# 4.4 Construction Surface Transportation

## 4.4.1 Introduction

The traffic analysis presented in this section addresses the proposed project's construction traffic impacts. The construction traffic impacts were determined for both the peak construction period for the proposed project (March 2020) (refer to Sections 4.4.2.3 and 4.4.3.7 for details) and the peak cumulative condition (November 2019) (refer to Section 4.4.2.4 for details). The peak construction month for the proposed project does not correspond to the peak cumulative condition, which includes traffic from the construction of other projects projected to be under construction during the construction schedule (October 2017 through December 2023). Additionally, this section addresses temporary traffic, access, and transit impacts during construction.

This proposed project construction traffic analysis builds upon relevant analysis and assumptions, including those for the cumulative impacts analysis (i.e., past, present, and reasonably foreseeable probable future projects) such as analyses from the Los Angeles International Airport (LAX or the "Airport") Master Plan EIR,[236] the South Airfield Improvement Project (SAIP) EIR,[237] the Crossfield Taxiway Project (CFTP) EIR,[238] Bradley West Project EIR,[239] Central Utility Plant Replacement Project (CUP-RP) EIR,[240] Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project EIR,[241] West Aircraft Maintenance Area (WAMA) Project EIR,[242] Midfield Satellite Concourse (MSC) EIR,[243] Runway 6L-24R and Runway 6R-24L Runway Safety Area (RSA North) EIR,[244] and the Landside Access Modernization Program (LAMP) Draft EIR.[245] Analysis procedures and data from these other projects were applied and updated as appropriate for the proposed project's cumulative impact analysis.

The construction traffic analysis study area is depicted in **Figure 4.4-1**. Construction employee parking, material delivery, and staging associated with the construction of the proposed project would be split between multiple lots, which are depicted in the **Figure 4.4-1**.

It is assumed that construction contractor parking would occur at Lot P1 located southeast of the intersection of Century Boulevard and Avion Drive, with workers being shuttled to and from the Central Terminal Area (CTA)/project site via Century Boulevard and World Way. Understanding that the availability of Lot P1 for project-related construction employee parking can change between now and when project construction occurs, Lot P1 can also be used for airport public parking or airport employee parking, or the

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236 City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, (SCH 1997061047), April 2004.

237 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) South Airfield Improvement Project, (SCH 2004081039), October 2005.

238 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Crossfield Taxiway Project, (SCH 2008041058), January 2009.

239 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Bradley West Project, (SCH 2008121080), September 2009.

240 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Central Utility Plant Project, (SCH 2009041043), October 2009.

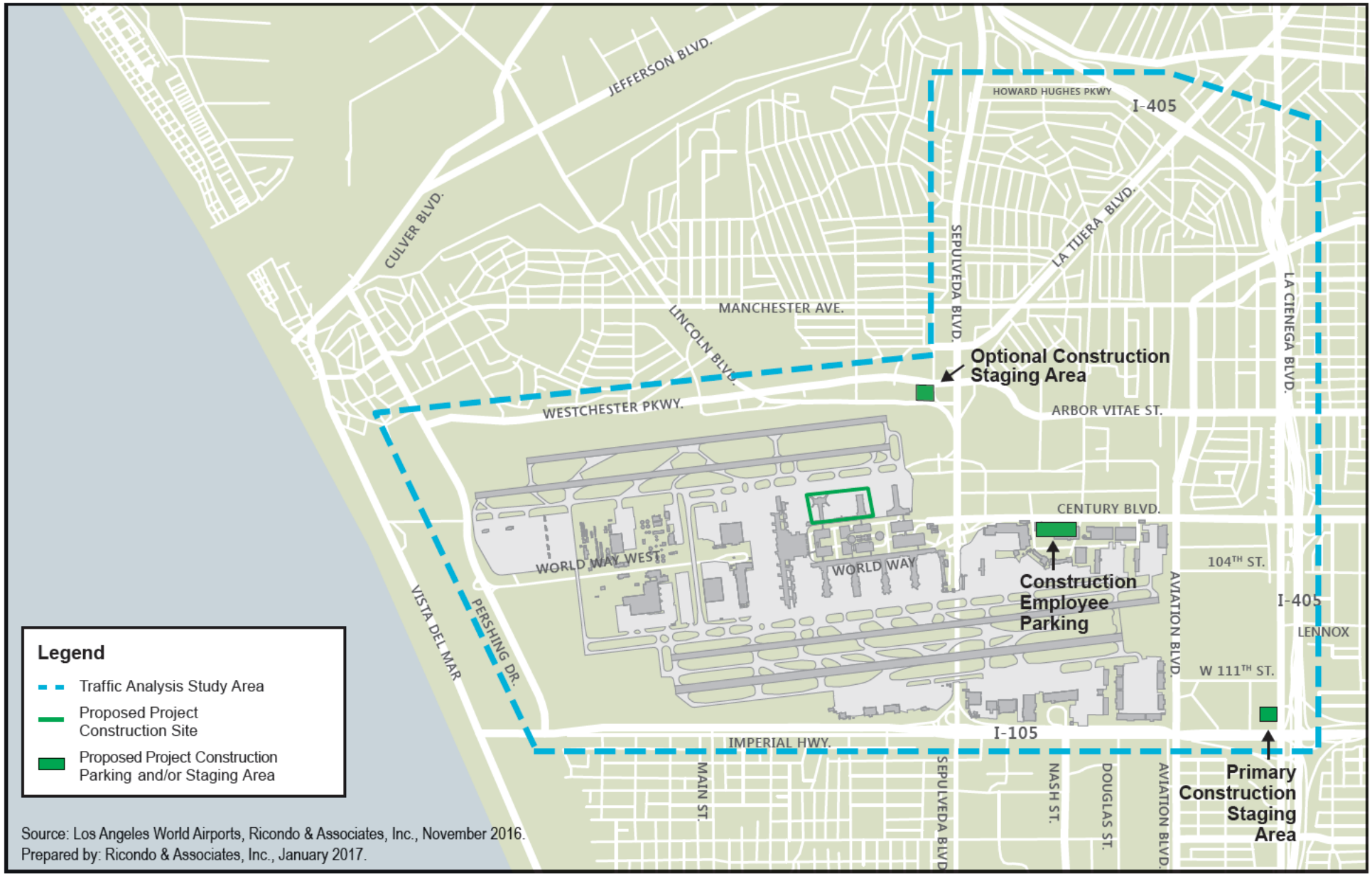
241 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project, (SCH 2012101019), January 2014.

242 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) West Aircraft Maintenance Area (WAMA) Project, (SCH 2012091037), February 2014.

243 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Midfield Satellite Concourse (MSC), (SCH 2013021020), June 2014.

244 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Runway 6L-24R and Runway 6R-24L Runway Safety Area (RSA) and Associated Improvement Projects, (SCH 2014051040), June 2014.

245 City of Los Angeles, Los Angeles World Airports, Draft Environmental Impact Report for Los Angeles International Airport (LAX) Landside Access Modernization Program, (SCH 2015021014), Section 4.12.3, Construction Surface Transportation, and Appendix P, Construction Traffic, September 2016.




Source: Los Angeles World Airports, Ricondo & Associates, Inc., November 2016.
Prepared by: Ricondo & Associates, Inc., January 2017.

**Terminals 2 and 3 Modernization Project**

**Construction Traffic Analysis Study Area**

Figure
**4.4-1**

project contractor may choose to utilize other parking lots in the nearby area, it is recognized that there are additional parking lots in the immediate area that offer project site access characteristics generally similar to those of Lot P1. Such additional parking lots, along with Lot P1, are identified on **Figure 4.4-5**. Construction staging would occur on either an existing industrial parcel located on La Cienega Boulevard, just north of Imperial Highway (proposed primary construction staging area – designated on **Figure 4.4-1** as 'Primary Construction Staging Area'); or on a portion of an existing LAWA-owned construction staging area along the south side of Westchester Parkway, east of the southern terminus of La Tijera Boulevard (optional primary construction staging area – designated on **Figure 4.4-1** as 'Optional Construction Staging Area'). This analysis assesses construction-related traffic impacts at off-airport intersections associated with the construction of the proposed project, including the traffic impacts of construction employee vehicles and shuttles, construction equipment, material delivery trucks, and truck trips associated with the proposed project.

This direct impact analysis addresses, in particular, the impacts from construction-related traffic that would occur during the peak construction period for the proposed project. The construction traffic analysis combines peak project-related traffic volumes with roadway traffic volumes occurring in the a.m. and p.m. commuter peak hours. The analysis provides an estimate of the construction-related traffic impacts within the off-airport public roadway system serving construction-related vehicles generated by the proposed project. The construction traffic impact analysis also qualitatively analyzes impacts of traffic disruptions (e.g., lane closures) within the CTA.

## 4.4.2 Methodology

### 4.4.2.1 Overview

As noted above, this analysis focuses on construction impacts of the proposed project. The analysis methodology for this EIR is based largely on the approach and data used for the Bradley West Project EIR, CUP-RP EIR, Runway 7L/25R RSA EIR, WAMA EIR, MSC EIR, RSA North EIR, and LAMP Draft EIR. The analyses, procedures, and data from these previous projects are applicable to the proposed project because these projects share many of the same characteristics related to vehicle peaking patterns and travel paths.

The construction traffic study area includes intersections and roadways that would be directly or indirectly affected by the construction of the proposed project. Construction employee parking and material staging (two alternative locations) for the proposed project are proposed at multiple locations in the vicinity of the Airport, as further described below. The construction traffic study area for this analysis includes those roads and intersections that would most likely be used by employee and truck traffic associated with construction of the proposed project. The procedures are also consistent with the information and requirements defined in City of Los Angeles Department of Transportation (LADOT) Traffic Study Policies and Procedures,[246] notwithstanding that a construction traffic analysis is not typically required by LADOT.

The following steps and assumptions were used to develop the analysis methodology:

- The construction traffic study area depicted in Figure 4.4-1 was defined to incorporate the local area roadways that serve as the primary travel paths that would be used by construction traffic to access the proposed project site, equipment, materials staging, and parking areas.
- Intersection turning movement traffic volume data were collected at key traffic study area intersections over a two-year period (2013 to 2015) from 7:00 a.m. to 9:00 a.m., and from 4:00 p.m. to 6:00 p.m. The traffic count periods were established to obtain traffic count data during the a.m. and p.m. peak commuter periods and represent the most recent counts at the construction traffic study area intersections. These counts were used as a basis for preparing the construction traffic analysis and assessing project-related traffic impacts. This approach provides a conservative impact analysis by

[246] City of Los Angeles Department of Transportation, Traffic Study Policies and Procedures, August 2014.

addressing situations when avoidance of the morning or afternoon commuter peak period is not possible. The estimated peak hours for construction-related traffic were determined by reviewing the estimated hourly construction-related trip activity for the proposed project developed for this study. 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 following describes the methodology and assumptions underlying the various traffic conditions considered in this traffic analysis, and how the proposed project's direct and cumulative impacts were identified relative to those conditions.

### 4.4.2.2 Determination of Baseline Traffic Conditions

Baseline conditions used in the analysis of project-related construction traffic impacts are defined as the existing conditions within the construction traffic study area at the time of the analysis (November 2016). Intersection turning movement volumes were collected over a two-year period (2013 to 2015), representing the most current comprehensive traffic counts completed by LAWA. Additionally, LAWA conducts annual driveway volume counts at various locations throughout the Airport (including those adjacent to public parking lots, employee parking lots, cargo facilities, rental car facilities, and off-Airport parking facilities). Furthermore, LAWA collects annual traffic volume counts each August along the CTA roadways to estimate annual growth in Airport traffic. Considering the location of the study area intersections, it was determined that each intersection contains a mix of both Airport-related traffic and non-Airport-related traffic. Consequently, both the driveway count data and CTA data were used to establish a growth rate to adjust the 2015 traffic volumes to 2016 levels. These data are reasonably representative of existing traffic conditions at the time the EIR Notice of Preparation was published (August 2016). The a.m. traffic volumes were increased by 12.1 percent, while the p.m. traffic volumes were increased by 11.2 percent.[247] These volumes were used as a basis for preparing the construction traffic analysis and assessing project-related construction traffic impacts. The following steps were taken to develop baseline traffic conditions information. Additionally, given temporary effects of street closures caused by construction of the Metro Crenshaw/LAX Transit Corridor, the use of this data with the driveway count and CTA roadway data provides the most accurate assessment of baseline traffic patterns within the study area.

**Prepare Model of Study Area Roadways and Intersections** - A model of construction traffic study area roadways and intersections was developed to assist with intersection capacity analysis (i.e., geometric configuration, quantitative delineation of capacity, and operational characteristics of intersections likely to be affected by the proposed project's traffic). The model was developed using TRAFFIX,[248] a commercially available traffic analysis software program designed for developing traffic forecasts and analyzing intersection and roadway capacities. The model uses widely accepted traffic engineering methodologies and procedures, including the Transportation Research Board Critical Movement Analysis (CMA) Circular 212 Planning Method,[249] which is the required intersection analysis methodology for traffic impact studies conducted within the City of Los Angeles.

**Calculate Baseline (2016) Levels of Service** - Intersection levels of service were calculated using the most recent intersection traffic volumes coinciding with the a.m. peak hour (7:00 a.m. to 8:00 a.m.) and the p.m. peak hour (4:00 p.m. to 5:00 p.m.). These levels of service defined existing baseline conditions which served as a basis of comparison for assessing impacts generated by construction of the proposed project.

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247 Ricondo and Associates, LAX Terminals 2 and 3 Traffic Volume Adjustment, December 2016.

248 Dowling Associates, TRAFFIX Version 7.7.

249 Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

### 4.4.2.3 Determination of Baseline Plus Peak Proposed Project Traffic Conditions

This construction traffic analysis was designed to assess the direct impacts associated with the construction of the proposed project, as well as the effects of future cumulative conditions. For purposes of determining direct project-related impacts, two traffic scenarios were developed consisting of baseline traffic described above plus the additional traffic that would be generated by the proposed project construction activity during the peak construction period. The difference in the two traffic scenarios relates to the location of the material staging area. One scenario corresponds to the material staging area being located on an existing industrial parcel on La Cienega Boulevard, just north of Imperial Highway (proposed primary construction staging area), while the second scenario corresponds to the material staging area being located on an existing LAWA-owned construction staging area along the south side of Westchester Parkway, east of the southern terminus of La Tijera Boulevard (optional primary construction staging area). The following steps were conducted to determine the Baseline Plus Peak proposed project traffic volumes. Detailed traffic volumes of Baseline Plus Peak are presented in Appendix D.2.

**Analyze Peak Proposed Project Construction Activity** - Vehicle trips associated with construction of the proposed project during the peak month of construction activity were estimated and distributed throughout the construction traffic study area network. The trips were estimated based on a review of the proposed project construction schedules and associated workforce levels and equipment, including trucks and other construction vehicles. Project-related construction trips were summarized to delineate peak month inbound and outbound construction employee trips and truck trips by hour of the day. The estimate of proposed project construction trips was based on construction employee workload schedules prepared for the proposed project. The construction employee trip distribution patterns were based on regional patterns developed for the proposed project and previous LAWA construction traffic studies, specific haul route information, airline passenger survey information, and regional population distributions. Detailed information regarding traffic distribution patterns is presented in Appendix D.4.

**Estimate Baseline (2016) Plus Peak Proposed Project Traffic Volumes** – The estimated Baseline Plus Peak proposed project (referred to hereinafter as Baseline Plus Project) traffic volumes were estimated by adding the proposed project volumes during the peak proposed project activity period (March 2020) to the baseline (2016) volumes.

### 4.4.2.4 Determination of Future Cumulative Traffic Conditions

In addition to the Baseline Plus Project condition described above, future cumulative traffic conditions were analyzed. For this traffic analysis, cumulative traffic conditions were assessed for the period during the overall proposed project construction program when the cumulative construction traffic associated with other LAX development programs would be greatest. This peak cumulative period was estimated to occur during November 2019.

In accordance with State CEQA Guidelines Section 15130(b), there are essentially two options for determining cumulative development for evaluating cumulative impacts:

a. List past, present, and reasonably foreseeable probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
b. Summarize projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program.

For purposes of analyzing the proposed project's cumulative construction traffic impacts, a hybrid of the two approaches was used. Section 4.4.3.8 provides descriptions of cumulative projects and how the traffic generation related to those projects would overlap with that of the proposed project. Also, using the

"projection" approach, background traffic was increased to reflect additional growth from non-specific projects, which may include both Airport- and/or non-Airport related projects. The construction traffic analysis assumed a two percent annual growth in background traffic which produces a conservative traffic volume scenario that would account for additional construction-related traffic in the event that additional construction projects are initiated during the timeframe evaluated for this study. This annual growth rate assumption is consistent with previous direction first provided by LADOT for use in the SAIP construction traffic analysis[250] and subsequently used for construction traffic studies prepared for the CFTP EIR, Bradley West Project EIR, CUP-RP EIR, Runway 7L/25R RSA Project EIR, WAMA Project EIR, MSC EIR, RSA North EIR, and LAMP Draft EIR.

Cumulative conditions were determined based on two sets of future cumulative traffic volume conditions, as described below. Detailed traffic volumes related to the cumulative conditions are presented in Appendix D.2.

## Cumulative Traffic (November 2019) Without Project

This scenario combines baseline traffic volumes with growth from all sources other than the proposed project to determine the overall peak cumulative traffic conditions during the construction period for the proposed project. The following steps were taken to develop the traffic volumes for this scenario.

**Develop November 2019 Focused Traffic Study Area Roadway Network** - Though it is possible additional improvements would be in place prior to the peak cumulative traffic period (November 2019), for purposes of this analysis, it has been conservatively assumed that no additional roadway improvements would be in place. Therefore, the baseline 2016 traffic study area roadway network was held constant to 2019.[251]

**Estimate November 2019 Cumulative (Without Project) Traffic Volumes** - Cumulative (November 2019) traffic volumes were estimated using the following process:

- As described above, baseline traffic volumes were multiplied by a growth factor of two percent per year to account for local background traffic growth through 2019. Furthermore, this annual growth rate is more conservative than what is projected for the South Bay/LAX area in the 2010 Congestion Management Program,[252] which estimates an annual growth of approximately 0.3 percent, providing a conservative analysis.
- Construction trips associated with the peak period of cumulative construction (November 2019) were estimated based on the estimated labor component of total construction cost and the timeline for each concurrent project (with the exception of the LAX Northside Area Development project, for which construction trip information was obtained from the traffic consultants involved in preparation of the traffic study for the LAX Northside Area Development EIR,[253] and the Landside Access Modernization Program Draft EIR)[254]. The cumulative development projects that were considered as part of this analysis and the estimated trips associated with these cumulative development projects are described in more detail below.

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250 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) South Airfield Improvement Project, (SCH 2004081039), October 2005.

251 While additional cumulative projects such as the Landside Access Modernization Program (LAMP) are scheduled to occur during the cumulative peak month (November 2019), the timing of potential temporary roadway closures, if any, is unknown at the time of the analysis. Any roadway network modifications would be included in the CTMP and reviewed by LAWA prior to implementation. Due to the unknown timing of potential closures or improvements, it is reasonable to assume the roadway network remains constant from 2016 to 2019.

252 Congestion Management Program, Appendix D, Exhibit D-1, South Bay/LAX Area, 2010.

253 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Northside Plan Update, Appendix E, Traffic Study, December 2014.

254 City of Los Angeles, Los Angeles World Airports, Draft Environmental Impact Report for Los Angeles International Airport (LAX) Landside Access Modernization Program, (SCH 2015021014), Appendix O, Off-Airport Traffic Study, September 2016.

### Cumulative Traffic (November 2019) With Project

The project-related construction traffic volumes occurring during the peak cumulative period were added to the Cumulative Traffic (November 2019) "Without Project" traffic volumes described in the previous section. This is a traffic scenario that represents the estimated total peak hour traffic volumes (consisting of background traffic, traffic related to ambient growth, traffic related to other projects, and proposed project construction traffic) that would use the construction traffic study area intersections during the cumulative peak in November 2019. Similar to Baseline plus Project conditions, two traffic scenarios were developed under this condition, one each for the primary and optional primary construction staging area locations.

## 4.4.2.5 Determination of Impacts and Mitigation Measures

The following steps were conducted to calculate intersection levels of service, identify impacts, and identify mitigation measures for significant impacts. Detailed intersection level of service (LOS) and volume-to-capacity ratio (v/c) outputs are presented in Appendix D.3.

**Analyze Intersection and Roadway Levels of Service** - The levels of service of the construction traffic study area intersections and roadways were analyzed using TRAFFIX. Intersection LOS (v/c) was estimated using the CMA planning level methodology, as defined in Transportation Research Board Circular 212,[255] in accordance with LADOT's Traffic Study Policies and Procedures,[256] and the L.A. CEQA Thresholds Guide.[257] Intersection LOS (v/c) was analyzed for the following conditions:

- Baseline
- Baseline Plus Peak Project Traffic (Proposed Primary and Optional Primary Construction Staging Areas)
- Future Cumulative Traffic (November 2019) Without Project
- Future Cumulative Traffic (November 2019) With Project (Proposed Primary and Optional Primary Construction Staging Areas)

**Identify Project Impacts** - Project-related impacts associated with construction of the proposed project were identified for intersections that would be significantly affected by project-related traffic, consistent with the approach established in the LADOT Traffic Study Policies and Procedures guidelines. The thresholds described in Section 4.4.4 were used to determine impact significance. Project-related impacts and cumulative impacts were determined by comparing the LOS (v/c) results for the following:

- **Baseline Plus Peak Proposed Project Compared with Baseline:** This comparison is utilized to isolate the impacts of the proposed project, considering the use of either the proposed primary or optional primary construction staging area.
- **Cumulative Impacts:** Cumulative impacts were determined using a two-step process. Initially, the "Cumulative Traffic (November 2019) With Project" condition was compared to the baseline condition to determine if a significant cumulative impact would occur relative to baseline conditions. A cumulative impact was deemed significant if it would exceed the threshold of significance. If a cumulative impact was determined to be significant, then a second comparison of the "With Project" vs. the "Without Project" LOS (v/c) conditions was made to determine if the project's contribution to the significant cumulative impact is determined to be "cumulatively considerable" in accordance with the impact thresholds defined in Section 4.4.4 below. This comparison was used for both the proposed primary and optional primary construction staging areas.

**Identify Mitigation Measures -** Mitigation measures were identified for intersections determined to be significantly affected by construction-related traffic.

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[255] Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.
[256] City of Los Angeles Department of Transportation, Traffic Study Policies and Procedures, August 2014.
[257] City of Los Angeles, L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analyses in Los Angeles, 2006.

## 4.4.3 Existing Conditions

### 4.4.3.1 Regulatory Setting

The LADOT Traffic Study Policies and Procedures manual requires that a Traffic Study be prepared if the following criteria are met:

- A project is likely to add 500 or more daily trips
- A project is likely to add 43 or more a.m. or p.m. peak hour trips

Based on LADOT criteria, the proposed project would require a Traffic Study as each condition mentioned above would be met.

In addition, the LADOT Traffic Study Policies and Procedures manual provides Congestion Management Program (CMP) Guidelines to assist local agencies in evaluating impacts of land use projects on the CMP system through the preparation of a regional transportation impact analysis (TIA). A CMP TIA is necessary for all projects that include, at a minimum, the following:

- 50 or more trips added to intersections during either the weekday a.m. or p.m. peak hours
- 150 or more trips added to the freeway during either the weekday a.m. or p.m. peak hours

Because the proposed project would generate traffic during the a.m. or p.m. peak commute periods, the proposed project would meet or exceed the criteria set forth by Caltrans or LADOT. Therefore, a TIA would typically be required based on the conditions outlined above. During the scoping of the SAIP traffic study in 2004, LADOT indicated that no Traffic Study was required because there was "no requirement to assess the temporary traffic impacts of a project resulting from construction activities. So, the proposal to prepare a traffic study is voluntary."[258] Additionally, LADOT reiterated in January 2017 that it does not require traffic impact studies for traffic construction-related impacts.[259] LAWA determined at that time that the preparation of a Traffic Study is useful in order to provide a full assessment and documentation of the impacts generated by the construction of the proposed project.

### 4.4.3.2 Baseline Conditions

As indicated above, baseline conditions relate to the facilities and general conditions that existed during a typical weekday in 2016 for the hours of 7:00 a.m. to 8:00 a.m. and 4:00 p.m. to 5:00 p.m.

#### Construction Traffic Study Area

The construction traffic study area is depicted in **Figure 4.4-1**. The geographic scope of the construction traffic study area was determined by identifying the intersections most likely to be used by construction-related vehicles accessing (1) the proposed project construction site, construction employee parking areas, and delivery staging areas and (2) the construction employee parking and staging areas for other concurrent construction projects in the vicinity of LAX. The construction traffic study area is generally bounded by I-405 to the east, I-105 and Imperial Highway to the south, Pershing Drive to the west, and Westchester Parkway, Sepulveda Boulevard, and Howard Hughes Parkway to the north. **Figure 4.4-1** depicts the proposed project construction site, which is in the northern portion of the CTA, north of World Way.

It is assumed that the construction employee parking area is located in the area near the intersection of Century Boulevard and Avion Drive (i.e., Lot P1). Understanding that the availability of Lot P1 for project-related construction employee parking can change between now and when project construction occurs, the

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258 Carranza, Tomas, City of Los Angeles Department of Transportation, email to Pat Tomcheck, Los Angeles World Airports, Subject: Re: FW: LAX Traffic Methodology Memo, July 29, 2004.

259 Ayala, Pedro, City of Los Angeles Department of Transportation, email to Pat Tomcheck, Los Angeles World Airports, Subject: Re: Traffic Impact Studies for Construction-Related Impacts, January 19, 2017.

project contractor may choose to utilize other parking lots in the nearby area; therefore, it is recognized that there are additional parking lots in the immediate area that offer project site access characteristics generally similar to those of Lot P1 (refer to Section 4.4.3.7 below for additional details). The material staging area is planned to be located either on an existing industrial parcel located on La Cienega Boulevard, just north of Imperial Highway (proposed primary construction staging area); or on a portion of an existing LAWA-owned construction staging area along the south side of Westchester Parkway, east of the southern terminus of La Tijera Boulevard (optional primary construction staging area).

### Traffic Study Area Roadways

The principal freeways and roadways serving as access routes within the construction traffic study area include the following:

- I-405 (San Diego Freeway) - This north-south freeway generally forms the eastern boundary of the construction traffic analysis traffic study area and provides regional access to the Airport and the surrounding area. Access to the traffic study area is provided via ramps at Howard Hughes Parkway, Century Boulevard, I-105, Imperial Highway, and three locations along La Cienega Boulevard.
- I-105 (Glenn M. Anderson or Century Freeway) - Along with Imperial Highway (described below), this east-west freeway forms the southern boundary of the construction traffic study area, and extends from the San Gabriel Freeway (I-605) on the east to Sepulveda Boulevard on the west. Access to the traffic study area is provided via ramps at Sepulveda Boulevard and along Imperial Highway. The westbound off-ramp from the I-105 Freeway to northbound Sepulveda Boulevard was widened to three lanes in March 2010.
- Aviation Boulevard - This north-south four-lane roadway bisects the traffic study area.
- Century Boulevard - This eight-lane divided roadway serves as the primary entry to the LAX CTA. This roadway also provides access to off-airport businesses and hotels and on-airport aviation-related facilities (e.g., air cargo facilities) located between the CTA and I-405.
- Imperial Highway - This east-west roadway is located at-grade and beneath much of the elevated I-105 freeway. The number of lanes on this roadway varies from six-lanes east of the merge with I-105 to four-lanes west of the merge with I-105.
- La Cienega Boulevard - This north-south roadway parallels I-405 at the eastern boundary of the traffic study area. The roadway varies from four to six lanes.
- Pershing Drive - This north-south four-lane divided roadway forms the western boundary of the construction traffic study area.
- Westchester Parkway - This east-west four-lane divided arterial roadway forms a portion of the northern boundary of the traffic study area.
- Sepulveda Boulevard (State Route 1 south of Lincoln Boulevard) - This major north-south six-lane arterial roadway provides direct access to the Airport via I-405 and Westchester Parkway on the north and via I-105 on the south. Sepulveda Boulevard between I-105 and Century Boulevard is located in a tunnel section beneath the south airfield runways.
- 111th Street - This east-west roadway has one lane in each direction separated by a continuous two-way left turn lane.

## 4.4.3.3 Existing Traffic Conditions

Traffic conditions at the construction traffic study area intersections and existing traffic activity (peak month, hourly, and annual) are discussed below.

## Traffic Study Area Intersections

Intersection locations and intersection control and geometry are discussed below.

### Intersection Locations

The routes likely to be utilized by construction-related vehicles were reviewed to identify the intersections likely to be used by vehicles accessing the construction employee parking/staging sites associated with the proposed project or the other concurrent construction project sites in the vicinity of LAX. Based on this review, the key intersections to be analyzed are listed below in **Table 4.4-1** and depicted on **Figure 4.4-2**.

**Table 4.4-1**
**Study Area Intersections**

| Intersection Number | Intersection Location |
|---|---|
| 1. | Aviation Boulevard and Century Boulevard |
| 2. | Imperial Highway and Aviation Boulevard |
| 3. | Aviation Boulevard and 111th Street |
| 4. | La Cienega Boulevard and Century Boulevard |
| 5. | Sepulveda Boulevard and Century Boulevard |
| 6. | Century Boulevard and I-405 Northbound Ramps East of La Cienega Boulevard |
| 7. | Imperial Highway and Douglas Street |
| 8. | Sepulveda Boulevard and Howard Hughes Parkway |
| 9. | Imperial Highway and La Cienega Boulevard |
| 10. | Imperial Highway and Main Street |
| 11. | Imperial Highway and Pershing Drive |
| 12. | Imperial Highway and Sepulveda Boulevard |
| 13. | Imperial Highway and Nash Street |
| 14. | Imperial Highway and I-105 Ramp |
| 15. | Imperial Highway and I-405 Northbound Ramp |
| 16. | La Cienega Boulevard and Lennox Boulevard |
| 17. | La Cienega Boulevard and 111th Street |
| 18. | La Cienega Boulevard and I-405 Southbound Ramps North of Century Boulevard |
| 19. | La Cienega Boulevard and I-405 Southbound Ramps South of Century Boulevard |
| 20. | La Cienega Boulevard and I-405 Southbound Ramps North of Imperial Highway |
| 21. | Sepulveda Boulevard and La Tijera Boulevard |
| 22. | Sepulveda Boulevard and Lincoln Boulevard |
| 23. | Sepulveda Boulevard and Manchester Avenue |
| 24. | Westchester Parkway and Pershing Drive |
| 25. | Sepulveda Boulevard and Westchester Parkway |
| 26. | Sepulveda Boulevard and 76th/77th Street |
| 27. | Sepulveda Boulevard and 79th/80th Street |
| 28. | Sepulveda Boulevard and 83rd Street |
| 29. | La Cienega Boulevard and 104th Street |
| Source: Los Angeles World Airports, September 2014.<br>Prepared By: Ricondo & Associates, Inc., January 2017. | |

### Intersection Control and Geometry

All of the construction traffic study area intersections listed in **Table 4.4-1** and depicted in **Figure 4.4-2** are signalized. In addition, all of the intersections are included in LADOT's Automated Traffic Surveillance and Control (ATSAC) system, except Imperial Highway and the I-405 northbound ramps east of La Cienega Boulevard (Intersection #15) and Century Boulevard and the I-405 northbound ramps east of La Cienega Boulevard (Intersection #6). The ATSAC system provides for monitoring of intersection traffic conditions and the flexibility to adjust traffic signal timing in response to current conditions. Study area intersection geometries are provided in Appendix D.1.

### Peak Hours

The hours of analysis were chosen based on those which have available baseline traffic volumes for all intersections in the construction traffic study area, and for those hours at the start of the commuter peak periods. Using this criterion, the hours analyzed for the proposed project were:

- **AM Peak Hour (7:00 a.m. to 8:00 a.m.)** - The proposed project a.m. peak hour represents a period for construction employees exiting the employee parking lot following an overnight shift. Additionally, material delivery trips (from external to staging area and staging area to project site) and employee shuttles were assumed to occur during the same hour. This approach provides a conservative impact analysis by addressing situations when complete avoidance of the morning commuter peak period is not possible.
- **PM Peak Hour (4:00 p.m. to 5:00 p.m.)** - The proposed project p.m. peak hour represents a period for material delivery trucks accessing/egressing the staging area. The construction traffic analysis assumed that no employee trips would be on the roadways at this time, as employees have either arrived or departed the staging lot prior to 4:00 p.m. (i.e., the timing of the afternoon shift [3:00 p.m. to 11:00 p.m.] requires all employees to be on-site prior to the 4:00 p.m. to 5:00 p.m. hour). This approach provides a conservative impact analysis by addressing situations when complete avoidance of the evening commuter peak period is not possible.

## 4.4.3.4 Baseline Intersection Volumes

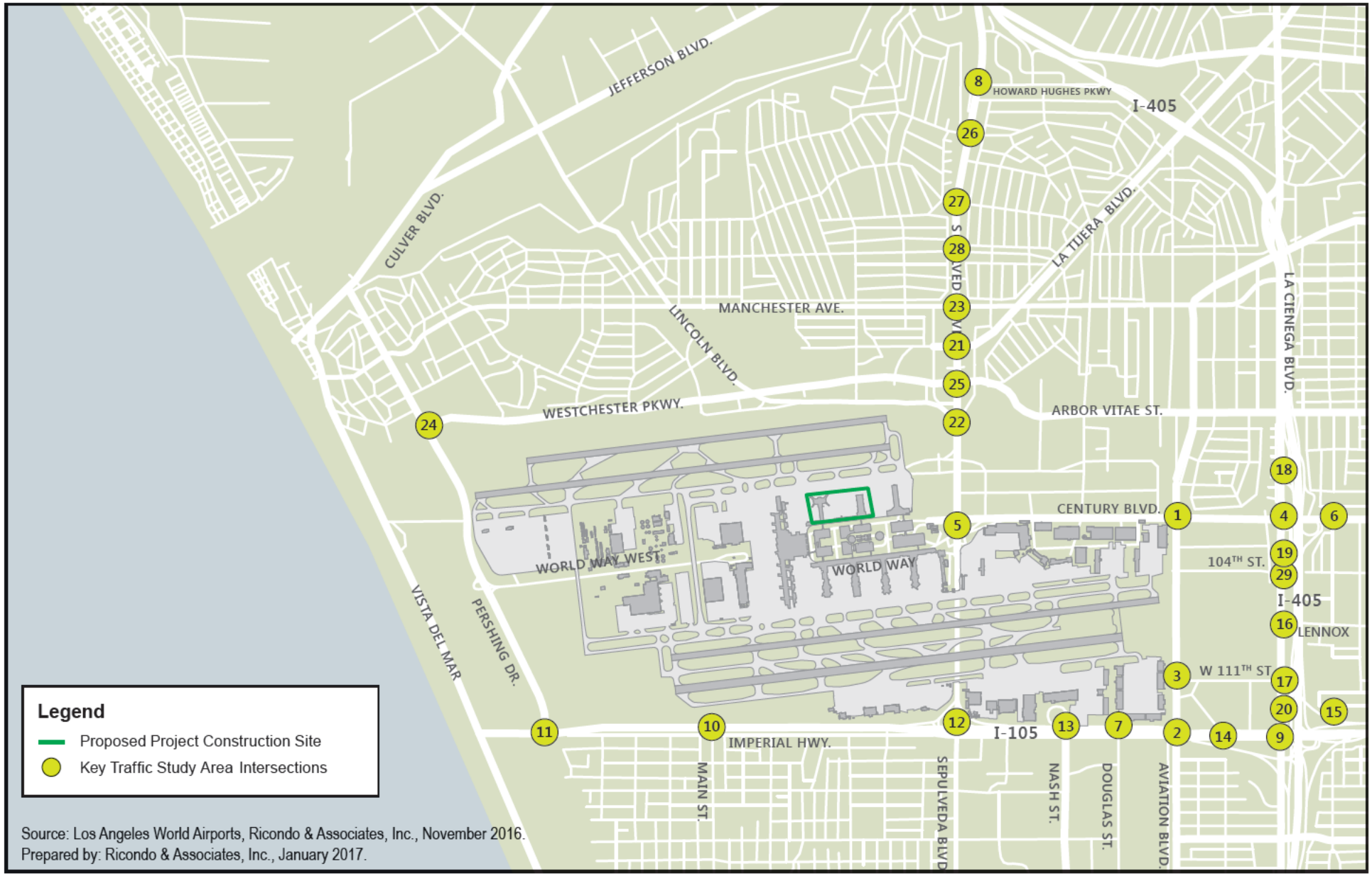
Baseline traffic volumes consist of the traffic volumes that represent traffic activity at the time of the analysis (November 2016). Baseline volumes are based on actual data collected during the a.m. and p.m. peak hours from 2013 to 2015, adjusted to 2016 based on review of LAX driveway and CTA traffic count data. Baseline intersection traffic volumes are provided in Appendix D.2.

## 4.4.3.5 Baseline Intersection Analyses

Intersection LOS (v/c) was analyzed using the CMA methodology to assess the estimated operating conditions during baseline conditions for the a.m. and p.m. peak hours. This method, also known as the Circular 212 Planning Method, calculates the sum of the per-lane volumes for the critical movements and divides by an overall intersection capacity (volume-to-capacity ratio). LOS is a qualitative measure that describes traffic operating conditions (e.g., delay, queue lengths, congestion). 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). LOS definitions for the CMA methodology are presented in **Table 4.4-2**.

In accordance with LADOT analysis procedures, the volume/capacity (v/c) ratio was calculated using the CMA methodology is further reduced by 0.07 for those intersections included within the ATSAC system to account for the improved operation and increased efficiency from the ATSAC system that is not captured as part of the CMA methodology. Application of the ATSAC reduction is described in Attachment D of the LADOT Traffic Study Policies and Procedures.[260]

[260] City of Los Angeles Department of Transportation, Traffic Study Policies and Procedures, August 2014.




**Terminals 2 and 3 Modernization Project**

**Construction Traffic Study Area Intersections**

Figure
**4.4-2**

**Table 4.4-2**
**Level of Service Thresholds and Definitions for Signalized Intersections**

| Level of Service (LOS) | Volume/Capacity Ratio Threshold | Definition |
|---|---|---|
| A | 0.000 - 0.600 | EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used. |
| B | 0.601 - 0.700 | VERY GOOD. An occasional approach phase is fully used; many drivers begin to feel somewhat restricted within groups of vehicles. |
| C | 0.701 - 0.800 | GOOD. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles. |
| D | 0.801 - 0.900 | 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. |
| E | 0.901 - 1.000 | POOR. Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles. |
| F | Greater than - 1.000 | 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. |
| Source: Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980. | | |
| Prepared By: Ricondo & Associates, Inc., January 2017. | | |

The estimated intersection LOS (v/c) for baseline conditions is provided in **Table 4.4-3**. As shown in **Table 4.4-3**, 16 of the 29 intersections operated at LOS C or better during the baseline a.m. and p.m. peak periods analyzed for the proposed project. The following intersections were estimated to be operating at LOS D or worse during the baseline a.m. or p.m. peak periods:

- Aviation Boulevard and Century Boulevard (Intersection #1) – LOS D p.m. peak hour
- La Cienega Boulevard and Century Boulevard (Intersection #4) – LOS D a.m. and p.m. peak hours
- Century Boulevard and Sepulveda Boulevard (Intersection #5) – LOS D a.m. peak hour
- Century Boulevard and I-405 Northbound Ramp (Intersection #6) – LOS E a.m. peak hour
- Imperial Highway and Sepulveda Boulevard (Intersection #12) – LOS E a.m. peak hour and LOS F p.m. peak hour
- Imperial Highway and I-105 Ramp (Intersection #14) – LOS D a.m. peak hour
- Imperial Highway and I-405 Northbound Ramp (Intersection #15) – LOS D p.m. peak hour
- La Cienega Boulevard and I-405 Southbound Ramp (Intersection #18) – LOS E a.m. peak hour
- Sepulveda Boulevard and La Tijera Boulevard (Intersection #21) – LOS D p.m. peak hour
- Sepulveda Boulevard and Lincoln Boulevard (Intersection #22) – LOS E p.m. peak hour
- Sepulveda Boulevard and Manchester Avenue (Intersection #23) – LOS D a.m. and p.m. peak hours
- Sepulveda Boulevard and Westchester Parkway (Intersection #25) – LOS D a.m. and p.m. peak hours
- Sepulveda Boulevard and 76th / 77th Street (Intersection #26) – LOS E a.m. peak hour

The LOS (v/c) results from the TRAFFIX program, including the volume, geometry and other inputs used to produce these results are provided in Appendix D.3.

**Table 4.4-3**
**Baseline Intersection Analysis Results**

| Intersection | | Peak Hour [1] | V/C [2] | LOS [3] |
|---|---|---|---|---|
| 1. | Aviation Blvd. & Century Blvd. | AM Peak Hour | 0.598 | A |
| | | PM Peak Hour | 0.826 | D |
| 2. | Imperial Hwy. & Aviation Blvd. | AM Peak Hour | 0.712 | C |
| | | PM Peak Hour | 0.650 | B |
| 3. | Aviation Blvd. & 111th St. | AM Peak Hour | 0.540 | A |
| | | PM Peak Hour | 0.478 | A |
| 4. | La Cienega Blvd. & Century Blvd. | AM Peak Hour | 0.817 | D |
| | | PM Peak Hour | 0.899 | D |
| 5. | Sepulveda Blvd. and Century Blvd. | AM Peak Hour | 0.824 | D |
| | | PM Peak Hour | 0.725 | C |
| 6. | Century Blvd. & I-405 N/B Ramp | AM Peak Hour | 0.924 | E |
| | | PM Peak Hour | 0.676 | B |
| 7. | Imperial Hwy. & Douglas St. | AM Peak Hour | 0.393 | A |
| | | PM Peak Hour | 0.623 | B |
| 8. | Sepulveda Blvd. & H. Hughes Pkwy. | AM Peak Hour | 0.671 | B |
| | | PM Peak Hour | 0.651 | B |
| 9. | Imperial Hwy. & La Cienega Blvd. | AM Peak Hour | 0.474 | A |
| | | PM Peak Hour | 0.698 | B |
| 10. | Imperial Hwy. & Main St. | AM Peak Hour | 0.616 | B |
| | | PM Peak Hour | 0.624 | B |
| 11. | Imperial Hwy. & Pershing Dr. | AM Peak Hour | 0.429 | A |
| | | PM Peak Hour | 0.498 | A |
| 12. | Imperial Hwy. & Sepulveda Blvd. | AM Peak Hour | 0.934 | E |
| | | PM Peak Hour | 1.323 | F |
| 13. | Imperial Hwy. & Nash St. | AM Peak Hour | 0.614 | B |
| | | PM Peak Hour | 0.383 | A |
| 14. | Imperial Hwy. & I-105 Ramp | AM Peak Hour | 0.811 | D |
| | | PM Peak Hour | 0.556 | A |
| 15. | Imperial Hwy. & I-405 NB Ramp | AM Peak Hour | 0.597 | A |
| | | PM Peak Hour | 0.832 | D |
| 16. | La Cienega Blvd. & Lennox Blvd. | AM Peak Hour | 0.553 | A |
| | | PM Peak Hour | 0.530 | A |
| 17. | La Cienega Blvd. & 111th St. | AM Peak Hour | 0.360 | A |
| | | PM Peak Hour | 0.301 | A |
| 18. | La Cienega Blvd. & I-405 Southbound Ramps North of Century | AM Peak Hour | 0.904 | E |
| | | PM Peak Hour | 0.754 | C |
| 19. | La Cienega Blvd. & I-405 Southbound Ramps South of Century | AM Peak Hour | 0.449 | A |
| | | PM Peak Hour | 0.351 | A |
| 20. | La Cienega Blvd. & I-405 Southbound Ramps North of Imperial | AM Peak Hour | 0.507 | A |
| | | PM Peak Hour | 0.291 | A |
| 21. | Sepulveda Blvd. & La Tijera Blvd. | AM Peak Hour | 0.692 | B |
| | | PM Peak Hour | 0.819 | D |
| 22. | Sepulveda Blvd. & Lincoln Blvd. | AM Peak Hour | 0.780 | C |
| | | PM Peak Hour | 0.964 | E |
| 23. | Sepulveda Blvd. & Manchester Ave. | AM Peak Hour | 0.865 | D |
| | | PM Peak Hour | 0.885 | D |
| 24. | Westchester Pkwy. & Pershing Dr. | AM Peak Hour | 0.473 | A |

**Table 4.4-3**
**Baseline Intersection Analysis Results**

| Intersection | | Peak Hour [1] | V/C [2] | LOS [3] |
|---|---|---|---|---|
| | | PM Peak Hour | 0.286 | A |
| 25. | Sepulveda Blvd. & Westchester Pkwy. | AM Peak Hour | 0.863 | D |
| | | PM Peak Hour | 0.893 | D |
| 26. | Sepulveda Blvd. & 76th/77th St. | AM Peak Hour | 0.915 | E |
| | | PM Peak Hour | 0.487 | A |
| 27. | Sepulveda Blvd. & 79th/80th St. | AM Peak Hour | 0.780 | C |
| | | PM Peak Hour | 0.504 | A |
| 28. | Sepulveda Blvd. & 83rd St. | AM Peak Hour | 0.643 | B |
| | | PM Peak Hour | 0.457 | A |
| 29. | La Cienega Blvd. & 104th St. | AM Peak Hour | 0.375 | A |
| | | PM Peak Hour | 0.407 | A |

Notes:
[1] The hours of analysis include the a.m. peak (7:00 a.m. - 8:00 a.m.) and the p.m. peak (4:00 p.m. - 5:00 p.m.).
[2] Volume to capacity ratio.
[3] LOS range: A (excellent) to F (failure).
SOURCE: Appendix D.3 of this EIR.
Prepared By: Ricondo & Associates, Inc., January 2017.

## 4.4.3.6 LAWA's Coordination and Logistic Management Team

Subsequent to the approval of the LAX Master Plan, LAWA established the Coordination and Logistic Management (CALM) Team. Working in cooperation with LAWA staff including Terminal Operations, Airport Police, Environmental Planning Group, and Commercial Development Group, the CALM Team monitors construction traffic, coordinates lane and roadway closures and analyzes traffic conditions to determine the need for additional traffic controls, lane restriping, and traffic signal modifications. An approval process for proposed construction work has been established in which contractors submit request forms describing the work, when the work is proposed to take place, duration, coordination efforts with other projects, etc. If pedestrian or vehicular traffic will be impacted, the submittal form will include proposed traffic control plans. These requests are reviewed by staff from the CALM Team and various LAWA divisions, and any concerns are addressed prior to approval. The CALM Team also develops an informational campaign for construction activities, including wayfinding signage for pedestrians to locate ground transportation facilities and parking during construction, information for commercial shuttle drivers regarding lane closures and detours, and traffic alerts on LAWA's website for the public and airport employees. A color-coded, real-time traffic conditions map for the LAX CTA is included on the LAWA website. Weekly meetings occur to discuss minimizing the construction impacts of current and future projects. Coordination with outside agencies is conducted as the individual projects necessitate.

## 4.4.3.7 Project-Generated Traffic

Traffic that would be generated by the proposed project is defined below for peak period of traffic generation.

### Project Construction Traffic During Project Peak (March 2020)

The peak construction period for the proposed project would likely occur during March 2020. Construction employee and truck trips were estimated on an hourly basis over the typical busy day, which coincides with the peak period of construction, and therefore, construction employment. It is likely that this would occur over several days, or weeks, as construction of the proposed project is at its peak.

Workforce levels at peak construction were based on a review of the proposed project construction estimates, which also included specific construction elements and employees per shift. It is estimated that 550 construction employees would access the proposed project construction site on a daily basis during the peak period of construction. The construction schedule is based on a triple-shift work schedule with shift times occurring from 7:00 a.m. to 3:00 p.m., 3:00 p.m. to 11:00 p.m., and 11:00 p.m. to 7:00 a.m. It is estimated that a 3rd shift (overnight) would only be required periodically. A total of 180 construction employees were estimated to work in each of the morning and afternoon shifts, with the balance of construction employees (190) working the overnight shift.

Based on the construction schedule described above, employees were estimated to be entering the site between 6:00 a.m. to 7:00 a.m., 2:00 p.m. to 3:00 p.m., and 10:00 p.m. to 11:00 p.m. Conversely, employees were estimated to be exiting the site between 7:00 a.m. to 8:00 a.m., 3:00 p.m. to 4:00 p.m., and 11:00 p.m. to 12:00 a.m. Vehicle occupancy was assumed to be 1.15 employees per vehicle. According to a study published by the Southern California Association of Governments (SCAG), the average vehicle occupancy on several regional roadways in the Los Angeles region ranged from approximately 1.15 to 1.30.[261] Provided the temporary nature of construction employment and the lower likelihood of rideshare opportunities, a conservative estimate of vehicle occupancy of 1.15 employees per vehicle was assumed. By applying the assumed vehicle occupancy factor, it was projected that 479 construction employee vehicles per day during the proposed project construction peak period would access and egress the construction traffic study area in support of proposed project construction.

For purposes of the intersection analyses, all vehicle trips were converted to "passenger car equivalents" (PCEs) to account for the additional impact that large vehicles, such as trucks, would have on roadway traffic operations. As such, the number of construction-related vehicle trips was multiplied by the following PCE factors, consistent with the assumptions in previous LAX construction projects:

| Vehicle Type | PCE Factor |
|---|---|
| Construction employees[262] | 1.0 |
| Construction delivery trucks | 2.5 |
| Employee shuttle buses | 2.0 |

The construction schedule was reviewed to determine the specific construction elements occurring during the Project peak month of March 2020. For the purposes of the construction traffic impact analysis, employees working on the proposed project were assumed to park at the lot located southeast of the intersection of Century Boulevard and Avion Drive (i.e., Lot P1, which is known as LAX Parking Lot F located 6075 West Century Boulevard). This parking lot, identified as area P1 in Figure 4.4-5, is located in the general vicinity of the project site with direct access to and from the site provided via Century Boulevard and World Way. Construction employees would be shuttled to their respective construction site by way of shuttle bus. The number of shuttle buses required to transport the construction employees was estimated based on an assumed ratio of 30 passengers per bus. Understanding that the availability of Lot P1 for project-related construction employee parking can change between now and when project construction occurs, as the subject area can also be used for airport public parking or airport employee parking, or the project contractor may choose to utilize other parking lots in the nearby area, it is recognized that there are additional parking lots in the immediate area that offer project site access characteristics generally similar to those of Lot P1. Such additional parking lots are depicted in Figure 4.4-5 and include, but are not limited to, the following sites:

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261 Southern California Association of Governments, Regional High-Occupancy Vehicle Lane System Performance Study, November 4, 2004.

262 It should be noted that a different conversion factor was applied to determine the number of construction employee vehicles that would access the proposed project area. A vehicle occupancy factor of 1.15 employees per vehicle was used to convert from employees to vehicles. This conversion factor is different than the PCE factor discussed here, which is used to adjust for the additional impact that large vehicles have on roadway traffic operations.

| Lot ID | Lot Name | Address |
|---|---|---|
| P1a | Joe's Parking | 6141 W. Century Boulevard |
| P1b | Qu kPark LAX | 9821 Vicksburg Avenue |
| P1c | Sunrise LAX Parking | 6155 W. 98th Street |
| P1d | LAX Lot C | 96th Street/Sepulveda Boulevard |
| P1e | Park Air Express | 5757 W. Century Boulevard |

Given these additional parking lots' proximity to Lot P1, construction employee commute patterns to and from those lots would likely be generally similar to those of Lot P1 and therefore, the impacts to the local roadway network and intersections would also be similar.

Delivery trucks carrying construction equipment and material would enter and exit the materials staging area located either on an existing industrial parcel located on La Cienega Boulevard, just north of Imperial Highway (proposed primary construction staging area); or on a portion of an existing LAWA-owned construction staging area along the south side of Westchester Parkway, east of the southern terminus of La Tijera Boulevard (optional primary construction staging area). A maximum of 68 haul truck trips per day was estimated during the Project peak (March 2020). Using an assumed PCE factor of 2.5 per vehicle and distributing these volumes (72 daily trips) in accordance with the likely delivery schedule (over 12 hours), it was estimated that a total of 15 PCEs (72 divided by 12, multiplied by 2.5) would enter and exit the study area during the a.m. and p.m. peak periods.

The estimated project-related construction trips (in PCEs) during the proposed project construction peak in March 2020 are summarized by hour in **Table 4.4-4**. The table includes construction employee vehicle trips, employee shuttle trips, and construction delivery truck trips used to transfer goods to and from the construction staging area(s).

**Table 4.4-4**
**Project Peak (March 2020) – Proposed Project-Related Construction Traffic PCEs**

| | | Employee [1] | | Truck [2] | | Employee Shuttles [3] | | |
|---|---|---|---|---|---|---|---|---|
| Hour | | Trips In | Trips Out | Trips In | Trips Out | Trips In | Trips Out | Total Construction PCEs |
| 0:00 | 1:00 | - | - | - | - | - | - | - |
| 1:00 | 2:00 | - | - | - | - | - | - | - |
| 2:00 | 3:00 | - | - | - | - | - | - | - |
| 3:00 | 4:00 | - | - | - | - | - | - | - |
| 4:00 | 5:00 | - | - | - | - | - | - | - |
| 5:00 | 6:00 | - | - | - | - | - | - | - |
| 6:00 | 7:00 | 157 | - | 15 | 15 | 12 | 12 | 211 |
| **7:00** | **8:00** | **-** | **165** | **15** | **15** | **14** | **14** | **223** |
| 8:00 | 9:00 | - | - | 15 | 15 | - | - | 30 |
| 9:00 | 10:00 | - | - | 15 | 15 | - | - | 30 |
| 10:00 | 11:00 | - | - | 15 | 15 | - | - | 30 |
| 11:00 | 12:00 | - | - | 15 | 15 | - | - | 30 |
| 12:00 | 13:00 | - | - | 15 | 15 | - | - | 30 |
| 13:00 | 14:00 | - | - | 15 | 15 | - | - | 30 |
| 14:00 | 15:00 | 157 | - | 15 | 15 | 12 | 12 | 211 |
| 15:00 | 16:00 | - | 157 | 15 | 15 | 12 | 12 | 211 |
| **16:00** | **17:00** | **-** | - | **15** | **15** | **-** | **-** | **30** |
| 17:00 | 18:00 | - | - | 15 | 15 | - | - | 30 |
| 18:00 | 19:00 | - | - | - | - | - | - | - |
| 19:00 | 20:00 | - | - | - | - | - | - | - |
| 20:00 | 21:00 | - | - | - | - | - | - | - |
| 21:00 | 22:00 | - | - | - | - | - | - | - |

**Table 4.4-4**
**Project Peak (March 2020) – Proposed Project-Related Construction Traffic PCEs**

| Hour | | Employee [1] Trips In | Employee [1] Trips Out | Truck [2] Trips In | Truck [2] Trips Out | Employee Shuttles [3] Trips In | Employee Shuttles [3] Trips Out | Total Construction PCEs |
|---|---|---|---|---|---|---|---|---|
| 22:00 | 23:00 | 165 | - | - | - | 14 | 14 | 193 |
| 23:00 | 0:00 | - | 157 | - | - | 12 | 12 | 181- |
| **Total** | | **479** | **479** | **180** | **180** | **76** | **76** | **1,470** |
| **Summary of Modeled Traffic PCEs** | | | | | | | | |
| Construction AM (7:00 AM– 8:00 AM) | | - | 165 | 15 | 15 | 14 | 14 | 223 |
| Construction PM (4:00 PM – 5:00 PM) | | - | - | 15 | 15 | - | - | 30 |

Notes:
[1] Estimate is based on 550 peak day construction employees. An occupancy factor of 1.15 employees per vehicle is included in the employee trip calculations.
[2] Truck trips (i.e., haul trucks) were converted at a rate of 2.5 PCEs per vehicle. Delivery trucks are planned to be located on an existing industrial parcel located on La Cienega Boulevard, just north of Imperial Highway (proposed primary construction staging area); or on a portion of an existing LAWA-owned construction staging area along the south side of Westchester Parkway, east of the southern terminus of La Tijera Boulevard (optional primary construction staging area). Additionally, the analysis assumes 100 percent of the construction staging would occur at either the proposed primary or optional primary construction staging areas (i.e., no combination of the two lots was included in the analysis).
[3] Employee shuttles were converted at a rate of 2.0 PCEs per vehicle. Shuttle occupancy was assumed to be 30 passengers per vehicle.
Source: CDM Smith (employee trip volumes, truck trips, vehicle schedule times) July 2016.
Prepared By: Ricondo & Associates, Inc., January 2017.

## Proposed Project Construction Trip Distribution

The locations of the proposed project construction site, construction employee parking area, delivery staging area(s), and other relevant features are depicted in **Figure 4.4-1 and Figure 4.4-3**. As shown in **Figure 4.4-3**, trucks would use the regional freeway system (I-405 and I-105), Imperial Highway, and La Cienega Boulevard to access the proposed primary construction staging area; or the regional freeway system (I-405 and I-105), Imperial Highway, Pershing Drive, and Westchester Parkway to access the optional primary construction staging area. The regional and local traffic flow distributions are also provided in **Figure 4.4-3**.

For purposes of distributing traffic on the construction traffic study area roadway network, it was assumed that construction employee trips would originate from geographic locations in proportion to the distribution of regional population, and specific street routing assumptions would be generally consistent with those of other previous LAX construction projects and data within the LAX Air Passenger Survey.[263] LAWA conducts airline passenger surveys on a regular basis to determine airline passenger travel characteristics and to assess changes in these travel patterns over time. Based on a review of the 2015 Air Passenger Survey Data, the most recent survey available at the Airport, it was determined that the regional travel and access patterns have not materially changed from the data obtained in 2011. For example, the 2015 Air Passenger Survey shows that the distribution of passengers accessing LAX from the major freeways is within three percentage points of those determined in 2011. Therefore, the distribution pattern assumptions used to distribute construction employee trips on the traffic study area network remain unchanged from those used in previous LAX project EIRs. As shown in **Figure 4.4-3**, it was estimated that approximately 21 percent of

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

the construction-related employee traffic would access the Airport from I-405 North, 23 percent from I-405 South, 32 percent from I-105 East, and 24 percent from local roadways. These route characteristics represent the roadways that a construction-related vehicle would use to access the traffic study area.

In assigning traffic to the construction traffic study area roadways, it was assumed that construction employee vehicles would approach the construction traffic study area in proportion to the regional population distributions described above. Truck traffic, however, is proposed to be limited to accessing the staging area(s) during construction via the regional freeway system (I-405 and I-105), Imperial Highway, Aviation Boulevard, Century Boulevard, La Cienega Boulevard, Pershing Drive, and Westchester Parkway. The freeway ramps, roadways, and intersections representing the travel paths for construction-related vehicles within the construction traffic study area were determined by reviewing the likely paths that would be used by vehicles traveling to the employee parking lots and to the construction staging areas, and assigning those trips to the most logical routes. The traffic study area circulation routes for construction employees and trucks are described in Appendix D.4.

## 4.4.3.8 Future Cumulative Traffic

The components of traffic for the future cumulative traffic condition are described in this section. The future cumulative traffic condition takes into consideration past, present, and reasonably foreseeable probable future projects, as identified in Table 3-1 and shown on Figure 3-1 in Chapter 3, *Overview of Project Setting*. In addition, baseline traffic volumes were multiplied by a growth factor of two percent per year to account for local background traffic growth through 2019. This background growth accounts for probable projects within the general vicinity of LAX area such as those indicated in Table 3-2; see Chapter 4, *Environmental Impact Analysis* (Description of Cumulative Impacts) for further details. The list of cumulative development projects is constantly changing as projects rotate off the list and new projects are approved and added to the list. Given that approval, construction, and operation of local area development projects is a continuous process, the traffic associated with the construction and operation of many past and current local area developments were likely present during the latest intersection counts, and therefore were likely represented in the traffic volume data used as a basis for the traffic study.

### Cumulative Projects

Development projects considered in the cumulative impact analysis include LAX Master Plan projects as well as other capital improvement projects undertaken by LAWA and other local agencies. Based on information available at the time the construction traffic analysis for the proposed project was prepared, the development projects forecasted to be under construction concurrent with the proposed project construction (October 2017 through December 2023) and of a nature that would contribute to cumulative traffic impacts were identified.

**Table 4.4-5** summarizes the estimated construction costs, and the assumed start and end dates of construction for the proposed project and each of the cumulative projects that are forecasted to be under construction concurrent with the proposed project; this list of probable future projects is shorter than the lists presented in Table 3-1 in Chapter 3, *Overview of Project Setting*, because it only includes projects that would be under construction concurrent with the proposed project construction. The estimated labor component of the total construction cost is a key element associated with estimating construction employee hours and resulting employee vehicle trips.


Source: Los Angeles World Airports, Ricondo & Associates, Inc., November 2016.
Prepared by: Ricondo & Associates, Inc., January 2017.

**Terminals 2 and 3 Modernization Project**

**Proposed Project Construction Vehicle Routes & Trip Distribution**

Figure
**4.4-3**

**Table 4.4-5**
**Construction Projects Concurrent with the Proposed Project Construction Period**

| Concurrent Construction Project | Estimated Total Construction Cost (Millions) | Start Date | End Date | Estimated Total Construction Employee Hours (Total) |
|---|---|---|---|---|
| Terminals 2 and 3 Modernization Program (proposed project) | $1,400 | Oct-17 | Dec-23 | 3,138,000 |
| Midfield Satellite Concourse North | $1,098 | Apr-15 | Nov-19 | 5,732,000 |
| Terminal 1.5 | $750 | Jun-17 | Jul-19 | 1,681,000 |
| Terminal 1 Improvements | $375 | Aug-14 | Dec-18 | 840,000 |
| Runway 7R-25L Rehabilitation | $200 | Sep-17 | Dec-18 | 336,000 |
| West Aircraft Maintenance Area Project | $67.3 | Aug-14 | Jan-18 | 425,000 |
| Miscellaneous Projects/Improvements | $945.5 | Jan-14 | Jul-20 | 530,000 |
| LAX Northside Development [1] | N/A[1/] | Apr-16 | Jun-25 | N/A[1] |
| Terminal 3 (T3) Connector | $175 | Oct-17 | Sep-19 | 393,000 |
| Airport Metro Connector (AMC) 96th Street Transit Station[2] | $619 | Jan-20 | Jan-23 | 1,040,000 |
| Airport Security Buildings | $75 | Jan-19 | Jan-21 | 126,000 |
| South Terminals Improvements | $660 | Nov-11 | Dec-18 | 1,479,000 |
| Argo Drain Sub-Basin Stormwater Infiltration and Treatment Facility | $7.5 | Mar-17 | Apr-19 | 17,000 |
| Canine Facility | $10 | Jan-18 | Jan-19 | 23,000 |
| Secured Area Access Post (SAAP) Project | $4 | Oct-17 | Apr-20 | 9,000 |
| Landside Access Modernization Program [3] | $5,500 | Oct-17 | Dec-35 | 13,100,000 |
| Concourse 0 | $1,500 | Apr-19 | Mar-23 | 3,362,000 |
| MSC South Project | $1,000 | Jan-20 | Jan-25 | 2,242,000 |
| Terminal 2 Improvements | $176 | Jan-14 | Jan-18 | 395,000 |
| North Airfield Improvements | $200 | July-19 | Dec-25 | 336,000 |
| Runway 7L-25R RSA South | $116.9 | May-16 | Nov-17 | 300,000 |
| LAX Bradley West Project | $525 | Nov-13 | Nov-17 | 1,177,000 |

Notes:

[1] Construction traffic estimates based on monthly construction activity estimates provided by Gibson Transportation Consulting, Inc..

[2] Estimated budget and schedule for the Airport Metro Connector: 96th Street Transit Station construction traffic based on information obtained from Crenshaw/LAX Transit Corridor Project Final EIR and project website.

[3] Construction traffic estimates provided by Connico Incorporated.

Source: LAWA; CDM Smith; Connico Incorporated, March 2016; Ricondo & Associates, Inc., July 2016; Los Angeles County Metropolitan Transportation Authority, Crenshaw/LAX Transit Corridor Project Final Environmental Impact Report/Environmental Impact Statement, Chapter 3, Transportation Impacts of the Alignment and Stations, Section 4.15, Construction Impacts, and Chapter 8, Financial Analysis and Comparison of Alternatives (Metro Crenshaw/LAX Transit Corridor cost), August 2011, Available: https://www.metro.net/projects/crenshaw_corridor.com (Metro Crenshaw/LAX Transit Corridor schedule), accessed January 12, 2017.

Prepared By: Ricondo & Associates, Inc., January 2017.

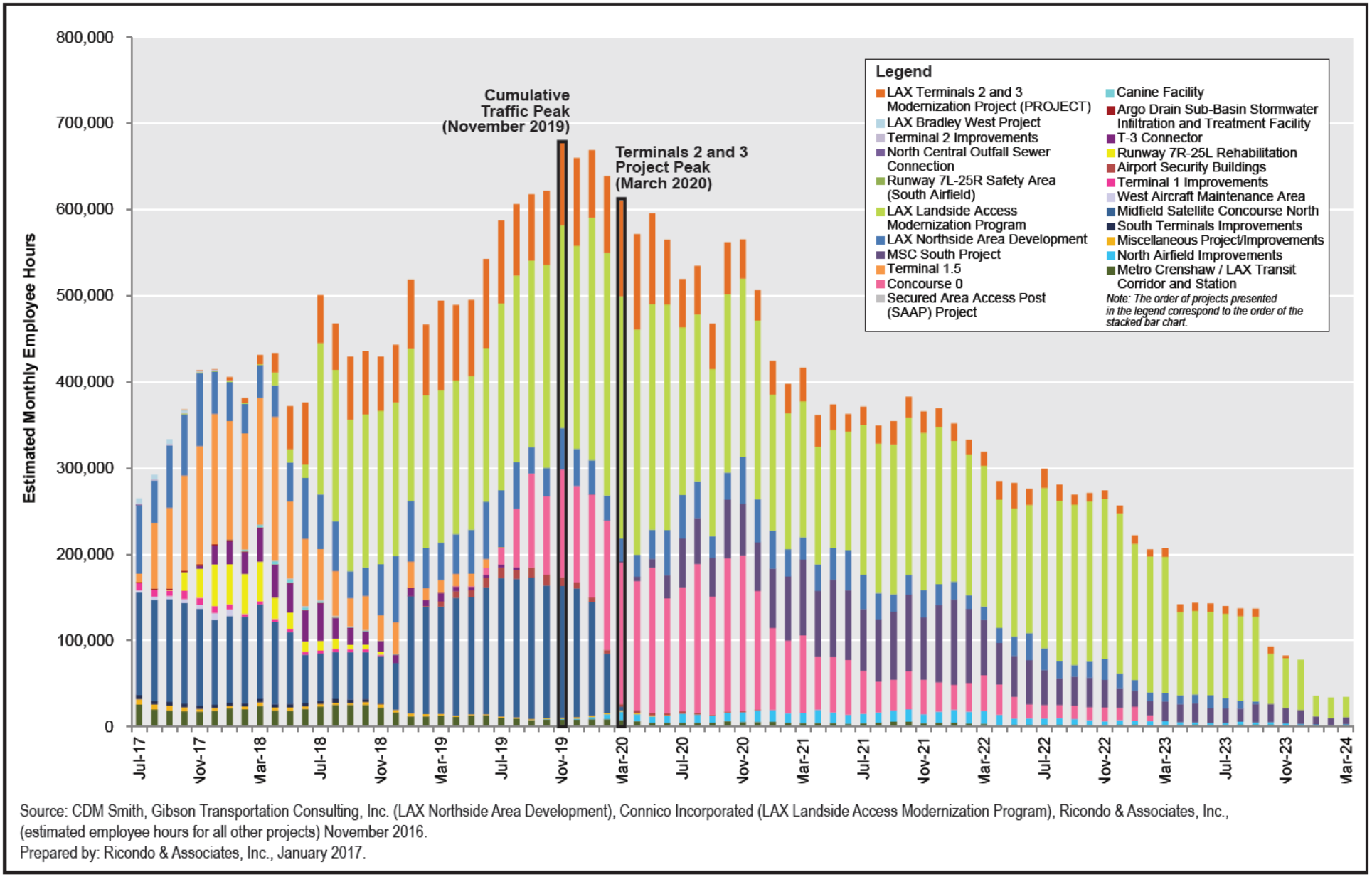
The activity characteristics of the resource loaded schedule (monthly employee hours, shift times, etc.) and associated construction-related vehicle trip activity developed for the Bradley West Project, in addition to other LAWA construction projects, was used to estimate the construction activity associated with the other concurrent projects for which detailed construction-related trip data were not available. Specifically, the ratio of total construction employee hours to total labor cost was calculated for the Bradley West Project, CUP-RP, WAMA, and MSC. A weighted average of this ratio was applied to the estimated labor costs associated with the other cumulative projects to provide an estimate of total employee hours required over the course of each of these other projects. In addition, the general distribution of employee hours over the course of the Bradley West Project construction program was used to allocate total employee hours over

the course of the individual projects on a monthly basis. This methodology was considered appropriate for this analysis as the Bradley West Project provided detailed information related to construction activity, costs, and associated vehicle trip activity, and provided detailed information related to the primary variables involved with determining labor schedules (i.e. project costs and timeline). Although it is likely that the other cumulative projects may experience different peaking patterns, the profile of the monthly distribution of employee hours over the course of the Bradley West Project provides a model profile calculated based on a comprehensive resource loaded schedule, which would provide a realistic surrogate for use in estimating activity from other cumulative projects for which detailed construction data are not available.

This approach was used to estimate construction employee hours and vehicle trips associated with all concurrent projects with the exception of the LAX Northside Area Development project for which construction trip information and monthly construction employee hour data were obtained from the traffic consultants involved in preparation of the traffic study for the LAX Northside Area Development EIR. Additionally, construction employee hours and vehicle trips associated with the MSC North, West Maintenance Area, Landside Access Modernization Program, and Terminal 1.5 Project were obtained based on detailed construction-related trip projections from the technical analyses prepared as part of their respective EIRs/Initial Studies.

**Figure 4.4-4** provides estimated employee hours by month for the proposed project and the cumulative construction projects that are forecasted to be under construction concurrent with the proposed project construction period. The figure includes all construction projects that are forecasted to occur over the course of the construction period for the proposed project. As shown in the figure, the peak period for proposed project construction is estimated to occur in March 2020, while the overall cumulative peak during construction of the proposed project is estimated to occur in November 2019.

Estimated a.m. and p.m. peak hour vehicle trips associated with the proposed project and the eight concurrent construction projects during November 2019 (cumulative peak period) are provided in **Table 4.4-6**. Traffic volumes associated with the proposed project during the peak period for cumulative traffic (November 2019) were estimated based on a review of the proposed project construction schedule. As a result, project employee traffic during the peak cumulative period (November 2019) would be about 86 percent of the employee traffic activity that would occur during the peak month for the project (March 2020).




Source: CDM Smith, Gibson Transportation Consulting, Inc. (LAX Northside Area Development), Connico Incorporated (LAX Landside Access Modernization Program), Ricondo & Associates, Inc., (estimated employee hours for all other projects) November 2016.
Prepared by: Ricondo & Associates, Inc., January 2017.

| Terminals 2 and 3 Modernization Project | Estimated Employee Hours for Proposed Project and Other Concurrent Construction Projects | Figure 4.4-4 |
|---|---|---|

**Table 4.4-6**
**Construction Project Trips Concurrent with the Proposed Project Construction Period**

| Project | Construction Trips in Passenger Car Equivalents (PCEs) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AM Peak Hour (7:00 AM - 8:00 AM) | | | | | | PM Peak Hour (4:00 PM - 5:00 PM) | | | | | |
| | Employees [2] | | Trucks [3] | | Shuttles [4] | | Employees [2] | | Trucks [3] | | Shuttles [4] | |
| | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| Proposed Project (November 2019) [1, 10] | -- | 142 | 13 | 13 | 12 | 12 | -- | -- | 13 | 13 | -- [9] | -- [9] |
| **Other Concurrent Projects in November 2019 [5,6]** | | | | | | | | | | | | |
| Midfield Satellite Concourse North [7] | 353 | -- | 92 | 92 | -- [9] | -- [9] | 83 | 353 | 92 | 92 | -- [9] | -- [9] |
| Miscellaneous Projects/Improvements | 4 | -- | 1 | 1 | -- [9] | -- [9] | -- | 4 | 1 | 1 | -- [9] | -- [9] |
| LAX Northside Area Development [8] | 234 | -- | -- | -- | -- [9] | -- [9] | -- | 234 | -- | -- | -- [9] | -- [9] |
| Airport Metro Connector (AMC) 96th Street Transit Station | 25 | -- | 5 | 5 | -- [9] | -- [9] | -- | 25 | 5 | 5 | -- [9] | -- [9] |
| Airport Security Buildings | 32 | -- | 6 | 6 | -- [9] | -- [9] | -- | 32 | 6 | 6 | -- [9] | -- [9] |
| Landside Access Modernization Program [9, 10] | -- | -- | 71 | 71 | -- [9] | -- [9] | -- | -- | 71 | 71 | -- [9] | -- [9] |
| Concourse 0 | 380 | -- | 65 | 65 | -- [9] | -- [9] | -- | 380 | 65 | 65 | -- [9] | -- [9] |
| North Airfield Improvements | 3 | -- | 1 | 1 | -- [9] | -- [9] | -- | 3 | 1 | 1 | -- [9] | -- [9] |
| **Total for Other Concurrent Projects in November 2019** | **1,031** | **--** | **241** | **241** | **-- [9]** | **-- [9]** | **83** | **1,031** | **241** | **241** | **-- [9]** | **-- [9]** |

Notes:

[1] Employee estimate is based on 473 peak day construction employees.

[2] An occupancy factor of 1.15 employees per vehicle is included in the employee trip calculations.

[3] Truck trips (i.e., haul trucks, concrete trucks) were converted at a rate of 2.5 PCEs per vehicle. Material delivery trucks are planned to be located at either the proposed primary construction staging area (existing industrial parcel located on La Cienega Boulevard, just north of Imperial Highway) or the optional primary construction staging area (on a portion of an existing LAWA-owned construction staging area along the south side of Westchester Parkway, east of the southern terminus of La Tijera Boulevard). The analysis assumes 100 percent of haul trucks would go to either the proposed primary or optional primary construction staging area.

[4] Employee shuttles were converted at a rate of 2.0 PCEs per vehicle. Shuttle occupancy was assumed to be 30 passengers per vehicle.

[5] The ratio of peak hour trips over total monthly employee construction hours for other concurrent projects was assumed to be equal to that calculated for the proposed Bradley West Project, CUP-RP, West Aircraft Maintenance Area, and MSC (weighted average), unless other project-specific data were available.

[6] The construction schedule for the Secured Area Access Project (SAAP) originally anticipated project completion in March 2019 but has been refined. The SAAP project is now anticipated to begin October 2017 and end April 2020, which occurs concurrent with the proposed project's cumulative peak (November 2019). However, upon review of the anticipated SAAP workforce levels, the number of employees and haul truck trips associated with the SAAP project are minimal. Furthermore, based on the anticipated shift time (6:00 a.m. to 3:30 p.m.), only a negligible portion of haul truck trips would occur during the AM peak hour (no haul truck trips during the PM peak hour), while no employee trips are estimated to occur during either the AM or PM peak hours. Therefore, it was determined that the revised SAAP construction schedule would have no appreciable effect on the cumulative peak analysis.

[7] Assumed to operate with a double-shift work schedule.

[8] Peak hour trips provided by Gibson Transportation Consulting.

[9] Employee shuttles would not affect public roadways or intersections due to the location of the project construction site and the employee parking areas. In some cases, employee parking would occur in close proximity to the construction site; in other cases, employee shuttles would travel largely or exclusively on on-airport roadways.

[10] Construction estimates provided by Connico Incorporated.

[11] Assumed to operate with a triple-shift work schedule.

Source: Gibson Transportation Consulting, Inc.; Connico Incorporated, June 2016; CDM Smith, Ricondo & Associates, Inc., July 2016.

Prepared By: Ricondo & Associates, Inc., January 2017.

For each of the cumulative projects, with exception of the MSC North Project and Landside Access Modernization Program, it was assumed that construction employees would access the traffic study area in the a.m. peak hour, and depart the traffic study area in the p.m. peak hour. The trip characteristics for the MSC North and Landside Access Modernization Program Project were based on the construction schedules developed for their respective EIRs. Furthermore, it was assumed that all construction projects would use a single work shift with the exception of the MSC North, which was assumed to utilize a double-shift work schedule with the same shift split characteristics as the Bradley West Project, and the Landside Access Modernization Program, which was assumed to utilize a triple-shift work schedule.

For purposes of distributing traffic within the construction traffic study area, employee parking and staging locations for the concurrent projects were identified. The assumed location of the construction employee parking and material staging area as well as general access and circulation patterns of construction-related vehicle activity for the proposed project are depicted in **Figure 4.4-5**. The contractor employee parking and staging areas for the eight concurrent construction projects during the cumulative peak period are also depicted in **Figure 4.4-5**, as well as other available staging locations in the area. The exhibit depicts parking and staging areas associated with the projects forecasted to be under construction concurrent with the peak cumulative period (November 2019) analyzed for this study. The regional and local area distribution patterns are generally the same as for the proposed project, with adjustments as necessary for access to the individual sites.

### 4.4.3.9 Planned Transportation Network Improvements

The Bradley West Project EIR identifies several intersection improvements throughout the construction traffic study area to mitigate impacts.[264] The following construction traffic study area intersections significantly impacted by the Bradley West Project would be improved when traffic activity levels reach certain activity thresholds at which an impact would be triggered.

- Imperial Highway and Sepulveda Boulevard (Intersection #12)
- La Cienega Boulevard and I-405 Ramps N/O Century Boulevard (Intersection #18)
- La Tijera Boulevard and Sepulveda Boulevard (Intersection #21)
- Sepulveda Boulevard and 76th/77th Street (Intersection #26)

Though it is possible improvements would be in place prior to the peak cumulative traffic period (November 2019), for purposes of this analysis it has been conservatively assumed that these improvements would not be in place. Therefore, the construction traffic analysis assumed that no transportation improvements would be implemented by November 2019 that would alter traffic patterns or modify the intersection capacity assumptions used in the analysis.

[264] City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Bradley West Project, (SCH 2008121080), Section 4.2.9, September 2009.

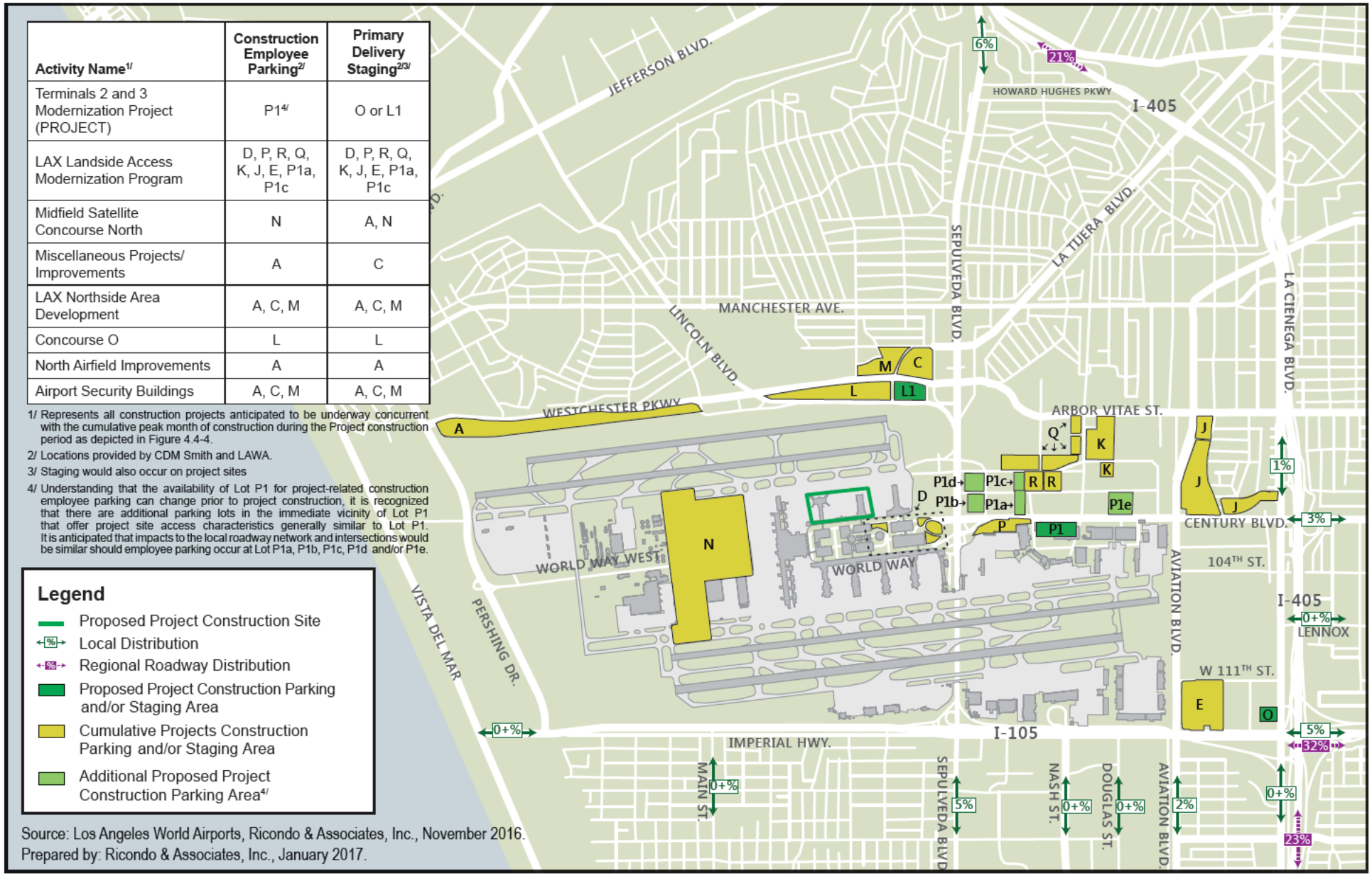
| Activity Name[1/] | Construction Employee Parking[2/] | Primary Delivery Staging[2/3/] |
|---|---|---|
| Terminals 2 and 3 Modernization Project (PROJECT) | P1[4/] | O or L1 |
| LAX Landside Access Modernization Program | D, P, R, Q, K, J, E, P1a, P1c | D, P, R, Q, K, J, E, P1a, P1c |
| Midfield Satellite Concourse North | N | A, N |
| Miscellaneous Projects/ Improvements | A | C |
| LAX Northside Area Development | A, C, M | A, C, M |
| Concourse O | L | L |
| North Airfield Improvements | A | A |
| Airport Security Buildings | A, C, M | A, C, M |

1/ Represents all construction projects anticipated to be underway concurrent with the cumulative peak month of construction during the Project construction period as depicted in Figure 4.4-4.

2/ Locations provided by CDM Smith and LAWA.

3/ Staging would also occur on project sites

4/ Understanding that the availability of Lot P1 for project-related construction employee parking can change prior to project construction, it is recognized that there are additional parking lots in the immediate vicinity of Lot P1 that offer project site access characteristics generally similar to Lot P1. It is anticipated that impacts to the local roadway network and intersections would be similar should employee parking occur at Lot P1a, P1b, P1c, P1d and/or P1e.




Source: Los Angeles World Airports, Ricondo & Associates, Inc., November 2016.
Prepared by: Ricondo & Associates, Inc., January 2017.

**Terminals 2 and 3 Modernization Project**

**Employee Parking and Staging Locations for Proposed Project and Other Projects at Construction Peak**

Figure **4.4-5**

## 4.4.4 Thresholds of Significance

The construction traffic study area intersections either fall entirely within the City of Los Angeles or share a boundary with the City of El Segundo or the City of Inglewood. The intersections which fall entirely within the City of Los Angeles were evaluated for traffic impacts using the LADOT traffic impact significance criteria. Intersections lying on the boundary of multiple jurisdictions were evaluated using the more conservative threshold of significance criteria; in all of these cases the LADOT criteria were shown to have the most conservative thresholds, as the allowable project-related increase in v/c by LADOT is smaller than that of other jurisdictions.

### 4.4.4.1 City of El Segundo Impact Criteria

In the City of El Segundo, an impact is considered significant if the following threshold is exceeded:[265]

- The LOS is E or F, its final volume/capacity (v/c) ratio is 0.901 or greater, and the project-related increase in v/c is 0.020 or greater.

### 4.4.4.2 City of Inglewood Impact Criteria

In the City of Inglewood, an impact is considered significant if the following threshold is exceeded:[266]

- The LOS is F, its final v/c ratio is 1.001 or greater, and the project-related increase in v/c is 0.020 or greater.

### 4.4.4.3 City of Los Angeles Impact Criteria

In accordance with LADOT criteria defined in its Traffic Study Policy and Procedures,[267] an impact is considered to be significant if one of the following thresholds is exceeded:

- The LOS is C, its final v/c ratio is 0.701 to 0.80, and the project-related increase in v/c is 0.040 or greater, or
- The LOS is D, its final v/c ratio is 0.801 to 0.90, and the project-related increase in v/c is 0.020 or greater, or
- The LOS is E or F, its final v/c ratio is 0.901 or greater, and the project-related increase in v/c is 0.010 or greater.

The "final v/c ratio" as defined by LADOT consists of the future v/c ratio at an intersection that includes volume from the project, baseline, ambient background growth, and other cumulative development projects, but without proposed intersection traffic mitigation.

The "project-related increase" is defined as the change in the unmitigated LOS (v/c) condition between the (a) future v/c "with" the project, baseline, ambient background growth (for the cumulative impact analysis), and other cumulative development project growth, and (b) the future v/c "without" the project, but with baseline, ambient background growth, and other cumulative development project growth.

### 4.4.4.4 Temporary Transportation Impacts During Construction

A significant impact on transportation during construction would occur if the proposed project would result in one or more of the following conditions:

- Result in temporary lane, alley, or street closures within a major or secondary highway right-of-way for more than one day.

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[265] City of El Segundo, Planning and Building Safety Department, City of El Segundo, Circulation Element of the General Plan, Policy C3-1.2, September 2004.

[266] Raju Associates, Inc., Traffic Study Assumptions and Methodology Memorandum to City of Inglewood, October 27, 2015.

[267] City of Los Angeles Department of Transportation, Traffic Study Policies and Procedures, August 2014.

- Result in the loss of regular vehicular or pedestrian access to airport, commercial, or industrial facilities for more than one day.
- Result in the temporary loss for more than one day of an existing bus stop or rerouting of a bus route.

These thresholds of significance were utilized because they address the concerns for traffic disruption associated with construction of the proposed project within the CTA. These thresholds were derived from the L.A. CEQA Thresholds Guide.[268]

## 4.4.5 Impacts Analysis

### 4.4.5.1 Impact Comparison 1: Peak Project Construction Traffic Plus Baseline Traffic Measured Against Baseline

This comparison provides the basis for determining project-related impacts. The comparison is based on project-specific traffic generation during the peak construction period (March 2020) added to baseline traffic volumes. The resulting levels of service were compared to the levels of service associated with the baseline condition. A significant impact would be realized if the thresholds of significance are met or exceeded. **Table 4.4-7** and **Table 4.4-8** compare LOS under baseline and project-plus-baseline conditions. **Table 4.4-7** presents the results assuming material staging is located at the proposed primary construction staging area (existing industrial parcel located on La Cienega Boulevard, just north of Imperial Highway), while the results in **Table 4.4-8** assume material staging is located at the optional primary construction staging area (area along the south side of Westchester Parkway, east of the southern terminus of La Tijera Boulevard). As shown, no significant impacts would occur under the proposed project assuming material staging occurs at either the proposed primary or optional primary construction staging area.

### 4.4.5.2 Impact Comparison 2: Cumulative Construction Traffic (November 2019) Measured Against Baseline

This comparison was conducted in two steps, which is consistent with State CEQA Guidelines Section 15130. An initial comparison was conducted by comparing the LOS (v/c) associated with peak cumulative traffic volumes with the baseline levels of service. This initial comparison was conducted to determine if there would be a significant cumulative impact. If a significant cumulative impact was determined, then an additional comparison was conducted to determine if the proposed project would make a cumulatively considerable contribution to the significant cumulative impact. This second comparison was conducted by comparing cumulative conditions with and without the proposed project. Cumulatively considerable contributions are realized when the thresholds of significance defined above are met or exceeded. If the project's contribution to a significant cumulative impact is not determined to be cumulatively considerable, then the project's impact under cumulative conditions is considered less than significant.

The impact comparisons are depicted in **Table 4.4-9** (proposed primary construction staging area) and **Table 4.4-10** (optional primary construction staging area). As shown in **Table 4.4-9**, 21 intersections would be significantly impacted during the cumulative peak construction period (November 2019) with staging occurring at the proposed primary construction staging area. Furthermore, the proposed project's contribution to such significant cumulative impacts would be cumulatively considerable at two of the significantly impacted intersections: Century Boulevard and Sepulveda Boulevard (Intersection #5) and Imperial Highway and I-105 Ramp (Intersection #14). The cumulatively considerable impact at Century Boulevard and Sepulveda Boulevard (Intersection #5) would be generated by construction employees exiting the employee parking area via Avion Drive to westbound Century Boulevard and then southbound Sepulveda Boulevard. The cumulatively considerable impact at Imperial Highway and I-105 Ramp (Intersection #14) would be generated by haul truck traffic transferring materials to/from the proposed

[268] City of Los Angeles, L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analyses in Los Angeles, 2006.

primary construction staging area via La Cienega Boulevard, Imperial Highway, Pershing Drive, and Westchester Parkway.

Of the remaining significantly impacted intersections, the proposed project would not contribute (change in V/C of 0.000) to impacts to 4 of the 21 significantly impacted intersections, and would only minimally contribute (change in V/C between 0.001 and 0.006) to impacts to the remaining significantly impacted intersections during the cumulative peak construction period (November 2019), assuming construction staging occurs at the proposed primary construction staging area. Similarly, assuming construction staging occurs at the optional primary construction staging area (shown in **Table 4.4-10**), 21 intersections would be significantly impacted during the cumulative peak construction period (November 2019); however, with the optional primary construction staging area, the proposed project's contribution to such significant cumulative impacts would be cumulatively considerable at only one of the significantly impacted intersections: Century Boulevard and Sepulveda Boulevard (Intersection #5), caused by construction employees exiting the employee parking area via Avion Drive to westbound Century Boulevard and then southbound Sepulveda Boulevard. Of the remaining significantly impacted intersections, the proposed project would not contribute (change in v/c of 0.000) to impacts to 10 of the 21 significantly impacted intersections, and would only minimally contribute (change in v/c between 0.001 and 0.006) to impacts to the remaining significantly impacted intersections during the cumulative peak construction period, assuming construction staging occurs at the optional primary construction staging area.

### 4.4.5.3 Temporary Transportation Impacts During Construction

Construction of the proposed project would occur within the northern portion of the CTA, at T2 and T3 and adjacent apron areas. This construction activity would temporarily add to existing traffic volumes within the CTA, which, in turn, could temporarily adversely affect roadway link and pedestrian flows. To the extent that project-related construction within the CTA would require temporary lane closures and detours, on-Airport traffic conditions could be impacted. To minimize impacts to the CTA roadway system and Airport operations during construction, any lane closures required during construction would occur during the night shift whenever possible. It is unlikely that lane closures would be required for any extended period of time. There is the possibility that a short-term lane closure on the upper level roadway within the CTA may be needed at some point in the construction program for the temporary installation of a crane to transfer/place structural steel to areas within the project site. [269] Such a lane closure, if any, would be unlikely to exceed one week, and would require advance coordination with, and approval by LAWA in accordance with CALM procedures. Access to the passenger terminals would be maintained throughout any lane closures, but drop-off and pick-up areas may temporarily shift. Although lane closures may exceed one day, the lane closures would not occur on a major or secondary highway, they would not result in the loss of vehicle or pedestrian access to the Airport, nor would they result in the loss of a bus stop or route; therefore, based on the thresholds described above in Section 4.4.4.4, transportation impacts of temporary lane closures associated with construction of the proposed project would be less than significant.

[269] The need, if any, for the use and placement of such a crane will be up to the construction means and methods implemented by the selected construction contractor.

**Table 4.4-7**
**Proposed Project - Level of Service Analysis Results - Impact Comparison 1 Baseline Compared to Project Plus Baseline (Proposed Primary Construction Staging Area)**

| Intersection | | Peak Hour [1] | Baseline | | Project Plus Baseline | | Change in V/C | Significant Impact |
|---|---|---|---|---|---|---|---|---|
| | | | V/C [2] | LOS [3] | V/C [2] | LOS [3] | | |
| 1. | Aviation Boulevard and Century Boulevard | AM Peak Hour | 0.598 | A | 0.600 | A | 0.002 | No |
| | | PM Peak Hour | 0.826 | D | 0.826 | D | 0.000 | No |
| 2. | Imperial Highway and Aviation Boulevard | AM Peak Hour | 0.712 | C | 0.712 | C | 0.000 | No |
| | | PM Peak Hour | 0.650 | B | 0.653 | B | 0.003 | No |
| 3. | Aviation Boulevard and 111th Street | AM Peak Hour | 0.540 | A | 0.540 | A | 0.000 | No |
| | | PM Peak Hour | 0.478 | A | 0.478 | A | 0.000 | No |
| 4. | La Cienega Boulevard and Century Boulevard | AM Peak Hour | 0.817 | D | 0.818 | D | 0.001 | No |
| | | PM Peak Hour | 0.899 | D | 0.899 | D | 0.000 | No |
| 5. | Sepulveda Blvd. and Century Blvd. | AM Peak Hour | 0.824 | D | 0.841 | D | 0.017 | No |
| | | PM Peak Hour | 0.725 | C | 0.725 | C | 0.000 | No |
| 6. | Century Boulevard and I-405 Northbound Ramp | AM Peak Hour | 0.924 | E | 0.924 | E | 0.000 | No |
| | | PM Peak Hour | 0.676 | B | 0.676 | B | 0.000 | No |
| 7. | Imperial Highway and Douglas Street | AM Peak Hour | 0.393 | A | 0.397 | A | 0.004 | No |
| | | PM Peak Hour | 0.623 | B | 0.627 | B | 0.004 | No |
| 8. | Sepulveda Boulevard and Howard Hughes Pkwy. | AM Peak Hour | 0.671 | B | 0.673 | B | 0.002 | No |
| | | PM Peak Hour | 0.651 | B | 0.651 | B | 0.000 | No |
| 9. | Imperial Highway and La Cienega Boulevard | AM Peak Hour | 0.474 | A | 0.490 | A | 0.016 | No |
| | | PM Peak Hour | 0.698 | B | 0.700 | B | 0.002 | No |
| 10. | Imperial Highway and Main Street | AM Peak Hour | 0.616 | B | 0.622 | B | 0.006 | No |
| | | PM Peak Hour | 0.624 | B | 0.629 | B | 0.005 | No |
| 11. | Imperial Highway and Pershing Drive | AM Peak Hour | 0.429 | A | 0.434 | A | 0.005 | No |
| | | PM Peak Hour | 0.498 | A | 0.504 | A | 0.006 | No |
| 12. | Imperial Highway and Sepulveda Boulevard | AM Peak Hour | 0.934 | E | 0.935 | E | 0.001 | No |
| | | PM Peak Hour | 1.323 | F | 1.323 | F | 0.000 | No |
| 13. | Imperial Highway and Nash Street | AM Peak Hour | 0.614 | B | 0.618 | B | 0.004 | No |
| | | PM Peak Hour | 0.383 | A | 0.386 | A | 0.003 | No |
| 14. | Imperial Highway and I-105 Ramp | AM Peak Hour | 0.811 | D | 0.824 | D | 0.013 | No |
| | | PM Peak Hour | 0.556 | A | 0.561 | A | 0.005 | No |
| 15. | Imperial Highway and I-405 Northbound Ramp | AM Peak Hour | 0.597 | A | 0.599 | A | 0.002 | No |
| | | PM Peak Hour | 0.832 | D | 0.832 | D | 0.000 | No |
| 16. | La Cienega Boulevard and Lennox Boulevard | AM Peak Hour | 0.553 | A | 0.553 | A | 0.000 | No |
| | | PM Peak Hour | 0.530 | A | 0.530 | A | 0.000 | No |
| 17. | La Cienega Boulevard and 111th Street | AM Peak Hour | 0.360 | A | 0.360 | A | 0.000 | No |
| | | PM Peak Hour | 0.301 | A | 0.301 | A | 0.000 | No |
| 18. | La Cienega Blvd. & I-405 Southbound Ramps North | AM Peak Hour | 0.904 | E | 0.905 | E | 0.001 | No |

**Table 4.4-7**
**Proposed Project - Level of Service Analysis Results - Impact Comparison 1 Baseline Compared to Project Plus Baseline (Proposed Primary Construction Staging Area)**

| Intersection | | Peak Hour [1] | Baseline | | Project Plus Baseline | | Change in V/C | Significant Impact |
|---|---|---|---|---|---|---|---|---|
| | | | V/C [2] | LOS [3] | V/C [2] | LOS [3] | | |
| | of Century | PM Peak Hour | 0.754 | C | 0.754 | C | 0.000 | No |
| 19. | La Cienega Blvd. & I-405 Southbound Ramps South of Century | AM Peak Hour | 0.449 | A | 0.464 | A | 0.015 | No |
| | | PM Peak Hour | 0.351 | A | 0.351 | A | 0.000 | No |
| 20. | La Cienega Blvd. & I-405 Southbound Ramps North of Imperial | AM Peak Hour | 0.507 | A | 0.528 | A | 0.021 | No |
| | | PM Peak Hour | 0.291 | A | 0.314 | A | 0.023 | No |
| 21. | Sepulveda Boulevard and La Tijera Boulevard | AM Peak Hour | 0.692 | B | 0.695 | B | 0.003 | No |
| | | PM Peak Hour | 0.819 | D | 0.819 | D | 0.000 | No |
| 22. | Sepulveda Boulevard and Lincoln Boulevard | AM Peak Hour | 0.780 | C | 0.780 | C | 0.000 | No |
| | | PM Peak Hour | 0.964 | E | 0.964 | E | 0.000 | No |
| 23. | Sepulveda Boulevard and Manchester Avenue | AM Peak Hour | 0.865 | D | 0.868 | D | 0.003 | No |
| | | PM Peak Hour | 0.885 | D | 0.885 | D | 0.000 | No |
| 24. | Westchester Parkway and Pershing Drive | AM Peak Hour | 0.473 | A | 0.478 | A | 0.005 | No |
| | | PM Peak Hour | 0.286 | A | 0.298 | A | 0.012 | No |
| 25. | Sepulveda Boulevard and Westchester Parkway | AM Peak Hour | 0.863 | D | 0.866 | D | 0.003 | No |
| | | PM Peak Hour | 0.893 | D | 0.893 | D | 0.000 | No |
| 26. | Sepulveda Boulevard and 76th/77th Street | AM Peak Hour | 0.915 | E | 0.917 | E | 0.002 | No |
| | | PM Peak Hour | 0.487 | A | 0.487 | A | 0.000 | No |
| 27. | Sepulveda Boulevard and 79th/80th Street | AM Peak Hour | 0.780 | C | 0.782 | C | 0.002 | No |
| | | PM Peak Hour | 0.504 | A | 0.504 | A | 0.000 | No |
| 28. | Sepulveda Boulevard and 83rd Street | AM Peak Hour | 0.643 | B | 0.646 | B | 0.003 | No |
| | | PM Peak Hour | 0.457 | A | 0.457 | A | 0.000 | No |
| 29. | La Cienega Boulevard and 104th Street | AM Peak Hour | 0.375 | A | 0.375 | A | 0.000 | No |
| | | PM Peak Hour | 0.407 | A | 0.407 | A | 0.000 | No |

Notes:
[1] The hours of analysis include the a.m. peak (7:00 a.m. - 8:00 a.m.), and the p.m. peak (4:00 p.m. - 5:00 p.m.).
[2] Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #6 and #15, which are not a part of the LADOT system.
[3] Level of Service range: A (excellent) to F (failure).
Source: Appendix D.3 of this EIR.

**Table 4.4-8**
**Proposed Project - Level of Service Analysis Results - Impact Comparison 1 Baseline Compared to Project Plus Baseline (Optional Primary Construction Staging Area)**

| Intersection | | Peak Hour [1] | Baseline | | Project Plus Baseline | | Change in V/C | Significant Impact |
|---|---|---|---|---|---|---|---|---|
| | | | V/C [2] | LOS [3] | V/C [2] | LOS [3] | | |
| 1. | Aviation Boulevard and Century Boulevard | AM Peak Hour | 0.598 | A | 0.600 | A | 0.002 | No |
| | | PM Peak Hour | 0.826 | D | 0.826 | D | 0.000 | No |
| 2. | Imperial Highway and Aviation Boulevard | AM Peak Hour | 0.712 | C | 0.712 | C | 0.000 | No |
| | | PM Peak Hour | 0.650 | B | 0.650 | B | 0.000 | No |
| 3. | Aviation Boulevard and 111th Street | AM Peak Hour | 0.540 | A | 0.540 | A | 0.000 | No |
| | | PM Peak Hour | 0.478 | A | 0.478 | A | 0.000 | No |
| 4. | La Cienega Boulevard and Century Boulevard | AM Peak Hour | 0.817 | D | 0.818 | D | 0.001 | No |
| | | PM Peak Hour | 0.899 | D | 0.899 | D | 0.000 | No |
| 5. | Sepulveda Blvd. and Century Blvd. | AM Peak Hour | 0.824 | D | 0.841 | D | 0.017 | No |
| | | PM Peak Hour | 0.725 | C | 0.725 | C | 0.000 | No |
| 6. | Century Boulevard and I-405 Northbound Ramp | AM Peak Hour | 0.924 | E | 0.924 | E | 0.000 | No |
| | | PM Peak Hour | 0.676 | B | 0.676 | B | 0.000 | No |
| 7. | Imperial Highway and Douglas Street | AM Peak Hour | 0.393 | A | 0.393 | A | 0.000 | No |
| | | PM Peak Hour | 0.623 | B | 0.623 | B | 0.000 | No |
| 8. | Sepulveda Boulevard and Howard Hughes Pkwy. | AM Peak Hour | 0.671 | B | 0.673 | B | 0.002 | No |
| | | PM Peak Hour | 0.651 | B | 0.651 | B | 0.000 | No |
| 9. | Imperial Highway and La Cienega Boulevard | AM Peak Hour | 0.474 | A | 0.474 | A | 0.000 | No |
| | | PM Peak Hour | 0.698 | B | 0.698 | B | 0.000 | No |
| 10. | Imperial Highway and Main Street | AM Peak Hour | 0.616 | B | 0.622 | B | 0.006 | No |
| | | PM Peak Hour | 0.624 | B | 0.629 | B | 0.005 | No |
| 11. | Imperial Highway and Pershing Drive | AM Peak Hour | 0.429 | A | 0.434 | A | 0.005 | No |
| | | PM Peak Hour | 0.498 | A | 0.504 | A | 0.006 | No |
| 12. | Imperial Highway and Sepulveda Boulevard | AM Peak Hour | 0.934 | E | 0.935 | E | 0.001 | No |
| | | PM Peak Hour | 1.323 | F | 1.323 | F | 0.000 | No |
| 13. | Imperial Highway and Nash Street | AM Peak Hour | 0.614 | B | 0.614 | B | 0.000 | No |
| | | PM Peak Hour | 0.383 | A | 0.383 | A | 0.000 | No |
| 14. | Imperial Highway and I-105 Ramp | AM Peak Hour | 0.811 | D | 0.814 | D | 0.003 | No |
| | | PM Peak Hour | 0.556 | A | 0.556 | A | 0.000 | No |
| 15. | Imperial Highway and I-405 Northbound Ramp | AM Peak Hour | 0.597 | A | 0.597 | A | 0.000 | No |
| | | PM Peak Hour | 0.832 | D | 0.832 | D | 0.000 | No |
| 16. | La Cienega Boulevard and Lennox Boulevard | AM Peak Hour | 0.553 | A | 0.553 | A | 0.000 | No |
| | | PM Peak Hour | 0.530 | A | 0.530 | A | 0.000 | No |
| 17. | La Cienega Boulevard and 111th Street | AM Peak Hour | 0.360 | A | 0.360 | A | 0.000 | No |
| | | PM Peak Hour | 0.301 | A | 0.301 | A | 0.000 | No |
| 18. | La Cienega Blvd. & I-405 Southbound Ramps North of Century | AM Peak Hour | 0.904 | E | 0.905 | E | 0.001 | No |
| | | PM Peak Hour | 0.754 | C | 0.754 | C | 0.000 | No |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 19. | La Cienega Blvd. & I-405 Southbound Ramps South of Century | AM Peak Hour | 0.449 | A | 0.464 | A | 0.015 | No |
| | | PM Peak Hour | 0.351 | A | 0.351 | A | 0.000 | No |
| 20. | La Cienega Blvd. & I-405 Southbound Ramps North of Imperial | AM Peak Hour | 0.507 | A | 0.507 | A | 0.000 | No |
| | | PM Peak Hour | 0.291 | A | 0.291 | A | 0.000 | No |
| 21. | Sepulveda Boulevard and La T jera Boulevard | AM Peak Hour | 0.692 | B | 0.695 | B | 0.003 | No |
| | | PM Peak Hour | 0.819 | D | 0.819 | D | 0.000 | No |
| 22. | Sepulveda Boulevard and Lincoln Boulevard | AM Peak Hour | 0.780 | C | 0.780 | C | 0.000 | No |
| | | PM Peak Hour | 0.964 | E | 0.964 | E | 0.000 | No |
| 23. | Sepulveda Boulevard and Manchester Avenue | AM Peak Hour | 0.865 | D | 0.868 | D | 0.003 | No |
| | | PM Peak Hour | 0.885 | D | 0.885 | D | 0.000 | No |
| 24. | Westchester Parkway and Pershing Drive | AM Peak Hour | 0.473 | A | 0.478 | A | 0.005 | No |
| | | PM Peak Hour | 0.286 | A | 0.298 | A | 0.012 | No |
| 25. | Sepulveda Boulevard and Westchester Parkway | AM Peak Hour | 0.863 | D | 0.866 | D | 0.003 | No |
| | | PM Peak Hour | 0.893 | D | 0.893 | D | 0.000 | No |
| 26. | Sepulveda Boulevard and 76th/77th Street | AM Peak Hour | 0.915 | E | 0.917 | E | 0.002 | No |
| | | PM Peak Hour | 0.487 | A | 0.487 | A | 0.000 | No |
| 27. | Sepulveda Boulevard and 79th/80th Street | AM Peak Hour | 0.780 | C | 0.782 | C | 0.002 | No |
| | | PM Peak Hour | 0.504 | A | 0.504 | A | 0.000 | No |
| 28. | Sepulveda Boulevard and 83rd Street | AM Peak Hour | 0.643 | B | 0.646 | B | 0.003 | No |
| | | PM Peak Hour | 0.457 | A | 0.457 | A | 0.000 | No |
| 29. | La Cienega Boulevard and 104th Street | AM Peak Hour | 0.375 | A | 0.375 | A | 0.000 | No |
| | | PM Peak Hour | 0.407 | A | 0.407 | A | 0.000 | No |

Notes:

[1] The hours of analysis include the a.m. peak (7:00 a.m. - 8:00 a.m.), and the p.m. peak (4:00 p.m. - 5:00 p.m.).

[2] Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #6 and #15, which are not a part of the LADOT system.

[3] Level of Service range: A (excellent) to F (failure).

Source: Appendix D.3 of this EIR.

**Table 4.4-9**
**Proposed Project - Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (November 2019) – Proposed Primary Construction Staging Area**

| Intersection | | Peak Hour [1] | Baseline [A] | | Cumulative Peak (November 2019) Without Project [B] | | With Project [C] | | | Cumulative Impact Determination [C]-[A] | | Cumulatively Considerable Determination [C]-[B] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V/C [2] | LOS [3] | V/C [2] | LOS [3] | V/C [2] | LOS [3] | Change in V/C | Significant Cumulative Impact? | Change in V/C | Cumulatively Considerable Contribution? |
| 1. | Aviation Boulevard and Century Boulevard | AM Peak Hour | 0.598 | A | 0.690 | B | 0.691 | B | 0.093 | No | 0.001 | No |
| | | PM Peak Hour | 0.826 | D | 0.969 | E | 0.969 | E | 0.143 | Yes | 0.000 | No |
| 2. | Imperial Highway and Aviation Boulevard | AM Peak Hour | 0.712 | C | 0.820 | D | 0.820 | D | 0.108 | Yes | 0.000 | No |
| | | PM Peak Hour | 0.650 | B | 0.761 | C | 0.764 | C | 0.114 | Yes | 0.003 | No |
| 3. | Aviation Boulevard and 111th Street | AM Peak Hour | 0.540 | A | 0.608 | B | 0.608 | B | 0.068 | No | 0.000 | No |
| | | PM Peak Hour | 0.478 | A | 0.533 | A | 0.533 | A | 0.055 | No | 0.000 | No |
| 4. | La Cienega Boulevard and Century Boulevard | AM Peak Hour | 0.817 | D | 0.871 | D | 0.872 | D | 0.055 | Yes | 0.001 | No |
| | | PM Peak Hour | 0.899 | D | 0.999 | E | 0.999 | E | 0.100 | Yes | 0.000 | No |
| 5. | Sepulveda Blvd. and Century Blvd. | AM Peak Hour | 0.824 | D | 0.926 | E | 0.942 | E | 0.118 | Yes | 0.016 | Yes |
| | | PM Peak Hour | 0.725 | C | 0.775 | C | 0.776 | C | 0.051 | Yes | 0.001 | No |
| 6. | Century Boulevard and I-405 Northbound Ramp | AM Peak Hour | 0.924 | E | 1.010 | F | 1.010 | F | 0.086 | Yes | 0.000 | No |
| | | PM Peak Hour | 0.676 | B | 0.742 | C | 0.742 | C | 0.066 | Yes | 0.000 | No |
| 7. | Imperial Highway and Douglas Street | AM Peak Hour | 0.393 | A | 0.470 | A | 0.473 | A | 0.080 | No | 0.003 | No |
| | | PM Peak Hour | 0.623 | B | 0.713 | C | 0.716 | C | 0.093 | Yes | 0.003 | No |
| 8. | Sepulveda Boulevard and Howard Hughes Parkway | AM Peak Hour | 0.671 | B | 0.768 | C | 0.770 | C | 0.099 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.651 | B | 0.700 | B | 0.700 | B | 0.049 | No | 0.000 | No |
| 9. | Imperial Highway and La Cienega Boulevard | AM Peak Hour | 0.474 | A | 0.517 | A | 0.525 | A | 0.051 | No | 0.008 | No |
| | | PM Peak Hour | 0.698 | B | 0.758 | C | 0.759 | C | 0.061 | Yes | 0.001 | No |
| 10. | Imperial Highway and Main Street | AM Peak Hour | 0.616 | B | 1.179 | F | 1.185 | F | 0.569 | Yes | 0.006 | No |
| | | PM Peak Hour | 0.624 | B | 0.839 | D | 0.842 | D | 0.218 | Yes | 0.003 | No |
| 11. | Imperial Highway and Pershing Drive | AM Peak Hour | 0.429 | A | 0.523 | A | 0.527 | A | 0.098 | No | 0.004 | No |
| | | PM Peak Hour | 0.498 | A | 0.723 | C | 0.726 | C | 0.228 | Yes | 0.003 | No |
| 12. | Imperial Highway and Sepulveda Boulevard | AM Peak Hour | 0.934 | E | 1.117 | F | 1.118 | F | 0.184 | Yes | 0.001 | No |
| | | PM Peak Hour | 1.323 | F | 1.477 | F | 1.477 | F | 0.154 | Yes | 0.000 | No |
| 13. | Imperial Highway and Nash Street | AM Peak Hour | 0.614 | B | 0.848 | D | 0.854 | D | 0.240 | Yes | 0.006 | No |
| | | PM Peak Hour | 0.383 | A | 0.458 | A | 0.461 | A | 0.078 | No | 0.003 | No |
| 14. | Imperial Highway and I-105 Ramp | AM Peak Hour | 0.811 | D | 0.965 | E | 0.977 | E | 0.166 | Yes | 0.012 | Yes |
| | | PM Peak Hour | 0.556 | A | 0.648 | B | 0.652 | B | 0.096 | No | 0.004 | No |
| 15. | Imperial Highway and I-405 Northbound Ramp | AM Peak Hour | 0.597 | A | 0.650 | B | 0.651 | B | 0.054 | No | 0.001 | No |
| | | PM Peak Hour | 0.832 | D | 0.895 | D | 0.895 | D | 0.063 | Yes | 0.000 | No |
| 16. | La Cienega Boulevard and Lennox Boulevard | AM Peak Hour | 0.553 | A | 0.595 | A | 0.595 | A | 0.042 | No | 0.000 | No |
| | | PM Peak Hour | 0.530 | A | 0.568 | A | 0.568 | A | 0.038 | No | 0.000 | No |
| 17. | La Cienega Boulevard and 111th Street | AM Peak Hour | 0.360 | A | 0.389 | A | 0.389 | A | 0.029 | No | 0.000 | No |

**Table 4.4-9**
**Proposed Project - Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (November 2019) – Proposed Primary Construction Staging Area**

| Intersection | | Peak Hour [1] | Baseline [A] | | Cumulative Peak (November 2019) Without Project [B] | | Cumulative Peak (November 2019) With Project [C] | | | Cumulative Impact Determination [C]-[A] | | Cumulatively Considerable Determination [C]-[B] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V/C [2] | LOS [3] | V/C [2] | LOS [3] | V/C [2] | LOS [3] | Change in V/C | Significant Cumulative Impact? | Change in V/C | Cumulatively Considerable Contribution? |
| | | PM Peak Hour | 0.301 | A | 0.324 | A | 0.324 | A | 0.023 | No | 0.000 | No |
| 18. | La Cienega Blvd. & I-405 Southbound Ramps North of Century | AM Peak Hour | 0.904 | E | 0.964 | E | 0.964 | E | 0.060 | Yes | 0.000 | No |
| | | PM Peak Hour | 0.754 | C | 0.804 | D | 0.804 | D | 0.050 | Yes | 0.000 | No |
| 19. | La Cienega Blvd. & I-405 Southbound Ramps South of Century | AM Peak Hour | 0.449 | A | 0.485 | A | 0.497 | A | 0.048 | No | 0.012 | No |
| | | PM Peak Hour | 0.351 | A | 0.400 | A | 0.400 | A | 0.049 | No | 0.000 | No |
| 20. | La Cienega Blvd. & I-405 Southbound Ramps North of Imperial | AM Peak Hour | 0.507 | A | 0.553 | A | 0.571 | A | 0.064 | No | 0.018 | No |
| | | PM Peak Hour | 0.291 | A | 0.325 | A | 0.345 | A | 0.054 | No | 0.020 | No |
| 21. | Sepulveda Boulevard and La Tijera Boulevard | AM Peak Hour | 0.692 | B | 0.740 | C | 0.742 | C | 0.050 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.819 | D | 0.885 | D | 0.887 | D | 0.068 | Yes | 0.002 | No |
| 22. | Sepulveda Boulevard and Lincoln Boulevard | AM Peak Hour | 0.780 | C | 0.834 | D | 0.835 | D | 0.055 | Yes | 0.001 | No |
| | | PM Peak Hour | 0.964 | E | 1.113 | F | 1.113 | F | 0.149 | Yes | 0.000 | No |
| 23. | Sepulveda Boulevard and Manchester Avenue | AM Peak Hour | 0.865 | D | 0.923 | E | 0.925 | E | 0.060 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.885 | D | 1.011 | F | 1.011 | F | 0.126 | Yes | 0.000 | No |
| 24. | Westchester Parkway and Pershing Drive | AM Peak Hour | 0.473 | A | 0.632 | B | 0.642 | B | 0.169 | No | 0.010 | No |
| | | PM Peak Hour | 0.286 | A | 0.558 | A | 0.567 | A | 0.281 | No | 0.009 | No |
| 25. | Sepulveda Boulevard and Westchester Parkway | AM Peak Hour | 0.863 | D | 1.091 | F | 1.095 | F | 0.232 | Yes | 0.004 | No |
| | | PM Peak Hour | 0.893 | D | 1.167 | F | 1.171 | F | 0.278 | Yes | 0.004 | No |
| 26. | Sepulveda Boulevard and 76th/77th Street | AM Peak Hour | 0.915 | E | 0.976 | E | 0.978 | E | 0.063 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.487 | A | 0.584 | A | 0.584 | A | 0.097 | No | 0.000 | No |
| 27. | Sepulveda Boulevard and 79th/80th Street | AM Peak Hour | 0.780 | C | 0.833 | D | 0.835 | D | 0.055 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.504 | A | 0.601 | B | 0.601 | B | 0.097 | No | 0.000 | No |
| 28. | Sepulveda Boulevard and 83rd Street | AM Peak Hour | 0.643 | B | 0.687 | B | 0.690 | B | 0.047 | No | 0.003 | No |
| | | PM Peak Hour | 0.457 | A | 0.551 | A | 0.551 | A | 0.094 | No | 0.000 | No |
| 29. | La Cienega Boulevard and 104th Street | AM Peak Hour | 0.375 | A | 0.404 | A | 0.404 | A | 0.029 | No | 0.000 | No |
| | | PM Peak Hour | 0.407 | A | 0.438 | A | 0.438 | A | 0.031 | No | 0.000 | No |

Notes:
[1] The hours of analysis include the a.m. peak (7:00 a.m. - 8:00 a.m.), and the p.m. peak (4:00 p.m. - 5:00 p.m.).
[2] Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #6, and #15, which are not a part of the LADOT system.
[3] Level of Service range: A (excellent) to F (failure).
Source: Appendix D.3 of this EIR.

**Table 4.4-10**
**Proposed Project - Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (November 2019) – Optional Primary Construction Staging Area**

| | | | Cumulative Peak (November 2019) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Baseline [A] | | Without Project [B] | | With Project [C] | | Cumulative Impact Determination [C]-[A] | | Cumulatively Considerable Determination [C]-[B] | |
| Intersection | | Peak Hour [1] | V/C [2] | LOS [3] | V/C [2] | LOS [3] | V/C [2] | LOS [3] | Change in V/C | Significant Cumulative Impact? | Change in V/C | Cumulatively Considerable Contribution? |
| 1. | Aviation Boulevard and Century Boulevard | AM Peak Hour | 0.598 | A | 0.690 | B | 0.691 | B | 0.093 | No | 0.001 | No |
| | | PM Peak Hour | 0.826 | D | 0.969 | E | 0.969 | E | 0.143 | Yes | 0.000 | No |
| 2. | Imperial Highway and Aviation Boulevard | AM Peak Hour | 0.712 | C | 0.820 | D | 0.820 | D | 0.108 | Yes | 0.000 | No |
| | | PM Peak Hour | 0.650 | B | 0.761 | C | 0.761 | C | 0.111 | Yes | 0.000 | No |
| 3. | Aviation Boulevard and 111th Street | AM Peak Hour | 0.540 | A | 0.608 | B | 0.608 | B | 0.068 | No | 0.000 | No |
| | | PM Peak Hour | 0.478 | A | 0.533 | A | 0.533 | A | 0.055 | No | 0.000 | No |
| 4. | La Cienega Boulevard and Century Boulevard | AM Peak Hour | 0.817 | D | 0.871 | D | 0.872 | D | 0.055 | Yes | 0.001 | No |
| | | PM Peak Hour | 0.899 | D | 0.999 | E | 0.999 | E | 0.100 | Yes | 0.000 | No |
| 5. | Sepulveda Blvd. and Century Blvd. | AM Peak Hour | 0.824 | D | 0.926 | E | 0.941 | E | 0.117 | Yes | 0.015 | Yes |
| | | PM Peak Hour | 0.725 | C | 0.775 | C | 0.775 | C | 0.050 | Yes | 0.000 | No |
| 6. | Century Boulevard and I-405 Northbound Ramp | AM Peak Hour | 0.924 | E | 1.010 | F | 1.010 | F | 0.086 | Yes | 0.000 | No |
| | | PM Peak Hour | 0.676 | B | 0.742 | C | 0.742 | C | 0.066 | Yes | 0.000 | No |
| 7. | Imperial Highway and Douglas Street | AM Peak Hour | 0.393 | A | 0.470 | A | 0.470 | A | 0.077 | No | 0.000 | No |
| | | PM Peak Hour | 0.623 | B | 0.713 | C | 0.713 | C | 0.090 | Yes | 0.000 | No |
| 8. | Sepulveda Boulevard and Howard Hughes Parkway | AM Peak Hour | 0.671 | B | 0.768 | C | 0.770 | C | 0.099 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.651 | B | 0.700 | B | 0.700 | B | 0.049 | No | 0.000 | No |
| 9. | Imperial Highway and La Cienega Boulevard | AM Peak Hour | 0.474 | A | 0.517 | A | 0.517 | A | 0.043 | No | 0.000 | No |
| | | PM Peak Hour | 0.698 | B | 0.758 | C | 0.758 | C | 0.060 | Yes | 0.000 | No |
| 10. | Imperial Highway and Main Street | AM Peak Hour | 0.616 | B | 1.179 | F | 1.185 | F | 0.569 | Yes | 0.006 | No |
| | | PM Peak Hour | 0.624 | B | 0.839 | D | 0.842 | D | 0.218 | Yes | 0.003 | No |
| 11. | Imperial Highway and Pershing Drive | AM Peak Hour | 0.429 | A | 0.523 | A | 0.527 | A | 0.098 | No | 0.004 | No |
| | | PM Peak Hour | 0.498 | A | 0.723 | C | 0.726 | C | 0.228 | Yes | 0.003 | No |
| 12. | Imperial Highway and Sepulveda Boulevard | AM Peak Hour | 0.934 | E | 1.117 | F | 1.118 | F | 0.184 | Yes | 0.001 | No |
| | | PM Peak Hour | 1.323 | F | 1.477 | F | 1.477 | F | 0.154 | Yes | 0.000 | No |
| 13. | Imperial Highway and Nash Street | AM Peak Hour | 0.614 | B | 0.848 | D | 0.848 | D | 0.234 | Yes | 0.000 | No |
| | | PM Peak Hour | 0.383 | A | 0.458 | A | 0.458 | A | 0.075 | No | 0.000 | No |
| 14. | Imperial Highway and I-105 Ramp | AM Peak Hour | 0.811 | D | 0.965 | E | 0.968 | E | 0.157 | Yes | 0.003 | No |
| | | PM Peak Hour | 0.556 | A | 0.648 | B | 0.648 | B | 0.092 | No | 0.000 | No |
| 15. | Imperial Highway and I-405 Northbound Ramp | AM Peak Hour | 0.597 | A | 0.650 | B | 0.650 | B | 0.053 | No | 0.000 | No |
| | | PM Peak Hour | 0.832 | D | 0.895 | D | 0.895 | D | 0.063 | Yes | 0.000 | No |

**Table 4.4-10**
**Proposed Project - Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (November 2019) – Optional Primary Construction Staging Area**

| Intersection | | Peak Hour [1] | Cumulative Peak (November 2019) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Baseline [A] | | Without Project [B] | | With Project [C] | | Cumulative Impact Determination [C]-[A] | | Cumulatively Considerable Determination [C]-[B] | |
| | | | V/C [2] | LOS [3] | V/C [2] | LOS [3] | V/C [2] | LOS [3] | Change in V/C | Significant Cumulative Impact? | Change in V/C | Cumulatively Considerable Contribution? |
| 16. | La Cienega Boulevard and Lennox Boulevard | AM Peak Hour | 0.553 | A | 0.595 | A | 0.595 | A | 0.042 | No | 0.000 | No |
| | | PM Peak Hour | 0.530 | A | 0.568 | A | 0.568 | A | 0.038 | No | 0.000 | No |
| 17. | La Cienega Boulevard and 111th Street | AM Peak Hour | 0.360 | A | 0.389 | A | 0.389 | A | 0.029 | No | 0.000 | No |
| | | PM Peak Hour | 0.301 | A | 0.324 | A | 0.324 | A | 0.023 | No | 0.000 | No |
| 18. | La Cienega Blvd. & I-405 Southbound Ramps North of Century | AM Peak Hour | 0.904 | E | 0.964 | E | 0.964 | E | 0.060 | Yes | 0.000 | No |
| | | PM Peak Hour | 0.754 | C | 0.804 | D | 0.804 | D | 0.050 | Yes | 0.000 | No |
| 19. | La Cienega Blvd. & I-405 Southbound Ramps South of Century | AM Peak Hour | 0.449 | A | 0.485 | A | 0.497 | A | 0.048 | No | 0.012 | No |
| | | PM Peak Hour | 0.351 | A | 0.400 | A | 0.400 | A | 0.049 | No | 0.000 | No |
| 20. | La Cienega Blvd. & I-405 Southbound Ramps North of Imperial | AM Peak Hour | 0.507 | A | 0.553 | A | 0.553 | A | 0.046 | No | 0.000 | No |
| | | PM Peak Hour | 0.291 | A | 0.325 | A | 0.325 | A | 0.034 | No | 0.000 | No |
| 21. | Sepulveda Boulevard and La Tijera Boulevard | AM Peak Hour | 0.692 | B | 0.740 | C | 0.742 | C | 0.050 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.819 | D | 0.885 | D | 0.885 | D | 0.066 | Yes | 0.000 | No |
| 22. | Sepulveda Boulevard and Lincoln Boulevard | AM Peak Hour | 0.780 | C | 0.834 | D | 0.834 | D | 0.054 | Yes | 0.000 | No |
| | | PM Peak Hour | 0.964 | E | 1.113 | F | 1.113 | F | 0.149 | Yes | 0.000 | No |
| 23. | Sepulveda Boulevard and Manchester Avenue | AM Peak Hour | 0.865 | D | 0.923 | E | 0.925 | E | 0.060 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.885 | D | 1.011 | F | 1.011 | F | 0.126 | Yes | 0.000 | No |
| 24. | Westchester Parkway and Pershing Drive | AM Peak Hour | 0.473 | A | 0.632 | B | 0.642 | B | 0.169 | No | 0.010 | No |
| | | PM Peak Hour | 0.286 | A | 0.558 | A | 0.567 | A | 0.281 | No | 0.009 | No |
| 25. | Sepulveda Boulevard and Westchester Parkway | AM Peak Hour | 0.863 | D | 1.091 | F | 1.091 | F | 0.228 | Yes | 0.000 | No |
| | | PM Peak Hour | 0.893 | D | 1.167 | F | 1.167 | F | 0.274 | Yes | 0.000 | No |
| 26. | Sepulveda Boulevard and 76th/77th Street | AM Peak Hour | 0.915 | E | 0.976 | E | 0.978 | E | 0.063 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.487 | A | 0.584 | A | 0.584 | A | 0.097 | No | 0.000 | No |
| 27. | Sepulveda Boulevard and 79th/80th Street | AM Peak Hour | 0.780 | C | 0.833 | D | 0.835 | D | 0.055 | Yes | 0.002 | No |
| | | PM Peak Hour | 0.504 | A | 0.601 | B | 0.601 | B | 0.097 | No | 0.000 | No |
| 28. | Sepulveda Boulevard and 83rd Street | AM Peak Hour | 0.643 | B | 0.687 | B | 0.689 | B | 0.046 | No | 0.002 | No |
| | | PM Peak Hour | 0.457 | A | 0.551 | A | 0.551 | A | 0.094 | No | 0.000 | No |
| 29. | La Cienega Boulevard and 104th Street | AM Peak Hour | 0.375 | A | 0.404 | A | 0.404 | A | 0.029 | No | 0.000 | No |
| | | PM Peak Hour | 0.407 | A | 0.438 | A | 0.438 | A | 0.031 | No | 0.000 | No |

**Table 4.4-10**
**Proposed Project - Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (November 2019) – Optional Primary Construction Staging Area**

| | | Cumulative Peak (November 2019) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Baseline [A] | | Without Project [B] | | With Project [C] | | Cumulative Impact Determination [C]-[A] | | Cumulatively Considerable Determination [C]-[B] | |
| Intersection | Peak Hour [1] | V/C [2] | LOS [3] | V/C [2] | LOS [3] | V/C [2] | LOS [3] | Change in V/C | Significant Cumulative Impact? | Change in V/C | Cumulatively Considerable Contribution? |

Notes:
[1] The hours of analysis include the a.m. peak (7:00 a.m. - 8:00 a.m.), and the p.m. peak (4:00 p.m. - 5:00 p.m.).
[2] Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #6, and #15, which are not a part of the LADOT system.
[3] Level of Service range: A (excellent) to F (failure).
Source: Appendix D.3 of this EIR.

## 4.4.6 Mitigation Measures

As described in Section 4.4.5, assuming construction staging occurs at the proposed primary construction staging area, the proposed project's contribution would be cumulatively considerable at two of the significantly impacted intersections (Century Boulevard and Sepulveda Boulevard [Intersection #5] and Imperial Highway and I-105 Ramp [Intersection #14]). Conversely, assuming construction staging occurs at the optional primary construction staging area, the proposed project's contribution would be cumulatively considerable at only one of the significantly impacted intersections (Century Boulevard and Sepulveda Boulevard [Intersection #5]).

Regarding the cumulatively considerable significant construction traffic impact at Imperial Highway and I-105, due to the location of the entry/exit point along La Cienega Boulevard, haul trucks would be required to exit the proposed primary construction staging area via southbound La Cienega Boulevard, while exits via northbound La Cienega Boulevard would be prohibited (i.e., at the location of the proposed primary construction staging area, left turns onto La Cienega Boulevard are prohibited). Furthermore, considering the designated truck routes described below in Section 4.4.8, haul trucks transferring materials to/from the proposed primary construction staging area would be required to pass directly through the intersection of Imperial Highway and I-105 (Intersection #14). As such, no mitigation is feasible for the cumulatively considerable significant construction traffic impact at Imperial Highway and I-105 Ramp (Intersection #14).

Regarding the cumulatively considerable significant construction traffic impact at Century Boulevard and Sepulveda Boulevard (Intersection #5), regardless of whether construction staging occurs at the proposed primary construction staging area or at the optional primary construction staging area, no feasible mitigation measures are available. The subject impact is anticipated to occur from construction employees finishing the swing shift (i.e., 11:00 p.m. to 7:00 a.m.) exiting the proposed construction employee parking area, specifically LAX Lot F near Avion Drive and Century Boulevard, that are likely to proceed westbound on Century Boulevard in order to get to southbound on Sepulveda Boulevard, which provides ready access to the nearby freeway system (I-105 and I-405). This travel route would require a left-turn at Sepulveda Boulevard from Century Boulevard, which causes the project's cumulatively considerable contribution to the significant impact at Intersection #5 during the AM peak hour. Although this significant impact could be reduced to less than significant by requiring those construction employees to only turn right onto eastbound Century Boulevard when exiting the subject parking area, thereby avoiding the left-turn movement at Intersection #5, the ability to implement, monitor, and enforce such a requirement is not feasible. Various consideration related to the infeasibility of such a measure include: (1) the ability for LAWA to legally require contractor employees to turn one way or another onto a public roadway system; and, (2) the ability to monitor and enforce implementation of this requirement relative to distinguishing project-related contractor employee personal vehicles from all other vehicles travelling in the area during the AM peak hour in order to confirm that project-related employees are turning right from Avion Drive onto Century Boulevard instead of turning left, and, furthermore, trying to account for construction employees that exit the parking area and turn left from Avion Drive to Century Boulevard, but want to head northbound on Sepulveda Boulevard and would, therefore, not be turning left at Intersection #5. Also, the typical ways of mitigating such an intersection impact through means such as making changes in signal phasing, restriping the intersection to add another turn-lane, or physically widening the intersection to add a turn lane(s) are not considered feasible in this instance. More specifically, changing the signal timing to provide additional time for left turns from westbound Century Boulevard to southbound Sepulveda Boulevard would reduce the amount of time available for through traffic on Sepulveda Boulevard, which is the more important traffic movement at this intersection during the morning peak hour. Relative to restriping the intersection to provide an additional left turn lane, the east leg of the subject intersection currently has a dedicated left-turn lane and an adjacent optional left-turn or straight-thru lane (i.e., westbound drivers in that lane can either turn left onto southbound Sepulveda Boulevard or continue straight onto "Little Century" into the CTA); hence, adding an additional left turn lane would require shifting the optional left-turn/straight thru lane northward, in which case the straight-thru path of travel would no longer align with the receiving lane in the west leg of the intersection. Physically widening

the subject intersection to accommodate the additional left turn lane is constrained on the south by the transition ramp from northbound Sepulveda Boulevard to eastbound Century Boulevard, and on the north by the presence of the Hyatt Regency hotel. Any such modifications to the intersection, be it restriping or physical improvements, would require approval from Caltrans (i.e., Sepulveda Boulevard is a part of Highway 1 at that location). Notwithstanding the traffic operations issues, physical constraints, and regulatory agency approval need noted above, the requirements for such implementing measures are not considered to be proportional to nature of the impact being mitigated; specifically, the subject impact would only occur when a swing-shift is needed during the construction program, at which timing, frequency, and duration of the need for swing-shifts, if any, is uncertain.

## 4.4.7 Level of Significance after Mitigation

As indicated above, there are no feasible mitigation measures available to address the cumulatively considerable significant construction traffic impact at Imperial Highway and I-105 Ramp (Intersection #14) assuming construction staging occurs at the proposed primary construction staging area; therefore, the impact at this intersection would be significant and unavoidable. More specifically, as described above in Section 4.4.6, the cumulatively considerable impact at Imperial Highway and I-105 Ramp (Intersection #14) would be generated by haul truck traffic transferring materials to/from the proposed primary construction staging area via La Cienega Boulevard, Imperial Highway, Pershing Drive, and Westchester Parkway. Due to the location of the entry/exit point along La Cienega Boulevard, haul trucks would be required to exit the proposed primary construction staging area via southbound La Cienega Boulevard, while exits via northbound La Cienega Boulevard would be prohibited. Furthermore, considering the designated truck routes described below in Section 4.4.8, haul trucks transferring materials to/from the proposed primary construction staging area would be required to pass directly through the intersection of Imperial Highway and I-105 (Intersection #14). For these reasons, no feasible mitigation measures were identified for the proposed project's contribution to the cumulatively significant impact at Intersection #14; therefore, the impact is considered significant and unavoidable. As stated below in Section 4.4.8, 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. The analysis described in this section considers a conservative scenario, when complete avoidance of the peak hour periods is not possible.

Additionally, as also indicated above, there are no feasible mitigation measure to address the cumulatively considerable significant construction traffic impact at Century Boulevard and Sepulveda Boulevard (Intersection #5), which would only occur if/when construction activities require a swing shift (i.e., 11:00 p.m. to 7:00 a.m.).

## 4.4.8 Other Measures

As indicated in Section 4.4.5, the proposed project's contribution would be cumulatively considerable at two of the significantly impacted intersections, assuming construction staging occurs at the proposed primary construction staging area, and at one of the significantly impacted intersection assuming construction staging occurs at the optional primary construction staging area. Although it was determined these impacts would be significant and unavoidable, LAWA would implement the following Standard Control Measure, which would serve to reduce construction impacts on study area intersections not significantly impacted. The individual measures were selected from a list of standard control measures developed by LAWA for projects at LAX. Only those measures that are applicable to the proposed project are identified below. Measure identifiers follow those in the standard measure; therefore, the identifiers listed are not be consecutive.

- **LAX-ST-1. Construction Traffic Management Plan.**

  Prior to initiation of construction, LAWA shall require contractors to complete a construction traffic management plan (CTMP). The CTMP shall include a description and illustrations of how the contractor will manage all construction related traffic during both peak and off-peak traffic periods.

The CTMP shall detail the haul routes, locations for variable message and other signs, construction deliveries, construction employee shift hours and parking locations, any lane striping changes and traffic signal modifications, and shuttle system operations, if any. The CTMP shall require approval of the LAWA Construction and Logistics Management (CALM) Team prior to implementation. The CALM Team approval process shall include multiple reviews addressing technical, scheduling and safety-related issues. Depending on the complexity and/or anticipated impacts to traffic flow, detailed review meetings with the contractor may be required. Contractor compliance shall be monitored throughout the project. LAWA shall require contractors to implement and comply with the following CTMP measures to reduce construction-related traffic impacts associated with projects at LAX, including:

**a. Construction Deliveries** – Construction deliveries requiring lane closures shall receive prior approval from the CALM Team. Construction notification of deliveries requiring lane closures shall be made in writing (a minimum of seventy-two (72) hours in advance, unless otherwise coordinated with the CALM Team prior to the required closure(s) when a 72-hour advance written notification is not feasible) in order to allow for any modifications to approved traffic detour plans. Delivery permits from all applicable local agencies shall be obtained thirty (30) days prior to any delivery requiring a lane closure, as feasible. To the extent possible, construction deliveries within the CTA requiring lane closures shall be scheduled during overnight hours (1:00 a.m. to 7:00 a.m.) to minimize impacts to Airport operations.

**b. 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. All deviations to these requirements shall be approved in writing by the CALM Team prior to actual site deliveries.

**c. Construction Employee Shift Hours** – To the extent possible, the beginning and ending times of work shifts that avoid peak commuter traffic periods (7:00 a.m. to 9:00 a.m. and 4:30 p.m. to 6:30 p.m. Monday through Friday) shall be established. (This measure may not apply to swing shifts.) To avoid peak commuter traffic, work periods may be extended to include weekend and multiple work shifts, when necessary.

**d. Designated Truck Routes** – For dirt, aggregate, bulk cement, and all other materials and equipment, truck deliveries to the LAX area shall be on designated routes only (freeways and non-residential streets). Designated truck routes shall be limited to:

1. Aviation Boulevard (Imperial Highway to Manchester Boulevard)
2. Manchester Boulevard (Aviation Boulevard to I-405)
3. Florence Avenue (Aviation Boulevard to I-405);
4. La Cienega Boulevard (north of Imperial Highway);
5. Pershing Drive (Westchester Parkway to Imperial Highway);
6. Westchester Parkway (Pershing Drive to Sepulveda Boulevard)
7. Century Boulevard (Sepulveda Boulevard to Aviation Boulevard)
8. Sepulveda Boulevard (Westchester Parkway to Imperial Highway)
9. Imperial Highway (Pershing Drive to I-405);
10. I-405; and
11. I-105.

**f. Stockpile Locations** – All stockpile locations shall be pre-approved by LAWA and its CALM Team. Stockpile locations/laydown/staging areas shall be accessed by construction vehicles with minimal disruption to adjacent public streets.

**g. Construction Employee Parking Locations** – If parking for construction employees is not located on, or in proximity to, the work site, shuttle buses to transport employees to the

construction areas shall be provided. The shuttle buses shall operate from the designated employee parking area to the work site. Shuttle buses shall comply with all applicable California Air Resources Board (CARB) and South Coast Air Quality Management District (SCAQMD) rules and regulations, and LAWA's Alternative Fuel Policy. All employees, including those of subcontractors and suppliers at all tiers, shall park in the designated parking locations and not on city streets, or in nearby neighborhoods. All construction personnel shall be required to attend an airport project-specific orientation meeting that will cover where to park, where staging areas are located, construction policies, etc.