5.0 ALTERNATIVES

5.1 Introduction

The *California Environmental Quality Act (CEQA) Guidelines* require that an Environmental Impact Report (EIR) include a discussion of a reasonable range of project alternatives that would "feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the proposed Project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6). Within that context, this Chapter discusses alternatives to the proposed Project.

Key provisions of the CEQA Guidelines on alternatives (Section 15126.6(b) through (f)) are excerpted below to explain the foundation and legal requirements for the alternatives analysis in this EIR.

- "…the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the proposed objectives, or would be more costly (15126.6(b)).
- "The specific alternative of 'no project' shall also be evaluated along with its impact" (15126.6(e)(1)). "The 'no project' analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives" (15126.6(e)(2)).
- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making" (15126.6(f)).
- "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6(f)(1)).
- For alternative locations, "only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR" (15126.6(f)(2)(A)).

- "If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location" (15126.6(f)(2)(B)).
- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative" (15126.6(f)(3)).

5.2 Significant Impacts of the MSC North Project and Future Phase(s) of the MSC Program

The alternatives in this Chapter have been selected to evaluate means for avoiding or substantially reducing the significant impacts of the proposed MSC North Project and future phase(s) of the MSC Program identified in Chapter 4 of this EIR. As summarized in Table 1-1 in Chapter 1, *Introduction and Executive Summary*, impacts related to air quality (operational impacts), noise, public services, and on-airport surface transportation were determined to be less than significant with incorporation of Los Angeles International Airport (LAX) Master Plan Mitigation Measures and Commitments. As described in Chapter 4.1, *Air Quality*, the proposed MSC North Project would result in a net increase in temporary emissions of criteria air pollutants associated with construction-related activities, which would be a significant and unavoidable impact even after implementation of LAX Master Plan Mitigation Measures and Commitments with respect to regional emissions of carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$). As described in Chapter 4.2, *Greenhouse Gas Emissions*, the proposed MSC North Project would result in a significant and unavoidable impact to greenhouse gas emissions even after implementation of LAX Master Plan Mitigation Measures and Commitments. Chapter 4.3, *Human Health Risk Assessment*, identified a significant and unavoidable impact to the acute non-cancer hazard index for acrolein. Chapter 4.7, *Construction Surface Transportation*, identified two intersections (Imperial Highway and Main Street, and Sepulveda Boulevard and Westchester Parkway) that would experience significant cumulative construction traffic impacts even after implementation of mitigation measures.

For purposes of this alternatives analysis, although specific information related to construction of the future phase(s) of the MSC Program is not known, it was assumed that the future phase(s) of the MSC Program would have construction-related impacts similar to the MSC North Project. A project-level environmental review for future phase(s) of the MSC Program will be initiated at such time as LAWA determines the timing of future phase(s).

5.3 Project Objectives

As identified in the CEQA Guidelines, the achievement of project objectives was considered in determining potentially feasible alternatives that would avoid or substantially lessen any significant effects of the proposed MSC North Project and/or the future phase(s) of the MSC Program. The objectives of the proposed MSC North Project and future phase(s) of the MSC Program include:

- Provide LAWA with the flexibility to accommodate existing demand for aircraft gates while modernizing other terminals and critical infrastructure at LAX and reducing reliance on the West Remote gates.
- Allow LAWA to close gates for renovation and rehabilitation without reducing the number of existing gates.
- Improve terminal operations, concessions facilities, and overall passenger experience at LAX.
- Facilitate the systematic implementation of the LAX Master Plan.

5.4 Alternatives

A wide range of alternatives to the airfield and facility improvements proposed for LAX were formulated and evaluated during the course of developing and approving the LAX Master Plan. As evidenced in reviewing the airport concepts addressed in the LAX Master Plan Final EIR, each of the four build alternatives called for new and reconfigured terminal facilities and associated gating, with the location of the new and reconfigured terminal facilities being influenced primarily by each alternative's proposed airfield (runway) configuration. As such, the terminal facility improvements and associated gating, such as those associated with the MSC, were formulated and defined particular to each of the airfield concepts, based on applicable FAA requirements and standards and professional airport planning practices. In light of several factors, including safety, cost, operational efficiency, and environmental concerns, it was ultimately determined by the Los Angeles City Council that the LAX Master Plan (Alternative D) best met the project objectives. Airfield configurations were developed and designed at a precise level of detail to satisfy FAA requirements related to airport layout plans. As such, consideration has already been given to a number of alternatives that included variations on terminal facility improvements associated with various airfield concepts. The proposed MSC was also included in the *Specific Plan Amendment Study* (SPAS) and was evaluated with the various airfield alternatives examined in that study. The following provides additional evaluation of alternatives to the proposed MSC North Project and future phase(s) of the MSC Program with particular emphasis on the construction impacts associated with each alternative.

As described at the beginning of this chapter, the significant impacts associated with the proposed MSC North Project pertain to both construction activities and airport operations. Alternatives presented in this section include: (1) potential alternatives that were initially considered but were screened-out from further consideration due to their infeasibility or readily apparent inability to avoid or substantially reduce the significant impacts of the Project; and (2) design alternatives/variations that are fully evaluated. Also, as required by CEQA, the "no project" alternative is also addressed in this section.

5.4.1 Potential Alternatives Screened-Out from Further Consideration

5.4.1.1 Redevelop Existing Terminal(s) to Add New Gates

As an alternative to construction of the MSC, LAWA considered whether the existing terminals within the CTA could be redeveloped to add new gates. A number of different terminal

configurations were examined as part of the LAX Master Plan and as part of SPAS, some of which would add gates within the CTA.[1] However, redevelopment of any of the existing terminals would close gates for an extended period of time. There are no spare gates at LAX to accommodate the passenger airline operations that would be displaced to allow redevelopment of an existing terminal; all gates are currently utilized. During peak periods, the West Remote Gates/Pads are also near capacity. Thus, LAWA cannot undertake redevelopment of a terminal to add new gates without displacing current tenants and their passenger operations. Because objectives of the MSC North Project include giving LAWA the flexibility to redevelop existing terminals without negatively affecting passenger operations and the ability to close gates for renovation without reducing the number of existing gates, this alternative was determined infeasible and was not carried forward for full evaluation.

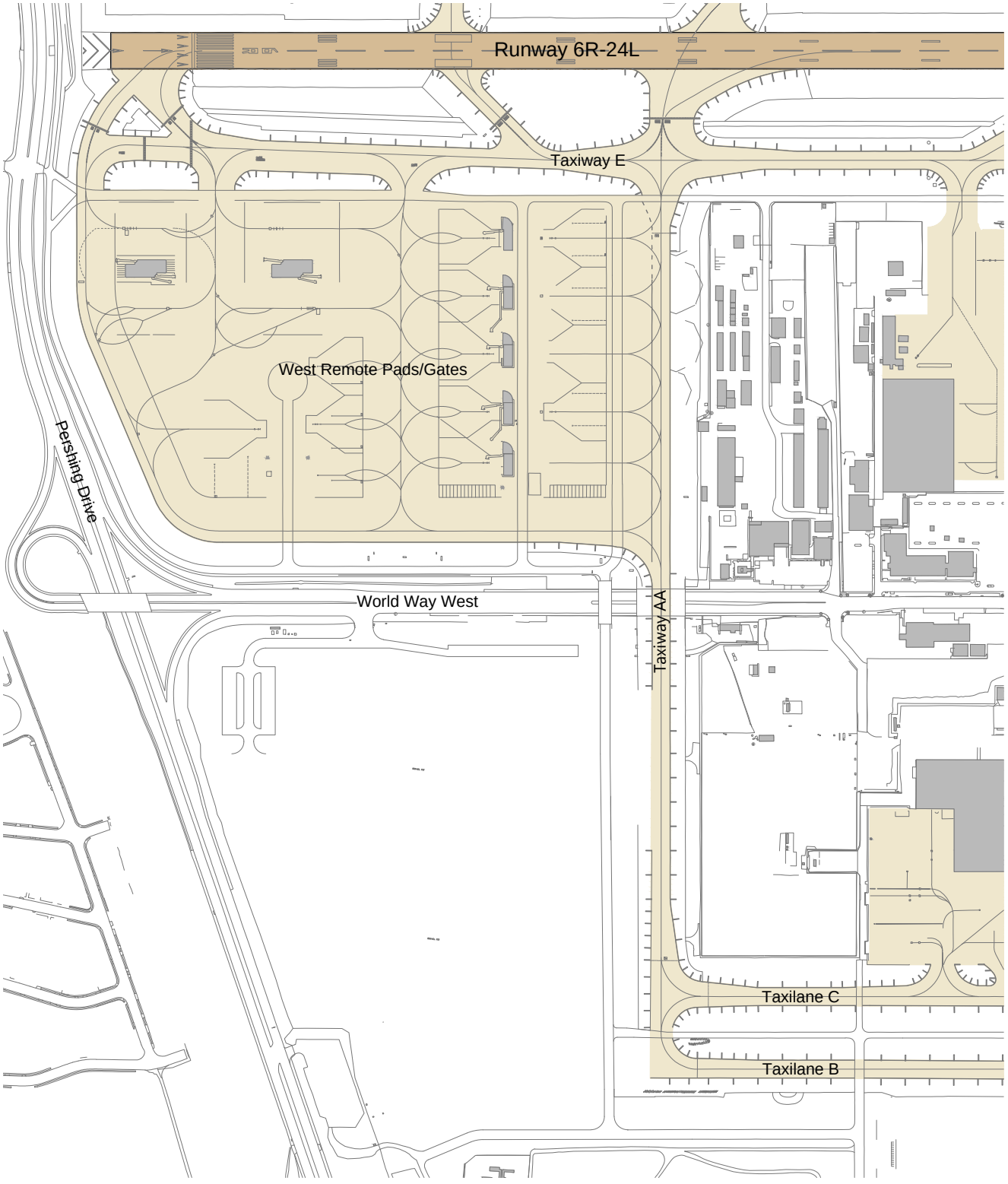
5.4.1.2 Alternate Site – West Remote Gates/Pads Site Alternative

This alternative focused on development of the proposed Project on the West Remote Gates/Pads site. This site is located west of the proposed Project Site and is bounded to the south by World Way West, to the north by Taxiway E, to the west by Pershing Drive, and to the east by Taxiway AA (see **Figure 5-1**). The approximately 71-acre West Remote Gates/Pads site is currently utilized as an apron/gate area for on-loading and off-loading of international and domestic flights that cannot be handled in the CTA. Passengers are ferried to and from the site by buses. The apron area is also utilized for RON and RAD parking of aircraft when the gates are not in use.

The West Remote Gates/Pads site can accommodate 11 aircraft at apron gates having jet loading bridges and another 7 hardstand (pads) without loading bridges, for a total of 18 positions. Additional aircraft are double- and sometimes triple-parked at some of these positions during overnight and early morning hours. In April, May, and June of 2013 the West Remote Gates/Pads were utilized to park 1,592 aircraft, with 634 using contact gates and an additional 958 operations parked on "hardstand" or RON positions. An August 2012 peak month survey of West Remote Gates/Pads usage found that peak use of the area was in the early morning, and included 16 aircraft parked simultaneously. On that same day, a total of 34 aircraft were positioned on the West Remote Gates/Pads site during various times of the day.

A large maneuvering area is located in the southwest quadrant of this alternative site. This maneuvering area also serves as an operational readiness area for "super-jumbo" aircraft such as the Antonov AN-124 cargo carrier, which has called on LAX in the past. Additionally, this space is utilized for RON/RAD for highly secure visits by public and government officials that at times require staging of military cargo and other large aircraft.

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



Source: HNTB, Corp., Los Angeles International Draft ALP, July 2012; Ricondo & Associates, Inc., December 2013.
Prepared by: Ricondo & Associates, Inc., December 2013.

LAX Midfield Satellite Concourse Draft EIR	West Remote Gates/Pads Site Alternative	Figure 5-1

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Although the West Remote Gates/Pads site was investigated in whole and in part as an alternative location for the proposed Project, it was not carried forward for further analysis because the site is already highly utilized for passenger gate facilities and for aircraft parking (i.e., RON/RAD), including special-purpose use (i.e., super-jumbo aircraft parking and high-security areas) and would not be able to accommodate additional apron gates or hardstand positions. The West Remote Gates/Pads have no concessions for passengers and are inefficient due to their distance from the CTA, providing a poor level of passenger service. Because objectives of the MSC North Project include giving LAWA the flexibility to redevelop existing terminals without negatively affecting passenger operations; the ability to close gates for renovation without reducing the number of existing gates; and to improve terminal operations, concessions facilities, and overall passenger experience at LAX, this alternative was determined infeasible and was not carried forward for full evaluation.

5.4.1.3 Alternative Construction Approach

Under this alternative, consideration was given to modifying the overall construction approach in an effort to avoid or substantially lessen the significant construction-related surface transportation, air quality, and greenhouse gas emission impacts identified in Chapter 4. It should be noted that the construction approach currently proposed for the MSC North Project already includes a number of features that reduce potential impacts in those areas. These features include, but are not limited to: scheduling construction employee shift hours and truck delivery hours to avoid the peak commuter periods; recycling/reuse of demolition debris associated with the removal of existing apron, roadways, and other surfaces through the use of an on-site rock-crusher; preparation of concrete using an on-site batch plant; establishment of limits on construction equipment idling time; and requirements to use low-emission equipment.

An alternative construction approach that could be considered relative to avoiding or substantially reducing the surface transportation and air quality impacts associated with the MSC North Project would be to extend the overall construction period to reduce the amount of daily activity. With respect to air quality impacts, **Table 5-1** indicates the amount of reduction in daily activity that would be required in order for the daily air pollutant emissions to fall below the SCAQMD CEQA thresholds of significance.

As indicated in Table 5-1, the largest reduction required to avoid a significant impact would be needed with respect to NOx emissions. Daily activities would need to be reduced by approximately 91 percent, which would limit daily construction activities to approximately 30 minutes within what would otherwise be a 10-hour work day or 1.2 hours within what would otherwise be a 24-hour work day. Even if the size of the equipment crews were reduced in half, based on a lower intensity of daily construction activity and an extended overall duration of construction, activity within a 10-hour work day could only occur for about an hour in order for the construction-related NOx emissions to remain less than significant. Based on such limitations, however, it would conceivably take approximately 100 years to complete project construction. While such an alternative would reduce daily emissions to a level that is less than significant and would also reduce the daily construction-related trip generation, it would simply increase the overall duration of air pollutant emissions and construction traffic on local roadways. Therefore, this alternative was determined to be infeasible and was not carried forward for full evaluation.

Table 5-1

Alternative Construction Approach (Reduce Daily Activity Duration)
Air Pollutant Emissions

Pollutant	SCAQMD Threshold (lbs/day)	MSC North Project Peak Daily Emissions (lbs/day)[1]	Amount (%) of Reduction Required to Avoid Significant Impact
Carbon monoxide, CO	550	**1,290**	57%
Volatile organic compounds, VOC	75	**135**	44%
Nitrogen oxides, NO_X	100	**1,156**	91%
Sulfur dioxide, SO_2	150	4	N/A
Respirable particulate matter, PM_{10}	150	**669**	76%
Fine particulate Matter, $PM_{2.5}$	55	**172**	68%

Note:
1 Values shown in bold indicate significant impacts.

Source: Ricondo & Associates, Inc., 2013.

5.4.2 Alternatives Carried Forward for Further Consideration

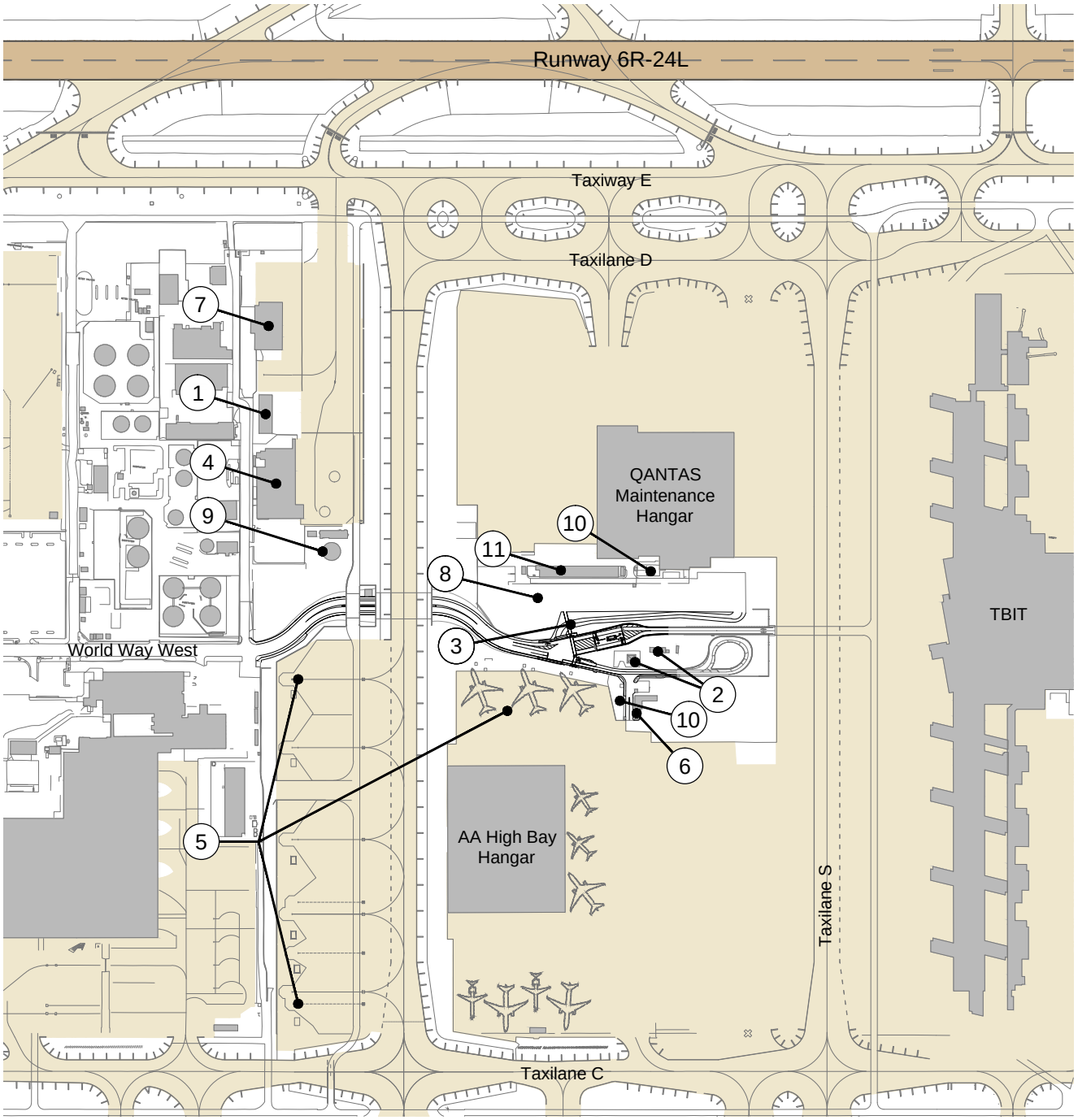
5.4.2.1 MSC North Project

Alternatives to the proposed MSC North Project were formulated to avoid or substantially lessen the significant impacts of the Project, with emphasis on the significant and unavoidable impacts that would occur during construction including construction traffic at two intersections; regional emissions of carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_X), respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$); and greenhouse gas emissions. In addition, the alternatives were formulated to avoid or substantially lessen the significant impact of Project operations on greenhouse gas emissions and human health risk associated with emissions of acrolein. As required by CEQA, a "no project" alternative is addressed in this section.

Alternative 1: No Project

Under the “No Project” alternative, none of the improvements and activities proposed for the MSC North Project would occur. The proposed Project site would continue to be used for aircraft maintenance, RON/RAD aircraft parking, the U.S. Coast Guard facility, electrical substations, and the various other existing uses at the site, as shown on **Figure 5-2**. LAWA would forego the opportunity to develop new gates that would allow them the flexibility to renovate and redevelop the existing terminals without negatively affecting existing airline passenger operations. LAWA would continue to rely on the West Remote Gates/Pads to provide remote contact gates and/or parking positions when contact gates at the terminals within the CTA are unavailable.

1. Electrical Vault #2
2. FAA Nagivational Aids
3. Natural Gas Regulator
4. U.S. Coast Guard Facility
5. RON (Remain Over Night) Aircraft Parking
6. American Airlines Private Post
7. US Airways Maintenance Facility
8. American Airlines Leasehold Parking
9. Water Deluge Tank and Pump Station
10. Electrical Industrial Stations (#66 & #1548)
11. American Airlines Maintenance (Non-Power) Shop



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Source: HNTB, Corp., Los Angeles International Draft ALP, July 2012; Ricondo & Associates, Inc., December 2013.
Prepared by: Ricondo & Associates, Inc., December 2013.

Legend
- Existing Taxiway and Apron Pavement
- Existing Runway Pavement
- Existing Airfield Building

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No Project Alternative

Figure **5-2**

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Alternative 2: Reduced Project

A reduced project alternative was identified that would involve the construction of 7-8 gates rather than the 11 gates proposed as part of the MSC North Project. The footprint of this facility was assumed to be approximately 100,000 square feet. The concourse would stop just north of World Way West and would avoid impacting the FAA navigational aids, one of the electrical industrial stations, 3 RON parking spaces, the natural gas regulator, and the American Airlines Private Post. In addition to a reduced concourse facility, this alternative would also eliminate the tunnel for a future conveyance system, as well as Taxiway C14 and associated enabling projects, including: demolition of the U.S. Coast Guard facility; demolition of the U.S. Airways Maintenance facility; relocation of Electrical Vault #2; the removal of 5 RON aircraft parking spaces; and the relocation of the water deluge tank and pump station. All other project components would be included. **Figure 5-3** illustrates the Reduced Project Alternative.

Alternative 3: MSC South

Alternative 3 would involve construction of the southern portion of the MSC rather than the northern portion as proposed. This alternative, shown on **Figure 5-4**, would impact the American Airlines High Bay Hangar, but would stop just south of World Way West. This alternative would avoid impacting the FAA navigational aids, one of the electrical industrial stations, the American Airlines Maintenance (Non-Power) shop, the American Airlines leasehold parking, and the natural gas regulator. This alternative would also result in a reduced project alternative with 2 fewer aircraft gates than the proposed MSC North Project.

Alternative 4: Alternate Site – Terminal/Concourse 0

Alternative 4 would involve the construction of "Terminal/Concourse 0" north of World Way and east of Terminal 1 (see **Figure 5-5**). Terminal/Concourse 0 could be constructed with up to 7 gates in the western portion of the area currently occupied by Park One. This alternative would require the relocation of Sky Way (upper and lower roadways) eastward to allow development of the terminal and would also provide additional roadway and curbfront in the CTA. This alternative would eliminate the impacts to the existing facilities at the Project site (aside from the Taxiway C14 enabling projects), which would remain as they exist today, and would also eliminate the need for an underground conveyance system from MSC to connect to the CTA.

5.4.2.2 Future Phase(s) of the MSC North Program

The alternatives to the proposed future phase(s) of the MSC North Program were formulated to avoid or substantially lessen the significant impacts of the future phase(s) of the MSC Program. The analysis of alternatives to the future phase(s) of the MSC Program assumes that the MSC North Project is constructed and operational as proposed.

Alternative 1: No Future Phase(s) of the MSC Program

As required by CEQA, a "no project" alternative was considered for the future phase(s) of the MSC Program. In this case, the "no project" alternative would mean that after the MSC North Project is constructed, no additional development of the MSC Program would occur. The MSC would remain an 11-gate facility with the Project components identified; no other proposed components would be implemented.

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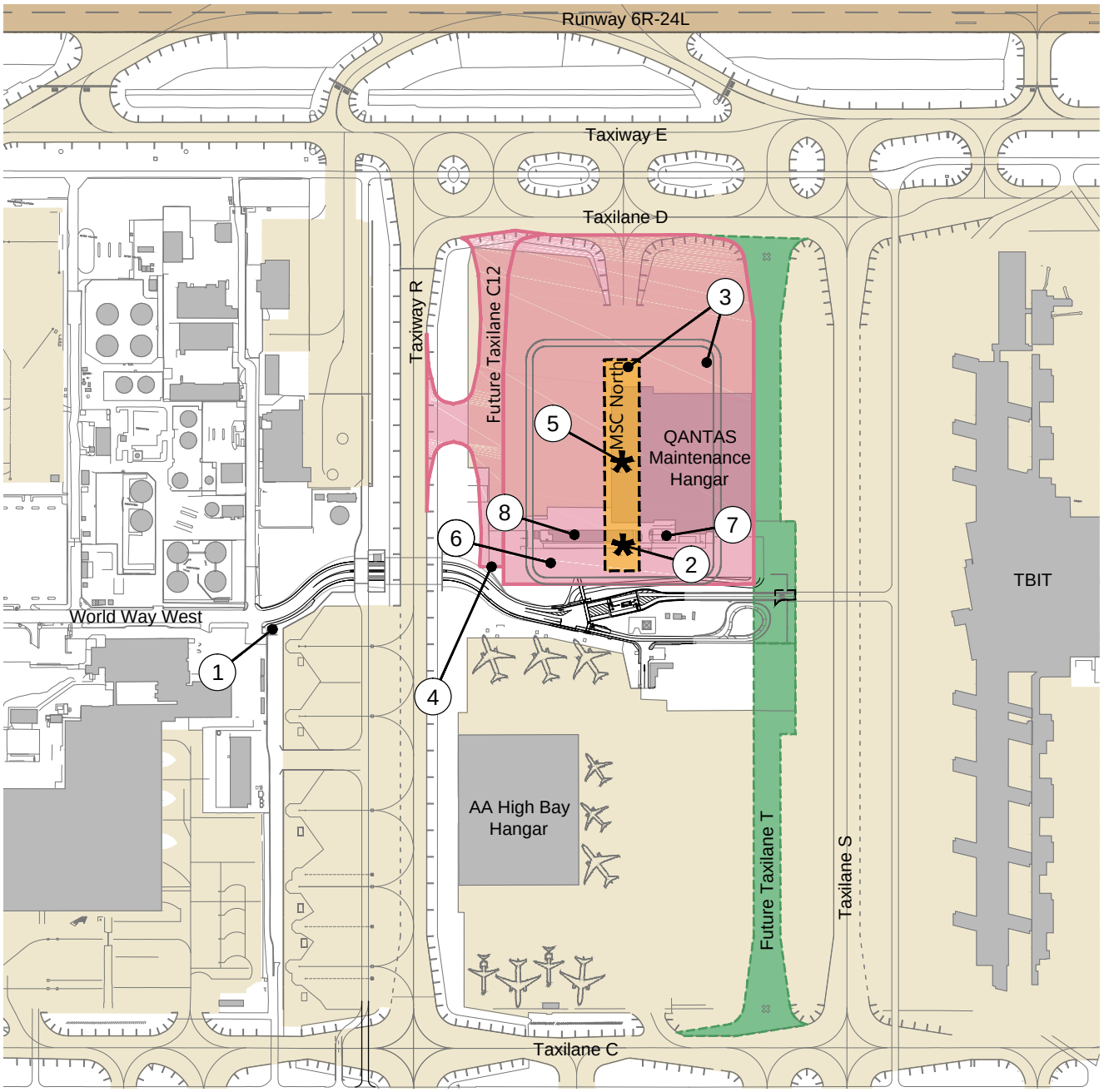
1 Project Utilities
2 Busing Operations
3 Concourse and Apron
4 Taxilane C12
5 Ramp Tower or Supplemental ATCT
6 American Airlines Leasehold Parking
7 Electrical Industrial Station (#66)
8 American Airlines Maintenance (Non-Power) Shop



Note:
Component numbers represent approximate locations of project components.

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Source: HNTB, Corp., Los Angeles International Draft ALP, July 2012; Ricondo & Associates, Inc., January 2014.
Prepared by: Ricondo & Associates, Inc., January 2014.

Legend
- Existing Taxiway and Apron Pavement
- Existing Runway Pavement
- Existing Airfield Building
- Taxilane T Project Area
- Project Components

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MSC North Project Reduced Project Alternative

Figure **5-3**

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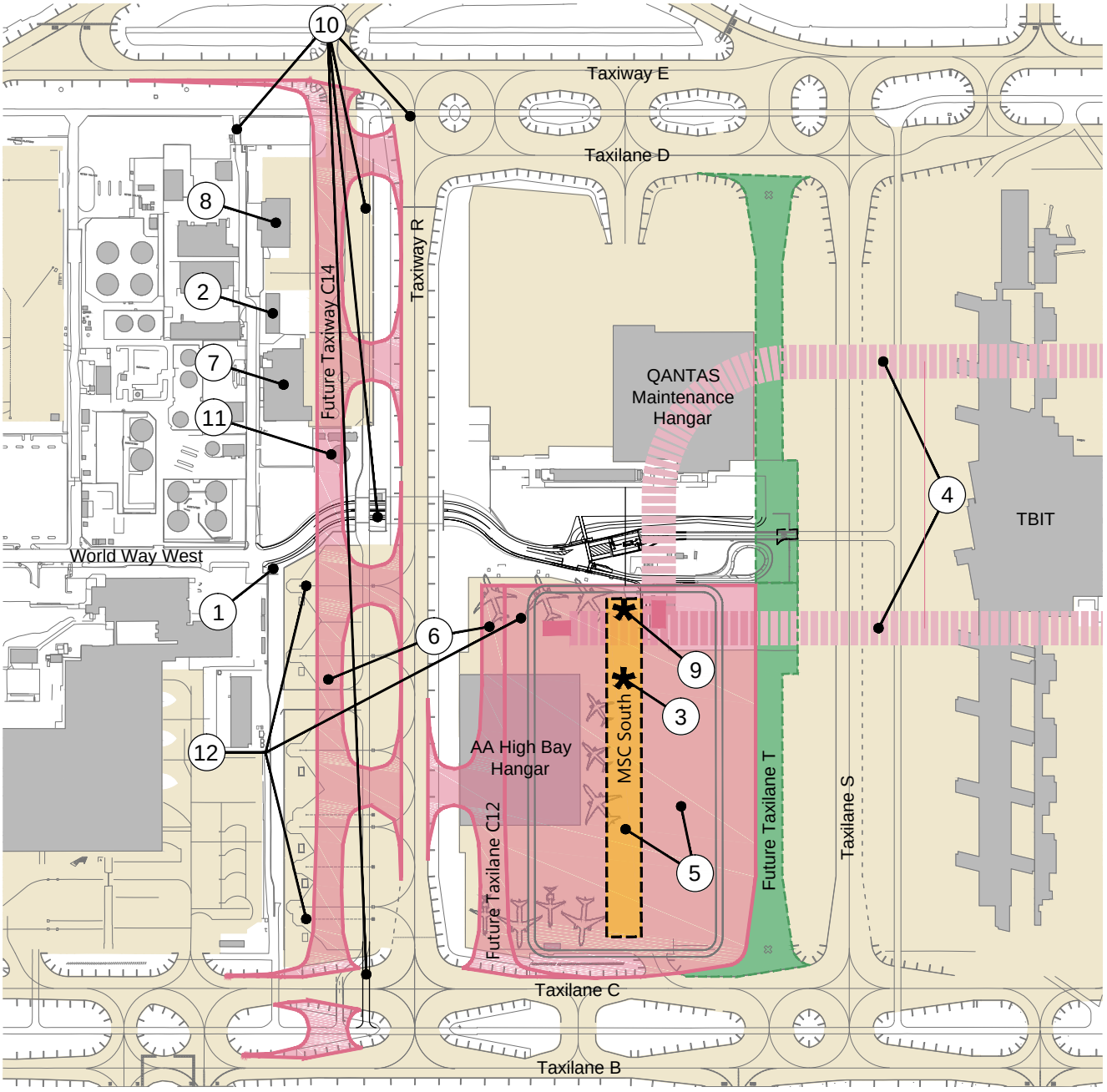
1. Project Utilities
2. Electrical Vault #2
3. Busing Operations
4. Conveyance Tunnels
5. Concourse and Apron
6. Taxiways and Taxilanes
7. U.S. Coast Guard Facility
8. US Airways Maintenance Facility
9. Ramp Tower or Supplemental ATCT
10. Reconfiguration of New Landside / AOA Perimeter and Service Roads
11. Water Deluge Tank and Pump Station
12. RON (Remain Over Night) Aircraft Parking



Note:
Component numbers represent approximate locations of project components.

Legend
- Existing Taxiway and Apron Pavement
- Existing Runway Pavement
- Existing Airfield Building
- Taxilane T Project Area
- Project Components

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Source: HNTB, Corp., Los Angeles International Draft ALP, July 2012; Ricondo & Associates, Inc., December 2013.
Prepared by: Ricondo & Associates, Inc., December 2013.

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MSC North Project South Alternative

Figure **5-4**

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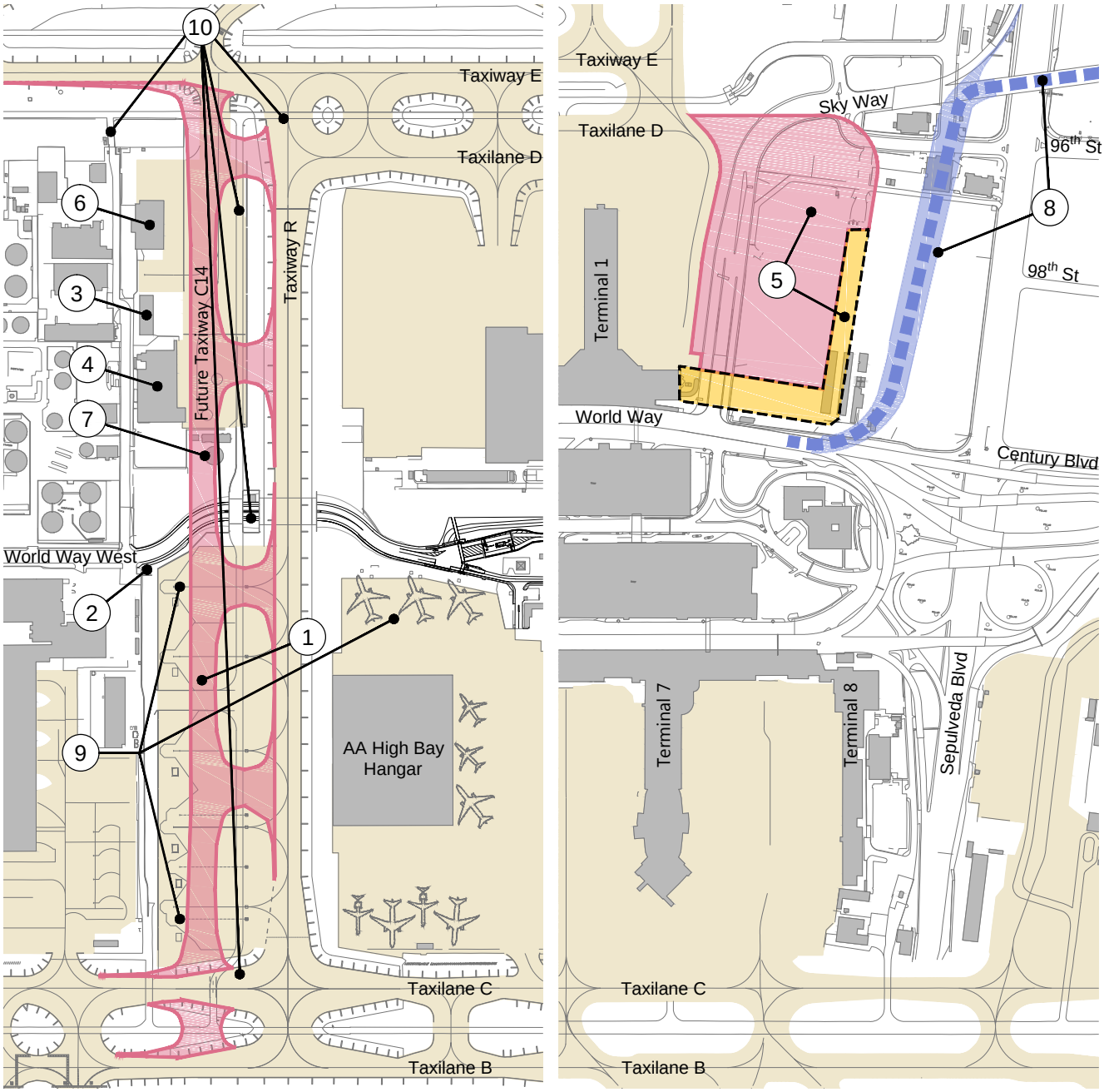
1. Taxiway C14
2. Project Utilities
3. Electrical Vault #2
4. U.S. Coast Guard Facility
5. Proposed Terminal 0 and Apron
6. US Airways Maintenance Facility
7. Water Deluge Tank and Pump Station
8. Redesigned Entry Roadways (96th Street)
9. RON (Remain Over Night) Aircraft Parking
10. Reconfiguration of New Landside / AOA Perimeter and Service Roads



Note:
Component numbers represent approximate locations of project components.

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Source: HNTB, Corp., Los Angeles International Draft ALP, July 2012; Ricondo & Associates, Inc., December 2013.
Prepared by: Ricondo & Associates, Inc., December 2013.

Legend
- Existing Taxiway and Apron Pavement
- Existing Runway Pavement
- Existing Airfield Building
- Redesigned Roadways
- Project Components

LAX Midfield Satellite Concourse Draft EIR

MSC North Project Alternate Site Alternative - Terminal/Concourse 0

Figure **5-5**

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Alternative 2: Reduced Program - Fewer Gates

The future phase(s) of the MSC Program includes up to an additional 18 gates, which when added to the gates proposed for the MSC North Project would provide a concourse with up to 29 gates. An alternative to the future phase(s) of the MSC Program would be a smaller concourse with fewer gates. For purposes of identifying alternatives that may avoid or substantially lessen the significant impacts of the future phase(s) of the MSC Program, a reduced Program alternative of a concourse with a total of 20 gates was considered.

Alternative 3: No Central Terminal Processor/APM to Existing Terminal

Another alternative considered to the future phase(s) of the MSC Program was an alternative that eliminates the Central Terminal Processor (CTP). Instead of the APM going to an CTP, the APM would instead go to one of the existing terminals within the CTA. For purposes of this analysis, it was assumed that the APM would run between Terminal 3 and the MSC.

Alternative 4: No Central Terminal Processor/No APM

The final alternative considered for the future phase(s) of the MSC Program was an alternative that included no CTP or APM; passengers would check-in, check their luggage, and undergo security screening within one of the existing terminals in the CTA, and then be bused to the MSC, as is assumed to occur for the MSC North Project.

5.5 Evaluation of Alternatives

The following describes the environmental impacts associated with each of the alternatives described above compared to the proposed MSC North Project or the future phase(s) of the MSC Program.

5.5.1 MSC North Project

5.5.1.1 Alternative 1: No Project

Air Quality

Under the No Project Alternative, the Project site would continue to be used for aircraft maintenance, RON/RAD aircraft parking, the U.S. Coast Guard facility, electrical substations, and the various other existing uses at the site. Under the No Project Alternative, the provision of new aircraft gates in the midfield area at LAX would not occur.

As discussed in Chapter 4.1, *Air Quality*, the proposed Project would result in a net increase in short-term and temporary emissions of criteria air pollutants associated with construction-related activities with a significant and unavoidable impact with respect to regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X. The No Project Alternative would not involve construction, therefore it would have no net increase in short-term and temporary emissions of criteria air pollutants.

The No Project Alternative would result in emissions consistent with current levels and with future aircraft activity projections, which would be about the same as the emissions under the proposed Project on a long-term basis. As discussed in Chapter 4.1, *Air Quality*, operation of the proposed Project is not expected to generate new emissions associated with aircraft operations because the proposed Project will not increase or change the type of aircraft operations at LAX. Taxiing distances of some aircraft would decrease under the proposed Project when compared to the No Project condition, as fewer operations would occur at the West Remote Gates/Pads. However, additional bus trips and ground support equipment (GSE) trips would occur under the proposed Project to transport passengers and their luggage between the MSC North and terminals within the CTA. Thus, the operational emissions under the No Project Alternative would have similar emissions related to aircraft operations, slightly lower emissions related to on-airport bus and GSE trips, but slightly greater emissions from aircraft taxiing.

Nonetheless, as the No Project Alternative would not involve any construction, it would not have the significant unavoidable impact that would occur under the proposed Project with respect to construction-related regional CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X emissions. With respect to regional operational emissions, the No Project Alternative would be similar to the proposed Project; impacts would be less than significant.

Greenhouse Gases

Under the No Project Alternative, the Project site would continue to be used for aircraft maintenance, RON/RAD aircraft parking, the U.S. Coast Guard facility, electrical substations, and the various other existing uses at the site. Under the No Project Alternative, the provision of new aircraft gates in the midfield area at LAX would not occur.

As discussed in Chapter 4.2, *Greenhouse Gas Emissions*, the proposed Project would result in a net increase in short-term and temporary GHG emissions associated with construction-related activities. This Alternative would result in no net increase in short-term and temporary emissions of GHGs since construction would not occur. On a long-term basis, the existing site facilities would continue to be used and would not be relocated. The proposed Project would be required to comply with the CALGreen and LAGBC Tier 1 standards for nonresidential buildings, which would reduce energy consumption, waste generation, and GHG emissions compared to similar buildings that do not meet the standards. Maintenance and other activities would continue to occur at the existing facilities located on the Project site, which were built prior to LAX's adoption of the Los Angeles Green Building Code Tier 1 standards and thus were not designed to meet the current energy efficiency standards. However, the MSC North Project would generate more greenhouse gas emissions than the existing facilities due to its size and function and the greater electrical, heating, and cooling requirements. Thus, the operational emissions under the No Project Alternative would be less than the proposed Project, and would be less than significant.

Human Health Risk

The No Project Alternative would have no health risk impact associated with construction since no construction would occur. Operational health impacts of this Alternative would be less than significant as there would be no change in operations at the airport compared to existing conditions. Therefore, there would be no change in localized emissions at the Project site,

impacts would be less than significant, and this alternative would avoid the significant and unavoidable impact of the proposed Project in regards to the acute non-cancer hazard index for acrolein.

Noise

Under the proposed Project, operational noise sources would include aircraft taxiing to the MSC North site, which would have less than significant noise impacts. The No Project Alternative would not introduce any new sources of noise on the Project site or within the surrounding vicinity; ambient noise levels at the site would remain as they are under existing conditions, consistent with typical noise levels from aircraft taxiing in the midfield area of the airport. Under the No Project alternative, more aircraft would taxi to and utilize the West Remote Gates/Pads than under the proposed Project. However, noise impacts from aircraft operations would be similar under both alternatives and would remain less than significant.

Public Services – Fire Protection Services

Under the No Project Alternative, the Project site would continue to be used for aircraft maintenance, RON/RAD aircraft parking, the U.S. Coast Guard facility, electrical substations, and the various other existing uses at the site. Under the No Project Alternative, the provision of new aircraft gates in the midfield area and a tunnel connecting the MSC North building to the CTA under the proposed Project would not occur. As discussed in Chapter 4.5, *Public Services – Fire Protection Services*, the proposed Project would have a less than significant impact. However, as the No Project Alternative entirely avoids the proposed Project's fire protection services impacts, it would have less impact than the proposed Project on existing fire protection services in the area.

Construction Surface Transportation

The No Project Alternative would not involve any of the construction activities associated with the development of the proposed Project. Construction traffic associated with demolition, construction of new facilities, delivery of materials and hauling, and employee trips that would be required for the construction of the proposed Project would not occur. As discussed in Chapter 4.7, *Construction Surface Transportation*, the proposed Project would have a significant and unavoidable impact on two intersections during the Project's construction phase. As the No Project Alternative entirely avoids the proposed Project's construction traffic impacts, it would have less impact than the proposed Project on existing traffic conditions in the area.

5.5.1.2 Alternative 2: Reduced Project

Air Quality

Under Alternative 2: Reduced Project (Reduced Project Alternative), the MSC North building would be smaller than the proposed Project with 3-4 fewer aircraft gates. As the concourse would extend to just north of World Way West, the Reduced Project Alternative would avoid impacting World Way West, the FAA navigational aids, an electrical industrial station, 3 RON parking spaces, the natural gas regulator, and the American Airlines Private Post. In addition to a reduced concourse facility, this alternative would also eliminate the tunnel for a future

conveyance system, as well as Taxiway C14 and associated enabling projects, including: demolition of the U.S. Coast Guard facility; demolition of the U.S. Airways Maintenance facility; relocation of Electrical Vault #2; the removal of 5 RON aircraft parking spaces; and the relocation of the water deluge tank and pump station.

The Reduced Project Alternative would result in construction emissions, but due to the reduced size of the project would be less than the proposed Project. As discussed in Chapter 4.1, *Air Quality*, the proposed Project would result in a net increase in short-term and temporary emissions of criteria air pollutants associated with construction-related activities with a significant and unavoidable impact with respect to regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X. As shown in **Table 5-2**, the Reduced Project Alternative would have less construction impacts than the proposed Project Alternative. Implementation of the Reduced Project Alternative would avoid significant impacts related to short-term and temporary emissions of VOC, PM_{10}, and $PM_{2.5}$, that would otherwise occur under the proposed Project. However, while impacts to construction-related regional CO and NO_X emissions would be reduced, impacts would still be significant and unavoidable.

Table 5-2

Reduced Project Alternative Air Pollutant Emissions

Pollutant	SCAQMD Threshold (lbs/day)	MSC North Project Peak Daily Emissions (lbs/day)[1]	Alternative 1: Reduced Project (lbs/day)
Carbon monoxide, CO	550	**1,290**	**575**
Volatile organic compounds, VOC	75	**135**	56
Nitrogen oxides, NO_X	100	**1,156**	**327**
Sulfur dioxide, SO_2	150	4	2
Respirable particulate matter, PM_{10}	150	**669**	130
Fine particulate Matter, $PM_{2.5}$	55	**172**	29

Note:
1 Values shown in bold indicate significant impacts.

Source: Ricondo & Associates, Inc., 2013.

The Reduced Project Alternative would result in emissions consistent with current levels and with future aircraft activity projections, which would be about the same as the emissions under the proposed Project on a long-term basis. As discussed in Chapter 4.1, *Air Quality*, operation of the proposed Project is not expected to generate new emissions associated with aircraft operations because the proposed Project will not increase or change the type of aircraft operations at LAX. Taxiing distances of some aircraft would decrease under the proposed Project when compared to the Reduced Project Alternative, as fewer operations would occur at the West Remote Gates/Pads. However, additional bus trips and ground support equipment (GSE) trips would occur under the proposed Project to transport passengers and their luggage between the MSC North and terminals within the CTA. Thus, the operational emissions under the Reduced Project Alternative would have similar emissions related to aircraft operations, slightly lower emissions related to on-airport bus and GSE trips, but slightly greater emissions from aircraft taxiing.

In summary, the Reduced Project Alternative would avoid the significant impact that would occur under the proposed Project with respect to construction-related regional PM_{10}, $PM_{2.5}$, and VOC emissions. While impacts for construction-related regional CO and NO_X emissions would be reduced, impacts would still be significant and unavoidable for these air pollutants. With respect to regional operational emissions, the Reduced Project Alternative would be similar to the proposed Project; impacts would be less than significant.

Greenhouse Gases

Under the Reduced Project Alternative, the MSC North building would be smaller than the proposed Project with 3-4 fewer aircraft gates. As the concourse would extend to just north of World Way West, the Reduced Project Alternative would avoid impacting World Way West, the FAA navigational aids, an electrical industrial station, 3 RON parking spaces, the natural gas regulator, and the American Airlines Private Post. In addition to a reduced concourse facility, this alternative would also eliminate the tunnel for a future conveyance system, as well as Taxiway C14 and associated enabling projects, including: demolition of the U.S. Coast Guard facility; demolition of the U.S. Airways Maintenance facility; relocation of Electrical Vault #2; the removal of 5 RON aircraft parking spaces; and the relocation of the water deluge tank and pump station.

As discussed in Chapter 4.2, *Greenhouse Gas Emissions*, the proposed Project would result in a net increase in GHG emissions. The Reduced Project Alternative would also result in a net increase in emissions of GHGs, but total emissions would be less due to the reduced size of the project, as shown in **Table 5-3**. The Reduced Project Alternative would be required to comply with the CALGreen and LAGBC Tier 1 standards for nonresidential buildings, which would reduce energy consumption, waste generation, and GHG emissions compared to similar buildings that do not meet the standards. The Reduced Project Alternative would result in operational greenhouse gas emissions associated with the MSC North building; however, total emissions would be less than the proposed Project due to the reduced size of the building. Additionally, GHG emissions from current uses of the MSC North Project site that would remain under the Reduced Project Alternative are quantified as well. The Reduced Project Alternative would result in fewer total greenhouse gas emissions, when compared to the proposed Project Alternative; it is anticipated that the Reduced Project Alternative would avoid the significant impact that would occur under the proposed Project with respect to greenhouse gas emissions.

Table 5-3

Comparison of Reduced Project Alternative Greenhouse Gas Emissions to Proposed Project

Emission Source	2019 Future Without MSC North Project CO_2e (Metric Tons)	2019 Future With MSC North Project CO_2e (Metric Tons)	Alternative 2: Reduced Project CO_2e (Metric Tons)	Proposed Project Incremental Difference CO_2e (Metric Tons)	Alternative 2 Incremental Difference CO_2e (Metric Tons)
Aircraft [1]	772,056	770,528	772,056	-1,528	0
Ground Support Equipment [1]	34,269	34,188	34,269	-81	0
Busing Operations [1]	572	760	760	188	188
On-Airport Stationary [2]	9	347	212	338	203
Building Electricity [2]	191	5,525	3,570	5,334	3,379
Solid Waste Disposal [2]	17	92	115	75	98
Indoor Water Usage [2]	80	1,191	925	1,111	845
Construction (Amortized) [2]	-	5,015	3,656	5,015	3,656
Total Net	**807,194**	**817,646**	**815,563**	**10,452**	**8,369**
SCAQMD GHG Threshold for Industrial Projects				10,000	10,000
Above the Threshold?				**Yes**	**No**

Notes:
1 Total emissions for LAX.
2 Emissions for MSC North Project site only.

Source: Ricondo & Associates, Inc., 2013.

Human Health Risk

The Reduced Project Alternative would result in changes to aircraft taxi patterns similar to the proposed Project, although with fewer gates, fewer aircraft operations would occur at the MSC North building. Although this Alternative does not include the construction of Taxiway C14, it is still anticipated that the acute non-cancer hazard index for acrolein would be similar to that anticipated under the proposed Project due to the shift of aircraft taxi operations from the CTA to the midfield area. Thus, operational health impacts of this Alternative would be similar to the proposed Project. Implementation of the Reduced Project Alternative would not avoid or substantially reduce the significant unavoidable impact that would occur under the proposed Project with respect to the acute non-cancer hazard index for acrolein.

Noise

Under the proposed Project, operational noise sources would include aircraft taxiing to the MSC North site, which would have less than significant noise impacts. The Reduced Project Alternative would include the same changes to aircraft taxi paths (with the exception of Taxiway C14), although with fewer gates at the MSC North, there would be fewer aircraft operations in this area of the airfield. As with the proposed Project, no significant noise impacts from aircraft operations at LAX is expected to occur under the Reduced Project Alternative.

Public Services – Fire Protection Services

Under the Reduced Project Alternative, the MSC North building would be smaller than the proposed Project with 3-4 fewer aircraft gates. Additionally, the Reduced Project Alternative would avoid impacting World Way West, the FAA navigational aids, an electrical industrial station, 3 RON parking spaces, the natural gas regulator, and the American Airlines Private Post. In addition to a reduced concourse facility, this alternative would also eliminate the tunnel for a future conveyance system, as well as Taxiway C14 and associated enabling projects, including: demolition of the U.S. Coast Guard facility; demolition of the U.S. Airways Maintenance facility; relocation of Electrical Vault #2; the removal of 5 RON aircraft parking spaces; and the relocation of the water deluge tank and pump station. With elimination of the tunnels and the reduction in size of the MSC North building, this alternative would have reduced impacts to fire protection services when compared to the proposed Project. As with the proposed Project, no significant impacts to fire protection services at LAX is expected to occur under the Reduced Project Alternative.

Construction Surface Transportation

Under the Reduced Project Alternative, the MSC North building would be smaller than the proposed Project with 3-4 fewer aircraft gates. Additionally, the Reduced Project Alternative would avoid impacting World Way West, the FAA navigational aids, an electrical industrial station, 3 RON parking spaces, the natural gas regulator, and the American Airlines Private Post. In addition to a reduced concourse facility, this alternative would also eliminate the tunnel for a future conveyance system, as well as Taxiway C14 and associated enabling projects, including: demolition of the U.S. Coast Guard facility; demolition of the U.S. Airways Maintenance facility; relocation of Electrical Vault #2; the removal of 5 RON aircraft parking spaces; and the relocation of the water deluge tank and pump station. Thus, this Alternative would have reduced impacts to surface transportation from construction activities when

compared to the proposed Project. As discussed in Chapter 4.7, *Construction Surface Transportation*, the proposed Project would have a significant and unavoidable impact on two intersections during the peak period of the Project's construction phase. Because the peak period of the construction phase is primarily related to construction of the MSC North building, it is anticipated that implementation of the Reduced Project Alternative would still result in significant and unavoidable impacts with respect to construction surface transportation. However, the impact would be reduced when compared to the proposed Project.

5.5.1.3 Alternative 3: MSC South

Air Quality

Under Alternative 3: MSC South (MSC South Alternative), the southern portion of the MSC building would be constructed, which would have 2 fewer aircraft gates than the Proposed Project. Additionally, the MSC South Alternative would avoid impacting World Way West, the FAA navigational aids, an electrical industrial station, the natural gas regulator, the American Airlines Maintenance (Non-Power) shop, and the American Airlines leasehold parking.

The MSC South Alternative would result in construction emissions, but due to the reduced size of the project would be less than the proposed Project, as shown in **Table 5-4**. As discussed in Chapter 4.1, *Air Quality*, the proposed Project would result in a net increase in short-term and temporary emissions of criteria air pollutants associated with construction-related activities with a significant and unavoidable impact with respect to regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X. Although the MSC South Alternative would have less construction impacts than the proposed Project Alternative, the main elements contributing to the exceedance of regional emissions would still occur; including construction of the MSC South building and apron, Taxiway C14, and passenger and conveyance tunnels. As shown in Table 5-4, implementation of the MSC South Alternative would not avoid or substantially reduce significant impacts related to short-term and temporary emissions of criteria air pollutants that would otherwise occur under the proposed Project.

Table 5-4

MSC South Alternative Regional Construction Emissions

Pollutant	SCAQMD Threshold (lbs/day)	MSC North Project Peak Daily Emissions (lbs/day)[1]	Alternative 3: MSC South (lbs/day)
Carbon monoxide, CO	550	**1,290**	**964**
Volatile organic compounds, VOC	75	**135**	**102**
Nitrogen oxides, NO_X	100	**1,156**	**765**
Sulfur dioxide, SO_2	150	4	3
Respirable particulate matter, PM_{10}	150	**669**	**275**
Fine particulate Matter, $PM_{2.5}$	55	**172**	**65**

Note:
1 Values shown in bold indicate significant impacts.

Source: Ricondo & Associates, Inc., 2013.

The MSC South Alternative would result in emissions consistent with current levels and with future aircraft activity projections, which would be about the same as the emissions under the proposed Project on a long-term basis. As discussed in Chapter 4.1, *Air Quality*, operation of the proposed Project is not expected to generate new emissions associated with aircraft operations because the proposed Project will not increase or change the type of aircraft operations at LAX. Taxiing distances of some aircraft would decrease under the proposed Project when compared to the MSC South Alternative, as fewer operations would occur at the West Remote Gates/Pads. However, additional bus trips and ground support equipment (GSE) trips would occur under the proposed Project to transport passengers and their luggage between the MSC North and terminals within the CTA. Thus, the operational emissions under the MSC South Alternative would have similar emissions related to aircraft operations, slightly lower emissions related to on-airport bus and GSE trips, but slightly greater emissions from aircraft taxiing.

In summary, the MSC South Alternative would not avoid or substantially reduce the significant unavoidable impact that would occur under the proposed Project with respect to construction-related regional CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X emissions. With respect to regional operational emissions, the MSC South Alternative would be similar to the proposed Project; impacts would be less than significant.

Greenhouse Gases

Under the MSC South Alternative, the MSC building would be smaller than the proposed Project with 2 fewer aircraft gates. Additionally, the MSC South Alternative would avoid impacting World Way West, the FAA navigational aids, an electrical industrial station, the natural gas regulator, the American Airlines Maintenance (Non-Power) shop, and the American Airlines leasehold parking.

As discussed in Chapter 4.2, *Greenhouse Gas Emissions*, the proposed Project would result in a net increase in GHG emissions. The MSC South Alternative would also result in a net increase in emissions of GHGs, but total emissions would be slightly less due to the reduced size of the project, as shown in **Table 5-5**. The MSC South Alternative would be required to comply with the CALGreen and LAGBC Tier 1 standards for nonresidential buildings, which would reduce energy consumption, waste generation, and GHG emissions compared to similar buildings that do not meet the standards. The MSC South Alternative would result in operational greenhouse gas emissions associated with the MSC building; total emissions would be slightly less than the proposed Project due to the reduced size of the building but would not be substantially different since the electrical, heating, and cooling requirements of the MSC South building would still be substantial. While the MSC South Alternative would result in fewer total greenhouse gas emissions, when compared to the proposed Project, it is not anticipated that the MSC South Alternative would avoid or substantially reduce the significant unavoidable impact that would occur under the proposed Project with respect to greenhouse gas emissions.

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Table 5-5

Comparison of MSC South Alternative Greenhouse Gas Emissions to Proposed Project

Emission Source	2019 Future Without MSC North Project CO_2e (Metric Tons)	2019 Future With MSC North Project CO_2e (Metric Tons)	Alternative 3: MSC South CO_2e (Metric Tons)	Proposed Project Incremental Difference CO_2e (Metric Tons)	Alternative 3 Incremental Difference CO_2e (Metric Tons)
Aircraft [1]	772,056	770,528	772,056	-1,528	0
Ground Support Equipment [1]	34,269	34,188	34,269	-81	0
Busing Operations [1]	572	760	760	188	188
On-Airport Stationary [2]	9	347	291	338	282
Building Electricity [2]	191	5,525	4,688	5,334	4,497
Solid Waste Disposal [2]	17	92	92	75	75
Indoor Water Usage [2]	80	1,191	1,050	1,111	970
Construction (Amortized) [2]	-	5,015	4,160	5,015	4.160
Total Net	**807,194**	**817,646**	**817,366**	**10,452**	**10,172**
SCAQMD GHG Threshold for Industrial Projects				10,000	10,000
Above the Threshold?				**Yes**	**Yes**

Notes:
1 Total emissions for LAX.
2 Emissions for MSC North Project site only.

Source: Ricondo & Associates, Inc., 2013.

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Human Health Risk

The MSC South Alternative would result in changes to aircraft taxi patterns similar to the proposed Project; although with fewer gates, fewer aircraft operations would occur at the MSC South. However, because this Alternative also includes the construction of Taxiway C14, it is anticipated that the acute non-cancer hazard index for acrolein would be similar to that anticipated under the proposed Project. The provision of Taxiway C14 and Taxilane C12 would cause more crossfield taxi operations to occur, which would reduce acrolein concentrations around most of the airport, but would increase peak concentrations at some receptor locations to the north and south (see Figure 4.3-2 in Chapter 4.3, *Human Health Risk Assessment*). Thus, operational health impacts of this Alternative would be similar to the proposed Project. Implementation of the MSC South Alternative would not avoid or substantially reduce the significant unavoidable impact that would occur under the proposed Project with respect to the acute non-cancer hazard index for acrolein.

Noise

Under the proposed Project, operational noise sources would include aircraft taxiing to the MSC North site, which would have less than significant noise impacts. The MSC South Alternative would include similar changes to aircraft taxi paths, although with fewer gates and at a location south of the proposed MSC North building. Thus, there would be slightly fewer aircraft operations in this area of the airfield. However, as with the proposed Project, no significant noise impacts from aircraft operations at LAX is expected to occur under the MSC South Alternative.

Public Services – Fire Protection Services

Under the MSC South Alternative, the MSC South building would be smaller than the proposed Project with 2 fewer aircraft gates. Additionally, the MSC South Alternative would avoid impacting World Way West, the FAA navigational aids, an electrical industrial station, the natural gas regulator, the American Airlines Maintenance (Non-Power) shop, and the American Airlines leasehold parking. However, the MSC South Alternative would include new aircraft gates in the midfield area, tunnel(s) connecting the MSC South building to the CTA, and Taxiway C14. Thus, this Alternative would have similar impacts to fire protection services when compared to the proposed Project. As with the proposed Project, no significant impacts to fire protection services at LAX is expected to occur under the MSC South Alternative.

Construction Surface Transportation

Under the MSC South Alternative, the MSC South building would be smaller than the proposed Project with 2 fewer aircraft gates. Additionally, the MSC South Alternative would avoid impacting World Way West, the FAA navigational aids, an electrical industrial station, the natural gas regulator, the American Airlines Maintenance (Non-Power) shop, and the American Airlines leasehold parking. However, the MSC South Alternative would include new aircraft gates in the midfield area, tunnel(s) connecting the MSC South building to the CTA, and Taxiway C14. Thus, this Alternative would have similar impacts to construction surface transportation when compared to the Proposed Project. As discussed in Chapter 4.7, *Construction Surface Transportation*, the proposed Project would have a significant and unavoidable impact on two intersections during the Project's construction phase. Thus, it is

anticipated that implementation of the MSC South Alternative would not avoid or substantially reduce the significant unavoidable impact that would occur under the proposed Project with respect to construction surface transportation.

5.5.1.4 Alternative 4: Terminal/Concourse 0

Air Quality

Under Alternative 4: Terminal/Concourse 0 (Terminal/Concourse 0 Alternative), the Project site would continue to be used for the American Airlines Maintenance (Non-Power) shop, the American Airlines leasehold parking American Airlines, RON/RAD aircraft parking north of the American Airlines High Bay Hangar, World Way West, FAA navigational aids, and electrical industrial stations. Under the Terminal/Concourse 0 Alternative, the provision of new aircraft gates in the midfield area at LAX that would be constructed under the proposed Project would not occur. Rather, Terminal/Concourse 0 would be constructed with up to 7 gates in the western portion of the area currently occupied by Park One, east of Terminal 1. This alternative would require the relocation of Sky Way (upper and lower roadways) eastward to allow development of the terminal and would also provide additional roadway and curbfront in the CTA. This alternative would also include the construction of Taxiway C14 and associated enabling projects, including: relocation of the U.S. Coast Guard facility; relocation of the U.S. Airways Maintenance facility; relocation of Electrical Vault #2; the relocation of 5 RON aircraft parking spaces; and the relocation of the water deluge tank and pump station.

The Terminal/Concourse 0 Alternative would result in construction emissions, but due to the reduced size of the project would be less than the proposed Project for all pollutants except for NO_X, as shown in **Table 5-6**. As discussed in Chapter 4.1, *Air Quality*, the proposed Project would result in a net increase in short-term and temporary emissions of criteria air pollutants associated with construction-related activities with a significant and unavoidable impact with respect to regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X. Although the Terminal/Concourse 0 Alternative would have less construction impacts than the proposed Project Alternative (for all criteria pollutants except NO_X), major construction elements contributing to the exceedance of regional emissions would still occur. This includes construction of the Terminal/Concourse 0 building and apron, Taxiway C14, and relocation of Sky Way. As shown in Table 5-6, implementation of the Terminal/Concourse 0 Alternative would not avoid or substantially reduce significant impacts related to short-term and temporary emissions of criteria air pollutants that would otherwise occur under the proposed Project.

Table 5-6

Terminal/Concourse 0 Regional Construction Emissions

Pollutant	SCAQMD Threshold (lbs/day)	MSC North Project Peak Daily Emissions (lbs/day)[1]	Alternative 4: Terminal/Concourse 0 (lbs/day)
Carbon monoxide, CO	550	**1,290**	**1,207**
Volatile organic compounds, VOC	75	**135**	**110**
Nitrogen oxides, NO_X	100	**1,156**	**1,224**
Sulfur dioxide, SO_2	150	4	3
Respirable particulate matter, PM_{10}	150	**669**	**334**
Fine particulate Matter, $PM_{2.5}$	55	**172**	**123**

Note:
1 Values shown in bold indicate significant impacts.

Source: Ricondo & Associates, Inc., 2014.

The Terminal/Concourse 0 Alternative would result in emissions consistent with current levels and with future aircraft activity projections, which would be about the same as the emissions under the proposed Project on a long-term basis. As discussed in Chapter 4.1, *Air Quality*, operation of the proposed Project is not expected to generate new emissions associated with aircraft operations because the proposed Project will not increase or change the type of aircraft operations at LAX. Taxiing distances of some aircraft would decrease under the proposed Project when compared to the Terminal/Concourse 0 Alternative, as fewer operations would occur at the West Remote Gates/Pads and aircraft would taxi to the midfield area, not the northeast corner of LAX. However, additional bus trips and ground support equipment (GSE) trips would occur under the proposed Project to transport passengers and their luggage between the MSC North and terminals within the CTA, which would not occur under the Terminal/Concourse 0 Alternative. Thus, the operational emissions under the Terminal/Concourse 0 Alternative would have similar emissions related to aircraft operations, lower emissions related to on-airport bus and GSE trips, but greater emissions from aircraft taxiing.

In summary, the Terminal/Concourse 0 Alternative would not avoid or substantially reduce the significant unavoidable impact that would occur under the proposed Project with respect to construction-related regional CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X emissions. With respect to regional operational emissions, the Terminal/Concourse 0 Alternative would be similar to the proposed Project; impacts would be less than significant.

Greenhouse Gases

Under the Terminal/Concourse 0 Alternative, the Project site would continue to be used for aircraft maintenance, RON/RAD aircraft parking, the U.S. Coast Guard facility, electrical substations, and the various other existing uses at the site. Under the Terminal/Concourse 0 Alternative, the provision of new aircraft gates in the midfield area at LAX would not occur. Rather, Terminal/Concourse 0 would be constructed with up to 7 gates in the western portion of the area currently occupied by Park One, east of Terminal 1. This alternative would require the

relocation of Sky Way (upper and lower roadways) eastward to allow development of the terminal and would also provide additional roadway and curbfront in the CTA.

As discussed in Chapter 4.2, *Greenhouse Gas Emissions*, the proposed Project would result in a net increase in short-term and temporary GHG emissions associated with construction-related activities. The Terminal/Concourse 0 Alternative would also result in a net increase in short-term and temporary emissions of GHGs, but total emissions would be slightly less due to the reduced size of the project, as shown in **Table 5-7**. The Terminal/Concourse 0 Alternative would be required to comply with the CALGreen and LAGBC Tier 1 standards for nonresidential buildings, which would reduce energy consumption, waste generation, and GHG emissions compared to similar buildings that do not meet the standards. The Terminal/Concourse 0 Alternative would result in operational greenhouse gas emissions associated with the terminal building; however, total emissions would be less than the proposed Project due to the reduced size of the building, but would not be substantially different since the electrical, heating, and cooling requirements of the terminal building would still be substantial. The Terminal/Concourse 0 Alternative would result in fewer total greenhouse gas emissions, when compared to the proposed Project Alternative; it is anticipated that the Terminal/Concourse 0 Alternative would avoid the significant impact that would occur under the proposed Project with respect to greenhouse gas emissions.

Human Health Risk

The Terminal/Concourse 0 Alternative would result in changes to aircraft taxi patterns with more aircraft traveling to the northeast corner of LAX than they do today. However, because this Alternative also includes the construction of Taxiway C14, it is anticipated that the acute non-cancer hazard index for acrolein impacts to receptors north of the airport would be similar to that anticipated under the proposed Project, and would probably impact receptors located just east of the CTA due to the proximity of the airport property line to the Terminal/Concourse 0 site. Thus, operational health impacts of this Alternative would be similar to the proposed Project. Implementation of the Terminal/Concourse 0 Alternative would not avoid or substantially reduce the significant unavoidable impact that would occur under the proposed Project with respect to the acute non-cancer hazard index for acrolein.

Noise

Under the proposed Project, operational noise sources would include aircraft taxiing to the MSC North site, which would have less than significant noise impacts. The Terminal/Concourse 0 Alternative would include similar changes to aircraft taxi paths due to construction of Taxiway C14, but would also include introduction of aircraft taxi noise further east in the CTA adjacent to the Terminal/Concourse 0 site. However, as with the proposed Project, no significant noise impacts from aircraft operations at LAX is expected to occur under the Terminal/Concourse 0 Alternative.

Table 5-7

Comparison of Terminal/Concourse 0 Alternative Greenhouse Gas Emissions to Proposed Project

Emission Source	2019 Future Without MSC North Project CO_2e (Metric Tons)	2019 Future With MSC North Project CO_2e (Metric Tons)	Alternative 4: Terminal/Concourse 0 CO_2e (Metric Tons)	Proposed Project Incremental Difference CO_2e (Metric Tons)	Alternative 4 Incremental Difference CO_2e (Metric Tons)
Aircraft [1]	772,056	770,528	772,056	-1,528	0
Ground Support Equipment [1]	34,269	34,188	34,269	-81	0
Busing Operations [1]	572	760	572	188	0
On-Airport Stationary [2]	9	347	221	338	212
Building Electricity [2]	191	5,525	3,566	5,334	3.375
Solid Waste Disposal [2]	17	92	73	75	56
Indoor Water Usage [2]	80	1,191	808	1,111	728
Construction (Amortized) [2]	-	5,015	3,190	5,015	3,190
Total Net	**807,194**	**817,646**	**814,755**	**10,452**	**7,561**
SCAQMD GHG Threshold for Industrial Projects				10,000	10,000
Above the Threshold?				**Yes**	**No**

Notes:
1 Total emissions for LAX.
2 Emissions for MSC North Project site only.

Source: Ricondo & Associates, Inc., 2013.

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Public Services – Fire Protection Services

Under the Terminal/Concourse 0 Alternative, the proposed terminal building would be smaller than the proposed Project with 4 fewer aircraft gates. Additionally, the Project site would continue to be used for aircraft maintenance, RON/RAD aircraft parking, the U.S. Coast Guard facility, electrical substations, and the various other existing uses at the site. Under the Terminal/Concourse 0 Alternative, the provision of new aircraft gates in the midfield area at LAX that would be constructed under the proposed Project would not occur. Rather, Terminal/Concourse 0 would be constructed with up to 7 gates in the western portion of the area currently occupied by Park One, east of Terminal 1. This alternative would require the relocation of Sky Way (upper and lower roadways) eastward to allow development of the terminal and would also provide additional roadway and curbfront in the CTA. This Alternative may also eliminate the need for airside passenger conveyance tunnels. Thus, this Alternative is anticipated to have less impact to fire protection services than the proposed Project. As with the proposed Project, no significant impacts to fire protection services at LAX is expected to occur under the Terminal/Concourse 0 Alternative.

Construction Surface Transportation

Under the Terminal/Concourse 0 Alternative, the proposed terminal building would be smaller than the proposed Project with 4 fewer aircraft gates. Additionally, the Project site would continue to be used for aircraft maintenance, RON/RAD aircraft parking, the U.S. Coast Guard facility, electrical substations, and the various other existing uses at the site. Under the Terminal/Concourse 0 Alternative, the provision of new aircraft gates in the midfield area at LAX that would be constructed under the proposed Project would not occur. Rather, Terminal/Concourse 0 would be constructed with up to 7 gates in the western portion of the area currently occupied by Park One, east of Terminal 1. This alternative would require the relocation of Sky Way (upper and lower roadways) eastward to allow development of the terminal and would also provide additional roadway and curbfront in the CTA. Because there is limited open space available in this part of the airport, construction staging would have to occur in other areas of the airport, most likely north of the runway complex or in the Continental City area in the southeast corner of the airport.

As discussed in Chapter 4.7, *Construction Surface Transportation*, the proposed Project would have a significant and unavoidable impact on two intersections during the Project's construction phase (Imperial Highway and Main Street, and Sepulveda Boulevard and Westchester Parkway). The Sepulveda Boulevard and Westchester Parkway intersection would be impacted if construction staging occurred north of the runway complex; however, the Imperial Highway and Main Street intersection would most likely not be impacted under the Terminal/Concourse 0 Alternative. Thus, the Terminal/Concourse 0 Alternative would lessen but not avoid the significant unavoidable impact that would occur under the proposed Project with respect to construction surface transportation.

Hazards and Hazardous Materials

The Park One site was previously used for various manufacturing operations by Garrett AiResearch, which was subsequently purchased by AlliedSignal (now known as Honeywell). AlliedSignal sold the property in 1991, at which time it was converted into an asphalt-covered commercial parking lot that is currently operated under the name of Park One, also known as

"Park 'N Fly." Several investigation and remediation programs have been implemented at this site since 1989. The principal chemicals of concern (COCs) in soil and groundwater at the site include 1,1-dichloroethene (1,1-DCE), 1,1,1-trichloroethane (1,1,1-TCA), and 1,4-dioxane. VOCs and 1,4-dioxane have been detected in soil, soil gas, perched groundwater, and groundwater at the site. Soil vapor extraction at the site is estimated to have removed more than 100,000 pounds of VOCs between 1990 and 2011. Soil closure has been obtained for all portions of the site except the northwest quadrant.[2]

Ongoing remediation at this site consists of soil vapor extraction to remove VOCs using a granular activated carbon system and monitoring wells. Due to the extent of the VOC contamination associated with the Park One site, it is possible that remediation would still be underway when construction of Terminal/Concourse 0 would be initiated. Due to the extent of excavation needed for the Terminal/Concourse 0 improvements, it is likely that part, or all, of the remediation system would have to be removed during construction, if it was still operational. This would entail destruction of the extraction wells and removal of underground piping and aboveground vessels. Removing the active remediation system at Park One for an extended period would interfere with existing cleanup efforts. However, temporary cessation of remediation would not have any impacts on human health as groundwater beneath the site is not used for municipal purposes and contaminated soils lie beneath asphalt and would not be exposed.

The Terminal/Concourse 0 Alternative would have a greater impact on hazards and hazardous materials than the proposed Project, but with a commitment to continue remediation of the site, impacts to ongoing remediation efforts would be less than significant.

5.5.2 Future Phase(s) of the MSC Program

The alternatives discussed below were developed to identify alternatives that would avoid or substantially reduce the significant impacts of the future phase(s) of the MSC Program. All alternatives assume that the proposed MSC North Project is implemented.

5.5.2.1 Alternative 1: No Future Phase(s) of the MSC Program

Air Quality

Under Alternative 1: No Future Phase(s) of the MSC Program (No Future Phase(s) of the MSC Program Alternative), the MSC North building would not be expanded and the uses on the southern portion of the MSC site would continue for aircraft maintenance, RON/RAD aircraft parking, and the various other existing uses at the site. Additionally, CTA parking garages P2B and P5 would not be impacted. No additional short-term and temporary emissions of criteria air pollutants associated with construction-related activities would occur.

[2] Technical Memorandum from AMEC (David J. DeVries, Z. Xiong, and S. Warner) to Steve Rowe, California Water Quality Control Board, Los Angeles Region, "Pre-Feasibility Study Technical Memorandum for "Hot Spot" Soil and Groundwater Remediation, Former Honeywell Sepulveda Site, 9851 Sepulveda Boulevard, Los Angeles, California, SLIC Site No. 0346", August 31, 2012.

The No Future Phase(s) of the MSC Program Alternative would result in emissions consistent with current levels and with future aircraft activity projections, which would be about the same as the emissions under the proposed future phase(s) of the MSC Program on a long-term basis. As discussed in Chapter 4.1, *Air Quality*, operation of the future phase(s) of the MSC Program is not expected to generate new emissions associated with aircraft operations because the future phase(s) of the MSC Program would not increase or change the type of aircraft operations at LAX. Taxiing distances of some aircraft would decrease under the future phase(s) of the MSC Program when compared to the No Future Phase(s) of the MSC Program Alternative, as the West Remote Gates/Pads would be closed. The future phase(s) of the MSC Program would also include operation of an APM, eliminating busing of passengers between the MSC and the CTA. Thus, the operational emissions under the No Future Phase(s) of the MSC Program Alternative would have similar emissions related to aircraft operations, but greater emissions related to aircraft taxiing and on-airport bus and GSE trips.

Nonetheless, as the No Future Phase(s) of the MSC Program Alternative would not involve any construction, it would not have the likely significant unavoidable impact that would occur under the future phase(s) of the MSC Program with respect to construction-related regional CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X emissions. With respect to regional operational emissions, the No Future Phase(s) of the MSC Program Alternative would have higher emissions than the future phase(s) of the MSC Program, but impacts would likely be less than significant.

Greenhouse Gases

Under the No Future Phase(s) of the MSC Program Alternative, the MSC North building would not be expanded and the uses on the southern portion of the MSC site would continue for aircraft maintenance, RON/RAD aircraft parking, and the various other existing uses at the site. This Alternative would result in no net increase in short-term and temporary emissions of GHGs since additional construction would not occur.

On a long-term basis, the existing site facilities would continue to be used and would not be relocated. Maintenance and other activities would continue to occur at the existing facilities located on the southern portion of the MSC site, which were built prior to LAX's adoption of the Los Angeles Green Building Code Tier 1 standards and thus were not designed to meet the current energy efficiency standards. However, under the No Future Phase(s) of the MSC Program Alternative, the MSC North building would generate more greenhouse gas emissions than the existing facilities due to its size and function (see Section 4.2.6). While the operational emissions under No Future Phase(s) of the MSC Program Alternative would be less than the future phase(s) of the MSC Program, the operational emissions associated with the No Future Phase(s) of the MSC Program Alternative would still be significant.

Human Health Risk

The No Future Phase(s) of the MSC Program Alternative would have no health risk impact associated with construction since no additional construction would occur. Therefore, impacts would be less than the future phase(s) of the MSC Program. Health hazards during operation of the MSC North building (under the No Future Phase(s) of the MSC Program Alternative) would be the same as described in Section 4.3.6. This alternative would have less health impacts when compared to the future phase(s) of the MSC Program in regards to the acute non-cancer hazard index for acrolein, but would have impacts similar to the MSC North Project.

Noise

Under the No Future Phase(s) of the MSC Program Alternative, operational noise sources would include aircraft taxiing to the MSC North site, which would have less than significant noise impacts. The No Future Phase(s) of the MSC Program Alternative would not introduce any new sources of noise on the southern portion of the MSC site or within the surrounding vicinity; ambient noise levels at the site would remain similar to noise levels under the MSC North Project, consistent with typical noise levels from aircraft taxiing in the midfield area of the airport. Under the No Future Phase(s) of the MSC Program Alternative, more aircraft would taxi to and utilize the West Remote Gates/Pads than under the future phase(s) of the MSC Program. However, noise impacts from aircraft operations would be similar under both alternatives and would remain less than significant.

Public Services – Fire Protection Services

Under the No Future Phase(s) of the MSC Program Alternative, the future phase(s) of the MSC Program site would continue to be used for aircraft maintenance, RON/RAD aircraft parking, and the various other existing uses at the site. Under the No Future Phase(s) of the MSC Program Alternative, the provision of additional aircraft gates in the midfield area and a CTP in the CTA would not occur. As discussed in Chapter 4.5, *Public Services – Fire Protection Services*, the future phase(s) of the MSC Program would have a less than significant impact. As the No Future Phase(s) of the MSC Program Alternative would be the same as the MSC North Project, it would have similar impacts on existing fire protection services in the area; therefore, no significant impacts to fire protection services at LAX are expected to occur under the No Future Phase(s) of the MSC Program.

5.5.2.2 Alternative 2: Reduced Program – Fewer Gates

Air Quality

Under Alternative 2: Reduced Program – Fewer Gates (Reduced Program Alternative), the future phase(s) of the MSC Program would be reduced from a concourse with up to 29 gates to a concourse of up to 20 gates. However, any expansion of the MSC building would impact the American Airlines High Bay Hangar and would most likely necessitate installation and operation of an APM to the CTP.

The Reduced Program Alternative would result in construction emissions, but due to the reduced size of the project could be less than the future phase(s) of the MSC Program. As discussed in Chapter 4.1, *Air Quality*, the proposed MSC North Project would result in a net increase in short-term and temporary emissions of criteria air pollutants associated with construction-related activities with a significant and unavoidable impact with respect to regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X. It is assumed for purposes of this analysis that the future phase(s) of the MSC Program would have similar construction-related impacts as would the Reduced Program Alternative, albeit less than the future phase(s) of the MSC Program.

The Reduced Program Alternative would result in emissions consistent with current levels and with future aircraft activity projections, which would be about the same as the emissions under the future phase(s) of the MSC Program on a long-term basis. As discussed in Chapter 4.1, *Air*

Quality, operation of the future phase(s) of the MSC Program is not expected to generate new emissions associated with aircraft operations because the future phase(s) of the MSC Program will not increase or change the type of aircraft operations at LAX. Taxiing distances of some aircraft would decrease under the future phase(s) of the MSC Program when compared to the Reduced Program Alternative, as no operations would occur at the West Remote Gates/Pads. The future phase(s) of the MSC Program would also eliminate bus trips to transport passengers and some GSE trips to transport their luggage between the MSC and terminals within the CTA; however, the Reduced Program Alternative may continue usage of the West Remote Gates/Pads, which would necessitate continued busing of passengers and luggage between the West Remote Gates/Pads and the CTA. Thus, the operational emissions under the Reduced Program Alternative would have similar emissions related to aircraft operations, but slightly greater emissions related to on-airport bus and GSE trips, and aircraft taxiing.

In summary, the Reduced Program Alternative would not avoid or substantially reduce the likely significant unavoidable impact that would occur under the proposed Project with respect to construction-related regional CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X emissions. With respect to regional operational emissions, the Reduced Program Alternative would have similar but slightly higher impacts than the future phase(s) of the MSC Program.

Greenhouse Gases

Under the Reduced Program Alternative, the MSC building would be smaller than the proposed future phase(s) of the MSC Program by at least 9 fewer aircraft gates. The Reduced Program Alternative would result in a net increase in short-term and temporary emissions of GHGs due to construction activities, but total emissions would be slightly less than the future phase(s) of the MSC Program due to the reduced size of the program. The Reduced Program Alternative would be required to comply with the CALGreen and LAGBC Tier 1 standards for nonresidential buildings, which would reduce energy consumption, waste generation, and GHG emissions compared to similar buildings that do not meet the standards. The Reduced Program Alternative could result in operational greenhouse gas emissions associated with the MSC building; total emissions would be slightly less than the future phase(s) of the MSC Program due to the reduced size of the building but would not be substantially different since the electrical, heating, and cooling requirements of the MSC building would still be substantial. While the Reduced Program Alternative would result in fewer total greenhouse gas emissions, when compared to the future phase(s) of the MSC Program, it is not anticipated that the Reduced Program Alternative would avoid or substantially reduce the significant unavoidable impact that would occur under the future phase(s) of the MSC Program with respect to greenhouse gas emissions.

Human Health Risk

The Reduced Program Alternative would result in changes to aircraft taxi patterns similar to the future phase(s) of the MSC Program, although with fewer gates, fewer aircraft operations would occur at the MSC and operations may continue to occur at the West Remote Gates/Pads. Similar to the future phase(s) of the MSC Program, it is anticipated that the acute non-cancer hazard index for acrolein would exceed the significance threshold at some receptors. Thus, operational health impacts of this Alternative would be similar to the future phase(s) of the MSC Program. Implementation of the Reduced Program Alternative would not avoid or substantially

reduce the significant unavoidable impact that would occur under the future phase(s) of the MSC Program with respect to the acute non-cancer hazard index for acrolein.

Noise

Under the future phase(s) of the MSC Program, operational noise sources would include aircraft taxiing to the MSC site, which would have less than significant noise impacts. The Reduced Program Alternative would include the same changes to aircraft taxi paths, although with fewer gates at the MSC, there would be fewer aircraft operations in this area of the airfield but continued aircraft operations at the West Remote Gates/Pads. As with the future phase(s) of the MSC Program, no significant noise impacts from aircraft operations at LAX is expected to occur under the Reduced Program Alternative.

Public Services – Fire Protection Services

Under the Reduced Program Alternative, the MSC building would be smaller than the future phase(s) of the MSC Program with at least 9 fewer aircraft gates. However, the Reduced Program Alternative would include additional aircraft gates in the midfield area, operation of the APM connecting the MSC building to the CTA, and the CTP. Thus, this Alternative would have similar impacts to fire protection services when compared to the future phase(s) of the MSC Program. As with the future phase(s) of the MSC Program, no significant impacts to fire protection services at LAX are expected to occur under the Reduced Program Alternative.

5.5.2.3 Alternative 3: No Central Terminal Processor/APM to Existing Terminal

Air Quality

Under Alternative 3: No Central Terminal Processor/APM to Existing Terminal (No CTP/APM to Existing Terminal Alternative), the future phase(s) of the MSC Program would include expansion of the MSC to up to 29 gates. However, under this Alternative, the CTP would not be constructed, but the underground APM system would be installed between the MSC and an existing terminal within the CTA.

The No CTP/APM to Existing Terminal Alternative would result in construction emissions, but due to the reduced size of the project would be less than the future phase(s) of the MSC Program. As discussed in Chapter 4.1, *Air Quality*, the proposed MSC North Project would result in a net increase in short-term and temporary emissions of criteria air pollutants associated with construction-related activities with a significant and unavoidable impact with respect to regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X. It is assumed for purposes of this analysis that the future phase(s) of the MSC Program would have similar construction-related impacts, as would the No CTP/APM to Existing Terminal Alternative since this alternative still includes the main components of the MSC Program (concourse, apron, and APM). However, construction-related impacts are expected to be less than the future phase(s) of the MSC Program.

The No CTP/APM to Existing Terminal Alternative would result in emissions consistent with current levels and with future aircraft activity projections, which would be about the same as the emissions under the future phase(s) of the MSC Program on a long-term basis. As discussed in

Chapter 4.1, *Air Quality*, operation of the future phase(s) of the MSC Program is not expected to generate new emissions associated with aircraft operations because the future phase(s) of the MSC Program would not increase or change the type of aircraft operations at LAX. Taxiing distances of aircraft under the future phase(s) of the MSC Program when compared to the No CTP/APM to Existing Terminal Alternative would be the same, as no operations would occur at the West Remote Gates/Pads. The No CTP/APM to Existing Terminal Alternative would eliminate bus trips to transport passengers and some GSE trips to transport luggage between the MSC and the CTA. Additionally, because this Alternative would not include construction of the CTP, it would result in fewer operational emissions (no emissions related to heating and cooling of the CTP). Thus, the operational emissions under the No CTP/APM to Existing Terminal Alternative would have similar emissions related to aircraft operations, and aircraft taxiing, but fewer emissions related to heating and cooling.

In summary, the No CTP/APM to Existing Terminal Alternative would not avoid or substantially reduce the likely significant unavoidable impact that would occur under the future phase(s) of the MSC Program with respect to construction-related regional CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X emissions. With respect to regional operational emissions, the No CTP/APM to Existing Terminal Alternative would have similar but less impacts than the future phase(s) of the MSC Program.

Greenhouse Gases

Under the No CTP/APM to Existing Terminal Alternative, the future phase(s) of the MSC Program would include expansion of the MSC to up to 29 gates. However, under this Alternative, the CTP would not be constructed but the underground APM system would be installed between the MSC and an existing terminal within the CTA. The No CTP/APM to Existing Terminal Alternative would result in a net increase in short-term and temporary emissions of GHGs due to construction activities, but total emissions would be less than the future phase(s) of the MSC Program due to the reduced size of the program. The No CTP/APM to Existing Terminal Alternative would be required to comply with the CALGreen and LAGBC Tier 1 standards for nonresidential buildings, which would reduce energy consumption, waste generation, and GHG emissions compared to similar buildings that do not meet the standards. The No CTP/APM to Existing Terminal Alternative would result in operational greenhouse gas emissions associated with the MSC building and APM, but would have no greenhouse gas emissions associated with the CTP. While the No CTP/APM to Existing Terminal Alternative would result in fewer total greenhouse gas emissions related to the elimination of the CTP, when compared to the future phase(s) of the MSC Program, it is not anticipated that the No CTP/APM to Existing Terminal Alternative would avoid or substantially reduce the significant unavoidable impact that would occur under the future phase(s) of the MSC Program with respect to greenhouse gas emissions.

Human Health Risk

The No CTP/APM to Existing Terminal Alternative would result in changes to aircraft taxi patterns similar to the future phase(s) of the MSC Program. Thus, similar to the future phase(s) of the MSC Program, it is anticipated that the acute non-cancer hazard index for acrolein would exceed the significance threshold at some receptors. Thus, operational health impacts of this Alternative would be similar to the future phase(s) of the MSC Program.

Noise

Under the future phase(s) of the MSC Program, operational noise sources would include aircraft taxiing to the MSC site, which would have less than significant noise impacts. The No CTP/APM to Existing Terminal Alternative would include the same changes to aircraft taxi paths. As with the future phase(s) of the MSC Program, no significant noise impacts from aircraft operations at LAX is expected to occur under the No CTP/APM to Existing Terminal Alternative.

Public Services – Fire Protection Services

Under the No CTP/APM to Existing Terminal Alternative, the future phase(s) of the MSC Program would include expansion of the MSC to up to 29 gates. However, under this Alternative, the CTP would not be constructed, but the underground APM system would be installed between the MSC and an existing terminal within the CTA. Thus, this Alternative would have similar impacts to fire protection services when compared to the future phase(s) of the MSC Program. As with the future phase(s) of the MSC Program, no significant impacts to fire protection services at LAX are expected to occur under the No CTP/APM to Existing Terminal Alternative

5.5.2.4 Alternative 4: No Central Terminal Processor/No APM

Air Quality

Under Alternative 4: No Central Terminal Processor/No APM (No CTP/No APM Alternative), the future phase(s) of the MSC Program would include expansion of the MSC to up to 29 gates. However, under this Alternative, the underground APM system between the MSC and the CTP or CTA would not be installed and the CTP would not be constructed.

The No CTP/No APM Alternative would result in construction emissions, but due to the reduced size of the project would be less than the future phase(s) of the MSC Program. As discussed in Chapter 4.1, *Air Quality*, the proposed MSC North Project would result in a net increase in short-term and temporary emissions of criteria air pollutants associated with construction-related activities with a significant and unavoidable impact with respect to regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X. It is assumed for purposes of this analysis that the future phase(s) of the MSC Program would have similar construction-related impacts associated with construction of the southern portion of the MSC, as would the No CTP/No APM Alternative, albeit less than the future phase(s) of the MSC Program.

The No CTP/No APM Alternative would result in emissions consistent with current levels and with future aircraft activity projects, which would be about the same as the emissions under the future phase(s) of the MSC Program on a long-term basis. As discussed in Chapter 4.1, *Air Quality*, operation of the future phase(s) of the MSC Program is not expected to generate new emissions associated with aircraft operations because the future phase(s) of the MSC Program will not increase or change the type of aircraft operations at LAX. Taxiing distances of aircraft under the future phase(s) of the MSC Program when compared to the No CTP/No APM Alternative would be the same, as no operations would occur at the West Remote Gates/Pads. The future phase(s) of the MSC Program would also eliminate bus trips to transport passengers and some GSE trips to transport luggage between the MSC and terminals within the CTA;

however, the No CTP/No APM Alternative would necessitate continued busing of passengers and luggage between the MSC and the CTA. Thus, the operational emissions under the No CTP/No APM Alternative would have similar emissions related to aircraft operations and aircraft taxiing, but much greater emissions related to on-airport bus and GSE trips. In fact, simulations of ground movements prepared for the MSC Program indicate that the number of bus trips and GSE trips required to support a 29-gate MSC would result in lengthy queues, congestion on the vehicle service roads, and potential delay to airfield operations due to the number of vehicles and trips required to transport passengers and luggage.

In summary, the No CTP/No APM Alternative would not avoid or substantially reduce the likely significant unavoidable impact that would occur under the future phase(s) of the MSC Program with respect to construction-related regional CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X emissions. With respect to regional operational emissions, the No CTP/No APM Alternative would have similar but higher impacts than the future phase(s) of the MSC Program due to increased busing and number of GSE trips.

Greenhouse Gases

Under the No CTP/No APM Alternative, the future phase(s) of the MSC Program would include expansion of the MSC to up to 29 gates. However, under this Alternative, the underground APM system between the MSC and the CTP or CTA would not be installed and the CTP would not be constructed. The No CTP/No APM Alternative would result in a net increase in short-term and temporary emissions of GHGs due to construction activities, but total emissions would be less than the future phase(s) of the MSC Program due to the reduced size of the program. The No CTP/No APM Alternative would be required to comply with the CALGreen and LAGBC Tier 1 standards for nonresidential buildings, which would reduce energy consumption, waste generation, and GHG emissions compared to similar buildings that do not meet the standards. The No CTP/No APM Alternative would result in operational greenhouse gas emissions associated with the MSC building; but would have no greenhouse gas emissions associated with the APM or CTP. However, the No CTP/No APM Alternative would necessitate continued busing of passengers and luggage between the MSC and the CTA resulting in greater greenhouse emissions. While the No CTP/No APM Alternative would result in fewer total greenhouse gas emissions related to the elimination of the APM and CTP, when compared to the future phase(s) of the MSC Program, it is not anticipated that the No CTP/No APM Alternative would avoid or substantially reduce the significant unavoidable impact that would occur under the future phase(s) of the MSC Program with respect to greenhouse gas emissions.

Human Health Risk

The No CTP/No APM Alternative would result in changes to aircraft taxi patterns similar to the future phase(s) of the MSC Program. Because the No CTP/No APM Alternative would result in continued (and increased) busing of passengers and transport of luggage via GSE, increased emissions associated with these trips would occur. Simulations of ground movements prepared for the MSC Program indicate that the number of bus trips and GSE trips required to support a 29-gate MSC would result in lengthy queues, congestion on the vehicle service roads, and potential delay to airfield operations due to the number of vehicles and trips required, which would also increase emissions and potential human health risks. Thus, similar to the future phase(s) of the MSC Program, it is anticipated that the acute non-cancer hazard index for

acrolein would exceed the significance threshold at some receptors. Thus, operational health impacts of this Alternative would be similar to the future phase(s) of the MSC Program.

Noise

Under the future phase(s) of the MSC Program, operational noise sources would include aircraft taxiing to the MSC site, which would have less than significant noise impacts. The No CTP/No APM Alternative would include the same changes to aircraft taxi paths. As with the future phase(s) of the MSC Program, no significant noise impacts from aircraft operations at LAX is expected to occur under the No CTP/No APM Alternative.

Public Services – Fire Protection Services

Under the No CTP/No APM Alternative, the future phase(s) of the MSC Program would include expansion of the MSC to up to 29 gates. However, under this Alternative, the underground APM system between the MSC and the CTP would not be installed and the CTP would not be constructed. Because this Alternative would not include an operational underground APM, impacts to fire protection services would be less than those associated with the future phase(s) of the MSC Program. As with the future phase(s) of the MSC Program, no significant impacts to fire protection services at LAX are expected to occur under the this Alternative.

5.6 Environmentally Superior Alternative

5.6.1 MSC North Project

Section 15126.6(e)(2) of the CEQA Guidelines indicates that an analysis of alternatives to a proposed project shall identify an environmentally superior alternative among the alternatives evaluated in an EIR. The Guidelines also state that should it be determined that the No Project Alternative is the environmentally superior alternative, the EIR shall identify another environmentally superior alternative among the remaining alternatives. With respect to identifying an environmentally superior alternative among those analyzed in this Draft EIR, the range of feasible alternatives includes the No Project Alternative; the Reduced Project Alternative; the MSC South Alternative, and the Terminal/Concourse 0 Alternative. Impacts related to these alternatives are shown in **Table 5-8**.

Table 5-8

Significant Impacts of MSC North Project Alternatives

Resource Category	Proposed Project	Alternative 1: No Project	Alternative 2: Reduced Project	Alternative 3: MSC South	Alternative 4: Terminal/Concourse 0
AIR QUALITY					
Construction	Significant and Unavoidable (CO, VOC, NO_x, PM_{10}, $PM_{2.5}$)	**Less than significant**	Significant and Unavoidable (CO, NO_x)	Significant and Unavoidable (CO, VOC, NO_x, PM_{10}, $PM_{2.5}$)	Significant and Unavoidable (CO, VOC, NO_x, PM_{10}, $PM_{2.5}$)
Operations	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
GREENHOUSE GAS EMISSIONS					
Construction and Operations	Significant and Unavoidable	**Less than significant**	**Less than significant**	Significant and Unavoidable	**Less than significant**
HUMAN HEALTH RISK ASSESSMENT					
Construction	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
Operations: Acute non-chronic hazard index for acrolein	Significant and Unavoidable	**Less than significant**	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable
NOISE – Aircraft Taxi Noise					
Operations	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
PUBLIC SERVICES – Fire Protection Services					
Construction	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
Operations	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
CONSTRUCTION SURFACE TRANSPORTATION					
Construction	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
Cumulative	Significant and Unavoidable	**Less than significant**	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable

Source: Ricondo & Associates, Inc., 2013.

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The No Project Alternative is considered to be the overall environmentally superior alternative as it would avoid all construction and operational impacts of the proposed Project and is the only Alternative that would not have a significant unavoidable impact with respect to construction-related regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X, greenhouse gas emissions, construction traffic impacts, and the acute non-cancer hazard index for acrolein. However, this Alternative would not meet any of the objectives established for the proposed Project.

In accordance with the CEQA Guidelines requirement to identify an environmentally superior alternative other than the No Project Alternative, a comparative evaluation of the remaining alternatives indicates that the Reduced Project Alternative would be the environmentally superior alternative relative to the other Alternatives. Due to the reduced project size, compared to the proposed Project, the Reduced Project Alternative would result in less construction-related impacts to air quality, health risks, greenhouse gases, and construction surface transportation, and less greenhouse gas emissions related to operations. However, it would most likely have similar impacts related to the acute non-hazard index for acrolein.

It is important to note, while the Reduced Project Alternative is considered the environmentally superior alternative, it would not avoid the significant unavoidable impacts that would occur under the proposed Project with respect to construction-related regional emissions of CO and NO_X, construction traffic impacts and the acute non-cancer hazard index for acrolein. However, the environmentally superior Reduced Project Alternative would eliminate the significant and unavoidable impacts of construction-related regional emissions of VOC, PM_{10}, and $PM_{2.5}$, as well as greenhouse gas emissions, and would serve to incrementally reduce significant impacts of the proposed Project related to construction-related emissions of CO and NO_X, construction traffic impacts, and the acute non-cancer hazard index for acrolein.

The MSC South Alternative would result in similar environmental impacts compared to the proposed Project, but would have reduced emissions in comparison. Compared to the Reduced Project Alternative, it would have greater construction-related emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X, greenhouse gas emissions, construction traffic impacts, and the acute non-cancer hazard quotient for acrolein.

The Terminal/Concourse 0 Alternative would result in similar environmental impacts compared to the proposed Project, but would eliminate the significant and unavoidable impacts related to greenhouse gas emissions. Compared to the Reduced Project Alternative, it would have greater construction-related emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X, (yet less than the proposed Project); similar construction traffic impacts; and due to the proximity of Terminal/Concourse 0 to the airport property line and increased taxi operations in the northeast corner of the CTA, would have greater impacts related to the acute non-cancer hazard quotient for acrolein.

While the Reduced Project Alternative is considered the environmentally superior alternative, it would not fully support the proposed Project's objectives. The Reduced Project Alternative would provide reduced flexibility to accommodate existing demand for aircraft gates while modernizing other terminals at LAX, would limit the number of gates LAWA could close for renovation (by 3-4), and would reduce the number of passengers that would experience improved terminal operations, concessions, and passenger experience as more operations would continue to use the West Remote Gates/Pads. The Reduced Project Alternative would result in a longer period of time for the systematic implementation of the LAX Master Plan, resulting in longer overall construction periods and increased passenger inconvenience.

Therefore, although the Reduced Project Alternative is the environmentally superior alternative, it would have similar significant unavoidable impacts related to construction-related emissions of CO and NO_X, construction traffic impacts, and the acute non-cancer hazard index for acrolein. Furthermore, the Reduced Project Alternative would not fully support the objectives of the proposed Project.

5.6.2 Future Phase(s) of the MSC Program

With respect to identifying an environmentally superior alternative for the future phase(s) of the MSC Program among those analyzed in this Draft EIR, the range of feasible alternatives includes the No Future Phase(s) of the MSC Program Alternative; the Reduced Program Alternative; the No CTP/APM to Existing Terminal Alternative, and the No CTP/No APM Alternative. Impacts related to these alternatives are shown in **Table 5-9**.

The No Future Phase(s) of the MSC Program Alternative is considered to be the overall environmentally superior alternative as it would avoid all construction and operational impacts of the proposed Project and is the only Alternative that would not have a significant unavoidable impact with respect to construction-related regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X, greenhouse gas emissions, construction traffic impacts, and the acute non-cancer hazard index for acrolein. However, this Alternative would not meet any of the objectives established for the proposed future phase(s) of the MSC Program.

In accordance with the CEQA Guidelines requirement to identify an environmentally superior alternative other than the No Project Alternative, a comparative evaluation of the remaining alternatives indicates that the Reduced Program Alternative would be the environmentally superior alternative relative to the other Alternatives. Due to the reduced program size, compared to the proposed future phase(s) of the MSC Program, the Reduced Program Alternative would result in less construction-related impacts to air quality, health risks, greenhouse gases, and construction surface transportation, and less greenhouse gas emissions related to operations. However, it would most likely have similar impacts related to the acute non-hazard index for acrolein.

It is important to note, while the Reduced Program Alternative is considered the environmentally superior alternative, it would not avoid the significant unavoidable impacts that would occur under the proposed future phase(s) of the MSC Program with respect to construction-related regional emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X, greenhouse gas emissions, construction traffic impacts, and the acute non-cancer hazard index for acrolein. Environmental impacts would not be materially different between the proposed future phase(s) of the MSC Program and the Reduced Program Alternative. Accordingly, the environmentally superior Reduced Program Alternative would not eliminate any significant and unavoidable impacts, but would serve to incrementally reduce some of the significant impacts of the proposed future phase(s) of the MSC Program related to construction-related emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X, greenhouse gas emissions, construction traffic impacts, and the acute non-cancer hazard index for acrolein.

Table 5-9

Significant Impacts of Future Phase(s) of MSC Program Alternatives

Resource Category	Proposed Program	Alternative 1: No Future Phase(s)	Alternative 2: Reduced Program	Alternative 3: No CTP/APM to CTA	Alternative 4: No CTP/No APM
AIR QUALITY					
Construction	Significant and Unavoidable (CO, VOC, NO_x, PM_{10}, $PM_{2.5}$)	**Less than significant**	Significant and Unavoidable (CO, VOC, NO_x, PM_{10}, $PM_{2.5}$)	Significant and Unavoidable (CO, VOC, NO_x, PM_{10}, $PM_{2.5}$)	Significant and Unavoidable (CO, VOC, NO_x, PM_{10}, $PM_{2.5}$)
Operations	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
GREENHOUSE GAS EMISSIONS					
Construction and Operations	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable
HUMAN HEALTH RISK ASSESSMENT					
Construction	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
Operations: Acute non-chronic hazard index for acrolein	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable
NOISE – Aircraft Taxi Noise					
Operations	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
PUBLIC SERVICES – Fire Protection Services					
Construction	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
Operations	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant

Source: Ricondo & Associates, Inc., 2014.

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The No CTP/APM to Existing Terminal Alternative would result in similar environmental impacts compared to the Reduced Program Alternative, and would not eliminate any significant and unavoidable impacts. Compared to the Reduced Program Alternative, it would have slightly greater construction-related emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X, greenhouse gas emissions, construction traffic impacts, and the acute non-cancer hazard index for acrolein.

The No CTP/No APM Alternative would result in similar environmental impacts compared to the Reduced Program Alternative, and would not eliminate any significant and unavoidable impacts. Compared to the Reduced Program Alternative, it would have similar construction-related emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X and greenhouse gas emissions; and reduced construction traffic impacts; but would have greater impacts related to operational air quality and greenhouse gas emissions due to the increased busing of passengers and GSE trips.

While the Reduced Program Alternative is considered the environmentally superior alternative, it would not fully support the proposed future phase(s) of the MSC Program objectives. The Reduced Program Alternative would provide reduced flexibility to accommodate existing demand for aircraft gates while modernizing other terminals at LAX, would limit the number of gates LAWA could close for renovation, and would reduce the number of passengers that would experience improved terminal operations, concessions, and passenger experience. It may also not provide sufficient gates to allow LAWA to close the West Remote Gates/Pads. The Reduced Program Alternative would result in a longer period of time for the systematic implementation of the LAX Master Plan, resulting in longer overall construction periods and increased passenger inconvenience.

Therefore, although the Reduced Program Alternative is the environmentally superior alternative, it would have similar significant unavoidable impacts related to construction-related emissions of CO, PM_{10}, $PM_{2.5}$, VOC, and NO_X, greenhouse gas emissions, construction traffic impacts, and the acute non-cancer hazard index for acrolein. Furthermore, the Reduced Program Alternative would not fully support the objectives of the proposed future phase(s) of the MSC Program.

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