

CHAPTER 4

*ENVIRONMENTAL CONSEQUENCES
AND MITIGATION MEASURES*

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4.1 INTRODUCTION

The potential environmental effects resulting from implementation of the Proposed Project and the No Action Alternative are presented in this chapter of the EIS.¹ The analysis presented in this chapter includes considerations of direct, indirect, and cumulative impacts and their significance and possible conflicts with the objectives of federal, regional, state, tribal, and local land use plans, policies, and controls for the area concerned. The required significance thresholds established in Federal Aviation Administration (FAA) Order 1050.1F, Exhibit 4-1, for each resource category² in this chapter is cited in each respective section or subsection and the methodologies used to determine whether the actions associated with this project could result in any environmental impacts are described. This chapter also presents a discussion of mitigation, minimization, or avoidance measures, where applicable that the FAA would consider to avoid and minimize potential adverse environmental impacts of the Proposed Project.

4.2 ENVIRONMENTAL RESOURCES

4.2.1 Environmental Resources Not Affected

As previously discussed in **Chapter 3, *Affected Environment*, Section 3.2**, the following resources would not be affected by the Proposed Project and are therefore, not included in this chapter:

- » Coastal Resources
- » Farmlands
- » Wetlands
- » Wild and Scenic Rivers

4.2.2 Potentially Affected Environmental Resources

This chapter of the EIS is organized to address the following resource categories:

- » Section 4.3 – Air Quality
- » Section 4.4 – Biological Resources
- » Section 4.5 – Climate

¹ FAA. (2015). Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Paragraph 7-1-1(g).

² FAA. (2015). Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1, page 4-4.

- » Section 4.6 – U.S. Department of Transportation, Section 4(f) and Land and Water Conservation Act, Section 6(f) resources
- » Section 4.7 – Hazardous Materials, Solid Waste, and Pollution Prevention
- » Section 4.8 – Historical, Architectural, Archaeological, and Cultural Resources
- » Section 4.9 – Land Use
- » Section 4.10 – Natural Resources and Energy Supply
- » Section 4.11 – Noise and Noise-Compatible Land Use
- » Section 4.12 – Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks (includes Surface Traffic)
- » Section 4.13 – Visual Effects
- » Section 4.14 – Water Resources
- » Section 4.15 – Cumulative Impacts
- » Section 4.16 – Irreversible and Irrecoverable Commitment of Resources

4.3 AIR QUALITY

This section presents the analysis of potential significant adverse air quality impacts resulting from the No Action Alternative and the Proposed Project. Potential effects on air quality must be analyzed for compliance with NEPA and the federal Clean Air Act of 1970, (CAA) [42 USC § 7401], as amended by the Clean Air Act Amendments of 1990 (CAAA). FAA Orders 1050.1F and 5050.4B determine the need for, define the type(s) of, and establish the extent of an air quality assessment required for airport-related actions and projects. Guidelines for air quality analyses are also included in the *Aviation Emissions and Air Quality Handbook Version 3* and FAA Order 1050.1F Desk Reference. The requirements in all of these documents were followed in preparing the air quality assessment for this EIS.

Chapter 1 (Air Quality) of the FAA Order 1050.1F Desk Reference states that an air quality assessment prepared under NEPA should include an analysis and conclusion of a proposed action’s impacts on air quality, specifically an evaluation of whether the proposed project’s effects would cause a new violation of the National Ambient Air Quality Standards (NAAQS) or contribute to a new violation in a manner that

would increase the frequency or severity of the new violation.³ FAA Order 5050.4B, Table 7-1, further provides that, for NEPA purposes, environmental analyses must determine if the air quality impacts of any reasonable alternative would exceed the NAAQS for the time periods analyzed. Section 176(c) of the CAAA requires federal agencies to ensure that their actions conform to the appropriate State Implementation Plan (SIP) for air basins that have not attained the NAAQS or are maintenance areas. Therefore, this air quality assessment focuses on the Proposed Project's potential air emission impacts relative to the NAAQS. The CAAQS are discussed in **Section 3.4.2**.

Conformity is defined as demonstrating that a project or action conforms to the SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards.⁴ Federally funded and approved actions at airports are subject to the U.S. Environmental Protection Agency's (U.S. EPA's) General Conformity Regulations.⁵ A General Conformity Determination (GCD) for the Proposed Project is required if the total direct and indirect pollutant emissions resulting from the Proposed Project are above *de minimis* emissions threshold levels⁶ specified in the General Conformity Regulations.⁷ The Proposed Project is not specifically exempt from the provisions of the General Conformity Regulations and does not meet the definition of a "Presumed to Conform" project as described in Federal Presumed to Conform Actions Under General Conformity (72 FR 41565). Within the South Coast Air Basin (Basin), the *de minimis* thresholds for carbon monoxide (CO), particulate matters (PM₁₀), PM_{2.5}), nitrogen dioxide (NO₂), ozone precursors (VOC and NO_x), and sulfur dioxide (SO₂) apply. The Basin is designated as extreme nonattainment for ozone (O₃) and serious nonattainment for PM_{2.5}, maintenance for CO and PM₁₀ and unclassified attainment for NO₂ and SO₂.⁸ The attainment statuses and *de minimis* thresholds applicable to the Proposed Project are presented in **Table 4.3-1**. Therefore, a general conformity applicability analysis was conducted for the Proposed Project because the Proposed Project would occur in Los Angeles County,

³ FAA Order 1050.1F, Desk Reference (July 2015). See also *Aviation Emissions and Air Quality Handbook Version 3 Update 1*. Retrieved September 2019, from FAA: https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/media/Air_Quality_Handbook_Appendices.pdf.

⁴ 42 USC Title 42 § 7506.

⁵ Title 40 CFR Part 93 (40 CFR 93); *Determining Conformity of Federal Actions to State or Federal Implementation Plans*.

⁶ U.S. EPA. (2019, November). *General Conformity*. Retrieved May 2020, from U.S. Environmental Protection Agency: <https://www.epa.gov/general-conformity>.

⁷ Title 40 Code of Federal Regulations Part 93 (40 CFR 93), Subpart B; *Determining Conformity of General Federal Actions to State or Federal Implementation Plans*.

⁸ U.S. EPA. (2018). *Nonattainment Areas for Criteria Pollutants (Green Book)*. Retrieved October 2018, from U.S. EPA <https://www.epa.gov/green-book>.

an area in non-attainment for 8-hour Ozone (O₃) and particulate matter, 2.5 microns (PM_{2.5}) as noted in **Table 3.4-1**.

TABLE 4.3-1
NAAQS AND DE MINIMIS THRESHOLDS IN THE SOUTH COAST AIR BASIN

Criteria Air Pollutant	NAAQS Attainment Status	De Minimis Threshold (tons per year)
Ozone (1-Hour)	Nonattainment (Extreme)	NOx: 10 VOC: 10
Ozone (2015 8-Hour)	Nonattainment (Extreme)	
CO (1-Hour and 8-Hour)	Attainment (Maintenance)	100
NO ₂ (1-Hour)	Unclassifiable/Attainment	100
NO ₂ (Annual)	Attainment (Maintenance)	
SO ₂ (1-Hour)	Designations Pending (expect Unclassifiable/Attainment)	100
SO ₂ (24-Hour and Annual)	Unclassifiable/Attainment	
PM ₁₀ (24-Hour)	Attainment (Maintenance)	100
PM _{2.5} (2012 Annual)	Nonattainment (Serious)	70
PM _{2.5} (2006 24-Hour)	Nonattainment (Serious)	
Lead	Nonattainment (Partial) ^{/a/}	25

Notes:

/a/ - Partial Nonattainment designation – Los Angeles County portion of the South Coast Air Basin only for near-source monitors. Expect redesignation to attainment based on current monitoring data.

Source: U.S. EPA, 2020.

If the General Conformity evaluation for this air quality assessment were to show that any of the applicable thresholds (O₃ and PM_{2.5}) were equaled or exceeded due to the Proposed Project, further, more detailed analysis to demonstrate conformity would be required, which is referred to as a GCD.⁹ Conversely, if the General Conformity evaluation were to show that none of the relevant thresholds were equaled or exceeded, the Proposed Project reasonably conforms to the applicable SIPs and no further analysis would be required under the CAA.

⁹ 40 C.F.R. § 93.153.

4.3.1 Significance Threshold

An action would cause significant air quality impacts if pollutant concentrations were to exceed one or more of the NAAQS (as established by the U.S. EPA under the CAA), for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations (see **Table 4.3-1**). In lieu of performing detailed dispersion modeling for all pollutants, mass-based emission thresholds can be used to determine the potential for project-related increases in emissions to result in exceedances of the NAAQS.¹⁰ For this purpose, the major source potential-to-emit thresholds for stationary sources under CAA New Source Review permitting, which correspond to the *de minimis* thresholds discussed below, indicate the level above which further analysis is needed to demonstrate whether emissions would result in an exceedance of an applicable NAAQS. Emissions below the *de minimis* threshold levels do not require dispersion analysis or further detailed analyses.

4.3.1.1 General Conformity

The U.S. EPA first promulgated the General Conformity Rule in 1993 to implement the conformity provision of Title I, Section 176(c)(1) of the CAA. Section 176(c)(1) requires that the federal government not engage in, support, or provide financial assistance for licensing, permitting, or approving any activity not conforming to an approved CAA implementation plan. The approved implementation plan could be a federal, state, or tribal implementation plan. The General Conformity Rule is designed to ensure that air emissions associated with federal actions do not contribute to air quality degradation or prevent achievement of state and federal air quality goals. General Conformity refers to the process of evaluating federal plans, programs, and projects to determine and demonstrate that they meet the requirements of the CAA and the applicable SIP. Compliance with the General Conformity Rule is based on a comparison of the changes in air emissions (Proposed Project minus the No Action Alternative) with the *de minimis* thresholds, in accordance with FAA Order 1050.1F.

Federally supported actions (or portions thereof) that do not fall under a CAA exemption or are not listed on FAA's approved presumed to conform list must then undergo a *de minimis* comparison to identify whether a formal GCD is required. If net emissions of an action are less than the *de minimis* threshold levels, then the action is considered to be too small to adversely affect the air quality status of the area and is automatically considered to conform with the applicable SIP. Therefore,

¹⁰ U.S. Environmental Protection Agency. (2020). General Conformity, General Conformity Training Module 2.1: Applicability Process. Retrieved May 2020, from U.S. Environmental Protection Agency: <https://www.epa.gov/general-conformity/general-conformity-training-module-21-applicability-process>.

the general conformity requirements have been complied with and the process is complete. Established *de minimis* thresholds can vary by pollutant, by the severity of nonattainment, and in some cases by geographic location.

4.3.2 Methodology

An Air Quality Protocol (Protocol) for the assessment of impacts under NEPA and General Conformity Determination was developed to identify the technical assumptions, methodologies, databases, and models that would be used to develop the air pollutant emission inventories, conduct the air quality impact analyses, and develop the greenhouse gas (GHG) emission inventory under NEPA (see **Appendix E-1** in **Appendix E**). In addition, the Protocol identifies the methodology and tools needed to complete the conformity analysis under the CAA. The purpose of the Protocol was to document in advance any data to be collected and analyzed, to document the approach to the analysis, and to obtain input from South Coast Air Quality Management District (SCAQMD), CARB, Southern California Association of Governments (SCAG), and U.S. EPA. Upon review of the Protocol, SCAQMD, CARB, and U.S. EPA concurred with the document. SCAG deferred comments on the protocol to FAA, EPA, CARB and SCAQMD.

The air quality analysis for this EIS includes direct and indirect emissions inventories. Mass emissions inventories were prepared for both construction and operations of the No Action Alternative and the Proposed Project. The criteria pollutant emission inventories developed as part of this EIS used standard industry software/models and federal, state, and locally approved methodologies. Emissions of regulated pollutants were calculated to determine if the impacts to air quality from the Proposed Project would potentially be significant under the federal CAA of 1970, as amended. For those Proposed Project pollutant emissions that exceeded mass emissions thresholds, dispersion-modeling analyses is required to determine if the Proposed Project would contribute to an exceedance of a NAAQS.

This EIS analyzed operational air quality impacts for two analysis years, 2024 and 2029. However, construction activities are expected to occur with varying degrees of intensity over the six-year span, 2021 through 2026. Thus, the analysis was performed for every construction year. The year 2024 represents the near-term operational and construction impacts of the Proposed Project and is associated with the opening year of the replacement passenger terminal. The year 2029 represents the long-term impacts of the Proposed Project and is associated with five years after the opening of the replacement passenger terminal. However, on a pollutant by pollutant basis, the maximum annual emissions of overlapping construction and operation activities was identified whether it is expected to occur in 2024, 2025, or 2026.

4.3.2.1 Emissions Inventory Modeling

Construction Emissions

Air pollutant emissions occurring as a result of construction activity vary based on an action's duration and level of activity. Construction emissions generally occur from three sources: tailpipe exhaust, fugitive dust, and evaporative sources. Construction-related exhaust emissions occur from on- and off-road equipment, delivery and haul trucks, and automobiles powered by fossil fuels, such as diesel, gasoline, compressed natural gas, liquefied natural gas, and propane.

Fugitive dust emissions can occur from land disturbance (grading), stockpiling of soil, demolition, loading and hauling of materials and debris, and from on- and off-road vehicle travel. Fugitive dust emissions rates vary as a function of many parameters (e.g., soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation). The Proposed Project site would require demolition of approximately 82,020 cubic yards (cy) of concrete and asphalt. In addition, this analysis includes the projected impacts associated with the export of approximately 179,000 cy of soil. All exported soil would be hauled to an approved site that is in compliance with all local, state, and federal regulations. A specific export site has not been selected yet. Therefore, the California Air Pollution Control Officers Association's (CAPCOA's) California Emissions Estimator Model (CalEEMod)TM version 2016.3.2 default value of 20-miles each way was used in the construction air emissions modeling.

Evaporative emissions result from activities such as asphalt paving, roadway markings, and architectural coating (i.e., painting). As discussed in Chapter 1, a number of roads would be relocated or realigned, and new amenities will be constructed as part of the Proposed Project. The Proposed Project includes approximately 401,000 square feet of new building surface to be painted, as well as 1,421,750 square feet of new asphalt, 3,380 spaces of replacement parking, and 413,000 square feet of aircraft parking apron to be paved and marked.

Construction is anticipated to start in 2021 and end in 2026, which includes the demolition of the existing terminal and the extension of Taxiways A and C after the replacement passenger terminal is completed and operational in 2024. The construction schedule for the Proposed Project, if approved, is shown in **Table 4.3-2**.

Phase 1 of construction would include the construction of the replacement passenger terminal building and an automobile parking structure. Phase 2 of the Proposed Project would include demolition of the existing terminal, paving of the

**TABLE 4.3-2
CONSTRUCTION SCHEDULE**

Project Component	Phase	Schedule
Close Parking Lot A	1	2021
Construct Replacement Passenger Terminal and Parking Structures	1	2021-2024
Construct ARFF Station	1	2023-2025
Construct Ground Service Equipment Maintenance Building and Airline Cargo Building	1	2024
Close Parking Lots B and E	1	2024
Demolish Existing Terminal and Parking Structure	2	2025
Relocate Perimeter Service Road and Security Fence	2	2025
Extend Taxiways A and C	2	2025-2026

Source: Authority, 2019. This schedule is tentative and subject to project approval.

taxiways, and construction of the Aircraft Rescue and Fire Fighting (ARFF) Station. Construction emissions were based on 8-hour workdays for 6 days per week. The estimated maximum daily number of employees working on-site at any time during construction is assumed to be approximately 480.

Criteria pollutant emissions associated with the construction of the Proposed Project were calculated for on-road and off-road vehicles and equipment (e.g., excavators, graders, worker vehicles) based on information provided by the Authority for the construction schedule, the equipment type for both on-road and off-road construction equipment, and the number of pieces of equipment used for each construction activity to estimate annual construction emissions. In addition, pursuant to the Air Quality Implementation Plan's (AQIP) Clean Construction Policy, all off-road diesel-powered construction equipment greater than 50 horsepower (hp) would adhere to the U.S. EPA Tier 4 final emission standards. Therefore, construction equipment greater than 50 hp were calculated as Tier 4 final, and CalEEMod defaults were used for construction equipment less than 50 hp.

The latest version of CalEEMod™ 2016.3.2 was used for the Proposed Project to determine criteria pollutant (CO, VOC, NO_x, PM₁₀, and PM_{2.5}) emissions from off-

road vehicles and equipment, non-aircraft sources during construction and operation of the Proposed Project. CalEEMod contains on-road region-specific (California) emission factors from CARB's Emission Factors (EMFAC2014) and OFFROAD2011 emissions model. The emissions from on-road vehicles associated with construction worker trips were estimated outside of CalEEMod to account for the latest on-road vehicle emissions factor since CalEEMod has yet to incorporate EMFAC2017 into its model.

On November 20, 2019, CARB published EMFAC off-model adjustment factors to account for the SAFE Rule Part I.¹¹ Emissions for mobile sources associated with the Proposed Project were calculated using CARB's off-model adjustment factors.

Operational Emissions

The Proposed Project would include operation of a replacement passenger terminal, employee vehicle parking lot, public automobile parking structure, replacement ARFF station, replacement airline cargo building, ground support equipment (GSE) and terminal maintenance building, central utility plant, vehicle storage and staging area, and other internal roadway, aircraft parking apron, and taxiway improvements. Aircraft operations would not change from the No Action Alternative.

Operational emissions of criteria air pollutants were estimated for the Proposed Project and No Action Alternative for two study years: 2024 and 2029. Operational emissions would be generated by two broad classes of sources referred to as airside and landside. Each of these sources requires a unique set of tools and data.

To calculate emissions from airside operations, the most recent version of the FAA's Aviation Environmental Design Tool (AEDT) version 3b was used to calculate emissions from aircraft operations and GSE.¹²

Airside Operations

Airside operational activities associated with the Proposed Project would result in emissions from the following primary sources:

- » **Aircraft** – The Proposed Project would not increase the number of gates at the Airport, the number of or length of the runways, or change aircraft operations. As a result, no change in the types of aircraft operated at the

¹¹ California Air Resources Board. (2019, November 19). *EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One*. Retrieved May 2020, from California Air Resources Board: https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf.

¹² FAA. (2019). *Aviation Environmental Design Tool (AEDT) Technical Manual*. Version 3b. Retrieved December 2019, from FAA: <https://aedt.faa.gov/>.

Airport is anticipated as a result of the Proposed Project. The operational emissions inventory would focus on emissions associated with changes in aircraft taxi distance.

The changes in the operational emissions inventory were measured by comparing the time it takes for aircraft to taxi distances under existing conditions relative to the time it takes for aircraft to taxi distances anticipated under the Proposed Project. Existing and anticipated aircraft taxi distances were measured using Geographic Information Systems (GIS) software. The unimpeded taxi time analysis depends on arrival and departure runway usage patterns, aircraft gate origin, and taxi speeds. Existing aircraft taxi times were acquired from the FAA via the Aviation System Performance Metric (ASPM) Database for the Airport. Operational emissions of VOCs (precursors for Ozone and used in modelling), NOX, CO, SO₂, PM₁₀, and PM_{2.5} from aircraft taxiing and aircraft landing and takeoffs (LTOs) was estimated using site-specific aircraft population data for existing conditions, the No Action Alternative, and the Proposed Project. AEDT's delay and sequencing model was used to model taxi times. Under the No Action Alternative for a taxi-in time of three minutes and nine seconds was applied to all arriving operations while a taxi-out time of 13 minutes and 14 seconds was applied to all departing operations. For the Proposed Project, a taxi-in time of three minutes and 12 seconds was applied to all arriving operations while a taxi-out time of seven minutes and 50 seconds was applied to all departing operations. All taxi times are based on unimpeded taxi times and a rolling average for the last five years.

- » **Ground-Support Equipment** – GSE is a category comprised of specialized pieces of equipment used to support and service aircraft between flights. GSE emissions were estimated using Airport-specific GSE population and times-in-mode data using AEDT and records acquired from the Airport. Construction plans influencing the use of GSE and auxiliary power, such as the installation of gate power and preconditioned air units was used to define the Proposed Project. In addition, emission factor limits set in the Memorandum of Understanding between SCAQMD and the Authority were implemented.

Landside Operations

Landside operational activities associated with the Proposed Project would result in emissions from the following primary sources:

- » **Area Source Emissions** - Landscape maintenance equipment that would be used at the replacement passenger terminal and other buildings associated with the Proposed Project would generate emissions from fuel combustion

and evaporation of unburned fuel. Equipment in this category would include lawnmowers, blowers, trimmers, hedge trimmers, and similar fuel-burning equipment used to maintain the landscaping of the Proposed Project. The emissions associated with landscape maintenance equipment were calculated based on the size of the landscaped area within the Proposed Project site and CARB'S OFFROAD2011 emission factors embedded within CalEEMod.

- » **Point Source Emissions** - On-site stationary source emissions from non-aircraft sources (i.e., auxiliary power units, fuel tanks, emergency generators, and large boilers) were also estimated using Authority supplied information (i.e. equipment size) and AEDT recommended default values, because Airport-specific data was not available. These data could include but are not limited to the duration and number of events.

Building area source emissions (e.g., natural gas) were estimated using CalEEMod. The natural gas usage factors were adjusted to account for the most recent version of the Title 24 Building Energy Efficiency Standards for the existing and new terminals, respectively. The Proposed Project includes a central utility plant. Its emissions would be similar to those of existing stationary sources, such as emergency generators (maintenance and testing) or large boilers. Emissions were estimated using the OFFROAD2011 model and/or emission factors based on compliance with the CARB/U.S. EPA emissions standards as appropriate and factors from the U.S. EPA AP-42.

- » **Mobile Source Emissions** – Operational emissions from on-road ground access vehicles (GAVs) were estimated outside of CalEEMod using EMFAC2017. All surface vehicles traveling to or from the Airport were considered in the air quality analysis, including privately-owned vehicles, government-owned vehicles, and commercially owned vehicles, such as rental cars, shuttles, buses, taxicabs, and trucks.

Trip rates and trip length values were based on the data provided by the traffic analysis and zip code data from the *Bob Hope Airport Ground Access Study Data Collection and Analysis* survey conducted by Unison Consulting, Inc. in 2012 to estimate the total vehicle miles traveled (VMT) associated with GAV.¹³ The emissions from on-road vehicles during construction of the Proposed Project were estimated outside of CalEEMod to account for the latest on-road vehicle emissions factor since CalEEMod has yet to incorporate EMFAC2017 into its model. EMFAC2017 was run in the emissions mode (also referred to as the "Burden" mode) and used to generate SoCAB-specific vehicle fleet emission factors in units of grams per mile, which is the same

¹³ Unison Consulting, Inc. (2012). *Bob Hope Ground Access Study Data Collection and Analysis*.

methodology used by CalEEMod to generate emission factors using the prior EMFAC2014 model. Emissions from on-road vehicles were calculated as the product of the estimated VMT and the EMFAC2017 emission factors.

4.3.2.2 Hazardous Air Pollutants

Hazardous air pollutants (HAPs) are pollutants that do not have established NAAQS but present potential adverse human health risks from short-term (acute) or long-term (chronic) exposures, as defined by Section 112 of the CAAA. As outlined in the Air Quality Protocol (see **Appendix E-1 in Appendix E**), the emissions of HAPs were addressed in accordance with the FAA's *Speciated Organic Gas Emissions from Airports Guidance* document. Specifically, the 2015 FAA Air Quality Handbook Chapter 6.2 (Hazardous Air Pollutants) was used to determine if an emission inventory of HAPs generated from the Proposed Project should be prepared.¹⁴ The flow chart notes that a HAPs emissions inventory should be prepared when: (a) the project is "major"; (b) the project is located in nonattainment or maintenance areas; or (c) a criteria air pollutant emissions inventory is also prepared. As previously stated, the Basin is categorized as a nonattainment for ozone and PM_{2.5}; therefore, an emissions inventory for HAPs generated by the Proposed Project was developed. Although the analysis of HAPs is not required by FAA Orders 1050.1F or 5050.4B, the HAPs emissions inventory was prepared using the same assumptions and models that were used to prepare the criteria pollutant emissions inventory discussed in **Section 4.3.2.1**. This FAA guidance¹⁵ also states "*it is also important to note that other than an emissions inventory, a HAPs assessment prepared for the FAA must not include any other type of analysis including, but not limited to, atmospheric dispersion modeling, toxicity weighting, or human health risk analyses.*" Thus, in accordance with the Protocol no analysis beyond an emissions inventory was prepared. The following are HAPs that were quantified in the emissions inventory:

1,3-Butadiene	2-Methylnaphthalene	Acetaldehyde
Acetone	Acrolein (2-propenal)	Benzaldehyde
Benzene	Ethylbenzene	Formaldehyde
Isopropylbenzene	m & p-Xylene	Methyl alcohol
Naphthalene	n-Heptane	o-Xylene
Phenol (carbolic acid)	Propionaldehyde	Styrene

¹⁴ FAA. (2018). *AEDT: Product Information*. Retrieved August 2018, from FAA: https://aedt.faa.gov/2d_information.aspx.

¹⁵ FAA. (2015). *Aviation Emissions and Air Quality Handbook Version 3 Update 1*. Retrieved September 2019, from FAA: https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/media/Air_Quality_Handbook_Appendices.pdf

Ethylene	1,2,3-trimethylbenzene	Propylene
Crotonaldehyde	Toluene	
1,2,4-trimethylbenzene (1,3,4-trimethylbenzene)		

To calculate HAPs from airside emission sources, AEDT uses the methodologies described in the FAA's "Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources."¹⁶ Table 1 of that guidance document provides U.S. EPA speciation profiles for aircraft gas turbine engines (Profile No. 5565) and aircraft piston engines (Profile No. 1099), as well as other airport-related sources. AEDT computes HAP emissions masses by first computing total organic gas (TOG) emissions for each source, then applying the mass fractions in the associated speciation profile to determine HAP emissions.¹⁷

The HAPs emissions inventory for landside emission sources was prepared using the same assumptions and models that were used to develop the air pollutant emission inventory for the Proposed Project as discussed in **Section 4.3.2.1**.

4.3.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve forecast aviation demands.

4.3.3.1 Construction Impacts

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve forecast aviation demands. Therefore, no construction-related impacts would occur under the No Action Alternative in 2024 or 2029.

4.3.3.2 Operational Impacts

Under the federal guidelines, the future No Action Alternative is compared to the future Proposed Project. Under the No Action Alternative, the replacement passenger terminal would not be built in the northeast quadrant and existing uses at the Airport, including the existing terminal, general aviation hangars and aircraft

¹⁶ FAA. (2020). *Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources*. Ver 1. May 2020.

¹⁷ FAA. (2018). *AEDT: Product Information*. Retrieved May 2020, from FAA: https://aedt.faa.gov/2d_information.aspx.

parking aprons, FAA maintenance and communication facilities, rental car storage, air freighter facilities structured and surface parking, and an airline cargo building for commercial air carriers in the remaining quadrants would continue very similarly to what they are today.

Aircraft operations under the No Action Alternative are expected to increase from 2018 during 2024 and 2029 due to a forecasted demand (see **Table 1.2-1** and **Exhibit 1.2-5**). Similarly, airport enplanements are expected to increase from 2018 due to a forecasted demand (see **Table 1.2-2** and **Exhibit 1.2-6**). The emissions inventory for the No Action Alternative is summarized in **Table 4.3-3** for the year 2024 (maximum operational annual emissions), and **Table 4.3-4** for the year 2029.¹⁸ As shown in **Table 4.3-3**, the maximum for VOC, CO, and SO₂ occurs in 2024. It is noted that while vehicle trips increase from 2018 to 2029, vehicle emission rates improve (i.e., decrease) from 2018 to 2029 due to retirement of older, less efficient vehicles and introduction of newer vehicles meeting more stringent emission and fuel efficiency standards.

TABLE 4.3-3
2024 NO ACTION ALTERNATIVE OPERATIONAL EMISSIONS INVENTORY (ANNUAL TONS)

Source	VOC	NO ₂	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	4	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Emergency Generators	0	2	1	<1	<1	<1
Mobile - Passengers	23	39	208	1	64	18
Mobile - Employees	1	1	8	<1	3	1
Aircraft	81	425	1,496	44	3	3
Ground Support Equipment	9	32	193	1	2	2
Total	118	500	1,906	46	72	23

Notes:

Values may not add up due to rounding

These operational emissions represent pre-Pandemic operational emissions numbers

CO = carbon monoxide

NO_x = oxides of nitrogen

PM₁₀ = particulate matter less than or equal to 10 microns in diameter

PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter

SO₂ = sulfur dioxide

VOC = volatile organic compound

Source: ESA, 2020.

¹⁸ Preparation of this EIS began in December 2018 and the forecasts that are being used are based on those that existed at that time. Thus, the forecast for 2020 was prepared prior to the Pandemic.

TABLE 4.3-4
2029 NO ACTION ALTERNATIVE OPERATIONAL EMISSIONS INVENTORY (ANNUAL TONS)

Source	VOC	NO ₂	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	4	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Emergency Generators	<1	2	1	<1	<1	<1
Mobile - Passengers	20	36	184	1	69	19
Mobile - Employees	1	<1	6	<1	3	1
Aircraft	60	455	1,416	39	3	3
Ground Support Equipment	10	34	206	2	2	2
Total	94	528	1,814	41	77	25

Notes:

Values may not add up due to rounding

These operational emissions represent pre-Pandemic operational emissions numbers

CO = carbon monoxide

NO₂ = oxides of nitrogen

PM₁₀ = particulate matter less than or equal to 10 microns in diameter

PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter

SO₂ = sulfur dioxide

VOC = volatile organic compound

Source: ESA, 2020.

4.3.3.3 Hazardous Air Pollutants

4.3.3.4 Hazardous Air Pollutants

HAPs from aircraft and off-airport vehicular travel under the No Action Alternative were calculated for 2024 and 2029 are presented in **Appendix E-4** in **Appendix E**. Under the No Action Alternative, the Proposed Project would not be built. As a result, there would be no additional HAPs emissions generated at the Airport beyond those presented in **Appendix E-4** in **Appendix E**.

4.3.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects.

4.3.4.1 Proposed Project (2024)

This section discusses emission inventory for the Proposed Project (2024). The criteria pollutant emissions inventories are used to disclose and compare the Proposed Project to the future No Action Alternative and determine the air quality impacts for purposes of NEPA.

Construction Impacts

Under the Proposed Project, construction is expected to take approximately six years, spanning calendar years 2021 through 2026. Although the replacement passenger terminal building is expected to be open for use in 2024, construction and demolition activities, as described in **Section 1.4**, would continue until completion in 2026. Since construction and demolition activities would overlap with operations, impacts from operation of the replacement passenger terminal building combined with construction emissions are also discussed below.

Construction Emission Inventory

Under the Proposed Project, construction-related emissions are expected from the following construction activities: demolition, grading, building construction, evaporative sources associated with the paving of the new roads, taxiways, and aircraft parking aprons, and architectural coatings associated with the repainting of road markings and painting of the replacement passenger terminal, ARFF, maintenance building, and airline cargo building. Demolition will account for approximately 82,020 cy of debris to be hauled and disposed of offsite. Air emissions occurring as the result of construction activities, which includes all the phases of construction mentioned above, vary based on the duration and level of activity of the Proposed Project. Although these emissions are temporary in nature and generally confined to the construction site and the access/egress roadways, they are quantified to determine if they would exceed the General Conformity *de minimis* threshold levels.

The construction emissions inventory for the Proposed Project is presented in **Table 4.3-5** and includes the construction minimization measures detailed in “Construction Minimization Measures” in **Section 4.3.5**. Detailed CalEEMod output results for construction modeling are provided in **Appendix E-2** in **Appendix E**. As shown on **Table 4.3-5**, total annual emissions from all project-related construction phases, including demolition, grading, building construction, paving, and architectural coating, during any year would not exceed the *de minimis* thresholds identified in 40 CFR Part 93. Therefore, construction of the Proposed Project would not cause or contribute to an exceedance of the NAAQS or increase the frequency or severity of any such existing violation and a general conformity determination is not required.¹⁹ As noted earlier, some construction and demolition activities would overlap with operations, since some elements of the Proposed Project would occur after opening of the replacement passenger terminal. The combined emissions are discussed below.

¹⁹ 42 USC Title 42 § 7506.

TABLE 4.3-5
PROPOSED PROJECT TOTAL CONSTRUCTION EMISSIONS INVENTORY BY YEAR (ANNUAL TONS)

Construction Year	Estimated Total Annual Emissions of Criteria Pollutants (tons/year)					
	VOC	NO ₂	CO	SO ₂	PM ₁₀	PM _{2.5}
2021	<1	1	5	<1	<1	<1
2022	1	9	11	<1	2	1
2023	<1	5	10	<1	2	1
2024	2	1	3	<1	1	<1
2025	<1	2	5	<1	1	<1
2026	<1	1	2	<1	<1	<1
Maximum Increase	2	9	11	<1	2	<1
<i>De Minimis</i> Thresholds	10	10	100	100	100	70
Exceed Thresholds?	NO	NO	NO	NO	NO	NO

Notes:

CO = carbon monoxide

NO₂ = oxides of nitrogen

PM₁₀ = particulate matter less than or equal to 10 microns in diameter

PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter

SO₂ = sulfur dioxide

VOC = volatile organic compounds

Source: ESA, 2020.

Operational Impacts

The criteria pollutant emissions inventories are used to disclose the operational emissions due to the Proposed Project and to compare them to those of the No Action Alternative. That comparison allows FAA to determine air quality impacts for NEPA purposes. Emission inventories are also used to compare the action-related emissions to the General Conformity thresholds to meet General Conformity Rule requirements applicable to this project because it is in a non-attainment area for 8-hr O₃ and PM_{2.5}.

Operational Emissions Inventory

The maximum net operational emissions inventories in 2024 for the Proposed Project are presented in **Table 4.3-6** and include the "Operational Minimization Measures" detailed in **Section 4.3.5.2**. Note that the majority of the Proposed Project emissions would be generated by mobile and aircraft sources. Some slight increases in energy-related emissions would occur due to illuminating and controlling climate in the replacement passenger terminal building because it would

TABLE 4.3-6
2024 PROPOSED PROJECT OPERATIONAL EMISSIONS INVENTORY (ANNUAL TONS)

Operational Activities	Estimated Annual Emissions of Criteria Pollutants (tons/year)					
	VOC	NO ₂	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	5	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Emergency Generators	<1	2	1	<1	<1	<1
Mobile - Passengers	23	40	211	1	65	18
Mobile - Employees	1	1	8	<1	3	1
Aircraft Emissions	81	426	1,496	43	3	3
Ground Service Equipment	9	32	193	1	2	2
Total Emissions	119	500	1,909	46	73	24
No Action Area Emissions	4	<1	<1	<1	<1	<1
No Action Energy Emissions	<1	<1	<1	<1	<1	<1
Emergency Generators	<1	2	1	<1	<1	<1
No Action Mobile Emissions - Passengers	22	39	208	<1	64	18
No Action Mobile Emissions - Employees	1	1	8	<1	3	1
No Action Aircraft Emissions	81	426	1,496	44	3	3
No Action Ground Service Equipment	9	32	193	1	2	2
Total No Action Emissions	118	500	1,906	46	72	23
2024 Net Emissions	1	0	3	0	1	1
<i>De Minimis</i> Thresholds	10	10	100	100	100	70
Exceed Thresholds?	NO	NO	NO	NO	NO	NO

Notes:

Values may not add up due to rounding.

CO = carbon monoxide

NO₂ = oxides of nitrogenPM₁₀ = particulate matter less than or equal to 10 microns in diameterPM_{2.5} = particulate matter less than or equal to 2.5 microns in diameterSO₂ = sulfur dioxide

VOC = volatile organic compounds

Area Source = architectural coatings, consumer products, and landscape maintenance equipment.

Energy Source = emissions associated with natural gas usage.

Source: ESA, 2020.

have a greater square footage compared to the existing passenger terminal building. However, the Authority has committed to the minimization measures identified in **Section 4.3.5**.

The Authority cannot substantively or materially affect reduction in Proposed Project mobile and/or aircraft-related source emissions beyond that already required by the operational minimization measures. The replacement passenger terminal building is approximately 35 percent larger and even with the commitment to minimizations measure, the Proposed Project could result in a slight increase for both area and energy emissions. In addition, the on-site trip length for passenger trips is slightly longer under the Proposed Project.

The operational emissions inventory for the Proposed Project are analyzed after subtracting the No Alternative emissions for the appropriate study year. The difference represents "project-related" emissions and are compared to the appropriate threshold values. As shown in **Table 4.3-6**, the maximum net operational emissions would not exceed the applicable *de minimis* thresholds. Therefore, the Proposed Project would not cause or contribute to an exceedance of the NAAQS, increase the frequency or severity of any such existing violation and reasonably conforms to the SIP. It is important to note that project-related emissions in 2024 would also include construction emissions, and the maximum impacts may occur from the combined net emissions discussed below.

Combined Construction and Operational Impacts

Operation of parts of the Proposed Project would begin before the Authority completes all features of the Proposed Project. For example, the Authority expects to complete construction of the new terminal and begin using it by 2024. Conversely, the Authority does not expect to complete demolishing the existing terminal and existing support structures (e.g., the existing air cargo building, GSE Building and ARFF Station) and finish constructing the airport service road, taxiway access and realignment of Avenue A (the existing terminal loop road), in the southeast quadrant of the Airport until 2026. Therefore, construction and operation of the Proposed Project components could occur at the same time.

The maximum combined construction and operational emissions inventory for 2024 for the Proposed Project are presented in **Table 4.3-7** and include the construction and operational minimization measures detailed in **Section 4.3.5**. The net operational and construction emissions inventory for the Proposed Project is calculated by subtracting the same year No Action Alternative emissions from the Proposed Project emissions. The difference represents "project-related" net emissions and are compared to the appropriate threshold values. According to the General Conformity Rule, 40 CFR § 93.153(b) and (c), "*a conformity determination*

TABLE 4.3-5
2024 PROPOSED PROJECT COMBINED CONSTRUCTION AND OPERATIONAL EMISSIONS INVENTORY
(ANNUAL TONS)

Construction + Operational Activities	Estimated Annual Emissions of Criteria Pollutants (tons/year)					
	VOC	NO ₂	CO	SO ₂	PM ₁₀	PM _{2.5}
Operations Equipment	119	500	1,909	46	73	24
Construction Emissions	2	1	3	<1	1	<1
Total Proposed Project Emissions	121	501	1,912	46	74	24
No Action Emissions	118	500	1,906	46	72	23
Net Emissions	3	1	6	0	2	1
<i>De Minimis</i> Thresholds	10	10	100	100	100	70
Exceed Thresholds?	NO	NO	NO	NO	NO	NO

Notes:

CO = carbon monoxide

NO₂ = oxides of nitrogen

PM₁₀ = particulate matter less than or equal to 10 microns in diameter

PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter

SO₂ = sulfur dioxide

VOC = volatile organic compounds

Area Source = architectural coatings, consumer products, and landscape maintenance equipment.

Energy Source = emissions associated with natural gas usage.

Source: ESA, 2020.

is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed any of the rates in paragraphs (b)(1) or (2) of this section” and that “The requirements of this subpart shall not apply to ...[a]ctions where the total of direct and indirect emissions are below the emissions levels specified in paragraph (b) of this section.” These emission levels specified in 40 CFR § 93.153(b) are commonly referred to as *de minimis* levels. **Table 4.3-7** shows that the increase in combined construction and operational emissions from the Proposed Project would not exceed the *de minimis* thresholds. Thus, the Proposed Project results in emissions that are exempt from the requirement to perform a general conformity determination. As previously stated, the construction activities and operations of the replacement passenger terminal building would overlap with some ancillary projects in 2025 and 2026. However, as presented in **Appendix E**, annual emissions for those years would also be below the *de minimis* threshold values and are equal to or lower than those shown on **Table 4.3-7**.

Since the Proposed Project emissions for both study years are below general conformity *de minimis* thresholds, a General Conformity Determination for the Proposed Project is not required.

Hazardous Air Pollutant Impacts

Emission sources that are relevant to the Proposed Project include construction equipment, mobile and stationary sources, and aircraft operations. **Appendix E-4** in **Appendix E** presents the HAP emissions associated with construction of the Proposed Project and the 2024 and 2029 operational HAP emissions for the Proposed Project compared to the No Action Alternative for the same timeframe .

4.3.4.2 Proposed Project (2029)

This section discusses the methodology and emissions inventory for the Proposed Project (2029).

Construction Impacts

There are no construction activities for the Proposed Project in the 2029 analysis year.

Operational Impacts

The 2029 operational emissions inventories for the Proposed Project are presented in **Table 4.3-8** and include the “Operational Minimization Measures” detailed below. It is noted that the majority of the Proposed Project emissions would be generated by mobile and aircraft sources. The Authority has committed to the minimization measures identified in **Section 4.3.5**. The Authority cannot substantively or materially affect reduction in Proposed Project mobile and/or aircraft-related source emissions beyond what is already required by the operational minimization measures.

The 2029 operational emissions inventory for the Proposed Project are analyzed after subtracting the No Action Alternative emissions for 2029. The difference represents “project-related” emissions and are compared to the appropriate threshold values. Project-related emissions above the *de minimis* values would require a GCD. A GCD would describe how the conformity criteria would be met, the results of the conformity analyses conducted for the study, and recommended measures to mitigate, offset, or reduce emissions to demonstrate conformity with the SIP.

TABLE 4.3-8
2029 PROPOSED PROJECT OPERATIONAL EMISSIONS INVENTORY (ANNUAL TONS)

Operational Activities	Estimated Annual Emissions of Criteria Pollutants (tons/year)					
	VOC	NO ₂	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	5	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Emergency Generators	<1	2	1	<1	<1	<1
Mobile - Passengers	21	37	190	<1	71	19
Mobile - Employees	1	<1	6	<1	3	1
Aircraft Emissions	60	455	1,419	39	3	3
Ground Service Equipment ^{a/}	10	34	206	2	2	2
Total Maximum Emissions	96	530	1,823	41	79	25
No Action Area Emissions	4	<1	<1	<1	<1	<1
No Action Energy Emissions	<1	<1	<1	<1	<1	<1
Emergency Generators	<1	2	1	<1	<1	<1
No Action Mobile Emissions - Passengers	20	36	184	1	69	19
No Action Mobile Emissions - Employees	1	<1	6	<1	3	1
No Action Aircraft emissions	60	456	1,421	39	3	3
No Action Ground Service Equipment	10	34	206	2	2	2
Total No Action Emissions	95	529	1,819	41	77	25
2029 Net Emissions	1	1	3	<1	2	1
<i>De Minimis</i> Thresholds	10	10	100	100	100	70
Exceed Thresholds?	NO	NO	NO	NO	NO	NO

Notes: /a/ - includes adjustments to account for future commitments per the MOU.

CO = carbon monoxide

NO₂ = oxides of nitrogen

PM₁₀ = particulate matter less than or equal to 10 microns in diameter

PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter

SO₂ = sulfur dioxide

VOC = volatile organic compounds

Area source = architectural coatings, consumer products, and landscape maintenance equipment.

Energy source = emissions associated with natural gas usage.

Source: ESA, 2020.

As shown in **Table 4.3-8**, operational emissions in 2029 would not exceed the applicable *de minimis* thresholds. Additionally, the emissions from GSEs included in the operational emissions, were adjusted to account for the Memorandum of Understanding (MOU) between the Airport and the SCAQMD (see **Appendix E-1**). The Proposed Project emissions are below general conformity *de minimis* thresholds; therefore, a General Conformity Determination for the Proposed Project is not required and the Proposed Project reasonably conforms to the SIP.

The Proposed Project emissions for both study years are below general conformity *de minimis* thresholds; thus, a General Conformity Determination for the Proposed Project is not required.

Hazardous Air Pollutants

Emission sources that are relevant to the Proposed Project include mobile and stationary sources, and aircraft operations. **Appendix E-4** in **Appendix E** presents the HAP emissions associated with the operational HAP emissions for the Proposed Project compared to the No Action Alternative for the same timeframe.

4.3.5 Mitigation, Avoidance, or Minimization Measures

The Proposed Project does not exceed the applicable significance thresholds for any pollutants. Therefore, no mitigation measures are required. However, as previously stated, the SCAQMD and the Authority entered into an MOU. In September 2019, the Authority submitted their voluntary AQIP to the SCAQMD, which outlined the Authority's strategies to reduce mobile emissions at the Airport. The AQIP was developed specifically as it relates to SCAQMD's Measure MOB-04 from the 2016 AQMP. The AQIP includes the following programs: GSE Emissions Policy, a Clean Construction Policy, Airport-Owned Clean Fleet, Electrical Charging Infrastructure, Burbank-MetroLink Shuttle Connection Program, Burbank Airport Employee Ride Share Policy, and Electric Bus Policy.²⁰ The MOU was finalized in December 2019.²¹

²⁰ South Coast Air Quality Management District. (2019). Hollywood Burbank Airport Air Quality Improvement Plan. Retrieved September 2019, from South Coast Air Quality Management District: <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/commercial-airports-mous>.

²¹ South Coast Air Quality Management District. (2019). Hollywood Burbank Airport Air Quality Improvement Plan. Retrieved December 2019, from South Coast Air Quality Management District: <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/commercial-airports-mous>.

4.3.5.1 Construction Emission Minimization Measures

Starting in 2020 the Authority requires all Capital Improvement Projects (CIP) construction contractors to submit clean construction plans and comply with the following requirements:²²

- » On-road medium-duty and larger diesel-powered trucks with a gross vehicle weight rating of at least 14,001 pounds would comply with U.S. EPA 2010 on-road emissions standards for PM₁₀ and NO_x. Construction contractors would be required to use such on-road haul trucks or the next cleanest vehicle.
- » Off-road diesel-powered construction equipment greater than 50 horsepower would meet, at a minimum, U.S. EPA Tier 4 (final) off-road emissions standards.
- » Construction contractors would utilize grid-based electric power at the construction site where feasible. If diesel- or gasoline-fueled generators are necessary, generators using “clean burning diesel” fuel and exhaust emission controls would be utilized.
- » Construction contractors would designate a person or persons to monitor construction-related measure through direct inspections, record reviews, and investigations of complaints.

Additionally, the Authority would design and build the replacement passenger terminal that achieves at least the U.S. Green Building Council’s LEED Silver certification, or the CalGreen equivalent of at least LEED silver certification. The Authority would also develop a LEED monitoring checklist and assessment tool and construction contractors would be required to submit monitoring forms at key construction phases to the Authority for review and comment.

4.3.5.2 Operational Emissions Minimization Measures

According to Section 3.2.2. of the Air Quality Protocol, operational emissions due to GSE was based on airport specific GSE population data. However, the AQIP established targets for GSEs used at the Airport. The Authority would achieve an Airport average composite emission factor for its GSE fleet, which is equal to or less than 1.92 grams per horsepower-hour of hydrocarbons plus nitrogen oxides (g/hp-h of HC plus NO_x) by January 1, 2023, and 0.82 g/hp-h of HC plus NO_x by

²² South Coast Air Quality Management District. (2019). Memorandum of Understanding Between South Coast Air Quality Management District and Burbank-Glendale-Pasadena Airport Authority Regarding Hollywood Burbank Airport’s Air Quality Improvement Plan. Retrieved September 2019, from South Coast Air Quality Management District: <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/facility-based-mobile-source-measures/final-bur-mou-12-20-19-rev.pdf?sfvrsn=6>.

January 1, 2031. GSE operators are to maintain In-Use Off-Road Diesel (ORD), Large spark-ignition (LSI) engines, and Portable Engine Airborne Toxic Control Measure (ATCM) data as required by CARB regulations. Therefore, the type of GSE vehicles and the emissions they produce are inherently included as a feature of the Proposed Project and was factored into the FAA's air quality significance determination with regard to operational emissions values for both study years in the EIS. In the event that an annual emission target is not achieved by a fleet owner, alternative compliance strategies such as application of Best Available Control Technology (BACT) and vehicle "turnover" (i.e., vehicle retirement, conversion to "low-use," repowering, or rebuilding engines to comply with more stringent emission limits). The Authority may adopt CARB alternative compliance strategies when evaluating a GSE operator's status and efforts towards achieving the 2023 and 2031 emission targets noted above.

According to Section 3.2.4 of the Protocol, operational emissions analysis of ground access vehicles (GAV) considered all surface vehicles traveling to or from the Airport and use a combination of on-road emission factors from EMFAC2017 and methodology from CalEEMod to calculate the emissions. Per the AQIP, the Authority is required to apply the following conditions:

- » On-road medium-duty and larger diesel-powered trucks with a gross vehicle weight rating of at least 14,001 pounds shall comply with U.S. Environmental Protection Agency (USEPA) 2010 on-road emissions standards for particulate matter -10 (PM₁₀) and nitrogen oxides (NO_x). Contractor shall be required to utilize such on-road haul trucks or the next cleanest vehicle.

The Authority has committed to operating a clean vehicle fleet and securing emission reductions.²³ The Clean Fleet Program Policy covers Airport-owned vehicles, except those used for safety purposes (such as police and fire vehicles). The Authority would increase purchase of electric vehicles (EV) Sedans, Medium-Duty Vehicles, and Heavy-Duty Vehicles, and commit that all new sedan purchases to be EV starting in 2021 and convert all sedan fleets to be EV by 2023. The Authority would also voluntarily increase the medium- and heavy-duty fleets with the goal of achieving 50 percent EV by 2031. The Airport Shuttle Bus Fleet, owned and operated by the Authority, is to be at least 50 percent electric by 2023, and 100 percent electric by 2031.²⁴

²³ South Coast Air Quality Management District. (2019). Hollywood Burbank Airport Air Quality Improvement Plan. Retrieved December 2019, from South Coast Air Quality Management District: <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/commercial-airports-mous>.

²⁴ South Coast Air Quality Management District. (2019). Hollywood Burbank Airport Air Quality Improvement Plan. Retrieved December 2019, from South Coast Air Quality Management District: <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/commercial-airports-mous>.

The Authority would increase the availability of electric vehicle charging stations in its existing and future parking structures and parking areas. The new parking structure would voluntarily increase electric vehicle charging stations to achieve 5 percent of total parking inventory based on regulatory ability and available power capacity from the City of Burbank. By 2031 EV charging stations would increase to 5 percent of total parking inventory.²⁵

The Authority would continue to support the Burbank-Metrolink Shuttle Connection Program. The program encourages employees and air passengers to take the Metrolink train to and from the Airport. The Authority would strive to achieve increased transit ridership through 2023 and 2031 by advertising and offering complimentary shuttle service between the Burbank Airport-North Station and the replacement passenger terminal building.²⁶

Under the Burbank Airport Employee Ride Share Policy the Authority would continue to participate and join the Burbank Transportation Management Organization (BTMO). Participation in the BTMO would help to reduce employee trips through increased employee rideshare, transit use and alternative mode share, with the goal of increasing employee rideshare.

To further reduce overall operational air quality emissions, the Authority would maintain the replacement passenger terminal that achieves at least LEED Silver certification, or the CalGreen equivalent of at least LEED Silver certification.

4.4 BIOLOGICAL RESOURCES

This section presents the analysis of possible impacts on plants and wildlife in the project area including Federal Endangered Species Act listed species and designated critical habitat Migratory Bird Treaty Act (MBTA) species, and special-status species as a result of the No Action Alternative and the Proposed Project followed by measures to mitigate, minimize, or avoid any such impacts.

4.4.1 Significance Threshold

The following criteria were used to determine if the project would have a significant environmental impact on biological resources:²⁷

²⁵ South Coast Air Quality Management District. (2019). Hollywood Burbank Airport Air Quality Improvement Plan. Retrieved December 2019, from South Coast Air Quality Management District: <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/commercial-airports-mous>.

²⁶ Hollywood Burbank Airport. (2020). Buses & Trains. Retrieved July 15, 2020, from Hollywood Burbank Airport: <https://hollywoodburbankairport.com/ground-transportation/buses-trains/>.

²⁷ FAA. (2015). Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1, page 4-4.

- » the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service determines that the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species; or
- » would result in the destruction or adverse modification of federally designated critical habitat.

4.4.1.1 Biological Resource Impact Factors

The following factors were also considered in determining if the project would have a significant environmental impact on biological resources.

- » "A long-term or permanent loss of non-listed plant or wildlife species, i.e., extirpation of the species from a large project area (e.g., a new commercial service airport);
- » Adverse impacts to special status species (e.g., a new commercial service airport);
- » Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations; or
- » Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), or ability to sustain the minimum population levels required for population maintenance."

4.4.2 Methodology

This section describes the potential environmental effects of the No Action Alternative and the Proposed Project on biological resources as they relate to species listed or candidates for listing under the Endangered Species Act, species protected under the MBTA, special-status species, and non-listed native species at large. The basis for determining impacts under the National Environmental Policy Act (NEPA) for the Proposed Project are measured against the conditions that would otherwise occur in the future if the No Action Alternative were selected. As such, the NEPA analysis in this EIS uses the No Action Alternative as the basis against which to measure and evaluate the potential impacts of the Proposed Project.

4.4.3 No Action Alternative

Under the No Action alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve forecast aviation demands. There would be no changes to onsite conditions or existing biological

resources, including general vegetation and wildlife resources, federally listed species, special-status species, and species protected under the MBTA.

No physical development would occur with the No Action Alternative. Therefore, there would be no impacts on federally listed threatened or endangered species or their designated critical habitat, migratory birds, and special-status species.

4.4.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects. Implementation of the Proposed Project would disturb about 138.4 acres of Airport property, including 106.7 acres of previously developed area consisting of paved areas and permanent structures and 31.7 acres of currently disturbed area consisting of undeveloped areas that have been heavily disturbed by human activities including adding a soil sterilizer to discourage vegetation growth. These areas support little to no vegetation and are actively managed under the Airport's WHMP. The Proposed Project has little potential to affect native and non-native vegetation communities because of the limited vegetation that exists within the Detailed Study Area.

Exhibit 3.5-1 depicts the existing locations of habitat and land cover and **Section 3.5.2** describes the habitat value of these areas.

4.4.4.1 Federally-Listed, State-Listed, and Special-Status Species

The Detailed Study Area does not contain any suitable habitat for federally listed endangered or threatened species nor does it contain designated critical habitat. No listed species were identified in the Detailed Study Area during wildlife surveys by qualified biologists. Due to the paved and developed nature of the Detailed Study Area, the frequent disturbance from Airport operations, and the treatment of undeveloped areas with soil sterilizer, as well as the activities to discourage wildlife under the Airport's WHMP, the FAA has determined the Proposed Project will not affect any federally-listed species or designated critical habitat. Therefore, the FAA is not required to conduct formal consultation with the USFWS under Section 7 of the Endangered Species Act of 1973, as amended.

4.4.4.2 Non-Listed Wildlife Species

Both wildlife populations and wildlife diversity are low on the Airport due to the abundance of developed and disturbed areas, which provide little to no habitat value for most wildlife species. While there are several commonly occurring wildlife species present on the Airport, such as California ground squirrel (*Otospermophilus beecheyi*) and house finch (*Haemorhous mexicanus*), these species are highly mobile and opportunistic. Most species will relocate away from disturbance and no

species present are threatened by this project. The construction of the new replacement passenger terminal and removal of the existing terminal would cause temporary disturbance to these species, but these species are adapted to human activities and will reestablish themselves in other places. Furthermore, reduction in species on the Airport is beneficial to aviation safety. Current wildlife hazard management activities already deter the presence of wildlife on Airport property. As such, there are no mitigation, avoidance, or minimization measures required for other wildlife species.

4.4.4.3 Migratory Bird Treaty Act Species

While the Airport has an approved WHMP, there is a potential for nesting songbirds to be present in the trees and shrubs within the Airport's developed areas. Measures are proposed in **Section 4.4.5.1** to reduce the likelihood of migratory bird presence and to avoid impacts if migratory birds are present during construction. The potential also exists for burrowing owls to occur in the Detailed Study Area (see **Table 3.5-1**).

4.4.5 Mitigation, Avoidance, or Minimization Measures

The following minimization measures are proposed for the Proposed Project to reduce potential impacts on sensitive species.

4.4.5.1 Special-Status Species

There is potential for burrowing owl to occur in undeveloped portions of the Airport due to the observation of active California ground squirrel burrows on the Airport, which are a primary source of suitable burrows and prey item for burrowing owl. Because the potential for the presence of burrowing owls at the Airport is considered low due to the utilization of the Airport's WHMP, implementation of the following measures would further limit the potential impact on this species and potential impacts would not be considered significant.

The following surveys and actions would be implemented:

- » No more than 14 days prior to ground-disturbing activities (vegetation clearance, grading), a qualified wildlife biologist with previous burrowing owl survey experience would conduct a preconstruction take avoidance survey on and within 200 meters (656 feet) of the construction zone (where legally accessible) to identify occupied breeding or wintering burrowing owl burrows as well as unoccupied burrows.

- » The take-avoidance burrowing owl survey would be conducted in accordance with the *Staff Report on Burrowing Owl Mitigation*²⁸ and consist of walking parallel transects 7 to 20 meters (23 to 66 feet) apart, adjusting for vegetation height and density or other obstacles as needed, and noting any burrows containing owls or with fresh signs that burrowing owl may be present.²⁹ Note that owl signs can wash away during rain events and may take several days to build back up again. Copies of the burrowing owl survey results shall be submitted to the Authority prior to ground-disturbing activities.
- If potential burrows are detected on site, a qualified biologist would conduct three consecutive days of camera surveys using an endoscope ("burrow camera") to verify if burrowing owls are present or absent in the burrow. Burrows shall not be dismantled until it is confirmed with 100 percent certainty that there are no owls present. It is important to completely collapse the burrow network when closing the burrow.
 - If burrowing owls are detected on site, no ground-disturbing activities would be permitted within 200 meters (656 feet) of an occupied burrow during the breeding season (February 1 to August 31), unless otherwise authorized by the California Department of Fish and Wildlife (CDFW). During the nonbreeding ("wintering") season (September 1 to January 31), ground-disturbing work can proceed near active burrows as long as the work occurs no closer than 50 meters (165 feet) from the burrow, or as allowed by the CDFW. Depending on the level of disturbance and proposed measures, a smaller buffer may be established in consultation with a qualified wildlife biologist.
 - If the owls are not in danger of direct impact, then the default action should always be to allow the owls to leave the existing burrow site on their own volition. A qualified wildlife biologist would monitor all active burrows to note when the young have fledged and the burrow is no longer active. The qualified wildlife biologist would obtain three consecutive days of negative surveillance camera results to verify owls are not present and would further support this information by scoping with an endoscope ("burrow camera") immediately prior to dismantling the burrow.

²⁸ California Department of Fish and Game. (2012). *Staff Report on Burrowing Owl Mitigation*. Retrieved November 2019, from California Department of Fish and Game: <https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds>.

Implementation of minimization measures would reduce the potential impacts to nesting birds and burrowing owls if they are present.

4.4.5.2 Migratory Bird Treaty Act Species

Because nesting songbirds and burrowing owls could appear at the Airport during construction, the following minimization measures would be implemented to reduce potential impacts on these biological resources during nesting season from February 1 to August 31:

1. All potential nesting trees scheduled to be cut down to allow for construction would be removed prior to the nesting season.
2. A qualified wildlife biologist would conduct preconstruction surveys of all potential nesting habitat. The surveying biologist must be qualified to determine the status and stage of migratory bird nesting without causing intrusive disturbance.
 - Surveys would be conducted no more than 3 days prior to construction activities.
 - Surveys would not be conducted for the entire Detailed Study Area at one time; the surveys must be phased so that each occurs shortly before a portion of the Detailed Study Area is disturbed by construction activities.
3. If active nests are found, the qualified wildlife biologist would determine an appropriate no-disturbance buffer requirement, and no construction within the buffer would be allowed until the onsite qualified wildlife biologist has determined that the nest is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest). Encroachment into the buffer may occur at the discretion of the onsite qualified wildlife biologist who would monitor nest activities.

4.5 CLIMATE

4.5.1 Significance Threshold

FAA Order 1050.1F has not established a significance threshold for climate and GHG emissions, nor has the FAA identified specific factors to consider in making a significance determination for GHG emissions. As noted by the Council on Environmental Quality (CEQ), *"climate change is a particularly complex challenge given its global nature and inherent interrelationships among its sources, causation, mechanisms of action and impacts..."* CEQ has also noted, *"it is not currently useful for the NEPA analysis to attempt to link specific climatological changes, or*

the environmental impacts thereof, to the particular project or emissions, as such direct linkage is difficult to isolate and to understand.”³⁰

4.5.2 Methodology

FAA Order 1050.1F determines the need for and establishes the extent of the Greenhouse Gas (GHG) assessment required for airport-related actions and projects. This GHG assessment includes direct and indirect emissions inventories for landside sources (area,³¹ energy, and mobile) and airside sources (aircraft operations, central utility plant, GSE).

In addition to the GHG operational emissions for the No Action Alternative, this EIS presents emissions for both construction and operation of the Proposed Project (e.g., emissions from construction vehicles and equipment vehicles to and from the new terminal, central utility plant, etc.). The GHG analysis for both the No Action and Proposed Project for this EIS looked at two operational analysis years: 2024 and 2029. The year 2024 represents the near-term operational and construction impacts of the Proposed Project and is associated with the opening year of the replacement passenger terminal. The year 2029 represents the long-term impacts of the Proposed Project and is associated with five years after the opening of the replacement passenger terminal. To produce this information, the AEDT 3b³² model used for conducting the air quality analysis was used because it produces carbon dioxide (CO₂) emissions for aircraft, GSE, motor vehicles and other sources of GHG emissions.

This analysis of GHG emissions generally follows the same methodology and assumptions as the air quality criteria pollutant emissions analysis discussed in **Section 4.3.2**. The aircraft fleet and its operations would be the same for the No Action Alternative and the Proposed Project except for the change in taxiway distances that would occur with the Proposed Project. The location of the replacement passenger terminal would require aircraft arriving on Runway 26 (occurring about 1.3 percent of the time) to taxi about 540 feet further than they currently do. Also, aircraft departing Runway 33 (about 5.7 percent of the time) would taxi 1,558 feet further than they currently do. Aircraft departing Runway 15 (82.1 percent of the time) would taxi 3,574 feet **less** than they currently do from the existing passenger terminal building. Therefore, on average, the Proposed

³⁰ CEQ. (August 1, 2016). *Memorandum for Heads of Federal Departments and Agencies, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate change in National Environmental Policy Act Reviews.*

³¹ Area sources are consumer product use, architectural coating, landscape maintenance equipment, and paving off-gassing.

³² The latest version of AEDT, AEDT-3c, was issued in March 2020 and reissued in June 2020, after the air quality and noise modeling were completed.

Project would decrease taxiing distance by 36 percent, or 2,781 feet, for an average taxi distance of 3,862 feet. Emissions from GSE were calculated using actual fuel data for 2018 and scaling up for future years proportional to increasing enplanements.

This GHG section also analyzes indirect GHG emissions from electricity use, which can result in GHG production if the electricity is generated by combusting fossil fuel. Uses of electricity for building operations include lighting, computers, machinery, and operating appliances (such as refrigerators).

Additionally, GHG emissions from the roads and public transit routes used by employees, passengers, and suppliers to and from the Airport were also analyzed. The GHG inventory clearly distinguishes the Proposed Project's GHG emissions from other relevant indirect sources affiliated with Airport operations.

GHGs of concern from construction and operational sources are primarily CO₂, methane (CH₄), and nitrous oxide (N₂O). For ease in reviewing and interpreting the analysis results, GHGs are reported as CO₂ equivalents (CO₂e) expressed in metric tons (MT). In accordance with the Intergovernmental Panel on Climate Change (IPCC), GHGs (CO₂, CH₄, N₂O) are converted to CO₂e based on their global warming potential (GWP). GWP ratios provided by the IPCC in its Fourth Assessment Report were used.³³ The results of the analysis are presented on an annual basis, by analysis year. The technical components of the analysis are contained in **Appendix E**.

4.5.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve forecast aviation demands. The No Action Alternative does not involve any construction. Thus, no additional GHG construction-related emissions would occur. Under the No Action Alternative, the replacement passenger terminal would not be built in the northeast quadrant and existing uses at the Airport, including the existing passenger terminal, general aviation hangars and aircraft parking aprons, FAA maintenance and communication facilities, rental car storage, air freighter facilities structured and surface parking, and an air cargo building for commercial air carriers in the remaining quadrants would continue. As a result, the No Action Alternative would generate the GHG emissions shown in **Table 4.5-1** for 2024 and 2029. As shown in **Table 4.5-1**, vehicle emissions levels for 2024 and 2029 decrease (i.e., improve)

³³ Intergovernmental Panel on Climate Change. (2007 June). *Fourth Assessment Report: The Physical Science Basis, Summary for Policy Makers*.

due to the retirement of older, less efficient vehicles and the introduction of newer vehicles meeting more stringent emission and fuel efficiency standards as vehicles get cleaner (i.e., produce less emissions). Similarly, GHG emissions from electricity generation (energy for building demands and water treatment and conveyance) would decrease over time due to California's increasingly stringent Renewables Portfolio Standard (RPS) Program. These benefits would occur in the future years under the No Action Alternative.

**TABLE 4.5-1
NO ACTION ALTERNATIVE GHG EMISSIONS INVENTORY FOR 2024 AND 2029**

Operational Year	Emission Source	Estimated GHG Emissions Inventory in CO _{2e} (MT/year) No Action
2024	Area	<1
	Building Energy (electricity + natural gas)	6,874
	Waste	236
	Water treatment/conveyance	2,391
	Emergency Generators	199
	Mobile	61,527
	Aircraft	117,228
	Ground Support Equipment	828
	Total Emissions	189,284
2029	Area	<1
	Building Energy (electricity + natural gas)	3,077
	Waste	236
	Water treatment/conveyance	1,197
	Emergency Generators	199
	Mobile	57,752
	Aircraft	105,421
	Ground Support Equipment	884
	Total Emissions	168,766

Notes:

CO_{2e} = carbon dioxide equivalent

Source: ESA, 2020.

4.5.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects.

4.5.4.1 Proposed Project (2024)

Construction assumptions and activities for the Proposed Project are provided in **Section 4.3.2**. Under the Proposed Project, construction activities would begin in 2021 and last until 2026 (see **Table 4.3-2** for timing for the construction of various project components). The GHG construction emissions inventory for the Proposed Project in **Table 4.5-2** shows that approximately 841 MT CO₂e would occur in year 2024.

TABLE 4.5-2
PROPOSED PROJECT CONSTRUCTION GHG EMISSIONS INVENTORY

Construction Year	Estimated GHG Emissions Inventory in CO ₂ e (MT/year) ^{/a/}
	CO ₂ e
2021	1,079
2022	4,089
2023	3,260
2024	841
2025	1,301
2026	397

Notes:

/a/ Totals may not add up exactly due to rounding in the modeling calculations

CO₂e = carbon dioxide equivalent

Source: ESA, 2021.

As previously stated, given the enormity of GHG emissions worldwide (see **Section 3.4**), the contributions of a single project, such as the Proposed Project, would generate less than 0.0001 percent of both the U.S.-based GHG emissions and global GHG emissions.³⁴ For example, in 2018, the United States emitted approximately 6,677 million metric tons (MMT) of CO₂e, an increase of 3.1 percent over 2017 emissions.³⁵

The emissions generated from construction of the Proposed Project in 2022 (the highest single year for project-related construction emissions) would be minor when compared to State (0.002 percent of the California 2017 GHG inventory) and National emissions (0.00018 percent of the Nation's 2018 GHG inventory).³⁶ Other

³⁴ Intergovernmental Panel on Climate Change. (2014). *Climate Change 2014: Synthesis Report. Fifth Assessment Report, Summary for Policy Makers*. Retrieved September 2019, from IPCC: <http://ipcc.ch/report/ar5/syr/>.

³⁵ The 2018 data represents the latest full year data that was available at the time of the analysis. The year-over-year comparison with 2017 was provided for additional context.

³⁶ This is the latest California data that was available at the time of the analysis. The Draft EIS was released in August of 2020, and CA 2018 GHG data was not released until October 2020.

project construction years would contribute even less to the State and National GHG emissions.

Operational Emissions

Operational assumptions and activities for the Proposed Project are provided in **Section 4.3.2.1**. The landside and airside GHG operational emissions inventory for the Proposed Project in 2024 are presented in **Table 4.5-3** because that year has the maximum increase in GHG emissions.

TABLE 4.5-3
2024 PROPOSED PROJECT OPERATIONAL GHG EMISSIONS INVENTORY

Emission Source	Emissions (metric tons per year)
	Total CO ₂ e
Area	<1
Building Energy (electricity+ natural gas)	7,057
Waste	252
Water treatment/conveyance	2,577
Emergency Generators	199
Mobile	63,205
Aircraft	117,228
GSE	828
Total Annual CO₂e (All Sources)	191,347
Annual No Action CO₂e	189,284
Annual Net Emissions	2,063

Notes:

GWP ratios are provided by the Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report (AR4)

Source: Intergovernmental Panel on Climate Change, 2007.

As shown in **Table 4.5-3**, the Proposed Project operational emissions would result in net increases in GHG emissions of approximately 2,063 MT CO₂e when compared to the No Action Alternative in 2024. These increases are primarily due to the increased size of the replacement passenger terminal compared to the existing passenger terminal and the increase in vehicle miles traveled for surface vehicles accessing the replacement passenger terminal. These increases would represent approximately 1.08 percent MT CO₂e more than the No Action Alternative would

generate. Compared to California's 2017 GHG emissions levels, the Proposed Project would generate approximately 0.0005 percent of those national levels.³⁷

Combined Construction and Operational Emissions

As shown in **Table 4.3-2**, the replacement passenger terminal building and its parking structures, the largest components of the Proposed Project, would be completed in 2024 and begin operating. The remainder of the Proposed Project would be constructed by 2026.

The 2024 combined construction and operational emissions inventory for the Proposed Project are presented in **Table 4.5-4**.

TABLE 4.5-4
2024 PROPOSED PROJECT COMBINED CONSTRUCTION AND OPERATIONAL GHG EMISSIONS INVENTORY

Emission Source	Emissions (metric tons per year)
	Total CO ₂ e
Area	<1
Energy (electricity + natural gas)	7,057
Waste	252
Water treatment/conveyance	2,577
Emergency Generators	199
Mobile	63,205
Aircraft	117,228
GSE	828
Construction Emissions	841
Total Annual CO₂e (All Sources)	192,187
No Action Alternative Annual CO₂e	189,284
Annual Net Emissions	2,903

Notes: GWP ratios are provided by the Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report (AR4)

Source: Intergovernmental Panel on Climate Change, 2007.

As shown in **Table 4.5-4**, the Proposed Project combined construction and operational emissions in 2024 would result in a net increase in GHG emissions of approximately 2,903 MT CO₂e compared to the No Action Alternative. These increases would be approximately 1.52 percent more than the GHG emissions of

³⁷ The 2018 data represents the latest full year data that was available at the time of the analysis. The year-over-year comparison with 2017 was provided for additional context.

the No Action Alternative in 2024. This level of GHG emissions increases would comprise approximately 0.0007 percent of California's 2017 GHG emissions.

Although the 2024 GHG emissions are presented, it is important to note that construction and operation would continue to overlap due to operations of the replacement passenger terminal building and overlapping construction activities associated with the demolition of the existing passenger terminal building, paving of the taxiway, and construction of the Aircraft Rescue and Fire Fighting (ARFF) station. Calculations for all years studied are presented in **Appendix E**. However, emissions for the 2024 were presented in this section since they represent the first year of operation of the replacement passenger terminal building.

4.5.4.2 Proposed Project (2029)

Construction Emissions

Project construction is planned to end in 2026. No construction activity is proposed for 2029. Therefore, this EIS addresses only operational emissions for that analytical year.

Operational Emissions

Operational assumptions and activities for the Proposed Project are provided in **Section 4.3.2**. The landside and airside GHG operational emissions inventory for the Proposed Project in 2029 is presented in **Table 4.5-5**.

As shown in **Table 4.5-5**, the Proposed Project operational emissions would result in a net increase in GHG emissions of approximately 1,788 MT CO₂e compared to the No Action Alternative in 2029. These increases would represent approximately 1.1 percent more compared to the No Action Alternative and equal to approximately 0.0004 percent of California's 2017 GHG emissions.

Although the replacement passenger terminal would include more efficient building energy standards, the replacement passenger terminal is approximately 35 percent larger than the existing passenger terminal, which accounts for a slight increase in GHG emissions from both area and building energy sources. Vehicle emission rates decrease (i.e., improve) due to the retirement of older, less efficient vehicles and the introduction of newer vehicles meeting more stringent emission and fuel efficiency standards as vehicles get cleaner. However, the on-site trip length for

TABLE 4.5-5
2029 PROPOSED PROJECT OPERATIONAL GHG EMISSIONS INVENTORY

Emission Source	Emissions (metric tons per year)
	Total CO ₂ e
Area	<1
Energy (electricity + natural gas)	3,257
Waste	268
Water treatment/conveyance	1,377
Emergency Generators	199
Mobile	59,332
Aircraft	105,238
GSE	884
Total Annual CO₂e (All Sources)	170,554
Annual No Action CO₂e	168,766
Annual Net Emissions	1,788

Notes:

GWP ratios are provided by the Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report (AR4)

Source: Intergovernmental Panel on Climate Change, June 2007.

passenger trips is slightly longer under the Proposed Project. As previously stated, future GSE emissions would decrease criteria pollutants and therefore, have the co-benefit of decreasing GHG emissions, although negligibly.³⁸ Given the enormity of GHG emissions worldwide, the contributions of one project, such as the Proposed Project are negligible.

4.5.5 Mitigation, Avoidance, or Minimization Measures

The minimization measures included in **Section 4.3.5, Air Quality** describe methods that would reduce GHG emissions from construction and operation related associated with the Proposed Project.

4.6 U.S. DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F)

This section describes the significance threshold(s) pertaining to U.S. Department of Transportation (U.S. DOT) Section 4(f) resources, methodologies used to

³⁸ South Coast Air Quality Management District. (2019). Hollywood Burbank Airport Air Quality Improvement Plan. Retrieved December 2019, from South Coast Air Quality Management District: <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/commercial-airports-mous>.

determine the potential effects the No Action Alternative and Proposed Project, identifies the potential Section 4(f) and Section 6(f) resource impacts, and identifies mitigation measures, if applicable.

Section 4(f) provides protection for publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites of national, state, or local significance. "Use" of a Section 4(f) resource can occur as a "physical use" or a "constructive use". As stated in FAA Order 1050.1F, a "physical use" would occur *"if the proposed action or alternative(s) would involve an actual physical taking of Section 4(f) property through purchase of land or a permanent easement, physical occupation of a portion or all of the property, or alteration of structures or facilities on the property."*³⁹

A "constructive use" would occur in the event that a proposed action does not physically impact a Section 4(f) resource, but impacts its attributes by means of increased noise levels, air or water pollution, visual impediments, or other impacts with the potential to harm its aesthetic value, wildlife resources, access, or any other attribute which would result in a "take" in every practical sense. As stated in FAA Order 1050.1F, a constructive use occurs *"when the impacts of a project on a Section 4(f) property are so severe that the activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the Section 4(f) property that contribute to its significance or enjoyment are substantially diminished. This means that the value of the Section 4(f) property, in terms of its prior significance and enjoyment, is substantially reduced or lost. For example, noise would need to be at levels high enough to have negative consequences of a substantial nature that amount to a taking of a park or portion of a park for transportation purposes."* For an airport, the most common type of "constructive use" is associated with changes in aircraft noise levels, restricted access, or visual impairment at a Section 4(f) property.

Section 6(f) of the National Park Service (NPS) Land and Water Conservation Fund (LWCF) Act protects land and water resources which have been acquired and developed with federal grants. The conversion of Section 6(f) land and water resources to other uses is discouraged by provisions of this Act. As described in **Section 3.7.2.2**, there are no Section 6(f) resources identified within the General Study Area. Therefore, no further analysis was needed for 6(f) resources.

³⁹ FAA. (2015). Order 1050.1F, Section B-2.2.1. Retrieved August 2019, from FAA: https://www.faa.gov/documentLibrary/media/Order/FAA_Order_1050_1F.pdf.

4.6.1 Significance Threshold

FAA Order 1050.1F, Exhibit 4-1, provides the FAA's significance threshold for Section 4(f), which states that a significant impact would occur if *"the action involves more than a minimal physical use of a Section 4(f) resource or constitutes a 'constructive use' based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource."*

4.6.2 Methodology

FAA Order 1050.1F Desk Reference, Chapter 5, Section 3 provides guidance specific to airport projects to determine project use of a Section 4(f) resource. Methods used to determine land use compatibility under 14 CFR Part 150 (Noise Compatibility Planning) are helpful in determining if aircraft noise would cause a constructive use of Section 4(f) properties, but were not considered in this analysis because the Proposed Project would not change the existing noise contours (see **Section 4.12**). In addition, a review of construction-related noise was conducted to determine whether a constructive use of any Section 4(f) resource would occur. The General Study Area was reviewed for any publicly owned parks, recreational areas, wildlife or waterfowl refuges, or historic sites. As described in **Section 3.7.2.1**, 14 Section 4(f) resources were identified within the General Study Area: nine parks, one property listed on the National Register for Historic Places (NRHP), two properties eligible for listing on the NRHP, one bikeway, and one recreational facility. An analysis of whether any components of the No Action Alternative and Proposed Project would have a physical or constructive use of Section 4(f) resources was conducted.

4.6.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve forecast aviation demands. Any future development at the Airport requiring a federal action would be subject to NEPA review and is not presumed under the No Action Alternative.

No physical use of a Section 4(f) resource would occur under the No Action Alternative. Therefore, no physical "take" of a Section 4(f) resource would occur.

Five Section 4(f) resources, Hangar 1, Hangar 2, the Portal of the Folded Wings Shrine to Aviation, Larry L. Maxam Memorial Park, and Maple Street Playground, are within the 2024 and 2029 No Action Alternative Community Noise Equivalent

Level (CNEL) 65 decibel (dB) noise contours (see **Exhibits 4.11-1** and **4.11-2**).⁴⁰ However, there is no constructive use under the No Action Alternative because each of these Section 4(f) resources already are within the CNEL 65 dB noise contour. In addition, no visual impairment or a change in access to any of these Section 4(f) resources would occur as a result of the No Action Alternative.

4.6.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement terminal and ancillary projects.

Construction and operation of the Proposed Project would not result in the physical taking of a Section 4(f) resource. The closest Section 4(f) resource, Hangar 2, is approximately 2,500 feet west of the Proposed Project site (see **Exhibit 4.6-1**). Therefore, no physical use of a Section 4(f) resource would occur.

Under the Proposed Project, five Section 4(f) resources, Hangar 1, Hangar 2, the Portal of the Folded Wings Shrine to Aviation, Larry L. Maxam Memorial Park, and the Maple Street Playground, are within the 2024 and 2029 CNEL 65 dB noise contours. However, since the Proposed Project does not increase aircraft operations, change the types of aircraft operating at the Airport, or alter the runway endpoints, the Airport's noise contours do not change as a result of the Proposed Project and are the same as the No Action Alternative. As there is no change in the noise contours, no effect to the function or resource values of these five Section 4(f) resources would occur from noise. Additionally, there would not be a CNEL 1.5 dB increase in the CNEL 65 dB noise contour as a result of the Proposed Project compared to the No Action Alternative.⁴¹ All other Section 4(f) resources in General Study Area are outside of the 2024 and 2029 CNEL 65 dB noise contours.

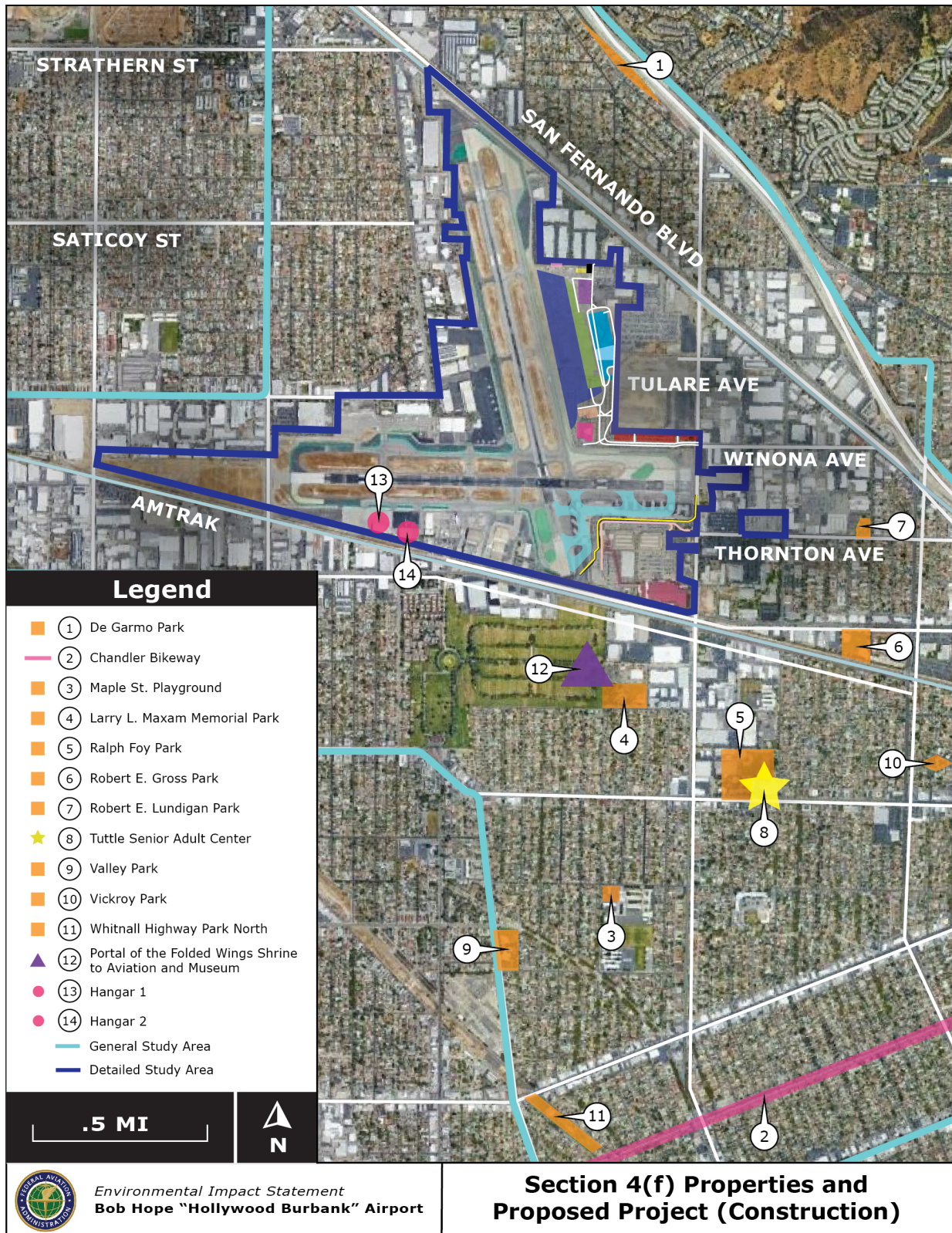
The Proposed Project is not anticipated to result in any visual resource impacts within the General Study Area (see **Section 4.13**).

There is no constructive use of any Section 4(f) property by the Proposed Project because the noise levels do not change. The Proposed Project does not change access to the Section 4(f) properties or result in any visual resource impairment or any other substantial impairment compared to the No Action Alternative.

⁴⁰ Community Noise Equivalent Level (CNEL) is the average A-weighted noise level (dB) during a 24-hour day, adjusted to apply a 10-decibel (dB) penalty during nighttime hours (from 10:00 p.m. to 7:00 a.m.) and an additional 5-dB penalty during evening hours (from 7:00 p.m. to 10:00 p.m.).

⁴¹ The 1.5 dB increase in the CNEL 65-dB noise contour is the threshold for determining whether a change in noise is considered significant. See Section 4.12 for further information.

EXHIBIT 4.6-1
SECTION 4(f) PROPERTIES AND PROPOSED PROJECT (CONSTRUCTION)



Sources: City of Burbank, 2018; City of Los Angeles, 2018; RS&H, 2021.

4.6.5 Mitigation, Avoidance, or Minimization Measures

Since there would be no physical or constructive use of any Section 4(f) resource by the Proposed Project, no mitigation, avoidance or minimization measures are necessary.

4.7 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

The section evaluates the potential environmental impacts related to hazardous materials, including their use, generation, transportation and disposal, and impacts related to solid waste and pollution prevention under the No Action Alternative and the Proposed Project.

4.7.1 Significance Threshold

The FAA has not established thresholds in Orders 1050.1F or 5050.4B or the 1050.1F Desk Reference for NEPA purposes of addressing this resource category. The FAA has developed the following factors to assess the extent of a project's possible impacts in this resource category. The following criteria are aids to determine the severity of impacts involving hazardous materials, solid waste, and pollution prevention that would result from actions under FAA's authority:

- » Violation of applicable Federal, state, tribal, or local laws or regulations regarding hazardous materials and/or solid waste management;
- » Involve a contaminated site (including but not limited to a site listed on the National Priorities List (NPL)). Contaminated sites may encompass relatively large areas. However, not all of the grounds within the boundaries of a contaminated site are contaminated, which leaves space for siting a facility on non-contaminated land within the boundaries of a contaminated site. An EIS is not necessarily required. Paragraph 6-2.3a of this Order allows for mitigating impacts below significant levels (e.g., modifying an action to site it on non-contaminated grounds within a contaminated site). Therefore, if appropriately mitigated, actions within the boundaries of a contaminated site would not have significant impacts;
- » Produce an appreciably different quantity or type of hazardous waste;
- » Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity; or
- » Adversely affect human health and the environment.

4.7.2 Methodology

This impact analysis compares the hazardous materials conditions associated with the No Action Alternative and the Proposed Project to assess potential impacts relating to hazardous materials, pollution prevention, and solid waste. These analyses address the type of hazardous materials or hazardous wastes that would be generated, stored, disturbed, transported, treated, or disposed as a result of implementing the Proposed Project, on-site contamination, including the existence of any NPL sites within the Proposed Project boundaries, and the discovery of unknown contaminants during construction.

The evaluation of hazardous conditions and materials associated with construction and/or operation of the Proposed Project is based on numerous site investigations performed over the years as discussed in **Section 3.8**, but primarily on the *Hazardous Materials Assessment for the Proposed Burbank Airport Replacement Terminal*,⁴² included in **Appendix G**. The Hazardous Materials Assessment (HMA) identified sites with recognized environmental conditions (RECs) of potential significance to the Proposed Project.

4.7.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve the forecasted aviation demands. Any future development at the Airport requiring a federal action would be subject to NEPA review and is not presumed under the No Action Alternative.

4.7.3.1 Hazardous Materials and Hazardous Waste

The No Action Alternative would continue to use petrochemical and chemical products such as aviation gasoline, Jet A fuel, diesel, solvents, adhesives, hot and cold asphalt patches, cleaning products, and other various lubricants and hazardous materials. Use of these hazardous materials would continue and slightly increase under the No Action Alternative due to the forecasted increases in aircraft operations that would be needed to meet forecasted passenger demands and changes in airfield and terminal maintenance associated with those demands.

Additionally, as stated in **Section 3.8**, asbestos containing materials (ACMs), lead based paint (LBP), and Polychlorinated Biphenyls (PCBs) are present at the existing

⁴² Diaz-Yourman & Associates. (2018). *Hazardous Materials Assessment, Proposed Burbank Airport Replacement Terminal*.

passenger terminal and will remain under the No Action. An Asbestos Operations and Maintenance Plan (Asbestos O&M Plan) would be in effect to address building cleaning, maintenance, renovation, and general operation procedures to minimize exposure to asbestos.

Although those activities would occur, the No Action Alternative would not produce an appreciably greater quantity or type of hazardous waste, such as used motor oil or spent cleaning solvents, or generate appreciably more waste due to remediation of accidental spills or leaks. This is because the forecasted increase in aircraft operations would not exceed historic peak aircraft operations until sometime after the forecast year of 2029.

The slight increase in hazardous materials used in the existing passenger terminal and the corresponding hazardous waste generation could increase the chances of an accidental spills or release during handling and storage. Potential increases in hazardous materials use and hazardous waste generation would be partially offset through compliance with regulations requiring reduced use of these substances. Those regulations include the following South Coast Air Quality Management District (SCAQMD) rules: 1122, Solvent Degreasers; 1129, Aerosol Coatings; 1143, Consumer Paint Thinners and Multipurpose Solvents; 1168 Adhesive and Sealant applications; 1171, Solvent Cleaning Operations; 1177, Liquefied Petroleum Gas Transfer and Dispensing; and 1194, Commercial Airport Ground Access. Furthermore, the Airport is subject to California's Hazardous Waste Source Reduction and Management Review Act Senate Bill 14 (SB 14), which requires certain hazardous waste generators to evaluate their waste streams every four years and to implement source reduction activities.⁴³ The Authority produces a performance report in compliance with SB 14 requirements, as well as a plan to reduce the generation of hazardous waste at its source and the release of chemicals to the environment. The plan documents the Authority's hazardous waste management information for use by state and local agencies. Additionally, many Airport tenants also meet the reduction and reporting requirements of SB 14.

Under the No Action Alternative, most Airport activities would involve the use of hazardous materials that would generate hazardous waste, which would be temporarily accumulated onsite. Activities that generate hazardous waste include aircraft refueling and defueling and maintenance procedures for aircraft and ground vehicles (e.g., oil, transmission, and hydraulic fluid changes). Waste oil and fuel,

⁴³ California Senate Bill 14, the *Hazardous Waste Source Reduction and Management Review Act*, enacted in 1989, compels California businesses to manage hazardous waste by focusing primarily on source reduction, that is, ways to lessen the amount of hazardous waste produced before turning to reuse/recycle, treatment, or disposal options. It applies to business that generate more than 12,000 kilograms of hazardous waste in a reporting year, or more than 12 kilograms of extremely hazardous waste in a reporting year.

used solvents, and used maintenance fluids are the most common types of hazardous waste generated at the Airport. Private contractors remove hazardous waste generated at the Airport and deliver it to treatment, recycling, and disposal facilities both within and outside the Los Angeles region, depending on the type and classification of waste. Wastes that cannot be recycled are transported off site for treatment and disposal at incinerators and Class I landfills.⁴⁴ The Class I landfills in the region have sufficient capacity to handle hazardous waste generated by the Airport as shown in **Table 4.7-1**, which identifies the permitted waste streams by landfill. If capacity were to become insufficient, waste transporters would take the hazardous waste to another Class I facility farther away.

Handling, storage, and disposal of these hazardous materials and hazardous wastes would comply with federal, state, and local regulations, including but not limited to those of RCRA, the Emergency Planning and Community Right-to-Know Act, Occupational Safety and Health Administration (OSHA), U.S. EPA, Cal-OSHA, U.S. Department of Transportation (U.S. DOT), California Highway Patrol, DTSC, SCAQMD, Aboveground Petroleum Storage Act, Uniform Building Code, Uniform Fire Code, and Los Angeles County Fire Department regulations. Compliance with these regulations would minimize exposure to workers and the environment resulting from an accidental spill or release of hazardous materials or waste.

The No Action Alternative would not violate applicable federal, state, or local laws regarding hazardous materials or any of the regulations noted above. It would not produce a substantial change in the amount or types of hazardous materials and/or hazardous waste generated, used, stored, disposed of, or transported, nor would it adversely affect human health or the environment. As a result, no adverse hazardous materials and hazardous waste impacts are expected.

4.7.3.2 Pollution Prevention

Under the No Action Alternative, the Authority would continue to apply pollution prevention measures to the greatest extent possible. These include implementing measures to minimize accidental spills and releases and using paints and other substances that contain low volatile organic compounds (VOCs).⁴⁵ Additionally, recycling would continue to limit the quantity of solid and hazardous waste generated by the Airport activities.

⁴⁴ Class I landfills accept hazardous materials and wastes and are required to meet more stringent regulatory requirements for siting, operation, and record-keeping than those that accept municipal solid waste. Incinerators destroy hazardous waste through combustion.

⁴⁵ Chemicals emitted as gases from certain solids or liquids. VOCs are known for being common indoor air pollutants. The U. S. EPA regulates VOCs in the outdoor air because some cause adverse health effects and because they can react with other pollutants to form ozone and secondary air toxics.

TABLE 4.7-1
CLASS I HAZARDOUS WASTE LANDFILLS AND TYPE OF WASTE ACCEPTED

Facility Name	Tons City of Burbank Hauls to Each Landfill	Percentage of Burbank's Annual Waste	Remaining Landfill Capacity (cubic yards)	Distance from Proposed Project Site	Type of Waste Accepted
Antelope Valley Public Landfill	2,296	2.59%	17,911,225	50 miles	Agricultural, Asbestos, Construction/demolition, Industrial, Inert, Mixed Municipal
Azusa Land Reclamation Co. Landfill	1,187	1.34%	51,512,201	30 miles	Agricultural, Asbestos, Construction/Demolition, Contaminated Soil, Green Materials, Industrial, Inert, Mixed Municipal
Burbank Landfill Site No. 3 ^{a/}	32,486	36.69%	5,174,362	5 miles	Mixed Municipal, Construction/Demolition, Industrial, Inert
Chiquita Canyon Sanitary Landfill ^{a/}	33,031	37.31%	8,617,126	30 miles	Mixed Municipal, Green Materials, Construction/Demolition, Industrial, Inert
El Sobrante Landfill	1,225	1.38%	145,530,000	71 miles	Construction/Demolition, Contaminated Soil, Mixed Municipal, Tires
Frank R. Bowerman Sanitary Landfill	452	0.51%	205,000,000	65 miles	Mixed Municipal, Industrial, Construction/Demolition
Lancaster Landfill and Recycling Center	313	0.35%	14,514,648	65 miles	Agricultural, Construction/Demolition, Industrial, Mixed municipal, Tires, Inert, Green Materials, Asbestos, Sludge (BioSolids), Contaminated Soil
McKittrick Waste Treatment Site	1,130	1.28%	769,790	121 miles	Other Designated, Industrial, Contaminated Soil
Mid-Valley Sanitary Landfill	1,453	1.64%	67,520,000	59 miles	Mixed municipal, Construction/Demolition, Industrial, Tires, Green Materials
Monterey Peninsula Landfill	3,135	3.54%	48,560,000	303 miles	Agricultural, Construction/Demolition, Sludge (BioSolids), Mixed Municipal, Food

Facility Name	Tons City of Burbank Hauls to Each Landfill	Percentage of Burbank's Annual Waste	Remaining Landfill Capacity (cubic yards)	Distance from Proposed Project Site	Type of Waste Accepted
					Wastes, Green Materials, Wood Waste
Olinda Alpha Sanitary Landfill	1,821	2.06%	34,200,000	49 miles	Agricultural, Industrial, Construction/Demolition, Mixed Municipal, Tires Wood Waste
San Timoteo Sanitary Landfill	12	0.01%	11,402,000	83 miles	Agricultural, Construction/Demolition, Dead Animals, Industrial, Inert, Mixed Municipal, Sludge (BioSolids), Green Materials
Simi Valley Landfill & Recycling Center	923	1.04%	88,300,000	30 miles	Construction/Demolition, Industrial, Mixed Municipal, Sludge (BioSolids)
Sunshine Canyon City/County Landfill ^{a/}	9,059	10.23%	96,800,000	15 miles	Construction/Demolition, Green Materials, Industrial, Inert, Mixed Municipal
Victorville Sanitary Landfill	16	0.02%	81,510,000	94 miles	Agricultural, Ash, Construction/Demolition, Dead Animals, Green Materials, Industrial, Mixed Municipal, Sludge (BioSolids), Tires, Wood Waste
Total	88,540	100.00%	877,321,352		

Notes:

/a/ - Landfills currently used by the Authority.

Sources: City of Burbank, 2013; City of Los Angeles, 2107; ESA, 2020.

There are five areas of historical contamination within the Airport property associated primarily with past aviation uses, as discussed in **Section 3.8** (see **Table 3.8-1** and **Exhibit 3.8-3**).

All five sites would continue to be managed as they are today under the No Action Alternative. Therefore, no adverse impacts are expected to occur as a result of the No Action Alternative.

4.7.3.3 Solid Waste

Solid waste disposal and recycling services for the No Action Alternative would be performed by private waste haulers which would transfer solid waste to regional landfills the Sanitation Districts of Los Angeles County operates. As shown in **Table 4.7-1**, an adequate surplus capacity exists at the regional landfills to accommodate the expected increase in solid waste under the No Action Alternative. Therefore, capacity would not be exceeded and there would be no adverse impacts on solid waste facilities.

Under the No Action Alternative, there would be no substantial change in the amounts or types of solid waste generated or, the method of collection or disposal, and landfill capacity would not be exceeded, as demonstrated above. Additionally, the No Action Alternative would not violate applicable federal, state, or local laws regarding solid waste management. Therefore, the No Action Alternative would not result in adverse effects related to solid waste management.

4.7.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects.

4.7.4.1 Hazardous Materials and Hazardous Waste - Construction

Construction of the Proposed Project would involve the routine transport, use, and disposal of limited quantities of hazardous materials typical of construction such as: gasoline and diesel to fuel construction equipment; hydraulic fluids, motor oils, and lubricants; and paints, solvents, and adhesives as well as contaminated fill material.

As is typical of most construction projects, the storage and use of hazardous materials could result in minor, on-site, incidental spills of diesel or gasoline fuel or oil to the ground during such activities as fueling equipment, filling fuel storage tanks, and handling lubricants. The spills could potentially expose Airport workers, passengers, and wildlife in on and near the Airport to carcinogenic and other harmful substances, threatening human and biotic community health and well-being if they are not properly contained.

Hazardous materials and wastes used or generated during project construction would be transported to and from the Airport via truck, primarily by private carriers. Accidents or accidental spills that may occur during this transportation could harm people due to exposure to those materials and wastes. They could also adversely affect soils and water quality in the vicinity of the spills. Impacts similar to those noted above for on-site spills would occur.

As previously stated, ACMs, LBP, and PCBs⁴⁶ are present at the existing passenger terminal building. Exposure to these materials and chemicals during terminal demolition could harm the health of construction workers or other people in the work area. Exposed people could experience harmful respiratory, blood chemistry, and nervous system issues if proper measures are not implemented.

The Proposed Project site contained soils that were contaminated due to previous activities, the site has been deemed suitable for construction of the Proposed Project.⁴⁷ Additionally, the exposure from previously contaminated soils to construction workers or the public is below U.S. EPA and Cal-EPA acceptable levels and would not pose a risk to human health and safety.⁴⁸

4.7.4.2 Hazardous Materials and Hazardous Waste - Operation

Terminal-oriented aircraft services under the Proposed Project would be the same as those under the No Action Alternative, but the types and numbers of passenger amenities that the existing passenger terminal offers may differ when the replacement passenger terminal is operating. Nevertheless, the hazardous materials generated, stored, used, transported, and disposed would be similar in type and quantity to those under the No Action Alternative, since the Proposed Project would serve the same forecasted number of passengers and aircraft operations as the No Action Alternative. Thus, there would not be a substantial change in the types of hazardous materials stored, disposed, or transported or volumes of hazardous waste generated. In addition, the replacement passenger terminal would not contain hazardous building materials like asbestos or lead paint, reducing the chronic hazardous materials exposure. Thus, the Proposed Project would minimize the risk of worker or passenger exposure to hazardous materials and/or hazardous waste.

As described above, operation of the Proposed Project would comply with applicable rules and regulations as well as mitigation, avoidance, and minimization measures (see **Section 4.7.5**). Thus, FAA does not anticipate severe adverse impacts on human health and the environment due to the Proposed Project's operational generation, storage, use, transport, and disposal of hazardous materials and hazardous waste.

⁴⁶ PCBs are presumed to be in fluorescent light ballasts in the existing passenger terminal building that are not specifically labeled as "No PCBs".

⁴⁷ Diaz Yourman & Associates. (2018, October). *Hazardous Materials Assessment Proposed Burbank Airport Replacement Terminal*.

⁴⁸ Diaz Yourman & Associates. (2018, October). *Hazardous Materials Assessment Proposed Burbank Airport Replacement Terminal*.

As shown in **Table 4.7-1**, the available landfills have plenty of remaining capacity to accept the demolition debris, soil, and hazardous waste that would be generated by construction of the Proposed Project along with its demolition component.

4.7.4.3 Solid Waste

The Proposed Project would temporarily increase the volume of solid waste generated during construction, including waste from both demolition and construction activities. The construction contractor is aiming for 75 percent of non-hazardous demolition and construction materials to be reused in onsite construction and/or hauled offsite for recycling, thereby reducing the quantity of waste materials transported to landfills serving the Proposed Project area. Given the amount of remaining landfill capacity (see **Table 4.7-1**), and the fact that construction materials would be reused and/or recycled, demolition and construction activities associated with the Proposed Project are not expected to result in an adverse impact related to solid waste management.

Solid waste would slightly increase under operation of the Proposed Project due to the increase in forecasted Airport operations and enplanements, but this would be the same as that of the No Action Alternative. Solid waste would not exceed landfill capacity, especially considering the increase in recycling and waste diversion requirements expected to occur under the California Integrated Waste Management Act. Additionally, the type and quantity of solid waste produced, and the method of collection or disposal would not change appreciably under the Proposed Project compared to the No Action Alternative. Handling and disposal of solid waste would comply with federal, state, and local regulations regarding solid waste management. Thus, the Proposed Project would not result in adverse effects related to solid waste management.

4.7.4.4 Pollution Prevention

As discussed in **Section 3.8**, the HMA identified the following five sites with RECs of potential significance to the Proposed Project:

1. San Fernando Valley Groundwater Basin Superfund Site (Area 1), Moderate;
2. Former Lockheed Plant B-5, Low;
3. Former Lockheed Plant C-1, Moderate;
4. Former Lockheed Plant B-6, Low; and

5. Physicians Clinical Laboratory (formerly known as the Aviall property located at 3111 North Kenwood),⁴⁹ Moderate.

The Proposed Project includes all five sites, because Sites 1, 2, and 3 would be affected by demolition and construction activities and Sites 4 and 5 are in the northeast quadrant. For Site 1, the U.S. EPA is currently overseeing the remediation. For Site 2, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) has issued a No Further Requirements determination. For Site 3, the Regional Board is currently monitoring the site. These three sites do not pose a threat to human health or the environment from cleanup activities.

Site 4, the former Lockheed Plant B-6 is part of the U.S. EPA Superfund Program and has undergone extensive soil and groundwater decontamination activities over the years. Based on these remedial activities, the HMA identifies the site as low risk.⁵⁰ As detailed in the HMA, the Regional Board has indicated that the site is compatible with the construction and operation of the replacement passenger terminal.⁵¹

Site 5, the Physicians Clinic Laboratory (formerly the Aviall Property) at 3111 North Kenwood Street, is adjacent to Site 4. The U.S. EPA oversaw the cleanup actions at this site from 1991 through 1995, along with numerous site investigations throughout the 2000's. Site investigations in 2014 and 2015 reported concentrations of hexavalent chromium in soil. The maximum concentrations were found at depths of 130 feet bgs, but hexavalent chromium was not detected in groundwater. In 2016, the Regional Board requested onsite groundwater sampling as part of the U.S. EPA Superfund Program. Although construction and operation of the Proposed Project would not occur on this site, the HMA identified this site as a moderate risk because of its hydrologically gradient location, which creates the potential for contamination to migrate to the Proposed Project site.⁵²

Under the Proposed Project, the Airport would continue to implement pollution prevention measures to the greatest extent possible, including measures to minimize accidental spills and releases and the use of low-VOC paints and solvents. Compliance with CERCLA regulations under the Proposed Project would ensure that

⁴⁹ The Aviall Property also has been known as the Physicians Clinical Laboratory. As evidenced in the Regional Board database, GeoTracker (<https://geotracker.waterboards.ca.gov/>, Accessed on July 29, 2020), Physicians Clinical Laboratory and the Aviall Property are one site, sharing both the same identification number (SL603798596) and physical address.

⁵⁰ Diaz Yourman & Associates. (2018, October). *Hazardous Materials Assessment Proposed Burbank Airport Replacement Terminal*.

⁵¹ Diaz Yourman & Associates. (2018, October). *Hazardous Materials Assessment Proposed Burbank Airport Replacement Terminal*.

⁵² Diaz Yourman & Associates. (2018, October). *Hazardous Materials Assessment Proposed Burbank Airport Replacement Terminal*.

operational activities would not disturb soils or groundwater or contribute to further contamination in the area. Thus, the five identified REC sites, and associated remediation activities, would not result in adverse effects to human health.

4.7.5 Mitigation, Avoidance, or Minimization Measures

The Proposed Project would adhere to federal, state, and local regulations to minimize the risk from the use, storage, transportation, disposal and incidental spills of hazardous materials and hazardous waste. Such regulations include, but are not limited to, RCRA, U.S. DOT Hazardous Materials Regulations, OSHA, Cal-OSHA, FAA and Airport health and safety rules, local Certified Unified Program Agencies regulations, requirements of the Construction General Permit and the Storm Water Pollution Prevention Program (SWPPP), NPDES, and SCAQMD rules and regulations. The following discussion (divided into subparts for ease of reading) presents measures that are either required by a regulatory agency or were incorporated into the Proposed Project to minimize hazardous material and/or solid waste impacts.

4.7.5.1 Asbestos, Lead-Based, and Poly-Chlorinated Bi-Phenol Materials

The Proposed Project would be required to comply with all regulations associated with the removal of ACMs, LBP, and PCBs during the demolition phase of the existing, decades-old terminal. Compliance with these regulations would ensure that human health and the environment would not be exposed to ACMs, LBPs, or PCBs above levels that are considered acceptable.

Removal of ACMs would be subject to Cal-OSHA requirements to ensure proper handling, notification, and disposal and would be performed by a licensed asbestos abatement contractor.

Prior to any interior demolition or renovation within the buildings containing ACMs, an asbestos survey would be performed prior to demolition and in accordance with the requirements of SCAQMD Rule 1403. The survey would include the inspection, identification, and quantification of all friable and Class I and Class II non-friable asbestos containing materials and physical samplings. Removal procedures would include: HEPA filtration, glovebag, adequate wetting, dry removal, or another approved alternative. All ACMs would be collected and placed in transparent, leak-tight containers or wrapping. All ACM would be contained in leak tight containers, labeled appropriately, transported, and disposed of in accordance with Rule 1403 and applicable rules and regulations.

PCBs in the existing passenger terminal building (fluorescent light ballasts not specifically labeled as “No PCBs”) would be handled per industry and Resource Conservation and Recovery Act (RCRA) standards. This would minimize the release of PCB into the environment.

Prior to demolition activities involving any areas known to contain lead-based paint, the Authority, as the applicant, would follow all procedural requirements and regulations for its proper removal and disposal. The removal of LBP would be subject to Cal-OSHA requirements to ensure proper handling, notification, and monitoring and would be performed by a licensed LBP abatement contractor. All trucks transporting lead-based waste would be covered or enclosed. All lead-based waste material would be contained properly, labeled appropriately, transported, and disposed of in accordance with applicable rules and regulations.

4.7.5.2 Contaminated Soil

The Regional Board requested preparation and submittal of a Soil Management Plan (SMP) for approval before starting construction activities. This is because there is a chance that workers could come in contact with contaminated soil, primarily with VOCs or hexavalent chromium, during excavation and grading. The SMP would address future soil excavation and grading activities and describe methods for detecting, testing, transporting, and managing impacted soil encountered during excavation and redevelopment activities. It would also address erosion and sediment controls, collection and analysis of soil samples, and placement and disposal of excavated soil. The Authority would prepare an SMP and obtain Regional Board approval prior to initiating construction activities. The SMP would outline a framework for soil assessment, remediation, and removal actions to be used if contaminated soils are uncovered during construction activities.

There is a low potential to encounter VOC-contaminated soil (soil registering greater than 50 ppm). However, the SMP would identify procedures to follow while excavating soils. The Authority would follow the SMP to minimize worker exposure to VOC emissions during excavation, grading, handling, and treatment of contaminated soil. Under the SMP, as grading, excavation and trenching are performed, the construction contractor would monitor exposed soils for staining or discoloration, wetness, saturation, or odors. Based on visual monitoring, “grab” soil samples would be collected at selected locations for headspace screening for VOCs using a calibrated Photoionization Detector (PID). Headspace PID readings that are elevated above those on non-impacted grab soil samples would be considered potentially contaminated. If excavation unexpectedly encounters VOC-contaminated soil with PID measurements greater than 50 parts per million, the continuation of excavation would be carried out in accordance with SCAQMD Rule 1166. Additionally, based on sampling results, SCAQMD Rule 1166 could

require vapor intrusion strategies and/or technologies in the final Proposed Project design. Compliance with the SMP and SCAQMD Rule 1166, if required, would ensure that human health and the environment would not be exposed to VOC-contaminated soils above levels that are considered acceptable during construction of the Proposed Project.

Additionally, the Proposed Project would comply with applicable SCAQMD rules that govern the control of air pollutant emissions from the Airport, including SCAQMD Rule 1166, if VOC contaminated soil is encountered at the site. This Rule includes the following measures:

- » The Authority would submit a plan to the SCAQMD for review and approval. The plan would detail measures for minimizing VOC emissions during excavation, grading, handling, and treatment of VOC contaminated soil in accordance with Attachment A of SCAQMD Rule 1166.
- » A copy of the approved plan must remain onsite during the entire excavation period. The plan would specify actions for the construction contractor to take if contaminated soils or vapors are encountered.
- » If stained or discolored soil or vapors are encountered during excavation, the construction contractor would monitor contaminated soils for VOCs by recording concentrations every 15 minutes.
- » If it is determined the soils are contaminated, readings above 50 ppm with a PID, the contractor would segregate contaminated soils from uncontaminated soils. The construction contractor would spray any contaminated soils with water and/or an approved vapor suppressant and cover the soils with plastic sheeting for all periods of inactivity lasting more than an hour. The construction contractor would perform daily inspections of contaminated soils until they have been treated or removed.
- » If soil were to be treated onsite, the Authority would obtain a permit to construct and operate the treatment equipment from the SCAQMD. Treatment options could include installing an underground VOC collection and disposal system prior to excavation or collecting and disposal of the VOCs from excavated soil using other approved equipment.
- » If the construction contractor is transporting the soil offsite for disposal, trucks must be tarped and the exterior of the truck, trailer and tires must be cleaned before the truck leaves the site.
- » The construction contractor would monitor for the presence of VOCs and implement the approved mitigation plan if any VOC-contaminated soils, as defined in Rule 1166, are detected.

- » If required, the Authority would obtain a SCAQMD permit for the activities and provide a copy of the permit to the DTSC.

The final design of the replacement passenger terminal shall include necessary consideration of vapor intrusion strategies and/or technologies, as warranted. The need for the strategies would be based upon a refined review of existing soil gas survey data and relevant data PID measurements, soils samples, test results) collected during construction in accordance with the SMP and SCAQMD Rule 1166.

Soil affected by high concentrations of hexavalent chromium and/or total chromium may also be disturbed during project construction. Soils contaminated with this metal appear to be stained a yellow color, dissimilar to surrounding non-impacted soil. At a minimum, the construction contractor would collect at least one soil sample at or near the center of the suspected contaminant area for chemical analysis. Analysis of soil samples would be conducted by a State-certified laboratory using appropriate methods based on the parameters to be analyzed. If a new contaminated area is identified, it would be characterized to assess its lateral and vertical extent. If affected soil is encountered, it would be excavated, followed by segregated stockpiling or direct-loading, waste profiling, and off-site disposal or recycling which would be performed in accordance with applicable federal, state, and local regulations.

4.7.5.3 Limits on Excavation Depth

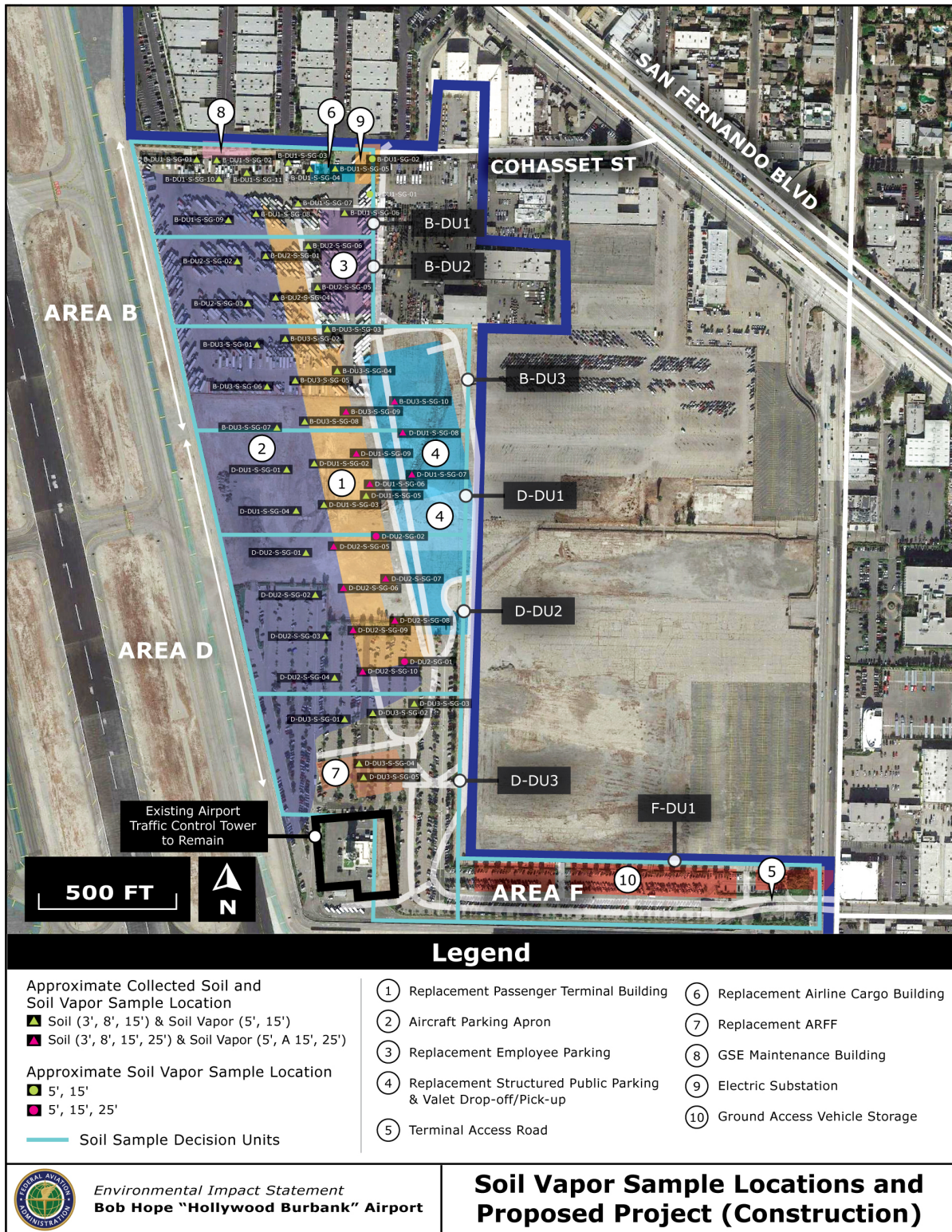
The Regional Board requested notification of any changes to a building or parking location whose excavation would exceed 25 feet bgs.⁵³ The Authority would be required to notify the Regional Board if there are any changes to a building or parking location that exceeds the 25-foot bgs excavation criterion (see **Section 4.7.5.4** for more information on Areas D-DU3 and F-DU1).

4.7.5.4 Expanding the Impact Area

At the time that the Regional Board issued their review of the HHRA, the replacement ARFF building was planned for Area D-DU3, shown in **Exhibit 4.7-1**, but only had a sampling depth of 15 feet bgs. Additionally, the ground access vehicle storage is proposed to be located in Area F-DU1, and the terminal access road is proposed to be in both areas. If the replacement ARFF and terminal access road in Area D-DU3 requires excavation greater than 15 feet bgs (the maximum

⁵³ California Regional Water Quality Control Board, Los Angeles Region. (2018). Letter – Review of Draft and Final Human Health Risk Assessment, Hollywood Burbank Airport Replacement Terminal, 2801 North Hollywood Way, Burbank, California, (SCP No. 104.0674A, Site ID No. 2040502), Assessor's Parcel Numbers (APNs): 2466-011-914, 2466-011-916, January 29, 2018.

EXHIBIT 4.7-1
SOIL VAPOR SAMPLE LOCATIONS AND PROPOSED PROJECT



Notes: Areas B, D, and F represent the phases in which each sample was taken. DU - Decision units. For example, B-DU3 would be Area B, Decision Unit 3.

Sources: Geosyntec, 2017; RS&H, 2021.

depth of soil vapor sampling in this area), the Authority has agreed to notify the Regional Board before construction begins to discuss the need for collecting additional soil/soil vapor samples for risk characterization. Because no soil and/or soil vapor samples have been completed in Area F-DU1, the Authority will notify and coordinate with the Regional Board prior to construction to discuss the level of sampling, if any, to be completed in this area for risk characterization.

4.8 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

This section presents the significance thresholds and methodology used for analysis of potential impacts to historic resources (i.e., historical, architectural, archaeological, and cultural resources) and analyzes the potential impacts to historic resources as a result of the Proposed Project when compared to the No Action Alternative.

National Historic Preservation Act (NHPA) Section 106 Consultation

The Federal Aviation Administration (FAA) conducted the required consultation with the California State Historic Preservation Officer (SHPO) under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The FAA initiated consultation on February 21, 2019, with the California SHPO to inform them of the Proposed Undertaking,⁵⁴ seek concurrence of an Area of Potential Effects (APE). The APE for direct and indirect impacts is described in **Section 3.8.2.1** and shown on **Exhibit 3.8-1**. The California SHPO concurred with the FAA's delineation of the APE via letter on March 19, 2019 (coordination letters included in **Appendix H**).

Native American Consultation

FAA received a listing of Native American tribal contacts for the Proposed Undertaking from the State of California Native American Heritage Commission (NAHC). The NAHC recommended FAA contact the following Native American tribes: Gabrieleno Band of Mission Indians – Kizh Nation, Gabrieleno Tongva - San Gabriel Band of Mission Indians, Gabrielino/Tongva Nation, Gabrielino Tongva Indians of California Tribal Council, and the Gabrielino-Tongva. On January 17, 2020, FAA provided detailed information about the Proposed Undertaking to the Native American tribal contacts provided by the NAHC via U.S. Mail. FAA received only one response, which was from the Gabrieleno Band of Mission Indians – Kizh Nation (see **Appendix H**). That response requested a discussion with the FAA regarding the Proposed Undertaking, which occurred on February 7, 2020, with the Gabrieleno Band of Mission Indians – Kizh Nation. The results of the discussion

⁵⁴ Under Section 106, a Proposed Project is referred to as the Proposed Undertaking.

revealed that due to the significant disturbance of soil during the initial construction of the various buildings on the former B-6 Property by Lockheed in the 1930s and subsequent hazardous materials remediation in the late 1990s and early 2000s, the possibility of finding intact Native American resources is very low in areas that were previously disturbed and excavated to a depth of 25 feet bgs.

4.8.1 Significance Threshold

According to FAA Order 1050.1F,⁵⁵ the FAA has not established a significance threshold for impacts to historical, architectural, archaeological and cultural resources. However, the FAA has identified one factor to consider when evaluating the context and intensity of potential environmental impacts for historical, architectural, archeological, and cultural resources. The factor is whether the Proposed Undertaking would result in a finding of *Adverse Effect* through the Section 106 process.

4.8.2 Methodology

4.8.2.1 Historical and Architectural

A Historical Resources Assessment and an Archaeological Resources Assessment was conducted that meets Section 106 requirements and that includes an evaluation of the buildings on the Airport property that either meet the 50-year threshold for eligibility to the National Register of Historic Places (NRHP) or were approaching historic age (45 years or older) (see **Appendix H**). In addition, buildings on adjacent parcels within the immediate vicinity that either met the 50-year threshold for eligibility to the NRHP or were approaching historic age (45 years or older) were surveyed in order to determine whether any individually-eligible buildings were present in order to account for both potential direct and indirect effects. The survey included the entirety of the Airport property and its immediate environs (this area is defined in the Direct and Indirect APE). For this effort, the FAA is the lead federal agency, thereby charged with conducting Section 106 of the NHPA of 1966, as amended (Section 106). The principal federal law addressing historic properties is the NHPA, as amended,⁵⁶ and its implementing regulations.⁵⁷ Section 106 of the NHPA states:

"The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license

⁵⁵ FAA. (2015 July). Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1, page 4-8.

⁵⁶ 54 USC § 300101 et seq.

⁵⁷ 36 CFR Part 800.

any undertaking, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, shall take into account the effect of the undertaking on any historic property. The head of the Federal agency shall afford the Council a reasonable opportunity to comment with regard to the undertaking."

The term "historic properties" refers to "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places."⁵⁸ The implementing regulations (36 CFR Part 800) describe the process for identifying and evaluating historic properties, for assessing the potential adverse effects of federal undertakings on historic properties, and seeking to develop measures to avoid, minimize, or mitigate adverse effects. The Section 106 process does not require the preservation of historic properties; instead, it is a procedural requirement mandating that federal agencies take into account effects to historic properties from an undertaking prior to approval.

The steps of the Section 106 process are accomplished through consultation with the SHPO, federally recognized Native American tribes, local governments, and other interested parties. The goal of consultation is to identify potentially affected historic properties, assess effects to such properties, and seek ways to avoid, minimize, or mitigate any adverse effects on such properties. The lead federal agency also must provide an opportunity for public involvement.⁵⁹ Consultation with Native American tribes regarding issues related to Section 106 and other authorities (such as NEPA and Executive Order No. 13007) must recognize the government-to-government relationship between the federal government and Native American tribes, as set forth in Executive Order 13175 *Consultation and Coordination with Indian Tribal Governments*, 65 FR 87249 (Nov. 9, 2000), and Presidential Memorandum on Tribal Consultation of November 5, 2009. This assessment has been prepared in compliance with Section 106. Guidance provided by the FAA was consulted and followed.⁶⁰

This historic resources assessment involved a review of the NRHP and its annual updates, the California Register of Historical Resources, the statewide Historical Resources Inventory database maintained by the California State Office of Historic Preservation, and the City of Burbank's inventory of historic properties to identify any previously recorded properties within or near the APE. Previous environmental review documentation prepared for other projects in the vicinity of the APE were

⁵⁸ 36 CFR Part 800.16(l)(1).

⁵⁹ 36 CFR 800.1(a).

⁶⁰ FAA. (2015, June). *Section 106: How to Assess the Effects of FAA Actions on historic Properties under Section 106 of the National Historic Preservation Act*.

also examined for any relevant information. The following tasks were performed for the assessment:

- » Conducted an intensive pedestrian survey to document the existing conditions of the property and adjacent parcels.
- » Photographed the subject property and examined other properties in the area that exhibited potential architectural and/or historical associations.
- » Conducted site-specific research on the property utilizing building permits, assessor's records, Sanborn fire insurance maps, city directories, historical photographs, California Index, Avery Index, Online Archive of California, USC Digital Collections, historical Los Angeles Times, and other published sources.
- » Reviewed historic as-built plans archived by the Authority's facilities department and conducted research at the City of Burbank Building Division.
- » Reviewed and analyzed ordinances, statutes, regulations, bulletins, and technical materials relating to federal designation assessment processes and related programs.
- » Evaluated potential historic properties based upon criteria used by the NRHP.
- » Assessed the Proposed Undertaking for its potential to affect identified historic properties and the potential to affect the continued eligibility of two structures—Hangars 1 and 2—to the NRHP.

4.8.2.2 Archaeological and Cultural Resources

A records search for the Proposed Undertaking was conducted on July 12, 2018, at the California Historical Resources Information System - South Central Coastal Information Center (CHRIS-SCCIC) housed at California State University, Fullerton. The records search included a review of all previous investigations and previously recorded archaeological resources within a 0.5-mile radius of the APE.

The NAHC was contacted on September 27, 2018, to request a search of the Sacred Lands File, which contains an inventory of sites of traditional, cultural, or religious value to the Native American community.

To supplement the CHRIS-SCCIC and NAHC records search, an archaeological resources survey was conducted on October 2, 2018, within the APE.

4.8.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve forecast aviation

demands. Future airport development projects that would be proposed to meet forecasted needs would be subject to review and approval under NEPA and is not assumed to occur under this alternative. Therefore, no impacts to historical, architectural, archaeological, or cultural resources would occur.

4.8.4 Proposed Project

This section describes the potential impacts, which include direct and indirect effects to historical, architectural, archaeological, and cultural resources due to the Proposed Undertaking.

4.8.4.1 Direct Effects

Eighteen buildings were reviewed for eligibility (all of which were located on Airport property) for inclusion in the NRHP. Of these 18, only the Terminal Building (Building 10) and the airline cargo building (Building Y) are proposed for demolition as part of the Proposed Undertaking. Both the Terminal Building and the airline cargo building have been determined by FAA as **not eligible** for inclusion in the NRHP, either individually or as a contributor to a district (see **Appendix H**). Of the other 16 buildings reviewed only two, Hangars 1 and 2, were determined by FAA to be eligible for inclusion in the NRHP. None of the 16 buildings, including Hangars 1 and 2, would be physically affected by the Proposed Undertaking. Therefore, construction of the Proposed Undertaking would not directly affect historic properties since neither of the buildings to be demolished are eligible for inclusion in the NRHP and no eligible historic district or building was identified within the Direct APE. Operation of the Airport would not change as a result of the Proposed Undertaking, nor would the conditions in the immediate vicinity of Hangars 1 or 2, as a result of the Proposed Undertaking.

The archaeological records search indicated a total of 22 previous investigations have been conducted within a 0.5-mile radius of the APE, three of which overlap the APE. No archaeological resources have been previously recorded within the APE or within a 0.5-mile radius of the APE. Additionally, the NAHC responded to the request in a letter dated October 8, 2018, that the APE was negative for known sacred lands (see **Appendix H**). No surface evidence of archaeological resources was encountered during the site survey.

It is likely that any historic-period and prehistoric archaeological resources located on or near the surface have been buried or displaced by the original construction of the Airport and by subsequent improvements. For example, previous remediation activities in the northeast quadrant included ground disturbance up to 60 feet

bgs.⁶¹ However, it is possible that the existing surface parking lots have sealed archaeological resources deeper below the surface as excavations for parking lots are typically shallow, two to three-feet below surface, and would therefore, not disturb or displace deeper archaeological resources while the asphalt pavement may have served as a barrier to preserve these resources. Because the Proposed Undertaking includes ground disturbance to depths of up to 25-feet, there is a potential to encounter archaeological resources at depths that have not been previously disturbed. The FAA, with SHPO concurrence, has addressed the potential disturbance of buried archaeological resources by developing a plan to implement should such resources be encountered during project construction.

Based on the analysis presented, the FAA determined there are no historic properties located within the Direct APE that would be affected by the Proposed Undertaking. The FAA made the following determination and finding: *No historic properties affected* by the Proposed Undertaking within the Direct APE. The SHPO concurred with the FAA's determination and finding on July 20, 2020 (see **Appendix H**).

4.8.4.2 Indirect Effects

As described in **Section 3.9.2.1**, the APE encompasses all of the above-ground properties that comprise the "view-shed" in its entirety—that is, it encompasses the entire area in which the Proposed Undertaking may visually affect above-ground structures because they share a line-of-sight with it.

The APE includes one NRHP-listed historic resource within it: Portal of the Folded Wings Shrine to Aviation (Primary #19-180686), which is located 1,690 feet south of the Direct APE at the entrance to the Pierce Brothers Valhalla Memorial Park Cemetery. The results of the archival research indicated that no other properties listed in or determined eligible for the NRHP were found within a 0.50-mile vicinity of the Direct APE. However, the FAA determined that Hangars 1 and 2 are eligible for inclusion in the NRHP under Criterion C, and Criteria Consideration B for Moved properties. The SHPO concurred with that eligibility determination under Section 106 consultation on July 20, 2020 (see **Appendix H**). These three resources were evaluated for indirect impacts. The Portal of the Folded Wings Shrine to Aviation is visibly shielded from the Direct APE by industrial buildings along the south side of Vanowen Street and has no views of the Direct APE. Hangars 1 or 2, which are the only buildings considered eligible to the NRHP within the direct APE, are airport buildings that are not affected by airport operations. Operation of the Airport would not change as a result of the Proposed Undertaking, nor would the conditions in the

⁶¹ Tetra Tech. (1993, November 19). *Subsurface Soil Investigation, Lockheed Plant B-6: Burbank, California, Volume II of IX: Area B Final Data Report*.

immediate vicinity of Hangars 1 or 2, as a result of the Proposed Undertaking. Therefore, the Proposed Undertaking would have no direct or indirect effects on historic resources located within the APE when compared to the No Action Alternative and no further evaluation of historical resources is required for compliance with Section 106.

4.8.5 Mitigation, Avoidance, or Minimization Measures

The Proposed Undertaking would have no effects on documented historic resources within the APE. The Proposed Undertaking includes ground disturbance to depths of up to 25-feet bgs and it was determined that there is a low potential to encounter archaeological resources at depths that have not been previously disturbed. As concurred with by the SHPO and as required by 36 CFR 800.13 of the regulations implementing Section 106, the FAA would require the following measures for the Proposed Undertaking in order to provide for the avoidance of impact and evaluation of unanticipated discoveries:

- » If human remains or funerary objects are encountered during the undertaking, all work shall cease within 100 feet of the find and the Los Angeles County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5;
- » If any Native American cultural resources are discovered, all work shall cease within a 60-foot buffer so that a qualified archaeologist can be retained to assess the find, and the Gabrieleno-Tongva – Kizh Nation will be contacted; and
- » If significant Native American cultural resources are discovered and avoidance cannot be ensured, a treatment plan shall be developed by a qualified archaeologist, followed by further consultation with the Gabrieleno-Tongva –Kizh Nation.

4.9 LAND USE

This section presents the land use significance thresholds, methodology, and analysis of potential impacts to land use as a result of the No Action Alternative and Proposed Project. Additionally, this section presents any mitigation measures.

4.9.1 Significance Threshold

According to FAA Order 1050.1F, there are no established significance thresholds or specific independent factors to consider for land use impacts. However, the Order does state that *"the determination that significant impacts exist in the Land Use*

*impact category is normally dependent on the significance of other impacts.*⁶² Any conflict with state and/or locally designated land uses and zoning may not individually result in a significant impact. Potential effects related to noise and noise-compatible land use, socioeconomics, environmental justice, and children's environmental health and safety risks could also result in significant land use impacts. These are discussed in **Sections 4.11** and **4.12**, respectively.

4.9.2 Methodology

The compatibility of existing and planned land uses with aviation noise impacts is described in FAA 1050.1F Desk Reference, Chapter 11, *Noise and Noise-Compatible Land Use*. In addition to the impacts of noise on land use compatibility, other FAA actions might also affect land use compatibility, such as the disruption of communities and resulting relocations, induced socioeconomic impacts, and impacts on land uses protected under Section 4(f) of the U.S. Department of Transportation Act; these are discussed in topical **Sections 4.12** and **4.6**, respectively.

The most current land use and zoning designations within the cities of Los Angeles and Burbank were obtained for the General Study Area. While considering existing and future land use plans within the General Study Area, the No Action Alternative and the Proposed Project were analyzed to determine whether they would be compatible with land use guidelines within Los Angeles and Burbank. An adverse impact or incompatible land use would occur if the No Action Alternative or the Proposed Project do not comply with current land use and zoning designations.

4.9.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve the forecasted aviation demands.

No development outside of Airport property or land acquisitions would occur as a result of the No Action Alternative. Therefore, land use impacts would not occur.

4.9.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects. The construction and operation of the Proposed Project would occur entirely on Airport property and

⁶² FAA. (2015), Order 1050.1F, Chapter 4, Page 4-8. Retrieved August 2019, from FAA: https://www.faa.gov/documentLibrary/media/Order/FAA_Order_1050_1F.pdf.

would not change existing or future land uses. The Proposed Project would be compatible with the Airport environment. The Authority assures that per 49 USC 47107(a)(10), *"the Burbank-Glendale-Pasadena Airport Authority (BGPAA), as the sponsor for Bob Hope Airport/Hollywood Burbank Airport, is hereby providing written assurance that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with normal Airport operations, including landing and takeoff of aircraft. This assurance applies to both existing and planned land uses."* (see **Appendix I**).

As described in **Section 3.10.2** and shown in **Exhibit 3.10-2**, most of the Detailed Study Area is zoned by the city of Burbank as AP Airport, Regional Industrial, and Golden State Commercial and Industrial with smaller portions zoned by the city of Los Angeles as Limited and Light Manufacturing. The Proposed Project is consistent with this zoning as well as with Measure B that was passed by Burbank voters, and aviation activities (operations and enplanements) would not change as a result of a replacement passenger terminal.⁶³ As **Section 4.11** describes, the Proposed Project would not cause a CNEL 1.5 dB change in the Airport's aviation CNEL 65+ dB noise contours. Therefore, incompatible land uses (e.g., residential land use) would not be affected. Additionally, the Proposed Project would not significantly affect other resources that could indirectly affect land use (for example, the Proposed Project would not disrupt communities or result in a physical or constructive use of Section 4(f) resources). See **Sections 4.12** and **4.6** for further details. Therefore, the Proposed Project would not change the land use in or around the General Study Area when compared to the No Action Alternative.

4.9.5 Mitigation, Avoidance, or Minimization Measures

Construction and operation of the Proposed Project is not anticipated to have an effect on land use. Therefore, no mitigation or Best Management Practices (BMPs) are proposed.

4.10 NATURAL RESOURCES AND ENERGY SUPPLY

This section presents the significance thresholds and methodology used to evaluate the potential for the No Action Alternative and the Proposed Project to affect natural resources and energy supplies. The discussion in this section will also identify the potential resource impacts of the Proposed Project as compared to the No Action Alternative and identify appropriate mitigation measures, if applicable.

⁶³ FAA. (2019). Terminal Area Forecast (TAF). Retrieved November 2019, from FAA: https://www.faa.gov/data_research/aviation/taf/

A project can deplete natural resources in a geographic region if construction requires a significant quantity of water, wood, gravel, stone, or other raw material. Furthermore, project operations may require excessive amounts of energy or exceed the capacity of energy service providers.

As described in **Section 3.11**, Airport operations require electricity, natural gas, and fuel for aircraft and ground vehicles. The Airport uses electricity and natural gas to heat and cool facilities (e.g., the terminal building and associated properties) as well as electricity to light facilities (e.g., the terminal building, the airfield, parking areas, and the Regional Intermodal Transportation Center (RITC)). Aircraft operations and ground support equipment (GSE) require fuel such as gasoline, diesel, jet fuel (Jet A), and aviation gasoline (AVGas) are used for aircraft operations.

Burbank Water and Power (BWP) and the Magnolia Power Plant in Burbank, which is operated and managed by BWP,⁶⁴ provide electrical power and natural gas, respectively, to the Airport. The Airport obtains fuels for aircraft operations and GSE through various contracted suppliers on an as-needed basis.

4.10.1 Significance Threshold

FAA Order 1050.1F provides policy and procedures related to airport actions implemented under NEPA but does not establish a significance threshold for the use of natural resources and energy supply. The Order does identify a factor to consider when evaluating the context and intensity of potential environmental impacts related to natural resources and energy supply (see Exhibit 4-1 of FAA Order 1050.1F).⁶⁵ As indicated in this exhibit, the Proposed Project may result in a significant impact if it could cause demand to exceed current or future supplies of natural resources and energy supplies.

4.10.2 Methodology

This EIS evaluates the potential effects of the Proposed Project related to the use of natural resources and energy supplies in terms of construction activity, aircraft operations, and building efficiency. Energy usage calculations are based on annual electricity consumption data for commercial building space provided by the U.S. Department of Energy.⁶⁶ In addition, the U.S. Department of Energy's *Commercial*

⁶⁴ Burbank Water and Power. (2020). Magnolia Power Plant. Retrieved April 2020, from Burbank Water and Power: https://www.burbankwaterandpower.com/images/administrative/downloads/MPP_ReadMore_02-03-2017.pdf.

⁶⁵ FAA. (2015). Order 1050.1F, *Environmental Impacts: Policies and Procedures*. July 2015.

⁶⁶ U.S. Energy Information Agency. (2012). *Commercial Buildings Energy Consumption Survey*, Consumption & Efficiency, 2012 CBECs Survey Data. Retrieved August 2019, from U.S. Energy Information Agency: <https://www.eia.gov/consumption/commercial/data/2003/index.php?view=consumption#c1a>.

Buildings Energy Consumption Survey was referenced for variances in the Proposed Project and No Action Alternative's electricity demand.⁶⁷ The following industry information related to sustainable design and sustainable practices was reviewed to determine whether mitigation measures would be necessary to reduce the potential landside development demands on natural resources and energy supplies:

- » Airport Cooperative Research Program Synthesis 10, *Airport Sustainability Practices, and*
- » Sustainable Aviation Guidance Alliance Database.

4.10.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve the forecasted aviation demands, which would increase the demand on natural resources.

4.10.3.1 Electricity

No facilities or lighting requiring electricity would be constructed as a component of the No Action Alternative. Therefore, this alternative would not increase demand for electricity. The electricity usage for the existing passenger terminal would increase as a result of the forecast growth in aircraft operations and passenger enplanements. However, the current energy suppliers could accommodate the forecast demand for aircraft operations and passengers.

4.10.3.2 Natural Gas

Under the No Action Alternative, no facilities or lighting requiring natural gas would be constructed as a component of the No Action Alternative. Therefore, this alternative would not increase demand for natural gas. The natural gas consumption for the existing passenger terminal would increase as a result of the forecast growth in aircraft operations and passenger enplanements. However, the current natural gas suppliers could accommodate the forecast demand for aircraft operations and passengers.

4.10.3.3 Fuel Consumption

Fuel demand at the Airport is determined based on several factors related to aircraft operations, including taxi time, taxi distance, and the fuel required for

⁶⁷ U.S. Energy Information Agency. (2012). *Commercial Buildings Energy Consumption Survey*, Consumption & Efficiency, 2012 CBECS Survey Data. Retrieved August 2019, from U.S. Energy Information Agency: <https://www.eia.gov/consumption/commercial/data/2003/index.php?view=consumption#c1a>.

aircraft to reach their various destinations. No new facilities would be constructed under the No Action Alternative. Fuel consumption would increase over time as a result of forecast growth in aircraft operations and passenger enplanements at the Airport. Additionally, GSE fuel requirements would grow proportionally with forecasted increases in aircraft operations. This growth is within the current capacity of the existing fuel suppliers as evidenced by past operations of the Airport and the increase in capacity of fuel availability in the region.

4.10.3.4 Natural Resources

No new facilities would be constructed under the No Action Alternative. Therefore, the No Action Alternative would not require the use of natural resources typically employed during construction and maintenance, such as asphalt, water, plastic, stone, metals, and wood, other than the materials necessary for general maintenance purposes.

4.10.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects. This section discusses the potential of the Proposed Project to exceed local energy or natural resource supplies when compared to the No Action Alternative. This section analyzes potential impacts with respect to future demand for energy and natural resources; changes in utility service demand, fuel consumption, and consumable materials for Airport operation and construction activities; and changes in demand for rare natural resources of limited supply.

4.10.4.1 Electricity

The existing passenger terminal is approximately 232,000 square feet. The proposed replacement passenger terminal would be 355,000 square feet (approximately 123,000 square feet larger than the existing passenger terminal).

The Proposed Project is estimated to increase the demand for electricity by about 501 megawatt-hours (MWh). In the fiscal year ending June 30, 2019, BWP had an annual electric supply of approximately 1.1 million MWh.⁶⁸ The increase in electricity demand as a result of the Proposed Project represents less than 1 percent of the BWP network demand. Therefore, the forecast demand would not exceed existing and future supplies within the region due to BWP's existing and

⁶⁸ Burbank Water and Power. (2019). Annual Report, Fiscal Year 2018-2019. Retrieved March 2020, from Burbank Water and Power: https://www.burbankwaterandpower.com/images/administrative/downloads/BWP_AnnualReport_FY2018-19.pdf.

future electricity-generation capacity and the Airport's numerous energy-efficiency measures to conserve electricity. In addition, the design of the proposed replacement terminal would include integrated mechanical and utility systems that incorporate modern technologies, which would comply with the standards of the American Society of Heating, Refrigerating and Air-Conditioning Engineers and Leadership in Energy and Environmental Design (LEED) and other sustainability initiatives. Therefore, the Proposed Project would not cause demand to exceed current or future supplies of the electrical supply when compared to the No Action Alternative.

4.10.4.2 Natural Gas

Until utility-scale energy storage of renewable energy sources becomes more cost-effective, BWP must supplement with natural gas, provided by the Magnolia Power Plant in Burbank.⁶⁹ An increase in natural gas consumption is expected under the Proposed Project, as the replacement passenger terminal would be approximately 123,000 square feet larger than the existing terminal. The estimated annual increase in natural gas demand under the Proposed Project would be about 756.51 million British thermal units (BTUs), which would be accommodated by current production of Magnolia Power Plant. For Fiscal Year 2018-2019, the Magnolia Power Plant delivered 6,119,818 million BTUs of natural gas energy.⁷⁰ The demand for natural gas as a result of the Proposed Project would be less than 1 percent of the natural gas delivered by the Magnolia Power Plant. Therefore, the Proposed Project would not cause demand to exceed current or future supplies of the natural gas supply when compared to the No Action Alternative.

4.10.4.3 Fuel Consumption

Construction of the Proposed Project is expected to increase demand for diesel fuel for construction vehicles. However, any temporary increase in fuel demand is expected to be minimal and would not exceed existing and future fuel supplies.

The Proposed Project would reduce the number of runway crossings for taxiing aircraft, thereby reducing idling times for aircraft, which would reduce fuel consumption for taxiing aircraft when compared to the No Action Alternative (see **Section 2.4.9**). The fuel demands under the Proposed Project would not exceed the availability of fuel in the region when compared to the No Action Alternative.

⁶⁹ City of Burbank. (2015). *Burbank Water and Power 2015 Integrated Resource Plan*. Retrieved December 2018, from City of Burbank: https://www.burbankwaterandpower.com/images/IRP/IRP_Presented_to_CityCouncil_Opt.pdf.

⁷⁰ Southern California Public Power Authority. (2019). Natural Gas Energy. Retrieved March 2020, from Southern California Public Power Authority: <http://scppa.org/page/Natural-Gas-Energy>.

4.10.4.4 Natural Resources

Construction of the Proposed Project would temporarily increase the use of natural resources at the Airport. These resources, which could include prefabricated building components, aggregate, soils, sub-base materials, and oils, are not rare or in short supply, and the quantity required for a development of this size would not place an undue strain on supplies when compared to the No Action Alternative. If appropriate, excavated soils would be used for fill material to reduce the amount of soil that would be removed from the Airport.

4.10.5 Mitigation, Avoidance, or Minimization Measures

The Proposed Project would not cause demand to exceed current or future supplies of natural resources or energy supplies. Because the Proposed Project would not exceed this consideration factor identified in FAA Order 1050.1F, no mitigation measures are required. However, the Authority would incorporate energy efficiency and sustainability measures wherever possible to further reduce energy consumption as a result of the Proposed Project. These design elements include, but are not limited to, energy-efficient lighting and equipment.

4.11 NOISE AND NOISE-COMPATIBLE LAND USE

This section presents the noise and noise-compatible land use significance thresholds, methodology, and analysis of potential impacts on noise-compatible land use as a result of the Proposed Project when compared to the No Action Alternative. It also identifies the potential corresponding resource impacts, and identifies mitigation measures, if applicable. **Appendix J** contains supplemental technical information about noise metrics, characteristics, methodology, and assumptions used to estimate aircraft noise exposure.

4.11.1 Significance Threshold

For aircraft noise, a significant noise impact would occur if the Proposed Project would increase noise by 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the Community Noise Equivalent Level⁷¹ (CNEL) 65 dB noise exposure level, or that will be exposed at or above the CNEL 65 dB level due to a CNEL 1.5 dB or greater increase, when compared to the No Action Alternative for the same timeframe. For example, an increase from CNEL 65.5 dB to 67 dB is considered a significant impact, as is an increase from CNEL 63.5 dB to 65 dB.

⁷¹ For aviation noise analyses, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities is established in terms of Day Night Average Sound Level (DNL), the FAA's primary noise metric. The CNEL may be used in lieu of DNL for FAA actions needing approval in California.

For construction equipment noise, no significance threshold has been established by the FAA.

4.11.2 Methodology

The methods used to describe existing and forecast noise conditions at the Airport rely extensively on the Aviation Environmental Design Tool (AEDT), Version 3b.⁷² The noise environment is commonly depicted in terms of lines of equal noise levels, or noise contours. These noise contours are supplemented with noise data for selected points such as noise sensitive receptors. The noise analysis in this section takes the following operational characteristics into account:

- » number of aircraft operations by equipment type;
- » day/evening/nighttime distribution by type;
- » flight tracks;
- » runway use;
- » flight profiles; and
- » typical operational procedures.

Aircraft substitutions were conducted using a list of past substitutions previously approved by the FAA Office of Environment and Energy (AEE), which can be found in **Appendix J**. As stated in **Section 1.2.3**, BUR does not currently operate at or near its maximum theoretical operational capacity. Furthermore, the Proposed Project will not increase the number or alter the type or timing of aircraft used at the Airport. As a result, the number of aircraft operations for the No Action Alternative and the Proposed Project are the same. The number, type, and time of day of aircraft operations are the parameters used in developing the noise contours for BUR. No difference exists between the No Action Alternative and the Proposed Project in terms of aircraft operations. As a result, the noise contours for both scenarios are the same.

For purposes of the noise analysis, the two analysis years are 2024 and 2029. Year 2024 represents the near-term impacts of the Proposed Project and is associated with the opening year of the replacement passenger terminal. Year 2029 represents the long-term impacts of the Proposed Project and is associated with five years after the opening of the replacement passenger terminal.

⁷² When this EIS began, AEDT Version 3b was the most current version of the model and therefore, was used for the analysis in this EIS.

For construction and demolition noise, a list of equipment that would be used during construction and demolition activities was developed. The typical noise levels associated with the equipment was identified and the attenuation associated with distance from those noise levels to the closest residential land uses was determined.

4.11.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve the forecasted aviation demands, which predict an increase in both operations and enplanements (see **Table 1.2-1**). As such, the No Action Alternative represents forecast conditions for future years 2024 and 2029 as presented in **Table 1.2-1**.

4.11.3.1 No Action Alternative (2024)

The No Action Alternative in 2024 assumes a total of 143,973 aircraft operations in the user class proportions shown in **Table 1.2-1**.

Exhibit 4.11-1 depicts the CNEL 65, 70, and 75 dB noise contours associated with the No Action Alternative in 2024. The 2024 CNEL 65 dB noise contour includes 1,067 residential properties, which is an increase of 204 residential properties over the 2018 CNEL 65 dB noise contour. This difference is due to the expected increase in operations as forecasted, which results in an expanded CNEL 65 dB noise contour. The 2024 CNEL 65 dB noise contour also includes the following five Section 4(f) properties: Hangar 1, Hangar 2, the Portal of the Folded Wings Shrine to Aviation, Larry L. Maxam Memorial Park, and Maple Street Playground. The 2024 CNEL 70 dB and 75 dB noise contours do not include any noise sensitive land uses. In aggregate, the 2024 CNEL 65 dB and greater noise contours include 1,067 residential properties and five Section 4(f) properties.⁷³

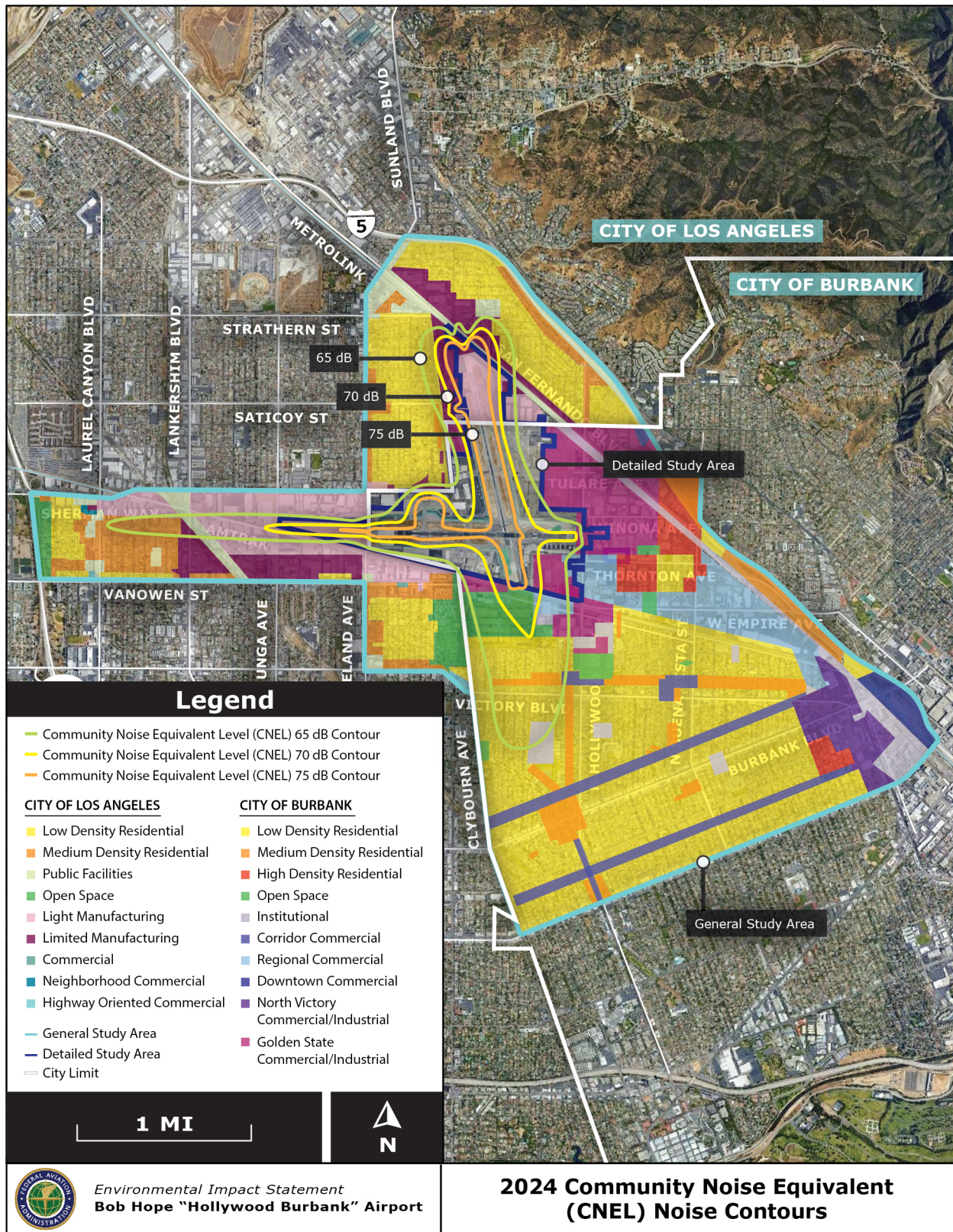
4.11.3.2 No Action Alternative (2029)

The No Action Alternative in 2029 assumes a total of 151,656 aircraft operations in the user class proportions shown in **Table 1.2-1**.

Exhibit 4.11-2 depicts the CNEL 65, 70, and 75 dB noise contours associated with the No Action Alternative in 2029. The 2029 CNEL 65 dB noise contour includes

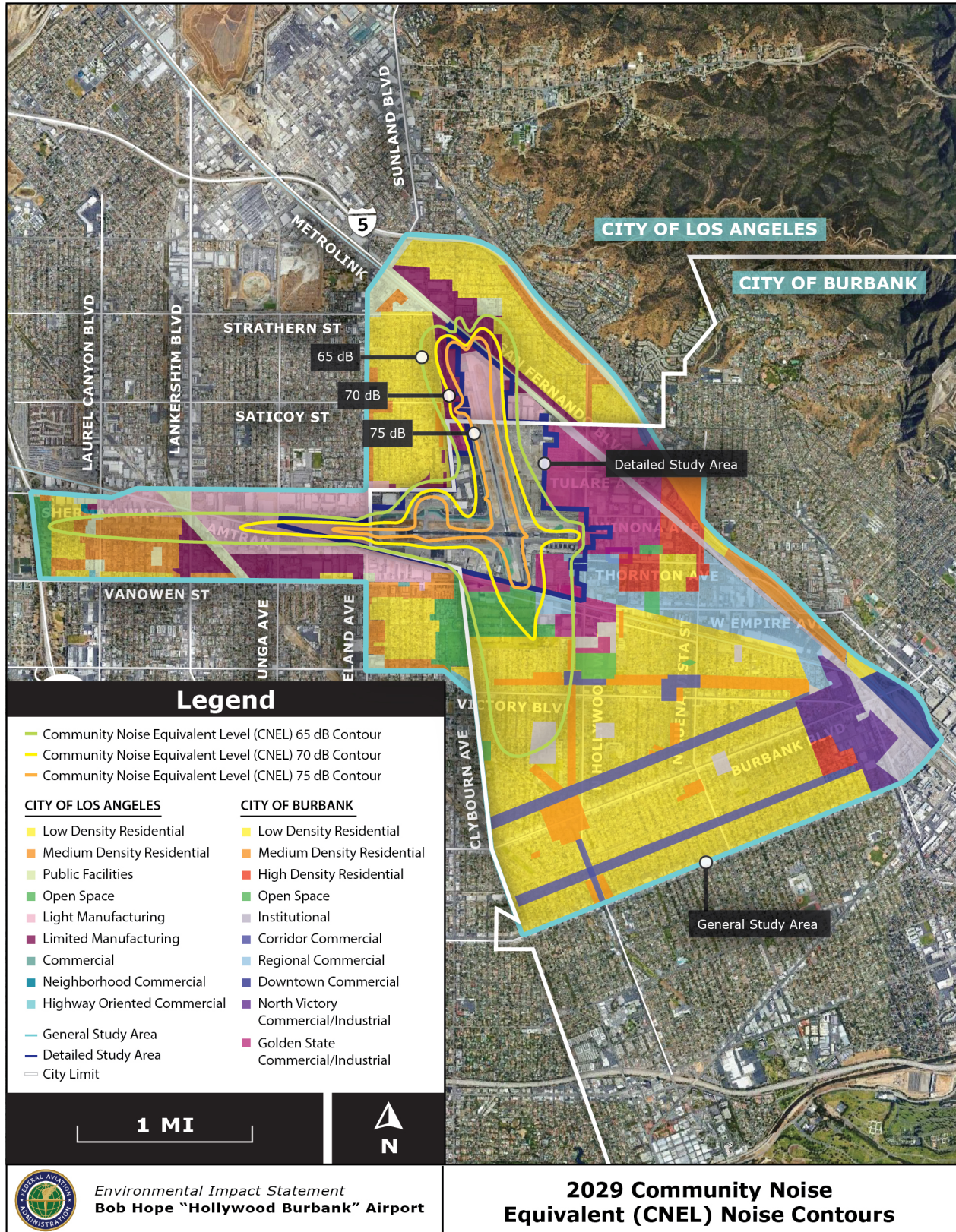
⁷³ Two daycare or childcare facilities are known to be within the 65 dB noise contour. Both of these facilities are within residential land uses already identified as a noise-sensitive land use and neither is a school or an educational facility.

EXHIBIT 4.11-1
2024 NO ACTION ALTERNATIVE NOISE CONTOURS



Sources: AEDT, 2019; RS&H, 2020.

EXHIBIT 4.11-2
2029 NO ACTION ALTERNATIVE NOISE CONTOURS



Sources: AEDT, 2019; RS&H, 2020.

1,159 residential properties, which is an increase in 296 residential properties over the 2018 CNEL 65 dB noise contour. This difference is due to the expected increase in operations as forecasted, which results in an expanded CNEL 65 dB noise contour.⁷⁴ The 2029 CNEL 65 dB noise contour also includes the following five Section 4(f) properties: Hangar 1, Hangar 2, the Portal of the Folded Wings Shrine to Aviation, Larry L. Maxam Memorial Park, and Maple Street Playground. The 2029 CNEL 70 dB and 75 dB noise contours do not include any noise sensitive land uses. In aggregate, the 2029 CNEL 65 dB and greater noise contour includes 1,159 residential properties and five Section 4(f) properties.⁷⁵

4.11.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects. The does not result in changes to the Airport's runway configuration, aircraft fleet mix, number of operations, timing of operations, air traffic procedures, or airspace.⁷⁶ As such, operational noise sources associated with the Proposed Project and No Action Alternative conditions for the year of project implementation (2024), and implementation year plus five years (2029) are identical.

4.11.4.1 Proposed Project (2024)

When compared to the No Action Alternative, the Proposed Project would not result in any change in noise contours in 2024. The Proposed Project conditions in 2024 assume a total of 143,973 aircraft operations in the user class proportions shown in **Table 1.2-1. Exhibit 4.11-1** depicts the CNEL 65, 70, and 75 dB noise contours associated with the Proposed Project conditions in 2024, which are identical to the No Action Alternative in 2024, meaning the number and location of noise sensitive land uses within the CNEL 65 dB noise contour would be the same as that for the No Action Alternative. As with the No Action Alternative, the Proposed Project would have no noise sensitive land uses in either the CNEL 70 dB noise contour or the CNEL 75 dB and greater noise contour. In aggregate, the CNEL 65 dB and greater noise contour includes 1,067 residential properties and five Section 4(f) properties for the Proposed Project in 2024, which is the same as that for the No

⁷⁴ Preparation of this EIS began in December 2018 and the forecasts used in this EIS are based on those that existed at that time. Thus, the forecast for 2020 was prepared prior to the onset of the Pandemic.

⁷⁵ Two daycare or childcare facilities are known to be within the 65 dB noise contour. Both of these facilities are within residential land uses already identified as a noise-sensitive land use and neither is a school or an educational facility.

⁷⁶ The FAA ATO's proposal regarding amendments to airspace departure procedures is an unrelated project subject to a separate environmental review. The proposals have independent utility and are separate and distinct projects. The proposed replacement passenger terminal building project and ATO's proposed airspace departure procedure amendments are **not** connected actions as defined under 40 CFR § 1508.25. Thus, detailed analysis of ATO's proposed departure procedures amendments is beyond the scope of this EIS.

Action Alternative.⁷⁷ Because there would not be a CNEL 1.5 dB or more increase in noise levels for any noise sensitive site in the CNEL 65+ dB noise contour, there would be no significant noise impact from operations as a result of the Proposed Project when compared to the No Action Alternative.

4.11.4.2 Proposed Project (2029)

When compared to the No Action Alternative, the Proposed Project would not result in any change in noise contours in 2029. The Proposed Project conditions in 2029 assume a total of 151,656 aircraft operations in the user class proportions shown in **Table 1.2-1. Exhibit 4.11-2** depicts the CNEL 65, 70, and 75 dB noise contours associated with the Proposed Project conditions in 2029, which are identical to the No Action Alternative in 2029, meaning the number and location of noise sensitive land uses within the CNEL 65 dB noise contour would be the same as that for the No Action Alternative. As with the No Action Alternative, the Proposed Project would have no residential properties or Section 4(f) properties in either the CNEL 70 dB noise contour or the CNEL 75 dB and greater noise contour. In aggregate, the CNEL 65 dB and greater noise contour includes 1,159 residential properties and five Section 4(f) properties for the Proposed Project in 2029, which is the same as that for the No Action Alternative.⁷⁸ Since there would not be a CNEL 1.5 dB or more increase for any noise sensitive site in the CNEL 65+ dB noise contour, there would be no significant noise impact from operations as a result of the Proposed Project when compared to the No Action Alternative .

4.11.4.3 Construction Noise

Construction of the Proposed Project would result in varying levels of noise generation subject to change based on the construction intensity and distance to a given receptor. **Table 4.11-1** presents equipment types that would be used to implement the Proposed Project and their respective noise levels at varying distances.

The closest noise sensitive land use, a residential property, to the northeast quadrant construction site is about 930 feet to the northeast, on the other side of San Fernando Boulevard. The closest noise sensitive land use, a residential property, to the construction and demolition activities that would occur in the southeast quadrant is about 1,400 feet to the east. For both of these noise

⁷⁷ Two daycare or childcare facilities are known to be within the 65 dB noise contour. Both of these facilities are within residential land uses already identified as a noise-sensitive land use and neither is a school or an educational facility.

⁷⁸ Two daycare or childcare facilities are known to be within the 65 dB noise contour. Both of these facilities are within residential land uses already identified as a noise-sensitive land use and neither is a school or an educational facility.

sensitive land uses, many other land uses and other noise sources would be between the areas where construction and demolition would occur and these noise sensitive land uses. These properties also are within the CNEL 70 dB noise contour associated with the I-5 freeway.⁷⁹ As shown in **Table 4.11-1**, the noise from

TABLE 4.11-1
TYPICAL CONSTRUCTION NOISE LEVELS

Construction Equipment	Noise Level (dB, Leq at 50') ^{/a/}	Noise Level (dB, Leq at 75') ^{/b/}	Noise Level (dB, Leq at 100') ^{/b/}	Noise Level (dB, Leq at 150') ^{/b/}	Noise Level (dB, Leq at 450') ^{/b/}	Noise Level (dB, Leq at 900') ^{/b/}	Noise Level (dB, Leq at 1,250') ^{/b/}
Jackhammer	88	85	83	79	70	64	62
Dump Truck	87	84	82	78	69	63	60
Scraper	87	84	82	78	69	63	60
Dozer	86	83	81	77	68	62	59
Grader	84	81	79	75	66	60	57
Backhoe	84	81	79	75	66	60	57
Compressor	80	77	75	71	62	56	53
Loader	78	75	73	69	60	54	51
Generator	77	74	72	68	59	53	50

Notes:

/a/ - Source sound levels are from Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide.

/b/ - Noise attenuation was calculated using the inverse square law for sound. The inverse square law demonstrates the inversely proportional relationship between source sound pressure and distance from sound source (-6 dB per doubling of distance).

Source: FHWA, 2006; RS&H, 2021.

construction and demolition equipment would attenuate to less than CNEL 70 dB at the closest noise sensitive land use to the northeast quadrant as well as the closest noise sensitive land use to the southeast quadrant. In addition, construction and demolition noise would be temporary and would be intermittent depending on the type of construction equipment needed. Therefore, given the distance from the construction and demolition activities at the Airport and the existing background noise associated with I-5, noise associated with construction and demolition

⁷⁹ City of Burbank. (2013, February). *Burbank2035 General Plan*. Retrieved September 2019, from City of Burbank: <https://www.burbankca.gov/home/showdocument?id=23448>.

activities of the Proposed Project is anticipated to be minimal for the closest noise sensitive land uses and would not be a not significant impact.

4.11.5 Mitigation, Avoidance, or Minimization Measures

The Proposed Project would not result in an increase in operational noise exposure on the surrounding community and construction and demolition associated with the Proposed Project would be temporary and have a minimal effect on the closest noise-sensitive land uses. The Proposed Project would not result in significant noise impacts. Therefore, no mitigation is required.

4.12 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

This section presents the significance thresholds and methodology used for analysis of socioeconomics, environmental justice, and children's environmental health and safety risks within the General Study Area. This section analyzes the potential impacts to these resources as a result of the No Action Alternative and Proposed Project.

4.12.1 Socioeconomics

4.12.1.1 Significance Threshold

There is no formal significance threshold provided by FAA Order 1050.1F regarding socioeconomic impacts. However, the consequences of the Proposed Project can be evaluated using the following factors, if the action would:

- » "Induce substantial economic growth in an area, either directly or indirectly (e.g., through establishing project in an undeveloped area)";
- » "Disrupt or divide the physical arrangement of an established community";
- » "Cause extensive relocation when sufficient replacement housing is unavailable";
- » "Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities";
- » "Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities"; or
- » "Produce a substantial change in the community tax base."

4.12.1.2 Methodology

This section examines consequences of the No Action Alternative and the Proposed Project, including potential to:

- » "move people from their homes";
- » "move businesses";
- » "divide or disrupt established communities";
- » "disrupt orderly, planned development";
- » "disrupt local traffic patterns and substantially reduce the levels of service of roads"; or
- » "create a notable change in employment"

For purposes of the surface traffic analysis, the two analysis years are 2024 and 2029. Year 2024 represents the near-term impacts of the Proposed Project and is associated with the opening year of the replacement passenger terminal. Year 2029 represents the long-term impacts of the Proposed Project and is associated with five years after the opening of the replacement passenger terminal.

4.12.1.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve forecast aviation demands.

Population and Housing

Under the No Action Alternative, no development would occur. Therefore, no impacts to population or housing would occur.

Employment

Under the No Action Alternative, no development would occur. No temporary or permanent employment opportunities would be created as a result of this alternative. However, employment would fluctuate under the No Action Alternative because people are hired and released for various reasons that are not associated with any development action. Therefore, employment within the General Study Area would not be affected by the No Action Alternative.

Economic Activity and Income

Under the No Action Alternative, no development would occur. Therefore, economic activity and income in the General Study Area would not be affected.

Surface Transportation

As shown in **Appendix K**, which provides a detailed surface traffic analysis, the No Action Alternative would result in the following four intersections operating at Level of Service (LOS) E or F during one or more peak hours:

- » I-5 Southbound Ramps and Empire Avenue (morning peak hour)
- » I-5 Northbound Ramps and Empire Avenue (morning peak hour)
- » Hollywood Way and I-5 Southbound Ramps (morning peak hour)
- » I-5 Southbound Ramps and San Fernando Boulevard (morning peak hour, evening peak hour, and Friday evening peak hour)

All four freeway mainline segments would operate at LOS D or worse in one or both directions during one or more peak hours. In addition, six of the eight freeway off-ramps in the Airport vicinity would have queues that exceed the length of one or more of the lanes approaching the intersection at the end of the off-ramp. However, only one of these off-ramps would extend onto the freeway mainline under any peak hour (I-5 northbound off-ramp to Empire Avenue).

The No Action Alternative would not change any shuttle service to remote parking lots and the Metrolink Stations on North San Fernando Boulevard and West Empire Avenue.

4.12.1.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects.

Population and Housing

The Proposed Project would not relocate residents or housing units within the General Study Area. The Proposed Project would create a temporary increase in construction employment. As stated in **Section 3.12.1**, there are 1,057 vacant housing units (3.3 percent) in the General Study Area and 3,903 vacant housing units (3.8 percent) in the City of Burbank. Therefore, the demand for housing posed by additional temporary construction employment could be accommodated by existing available or projected housing units⁸⁰ in the General Study Area and the

⁸⁰ City of Burbank. (2013, February). *Burbank2035 General Plan*. Retrieved November 2018, from City of Burbank: <https://www.burbankca.gov/home/showdocument?id=23448>.

City of Burbank. However, it is unlikely that construction workers would need to relocate as there is sufficient construction employment in Los Angeles and Burbank. Considering the low likelihood that temporary workers would need to relocate, the increase in temporary employment associated with the Proposed Project is not expected to impact population and housing resources.

An increase in permanent employment, due to the additional concessionaires proposed in the replacement passenger terminal, would occur with the Proposed Project. However, this increase would be minimal. Permanent employment would increase by less than five percent, or about 135 permanent employees, which is less than 0.2 percent of the total Burbank employment. The employment increase would be minor and should be accommodated within the existing housing market. Therefore, population and housing resources in the General Study Area is not expected to be affected when compared to the No Action Alternative.

Employment

The Proposed Project would positively affect employment by creating a temporary demand for construction employment. As shown in **Table 3.12-4**, there is a 7.7 percent and 7.5 percent unemployment rate in the General Study Area and Burbank, respectively. Temporary employment associated with construction of the Proposed Project is needed from the start of construction in 2021 (if approved) through 2026, and would peak with 480 construction employees, which is less than 0.5 percent of the total employment in Burbank. Therefore, the amount of construction workers in the General Study Area and Burbank is great enough to accommodate this need.

The Airport would also experience an increase in permanent employment of less than five percent, or about 135 employees, which is less than 0.2 percent of total Burbank employment. Population growth would not result from either temporary or permanent employment increases, as they are not significant enough to generate growth. Therefore, employment in the General Study Area is not expected to be affected when compared to the No Action Alternative.

Economic Activity and Income

While the Proposed Project may result in a slight increase in employment opportunities, it would not cause notable fluctuations in economic activity or income. Construction would be temporary and would not relocate residences or business, disrupt communities, or cause a change in tax base. There would be slight increases in economic activity or income from the temporary and full-time jobs created but the size of increase would be minor compared to the ongoing economic activity within this area. Therefore, while beneficial impacts to the

economic situation in the area would be minor, economic activity or income in the General Study Area is not expected to be affected when compared to the No Action Alternative.

Surface Transportation

During construction of the replacement passenger terminal building and ancillary facilities, construction vehicles would access the Airport using established routes designated by the cities of Burbank and Los Angeles. The Authority has agreed to prepare a construction traffic management plan regarding the use of these specific streets in the Airport vicinity. Parking of construction vehicles and construction worker vehicles would be accommodated on Airport property.

The Proposed Project would change the primary access point to the terminal from the Hollywood Way / Airport Drive / Thornton Avenue intersection to the Hollywood Way / Winona Avenue intersection (see **Exhibit 1.4-1**). The Proposed Project would add a fourth eastbound lane approaching the Hollywood Way / Winona Avenue intersection and would add a separate left-turn pocket on the eastbound approach to the San Fernando Road / Cohasset Street intersection.

When compared to the No Action Alternative, a change in traffic volumes at intersections in the Airport vicinity would occur as a result of the Proposed Project (see **Appendix K**). Two intersections within the City of Burbank (Hollywood Way / Winona Avenue intersection and San Fernando Boulevard / Naomi Street and Winona Avenue intersection) would experience a decrease in the LOS from LOS B to LOS D as a result of the Proposed Project. The FAA does not have significance thresholds for surface traffic.⁸¹ For the two intersections with a LOS of E or F under the No Action Alternative, the LOS at these intersections would not change but the Proposed Project would result in a decrease in delay at each of these intersections, which would slightly improve the wait time at the intersection. As with the No Action Alternative, all four freeway mainline segments would operate at LOS D or worse in one or both directions during one or more peak hours under the Proposed Project. In addition, the Proposed Project would add a maximum of 16 Friday evening peak hour trips in the southbound direction of I-5 between Hollywood Way and Buena Vista Street compared to the No Action Alternative. These changes in traffic volumes would not disrupt local traffic patterns and would not, with the exception of the two intersections listed above, decrease the LOS on streets and freeways in the Airport vicinity. In addition, the Proposed Project would result in an increase in surface traffic on Hollywood Way between Thornton Avenue and Winona

⁸¹ LOS D is considered acceptable according to the City of Burbank. See City of Burbank. (2013, February). *Burbank2035 General Plan*. Retrieved May 2020, from City of Burbank: <https://www.burbankca.gov/home/showdocument?id=23448>.

Avenue. The increase in surface traffic would not result in any surface traffic noise impacts because none of the land uses along this segment of Hollywood Way are considered to be noise sensitive.

For freeway off-ramps, the Proposed Project, when compared to the No Action Alternative, would result in a reduction in peak hour traffic on the I-5 northbound off-ramp to Empire Avenue by 8 vehicles and an increase in peak hour traffic on the I-5 northbound off-ramp to Hollywood Way by 14 vehicles. These changes in traffic volumes on freeway off-ramps would have a minimal effect on queue lengths and would not disrupt local traffic patterns.

Under the Proposed Project, the number of vehicles using the at-grade rail crossings near the Airport would be the same as that for the No Action Alternative.

The Proposed Project would provide shuttle service between the replacement passenger terminal and the southeast quadrant, which would provide access to the remote parking lots, the RITC, and the Metrolink Station on West Empire Avenue. In addition, the Authority has committed to provide an air carrier passenger shuttle between the replacement passenger terminal and the Metrolink Station on North San Fernando Boulevard for each arriving and departing train. Therefore, the Proposed Project is not expected to affect the use of public transportation to and from the Airport.

4.12.2 Environmental Justice

4.12.2.1 Significance Threshold

FAA Order 1050.1F provides guidance for the preparation of environmental justice analysis in support of an EIS. Although the FAA does not provide a significance threshold for environmental justice, factors that indicate a significant impact may occur is if the action would have the potential to lead to a disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands due to:

- » Significant impacts in other environmental impact categories; or
- » Impacts on the physical or natural environment that affect an environmental justice population in a way that the FAA determines are unique to the environmental justice population and significant to that population.

Disproportionately high and adverse human health or environmental effect on minority and low-income populations means an adverse effect that:

1. Is predominately borne by a minority population and/or a low-income population; or
2. Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or non-low-income population.

4.12.2.2 Methodology

Based on a review of the direct and indirect effects and the population characteristics of the area around the Airport, the resource categories were analyzed to determine if environmental justice populations would endure a disproportionately high and adverse human health and environmental effect of significant impacts. For purposes of assessing potential environmental justice impacts related to significant impacts, the following criteria were used to identify census block groups where minority and low-income population will be counted⁸²:

- » Census tracts that have a population of 50 percent or more exceeding the poverty guideline
- » Census tracts that have a population of 50 percent or more exceeding the minority guideline

4.12.2.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve forecast aviation demands.

Under the No Action Alternative, no development would occur. Two census tracts (Census Tracts 1232.03 and 1232.1) in the General Study Area with minority populations would be in the CNEL 65 dB noise contour for the 2024 and 2029 No Action Alternative. Therefore, no effects to environmental justice populations within the General Study Area would occur.

4.12.2.4 Proposed Project

There are two census tracts within the General Study Area (Census Tract 1232.03 and 1232.04) that have a higher percentage of minority population than Los Angeles County. These census tracts have a 53.8 percent and 52.8 percent minority population, respectively. Census tracts 1232.03 and 1232.04 are located

⁸² U.S. EPA. (2016 June). *Technical Guidance for Assessing Environmental Justice in Regulatory Analysis*.

within the CNEL 65 dB noise contour for the 2024 and 2029 Proposed Project. However, as discussed in **Section 4.11**, the 2024 and 2029 Proposed Project noise contours are the same as the 2024 and 2029 No Action Alternative noise contours. Thus, there would be no disproportionate noise impacts on minority populations caused by the Proposed Project. In addition, there are no census tracts with a low-income population greater than 50 percent within the General Study Area, therefore, there are similarly no impacts that would disproportionately affect a low-income population in a unique or significant manner. Likewise, the Proposed Project would not result in significant impacts in the other environmental impact categories evaluated in this EIS nor do the environmental justice populations use resources specifically affected by the Proposed Project. Therefore, disproportionately high and adverse effects to environmental justice populations within the General Study Area are not expected to occur as a result of the Proposed Project Alternative when compared to the No Action Alternative.

4.12.3 Children's Environmental Health and Safety Risks

4.12.3.1 Significance Threshold

There is no formal significance threshold provided by FAA Order 1050.1F regarding children's environmental health and safety risks. However, the consequences of the Proposed Project can be evaluated based on the potential creation of disproportionate environmental risks to children.

4.12.3.2 Methodology

This section examines consequences of the No Action Alternative and the Proposed Project, including potential to generate disproportionate environmental risks to the health or safety of children.

4.12.3.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve forecast aviation demands.

Under the No Action Alternative, no development would occur. Therefore, children's health and safety within the General Study Area would not be affected.

4.12.3.4 Proposed Project

The Proposed Project would not result in the relocation, acquisition, or alteration of schools, residences, daycares, parks, or any other establishments associated with

children or childcare. Construction for the Proposed Project would be temporary and short in duration, and would observe regulations regarding use, transportation, and disposal of hazardous waste and materials. Providencia Elementary School is located about 2,000 feet southeast of the Airport's southeast quadrant where the existing passenger terminal would be demolished. As shown in **Table 4.11-1**, the noise level (dB, Leq) for construction equipment at 1,250 feet would be between 50 and 60 dB. Therefore, construction noise at the school's location would not affect children or disrupt learning activities because it would be at or below 60 dB, which is considered compatible with education land uses (see **Table 3.11-1**).

There are nine schools located within the General Study Area, none of which are located within the CNEL 65 dB noise contour. Two daycares and childcare facilities and two parks (Larry L. Maxam Memorial Park and Maple Street Playground) are located within the CNEL 65 dB noise contour.⁸³ However, the CNEL 65 dB noise contour does not change as a result of the Proposed Project. Additionally, as stated in **Section 4.3**, there would be no significant air quality impacts resulting from the Proposed Project. There are no other significant impacts that would disproportionately affect children's health or safety. Therefore, the Proposed Project would not adversely affect children's health and safety within the General Study Area when compared to the No Action Alternative.

4.12.4 Mitigation, Avoidance, or Minimization Measures

The Proposed Project would not result in significant impacts to socioeconomics, environmental justice, or children's health and safety. No mitigation measures are proposed.

4.13 VISUAL EFFECTS

This section presents the significance thresholds, methodology used for the visual effects analysis, and the analysis of potential impacts on visual resources as a result of the No Action Alternative and Proposed Project. Additionally, this section presents any mitigation measures, if applicable.

⁸³ Two daycare or childcare facilities are known to be within the 65 dB noise contour. Both of these facilities are within residential land uses already identified as a noise-sensitive land use and neither is a school or an educational facility.

4.13.1 Light Emissions

4.13.1.1 Significance Threshold

FAA Order 1050.1F does not provide a formal significance threshold for light emissions or visual effects, and there are no federal requirements or special purpose laws regarding light emissions or visual effects.

While the FAA Order 1050.1F does not provide a formal significance threshold for light emissions it does provide the following factors to consider in a significance determination:

- » "Create annoyance or interfere with normal activities from light emissions"
- » "Affect the visual character of the area due to the light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources"

4.13.1.2 Methodology

For this analysis, light emissions from the Airport were considered a concern if the light emissions disturbed or reduced the aesthetic value of residences, businesses, or other light-sensitive resources in the General Study Area.

4.13.1.3 No Action Alternative

Under the No Action Alternative, the Authority would not construct or operate the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve the forecast aviation demands using the existing passenger terminal.

Under the No Action Alternative, no development would occur, and no additional lighting would be added. Light emissions would be the same or similar to existing conditions at the Airport. Therefore, no light-sensitive resources would be affected.

4.13.1.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects.

The Proposed Project includes construction of a two-story replacement passenger terminal, multistory parking structure, and other associated facilities typical of structures at the Airport in the northeast quadrant of the property. After construction of the new terminal, the existing passenger terminal and the existing public parking structure in the southeast quadrant would be removed and Taxiways

A and C would be extended into this area. Taxiways A and C would require installation of additional taxiway edge lighting. Construction activities would not cause light emissions impacts because construction would not occur during the nighttime.

The replacement passenger terminal would be 35 percent larger than the existing passenger terminal and have more lighting and light emissions. Additional facilities, such as parking and ancillary structures, would require lighting. The existing terminal would be replaced with new taxiways and new terminal access roadways, which would require lighting as well. However, lighting proposed under this alternative would not generate light emissions uncharacteristic of the current Airport, airfield, and associated facilities. Lighting for taxiways, roadways, parking structures, walkways, and the replacement terminal would be directional, only creating light emissions that are necessary for safety and security.

The General Study Area is characterized by numerous sources of lighting in and along streets, highways, parking lots, walkways, and buildings. The relocation of lighting associated with the Proposed Project would result in light emissions similar to the existing lighting at the Airport, and specifically, the replacement passenger terminal and associated facilities would generate similar light emissions as under current conditions; such emissions are common in heavily populated urbanized areas. The new or relocated lighting would not be substantially different from current light emissions and would not cause any new annoyance or disrupt community activities in the General Study Area. The Authority would follow all applicable regulations regarding light emissions, including those of the City of Burbank Zoning Ordinance⁸⁴ and the FAA for airport lighting, to ensure that the relocated and additional lighting would not result in any safety hazards. Therefore, light emissions from the Proposed Project would not be significant as they are not expected to create annoyance or interfere with normal activities when compared to the No Action Alternative.

4.13.2 Visual Resources and Visual Character

4.13.2.1 Significance Threshold

FAA Order 1050.1F does not provide a formal significance threshold for visual resources and visual character. However, the consequences of the No Action Alternative and the Proposed Project can be evaluated based on factors to consider identified in the Order. These factors include the potential to:

⁸⁴ City of Burbank. (2019). The Burbank Municipal Code. Retrieved December 2019, from City of Burbank: <https://www.codepublishing.com/CA/Burbank/?Burbank10/Burbank1001.html%23mainContent>.

- » "Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources"
- » "Contrast with the visual resources and/or visual character in the study area"
- » "Block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations"

4.13.2.2 Methodology

For this analysis, visual resources and visual character effects were assessed based on the potential of the No Action Alternative and Proposed Project to negatively alter the viewshed of the General Study Area.

4.13.2.3 No Action Alternative

Under the No Action Alternative, the Authority would not construct or operate the proposed replacement passenger terminal or any ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and serve the forecast aviation demands using the existing passenger terminal.

Therefore, neither the visual character nor the visual resources of the General Study Area would be affected.

4.13.2.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects. Construction would be visible in the Airport vicinity from public roadways, and associated construction equipment would be present and visible during the construction period. However, any potential construction impacts would be temporary and similar to other construction projects in the area, lasting only as long as the construction period. Therefore, visual resources and visual character would not be permanently affected.

The northeast quadrant of the Airport currently includes the Airport Traffic Control Tower, surface automobile parking lots, and undeveloped Airport property. There are currently two-story and three-story buildings near the northeast quadrant, including the Electrosonic building and the Hub Television Network building, as well as elevated roadways in the area along Hollywood Way and San Fernando Boulevard. Although the Proposed Project would alter views across the northeast quadrant from existing conditions, those views would be consistent with the visual aesthetic associated with the Airport and would not contrast with the visual resources and/or visual character in the Detailed Study Area. Further, existing buildings and other structures in the area currently obstruct views of the Verdugo

Mountains to the northeast and the Santa Monica Mountains to the southeast of the Airport, as well as parks and open spaces in the General Study Area. Therefore, the Proposed Project is not expected to contrast, block or obstruct, or affect the aesthetic value of visual resources when compared to the No Action Alternative.

The Proposed Project would demolish and remove the existing passenger terminal and public parking structure in the southeast quadrant; Taxiways A and C would be extended into this area. This visual change would be consistent with the visual character of an airport. Therefore, the demolition of existing facilities and the taxiway extensions is not expected to contrast, block or obstruct, or affect the aesthetic value of visual resources when compared to the No Action Alternative.

4.13.3 Mitigation, Avoidance, or Minimization Measures

The Proposed Project would not result in any significant light emissions impacts or significant degradation of visual resources or visual character. No mitigation measures are proposed.

4.14 WATER RESOURCES

This section presents the analysis of potential impacts to water resources including floodplains, surface waters, and groundwater as a result of the No Action Alternative and Proposed Project. There are no wetlands or wild and scenic rivers in or around the Detailed Study Area. Therefore, those resources are not further discussed in this section.

4.14.1 Floodplains

4.14.1.1 Significance Threshold

According to FAA Order 1050.1F, a significant impact to a floodplain would occur if “the action would cause notable adverse impacts on natural and beneficial floodplain values.”

4.14.1.2 Methodology

The most recent floodplain delineations were gathered from the Federal Emergency Management Agency (FEMA) and compared with the Proposed Project’s perimeter of impacts to determine what actions would occur within the 100-year floodplain and what impacts these actions would have.

4.14.1.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and associated facilities. The Authority would continue to operate the Airport and serve the forecast aviation demands. The No Action Alternative would not involve any construction and there would be no change to the existing floodplain.

4.14.1.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects, which includes demolishing the existing terminal building and its associated parking facilities, extending the taxiways and realigning the access road around the Airport.

The only portion of the Detailed Study Area that lies within the 100- and 500-year floodplains is a small area in the southeast quadrant and a portion of the southwest quadrant (see **Exhibit 3.14-1**). However, there is no proposed development that would affect either the 100-year or 500-year floodplains in these areas. Therefore, no impacts to the floodplains would occur as a result of implementing the Proposed Project.

4.14.2 Surface Waters

4.14.2.1 Significance Threshold

According to FAA Order 1050.1F, a significant impact to surface waters would occur if the action would⁸⁵:

- » "Exceed water quality standards established by Federal, state, local, and tribal regulatory agencies; or
- » Contaminate public drinking water supply such that public health may be adversely affected."

The order also lists factors to consider that may result in a significant impact. The factors⁸⁶ are if the project would:

- » Adversely affect natural and beneficial water resource values to a degree that substantially diminishes or destroys such values;

⁸⁵ FAA. (2015 July). Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1, page 4-12.

⁸⁶ FAA. (2015 July). Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1, page 4-12.

- » Adversely affect surface waters such that the beneficial uses and values of such waters are appreciably diminished or can no longer be maintained and such impairment cannot be avoided or satisfactorily mitigated; or
- » Present difficulties based on water quality impacts when obtaining a permit or authorization.

4.14.2.2 Methodology

Hydrologic analysis considered the changes in peak flows due to changes in pre-development and post-development site conditions and also investigated water quality and mitigation requirements associated with the implementation of the Proposed Project. The Modified Rational Method was used to determine the peak flows and stormwater water quality requirements.

4.14.2.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and associated facilities. The Authority would continue to operate the Airport, maintain the Airport, and serve the forecast aviation demands.

No site development would occur in the No Action Alternative. Therefore, there would be no change in impacts to surface water.

4.14.2.4 Proposed Project

Construction of the Proposed Project would involve the use of heavy equipment and construction-related chemicals such as fuels, oils, grease, solvents, and paints, which would be stored in limited quantities on site. In the absence of proper controls, potential indirect impacts could result from accidental spills or inappropriate disposal of potentially harmful construction materials that could pollute surface waters. However, construction equipment would be refueled in designated construction staging areas away from drainages that lead to surface waters and in areas with minimal pervious surfaces. Additionally, the potential for a spill or release of construction-related chemicals to affect surface waters would generally be limited because of the localized, short-term nature of any release and the fact that personnel are trained and equipped to respond by keeping any spill or release from reaching surface water through best management practices (BMPs) and control requirements in the National Pollutant Discharge Elimination System (NPDES) permit, Stormwater Pollution Prevention Plan (SWPPP), and Spill Prevention, Control, and Countermeasure (SPCC) Plan. BMPs could include, but are not limited to, the use of water bars, silt fences, staked straw bales, and avoidance of water bodies during construction.

The SPCC plan details how oil would be stored onsite and procedures for control and cleanup of any spills that may occur. Additionally, the SPCC plan has requirements for appropriate secondary containment and/or diversionary structures, security measures, inspections, record keeping and employee training. Furthermore, the NPDES permit and SWPPP also contain measures for handling these types of materials and action protocols to implement in the event of a spill or release.

In addition, the Authority would prepare a site-specific health and safety plan for the Proposed Project that would include the protocol for appropriately handling an accidental on-site release in compliance with OSHA and Cal-OSHA regulations. A copy of the health and safety plan would be retained for on-site compliance. Compliance with all applicable federal, state, and local requirements concerning the handling, storage, and disposal of hazardous materials would reduce the potential for a release of contaminants into surface waters. These measures would help ensure that the Proposed Project would not violate waste discharge requirements, degrade water quality to levels below established standards, or contaminate public drinking water supply such that public health is adversely affected. Therefore, construction of the Proposed Project is not expected to result in impacts to surface water quality as a result of accidental spills or releases.

Construction of the Proposed Project would also involve soil disturbing activity, which could, in the absence of proper controls, pollute surface waters with sediment. To meet requirements set forth by the NPDES Construction General Permit, the Proposed Project would implement erosion and sediment control practices during construction. Additionally, a SWPPP would be prepared to outline requirements and BMPs that would help prevent construction related pollutants from discharging offsite. The SWPPP would address the capture, retention, and control of sediment in disturbed areas of construction. BMPs may include perimeter controls such as silt fencing, storm drain inlet protection, runoff controls, entrance and exit controls, sediment basins, and temporary soil stabilization. By incorporating these measures during construction, the Proposed Project would not cause significant adverse impacts to surface waters by exceeding water quality standards established by federal, state, local, and tribal regulatory agencies or contaminating public drinking water supply such that public health may be adversely affected.

Construction activities could potentially uncover previously contaminated soils as discussed in **Section 4.7**. However, adherence to a Soil Management Plan (SMP) as discussed below, which outlines what to do if contaminated soil is encountered, would be protective of water quality by implementing isolation management measures of any suspected contamination. Therefore, construction of the Proposed

Project would not result in impacts to surface water quality as a result of excavation of contaminated soils.

Potentially adverse impacts to surface waters could occur if operation of the Proposed Project would result in exceedances of water quality standards, contamination of the public drinking water supply, or affect water resources values such that they are diminished or can no longer be maintained.

The Airport is already highly developed, with all contributing areas analyzed in the pre-development conditions having between 95 percent to 100 percent impervious cover. The Proposed Project would decrease impervious surfaces by approximately 1.7 acres in the northeast quadrant and by approximately 17.3 acres in the southeast quadrant for a total decrease of 19 acres compared to the No Action Alternative.

For the northeast quadrant, the removal of impervious cover would be due to the reconfiguration of the existing parking lots to accommodate entry and exit roads for the proposed replacement passenger terminal. For the southeast quadrant, the decrease in impervious cover would be the result of proposed pervious infield areas from the extensions of Taxiways A and C (see **Exhibit 4.14-1**). Under the Proposed Project, the northeast quadrant would be 92.5 percent impervious compared to 95.0 percent for the No Action Alternative while the southeast quadrant would be 74.6 percent impervious compared to 100.0 percent for the No Action Alternative.

Surface runoff from the northeast quadrant flows off-site to the east through stormwater pipes and discharges into the Burbank Western Channel. Surface runoff from the southeast quadrant flows off-site to the south and east into the Lockheed Drainage Channel, which then discharges into the Burbank Western Channel.

The drainage basins shown in **Exhibit 3.15-2** are based on existing flow patterns and stormwater infrastructure for the Airport. For the purposes of hydrologic analysis for this EIS, these drainage basins were subdivided into smaller contributing areas based on existing discharge points. By dividing the basins into smaller areas where all runoff from each area flows to a single discharge point, the peak flow rates for pre-development and post-development conditions could be directly compared. Implementation of the Proposed Project would modify flow patterns and therefore, the boundaries of the contributing areas for each discharge point. The post-development boundaries for the contributing areas and their respective discharge points are shown in **Exhibit 4.14-2**.

EXHIBIT 4.14-1
PROPOSED PROJECT CHANGE IN IMPERVIOUS SURFACE IN SOUTHEAST QUADRANT

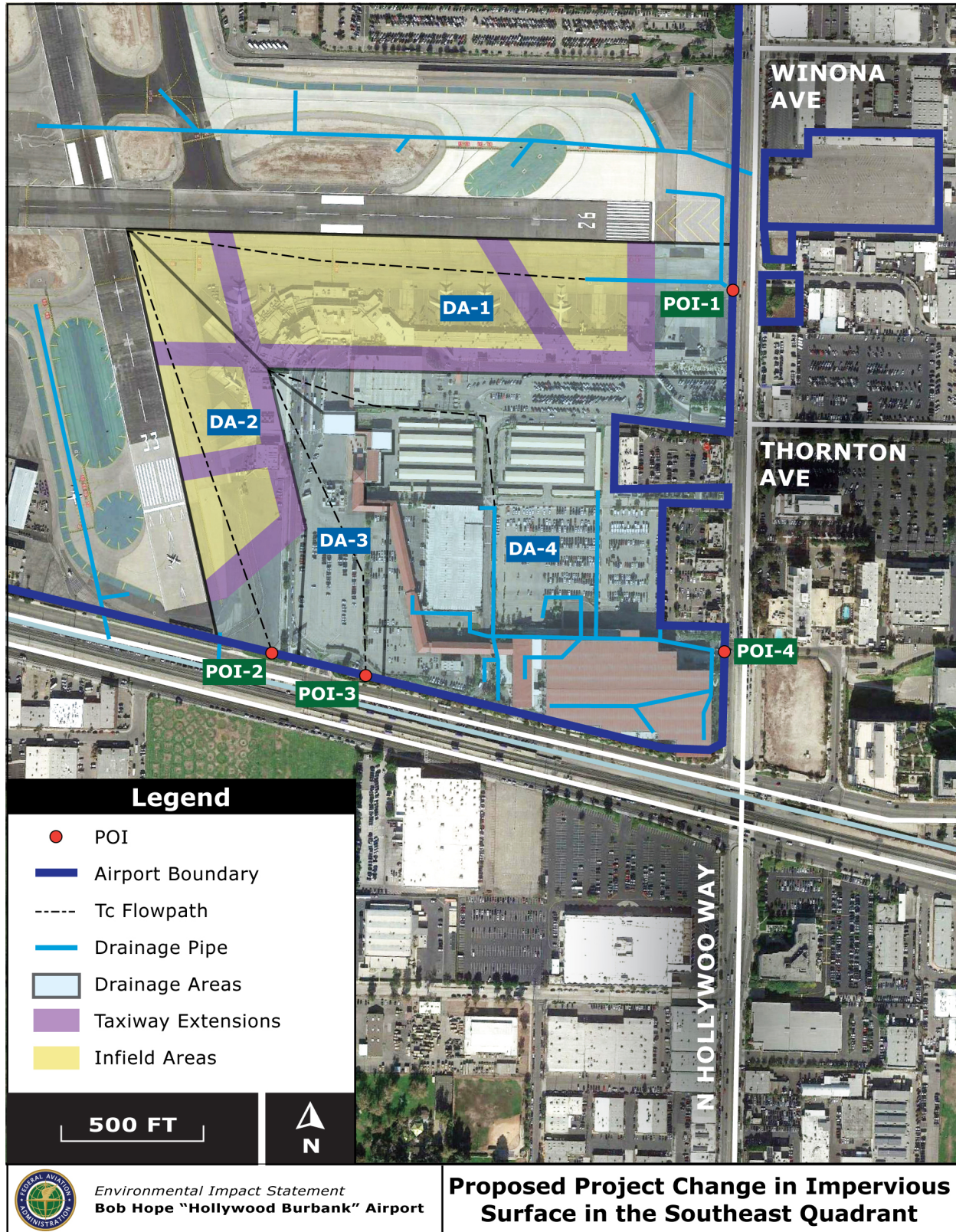


EXHIBIT 4.14-2
POST-DEVELOPMENT SURFACE WATER RUNOFF TO DISCHARGE POINTS IN THE DETAILED STUDY AREA



Sources: Authority, 2015; RS&H 2020.

Stormwater infrastructure improvements for the Proposed Project would tie into existing stormwater infrastructure and discharge at existing discharge points.

Based on analysis using HydroCalc, a program from Los Angeles County Department of Public Works (LACDPW) for determining runoff rates, there would be a net reduction in the impervious area in post-development conditions and an overall reduction in 50-year peak flows to discharge points. Between pre- and post-development conditions, the 50-year peak flow for the northeast quadrant would decrease by 11.84 cubic feet per second (cfs), while the 50-year peak flow for the southeast quadrant would decrease by 28.22 cfs. Detailed information can be found in **Appendix L**. Based on the results of this analysis, the Proposed Project would not have a significant impact on existing surface water hydrology, existing subsurface stormwater conveyance systems, or on surface waters.

During operation of the Proposed Project, stormwater runoff would have the potential to collect pollutants including oil, grease, sediments, heavy metals, nutrients, and trash/debris commonly found in runoff from airport, industrial, and commercial sites. Operations on the proposed aircraft parking apron would store and use potentially hazardous chemicals such as jet fuel, oil, and grease.

To address those effects, the Proposed Project would be designed to comply with the Los Angeles County Low Impact Development (LID) Manual requirements for both peak flow rates and stormwater quality.⁸⁷ Modification to the Airport's industrial SWPPP and implementation of BMPs as part of a LID Plan, in addition to the hydrodynamic separators already present at outfall locations, would ensure compliance with water quality standards for stormwater runoff. The LID Manual also requires all new developments meeting its criteria as a "Designated Site" to retain 100 percent of the stormwater quality design volume (SWQDv) on-site through LID practices or to seek exemption or alternative compliance as outlined in the LID Manual. The northeast and southeast quadrants would both be considered Designated Projects as they meet the criteria for "redevelopment" as stipulated by Los Angeles County LID Manual. Furthermore, if 50 percent or more of the impervious area on a Designated Project area would be redeveloped, both the new and the existing portions of the site must meet the SWQDv requirement. If less than 50 percent of the Designated Project area is to be redeveloped, then only the new portion must be brought up to current LID standards.

The Proposed Project in the northeast quadrant would redevelop more than 50 percent of the impervious area and would have to meet the more stringent LID requirements for SWDQv. The Proposed Project in the southeast quadrant would

⁸⁷ County of Los Angeles Department of Public Works. (2014, February). *Low Impact Development Standards Manual*.

redevelop less than 50 percent of the site, so only the new portions would have to meet the LID requirements. In comparison, the No Action Alternative would not require retention of the SWQDv as no development is proposed. The SWQDv calculated for each contributing area that would require mitigation is listed in **Table 4.14-1**. The post-development contributing areas requiring SWQDv can be seen in **Exhibit 4.14-2**. The drainage basins that would require water quality BMPs would be the B-6, 15-33, and Southeast basins (see **Exhibit 3.15-2**).

TABLE 4.14-1
PROPOSED PROJECT AND STORMWATER QUALITY DESIGN VOLUMES (SWQDv)

Contributing Area for Discharge Points	Post-Development SWQDv
Contributing Area to DP1	13.15 acre-feet
Contributing Area to DP2	15.96 acre-feet
Contributing Area to DP3	5.10 acre-feet
Contributing Area to DP4	3.10 acre-feet

Notes:

DP – Discharge Point

Sources: County of Los Angeles, 2014; RS&H, 2019.

Site-specific source control measures such as stormwater drainage message and stormwater quality control measures to treat the SWQDv would be implemented with the Proposed Project. The storm drainage message source control would require that signs and alerts be placed at stormwater inlets that are publicly accessible to alert and remind the public about the effects of and the prohibition against waste disposal into the storm drain system. Given the highly developed nature of the site and that the site is not suitable for implementation of typical infiltration LID practices due to the risk of groundwater pollution, potential BMPs for development of the Proposed Project include underground treatment systems, such as hydrodynamic separators and underground extended detention basins coupled with proprietary soil mixture (see **Appendix L**). Proprietary soil mixtures are an internal treatment option for the detention basins to improve stormwater water quality due to potentially high pollutant loads from areas such as the aircraft parking apron.

These BMPs would address both the stormwater retention and quality requirements set forth by the LID manual.

As discussed in **Section 3.15.2**, the only stormwater quality measures implemented at the Airport are hydrodynamic separators at outfalls for the southeast quadrant. Thus, any implemented LID measures or BMPs associated with the Proposed Project would improve the stormwater quality leaving the Airport property. Potential impacts due to exceeding stormwater quality standards would not occur because the Authority would be required to meet regulatory requirements, the LID Plan, and the SWPPP. Therefore, operation of the Proposed Project consistent with established federal, state, and local regulatory water quality standards would prevent significant surface water impacts. Such operation would also prevent contaminating public drinking water supplies.

4.14.3 Groundwater

4.14.3.1 Significance Threshold

According to FAA Order 1050.1F, a significant impact to groundwater would occur if the action would⁸⁸:

- » "Exceed groundwater quality standards established by Federal, state, local, and tribal regulatory agencies; or
- » Contaminate an aquifer used for public water supply such that public health may be adversely affected"

Additionally, the FAA provides supplementary factors for consideration when evaluating the context and intensity of potential environmental impacts for groundwater. These supplementary factors are not considered thresholds, and any potential effects derived from applying these factors do not constitute a significant impact; rather, these factors provide a context for determining whether a significant impact could occur. The supplementary factors considered in this analysis include, but are not limited to, whether the Proposed Project or No Action Alternative could:⁸⁹

- » adversely affect natural and beneficial groundwater values to a degree that substantially diminishes or destroys such values;
- » adversely affect groundwater quantities such that the beneficial uses and values of such groundwater are appreciably diminished or can no longer be

⁸⁸ FAA. (2015 July). Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1, page 4-12.

⁸⁹ FAA. (2015, July). 1050.1F Desk Reference. Retrieved September 2019, from FAA: https://www.faa.gov/about/office_org/headquarters_offices/apl/enviro_n_policy_guidance/policy/faq_nepa_order/desk_ref/media/14-water-resources.pdf.

maintained, and such impairment cannot be avoided or satisfactorily mitigated; or

- » present difficulties based on water quality when obtaining a permit or authorization.

4.14.3.2 Methodology

The groundwater analysis considered potential changes in groundwater recharge and water quality conditions associated with implementation of the Proposed Project compared to the No Action Alternative.

4.14.3.3 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement passenger terminal and ancillary projects. The Authority would continue to operate the Airport and serve the forecast aviation demands.

No site development would occur in the No Action Alternative. Therefore, there would be no change in impacts to groundwater.

4.14.3.4 Proposed Project

Under the Proposed Project, the Authority would construct and operate the replacement passenger terminal and ancillary projects and demolish the existing terminal building and its associated parking facilities. There would also be the extension of the taxiways and the realignment of portions of the Airport's perimeter road.

The Proposed Project would incorporate all of the water quality protection measures discussed in **Section 4.14.2** because they help avoid and potentially reduce project impacts to the water quality of ground water. In addition, the Proposed Project would comply with all applicable federal, state, and local regulations regarding hazardous materials and waste discharge requirements reducing the potential for a release of contaminants that could infiltrate and contaminate groundwater. Therefore, construction of the Proposed Project is not expected to result in impacts to groundwater quality levels above those considered acceptable as a result of accidental spills or releases.

The Proposed Project's location includes part of the former Lockheed B-6 Plant (see **Exhibit 3.8-3**), which was historically used for aircraft manufacturing and maintenance purposes involving the use and storage of various chemicals and

hazardous materials.⁹⁰ As a result of these past uses, the Proposed Project site, Airport, and surrounding areas have been investigated for potential groundwater and soil contamination under the Well Investigation Program (WIP) as part of the San Fernando Valley Groundwater Basin Superfund Site. The groundwater basin beneath the Proposed Project site is contaminated, primarily with volatile organic compounds (VOCs) and hexavalent chromium. A Cleanup and Abatement Order was issued in 1987 by the Regional Board, on behalf of the U.S. EPA, to the responsible parties of the site to cleanup and abate VOC contamination of soils and groundwater at the Proposed Project site and surrounding area. Since then, remediation has been performed and the Regional Board has issued closure letters to acknowledge completion of cleanup activities.⁹¹ Construction of the Proposed Project would not interfere with ongoing groundwater remediation activities or monitoring wells in the WIP.⁹²

The Authority conducted a soil and soil vapor investigation⁹³ of the Proposed Project site in 2017 (see **Exhibit 4.7-1**). The RWQCB reviewed the results and found that additional soil sampling of the site was not required, and the Proposed Project site is compatible for construction of and operation of a replacement passenger terminal and associated facilities. However, construction activities could potentially uncover previously contaminated soils due to past uses at the site during grading, excavation, and paving activities.⁹⁴ The Proposed Project's mitigation, avoidance, and minimization measures, discussed below in **Section 4.14.4**, include preparation of a Soil Management Plan (SMP), required by the Regional Board prior to any construction activities. The SMP would address future soil excavation activities and describe methods for managing any impacted soil encountered during excavation and construction activities. The SMP would also address the following: excavation management, transportation of excavated soil, erosion and sediment

⁹⁰ See Section 3.8 *Hazardous Materials, Solid Waste, and Pollution Prevention* for a detailed discussion of historical site uses and soil and groundwater remediation efforts that have occurred onsite and in the surrounding areas as a result of these uses. The northeast quadrant was home to the former Lockheed Plant B-6. Due to activities that occurred at the site, soil and subsequent groundwater contamination occurred. Remediation activities at the site were started in 1992 and continue today. The project site overlays the San Fernando Valley Groundwater Superfund Site. See Exhibit 3.7-2 for the locations of the latest field investigation activities to assess the presence of chemical constituents in soil and soil vapor samples in the Proposed Project site for the Human Health Risk Assessment (HHRA). The HHRA found that the cancer risk for the construction worker, and non-cancer hazard index are below *de minimis* levels so construction activities would not adversely affect on-site or off-site construction workers health risks.

⁹¹ Ardent. (2015). *Phase I Environmental Site Assessment (ESA) performed separately for the former Lockheed Plant B-6 and Plant B-5*.

⁹² There are three monitoring wells located adjacent to the Proposed Project site.

⁹³ EFI Global. (2017, May 15). *Technical Memorandum – Assessment of Subsurface Soil and Soil Vapor for Chemical Impacts Burbank-Glendale-Pasadena Airport Replacement Terminal*.

⁹⁴ Section 4.8 of the EIS discusses in detail the impacts related to construction and operation of the Proposed Project regarding hazardous materials, including the potential to encounter contaminated soil and groundwater during construction activities.

controls, collection and analysis of soil samples, and placement and disposal of excavated soil.

The depth of all excavations planned for the Proposed Project would not be deeper than 25 feet bgs. Thus, groundwater is not expected to be encountered during excavation and grading activities because of the deep groundwater levels in the vicinity of the Proposed Project site (approximately 250 feet bgs). Although encountering contaminated groundwater is not anticipated due to the depth to groundwater, seepage may be encountered, although it is also unlikely. However, construction workers would have the potential to be exposed to potentially contaminated (primarily with VOCs and/or hexavalent chromium) small groundwater pockets or seepage during construction activities. If seepage is encountered during construction, dewatering may be necessary. If dewatering was necessary, due to encountering groundwater or seepage into the pit, the Authority would apply for coverage under the NPDES permit and construction of the Proposed Project would adhere to monitoring, testing, and discharge requirements set forth by the Regional Board.⁹⁵ If monitoring and/or testing identifies contaminated groundwater, the contractor would properly treat (decontaminate) the water prior to discharging it in accordance with the NPDES permit, under which decontaminated groundwater may be treated and pumped to the storm drain system or used for onsite dust control purposes. Thus, adherence with the mitigation, avoidance, and minimization measures (see **Section 4.14.4**) and compliance with regulatory requirements would ensure that dewatering activities, if required, would not violate waste discharge requirements, degrade groundwater quality to levels below established standards, or contaminate an aquifer such that public health is adversely affected.

Water use may temporarily increase for a limited time during the construction phase for general site activities including cleaning of tools and equipment, wet trades, and dust suppression. However, this increase would be temporary and is not expected to deplete groundwater resources. Additionally, the Proposed Project would use recycled water on site during construction activities for dust control, soil compaction, concrete mixing, and cleaning outdoor areas. Per California Code of Regulations, recycled water would meet at least disinfected secondary-23 recycled water standards.⁹⁶ This would ensure that recycled water would not threaten groundwater quality and would decrease the potable water usage onsite for

⁹⁵ State Water Resource Control Board. (2010, July 1). Division of Water Quality, Construction General Permit Fact Sheet.

⁹⁶ "Disinfected secondary-23 recycled water" means recycled water that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 23 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed, and the number of total coliform bacteria does not exceed an MPN of 240 per 100 milliliters in more than one sample in any 30 day period.

construction activities. Compliance with existing regulations, programs, and policies would ensure that any runoff from construction activities would not violate waste discharge requirements, degrade groundwater quality to levels below established standards or contaminate an aquifer such that public health is adversely affected. Additionally, the use of recycled water during construction would lessen the reliance on water usage such that the Proposed Project would not deplete groundwater supplies, similar to the No Action Alternative.

Potential impacts on groundwater could occur if operation of the Airport under the Proposed Project would result in exceedances of groundwater quality standards, contamination of the public drinking water supply, or affect groundwater quantities such that they are diminished or can no longer be maintained. Groundwater in the area is not suitable for potable use without prior treatment. Post construction operations of the Proposed Project would not interfere with groundwater remediation activities, associated with the San Fernando Valley Groundwater Basin Superfund Site (see **Exhibit 3.8-3**), or WIP monitoring wells⁹⁷ in the Detailed Study Area, as no wells are located onsite. Additionally, like the No Action Alternative, the Proposed Project would not involve groundwater extraction or other activities that could result in direct withdrawal or depletion of groundwater supplies.

The Proposed Project would obtain water for its operations from BWP, which uses locally treated groundwater sources as part of its water supply. Water usage for the Proposed Project would be similar to water usage under the No Action Alternative. This is because the proposed replacement passenger terminal would serve the same number of forecasted passengers and operations as the No Action Alternative. However, the replacement passenger terminal would introduce additional passenger amenities (e.g., restaurants and restrooms) and office space, which could increase indoor water demand slightly over that of the No Action Alternative. BWP would be capable of meeting that slight demand increase because the City of Burbank's *Burbank2035General Plan*⁹⁸ and the *2015 Urban Water Management Plan* account for that increase. The *Urban Water Management Plan*⁹⁹ states that the City has sufficient groundwater supplies through 2040 to meet demand. Furthermore, the Proposed Project would comply with applicable municipal code requirements related to reducing indoor water consumption such as the use of low-flow indoor water fixtures, which would limit potential increases in indoor water usage.

⁹⁷ There are three monitoring wells located on the site adjacent to the Proposed Project site.

⁹⁸ City of Burbank. (2013, February). *Burbank2035 General Plan*. Retrieved September 2019, from City of Burbank: <https://www.burbankca.gov/home/showdocument?id=23448>.

⁹⁹ Burbank Water and Power. (2016, June). *2015 Urban Water Management Plan*. Retrieved September 2019, from Burbank Water and Power: https://www.burbankwaterandpower.com/images/water/downloads/2015_UWMP_Final_06-24-2016.pdf.

Although the Proposed Project might slightly increase water usage over that of the No Action Alternative, it would not adversely affect groundwater quantities as projected Airport water usage was considered in the *2015 Urban Water Management Plan*. Since the Proposed Project is consistent with the *2035 General Plan and 2015 Urban Water Management Plan*, water usage under the Proposed Project would not adversely affect groundwater quantities such that beneficial uses are appreciably diminished.

The Airport, as developed, has very little pervious surfaces. Currently, the Proposed Project site has two out of five drainage areas with approximately 95 percent impervious surfaces in each. Construction of the Proposed Project, which includes demolition of existing structures, would result in approximately 97 percent impervious surfaces for drainage area 1 and 89 percent impervious surfaces for drainage area 2, with approximately 93 percent impervious surfaces across the site (see **Section 4.14.2** for a more thorough discussion).¹⁰⁰ Although slightly less than the No Action Alternative, the amount of impervious surfaces under the Proposed Project would be similar to the No Action Alternative, so there would be no significant changes in the amount of impervious surfaces at the Proposed Project site. Therefore, infiltration rates at the Proposed Project site are expected to remain approximately the same as those under the No Action Alternative based on the amount of impervious area. Additionally, the San Fernando Valley Groundwater Basin is not actively used for groundwater recharge due to prior contamination. Thus, the Proposed Project would not alter or modify groundwater recharge rates in the area over those of the No Action Alternative.

When compared to existing aircraft operations, future aircraft operations with or without the Proposed Project would increase the frequency of refueling activities and the volume of jet fuel handled at the Airport. As a result, the Proposed Project does not pose a greater fuel spill risk than the No Action Alternative. Continued use of best management practices for fuel-handling will ensure that the Proposed Project would not adversely affect potable water aquifers or the environment.

The aircraft parking apron is the area where aircraft are parked for refueling, maintenance activities, and the handling of passengers or cargo. Due to the nature of these activities and the potential for them to result in hydrocarbon contamination in stormwater, the Proposed Project would require the installation of a hydrodynamic separator at all aircraft parking apron stormwater exit points to capture pollutants such as jet fuel before they enter and contaminate other drainage systems. This is similar to current aircraft parking apron conditions at the

¹⁰⁰ Refer to Appendix L, which discusses the hydrology of the site, including the pre and post surface drainage and impervious surfaces at the Proposed Project site and Low Impact Development (LID) requirements.

Airport. The Proposed Project drainage systems would need to be connected to either the trench drain or drainage channel that is used for the entire aircraft parking apron area and must be located upstream of any treatment system. Implementation of a LID Plan, discussed in **Section 4.14.2**, prepared for the Proposed Project, would satisfy the municipal separate storm sewer system (MS4) permit requirements and would ensure compliance with water quality standards for stormwater runoff. The potential for the Proposed Project to exceed stormwater quality standards, which could degrade groundwater quality, would not occur with adherence to regulatory requirements and the LID Plan (see **Section 4.14.2**). In addition, compliance with the MS4 permit would ensure that the Proposed Project would not violate waste discharge requirements. Therefore, operation of the Proposed Project would not result in groundwater impacts as a result of exceeding water quality standards or contaminating an aquifer used for water supply above levels that are considered protective of human health and the environment.

Ground disturbing activities for the Proposed Project would modify the southeast quadrant and the northeast quadrant, which have the potential to alter drainage patterns and surface flows across both quadrants. As discussed in **Section 4.14.2**, the Proposed Project could result in potential increases in post-development peak flows, which could exceed the capacity of the existing storm water drainage systems and increase pollutants in stormwater runoff. As such, the Proposed Project would implement the LID Plan to ensure that increased flows would be managed and treated onsite to reduce any potential impacts to drainage systems, water, and groundwater quality to minor levels. Therefore, with adherence to the LID Plan, groundwater quality standards would not be exceeded.

4.14.4 Mitigation, Avoidance, or Minimization Measures

4.14.4.1 Floodplains

The Proposed Project is outside of any designated 100-year or 500-year floodplains and would not affect floodplains in the study area. No floodplain mitigation is needed.

4.14.4.2 Surface Water

The Proposed Project would meet all applicable federal, state, and local permits and requirements related to surface waters. Compliance with these requirements includes implementation of construction and operational minimization measures to prevent exceedance of significance thresholds for surface waters. These measures include BMPs and are discussed in detail in previous sections which would entail the following requirements:

- » Implementation of a SWPPP and adherence to NPDES permit requirements for construction activities and incorporating control measures during construction to minimize erosion and sedimentation, such as temporary soil stabilization and use of temporary silt fencing, and to maintain existing drainage patterns and infrastructure.
- » Incorporation of best management practices (BMPs) during construction as part of the SWPPP, SPCC, and SMP plans to minimize accidental spills of hazardous materials and to properly store and dispose of hazardous materials and waste.
- » Implementation of source control measures and post-construction BMPs as part of the LID plan such as underground treatment systems to manage and treat runoff from the operation of the Proposed Action.

Incorporation of these measures and compliance with applicable requirements provides adequate assurance that project related impacts to surface waters would be less than significant.

4.14.4.3 Groundwater

The Authority would prepare a soil management plan (SMP) and obtain Regional Board approval prior to initiating construction activities. The soil management plan would outline a framework for soil assessment, remediation, and removal confirmation actions to be undertaken if contaminated soils are uncovered during construction activities.

During grading, excavation, and trenching activities for the Proposed Project, the construction contractor would monitor exposed soil for stained or discolored soil, wet or saturated soil, and odors. Based on visual monitoring, the contractor would collect "grab" soil samples at selected locations (both suspected contaminated and uncontaminated soils) to perform headspace screening for VOCs using a calibrated photoionization detector. Headspace readings of suspected contaminated soils that are elevated above those of uncontaminated grab soil samples would be considered potentially contaminated. If potentially contaminated soil is encountered, the construction contractor would send the samples to a state-certified laboratory who would analyze the soil to identify and characterize the impact and determine if soil remediation is required.

Soil affected by high concentrations of hexavalent chromium and/or total chromium may also be disturbed during project construction. Soils contaminated with this metal appear to be stained a yellow color, dissimilar to surrounding non-impacted soil. Per the requirements of the SMP requested by the Regional Board, at a minimum, the construction contractor would collect at least one soil sample for

chemical analysis at or near the center of the suspected impact in an effort to represent the “worst-case” condition. A state-certified laboratory would analyze soil samples using appropriate methods based on the parameters to be analyzed. If an impact is identified, the construction contractor would assess the area to characterize the lateral and vertical extent of contamination. In accordance with the SMP, remediation would likely involve excavation of the affected soil followed by segregated stockpiling or direct-loading, waste profiling, and off-site disposal or recycling, which the selected construction contractor would perform in accordance with applicable federal, state, and local regulations.

4.15 CUMULATIVE IMPACTS

This section describes the potential cumulative effects of the No Action Alternative and Proposed Project when considered with past, present, and reasonably foreseeable future actions listed in **Section 3.16**. Cumulative impacts are the total combined impacts on the environment from the Proposed Project and other past, present, or reasonably foreseeable actions.

Environmental resource categories that would not result in potential adverse effects as a result of the Proposed Project cannot result in cumulative impacts (Climate, U.S. Department of Transportation Section 4(f), Land Use, Natural Resources and Energy Supply, Noise and Noise-Compatible Land Use, Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety, and Visual Effects). In this EIS, the surface traffic analysis discussed in **Section 4.12** included an increase in vehicle traffic associated with all past, present, and reasonably foreseeable projects as part of the analysis of impacts from the Proposed Project. Therefore, only environmental categories where impacts could occur are discussed. These categories include Air Quality, Biological Resources, Hazardous Materials, Solid Waste, and Pollution Prevention, Historical, Architectural, Archaeological, and Cultural Resources, and Water Resources.

4.15.1 Air Quality

As discussed in **Section 4.3**, construction and operational emissions from the Proposed Project would not exceed *de minimis* thresholds or contribute to a violation or delay of timely attainment of the National Ambient Air Quality Standards (NAAQS). The construction emissions of past, present, and reasonably foreseeable projects in the General Study Area would not occur during the same time period as construction of the Proposed Project. Four of the present projects (I-5 widening, Empire Avenue interchange, Burbank Airport South Metrolink Station Pedestrian Bridge, and the Avion project) would be completed prior to the start of construction of the Proposed Project. In addition, the FAA-ATO’s OROSZ Three Departure (RNAV) and SLAPP Two Departure (RNAV) Proposed Procedure

Amendments project, SLAPP RNAV Two Departure project, and RNAV Visual Runway 15 and RNAV Visual Runway 33 project would have no construction-related emissions. The California High Speed Rail Burbank to Los Angeles segment project is expected to begin construction after the completion of the Proposed Project.¹⁰¹ The Delta Ramp Expansion, which is in the northwest quadrant of the Airport, has been completed. The Avion Business Park Development, which is adjacent to the northeast quadrant of the Airport, is proposed to be completed prior to the start of construction of the replacement passenger terminal building. Therefore, no cumulative construction-related emissions would occur from any of these projects in concert with the Proposed Project.

Past, present, and reasonably foreseeable projects near the Proposed Project would have been or are required to implement mitigation measures specific to each project regarding operational air quality impacts. As stated in **Section 4.3**, operational emissions associated with the Proposed Project would be similar to those of the No Action Alternative and would not exceed the applicable *de minimis* thresholds. Therefore, the Proposed Project would not contribute to any significant air quality impacts as compared to the No Action Alternative. Further, the Proposed Project would adhere to the targets and strategies established in the Authority's AQIP as part of the MOU with the SCAQMD to reduce mobile emissions at the Airport and would not exceed *de minimis* thresholds or contribute to a new violation of the NAAQS. Because the air emissions associated with the Proposed Project are below *de minimis* thresholds, the Proposed Project would not have significant cumulative air quality impacts when compared to the No Action Alternative. Therefore, the cumulative impacts to air quality are not significant.

4.15.2 Biological Resources

As discussed in **Section 4.4**, the Proposed Project has the potential to affect migratory birds and burrowing owls in the Detailed Study Area during construction. Migratory birds may be present in the trees and shrubs located in developed areas. Construction of the Proposed Project could also result in the loss of burrowing owls, if any burrowing owls were present during construction activities. The potential for impacts to migratory birds including burrowing owls is low given the highly developed environment of an airport and the implementation of the Airport's WHMP.

¹⁰¹ The FAA has been advised by California High Speed Rail Authority (CHSRA) that Phase I operation is proposed to start in 2029. According to the CHSRA, the precise timing of construction for the CHSRA's Burbank Airport Station and the Burbank to Los Angeles Project Section as a whole will be determined after completion of the environmental review process, final decisions by the CHSRA's Board, and receipt of funding for the project construction.

The Proposed Project when considered with past, present, and reasonably foreseeable future actions described in **Section 3.16**, would not result in significant adverse impacts to biological resources. Present and reasonably foreseeable projects near the Proposed Project are or would be required to implement mitigation measures specific to each project and therefore would not have a significant impact on burrowing owls or migratory birds. Any of the limited biological resources in the area are adapted to human disturbance and would migrate to nearby suitable habitat during construction. Any impact to biological resources would be small in size and temporary in nature and would, therefore, not contribute to a cumulative impact. In addition, the Proposed Project would not cumulatively contribute to a significant impact on biological resources when compared to the No Action Alternative. Therefore, the cumulative impacts of the Proposed Project on biological resources is not significant.

4.15.3 Climate

There are no significance thresholds established for climate and GHG emissions and the FAA has not identified specific factors to consider in making a significance determination for GHG emissions, especially as it may be applied to a particular project. Neither the Proposed Project nor any of the past, present, or reasonably foreseeable projects have been identified to have a significant impact to climate or greenhouse gas emissions. Although there are no significant impacts to climate, the minimization measures included in **Section 4.3.5, Air Quality** describe methods that would reduce GHG emissions from construction and operations associated with the Proposed Project. Therefore, the Proposed Project when considered with past, present, and reasonably foreseeable future projects described in **Section 3.16**, would not result in significant impacts. Since the proposed project would generate a small fraction (approximately 0.0005 percent) of the state's generated greenhouse gases during construction and no additional greenhouse gases during operation, the Proposed Project would not have significant cumulative climate impacts when compared to the No Action Alternative.

4.15.4 Hazardous Materials, Solid Waste, and Pollution Prevention

Hazardous Materials

As stated in **Section 4.7**, construction of the Proposed Project would use hazardous materials typical of construction such as gasoline and diesel fuels, hydraulic fluids, motor oils, lubricants, paints, solvents, and adhesives. Use and storage of these materials could result in minor, incidental spills. The selected construction contractor would avoid impacts from such incidents by thoroughly cleaning up minor spills as soon as they occur and by preparing a site-specific construction storm water pollution prevention program (SWPPP) for the Proposed Project

specifying the location of stored hazardous materials and relevant protective measures. Asbestos containing materials and lead based paint are present at the existing passenger terminal, Hangar 35, various offices, and other parts of the Airport. Such materials would be removed prior to demolition in accordance with relevant regulations.

Past projects within the Detailed Study Area have resulted in hazardous materials contamination of soil and groundwater. Remediation has been performed at the Airport and the Regional Board issued closure letters to acknowledge the completion of cleanup activities.¹⁰² The selected construction contractor could encounter contaminated soil or groundwater during construction activities such as excavation, grading, and paving; however, it is not expected to encounter contaminated groundwater because excavations would not be below 25 feet bgs and the deep groundwater at the Proposed Project site is at about 250 feet bgs. The Regional Board requested that the Authority prepare and submit a Soil Management Plan (SMP) for approval before starting construction activities. This is because there is a chance that the construction contractor could come in contact with contaminated soil, primarily with VOCs or hexavalent chromium, during excavation and grading. All past, present, and reasonably foreseeable projects would have been required to or would be required to comply with all relevant regulations related to the storing and using of hazardous materials during construction of each project and therefore, construction of the Proposed Project would not result in a cumulative affect for hazardous materials that could affect human health and the environment.

The Proposed Project would adhere to federal, state, and local regulations to minimize the risk from the use, storage, transportation, disposal and incidental spills of hazardous materials and hazardous waste. Such regulations include, but are not limited to, RCRA, U.S. DOT Hazardous Materials Regulations, OSHA, Cal-OSHA, FAA and Airport health and safety rules, local Certified Unified Program Agencies regulations, requirements of the Construction General Permit and the SWPPP, NPDES, and SCAQMD rules and regulations. Operation of each cumulative project would be required to comply with all hazardous materials regulations and permit requirements. Therefore, implementation of the Proposed Project would not cumulatively violate federal, state, tribal, or local laws or regulations and with the required minimization measures, would not produce appreciably different quantity of hazardous materials compared to the No Action Alternative, or adversely affect human health and the environment.

¹⁰² Ardent. (2015). *Phase I Environmental Site Assessment (ESA) performed separately for the former Lockheed Plant B-6 and Plant B-5.*

The Proposed Project would not result in significant cumulative impacts from hazardous materials when compared to the No Action Alternative.

Solid Waste

The Proposed Project would temporarily increase the volume of solid waste generated on Airport property during construction, including waste from both demolition and construction activities. However, a considerable portion of these demolition and construction materials would be reused for onsite construction and/or hauled offsite for recycling (up to 75 percent), thereby reducing the quantity of waste materials transported to landfills serving the area.¹⁰³ Solid waste would slightly increase under operation of the Proposed Project due to the increase in forecast Airport operations and enplanements, which would be the same as that of the No Action Alternative. Solid waste would not exceed landfill capacity, especially considering the increase in recycling and waste diversion requirements expected to occur under the California Integrated Waste Management Act.

Review of available information for past and present projects did not reveal any significant effects to solid waste and would have been required to comply with federal, state, and local rules and regulations. Reasonably foreseeable future projects would be required to follow federal, state, and local rules and regulations regarding the handling, storage, and use of solid waste. The Authority would amend, if needed, the procedures for managing solid waste at the Airport should the amount of solid waste generated exceed what can currently be managed. Therefore, implementation of the Proposed Project would not result in a significant cumulative impact related to solid waste.

The Proposed Project would not result in a significant solid waste cumulative impact when compared to the No Action Alternative.

Pollution Prevention

As stated in **Section 4.7**, there are five REC sites within or adjacent to the Proposed Project site (see **Section 4.7.4.3** for more details). Site 4 (Proposed Project site) is located in the northeast quadrant, but the Regional Board has deemed the site compatible with construction of the Proposed Project. Site 5 is adjacent to the northeast quadrant and construction activities could cause contamination from this site to migrate to the northeast quadrant. Construction

¹⁰³ The concrete and asphalt pavements currently in use at the existing passenger terminal building would not be able to be used for base material for the replacement passenger terminal building because the existing passenger terminal building and associated aircraft parking apron would remain in use until the replacement passenger terminal building is ready for use. Once the replacement passenger terminal building is operational, any additional concrete or asphalt pavements that are removed could be recycled.

activities associated with the Proposed Project are not expected to encounter contaminated groundwater because excavation and grading activities associated with the Proposed Project would not be deeper than 25 feet bgs (see **Section 4.14** for more details).

Under the Proposed Project, the Airport would continue to implement pollution prevention measures to the greatest extent possible, including measures to minimize accidental spills and releases and the use of low-VOC paints among other methods. Compliance with federal regulations under the Proposed Project would ensure that operational activities would not disturb soils or groundwater or contribute to further contamination in the area. Each of the past, present, and foreseeable projects would also have had to comply or would have to comply with all federal regulations as part of their project. For those reasons, the Proposed Project in addition to past, present, and reasonably foreseeable future projects, is not anticipated to cause a significant cumulative effect to pollution prevention.

The Proposed Project would not result in significant cumulative impacts related to pollution prevention when compared to the No Action Alternative.

4.15.5 Historical, Architectural, Archaeological, and Cultural Resources

The past, present, and reasonably foreseeable future projects and the Proposed Project could result in impacts to historic, architectural, archaeological, and cultural resources. However, as described in **Section 4.8**, the Proposed Undertaking would have no effects on historic resources within the APE and the Proposed Undertaking does not exceed the applicable archaeological or cultural thresholds of significance. Because the Proposed Undertaking includes ground disturbance to depths of up to 25-feet bgs, there is a low potential to encounter archaeological resources at depths that have not been previously disturbed. The FAA, with SHPO concurrence, has addressed the potential disturbance of buried archaeological resources by developing a plan to implement should such resources be encountered during project construction. If historic or prehistoric archaeological resources are discovered during construction, activities would halt so they can be evaluated by the qualified archaeologist. For these reasons, the Proposed Project in addition to past, present, and reasonably foreseeable future actions, is not anticipated to cause a significant cumulative effect to historical, architectural, archaeological, or cultural resources. In addition, the Proposed Project in combination with other past, present, or reasonably foreseeable projects at and adjacent to the Airport would not result in significant cumulative impacts to historical, architectural, archeological, and cultural resources when compared to the No Action Alternative.

4.15.6 Water Resources

Surface Water

Construction of the Proposed Project would involve the use of heavy equipment and construction-related chemicals, which would be stored in limited quantities on site. The potential for a spill or release of construction-related chemicals to affect surface waters would generally be limited because of the localized, short-term nature of any release and the fact that personnel are trained and equipped to respond by keeping any spill or release from reaching surface water through best management practices (BMPs) and control requirements in the National Pollutant Discharge Elimination System (NPDES) permit, SWPPP, and Spill Prevention, Control, and Countermeasure (SPCC) Plan. Construction activities could potentially uncover previously contaminated soils as discussed in **Section 4.7**. However, adherence to a Soil Management Plan (SMP), would be protective of water quality by implementing isolation management measures of any suspected contamination.

During operation of the Proposed Project, stormwater runoff would have the potential to collect pollutants commonly found in runoff from airport, industrial, and commercial sites. Operations on the proposed aircraft parking apron would store and use potentially hazardous chemicals but the Proposed Project would be designed to comply with the Los Angeles County Low Impact Development (LID) Manual requirements to ensure personnel are trained and equipped to respond by keeping any spill or release from reaching surface water. Modification to the Airport's industrial SWPPP and implementation of BMPs as part of a LID Plan, in addition to the hydrodynamic separators already present at outfall locations, would ensure compliance with water quality standards for stormwater runoff. Operation of the other cumulative projects would have been or would be required to comply with all water quality regulations and permit requirements. With these minimization measures, implementation of the Proposed Project, in addition to past, present, and reasonably foreseeable future projects, would not exceed water quality standards established by federal, state, and local regulatory agencies or contaminate water resources such that public health may be adversely affected. Therefore, the Proposed Project in combination with other past, present, or reasonably foreseeable projects at and adjacent to the Airport would not result in significant cumulative surface water impacts when compared to the No Action Alternative.

Groundwater

As described in **Section 4.14**, construction of the Proposed Project would involve the use of heavy equipment and construction-related chemicals, which would be stored in limited quantities on site. However, the Proposed Project would

incorporate all of the water quality protection measures discussed in **Section 4.14.2** because they also help reduce project effects on the water quality of ground water.

Since the Proposed Project site lies within an area of previously known contamination due to past activities, there is the potential of encountering contaminated soils during construction activities. To reduce this potentially significant adverse impact, the Authority would prepare and adhere to a SMP, which outlines procedures in case contaminated soil is encountered.

As stated in **Section 4.14**, current groundwater depth is approximately 250 feet below ground surface. Excavation activities during construction of the Proposed Project are not expected to occur below 25 bgs. Based on the depths to groundwater at the Proposed Project site, construction is not anticipated to encounter contaminated groundwater. However, if contaminated groundwater is encountered, dewatering may be needed, and the Authority would apply for coverage and adhere to the monitoring and reporting requirements under the NPDES permit. Construction of each of the cumulative projects would have been required or would be required to comply with applicable water quality regulations and permits. Therefore, with adherence to the LID Plan, permits, and SMP; construction of the Proposed Project is not expected to exceed groundwater quality standards or contaminate above levels that are considered protective of human health and the environment when combined with cumulative projects.

Operation of the Proposed Project would not interfere with groundwater remediation activities, associated with the San Fernando Valley Groundwater Basin Superfund Site, or Well Investigation Program (WIP) monitoring wells in the Detailed Study Area, as no wells are located onsite. Additionally, the Proposed Project would not involve groundwater extraction or other activities that could result in direct withdrawal or depletion of groundwater supplies. Water usage for the Proposed Project would be similar to usage under the No Action Alternative due to the expected forecasted increase in Airport operations and enplanements from the No Action Alternative. Operation of each cumulative project would be required to comply with all water quality regulations and permit requirements. Therefore, with adherence to the LID Plan, permits, and SMP; implementation of the Proposed Project is not expected to exceed groundwater quality standards or contaminate above levels that are considered protective of human health and the environment when combined with cumulative projects. The Proposed Project in combination with other past, present, or reasonably foreseeable projects at and adjacent to the Airport would not result in significant cumulative groundwater impacts when compared to the No Action Alternative.

4.15.7 Conclusion

The Authority's implementation of minimization measures, BMPs, and compliance with all permit requirements outlined for the resources in the previous sections, would ensure that the Proposed Project would not exceed any significance thresholds identified in FAA Orders 1050.1F or 5050.4B. Therefore, construction and operation of the Proposed Project in combination with the past, present, and reasonably foreseeable future projects would not result in any significant cumulative environmental impacts.

4.16 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

This section presents the analysis of potential impacts of irreversible and irretrievable commitment of resources as a result of the No Action Alternative and the Proposed Project. CEQ regulations¹⁰⁴ require that an environmental consequences discussion in an EIS include identification of any irreversible or irretrievable commitments of resources which would be involved in the Proposed Project.

An irreversible or irretrievable commitment of resources refers to "impacts on or losses to resources that cannot be recovered or reversed."¹⁰⁵ Examples of this include permanent conversion of wetlands and loss of cultural resources, soils, wildlife, or socioeconomic conditions,¹⁰⁶ in which the losses are permanent. Irreversible is a term that describes the loss of future options and applies to the "loss of production, harvest, or use of natural resources."¹⁰⁷ It applies primarily to the impacts of use of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity, that are renewable only over long periods of time.

4.16.1 No Action Alternative

Under the No Action Alternative, the Authority would not implement the proposed replacement terminal and ancillary projects. The Authority would continue to operate the Airport, perform maintenance, and use resources to serve forecast aviation demands.

¹⁰⁴ 40 C.F.R. § 1502.16.

¹⁰⁵ FAA. (2015). 1050.1F Desk Reference.

¹⁰⁶ Version 1.0 of the FAA 1050.1F Desk Reference included socioeconomic conditions as part of the irreversible or irretrievable commitment of resources. However, Version 2.0 of the FAA 1050.1F Desk Reference (released in February 2020) does not. Since this EIS began while Version 1.0 was in effect, this EIS is using socioeconomic conditions as a factor to consider.

¹⁰⁷ FAA. (2015). Order 1050.1F, *Environmental Impacts: Policies and Procedures*. July 2015.

4.16.2 Proposed Project

While the construction and operation of the Proposed Project would potentially increase the demand for Jet A, AvGas, unleaded gasoline, and diesel fuel, any increase in demand for fuel is expected to be minimal and would not exceed existing and future supplies. Any increase in airplane fuels is expected to match that of the No Action Alternative as this increase is due to the forecasted increase in operations which is the same under both scenarios. As described in **Section 1.3**, the Proposed Project's purpose and need is to ensure the replacement passenger terminal meets FAA Airport Design Standards.¹⁰⁸ As stated in **Section 1.2.3**, the passenger terminal building is not of significance in determining the operations capacity of an airport. The demand for air transportation is a function of the socioeconomic climate of the region served by the airport, not the attractiveness of a passenger terminal building. Thus, the Proposed Project is not an airport capacity-enhancing project. The Proposed Project would require the use of some natural and man-made resources. The construction of, and travel to and from, the Proposed Project site would require the consumption of petroleum products and petroleum-based electrical generation provided by the local power company. Commitment of these man-made resources would not be considered significant. As a result of implementing the Proposed Project, proposed construction activities would require the use of typical paving and construction materials such as sand, gravel, concrete, and asphalt. Metal wiring and plastic insulation would be used for new lighting. These materials are not in short supply and construction for the Proposed Project would not exceed the available supply of these materials. Construction activities would require natural resources such as fill material, asphalt, water, wood, or gravel. The demand for nonrenewable resources is not expected to exceed current or future supplies and, therefore, would not constitute an irreversible or irretrievable commitment of resources when compared to the No Action Alternative.

The Proposed Project is not expected to alter, contrast, or obstruct the existing views due to the existing similar-sized buildings within the General Study Area. The Proposed Project would not be inconsistent with the existing urban development within the General Study Area. Therefore, there is not expected to be a noticeable change to the urban environment when compared to the No Action Alternative.

As this chapter describes, there are no significant impacts and/or exceedance of any factors to consider as outlined in FAA Order 1050.1F as a result of

¹⁰⁸ FAA. (2014, February 26). Federal Aviation Administration, Advisory Circular 150/5300-13A, Change 1, *Airport Design*, Chapter 5.

implementing the Proposed Project. **Section 4.3**, Air Quality, **Section 4.4**, Biological Resources, **Section 4.7**, Hazardous Materials, Solid Waste, and Pollution Prevention, and **Section 4.14**, Water Resources contain mitigation, avoidance, and minimization measures as well as outline BMPs and compliance with regulations and permit requirements that would be implemented for the Proposed Project. Therefore, there would be no irreversible and/or irretrievable commitment of these resources when compared to the No Action Alternative. As discussed in **Section 4.8**, Historical, Architectural, Archeological, and Cultural Resources, there are no expected impacts to historic properties as a result of implementing the Proposed Project when compared to the No Action Alternative. As stated in **Section 4.8**, if previously unknown historic or cultural resources are discovered during construction, all construction activities would stop, within the immediate vicinity of the find, so that a qualified archaeologist can evaluate the resources and all parties (e.g., FAA, Authority, SHPO, etc.) have been consulted.

Additionally, the Authority would incorporate energy efficiency and sustainable measures to the extent possible into the Proposed Project.

4.16.3 Mitigation, Avoidance, or Minimization Measures

The Proposed Project is not expected to result in impacts on, or losses to, resources that cannot be recovered or reversed. The minimization measures included in **Section 4.8.5** describe the protocol for addressing unanticipated discoveries.

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