

No. _____

In the
UNITED STATES COURT OF APPEALS
For the Ninth Circuit

CITY OF MALIBU, California
Petitioner

v.

FEDERAL AVIATION ADMINISTRATION, MICHAEL G. WHITAKER, in his
official capacity as Administrator, Federal Aviation Administration, U.S.
DEPARTMENT OF TRANSPORTATION and PETE BUTTIGIEG, in his official
capacity as Secretary
Respondents

PETITION FOR REVIEW OF AGENCY ORDER

[Federal Rules of Appellate Procedure, Rule 15]
[49 U.S.C. § 46110(a)]

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Pursuant to 49 U.S.C. § 46110, Rule 15(a) of the Federal Rules of Appellate Procedure, and Circuit Rule 15-1, the City of Malibu (the “City” or “Malibu”) hereby petitions the United States Court of Appeals for the Ninth Circuit Court for review of the FAA’s decision signed on February 20, 2024 to apply a Categorical Exclusion/Record of Decision (CATEX/ROD) to May 2018 amendments that are incorporated in HUULL TWO, IRNMN TWO, and RYDRR TWO, the three Standard Terminal Arrivals (STARs) at Los Angeles International Airport. A copy of the CATEX/ROD is attached as Exhibit A to this Petition.

Dated: April 19, 2024

LEECH TISHMAN FUSCALDO & LAMPL

By: Steven M. Taber
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Attorneys for the City of Malibu, California

RULE 26.1 DISCLOSURE STATEMENT

Petitioner City of Malibu is a municipal corporation and not a “nongovernmental corporate entity.” Therefore, Petitioner is not required to file a corporate disclosure statement pursuant to Federal Rule of Appellate Procedure 26.1(a).

Dated: April 19, 2024

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EXHIBIT A



February 2024

**Final Air Traffic Environmental Review
and
Categorical Exclusion/Record of Decision**

**2018 Amendments to the
HUULL, IRNMN, and RYDRR Arrival Routes**

**Los Angeles International Airport
Los Angeles, California**

Prepared by:

**United States Department of Transportation
Federal Aviation Administration**

EXHIBIT A

NOTE: This Final Environmental Review relies on the FAA's Initial Environmental Review form from FAA Order JO 7400.2P. The Initial Environmental Review form provides basic information about the proposed action to better assist in preparing for the environmental analysis phase of a proposed action. Although it requests information in several categories, not all the data may be available initially; however, it does represent information, in accordance with FAA Order 1050.1, Environmental Impacts: Policies and Procedures, which ultimately will be needed for preparation of the appropriate environmental document. If the Instrument Flight Procedure Environmental Pre-Screening Filter is used for initiating the environmental review process, and it passes the initial screening, then the Environmental Review is unnecessary. Additional guidance on the identification of potential environmental impacts by environmental category is available in FAA Order 1050.1 Desk Reference.

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Section 0. Administrative Background and Court Rulings

This Federal Aviation Administration (FAA) environmental review was prepared by the Western Service Center, Operations Support Group. This review was conducted to consider the May 2018 amendments to three area navigation (RNAV) arrival routes at Los Angeles International Airport (KLAX). These types of procedures are commonly referred to as Standard Terminal Arrivals (STARs) and are the three arrival routes for flights arriving at KLAX from the west and northwest. The FAA originally established the arrival routes as a part of the 2016 Southern California Metroplex project (SoCal Metroplex project), specifically as the HUULL ONE ARRIVAL (RNAV) (HUULL ONE), IRNMN ONE ARRIVAL (RNAV) (IRNMN ONE), and RYDRR ONE ARRIVAL (RNAV) (RYDRR ONE). The FAA implemented amendments in May 2018 and the arrival routes were up-numbered to the HUULL TWO ARRIVAL (RNAV) (HUULL TWO), IRNMN TWO ARRIVAL (RNAV) (IRNMN TWO), and RYDRR TWO ARRIVAL (RNAV) (RYDRR TWO) as a result of publication.

Based on the findings of the environmental review as described in this document, the applicable categorical exclusion (CATEX) from FAA Order 1050.1F, Section 5.6.5 for the Action is:

i. Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas, and increases in minimum altitudes and landing minima. For modifications to air traffic procedures at or above 3,000 feet AGL, the Noise Screening Tool (NST) or other FAA-approved environmental screening methodology should be applied.

Background

The SoCal Metroplex project consisted of 153 satellite-based departures, arrivals, and other procedures at 6 major airports (Bob Hope/Hollywood Burbank, John Wayne/Orange County, Los Angeles International, Long Beach/Daugherty Field, Ontario International, and San Diego International) and 15 satellite airports. The SoCal Metroplex project improved the flexibility and predictability of air traffic routes through increased use of performance-based navigation. The SoCal Metroplex project was a key component in the implementation of FAA's Next Generation Air Transportation System.

In 2016, complying with the requirements of National Environmental Policy Act of 1969 (42 United States Code [U.S.C.] § 4321 *et seq.*) (NEPA), the FAA prepared an Environmental Assessment of the SoCal Metroplex project. As part of the SoCal Metroplex Environmental Assessment, the FAA conducted extensive public outreach before the 2016 implementation of the flight procedures, including the three original arrival routes, HUULL ONE, IRNMN ONE, and RYDRR ONE. The FAA released the Draft SoCal Metroplex Environmental Assessment for public review and comment on June 10, 2015. The public comment period for the Draft SoCal Metroplex Environmental Assessment was open for 120 days, through October 8, 2015, to allow for greater public participation. The FAA notified local, state, and Federal officials with constituents in the study areas; the FAA published notices of the Draft SoCal Metroplex Environmental Assessment's availability online in local newspapers, sent copies via email,

provided local libraries with copies, and conducted 11 public workshops. In addition, outreach was conducted with airports, elected officials, and government offices. In total, the FAA received over 4,000 comments on the Draft SoCal Metroplex Environmental Assessment.

On August 31, 2016, the FAA completed the Final SoCal Metroplex Environmental Assessment and signed the SoCal Metroplex Finding of No Significant Impact/Record of Decision.¹ On September 2, 2016, the FAA issued the notice of availability of the Final SoCal Metroplex Environmental Assessment and a Finding of No Significant Impacts/Record of Decision through the *Federal Register*.² The notice was sent to Federal and state agencies, local elected officials, study airports, libraries, and was published in major newspapers, online, and through email. The administrative process on the SoCal Metroplex Environmental Assessment has been closed since 2016. The procedures were implemented in phases from November 2016 through April 2017.

On September 2, 2016, after the FAA's environmental decision on the SoCal Metroplex project became final, nine parties filed petitions for review of the FAA's decision in the United States (U.S.) Court of Appeals for the Ninth and D.C. Circuits. The U.S. Court of Appeals for the District of Columbia consolidated four of those petitions for review. The FAA prevailed on those claims, including complaints about noise impacts at KLAX. See *Vaughn v. FAA*, 756 F. App. 8 (D.C. Cir. 2018).

Post-Implementation Review and Amendments

Next Generation procedures were designed and intended to make the National Airspace System inherently safer and more efficient. The SoCal Metroplex Next Generation procedures at KLAX were designed to procedurally separate aircraft, which eases controller workload by reducing aircraft reliance on radar and the need for controllers to provide vectors. During the post-implementation review of the HUULL ONE, IRNMN ONE, and RYDRR ONE procedures, the Design and Implementation team worked with the Air Traffic Control facilities with jurisdiction over the applicable airspace to evaluate whether the new or amended procedures and routes performed as expected and to verify that the procedures meet objectives for efficiency, safety, controller workload, and capacity as intended.

In accordance with post-implementation monitoring and evaluation guidance contained in FAA Order 7100.41, *Performance Based Navigation Implementation Process*, the Design and Implementation team proposed that the HUULL ONE, IRNMN ONE, and RYDRR ONE procedures be amended to improve aircraft sequencing, and to correct the procedures to meet updated FAA design criteria.³ Specifically, the original HUULL ONE, IRNMN ONE, and

¹ FAA Finding of No Significant Impact / Record of Decision for the SoCal Metroplex Environmental Assessment, August 2016.

https://www.faa.gov/air_traffic/community_engagement/socal/media/FONSI_ROD_160818_FINAL_Electronic_Signature.pdf, Accessed June 29, 2023.

² Federal Register Notice of Availability of the SoCal Metroplex Final Environmental Assessment and Finding of No Significant Impact / Record of Decision, September 7, 2016.

<https://www.federalregister.gov/documents/2016/09/07/2016-21413/notice-of-availability-of-the-southern-california-metroplex-final-environmental-assessment-and->, Accessed June 29, 2023.

³ Sequencing of aircraft means to space out the arriving and departing aircraft to achieve safe lateral and vertical Final Air Traffic Environmental Review and CATEX/ROD

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RYDRR ONE STARs were developed while FAA Order 8260.3B was in effect; they were published while FAA Order 8260.3C was in effect, and they were formally implemented while FAA Order 8260.3D was in effect. While FAA Order 8260.3B did not have a requirement for STARs to have an altitude at the end fix, FAA Order 8260.3C, FAA Order 8260.3D, and subsequent orders in the series did and do.⁴

In 2018, as part of the Design and Implementation team's post-implementation recommendations, the FAA amended the previously referenced three arrival procedures—HUULL ONE, IRNMN ONE, and RYDRR ONE—by changing altitudes, adding a waypoint, updating the procedures to include an altitude at the end of the STARs, and otherwise improving the procedures' compliance with current design criteria.⁵

The City of Los Angeles objected, and both parties reached an agreement whereby the City of Los Angeles did not have to file their petition within 60 days—as is usually required—so that the FAA could attempt to resolve the issues. The City of Los Angeles made three requests:

- 1) That the FAA impose a minimum altitude restriction of 6,000 feet (ft) above ground level (AGL) at the DAHJR waypoint between 10 p.m. and 6 a.m. local;
- 2) That FAA reinstitute charted visual flight procedures to KLAX Runways (RWY) 25 Left (L) and 25 Right (R), including a mandatory minimum of 6,000 ft AGL until DAHJR waypoint;
- 3) That FAA commit to deploying the Air Traffic Control computer automation tool known as "Terminal Sequencing and Spacing" at KLAX.

After a year of discussion, the FAA partially agreed to the first request, and rejected the second and third requests, at which time the City of Los Angeles filed its petition for review of the FAA's actions. The City of Los Angeles alleged a violation of NEPA, because the FAA did not document its application of a categorical exclusion (CATEX) to the 2018 amendments or otherwise document its compliance with Section 4(f) of the Department of Transportation (DOT) Act, or NHPA.

On July 8, 2021, the Ninth Circuit issued an unpublished memorandum where the Court held that the FAA violated NEPA, NHPA, and Section 4(f) of the DOT Act.⁶ The Court declined to vacate the amended flight procedures because of the disruptive consequences identified in an FAA declaration, but instead remanded the matter back to the FAA to undertake the proper NEPA

separation from other aircraft.

⁴ Fix is defined as a geographical position determined by visual reference to the surface, by reference to one or more radio navigational aids, by celestial plotting, or by another navigational device. FAA Aeronautical Information Manual. https://www.faa.gov/air_traffic/publications/atpubs/pcg_html/glossary-w.html. Accessed June 29, 2023.

⁵ Waypoint is defined as a predetermined geographical position used for route/instrument approach definition, progress reports, published visual flight rules (VFR) routes, visual reporting points or points for transitioning and/or circumnavigating controlled and/or special use airspace, that is defined relative to a very high frequency omnidirectional range / tactical air navigation facility (VORTAC), or in terms of latitude/longitude coordinates. FAA Aeronautical Information Manual. https://www.faa.gov/air_traffic/publications/atpubs/pcg_html/glossary-w.html. Accessed June 29, 2023.

⁶ See *City of Los Angeles v. Dickson*, No. 19-71581, 2021 WL 2850586 (9th Cir. July 8, 2021).
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analysis and NHPA and Section 4(f) consultation. On March 9, 2023, the Ninth Circuit issued a partial writ of mandamus, ordering the FAA to expedite its completion of the environmental review.

Scope of the Environmental Review

This environmental review was prepared by the FAA Western Service Center, Operations Support Group, to determine whether extraordinary circumstances exist which would preclude a CATEX as the appropriate level of environmental review for the Action, which is specifically the May 2018 amendments incorporated in the HUULL TWO, IRNMN TWO, and RYDRR TWO STARs. The environmental review fulfills the FAA's compliance with NEPA; implementing regulations issued by the Council on Environmental Quality (40 CFR, parts 1500-1508, updated May 2022); FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* (FAA Order 1050.1F); and FAA Order 7400.2P, *Procedures for Handling Airspace Matters*.

A CATEX refers to a category of actions that the FAA has determined, based on established methodology, do not individually or cumulatively have a significant effect on the human environment except in extraordinary circumstances. A CATEX is not an exemption or a waiver from NEPA; it is a level of NEPA review and compliance.

FAA Order 1050.1F, Section 5-6.5, Categorical Exclusions for Procedural Actions, includes the list of CATEXs involving establishment, modification, or application for airspace or air traffic procedures. Extraordinary circumstances are factors or circumstances in which a normally categorically excluded action may have a significant environmental impact that then requires further analysis in an Environmental Assessment or Environmental Impact Statement. For FAA actions, extraordinary circumstances exist when the action involves any of the circumstances described in Order 1050.1F, Paragraph 5-2.b., and has the potential for a significant impact.

The Action is an air traffic action only, with no ground-based activities. For this Action, the FAA considered the following factors, which, if they resulted in a significant impact, would preclude use of a CATEX in satisfying NEPA requirements for the Action:

- An adverse effect on cultural resources protected under the NHPA of 1966, as amended, 54 U.S.C. § 300101 *et seq.*;
- An impact on properties protected under Section 4(f) of the DOT Act;
- An impact on natural, ecological, or scenic resources of Federal, state, tribal, or local significance;
- An impact on noise levels of noise sensitive areas;
- An impact on air quality;
- Impacts on the quality of the human environment that are likely to be highly controversial on environmental grounds; and
- Likelihood to directly, indirectly, or cumulatively create a significant impact on the human environment.

FAA Order 1050.1F, paragraph 5-3, CATEX Documentation, states the extent of documentation

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for a CATEX determination should be tailored to the type of action involved and the potential for extraordinary circumstances. There is no prescribed format; however, the documentation should cite the CATEX(s) used, describe how an action fits within the category of actions described in the CATEX, and explain that there are no extraordinary circumstances that would preclude an action from being categorically excluded. This environmental review serves to describe how the CATEX applies to the Action and presents the analysis of extraordinary circumstances.

Air Traffic Control Tools

Vectoring techniques, speed control, altitude adjustments, and visual approaches are common tools used by Air Traffic Control to provide a safe and effective flow of traffic into an airport or transitioning through multiple Air Traffic Control sectors.

A vector is a heading issued by Air Traffic Control to an aircraft to provide navigational guidance by radar and supersedes other navigational guidance the aircraft may have been using, such as a STAR.

Altitude and speed control adjustments are often used for separation. Generally, aircraft must be either 1,000 ft apart vertically, or 3 miles apart laterally.

Visual approaches are also an option for the pilot-in-command and are accommodated by Air Traffic Control when traffic and weather permit. As implied in the name, it is authorization for the pilot to navigate visually to an airport, and—like a vector—supersedes other navigational guidance the aircraft may have been using.

There are many reasons these tools are used by Air Traffic Control; for example, they may need to vector an aircraft or change its speed to safely sequence it with traffic inbound from another direction. When using a vector, Air Traffic Control will often change the altitude of the aircraft to deconflict or sequence with other traffic. Once the sequence is established, Air Traffic Control may clear the aircraft for a published procedure or issue a visual approach to enable the aircraft to resume navigation to the airport for landing.

These Air Traffic Control techniques were evaluated in the SoCal Metroplex Environmental Assessment, and all have been utilized by Air Traffic Control since its implementation, but are not further evaluated in this environmental review, for reasons below.

When Air Traffic Control issues an aircraft flying a STAR a vector, an altitude, or a visual approach, the aircraft is no longer cleared via the STAR because it is now navigating outside of the defined lateral or vertical confines of the STAR. Instead, it is now under either Air Traffic Control's lateral and vertical direction or the pilot's own visual navigation.

Based on questions from various parties pertaining to the amended flight procedures, it appears there is still confusion on this point, particularly regarding aircraft originally navigating via the IRNMN ONE, HUULL ONE, and RYDRR ONE STARs.

A STAR procedure is a published route defined both laterally and vertically. If Air Traffic

Control issues a heading or altitude that is not part of the STAR, the pilot must consider the STAR canceled. Also, if a pilot requests to deviate from the STAR (usually as a result of weather-related issues), the aircraft is no longer on the STAR.

For example, refer to the IRNMN TWO procedure beginning at the JUUSE waypoint illustrated in **Figure 0** (figures are provided in **Appendix B**). As shown in the graphic, an aircraft on the IRNMN procedure must cross the JUUSE waypoint between 9,000 and 8,000 ft mean sea level (MSL). The aircraft then proceeds to the CLIFY waypoint where the aircraft must cross between 8,000 and 7,000 ft MSL. The aircraft then proceeds to the DAHJR waypoint, where the aircraft must cross at 6,000 ft MSL. The aircraft then continues to cross GADDO waypoint at 6,000 ft MSL. While on the IRNMN TWO procedure, all altitude restrictions listed on the procedure are mandatory for the aircraft. If Air Traffic Control issues any instruction that deviates from the altitudes or routing, the aircraft is no longer on the procedure and must be given alternative navigational guidance.⁷

As mentioned above, these Air Traffic Control techniques, including vectoring, were included in the original HUULL ONE, IRNMN ONE, and RYDRR ONE procedures that the FAA evaluated in the SoCal Metroplex Environmental Assessment, and all have been utilized by Air Traffic Control since implementation of the SoCal Metroplex project. The May 2018 amendments incorporated in the HUULL TWO, IRNMN TWO, and RYDRR TWO procedures do not make any changes to the vectoring and other Air Traffic Control techniques that were authorized and included in the original procedures, so they are not part of the Action that FAA has studied here.

⁷ When observing real-time or historical radar track data, due to the intricacies of barometric pressure, radar measuring equipment, aircraft equipment, and other variations, there is an allowable tolerance of 299 ft when monitoring radar altitude readouts. Thus, an aircraft issued 6,000 ft is not considered deviating from its assigned altitude until it is at or below 5,700 ft, or at or above 6,300 ft.

Section 1. Proposed Project Description

Describe the proposed project. Include general information identifying procedure(s) and/or airspace action(s) to be implemented and/or amended. Identify the associated airports and/or facilities.

The May 2018 amendments incorporated in the HUULL TWO, IRNMN TWO, and RYDRR TWO STARs are the Action for this environmental review, and the details of the Action are discussed below.

The FAA periodically updates procedures for safety and efficiency. Procedure design is intended to be uniform, and procedures are routinely updated to comply with changes to FAA criteria, which results in a high level of safety and efficiency in air traffic management across the country. In the case of the HUULL ONE, IRNMN ONE, and RYDRR ONE STARs, the FAA determined that amendments to these procedures were necessary to de-conflict the flight paths with aircraft transitioning from the en route airway structure to the terminal airway structure, and to ensure separation from adjacent arrival air traffic at KLAX and surrounding airports. The May 2018 amendments incorporated in the HUULL TWO, IRNMN TWO, and RYDRR TWO STARs included specific types of changes, such as:

- **Altitude changes** – Procedure altitudes were changed to de-conflict with aircraft transitioning from the en route airway structure and ensure separation from adjacent arrival aircraft.
- **Altitude restriction** – The previous procedures incorrectly did not include an altitude at GADDO, the termination fix of the STAR, where the procedure ends. FAA Order 8260.3D requires an altitude at the termination fix.^{8 9} The Order requires that if the STAR authorizes radar vectors after the termination fix or navigational aid, an altitude is required at the termination fix or navigational aid; and if the STAR does not join an approach procedure, then the altitude authorized at the termination fix or navigational aid should be a mandatory altitude.

The altitude restrictions are not considered *altitude changes*. The previous procedure did not include a published altitude restriction at GADDO waypoint; this means aircraft continued at the last assigned altitude, which was 6,000 ft MSL at the previous fix, DAHJR waypoint. Since the same altitude (6,000 ft MSL) is added (by the Action) at GADDO waypoint, the actual altitude flown from DAHJR waypoint to GADDO waypoint remains the same. The purpose of adding the altitude restriction is to bring the procedures into compliance with FAA criteria.

- **Speed restrictions** – Speed restrictions were amended to enhance safety and efficiency in sequencing arriving aircraft.

⁸ Refers to FAA Order 8260.3D, *United States Standard for Terminal Instrument Procedures*, para. 2-2-7f (2).

⁹ FAA Order 8260.3C was in effect until February 16, 2018, when FAA Order 8260.3D was issued. (FAA Order 8260.3D has since been superseded by FAA Order 8260.3E, issued in September 2020.) Each version of the Order has the same requirement for an altitude at the termination fix.

The Action did not include changes to the lateral flight paths of aircraft along the procedure routes from the initial design of the procedures evaluated in the SoCal Metroplex Environmental Assessment. Upon publication, the names of the amended procedures were up-numbered (e.g., the HUULL ONE ARRIVAL [RNAV] was up-numbered to the HUULL TWO ARRIVAL [RNAV]).

- 1.1.** Describe the operational and/or environmental benefits that may result if the proposed action is implemented.

The May 2018 amendments incorporated in the HUULL TWO, IRNMN TWO, and RYDRR TWO STARs improved the predictability of flight routes and enhanced safety and efficiency in the National Airspace System. The procedure amendments were determined to be necessary for the procedures to comply with updated FAA safety and design criteria.

- 1.1.1.** Is a reduction of fuel cost and/or energy consumption anticipated as a result of the proposed action?

☐ Yes ☒ No ☐ N/A

- 1.1.1.a.** If so, can it be quantified, and how?

☐ Yes ☐ No ☒ N/A

- 1.1.1.b.** If not quantifiable, describe the approximate anticipated benefits in lay terms.

Not applicable.

- 1.1.2.** Describe any additional operational and/or environmental benefits that may result from the proposed action.

Not applicable.

- 1.2.** Describe the existing procedure(s) (the no action alternative) in full detail. Provide the necessary chart(s) depicting the current procedure(s). Describe the typical fleet mix, including (if possible) the number and types of aircraft on the route (both annually and average day) and depict their altitude(s) along the route.

The number of operations at KLAX, and the typical fleet mix for the calendar year 2017 was the data set used to represent the No Action Alternative. Although FAA is preparing this environmental review in 2023, the amendments have been effective and flown since May 2018. To capture the No Action Alternative, it is necessary to examine data from 2017, before the amendments were implemented.

The FAA Operations Network is the source of FAA air traffic operational metrics for

public airports. The data from the FAA Operations Network reports at KLAX for each calendar year from 2017 to 2022 are presented in **Table 1** of **Appendix A** by type of operation/use.

The FAA Traffic Flow Management System Count Report contains data derived from the Air Traffic Airspace Lab's Traffic Flow Management System. **Table 2** of **Appendix A** details the approximate number of total arrival operations at KLAX annually from 2017 to 2022 by typical aircraft fleet mix weight classes from the FAA Traffic Flow Management System Count Report.

- 1.3. Describe the proposed action, providing the necessary chart(s) depicting changes. Describe anticipated changes to the fleet mix, numbers of aircraft on the new routes and their altitude(s), if any.

The May 2018 amendments incorporated in the HUULL TWO, IRNMN TWO, and RYDRR TWO STARs from their original designs (Action) are summarized in **Table 3** of **Appendix A**. Altitudes are specified in ft MSL, ft AGL, or as flight level (FL).¹⁰

The HUULL ONE procedure plate is illustrated in **Figure 1**, the HUULL TWO procedure plate is illustrated in **Figure 2** and is illustrated on a street map in **Figure 3** of **Appendix B**. The changes to the HUULL TWO from the HUULL ONE design are illustrated in **Figure 4** of **Appendix B**.

The IRNMN ONE is illustrated in **Figure 5** (two pages), and the IRNMN TWO is illustrated in **Figures 6** (two pages) and **7**. The changes to the IRNMN TWO from the IRNMN ONE design are illustrated in **Figure 8**. See **Appendix B**.

The RYDRR ONE is illustrated in **Figure 9** (two pages), and the RYDRR TWO is illustrated in **Figures 10** (two pages) and **11**. The changes to the RYDRR TWO from the RYDRR ONE design are illustrated in **Figure 12**. See **Appendix B**.

The procedure plates for the HUULL ONE, IRNMN ONE, and RYDRR ONE are provided in **Figure 1**, **Figure 5** (two pages), and **Figure 9** (two pages) of **Appendix B**, respectively—as they appeared in publication—and prior to the changes described in **Table 3** of **Appendix A**. The three procedures are illustrated in **Figure 13** of **Appendix B** with an overlay of 30 random days of flight tracks from May 2017 through April 2018 obtained from the FAA's Performance Data Analysis Reporting System (PDARS).

The study area is comprised of a one NM buffer around the procedure lines for all portions of the procedures that overfly land areas at or below altitudes of approximately (~) 20,000 ft AGL, as illustrated in **Figure 14** of **Appendix B**. An altitude of ~20,000 ft

¹⁰ In aviation, a flight level (FL) is an aircraft's altitude at standard air pressure and therefore is not necessarily the same as the aircraft's actual altitude, either above mean sea level (MSL) or above ground level (AGL). Aircraft altitudes at or above 18,000 feet will be referenced in FL.

AGL was determined to be conservative for this analysis per the guidance provided in FAA Order 1050.1F, B-1.3, *Affected Environment*.

The study area for the noise analysis of a proposed change in air traffic procedures or airspace redesign may extend vertically from the ground to 10,000 ft AGL, or up to 18,000 ft AGL if the proposed action or alternative(s) are over a national park or wildlife refuge where other noise is very low, and a quiet setting is a generally recognized purpose and attribute.

- 1.3.1.** Has airspace modeling been conducted using Sector Design Analysis Tool (SDAT), Aviation Environmental Screening Tool (AEST), Terminal Area Route Generation, Evaluation, and Traffic Simulation (TARGETS), or another airspace/air traffic design tool?

☒ Yes. Model: TARGETS ☐ No

If yes, provide a summary of the output from the modeling.

Figures 3, 7, 8, 11, 13, and 14 were generated in TARGETS. The base maps for **Figures 4, 8, and 12** were also generated using TARGETS. See **Appendix B**.

- 1.3.2.** Will there be actions affecting changes in aircraft flights between the hours of 10 p.m. – 7 a.m. local?

☐ Yes ☒ No

Describe:

The number of flights that occur between the hours of 10:00 p.m. and 7:00 a.m. did not change as a result of the implementation of the procedure amendments.

- 1.3.3.** Are any noise abatement programs presently in effect for the affected airport(s), formal or informal?

☒ Yes ☐ No ☐ N/A

Describe:

The following are elements of the KLAX noise abatement program per the Los Angeles World Airports website.¹¹

Over-Ocean Operations Procedure

From midnight to 6:30 a.m., all aircraft arriving at KLAX must approach from over the ocean unless the FAA's Air Traffic Control determines that weather or airport/air traffic operational conditions make it unsafe for such operations. This procedure, originally implemented in 1973, provides close-in communities to the east of the airport with some noise relief from arriving aircraft during the noise sensitive early morning hours.

¹¹ Los Angeles World Airports Noise Management Program. <https://www.lawa.org/lawa-environment/noise-management/lawa-noise-management-lax>, accessed February 6, 2024.

When over-ocean operations procedures are in effect, the airport would take aircraft off of the IRNMN, RYDRR, and HUULL procedures, and would instead direct aircraft to approach the airport from the west. The Action does not affect over-ocean operations procedures.

Preferential Runway Use Procedure

During the daytime and evening hours (between 7 a.m. and 10 p.m.) KLAX prefers that the outer runways (closer to neighboring communities) are reserved for arrivals and that the inner runways (closer to the terminals) are used for departures—which are usually louder than arrivals. During noise sensitive hours (between 10 p.m. and 7 a.m.), Air Traffic Control maximizes the use of the inner runways and taxiways for all operations to lessen community noise impacts.

KLAX typically lands aircraft on the outer runways (25L and 24R), while departing aircraft on the inner runways (25R and 24L) in an effort to minimize noise for the departure aircraft as best as they can. The arrivals are significantly quieter than the departures. The Action does not affect preferential runway use.

Early Turn Notification Program

To minimize noise in residential communities along the north and south airport boundaries, pilots of all aircraft departing toward the west (over the ocean) must fly straight out until past the shoreline before beginning any turns, unless specifically instructed otherwise by Air Traffic Control. Noise management section staff regularly monitor all early turns to the north and south and use recordings of communications with pilots to verify whether Air Traffic Control instructed the early turns. The staff issue notification letters with supporting graphics to airlines that deviate from this procedure. A monthly report is also generated for local communities, the FAA, and other interested parties. The operators of the aircraft are notified of any early turns they may have committed. The airlines are asked to investigate each incident and respond to Los Angeles World Airports with an explanation of why the incident occurred and what the airlines have done or will do to correct the problem for future departures.

Restriction on Engine Run-Ups between 11 p.m. and 6 a.m.

Departing and arriving aircraft are not the only sources of noise. All aircraft require regular engine maintenance and testing. Los Angeles World Airports requires that all idle engine checks and run-ups (engine tests) be conducted for the minimum time required to accomplish the necessary maintenance or preflight checks, with auxiliary power units also operated as minimally as possible. Run-ups of mounted aircraft engines (for maintenance or test purposes) are prohibited between 11 p.m. and 6 a.m. Maintenance or test running of jet engines not mounted on aircraft is prohibited unless performed in a test cell of adequate design. Airport operations staff regularly inspects the airfield area and tenant facilities. If they observe any unauthorized run-up activity during the nighttime

hours noted above, they will halt the operation as necessary. Noise management installed a special monitor at the FedEx maintenance facility to specifically monitor ground run-ups and evaluate the noise impact of this activity. The monitor consists of a camera and noise microphone to capture such operations.

In-Flight Monitoring Program

Noise management staff monitor specific arrival and departure procedures for compliance with described minimum altitudes, location of aircraft, and other requirements established by the FAA or contained in KLAX's Aircraft Noise Abatement Operating Procedures and Restrictions (<https://www.lawa.org/-/media/lawa-web/lawa-rules-and-reg/KLAX-rules/section-13---noise-abatement.ashx>). This is accomplished using one of the world's largest, most comprehensive noise monitoring systems.

Staff collect noise, flight track, and operations data as well as in-flight pilot and tower radio audio records. This on-going program is referred to as the In-Flight Monitoring Program and monitors adherence to specific flight operations.

- 1.3.4.** Will airport preferential runway configuration use change as a result of the proposed action?

☐ Yes ☒ No ☐ N/A

Explain:

Forty-four percent of departure operations at KLAX utilize RWY 24R and 38 percent utilize RWY 25L. The KLAX preferential RWY configuration did not change as a result of the Action. The purpose of the KLAX Preferential RWY Use Policy is to reduce noise impacts from KLAX operations on the communities surrounding the airport, and Los Angeles World Airports. The Policy includes a preference for using the inboard runways (RWYs 6R/24L and 7L/25R), or those runways furthest from the communities directly north and south of the airport, for departures at all times. During the more noise sensitive nighttime hours, between 10:00 p.m. and 7:00 a.m., the preferential use of inboard runways is expanded further to include both departures and arrivals. Finally, between midnight and 6:30 am, the Policy utilizes a contra-flow operation, also known as the Over-Ocean Operations Policy, which directs both arrival and departure operations over the ocean rather than over the communities east of the airport.

- 1.3.5.** Is the proposed action primarily designed for Visual Flight Rules (VFR), Instrument Flight Rules (IFR) operations, or both?

☐ VFR ☒ IFR ☐ Both

If the proposed action specifically involves a charted visual approach (CVA) procedure, provide a detailed local map indicating the route of the CVA, along with a discussion of the rationale for how the route was chosen.

Not applicable.

1.3.6. Will there be a change in takeoff power requirements?

☐ Yes ☒ No

If so, what types of aircraft are involved, i.e., general aviation propeller-driven versus large air carrier jets?

Not applicable.

1.3.7. Will all changes occur over 3,000 feet above ground level (AGL)?

☒ Yes ☐ No

Refer to **Table 3** of **Appendix A** for a description of all the procedure changes and their respective altitudes. **Figures 4, 8, and 12** of **Appendix B** illustrate the changes made to each procedure.

1.3.8. What is the lowest altitude on newly proposed routes or on existing routes that will receive an increase in operations?

The number of operations will not increase as a result of the procedure amendments. An increase in operations is not part of the purpose and need of the Action.

1.3.9. Will there be actions involving civil jet aircraft arrival procedures between 3,000-7,000 feet AGL or departures between 3,000-10,000 feet AGL?

☒ Yes ☐ No

Section 2. Purpose and Need

- 2.1. Describe the purpose and need for the proposed action. Present the problem being addressed and describe what the FAA is trying to achieve with the proposed action. The purpose and need for the proposed action must be clearly explained and stated in terms that are understandable to individuals who are not familiar with aviation or commercial aerospace activities. If detailed background information is available, summarize here and provide a copy as an attachment to this review.

As stated in Section 1, procedure design is intended to be uniform and procedures are routinely updated to comply with changes to FAA criteria, which results in a high level of safety and efficiency in air traffic management across the country. In May 2018, the FAA amended the HUULL ONE, IRNMN ONE, and RYDRR ONE STARs to improve and facilitate sequencing of arrival aircraft, which brought the procedures into compliance with FAA Orders, as well as improved de-confliction between these procedures and other aircraft in the vicinity. The amended procedures are the HUULL TWO, IRNMN TWO, and RYDRR TWO STARs. The types of changes include:

- **Altitude Changes** – The purpose of the altitude changes is to de-conflict with aircraft transitioning from the en route airway structure and to ensure separation from adjacent arrival air traffic.
- **Altitude restrictions** – The purpose of the altitude restrictions is to reduce air traffic control workload by coding the safe minimum and/or maximum altitude at those points of the procedure routes into the navigation procedures without extraneous controller coordination, and to bring the procedures into compliance with certain FAA flight procedure criteria.
- **Speed Restrictions** – The purpose of the speed restrictions is to enhance safety and efficiency in the sequencing of arriving aircraft.

- 2.1.1. Is the proposed action the result of a user or community request or regulatory mandate?

☐ Community Request ☒ Regulatory Mandate ☐ User Request ☒ Other

- 2.1.2. If not, describe what necessitates this proposed action:

In addition to the regulatory mandate necessitating the addition of an altitude restriction at GADDO waypoint, the post-implementation review of the HUULL ONE, IRNMN ONE, and RYDRR ONE STARs included a review by the Design and Implementation team and the Air Traffic Control facilities that had jurisdiction over the applicable airspace to ensure that the procedures performed as expected and verified that the new procedures and/or routes met objectives for efficiency, safety, controller workload, and capacity as intended. The Design and Implementation team proposed the HUULL ONE, IRNMN ONE, and RYDRR ONE STARs be amended to improve and facilitate sequencing of arrival aircraft, bring the procedures into compliance with FAA Orders, as well as improve de-confliction between these procedures and other aircraft in the vicinity.

Section 3. Alternatives

3.1. Are there alternatives to the proposed action?

☒ Yes ☐ No

If yes, describe any alternatives to the proposed action.

The FAA considered two alternatives: the Action and the No Action Alternative. The alternatives analysis is consistent with Council on Environmental Quality regulations and FAA guidance provided in FAA Order 1050.1F.

The No Action Alternative was comprised of the HUULL ONE, IRNMN ONE, and RYDRR ONE STARs. See published procedure charts in **Figure 1**, **Figure 5**, and **Figure 9** of **Appendix B**, respectively. The procedure charts depict the altitudes for the originally published designs of the procedures.

The published procedure charts for the HUULL TWO, IRNMN TWO, and RYDRR TWO STARs are provided in **Figure 2**, **Figure 6**, and **Figure 10** of **Appendix B**, respectively.

3.2. Please provide a summary description of eliminated alternatives and the reasons for their elimination.

The FAA's flight procedure design process is iterative, so iterations that were considered during the design phase of the project that do not achieve FAA performance and safety criteria were eliminated from consideration and were not carried forward for further environmental review. The only alternative to the Action Alternative is the No Action Alternative, and the No Action Alternative does not meet the purpose and need of the Action Alternative. Specifically, the No Action Alternative (reverting to the original procedure designs from 2017) does not meet FAA criteria and standards for procedure design. Although the Action Alternative consists of minor amendments to the original 2017 procedure designs, the Action is the preferred alternative for air traffic safety, while the No Action Alternative would not meet current standards and would retain unnecessary challenges in the sequencing of aircraft, reducing air safety. As mentioned in Section 0, sequencing of aircraft means to space out the arriving and departing aircraft to achieve safe lateral and vertical clearance from other aircraft.

Section 4. Environmental Review and Evaluation

The determination of whether a proposed action may have a significant environmental effect is made by considering requirements applicable to the specific environmental impact categories discussed below (see FAA Order 1050.1, Appendix B).

4.1. Describe the Affected Environment

4.1.1 Describe the existing land use, including noise sensitive areas (if any) in the vicinity of the proposed action.

KLAX is a public airport located in Los Angeles County, California. Land use in the immediate vicinity surrounding the airport is industrial and residential. Land cover for the study area was reviewed using the U.S. Environmental Protection Agency's (EPA) NEPAassist tool, as illustrated in **Figure 15 of Appendix B**.¹² The land use descriptions below focus on general land use in the vicinity of the May 2018 amendments incorporated in the HUULL TWO, IRNMN TWO, and RYDRR TWO STARs.

HUULL TWO STAR:

Aircraft transitioning from the en route airway structure join the HUULL TWO procedure at the TOKIO waypoint, which is over the Pacific Ocean. The flight path heads southeast crossing over a sparsely populated rural area of Santa Barbara County toward the HUULL waypoint, which is also over the Pacific Ocean. Aircraft cross the HUULL waypoint at or below (AOB) 23,000 ft MSL (~23,000 AGL). The procedure flight path then turns east towards the GNZZO waypoint, crossing the GNZZO waypoint between 13,000 and 14,000 ft MSL (~13,000 and 14,000 ft AGL). From the GNZZO waypoint, the flight path continues east, crossing the shoreline and then residential areas in Santa Monica, Culver City, and Los Angeles, continuing on to GADDO waypoint.

IRNMN TWO STAR:

Aircraft transitioning south from the en route airway structure join the IRNMN TWO procedure at the BURGL waypoint, FRASR waypoint, or REBRG waypoint. The segments from the BURGL waypoint and the REBRG waypoint join at the DOUIT waypoint with a minimum en route altitude of 14,000 to 17,000 ft MSL (~11,500 to 14,500 ft AGL). The southerly flight path between the DOUIT waypoint and the IRNMN waypoint crosses over sparsely populated mountainous terrain of the Carrizo Plain National Monument. The Los Padres National Forest lies ~11 NM to the west and south, and the city of Bakersfield lies ~37 NM to the east. The segment from the FRASR waypoint joins the procedure at the IRNMN waypoint crossing over mountainous terrain of the Los Padres National Forest and the Hopper Mountain National Wildlife Refuge. Land use along the flight path transitions from sparsely populated mountainous terrain to agriculture uses and residential areas, then crosses the coastline near the BAYST

¹² EPA NEPAassist, <https://nepassisttool.epa.gov/nepassist/nepamap.aspx>. Accessed June 1, 2023.
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waypoint, which is over the Pacific Ocean. From the BAYST waypoint, the flight path continues east over the Pacific Ocean, then crosses the shoreline and overflies residential areas in Santa Monica, Culver City, and Los Angeles, continuing on to GADDO waypoint.

RYDRR TWO STAR:

Aircraft transitioning east from the en route airway structure join the RYDRR TWO procedure at CERNL waypoint, ELKEY waypoint, or SNAXX waypoint, which are all over the Pacific Ocean. The portion of the procedure that starts with the ELKEY waypoint contains a segment from EESSA waypoint to GNKEE waypoint which crosses over the unpopulated Anacapa Island of the Channel Islands National Park, crossing GNKEE waypoint between 12,000 and 13,000 ft MSL (~12,000 – 13,000 ft AGL). Both procedure segments then continue east and cross the shoreline at the city of Oxnard. The two segments join at the RYDRR waypoint at 11,000 ft MSL (~10,950 ft AGL) over agricultural areas of the city of Camarillo. The flight path between the RYDRR waypoint and BAYST waypoint crosses over agricultural areas and sparsely populated Santa Monica Mountains. From the BAYST waypoint, the flight path continues east over the Pacific Ocean, then crosses the shoreline and overflies residential areas in Santa Monica, Culver City, and Los Angeles, continuing on to GADDO waypoint.

- 4.1.2.** Will the proposed action introduce air traffic over noise sensitive areas not currently affected?

☐ Yes ☒ No

Describe:

The Action is limited to minor amendments of existing flight procedures. None of the amendments changed lateral flight paths, and no new areas are overflowed as a result of the Action. There is only one minor adjusted altitude restriction over land at IRNMN waypoint, from AOB 16,000 ft MSL to between 12,000 and 16,000 ft MSL, which will have no effect on noise sensitive areas. The addition of an altitude restriction of 6,000 ft MSL at GADDO waypoint did not affect altitudes of aircraft flying the STARs because aircraft were already instructed to fly at 6,000 ft MSL at the previous waypoint on the route (DAHJR waypoint) in the original design of the procedures. Refer to **Section 1**. In sum, the Action did not negatively affect air traffic over noise sensitive areas.

Note: An area is noise sensitive if aircraft noise may interfere with the normal activities associated with the use of the land. Normally, noise sensitive areas include residential, educational, health, and religious structures and sites, and parks, recreational areas, areas with wilderness characteristics, wildlife refuges, and cultural and historical sites. See FAA Order 1050.1F, Section 11-5, *Definitions*, for the full definition of noise sensitive areas.

4.2. Environmental Consequences

As stated in FAA Order 1050.1F, Paragraph 5-2.b., extraordinary circumstances exist when a proposed action meets both of the following criteria:

4.2.a. Involves any of the following circumstances below; and

4.2.b. May have a significant impact (see 40 CFR 1508.4).

The determination of whether an action may have a significant environmental effect is made by considering any requirements applicable to the specific resource (See FAA Order 1050.1F, Paragraph 4-3 and Exhibit 4-1).

The use of a CATEX to satisfy NEPA is precluded if the action involves any of the circumstances described in Order 1050.1F, Paragraph 5-2.b., and has the potential for significant impact.¹³ The determination of whether an action may have a significant environmental impact under NEPA is made by considering the relevant environmental impact categories and comparing impacts to the FAA's thresholds of significance, where applicable, as well as any other relevant federal laws and statutes, Executive Orders, and regulations outlined in FAA Order 1050.1F.

There are 14 environmental impact categories identified by FAA Order 1050.1F. Only those areas where there may be significant environmental impacts caused by the Action, or where there are uncertainties which require evaluation are discussed in this document.

The Action does not involve land acquisition, physical disturbance, or construction activities. Furthermore, there is no anticipated increase in the number of aircraft operations at KLAX associated with the Action. Given the limited scope of the Action, the following environmental impact categories were assessed and were considered to have negligible or non-existent effects from the Action, and in accordance with Council on Environmental Quality regulations, did not warrant further analysis:

- Biological Resources
- Climate
- Coastal Resources
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Land Use
- Natural Resources and Energy Supply
- Socioeconomic Impacts and Children's Environmental Health and Safety Risks

¹³ Refer also to the Council on Environmental Quality's Chapter V. definition for *Categorical Exclusion* in 40 CFR § 1508.4.

- Water Resources (including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

4.2.1. Air Quality

Has research been conducted to identify areas of concern or communication with air quality regulatory agencies to determine if the affected area is a non-attainment area (an area which exceeds the Clean Air Act National Ambient Air Quality Standards (NAAQS) for the following criteria air pollutants: ozone, carbon monoxide, lead, particulate matter, sulfur dioxide, or nitrogen dioxide) or maintenance area (an area which was in non-attainment but subsequently upgraded to an attainment area) concerning air quality?

☒ Yes ☐ No

Comment:

This section considers the potential for the Action to have impacts on air quality that could preclude use of a CATEX. Any air quality impacts are the result of increased emissions from aircraft using the amended procedures as compared to the No Action Alternative; there are no other emissions sources associated with the Action. No additional operations resulted from the Action.

According to FAA Order 1050.1F, Exhibit 4-1, an emissions impact is significant if “[t]he action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards, as established by the EPA under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.”

Under section 176(4) of the Clean Air Act (42 U.S.C. § 7506(c)) and EPA regulations at 40 CFR Parts 51 and 93 (commonly referred to as the General Conformity Rule), the FAA must ensure that its activities do not cause or contribute to new violations of the National Ambient Air Quality Standards; worsen existing violations of the National Ambient Air Quality Standards; or delay attainment of the National Ambient Air Quality Standards. When developing the General Conformity Rule, the EPA recognized that many actions conducted by Federal agencies do not result in substantial increases in air pollutant emissions in nonattainment and maintenance areas. Therefore, the EPA established threshold levels (also referred to as *de minimis* levels) for emissions of each of the criteria pollutants. When the sum of the increases from direct and indirect emissions of a project would be less than the *de minimis* levels, a project would not require a general conformity determination.

The General Conformity Rule also allows Federal agencies to develop a list of actions that are presumed to conform to a State Implementation Plan.¹⁴ This can

¹⁴ As required by the Clean Air Act, a State Implementation Plan is a collection of regulations and documents used by a state, territory, or local air district to reduce air pollution in areas that do not meet the National Ambient Air Quality Standards.

be done by clearly demonstrating that the total of direct and indirect emissions from these types of activities would not cause or contribute to any new violation of any standard in any area; interfere with provisions in the applicable State Implementation Plan for maintenance of any standard; increase the frequency or severity of any existing violation of any standard in any area; or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area, including emission levels specified in the applicable State Implementation Plan. Alternatively, Federal agencies can establish actions that are presumed to conform by providing documentation that emissions from these types of actions are below the applicable *de minimis* levels.

The FAA published a list of Presumed to Conform activities in the *Federal Register* on July 30, 2007.¹⁵ That list exempts the conformity-determination requirement from all “Air Traffic Control Activities and Adopting Approach, Departure and Enroute Procedures for Air Operations.” The exemption does not only apply above the mixing height. The Federal Register notice explains that longstanding research indicates that any operations above 1,500 ft AGL have “little if any effect on emissions and ground concentrations.” Operations at that low altitude are tightly constrained by any number of factors. “Accordingly, air traffic actions below the mixing height are also presumed to conform when modifications to routes and procedures are designed to enhance operational efficiency, increase fuel efficiency, or reduce community noise impacts by means of thrust reductions.” *Id.*

Air quality nonattainment and maintenance areas in the study area were reviewed using NEPAassist as illustrated in **Figure 16 of Appendix B**.

No projects or proposals have been identified that, when combined with the Action, violate any aspect of the current State Implementation Plan or threaten the attainment status of the region. In addition, no projects or proposals have been identified that, when combined with the Action, have substantial greenhouse gas emissions or lead to a violation of any Federal, state, or local air quality regulation. The cumulative impact of this action on the global climate when added to other past, present, and reasonably foreseeable future actions is currently not scientifically predictable.

According to the International Energy Agency, aviation contributed approximately two percent of global carbon dioxide (CO₂) emissions in 2022.¹⁶ Actions are underway within the U.S. and by other nations to reduce aviation's contribution to climate change. Such measures include new aviation related technologies to reduce emissions and improve fuel efficiency, renewable alternative fuels with a lower carbon footprint, more efficient air traffic

¹⁵ Refer to Federal Register Volume 7, No. 145, 41565-41580. <https://www.govinfo.gov/content/pkg/FR-2007-07-30/pdf/07-3695.pdf>, accessed June 1, 2023.

¹⁶ International Energy Agency, <https://www.iea.org/energy-system/transport/aviation>. Accessed June 1, 2023.
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management, market-based measures and environmental regulations including an aircraft CO₂ standard. At present, there are no calculations that state the extent to which measures, individually or cumulatively, may affect aviation's CO₂ emissions. The FAA, with support from the U.S. Global Change Research Program and its participating Federal agencies (e.g., National Aeronautics and Space Administration [NASA], National Oceanic and Atmospheric Administration [NOAA], EPA, and the U.S. Department of Energy [DOE]), developed the Aviation Climate Change Research Initiative in an effort to advance scientific understanding of regional and global climate impacts of aircraft emissions, with quantified uncertainties for current and projected aviation scenarios under changing atmospheric conditions.

Evaluation: Will implementation of proposed action result in an impact on air quality or a violation of local, state, tribal, or federal air quality standards under the Clean Air Act amendments of 1990? (See FAA Order 1050.1, Paragraph 5-2.b.(8), the Air Quality Handbook, and 1050.1 Desk Reference, Chapter 1 for details on how to make the determination.)

☐ Yes ☒ No

Comment:

Refer to Section 4.2.1 above. The FAA's Presumed to Conform list includes "Air Traffic Control Activities and Adopting Approach, Departure and En route Procedures for Air Operations." Air Traffic Control activities are defined for this purpose as "actions that promote the safe, orderly, and expeditious flow of aircraft traffic, including airport, approach, departure, and en route Air Traffic Control. Airspace and air traffic actions (e.g., changes in routes, flight patterns, and arrival and departure procedures) are implemented to enhance safety and increase the efficient use of airspace by reducing congestion, balancing controller workload, and improving coordination between controllers handling existing air traffic, among other things." The FAA determined that project-related aircraft emissions released into the atmosphere below the inversion base for pollutant containment, commonly referred to as the "mixing height" (generally 3,000 ft AGL), can be presumed to conform when modifications to routes and procedures are designed to enhance operational efficiency (i.e., to reduce miles flown by reducing delays), increase fuel efficiency, or reduce community noise impacts by means of engine thrust reductions. As the purpose and need of the Action was to improve the safety and efficiency of the referenced flight procedures, the Action falls within the FAA's Presumed to Conform list of covered air traffic related activities.

4.2.2. Biological Resources (including Marine Mammals; Wildlife and Waterfowl; Endangered/Threatened Species; Critical Habitat)

4.2.2.1. Are wildlife and/or waterfowl refuge/management areas, protected or critical habitats within the affected area of the proposed action?

☒ Yes ☐ No

Identify:

The EPA's NEPAAssist tool and the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation database were reviewed to identify endangered, threatened, or candidate species and is part of the project file.¹⁷ Critical habitats identified in the study area, during the course of this review, are illustrated in **Figure 17** of **Appendix B**.

- 4.2.2.2. If so, has there been any communication with the appropriate wildlife management regulatory agencies (federal or state) agencies to determine if endangered or protected species inhabit the area?

☐ Yes ☒ No

If yes, identify endangered or protected species.

- 4.2.2.3. At what altitude would aircraft overfly these habitats?

Minimum aircraft altitudes for the procedure waypoints in the study area relative to the identified critical habitats are provided for reference in **Figure 17** of **Appendix B**.

- 4.2.2.4. During what times of the day would operations be more/less frequent?

A change in the number of aircraft operations, including those occurring between 10 p.m. and 7 a.m., and the aircraft fleet mix is not part of the purpose and need of the Action and is not anticipated.

Evaluation: Will implementation of the proposed action result in an impact on natural, ecological or biological resources of federal, tribal, state, or local significance (for example, federally listed or proposed endangered, threatened, or candidate species or proposed or designated critical habitat under the Endangered Species Act)? (See FAA Order 1050.1, Paragraph 5-2.b.(3), and 1050.1 Desk Reference, Chapter 2 for details on how to make the determination.)

- 4.2.2.a. ☐ Yes

Comment:

- 4.2.2.b. ☒ No. An impact to biological resources is not anticipated. The USFWS's Information for Planning and Consultation database identified 11 threatened or endangered bird species that could potentially be located within the study area, including: California Condor, California Least Tern, Coastal California Gnatcatcher,

¹⁷ USFWS's Information for Planning and Consultation Database. <https://ipac.ecosphere.fws.gov/location/index>. Accessed May 23, 2023.

Hawaiian Petrel, Least Bell's Vireo, Light-footed Clapper Rail, Marbled Murrelet, Short-tailed Albatross, Southwestern Willow Flycatcher, and Yellow-billed Cuckoo. In addition, the USFWS's Information for Planning and Consultation database identified 47 migratory bird species that could potentially be located within the project study area. The study area falls within the Pacific Flyway, a major north-south flyway for migratory birds. Every year, migratory birds travel some or all of this distance in spring and fall, following food sources, heading to breeding grounds, or traveling to overwintering sites. The Action is an air traffic action only. Based on the analysis of flight track data, aircraft are currently overflying this area of the Pacific Flyway (**Figure 13 of Appendix B**).

The greatest potential for impacts to wildlife species would result from wildlife strikes on bird and bat species at altitudes below 3,000 ft AGL. Refer to **Table 3 of Appendix A** for a description of the Action. All changes made in the IRNMN TWO, HUULL TWO, and RYDRR TWO STARs occurred at altitudes above 3,000 ft AGL.

As the Action is an air traffic action only and is not intended to increase the number of aircraft operations or change the aircraft fleet mix, and because no new areas would be overflowed, the Action is not anticipated to result in an impact to biological resources.

4.2.3. Climate

***NOTE:** The FAA has not established a significance threshold for climate. The Council on Environmental Quality (CEQ) has noted that "...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.¹⁸" Accordingly, it is not useful to attempt to determine the significance of such impacts. (See FAA Order 1050.1, Desk Reference, Chapter 3.)*

Since the Action only restricts altitudes at some points along the procedures and did not change flight paths laterally, there is no anticipated increase in greenhouse gas emissions in connection with the Action.

4.2.4. Coastal Resources

***NOTE:** Coastal resources include both coastal barriers and coastal zones.*

4.2.4.1. Are there designated coastal resources in the affected area?

☒ Yes ☐ No

¹⁸ Draft NEPA Guidance on *Consideration of the Effects of Climate Change and Greenhouse Emissions*, Council on Environmental Quality (2010).

Identify:

There are California coastal resources located near the study area.

- 4.2.4.2.** Will implementation of the proposed action result in any construction or development or any physical disturbances of the ground with the potential to affect coastal resources?

☐ Yes ☒ No

Evaluation: Will implementation of the proposed action result in an impact to coastal resources? (See FAA Order 1050.1, Paragraph 5-2.b.(4), and 1050.1 Desk Reference, Chapter 4 for details on how to make the determination.)

4.2.4.a ☐ Yes.

Comment:

4.2.4.b ☒ No. An impact to coastal resources is not anticipated.

4.2.5. Department of Transportation Act, Section 4(f)

- 4.2.5.1.** Are there cultural or scenic resources, of national, state, or local significance, such as national parks, publicly owned parks, recreational areas, and public and private historic sites in the affected area?

☒ Yes ☐ No

Identify:

Section 4(f) of the U.S. DOT Act of 1966 (now codified at 49 U.S.C. § 303) protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites.

According to FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Section 4(f) applies to an action that involves more than a minimal physical use of a resource or constitutes constructive use. Resources that are protected by Section 4(f) are publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance; and publicly or privately owned land from a historic site of national, state, or local significance.

Section 4(f) Resources in the Study Area

The FAA conducted an online search of the study area to identify Section 4(f) resources through NEPAassist and Google Earth. Those properties identified are listed in **Table 4 of Appendix A**. Due to the volume of resources identified in the course of the search, the Section 4(f) resources were assigned arbitrary identification numbers (ID #) and are generally sorted geographically by route segment, as illustrated in the following figures generated in Google Earth (**Figures 18-25** of

Appendix B):

- **Figure 18:** segment from MDOTS / FRASR to IRNMN
- **Figure 19:** segment from IRNMN to BAYST
- **Figure 20:** segment from EESSA to RYDRR
- **Figure 21:** segment from GNZZO to RYDRR
- **Figure 22:** segment from RYDRR to BAYST
- **Figure 23:** segment from BAYST to CLIFY
- **Figure 24:** segment from CLIFY to DAHJR
- **Figure 25:** segment from DAHJR to GADDO

In addition to the online search for Section 4(f) resources in the study area presented in **Table 4** of **Appendix A** and **Figures 18-25** of **Appendix B**, the FAA initiated consultation with the City of Los Angeles and the City of Culver City, on May 4, 2022, in an effort to solicit comments and facilitate the identification of any Section 4(f) resources in the study area of the Cities' respective jurisdictions. Per the recommendation of the City of Los Angeles, FAA initiated consultation with Los Angeles County on July 28, 2023. FAA also initiated consultation with the City of Malibu on November 30, 2023 in response to a request to consult from the city. A summary of consultation activities is included in **Appendix E**.

City of Culver City Historic and Cultural Resources

The City of Culver City provided a list of historic and cultural resources within its jurisdiction on April 26, 2023. The list was generated by the City of Culver City as part of updating their General Plan. Per the definition of Section 4(f) resources provided above, historic sites of local significance qualify for protection under Section 4(f). Therefore, all of the historic and cultural resources provided by the City of Culver City are considered to be Section 4(f) resources. The information provided by the City of Culver City is included in its entirety in **Appendix C** for reference. The resources were reviewed and summarized by type, historic significance, and proximity to the study area in **Table 5** of **Appendix A**. The City of Culver City historic and cultural resources within the study area that have local, state, or national significance are summarized in **Table 6** of **Appendix A**, in the order of their appearance on the list provided by the City of Culver City and with corresponding page references for ease of review. The approximate locations of the City of Culver City historic and cultural resources are illustrated in **Figure 26** of **Appendix B**.

Those historic and cultural resources identified by the City of Culver City and listed as historic districts, landmarks, in the NRHP, in the State of California Register of Historic Places (California Register), or potentially eligible for listing in the NRHP or California Register are

further evaluated under Section 106 in Section 4.2.8 of this environmental review.

City of Los Angeles Historic and Cultural Resources

The City of Los Angeles Department of City Planning provided the FAA with an online web application to share their data on historic and cultural resources within their jurisdiction.¹⁹ As with the list of resources provided by the City of Culver City, historic sites of local significance are protected under Section 4(f), so the historic and cultural resources identified by the City of Los Angeles are considered Section 4(f) resources.

Historic Preservation Overlay Zones – This is a zoning tool used by the City of Los Angeles to protect and preserve neighborhoods composed of architecturally and historically significant structures.²⁰ A type of historic district, Historic Preservation Overlay Zones protect single-family residential neighborhoods. The purpose of this type of zoning is to prevent demolition and/or inappropriate alterations of historic properties, to develop tailored preservation guidelines to manage change in neighborhoods, to develop community design review processes for individual neighborhoods, and to provide property tax relief to eligible neighborhoods through the Mills Act Program. Historic Preservation Overlay Zones were established in 1979 through an ordinance to preserve the architectural and cultural legacy of Los Angeles neighborhoods. This data set is publicly available and can be downloaded from the City of Los Angeles GeoHub Data Catalog.²¹ The dataset includes 35 resources, 10 of which were identified as within the study area. The individual resources are listed in **Table 7 of Appendix A**, and illustrated in **Figure 27 of Appendix B**, which was generated using the online web application provided by the City of Los Angeles.

Historic Cultural Monuments – The City of Los Angeles Cultural Heritage Commission and Los Angeles City Council have established over 1,200 historic places as Historic Cultural Monuments since 1962.²² These are historic landmarks that have special designation by the City of Los Angeles as architecturally distinct or historically significant

¹⁹ City of Los Angeles Department of City Planning, <https://dcpgis.lacity.org/portal/apps/webappviewer/index.html?id=ae6a678dc9074fd79b2af59ad1d827c3>, accessed June 9, 2023.

²⁰ Los Angeles Conservancy, Historic Preservation Overlay Zones. <https://www.laconservancy.org/historic-preservation-overlay-zone-hpoz>. Accessed June 22, 2023.

²¹ Los Angeles GeoHub Data Catalog, Historic Preservation Overlay Zones. <https://geohub.lacity.org/datasets/lahub::historic-preservation-overlay-zones-hpoz/explore>. Accessed June 12, 2023.

²² City of Los Angeles Planning, <https://planning.lacity.org/blog/what-significance-cultural-heritage-commission>. Accessed June 22, 2023.

buildings. The purpose of the designation is to protect these resources from demolition and/or inappropriate alteration through a permitting and review process by the Los Angeles Cultural Heritage Commission that can delay the demolition of a designated property by up to one year. Owners also become eligible to use preservation incentives, such as property tax relief through the Mills Act Historic Property Contract Program. This data set is publicly available and can be downloaded from the City of Los Angeles GeoHub Data Catalog.²³ The data set includes 1,323 resources, 345 of which were identified as located within the study area. The individual resources are listed in **Table 8 of Appendix A** and illustrated in **Figure 28 of Appendix B**, which was generated using ArcGIS.²⁴ The information in **Table 8** was taken directly from a query of the dataset using ArcGIS. To preserve the integrity of the data set, the attributes are presented as they appear in the data set, including spelling and omissions.

State Historic Resources – The City of Los Angeles’ data set included State historic resources located within and near the City’s jurisdiction. The California Historic Resources Information System manages this data set, and it is not publicly available for viewing or download.²⁵ The data set includes individual properties and historic districts listed in the California Register and NRHP, and properties of unknown significance that are considered to be eligible for listing in the California Register and NRHP. In cases of historic districts and historic neighborhoods, the individual contributing resources are considered as part of the respective historic districts and historic neighborhoods. Because this data set was view-only, the exact number of resources in the list is unknown. The data set was carefully reviewed and approximately 262 State Historic Resources were identified in the study area, as presented in **Table 9 of Appendix A** and illustrated in **Figure 29 of Appendix B**, generated using the online web application provided by the City of Los Angeles. To preserve the integrity of the data set, the attributes are presented as they appear in the data set, including spelling and omissions.

SurveyLA – The City of Los Angeles Office of Historic Resources serves as the professional staff for the City’s historic preservation committee—the Cultural Heritage Commission—and oversees the City’s 35 Historic Preservation Overlay Zones encompassing over 21,000 properties. The Office of Historic Resources manages the City of Los Angeles’ historic resource inventory (HistoricPlacesLA includes the

²³ Los Angeles GeoHub Data Catalog, Historic Cultural Monuments.

<https://geohub.lacity.org/datasets/lahub::historic-cultural-monuments-hcm/explore>. Accessed June 12, 2023.

²⁴ ArcGIS Pro. Version 2.9.0 by Esri Inc.

²⁵ California Office of Historic Preservation, California Historic Resources Information System.

https://ohp.parks.ca.gov/?page_id=1068. Accessed June 22, 2023.

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findings of SurveyLA). SurveyLA is the result of comprehensive field surveys conducted by the City of Los Angeles in partnership with the Getty Conservation Institute from 2010 to 2017, to identify significant historic resources within its jurisdiction, covering over 880,000 parcels and almost 500 square miles.^{26 27 28} SurveyLA was the largest and first all-digital citywide historic resources survey in the nation. Historic resources considered by the survey include buildings, structures, objects, natural landscapes, natural features, and historic districts.²⁹ The City of Los Angeles' historic context statement provides the framework for identifying and evaluating the City's historic resources and is designed for use by SurveyLA surveyors and by all agencies, organizations, and professionals completing historic resource surveys in the City of Los Angeles.³⁰ The historic context statement identifies important themes in the City's history and development, and covers the following themes:

- Spanish Colonial & Mexican Era Settlement (1791-1849)
- Pre-consolidation Communities of Los Angeles (1962-1932)
- Residential Development & Suburbanization (1880-1980)
- Commercial Development (1850-1980)
- Public & Private Institutional Development (1850-1980)
- Architecture & Engineering (1850-1980)
- The Entertainment Industry (1908-1980)
- Cultural Landscapes (1950-1980)
- Industrial Development (1850-1980)
- Ethnic-Cultural Contexts

The purpose of SurveyLA is to identify resources eligible for designation in the NRHP and California Register, as well as formal designation of historical significance locally by the City of Los Angeles, which include Historic Cultural Monuments and Historic Preservation Overlay Zones. The SurveyLA dataset is divided into three categories: individual resources, district contributors, and non-parcel resources. SurveyLA data is publicly accessible for viewing through

²⁶ City of Los Angeles Planning, Historic Resource Surveys. <https://planning.lacity.org/preservation-design/historic-resources-survey>, accessed June 22, 2023.

²⁷ Los Angeles Conservancy, SurveyLA: The Los Angeles Historic Resources Survey. <https://www.laconservancy.org/surveyla-los-angeles-historic-resources-survey>., accessed June 22, 2023.

²⁸ The Getty Conservation Institute, Los Angeles Historic Resource Survey Project (2000-2015). https://www.getty.edu/conservation/our_projects/field_projects/lasurvey/lasurvey_component3.html., accessed June 29, 2023.

²⁹ City of Los Angeles Department of City Planning Historic Resources Surveys Info Brief, SurveyLA FAQs. <https://planning.lacity.org/odocument/fe3186ea-cc35-4bce-94dd-4611f28e74ca/Info%20Brief%20SurveyLA%20FAQs.pdf>., accessed June 22, 2023.

³⁰ City of Los Angeles Department of City Planning Historic Context Statement. <https://planning.lacity.org/preservation-design/historic-resources/historic-themes>., accessed June 22, 2023.

HistoricPlacesLA, however, the data set is not publicly available for downloading.³¹

In order for the FAA to perform its analysis, and due to the large volume of listed resources in the data set, the City of Los Angeles provided the FAA with the SurveyLA data files, as the web applications hosting this data set are view only and cannot be queried. The FAA has incorporated the SurveyLA data into its review. The information in the following tables was taken directly from a query of the dataset using ArcGIS. To preserve the integrity of the data set, the attributes are presented as they appear in the data set, including spelling and omissions.

The following categories of resources, identified through SurveyLA and located in the study area, are summarized through tables or illustrated with figures in the following appendices:

- Types of resources are summarized in **Table 10 of Appendix A.**
- Individual resources are summarized in **Appendix D.**
- Historic districts are summarized in **Table 11 of Appendix A.**
- Non-parcel historic resources are summarized in **Table 12 of Appendix A.**
- Individual historic resources are illustrated in **Figure 30 of Appendix B.**
- Historic cultural district contributors are illustrated in **Figure 31 of Appendix B.**
- Historic cultural districts are illustrated in **Figure 32 of Appendix B.**
- Non-parcel historic cultural resources are illustrated in **Figure 33 of Appendix B.**

Note: Figures 30–33 were prepared using the City of Los Angeles’ online web application.

Los Angeles County Section 4(f) Resources

The FAA consulted with Los Angeles County based on a recommendation by the City of Los Angeles. The FAA received the following information from various county departments:

The Los Angeles County Airport Land Use Commission submitted a response to FAA’s Section 4(f) consultation letter on August 31, 2023. The letter included the following information: Los Angeles County Planning staff conducted a Geographic Information System analysis of parcels with land use and ownership data within the Santa Monica

³¹ HistoricPlacesLA. <http://historicplacesla.org/>, accessed June 22, 2023.

Mountains. Los Angeles County Planning does not have jurisdiction over any publicly accessible parkland or wildlife refuge in the area. The Geographic Information System analysis disclosed that no County landmarks are within the flightpath study area. Furthermore, the analysis disclosed parkland, refuges, and preserves within the jurisdiction of other County, State, and Federal agencies. County parkland, preserves, and publicly accessible open spaces are managed by the County Department of Parks and Recreation and Department of Beaches and Harbors. State agencies such as State Parks, Mountain Recreation and Conservation Agency, and Santa Monica Mountains Conservancy manage state parkland and wildlife refuges and preserves. The National Park Service manages all federally owned parkland in the Santa Monica Mountains. The letter included a recommendation to conduct tribal consultation.

The Los Angeles County Department of Parks and Recreation submitted a response to FAA's Section 4(f) consultation letter on September 1, 2023. The letter included the following information: three resources were identified that are in close proximity to the airport and are particularly noise sensitive (Lennox Park, Stoneview Nature Center, and Whittier Narrows Natural Area and Nature Center). In addition, a list of 108 facilities were identified as located nearby, as summarized in **Table 13** of **Appendix A** and illustrated in **Figure 34** of **Appendix B**. The map shown in **Figure 34** was copied from the figure provided by Los Angeles County Department of Parks and Recreation in their correspondence to the FAA and includes resources outside of the study area. The information in **Table 13** was taken directly from the Los Angeles County Department of Parks and Recreation's response letter. To preserve the integrity of the data set, the information is presented as it appears in the County's response letter, including spelling and omissions.

City of Malibu

During the public comment period for the Draft Environmental Review, the FAA received a comment letter dated November 1, 2023 indicating the City of Malibu's interest in consultation with FAA under Section 106 and Section 4(f) for the undertaking. Pursuant to those comments, FAA invited the City of Malibu to participate as a consulting party and requested information on Section 106 and Section 4(f) resources in its jurisdiction within the Area of Potential Effects in a letter dated November 30, 2023. The City of Malibu responded on December 14, 2023 with a list of important recreational, historic, and cultural resources in its jurisdiction. As with the lists of resources provided by the City of Culver City and City of Los Angeles, historic sites of local significance are protected under Section 4(f), so the historic and cultural resources

identified by the City of Malibu are considered Section 4(f) resources. The resources identified by the City of Malibu are listed in **Table 14** and illustrated in **Figure 35**.

- 4.2.5.2.** If so, during what time(s) of the day would operations occur that may impact these areas?

Civilian jet aircraft are currently overflying these areas and the overflights would continue. The number of aircraft operations and the aircraft fleet mix are not expected to change as a result of the implementation of the Action.

Evaluation: Will implementation of the proposed action result in an impact to properties protected under Section 4(f) of the Department of Transportation Act? (See FAA Order 1050.1, Paragraph 5-2.b.(2), and 1050.1 Desk Reference, Chapter 5 for details on how to make the determination.)

- 4.2.5.a.** ☐ Yes.
Comment:

- 4.2.5.b.** ☒ No. Section 4(f) impacts are not anticipated. A supplemental review of the Section 4(f) and Section 106 resources identified during the course of this project was conducted to identify those resources which could be considered noise sensitive. Refer to **Appendix F** for the analysis conducted, and Section 4.2.8.4 below for a summary of the analysis and findings.

The Action does not result in noise levels at properties protected by Section 4(f) that are incompatible with the land uses specified in the Part 150 guidelines. In addition, the results of the noise prescreening analysis indicated no significant changes in noise exposure levels as a result of the Action. Supplemental noise modeling was conducted to validate the findings of the noise screening. The supplemental noise modeling found that the Action does not have the potential for reportable or significant noise impacts. See **Appendix G** for the supplemental noise modeling report.

Furthermore, the Action does not involve land acquisition, physical disturbance, or construction activities. The noise screening conducted for this project indicates that the Action does not have the potential for extraordinary circumstances. Therefore, the FAA has concluded that the Action does not result in a physical disturbance or constructive use of properties protected by Section 4(f).

4.2.6. Farmlands

Are the following resources present: National Resources Conservation designated prime and unique farmlands or, state, or locally important farmlands including pastureland, cropland, and forest?

☒ Yes ☐ No

Identify:

There are farmlands, pastureland, cropland, and forest lands within the study area. However, this is an air traffic action and no physical ground disturbance occurred with implementation of the Action. Therefore, no impacts to the farmlands resource category are anticipated and this category is not applicable to the Action.

Evaluation: Will the implementation of the proposed action involve the development of land regardless of use, or have the potential to convert any farmland to non-agricultural uses? (See FAA Order 1050.1, Paragraph 5-2.b.(4), and the 1050.1 Desk Reference, Chapter 6 for details on how to make the determination.)

4.2.6.a. ☐ Yes.

Comment:

4.2.6.b. ☒ No. The Action does not have the potential to impact farmland resources.

4.2.7. Hazardous Material, Solid Waste, and Pollution Prevention

Will implementation of the proposed action result in any construction or development or any physical disturbances of the ground in an area known to contain hazardous materials, hazardous waste, solid waste, or other forms of pollution or contamination?

☐ Yes ☒ No

Evaluation: Is implementation of the proposed action likely to cause contamination by hazardous materials, hazardous waste, or likely to disturb existing hazardous materials, hazardous waste site, or other area of contamination? (See FAA Order 1050.1, Paragraph 5-2.b.(12), and 1050.1 Desk Reference, Chapter 7 for details on how to make the determination.)

4.2.7.a. ☐ Yes.

Comment:

4.2.7.b. ☒ No. An impact to existing areas of hazardous material, hazardous or solid waste, or pollution prevention activities, is not anticipated; and implementation of the Action is not anticipated to result in the production of hazardous material, hazardous or solid waste.

4.2.8. National Historic Preservation Act of 1966 (NHPA)

NOTE: Section 106 of the NHPA applies to actions that have the potential to affect historic properties in a way that alters any of the characteristics that make the property significant, including changes in noise where a quiet setting is an attribute of significance. Direct effects include the removal or alteration of historic resources. Indirect effects include changes in noise, vehicular traffic, light emissions, or other changes that could interfere substantially with the use or character of the resource.

The Area of Potential Effects under Section 106 is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties are present (36 CFR § 800.16(d)). The Area of Potential Effects is influenced by the scale and nature of the undertaking and may vary for different kinds of effects caused by the undertaking. The Area of Potential Effects for the purposes of the Action is the area defined as the study area. See **Section 1.3**.

4.2.8.1. Are there historic resources protected under Section 106 of the NHPA in the study area of the proposed action?

☒ Yes ☐ No

Identify:

The FAA initiated Section 106 consultation with the California State Historic Preservation Office (SHPO), the City of Los Angeles, and the City of Culver City on May 4, 2022. At the recommendation of the California SHPO, the FAA initiated tribal consultation efforts on April 7, 2023. The FAA also initiated consultation with the Los Angeles Conservancy on October 21, 2022, and initiated consultation with the City of Malibu on November 30, 2023. A summary of the consultation activities is included in **Appendix E**.

Section 106 regulations direct federal agencies to make reasonable and good faith efforts to identify historic properties within the Area of Potential Effects (36 CFR § 800.4(b)(1)). A search of NEPAAssist identified 137 historic properties listed on the National Register within the Area of Potential Effects, as summarized in **Table 15 of Appendix A**. The identified historic properties in the Area of Potential Effects are illustrated in **Figure 36 of Appendix B**, and a zoomed-in view of those historic properties near the parts of the Area of Potential Effects over City of Culver City and City of Los Angeles are illustrated in **Figure 37 of Appendix B**. **Figures 36 and 37** were generated using NEPAAssist.

In addition to the resources identified through a search of the NRHP, Section 106 requires Federal agencies to consider those historic resources that are eligible or potentially eligible for inclusion on the

NRHP. FAA consulted with the City of Culver City, the City of Los Angeles, and the City of Malibu to identify historic resources within their jurisdictions of local historic significance that would be eligible or potentially eligible for inclusion on the NRHP.

City of Culver City Section 106 Resources

As discussed in Section 4.2.5 of this environmental review, pertaining to Section 4(f) resources, the City of Culver City provided a list of historic and cultural resources within its jurisdiction on April 26, 2023. The information provided by the City of Culver City is included in its entirety in **Appendix C**, and the resources are summarized in **Table 5 of Appendix A**. Those resources listed by the City of Culver City as located within the Area of Potential Effects—which are designated as landmarks, recognized structures, significant structures, California Register properties, NRHP and/or California Register eligible properties, and those of unknown significance—are considered potentially eligible for listing on the NRHP and/or the California Register, and are therefore considered Section 106 resources for the purposes of this review, as summarized in **Table 6 of Appendix A**.

City of Los Angeles Section 106 Resources

As discussed in Section 4.2.5 of this environmental review pertaining to Section 4(f) resources, the City of Los Angeles provided the FAA with an online web application to share their data on historic and cultural resources within their jurisdiction. The historic cultural resources identified by the City of Los Angeles are all presumed to be Section 106 resources for the purposes of this environmental review and are summarized in **Tables 7–12 of Appendix A** and **Appendix D**, and illustrated in **Figures 27–33 of Appendix B**.

California Native American Heritage Commission Consultation

The FAA initially contacted the California Native American Heritage Commission on October 6, 2022, and requested a list of tribal groups and entities that might have additional knowledge or interest in the Area of Potential Effects, or knowledge of historical resources. The FAA sent a reminder email on November 14, 2022, and January 11, 2023, at which point the California Native American Heritage Commission responded with a form to complete prior to providing the records. The FAA provided the form and exchanged numerous emails with the California Native American Heritage Commission over the next few weeks, until a list of 22 tribes was provided to FAA on March 17, 2023. The FAA sent letters on April 7, 2023, to all 22 tribes requesting information and historic resources in the Area of Potential Effects.

The Barbareño/Ventureño Bank of Mission Indians responded by saying

they are deferring this project to local tribes and FAA requested contact information, but none was provided. The Fernandeno Tataviam Band of Mission Indians responded that they had nothing to add at that time. The Gabrieleño Band of Mission Indians – Kizh Nation responded with a question about ground disturbance being a part of the project. The FAA responded that ground disturbance was not a part of the project, and Gabrieleño Band of Mission Indians – Kizh Nation stated they did not have any concerns.

The Rincon Band of Luiseño Indians responded that the location identified within project documents is not within the Band's specific Area of Historic Interest and that the Band has no additional information to provide.

The Santa Ynez Band of Chumash Indians was the only tribe who requested to have formal consultations with the FAA. On June 7, 2023, the FAA and the Santa Ynez Band of Chumash Indians conducted a formal consultation session where the FAA provided a background of the project, specific details of the undertaking, and a schedule of future expected activities. The Santa Ynez Band of Chumash Indians did not request any further information and stated they looked forward to reviewing the environmental review document when it becomes available.

No other tribes responded to the FAA's consultation letters.

Los Angeles Conservancy

The FAA sent an initial letter on October 21, 2022, to the Los Angeles Conservancy (Conservancy) to provide details of the undertaking and to determine whether the Conservancy was interested in consulting on the undertaking. The FAA sent a reminder email on November 16, 2022, and received a response that included some questions related to the project. The FAA responded to the request for information on November 30, 2022, by providing the information requested. On March 31, 2023, the FAA sent a letter to the Conservancy requesting a response within 14 days of this follow-up invitation to consult with the FAA. The Conservancy responded on April 3, 2023, that they wanted to be on a consultation list for the undertaking. The FAA responded on April 12, 2023, with a letter requesting a review of the project and for information on properties in the Area of Potential Effects within 14 days. The Conservancy responded with a request for detailed mapping of the Area of Potential Effects. The FAA provided the ArcGIS shape files to assist the Conservancy with the Area of Potential Effects boundaries followed by an email on April 27, 2023, with additional information and tips for accessing the ArcGIS files. The Conservancy did not reply.

City of Malibu

As discussed in Section 4.2.5 of this environmental review pertaining to Section 4(f) resources, the City of Malibu provided the FAA with a list of Section 4(f) and Section 106 resources within their jurisdiction. The historic cultural resources identified by the City of Malibu are all presumed to be Section 106 resources for the purposes of this environmental review and are summarized in **Table 14** of **Appendix A** and illustrated in **Figure 35** of **Appendix B**.

- 4.2.8.2.** Will the proposed action include removal or alteration of historic resources (direct effect)?
☐ Yes ☒ No

Because this undertaking did not require land acquisition, construction, or other ground disturbance, there are no direct physical effects to historic resources. Therefore, potential effects are limited to effects from aircraft overflights, primarily noise.

- 4.2.8.3.** Do any of the historic resources identified have quiet as a generally recognized feature or attribute?
☐ Yes ☒ No
If yes, explain:

The FAA compared the procedures with historic flight tracks—as shown in **Figure 13** of **Appendix B**—and determined that there are no new areas overflowed, and therefore the Action has no potential to introduce new visual, atmospheric, or auditory elements that diminish the integrity of a historic property.

In addition, the historic and cultural resources identified in the Area of Potential Effects were evaluated to determine the rationale given for their local, state, or federal historic significance. The resources identified through the NRHP did not include any registered historic resources with quiet as a generally recognized feature or attribute from their respective listings.

The historic resources provided by the City of Culver City and the City of Los Angeles are in a highly developed urban and suburban settings and are significant based on their architecture and contributions to local and regional culture. The purpose for their historic designation is to protect these resources from redevelopment.

- 4.2.8.4.** Will the proposed action substantially interfere with the use or character of the resource (indirect effect)?

☐ Yes ☒ No

Explain:

Although this question is posited in the NHPA discussion pertaining to Section 106 resources, it also applies to Section 4(f) resources. The FAA considered all Section 106 and Section 4(f) resources in its analysis to determine whether the Action substantially interferes with the use or character of these resources (indirect effects).

During consultation, the City of Culver City indicated that all identified resources within its jurisdiction have quiet as an attribute. However, the data sets provided by the City of Culver City and the City of Los Angeles do not indicate that any of the resources reviewed have quiet as a generally recognized feature or attribute, and none of the resources are located in areas that would be considered to have quiet as a setting contributing to its significance under Section 106 due to the presence of industrial and commercial developments, railroads, roads, highways, and existing air traffic, among other noise contributors.

In their letter to the FAA, Los Angeles County Department of Parks and Recreation identified three Section 4(f) resources in their jurisdiction as being noise sensitive, including: Lennox Park; Stoneview Nature Center; and Whittier Narrows Natural Area and Nature Center. Of these three resources, only Stoneview Nature Center is located within the study area.

None of the 22 tribes the FAA consulted with provided a list of cultural or historic resources for review.

A total of 5,504 Section 4(f) and Section 106 resources were identified during the course of this review. An undertaking would have an effect on a historic property if it alters the characteristics qualifying that property for the National Register (36 CFR 800.16(i), 800.5(a)(a)). Such effects are considered "adverse" if they would diminish the integrity of a property's location, design, setting, materials, workmanship, feeling, or association (36 CFR 800.5(a)). The undertaking does not require land acquisition, construction, or ground disturbance, and there are no direct or physical effects to historic properties. However, the FAA recognizes that for certain types of historic properties, particularly those where the property's historical significance is especially reliant on its setting or feeling, the introduction of visual, atmospheric, or audible elements could diminish the property's integrity. In such cases, changes in aircraft operations could result in indirect, non-physical effects.

Therefore, the FAA focused its assessment of effects on the potential for

the Action to introduce visual or audible elements that would diminish the integrity of setting or feeling for historic properties where those are significant historical features. The FAA also considered the extent to which those aspects of integrity have already been diminished under existing conditions. The assessment of effects also acknowledges that many of the historic resources within the APE were designated in the 1970s, 1980s, and 1990s. As such, they have been potentially subject to decades of change including the introduction of visual and audible elements. This includes incremental changes, such as the increase in surface and aircraft traffic throughout the APE, as well as large changes such as the construction of I-405, I-210, or I-5 and subsequent expansions of the freeway system. These changes may have diminished the integrity of the properties setting or feeling, although other aspects of integrity may be sufficient to convey the properties' significance, and none have been removed from the National Register. However, for the purposes of this analysis, the FAA looked specifically at whether the properties retain integrity of setting and feeling under existing conditions.

Supplemental analysis of those resources was performed in support of the Final Environmental Review to identify those historic and cultural resources whose significance depends in whole, or in part, upon a setting that is sensitive to auditory or visual changes. A summary of the supplemental review is provided below. See **Appendix F** for the supplemental historic and cultural resources evaluation and findings. This review included an initial evaluation (Tier 1) to identify those historic properties whose significance potentially depends in whole, or in part, upon a setting that is sensitive to auditory or visual changes that could result from the Action, and a secondary evaluation (Tier 2) to exclude those historic properties whose setting and feeling were not significant factors in their historical significance due to certain types of land uses that are particularly prone to high degrees of visual and auditory intrusion, location in a dense urban environment subject to intensive uses, high levels of ambient noise, or changes to the surrounding environment that would alter the original settings of these resources from when they were constructed.

The Tier 1 evaluation criteria includes the following resource categories:

- A. Properties constructed before or deriving their significance during a period prior to the construction of KLAX in 1928, and includes 3,182 properties in this category.
- B. Properties that are composed of large, open spaces (3 acres or greater in size) that may constitute cultural landscapes. This category

included parks, cemeteries, school campuses, ranches, etc. and includes 175 properties in this category.

- C. Properties that could be considered sacred in nature, such as traditional cultural properties, places of worship, or places for contemplation, and includes 109 properties in this category.
- D. Properties whose use would be sensitive to changes in noise that were not already identified in the other three categories. This includes theatres, performance spaces, movie and art studios, libraries, and similar spaces, and includes 79 properties in this category.

After sorting through the list of the properties within the Area of Potential Effects that met one or more of the above categories, 3,267 potentially sensitive historic properties were identified. However, much of the Area of Potential Effects is located within a dense urban environment that is already exposed to industrial and commercial uses, high levels of noise from various sources, or changes to the surrounding land that would alter the original settings of these resources from when they were constructed. Certain types of land use are particularly associated with auditory and visual effects. In most cases, these effects have not resulted in diminished integrity of a resources setting or feeling. Thus, the Tier 2 evaluation assessed the list of resources found in the Tier 1 evaluation to exclude those resources for whom setting and feeling were not significant factors in their historic significance. Specifically, the following uses and resource types were excluded from the Tier 2 list:

- A. Industrial/commercial buildings, public offices, and civic buildings. These types of properties are generally anticipated to be within an environment that is generally loud and that may be exposed to variable noise and auditory conditions. Their significance is not dependent on sustained periods of quiet. There were 520 properties in this category that were excluded from the list of potentially sensitive historic properties.
- B. Twentieth century historic residential districts are a historic property type that relies upon grouping of properties that share a history, an architectural style, or otherwise are unified by use or function. Their significance is partially derived from their relationship with other contributors to the district and is not dependent on setting or feeling to a degree that would be affected by the Action. Many of these districts were constructed concurrent with and after construction of KLAX. There were 41 properties in this category that were excluded

from the list of potentially sensitive historic properties.

- C. Private residential properties, hotels, and apartment complexes that do not include gardens or landscapes. These properties are generally significant for their architecture or their association with historic events or persons. Their histories are not tied to agriculture, ranching, or other historic land uses that might have been in the Area of Potential Effects before KLAX was constructed. Under this category, 2,346 historic properties were excluded.
- D. Many public spaces and campuses have large open spaces but are also intended for public use with a high degree variability in auditory or visual effects. They are characterized by their randomness of use and are not inherently sensitive to changes in outside noise or overhead visual activity. This category includes schools, hospitals, recreation areas, community centers, sport venues, and clubhouses. Under this category, 201 properties were excluded.
- E. Over time, many historic properties have already been affected by changes in their environment or have been modified to a degree that their integrity as a historic resource is already compromised. This category includes these altered properties, those that now exist in a highly dense urban environment, or for which information is insufficient, inaccurate, missing, or unverifiable. This category includes 106 historic properties which were excluded.

After applying the exclusion categories to the list of 3,267 potentially sensitive historic properties, a total of 201 historic properties were identified that could be considered to have a quiet setting as a generally recognized purpose or attribute contributing to its historic significance. These resources are listed in **Table 16**.

Based on the available information and the limited scope of the Action, no new areas were overflowed by the Action compared to the No Action Alternative, and so there was no introduction of a new visual or audible element to any historic or cultural resources present within the study area. These resources were overflowed by the previous iteration of the procedures (the No Action Alternative). Per Section 4.2.11 below, pertaining to Noise and Noise-Compatible Land Use, there were no significant or reportable noise impacts in connection with the Action.

FAA's NEPA procedures also note that special consideration needs to be given to the evaluation of the significance of noise impacts on noise sensitive areas within national parks, national wildlife and waterfowl refuges, and historic sites, including traditional cultural properties,

where the land use compatibility guidelines in 14 CFR Part 150 are not relevant to the value, significance, and enjoyment of the area in question. For example, the DNL 65 dB significant noise threshold may not adequately address the impacts of noise on areas where other noise is very low, and a quiet setting is a generally recognized purpose and attribute. Therefore, the FAA's reportable noise threshold is taken into consideration for these noise sensitive resources. The reportable noise threshold is more conservative than the 14 CFR Part 150 land use compatibility guidelines and includes noise impacts ranging from:

- DNL 60 dB to <65 dB with an increase of up to 3 dB
- DNL 45 dB to <60 dB with an increase of up to 5 dB

Supplemental noise modeling was conducted in support of the noise screening analysis, which confirmed that the Action did not have the potential to cause significant or reportable noise impacts. Refer to **Section 4.2.11** and **Appendix G**. As the Action does not exceed the significant or reportable noise threshold criteria, the Action does not have the potential to substantially interfere with the use or character of these resources through indirect effects.

Evaluation: Will the proposed action result in an adverse effect on resources protected under the National Historic Preservation Act of 1966, as amended? (See FAA Order 1050.1, paragraph 5-2.b.(1), and 1050.1 Desk Reference, Chapter 8 for details on how to make the determination.)

4.2.8.a. ☐ Yes.
Explain:

4.2.8.b. ☒ No. An impact to resources subject to Section 106 review is not anticipated. The FAA has concluded that there will be “no historic properties affected” for the May 2018 amendments incorporated in the HUULL TWO, IRNMN TWO, and RYDRR TWO procedures. The Action does not have an effect on a historic property unless it alters the characteristics qualifying that property for the National Register. Such effects are considered “adverse” if they would diminish the integrity of a property’s significant historic features (including its setting, provided the setting is a contributing factor to the property’s historic significance). The FAA sent a Section 106 determination letter to the California State Historic Preservation office (SHPO) on September 15, 2023, with a finding of “no historic properties affected”. The FAA received a response of “no objections” to its finding from the California SHPO on October 16, 2023.

Implementation of the Action involves changes to aircraft arrival procedures and does not include any project components that touch or otherwise directly affect the ground surface. Because there are no ground-disturbing activities associated with the Action (e.g., construction or demolition), archaeological resources—such as surface or subsurface artifacts or other intact cultural deposits—are not being disturbed.

The FAA’s noise screening analysis indicated that the undertaking did not result in changes to noise exposure that exceed the FAA’s significant noise threshold. Consequently, the assessment of effects was limited to the introduction of atmospheric, audible, or visual features resulting from aircraft overflights.

As illustrated in **Figure 13 of Appendix B**, the FAA compared the amended procedures with the May 2017 through April 2018 flight tracks, and determined that there are no new areas overflown and therefore the Action has no potential for the introduction of new visual, atmospheric, or auditory elements that would diminish the integrity of a historic or cultural resource.

4.2.9. Land Use

The compatibility of existing and planned land uses with an aviation or aerospace proposal is usually associated with noise impacts. In addition to the impacts of noise on land use compatibility, other potential impacts of FAA actions may affect land use compatibility. The impact on land use, if any, should be analyzed and described under the appropriate impact category.

Evaluation: The determination that significant impacts exist in the Land Use impact category is normally dependent on the significance of other impacts. (See 1050.1 Desk Reference, Chapter 9 for details on how to make the determination.)

4.2.10. National Resources and Energy Supply

NOTE: *This resource category excludes fuel burn.*

Will the proposed action have the potential to cause demand or strain on a natural resource(s) or material(s) that exceeds current or future availability of these resources? (See FAA Order 1050.1, paragraph 5-2.b.(4).

☐ Yes ☒ No

If yes, explain:

Evaluation: Will implementation of the proposed action result in an impact in relation to natural resources and energy supply?

4.2.10.a. ☐ Yes.

Comment:

- 4.2.10.b.** ☒ No. An impact to natural resources and materials and/or energy supply is not anticipated.

4.2.11. Noise and Noise-Compatible Land Use

The significance threshold for noise is whether the proposed action would increase noise by Day-night average sound level (DNL) 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level; or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB increase, when compared to the No Action alternative for the same timeframe.

NOTE: *An area is noise sensitive if aircraft noise may interfere with the normal activities associated with the use of the land. See FAA Order 1050.1, Paragraph 11-5.b.(10), for the full definition of noise sensitive areas.*

Noise compatibility or non-compatibility of land use is determined by comparing the proposed action DNL values to the values in the 14 CFR Part 150, Appendix A, Table 1, Land-Use Compatibility guidelines. (See FAA Order 1050.1 and 1050.1 Desk Reference, Chapter 11.)

NOTE: *14 CFR Part 150 guidelines are not sufficient to address the effects of noise on some noise sensitive areas.*

- 4.2.11.1.1.** Will the proposed action introduce air traffic over noise sensitive areas *not* currently affected?

☐ Yes ☒ No

Comment:

Noise screening analysis was performed using the FAA's *Guidance for Noise Screening of Air Traffic Actions Revision 1*.³² As noted in **Section 0** (above), when the FAA determines that an action qualifies for categorical exclusion (CATEX), it must also consider whether there are any extraordinary circumstances that would preclude application of the CATEX.³³ To identify the potential for extraordinary circumstances involving impacts on noise levels to noise sensitive areas, the FAA conducted a noise analysis using standard, Agency-approved noise screening tools and methodology. Screening tools use simplified but conservative modeling assumptions to provide estimates of where noise increases may occur. This analysis enables the FAA to identify areas that may require additional consideration

³² FAA Guidance for Noise Screening of Air Traffic Actions, Version 1.1, December 2012.

³³ FAA Order 1050.1F, Section 5-3. Refer to Section 0. Administrative Background and Court Rulings.
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prior to determining whether use of a CATEX is appropriate.

The compatibility of existing and planned land uses with aviation actions is usually determined in relation to the level of aircraft noise by comparing the DNL values to the land use compatibility guidelines in the FAA's regulations at 14 CFR Part 150.³⁴ Part 150 identifies a DNL level of 65 dB and below as compatible with residential and most other uses (see Exhibit 11-3 of the FAA Order 1050.1F, Desk Reference).

To determine whether aircraft noise impacts are significant under NEPA, the FAA considers whether a predicted noise increase associated with an action exceeds defined thresholds of significance. For aircraft noise, the threshold of significance is an increase of DNL 1.5 dB, or more, for a noise sensitive area exposed to noise at or above the DNL 65 dB noise exposure level; or a noise sensitive area that would be exposed to at or above the DNL 65 dB noise exposure level, due to a DNL 1.5 dB or greater increase, when compared to the No Action Alternative for the same timeframe.

FAA Order 1050.1F notes that special consideration needs to be given to the evaluation of the significance of noise impacts on certain noise sensitive areas (including, but not limited to, noise sensitive areas within national parks; national wildlife and waterfowl refuges; and historic sites, including traditional cultural properties) where the land use compatibility guidelines in 14 CFR Part 150 are not relevant to the value, significance, and enjoyment of the area in question.

Noise Screening Track Data

To determine projected noise levels on the ground, it is necessary to determine the frequency of aircraft operations and the position of the aircraft in space laterally (i.e., ground tracks), and vertically (i.e., altitude). The arrival and departure direction to and from an airport are generally influenced by the geometry of the airport's runways and procedures used to manage air traffic, which are primarily influenced by wind and weather conditions. Much of this information is obtainable through historical radar track data. Track data provides information regarding lateral path definitions, aircraft types, time of day operations, runway usage percentages for departure/arrival streams and day/night traffic ratios.

³⁴ DNL takes into account the noise level of each individual aircraft event, the number of times those events occur, and the time of day in which they occur. DNL includes a 10 dB noise penalty added to noise events occurring from 10:00 p.m. to 7:00 a.m., to reflect the increased sensitivity to noise and lower ambient sound levels at night. FAA Order 1050.1F requires use of the DNL metric in NEPA analyses, although DNL analysis may optionally be supplemented on a case-by-case basis to characterize specific noise impacts.

The FAA obtained historical radar track data from its National Offload Program.³⁵ To capture the baseline from the No Action Alternative, track data was collected for 30 randomly selected days (using a random day generator) during the calendar year timeframe of January 1, 2017, through December 31, 2017, (refer to **Figure 13 of Appendix B**). The selection of 30 random days is considered to best represent average traffic counts and traffic flows accounting for seasonal variations and peak travel times for KLAX.

The Altitude/Operations Test for noise screening was applied to complete the analysis of potential noise impacts associated with changes in aircraft noise exposure levels as a result of implementation of the Action.³⁶ The Altitude/Operations Test was completed to determine if changes in the number of operations or altitudes, or both, are enough to cause a change in DNL exceeding the noise screening thresholds. The Altitude/Operations Test is used to determine whether the potential exists for extraordinary circumstances or significant noise impacts. To perform this test, the user should first collect the following data on the existing and proposed operations:

Existing operations (*Existing Ops*) and proposed operations (*Proposed Ops*), with operations between 10:00 p.m. and 07:00 a.m. multiplied by 10 (operations between 7:00 p.m. and 10:00 p.m. must also be multiplied by 3 for California). The percent change in operations (*% Ops Change*) is computed as:

$$\% \text{ Ops Change} = \frac{\text{Proposed Ops Change} - \text{Existing Ops}}{\text{Existing Ops}}$$

For a change in altitude, start with the lowest existing altitude in ft AGL (not MSL) (*Existing Alt*) typically flown at the location of the largest altitude decrease. Next, collect the lowest proposed altitude in ft AGL (*Proposed Alt*) expected to be flown along the route or procedure being investigated once the action is implemented; the percent altitude change (*% Alt Change*) is then computed as:

$$\% \text{ Alt Change} = \frac{\text{Proposed Alt} - \text{Existing Alt}}{\text{Existing Alt}}$$

Noise Screening Analysis Results

The procedure amendments involve changes in altitudes at specific fixes along each procedure with no change in operational use. The

³⁵ All traffic data was obtained using the Los Angeles Air Route Traffic Control Center as the radar source facility. Thirty random days were selected from the year timeframe of January 1, 2017, through December 31, 2017.

³⁶ FAA Guidance for Noise Screening of Air Traffic Actions, Version 1.1, December 2012.

criteria for the Altitude/Operations Test for the change in altitude is determined by calculating the percentage change in altitude and comparing the percentage change to a matrix. The calculation compares, in ft AGL, the lowest existing altitude at the location of the largest altitude decrease to the lowest altitude expected to be flown along the procedure being investigated.

For changes in altitude for the amendments that are above 10,000 ft AGL, which includes the amended altitudes at GNZZO waypoint, IRNMN waypoint, SYMON waypoint, and GKNEE waypoint, the percentage change values for each procedure were compared to the Altitude/Operations Test metric for *Altitude/Operations Test Between 7,000 ft AGL and 10,000 ft AGL* to remain conservative in assessing potential noise impacts, even though the changed altitudes at these WPs are at altitudes above 10,000 ft AGL. For the assignment of an altitude restriction at GADDO waypoint, the change was compared to the Altitude/Operations Test metric for *Altitude/Operations Test Between 3,001 feet AGL and 7,000 feet AGL* in assessing potential noise impacts.

The Altitude/Operations Test results for all three procedures are presented in **Figure 37** of **Appendix B** and are described below.

HUULL TWO Altitude/Operations Test Results:

Altitude Restriction at GNZZO waypoint

GNZZO waypoint is located over open ocean with no sensitive noise receptors, however, the subsequent segment between GNZZO waypoint and RYDRR waypoint overflies land areas. Therefore, this change was reviewed for potential noise impacts. The altitude restriction at the GNZZO waypoint changed from “BETWEEN 14,000 AND 16,000” to “BETWEEN 13,000 AND 14,000.” Altitudes of 14,000 ft MSL and 13,000 ft MSL correspond to ~14,000 ft AGL and 13,000 ft AGL, respectively.

The computed percent change in altitude is a decrease of -7.1%, which is calculated as follows:

$$\% \text{ Alt Change} = \frac{13,000 \text{ ft AGL} - 14,000 \text{ ft AGL}}{14,000 \text{ ft AGL}} = -0.071 = -7.1\%$$

There is no expected change in operations. Therefore, the computed percent change in operations is 0%.

A comparison of the percentage of altitude change (-7.1%, rounded up

to -10% to be conservative) and the percentage of operations change (0%) at GNZZO waypoint indicates that the Altitude/Operations Test is passed for the altitude decrease at GNZZO waypoint.

Altitude Restriction at GADDO waypoint

The altitude restriction at the GADDO waypoint was changed from not having an altitude restriction to “AT 6000.” This was not a change to aircraft altitudes because aircraft that are on the procedure were already required to be at 6,000 ft MSL per FAA Order 8260.3D. An altitude of 6,000 ft MSL corresponds to ~5,800 ft AGL at GADDO waypoint.

The computed percent change in altitude is 0%.

The computed percent change in operations is 0%.

A comparison between the percentage of altitude change (0%) and the percentage of operations change (0%) at GADDO waypoint indicates that the Altitude/Operations Test is passed. Note: this is illustrated using the *Altitude/Operations Test Between 3,001 ft AGL and 7,000 ft AGL*.

Summary of HUULL TWO Altitude/Operations Test Results

The changes to altitudes for the HUULL TWO procedure pass the Altitude/Operations Test noise screening analysis; therefore, the potential for extraordinary circumstances does not exist.

IRNMN TWO Altitude/Operations Test Results:

Altitude Restriction at IRNMN waypoint

The altitude restriction at the IRNMN waypoint changed from “AT OR BELOW 16,000” to “BETWEEN 12,000 and 16,000.” Altitudes of 12,000 ft MSL and 16,000 ft MSL correspond to altitudes of ~11,000 ft AGL and 15,000 ft AGL, respectively, at IRNMN waypoint.

The computed percent change in altitude is an altitude decrease of -25%, which is calculated as follows:

$$\% \text{ Alt Change} = \frac{11,000 \text{ ft AGL} - 15,000 \text{ ft AGL}}{15,000 \text{ ft AGL}} = -0.27 = -27\%$$

There is no expected change in operations. Therefore, the computed percent change in operations result in a percentage change of 0%.

A comparison between the percentage of altitude change (-27%) and the percentage of operations change (0%) at IRNMN waypoint indicates that the Altitude/Operations Test is passed.

Altitude Restriction at SYMON waypoint

The altitude restriction at the SYMON waypoint changed from “BETWEEN 11,000 AND 13,000” to “BETWEEN 12,000 AND 13,000.” Altitudes of 11,000 ft MSL and 12,000 ft MSL correspond to ~10,100 ft AGL and 11,100 ft AGL, respectively, at SYMON waypoint.

The computed percentage change in altitude is an increase of 9%, which is calculated as follows:

$$\% \text{ Alt Change} = \frac{11,100 \text{ ft AGL} - 10,100 \text{ ft AGL}}{11,100 \text{ ft AGL}} = 0.9 = 9\%$$

There is no expected change in operations. Therefore, the computed percent change in operations result in a percentage change of 0%.

A comparison between the percentage of altitude change (altitude increase of 9%, rounded down to 5% to be conservative) and the percentage of operations change (0%) at SYMON waypoint indicates that the Altitude/Operations Test is passed. Note: this is a conservative calculation because the altitude increase is actually greater than that utilized for the Altitude/Operations Test.

Altitude Restriction at GADDO waypoint

The altitude restriction at the GADDO waypoint was changed from not having an altitude restriction to “AT 6,000.” This was not a change to aircraft altitudes because aircraft that are on the procedure were already required to be at 6,000 ft MSL per FAA Order 8260.3D. An altitude of 6,000 ft MSL corresponds to ~5,800 ft AGL at GADDO waypoint.

The computed percent change in altitude is 0%.

The computed percent change in operations is 0%.

A comparison of the percentage of altitude change (0%) and percentage of operations change (0%) at GADDO waypoint indicates that the Altitude/Operations Test is passed.

Summary of IRNMN TWO Altitude/Operations Test Results

The changes to altitudes for the IRNMN TWO procedure pass the

Altitude/Operations Test noise screening analysis; therefore, the potential for extraordinary circumstances does not exist.

RYDRR TWO Altitude/Operations Test Results:

Altitude Restrictions Over Water at SERCO, HUULL, and EESSA WPs

There were some altitude restriction changes on the RYDRR TWO procedure for WPs that are located over the Pacific Ocean, including the SERCO, HUULL and EESSA WPs. All of these WPs and their respective subsequent segments are located over the Pacific Ocean with no noise sensitive receptors, and therefore no further noise screening is needed.

Altitude Restriction at GKNEE waypoint

The altitude restriction at the GKNEE fix changed from “BETWEEN 14,000 and 16,000” to “BETWEEN 12,000 and 13,000.” Although GKNEE waypoint is over open ocean, the subsequent segment between GKNEE waypoint and RYDRR waypoint overflies land areas. Altitudes of 14,000 ft MSL and 12,000 ft MSL correspond to ~14,000 ft AGL and 12,000 ft AGL, respectively, at GKNEE waypoint.

The computed percent change in altitude is a decrease of -14.3% which is calculated as follows:

$$\% \text{ Alt Change} = \frac{12,000 \text{ ft AGL} - 14,000 \text{ ft AGL}}{14,000 \text{ ft AGL}} = -0.143 = -14.3\%$$

There is no expected change in operations. Therefore, the computed percent change in operations result in a percentage change of 0%.

A comparison between the percentage of altitude change (-14.3%, rounded up to -15%) and the percentage operations change (0%) at GKNEE waypoint indicates that the Altitude/Operations Test is passed.

Altitude Restriction at GADDO waypoint

The altitude restriction at the GADDO waypoint was changed from not having an altitude restriction to “AT 6,000.” This was not a change to aircraft altitudes because aircraft that are on the procedure were already required to be at 6,000 ft MSL per FAA Order 8260.3D. An altitude of 6,000 ft MSL corresponds to ~5,800 ft AGL at GADDO waypoint.

The computed percent change in altitude is 0%.

The computed percent change in operations is 0%.

A comparison between the percentage of altitude change (0%) and percentage of operations change (0%) at GADDO waypoint indicates that the Altitude/Operations Test is passed.

Summary of RYDRR TWO Altitude/Operations Test Results

The changes to altitudes for the RYDRR TWO procedure pass the Altitude/Operations Test noise screening analysis; therefore, the potential for extraordinary circumstances does not exist.

- 4.2.11.1.2. Do the results of the noise analysis indicate that the proposed action would result in an increase in noise exposure by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level?

☐ Yes ☒ No

A noise screening was completed to assess the potential impacts from a change in aircraft noise exposure resulting from the Proposed Action. The noise screening analysis was conducted using the initial screening module of the TARGETS Aviation Environmental Design Tool (AEDT) environmental plug-in.

For this analysis, the Altitude/Operations Test was used in accordance with FAA's *Guidance for Noise Screening of Air Traffic Actions* (December 2012). The Altitude/Operations Test is used to screen for potential noise impacts resulting from a single change in altitude on a route or procedure, or simultaneous change in number of operations and altitudes. An increase in operations and a change in fleet mix is not part of the purpose and need of this project. Based on the results of the noise screening, the Action does not have the potential for significant noise impacts or extraordinary circumstances.

Supplemental noise modeling was conducted to validate the noise screening results presented in the Draft Environmental Review using the TARGETS Environmental Plug-in Tool, which uses AEDT to calculate noise. See **Appendix G** for the supplemental noise modeling report.

Historic radar track data for KLAX was obtained from the Performance Data Analysis and Reporting System (PDARS). Dates where runways were closed for construction projects were removed from consideration and include flight tracks from May 2017 to April 2018. The random dates are assumed to represent average typical

runway usage, flight paths, and day/night traffic ratios by capturing a range of temperature and wind conditions.

After the removal of overflights and incomplete track segments, 103,503 total tracks were used for the analysis. The altitude of the historical tracks was considered and a range ring was set to contain the area where most of the tracks reached above 10,000 feet above ground level (AGL). This established the study area for the supplemental noise analysis. In the case of KLAX, the range was set at 60 nautical miles (NM) and the study area was an area approximately 5 NM either side of the procedure paths. The supplemental noise modeling considered a larger area of 5 NM on either side of the procedure paths in support of a more conservative analysis of all areas containing potentially noise sensitive resources identified during the course of this review, including those outside the APE. The supplemental noise model is responsive to public comments received on the draft environmental review.

Once the baseline and alternative scenarios were built, the TARGETS Environmental Plug-in Tool was used to generate noise outputs for both scenarios. The Environmental Plug-in Tool uses AEDT to calculate noise. The noise output files from AEDT for both the baseline and alternative noise exposures consist of a series of equally spaced grid points, each showing a DNL value. The noise grid (receptor set) consists of grid points (receptors) spaced 0.5 NM apart. The noise impact is a comparison between the baseline and the alternative noise exposure that depicts reportable and significant noise changes at all affected receptors per the criteria indicated in FAA Order 1050.1F and Chapter 32 of FAA Order 7400.2P. In the case of the Action, there was no reportable and no significant increase in noise. The supplemental noise modeling report is included in **Appendix G**.

- 4.2.11.1.3.** If yes, are the results of the noise analysis incompatible with one or more of the Land Use Compatibility categories? (See FAA Order 1050.1, Desk Reference Chapter 11, Exhibit 11-3.)

☐ Yes ☒ No

If yes, explain:

- 4.2.11.1.4.** Do the results of the noise analysis indicate a threshold of significance over noise sensitive areas *not* listed under the Land Use Compatibility categories (for example, national parks, wildlife/waterfowl refuges)?

☐ Yes ☒ No

If yes, explain:

4.2.11.2 Do the results of the noise analysis indicate a change in noise meeting threshold criteria considered “reportable”?

i. For DNL 60 dB to <65 dB: + 3 dB ☐ Yes ☒ No

ii. For DNL 45 dB to <60 dB: + 5 dB ☐ Yes ☒ No

Evaluation:

4.2.11.a. Will the proposed action result in a significant noise impact over noise sensitive land use? (See FAA Order 1050.1, paragraph 5-2. b.(7), and the 1050.1 Desk Reference, Chapter 11 for details on how to make the determination.)

☐ Yes

If yes, explain:

4.2.11.b. ☒ No. The results of the noise analysis indicate that no significant or reportable noise impacts are expected to result from the implementation of the Action.

4.2.12. Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risk

4.2.12.1. Socioeconomics

4.2.12.1.a. Will the proposed action result in a division or disruption of an established community; a disruption of orderly, planned development; or an inconsistency with plans or goals that have been adopted by the community in which the proposed action is located? (See FAA Order 1050.1, Paragraph 5-2. b.(5).)

☐ Yes ☒ No

4.2.12.1.b. Will the proposed action result in an increase in congestion from surface transportation, by causing a decrease in the Level of Service below the acceptable level determined by the appropriate transportation agency? (i.e., a highway agency) (See FAA Order 1050.1, Paragraph 5-2.b.(6).)

☐ Yes ☒ No

Evaluation: Will implementation of the proposed action result in an impact to socioeconomics? (See the 1050.1 Desk Reference, Chapter 12 for details on how to make the determination.)

4.2.12.a. ☐ Yes

Comment:

- 4.2.12.b.** ☒ No. The Action does not involve acquisition of real estate, relocation of residence or community business, disruption of local traffic patterns, loss of community tax base, or changes to the fabric of the community.

4.2.12.2. Environmental Justice

***NOTE:** FAA has not established a significance threshold for Environmental Justice. Impacts to Environmental Justice in the context of other impact categories should be considered.*

Evaluation: Will the proposed action have the potential to lead to a disproportionately high and adverse impact to an environmental justice population, (i.e., a low income or minority population) 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? (See 1050.1 Desk Reference, Chapter 12 for details on how to make the determination.)

- 4.2.12.2.a.** ☐ Yes

Comment:

- 4.2.12.2.b.** ☒ No. An impact related to environmental justice is not anticipated. An environmental justice analysis considers the potential of the Action to cause disproportionate and adverse effects on low-income or minority populations due to significant impacts in other environmental impact categories; or impacts on the physical 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. If these factors exist, there is not necessarily a significant impact; rather, the FAA must evaluate these factors in light of context and intensity to determine if there are significant impacts.

This section addresses the potential for impacts on minority and low-income populations of the Action as compared with the No Action Alternative. In weighing whether the Action raises environmental justice concerns, the analysis draws on the findings of the other impact analyses, particularly noise, land use, and air quality.

The FAA conducted supplemental environmental justice

analysis using the EPA's Environmental Justice Screening and Mapping Tool (EJScreen, Version 2.2) to assess the presence of minority and low-income communities within the study area.³⁷ The analysis indicates that there are low income communities where over 20% of the population is below the poverty level throughout the study area, including (but not limited to) areas of Oxnard, Cienega, Jefferson, Los Angeles, Boyle Heights, and Wellington Heights. Refer to **Figure 38, 39, and 40**. These communities are interspersed with middle- and high-income neighborhoods.

A review of minority populations within the study area indicates that there are communities with populations of at or above the 80th percentile for people of color throughout the study area, including (but not limited to) areas of Fillmore, Moorpark, Oxnard, Culver City, Sentous, Cienega, Los Angeles, Jefferson, Boyle Heights, and Wellington Heights. These communities are most prevalent in areas of Los Angeles, Jefferson, Boyle Heights, and Wellington Heights towards the eastern boundary of the study area. Refer to **Figures 41, 42, 43, and 44**.

Although minority and low-income populations are present in the study area, these communities are interspersed with middle- and high-income communities and non-minority populations within the study area. In addition, most of the study area covers areas that do not have distinct minority or low-income populations. Aircraft have historically overflowed the study area. Implementation of the Action has not adversely affected air quality or land use within the study area. Additionally, the results of the noise screening analysis, when compared to the No Action Alternative, indicate that changes in noise exposure levels are below the threshold of significance for implementation of the Action. The Action has no new social or economic effects on the study area. There are no impacts on the physical or natural environment that affect environmental justice populations in a way that is unique to that population or significant to that population.

Based on the findings of the other impact categories included in this review, no significant environmental impacts were identified. In addition, there are no disproportionate or adverse impacts on minority or low-income populations as a result of the Action as compared to the No Action Alternative.

³⁷ EPA EJScreen, <https://ejscreen.epa.gov/mapper/>. Accessed December 22, 2023.

4.2.12.3. Children's Environmental Health and Safety Risk

NOTE: *FAA has not established a significance threshold for Children's Environmental Health and Safety Risk. Impacts to Children's health and safety in the context of other impact categories should be considered.*

Evaluation: Will the proposed action have the *potential* to lead to a disproportionate health or safety risk to children due to significant impacts in other environmental impact categories? (See the 1050.1 Desk Reference, Chapter 12, for details on how to make the determination.)

4.2.12.3.a. ☐ Yes

Comment:

4.2.12.3.b. ☒ No. An impact related to children's environmental health and safety is not anticipated.

4.2.13. Visual Effects

NOTE: *There are no special purpose laws for light impacts and visual impacts. Impacts from light emissions are generally related to airport aviation lighting.*

4.2.13.1. Will implementation of the proposed action create annoyance or interfere with normal activities from light emissions?

☐ Yes ☒ No

Explain:

The Action did not create annoyance or interfere with normal activities from light emissions. No new areas were overflowed as the result of the Action, and there was no change to the procedure tracks laterally. The Action did not introduce a new atmospheric or visual element.

4.2.13.2. Will implementation of the proposed action affect the visual character of the area including the importance, uniqueness, and aesthetic value of the affected visual resources?

☐ Yes ☒ No

Explain:

The Action did not interfere or have an effect on the visual character or visual resources within the study area. No new areas were overflowed as the result of the Action, and there was no change to the procedure tracks laterally. The Action did not introduce a new atmospheric or visual element.

Evaluation: Will the proposed action result in an impact to visual resources? (See FAA Order 1050.1, Paragraph 5-2.b.(5), and 1050.1 Desk Reference, Chapter 13

for details on how to make the determination.)

4.2.13.a. ☐ Yes

Comment:

4.2.13.b. ☒ No. The Action did not interfere or have an effect on visual resources. The FAA has not established a significance threshold for visual effects in FAA Order 1050.1F; however, the FAA has identified factors to consider when evaluating the context and intensity of potential environmental impacts for visual effects. As noted above, it was determined that there are no new areas overflowed and that the Action did not result in an introduction of atmospheric, visual, or auditory elements that could diminish the integrity of historic and traditional cultural resources. The FAA concluded that the Action did not have a significant visual effect on parks, wilderness areas, tribal lands, and historic properties.

4.2.14. Water Resources (including Wetlands, Flood Plains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

4.2.14.1. Are there wetlands, flood plains, and/or Wild and Scenic Rivers in the proposed action study area?

☒ Yes ☐ No

These resources are present within the study area, however, the Action is an air traffic action only with no ground-based activities. Therefore, there is no potential for impacts to these resources.

4.2.14.2. Are there reservoirs or other public water supply systems in the affected area?

☒ Yes ☐ No

These resources are present within the study area, however, the Action is an air traffic action only with no ground-based activities. Therefore, there is no potential for impacts to these resources.

4.2.14.3. Will implementation of the proposed action result in any construction or development or any physical disturbances of the ground?

☐ Yes ☒ No

4.2.14.4. Will implementation of the proposed action result in any changes to existing discharges to water bodies, create a new discharge that would result in impacts to water quality, or modify a water body?

☐ Yes ☒ No

If yes, is there a potential for an impact to water quality, sole source aquifers, a public water supply system, federal, state or tribal water quality standards established under the Clean Water Act and the Safe Drinking Water Act?

☐ Yes ☒ No

Evaluation: Will the proposed action result in an impact to water resources? (See FAA Order 1050.1, paragraph 5-2. b.(9), and 1050.1 Desk Reference, Chapter 14 for details on how to make the determination.)

4.2.14.a. ☐ Yes

Comment:

4.2.14.b. ☒ No. The Action does not have the potential to impact water resources.

4.2.15. Effects on the Quality of the Human Environment that are Likely to be Highly Controversial on Environmental Grounds.

***NOTE:** The term “highly controversial on environmental grounds” means there is a substantial dispute involving reasonable disagreement over the degree, extent, or nature of a proposed action’s environmental impacts or over the action’s risks of causing environmental harm. Mere opposition is not sufficient for a proposed action or its impacts to be considered highly controversial on environmental grounds. Opposition on environmental grounds by a federal, state, or local government agency or by a tribe or a substantial number of the persons affected by the action should be considered in determining whether or not reasonable disagreement regarding the impacts of a proposed action exists.*

***NOTE:** If in doubt about whether a proposed action is highly controversial on environmental grounds, consult the Line of Business/Staff Office (LOB/SOB) headquarters environmental division, the Office of Environment and Energy (AEE), Regional Counsel, or the Office of the Chief Counsel (AGC) for assistance. (See FAA Order 1050.1, Paragraph 5-2.b.(10).)*

4.2.15.1. Will implementation of the proposed action result in the likelihood of an inconsistency with any federal, state, tribal, or local law relating to the environmental aspects of the proposed action. (See FAA Order 1050.1, Paragraph 5-2.b.(11).)

☐ Yes ☒ No

If yes, explain:

Evaluation: Is there likelihood for the proposed action to be highly controversial based on environmental grounds?

4.2.15.a. ☐ Yes

Comment:

☒ No. The potential for controversy on environmental grounds is not anticipated. However, the City of Los Angeles and the City of Culver City expressed significant opposition to the original flight procedures (HUULL ONE, IRNMN ONE, and RYDRR ONE). The original flight procedures are not at issue because the Action the FAA is evaluating are minor amendments made in the implementation of the HUULL TWO, IRNMN TWO, and RYDRR TWO flight procedures—not the original flight procedures. The City of Los Angeles and City of Culver City have continued to express opposition and interest in the procedures and the amendments. Specifically, the Action was the subject of a lawsuit by Los Angeles (*City of Los Angeles v. Dickson*, No. 19-71581 [Jul. 8, 2021]), in which Culver City intervened. In that lawsuit, the U.S. Court of Appeals for the Ninth Circuit held that the FAA failed to properly evaluate and disclose the environmental impacts of the amendments as required under NEPA, Section 4(f) of the DOT Act, and Section 106 of the NHPA.

In accordance with the court's decision, the FAA conducted this environmental review under NEPA and related consultations under Section 4(f) of the DOT Act and Section 106 of NHPA, properly evaluating and disclosing the environmental impacts of the amendments. No significant environmental impacts were identified in connection with the Action during the course of this environmental review, and so although further opposition is expected, controversy on environmental grounds is not anticipated.

Section 5. Mitigation

Are there measures which can be implemented that might mitigate any of the potential impacts, i.e., global positioning systems / flight management system plans, navigational aids, etc.?

☐ Yes ☒ No ☐ N/A

Describe:

Due to the findings of this environmental review that there are no significant impacts, no mitigation measures are necessary for the Action.

Section 6. Cumulative Impacts

What other projects (FAA, non-FAA, or non-aviation) are known, planned, have been previously implemented, or are ongoing in the affected area that would contribute to the proposed project's environmental impact?

The cumulative impacts analysis focuses on those resource areas that are impacted by the Action in conjunction with the past, present, and reasonably foreseeable future actions. The likelihood that an action would cumulatively create a significant impact on the human environment is another extraordinary circumstance that the FAA must consider before categorically excluding an action from further NEPA review. In accordance with FAA Order 1050.1F, the significance of cumulative impacts should be determined in the same manner as the significance of direct and indirect impacts.

The FAA has the discretion to determine whether, and to what extent, information about past actions is useful for the analysis of the impacts of the action and alternative(s). Present impacts of past actions that are relevant and useful are those that may have a significant cause-and-effect relationship with the direct and indirect impacts of the action and alternative(s). Present actions occurring in the same general timeframe as the proposal may have noise or other environmental concerns that should be considered in conjunction with those that would be generated by the FAA action and alternative(s) under consideration. Reasonably foreseeable future actions are actions that may affect projected impacts of a proposal and are not remote or speculative.

Consideration of cumulative impacts applies to the impacts resulting from the implementation of the Action combined with other actions. A cumulative impact is defined as an impact on the environment, which results from the incremental impact of the action when added to other, recent and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions.

Analyzing cumulative impacts is considered within geographic (spatial) and time (temporal) boundaries. Reasonably foreseeable future actions refer to projects that would likely be completed within the next five years and do not include those actions that are highly speculative or indefinite. The types of projects considered under the cumulative impact analysis were primarily limited to airfield projects, specifically projects that directly affect or involve runways and modifications to parallel taxiways (TWY) (e.g., lengthening and/or widening). These types of projects may affect aircraft flight operations.

Cumulative Impacts Analysis - Noise and Noise-Compatible Land Use

The FAA conducted a search of publicly available databases, website and data sources to obtain information on air traffic and airport-based projects at KLAX to assist in the cumulative effects analysis. The following are the projects considered in the cumulative impacts analysis and include both airport and air traffic procedure projects. **Table 15 of Appendix A** is a summary of airport-based projects.

Table 16 of Appendix A provides a summary of KLAX air traffic procedures expected to be implemented or amended in the near future along with a scheduled publication date. Some of the scheduled publication dates are subject to change due to scheduling and funding and may be amended as needed.

Table 17 of Appendix A provides a summary of KLAX air traffic procedure implementations or amendments that were published in the past and are being considered in the cumulative effects analysis.

In reviewing all past, present, and reasonably foreseeable future airport projects, the FAA has determined the projects are not capacity-enhancing. The projects do not increase the operational capacity of the airport, although some of them include additional new gates at the terminal. While these gates could allow airlines to schedule more flights to KLAX, the operational capacity of the airport will not increase. The airport's capacity is determined by the hourly throughput of the runways. Given that the airport projects did not add to the number of aircraft operations at KLAX, no cumulative or significant impacts would occur due to the implementation of the procedures.

The noise analysis results from the May 2018 amendments incorporated in the IRNMN TWO, HUULL TWO, and RYDRR TWO STARs indicate that there are no reportable or significant noise impacts as a result of implementing the Action. None of the past air traffic actions resulted in a significant noise impact and no future actions are expected to result in significant noise impacts. In reviewing all past, present, and reasonably foreseeable future air traffic projects, the implementation of the Action would not be expected to result in significant cumulative impacts. If no impacts to an environmental resource category were identified under the Action, when compared to the No Action Alternative, then no further analysis for cumulative impacts is required.

Section 7. Community Involvement

Community involvement is the process of engaging in dialog and collaboration with communities affected by FAA actions. The appropriate level of community involvement and public engagement will vary to some degree depending on the project scope and affected communities. (See FAA Order JO 7400.2, appendices 10 and 11, and the Community Involvement Performance Based Navigation Desk Guide, and/or AEE's Community Involvement Manual, or other available Community Involvement guidance for further information.). Community involvement is the process of engaging in dialogue and collaboration with communities affected by FAA actions. Formal community involvement or public meetings/hearings may be required for the project.

Have individuals and/or groups who could have an interest in an FAA activity due to their location or by their function in the community been notified, consulted, or otherwise informed of this action?

☒ Yes ☐ No ☐ Not Known

The FAA released the draft of this environmental review, including the NEPA, Section 4(f), and Section 106 analyses to the public for comment on October 2, 2023. In addition, during the course of this environmental review, the FAA consulted with the California Native American Heritage Commission and local tribes, the California SHPO, the City of Los Angeles, the City of Culver City, the County of Los Angeles, the City of Malibu, the Los Angeles Conservancy, and the Mountain Conservation and Resource Agency pertaining to the Action.

Are the airport proprietor and/or users providing general support for the action?

☒ Yes ☐ No ☐ Not Known

Are local citizens and community leaders aware of the action?

☒ Yes ☐ No ☐ Not Known

Are any ☒ opposed to or ☐ supporting it? ☐ Not Known

Has the FAA received one or more comments objecting to the project on environmental grounds from local citizens or elected officials?

☒ Yes ☐ No ☐ Not Known

The City of Los Angeles and its Councilmembers have requested general information as well as environmental documentation on these procedure amendments. Refer to **Section 0.** of this environmental review for background information pertaining to the project. A summary of consultation activities is provided in **Appendix E.**

The FAA released the draft environmental review document for the May 2018 amendments to area navigation (RNAV) arrival procedures, HUULL TWO, IRNMN TWO, and RYDRR TWO, at Los Angeles International Airport (KLAX), in Los Angeles, California for public review and comment beginning on October 2, 2023, and ending on November 1, 2023.

Comments from the public were reviewed and general responses to comments are provided in Final Air Traffic Environmental Review and CATEX/ROD
May 2018 Amendments to the HUULL TWO, IRNMN TWO, and RYDRR TWO STARs
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Appendix H.

Is the project consistent with local plans and development efforts?

☒ Yes ☐ No

Has there been any previous aircraft-related environmental or noise analysis, including a FAR Part 150 Study, conducted at this location?

☒ Yes ☐ No

The Final KLAX Part 150 Noise Exposure Map Update was submitted to the FAA on September 23, 2015. Los Angeles World Airports received formal acceptance of the Noise Exposure Map from the FAA on February 18, 2016. Public notice of the formal acceptance was published in the Los Angeles Times newspaper on March 4-6, 2016, pursuant to Section 107(a) & (b) [Title 49, U.S.C. § 47506] of the Airport Safety and Noise Abatement Act of 1979.³⁸

If “Yes,” was the study reviewed as a part of this initial review?

☐ Yes ☒ No ☐ N/A

Section 8. References/Correspondence

Attach written correspondence, summarized phone contacts using Memorandums for the File, etc.

A summary of correspondence between the FAA and consulting parties conducted during the course of this environmental review for the Action is provided in **Appendix E**.

Section 9. Additional Preparers

The person(s) listed below, in addition to the preparer indicated on page 1, are responsible for all or part of the information and representations contained herein:

Name: _____

Title: _____

Facility: _____

Telephone Number: _____

Specific Area of Responsibility: _____

³⁸ Los Angeles World Airports Noise Management at KLAX. <https://www.lawa.org/lawa-environment/noise-management/lawa-noise-management-lax/lax-part-150-noise-exposure-map-update>. Accessed February 6, 2024.
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Section 10. Declaration of Exclusion

The FAA has reviewed the above referenced proposed actions, and it has been determined, by the undersigned, to be categorically excluded from further environmental analysis and documentation according to FAA Order 1050.1F, Environmental Impacts: Policies and Procedures. The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1F.

The basis for this determination is the environmental review conducted by the Western Service Center Operations Support Group. The Environmental Review was conducted in accordance with policies and procedures in FAA JO 7400.2M, "Procedures for Handling Airspace Matters," Department of Transportation Order 5610.1C, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1F.

The proposed actions meet the following categorical exclusion (CATEX) contained in FAA Order 1050.1F:

§5-6.5(i): Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas, and increases in minimum altitudes and landing minima. For modifications to air traffic procedures at or above 3,000 feet AGL, the Noise Screening Tool (NST) or other FAA-approved environmental screening methodology should be applied.

Specifically, this categorical exclusion applies to the Action because:

- The Action is limited to the establishment of revised (amended) flight procedures conducted at or above 3,000 feet AGL. Current FAA approved environmental screening methodologies were applied in accordance with FAA Order 7400.2, Chapter 32; and
- The implementation of this Action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1F.

Section 11. Decision and Order

After careful and thorough consideration of the facts contained herein, the undersigned find that the proposed actions are consistent with existing national environmental policies and objectives as set forth in Section 101(A) of the National Environmental Policy Act and other applicable environmental requirements and will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(C) of the National Environmental Policy Act.

The undersigned has reviewed the referenced Environmental Review, including the evaluation of the purpose and need that this action would serve. The proposed actions described in the Environmental Review are found to be reasonably supported and a Categorical Exclusion/Record of Decision (CATEX/ROD) is appropriate.

Under the authority delegated by the Administrator of the FAA, it is directed that action be taken to carry out the following proposed actions: As described above, amend airspace procedures HUULL ONE, IRNMN ONE, and RYDRR ONE and maintain its ongoing use of the HUULL TWO, IRNMN TWO, and RYDRR TWO.

Concurrence by:

**LONNIE DEL
COVALT** Digitally signed by
LONNIE DEL COVALT
Date: 2024.02.16
11:10:22 -08'00'

Lonnie D. Covalt
Lead Environmental Protection Specialist
Western Service Center
Operations Support Group

Approved by:

**BYRON G Y
CHEW** Digitally signed by
BYRON G Y CHEW
Date: 2024.02.20
08:42:58 -08'00'

B. G. Chew
Group Manager
Western Service Center
Operations Support Group

RIGHT OF APPEAL

This CATEX/ROD constitutes a final order of the FAA Administrator and is subject to exclusive judicial review under 49 U.S.C. § 46110 by the U.S. Circuit Court of Appeals for the District of Columbia or the U.S. Circuit Court of Appeals for the circuit in which the person contesting the decision resides or has its principal place of business. Any party having substantial interest in this order may apply for review of the decision by filing a petition for review in the appropriate U.S. Court of Appeals no later than 60 days after the order is issued in accordance with the provisions of 49 U.S.C. § 46110. Any party seeking to stay implementation of the ROD must file an application with the FAA prior to seeking judicial relief as provided in Rule 18(a) of the Federal Rules of Appellate Procedure.

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EXHIBIT A