

IBEC Project

Westslope Consulting
Inglewood, California

*A description of Aeronautical Study Process and
Results of an Obstruction Evaluation & Airspace Analysis*

May 10, 2019



Capitol Airspace Group

capitolairspace.com

(703) 256 - 2485

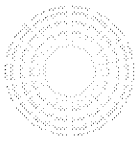


Table of Contents

FAA’s Aeronautical Study Process 1

 Step One: Providing Notification to the FAA 1

 Step Two: Initial Review 2

 Step Three: Preliminary Results in a Notice of Presumed Hazard (NPH) 2

 Step Four: Responding to a Notice of Presumed Hazard (NPH) 2

 Step Five: Final Determinations..... 3

 Step Six: Before and After Construction 3

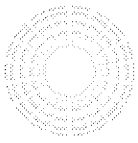
Results of Obstruction Evaluation and Airspace Analysis 3

Attachment 1: 14 CFR Part 77.9 Notice Criteria 2

Attachment 2: 14 CFR Part 77.19 Imaginary Surfaces 3

Attachment 3: Composite Height Constraint Map (FAA Obstacle Clearance Surfaces)..... 4

Attachment 4: Runway Protection Zones (RPZ) 5



FAA's Aeronautical Study Process

The United States Congress has charged the Federal Aviation Administration (FAA) with the responsibility to promote air commerce in the United States. As part of this responsibility, the FAA is tasked with ensuring air safety and preserving the National Airspace System (NAS). It is through these mandates that the FAA draws its authority to conduct aeronautical studies of proposed structures.¹ Below is an overview of the typical process and required steps for working through the aeronautical study process.

Step One: Providing Notification to the FAA

Developers intending to build structures in excess of certain notification criteria must notify the FAA. These criteria state that permanent or temporary structures with a planned height greater than 200 feet above ground level (AGL) must be submitted to the FAA for an aeronautical study. Additionally, structures that exceed a 100:1 (run:rise) slope within 20,000 feet of Jack Northrop Field/Hawthorne Municipal Airport (HHR) must also be submitted to the FAA (*Attachment 1*). This notice must be submitted to the FAA at least 45 days prior to the start of construction.²

Prior to the FAA's establishment of the FAA OE/AAA automation system, notice was provided to the FAA by submitting FAA Form 7460-1, Notice of Proposed Construction or Alteration.³ The FAA and industry continue to refer to these filings as "7460-1" filings.

These filings require basic information about each permanent and temporary structure to be studied. Specifically, the FAA requires that the structure's location, ground elevation, and height be submitted. Capitol Airspace recommends that developers obtain an FAA "1A" survey prior to this submittal. This stamped and signed survey will ensure that the FAA does not apply margin-of-error penalties to the final, approved height of the structure.

To avoid error and maintain standard data, the following is required:

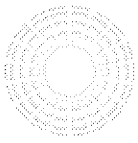
1. Coordinates and heights must use the North American Datum of 1983 (NAD83) and the North American Vertical Datum of 1988 (NAVD88), respectively.
2. Exact latitude and longitude coordinates must be provided in degrees, minutes, and seconds rounded to the nearest hundredth of a second.
3. Site elevation must be provided in above mean sea level (AMSL) feet rounded to the nearest foot.
4. Structure height must be provided in above ground level (AGL) rounded to the next highest foot. This height should include all structures that could exist above roof-line, including parapets, lights, and mechanical equipment.

Once the FAA receives and verifies these filings, an aeronautical study number is issued for each point. This begins the aeronautical study process.

¹ 14 CFR §77 – *Safe, Efficient Use, and Preservation of the Navigable Airspace*

² 14 CFR §77.7 – *Form and time of notice*; and §77.9 – *Construction or alteration requiring notice*

³ <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>



Step Two: Initial Review

Each project is assigned to a specialist within the FAA Obstruction Evaluation Group (OEG). For most projects, there are ten different government offices or agencies that take part in the study process, including: FAA Airports, FAA Instrument Flight Procedures Impact Team, FAA Flight Standards, FAA Technical Operations, FAA Frequency Management, United States Air Force, United States Navy, United States Army, Department of Homeland Security (DHS), and the Department of Defense (DoD).

Technicians in each of these offices will review each point to ensure that the planned structure does not interfere with their areas of responsibility. For example, the Instrument Flight Procedures Impact Team will assess for impact on instrument departure and approach procedures. The Technical Operations office will consider the potential for impacts on navigational aids and radar surveillance systems.

Once each office has assessed the proposed project, they submit a response of either “objection” or no-objection” via the FAA OE/AAA system. During this preliminary review period, the project is considered to be in “work status.” Review by all responding offices typically takes between 60 and 90 days. After all offices have responded, the project is moved from “work status” into “evaluation status.” It is at this point that the FAA Obstruction Evaluation Specialist will assess all of the responses and determine whether to issue a Notice of Presumed Hazard (NPH) or a favorable “Does Not Exceed” determination.

If any proposed structures exceed a 14 CFR Part 77 imaginary surface (e.g., *Attachment 2*), then an NPH is guaranteed and the FAA will require marking and lighting in accordance with FAA Advisory Circular 70/7460-1L. However, this does not automatically result in a Determination of Hazard. Proposed structures must have airspace or radar impacts that constitute a substantial adverse effect in order to warrant the issuance of a Determination of Hazard.

Step Three: Preliminary Results in a Notice of Presumed Hazard (NPH)

An NPH letter is meant to be a means for the FAA to notify the developer that the FAA has identified an issue that will require further aeronautical study in order to determine whether or not the structure will pose a hazard to air navigation. Typically, the FAA will also include any objections received by the various responding FAA, DoD, or DHS offices.

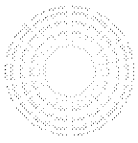
Step Four: Responding to a Notice of Presumed Hazard (NPH)

While there are many methods to resolve objections received on a project, nearly all NPH cases must be circularized to the public for comment. Public notices should be distributed to any party that can provide information relevant to FAA’s aeronautical study.

The distribution list typically includes the following:⁴

- All public-use airports within 13 nautical miles (NM) of the proposed structures
- All private-use airports within 5 NM of the proposed structures
- Any affected airport

⁴ As described in FAA Order 7400.2L Paragraph 6-3-17, “Circularization”



- The air traffic facility that provides radar vectoring services in the vicinity of the proposed structures
- FAA Flight Standards
- All known aviation interested persons such as state, city, and local aviation authorities
- Flying clubs and organizations

It is through this 37 day public comment period that the FAA solicits feedback from the flying community. Once the comment period closes, the FAA will discard comments that are not of a valid aeronautical nature. During this time, mitigation options that strike a balance between the needs of the development project and the FAA's need to preserve the NAS may be submitted.

Step Five: Final Determinations

At the end of the further aeronautical study and public comment period, the FAA will make a final decision and issue either a Determination of No Hazard or a Determination of Hazard. Favorable determinations are valid for 18 months. A one-time extension can be requested. This request is further reviewed by the FAA and may result in the issuance of an extension letter for an additional 18 months.

Step Six: Before and After Construction

Supplemental notice may require notification to the FAA both prior to, and shortly after, construction. This allows the FAA to chart each structure so that pilots are aware of the new, taller development. Lastly, the FAA may take action to temporarily or permanently modify airspace to accommodate the proposed structures.

Results of Obstruction Evaluation and Airspace Analysis

Capitol Airspace conducted an obstruction evaluation and airspace analysis for the IBEC Project in Inglewood, California. The purpose of this analysis was to identify obstacle clearance surfaces established by the Federal Aviation Administration (FAA) that could limit buildable heights within an approximately 27 acre study area (red outline, *Figure 1*). At the time of this analysis, the tallest proposed permanent development was 240 feet above mean sea level (AMSL) while the tallest proposed temporary construction equipment was estimated at 290 feet AMSL.

Height constraints overlying the IBEC Project range from 290 to 450 feet AMSL (*Attachment 3*) and are associated with the Los Angeles International Airport (LAX) Localizer Approach to Runway 25L final approach segment. It should be noted that the proposed buildings and temporary construction equipment are well outside of Los Angeles International Airport runway protection zones (*Attachment 4*).

At a maximum height of 290 feet AMSL, proposed buildings and temporary construction equipment will exceed 14 CFR Part 77 imaginary surfaces. As a result, it is likely that the FAA will require circularization for public comment for the proposed buildings. However, these structures (both permanent and temporary) will not have an impact on Los Angeles International Airport nor Hawthorne Municipal Airport (HHR) visual flight rules (VFR) operations or published instrument flight rules (IFR) procedures. As a result, it is likely that the FAA will issue favorable determinations of no hazard, exclusive of potential interference on communications, navigation, or surveillance radar systems.

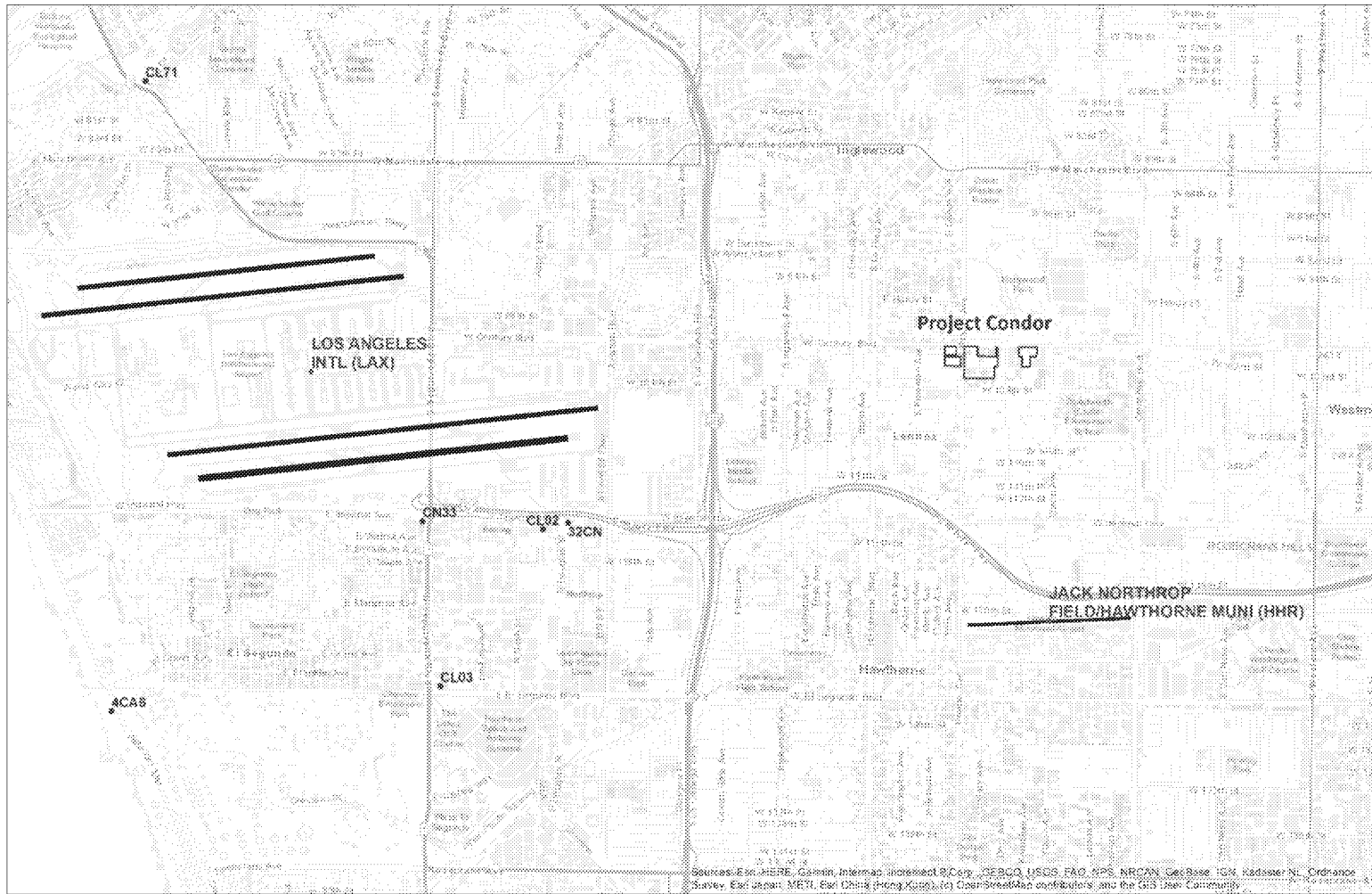
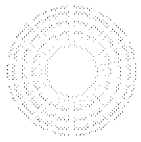


Figure 1: Public-use (blue) and private-use (red) airports in proximity to the IBEC Project

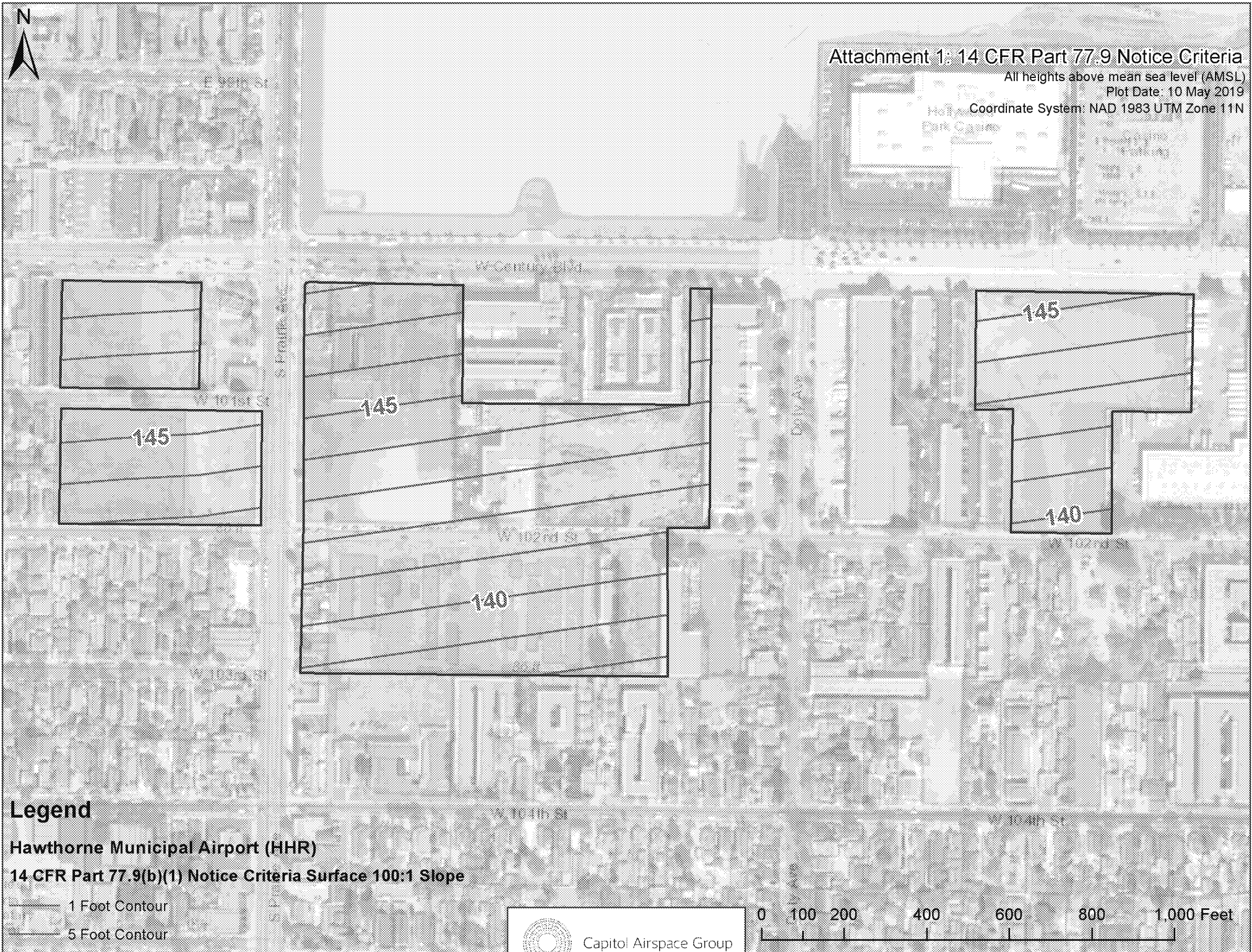


Attachment 1: 14 CFR Part 77.9 Notice Criteria

All heights above mean sea level (AMSL)

Plot Date: 10 May 2019

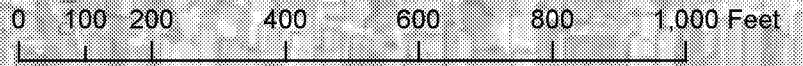
Coordinate System: NAD 1983 UTM Zone 11N



Legend

Hawthorne Municipal Airport (HHR)
14 CFR Part 77.9(b)(1) Notice Criteria Surface 100:1 Slope

- 1 Foot Contour
- 5 Foot Contour





Attachment 2: 14 CFR Part 77.19 Imaginary Surface

All heights above mean sea level (AMSL)

Plot Date: 10 May 2019

Coordinate System: NAD 1983 UTM Zone 11N



Legend

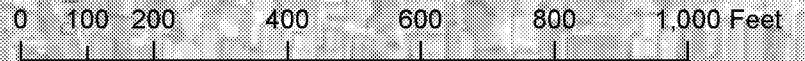
Hawthorne Municipal Airport (HHR)

14 CFR Part 77.19 Imaginary Surface

 Horizontal Surface (Flat 215' AMSL)



Capitol Airspace Group





Attachment 3: Composite Height Constraint Map

All heights above mean sea level (AMSL)

Plot Date: 10 May 2019

Coordinate System: NAD 1983 UTM Zone 11N



Legend

FAA Obstacle Clearance Surface

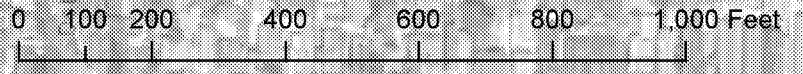
Height - AMSL Feet

High : 450

Low : 290

5 Foot Contour

25 Foot Contour





Attachment 4: Los Angeles International Airport (LAX) Runway Protection Zones (RPZ)

All heights above mean sea level (AMSL)



Plot Date: 10 May 2019

Coordinate System: NAD 1983 UTM Zone 11N



Legend

Los Angeles International Airport RPZ

-  Runway 25R
-  Runway 25L

