# Airport Background Data and Assumptions Report – Lompoc Airport

Santa Barbara County
Airport Land Use Compatibility Plan Update

# 1.0 Introduction

The following report describes Lompoc Airport (LPC or the Airport) and the surrounding area. Information used in the preparation of this report is derived from the 2011 Lompoc Airport Layout Plan and airport records maintained by the Federal Aviation Administration (FAA), as well as the draft Airport Master Plan Update, completed in April 2011. Information provided in this report includes a description of the Airport location, the surrounding land uses, the existing and planned Airport facilities, and the existing and projected operational activity at the Airport.

# 2.0 Airport Background

Lompoc Airport is located in the City of Lompoc (City) in far western Santa Barbara County, approximately 45 miles west of the City of Santa Barbara and approximately seven miles southeast of Vandenberg Air Force Base. The Airport lies in the northern section of the City adjacent to the Santa Ynez River. An aerial photo showing the Airport and surrounding areas is provided in **Exhibit A-1**.

The Airport was established on November 4, 1928, between 'H' and 'O' Streets and College and Pine Avenues, in what is now the City center. In 1960, the Airport was relocated to its current location, approximately a mile to the north, after becoming encroached upon by surrounding development. The current Airport is located immediately north of the City, bordered to the north and east by the Santa Ynez River, and to the west by Highway 1/'H' Street. The Airport is owned and operated by the City.

Land use around the Airport is varied, with open space and agricultural uses found to the north and east of the Airport, beyond the Santa Ynez River, and general commercial and light industrial/business park uses predominant to the west and south of the Airport. The Lompoc Federal Penitentiary is located approximately 1.75 miles northwest of the Airport near the boundary of Vandenberg Air Force Base. The Lompoc campus (Lompoc Valley Center) of Allan Hancock College, a multi-campus community college, is located approximately one mile north of the Airport. The closest residential land uses are located approximately 0.25 mile to the south and west of the Airport. Existing land use is depicted in **Exhibit A-2**. Planned land use is depicted in **Exhibit A-3**.

The Airport Master Plan was last updated in April 2011 and provides a forecast of Airport activity through 2030. The Master Plan anticipates that the Airport will continue to primarily serve general aviation (GA) activity and that its role in this capacity will not significantly change. However, the Airport anticipates a steady increase in business aircraft and hopes to be an asset in stimulating the local economy. The recommended facility improvements included in the Master Plan are focused on satisfying this role and include extending the runway from 4,600 feet to 4,857 feet and expanding the terminal/administrative building by approximately 4,000 square feet to meet the facility forecast requirements and to comply with Americans with Disabilities Act access requirements.

**Table A-1** provides a summary of Airport background information.

Table A-1 - Airport Background Summary - Lompoc Airport

General Information	Description
Airport Ownership	City of Lompoc
Year Opened	1928 (relocated 1960)
Airport Property Size	194 acres
Airport Classification	General Aviation
Airport Elevation	88 feet MSL
Airport Planning Documents	Description
Airport Master Plan	Lompoc Airport Master Plan Update, 2011
Planned Facility Improvements	Description
Airside	<ul> <li>Pavement Management Plan</li> <li>Reconstruct Apron</li> <li>Install Airfield Signs &amp; Airfield Electrical Upgrade &amp; Replacement</li> <li>Runway/Taxiway Overlay and Extension</li> <li>Construct Blast Fence</li> <li>Recertify Instrument Approach/Upgrade to WAAS/LPV Approach</li> <li>Rehabilitate City Owned Hangars</li> <li>Relocate AWOS/Install Super AWOS</li> <li>Construct Individual Hangars</li> <li>Construct Airport Maintenance Facility</li> <li>Construct Oil Recycling Center</li> <li>Construct Individual Hangars</li> <li>Construct Conventional Hangars</li> <li>Construct Aviation Related Use Building and Associated Parking</li> <li>Re-construct Apron</li> </ul>
Landside	<ul> <li>Construct Box Hangars</li> <li>Sustainability Plan</li> <li>Construct Perimeter Road</li> <li>Expand Terminal and Connect to City Sewer System</li> <li>Construct Airport Café/Restaurant and Automobile Parking</li> <li>Rehabilitate Airport Beacon Tower</li> <li>Provide Additional Automobile Parking</li> <li>Enhance Airport Security</li> </ul>

Notes: MSL = Mean Sea Level

WAAS=Wide Area Augment System LPV= Localizer Performance with Vertical Guidance

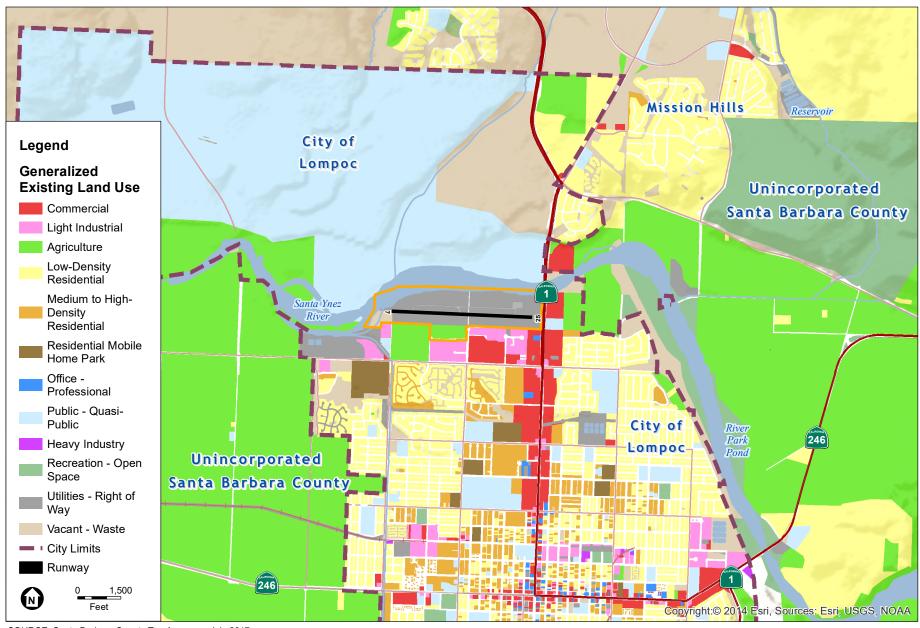
Source: Lompoc Airport Layout Plan, 2011; Lompoc Airport Master Plan Update, 2011; FAA Airport Master Record, <a href="http://www.gcr1.com/5010WEB/airport.cfm?Site=LPC&CFID=2320978&CFTOKEN=92574761">http://www.gcr1.com/5010WEB/airport.cfm?Site=LPC&CFID=2320978&CFTOKEN=92574761</a>, Accessed April 2017.



SOURCE: ESRI, Inc., 2019.



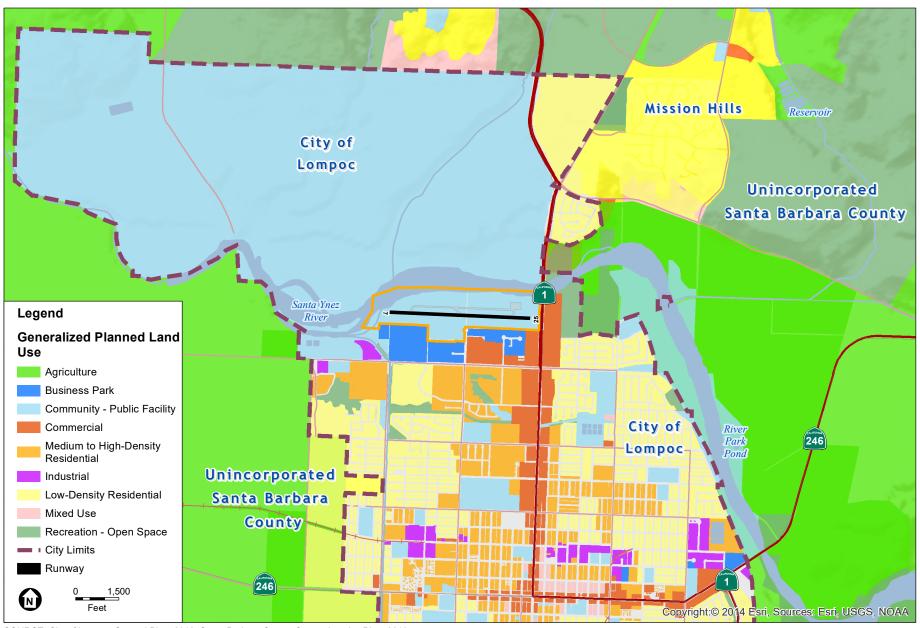
Draft Airport Background Data and Assumption Lompoc Airport			
IIS PAGE INTENTIONALLY LEFT BLAN	K		



SOURCE: Santa Barbara County Tax Assessor, July 2017.



ompoc Airport			
S PAGE INTENTIONALLY LEFT BLAN	NK.		



SOURCE: City of Lompoc General Plan, 2019; Santa Barbara County Comprehensive Plan, 2019.

ompoc Airport			
PAGE INTENTIONALLY LEF	T BLANK		

# 3.0 Airport Characteristics

The following section provides a brief description of current Airport characteristics. Airside facilities described include runways, taxiways, and aprons. Landside facilities include the terminal building, administrative offices, and GA and Airport support facilities.

Lompoc Airport is classified as a GA Airport in the National Plan of Integrated Airport Systems (NPIAS) and as a Community Airport in the California Aviation System Plan (CASP). The 2011 Draft Master Plan identified LPC as an ARC B-II facility and the critical design aircraft is the Cessna Citation Jet 2. The Airport property is 140 acres in size and the Airport has one runway, Runway 7-25. Runway 7-25 is 4,600 feet long and 100 feet wide. The runway was extended to its current length in 2002. As of August 2017, Runway 25 is marked with a displaced threshold of approximately 116 feet. The Draft Master Plan states that the Runway 25 displaced threshold was presumably added to provide clearance over Highway 1/'H' Street to the east of the Airport. However, the Draft Master Plan states the displaced threshold is not correctly located and is not necessary. This displaced threshold is not identified on the FAA's Form 5010 Airport Master Record nor is it included in the FAA's Digital-Chart Supplement (formerly the Airport/Facility Directory.) The runway pavement strength is 17,000 pounds for single wheel landing gear. Neither the Airport Master Plan nor the Airport Master Record maintained by the FAA provide information on pavement strength for other types of landing gear.

The runway is served by two parallel taxiways, the north parallel taxiway and the south parallel taxiway. The north parallel taxiway is 50 feet wide and runs approximately 3/4ths of the runway distance. The placement of the Santa Ynez floodway prevented the extension of the taxiway when the runway was extended in 2003. The south parallel taxiway is 35 feet wide and is a full parallel taxiway extending the length of the runway. Both taxiways have four exit taxiways; one each at each runway end, one each close to the Runway 25 threshold, and one each at the middle of the runway.

The Airport is self-controlled and does not operate an Air Traffic Control Tower (ATCT). Visual aids at the Airport include a rotating beacon, runway end identifier lights (REIL), medium intensity runway lights (MIRL), and a visual approach slope indicator (VASI). The VASI is located to the left of Runway 25 and the REIL on the Runway 25 end is located at the displaced threshold. A segmented circle and windsock are located on the south side of the runway approximately 150 feet south of the runway centerline. The segmented circle reflects the single sided traffic pattern at the airport

There are currently two published instrument approaches to the Airport: RNAV (GPS) RWY 25 and VOR DME A. These instrument approaches are described in greater detail in **Table A-2**. Visibility minimums at the Airport are relatively high primarily due to terrain located in the vicinity of the airport and restricted areas west of the airport. Furthermore, Highway1/'H' Street, trees, and power lines to the east of the airport also impact approach minimums.

Aircraft parking aprons are located on both the north and south sides of the runway with tie-downs for 53 aircraft. In addition, the Airport maintains 63 hangars on the north apron and 15 hangars on the south apron. The City of Lompoc manages 24 of these hangars and the remaining 54 hangars are held under long-term land leases. There are no full service fixed-base operators (FBOs) on the Airport; however, there is one partial-service FBO that provides aircraft maintenance service and another that provides skydiving training. An oil recycling center is operated by the Airport near Hangar 43, along George Miller Drive. The Airport maintains a 1,200 square foot terminal/administrative building with offices, a pilot's lounge/flight planning room, and restrooms. The Airport's automobile parking area provides approximately 73 parking spaces.

The City updated the Airport's Master Plan, including the ALP, in April 2011. The ALP is provided in **Exhibit A-4**. Information provided in the 2011 Airport Master Plan Update was used to prepare this document. The planned improvements to the Airport described in the Airport Master Plan Update include extending Runway 25 by 257 feet for a total length of 4,857 feet, including a displaced threshold of 197 feet; construction of an Airport perimeter road, installation of a blast fence between the runway and Highway 1/'H' Street; construction of 101 additional hangars adding 28,400 square feet of hangar space; and expansion of the administration/terminal building to 5,000 square feet.

**Table A-2** presents a summary of the Airport's airside and landside facilities.

Table A-2 - Airport Facilities Summary - Lompoc Airport

Airside Facilities  Airside Facilities	npoc Anpo	rt			
Runways	Description	on			
Runway Designation	Runway 7-	-25			
Airport Reference Code (ARC)	B-II				
Critical Design Aircraft	Citation 55	60 (II)			
Runway Dimensions	4,600' x 10	00' (planned exter	nsion - 4,857'	x 100')	
Pavement Strength	17,000 lbs				
Runway Lighting/ Visual Approach Aids	MIRL, REI	L, Rotating Beaco	on, VASI (3.25	degrees) - F	Runway 25
Taxiways	North Parallel Taxiway, South Parallel Taxiway				•
Heliport/Helipad	None				
Approach Protection	Description				
Runway Protection Zones (RPZs)					
Runway 7	500' x 700' x 1,000', 43% within Airport property				
Runway 25	500' x 1,010' x 1,700', 60% within Airport property				
Approach Obstacles	Runway 25: Highway 1/'H' Street, power lines				
Traffic Patterns and Approach Procedures	Description	on			
Aircraft Traffic Patterns					
Runway 7	Left				
Runway 25	Right				
Pattern Altitude	901.1 feet	MSL/813 feet AG	L		
Instrument Approach Procedures	Туре	Navigational	Aircraft	Min	imums
		Aids	Category	Ceiling (feet)	Visibility (miles/feet)
RNAV (GPS) RWY 25	RNAV	GPS	A, B	1,000'	1¼ mile
,	Circling	GPS	A, B	1,000"	1¼ mile
VOR/DME-A	Circling	VOR	A	1,340'	1¼ mile
VOINDIVIE-A	0019	. •		.,	. ,

Table A-2 - Airport Facilities Summary – Lompoc Airport (continued)

Landside Facilities				
Building Area	Description			
Aircraft Parking Location	North side, south side			
Aircraft Parking Capacity				
Hangar Spaces	63 hangars on the north side			
-	15 hangars on the south side			
<ul> <li>Tie-Down Spaces</li> </ul>	41 on the north side			
	12 on the south side			
Services				
• Fuel	100LL, Jet A			
Other	Major airframe and power plant repairs; oxygen			

Notes: AGL=Above ground level

DME=Distance measuring equipment GPS= Global Positioning System

LOC=Localizer

MIR =Medium intensity runway lights

MSL=Mean sea level

REIL=Runway edge indicator lights

RNAV=Area navigation

VASI=Visual Approach Slope Indicator

VOR=Very high frequency omnidirectional radio range

Source: Lompoc Airport Layout Plan, 2011; Federal Aviation Administration National Flight Data Center < https://nfdc.faa.gov/nfdcApps/services/airportLookup/airportDisplay.jsp?airportId=klpc>, accessed April 2017.

# 4.0 Airport Activity

The following sections describe existing activity at the Airport as well as forecasted Airport activity consistent with facility improvements depicted on the Airport Layout Plan and facilities projections provided for in the Airport Master Plan Update.

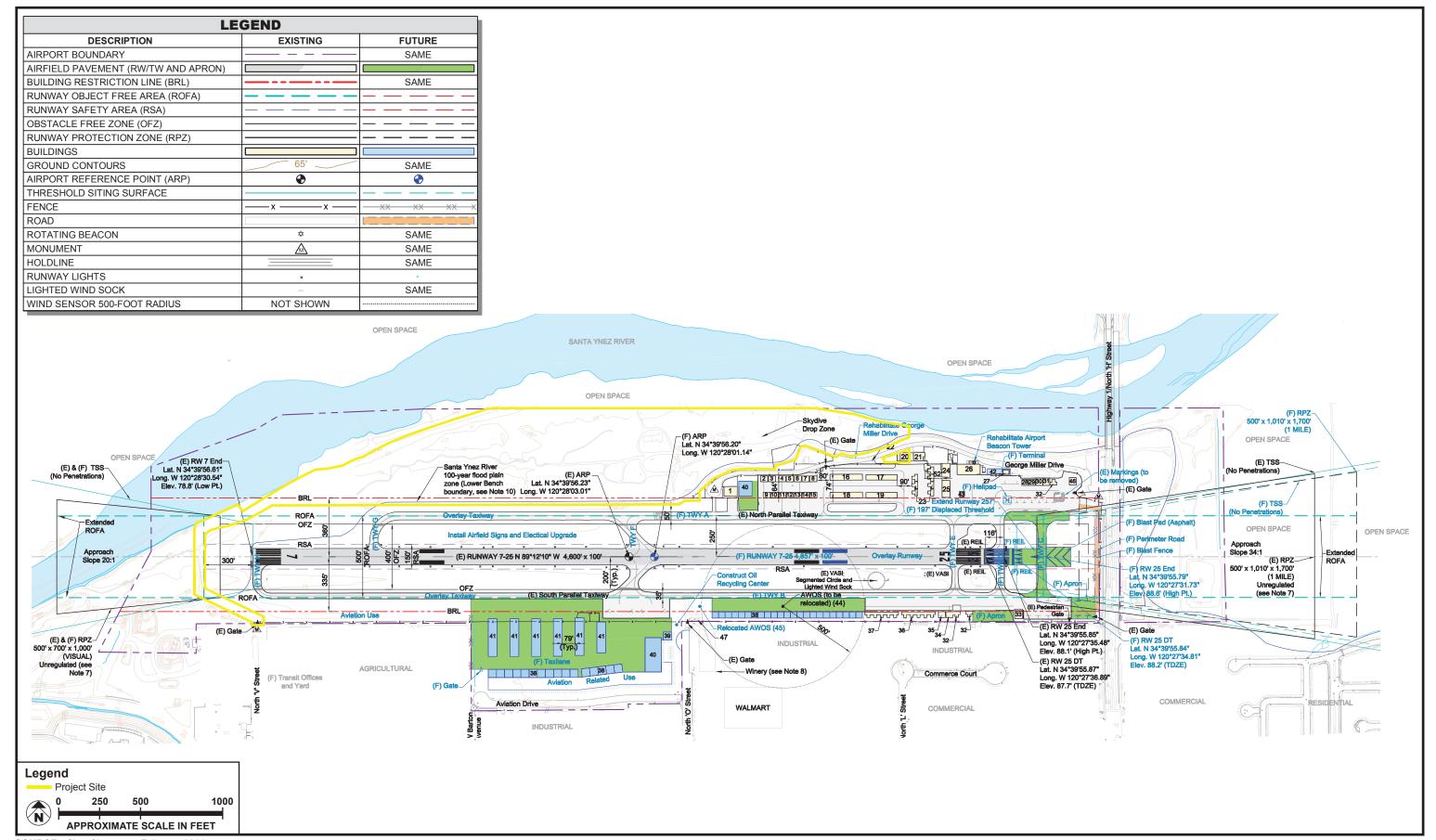
# 4.1 Existing Airport Activity

**Table A-3** summarizes existing airport activity at the Airport as identified in the 2011 Master Plan. In 2009, there were 70 aircraft based at the Airport, including 67 single-engine propeller aircraft, one multi-engine propeller aircraft, one turbine aircraft, and one helicopter. The number of aircraft at the Airport has remained relatively stable over the last several years, ranging between 61 aircraft in 1995 to 75 aircraft in 2007. There were approximately 30,200 operations at the Airport in 2009, roughly split equally between local and itinerant operations. According to the FAA's Airport Master Record, there were 30,000 operations for the 12 months ending June 21, 2016. These operations were split evenly between local and itinerant traffic.

The Airport's aircraft traffic is primarily restricted to the north of the airport. On very rare occasion aircraft make a circling approach to Runway 25 and operate downwind south of the runway. Prevailing winds are from the northwest and the majority of arrivals and departures are to/from Runway 25. Helicopter traffic is minimal and operates from the runway.

Lompoc Airport	
THIS PAGE INTENTIONALLY LEFT BLANK	
THIS PAGE INTENTIONALLY LEFT BEARN	

**Draft Airport Background Data and Assumptions Report** 



SOURCE: City of Lompoc - February 2011

Meridian

FIGURE **2.0-1** 

Draft Airport Background Data and Assumptions Report	
ompoc Airport	

# 4.2 Forecast Airport Activity

California state law requires that the Airport Land Use Compatibility Plans (ALUCPs) must be based on a long-range Airport Master Plan or an ALP that forecasts anticipated growth at an airport for the next 20 years. For purposes of this ALUCP update, the 2011 Airport Master Plan 20-year (2030) forecast is used to characterize future airport activity.

**Table A-3** summarizes forecasted airport activity at the Airport. A total of 114 aircraft are forecast to be based at the Airport in 2030, including 107 single-engine propeller aircraft, two multi-engine propeller aircraft, two jet aircraft, two helicopters, and one ultralight aircraft or glider. Approximately 62,600 annual operations are forecasted at the Airport in 2030.

Table A-3 – Airport Activity Data – Lompoc Airport

Based Aircraft	Existing Condit	Existing Conditions (2009)		Future Conditions (2030)		
Single-engine prop	67		107			
Multi-engine prop	1	1		2		
Turbine/ Jet	1		2			
Helicopter	1		2			
Other <sup>1</sup>	0		1	1		
Total	70		114			
Aircraft Operations	Existing Condit	tions (2009)	Future Conditions (2030)			
	Number of	Percentage by	Number of	Percentage by		
	Operations	Aircraft Type	Operations	Aircraft Type		
Single-engine prop	29,000	96.03%	54,780	87.50%		
Multi-engine prop	1,000	3.31%	3,760	6.00%		
Turbine/ Jet	50	0.17%	1,570	2.50%		
Helicopter	150	0.50%	1,880	3.00%		
Other <sup>1</sup>	0	0.00%	630	1.00%		
Total	30,200	100.00%	62,000	100.00%		
Local/Itinerant Split	Existing Condit	tions (2009)	Future Condition	ons (2030)		
Local Operations	15,200		37,600			
Itinerant Operations	15,000		25,000			
Total	30,200		62,600			

Notes: 1\Other=lighter than air, gliders, or home-built aircraft.

Source: Lompoc Airport Master Plan, 2011.

# 5.0 Draft Compatibility Factors

The four compatibility factors depicted on the following exhibits were developed following guidance provided in the California Department of Transportation's (Caltrans) Airport Land Use Compatibility Handbook (Handbook) and represent operating conditions specific to LPC. Each compatibility factor is further discussed below.

#### 5.1 Draft Noise Compatibility Data

**Exhibit A-5** shows noise contours derived from the 2011 Airport Master Plan. As discussed above, the Master Plan forecasts 62,600 annual operations, or approximately 172 annual average daily operations, for 2030 conditions. The noise contour shown on **Exhibit A-5** was taken from the prior Master Plan and represents 150 annual average daily operations under 2015 conditions. While the number of operations represented by the noise contour is lower than

the number of operations projected for 2030 conditions, the area exposed to noise levels of CNEL 60 dBA or higher is almost entirely limited to Airport property. It is unlikely that the slightly higher number of operations forecasted in the Master Plan would result in a substantially larger area of noise exposure. Furthermore, newer aircraft tend to be quieter than older aircraft. As newer aircraft begin operation at the Airport, it can be anticipated that they may likely generate less noise. Therefore, the noise contour shown on **Exhibit A-5** represents a reasonable approximation of noise exposure at LPC under 2030 conditions.

#### 5.2 Draft Safety Compatibility Data

**Exhibit A-6** shows the proposed safety zones for the Airport. The safety zones were developed based on guidance provided in the Handbook, which includes dimensions for "generic" safety zones. These generic safety zones are geometric shapes representing areas of progressive degree of risk of aircraft accident based on statistical analysis of accident locations. Typically, the closer to the runway end, the higher the risk for an accident. While the number of safety zones at an airport may vary based on the airport's unique operating conditions, the Handbook provides guidance for up to six safety zones. **Table A-4** describes these safety zones in detail.

Safety zones for LPC were developed by selecting the appropriate set of generic safety zones from the examples provided in the Handbook and then overlaying them on the runways. Where necessary, adjustments were made to the safety zones to reflect the unique operating conditions at the Airport. Generalized traffic patterns taken from the Master Plan were used for the purpose of adjusting the safety zones at the Airport, as well consideration for the fact that the majority of operations at the Airport are arrivals to and departures from Runway 25. Proposed safety zones included in the Master Plan were also considered in delineating the proposed safety zones shown on **Exhibit A-6**.

The safety zones for Runway 7-25 were based on *Example 4: General Aviation Runway with Single-Sided Traffic Pattern*, included in the Handbook. *Example 4* reflects runways with traffic generally or entirely restricted to one side. Aircraft operations at LPC are almost entirely restricted to the north side of the Airport, with all departures restricted to the north. On very rare occasion aircraft make a circling approach to Runway 25 and operate downwind south of the runway. *Example 4* also assumes a runway length of between 4,000 and 5,000 feet, approach visibility minimums greater than or equal to ¾ a mile but less than a mile, and RPZs of 1,000 feet by 1,510 feet by 1,700 feet. While the approach visibility minimum for Runway 25 are slightly higher than those recommended in *Example 4*, the runway length and RPZ dimensions are consistent with this example.

Adjustments were made to Safety Zones 1 on both ends of the runway to reflect the RPZs as described on the ALP. Safety Zone 1 was reduced in size to 500 feet by 700 feet by 1,000 feet, appropriate for a visual approach runway serving Category A and B aircraft. Safety Zone 1 on the Runway 25 end was adjusted in size to 500 feet by 1,010 feet by 1,700 feet. Safety Zone 3 on the Runway 25 end was extended by 500 feet to the east to provide greater coverage to departing aircraft turning to the northeast beyond the runway end and arriving aircraft turning to the final approach.

Table A-4 – Airport Safety Zones

Landside Facilities	
Safety Zone	Description
Safety Zone 1 Safety Zone 2	<ul> <li>Runway Protection Zone</li> <li>Reflects areas where aircraft are on very close approach or departure;</li> <li>Altitude: Typically less than 200 feet above the runway.</li> <li>Inner Approach/Departure Zone</li> <li>Aircraft overflying at low altitudes on final approach</li> </ul>
	<ul> <li>and straight-out departure;</li> <li>Altitude: Between 200 and 400 feet above the runway.</li> </ul>
Safety Zone 3	<ul> <li>Inner Turning Zone</li> <li>Aircraft, (especially smaller, piston-powered aircraft) turning base to final on landing approach or initiating turn to enroute direction on departure;</li> <li>Altitude: Less than 500 feet above runway, particularly on landing.</li> </ul>
Safety Zone 4	<ul> <li>Outer Approach/Departure Zone</li> <li>Approaching aircraft usually at less than traffic pattern altitude. Particularly applicable for busy general aviation runways (because of elongated traffic pattern), runways with straight-in instrument approach procedures, and other runways where straight-in or straight-out flight paths are common;</li> <li>Altitude: Less than 1,000 feet above the runway.</li> </ul>
Safety Zone 5	<ul> <li>Sideline Zone</li> <li>Area not normally overflown; primary risk is with aircraft (especially twins) losing directional control on takeoff; excessive crosswind gusts or engine torque;</li> <li>Altitude: Runway elevation.</li> </ul>
Safety Zone 6	<ul> <li>Traffic Pattern Zone</li> <li>Aircraft within a regular traffic pattern and pattern entry routes;</li> <li>Altitude: Ranging from 500 to 1,500 feet above the runway.</li> </ul>

Source: Caltrans Airport Land Use Compatibility Handbook, 2011.

## 5.3 Draft FAR Part 77 Airspace Compatibility Data

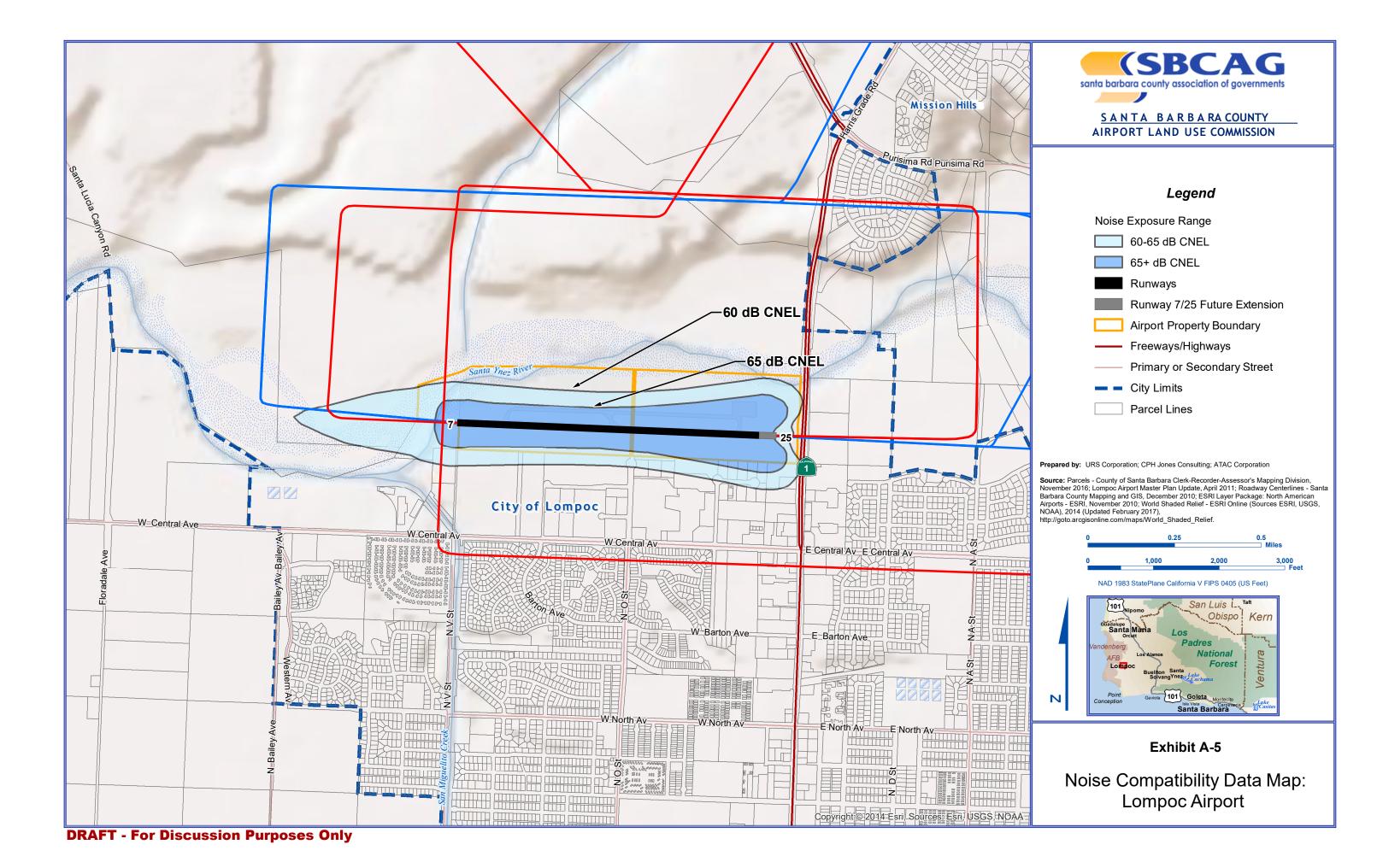
**Exhibit A-7** depicts the Part 77 airspace surfaces for LPC as shown in the Master Plan Update. Part 77 airspace surfaces reflect areas around airports determined by FAA regulations that should be protected from obstructions and visual impacts that may interfere with the safe operation of aircraft. The current airport elevation is 88.1 feet MSL. The Part 77 airspace surfaces included in the current ALP/Draft Master Plan are based on the elevation of the Runway 25 end once the runway has been extended 257 feet. The extension will raise the elevation of the Runway 25 end to 88.6 feet.

## 5.4 Draft Overflight Compatibility Data

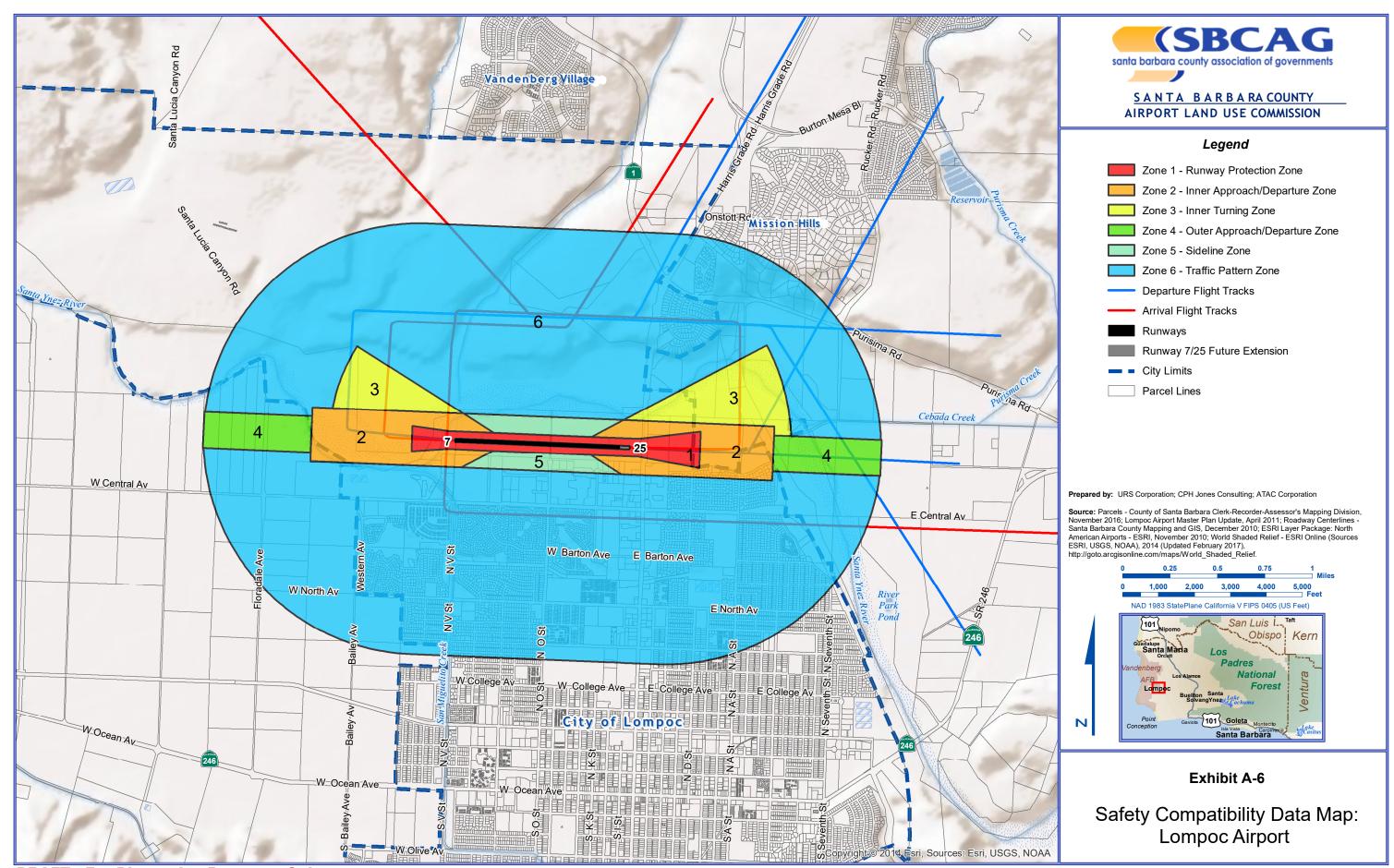
**Exhibit A-8** shows the overflight notification area for LPC. The overflight notification area includes all areas covered by the Airport's Safety Zones as well as flight corridors based on the traffic patterns presented in the Master Plan. General corridors centered on the traffic pattern flight tracks were created to account for normal variation in aircraft operations. The generalized flight corridors extend to the outer boundary of the Airport's conical surface.

#### 5.5 Draft Airport Influence Area

**Exhibit A-9** shows the Airport Influence Area (AIA) for LPC. The AIA is "the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses." (Business and Professions Code 11010(b)(13)(b).) The AIA is divided into two areas. Review Area 1 and Review Area 2. Review Area 1 consists of a combination of the noise contours and six safety zones for the Airport, and represents areas where noise and/or safety concerns may require limitations on the type of allowable land uses. Review Area 2, consists of areas beyond Review Area 1 but within the area covered by the combined airspace surfaces and overflight notification area. Restrictions on the height of objects within Review Area 2 may apply.

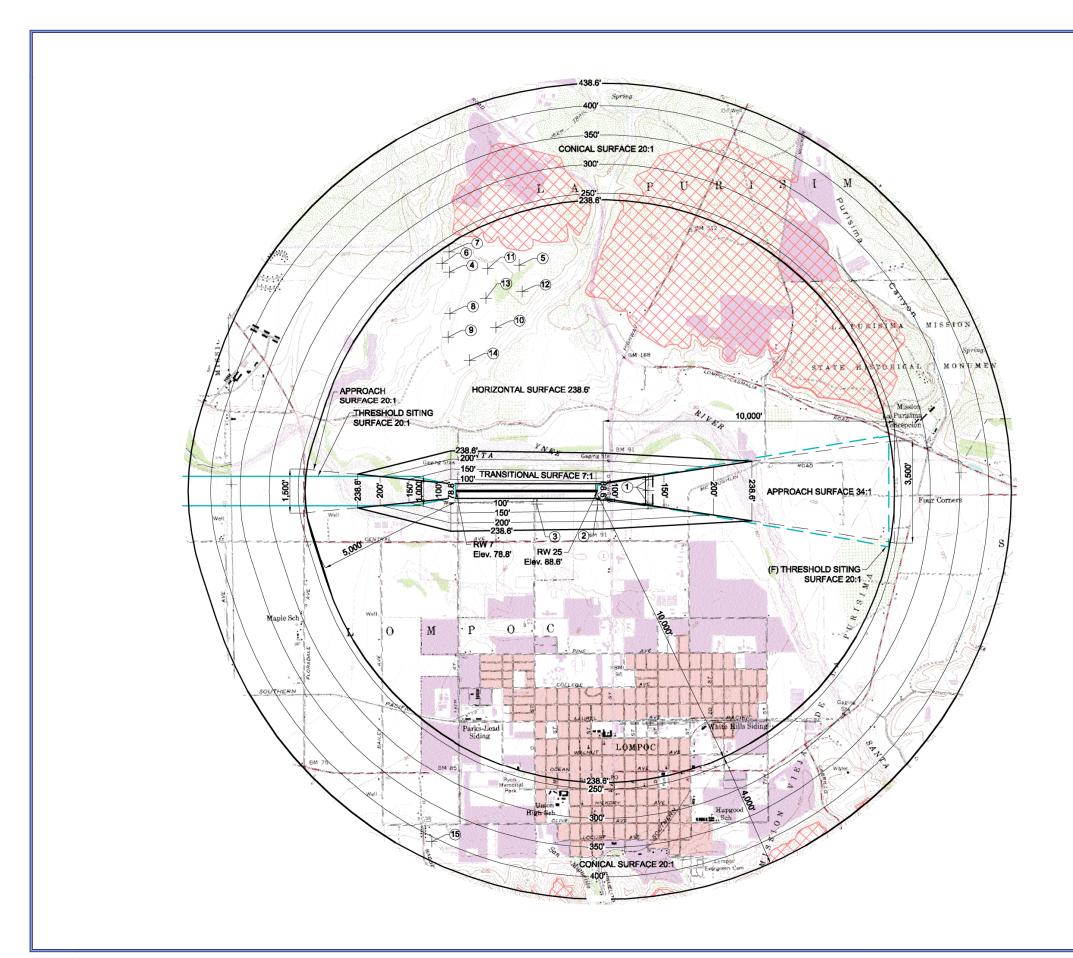


Lompoc	oort Backgro Airport	una Data ar	ia Assumpu	ons Re
Lompoc	Allpoit			



**DRAFT - For Discussion Purposes Only** 

Draft Airport Background Data and Assumptions Rep Lompoc Airport		
	•	•





#### Legend

Terrain Penetrations of Part 77 Surfaces
Runway

#### Notes:

- Far Part 77 Surfaces are based on the ultimate runway location.
- 2. All elevations are in feet above mean sea level (MSL).
- A composite ground profile is created by using the highest point at any given distance from the runway within the approach surface.
- 4. There are no threshold siting surface penetrations.
- 5. The Santa Ynez River traverses through the approach surfaces of Runway 7 and 25. The traverse way is exaggerated as the profile reflects a composite ground profile.
- Power lines are marked with white and orange spherical markers.

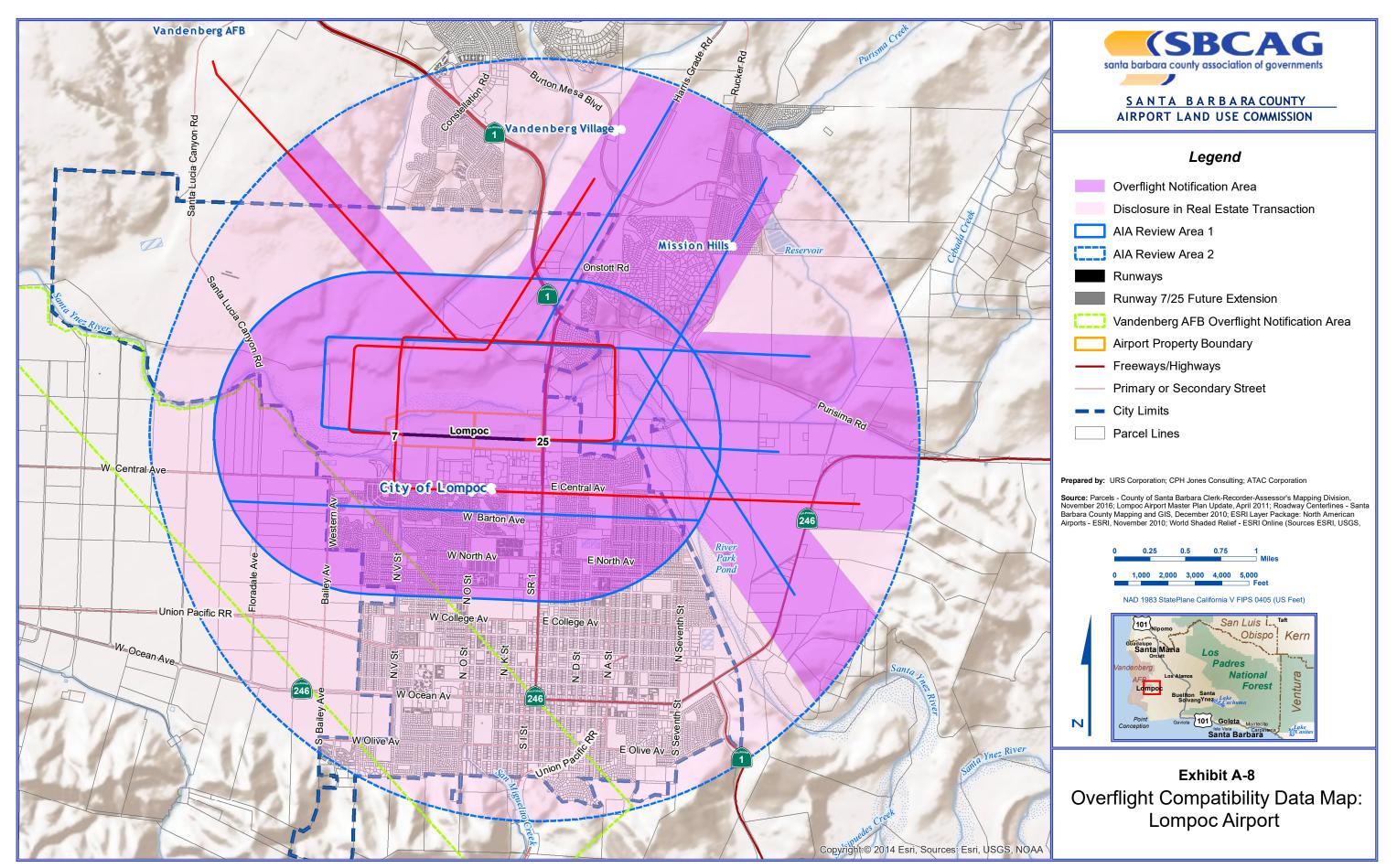
Prepared by: CPH Jones Consulting
Source: Lompoc Airport Master Plan, April 2011

#### NOT TO SCALE



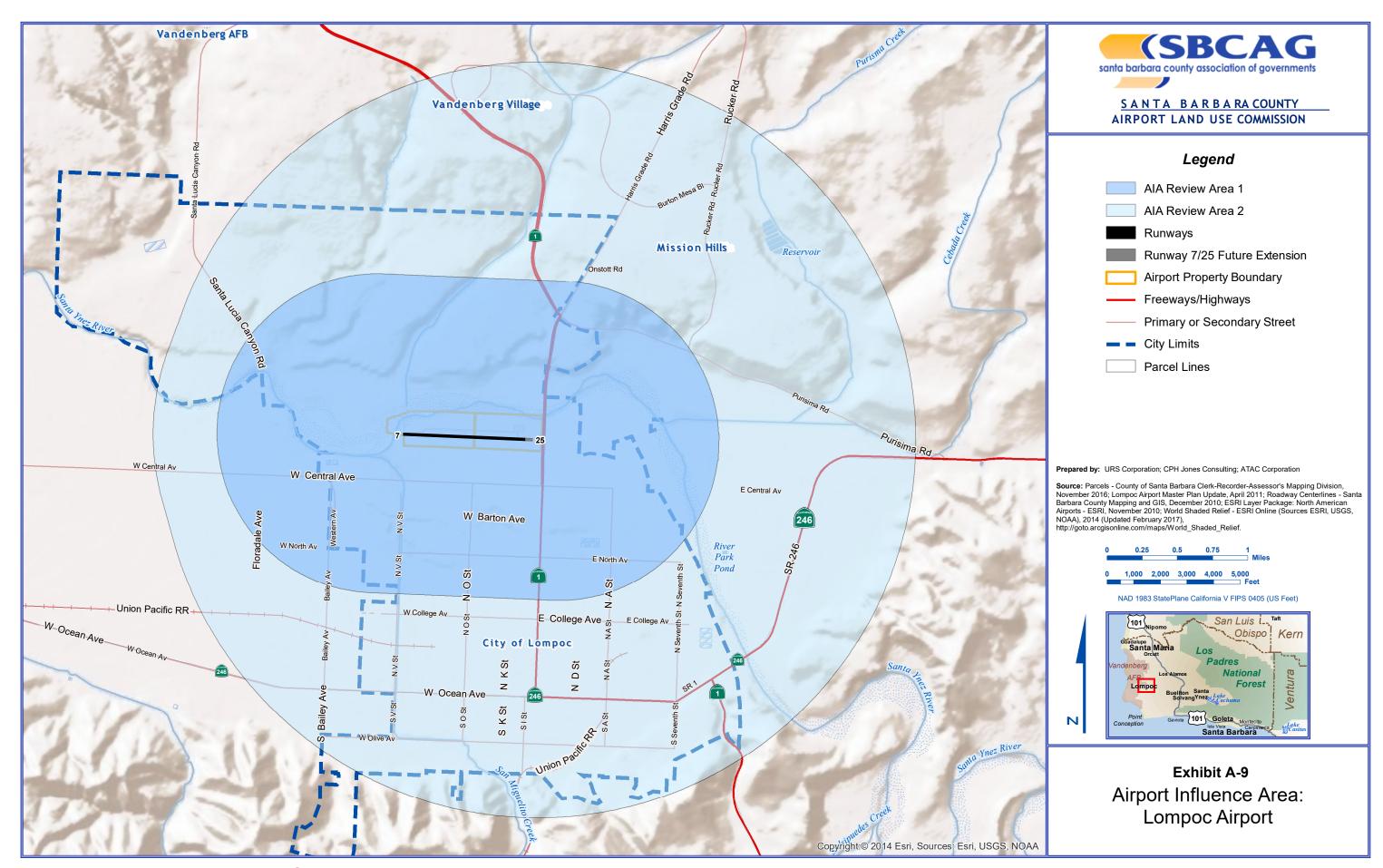


# Exhibit A-7 FAR Part 77 Airspace Protection Compatibility Data Map: Lompoc Airport



**DRAFT - For Discussion Purposes Only** 

Draft Airport Back	ground Data and Assumptions Report
Lompoc Airport	



**DRAFT - For Discussion Purposes Only** 

-	•	and Assumptions Repo
Lompoc Airpo	rt	