SLO County Airport
Master Plan
Chapter 1 Inventory of Existing Conditions

RS&H

Chapter 1
Inventory of Existing Conditions

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of the County of San Luis Obispo

RS&H

PREPARATION

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CHAPTER 1

INVENTORY OF EXISTING CONDITIONS

1.1 INTRODUCTION

The Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5070-6B Change 2, *Airport Master Plans,* outlines the necessary steps in the development of an airport master plan. The first step is to identify existing conditions. The objective of this step is to provide background information for subsequent phases of analysis.

An airport's existing conditions are identified through the collection and review of relevant data. This method was used to document the existing conditions at SLO County Airport (also referred to as "Airport" or "SBP" throughout this report) and the surrounding region. Information used to validate conditions was obtained through the following process over the course of several months.

- On-site investigations
- Interviews with airport management, airport traffic control tower staff, and airport tenants
- Collection and review of previous reports and studies

1.2 AIRPORT SETTING AND ROLE

SLO County Airport is in San Luis Obispo County approximately 3.5 miles south of downtown San Luis Obispo, California. The Airport is approximately 180 miles north of Los Angeles and 230 miles south of San Francisco. The Airport sits at an elevation of 212 feet above mean sea level and occupies 340 acres of land.

1.2.1 Airport Ownership and Control

The Airport is owned and operated by the County of San Luis Obispo (County), with County employees in the Airports Department overseeing the day-to-day operations and maintenance of the Airport. The County has a five-member Board of Supervisors. The San Luis Obispo County Board of Supervisors, the legislative arm of the County government, is committed to the implementation of such policies and the provision of such services that will enhance the economic, environmental and social quality of life in San Luis Obispo County. The Board of Supervisors reviews and approves airport-related issues and holds meetings twice a month. In addition to SBP, the County of San Luis Obispo also owns and operates Oceano Airport, located 12 miles south of San Luis Obispo.

1.2.2 Airport Regional Role

SBP ranks within the top 50 busiest FAA primary nonhub commercial service airports in terms of passenger enplanements in the United States[1]. The FAA National Plan of Integrated Airport Systems (NPIAS) lists SLO County Airport as a primary nonhub commercial service airport. Primary nonhub commercial service airports are classified as airports that have more than 10,000 annual enplanements, but enplane less than 0.05 percent of all nationwide commercial passenger enplanements.

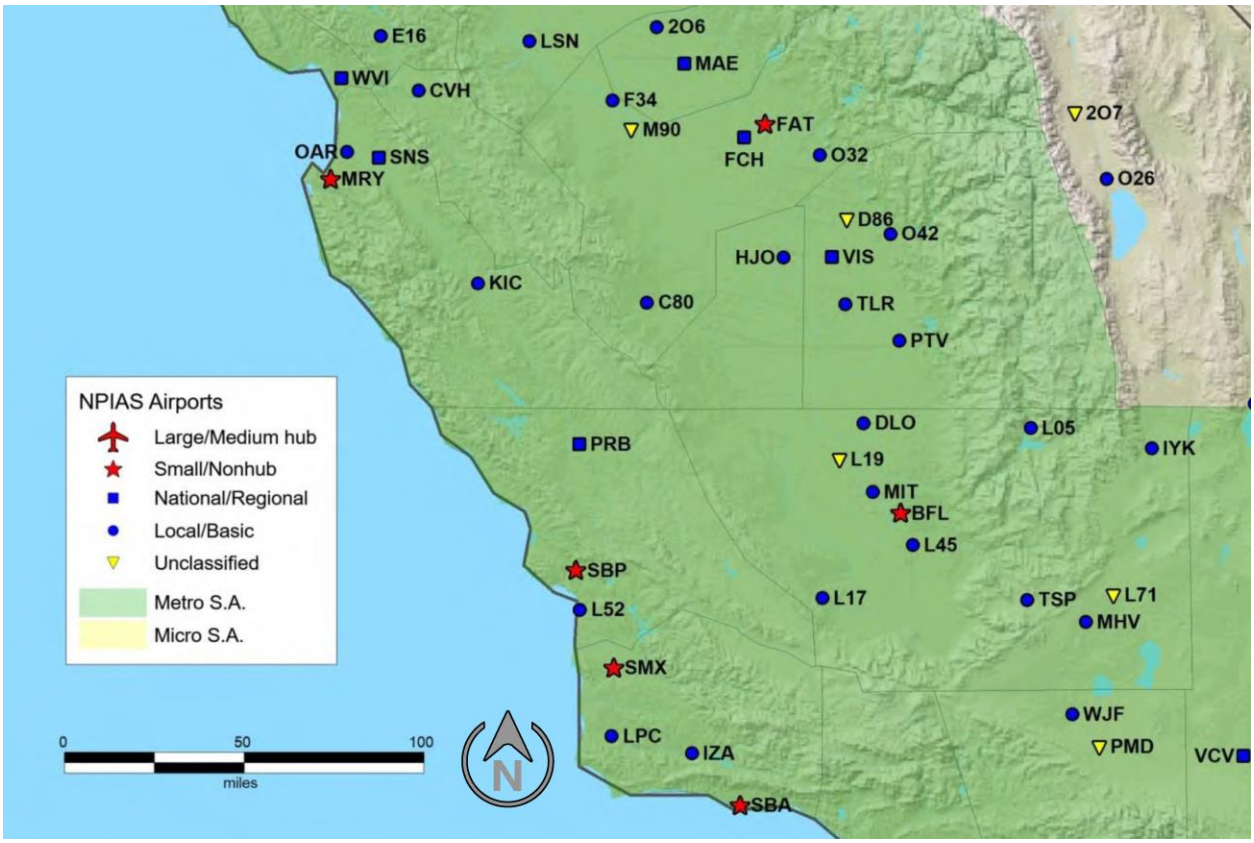
SBP provides commercial passenger services for the region with service to eight non-stop destinations in 2020. A new passenger terminal opened in October 2017 to serve the growing demand for air service

[1] Based on Calendar Year 2019 total passenger boarding (enplanement) data from 267 primary, nonhub commercial service airports; Data extracted from the Air Carrier Activity Information System that supports the FAA's Airport Improvement Program.

within the community. Total passengers increased from 292,460 in 2015 to 544,580 in Calendar Year 2019[2]. The Airport also has a robust general aviation community and accommodates aircraft maintenance, repair, and overhaul (MRO), fixed base operator (FBO), air cargo, and military activity. In total, the Airport accommodated approximately 80,000 aircraft operations in Calendar Year 2019.

There are four NPIAS airports within 50 miles of SBP as depicted in *Figure 1-1*. *Table 1-1* lists these airports along with their respective runway lengths, instrument approaches, role within the NPIAS, based aircraft numbers, and distance from SBP.

FIGURE 1-1
SURROUNDING AIRPORTS MAP



Source: *FAA National Plan of Integrated Airport Systems (NPIAS) 2021-2025*, Appendix B, September 30, 2020

[2] Total passenger numbers in Calendar Year 2015 and 2019 from the SBP Airport website, https://www.sloairport.com/airport-statistics/

TABLE 1-1
NPIAS AIRPORTS WITHIN 50 MILES OF SBP

Airport	Airport Code	Primary Runway Length (feet)	Instrument Approaches	NPIAS Role	Based Aircraft	Flight Distance from SBP (nautical mile direction)
Oceano County Airport (1)	L52	2,325	None	General Aviation	9	8.2 S
Santa Maria Public Airport	SMX	8,004	ILS, RNAV (GPS), LOC/DME, VOR	Primary Non-hub	218	22.2 SE
Paso Robles Municipal Airport	PRB	6,008	RNAV (GPS), VOR	General Aviation	150	26.1 N
Lompoc Airport	LPC	4,600	RNAV (GPS), VOR/DME	General Aviation	21	35.4 S

Source: FAA 5010-1 Form, 2020; FAA U.S. Terminal Procedures, 2020
Note: (1) Oceano County Airport is owned and operated by the County of San Luis Obispo

1.2.3 Airport Meteorological Conditions

The Airport is situated in California's central coast, which has a Mediterranean regional climate. September is the warmest month with an average daily maximum temperature of 81.1° F, as summarized in *Table 1-2*,. On average, the temperature exceeds 90.0° F 12 days per year. Average annual precipitation is 15.6 inches with a largest one-day precipitation of 3.6 inches in November 2019. During warmer months, winds are typically from the southwest, between 300° to 340°. However, during winter months winds from the northeast, typically 100° to 190°, are observed with increased frequency.

TABLE 1-2
AIRPORT METEROLOGICAL CONDITIONS

Item	Value
Annual Mean Maximum Temperature	73.1° F
Annual Mean Minimum Temperature	48.9° F
Typical Hottest Month	September
Mean Daily Maximum Temperature of the Hottest Month	81.1° F
Average Annual Precipitation (inches)	15.6
1-year Daily Precipitation Maximum (inches)	3.6

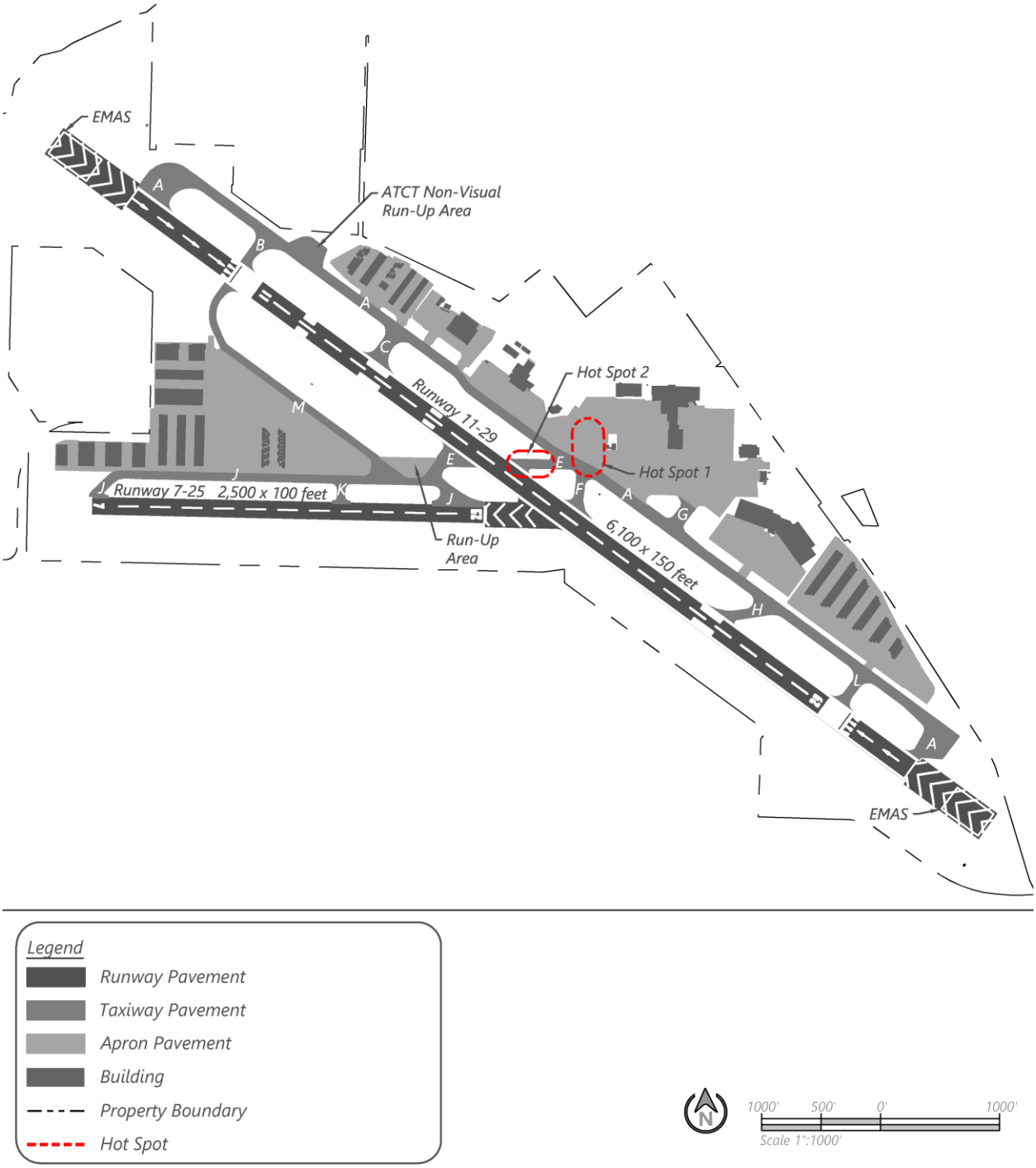
Source: National Oceanic and Atmospheric Administration, National Centers for Environmental Information, 2010 – 2019

1.3 AIRFIELD FACILITIES

This section provides an inventory of SBP airfield facilities, which includes the runway and taxiway systems as well as the apron. This section will further discuss the existing pavement condition, FAA determined hot spots[3], navigational aids, and lighting. The airfield facilities are graphically depicted in *Figure 1-2*.

[3] A hot spot is defined by the FAA as a location on an airport movement area with a history of potential risk of collision or runway incursion, and where heightened attention by pilots and drivers is necessary.

FIGURE 1-2
AIRFIELD FACILITIES



Note: A hot spot is defined by the FAA as a location on an airport movement area with a history of potential risk of collision or runway incursion, and where heightened attention by pilots and drivers is necessary.

1.3.1 Runway System

SBP has two runways. The primary runway, Runway 11-29, is 6,100 feet long by 150 feet wide. This runway is constructed of asphalt and has a pavement strength of 100,000 pounds for dual wheel aircraft. Runway

11 has precision markings and Runway 29 has non-precision markings. The secondary runway, Runway 7-25, is 2,500 feet long by 100 feet wide. This runway is constructed of asphalt and has a pavement strength of 12,500 pounds for dual wheel aircraft. Runway 7-25 has visual markings. *Table 1-3* provides a summary of the runway system.

TABLE 1-3
RUNWAY CHARACTERISTICS

Item		Runway 11-29	Runway 7-25
Runway Length (feet)		6,100	2,500
Runway Width (feet)		150	100
Runway Shoulder Width (feet)		20	25
Runway End Elevation (feet above Mean Sea Level)		162.0 (11) 212.3 (29)	162.0 (07) 189.1 (25)
Pavement Surface		Asphalt	Asphalt
Pavement Condition Index		33 - 76	31 - 74
Surface Treatment		Grooved	None
Pavement Strength – Wheel Loading (pounds)	Single Wheel	75,000	12,500
	Dual Wheel	100,000	12,500
	Single Tandem	82,000	N/A
Pavement Classification Number		54 /F/D/X/T	25 /F/D/X/T

Source: FAA 5010-1 Form, 2020; SBP Pavement Maintenance Management Plan, 2020

Declared distances, as defined in AC 150/5300-13B, *Airport Design*, represent the maximum distances available and suitable for meeting takeoff, rejected takeoff, and land distance requirements for aircraft. As shown in *Table 1-4*, for Runway 11-29, the takeoff run available, takeoff distance available, and the accelerate stop distance available is the full length of the runway at 6,100 feet. However, the landing distance available is reduced for both Runway 11 and Runway 29. The Runway 11 landing distance available is reduced by an 800-foot displaced threshold to a length of 5,300 feet and the Runway 29 landing distance available is reduced by a 500-foot displaced threshold to a length of 5,600 feet. For Runway 7-25, each declared distance is the full length of the runway at 2,500 feet.

TABLE 1-4
DECLARED DISTANCES

	Runway 11	Runway 29	Runway 7	Runway 25
Takeoff Run Available (feet)	6,100	6,100	2,500	2,500
Takeoff Distance Available (feet)	6,100	6,100	2,500	2,500
Accelerate-Stop Distance Available (feet)	6,100	6,100	2,500	2,500
Landing Distance Available (feet)	5,300	5,600	2,500	2,500

Source: FAA 5010-1 Form, 2020

1.3.2 Taxiway System

The Airport has 11 taxiways. Taxiway A is a full-length parallel taxiway east of Runway 11-29. Taxiway M is a partial-length parallel taxiway west of Runway 11-29. Taxiways B, C, E, F, H, and L connect Taxiway A and Runway 11-29. Taxiway G connects Taxiway A to the terminal apron. Taxiway J is a full-length parallel taxiway north of Runway 7-25. Taxiway K connects Taxiway J and Runway 7-25.

The airport has two run-up pads, one on Taxiway A near Taxiway B and one at the intersection of Taxiways E, J, and M. The run-up pad at Taxiway A near Taxiway B is not visible from the Airport Traffic Control Tower. Currently, Taxiway A at the Runway 11 end is the location most frequently used to conduct run-up operations.

1.3.3 Pavement Condition

The Airport's paved airfield surfaces total roughly 400,000 square yards. The County of San Luis Obispo maintains and periodically updates a Pavement Maintenance Management Plan (PMMP) of airfield pavement including runways, taxiways, and apron areas with an update to the PMMP in 2020. The PMMP includes determinations of the pavement condition index (PCI), a visual analysis of the existing pavement surface conditions with PCI values ranging from 0, representing pavement that has failed and is no longer usable, to 100, which represents new pavement in excellent condition. The pavement conditions at SBP range from very poor to good. Runway 11-29 has a PCI rating which ranges from 33 to 76 and Runway 7-25 has a PCI rating which ranges from 31 to 74. The Airport is completing a rehabilitation project on portions of Runway 11-29 in Summer 2021. Other pavement rehabilitation / reconstruction plans will be determined based upon the 2020 PMMP and this Master Plan. *Figure 1-3* depicts the SBP pavement conditions.

FIGURE 1-3
SBP PAVEMENT CONDITIONS

Source: SBP Pavement Maintenance Management Plan, 2020

1.3.4 Airfield Hot Spots

The FAA has defined specific locations at airports as hot spots to help alert users of areas that can be confusing and have the potential for collisions or runway incursions. SBP has two designated hot spots as depicted in *Figure 1-2***.** Hot Spot 1 is located near the base of the Airport Traffic Control Tower (ATCT). Per

the FAA, Hot Spot 1 is in an area that may not be visible from the ATCT. Hot Spot 2 is located at Taxiway E and addresses the non-perpendicular taxiway connector to Runway 11-29.

1.3.5 Navigational Aids and Lighting

Navigational aids and lighting, often referred to as NAVAIDs, include visual aids, electronic aids, and meteorological aids. Navigational aids are used to help pilots navigate to and from the airport and perform safe landings and takeoffs. SBP features all three types of aids, which are detailed in the following sections. The navigational aids located at the Airport are listed in *Table 1-5* and graphically depicted in *Figure 1-4*.

1.3.5.1 Visual Aids

Visual aids and airfield lighting are necessary to facilitate flight operations and enhance safety during periods of inclement weather and/or darkness by providing guidance to pilots in the air and on the ground. Runway 11-29 is equipped with high-intensity runway edge lighting, while Runway 7-25 has no runway edge lighting. The Runway 11-29 ends have visual approach slope indicators. Further visual guidance is provided at the Runway 29 end by runway end identifier lights. Other visual aids at the Airport include a rotating beacon and primary lighted windcone with a segmented circle and traffic pattern indicators for the runways.

1.3.5.2 Electronic Aids

Electronic aids include devices and equipment used for aircraft instrument approaches. Some aircraft approaches rely on very high frequency (VHF) omnidirectional range radio, which uses a ground-based facility to transmit high frequency radio signals 360 degrees in azimuth from the station. These signals help the pilot turn at a given point above the ground or fly along a radial to/from the station. There is one VHF omnidirectional range collocated tactical air (VORTAC) station 5.5 miles northwest of the Airport named "Morro Bay VORTAC".

Runway 11 features an instrument landing system (ILS), which is an approach aid that provides horizontal and vertical alignment for an aircraft on final approach. Guidance is provided through the combination of a localizer transmitter and a glideslope transmitter. Localizers provide horizontal runway centerline guidance, whereas a glideslope provides vertical guidance. The Airport's area navigation (RNAV) and global positioning system (GPS) approaches rely on GPS, a space-based satellite system that provides GPS receivers with accurate position information. GPS satellites are owned by the United States Government and controlled by the Department of Defense. GPS approaches enable pilots of properly equipped aircraft to fly to the runway with generally lower visibilities than VORTAC approaches and may incorporate landing minima on par with those of ILS approaches. RNAV GPS approaches can provide pilots horizontal and vertical guidance.

1.3.5.3 Meteorological Aids

Meteorological aids at the Airport include an Automated Surface Observing Station (ASOS), which provides users real-time weather information. The system provides key meteorological metrics such as air temperature, dewpoint, barometric pressure, wind speed and direction, precipitation type and amount, and weather type.

TABLE 1-5
NAVIGATIONAL AIDS AND LIGHTING

Item	Runway 11	Runway 29	Runway 7	Runway 25
Visual Aids (On-Airport)				
Runway Markings	Precision	Non-Precision	Visual	Visual
Runway Centerline Lights	No	No	No	No
High Intensity Runway Lights	Yes	Yes	No	No
Runway End Identifier Lights	No	Yes	No	No
Medium Intensity Approach Light System with Runway Alignment Indicator Lights	Yes	No	No	No
Visual Approach Slope Indicator	Yes	Yes	No	No
Airport Rotating Beacon		Yes		
Segmented Circle		Yes		
Windcone	Yes	Yes	No	No
Electronic Aids (On-Airport)				
Glideslope	Yes	No	No	No
Localizer	Yes	No	No	No
Electronic Aids (Off-Airport)				
VHF Omnidirectional Range Collocated Tactical Air		Yes		
Meteorological Aids (On-Airport)				
Automated Surface Observing System		Yes		

Source: FAA Chart Supplements, 2020; FAA 5010-1 Form, 2020

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FIGURE 1-4 ON-AIRPORT NAVIGATIONAL AIDS AND LIGHTING

Legend

Visual Aids

- *Runway End Identifier Lights*
- *Medium Intensity Approach Light System with Runway Alignment Indicator Lights*
- *Visual Approach Slope Indicator*
- *Windcone with Segmented Circle*
- *Windcone*

Electronic Aids

- GS *Glideslope*
- LOC *Localizer*

Metrological Aids

- ASOS *Automated Surface Observing System*

Property Boundary

N

600' 300' 0' 600'

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1.3.6 Airfield Vehicle Access Road

Emergency, maintenance, and operations vehicles can access navigational aids and equipment and circulate around the airfield using either the north or south access road around Runway 11-29. Most of the access road is a single-lane, unidirectional roadway with an improved gravel surface. Due to its location within the Runway 11 ILS critical area, using the north access road requires ATC clearance.

1.4 AIRSPACE

This section summarizes the airspace surrounding SBP, the responsibilities of various air traffic control facilities, and limitations imposed on the flight paths of individual aircraft by the geography and surrounding airspace. Additionally, a description of the preferred runway uses, aircraft approaches and departures, special air traffic rules, and noise mitigation strategies are included.

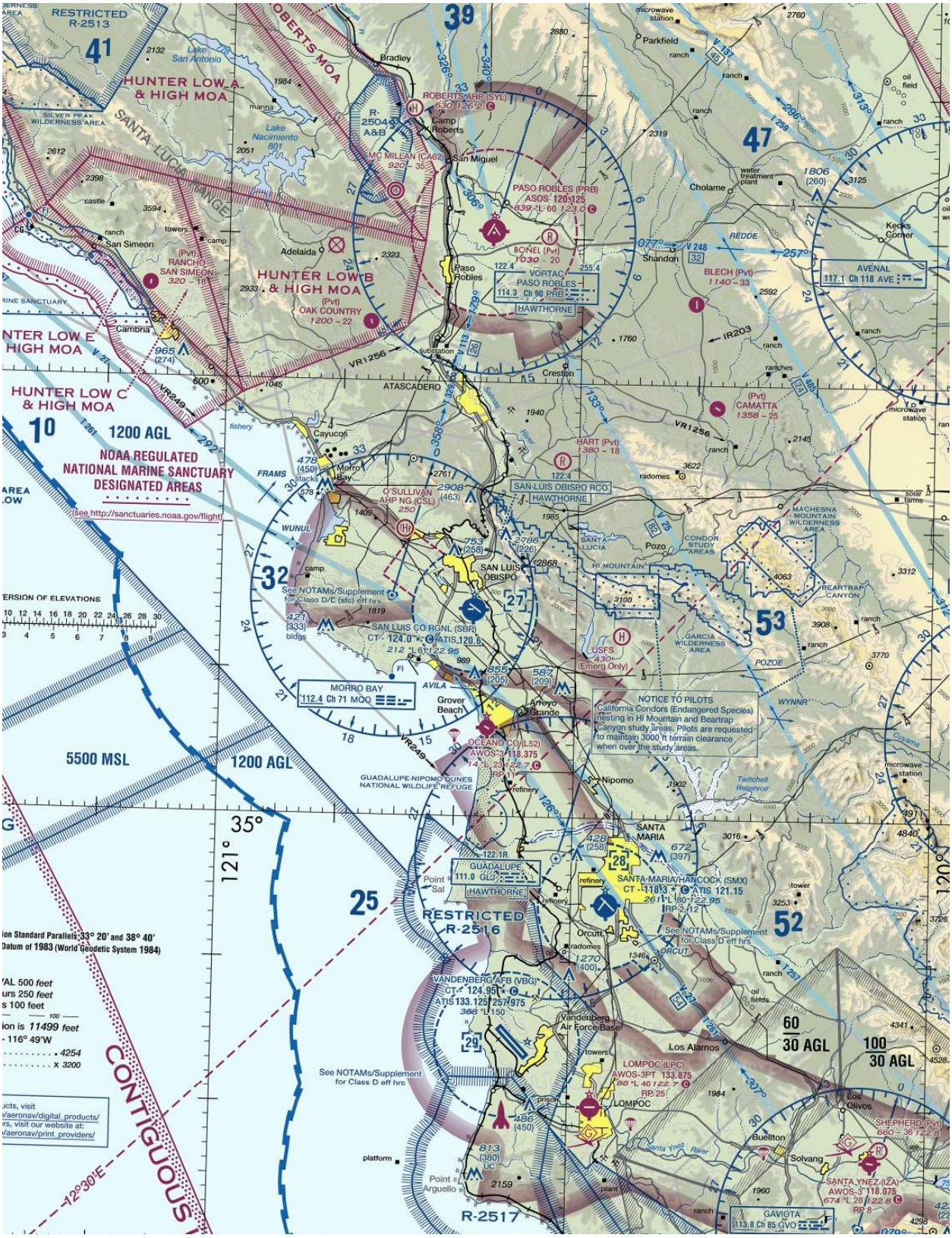
1.4.1 Air Traffic Control Procedures

The FAA controls airspace through several layers of air traffic control facilities. During the enroute phase of flight the Los Angeles Air Route Traffic Control Center handles traffic over portions of the states of California, Nevada, Arizona, and California. The Santa Barbara Terminal Radar Approach Control Facility (TRACON) handles both arriving aircraft during their initial descent towards SBP and departing traffic after they clear the Airport traffic pattern. The SBP ATCT is responsible for aircraft making their final approach before landing, ground operations, takeoff, and initial climb. *Figure 1-5* depicts the airspace surrounding the Airport.

The airspace around SBP has several restricted areas, military operations areas (MOA), and other warnings and recommendations. Restricted areas are zones where operations are hazardous to nonparticipating aircraft and contain airspace within which the flight of aircraft, while not wholly prohibited, is subject to restrictions. The closest restricted airspace to SBP is R-2516 located approximately 15 nautical miles south and continuously restricted for use by Vandenburg Air Force Base. An MOA contains airspace designated and used for military operations. The closest MOA is located approximately 20 nautical miles northwest of SBP and is used for operations by Fort Hunter Liggett. Additionally, areas of note around the coast include the National Defense Operating Area warnings, a wildlife refuge, a marine sanctuary where pilots are recommended to remain 2,000 feet above ground level, and condor nesting areas where pilots are recommended to remain 3,000 feet above ground level.

At SBP, the ATCT is operational between 6:00 a.m. and 8:00 p.m. When the ATCT is closed, the airspace reverts to Class G. When Class G airspace is in effect, pilots and vehicle operators that are approved to operate in the movement area will state their intentions on the common traffic advisory frequency. Instrument Flight Rules clearance is available when the ATCT tower is closed through Santa Barbara TRACON between 8 p.m. until they close at 10 p.m. or the Los Angeles Air Route Traffic Control Center between 10 p.m. until the ATCT reopens at 6 a.m. IFR clearance allows pilots to fly in instrument meteorological conditions (IMC) and maneuver their aircraft solely on referencing the instrumentation in the aircraft. An IFR clearance also grants pilots the ability to fly their aircraft into Class A airspace, which begins at 18,000 feet above mean sea level.

FIGURE 1-5
AIRSPACE SURROUNDING SBP



Source: FAA VFR Sectional, 2020

1.4.2 VFR and IFR Procedures

Air traffic operations generally fall within one of two categories; those flying under visual flight rules (VFR) and those under instrument flight rules (IFR). Under VFR, aircraft operating in good visibility weather do so using "see and avoid" practices with other aircraft.

Transport category aircraft, as well as many charter aircraft and high-performance general aviation aircraft that are properly equipped and staffed, can operate under IFR. Aircraft flying under IFR are required to comply with routes and altitudes given by air traffic controllers during all phases of flight. The controllers are then responsible for ensuring adequate separation between aircraft, which may be flying in clouds, snow, or other conditions of poor visibility during which the view outside the aircraft is limited. Aircraft approaching SBP during periods of poor visibility fly through the airport environment and to the runway using predetermined routes called standard instrument approach procedures. A pilot's ability to land during inclement weather is determined by several factors, including approach lighting, navigational aids, aircraft equipment, and pilot qualifications. *Table 1-6* lists the instrument approaches available at SBP.

TABLE 1-6
INSTRUMENT APPROACHES

Item	Minimum Visibility
Runway 11	
ILS	1/2-Mile
RNAV (GPS)	1/2-Mile
LOC	1/2-Mile
VOR / TACAN-A	1 1/4-Mile
Runway 29	
RNAV (GPS)	1-Mile
VOR / TACAN-A	1 1/4-Mile

Source: FAA U.S. Terminal Procedures, 2020

1.4.3 Local Airspace

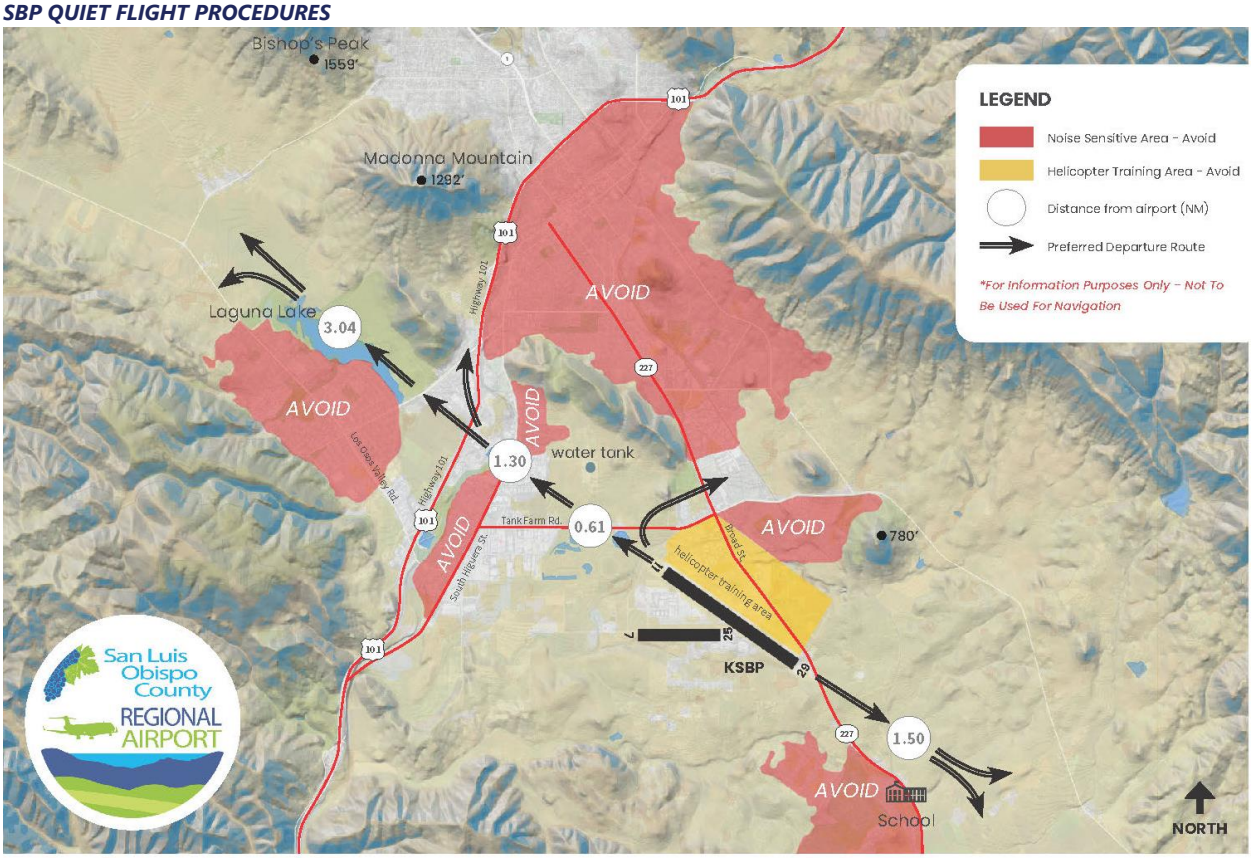
Airfield geometry plays a crucial role in determining the traffic pattern for any airport. All runways, including Runways 11, 29, 7, and 25 have standard, left-turn traffic patterns. Runway 11-29 is the primary runway and is used for nearly all aircraft operations. Runway 7-25 serves as a secondary runway and is sporadically used, primarily during flight training operations. Helicopter operations are conducted via the runway traffic pattern.

1.4.3.1 Noise Abatement Procedures

SBP encourages pilots to use best practices for noise reduction when operating aircraft to reduce airplane noise impacts on the community. SBP promotes voluntary Quiet Flight procedures to provide guidance for pilots on noise abatement routes[4]. *Figure 1-6* depicts the Quiet Flight procedures as well as graphic information on noise sensitive areas within the community.

[4] Additional and updated Information on the Quiet Flight procedures can be found at https://www.sloairport.com/pilot-information/

FIGURE 1-6
SBP QUIET FLIGHT PROCEDURES



Source: SBP, 2020

1.4.4 Part 77 Objects Affecting Navigable Airspace

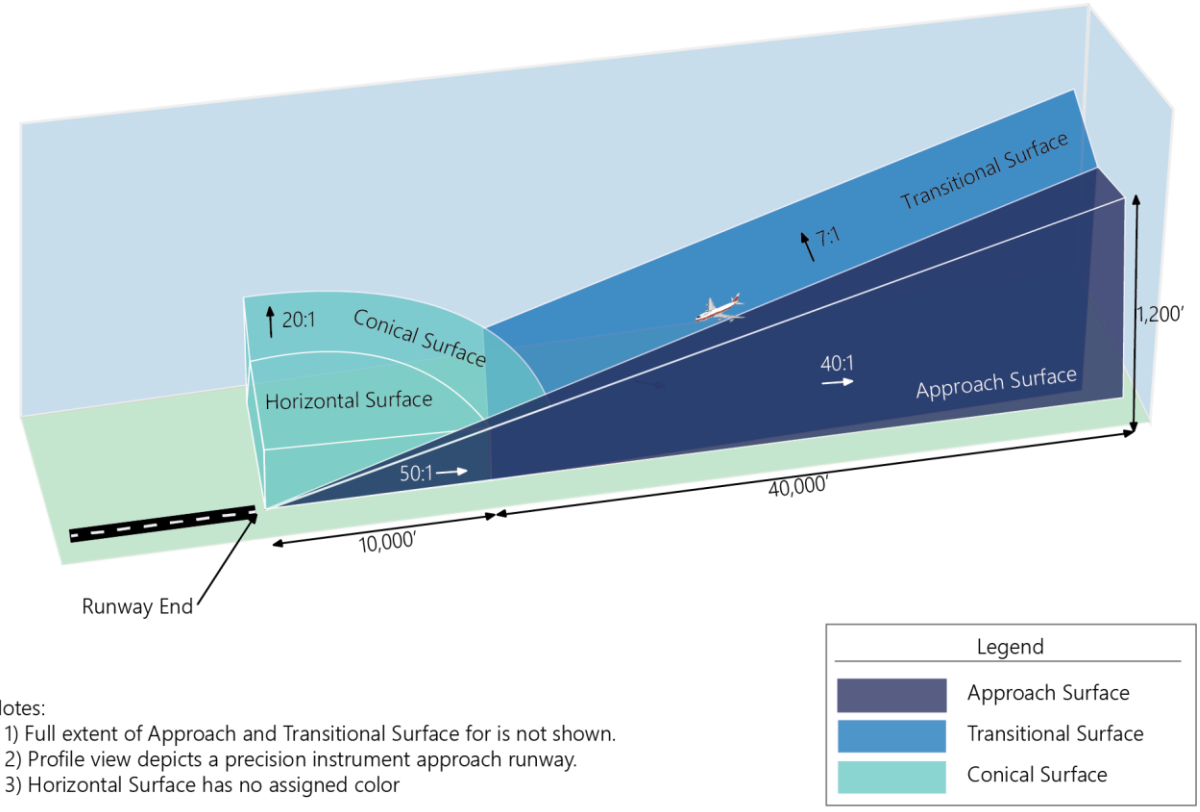
The airspace surrounding the Airport should be kept clear of obstructions to the furthest extent possible. Title 14 Code of Federal Regulations (CFR) Part 77, *Objects Affecting Navigable Airspace* keeps essential airspace free and clear of obstructions that could be hazardous to aircraft on an approach to an airport. For an object to be deemed an obstruction, it must penetrate at least one of the five sections of airspace defined by Part 77 as "imaginary surfaces." *Figure 1-7* depicts the five sections of Part 77 airspace, which are broken out into the following surfaces:

- **Primary Surface** – This surface is centered on the runway, extending 200 feet beyond the edge of the runway. The width of the surface is dependent upon the type of approach to the runway. Since Runway 11 has an instrument landing approach, the primary surface width of Runway 11-29 is 1,000 feet. The width of the primary surface for Runway 7-25 is 250 feet.
- **Approach Surface** - This surface is a sloped plane that begins at the edge of the Primary Surface and extends horizontal in the shape of a trapezoid. The slope horizontal length, and the width of the surface are dependent upon the approach to the runway. Runway 11-29 is a precision instrument runway with an approach surface length of 50,000 feet and a width at the end of the surface of 16,000 feet. The first 10,000 feet of the approach surface has a slope of 50:1, while the remaining 40,000 feet has a slope of 40:1. As a visual approach utility

runway, Runway 7-25 has an approach surface length of 5,000 feet with a width of 1,250 feet at the end of the surface. For these runways, the approach surface has a slope of 20:1.

- **Transitional Surface** – This surface is a plane sloped at 7:1 from the primary surface and approach surfaces. The surface terminates when it intersects with the horizontal surface.
- **Horizontal Surface** – This surface is a horizontal plane 150 feet above the airport elevation. The geometry of the surface is created by arcs centered on the edge of the primary surface with defined radii and then connected by tangents. The radius of the horizontal surface, based on the approaches at SBP, is 10,000 feet.
- **Conical Surface** – This surface is a plane sloped at 20:1 extending upward from the periphery of the horizontal surface to 4,000 feet.

FIGURE 1-7
PART 77 SURFACES PROFILE VIEW



Notes:
1) Full extent of Approach and Transitional Surface for is not shown.
2) Profile view depicts a precision instrument approach runway.
3) Horizontal Surface has no assigned color

1.4.5 Obstructions

The Airport has three FAA approved departure procedures, which include Avila Four, Crepe Three, and Wynnr Three. These procedures detail the obstructions off each runway departure end. These departure procedures are modified to account for existing obstructions. Existing and potential future obstructions are presented in the Airport Layout Plan prepared as part of this Master Plan.

1.5 PASSENGER TERMINAL

This section provides an inventory of the passenger terminal building at SBP. The passenger terminal at SBP opened in October 2017. The building encompasses approximately 58,000 square feet with six gates. It is a T-shaped, single-level building with functional areas as summarized in *Table 1-7* and graphically depicted in *Figure 1-8*. The apron surrounding the passenger terminal includes six aircraft parking positions adjacent to the building and two aircraft parking positions away from the building.

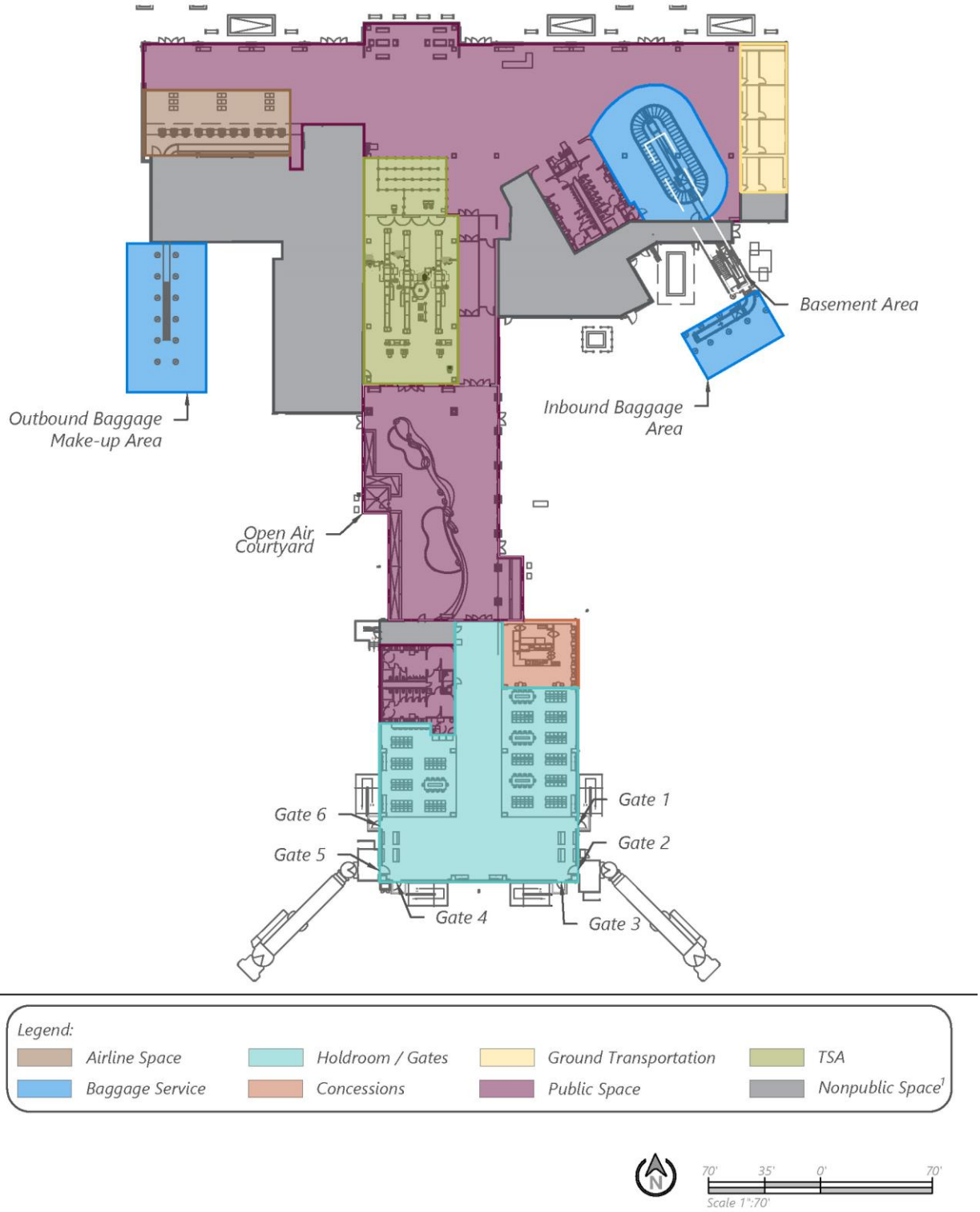
TABLE 1-7
PASSENGER TERMINAL FUNCTIONAL AREAS

Functional Area	Area Type	Area (sf)
Airline Space	PUbli	3,735
Baggage Service(1)		3,272
TSA		7,149
Holdroom/Gates		8,713
Concessions		1,276
Ground Transportation		1,463
Public Space		23,648
Airport Space		6,512
Building Support		1,884

Source: SBP, 2020

Notes: Area does not include outbound baggage make-up area (2,585 square feet) or inbound baggage area (985 square feet).

FIGURE 1-8
PASSENGER TERMINAL MAP BY FUNCTIONAL AREA



Notes: (1) Encompasses nonpublic areas that may otherwise be categorized as one of the terminal functional areas.

1.5.1.1 Airline Space

Airline space occupies the northwest portion of the passenger terminal. The space includes the ticketing area and airline ticket offices. The ticketing area includes 11 check-in counter positions along with the baggage takeaway belt and the associated passenger queue lines. The airline ticket offices include dedicated administrative and storage space for three airlines.

1.5.1.2 Baggage Service

Baggage service space occupies the northwest and northeast portions of the passenger terminal. The space includes the outbound baggage make-up area, located outside the passenger terminal, where baggage is sorted by airline personnel prior to loading onto aircraft. The baggage service space also includes the inbound baggage area where bags are sorted outside by airline personnel when aircraft arrive at the gate and the inside baggage claim area where passengers retrieve their checked baggage from a baggage claim device. The claim device is an oval-shaped, sloped-plate, carousel fed by a single, inbound belt.

1.5.1.3 Transportation Security Administration Space

The Transportation Security Administration (TSA) was established in 2001 to protect the nation's transportation systems to ensure freedom of movement for people and commerce. TSA space at SBP occupies the northwest and central portions of the passenger terminal. TSA agents staff the outbound baggage screening and passenger security screening checkpoint areas. TSA also occupies offices adjacent to the security screening checkpoint.

The outbound baggage screening area is located behind the ticketing check-in counters. Checked bags are processed at the check-in counters and placed on the takeaway belt behind the counters. The belt transports the checked baggage to the outbound baggage screening area and through a device where they are screened by TSA agents. The area also includes space for manual screening such as for alerted or oversized baggage. Once cleared, the baggage moves to the outbound baggage make-up area for sorting and delivery to aircraft.

The passenger security screening checkpoint is in the central portion of the passenger terminal, between the ticketing and baggage claim areas. The security screening checkpoint has three lanes, two standard screening lanes, and one TSA Precheck lane. The area has queuing for document check and a post-screening recomposure area.

1.5.1.4 Holdroom/Gates

The holdroom/gate space occupies the southern portion of the terminal building. The holdroom is a common area servicing six gates, with seating on the east and west sides, a central congregating area, four two-position fixed gate podiums, and two mobile gate podiums. The gate podiums serve four ground-loading gates and two passenger boarding bridge gates. The passenger boarding bridges include integrated gate-check bag vestibules allowing the efficient transfer of gate-checked bags between the passengers and the airline ramp workers.

1.5.1.5 Concessions

An area for vending machines is located near the front of the passenger terminal and accessible to passengers before they go through the passenger security screening checkpoint (pre-security). Post-

security concessions are in the northeast corner of the holdroom. The concessions provides prepackaged hot food, cold food, beverages, alcohol, and sundries. The holdroom concession area has a dedicated seating area.

1.5.1.6 Ground Transportation

Ground transportation space occupies the northern portion of the passenger terminal. It includes the information desk near the main entrance of the passenger terminal and the rental car customer service counters with adjacent rental car offices located near the baggage claim area. The Airport is currently served by four rental car companies.

1.5.1.7 Public Space

Public space occupies approximately 40 percent of the passenger terminal. It includes circulation and waiting areas, an open air courtyard, pet relief area, nursing mothers rooms, and restrooms.

1.5.1.8 Airport Space

Airport space occupies non-public areas behind ticketing and baggage claim areas and is used by County staff in support of Airport operations. The space includes administrative space, the Emergency Operations Center, non-public restrooms, the badging and security office, airport storage, and a conference room adjacent to the rental car offices.

1.5.1.9 Building Support

Building support spaces include the areas for essential communication, mechanical, electrical, plumbing, fire protection, security, and other building support functions. Building support spaces are generally located in three areas of the passenger terminal; the ticketing area, the baggage claim area, and near the courtyard.

1.5.1.10 Terminal Apron

The terminal apron surrounds the terminal holdroom. It is the space where the passenger boarding bridges are located, where aircraft park, and where ground handling activities occur. Aircraft parking position capabilities and dependencies are illustrated in *Figure 1-9* and described in *Table 1-8*.

The apron includes six aircraft positions around the holdroom and two remote parking positions for remain overnight aircraft parking located southeast of the passenger terminal. Access to terminal parking positions 1, 3, and 4 are dependent on aircraft parked on the adjacent gates, which limits the ability for all six aircraft parking positions to be used simultaneously.

FIGURE 1-9
TERMINAL APRON AIRCRAFT PARKING POSITION CAPABILITIES AND DEPENDENCIES

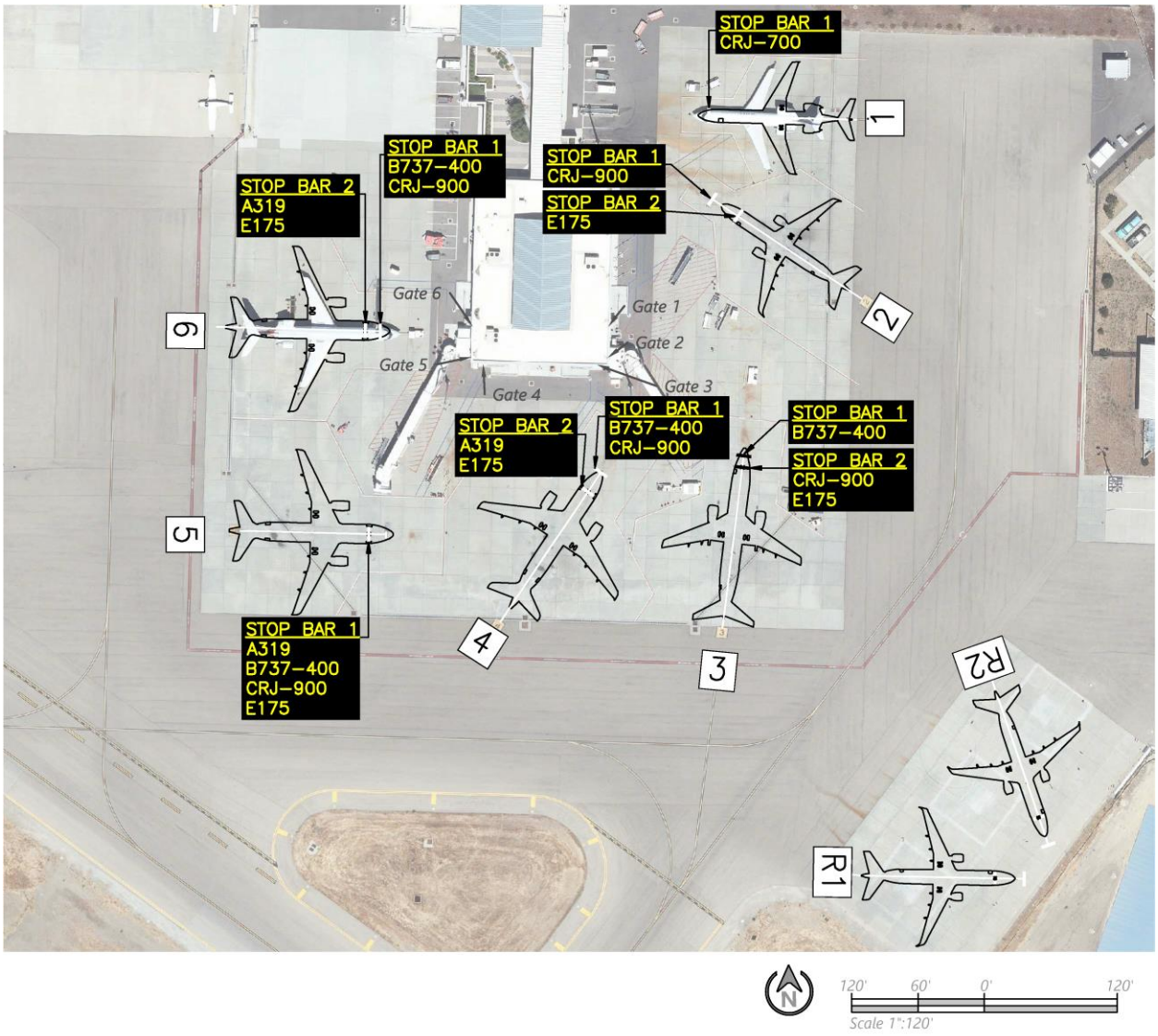


TABLE 1-8
TERMINAL APRON AIRCRAFT PARKING POSITION CAPABILITIES AND DEPENDENCIES

Aircraft Parking Position	Holdroom Gate	Boarding Bridge	Stop Bar 1[1]	Stop Bar 2[1]	Max Aircraft	Parking Position Dependencies
1	Gate 1	No	CRJ-700	None	CRJ-700	Blocked if E175 at Position 2
2	Gate 1 or Gate 2	Yes Secondary Position	CRJ-900	E175	E175	E175 Blocks Position 1
3	Gate 2 or Gate 3	Yes Primary Position	B737-400	CRJ-900 E175	A319[2] (Wingspan) B737-400 (Length)	Blocked if E175 at Position 4
4	Gate 3	No	B737-400 CRJ-900	A319 E175	A319 (Wingspan) B737-400 (Length)	Blocked if any aircraft at Position 5 blocks Position 3
5	Gate 4 or Gate 5	Yes Primary Position	A319 B737-400 CRJ-900 E175	None	A319 (Wingspan) B737-400 (Length)	Blocks Position 4
6	Gate 6	No	B737-400 CRJ-900	A319 E175	A319 (Wingspan) B737-400 (Length)	None
R1 (South Position)	Remote	No	None	None	E175	None
R2 (North Position)	Remote	No	None	None	E175	None

Source: SBP, 2020
Notes: (1) A stop bar is a marking painted on the terminal apron to identify the location for the aircraft nose wheel to stop when parking the aircraft; (2) Position stop bar not marked for A319 but A319 aircraft can be accommodated.

1.6 REGIONAL ROADWAYS AND LANDSIDE FACILITIES

This section provides an inventory of the off-airport regional roadways providing access to SBP and on-airport SBP landside facilities. SBP landside facilities include the on-airport roadways, passenger terminal curb, public and employee vehicle parking lots, and rental car facilities.

1.6.1.1 Regional Roadways

The passenger catchment area for SBP comprises San Luis Obispo County and a portion of Santa Barbara County to the south[5]. Within this catchment area, U.S. Highway 101 (US 101) serves as the primary north/south regional access highway. All facilities on the east side of the Airport, including the passenger terminal, can be accessed from California State Route 227 (also called Broad Street, north of the Airport, and Edna Road, south of the Airport). All facilities on the Airport's west side are accessed via Old Sante Fe Road, which is accessed via Buckley Road and Tank Farm Road as shown in *Figure 1-10*.

1.6.1.2 On-Airport Roadways

The airport loop roadway, as depicted in *Figure 1-11*, is the main on-airport roadway used by commercial passengers. From State Route 227, vehicles enter the Airport at Aero Drive. Aero Drive is a two-way street with a single lane in each direction as well as a bicycle lane. Aero Drive also includes a pedestrian sidewalk on the north side of the street, which continues to the passenger terminal.

Aero Drive merges and becomes Airport Drive continuing towards the passenger terminal. The two-way street becomes a one-way, two-lane road just prior to the passenger terminal. At the terminal, the road widens to four lanes with the addition of two lanes for passenger drop-off and pick-up. Leaving the passenger terminal, the roadway remains a one-way road but reduces back to two lanes. Vehicles either 1) turn right onto Aviadores Way to the rental car ready/return lot, Aircraft Rescue and Fire Fighting facility, or other tenant facilities, 2) continue straight and turn right heading southbound on State Route 227 (Edna Road) to exit the Airport, or 3) turn left onto a one-way, two-lane, return loop road. Passengers use the return loop road to return to the public parking lots or terminal curb. They also use the return loop road to exit the Airport northbound by accessing Aero Drive and taking the left turn lane onto State Route 227 (Broad Street).

1.6.1.3 Terminal Curb

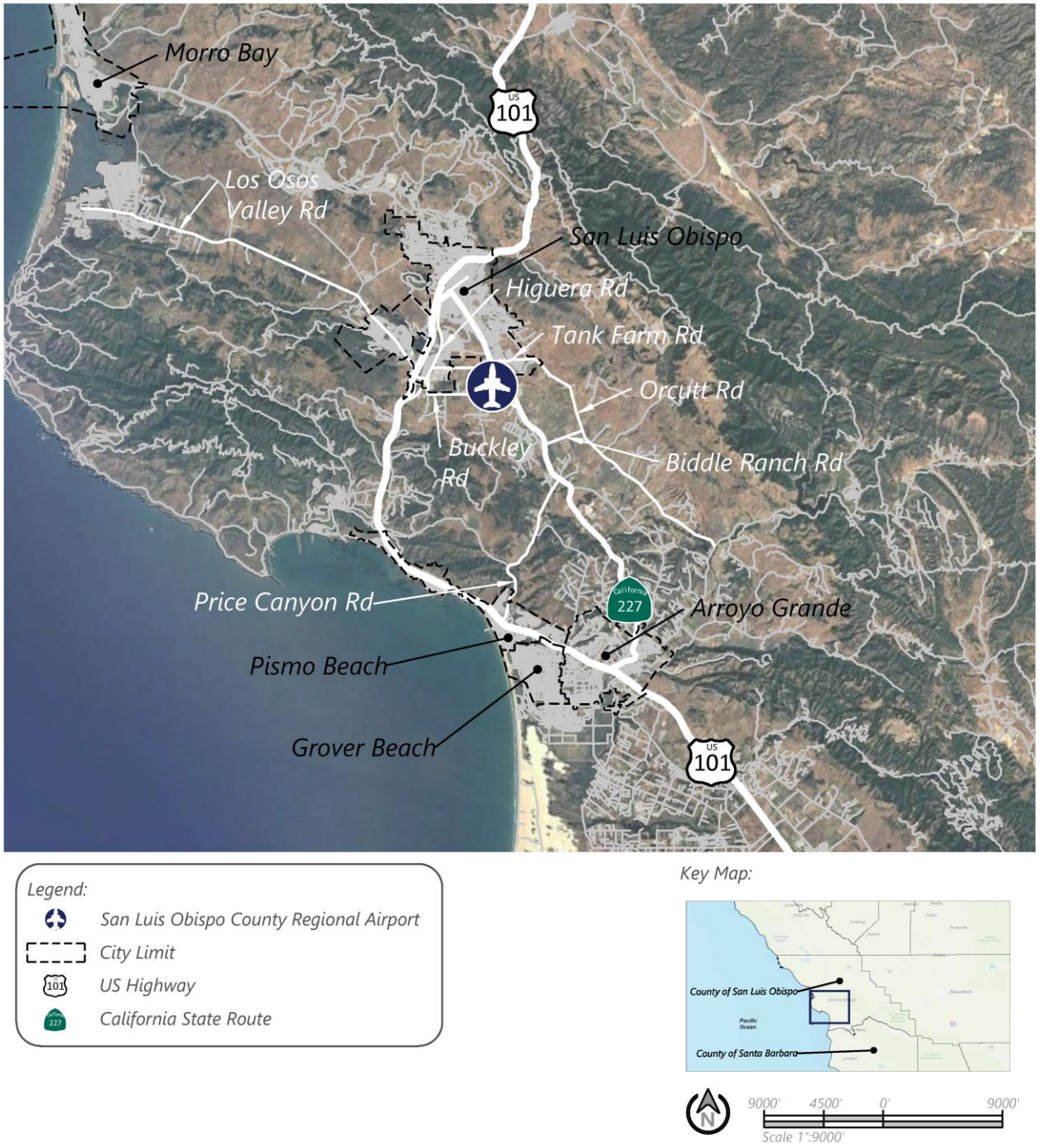
The terminal curb is 410 feet long and provides space for vehicle loading/unloading. A 22-foot-wide signalized crosswalk is located near the midpoint of the terminal curb and provides pedestrian access from the passenger terminal to public parking Lot 4. The first 125 feet of the terminal curb is designated for passenger pick-up by designated ground transportation services. The next 105 feet up to the crosswalk is generally designated for passenger drop-off. The 135 feet after the crosswalk is generally designated for passenger pick-up. The last 45 feet of the terminal curb is designated for passenger drop-off/pickup by public transit services provided by SLO Transit.

1.6.1.4 Ground Transportation Services

Ground transportation services include commercial transportation services such as taxicabs, limousines, shared-ride services, transportation network companies (e.g., Uber and Lyft), courtesy vehicles, buses, and vans that drop-off and pick-up passengers. There is a designated passenger pick-up area at the yellow curb (125 linear feet) at the start of the terminal curb for ground transportation service companies who have agreements with the Airport. The Airport also has a public transit stop located at the red marked curb (45 linear feet) at the end of the terminal curb. Two SLO Transit bus routes provide hourly service to the Airport seven days per week. The SLO Transit busses connect to regional transit services at the downtown San Luis Obispo transit center.

[5] Catchment area for SBP identified in the *2018 Traffic Retention and Leakage Study*.

FIGURE 1-10
REGIONAL ROADWAYS PROVIDING ACCESS TO SBP



Source: County of San Luis Obispo, 2020

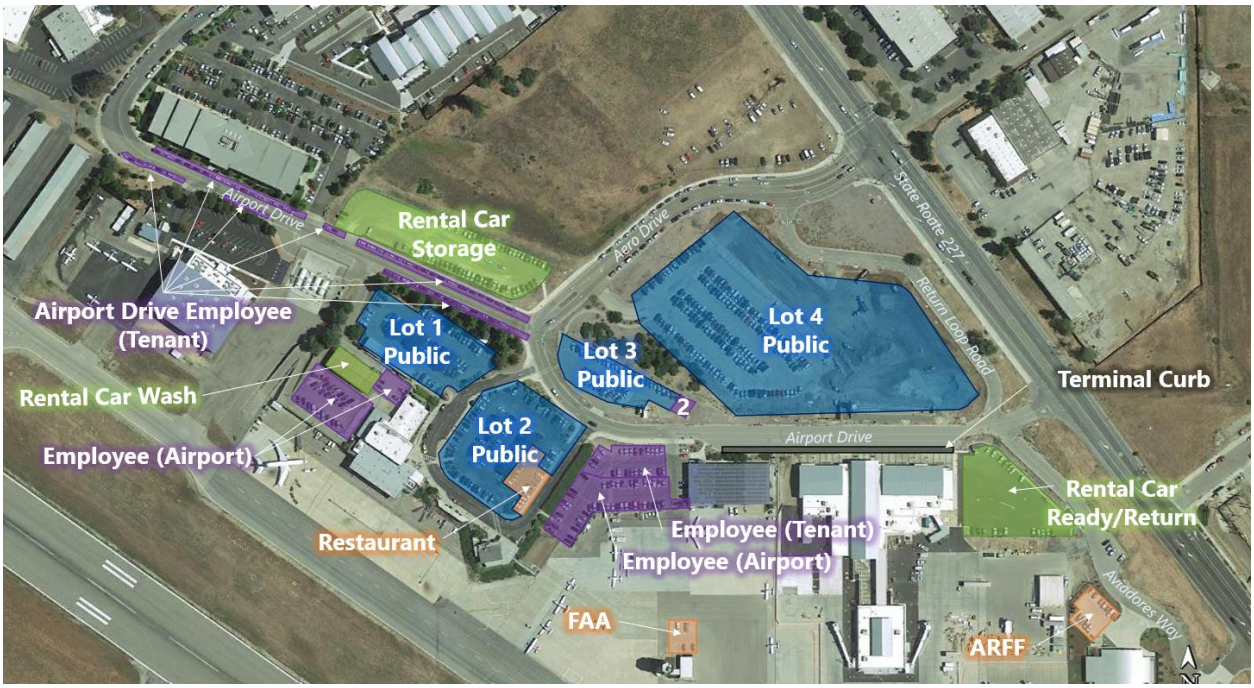
FIGURE 1-11
AIRPORT LOOP ROADWAY

1.6.1.5 Vehicle Parking

Figure 1-12 and *Table 1-9* provides an inventory depiction and summary of the Airport public and employee vehicle parking facilities located near the passenger terminal. The inventory was completed with data obtained from Airport management, surveys sent to rental car providers, and on-site observations.

Public parking is available in Lots 1, 2, 3, and 4. The lots are not differentiated by an hourly or daily parking designation. Passengers pay for hourly or daily parking at kiosks located in each parking lot prior to their flight. Employee parking is available near Lots 1 and 2 and along portions of Airport Drive. Employee parking is provided for airport staff and employees of airport tenants. Rental car parking includes the ready/return lot located east of the terminal, and the rental car storage lot located along Airport Drive, west of the terminal. Designated parking for the Spirit of San Luis Restaurant is provided in Lot 2.

FIGURE 1-12
VEHICLE PARKING NEAR THE PASSENGER TERMINAL



Source: 2019 SBP Parking Study
Notes: Landside facilities are presented in four categories: blue = public parking; purple = employee parking; green = rental car; orange = other

TABLE 1-9
LANDSIDE FACILITIES INVENTORY

Landside Facilities	Existing Vehicle Parking Spaces	Area (acres)
Public Parking		
Lot 1	82	0.7
Lot 2	80	0.9
Lot 3	45	0.5
Lot 4	395	3.4
Subtotal	602	5.5
Employee Parking		
Airport Drive	59	0.3
Lot 3	2	<0.1
Employee (Airport Terminal)	50	0.4
Employee (FBO and MRO Tenants)	165	1.32
Employee (Airport Maintenance and Operations)	21	0.2
Subtotal	297	2.3
Rental Car Facilities		
Ready/Return Lot	63	0.7
Storage Lot	101	0.7
Wash and Maintenance	-	0.3
Subtotal	164	1.7
Other Parking		
Aircraft Rescue and Fire Fighting	14	0.1
Airport Traffic Control Tower	12	0.1
Restaurant (Visitor)	20	0.1
Subtotal	46	0.3

Notes: The inventory reflects landside facilities located near the SBP passenger terminal.

1.7 GENERAL AVIATION AND SUPPORT FACILITIES

This section provides an inventory of general aviation and support facilities. These facilities generally include 1) hangars / buildings for aircraft storage, workshops, office, and equipment storage, 2) apron pavement for aircraft parking, aircraft taxiing and maneuvering, and equipment storage, and 3) landside space for vehicle parking, roadways and vehicle circulation, and landscaping.

Figure 1-13 depicts the general aviation and support facilities by function:

- General Aviation
- Fixed Base Operator and Maintenance, Overhaul, and Repair
- Air Cargo
- Airport Maintenance and Operations
- Aircraft Rescue and Fire Fighting
- Airport Traffic Control Tower
- Aviation Fuel Storage
- Aircraft Wash Rack

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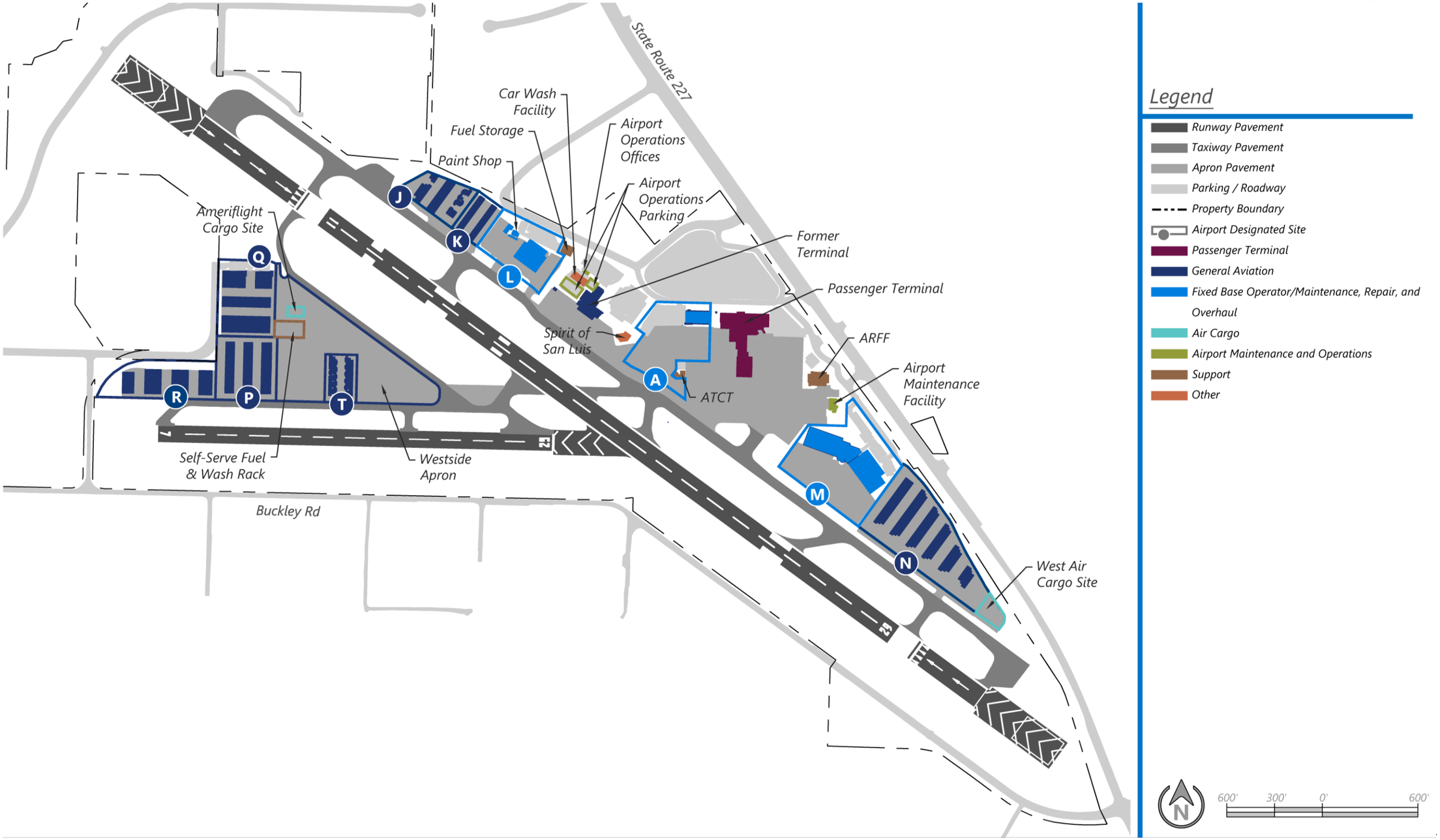
FIGURE 1-13 AIRPORT FACILITIES BY FUNCTION



Notes: Hangars/buildings are colored with a solid color by function. Taxilane/apron and landside areas are identified with an outline color by function. All airport functions shown except for the roadway, terminal curb, ground transportation services, vehicle parking, and some rental car functions. The sites are included in this Master Plan for identification purposes and are not representative of actual tenant leasehold areas.

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1.7.1 General Aviation

General aviation facilities support nonscheduled passenger services, air charter operations, and private aircraft activities. These general aviation facilities occupy several locations around the Airport, as shown in *Figure 1-13*.

Table 1-10 summarizes the general aviation facilities at the Airport, excluding the Fixed Base Operator[6]. The general aviation facilities are identified by Airport designated site, shown in *Figure 1-13*. The table provides information for the hangar/building, taxilane/apron, and landside areas within each site. The sites included in this Master Plan are for identification purposes and not representative of actual tenant leasehold areas. The County and individual hangar associations operate and manage general aviation facilities.

TABLE 1-10
GENERAL AVIATION FACILITIES

Airport Designated Site(1)	Conventional Hangar		T-Hangar		Taxilane/Apron		Landside		Other Bldgs
	Area (sf)(2)	Count	Area (sf)(2)	Count	Area (sy)	Tie-Down Count	Area (sf)	Space Count	Area (sf)
Site J	2,192	1	24,526	22	8,670	10	0	0	0
Site K	0	0	18,577	16	4,352	0	0	0	0
Site N	0	0	82,301	65	27,783	16	0	0	0
Site P	19,319	6	34,369	28	10,902	0	0	0	0
Site Q	73,861	20	0	0	7,105	0	17,413	43	0
Site R	52,010	20	0	0	6,441	0	0	0	0
Site T	0	0	18,339	21	2,130	0	0	0	0
Old Terminal	0	0	0	0	10,440	0	0	0	800
Westside Apron	0	0	0	0	45,825	93	0	0	0

Notes: (1) Airport designated sites reference airport locations depicted in *Figure 1-13*.; (2) Areas reflect the building footprint.; The sites are included in this Master Plan for identification purposes and not representative of actual tenant leasehold areas.

General aviation hangar and apron lease sites operated by the County include Site N and the Westside apron. Site N has permanent T-hangar buildings and aircraft tie-down parking which accommodates smaller single- and multi-engine aircraft. The Westside apron is the largest area on the Airport for aircraft tie-downs and is bordered by Taxiway J, Taxiway M, Site Q, Site P, and Site T. Westside tie-downs

[6] FAA defines a Fixed Base Operator per FAA Advisory Circular 150/5190-7, *Minimum Standards for Commercial Aeronautical Activities*, as a commercial business that is granted the right by an Airport Sponsor to operate on an airport and provide aeronautical services such as fueling, hangaring, tie-down and parking, aircraft rental, aircraft rental, and fight instruction.

accommodate single- and multi-engine piston aircraft. The Westside apron also includes an aircraft wash rack and a small, portable restroom.

Individual hangar associations lease hangar and apron space at seven sites on the Airport:

- **Sites J and K** are located on the Airport's east side near the Runway 11 end and are accessed via Taxiway A. The sites include a conventional hangar, portable and permanent T-hangars, and apron tie-downs. Sites J and K primarily accommodate small single- and multi-engine piston aircraft. Site J also accommodates a general aviation aircraft maintenance business.
- **Site Q** is located on the north end of the Westside apron on the Airport's west side. Site Q has conventional hangars with door sizes ranging from 50 to 70 feet. The hangars accommodate aircraft including pressurized turboprops (e.g., Beechcraft King Air), small business jets (e.g., Cessna Citation), and helicopters. Some of the hangars have an adjacent two floors of office space. Businesses operating out of Site Q include flight training, avionics repair, air charter, and other aircraft maintenance activities. Site Q also provides a designated vehicle parking area for tenants and customers.
- **Sites R, P, and T** are located south of Site Q on the Airport's west side. Site R has conventional hangars. Site P has conventional and permanent T-hangars. Site T has portable T-hangars. Sites R and Site P can accommodate larger multi-engine aircraft or small business jets, while Site T accommodates small piston engine aircraft.
- **The Old Terminal Area** is located on the Airport's east side between Site A and Site L. A portion of the 14,000-square-foot old terminal building is leased by SunWest Aviation, Inc. as administrative space to support flight training and air charter operations provided by a fleet of five single-engine piston aircraft. SunWest also leases a portion of the apron to store aircraft.

1.7.2 Fixed Base Operator and Maintenance, Repair, and Overhaul Facilities

An FBO provides services such as aircraft storage, aircraft rental or sales, flight instruction, air charter flights, flight crew lounge, passenger terminal and other passenger services, fueling, aircraft line services[7], and aircraft repair and maintenance. At SBP, FBO services are provided by businesses including ACI Jet, MarcAir, SunWest, Air San Luis, Cuesta Aviation, Nelson Aviation Group, San Luis Avionics, Aerocademy, and Helipro. Many of these businesses are in general aviation facilities previously described and shown in *Figure 1-13*. ACI Jet is currently the only full-service FBO. SBP, is also home to ACI Jet's MRO services. MRO facilities refers to repair station or maintenance facility certificated by the FAA under Title 14 of the Code of Federal Regulations Part 145 and is engaged in the maintenance, inspection, and alteration of aircraft and aircraft products.

Table 1-11 summarizes the Airport's FBO and MRO facilities. The facilities are identified by Airport designated site. The table provides information for the hangar/building, apron, and landside areas within each site. The subsequent text provides a further examination of each service.

[7] Aircraft interior and exterior cleaning and lavatory servicing

TABLE 1-11
FIXED BASE OPERATOR AND MAINTENANCE, OVERHAUL, AND REPAIR FACILITIES

Airport Designated Site [1]	Hangar Space		Taxilane/Apron		Landside		Terminal/Office/ Other
	Area (sf)[2]	Count	Area (sy)	Tie-Down Count	Area (sf)	Space Count [3]	Area (sf)
Site A	13,263	1	17,359	22	14,595	41	0
Site M	67,318	2	15,545	0	14,756	74[4]	28,856
Site L	19,000	1	8,722	0	22,502	50	5,519

Notes: (1) Area designated sites reference airport locations depicted in *Figure 1-13*.; (2) Areas reflect the building footprint.; (3) FBO and MRO space counts also summarized in *Table 1-9*; (4) Vehicle parking shared with ACI Jet MRO operation.

1.7.2.1 Fixed Base Operator

ACI Jet is the sole full-service FBO provider at the Airport and operates in Site A and Site M. The hangar and apron space within Site A is used to accommodate and maneuver transient aircraft or ground support equipment storage. The offices in the Site A hangar are subleased to SBP Airport and are used by Airport Operations staff. Site A includes a vehicle parking lot used by ACI Jet employees and airport staff.

ACI Jet relocated their Site A FBO offices and most operations to a hangar, office, and corporate terminal facility at Site M in spring 2021. The new executive FBO provides general aviation pilot and passenger amenities, as well as administrative space for ACI Jet operations. Site M FBO amenities also include two wash racks, including one located inside the MRO hangar and one on the apron outside the hangar. Site M includes apron space used to store and maneuver aircraft for ACI Jet's FBO, air charter, and aircraft maintenance operation. Approximately half of the apron space in Site M is dedicated to FBO operations. ACI Jet's FBO operation accommodates a range of aircraft but primarily caters to large, pressurized turboprops and business jets.

1.7.2.2 Aircraft Maintenance, Repair, and Overhaul

Aircraft MRO facilities are provided by ACI Jet. ACI Jet is an Authorized Service Facility for Bombardier aircraft and provides a full range of services for Cessna Citation business jets. The ACI Jet MRO operates out of the east hangar and east side of the apron at Site M. Maintenance services offered include nose to tail aircraft maintenance, engine and wheel repair, interior repair work, avionic sales, Bombardier parts distribution, line and select heavy maintenance, inspections, warranty, and aircraft on ground services on Bombardier Challenger 300-series, 600-series, and Global-series business jets. The ACI Jet MRO apron area comprises approximately half of the Site M apron and is typically used by Bombardier aircraft such as the Global Express, Challenger series (500 – 750), and Cessna Citation. Any run-up activities occur at the end of Taxiway A near the Runway 11 end or at the compass rose near the Runway 25 end, instead of the Site M apron. The ACI Jet MRO facility shares the landside area with the FBO and headquarters building within the Site M footprint. A paint shop, located at Site L, is used by ACI Jet.

Other airport maintenance locations include a currently vacant hangar facility at Site L. The hangar can partially accommodate two Embraer E175 aircraft (aircraft cannot completely fit due to tail height). Up to four additional Embraer E175 aircraft can be parked on the apron. The facility also includes a two-story

office building annex. Additional aircraft maintenance services are provided for smaller general aviation aircraft by business located at the general aviation facilities.

1.7.3 Air Cargo

Two air cargo carriers currently operate at SBP, West Air and Ameriflight. The apron areas occupied by air cargo operations are summarized in *Table 1-12*.

West Air operates as a FedEx feeder service. West Air leases apron on the southeast portion of the Site N apron. West Air operates two to three Cessna Caravan aircraft arrival flights per day Monday through Saturday, typically inbound from Ontario International Airport and/or Santa Maria Airport. The aircraft typically arrive at different times, with at least one flight arriving between 7:30 to 9:00 am. The apron area is only able to accommodate two Cessna Caravan aircraft at a time.

Ameriflight operates for UPS. Ameriflight leases apron on the Westside apron, north of the self-serve fueling facility and east of Site Q. Ameriflight operates one to two Fairchild Swearingen Metroliner arrivals per day on Monday through Saturday, typically inbound from Hollywood Burbank Airport.

The Airport does not have dedicated air cargo building or landside facilities. All air cargo is processed off-airport. Both air cargo carriers load and unload cargo from the aircraft to trucks on the apron. For West Air, FedEx trucks drive onto the apron using Aviadores Way. For Ameriflight, UPS trucks access the apron via Old Santa Fe Rd.

TABLE 1-12
AIR CARGO FACILITIES

Airport Designated Site (1)	Taxilane/Apron	
	Area (sy)	Position Count (2)
Site N	2,827	4
Westside Apron	583	3

Note: (1) – Airport designated sites reference airport locations depicted in *Figure 1-13*. (2) Position counts include area used for aircraft parking as well as truck staging.

1.7.4 Airport Maintenance and Operations

The Airport maintenance facility is located north of Site M. The facility has four flow-through bays that house various maintenance equipment and vehicles such as a tractor, sweeper, and other airfield equipment. The facility also includes workbench areas for maintenance personnel. In addition to the bays, equipment and vehicles are stored under four carport structures totaling approximately 1,600 square feet. A smaller 625-square-foot building located near the facility stores a lawn mower. Storage areas are at capacity and many of the building and pavement areas are in disrepair.

Airport operations staff moved into offices at the former ACI Jet hangar at Site A in spring 2022. Airport operations staff are the only users of the offices in this facility. Airport staff park in the Site A parking lot adjacent to the hangar. The existing airport maintenance and operations parking inventory is described in *Table 1-9*.

1.7.5 Aircraft Rescue and Firefighting

The Airport's Aircraft Rescue and Firefighting (ARFF) facility, which jointly serves as a County (Cal Fire) fire station (Station 21), is located near the passenger terminal. In addition to at the Airport, Station 21 provides fire protection for Edna Valley, rural areas surrounding the City of San Luis Obispo, as well as within the City of San Luis Obispo. The existing facility was constructed and opened in 2006.

The facility has three flow-through bays to service both airport and County emergency response calls. ARFF operations use two response vehicles including a front-line rig and a Type 1 fire engine. One vehicle is required for SBP to meet ARFF Index B requirements and the other serves as backup. An ARFF Index B allows SBP to serve commercial aircraft that are less than 126 feet in length[8]. Other vehicles stored in the facility include a rescue vehicle, water tender, and Mass Casualty Incident (MCI) vehicle.

The ARFF facility is staffed 24 hours per day which complies with Title 14 CFR Part 139 requirements. Hours of operations depend on the schedule of commercial and charter operators. Three firefighting personnel are typically on duty at a time, but the station employs 25 firefighters. The ARFF facility currently provides 14 employee/visitor vehicle parking spaces, as referenced in *Table 1-9*. All training is provided at SBP, except for live fire training.

1.7.6 Airport Traffic Control Tower

The FAA contracts with Serco Management Services to operate and maintain the SBP Airport Traffic Control Tower through the FAA Contract Tower Program[9]. The 77-foot-tall ATCT, located near Site A and the passenger terminal, was constructed in 1988. Parking for staff is provided at the base of the tower. When the tower is in operation, air traffic controllers provide clearance and direction to aircraft making their final approach before landing, ground operations, takeoff, and initial climb as well as ground vehicles operating on the airfield. The tower is in operation between the hours of 6:00 a.m. to 8:00 p.m. local time. The existing vehicle parking inventory for the Airport Traffic Control Tower is described in *Table 1-9*.

1.7.7 Fuel Storage

ACI Jet is the fuel provider at SBP and operates a fuel farm located near Site L which includes five above-ground tanks as well as a self-serve fuel tank located on the Westside apron. Fuel storage capacity is presented in *Table 1-13*. ACI Jet receives one to two loads of Jet A per day, transported from either San Francisco or Los Angeles. Fuel is primarily distributed via five ACI fuel trucks that transport fuel as a service directly to tenant locations. The largest capacity Jet A fuel truck can hold 5,000 gallons. The largest capacity 100 LL AvGas truck is 1,000 gallons. Designated fuel truck parking locations are located at the ACI Jet fuel farm near Site L, ACI Jet FBO at Site A, and the self-serve fuel area on the Westside apron.

[8] FAA Advisory Circular 150/5220-10E, *Guide Specification for Aircraft Rescue Fire Fighting (ARFF) Vehicles* (June 1st 2011)

[9] The Federal Contract Tower (PCT) Program was established in 1982 to allow the FAA to contract out the operation of towers. As of 2020, a total of approximately 256 FCTs are in operation (comprising ~49 percent of all Federal air traffic control towers in the United States) and staffed by 1,400 controllers. All contract controllers meet the same qualification and training requirements as FAA air traffic controllers. The FCT Program is administered by the FAA's Air Traffic Organization.

TABLE 1-13
AVIATION FUEL STORAGE

Fuel Storage	Size (gallons)	Fuel Type
Fuel Tank 1	15,000	Jet A
Fuel Tank 2	15,000	Jet A
Fuel Tank 3	12,000	100 LL AvGas
Fuel Tank 4	20,000	Jet A
Fuel Tank 5	500	Diesel
Westside Apron Fuel Tank (Self-Serve)	15,000	100 LL AvGas

Source: ACI Jet, 2020

1.7.8 Wash Rack

The Airport has two designated aircraft wash racks used by aircraft, firefighting vehicles, and airport-only vehicles and equipment. The Airport operates a wash rack on the Westside apron near the self-service fuel facility for general aviation aircraft. Additionally, the ACI Jet facility located at Site M has an indoor and outdoor wash rack.

1.7.9 Utilities

The utility infrastructure comprises a network of electrical, natural gas, water, sanitary sewer, and stormwater lines. A full coverage of utility services are currently provided at all facilities east of Runway 11-29. Facilities west of Runway 11-29 have partial coverage, as summarized for general aviation facilities in *Table 1-10*.

Electric power is provided by Pacific Gas & Electric. The Airport has full electric power coverage, except for Site T on the Westside apron. Power lines servicing the Airport originate from main lines from the west side of the Airport along Hoover Avenue and Old Santa Fe Road as well as the east side of the Airport along Aero Drive to the electrical vault near Parking Lot 3. Natural gas is provided by Southern California Gas Company.

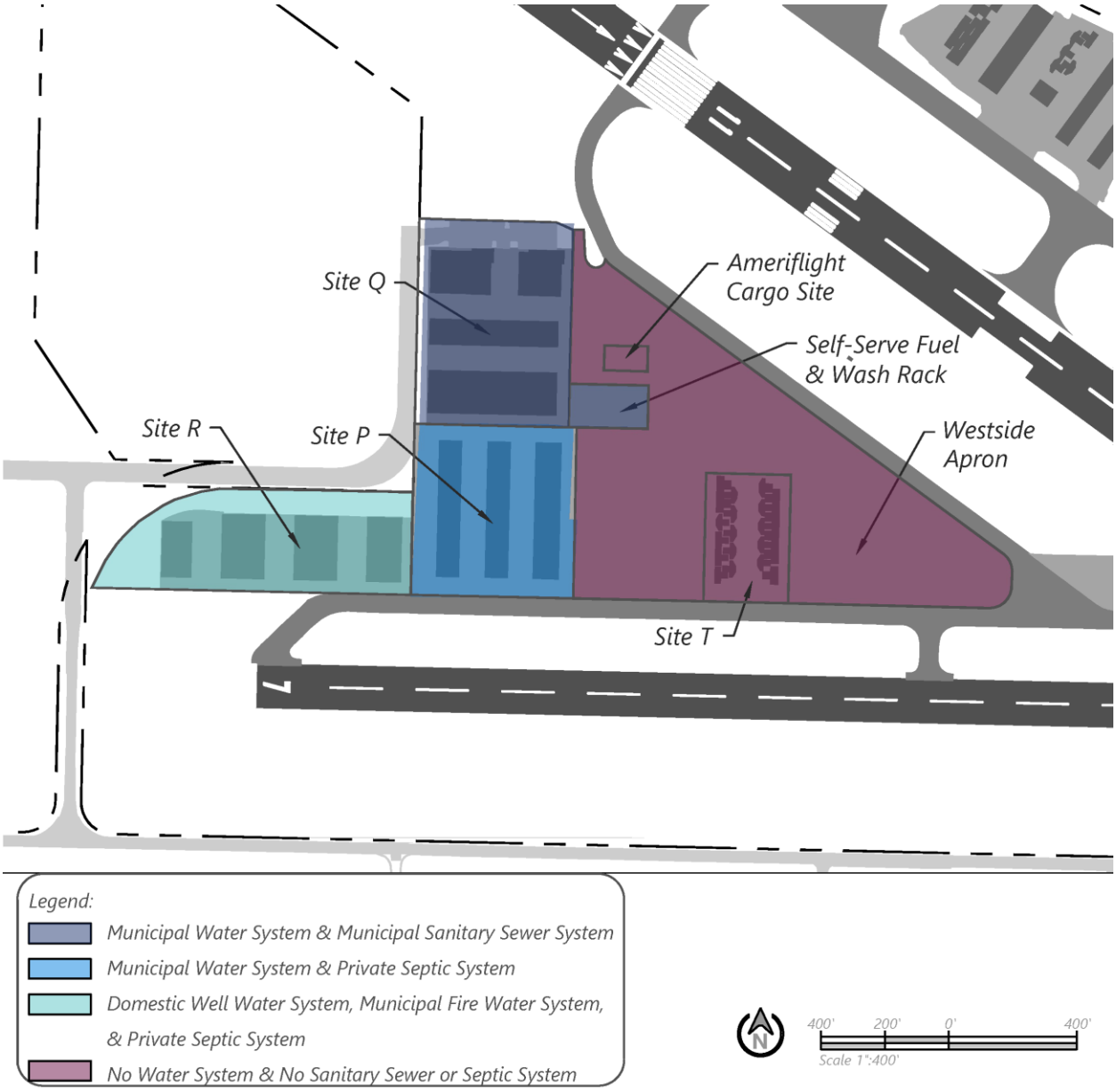
Water and sanitary sewer services are provided by the City of San Luis Obispo. On-airport water and sewer lines are owned and maintained by the Airport. Tenants are charged by the Airport for water/sewer services. Water and sewer line connection points are located at the corner of Fiero Lane and State Route 227. The water and sewer lines run behind Sites J and K, the run-up area, under the Runway 11 threshold, and under the Westside apron towards the wash rack on the Westside apron. *Figure 1-14* depicts the water and sanitary sewer system coverages, respectively, west of Runway 11-29. All facilities except Site T and Site R have access to the water line. Site R relies upon well water, accessed from a well located behind one of the Site R hangars.

The sanitary sewer is an 8-inch line as it enters Airport property. The sanitary sewer line that extends to the west side of the Airport services Site Q and the wash rack is a 2-inch force main. The other sites have septic systems installed and still operate using these septic systems, except for Site T, which has no system.

The management of stormwater runoff is important in maintaining water quality in the County of San Luis Obispo. The Airport is required to comply with several regulatory standards pertaining to stormwater

including 33 United States Code Section 1251, *Federal Water Pollution Control Act,* California Low Impact Development requirements, and California Climate Change Resiliency efforts. The Airport also must meet the FAA design standards and requirements of its industrial stormwater permit. The County of San Luis Obispo completed a Stormwater Master Plan concurrent with this Airport Master Plan to assure compliance with heightened stormwater regulatory requirements within a constrained airport land area. Data and best management practices identified in the Stormwater Master Plan are considered in the airport development plan process of the Airport Master Plan, documented in *Chapter 4, Alternatives*.

FIGURE 1-14
WATER AND SEWER SYSTEM COVERAGE WEST OF RUNWAY 11-29



1.8 LAND USE

The County of San Luis Obispo General Plan is the foundation upon which all land use decisions are based in the County. The public policies presented on land use and development aid future decision-making by County officials. The General Plan addresses land use, circulation, open space, noise, housing, and other elements.

Airport property falls within the jurisdiction of San Luis Obispo County and is adjacent to the boundary of the incorporated City of San Luis Obispo. The County and City designate land uses within the vicinity of the Airport as agriculture/open space, business park/industrial, general retail/commercial, services manufacturing, and low density residential. The Airport itself is designated as a public facility.

An Airport Land Use Plan (ALUP) was prepared and adopted by the San Luis Obispo County Airport Land Use Commission to meet California state requirements for an Airport Land Use Compatibility Plan. Airport land use compatibility is the reconciliation of how land development and airports function together. The goal of the ALUP is to promote compatibility between airports and land uses that surround them.

1.9 ENVIRONMENTAL

As discussed in FAA AC 150/5070-6B Change 2, *Airport Master Plans*, the purpose of considering environmental factors in airport master planning is to help the Airport Sponsor thoroughly evaluate airport development alternatives and to provide information that will help expedite subsequent environmental processing.

An airport environmental conditions summary is presented in *Table 1-14* and describes the general environmental condition and potential environmental effect by applicable environmental resource category. The environmental resource categories are outlined in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* and the 1050.1F, *Desk Reference*. *Appendix A* provides further information on each resource category's applicability to SBP.

All resource categories apply to SBP except for Coastal Resources and Wild and Scenic Rivers. The Airport is located about 5.1 miles north of the closest area that is designated California Coastal Zone. The Coastal Barriers Resources Act only applies to undeveloped coastal barriers along the Atlantic and Gulf Coasts and the Great Lakes. The closest Wild and Scenic River is the Sisquoc River, which is about 30 miles southeast of the Airport near the City of Santa Maria. Therefore, no impacts to that river segment would occur.

TABLE 1-14
SUMMARY OF ENVIRONMENTAL CONDITIONS

Environmental Resource Category	Description/Potential Environmental Effect
Air Quality	The Airport is in a portion of San Luis Obispo County that is in attainment with all National Ambient Air Quality Standards.
Biological Resources	Seven U.S. Fish and Wildlife Service listed protected species and/or habitats and nine California Natural Diversity Database listed protected species may be present on or near Airport property. The federally listed species include: • California tiger salamander (*ambystoma californiense*) • California red-legged frog (*rana draytonii*) • California condor (*Gymnogyps californianus*) • Vernal pool fairy shrimp (*branchinecta lynchi*) • Central California coast Distinct population Segment (DPS) Steelhead (*oncorhynchus mykiss irideus*) • South-central California coast DPS (*Oncorhynchus mykiss irideus*) • Chorro Creek bog thistle (*Cirsium fontinales* var. *obispoense*) The state listed species include: • California tiger salamander (*ambystoma californiense*) • Foothill yellow-legged frog (*rana boylii*) • Bald eagle (*haliaeetus leucocephalus*) • California condor (*Gymnogyps californianus*) • Tricolored blackbird (*agelaius tricolor*) • Crotch bumble bee (*bombus crotchii*) • Adobe sanicle (*sanicula martima*) • Chorro Creek bog thistle (*Cirsium fontinales* var. *obispoense*) • Cuesta Pass checkerbloom (*sidalcea hickmanii* ssp. *anomala*)
Climate	Activities that require fuel or power are the primary stationary sources of greenhouse gas (GHG) emissions at airports. Aircraft and ground access vehicles that are not under the control of an airport, typically generate more GHG emissions than airport-controlled sources. Aviation and non-aviation vehicles generate GHG emissions at the Airport.
Department of Transportation Act, Section 4(f)	There are no Section 4(f) resources at the Airport.
Farmlands	The Airport is within proximity of prime farmland, farmland of statewide importance, farmland of local importance, and land protected under Williamson Act Contract. See *Figure 1-15*.

Environmental Resource Category	Description/Potential Environmental Effect
Hazardous Materials, Solids Waste, and Pollution Prevention	There are 22 registered hazardous waste sites within proximity of the Airport. Additionally, there is a remediation program site, the Tank Farm Site, located to the northwest of the Airport along Tank Farm Road. The Tank Farm property was used as an oil storage facility into the early 1990s. While the facilities have been decommissioned and most of the tanks have been dismantled, the circular berms that once enclosed the storage tanks remain on the property.
Historical, Architectural, Archaeological, and Cultural Resources	There are no historic resources located at the Airport.
Land Use	The Airport falls within the jurisdiction of San Luis Obispo County and is adjacent to the boundary of the incorporated City of San Luis Obispo. The Airport is designated as a public facility and is surrounded by agriculture/open space, business park/industrial, general retail/commercial, services manufacturing, and low density residential.
Natural Resources and Energy Supply	None of the natural resources that the Airport uses, or has used, are in short supply.
Noise and Noise-Compatible Land Use	Nearby residential areas may be sensitive to aircraft noise associated with the Airport. As determined in the Airport's Land Use Compatibility Plan, all residential areas are considered compatible with cumulative noise level below Community Noise Equivalent Level 65 decibels.
Socioeconomic, Environmental Justice, Children's Environmental Health and Safety Risks	The Census Tracts that the Airport falls within or is adjacent to do not contain a high percentage of minority or low-income populations.
Visual Effects	The Airport is zoned as Airport Operations and is developed in a manner that is consistent with this zoning. Vegetation (e.g., trees and shrubs) helps to reduce both the light emissions and visual effects to the Airport for residential areas.
Water Resources	Mapped wetland resources (2 acres) and floodplains (western boundary) are located within the Airport property. See *Figure 1-15*.

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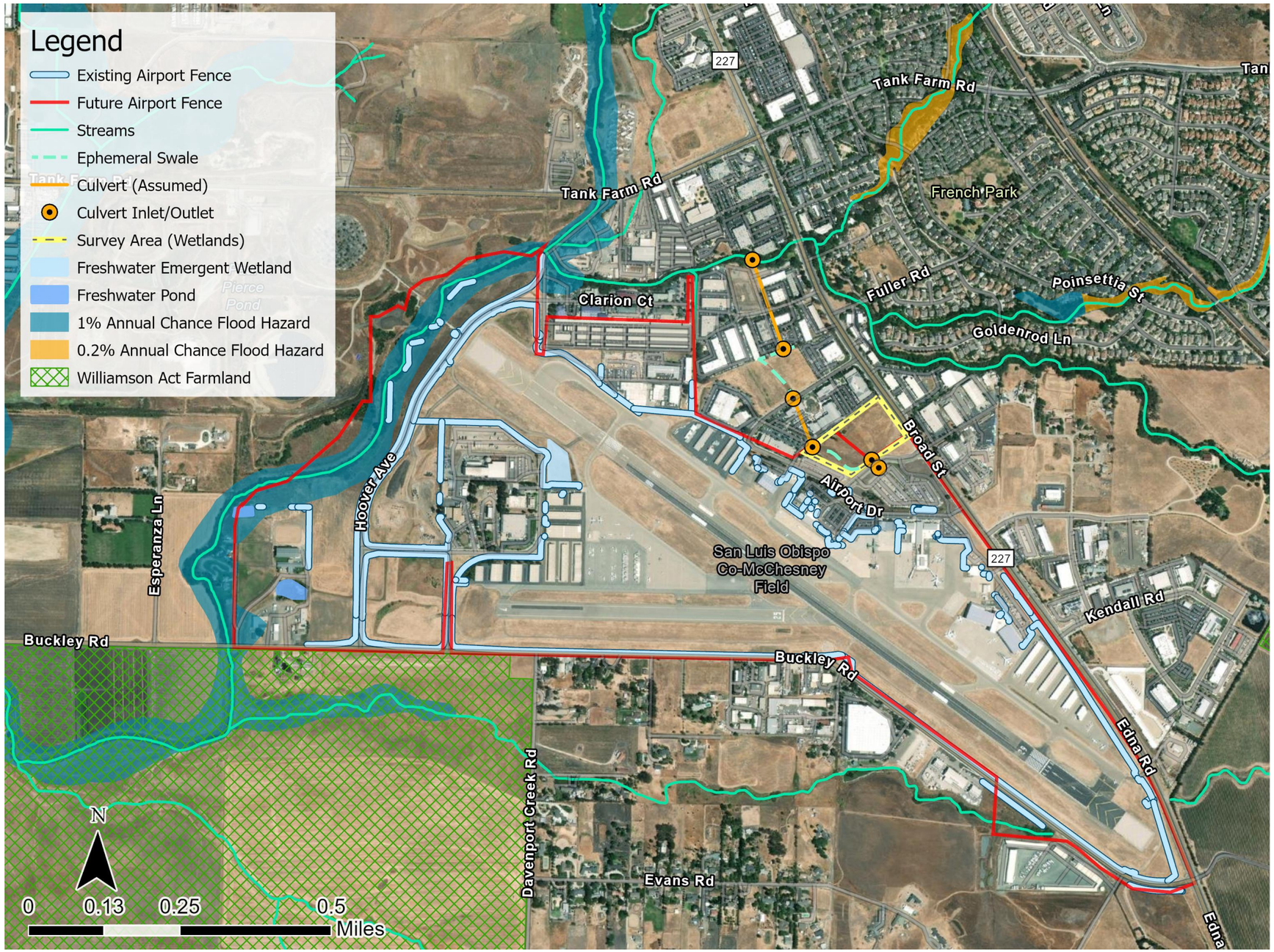
FIGURE 1-15
CALIFORNIA IMPORTANT FARMLAND AND WETLAND RESOURCES



Source: County of San Luis Obispo, 2020

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APPENDIX A

ENVIRONMENTAL RESOURCE CATEGORY APPLICABILITY TO SBP

A.1 AIR QUALITY

The U.S. Environmental Protection Agency (USEPA) sets National Ambient Air Quality Standards (NAAQS) for certain air pollutants to protect public health and welfare through Section 109 of the Clean Air Act (CAA). The USEPA has identified the following six criteria air pollutants and has set NAAQS for them: Carbon Monoxide (CO), Lead (Pb), Nitrogen Dioxide (NO_2), 8-Hour Ozone (O_3), Particulate Matter (PM_{10} or $PM_{2.5}$), and Sulfur Dioxide (SO_2).

Geographic areas that meet all the NAAQS are considered "in attainment" for the NAAQS. Geographic areas that exceed one or more NAAQS are designated as "nonattainment" areas, which can be marginal, moderate, serious, severe, and extreme depending on the degree to which they exceed the NAAQS. The Airport is in a portion of San Luis Obispo County that is in attainment with all NAAQS. Therefore, no CAA Conformity Analysis for conformity with a State Implementation Plan (SIP) is required. SIPs are not prepared for areas that have continuously met all NAAQS. The Airport is required to conform to the NAAQS as required by the U.S. Environmental Protection Agency (USEPA), as well as local, state, and federal air quality regulations when considering future Airport development.

In addition to the applicable federal laws the Airport is subject to State of California and local air quality regulations. California has established California Ambient Air Quality Standards (CAAQS) that, in some cases, are more restrictive than the NAAQS.

A.2 BIOLOGICAL RESOURCES

Biological resources include terrestrial and aquatic plant and animal species; game and non-game species; special status species; and environmentally sensitive or critical habitats. The U.S. Fish and Wildlife Service (USFWS) identifies seven federally protected species and/or habitat that may be present on or near Airport property. Although the Endangered Species Act (ESA) does not protect state-protected species or habitats, the National Environmental Policy Act of 1969 (NEPA) documentation ensures that environmental analysis prepared for airport actions addresses the potential effects to state-protected resources. The California Natural Diversity Database (CNDDB) identifies nine state protected species and/or habitat that may be present on or near Airport property.

The Migratory Bird Treaty Act (MBTA) prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulations, and does not require intent to be proven. Trees are located on or adjacent to Airport property that have the potential to hold nests for migratory bird species. There is the potential for 27 migratory bird species.

As reported in the SLO County Airport Master Plan Update Environmental Assessment/Environmental Impact Report (EA/EIR)[10] San Luis Obispo Creek, downstream of the Airport, provides habitat for the endangered tidewater goby (*Eucyclogobius newberryi*) at its mouth and threatened steelhead trout (*Oncorhynchus mykiss*); however, only marginal habitat for steelhead occurs in the East Fork of San Luis Obispo Creek and its tributaries due to low flows and the seasonal nature of water flows; the lack of tidal influence precludes the presence of the goby. Other fish species reported downstream from the project

[10] Environmental Science Associates, SLO County Airport Master Plan Update EA/EIR, July 2006, Available: https://www.sloairport.com/wp-content/SBP_Final%20EA-EIR.pdf. Accessed: November 5, 2020.

site in the main stem of San Luis Obispo Creek and its tributaries include three-spined stickleback (*Gasterosteus aculeatus*), mosquitofish (*Gambusia affinis*), speckled dace (*Rhinicthys osculus*), brown bullhead (*Ameiurus nebulosus*), and prickly sculpin (*Cottus asper*). Resident rainbow trout (*Onchorhyncus mykiss*) have been reported in San Luis Obispo Creek and its tributaries upstream of the Airport.

A variety of wildlife habitats occur in the downstream reaches of San Luis Obispo Creek. This stream provides important habitat for resident and migratory waterfowl, shorebirds, and species endemic to saline marsh environments.[11]

A.3 CLIMATE

Greenhouse gases (GHG) are gases that trap heat in the earth's atmosphere. Both naturally occurring and man-made GHGs primarily include water vapor, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Activities that require fuel or power are the primary stationary sources of GHGs at airports. Aircraft and ground access vehicles that are not under the control of an airport, typically generate more GHG emissions than airport-controlled sources. Research has shown there is a direct correlation between fuel combustion and GHG emissions. In terms of U.S. contributions, the Government Accountability Office (GAO) reports that "domestic aviation contributes about three percent of total carbon dioxide emissions, according to EPA data," compared with other industrial sources, including the remainder of the transportation sector (20%) and power generation (41%).[12] The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly1.3 percent of all anthropogenic GHG emissions globally.[13]

For disclosure purposes, GHG emissions related to any increase in Airport activity should be calculated at the project level, as well as GHG emissions related to construction activities.

A.4 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F) RESOURCES

The USDOT Act, Section 4(f) provides that no project that requires the use of any land from a public park or recreational area, wildlife and waterfowl refuge, or historic site be approved by the Secretary of the Interior unless there is no viable alternative and provisions to minimize any possible harm are included in the planning. Similarly, the Land and Water Conservation Fund Act prevents the conversion of lands purchased or developed with Land and Water Conservation funds to non-recreation uses, unless the Secretary of the Interior, through the National Park Service, approves the conversion. Conversion may only be approved if it is consistent with the comprehensive statewide outdoor recreation plan when the approval occurs. Additionally, the converted property must be replaced with other recreation property of reasonably equivalent usefulness and location, and at least equal fair market value.

No historic sites, wildlife refuges, or waterfowl refuges are located within the vicinity of the Airport. The nearest public park/recreational area is E. A. French Park, which is located at the corner of Poinsettia Street

[11] Ibid.
[12] U.S. Government Accountability Office, Report to Congressional Committees, Aviation and Climate Change, June 2009. Accessed: http://www.gao.gov/new.items/d09554.pdf, October 2020.
[13] International Civil Aviation Organization (ICAO) Environmental Report 2019, *Destination Green: The Next Chapter*, 2019. Accessed: https://www.icao.int/environmental-protection/Documents/ICAO-ENV-Report2019-F1-WEB%20(1).pdf, October 2020.

and Fuller Road, approximately 0.6 miles northeast of the Airport. The area between the Airport and the park includes major arterial highway, light industrial and commercial land uses, and a residential area. As such, future improvements at the Airport would not result in the use of the park and no impact would occur.

A.5 FARMLANDS

The FAA requires consideration of "important farmlands," which it defines to include "all pasturelands, croplands, and forests considered to be prime, unique, or statewide or local important lands." As shown in *Figure 1-16* and *Figure 1-17*, farmland within proximity of the Airport includes prime farmland, farmland of statewide importance, farmland of local importance, and land protected under Williamson Act Contract. While the Airport property is currently identified as urban and built-up land, if work extends outside of the existing Airport boundaries, there is potential to affect farmlands. Farmland impacts would then need to be evaluated using the Natural Resources Conservation Service Conversion Impact Rating Form AD-1006.

A.6 HAZARDOUS MATERIALS, SOLIDS, WASTE, AND POLLUTION PREVENTION

There are various registered hazardous waste sites on or adjacent to Airport property.[14] These sites are shown in *Table 1-15*. In addition to the registered sites identified in *Table 1-15*, there is a remediation program site, the Tank Farm Site, located to the northwest of the Airport along Tank Farm Road. The Tank Farm property was used as a major oil storage facility into the early 1990s. While the facilities have been decommissioned and most of the tanks have been dismantled, the circular berms that once enclosed the storage tanks remain on the property.

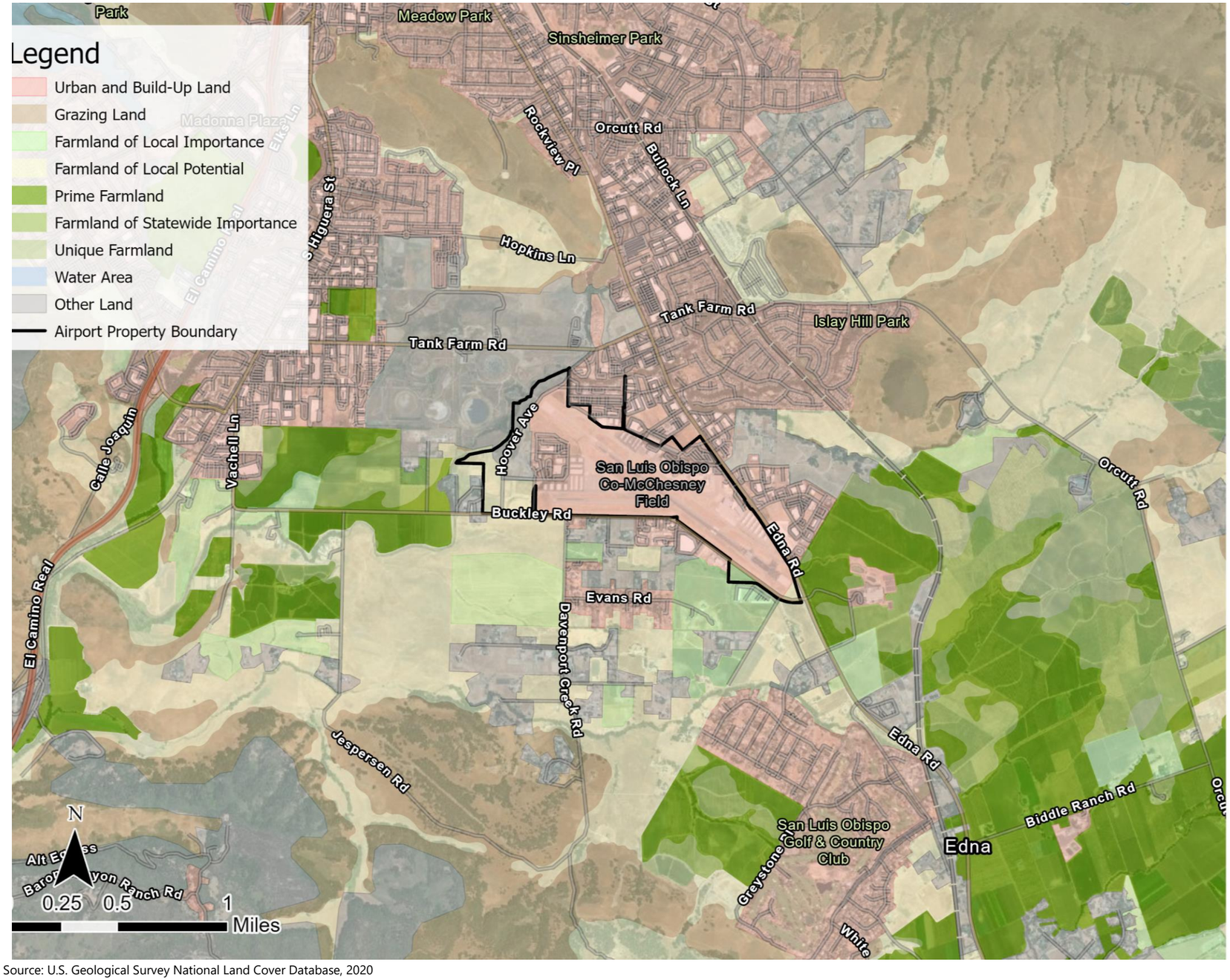
Construction of any additional facilities will require an update to the Airport's National Pollutant Discharge Elimination System (NPDES) permit and Stormwater Pollution Prevention Plan (SWPPP). The San Luis Obispo County Integrated Waste Management Authority implements the regional solid waste and hazardous waste programs.

A.7 HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

There are no historic resources located at or adjacent to the Airport. The closest National Register of Historic Places (NRHP)-listed resource is the Pereira Octagon Barn, located approximately two miles west of the Airport.[15]

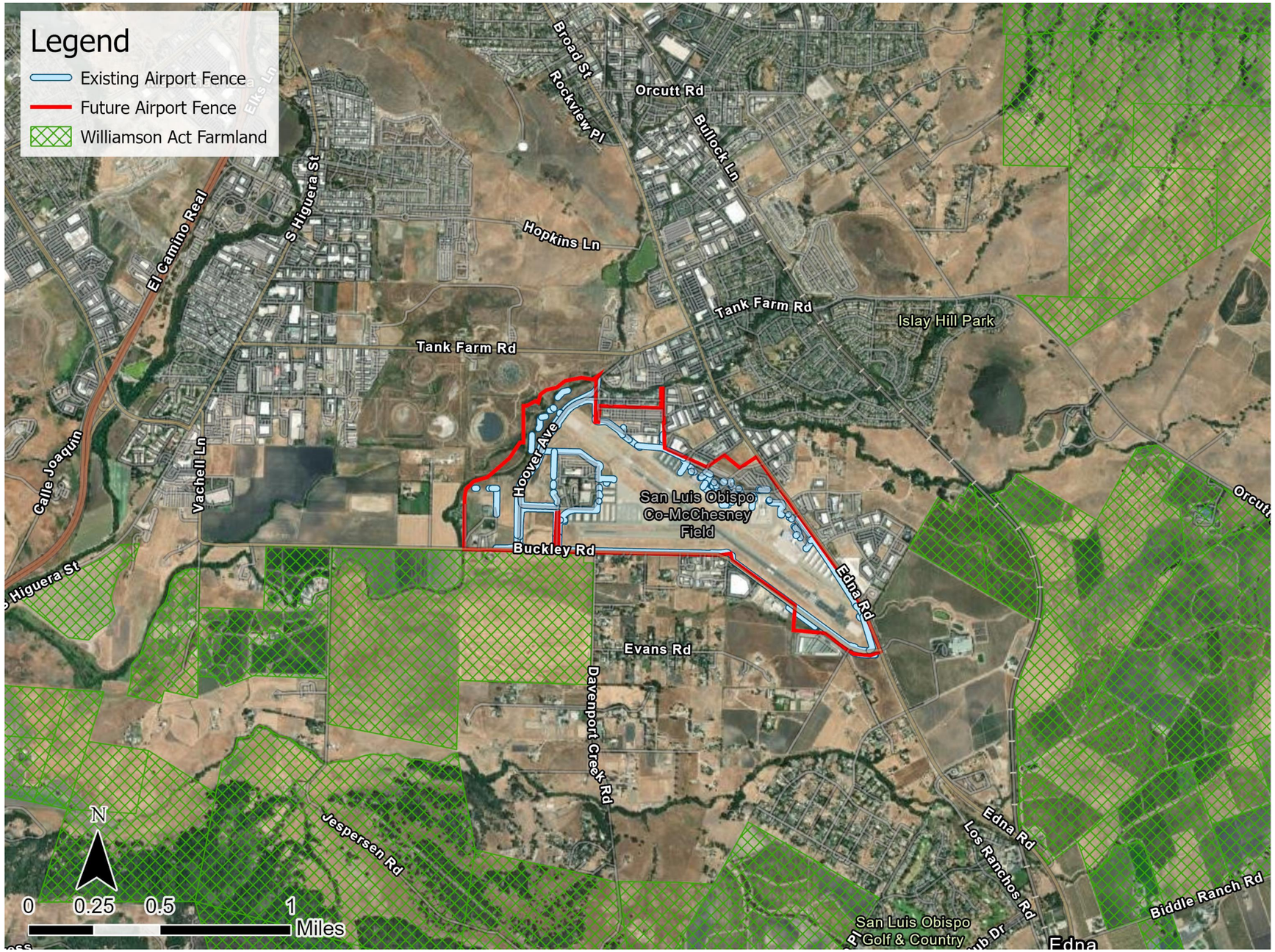
[14] U.S. Environmental Protection Agency, NEPAssist, EPA Facilities, Hazardous Waste. Available: https://nepassisttool.epa.gov/nepassist/nepamap.aspx?wherestr=san+luis+obispo+regional+airport. Accessed: October 16, 2020.
[15] U.S. Environmental Protection Agency, NEPAssist, Places, National Register of Historic Places. Available: https://nepassisttool.epa.gov/nepassist/nepamap.aspx?wherestr=san+luis+obispo+regional+airport. Accessed: October 16, 2020.

FIGURE 1-16
CALIFORNIA IMPORTANT FARMLAND



Source: U.S. Geological Survey National Land Cover Database, 2020

FIGURE 1-17
WILIAMSON ACT FARMLAND



Source: County of San Luis Obispo, 2020

TABLE 1-15
HAZARDOUS WASTE SITES

Site	Handler ID	Address
Filbin Property	CAR000182220	4398 Santa Fe Road
CB and I Inc	CAD983592189	4388 Old Santa Fe Road
San Luis Garbage Co	CAL000383568	4388 Old Santa Fe Road
Kompogas SLO LLC	CAL000444766	4300 Old Santa Fe Road
AM PAC Repair	CAL000230408	4149 Santa Fe Street
CEA Berkleonics Inc	CAD982040685	1 Aerovista Park
Saes Parker UHP Comp Corp	CAR000013474	4175 B Santa Fe Road
Strasbaugh	CAR000016360	825 Buckley Road
Diamond Oil SVC/Beck Trucking	CAD981370539	4902 Edna Road
American Eagle Airlines Inc	CAR000173757	835 Airport Drive
County of San Luis Obispo	CAD981409840	901 Airport Drive
Golden State Propeller Inc	CAR000084053	981 Airport Drive
B & B Body Shop	CAD09600961	845 Fiero Lane
B & B Collision Repair	CAL000285664	845 Fiero Lane
Central Coast Trucking Inc	CAR000207779	852 El Capitan Way
XKS Unlimited Inc	CAD983587684	850 Fiero Lane
C S S Inc	CAD982495772	202B Tank Farm Road
Entegris Inc	CAD982504391	4175 Santa Fe Road
Luxury Lighting Larry Johnston	CAP000165191	712 Fiero Lane
San Luis Struck Service Garage	CAD982496713	219 Tank Farm Road
Specialty Construction Inc	CAL000267653	645 Clarion Court
United Rentals Inc #560	CAL000209710	635 Tank Farm Road

Source: USEPA, 2020

A.8 LAND USE

Airport property falls within the jurisdiction of San Luis Obispo County and is adjacent to the boundary of the incorporated City of San Luis Obispo. As shown in *Figure 1-18*, the City and County designate land uses within the vicinity of the Airport as agriculture/open space, business park/industrial, general retail/commercial, services manufacturing, and low density residential. The Airport itself is designated as a public facility.

All new development within the Airport Influence Area (AIA), which includes the area encompassed by the Airport safety zones, is required to conform to the Airport's Land Use Compatibility Plan (ALUCP). The goal of the ALUCP is to promote compatibility between airports and land uses that surround them.

A.9 NATURAL RESOURCES AND ENERGY SUPPLY

Natural resources (e.g., water, asphalt, aggregate, etc.) and energy use (e.g., fuel, electricity, etc.) at an airport is a function of the needs of aircraft, support vehicles, airport facilities, support structures, and terminal facilities. None of the natural resources that the Airport uses, or has used, are in short supply.

Water is the primary natural resource used at the Airport on a daily basis. Asphalt, aggregate, and other natural resources have also been used in various construction projects at the Airport. None of the natural resources that the Airport uses, or has used, are in rare or short supply. Energy use at the Airport is primarily in the form of electricity required for the operation of Airport-related facilities (e.g., terminal building, hangars, airfield lighting) and fuel for aircraft, aircraft support vehicles/equipment, and Airport maintenance vehicles/equipment.

Electricity to the Airport is provided by Pacific Gas & Electric Company (PG&E). Natural gas is provided by Southern California Gas Company.

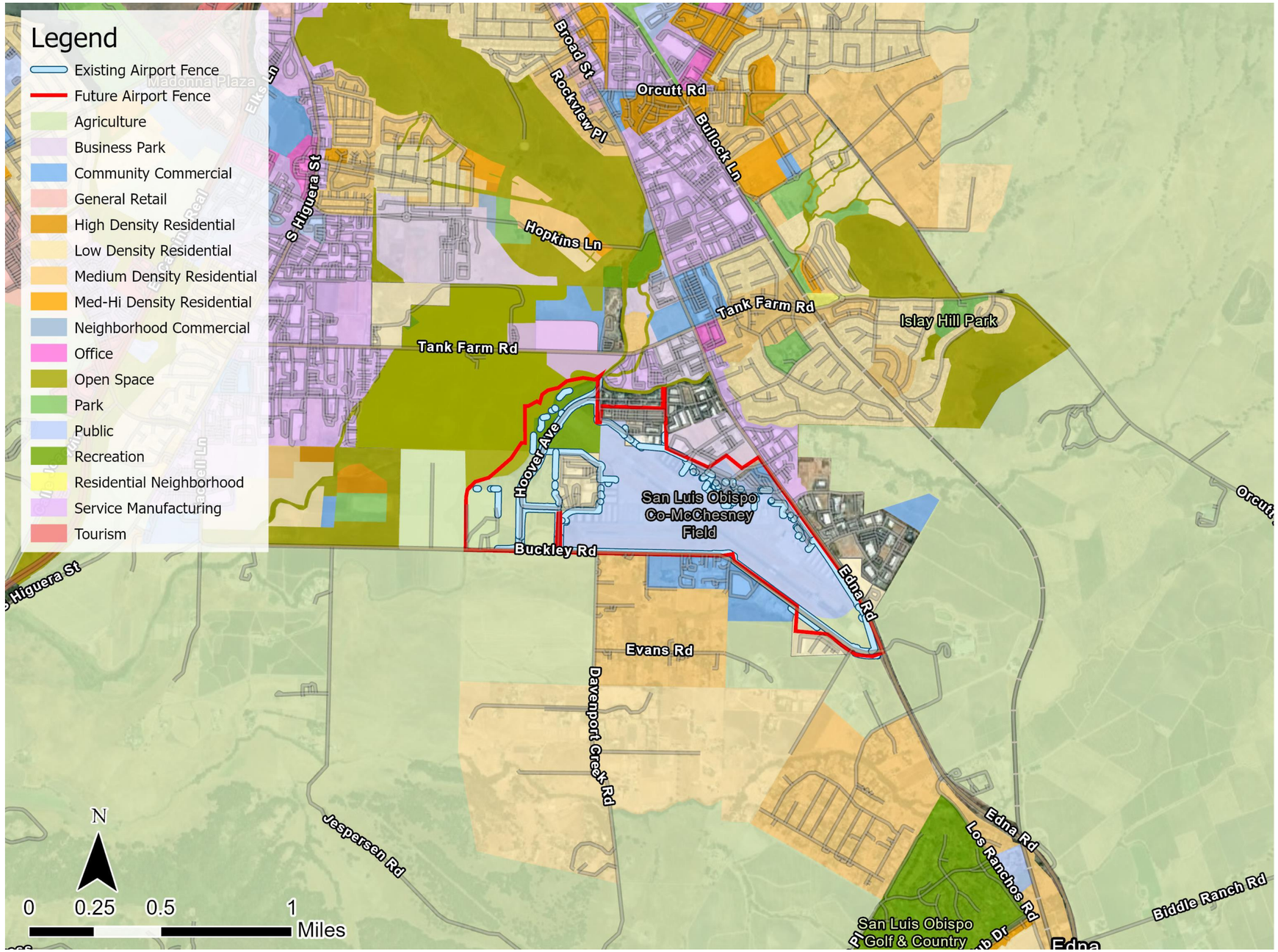
A.10 NOISE AND NOISE-COMPATIBLE LAND USE

Day-Night Sound Level (DNL) is based on sound levels measures in relative intensity of sound, (decibels or dB) on the "A-weighted scale" or dBA over a time-weighted average normalized to a 24-hour period. DNL has been widely accepted as the best available method to describe aircraft noise exposure.[16] Appendix B, paragraph B-1 of FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures,* recognizes the use of the Community Noise Equivalent Level (CNEL) as an alternative metric to the Day/Night Average Sound Level (DNL) in California. FAA Order 1050.1F, Exhibit 4-1 defines a significant noise impact as an action that would increase noise by 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the CNEL 65 dB noise exposure level, or that will be exposed at or above the CNEL 65 dB level due to a CNEL 1.5 dB or greater increase, when compared to the No Action Alternative for the same timeframe.

As determined in the Airport's ALUCP, all residential areas are considered compatible with cumulative noise level below DNL 65 dBA. As shown in *Figure 1-18*, there are scattered residential land uses near the Airport. These areas may be sensitive to aircraft noise associated with the Airport. The Airport's aviation noise contours were developed in 2015 as part of a noise study prepared for the Airport.

[16] Federal Aviation Administration, *Technical Support for Day/Night Average Sound Level (DNL) Replacement Metric Research*, Final Report, June 14, 2011. Available: https://www.faa.gov/about/office_org/headquarters_offices/apl/research/science_integrated_modeling/noise_impacts/media/6-14-2011_finalreport_metricsmestre_etal_061411_part1.pdf Accessed: October 19, 2020.

FIGURE 1-18
LAND USE IN THE VICINITY OF THE AIRPORT



Source: County of San Luis Obispo, 2020; City of San Luis Obispo, 2020

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A.11 SOCIOECONOMIC, ENVIRONMENTAL JUSTICS, CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

The primary considerations of a socioeconomics analysis are the economic activity, employment, income, population, housing, public services, and social conditions of the area. The Airport is within Census Tract 115.03 and adjacent to Census Tract 116. Census Tract 115.03 has about a 9.4 percent minority population, about a 3.3 percent poverty level, about a 2.8 percent unemployment level, and approximately 0.02 percent of the Census Tract's houses are vacant.[17] Census Tract 116 has about a 10.9 percent minority population, about a 4.3 percent poverty level, about a 3.4 percent unemployment level, and approximately 19.4 percent of the Census Tract's houses are vacant.[18] San Luis Obispo County has about a 11.1 percent minority population, about 12.7 percent poverty level, about 3.4 percent unemployment level, and approximately 14.1 percent of the County's housing is vacant.[19]

The Airport is located to the southeast of the incorporated City of San Luis Obispo boundary between State Route 227/Edna Valley Road and Buckley Road. State Route 227 serves as an alternate route of US Route 101 between Arroyo Grande and the City of San Luis Obispo. Buckley Road is a two-lane rural arterial roadway that connects State Route 227 to Vachell Lane. The closest school to the Airport, Los Ranchos Elementary School, is approximately 0.9 miles south of the Airport. The school serves students in kindergarten through sixth grade.

A.12 VISUAL EFFECTS

Order 1050.1F describe factors to consider within light emissions and visual resources/visual character. Potential impacts of light emissions include the annoyance or interference with normal activities, as well as effects to the visual character of the area due to light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources.

Light Emissions

Various lighting features currently illuminate Airport facilities, such as the airfield (e.g., runways and taxiways), buildings, access roadways, automobile parking areas, and apron areas for the safe and secure movement of people and vehicles (e.g., aircraft, passenger cars, etc.).

Visual Resources and Visual Character

Structures at the Airport include, but are not limited to, the terminal building, fixed base operators, hangars, and maintenance buildings. The Airport is zoned as Airport Operations and is developed in a manner that is consistent with this zoning.

Vegetation (e.g., trees and shrubs) helps to reduce both the light emissions and visual effects to the Airport for residential areas. Residential land uses are present in the vicinity of the Airport and typically have limited direct views due to existing landscaping, terrain, and other buildings. Commercial land uses to the north and south have a direct line of sight to the Airport; however, the visual effects of the Airport

[17] U.S. Census Bureau, American Community Survey 2018. Available at: www.data.census.gov, Accessed: October 21, 2020.
[18] Ibid.
[19] Ibid.

to commercial or industrial land uses are not typically considered a nuisance.

Consideration of aesthetics in the future at the Airport should attempt to adhere to existing design, art, and architecture at the Airport and in the vicinity in order to minimize any potential viewshed effects.

A.13 WATER RESOURCES

Water resources are considered wetlands, floodplains, surface waters, groundwater and wild and scenic rivers. These resources typically function as a single, integrated natural system that are important in providing drinking water and in supporting recreation, transportation and commerce, industry, agriculture, and aquatic ecosystems.

Wetlands

The Clean Water Act (CWA) defines wetlands as ". . . those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."[20] Wetlands have three necessary characteristics:

- Water: presence of water at or near the ground surface for a part of the year;
- Hydrophytic Plants: a preponderance of plants adapted to wet conditions; and
- Hydric Soils: soil developed under wet conditions.

According to the National Wetlands Inventory, approximately 2 acres of wetland exist on Airport property and additional wetland resources are located in close proximity to the Airport boundaries (see *Figure 1-19*).[21]

Floodplains

Floodplains are "...lowland areas adjoining inland and coastal water which are periodically inundated by flood waters, including flood-prone area of offshore islands."[22] Floodplains are often referred to in terms of the 100-year floodplain, which is intended to indicate the one percent chance of a flood occurring in any given year. EO 11988 directs federal agencies to take action to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial floodplains. EO 11988 does not allow activities in a floodplain unless there is no practicable alternative and measures to minimize unavoidable short-term and long-term impacts are included. USDOT Order 5650.2 outlines the policies and procedures for ensuring that proper consideration is given to the avoidance and mitigation of adverse floodplain impacts in agency actions, planning programs, and budget requests. Therefore, the objective is to avoid, to the extent practicable, any impacts within the 100-year floodplain. As shown in *Figure 1-19*, portions of Airport property at the western boundary are within the 100-year floodplain.

[20] U.S. Environmental Protection Agency, Section 404 of the Clean Water Act. Available: https://www.epa.gov/cwa-404/how-wetlands-are-defined-and-identified-under-cwa-section-404. Accessed: October 22, 2020.-3
[21] U.S. Fish and Wildlife Service, National Wetlands Inventory Mapper, SLO County Airport. Available: https://www.fws.gov/wetlands/data/mapper.html. Accessed: October 23, 2020.
[22] Executive Order 11988, *Floodplain Management*, May 1, 1977.

Surface Waters

Surface waters include areas where water collects on the surface of the ground, such as streams, rivers, lakes, ponds, estuaries, and oceans. Surface waters in vicinity of the Airport include Acacia Creek to the west, the East Fork of the San Luis Obispo Creek to the southwest, and Buckley Creek that crosses through the southeast portion of the Airport. Orcutt Creek, Hansen Creek, and Islay Creek all split off from Acacia Creek directly north of the Airport[23]. The Airport is located in the Lower San Luis Obispo Creek watershed.

Groundwater

Groundwater is described as the "subsurface water that occupies the space between sand, clay, and rock formations."[24] The nearest sole source aquifer to the Airport is the Fresno County Aquifer, which is located about 90 miles to the northeast.

The Edna Saddle Pressure Zone delivers water from reservoirs north of the City of San Luis Obispo to the Airport.[25]

[23] County of San Luis Obispo, *San Luis Obispo Airport Area Specific Plan*. Available: http://www.slocity.org/home/showdocument?id=4294. Accessed: October 21, 2020.
[24] Federal Aviation Administration, 1050.1F Desk Reference, Section 14.4 Groundwater. July 2015. .
[25] County of San Luis Obispo, *San Luis Obispo Airport Area Specific Plan*. Available: http://www.slocity.org/home/showdocument?id=4294. Accessed: October 21, 2020.

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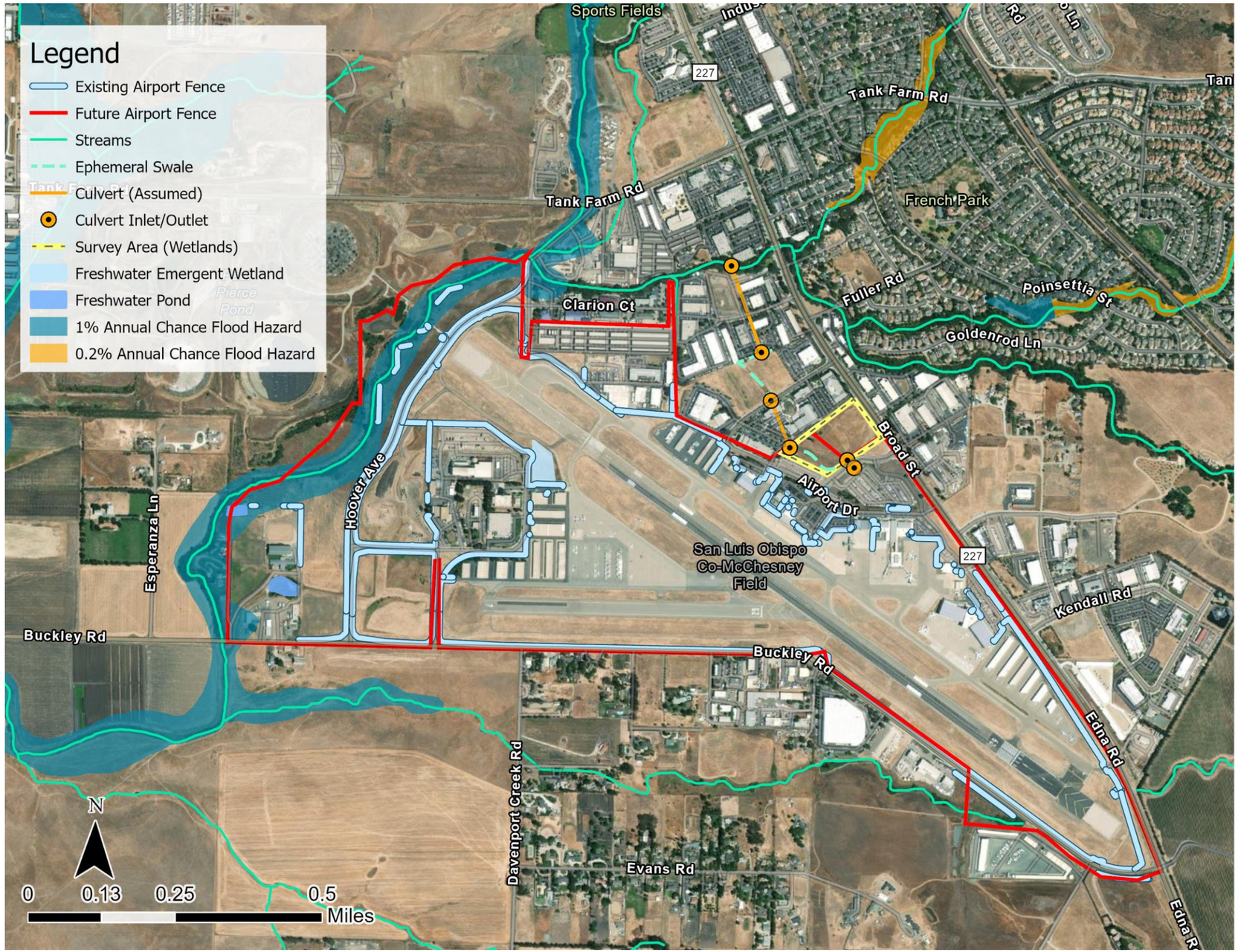
FIGURE 1-19
WATER RESOURCES



Source: County of San Luis Obispo, 2020

SLO County Airport
Master Plan
Chapter 2 Aviation Demand Forecast

RS&H

Chapter 2
Aviation Demand Forecast

February 2, 2021

San Luis Obispo, California

RS&H No.: 2260015010

Prepared by RS&H, Inc. at the direction
of the County of San Luis Obispo

RS&H

PREPARATION

"The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws."

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CHAPTER 2

AVIATION DEMAND FORECAST

2.1 AVIATION DEMAND FORECASTS

Aviation demand forecasts at SLO County Airport (SBP or the Airport) are presented in this chapter for the 20-year planning period (forecast horizons of 2024, 2029, and 2039). The forecasts provide a basis for determining the type, size, and timing of aviation facility development. Consequently, the forecasts influence virtually all phases of the planning process.

During the production of this forecast and report, the COVID-19 (Coronavirus) pandemic severely impacted commercial aviation in the U.S. and most of the world. To address the forecasting uncertainty introduced by the pandemic, the FAA provided the following general guidance[1] on aviation demand forecasts that are prepared during this period of uncertainty:

- Use the most recent data available
- Consider major factors unique to the airport being studied
- Review past airport traffic recovery during other times of decreased aviation activity
- Utilize FAA-suggested of recovery scenarios on timing of traffic recovery back to 2019 totals
- Incorporate of planning activity levels (PAL)s for facility development rather than specific timelines

Initially, forecasts from four recently completed studies were compared: the 2005 SBP Master Plan, the 2017 SBP Airport Layout Plan, the 2019 SBP Parking Study, and the 2019 FAA Terminal Area Forecast (TAF) for SBP. However, per FAA guidance the 2019 TAF is not a suitable source for forecasting during or after the pandemic, and the other forecasts are deemed unreliable as well. Therefore, the forecasts were developed using the most recent historical data from the Airport and the Preliminary FAA TAF 2020.[2]

The aviation demand forecasts for the Airport are presented in the following sections of this chapter:

- Historical Activity Review
- Factors Affecting Future Aviation Demand
- Annual Enplaned Passengers Forecast
- Based Aircraft Forecast
- Annual Aircraft Operations Forecast
- Design Day/Design Hour Activity
- Comparison with Other Forecasts
- Summary of Forecasts
- FAA Forecast Summary and Documentation Form

[1] ACC Airports Technical Workshop. (August 2020)
[2] The FAA TAF 2020 is not anticipated to be published until March or April 2020, therefore, the Preliminary FAA TAF 2020 which was released in November 2020 to the Airport was used for comparative purposes in its place.

This chapter includes a review of historical trends and an examination of factors that impact aviation activity to allow the reader to place the SLO County Airport forecast in proper context.

The forecasts provide for 5, 10, and 20-year estimates of future aviation activity at the Airport. The association of various forecast periods with specific time frames is necessary to develop a schedule of improvement needs and assess the ability of the Airport to finance the recommended development plan. However, actual implementation of airport development projects will be based on aviation activity levels, referenced for development purposes as planning activity level (PAL). If activity grows faster than anticipated, the implementation schedule would be accelerated. Similarly, slower than projected growth may warrant deferment of planned improvements to a later date. Actual activity growth should be frequently compared to projected growth so schedule corrections can be identified and implemented.

2.2 HISTORICAL ACTIVITY REVIEW

This section presents a brief review of long-term historical trends in various elements of aviation activity at SLO County Airport. Elements reviewed include airlines serving the Airport and their market shares, markets being served, annual enplaned passengers, and annual aircraft operations.

2.2.1 Airlines Serving the Airport

As of 2020, the Airport was served by four airlines mainly operating between their west coast and mid-continent hubs. Alaska Airlines, American Airlines, and United Airlines and their regional affiliates account for 99.7 percent of SBP enplanements. Passenger airlines serving the Airport and their share of enplanements in 2019 are shown in *Table 2-1*.

TABLE 2-1
2019 PASSENGER AIRLINE MARKET SHARE

Passenger Airlines	2019 Enplanements	Share
Alaska Airlines	24,906	9.0%
Alaska Airlines / Horizon Airlines		
Alaska Airlines / SkyWest Airlines		
American Airlines	99,500	36.2%
American Airlines / Envoy Air		
American Airlines / Mesa Airlines		
American Airlines / SkyWest Airlines		
Contour Airlines	884	0.3%
United Airlines	149,913	54.5%
United Airlines / SkyWest Airlines		
United Airlines / United Express dba SkyWest Airlines		
Total	275,203	100.0%

Source: Airport Records, 2020

2.2.2 Markets Served

The passenger airlines serving SLO County Airport provide non-stop service to eight domestic airports in 2019, and a new Portland, Oregon (PDX) market is anticipated to begin in the first quarter of 2021. Non-stop service to many of the west coast hubs provides excellent access to the national air transportation system. The Airport's non-stop destinations in 2019 are shown in *Table 2-2*.

TABLE 2-2
NON-STOP DESTINATIONS FROM SAN LUIS OBISPO

Location	Airline	Location	Airline
Denver, Colorado (DEN)[(1)]	United Airlines	Phoenix, Arizona (PHX) [(1)]	American Airlines
Dallas/Ft. Worth, Texas (DFW)[(1)]	American Airlines	San Diego, California (SAN)	Alaska Airlines
Las Vegas, Nevada (LAS)	Contour Airlines	San Francisco, California (SFO) [(1)]	United Airlines
Los Angeles, California (LAX)[(1)]	United Airlines	Seattle, Washington (SEA) [(1)]	Alaska Airlines

[(1)] Airports are major connecting hub for the serving airline and provide SBP with access to worldwide locations.
Source: Airport Records, 2020

2.2.3 Annual Enplaned Passengers

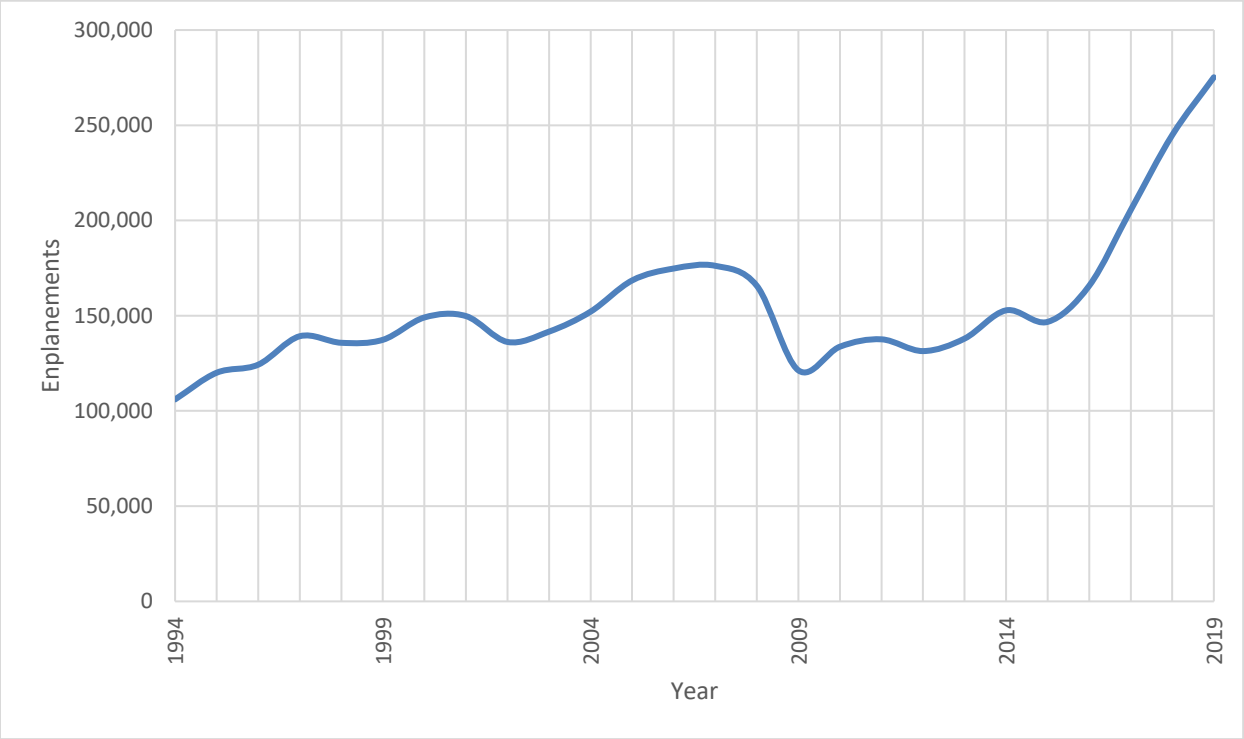
An extended history of passengers boarding commercial service aircraft, or enplanements, at the Airport is presented in *Figure 2-1* and *Table 2-3*. Enplanements at SLO County Airport have increased significantly since the mid-1990s, with current annual volumes more than double the traffic counts from that period. The Airport's enplanement levels dropped to their lowest level over the past 10 years in 2009 as a result of the Great Recession, resulting in minimal growth in enplaned passengers from 2010-2014 as the Airport recovered. From 2014-2019, the Airport went through its greatest period of growth highlighted by the following events:

- *SkyWest Airlines Up-gauges SBP Fleet* – From 2014-2015, Airport passenger activity decreased by 3.4 percent. In April 2015, SkyWest reduced the number of daily flights from 11 to five as it transitioned some of its turboprop fleet to 50-seat regional jets at SBP. The Airport retained two daily flights to San Francisco International Airport and three to Los Angeles International Airport.[3]
- *Daily Service to Phoenix* – From 2016-2017, Airport passenger activity increased by 23.4 percent. In February 2016, American Airlines began daily service to Phoenix Sky Harbor International Airport[4] for the first time, which had previously only been offered seasonally.
- *Airline Growth and New Terminal Opening* – From 2017-2018, Airport passenger activity increased by 19.1 percent. During that period, multiple events occurred spurring growth in commercial passenger activity. In April 2017, Alaska Airlines began operating out of SBP, offering the Airport's first Seattle-Tacoma International Airport market. Then in June 2017, United Airlines added non-stop service to Denver International Airport. Lastly, in November 2017, the Airport opened its new passenger terminal offering attractive new facilities and amenities for its passengers.
- *United Airlines Service Expansion* – From 2018-2019, Airport passenger activity increased by 12.1 percent. In April 2018, United Airlines up-gauged some of its SBP fleet to the Embraer E175 (E175) on markets to San Francisco and Los Angeles. United Airlines also added a new daily flight to

[3] Business flyers trade bigger planes for fewer flights (March 27, 2015) Source: https://www.pacbiztimes.com/2015/03/27/business-flyers-trade-bigger-planes-for-fewer-flights/
[4] Source: https://santamariatimes.com/news/local/slo-county-regional-airport-adds-flights-to-phoenix/article_ffa777fc-6266-5bf0-88bc-a5cb2ca6521e.html (January, 2016)

Denver which increased the Airport's daily passenger counts and connectivity to eastern domestic destinations.[5]

FIGURE 2-1
HISTORICAL ENPLANEMENTS



Source: FAA TAF, 2019 (years 1994-2009); Airport Records (years 2009-2019)

[5] Source: https://www.sloairport.com/united-airlines-grows-at-san-luis-obispo-airport/ (April, 2018)

TABLE 2-3
HISTORICAL ENPLANEMENTS

Year	Enplanements	Annual Increase / Decrease
1994	106,049	
1999	137,352	1.2%
2004	152,132	7.4%
2009	121,326	-26.8%
2010	133,740	10.2%
2011	137,604	2.9%
2012	131,427	-4.5%
2013	137,985	5.0%
2014	152,829	10.8%
2015	146,769	-4.0%
2016	165,747	12.9%
2017	205,522	24.0%
2018	244,913	19.2%
2019	275,203	12.4%

Source: FAA TAF, 2019 (years 1994-2008); Airport Records (years 2009-2019)

2.2.4 Annual Aircraft Operations

An aircraft operation is defined as either a takeoff or a landing. *Figure 2-2* and *Table 2-4* present a 25-year history of the annual aircraft operations recorded at the Airport in four categories: air carrier, commuter/air taxi (commuter), general aviation, and military. An air carrier operation represents either a takeoff or a landing of a commercial aircraft with a capacity of more than 60 seats (including similarly sized cargo aircraft). Commuter operations represent scheduled commercial flights for aircraft with 60 or fewer seats and include air taxi operations, which are nonscheduled flights or for-hire flights of aircraft with 60 or fewer seats (including similarly sized air cargo aircraft). General Aviation operations represent all civil aviation aircraft takeoffs and landings not classified as commercial (air carrier or commuter) or military.

Air carrier operations (including passenger and cargo operations) were at their highest annual historical level in 2019 with over 5,000 operations. The total air carrier operations count has increased year-over-year since 2015, with an average of 3,000 annual operations annually since that time.

Commuter operations (including passenger, cargo, and air taxi operations) have generally declined since 1994 when they peaked at 24,000. Over the past five years, the Airport has maintained an average of approximately 7,600 total annual operations.

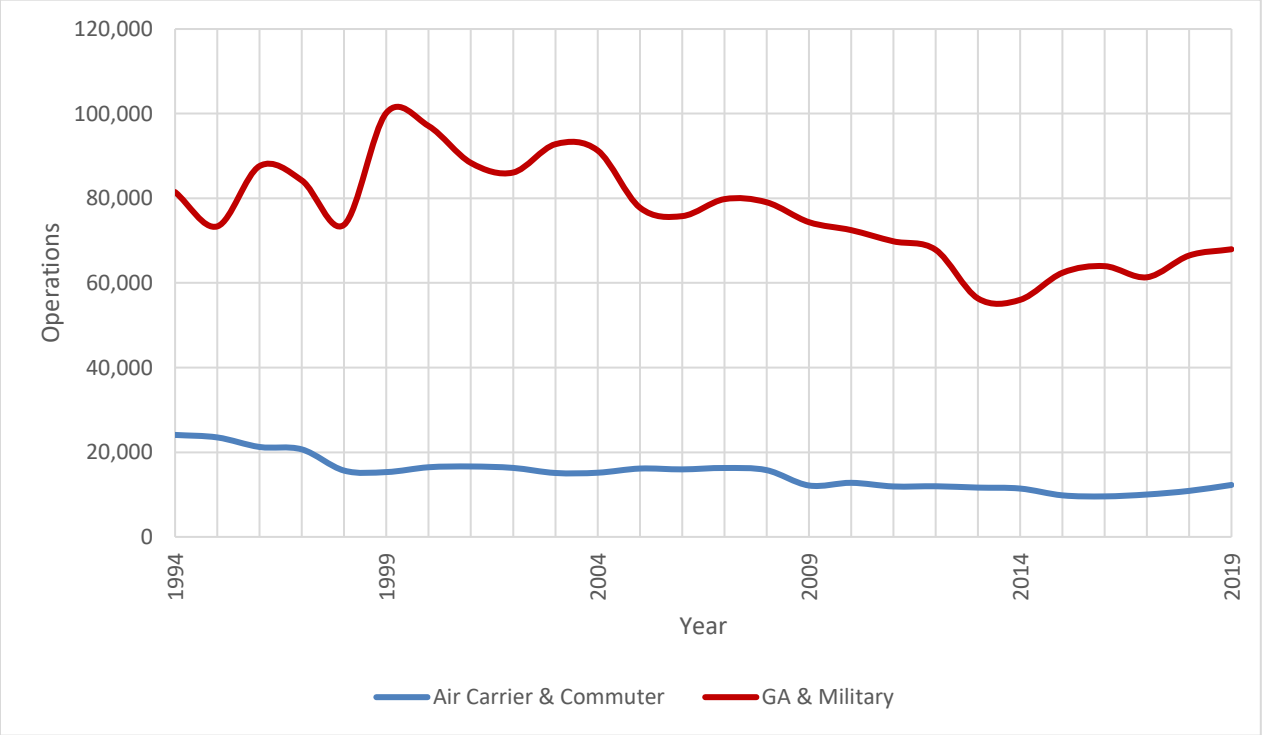
General aviation operations have accounted for the greatest share of the Airport's total with an average of 83 percent from 1994-2019. A review of the general aviation activity during this time shows that the Airport peaked in 1999 with over 99,000 operations (see *Table 2-4*). However, more recently from 2015-

2019, the Airport's total annual general aviation operations have been less, averaging 63,000. This decrease from 1999 levels is consistent among some of the nation's trends in the active fleet of general aviation aircraft as well as hours flown by general aviation aircraft. However, some of the Airport's itinerant general aviation traffic may be attracted to the Airport as a result of the fixed-based operator (FBO) ACI Jet, which is a Bombardier authorized service facility. The FBO provides a full range of repair services for a wide variety of general aviation jets[6] which include but are not limited to airframes on the Bombardier Global Express, Bombardier Challenger, and Cessna Citation jet variants.

Military aircraft operations have fluctuated minimally over the past 25-years keeping a range of approximately 500 to 1,000 annual operations during that time. There were 890 total annual military operations at SLO County Airport in 2019.

The slight increase in commercial operations over the past 10 years has not been enough to offset the decline in GA and military activity, causing the Airport's total operations to decrease by approximately 6,000 during that time.

FIGURE 2-2
HISTORICAL OPERATIONS



Source: FAA TAF, 2019 (years 1994-2009); FAA ATADS (years 2009-2019)

[6] Source: https://mro.acijet.com/what-we-work-on/ (September 2020)

TABLE 2-4
HISTORICAL OPERATIONS

	Commercial Service			General			
Year	Air Carrier	Commuter	Subtotal	Aviation	Military	Subtotal	Total
1994	0	24,095	24,095	80,640	832	81,472	105,567
1999	0	15,315	15,315	99,133	1,056	100,189	115,504
2004	0	15,164	15,164	90,409	898	91,307	106,471
2009	1,071	11,075	12,146	73,928	439	74,367	86,513
2010	1,122	11,654	12,776	71,726	755	72,481	85,257
2011	1,000	10,922	11,922	69,370	462	69,832	81,754
2012	258	11,707	11,965	67,237	596	67,833	79,798
2013	361	11,290	11,651	55,284	1,060	56,344	67,995
2014	1,104	10,322	11,426	55,427	592	56,019	67,445
2015	984	8,832	9,816	61,687	713	62,400	72,216
2016	1,354	8,219	9,573	63,040	928	63,968	73,541
2017	2,463	7,555	10,018	60,634	708	61,342	71,360
2018	4,172	6,705	10,877	65,891	593	66,484	77,361
2019	5,213	7,059	12,272	67,129	828	67,957	80,229

Source: FAA TAF, 2019 (years 1994-2009); FAA ATADS (years 2009-2019)

2.3 FACTORS AFFECTING FUTURE AVIATION DEMAND

Aviation activity at SLO County Airport is influenced by a number of factors. Among these factors are national economic conditions, local socioeconomic conditions, and airline industry conditions. These factors are reviewed in this section to provide insight on how such variables may influence demand for future aviation activity at the Airport.

2.3.1 National Economic Conditions

National economic conditions typically have a strong effect on future aviation demand. Aviation demand is typically robust during periods of strong economic growth and weaker during economic recessions. While the COVID-19 (Coronavirus) pandemic has impacted the economy, it has greatly diminished commercial passenger use since the pandemic began in March 2020. Since that time, various governmental restrictions on travel, required quarantines, an increasing number of COVID-19 cases, loss of jobs, and a general hesitancy to travel by much of the public have contributed to the decline.

In an effort to offset some of the economic strain felt due to the pandemic, the U.S. government has provided two rounds of stimulus checks for much of the U.S. population as of January 2021. A few other trends have also been noticeable in the industry's slow recovery during 2020. Since March 2020, many employers and institutions have implemented work-from-home and virtual school policies to minimize the risk of COVID-19 exposure. The flexibility of these policies has enabled some of the U.S. population to travel to more vacation-oriented destinations and work or study remotely. Likewise, real estate has also fluctuated and increased in some locations because of the appeal of working in what might be perceived

as a more desirable location due to such policies. In San Luis Obispo, the median sale price of homes has increased at 9.1 percent year-over-year from December 2019 to December 2020.[7]

Despite many of the unordinary economic trends and conditions, the national economy will recover as it is cyclical and grows over long periods of time. The national FAA forecast and other national forecasts anticipate the U.S. Gross Domestic Product growing at about 1.9 percent annually over the long term. While these forecasts have been considered in calculating future annual growth rates at the Airport, the timing, extent, and rate of annual growth in the U.S. economy and future changes in real disposable income will affect the rate of future airline traffic both nationally and at SLO County Airport.

2.3.2 Local Socioeconomic Conditions

Consideration of a community's economic character is particularly important to the determination of business travel and general aviation activity. Current and projected economic trends and population projections associated with the Airport's primary air service area were examined. For this forecast, the Airport's primary service area was defined as the San Luis Obispo-Paso Robles, CA Metropolitan Statistical Area (MSA). An airport service area provides a reasonable geographical extent from which passengers would originate from and be willing to travel. Various things like drive time, an airport's amenities, and specific airlines or destinations may contribute to a customer's preference for flying out of one airport over another. The SBP service area was identified for the purpose of comparing socioeconomic statistics and is not meant to act as an analysis of the catchment area for SBP or any other airport in its vicinity.

Figure 2-3 shows the SBP service area that was used for this forecast.

2.3.2.1 Socioeconomic Trends

The following summarizes the comparison of historical and forecast socioeconomic trends:

- Historical population growth for the SBP service area have been very similar to the growth rates of California and U.S. rates from 1999 through 2019. Population growth rates in the SBP service area are projected to increase while remaining slightly less than the U.S. and California from 2019-2039.
- Historical growth for employment in the SBP service area have also increased at a greater rate than the U.S. and California from 1999-2019. Employment growth rates are projected to increase, but slightly less than the U.S. and California from 2019-2039. However, the magnitude of these differences is small.
- Historical personal income per capita (PIPC) growth rates have been noticeably greater in the SBP service area than the U.S. and state of California. While the PIPC growth rates for the SBP service area are projected to increase from 2019-2039, the rate is projected to be slightly less than the U.S. and California. However, the magnitude of these differences is small.
- Historical growth of Gross Regional Product (GRP) has increased at a noticeably higher rate than the U.S. Gross Domestic Product and the state of California. While the GRP growth rates for the SBP service area are projected to increase from 2019-2039, they are projected to be slightly less

[7] Source: Redfin, 2021. https://www.redfin.com/city/17464/CA/San-Luis-Obispo/housing-market

than the U.S. and California. However, like the other socioeconomic variables the magnitude of these differences is small.

A comparison of the socioeconomic variables and their growth trends for the Airport's service area, California, and U.S. are shown historically from 1999-2019 in *Figure 2-4*, and forecast from 2019-2039 in *Figure 2-5*.

FIGURE 2-3
SBP SERVICE AREA

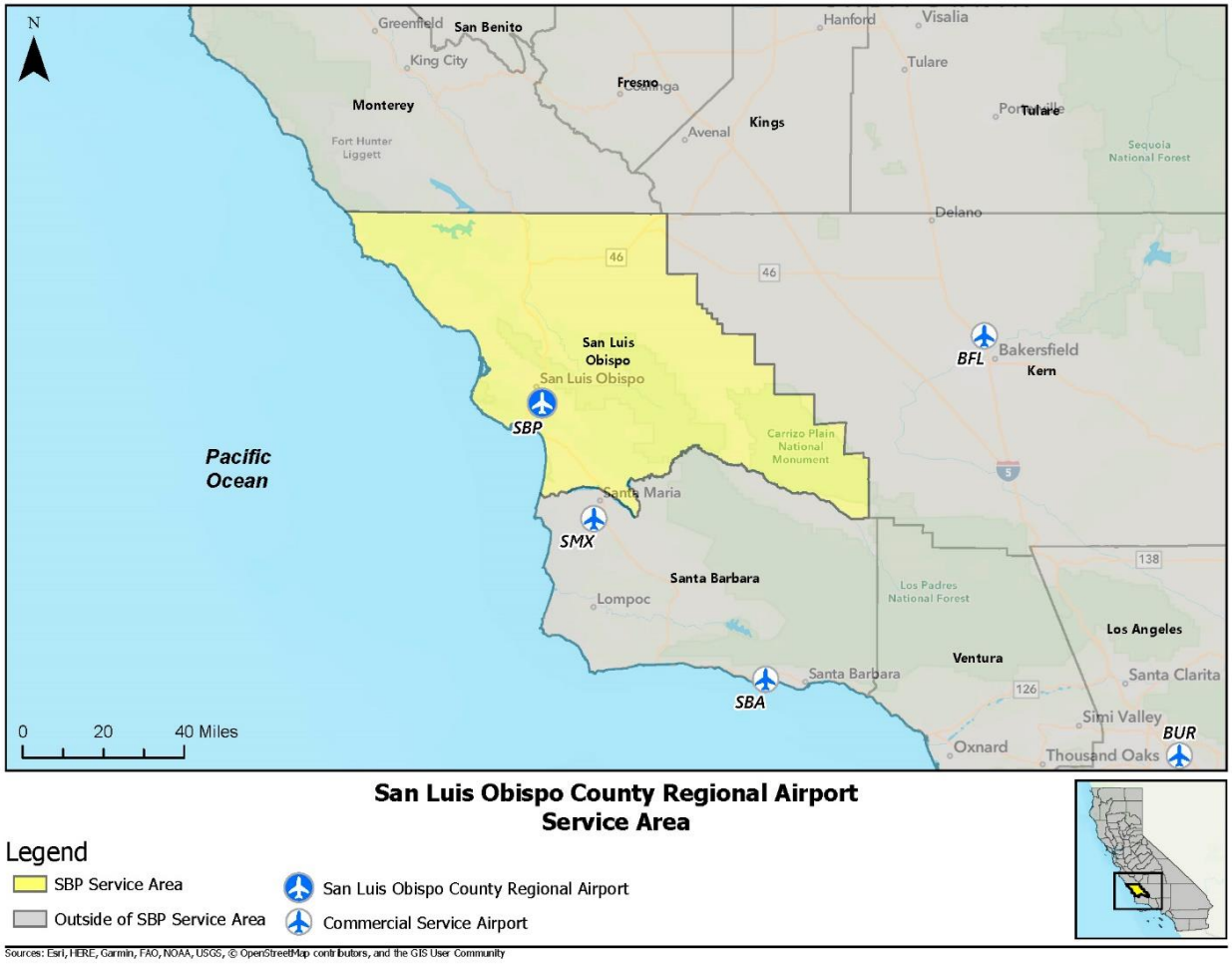
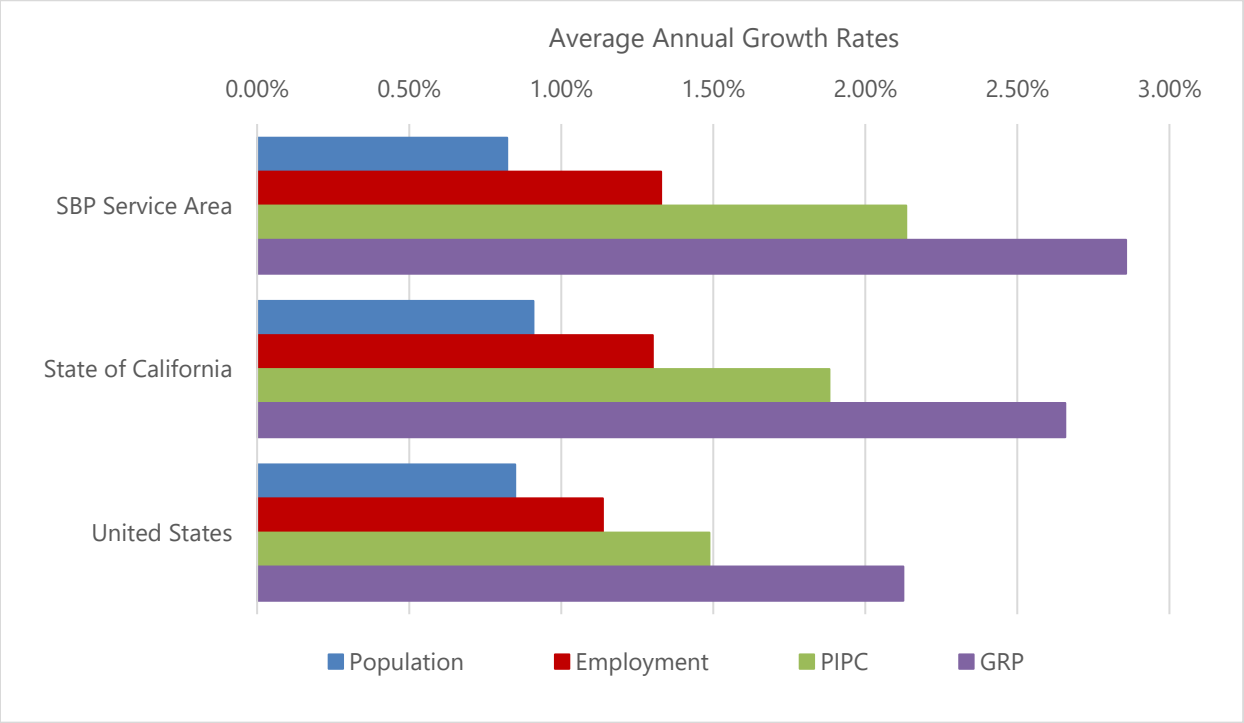
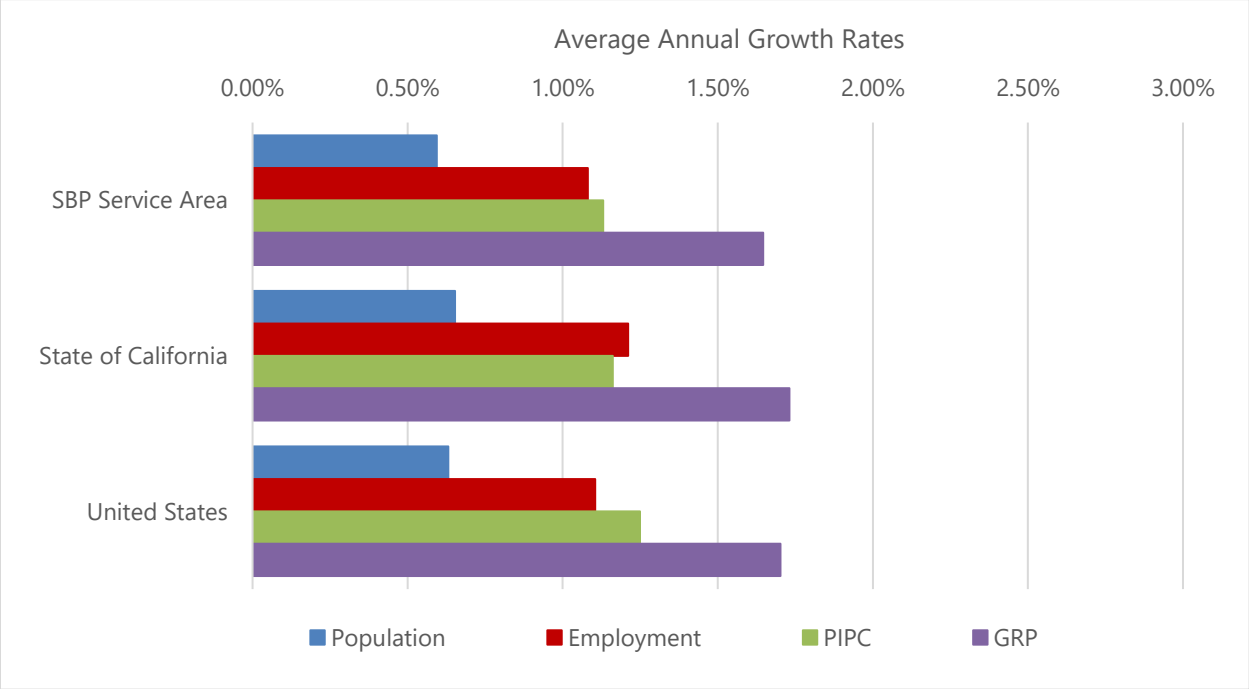


FIGURE 2-4
HISTORICAL SOCIOECONOMIC TRENDS



Source: Woods & Poole, Inc., 2019

FIGURE 2-5
FORECAST SOCIOECONOMIC TRENDS



Source: Woods & Poole, Inc., 2019

2.3.3 Airline Industry Condition

The airline industry is evolving rapidly in order to achieve its business objectives during a particularly difficult economic time. There have been several changes to the airlines and their capacities in the short-term as adjustments to markets and frequencies are being made to accommodate the decline in demand during the recovery from COVID-19.

Additionally, many airlines are modifying their fleets for increased efficiency and profitability. Many aircraft orders have been lessened and some airlines are considering up-gauging earlier than originally expected to generate greater profit margins. Should airline consolidation occur, SLO County Airport is well-positioned to weather any potential adverse impacts due to their diverse mix of airlines and destinations.

With the increase of work-from-home or telecommuting that is taking place in the U.S. and the limitations on international travel, airlines are seeing an uptick in the desire of passengers to travel to domestic leisure destinations. Given the appeal of the San Luis Obispo and coastal California region, it is likely that SBP could see increased passenger activity compared to other U.S. airports as business travel remains low. As international markets begin to reopen, the SBP markets to major gateway connecting hubs like Denver, San Francisco, and Los Angeles for United Airlines; as well as Phoenix and Dallas/Ft. Worth for American Airlines could experience an uptick in demand as pent up travelers get an opportunity to visit friends and relatives.

Ultimately, the timing of a successful COVID-19 vaccine/treatment has been viewed as the greatest resolution to commercial passenger activity returning to the 2019 – normal conditions. As of January 2021, two vaccines have been approved and begun to be administered to some of the U.S. and world population. Some sources suggest that 80 percent of the U.S. might be vaccinated by mid- to late-summer.[8]

2.3.4 Summary

The variables discussed in this portion of the chapter play an important role in the future demand for aviation activity at the Airport. The SBP service area has experienced population, employment, PIPC, and GRP growth from1990 to the present, and these socioeconomic factors are projected to continue to grow at similar levels compared to California and the U.S. through the forecast period.

However, the largest driver of continued commercial passenger success at SBP is the recovery from the pandemic. The Airport has many intangibles including its uniqueness and appeal as a desirable destination for leisure travelers; its current diversity of airlines and markets; its connectivity to major western hubs; and its record of resiliency after other times of aviation demand such as the Great Recession of 2009.

[8] Gandel, S. *When will you get the COVID-19 Vaccine?* (January 12, 2021). Retrieved online at: https://www.cbsnews.com/news/covid-vaccine-when-can-you-get/

2.4 ENPLANED PASSENGER FORECASTS

Several methodologies were explored as a means to develop the enplaned passenger forecasts such as multiple regression analysis based on local socioeconomic variables, trend analyses, and market share analyses. Per FAA guidance, the adoption of the FAA TAF 2019 is not to be sought as a viable forecast option. The FAA gives three scenarios for the recovery of enplanements to 2019 totals[9]:

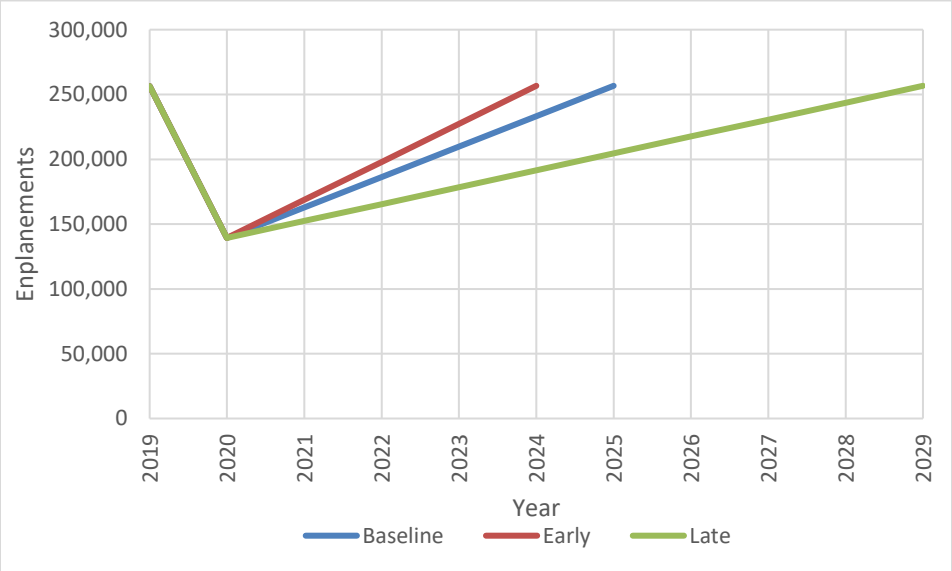
- Baseline recovery returns to 2019 totals in 2025
- Early recovery returns to 2019 totals in 2024
- Late recovery returns to 2019 totals in 2029

Each of the forecasts were developed similarly with three phases of activity. The first phase was the period of recovery from the pandemic, then the return to recent activity, and finally sustained growth. In addition to the preferred base case forecast, two alternative scenarios were also developed to provide an upper and lower range. Each of the forecasts focused on the FAA's recovery periods, historical enplanement and socioeconomic growth trends.

2.4.1 Updated Enplanements for 2020

Per FAA guidance, this SBP forecast incorporates the most recent months of aviation activity including October and November 2020. December 2020 was estimated using the most recent average change month-over-month to generate an estimate of 139,318 enplanements for 2020, which is -49.4 percent compared to 2019 totals. This is assumed to be the lowest enplanement total the Airport will reach, and the recovery periods are built off it. *Figure 2-6* applies the updated enplanement totals for SBP with the FAA recovery scenarios.

FIGURE 2-6
FAA RECOVERY SCENARIOS FOR ENPLANEMENTS AT SBP



Source: FAA, 2020

[9] (FAA, 2020) Attachment 3. Preliminary 2020 TAF Scenarios: Forecast Recovery Timeframe

2.4.2 Base Case Enplaned Passenger Forecast

The base case forecast incorporates the FAA's baseline recovery scenario where enplanement totals recover to 2019 levels in 2025. At that point, passenger activity would increase annually at the historical growth rate of SBP over the past 10-years, before sustaining itself at the 20-year historical personal income per capita historical growth rate for the state of California for the remainder of the 20-year forecast horizon. Overall, the base case forecast projects the Airport will increase its enplanement total from its 2019 total by 2.6 percent annually.

The base case forecast projects passenger enplanement growth throughout the planning period with total enplaned passengers exceeding 350,000 by 2029, 400,000 by 2036, and ultimately reaching 427,000 in 2039. It is assumed that to meet the projected enplanement totals of the base case forecast, all 50-seat aircraft would be up-gauged to larger aircraft by 2034,[10] and frequencies for existing markets would be increased. The base case forecast for enplaned passengers is compared with the alternative high range and low range forecasts in *Figure 2-7* and *Table 2-5*.

2.4.3 Alternative High Range Enplaned Passenger Forecast

The alternative high range forecast was developed using the FAA's early recovery scenario, where enplanement totals recover to 2019 levels in 2024. At that point, passenger activity growth would return to the Airport's most recent annual rate of growth from 2017-2019, before maintaining the 20-year growth rate for the duration of the forecast. Overall, the high range forecast projects the Airport will increase its enplanement total from its 2019 total by 4.2 percent annually.

The high range forecast projects 350,000 enplaned passengers by 2028, and 400,000 by 2030, before ultimately reaching 580,000 in 2039. The alternative high range scenario assumes that all airlines will up-gauge to aircraft larger than 50-seats by 2029. Additionally, this scenario assumes the addition of a new airline beginning service by 2034, and the operation of multiple larger narrowbody aircraft would occur by 2039, including the Airbus 220 (A220), Airbus 319-100 (A319), and Boeing 737-800 (B738). The alternative high range enplaned passenger forecast is compared with the base case and the alternative low range forecasts in *Figure 2-7* and *Table 2-5*.

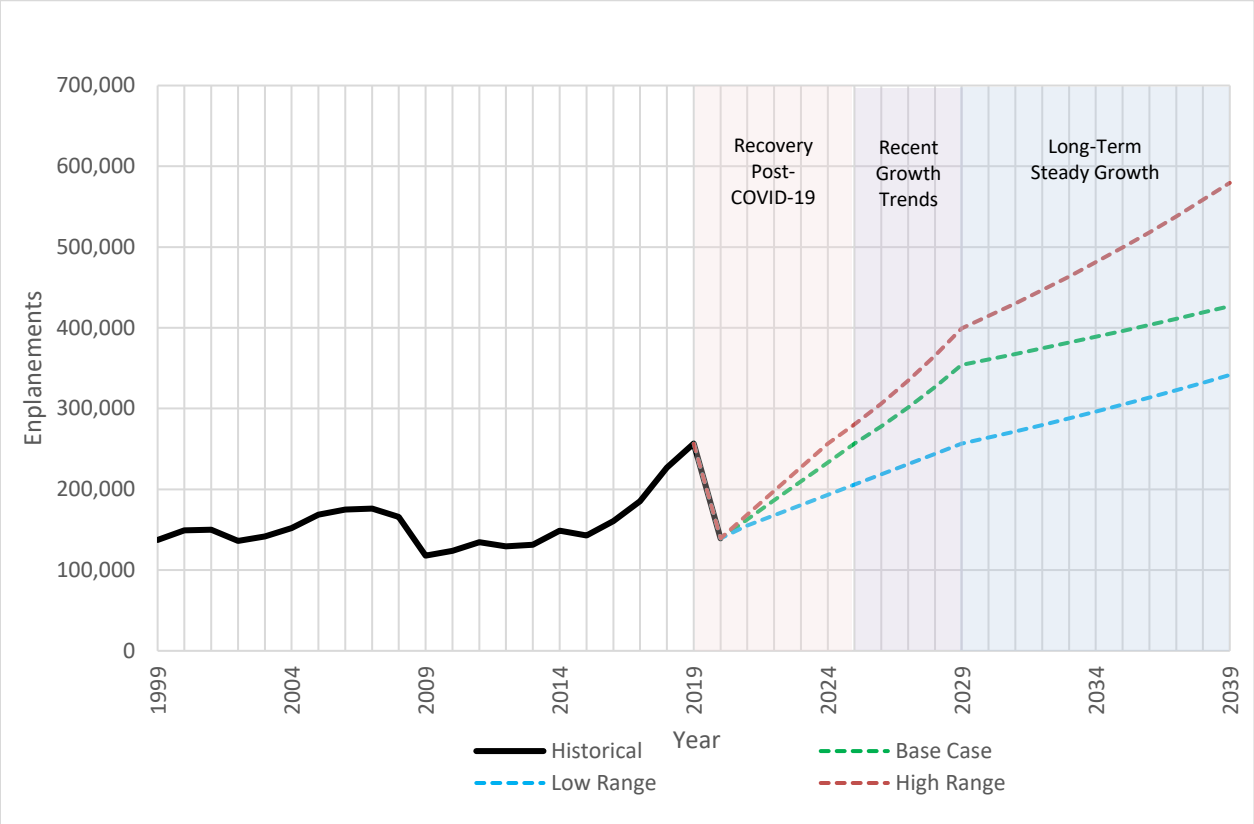
2.4.4 Alternative Low Range Enplaned Passenger Forecast

The alternative low range forecast was developed using the FAA's late recovery scenario, where enplanement totals recover to 2019 levels in 2029. At that point, passenger activity growth would increase at the annual rate of growth that the Airport experienced post-2009 Recession for the remainder of the planning horizon. Overall, the low range forecast projects the Airport will increase its enplanement total from its 2019 total by 1.4 percent annually.

This alternative low range scenario focuses heavily on a much slower recovery for the commercial aviation industry at SBP post COVID-19. The low range forecast projects 300,000 enplanements by 2035, and ultimately reaches 340,000 enplaned passengers annually by 2039. The alternative low range enplaned passenger forecast is compared with the base case forecast and the alternative high range forecast in *Figure 2-7* and *Table 2-5*.

[10] Contour Airlines operates one daily flight to Las Vegas on an Embraer 135 (44 seats).

FIGURE 2-7
ENPLANEMENTS FORECAST COMPARISON



Source: Preliminary FAA TAF 2020

TABLE 2-5
ENPLANEMENTS FORECAST COMPARISON

Year	Base Case	High Range	Low Range
1994	106,049	106,049	106,049
1999	137,352	137,352	137,352
2004	152,132	152,132	152,132
2009	117,884	117,884	117,884
2014	148,744	148,744	148,744
2019	256,694	256,694	256,694
2020*	139,318	139,318	139,318
2024	233,219	256,694	193,051
2029	354,201	399,140	256,694
2034	388,772	481,117	296,137
2039	426,717	579,485	341,641
Annual Growth			
2019-2039	2.6%	4.2%	1.4%

* Estimated based year-to-date 2020 Airport Records
Source: Preliminary FAA TAF 2020

2.5 BASED AIRCRAFT FORECAST

Based aircraft at an airport represent the total number of active civil aircraft permanently located or projected to be located at an airport during a specific period. Based aircraft categories include single-engine, multi-engine, turboprop, jet, and rotorcraft. The national general aviation industry has experienced declines in nearly all measures of activity since the early 1980s including new aircraft shipments, active fixed base operators (FBOs), hours flown, etc. The number of aircraft based at individual airports has dropped at many facilities nationwide. However, at SLO County Airport this is not the case. At the time this forecast was developed, in August 2020, the Airport identified a total of 267 based aircraft.[11]

The number of based aircraft at are projected to grow at an average of 0.5 percent annually throughout the planning period. This is reflective of the growth projected by the FAA Aerospace Forecast 2020-2040 for the Active General Aviation Fleet and General Aviation Hours Flown.

The TAF does not project types of aircraft, so the 2019 distribution of aircraft was taken from the FAA 5010-1 form.[12] The forecast of the Airport's future fleet of based aircraft was based on trends in the national general aviation fleet and hours flown as listed in the FAA Aerospace Forecast for FY 2020-2040. The based aircraft forecast projects greatest growth in jets, multi-engine aircraft, and helicopters, while minimally increasing single engine aircraft.

Table 2-6 shows the based aircraft forecast by type from 2020-2039.

TABLE 2-6
BASED AIRCRAFT FORECAST

Year	Single Engine	Multi Engine	Jet	Helicopter	Total
2019(1)	236	13	11	6	266
2020	237	13	11	6	267
2024	238	14	13	7	272
2029	239	16	16	8	279
2034	242	18	18	8	286
2039	244	19	20	8	292
Annual Growth					
2019-2024	0.2%	1.5%	3.4%	3.1%	0.4%
2019-2029	0.1%	2.1%	3.8%	2.7%	0.5%
2019-2039	0.2%	1.9%	3.1%	1.7%	0.5%

(1) 2019 total interpolated from 2020 update, and 2019 FAA TAF estimation. 2) Distribution of based aircraft by type based on FAA 5010-1 Form August 2020.
Source: SLO County Airport, 2020; FAA TAF, 2019; FAA 5010-1 Form, August 2020

[11] The 267 total based aircraft was reconciled from the 2019 FAA TAF estimate of 202 based aircraft for FY 2019.
[12] Published in August 2020.

2.6 ANNUAL AIRCRAFT OPERATIONS FORECAST

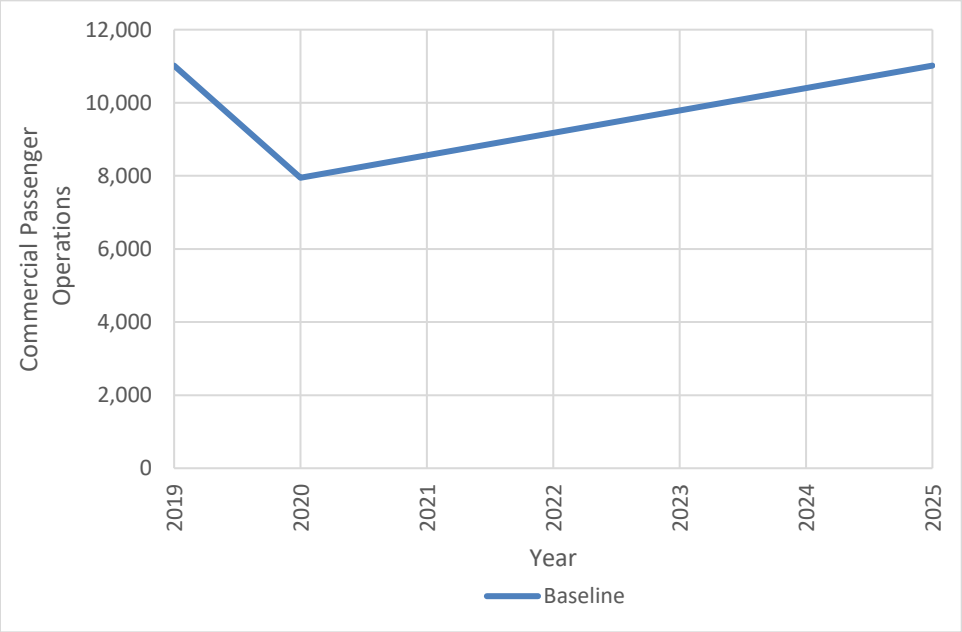
Forecasts of annual aircraft operations were prepared for three categories of aviation activity using the TAF's classifications. The three categories include commercial service (air carrier and commuter) operations, general aviation operations, and military operations. General aviation operations represent all civil aviation aircraft takeoffs and landings not classified as commercial or military.

2.6.1 Commercial Operations

Like the base case enplanements forecast, the commercial passenger operations forecast incorporates the FAA's baseline recovery scenario, which is a return to 2019 totals in 2025. Using this scenario, with the most up-to-date commercial passenger operation totals for 2020, the Airport is estimated to have a total of 7,948 commercial passenger operations in 2020 which is approximately 28 percent below 2019 totals. This is assumed to be the lowest commercial passenger operations total the Airport will reach.

Figure 2-8 applies the updated enplanement totals for SBP with the FAA recovery scenarios.

FIGURE 2-8
FAA RECOVERY SCENARIOS FOR COMMERCIAL PASSENGER OPERATIONS AT SBP



Source: FAA, 2020

Cargo activity is assumed to remain constant among the Airport's two cargo operators – Western Air and Ameriflight. Discussions with the two operators suggest that they anticipate continuing their operations at the same capacity and continuing to use their existing fleet. The Airport will average a 1.5 percent annual increase in commercial passenger operations at SBP over the next 20 years. Overall, commercial operations will increase annually at an average of 1.3 percent from 2019-2039.

2.6.2 General Aviation Forecast

Review of monthly general aviation operations year over year indicate limited to no COVID-19 impact general operations except for March 2020 where the activity was approximately 50 percent of the previous year's monthly total. The overall lack of impact to general aviation operations may be attributable to the safety from COVID-19 exposure offered by private aircraft travel. General aviation operations are forecast to increase very slightly using the FAA Aerospace 20-year forecast for total less student pilots at 0.1 percent. As a result, general aviation activity is anticipated to increase slightly over the planning horizon for both itinerant and civil GA operations. Overall, total GA operations are projected to increase annually at 0.1 percent over the long-term planning period.

2.6.3 Military Forecast

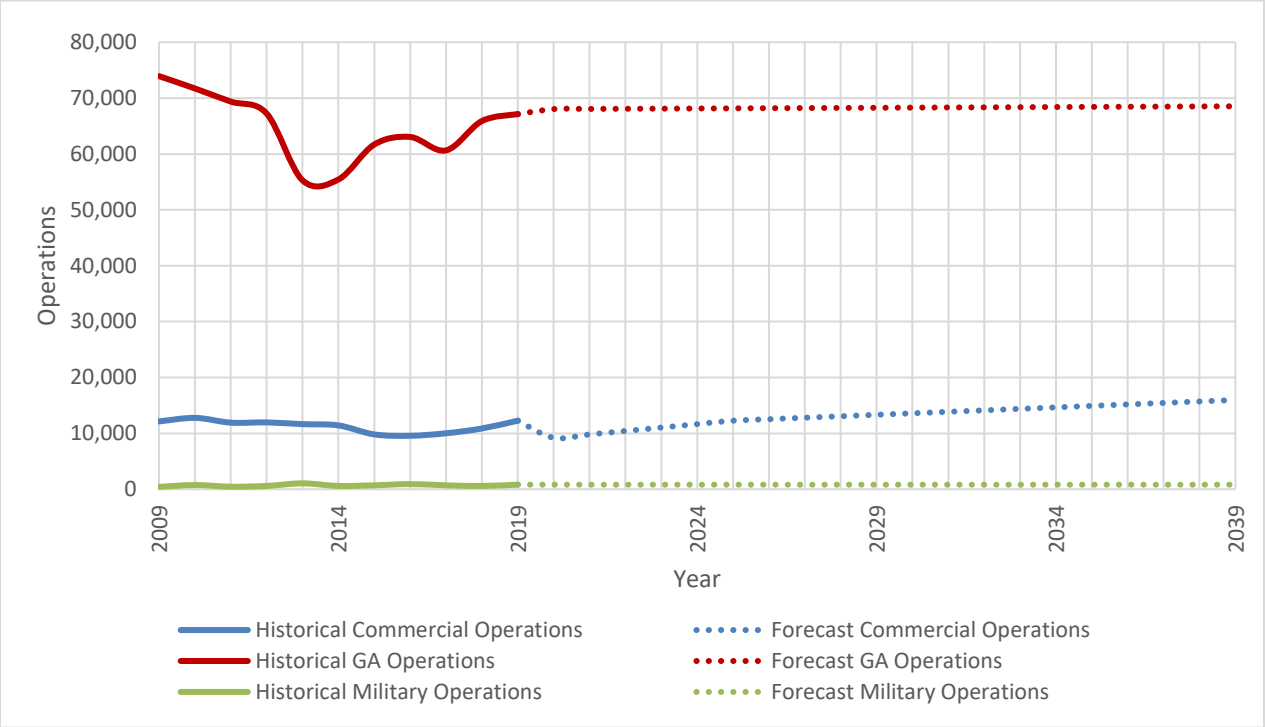
The military aircraft at SBP represented an average of 0.8 percent of the Airport's total operations from 1999-2019. As is a customary practice, in an aviation forecast, the military operations for SBP were held constant at their base year totals of 642 itinerant military operations and 186 local military operations over the forecast horizon.

2.6.4 Total Operations Forecast

Overall, the 2019 TAF forecast shows a slight growth in air carrier and civil operations that is enough to offset the decrease in air taxi and commuter operations. The resulting annual growth for total annual operations at SBP during that time is 0.3 percent.

The aircraft operations forecast is broken down into commercial operations, general aviation operations, and military operations in *Figure 2-9* and *Table 2-7*.

FIGURE 2-9
AIRCRAFT OPERATIONS FORECAST



Source: Preliminary FAA TAF 2020

TABLE 2-7
AIRCRAFT OPERATIONS FORECAST

Year	Commercial Operations	GA Operations	Military Operations	Total Operations
1994	24,095	80,640	832	105,567
1999	15,315	99,133	1,056	115,504
2004	15,164	90,409	898	106,471
2009	12,146	73,928	439	86,303
2014	11,426	55,427	592	67,776
2019	12,272	67,129	828	80,229
2020*	9,204	68,030	828	78,062
2024	11,658	68,134	828	80,620
2029	13,331	68,264	828	82,423
2034	14,654	68,397	828	83,879
2039	15,978	68,532	828	85,338
Annual Growth				
2019-2020	-25.0%	1.3%	0.0%	-2.7%
2019-2024	-1.0%	0.3%	0.0%	0.1%
2019-2029	0.8%	0.2%	0.0%	0.3%
2019-2039	1.3%	0.1%	0.0%	0.3%

*Estimated
Source: Preliminary FAA TAF 2020

2.7 DESIGN DAY/DESIGN HOUR ACTIVITY FORECASTS

Capacity analyses and the determination of future facility requirements of various elements of airport facilities are often based on design day or design hour activity levels. To avoid the construction and operational cost of acquiring capacity that would be rarely used, design day and design hour activity levels should not be the absolute busiest period at the Airport. Rather the design day and design hour activity levels should be representative of busy periods, but not the absolute peak periods. Often the design day is generally equivalent to the 85th percentile of activity for the design year. Facilities designed to accommodate this level of activity in the design year will provide a comfortable level of service for most of the time. During unusually high activity periods such as the Wednesday before and the Sunday after Thanksgiving Day, airport facilities can be expected to experience more crowded conditions and longer, but not unreasonable or intolerable, processing times.

2.7.1 Peak Month Activity

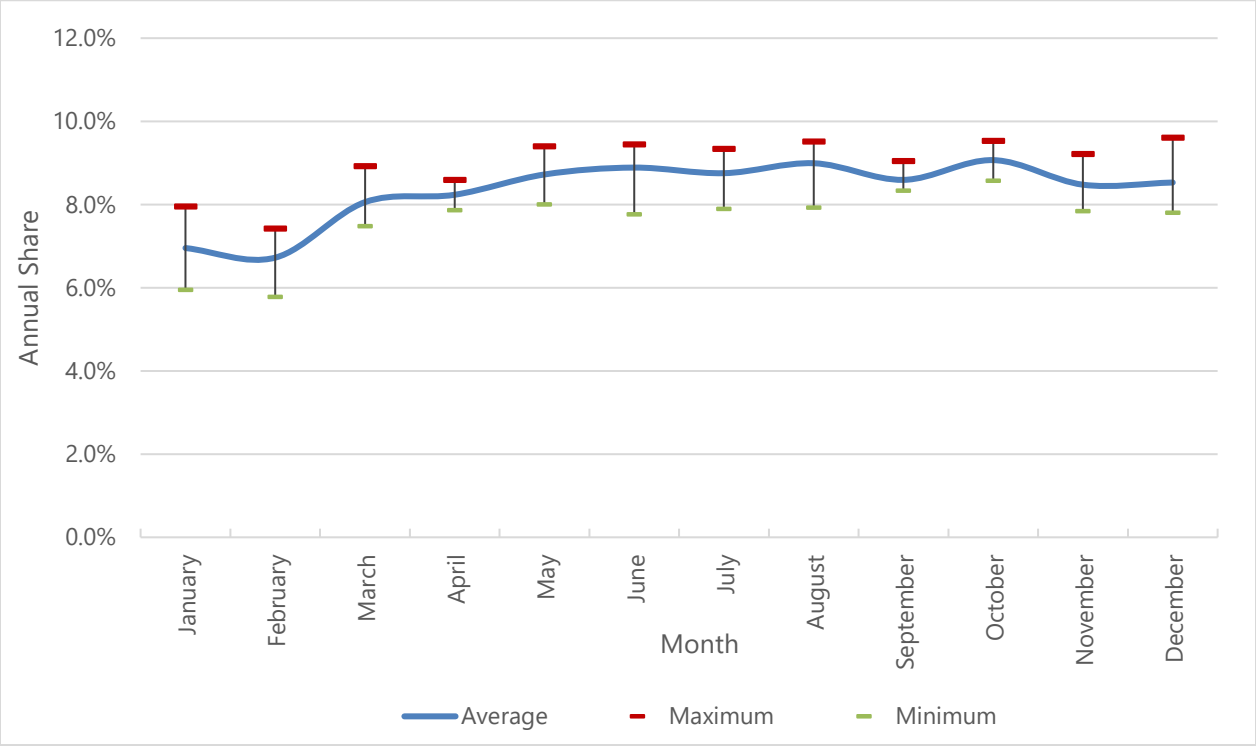
As is common when evaluating such data at various airports, the calendar month that experienced the highest level of activity in a given year varies. At SBP, activity in the peak month expressed as a percentage of annual activity is fairly constant from year to year. If annual activity were equally distributed among all 12 months in a year, monthly activity would total approximately 8.3 percent of the year's activity. The design day level of activity is often calculated in airport planning efforts using a peak month/average day definition.

The Airport has averaged 9.1 percent of its annual enplaned passenger total in the month of October from 2010-2019. October is likely the peak month as a result of the autumn grape harvest attracting wine enthusiasts to the San Luis Obispo and Paso Robles area wineries and vineyards. *Figure 2-10* and *Table 2-8* show the maximum, minimum, and average monthly distributions of annual total enplaned passengers at SBP.

The Airport has averaged 9.1 percent of its annual total operations in the months of June and July from 2010-2019. *Figure 2-11* and *Table 2-9* show the maximum, minimum, and average monthly distributions of total annual operations at SBP.

The Airport has averaged 8.9 percent of its annual commercial passenger operations total in the month of June from 2010-2019. *Figure 2-12* and *Table 2-10* show the maximum, minimum, and average monthly distributions of annual commercial service operations at SBP.

FIGURE 2-10
MONTHLY DISTRIBUTION OF ENPLANED PASSENGERS



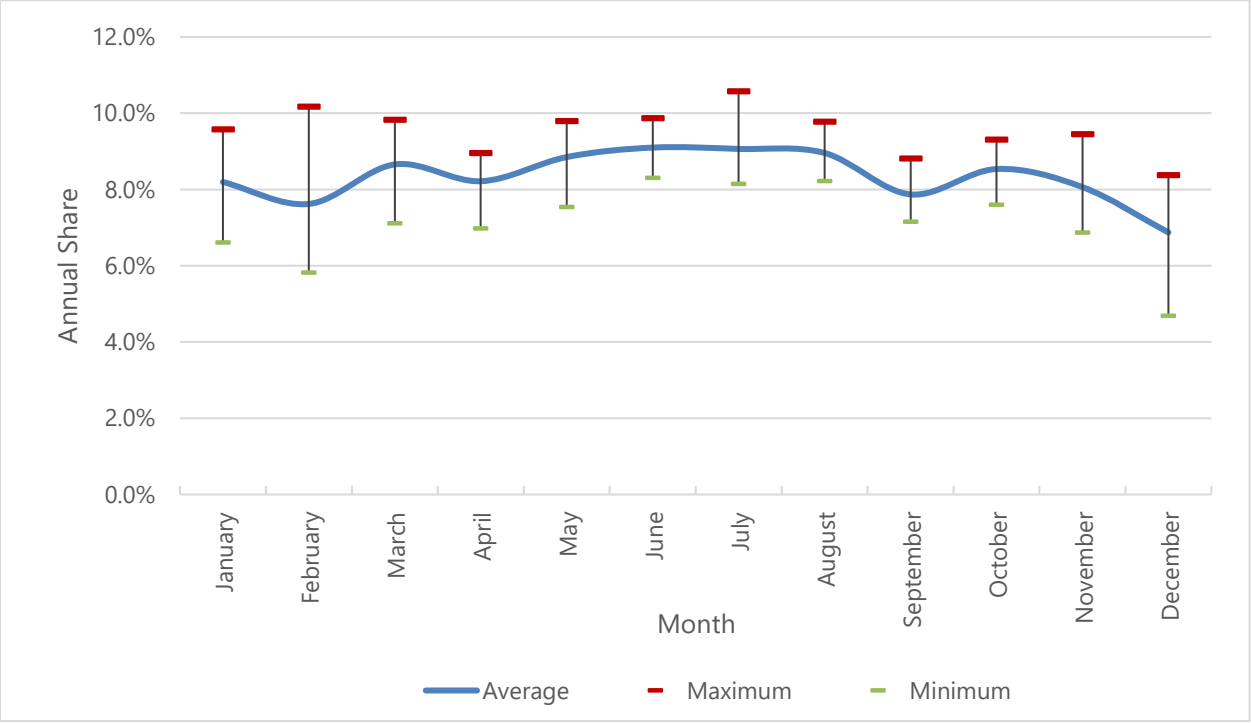
Source: Airport Records, CY 2010-2019

TABLE 2-8
MONTHLY DISTRIBUTION OF ENPLANED PASSENGERS

Month	Average	Maximum	Minimum
January	7.0%	8.0%	6.0%
February	6.7%	7.4%	5.8%
March	8.1%	8.9%	7.5%
April	8.2%	8.6%	7.9%
May	8.7%	9.4%	8.0%
June	8.9%	9.4%	7.8%
July	8.8%	9.3%	7.9%
August	9.0%	9.5%	7.9%
September	8.6%	9.0%	8.3%
October	**9.1%**	**9.5%**	**8.6%**
November	8.5%	9.2%	7.8%
December	8.5%	9.6%	7.8%

Source: Airport Records, CY 2010-2019

FIGURE 2-11
MONTHLY DISTRIBUTION OF TOTAL ANNUAL OPERATIONS



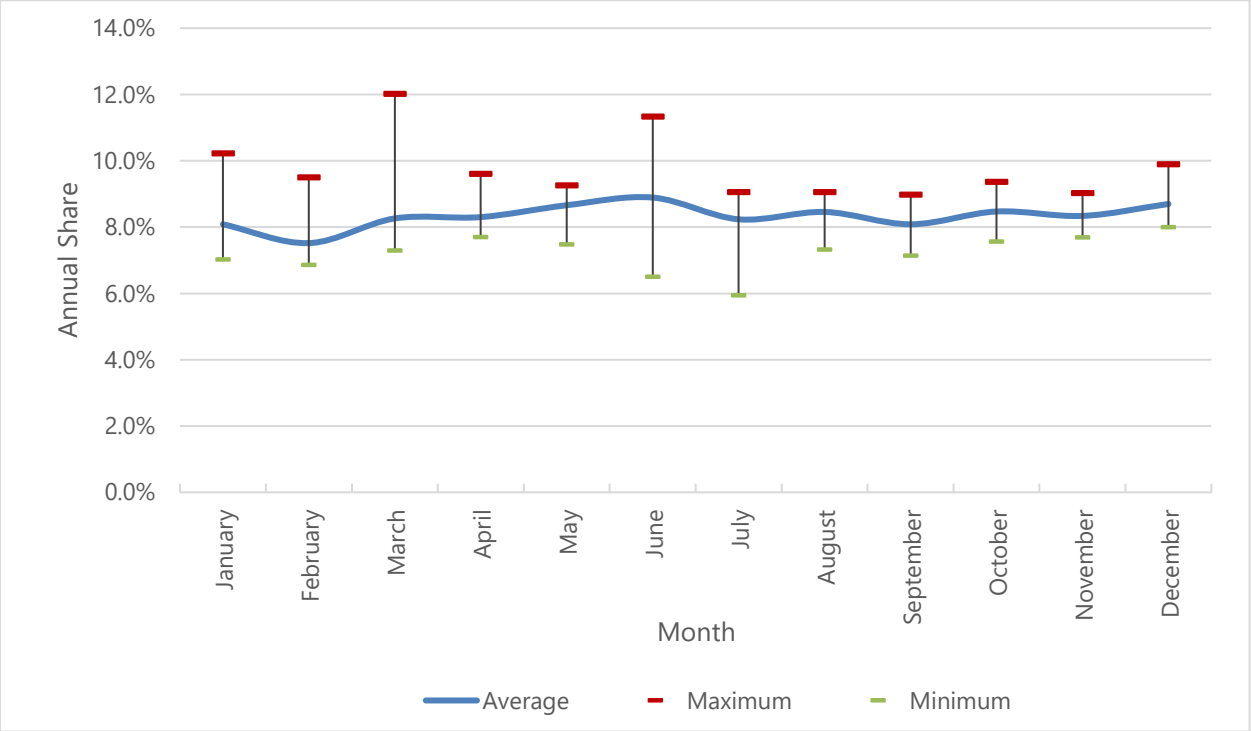
Source: Airport Records, CY 2009-2011, 2018-2019; FAA OPSNET, CY 2012-2017

TABLE 2-9
MONTHLY DISTRIBUTION OF TOTAL ANNUAL OPERATIONS

Month	Average	Maximum	Minimum
January	8.2%	9.6%	6.6%
February	7.6%	10.2%	5.8%
March	8.7%	9.8%	7.1%
April	8.2%	9.0%	7.0%
May	8.9%	9.8%	7.5%
June	**9.1%**	**9.9%**	**8.3%**
July	**9.1%**	**10.6%**	**8.1%**
August	9.0%	9.8%	8.2%
September	7.9%	8.8%	7.2%
October	8.5%	9.3%	7.6%
November	8.1%	9.5%	6.9%
December	6.9%	8.4%	4.7%

Source: Airport Records, CY 2009-2011, 2018-2019; FAA OPSNET, CY 2012-2017

FIGURE 2-12
MONTHLY DISTRIBUTION OF ANNUAL COMMERCIAL SERVICE OPERATIONS



Source: Airport Records, CY 2009-2011, 2018-2019; FAA OPSNET, CY 2012-2017

TABLE 2-10
MONTHLY DISTRIBUTION OF ANNUAL COMMERCIAL SERVICE OPERATIONS

Month	Average	Maximum	Minimum
January	8.1%	10.2%	7.0%
February	7.5%	9.5%	6.9%
March	8.3%	12.0%	7.3%
April	8.3%	9.6%	7.7%
May	8.7%	9.3%	7.5%
June	**8.9%**	**11.3%**	**6.5%**
July	8.2%	9.1%	5.9%
August	8.5%	9.1%	7.3%
September	8.1%	9.0%	7.1%
October	8.5%	9.4%	7.6%
November	8.3%	9.0%	7.7%
December	8.7%	9.9%	8.0%

Source: Airport Records, CY 2009-2011, 2018-2019; FAA OPSNET, CY 2012-2017

2.7.2 Design Day / Design Hour Activity

Design day/design hour activity statistics are useful for master planning including peak hour activity and peak 15-minute activity. Analysis of a number of data sources including Airport records, FAA activity records, and actual flight operations data facilitates the estimation of these needed statistics. They are essential for establishing facility requirements, as they represent the total number of enplaning and deplaning passengers and aircraft on an hour-by-hour or rolling 15-minute basis.

Design day forecast models portray an average day of the peak month (ADPM). It is common practice to establish an ADPM rather than the true peak day of the peak month to get a more commonly occurring metric for an airport. The planning model used in this forecast was generated through a two-part process. First, the ADPM was selected. While October was the peak month for enplanements on average since 2010, it was missing the newly added Alaska Airlines San Diego market which was added in January 2020. As a result, the base year for the design day flight schedule was from an ADPM in January 2020 and then annualized to meet the 2019 enplaned passengers total. Then the base case and high range enplaned passenger forecasts were applied. In order to meet the annualized totals for each of the forecast years, historical load factors from SBP were used, assumptions were made on up-gauging of aircraft, frequencies were added to existing markets, and new future markets and/or airlines.

Table 2-11 and *Table 2-12* show the base case forecast ADPM schedule for arrivals, and departures. *Table 2-13* and *Table 2-14* show the high range forecast ADPM schedule for arrivals and departures.

2.7.2.1 Peak Passenger Forecast

The design day/design hour model was applied to the base case and high range forecasts. Then the total number of enplaning, deplaning, and total passengers was summed for each forecast year.[13] A peak 15-minute period was developed using a more exact approach for monitoring the number of passengers in the terminal facilities relative to their trip details and standard industry assumptions on percentages of individuals arriving or leaving the Airport. Peak day and hour passenger forecasts for the base case and high range forecasts are shown in *Table 2-15*.

2.7.2.2 Peak Operations Forecast

Peak hour operations are based on the average distribution of operations performed by aircraft types on an ADPM. Because the time and equipment of an operation are highly variable (except for commercial), the hourly percentage of arrivals and departures by each aircraft was held constant and applied to the base case operations forecast. Peak day and hour operations forecasts for the base case forecasts is shown in *Table 2-15*.

2.7.2.3 Peak Commercial Operations Forecast

The peak hour of commercial operations was developed using the same design day/hour model as the peak passenger forecast. Peak day and hour commercial passenger operations forecasts for the base case and high range forecasts are shown in *Table 2-15*.

[13] For planning purposes, 100 percent load factors are assumed.

TABLE 2-11
BASE CASE FORECAST ADPM ARRIVALS

Origin	Marketing Airline	Regional Airline	Arrival Time	Base Year		+5 Yr.		+10 Yr.		+20 Yr.	
				Seats	Daily	Seats	Daily	Seats	Daily	Seats	Daily
SFO	UA	OO	9:49	50				70		76	
60 Minute Subtotal (9:00-9:59)				**50**	**4.4%**	**0**	**0.0%**	**70**	**5.4%**	**76**	**4.8%**
DEN	UA	OO	11:25	50		50		70		76	
LAX	UA	OO	11:28	70				70		76	
PHX	AA	OO	11:53	65				65		65	
LAS	LF		11:55	30		30		30		30	
60 Minute Subtotal (11:00-11:59)				**215**	**18.8%**	**80**	**8.9%**	**235**	**18.0%**	**247**	**15.7%**
SEA	AS	QX	12:14	76		76		76		76	
SFO	UA	OO	12:15	50		50		76		76	
DFW	AA	MQ	12:49	76		76		76		76	
60 Minute Subtotal (12:00-12:59)				**202**	**17.7%**	**202**	**22.5%**	**228**	**17.5%**	**228**	**14.5%**
PDX	AS	OO	13:05			76		76		76	
SAN	AS	OO	13:27	76		76		76		76	
60 Minute Subtotal (13:00-13:59)				**76**	**6.6%**	**152**	**16.9%**	**152**	**11.6%**	**152**	**9.7%**
SEA	AS	OO	14:15							76	
60 Minute Subtotal (14:00-14:59)				**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**76**	**4.8%**
LAX	UA	OO	15:18	50		50		50		76	
60 Minute Subtotal (15:00-15:59)				**50**	**4.4%**	**50**	**5.6%**	**50**	**3.8%**	**76**	**4.8%**
PHX	AA	OO	16:01	65		65		65		65	
DFW	AA	OO	16:55							76	
60 Minute Subtotal (16:00-16:59)				**65**	**5.7%**	**65**	**7.2%**	**65**	**5.0%**	**141**	**9.0%**
DEN	UA	OO	17:45	50		50		70		70	
60 Minute Subtotal (17:00-17:59)				**50**	**4.4%**	**50**	**5.6%**	**70**	**5.4%**	**70**	**4.5%**
PHX	AA	OO	18:44	65				65		65	
SFO	UA	OO	18:45	50		50		50		76	
60 Minute Subtotal (18:00-18:59)				**115**	**10.1%**	**50**	**5.6%**	**115**	**8.8%**	**141**	**9.0%**
DEN	UA	OO	20:42	70				70		76	
DFW	AA	OO	20:51	65		65		65		76	
60 Minute Subtotal (20:00-20:59)				**135**	**11.8%**	**65**	**7.2%**	**135**	**10.3%**	**152**	**9.7%**
SFO	UA	OO	21:23	50		50		50		70	
60 Minute Subtotal (21:00-21:59)				**50**	**4.4%**	**50**	**5.6%**	**50**	**3.8%**	**70**	**4.5%**
PHX	AA	OO	22:07	65		65		65		65	
LAX	UA	OO	22:19	70		70		70		76	
60 Minute Subtotal (22:00-22:59)				**135**	**11.8%**	**135**	**15.0%**	**135**	**10.3%**	**141**	**9.0%**
Total Daily Arriving Passengers				**1,143**	**100.0%**	**899**	**100.0%**	**1,305**	**100.0%**	**1,570**	**100.0%**
Count of Daily Arrivals				**19**		**15**		**20**		**22**	

TABLE 2-12
BASE CASE FORECAST ADPM DEPARTURES

Destination	Marketing Airline	Regional Airline	Arrival Time	Base Year		+5 Yr.		+10 Yr.		+20 Yr.	
				Seats	Daily	Seats	Daily	Seats	Daily	Seats	Daily
DFW	AA	OO	6:00	65		65		65		76	
LAX	UA	OO	6:01	50		50		50		76	
DEN	UA	OO	6:28	70				70		76	
PHX	AA	OO	6:38	65		65		65		65	
SFO	UA	OO	6:41	70		70		70		76	
60 Minute Subtotal (6:00-6:59)				**320**	**28.0%**	**250**	**27.8%**	**320**	**24.5%**	**369**	**23.5%**
LAX	UA	OO	8:41	50		50		50		70	
60 Minute Subtotal (8:00-8:59)				**50**	**4.4%**	**50**	**5.6%**	**50**	**3.8%**	**70**	**4.5%**
SFO	UA	OO	10:19	50				70		76	
60 Minute Subtotal (10:00-10:59)				**50**	**4.4%**	**0**	**0.0%**	**70**	**5.4%**	**76**	**4.8%**
SFO	UA	OO	11:55	50		50		70		76	
60 Minute Subtotal (11:00-11:59)				**50**	**4.4%**	**50**	**5.6%**	**70**	**5.4%**	**76**	**4.8%**
LAX	UA	OO	12:05	70				70		76	
PHX	AA	OO	12:23	65				65		65	
LAS	LF		12:25	30		30		30		30	
DEN	UA	OO	12:50	50		50		76		76	
SEA	AS	QX	12:55	76		76		76		76	
60 Minute Subtotal (12:00-12:59)				**291**	**25.5%**	**156**	**17.4%**	**317**	**24.3%**	**323**	**20.6%**
PDX	AS	OO	13:05			76		76		76	
DFW	AA	MQ	13:40	76		76		76		76	
60 Minute Subtotal (13:00-13:59)				**76**	**6.6%**	**152**	**16.9%**	**152**	**11.6%**	**152**	**9.7%**
SAN	AS	OO	14:10	76		76		76		76	
SEA	AS	OO	14:56							76	
60 Minute Subtotal (14:00-14:59)				**76**	**6.6%**	**76**	**8.5%**	**76**	**5.8%**	**152**	**9.7%**
DEN	UA	OO	15:50	50		50		50		76	
60 Minute Subtotal (15:00-15:59)				**50**	**4.4%**	**50**	**5.6%**	**50**	**3.8%**	**76**	**4.8%**
PHX	AA	OO	16:31	65		65		65		65	
60 Minute Subtotal (16:00-16:59)				**65**	**5.7%**	**65**	**7.2%**	**65**	**5.0%**	**65**	**4.1%**
DFW	AA	OO	17:25							76	
60 Minute Subtotal (17:00-17:59)				**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**76**	**4.8%**
SFO	UA	OO	18:15	50		50		70		70	
60 Minute Subtotal (18:00-18:59)				**50**	**4.4%**	**50**	**5.6%**	**70**	**5.4%**	**70**	**4.5%**
PHX	AA	OO	19:14	65				65		65	
60 Minute Subtotal (19:00-19:59)				**65**	**5.7%**	**0**	**0.0%**	**65**	**5.0%**	**65**	**4.1%**
Total Daily Departing Passengers				**1,143**	**100.0%**	**899**	**100.0%**	**1,305**	**100.0%**	**1,570**	**100.0%**
Count of Daily Departures				**19**		**15**		**20**		**22**	

TABLE 2-13
HIGH RANGE FORECAST ADPM ARRIVALS

Origin	Marketing Airline	Regional Airline	Arrival Time	Base Year		+5 Yr.		+10 Yr.		+20 Yr.	
				Seats	Daily	Seats	Daily	Seats	Daily	Seats	Daily
LAX	UA	OO	9:23							76	
SFO	UA	OO	9:49	50				70		76	
60 Minute Subtotal (9:00-9:59)				**50**	**4.4%**	**0**	**0.0%**	**70**	**4.8%**	**152**	**7.1%**
SLC		-	10:45							109	
60 Minute Subtotal (10:00-10:59)				**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**109**	**5.1%**
DEN	UA	OO	11:25	50		50		76		76	
LAX	UA	OO	11:28	70		70		70		76	
PHX	AA	OO	11:53	65				65		65	
LAS	LF		11:55	30		30		30		30	
60 Minute Subtotal (11:00-11:59)				**215**	**18.8%**	**150**	**15.2%**	**241**	**16.4%**	**247**	**11.6%**
SEA	AS	QX	12:14	76		76		159		159	
SFO	UA	OO	12:15	50		50		76		76	
DFW	AA	MQ	12:49	76		76		76		76	
60 Minute Subtotal (12:00-12:59)				**202**	**17.7%**	**202**	**20.5%**	**311**	**21.2%**	**311**	**14.6%**
PDX	AS	OO	13:05			76		76		159	
SAN	AS	OO	13:27	76		76		76		76	
60 Minute Subtotal (13:00-13:59)				**76**	**6.6%**	**152**	**15.4%**	**152**	**10.4%**	**235**	**11.0%**
LAX	UA	OO	15:18	50				76		76	
60 Minute Subtotal (15:00-15:59)				**50**	**4.4%**	**0**	**0.0%**	**76**	**5.2%**	**76**	**3.6%**
PHX	AA	OO	16:01	65		65		65		65	
SLC		-	16:55							109	
60 Minute Subtotal (16:00-16:59)				**65**	**5.7%**	**65**	**6.6%**	**65**	**4.4%**	**174**	**8.2%**
DEN	UA	OO	17:45	50		50		70		76	
60 Minute Subtotal (17:00-17:59)				**50**	**4.4%**	**50**	**5.1%**	**70**	**4.8%**	**76**	**3.6%**
PHX	AA	OO	18:44	65		65		65		65	
SFO	UA	OO	18:45	50		50		76		76	
60 Minute Subtotal (18:00-18:59)				**115**	**10.1%**	**115**	**11.7%**	**141**	**9.6%**	**141**	**6.6%**
SLC		-	20:41							109	
DEN	UA	OO	20:42	70				70		76	
DFW	AA	OO	20:51	65		65		65		76	
60 Minute Subtotal (20:00-20:59)				**135**	**11.8%**	**65**	**6.6%**	**135**	**9.2%**	**261**	**12.3%**
SFO	UA	OO	21:23	50		50		70		76	
60 Minute Subtotal (21:00-21:59)				**50**	**4.4%**	**50**	**5.1%**	**70**	**4.8%**	**76**	**3.6%**
PHX	AA	OO	22:07	65		65		65		65	
LAX	UA	OO	22:19	70		70		70		76	
ORD		-	22:42							128	
60 Minute Subtotal (22:00-22:59)				**135**	**11.8%**	**135**	**13.7%**	**135**	**9.2%**	**269**	**12.6%**
Total Daily Arriving Passengers				**1,143**	**100.0%**	**984**	**100.0%**	**1,466**	**100.0%**	**2,127**	**100.0%**
Count of Daily Arrivals				**19**		**16**		**20**		**25**	

TABLE 2-14
HIGH RANGE FORECAST ADPM DEPARTURES

Destination	Marketing Airline	Regional Airline	Arrival Time	Base Year		+5 Yr.		+10 Yr.		+20 Yr.	
				Seats	Daily	Seats	Daily	Seats	Daily	Seats	Daily
SLC		-	6:00							109	
DFW	AA	OO	6:00	65		65		65		76	
LAX	UA	OO	6:01	50		50		76		76	
DEN	UA	OO	6:28	70				70		76	
PHX	AA	OO	6:38	65		65		65		65	
SFO	UA	OO	6:41	70		70		70		76	
60 Minute Subtotal (6:00-6:59)				**320**	**28.0%**	**250**	**25.4%**	**346**	**23.6%**	**478**	**22.5%**
LAX	UA	OO	8:41	50		50		70		76	
60 Minute Subtotal (8:00-8:59)				**50**	**4.4%**	**50**	**5.1%**	**70**	**4.8%**	**76**	**3.6%**
LAX	UA	OO	10:13							76	
SFO	UA	OO	10:19	50				70		76	
60 Minute Subtotal (10:00-10:59)				**50**	**4.4%**	**0**	**0.0%**	**70**	**4.8%**	**152**	**7.1%**
SLC		-	11:35							109	
SFO	UA	OO	11:55	50		50		76		76	
60 Minute Subtotal (11:00-11:59)				**50**	**4.4%**	**50**	**5.1%**	**76**	**5.2%**	**185**	**8.7%**
LAX	UA	OO	12:05	70		70		70		76	
PHX	AA	OO	12:23	65				65		65	
LAS	LF		12:25	30		30		30		30	
DEN	UA	OO	12:50	50		50		76		76	
SEA	AS	QX	12:55	76		76		159		159	
60 Minute Subtotal (12:00-12:59)				**291**	**25.5%**	**226**	**23.0%**	**400**	**27.3%**	**406**	**19.1%**
DFW	AA	MQ	13:40	76		76		76		76	
PDX	AS	OO	13:46			76		76		159	
60 Minute Subtotal (13:00-13:59)				**76**	**6.6%**	**152**	**15.4%**	**152**	**10.4%**	**235**	**11.0%**
SAN	AS	OO	14:10	76		76		76		76	
60 Minute Subtotal (14:00-14:59)				**76**	**6.6%**	**76**	**7.7%**	**76**	**5.2%**	**76**	**3.6%**
DEN	UA	OO	15:50	50				76		76	
60 Minute Subtotal (15:00-15:59)				**50**	**4.4%**	**0**	**0.0%**	**76**	**5.2%**	**76**	**3.6%**
PHX	AA	OO	16:31	65		65		65		65	
60 Minute Subtotal (16:00-16:59)				**65**	**5.7%**	**65**	**6.6%**	**65**	**4.4%**	**65**	**3.1%**
SLC		-	17:45							109	
60 Minute Subtotal (17:00-17:59)				**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**109**	**5.1%**
SFO	UA	OO	18:15	50		50		70		76	
60 Minute Subtotal (18:00-18:59)				**50**	**4.4%**	**50**	**5.1%**	**70**	**4.8%**	**76**	**3.6%**
PHX	AA	OO	19:14	65		65		65		65	
60 Minute Subtotal (19:00-19:59)				**65**	**5.7%**	**65**	**6.6%**	**65**	**4.4%**	**65**	**3.1%**
ORD		-	23:17							128	
60 Minute Subtotal (23:00-23:59)				**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**128**	**6.0%**
Total Daily Departing Passengers				**1,143**	**100.0%**	**984**	**100.0%**	**1,466**	**100.0%**	**2,127**	**100.0%**
Count of Daily Departures				**19**		**16**		**20**		**25**	

TABLE 2-15
DESIGN DAY/DESIGN HOUR ACTIVITY FORECASTS

Description	Planning Activity Level 2019	2024	2029	2039
Total Enplaned Passengers				
Base Case Forecast				
Annual Enplanements	256,694	233,219	354,201	426,717
Peak Month (8.9% of annual)	22,822	20,735	31,491	37,939
Average Day (31 days)	736	669	1,016	1,224
Peak Hour Passenger Enplanements	320	250	320	369
Peak 15-Minute Passenger Enplanements	273	203	273	320
Peak Hour Passenger Deplanements	215	202	235	247
Peak 15-Minute Passenger Deplanements	150	144	176	178
Peak Hour Total Passengers	493	358	545	551
Peak 15-Minute Total Passengers	298	324	354	355
High Range Forecast				
Annual Enplanements	256,694	256,694	399,140	579,485
Peak Month (8.9% of annual)	22,822	22,822	35,487	51,521
Average Day (31 days)	736	736	1,145	1,662
Peak Hour Passenger Enplanements	320	250	400	478
Peak 15-Minute Passenger Enplanements	273	203	299	429
Peak Hour Passenger Deplanements	215	202	311	311
Peak 15-Minute Passenger Deplanements	150	150	256	256
Peak Hour Total Passengers	493	428	711	717
Peak 15-Minute Total Passengers	298	324	517	521
Total Operations				
Annual Operations	80,229	80,620	82,423	85,338
Peak Month (9.1% of annual)	7,300	7,335	7,499	7,765
Average Day (31 days)	235	237	242	250
Peak Hour (9.1%)	21	22	22	23
Remain overnight (RON) Parking	6	5	6	6
Commercial Passenger Operations				
Annual Commercial Passenger Operations	12,272	11,658	13,331	15,978
Peak Month (8.9% of annual)	1,092	1,038	1,186	1,422
Average Day (31 days)	35	33	38	46
Peak Hour Passenger Departures	5	4	5	5
Peak Hour Passenger Arrivals	4	3	4	4

Source: Preliminary FAA TAF 2020
Note: (1) Differences in peak hour totals from 2019 to 2024 in the high range are based on assumed schedules and markets.

2.8 COMPARISON WITH OTHER FORECASTS

Forecasts prepared in a Master Plan are reviewed by the FAA and compared to the TAF projections. FAA Order 5090.3C, *Field Formulation of The National Plan of Integrated Airport Systems* provides guidance on the FAA review process. However, the FAA Revision to Guidance on Review and Approval of Aviation Forecasts (June 2008) letter states:

"For all classes of airports, forecasts for total enplanements, based aircraft, and total operations are considered consistent with the TAF if they meet the following criterion:

- Forecasts differ by less than 10 percent in the 5-year forecast period, and 15 percent in the 10-year forecast period"

The FAA TAF 2019 would have been the baseline forecast used to compare the base case forecast with, however, per FAA guidance the FAA TAF 2019 was not to be used. As result, the Preliminary FAA TAF 2020[14] was used in its place. While the difference between the base case forecast and the Preliminary FAA TAF 2020 exceeds 10 percent in five years, the variance was the result of using the FAA's baseline recovery period of 2025 to 2019 levels. Based on these projections the National Plan of Integrated Airport Systems designation of SBP as a primary service nonhub airport will remain constant over the planning period. *Table 2-16* compares the base case forecast with the Preliminary FAA TAF 2020.

TABLE 2-16
FAA TAF COMPARISON

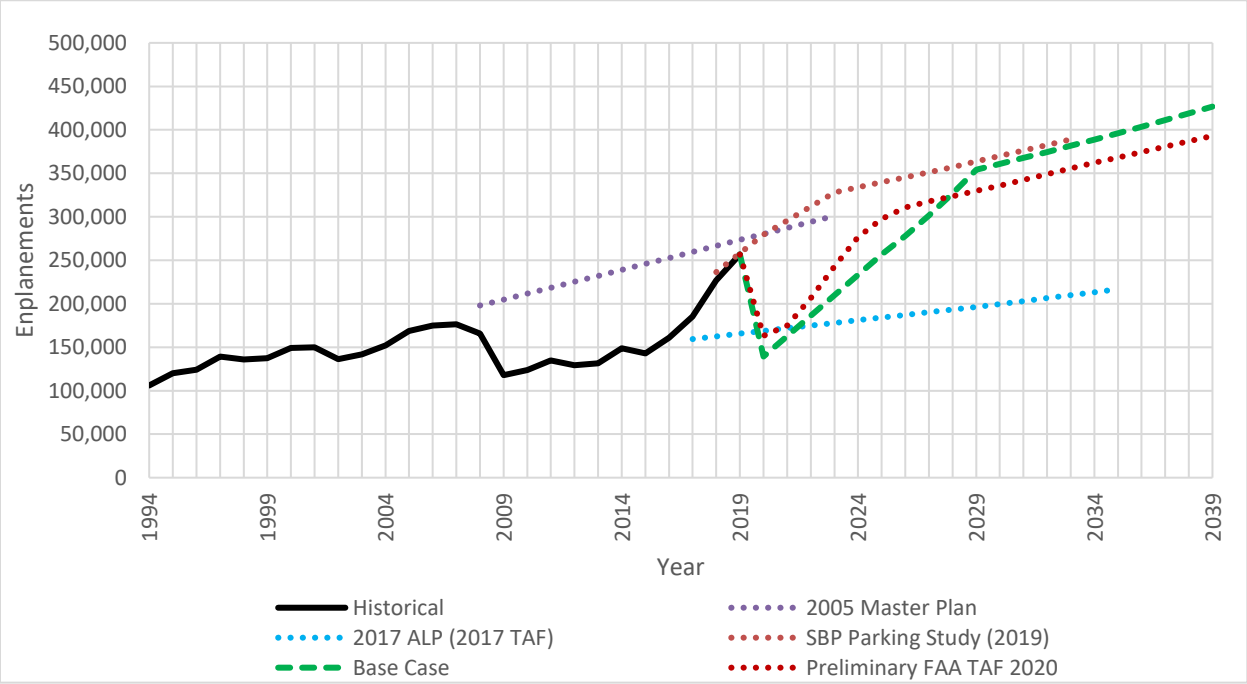
Description	Year	Base Case Forecast	Preliminary FAA TAF 2020	Percent Higher / (Lower)
Enplanements				
Base Year	2019	256,694	256,694	0.0%
Base Year +5 Years	2024	233,219	276,313	(15.6%)
Base Year +10 Years	2029	354,201	329,680	7.4%
Base Year +15 Years	2034	388,772	362,070	7.4%
Total Operations				
Base Year	2019	80,229	80,229	0.0%
Base Year +5 Years	2024	80,620	84,790	(4.9%)
Base Year +10 Years	2029	82,423	86,012	(4.2%)
Base Year +15 Years	2034	83,879	87,082	(3.7%)

Source: FAA TAF, 2019

Figure 2-13 provides a comparison of the base case forecast for enplaned passengers that is presented in this chapter with the 2005 SBP Master Plan, 2017 SBP Airport Layout Plan, the 2019 SBP Parking Study, and the Preliminary FAA TAF 2020. Likewise, *Figure 2-14* provides a comparison of the base case forecast for total annual operations with the forecasts of the 2005 SBP Master Plan, the 2017 SBP Airport Layout Plan, and Preliminary FAA TAF 2020.

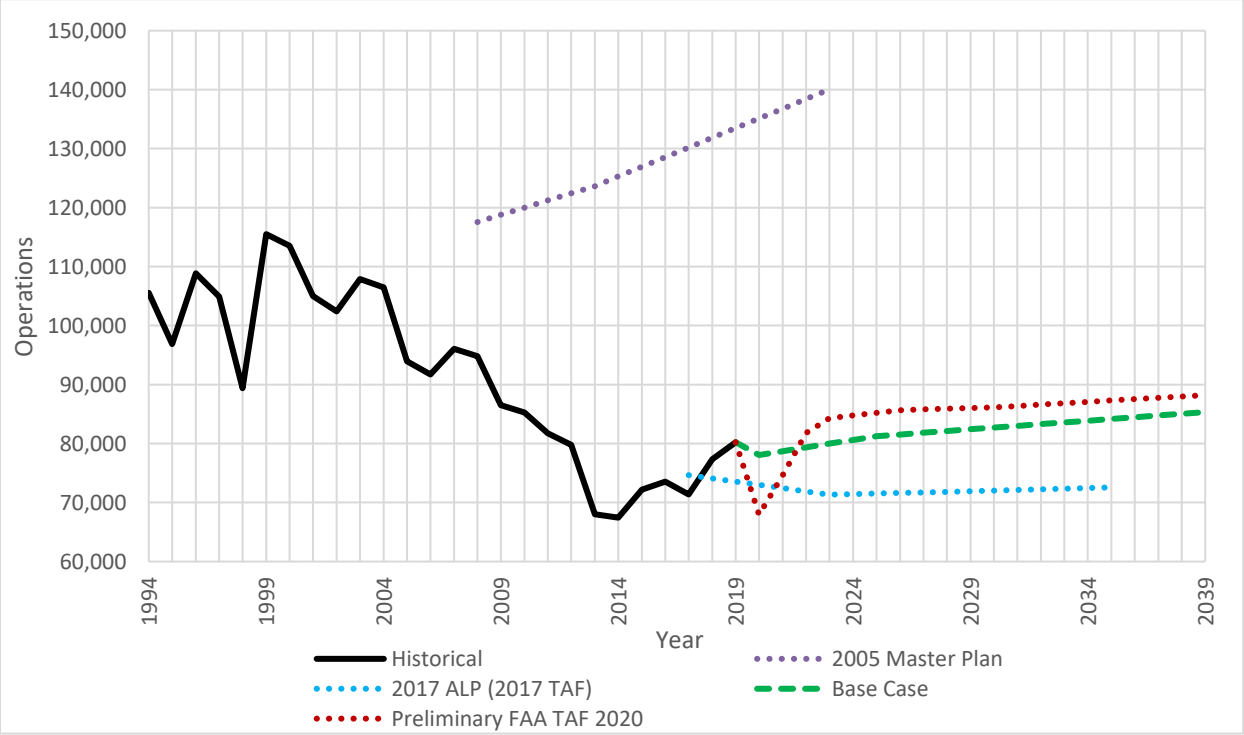
[14] The Preliminary FAA TAF 2020 was reviewed by the Airport in 2020.

FIGURE 2-13
COMPARISON OF ANNUAL ENPLANED PASSENGER FORECASTS



Source: Preliminary FAA TAF 2020, 2021; SBP Parking Study 2019; SBP ALP, 2017; SBP Airport Master Plan, 2005

FIGURE 2-14
COMPARISON OF TOTAL ANNUAL OPERATIONS FORECASTS



Source: FAA TAF, 2017; FAA TAF, 2019.

2.9 CRITICAL AIRCRAFT

FAA Advisory Circular 150-5700-17 *Critical Aircraft* defines the critical aircraft[15] {as} the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of the airport. Regular use is 500 annual operations, including both itinerant and local operations but excluding touch-and-go operations. An operation is either a takeoff or landing." The specifications of the critical aircraft are associated with an Aircraft Approach Category (AAC) based on the approach speed of the aircraft when landing, Airplane Design Group (ADG) based on the wingspan and tail height of the aircraft, and Taxiway Design Group (TDG) based on the landing gear spacing and configuration.

This master plan forecast identified a critical aircraft for each of the Airport's runways. While the primary runway (Runway 11-29) can accommodate all aircraft that operate at SBP, the secondary runway (Runway 7-25) is limited to smaller aircraft due to runway dimensions and pavement strength.

2.9.1 Primary Runway 11-29 Critical Aircraft

Annual FAA Traffic Flow Management System Counts totals of operations by aircraft show that the current critical aircraft for Runway 11-29 is a C-III, an increase from the C-II designated on the 2017 ALP. The airlines have significantly up-gauged the size of aircraft operating at SBP, a trend that is forecast to continue into the future. Given the characteristics of the C-III aircraft that have operated at SBP, a composite critical aircraft made up of the Bombardier CRJ-900 (CRJ900) and Embraer E75L (E175) was selected. Both aircraft are Aircraft Approach Category C and Airplane Design Group III. The E175 is a Taxiway Design Group 3, and the CRJ900 is a Taxiway Design Group 2, with the larger Taxiway Design Group 3 becoming the designated category.

The future critical aircraft for Runway 11-29 will remain the CRJ900 / E175 composite, with following designations:

Primary Runway 11-29

Current Critical Aircraft: CRJ900 / E175

- AAC – C
- ADG – III
- TDG – 3

Future Critical Aircraft: CRJ900 / E175

- AAC – C
- ADG – III
- TDG – 3

Table 2-17 shows the historical annual operations by C-III aircraft at SBP for 2018 and 2019. *Figure 2-15* shows some of the specifications of the CRJ900 and E175.

[15] The design aircraft may also be referred to as the design aircraft.

TABLE 2-17
PRIMARY RUNWAY CRITICAL AIRCRAFT OPERATIONS

Year	Runway 11-29			
	Total C-III	CRJ900	E175	Other C-III
2018	5,042	2,458	2,342	242
2019	3,850	759	2,254	837

Source: FAA Traffic Flow Management System Counts, 2018-2019

2.9.2 Secondary Runway 7-25 Critical Aircraft

Runway 7-25 is used by smaller piston and turboprop aircraft. Therefore, a secondary critical aircraft is designated for this smaller runway. Traffic Flow Management System Counts data shows that the runway is used by both A-I Small and B-I Small aircraft. Based on this information, the current critical aircraft continues to be the Cessna Golden Eagle 421 (C421) as shown on the 2017 ALP. The C421 is representative of the B-I Small Group, which also includes the Beech King Air 90 (BE9L) and the Cessna 425 Corsair (C425).

Given the high volume of B-I Small aircraft at SBP, the C421 is expected to remain as the future critical aircraft for the runway and anticipated to remain heavily used over the forecast horizon.

Secondary Runway 7-25

Current Critical Aircraft: C421

- AAC – B
- ADG – I (Small)
- TDG – 1A

Future Critical Aircraft: C421

- AAC – B
- ADG – I (Small)
- TDG – 1A

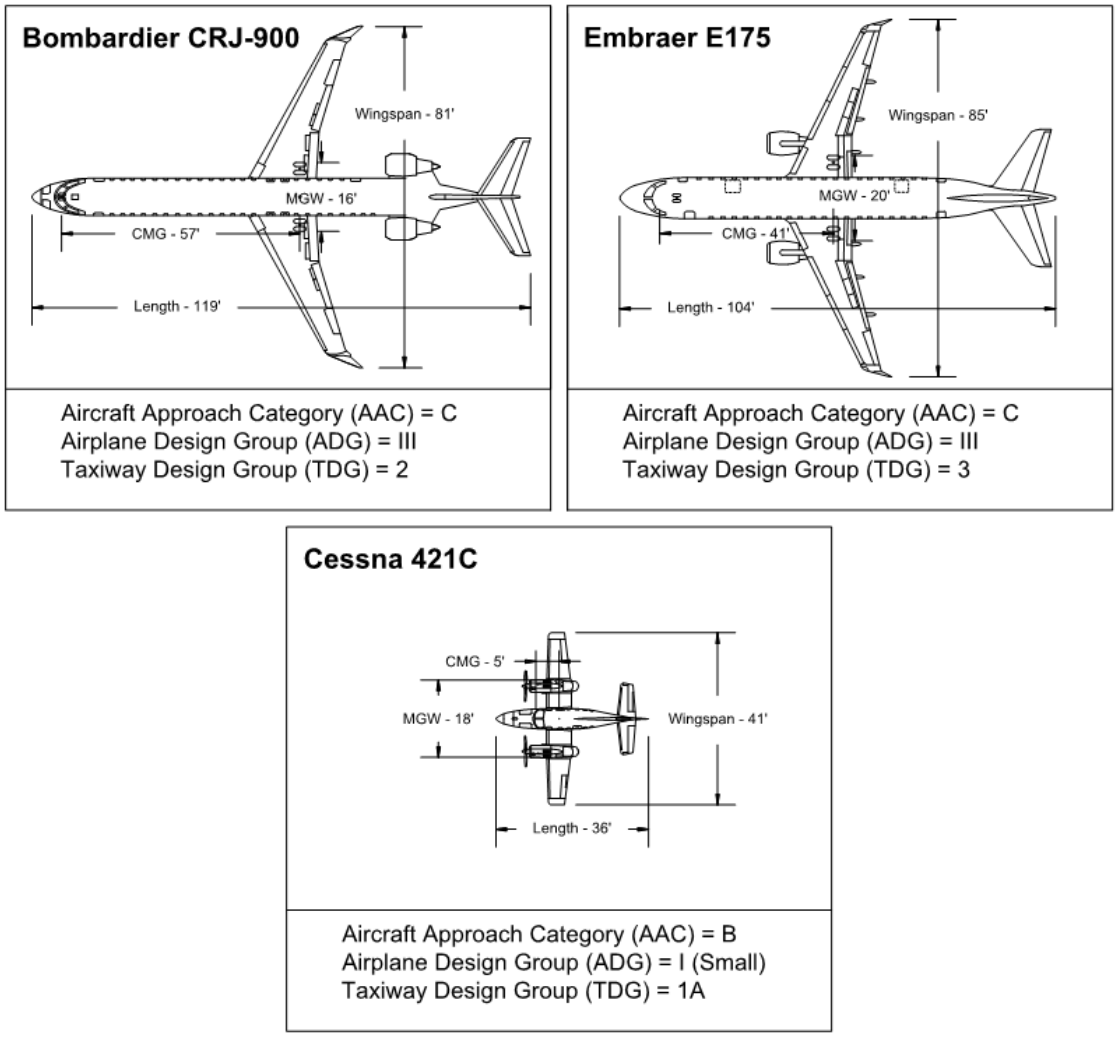
Table 2-18 breaks down historical operations from 2018-2019, with the most active B-I Small aircraft identified during that time and the remainder of B-I Small grouped together. *Figure 2-15* shows some of the specifications of the C421.

TABLE 2-18
SECONDARY RUNWAY CRITICAL AIRCRAFT OPERATIONS

Year	Runway 7-25				
	Total B-I Small	BE9L	C421	C425	Other B-I Small
2018	1,067	130	67	291	579
2019	770	140	88	161	381

Source: FAA Traffic Flow Management System Counts, 2018-2019

FIGURE 2-15
CRITICAL AIRCRAFT SPECIFICATIONS



2.10 SUMMARY OF FORECASTS

Table 2-19 presents a summary listing of the aviation demand forecasts at the Airport. These projections are used in the following chapters of the Master Plan to assess the capacity of existing facilities and determine facility expansions or improvements needed to satisfy future activity levels.

2.10.1 Planning Activity Levels

Since airport activity levels are heavily influenced by unanticipated economic events, or other significant events and changes to communities or the aviation industry such as the COVID-19 pandemic, the planning facility expansions or required upgrades based on specific years can be challenging. Therefore, it is generally accepted that the planning and construction of a new facility be initiated only when specific activity levels have been reached that necessitate the improvement, rather than being initiated based on reaching a calendar date.

Ultimately, these milestones are instrumental as they equate to planning activity levels (PAL)s and act as triggers for various types of airport development or improvements depending on the forthcoming facility requirements. A PAL could occur sooner or later than the year associated with that level of activity in this document. For planning purposes, the subsequent three PALs (PAL 1, PAL 2, and PAL 3) correspond to the base case forecast years (Base Year +10 years, Base Year +15 years, and Base Year +20 years).

Figure 2-16 shows the process of making facility improvements based on reaching PALs and how they are incorporated into the growth projected in a forecast.

FIGURE 2-16
PLANNING ACTIVITY LEVELS DESCRIPTION

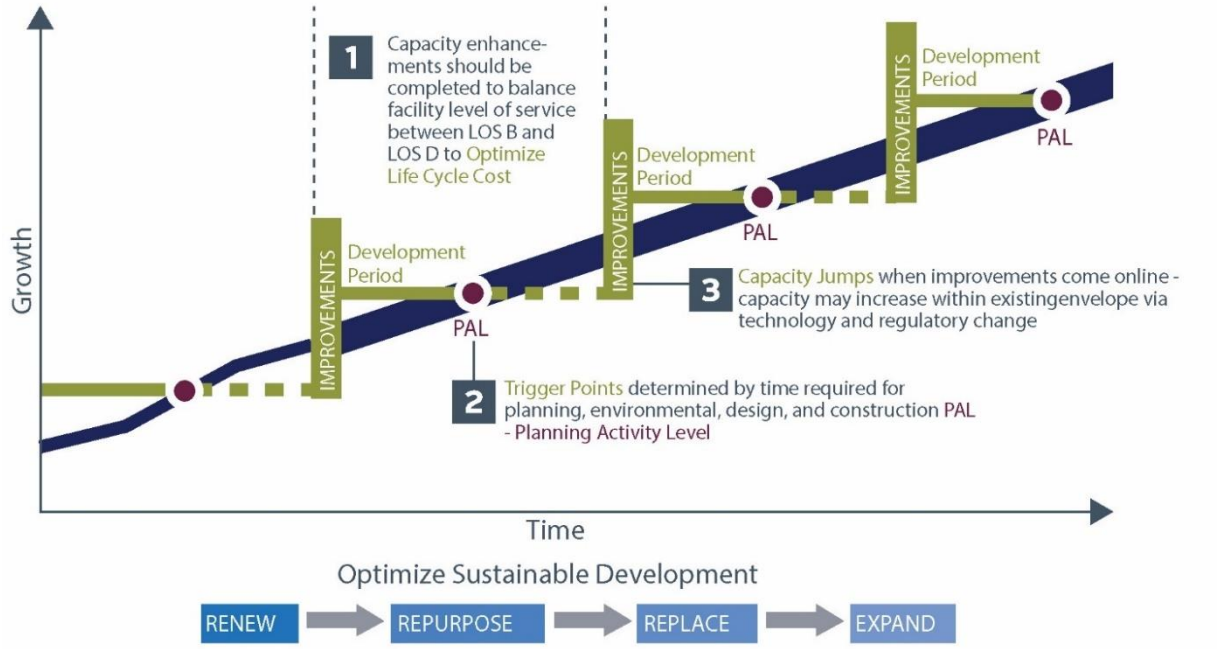


TABLE 2-19
SUMMARIZATION AND DOCUMENTATION OF FORECAST

A. Forecast Levels and Growth Rates

	Base Yr. Level	Base Yr. +1yr.	Base Yr. +5yrs.	Base Yr. +10yrs.	Base Yr. +15yrs.	Base Yr. to +1	Base Yr. to +5	Base Yr. to +10	Base Yr. to +15
Passenger Enplanements									
Air Carrier	546	324	543	824	905	-40.6%	-0.1%	4.2%	3.4%
Commuter	256,148	138,993	232,676	353,377	387,867	-45.7%	-1.9%	3.3%	2.8%
TOTAL ENPLANEMENTS	256,694	139,318	233,219	354,201	388,772	-45.7%	-1.9%	3.3%	2.8%
Operations									
Itinerant									
Air carrier	5,213	3,910	4,952	5,663	6,225	-25.0%	-1.0%	0.8%	1.2%
Commuter/air taxi	7,059	5,294	6,706	7,668	8,429	-25.0%	-1.0%	0.8%	1.2%
Total Commercial Operations	12,272	9,204	11,658	13,331	14,654	-25.0%	-1.0%	0.8%	1.2%
General aviation	36,198	36,684	36,740	36,810	36,882	1.3%	0.3%	0.2%	0.1%
Military	642	642	642	642	642	0.0%	0.0%	0.0%	0.0%
Local									
General aviation	30,931	31,346	31,394	31,454	31,515	1.3%	0.3%	0.2%	0.1%
Military	186	186	186	186	186	0.0%	0.0%	0.0%	0.0%
TOTAL OPERATIONS	**80,229**	**78,062**	**80,620**	**82,423**	**83,879**	**-2.7%**	**0.1%**	**0.3%**	**0.3%**
Instrument Operations	Not included in this forecast								
Peak Hour Operations	21	21	22	22	23	-2.3%	0.1%	0.3%	0.4%
Cargo/mail (enplaned + deplaned tons)	Not included in this forecast								
Based Aircraft [1]									
Single Engine (Non-jet)	236	237	238	239	242	0.4%	0.2%	0.1%	0.2%
Multi Engine (Non-jet)	13	13	14	16	18	0.0%	1.5%	2.1%	2.2%
Jet Engine	11	11	13	16	18	0.0%	3.4%	3.8%	3.3%
Helicopter	6	6	7	8	8	0.0%	3.1%	2.9%	1.9%
Other	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%
TOTAL	**266**	**267**	**272**	**279**	**286**	**0.4%**	**0.4%**	**0.5%**	**0.5%**

B. Operational Factors

	Base Yr. Level	Base Yr. +1yr.	Base Yr. +5yrs.	Base Yr. +10yrs.	Base Yr. +15yrs.
Average aircraft size (seats)					
Air carrier	69.4	69.4	71.1	70.3	70.3
Commuter	47.5	47.5	47.1	45	30
Average enplaning load factor					
Air carrier	81.4%	79.1%	79.1%	79.1%	79.1%
Commuter	81.4%	79.1%	79.1%	79.1%	79.1%
GA operations per based aircraft	252	255	250	245	239

[1] Base Year 2019 and Base Year +1-year totals and distributions of based aircraft were updated based on the Airport's input and most recent FAA 5010-1 Form.

Source: Preliminary FAA TAF 2020; RS&H, 2021

SLO County Airport
Master Plan
Chapter 3 Facility Requirements

RS&H

Chapter 3
Facility Requirements

May 2023

San Luis Obispo, California

RS&H No.: 2260015010

Prepared by RS&H, Inc. at the direction
of the County of San Luis Obispo

RS&H

PREPARATION

"The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws."

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CHAPTER 3

FACILITY REQUIREMENTS

3.1 INTRODUCTION

Future airport facility requirements include the type, size, and/or quantity of facilities necessary to accommodate future development needs of the airport. The need for new or expanded facilities is often driven by capacity shortfalls that leave an airport unable to accommodate forecast growth, as described in *Chapter 2, Aviation Demand Forecast*, with existing facilities. The requirements for new or improved facilities can also be driven by other rationale, such as: updated regulatory standards set by the Federal Aviation Administration (FAA); an evolving strategic vision for the airport; the need to replace outdated facilities; or the desire to introduce new services or facilities. This rationale can have an impact on future needs and are considered in the determination of future facility requirements.

For the facility requirements based on aviation activity, the aviation activity milestones are represented as Planning Activity Levels (PAL) throughout this Chapter. The PALs are associated with forecast years that span the 20-year planning horizon. However, due to the potential for aviation growth to occur faster or slower than forecast and to compensate for impacts caused by unforeseen industry disruptors (e.g., COVID-19), the facility requirements are triggered by activity levels rather than a specific year.

Since the completion of the Master Plan forecast, aviation activity at SLO County Airport (also referred to as "Airport" or "SBP" throughout this report) was recovering faster than forecast at the time this document was published in 2023. However, the use of PALs allows the Airport to associate the need for specific facility improvements to aviation activity milestones. The recommended project implementation timeline to accommodate the aviation demand considers the accelerated aviation activity since the completion of the Master Plan forecast. The project implementation timeline described in *Chapter 5, Facilities Implementation Plan*.

PAL 1 is associated with the demand for the 2029 Base Case Forecast, PAL 2 is associated with the demand for the 2034 Base Case Forecast, and PAL 3 is associated with the demand for the 2039 Base Case Forecast. A PAL was not associated with the 2024 Base Case Forecast because no aviation growth was forecast to occur between the 2019 base year and 2024 as the aviation industry recovers from COVID-19.

In addition to the preferred Base Case Forecast's PAL 1 through PAL 3, the Master Plan includes a High Case forecast. The High Case forecast adds two additional PALs – PAL 4 and PAL 5 – which reflect the higher number of enplaned passengers. The High Case forecast assumes the following:

1) all airlines would upgauge their fleet mix to aircraft larger than 50-seats by 2029,
2) a new airline would begin service by 2034, and
3) the operation of multiple larger narrowbody aircraft would occur by 2039, including the Airbus 220, Airbus A319-100, and Boeing 737-800.

The 2034 and 2039 activity levels from the alternative High Case forecast are represented as PAL 4, and PAL 5, respectively, in the facility requirements.

The aviation demand for PAL 1 through PAL 5 is summarized in *Table 3-1*.

TABLE 3-1
DEMAND ASSOCIATED WITH EACH PLANNING ACTIVITY LEVEL

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Passenger Enplanements						
Annual Enplanements	256,694	354,201	388,772	426,717	481,117	579,485
Design Day (1) Enplanements	736	1,016	1,115	1,224	1,380	1,662
Peak Hour Enplanements	320	320	340	369	461	478
Annual Aircraft Operations						
Commercial Operations	12,272	13,331	14,654	15,978	-	-
General Aviation Operations	67,129	68,264	68,397	68,532	-	-
Military Operations	828	828	828	828	-	-
Total Operations	80,229	82,423	83,879	85,338	-	-
General Aviation Based Aircraft						
Single Engine (Non-Jet)	236	239	242	244	-	-
Multi-Engine (Non-Jet)	13	16	18	19	-	-
Jet Engine	11	16	18	21	-	-
Helicopter	6	8	8	8	-	-
Total Based Aircraft	266	279	286	292	-	-

Note: (1) - Represented as average day of the peak month (i.e., average day in October)

This Chapter addresses facility requirements pertaining to the following functional areas:

- Airfield Demand and Capacity Analysis
- Airfield
- Passenger Terminal
- Ground Access
- Air Cargo
- General Aviation and Maintenance, Repair & Overhaul
- Support Facility
- Utilities

3.2 AIRFIELD DEMAND AND CAPACITY ANALYSIS

Capacity, or throughput capacity, is defined as a measure of the maximum number of aircraft operations that can be accommodated on the airport in an hour. FAA uses Annual Service Volume (ASV) as a reasonable estimate of an airport's annual capacity. When the annual operational demand exceeds eighty percent of the ASV, the Airport can expect significant delays and congestion. According to FAA Order 5090.3C, *Field Formulation of the National Plan of Integrated Airport Systems*, an airport can become eligible for project funding to increase capacity when it has reached sixty percent of its current capacity.

To determine airfield capacity and associated aircraft delays at a planning level, the methodology of FAA Advisory Circular (AC) 150/5060-5, *Airport Capacity and Delay* is generally used. ASV accounts for airfield characteristics, aircraft mix, meteorological conditions, touch and go operations, arrival and departure mix, airspace, and air traffic control.

3.2.1 Airfield Characteristics

The number of runways or taxiways and the navigational aids available directly affect airport capacity. The orientation of runways (parallel or not) and their separation distances, and taxiway locations with respect to runways may influence the operations that can be handled (simultaneous VFR, simultaneous IFR). An efficient taxiway system combined with strategic runway access points will lead to more efficient use of airport capacity. SBP has two non-parallel runways including the 6,100-foot-long Runway 11-29 and 2,500-foot-long Runway 7-25. Runway 11-29 has a full parallel taxiway, Taxiway A, and a partial parallel taxiway, Taxiway M. Runway 7-25 has a full parallel taxiway with Taxiway J.

3.2.2 Aircraft Mix

The size of an aircraft, its approach speed and braking ability influence the capacity of an airport. Larger aircraft with higher takeoff weight requirements usually reduce the capacity because greater airspace separation is required due to wake turbulence. FAA requires establishing an aircraft mix index. The mix index is computed using the following formula:

$$Mix\ Index = \%(C + 3D)$$

where:

C = percentage of aircraft weighing 12,500 pounds to 300,000 pounds
D = percentage of aircraft weighing greater than 300,000 pounds

During the planning horizon, SBP is forecast to have a fleet mix where approximately half of all operations are aircraft below 12,500 pounds and no operations are aircraft with a take-off weight of greater than 300,000 pounds.

3.2.3 Meteorological Conditions

Good weather conditions allow a higher capacity than poor weather conditions. A high percentage of flights under Visual Flight Rules (VFR) generally implies more capacity than a high percentage of flights under Instrument Flight Rules (IFR).

3.2.4 Touch and Go Operations

Touch and go operations typically require less runway occupancy time. Therefore, touch-and-go operations affect capacity less than traditional operations. Air Traffic Control (ATC) staff has estimated existing touch and go operations at 100 per day. Therefore, SBP touch-and-go operations will be estimated at approximately 20-50% of traffic.

3.2.5 Arrivals and Departures

An arrival typically needs more time on the runway than a departure. Therefore, arrivals affect capacity more than departure operations. The FAA states that if 40 percent of operations are arrivals, this will generate 11 percent more aircraft that can be accommodated in a hour than if 50 percent are arrivals. Consideration of arrivals and departures for capacity is typically more applicable for consideration at commercial service airports that experience large incoming and outgoing banks of aircraft. For SBP, it is assumed that there is an equal split of arrival and departure operations.

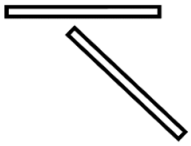
3.2.6 Airspace and Air Traffic Control

The location of the airport airspace and air traffic control (ATC) rules of separation will affect capacity. Surrounding obstacles, as well as ATC procedures, can also influence air traffic flow and capacity.

3.2.7 Airfield Capacity Analysis

SBP is a two-runway system comparable to the #14 configuration depicted in AC 150/5060-5, shown in *Figure 3-1*. The ASV of a runway depends on the mix index associated with that runway. As discussed, mix index is related to the percentage of heavier aircraft operations compared to total annual operations. For the Airport the mix index is forecast to remain between 21 and 50 for the planning period, resulting in an ASV of 225,000.

FIGURE 3-1
TWO-RUNWAY MIX INDEX AND ANNUAL SERVICE VOLUME

Runway Configuration	Mix Index %(C+3D)	ASV
14. 	0 to 20	270,000
	21 to 50	225,000
	51 to 80	220,000
	81 to 120	225,000
	121 to 130	265,000

Source: FAA Advisory Circular (AC) 150/5060-5, *Airport Capacity and Delay*

Comparing the forecast operations to the ASV creates an ASV ratio which helps identify any existing and future capacity constraints. The generally accepted industry benchmark to begin planning for additional airfield capacity is when demand reaches 60 percent of the ASV, and construction of improvements is needed when demand reaches 80 percent of ASV. As shown in *Table 3-2*, the ASV ratio for SBP remains below these thresholds for the planning period.

TABLE 3-2
AIRFIELD CAPACITY ANALYSIS

Existing Runway System	2019	PAL 1	PAL 2	PAL 3
Annual Service Volume	225,000	225,000	225,000	225,000
Annual Demand	80,229	82,422	83,879	85,338
ASV Demand/Capacity Ratio	36%	37%	37%	38%

Source: FAA Advisory Circular (AC) 150/5060-5, *Airport Capacity and Delay*

Due to airspace, fleet mix, wind conditions, and available runway length, limited operations occur using Runway 7-25. As shown in *Figure 3-2,* the current two-runway system provides marginally more capacity than would a one runway system. At the PAL 3 level of operations, the ASV Demand/Capacity Ratio only increases from 38% in a two-runway system compared to 44% in a one-runway system.

FIGURE 3-2
ONE-RUNWAY MIX INDEX AND ANNUAL SERVICE VOLUME

Runway Configuration	Mix Index %(C+3D)	ASV
1.	0 to 20	230,000
	21 to 50	195,000
	51 to 80	205,000
	81 to 120	210,000
	121 to 130	240,000

Source: FAA Advisory Circular (AC) 150/5060-5, *Airport Capacity and Delay*

3.3 AIRFIELD

The airfield comprises the runway, taxiways, apron pavement, navigational aids, and lighting supporting these facilities. This section describes the methodology and results of analysis conducted to determine the requirements for these airfield elements. Requirements were established considering compliance with Federal Aviation Administration (FAA) Advisory Circulars and industry standards.

Airfield facility requirements are presented for the following airfield elements:

- Runway Requirements – runway designation, orientation, length, pavement strength, and clearance / safety areas
- Taxiway Requirements – clearance / safety areas, non-standard taxiway design conditions
- Visual Aids and Navigational Requirements – electronic, visual, and metrological aids

3.3.1 Airport Design Criteria

The critical aircraft determines the geometric design standards, protection areas, and separation distances for runways, taxiways/taxilanes and aprons. The airfield geometry must be designed so the critical aircraft is able to use the runways, taxiways and apron areas. Airport design standards are established in FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*. This AC provides the geometric dimensional criteria based upon the critical aircraft's designated Aircraft Approach Category (AAC), Airplane Design Group (ADG), and Taxiway Design Group (TDG). As identified in *Chapter 2, Aviation Demand Forecast*, the composite critical aircraft are the Bombardier CRJ-900 and Embraer E175 for Runway 11-29 and the airport at-large. The Cessna 421 is the critical aircraft for Runway 7-25 and the west side of the airport. Critical aircraft included in the High Case forecast, reflected in PAL 4 and PAL 5, are the Airbus A319 and Boeing 737-800 – both of which would use Runway 11-29. Designing airfield components to accommodate these aircraft is critical to maintaining a safe and efficient airfield environment. The characteristics of the critical aircraft are described in *Table 3-3*.

TABLE 3-3
CRITICAL AIRCRAFT

Aircraft	PAL	Airfield Components	Aircraft Approach Category	Airplane Design Group	Taxiway Design Group
Airbus A319	4, 5	Runway 11-29	C	III	3
Boeing 737-800	4, 5	Runway 11-29	D	III	3
Bombardier CRJ-900	1-5	Runway 11-29	C	III	3
Cessna 421	1-5	Runway 7-25	B	I-Small	1A
Embraer E175	1-5	Runway 11-29	C	III	3

3.3.2 Runway Requirements

Analysis of the runways addresses the geometric ability of the runways to meet FAA design standards based on the critical aircraft. Elements examined in this section include runway designation, orientation, length, pavement strength, and geometric and separation standards.

3.3.2.1 Designation

FAA Advisory Circular 150/5300-13B, *Airport Design*, indicates that the primary runway should be orientated in the direction of the prevailing winds. Every runway has two associated directional headings. A true heading, or the direction toward which it is physically oriented that will not change unless the runway is realigned, and a magnetic heading, which is determined by the runway's orientation along with an adjustment for magnetic declination. A runway's magnetic heading is important for pilots since they use magnetic compasses to determine their heading while in flight. Runway designations are provided on each runway to indicate the runway orientation according to the magnetic compass bearing. Due to the slow drift of the magnetic poles on the Earth's surface in relation to the location of the Airport, the magnetic bearing of a runway can change over time and runway designations must occasionally be updated. It is industry standard that a runway designation be considered when the runway magnetic heading shifts more than 5° from the runway marking designation.

The rate of magnetic variance at SBP is 12.50° E ± 0.35° E as of August 2020. The current rate of change is 0.08° W per year. As shown in *Table 3-4*, Runway 11-29 is not forecast to be revised during the planning period. However, Runway 7-25 exceeds the 5° standard for revising the runway marking designation and is recommend for an update to Runway 8-26.

TABLE 3-4
RUNWAY DESIGNATION

Runway Designation	Runway Heading	True Bearing	Magnetic Bearing	Magnetic Bearing	Runway Heading	Runway Designation
Runway 11	112°	124° 45' 16"	112° 15' 16"	113° 51' 16"	113°	Runway 11
Runway 29	292°	304° 45' 49"	292° 15' 49"	293° 51' 49"	293°	Runway 29
Runway 7	77°	89° 46' 44"	77° 16' 44"	78° 52' 44"	78°	Runway 8
Runway 25	257°	269° 47' 01"	257° 17' 01"	258° 53' 01"	258°	Runway 26

Source: NOAA, 2020

3.3.2.2 Orientation

The primary factor in determining runway orientation is the direction of prevailing winds. FAA Advisory Circular 150/5300-13B, *Airport Design*, indicates the primary runway should be orientated in the direction of the prevailing winds. FAA runway design standards recommend an airport's runway system provide a minimum of 95 percent wind coverage. If a single runway cannot provide this level of coverage, then a crosswind runway is warranted.

The following runway wind coverage analysis considers ten years of meteorological data (January 2010 through December 2019) from the National Climactic Data Center for wind speed and direction in all-weather, VFR and IFR conditions. Four crosswind components were evaluated – 10.5 knots, 13 knots, 16 knots, and 20 knots to establish the levels of coverage for each of the Airport's runways. The minimum crosswind component is 16 knots for Runway 11-29 and 10.5 knots for Runway 7-25.

Table 3-5 summarizes the resulting wind coverage for each runway direction individually and the combined runway system. The wind coverage provided by Runway 11-29 exceeds 98 percent in each weather conditions and crosswind component. Based on these results, Runway 7-25 is not required to satisfy the need for a crosswind runway but it does provide utility for general aviation activities, such as flight training.

TABLE 3-5
WIND COVERAGE ANALYSIS

Runway and Crosswind Component	All Weather Wind Coverage	VFR Wind Coverage	IFR Wind Coverage
Runway 11-29			
10.5 knots	98.28%	98.10%	99.10%
13 knots	99.34%	99.32%	99.40%
16 knots	99.89%	99.90%	99.84%
20 knots	99.98%	99.99%	99.97%
Runway 7-25			
10.5 knots	88.18%	85.58%	97.12%
13 knots	93.89%	92.53%	98.59%
16 knots	98.12%	97.66%	99.73%
20 knots	99.84%	99.80%	99.97%
Combined			
10.5 knots	98.56%	98.39%	99.11%
13 knots	99.55%	99.53%	99.59%
16 knots	99.93%	99.94%	99.89%
20 knots	100.00%	100.00%	99.99%

Source: National Climate Data Center; FAA Wind Analysis

3.3.2.3 Runway Length

An analysis was completed to evaluate the existing length of Runway 11-29 and is described in this section. A runway length requirements analysis was not completed for Runway 7-25. The goal was to understand if Runway 11-29 is capable of accommodating takeoff and landing requirements of the aircraft and markets identified in the Master Plan forecast. Not all aircraft identified in the forecast were included in the analysis, but rather key aircraft deemed to be most demanding. The following aircraft types were included in the analysis:

- Bombardier CRJ-900
- Embraer E175
- Boeing 737-800
- Boeing 737-MAX8
- Airbus A319
- Airbus A320

Similarly, the analysis included key destinations that identified from the Master Plan forecast as well as some aspirational city pairs. The following airport destinations were included in the analysis:

- PHX – Phoenix Sky Harbor International Airport (Phoenix, AZ)
- SEA – Seattle-Tacoma International Airport (Seattle, WA)
- DEN – Denver International Airport (Denver, CO)
- DFW – Dallas Fort Worth International Airport (Dallas-Fort Worth, TX)
- IAH – George Bush Intercontinental Airport (Houston, TX)
- MSP – Minneapolis-St Paul International Airport (Minneapolis, MN)
- ORD – Chicago O'Hare International Airport (Chicago, IL)

Aircraft performance and associated required runway lengths were determined separately for operation type (i.e., takeoff and landing) and runway operational direction. The takeoff length analysis methodology was completed using inputs typical of airline flight dispatch planning purposes such as route, weather condition, airway distance and range of payload targets.

The takeoff analysis determined the existing Runway 11-29 length (in consideration of orientation and slope) is sufficient to enable current and future scheduled aircraft to fly with full passengers and baggage to destinations up to four hours flight time from SBP. This includes all the markets identified in the Master Plan forecast, as well as major mid-continent US airline hubs not identified in the Master Plan Forecast (i.e., ORD, DFW, IAH, MSP). As previously described, this analysis result is largely predicated on the use of Runway 29 for departures – not Runway 11. Departures on Runway 11 restricts takeoff performance compared to Runway 29 departures. This restriction is driven by the close-in obstacles beyond the Runway 11 departure end. Example takeoff weight limitations imposed on aircraft on Runway 11 departures versus Runway 29 departures:

- Embraer E175 = 5,800 lbs.
- Boeing 737-800 = 3,100 lbs.
- Airbus A320 = 12,000 lbs.

The landing length analysis was evaluated for the payload that would be available for an aircraft to arrive at SBP with 45 minutes of fuel reserve (which is required for Part 121 operations) plus enough fuel to travel to an alternate airport. The landing length analysis included consideration of both wet and dry conditions. The analysis results indicated that the existing runway length was capable of accommodating all but one aircraft – the CRJ-900. The CRJ-900 encounters payload penalties under both dry and wet runway conditions given the existing runway length. The Landing Distance Available (LDA) needs to be 5,420 feet to accommodate the CRJ-900 landing in dry conditions and 6,430 feet to accommodate the CRJ-900 landing in wet conditions. The existing LDA is 5,300 feet for Runway 11 and 5,600 feet for Runway 29. These results are summarized in *Table 3-6*.

Despite the landing performance results for the CRJ-900, an extension of Runway 11-29 is not recommended as part of this Master Plan given that winds typically favor operation on Runway 29 and wet runway conditions are not common.

TABLE 3-6
CRJ-900 LANDING PAYLOAD PENALTIES

Runway	LDA[1] (ft)	Condition	Allowable Passengers[2]	Weight Below MLW[3] (lbs.)
11	5,300	Dry	75	6,485
		Wet	25	17,176
29	5,600	Dry	76	0
		Wet	68	12141

Source: Lean Engineering, 2021
Notes: 1 – LDA = Landing Distance Available. 2 – CRJ-900 has 76 seats. 3 – MLW = Maximum Certificated Landing Weight (as determined by aircraft manufacturer).

3.3.2.4 Pavement Strength

The standardized method of reporting airport pavement strength is the Aircraft Classification Number – Pavement Classification Number method. The Pavement Classification Number (PCN) is a number that expresses the load-carrying capacity of a pavement for unrestricted operations. The Aircraft Classification Number (ACN) is the value that expresses the relative effect of an aircraft at a given configuration on a pavement structure for a specified standard subgrade strength. Comparison of SBP's PCN and ACN helps determine if the existing runways can accommodate the load of the aircraft forecast to operate at the Airport. The PCN for Runway 11-29 and Runway 7-25 are shown in *Table 3-7*.

The analysis indicates that the existing Runway 11-29 load-carrying capacity is sufficient to accommodate the Bombardier CRJ-900, Embraer 175, and Airbus A319 critical aircraft. The Boeing 737-800 would exceed the load-carrying capacity of the pavement at the maximum takeoff weight but can be accommodated at lower operational weights. An analysis completed by Lean Engineering as part of the Master Plan indicated that the PCN would not be a limiting factor for larger narrowbody aircraft to operate at SBP given the known factors and anticipated conditions at SBP (i.e., takeoff weights associated with anticipated destinations, existing runway length, and known obstacles). Therefore, reconstructing Runway 11-29 with the purpose of enhancing the PCN and increasing the pavement weight carrying capacity is not required during the planning period. However, when Runway 11-29 reconstruction is required because the pavement reaches its useful life, it is recommended the Airport consider enhancing the PCN

to accommodate fully loaded large narrowbody jets if operations have begun at that time. The ACN (at maximum operational weights) for the critical aircraft are shown in *Table 3-8*.

TABLE 3-7
PAVEMENT CLASSIFICATION NUMBER

Item	Runway 11-29	Runway 7-25
Pavement Classification Number	47	25
Pavement Type	Flexible	Flexible
Subgrade Category	D – Ultra Low	D – Ultra Low
Allowable Tire Pressure	X – Medium	X – Medium
Determination Method	Technical	Technical

Source: FAA 5010-1 Form, 2020

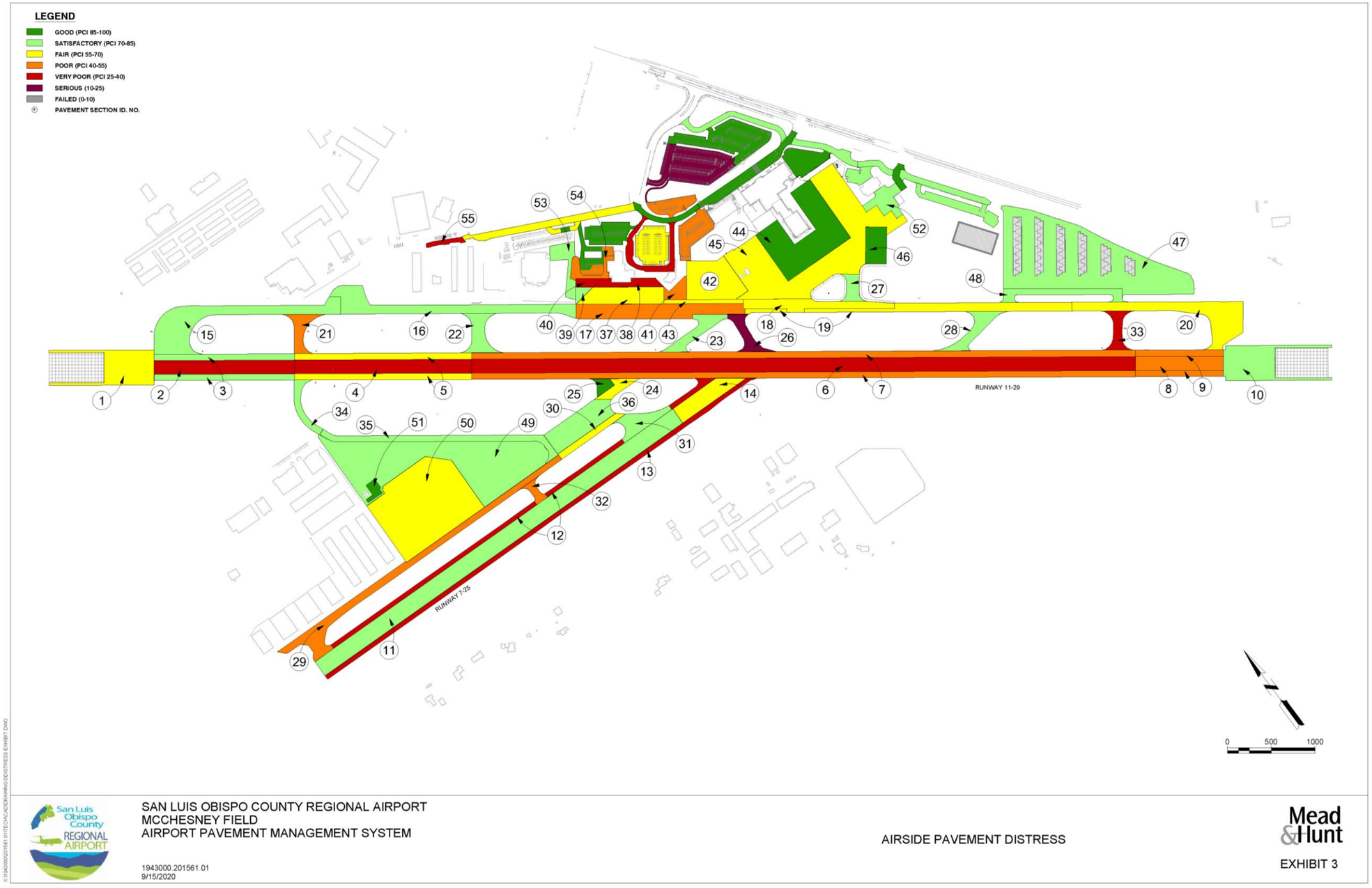
TABLE 3-8
AIRCRAFT CLASSIFICATION NUMBER

Aircraft	ACN Value
Boeing 737-800	55
Airbus A319	46
Bombardier CRJ-900	26
Embraer 175	26

Source: Boeing Airplane Characteristics, 2020; Airbus Aircraft Characteristics 2020; Bombardier Airport Planning Manual, 2015; Embraer Aircraft Planning Manual, 2005.

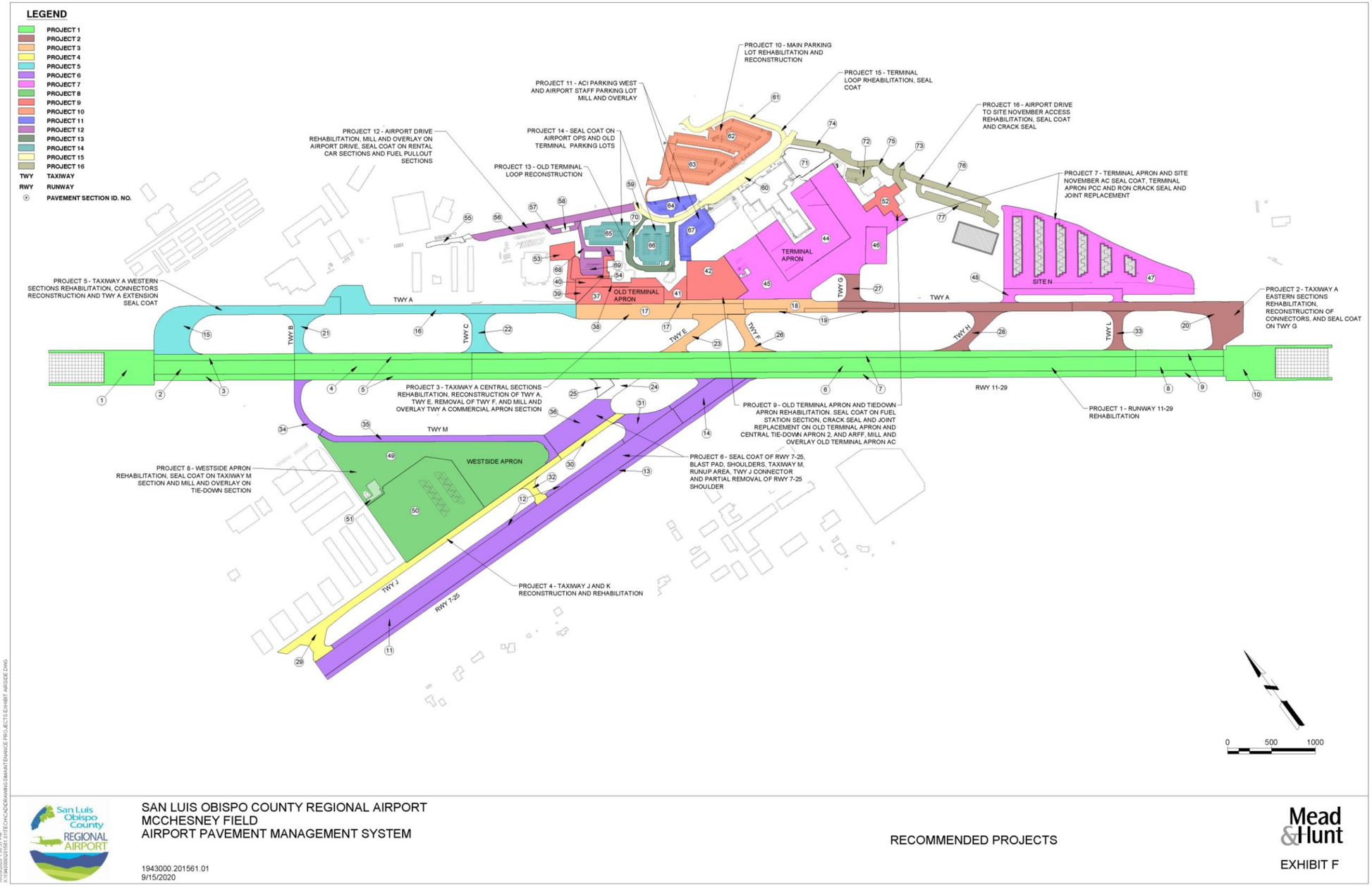
Pavement Condition Index (PCI) is a numerical rating of the pavement condition based on the type and severity of distresses observed on the pavement surface. The PCI value of the pavement condition is represented by a numerical index between 0 and 100, where 0 is the worst possible condition and 100 is the best possible condition. The PCI is determined using condition survey inspections to identify major rehabilitation needs for an airport. *Figure 3-3* depicts the pavement distresses and PCI ratings as of the SBP PCI Study completed in September 2020. *Figure 3-4* depicts the recommended phasing plan using the forecast pavement condition identified in the PCI Study. The Airport rehabilitated Runway 11-29 in Summer 2021, and therefore the PCI Study results do not reflect the improvements associated with that project. *Table 3-10* lists the pavement areas fair or worse (PCI <70) as potential pavement areas that are likely to need reconstruction or rehabilitation soonest.

FIGURE 3-3
PAVEMENT CONDITION INDEX RATINGS AND PAVEMENT DISTRESSES



Source: SBP Pavement Maintenance Management Plan, 2020
Note: Runway 11-29 rehabilitation was completed in 2021 so pavement condition is assumed to be Good (PCI 85-100) at the time this document was published.

FIGURE 3-4
PAVEMENT CONDITION INDEX



Source: SBP Pavement Maintenance Management Plan, 2020
Note: Runway 11-29 rehabilitation (Project 1) was completed in 2021.

TABLE 3-9
AIRPORT PAVEMENT MANAGEMENT SYSTEM PCI TABLES

PAVEMENT CONDITION TABLE				
PAVEMENT FEATURE	**SECTION[1]**	**DESCRIPTION**	**CURRENT PCI**	**CURRENT RATING**
Runway 11-29	1	Runway 11 Blast Pad	56	Fair
	2	Runway 11 Extension - Keel	38	Very Poor
	3	Runway 11 Extension - Outer	76	Satisfactory
	4	Runway 11 Threshold - Keel	33	Very Poor
	5	Runway 11 Threshold - Outer	69	Fair
	6	Main Section - Keel	36	Very Poor
	7	Main Section - Outer	46	Poor
	8	Runway 29 Extension - Keel	47	Poor
	9	Runway 29 Extension - Outer	53	Poor
	10	Runway 29 Blast Pad	74	Satisfactory
Runway 7-25	11	Main Section	74	Satisfactory
	12	North Shoulder	39	Very Poor
	13	South Shoulder	31	Very Poor
	14	Runway 25 Blast Pad	66	Fair
Taxiway A	15	Northern Extension	72	Satisfactory
	16	Extension to Old Terminal	77	Satisfactory
	17	Old Terminal Section	52	Poor
	18	Commercial Apron Section	67	Fair
	19	Site November Section	67	Fair
	20	Southern Extension	64	Fair
Taxiway B	21	Taxiway B	43	Poor
Taxiway C	22	Taxiway C	77	Satisfactory
Taxiway E	23	East Connector	73	Satisfactory
	24	West Connector	68	Fair
	25	West Connector Widening	94	Good
Taxiway F	26	Taxiway F	22	Serious
Taxiway G	27	Taxiway G	73	Satisfactory
Taxiway H	28	Taxiway H	81	Satisfactory
Taxiway J	29	West Section	51	Poor
	30	East Section	59	Fair
	31	East Connector	83	Satisfactory
Taxiway K	32	Taxiway K	47	Poor
Taxiway L	33	Taxiway L	40	Very Poor
Taxiway M	34	ILS Marking to Runway 11	75	Satisfactory
	35	Main Section	77	Satisfactory
	36	Runup Area	78	Satisfactory
Old Terminal Apron	37	Old Terminal Apron PCC	57	Fair
	38	Old Terminal Apron AC	37	Very Poor
	39	Old Terminal Apron Extension PCC	78	Satisfactory
	40	Old Terminal Apron Extension AC	28	Very Poor
	41	Central Tie-down Apron 1	44	Poor
	42	Central Tie-down Apron 2	59	Fair
	43	Central Tie-down Apron 2 - AC Overlay	67	Fair
Terminal Apron	44	Commercial Apron, PCC	89	Good
	45	Commercial Apron, AC	68	Fair
	46	RON Parking	90	Good
Site November Apron	47	Hangar Taxilanes and Parking Apron	79	Satisfactory
	48	Main Taxilane	74	Satisfactory
Westside Apron	49	Westside Apron at Taxiway M	79	Satisfactory
	50	Westside Apron at Hangars and Tie-downs	66	Fair
	51	Wash Rack	98	Good
ARFF	52	ARFF Facility Pavements	81	Satisfactory
Fuel Station	53	Fuel Station Pavement	83	Satisfactory
	54	Terminal to Fuel Station Road	48	Poor
Air San Luis Access Road	55	Air San Luis Access Road	39	Very Poor
Airport Drive	56	Northwest Airport Drive to Aero Drive	59	Fair
	57	Fuel Station Pullout	63	Fair
	58	Fuel Station Pullout Pad, PCC	98	Good
	59	Two Lanes Near Rental Car Loop (One-way)	86	Good
	60	Four Lanes Terminal Drop-off (One-way)	93	Good
	61	Airport Drive to Aero Drive	73	Satisfactory
North Parking	62	Main Parking (Lot 4) - 1	95	Good
	63	Main Parking (Lot 4) - 2	25	Serious
	64	Airport Staff Parking Lot	56	Fair
West Parking Lots	65	Airport Ops Parking Lot	90	Good
	66	Old Terminal Access	66	Fair
	67	ACI West Parking Lot	41	Poor
	68	Rental Car Wash - 1	95	Good
	69	Rental Car Wash - 2	53	Poor
Old Terminal Building Loop	70	Loop Around Rental Car Lots	39	Very Poor
East Enterprise Lot	71	East Enterprise Parking Lot	95	Good
Landside ARFF	72	ARFF Parking Lot	83	Satisfactory
	73	ARFF Access	92	Good
Airport Drive to Site November Access	74	Airport Drive to ARFF	85	Satisfactory
	75	ARFF Section	83	Satisfactory
	76	ARFF Airport Access to Site N	79	Satisfactory
	77	ACI East Parking Lot	80	Satisfactory

Source: SBP Pavement Maintenance Management Plan, 2020
Notes: (1) – Section identification number referenced in Exhibit A; Pavement Features; (2): – The area is currently under reconstruction. The PCI in this area will be considered 100 once the reconstruction is completed.

TABLE 3-10
PAVEMENT AREAS BY PAVEMENT CONDITION INDEX

Pavement Condition Index (worst to best)
Serious (PCI 10-25)
Taxiway F Connector
Public Parking Lot 4 (West side)
Very Poor (PCI 25-40)
Runway 7-25 Shoulders
Taxiway L Connector
Airport Drive (near Site J)
Old Terminal Apron (portion)
Old Terminal Loop Road
Poor (PCI 40-55)
Runway 11-29 Shoulder (portion)
Taxiway B Connector
Taxiway J and Connectors
Old Terminal Apron (portion)
Employee Parking (Operations)
Employee Parking (Terminal, ACI)
Public Parking Lot 3
Fair (PCI 55-70)
Runway 11 EMAS
Runway11-29 Shoulders (portion)
Taxiway A (south of Taxiway F)
Taxiway E (near compass rose)
Taxiway J (near compass rose)
Old Terminal Apron (portion)
FBO Apron
Westside Apron (portion)
Public Parking Lot 2
Airport Drive (north of Public Parking Lot 1)

Source: SBP Pavement Maintenance Management Plan, 2020
Note: Satisfactory and Good condition pavement areas (PCI 70 and above) excluded from list.

3.3.2.5 Geometric and Separation Standards

This section analyzes the existing runway geometric and separation distances based on current FAA dimensional standards for each runway. The Runway Design Code is a three-component code relating to the Aircraft Approach Category (AAC), Airplane Design Group (ADG), and approach visibility minimums

(referred to as RVR) based on the critical aircraft that use the runway. The Runway Design Code convention is "AAC-ADG-RVR". The Runway Design Code establishes the design characteristics for a particular runway.

The Runway Design Code is C-III-2400 for Runway 11-29 and B-I Small-Visual for Runway 7-25. Compliance with geometric and separation standards enhances airfield safety. Non-standard conditions should be mitigated to the fullest extent practicable. Results of the analysis of runway geometric and separation standards are summarized in *Table 3-11* and *Table 3-12*. The results are graphically depicted in *Figure 3-5* and *Figure 3-6*. The subsequent sections provide further explanation of the key non-standard conditions.

3.3.2.6 Runway Safety Area

The FAA allows RSA standards to be met using an engineered materials arresting system (EMAS), or arrester bed. An EMAS is a bed of engineered materials built at the end of a runway to reduce the impact of an aircraft runway excursion. Both Runway 11 and Runway 29 ends have an EMAS. The EMAS is designed to accommodate the aircraft in the fleet mix. When the EMAS systems was installed in 2008, fleet mix verification performance was completed by the manufacturer on the CRJ-700, CRJ-200, ERJ145, and 737-200 (simulated using 737-400) aircraft. All aircraft met the 70-knot threshold. As a result of having the EMAS installed, the current RSA satisfies standards for Runway 11-29 while extending 600 feet beyond the Runway 11 and 29 ends, compared with the ARC C-III standard of 1,000 feet.

Fleet mix verification performance analyses for EMAS with the forecast aircraft fleet mix and options for providing a dimensionally standard RSA for Runway 11-29 are described in *Chapter 4, Alternatives*. Currently, the airfield vehicle access road is within the RSA, west of the Runway 11 threshold. The alternatives will also explore resolving portions of the airfield vehicle access road within the RSA as well as the POFZ.

3.3.2.7 Runway Object Free Area

There are several objects within the ROFA of Runway 11-29 as shown in *Figure 3-5* which do not meet current standards and should be relocated or removed to the extent practicable. Existing penetrations to the ROFA include;

- Hoover Avenue, Santa Fe Road, Buckley Road, State Route 227
- Airfield vehicle access road
- Perimeter fence
- Trees beyond Runway 11 end
- Off-airport development beyond Runway 29 end
- Glideslope
- ASOS
- Segmented circle with windcone

Options for providing a compliant ROFA for Runway 11-29 will be explored in *Chapter 4, Alternatives*.

TABLE 3-11
RUNWAY 11-29 DESIGN STANDARDS

Airfield Components	Existing	Requirement	Met (✓)	Limiting Object
Runway Design				
Runway Width	150'	100-150'(1)	✓	
Runway Shoulder Width	20'(2)	20-25'(1)	✓	
Runway Blast Pad Width	200'	140-200'(1)	✓	
Runway Blast Pad Length	600'	200'	✓	
Runway Protection				
Runway Safety Area (RSA)				
Length Beyond Departure End	600' EMAS	1,000' / 600' EMAS	✓	
Length Prior to Threshold	600'	600'	✓	
Width	500'	500'	✓	
Runway Object Free Area (ROFA)				
Length Beyond Runway End	600'	1,000'	X	Fence near Edna Rd at Rwy 29 end
Length Prior to Threshold	600'	600'	✓	
Width	560'	800'	X	Buckley Rd; Fence near Edna Rd at Rwy 29 end
Runway Obstacle Free Zone (ROFZ)				
Length	200'	200'	✓	
Width	400'	400'	✓	
Precision Obstacle Free Zone (POFZ)				
Length	200'	200'	✓	
Width	800'	800'	✓	
Approach Runway Protection Zone (ARPZ)				
Length	2,500'	2,500'	✓	
Inner Width	1,000'	1,000'	✓	
Outer Width	1,750'	1,750'	✓	
Departure Runway Protection Zone (DRPZ)				
Length	1,700'	1,700'	✓	
Inner Width	500'	500'	✓	
Outer Width	1,010'	1,010'	✓	
Runway Separation				
Runway centerline to:				
Holding Position	200'	252'(3)	X	
Parallel Taxiway/Taxilane Centerline	290'	400'	X	Near Old Terminal Building

Source: FAA Advisory Circular 150/5300-13B, Airport Design

Notes: (1) - For airplanes with maximum certificated takeoff weight of 150,000 lbs. or less, the standard runway width is 100 feet, the shoulder width is 20 feet, and the runway blast pad width is 140 feet.
(2) – Paved shoulders are recommended but not required for runways accommodating ADG-III aircraft. First 10' of existing runway shoulder is paved, and remaining 10' is soil stabilized.
(3) – Increased from 250' by 1 foot for each 100 feet above sea level.

TABLE 3-12
RUNWAY 7-25 DESIGN STANDARDS

Airfield Components	Existing	Requirement	Met (✓)
Runway Design			
Runway Width	100'	60'	✓
Runway Shoulder Width	10'	10'	✓
Runway Blast Pad Width	0' (RW 7)	80'	X
Runway Blast Pad Length	0' (RW 7)	60'	X
Runway Protection			
Runway Safety Area (RSA)			
Length Beyond Departure End	240'	240'	✓
Length Prior to Threshold	240'	240'	✓
Width	120'	120'	✓
Runway Object Free Area (ROFA)			
Length Beyond Runway End	240'	240'	✓
Length Prior to Threshold	240'	240'	✓
Width	250'	250'	✓
Runway Obstacle Free Zone (ROFZ)			
Length	200'	200'	✓
Width	250'	250'	✓
Precision Obstacle Free Zone (POFZ)			
Length	N/A	N/A	✓
Width	N/A	N/A	✓
Approach Runway Protection Zone (ARPZ)			
Length	1,000'	1,000'	✓
Inner Width	250'	250'	✓
Outer Width	450'	450'	✓
Departure Runway Protection Zone (DRPZ)			
Length	1,000'	1,000'	✓
Inner Width	250'	250'	✓
Outer Width	450'	450'	✓
Runway Separation			
Runway centerline to:			
Holding Position	125'	125'	✓
Parallel Taxiway/Taxilane Centerline	150'	150'	✓

Source: FAA Advisory Circular 150/5300-13B, Airport Design.

3.3.2.8 Runway Protection Zone

For the protection of people and property on the ground, the FAA has identified an area of land located off each runway end as the Runway Protection Zone (RPZ). The size of these zones varies according to the design aircraft's Aircraft Approach Category (AAC), Airplane Design Group (ADG), and the visibility minimums defined for each runway. According to the FAA Advisory Circular 150/5300-13B, *Airport Design*, the FAA recommends having all areas within the RPZ cleared where practical. When this is impractical, airport owners should maintain the RPZ clear of all facilities supporting incompatible activities.

FAA Advisory Circular 150/5190-4B, *Airport Land Use Compatibility Planning*, describes FAA guidance regarding identifying incompatible land uses within the RPZ and expectations for airport sponsors to resolve incompatible land uses within the RPZ. The FAA expects airport sponsors to seek all possible opportunities to eliminate, reduce, or mitigate existing incompatible land uses through an evaluation process. Although the Advisory Circular does not explicitly indicate what is considered incompatible, the FAA identifies the following land uses that require no further evaluation:

- Farming that meets airport design clearance standards in FAA Advisory Circular 150/5300-13 and guidance as outlined in Advisory Circular 150/5200-33;
- Irrigation channels meeting the standards of Advisory Circular 150/5200-33 and FAA/ United States Department of Agriculture manual, Wildlife Hazard Management at Airports;
- Airport service roads, as long as they are not public roads and are directly controlled by the airport operator;
- Underground facilities, as long as they meet other design criteria, such as RSA standards, as applicable;
- NAVAIDs and aviation facilities, such as equipment for airport facilities considered fixed-by-function in regard to the RPZ; or
- Above-ground fuel tanks associated with back-up generators for unstaffed NAVAIDs.

Evaluation of the land uses within the existing RPZs indicate there are some land uses that are not identified in one of the categories listed above. The land uses are described in *Table 3-13*. *Chapter 4, Alternatives* evaluates and describes options to mitigate risk associated with the incompatible land uses.

TABLE 3-13
INCOMPATIBLE USES WITHIN RPZS

Land Use	Runway 11 End	Runway 29 End	Runway 7 End	Runway 25 End
Tank Farm Rd	x	n/a	n/a	n/a
Hoover Ave	x	n/a	x	n/a
Santa Fe Rd	x	n/a	x	n/a
State Route 227	n/a	x	n/a	n/a
Buckley Rd	n/a	x	n/a	n/a
Warehouse Buildings	x	n/a	n/a	n/a

3.3.2.9 Runway Separation Requirements

This section analyzes the existing runway geometric and separation distances based on current FAA dimensional standards for each runway. Runway 11-29 is analyzed for compliance with C-III-2400 standards. Runway 7-25 is analyzed for compliance with B-I (Small)-Visual standards.

Runway 11-29 is separated from Taxiway A, centerline to centerline, by 325 feet, except for a 1,015-foot-long segment between Taxiway C and Taxiway E where the separation is 290 feet. The standard separation is 400 feet. Runway 7-25 is separated from Taxiway J, centerline to centerline by the standard 150 feet. Compliance with geometric and separation standards enhances airfield safety. Non-standard conditions should be mitigated as practicable. Options that address runway separation between Runway 11-29 and Taxiway A will be explored in *Chapter 4, Alternatives*.

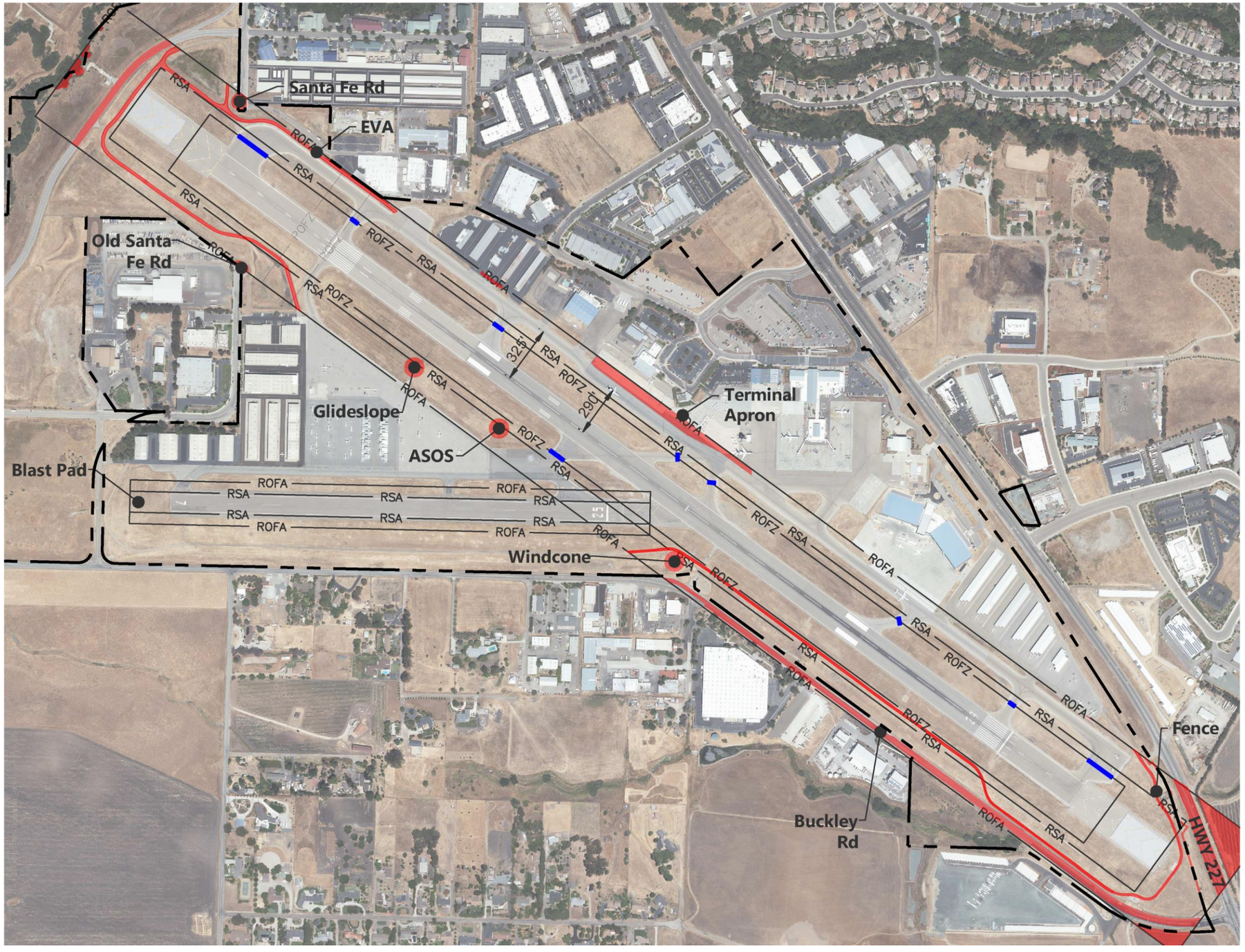


FIGURE 3-5
RUNWAY DEFICIENCIES

Runway Deficiencies

Legend:

- RSA — *Runway Safety Area (RSA)*
- ROFA — *Runway Object Free Area (ROFA)*
- ROFZ — *Runway Obstacle Free Zone (ROFZ)*
- POFZ — *Precision Obstacle Free Zone (POFZ)*
- *Hold Short Markings*
- *Non-Standard Runway Conditions*
- *Property Boundary*

N

600' 300' 0' 600'

3.3.3 Taxiway Requirements

Analysis of the taxiways addresses the geometric ability of the taxiways to meet FAA design standards based on the critical aircraft. Elements examined in this section include taxiway widths, clearance and protection design standards, and geometry best practices. *Table 3-14* presents the taxiway design standards analysis results.

TABLE 3-14
TAXIWAY SEPARATION STANDARDS

Taxiway Components	Taxiway Type	Taxiway Width	Taxiway Shoulder Width	Taxiway Safety Area Width	Taxiway Object Free Area / Centerline to Fixed or Movable Object Width	Requirement Met (✓)
Requirement (ADG III, TDG 3)		**50'**	**20'**	**118'**	**171' / 85.5'**	
TWY A	Parallel	50'	10'	106'	132.5' / 47'	**X**
TWY B	Connector	50'	10'	118'	171' / 85.5'	**X**
TWY C	Connector	50'	10'	118'	171' / 85.5'	**X**
TWY E	High-Speed	50'	10'	118'	171' / 85.5'	**X**
TWY F	High-Speed	50'	10'	118'	171' / 85.5'	**X**
TWY G	Apron	50'	10'	118'	171' / 85.5'	**X**
TWY H	Connector	50'	10'	118'	171' / 85.5'	**X**
TWY L	Connector	50'	10'	118'	171' / 85.5'	**X**
Requirement (ADG II, TDG 2A)		**35'**	**15'**	**79'**	**124' / 62'**	
TWY J	Parallel	35'	10'	79'	124' / 62'	**X**
TWY M	Parallel	35'	10'	79'	124' / 62'	**X**
TWY E	Connector	35'	10'	79'	124' / 62'	**X**
Requirement (ADG I, TDG 1A)		**25'**	**10'**	**49'**	**89' / 44.5'**	
TWY J	Parallel	25'	10'	49'	89' / 44.5'	✓
TWY K	Connector	25'	10'	49'	89' / 44.5'	✓

Source: FAA Advisory Circular 150/5300-13B, *Airport Design*
Note: (1) – See Paragraph 4.7 in FAA Advisory Circular 150/5300-13B, *Airport Design* for fillet design dimensions. Values in red text indicate a deficiency compared to the FAA standard.

3.3.3.1 Width and Fillet

Taxiway pavement and shoulder widths are determined by the TDG of the critical aircraft. As shown in *Table 3-14*, all taxiways meet the FAA standard width for the pavement. The taxiways at SBP have turf shoulders. Paved shoulders are recommended but not required for taxiways accommodating ADG III aircraft. Dense turf shoulders that meet the dimensional standard and that "can prevent erosion and

support the occasional passage of aircraft, maintenance equipment, or emergency equipment under dry conditions"[1] are permitted for ADG-III taxiways.

In 2022, the FAA revised criteria for taxiway design dimensions and fillet design in FAA Advisory Circular 150/5300-13B, *Airport Design*. FAA requires that taxiways are designed to meet current TDG standards, which are based upon undercarriage dimensions, specifically the Main Gear Width (MGW) and the Cockpit to Main Gear (CMG) dimensions. As of early 2021, all of the SBP taxiway fillets were nonstandard (with the exception of the Taxiway A entrance taxiway segment to the Runway 29 approach end) based on current standards. The Airport undertook a project to reconstruct portions of Taxiway A in 2021 which will result in more of the Taxiway A fillets meeting the current FAA standard. It is recommended that all taxiways at SBP be reconstructed to achieve the FAA standard fillet design as the pavements are planned for reconstruction as part of the Pavement Management Plan.

3.3.3.2 Clearance and Protection Design Standards

The taxiway system requirements analysis addresses specific requirements relative to FAA design criteria and the ability of the existing taxiways to accommodate current and forecast demand. At a minimum, taxiways must provide safe and efficient circulation by maintaining traffic flow using taxi routing with a minimum number of points requiring a change in the airplane's taxiing speed, provide access between runways, aircraft parking and hangar areas, and meet FAA design standards to safely accommodate the critical aircraft. Analysis was completed of the Taxiway Safety Area (TSA), Taxiway Object Free Area (TOFA), and Taxiway Centerline to Fixed or Movable Object (FOMO) to determine if the standards are currently met. These separation standards help ensure adequate clearance is provided while aircraft are moving on the airfield. *Table 3-14* presents the taxiway design standards analysis results.

Most SBP taxiways are designated as ADG-III, TDG 3 to accommodate the critical aircraft. However, Taxiways M, E, and a portion of Taxiway J accommodate ADG-II, TDG 2A aircraft including the Beechcraft King Air and Fairchild Swearingen Metroliner to access the Westside apron and hangar facilities on the west side of the Airport. Taxiways J and K are designed to accommodate aircraft accessing Runway 7-25 are designed to ADG-I, TDG 1A standards.

Several substandard areas exist for the TSA and TOFA surfaces of Taxiway A. Existing penetrations to the TSA include the airfield vehicle access road and portions of the Sites J and K aircraft apron. Existing penetrations to the TOFA include;

- Airfield vehicle access road
- Perimeter fence
- Off-airport development near Runway 11 threshold
- Run-Up Pad
- Sites J and K apron; Old passenger terminal apron, Site N apron

Some of the TSA and TOFA non-standard conditions result from the increased width between the previous ADG-II standard and the current ADG-III standard. Additionally, the Taxiway M TOFA is non-

[1] AC 150/5300-13B Airport Design

standard due to a penetration by the airfield vehicle access road near Site Q. TSA and TOFA penetrations are shown graphically in *Figure 3-6*.

A critical area associated with an Instrument Landing System (ILS) should remain clear of objects while the ILS system is in use by aircraft on approach. The purpose of ILS hold bar pavement markings is to denote holding locations for taxiing aircraft outside of the critical area. The critical area for the Runway 11 glideslope overlays a portion of Taxiway M. However, the ILS hold bar is incorrectly located on Taxiway M, as shown graphically in *Figure 3-6*. The ILS hold bar should be relocated to denote the critical area boundary.

3.3.3.3 Geometric Best Practices

The layout of the taxiway system was assessed to determine whether the geometry meets FAA design standards to enhance safety and situational awareness. These design standards are incorporated as standards into the FAA Advisory Circular 150/5300-13B, *Airport Design*.

- **Runway Access from Apron**

  Direct access between aircraft parking aprons and a runway is not recommended, as it has proven too easy for a pilot to lose situational awareness while taxiing out, miss the turn for a taxiway and mistakenly end up on a runway. FAA requires indirect access between aircraft parking aprons and a runway. To accomplish this, the taxiway layout must require a pilot to make a series of turns while taxiing from an apron to a runway. Instances of direct access at SBP include Taxiway C, E, F, K, & L as denoted on *Figure 3-6* and include the following: south cargo ramp to Runway 11-29; terminal apron to Runway 11-29, Site M to Runway 11-29, west side ramp to Runway 7-25.

- **High Energy Intersection**

  High energy intersections are considered those in the middle third of the runway. The middle third is most often a "high-energy" zone of a runway where an aircraft, landing or taking off, is travelling at a rate at which a pilot can least maneuver to avoid a collision with another aircraft. Runway crossings should be limited to the outer third of runways. Taxiway E violates this design principle by providing a crossing of Runway 11-29 in the middle third. Alternatives to address this deficiency while providing efficient and safe connectivity between the east and west side of the Airport is examined in *Chapter 4, Alternatives*.

- **Runway / Taxiway Right-Angle Intersections**

  Right-angle intersections are FAA standard for all runway entrances and runway/taxiway intersections except for high-speed exit taxiways. A right-angle intersection provides pilots the best possible vantage point to scan for aircraft on the runway before entering or crossing the runway. Additionally, a right-angle intersection allows the optimum orientation of signage so that it is clearly visible to pilots. Taxiways E, F, and H have non-right angle intersections. Taxiway E is designated as a Hot Spot by the FAA due to non-perpendicular design. The design and location of Taxiway F is a remnant from an extended Runway 7-25.

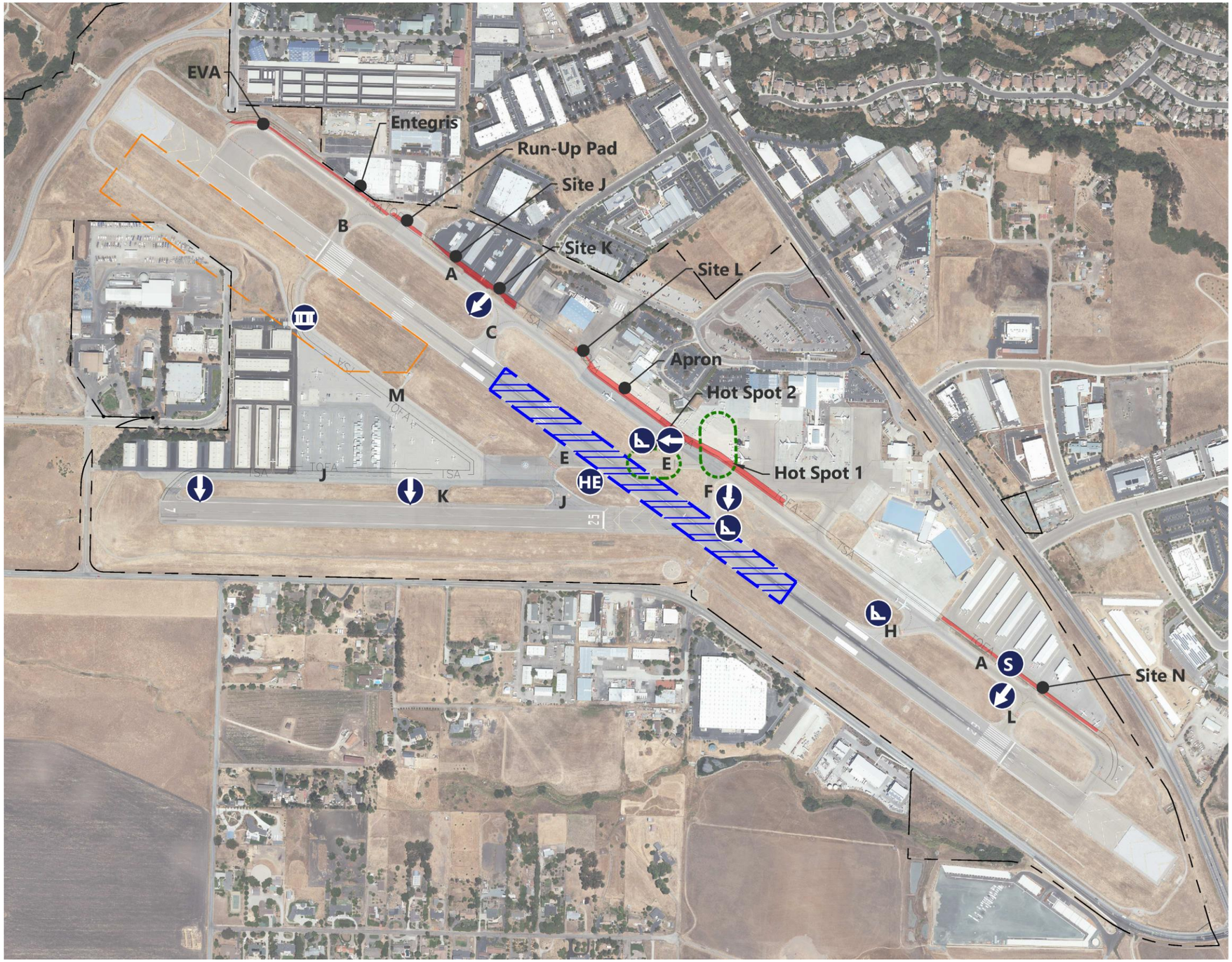


FIGURE 3-6
TAXIWAY DEFICIENCIES

Taxiway Deficiencies

Legend:

Taxiway Separation Standards

- TSA — *Taxiway Safety Area (TSA)*
- TOFA — *Taxiway Object Free Area (TOFA)*
- *TSA/TOFA Penetrations*

Non-Standard Taxiway Locations

- *Hot Spots*
- *High-energy runway section*

Non-Standard Taxiway Design

- *Direct runway access*
- *Non-right angle intersection*
- *High-energy crossing*
- *Taxiway/Taxilane Separation*

Operational Clear Areas

- *Glideslope Critical Area*
- *Incorrect ILS Hold Bar Location*

Non-Standard Conditions Not Depicted

Hold Short Markings
Do no meet separation standards

Fillet design
All taxiway fillets deficient per AC 150/5300-13B, Airport Design - 4.7 Taxiway Fillet Design

N

600' 300' 0' 600'

3.3.4 Navigational Aids and Lighting

Navigational aids and lighting, or NAVAIDs, consist of equipment to help pilots locate the Airport. NAVAIDS provide information to pilots about aircraft horizontal alignment, height above the ground, location of airport facilities, and aircraft position on the airfield. The visual, electronic, and meteorological types of NAVAIDS were assessed at SBP.

3.3.4.1 Visual Aids

Visual aids at the Airport include those specific to each runway and those that serve the whole airport. The visual aids at SBP, as listed in *Table 3-15*, are considered adequate to meet future airport needs. It is recommended that, as practical with equipment lifecycle and future projects, consideration be made to upgrade the VASI for a Precision Approach Path Indicator (PAPI). In addition, the segmented circle and windcone are both located within the Runway 11-29 ROFA and are recommended to be relocated.

TABLE 3-15
AIRPORT VISUAL NAVIGATIONAL AIDS

Navigational Aids	Runway		Runway		Requirement Met (✓)
	11	29	7	25	
Lighting	HIRL	HIRL	None	None	✓
Approach Lighting	MALSR	REIL	None	None	✓
Touchdown Zone Lighting	No	No	No	No	✓
Visual Slope Indicator	VASI	VASI	None	None	✓
Runway Markings	Precision	Non-Precision	Visual	Visual	✓
Runway Centerline Lights	No	No	No	No	✓
Runway Windcone	Yes	Yes	No	No	✓
Segmented Circle	Yes	Yes	No	No	✓
Rotating Beacon	Yes	Yes	Yes	Yes	✓

Source: SBP, 2021; FAA 5010-1 Form, 2020

3.3.4.2 Electronic Aids

Electronic aids include devices and equipment used for aircraft instrument approaches. The Airport's electronic aids are listed in *Table 3-16*. Analysis of the existing equipment and the needs at the Airport indicate electronic aids are sufficient through the planning horizon.

As described in *Table 3-11*, the Runway 11 glideslope antenna and equipment shelter are nonstandard because they are located within the Runway 11-29 ROFA. The FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*, states that glideslopes are not fixed-by-function in the ROFA. However, the FAA also indicates that exceptions can be made on a case-by-case basis to allow a glideslope antenna in the ROFA due to physical constraints that exist at the site. Options to relocate the glideslope antenna outside the Runway 11-29 ROFA are evaluated in *Chapter 4, Alternatives*.

TABLE 3-16
AIRPORT ELECTRONIC NAVIGATIONAL AIDS

Electronic Aids	Runway		Runway		Requirement Met (✓)
	11	29	7	25	
ILS	Yes	No	No	No	✓
RNAV (GPS)	Yes	Yes	No	No	✓
LOC	Yes	No	No	No	✓
VOR or TACAN-A	No	No	Yes	No	✓

Source: SBP, 2021; FAA 5010-1 Form, 2020

3.3.4.3 Meteorological Aids

Meteorological aids include the Automated Surface Observing System (ASOS). The ASOS is currently located within the Runway 11-29 ROFA and will require relocation.

3.4 PASSENGER TERMINAL

This section describes the methodology and requirements for each functional area of the terminal building and apron as determined based on industry guidelines. Passenger terminal requirements are based on the demand associated with PALs, as described in *Table 3-1*.

The passenger terminal is categorized into the following functional areas:

- **Airline Space –** The areas of the terminal used for ticketing/check-in, active, and queuing spaces, as well as airline ticketing offices.
- **Baggage Service –** The areas of the terminal used to handle inbound and outbound baggage, including facilities necessary to perform baggage sorting, offloading, and retrieval.
- **Transportation Security Administration (TSA) –** The areas of the terminal operated by the TSA, including the security screening checkpoint (SSCP), offices, and checked baggage screening rooms.
- **Holdroom –** The areas of the terminal where passengers wait to board aircraft, including airline customer service counters, boarding queues, and other amenities.
- **Concessions –** The areas of the terminal used for the sale of food, beverage, and other retail items.
- **Ground Transportation –** The areas of the terminal that support car rental, taxi, bus, and ride sharing functions.
- **Public Space –** The areas of the terminal used by the public for circulation and associated functions, including waiting areas for meeter/greeters, restrooms, and information booth.
- **Airport Space –** The areas of the terminal used by the airport administration for offices, storage, and operations functions.
- **Building Support –** The areas of the terminal reserved for mechanical, electrical, telecom, and other services that provide the utilities to operate the terminal.

The following sections focus on each functional area and describes the program area requirements based on current industry-standard planning practices, the forecast design day flight schedule, and observed conditions. For the planning period, forecast peak-hour enplanements were used to determine future

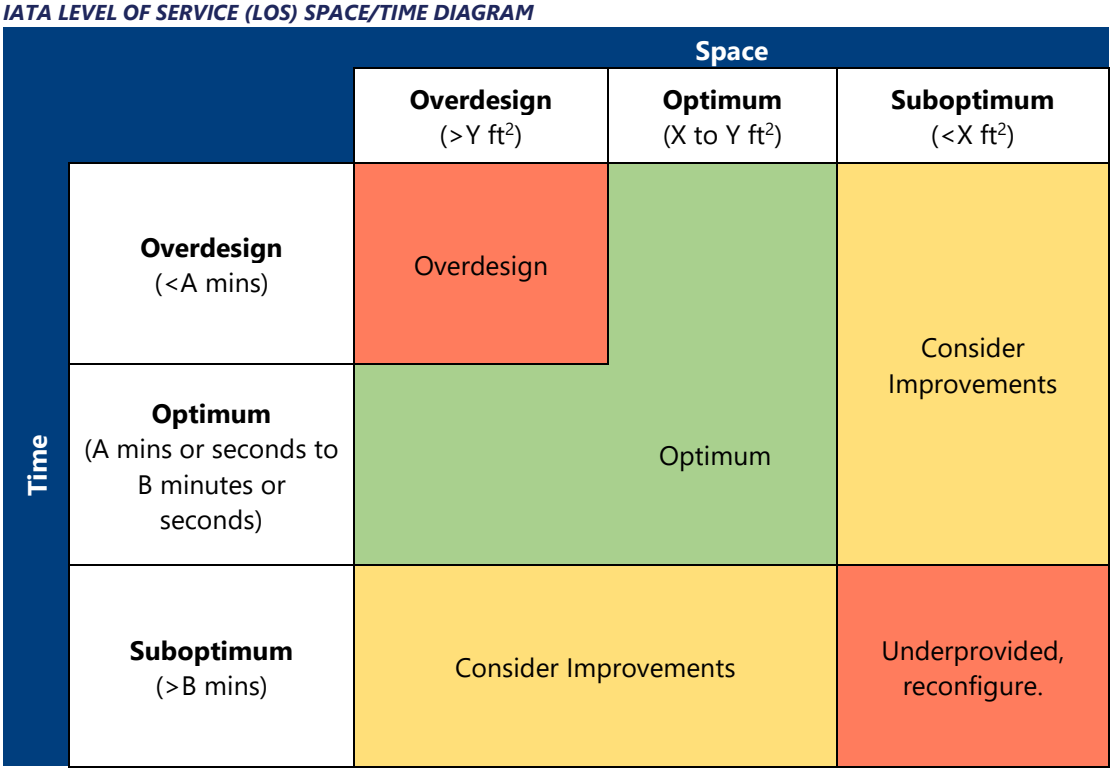
space requirements for each PAL and compared to the existing capacity for a determination of space surpluses or deficits.

Industry-standard airport terminal planning practices from the following guidance documents were incorporated into the analysis methodology:

- Airport Cooperative Research Program (ACRP) Report 25, *Airport Passenger Terminal Planning and Design* – Volumes 1 and 2, 2010
- ACRP Report 40, *Airport Curbside and Terminal Area Roadway Operations*, 2010
- ACRP Report 54, *Resource Manual for Airport In-Terminal Concessions*, 2011
- Transportation Security Administration (TSA), *Checkpoint Design Guide*, Revision 5.1, 2014
- TSA *Planning Guidelines and Design Standards for Checked Baggage Inspection Systems*, Version 5.0, 2015
- International Air Transportation Association (IATA) *Airport Development Reference Manual*, 11th Edition, 2019
- Federal Aviation Administration Advisory Circular (AC) 150/5360-13A, *Airport Terminal Planning*, 2018

Requirements analysis methodology were also tailored to consider and meet a desired level of service (LOS). According to IATA guidelines, LOS for many terminal facilities is directed by space (queuing) and time (waiting). *Figure 3-7* shows IATA's LOS space-time diagram, with the X-axis defining the amount of space available per occupant, and the Y-axis representing the wait time for passengers in queue. The goal is to offer an acceptable LOS by targeting values in the "optimum" range. *Table 3-17* shows IATA's LOS standards for each functional area of the passenger terminal. The lower number within the Optimum LOS guideline range was used to allow for the best use of limited space while maintaining optimum levels of service.

FIGURE 3-7
IATA LEVEL OF SERVICE (LOS) SPACE/TIME DIAGRAM



Source: IATA Airport Development Reference Manual, 11th Edition (2019)

TABLE 3-17
IATA LEVEL OF SERVICE SPACE AND TIME GUIDELINES

		Space Guidelines [sf/pax]			Maximum Waiting Time Guidelines Economy Class [minutes]			Maximum Waiting Time Guidelines Business Class/First Class/Fast Track [minutes]			Other Guidelines & Remarks		
		Overdesign	**Optimum**	**Suboptimum**	**Overdesign**	**Optimum**	**Suboptimum**	**Overdesign**	**Optimum**	**Suboptimum**	**Overdesign**	**Optimum**	**Suboptimum**
Public Departure Hall (well-wishers)		> 25.0	22.0 - 25.0	< 22.0	n/a			n/a			Optimum proportion of seated occupants: 15 - 20% *		
Check-in	Self-Service Kiosk (Boarding Pass/Bag Tagging)	> 19.0	14.0 - 19.0	< 14.0	< 1.0	1.0 - 2.0	> 2.0	< 1.0	1.0 - 2.0	> 2.0			
	Bag Drop (queue width: 4.6-5.3 ft)	> 19.0	14.0 - 19.0	< 14.0	< 1.0	1.0 - 5.0	> 5.0	< 1.0	1.0 - 3.0	> 3.0			
	Check-in Desk (queue width: 4.6-5.3 ft)	> 19.0	14.0 - 19.0	< 14.0	< 10.0	10.0 - 20.0	> 20.0	< 3.0	Business 3.0 - 5.0 First 1.0 - 3.0	> 5.0			
Security Control (queue width: 3.5-4.0 ft)		> 13.0	11.0 - 13.0	< 11.0	< 5.0	5.0 - 10.0	> 10.0	< 1.0	Fast Track 1.0 - 3.0	> 3.0			
Gate Holdrooms/ Departure Lounges	Seating	> 24.0	19.0 - 24.0	< 19.0	n/a			n/a			Optimum proportion of seated occupants: 50 - 70%		
	Standing	> 16.0	13.0 - 16.0	< 13.0							Maximum Occupancy Rate		
											< 60.0%	60.0% - 70.0%	> 70.0%
Baggage Claim	Narrowbody Aircraft	> 18.0	16.0 - 18.0	< 16.0	< 0.0	0.0 / 15.0	> 15.0	< 0.0	0.0 / 15.0	> 15.0	The first waiting time relates to "first passenger to first bag". The second waiting time relates to "last bag on belt" (counting from first bag delivery)**		
	Widebody Aircraft	> 18.0	16.0 - 18.0	< 16.0	< 0.0	0.0 / 25.0	> 25.0						
Public Arrivals Hall (meeters-greeters)		> 25.0	22.0 - 25.0	< 22.0	n/a			n/a			Optimum proportion of seated occupants: 15 - 20% *		

Source: Excerpt from IATA Airport Development Reference Manual, 10th Edition (2014)
Note: The green shaded area represents the Optimum Level of Service.

3.4.1 Airline Space

The requirements analysis was conducted based on the existing operational condition of preferential use ticket counters. The analysis is based on each airline having a set number of counters for which they have preferential use rights. This operational condition is in place at SBP as of 2021 and assumes sufficient airline specific counter space would be provided to support the individual peak for each airline.

The methodology assumes 40 percent of passengers will use the ticket counter services (the rest using mobile ticket options). Also, the number of required counter positions consider a maximum passenger wait time of 15 minutes. The methodology also considers that each airline would have dedicated office space.

The airline space requirements are presented in *Table 3-18*. An additional counter position is required to accommodate PAL 1 and PAL 2 demand. This reflects the need to accommodate all four airlines with dedicated fixed ticket counter positions and eliminate the use of the portable ticket counter podium. Additional ticket counter positions are required in PAL 3 to accommodate forecast growth by the existing four airlines and again in PAL 4 to accommodate new service by a fifth airline. Additional ticket counter areas would be required starting in PAL 1 and the need increases throughout the planning period, proportional to the number of new counter positions. Additional airline office area is required to accommodate PAL 1 demand and increases through the planning period.

TABLE 3-18
AIRLINE SPACE REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Ticket Counter Length						
Counter Positions	11	12	12	15	18	19
Surplus (Deficit)	-	(1)	(1)	(4)	(7)	(8)
Counter Length (lf)	70	75	75	95	115	120
Surplus (Deficit) (lf)	-	(5)	(5)	(25)	(45)	(50)
Ticket Counter Area						
Counter and Agent Area (sf)	1,030	1,125	1,125	1,405	1,690	1,780
Surplus (Deficit) (sf)	-	(95)	(95)	(375)	(660)	(750)
Passenger Service Area (sf)	435	460	460	570	685	725
Surplus (Deficit) (sf)	-	(25)	(25)	(135)	(250)	(290)
Passenger Queuing Area (sf)	595	840	840	1,050	1,260	1,330
Surplus (Deficit) (sf)	-	(245)	(245)	(455)	(665)	(735)
Total Ticket Counter Area (sf)	2,060	2,425	2,425	3,025	3,635	3,835
Surplus (Deficit) (sf)	-	(365)	(365)	(965)	(1,575)	(1,775)
Airline Office Area						
Office Area (sf)	1,675	2,400	2,400	2,400	3,000	3,000
Surplus (Deficit) (sf)	-	(725)	(725)	(725)	(1,325)	(1,325)
Total Airline Space						
Total Airline Space (sf)	3,735	4,825	4,825	5,425	6,635	6,835
Surplus (Deficit) (sf)	-	(1,090)	(1,090)	(1,690)	(2,900)	(3,100)

Note: Existing values rounded.

3.4.2 Baggage Service

Baggage service area requirements were determined for the outbound baggage make-up area, public baggage claim area, and nonpublic inbound baggage area.

The baggage make-up area analysis was determined by estimating the number of outbound checked baggage based on the seating capacity of the departing aircraft during the peak hour. This is the industry standard "Equivalent Aircraft" (EQA) method recommended for planning purposes in ACRP Report 25, *Airport Passenger Terminal Planning and Design* guidebook. The methodology assumes that two baggage carts will be required per 145 departing seats during the peak hour and a planning factor of 600 square feet is required for each cart.

The baggage claim analysis methodology identified the required claim length based on the estimated number of peak hour deplaning passengers that checked baggage. The number of passengers, not bags, was used to determine the claim device length because deplaning passengers reach the claim area before their bags and dwell at the claim frontage. The claim passenger waiting area was calculated using a ratio of 17 square feet per passenger representing an Optimum LOS.

The inbound baggage area methodology is like that of the outbound baggage make-up area. The analysis considers the number of inbound checked baggage during the peak hour using the 0.7 bags per passenger metric which is based on input from airline personnel. The area requirements were determined by estimating the number of baggage carts and the associated area.

The baggage service area requirements are presented in *Table 3-19*. The outbound baggage make-up area requires additional space in PAL 1 to accommodate the peak hour demand. This analysis result is reflective of input received in 2020 from Airport and airline personal that the existing make-up area becomes inundated with bags if sufficient airline staff is not in place to process the baggage. This happens on occasion as the below-wing airline staff sometimes must focus on incoming aircraft rather than outbound baggage processing. In cases where airline staff is spread thin, the make-up area can become full of baggage creating congestion in the checked bag screening room and subsequently at the takeaway belt in the ticketing area.

The baggage claim length and associated area is sufficient until PAL 4. Additional claim length and claim area is required to accommodate demand in PAL 4 and PAL 5. It should be noted that location of the bag claim active area results in congestion around the rental car counters in the existing conditions. During peak arrival times, arriving passengers waiting at the bag claim sometimes interfere with the queue for the rental car counters.

The analysis shows that additional space is required for the inbound baggage area to accommodate demand in PAL 1. The existing inbound baggage area becomes congested during peak arrival periods which can delay efficient offloading of baggage. Additional space for the inbound baggage area is required to accommodate the higher peak hour passenger loads in PAL 4 and PAL 5.

TABLE 3-19
BAGGAGE SERVICE REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Outbound Baggage						
Baggage Make-up Area (sf)	2,585	3,200	3,200	3,200	3,800	3,800
Surplus (Deficit) (sf)	-	(615)	(615)	(615)	(1,215)	(1,215)
Baggage Claim						
Claim Length (lf)	125	115	115	115	165	165
Surplus (Deficit) (lf)	-	10	10	10	(40)	(40)
Claim Device Area (sf)	970	920	920	930	1,335	1,335
Surplus (Deficit) (sf)	-	50	50	40	(365)	(365)
Claim Passenger Waiting Area (sf)	1,900	1,700	1,700	1,720	2,475	2,475
Surplus (Deficit) (sf)	-	200	200	180	(575)	(575)
Total Claim Area (sf)	2,870	2,620	2,620	2,650	3,810	3,810
Surplus (Deficit) (sf)	-	250	250	220	(940)	(940)
Inbound Baggage						
Inbound Baggage Conveyance Tunnel (sf)	405	405	405	405	405	405
Surplus (Deficit) (sf)	-	0	0	0	0	0
Baggage Service Area (sf)	985	1,650	1,650	1,650	2,200	2,200
Surplus (Deficit) (sf)	-	(665)	(665)	(665)	(1,215)	(1,215)
Total Inbound Baggage (sf)	1,390	2,055	2,055	2,055	2,605	2,605
Surplus (Deficit) (sf)	-	(665)	(665)	(665)	(1,215)	(1,215)
Total Baggage Service Area						
Total Baggage Service Area (sf)	6,845	7,875	7,875	7,905	10,215	10,215
Surplus (Deficit) (sf)	-	(1,030)	(1,030)	(1,060)	(3,370)	(3,370)

Note: Existing values rounded.

3.4.3 Transportation Security Administration (TSA)

TSA requirements were determined for the passenger security screening checkpoint area (SSCP) and TSA outbound baggage screening area that is located behind the ticketing check-in counters.

The analysis methodology for the SSCP considers the peak hour enplanements. The methodology applies the average checkpoint processing rates to determine the required number of checkpoint lanes and queue area assuming a maximum wait time of eight minutes. A factor of 10 square feet per passenger which is associated with Optimum LOS, was used to calculate the queue area.

The baggage screening area methodology considers the estimated baggage checked during the peak hour (based on the 0.7 checked bags per passenger factor) and determines the number of primary screening devices based on manufacturer throughput standards (226 bags per hour per device). The screening area was calculated based on industry standard areas for primary and secondary screening as well as additional equipment storage.

The TSA area requirements are presented in *Table 3-20*. The existing queuing area is sufficient to accommodate demand through PAL 3. Additional queuing area is required for the SSCP in PAL 4.

The existing checked bag screening area is insufficient to accommodate PAL 1 demand. The deficits are in the baggage screening area where the room is sized for one machine only. The peak hour baggage count exceeds the throughput of the single device, leading to the need for a second device. Additionally, with one machine, there is no redundancy and any malfunctions with the device will create delays in screening, resulting in bags stacking up on the conveyor from the ticketing area. Increased baggage demand also leads to more conveyor space and additional devices in the second and third level screening.

TABLE 3-20
TRANSPORTATION SECURITY ADMINISTRATION REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Passenger Screening Checkpoint						
Screening Lanes	3	2	2	2	3	3
Surplus (Deficit)	-	1	1	1	0	0
Queuing Space (sf)	580	515	515	515	770	770
Surplus (Deficit) (sf)	-	65	65	65	(190)	(190)
Inspection Area (sf)	3,630	2,420	2,420	2,420	3,630	3,630
Surplus (Deficit) (sf)	-	1,210	1,210	1,210	0	0
Recomposure Area (sf)	545	260	260	260	390	390
Surplus (Deficit) (sf)	-	285	285	285	155	155
Office Area (sf)	1,465	780	800	820	1,150	1,160
Surplus (Deficit) (sf)	-	685	665	645	315	305
Checkpoint Total (sf)	6,220	3,975	3,995	4,015	5,940	5,950
Surplus (Deficit) (sf)	-	2,245	2,225	2,205	280	270
Checked Bag Screening						
Est. Peak Hour Checked Bags	-	250	265	285	355	370
Primary Screening Devices	1	2	2	2	2	2
Surplus (Deficit)	-	(1)	(1)	(1)	(1)	(1)
Checked Baggage Screening (sf)	930	2,860	2,860	2,860	2,960	2,960
Surplus (Deficit) (sf)	-	(1,930)	(1,930)	(1,930)	(2,030)	(2,030)
Total TSA Area						
Total TSA Area (sf)	7,150	6,835	6,855	6,875	8,900	8,910
Surplus (Deficit) (sf)	-	315	295	275	(1,750)	(1,760)

Note: Existing values rounded.

3.4.4 Holdroom

The holdroom includes the gate queuing and deplaning corridor, passenger seating area, and standing area. The required holdroom area was determined using the peak hour departing aircraft seating capacity and planned ratio of seated to standing passengers. The analysis methodology assumes that space will be provided for 80 percent of passengers to be seated and the remaining 20 percent to stand. This ratio slightly exceeds the Optimum LOS to provide an enhanced passenger experience. The analysis considers 19 square feet per seated passenger and 13 square feet per standing passenger, based on Optimum LOS. These values are on the lower end of the range for Optimum LOS to balance the enhanced seating/sitting ratio referenced above.

The requirements for the holdroom area are presented in *Table 3-21*. The holdroom area is sufficient to accommodate the forecast peak hour demand through PAL 3. Additional space is required to accommodate the demand in PAL 4 and PAL 5.

TABLE 3-21
HOLDROOM REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Holdroom Area (sf)	8,715	8,145	8,145	8,310	9,380	9,470
Surplus (Deficit) (sf)	-	570	570	405	(665)	(755)

Note: Existing values rounded.

3.4.5 Concessions

Concession area requirements were determined by establishing an existing ratio of the number of enplanements to existing concession area. The ratio of 3.9 square feet / 1,000 annual enplaned passengers was used to calculate concession space. The methodology scaled these planning factors based on the SBP annual enplanements forecast for each PAL.

A 275 square foot concession area is located on the non-secure side of the terminal near bag claim and features a food and beverage vending machine. The primary concessions area is located adjacent to the holdroom post-security. The analysis assumes the pre-security concession area will remain the same size throughout the planning period and all of the concession growth will be accommodated post-security. Concession area requirements are presented in *Table 3-22*. The results show that additional space is required for the post-security concession area to accommodate demand in PAL 1.

TABLE 3-22
CONCESSIONS REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Pre-Security Concessions (sf)	275	275	275	275	275	275
Surplus (Deficit) (sf)	-	0	0	0	0	0
Post-Security Concessions (sf)	1,000	1,380	1,515	1,660	1,875	2,255
Surplus (Deficit) (sf)	-	(380)	(515)	(660)	(875)	(1,255)
Total Concessions Area (sf)	1,275	1,655	1,790	1,935	2,150	2,530
Surplus (Deficit) (sf)	-	(380)	(515)	(660)	(875)	(1,255)

Note: Existing values rounded.

3.4.6 Ground Transportation

The passenger terminal currently has counter and office space available for four rental car customer service providers. A meeting room south of the existing rental car counter area can be converted to accommodate a fifth service provider, if necessary

The analysis included review of total monthly rental car transaction data from 2017, 2018, and 2019. This was used to establish a historic trend ratio of the number of rental car transactions per enplanement. The peak month transactions for each PAL were estimated by using average monthly transactions from peak

months in 2017, 2018, and 2019. This was used to establish the number of rental transactions per peak month average day and per peak hour for each PAL. The required number of customer service counters were calculated based on assumption that each transaction takes six minutes and that desired maximum wait time is 15 minutes.

The analysis calculation of the total customer service center was completed based on two operating conditions – 1) customer service counter area within the terminal and 2) standalone rental car customer building.

For the operating condition that the customer counters are in the passenger terminal, the requirements consider space for the service counter and adjoining administrative/storage space. The analysis assumed 365 square feet is sufficient for each customer service counter given this ratio is representative of the current facility configuration. Dedicated space for passenger queuing is not considered in the requirements for the passenger terminal building operating configuration considering the queue for the existing customer service counters is part of the general terminal lobby circulation space.

In the case where the customer counters are in a standalone rental car facility, space is considered for passenger queuing, circulation, and restrooms. This is in addition to the service counter and adjoining administrative/storage space. The number of people in the queue is estimated by assuming that party size is an average of 1.4 people per party, based on industry standard and professional judgement. The queue area is calculated by using a space ratio of 14 square feet per passenger to represent an Optimum LOS based on the IATA ADRM.

The analysis results indicate that one additional service counter is required by PAL 2 and a second additional service counter is required by PAL 4. The analysis results also indicate that a standalone customer service center approximately 3,050 square feet is required to accommodate demand in PAL 1 with the required building size increasing to 4,300 square feet in PAL 5. The results for the ground transportation area are presented in *Table 3-23*.

TABLE 3-23
GROUND TRANSPORTATION REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Terminal Customer Service Area						
Peak Hour Transactions	-	58	61	67	83	86
Customer Service Counters	4	4	5	5	6	6
Number of People in Queue	-	81	86	93	117	121
Total Customer Service Area (sf)	1,465	1,465	1,830	1,830	2,195	2,195
Area Surplus (Deficit) (sf)	-	0	(365)	(365)	(730)	(730)
Standalone Customer Service Building						
Peak Hour Transactions	-	58	61	67	83	86
Customer Service Counters	-	4	5	5	6	6
Number of People in Queue	-	81	86	93	117	121
Counter Area and Offices (sf)	-	1,465	1,830	1,830	2,195	2,195
Circulation/Restrooms/Administrative Space for Standalone Structure (sf)	-	1,600	1,800	1,900	2,100	2,100
Total Standalone Customer Service Building Area (sf)	-	3,065	3,630	3,730	4,295	4,295

Note: Existing values rounded.

3.4.7 Public Space

Public spaces in the terminal encompass the restrooms and general circulation areas in the pre-security and post-security portions of the terminal building.

Restroom requirements were calculated for the pre- and post-security areas based on industry standards outlined in the ACRP Report 25, *Airport Passenger Terminal Planning and Design* guidebook. The pre-security restrooms requirements analysis was calculated based on the number of peak hour combined enplaning and deplaning passengers plus an estimated number of meeter/greeters. The pre-security restroom fixture count was determined using the ratio 1 fixture/100 peak hour persons. The post-security restroom requirements analysis considered the number based on the maximum number of passengers anticipated to be in the holdroom area during the peak hour. This is represented as the total seat count of aircraft forecast to be parked at the terminal building during the peak hour – this is referred to as the equivalent aircraft factor (EQA). The post-security restroom fixture count was based on a ratio of 24 fixtures/8 EQA. A factor of 85 square feet/fixture was used to calculate restroom areas and the analysis assumed an equal number of men's and women's restrooms. Both pre- and post-security restroom requirements included supplementary area (320 square feet) to accommodate a family restroom, mother's nursing room, and janitor storage area. The restroom requirements are presented in *Table 3-24*. The pre- and post-security restroom areas are sufficient to accommodate demand through the planning period.

Pre- and post-security circulation areas were calculated by maintaining the existing ratio of circulation space relative to the other building functional areas. The methodology relates the pre-security circulation area to the other pre-security building functional areas and vice versa for post-security. Therefore, additional circulation space would be required proportionally to additional required space for other building functional areas for each PAL. This methodology maintains the existing LOS for passenger circulation throughout the planning period. The circulation area requirements are presented in *Table 3-24*. The pre-security circulation is sufficient to accommodate demand through PAL 2 with additional space required in PAL 3. The post-security circulation is sufficient to accommodate demand through PAL 1 with additional space required in PAL 2.

TABLE 3-24
PUBLIC SPACE REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Restrooms						
Pre-Security Restrooms (sf)	1,510	1,000	1,000	1,000	1,170	1,170
Surplus (Deficit) (sf)	-	510	510	510	340	340
Post-Security Restrooms (sf)	1,345	1,170	1,170	1,170	1,340	1,340
Surplus (Deficit) (sf)	-	175	175	175	5	5
Total Restroom Area (sf)	2,855	2,170	2,170	2,170	2,510	2,510
Surplus (Deficit) (sf)	-	685	685	685	345	345
Circulation Area						
Pre-Security Circulation (sf)	12,610	12,225	12,260	12,625	15,130	15,315
Surplus (Deficit) (sf)	-	385	350	(15)	(2,520)	(2,705)
Post-Security Circulation (sf)	8,185	8,085	8,325	8,745	10,130	11,185
Surplus (Deficit) (sf)	-	100	(140)	(560)	(1,945)	(3,000)
Total Circulation Area (sf)	20,795	20,310	20,585	21,370	25,260	26,500
Surplus (Deficit) (sf)	-	485	210	(575)	(4,465)	(5,705)
Total Public Space						
Total Space (sf)	23,650	22,480	22,755	23,540	27,770	29,010
Surplus (Deficit) (sf)	-	1,170	895	110	(4,120)	(5,360)

Note: Existing values rounded.

3.4.8 Airport Space

Airport space represents space for airport administration staff and airport operations space, such as non-public secure circulation and storage areas. The existing airport space is 6,510 square feet and was deemed sufficient to accommodate the demand throughout the planning period. However, the location of the administrative space may be best suited elsewhere on-airport. This is discussed further in *Chapter 4, Alternatives*.

3.4.9 Building Support

Building support consists of all the utility areas needed to allow the building to function properly. The requirements are calculated based upon a percentage of the total usable facility area. The results for building support are described *Table 3-25*. The analysis shows that there is adequate space through PAL 2. Additional space for building systems is required starting in PAL 3 to accompany expansion of other functional areas within the terminal.

TABLE 3-25
BUILDING SUPPORT REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Total Building Support Area (sf)	1,885	1,805	1,820	1,895	2,255	2,300
Surplus (Deficit) (sf)	-	80	65	(10)	(370)	(415)

Note: Existing values rounded.

3.4.10 Terminal Building Summary

The terminal facility requirements are summarized in *Table 3-26* for each functional area of the terminal building. The table shows that the total airline space, baggage service, and concession functional areas are deficient in PAL 1 and PAL 2. In PAL 3, more space is required for the airline space, baggage service, concessions, public space, and building support functional areas. In PAL 4 and PAL 5, all functional areas except ground transportation and airport space will require expansion to accommodate the forecast demand.

TABLE 3-26
TERMINAL BUILDING REQUIREMENTS SUMMARY

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Airline Space						
Area (sf)	3,735	4,825	4,825	5,425	6,635	6,835
Surplus (Deficit) (sf)	-	(1,090)	(1,090)	(1,690)	(2,900)	(3,100)
Baggage Service						
Area (sf)	6,845[(1)]	7,875	7,875	7,905	10,215	10,215
Surplus (Deficit) (sf)	-	(1,030)	(1,030)	(1,060)	(3,370)	(3,370)
TSA						
Area (sf)	7,150	6,835	6,855	6,875	8,900	8,910
Surplus (Deficit) (sf)	-	315	295	275	(1,750)	(1,760)
Holdroom						
Area (sf)	8,715	8,145	8,145	8,310	9,380	9,470
Surplus (Deficit) (sf)	-	570	570	405	(665)	(755)
Concessions						
Area (sf)	1,275	1,655	1,790	1,935	2,150	2,530
Surplus (Deficit) (sf)	-	(380)	(515)	(660)	(875)	(1,255)
Ground Transportation						
Area (sf)	1,465	1,465	1,830	1,830	2,195	2,195
Surplus (Deficit) (sf)	-	0	(365)	(365)	(730)	(730)
Public Space						
Area (sf)	23,650	22,480	22,755	23,540	27,770	29,010
Surplus (Deficit) (sf)	-	1,170	895	110	(4,120)	(5,360)
Airport Space						
Area (sf)	6,510	6,510	6,510	6,510	6,510	6,510
Surplus (Deficit) (sf)	-	0	0	0	0	0
Building Support						
Area (sf)	1,885	1,785	1,800	1,860	2,215	2,300
Surplus (Deficit) (sf)	-	100	85	25	(330)	(415)
Building Total						
Area (sf)	61,230[(1)]	61,450	62,305	63,880	75,485	76,665
Surplus (Deficit) (sf)	-	(220)	(1,075)	(2,650)	(14,255)	(15,435)

Note: Existing values rounded. (1) Areas include 2,585 square feet (outbound baggage make-up area) and 985 square feet (inbound baggage area) located outside building.

3.4.11 Terminal Apron

The terminal apron is a secure area of the airfield used for the parking of scheduled commercial service aircraft that are engaged in passenger enplaning and deplaning activity, and associated ground support equipment (GSE) vehicles. SBP currently has six aircraft parking positions along the face of the passenger terminal and two remote positions for remain overnight aircraft parking.

The terminal apron requirements determination included an analysis of the fleet mix and forecast aircraft schedule in the Design Day Flight Schedule (DDFS) for each PAL. The analysis comprised three parts. First, the analysis identified the total aircraft count and aircraft fleet forecast to occupy the terminal apron during the peak period for each PAL. These results are presented in *Table 3-27*. The analysis also identified the largest aircraft type and number of those aircraft that are forecast to park at the terminal. These results are presented in *Table 3-28*. Lastly, the analysis identified the fleet mix of aircraft forecast to remain overnight (RON) at SBP during each PAL. These results are presented in *Table 3-29*.

The results show six independent aircraft parking positions are required to accommodate peak period demand throughout the planning period. Today there are six positions, but the layout only allows three positions to be independent of each other. *Chapter 4, Alternatives* further explores how to accommodate independent parking of future commercial aircraft through various aircraft parking layout options. The DDFS analysis determined the terminal apron will need to accommodate up to four Embraer E175 aircraft simultaneously through PAL 3 and up to two Boeing 737-800 aircraft simultaneously in PAL 5. The existing apron can only accommodate up to a Boeing 737-400 aircraft.

The requirement for RON aircraft positions is for six positions in PAL 1, 2, and 3, and seven positions in PAL 4 and 5. The terminal currently has sufficient positions and of the right size to accommodate RON aircraft parking positions through the planning horizon.

TABLE 3-27
AIRCRAFT PARKING POSITIONS REQUIRED FOR PEAK PERIOD

Aircraft	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
ERJ-135	-	1	1	1	1	1
CRJ-200	-	0	0	0	0	0
CRJ-700	-	3	3	1	2	1
E175	-	2	2	4	2	3
A220	-	0	0	0	0	0
A319	-	0	0	0	0	0
737-800	-	0	0	0	1	1
Total	**6**	**6**	**6**	**6**	**6**	**6**

TABLE 3-28
MAX SIMULTANEOUS GATE USAGE

Aircraft	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
ERJ-135	5	1	1	1	1	1
CRJ-200	5	1	0	0	0	0
CRJ-700	5	3	3	2	2	1
E175	4	4	4	4	3	3
A220	3	0	0	0	1	1
A319	2	0	0	0	0	1
737-800	0	0	0	0	1	2

TABLE 3-29
REMAIN OVERNIGHT PARKING POSITIONS REQUIRED

Aircraft	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
ERJ-135	-	0	0	0	0	0
CRJ-200	-	2	0	0	0	0
CRJ-700	-	4	6	2	3	1
E175	-	0	0	4	3	5
A220	-	0	0	0	1	1
A319	-	0	0	0	0	0
737-800	-	0	0	0	0	0
Total	**8**	**6**	**6**	**6**	**7**	**7**

3.5 ACCESS, CIRCULATION, AND PARKING

The elements of the access, circulation and parking system, or the landside system, include the infrastructure elements providing vehicular access for the Airport, general circulation within public areas, vehicle storage and parking, and connections to ground transportation. This section describes the methodology and results of analyses conducted to determine landside requirements at SBP based on industry guidelines, planning parameters specific to the Airport's passenger characteristics, and the FAA approved passenger forecast as documented in *Chapter 2, Aviation Demand Forecast*. Future requirements were determined for the airport access roadways, passenger terminal curb, and vehicle parking areas.

3.5.1 Airport Access Roadways

Aero Drive is a two-directional roadway that serves as the entrance roadway to access the passenger terminal from California State Route 227. Aero Drive is also used as one of the access roadways for airport tenants and off-airport businesses located along Airport Drive and Aviadores Way. These tenant sites and businesses are also accessible from State Route 227 via Aerovista Place located north of Aero Drive and an unnamed roadway located near the ARFF building. The existing off-airport businesses are not anticipated to greatly impact the roadway traffic volumes through the planning horizon. Based on the DDFS, the peak time for passenger traffic at the airport occurs at noon whereas the peak times for the adjacent off-airport businesses occur in the morning and afternoon business commute hours. Through the planning horizon, forecast flight schedule changes are not anticipated to change the airport peak hour. Furthermore, airport traffic will still constitute the majority share of traffic on airport roadways.

Analysis of the forecast demand and an assumption of 1.2 passengers per vehicle estimates 400 vehicles associated with passengers on Aero Drive during the peak hour in the near-term and is expected to grow to approximately 460 vehicles by the end of the planning horizon. The capacity for Aero Drive is 600 vehicles per hour which represents a LOS C for traffic flow with speeds at or near the free-flow speeds of the roadway[2]. Considering it is primarily for airport-related traffic during the peak hour, Aero Drive has sufficient capacity through the planning horizon.

In 2008, the County realigned Aero Drive and relocated the signalized intersection at Aero Drive and State Route 227 to align with Spitfire Lane. The airport monument sign was not relocated as part of this project and remains in its original location approximately 200 feet northwest of the Aero Drive intersection. The monument sign is difficult to see for drivers traveling northbound on State Route 227 given the distance to the Aero Drive / State Route 227 intersection. The Airport should consider relocating or constructing a new monument sign closer to the intersection to enhance driver wayfinding.

3.5.1.1 Other On-Airport Roadway Requirements

Other on-airport public roadways include Aviadores Way located south of the passenger terminal, Airport Drive located north of the passenger terminal, and the old airport loop roadway located near the old passenger terminal building. These roadways are considered of sufficient capacity through the planning horizon and are used only by the tenants and/or their customers in that area. Similarly, although not located on-airport, Old Santa Fe Road is the access roadway used by the general aviation tenants on the airport west side. It is anticipated to continue to be used by the same businesses throughout the planning horizon and hence is deemed of sufficient capacity to accommodate future demand.

3.5.2 Terminal Curb and Ground Transportation

The terminal curb is the location for the combined active loading and unloading of passengers by private and commercial vehicles. The terminal curb is configured as a 4-lane, single level roadway with a single inner 16-foot-wide drop-off/pick-up lane, and second adjacent 12-foot-wide lane where passenger drop-off/pick-up is allowed, and two outer 12-foot-wide pass-through lanes. The curb length for drop-off and pick-up, which excludes the 22-foot-wide main crosswalk, measures 405 linear feet. The effective curb length is 527 feet, which accounts for an allowance of double parking in the second lane. Future curb length requirements were determined based on future estimates of the peak hour vehicles at the terminal curb based on forecast passenger demand[3] and the design day flight schedule and planning parameters representative of the Airport's passenger and vehicle characteristics. This includes vehicle mode shares, dwell times, and stall lengths.

Table 3-30 presents the estimated peak hour traffic volumes on the terminal curb by mode. Mode shares percentage splits were identified from results of the passenger survey required to access the Airport's public wi-fi. The data was collected between November 2019 and March 2020. *Table 3-31* shows the average dwell times and stall lengths used for the curb length calculations as determined from consultant experience and industry standard metrics. *Table 3-32* presents the resulting terminal curb length requirements and LOS.

[2] ACRP Report 40, *Airport Curbside and Terminal Area Roadway Operations*, 2010.

[3] The passenger demand reflects the total combined enplaned and deplaned passengers in the peak hour.

TABLE 3-30
TERMINAL CURB PEAK HOUR TRAFFIC VOLUMES BY MODE

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
TNC[1] / Taxi / Limo	58	64	64	65	83	84
All Other Vehicles[2]	199	220	220	222	286	289
Public Transportation	3	4	4	4	5	5

Notes: (1) TNC = Transportation Network Company; (2) All other vehicles include private vehicles, and for-hire shared-ride services, courtesy, charter shuttle, and other vans that drop-off and pick-up passengers.

TABLE 3-31
AVERAGE STALL LENGTH AND DWELL TIMES

	Standard Average Stall Length (feet)	Average Dwell Time (min)
TNC / Taxi / Limo	25	1.9
All Other Vehicles	25	2.2
Public Transportation	60	2.7

TABLE 3-32
TERMINAL CURB LENGTH REQUIREMENTS

	Existing[1]	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Length (feet)	615	510	510	510	610	610
Level of Service		A	A	A	B	B
Surplus (Deficit)		105	105	105	5	5

Notes: (1) A total of 30% of the second lane is assumed to be utilized for passenger drop-off / pick-up and was added to the existing inner curb length of 405 feet for the effective curb length. The total length of the two lanes is 810 linear feet.

The existing terminal curb length is sufficient to meet future vehicle demand through PAL 3. However, some additional demand (84 linear feet) is necessary to meet demand in PAL 4 and 5. Curb allocation currently assumes all TNC / taxi / limo drop-offs and pick-ups (pre-arranged and on-demand) occur at the terminal curb. This demand is for 5 stalls through PAL 3 and 6 stalls through PAL 5 without the need for a staging area. If additional space is needed in PAL 4 or 5 to accommodate vehicular demand, a staging area for commercial vehicles could be identified to offset or manage demand at the terminal curb. This staging area would be used at a minimum for TNCs, taxis, limos, but could also be set up other commercial ground transportation vehicles by arrangement.

Finally, the terminal curb roadway with its pass-through lanes has an ultimate capacity of approximately 2,680 vehicles per hour at a LOS C. Based on the design day flight schedule, the greatest number of airport-related vehicles estimated to pass through the roadway is 600 vehicles in PAL 5. The roadway has more than enough capacity to accommodate through traffic volumes. No changes to the terminal curb roadway are required through the planning horizon to improve capacity.

3.5.3 Vehicle Parking

Vehicle parking requirements were determined for public, employee, and rental car parking facilities.

3.5.3.1 Public Auto Parking

Future public parking space requirements were determined by establishing a planning factor between the historical peak month enplanements and parking transactions. Based on a review of historical parking transactions, peak parking activity at SBP occurs in May. The analysis assumes that the current LOS is maintained through the planning horizon. The ratio was determined from passenger enplanement and parking space transaction and occupancy data during the peak months of 2017, 2018, and 2019.

Public parking space requirements are considerate of surge and search factors. A 1.1 surge factor increases the space requirement to account for peak parking times. A 1.05 search factor increases the space requirement to account for the added ease in searching for a parking space.

Space requirements are also adjusted in consideration of transportation network companies (TNC) such as Uber and Lyft, which have resulted in passengers changing their airport access preferences. Although some airports nationwide, including SBP, are observing decreased parking transactions along with increased TNC usage, the TNC impact to all mode shares (e.g., parking, rental car, curbside drop-off and pick-up by private and ground transportation vehicles) is still largely undetermined and observed trends may not be directly correlated. Industry surveys reveal the declining share of passengers that park may be contributed in part to TNCs, but the trend may also be explained by other factors such as increased parking fees. This may be the case for SBP. TNCs have only been active at SBP since April 2016 so trend correlations will require further monitoring. The assumption is that up to 10% of public parking transactions will gradually divert to TNCs over the planning horizon though 2039 based on industry trends and professional judgement.

The analysis results indicate that 823 public parking spaces are needed to meet the PAL 1 demand. The demand grows to 1,250 spaces, requiring a doubling of available parking spaces, in PAL 5. *Table 3-33* presents a summary of vehicle parking space requirements at SBP.

Area requirements were determined assuming 440 square feet per parking space, which is the average size per parking space at SBP and includes space for circulation lanes and landscaping. This planning factor provides a slightly higher LOS than the industry standard of 350 square feet per parking space because of California Low Impact Development stormwater management requirements for impervious surfaces.

TABLE 3-33
PARKING SPACE REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Public Parking Stalls	602	823	885	951	1,072	1,250
Surplus (Deficit)		(221)	(283)	(349)	(470)	(648)
Airport Employee/FBO/Other Tenant Parking Stalls	297	233	258	286	286	286
Surplus (Deficit)		64	39	11	11	11
RAC Ready / Return Stalls	63	74	74	74	87	90
Surplus (Deficit)		(11)	(11)	(11)	(24)	(27)
RAC Storage Stalls	101	215	233	253	289	344
Surplus (Deficit)		(114)	(132)	(152)	(188)	(243)
General Aviation Parking Stalls	43	49	50	52	52	52
Surplus (Deficit)		(6)	(7)	(9)	(9)	(9)
Total Parking Stalls	1,106	1,394	1,500	1,616	1,786	2,022
Surplus (Deficit)		(288)	(394)	(510)	(680)	(916)

3.5.3.2 Airport Employee and FBO/MRO Auto Parking

Airport employee vehicle parking space requirements were determined for employees working in the passenger terminal and in airport maintenance/operations. The employee and customer parking requirements for the Fixed Base Operator (FBO)/Maintenance, Repair, and Overhaul (MRO) tenant facilities were also included in this category. Automobile parking requirements were jointly determined for airport employee and FBO/MRO facilities because parking for both sets of users are comingled in existing parking inventory.

Total employee parking requirements were determined based on data with tenants indicating demand as of 2021 and predicted future usage, employee permit data, and forecast enplanement and operations growth rates relating to the type of tenant parking being projected. The parking space needs are presented in *Table 3-33*. The future requirement is 286 spaces in PAL 3-5 which results in a slight surplus for employee parking. ACI accounts for about half of the employee parking requirements. There are enough total parking spaces to accommodate the PAL 3-5 demand; however, the location of the existing parking spaces is misaligned with location of the employee work locations. Alternatives to reallocate auto parking inventory to better align with geographic demand are described in *Chapter 4, Alternatives*.

3.5.3.3 Rental Car Parking Requirements

Rental car spaces were determined for the ready/return lot located near the passenger terminal building and the storage lot located at the intersection of Airport Drive and Aero Drive. Space needs are dependent upon growth in passenger enplanements. The availability of rental car staff on site can heavily influence the space allocated for the ready/return lot. An operation with more staff on site can turn vehicles more frequently (customer returns vehicle, vehicle driven to the wash facility for cleaning and light maintenance, vehicle returned to the ready/return lot) and reduce overall space needs.

Observations and feedback from Airport management and rental car providers indicate the ready/return lot is at capacity in consideration of a total of approximately three existing rental car staff available to turn the vehicles. As passenger enplanements increase, peak month average day rental car activity transactions are estimated to grow by 200% by the end of the planning period. For rental car storage, growth was determined based on annual passenger enplanements, with existing demand identified through surveys

provided to rental car providers in August 2018. The potential impact of TNCs on rental cars was considered in the requirements analysis. The assumption, as supported by industry trends, was a reduction of 5% of rental car spaces over the planning horizon.

Rental car ready/return parking space needs are 74 spaces in PAL 3 and 90 spaces in PAL 5. Storage space needs are 253 spaces in PAL 3 and 344 spaces in PAL 5. The rental car parking lot requirements are presented in *Table 3-33*.

3.5.3.4 General Aviation Auto Parking

The landside area requirements were determined for general aviation conventional hangars. The existing ratio of vehicle parking to conventional hangar space was maintained to determine the facility requirements throughout the planning period based on observation. No additional vehicle parking areas are required for T-hangar spaces or apron areas. The Airport currently allows vehicle parking in the leased T-hangar and on the apron at the tie-down site. This practice is expected to remain in-effect throughout the planning period given the land constrained airport facility. The landside requirements are presented in *Table 3-33*. Additional vehicle parking is required to support future conventional hangar development starting in PAL 1 and throughout the planning period.

3.6 GENERAL AVIATION AND SUPPORT FACILITIES

This section describes the methodology and results of analyses conducted to determine the requirements for the following functional airport areas:

- General aviation
- Fixed base operator and maintenance, repair, and overhaul
- Air cargo
- Aircraft Rescue and Firefighting
- Airport maintenance and operations
- Airfield electrical vault
- Airport Traffic Control Tower
- Airport fuel storage
- Wash rack
- Small unmanned aircraft systems
- Utilities

3.6.1 General Aviation

General aviation facilities include the hangars/buildings, taxilanes, and aprons used by general aviation users at SBP. Landside requirements for general aviation users are described in *Section 3.5.3*. The general aviation facility requirements analysis was completed based on the inputs, planning guidelines, and methodologies referenced in the following:

- ACRP Report 96, *Apron Planning and Design Handbook*
- ACRP Report 113, *General Aviation Facility Planning*

The analysis comprised an evaluation of T-hangar, conventional hangar, aircraft apron, and associated landside areas. The analysis assumed based aircraft were stored in T-hangars, conventional hangars, or on the apron. The proportion of aircraft stored in each location was determined based on a review of the existing aircraft storage ratios. The proportion used throughout the planning horizon to determine the requirements considered a greater proportion of aircraft owners wanting to store their aircraft in a hangar (instead of the apron) if hangar space was made available.

T-hangar requirements were determined from forecast demand and included a breakdown for single- and multi-engine aircraft. The analysis assumed that 65 percent of based single-engine aircraft were stored in T-hangars and 70 percent of based multi-engine aircraft were stored in T-hangars, which are similar to existing observed ratios. The T-hangar requirements are presented in *Table 3-34*. Additional T-hangars are required starting in PAL 1 and throughout the planning period.

Conventional hangar requirements were determined from forecast demand and included a breakdown of single-engine, multi-engine aircraft, jets, and helicopters. The analysis assumed 20 percent of based single-engine aircraft were stored in conventional hangars, 25 percent of based multi-engine aircraft were stored in conventional hangars, and 100 percent of based jets and based helicopters in conventional hangars, which are similar to existing observed ratios. The hangar area was determined based on the size of representative aircraft for each of the aircraft types. The conventional hangar requirements are presented in *Table 3-35*. Additional conventional hangars are required starting in PAL 1 and throughout the planning period.

The based aircraft apron requirements were determined from forecast demand and included a breakdown of single- and multi-engine aircraft. The analysis assumed that 15 percent of based single-engine aircraft and 5 percent of based multi-engine aircraft are stored on the apron, which are similar to existing observed ratios. The apron area was determined based on the size of representative aircraft for each of the aircraft types. The apron area calculations also include space for apron taxilanes and aircraft circulation. The based aircraft apron requirements are presented in *Table 3-36*. Sufficient apron area exists to accommodate based aircraft throughout the planning period.

TABLE 3-34
T-HANGAR FACILITY REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3
Single-Engine Positions	-	153	155	157
Multi-Engine Positions	-	11	12	13
Jet Positions	-	0	0	0
Helicopter Positions	-	0	0	0
Total Hangar Positions	152	164	167	170
Surplus (Deficit)	-	(12)	(15)	(18)
Hangar Area (sf)	178,100	192,200	195,700	199,200
Surplus (Deficit) (sf)	-	(14,100)	(17,600)	(21,100)

TABLE 3-35
CONVENTIONAL HANGAR FACILITY REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3
Single-Engine Positions	-	47	48	48
Multi-Engine Positions	-	4	4	5
Jet Positions	-	3	3	3
Helicopter Positions	-	7	8	9
Total Aircraft Positions	-	61	63	65
Hangar Area (sf)	147,400	165,800	170,100	175,100
Surplus (Deficit) (sf)	-	(18,400)	(22,700)	(27,700)

TABLE 3-36
BASED AIRCRAFT APRON REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3
Single-Engine Positions	-	35	36	36
Multi-Engine Positions	-	1	1	1
Jet Positions	-	0	0	0
Helicopter Positions	-	0	0	0
Total Aircraft Positions	-	36	37	37
Aircraft Parking Apron Area (sy)	17,800	10,800	11,100	11,100
Apron Taxilanes/Circulation Area (sy)	94,200	82,550	84,500	86,000
Total Area (sy)	115,500	93,350	95,600	97,100
Surplus (Deficit) (sy)	-	22,150	19,900	18,400

3.6.2 Fixed Base Operator and Maintenance, Repair, and Overhaul

Fixed base operators (FBO) at SBP provide aircraft storage, aircraft rental or sales, flight instruction, air charter flights, flight crew lounge, passenger terminal and other passenger services, fueling, aircraft line services (e.g., aircraft interior and exterior cleaning and lavatory servicing), and aircraft repair and maintenance. ACI Jet is currently the only full-service FBO and provides maintenance, repair, and overhaul (MRO) services. The requirements for FBO and MRO operations are combined given the same existing tenant at SBP performs both operations in the same facility.

The FBO facility requirements considered the aircraft storage areas required for transient aircraft and based charter aircraft. Both groups of aircraft are stored in hangars and on the apron at SBP.

The demand for transient aircraft was calculated by estimating the number of transient general aviation operations during the average day of the peak month. Based on observation, the analysis assumed 10 percent of transient general aviation aircraft would be stored in hangars and 90 percent of the transient aircraft would be stored on the apron. The area required for hangar and apron storage was determined based on the average size of a representative transient GA aircraft considering the transient fleet ranges from single-engine aircraft to jet aircraft. The demand also considered the need to accommodate transient military aircraft on the apron. The Lockheed Martin C-130 was used as the representative aircraft for the transient military demand.

The demand for based charter jet aircraft is based on the existing and future forecast charter fleet based at SBP. The charter fleet is expected to grow in PAL 1 and remain constant through the remainder of the planning period based on input received from the air charter operator. Based on interviews with FBO jet charter operator, the analysis assumed that 60 percent of the charter aircraft fleet would be on the ground at the same time while the remaining portion of the fleet was in service elsewhere. Of the portion on the ground at the same time, the analysis assumed 20 percent of the based charter aircraft would be stored in hangars and 80 percent stored on the apron.

The existing MRO facility at SBP provides scheduled maintenance and original equipment manufacturing services to aircraft owners. Therefore, demand for the MRO operation at SBP is expected to be proportional to the nationwide forecast growth in jet operations, as described in the FAA Aerospace Forecasts. The requirements analysis assumes the existing MRO hangar and apron facility is at 50 percent capacity based on interviews with MRO personnel and the facility size would need to increase proportional to the growth in jet operations to accommodate aircraft maintenance demand throughout the planning period.

The FBO terminal space supports the operation of the FBO hangar and apron facilities. Therefore, the FBO terminal area was calculated as a proportion of the area space required for FBO hangar and apron throughout the planning period. Similarly, the maintenance administration and maintenance shop space requirements were calculated as a proportion of the space required for MRO hangar and apron.

The FBO and MRO facility requirements are presented in *Table 3-37*, *Table 3-38*, and *Table 3-39*.

TABLE 3-37
FBO AND MRO HANGAR FACILITY REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3
FBO Hangar				
Charter Aircraft Parking (sf)	-	24,700	24,700	24,700
Transient Aircraft Parking (sf)	-	10,700	10,700	10,700
FBO Hangar (sf)	41,200	35,400	35,400	35,400
Surplus (Deficit) (sf)	-	5,800	5,800	5,800
MRO Hangar				
MRO Hangar (sf)	39,400	25,600	28,500	31,800
Surplus (Deficit) (sf)	-	13,800	10,900	7,600
Total FBO+MRO Hangar				
Total FBO+MRO Hangar (sf)	80,600	61,000	63,900	67,200
Hangar Surplus (Deficit) (sf)	-	19,600	16,700	13,400

TABLE 3-38
FBO AND MRO APRON FACILITY REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3
FBO Apron				
Charter Aircraft Parking	-	12,600	12,600	12,600
Transient Aircraft Parking	-	14,500	14,500	14,500
FBO Apron (sy)	33,250	27,100	27,100	27,100
Surplus (Deficit) (sy)	-	6,150	6,150	6,150
MRO Apron				
MRO Apron (sy)	7,750	8,400	8,600	8,800
Surplus (Deficit) (sy)	-	(650)	(850)	(1,050)
Total FBO+MRO Apron				
Total FBO+MRO Apron (sy)	41,000	35,500	35,700	35,900
Surplus (Deficit) (sy)	-	5,500	5,300	5,100

TABLE 3-39
FBO AND MRO OTHER FACILITY REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3
FBO Terminal				
Terminal Space (sf)	28,900	24,300	24,300	24,300
Surplus (Deficit) (sf)	-	4,600	4,600	4,600

3.6.3 Air Cargo

Air cargo operations currently operate on airport apron areas. Air cargo facility requirements analysis comprised existing and anticipated future air cargo demand. Future demand is based on fleet mix changes anticipated to occur in the industry. The fleet mix changes considered in the analysis was based on input received from air cargo operators at SBP.

Aircraft apron parking areas were determined using anticipated fleet mix with buffer areas from the aircraft wingtips, nose, and tail. The analysis also considered apron space for box trucks to park adjacent to the aircraft during the onload/off-load operation. No significant changes are anticipated in the air cargo operation at SBP during the planning period. The air cargo operation is expected to remain an apron onload/off-load with offsite sort operation throughout the planning period.

The air cargo apron requirements are presented in *Table 3-40*. Additional apron area is required to accommodate the existing air cargo operation more efficiently. This is in alignment with feedback received from air cargo operators at SBP. Approximately 1,500 square yards of additional apron space would be required to accommodate the future demand should the fleet mix change, as anticipated.

TABLE 3-40
AIR CARGO APRON REQUIREMENTS

	Existing	Existing Demand	Future Demand
Cessna 208 Caravan	-	3	0
Cessna 408 SkyCourier	-	0	2
Fairchild Swearingen Metroliner	-	2	3
Aircraft Parking Area Subtotal (sy)	-	3,100	4,000
Box Truck Count	-	6	9
Box Truck Apron Staging (sy)	-	200	300
Apron Circulation (sy)	-	500	600
Total Area (sy)	3,400	3,800	4,900
Surplus (Deficit) (sy)	-	(400)	(1,500)

3.6.4 Aircraft Rescue and Firefighting

Part 139 certificated airports that serve scheduled and unscheduled air carrier flights are required to provide aircraft rescue and firefighting (ARFF) facilities and equipment. ARFF requirements are based on the Index level of the airport. Index is determined by the longest aircraft with five or more daily departures. Currently, The current and future critical aircraft at SBP is the 119 feet long Bombardier CRJ-900 which is an Index B. SBP has two ARFF vehicles, meeting the Index B requirements of having available one or two vehicles equipped with a combination of water, dry chemical, and firefighting foam agents as specified in *Title 14 CFR Part 139.317, Aircraft rescue and firefighting: Equipment and agents*. At PAL 4 and 5, the critical aircraft would become the Boeing 737-800, an Index C aircraft, which would require the acquisition of an additional ARFF vehicle.

The vehicle storage portion of the current facility is adequately sized at 4,100 square feet with three flow-through bays to accommodate the two ARFF vehicles and a single airport mass casualty vehicle, as well as four municipal firefighting and emergency vehicles. The bay dimensions are adequate to accommodate the vehicles. At Index C in PAL 4 and 5, the facility would require expansion of another vehicle bay to store an additional ARFF vehicle. *FAA Advisory Circular 5210-15A, Aircraft Rescue Firefighting Station Building Design* states the total eligible bays for an ARFF facility equal the ARFF Index plus one bay for light maintenance and washing. SBP currently has three bays and if increased to an Index C, would be eligible for four bays. Consideration for additional bays may be warranted for other emergency, HAZMAT, or training vehicles, or for the re-supply of foam and water during an incident.

The living and office portion of the current facility is adequately sized to accommodate increased staffing through the planning horizon. Staff identified additional storage capacity for spare vehicle parts and miscellaneous apparatus as the only future expansion needs. The facility typically has three staff on duty, and a roster of 25 firefighters. Given the location of the ARFF facility near the apron area and terminal building concerns have been expressed regarding the potential conflict of airplane pushbacks potentially impeding ARFF vehicle access and the ability to meet response time requirements, as well as the effects of the resulting jet blast to the facility. As shown in *Table 3-41*, the portions of the ARFF facility which does not meet requirements through PAL 3 include vehicle parking spaces (which are deficient by 16 spaces to accommodate peak events such as training) and storage area space (which is currently in 2,300 square feet of storage containers but will be displaced by Airport Maintenance).

TABLE 3-41
ARFF FACILITY SPACE REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Vehicle Parking Spaces	14	30	30	30	30	30
Living / Office Area (sf)	4,500	4,500	4,500	4,500	4,500	4,500
Covered Vehicle Storage Area (sf)	4,100	4,100	4,100	4,100	5,500	5,500
Storage Area (sf)	0	2,300	2,300	2,300	3,500	3,500
Total Area (sf)	8,600	10,930	10,930	10,930	13,500	13,500
Surplus (Deficit) (sf)		(2,330)	(2,330)	(2,330)	(4,900)	(4,900)

3.6.5 Airport Maintenance and Operations

The Airport maintains seven primary maintenance vehicles including a sweeper, mower, and platform lift, and a variety of smaller maintenance vehicles and equipment. Most vehicles are parked outside. The sweeper is parked under a canopy. The existing garage building has flow through bays and is setup to accommodate some of the smaller vehicles. It also accommodates shelf stock of spare parts, small tools, and power equipment. The existing garage building is at capacity and needs to be expanded. The workshop space is currently overcapacity and requires additional space to be adequately serviceable.

Future requirements for airport maintenance and operations space was estimated based on input from Airport staff regarding the amount of additional space required. *Table 3-42* presents a summary of the airport maintenance and operations facility requirements. Operations and maintenance employee auto parking requirements are presented in *Section 3.5.3*. Alternatives to accommodate an expanded maintenance and operations function (and potentially collocate with other Airport staff facilities) is discussed in *Chapter 4, Alternatives*.

TABLE 3-42
AIRPORT MAINTENANCE AND OPERATIONS FACILITY SPACE REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3
Admin Operations/Maintenance (sf)	300	300	400	400
Workshop Space (sf)	2,700	3,100	3,500	3,900
Vehicle Bays	4	5	5	6
Vehicle Bay Area (sf)	1,400	3,400	3,400	4,100

3.6.6 Airfield Electrical Vault

The airfield electrical vault requires improvements to enhance electrical shielding and accommodate additional electrical equipment. The Airport plans to upgrade the existing vault to extend the life of the building for another five years. The vault requires expansion to add two new regulators, which will require the vault size to increase from 360 square feet to approximately 720 square feet. While the current site is acceptable to accommodate the vault replacement, other suitable locations are evaluated in the development of alternatives. Additional considerations of the electrical vault and its space requirements are addressed in *Chapter 4, Alternatives*.

3.6.7 Airport Traffic Control Tower

The Airport Traffic Control Tower (ATCT) currently has line of sight issues directly at the base of the tower and at the run-up pad situated near Site J along Taxiway A as shown in *Chapter 1, Inventory*. Additionally,

its location near the passenger terminal constrains aircraft pushbacks. The recommendation in PAL 4 and 5 is to consider the relocation of the Airport Traffic Control Tower, particularly when aircraft larger (longer or wider) than the Bombardier CRJ-900 or Embraer E175 will use the terminal gates. Appropriate clearances and terminal gate and apron layouts for these aircraft will be explored in the development of alternatives. The Master Plan recommends a siting study per FAA Order 6480.4B, *Airport Traffic Control Tower Siting Process*, be conducted as a follow-on study to determine a suitable site for the ATCT at the end of PAL 3.

3.6.8 Aviation Fuel Storage

The fuel requirements were determined by establishing a ratio of average fuel usage per aircraft operation at SBP. This ratio was established using the historic fuel flow rates compared to the number of operations during the same time period. Using 2019 data, the Jet A usage ratio was 96 gallons per jet aircraft operation and the 100LL AvGas ratio was 6 gallons per piston aircraft operation. These ratios were applied to the forecast demand for aircraft operations on the average day of the peak month for the PALs throughout the planning horizon.

Planning guidelines for fuel storage recommend two to seven days storage capacity during the peak month. Based on discussions with the FBO (which manages the fuel farm) in 2020, the fuel farm is partially replenished daily with Jet A trucked from Los Angeles or San Francisco. The analysis shows that the Airport has enough Jet A capacity to operate for three to four days without fuel delivery. However, the FBO and Airport accept daily fuel deliveries to keep the tanks full (or close to full) to preserve operational continuity should unforeseen conditions prevent fuel delivery for one or two days. Therefore, a three-day supply was used to establish the requirement for fuel storage at SBP.

The existing storage capacity for Jet A and AvGas are sufficient to accommodate future fuel needs of a 3-day supply of fuel. The analysis result assumes that the existing fuel delivery schedule is maintained through the planning horizon. *Table 3-43* presents the Jet A fuel storage requirements and *Table 3-44* presents the AvGas fuel storage requirements. Future planning will need to consider aircraft and vehicle ingress/egress access needs on the secure side of the airfield to and from Taxiway A and near the Site L hangar. Furthermore, additional pavement marking and/or signage are recommended to more clearly delineate vehicle access routes for fuel trucks.

TABLE 3-43
JET A FUEL STORAGE REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3
Average Day Peak Month Operations	-	120	124	128
Use Ratio (Gallons / Operation)	96	96	96	96
Average Day Peak Month Demand (Gallons)	-	12,000	12,000	13,000
3-Day Fuel Storage(Gallons)	42,000	36,000	36,000	39,000
Surplus (Deficit)		6,000	6,000	3,000

TABLE 3-44
AVGAS FUEL STORAGE REQUIREMENTS

	Existing	PAL 1	PAL 2	PAL 3
Average Day Peak Month Operations	-	122	122	122
Use Ratio (Gallons / Operation)	6	6	6	6
Average Day Peak Month Demand (Gallons)	-	730	750	770
3-Day Fuel Storage (Gallons)	35,000	2,160	2,160	2,160
Surplus (Deficit)		32,840	32,840	32,840

3.6.9 Wash Rack

The Airport-owned wash rack on the Westside apron and the ACI wash racks on the east side of the Airport are adequate to meet future operational needs through the planning horizon.

3.6.10 Small Unmanned Aircraft Systems

Small, unmanned aircraft systems (UAS), commonly known as "drones," have gained popularity in recent years as they became commercially viable for hobbyists. The FAA has created new rules, 14 CFR Part 107 – *Small Unmanned Aircraft Systems,* governing the use of small UAS due to increasing drone popularity and the potential for safety conflicts within the National Airspace System.

Small UAS operators must register drones with the FAA if they weight between 0.55 and 55 pounds[4] under 14 CFR Part 107. Commercial small UAS operators are also required to obtain a Remote Pilot Airman Certificate and abide by the rules within FAA Part 107, which includes the applicable limitations when operating within the FAA controlled airspace system. Examples of drone operating rules include keeping the small UAS within line of sight, yielding right-of-way to manned aircraft, and notifying airports and ATC prior to operating within five miles of an airport[5]. UAS operators can identify the most current restrictions or requirements in effect for specific locations by using the FAA smartphone "B4UFLY" application.

While the need for FAA regulations governing small UAS pilots became evident years ago, it takes times to develop these regulations and vet them through the public involvement process. This need was considered under Section 333 of the FAA Modernization and Reform Act of 2012 whereby a "bridging" exemption was created to cover the gap between FAA rulemaking and small UAS operator demand. This exemption allowed licensed pilots the ability to pilot small UASs once a petition was granted on a case-by-case basis. These Section 333 exemptions remain valid, even with the creation of Part 107, as set forth in the individually granted exemption. Part 107 does not require a private pilot license, as it contains its own licensing regulation.

The Part 107 small UAS regulations are in place to protect the public (including traditional aircraft operators and passengers using public use airports, like SBP) from potential dangers posed by drones. Opportunities also exist for airport operators to embrace this new technology and increase revenue through leasing policies which encourage drone production or maintenance facilities and drone sales

[4] Recreational small unmanned aircraft system users are allowed to fly drones without registration if they weight less than 0.55 pounds. Drones weighing 55 pounds or more require licensing and registration as traditional aircraft under 14 CFR Part 47.
[5] All of the most current small UAS operating rules can be found on www.faa.gov/uas.

companies on airport property. Additionally, companies are testing drones for use in package deliveries. While specific details about these type of delivery services have not been released, future launching/landing facilities for this type of drone delivery will most likely be located within corresponding product warehouses, or even mobile delivery trucks. Drone testing by various companies interested in this type of delivery service are completing product testing internationally, but testing is not yet occurring in the United States at airfields with commercial passenger operations. As commercial drone operations become more popular, the Airport may benefit from new customer interest in UAS aviation facility development. It is anticipated that US airports, including SBP, will begin to see development of commercial drone facilities within the 20-year planning period. The Airport can conduct a more detailed study on drone facility development needs as their commercial viability materializes. At this time, there is insufficient facility information to prepare requirements and an Alternatives analysis will not need to allocate space for drone air cargo operations.

3.6.11 Utilities

Improved electric, water, and sanitary sewer line connectivity should be considered to support future airport development. The areas where there is insufficient utility infrastructure are summarized in *Table 3-45*. It is recommended the County work towards extending full utility coverage for all existing and future development areas. Extending full utility coverage will improve the LOS provided to existing tenants and promote new development opportunities. Proposed improvements to the utility infrastructure are addressed in *Chapter 4, Alternatives*.

The updated Airport Stormwater Master Plan was prepared in parallel with this Airport Master Plan. The Stormwater Master Plan evaluates the storm drain network and all drainage elements and determines other required measures necessary to meet regulatory requirements and ensure proper drainage for future airport development plans. Stormwater infrastructure deficiencies are described in the Stormwater Master Plan and recommended infrastructure improvements are included in *Chapter 5, Implementation Plan* of the Airport Master Plan.

TABLE 3-45
EXISTING AREAS OF INSUFFICIENT UTILITY COVERAGE

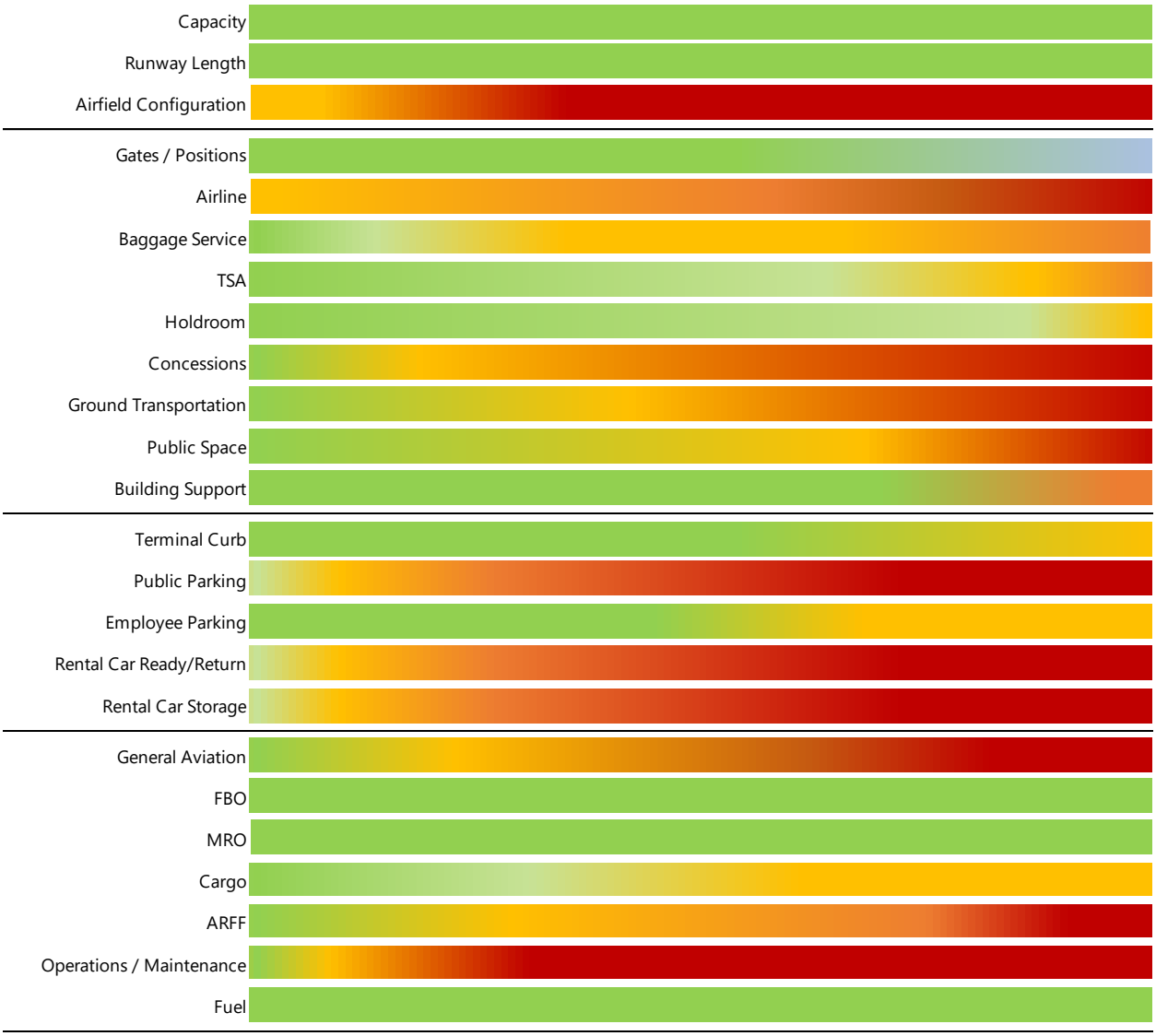
	Areas
Electric	Westside apron, Site T
Water	Westside apron, Site T, Site R
Sanitary Sewer	Westside apron, Site T, Site R, Site Q, Site P

3.7 SUMMARY OF AIRPORT FACILITY NEEDS

Figure 3-8 presents a graphical summary of facility requirements as documented in this Chapter.

FIGURE 3-8
FACILITY REQUIREMENTS SUMMARY

	Existing	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5
Passengers	256,694	354,201	388,772	426,717	481,117	579,485
Operations	80,229	82,423	83,879	85,338	83,879	85,338



SLO County Airport
Master Plan
Chapter 4 - Alternatives

RS&H

Chapter 4
Alternatives

DRAFT

February 2024

San Luis Obispo, California

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Prepared by RS&H, Inc. at the direction of the County of San Luis Obispo

RS&H

PREPARATION

"The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws."

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CHAPTER 4

ALTERNATIVES

4.1 INTRODUCTION

The purpose of this chapter is to identify and evaluate development alternatives for SLO County Airport (also referred to as "Airport" or "SBP" throughout this report) that accommodate forecast aviation demand and satisfy the associated facility requirements identified in *Chapter 3, Facility Requirements*.

Alternatives were developed by grouping key airport facilities into the following four major functional areas:

- Airfield
- Passenger terminal
- Landside
- General aviation and support facilities

Alternatives for each functional area were developed using industry resources and recommended methodologies. As part of the alternative development process, the Master Plan Team participated in alternatives workshops with Airport Staff that provided an opportunity for collaboration in the selection of preferred alternatives.

The alternatives analysis starts with the airfield because it requires the greatest land area and is the least flexible in location and size. After the Preferred Airfield Alternative elements are established, the analysis shifts to the other functional uses. In all cases, the goal is to satisfy the facility requirements such that the Airport can meet standards and accommodate forecast growth throughout the planning period.

The preferred alternatives for each functional area are combined and integrated into a single Preferred Airport Development Plan presented at the end of this chapter. The Preferred Airport Development Plan is the basis for the future conditions shown in the Airport Layout Plan (ALP) drawing set. The remainder of this chapter details the methodologies used to identify and evaluate the alternatives for each functional area and the process that led to the selection of the recommended alternative for each of the functional areas.

4.2 AIRFIELD

As noted in the Facility Requirements analysis, there are three primary FAA airport design standards that SBP does not currently meet and require resolution:

- Runway 11-29 to Twy A separation
- Runway 11-29 Object Free Area (ROFA)
- Taxiway A Object Free Area (TOFA)

4.2.1 Airfield Alternatives Considerations

The FAA has directed the Airport to resolve non-standard airfield conditions within the planning period. A key objective of the Master Plan process has been to prepare a plan to meet current FAA airfield design standards that could be implemented in a phased manner. The considerations described in this section influence how the airfield alternatives were identified, refined, and evaluated.

The runway/taxiway separation standard is 400 feet measured from centerline to centerline. However, the current separation between Runway 11-29 and Taxiway A ranges from 290 feet to 325 feet. The alternatives evaluate options to increase the separation between the runway and taxiway to meet the current 400-foot standard. The existing runway-taxiway separation is illustrated in *Figure 4-1*.

FIGURE 4-1
SUMMARY OF RUNWAY 11-29 TO TAXIWAY A SEPARATION NONSTANDARD CONDITIONS

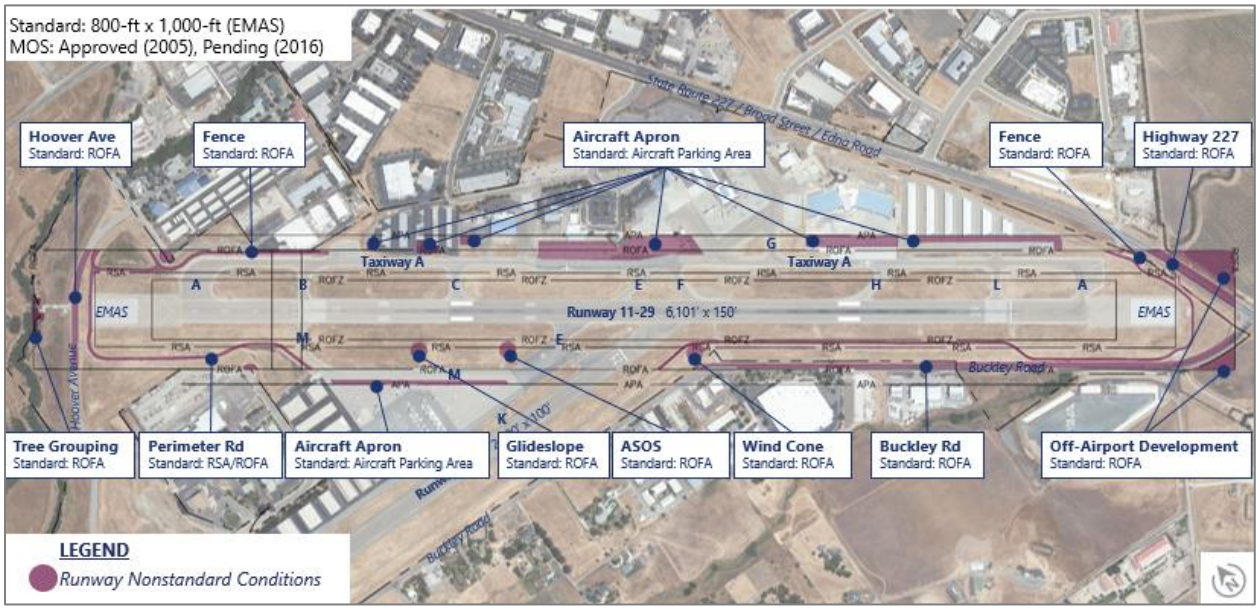
The standard ROFA dimensions are 800 feet wide and 1,000 feet beyond each runway end. The ROFA should be cleared of all above-ground objects (except those deemed fixed-by-function to support aircraft navigation) to meet FAA design standards. The ROFA nonstandard conditions are summarized in *Figure 4-2*. The alternatives evaluate options to resolve the ROFA nonstandard condition. It should be noted that the Runway 11-29 Safety Area (RSA) currently meets object clearing standards because of the existing engineered materials arresting system (EMAS) installations at each runway end. When the EMAS systems was installed in 2008, fleet mix verification performance was completed by the EMAS manufacturer on the CRJ-700, CRJ-200, ERJ145, and 737-200 (simulated using 737-400) aircraft. A fleet mix verification analysis was performed by the EMAS manufacturer, Runway Safe Group, in 2021 to verify that the existing EMAS can accommodate the forecast fleet mix at SBP. The analysis evaluated the following aircraft:

- Bombardier CRJ-900
- Embraer ERJ-170STD
- Embraer ERJ-175LR
- Embraer ERJ-195LR
- Airbus A220-300
- Boeing 737-MAX7
- Airbus A320 NEO

The results indicate that both EMAS configurations are large enough to provide stopping power for the current aircraft fleet mix at Maximum Takeoff Weight and 80% of Maximum Landing Weight. Therefore,

retaining the EMAS to satisfy the RSA requirements is a feasible long-term option to satisfy the RSA design standards but it does not satisfy the ROFA design standards. The 2021 EMAS Verification of Fleet Performance Report is attached as *Appendix A*.

FIGURE 4-2
SUMMARY OF RUNWAY 11-29 OBJECT FREE AREA NONSTANDARD CONDITIONS

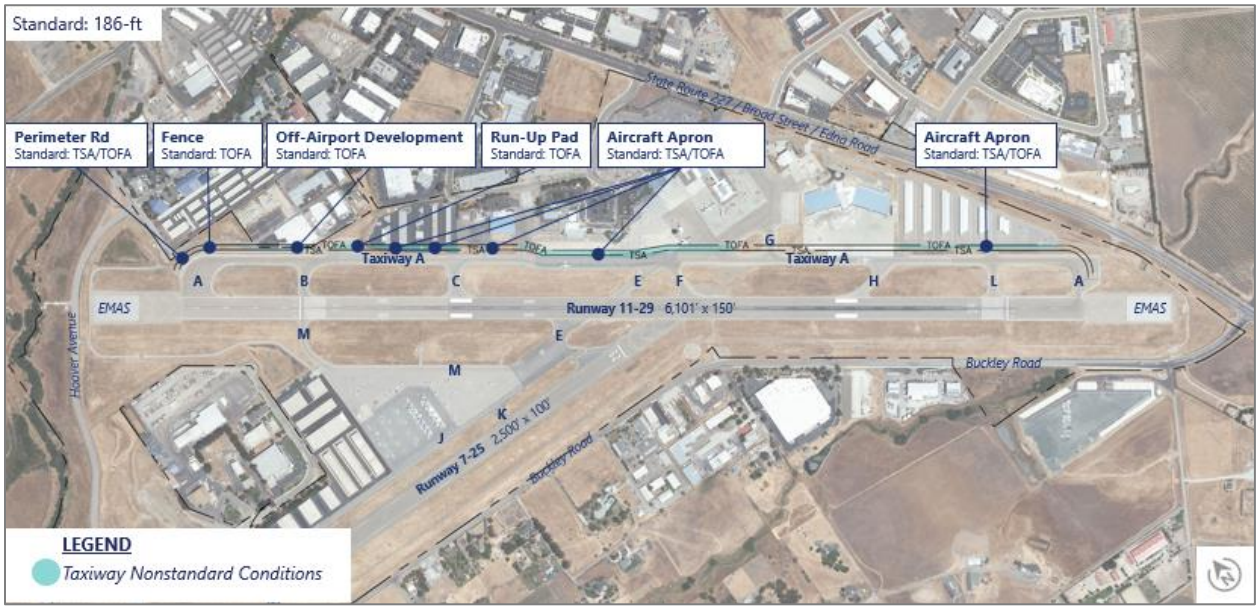


The FAA-standard TOFA dimension for Taxiway A is 186 feet wide, centered on taxiway centerline. The TOFA should be cleared of all above-ground objects (except those deemed fixed-by-function to support aircraft navigation) to meet FAA design standards. The TOFA nonstandard conditions are summarized in *Figure 4-3*. The alternatives identify options to resolve the nonstandard TOFA condition.

Resolving the airfield nonstandard conditions is challenging due to existing development both on and off airport. The airport's existing property is not large enough to accommodate reconfiguration of the existing primary runway and taxiway orientation and length. The development constraints off-airport present additional challenges for resolving the nonstandard conditions. These constraints and their impacts were considered in the alternative evaluation process. The development constraints are summarized as follows:

- On-airport tenant development surrounding the airfield
- Off-airport development northeast of the Airport
- Residential development west of the Airport
- Terrain affecting air navigation located east and west of the Airport
- Challenging terrain for development north and west of the airfield
- State Route 227, Buckley Road, and Hoover Avenue near the airfield

FIGURE 4-3
SUMMARY OF TAXIWAY A OBJECT FREE AREA NONSTANDARD CONDITIONS



4.2.2 Airfield Alternatives

Airfield alternatives were generated to address the airfield needs by employing dimensional separation methods without relying on special operational procedures or Modifications of Standards (MOS). These alternatives aim to resolve the three main airfield needs described in the previous section. These measures are intended to enhance airfield safety and compliance without necessitating unconventional operational practices or deviations from FAA standard regulations.

Additionally, emphasis was placed on creating alternatives that do not require long-term runway closure of the primary Runway 11-29. Runway closures longer than two weeks were considered too disruptive to regular air service for the community and vitally important to enable continued air carrier operations at SBP, safeguarding the Airport's long-term viability and financial self-sufficiency.

4.2.2.1 Airfield Alternative 1

Airfield Alternative 1 addresses airfield needs while maintaining the existing endpoints of Runway 11-29. This approach involves realigning the entire length of Taxiway A by 75 feet to achieve a 400-foot separation between Runway 11-29 and Taxiway A. This alternative also incorporates enhancements to the Taxiway A connector taxiways. Adjustments to the Runway 11-29 endpoint taxiways include the integration of dimensionally standard bypass taxiways, facilitating efficient aircraft movement and minimizing congestion. Two additional connector taxiways are proposed outside the high-energy zone. The taxiway alignments avoid direct access between Runway 11-29 to the parking aprons and are configured as right-angle intersections. These connector taxiways are designed to comply with FAA design standards, aiming to improve safety and situational awareness. Additionally, as part of this alternative, Taxiway M is proposed for extension to the Runway 11 end, providing enhanced access to the Runway. The Taxiway M connector taxiways would also undergo modifications to meet standard right-angle intersection standard. Airfield Alternative 1 is depicted in *Figure 4-4*.

Due to the realignment of Taxiway A and the TOFA clearance standards, extensive earthwork would be required, and on- and off-airport facilities would be impacted. This alternative proposes the establishment of four designated development areas to accommodate the relocation of affected facilities and to facilitate areas for future development.

To resolve the nonstandard ROFA for Runway 11-29, relocating navigational aids (NAVAIDs) and realigning two roadways are necessary to establish a standard ROFA. The relocation of NAVAIDs such as the Glideslope, Automated Surface Observation System (ASOS), and segmented circle with windcone is mandated by FAA standards, which require these NAVAIDs to be positioned outside the ROFA boundaries. Moreover, it is necessary to modify the layout of Hoover Avenue near the Runway 11 end and State Route 227 near the Runway 29 end to satisfy ROFA object clearance standards.

Airfield Alternative 1 offers a solution to address the nonstandard airfield conditions outlined in *Chapter 3, Facility Requirements* without necessitating modifications to Runway 11-29. The realignment of Taxiway A achieves the FAA-required runway separation standard of 400 feet for Runway 11-29. Land acquisition and the relocation of existing facilities would be necessary to meet the TOFA standard, ensuring obstruction-free paths for both Taxiway A and Taxiway M. Multiple connector taxiways are enhanced to adhere to FAA's geometric best practices. One major challenge that would result from maintaining the existing alignment of Runway 11-29 is acquiring land and realigning Hoover Avenue and State Route 227 to outside the ROFA. Realignment of State Route 227, which is a California state highway, may pose insurmountable challenges preventing the implementation of a standard ROFA without reducing runway length.

4.2.2.2 Airfield Alternative 2

Airfield Alternative 2 addresses nonstandard airfield conditions by relocating the endpoints of Runway 11-29. This involves eliminating displaced thresholds at both ends and shifting the Runway 11 and Runway 29 endpoints 740 feet northwest. Like Alternative 1, Taxiway A is realigned 75 feet to the northeast to provide a 400-foot separation between Runway 11-29 and extended northwest to align with the new Runway 11 end. The alternative also includes the same enhancements to the Taxiway A connector taxiways, with their locations adjusted to align with the shifted runway ends. Endpoint taxiways for Runway 11-29 are modified to integrate dimensionally standard bypass taxiways, enhancing aircraft movement efficiency, and reducing congestion. Two additional connector taxiways are proposed beyond the high-energy zone. The taxiway alignments avoid direct access between Runway 11-29 and parking aprons and feature right-angle intersections. These connector taxiways adhere to FAA design standards to enhance safety and situational awareness. Taxiway M is extended to the new Runway 11 end, improving aircraft access, with its connector taxiways undergoing the same modifications as in Alternative 1 to meet the right-angle intersection standard. Airfield Alternative 2 is depicted in *Figure 4-5*.

To resolve the nonstandard TOFA, the relocation of existing facilities, as in Airfield Alternative 1, would be necessary. Additionally, this Alternative would entail more earthwork due to the northwest shift of the Runway 11 end and the extensions of Taxiway A and Taxiway M. Like Alternative 1, this option suggests establishing four designated development areas to facilitate the relocation of affected facilities and provide space for future development.

To address the nonstandard ROFA for Runway 11-29, relocating the same NAVAIDs as in Alternative 1 is necessary to establish a standard ROFA. This relocation, which includes NAVAIDs such as the Glideslope, ASOS, and segmented circle with windcone, is required to meet ROFA object clearances standards.

Furthermore, this alternative necessitates additional earthwork beyond the shifted Runway 11 end to establish a standard ROFA. Hoover Avenue undergoes the same realignment as Alternative 1 to keep it outside the ROFA boundaries. However, no realignment of State Route 227 is necessary in this alternative. With Runway 29 relocated to the northwest, achieving a dimensionally standard ROFA is feasible without realigning State Route 227.

Airfield Alternative 2 proposes a solution to resolve the nonstandard airfield conditions outlined in *Chapter 3, Facility Requirements* by shifting the endpoints of Runway 11-29 to the northwest by 740 feet. The realignment of Taxiway A satisfies the FAA-required runway separation standard of 400 feet for Runway 11-29. Like Alternative 1, this option necessitates land acquisition and the relocation of existing facilities to meet the TOFA standard, guaranteeing obstruction-free paths for both Taxiway A and Taxiway M. Multiple connector taxiways are improved to align with FAA's geometric best practices. Compared to Alternative 1, this alternative requires additional earthwork to accommodate the extensions of taxiways necessary for the Runway 11 end shift and to establish a standard 1,000-foot ROFA beyond the new Runway 11 end. An advantage of Alternative 2 over Alternative 1 is the lack of need to realign State Route 227, making it a more feasible option to achieve a standard ROFA.

4.2.2.3 Airfield Alternative 3

Airfield Alternative 3 addresses nonstandard airfield conditions by relocating and shifting the endpoints of Runway 11-29, along with adjusting the runway's alignment. This includes eliminating displaced thresholds at both ends, shifting the Runway 11 and Runway 29 endpoints 580 feet northwest, and realigning the entire length of the runway 75 feet southward. Taxiway A remains in its current alignment, except for the segment that only has 290 feet of separation from existing Runway 11-29. Unlike the previous alternatives, Runway 11-29 is realigned to the southwest by 75 feet to meet the 400-foot separation requirement instead of moving Taxiway A. Like Alternative 2, Taxiway A would need an extension to the northwest to align with the new Runway 11 end. The plan also includes enhancements to the Taxiway A connector taxiways, with their positions adjusted to align with the shifted runway ends. Endpoint taxiways for Runway 11-29 are modified to integrate dimensionally standard bypass taxiways, improving aircraft movement efficiency, and reducing congestion. Two additional connector taxiways are proposed beyond the high-energy zone. The taxiway alignments prevent direct access between Runway 11-29 and parking aprons and feature right-angle intersections. This alternative requires the closure of Runway 7-25 and necessitates a new alignment for Taxiway M to enable Runway 11-29 to be realigned to the southwest. Like the other alternatives, Taxiway M provides access to the new Runway 11 end but also extends southeastward, intersecting the existing Runway 7-25. The Taxiway M connector taxiways undergo similar modifications as the previous alternatives to meet the right-angle intersection standard. Airfield Alternative 3 is depicted in *Figure 4-6*.

To address the nonstandard TOFA, relocating existing facilities is necessary. There are fewer impacts on facilities north of Taxiway A compared to other alternatives because Taxiway A remains in its current alignment. However, substantial impacts to facilities south of the new Taxiway M alignment would result, particularly with the closure of Runway 7-25. Extensive earthwork is required due to the northwest shift of the Runway 11 end and extensions of Taxiway A and Taxiway M. Like Alternative 1 and 2, this option proposes establishing four designated development areas to facilitate the relocation of affected facilities and accommodate future development needs.

To resolve the nonstandard ROFA for Runway 11-29, relocating the same NAVAIDs as in Alternatives 1 and 2 is necessary to establish a standard ROFA. This relocation, NAVAIDs such as the Glideslope, ASOS, and segmented circle with windcone, satisfies the ROFA object clearance standards. Like Alternative 2, this approach requires earthwork beyond the shifted Runway 11 end to establish a standard ROFA. Hoover Avenue undergoes the same realignment as in previous alternatives to maintain its position outside the ROFA boundaries. No realignment of State Route 227 is needed in this alternative, but Buckley Road must be realigned to achieve a standard ROFA due to the realignment of Runway 11-29.

Airfield Alternative 3 presents a solution aimed at addressing the nonstandard airfield conditions outlined in *Chapter 3, Facility Requirements* by maintaining Taxiway A in its original alignment and implementing significant changes to the alignment of Runway 11-29. This realignment of Runway 11-29 satisfies the FAA-required runway-to-taxiway separation standard of 400 feet. Like Alternatives 1 and 2, this approach entails land acquisition and the relocation of existing facilities to meet the TOFA standard, ensuring unobstructed pathways for both Taxiway A and Taxiway M. Improvements to multiple connector taxiways align with FAA geometric best practices. Comparable to Alternative 1, Alternative 3 requires earthwork to accommodate taxiway extensions necessary for the Runway 11 end shift and to establish a standard 1,000-foot ROFA beyond the new Runway 11 end. Like Alternative 2, this alternative would not require realignment of State Route 227. The substantial challenge of Alternative 3 results from the new alignment of Runway 11-29, which would require closure of the runway for months of even more than a year to facilitate construction. Another notable drawback is the realignment of Buckley Road, which would require substantial commercial and residential property acquisition south of the airport.

4.2.2.4 Airfield Alternative 4

Airfield Alternative 4 addresses nonstandard airfield conditions through complete relocation of Runway 11-29. Alternative 4 would result in relocation of Runway 11-29 500 feet to the southwest Taxiway A 375 feet southwest as well. In contrast to previous alternatives, both the runway and taxiway are relocated to the southwest to meet the 400-foot separation requirement between the runway and taxiway. The plan includes similar enhancements to the Taxiway A connector taxiways as seen in prior alternatives. Endpoint taxiways for Runway 11-29 are modified to incorporate dimensionally standard bypass taxiways, enhancing aircraft movement efficiency, and reducing congestion. Additionally, two extra connector taxiways are proposed beyond the high-energy zone. The taxiway alignments prevent direct access between Runway 11-29 and parking aprons and feature right-angle intersections to meet FAA design standards. Like Alternative 3, relocation of Runway 11-29 in this alternative necessitates the closure of Runway 7-25 and requires a new alignment for Taxiway M. Taxiway M would undergo similar modifications as in previous alternatives, facilitating access to the Runway 11 end, with its connector taxiways undergoing modifications to meet standard right-angle intersection standard. Airfield Alternative 4 is depicted in *Figure 4-7*.

To address the nonstandard TOFA, as with the other alternatives, relocating existing facilities is necessary. However, this alternative distinguishes itself by concentrating all facility impacts on the west side of the airfield, which includes the closure of Runway 7-25. It also necessitates extensive earthwork to facilitate the complete relocation of Runway 11-29, Taxiway A, and Taxiway M. Like previous alternatives, this option advocates for the establishment of four designated development areas to enable the relocation of affected facilities and to accommodate future development needs. Notably, one of these development areas is proposed on the east side of the airfield due to the 375-foot realignment of Taxiway A, allowing for new development outside the TOFA.

To address the nonstandard ROFA for Runway 11-29, relocating the same NAVAIDs as in the other alternatives is necessary to provide a standard ROFA. Relocation of NAVAIDs including the Glideslope, ASOS, and segmented circle with windcone, would be required to meet the ROFA standard. Substantial earthwork is required for both the realignment of Runway 11-29 and the establishment of a standard ROFA in this alternative. Hoover Avenue undergoes the same realignment as in previous alternatives to stay outside the ROFA boundaries. Like Airfield Alternative 3, no realignment of State Route 227 is required in this Alternative. However, Buckley Road would need a more extensive realignment compared to Alternative 3 due to the Runway 11-29 relocation farther southwest.

Airfield Alternative 4 would require substantial construction to relocate all the primary airfield infrastructure at the airport including Runway 11-29, Taxiway A, and Taxiway M to address the nonstandard airfield conditions outlined in *Chapter 3, Facility Requirements*. Relative to the other alternatives, Alternative 4 requires the most construction and has the most substantive anticipated impacts. Like the preceding alternatives, Alternative 4 requires acquiring land and relocating facilities to meet the TOFA standard. However, Alternative 4 impacts are mostly on the west side of the airport which would allow redevelopment on the airport's east side. This alternative adopts a layout aligned with those proposed in previous options to improve connector taxiways in accordance with the FAA's geometric best practices. A major factor in this alternative is the extensive earthwork necessary for the relocation of major airfield infrastructure. Alternative 4 would not require realignment of State Route 227. Alternative 4 would require multi-month closures of the primary runway and taxiways to accommodate construction. Alternative 4 would require the greatest amount of commercial and residential property acquisition south of the airport to accommodate the relocated airfield facilities and realignment of Buckley Road.

4.2.2.5 Airfield Alternative 5

Airfield Alternative 5 addresses nonstandard airfield conditions by relocating the middle portion of Taxiway A, which currently has only 290 feet of separation from Runway 11-29. This section would be realigned to align with the rest of Taxiway A, ensuring a separation of 325 feet from Runway 11-29. This Alternative also involves removing the displaced threshold on Runway 11. In contrast to previous alternatives, Airfield Alternative 5 does not propose major modifications to Runway 11-29 or Taxiway A to achieve the required 400-foot separation between the runway and taxiway. As a result, a long-term Modification to Standards approval would be necessary from FAA. There are no plans for enhancements to the Taxiway A connector taxiways. Since there are no significant changes to Taxiway A or Runway 11-29, this Alternative does not impact Taxiway M or Runway 7-25. Airfield Alternative 5 is depicted in *Figure 4-8*.

Existing facilities would be impacted to nonstandard address conditions in the TOFA, but there are no plans for relocation or development areas in this alternative. Most facilities impacted are existing objects within the current alignment of the Taxiway A TOFA. Additional facility impacts would result from realigning the middle portion of Taxiway A. Compared to other alternatives, there is a minimal requirement for earthwork in this option since most airfield elements would remain in their current positions.

To address the nonstandard ROFA for Runway 11-29, it is necessary to relocate the same NAVAIDs as outlined in other alternatives. This relocation, which includes NAVAIDs like the Glideslope, ASOS, and segmented circle with windcone, results in a standard ROFA and satisfies ROFA object clearance

standards. Hoover Avenue and State Route 227 would undergo the same realignments as described in Airfield Alternative 1 to provide a standard 1,000-foot ROFA at the ends of Runway 11 and Runway 29.

Airfield Alternative 5 is a less impactful approach to addressing the nonstandard airfield conditions outlined in *Chapter 3, Facility Requirements*. It maintains Runway 11-29 and the majority of Taxiway A in their original alignments, with only the middle portion of Taxiway A being realigned. While this alternative requires land acquisition to meet the TOFA standard for Taxiway A, it does not provide options for relocating affected facilities. The advantage of this alternative is its limited impact on existing airport facilities, with no need for long-term closures of runways or taxiways. However, a major disadvantage is the necessity for long term Modification of Standards issuance from FAA. While some elements offer viable short-term solutions, they do not provide a long-term resolution to adhere to the FAA's requirement of resolving nonstandard airfield dimensional standards. Furthermore, Airfield Alternative 5 faces the same challenge as seen in Airfield Alternative 1, which involves acquiring land and realigning Hoover Avenue and State Route 227 to be situated outside the ROFA. Realignment of State Route 227, being a California state highway, would pose substantial uncertainties.

4.2.2.6 Airfield Alternative 6

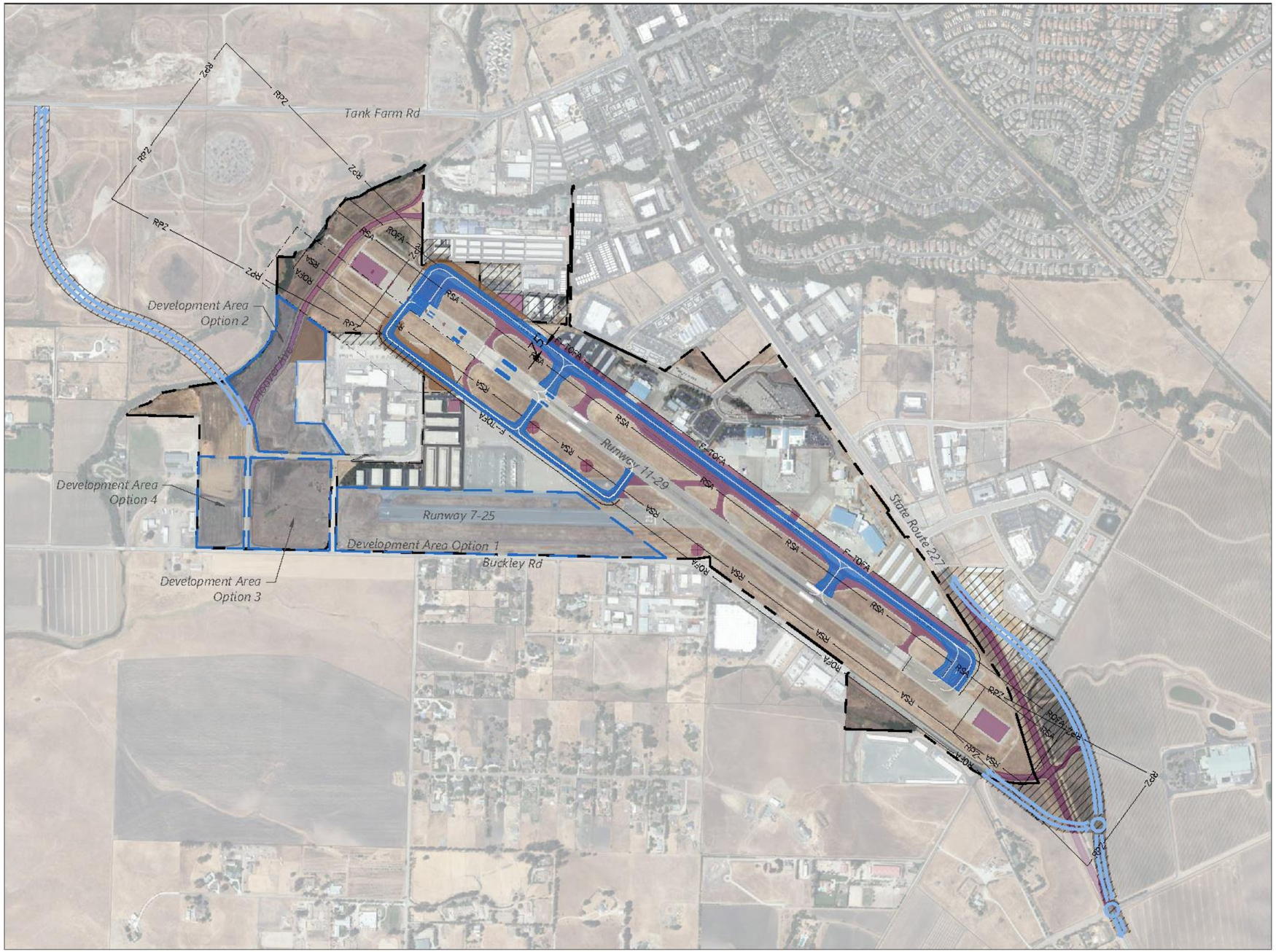
Like the previous alternative, Airfield Alternative 6 addresses nonstandard airfield conditions by relocating the middle portion of Taxiway A, which currently has 290 feet of separation from Runway 11-29. This segment would be adjusted to align with the rest of Taxiway A, providing separation of 325 feet from Runway 11-29. Additionally, this alternative includes the removal of the displaced threshold on Runway 11. Airfield Alternative 6 does not propose significant modifications to Runway 11-29 or Taxiway A to achieve the required 400-foot separation between the runway and taxiway. Consequently, Modification to Standards would be necessary. Moreover, there are no plans for enhancements to the Taxiway A connector taxiways. Given the absence of significant changes to Taxiway A or Runway 11-29, this alternative does not affect Taxiway M or Runway 7-25. Airfield Alternative 6 is depicted in *Figure 4-9*.

Alternative 6 would not impact existing facilities to resolve the nonstandard TOFA. Moreover, no earthwork would be necessary. Instead, this alternative would achieve a smaller than required TOFA standard by submitting a Modification to Standards request to the FAA.

To address the nonstandard ROFA for Runway 11-29, it is necessary to relocate the same NAVAIDs as specified in other alternatives. This relocation involves NAVAIDs such as the Glideslope, ASOS, and segmented circle with windcone, to satisfy ROFA object clearance standards. Unlike the other alternatives, Airfield Alternative 6 does not propose realignment of public roadways. Instead, a ROFA standard shorter than required would be implemented at the ends of Runway 11-29 through Modification to Standards.

Alternative 6, similar to Alternative 5, is a less impactful approach to meeting the nonstandard airfield conditions outlined in *Chapter 3, Facility Requirements*. It retains the current alignments of Runway 11-29 and the majority of Taxiway A, with only the middle portion of Taxiway A being realigned. The key distinction between this alternative and Airfield Alternative 5 is that Alternative 6 intends to address all nonstandard airfield conditions through Modification of Standards. The advantage of this alternative is that it preserves most of the airfield in its existing alignment, thereby avoiding the need for land acquisition or realignment of public roadways. Realignment of the middle portion of Taxiway A and the implementation of Modification to Standards can serve as a short-term solution to the nonstandard airfield conditions. Alternative 6, however, would not meet current FAA airfield design standards.

FIGURE 4-4 AIRFIELD ALTERNATIVE 1



Legend

- New Airfield Pavement
- New Landside Pavement
- Extensive Earthwork
- Impacted Facility
- Relocated Glideslope Critical Area
- Land Acquisition
- Potential On-Airport Development
- Existing Airport Property Boundary

N

1000' 500' 0' 1000'

FIGURE 4-5 AIRFIELD ALTERNATIVE 2

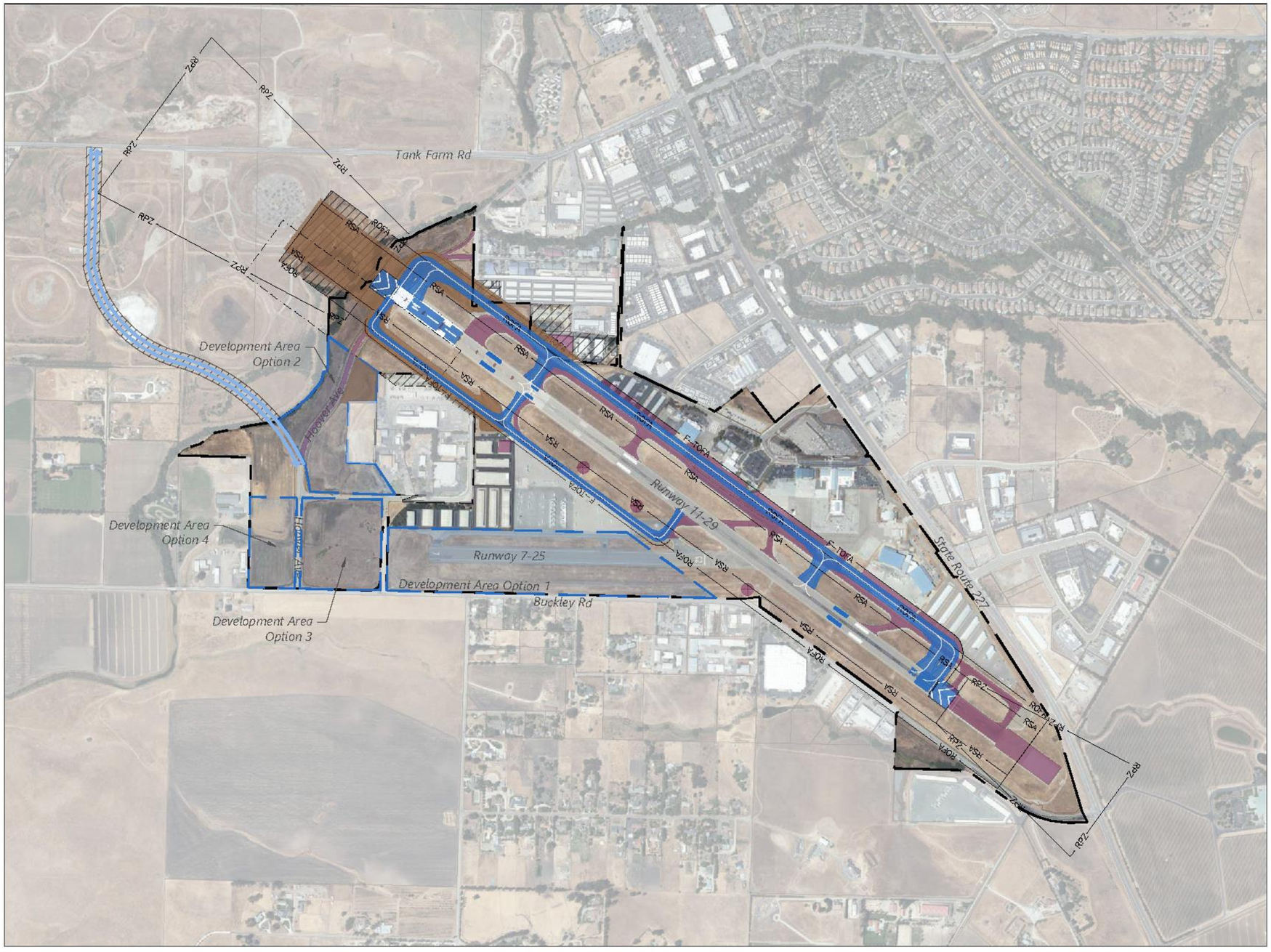
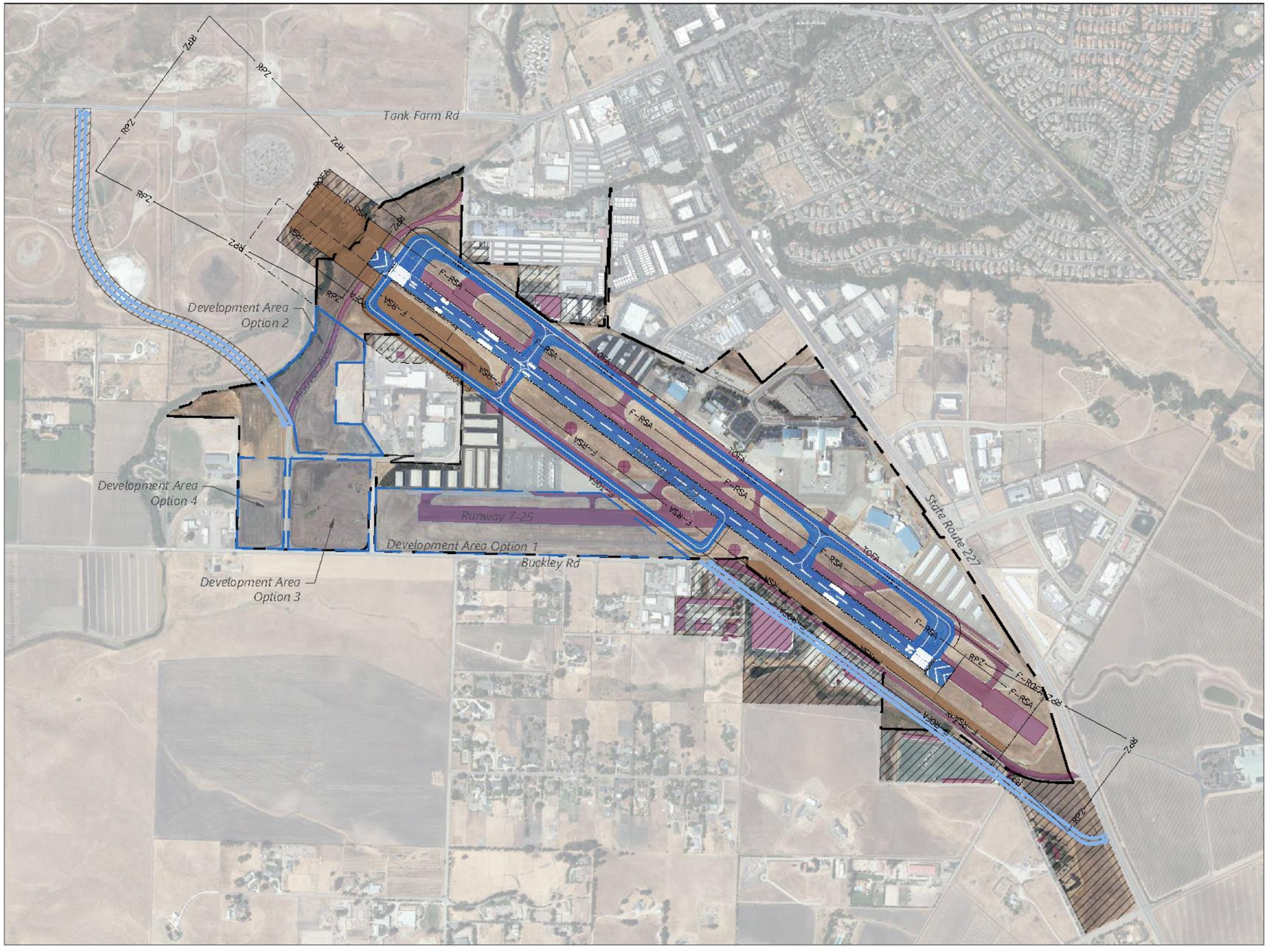


FIGURE 4-6 AIRFIELD ALTERNATIVE 3



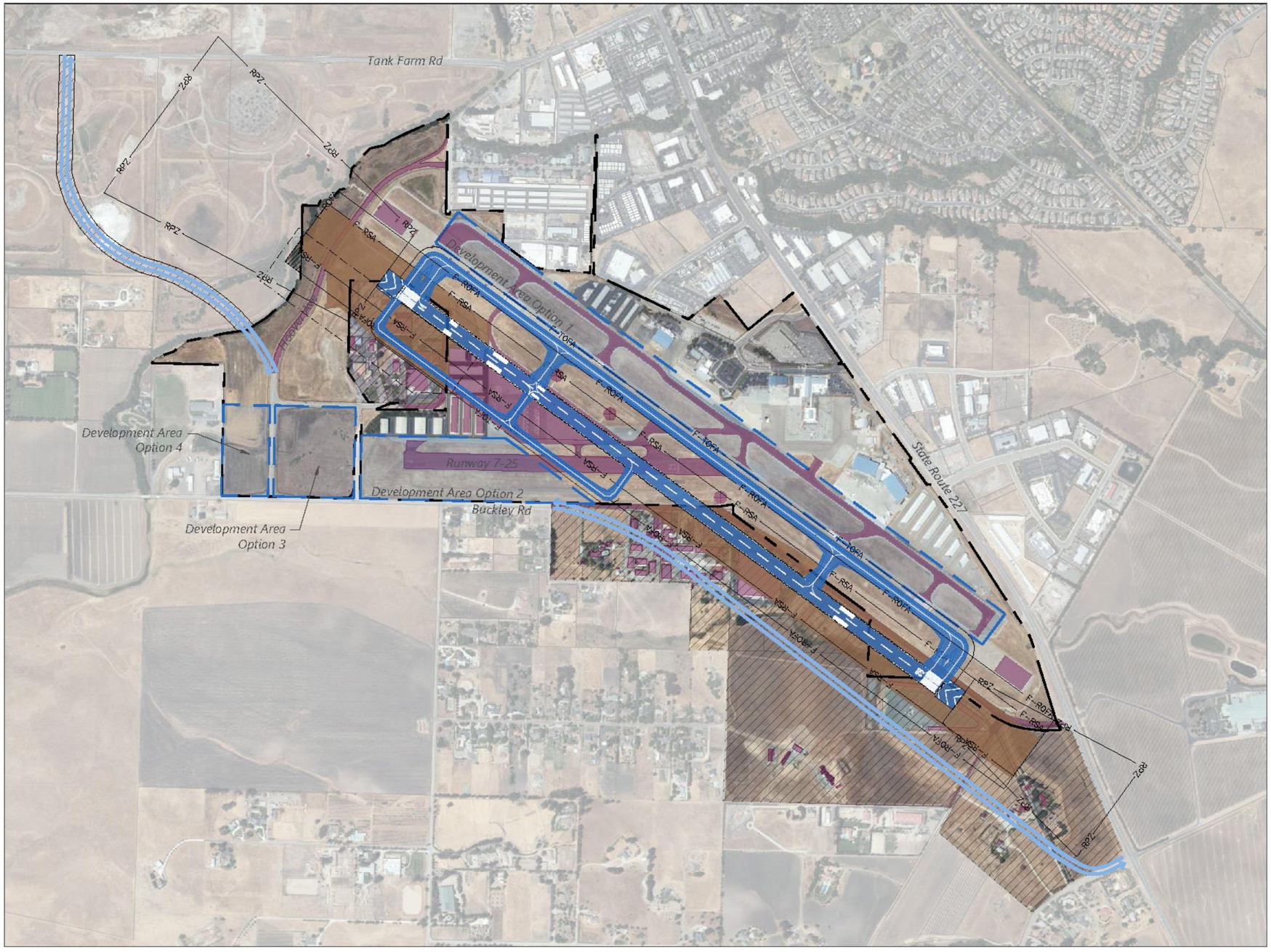
Legend

- New Airfield Pavement
- New Landside Pavement
- Extensive Earthwork
- Impacted Facility
- Relocated Glideslope Critical Area
- Land Acquisition
- Potential On-Airport Development
- Existing Airport Property Boundary

N

1000' 500' 0' 1000'

FIGURE 4-7 AIRFIELD ALTERNATIVE 4



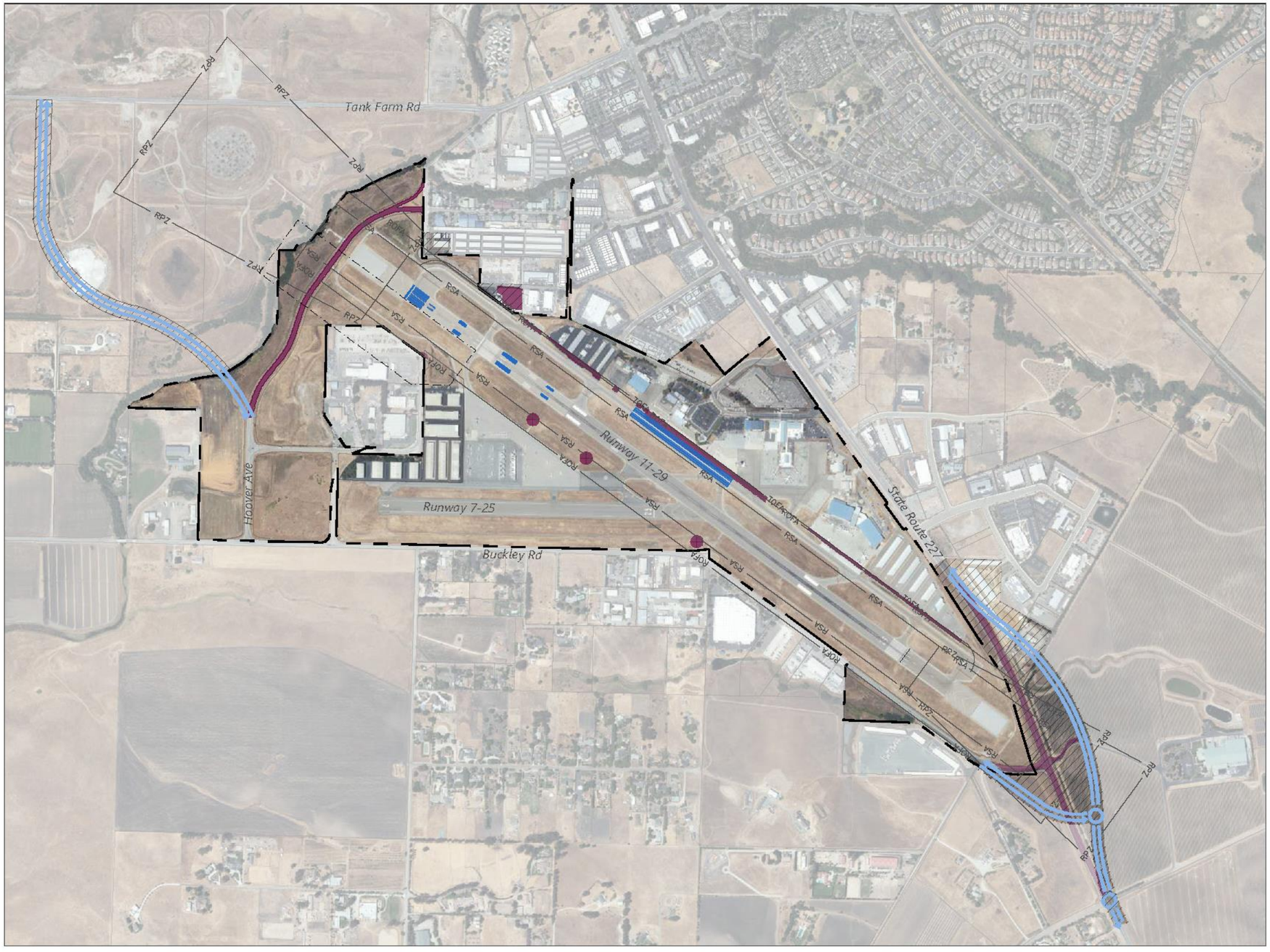
Legend

- New Airfield Pavement
- New Landside Pavement
- Extensive Earthwork
- Impacted Facility
- Relocated Glideslope Critical Area
- Land Acquisition
- Potential On-Airport Development
- Existing Airport Property Boundary

N

1000' 500' 0' 1000'

FIGURE 4-8 AIRFIELD ALTERNATIVE 5



Legend

- *New Airfield Pavement*
- *New Landside Pavement*
- *Extensive Earthwork*
- *Impacted Facility*
- *Relocated Glideslope Critical Area*
- *Land Acquisition*
- *Potential On-Airport Development*
- *Existing Airport Property Boundary*

N

1000' 500' 0' 1000'

FIGURE 4-9 AIRFIELD ALTERNATIVE 6

Legend

- New Airfield Pavement
- Runway and/or Taxiway MOS
- New Landside Pavement
- Extensive Earthwork
- Impacted Facility
- Relocated Glideslope Critical Area
- Land Acquisition
- Potential On-Airport Development
- Existing Airport Property Boundary

N

1000' 500' 0' 1000'

4.2.3 Airfield Alternatives Evaluation

The airfield alternatives evaluation process was completed in two phases – Primary Evaluation and Secondary Evaluation. This two-phased methodology allows the evaluation process to first determine if there are any alternatives that do not meet the primary objectives, at a high-level, before undertaking a more detailed evaluation. The airfield alternatives evaluation was completed by the Master Plan team in coordination with Airport staff to identify the Preferred Airfield Alternative.

4.2.3.1 Airfield Alternatives Primary Evaluation

The Airfield Alternative Primary Evaluation starts with all six alternatives referenced in *Section 4.2.2*. The goal of the Primary Evaluation is to determine which of the six alternatives meets the primary objectives and eliminate the other airfield alternatives from further consideration.

The Primary Evaluation includes two criterion which represent the two primary objectives, as described below:

- Alternative meets FAA airfield dimensional standards
- Alternative implementation does not require long-term runway closure

The first primary objective is guidance received from the FAA that states that the Preferred Airfield Alternative needs to include resolution of all nonstandard airfield conditions using dimensional separation (i.e., without using special operational procedures or Modification of Standards) as the identified long-term solution. This objective is recognized as part of the FAA's increased emphasis on the need for airports to strive to achieve the dimensional standards established in FAA airfield design guidance.

The second primary objective is reflective of the Airport's goal to avoid an alternative that could jeopardize the viability for air carriers or tenants to continue operating at SBP. Runway 11-29 is the Airport's only commercial service runway and is used by more than 90 percent of all operations. It is not feasible for SBP to consider a long-term runway closure, or the airport would risk loss of air service to the community while the business disruption to tenants would be untenable for the airport's base of aviation related business. Therefore, the Preferred Airfield Alternative should avoid runway closures (e.g., longer than two weeks) which could disrupt air carrier schedules to the point that carriers choose to permanently cease operations at SBP. Such an outcome would be detrimental to the Airport's long-term viability and its ability to remain financially self-sufficient.

Each alternative was evaluated against the criteria on a Pass/Fail scale of measurement. A "Pass" results if the alternative satisfies both criteria. A Fail results if the alternative does not satisfy one or both criteria which eliminates the Airfield Alternative from further consideration.

The Primary Airfield Alternatives Evaluation results are described in *Table 4-1*. Alternative 5 and Alternative 6 Fail the first criterion since both alternatives would need FAA approved Modifications to Standards (MOS). Therefore, Alternative 5 and Alternative 6 were eliminated from further consideration. Alternative 3 Fails the second criterion since it requires a long-term runway closure. Therefore, Alternative 3 was eliminated from further consideration. The result of the screening process that was conducted in the primary evaluation eliminated Alternatives 3, 5, and 6 and kept Alternatives 1, 2, and 4 for a more detailed Secondary Evaluation.

TABLE 4-1
AIRFIELD ALTERNATIVES PRIMARY EVALUATION RESULTS

	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
Meets FAA Dimensional Standards	✓	✓	✓	✓	X	X
Does Not Require Long-Term Runway Closure	✓	✓	X	✓	✓	✓
Retained for Further Consideration	✓	✓	X	✓	X	X

While Airfield Alternative 6 does not satisfy the requirements to be considered a viable long-term airfield alternative, it does provide incremental improvement to the airfield. The incremental improvement can be viewed as an interim step to address the nonstandard airfield conditions in the near term while additional improvements would be required in the long-term to fully meet FAA airfield design standards.

4.2.3.2 Airfield Alternatives Secondary Evaluation

The Airfield Alternative Secondary Evaluation continues with Airfield Alternative 1, Airfield Alternative 2, and Airfield Alternative 4. The goal of the Secondary Evaluation is to determine which of the remaining alternatives best satisfies the long-term needs of the Airport and can serve as the Preferred Airfield Alternative.

The Secondary Evaluation criteria is organized into five categories:

1. Operational Performance,
2. Planning Tenets,
3. Environmental Factors,
4. Sustainability Factors, and
5. Implementation.

The Secondary Evaluation categories align with the broad evaluation categories described in Advisory Circular 150/5070-6B, *Airport Master Plans*.

Each Secondary Evaluation category includes measurable criterion that evaluate specific potential impacts and factors important to the Airport Sponsor, the FAA, and the community at-large. There is a total of 22 criterion across the five categories. The broad range of evaluation criteria provides a balanced evaluation process that considers important aspects of the airfield alternatives.

The Operational Performance Category measures how well the airfield functions, as a system. The criteria evaluate the airfield's functionality during construction and after implementation of each airfield alternative. The Operational Performance Category scoring and the associated factors that influenced the scoring are described in *Table 4-2*.

The Planning Tenets Category measures how well alternatives observe and address best planning practices. The planning tenets focus on minimizing overall impacts resulting from the airfield alternatives and consider ways to offset potential impacts through planning best practices. This Category also focuses on achieving the highest and best use of existing airport property, which is critical for land constrained airports like SBP. The Planning Tenets Category score and the associated factors that influenced the scoring are described in *Table 4-3*.

The Environmental Factors Category measures the potential impacts associated with key impact categories in the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) entitlement processes. This Criteria evaluates types and potential degree of environmental impacts that may be associated with the implementation of each airfield alternative. The criterion in this Category acts as a preliminary evaluation of key evaluation metrics that would be considered during the environmental entitlement process that would follow the Master Plan. Potential environmental impacts are evaluated at a master plan level. This early screening may help identify unavoidable significant impacts and help prevent recommendation of a preferred alternative that could not be entitled under NEPA or CEQA. However, this level of review is not as detailed as what would be required under NEPA or CEQA. The Environmental Factors Category scoring and the associated factors that influenced the scoring are described in *Table 4-4*.

The Sustainability Factors Category measures sustainability initiatives and other environmental factors that are not specifically referenced in the NEPA and CEQA processes but are important to the Airport staff minimizing community impacts. In addition to evaluating community impacts, this Category specifically considers potential negative impacts related to quantity of required construction materials, disturbing potentially contaminated land areas around the Airport, and economic losses. The Sustainability Factors Category scoring and the associated factors that influenced the scoring are described in *Table 4-5*.

The Implementation Category measures the likelihood of successful implementation. Support from elected officials, intergovernmental agencies, and the community at-large are subjective measures that affect the likelihood of the could be implemented. This Category considers these subjective measures as well as the objective measure of the rough order magnitude (ROM) capital costs of project implementation relative to the available funding. The Implementation Category scoring and the associated factors that influenced the scoring are described in *Table 4-6*.

The Secondary Evaluation measures the ability for each airfield alternative to satisfy the criteria on a three-level scale of measurement to measure a range of potential effectiveness, unlike the binary (e.g., pass or fail) scale in the Primary Evaluation. The evaluation scale scores are conveyed as a color-coded range. A "green" color score means that a given alternative meets or mostly meets the criterion. A "yellow" color score means that a given alternative somewhat meets the criterion. A "red" color score means that a given alternative barely meets or does not meet the criterion.

Numerical values were attributed to each of the color scores to quantitatively determine the alternative that performed best. "Green" color scores received a numerical score of 3. "Yellow" color scores received a numerical score of 2. "Red" color scores received a numerical score of 1. The criterion scores were totaled as a final numerical score for each airfield alternative. The maximum numerical score for each alternative was 66. The Airfield Alternatives Secondary Evaluation color scores and numerical scores are summarized in *Table 4-7*.

TABLE 4-2
AIRFIELD ALTERNATIVES SECONDARY EVALUATION – OPERATIONAL PERFORMANCE CATEGORY

	Alternative 1	Alternative 2	Alternative 4
Runway 11-29 Operational Utility (Long-Term)	» Rwy 29 Part 77 & departure surface hill penetrations remain » San Luis Obispo Creek East Fork remains limitation to long-term runway extension flexibility	**» Rwy 29 end shifted 740' NW away from hill penetrating existing Part 77 & departure surfaces** **» Increased long-term runway extension flexibility due to mitigation/shifting of San Luis Obispo Creek East Fork**	» Rwy 29 end shifted (500' laterally to SE) may improve existing obstruction penetration issue » San Luis Obispo Creek East Fork remains limitation to long-term runway extension flexibility
Runway 11-29 Operational Utility (During Construction)	» Extended Rwy closure required to reconstruct in-place to resolve nonstandard longitudinal grade	» Extended Rwy closure required to reconstruct in-place to resolve nonstandard longitudinal grade » MALSR inoperable during phases of construction	**» Limited Rwy closures (hours or days) for Twy connector construction** **» No change to declared distances during construction**
Runway 7-25 Operational Utility	**» Rwy 7-25 closure not required**	**» Rwy 7-25 closure not required**	» Rwy 7-25 closure required
Aircraft Ground Maneuverability	» Shifted Taxiway A impacts aircraft pushback operation from terminal parking positions 4 & 5 » Demand for aircraft taxiing across runway like existing	» Shifted Taxiway A impacts aircraft pushback operation from terminal parking positions 4 & 5 » Demand for aircraft taxiing across runway like existing	**» No impact to aircraft pushback operation from terminal** **» Fewer aircraft taxiing across runway since reduced aircraft parking on West Side**

Note: **Bold text** represents the best performing Alternatives feature(s).

TABLE 4-3
AIRFIELD ALTERNATIVES SECONDARY EVALUATION – PLANNING TENETS CATEGORY

	Alternative 1	Alternative 2	Alternative 4
On-Airport Facility Impacts	**» Hangar impacts ≈ 24,500 SF** **» Apron impacts ≈ 345,200 SF** **» Total area impacted ≈ 9 AC**	**» Hangar impacts ≈ 24,500 SF** **» Apron impacts ≈ 345,200 SF** **» Total area impacted ≈ 9 AC**	» Hangar impacts 145,900 SF » Apron impacts 593,700 SF » Total area impacted ≈ 17 AC
Off-Airport Facility Impacts	» 1 Residential Parcel impacted » 2 Commercial/Industry Parcels impacted » 6 Land Parcels impacted	**» 0 Residential Parcels impacted** **» 3 Commercial/Industry Parcels impacted** **» 3 Land Parcels impacted**	» 5 Residential Parcels impacted » 15 Commercial/Industry Parcels impacted » 2 Land Parcels impacted
Potential Development Area	» 72-acre potential developable area in Development Zones 1+2 (existing Hoover Avenue area + Rwy 7-25 area)	» 72-acre potential developable area in Development Zones 1+2 (existing Hoover Avenue area + Rwy 7-25 area)	**» 94-acre potential developable area in Development Zones 1+2 (existing Twy A area + Rwy 7-25 area)**
Roadway Realignment	» 3,900 LF of Hoover Avenue realigned » 1,100 LF of Buckley Road extended » 3,800 LF of State Route-227 realigned » TOTAL - 8,800 LF	**» 3,900 LF of Hoover Avenue realigned** **» TOTAL - 3,900 LF**	» 3,900 LF of Hoover Avenue realigned » 6,300 LF of Buckley Road realigned » TOTAL - 10,200 LF

Note: **Bold text** represents the best performing Alternatives feature(s).

TABLE 4-4
AIRFIELD ALTERNATIVES SECONDARY EVALUATION – ENVIRONMENTAL FACTORS CATEGORY

	Alternative 1	Alternative 2	Alternative 4
Noise Compatibility	**» Minimal increase in noise for residences NW of Airport - Rwy 11 threshold shifted 800' NW** **» No change in noise for residences SE of Airport**	» Potential moderate increase in noise for residences NW of Airport - Rwy 11 threshold shifted 1540' NW and Rwy 29 takeoff roll shifted 740' NW (residences north of Prado Road may experience increased noise) » No change in noise for residences SE of Airport	» Potential moderate increase in noise for residences NW of Airport - Rwy 11 threshold shifted 950' W » Potential moderate increase in noise for residences SE of Airport - Rwy 29 aiming/threshold shifted 800' S
Water Resources	**» Impacts to San Luis Obispo Creek East Fork and associated wetland by dimensionally standard Rwy 11 RSA** **» Impacts to Buckley Creek by State Route 227 relocation** **» No impact to detention basins**	**» Impacts to San Luis Obispo Creek East Fork and associated wetland by 740' Rwy shift** **» No impact to Buckley Creek** **» Impacts to detention basin near SLO City Storage by Twy A**	» Impacts to San Luis Obispo Creek East Fork and associated wetland by Rwy 11 RSA » Impacts to Buckley Creek by Buckley Road relocation » Impacts detention basin near Site Q
Acquisition of Sites with Environmental Concern	**» Acquisition of Entegris, Inc. property and a portion of the Kompogas Recycling Plant – both are designated as potential PFAS contamination sites per previous studies**	**» Acquisition of Entegris, Inc. property and a portion of the Kompogas Recycling Plant – both are designated as potential PFAS contamination sites per previous studies**	» Acquisition of previously petroleum-contaminated parcel on northwest of the Airport » Acquisition of Kompogas Recycling Plant and other industrial use parcels designated as potential PFAS contamination sites per previous studies
Acquisition of Sites with Farmland of Importance	» Impact to "Prime Farmland" at Edna Ranch (Tolosa Winery)	**» No impact**	» Impact to "Farmland of Local Importance" near Buckley Springs Storage
Air Quality Impacts During Construction	**» 235 days anticipated for construction *(does not include runway closure for reconstruction to resolve longitudinal grade)***	» 300 days anticipated for construction *(does not include runway closure for reconstruction to resolve longitudinal grade)*	» 500 days anticipated for construction
Biological Resources	**» Impact to potential protected species habitat in wetlands of San Luis Obispo Creek East Fork**	» Impact to potential protected species habitat in wetlands of San Luis Obispo Creek East Fork » Impact to known vernal pool fairy shrimp habitat	**» Impact to potential protected species habitat in wetlands of San Luis Obispo Creek East Fork**
Floodplain	**» Existing Rwy 11 RSA impacts East Fork of San Luis Obispo Creek and associated 100-year floodplain**	» Runway extension and associated RSA significantly impacts East Fork of San Luis Obispo Creek and associated 100-year floodplain » Significant changes to existing floodplains due to creek realignment	**» RSA of runway shift impacts East Fork of San Luis Obispo Creek and associated 100-year floodplain**

Note: **Bold text** represents the best performing Alternatives feature(s).

TABLE 4-5
AIRFIELD ALTERNATIVES SECONDARY EVALUATION – SUSTAINABILITY FACTORS CATEGORY

	Alternative 1	Alternative 2	Alternative 4
Community Impacts	» 1 residential property impacted (no structures impacted) » 7 businesses impacted (SLO City Storage, Entegris, Waste Connections, and Kompogas SLO, Broad Street Storage, Andy's Wood Floor Pro, Tolosa Winery Farm) **» Minimal shift in airplane noise**	**» No residential property impacts** **» 4 businesses impacted (SLO City Storage, Entegris, Waste Connections, and Kompogas SLO)** » Moderate shift in airplane noise for residential area northwest of the Airport	» 5 residential properties impacted (including homes) » 15 businesses impacted » Greater shift in airplane noise for neighborhood surrounding the airport
Resource Minimization	**» ≈140,000 SY of new airfield pavement** **» ≈120,000 SY of existing airfield pavement demo** **» ≈290,000 CY of cut material** **» ≈210,000 CY of fill material**	» ≈165,000 SY of new airfield pavement » ≈140,000 SY of existing airfield pavement demo » ≈580,000 CY of cut material » ≈415,000 CY of fill material	» ≈235,000 SY of new airfield pavement » ≈200,000 SY of existing airfield pavement demo » ≈1.45 million CY of cut material » ≈2.0 million CY of fill material
Emerging Contaminant Impacts	**» Acquisition of Entegris, Inc. property** **» Limited disturbance of potentially contaminated soils**	**» Acquisition of Entegris, Inc. property** **» Limited disturbance of potentially contaminated soils**	» Acquisition of contaminated west side parcel » Acquisition of Kompogas and other designated hazardous waste sites » Significant disturbance of potentially contaminated soils via development occurring on south of airport
Economic Impacts	» Potential loss of revenue during runway closure to enable construction work within RSA (depending on phasing) » Moderate impacts to airport tenant facilities and revenues	» Potential loss of revenue during runway closure to enable construction work within RSA (depending on phasing) » Moderate impacts to airport tenant facilities and revenues	**» Limited loss of revenue – long-term runway closure not required** **» Significant impacts to airport tenant facilities and revenue**

Note: **Bold text** represents the best performing Alternatives feature(s).

TABLE 4-6
AIRFIELD ALTERNATIVES SECONDARY EVALUATION – IMPLEMENTATION CATEGORY

	Alternative 1	Alternative 2	Alternative 4
Community Support	» Acquisition of 9 parcels » NEPA documentation - EA at minimum or could be EIS, if FAA determines the magnitude of impacts or public controversy is significant enough	**» Acquisition of 6 parcels** **» NEPA documentation - EA at minimum or could be EIS, if FAA determines the magnitude of impacts or public controversy is significant enough**	» Acquisition of 22 parcels » NEPA documentation - EA at minimum but the FAA may be more likely to determine EIS documentation is appropriate given of the magnitude of impacts or potential for public controversy
Agency Support	» Caltrans - anticipated agency opposition because of impact to State Route-227 alignment and ROW » County of SLO - anticipated agency opposition because of impact to important transportation/business corridor (State Route-227) » City of SLO - anticipated agency opposition because of impact to important transportation/business corridor (State Route-227)	**» Caltrans - agency disposition unknown** **» County of SLO - anticipated agency acceptance** **» City of SLO - anticipated agency opposition because of runway shift towards City limits**	» Caltrans - agency disposition unknown » County of SLO - anticipated agency opposition due to significant impact to regional solid waste infrastructure » City of SLO - anticipated agency opposition due to significant impact to regional solid waste infrastructure
Project ROM Cost Estimate[1]	» $55.2M Airfield Construction Total » $13.8M Roadway Construction Total » $70.8M Property Acquisition » $59.3M Contingencies and Other Soft Costs » $199.1M TOTAL	**» $71.6M Airfield Construction Total** **» $3.6M Roadway Construction Total** **» $46.4M Property Acquisition** **» $61.3M Contingencies and Other Soft Costs** **» $182.9M TOTAL**	» $165.1M Airfield Construction Total » $9.6M Roadway Construction Total » $326.1M Property Acquisition » $164.7M Contingencies and Other Soft Costs » $665.5M TOTAL

Notes: **Bold text** represents best performing Alternatives feature(s).
(1) – Rough Order Magnitude costs are planning-level estimates representative of airfield construction, enabling projects required to complete airfield construction, estimated land acquisition costs, planning-level construction contingencies, and applicable soft costs. Costs in 2021 dollars.

TABLE 4-7
AIRFIELD ALTERNATIVES SECONDARY EVALUATION SUMMARY

	Alternative		
	1	2	4
Operational Performance			
Runway 11-29 Operational Utility (Long-Term)			
Runway 11-29 Operational Utility (During Construction)			
Runway 7-25 Operational Utility			
Aircraft Ground Maneuverability			
Planning Tenets			
On-Airport Facility Impacts			
Off-Airport Facility Impacts			
Potential Development Area			
Roadway Realignment			
Environmental Factors			
Noise Compatibility			
Water Resources			
Acquisition of Sites with Environmental Concern			
Acquisition of Sites with Farmland of Importance			
Air Quality Impacts During Construction			
Biological Resources			
Floodplain			
Sustainability Factors			
Community Impacts			
Resource Minimization			
Emerging Contaminant Impacts			
Economic Impacts			
Implementation			
Community Support			
Agency Support			
Project ROM Cost Estimate			
Numerical Score	**41**	**46**	**35**

4.2.4 Preferred Airfield Alternative

Alternative 2 is selected as the Preferred Airfield Alternative because it performs best against the Secondary Evaluation criteria of the three airfield alternatives and likely has the highest probability of being implemented relative to Alternatives 1 and 4. Key factors that positively differentiate Alternative 2 are as follows:

- Alternative 2 provides the best long-term operational utility for Runway 11-29.
- Alternative 2 minimizes roadway realignment compared to Alternatives 1 and 4.
- Alternative 2 minimizes the amount of required land acquisition relative to Alternatives 1 and 4. Specifically, acquisition of property east of State Highway 227 and business and residential property south of Buckley Road is avoided.
- Alternative 2 resulted in the least amount of community impacts.

The Preferred Airfield Alternative is depicted in *Figure 4-10*.

One airfield solution that was identified after the Preferred Airfield Alternative was prepared and selected is the relocation of the Automated Surface Observing Systems (ASOS) equipment. The ASOS is currently located within the Runway 11-29 Object Free Area and requires relocation since the equipment is not fixed-by-function.

The ASOS siting considerations are described in the Federal Standard for Siting Meteorological Sensors at Airports (FCM-S4-1994). The FAA guidance provides two preferred options for siting ASOS at airports:

- Option 1 is 1,000 to 3,000 feet from the runway threshold (in this case, Runway 11 end) and 750 to 1000 feet from the runway centerline. There are not viable siting locations that fit these criteria and would meet the height obstruction restrictions.
- Option 2 is to collocate the ASOS with the glideslope, which is planned to be located within the ROFA due to space constraints. However, FAA guidance states that in no case shall the site selected result in a violation of a runway or taxiway object free area. Therefore, this option is also not viable given the glideslope's location within the ROFA.

Alternate locations are allowed. Since both options are unnecessarily restrictive, FAA allows the ASOS sensors to be sited on a case-by-case basis if the alternate location would assure the resultant observations are representative of the touchdown zone of Runway 11.

Therefore, the ASOS sensor is recommended to be sited on the northeast side of the Runway centerline within the 1,000-to-3,000-foot distance to the runway threshold. However, this recommended siting would need to be evaluated by the FAA at the time of relocation to validate that it meets the meteorological capture parameters required by FAA.

The comprehensive Preferred Airport Development Plan is depicted in *Figure 4-33*.

FIGURE 4-10 PREFERRED AIRFIELD ALTERNATIVE

Legend

- New Airfield Pavement
- New Landside Pavement
- Extensive Earthwork
- Impacted Facility
- Relocated Glideslope Critical Area
- Land Acquisition
- Potential On-Airport Development
- Existing Airport Property Boundary

N

1000' 500' 0' 1000'

4.3 PASSENGER TERMINAL

The facility requirements analysis identified that the passenger terminal building and apron would require additional space and infrastructure to meet forecast passenger demand in the future. The passenger terminal and apron requirements are summarized here:

- Planning Activity Level (PAL) 1-5 gate requirements include six independently accessible Airplane Design Group (ADG) III aircraft parking positions around the terminal building for active loading/unloading.
- PAL 1 building space needs include: airline ticketing and office space, outbound baggage screening, outbound baggage make-up, inbound baggage handling, and concessions.
- PAL 2-3 building space needs include: rental car customer service area.
- PAL 4-5 building space needs include: Transportation Security Administration (TSA) security screening space, holdroom, circulation, and building support.
- PAL 4-5 remain overnight apron needs include: one additional ADG-III commercial service aircraft (beyond positions available at gates).

The requirements summarized above are for the passenger terminal building and passenger airline gates. The airport terminal apron area also accommodates overflow general aviation, charter, and military aircraft at remote parking positions. Thus, the Terminal Apron Alternatives include options to retain remote general aviation, charter, and military aircraft parking. The remote general aviation, charter, and military aircraft facility requirements for PAL 1-5 are for one ADG-III charter aircraft and one ADG-IV military aircraft (C130).

The terminal apron alternatives include a shift of the terminal apron development away from Taxiway A since the Preferred Airfield Alternative includes realigning Taxiway A 75 feet to east and construction of new remote hardstands/gate. The terminal building alternatives include additional ticketing space, outbound baggage processing, and post-security concessions.

4.3.1 Passenger Terminal Apron Alternatives

Four Terminal Apron Alternatives were prepared for evaluation. There are elements that are consistent between the four Terminal Apron Alternatives. The consistent elements are:

- Realigned taxilane on the west and east side of terminal apron to meet Taxilane Object Free Area (TLOFA) clearance standards, as described in FAA Advisory Circular 150/5300-13B, *Airport Design*.
  - The west apron taxilane results in impact to the Airport Traffic Control Tower (ATCT).
  - The east apron taxilane results in impact to R1 and R2 remote aircraft parking positions.
- Two remote aircraft parking positions on the west side of the terminal apron.
- Apron service road around the south and west side of the terminal apron positions.

The following subsections describe the differences between each of the Terminal Apron Alternatives.

4.3.1.1 Terminal Apron Alternative 1

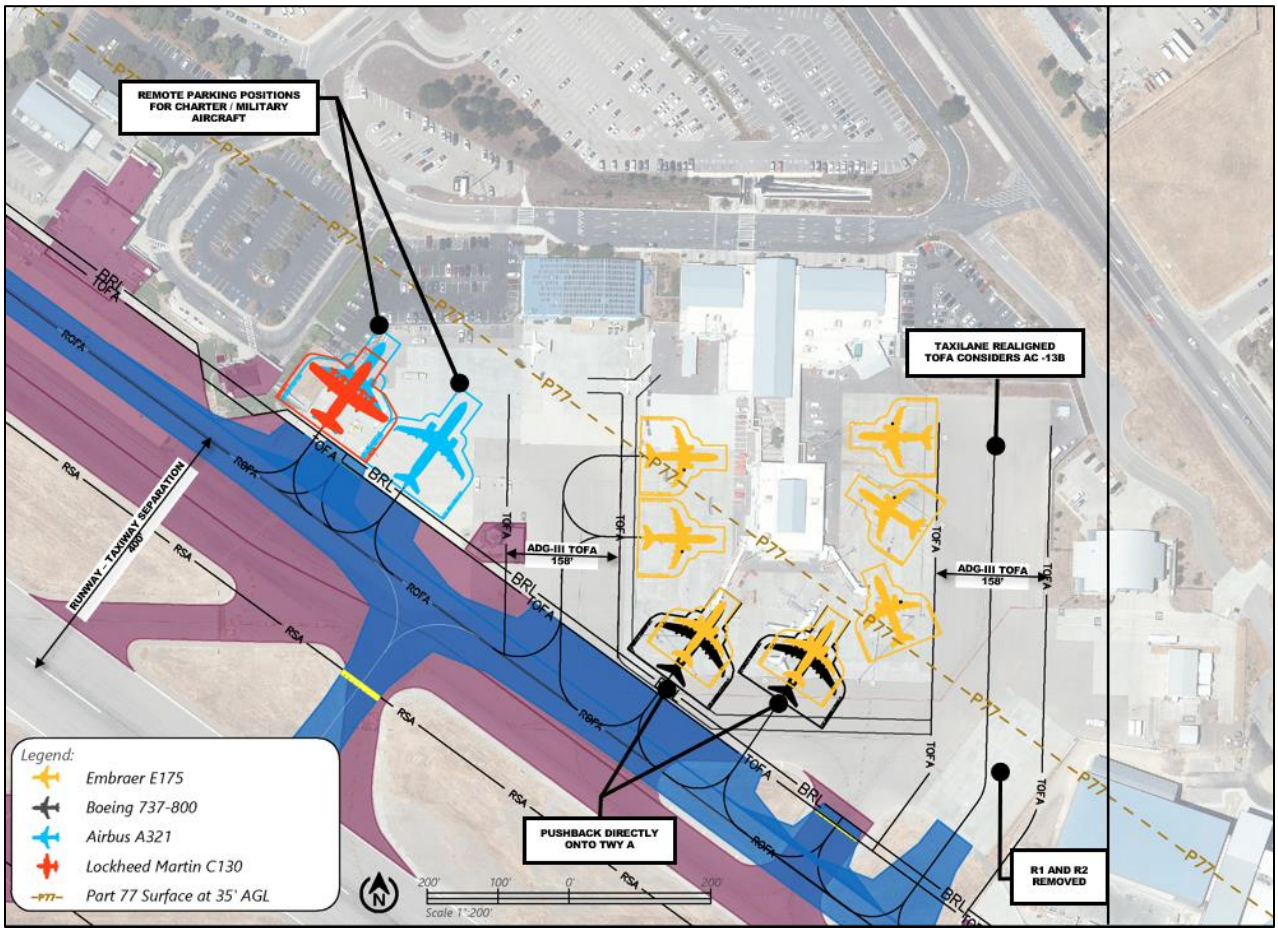
Terminal Apron Alternative 1 considers an apron configuration where seven aircraft are parked simultaneously around the terminal building. This parking configuration is composed of five positions capable of accommodating aircraft sized up to Embraer E175 and two positions capable of

accommodating aircraft sized up to Boeing 737-800. In this configuration, one Boeing 737-800 position and one Embraer E175 position would be accessible using the existing passenger boarding bridges. The other positions would be ground-loaded.

Another characteristic of this parking configuration is that the aircraft in the two Boeing 737-800 positions would be pushed back onto the realigned Taxiway A for departure. All other aircraft could pushback onto a taxilane and complete startup procedures outside the movement area.

Terminal Apron Alternative 1 is depicted in *Figure 4-11*.

FIGURE 4-11
TERMINAL APRON ALTERNATIVE 1



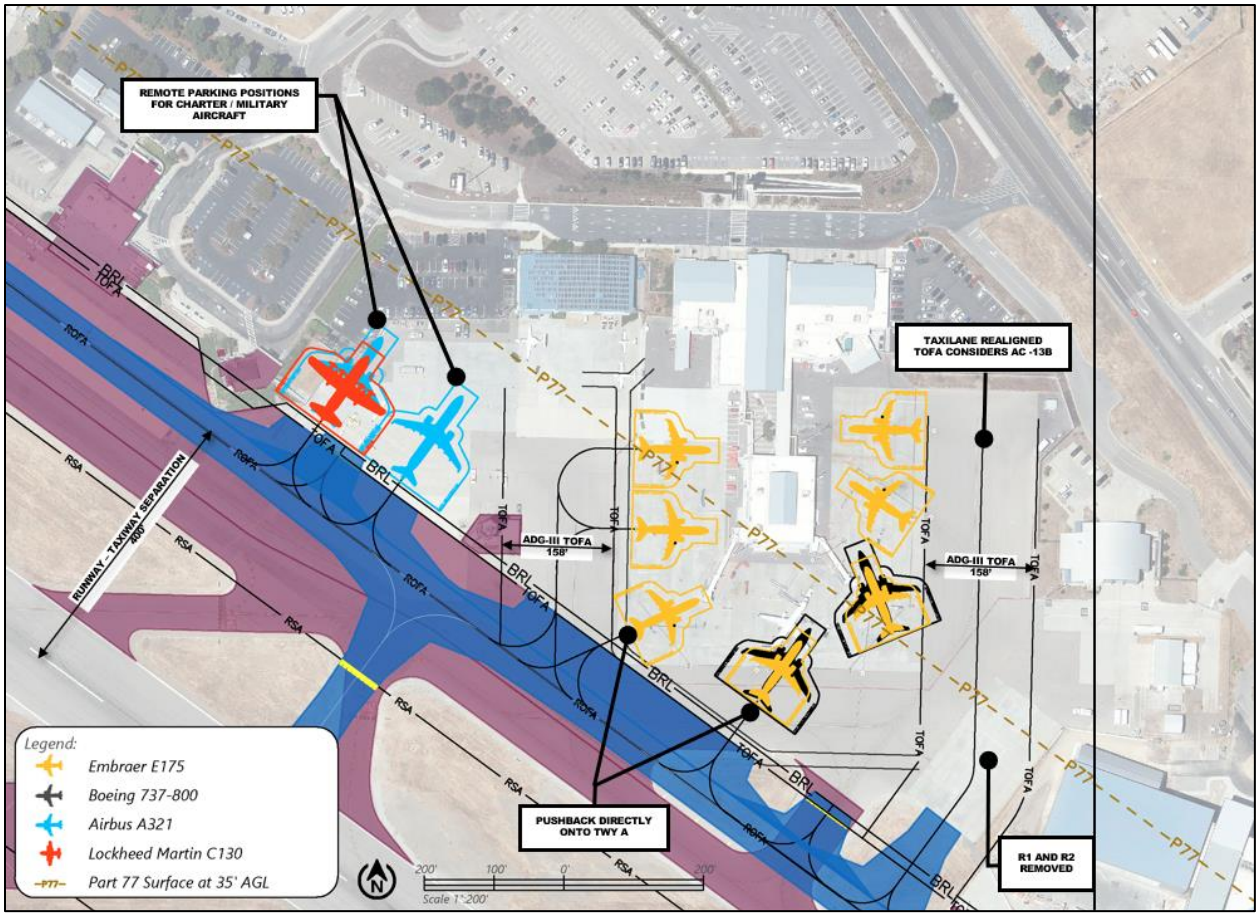
4.3.1.2 Terminal Apron Alternative 2

Terminal Apron Alternative 2 considers an apron configuration where seven aircraft are parked simultaneously around the terminal building. This parking configuration is composed of five positions capable of accommodating aircraft sized up to Embraer E175 and two positions capable of accommodating aircraft sized up to Boeing 737-800. In this configuration, one Boeing 737-800 position and one Embraer E175 position would be accessible using the existing passenger boarding bridges. The other positions would be ground-loaded.

Another characteristic of this parking configuration is that the aircraft in one Boeing 737-800 position and one Embraer E175 position would be pushed back onto the realigned Taxiway A for departure. All other aircraft could pushback onto a taxilane and complete startup procedures outside the movement area.

Terminal Apron Alternative 2 is depicted in *Figure 4-12*.

FIGURE 4-12
TERMINAL APRON ALTERNATIVE 2



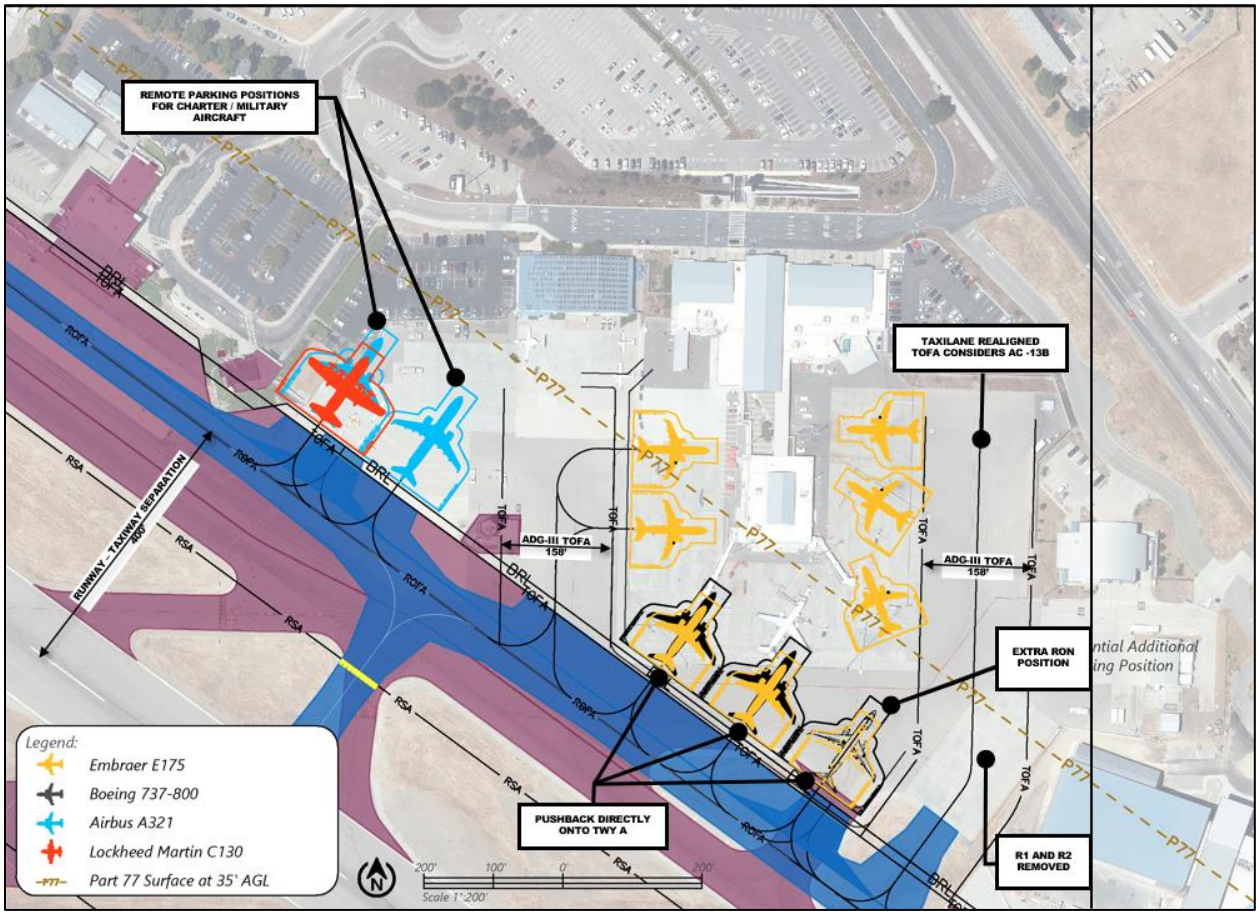
4.3.1.3 Terminal Apron Alternative 3

Terminal Apron Alternative 3 considers an apron configuration where eight aircraft are parked simultaneously around the terminal building. This parking configuration is composed of five positions capable of accommodating aircraft sized up to Embraer E175 and three positions capable of accommodating aircraft sized up to Boeing 737-800. In this configuration, one Boeing 737-800 position and one Embraer E175 position would be accessible using the existing passenger boarding bridges. The other positions would be ground-loaded.

Another characteristic of this parking configuration is that the aircraft in the three Boeing 737-800 positions would be pushed back onto the realigned Taxiway A for departure. All other aircraft could pushback onto a taxilane and complete startup procedures outside the movement area.

Terminal Apron Alternative 3 is depicted in *Figure 4-13*.

FIGURE 4-13
TERMINAL APRON ALTERNATIVE 3



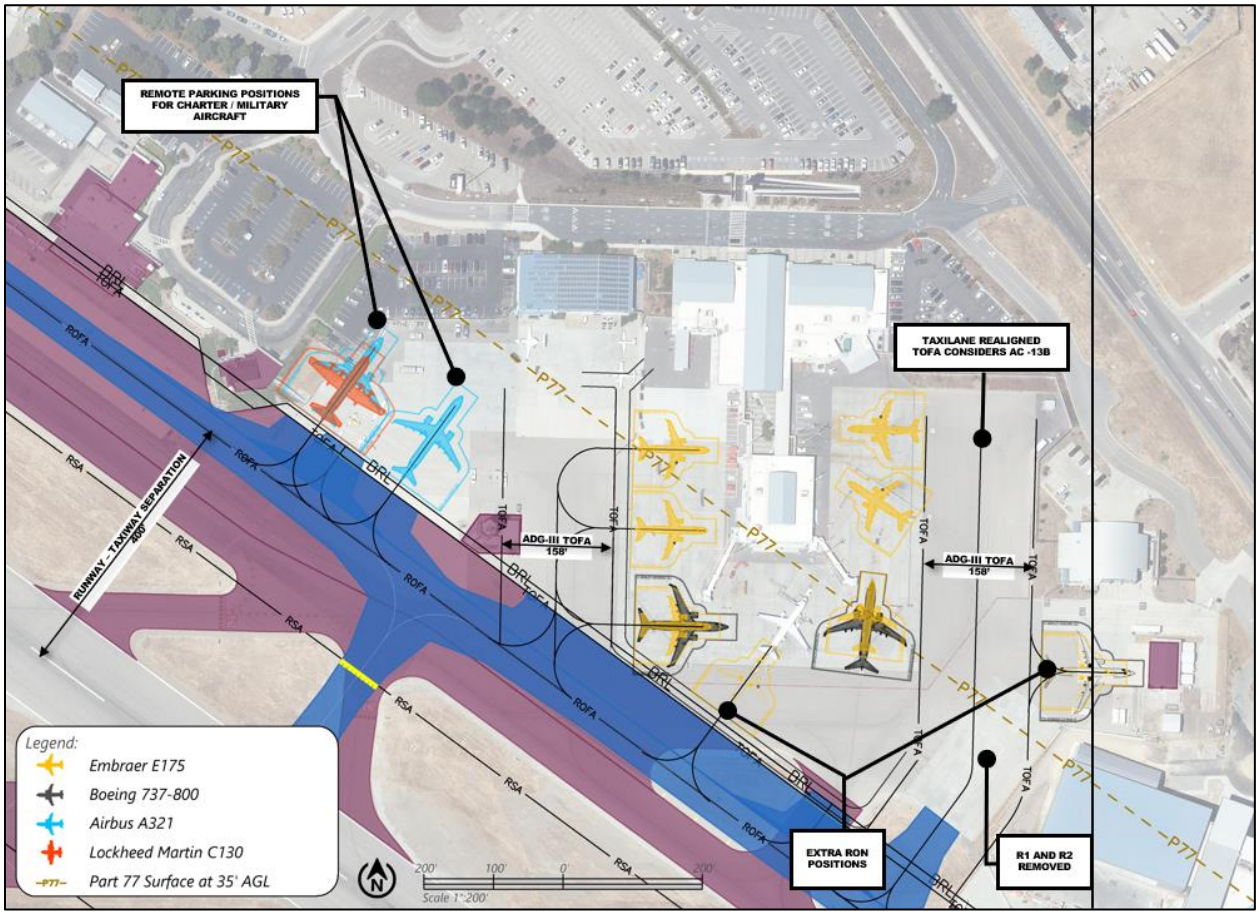
4.3.1.4 Terminal Apron Alternative 4

Terminal Apron Alternative 4 considers an apron configuration where seven aircraft are parked simultaneously around the terminal building. This parking configuration is composed of five positions capable of accommodating aircraft sized up to Embraer E175 and two positions capable of accommodating aircraft sized up to Boeing 737-800. This Alternative also considers Boeing 737-800 RON aircraft position south of the Aircraft Rescue and Firefighting (ARFF) Station. This would impact the Airport Maintenance Building. In this configuration, two Boeing 737-800 positions would be accessible using the existing passenger boarding bridges. The other positions would be ground-loaded.

Another characteristic of this parking configuration is that the aircraft a single Embraer E175 position would be pushed back onto the realigned Taxiway A for departure. All other aircraft could pushback onto a taxilane and complete startup procedures outside the movement area.

Terminal Apron Alternative 4 is depicted in *Figure 4-14*.

FIGURE 4-14
TERMINAL APRON ALTERNATIVE 4



4.3.1.5 Preferred Terminal Apron Alternative

Terminal Apron Alternative 3 was selected as the Preferred Terminal Apron Alternative by Airport staff after evaluation against the other Apron Alternatives. The primary reasons that Terminal Apron Alternative 3 was selected are as follows:

- The configuration maximizes the number of positions around the terminal with eight aircraft positions, instead of seven.
- The larger aircraft positions (Boeing 737-800) are located along Taxiway A which results in greater flexibility to accommodate larger ADG-III aircraft, such as Airbus A321 aicraft than if those positions were located on the east or west side of the terminal building.
- The configuration avoids impact to the Airport Maintenance Facility.

The Preferred Terminal Apron Alternative was refined to include an apron/taxilane expansion on the east side of the terminal building to enable the efficient taxi and pushback operations of larger ADG-III aircraft accessing the northeast aircraft parking position. The Preferred Terminal Apron Alternative is combined with the Preferred Terminal Building Alternative to create the Preferred Passenger Terminal Facility Alternative. The Preferred Passenger Terminal Facility Alternative is depicted in *Figure 4-19*.

4.3.2 Passenger Terminal Building Alternatives

Alternatives for the passenger terminal building were prepared based on the requirements outlined in *Chapter 3, Facility Requirements*. The passenger terminal building facility requirements indicate that key functional areas such as total airline space, baggage service, and concessions will need enlargement starting from PAL 1 and continuing into PAL 2. By PAL 3, the need for expansion extends to additional areas including airline space, baggage service, concessions, public space, and building support functional areas. At PAL 4 and PAL 5, expansion will be necessary across all functional areas to effectively accommodate the projected demand. A comprehensive plan for terminal building improvements has been formulated, which will be executed in three distinct phases, each corresponding to a specific PAL level.

4.3.2.1 Phase 1 Terminal Building Alternative

Phase 1 terminal building improvements meet a portion of PAL 1 demand by expanding airline ticketing and office space, outbound baggage screening to meet TSA requirements, and outbound baggage make-up. This includes expansion of the terminal building to the west. The former ACI hangar adjacent to the west end of the terminal would be demolished to accommodate terminal expansion. Since airport staff currently utilize space both in the hangar and in the existing terminal building, a new airport administration building would be constructed on the site of the former terminal to consolidate airport staff in one facility before the ACI hangar is demolished.

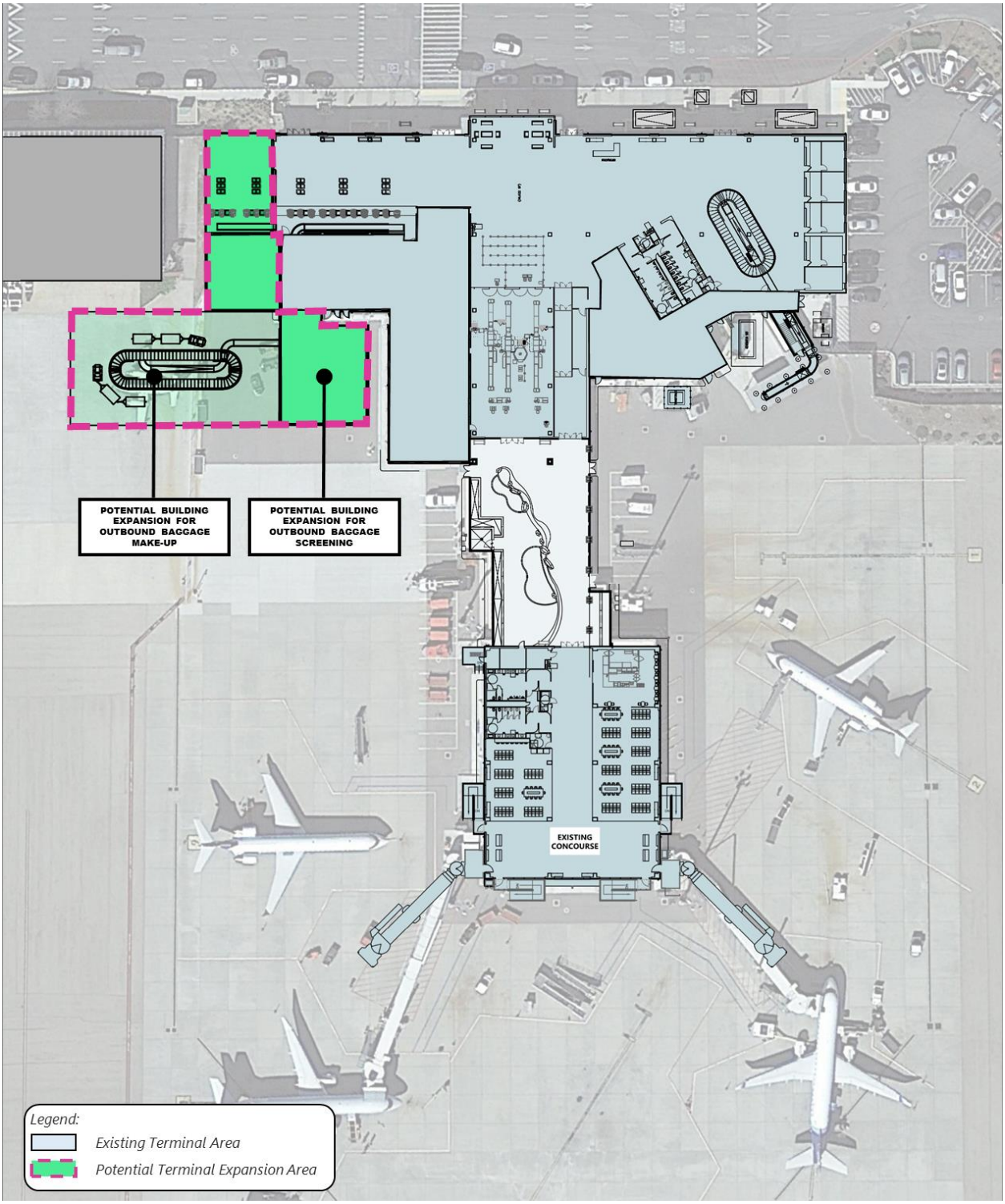
The terminal expansion, adjacent to the existing airline ticketing and office area, would meet the demand for additional airline ticketing and lobby space. This expansion would facilitate the addition of six ticketing counters, extra office space for airlines, and an overall increase in the terminal's ticketing area.

The existing TSA outbound baggage screening area, situated behind the airline ticket counters, is equipped with one baggage screening device. The existing single device would not meet PAL 1 demand and would require expansion of the area to enable installation of a second screening device to avoid baggage backups. Terminal building expansion to the south and west of the existing screening area is proposed to accommodate installation of a second screening device. The expansion would create additional space for checked bag screening and would include the installation of two new baggage screening devices.

Furthermore, the existing outbound baggage make-up area requires additional space during PAL 1 to accommodate the peak hour demand. Expanding farther westward of the new baggage screening area would facilitate an enhanced outbound baggage make-up area, addressing its needs by providing additional space and increased bag storage. This expansion would mitigate congestion that would potentially impact the screening and ticketing areas.

The Phase 1 Terminal Building Alternative is depicted in *Figure 4-15*.

FIGURE 4-15
PHASE 1 TERMINAL BUILDING ALTERNATIVE



4.3.2.2 Phase 2 Terminal Building Alternative

Phase 2 of terminal building improvements meets additional PAL 1 demand through improvements to the baggage service functional area. Phase 1 terminal improvements serve the outbound baggage make-up area while Phase 2 addresses the inbound baggage induction area (apron-side) and the baggage claim area. Two options are proposed for Phase 2: an eastward expansion of the existing terminal building or a "no action" approach.

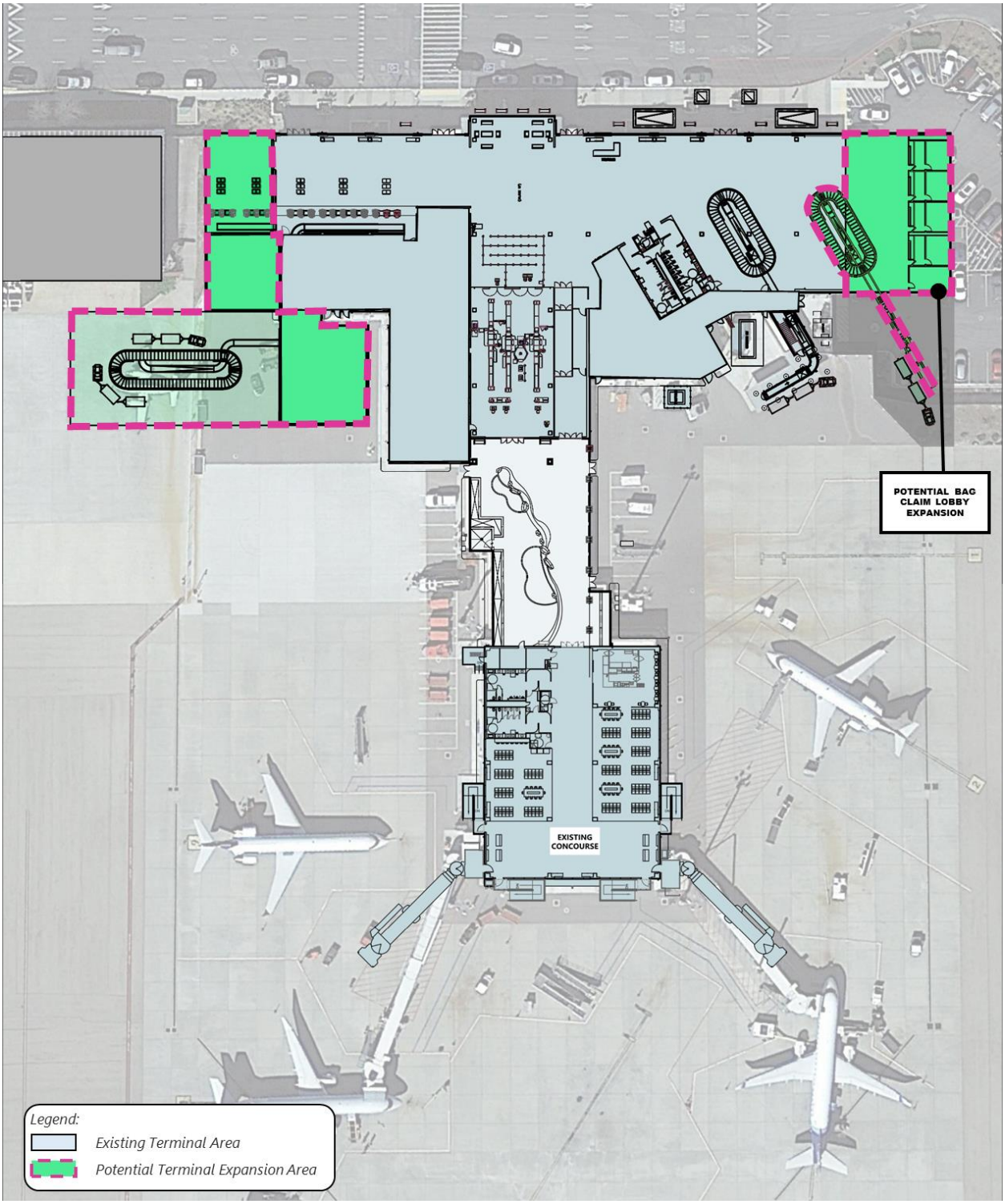
The existing baggage claim length is sufficient; however, its location poses congestion issues around the rental car counters in existing conditions. The analysis indicates the need for additional space in the inbound baggage induction area to accommodate demand in PAL 1. The existing inbound baggage induction area experiences congestion during peak arrival periods, leading to delays in efficient baggage offloading. To mitigate these challenges, this alternative includes the addition of an extra baggage claim carousel with the eastward expansion of the terminal building. This would alleviate congestion in both the baggage claim area and inbound baggage induction area while also accommodating future demand.

Eastward expansion of the terminal building would impact the rental car counters and offices in the terminal building and the rental car lot east of the terminal building. The Phase 2 Terminal Building Alternative includes the rental car counters and offices being relocated within the expanded terminal building. Another option (not depicted) would be to relocate the rental car customer service area to a consolidated rental car facility, should one be constructed. The eastward expansion would also encroach upon the existing rental car ready/return lot resulting in the loss of parking spaces. The facility requirements chapter has identified the need for additional rental car customer service counters or a standalone customer service center starting from PAL 1. However, during the assessment of alternatives, it was determined that the terminal expansion alone cannot fulfill the rental car requirements, necessitating exploration of alternative landside options.

In contrast, the "no action" option entails no modifications to the terminal bag claim lobby. Although this option does not address the identified needs in the baggage area, it avoids impacts to the existing rental car counters, offices and ready return lot.

The Phase 2 Terminal Building Alternative is depicted in *Figure 4-16*.

FIGURE 4-16
PHASE 2 TERMINAL BUILDING ALTERNATIVE



4.3.2.3 Phase 3 Terminal Building Alternative

Phase 3 of the terminal building enhancements meets the remaining PAL 1 demand by addressing the concessions space. Phase 3 also meets PAL 4 and PAL 5 demand by addressing needs in holdroom, TSA security screening, and airport administrative space functional areas. Phase 3 explores expanding the terminal concourse and holdroom areas eastward next to the open-air courtyard and westward next to the existing holdroom area.

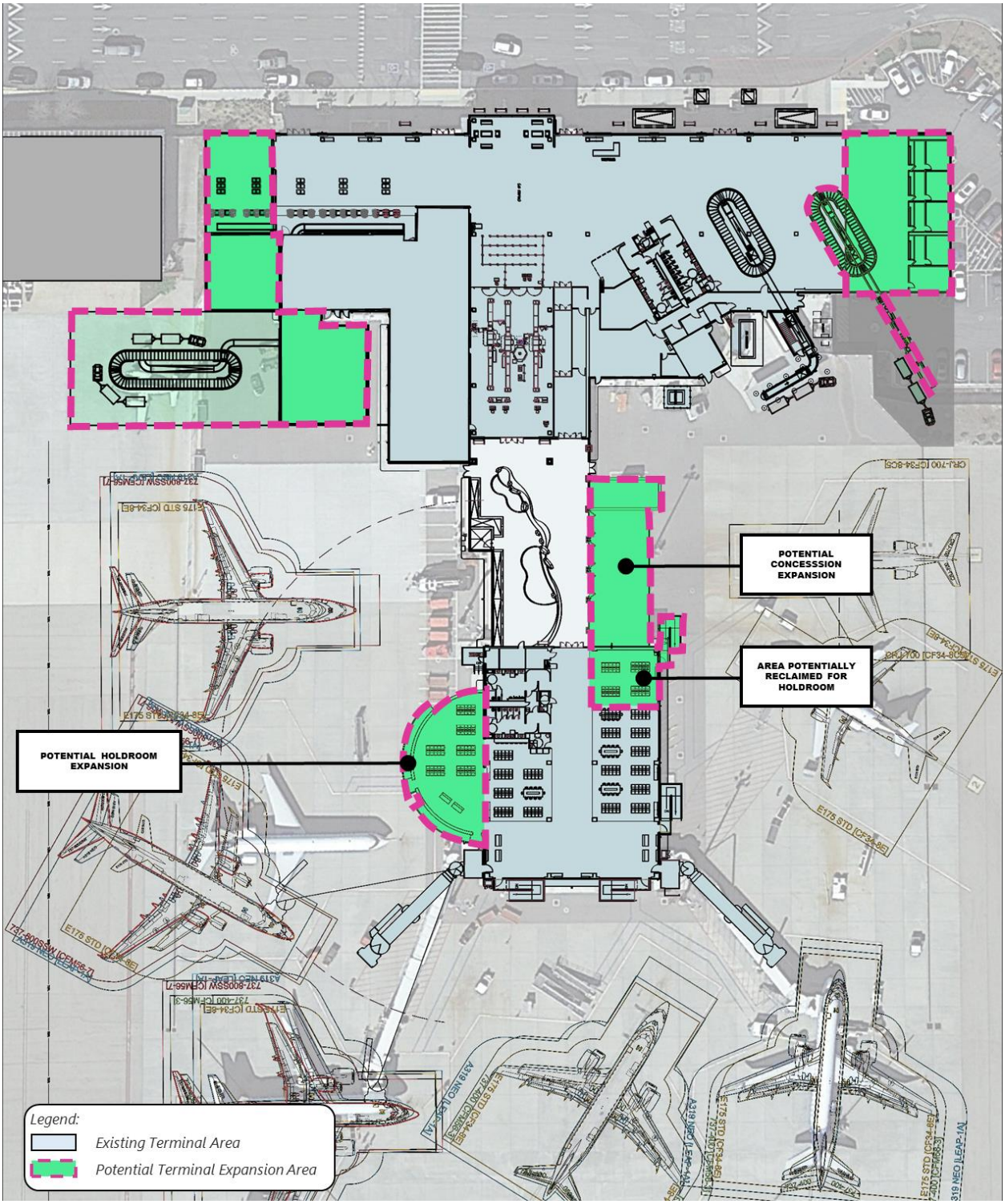
Additional post-security concessions space is required from PAL 1 onwards. Presently, the airside concessions are confined to the northwest corner of the terminal's existing holdroom area. To address the demand for additional area for airside concessions, a proposed solution involves an expansion towards the east, adjacent to the open-air courtyard section of the terminal. This expansion would provide a designated area for post-security concessions and provide additional circulation and holdroom space to meet demand.

Expansion of the holdroom area becomes necessary from PAL 4 onwards. Upon fulfilling the concessions requirements through the eastward expansion, the existing concessions area can be repurposed into holdroom space. Additionally, a westward expansion of the holdroom area is proposed to provide supplementary space to meet the PAL demand. Expanding the building to the west would require apron reconfiguration to push aircraft parking positions farther away from the building. This would be necessary to comply with the National Fire Protection Association (NFPA) Regulation 415, which mandates aircraft fueling to occur at least 100 feet from the terminal building face for safety in case of fire, since the existing terminal building lacks fire protection glazing.

Existing airport administration and operations space meets the facility requirements. However, administration and operations are not collocated, and the existing administration space could be repurposed to serve passenger airline and TSA needs. Airport operations currently occupy a portion of a former ACI FBO hangar which occupies land that could be repurposed for passenger terminal expansion outlined in Phase 1.

The Phase 3 Terminal Building Alternative is depicted in *Figure 4-17*.

FIGURE 4-17
PHASE 3 TERMINAL BUILDING ALTERNATIVE



4.3.2.4 Preferred Terminal Building Alternative

A Preferred Terminal Building alternative was refined after an evaluation of the alternatives by Airport staff. The Preferred Terminal Building Alternative is depicted in *Figure 4-18*. This alternative combines elements from Phases 1, 2, and 3 while incorporating modifications to enhance efficiency. The elements of the alternatives that were considered unfeasible or would have significant adverse impacts on surrounding facilities were removed from further consideration.

The Preferred Terminal Building Alternative integrates the Phase 1 Alternative, which includes expanding airline ticketing space, outbound baggage screening, and outbound baggage service make-up . One notable difference in the Preferred Terminal Building Alternative is in the configuration of the outbound checked baggage screening and make-up area. In the Preferred Terminal Building Alternative, refinement has been undertaken to relocate this area farther west. This modification facilitates construction implementation while minimizing disruptions to the ongoing operations of the baggage screening and make-up area within the terminal. The west terminal building expansion would require the demolition of the existing ACI Hangar to enable construction of the terminal building expansion.

The Preferred Terminal Building Alternative opted for the "no action" option outlined in Phase 2. While a second baggage claim device would enhance inbound baggage processing, the existing device would suffice, albeit it a slightly degraded level of service. Moreover, the expansion of the baggage claim lobby was determined to be too impactful on the rental car counters, office, and the ready/return rental car parking area. This decision was influenced by the challenges, both near-term and long-term, associated with meeting the requirements for vehicle parking of all kinds.

From the Phase 3 Alternative, the proposed westward expansion of the passenger holdroom was dismissed due to its impact on aircraft parking positions. The concessions expansion space on the east side of the terminal building that was identified in the Phase 3 Alternative was carried forward into the Preferred Terminal Building Alternative. This would help resolve the passenger holdroom need if the existing post-security concession area were repurposed as holdroom space after the new concession space is constructed. Further, it was assumed that a portion of the SBP passengers would continue to enjoy the temperate Southern California climate and lounge in the open-air courtyard prior to departure which would relieve any congestion or overcrowding within the holdroom.

4.3.3 Preferred Terminal Building Alternative

The Preferred Terminal Building Alternative is combined with the Preferred Terminal Apron Alternative to create the Preferred Passenger Terminal Facility Alternative. The Preferred Passenger Terminal Facility Alternative is depicted in *Figure 4-19*.

FIGURE 4-18
PREFERRED TERMINAL BUILDING ALTERNATIVE

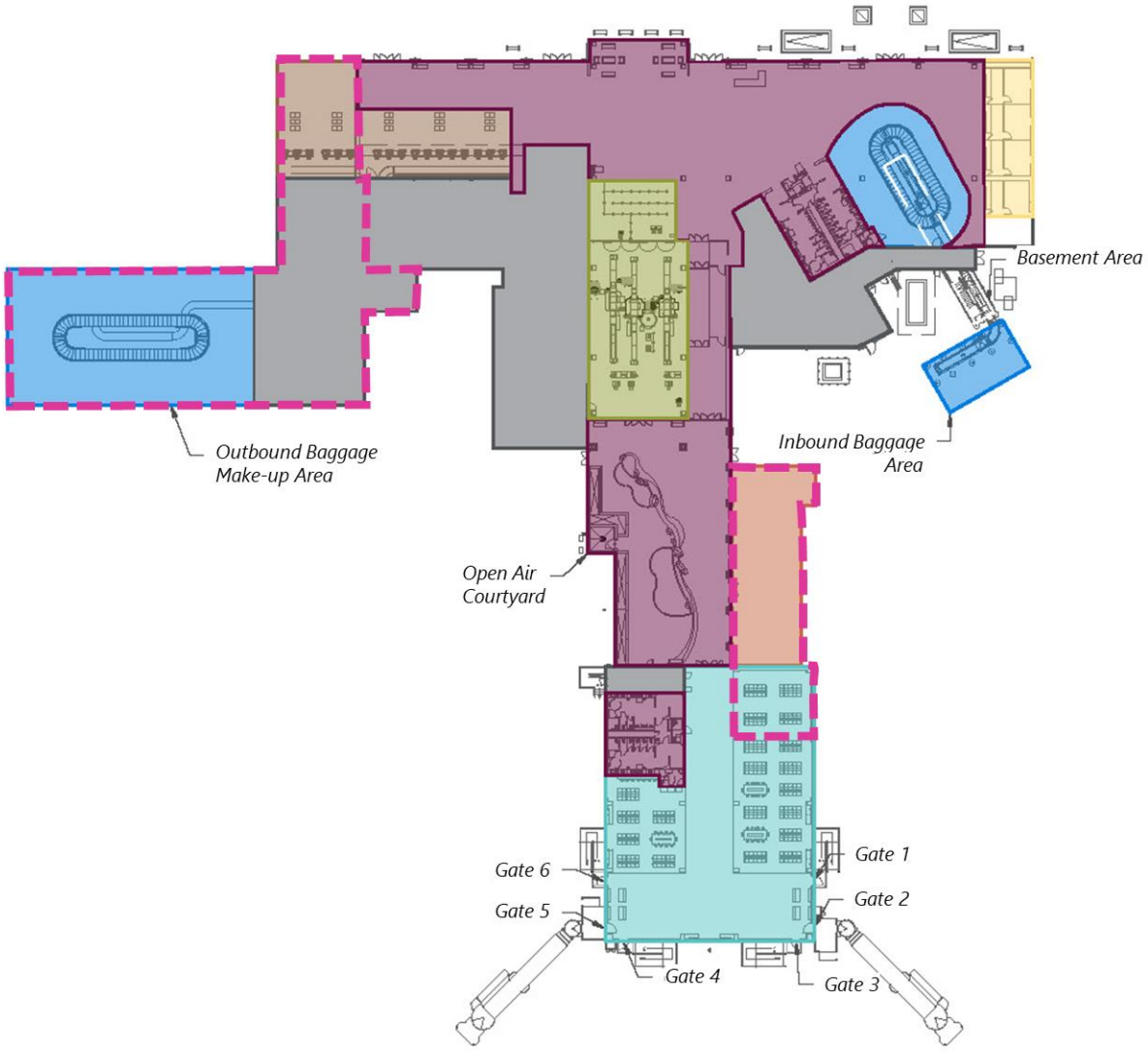
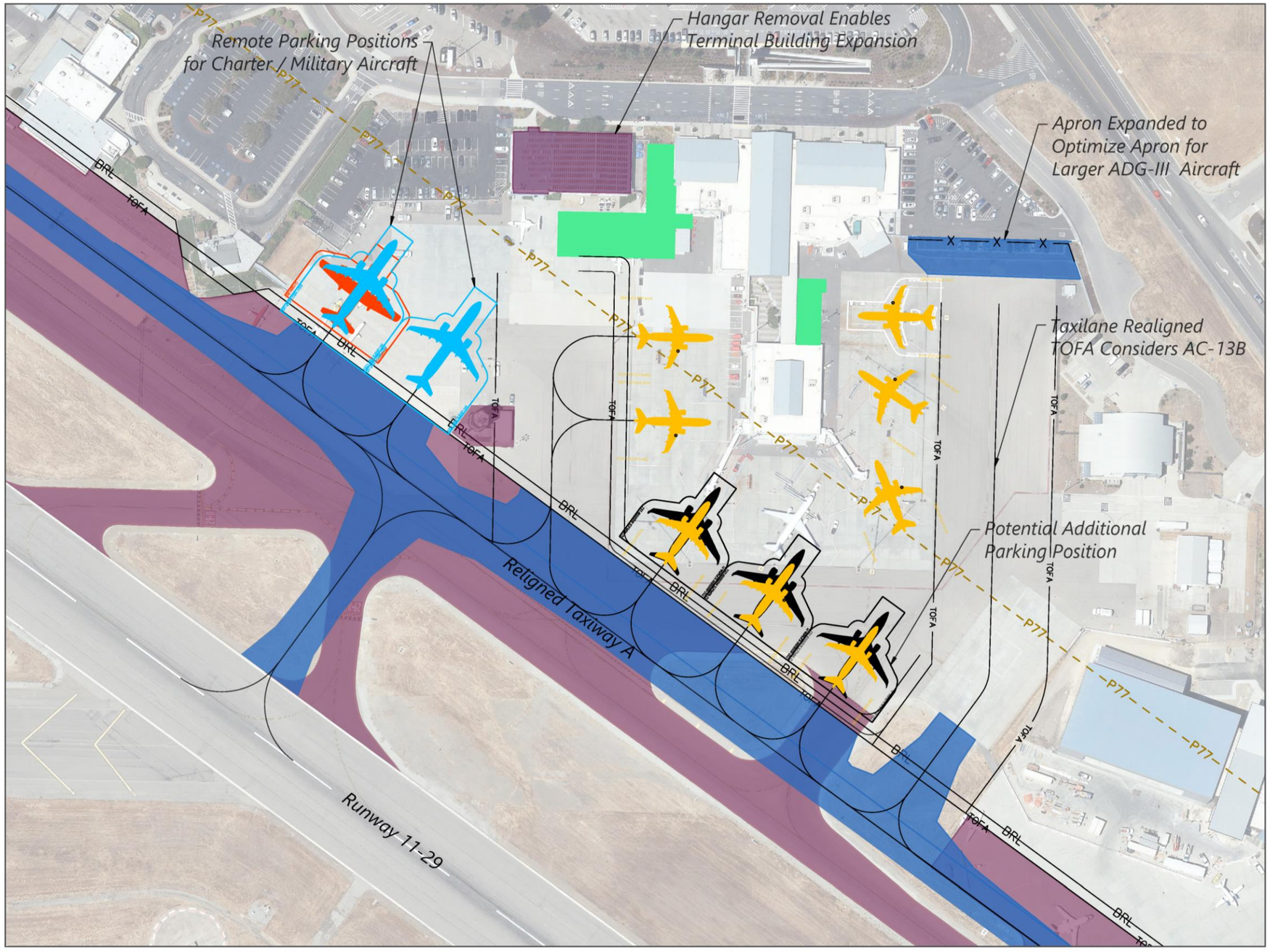


FIGURE 4-19 PASSENGER TERMINAL FACILITY ALTERNATIVE



Legend

- Embraer E175
- Boeing 737-800
- Airbus A321
- Lockheed Martin C130
- P77 Part 77 Surface at 35' AGL
- New Airfield Pavement
- Impacted Facility
- Terminal Building Expansion

N

150' 75' 0' 150'

4.4 LANDSIDE

Landside facility requirements are summarized as follows:

- PAL 1-5 parking needs include: existing need for additional public parking stalls.
- PAL 3-5 parking needs include: need for additional employee parking stalls.
- PAL 1-5 parking needs include: existing need for additional rental car stalls.

The landside alternatives accommodate improvements to vehicle parking areas and rental car facilities. There are also recommendations for improvements that would enhance traffic on airport terminal circulation roads. These recommendations are:

- Add dynamic messaging signs on Aero Drive to notify drivers of available parking stall counts and locations.
- Eliminate on-street vehicle parking on Aero Drive so vehicles are not parked in bike lanes which would enhance bicycle access and safety and reduce car-bicycle conflicts and traffic impacts.
- Construct a cell phone waiting lot between the Return Loop Road and State Route 227.

4.4.1 Parking Structure Considerations

Even though the airport has a substantial passenger vehicle parking need, the master plan did not consider a parking garage based on construction impacts and cost. A parking garage was previously evaluated in detail in a 2019 Airport Parking Study which evaluated options for constructing new surface parking and/or constructing a parking structure near the passenger terminal. One important consideration to constructing a parking structure is accommodating displaced parking demand during construction, assuming the structure is constructed on existing Parking Lot 4. The options proposed in the 2019 Airport Parking Study considered using land north of Aero Drive as the location to accommodate the displaced demand during construction. That would require acquisition of land the Airport currently does not own and at the time of the study, that land was undeveloped. However, those options are no longer considered viable because those parcels are now being developed into a commercial property as of 2022. The cost of constructing a parking garage at the airport would absorb a substantial share of the airport revenue, potentially putting the airport's financial self-sufficiency at risk.

4.4.2 Preferred Landside Alternative

The Preferred Landside Alternative would consolidate most of the airport's disparate parking lots on the airport's east side near the passenger terminal building. The Preferred Landside Alternative is depicted in *Figure 4-20*.

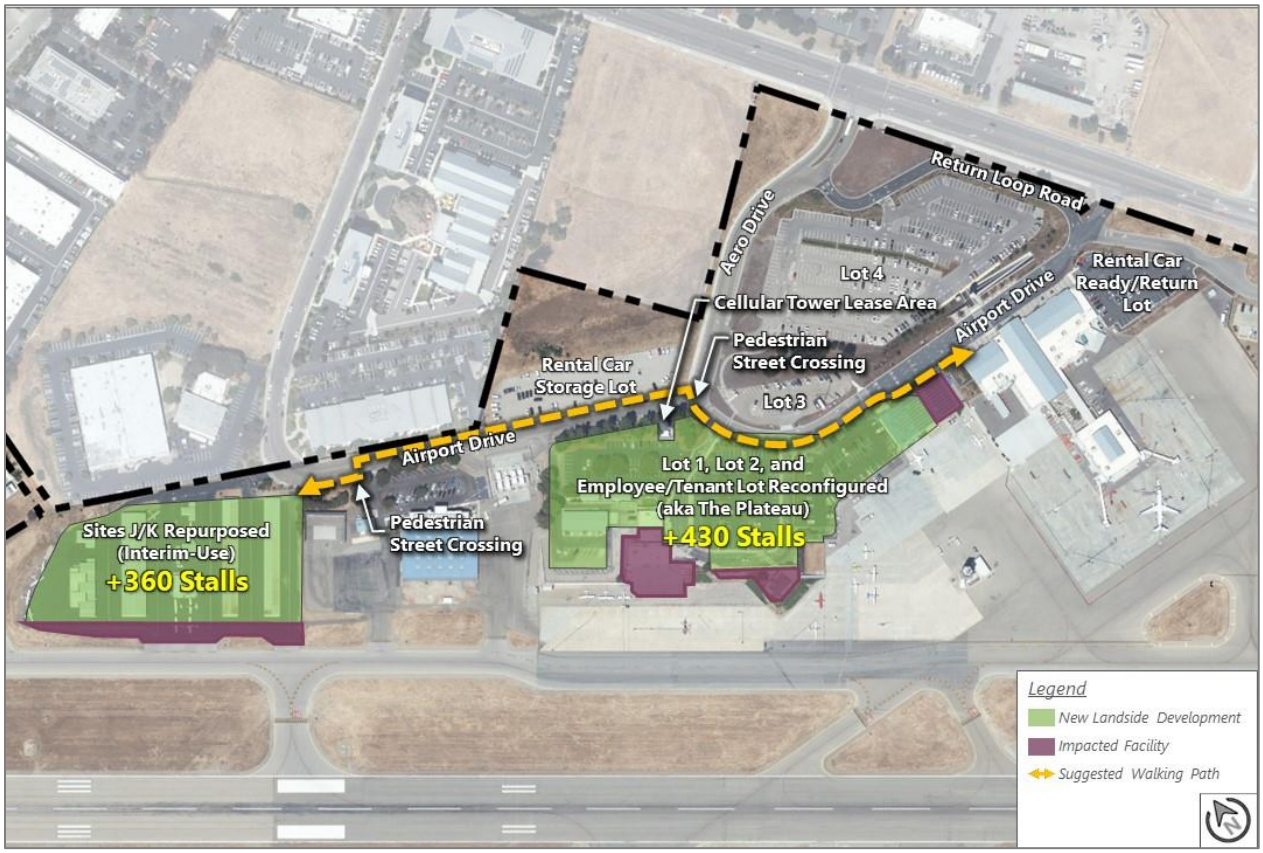
4.4.2.1 Repurpose Site J and Site K

The first component is to convert Site J and Site K from a general aviation use to accommodate vehicle parking. The recommendation is to relocate the existing Site J and Site K aviation tenants to the Westside and demolish the existing hangar buildings. This enables the perimeter fence to be relocated around the apron and along the movement area boundary and then convert the apron from an aeronautical to a nonaeronautical use. Site J and Site K would be converted to accommodate an estimated 360 vehicle parking spaces, depending on the configuration.

Pedestrian access to the passenger terminal building can be achieved by implementing a contiguous walking path from Site J and Site K to the passenger terminal. Currently there is no contiguous sidewalk along the south side of Airport Drive that connects Site J and Site K to the passenger terminal building. The sidewalk terminates adjacent to Site L and does not resume on the south side of Airport Drive until the intersection with Aero Drive. One option is to add a crosswalk near Site L so pedestrians could cross to the north side of Airport drive to avoid the area on the south side of Airport Drive where there is no contiguous sidewalk.

The recommendation is for Site J and Site K to temporarily be repurposed to accommodate landside uses for an interim period. The goal is for landside development in this area to quickly satisfy an existing and near-term need while permanent capacity enhancement strategies are implemented. After permanent capacity enhancement strategies are implemented, then Site J and Site K would be returned to aeronautical use to accommodate general aviation demand.

FIGURE 4-20
PREFERRED LANDSIDE ALTERNATIVE



4.4.2.2 Redevelop Plateau Lot

The second component is to redevelop the area currently occupied for Lot 1, Lot 2, and the employee/tenant parking lot adjacent to Lot 2. The Preferred Landside Alternative includes redeveloping these lots into a single, cohesive lot to optimize the area for vehicle parking. redevelopment includes addressing the existing grade differences through construction of ramps and/or adding earthwork fill. A conceptual parking configuration is depicted in *Figure 4-21*. The concept avoids impact to the existing cellular communications tower located in a leased area on the north side of the lot.

Redeveloping the lot is expected to yield approximately 430 parking stalls, which is a net increase of 130 over the existing 300 spaces. The lot reconfiguration impacts the rental car maintenance facility which would need to be relocated for the Plateau Lot concept's implementation.

4.4.2.3 Westside Landside Alternative

The 2019 Airport Parking Study evaluated a location to construct a remote surface parking facility on the Westside of the Airport, north of Old Sante Fe Road. The Master Plan includes evaluation of the area south of Old Santa Fe Road, as depicted in *Figure 4-22*, and informally refers to the site as "Sante Fe Square." Santa Fe Square was not previously available for development due to its location off the west end of Runway 7-25, which limited building heights and land use types. However, the Master Plan preferred airfield development will result in the closing of Runway 7-25 which enables the consideration of Santa Fe Square for development.

The Westside Landside Alternative includes construction of a surface lot for remote public parking and/or a consolidated rental car facility within Santa Fe Square.

The Sante Fe Square site would require improvement prior to development. The site would require grading to level the land and provide proper drainage, which adds costs and complications to its development.

Landside development on the site would require a two-mile shuttle trip to and from the airport terminal. A shuttle would need to be operated 24/7 to provide acceptable service which adds operating costs including driver labor, vehicle operation, and vehicle maintenance.

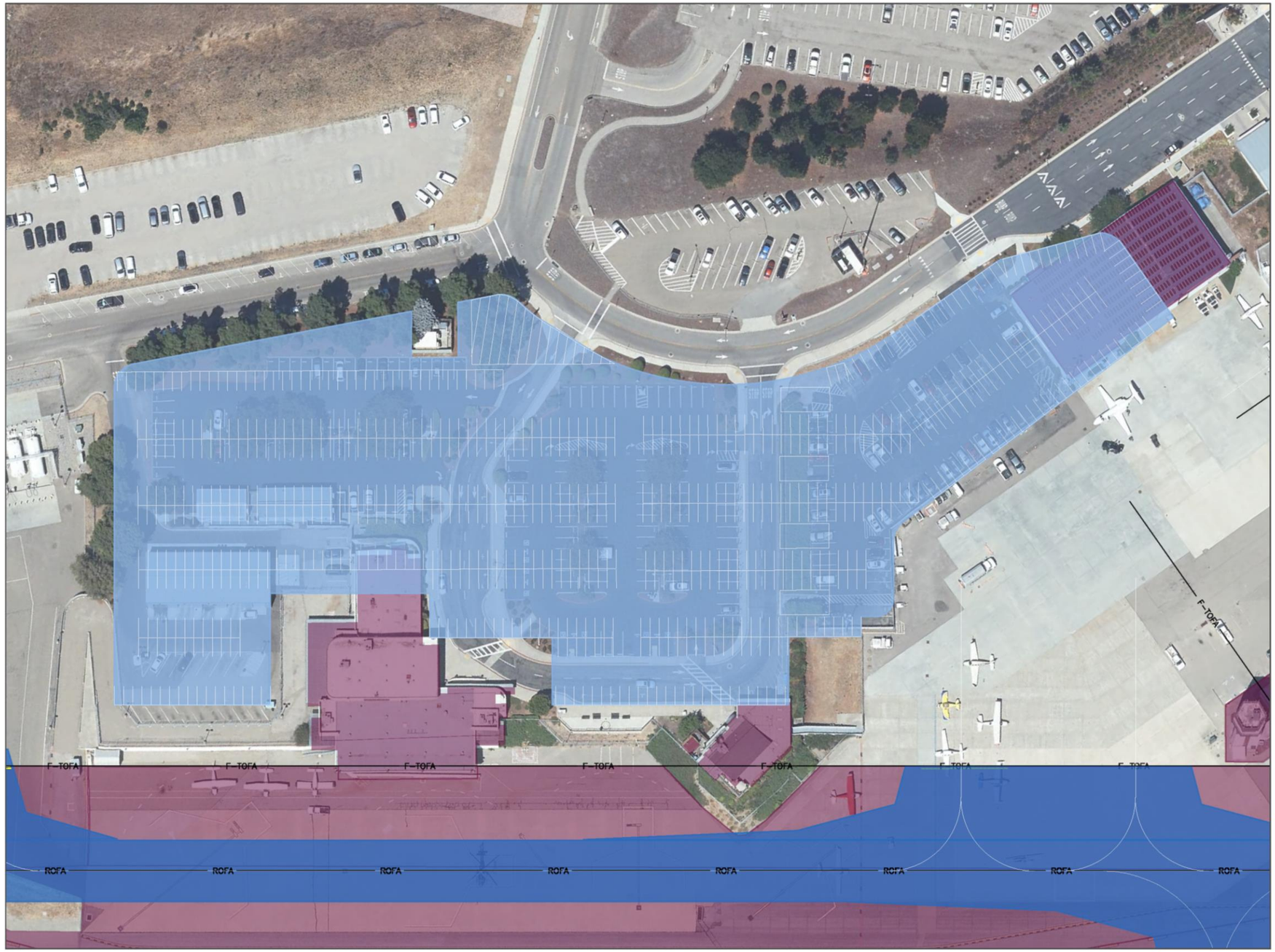
The site may have a higher and better use than surface parking without the development limitations that presently exist due to its proximity to Runway 7-25 which is described further in *Section 4.5.7*.

If Santa Fe Square is not preferred for landside development, it is recommended that the 2019 Airport Parking Study alternative for a remote landside facility north of Old Santa Fe Road is selected or that land west of Hoover Avenue is evaluated for potential parking or other landside facilities.

4.4.3 Other Potential Landside Solutions

The airport's small land area limits opportunities to meet current and future demand for vehicle parking within the existing airport boundary, especially near the terminal. Given these limitations, the airport could encourage alternatives such as third-party development of for-profit off-airport parking facilities near the airport, community enhancement of public transportation access, alternative modes of transportation (e.g., bike access), and shared rides to help mitigate parking demand.

FIGURE 4-21 PREFERRED LANDSIDE ALTERNATIVE – "PLATEAU LOT" RECONFIGURATION CONCEPT



Legend

- *New Airfield Pavement*
- *New Landside Development*
- *Impacted Facility*

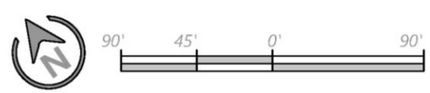


FIGURE 4-22
WESTSIDE LANDSIDE ALTERNATIVE

4.5 GENERAL AVIATION AND SUPPORT FACILITIES

This section describes recommended improvements to the following functional airport areas:

- General Aviation
- Fixed Base Operator (FBO) and Maintenance, Repair, and Overhaul (MRO)
- Air Cargo
- Aircraft Rescue and Firefighting
- Airfield Electrical Vault
- Airport Traffic Control Tower
- Airport Administration and Maintenance Building
- Utilities
- Nonaeronautical Development

4.5.1 General Aviation, FBO/MRO, Air Cargo Alternatives

This set of alternatives consider aeronautical development to accommodate general aviation, FBO, MRO, and air cargo uses. Airport support needs were identified for these aeronautical uses in the Facility Requirements analysis and are summarized here:

- PAL 1-3 additional small conventional hangar space required to accommodate demand.
- PAL 1-3 additional T-hangar space required to accommodate demand.

While the facility requirements did not indicate a need for additional apron space, the Preferred General Aviation, FBO/MRO, Air Cargo Alternative includes additional apron space to support a balanced approach to aircraft storage.

Alternatives were prepared for areas around the Airport to accommodate the aeronautical demand. The Preferred Alternative for Site J, Site K, and Site L is depicted in *Figure 4-23*. The Preferred Alternative for Site M and Site N is depicted in *Figure 4-24*. The Preferred Alternative for the Westside is depicted in *Figure 4-25*. These alternatives represent the full build-out to accommodate the PAL 3 demand and after the realignment of Taxiway A to meet airfield standards. However, a phased approach is recommended to develop the infrastructure based on demand.

In PAL 1, the Preferred Development Plan includes constructing new T-hangars to the west and east of Site T. These new T-hangars would help accommodate the existing and near-term demand for T-hangars. In PAL 1 and PAL 2, Site J and Site K are recommended to be converted to landside vehicle parking to address that immediate need. The existing Site J and Site K tenants would be relocated to the new T-hangars on the Westside.

In PAL 2, the Westside apron would be partially built-out to accommodate the forecast demand after Runway 7-25 is decommissioned and demolished. In PAL 3, the full build-out of the Westside apron would be needed to accommodate the forecast demand. Additionally, the Preferred Development Plan recommends Site J, Site K, and Site L be redeveloped to accommodate aeronautical development in consideration of the realigned Taxiway A.

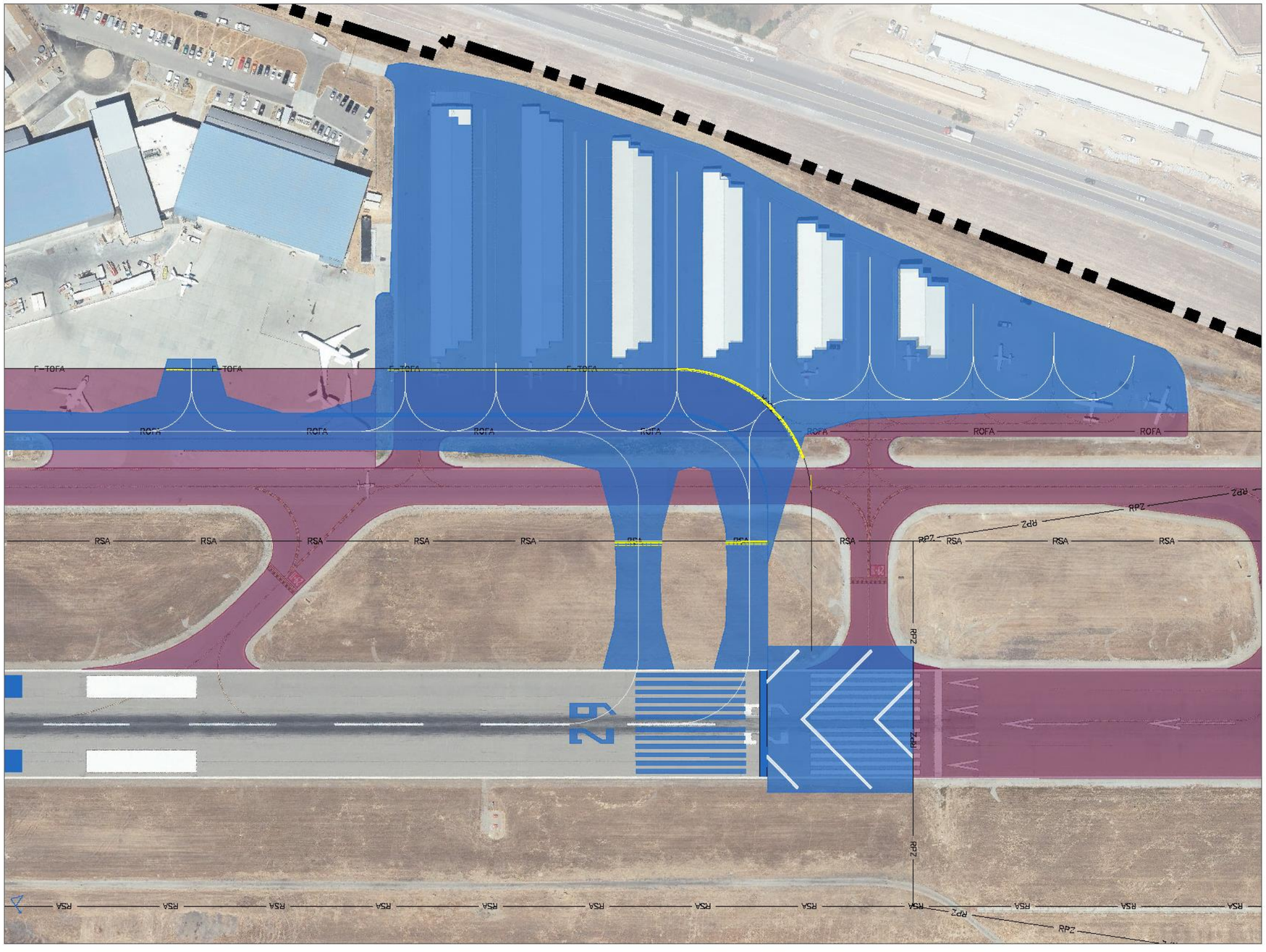
FIGURE 4-23 PREFERRED GENERAL AVIATION, FBO/MRO, AIR CARGO ALTERNATIVE – SITES J, K, L

Legend

- New Airfield Pavement
- New Building
- Impacted Facility
- Existing Airport Property Boundary

100' 50' 0' 100'

FIGURE 4-24 PREFERRED GENERAL AVIATION, FBO/MRO, AIR CARGO ALTERNATIVE – SITES M, N



Legend

- *New Airfield Pavement*
- *Impacted Facility*
- *Existing Airport Property Boundary*

N

150' 75' 0' 150'

FIGURE 4-25 PREFERRED GENERAL AVIATION, FBO/MRO, AIR CARGO ALTERNATIVE – WEST SIDE

Legend

- *New Airfield Pavement*
- *New Landside Pavement*
- *New Building*
- *Impacted Facility*
- *Existing Airport Property Boundary*

300' 150' 0' 300'

4.5.2 Airport Administration Building

Airport staff offices are currently in two locations including the terminal building and the former ACI hangar. There is a need to consolidate airport staff (maintenance, operations, and management) into a single facility to facilitate a more cohesive and efficient working environment.

The building would need to accommodate higher future staffing levels. The Airport employee headcount was 28 at the time the analysis was completed. The analysis assumed that the future Airport employee headcount would be 40 based on conversations with Airport leadership. This increased headcount metric was key to estimate future building size requirements. The required building size relied on the future staffing levels and was calculated for three functional areas:

- Vehicle bay size for maintenance and operations staff
- Shop space for maintenance staff
- Office space for all staff

The required vehicle bay count and space allocation is 4,100 square feet as described in *Chapter 3, Facility Requirements*. The analysis of vehicle needs results in an ideal future vehicle bay dimensions of 40 feet long by 17 feet wide. The shop space requirement is calculated at 3,900 square feet to accommodate the future demand for maintenance operations. The office space requirement is calculated at 7,600 square feet to accommodate the future demand staffing headcount.

Neither the existing location, the terminal building nor the old ACI hangar, has sufficient space to be expanded to accommodate the consolidated staff. The most viable alternative is to construct a new facility to accommodate airport staff. The building needs to be located adjacent to the airfield to support efficient airfield access for operations and maintenance personnel. The site of the old terminal building was selected because it is airfield adjacent but the terrain in that area makes the site challenging to accommodate aeronautical development, which makes it ideal for a new airport administration building.

The goal for the building to also include space for a new restaurant to replace the function of the Spirit of San Luis restaurant that would be demolished to enable the realignment of Taxiway A. This helps the Airport generate nonaeronautical revenue and support revenue diversification and maintain community goodwill.

The Preferred Administrative Building Alternative is to construct a multi-level airport administration building at the site of the former terminal. The ground floor of the building would be at apron level. The ground level would include vehicle garages and workshop space, as depicted in *Figure 4-26*. It would provide airfield vehicle access for operations staff and maintenance personnel. The main level of the building would be at the existing parking lot elevation and would have office space, as depicted in *Figure 4-27*. The upper level of the building may include space to accommodate a replacement restaurant and viewing area, as depicted in *Figure 4-28*.

FIGURE 4-26
PREFERRED ADMINISTRATIVE BUILDING ALTERNATIVE – CONCEPTUAL GROUND LEVEL

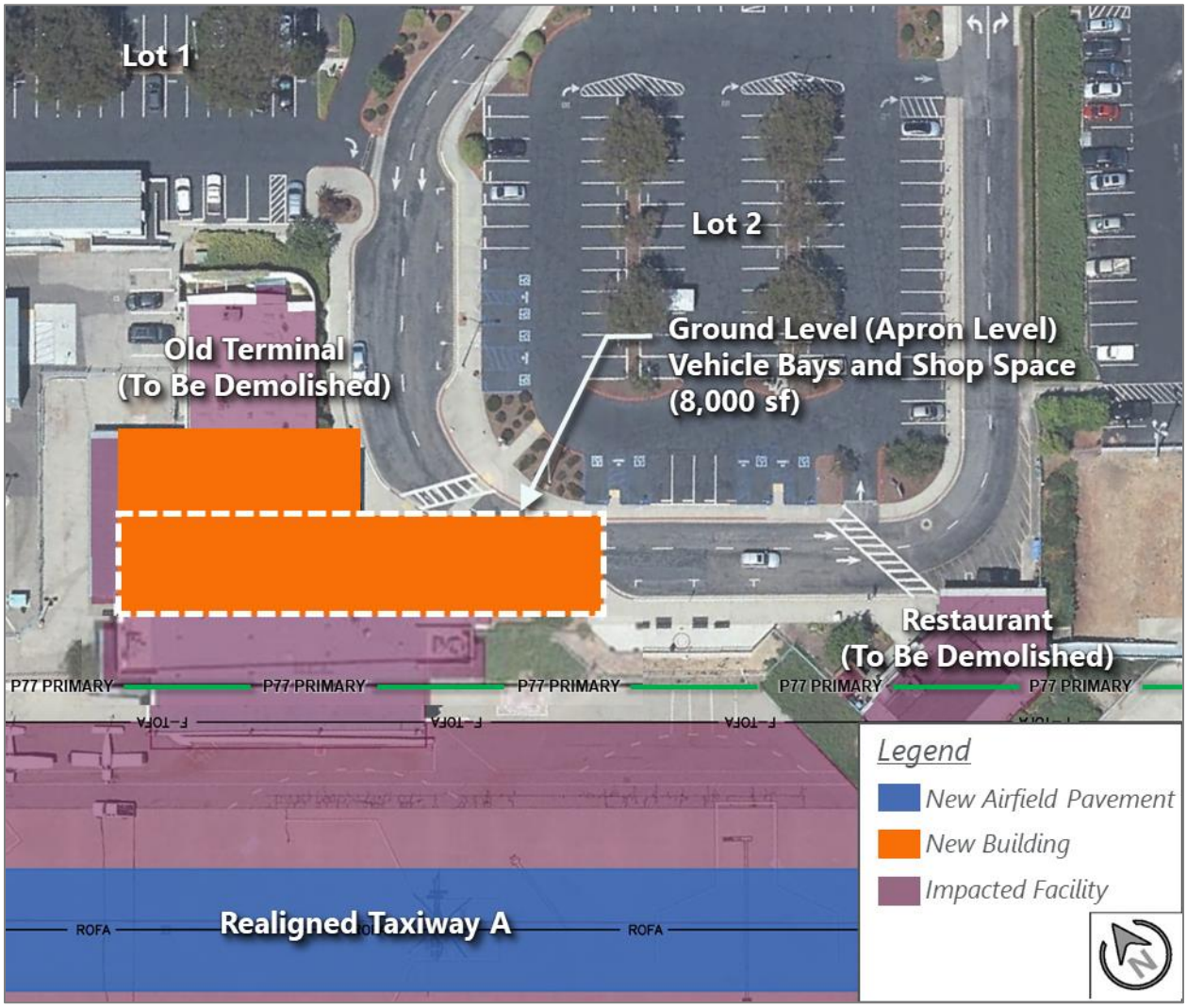


FIGURE 4-27
PREFERRED ADMINISTRATIVE BUILDING ALTERNATIVE – CONCEPTUAL 2ND LEVEL

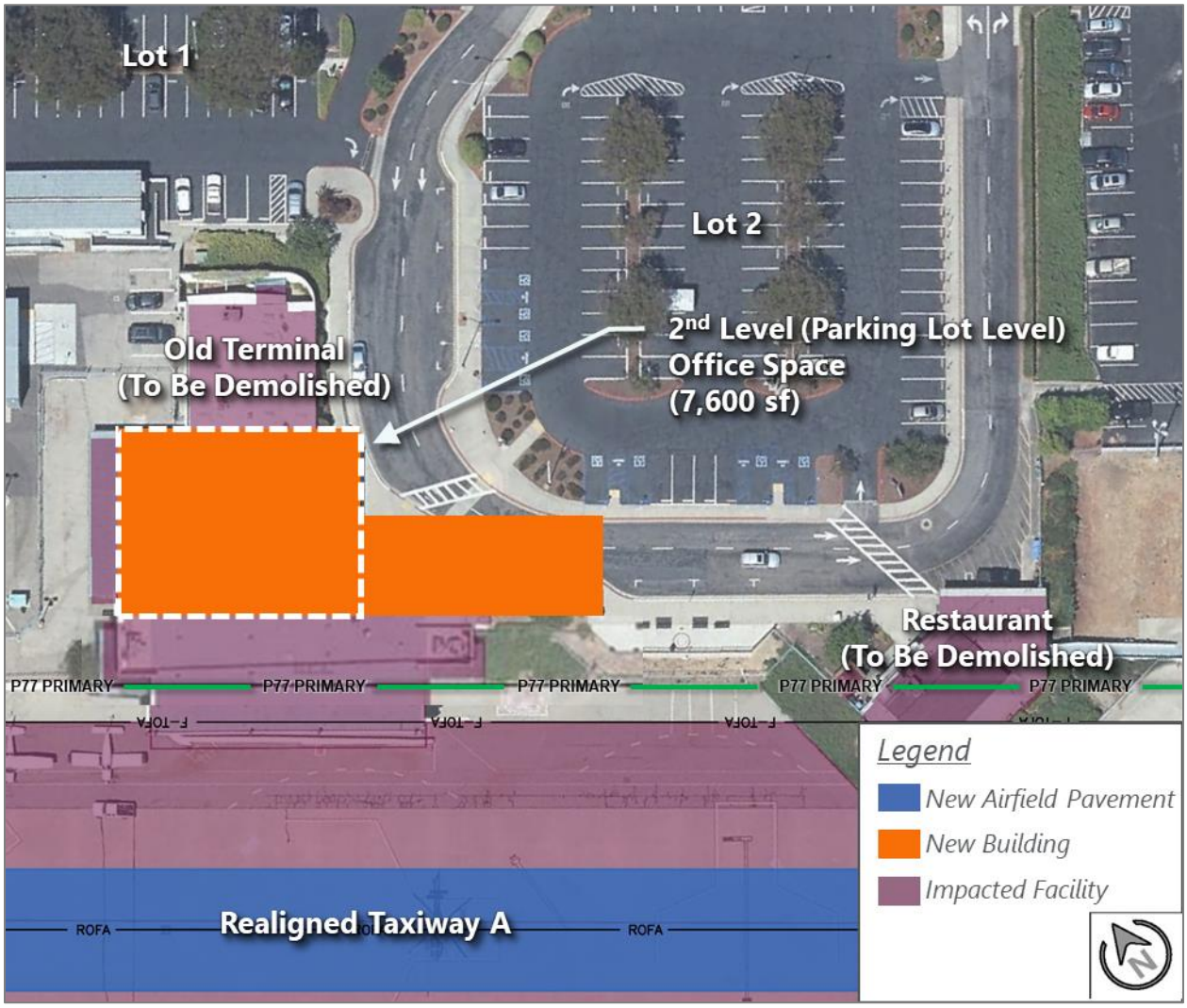
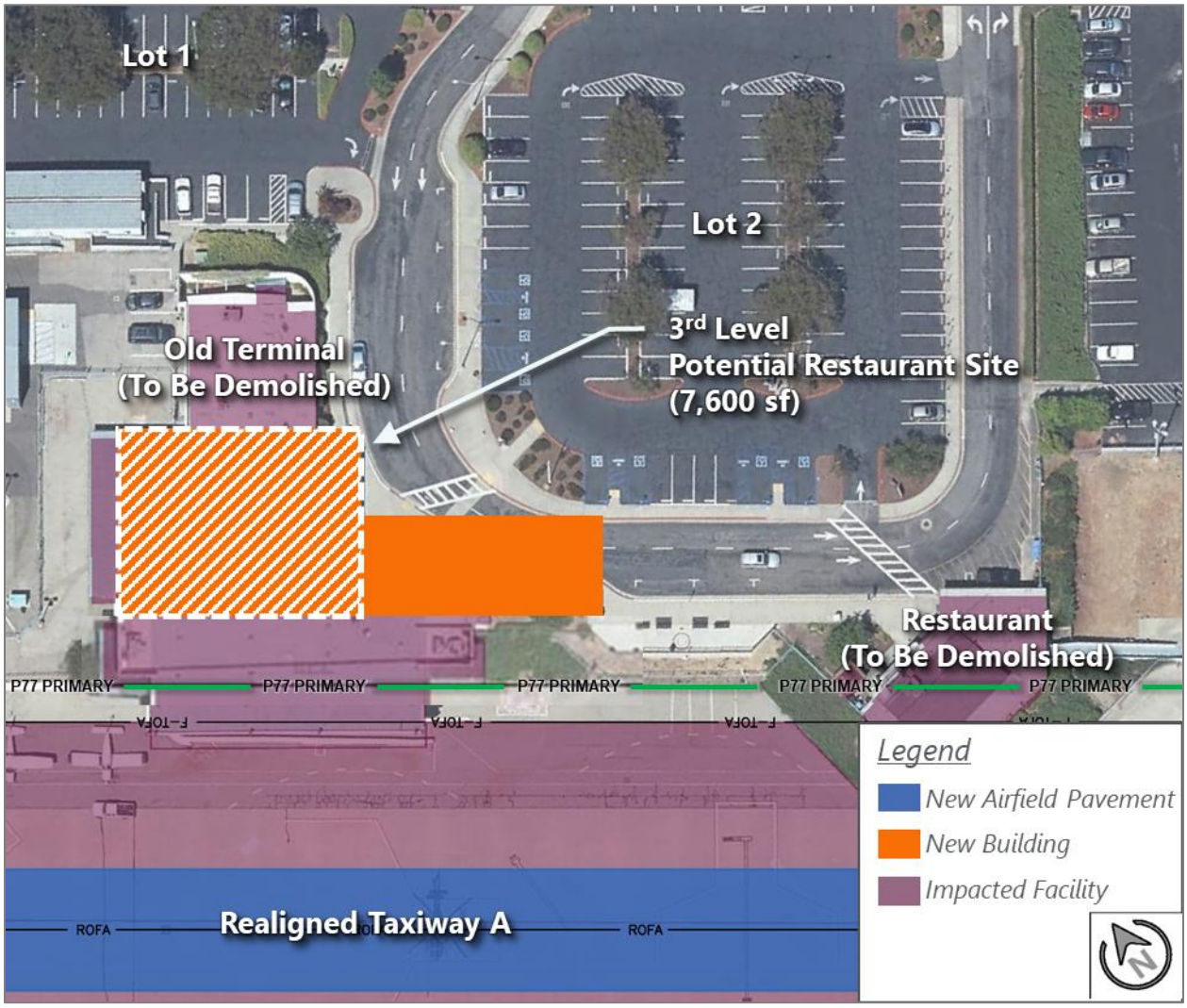


FIGURE 4-28
PREFERRED ADMINISTRATIVE BUILDING ALTERNATIVE – CONCEPTUAL 3RD LEVEL



4.5.3 Airfield Electrical Vault

The airfield electrical vault requires improvements to enhance electrical shielding and accommodate additional electrical equipment. Expanding the vault in-place is not a viable alternative. Constructing a new airfield electrical vault is required to accommodate this demand.

The recommended site for the new electrical vault is adjacent to the current site of the Spirit of San Luis restaurant and Airport employee parking. The site is depicted in *Figure 4-29*.

FIGURE 4-29
PREFERRED AIRFIELD ELECTRICAL VAULT RELOCATION SITE

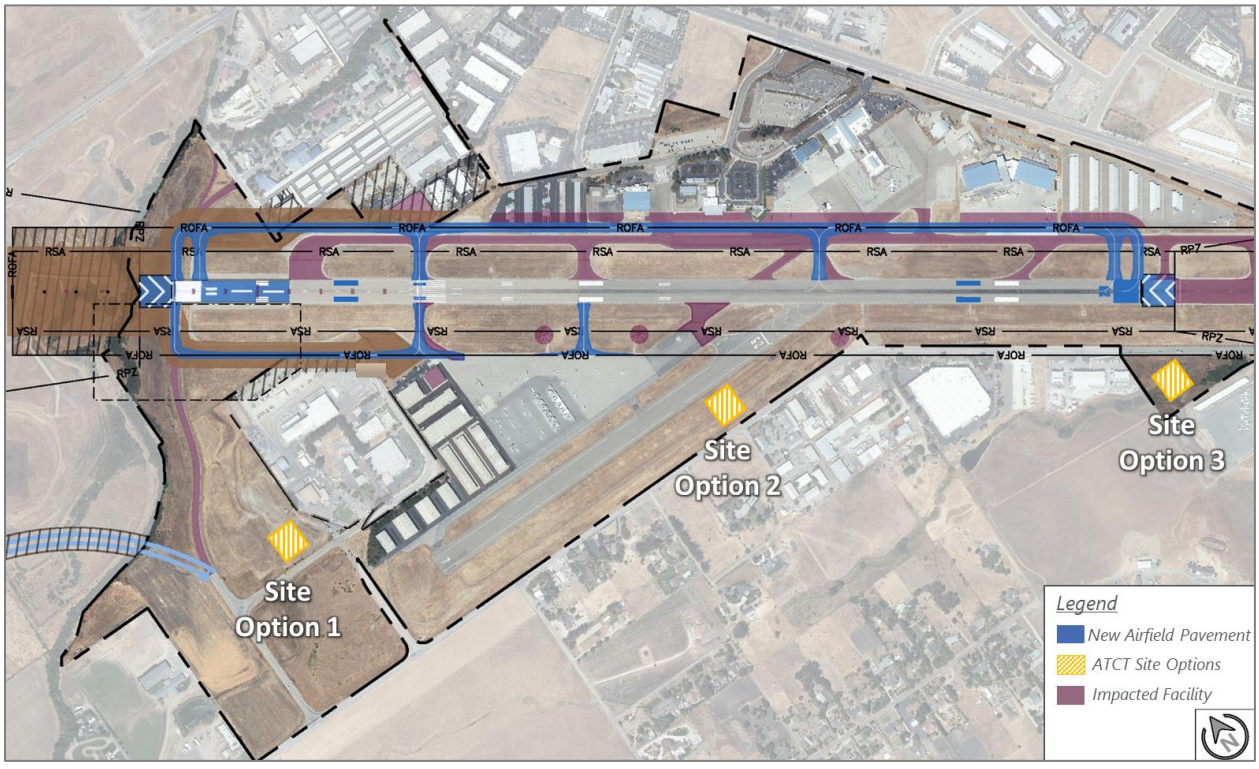
4.5.4 Airport Traffic Control Tower

The existing Airport Traffic Control Tower (ATCT) has line of sight issues in the immediate vicinity around the base of the tower given its location within an aircraft apron. Additionally, its location within an aircraft apron and adjacent to the passenger terminal constrains aircraft pushback and aircraft movement. Further, reconfiguration of the passenger terminal apron to accommodate an ADG-III taxilane on the west side of the terminal impacts the base building of the ATCT. Therefore, relocation of the ATCT and demolition of the existing ATCT building is required to meet forecast passenger demand.

Three potential sites for relocation were identified as part of the Master Plan alternatives process. Site 1 is located north of Old Santa Fe Road in the area west of the off-airport commercial development. Site 2 is located near the Runway 25 end. Site 3 is located on airport-owned land west of Buckley Road near the Runway 29 end.

Site Option 2 is recommended due to its central location along Runway 11-29 and its probable superior visibility of the air operations area relative to Sites 1 and 3. However, additional analysis is required after the completion of this Master Plan to confirm the most suitable location for the ATCT relocation site. This includes an ATCT Siting Study and FAA coordination, per FAA Order 6480.4. The three ATCT relocation site options are depicted in *Figure 4-30*.

FIGURE 4-30
AIRPORT TRAFFIC CONTROL TOWER RELOCATION SITE ALTERNATIVES



4.5.5 Aircraft Rescue and Firefighting

The facility requirements indicated that the need for the Aircraft Rescue and Firefighting (ARFF) facility was for vehicle parking, covered vehicle storage, and other equipment storage areas. The recommendation is for the ARFF facility to occupy and repurpose the airfield maintenance facility building for covered vehicle storage and other storage areas after the airfield maintenance function is relocated to the new Airport Administration Building.

4.5.6 Utilities

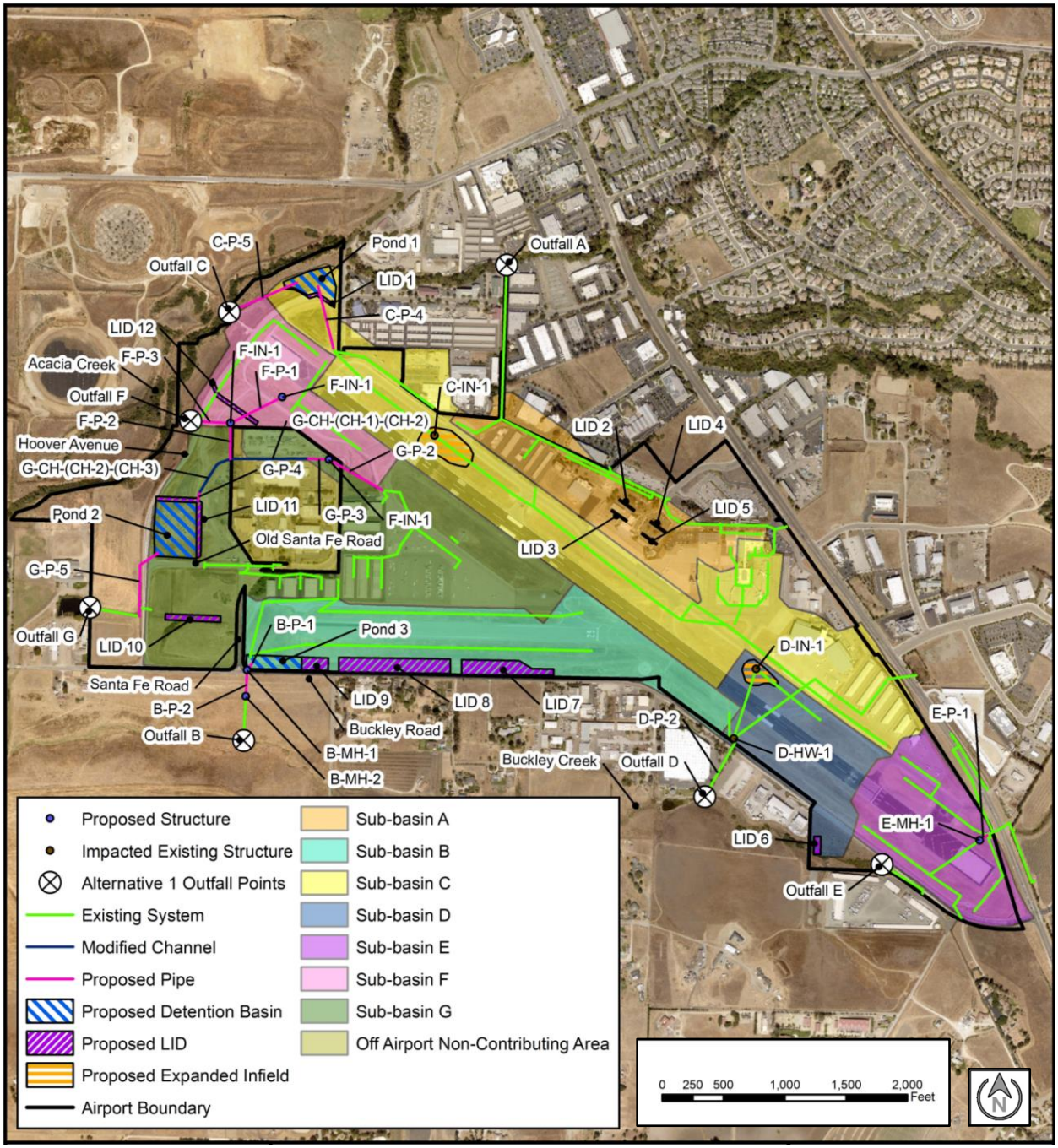
There is insufficient electric, water, and sanitary sewer utility coverage on the Westside, as described in *Chapter 3, Facility Requirement*. Site P, Site Q, Site R, Site T, and the Westside apron have varying levels of utility coverage which needs to be improved to support a higher level of service to general aviation lessees. The recommendation is for these utility connections to be enhanced when the general aviation facilities on the Westside are redeveloped and expanded.

The 2023 Airport Stormwater Master Plan identified and evaluated solutions for enhancing the existing stormwater systems to meet the current demand and accommodate the proposed changes recommended in this Master Plan. The Preferred Stormwater Management Alternative includes the following elements:

- Installation of three new detention ponds (Ponds 1, 2, and 3)
- New pipes and structures to convey runoff to and from future ponds
- Modifications to existing pipes and channels
- Various locations for potential solutions to meet the California Low Impact Development (LID) requirements.

Potential LID solutions include bioswales, vegetated filter strips, and detention ponds. Pond 1 is in the northwest corner of the Airport's property. Pond 2 is located northeast of the intersection of Hoover Avenue and Old Santa Fe Road. Pond 3 is located northeast of the intersection of Santa Fe Road and Buckley Road. The Preferred Stormwater Management Alternative from the Stormwater Master Plan is depicted in *Figure 4-31*.

FIGURE 4-31
PREFERRED STORMWATER MANAGEMENT ALTERNATIVE

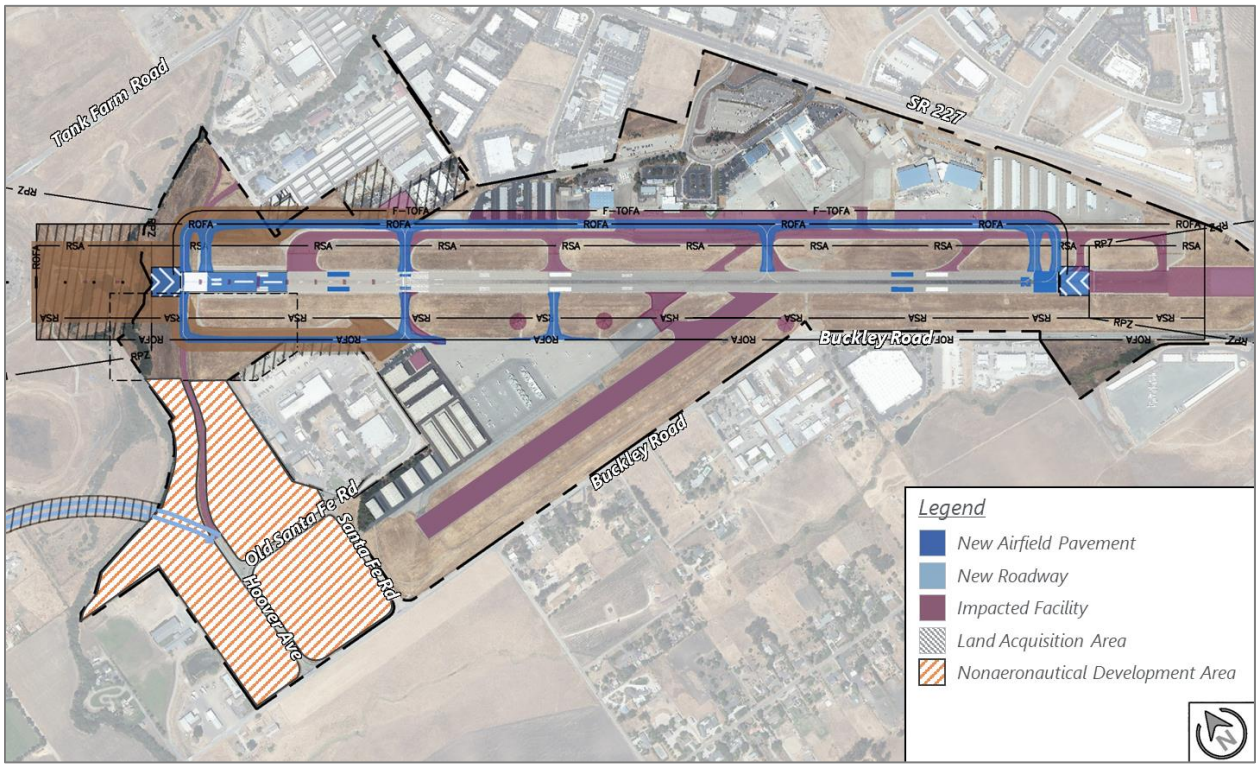


4.5.7 Nonaeronautical Development

On-airport nonaeronautical development enhances the Airport's ability to maintain its obligation of financial self-sufficiency by leasing undeveloped land. It also diversifies the Airport's revenue streams to allow the Airport to be more financially resilient.

The Westside area is best suited to accommodate nonaeronautical development. On-airport areas north of Buckley Road and west of Santa Fe Road are best suited for nonaeronautical development because they do not have access to the airside and cannot otherwise be used for aeronautical development. The proposed nonaeronautical development areas are depicted in *Figure 4-32*.

FIGURE 4-32
NONAERONAUTICAL DEVELOPMENT AREA



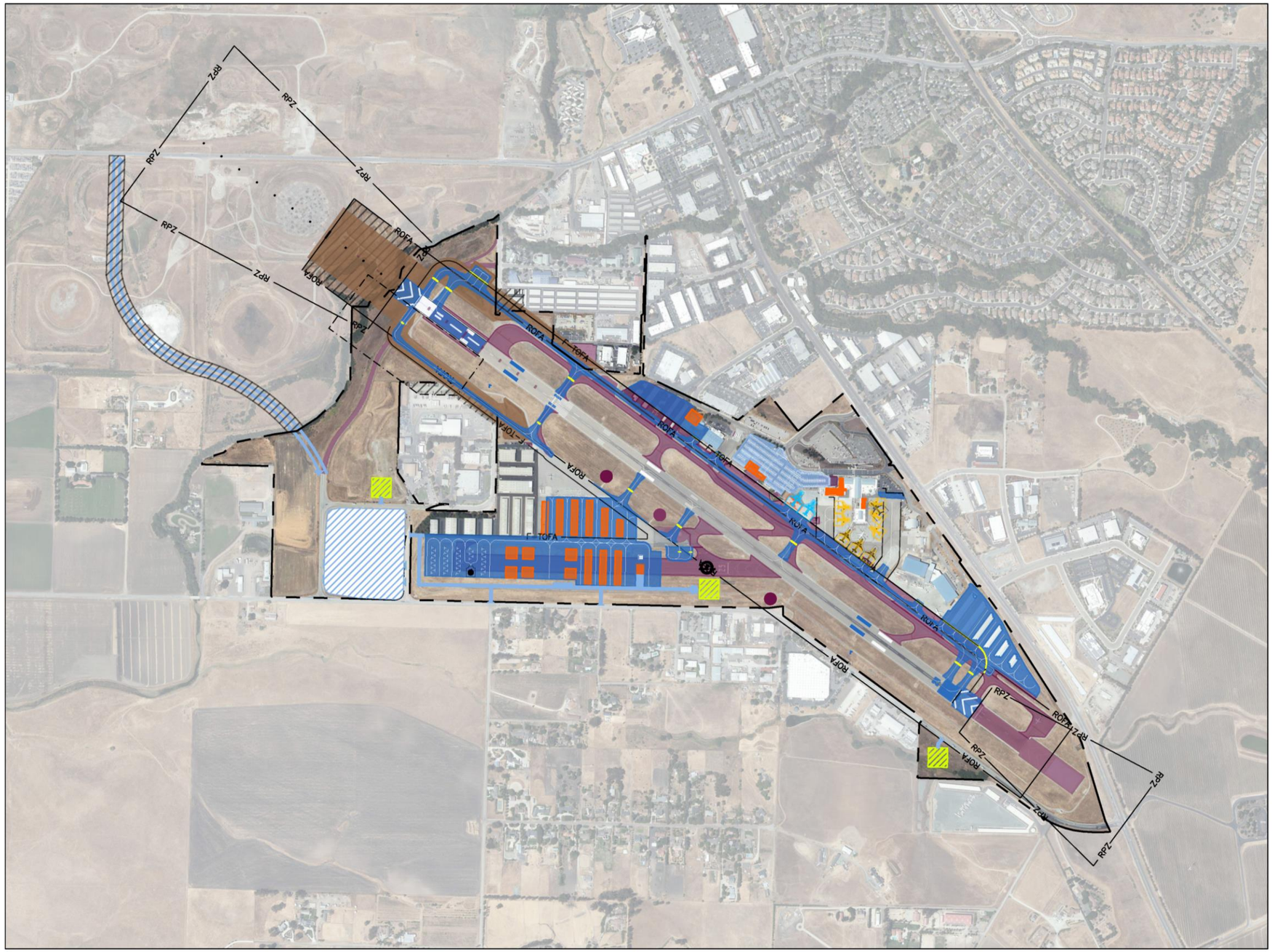
Implementing the Preferred Airfield Alternative results in impacts to off-airport landowners. Fair market compensation would be provided including business relocation costs as deemed appropriate. The Airport would seek to purchase impacted property at fair market value and/or by leasing Airport land to affected landowners such that replacement facilities can be constructed.

Santa Fe Square, located north of Buckley Road and south of Old Santa Fe Road, was identified as a suitable side to accommodate nonaeronautical industrial development that needs to be relocated from impacted off-airport land areas to enable the realignment of Taxiway A. Santa Fe Square was also identified to potentially accommodate landside development. However, nonaeronautical industrial development may be of higher and better use since it enables the implementation of the Preferred Airfield Alternative.

4.6 PREFERRED AIRPORT DEVELOPMENT PLAN

The preferred alternatives for each functional area are combined and integrated into a single Preferred Airport Development Plan which is depicted in *Figure 4-33*. The Preferred Airport Development Plan is the basis for the future conditions shown in the ALP drawing set. Rough order magnitude cost estimates and implementation phasing framework is outlined in *Chapter 5, Facilities Implementation Plan*.

FIGURE 4-33 PREFERRED AIRPORT DEVELOPMENT PLAN



Legend

- New Airfield Pavement
- New Landside Pavement
- New Building
- Extensive Earthwork
- Impacted Facility
- Relocated Glideslope Critical Area
- Land Acquisition
- Potential Nonaeronautical Development
- Existing Airport Property Boundary

N

1000' 500' 0' 1000'

APPENDIX A

2021 EMAS VERIFICATION OF FLEET PERFORMANCE REPORT

Verification of Fleet Performance Report

FOR SAN LUIS OBISPO COUNTY REGIONAL AIRPORT

PREPARED BY:
Sarah Ma, Ph.D.
October 28, 2021

SUSTAINABLY DESIGNED. ENGINEERED TO PROTECT.

Rev 01.1

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APPENDIX A: BACKGROUND OF RUNWAY SAFE A1
1. Advisory Circular A2
2. Design Process A2

ABBREVIATIONS

ARFF	Aircraft rescue and firefighting
EMAS	Engineered Material Arresting System
FAA	Federal Aviation Administration (US)
ICAO	International Civil Aviation Organization
MDOF	Multi-Degree-Of-Freedom
MLW	Maximum Landing Weight
MTOW	Maximum Take-Off Weight
RESA	Runway End Safety Area
RSA	Runway Safety Area

1. INTRODUCTION

San Luis Obispo County Regional Airport (SBP) McChesney Field is a civil airport near San Luis Obispo, California, United States. Three passenger airlines serve the airport with nonstop flights to eight cities: Dallas-Fort Worth, Denver, Los Angeles, Phoenix, Portland, San Diego, San Francisco, and Seattle.

The Engineered Material Arresting Systems (EMAS) discussed in this report and installed in July 2008 on each end of runway 11-29 are being evaluated for predicted aircraft performance specifically to consider new aircraft. The additional aircraft considered may presently or in the future operate at SBP. We have thus evaluated the ability of the present EMAS systems to maintain 70 knot overrun protection.

In cases where RWS's FAA approved computer model predicts that overrun performance for an individual aircraft drops below 70 knots we will also preliminarily determine what size EMAS may be required in the future when the present systems are retired on or around 2028 (20-year useful life). The following report summarizes the evaluation process and preliminary recommendations from Runway Safe.

Table 1. General airport information.

General airport information	
Airports full name	San Luis Obispo County Regional Airport
Location	San Luis Obispo, California, USA
GPS coordinates	35-14-14.2000N 120-38-33.4000W
Runway #1	11-29
Runway length #1	6,101ft
Runway width #1	150ft
Slope	towards RW 11 departure end (29 numbered end)
Elevation over sea level	212ft
IATA code	SBP
ICAO code	KSBP

Figure 1. Airport location overview.

2. SCOPE OF SERVICES

The EMASMAX beds discussed in this report are located at both ends of runway 11-29, see Figures 2-4.

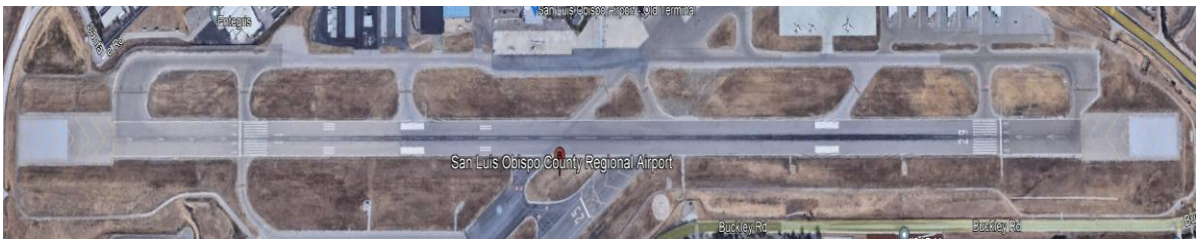


Figure 2. Overview of EMASMAX locations.

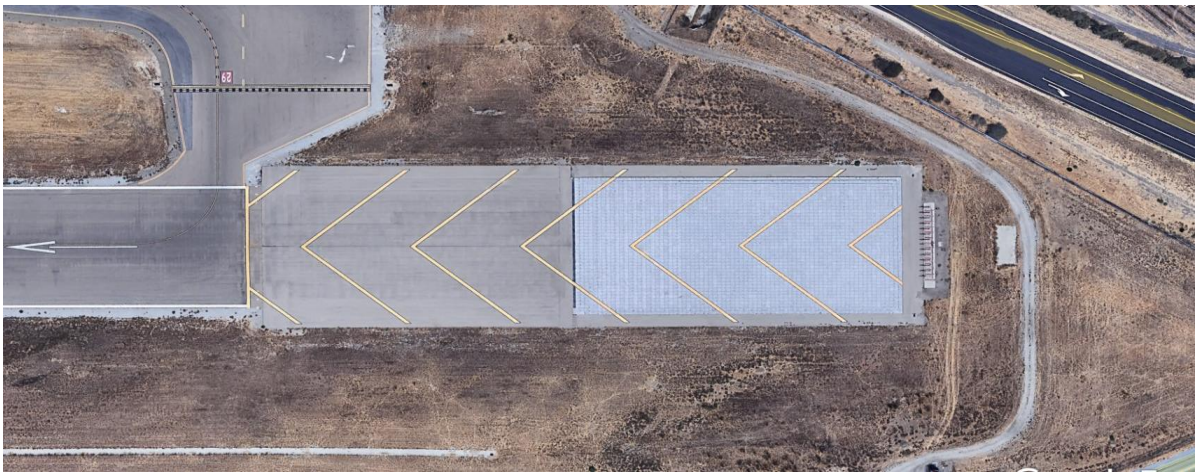


Figure 3. Close-up views of EMASMAX location on the 11-departure end.

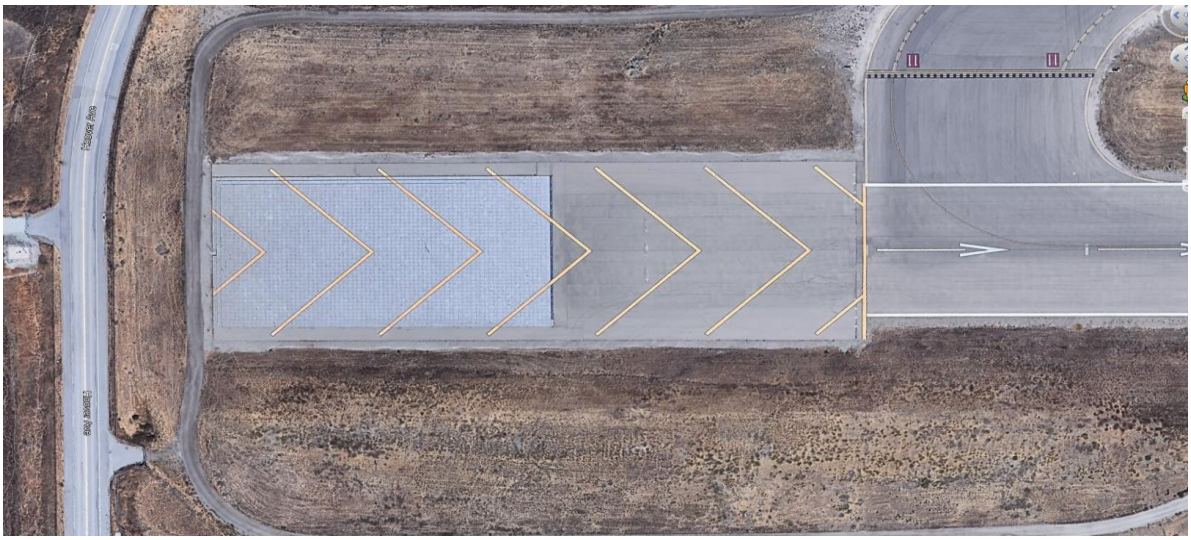


Figure 4 Close-up views of EMASMAX location on the 29-departure end.

3. AIRPORT SPECIFICATIONS

The FAA Advisory Circular 150/5220-22B requires “to the extent practicable, the EMAS shall be designed for the range of aircraft expected to use the runway.” The study considers aircraft operations (current & future) that were not present when systems were deployed 13 years ago (2008). With a twenty-year (20) operational life the two EMAS at each end of runway 11-29 have the potential to see these new aircraft operations.

Aircraft operational data and projections provided by the airport, and their prime consultant, were reviewed to determine a representative aircraft fleet mix for the evaluation within the currently installed EMAS systems. In instances where the new aircraft considered may not achieve predicted 70 knots overrun protection based on Runway Safe’s (RWS) computer model we shall also provide preliminary EMAS system sizing that may be considered in the future (EMAS replacement within 7-10 yrs.). Based on the forgoing, the aircraft being evaluated are the CRJ-900, E170-STD, E175-LR, E195-LR, A220-30. B737MAX7 & A320NEO.

In Table 2 a summary of the configuration fleet along with field adjusted maximum take-off weight (MTOW) and 80% of maximum landing weight (MLW) is presented. The 80% of MLW is modeled along with adjusted MTOW to show potential performance in landing situation, while MTOW is modeled to show a worst-case scenario from an aircraft weight aspect.

Table 2. Configuration Fleet Mix

Aircraft Model	MTOW [lb]	MLW [lb]	80% MLW [lb]	# Annual Operations
CRJ-900	79,500 (adj.)	73,500	54,800	1000+
ERJ-170STD	79,344 (adj.)	72,311	57,849	500+
ERJ-175LR	82,000 (adj.)	74,957	59,966	500+
ERJ-195LR	110,000 (adj.)	99,208	79,366	Mid-term future ops
A220-300 (CS100)	125,000 (adj.)	115,000	92,000	Mid-term future ops
B737-MAX-7	165,000 (adj.)	145,600	116,480	Long-term future ops
A320 NEO (WV055)	170,000 (adj.)	148,592	118,873	Long-term future ops

4. EMASMAX DESIGN

A typical block unit of a Runway Safe EMASMAX is provided in Figure 5. The EMASMAX bed consists of individual 4 ft x 4 ft (1.3m x 1.3m) cellular concrete blocks. Each EMASMAX block consists of a plastic top and bottom trays. There is a foam pad between each top tray and concrete block. The cellular concrete is cast directly into the bottom tray. The top tray has a scrim cloth molded into it. The scrim is used to adhere he top tray to the EMASMAX block itself. The blocks vary in height depending on the custom design for a specific RSA. All components in the Runway Safe EMASMAX bed are selected to produce a durable product that require minimal maintenance and maintains performance over the twenty-years life span.

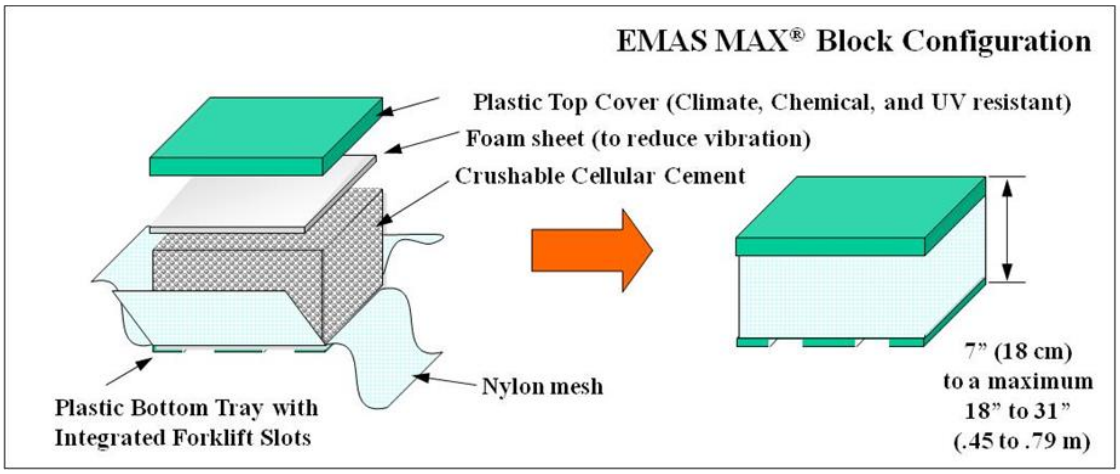
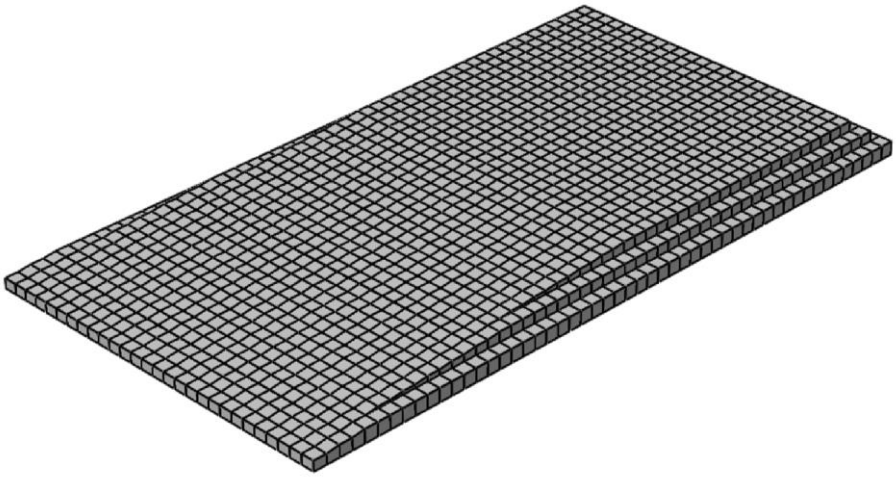


Figure 5 Runway Safe EMASMAX block unit

The performance area of the Runway Safe EMASMAX is assumed to be the same as the runway width. The side steps are part of the EMASMAX bed but are not considered part of the performance area and make the EMASMAX system wider than the runway. The basic geometry of the EMASMAX is provided in Figure 6. The EMASMAX must be constructed on a paved (un-grooved) base, which is able to support the occasional aircraft traffic (taxiway strength asphalt). It is Runway Safe's recommendation that the paved area be 10 feet wider on each side and 10 feet longer behind the EMASMAX bed to allow for vehicle traffic around the bed.



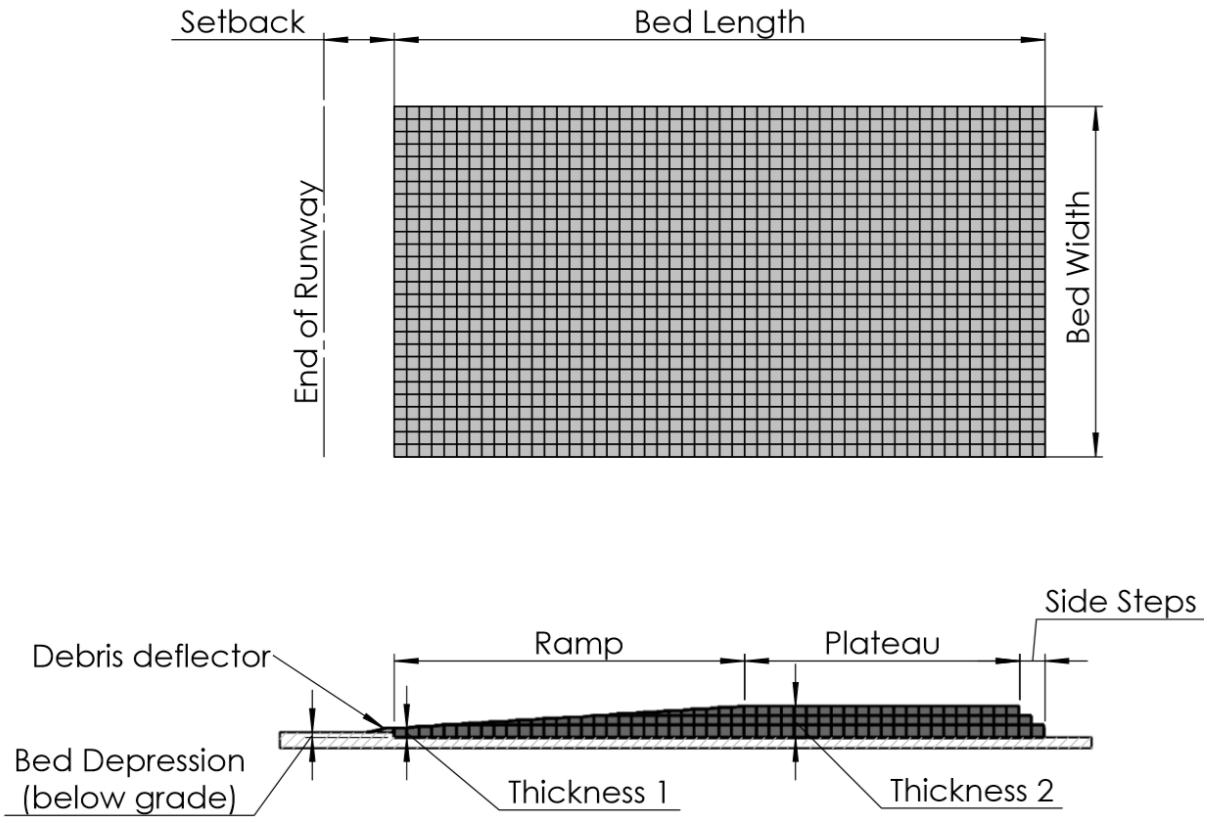


Figure 6 Runway safe EMASMAX basic geometry

4.1. EMASMAX geometry and overrun performance for RW 11-29

The configurations of the two EMASMAX systems, installed in 2008 at each end of RW 11/29, are presented in Tables 3 and 4. The performance of the two systems are presented in Tables 5 and 6, as predicted maximum runway exits speeds for the new, predicted aircraft fleet mix operating on the runway.

Table 3. Runway Safe EMASMAS geometry for Runway 11 Departure End.

Bed geometry	
RSA Length	600.00 ft
Setback	300.33 ft
EMASMAX bed strength	60- strength
RSA longitudinal slope (*)	Centerline Profile: RW 0.00% and RSA -1.00%
Bed Length	299.67 ft
Bed Width	170.10 ft
Ramp	97.17 ft
Plateau	202.50 ft
Thickness 1	5 in
Thickness 2	17 in

(*): Negative value for downhill slope, Positive value for uphill slope

Table 4 Runway Safe EMASMAX geometry for Runway 29 Departure End.

Bed geometry	
RSA Length	600.00 ft
Setback	288.18 ft
EMASMAX bed strength	60- strength
RSA longitudinal slope (*)	Centerline Profile: RW -0.80% and RSA -2.30%
Bed Length	311.82 ft
Bed Width	170.10 ft
Ramp	97.17 ft
Plateau	214.65 ft
Thickness 1	5 in
Thickness 2	17 in

(*): Negative value for downhill slope, Positive value for uphill slope

Table 5 Runway 11 and 29 Departure Ends EMASMAX performance summary for MTOW.

Aircraft Model	**MTOW [lb.]**	**Performance**	
		Design Case [knots]	**Typical Case [knots]**
CRJ-900	79,500	70+	70+
ERJ-170	79,344	70+	70+
ERJ-175LR	82,000	70+	70+
ERJ-195-E2	110,000	70+	70+
A220-300	125,000	70+	70+
B737-MAX-7	165,000	70+	70+
A320 NEO	170,000	70+	70+

Table 6. Runway 11 & 29 Departure End EMASMAX performance summary for 80% of MLW.

Aircraft Model	**80% MLW [lb.]**	**Performance**	
		Design Case [knots]	**Typical Case [knots]**
CRJ-900	54,800	70+	70+
ERJ-170	57,849	70+	70+
ERJ-175LR	59,966	70+	70+
ERJ-195-E2	79,366	70+	70+
A220-300	92,000	70+	70+
B737-MAX-7	116,480	70+	70+
A320 NEO	118,873	70+	70+

Design Case: using 0.25 braking coefficient and no reverse thrust (μ = 0.25; No reverse thrust)
Typical Case: using 0.35 braking coefficient and full reverse thrust (μ = 0.35; Full reverse thrust)

5. CONCLUSION AND SUMMARY

The EMASMAX bed installed in 2008 at Runway 11 departure end is 299.67 feet long and 170.10 feet wide, with a setback of 300.33 feet. The other EMASMAX bed, also installed in 2008 at RW 29 departure end is 311.82 feet long and 170.10 feet wide, with a setback of 288.18 feet.

Both EMAS configurations are large enough to support an EMAS with 70 knots predicted stopping power for the new aircraft fleet mix operating at Maximum Take Off Weight and 80% of Maximum Landing Weight (adjusted if necessary) in accordance with FAA Order 5200.9.

APPENDIX A: BACKGROUND OF RUNWAY SAFE

The Federal Aviation Administration (FAA) in the United States requires that commercial service airports, regulated under Code of Federal Regulations (CFR) 14 Part 139 safety rules, have a standard Runway Safety Area (RSA) where practicable. A standard RSA typically extends 1,000 ft (304.8 m) beyond each end and 250 ft (76.2 m) on each side of the runway. The FAA has this requirement to reduce the risk of damage to airplanes in the event of overruns, undershoots, or veers off the side of the runway, as it provides a safe area for stopping the aircraft.

The International Civil Aviation Organization (ICAO) states in ICAO Annex 14 Aerodromes that a runway end safety area of at least 90 m (295 ft) needs to be present. However, the recommendation in ICAO Annex 14 Aerodromes is at least 240 m (787 ft) or 120 m (394 ft) depending on the runway code. Together with the RESA requirements and recommendations ICAO also require a 60 m strip at the end of the runway given a total length of 150 m (required) and 300 m or 180 m (recommended) dependent on runway code.

In cases where available space does not permit a long enough overrun area at the end of the runway, both FAA and ICAO may approve installation of an Engineered Material Arresting System (EMAS), as an alternative means of complying with the requirements, to help decelerate and stop an aircraft that overruns the runway. Runway Safe's EMAS product uses a bed of crushable material with reliable and predictable deformation characteristics placed at the end of a runway. When an aircraft enters the bed, the tires of the aircraft will sink into the lightweight material. The aircraft is then decelerated as it crushes and rolls through the material see Figure A- 1.

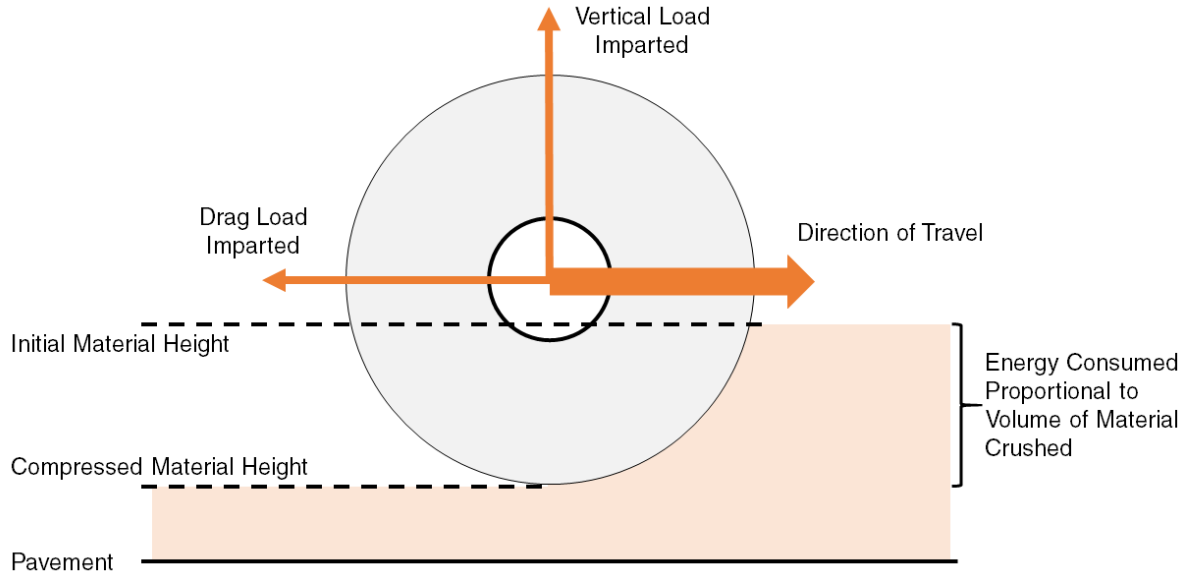


Figure A- 1. Energy absorption through crushing of EMASMAX material.

In 1994, ESCO (Engineered Arresting Systems Corporation) joined with the FAA under a Cooperative Research and Development Agreement (CRDA) to develop an arresting capability for the commercial aviation community. From 1994 to 1996, the FAA conducted a series of tests with ESCO's EMAS and, subsequently, approved the system for use at commercial airports throughout the United States. In early 2020 the sale of the ESCO's EMASMAX product line to Runway Safe Group was completed. With this acquisition Runway Safe becomes the industry leader in commercial aircraft arresting systems.

1. Advisory Circular

Advisory Circular AC 150/5220-22B, Engineered Materials Arresting Systems (EMAS) for Aircraft Overruns details the requirements for the planning, design, installation, and maintenance of EMAS in non-standard runway safety areas (RSA). It should be noted that the Advisory Circular AC 150/5220-22B is an update of the older Advisory Circular AC 150/5220-22A with minor changes. Included in this document are guidelines for producing an FAA-acceptable aircraft arrestor system for air carrier aircraft. The Runway Safe EMASMAX as designed and detailed meets all requirements in the AC 150/5220-22B document including all safety and stoppage requirements as well as strength and serviceability requirements for environmental loads and jet-blast.

2. Design Process

Runway Safe EMASMAX designs are developed considering two primary demands: (1) to bring aircraft to a stop safely, (2) to meet environmental and operational requirements (jet blast, weather, etc.). Our qualification to meet these two demands are presented in the following.

Runway Safe Group utilizes an FAA-validated design method to predict the performance of the EMAS. The basis of our design method is our computer simulation program, which is an FAA-accepted model. It involves complex computer analysis of over 100 variables for each operating aircraft. The EMASMAX bed configuration is the optimized design solution, to provide the best performance for the client airport's reported mix of aircraft in use. The design optimization process is supported by our FAA approved computer model.

In conducting its modeling, Runway Safe Group relies heavily upon the airport client to provide accurate and complete information concerning the range of aircraft that must be considered and the aircraft's characteristics and makes reasonable efforts to obtain additional information about relevant aircraft characteristics directly from the manufacturers. However, when less than complete information concerning relevant aircraft characteristics is made available, Runway Safe Group may, after discussion with the client airport, eliminate specific aircraft from the analysis or use available data for comparable aircraft for purposes of its modeling.

The modeling process considers all design aircraft operating at their maximum takeoff weight (MTOW) as well as 80% of the maximum landing weight (MLW). These cases are considered to capture maximum weight as well as a more typical expected weight during an overrun.

In addition, two distinct deceleration cases are considered at each weight. The most conservative design case assumes no reverse thrust and poor braking with a 0.25 braking friction coefficient. A second and more typical scenario assumes full reverse thrust and braking on wet pavement with a 0.35 braking friction coefficient. The results from the most conservative "design case" are used to determine recommended EMASMAX bed length. However, it is useful to see performances under both cases for certain aircraft types.

In Runway Safe Group's planning and design efforts, we also considered 3 options of EMASMAX block strength and selected the best option for performance. EMASMAX provides 50, 60 and 80 strength systems to meet unique needs and conditions of airports. 50, 60 and 80 strengths have better performance in arresting light-, medium- and heavy-weight aircrafts, respectively. Each EMASMAX block we made was tested on material strength, to ensure its quality meet the material strength requirement.

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SLO County Airport
Master Plan
Chapter 5 - Facilities Implementation Plan

RS&H

Chapter 5
Facilities Implementation Plan

DRAFT

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San Luis Obispo, California

RS&H No.: 2260015010

Prepared by RS&H, Inc. at the direction of the County of San Luis Obispo

RS&H

PREPARATION

"The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws."

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CHAPTER 5

FACILITIES IMPLEMENTATION PLAN

5.1 INTRODUCTION

This purpose of this chapter is to provide a detailed description of the Facilities Implementation Plan for the SLO County Airport (SBP/Airport). The chapter describes the proposed projects in the 20-Year Airport Master Plan Update development program, provides estimates for their cost, and identifies a timeline for implementation.

5.2 DEVELOPMENT PLAN CONSIDERATIONS

5.2.1 Program Planning

Airport development needs were documented in *Chapter 3 – Facility Requirements*. To address these needs, several alternatives were selected and planned for the 20-year planning horizon (2020-2039) and beyond. Each project was then prioritized by triggering points, existing conditions, estimated costs and resources for funding, as well as the project's overall magnitude. The projects were then defined in *Chapter 4 – Alternatives*, which identifies those projects that are planned over the 20-year Master Plan Update planning horizon of 2039.

As a part of the FAA's National Plan of Integrated Airport Systems (NPIAS), SBP is required to provide an updated Airport Capital Improvement Program (CIP) annually. The FAA uses the NPIAS to identify the nearly 3,400 airports that are important to the national air transportation system. By being a part of the NPIAS, airports such as SBP are eligible to obtain federal funding through grants in the Airport Improvement Program (AIP)[1]. As a sponsor (or recipient of a grant), an airport must provide documentation relating to capital projects that will be used to develop and improve an airport in the areas of Safety, Capacity, and Noise Compatibility.

An airport sponsor is obligated to legally and financially abide by FAA's grant assurances[2] and any other obligations contained in a project application/grant agreement. Once the master plan improvement program is identified by the master plan, projects will be incorporated into future iterations of an airport's CIP with a focus on projects identified in the first five years of the master plan or master plan update time frame.

Typically, Master Plan Improvement Programs are identified in five-year increments for the Base Case forecast. For this program, those increments are 0–10-year program, 11-15-year program, and 16–20-year program. In general, this corresponds to the time frames: 2020-2029, 2030-2034, and 2035-2039. However, projects are demand and need driven and not tied to a particular year.

It is important to plan the design and construction of projects around activity *as it occurs*, throughout the planning horizon because the actual amount of airport activity (i.e., enplanements, operations) will vary from the activity presented in the forecast. Using planning activity levels (PALs) instead of years is one mechanism for accomplishing this. Continuous monitoring of the annual activity provides a benchmark

[1] In order to maintain an accurate amount of funding needed through the AIP, the FAA provides Congress with 5-year estimates of eligible development projects every two years (FAA, 2018).
[2] Grant assurances ensure an airport is operating in a safe and serviceable condition. FAA, 2018

year over year to compare the actual activity to the forecast activity. Some of the factors which may affect the type and volume of growth could include:

- Change in aircraft fleet mix
- Closure or addition of large general aviation and/or maintenance facilities
- Economic growth in the region resulting in increased passenger activity and/or new air service

The Base Case forecast represents PAL 1, 2, and 3. The High Range forecast represents PAL 4 and 5. *Table 5-1* identifies the forecasts by PAL and their implementation phase.

TABLE 5-1
MASTER PLAN IMPROVEMENT PROJECT PHASES

PAL Designation	Implementation Plan Designation	Annual Enplanements	Annual Operations
PAL 1	Interim – Phase I	Up to 354,000	Up to 82,000
PAL 2	Interim – Phase II	Up to 388,000	Up to 84,000
PAL 3, PAL 4, PAL 5	Future	Up to 579,000	Up to 85,000

For projects that require environmental entitlement, it is assumed that California Environmental Quality Act (CEQA) and FAA National Environmental Policy Act (NEPA) entitlement documentation would be conducted prior to design of a project. The implementation plan for SBP presented in this document assumes that programmatic CEQA and NEPA entitlement will occur for the projects associated with the Runway 7-25 shift and Taxiway A realignment. The implementation plan also assumes that project-level environmental entitlement will apply for all other projects. The cost for project-level environmental entitlement is included in each project total and a general cost of the programmatic environmental entitlement is included as a separate project in the implementation plan.

Each Master Plan Improvement project for SBP is identified with a project number for reference in this document. Both the capital projects and environmental projects listed on the tables throughout this chapter display the project name, implementation phase, and associated costs.

The most important project for implementation at SBP is the resolution of the nonstandard conditions related to Runway 11-29 and Taxiway A. A key project that enables those facility improvements is the decommissioning of Runway 7-25. The closure of Runway 7-25 is necessary for the Airport to meet the objectives of the Master Plan development program. Other important development projects such as the westside apron expansion and hangar construction, airport traffic control tower (ATCT) relocation, and terminal apron reconfiguration cannot be constructed until Runway 7-25 has been decommissioned.

5.2.2 Implementation Process

The following is a typical implementation process for each recommended Master Plan Improvement project at SBP. Several steps are necessary, beginning well in advance of when the facility is needed. This time in advance of when the facility is needed is necessary to coordinate the funding, environmental

documentation, and design, as well as to complete construction. The typical sequence of events necessary to complete an airport project at SBP per FAA guidance are listed below.

Initial Steps Prior To Construction

- Identify the project in the approved Airport Layout Plan
- Validate project justification and funding eligibility
- Determine probable level of CEQA environmental review and NEPA environmental review that is required – note that planning may need to begin earlier
- Coordinate with federal, state, local officials, and airport users

Next Steps Prior To Construction

- Identify funding sources
- Determine if a Benefit/Cost Analysis is necessary
- Determine if a reimbursable agreement is necessary for affected navigational aids (NAVAIDs)

Other Steps Prior To Construction

- Refine project scope
- Solicit professional design services
- Prepare preliminary design, site plan, and cost estimates
- If necessary, initiate reimbursable agreements and coordinate any NAVAID requirements with FAA
- Submit a request for airspace review of projects under non-rulemaking authority (NRA)
- Begin Benefit/Cost Analysis if determined to be necessary
- If necessary, submit environmental assessment documentation for FAA review, approval, and funding
- Submit categorical exclusion documentation for FAA review, approval, and funding
- Coordinate with local officials and airport users on refined project scope and schedule

Final Steps Prior To Construction

- Complete airspace study
- Complete any additional environmental documentation, if necessary
- Complete 90 percent design, plans, and specifications after FAA environmental findings are made
- Execute reimbursable agreements to support NAVAIDs, if relevant
- Prepare and coordinate submittal of Construction Safety Phasing Plan to FAA, as appropriate
- Secure all necessary funding
- Secure environmental and other necessary permits
- Submit Benefit/Cost Analysis, as appropriate

- Coordinate Safety Risk Management Panel with FAA-Air Traffic Organization (ATO) or FAA-Office of Airports (ARP), as necessary
- Finalize construction bidding, grant application, and acceptance schedules

Prior to Construction

- Complete 100 percent design, plans, and specifications
- Complete CEQA and NEPA entitlement documentation for current fiscal year, if appropriate
- Advertise and secure bids according to acceptance schedules
- Accept federal grants
- Complete FAA Quarterly Reports as required for all Federally funded projects
- Issue Notice-to-Proceed
- Coordinate with local officials and airport users to facilitate project construction and provide progress and schedule updates as necessary
- Monitor environmental mitigation requirements during construction, as necessary

Post Construction

- Submit final report and close any accepted federal grants
- Complete necessary monitoring of environmental mitigation measures
- Update Airport Layout Plan drawing set

5.2.3 Environmental Entitlement Considerations

Analyzing the potential environmental effects for projects within each development phase is a deliberative process and will need to be completed in advance of design and construction to allow for project completion in accordance with applicable federal, state, and local rules and regulations. Once the Airport has completed the project planning process, the Airport would need to determine what projects would require environmental analysis under CEQA and NEPA.

A project requires CEQA review if the project results in a physical change to the environment.

There are three general levels of CEQA review: Categorical Exemption (CE), Initial Study (IS), or Environmental Impact Report (EIR) and various subgroups with each.

A project requires NEPA review if:

1. The project results in a change to the Airport Layout Plan (ALP), or
2. The project uses federal funding

There are three general levels of NEPA review: Categorical Exclusion (CATEX), Environmental Assessment (EA), or Environmental Impact Statement (EIS) and various subgroups with each.

If it is determined that a project requires environmental analysis, the Airport would need to determine the specific type of documentation required for CEQA and coordinate with FAA to determine the specific type of documentation required for NEPA.

5.3 RECOMMENDED DEVELOPMENT PLAN

The SBP Airport Master Plan identifies more than 40 infrastructure projects that are recommended for development within the 20-year planning horizon. The projects are depicted in the ALP drawing set. These projects are recommended to meet forecast aviation demand and/or to meet current FAA design standards.

The process used to identify and select the recommended projects is described in *Chapter 4 – Alternatives*. The project descriptions and general project phasing are described below.

5.3.1 Interim – Phase I

The initial phase of project implementation is referred to as Interim – Phase I. These projects generally represent airfield standards projects that can be implemented in the near term. The Interim – Phase I development plan also includes capacity enhancement projects for the support facilities (e.g., terminal, landside, general aviation) to accommodate existing or near-term forecast aviation activity.

The projects allocated to the Interim – Phase I development plan are anticipated to be implemented in the 0 to 10-year timeframe. However, some projects may be implemented later, depending on actual demand and/or funding availability.

The project list with descriptions, triggers, and justifications is described in *Table 5-2* and presented in *Figure 5-1* below.

5.3.2 Interim – Phase II

The second phase of project implementation is referred to as Interim – Phase II. These projects generally represent airfield standards projects that require enabling projects before they can be implemented. The Interim – Phase II development plan also includes capacity enhancement projects for the support facilities (e.g., terminal, landside, general aviation) to accommodate mid-term forecast aviation activity.

The projects allocated to the Interim – Phase II development plan are anticipated to be implemented in the 11 to 15-year timeframe. However, some projects may be implemented sooner or later, depending on actual demand and/or funding availability.

The project list with descriptions, triggers, and justifications is described in *Table 5-3* and presented in *Figure 5-2* below.

5.3.3 Future

The third phase of project implementation is referred to as Future. These projects generally represent airfield standards projects that require coordination with other local governmental agencies or land acquisition before they can be implemented. The Future development plan also includes capacity enhancement projects for the support facilities (e.g., terminal, landside, general aviation) to accommodate long-term forecast aviation activity.

The projects included in the Future development plan are anticipated to be implemented in the 15 to 20-year timeframe. However, some projects may be implemented sooner, depending on actual demand and/or funding availability.

The project list with descriptions, triggers, and justifications is described in *Table 5-4* and presented in *Figure 5-3* below.

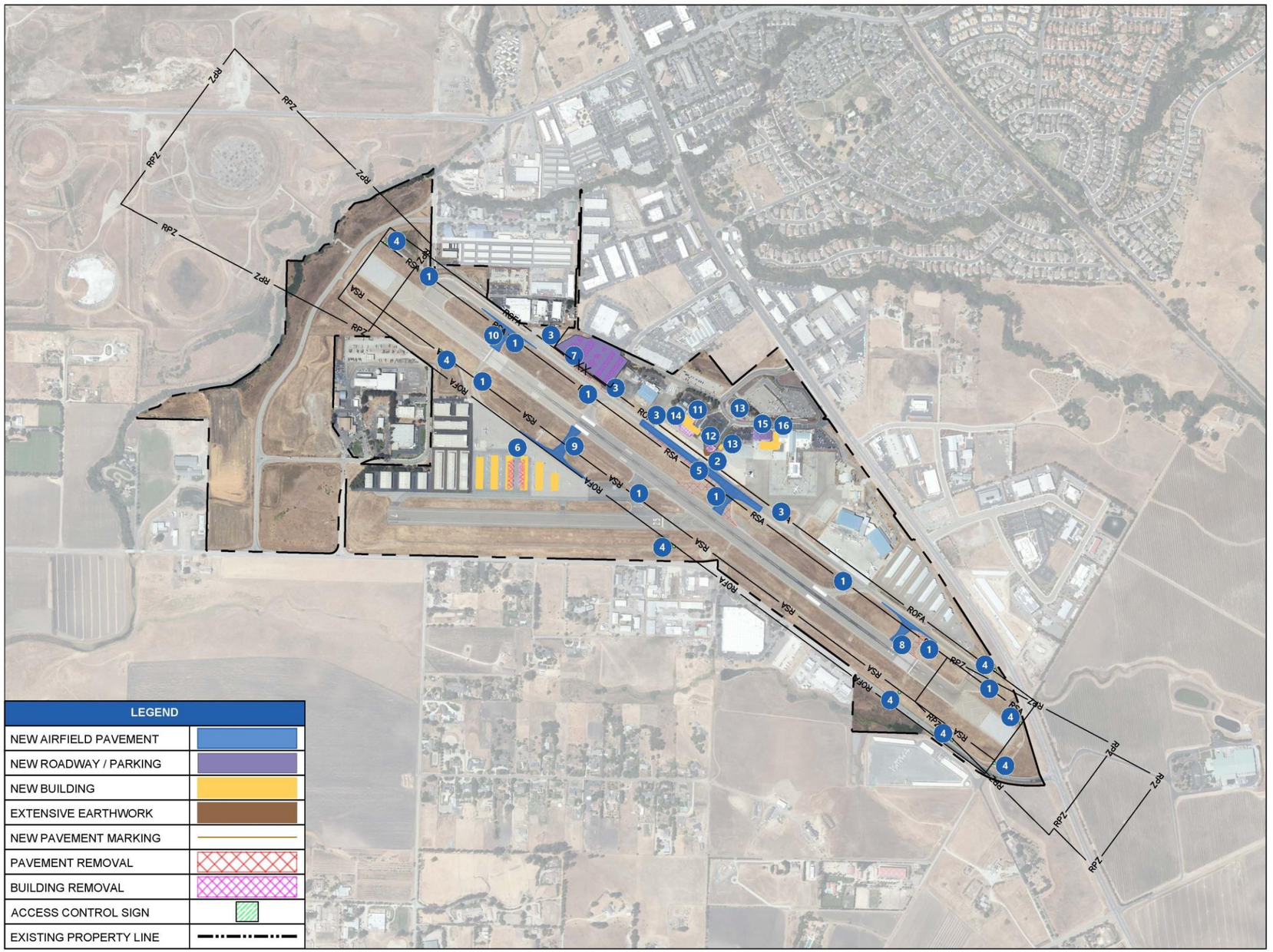
TABLE 5-2
INTERIM – PHASE I PROJECTS

Project Number	Project	Enabling Project(s)	Description	Trigger	Justification
1	Relocate Runway Hold Locations	-	Relocate signage and pavement hold line markings to new location 250' from Runway 11-29 centerline to conform with Paragraph 3.18 in FAA AC 150/5300-13B, Airport Design. Applies to Taxiways A, B, M, C, E, F, H, L. Apply new Taxiway nomenclature applied with project to confirm with Paragraph 1.4 in FAA AC 150/5340-18G, Change 1, Standards for Airport Sign Systems per ALP.	Triggered by the need to comply with current FAA airfield design standards. This project should be completed in Near-Term.	Required to meet existing FAA runway holding position separation standard. The existing standard for runway centerline to holding position separation is 250 feet for Runway 11-29.
2	Remove Portion of Embankment Near Spirit of San Luis Restaurant	-	Remove portion of embankment near Spirit of San Luis restaurant. Clears embankment from Part 77 Primary Surface. Allows airside ground vehicle maneuvering outside future Taxiway A OFA within non-movement area.	Triggered by the need to comply with current FAA airfield design standards. This project should be completed in Near-Term.	Required to remove portion of embankment that penetrates the Part 77 Primary Surface. Also required to meet existing Taxiway Object Free Area (TOFA) standard after Taxiway A realignment. Will allow ground vehicles to operate outside the new TOFA location.
3	Relocate Movement Area Boundary Markings	-	New pavement markings at edge of Taxiway A OFA to delineate movement area boundary per Paragraph 4.5 in FAA AC 150/5300-13B, Airport Design. Includes removal of aircraft tiedown markings within Taxiway A OFA and existing movement area boundary markings. Applies to runup apron, Site J, Site K, Site L, Old Terminal apron, Site A, Site G, and Site M.	Triggered by the need to comply with current FAA airfield design standards. This project should be completed in Near-Term.	Required to meet existing FAA Taxiway Object Free Area (TOFA) standard. The existing TOFA standard for Taxiway A is 132.5 feet (nonstandard)
4	Add/Relocate Perimeter Road Access Control Signs	-	Construct/relocate access control signage to limit access to ground vehicles through RSA, ROFA, and POFZ when runway is in-use to conform with Paragraphs 3.10, 3.11.5 and 3.12 in FAA AC 150/5300-13B, Airport Design.	Triggered by the need to comply with current FAA airfield design standards. This project should be completed in Near-Term.	Enhances airfield safety by providing access control coordination for ground vehicles operating within the RSA, ROFA, and POFZ.
5	Realign Taxiways A, E, F	-	Realign segment of Taxiway A to 325' from Runway 11-29 centerline to enhance airfield safety. MOS required for realignment to proposed Taxiway A alignment. Also includes demolition of Taxiway E east of Runway 11-29 and Taxiway F to resolve Hot Spot 1, Hotspot 2, and conform with Paragraph 4.8 of FAA AC 150/5300-13B, Airport Design. Realign Taxiway F (new Taxiway A4 - see Project A).	Triggered by need to comply with current FAA airfield design standards. This project should be completed in Near-Term.	Enhances airfield safety by providing additional separation from the Runway 11-29 centerline to the Taxiway A centerline. Eliminates need for some Special Operating Procedures associated with simultaneous aircraft operations on Runway 11-29 and Taxiway A.
6	Construct Westside Hangar (Phase I)	-	Construct 4 new T-Hangar buildings on the Westside apron. Includes shifting 21 existing portable hangar units in Site T 10-20 feet to align with future taxilane object free area (TLOFA). This enables Reconfigure Site J and Site K (Phase I) project.	Triggered by the need to accommodate existing general aviation aircraft parking demand displaced from Site J and Site K. This project should be completed in Interim Phase I.	Additional hangar space is needed to accommodate demand for general aviation aircraft storage. Enables the Reconfigure Site J and Site K (Phase I) project.

Project Number	Project	Enabling Project(s)	Description	Trigger	Justification
7	Convert Sites J/K into Interim-Use Vehicle Parking	6	Remove/demolish hangar buildings, relocate airfield security fence along Taxiway A OFA, close/demolish airfield pavement areas within Taxiway A OFA, and construct markings/signage/revenue control devices for vehicle parking.	Demolition of existing buildings is triggered by need to comply with current FAA airfield design standards. Conversion of portions of site to vehicle parking triggered by need for additional vehicle parking at PAL 1.	Provides additional vehicle parking in the vicinity of the passenger terminal building to accommodate existing and forecast demand. Conversion of airside to landside use for interim period until such time the demand for airfield development can no longer be accommodated elsewhere on-airport and/or the vehicle parking deficit can be accommodated elsewhere.
8	Construct Taxiway A6 (New - Near Existing Rwy 26 Threshold)	-	Construct new Taxiway A6 to FAA AC FAA AC 150/5300-13B standards. Taxiway A6 will be located north of existing Taxiway L and will align with the Runway 29 endpoint in the Future condition. This project also includes demolition of existing Taxiway L which will be beyond the Runway 29 end in the Future condition.	Triggered by deteriorating pavement conditions for existing Taxiway L. Should be completed in Interim Phase I.	Taxiway L pavement condition is nearing end of useful life. New connector will be constructed to current FAA design standards and aligns with future Runway 29 endpoint.
9	Construct Taxiway B3 (Twy C South)	-	Construct new Taxiway B3 to FAA AC 150/5300-13B standards.	*Enabling Project:* Enables and therefore, must precede Reconstruct Taxiway M project, Reconstruct Taxiway B project, and Reconstruct Taxiway E project.	A new connector will be constructed to current FAA design standards and will extend existing Taxiway C across Runway 11-29 to provide another crossfield taxi connection to the Westside apron.
10	Reconstruct Taxiway B	9	Reconstruct Taxiway B to FAA AC 150/5300-13B standards. This taxiway connector will be referred to as Taxiway A2 in the Interim condition and / Taxiway A3 in the Future condition.	Triggered by deteriorating pavement conditions for existing Taxiway B. Should be completed in Interim Phase I.	Taxiway B pavement condition is nearing end of useful life. Replacement connector will be constructed to current FAA design standards and maintains crossfield taxi connection.
11	Demolish Old Terminal	-	Includes demolition of old passenger terminal building.	Triggered by need to comply with current FAA airfield design standards.	Required to accommodate the Realignment of Taxiway A to meet existing FAA runway-taxiway centerline separation standards. The existing standard for runway-taxiway centerline separation is 400 feet for Runway 11-29.
12	Demolish Restaurant	-	Includes demolition of Spirit of San Luis restaurant building.	Triggered by need to comply with current FAA airfield design standards.	Required accommodate the Realignment of Taxiway A to meet existing FAA runway-taxiway centerline separation standards. The existing standard for runway-taxiway centerline separation is 400 feet for Runway 11-29.

Project Number	Project	Enabling Project(s)	Description	Trigger	Justification
13	Relocate Airfield Electrical Vault	-	Construct new airfield electrical vault adjacent to current site of Spirit of San Luis restaurant and Airport employee parking.	Triggered by need to accommodate additional airfield electrical equipment and meet current code standards for electrical rooms.	Required to accommodate the larger and additional electrical equipment associated with the airfield infrastructure.
14	Construct New Airport Administration Building	11	Construction of a multi-level building. The ground floor of the building will be at apron level. The ground level will include vehicle garages and workshop space. It will provide vehicle access for Airport ops and maintenance personnel to access the airfield. The main level of the building will be at the existing parking lot elevation. The main level will have office space. The upper level of the building may include space to accommodate a restaurant and viewing area.	Triggered by the need to consolidate Airport staff into a single building after the old ACI Hangar is demolished. The old ACI Hangar currently accommodates office space for some Airport staff.	Airport staff offices are currently dispersed throughout the Terminal Building and the Old ACI Hangar. The new Airport Administration Building will consolidate Airport staff (including maintenance, operations, and management) into a single location. Replaces the function of the restaurant that needs to be demolished. Including the nonaeronautical restaurant space in this building supports Airport revenue diversification.
15	Demolish Old ACI Hangar	14	Acquisition and demolition of the Old ACI Hangar, located immediately west of the passenger terminal building. Enables the Reconfigure Terminal Landside Area project.	Triggered by the construction of the Airport Administration Building. Also triggered by need to expand terminal building.	The Old ACI Hangar will be demolished upon the completion of the new Airport Administration Building. Hangar demolition enables terminal building expansion (Phase I).
16	Expand Terminal Building (Phase I)	15	Includes expansion on west side of terminal building. Building expansion will include space for additional airline ticketing, outbound checked bag screening, and outbound checked bag make-up. The project also includes terminal apron modification to enable additional aircraft to park around terminal building.	Triggered by forecast passenger demand. This project should be implemented in Near-Term.	Necessary to accommodate additional airline ticketing space and additional screening/make-up area for outbound checked bags to meet future forecast passenger demand.

FIGURE 5-1
INTERIM – PHASE I DEVELOPMENT PROJECTS



Interim - Phase I

1. *Relocate Runway Hold Locations*
2. *Remove Portion of Embankment Near Restaurant*
3. *Relocate Movement Area Boundary Markings*
4. *Add/Relocate Perimeter Road Access Control Signs*
5. *Realign Taxiways A, E, F*
6. *Construct Westside Hangar (Phase I)*
7. *Convert Sites J/K into Interim-Use Vehicle Parking*
8. *Construct Taxiway A6*
9. *Construct Taxiway B3*
10. *Reconstruct Taxiway B*
11. *Demolish Old Terminal*
12. *Demolish Restaurant*
13. *Relocate Airfield Electrical Vault*
14. *Construct New Airport Administration Building*
15. *Demolish Old ACI Hangar*
16. *Expand Terminal Building (Phase I)*

N

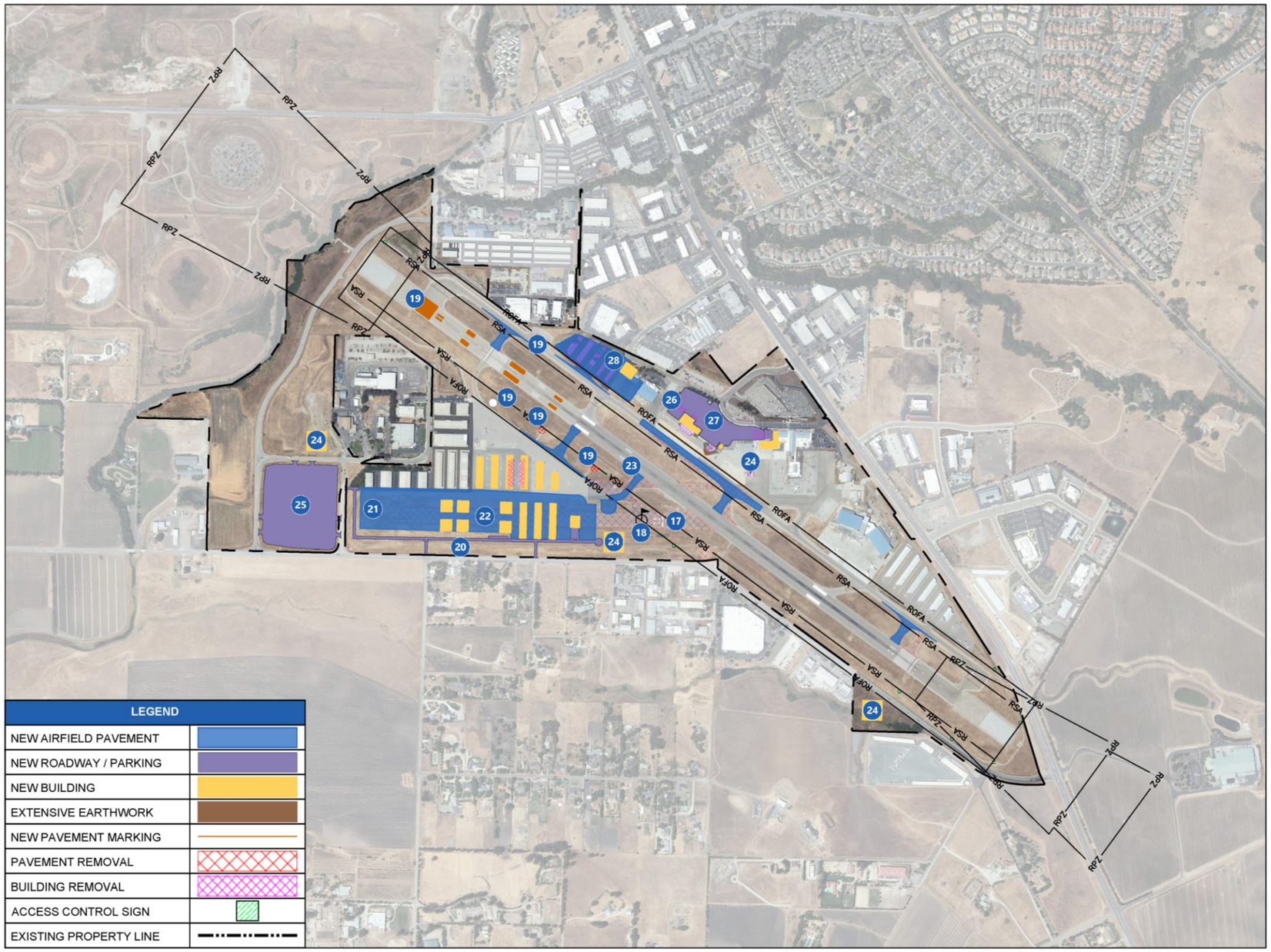
1000' 500' 0' 1000'

TABLE 5-3
INTERIM – PHASE II PROJECTS

Project Number	Project	Enabling Project(s)	Description	Trigger	Justification
17	Decommission Runway 7-25	-	Close Runway 7-25 and demolish pavement to allow for redevelopment area needed to accommodate GA facilities impacted by Taxiway A realignment.	Triggered by forecast demand of general aviation facilities and Runway 7-25 no longer being eligible for AIP funding due to limited use.	Allows for development area needed to accommodate GA facilities impacted by Taxiway A realignment and to accommodate future general aviation demand. Only 2-5% of operations occur on Runway 7-25 because it no longer being eligible for AIP funding, the runway will be limited for future rehabilitation projects that may be necessary in the future.
18	Relocate Segmented Circle	17	Removal of existing segmented circle and windcone and installation of new segmented circle and windcone after Runway 7-25 decommissioning.	Triggered by Runway 7-25 decommissioning.	The existing segmented circle and windcone are located within the ROFA. Per FAA AC 150/5300-13B, Airport Design, the primary windcone is not fixed-by-function and cannot be located within the ROFA. Relocation is required to meet existing FAA standard for the ROFA.
19	Remove Runway 11 Displaced Threshold	-	Removal of the Runway 11 Displaced Threshold. Includes relocation of the Runway 11 Glideslope and the Runway 11 supplemental windcone and the replacement of the Runway 11 VASIs to PAPIs based on the Runway 11 End converting to the landing threshold. The Runway 29 supplemental windcone will be relocated outside of the existing RSA. The ASOS is relocated to the northeast side of the Runway centerline to satisfy siting requirements. However, the identified ASOS siting will need to be evaluated by FAA at the time of relocation to ensure it meets the meteorological capture parameters.	Triggered by need for additional landing length to accommodate the existing Critical Aircraft (Airbus A319).	The existing Landing Distance Available (LDA) for Runway 11 is 5,300 feet. The Landing Distance Available (LDA) needs to be 6,000 feet to accommodate the Airbus A319 landing in wet conditions. The removal of the displaced threshold for Runway 11 provides the necessary landing length for the A319 as the LDA becomes the full length of the Runway at 6,100 feet.
20	Construct Westside Access Road	-	Construct new public road on the Westside to provide access to airport facilities after Runway 7-25 decommissioning.	Enables and therefore, must precede the Expand Westside Apron Project.	Provides additional landside access to the Westside Apron Expansion and potential ATCT location.
21	Expand Westside Apron	17	Construct new apron in the Westside area after Runway 7-25 decommissioning. The development concept includes construction of 12 new taxilanes, new run-up pad, new compass calibration pad, and 43 new tie-down positions. Includes extension of Taxiway C (existing Taxiway J). This project also include enhanced electric, water, and sanitary sewer utility connections to support existing and future development.	Triggered by forecast demand of general aviation facilities.	Additional apron space is needed to accommodate demand for general aviation aircraft storage.

Project Number	Project	Enabling Project(s)	Description	Trigger	Justification
22	Construct Westside Hangar (Phase II)	21	Construct new GA hangar facilities in the Westside area after Runway 7-25 decommissioning. The development concept includes construction of six new box hangar buildings, three new T-Hangar buildings, and a new FBO (which includes new aircraft fueling infrastructure).	Triggered by forecast demand of general aviation facilities.	Additional hangar space is needed to accommodate demand for general aviation aircraft storage.
23	Reconstruct Taxiway E (West of Runway 11-29)	9	Demolition of existing Taxiway E segment (West of Runway 11-29) and existing compass calibration pad. Includes the construction of new Taxiway B3.	Triggered by the construction of the West Apron Expansion.	Reconstruction of Taxiway E is necessary, so it is aligned perpendicular to Runway 11-29.
24	Relocate ATCT	17, 20	Demolish the existing ATCT and construct a new ATCT at one of the three proposed locations. This includes ATCT Siting Study and FAA coordination per FAA Order 6480.4	Enables and therefore, must precede the Reconfigure Terminal Apron Project.	Required to accommodate the Terminal Apron Reconfiguration, a project necessary to meet future forecast passenger demand.
25	Develop Santa Fe Square	17	Construct "Santa Fe Square" nonaeronautical buildout after Runway 7-25 decommissioning.	Triggered by need for additional vehicle parking positions for PAL 3.	Additional vehicle parking is required to accommodate future forecast demand.
26	Demolish Rental Car Service Center	25	Demolition of Rental Car Service Center Building and Vehicle Lot.	Enables and therefore, must precede the Reconfigure Terminal Area Landside Project.	Required to accommodate additional vehicle parking to meet future forecast demand.
27	Reconfigure Terminal Area Landside	11, 12, 26	Reconfiguration of Lot 1, Lot 2, Employee Lot and area previously occupied by Rental Car Service Center into a more efficient, consolidated vehicle parking area.	Triggered by need for additional vehicle parking positions for PAL 1.	Additional vehicle parking is required to accommodate future forecast demand.
28	Reconfigure Site J and Site K (Phase II)	27	Occurs independently of Taxiway A. Reconfigure for aircraft use when landside demand is accommodated elsewhere on-Airport.	Triggered by forecast demand of general aviation facilities.	Enables Site J and Site K to be converted from landside use back to airside use when the demand for airfield development can no longer be accommodate elsewhere on-airport and/or the vehicle parking deficit can be accommodated elsewhere.

FIGURE 5-2
INTERIM – PHASE II DEVELOPMENT PROJECTS



Interim - Phase II

17. *Decommission Runway 7-25*
18. *Relocate Segmented Circle*
19. *Remove Runway 11 Displaced Threshold*
20. *Construct Westside Access Road*
21. *Expand Westside Apron*
22. *Construct Westside Hangar (Phase II)*
23. *Reconstruct Taxiway E (West of RWY 11-29)*
24. *Relocate ATCT*
25. *Develop Santa Fe Square*
26. *Demolish Rental Car Service Center*
27. *Reconfigure Terminal Area Landside*
28. *Reconfigure Site J and Site K (Phase II)*

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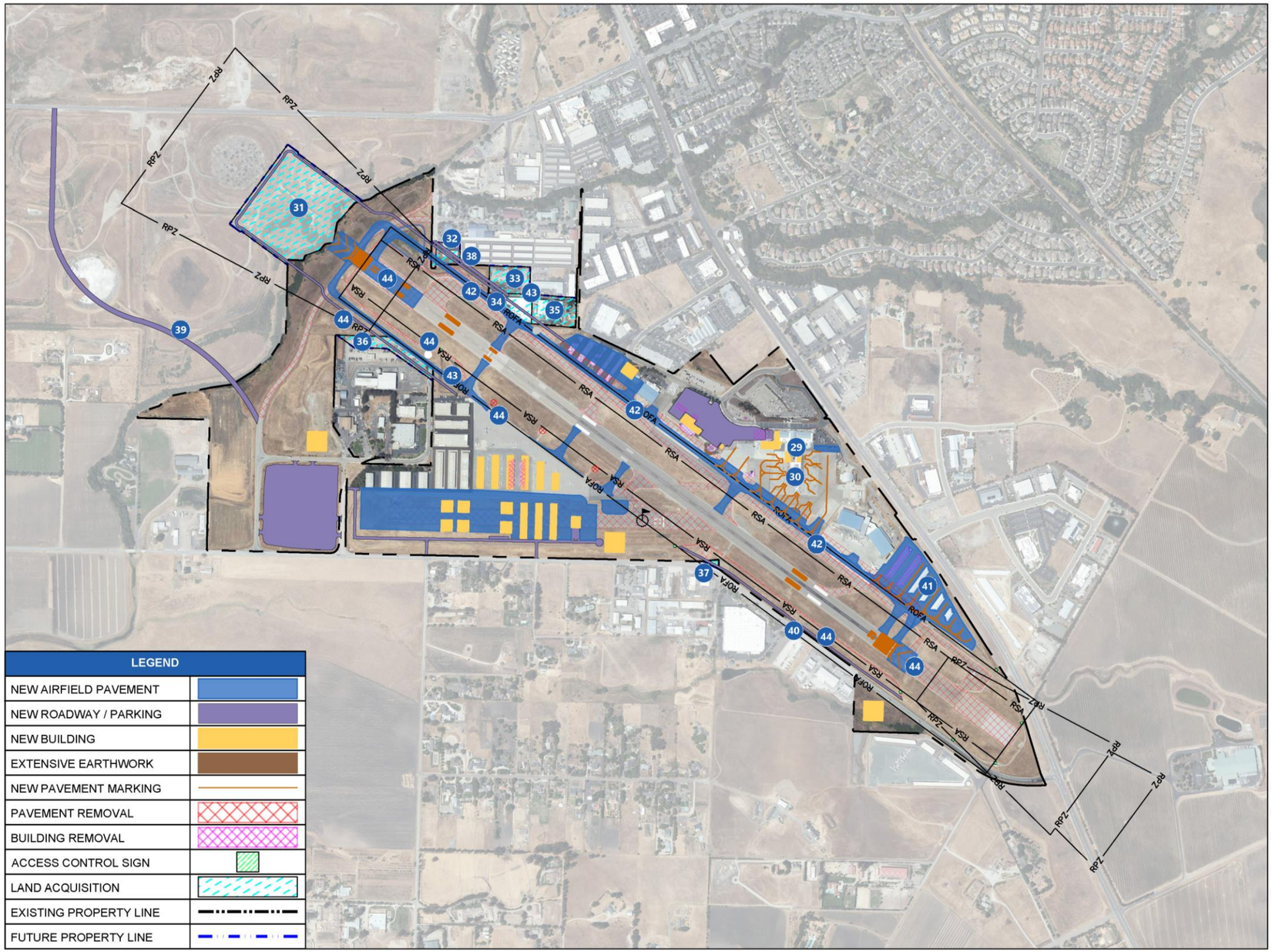
TABLE 5-4
FUTURE PHASE PROJECTS

Project Number	Project	Enabling Project(s)	Description	Trigger	Justification
PE	Programmatic CEQA and NEPA Environmental Entitlement	-	Programmatic environmental evaluation and entitlement for runway shift and taxiway realignment projects under California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).	Triggered by need to comply with current FAA airfield design standards and CEQA+NEPA project environmental entitlement requirements.	CEQA entitlement required per Sections 15000 through 15387 of the California Code of Regulations. NEPA entitlement required per FAA Order 5050.4, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions.
29	Expand Terminal Building (Phase II)	-	Includes expansion of the terminal building concourse. Building expansion will include space for additional passenger holdroom and concessions.	Triggered by forecast passenger demand. This project should be implemented in Future.	Necessary to accommodate sufficient seating and areas in the holdroom for passenger demand.
30	Reconfigure Terminal Apron	-	Includes realignment of taxilanes to provide necessary TLOFA width outlined in Paragraph 4.5.2 in FAA AC 150/5300-13B, Airport Design. Also includes reconfiguration of aircraft parking positions to provide eight independent terminal parking positions and two remote parking positions for charter/military aircraft.	Triggered by forecast passenger demand.	Enables the realignment of Taxiway A. Reconfiguration of the Terminal Apron maintains aircraft parking clearance of the TOFA and TLOFA and provides additional parking positions needed to accommodate forecast passenger demand.
31	Acquire Land (Parcel A) (A.P.N: 076-382-005)	PE	Acquire of a portion of Parcel A, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift and new perimeter road.	Enables and therefore, must precede the Runway 11-29 Shift Project.	Land acquisition enables a dimensionally standard ROFA associated with the Runway 11-29 Shift and a perimeter road alignment located outside the OFA on the Runway 11 end.
32	Acquire Land (Parcel B) (A.P.N: 076-411-055)	PE	Acquire Parcel B, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway A realignment/extension. This project includes the demolition of the existing building on the site.	Enables and therefore, must precede the Runway 11-29 Shift Project.	Land acquisition enables a dimensionally standard ROFA associated with the Runway 11-29 Shift and the accompanying Taxiway A extension. It also enables a perimeter road alignment located outside the OFA on the Runway 11 end.
33	Acquire Land (Parcel C) (A.P.N: 076-401-043)	PE	Acquire Parcel C, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway A realignment/extension.	Enables and therefore, must precede the Runway 11-29 Shift Project.	Land acquisition enables a dimensionally standard ROFA associated with the Runway 11-29 Shift and the accompanying Taxiway A extension. It also enables a perimeter road alignment located outside the OFA on the Runway 11 end.

Project Number	Project	Enabling Project(s)	Description	Trigger	Justification
34	Acquire Land (Parcel D) (A.P.N: 076-401-065)	PE	Acquire Parcel D, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway A realignment/extension. This project includes the demolition of the existing building on the site.	Enables and therefore, must precede the Runway 11-29 Shift Project.	Land acquisition enables a dimensionally standard ROFA associated with the Runway 11-29 Shift and the accompanying Taxiway A extension. It also enables a perimeter road alignment located outside the OFA on the Runway 11 end.
35	Acquire Land (Parcel E) (A.P.N: 076-401-032)	PE	Acquire Parcel E, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway A realignment/extension.	Enables and therefore, must precede the Runway 11-29 Shift Project.	Land acquisition enables a dimensionally standard ROFA associated with the Runway 11-29 Shift and the accompanying Taxiway A extension. It also enables a perimeter road alignment located outside the OFA on the Runway 11 end.
36	Acquire Land (Parcel F) (A.P.N: 076-371-031)	PE	Acquire a portion of Parcel F, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway B extension.	Enables and therefore, must precede the Runway 11-29 Shift Project.	Land acquisition enables a dimensionally standard ROFA associated with the Runway 11-29 Shift and the accompanying Taxiway B extension. It also enables a perimeter road alignment located outside the OFA on the Runway 11 end.
37	Acquire Land (Parcel G) (A.P.N: 076-062-046)	PE	Acquire Parcel G, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift.	Enables and therefore, must precede the Runway 11-29 Shift Project.	Land acquisition enables a dimensionally standard ROFA associated with the Runway 11-29 Shift.
38	Realign Public Access Driveway	PE	Demolish and realign portion of public access driveway northeast of Taxiway A to maintain access to off-airport development beyond realigned Taxiway A OFA.	Enables and therefore, must precede the Realign Taxiway A project.	Required to accommodate the Taxiway A realignment and maintain clearance outside the TOFA.
39	Realign Hoover Avenue	PE	Demolish and realign Hoover Avenue connecting from Old Santa Fe Road to Tank Farm Road to enable the Runway 11-29 shift and provide clearance outside the Runway 11 approach RPZ	Enables and therefore, must precede the Runway 11-29 Shift Project.	The shift of Runway 11-29 is required to create a dimensionally standard ROFA. The existing alignment of Hoover Avenue will intersect the new location of Runway 11-29 and the new Taxiway A and Taxiway B extensions. It will be necessary to realign Hoover Ave to provide clearance from the future ROFZ, RSA, ROFA, POFZ, and RPZ.
40	Reconfigure Buckley Road	PE	Includes depression of Buckley Road on its existing alignment to reduce roadway elevation and meet existing ROFA standard. New Buckley Road elevation should be regraded, so roadway is at least 15 feet below the elevation of the Runway 11-29 centerline.	Triggered by need to comply with current FAA airfield design standards.	Required to meet existing FAA standard for the ROFA outlined in Paragraph 3.12 FAA in AC 150/5300-13B, Airport Design.

Project Number	Project	Enabling Project(s)	Description	Trigger	Justification
41	Reconfigure Site N	PE	Demolish 2 T-Hangar buildings at Site N and reconstruct the aircraft parking apron area to connect to Site M apron and accommodate heavier aircraft.	Enables and therefore, must precede the Realign Taxiway A project.	Site M will lose apron area as a result of the Taxiway A realignment. The Reconfiguration of Site N and the demolition of 2 T-Hangar buildings allows Site M to maintain apron area necessary to accommodate larger aircraft.
42	Realign Taxiway A	11, 12, 24, 28, PE, 30, 32, 33, 34, 35, 38, 41	Demolish existing Taxiway A and reconstruct to provide 400 feet of separation from Runway 11-29. Includes demolition of Old Passenger Terminal Apron and portions of Site J Apron, Site K Apron, Passenger Terminal Apron, Site M Apron, and Site N Apron within the new Taxiway A OFA.	Triggered by need to comply with current FAA airfield design standards.	Required to meet existing FAA runway-taxiway centerline separation standards. The existing standard for runway-taxiway centerline separation is 400 feet for Runway 11-29.
43	Extend Taxiway M (Exist.) / Taxiway B (Fut.)	PE, 36	Includes extension of Taxiway B (currently referred to as Taxiway M) to the new Runway 11 endpoint, construction of Taxiway B1 at the end, and reconfiguration of Taxiway B2 (currently the northmost connector on Taxiway M) to a perpendicular connector. New segment of Taxiway B will be constructed at 400-foot separation from Runway 11-29 to meet FAA AC 150/5300-13B standards and to minimize impacts to GA development in Site Q.	Triggered by need to provide taxi connection from West Side area to Runway 11 end without runway crossing.	Provides access to the Runway 11 end from the westside apron.
44	Shift Runway 11-29	PE, 31, 37, 42, 43	Demolish 740 feet of runway length from the existing Runway 29 endpoint and construct 740 feet of runway length beyond the existing Runway 11 endpoint. Demolish the existing EMAS for Runway 11 and Runway 29. Includes extension of Taxiway A to the new Runway 11 endpoint and demolition of Taxiway A beyond the new Runway 29 endpoint. Also includes construction of new taxiway and bypass taxiway connectors at new runway ends. Existing NAVAIDs including the Runway 11-29 supplemental windcones, Runway 11 MALSR, Runway 11 Glideslope, and Runway 11 Localizer, will be relocated based on the new runway ends. PAPIs will replace the existing Runway 29 VASIs and will be positioned based on the new Runway 29 end. The ASOS is relocated to adjust for the Runway 11 threshold shift. The identified ASOS siting will need to be evaluated by FAA at the time of relocation to ensure it meets the meteorological capture parameters. Includes realignment of the vehicle service road on the Runway 11 end to provide clearance of the ROFA and on the Runway 29 end to provide clearance of the RSA. Perimeter fencing will be constructed outside the new vehicle service road and other areas of land acquisition. Cut, fill, and grading to support standard ROFA.	Triggered by the need to comply with current FAA ROFA standard. Runway 11-29 currently does not have a standard ROFA.	Required to meet existing FAA standard for the ROFA. The existing ROFA standard required for Runway 11-29 is 1,000 feet beyond the runway ends. The runway shift also allows for the removal of EMAS and provides a standard 1,000-foot RSA on both runway ends. Allows for the vehicle service road to be located outside the ROFA on the 11 end and access control coordination will only be necessary on the Runway 29 end.

FIGURE 5-3
FUTURE DEVELOPMENT PROJECTS



Future

29 *Expand Terminal Building Phase II*
30 *Reconfigure Terminal Apron*
31 *Acquire Land (Parcel A)*
32 *Acquire Land (Parcel B)*
33 *Acquire Land (Parcel C)*
34 *Acquire Land (Parcel D)*
35 *Acquire Land (Parcel E)*
36 *Acquire Land (Parcel F)*
37 *Acquire Land (Parcel G)*
38 *Realign Santa Fe Road*
39 *Realign Hoover Ave*
40 *Reconfigure Buckley Road*
41 *Reconfigure Site N*
42 *Realign Taxiway A*
43 *Extend Taxiway B*
44 *Shift Runway 11-29*

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5.3.4 Project Cost Estimates

"Planning-level estimates", as defined for this purpose, are rough order-of-magnitude (ROM) cost estimates that consider gross areas multiplied by a realistic unit cost factor. In addition, a contingency factor is applied to the capital construction costs for each project. This contingency factor is added to account for the variables in the design of facilities that cannot be predicted at the planning level. Beyond construction costs, the "soft costs" of projects including architectural/engineering design fees and project management fees, and other potential costs are accounted for, depending on the project magnitude and mobilization requirements. This method of financial planning ensures a realistic and effective Master Plan Improvement Program budget that identifies sufficient funding for each project over the planning period. Funding mechanisms to enable the Master Plan Improvement Program are described in *Chapter 6 – Financial Plan*. *Table 5-5* provides the ROM cost estimates prepared for the Master Plan Improvement Program.

TABLE 5-5
PROJECT CAPITAL COST ESTIMATES

Project Number	Project Name	Total ROM Cost[1]
Interim – Phase I		
1	Relocate Runway Hold Locations	$ 30,000
2	Remove Portion of Embankment Near Spirit of San Luis Restaurant	$ 70,000
3	Relocate Movement Area Boundary Markings	$ 20,000
4	Add/Relocate Perimeter Road Access Control Signs	$ 10,000
5	Realign Taxiways A, E, F	$ 4,200,000
6	Construct Westside Hangar (Phase I)	$ 9,050,000
7	Convert Sites J/K into Interim-Use Vehicle Parking	$ 3,750,000
8	Construct Taxiway A6 (New – Near Existing Rwy 26 Threshold)	$ 1,000,000
9	Construct Taxiway B3 (Twy C South)	$ 1,320,000
10	Reconstruct Taxiway B	$ 920,000
11	Demolish Old Terminal	$ 1,080,000
12	Demolish Restaurant	$ 280,000
13	Relocate Airfield Electrical Vault	$ 1,390,000
14	Construct New Airport Administration Building	$ 8,780,000
15	Demolish Old ACI Hangar	$ 990,000
16	Expand Terminal Building (Phase I)	$ 7,630,000
	Interim – Phase I Projects Subtotal [2]	**$ 41,000,000**
Interim – Phase II		
17	Decommission Runway 7-25	$ 1,480,000
18	Relocate Segmented Circle	$ 5,000,000
19	Remove Runway 11 Displaced Threshold	$ 10,170,000
20	Construct Westside Access Road	$ 900,000
21	Expand Westside Apron	$ 9,190,000
22	Construct Westside Hangar (Phase II)	$ 12,720,000
23	Reconstruct Taxiway E (West of Runway 11-29)	$ 1,130,000
24	Relocate ATCT	$ 60,250,000
25	Develop Santa Fe Square	$ 4,340,000

Project Number	Project Name	Total ROM Cost[1]
26	Demolish Rental Car Service Center	$ 320,000
27	Reconfigure Terminal Area Landside	$ 1,630,000
28	Reconfigure Site J and Site K (Phase II)	$ 6,920,000
	Interim – Phase II Projects Subtotal [2]	**$ 115,000,000**
Future		
PE	Programmatic CEQA and NEPA Entitlement	$ 1,500,000
29	Expand Terminal Building (Phase II)	$ 3,660,000
30	Reconfigure Terminal Apron	$ 1,220,000
31	Acquire Land (Parcel A) (A.P.N: 076-382-005)	$ 8,620,000
32	Acquire Land (Parcel B) (A.P.N: 076-411-055)	$ 1,300,000
33	Acquire Land (Parcel C) (A.P.N: 076-401-043)	$ 2,730,000
34	Acquire Land (Parcel D) (A.P.N: 076-401-065)	$ 31,390,000
35	Acquire Land (Parcel E) (A.P.N: 076-401-032)	$ 24,820,000
36	Acquire Land (Parcel F) (A.P.N: 076-371-031)	$ 2,840,000
37	Acquire Land (Parcel G) (A.P.N: 076-062-046)	$ 1,310,000
38	Realign Public Access Driveway	$ 790,000
39	Realign Hoover Avenue	$ 6,070,000
40	Reconfigure Buckley Road	$ 6,340,000
41	Reconfigure Site N	$ 5,640,000
42	Realign Taxiway A	$ 20,450,000
43	Extend Taxiway M (Exist.) / Taxiway B (Fut.)	$ 3,870,000
44	Shift Runway 11-29	$ 129,200,000
	Future Projects Subtotal [2]	**$ 252,000,000**
	Projects Total [2]	**$ 408,000,000**

Notes: 1 – All costs in 2023 dollars; 2 – May not sum due to rounding.

5.4 AIRPORT ACTIVITY MONITORING AND PROJECT TRIGGERS

Mechanisms for efficiently and correctly monitoring actual airport activity against that which is projected in this Master Plan is important to the implementation of projects on a demand-driven basis. Airport staff collect data on annual airport operations, based aircraft tenant activity, parking, rental car and various other data points. Reviewing this data on an annual basis – and comparing it to the forecast and the PALs used in this Master Plan – will provide a benchmark on how closely activity is occuring compared to the projections, and whether implementation of the individual projects should occur as projected, earlier than projected, or later than projected. If actual activity is below forecasted levels, projects may not need to be implemented as projected. Conversely, if demand exceeds forecasted levels, projects may need to be implemented sooner than projected.

Many projects recommended as a part of the SBP Master Plan are driven by the need to improve airport facilities to meet FAA airport design standards. These projects are not needed as a result of aviation activity levels. Projects that are required to comply with FAA airport design standards should be implmented as soon as is practicable. Practicable is defined as when funding is available, when enabling projects (including land acquisition) are completed, and when existing pavement is at the end of its useful life.

SLO County Airport
Master Plan
Chapter 6 - Financial Feasibility Analysis

RS&H

Chapter 6
Financial Feasibility Analysis

February 2024

San Luis Obispo, California

RS&H No.: 10260015010

Prepared by RS&H, Inc. at the direction
of the County of San Luis Obispo

RS&H

PREPARATION

"The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws."

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CHAPTER 6

FINANCIAL FEASIBILITY ANALYSIS

6.1 INTRODUCTION

As detailed in *Chapter 5, Facilities Implementation Plan*, the SLO County Airport (SBP or Airport) Master Plan sets forth a long-range Airport Capital Improvement Plan (ACIP) that can accommodate forecast demand levels at the Airport. This chapter explores the financial feasibility of implementing the preferred alternative of the Master Plan in the following sections:

- Airport Capital Improvement Plan (ACIP) Costs
- Airport Funding Sources
- Airport Historical Funding and Financial Outlook
- Capital Program Funding Feasibility

The focus of the analysis described in the sections that follow is to assess the Airport's ability to fund the preferred alternative and ACIP projects identified for the Interim Phases I and II and the long-term future periods.

6.2 AIRPORT CAPITAL IMPROVEMENT PLAN (ACIP) COSTS

The ACIP for projects at SBP for the Phase I Interim (Fiscal Years (FY) 2024-2029), Phase II Interim (FY 2030-2034), and Future (FY 2035-2039) periods are presented in the following sections, along with anticipated Federal Aviation Administration (FAA) and local shares. Funding from California Department of Transportation (Caltrans) have not been used recently for SBP capital projects.

The breakdown of eligible project funding represents an FAA share of 90[1] percent through the FAA Airport Improvement Program (AIP), and local share of about 10 percent. To obtain FAA funding for these projects, the Sponsor must submit and/or update its five-year ACIP to the FAA on an annual basis. The annual ACIP update process is the FAA's mechanism for prioritizing its funding program on a statewide basis and considers system-wide issues such as safety and capacity.

As shown in *Table 6-1*, the overall capital program funding need is estimated to be about $429 million through 2039. The federal share is estimated to be $350 million, with local share anticipated at $27 million. As noted, the local share includes use of Passenger Facility Charge (PFC) and Customer Facility Charge (CFC) where eligible. Project costs identified as Other, or Unmet Need are those associated with hangar development, new airport administration building, some landside roadway projects and the long-term shift of Runway 11-29. Unmet needs are estimated to be $57 million for the period.

[1] The Federal share for projects is just over 90 percent (90.66%) based upon 49 USC § 47109(b), which includes provisions that increase the Federal share for airports in states that have more than 5% public or Indian land as defined by the Department of the Interior's Bureau of Land Management. The Local share is 9.34 percent.

TABLE 6-1
ACIP COSTS AND FUNDING SHARE BY PERIOD

	Total Cost	Federal Share[1]	Local Share[2]	Other/Unmet Need
Phase I Interim	$58,000,000	$29,000,000	$6,000,000	$25,000,000
Phase II Interim	$121,000,000	$95,000,000	$6,000,000	$21,000,000
Future	$250,000,000	$226,000,000	$15,000,000	$11,000,000
Total	**$429,000,000**	**$350,000,000**	**$27,000,000**	**$57,000,000**

Source: RS&H Analysis, 2024
Note: [1] Federal share includes Bipartisan Infrastructure Law, Airport Infrastructure Grant Allocation Funds
[2] Local share includes use of Passenger Facility Charge and Customer Facility Charge revenues.

6.2.1 Existing ACIP / FAA Accepted Five-Year Capital Improvement Program

The Airport maintains a 5-year ACIP for projects at SBP aimed at expanding, maintaining, and improving airport infrastructure, which is submitted to the FAA. *Table 6-2* depicts the most current 5-year ACIP for FY 2024-2029, current as of July 2023. The Airport's 5-year ACIP for SBP amounts to approximately $53.2 million.

Funding for airport projects is coordinated with the FAA. The current approved ACIP focuses on airfield taxiway improvements, such the Taxiway B3 connector to the general aviation apron, Taxiway A realignment, and geometry improvements to Taxiways E and F. The ACIP also includes acquisition of a private hangar and another site, which are enabling projects for expansion of the passenger terminal and Taxiway A improvements, respectively.

An essential outcome of any master plan is the revision of an airport's 20-year ACIP. The updated ACIP must incorporate and maintain the near-term programmed projects and funding plans, leveraging the existing mechanisms for implementation and funding. Consequently, projects listed in the current 5-year ACIP (presented in *Table 6-2*) are also included in the updated ACIP outlined in *Section 6.5, ACIP and Funding Plan*.

TABLE 6-2
EXISTING 5-YEAR ACIP

FAA FY / Project #	Project	Total Project Cost	FAA Participation			Federal Share Total	PFC	Local Share
			Entitlement	Discretionary	BIL AIG			
24-1	Construct Taxiway B3 (C South) to General Aviation Apron - Construct	$4,015,000	$1,941,228	$0	$1,698,771	$3,639,999	$375,001	$0
24-2	Taxiway A Realignment (Zone 2); Taxiway A Seal Coat (Zones 1 & 3), Taxiway Connectors Redesignation, and Runway Holding Position Relocation - Design	$469,515	$0	$0	$425,662	$425,662	$0	$43,853
25-1	Taxiway A Realignment (Zone 2) - Construct	$5,345,000	$4,845,777	$0	$0	$4,845,777	$499,223	$0
25-2	Geometry Improvements for Taxiways E & F and Remove Runway 25 Blast Pad Pavement - Construct	$3,181,000	$0	$0	$2,883,895	$2,883,895	$297,105	$0
25-3	Taxiway A Seal Coat (Zones 1 & 3), Taxiway Connectors Redesignation, Runway Holding Position Relocation - Construct	$1,938,335	$1,673,838	$0	$0	$1,673,838	$264,498	$0
26-1	Replace/Install Electrical Vault - Design & Construct	$1,584,512	$0	$0	$1,436,519	$1,436,519	$0	$147,993
26-2	Building Acquisition - ACI Site A (Enabling Project for Terminal Expansion)	$1,800,000	$0	$0	$0	$0	$1,800,000	$0
27-1	Reconstruct Taxiway A Connector (North) including Runway 11 By-Pass Taxiway, Taxiway B, and Taxiway C (North) - Design & Construct	$6,218,617	$4,346,410	$0	$1,291,388	$5,637,798	$0	$580,819
28-1	Construct Taxiway A By-Pass East of Taxiway L (Zone 3) - Design & Construct	$3,529,833	$0	$0	$3,200,147	$3,200,147	$0	$329,686
28-2	Construct Site N Connector Taxiway (Geometry Improvement) - Design & Construct	$639,328	$203,533	$0	$376,082	$579,615	$0	$59,713
28-3	Reconstruct Connector Taxiways A and L - Design & Construct	$3,424,410	$1,969,672	$1,134,898	$0	$3,104,570	$0	$319,840
28-4	Land Acquisition for Entegris Property (Enabling Project for Taxiway A	$13,000,000	$0	$11,785,800	$0	$11,785,800	$0	$1,214,200
29-1	Land Acquisition for SLO Mini Storage Property (Enabling Project for Taxiway A Relocation) - Approx. 1.4 acres	$8,000,000	$2,173,205	$5,079,595	$0	$7,252,800	$0	$747,200
Total ACIP - FY 2024-2029		**$53,145,550**	**$17,153,663**	**$18,000,293**	**$11,312,464**	**$46,466,420**	**$3,235,827**	**$3,443,304**

Source: Airport Records, 2024; Prepared by RS&H, 2024

6.3 AIRPORT FUNDING SOURCES

Generally, airports are unable to meet all capital development funding needs from internal funding sources. Federal, state, local, and private funding often combine with airport funds and bond proceeds (supported by airport revenues and/or municipal support) to generate the funds required to undertake capital improvement projects. Federal funding sources, notably AIP grants, can be subject to modifications by Congress and competition among airports for discretionary awards. Many states contribute grant funding to support local airport programs; however, funding from Caltrans has not been used recently for SBP capital projects. Local funding sources often include airport sponsor funds, bond proceeds driven by airport revenues or municipal support, and occasionally, private contributions.

Implementing the Preferred Airport Development Plan presented in *Chapter 5, Facilities Implementation Plan*, requires careful consideration of available funds from different sources and their specific eligibility criteria. The following are the primary funding sources that may be available to provide capital for the Preferred Airport Development Plan at SBP:

- Federal Funding Sources
- State Department of Transportation Grants
- Local Funding Options
- Passenger Facility Charges
- Customer Facility Charges
- Loan Programs

The following sections describes each funding source and its applicability to SBP.

6.3.1 Federal Funding Sources

The primary sources of federal funding available for projects at SBP are grants from the FAA AIP, which includes discretionary and entitlement grant funding, funds remaining or anticipated from the 2021 Bipartisan Infrastructure Law (BIL), and revenues collected by participating in the FAA Passenger Facility Charges (PFC's) program.

6.3.1.1 Airport Improvement Program

The AIP provides more than $3.18 billion annually in entitlement and discretionary grant funds for a network of more than 3,300 eligible airports. AIP funding is dependent upon the airport category, the role filled within the National Plan of Integrated Airport Systems (NPIAS), and the priority of the improvement as determined within the National Priority Ranking System (NPS). SBP is categorized as a commercial service primary non-hub airport because it surpasses 10,000 annual enplanements but less than 0.05 percent of annual U.S. commercial enplanements. By receiving federal funding for capital improvement projects, SBP has an obligation to adhere to federal grant assurance requirements[2].

Primary non-hub airports receive entitlement funds that must be used within three fiscal years immediately following the year the funds were originally allocated. Based on its NPIAS categorization and percent share of

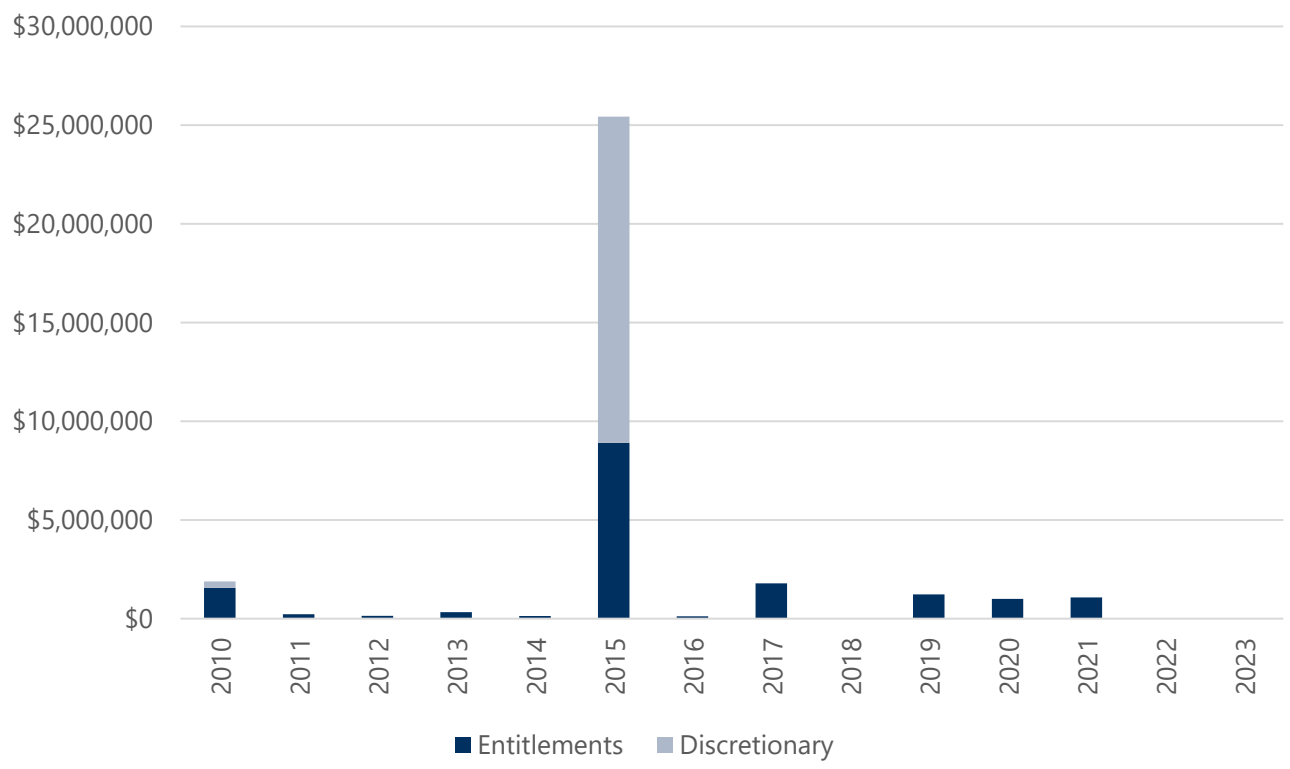
[2] Applicable federal law and guidance under the Code of Federal Regulations (CFR) Title 14, FAA Advisory Circulars, FAA Orders, and FAA Memos.

national passenger levels, recent SBP entitlement funding has ranged from about $1.2 million in 2019 (pre-COVID-19 pandemic) and is anticipated to be around $2 million in fiscal year 2024 as enplanement levels recover.

AIP discretionary grants are offered competitively depending on the availability of funds and through the FAA's assessment of need and priority via the NPS. SBP is eligible to receive 90.66 percent[3] match for eligible capital projects. This is an increase from the typical 90 percent because the U.S. Government owns a significant portion of lands in California. Sections 47109 (b) and (c) of Title 49 United States Code provides for an increase in federal share in those states in which the U.S. Government owns more than 5 percent of the total lands within a state to compensate for the loss of revenue accruing to the state.

Figure 6-1 shows the historic AIP grant awards for SLO County Airport from 2010-2023. As shown, federal funding for SBP has been limited aside from 2015 where grants exceed $25 million for the construction of the new terminal. Annual entitlement grants for the period have averaged about $1.2 million.

FIGURE 6-1
FEDERAL GRANT FUNDS AT SBP (HISTORICAL)



Source: FAA; RS&H Analysis, 2024.

[3] Airport Improvement Program Handbook, Order 5100.38D, Change 1, https://www.faa.gov/documentLibrary/media/Order/AIP-Handbook-Order-5100-38D-Chg1.pdf, Accessed: January 2024

6.3.1.2 Bipartisan Infrastructure Law

In November 2021, the BIL was signed by the President of the United States. BIL included a reserve of a portion of the US General Fund to be invested in various airport development projects, including runways, taxiways, safety, and sustainability initiatives, as well as terminal, airport-transit connections, and roadway projects. The distribution of these funds is overseen by the FAA's Office of Airports. These investments are intended to enhance and improve the overall capabilities and facilities of airports across the country.[4] The BIL includes several funding programs for airports, two of which are available to SBP.

- The Airport Improvement Grant (AIG) allocates $15 billion ($3 billion annually) for the 2022-2026 period for all NPIAS airports, using a process similar to AIP-based airport classification and passenger activity levels. Following the receipt of $2.3 million of BIL funds for each FY 2022 and FY 2023, the Airport anticipates nearly $2.4 million for FY 2024 through FY 2026 as activity increases. AIG funds will supplement the AIP grants received by SBP until the conclusion of the fourth fiscal year following their distribution. AIP grants will remain available for obligation during this time.

- The Airport Terminal Program (ATP) allocates $5 billion ($1 billion annually) for the 2022-2026 period in supplemental discretionary funding opportunities reserved specifically for the use in development and/or improvement of airport passenger terminal facilities. The ATP requires a unique application process and maintains AIP-eligibility requirements, but with a greater federal share of project costs based on airport classification. The window for applications in each fiscal year begins with a Notice of Funding Opportunity (NOFO).

Portions or components of terminal projects in the SBP ACIP qualify for AIG and for ATP funding.

6.3.2 State Funding

The State provides funding to commercial airports through Caltrans' Aeronautics Program in the Division of Transportation Planning, which administers the following grant, loan, and credit programs:

- Acquisition and Development (A&D) Grant Program
- State funded Airport Improvement Matching Grant Program
- Local Airport Loan Program
- Annual Credit Grants program

As a primary airport, SBP is not eligible for the Annual Credit Grants program. To be eligible for a State-funded AIP matching grant and the A&D grant, an airport project must be listed in the most current statewide Capital Improvement Plan[5]. The State Airport Capital Improvement Plan is a ten-year planning document, published by the California Department of Transportation every odd year that encompasses capital improvement and planning projects in California's publicly owned airports. Key aspects of the programs that SBP is eligible for are as follows:

[4] Bipartisan Infrastructure Law - Airport Infrastructure. https://www.faa.gov/bil/airport-infrastructure, Accessed: January 2024

[5] Caltrans, https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/aeronautics, Accessed: January 2024

- A&D Grant Program: The Acquisition and Development (A&D) Grant Program is a biennial, two-year program providing state grants to eligible, publicly owned, public-use airports for planning, construction, and land acquisition. A&D projects are State funded at 90 percent of the total project cost with a 10 percent local match required.
- Airport Improvement Matching Grant Program: The State AIP Matching Rate is 5 percent of the federal grant. Once a FAA AIP Grant has been executed, the sponsoring agency may apply to the State for an AIP matching grant. Grants are processed in the order received and awarded until all funds are fully exhausted.
- Local Airport Loan Program: The Local Airport Loan Program provides discretionary State loans to eligible airports for projects that enhance an airport's ability to provide general aviation services (hangars, general aviation terminals, utilities, general aviation fueling facilities, Acquisition and Development (A&D)-eligible projects, etc.). A loan may also provide the local share for an AIP grant. Such a loan can be used in conjunction with a State-funded AIP Matching grant. The maximum term of a loan is 17 years.

As noted previously, SBP and Caltrans have not recently partnered to fund SBP capital projects.

6.3.3 Local Funding

The local share for federally funded projects at the Airport is about 10 percent. SBP has several options to fund their local share, which are summarized in this section.

At SBP, aeronautical revenues comprise approximately 45 percent of operating revenues, with the remaining coming from non-aeronautical revenues. In terms of aeronautical revenues, the primary contributors are airline terminal rents and fees, airline landing fees, fuel sales and flowage fees, rentals for cargo and other hangars, and revenues from the Fixed Base Operator (FBO).

Operating expenses are comprised of personnel compensation and expenses, contractual services, communications, utilities, and supplies/materials. Depreciation, while not a cash expense, is also a significant annual operating expense.

Table 6-3 shows recent historical revenues and expenses. *Table 6-4*, *Table 6-5*, and *Table 6-6* show a projection of operating financial performance that might be anticipated at SBP. The financial projection follows the passenger forecast for airline revenues and Consumer Price Index (CPI) for aeronautical revenues from non-airline sources. The projection of non-aeronautical revenue follows the passenger forecast for terminal-related revenues (concessions/retail, etc.) and CPI for non-terminal revenues. This projection assumes no substantial changes to current operating conditions.

For the recent historical period (2019-2023), SBP operating revenues have increased at an average rate of 6.4 percent annually while operating expenses have increased at 16.5 percent annually, before depreciation. Prior to the onset of the global COVID-19 pandemic, operating revenues at the Airport were growing at an average annual rate of more than 12 percent (2012-2019). The impact of the global COVID-19 pandemic was a decrease in operating revenues by nearly 30 percent; however, FY 2023 financial performance has brought recovery that has surpassed 2019 levels.

The financial projections for SBP are estimated to produce a cumulative net income before depreciation of about $25.4 million through the mid-term (FY2030-2034) period. Importantly, not all this net income will be available for capital projects in any given year.

TABLE 6-3
AIRPORT REVENUES AND EXPENSES (HISTORICAL)

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Operating Revenues					
1.0 Passenger Airline Aeronautical Revenue					
1.1 Passenger Airline Landing Fees	$ 455,261	$ 418,713	$ 317,436	$ 413,011	$ 748,677
1.2 Terminal Arrival Fees, Rents & Utilities	$ 1,697,467	$ 1,413,662	$ 1,086,309	$ 1,622,342	$ 2,099,646
1.3 Terminal area apron charges/tiedowns	$ -	$ -	$ -	$ -	$ 130,075
1.4 Federal Inspection Fees	$ -	$ -	$ -	$ -	$ -
1.5 Other Passenger Aeronautical Fees	$ -	$ -	$ -	$ -	$ -
1.6 Total	**$ 2,152,729**	**$ 1,832,375**	**$ 1,403,746**	**$ 2,035,353**	**$ 2,978,398**
2.0 Non-Passenger Aeronautical Revenue					
2.1 Landing Fees from Cargo	$ 16,747	$ 18,252	$ 18,169	$ 18,311	$ 19,875
2.2 Landing Fees from General Aviation & Military	$ 1,200	$ 507	$ 390	$ 546	$ 36,425
2.3 FBO revenue: Contract or sponsor-operated	$ 255,249	$ 311,712	$ 345,050	$ 313,495	$ 352,318
2.4 Cargo & Hangar Rentals	$ 477,556	$ 484,002	$ 488,830	$ 413,233	$ 407,935
2.5 Aviation Fuel Tax Retained for Airport Use	$ -	$ -	$ -	$ -	$ -
2.6 Fuel Sales net Profit/Loss or Fuel Flowage Fees	$ 521,176	$ 581,267	$ 385,809	$ 494,195	$ 536,897
2.7 Security Reimbursement from Federal Government	$ 115,154	$ 108,509	$ 105,240	$ 120,720	$ 114,840
2.8 Other Non-Passenger Aeronautical Revenue	$ -	$ -	$ 897	$ 260,383	$ 240,127
2.9 Total	**$ 1,387,083**	**$ 1,504,249**	**$ 1,344,385**	**$ 1,620,883**	**$ 1,708,417**
3.0 Total Aeronautical Revenue	**$ 3,539,811**	**$ 3,336,624**	**$ 2,748,131**	**$ 3,656,236**	**$ 4,686,815**
4.0 Non-Aeronautical Revenue					
4.1 Land and Non-Terminal Facility Leases/Revenues	$ 311,043	$ 342,006	$ 369,732	$ 89,035	$ 93,219
4.2 Terminal - Food/Beverage	$ 62,347	$ 84,902	$ 48,203	$ 101,644	$ 211,381
4.3 Terminal - Retail	$ -	$ -	$ -	$ -	$ -
4.4 Terminal - Services & Other	$ 123,402	$ 141,261	$ 133,866	$ 142,171	$ 151,635
4.5 Rental Cars - Excluding CFC's	$ 1,003,094	$ 933,997	$ 867,850	$ 1,289,063	$ 1,538,711
4.6 Parking & Ground Transportation	$ 2,575,422	$ 2,223,318	$ 1,349,797	$ 2,503,391	$ 3,345,184
4.7 Hotel	$ -	$ -	$ -	$ -	$ -
4.8 Other	$ 549,874	$ 767,511	$ 268,043	$ 363,268	$ 442,665
4.9 Total	**$ 4,625,182**	**$ 4,492,995**	**$ 3,037,490**	**$ 4,488,573**	**$ 5,782,795**
5.0 Total Operating Revenue	**$ 8,164,993**	**$ 7,829,619**	**$ 5,785,621**	**$ 8,144,809**	**$ 10,469,610**
6.0 Operating Expenses					
6.1 Personnel Compensation & Benefits	$ 1,611,962	$ 2,753,018	$ 2,233,414	$ 2,606,257	$ 3,975,106
6.2 Communications & Utilities	$ 473,303	$ 448,936	$ 429,164	$ 486,918	$ 496,994
6.3 Supplies & Materials	$ 341,713	$ 818,492	$ 442,592	$ 481,306	$ 493,523
6.4 Contractual Services	$ 2,144,933	$ 2,490,070	$ 2,137,555	$ 2,622,710	$ 3,380,033
6.5 Insurance Claims & Settlements	$ 58,090	$ 61,196	$ 68,615	$ 94,545	$ 112,195
6.6 Other	$ 204,464	$ 281,428	$ 177,920	$ 282,093	$ 461,734
6.9 Total Operating Expenses	**$ 4,834,465**	**$ 6,853,140**	**$ 5,489,259**	**$ 6,573,828**	**$ 8,919,585**
Operating Income (loss) without depreciation	**$ 3,330,528**	**$ 976,479**	**$ 296,362**	**$ 1,570,981**	**$ 1,550,025**

Source: Airport Records, 2024; Prepared by RS&H, 2024.

TABLE 6-4
AIRPORT REVENUES AND EXPENSES (PROJECTED FY 24 - FY 29)

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Operating Revenues						
1.0 Passenger Airline Aeronautical Revenue						
1.1 Passenger Airline Landing Fees	$ 813,939	$ 884,890	$ 962,026	$ 1,045,885	$ 1,137,055	$ 1,236,171
1.2 Terminal Arrival Fees, Rents & Utilities	$ 2,282,672	$ 2,481,652	$ 2,697,977	$ 2,933,159	$ 3,188,841	$ 3,248,792
1.3 Terminal area apron charges/tiedowns	$ 135,148	$ 140,419	$ 145,895	$ 151,585	$ 157,497	$ 163,639
1.4 Federal Inspection Fees	$ -	$ -	$ -	$ -	$ -	$ -
1.5 Other Passenger Aeronautical Fees	$ -	$ -	$ -	$ -	$ -	$ -
1.6 Total	**$ 3,231,759**	**$ 3,506,960**	**$ 3,805,897**	**$ 4,130,629**	**$ 4,483,393**	**$ 4,648,602**
2.0 Non-Passenger Aeronautical Revenue						
2.1 Landing Fees from Cargo	$ 20,744	$ 21,652	$ 22,599	$ 23,588	$ 24,619	$ 25,696
2.2 Landing Fees from General Aviation & Military	$ 37,846	$ 39,322	$ 40,855	$ 42,448	$ 44,104	$ 45,824
2.3 FBO revenue: Contract or sponsor-operated	$ 371,157	$ 391,003	$ 411,911	$ 433,937	$ 457,140	$ 481,584
2.4 Cargo & Hangar Rentals	$ 423,844	$ 440,374	$ 457,549	$ 475,393	$ 493,934	$ 513,197
2.5 Aviation Fuel Tax Retained for Airport Use	$ -	$ -	$ -	$ -	$ -	$ -
2.6 Fuel Sales net Profit/Loss or Fuel Flowage Fees	$ 557,836	$ 579,592	$ 602,196	$ 625,681	$ 650,083	$ 675,436
2.7 Security Reimbursement from Federal Government	$ 119,319	$ 123,972	$ 128,807	$ 133,831	$ 139,050	$ 144,473
2.8 Other Non-Passenger Aeronautical Revenue	$ 249,492	$ 259,222	$ 269,332	$ 279,836	$ 290,749	$ 302,089
2.9 Total	**$ 1,780,238**	**$ 1,855,137**	**$ 1,933,249**	**$ 2,014,714**	**$ 2,099,679**	**$ 2,188,299**
3.0 Total Aeronautical Revenue	**$ 5,011,997**	**$ 5,362,097**	**$ 5,739,146**	**$ 6,145,342**	**$ 6,583,072**	**$ 6,836,901**
4.0 Non-Aeronautical Revenue						
4.1 Land and Non-Terminal Facility Leases/Revenues	$ 96,855	$ 100,632	$ 104,557	$ 108,634	$ 112,871	$ 117,273
4.2 Terminal - Food/Beverage	$ 229,807	$ 249,839	$ 271,618	$ 295,295	$ 321,035	$ 349,020
4.3 Terminal - Retail	$ -	$ -	$ -	$ -	$ -	$ -
4.4 Terminal - Services & Other	$ 159,672	$ 168,134	$ 177,045	$ 186,429	$ 196,309	$ 206,714
4.5 Rental Cars - Excluding CFC's	$ 1,672,840	$ 1,818,661	$ 1,977,193	$ 2,149,545	$ 2,336,920	$ 2,540,629
4.6 Parking & Ground Transportation	$ 3,636,783	$ 3,953,800	$ 4,298,452	$ 4,673,147	$ 5,080,504	$ 5,523,371
4.7 Hotel	$ -	$ -	$ -	$ -	$ -	$ -
4.8 Other	$ 459,929	$ 477,866	$ 496,503	$ 515,867	$ 535,985	$ 556,889
4.9 Total	**$ 6,255,885**	**$ 6,768,933**	**$ 7,325,368**	**$ 7,928,916**	**$ 8,583,626**	**$ 9,293,895**
5.0 Total Operating Revenue	**$ 11,267,882**	**$ 12,131,030**	**$ 13,064,514**	**$ 14,074,259**	**$ 15,166,698**	**$ 16,130,797**
6.0 Operating Expenses						
6.1 Personnel Compensation & Benefits	$ 3,690,017	$ 3,912,318	$ 4,148,012	$ 4,397,905	$ 4,662,853	$ 4,943,762
6.2 Communications & Utilities	$ 733,892	$ 778,105	$ 824,981	$ 874,681	$ 927,376	$ 983,245
6.3 Supplies & Materials	$ 699,513	$ 741,655	$ 786,335	$ 833,707	$ 883,933	$ 937,185
6.4 Contractual Services	$ 3,957,923	$ 4,196,364	$ 4,449,170	$ 4,717,207	$ 5,001,390	$ 5,302,694
6.5 Insurance Claims & Settlements	$ 142,030	$ 150,587	$ 159,659	$ 169,277	$ 179,475	$ 190,288
6.6 Other	$ 415,433	$ 440,461	$ 466,996	$ 495,129	$ 524,958	$ 556,584
6.9 Total Operating Expenses	**$ 9,456,937**	**$ 10,026,661**	**$ 10,630,708**	**$ 11,271,145**	**$ 11,950,165**	**$ 12,670,092**
Operating Income (loss) without Depreciation	**$ 1,810,945**	**$ 2,104,369**	**$ 2,433,806**	**$ 2,803,113**	**$ 3,216,533**	**$ 3,460,705**

Source: Airport Records, 2024; Prepared by RS&H, 2024

TABLE 6-5
AIRPORT REVENUES AND EXPENSES (PROJECTED FY 30 - FY 34)

	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034
Operating Revenues					
1.0 Passenger Airline Aeronautical Revenue					
1.1 Passenger Airline Landing Fees	$ 1,259,411	$ 1,283,088	$ 1,307,210	$ 1,331,786	$ 1,356,824
1.2 Terminal Arrival Fees, Rents & Utilities	$ 3,309,869	$ 3,372,094	$ 3,435,490	$ 3,500,077	$ 3,565,878
1.3 Terminal area apron charges/tiedowns	$ 170,021	$ 176,652	$ 183,541	$ 190,699	$ 198,137
1.4 Federal Inspection Fees	$ -	$ -	$ -	$ -	$ -
1.5 Other Passenger Aeronautical Fees	$ -	$ -	$ -	$ -	$ -
1.6 Total	**$ 4,739,301**	**$ 4,831,835**	**$ 4,926,241**	**$ 5,022,562**	**$ 5,120,839**
2.0 Non-Passenger Aeronautical Revenue					
2.1 Landing Fees from Cargo	$ 26,820	$ 27,994	$ 29,218	$ 30,496	$ 31,830
2.2 Landing Fees from General Aviation & Military	$ 47,611	$ 49,468	$ 51,397	$ 53,402	$ 55,484
2.3 FBO revenue: Contract or sponsor-operated	$ 507,335	$ 534,463	$ 563,042	$ 593,149	$ 624,866
2.4 Cargo & Hangar Rentals	$ 533,212	$ 554,007	$ 575,613	$ 598,062	$ 621,387
2.5 Aviation Fuel Tax Retained for Airport Use	$ -	$ -	$ -	$ -	$ -
2.6 Fuel Sales net Profit/Loss or Fuel Flowage Fees	$ 701,778	$ 729,147	$ 757,584	$ 787,130	$ 817,828
2.7 Security Reimbursement from Federal Government	$ 150,107	$ 155,962	$ 162,044	$ 168,364	$ 174,930
2.8 Other Non-Passenger Aeronautical Revenue	$ 313,870	$ 326,111	$ 338,829	$ 352,044	$ 365,773
2.9 Total	**$ 2,280,734**	**$ 2,377,152**	**$ 2,477,729**	**$ 2,582,647**	**$ 2,692,099**
3.0 Total Aeronautical Revenue	**$ 7,020,035**	**$ 7,208,987**	**$ 7,403,970**	**$ 7,605,209**	**$ 7,812,937**
4.0 Non-Aeronautical Revenue					
4.1 Land and Non-Terminal Facility Leases/Revenues	$ 121,847	$ 126,599	$ 131,536	$ 136,666	$ 141,996
4.2 Terminal - Food/Beverage	$ 355,581	$ 362,266	$ 369,077	$ 376,016	$ 383,085
4.3 Terminal - Retail	$ -	$ -	$ -	$ -	$ -
4.4 Terminal - Services & Other	$ 217,670	$ 229,206	$ 241,354	$ 254,146	$ 267,616
4.5 Rental Cars - Excluding CFC's	$ 2,588,393	$ 2,637,055	$ 2,686,631	$ 2,737,140	$ 2,788,598
4.6 Parking & Ground Transportation	$ 5,627,210	$ 5,733,002	$ 5,840,782	$ 5,950,589	$ 6,062,460
4.7 Hotel	$ -	$ -	$ -	$ -	$ -
4.8 Other	$ 578,607	$ 601,173	$ 624,619	$ 648,979	$ 674,289
4.9 Total	**$ 9,489,308**	**$ 9,689,301**	**$ 9,893,999**	**$ 10,103,535**	**$ 10,318,043**
5.0 Total Operating Revenue	**$ 16,509,344**	**$ 16,898,287**	**$ 17,297,969**	**$ 17,708,744**	**$ 18,130,981**
6.0 Operating Expenses					
6.1 Personnel Compensation & Benefits	$ 5,241,595	$ 5,557,370	$ 5,892,168	$ 6,247,136	$ 6,623,489
6.2 Communications & Utilities	$ 1,042,479	$ 1,105,283	$ 1,171,869	$ 1,242,467	$ 1,317,319
6.3 Supplies & Materials	$ 993,645	$ 1,053,506	$ 1,116,973	$ 1,184,264	$ 1,255,609
6.4 Contractual Services	$ 5,622,150	$ 5,960,851	$ 6,319,957	$ 6,700,697	$ 7,104,375
6.5 Insurance Claims & Settlements	$ 201,751	$ 213,906	$ 226,792	$ 240,455	$ 254,941
6.6 Other	$ 590,115	$ 625,665	$ 663,358	$ 703,321	$ 745,692
6.9 Total Operating Expenses	**$ 13,433,390**	**$ 14,242,672**	**$ 15,100,708**	**$ 16,010,436**	**$ 16,974,970**
Operating Income (loss) without Depreciation	**$ 3,075,954**	**$ 2,655,616**	**$ 2,197,261**	**$ 1,698,308**	**$ 1,156,011**

Source: Airport Records, 2024; Prepared by RS&H, 2024

TABLE 6-6
AIRPORT REVENUES AND EXPENSES (PROJECTED FY 35 - FY 39)

	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039
Operating Revenues					
1.0 Passenger Airline Aeronautical Revenue					
1.1 Passenger Airline Landing Fees	$ 1,382,332	$ 1,408,320	$ 1,434,796	$ 1,461,770	$ 1,489,251
1.2 Terminal Arrival Fees, Rents & Utilities	$ 3,632,917	$ 3,701,216	$ 3,770,799	$ 3,841,690	$ 3,913,913
1.3 Terminal area apron charges/tiedowns	$ 205,864	$ 213,893	$ 222,235	$ 230,902	$ 239,907
1.4 Federal Inspection Fees	$ -	$ -	$ -	$ -	$ -
1.5 Other Passenger Aeronautical Fees	$ -	$ -	$ -	$ -	$ -
1.6 Total	**$ 5,221,113**	**$ 5,323,428**	**$ 5,427,829**	**$ 5,534,361**	**$ 5,643,072**
2.0 Non-Passenger Aeronautical Revenue					
2.1 Landing Fees from Cargo	$ 33,223	$ 34,676	$ 36,193	$ 37,776	$ 39,429
2.2 Landing Fees from General Aviation & Military	$ 57,648	$ 59,897	$ 62,232	$ 64,660	$ 67,181
2.3 FBO revenue: Contract or sponsor-operated	$ 658,278	$ 693,478	$ 730,559	$ 769,623	$ 810,777
2.4 Cargo & Hangar Rentals	$ 645,621	$ 670,800	$ 696,961	$ 724,143	$ 752,384
2.5 Aviation Fuel Tax Retained for Airport Use	$ -	$ -	$ -	$ -	$ -
2.6 Fuel Sales net Profit/Loss or Fuel Flowage Fees	$ 849,723	$ 882,863	$ 917,294	$ 953,069	$ 990,238
2.7 Security Reimbursement from Federal Government	$ 181,752	$ 188,841	$ 196,205	$ 203,857	$ 211,808
2.8 Other Non-Passenger Aeronautical Revenue	$ 380,038	$ 394,860	$ 410,260	$ 426,260	$ 442,884
2.9 Total	**$ 2,806,284**	**$ 2,925,413**	**$ 3,049,705**	**$ 3,179,388**	**$ 3,314,701**
3.0 Total Aeronautical Revenue	**$ 8,027,397**	**$ 8,248,842**	**$ 8,477,534**	**$ 8,713,749**	**$ 8,957,772**
4.0 Non-Aeronautical Revenue					
4.1 Land and Non-Terminal Facility Leases/Revenues	$ 147,534	$ 153,287	$ 159,266	$ 165,477	$ 171,931
4.2 Terminal - Food/Beverage	$ 390,287	$ 397,624	$ 405,099	$ 412,715	$ 420,474
4.3 Terminal - Retail	$ -	$ -	$ -	$ -	$ -
4.4 Terminal - Services & Other	$ 281,799	$ 296,735	$ 312,462	$ 329,022	$ 346,460
4.5 Rental Cars - Excluding CFC's	$ 2,841,024	$ 2,894,435	$ 2,948,850	$ 3,004,289	$ 3,060,769
4.6 Parking & Ground Transportation	$ 6,176,434	$ 6,292,551	$ 6,410,851	$ 6,531,375	$ 6,654,165
4.7 Hotel	$ -	$ -	$ -	$ -	$ -
4.8 Other	$ 700,586	$ 727,909	$ 756,298	$ 785,793	$ 816,439
4.9 Total	**$ 10,537,664**	**$ 10,762,542**	**$ 10,992,826**	**$ 11,228,672**	**$ 11,470,239**
5.0 Total Operating Revenue	**$ 18,565,061**	**$ 19,011,383**	**$ 19,470,360**	**$ 19,942,421**	**$ 20,428,011**
6.0 Operating Expenses					
6.1 Personnel Compensation & Benefits	$ 7,022,515	$ 7,445,580	$ 7,894,132	$ 8,369,707	$ 8,873,932
6.2 Communications & Utilities	$ 1,396,679	$ 1,480,821	$ 1,570,032	$ 1,664,617	$ 1,764,900
6.3 Supplies & Materials	$ 1,331,252	$ 1,411,452	$ 1,496,484	$ 1,586,638	$ 1,682,224
6.4 Contractual Services	$ 7,532,371	$ 7,986,152	$ 8,467,270	$ 8,977,373	$ 9,518,206
6.5 Insurance Claims & Settlements	$ 270,300	$ 286,584	$ 303,849	$ 322,154	$ 341,562
6.6 Other	$ 790,616	$ 838,246	$ 888,745	$ 942,287	$ 999,054
6.9 Total Operating Expenses	**$ 17,997,611**	**$ 19,081,860**	**$ 20,231,429**	**$ 21,450,253**	**$ 22,742,503**
Operating Income (loss) without Depreciation	**$ 567,450**	**$ (70,477)**	**$ (761,069)**	**$ (1,507,832)**	**$ (2,314,492)**

Source: Airport Records, 2024; Prepared by RS&H, 2024

Local funding options also include the following:

- Public Private Partnerships: A Public Private Partnership (P3) is an arrangement between the public and private sectors whereby services traditionally provided by the public sector are provided by the private sector. These agreements target setting a clear understanding of shared objectives for delivery of public infrastructure and/or public services. A P3 can take many forms, but in relation to airport development, it is simply another funding strategy to be considered in the development, implementation and operation of facilities and infrastructure projects.

- External and/or Private Funding: For SBP, there are several projects in the ACIP that will require funds from external sources, which can be private interests or other public partners. Such projects include hangar development, or other landside facilities such as vehicle parking, and development of Santa Fe Square. The timing of these types of projects are demand-dependent; however, attracting private interests can be more effective by partnering economic development agencies at the local or state level to leverage opportunities and tax or job creation incentives if the projects are of a substantial scale and scope.

6.3.4 Passenger Facility Charges

The PFC Program is available to fund certain eligible capital development projects at publicly owned commercial passenger service airports. This program permits the collection of PFCs at a level up to $4.50 per enplaned passenger. PFCs are capped at a maximum of $4.50 per flight segment with a maximum of two PFCs charged on a one-way trip, or four PFCs charged on a round trip, for a maximum total of $18.00. Projects must be FAA-approved to qualify for using these funds. Eligible projects include those which enhance safety, security, or capacity; reduce noise; or increase air carrier competition. PFCs are collected by air carriers when tickets are sold and are later remitted to the airport, less a handling fee of $0.11 per collected PFC.

SBP was first approved for application to collect PFCs beginning February 1, 1993. Since then, the Airport has received approval from the FAA for four PFC applications, the last of which is presently collecting at a $4.50 rate with an anticipated expiration date of June 1, 2024. The Airport has received approval to collect and use a total of $18,693,142 in PFC funds since its first application.

It should be noted that Congress could move to raise the PFC rate cap, which has been an important issue in the U.S. airport and airline industry for many years. An increase to the PFC rate would have a substantial impact on collections for airports across the country, including SBP.

To fund projects added to the ACIP from this Master Plan, the existing PFC program at SBP can be amended or extended by following the FAA PFC application process.

6.3.5 Customer Facility Charges

Collections from Customer Facility Charges (CFC) are another form of airport revenue that are generally limited to funding of rental car facilities, associated infrastructure, and their operating costs. A CFC is a charge paid by rental car customers per the number of contract days that a vehicle has been rented. Unlike PFCs, CFCs do not require approval from the FAA or any other Federal agency. CFCs are generally negotiated and implemented contractually between the airport and the rental car companies and are collected under specific terms including use of the funds. CFC revenue is typically limited to funding rental car facilities and operating costs at the airport, rental car related capital expense (debt service), and rental car related operating and maintenance

expenses. Between FY 2010 and FY 2023, SBP has collected CFCs totaling about $4.3 million. The current CFC rate is $10.00 per customer transaction per rental day.

6.3.6 Issuance of Debt

For large projects that are not eligible for federal funding but may have widespread local appeal and/or public support, airports frequently utilize capital market bonds to finance long-term construction projects. Loans from public financing agencies or commercial paper can also be used. There are four basic types of municipal bonds available to SBP: general obligation (GO) bonds, general airport revenue bonds (GARB), PFC-backed bonds, and special facility bonds, which are summarized as follows:

- GO Bonds: Supported by the overall tax base of the issuing entity (the airport sponsor), GO bonds often carry the lowest interest rate.
- GARB: Repaid by the revenues generated by the airport, or other revenues as defined in the bond indenture, GARBs are the most common form of airport debt.
- PFC-Backed Bonds: Either stand-alone or "double-barrel," PFC-backed bonds are backed solely by PFC revenues or by PFC revenues and other airport revenues generated by rentals, fees, and charges. General airport revenues can be pledged as a backup if enplanement activity decreases and PFC revenues do not meet the obligation.
- Special Facility Bonds: Special facility bonds are used to construct a terminal or facility for a named airline, and are backed by lease payments which are structured to cover debt service to the bonds.

6.3.6.1 California Infrastructure and Economic Development Bank (IBank)

SBP also has access to, and has used a unique California debt service provider called the California Infrastructure and Economic Development Bank (IBank). The California IBank "was created in 1994 to finance public infrastructure and private development." SBP used an IBank loan to fund select portions of the 2016 terminal project that were mostly non-eligible for funding under AIP and totaled about $10 Million. The airport continues to pay down debt on the IBank loan. The IBank "has broad authority to issue tax-exempt and taxable revenue bonds, provide financing to public agencies, provide credit enhancements, acquire or lease facilities, and leverage State and Federal funds."

A review of existing debt obligations of the County for the Airport indicates annual debt service budgeted at $241,000 for FY 2024. Since 2016, the County has primarily utilized loans for specific projects at SBP, and outstanding debt is related to the following:

- California Infrastructure and Economic Development (IBank) Loan for New Terminal (2016)
- On-Bill Financing PG&E Equipment Loan (2023)

Debt service for the IBank Loan qualifies for use of PFC revenues.

Table 6-7 presents a summary of annual debt service and the Debt Coverage Ratio (DCR) for the Airport for the planning period. As shown, SBP's DCR is projected to improve as the County pays down outstanding debt and as net revenues grow.

The DCR is a metric of net revenues to annual debt service, which assesses debt capacity and the ability of operating income to cover debt service payments. DCR is an integral metric used by lenders to evaluate creditworthiness. Typically, for long-term debt secured by revenues or PFCs, the standard minimum threshold accepted by lending institutions is 1.25.

TABLE 6-7
AIRPORT DEBT COVERAGE RATIO (HISTORICAL AND PROJECTED)

	Historical				
	FY 2019	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**
Category					
Operating Revenues	$8,164,993	$7,829,619	$5,785,621	$8,144,809	$10,469,610
Total Expenses	$4,834,465	$6,853,140	$5,489,259	$6,573,828	$8,919,585
Net Revenues	**$3,330,528**	**$976,479**	**$296,362**	**$1,570,981**	**$1,550,025**
Annual Debt Service	$820,334	$2,209,709	$1,708,576	$201,681	$241,279
Debt Coverage Ratio (DCR)	**25%**	**226%**	**577%**	**13%**	**16%**

	Projected					
	FY 2024	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**
Category						
Operating Revenues	$11,267,882	$12,131,030	$13,064,514	$14,074,259	$15,166,698	$16,130,797
Total Expenses	$9,456,937	$10,026,661	$10,630,708	$11,271,145	$11,950,165	$12,670,092
Net Revenues	**$1,810,945**	**$2,104,369**	**$2,433,806**	**$2,803,113**	**$3,216,533**	**$3,460,705**
Annual Debt Service	$240,983	$240,674	$240,355	$236,702	$199,800	$199,448
Debt Coverage Ratio (DCR)	**13.3%**	**11.4%**	**9.9%**	**8.4%**	**6.2%**	**5.8%**

	Projected				
	FY 2030	**FY 2031**	**FY 2032**	**FY 2033**	**FY 2034**
Category					
Operating Revenues	$16,509,344	$16,898,287	$17,297,969	$17,708,744	$18,130,981
Total Expenses	$13,433,390	$14,242,672	$15,100,708	$16,010,436	$16,974,970
Net Revenues	**$3,075,954**	**$2,655,616**	**$2,197,261**	**$1,698,308**	**$1,156,011**
Annual Debt Service	$199,083	$198,706	$198,315	$197,912	$197,494
Debt Coverage Ratio (DCR)	**6.5%**	**7.5%**	**9.0%**	**11.7%**	**17.1%**

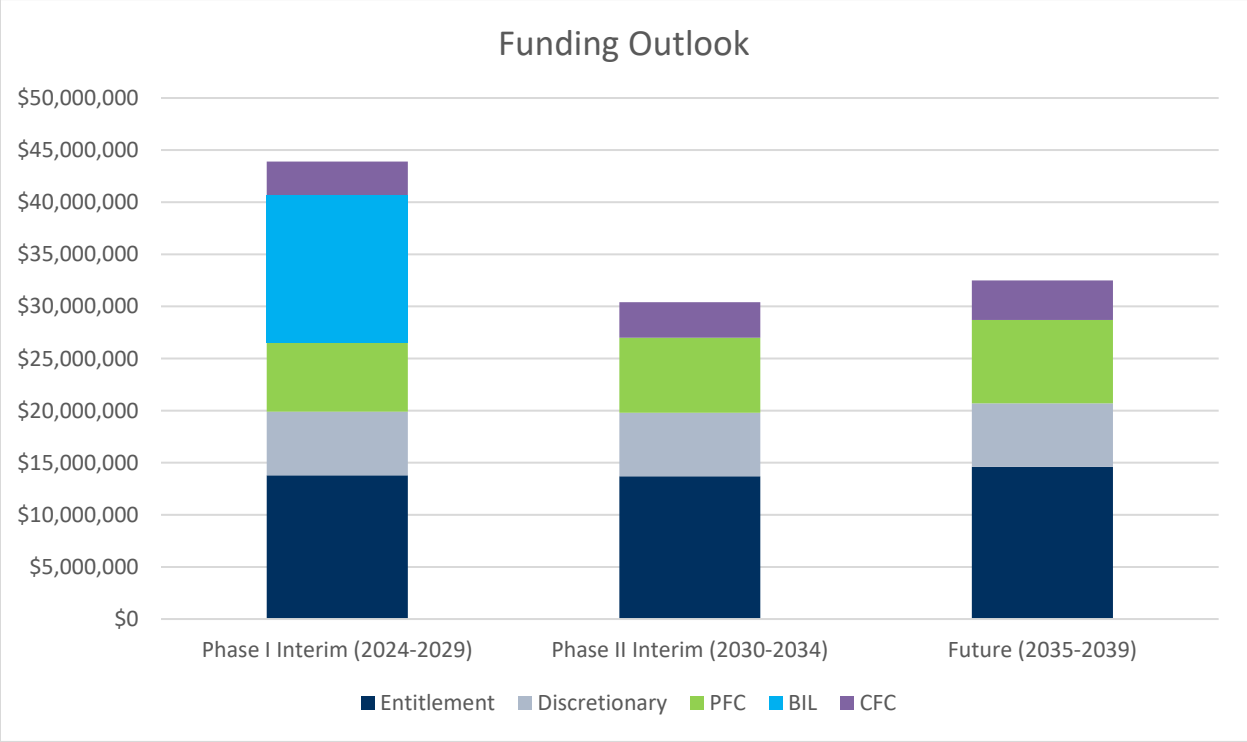
	Projected				
	FY 2035	**FY 2036**	**FY 2037**	**FY 2038**	**FY 2039**
Category					
Operating Revenues	$18,565,061	$19,011,383	$19,470,360	$19,942,421	$20,428,011
Total Expenses	$17,997,611	$19,081,860	$20,231,429	$21,450,253	$22,742,503
Net Revenues	**$567,450**	**-$70,477**	**-$761,069**	**-$1,507,832**	**-$2,314,492**
Annual Debt Service	$197,062	$196,615	$195,674	$195,180	$194,668
Debt Coverage Ratio (DCR)	**34.7%**	**-279.0%**	**-25.7%**	**-12.9%**	**-8.4%**

Source: Airport Records, 2024; Prepared by RS&H, 2024.

6.4 FUNDING OUTLOOK

Based on the overview of funding sources outlined in this section, it is reasonable to anticipate funding availability to continue at historical levels. However, if actual passenger enplanements come in near forecasted activity levels, AIP entitlement funds, PFC, and CFC revenues can be expected to improve over historical levels. Following these assumptions, funding levels are projected as shown in *Figure 6-2*.

FIGURE 6-2
FUNDING OUTLOOK BY PERIOD (PROJECTED)



Source: RS&H Analysis, 2024.

Funding available to SBP may reach nearly $44 million during the Phase I Interim period due in large part to BIL AIG allocations. For Phase II Interim period, total funding is anticipated to increase from AIP-entitlements, PFC, and CFC sources, but decreasing overall due to the sunsetting of BIL program funding. Funding availability may reach about $33 million in the Future period.

This funding outlook assumes that discretionary grant funds will remain at historical levels, which is about $1.2 million annually, which amounts to 19 percent of all funds for the planning period.

Table 6-8 provides the outlook of potential funding breakdown illustrated in *Figure 6-2.*

TABLE 6-8
FUNDING OUTLOOK BY PERIOD AND SOURCE (PROJECTED)

Funding Source	Phase I Interim FY 2024-2029	Phase II Interim FY 2030-2034	Future FY 2035-2039
Entitlement	$13,800,000	$13,700,000	$14,600,000
Discretionary	$7,300,000	$6,100,000	$6,100,000
PFC	$6,600,000	$7,200,000	$8,000,000
BIL	$7,100,000	$0	$0
CFC	$3,200,000	$3,400,000	$3,800,000
Total	**$37,700,000**	**$30,300,000**	**$32,300,000**

Source: RS&H Analysis, 2024.

6.5 ACIP AND FUNDING PLAN

This section presents the ACIP for SBP for Phase I Interim, Phase II Interim, and Future periods through 2039, and a funding plan that identifies funding allocations by source based upon availability and project eligibility. The ACIP funding plan developed for SBP used the following assumptions:

- **Entitlement Funds** – funds from FAA AIP entitlement funds available to the Airport will grow through the period following the forecast of enplanements in *Chapter 2, Aviation Demand Forecast*
- **Discretionary Funds** – discretionary funds were allocated by project based upon AIP-eligibility.
- **BIL Funds** – funds from BIL AIG allocations are estimated to be the average of allocations for FY 2022-2024, which is $2,360,532
- **PFC Funds** – funds from PFC collections available for ACIP projects are forecasted based upon the forecast of enplanements from Chapter 2, and reduced based on County records that show use of PFC funds for certain debt service.
- **CFC Funds** – funds from CFC revenues are projected to follow the forecast of enplanements.
- **Local Share** – local or sponsor fund available for ACIP projects are assumed to be 55 percent of net income annually before depreciation.

The planning-level cost estimates provided for each project are Rough Order of Magnitude (ROM) estimates. ROM estimates provide an approximation of costs and are valuable in the early planning stages to gauge the financial implications of the proposed projects. As the projects progress, more detailed and accurate cost estimates will be developed to refine the budgeting and funding requirements.

The Master Plan ACIP is presented in *Table 6-9***.** It includes project names and descriptions, which are ordered such that enabling projects precede larger projects. Projects included in Phase I Interim are those anticipated to be completed from FY 2025-2029, Phase II Interim projects between FY 2030-2034, and Future projects from FY 2035-2039.

TABLE 6-9
MASTER PLAN ACIP

Project No.	Project	Total Project Cost	FAA Participation			Federal Share Total	PFC	CFC	Local Share	Unmet Need
			Entitlement	Discretionary	BIL AIG					
Phase I Interim (2024-2029)										
1	Perimeter Road Access Control Signs	$10,000	$10,000	$0	$0	$10,000	$0	$0	$0	$0
2	Relocate Movement Area Boundary Markings	$20,000	$20,000	$0	$0	$20,000	$0	$0	$0	$0
3	Construct Taxiway B3 (Existing Twy C South)	$4,243,665	$1,941,228	$1,906,079	$0	$3,847,307	$375,001	$0	$21,357	$0
4	Realign Taxiway A (Zone 2)	$5,579,758	$4,845,777	$0	$212,831	$5,058,608	$499,223	$0	$21,927	$0
5	Demolish Rwy 25 Blast Pad and Realign Taxiways E and F	$3,415,756	$0	$0	$3,096,725	$3,096,725	$297,105	$0	$21,926	$0
6	Construct Westside Hangar (Phase I)	$10,080,000	$0	$0	$0	$0	$0	$0	$0	$10,080,000
7	Convert Sites J/K into Interim-Use Vehicle Parking (Phase I)	$4,190,000	$419,000	$0	$0	$419,000	$0	$0	$39,135	$3,731,865
8	Relocate Rwy Hold Locations and Rehab Twy A (Seal Coat)	$2,173,093	$1,673,838	$0	$212,830	$1,886,668	$264,498	$0	$21,927	$0
9	Remove Portion of Embankment Near Spirit of San Luis Restaurant	$80,000	$7,472	$0	$72,528	$80,000	$0	$0	$0	$0
10	Reconstruct Taxiway B	$1,630,000	$0	$1,477,758	$0	$1,477,758	$0	$0	$152,242	$0
11	Relocate Airfield Electrical Vault	$1,584,512	$0	$1,436,519	$0	$1,436,519	$0	$0	$147,993	$0
12	Demolish Old Terminal and Restaurant	$1,520,000	$137,803	$0	$0	$137,803	$0	$0	$14,197	$1,368,000
13	Construct Taxiway A6 (New - Near Existing Rwy 26 Threshold)	$1,720,000	$0	$160,648	$1,559,352	$1,720,000	$0	$0	$0	$0
14	Construct New Airport Administration Building	$9,790,000	$0	$0	$0	$0	$0	$0	$0	$9,790,000
15	Demolish Old ACI Hangar	$2,900,000	$1,971,855	$0	$0	$1,971,855	$928,145	$0	$0	$0
16	Expand Terminal Building (Phase I)	$8,510,000	$2,711,941	$5,786,375	$0	$8,498,315	$11,685	$0	$0	$0
	Total Short-Term	**$57,500,000**	**$13,800,000**	**$10,800,000**	**$5,200,000**	**$29,800,000**	**$2,400,000**	**$0**	**$500,000**	**$25,000,000**
Phase II Interim (2030-2034)										
17	Decommission Runway 7-25	$2,680,000	$0	$2,429,688	$0	$2,429,688	$0	$0	$250,312	$0
18	Relocate Segmented Circle	$5,000,000	$1,125,000	$3,408,000	$0	$4,533,000	$0	$0	$467,000	$0
19	Remove Runway 11 Displaced Threshold	$10,180,000	$1,603,368	$7,558,632	$1,018,000	$10,180,000	$0	$0	$0	$0
20	Construct Westside Access Road	$1,010,000	$0	$0	$0	$0	$0	$0	$0	$1,010,000
21	Expand Westside Apron	$10,240,000	$2,728,368	$7,511,632	$0	$10,240,000	$0	$0	$0	$0
22	Construct Westside Hangar (Phase II)	$14,180,000	$0	$0	$909,331	$909,331	$0	$0	$0	$13,270,669
23	Reconstruct Taxiway E (West of Runway 11-29)	$1,750,000	$0	$1,586,550	$0	$1,586,550	$0	$0	$163,450	$0
24	Relocate ATCT	$60,250,000	$2,728,368	$54,622,650	$0	$57,351,018	$2,898,982	$0	$0	$0
25	Develop Santa Fe Square	$4,830,000	$0	$0	$0	$0	$0	$0	$0	$4,830,000
26	Demolish Rental Car Service Center	$360,000	$0	$0	$0	$0	$0	$360,000	$0	$0
27	Reconfigure Terminal Area Landside	$1,810,000	$0	$0	$0	$0	$0	$0	$0	$1,810,000
28	Reconfigure Site J and Site K (Phase II)	$7,720,000	$5,456,737	$1,542,215	$0	$6,998,952	$0	$0	$721,048	$0
	Total Phase II Interim (Rounded)	**$120,100,000**	**$13,700,000**	**$78,700,000**	**$2,200,000**	**$94,600,000**	**$2,900,000**	**$400,000**	**$1,700,000**	**$20,800,000**

Project No.	Project	Total Project Cost	FAA Participation			Federal Share Total	PFC	CFC	Local Share	Unmet Need
			Entitlement	Discretionary	BIL AIG					
Future (2035-2039)										
PE	Programmatic CEQA and NEPA Entitlement	$1,500,000	$1,359,900	$0	$0	$1,359,900	$0	$0	$140,100	$0
29	Expand Terminal Building (Phase II)	$4,080,000	$779,316	$2,774,196	$0	$3,553,512	$526,488	$0	$0	$0
30	Reconfigure Terminal Apron	$1,360,000	$779,316	$453,660	$0	$1,232,976	$115,160	$0	$11,864	$0
31	Acquire Land (Parcel A) (A.P.N: 076-382-005)	$8,620,000	$2,918,532	$4,896,360	$0	$7,814,892	$729,911	$0	$75,197	$0
32	Acquire Land (Parcel B) (A.P.N: 076-411-055)	$8,000,000	$0	$7,252,800	$0	$7,252,800	$677,412	$0	$69,788	$0
33	Acquire Land (Parcel C) (A.P.N: 076-401-043)	$610,000	$0	$553,026	$0	$553,026	$51,653	$0	$5,321	$0
34	Acquire Land (Parcel D) (A.P.N: 076-401-065)	$6,920,000	$2,918,532	$3,355,140	$0	$6,273,672	$585,961	$0	$60,367	$0
35	Acquire Land (Parcel E) (A.P.N: 076-401-032)	$5,470,000	$0	$4,959,102	$0	$4,959,102	$463,180	$0	$47,718	$0
36	Acquire Land (Parcel F) (A.P.N: 076-371-031)	$2,840,000	$0	$2,574,744	$0	$2,574,744	$240,481	$0	$24,775	$0
37	Acquire Land (Parcel G) (A.P.N: 076-062-046)	$1,310,000	$1,187,646	$122,354	$0	$1,310,000	$0	$0	$0	$0
38	Realign Public Access Driveway	$890,000	$0	$0	$0	$0	$0	$0	$0	$890,000
39	Realign Hoover Avenue	$6,810,000	$1,730,886	$4,443,060	$0	$6,173,946	$576,647	$0	$59,407	$0
40	Reconfigure Buckley Road	$7,100,000	$2,918,532	$3,518,328	$0	$6,436,860	$601,203	$0	$0	$61,937
41	Reconfigure Site N	$6,310,000	$0	$5,720,646	$0	$5,720,646	$589,354	$0	$0	$0
42	Realign Taxiway A	$33,430,000	$0	$30,307,638	$0	$30,307,638	$3,122,362	$0	$0	$0
43	Extend Taxiway M (Exist.) / Taxiway B (Fut.)	$6,970,000	$0	$6,319,002	$0	$6,319,002	$650,998	$0	$0	$0
44	Shift Runway 11-29	$147,200,000	$0	$133,451,520	$0	$133,451,520	$4,185,092	$0	$0	$9,563,388
	Total Future (Rounded)	**$249,500,000**	**$14,600,000**	**$210,800,000**	**$0**	**$225,400,000**	**$16,000,000**	**$0**	**$600,000**	**$7,700,000**
	Total ACIP (Rounded)	**$427,100,000**	**$42,100,000**	**$300,300,000**	**$7,400,000**	**$349,800,000**	**$21,300,000**	**$400,000**	**$2,800,000**	**$53,500,000**

Source: RS&H Analysis, 2024.

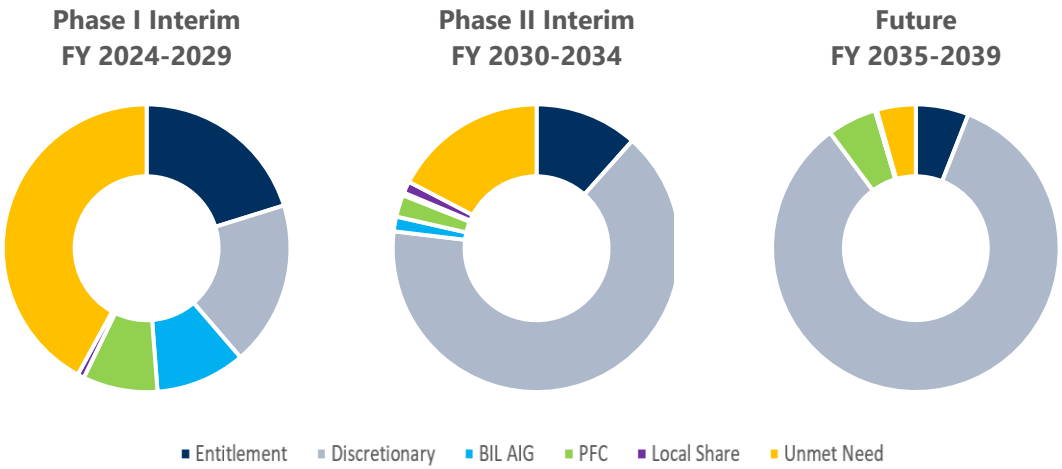
6.5.1 Funding Needs

As shown in *Table 6-9*, the capital program funding need for SBP is substantial, reaching $429 million in total project costs for the planning period. The ACIP indicates a total need of $342 million in AIP entitlement and discretionary grants, $27 million in local funds (including AIP-match, PFCs and CFCs), and $57 million in unmet needs. *Table 6-10* provides a breakdown of ACIP funding needs by period and source.

TABLE 6-10
MASTER PLAN ACIP FUNDING NEEDS (ROUNDED)

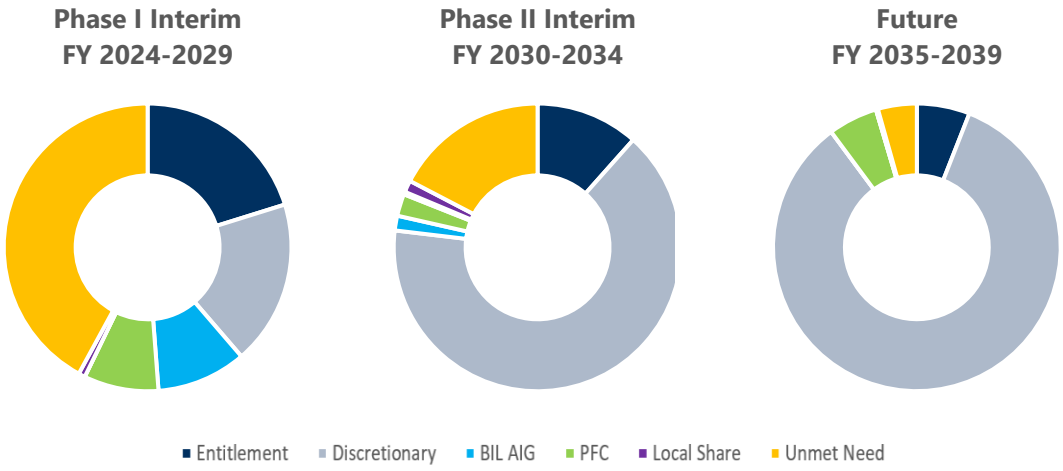
Funding Source	Phase I Interim FY 2024-2029	Phase II Interim FY 2030-2034	Future FY 2035-2039
Entitlement	$13,800,000	$13,700,000	$14,600,000
Discretionary	$10,800,000	$78,700,000	$210,800,000
BIL	$5,200,000	$2,200,000	$0
PFC	$2,400,000	$2,900,000	$16,000,000
CFC	$0	$400,000	$0
Local Share	$500,000	$1,700,000	$600,000
Unmet Need	$25,000,000	$20,800,000	$7,700,000

Source: RS&H Analysis, 2024.



illustrates how funding needs evolve over the planning period. In Phase I Interim, entitlement and discretionary grants are similar in size, as are BIL funds and PFC allocations to project costs. The unmet funding need is $25 million. In Phase II Interim, however, costs associated with relocation of the Airport Traffic Control Tower have a large impact on the need for discretionary funds. In the Future period, land acquisitions and other projects to enable the shift of Runway 11-29 push the need for federal discretionary funds to nearly $211 million.

FIGURE 6-3
FUNDING NEEDS BY PERIOD (PROJECTED)



Source: RS&H Analysis, 2024.

6.6 FUNDING AVAILABILITY AND FINANCIAL FEASIBILITY

As shown at the outset of this Chapter and detailed herein, the overall capital program funding need for SBP is estimated to surpass $427 million through 2039. The federal share is estimated to be $350 million, with the local share anticipated to reach $25 million. The funding plan also identifies unmet needs to reach $54 million, which includes ineligible but important projects, and the long-term shift of Runway 11-29.

The following provides additional details related to the use of available funds in the ACIP, and the outlook of funding availability by source:

- **SBP Available Cash** – SBP operating financial performance has produced net income (before depreciation) for the historical period, which is projected to continue based on the forecast of enplanements and modest growth for non-airline and non-aeronautical revenues. Some portion of net income can be used for capital projects, either local share of AIP-eligible projects or for non-eligible projects. Based upon the forecast of Airport revenues and expenses presented in *Table 6-4*, *Table 6-5*, and *Table 6-6,* the funding plan estimates that a cumulative of approximately $14 million may be available for capital projects over all periods, which is about 55 percent of net income. However, local cash available could be exhausted quickly by ineligible projects in the near term, namely Phase I Construction of Westside hangars and a new Airport Administration building, which together amount to about $19.9 million.

- **Entitlement Funds** – The SBP ACIP funding utilizes the projected levels of AIP entitlement funds based upon the forecast of passenger enplanements and allocates these funds for AIP-eligible projects throughout the planning period among 23 projects, which amounts to roughly $41 million through 2039. The Master Plan ACIP funding plan allocates entitlement monies based upon eligibility first, and prior to estimating the amount of funds programmed for discretionary grants, use of BIL funds, PFC, and local match funds. While entitlement funding is projected to be

significant, average annual entitlement funding of about $2.5 million has a limited effect on a program of this size, especially in the Future period where project costs are about $250 million.

- **Discretionary Grants** – SBP has received an average of just $1.2 million annually in entitlement grants since 2010 and just two discretionary awards amounting to about $25.5 million for the passenger terminal in 2015. The Master Plan ACIP has identified a significant and increased need for FAA discretionary grant support to implement the SBP capital program based upon project eligibility. As noted, the ACIP funding plan shows a need for $11 million in Phase I Interim, $79 million in Phase II Interim, and $211 million in the Future period. The total surpasses $300 million in discretionary funding support. The largest discretionary funding need per period is as follows:
    - Phase I Interim – $5.8 million for Phase I expansion of the terminal building,
    - Phase II Interim – $54.6 million for relocation of the ATCT
    - Future – $133.5 million for the shift of Runway 11-29 (cost does not include enabling projects and land acquisition)

  This is an increase of 300 percent over the 14-year, 2010-2023 historical AIP-funding level of $33 million.

- **PFC Revenues** – PFC revenues are programmed to fund more than 20 projects throughout the planning period. Examples include assisting with taxiway improvements, demolition of the ACI hangar, and terminal expansion in the Phase I Interim period. In Phase II, PFCs are utilized for the relocation of the Airport Traffic Control Tower, but PFCs are otherwise reserved for Future period projects which have a total need of $16 million for the Future period. In the Future period, PFC funds are programmed for terminal and apron expansion, roadway realignments, reconfiguration of Site N, land acquisitions, and taxiway improvements. PFC revenues can be used to reimburse for the local match of AIP grants; however, doing so will reduce the amount of PFC revenues available for other projects. The Airport's PFC program and collection rate should be monitored and the Airport should submit additional applications to maintain collection authority and reserves to support a capital program of this size.

- **BIL Program Infrastructure Funds** – The ACIP anticipates about $2.4 million annually in BIL AIG allocations for 2024-2026. In Interim Phase I, the funds are allocated to airfield projects. In Interim Phase II, the funds are allocated to additional airfield projects and Phase II of Westside hangar construction.

Beyond funding from federal and local sources for AIP-eligible projects, the Master Plan ACIP identifies an unmet need for $54 million for the planning period, mostly due to AIP-ineligible projects as follows:

- Phases I and II of Westside hangar construction – $23.2 million unmet
- Conversion of Sites J and K to temporary vehicle parking – $3.7 million unmet
- Old terminal and restaurant demolition – $1.4 million unmet
- Construction of new airport administration building – $9.8 million unmet
- Development of Santa Fe Square – $4.8 million unmet

- Reconfiguration of terminal landside – $1.8 million unmet
- Westside access road and realignment of public access driveway – $1.9 million unmet

As noted, use of Airport cash for phase one of the Westside hangar construction project and the new airport administration building will jeopardize the availability of local AIP-match funds for eligible projects. This puts the Airport in a difficult position, and likely means the deferral of such projects unless other external funding can be identified. Toward the end of the Future period (2035-2039), entitlement funding and PFC revenues could be exhausted, which will cause a delay in enabling projects and implementation of the shift of Runway 11-29.

Overall, substantial supplementary financial support will be necessary to implement the planned ACIP, especially into the Phase II Interim period (2030-2034) and the Future 2035+ period, despite indications of continued activity growth and production of net operating income for the period. Should sufficient AIP discretionary grant funding be delayed or unavailable, ACIP projects will need to be deferred to later years or the use of debt in the form of bonds or low interest loans or commercial notes may need to be considered.

SLO County Airport
Master Plan
Airport Layout Plan Narrative Report

RS&H

Airport Layout Plan Narrative Report

August 2023

San Luis Obispo, California

RS&H No.: 2260015010

Prepared by RS&H, Inc. at the direction of the County of San Luis Obispo

RS&H

"The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws."

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AIRPORT LAYOUT PLAN NARRATIVE REPORT

1 EXECUTIVE SUMMARY

This Airport Layout Plan (ALP) Narrative Report accompanies the ALP drawing set completed as part of the 2023 Airport Master Plan for SLO County Airport (SBP or Airport). The ALP drawing set serves as a visual representation of the Airport's existing facilities and planned future development. The ALP Narrative Report serves as a written summary of the findings and recommendations of the planning efforts undertaken to prepare the Airport Master Plan and the ALP drawing set. Both documents were prepared using several FAA guidelines and checklists, which included the following:

- FAA Advisory Circular 150/5300-13B, Airport Design
- FAA Advisory Circular 150/5070-6B Change 2, Airport Master Plans
- FAA ARP SOP 2.00 Standard Procedure for FAA Review and Approval of Airport Layout Plans
- FAA ARP SOP 3.00 Standard Procedure for FAA Review of Exhibit 'A' Airport Property Inventory Maps

The Airport's Preferred Development Alternative is the overall capital improvement plan derived through the Master Plan process. There are 40+ infrastructure projects that are recommended for development within the 20-year planning horizon to implement the Airport's Preferred Development Alternative. The projects are depicted in the ALP drawing set. The projects are recommended to meet forecast aviation demand and/or to meet current FAA design standards.

The projects are allocated to an implementation timeline that generally describes the timeframe for when each project should be implemented. The implementation timeline is split between the Interim timeframe and Future timeframe.

The Interim timeframe represents airfield standards and capacity enhancement projects that generally can be completed without substantial coordination with local third parties. Interim projects are subdivided into Phase I (projects that may be implemented in the near-term) and Phase II (projects that may be implemented in the mid-term). The Interim timeframe projects are depicted on Sheet 4 of the ALP drawing set.

The Future timeframe represents projects that generally require coordination with other local governmental agencies or land acquisition before they can be implemented. Future projects will be implemented in the long term, near the end of the planning horizon. The Future timeframe projects are depicted on Sheet 5 of the ALP drawing set.

Table 1 summarizes the future recommended infrastructure projects for the Airport for the 20-year planning period. Ongoing coordination with FAA ADO, on-airport stakeholders, and off-airport property owners will be required to support successful project implementation.

TABLE 1
SUMMARY OF PROJECTS

Project Name	Timeframe
Relocate Runway Hold Locations	Phase I Interim
Remove Portion of Embankment Near Spirit of San Luis Restaurant	Phase I Interim
Relocate Movement Area Boundary Markings	Phase I Interim
Add/Relocate Perimeter Road Access Control Signs	Phase I Interim
Realign Taxiways A, E, F	Phase I Interim
Construct Westside Hangar (Phase I)	Phase I Interim
Convert Sites J/K into Interim-Use Vehicle Parking (Phase I)	Phase I Interim
Construct Taxiway A6	Phase I Interim
Construct Taxiway B3	Phase I Interim
Reconstruct Taxiway B	Phase I Interim
Demolish Old Terminal	Phase I Interim
Demolish Restaurant	Phase I Interim
Construct New Airport Administration Building	Phase I Interim
Demolish Old ACI Hangar	Phase I Interim
Expand Terminal Building Phase I	Phase I Interim
Decommission Runway 7-25	Phase II Interim
Relocate Segmented Circle	Phase II Interim
Remove Runway 11 Displaced Threshold	Phase II Interim
Construct Westside Access Road	Phase II Interim
Expand Westside Apron	Phase II Interim
Construct Westside Hangar (Phase II)	Phase II Interim
Reconstruct Taxiway E (West of Runway 11-29)	Phase II Interim
Relocate ATCT (7-25 closure)	Phase II Interim
Develop Santa Fe Square	Phase II Interim
Demolish Rental Car Service Center	Phase II Interim
Reconfigure Terminal Area Landside	Phase II Interim
Reconfigure Site J and Site K (Phase II)	Phase II Interim
Expand Terminal Building Phase II	Future
Reconfigure Terminal Apron	Future
Acquire Land (Parcel A) (A.P.N: 076-382-005)	Future
Acquire Land (Parcel B) (A.P.N: 076-411-055)	Future
Acquire Land (Parcel C) (A.P.N: 076-401-043)	Future
Acquire Land (Parcel D) (A.P.N: 076-401-065)	Future
Acquire Land (Parcel E) (A.P.N: 076-401-032)	Future
Acquire Land (Parcel F) (A.P.N: 076-371-031)	Future
Realign Santa Fe Road	Future
Realign Hoover Avenue	Future
Reconfigure Buckley Road	Future
Reconfigure Site N	Future
Realign Taxiway A	Future
Extend Taxiway B	Future
Shift Runway 11-29	Future

2 BASIC AERONAUTICAL FORECASTS

2.1 Forecast Summary

The aviation demand forecast at SBP is presented for the 20-year planning period (forecast horizons of 2024, 2029, 2034, and 2039). The Master Plan forecast provides a basis for determining the type, size, and timing of aviation facility development. The forecast was developed using the most recent historical data from the Airport and the Preliminary FAA Terminal Area Forecast (TAF) 2020.[1] The SBP Master Plan forecast was approved by FAA on January 5th, 2022.

Table 2 presents a summary listing of the aviation demand forecasts at the Airport. These projections are used in the Master Plan to assess the capacity of existing facilities and determine facility expansions or improvements needed to satisfy future activity levels. More information about the SBP Master Plan Forecast is provided in *Chapter 2 – Forecast*.

TABLE 2
BASIC AERONAUTICAL FORECAST SUMMARY

Year	Annual Ops	Itinerant Ops	Based Aircraft	Enplanements
2019	80,229	49,112	266	256,694
2024	80,620	49,040	272	233,219
2029	82,423	50,783	279	354,201
2034	83,879	52,178	286	388,772
2039	85,338	53,575	292	426,717

[1] The FAA TAF 2020 is not anticipated to be published until March or April 2020, therefore, the Preliminary FAA TAF 2020 which was released in November 2020 to the Airport was used for comparative purposes in its place.

2.2 Critical Aircraft

FAA Advisory Circular 150/5000-17 *Critical Aircraft* defines the critical aircraft[2] [as] "the most demanding aircraft type, or grouping of aircraft with similar characteristics, which make regular use of the airport. Regular use is 500 annual operations, including both itinerant and local operations but excluding touch-and-go operations. An operation is either a takeoff or landing."

The Master Plan forecast identified a critical aircraft for each of the Airport's runways. Runway 11-29 can accommodate all aircraft that operate at SBP, Runway 7-25 is limited to smaller aircraft due to runway dimensions and pavement strength. *Table 3* shows the historical annual operations by critical aircraft at SBP for 2018 and 2019. More information about the critical aircraft is provided in *Section 2.9* in *Chapter 2 – Forecast*.

TABLE 3
CRITICAL AIRCRAFT OPERATIONS

	2018	2019	2020	2021	2022	2023[1]
Runway 11-29						
Total C-III	5,042	3,850	2,074	4,315	6,039	3,969
CRJ900	2,458	759	0	4	0	0
E170	0	486	581	1,442	1,114	506
E175	2,342	2,254	1,149	2,336	3,998	2,385
A319	16	14	0	10	353	864
Other C-III	226	337	344	523	574	214
Runway 7-25						
Total B-I Small	1,067	770	562	542	550	342
BE9L	130	140	100	115	93	64
C421	67	88	49	43	46	17
C425	291	161	53	74	39	46
Other B-I Small	579	381	360	310	372	215

Source: FAA Traffic Flow Management System Counts, 2023
Note: 1 – Incomplete year. Data through June 2023

[2] The critical aircraft may also be referred to as the design aircraft.

2.3 Runway Data

SBP has two asphalt paved runways. The primary runway is Runway 11-29 and the secondary runway is Runway 7-25. *Table 4* provides a summary of the runway system. More information about the runway system can be found in the Airport Data Sheet of the ALP.

TABLE 4
RUNWAY CHARACTERISTICS

Item		Runway 11	Runway 29	Runway 7	Runway 25
Runway Length (feet)	(Existing)	6,100'	6,100'	2,500'	2,500'
	(Interim)	6,100'	6,100'	To Be Removed	
	(Future)	6,100'	6,100'		
Runway Width (feet)	(Existing)	150'	150'	100'	100'
	(Interim)	150'	150'	To Be Removed	
	(Future)	150'	150'		
Runway Design Code (RDC)	(Existing)	C/III/2400	C/III/5000	B/I(S)/VIS	B/I(S)/VIS
	(Interim)	Same	Same	To Be Removed	
	(Future)	Same	Same		
Approach Reference Code (APRC)	(Existing)	B/I/2400	B/II/5000	B/I(S)/VIS	B/I(S)/VIS
	(Interim)	B/II/2400	B/III/400 D/II/400	To Be Removed	
	(Future)	D/IV/2400 D/V/2400	D/IV/4000 D/V/4000		
Departure Reference Code (DPRC)	(Existing)	B/II	B/II	B/I(S)	B/I(S)
	(Interim)	B/III D/II	B/III D/II	To Be Removed	
	(Future)	D/IV D/V	D/IV D/V		

2.4 Approach Procedure Requirements

Air traffic operations generally fall within one of two categories: those flying under visual flight rules (VFR) and those under instrument flight rules (IFR). Under VFR, aircraft operating in good visibility weather do so using "see and avoid" practices with other aircraft. Aircraft flying under IFR are required to comply with routes and altitudes given by air traffic controllers during all phases of flight. A pilot's ability to land during inclement weather is determined by several factors, including approach lighting, navigational aids, aircraft equipment, and pilot qualifications.

Table 5 lists the instrument approaches available at SBP. The Master Plan analysis determined that it is not necessary to upgrade the approach procedures at SBP. Runway 11-29 will retain the same precision and

non-precision instrument approach procedures. Runway 7-25 is a visual runway with no instrument approaches and is to be demolished during the planning period. More information about the Airport's instrument approaches is provided in *Section 3.3.4* in *Chapter 3 – Facility Requirements*.

TABLE 5
INSTRUMENT APPROACHES

Item	Minimum Visibility
Runway 11	
ILS	1/2-Mile
RNAV (GPS)	1/2-Mile
LOC	1/2-Mile
VOR / TACAN-A	1 1/4-Mile
Runway 29	
RNAV (GPS)	1-Mile
VOR / TACAN-A	1 1/4-Mile

Source: FAA U.S. Terminal Procedures, 2023

2.5 Navigational Aids

Navigational aids and lighting, or NAVAIDs, consist of equipment to help pilots locate the Airport. NAVAIDs provide information to pilots about aircraft horizontal alignment, height above the ground, location of airport facilities, and aircraft position on the airfield. The visual, electronic, and meteorological types of NAVAIDS were assessed at SBP.

Runway 11-29 is currently equipped with Visual Approach Slope Indicators (VASIs) as its visual glidepath system. It is recommended that, as practical with equipment lifecycle and future projects, consideration be made to upgrade the VASI for a Precision Approach Path Indicator (PAPI). In addition, the segmented circle, windcone, and Automated Surface Observing System (ASOS) are located within the Runway 11-29 Runway Object Free Area (ROFA) and are recommended to be relocated outside the ROFA. As a result of the proposed runway shift for Runway 11-29, the glideslope, localizer, and Medium Intensity Approach Lighting System with Runway Alignment (MALSR) will need to be relocated accordingly to maintain their function of providing approach guidance.

2.6 Wind Coverage

Table 6 summarizes the resulting wind coverage for each runway direction individually and the combined runway system. The wind coverage provided by Runway 11-29 exceeds 98 percent in each weather condition and crosswind component. FAA Advisory Circular 150/5300-13B *Airport Design* states "The desirable wind coverage for an airport is 95 percent of the time based on the total number of weather observations during the recording period of at least ten consecutive years." Based on these results, Runway 11-29 is sufficient to accommodate crosswind components for the planning period. Runway 7-25 is not required to satisfy the need for a crosswind runway, but it does provide utility for general aviation activities, such as flight training.

TABLE 6
WIND COVERAGE ANALYSIS

Runway and Crosswind Component	All Weather Wind Coverage	VFR Wind Coverage	IFR Wind Coverage
Runway 11-29			
10.5 knots	98.28%	98.10%	99.10%
13 knots	99.34%	99.32%	99.40%
16 knots	99.89%	99.90%	99.84%
20 knots	99.98%	99.99%	99.97%
Runway 7-25			
10.5 knots	88.18%	85.58%	97.12%
13 knots	93.89%	92.53%	98.59%
16 knots	98.12%	97.66%	99.73%
20 knots	99.84%	99.80%	99.97%
Combined			
10.5 knots	98.56%	98.39%	99.11%
13 knots	99.55%	99.53%	99.59%
16 knots	99.93%	99.94%	99.89%
20 knots	100.00%	100.00%	99.99%

Source: National Climate Data Center; FAA Wind Analysis, Data Range: 2010 - 2019

3 MODIFICATION TO STANDARDS

There are nonstandard airfield conditions at SBP that require Modification to Standards (MOS) on an interim basis. Three MOS provide interim resolution of the nonstandard conditions. The MOS will be in-place until key infrastructure projects can be completed to resolve the airfield nonstandard conditions. Those projects are described in *Chapter 4 – Alternatives* of the accompanying SBP Airport Master Plan and *Section 6.2* of this ALP Narrative Report. The MOS are summarized in *Table 7*.

TABLE 7
MODIFICATION TO STANDARDS

Approval Date	Airspace Case Number	Standard to be Modified	Description
Pending	Pending	AC 150/5300-13B: Paragraph 3.17	Runway 11-29-Taxiway A Separation is 290'-325'. Standard is 400'.
Pending	Pending	AC 150/5300-13B: Paragraph 3.12	Runway 11-29 OFA is 540' X 600'. Standard is 800' x 1000'.
Pending	Pending	AC 150/5300-13B: Table 4-1	Taxiway A OFA Width is 132.5'. Standard is 171'.

4 OBSTRUCTION SURFACES

The airport airspace drawings identify obstacle identification surfaces. The surfaces define the limits of recommended land use control for the height of objects surrounding the Airport's 14 CFR Part 77, Imaginary Surfaces. Each of the Code of Federal Regulations (CFR) Part 77, Subpart C, Imaginary Surfaces (Primary, Approach, Transitional, Horizontal, and Conical) are depicted in Sheet 6 and Sheet 7 of the ALP.

The sheets also provide numerical data for all obstructions visually depicted in the plan view of the Airport Airspace Conical Surface drawing. Each obstruction is identified with a description, a top elevation, the surface the object is penetrating, the surfaces' elevation at the penetrating point, the amount of penetration, and a recommended disposition. Obstructions vary from vegetation to man-made objects. Some objects are defined as fixed-by-function, such as NAVAIDS, because of current siting requirements and the role they play in ensuring the safe navigation of flight. Obstructions include various types of vegetation, which can be mitigated through removal or trimming. The proposed disposition for vegetation located off-airport property is listed to be trimmed but should be coordinated with the landowner to determine the proper mitigation. The proposed disposition for vegetation on-airport property is listed to be trimmed or removed depending on the location or whether it is affected by Interim/Future improvements.

5 RUNWAY PROTECTON ZONE

FAA Advisory Circular 150/5190-4B, *Airport Land Use Compatibility Planning*, describes FAA guidance for identifying incompatible land uses within the Runway Protection Zone (RPZ) and expectations for airport sponsors to resolve incompatible land uses within the RPZ. The FAA expects airport sponsors to seek all possible opportunities to eliminate, reduce, or mitigate existing incompatible land uses through an

evaluation process. Although the Advisory Circular does not explicitly indicate what is considered incompatible, the FAA identifies the following land uses that require no further evaluation:

- Farming that meets airport design clearance standards in FAA Advisory Circular 150/5300-13 and guidance as outlined in Advisory Circular 150/5200-33;
- Irrigation channels meeting the standards of Advisory Circular 150/5200-33 and FAA/ United States Department of Agriculture manual, Wildlife Hazard Management at Airports;
- Airport service roads, as long as they are not public roads and are directly controlled by the airport operator;
- Underground facilities, as long as they meet other design criteria, such as RSA standards, as applicable;
- NAVAIDs and aviation facilities, such as equipment for airport facilities considered fixed-by-function in regard to the RPZ; or
- Above-ground fuel tanks associated with back-up generators for unstaffed NAVAIDs.

Evaluation of the land uses within the existing RPZs indicate there are some land uses that are not identified in one of the categories listed above. The existing land uses are described in *Table 8*.

TABLE 8
EXISTING INCOMPATIBLE USES WITHIN RPZS

Land Use	Runway 11 End	Runway 29 End	Runway 7 End	Runway 25 End
Tank Farm Rd	x	n/a	n/a	n/a
Hoover Ave	x	n/a	x	n/a
Santa Fe Rd	x	n/a	x	n/a
State Route 227	n/a	x	n/a	n/a
Buckley Rd	n/a	x	n/a	n/a
Warehouse Buildings	x	n/a	n/a	n/a

Note: "x" indicates incompatible use for corresponding RPZ

The Airport's Preferred Development Alternative provides resolution to several of the existing incompatible uses within the RPZs. The removal of Runway 7-25 in the Interim timeframe will resolve the Runway 7 land use incompatibility with Hoover Avenue and Santa Fe Road. The Runway 11-29 shift in the Future timeframe will resolve the land use incompatibility with Runway 11 land use incompatibility with Hoover Avenue, Santa Fe Road, and the warehouse buildings.

6 DEVELOPMENT SUMMARY

6.1 Development Projects Completed Since Last ALP

The last ALP was a Pen & Ink Update submitted in December 2019. Several infrastructure projects were completed since the last ALP. The major projects are as follows:

- Pavement rehabilitation of Runway 11-29
- Pavement rehabilitation of Runway 7-25 and West Side apron area
- Demolition/removal of temporary office structures in Lot 1 near Old Terminal Building
- Site N taxilane and apron rehabilitation

6.2 Recommended Projects

The SBP Airport Master Plan identifies 40+ infrastructure projects that are recommended for development within the 20-year planning horizon. The projects are depicted in the ALP drawing set. These projects are recommended to meet forecast aviation demand and/or to meet current FAA design standards.

The process used to identify and select the recommended projects is described in *Chapter 4 – Alternatives* and the process used to allocate the recommended projects to an implementation timeline is described in *Chapter 5 – Facilities Implementation Plan* of the accompanying SBP Airport Master Plan. The project descriptions and general project phasing are described below.

6.2.1 Phase I Interim

The initial phase of project implementation is referred to as Phase I Interim. These projects are described in *Table 9* and depicted on Sheet 4 of the ALP drawing set.

These projects generally represent airfield standards projects that can be efficiently implemented in the near term. The Phase I Interim development plan also includes capacity enhancement projects for the support facilities (e.g., terminal, landside, general aviation) to accommodate existing or near-term forecast aviation activity.

The projects allocated to the Phase I Interim development plan are anticipated to be implemented in the 0 to 5-year timeframe. However, some projects may be implemented later, depending on actual demand and/or funding eligibility.

6.2.2 Phase II Interim

The second phase of project implementation is referred to as Phase II Interim. These projects are described in *Table 10* and depicted on Sheet 4 of the ALP drawing set.

These projects generally represent airfield standards projects that require enabling projects before they can be implemented. The Phase II Interim development plan also includes capacity enhancement projects for the support facilities (e.g., terminal, landside, general aviation) to accommodate mid-term forecast aviation activity.

The projects allocated to the Phase II Interim development plan are anticipated to be implemented in the 6 to 10-year timeframe. However, some projects may be implemented sooner or later, depending on actual demand and/or funding eligibility.

6.2.3 Future

The third phase of project implementation is referred to as Future. These projects are described in *Table 11* and depicted on Sheet 5 of the ALP drawing set.

These projects generally represent airfield standards projects that require coordination with other local governmental agencies or land acquisition before they can be implemented. The Future development plan also includes capacity enhancement projects for the support facilities (e.g., terminal, landside, general aviation) to accommodate long-term forecast aviation activity.

The projects included in the Future development plan are anticipated to be implemented in the 10 to 20-year timeframe. However, some projects may be implemented sooner, depending on actual demand and/or funding eligibility.

TABLE 9
PHASE I INTERIM PROJECTS

Project Name	Description
Relocate Runway Hold Locations	Relocate signage and pavement hold line markings to new location 250' from Runway 11-29 centerline to conform with Paragraph 3.18 in FAA AC 150/5300-13B. Applies to Taxiways A, B, M, C, E, F, H, and L.
Remove Portion of Embankment Near Airport Restaurant	Remove portion of embankment near Spirit of San Luis restaurant. Clears embankment from Part 77 Primary Surface. Allows airside ground vehicle maneuvering outside future Taxiway A OFA within non-movement area.
Relocate Movement Area Boundary Markings	New pavement markings at edge of Taxiway A OFA to delineate movement area boundary per Paragraph 4.5 in FAA AC 150/5300-13B. Includes removal of aircraft tiedown markings within Taxiway A OFA and existing movement area boundary markings. Applies to runup apron, Site J, Site K, Site L, Old Terminal apron, Site A, Site G, and Site N.
Add/Relocate Perimeter Road Access Control Signs	Construct/relocate access control signage to limit access to ground vehicles through RSA, ROFA, and POFZ when runway is being utilized to conform with Paragraphs 3.10, 3.11.5 and 3.12 in FAA AC 150/5300-13B.
Realign Taxiways A, E, F	Realign segment of Taxiway A to 325' from Runway 11-29 centerline to enhance airfield safety. MOS required for realignment to proposed Taxiway A alignment. Also includes demolition of Taxiway E east of Runway 11-29 and Taxiway F to resolve Hot Spot 1, Hotspot 2, and conform with Paragraph 4.8 of FAA AC 150/5300-13B.
Construct Westside Hangar (Phase I)	Construct 6 new T-Hangar buildings on the Westside apron. Includes demolition of 21 portable hangar units in Site T. This enables Reconfigure Site J and Site K (Phase I) project.
Convert Sites J/K into Interim-Use Vehicle Parking (Phase I)	Remove/demolish hangar buildings, relocate airfield security fence along Taxiway A OFA, close/demolish airfield pavement areas within Taxiway A OFA, and construct markings/signage/revenue control devices for vehicle parking.
Construct Taxiway A6	Construct new Taxiway A6 to FAA AC FAA AC 150/5300-13B standards. Taxiway A6 will be located north of existing Taxiway L and will align with the new Runway 29 endpoint in the Future condition. This project also includes demolition of existing portion of Taxiway L beyond the Future Runway 29 end.
Construct Taxiway B2	Construct new Taxiway B3 to FAA AC 150/5300-13B standards.
Reconstruct Taxiway B	Reconstruct Taxiway B to FAA AC 150/5300-13B standards. This taxiway connector will be referred to as Taxiway A2 in the Interim condition and / Taxiway A3 in the Future condition.
Demolish Old Terminal	Includes demolition of old passenger terminal building.
Demolish Restaurant	Includes demolition of Old Spirit of San Luis restaurant.
Construct New Airport Administration Building	Construction of a multi-level building. The ground floor of the building will be at apron level. The ground level will include vehicle garages and workshop space. The main level of the building will have offices. The upper level of the building may include space to accommodate a restaurant and viewing area.
Demolish Old ACI Hangar	Demolition of the Old ACI Hangar, located immediately west of the passenger terminal building. Enables the Reconfigure Terminal Landside Area project.
Expand Terminal Building (Phase I)	Includes expansion on west side of terminal building. Building expansion will include additional airline ticketing and outbound bag screening/make-up.

TABLE 10
PHASE II INTERIM PROJECTS

Project Name	Description
Decommission Runway 7-25	Close Runway 7-25 and demolish pavement to allow for redevelopment area needed to accommodate GA facilities impacted by Taxiway A realignment. Also includes the demolition of Taxiway E west of Runway 11-29.
Relocate Segmented Circle	Removal of existing segmented circle and windcone and installation of new segmented circle and windcone after Runway 7-25 decommissioning.
Remove Runway 11 Displaced Threshold	Removal of the Runway 11 Displaced Threshold. Includes relocation of Runway 11 Glideslope and the Runway 11 supplemental windcone and the replacement of the Runway 11 VASIs to PAPIs based on the Runway 11 End converting to the landing threshold. The Runway 29 supplemental windcone will be relocated outside of the existing RSA. The ASOS is relocated to the northeast side of the Runway centerline to satisfy siting requirements. However, the identified ASOS siting will need to be evaluated by FAA at the time of relocation to ensure it meets the meteorological capture parameters.
Construct Westside Access Road	Construct new public road on the Westside to provide access to airport facilities after Runway 7-25 decommissioning.
Expand Westside Apron	Construct new apron in the Westside area after Runway 7-25 decommissioning. The development concept includes construction of 12 new taxilanes, new run-up pad, new compass calibration pad, and 43 new tie-down positions. Also includes extension of Taxiway C (existing Taxiway J).
Construct Westside Hangar (Phase II)	Construct new GA hangar facilities in the Westside area after Runway 7-25 decommissioning. The development concept includes construction of six new box hangar buildings, three new T-Hangar buildings, and a new FBO (which includes new aircraft fueling infrastructure).
Reconstruct Taxiway E (West of Runway 11-29)	Demolition of existing Taxiway E segment (West of Runway 11-29) and existing compass calibration pad. Includes the construction of new Taxiway B3.
Relocate ATCT	Demolish the existing ATCT and construct a new ATCT at one of the three proposed locations. This includes ATCT Siting Study and FAA coordination per FAA Order 6480.4
Develop Santa Fe Square	Construct "Santa Fe Square" parking buildout after Runway 7-25 decommissioning.
Demolish Rental Car Service Center	Demolition of Rental Car Service Center Building and Vehicle Lot.
Reconfigure Terminal Area Landside	Reconfiguration of Lot 1, Lot 2, Employee Lot and area previously occupied by Rental Car Service Center into a more efficient, consolidated vehicle parking area.
Reconfigure Site J and Site K (Phase II)	Occurs independently of Twy A. Reconfigure for aicraft use when landside demand is accommodated on west side.

TABLE 11
FUTURE PHASE PROJECTS

Project Name	Description
Expand Terminal Building (Phase II)	Includes expansion on east side of terminal building. Building expansion will include space for additional passenger holdroom and secure-side concessions.
Reconfigure Terminal Apron	Includes realignment of taxilanes to provide necessary TLOFA width outlined in Paragraph 4.5.2 in FAA AC 150/5300-13B, Airport Design. Also includes reconfiguration of aircraft parking positions to provide eight independent terminal parking positions and two remote parking positions for charter/military aircraft.
Acquire Land (Parcel A) (A.P.N: 076-382-005)	Acquire of a portion of Parcel A, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift and new perimeter road.
Acquire Land (Parcel B) (A.P.N: 076-411-055)	Acquire Parcel B, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway A realignment/extension. This project includes the demolition of the existing building on the site.
Acquire Land (Parcel C) (A.P.N: 076-401-043)	Acquire Parcel C, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway A realignment/extension.
Acquire Land (Parcel D) (A.P.N: 076-401-065)	Acquire Parcel D, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway A realignment/extension. This project includes the demolition of the existing building on the site.
Acquire Land (Parcel E) (A.P.N: 076-401-032)	Acquire Parcel E, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway A realignment/extension.
Acquire Land (Parcel F) (A.P.N: 076-371-031)	Acquire a portion of Parcel F, as designated on the Exhibit 'A' Airport Property Map, to accommodate Runway 11-29 shift, new perimeter road, and Taxiway B extension.
Realign Santa Fe Road	Demolish and realign portion of Santa Fe Rd northeast of Taxiway A to maintain access to off-airport development beyond realigned Taxiway A OFA.
Realign Hoover Avenue	Demolish and realign Hoover Avenue connecting from Old Santa Fe Road to Tank Farm Road to enable the Runway 11-29 shift and provide clearance outside the Runway 11 approach RPZ
Reconfigure Buckley Road	Includes depression of Buckley Road on its existing alignment to reduce roadway elevation and meet existing ROFA standard. The new Buckley Road elevation should be re-graded, so the roadway is at least 15 feet below the elevation of the Runway 11-29 centerline.
Reconfigure Site N	Demolish 2 T-Hangar buildings at Site N and reconstruct the aircraft parking apron area to connect to Site M apron and accommodate heavier aircraft.
Realign Taxiway A	Demolish existing Taxiway A and reconstruct to provide 400 feet of separation from Runway 11-29. Includes demolition of Old Passenger Terminal Apron and portions of Site J Apron, Site K

	Apron, Passenger Terminal Apron, Site M Apron, and Site N Apron within the new Taxiway A OFA.
Extend Taxiway B	Includes extension of Taxiway B (currently referred to as Taxiway M) to the new Runway 11 endpoint, construction of Taxiway B1 at the end, and reconfiguration of Taxiway B2 (currently the northmost connector on Taxiway M) to a perpendicular connector. New segment of Taxiway B will be constructed at 400-foot separation from Runway 11-29 to meet FAA AC 150/5300-13B standards and to minimize impacts to GA development in Site Q.
Shift Runway 11-29	Demolish 740 feet of runway length from the existing Runway 29 endpoint and construct 740 feet of runway length beyond the existing Runway 11 endpoint. Includes extension of Taxiway A to the new Runway 11 endpoint and demolition of Taxiway A to the new Runway 29 endpoint. Also includes construction of new taxiway and bypass taxiway connectors at new runway ends. Existing NAVAIDs including the Runway 11-29 supplemental windcones, Runway 11 MALSR, Runway 11 Glideslope, and Runway 11 Localizer, will be relocated based on the new runway ends. PAPIs will replace the existing Runway 29 VASIs and will be positioned based on the new Runway 29 end. The ASOS is relocated to adjust for the Runway 11 threshold shift. The identified ASOS siting will need to be evaluated by FAA at the time of relocation to ensure it meets the meteorological capture parameters. Includes realignment of the vehicle service road on the Runway 11 end to provide clearance of the ROFA and on the Runway 29 end to provide clearance of the RSA. Perimeter fencing will be constructed outside the new vehicle service road and other areas of land acquisition. Cut, fill, and grading to support standard ROFA.

7 LETTERS OF COORDINATION

Not Applicable

8 WILDLIFE HAZARD MANAGEMENT ISSUES

Not Applicable

9 ENVIRONMENTAL FEATURES

A summary of the existing airport environmental conditions is presented in *Table 12* and describes the general environmental condition and potential environmental effect by applicable environmental resource category. The environmental resource categories are outlined in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* and the 1050.1F, *Desk Reference*. *Chapter 1, Inventory of Existing Conditions, Appendix A* provides further information on each resource category's applicability to SBP.

TABLE 12
SUMMARY OF EXISTING ENVIRONMENTAL CONDITIONS

Environmental Resource Category	Description/Potential Environmental Effect
Air Quality	The Airport is in a portion of San Luis Obispo County that is in attainment with all National Ambient Air Quality Standards.
Biological Resources	Seven U.S. Fish and Wildlife Service listed protected species and/or habitats and nine California Natural Diversity Database listed protected species may be present on or near Airport property. The federally listed species include: • California tiger salamander (*ambystoma californiense*) • California red-legged frog (*rana draytonii*) • California condor (*Gymnogyps californianus*) • Vernal pool fairy shrimp (*branchinecta lynchi*) • Central California coast Distinct population Segment (DPS) Steelhead (*oncorhynchus mykiss irideus*) • South-central California coast DPS (*Oncorhynchus mykiss irideus*) • Chorro Creek bog thistle (*Cirsium fontinales* var. *obispoense*) The state listed species include: • California tiger salamander (*ambystoma californiense*) • Foothill yellow-legged frog (*rana boylii*) • Bald eagle (*haliaeetus leucocephalus*) • California condor (*Gymnogyps californianus*) • Tricolored blackbird (*agelaius tricolor*) • Crotch bumble bee (*bombus crotchii*) • Adobe sanicle (*sanicula martima*) • Chorro Creek bog thistle (*Cirsium fontinales* var. *obispoense*) • Cuesta Pass checkerbloom (*sidalcea hickmanii* ssp. *anomala*)
Climate	Activities that require fuel or power are the primary stationary sources of greenhouse gas (GHG) emissions at airports. Aircraft and ground access vehicles that are not under the control of an airport typically generate more GHG emissions than airport-controlled sources. Aviation and non-aviation vehicles generate GHG emissions at the Airport.
Department of Transportation Act, Section 4(f)	There are no Section 4(f) resources at the Airport.
Farmlands	The Airport is within proximity of prime farmland, farmland of statewide importance, farmland of local importance, and land protected under Williamson Act Contract.

Environmental Resource Category	Description/Potential Environmental Effect
Hazardous Materials, Solids Waste, and Pollution Prevention	There are 22 registered hazardous waste sites within proximity of the Airport. Additionally, there is a remediation program site, the Tank Farm Site, located to the northwest of the Airport along Tank Farm Road. The Tank Farm property was used as an oil storage facility in the early 1990s. While the facilities have been decommissioned and most of the tanks have been dismantled, the circular berms that once enclosed the storage tanks remain on the property.
Historical, Architectural, Archaeological, and Cultural Resources	There are no historic resources located at the Airport.
Land Use	The Airport falls within the jurisdiction of San Luis Obispo County and is adjacent to the boundary of the incorporated City of San Luis Obispo. The Airport is designated as a public facility and is surrounded by agriculture/open space, business park/industrial, general retail/commercial, services manufacturing, and low density residential.
Natural Resources and Energy Supply	None of the natural resources that the Airport uses, or has used, are in short supply.
Noise and Noise-Compatible Land Use	Nearby residential areas may be sensitive to aircraft noise associated with the Airport. As determined in the Airport's Land Use Compatibility Plan, all residential areas are considered compatible with cumulative noise level below Community Noise Equivalent Level 65 decibels.
Socioeconomic, Environmental Justice, Children's Environmental Health and Safety Risks	The Census Tracts that the Airport falls within or is adjacent to do not contain a high percentage of minority or low-income populations.
Visual Effects	The Airport is zoned as Airport Operations and is developed in a manner that is consistent with this zoning. Vegetation (e.g., trees and shrubs) helps to reduce both the light emissions and visual effects to the Airport for residential areas.
Water Resources	Mapped wetland resources (two acres) and floodplains (western boundary) are located within the Airport property. A majority of the Airport uses inlets and stormwater pipes to convey stormwater runoff. Portions of the system are open ditches, which are generally located on the north and west sides of the Airport.

10 ACTIONS FROM RUNWAY SAFETY OFFICE

Not Applicable

11 DECLARED DISTANCES

Declared distances, as defined in Advisory Circular 150/5300-13B, *Airport Design*, represent the maximum distances available and suitable for meeting takeoff, rejected takeoff, and land distance requirements for aircraft. As shown in *Table 13*, for Runway 11-29, the existing/interim/future takeoff run available, existing/interim/future takeoff distance available, and the existing/interim/future accelerate stop distance available is the full length of the runway at 6,100 feet. However, the existing landing distance available is reduced for both Runway 11 and Runway 29. The Runway 11 existing landing distance available is reduced by an 800-foot displaced threshold to a length of 5,300 feet and the Runway 29 existing/interim landing distance available is reduced by a 500-foot displaced threshold to a length of 5,600 feet. With the removal of the displaced threshold for Runway 11 during the interim planning period, the interim landing distance available becomes the full length of the runway at 6,100 feet. With the runway shift and removal of displaced threshold for Runway 29 during the future planning period, the future landing distance available becomes the full length of the runway at 6,100 feet. For Runway 7-25, each declared distance is the full length of the runway at 2,500 feet. Runway 7-25 is to be demolished during the interim/future planning period.

TABLE 13
DECLARED DISTANCES

Runway End		TORA	TODA	ASDA	LDA
Runway 11	(Existing)	6,100'	6,100'	6,100'	5,300'
	(Interim)	6,100'	6,100'	6,100'	6,100'
	(Future)	6,100'	6,100'	6,100'	6,100'
Runway 29	(Existing)	6,100'	6,100'	6,100'	5,600'
	(Interim)	6,100'	6,100'	6,100'	5,600'
	(Future)	6,100'	6,100'	6,100'	6,100'
Runway 7	(Existing)	2,500	2,500	2,500	2,500
	(Interim/Future)	To Be Removed			
Runway 25	(Existing)	2,500	2,500	2,500	2,500
	(Interim/Future)	To Be Removed			

Source: FAA 5010-1 Form, 2020

APPENDIX A. ALP REVIEW CHECKLIST

The following checklist shall be used in lieu of FAA AC 150/5070-6B, Appendix F, Airport Layout Plan Drawing set. This checklist is intended for use when submitting a new or updated ALP to the FAA for review and approval. Consultants and/or sponsors should indicate "Yes," "No" or "N/A" (not applicable) for every item on the checklist. The same checklist shall be provided to FAA for review and verification. For all reviewers: It is important that each item listed be shown on the respective plan.

Airport Identification (to be completed by Sponsor or Consultant)			
Airport	San Luis Obispo County Regional Airport		
City and State	San Luis Obispo, CA	Location Identifier	SBP
Airport Owner	San Luis Obispo County		

ALP Submission Information (to be completed by Sponsor or Consultant)		
ALP Prepared by	RS&H Name of Consulting Firm	
	Gareth Hanley Name of Individual	04/21/23 Date
	(813) 636-2608 Telephone	
	Gareth.Hanley@rsandh.com Email address	
Consulting QA/QC Review	Evan Pfahler, Vice President Aviation Name and Title of Individual	04/23/23 Date
Sponsor Review	Craig Piper, Deputy Airport Director Name and Title of Individual	06/19/23 Date

FAA Review (to be completed by FAA)	
Name and Title of Individual	Date

Critical Design Aircraft or Family of Aircraft:

	Make	Model	Annual Itinerant Operations
Existing	Airbus	A319	864 (Jan 2023-Jun 2023)
Future	Airbus	A319	-

Forecasted Year: 2019

Airport Reference Code (ARC): C-III

Runway Design Code (RDC) & Runway Reference (RRC):

Runway	RDC	RRC
Runway 11-29	C/III/2400	B/I/2400 (APRC) / B/II (DPRC)
Runway 7-25	B/I(S)/VIS	B/I(S)/VIS (APRC) B/I(S) (DPRC)

Approach Minimums:

Rwy End	Minimum	Rwy End	Minimum
11	1/2 MILE (RVR 2400)		
29	1 MILE (RVR 5000)		
7	VISUAL		
25	VISUAL		

Runways (Existing and Future):

Runway	Existing		Future		Departure Surface (Y or N/A)
	Length (ft)	Width (ft)	Length (ft)	Width (ft)	
Runway 11-29	6,100	150	6,100	150	Y
Runway 7-25	2,500	100	Demolished	Demolished	N/A

For the balance of the checklist, enter a mark (✔ or X) to confirm inclusion.

A.1. Narrative Report

Narrative Report					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
A. Executive Summary – A concise summary of the findings/ recommendations of the master planning effort or changes to the ALP. This should include a description of planned projects, an implementation plan/timeline, and identification of benchmarks or actions that will be conducted to either verify the original planning assumptions or proceed with project implementation.	From AC 150/5070-6, Section 202: An accompanying ALP Narrative Report should explain and document those changes and contain at least the following elements: – Basic aeronautical forecasts. – Basis for the proposed items of development. – Rationale for unusual design features and/or modifications to FAA Airport Design Standards. – Summary of the various stages of airport development and layout sketches of the major items of development in each stage. – An environmental overview to document environmental conditions that should be considered in the identification and analysis of airport development alternatives and proposed projects.	✓			
1. Identify Projects along with description		✓			
2. Create a Timeline for each Project		✓			
3. Identify and List:		✓			
a. Proposed Projects (e.g., Hangar development)		✓			
b. Milestones/ Triggering Events (e.g., 1. All hangars are full, 2. There is a waiting list long enough to fill a new development, 3. Hangars have reached their useful life, etc.)		✓			
c. Action items/Next Steps (e.g., 1. Maintain log and gather data, 2. Discuss plan with ADO, 3. Coordinate with ADO regarding potential for inclusion in FAA ACIP (Airports Capital Improvement Program), 4. Identify funding sources.)		✓			
d. Funding Plan	Capital Improvement Plan for the forecast horizons. See AC 150/5070-6, Chapter 11. Only a rough, order-of-magnitude report is needed in the executive summary.		✓		

Narrative Report					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
B. Basic aeronautical forecasts (0-5, 6-10, 11-20 years): Basic aeronautical forecasts (0-5, 6-10, 11-20 years):	Forecasts of future levels of aviation activity as approved by the FAA. These projections are used to determine the need for new or expanded facilities. See AC 150/5070-6, Chapter 7.				
1. Total annual operations	Total local and itinerant aircraft operations at the airport.	✓			
2. Annual itinerant operations by all aircraft	Itinerant operations by aircraft that leaves the local airspace, generally 25 miles or more from the airport. See AC 150/5070-6, Chapter 7, Section 702.a. and Figure 7-2.	✓			
3. Annual itinerant operations by current critical aircraft		✓			
4. Annual itinerant operations by future critical aircraft			✓		
5. Number of based aircraft	Aircraft that use the subject airport as a home base, i.e., have hangar or tie-down space agreements. See AC 150/5070-6, Chapter 7, Section 702.a. and Figure 7-2.	✓			
6. Annual instrument approaches	Number of instrument approaches expected to be executed during a 12-month period. See AC 150/5070-6, Chapter 7, Section 702.a. and Figure 7-2.		✓		
7. Number of enplanements	See AC 150/5070-6, Chapter 7, Section 702.a. and Figure 7-2.	✓			

Narrative Report					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
8. Critical Aircraft (also referred as "design aircraft" or "critical design aircraft)	The critical aircraft is the most demanding aircraft identified in the forecast that will use the airport. Federally funded projects require that the critical aircraft will make substantial use of the airport in the planning period. Substantial use means either 500 or more annual itinerant operations or scheduled service. The critical aircraft may be a single aircraft or a composite of the most demanding characteristics of several aircraft. Provide the aircraft, AAC, and ADG. (e.g. Boeing 737-400, C-III) See AC 150/5300-13A, Paragraph 105(b) and FAA Order 5090.3C, 3-4.	✓			
9. Runway Design Code (RDC)	Describe the RDC for each runway. For the purpose of airport geometric design, each runway will contain a RDC which signifies the design standards to which the runway is to be built. The RDC consists of three parameters: Aircraft Approach Category (AAC), Airplane Design Group (ADG) and the approach visibility minimums. These parameters represent the aircraft that are intended to be accommodated by the airport, regardless of substantial use. See AC 150/5300-13A, Paragraph 105(c).	✓			
10. Runway Reference Code (RRC)	Describe the RRC for each runway. The RRC describes the current operational capabilities of a runway where no special operating procedures are necessary. The RRC consists of the same three components as the RDC, but is based on planned development and has no operational application. See AC 150/5300-13A, Paragraph 318.	✓			
C. Alternatives/Proposed Development					

Narrative Report					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
11. Explanation of proposed development items	Specific projects can be described as project listings on a master table, on individual project data sheets, or in projects booklets.	✓			
12. Discuss near-term and future Approach Procedure Requirements or effects (e.g., LPV, Circling, etc.)	Based on existing or forecast usage. See FAA Order 7400.2, Figures 6-6-3 and 6-3-9.	✓			
13. Navigational Aids or Other Equipment Needs (e.g., Approach Lights, Wind Cones, AWOS, etc.)	The need for new or additional navigational aids is a function of the fleet mix, the percentage of time that poor weather conditions are present, and the cost to the users of not being able to use the airport while it is not accessible.	✓			
14. Wind coverage. Is it adequate for existing and future runway layouts? Has wind data been updated?	This analysis determines if additional runways are needed to provide the necessary wind coverage. Reference AC 150/5300-13A, Appendix 2 for guidance on wind coverage analysis techniques.	✓			
D. Modification to Standards.	Any approved nonconformance to FAA standards, other than dimensional standards for RSAs and OFZs, require FAA approval. A description of all approved modification to standards shall be provided. See AC 150/5300-13A, Paragraph 106(b) and FAA Order 5300.1.	✓			
E. Obstruction Surfaces (14 CFR Part 77 and Threshold Siting Surface)	Reference 14 CFR Part 77 and AC 150/5300-13A, Paragraph 303.	✓			
F. Runway Protection Zone	A description of any incompatible land uses inside the RPZ shall be provided. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP-400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310 and FAA memorandum dated September 27, 2012.	✓			

Narrative Report					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
G. Development summary (including sketches, schedules, and cost estimates) for stages of construction for: Development summary (including sketches, schedules, and cost estimates) for stages of construction for:	Documentation provided should include any electronic spreadsheets and files to facilitate in modifying the financial plan on an as-needed basis.				
15. Development Projects Completed Since Last ALP		✓			
16. 0-5 years		✓			
17. 6-10 years		✓			
18. 11-20 years		✓			
H. Shadow or line-of-sight study for towered airports (negative or positive statements are required).	Reference FAA Order 6480.4. This can be from the Airway Facilities Tower Integration Laboratory (AFTIL) or simpler GIS-generated studies.			✓	
I. Letters of coordination with all levels of government, as needed.	Affected private and/or governmental groups, agencies, commissions, etc., that may have input on the plans. See AC 150/5070-6, Chapter 3.			✓	
J. Wildlife Hazard Management Issues Review (in narrative).	Reference AC 150/5200-33.			✓	
K. Preliminary Identification of Environmental Features	Potential or known features only. Further environmental analysis will be necessary. Reference FAA Order 5050.4B. Begin framework for NEPA analysis.				
19. Major airport drainage ditches		✓			
20. Wetlands		✓			
21. Flood Zones		✓			
22. Historic or Cultural features		✓			
23. Section 4(f) features		✓			

Narrative Report					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
24. Flora/Fauna		✓			
25. Natural Resources		✓			
26. Etc. (other features identified in Order 5050.4B)		✓			
L. Note Action Items from Runway Safety Program Office	List and note status of items from Runway Safety Program Office or Runway Safety Action Plan.			✓	
M. Declared Distance (DD)	The narrative on declared distances is used to aid in understanding the maximum distances available and suitable for meeting takeoff, rejected takeoff, and landing distances performance requirements for turbine powered aircraft. The narrative shall also provide clarification on why declared distances have been implemented. Declared distances data must be listed for all runway ends. The TORA, TODA, ASDA, and LDA will be equal to the runway length in cases where a runway does not have displaced thresholds, stopways, or clearway, and have standard RSAs, ROFAs, RPZs, and TSS. Reference AC 150/5300-13A, Paragraph 323.	✓			

Remarks

- Funding Plan development in-progress. Will be included in the Airport Master Plan Chapter 5, Facilities Implementation Plan.
- Annual Itinerant Operations by Future Critical Aircraft and Annual Instrument Approaches values were not included in Master Plan forecast and therefore omitted in this Narrative Report.

A.2. Title Sheet

- The scale of the Title Sheet should be developed to include the items listed below.
- The minimum size for the final drawing set is 22" X 34" (ANSI D) and 24" X 36" (ARCH D). Coordinate use of 34" x 44" (ANSI E) and 26" X 48" (ARCH E) with FAA. Color drawings may be acceptable if they are still usable if reproduced in grey scale.

Title Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
A. Title and revision blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	✓			
B. Airport sponsor approval block	Provide an approval block for the sponsoring authority's representative to sign. Include space for name, title, and date.	✓			
C. Date of ALP (date the airport sponsor signs the ALP)	The month and year of signature prominently shown near the title.	✓			
D. Index of sheets (including revision date column)	Airport Layout Drawing, Airport Airspace Drawing, Inner Portion of the Approach Surface Drawing, Terminal Area Drawing, Land Use Drawing, Airport Property Map, Airport Departure Surface, etc.	✓			
E. State Aeronautics Agency Approval Block (as needed)	Provide an approval block for the sponsoring authority's representative to sign. Include space for name, title, and date.	✓			
F. State outline with county boundaries. County in which airport is located should be highlighted.	Provide as needed.	✓			
G. Location map (general area)		✓			
H. Vicinity map (specific airport area)		✓			
Remarks					

A.3. Airport Data Sheet

- For smaller airports, some of the ALP sheets may be combined if practical and approved FAA.

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
A. Title and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	✓			
B. Wind Rose (all weather and IFR) with appropriate airport reference code and runway orientation depicted, crosswind coverage, and combined coverage, source of wind information and time period covered (for IFR runways applicable minimums should be included):	Assembly and analysis of wind data to determine ultimate runway orientation and also provides the operational impact of winds on existing runways. If instrument procedures are present or will be requested then both all-weather and instrument meteorological condition wind roses are required. See AC 150/5300-13A, Appendix 2.	✓			
1. 10.5, 13, 16, 20 knots wind rose (based on appropriate airport reference code)	When a runway orientation provides less than 95 percent wind coverage for any aircraft forecasted to use the airport on a regular basis, a crosswind runway is recommended. The 95 percent wind coverage is computed on the basis of the crosswind not exceeding 10.5 knots for Airport Reference Codes A-I and B-I, 13 knots for Airport Reference Codes A-II and B-II, 16 knots for Airport Reference Codes A-III, B-III, and C-I through D-III, and 20 knots for Airport Reference Codes A-IV through D-VI. See also AC 150/5300-13A, Paragraph 302(c)(3) and AC 150/5300-13A, Appendix 2.	✓			
2. Percentage of wind coverage/crosswind		✓			
3. Source of data	Wind data may be obtained from NOAA at http://www.ncdc.noaa.gov/ Reference AC 150/5300-13A, Appendix 2, Paragraph A2-5 and A2-6.	✓			

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
4. Age of data (last 10 consecutive years of data with most current data no older than 10 years)	Data must be from the latest 10-year period from the reporting station closest to the airport. Reference AC 150/5300-13A, Appendix 2, Paragraph A2-5.				
C. Airport Data Table					
1. ARC for Airport	List the Airport Reference Code (ARC) for airport. 5300-13AARC is an airport designation that signifies the airport's highest Runway Design Code (RDC), minus the third (visibility) component of the RDC. Reference AC 150/5300-13A.	✓			
2. Mean maximum temperature of hottest month	List the mean maximum temperature and the hottest month for the airport location as listed in "Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree-Days" (Climatography of the United States No. 81). See AC 150/5325-4, 506.b.	✓			
3. Airport elevation (highest point of the landing areas, nearest 0.1 foot) – using North American Vertical Datum of 1988 (NAVD88)	List the Airport Elevation, the highest point on an airport's usable runway expressed in feet above mean sea level (MSL). Use NAVD88. Reference AC 150/5300-13A, Paragraph 102(g) All elevations shall be in NAVD88. A note shall be put on the Airport Layout Drawing that denotes that the NAVD88 vertical control datum was used.	✓			
4. Airport Navigational Aids, including ownership (NDB, TVOR, ASR, Beacon, etc.)	List the electronic aids available at the airport.	✓			

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
5. Airport reference point coordinates, nearest second (existing, future if appropriate, and ultimate) - NAD83	List the Airport Reference Point, the latitude and longitude of the approximate center of the airport. Use the North American Datum of 1983 (NAD83) coordinate system. See AC 150/5300-13A, Paragraph 207. All latitude/longitude coordinates shall be in NAD83. A note shall be put on the Airport Layout Drawing that denotes that the NAD83 coordinate system was used.	✓			
6. Miscellaneous facilities (taxiway lighting, lighted wind cone(s), AWOS, etc.) [Including type/model and any facility critical areas]	List any other facilities available at the airport.	✓			
7. Airport Reference Code and Critical Aircraft (existing & future)	List the existing and ultimate Airport Reference Code and Critical Aircraft, the most demanding aircraft identified in the forecast that will use the airport. Federally funded projects require that critical design airplanes have at least 500 or more annual itinerant operations at the airport (landings and takeoffs are considered as separate operations) for an individual airplane or a family grouping of airplanes. See AC 150/5325-4, 102.a.(8) and AC 150/5070-6, 702.a. Indicated dimensions for wingspan and undercarriage, along with approach speed.	✓			
8. Airport magnetic variation, date and source	Magnetic declination may be calculated at http://www.ngdc.noaa.gov/geomag-web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	✓			
9. NPIAS service level (GA, RL, P, CS, etc.)	See FAA Order 5090.3C.	✓			

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
10. State equivalent service role	As applicable pursuant to State Aviation Department System Plan.	✓			
D. Runway Data Table	The Runway Data Table should show information for both existing and ultimate runways.				
1. Runway identification (Include identifying runways that are "utility")	A column for each runway end should be present. List the runway end number and if pavement strength is less than 12,500 pounds (single-wheel), then note as utility.	✓			
2. Runway Design Code (RDC)	5300-13AThe first component, depicted by a letter, is the AAC and relates to aircraft approach speed (operational characteristics). The second component, depicted by a Roman numeral, is the ADG and relates to either the aircraft wingspan or tail height (physical characteristics); whichever is more restrictive. The third component relates to the visibility minimums expressed by RVR values in feet of 1200, 1600, 2400, and 4000. List the RDC for each runway. See AC 150/5300-13A, Paragraph 105(c).	✓			
3. Runway Reference Code (RRC)	The RRC describes the current operational capabilities of a runway where no special operating procedures are necessary. Like the RDC, it is composed of three components: AAC, ADG, and visibility minimums. List the RRC for each Runway. See AC 150/5300-13A, Paragraph 318.	✓			
4. Pavement Strength & Material Type	Indicate the runway surface material type, e.g., turf, asphalt, concrete, water, etc.	✓			
a. Strength by wheel loading	List the existing and ultimate design strength of the landing surface. See AC 150/5320-6, Chapter 3.	✓			
b. Strength by PCN	See AC 150/5335-5.	✓			

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
c. Surface treatment	Note any surface treatment: grooved, PFC, etc.	✓			
5. Effective Runway Gradient (%) Author to note maximum grade within runway length. Note to included statement that the runway meets line of sight requirements	List the maximum longitudinal grade of each runway centerline. See AC 150/5300-13A, Paragraph 313.	✓			
6. Percent (%) Wind Coverage (each runway)	List the percent wind coverage for each runway for each Aircraft Approach Category. See AC 150/5300-13A, Appendix 2.	✓			
7. Runway dimensions (length and width)	Dimensions determined for the Critical Design Aircraft by using graphical information in AC 150/5325-4.	✓			
8. Displaced Threshold	Provide the pavement elevation of the runway pavement at any displaced threshold. See AC 150/5300-13A, Paragraph 303(2).	✓			
9. Runway safety area dimensions (actual existing and design standard)	List the existing and ultimate dimensions of the Runway Safety Area (RSA). See AC 150/5300-13A, Paragraph 307.	✓			
10. Runway end coordinates (NAD83) (include displaced threshold coordinates, if applicable) to the nearest 0.01 second and 0.1 foot of elevation.	Show the latitude and longitude of the threshold center and end of pavement (if different) to the nearest .01 of a second and 0.1 foot of elevation.	✓			
11. Runway lighting type (LIRL, MIRL, HIRL)	List the existing and ultimate type of runway lighting system for each runway, e.g., Reflectors, Low Intensity Runway Lighting (LIRL), Medium Intensity Runway Lighting (MIRL), or High Intensity Runway Lighting (HIRL). LIRLs will typically not be shown for new systems. See AC 150/5340-30, Ch. 2.	✓			

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
12. Runway Protection Zone (RPZ) Dimensions	List the existing and ultimate Runway Protection Zone (RPZ) dimensions. See AC 150/5300-13A, Paragraph 310. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP-400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310 and FAA memorandum dated September 27, 2012.	✓			
13. Runway marking type (visual or basic, non-precision, precision)	Indicate the existing and ultimate pavement markings for each runway. See AC 150/5340-1, Section 2.	✓			
14. 14 CFR Part 77 approach category (50:1; 34:1; 20:1) Existing and Future	List the existing and ultimate approach surface slope. See FAA Order 7400.2, Figures 6-6-3 and 6-3-9.	✓			
15. Approach Type (precision, non-precision, visual)	List the existing and ultimate Part 77 Approach Use Types. See FAA Order 7400.2, Figures 6-6-3 and 6-3-9.	✓			
16. Visibility minimums (existing and future)	List the existing and ultimate visibility minimums for each runway. See AC 150/5300-13A, Table 1-3.	✓			
17. Type of Aeronautical Survey Required for Approach (Vertically Guided, not Vert. Guided)	List the type of aeronautical survey required for the visibility minimums given. See AC 150/5300-18, Section 2.7 and AC 150/5300-13A, Table 3-4 and Table 3-5.	✓			
18. Runway Departure Surface (Yes or N/A)"	Determine applicability of 40:1 Departure Obstacle Clearance Surface (OCS) as defined in Paragraph 303(c) of AC 150/5300-13A.	✓			

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
19. Runway Object Free Area	List the existing and ultimate dimensions of the Runway Object Free Area (OFA). See AC 150/5300-13A, Paragraph 309. Objects non-essential for air navigation or aircraft ground maneuvering purposes must not be placed in the ROFA, unless a modification to standard has been approved.	✓			
20. Obstacle Free Zone	The OFZ clearing standard precludes aircraft and other object penetrations, except for frangible NAVAIDs that need to be located in the OFZ because of their function. Modification to standards does not apply to the OFZ. List the Runway OFZ, Inner-approach OFZ, Inner-transitional OFZ, and Precision OFZ if applicable.	✓			
21. Threshold siting surface (TSS)	List the existing and ultimate threshold siting surface (i.e. approach and departure surfaces). Identify any objects penetrating the surface. If none, state “No TSS Penetrations”. Reference AC 150/5300-13A, Paragraph 303.	✓			
22. Visual and instrument NAVAIDs (Localizer, GS, PAPI, etc.)	List the existing and ultimate visual navigational aids serving each runway.	✓			
23. Touchdown Zone Elevation	List the highest runway centerline elevation in the existing and ultimate first 3000 feet from landing threshold. See FAA Order 8260.3, Appendix 1.	✓			
23. Taxiway and Taxilane width	List the existing and ultimate width of the taxiways and taxilane. Reference AC 150/5300-13A, Paragraph 403 and Table 4-2.	✓			
24. Taxiway and Taxilane Safety Area dimensions	List the existing and ultimate taxiway and taxilane safety area dimensions. Reference AC 150/5300-13A, Paragraph 404(c) and Table 4-1.	✓			

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
25. Taxiway and Taxilane Object Free Area	List the existing and ultimate taxiway and taxilane object free area dimensions. Reference AC 150/5300-13A, Paragraph 404(b) and Table 4-1.	✓			
26. Taxiway and Taxilane Separation	List any objects located inside the Taxiway/Taxilane Safety Area and Taxiway/Taxilane Object Free Area. Also provide the distance from the taxiway/taxilane centerline to the fixed or movable object. Reference Paragraph 404(a) and Table 4-1.	✓			
27. Taxiway/Taxilane lighting	List the existing and ultimate type of taxiway lighting system, e.g., Reflectors, Low Intensity Taxiway Lighting (LITL), Medium Intensity Taxiway Lighting (MITL), or High Intensity Taxiway Lighting (HITL). LITLs will typically not be shown for new systems. See AC 150/5340-30, Chapter 4.	✓			
28. Identify the vertical and horizontal datum	All latitude/longitude coordinates shall be in North American Datum of 1983 (NAD 83). A note shall be put on the Airport Layout Drawing that denotes that the NAD 83 coordinate system was used. All elevations shall be NAVD88. A note shall be put on the Airport Layout Drawing that denotes that the NAVD88 vertical control datum was used.	✓			
E. Modification to Standards Approval Table (if applicable, a separate written request, including justification, should accompany the modification to standards). Show: Approval Date/ Airspace Case No. / Standard to be Modified / Description	Provide a table to list all FAA approved Modifications to Standards. See AC 150/5300-13A, Paragraph 106(b), and FAA Order 5300.1. List “None Required” on the table if no Modifications have yet been proposed or approved.	✓			

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
F. Declared Distances Table	Required even if Declared Distances are not in effect. Declared distances are only to be used for runways with turbine-powered aircraft. The TORA, TODA, ASDA, and LDA will be equal to the runway length in cases where a runway does not have displaced thresholds, stopways, or clearways, and have standard RSAs, ROFAs, RPZs, and TSS. Reference AC 150/5300-13A, Paragraph 323.	✓			
1. Take Off Run Available (TORA)	List the runway length declared available and suitable for the ground run of an airplane taking off, i.e., Take Off Run Available (TORA). The TORA may be reduced such that it ends prior to the runway to resolve incompatible land uses in the departure RPZ, and/or to mitigate environmental effects. Reference AC 150/5300-13A, Paragraph 323(d)(1).	✓			
2. Take Off Distance Available (TODA)	List the length of remaining runway or clearway (CWY) beyond the far end of the TORA ADDED TO the TORA. The resulting sum is the Take Off Distance Available (TODA) for the runway. The TODA may be reduced to mitigate penetrations to the 40:1 instrument departure surface, if applicable. The TODA may also extend beyond the runway end through the use of a clearway Reference AC 150/5300-13A, Paragraph 323(d)(2).	✓			
3. Accelerate Stop Distance Available (ASDA)	5300-13A List the length the length of runway plus stopway (if any) declared available and suitable for satisfying accelerate-stop distance requirements for a rejected takeoff. Additional RSA and ROFA can be obtained by reducing the ASDA. Reference AC 150/5300-13A, Paragraph 323(d)(3).	✓			

Airport Data Sheet					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
4. Landing Distance Available (LDA)	5300-13A List the length of runway declared available and suitable for satisfying landing distance requirements. The LDA may be reduced to satisfy the approach RPZ, RSA, and ROFA requirements. Reference AC 150/5300-13A, Paragraph 323(e).	✓			
G. Legend	Provide a Legend that identifies all symbols and line types used on the drawing. Lines must be clear and readable with sufficient scale and quality to discern details.			✓	
Remarks					

A.4. Airport Layout Plan Drawing (EXISTING)

- For smaller airports, some of the ALP sheets may be combined if practical and approved by FAA.
- Two, or more, sheets may be necessary for clarity, existing and proposed. The reviewer should be able to differentiate between existing, future, and ultimate development. If clarity is an issue, some features of this drawing may be placed in tabular format. North should be pointed towards the top of the page or to the left. (scale 1"=200' to 1"=600')

Airport Layout Plan Drawing					
Item	Instructions	Sponsor/Consultant			FAA
		Yes	No	N/A	
A. Title and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	✓			
B. Space for the FAA approval stamp	Leave a blank four-inch by four-inch area for the FAA approval stamp.	✓			
C. Layout of existing and proposed facilities and features:	To assure full consideration of future airport development in 14 CFR Part 77 studies, airport owners must have their plans on file with the FAA. The necessary plan data includes, as a minimum, planned runway end coordinates, elevation, and type of approach for any new runway or runway extension. See AC 150/5300-13A, Paragraph 106.	✓			
1. True and magnetic North arrow with year of magnetic declination	Magnetic declination may be calculated at http://www.ngdc.noaa.gov/geomag-web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	✓			
2. Airport reference point – locate by symbol a Lat./Long. To nearest second (existing, future, and ultimate) NAD 83	List the Airport Reference Point, the latitude and longitude of the approximate center of the airport. Use the NAD 83 coordinate system. See AC 150/5300-13A, Paragraph 207.	✓			
3. Wind cones, segmented circle, beacon, AWOS, etc.	Show as applicable pursuant to AC 150/5300-13A, Chapter 6.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
4. Contours (showing only significant terrain differences)	Topography, budget, and future uses of the base mapping, will dictate what intervals of topographical contours to use on the maps. Topographic issues may be important in the alternatives analysis, which may require that reduced contour intervals be used. See AC 150/5070-6, 1005.	✓			
5. Elevations: All NAVD88	All latitude/longitude coordinates shall be in NAD83/NAVD88.	✓			
a. Runway – existing, future, and ultimate ends (nearest 0.1 ft.)	Show the latitude and longitude of the threshold center and end of pavement.	✓			
b. Touchdown Zone Elevation (highest point in first 3,000 ft. of runway)	List the highest runway centerline elevation in the existing and ultimate first 3000 feet from landing threshold. See FAA Order 8260.3, Appendix 1.	✓			
c. Runway high/low points (existing and future)	For all runways identify high and low points (centerline) and provide elevation information.	✓			
d. Label runway/runway intersection elevations	Label the pavement elevation of runway intersections where the centerlines cross.			✓	
e. Displaced Thresholds (if any)	Label the pavement elevation and coordinates of the runway pavement at any displaced threshold. See AC 150/5300-13A, Paragraph 303(a)(2).	✓			
f. Roadways & Railroads (where they intersect Approach surfaces, the extended runway centerline, and at the most critical points)	Provide elevation information for the traverse ways' centerline elevation where they intersect the Part 77 Approach surfaces (existing and ultimate). Note whether this elevation is the actual elevation or the traverseway elevation plus the traverseway adjustment (23' for railways, 17' for interstate highways, 15' for other public roads, or 10' for private roads). See also 14 CFR Part 77.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
g. Structures, Buildings, and Facilities	All buildings on the Airport Layout Drawing should be identified by an alphanumeric character. List these identifiers in a table and give a description of the building. If no Terminal Area drawing is done, also include the top of structure elevation in MSL. If any of the structures violate any airport or approach surfaces give an ultimate disposition to remedy the violation. Don't forget navigation aid shelters, AWOS/ASOS, RVRs, PAPIs, Fueling systems, REILs, etc. Also identify the structure use (hangar, FBO, crew quarters, etc.), as needed. Some lesser objects may be identified by symbols in the legend.	✓			
h. Define features to include: trees streams, water bodies, etc.	Provide information and delineate trees, streams, water bodies, etc., on or near airport property and approach surfaces.	✓			
6. Runway Details					
a. Runway Design – runway length, runway width, shoulder width, blast pad width, blast pad length, and cross wind component. (existing, future, and ultimate)	AC 150/5325-4 describes procedures for establishing the appropriate runway length. AC 150/5300-13A, Table 3-4 and Table 3-5 provides the minimum runway length. AC 150/5300-13A, Table 3-8 provides the standard dimensions of the runway width, shoulder width, blast pad width, blast pad length, and crosswind component based on RDC. Clearly denote the runway numbers at the thresholds. Show location of existing and future threshold lights.	✓			
b. Orientation – true bearing to nearest 0.01 second (and runway numbers)	Show the true bearing to the nearest .01 of a degree of the runway centerline.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
c. End Coordinates – existing, future, and ultimate degrees, minutes, seconds (to the nearest 0.01 second)	Show the latitude and longitude of the threshold center and end of pavement (if different) to the nearest .01 of a second.	✓			
d. Runway Safety Areas (RSA) – actual, existing, future, and ultimate (including dimensions)	Show the extents of the existing and ultimate RSA 5300-13A. Reference AC 150/5300-13A, Paragraph 307.	✓			
e. Runway Object Free Areas (ROFA)	Show the extents of the existing and ultimate ROFA. Reference AC 150/5300-13A, Paragraph 309.	✓			
f. Precision Obstacle Free Zone (POFZ)	Show the extents of the existing and ultimate POFZ. Reference AC 150/5300-13A, Paragraph 308(d).	✓			
g. Obstacle Free Zone (OFZ)	Show the extents of the existing and ultimate OFZ. Reference AC 150/5300-13A, Paragraph 308.	✓			
h. Clearways and Stopways	Show any/all clearways and stopways/overruns and the markings used to denote these areas. See AC 150/5300-13A, Paragraph 311 and 312; and AC 150/5340-1, Section 2, Paragraph 14.	✓			
i. Runway Protection Zone (RPZ) - Dimensions (existing, future, and ultimate)	Show existing and ultimate RPZ. See AC 150/5300-13A, Paragraph 310. Show the existing and ultimate protective area/zone type of ownership. Identify any incompatible objects and activities inside the RPZ. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP-400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310 and FAA memorandum dated September 27, 2012.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
j. 14 CFR Part 77 Approach Surfaces	Show the portion of the existing and ultimate approach surfaces that are over airport and adjacent property and identify the approach surface dimensions and slope. See FAA Order 7400.2, Figure 6-3-9.	✓			
k. Threshold Siting Criteria: Approach/Departure Surface (existing, future, and ultimate) 5300-13A	Determine and identify pursuant to AC 150/5300-13A, Paragraph 303(b) and 303(c).	✓			
l. Terminal Instrument Procedures (TERPS)surface and TERPS GQS, if applicable.	Determine and identify pursuant to AC 150/5300-13A, Paragraph 303(a)(4)(a), Table 3-4, and Table 3-5. Reference FAA Order 8260.3.	✓			
m. Navigation Aids (NAVAIDS) – PAPI, ILS, GS, LOC, ALS, MALSR, REIL, etc., (plus facility critical area's)	Show all NAVAIDS and provide clearance distances from runways, taxiways, etc. Reference AC 150/5300-13A, Chapter 6.	✓			
n. Marking – thresholds, hold lines, etc.	Show on the runway the type and location of markings, existing and ultimate. See AC 150/5340-1, Section 2.	✓			
o. Displaced threshold coordinates and elevation	Show the latitude, longitude, and the pavement elevation of the runway pavement at any displaced threshold. See AC 150/5300-13A, Paragraph 303(a)(2).5300-13A.	✓			
p. Runway centerline separation distances	Show the runway centerline separation distances to parallel runway centerline, holding position, parallel taxiway/taxilane centerline, aircraft parking area, and helicopter touchdown pad, if applicable. Reference AC 150/5300-13A, Paragraph 321 and Table 3-8.	✓			
7. Taxiway Details	Show the taxiway centerline separation distances to parallel taxiway/taxilane centerlines, fixed or movable objects.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
a. Dimensions – width (existing & ultimate)	Taxiway width based on Taxiway Design Group (TDG). See AC 150/5300-13A, Table 4-2.	✓			
b. Taxiway Edge Safety Margin (TESM)	TESM dimension based on TDG. See AC 150/5300-13A, Table 4-2.	✓			
c. Taxiway Shoulder Width	Taxiway shoulder width based on TDG. See AC 150/5300-13A, Table 4-2.	✓			
b. Taxiway/Taxilane Object Free Area (TOFA)	TOFA width based on Taxiway Design Group (TDG). TOFA extend the entire length of taxiway. See AC 150/5300-13A, Table 4-1.	✓			
c. Taxiway/Taxilane Safety Area (TSA)	TSA width based on TDG. TSA extend the entire length of taxiway. See AC 150/5300-13A, Table 4-1.	✓			
d. Taxiway/Taxilane Centerline Separation from:					
i. Runway centerline	Show the distance from centerline of runway to centerline of taxiway. See AC 150/5300-13A, Table 4-1.	✓			
ii. Parallel taxiway	Show the distance from centerline of taxiway to centerline of parallel taxiway. See AC 150/5300-13A, Table 4-1.			✓	
iii. Aircraft parking	Show the distance from centerline of taxiway to marked aircraft parking/tie downs. See AC 150/5300-13A, Table 4-1.	✓			
iv. Fixed or Movable Objects	Show the distance from centerline of taxiway to airport objects such as buildings, facilities, poles, etc. See AC 150/5300-13A, Table 4-1.	✓			
8. Fences (identify height)	Show the location of existing and ultimate fences and identify height.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
9. Aprons					
a. Dimensions (square footage, dimension, or length and width)	Include dimensions of apron and distance from runway and taxiway centerlines. Apron should be sized using activity forecast and the apron design spreadsheet. See AC 150/5300-13A, Chapter 5 and FAA Engineering Brief No. 75.	✓			
b. Identify aircraft tie-down layout	Show proposed tie-down layout on the apron area. See AC 150/5300-13A, Figure A5-1, AC 20-35, and AC 150/5340-1.	✓			
c. Identify Special Use Areas (e.g., deicing or aerial application areas on or near apron)	Show as applicable and pursuant to representative ACs.			✓	
10. Roads	Label all roads.	✓			
11. Legend	Provide a Legend that identifies all symbols and line types used on the drawing. Lines must be clear and readable with sufficient scale and quality to discern details.	✓			
12. Items to be identified with distinct line types	Use distinct line types to identify different items and differentiate between existing and ultimate.				
a. NAVAID Critical Areas (Glide Slope, Localizer, AWOS, ASOS, VOR, RVR, etc.)	Show the critical area outline for all Instrument Landing System and other electronic Navigational Aids located on the airport. See AC 150/5300-13A, Chapter 6 for general guidance and FAA Order 5750.16 for critical area dimensions.	✓			
b. Building Restriction Lines 5300-13A(BRL)	The BRL is the line indicating where airport buildings must not be located, limiting building proximity to aircraft movement areas. See AC 150/5300-13A, Paragraph 213(a).	✓			
c. Runway Visibility Zone (RVZ)	Show the RVZ for the existing and ultimate airport configurations. See AC 150/5300-13A, 305(c).			✓	

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
d. Airport Property Lines and Easements (existing, future, and ultimate)	Show the airport property boundaries, including easements, for the existing and ultimate airport configurations.	✓			
13. Survey Documentation					
a. Survey Monuments (PACS/SACS, see AC 150/5300-16)	Show the location of all established survey monuments located on or near the airport property. Identify Primary and Secondary Airport Control Stations (PACS/SACS) if they exist. See AC 150/5300-16. Show the location of all section corners on or near the airport property.	✓			
b. Offsets, stations, etc.	Show as applicable.	✓			
14. Any Air Traffic Control Tower (ATCT) line of sight/shadow study areas (use separate sheet if necessary)	Reference FAA Order 6480.4.			✓	
15. General Aviation development area (e.g., fuel facilities, FBO, hangars, etc.) – greater detail can be shown on the terminal area drawing	Show as applicable.			✓	
16. Facilities and movement areas that are to be phased out, if any, are described	Show as applicable.			✓	
Remarks - Item 7b and 7c are shown on Data Sheet - BRL is at edge of Primary Surface					

A.4. Airport Layout Plan Drawing (INTERIM)

- For smaller airports, some of the ALP sheets may be combined if practical and approved by FAA.
- Two, or more, sheets may be necessary for clarity, existing and proposed. The reviewer should be able to differentiate between existing, future, and ultimate development. If clarity is an issue, some features of this drawing may be placed in tabular format. North should be pointed towards the top of the page or to the left. (scale 1"=200' to 1"=600')

Airport Layout Plan Drawing					
Item	Instructions	Sponsor/Consultant			FAA
		Yes	No	N/A	
A. Title and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	✓			
B. Space for the FAA approval stamp	Leave a blank four-inch by four-inch area for the FAA approval stamp.	✓			
C. Layout of existing and proposed facilities and features:	To assure full consideration of future airport development in 14 CFR Part 77 studies, airport owners must have their plans on file with the FAA. The necessary plan data includes, as a minimum, planned runway end coordinates, elevation, and type of approach for any new runway or runway extension. See AC 150/5300-13A, Paragraph 106.	✓			
1. True and magnetic North arrow with year of magnetic declination	Magnetic declination may be calculated at http://www.ngdc.noaa.gov/geomag-web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	✓			
2. Airport reference point – locate by symbol a Lat./Long. To nearest second (existing, future, and ultimate) NAD 83	List the Airport Reference Point, the latitude and longitude of the approximate center of the airport. Use the NAD 83 coordinate system. See AC 150/5300-13A, Paragraph 207.	✓			
3. Wind cones, segmented circle, beacon, AWOS, etc.	Show as applicable pursuant to AC 150/5300-13A, Chapter 6.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
4. Contours (showing only significant terrain differences)	Topography, budget, and future uses of the base mapping, will dictate what intervals of topographical contours to use on the maps. Topographic issues may be important in the alternatives analysis, which may require that reduced contour intervals be used. See AC 150/5070-6, 1005.	✓			
5. Elevations: All NAVD88	All latitude/longitude coordinates shall be in NAD83/NAVD88.				
a. Runway – existing, future, and ultimate ends (nearest 0.1 ft.)	Show the latitude and longitude of the threshold center and end of pavement.	✓			
b. Touchdown Zone Elevation (highest point in first 3,000 ft. of runway)	List the highest runway centerline elevation in the existing and ultimate first 3000 feet from landing threshold. See FAA Order 8260.3, Appendix 1.	✓			
c. Runway high/low points (existing and future)	For all runways identify high and low points (centerline) and provide elevation information.	✓			
d. Label runway/runway intersection elevations	Label the pavement elevation of runway intersections where the centerlines cross.			✓	
e. Displaced Thresholds (if any)	Label the pavement elevation and coordinates of the runway pavement at any displaced threshold. See AC 150/5300-13A, Paragraph 303(a)(2).	✓			
f. Roadways & Railroads (where they intersect Approach surfaces, the extended runway centerline, and at the most critical points)	Provide elevation information for the traverse ways' centerline elevation where they intersect the Part 77 Approach surfaces (existing and ultimate). Note whether this elevation is the actual elevation or the traverseway elevation plus the traverseway adjustment (23' for railways, 17' for interstate highways, 15' for other public roads, or 10' for private roads). See also 14 CFR Part 77.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
g. Structures, Buildings, and Facilities	All buildings on the Airport Layout Drawing should be identified by an alphanumeric character. List these identifiers in a table and give a description of the building. If no Terminal Area drawing is done, also include the top of structure elevation in MSL. If any of the structures violate any airport or approach surfaces give an ultimate disposition to remedy the violation. Don't forget navigation aid shelters, AWOS/ASOS, RVRs, PAPIs, Fueling systems, REILs, etc. Also identify the structure use (hangar, FBO, crew quarters, etc.), as needed. Some lesser objects may be identified by symbols in the legend.	✓			
h. Define features to include: trees streams, water bodies, etc.	Provide information and delineate trees, streams, water bodies, etc., on or near airport property and approach surfaces.	✓			
6. Runway Details					
a. Runway Design – runway length, runway width, shoulder width, blast pad width, blast pad length, and cross wind component. (existing, future, and ultimate)	AC 150/5325-4 describes procedures for establishing the appropriate runway length. AC 150/5300-13A, Table 3-4 and Table 3-5 provides the minimum runway length. AC 150/5300-13A, Table 3-8 provides the standard dimensions of the runway width, shoulder width, blast pad width, blast pad length, and crosswind component based on RDC. Clearly denote the runway numbers at the thresholds. Show location of existing and future threshold lights.	✓			
b. Orientation – true bearing to nearest 0.01 second (and runway numbers)	Show the true bearing to the nearest .01 of a degree of the runway centerline.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
c. End Coordinates – existing, future, and ultimate degrees, minutes, seconds (to the nearest 0.01 second)	Show the latitude and longitude of the threshold center and end of pavement (if different) to the nearest .01 of a second.	✓			
d. Runway Safety Areas (RSA) – actual, existing, future, and ultimate (including dimensions)	Show the extents of the existing and ultimate RSA 5300-13A. Reference AC 150/5300-13A, Paragraph 307.	✓			
e. Runway Object Free Areas (ROFA)	Show the extents of the existing and ultimate ROFA. Reference AC 150/5300-13A, Paragraph 309.	✓			
f. Precision Obstacle Free Zone (POFZ)	Show the extents of the existing and ultimate POFZ. Reference AC 150/5300-13A, Paragraph 308(d).	✓			
g. Obstacle Free Zone (OFZ)	Show the extents of the existing and ultimate OFZ. Reference AC 150/5300-13A, Paragraph 308.	✓			
h. Clearways and Stopways	Show any/all clearways and stopways/overruns and the markings used to denote these areas. See AC 150/5300-13A, Paragraph 311 and 312; and AC 150/5340-1, Section 2, Paragraph 14.	✓			
i. Runway Protection Zone (RPZ) - Dimensions (existing, future, and ultimate)	Show existing and ultimate RPZ. See AC 150/5300-13A, Paragraph 310. Show the existing and ultimate protective area/zone type of ownership. Identify any incompatible objects and activities inside the RPZ. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP-400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310 and FAA memorandum dated September 27, 2012.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
j. 14 CFR Part 77 Approach Surfaces	Show the portion of the existing and ultimate approach surfaces that are over airport and adjacent property and identify the approach surface dimensions and slope. See FAA Order 7400.2, Figure 6-3-9.	✓			
k. Threshold Siting Criteria: Approach/Departure Surface (existing, future, and ultimate) 5300-13A	Determine and identify pursuant to AC 150/5300-13A, Paragraph 303(b) and 303(c).	✓			
l. Terminal Instrument Procedures (TERPS)surface and TERPS GQS, if applicable.	Determine and identify pursuant to AC 150/5300-13A, Paragraph 303(a)(4)(a), Table 3-4, and Table 3-5. Reference FAA Order 8260.3.	✓			
m. Navigation Aids (NAVAIDS) – PAPI, ILS, GS, LOC, ALS, MALSR, REIL, etc., (plus facility critical area's)	Show all NAVAIDS and provide clearance distances from runways, taxiways, etc. Reference AC 150/5300-13A, Chapter 6.	✓			
n. Marking – thresholds, hold lines, etc.	Show on the runway the type and location of markings, existing and ultimate. See AC 150/5340-1, Section 2.	✓			
o. Displaced threshold coordinates and elevation	Show the latitude, longitude, and the pavement elevation of the runway pavement at any displaced threshold. See AC 150/5300-13A, Paragraph 303(a)(2).5300-13A.	✓			
p. Runway centerline separation distances	Show the runway centerline separation distances to parallel runway centerline, holding position, parallel taxiway/taxilane centerline, aircraft parking area, and helicopter touchdown pad, if applicable. Reference AC 150/5300-13A, Paragraph 321 and Table 3-8.	✓			
7. Taxiway Details	Show the taxiway centerline separation distances to parallel taxiway/taxilane centerlines, fixed or movable objects.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
a. Dimensions – width (existing & ultimate)	Taxiway width based on Taxiway Design Group (TDG). See AC 150/5300-13A, Table 4-2.	✓			
b. Taxiway Edge Safety Margin (TESM)	TESM dimension based on TDG. See AC 150/5300-13A, Table 4-2.	✓			
c. Taxiway Shoulder Width	Taxiway shoulder width based on TDG. See AC 150/5300-13A, Table 4-2.	✓			
b. Taxiway/Taxilane Object Free Area (TOFA)	TOFA width based on Taxiway Design Group (TDG). TOFA extend the entire length of taxiway. See AC 150/5300-13A, Table 4-1.	✓			
c. Taxiway/Taxilane Safety Area (TSA)	TSA width based on TDG. TSA extend the entire length of taxiway. See AC 150/5300-13A, Table 4-1.	✓			
d. Taxiway/Taxilane Centerline Separation from:					
i. Runway centerline	Show the distance from centerline of runway to centerline of taxiway. See AC 150/5300-13A, Table 4-1.	✓			
ii. Parallel taxiway	Show the distance from centerline of taxiway to centerline of parallel taxiway. See AC 150/5300-13A, Table 4-1.			✓	
iii. Aircraft parking	Show the distance from centerline of taxiway to marked aircraft parking/tie downs. See AC 150/5300-13A, Table 4-1.	✓			
iv. Fixed or Movable Objects	Show the distance from centerline of taxiway to airport objects such as buildings, facilities, poles, etc. See AC 150/5300-13A, Table 4-1.	✓			
8. Fences (identify height)	Show the location of existing and ultimate fences and identify height.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
9. Aprons					
a. Dimensions (square footage, dimension, or length and width)	Include dimensions of apron and distance from runway and taxiway centerlines. Apron should be sized using activity forecast and the apron design spreadsheet. See AC 150/5300-13A, Chapter 5 and FAA Engineering Brief No. 75.	✓			
b. Identify aircraft tie-down layout	Show proposed tie-down layout on the apron area. See AC 150/5300-13A, Figure A5-1, AC 20-35, and AC 150/5340-1.	✓			
c. Identify Special Use Areas (e.g., deicing or aerial application areas on or near apron)	Show as applicable and pursuant to representative ACs.			✓	
10. Roads	Label all roads.	✓			
11. Legend	Provide a Legend that identifies all symbols and line types used on the drawing. Lines must be clear and readable with sufficient scale and quality to discern details.	✓			
12. Items to be identified with distinct line types	Use distinct line types to identify different items and differentiate between existing and ultimate.				
a. NAVAID Critical Areas (Glide Slope, Localizer, AWOS, ASOS, VOR, RVR, etc.)	Show the critical area outline for all Instrument Landing System and other electronic Navigational Aids located on the airport. See AC 150/5300-13A, Chapter 6 for general guidance and FAA Order 5750.16 for critical area dimensions.	✓			
b. Building Restriction Lines 5300-13A(BRL)	The BRL is the line indicating where airport buildings must not be located, limiting building proximity to aircraft movement areas. See AC 150/5300-13A, Paragraph 213(a).	✓			
c. Runway Visibility Zone (RVZ)	Show the RVZ for the existing and ultimate airport configurations. See AC 150/5300-13A, 305(c).			✓	

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
d. Airport Property Lines and Easements (existing, future, and ultimate)	Show the airport property boundaries, including easements, for the existing and ultimate airport configurations.	✓			
13. Survey Documentation					
a. Survey Monuments (PACS/SACS, see AC 150/5300-16)	Show the location of all established survey monuments located on or near the airport property. Identify Primary and Secondary Airport Control Stations (PACS/SACS) if they exist. See AC 150/5300-16. Show the location of all section corners on or near the airport property.	✓			
b. Offsets, stations, etc.	Show as applicable.	✓			
14. Any Air Traffic Control Tower (ATCT) line of sight/shadow study areas (use separate sheet if necessary)	Reference FAA Order 6480.4.			✓	
15. General Aviation development area (e.g., fuel facilities, FBO, hangars, etc.) – greater detail can be shown on the terminal area drawing	Show as applicable.	✓			
16. Facilities and movement areas that are to be phased out, if any, are described	Show as applicable.	✓			
Remarks - Item 7b and 7c are shown on Data Sheet - BRL is at edge of Primary Surface					

A.4. Airport Layout Plan Drawing (FUTURE)

- For smaller airports, some of the ALP sheets may be combined if practical and approved by FAA.
- Two, or more, sheets may be necessary for clarity, existing and proposed. The reviewer should be able to differentiate between existing, future, and ultimate development. If clarity is an issue, some features of this drawing may be placed in tabular format. North should be pointed towards the top of the page or to the left. (scale 1"=200' to 1"=600')

Airport Layout Plan Drawing					
Item	Instructions	Sponsor/Consultant			FAA
		Yes	No	N/A	
A. Title and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	✓			
B. Space for the FAA approval stamp	Leave a blank four-inch by four-inch area for the FAA approval stamp.	✓			
C. Layout of existing and proposed facilities and features:	To assure full consideration of future airport development in 14 CFR Part 77 studies, airport owners must have their plans on file with the FAA. The necessary plan data includes, as a minimum, planned runway end coordinates, elevation, and type of approach for any new runway or runway extension. See AC 150/5300-13A, Paragraph 106.	✓			
1. True and magnetic North arrow with year of magnetic declination	Magnetic declination may be calculated at http://www.ngdc.noaa.gov/geomag-web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	✓			
2. Airport reference point – locate by symbol a Lat./Long. To nearest second (existing, future, and ultimate) NAD 83	List the Airport Reference Point, the latitude and longitude of the approximate center of the airport. Use the NAD 83 coordinate system. See AC 150/5300-13A, Paragraph 207.	✓			
3. Wind cones, segmented circle, beacon, AWOS, etc.	Show as applicable pursuant to AC 150/5300-13A, Chapter 6.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
4. Contours (showing only significant terrain differences)	Topography, budget, and future uses of the base mapping, will dictate what intervals of topographical contours to use on the maps. Topographic issues may be important in the alternatives analysis, which may require that reduced contour intervals be used. See AC 150/5070-6, 1005.	✓			
5. Elevations: All NAVD88	All latitude/longitude coordinates shall be in NAD83/NAVD88.				
a. Runway – existing, future, and ultimate ends (nearest 0.1 ft.)	Show the latitude and longitude of the threshold center and end of pavement.	✓			
b. Touchdown Zone Elevation (highest point in first 3,000 ft. of runway)	List the highest runway centerline elevation in the existing and ultimate first 3000 feet from landing threshold. See FAA Order 8260.3, Appendix 1.	✓			
c. Runway high/low points (existing and future)	For all runways identify high and low points (centerline) and provide elevation information.	✓			
d. Label runway/runway intersection elevations	Label the pavement elevation of runway intersections where the centerlines cross.			✓	
e. Displaced Thresholds (if any)	Label the pavement elevation and coordinates of the runway pavement at any displaced threshold. See AC 150/5300-13A, Paragraph 303(a)(2).			✓	
f. Roadways & Railroads (where they intersect Approach surfaces, the extended runway centerline, and at the most critical points)	Provide elevation information for the traverse ways' centerline elevation where they intersect the Part 77 Approach surfaces (existing and ultimate). Note whether this elevation is the actual elevation or the traverseway elevation plus the traverseway adjustment (23' for railways, 17' for interstate highways, 15' for other public roads, or 10' for private roads). See also 14 CFR Part 77.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
g. Structures, Buildings, and Facilities	All buildings on the Airport Layout Drawing should be identified by an alphanumeric character. List these identifiers in a table and give a description of the building. If no Terminal Area drawing is done, also include the top of structure elevation in MSL. If any of the structures violate any airport or approach surfaces give an ultimate disposition to remedy the violation. Don't forget navigation aid shelters, AWOS/ASOS, RVRs, PAPIs, Fueling systems, REILs, etc. Also identify the structure use (hangar, FBO, crew quarters, etc.), as needed. Some lesser objects may be identified by symbols in the legend.	✓			
h. Define features to include: trees streams, water bodies, etc.	Provide information and delineate trees, streams, water bodies, etc., on or near airport property and approach surfaces.	✓			
6. Runway Details					
a. Runway Design – runway length, runway width, shoulder width, blast pad width, blast pad length, and cross wind component. (existing, future, and ultimate)	AC 150/5325-4 describes procedures for establishing the appropriate runway length. AC 150/5300-13A, Table 3-4 and Table 3-5 provides the minimum runway length. AC 150/5300-13A, Table 3-8 provides the standard dimensions of the runway width, shoulder width, blast pad width, blast pad length, and crosswind component based on RDC. Clearly denote the runway numbers at the thresholds. Show location of existing and future threshold lights.	✓			
b. Orientation – true bearing to nearest 0.01 second (and runway numbers)	Show the true bearing to the nearest .01 of a degree of the runway centerline.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
c. End Coordinates – existing, future, and ultimate degrees, minutes, seconds (to the nearest 0.01 second)	Show the latitude and longitude of the threshold center and end of pavement (if different) to the nearest .01 of a second.	✓			
d. Runway Safety Areas (RSA) – actual, existing, future, and ultimate (including dimensions)	Show the extents of the existing and ultimate RSA 5300-13A. Reference AC 150/5300-13A, Paragraph 307.	✓			
e. Runway Object Free Areas (ROFA)	Show the extents of the existing and ultimate ROFA. Reference AC 150/5300-13A, Paragraph 309.	✓			
f. Precision Obstacle Free Zone (POFZ)	Show the extents of the existing and ultimate POFZ. Reference AC 150/5300-13A, Paragraph 308(d).	✓			
g. Obstacle Free Zone (OFZ)	Show the extents of the existing and ultimate OFZ. Reference AC 150/5300-13A, Paragraph 308.	✓			
h. Clearways and Stopways	Show any/all clearways and stopways/overruns and the markings used to denote these areas. See AC 150/5300-13A, Paragraph 311 and 312; and AC 150/5340-1, Section 2, Paragraph 14.	✓			
i. Runway Protection Zone (RPZ) - Dimensions (existing, future, and ultimate)	Show existing and ultimate RPZ. See AC 150/5300-13A, Paragraph 310. Show the existing and ultimate protective area/zone type of ownership. Identify any incompatible objects and activities inside the RPZ. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP-400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310 and FAA memorandum dated September 27, 2012.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
j. 14 CFR Part 77 Approach Surfaces	Show the portion of the existing and ultimate approach surfaces that are over airport and adjacent property and identify the approach surface dimensions and slope. See FAA Order 7400.2, Figure 6-3-9.	✓			
k. Threshold Siting Criteria: Approach/Departure Surface (existing, future, and ultimate) 5300-13A	Determine and identify pursuant to AC 150/5300-13A, Paragraph 303(b) and 303(c).	✓			
l. Terminal Instrument Procedures (TERPS)surface and TERPS GQS, if applicable.	Determine and identify pursuant to AC 150/5300-13A, Paragraph 303(a)(4)(a), Table 3-4, and Table 3-5. Reference FAA Order 8260.3.	✓			
m. Navigation Aids (NAVAIDS) – PAPI, ILS, GS, LOC, ALS, MALSR, REIL, etc., (plus facility critical area's)	Show all NAVAIDS and provide clearance distances from runways, taxiways, etc. Reference AC 150/5300-13A, Chapter 6.	✓			
n. Marking – thresholds, hold lines, etc.	Show on the runway the type and location of markings, existing and ultimate. See AC 150/5340-1, Section 2.	✓			
o. Displaced threshold coordinates and elevation	Show the latitude, longitude, and the pavement elevation of the runway pavement at any displaced threshold. See AC 150/5300-13A, Paragraph 303(a)(2).5300-13A.			✓	
p. Runway centerline separation distances	Show the runway centerline separation distances to parallel runway centerline, holding position, parallel taxiway/taxilane centerline, aircraft parking area, and helicopter touchdown pad, if applicable. Reference AC 150/5300-13A, Paragraph 321 and Table 3-8.	✓			
7. Taxiway Details	Show the taxiway centerline separation distances to parallel taxiway/taxilane centerlines, fixed or movable objects.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
a. Dimensions – width (existing & ultimate)	Taxiway width based on Taxiway Design Group (TDG). See AC 150/5300-13A, Table 4-2.	✓			
b. Taxiway Edge Safety Margin (TESM)	TESM dimension based on TDG. See AC 150/5300-13A, Table 4-2.	✓			
c. Taxiway Shoulder Width	Taxiway shoulder width based on TDG. See AC 150/5300-13A, Table 4-2.	✓			
b. Taxiway/Taxilane Object Free Area (TOFA)	TOFA width based on Taxiway Design Group (TDG). TOFA extend the entire length of taxiway. See AC 150/5300-13A, Table 4-1.	✓			
c. Taxiway/Taxilane Safety Area (TSA)	TSA width based on TDG. TSA extend the entire length of taxiway. See AC 150/5300-13A, Table 4-1.	✓			
d. Taxiway/Taxilane Centerline Separation from:					
i. Runway centerline	Show the distance from centerline of runway to centerline of taxiway. See AC 150/5300-13A, Table 4-1.	✓			
ii. Parallel taxiway	Show the distance from centerline of taxiway to centerline of parallel taxiway. See AC 150/5300-13A, Table 4-1.			✓	
iii. Aircraft parking	Show the distance from centerline of taxiway to marked aircraft parking/tie downs. See AC 150/5300-13A, Table 4-1.	✓			
iv. Fixed or Movable Objects	Show the distance from centerline of taxiway to airport objects such as buildings, facilities, poles, etc. See AC 150/5300-13A, Table 4-1.	✓			
8. Fences (identify height)	Show the location of existing and ultimate fences and identify height.	✓			

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
9. Aprons					
a. Dimensions (square footage, dimension, or length and width)	Include dimensions of apron and distance from runway and taxiway centerlines. Apron should be sized using activity forecast and the apron design spreadsheet. See AC 150/5300-13A, Chapter 5 and FAA Engineering Brief No. 75.	✓			
b. Identify aircraft tie-down layout	Show proposed tie-down layout on the apron area. See AC 150/5300-13A, Figure A5-1, AC 20-35, and AC 150/5340-1.	✓			
c. Identify Special Use Areas (e.g., deicing or aerial application areas on or near apron)	Show as applicable and pursuant to representative ACs.			✓	
10. Roads	Label all roads.	✓			
11. Legend	Provide a Legend that identifies all symbols and line types used on the drawing. Lines must be clear and readable with sufficient scale and quality to discern details.	✓			
12. Items to be identified with distinct line types	Use distinct line types to identify different items and differentiate between existing and ultimate.				
a. NAVAID Critical Areas (Glide Slope, Localizer, AWOS, ASOS, VOR, RVR, etc.)	Show the critical area outline for all Instrument Landing System and other electronic Navigational Aids located on the airport. See AC 150/5300-13A, Chapter 6 for general guidance and FAA Order 5750.16 for critical area dimensions.	✓			
b. Building Restriction Lines 5300-13A(BRL)	The BRL is the line indicating where airport buildings must not be located, limiting building proximity to aircraft movement areas. See AC 150/5300-13A, Paragraph 213(a).	✓			
c. Runway Visibility Zone (RVZ)	Show the RVZ for the existing and ultimate airport configurations. See AC 150/5300-13A, 305(c).			✓	

Airport Layout Plan Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
d. Airport Property Lines and Easements (existing, future, and ultimate)	Show the airport property boundaries, including easements, for the existing and ultimate airport configurations.	✓			
13. Survey Documentation					
a. Survey Monuments (PACS/SACS, see AC 150/5300-16)	Show the location of all established survey monuments located on or near the airport property. Identify Primary and Secondary Airport Control Stations (PACS/SACS) if they exist. See AC 150/5300-16. Show the location of all section corners on or near the airport property.	✓			
b. Offsets, stations, etc.	Show as applicable.	✓			
14. Any Air Traffic Control Tower (ATCT) line of sight/shadow study areas (use separate sheet if necessary)	Reference FAA Order 6480.4.			✓	
15. General Aviation development area (e.g., fuel facilities, FBO, hangars, etc.) – greater detail can be shown on the terminal area drawing	Show as applicable.			✓	
16. Facilities and movement areas that are to be phased out, if any, are described	Show as applicable.	✓			
Remarks - Item 7b and 7c are shown on Data Sheet - BRL is at edge of Primary Surface					

A.5. Airport Airspace Drawing

- A required drawing.
- Scale 1" = 2000' plan view, 1" = 1000' approach profiles, 1"=100' (vertical) for approach profiles.
- 14 CFR Part 77, Objects Affecting Navigable Airspace, defines this as a drawing depicting obstacle identification surfaces for the full extent of all airport development. It should also depict airspace obstructions for the portions of the surfaces excluded from the Inner Portion of the Approach Surface Drawing.

Airport Airspace Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
A. Title and Revision Block	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	✓			
B. Plan view (based on ultimate runway lengths) Include location of water or sewage facilities if inside horizontal surface.					
1. U.S. Geological Survey (USGS) Quad Sheet for base map	Use the most current USGS Quadrangle(s) as a base map for the airspace drawing.	✓			
2. Runway end numbers	Show the ultimate runways and runway numbers. Contact the FAA before renumbering existing runways.	✓			
3. Part 77 Surfaces (Horizontal, Conical, Transition, based on ultimate). Including elevations at the point where surfaces change.	Show the extents of the Part 77 imaginary surfaces. For airports that have precision approach runways show balance of the 40,000' approach on a second sheet, if necessary. See 14 CFR Part 77.19.	✓			
4. 50' elevation contours on sloping surfaces (NAVD88)	Show contour lines on all sloping Part 77 imaginary surfaces. See 14 CFR Part 77.19.	✓			
5. Top elevations of penetrating objects for the inner portion of the approach surface drawing	Identify by unique alphanumeric symbol all objects beyond the Runway Protection Zones that penetrate any of the Part 77 surfaces. See 14 CFR Part 77.	✓			
6. Note specifying height restriction (ordinances/statutes)	List any local zoning restrictions that are in place to protect the airport and surrounding airspace. See AC 150/5190-4.	✓			
7. North Arrow with	Magnetic declination may be				

Airport Airspace Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
magnetic declination and year	calculated at http://www.ngdc.noaa.gov/geomag-web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	✓			
C. Profile view					
1. Airport Elevation	List the Airport Elevation, the highest point on an airport's usable runway expressed in feet above mean sea level (MSL). Use NAVD88 datum. See AC 150/5300-13A, Chapter 1, Paragraph 102(g).	✓			
2. Composite Ground Profile along extended Runway Centerline (Representing the composite profile, based on the highest terrain across the width and along the length of the approach surface)	Depict the ground profile along the extended runway centerline representing the composite profile, based on the highest terrain across the width and along the length of the approach surface.	✓			
3. Significant objects (bluffs, rivers, roads, schools, towers, etc.) and elevations	Identify all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions. Use the objects' same alphanumeric identifier that was used on the plan view. Identify the top elevations of all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions.	✓			
4. Existing, future, and ultimate runway ends and approach slopes	Show existing and ultimate runway ends and FAR Part 77 approach surface slopes. See 14 CFR Part 77.19.	✓			
D. Obstruction Data Tables (identify obstacles not depicted on the Inner Portion of the Approach Surface Drawing)					
1. Object identification number	Identify all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach				

Airport Airspace Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
	surfaces, regardless of whether or not they are obstructions. Use the objects alphanumeric identifier that was used on the plan view. Identify the top elevations of all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions.	✓			
2. Description	Provide a brief description of the object, e.g., Power Pole, Cell Tower, Natural Gas Flare, etc.	✓			
3. Date of Obstruction Survey	Provide the date of latest obstruction survey.	✓			
4. Ground Surface Elevation	Provide the ground surface elevation (MSL) at the base of each object.	✓			
5. Object Elevation	List the above ground level (AGL) height and the top of object elevation (above mean sea level / AMSL / MSL) for each object.	✓			
6. Amount of surface penetration	List the surface that is penetrated and the amount the object protrudes above the surface. See 14 CFR Part 77.	✓			
7. Proposed or existing disposition of the obstruction	Provide a proposed or existing disposition of the object to remedy the penetration. See AC 70/7460-1.				
a. Proposed Disposition (existing)		✓			
b. Proposed Disposition (future)		✓			
Remarks					

A.6. Inner Portion of the Approach Surface Drawing

- A required drawing.
- Scale 1”=200’ Horizontal, 1”=20’ Vertical, two sheets may be necessary for clarity. Typically, the plan view is on the top half of the drawing and the profile view is on the bottom half. Views should be drawn from the runway threshold to a point on the approach slope 100 feet above the runway threshold elevation, at a minimum, or the limits of the RPZ, whichever is further.
- Drawings containing the plan and profile view of the inner portion of the approach surface to the runway and a tabular listing of all surface penetrations. The drawing will depict the obstacle identification approach surfaces contained in 14 CFR Part 77, Objects Affecting Navigable Airspace. The drawing may also depict other surfaces, including the threshold-siting surface, Glideslope Qualification Surface (GQS), those surfaces associated with United States Standards for Instrument Procedures (TERPS), or those required by the local FAA office or state agency. The extent of the approach surface and the number of airspace obstructions shown may restrict each sheet to only one runway end or approach.

Inner Portion of the Approach Surface Drawing					
Item	Instructions	Sponsor/Consultant			FAA
		Yes	No	N/A	
A. Title and Revision Block	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	✓			
B. Plan View (existing, future, and ultimate)					
1. Inner portion of approach surface	Show the area from the runway threshold out to where the ultimate approach surface slope is 100 feet above the threshold elevation.	✓			
2. Aerial photo for base map	Use an aerial photograph for the base map.	✓			
3. Objects (identified by numbers)	Identify all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions using an alphanumeric character.	✓			
4. Property line within approaches	Show the property lines that are within the area/portion of airport shown.	✓			

Inner Portion of the Approach Surface Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
5. Road & railroad elevations, plus movable object heights	Provide elevation information for the traverse ways' centerline elevation where they intersect the Part 77 Approach surfaces (existing and ultimate). Note whether this elevation is the actual elevation or the traverse way elevation plus the traverse way adjustment (23' for railways, 17' for interstate highways, 15' for other public roads, or 10' for private roads). See also 14 CFR Part 77.	✓			
6. Part 77 Approach Surface clearance over Roads and Railroads at the most critical points, the Centerline and Edge of the surface.	Provide elevation information for the traverse ways where they intersect the edges and centerline of the Part 77 Approach surfaces (existing and ultimate). Note whether this elevation is the actual elevation or the traverseway elevation plus the traverseway adjustment (23' for railways, 17' for interstate highways, 15' for other public roads, or 10' for private roads). See also 14 CFR Part 77.	✓			
7. Physical end of runway, end number, elevation (NAVD88) Nearest 0.1 foot	Show the existing and ultimate runway end, runway number, and the elevation of the threshold center.	✓			
8. Airport Design Surfaces					
a. Runway Safety Area	Show the extents of the existing and ultimate Runway Safety Area (RSA). See AC 150/5300-13A, Paragraph 307 and Table 3-8.	✓			
b. Runway Object Free Area	Show the extents of the existing and ultimate Object Free Area (OFA). See AC 150/5300-13A, Paragraph 309 and Table 3-8.	✓			
c. Runway Obstacle Free Zone (OFZ)	Show the extents of the existing and ultimate OFZ which includes the inner-approach OFZ, inner-transitional OFZ, and the Precision OFZ (POFZ), if applicable. See AC 150/5300-13A, Paragraph 308.	✓			

Inner Portion of the Approach Surface Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
d. Runway Protection Zone (RPZ)	Show the extents of the existing and ultimate RPZ. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP-400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310, Table 3-5 and FAA memorandum dated September 27, 2012.	✓			
e. NAVAID critical area	Show the critical area outline for all Instrument Landing System and other electronic Navigational Aids located on the airport. See AC 150/5300-13A, Chapter 6 for general guidance and FAA Order 5750.16 for critical area dimensions.	✓			
9. Ground contours	Show ground contour lines in 2', 5', or 10' intervals. Topographic issues may be important in the alternatives analysis, which may require that reduced contour intervals be used. See AC 150/5070-6, Paragraph 1005.	✓			
10. North arrow with magnetic declination and year	Magnetic declination may be calculated at http://www.ngdc.noaa.gov/geomag-web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, Chapter 2, Section 5, for further information.	✓			
C. Profile view					
1. Existing and proposed runway centerline ground profile (list elevations at runway ends & at all points of grade changes) (representing the composite profile based on the highest terrain across the width and along the length of the approach surface)	Depict the ground profile along the extended runway centerline representing the composite profile, based on the highest terrain across the width and along the length of the approach surface to where the ultimate approach surface slope is 100 feet above the threshold elevation. A more effective presentation may be a rendering of a composite critical profile.	✓			

Inner Portion of the Approach Surface Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
2. Future development from plan view	Identify future development using same alphanumeric identifier that was used on the plan view.	✓			
3. Part 77 Approach/transition surface; existing and future VASI/PAPI siting surface	Show the boundaries of the existing and ultimate Part 77 Approach Surface. See FAA Order 7400.2, Figure 6-3-9, See also 14 CFR Part 77.	✓			
4. Threshold Siting Surface	Depict any applicable siting requirements pursuant to Table 3-2 of FAA AC 150/5300-13A.	✓			
5. Terrain in approach area (fences, streams, etc.)	Show all significant terrain(fences, streams, mountains, etc.) within the approach surfaces, regardless of whether or not they are obstructions	✓			
6. Objects – identify the controlling object (same numbers as plan view)	Show all significant objects (roads, rivers, railroads, towers, sign and power poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions. Identify the objects using same alphanumeric identifier that was used on the plan view.	✓			
7. Cross section of road & railroad	Show the cross-section of any roads and/or railroads that cross the area shown. Indicate cross section elevations of roads and railroads at edges and extended centerlines that cross the area shown.	✓			
8. Existing and proposed property and easement lines	Show the airport property boundaries, including easements, for the existing and ultimate airport configurations. AC 5300-13A Note easements for pipelines and residential through the fence gateways.	✓			
D. Obstruction tables for each approach surface (surface should be identified)	A separate table for each runway end must be used to enhance information clarity.				
1. Object identification number	List each object by the same alphanumeric symbol used in the plan view.	✓			

Inner Portion of the Approach Surface Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
2. Description	Provide a brief description of the object, e.g., Power Pole, Cell Tower, Natural Gas Flare, etc.	✓			
3. Date of Obstruction Survey and Survey Accuracy	Provide the date of latest obstruction survey.	✓			
4. Surface Penetrations	5300-13A For any object that penetrates the Part 77 surface, the approach surface, or the obstacle free zone, describe the vertical length the object protrudes.	✓			
5. Proposed disposition of surface penetrations	Provide a proposed disposition of the object to remedy the penetration as described in item 4 above. See AC 70/7460-1 for Part 77 violations. "Removal" and/or "Lower" should be listed for any Airports safety area/zone violations. See AC 150/5300-13A, Paragraph 303 and 308.	✓			
6. Object elevation	List the Above Ground Level (AGL) height and the top of object elevation in MSL for each object.	✓			
7. Triggering Event (e.g., a runway extension) – Timeframe/expected date for removal	List the surface that is penetrated and the amount the object protrudes above the surface. See 14 CFR Part 77 and AC 150/5300-13A, Paragraphs 303 and 308.	✓			
8. Allowable approach surface elevation (if applicable)		✓			
9. Amount of approach surface penetration (if applicable)		✓			
10. Proposed disposition of approach surface obstruction (if applicable)	Provide a proposed disposition of the object to remedy the penetration. See AC 70/7460-1 for Part 77 violations. "Removal" and/or "Lower" should be listed for any Airports safety area/zone violations. See AC 150/5300-13A, Paragraph 303.	✓			

Inner Portion of the Approach Surface Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
11. Obstacle Free Zone (OFZ)	Determine and depict the applicable OFZ surfaces, see AC 150/5300-13A, Paragraph 308. Provide a proposed disposition of the object to remedy the penetration. Note: Modification to the OFZ standard is not permitted.	✓			
E. Runway Centerline Profile	This may be shown on the Inner Portion of the Approach Surface drawing if there is space to show the runway and Runway Safety Area in sufficient detail otherwise a separate sheet may be necessary. At a minimum this drawing is to show the full length of the runway and Runway Safety Area including: runway elevations, runway and Runway Safety Area gradients, all vertical curves, and a line representing the 5' line-of-sight. See AC 150/5300-13A, Paragraph 305.	✓			
1. Scale	The vertical scale of this drawing must be able to show the separation of the runway surface and the 5' Line-of-Sight line. See AC 150/5300-13A, Paragraph 305.	✓			
2. Elevation	Show runway elevations, runway and Runway Safety Area gradients, and all vertical curve data. See AC 150/5300-13A, Paragraph 318.	✓			
3. Line of Sight	The vertical scale of this drawing must be able to show the separation of the runway surface and the 5' Line-of-Sight line. See AC 150/5300-13A, Section 305.	✓			
Remarks					

A.9. Land Use Drawing

- Scale 1”=200’ to 1”=600’.
- A drawing depicting on- and off-airport land uses and zoning in the area around the airport. At a minimum, the drawing must contain land within the 65 DNL noise contour. For medium or high activity commercial service airports, on-airport land use and off-airport land use may be on separate drawings. The Airport Layout Drawing should be used as a base map.
- Drawing optional. Need based on scope of work.

Land Use Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
A. Title and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	✓			
B. Airport boundaries/property, existing & future (fee and easement)	Show the existing and ultimate property lines. If known, show property lines for parcels surrounding the airport.	✓			
C. Plan view of land uses by category (Agricultural, Aeronautical, Commercial, Residential, etc.). Use local land use categories.					
1. On-Airport (existing & future)	Label existing and ultimate on-airport property by usage, e.g., Terminal Area, Air Cargo, Public Ramp, Airfield - Movement, Airfield - Non-movement, etc. Include existing and future airport features (e.g., runways, taxiways, aprons, safety areas/zones, terminal buildings and navigational aids).	✓			
2. Off-Airport (existing & future) [to the 65 DNL Contour at a minimum, if contour known]	Label existing and ultimate off-airport property by usage and zoning, e.g., Agricultural, Industrial, Residential, Commercial, etc.	✓			
D. Boundaries of local government	List any local zoning restrictions that are in place to protect the airport and surrounding airspace. See AC 150/5190-4.	✓			
E. Land use legend	Provide a legend that identifies all symbols and line types used on the drawing. Lines must be clear and readable with sufficient scale and quality to discern details.	✓			

Land Use Drawing					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
F. Public facilities (schools, hospitals, parks, churches etc.)	Identify public facilities, e.g., schools, parks, etc.	✓			
G. Runway visibility zone for intersecting runways	Show the Runway Visibility Zone(s) for the existing and ultimate airport configurations. See AC 150/5300-13A, Section 305.			✓	
H. Show off-airport property out to 65 DNL if available	Label existing and ultimate off-airport property by usage and zoning, e.g., Agricultural, Industrial, Residential, Commercial, etc.	✓			
I. Airport Overlay Zoning or Zoning Restrictions	List any local zoning restrictions that are in place to protect the airport and surrounding airspace. See AC 150/5190-4.	✓			
J. North arrow with magnetic declination and year	Magnetic declination may be calculated at http://www.ngdc.noaa.gov/geomag-web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	✓			
K. Drawing details to include runways, taxiways, aprons, RPZ, terminal buildings and NAVAIDS	Show existing and future airport features (e.g., runways, taxiways, aprons, safety areas/zones, terminal buildings and navigational aids, etc.). See AC 150/5300-13A.	✓			
L. Crop Restrictions	Show the Crop Restriction Line (CRL). See AC 150/5300-13A, Paragraph 322 and AC 150/5200-33.			✓	
Remarks					

A.10. Airport Property Map / Exhibit A

- Scale 1”=200’ to 1”=600’.

Airport Property Map / Exhibit A					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
A. Will Property Map serve as Exhibit A? – **If YES,** follow the directions to the right. – **If NO,** go to item B below.	If prepared in accordance with AC 150/5100-17, Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects, use ARP SOP no. 3.00 Exhibit A guidance instead of below checklist.	✓			
If Property Map *will not* serve as Exhibit A: B. Title and Revision Blocks		✓			
C. Plan view showing parcels of land (existing, future, and ultimate)					
1. Fee land interests (existing and future)		✓			
2. Easement interests (existing and future)		✓			
a. Part 77 protection		✓			
b. Compatible Land Use		✓			
c. RPZ protection		✓			
3. Airport Property Line		✓			
D. Legend – shading/cross hatching, survey monuments, etc.		✓			
E. Data Table					
1. Depiction of various tracts of land acquired to develop airport	If any obligations were incurred as a result of obtaining property, or an interest therein, they should be noted. Obligations that stem from Federal grant or an FAA-administered land transfer program, such as surplus property programs, should also be noted. The drawing should also depict easements beyond the airport boundary.	✓			

Airport Property Map / Exhibit A					
Item	**Instructions**	**Sponsor/Consultant**			**FAA**
		Yes	**No**	**N/A**	
2. Method of acquisition or property status (fee simple, easement, etc.)		✓			
3. Type of Acquisition Indicated	(e.g., AIP-noise, AIP-entitlement, PFC, surplus property, local purchase, local donation, condemnation, other)	✓			
4. Acreage		✓			
F. Access point(s) for through-the-fence arrangements including residential				✓	
Remarks					

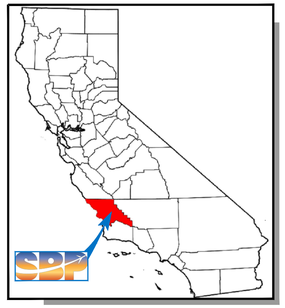
APPROVAL LETTER

AIRPORT LAYOUT PLAN
FOR
SAN LUIS OBISPO COUNTY REGIONAL AIRPORT (SBP)
SAN LUIS OBISPO, CALIFORNIA

APRIL 2025

SAN LUIS OBISPO COUNTY
REGIONAL AIRPORT

APPROVED _____ NAME _____ DATE



STATE / COUNTY MAP
SCALE: NTS

LOCATION MAP
SCALE: NTS

VICINITY MAP
SCALE: NTS

DISCLAIMER

THE PREPARATION OF THIS PLAN WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, AS AMENDED. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS PLAN BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

PLANS PREPARED BY:

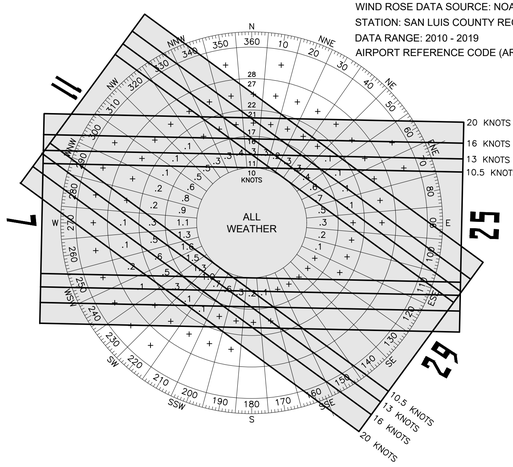
RS&H California, Inc.
5901 W Century Blvd, Suite 1030
Los Angeles CA, 90045
310-692-2050
www.rsandh.com

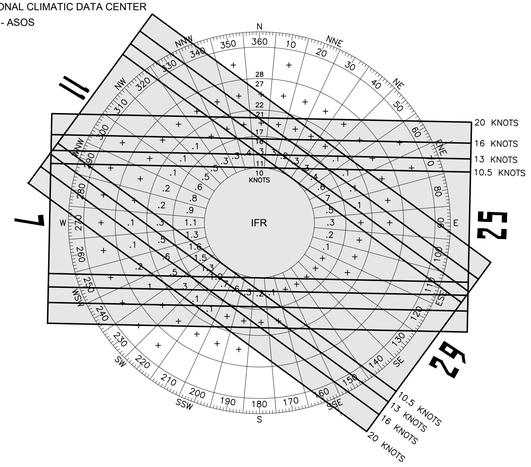
REVISIONS		
NO.	DESCRIPTION	DATE

INDEX TO SHEETS

SHEET NUMBER	DRAWING TITLE	REVISION DATE
1	COVER SHEET	
2	AIRPORT DATA SHEET	
3	AIRPORT LAYOUT DRAWING (EXISTING)	
4	AIRPORT LAYOUT DRAWING (INTERIM)	
5	AIRPORT LAYOUT DRAWING (FUTURE)	
6	AIRPORT AIRSPACE	
7	AIRPORT AIRSPACE CONICAL SURFACE	
8	AIRPORT AIRSPACE OBSTRUCTION TABLES	
9	AIRPORT AIRSPACE PROFILES	
10	INNER PORTION OF THE APPROACH SURFACE RUNWAY 7 (EXISTING)	
11	INNER PORTION OF THE APPROACH SURFACE RUNWAY 25 (EXISTING)	
12	INNER PORTION OF THE APPROACH SURFACE RUNWAY 11 (EXISTING)	
13	INNER PORTION OF THE APPROACH SURFACE RUNWAY 11 (INTERIM)	
14	INNER PORTION OF THE APPROACH SURFACE RUNWAY 11 (FUTURE)	
15	INNER PORTION OF THE APPROACH SURFACE RUNWAY 29 (EXISTING/INTERIM)	
16	INNER PORTION OF THE APPROACH SURFACE RUNWAY 29 (FUTURE)	
17	RUNWAY 11-29 OBSTRUCTION TABLES	
18	RUNWAY CENTERLINE PROFILES	
19	LAND USE PLAN (EXISTING)	
20	LAND USE PLAN (FUTURE)	
21	EXHIBIT 'A' AIRPORT PROPERTY MAP	
22	EXHIBIT 'A' AIRPORT PROPERTY MAP - TABLE	

WIND ROSE DATA SOURCE: NOAA NATIONAL CLIMATIC DATA CENTER
STATION: SAN LUIS COUNTY REGIONAL - ASOS
DATA RANGE: 2010 - 2019
AIRPORT REFERENCE CODE (ARC): C-III





ALL WEATHER WIND DATA

RUNWAY	10.5 KNOTS	13 KNOTS	16 KNOTS	20 KNOTS
RUNWAY 11-29	98.28%	99.34%	99.89%	99.98%
RUNWAY 7-25	88.18%	N/A	N/A	N/A
COMBINED	98.56%	99.34%	98.89%	99.98%
ALL WEATHER OBSERVATIONS: 31,582				

IFR WIND DATA

RUNWAY	10.5 KNOTS	13 KNOTS	16 KNOTS	20 KNOTS
RUNWAY 11-29	99.10%	99.40%	99.84%	99.97%
RUNWAY 7-25	N/A	N/A	N/A	N/A
COMBINED	99.10%	99.40%	99.84%	99.97%
IFR OBSERVATIONS: 9,297				

RUNWAY DATA TABLE

		RUNWAY 11			RUNWAY 29			RUNWAY 7		RUNWAY 25	
		EXISTING	INTERIM	FUTURE	EXISTING	INTERIM	FUTURE	EXISTING	INTERIM / FUTURE	EXISTING	INTERIM / FUTURE
RUNWAY DESIGN CODE (RDC)		C/III/2400	SAME	SAME	C/III/5000	SAME	SAME	B/II(S)/VIS		B/II(S)/VIS	
APPROACH REFERENCE CODE (APRC)		B/II/2400	B/III/2400	D/IV/2400 D/V/2400	B/II/5000	B/III/4000 D/III/400	D/IV/4000 D/V/4000	B/II(S)/VIS		B/II(S)/VIS	
DEPARTURE REFERENCE CODE (DPRC)		B/II	B/III D/III	D/IV D/V	B/II	B/III D/II	D/IV D/V	B/II(S)		B-I (S)	
PAVEMENT SURFACE		ASPHALT	SAME	SAME	ASPHALT	SAME	SAME	ASPHALT		ASPHALT	
SURFACE TREATMENT		GROOVED	SAME	SAME	GROOVED	SAME	SAME	NO TREATMENT		NO TREATMENT	
PAVEMENT STRENGTH - WHEEL LOADING (POUNDS)	S	112,000	SAME	SAME	112,000	SAME	SAME	12,500		12,500	
	D	147,000			147,000			12,500		12,500	
PAVEMENT STRENGTH - PCN		49/F/D/X/T	SAME	SAME	49/F/D/X/T	SAME	SAME	25/F/D/X/T		25/F/D/X/T	
RUNWAY GRADIENT [2]		1.4%	SAME	SAME	1.4%	SAME	SAME	1.3%		1.3%	
PERCENT WIND COVERAGE (ALL WEATHER)	10.5 KNOTS	98.28%	SAME	SAME	98.28%	SAME	SAME	88.18%		88.18%	
	13 KNOTS	99.34%			99.34%			N/A		N/A	
	16 KNOTS	99.89%			99.89%			N/A		N/A	
	20 KNOTS	99.98%			99.98%			N/A		N/A	
RUNWAY LENGTH		6,101'	SAME	SAME	6,101'	SAME	SAME	2,500'		2,500'	
RUNWAY WIDTH		150'	SAME	SAME	150'	SAME	SAME	100'		100'	
RUNWAY END - COORDINATES (NAD 83)	LAT.	35° 14' 31.97" N	SAME	35° 14' 36.09" N	35° 13' 57.56" N	SAME	35° 14' 01.69" N	35° 14' 12.69" N		35° 14' 12.79" N	
	LONG.	120° 38' 58.44" W		120° 39' 05.91" W	120° 37' 58.03" W		120° 38' 05.50" W	120° 39' 0.96" W		120° 38' 30.83" W	
RUNWAY END - ELEVATION (NAVD 88)		161.8'	SAME	154.6' (EST.)	212.2'	SAME	210.0' (EST.)	162.0'		189.0'	
DISPLACED THRESHOLD - LENGTH		800'	N/A	N/A	500'	SAME	N/A	N/A		N/A	
DISPLACED THRESHOLD - COORDINATES (NAD 83)	LAT.	35° 14' 27.41" N	N/A	N/A	35° 14' 00.34" N	SAME	N/A	N/A		N/A	
	LONG.	120° 38' 50.65" W			120° 38' 03.13" W						
DISPLACED THRESHOLD - ELEVATION (NAVD 88)		168.1'	N/A	N/A	211.7'	SAME	N/A	N/A		N/A	
RUNWAY LIGHTING		HIRL	SAME	SAME	HIRL	SAME	SAME	N/A		N/A	
RUNWAY PROTECTION ZONE (RPZ) [1]	APP.	1,000'x2,500'x1,750'	SAME	SAME	500'x1,700'x1,010'	SAME	SAME	250'x1,000'x450'		250'x1,000'x450'	
	DEP.	500'x1,700'x1,010'			500'x1,700'x1,010'			250'x1,000'x450'	*TO BE REMOVED*	250'x1,000'x450'	*TO BE REMOVED*
RUNWAY MARKING		PRECISION	SAME	SAME	NONPRECISION	SAME	SAME	BASIC		BASIC	
14 CFR PART 77 APPROACH CATEGORY		50:1	SAME	SAME	34:1	SAME	SAME	20:1		20:1	
APPROACH TYPE		PRECISION	SAME	SAME	NONPRECISION	SAME	SAME	VISUAL		VISUAL	
VISIBILITY MINIMUMS		1/2 MILE (RVR 2400)	SAME	SAME	1 MILE (RVR 5000)	SAME	SAME	VISUAL		VISUAL	
AERONAUTICAL SURVEY		VERTICALLY GUIDED	SAME	SAME	VERTICALLY GUIDED	SAME	SAME	NON-VERTICALLY GUIDED		NON-VERTICALLY GUIDED	
RUNWAY DEPARTURE SURFACE		YES	SAME	SAME	YES	SAME	SAME	NO		NO	
RUNWAY SAFETY AREA (RSA)	WIDTH	500' [1]	SAME	SAME	500' [1]	500' [1]	SAME	500' [1]	120' [3]	120' [1]	
	LENGTH BEYOND RWY END	600' [1] (EMAS)			1000' [1]	600' [1] (EMAS)		1000' [1]	240' [3]	240' [1]	
RUNWAY OBJECT FREE AREA (ROFA)	WIDTH	540'	SAME	SAME	800' [1]	560'	SAME	800' [1]	250' [3]	250' [1]	
	LENGTH BEYOND RWY END	692'			1,000' [1]	600'		1,000' [1]	240' [3]	240' [1]	
RUNWAY OBSTACLE FREE ZONE (ROFZ)	WIDTH	400' [1]	SAME	SAME	400' [1]	400' [1]	SAME	250' [1]		250' [1]	
	LENGTH BEYOND RWY END	200' [1]			200' [1]	200' [1]		200' [1]		200' [1]	
INNER-APPROACH OFZ	WIDTH	400' [1]	SAME	SAME	N/A	SAME	SAME	N/A		N/A	
	LENGTH	1,600' [1]									
INNER-TRANSITIONAL OFZ	HEIGHT	53.4'	SAME	SAME	N/A	SAME	SAME	N/A		N/A	
PRECISION OBSTACLE FREE ZONE (POFZ)	WIDTH	800' [1]	SAME	SAME	N/A	SAME	SAME	N/A		N/A	
	LENGTH BEYOND RWY END	200' [1]									
13B APPROACH SURFACE (APP)		34:1 (SURFACE 5) [3]	SAME	SAME	20:1 (SURFACE 4) [3]	SAME	SAME	20:1 (SURFACE 2)		20:1 (SURFACE 2)	
VISUAL AND INSTRUMENT NAVAIDS		ILS (CAT I), RNAV (GPS), VASI-4L, MALSR	ILS (CAT I), RNAV (GPS), PAPI-4L, MALSR	SAME	RNAV (GPS), VASI-4L, REIL	SAME	RNAV (GPS), PAPI-4L, REIL	N/A		N/A	
CRITICAL AIRCRAFT		A319	SAME	SAME	A319	SAME	SAME	C421		C421	
TOUCHDOWN ZONE ELEVATION (NAVD 88)		197.8'	191.3 (EST.)	183.5 (EST.)	211.8'	SAME	210.0' (EST.)	189.0'		189.0'	

1. DIMENSION SHOWN MEETS FAA STANDARDS.
2. RUNWAYS MEET LINE OF SIGHT REQUIREMENTS.
3. 30:1 SLOPE (SURFACE 6) IS REQUIRED IN ADDITION TO THE APPLICABLE APPROACH SURFACE ESTABLISHED IN TABLE 3-4 IN FAA AC 150/5300-13B

MODIFICATION TO STANDARDS

APPROVAL DATE	AIRSPACE CASE NO.	STANDARD TO BE MODIFIED	DESCRIPTION
PENDING		AC 150/5300-13B: PARA. 3.17	RWY 11-29-TWY A SEP. IS 290 FT-325 FT. STD IS 400 FT.
PENDING		AC 150/5300-13B: PARA. 3.12	RWY 11-29 OFA IS 540 FT X 600 FT. STD IS 800 FT x 1000 FT.
PENDING		AC 150/5300-13B: TABLE 4-1	TWY A OFA WIDTH IS 132.5 FT. STD IS 171 FT.

SURVEY MONUMENTS

IDENTIFIER	NGS PID	PACS OR SACS	LATITUDE	LONGITUDE	ELEVATION
SBP C	AA4511	PACS	35° 14' 09.39" N	120° 38' 26.16" W	189.5'
SBP 2A 1993	AA4512	SACS	35° 14' 11.93" N	120° 39' 00.98" W	161.0'
SBP AP 1971 STA B2	AA4513	SACS	35° 14' 21.85" N	120° 38' 43.51" W	173.0'
SBP E	DF4281	SACS	35° 14' 11.37" N	120° 38' 59.55" W	160.1'
SOURCE: NATIONAL GEODETIC SURVEY, NAD 83 (2011), NAVD (88)					

ACRONYMS

2D	TWO DUAL WHEELS IN TANDEM (AIRCRAFT LANDING GEAR)	LDA	LANDING DISTANCE AVAILABLE	S	SINGLE WHEEL (AIRCRAFT LANDING GEAR)
ADG	AIRPLANE DESIGN GROUP	LOC	LOCALIZER	TDG	TAXIWAY DESIGN GROUP
AGL	ABOVE GROUND LEVEL	MALSR	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS	TDZ	TOUCHDOWN ZONE
ARP	AIRPORT REFERENCE POINT			TODA	TAKEOFF DISTANCE AVAILABLE
ASDA	ACCELERATE STOP DISTANCE AVAILABLE	MIRL	MEDIUM INTENSITY RUNWAY LIGHTS	TORA	TAKEOFF RUN AVAILABLE
ASOS	AUTOMATED SURFACE OBSERVING SYSTEM	MITL	MEDIUM INTENSITY TAXIWAY LIGHTS	VASI	VISUAL APPROACH SLOPE INDICATOR
ASR	AIRPORT SURVEILLANCE RADAR	MSL	MEAN SEA LEVEL	VFR	VISUAL FLIGHT RULES
D	DUAL WHEEL (AIRCRAFT LANDING GEAR)	NGS	NATIONAL GEODETIC SURVEY	VOR	VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE
DME	DISTANCE MEASURING EQUIPMENT	NP	NON-PRECISION	(E)	EXISTING CONDITIONS
GPS	GLOBAL POSITIONING SYSTEM	PAPI	PRECISION APPROACH PATH INDICATOR	(I)	INTERIM CONDITIONS
GS	GLIDESLOPE	PCN	PAVEMENT CONDITION NUMBER	(F)	FUTURE CONDITIONS
HIRL	HIGH INTENSITY RUNWAY LIGHTS	PIR	PRECISION INSTRUMENT RUNWAY		
IFR	INSTRUMENT FLIGHT RULES	REIL	RUNWAY END IDENTIFIER LIGHTING		
ILS	INSTRUMENT LANDING SYSTEM	RNAV	AREA NAVIGATION		

AIRPORT DATA TABLE

		EXISTING	INTERIM	FUTURE
AIRPORT REFERENCE CODE		C-III	SAME	SAME
MEAN MAXIMUM TEMPERATURE / HOTTEST MONTH		81.1° / SEPTEMBER	SAME	SAME
AIRPORT ELEVATION (NAVD 88)		212.6'	SAME	210.0 (EST.)
AIRPORT NAVIGATIONAL AIDS (OWNERSHIP)		MALSR, ILS, VASI-4L, REIL, BEACON (AIRPORT)	MALSR, ILS, PAPI-4L, VASI 4-L, REIL, BEACON (AIRPORT)	MALSR, ILS, PAPI-4L, REIL, BEACON (AIRPORT)
AIRPORT REFERENCE POINT (NAD 83)	LAT.	35° 14' 14" N	35° 14' 14" N	35° 14' 18" N
	LONG.	120° 38' 33" W	120° 38' 28" W	120° 38' 35" W
MISCELLANEOUS FACILITIES (OWNERSHIP)		ASOS (AIRPORT), ATCT (FAA), COMPASS ROSE (AIRPORT), SEGMENTED CIRCLE (AIRPORT), LIGHTED WINDCONE (AIRPORT), WIND MEASURING EQUIPMENT (FAA)	SAME	SAME
AIRPORT REFERENCE CODE AND CRITICAL AIRCRAFT		C-III / AIRBUS A319	SAME	SAME
MAGNETIC VARIATION		12° 19' EAST ±0° 21'	SAME	SAME
		NOVEMBER 2022		
NPIAS SERVICE LEVEL		PRIMARY / NON-HUB	SAME	SAME
STATE EQUIVALENT SERVICE ROLE		COMMERCIAL SERVICE PRIMARY	SAME	SAME
MAGNETIC VARIATION SOURCE: NOAA NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION, WORLD MAGNETIC MODEL (WMM) (2019-2024)				

TAXIWAY / TAXILANE DATA TABLE

	TWY A (N of TWY C)	TWY A (TWY C TO TWY F)	TWY A (S OF TWY F)	TWY B	TWY C	TWY E (E of RWY 11-29)	TWY E (W of RWY 11-29)	TWY F
	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
TAXIWAY / TAXILANE WIDTH	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	71' (TDG 3)	50' (TDG 3)	74' (TDG 2A)	50' (TDG 3)
TAXIWAY EDGE SAFETY MARGIN (TESM)	15'	15'	15'	15'	25.5'	15'	27.75'	15'
TAXIWAY / TAXILANE SAFETY AREA (TSA)	107'	106'	106'	118'	118'	118'	79'	118'
TAXIWAY / TAXILANE OBJECT FREE AREA (TOFA)	133.5'	132.5'	132.5'	171'	171'	171'	124'	171'
OBJECTS WITHIN TSA / TOFA	VEHICLE SERVICE ROAD (10'), AIRCRAFT APRON (47')	AIRCRAFT APRON (47')	AIRCRAFT APRON (47')	NONE	NONE	NONE	NONE	NONE
TAXIWAY / TAXILANE LIGHTING	MITL	MITL	MITL	MITL	MITL	MITL	MITL	MITL

TAXIWAY / TAXILANE DATA TABLE

	TWY G	TWY H / TWY A6	TWY L	TWY M / TWY B	TWY J (E of TWY K)	TWY J (W of TWY K)	TWY K	TWY A
	EXISTING	EXISTING / INTERIM	EXISTING	EXISTING / INTERIM	EXISTING	EXISTING	EXISTING	INTERIM
TAXIWAY / TAXILANE WIDTH	75' (TDG 3)	50' (TDG 3)	50' (TDG 3)	35' (TDG 2A)	41' (TDG 2A)	41' (TDG 2A)	42' (TDG 2A)	50' (TDG 3)
TAXIWAY EDGE SAFETY MARGIN (TESM)	27.5'	15'	15'	8.25'	11.25'	11.25'	11.75'	15'
TAXIWAY / TAXILANE SAFETY AREA (TSA)	118'	118'	118'	79'	79'	79'	79'	118'
TAXIWAY / TAXILANE OBJECT FREE AREA (TOFA)	171'	171'	171'	124'	124'	124'	124'	171'
OBJECTS WITHIN TSA / TOFA	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
TAXIWAY / TAXILANE LIGHTING	MITL	MITL	MITL	MITL	MITL	MITL	MITL	MITL

TAXIWAY / TAXILANE DATA TABLE

	TWY A1	TWY A2	TWY A3	TWY A4	TWY A5	TWY A7	TWY A8	TWY A
	INTERIM	INTERIM	INTERIM	INTERIM	INTERIM	INTERIM	INTERIM	FUTURE
TAXIWAY / TAXILANE WIDTH	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)
TAXIWAY EDGE SAFETY MARGIN (TESM)	15'	15'	15'	15'	15'	15'	15'	15'
TAXIWAY / TAXILANE SAFETY AREA (TSA)	118'	118'	118'	118'	118'	118'	118'	118'
TAXIWAY / TAXILANE OBJECT FREE AREA (TOFA)	171'	171'	171'	171'	171'	171'	171'	171'
OBJECTS WITHIN TSA / TOFA	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
TAXIWAY / TAXILANE LIGHTING	MITL	MITL	MITL	MITL	MITL	MITL	MITL	MITL

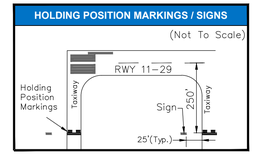
TAXIWAY / TAXILANE DATA TABLE

	TWY A1	TWY A2	TWY A3	TWY A4	TWY A5	TWY A6	TWY A7	TWY B
	FUTURE	FUTURE	FUTURE	FUTURE	FUTURE	FUTURE	FUTURE	FUTURE
TAXIWAY / TAXILANE WIDTH	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	50' (TDG 3)	35' (TDG 2A)
TAXIWAY EDGE SAFETY MARGIN (TESM)	15'	15'	15'	15'	15'	15'	15'	8.25'
TAXIWAY / TAXILANE SAFETY AREA (TSA)	118'	118'	118'	118'	118'	118'	118'	79'
TAXIWAY / TAXILANE OBJECT FREE AREA (TOFA)	171'	171'	171'	171'	171'	171'	171'	124'
OBJECTS WITHIN TSA / TOFA	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
TAXIWAY / TAXILANE LIGHTING	MITL	MITL	MITL	MITL	MITL	MITL	MITL	MITL

TAXIWAY / TAXILANE DATA TABLE

	TWY B1	TWY B2	TWY B3	TWY B4	TWY C
	FUTURE	INTERIM / FUTURE	INTERIM / FUTURE	INTERIM / FUTURE	INTERIM / FUTURE
TAXIWAY / TAXILANE WIDTH	35' (TDG 2A)	35' (TDG 2A)	50' (TDG 3)	35' (TDG 2A)	35' (TDG 2A)
TAXIWAY EDGE SAFETY MARGIN (TESM)	8.25'	8.25'	15'	8.25'	8.25'
TAXIWAY / TAXILANE SAFETY AREA (TSA)	79'	79'	118'	79'	79'
TAXIWAY / TAXILANE OBJECT FREE AREA (TOFA)	124'	124'	171'	124'	124'
OBJECTS WITHIN TSA / TOFA	NONE	NONE	NONE	NONE	NONE
TAXIWAY / TAXILANE LIGHTING	MITL	MITL	MITL	MITL	MITL

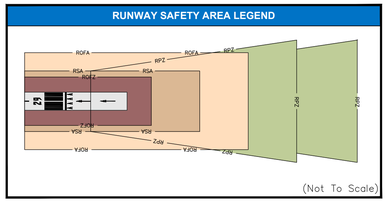
HOLDING POSITION MARKINGS / SIGNS



DECLARED DISTANCES

RUNWAY END		TORA	TODA	ASDA	LDA
RUNWAY 11	(EXISTING)	6,101'	6,101'	6,101'	5,300'
	(INTERIM)	6,101'	6,101'	6,101'	6,101'
	(FUTURE)	SAME			
RUNWAY 29	(EXISTING)	6,101'	6,101'	6,101'	5,600'
	(INTERIM)	SAME			
	(FUTURE)	6,101'	6,101'	6,101'	6,101'
RUNWAY 7	(EXISTING)	2,500'	2,500'	2,500'	2,500'
	(INTERIM / FUTURE)	TO BE REMOVED			
RUNWAY 25	(EXISTING)	2,500'	2,500'	2,500'	2,500'
	(INTERIM / FUTURE)	TO BE REMOVED			

RUNWAY SAFETY AREA LEGEND



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San Luis Obispo County Regional Airport

San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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SHEET TITLE

AIRPORT DATA SHEET

SHEET NUMBER

2 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_02_Data.dwg Plotted on: 4/8/2025 9:50 AM Plotted by: Peddie, Brendon

FEDERAL AVIATION ADMINISTRATION

DESCRIPTION	EXISTING
PROPERTY LINE	
RUNWAY SAFETY AREA	RSA
RUNWAY OBJECT FREE AREA	ROFA
RUNWAY OBSTACLE FREE ZONE	ROFZ
PRECISION OBSTACLE FREE ZONE	
RUNWAY PROTECTION ZONE	
OBSTACLE FREE ZONE	OFZ
TAXIWAY SAFETY AREA	TSA
TAXIWAY OBJECT FREE AREA	TOFA
35' BUILDING RESTRICTION LINE	BRL 35'
PART 77 SURFACE	PT77
AIRFIELD PAVEMENT	
BUILDINGS ON-AIRPORT	
BUILDINGS OFF-AIRPORT	
ROADWAY/PARKING	
UNPAVED ROADWAY/PARKING	
VSR WITHIN OBJECT FREE AREA[7]	
AIRCRAFT HOLDING POSITION	
PAVEMENT MARKING	
AIRFIELD LIGHT	
REIL	
VASI	
ARP	
BEACON	
WINDCONE	
TREES	
FENCE	
POWER POLE	
LIGHT POLE	
DRAINAGE DITCH	
RIVER / POND	
GROUND CONTOURS	
SURVEY MONUMENT	PACS/SACS

NOTES:
1. ALL COORDINATES ARE IN NORTH AMERICAN DATUM OF 1983 (NAD 83).
2. ALL ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. ALL ELEVATIONS EXPRESSED IN FEET ABOVE MEAN SEA LEVEL (MSL).
4. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).
5. BUILDING RESTRICTION LINE IS 35' UNLESS OTHERWISE NOTED.
6. PERIMETER FENCE IS 7' CHAIN LINK WITH THREE STRAND BARBED WIRE UNLESS OTHERWISE NOTED.
7. OBJECT CLEARANCE REQUIREMENTS MET USING ACCESS CONTROL COORDINATION. VEHICLE OPERATORS REQUIRED TO CONTACT TOWER BEFORE PROCEEDING INTO CONTROLLED AREAS.

EXISTING BUILDING LEGEND		
BUILDING NO	BUILDING DESCRIPTION	ELEVATION HIGHEST POINT
1	OLD TERMINAL BUILDING	231.3'
2	RESTAURANT	215.9'
3	ELECTRICAL VAULT	201.3'
4	AIRPORT TRAFFIC CONTROL TOWER (ATCT)	271.0'
5	PASSENGER TERMINAL BUILDING	228.9'
6	HANGAR AND SHOP	225.4'
7	AIRCRAFT RESCUE AND FIREFIGHTING (ARFF)	227.9'
8	MAINTENANCE BUILDING	226.3'
9	HANGAR	252.2'
10	T-HANGAR (13 UNITS)	227.5'
11	T-HANGAR (13 UNITS)	225.0'
12	T-HANGAR (11 UNITS)	225.1'
13	T-HANGAR (9 UNITS)	225.2'
14	T-HANGAR (7 UNITS)	227.9'
15	T-HANGAR (4 UNITS)	234.2'
16	NOT USED	-
17	NOT USED	-
18	NOT USED	-
19	NOT USED	-
20	PORTABLE HANGAR (21 UNITS)	188.1'
21	HANGAR (2 UNITS)	182.1'

EXISTING BUILDING LEGEND		
BUILDING NO	BUILDING DESCRIPTION	ELEVATION HIGHEST POINT
22	HANGAR (6 UNITS)	183.2'
23	HANGAR (6 UNITS)	183.7'
24	HANGAR (6 UNITS)	187.1'
25	T-HANGAR (14 UNITS)	181.4'
26	T-HANGAR (14 UNITS)	184.0'
27	HANGAR (6 UNITS)	187.6'
28	HANGAR (D) (8 UNITS)	192.3'
29	HANGAR / SHOP (C) (6 UNITS)	191.0'
30	HANGAR / SHOP (B) (3 UNITS)	186.8'
31	HANGAR / SHOP (A) (2 UNITS)	188.2'
32	PORTABLE HANGAR (5 UNITS)	193.2'
33	T-HANGAR (14 UNITS)	195.7'
34	HANGAR	197.3'
35	PORTABLE HANGAR (5 UNITS)	191.1'
36	T-HANGAR (14 UNITS)	194.5'
37	T-HANGAR (14 UNITS)	195.1'
38	PAINT BOOTH / STORAGE	202.8'
39	HANGAR / SHOP / OFFICE	224.7'
40	FUEL FARM	196.3'
41	CAR WASH (RENTAL CAR)	217.1'

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

400' 200' 0 400'

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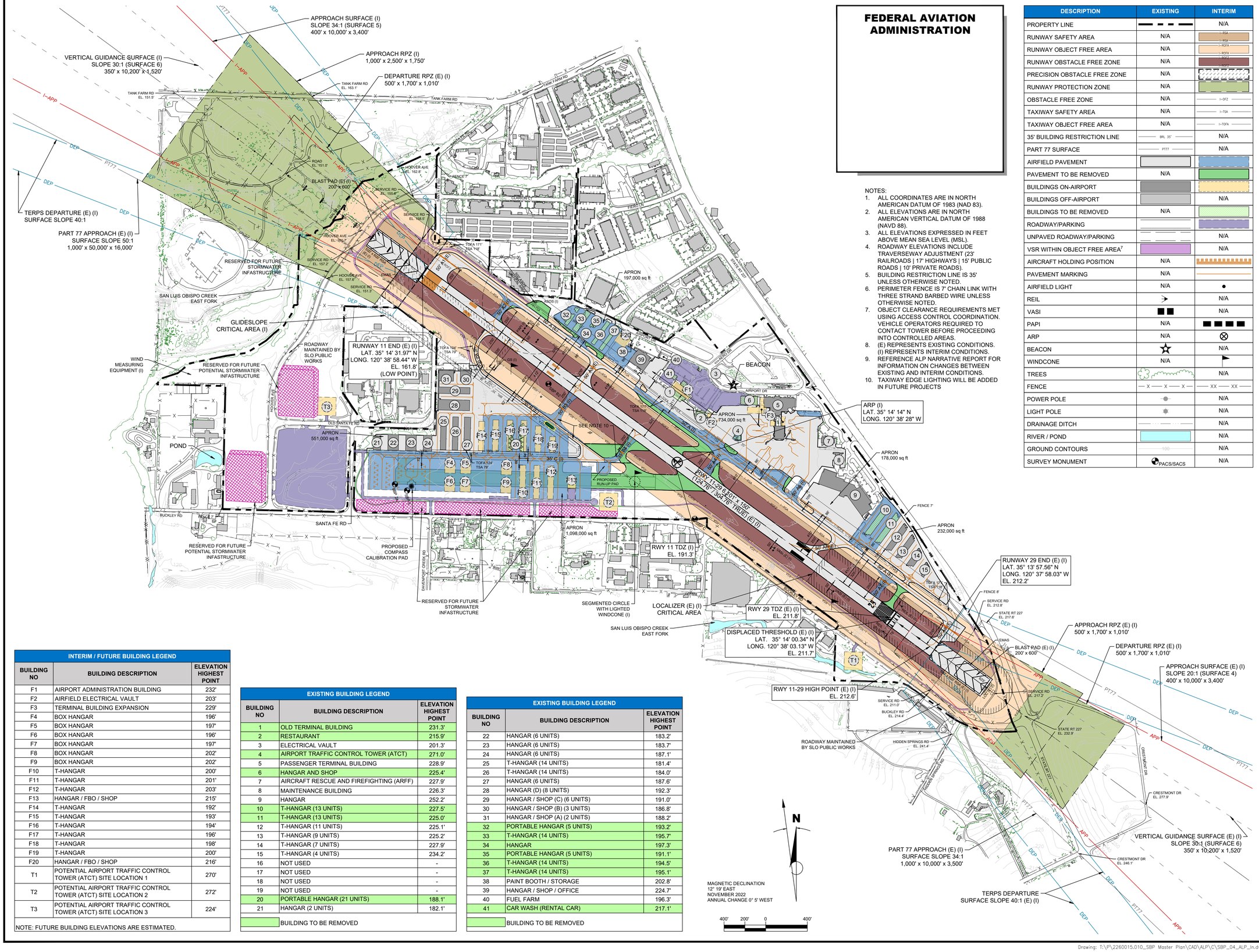
SHEET TITLE

AIRPORT LAYOUT DRAWING (EXISTING)

SHEET NUMBER

3 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_03_ALP_Ex.dwg Plotted on: 4/8/2025 9:54 AM Plotted by: Peddie, Brendan



FEDERAL AVIATION ADMINISTRATION

NOTES:
1. ALL COORDINATES ARE IN NORTH AMERICAN DATUM OF 1983 (NAD 83).
2. ALL ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. ALL ELEVATIONS EXPRESSED IN FEET ABOVE MEAN SEA LEVEL (MSL).
4. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).
5. BUILDING RESTRICTION LINE IS 35' UNLESS OTHERWISE NOTED.
6. PERIMETER FENCE IS 7' CHAIN LINK WITH THREE STRAND BARBED WIRE UNLESS OTHERWISE NOTED.
7. OBJECT CLEARANCE REQUIREMENTS MET USING ACCESS CONTROL COORDINATION. VEHICLE OPERATORS REQUIRED TO CONTACT TOWER BEFORE PROCEEDING INTO CONTROLLED AREAS.
8. (E) REPRESENTS EXISTING CONDITIONS. (I) REPRESENTS INTERIM CONDITIONS.
9. REFERENCE ALP NARRATIVE REPORT FOR INFORMATION ON CHANGES BETWEEN EXISTING AND INTERIM CONDITIONS.
10. TAXIWAY EDGE LIGHTING WILL BE ADDED IN FUTURE PROJECTS

DESCRIPTION	EXISTING	INTERIM
PROPERTY LINE		N/A
RUNWAY SAFETY AREA	N/A	I–RSA / E–RSA
RUNWAY OBJECT FREE AREA	N/A	I–ROFA / E–ROFA
RUNWAY OBSTACLE FREE ZONE	N/A	I–ROFZ / E–ROFZ
PRECISION OBSTACLE FREE ZONE	N/A	I–POFZ
RUNWAY PROTECTION ZONE	N/A	
OBSTACLE FREE ZONE	N/A	I–OFZ
TAXIWAY SAFETY AREA	N/A	I–TSA
TAXIWAY OBJECT FREE AREA	N/A	I–TOFA
35' BUILDING RESTRICTION LINE	BRL 35'	N/A
PART 77 SURFACE	PT77	N/A
AIRFIELD PAVEMENT		
PAVEMENT TO BE REMOVED	N/A	
BUILDINGS ON-AIRPORT		
BUILDINGS OFF-AIRPORT		N/A
BUILDINGS TO BE REMOVED	N/A	
ROADWAY/PARKING		
UNPAVED ROADWAY/PARKING		N/A
VSR WITHIN OBJECT FREE AREA[7]		N/A
AIRCRAFT HOLDING POSITION	N/A	
PAVEMENT MARKING	N/A	
AIRFIELD LIGHT	N/A	
REIL		N/A
VASI		N/A
PAPI	N/A	
ARP	N/A	
BEACON		N/A
WINDCONE	N/A	
TREES		N/A
FENCE	X X X	XX XX
POWER POLE		N/A
LIGHT POLE		N/A
DRAINAGE DITCH		N/A
RIVER / POND		N/A
GROUND CONTOURS	100	N/A
SURVEY MONUMENT	PACS/SACS	N/A

INTERIM / FUTURE BUILDING LEGEND		
BUILDING NO	BUILDING DESCRIPTION	ELEVATION HIGHEST POINT
F1	AIRPORT ADMINISTRATION BUILDING	232'
F2	AIRFIELD ELECTRICAL VAULT	203'
F3	TERMINAL BUILDING EXPANSION	229'
F4	BOX HANGAR	196'
F5	BOX HANGAR	197'
F6	BOX HANGAR	196'
F7	BOX HANGAR	197'
F8	BOX HANGAR	202'
F9	BOX HANGAR	202'
F10	T-HANGAR	200'
F11	T-HANGAR	201'
F12	T-HANGAR	203'
F13	HANGAR / FBO / SHOP	215'
F14	T-HANGAR	192'
F15	T-HANGAR	193'
F16	T-HANGAR	194'
F17	T-HANGAR	196'
F18	T-HANGAR	198'
F19	T-HANGAR	200'
F20	HANGAR / FBO / SHOP	216'
T1	POTENTIAL AIRPORT TRAFFIC CONTROL TOWER (ATCT) SITE LOCATION 1	270'
T2	POTENTIAL AIRPORT TRAFFIC CONTROL TOWER (ATCT) SITE LOCATION 2	272'
T3	POTENTIAL AIRPORT TRAFFIC CONTROL TOWER (ATCT) SITE LOCATION 3	224'

NOTE: FUTURE BUILDING ELEVATIONS ARE ESTIMATED.

EXISTING BUILDING LEGEND		
BUILDING NO	BUILDING DESCRIPTION	ELEVATION HIGHEST POINT
1	OLD TERMINAL BUILDING	231.3'
2	RESTAURANT	215.9'
3	ELECTRICAL VAULT	201.3'
4	AIRPORT TRAFFIC CONTROL TOWER (ATCT)	271.0'
5	PASSENGER TERMINAL BUILDING	228.9'
6	HANGAR AND SHOP	225.4'
7	AIRCRAFT RESCUE AND FIREFIGHTING (ARFF)	227.9'
8	MAINTENANCE BUILDING	226.3'
9	HANGAR	252.2'
10	T-HANGAR (13 UNITS)	227.5'
11	T-HANGAR (13 UNITS)	225.0'
12	T-HANGAR (11 UNITS)	225.1'
13	T-HANGAR (9 UNITS)	225.2'
14	T-HANGAR (7 UNITS)	227.9'
15	T-HANGAR (4 UNITS)	234.2'
16	NOT USED	-
17	NOT USED	-
18	NOT USED	-
19	NOT USED	-
20	PORTABLE HANGAR (21 UNITS)	188.1'
21	HANGAR (2 UNITS)	182.1'
	BUILDING TO BE REMOVED	

EXISTING BUILDING LEGEND		
BUILDING NO	BUILDING DESCRIPTION	ELEVATION HIGHEST POINT
22	HANGAR (6 UNITS)	183.2'
23	HANGAR (6 UNITS)	183.7'
24	HANGAR (6 UNITS)	187.1'
25	T-HANGAR (14 UNITS)	181.4'
26	T-HANGAR (14 UNITS)	184.0'
27	HANGAR (6 UNITS)	187.6'
28	HANGAR (D) (8 UNITS)	192.3'
29	HANGAR / SHOP (C) (6 UNITS)	191.0'
30	HANGAR / SHOP (B) (3 UNITS)	186.8'
31	HANGAR / SHOP (A) (2 UNITS)	188.2'
32	PORTABLE HANGAR (5 UNITS)	193.2'
33	T-HANGAR (14 UNITS)	195.7'
34	HANGAR	197.3'
35	PORTABLE HANGAR (5 UNITS)	191.1'
36	T-HANGAR (14 UNITS)	194.5'
37	T-HANGAR (14 UNITS)	195.1'
38	PAINT BOOTH / STORAGE	202.8'
39	HANGAR / SHOP / OFFICE	224.7'
40	FUEL FARM	196.3'
41	CAR WASH (RENTAL CAR)	217.1'
	BUILDING TO BE REMOVED	

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www.rsandh.com

San Luis Obispo County Regional Airport

San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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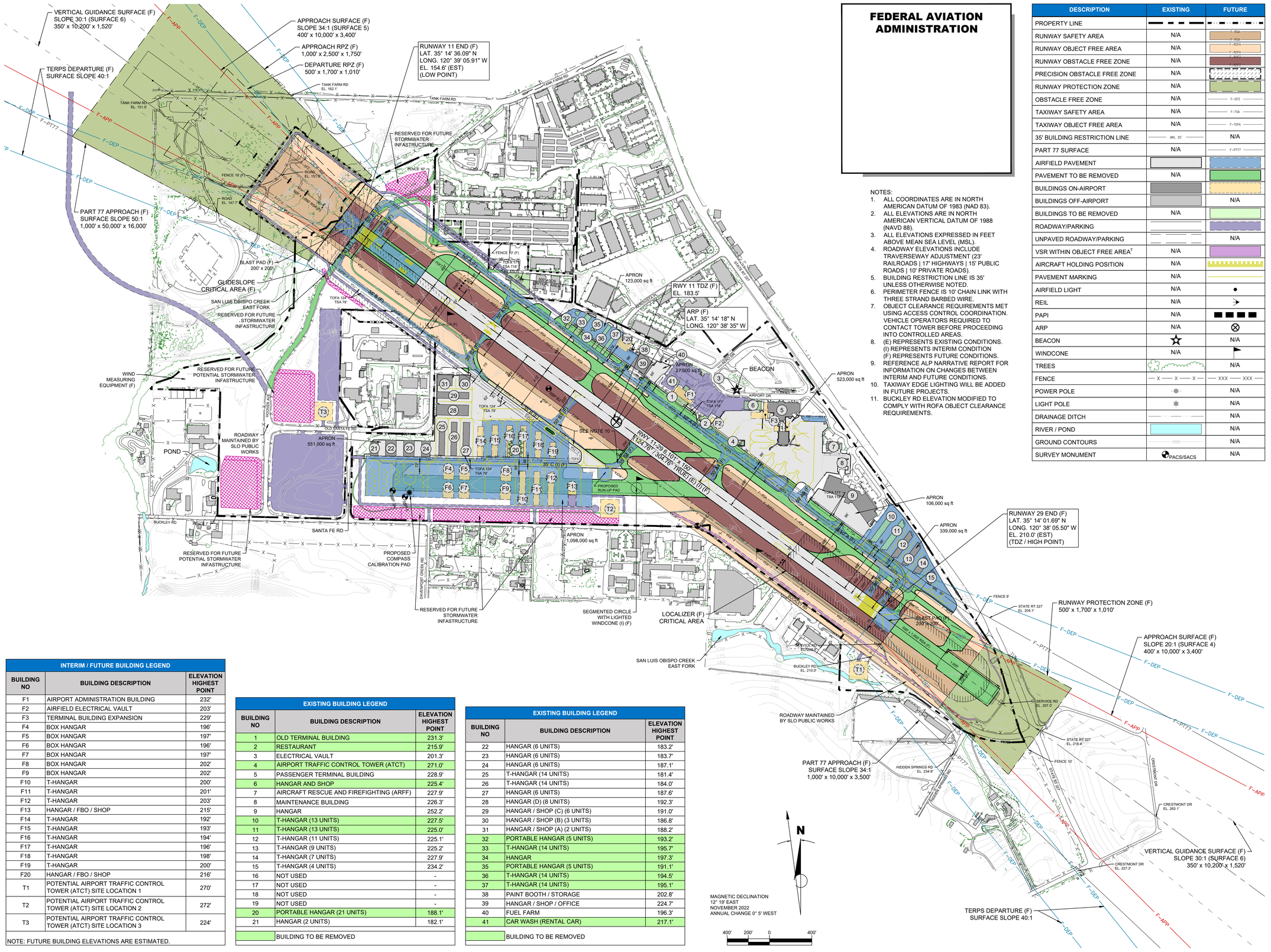
SHEET TITLE

AIRPORT LAYOUT DRAWING (INTERIM)

SHEET NUMBER

4 OF 22



FEDERAL AVIATION ADMINISTRATION

NOTES:

1. ALL COORDINATES ARE IN NORTH AMERICAN DATUM OF 1983 (NAD 83).
2. ALL ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. ALL ELEVATIONS EXPRESSED IN FEET ABOVE MEAN SEA LEVEL (MSL).
4. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).
5. BUILDING RESTRICTION LINE IS 35' UNLESS OTHERWISE NOTED.
6. PERIMETER FENCE IS 10' CHAIN LINK WITH THREE STRAND BARBED WIRE.
7. OBJECT CLEARANCE REQUIREMENTS MET USING ACCESS CONTROL COORDINATION. VEHICLE OPERATORS REQUIRED TO CONTACT TOWER BEFORE PROCEEDING INTO CONTROLLED AREAS.
8. (E) REPRESENTS EXISTING CONDITIONS. (I) REPRESENTS INTERIM CONDITION (F) REPRESENTS FUTURE CONDITIONS.
9. REFERENCE ALP NARRATIVE REPORT FOR INFORMATION ON CHANGES BETWEEN INTERIM AND FUTURE CONDITIONS.
10. TAXIWAY EDGE LIGHTING WILL BE ADDED IN FUTURE PROJECTS.
11. BUCKLEY RD ELEVATION MODIFIED TO COMPLY WITH ROFA OBJECT CLEARANCE REQUIREMENTS.

DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE		
RUNWAY SAFETY AREA	N/A	F–RSA
RUNWAY OBJECT FREE AREA	N/A	F–ROFA
RUNWAY OBSTACLE FREE ZONE	N/A	F–ROFZ
PRECISION OBSTACLE FREE ZONE	N/A	
RUNWAY PROTECTION ZONE	N/A	
OBSTACLE FREE ZONE	N/A	F–OFZ
TAXIWAY SAFETY AREA	N/A	F–TSA
TAXIWAY OBJECT FREE AREA	N/A	F–TOFA
35' BUILDING RESTRICTION LINE	BRL 35'	N/A
PART 77 SURFACE	N/A	F–PT77
AIRFIELD PAVEMENT		
PAVEMENT TO BE REMOVED	N/A	
BUILDINGS ON-AIRPORT		
BUILDINGS OFF-AIRPORT		N/A
BUILDINGS TO BE REMOVED	N/A	
ROADWAY/PARKING		
UNPAVED ROADWAY/PARKING		N/A
VSR WITHIN OBJECT FREE AREA[7]	N/A	
AIRCRAFT HOLDING POSITION	N/A	
PAVEMENT MARKING	N/A	
AIRFIELD LIGHT	N/A	
REIL	N/A	
PAPI	N/A	
ARP	N/A	
BEACON		N/A
WINDCONE	N/A	
TREES		N/A
FENCE	X X X	XXX XXX
POWER POLE		N/A
LIGHT POLE		N/A
DRAINAGE DITCH		N/A
RIVER / POND		N/A
GROUND CONTOURS	100	N/A
SURVEY MONUMENT	PACS/SACS	N/A

INTERIM / FUTURE BUILDING LEGEND		
BUILDING NO	BUILDING DESCRIPTION	ELEVATION HIGHEST POINT
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F11	T-HANGAR	201'
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F13	HANGAR / FBO / SHOP	215'
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NOTE: FUTURE BUILDING ELEVATIONS ARE ESTIMATED.

EXISTING BUILDING LEGEND		
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1	OLD TERMINAL BUILDING	231.3'
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16	NOT USED	-
17	NOT USED	-
18	NOT USED	-
19	NOT USED	-
20	PORTABLE HANGAR (21 UNITS)	188.1'
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	BUILDING TO BE REMOVED	

EXISTING BUILDING LEGEND		
BUILDING NO	BUILDING DESCRIPTION	ELEVATION HIGHEST POINT
22	HANGAR (6 UNITS)	183.2'
23	HANGAR (6 UNITS)	183.7'
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25	T-HANGAR (14 UNITS)	181.4'
26	T-HANGAR (14 UNITS)	184.0'
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	BUILDING TO BE REMOVED	

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San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

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REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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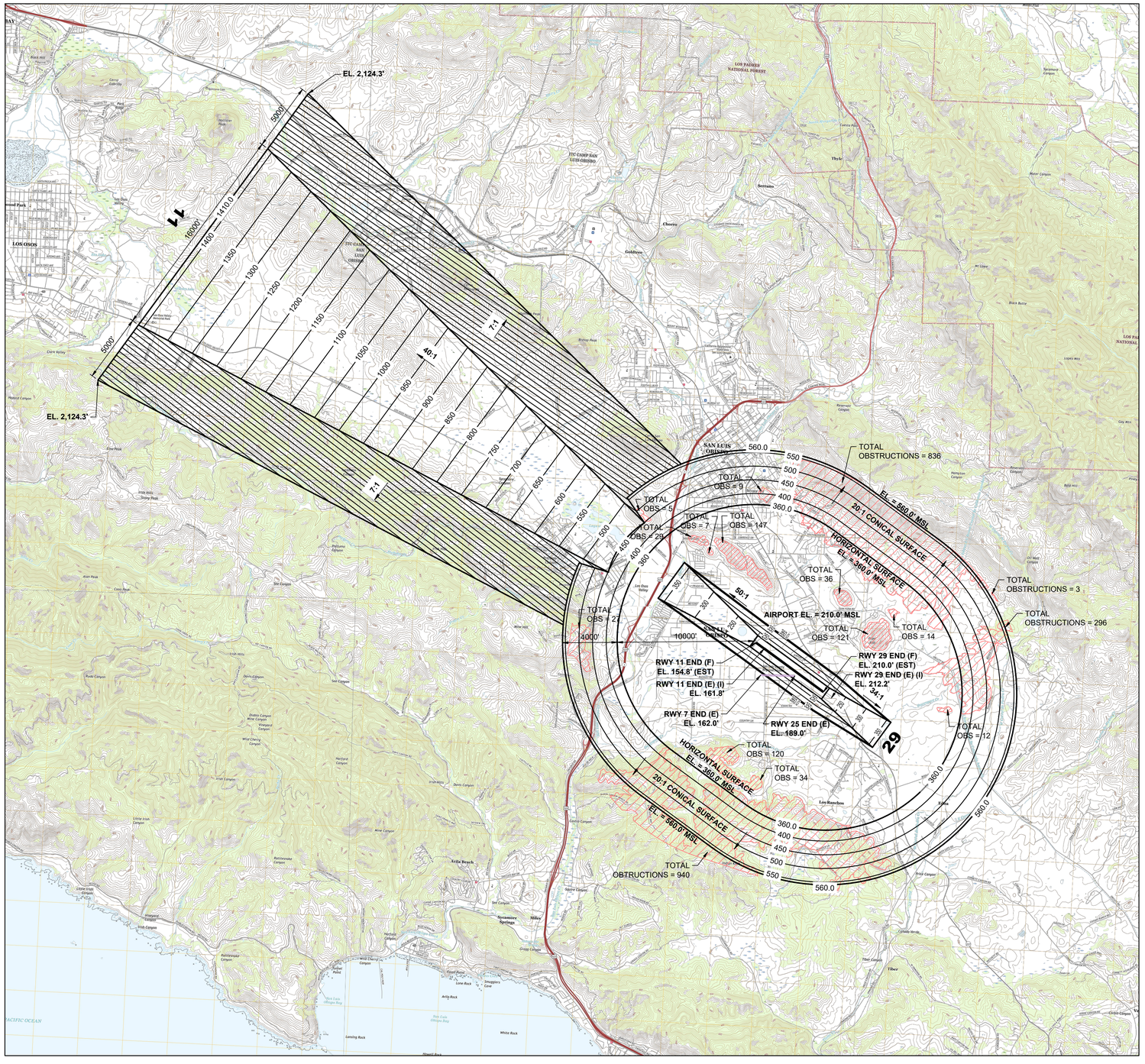
SHEET TITLE

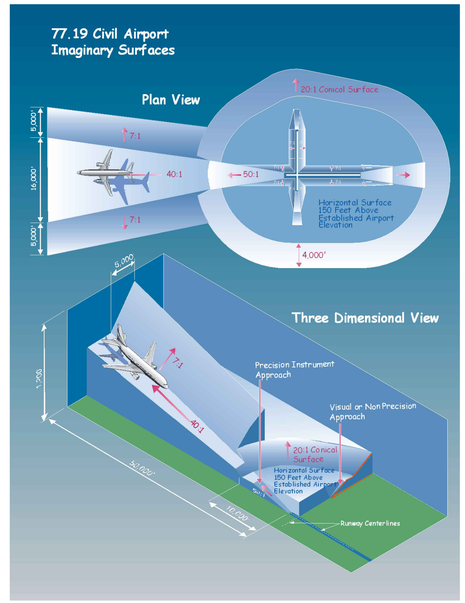
AIRPORT LAYOUT DRAWING (FUTURE)

SHEET NUMBER

5 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_05_ALP_Fu.dwg Plotted on: 4/8/2025 10:08 AM Plotted by: Peddie, Brendan





DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
					C	D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
					C	D	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

A - UTILITY RUNWAYS
B - RUNWAYS LARGER THAN UTILITY
C - VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
D - VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
* - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET

ZONING RESTRICTIONS
AIRPORT INFLUENCE AREA (AIA). LOCAL HEIGHT RESTRICTIONS SET FORTH IN SLO COUNTY CODE 22.14.030 AND THE SLO AIRPORT LAND USE COMPATIBILITY PLAN (AS AUTHORIZED IN CA PUC ARTICLE 3.5).

LEGEND	
DESCRIPTION	SYMBOL
OBSTRUCTION GRID AREA	

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

4,000' 2,000' 0 4,000'

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San Luis Obispo County Regional Airport

San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
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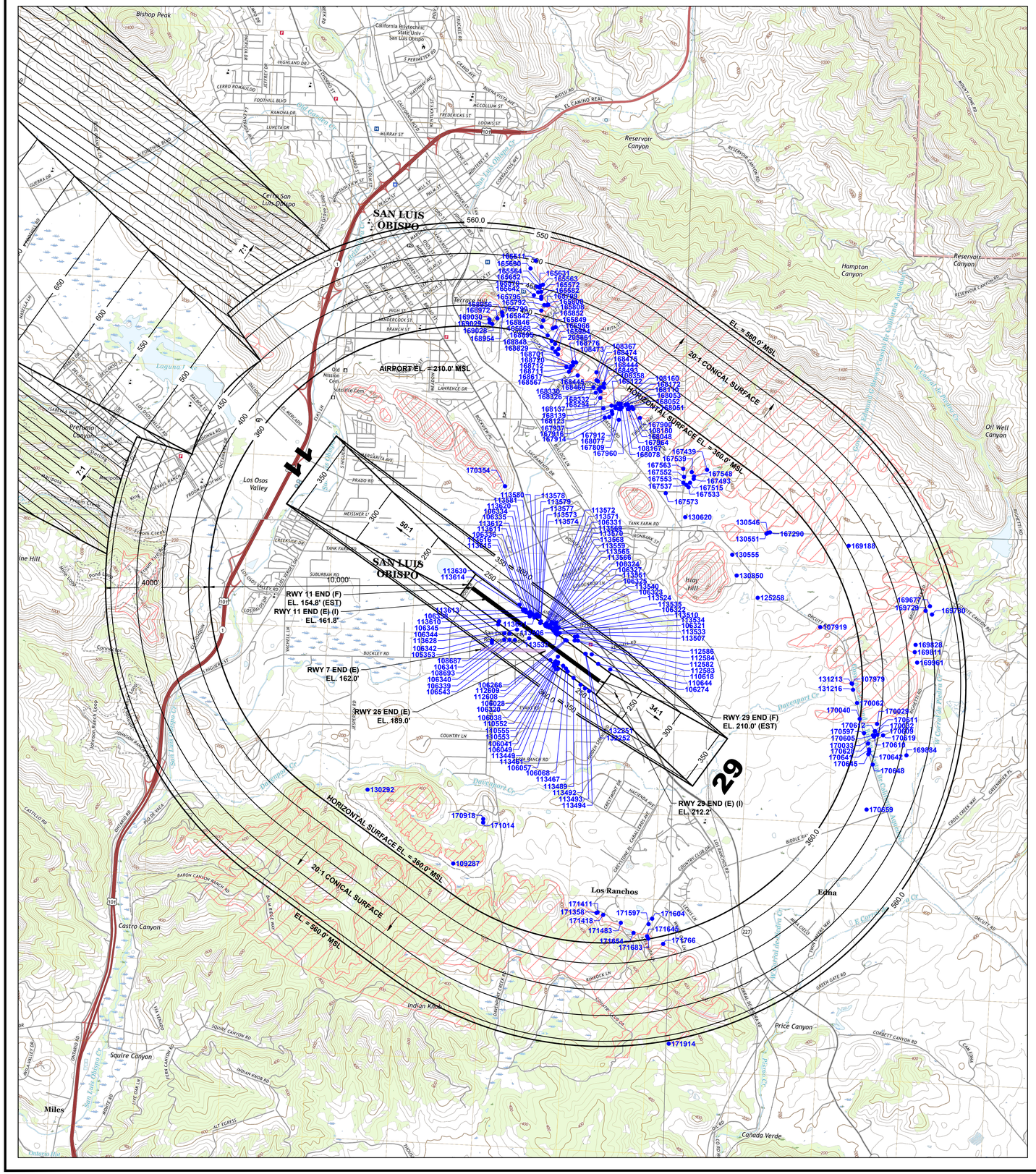
SHEET TITLE

AIRPORT AIRSPACE DRAWING

SHEET NUMBER

6 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_06-09_Pt77.dwg Plotted on: 4/8/2025 10:24 AM Plotted by: Peddie, Brendon


AIRPORT EL. = 210.0' MSL
HORIZONTAL SURFACE EL. = 360.0' MSL
20:1 CONICAL SURFACE
EL. = 560.0' MSL
RWY 11 END (F)
EL. 154.8' (EST)
RWY 11 END (E) (I)
EL. 461.8'
RWY 7 END (E)
EL. 162.0'
RWY 25 END (E)
EL. 189.0'
RWY 29 END (F)
EL. 210.0' (EST)
RWY 29 END (E) (I)
EL. 212.2'
SAN LUIS OBISPO
Los Osos Valley
Los Ranchos
Edna
Reservoir Canyon
Hampton Canyon
Bishop Peak
Cerro San Luis Obispo
Laguna Lake
Prefumo Canyon
Froom Ranch
Castro Canyon
Squire Canyon
Indian Knob
Price Canyon
Canada Verde
Miles
Islon Hill
Connector
Terrace Hill
Old Mission Cem.
Calvary Cem.
California Polytechnic State Univ - San Luis Obispo
Johnson Ranch Loop
Pond Loop
Froom Creek
Old Garden Cr.
San Luis Obispo Cr.
Stenner Creek
Prefumo Creek
Davenport Cr.
Pismo Creek
Oso Flaco Lake Natural Area
Oso Flaco Creek
Oil Well Canyon
Orcutt Hill
Ontario Hill
Los Osos Valley Rd.
Los Osos Valley Rd. Bypass
Higuera St.
Broad St.
South Higuera St.
Prado Rd.
Tank Farm Rd.
Suburban Rd.
Buckley Rd.
Country Ln.
Ranch Rd.
Meissner Ln.
Creekside Dr.
Foothill Blvd.
El Camino Real
Orcutt Rd.
Biddle Ry.
Broad St.
Ontario Rd.
Castillo Rd.
Oso Flaco Lake Rd.
Barron Canyon Ranch Rd.
Indian Knob Rd.
Squire Canyon Rd.
Corbett Canyon Rd.
Lake Rd.
Oregon Gate Rd.
Cross Creek Rd.
Cross Creek Way
Cuesta Grade
Cuesta Ridge Rd.
Via Real
Via Rancho Rd.
Via Carrillo
Via Concha
Via Cielo
Via Cielito
Via Cielo Ln.
Via Cielito Ln.
Via Cielo Ct.
Via Cielito Ct.
Via Cielo Dr.
Via Cielito Dr.
Via Cielo Pl.
Via Cielito Pl.
Via Cielo Way
Via Cielito Way
Via Cielo Cir.
Via Cielito Cir.
Via Cielo Loop
Via Cielito Loop
Via Cielo Ter.
Via Cielito Ter.
Via Cielo Trl.
Via Cielito Trl.
Via Cielo Aly.
Via Cielito Aly.
Via Cielo Sq.
Via Cielito Sq.
Via Cielo Pkwy.
Via Cielito Pkwy.
Via Cielo Blvd.
Via Cielito Blvd.
Via Cielo Hwy.
Via Cielito Hwy.
Via Cielo Expy.
Via Cielito Expy.
Via Cielo Fwy.
Via Cielito Fwy.
Via Cielo Tpke.
Via Cielito Tpke.
Via Cielo Toll Rd.
Via Cielito Toll Rd.
Via Cielo Toll Hwy.
Via Cielito Toll Hwy.
Via Cielo Toll Expy.
Via Cielito Toll Expy.
Via Cielo Toll Fwy.
Via Cielito Toll Fwy.
Via Cielo Toll Tpke.
Via Cielito Toll

OBSTRUCTION TABLE

OBJECT NO.	OBJECT DESCRIPTION	GROUND SURFACE ELEVATION (FT.)	OBJECT TOP ELEVATION (FT.)	PART 77 SURFACE ELEVATION (FT.)	PART 77 CLEARANCE (+ PENETRATE) (- CLEAR)	PART 77 SURFACE VIOLATION	PROPOSED DISPOSITION
105353	LIGHT POLE	164.6	201.1	199.1	2.0	TRANSITIONAL	OBSTRUCTION LIGHT
106028 (2)	ROAD	186.3	201.3	194.1	7.2	PRIMARY	GRADE
106038 (2)	ROAD	189.4	204.4	195.7	8.7	PRIMARY	GRADE
106041 (2)	ROAD	189.9	204.9	196.5	8.4	PRIMARY	GRADE
106049 (2)	ROAD	188.0	203.0	196.7	6.2	PRIMARY	GRADE
106057 (2)	ROAD	186.5	201.5	198.5	2.9	PRIMARY	GRADE
106068	ROAD	184.9	199.9	199.6	0.3	PRIMARY	GRADE
106266	CONTROL TOWER	196.0	270.4	194.2	76.3	TRANSITIONAL	RELOCATE
106274	BUILDING	208.1	227.7	227.1	0.6	TRANSITIONAL	OBSTRUCTION LIGHT
106320	AIRFIELD EQUIPMENT	193.3	226.3	195.4	30.8	PRIMARY	RELOCATE
106321	LIGHT POLE	192.7	237.4	205.2	32.2	TRANSITIONAL	OBSTRUCTION LIGHT
106322	LIGHT POLE	197.6	232.6	209.0	23.6	TRANSITIONAL	OBSTRUCTION LIGHT
106323	LIGHT POLE	195.8	230.0	207.8	22.2	TRANSITIONAL	OBSTRUCTION LIGHT
106324	LIGHT POLE	197.9	217.0	197.7	19.3	TRANSITIONAL	OBSTRUCTION LIGHT
106325	BUILDING HVAC	197.4	225.6	196.3	29.2	TRANSITIONAL	DEMOLISH
106327	LIGHT POLE	195.9	230.6	223.4	7.2	TRANSITIONAL	OBSTRUCTION LIGHT
106331	BUILDING	187.6	196.7	185.4	11.3	PRIMARY	OBSTRUCTION LIGHT
106334	BUILDING	179.9	194.6	186.9	7.6	TRANSITIONAL	DEMOLISH
106335	BUILDING	179.4	194.0	183.8	10.2	TRANSITIONAL	DEMOLISH
106336	BUILDING VENT	178.6	196.7	175.2	21.5	PRIMARY	DEMOLISH
106338	BUILDING	178.4	194.7	174.0	20.8	PRIMARY	DEMOLISH
106339	LIGHT POLE	172.7	216.5	198.8	17.8	TRANSITIONAL	RELOCATE
106340	LIGHT POLE	170.5	214.5	213.6	0.9	TRANSITIONAL	RELOCATE
106341	LIGHT POLE	169.0	212.6	182.9	29.8	TRANSITIONAL	OBSTRUCTION LIGHT
106342	LIGHT POLE	165.8	209.3	197.3	12.0	TRANSITIONAL	OBSTRUCTION LIGHT
106344	BUILDING	163.4	185.0	175.6	9.5	TRANSITIONAL	OBSTRUCTION LIGHT
106345	LIGHT POLE	163.2	177.5	168.6	8.9	PRIMARY	OBSTRUCTION LIGHT
106543	AIRFIELD EQUIPMENT	179.0	208.8	182.5	26.3	PRIMARY	RELOCATE
107919 (2)	ROAD	354.8	369.8	362.3	7.5	HORIZONTAL	NO ACTION
107979 (2)	ROAD	353.3	368.3	362.3	6.0	HORIZONTAL	NO ACTION
108160 (2)	ROAD	352.3	367.3	362.3	5.0	HORIZONTAL	NO ACTION
108167 (2)	ROAD	352.2	367.2	362.3	4.9	HORIZONTAL	NO ACTION
108180 (2)	ROAD	349.0	364.0	362.3	1.7	HORIZONTAL	NO ACTION
108358 (2)	ROAD	351.2	366.2	362.3	3.9	HORIZONTAL	NO ACTION
108367	ROAD	352.2	367.2	362.3	4.9	HORIZONTAL	NO ACTION
108473	ROAD	355.7	370.7	362.3	8.4	HORIZONTAL	NO ACTION
108687	LIGHT POLE	164.9	186.8	186.1	0.8	TRANSITIONAL	OBSTRUCTION LIGHT
108693	LIGHT POLE	168.4	212.2	209.4	2.8	TRANSITIONAL	RELOCATE
109287	TOWER	356.1	469.1	362.3	106.8	HORIZONTAL	NO ACTION
110552	ANTENNA	186.8	213.4	195.8	17.6	PRIMARY	RELOCATE
110553	BUILDING VENT	186.9	204.9	196.4	8.5	TRANSITIONAL	NO ACTION
110555	ANTENNA	186.7	220.1	205.0	15.1	TRANSITIONAL	NO ACTION
110618	BUILDING	204.2	249.3	226.1	23.2	TRANSITIONAL	OBSTRUCTION LIGHT
110644	BUILDING	206.1	222.7	208.0	14.7	TRANSITIONAL	DEMOLISH
112582	LIGHT POLE	197.8	265.9	236.5	29.4	TRANSITIONAL	OBSTRUCTION LIGHT
112583	LIGHT POLE	197.8	266.2	225.2	40.9	TRANSITIONAL	OBSTRUCTION LIGHT
112584	LIGHT POLE	198.7	266.7	242.4	24.4	TRANSITIONAL	OBSTRUCTION LIGHT
112586	LIGHT POLE	198.5	268.0	252.6	15.4	TRANSITIONAL	OBSTRUCTION LIGHT
112608	LIGHT POLE	196.1	241.9	196.9	45.0	TRANSITIONAL	RELOCATE
112609	BUILDING ANTENNA	196.3	216.1	196.1	20.0	TRANSITIONAL	REMOVE
113449	UTILITY POLE	185.7	216.3	213.6	2.8	TRANSITIONAL	OBSTRUCTION LIGHT
113461	UTILITY POLE	183.8	219.8	208.3	11.4	TRANSITIONAL	OBSTRUCTION LIGHT
113467	FLAG POLE	181.1	204.8	200.4	4.3	PRIMARY	OBSTRUCTION LIGHT
113489	LIGHT POLE	176.8	203.9	202.9	1.0	PRIMARY	OBSTRUCTION LIGHT
113492	BUILDING SOLAR PANEL	185.6	215.1	211.6	3.5	TRANSITIONAL	NO ACTION
113493	BUILDING VENT	185.3	216.2	215.4	0.8	TRANSITIONAL	NO ACTION
113494	BUILDING	184.7	216.2	215.4	0.8	TRANSITIONAL	OBSTRUCTION LIGHT
113506	BUILDING HVAC	199.0	215.3	190.6	24.7	PRIMARY	REMOVE
113507	BUILDING VENT	198.1	209.5	190.6	18.9	TRANSITIONAL	REMOVE
113510	SIGN	198.5	210.3	195.4	14.9	TRANSITIONAL	REMOVE
113524	LIGHT POLE	196.6	231.8	224.3	7.5	TRANSITIONAL	OBSTRUCTION LIGHT
113532	FENCE	194.8	200.6	191.2	9.4	PRIMARY	RELOCATE
113533	FENCE	197.6	203.3	190.5	12.8	PRIMARY	RELOCATE
113534	FENCE	197.4	204.0	192.4	11.6	TRANSITIONAL	RELOCATE
113535	FENCE	195.3	202.5	192.4	10.1	TRANSITIONAL	RELOCATE
113540	LIGHT POLE	193.8	229.1	223.2	5.9	TRANSITIONAL	OBSTRUCTION LIGHT
113551	ANTENNA	191.6	252.0	237.7	14.3	TRANSITIONAL	NO ACTION
113559	LIGHT POLE	196.4	231.1	222.0	9.1	TRANSITIONAL	OBSTRUCTION LIGHT
113565	BUILDING VENT	198.5	216.9	206.3	10.7	TRANSITIONAL	REMOVE
113566	LIGHT POLE	196.4	216.1	190.3	25.8	TRANSITIONAL	RELOCATE
113568	LIGHT POLE	195.7	216.1	186.9	29.2	TRANSITIONAL	RELOCATE
113569	LIGHT POLE	195.8	215.8	189.2	26.7	TRANSITIONAL	RELOCATE
113570	LIGHT POLE	197.0	216.9	195.8	21.1	TRANSITIONAL	RELOCATE
113571	LIGHT POLE	182.9	202.3	197.3	5.1	TRANSITIONAL	RELOCATE
113572	LIGHT POLE	182.9	202.1	187.2	14.9	TRANSITIONAL	RELOCATE
113573	BUILDING	181.6	190.3	182.5	7.9	PRIMARY	OBSTRUCTION LIGHT
113574	BUILDING SATELLITE DISH	182.5	224.3	186.1	38.2	TRANSITIONAL	NO ACTION
113577	BUILDING VENT	182.8	202.1	197.7	4.4	TRANSITIONAL	NO ACTION
113578	FENCE	182.3	202.9	193.0	9.9	TRANSITIONAL	RELOCATE
113579	FENCE	182.3	202.3	201.1	1.2	TRANSITIONAL	RELOCATE
113580	FENCE	181.0	202.5	200.0	2.5	TRANSITIONAL	RELOCATE
113581	FENCE	181.4	202.5	192.0	10.5	TRANSITIONAL	RELOCATE
113610	BUILDING	178.6	193.8	176.3	17.5	PRIMARY	DEMOLISH
113611	BUILDING VENT	179.3	190.5	184.4	6.1	TRANSITIONAL	REMOVE
113612	BUILDING	179.3	189.6	186.6	3.0	TRANSITIONAL	DEMOLISH
113613	BUILDING VENT	178.0	191.4	172.8	18.6	PRIMARY	REMOVE
113614	BUILDING	177.7	189.5	172.4	17.1	PRIMARY	DEMOLISH
113615	BUILDING	178.1	190.0	174.0	16.0	TRANSITIONAL	DEMOLISH
113616	BUILDING	178.6	190.7	177.8	12.9	TRANSITIONAL	DEMOLISH
113620	FENCE	180.8	185.0	182.6	2.4	TRANSITIONAL	RELOCATE
113621	FENCE	180.4	184.9	178.3	6.5	PRIMARY	RELOCATE
113628	BUILDING	172.0	182.5	175.2	7.3	PRIMARY	RELOCATE
113630	LIFT	154.5	182.5	178.4	4.0	TRANSITIONAL	NO ACTION
125258	TOWER	283.2	366.9	362.3	4.6	HORIZONTAL	OBSTRUCTION LIGHT
130292	TOWER	293.4	415.8	362.3	53.5	HORIZONTAL	OBSTRUCTION LIGHT
130546	BUILDING	360.7	381.3	362.3	19.1	HORIZONTAL	NO ACTION
130551	LIGHT POLE	360.9	381.4	362.3	19.1	HORIZONTAL	NO ACTION
130555 (3)	UTILITY POLE	335.9	375.0	362.3	12.7	HORIZONTAL	NO ACTION
130620	TOWER	265.0	395.5	362.3	33.2	HORIZONTAL	OBSTRUCTION LIGHT
130850	TOWER	292.9	400.5	362.3	38.3	HORIZONTAL	OBSTRUCTION LIGHT

OBSTRUCTION TABLE

OBJECT NO.	OBJECT DESCRIPTION	GROUND SURFACE ELEVATION (FT.)	OBJECT TOP ELEVATION (FT.)	PART 77 SURFACE ELEVATION (FT.)	PART 77 CLEARANCE (+ PENETRATE) (- CLEAR)	PART 77 SURFACE VIOLATION	PROPOSED DISPOSITION
131213	UTILITY POLE	355.0	398.2	362.3	35.9	HORIZONTAL	NO ACTION
131216	UTILITY POLE	342.3	365.1	362.3	2.8	HORIZONTAL	NO ACTION
132251	FENCE	203.6	210.3	206.7	3.6	TRANSITIONAL	RELOCATE
132252	FENCE	203.6	210.4	206.0	4.4	TRANSITIONAL	RELOCATE
165511	UTILITY POLE	496.7	531.0	518.1	12.9	CONICAL	NO ACTION
165563 (3)	UTILITY POLE	468.7	507.9	474.8	33.1	CONICAL	NO ACTION
165564	BUILDING	456.7	477.8	472.2	5.6	CONICAL	NO ACTION
165570 (3)	UTILITY POLE	438.5	477.3	458.7	18.6	CONICAL	NO ACTION
165572	BUILDING VENT	447.8	473.9	460.6	13.3	CONICAL	NO ACTION
165582	UTILITY POLE	429.4	466.9	451.1	15.7	CONICAL	NO ACTION
165631 (4)	LIGHT POLE	452.7	472.8	467.8	5.0	CONICAL	NO ACTION
165642 (3)	UTILITY POLE	417.9	455.3	451.6	3.7	CONICAL	NO ACTION
165652	UTILITY POLE	443.3	473.4	468.9	4.5	CONICAL	NO ACTION
165690	BUILDING	477.1	508.5	501.7	6.7	CONICAL	NO ACTION
165790 (5)	BUILDING	401.6	431.8	425.2	6.6	CONICAL	NO ACTION
165792 (5)	BUILDING VENT	419.4	442.9	436.7	6.2	CONICAL	NO ACTION
165795	LIGHT POLE	424.7	460.0	447.2	12.8	CONICAL	NO ACTION
165799	LIGHT POLE	423.3	459.4	437.5	21.8	CONICAL	NO ACTION
165800 (3)	UTILITY POLE	429.2	464.8	439.3	25.4	CONICAL	NO ACTION
165808 (5)	BUILDING	429.3	444.2	438.4	5.8	CONICAL	NO ACTION
165842 (3)	UTILITY POLE	381.3	417.3	407.4	9.9	CONICAL	NO ACTION
165846 (3)	UTILITY POLE	356.0	403.5	394.3	9.2	CONICAL	NO ACTION
165849	BUILDING	378.6	403.8	400.2	3.6	CONICAL	NO ACTION
165852	LIGHT POLE	372.9	401.4	396.6	4.8	CONICAL	NO ACTION
165868 (3)	UTILITY POLE	344.3	389.8	380.9	9.0	CONICAL	NO ACTION
165984	LIGHT POLE	337.8	382.3	368.7	13.6	CONICAL	NO ACTION
167290	SOLAR PANEL	353.1	369.1	362.3	6.8	HORIZONTAL	NO ACTION
167439	UTILITY POLE	332.8	371.2	362.3	8.9	HORIZONTAL	NO ACTION
167493 (5)	BUILDING	345.3	373.4	362.3	11.1	HORIZONTAL	NO ACTION
167515	UTILITY POLE	350.2	381.0	362.3	18.8	HORIZONTAL	NO ACTION
167533 (5)	BUILDING	355.6	374.1	362.3	11.8	HORIZONTAL	NO ACTION
167537	UTILITY POLE	352.7	380.7	362.3	18.4	HORIZONTAL	NO ACTION
167539	WINDMILL	348.2	371.7	362.3	9.4	HORIZONTAL	NO ACTION
167548	UTILITY POLE	347.8	365.1	362.3	2.8	HORIZONTAL	NO ACTION
167552	UTILITY POLE	328.7	367.9	362.3	5.6	HORIZONTAL	NO ACTION
167553	UTILITY POLE	334.6	371.4	362.3	9.2	HORIZONTAL	NO ACTION
167563	BUILDING VENT	348.4	373.4	362.3	11.1	HORIZONTAL	NO ACTION
167573	TOWER	291.6	399.9	362.3	37.6	HORIZONTAL	OBSTRUCTION LIGHT
167809	TOWER	320.1	385.1	362.3	22.8	HORIZONTAL	OBSTRUCTION LIGHT
167900 (5)	BUILDING	347.8	375.9	362.3	13.6	HORIZONTAL	NO ACTION
167912	TOWER	329.1	399.7	362.3	37.4	HORIZONTAL	OBSTRUCTION LIGHT
167914	SUBSTATION	318.3	366.8	362.3	4.5	HORIZONTAL	FIXED BY FUNCTION
167916 (3)	UTILITY POLE	313.5	376.4	362.3	14.2	HORIZONTAL	FIXED BY FUNCTION
167937	TOWER	335.4	412.0	362.3	49.8	HORIZONTAL	OBSTRUCTION LIGHT
167960 (5)	BUILDING	350.7	378.2	362.3	15.9	HORIZONTAL	NO ACTION
167964 (5)	BUILDING VENT	353.1	370.8	362.3	8.5	HORIZONTAL	NO ACTION
168048 (5)	BUILDING	354.3	370.7	362.3	8.4	HORIZONTAL	NO ACTION
168051	LIGHT POLE	353.9	393.8	362.3	31.6	HORIZONTAL	NO ACTION
168052	UTILITY POLE	352.1	394.2	362.3	32.0	HORIZONTAL	NO ACTION
168053 (5)	BUILDING	357.5	371.8	362.3	9.5	HORIZONTAL	NO ACTION
168077	SATELLITE DISH	350.5	368.6	362.3	6.4	HORIZONTAL	NO ACTION
168078	UTILITY POLE	347.7	381.1	362.3	18.9	HORIZONTAL	NO ACTION
168110 (5)	BUILDING	352.5	368.5	362.3	6.3	HORIZONTAL	NO ACTION
168122 (3)	UTILITY POLE	345.7	378.0	362.3	15.7	HORIZONTAL	NO ACTION
168123	BUILDING VENT	348.2	366.1	362.3	3.9	HORIZONTAL	NO ACTION
168137 (3)	UTILITY POLE	340.6	382.8	362.3	20.5	HORIZONTAL	NO ACTION
168139	UTILITY POLE	316.5	363.5	362.3	1.2	HORIZONTAL	NO ACTION
168172	BUILDING VENT	356.1	374.3	362.3	12.0	HORIZONTAL	NO ACTION
168294	UTILITY POLE	331.3	371.5	362.3	9.2	HORIZONTAL	NO ACTION
168326 (3)	UTILITY POLE	337.3	369.1	362.3	6.8	HORIZONTAL	NO ACTION
168330 (3)	UTILITY POLE	340.2	371.6	362.3	9.3	HORIZONTAL	NO ACTION
168332 (3)	UTILITY POLE	341.4	383.7	362.3	21.4	HORIZONTAL	NO ACTION
168444	BUILDING	348.1	379.6	362.3	17.4	HORIZONTAL	NO ACTION
168445	LIGHT POLE	341.3	382.9	362.3	20.7	HORIZONTAL	NO ACTION
168460	UTILITY POLE	324.0	365.0	362.3	2.8	HORIZONTAL	NO ACTION
168474 (4)	LIGHT POLE	334.5	367.1	362.3	4.8	HORIZONTAL	NO ACTION
168475	UTILITY POLE	338.3	376.8	362.3	14.5	HORIZONTAL	NO ACTION
168493	LIGHT POLE	353.5	374.0	362.3	11.7	HORIZONTAL	NO ACTION
168567	BUILDING	342.6	363.2	362.3	0.9	HORIZONTAL	NO ACTION
168617	UTILITY POLE	324.3	364.8	362.3	2.6	HORIZONTAL	NO ACTION
168701 (4)	LIGHT POLE	344.7	382.9	362.3	20.6	HORIZONTAL	NO ACTION
168711 (3)	UTILITY POLE	331.8	375.7	362.3	13.4	HORIZONTAL	NO ACTION
168712	LIGHT POLE	328.8	373.5	362.3	11.2	HORIZONTAL	NO ACTION
168720 (5)	BUILDING VENT	339.9	368.9	362.3	6.6	HORIZONTAL	NO ACTION
168776	BUILDING	352.0	369.6	362.3	7.3	HORIZONTAL	NO ACTION
168829	BUILDING VENT	345.8	367.2	362.3	4.9	HORIZONTAL	NO ACTION
168848 (3)	UTILITY POLE	342.1	381.7	362.3	19.5	HORIZONTAL	NO ACTION
168895	UTILITY POLE	332.0	369.7	362.3	7.4	HORIZONTAL	NO ACTION
168954 (5)	BUILDING	392.7	415.7	405.5	10.2	CONICAL	NO ACTION
168972	LIGHT POLE	385.4	412.8	399.5	13.4	CONICAL	NO ACTION
169028	LIGHT POLE	364.7	393.4	388.3	5.2	CONICAL	NO ACTION
169029 (5)	BUILDING	374.6	396.2	390.7	5.4	CONICAL	NO ACTION
169030	BUILDING	394.3	410.2	396.9	13.3	CONICAL	NO ACTION
169188	BIRDHOUSE	394.5	407.8	392.0	15.8	CONICAL	NO ACTION
169677	BUILDING	472.1	489.8	487.2	2.6	CONICAL	NO ACTION
169729	UTILITY POLE	466.0	503.5	476.8	26.7	CONICAL	NO ACTION
169730	UTILITY POLE	455.1	493.3	486.8	6.5	CONICAL	NO ACTION
169811	UTILITY POLE	412.9	445.3	439.7	5.6	CONICAL	NO ACTION
169828	BUILDING	421.5	446.0	443.6	2.4	CONICAL	NO ACTION
169884	TOWER	360.7	457.8	429.4	28.4	CONICAL	OBSTRUCTION LIGHT
169961	UTILITY POLE	410.2	444.8	441.8	3.0	CONICAL	NO ACTION
170029 (3)	UTILITY POLE	356.2	379.3	363.8	15.4	CONICAL	NO ACTION
170032 (3)	UTILITY POLE	362.6	390.5	362.3	28.2	HORIZONTAL	NO ACTION
170033	UTILITY POLE	360.6	384.5	362.3	22.2	HORIZONTAL	NO ACTION
170040	UTILITY POLE	355.7	398.0	362.3	35.7	HORIZONTAL	NO ACTION
170062 (3)	UTILITY POLE	338.1	380.2	362.3	17.9	HORIZONTAL	NO ACTION
170354	TOWER	288.7	392.1	362.3	29.8	HORIZONTAL	OBSTRUCTION LIGHT
170597	UTILITY POLE	336.4	380.7	362.3	18.4	HORIZONTAL	NO ACTION
170605 (5)	BUILDING VENT	361.5	380.9	362.3	18.6	HORIZONTAL	NO ACTION
170609	BUILDING	367.7	377.0	367.1	9.9	CONICAL	NO ACTION

OBSTRUCTION TABLE

OBJECT NO.	OBJECT DESCRIPTION	GROUND SURFACE ELEVATION (FT.)	OBJECT TOP ELEVATION (FT.)	PART 77 SURFACE ELEVATION (FT.)	PART 77 CLEARANCE (+ PENETRATE) (- CLEAR)	PART 77 SURFACE VIOLATION	PROPOSED DISPOSITION
170610	SATELLITE DISH	361.0	373.0	362.3	10.8	HORIZONTAL	NO ACTION
170611	TANK	360.6	368.7	362.3	6.4	HORIZONTAL	NO ACTION
170612	UTILITY POLE	360.6	380.1	362.3	17.9	HORIZONTAL	NO ACTION
170619	UTILITY POLE	374.1	403.7	378.1	25.6	CONICAL	NO ACTION
170628	UTILITY POLE	340.5	382.2	362.3	19.9	HORIZONTAL	NO ACTION
170641 (5)	BUILDING	352.5	376.6	362.3	14.4	HORIZONTAL	NO ACTION
170642	FLAG POLE	352.2	381.0	362.3	18.7	HORIZONTAL	NO ACTION
170645 (3)	UTILITY POLE	347.4	393.1	362.3	30.9	HORIZONTAL	NO ACTION
170648	UTILITY POLE	332.6	377.4	370.1	7.3	CONICAL	NO ACTION
170659	ANTENNA	317.2	415.1	388.8	26.2	CONICAL	OBSTRUCTION LIGHT
170918	BUILDING VENT	342.1	366.4	362.3	4.2	HORIZONTAL	NO ACTION
171014	UTILITY POLE	329.9	362.8	362.3	0.6	HORIZONTAL	NO ACTION
171358	SATELLITE DISH	343.3	371.5	362.3	9.2	HORIZONTAL	NO ACTION
171411	BUILDING VENT	337.0	367.8	362.3	5.5	HORIZONTAL	NO ACTION
171418	BUILDING	329.6	363.2	362.3	0.9	HORIZONTAL	NO ACTION
171483 (5)	BUILDING	337.5	370.0	362.3	7.8	HORIZONTAL	NO ACTION
171597	UTILITY POLE	328.9	368.4	362.3	6.1	HORIZONTAL	NO ACTION
171604	UTILITY POLE	319.2	363.8	362.3	1.5	HORIZONTAL	NO ACTION
171645	BUILDING VENT	335.3	367.2	362.3	4.9	HORIZONTAL	NO ACTION
171654	BUILDING	358.7	384.3	362.3	22.0	HORIZONTAL	NO ACTION
171683	UTILITY POLE	330.9	373.0	362.3	10.7	HORIZONTAL	NO ACTION
171766	BUILDING VENT	333.4	369.4	362.3	7.1	HORIZONTAL	NO ACTION
171914	TOWER	499.5	622.6	541.7	80.9	CONICAL	OBSTRUCTION LIGHT
205861	BUILDING	349.9	363.3	362.3	1.0	HORIZONTAL	NO ACTION

1. OBSTRUCTION SURVEY COMPLETED BY MARTINEZ GEOSPATIAL, INC IN 2023.
2. OBJECT IS HIGHEST ROAD POINT WITHIN 200'x200' GRID STARTING AT EACH RUNWAY END.
3. OBJECT IS HIGHEST UTILITY POLE WITHIN 200'x200' GRID STARTING AT EACH RUNWAY END.
4. OBJECT IS HIGHEST LIGHT POLE WITHIN 200'x200' GRID STARTING AT EACH RUNWAY END.
5. OBJECT IS HIGHEST BUILDING POINT WITHIN 200'x200' GRID STARTING AT EACH RUNWAY END.
6. USGS QUADRANGLE BASE MAPS DATED 2019
7. SEE INNER APPROACH PLAN AND PROFILE SHEETS FOR CLOSE-IN OBSTRUCTIONS.
8. ONLY MANMADE OBSTRUCTIONS ARE SHOWN. FOR A COMPLETE LIST OF OBSTRUCTIONS PLEASE CONSULT THE AIRPORT.

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San Luis Obispo County Regional Airport

San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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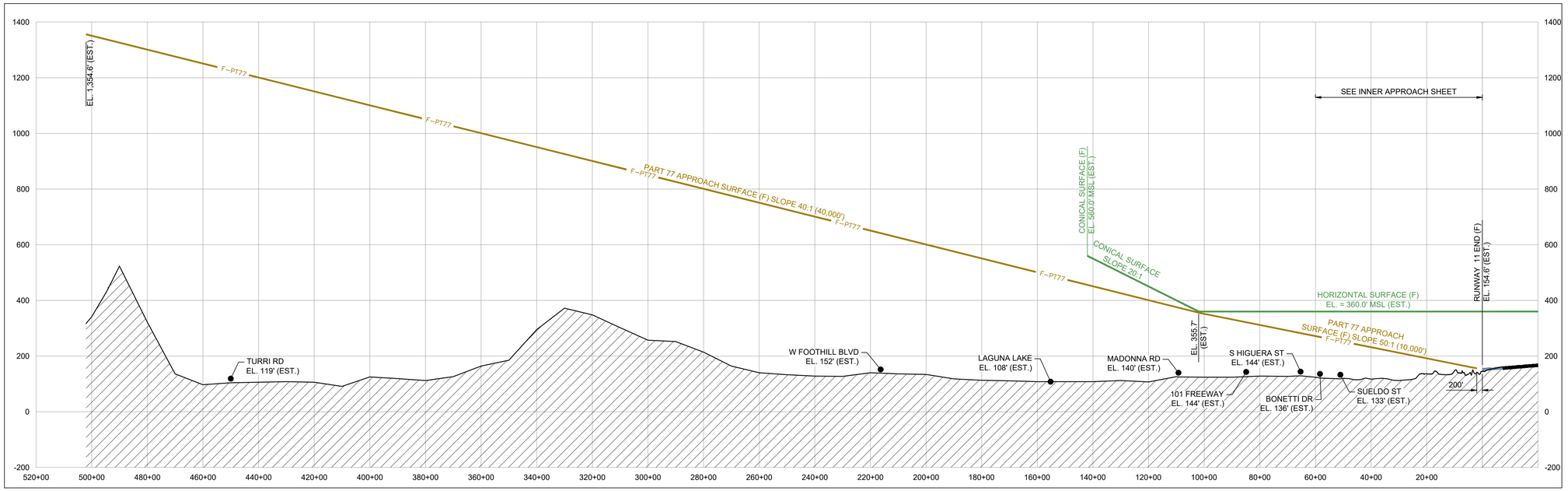
SHEET TITLE

AIRPORT AIRSPACE OBSTRUCTION TABLES

SHEET NUMBER

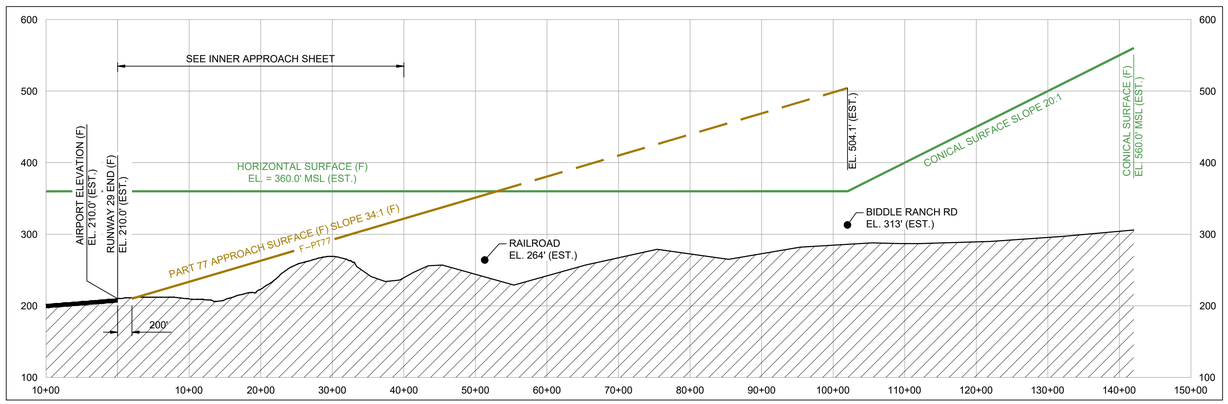
8 OF 22



RUNWAY 11 AIRSPACE PROFILE

2,000' 1,000' 0 2,000' HORIZONTAL SCALE

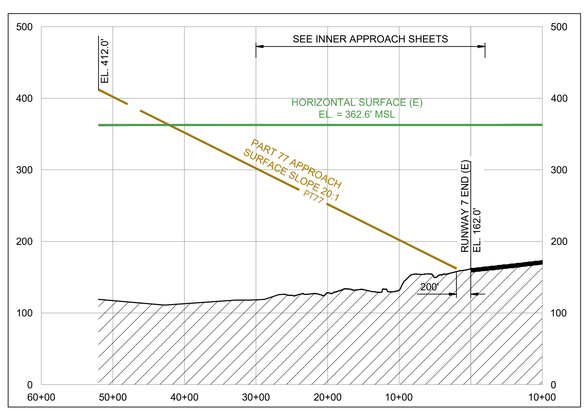
200' 100' 0 200' VERTICAL SCALE



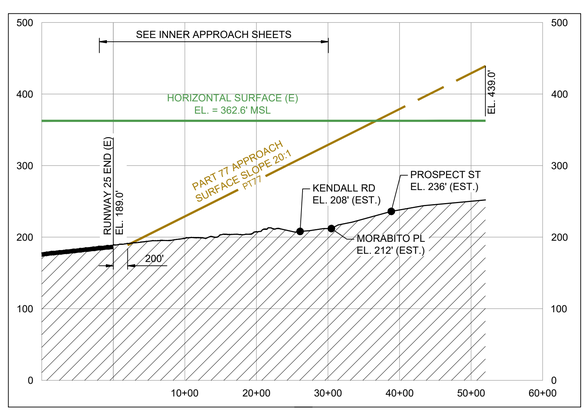
RUNWAY 29 AIRSPACE PROFILE

1,000' 500' 0 1,000' HORIZONTAL SCALE

100' 50' 0 100' VERTICAL SCALE



RUNWAY 7 AIRSPACE PROFILE



RUNWAY 25 AIRSPACE PROFILE

1,000' 500' 0 1,000' HORIZONTAL SCALE

100' 50' 0 100' VERTICAL SCALE

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www.rsandh.com

San Luis Obispo County Regional Airport

San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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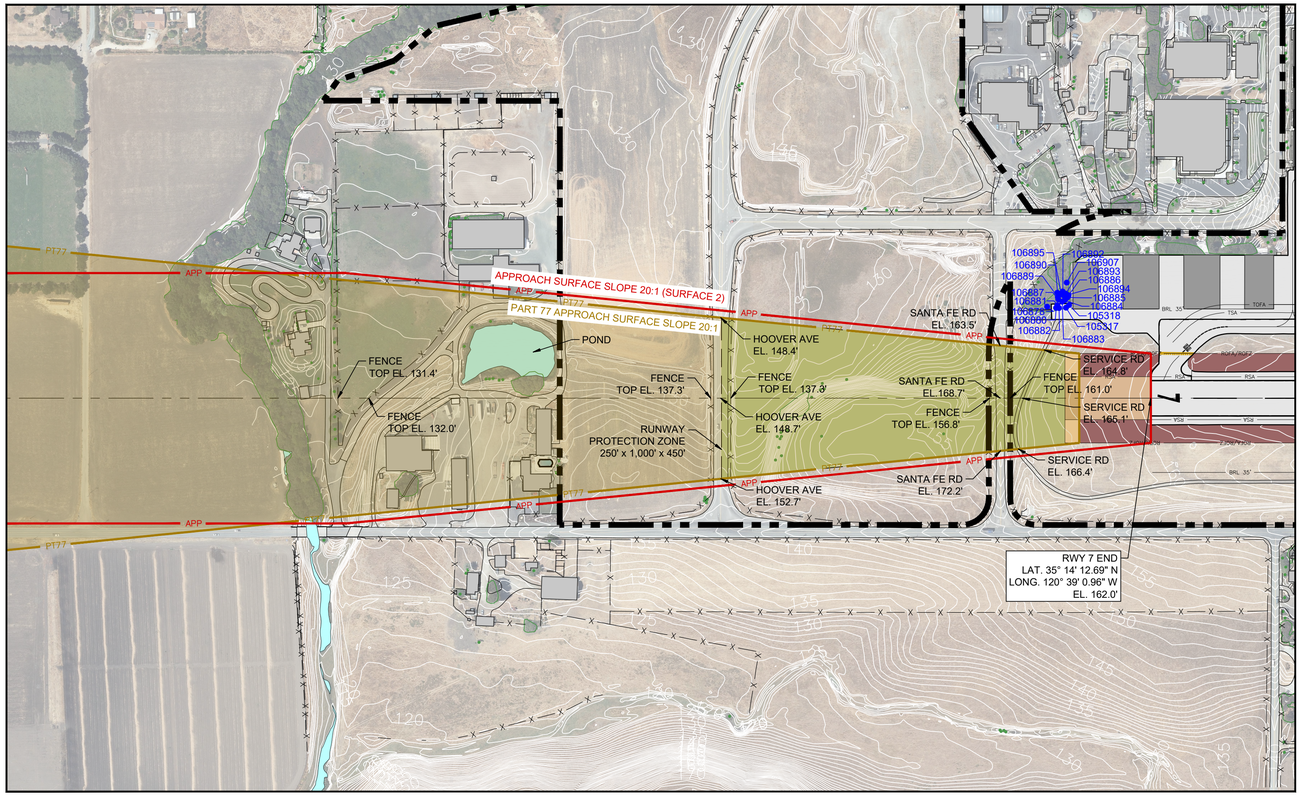
SHEET TITLE

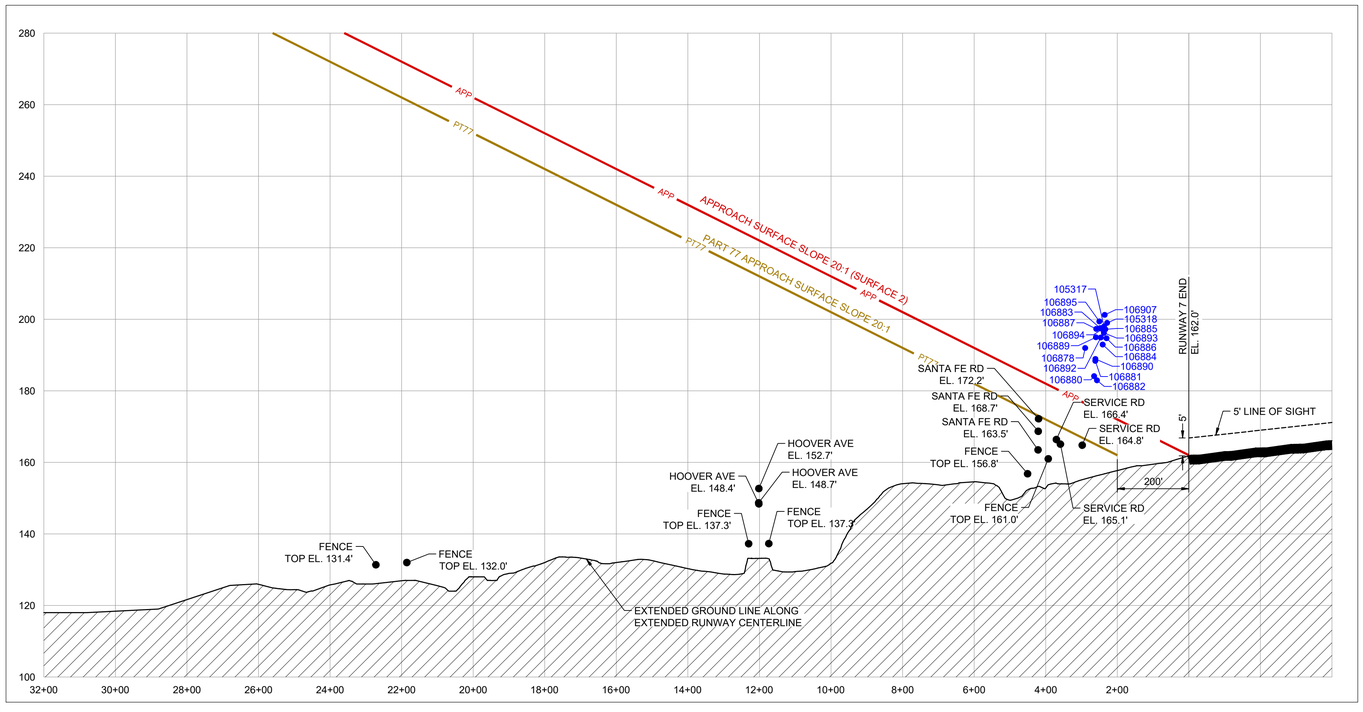
AIRPORT AIRSPACE PROFILES

SHEET NUMBER

9 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_06-09_Pt77.dwg Plotted on: 4/8/2025 10:30 AM Plotted by: Peddie, Brendon





RUNWAY 7 OBSTRUCTION TABLE

OBJECT NO.	OBJECT DESCRIPTION	ABOVE GROUND LEVEL (FT.)	OBJECT TOP ELEVATION (FT.)	CLEARANCE (+ PENETRATE) (- CLEAR)		PROPOSED DISPOSITION	PART 77 SURFACE VIOLATION	TRIGGERING EVENT
				PART 77 SURFACE (FT.)	13B APPROACH SURFACE (FT.)			
105317	TREETOP	42.1	198.0	16.4	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
105318	TREETOP	42.9	199.0	16.7	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106878	TREETOP	38.9	192.0	8.1	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106880	TREETOP	29.7	184.1	1.6	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106881	TREETOP	33.8	188.4	5.0	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106882	TREETOP	28.1	182.9	0.8	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106883	TREETOP	42.2	197.5	13.2	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106884	TREETOP	37.2	192.9	8.2	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106885	TREETOP	41.2	197.2	11.7	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106886	TREETOP	38.7	194.7	8.4	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106887	TREETOP	42.6	197.3	11.7	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106889	TREETOP	40.3	195.0	8.4	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106890	TREETOP	34.1	188.9	0.6	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106892	TREETOP	39.4	194.9	6.6	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106893	TREETOP	40.3	196.2	9.1	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106894	TREETOP	41.6	197.3	10.8	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106895	TREETOP	44.1	199.4	12.1	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106907	TREETOP	45.5	201.2	9.7	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE

1. OBSTRUCTION SURVEY COMPLETED BY MARTINEZ GEOSPATIAL, INC. 2023.
2. ELEVATIONS IN TABLE REFLECT THE RECOMMENDED AIRSPACE CLEARANCES: 23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS.

DESCRIPTION	EXISTING
PROPERTY LINE	
PART 77 SURFACE	PT77
APPROACH SURFACE	APP
OBSTRUCTION	● 200000

NOTES:
1. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

200' 100' 0 200'
HORIZONTAL SCALE

20' 10' 0 20'
VERTICAL SCALE

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San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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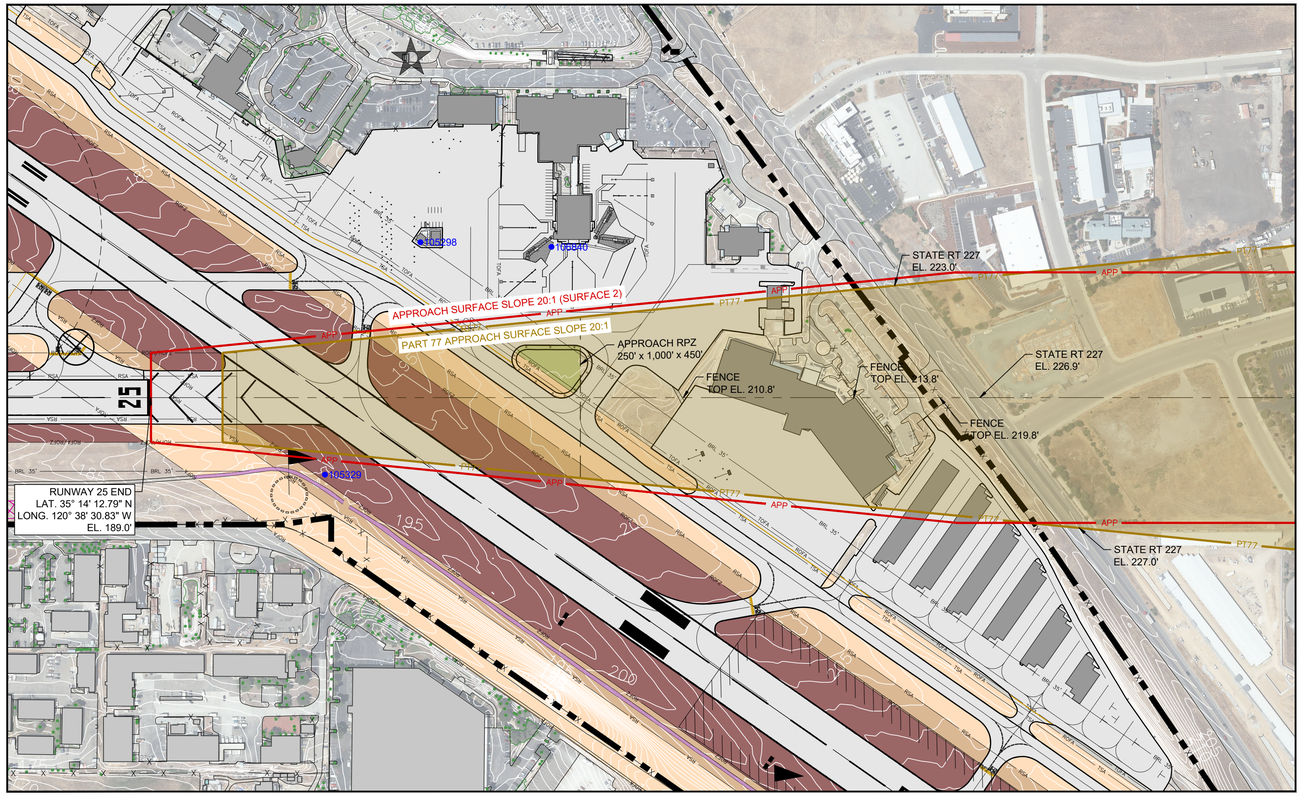
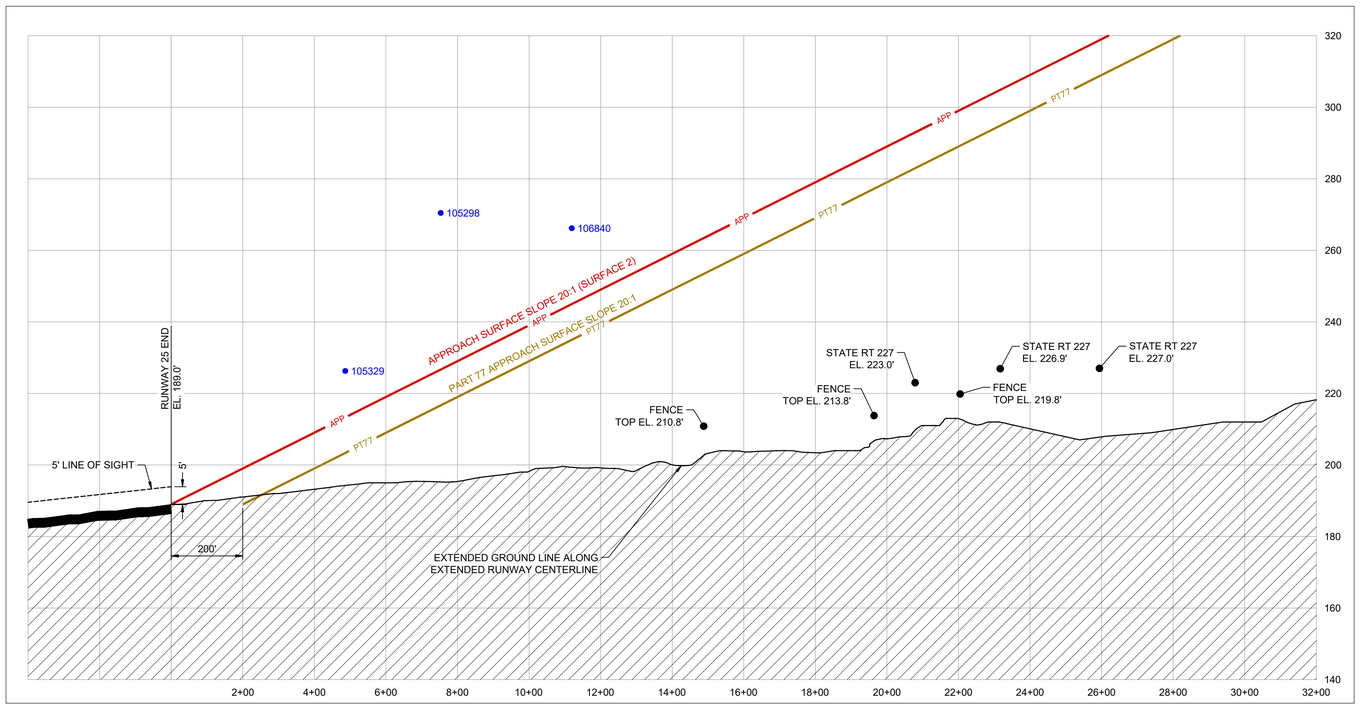
SHEET TITLE
INNER PORTION OF THE APPROACH SURFACE RUNWAY 7 (EXISTING)

SHEET NUMBER
10 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_10-18_InnerApps.dwg Plotted on: 4/8/2025 10:39 AM Plotted by: Peddie, Brendan





RUNWAY 25 OBSTRUCTION TABLE

OBJECT NO.	OBJECT DESCRIPTION	ABOVE GROUND LEVEL (FT.)	OBJECT TOP ELEVATION (FT.)	CLEARANCE (+ PENETRATE) (- CLEAR)		PROPOSED DISPOSITION	PART 77 SURFACE VIOLATION	TRIGGERING EVENT
				PART 77 SURFACE (FT.)	13B APPROACH SURFACE (FT.)			
105298	CONTROL TOWER	74.4	270.4	17.6	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
106840	LIGHT POLE	68.3	266.2	2.0	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE
105329	AIRFIELD EQUIPMENT	33.0	226.3	14.1	N/A	RUNWAY DEMO	TRANSITIONAL	END OF USEFUL LIFE

1. OBSTRUCTION SURVEY COMPLETED BY MARTINEZ GEOSPATIAL, INC. 2023.
2. ELEVATIONS IN TABLE REFLECT THE RECOMMENDED AIRSPACE CLEARANCES: 23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS.

DESCRIPTION	EXISTING
PROPERTY LINE	
PART 77 SURFACE	PT77
APPROACH SURFACE	APP
OBSTRUCTION	●200000

NOTES:
1. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

N

200' 100' 0 200'
HORIZONTAL SCALE

20' 10' 0 20'
VERTICAL SCALE

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San Luis Obispo County Regional Airport
San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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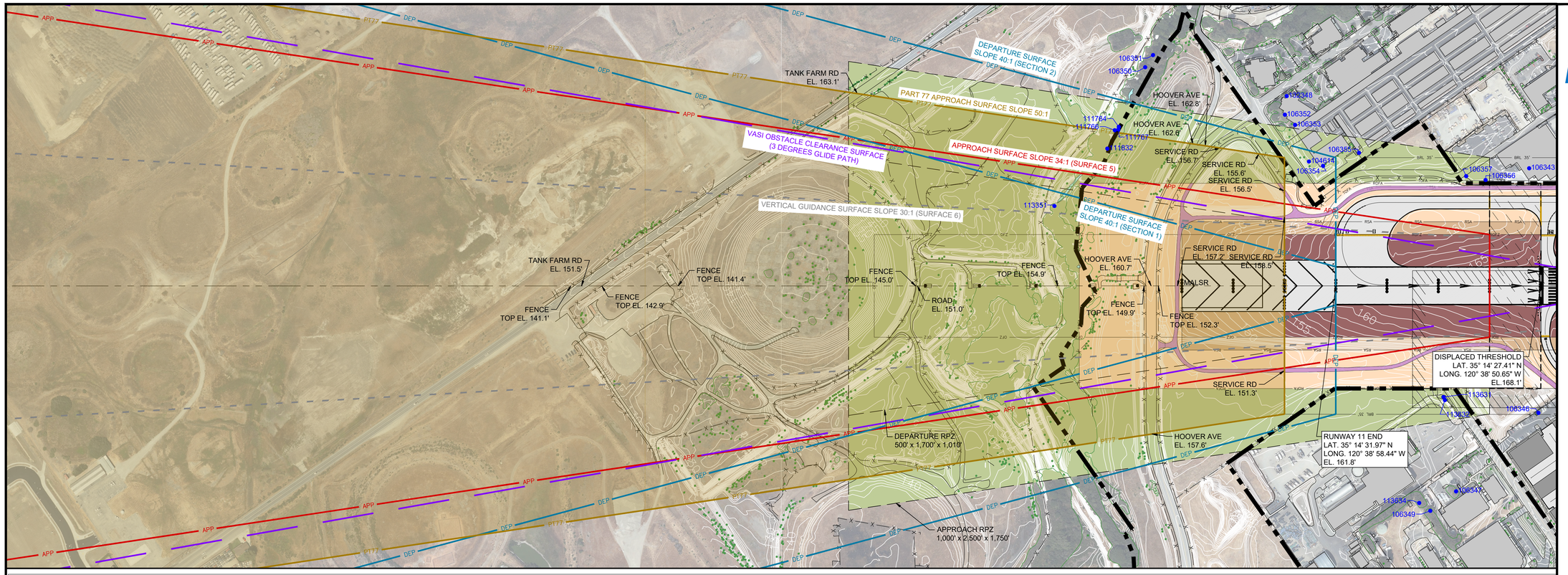
SHEET TITLE

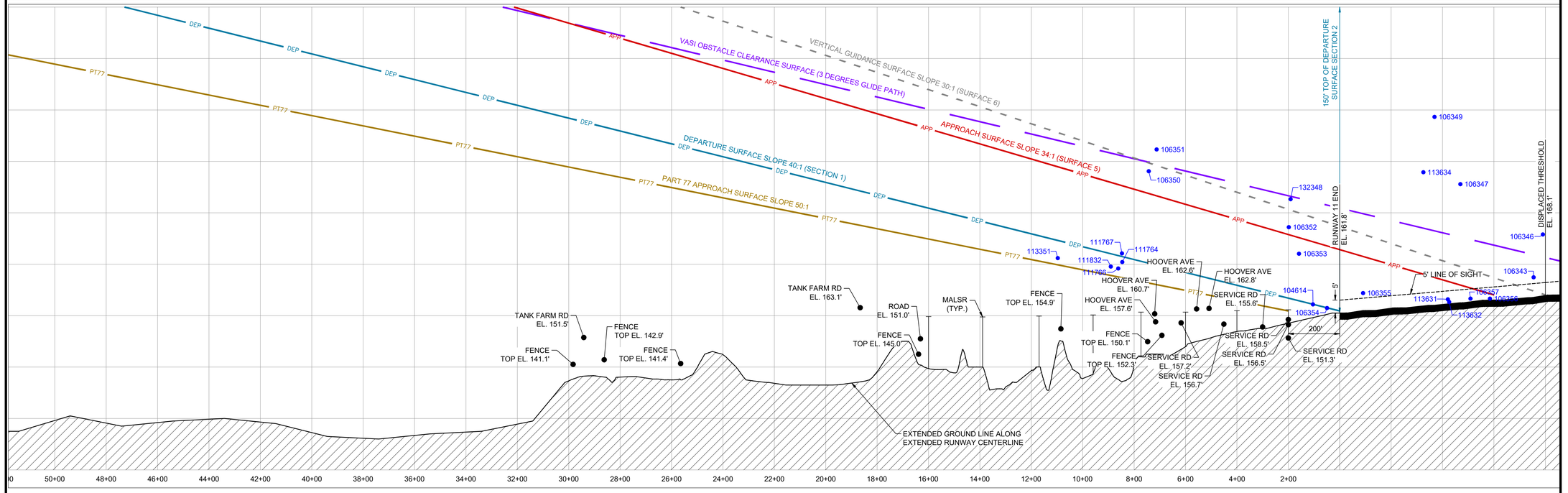
INNER PORTION OF THE APPROACH SURFACE RUNWAY 25 (EXISTING)

SHEET NUMBER

11 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_10-18_InnerApps.dwg Plotted on: 4/8/2025 10:42 AM Plotted by: Peddie, Brendan





DESCRIPTION	EXISTING
PROPERTY LINE	
PART 77 SURFACE	PT77
APPROACH SURFACE	APP
DEPARTURE SURFACE	DEP

DESCRIPTION	EXISTING
VASI OBSTACLE CLEARANCE SURFACE	
VERTICAL GUIDANCE SURFACE	
OBSTRUCTION	●200000

NOTES:
1. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).
2. SEE SHEET 17 FOR OBSTRUCTION TABLE.

200' 100' 0 200'
HORIZONTAL SCALE

20' 10' 0 20'
VERTICAL SCALE

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

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CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
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DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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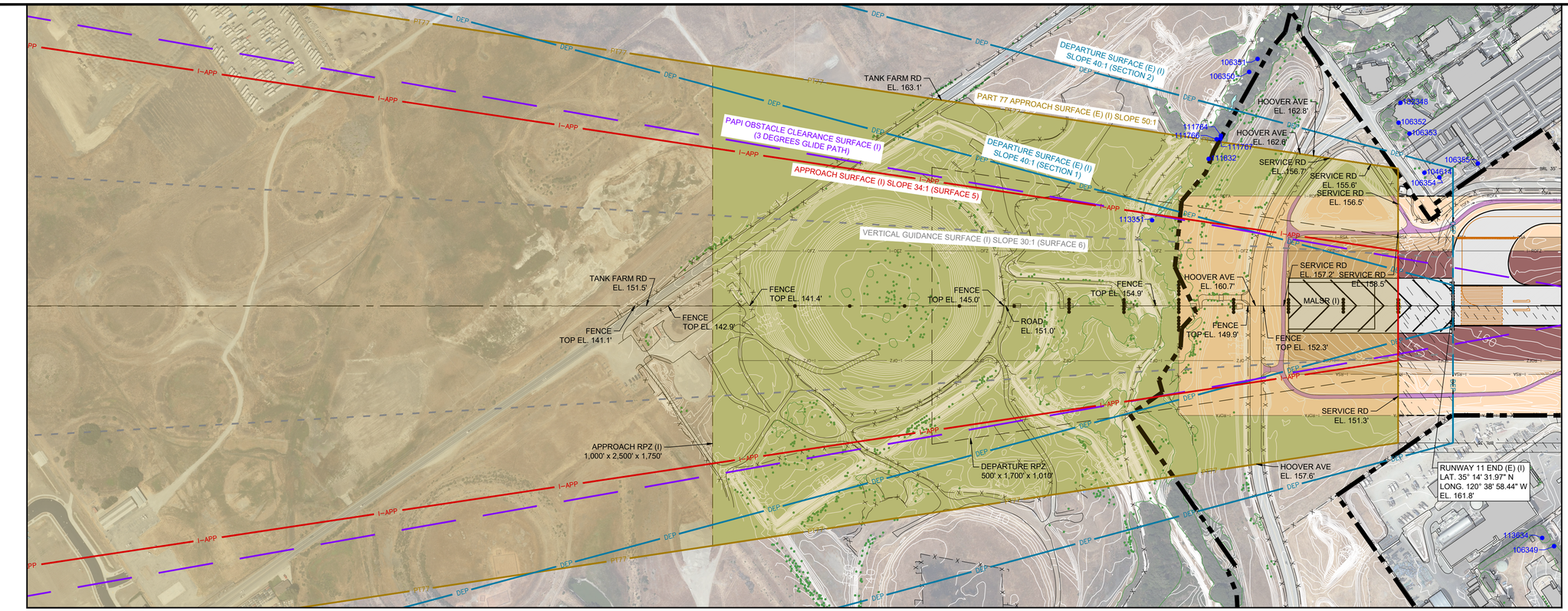
SHEET TITLE

INNER PORTION OF THE APPROACH SURFACE RUNWAY 11 (EXISTING)

SHEET NUMBER

12 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_10-18_InnerApps.dwg Plotted on: 4/8/2025 10:46 AM Plotted by: Peddie, Brendon



DESCRIPTION	EXISTING	INTERIM
PROPERTY LINE		N/A
PART 77 SURFACE	PT77	N/A
APPROACH SURFACE	N/A	I-APP
DEPARTURE SURFACE	DEP	N/A

DESCRIPTION	EXISTING	INTERIM
PAPI OBSTACLE CLEARANCE SURFACE	N/A	
VERTICAL GUIDANCE SURFACE	N/A	
OBSTRUCTION	● 200000	N/A

NOTES:
1. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).
2. SEE SHEET 17 FOR OBSTRUCTION TABLE.

200' 100' 0 200'
HORIZONTAL SCALE

20' 10' 0 20'
VERTICAL SCALE

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

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San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
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DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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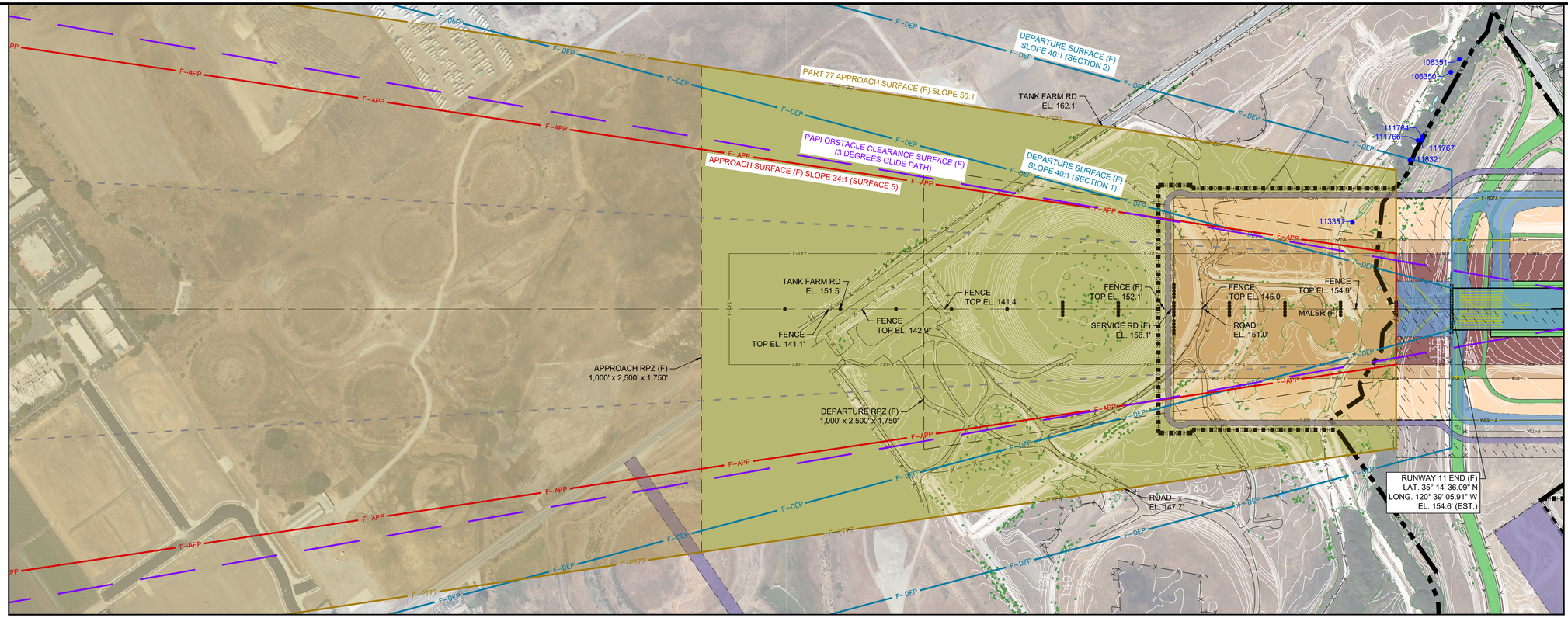
SHEET TITLE

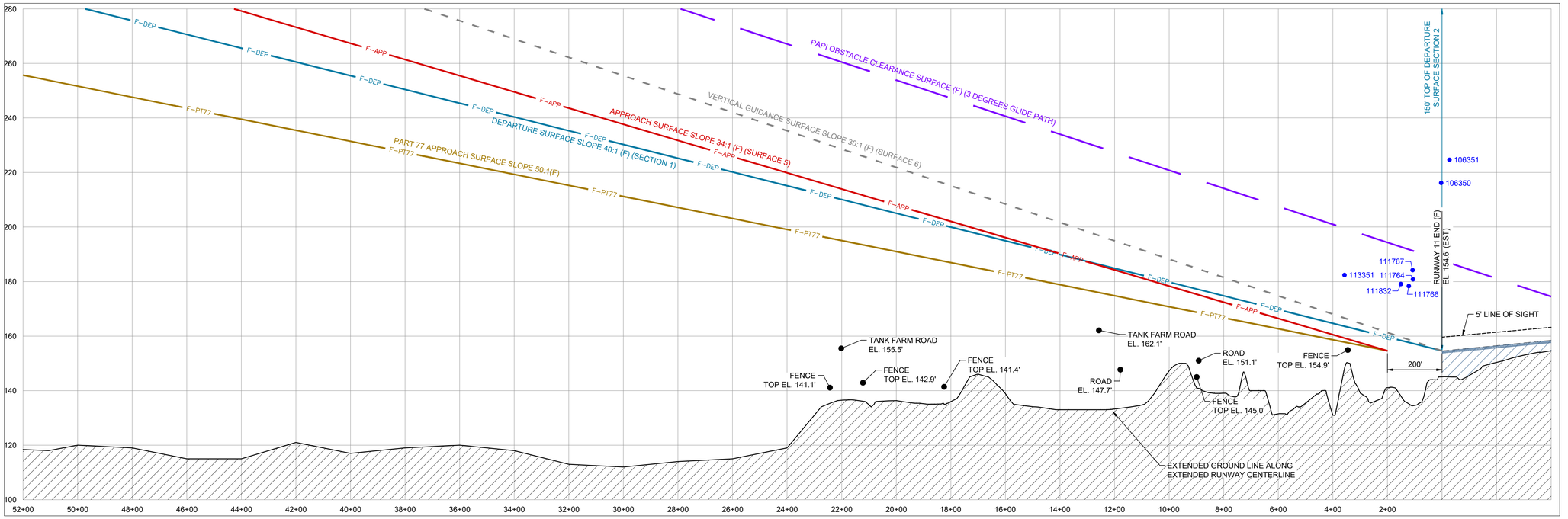
INNER PORTION OF THE APPROACH SURFACE RUNWAY 11 (INTERIM)

SHEET NUMBER

13 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_10-18_InnerApps.dwg Plotted on: 4/8/2025 10:52 AM Plotted by: Peddie, Brendan





DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE		
PART 77 SURFACE	N/A	F-PT77
APPROACH SURFACE	N/A	F-APP
DEPARTURE SURFACE	N/A	F-DEP

DESCRIPTION	EXISTING	FUTURE
PAPI OBSTACLE CLEARANCE SURFACE	N/A	
VERTICAL GUIDANCE SURFACE	N/A	
OBSTRUCTION	●200000	●200000

NOTES:
1. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).
2. SEE SHEET 17 FOR OBSTRUCTION TABLE.

200' 100' 0 200'
HORIZONTAL SCALE

20' 10' 0 20'
VERTICAL SCALE

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

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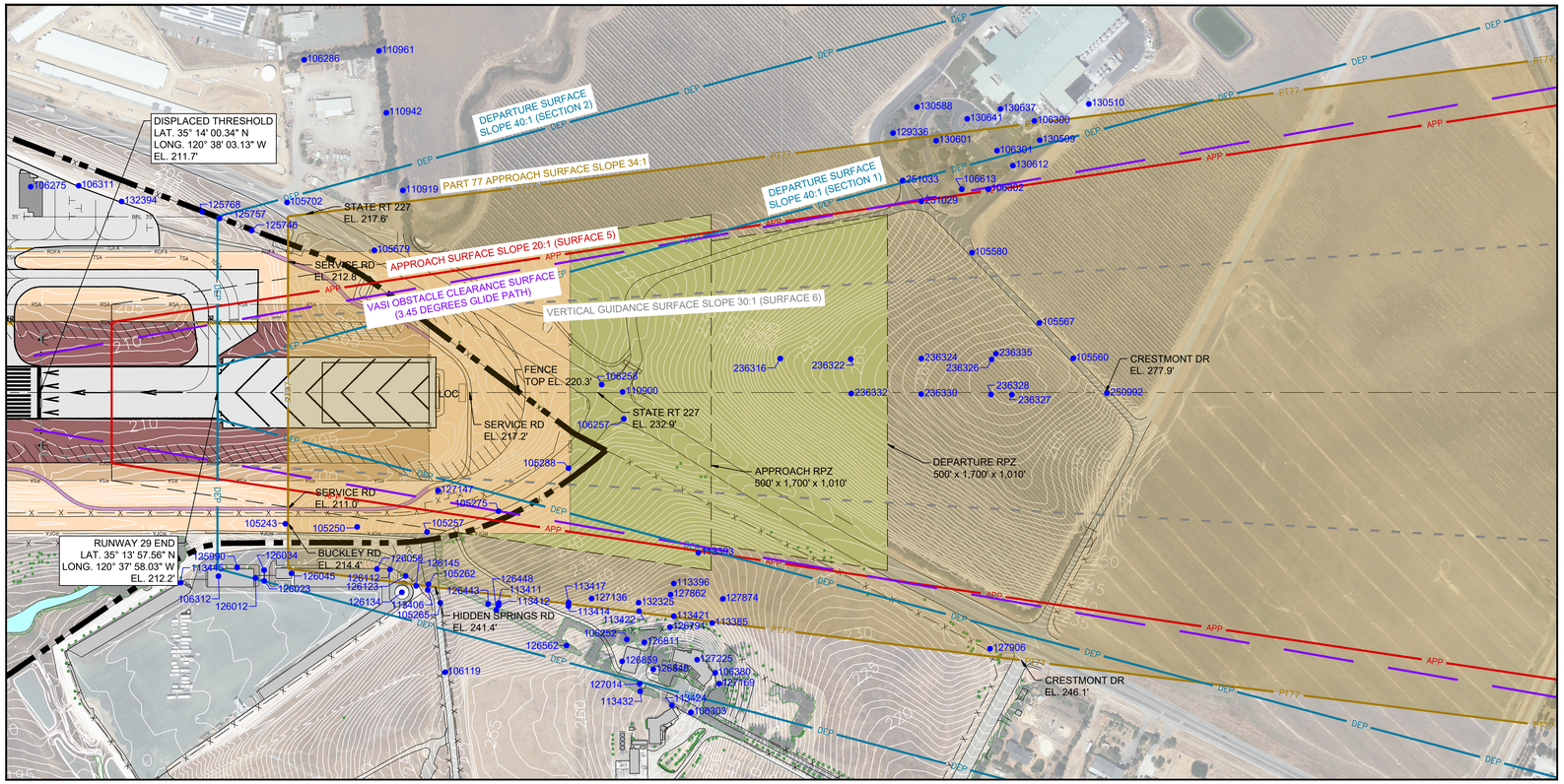
SHEET TITLE

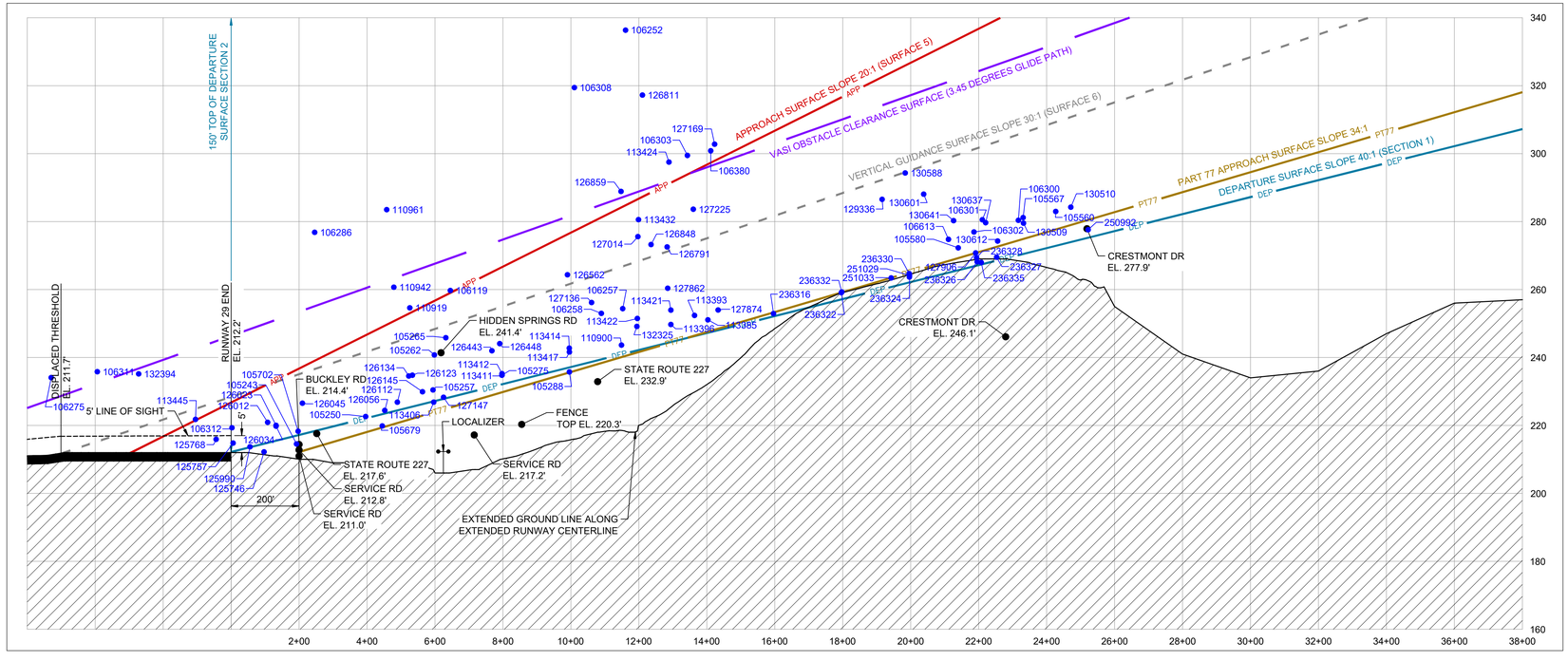
INNER PORTION OF THE APPROACH SURFACE RUNWAY 11 (FUTURE)

SHEET NUMBER

14 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_10-18_InnerApps.dwg Plotted on: 4/8/2025 10:57 AM Plotted by: Peddie, Brendan





DESCRIPTION	EXISTING
PROPERTY LINE	
PART 77 SURFACE	PT77
APPROACH SURFACE	APP
DEPARTURE SURFACE	DEP
VASI OBSTACLE CLEARANCE SURFACE	
VERTICAL GUIDANCE SURFACE	
OBSTRUCTION	● 200000

NOTES:
1. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).
2. SEE SHEET 17 FOR OBSTRUCTION TABLE.

200' 100' 0 200'
HORIZONTAL SCALE

20' 10' 0 20'
VERTICAL SCALE

MAGNETIC DECLINATION
12° 15' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

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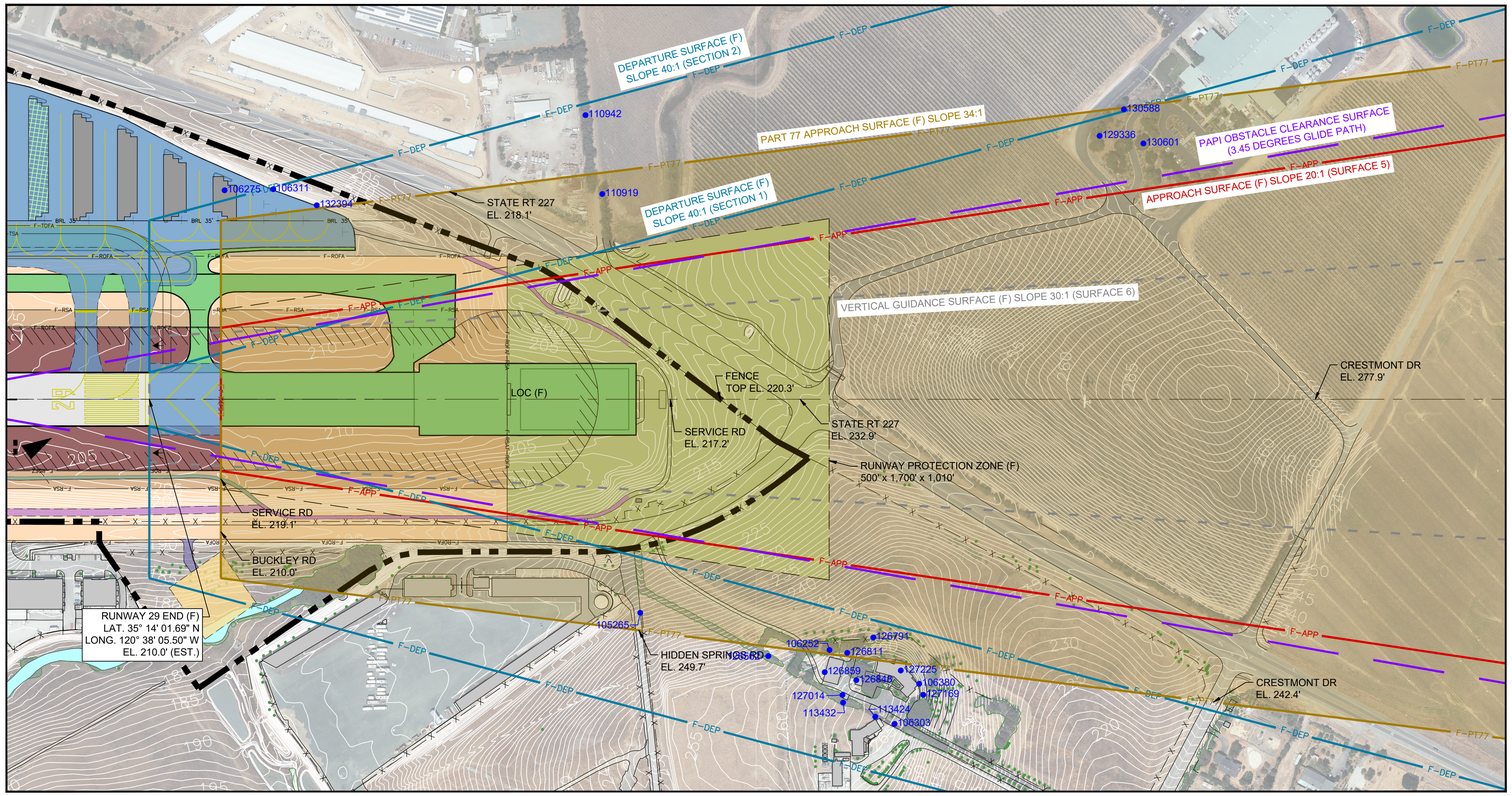
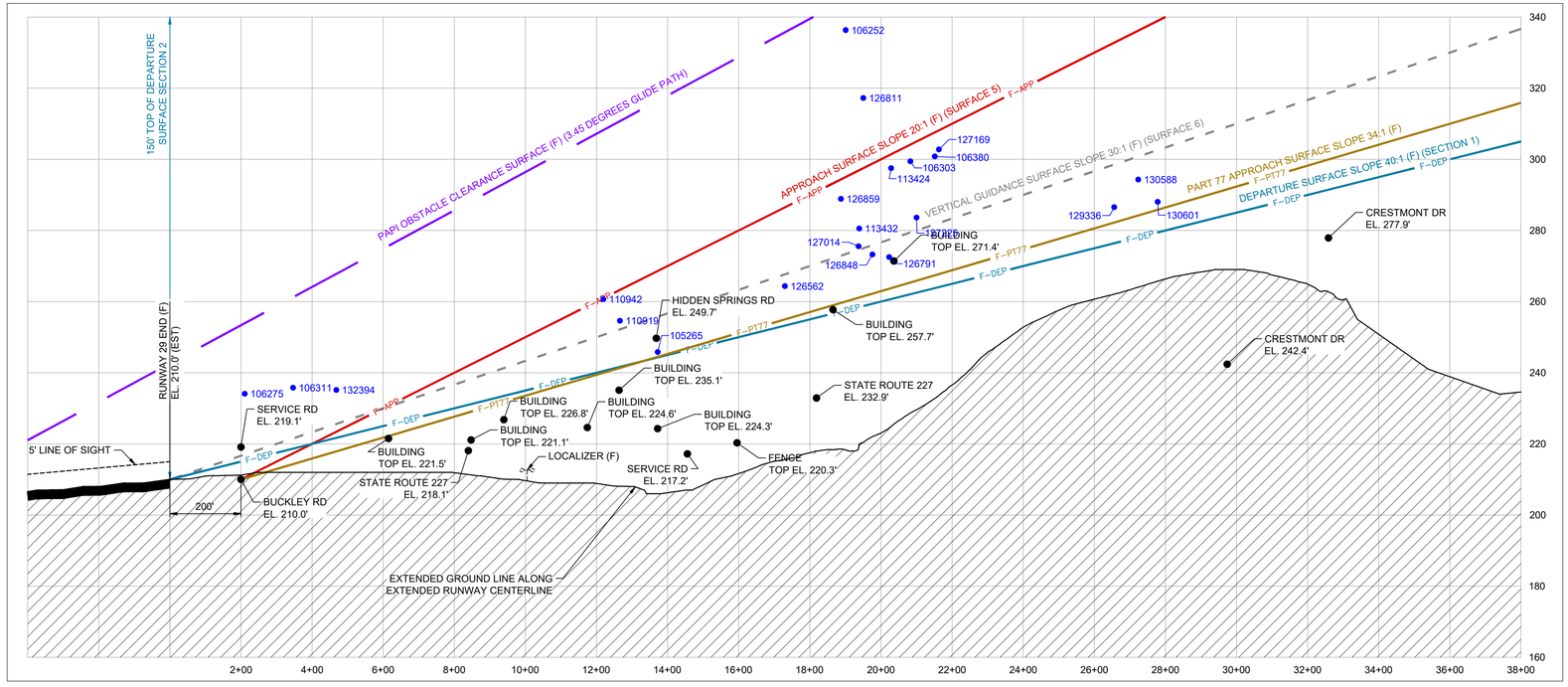
SHEET TITLE
INNER PORTION OF THE APPROACH SURFACE RUNWAY 29 (EXISTING/INTERIM)

SHEET NUMBER
15 OF 22





DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE		
PART 77 SURFACE	N/A	F–PT77
APPROACH SURFACE	N/A	F–APP
DEPARTURE SURFACE	N/A	F–DEP
PAPI OBSTACLE CLEARANCE SURFACE	N/A	
VERTICAL GUIDANCE SURFACE	N/A	
OBSTRUCTION	● 200000	● 200000

NOTES:
1. ROADWAY ELEVATIONS INCLUDE TRAVERSEWAY ADJUSTMENT (23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS).
2. SEE SHEET 17 FOR OBSTRUCTION TABLE.

200' 100' 0 200'
HORIZONTAL SCALE

20' 10' 0 20'
VERTICAL SCALE

MAGNETIC DECLINATION
12° 15' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

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SHEET TITLE
INNER PORTION OF THE APPROACH SURFACE RUNWAY 29 (FUTURE)

SHEET NUMBER
16 OF 22

RUNWAY 11 OBSTRUCTION TABLE

OBJECT NO.	OBJECT DESCRIPTION	ABOVE GROUND LEVEL (FT.)	OBJECT TOP ELEVATION (FT.)	CLEARANCE (+ PENETRATE) (- CLEAR)									PROPOSED DISPOSITION			PART 77 SURFACE VIOLATION			TRIGGERING EVENT		
				PART 77 SURFACE (FT.)			DEPARTURE SURFACE (FT.)			13B APPROACH SURFACE (FT.)											
				(E)	(I)	(F)	(E)	(I)	(F)	(E)	(I)	(F)	(E)	(I)	(F)	(E)	(I)	(F)	(E)	(I)	(F)
104614	TREETOP	14.4	164.4	2.5	2.5	×	-152.5	-152.5	×	N/A	N/A	×	TRIM	REMOVE	×	PRIMARY	PRIMARY	PRIMARY	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106343	BUILDING	21.6	174.9	7.2	7.2	×	N/A	*N/A*	×	N/A	*N/A*	×	NONE	REMOVE	×	PRIMARY	PRIMARY	PRIMARY	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106346	TREETOP	28.8	191.6	23.6	23.6	×	N/A	*N/A*	×	N/A	*N/A*	×	TRIM	REMOVE	×	PRIMARY	PRIMARY	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106347	TREETOP	62.3	211.1	2.5	2.5	*2.5*	N/A	N/A	*N/A*	N/A	N/A	*N/A*	TRIM	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106349	TREETOP	92.6	237.3	18.6	18.6	*18.6*	N/A	N/A	*N/A*	N/A	N/A	*N/A*	TRIM	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106350	TREETOP	76.1	216.2	4.8	4.8	*2.2*	N/A	N/A	N/A	N/A	N/A	N/A	TRIM	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106351	TREETOP	87.9	224.6	6.5	6.5	*3.9*	N/A	N/A	*N/A*	N/A	N/A	*N/A*	TRIM	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106352	TREETOP	44.9	194.4	8.7	8.7	*6.1*	N/A	N/A	*N/A*	N/A	N/A	*N/A*	TRIM	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106353	TREETOP	34.6	184.1	4.1	4.1	*1.5*	N/A	N/A	*N/A*	N/A	N/A	*N/A*	TRIM	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106354	TREETOP	15.5	162.9	1.1	1.1	×	-151.1	-151.1	×	N/A	N/A	×	TRIM	REMOVE	×	PRIMARY	PRIMARY	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106355	LIGHT POLE	20.4	168.8	3.8	3.8	×	N/A	N/A	×	N/A	N/A	×	NONE	NONE	RELOCATE	TRANSITIONAL	TRANSITIONAL	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106356	LIGHT POLE	15.6	166.6	0.2	0.2	×	N/A	*N/A*	×	N/A	*N/A*	×	NONE	NONE	RELOCATE	PRIMARY	PRIMARY	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
106357	LIGHT POLE	14.9	166.6	0.7	0.7	×	N/A	*N/A*	×	N/A	*N/A*	×	NONE	NONE	RELOCATE	PRIMARY	PRIMARY	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
111764	TREETOP	40.1	180.8	2.8	2.8	0.2	-172.8	-172.8	N/A	N/A	N/A	N/A	TRIM	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
111766	TREETOP	39.8	178.3	2.2	2.2	×	-176.1	-176.1	×	N/A	N/A	×	TRIM	TRIM	×	TRANSITIONAL	TRANSITIONAL	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
111767	TREETOP	42.7	184.2	7.6	7.6	5	-169.5	-169.5	N/A	N/A	N/A	N/A	TRIM	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
111832	TREETOP	38.0	179.1	3.4	3.4	0.8	-176.7	-176.7	-133	N/A	N/A	N/A	TRIM	TRIM	TRIM	APPROACH	APPROACH	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
113351	TREETOP	45.6	182.4	2.6	2.6	×	-6.8	-6.8	×	-35.6	-5.8	×	TRIM	TRIM	×	APPROACH	APPROACH	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
113631	TREETOP	23.0	166.3	1.3	1.3	×	N/A	*N/A*	×	N/A	*N/A*	×	TRIM	TRIM	×	PRIMARY	PRIMARY	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
113632	TREETOP	22.1	165.3	0.2	0.2	×	N/A	*N/A*	×	N/A	*N/A*	×	TRIM	TRIM	×	PRIMARY	PRIMARY	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
113634	TREETOP	73.7	215.7	1.8	1.8	×	N/A	N/A	×	N/A	N/A	×	TRIM	TRIM	×	TRANSITIONAL	TRANSITIONAL	×	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT
132348	TREETOP	57.4	205.3	9.2	9.2	*6.6*	N/A	N/A	*N/A*	N/A	N/A	*N/A*	TRIM	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	DISP THR REMOVAL	RWY SHIFT

1. OBSTRUCTION SURVEY COMPLETED BY MARTINEZ GEOSPATIAL, INC. 2023.
2. ELEVATIONS IN TABLE REFLECT THE RECOMMENDED AIRSPACE CLEARANCES: 23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS.
3. NO OBSTRUCTIONS TO EXISTING, INTERIM OR FUTURE VASI / PAPI OBSTACLE SURFACE.
4. NO OBSTRUCTIONS TO EXISTING, INTERIM OR FUTURE APPROACH SURFACE (SURFACE 6).

× - OBJECT IS NOT AN OBSTRUCTION FOR THIS SCENARIO
ITALICIZED - OBJECT IS OUTSIDE OF VIEW AREA, SEE SHEET 7 FOR LOCATION

RUNWAY 29 OBSTRUCTION TABLE

OBJECT NO.	OBJECT DESCRIPTION	ABOVE GROUND LEVEL (FT.)	OBJECT TOP ELEVATION (FT.)	CLEARANCE (+ PENETRATE) (- CLEAR)						PROPOSED DISPOSITION		PART 77 SURFACE VIOLATION		TRIGGERING EVENT	
				PART 77 SURFACE (FT.)		DEPARTURE SURFACE (FT.)		13B APPROACH SURFACE (FT.)							
				(E)	(F)	(E)	(F)	(E)	(F)	(E)	(F)	(E)	(F)	(E)	(F)
105243 (3)	ROAD	15.0	214.5	2.4	×	-152.4	×	N/A	×	GRADE	×	PRIMARY	×	1-5 YEARS	RWY SHIFT
105250 (3)	ROAD	15.0	222.6	4.7	×	-149.3	×	N/A	×	GRADE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
105257 (3)	ROAD	15.0	230.5	6.7	×	-146.4	×	N/A	×	GRADE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
105262 (3)	ROAD	15.0	240.8	16.9	×	-136.2	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
105265 (3)	ROAD	15.0	245.8	14.8	1.3	-131.9	-147.9	N/A	N/A	NONE	NONE	TRANSITIONAL	APPROACH	1-5 YEARS	RWY SHIFT
105275 (3)	ROAD	15.0	234.8	5.0	×	-147.0	×	-31.8	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
105288 (3)	ROAD	15.0	235.7	0.2	×	-1.4	×	-40.8	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
105560 (3)	ROAD	15.0	283.0	5.3	×	10.1	×	-65.1	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
105567 (3)	ROAD	15.0	281.2	6.3	×	10.7	×	-62.1	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
105580 (3)	ROAD	15.0	272.3	3.0	×	6.6	×	-61.4	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
105679	ROAD	15.0	219.8	0.5	×	-153.3	×	N/A	×	NONE	×	APPROACH	APPROACH	1-5 YEARS	RWY SHIFT
105702 (3)	ROAD	15.0	218.3	0.5	×	-148.8	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
106119 (3)	ROAD	15.0	259.7	0.4	×	N/A	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
106252 (2)	TREETOP	79.0	336.3	84.4	76.3	-54.4	-70.4	N/A	N/A	TRIM	TRIM	TRANSITIONAL	APPROACH	1-5 YEARS	RWY SHIFT
106257	LIGHT POLE	34.4	254.4	14.2	×	13.4	×	-30.0	×	OBSTRUCTION LIGHT	×	APPROACH	×	1-5 YEARS	RWY SHIFT
106258	LIGHT POLE	35.3	253.0	14.6	×	13.5	×	-28.2	×	OBSTRUCTION LIGHT	×	APPROACH	×	1-5 YEARS	RWY SHIFT
106275	BUILDING	25.4	234.1	10.3	7.7	N/A	N/A	N/A	N/A	OBSTRUCTION LIGHT	OBSTRUCTION LIGHT	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
106286	TREETOP	48.5	276.8	0.6	×	N/A	×	N/A	×	TRIM	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
106300 (2)	TREETOP	19.7	280.3	5.0	×	-138.8	×	N/A	×	TRIM	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
106301	LIGHT POLE	21.8	280.5	9.2	×	-136.0	×	N/A	×	OBSTRUCTION LIGHT	×	APPROACH	×	1-5 YEARS	RWY SHIFT
106302	LIGHT POLE	20.5	276.9	6.3	×	10.1	×	N/A	×	OBSTRUCTION LIGHT	×	APPROACH	×	1-5 YEARS	RWY SHIFT
106303	UTILITY POLE	33.7	299.4	15.8	13.2	N/A	-111.7	N/A	N/A	OBSTRUCTION LIGHT	OBSTRUCTION LIGHT	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
106308	WINDMILL	63.9	319.4	1.3	×	N/A	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
106311	LIGHT POLE	27.2	235.8	11.1	8.5	N/A	-132.8	N/A	N/A	OBSTRUCTION LIGHT	OBSTRUCTION LIGHT	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
106312	BUILDING	15.2	219.3	4.1	×	N/A	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
106380 (2)	TREETOP	38.8	300.8	32.4	29.8	-96.2	-112.1	N/A	N/A	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
106613 (2)	TREETOP	20.7	274.8	6.4	×	9.8	×	N/A	×	TRIM	×	APPROACH	×	1-5 YEARS	RWY SHIFT
110900	TRAFFIC LIGHT	25.1	243.6	3.6	×	2.7	×	-40.5	×	OBSTRUCTION LIGHT	×	APPROACH	×	1-5 YEARS	RWY SHIFT
110919 (2)	TREETOP	49.0	254.6	28.1	13.3	-120.5	-136.5	N/A	N/A	TRIM	TRIM	TRANSITIONAL	APPROACH	1-5 YEARS	RWY SHIFT
110942 (2)	TREETOP	46.2	260.7	3.2	0.6	N/A	-129.6	N/A	N/A	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
110961	TREETOP	63.6	283.5	1.2	×	N/A	×	N/A	×	TRIM	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
113385 (4)	GROUND	0.0	251.1	2.9	×	-145.6	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
113393 (2)	TREETOP	7.5	252.4	6.0	×	-143.4	×	N/A	×	TRIM	×	APPROACH	×	1-5 YEARS	RWY SHIFT
113396 (4)	GROUND	0.0	249.7	5.3	×	-144.3	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
113406 (4)	GROUND	0.0	226.9	1.5	×	-150.0	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
113411 (4)	GROUND	0.0	234.8	1.9	×	-147.0	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
113412	GROUND	0.0	235.2	1.3	×	-146.6	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
113414 (4)	GROUND	0.0	242.7	6.2	×	-143.9	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
113417 (4)	GROUND	0.0	241.6	6.0	×	-145.1	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
113421 (4)	GROUND	0.0	253.9	9.6	×	-140.1	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
113422 (4)	GROUND	0.0	251.5	10.0	×	-140.1	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
113424 (2)	TREETOP	29.9	297.5	17.4	14.8	N/A	-112.4	N/A	N/A	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
113432 (2)	TREETOP	15.6	280.6	7.1	4.5	N/A	-127.1	N/A	N/A	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
113445	BUILDING	18.6	221.8	3.9	×	N/A	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
125746	FENCE	7.5	212.2	0.0	×	-152.4	×	N/A	×	NONE	×	PRIMARY	×	1-5 YEARS	RWY SHIFT
125757	FENCE	6.4	214.8	2.6	×	-147.6	×	N/A	×	NONE	×	PRIMARY	×	1-5 YEARS	RWY SHIFT
125768	FENCE	7.3	215.9	1.8	×	N/A	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
125990 (2)	TREETOP	10.1	213.7	1.5	×	-149.9	×	N/A	×	NONE	×	PRIMARY	×	1-5 YEARS	RWY SHIFT
126012	BUILDING	15.4	220.9	5.0	×	-144.0	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
126023	LIGHT POLE	13.8	220.0	2.9	×	-145.5	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT

RUNWAY 29 OBSTRUCTION TABLE

OBJECT NO.	OBJECT DESCRIPTION	ABOVE GROUND LEVEL (FT.)	OBJECT TOP ELEVATION (FT.)	CLEARANCE (+ PENETRATE) (- CLEAR)						PROPOSED DISPOSITION		PART 77 SURFACE VIOLATION		TRIGGERING EVENT	
				PART 77 SURFACE (FT.)		DEPARTURE SURFACE (FT.)		13B APPROACH SURFACE (FT.)							
				(E)	(F)	(E)	(F)	(E)	(F)	(E)	(F)	(E)	(F)	(E)	(F)
126034	LIGHT POLE	13.5	219.8	7.0	×	-145.7	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
126045	BUILDING	19.6	226.5	12.4	×	-140.8	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
126056	BUILDING	13.9	224.4	4.8	×	-148.9	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
126112	LIGHT POLE	9.7	226.8	6.1	×	-147.4	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
126123	LIGHT POLE	12.7	234.8	12.8	×	-140.5	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
126134	TANK	17.1	234.5	9.1	×	-140.5	×	N/A	×	NONE	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
126145 (2)	TREETOP	7.3	229.9	6.6	×	-146.1	×	N/A	×	TRIM	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
126443 (2)	TREETOP	8.0	242.0	9.0	×	-139.1	×	N/A	×	TRIM	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
126448 (2)	TREETOP	8.1	244.1	8.3	×	-137.6	×	N/A	×	TRIM	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
126562 (2)	TREETOP	12.1	264.3	11.9	9.3	-122.3	-138.2	N/A	N/A	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
126791	UTILITY POLE	16.7	272.5	24.1	8.9	-121.2	-137.2	N/A	N/A	NONE	NONE	TRANSITIONAL	APPROACH	1-5 YEARS	RWY SHIFT
126811 (2)	TREETOP	57.9	317.2	63.5	55.7	-74.7	-90.7	N/A	N/A	TRIM	TRIM	TRANSITIONAL	APPROACH	1-5 YEARS	RWY SHIFT
126848	BUILDING	8.8	273.2	8.3	5.7	-119.6	-135.3	N/A	N/A	NONE	NONE	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
126859	BUILDING	28.0	288.9	28.2	25.6	-101.8	-117.5	N/A	N/A	NONE	NONE	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
127014	BUILDING	11.1	275.6	5.2	2.6	N/A	-132.1	N/A	N/A	NONE	NONE	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
127136	UTILITY POLE	13.9	256.2	18.7	×	-132.1	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
127147	AIRFIELD EQUIPMENT	14.5	228.3	3.6	×	-149.3	×	-29.7	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
127169 (2)	TREETOP	43.1	302.8	29.9	27.3	-94.7	-110.4	N/A	N/A	TRIM	TRIM	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
127225	BUILDING VENT	21.1	283.6	21.1	18.5	-112.0	-128.0	N/A	N/A	NONE	NONE	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
127862	UTILITY POLE	10.0	260.4	16.3	×	-133.4	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
127874	UTILITY POLE	8.0	254.0	5.5	×	-143.5	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
127906	UTILITY POLE	37.6	270.8	0.0	×	-145.3	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
129336 (2)	TREETOP	33.7	286.5	20.8	4.3	-122.7	10.1	N/A	N/A	TRIM	TRIM	TRANSITIONAL	APPROACH	1-5 YEARS	RWY SHIFT
130509	LIGHT POLE	19.4	279.5	4.6	×	-140.0	×	N/A	×	OBSTRUCTION LIGHT	×	APPROACH	×	1-5 YEARS	RWY SHIFT
130510	LIGHT POLE	24.3	284.2	0.2	×	-138.7	×	N/A	×	OBSTRUCTION LIGHT	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
130588 (2)	TREETOP	36.4	294.3	17.2	10.1	-116.7	-132.6	N/A	N/A	TRIM	TRIM	TRANSITIONAL	APPROACH	1-5 YEARS	RWY SHIFT
130601 (2)	TREETOP	30.3	288.1	21.8	2.2	-124.2	8.6	N/A	N/A	TRIM	TRIM	APPROACH	APPROACH	1-5 YEARS	RWY SHIFT
130612	LIGHT POLE	16.3	274.3	1.6	×	5.7	×	N/A	×	OBSTRUCTION LIGHT	×	APPROACH	×	1-5 YEARS	RWY SHIFT
130637	TREETOP	19.3	279.7	0.6	×	-137.1	×	N/A	×	TRIM	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
130641	LIGHT POLE	22.0	280.3	6.3	×	-134.2	×	N/A	×	OBSTRUCTION LIGHT	×	TRANSITIONAL	×	1-5 YEARS	RWY SHIFT
132325 (4)	GROUND	0.0	249.1	7.7	×	-142.4	×	N/A	×	NONE	×	APPROACH	×	1-5 YEARS	RWY SHIFT
132394	LIGHT POLE	26.7	235.2	16.9	14.3	N/A	-136.3	N/A	N/A	OBSTRUCTION LIGHT	OBSTRUCTION LIGHT	TRANSITIONAL	TRANSITIONAL	1-5 YEARS	RWY SHIFT
236316 (4)	GROUND	0.0	252.9	N/A	×	0.8	×	-53.6	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
236322 (4)	GROUND	0.0	259.1	N/A	×	2.0	×	-57.4	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
236324 (4)	GROUND	0.0	263.7	N/A	×	1.6	×	-62.8	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
236326 (4)	GROUND	0.0	268.2	N/A	×	1.1	×	-68.3	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
236327	GROUND	0.0	269.5	N/A	×	1.0	×	-69.9	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
236328 (4)	GROUND	0.0	269.4	N/A	×	2.3	×	-67.0	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
236330 (4)	GROUND	0.0	264.7	N/A	×	2.6	×	-61.8	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
236332 (4)	GROUND	0.0	259.3	N/A	×	2.1	×	-57.3	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
236335	GROUND	0.0	268.0	N/A	×	0.6	×	-69.1	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
250992 (3)	ROAD	15.0	277.6	N/A	×	2.3	×	-75.2	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
251029 (3)	ROAD	15.0	264.1	N/A	×	2.0	×	-62.4	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT
251033 (3)	ROAD	15.0	263.4	N/A	×	0.6	×	N/A	×	NONE	×	NONE	×	1-5 YEARS	RWY SHIFT

1. OBSTRUCTION SURVEY COMPLETED BY MARTINEZ GEOSPATIAL, INC. 2023.
2. OBJECT IS HIGHEST TREETOP WITHIN 200'x200' GRID STARTING AT THE END OF RUNWAY 29.
3. OBJECT IS HIGHEST ROAD POINT WITHIN 200'x200' GRID STARTING AT THE END OF RUNWAY 29.
4. OBJECT IS HIGHEST GROUND POINT WITHIN 200'x200' GRID STARTING AT THE END OF RUNWAY 29.
5. ELEVATIONS IN TABLE REFLECT THE RECOMMENDED AIRSPACE CLEARANCES: 23' RAILROADS | 17' HIGHWAYS | 15' PUBLIC ROADS | 10' PRIVATE ROADS.
6. NO OBSTRUCTIONS TO EXISTING, INTERIM OR FUTURE VASI / PAPI OBSTACLE SURFACE.
7. NO OBSTRUCTIONS TO EXISTING, INTERIM OR FUTURE APPROACH SURFACE (SURFACE 6).
8. ONLY MANMADE OBSTRUCTIONS ARE SHOWN. FOR A COMPLETE LIST OF OBSTRUCTIONS PLEASE CONSULT THE AIRPORT.

× - OBJECT IS NOT AN OBSTRUCTION FOR THIS SCENARIO
ITALICIZED - OBJECT IS OUTSIDE OF VIEW AREA, SEE SHEET 7 FOR LOCATION

RS&H

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San Luis Obispo County Regional Airport

San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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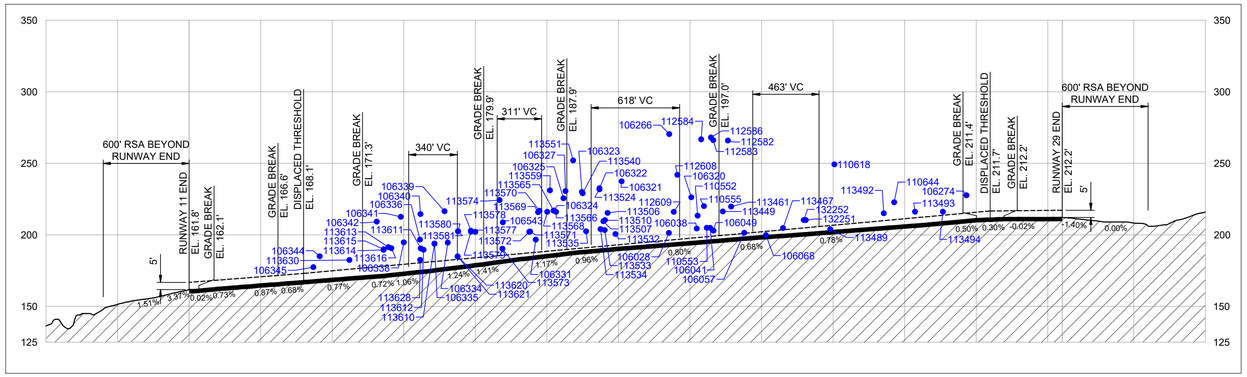
SHEET TITLE
RUNWAY 11 AND RUNWAY 29 OBSTRUCTION TABLES

SHEET NUMBER
17 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_10-18_InnerApps.dwg Plotted on: 4/8/2025 11:12 AM Plotted by: Peddie, Brendan



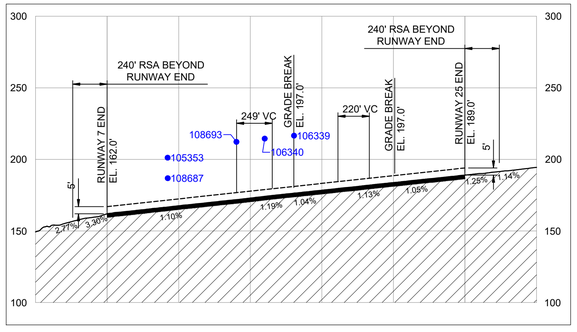
RUNWAY 11-29 CENTERLINE PROFILE

SEE SHEET 8 FOR PART 77 OBSTRUCTION TABLE.

500' 250' 0 500'
HORIZONTAL SCALE

50' 25' 0 50'
VERTICAL SCALE

LEGEND	
DESCRIPTION	SYMBOL
OBSTRUCTION	● 200000



RUNWAY 7-25 CENTERLINE PROFILE

SEE SHEET 8 FOR PART 77 OBSTRUCTION TABLE.

500' 250' 0 500'
HORIZONTAL SCALE

50' 25' 0 50'
VERTICAL SCALE

LEGEND	
DESCRIPTION	SYMBOL
OBSTRUCTION	● 200000

NOTE: RUNWAY AND RUNWAY SAFETY AREA GRADIENTS AND VERTICAL CURVES HAVE BEEN ESTIMATED AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.

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San Luis Obispo, CA

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

PROJECT NUMBER
1026-0015-010

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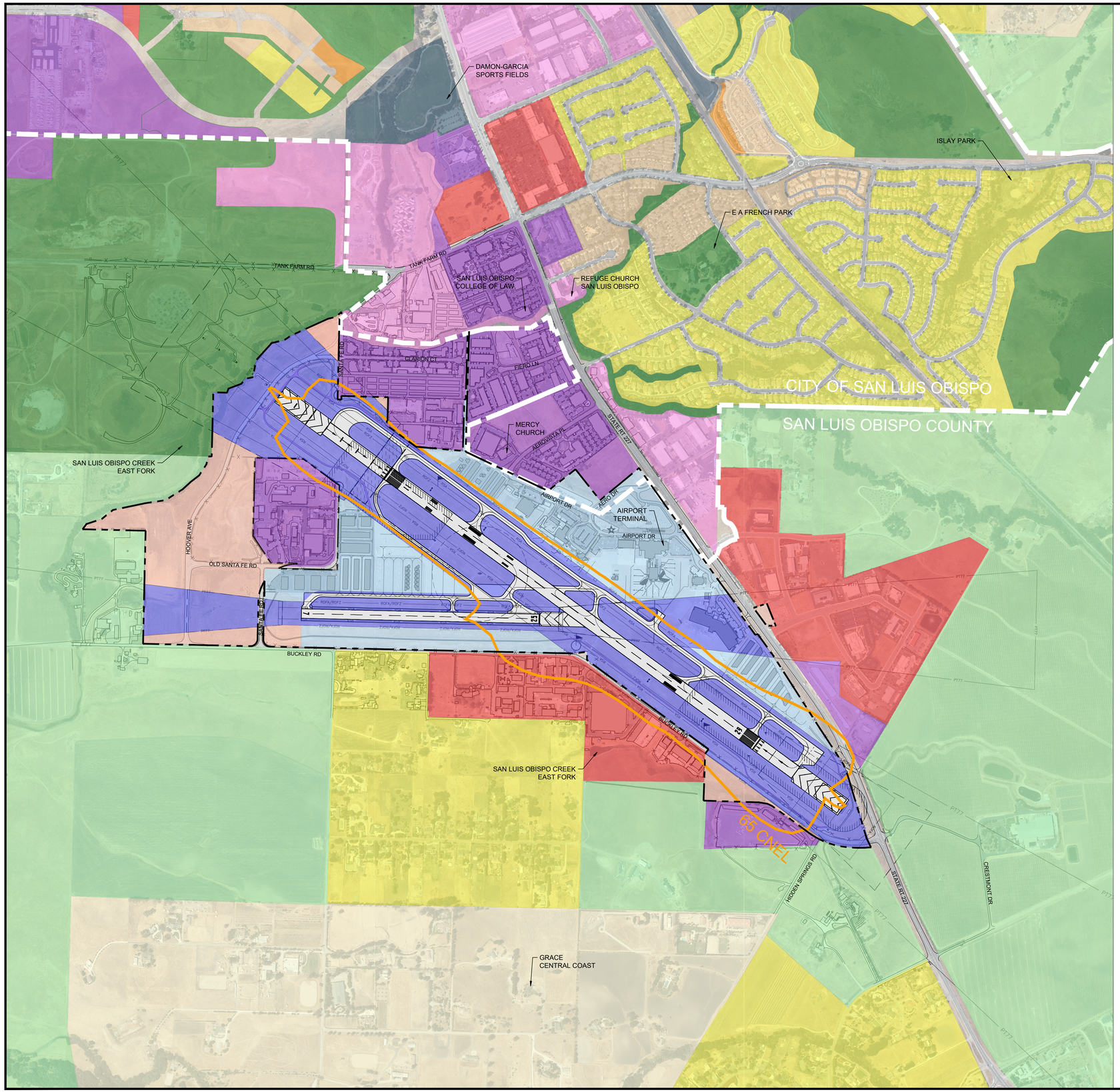
SHEET TITLE

RUNWAY CENTERLINE PROFILES

SHEET NUMBER

18 OF 22



ON-AIRPORT LAND USE LEGEND	
RUNWAY / TAXIWAY PAVEMENT	
AIRCRAFT OPERATIONS AREA	
AVIATION USE AREA	
FUTURE AIRPORT USE AREA	
65 CNEL NOISE CONTOUR	

OFF-AIRPORT LAND USE LEGEND	
CITY LIMITS	
AGRICULTURAL / OPEN SPACE	
GENERAL RETAIL / COMMERCIAL	
BUSINESS PARK / INDUSTRIAL	
RURAL RESIDENTIAL	
LOW DENSITY RESIDENTIAL	
MEDIUM DENSITY RESIDENTIAL	
HIGH DENSITY RESIDENTIAL	
PUBLIC FACILITY	
RECREATION / OPEN SPACE	
SERVICES MANUFACTURING	

ZONING RESTRICTIONS
AIRPORT INFLUENCE AREA (AIA). LOCAL HEIGHT RESTRICTIONS SET FORTH IN SLO COUNTY CODE 22.14.030 AND THE SLO AIRPORT LAND USE COMPATIBILITY PLAN (AS AUTHORIZED IN CA PUC ARTICLE 3.5).

NOTES:

1. AIA AREA AS REPRESENTED IN SBP AIRPORT LAND USE PLAN, MAY 2021.
2. COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) NOISE CONTOUR AS REPRESENTED IN NOISE STUDY PREPARED BY RS&H IN 2015.
3. THE AIRCRAFT OPERATIONS AREA INCLUDES THE AIRFIELD AREA OR AIRCRAFT MOVEMENT AREAS (E.G. RUNWAYS AND TAXIWAYS) AND APPROACH / DEPARTURE AREA USED BY AIRCRAFT TO ARRIVE / DEPART THE AIRPORT.
4. THE AVIATION USE AREA INCLUDES THE AREA THAT IS CURRENTLY DEVELOPED AND USED FOR AERONAUTICAL PURPOSES OR AVIATION USE AS WELL AS ANY AREAS RESERVED FOR POTENTIAL AVIATION USE IN THE FUTURE.
5. THE FUTURE AIRPORT USE AREA INCLUDES ON-AIRPORT AREAS THAT ARE NOT YET CATEGORIZED AS ANOTHER LAND USE BUT RESERVED FOR FUTURE AIRPORT USE AS AERONAUTICAL OR NON-AERONAUTICAL / NON-AVIATION DEVELOPMENT.

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

N

500' 250' 0 500'

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AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

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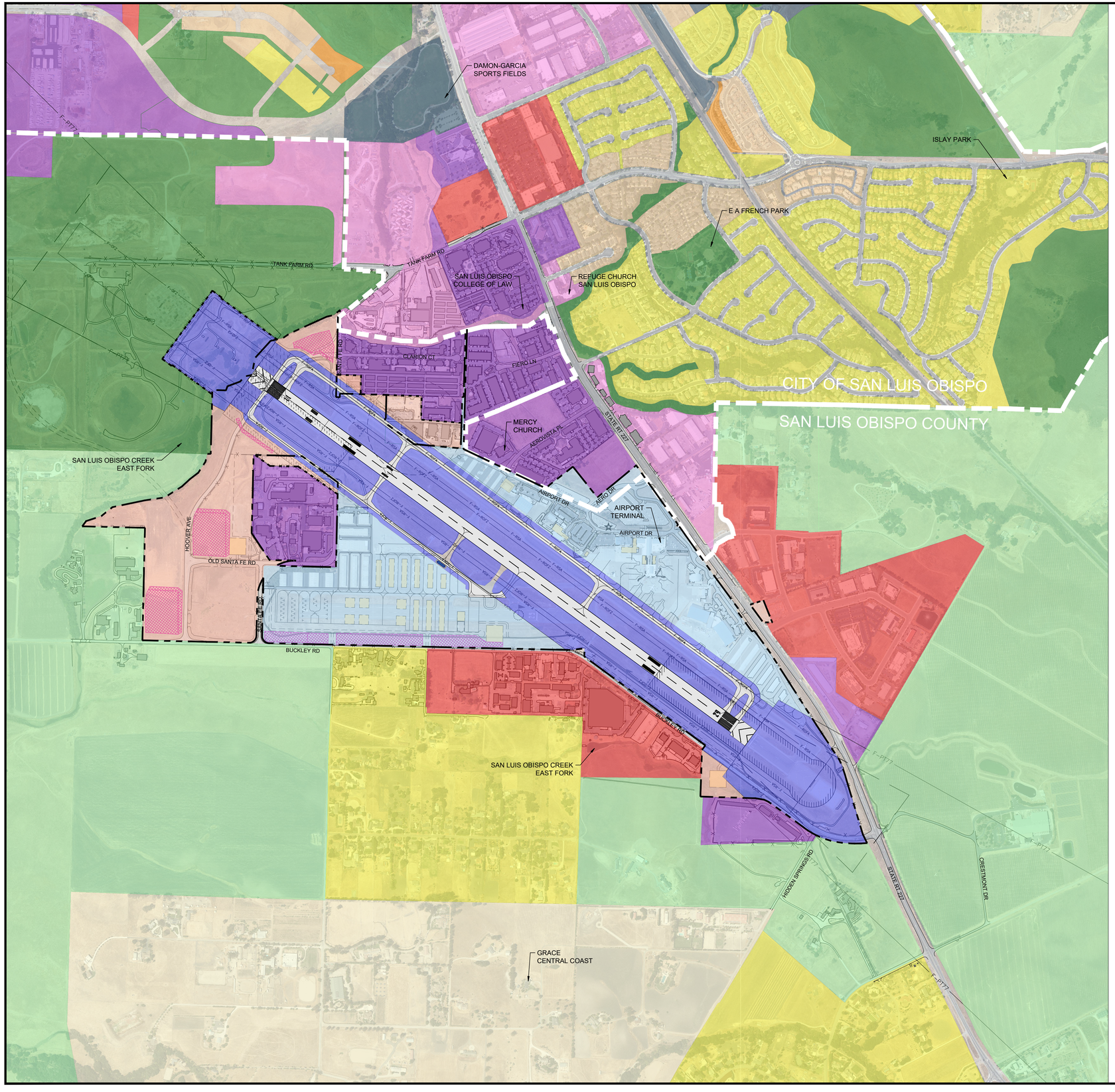
SHEET TITLE

LAND USE PLAN (EXISTING)

SHEET NUMBER

19 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_19_ExLand.dwg Plotted on: 4/8/2025 11:24 AM Plotted by: Peddie, Brendan



ON-AIRPORT LAND USE LEGEND	
RUNWAY / TAXIWAY PAVEMENT	
AIRCRAFT OPERATIONS AREA	
AVIATION USE AREA	
FUTURE AIRPORT USE AREA	

OFF-AIRPORT LAND USE LEGEND	
CITY LIMITS	
AGRICULTURAL / OPEN SPACE	
GENERAL RETAIL / COMMERCIAL	
BUSINESS PARK / INDUSTRIAL	
RURAL RESIDENTIAL	
LOW DENSITY RESIDENTIAL	
MEDIUM DENSITY RESIDENTIAL	
HIGH DENSITY RESIDENTIAL	
PUBLIC FACILITY	
RECREATION / OPEN SPACE	
SERVICES MANUFACTURING	

ZONING RESTRICTIONS
AIRPORT INFLUENCE AREA (AIA). LOCAL HEIGHT RESTRICTIONS SET FORTH IN SLO COUNTY CODE 22.14.030 AND THE SLO AIRPORT LAND USE COMPATIBILITY PLAN (AS AUTHORIZED IN CA PUC ARTICLE 3.5).

NOTES:
1. AIA AREA AS REPRESENTED IN SBP AIRPORT LAND USE PLAN, MAY 2021.
2. THE AIRCRAFT OPERATIONS AREA INCLUDES THE AIRFIELD AREA OR AIRCRAFT MOVEMENT AREAS (E.G. RUNWAYS AND TAXIWAYS) AND APPROACH / DEPARTURE AREA USED BY AIRCRAFT TO ARRIVE / DEPART THE AIRPORT.
3. THE AVIATION USE AREA INCLUDES THE AREA THAT IS CURRENTLY DEVELOPED AND USED FOR AERONAUTICAL PURPOSES OR AVIATION USE AS WELL AS ANY AREAS RESERVED FOR POTENTIAL AVIATION USE IN THE FUTURE.
4. THE FUTURE AIRPORT USE AREA INCLUDES ON-AIRPORT AREAS THAT ARE NOT YET CATEGORIZED AS ANOTHER LAND USE BUT RESERVED FOR FUTURE AIRPORT USE AS AERONAUTICAL OR NON-AERONAUTICAL / NON-AVIATION DEVELOPMENT.

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

500' 250' 0 500'

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AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: APRIL 2025
REVIEWED BY: GH
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DESIGNED BY: BP

PROJECT NUMBER
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SHEET TITLE

LAND USE PLAN (FUTURE)

SHEET NUMBER

20 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_20_FuLand.dwg Plotted on: 4/8/2025 11:33 AM Plotted by: Peddie, Brendan

POTENTIAL PROPERTY ACQUISITIONS						
REF. NO.	A.P.N.	OWNER	AREA (ACRES)	DOCUMENT TITLE	EXISTING FACILITIES	PURPOSE OF ACQUISITION
A	076-382-005	UNION OIL CO OF CA	76.00 (1)	DEED	PREVIOUSLY DEVELOPED LAND AREA	FUTURE DEVELOPMENT
B	076-411-055	SANTA FE PARTNERS LLC	1.00	GRANT DEED	MINI-STORAGE	FUTURE DEVELOPMENT
C	076-401-043	ENTEGRIS INC	2.11	GRANT DEED	INDUSTRIAL FACILITY	FUTURE DEVELOPMENT
D	076-401-065	ENTEGRIS INC	1.65	GRANT DEED	INDUSTRIAL FACILITY	FUTURE DEVELOPMENT
E	076-401-032	ENTEGRIS INC	2.50	DEED OF TRUST	INDUSTRIAL FACILITY	FUTURE DEVELOPMENT
F	076-371-031	CORRAL DE PIEDRA LAND COMPANY A CA CORP	9.11 (1)	GRANT DEED	INDUSTRIAL FACILITY	FUTURE DEVELOPMENT
G	076-062-046	APPLE RIVER & COMPANY LIMITED PARTNERSHIP	2.02 (1)	DEED OF TRUST	INDUSTRIAL FACILITY	FUTURE DEVELOPMENT

1. ONLY A PORTION OF THIS PARCEL AREA IS REQUIRED TO SUPPORT FUTURE AIRPORT DEVELOPMENT.

EXISTING PROPERTY MAP LEGEND LOCATED ON SHEET 22

DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE		
EASEMENT	E	N/A
PARCEL LINE		N/A
RUNWAY SAFETY AREA	RSA	F - RSA
RUNWAY OBJECT FREE AREA	ROFA	F - ROFA
RUNWAY OBSTACLE FREE ZONE	ROFZ	F - ROFZ
RUNWAY PROTECTION ZONE		
TAXIWAY OBJECT FREE AREA	TOFA	F - TOFA
BUILDING RESTRICTION LINE	BRL 35'	N/A
PART 77 SURFACE	PT77	F - PT77
AIRFIELD PAVEMENT		
AIRFIELD PAVEMENT TO BE REMOVED	N/A	
BUILDINGS		
BUILDINGS TO BE REMOVED	N/A	
ROADWAY/PARKING		
UNPAVED ROADWAY/PARKING		N/A
FENCE	X X X	XXX XXX
NGS MONUMENT	PACS/SACS	N/A

N

MAGNETIC DECLINATION
12° 19' EAST
NOVEMBER 2022
ANNUAL CHANGE 0° 5' WEST

400' 200' 0 400'

DETAIL A NO SCALE

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AIRPORT LAYOUT PLAN

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REVISIONS

NO.	DESCRIPTION	DATE

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REVIEWED BY: GH
DRAWN BY: BP
DESIGNED BY: BP

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SHEET TITLE

EXHIBIT 'A' AIRPORT PROPERTY MAP

SHEET NUMBER

21 OF 22

Drawing: T:\P\2260015.010_SBP Master Plan\CAD\ALP\C\SBP_21_ExhibitA.dwg Plotted on: 4/8/2025 11:37 AM Plotted by: Peddle, Brendan

EXISTING PROPERTY DATA

REF. NO.	APPROXIMATE AREA (ACRES)	A.P.N.	DOCUMENT TITLE	GRANTOR	INTEREST	DATE AQUIRED	VOLUME & PAGE		DOCUMENT NO.	FUND SOURCE	REMARKS
1	0.99	076-401-021	QUITCLAIM	PENCE	QUITCLAIM	2008			2008-038601	AIP 05	
2	2.50	076-401-030	GRANT DEED	BLACK	FEE SIMPLE	1986	2844	624	1986-0035156	AIP 05	
3	2.00	076-401-014	GRANT DEED	FLAXBY	FEE SIMPLE	1986	2830	750	1986-0026814	AIP 06	2 PARCELS, WELL SITE, & PIPE EASEMENT
4	1.89	076-401-008	CORPORATION GRANT DEED	WOODS	FEE SIMPLE	1989	3329	683	1989-0037625	AIP 08	
5	1.70	076-401-013	GRANT DEED	WOODS	FEE SIMPLE	1994			1994-054594		DEED PARCEL EXCEPTING 2 OTHER DEED PARCELS
5A.1	0.01	076-401-010	GRANT DEED	FLADBY	FEE SIMPLE	1986	2830	750	1986-0026814		
5A.2	0.01	076-401-013	GRANT DEED	FERRINI	FEE SIMPLE	1994			1994-054594		
6A	2.20		EASEMENT DEED	EASEMENT TO SAES	EASEMENT					AIP 08	50' ACCESS EASEMENT TO SAES
8	9.77	076-371-027	STIPULATION FOR JUDGMENT IN CONDEMNATION	HEINEMANN	FEE SIMPLE	1995			1995-040784	AIP 08	
9	23.54	076-371-026	GRANT DEED	BRUGHELLI	FEE SIMPLE	1991	3760	86	1991-059975	AIP 08	
10	18.36	076-371-029	INDIVIDUAL GRANT DEED	ZANOLLI	FEE SIMPLE	1976	1886	281	1976-010156	ADAP 01	
11	11.01	076-382-006	INDIVIDUAL GRANT DEED	ZANOLLI	FEE SIMPLE	1976			1976-010156	ADAP 01	
12	21.94	076-401-067	GRANT DEED	BRANCH	FEE SIMPLE	1978	2088	172	1978-035546	ADAP 01	RESERVED 75' ALONG N'LY LINE FOR ACCESS EASEMENT
14	11.01	076-401-064 (PTN)	INDIVIDUAL GRANT DEED	MADDALENA	FEE SIMPLE	1981	2306	388	1981-007335	ADAP 04	
15	1.46	076-401-064 (PTN)	INDIVIDUAL GRANT DEED	RESERVATIONS IN DEED	EASEMENT	1981	2306	388	1981-007335	ADAP 04	
16	3.99	076-401-064 (PTN)	RESOLUTION/GRANT DEED	NORTHWINDS	FEE SIMPLE	1981	2346	175	1981-036306	ADAP 04	
17	5.47	044-081-044(PTN)	FINAL ORDER OF CONDEMNATION	MARTINELLI	EASEMENT	1985	2667	146	1985-000913	ADAP 06	AVIGATION EASEMENT ONLY
18	11.13	044-041-007	RESOLUTION/GRANT OF AVIGATION EASEMENT	NORTHWINDS	EASEMENT	1981	2346	175	1981-036306	ADAP 04	AVIGATION EASEMENT ONLY
19	2.51	076-401-029	GRANT DEED	CENTRAL COAST TRADING	FEE SIMPLE	1998			1998-075439	PFC	
20	2.52	053-413-009	RESOLUTION/GRANT DEED	COWEN	FEE SIMPLE	2002			2002-071115	CFC	
21	0.16	076-371-033	GRANT DEED	CB&I	FEE SIMPLE	2008			2008-021654		
22	0.01	---	RESOLUTION/GRANT DEED	SIMS	FEE SIMPLE	2006			2006-065620		
23	0.94	076-371-032	GRANT DEED	CB&I	FEE SIMPLE	2008			2008-021653		
24	0.70	76-401-066	GRANT DEED	SAES	FEE SIMPLE	2009			2009-009610		
25	0.89	076-371-028	FINAL ORDER OF CONDEMNATION	FILBIN	FEE SIMPLE	2007			2007-080039	AIP#27	
26	1.23		RESOLUTION	COUNTY OWNED	FEE SIMPLE	2002			2002-020821		ABANDONED PORTION OF ROAD/ACCEPTING PTN. OF BUCKLEY ROAD INTO COUNTY ROAD SYSTEM
27	3.49	076-063-033	GRANT DEED	STAHL	FEE SIMPLE	2012			2012-002272		
28	15.39	076-401-064 (PTN)	FINAL JUDGEMENT OF CONDEMNATION	BAKER	FEE SIMPLE	1948	471	179	1948-001423		
29	1.53	Aero Dr.	RESOLUTION/GRANT DEED	GARCIA	FEE SIMPLE	1953	716	327	1953-008856		TRANS TO COUNTY ROAD SYSTEM
30	3.55		RELINQUISHMENT	RELINQUISHED	FEE SIMPLE	1980	2240	224	1980-019780		
31	0.89	076-401-064 (PTN)	FINAL JUDGEMENT OF CONDEMNATION	MADDALENA	FEE SIMPLE	2001			2001-022991		
32	0.63	076-401-064 (PTN)	RESOLUTION/GRANT DEED	MADDALENA	FEE SIMPLE	2001			2001-054240		PORTION INSIDE ARPT FENCE
33	0.19	076-401-064 (PTN)	INDENTURE	BAKER		1944	365	44	1944-004332		
34	0.43	076-401-064 (PTN)	RESOLUTION/GRANT DEED	GARCIA	FEE SIMPLE	1969	1519	422	1969-011357		
35	0.24	076-415, 076-411-054 (PTN)	EASEMENT DEED/QUITCLAIM EASEMENT DEED	COLLET	EASEMENT	1977	1995	740	1977-034895		
36	1.19		RESOLUTION	COUNTY OWNED	FEE SIMPLE	1948	477	143	1948-005517		ABANDONED PORTION OF ROAD
37	0.81		RESOLUTION	COUNTY OWNED	FEE SIMPLE	2009			2009-0246618		VACATED ROAD
38	11.22		RESOLUTION	COUNTY GS DEPT TO PW DEPT	EASEMENT	2009			2009-0246618		ROAD EASEMENT
39	4.01		RESOLUTION	BOD RES.	FEE SIMPLE	2002			2002-020821		
41	0.86	076-401-68	GRANT DEED	COUNTY & SAES	FEE SIMPLE	1995			1995-033405		
42	51.11	076-401-064 (PTN)	FINAL JUDGEMENT OF CONDEMNATION	BAKER	FEE SIMPLE	1944	367	113	1995-003404		
43	91.73	076-401-064 (PTN)	FINAL JUDGEMENT OF CONDEMNATION	BAKER	FEE SIMPLE	1943	347	251	1944-006184		
44	42.06	076-401-064 (PTN)	FINAL JUDGEMENT OF CONDEMNATION	BAKER	FEE SIMPLE	1943	347	252	1943-08429		
45	26.25		RESOLUTION/QUITCLAIM DEED	QUITCLAIMED	FEE SIMPLE	1971	1604	298	1943-08430		
46	0.57	Buckley Rd	N/A	COUNTY OWNED	FEE SIMPLE	N/A			1971-003172		NOT ABANDOND PTN OF BUCKLY ROW INSIDE ARPT FENCE / 1ST REALIGNMENT
47	0.40	Buckley Rd	N/A	COUNTY OWNED	FEE SIMPLE	N/A					NOT ABANDOND PTN OF BUCKLY ROW INSIDE ARPT FENCE / 2ND REALIGNMENT
48	N/A	076-373-001	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
49	N/A	076-373-002	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
50	N/A	076-373-003	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
51	N/A	076-373-004	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
52	N/A	076-373-005	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
53	N/A	076-373-006	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
54	N/A	076-373-007	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
55	N/A	076-373-008	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
56	N/A	076-373-009	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
57	N/A	076-373-010	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
58	N/A	076-373-011	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
59	N/A	076-373-012	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
60	N/A	076-373-013	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
61	N/A	076-373-014	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
62	N/A	076-373-015	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
63	N/A	076-373-016	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
64	N/A	076-373-017	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
65	N/A	076-373-018	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
66	N/A	076-373-019	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
67	N/A	076-373-020	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS
68	3.66	076-373-021	CONDOMINIUM PLAN/RESOLUTION		FEE SIMPLE	1996			1996-034384		COMMERCIAL HANGARS CONDOMINIOMS

AIRPORT PROPERTY RELEASE

REF. NO.	APPROXIMATE AREA (ACRES)	A.P.N.	DOCUMENT TITLE	GRANTOR	INTEREST	FAA LETTER OF RELEASE DATE	DEED TRANSFER DATE	DOCUMENT NO.	PURPOSE FOR RELEASE
R1	0.63	076-511-025	QUIT CLAIM DEED	PEOPLES' SELF-HELP HOUSING CORP	FEE SIMPLE	8/29/2018	10/5/2018	2018-041288	SURPLUS PROPERTY

RS&H

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AIRPORT LAYOUT PLAN

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SHEET TITLE

EXHIBIT 'A' AIRPORT PROPERTY MAP - TABLE

SHEET NUMBER

22 OF 22