

What's Your Land Use Compatibility Priority?

Airspace
Obstructions

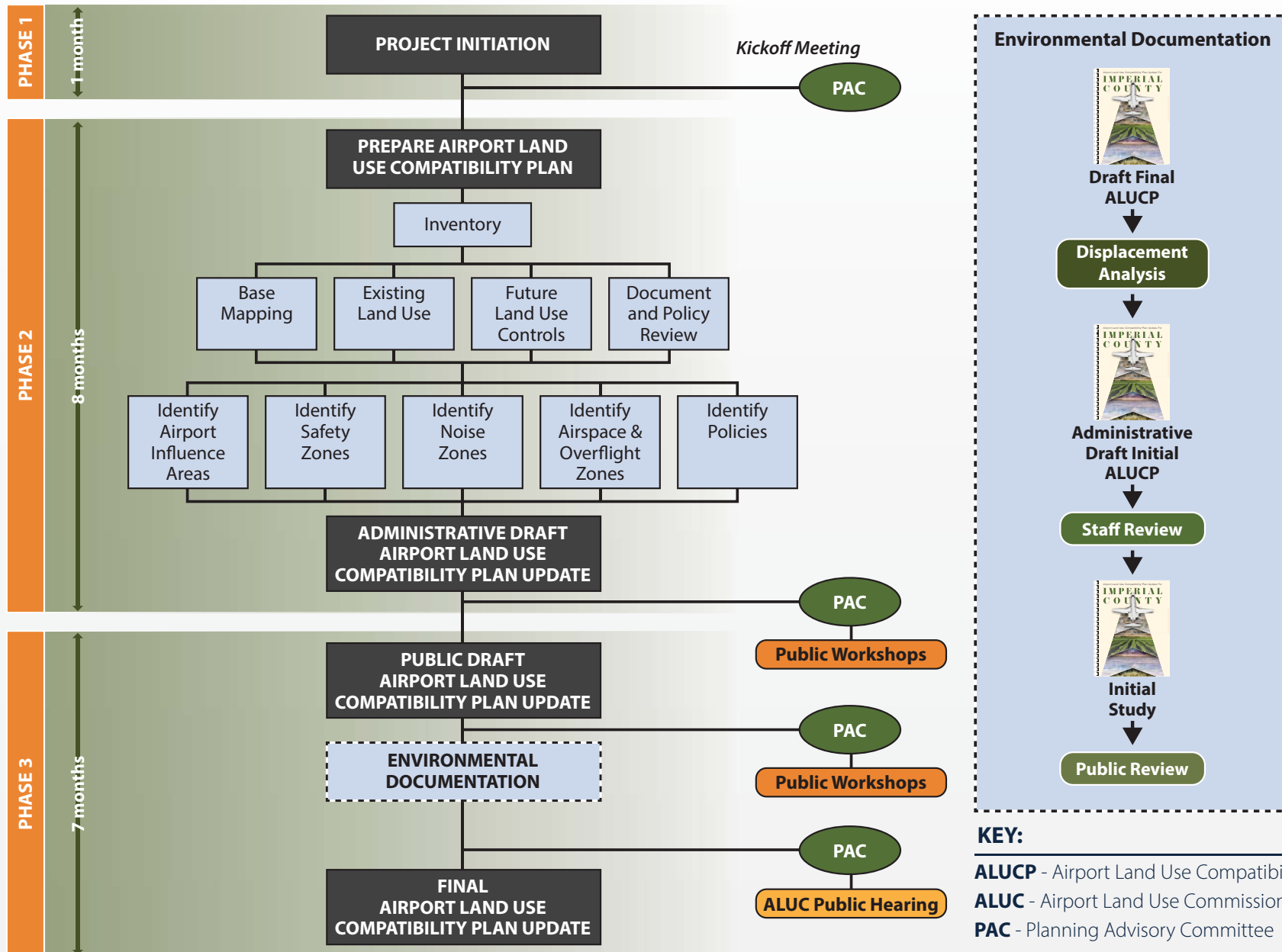
Noise

Safety on
the Ground

Wildlife
Hazards

Other

Study Process





What It Is/What It Isn't

The Airport Land Use Compatibility Plan Can Be Used To:

- Protect the public from airport noise
- Ensure land use development is not concentrated in areas of high aircraft accident risk
- Ensure no structures or activities adversely affect navigable airspace

The Airport Land Use Compatibility Plan Cannot Be Used To:

- Control aircraft operations
- Specify land uses on parcels near an airport
- Remove existing incompatible land uses
- Authorize the airport to expand



Aircraft and Airspace Regulations



PILOT

- Responsible for safe operation of aircraft in the air and on the ground



FAA

- Establishes airspace - where aircraft may be flown
- Sets aircraft noise standards
- Certifies aircraft and pilots

IMPERIAL COUNTY, CITIES OF BRAWLEY, CALIPATRIA, CALEXICO, EL CENTRO, & IMPERIAL

- No control over aircraft in flight
- May establish land use plans to promote public health & safety in the vicinity of airports



LAND USE REGULATIONS

IMPERIAL COUNTY

- Responsible for maintaining a safe airport
- Coordinates with citizens and developers to promote land use compatibility

STATE OF CALIFORNIA

- Enables local land use planning through adoption of zoning ordinances and a General Plan
- Enables airport commission to act as an airport zoning commission to zone property within one mile of the airport.

UNITED STATES

- No land use authority except on airports that were previously owned by the federal government and/or on airports which receive federal funding for airport capital improvements projects.

"Cessna four-one-seven-sierra-tango cleared for takeoff on runway one-two, southeast departure approved"

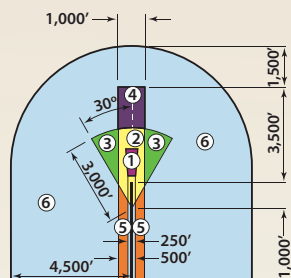


NOISE ABATEMENT PROCEDURES

"Tower, Cessna four-one-seven-sierra-tango holding short of runway one-two for VFR departure south-eastbound."



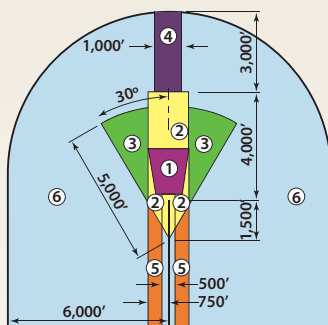
Airport Land Use Planning Handbook Safety Zones



SHORT GENERAL AVIATION RUNWAY

Assumptions:

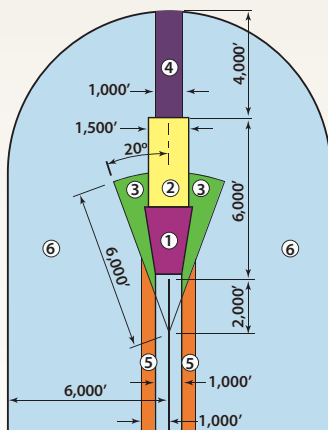
- Length less than 4,000 feet
- Approach visibility minimums ≥ 1 mile or visual approach only
- Zone 1 = 250' x 450' x 1,000'



MEDIUM GENERAL AVIATION RUNWAY

Assumptions:

- Length 4,000 to 5,999 feet
- Approach visibility minimums $\geq \frac{3}{4}$ mile and < 1 mile
- Zone 1 = 1,000' x 1,510' x 1,700'



LONG GENERAL AVIATION RUNWAY

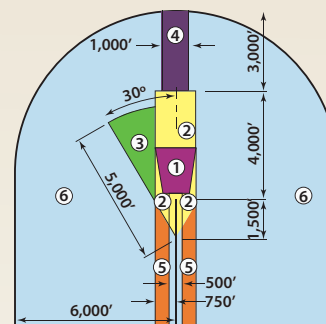
Assumptions:

- Length 6,000 or more
- Approach visibility minimums $< \frac{3}{4}$ mile
- Zone 1 = 1,000' x 1,750' x 2,500'

LEGEND

- | | | |
|---------------------------------|---------------------------------|------------------------|
| ① Runway Protection Zone | ③ Inner Turning Zone | ⑤ Sideline Zone |
| ② Inner Approach/Departure Zone | ④ Outer Approach/Departure Zone | ⑥ Traffic Pattern Zone |

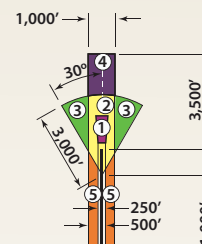
Source: California Airport Land Use Planning Handbook, 2011.



GENERAL AVIATION RUNWAY WITH SINGLE-SIDED TRAFFIC PATTERN

Assumptions:

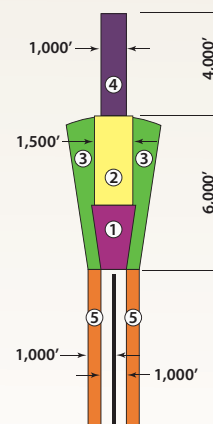
- Length 4,000 to 5,999 feet
- Approach visibility minimums $\geq \frac{3}{4}$ mile and < 1 mile
- Zone 1 = 1,000' x 1,510' x 1,700'
- See Note.



LOW ACTIVITY GENERAL AVIATION RUNWAY

Assumptions:

- Less than 2,000 takeoffs and landings per year at individual runway end.
- Length less than 4,000 feet
- Approach visibility minimums ≥ 1 mile or visual approach only
- See Note.



LARGE AIR CARRIER RUNWAY

Assumptions:

- Minimal light-aircraft general aviation activity
- Predominately straight-in and straight-out flight routes
- Approach visibility minimums $< \frac{3}{4}$ mile
- See Note.

Note:

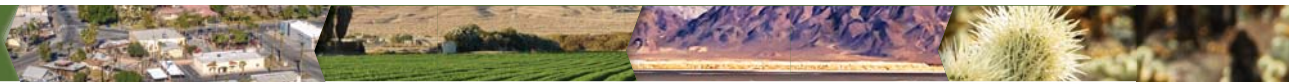
RPZ (Zone 1) size in each example is as indicated by FAA criteria for the approach type assumed. Adjustment may be necessary if the Approach type differs.

These examples are intended to provide general guidance for establishment of airport safety compatibility zones. They do not represent California Department of Transportation standards of policy.

LEGEND

- | | | |
|---------------------------------|---------------------------------|------------------------|
| ① Runway Protection Zone | ③ Inner Turning Zone | ⑤ Sideline Zone |
| ② Inner Approach/Departure Zone | ④ Outer Approach/Departure Zone | ⑥ Traffic Pattern Zone |

Source: California Airport Land Use Planning Handbook, 2011.



Airport Land Use Planning Handbook Safety Zones

LAND USE	Yearly Day-Night Average Sound Level (DNL) in Decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
Residential						
Residential, other than mobile homes and transient lodgings	Y	N ¹	N ¹	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N ¹	N ¹	N ¹	N	N
Public Use						
Schools	Y	N ¹	N ¹	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y ²	Y ³	Y ⁴	Y ⁴
Parking	Y	Y	Y ²	Y ³	Y ⁴	N
Commercial Use						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail-building materials, hardware and farm equipment	Y	Y	Y ²	Y ³	Y ⁴	N
Retail trade-general	Y	Y	25	30	N	N
Utilities	Y	Y	Y ²	Y ³	Y ⁴	N
Communication	Y	Y	25	30	N	N
Manufacturing & Production						
Manufacturing, general	Y	Y	Y ²	Y ³	Y ⁴	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y ⁶	Y ⁷	Y ⁸	Y ⁸	Y ⁸
Livestock farming and breeding	Y	Y ⁶	Y ⁷	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y ⁵	Y ⁵	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally-determined land uses for those determined to be appropriate by local authorities in response to locally-determined needs and values in achieving noise compatible land uses.

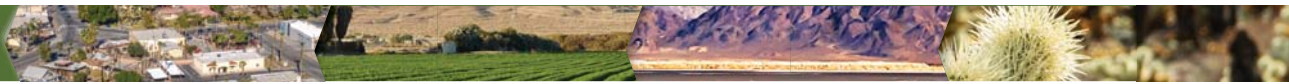
KEY

- Y (Yes)** Land Use and related structures compatible without restrictions.
- N (No)** Land Use and related structures are not compatible and should be prohibited.
- NLR** Noise Level Reduction (outdoor-to-indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
- 25, 30, 35** Land Use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.

NOTES

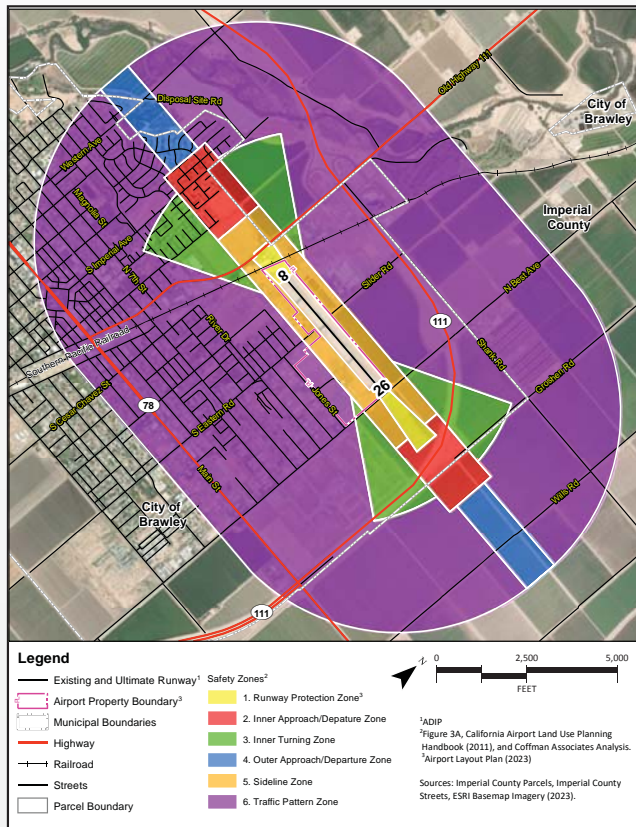
- Where the community determines that residential or school uses must be allowed, measures to achieve outdoor-to-indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB, respectively, should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide an NLR of 20 dB; thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
- Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
- Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
- Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
- Land use compatible provided special sound reinforcement systems are installed.
- Residential buildings require an NLR of 25.
- Residential buildings require an NLR of 30.
- Residential buildings not permitted.

Source: **14 CFR Part 150**, Appendix A, Table 1.

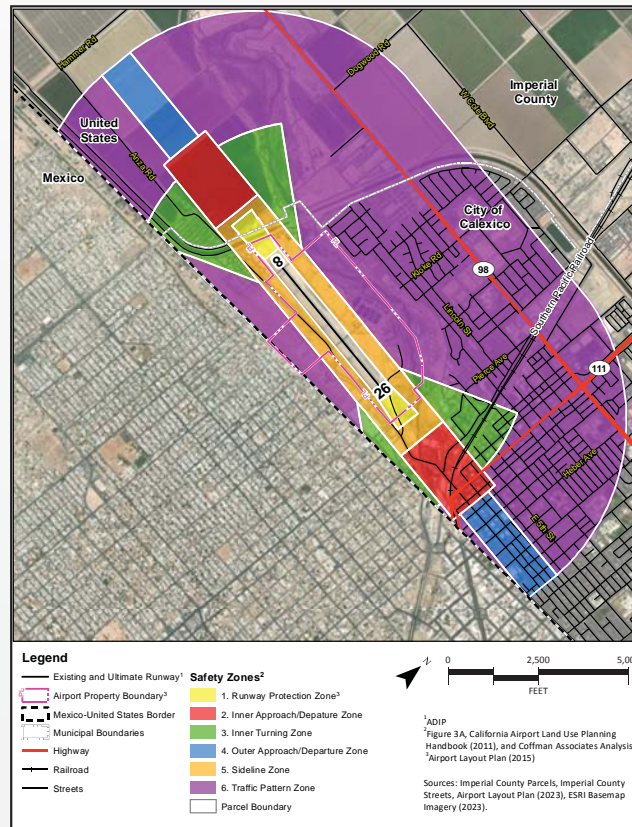


Safety Zones

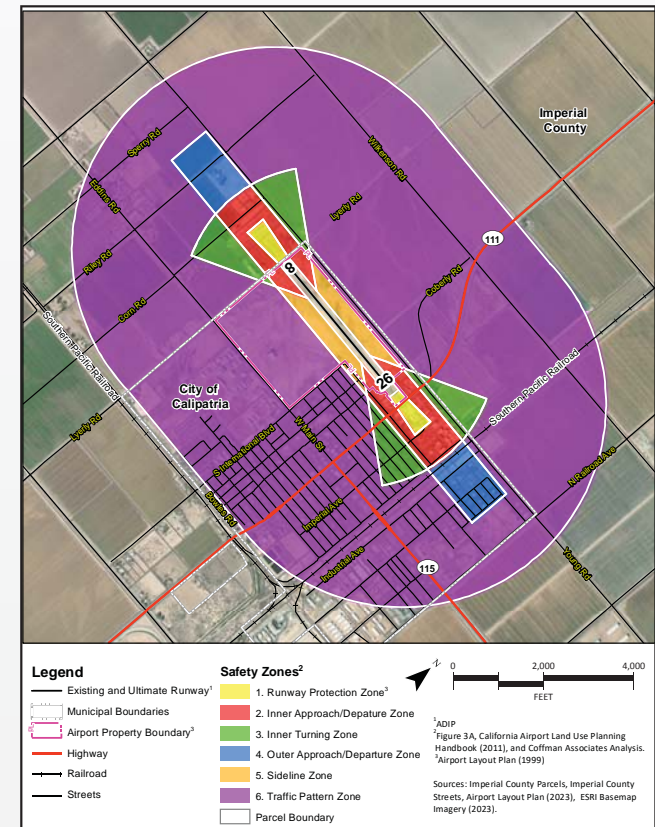
Brawley (BWC)



Calexico (CXL)



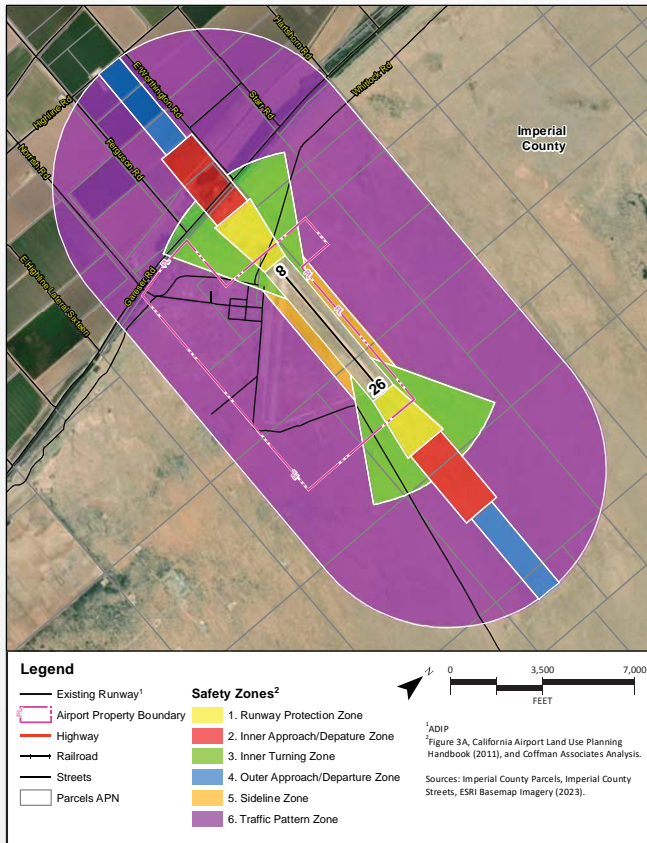
Cliff Hatfield (CLR)



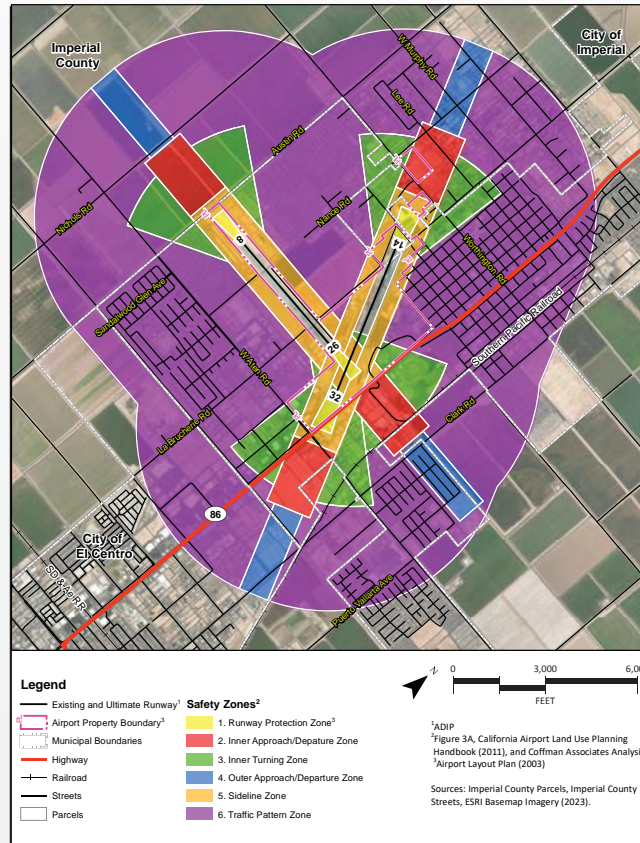


Safety Zones

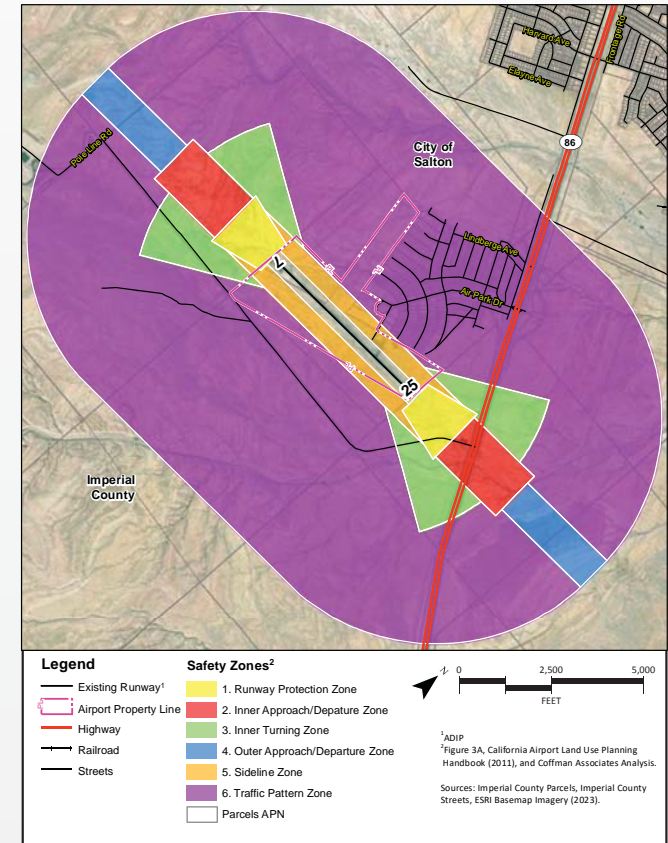
Holtville (L04)



Imperial County (IPL)



Salton Sea (SAS)

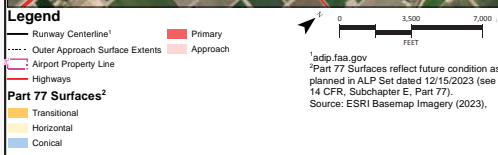
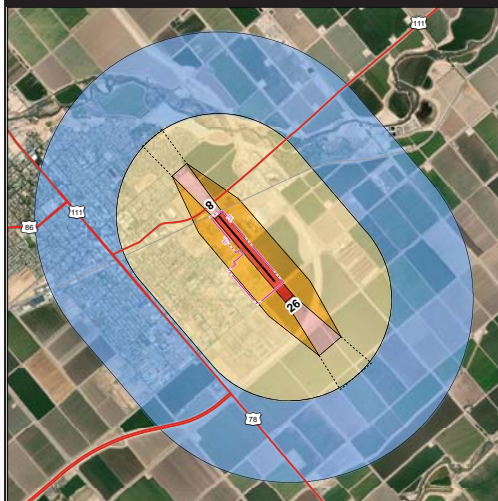


Safety Zone Compatibility Criteria Matrix

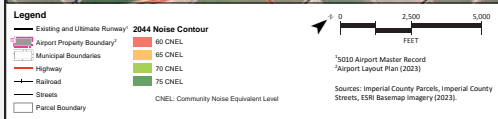
Dwelling Units (d.u.) per Acre ¹	Max Nonresidential Intensity ²	Required Open Land	Allow	Allow With Conditions	Not Recommended ³	Other Development Conditions ⁴
Zone 1: Runway Protection						
• None	• None	• All Remaining	• None	• None	• All new structures and residential land uses • Parking lots, streets, roads	• Not Applicable
Zone 2: Inner Approach/Departure						
• 1 d.u. per 10 acres	• 40 persons per acre	• 30%	• Agriculture; non-group outdoor recreational uses	• Residential uses • Warehouses, mini-storage • Industrial uses; vehicle, aircraft, marine repair services • All uses are subject to height limitations for airspace protection	• Major shopping centers, theaters, meeting halls, and other assembly facilities • Children's schools, day-care centers, hospitals, nursing homes • Stadiums, recreation facilities • Hazardous materials	• Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460) ⁵ • Dedication of avigation easement ⁶ • Locate structures maximum distance from extended runway centerline • Minimum NLR of 45 dB residences (including mobile homes) and office buildings ⁷
Zone 3: Inner Turning						
• 1 d.u. per 2 acres	• 70 persons per acre	• 20%	• Uses allowed in Zone 2 • Greenhouses	• Uses allowed with conditions in Zone 2 • Office, retail, and other commercial uses	• Major shopping centers, theaters, meeting halls, and other assembly facilities • Children's schools, day-care centers, hospitals, nursing homes • Stadiums, recreation facilities • Hazardous materials	• Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460) ⁵ • Dedication of avigation easement ⁶ • Locate structures maximum distance from extended runway centerline • Minimum NLR of 45 dB residences (including mobile homes) and office buildings ⁷
Zone 4: Outer Approach/Departure						
• 1 d.u. per 2 acres	• 100 persons per acre	• 30%	• Uses allowed in Zone 2-3	• Uses allowed with conditions in Zone 2-3	• Theaters, meeting halls, and other assembly facilities • Children's schools, day-care centers, hospitals, nursing homes • Stadiums, recreation facilities • Hazardous materials	• Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460) ⁵ • Dedication of avigation easement ⁶ • Minimum NLR of 45 dB in residences (including mobile homes) and office buildings ⁷
Zone 5: Sideline						
• 1 d.u. per acre	• 70 persons per acre	• 30%	• Uses allowed in Zone 2-4	• Uses allowed with conditions in Zone 2-4 • Residential Uses	• Stadiums, recreation facilities • Children's schools, day-care centers, hospitals, nursing homes	• Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460) ⁵ • Dedication of avigation easement ⁶
Zone 6: Traffic Pattern						
• No Limit	• 200 persons per acre	• 10%	• Uses allowed with conditions in Zones 2-5	• Uses allowed with conditions in Zones 2-5 • Children's schools, day-care centers, hospitals, and nursing homes • Outdoor stadiums and similar uses with high concentration of people	• None	• Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460) ⁵ • Deed notice required for residential uses ⁶
Zone 7: Conical Surface						
• No Limit	• No Limit	• None	• Uses Allowed in Zone 2-6	• Any	• None	• Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460) ⁵
Notes: ¹ Residential development containing more than the indicated number of dwelling units per gross acre (d.u./ac) is not recommended. Clustering of units is encouraged. Gross acreage includes the property at issue plus a share of adjacent roads and any adjacent, permanently dedicated, open lands. ² Usage intensity calculations include the peak number of people per gross acre (e.g., employees, customers/visitors, etc.) who may be on the property at a single point in time, whether indoors or outside. Gross acreage includes the property at issue plus a share of adjacent roads and any adjacent, permanently dedicated, open lands. See Appendix J for more detailed information on calculating usage intensity. ³ The uses listed here are not recommended regardless of whether they meet the intensity criteria, subject to applicable state or federal law. In addition to these uses, other uses that are normally permitted may not be recommended in the respective compatibility zones because they do not meet the usage intensity criteria. ⁴ Additional resources may be found on the Imperial County Planning and Development Service Department's website: https://www.icpds.com/ ⁵ Information regarding FAA airspace review filing requirements may be found on the FAA's Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) portal: https://oeaaa.faa.gov/oeaaa/external/portal.jsp ⁶ As part of certain real estate transactions involving residential property within any compatibility zone (that is, anywhere within an airport influence area), disclosure of information regarding airport proximity and the existence of aircraft overflights must be disclosed. This requirement is set by state law. ⁷ NLR = Noise Level Reduction: the outside-to-inside sound level attenuation the structure provides.						
Legend: RPZ = Runway Protection Zone TPZ = Traffic Pattern Zone ITZ = Inner Turning Zone IADZ = Inner Approach/Departure Zone SZ = Sideline Safety Zone OADZ = Outer Approach/Departure Zone						



Part 77 Airspace Surfaces



Noise Contours



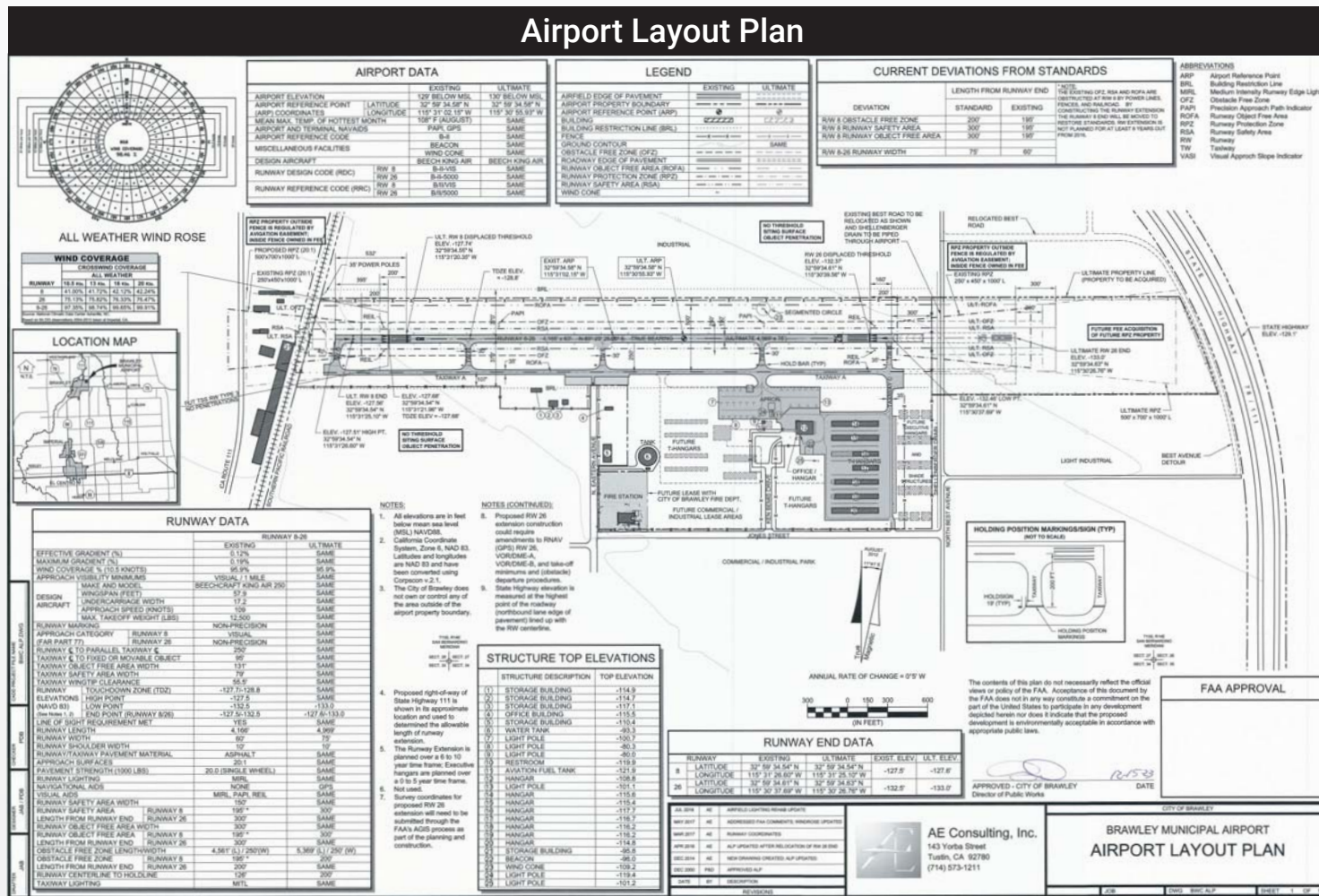
Brawley Municipal Airport (BWC)

Table A1: Aircraft Fleet Mix and Operations

Operations	AEDT Designator	2044*
Minorant		
Single Engine, Fixed	GASEPF	309
Single Engine, Variable	GASEPV	309
Multi-Engine Piston	BEC58P	162
Turboprop	DH6C	174
Turboprop	Pilatus PC-12	174
Helicopter	SA3500	200
Minorant Subtotal		1,328
Local		
Single Engine, Fixed	GASEPF	409
Single Engine, Variable	GASEPV	409
Multi-Engine Piston	BEC58P	162
Local Subtotal		980
Grand Total		2,308

Source: *FAA Terminal Area Forecast, Fiscal Years 2023-2050, January 2024

Airport Layout Plan



Legend

- Runway Centerline¹
- Outer Approach Surface Extents
- Airport Property Line
- Highways
- Part 77 Surfaces²
 - Transitional
 - Horizontal
 - Conical
- Primary
- Approach

¹adip.laa.gov
²Part 77 Surfaces reflect future condition as planned in ALP Set dated 03/05/15 (see14 CFR, Subchapter E, Part 77).
 Source: ESRI Basemap Imagery (2023).

Airport Layout Plan

Operations	AEDT Designator	2044*
Iterant		
Single Engine, Fixed	GASEPF	508
Single Engine, Variable	GASEPV	507
Multi-Engine Piston	BEC58P	385
Turboprop	DHC6	233
Turboprop	Pilatus PC-12	169
Turbojet, Small	SA350D	245
Turbojet, Medium	CNA55B	120
Iterant Subtotal		2,167
Local		
Single Engine, Fixed	GASEPF	121
Single Engine, Variable	GASEPV	120
Local Subtotal		241
Grand Total		2,408

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Legend

- Existing and Ultimate Runway
- Airport Property Boundary
- Mexico-United States Border
- Municipal Boundaries
- Highway
- Railroad
- Streets
- Planal Boundary

2044 Noise Contour

- 65 CNEL
- 70 CNEL
- 75 CNEL

CNEL: Community Noise Equivalance Level

Sources: Imperial County Parcels, Imperial County Streets, Airport Layout Plan (2015), Airport Master Record (2015), Esri Basemap Imagery (2015).

Legend

- Runway Centerline¹
- Outer Approach Surface Extents
- Airport Property Line
- Highways
- Primary
- Approach

Part 77 Surfaces²

- Transitional
- Horizontal
- Conical

0 1,500 3,000
FEET

¹adip.faa.gov
²Part 77 Surfaces reflect future condition as planned in ALP Set dated 08/1999 (see 14 CFR, Subchapter E, Part 77).
 Source: ESRI Basemap Imagery (2023),

Legend

- Existing and Ultimate Roadway
- Highway
- Municipal Boundaries
- Railroad
- Streets
- Parcel Boundary

2044 Noise Contour

- 60 CNEL
- 65 CNEL
- 70 CNEL
- 75 CNEL

CNEL: Community Noise Equivalent Level

Scale: 0 to 4,000 FEET

Sources: Imperial County Parcels, Imperial County Streets, Airport Layout Plan (2023), 1999 Base Map Imagery (2023).

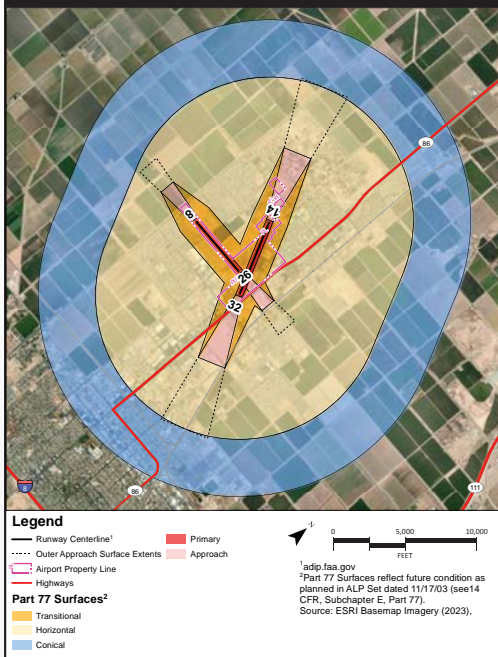
Operations	AEDT Designator	2044*
<i>Interpark</i>		
Simple Engine, Variable	GASEPV	1,000
<i>Interpark Subtotal</i>		1,000
Local		
N/A	N/A	0
Grand Total		1,000

Source: *FAA Terminal Area Forecast, Fiscal Years 2023-2050, January 2024

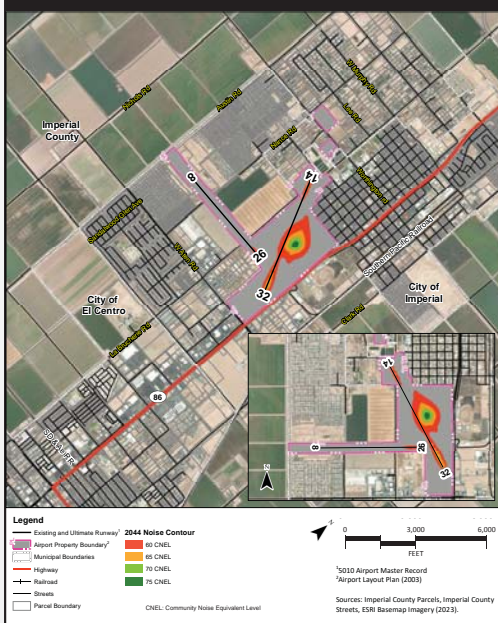
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IMPERIAL COUNTY ALUCP

Part 77 Airspace Surfaces



Noise Contours

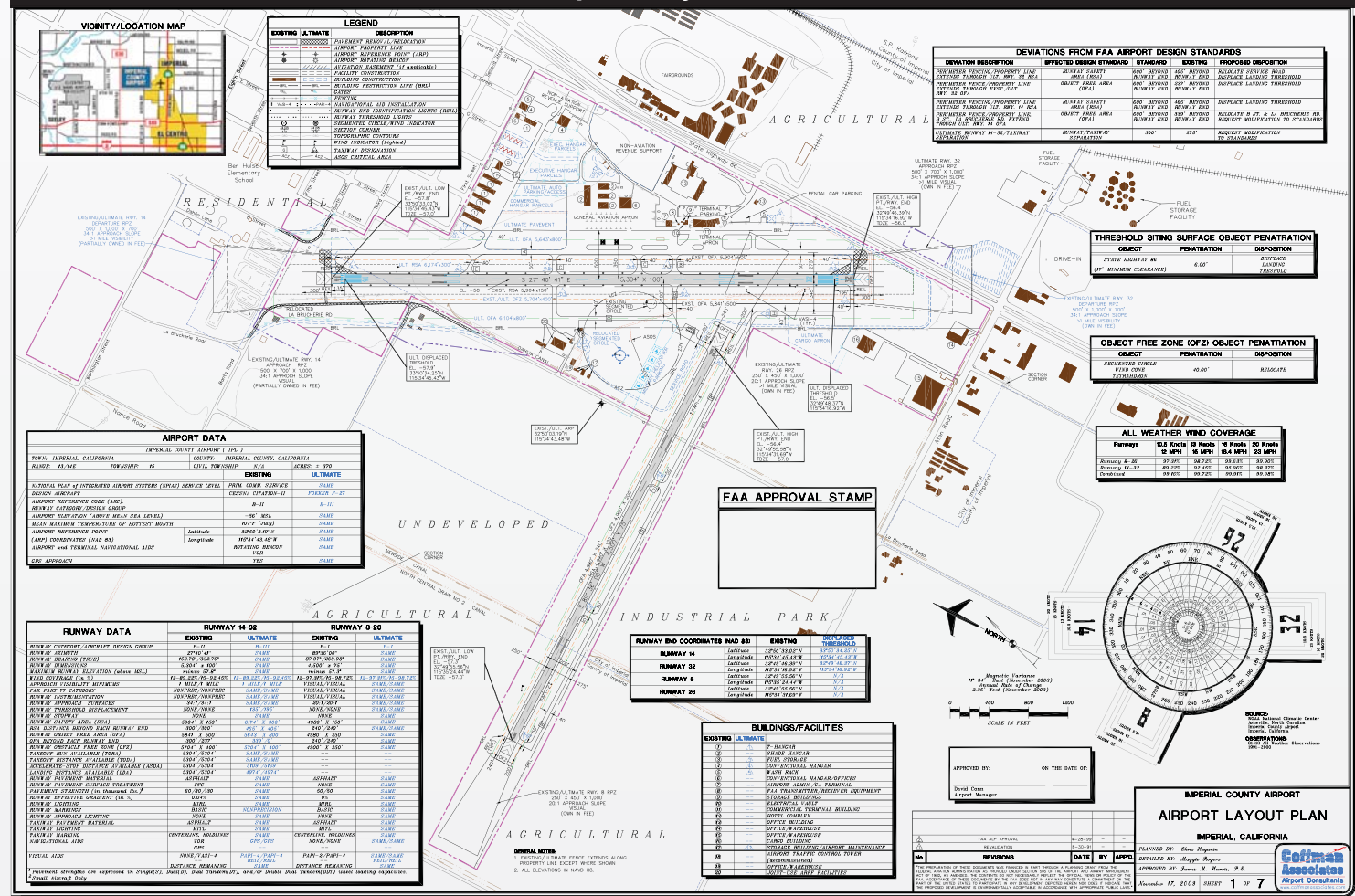


Imperial County Airport (IPL)

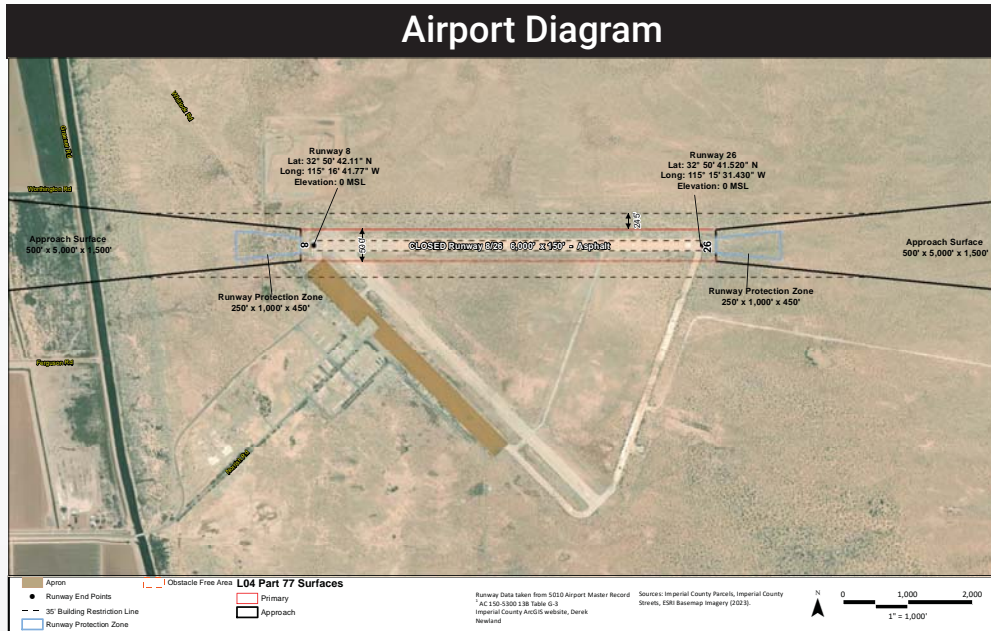
Table A1: Aircraft Fleet Mix and Operations

Operations	AEDT Designator	2044*
Itinerant		
Single Engine, Fixed	GASEPF	234
Single Engine, Variable	GASEPV	234
Multi-Engine Piston	BECS8P	25
Turboprop	Pilatus PC-12	1,174
Military Helicopter, V-22 Osprey	CH47D	1,221
Military Helicopter, AH-1 Huey Cobra	SA365N	1,220
Military Helicopter, CH-53 Sea Stallion	S65	1,220
Itinerant Subtotal		5,328
Local		
Single Engine, Fixed	GASEPF	523
Single Engine, Variable	GASEPV	522
Multi-Engine Piston	BECS8P	55
Local Subtotal		1,100
Grand Total		6,428

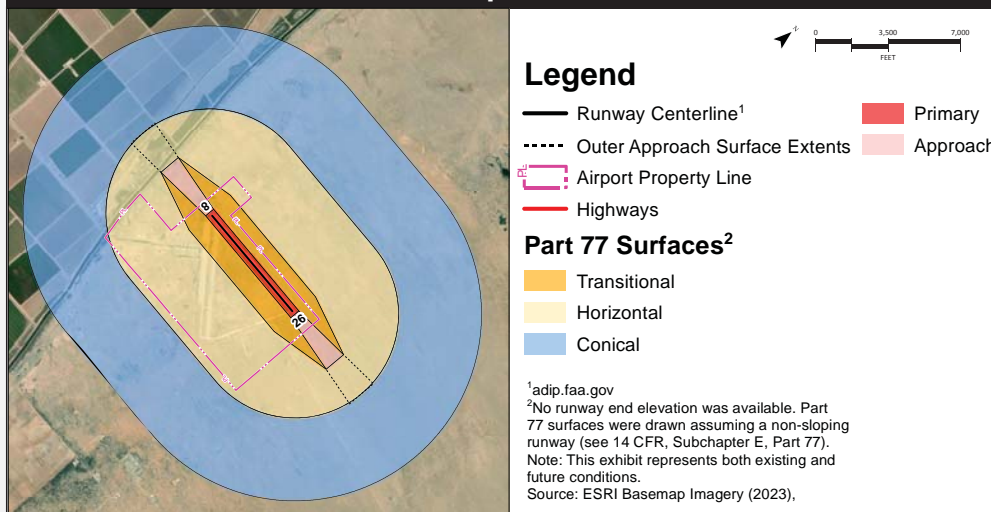
Airport Layout Plan



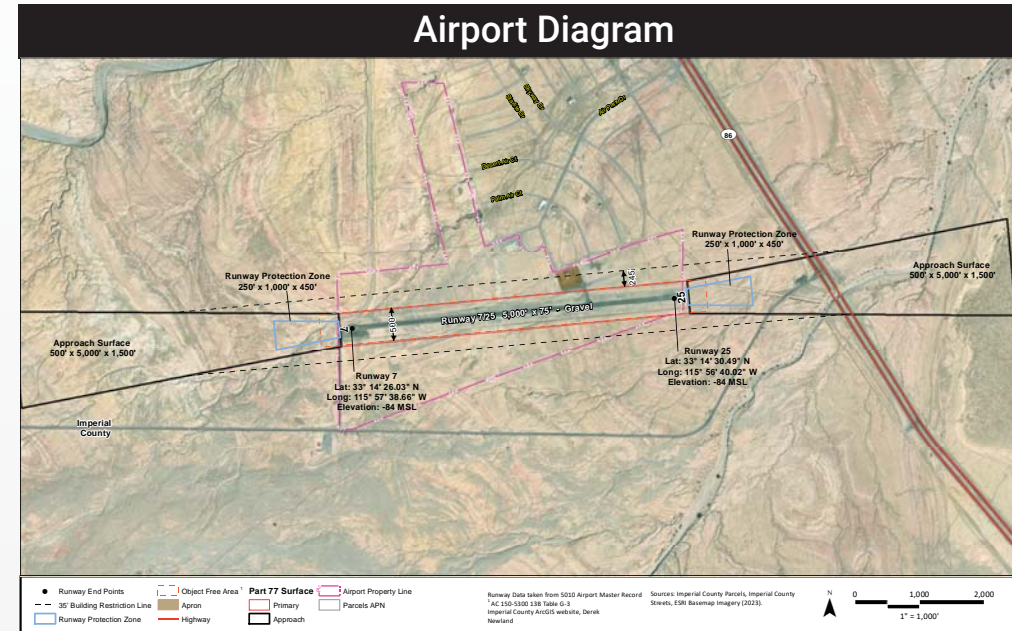
Holtville Airport (L04)



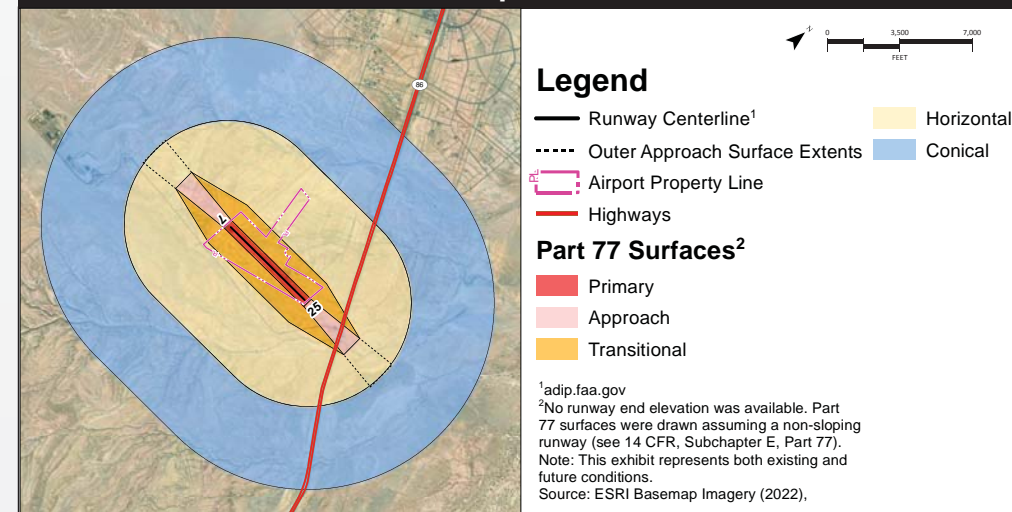
Part 77 Airspace Surfaces



Salton Sea Airport (SAS)



Part 77 Airspace Surfaces



El Centro Naval Air Facility

