Photo Credit: Henryk Kotowski

AIRPORT LAND USE COMMISSION
San Diego County Regional Airport Authority

Naval Outlying Landing Field Imperial Beach

AIRPORT LAND USE COMPATIBILITY PLAN

ADOPTED OCTOBER 15, 2015

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

Airport Land Use Compatibility Plan for

Naval Outlying Landing Field Imperial Beach

Volume 1

PREPARED FOR:

San Diego County Regional Airport Authority

Adopted October 15, 2015

PREPARED BY:

RICONDO & ASSOCIATES, INC.

RESOLUTION NO. 2015-0031 ALUC

A RESOLUTION OF THE AIRPORT LAND USE COMMISSION FOR SAN DIEGO COUNTY ADOPTING THE AIRPORT LAND USE COMPATIBILITY PLAN FOR NAVAL OUTLYING LANDING FIELD IMPERIAL BEACH AND NOTICE OF EXEMPTION

WHEREAS, the San Diego County Regional Airport Authority (Airport Authority) has been designated as the Airport Land Use Commission (ALUC) for each public-use and military airport in the County of San Diego (County), effective January 1, 2003 (Cal. Pub. Util. Code, §21670.3(a)); and

WHEREAS, the ALUC is required to prepare, adopt and amend, as necessary, an Airport Land Use Compatibility Plan (ALUCP) for the area within its jurisdiction surrounding any military airport (Cal. Pub. Util. Code, §§21674(c); 21675(b)); and

WHEREAS, ALUCPs are the fundamental tool used by ALUCs in fulfilling their purpose of promoting compatibility of land uses within the vicinity of airports, to the extent that land is not already devoted to incompatible uses, in order to protect the public health, safety, and welfare from the effects of airports and concurrently protect the operations of those airports from encroachment by incompatible uses; and

WHEREAS, the ALUC is required to be guided by information in the State of California, Department of Transportation, Division of Aeronautics Airport Land Use Planning Handbook (Caltrans Handbook) in preparing ALUCPs (Cal. Pub. Util. Code, §21674.7(a)); and

WHEREAS, the ALUC is also required to prepare an ALUCP for an area surrounding any military airport, that is "consistent with the safety and noise standards" in the Air Installation Compatible Use Zone (AICUZ) study prepared for that military airport by the branch of the armed services operating the airport (Cal. Pub. Util. Code, §21675(b)); and

WHEREAS, the ALUC has prepared an ALUCP for Naval Outlying Landing Field Imperial Beach (NOLF IB) that is consistent with the safety and noise standards in the 2011 AICUZ and otherwise consistent with the requirements of the State Aeronautics Act and Caltrans Handbook; and

WHEREAS, the ALUC has reviewed the proposed ALUCP pursuant to the California Environmental Quality Act (CEQA; Cal. Pub. Res. Code §21000 *et seq.*); the State CEQA Guidelines (Cal. Code of Regs, Title 14, §15000 *et seq.*); and the Authority's own CEQA Procedures; and

WHEREAS, the ALUC has further determined that the proposed ALUCP is exempt from CEQA, pursuant to the "common sense" exemption, located in CEQA Guidelines §15061(b)(3), because "it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, and the activity is not subject to CEQA" (*ibid.*); and

WHEREAS, a proposed Notice of Exemption has been prepared by the ALUC to document the basis for the determination that the proposed ALUCP is exempt from CEQA; and

WHEREAS, the ALUC provided public notice advertised in newspapers of general circulation with an opportunity to comment on the proposed NOLF IB ALUCP for 30 days in July 2014; and

WHEREAS, the ALUC held two community meetings on January 14, 2014, and on July 21, 2015, on the proposed ALUCP in the city of Imperial Beach, in order to provide information about and opportunity for public comment on the proposed ALUCP; and

WHEREAS, the ALUC has consulted with and sought comments from affected local agency elected officials and staff regarding the proposed ALUCP for NOLF IB, to include meetings with the City of Imperial Beach and the City of Coronado; and

WHEREAS, the ALUC received comments in response to the period of public review on the proposed ALUCP from the City of Coronado requesting a meeting with the Coronado Cays Homeowners Association, which ALUC staff held on June 4, 2015; and

WHEREAS, the ALUC held a duly noticed public meeting on October 15, 2015, to receive and consider public testimony with respect to the NOLF IB ALUCP; and

WHEREAS, the ALUC has considered all of the information presented as set forth above, to include the proposed ALUCP and proposed Notice of Exemption, as a result of the ALUC's independent judgement and analysis.

NOW, THEREFORE, BE IT RESOLVED that the ALUC approves and adopts for implementation the ALUCP for NOLF IB, to be effective immediately upon action of this Resolution; and

BE IT FURTHER RESOLVED that the ALUC finds, on the basis of the whole record before it, including, but not limited to, the proposed Notice of Exemption, that : (*i*) there is no substantial evidence that the proposed ALUCP has the potential to cause a significant effect on the environment; (*ii*) the proposed ALUCP is exempt from CEQA; and (*iii*) the proposed Notice of Exemption reflects the ALUC's independent judgment and analysis, and, therefore, the ALUC orders that ALUC staff file the Notice of Exemption accompanying this Resolution with the appropriate authorities to memorialize this determination; and

BE IT FURTHER RESOLVED by the ALUC that it finds that this ALUC action is not a "development" as defined by the California Coastal Act (Cal. Pub. Res. Code §30106).

PASSED, ADOPTED, AND APPROVED by the ALUC for San Diego County at a regular meeting this 15th day of October, 2015, by the following vote:

AYES:	Commissioners:	Alvarez, Boling, Cox, Desmond, Gleason, Hubbs, Janney, Robinson, Sessom
NOES:	Commissioners:	None
ABSENT:	Commissioners:	None

ATTEST:

for

TONY R. RUSSELL
DIRECTOR, CORPORATE &
INFORMATION GOVERNANCE /
AUTHORITY CLERK

APPROVED AS TO FORM:

BRETON K. LOBNER
GENERAL COUNSEL

NOTICE OF EXEMPTION

TO: State of California
Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 212
Sacramento, California 95814

County Clerk
County of San Diego
County Administration Center
1600 Pacific Highway, Room 260
San Diego, California 92101

FROM: San Diego County Regional Airport Authority
Airport Land Use Commission
Post Office Box 82776
San Diego, California 92138-2776

PROJECT TITLE: Naval Outlying Landing Field Imperial Beach Airport Land Use Compatibility Plan (NOLF IB ALUCP)

PROJECT LOCATION: The airport influence area (AIA) for the NOLF IB ALUCP is located adjacent to NOLF IB in the southwestern corner of San Diego county near the Pacific Ocean. It encompasses properties within the cities of Imperial Beach and San Diego as well as Tijuana River estuary public lands managed by the U.S. Fish and Wildlife Service and the County of San Diego.

DESCRIPTION OF NATURE, PURPOSE, AND BENEFICIARIES OF PROJECT: The San Diego County Airport Land Use Commission (ALUC) is mandated by the State Aeronautics Act to prepare an ALUCP for each military airport within the county. The purpose of an ALUCP is to protect the operations of the airport and concurrently safeguard the welfare of inhabitants and the general public within the vicinity of the airport. The ALUCP accomplishes these complementary objectives by establishing a geographic scope of application (the AIA) and criteria for the compatibility of specific land uses within the AIA. The compatibility standards are based upon sensitivity of land uses to airport noise exposure, minimizing risk in the event of aircraft accidents, protection of airspace from hazards and obstructions to flight and airport operations, and residential awareness of airport proximity to minimize annoyance. Pursuant to State law, the ALUCP is consistent with the noise and safety standards in the Air Installations Compatible Use Zones (AICUZ) study prepared by the U.S. Navy for NOLF IB.

The ALUCP compatibility standards are advisory. Subsequent to ALUCP adoption, local land use jurisdictions must ensure that their land use plans are consistent with the ALUCP's compatibility standards or overrule all or portions of the ALUCP by a two-thirds vote (Public Utilities Code § 21676; Government Code § 65302.3). These local agencies are the cities of Imperial Beach and San Diego. The ALUCP does not regulate airport operations, nor does it have any impact on existing land uses. The ALUCP applies only to land use plans and projects proposed after adoption of the ALUCP. Nonetheless, the project does not constitute any environmental impact due to practical constraints explained below. The beneficiaries of the project would be the implementing local agencies and inhabitants or the general public who would occupy land uses near the airport.

NAME OF PUBLIC AGENCY APPROVING PROJECT: San Diego County Regional Airport Authority (SDCRAA), acting in its capacity as the ALUC for San Diego county

NAME OF PERSON/AGENCY CARRYING OUT PROJECT: SDCRAA, cities of Imperial Beach and San Diego

EXEMPT STATUS: *(check one)*

- ☐ Ministerial (§21080(b)(1); 15268)
- ☐ Declared Emergency (§21080(b)(3); 15269(a))
- ☐ Emergency Project (§21080(b)(4); 15269(b)(c))
- ☒ Categorical Exemption: **§15061(b)(3)**
- ☐ Statutory Exemptions

REASONS WHY PROJECT IS EXEMPT: It can be seen with certainty that there is no possibility that the NOLF IB ALUCP may have a significant effect on the environment for two reasons. First, the ALUCP is largely preempted by federal jurisdiction, and, therefore, has no force and effect as to such property. The noise exposure contours and safety zones established by the ALUCP lie almost entirely on the airport property or on federal lands adjacent to the airport, neither of which is subject to ALUC jurisdiction.

Secondly, the effects of the ALUCP on non-federal lands outside the airport would not have a discernible effect upon the environment. The ALUCP would establish a requirement for interior sound attenuation of any new residences, schools, or public assembly land uses in a very limited area, but this small area is already developed, with negligible real estate assembly or local zoning allowance for any such new uses. Even so, standard construction practices already incorporate the requisite noise level to comply with the ALUCP without any extraordinary measures. The ALUCP would impose notification requirements of airport proximity relative to any new residential construction, but such notice does not constitute a change to the environmental setting.

None of these requirements would prohibit any land uses not already disallowed or otherwise limited by local agency, State, or federal laws and regulations. There would be no potential displacement of any land uses or populations elsewhere as a result of the ALUCP, and, thus, it would neither induce nor prohibit growth which might occur in the absence of the ALUCP. There are no direct, indirect, or cumulative impacts created by the ALUCP because it does not result in any environmental impacts. The ALUCP as a project is therefore exempt from CEQA.

Lead Agency Contact Person:

Signature: _____ Date: _____

Keith Wilschetz
Director, Airport Planning & Noise Mitigation
(619) 400-2457; ALUCPcomments@san.org

Date received for filing at OPR: _____

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CHAPTER 1
Implementation

This Airport Land Use Compatibility Plan (ALUCP) for Naval Outlying Landing Field Imperial Beach (NOLF IB) is the fundamental tool used by the San Diego County Airport Land Use Commission (ALUC) to promote airport land use compatibility in the vicinity of the airfield.

This ALUCP was prepared by the San Diego County Regional Airport Authority (SDCRAA), acting in its capacity as the San Diego County ALUC.

1.1 Purpose and Contents of the Plan

Consistent with State law, the purpose of this ALUCP is to promote compatibility between NOLF IB and surrounding future land uses to:

- Provide for the orderly development of NOLF IB and the area surrounding the facility
- Protect public health, safety and welfare in areas around NOLF IB[1]

As required by State law,[2] this ALUCP is consistent with the safety and noise standards in the *Air Installations Compatible Use Zones (AICUZ) Update* prepared by the United States Department of Defense (DOD), Naval Facilities Command Southwest (NAVFAC SW) for NOLF IB.[3] The primary goal of the DOD's AICUZ Program is to protect the health, safety, and welfare of those living on and near a military airfield while preserving the operational capability of the airfield.[4]

This ALUCP provides airport land use compatibility policies and standards related to four airport-related factors: noise, safety, airspace protection and overflight. The goals of these land use compatibility policies and standards are as follows.

1 California Public Utilities Code §21675(a).
2 California Public Utilities Code §21675(b).
3 The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California,* prepared for NAVFAC-SW, 2011.
4 The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California,* prepared for NAVFAC-SW, 2011, ES-1.

Compatibility Factor	Goals
Noise	Ensures that new development within the noise contours is compatible with aircraft noise by: • Limiting new noise-sensitive development within the noise compatibility boundary • Ensuring that any new noise-sensitive development includes sound attenuation
Safety	Protects the public health, safety, and welfare by: • Prohibiting certain sensitive land uses within the safety zones • Limiting the number of people in areas subject to the highest risk of aircraft accidents
Airspace Protection	Ensures that new development is consistent with: • Assuring flight safety by limiting the height of new structures and objects • Preserving the long-term operational capability of NOLF IB
Overflight	Ensures that prospective buyers of new housing within areas subject to aircraft overflights are informed about the potential effects of overflights

1.2 Effective Date and Amendment

1.2.1 Effective Date

This ALUCP becomes effective on the date of its adoption by the ALUC. If any portion of this ALUCP is invalidated by court action, other portions of this ALUCP remain unaffected and in full force.

1.2.2 Amendment of this ALUCP

Amendment of this ALUCP may be made once per calendar year, as provided by law.[5] ALUCP amendments may address any issue deemed appropriate by the ALUC. In addition, the ALUC must amend the ALUCP as needed to reflect updates and revisions to the AICUZ.

[5] California Public Utilities Code §21675(a).

1.3 State Requirements and Guidance

1.3.1 State ALUC Statute

State law requires the San Diego County ALUC to prepare ALUCPs for all public-use and military airports in the County.[6] The Legislature assigned the ALUC function in San Diego County to SDCRAA.[7]

State law requires the California Department of Transportation (Caltrans) to provide guidance to ALUCs in preparing ALUCPs. The Caltrans Division of Aeronautics publishes the *California Airport Land Use Planning Handbook* (the Handbook) to fulfill this responsibility. State law requires ALUCs to be guided by the information in the Handbook when preparing ALUCPs.[8] ALUCs have a degree of flexibility and discretion to make planning decisions they consider appropriate for the airports within their jurisdiction.

State law requires ALUCPs to be consistent with the safety and noise standards in the AICUZ for military airports.[9] State law also includes requirements for ALUC review of land use plans and regulations and other land use projects.[10] In addition, the ALUC should review revisions to the AICUZ to determine whether amendments to the ALUCP are required.

After the ALUC adopts an ALUCP, local agencies with jurisdiction within the NOLF IB Airport Influence Area (AIA), defined in **Section 1.4**, must either amend their land use plans and regulations to be consistent with the ALUCP or overrule the ALUCP.[11]

A local agency can overrule the ALUCP (or any part of the ALUCP) with a two-thirds majority vote of its governing body. The overrule resolution must include findings describing how the local agency's current land use plans and regulations achieve the objectives of the State ALUC statute.[12]

In addition to agencies with land use regulatory authority (such as cities and counties), special districts, community college districts and school districts are also subject to the requirements of the State ALUC statute.[13]

6 California Public Utilities Code §21675.
7 California Public Utilities Code §21670.3.
8 California Public Utilities Code §21674.7.
9 California Public Utilities Code §21675(b).
10 California Public Utilities Code §§21675.2, 21676, 21676.5.
11 California Public Utilities Code §§21675.1(d), 21676, 21676.5.
12 California Public Utilities Code §§21676 and 21676.5.
13 California Public Utilities Code §21670(f).

What are Land Use Plans and Regulations?	What are Land Use Projects?
Land use plans and regulations include any general plan, community plan, specific plan, precise plan, zoning ordinance, rezone, building regulation or any amendments to these policy and regulatory documents. Land use plans and regulations also include any school district, community college district or special district master plans or amendments to master plans.	A land use project is a proposed development that requires a ministerial or discretionary permit or approval from a local agency or that is sponsored by a local agency and involves any of the following: • Construction of a new building • Enlargement of the floor area of an existing building • The subdivision of land • A change of use within an existing structure (land uses are defined in Appendix A of this ALUCP) • An increase in the height of a structure or object When a land use project includes a land use plan amendment or rezone, it is reviewed as a land use plan and regulation.

1.3.2 California Airport Land Use Planning Guidelines

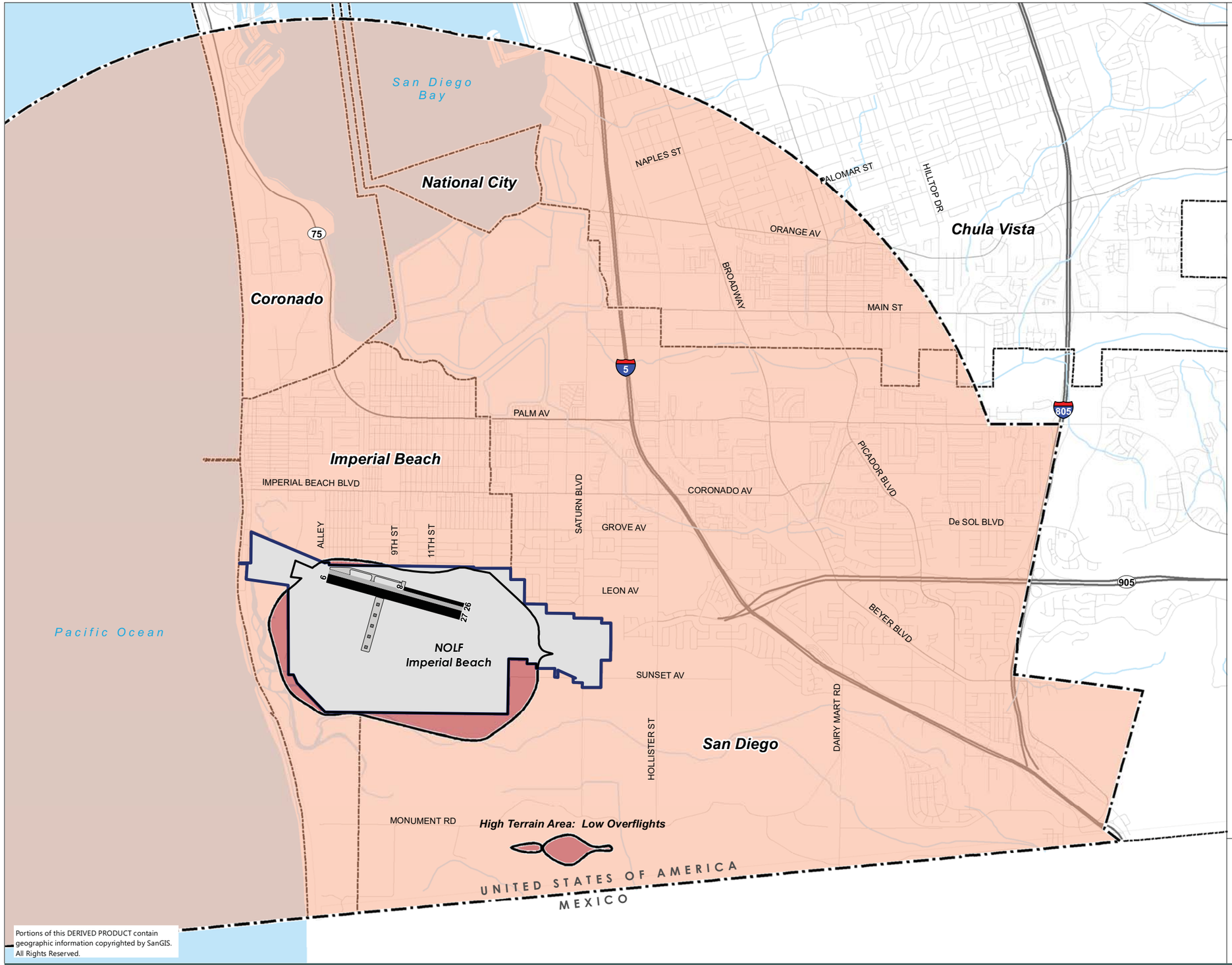
The latest edition of the Handbook was released in October 2011.[14] The Handbook provides guidance on the delineation of airport compatibility factor boundaries, the policies that should apply within those areas, and the administration of ALUCPs. The guidance in the *Handbook* is intended to serve as the starting point for compatibility planning around individual airports.[15] In addition to reflecting the updated AICUZ for NOLF IB, the policies and maps in this ALUCP take into account the guidance provided by the current edition of the Handbook.

1.4 Geographic Scope: the Airport Influence Area

The AIA defines the boundary where this ALUCP applies. The AIA is "the area in which current and projected future airport-related noise, safety, airspace protection, or overflight factors/layers may significantly affect land use or necessitate restrictions on land use."[16]

Within the AIA, various boundaries applying to each of the four compatibility factors are defined. The AIA is divided into Review Areas 1 and 2, as depicted in **Exhibit 1-1**. The differences in impacts within these two areas require different policies and review procedures.

[14] California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011.
[15] California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 3-16. 3-20, 4-12, 4-15, 4-16, 4-32, 4-40.
[16] California Business and Professions Code 11010(b)(13)(B).



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Water

Airport Influence Area (AIA)

- Airport Influence Area: the AIA is the area within which real estate disclosure is required.
- Review Area 1: the combination of the 60 dB CNEL noise contour and the outer boundary of all safety zones.
- Review Area 2: the combination of the airspace protection and overflight boundaries beyond Review Area 1.

north 0 3,600 ft.

Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads, rivers and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield); Ricondo & Associates, Inc., 2013 (airport influence area).

Prepared by: Ricondo & Associates, Inc., March 2014.

Exhibit 1-1

Airport Influence Area

- Review Area 1 is defined by the combination of the 60 dB CNEL noise contour and the outer boundary of all safety zones. All ALUCP policies and standards apply within Review Area 1.
- Review Area 2 is defined by the combination of the airspace protection and overflight boundaries beyond Review Area 1. Only airspace protection and overflight policies and standards apply within Review Area 2.

1.4.1 Real Estate Disclosure

Sellers of property and their agents are required by State law to disclose to prospective buyers of new and existing residential properties when such property is located within the AIA, as shown on **Exhibit 1-1**.[17]

1.5 Local Agencies and Stakeholders Subject to this ALUCP

This ALUCP applies to all local agencies within the AIA. In this ALUCP, the term "local agency" includes the cities of Chula Vista, Coronado, Imperial Beach and San Diego in addition to all school, community college and special districts within the AIA. This ALUCP does not apply to any property owned by the United States government or any Native American tribe or located within Mexico.

Those affected most directly by the ALUCP include three groups of stakeholders – the ALUC, local agencies and project sponsors. The following table briefly describes these stakeholders and their roles in using or implementing the ALUCP.

[17] Business and Professions Code § 11010(a) and (b)(13); Civil Code §§1102.6, 1103.4 and 1353; Code of Civil Procedure §731a.

	ALUC	Local Agencies	Project Sponsors
Stakeholders	The SDCRAA Board serves as the ALUC for San Diego County.	In this ALUCP, the term "local agency" means any municipality with land use regulatory and permitting authority within the AIA. It also includes school districts, community college districts and special districts with the authority to build and operate public buildings and facilities.	In this ALUCP, the term "project sponsor" refers to any person or entity having a legal interest in a property, including a local agency, landowner or nonresidential tenant, who submits an application to a local agency for review of a project proposed on such property.
How they use this ALUCP	This ALUCP is used by the ALUC and its staff to fulfill its mandate to promote airport land use compatibility in the environs of NOLF IB.	This ALUCP provides compatibility policies and standards that local agencies must incorporate into their land use plans and regulations.[18]	Project sponsors must comply with the compatibility policies and standards of this ALUCP in designing and building projects.

1.6 Existing Land Uses

Under State law, an ALUC has no authority over existing land use.[19] An exception is for existing incompatible land uses that are proposed to be intensified, as described in **Section 1.6.1**.

A land use project will be considered an existing land use when a "vested right" is obtained in any of the following ways:

- An approved and unexpired vesting tentative map (pursuant to California Government Code §66498.1); or
- An executed and valid development agreement (pursuant to California Government Code §65866); or
- Issuance of a valid building permit with substantial work performed and substantial liabilities incurred in good faith reliance on the permit[20]

An extension of time, or a proposed modification to an existing land use project that the local agency has determined to be in substantial conformance with previous approvals, is not subject to ALUC review. If the proposed modification is determined not to be in substantial conformance, it must be submitted to the ALUC.

[18] State law allows local agencies to overrule the ALUCP and other ALUC decisions, after meeting specific requirements (California Public Utilities Code §§21676 and 21676.5).

[19] California Public Utilities Code §§21670(a)(2), 21674(a).

[20] Pursuant to the California Supreme Court decision in *Avco Community Developers, Inc. v. South Coast Regional Com.* (1976) 17 Cal.3d 785,791, and its progeny.

The determination of whether a land use plan, regulation or project meets the criteria of an existing land use must be made by the ALUC (or the local agency after it has made its general plan and land use regulations consistent with the ALUCP).

1.6.1 Existing Incompatible Land Uses

An existing incompatible land use is inconsistent with one or more of the policies or standards of this ALUCP and is not subject to this ALUCP unless it proposes enlargement or reconstruction after the adoption of this ALUCP. The proposed enlargement or reconstruction of existing incompatible land uses must be evaluated according to the applicable compatibility policies and standards listed below.

Repair, maintenance or remodeling of an existing incompatible land use within an existing building footprint is not subject to the following policies and standards unless the work would result in a height that would increase any degree of airspace protection incompatibility.

1.6.1.1 Noise

An existing incompatible land use for noise is not sound attenuated to the levels required by **Table 2-1** in **Chapter 2**.

Enlargement or reconstruction of uses described as "incompatible" in **Table 2-1** is inconsistent with this ALUCP and is not allowed.

Enlargement and reconstruction of land uses described as "conditionally compatible" in **Table 2-1,** but which do not comply with the stated conditions, are subject to ALUC review and the following requirements:

- The enlarged portion of the building must be sound-attenuated as required by **Table 2-1**
- Reconstructed buildings must be fully sound-attenuated as required by **Table 2-1**

1.6.1.2 Safety

An existing incompatible land use for safety either exceeds the residential density or nonresidential intensity levels listed in **Table 3-1** in **Chapter 3**.

Enlargement and reconstruction of uses described as "incompatible" in **Table 3-1** is inconsistent with this ALUCP and is not allowed.

Enlargement and reconstruction of land uses described as "conditionally compatible" in **Table 3-1** but which do not comply with the stated conditions are subject to ALUC review and the following requirements:

- Residential Uses Only
  - An existing incompatible residential use may be expanded in building area or reconstructed if there is no increase in the number of dwelling units. A second dwelling unit, as defined by State law, [21] is not counted toward this limitation.
- Nonresidential Uses Only
  - An existing incompatible nonresidential use may be expanded in building area or reconstructed if there is no increase in the intensity of the use.
  - Existing incompatible children's schools (grades K–12) may be expanded, replaced or reconstructed if required by State law. New, expanded or modernized facilities to accommodate existing enrollment must be submitted to the ALUC for review.

1.6.1.3 Airspace

Enlargement and reconstruction of an existing incompatible land use are not subject to ALUC review for airspace purposes, unless the work would result in an increase in height that creates an obstruction or hazard (see **Section 4.3** in **Chapter 4**).

1.6.1.4 Overflight

Since the overflight policies of this ALUCP only apply to new residential units, enlargement and reconstruction of existing residences within the overflight boundary shown on **Exhibit 5-1** are not subject to ALUC review.

1.6.1.5 Discontinuance

An existing incompatible land use (as indicated in **Table 2-1** and **Table 3-1**) that has been abandoned for more than 24 months cannot qualify as an existing use. An incompatible land use may be re-established prior to 24 months (as determined by the local agency) following initial abandonment without being subject to ALUC review. Any resumption of a previously existing incompatible use may not add additional area or height which would increase any degree of incompatibility or increase intensity beyond what existed immediately prior to abandonment of the use.

1.7 Single-Family Residence Development Right

Notwithstanding any other policies of this ALUCP, construction of a single-family residence, including a second dwelling unit, is allowed subject to the following considerations:

- The property is not located in the Clear Zone (CZ)
- Each dwelling unit must be sound-attenuated, if required by the noise compatibility policies and standards of this ALUCP

[21] California Government Code §§65852.150, 65852.

- An overflight agreement must be recorded, if required by the compatibility policies and standards of this ALUCP
- Each dwelling unit must comply with the airspace protection policies and standards of this ALUCP

1.8 Land Use Plans, Regulations and Projects in Progress at Time of ALUCP Adoption

Land use plans and regulations for which an application to the local agency was deemed complete prior to the adoption of this ALUCP are not subject to further review by the ALUC. However, land use plans and regulations for which an application is deemed complete by the local agency after the adoption of this ALUCP must comply with the policies and standards of this ALUCP.

Land use projects for which an application has been deemed complete per the Government Code by the local agency prior to the adoption of this ALUCP are not subject to further review. If a land use project application deemed complete prior to adoption of this ALUCP is revised after adoption of this ALUCP, it is subject to this ALUCP. Land use project applications deemed complete by the local agency after the adoption of the ALUCP are subject to this ALUCP.

What is consistency?

Consistency means being compatible with the policies and standards for each applicable compatibility factor (noise, safety, airspace protection and overflight). A proposed land use plan, regulation or project must comply with those policies and standards to be deemed consistent by the ALUC.

1.9 ALUC Review Process before Local Agency Implementation

This section describes the process for consistency determinations before a local agency:

- Amends its land use plans and regulations to be consistent with this ALUCP, or
- Overrules all or part of this ALUCP

Exhibit 1-2 depicts the ALUC review process for land use plans, regulations and projects before a local agency has implemented or overruled this ALUCP.

1.9.1 Review Area 1

ALUC review is required for all land use plans, regulations and projects located in Review Area 1. ALUC staff may make a consistency determination for any land use plan, regulation or project that:

- Is compatible with ALUCP noise and safety compatibility policies, and
- Does not require Federal Aviation Administration (FAA) review[22] or is determined by the FAA not to be a hazard or obstruction to air navigation

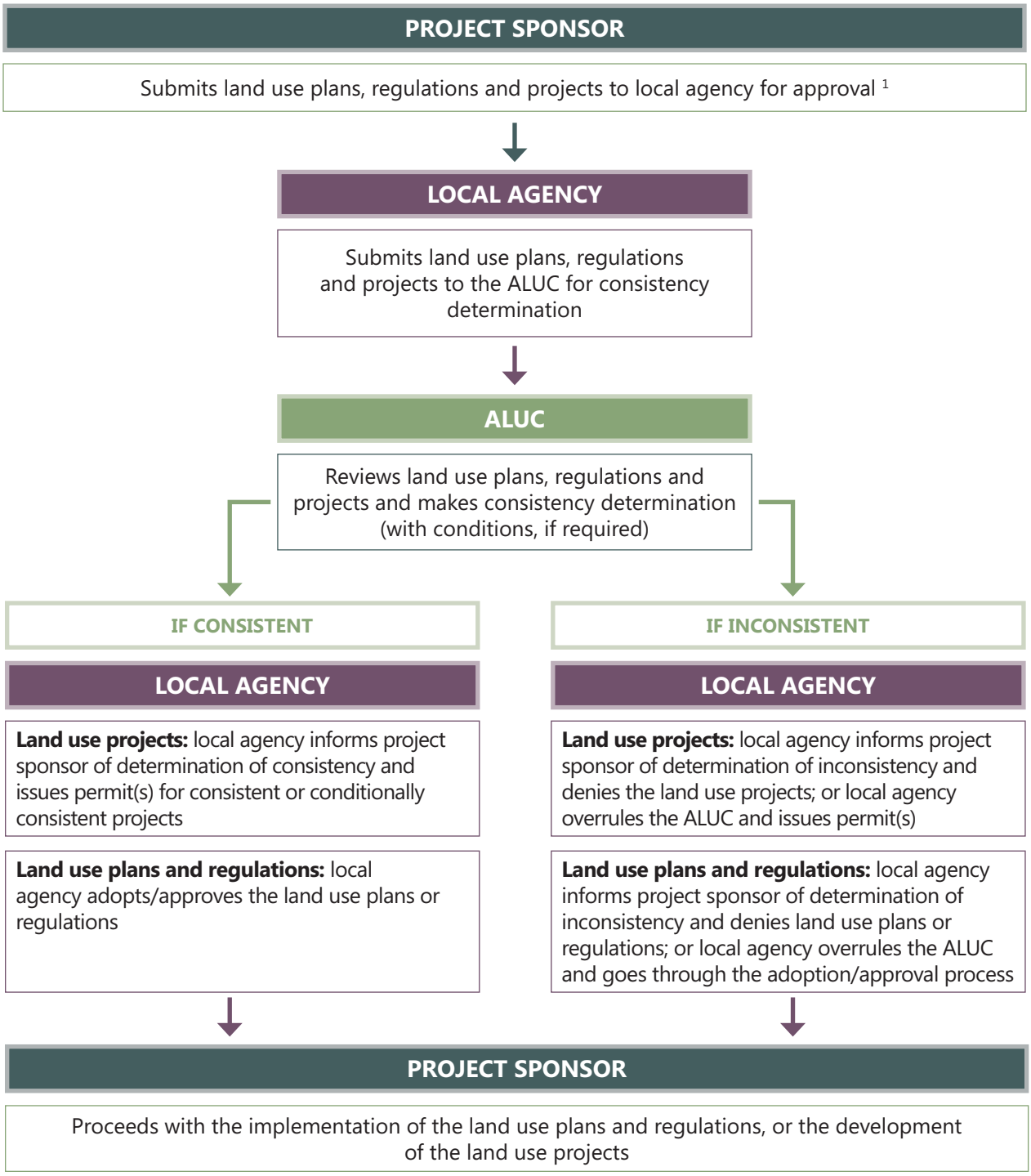
1.9.2 Review Area 2

ALUC review is required for land use plans and regulations within Review Area 2 proposing increases in height limits and for land use projects that:

- Have received from the FAA a Notice of Presumed Hazard, a Determination of Hazard or a Determination of No Hazard subject to conditions, limitations or marking and lighting requirements[23], and/or
- Would create any of the following hazards, as discussed in **Section 4.4** in **Chapter 4**:
  - Glare
  - Lighting
  - Electromagnetic interference
  - Dust, water vapor, and smoke
  - Thermal plumes
  - Bird attractants

[22] Title 14, Code of Federal Regulations, Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*, Subpart B, *Notice Requirements,* §77.9.

[23] Title 14, Code of Federal Regulations, Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*, Subpart B, *Notice Requirements,* §§77.25 – 77.35.



Note: 1. This includes land use plan amendments proposed by a project sponsor and rezones.

Source/Prepared by: Ricondo & Associates, Inc., June 2013.

Exhibit 1-2

ALUC Review Before Local Agency Implementation

1.9.3 Consistency Determination Review Process

Local agencies must submit an application for consistency determination to the ALUC for proposed land use plans, regulations and projects as required by this ALUCP.[24]

The application must contain information described in **Appendix B**. The procedures discussed in the following sections apply.

1.9.3.1 Review of Application for Completeness

ALUC staff must determine if the application for consistency determination from the local agency is complete and notify the local agency of application completeness in writing within 30 calendar days after receipt of an application.

If the application for consistency determination is incomplete, ALUC staff will identify the information required to complete the application and inform the local agency. If additional information is required, a new 30-calendar day review period begins after the additional information is received by ALUC staff.

If ALUC staff does not make a written determination of completeness within 30 calendar days after receipt of an application for consistency determination, the application is considered complete.

1.9.3.2 Consistency Review Timeframe

The ALUC must respond to a local agency's request for consistency determination within 60 calendar days after the application is deemed complete by ALUC staff.

The 60 calendar day review period may be extended if the local agency agrees in writing or so states at an ALUC meeting.

If the ALUC fails to act within 60 calendar days, the proposed land use plan, regulation or project is considered consistent with this ALUCP.[25]

1.9.3.3 Consistency Determination Result

The ALUC must notify the local agency in writing of its consistency determination. A proposed land use plan, regulation or project is determined to be one of the following:

- Consistent with all four compatibility factors in this ALUCP. The local agency can proceed with its approval.
- Conditionally consistent with this ALUCP. Any specified conditions must correspond to the policies and standards of this ALUCP. Unless a condition specifies subsequent review by the ALUC, responsibility to ensure compliance with conditions rests with the local agency with permit or approval authority.

[24] California Public Utilities Code § 21676
[25] California Public Utilities Code §21676(d).

- Not consistent with this ALUCP. The ALUC must explain the specific conflicts with ALUCP policies and standards. The local agency may not approve the proposed land use plan, regulation or project, unless it overrules the ALUC's finding of inconsistency in accordance with applicable State law.[26]

Exhibit 1-3 presents a flow diagram summarizing the consistency determination review process.

1.10 Local Agency Implementation

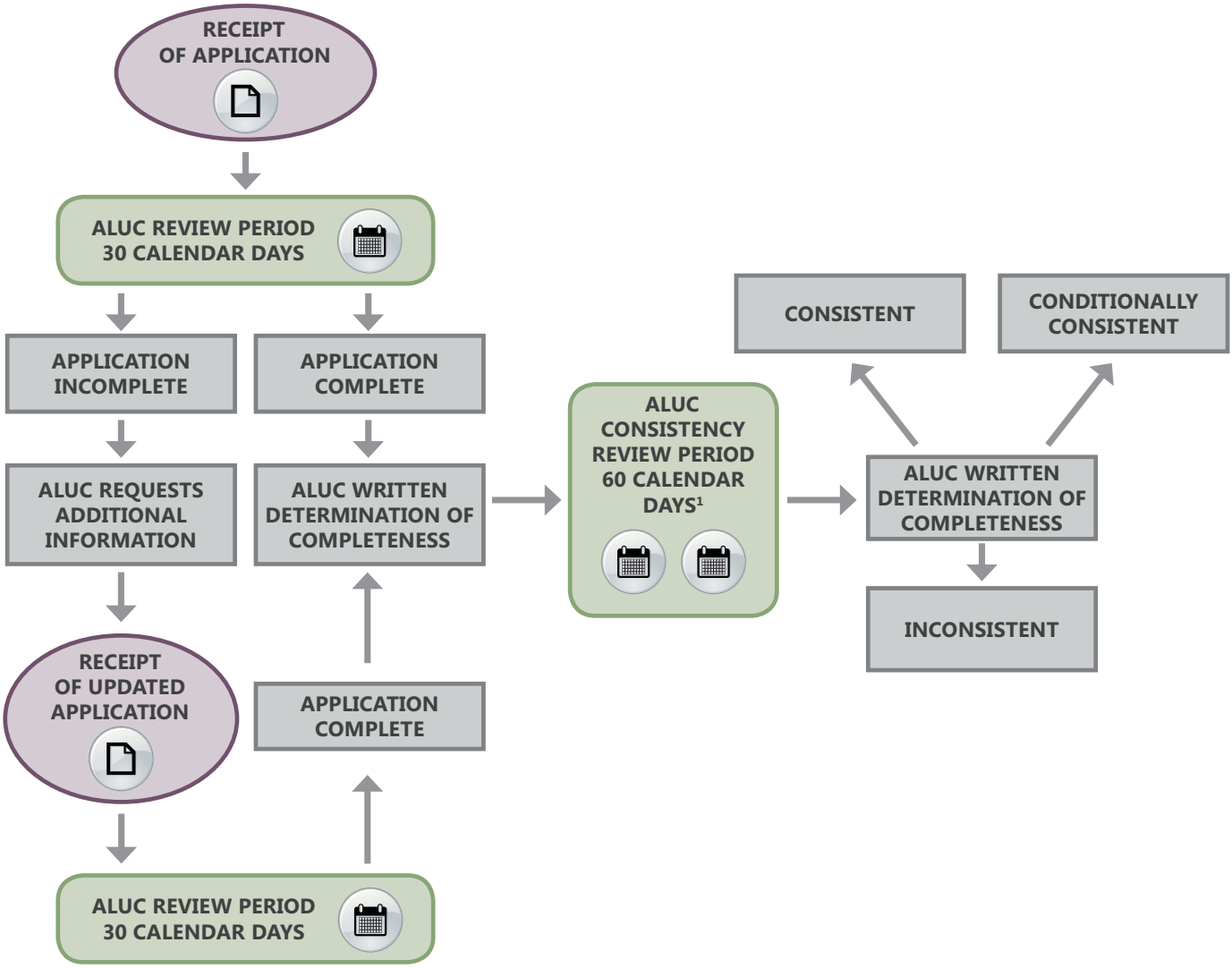
1.10.1 Local Agency Requirements and Responsibilities

Within 180 calendar days of the ALUC's adoption or amendment of this ALUCP, each local agency affected by this ALUCP must: [27]

- Amend its land use plans and regulations to be consistent with this ALUCP, if needed, or
- Overrule this ALUCP by a two-thirds vote of its governing body after adopting findings that justify the overrule and providing notice, as required by law[28]

If a local agency fails to take either action, it must follow the review process detailed in **Section 1.9**.

[26] California Public Utilities Code §21675.1(d).
[27] California Government Code §65302.3(a), (b) and (c).
[28] California Public Utilities Code §21675.1(d).



Note: 1. California Public Utilities Code §21676(d).
Source: Ricondo & Associates, Inc., June 2013.
Prepared by: Ricondo & Associates, Inc., June 2013.

Exhibit 1-3

Consistency Determination Review Process

1.10.2 Establishing Consistency of Local Agency Land Use Plans and Regulations

To establish consistency of land use plans and regulations with this ALUCP, local agencies must eliminate conflicts with this ALUCP. Conflicts may include:

- Land use plan or zoning designations that permit incompatible uses within noise contours or safety zones
- Permissible nonresidential intensities that exceed this ALUCP's intensity limits in any safety zone
- Permissible heights that would constitute a hazard as determined by the FAA

Land use designations in local agency land use plans that reflect existing land uses do not render the local agency plans inconsistent with this ALUCP. However, local agencies must limit the expansion and reconstruction of existing land uses that are not consistent with this ALUCP in accordance with the existing incompatible land use policies and standards of this ALUCP (see **Section 1.6.1**).

1.10.2.1 Methods of Implementing this ALUCP

A local agency can make its land use plans and regulations consistent with this ALUCP in the following ways:

- Incorporate ALUCP policies into General Plan Elements—Individual elements of local general plans may be amended to incorporate applicable policies from this ALUCP. For example, noise compatibility policies and standards could be added to the noise element, safety policies to the safety element, and other policies, standards and maps to the land use element
- Adopt ALUCP as Stand-Alone Document—Local agencies may adopt this ALUCP as a local policy document
- Adopt Overlay Zone—Local agencies may incorporate the policies and standards of this ALUCP into an overlay zone to supplement the requirements of the standard land use zoning districts

If the local agency's land use plans and regulations are consistent with this ALUCP, no action to adopt additional policies or regulations is required. However, only the ALUC can determine whether or not a local agency's land use plans and regulations are consistent with this ALUCP.

What is an Overlay Zone?

An overlay zone is a special purpose zoning district. The regulations within an overlay zone supplement the requirements of the underlying standard zoning districts (typically residential, commercial, or industrial). Overlay zones are used to achieve a special purpose, such as flood hazard protection or the preservation of a historic district, without directly changing the underlying land use in the affected area.

1.10.2.2 Ensuring Long-Term Compliance with this ALUCP

Local agency land use plans and regulations must include provisions for long-term compliance with this ALUCP. Local agencies must define the process they will follow when revising or amending land use plans and regulations, or when reviewing and approving land use projects within the AIA to ensure that they will be consistent with this ALUCP. Land use plans and regulations, including zoning, subdivision and building regulations, must include standards for reviewing land use projects for consistency with this ALUCP. More information regarding implementation can be found in **Appendix B**.

1.11 ALUC Review after Local Agency Implementation

Exhibits 1-4 and **1-5** depict the ALUC review process for land use plans, regulations and projects after a local agency has implemented this ALUCP.

1.11.1 Review of Land Use Plans and Regulations

Proposed land use plans and regulations within Review Area 1 always require ALUC review. ALUC review is also required for land use plans and regulations within Review Area 2 proposing increases in height limits.

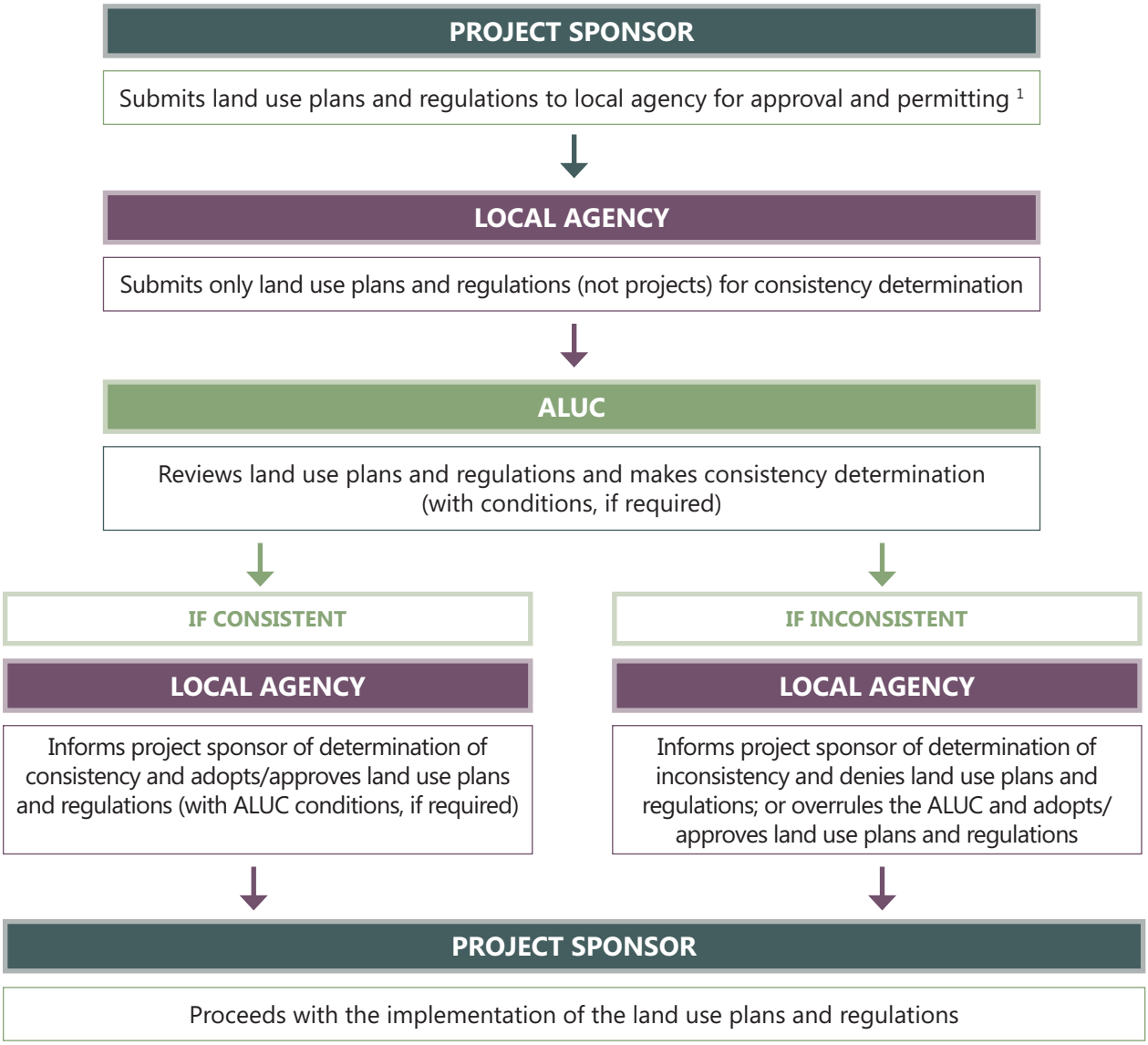
1.11.2 Review of Land Use Projects

After local agency implementation or overrule of this ALUCP, land use projects are no longer required to be submitted to the ALUC for review, unless the following apply:

- The land use project includes a land use plan amendment or rezone
- The land use project has received a determination from the FAA that it will constitute a hazard or obstruction to air navigation
- The land use project has characteristics that may result in the creation of a hazard to air navigation, as discussed in **Section 4.4** in **Chapter 4**

1.11.3 Voluntary Review of Land Use Projects

After implementation, local agencies may choose to submit land use projects to the ALUC for advisory review. Any ALUC recommendation would be non-binding.

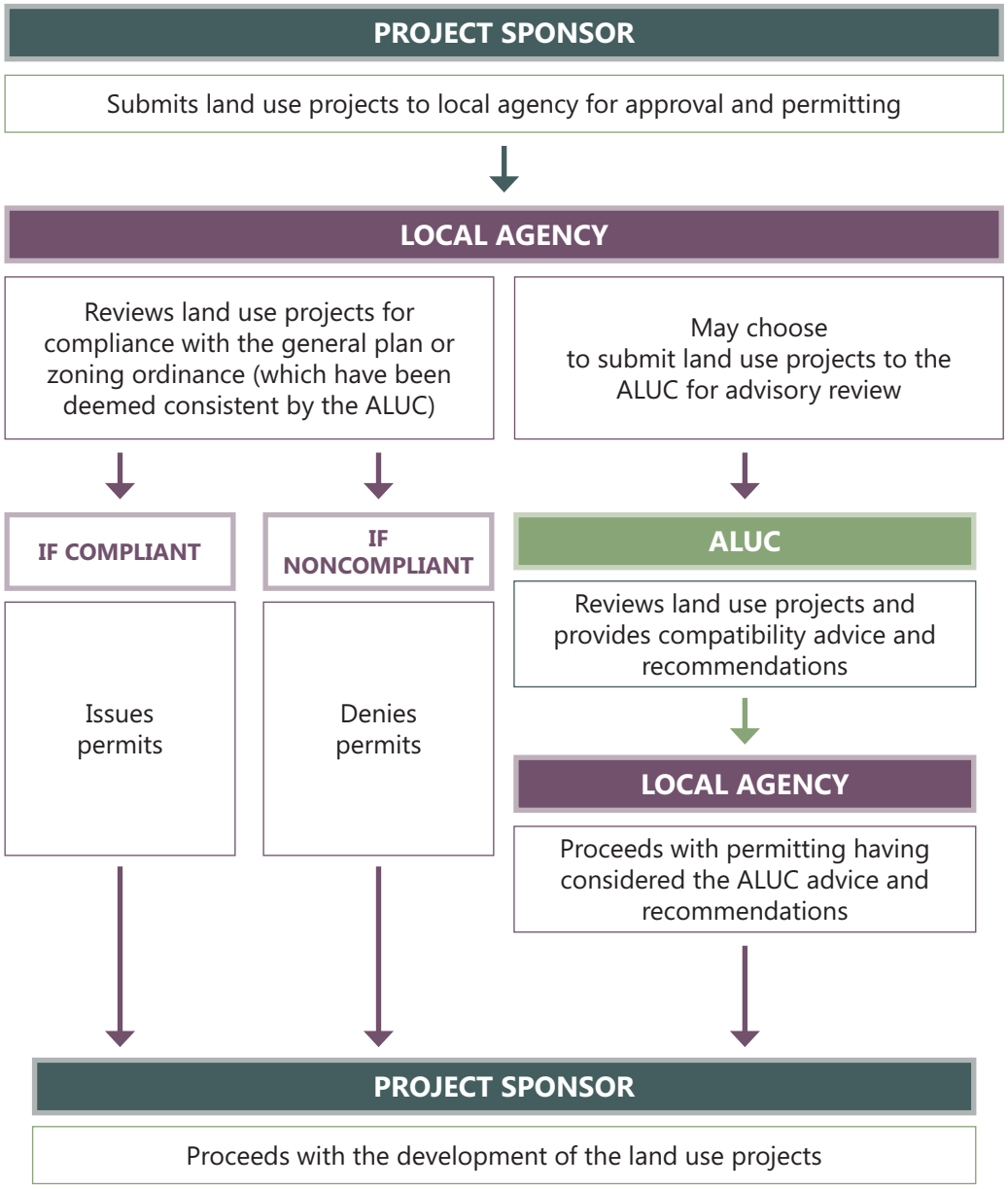


Note: 1. This includes land use plan amendments proposed by a project sponsor and rezones.

Source/Prepared by: Ricondo & Associates, Inc., June 2013.

Exhibit 1-4

ALUC Review After Local Agency Implementation Land Use Plans and Regulations



Source/Prepared by: Ricondo & Associates, Inc., June 2013.

Exhibit 1-5

ALUC Review After Local Agency Implementation Land Use Projects

1.11.4 Consistency Determination Review Process

Local agencies must submit to the ALUC an application for consistency determination for proposed land use plans and regulations as required by this ALUCP.[29] The consistency determination review process for land use plans and regulations follows the same process as discussed in **Section 1.9.3**.

1.12 ALUC Review of Proposed Airport Plans and Projects

The ALUC is required by State law to review proposed airport plans for consistency with this ALUCP.[30] This requirement ensures that the ALUC is kept informed of changes in airport plans so that appropriate amendments to this ALUCP can be made.

1.12.1 Airport Plans and Projects

The following airport plans and projects require ALUC review:[31]

- Any AICUZ study or amendments to an AICUZ study that would modify previously adopted airport plans
- Any proposal for airport expansion. Airport expansion is defined to include the construction of a new runway, the extension or realignment of an existing runway, the acquisition of runway protection zones or the acquisition of any interest in land for the purposes identified above.

1.12.2 ALUC Actions on Airport Plans

The ALUC should determine if an AICUZ or expansion plan is consistent or inconsistent with this ALUCP. When an inconsistency exists, the ALUC will amend this ALUCP to reflect the assumptions and recommendations in the AICUZ study.

1.12.3 Consistency Determination Result

A proposed airport plan or project is determined to be one of the following:

- Consistent: no revisions or amendments to the ALUCP are required
- Inconsistent: the ALUC must amend this ALUCP[32]

1.12.4 Limit of ALUC Authority Over Airport

SDCRAA has no authority over airport operations or development on airport property.[33]

29 California Public Utilities Code § 21676(b).
30 California Public Utilities Code §21676(c).
31 California Public Utilities Code §21676(c); California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, pp. 6-3 – 6-4.
32 California Public Utilities Code §21675(a).
33 California Public Utilities Code §21674(e).

CHAPTER 2
Noise Compatibility Policies and Standards

Chapter 2 provides the noise contour map for Naval Outlying Landing Field Imperial Beach (NOLF IB) and applicable compatibility policies and standards. It is acknowledged that many residents are potentially exposed to the aircraft noise generated from NOLF IB; however certain properties experience exposure to levels greater than 60 dB CNEL as mapped in this chapter.

Appendix E2 provides the technical basis for delineating the noise contours and establishing the policies and standards.

In addition to the policies and standards established by this chapter, a project sponsor must also review all policies and standards established by this ALUCP.

The policies of this chapter apply only to new development or redevelopment. The policies do not apply to existing land uses, except as noted in **Section 1.6** in **Chapter 1**.

A list of the noise compatibility policies is provided below.

Policy N.1	Noise Contour Map and Table
Policy N.2	Sound Attenuation
Policy N.3	Evaluation of Noise Compatibility for Development with a Mix of Uses
Policy N.4	Building Split by a Noise Contour
Policy N.5	Land Uses Not Specified in Table 2-1
Policy N.6	New Uses in Existing Buildings

Noise Compatibility Policies and Standards

Policy N.1 Noise Contour Map and Table

This ALUCP establishes the 60 dB CNEL contour as the threshold above which noise compatibility standards apply.[1] Noise contours by 5 dB CNEL increments are depicted in **Exhibit 2-1**.

Proposed land uses will be evaluated for consistency with the standards contained in **Table 2-1**. These standards establish three land use compatibility categories, as follows:

- Compatible (green): The use is consistent with this ALUCP
- Conditionally compatible (yellow): The use is consistent with this ALUCP if the conditions described in **Table 2-1** are met
- Incompatible (red): The use is inconsistent with this ALUCP

Land uses located outside the 60 dB CNEL contour are not subject to the noise compatibility policies and standards of this ALUCP.

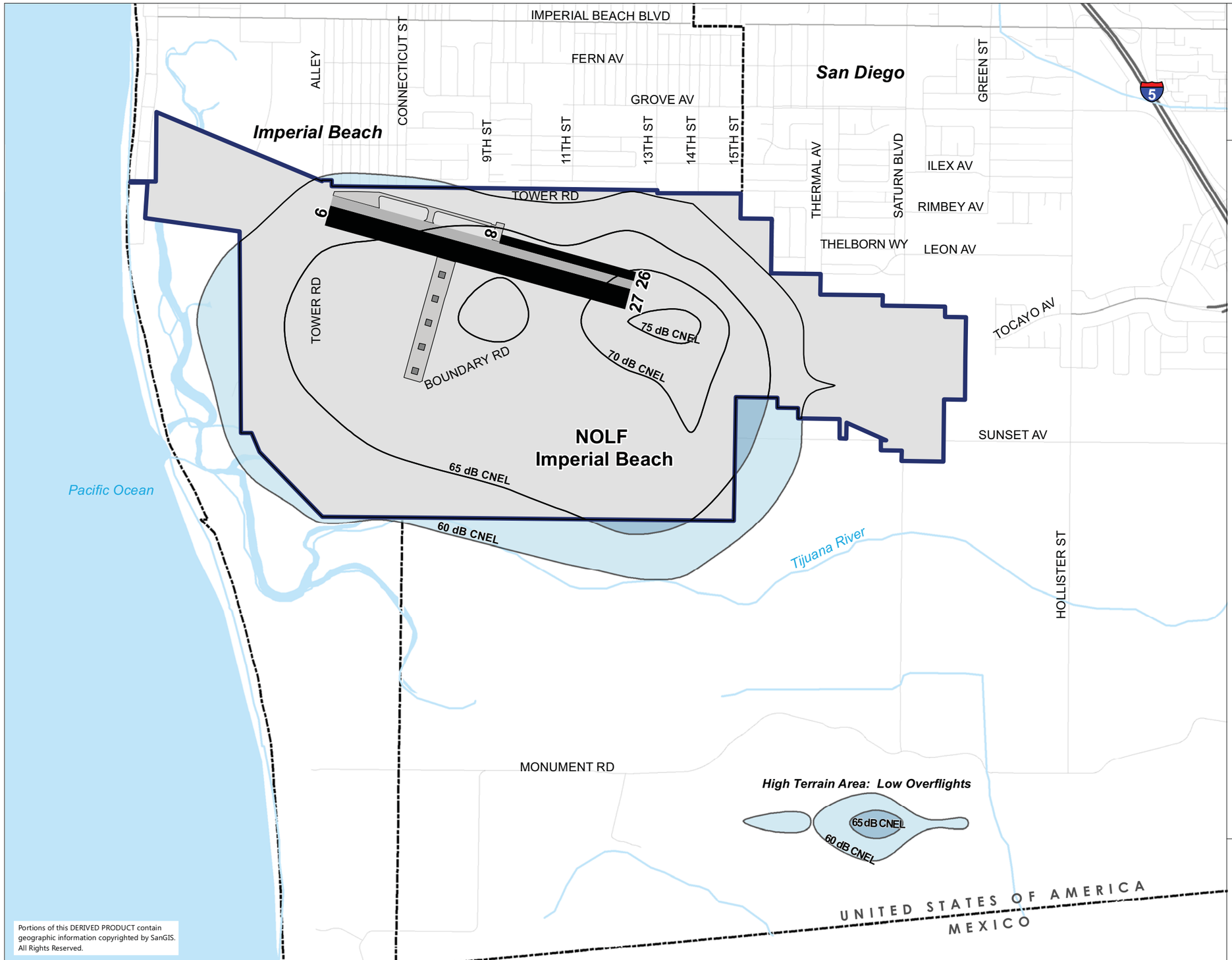
Policy N.2 Sound Attenuation

Conditionally compatible land uses must incorporate sound attenuation to achieve indoor noise levels as specified in **Table 2-1**.

Policy N.3 Evaluation of Noise Compatibility for Development with a Mix of Uses

When a land use project involves a combination of different land uses listed in **Table 2-1**, each component use must comply with the applicable noise standards.

[1] California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 4-46.



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Water

Forecast Noise Exposure Ranges:

- 60 - 65 dB CNEL
- 65 - 70 dB CNEL
- 70 - 75 dB CNEL
- 75 + dB CNEL

north

0 1,600 ft.

Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads, rivers and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, noise contours).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit 2-1

Noise Contour Map

Table 2-1 (1 of 2) Noise Compatibility Standards

SLUCM No.*	Land Use Category Refer to Appendix A for definitions of all land uses in this table. Land uses not specifically listed shall be evaluated, as determined by the ALUC, using the criteria for similar uses.	Noise Contour Range (dB CNEL)			
		60–65	65–70	70–75	75+
RESIDENTIAL					
11, 14	Single-Family, Multi-Family, Mobile Home	45			
12	Group Quarters	45/50**			
13	Residential Hotel	45/50**			
COMMERCIAL, OFFICE, SERVICE, TRANSIENT LODGING					
15, 751	Hotel, Motel, Resort, Guest Camp	45/50**			
61, 631, 632, 633, 635, 636, 65, 671, 8221-8222	Office - Medical/Dental, Professional Services, Civic				
51-59, 62	Wholesale & Retail Sales, Eating/Drinking Establishment, Personal Services, Funeral Chapel/Mortuary				
64, 66	Repair Services (e.g., Auto, Electrical, Furniture), Car Wash, Contract Construction Service				
7425	Sport/Fitness Facility				
721	Auditorium, Concert Hall, Theatre	45†	45		
7211, 7213	Amphitheater, Outdoor Music Shell				
EDUCATIONAL, INSTITUTIONAL, PUBLIC SERVICES					
691, 699, 7119, 723, 729	Assembly - Adult (Religious, Fraternal, Other)	45†	45		
691, 7119, 729	Assembly - Children (Instructional Studio, Cultural Heritage School, Religious, Other)	45†	‡‡		
624	Cemetery				
68	Child Day Care and School (Preschool, Kindergarten through Grade 12), Adult School (College, University, Vocational/Trade School)	45†	‡‡		
672	Fire, Police Station				
674	Jail, Prison				
7111, 7112, 7113	Library, Museum, Gallery	45†	45		
6513, 6516, 6517	Medical Care - Hospital, Out-Patient Surgery Center, Congregate Care, Nursing and Convalescent Home	45†	‡‡		
INDUSTRIAL					
4214, 4222, 4315	Vehicle Storage - Construction, Bus, Motor Freight, Aircraft				
21-39, 821	Manufacturing/Processing				
85, 89	Mining, Extractive Industry				
6391	Research and Development - Scientific, Technical				
485	Sanitary Landfill, Solid Waste Incinerator, Recycling Center, Solid Waste Transfer Station				
6373-6379	Warehousing/Storage				

Table 2-1 (2 of 2) Noise Compatibility Standard

SLUCM No.*	Land Use Category Refer to Appendix A for definitions of all land uses in this table. Land uses not specifically listed shall be evaluated, as determined by the ALUC, using the criteria for similar uses.	Noise Contour Range (dB CNEL)			
		60–65	65–70	70–75	75+
TRANSPORTATION, COMMUNICATION, UTILITIES					
46	Auto Parking				
47	Communication - Cell Phone, TV/Radio Tower				
481-484, 489	Utilities - Electrical, Gas, Water, Wastewater, Wind Turbine, Photovoltaic Solar Array				
4113, 4115, 4122, 4211-4213, 4312, 4314, 4411, 4413	Passenger Terminal (air, bus, rail, marine)				
4114, 4221, 4313, 4412	Cargo Terminal (air, bus, rail marine)				
RECREATION, PARK, OPEN SPACE					
722	Arena, Stadium				
744	Marina				
74, 76	Park, Recreation (golf course, tennis court, riding stable, water sports)				
712	Nature Exhibits (botanical garden, zoo)				
73	Amusements (fairground, amusement park, shooting or golf driving range, etc.)				
AGRICULTURE					
81-84	Agriculture, Aquaculture				

LEGEND		
	Compatible: Use is allowed.	
45	Conditionally Compatible: Use is allowed subject to stated conditions.	Indoor uses: building must be treated to attenuate outdoor noise to 45 dB CNEL indoors.
50		Indoor uses: building must be treated to attenuate outdoor noise to 50 dB CNEL indoors.
45/50		Sleeping rooms must be attenuated to reduce outdoor noise to 45 dB CNEL indoors; other indoor areas must be attenuated to 50 dB CNEL.
	Incompatible: Use is not allowed.	
	Not applicable (on base property).	

NOTES	
*	Land use codes from *Standard Land Use Coding Manual*, Urban Renewal Administration, Housing and Home Finance Agency and Bureau of Public Roads, Department of Commerce, 1965.
**	Required by the California Building Code, Title 24, Part 2, Chapter 12, §1207.11.3, *Airport Noise Sources*.
ǂ	Based on standards adopted by the ALUC for other airports in San Diego County.
ǂǂ	While these uses are considered conditionally compatible in the AICUZ study, they are incompatible under the State Noise Law. See California Code of Regulations, Title 21, §5014, *Incompatible Uses within the Noise Impact Boundary*.

Source: Ricondo & Associates, Inc., October 2013. Adapted from The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Update, Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California,* prepared for NAVFAC-SW, 2011, Table C-1.
Prepared by: Ricondo & Associates, Inc., November 2013.

Policy N.4 Building Split by a Noise Contour

The standards for the noise contour range within which **more than 50 percent** of the building is located, as determined by gross floor area (in square feet), apply.

For Illustrative Purposes Only

Policy N.5 Land Uses Not Specified in Table 2-1

For any proposed land use that is not specified in **Table 2-1**, the ALUC must determine the most similar land use based upon the land use definitions and guidance in **Appendix A**. The ALUC may also consider the noise sensitivity of the land use in determining the most similar land use. Considerations include whether the land use involves:

- Sleeping rooms
- Activities where a quiet indoor environment is needed

Once the ALUC determines the most similar land use, standards for that land use will apply.

Policy N.6 New Uses in Existing Buildings

No ALUC review is required when new compatible or conditionally compatible uses, as described in **Table 2-1**, are proposed within a portion of an existing building, such as a multi-tenant shopping center. However, ALUC review is required for new residential, public assembly and adult school uses.[2] Incompatible uses are not allowed.

ALUC review is required when a new use (or multiple uses) is proposed to entirely occupy an existing building. In those cases, the new use or uses must comply with the applicable conditions in **Table 2-1**.

[2] Title 21, California Code of Regulations, Subchapter 6, *Noise Standards*, Section 5014.

CHAPTER 3

Safety Compatibility Policies and Standards

Chapter 3 provides a map of the safety zones for Naval Outlying Landing Field Imperial Beach (NOLF IB) and applicable policies and standards.

Appendix E3 explains the technical basis for delineating the safety zones and establishing the safety compatibility policies and standards.

In addition to the policies and standards established by this chapter, a project sponsor must also review all policies and standards established by this ALUCP.

The policies of this chapter apply only to new development or redevelopment. The policies do not apply to existing land uses, except as noted in **Section 1.6** in **Chapter 1**. A list of the safety compatibility policies is provided below.

Policy S.1	Safety Compatibility Zone Map and Table
Policy S.2	Projects with a Single Conditionally Compatible Use
Policy S.3	Projects with Multiple Conditionally Compatible Uses
Policy S.4	Ancillary Uses
Policy S.5	Buildings Split by Safety Zone Boundaries
Policy S.6	Land Uses Not Specified in Table 3-1
Policy S.7	New Uses in Existing Buildings

3.1 Safety Compatibility Policies and Standards

Policy S.1 Safety Compatibility Zone Map and Table

This ALUCP establishes the safety zones where safety policies and standards apply, as depicted in **Exhibit 3-1**.

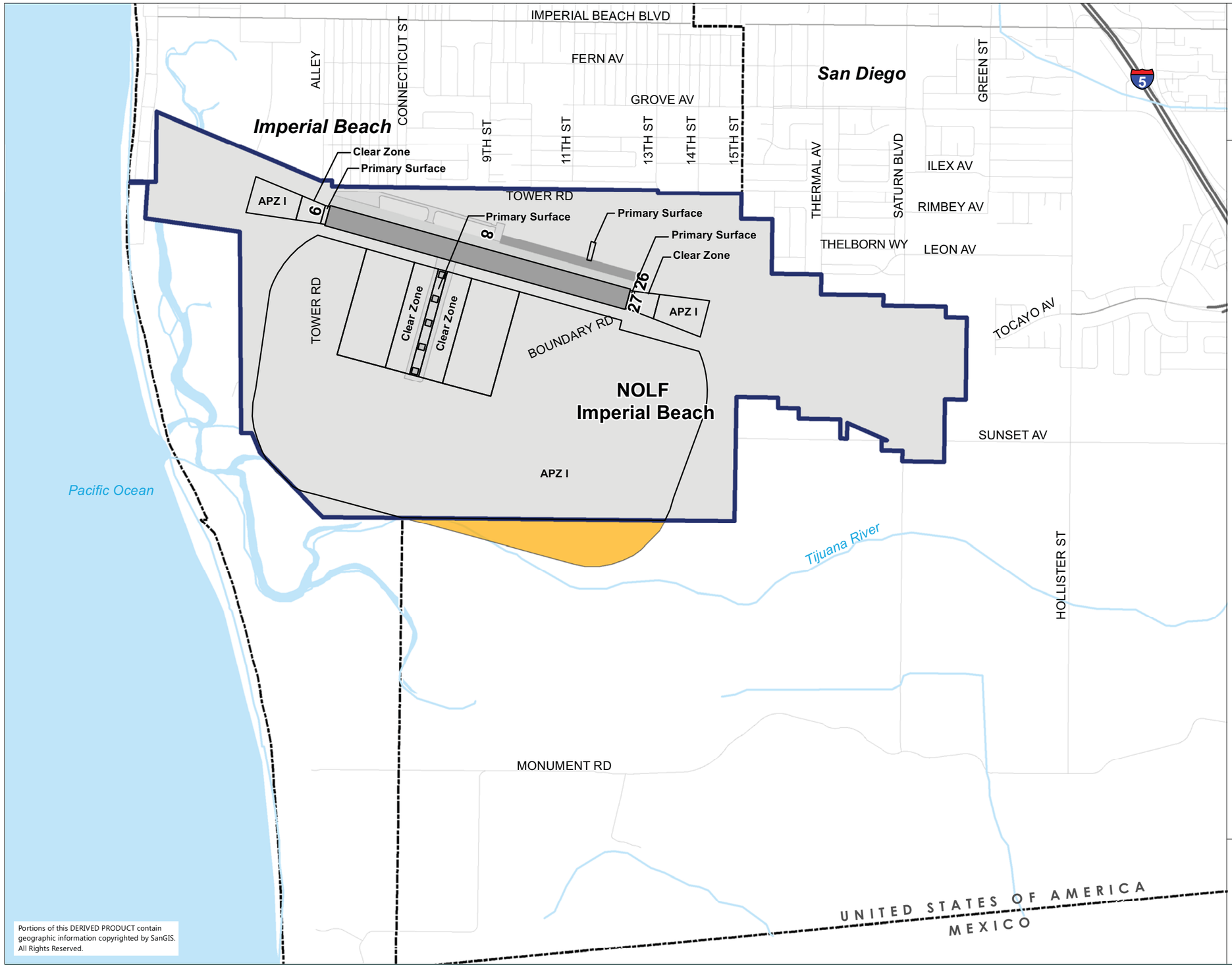
Table 3-1 establishes the safety compatibility standards that apply to different land use categories within each safety zone. Land uses are classified within each safety zone as:

- Conditionally compatible (yellow): The use is consistent with this ALUCP if the conditions described in **Table 3-1** are met. For nonresidential uses, the maximum allowable intensity is indicated by safety zone. Nonresidential intensity is a measure of the number of people per net acre and, for many conditionally compatible uses, is regulated through maximum floor area ratios (FARs).
- Incompatible (red): The use is inconsistent with this ALUCP.

What are Clear Zones (CZ) and Accident Potential Zones (APZ)?

Clear Zones (CZ) are trapezoid-shaped safety zones defined off the immediate ends of runways at military airfields. They are equivalent to runway protection zones at civilian airports.

Accident Potential Zones (APZ) are safety-related zones defined by AICUZ studies for areas beyond CZs at military airfields.



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LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Water

Safety Compatibility Zones:

- Primary Surface
- Accident Potential Zone (APZ) I
- Clear Zone (CZ)

north

0 1,600 ft.

Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads, rivers and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, safety zones).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit 3-1

Safety Compatibility Zones

Table 3-1 (1 of 4) Safety Compatibility Standards

SLUCM No.*	Land Use Category Refer to Appendix A for definitions of all land uses in this table. Land uses not specifically listed shall be evaluated, as determined by the ALUC, using the criteria for similar uses.	Safety Zones [§] CZ / APZ I Maximum Intensity Limits (people per acre) 10 / 25	Conditions Uses must adhere to the FAR and maximum intensity limits as indicated.	Occupancy Factor [‡]
RESIDENTIAL				
11, 14	Single-Family, Multi-Family, Mobile Home			N/A
12	Group Quarters			N/A
13	Residential Hotel			N/A
COMMERCIAL, OFFICE, SERVICE, TRANSIENT LODGING				
15, 751	Hotel, Motel, Resort, Guest Camp			N/A
61, 631, 632, 633, 635, 636, 65, 671, 8221, 8222	Office - Medical/Dental, Professional Services, Civic			N/A
51	Wholesale Trade	**0.28**		250
53, 54, 56-59, 62	Retail Sales (except as listed below), Eating/Drinking Establishment, Personal Services, Funeral Chapel/Mortuary			N/A
521	Lumber, Building Material Sales	**0.20**		250
522, 523, 524, 525	Heating and Plumbing, Paint, Electrical, Hardware and Farm Equipment Sales	**0.12**		250
55	Automotive, Marine Craft, Aircraft, and Heavy Equipment Sales	**0.14**		250
64, 66	Repair Services (e.g., Auto, Electrical, Furniture), Car Washes, Contract Construction Services	**0.11**		250
7425	Sport/Fitness Facility			N/A
721	Auditorium, Concert Hall, Theatre			N/A
7211, 7213	Amphitheater, Outdoor Music Shell			N/A

Table 3-1 (2 of 4) Safety Compatibility Standards

SLUCM No.*	Land Use Category Refer to Appendix A for definitions of all land uses in this table. Land uses not specifically listed shall be evaluated, as determined by the ALUC, using the criteria for similar uses.	Safety Zones [§] CZ / APZ I Maximum Intensity Limits (people per acre) 10 / 25		Conditions Uses must adhere to the FAR and maximum intensity limits as indicated.	Occupancy Factor [‡]
EDUCATIONAL, INSTITUTIONAL, PUBLIC SERVICES					
691, 699, 7119, 723, 729	Assembly - Adult (Religious, Fraternal, Other)				N/A
691, 7119, 729	Assembly - Children (Instructional Studio, Cultural Heritage School, Religious, Other)				N/A
624	Cemetery		0.11	No chapels or indoor places of assembly.	N/A
68	Child Day Care and School (Preschool, Kindergarten through Grade 12), Adult School (College, University, Vocational/Trade School)				N/A
672	Fire, Police Station				N/A
674	Jail, Prison				N/A
7111, 7112, 7113	Library, Museum, Gallery				N/A
6513, 6516, 6517	Medical Care - Hospital, Out-Patient Surgery Center, Congregate Care, Nursing and Convalescent Home				N/A
INDUSTRIAL					
4214, 4222, 4315	Vehicle Storage - Construction, Bus, Motor Freight, Aircraft		0.28	No processing or storage of hazardous materials; maximum intensity limit indicated at top of page.	1,000
21-23, 28, 31-35	Manufacturing (except as listed below)				N/A
24-27, 39	Manufacturing - Low Intensity: lumber, wood; furniture, fixtures; paper, printing, publishing		0.28		300
29, 6379	Processing/Storage of Hazardous Materials				N/A
85, 89	Mining, Extractive Industry		0.28	No use of explosives; maximum intensity limit indicated at top of page.	1,000
6391	Research and Development - Scientific, Technical				N/A
485	Sanitary Landfill, Solid Waste Incinerator, Recycling Center, Solid Waste Transfer Station				N/A
6373-6379	Warehousing/Storage (excluding hazardous materials)		1.00		1,000

Table 3-1 (3 of 4) Safety Compatibility Standards

SLUCM No.*	Land Use Category Refer to Appendix A for definitions of all land uses in this table. Land uses not specifically listed shall be evaluated, as determined by the ALUC, using the criteria for similar uses.	Safety Zones [§] CZ / APZ I Maximum Intensity Limits (people per acre) 10 / 25		Conditions Uses must adhere to the FAR and maximum intensity limits as indicated.	Occupancy Factor [ǂ]
TRANSPORTATION, COMMUNICATION, UTILITIES					
46	Auto Parking		**0.28**		1,000
47	Communication - Cell Phone, TV/Radio Tower		**0.28**	No height obstructions and no frequency interference.	N/A
4812	Electrical Power Generation Plant (conventionally fueled)				N/A
4812	Wind Turbine, Photovoltaic Solar Array		**0.28**	No glare and no height obstructions.	N/A
4813	Electrical Substation		**0.28**	No above-ground transmission lines.	N/A
4832, 4841, 4842, 4849	Water, Wastewater Treatment Plant		**0.28**	Must be designed and operated to avoid attracting birds; maximum intensity limit indicated at top of page.	1,000
4113, 4115, 4122, 4211-4213, 4312, 4314, 4411, 4413	Passenger Terminal (air, bus, rail, marine)				N/A
4114, 4221, 4313, 4412	Cargo/Freight Terminal (air, bus, rail, marine)		**0.28**		1,000
RECREATION, PARK, OPEN SPACE					
722	Arena, Stadium				N/A
744	Marina			No indoor places of assembly.	N/A
74, 76	Park, Recreation (golf course, tennis court, riding stable, water sports)		**0.11**	No tot lots and no indoor places of assembly.	N/A
712	Nature Exhibits (botanical garden, zoo)			No indoor places of assembly.	N/A
73	Amusements (fairground, amusement park, shooting or golf driving range, etc.)				N/A

Table 3-1 (4 of 4) Safety Compatibility Standards

SLUCM No.*	Land Use Category Refer to Appendix A for definitions of all land uses in this table. Land uses not specifically listed shall be evaluated, as determined by the ALUC, using the criteria for similar uses.	Safety Zones §		Conditions Uses must adhere to the FAR and maximum intensity limits as indicated.	Occupancy Factor ǂ
		CZ	APZ I		
		Maximum Intensity Limits (people per acre)			
		10	25		
AGRICULTURE					
81-84	Agriculture, Aquaculture		0.28	No residential buildings; activities attracting birds are incompatible.	N/A

LEGEND	
#.##	Conditionally Compatible: Use is allowed subject to stated conditions. Uses conditionally compatible are subject to stated Floor Area Ratio (FAR) limits.
	Incompatible: Use is not allowed.
	Not Applicable (On base property)

NOTES

* Land use codes from *Standard Land Use Coding Manual,* Urban Renewal Administration, Housing and Home Finance Agency and Bureau of Public Roads, Department of Commerce, 1965.

ǂ Occupancy factor is expressed as square feet of floor area per person. The occupancy factor is used to estimate the average intensity of conditionally compatible uses.
N/A means "not applicable", because the land use is incompatible or does not involve the construction of habitable buildings.

§ APZ = Accident Potential Zone
CZ = Clear Zone

Source: Ricondo & Associates, Inc., October 2013. Adapted from The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Update, Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach*, California, prepared for NAVFAC-SW, 2011, Table C-2.
Prepared by: Ricondo & Associates, Inc., November 2013.

3.2 Conditionally Compatible Land Uses

What is Nonresidential Intensity?

Intensity is a measure of the concentration of people in nonresidential land uses and is expressed by the number of people per acre. Floor Area Ratio (FAR) can be used as an indirect indicator of intensity. FAR is calculated by dividing the floor area of the building by the area of the lot.

Policy S.2 Projects with a Single Conditionally Compatible Use

The total intensity of a conditionally compatible nonresidential land use must not exceed the maximum allowable intensity in people per acre shown at the top of Table 3-1. The maximum FARs indicated for conditionally compatible uses are a commonly used alternative metric for development intensity and are provided for the convenience of project applicants. A proposed land use is deemed compliant with the intensity limits in Table 3-1 if it does not exceed the indicated FAR.

A project may exceed the listed maximum FAR as long as the maximum allowable intensity in people per acre indicated at the top of Table 3-1 is not exceeded. A project's nonresidential intensity in people per acre may be calculated using the occupancy factors indicated for each land use category in Table 3-1. Intensity in people per acre may be calculated by dividing the nonresidential floor area by the occupancy factor and then dividing the resulting quotient (occupancy) by the area of the project site in net acres.

$$\left(\frac{\text{Nonresidential Floor Area}}{\text{Occupancy Factor}} \right) \Big/ \text{Site Area in acres} = \text{People per Acre}$$

The above formula must be used to determine the intensity of nonresidential buildings for land uses without assigned maximum FARs.

Structures devoted to parking (whether above or below ground) are not to be included in the gross square footage of the building for purposes of calculating the FAR.

New structures, other than those required for aeronautical purposes, are not compatible within the CZ.

What does "net acreage" mean?

Net acreage refers to the lot area not including land dedicated for public purposes, such as streets or parks.

Policy S.3 **Projects with Multiple Conditionally Compatible Uses**

For projects involving multiple conditionally compatible nonresidential uses, the FAR for each use must not exceed the maximum allowable FAR for the use as shown in Table 3-1. The FAR for each component use can be calculated using the following steps:

1. Determine the proportion of the floor area of each use to the total project floor area by dividing the floor area dedicated to the component use by the total floor area.
2. Calculate the amount of total land area proportionate to the component use by multiplying the net acreage of the project site by the proportion calculated in step 1 above.
3. The FAR for the component use may then be calculated by dividing the floor area dedicated to the use by the proportionate amount of site land area calculated in step 2 above.

Structures devoted to parking (whether above or below ground) are not to be included in the gross square footage of the building for purposes of calculating the FAR.

See Example B in Table 3-2 for an example of calculating intensity for a nonresidential project with multiple uses.

3.3 Supplemental Safety Compatibility Policies

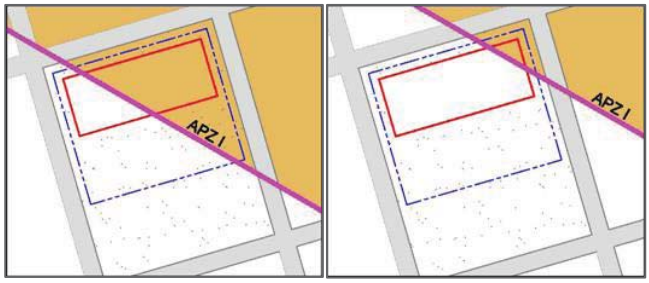
Policy S.4 **Ancillary Uses**

Ancillary uses are primarily intended for use by the employees/residents/occupants of a land use project and cumulatively occupy no more than 10 percent of the total floor area.

Ancillary uses occupying no more than 10 percent of the total floor area that are conditionally compatible (yellow) according to **Table 3-1** are not included in the calculation of intensity. Ancillary uses that are listed as "incompatible" (red) in **Table 3-1** are not permitted.

Policy S.5 Buildings Split by Safety Zone Boundaries

When 50 percent or more of a proposed building, as determined by gross floor area (in square feet), is located within a safety zone, the requirements of that safety zone apply. When less than 50 percent of the building is located within a safety zone, no safety restrictions apply. However, no building or portion of a building is allowed within the CZ.



For Illustrative Purposes Only

Policy S.6 Land Uses Not Specified in Table 3-1

For any proposed land use that is not specified in **Table 3-1**, the ALUC must determine the most similar land use based upon the land use definitions and guidance in Appendix A. Once the most similar use is determined, standards for that use apply.

Policy S.7 New Uses in Existing Buildings

No ALUC review is required when new uses are proposed within a portion of an existing building, such as a multi-tenant shopping center. Only those uses described in **Table 3-1** as compatible or conditionally compatible are allowed; incompatible uses are not allowed.

ALUC review is required when a new use (or multiple uses) is proposed to entirely occupy an existing building, provided that the maximum intensity is limited as described in **Policies S.2** and **S.3**. Intensities for new uses in existing buildings may be calculated using the method for determining people per acre described in **Policy S.2**.

If the overall size of the existing building results in a calculated intensity that exceeds the maximum limit, an occupancy deed restriction can be recorded on the property limiting the occupancy of the building to no more than the maximum limit as calculated using the occupancy factors listed for each conditionally compatible use in **Table 3-1**.

Table 3-2 (1 of 2) Examples

Example A: Calculating Nonresidential Intensity A construction materials/lumber yard sales development is proposed in APZ I.	
Project Details: **Site area:** 0.25 acres or 10,890 square feet **Total building floor area:** 1,500 square feet **Retail uses:** Lumber, pipe, and other building/landscape construction materials	**Calculations:** The proposed uses are in the "Lumber, Building Material Sales" category in **Table 3-1** which has an FAR limit of 0.2. Divide the floor area by the site area to calculate the FAR. 1,500 s.f. ÷ 10,890 s.f. = 0.14 FAR
Result: The FAR of 0.14 is less than the allowable maximum of 0.2 indicated in **Table 3-1** for APZ I. **Therefore, the proposed project is compatible.**	
Example B: Calculating Intensity for a Nonresidential Project with Multiple Uses A repair shop/warehouse project is proposed in APZ I.	
Project Details: **Site area:** 0.25 acres or 10,890 square feet **Repair Services area:** 7,000 square feet **Warehouse area:** 9,000 square feet **Total building floor area:** 16,000 square feet	**Calculations:** The proposed uses are in the "Repair Services" (FAR of 0.11) and "Warehousing/Storage" (FAR of 1.00) categories in Table 3-1. Calculate the proportion of total floor area for each component land use by dividing the floor area of each use by the total floor area. Repair Services: 7,000 s.f. ÷ 16,000 s.f. = 0.4375. Warehouse: 9,000 s.f. ÷ 16,000 s.f. = 0.5625. Calculate the amount of site area proportionate to each component's floor area. Repair Services: 10,890 s.f. x 0.4375 = 4,764 s.f. Warehouse: 10,890 s.f. x 0.5625 = 6,126 s.f. Calculate the FAR for each component land use by dividing the floor area by the components share of site area. Repair Services: 7,000 s.f. ÷ 4,764 s.f. = 1.47. Warehouse: 9,000 s.f. ÷ 6,126 s.f. = 1.47
Result: The FAR of 1.47 is more than the allowable maximum FARs of 0.11 and 1.0 indicated in **Table 3-1** for repair services and warehousing/storage, respectively. **Therefore, the proposed project is not compatible.**	

Table 3-2 (2 of 2) Examples

Example C: Calculating Intensity for a Nonresidential Use Not Assigned a Maximum FAR in Table 3-1 An informational building/gift shop is proposed as part of a planned nature exhibit in APZ I.	
Project Details: **Site area:** 0.5 acres or 21,780 square feet **Total building floor area:** 2,000 square feet **Occupancy factor:** 170 square feet/person	**Calculations:** The proposed use is in the "Nature Exhibits" category in Table 3-1. Calculate the number of occupants of the proposed use by dividing total building floor area by the occupancy factor. 2,000 s.f. ÷ 170 s.f./person = 11.76 occupants Calculate the intensity by dividing the number of building occupants by the site area in acres. 11.76 occupants ÷ 0.5 acres = 23.5 people per acre
Result: The intensity of 23.5 people per acre is less than the allowable maximum intensity of 25 people per acre indicated in **Table 3-1** for APZ I. **Therefore, the proposed project is compatible.**	

CHAPTER 4

Airspace Protection Policies and Standards

Chapter 4 provides an airspace protection boundary map for Naval Outlying Landing Field Imperial Beach (NOLF IB) and applicable policies and standards.

Appendix E4 provides the technical basis for delineating the airspace protection boundary and establishing the policies and standards.

In addition to the policies and standards established by this chapter, a project sponsor must also review all policies and standards established by this ALUCP.

The policies of this chapter apply only to new development or redevelopment. The policies do not apply to existing land uses, except as noted in **Section 1.6** in **Chapter 1**.

A list of the airspace protection policies is provided below.

Policy A.1	Airspace Protection Boundary
Policy A.2	FAA Notification Requirements
Policy A.3	Hazards
Policy A.4	Compatible Structure or Object
Policy A.5	Conditionally Compatible Obstructions
Policy A.6	Standards for the Protection of Flight Safety

What is an Obstruction?

An obstruction is an object that exceeds the obstruction standards established in 14 CFR Part 77, as determined by the FAA. Obstructions must be marked, lighted and identified in aeronautical publications so they are easily recognized by pilots.

What is a Hazard?

A hazard is an object or condition that would compromise flight safety as determined by the FAA.

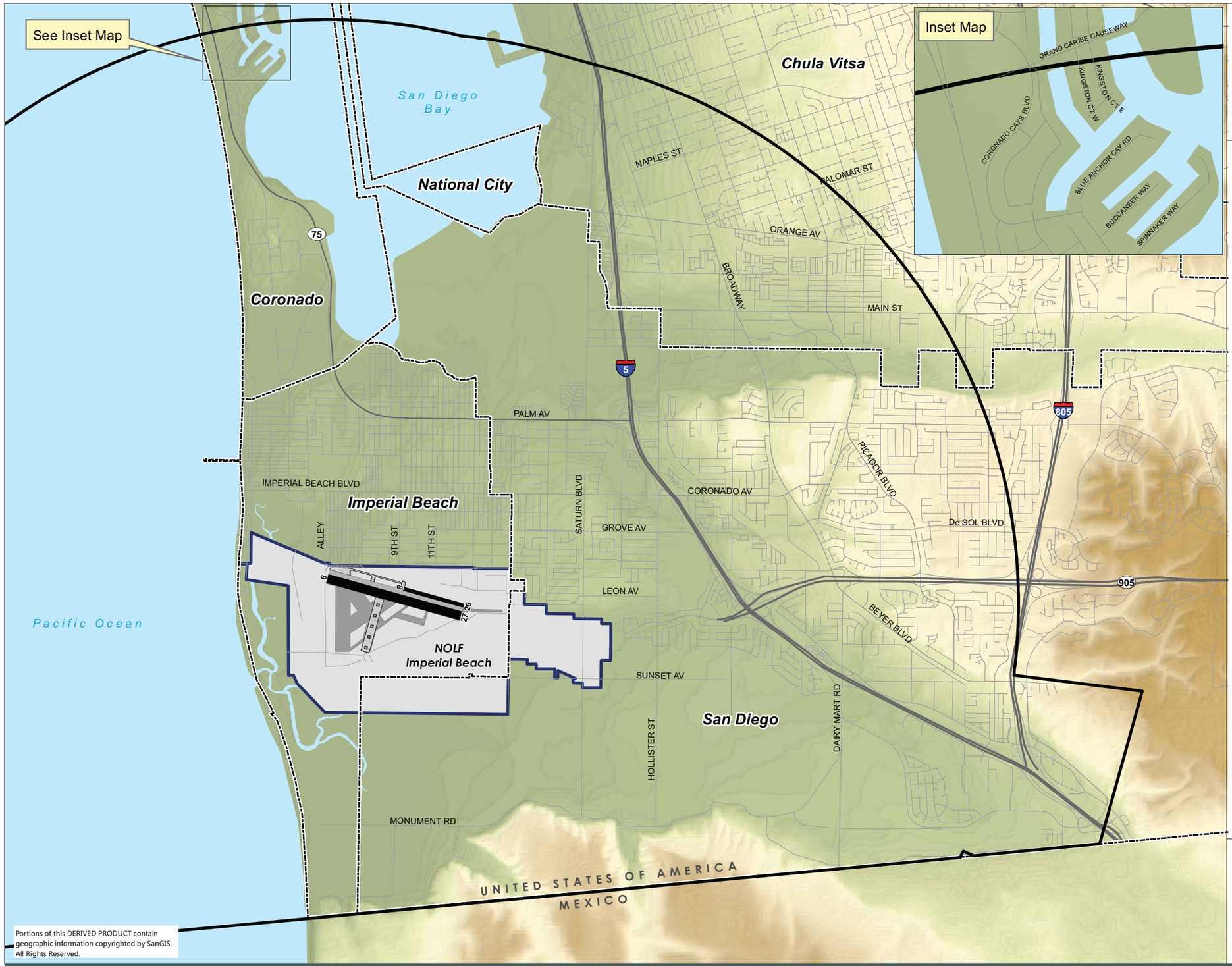
Airspace Protection Policies and Standards

Policy A.1 Airspace Protection Boundary

The airspace protection boundary, as depicted on **Exhibit 4-1**, establishes the area where the policies and standards of this chapter apply.

The airspace protection boundary is based on the outermost edge of the following airspace surfaces:

1. Part 77, Subpart B, 100:1 notification surface boundary
2. Military helicopter object clearance surfaces
3. The approach surfaces for the Runway 27 TACAN approach defined by the criteria in FAA Order 8260.3B, United States Standard for Terminal Instrument Procedures (TERPS) (which lie within the Subpart B, 100:1 surface boundary)



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Proposed Airspace Protection Boundary

Terrain Elevations (in feet MSL)

High : 255

Low : 1

north 0 3,600 ft.

Notes: 1. MSL = Mean Sea Level
2. Airport elevation is 24 feet MSL
3. The Airspace Protection Boundary is defined as the outer boundary of the combined Part 77 Subpart B, Subpart C and TERPS approach surface boundaries.

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, terrain); Ricondo & Associates, Inc., 2013, (proposed airspace protection boundary).

Prepared by: Ricondo & Associates, Inc., August 2014.

Exhibit 4-1

Airspace Protection Boundary

4.1 FAA Notification of Proposed Construction or Alteration

Federal law requires project sponsors of proposed structures or objects (including structures, antennas, trees, and mobile and temporary objects, such as construction cranes) that exceed Part 77, Subpart B, height criteria to submit to the FAA a Notice of Proposed Construction or Alteration (Form 7460-1).[1] Additionally, the FAA may also require notification for proposed structures or objects that may cause signal reception interference with navigational aids (NAVAIDs). Project sponsors may refer to this FAA website[2] to determine if they are required to file Form 7460-1 with the FAA.

Policy A.2 FAA Notification Requirements

Project sponsors must comply with FAA notice requirements for proposed construction or alteration of objects exceeding certain heights or that could potentially interfere with NAVAIDs by filing of Form 7460-1 with the FAA, if required.

Regardless of location, sponsors of proposed projects are required by federal law to notify the FAA of proposed structures or objects exceeding 200 feet above ground level.[3]

Project sponsors must include a copy of the FAA notice of determination letter with their consistency applications to the ALUC if FAA review is required.

See **Appendix B** for the submittal requirements under ALUCP consistency determination application process.

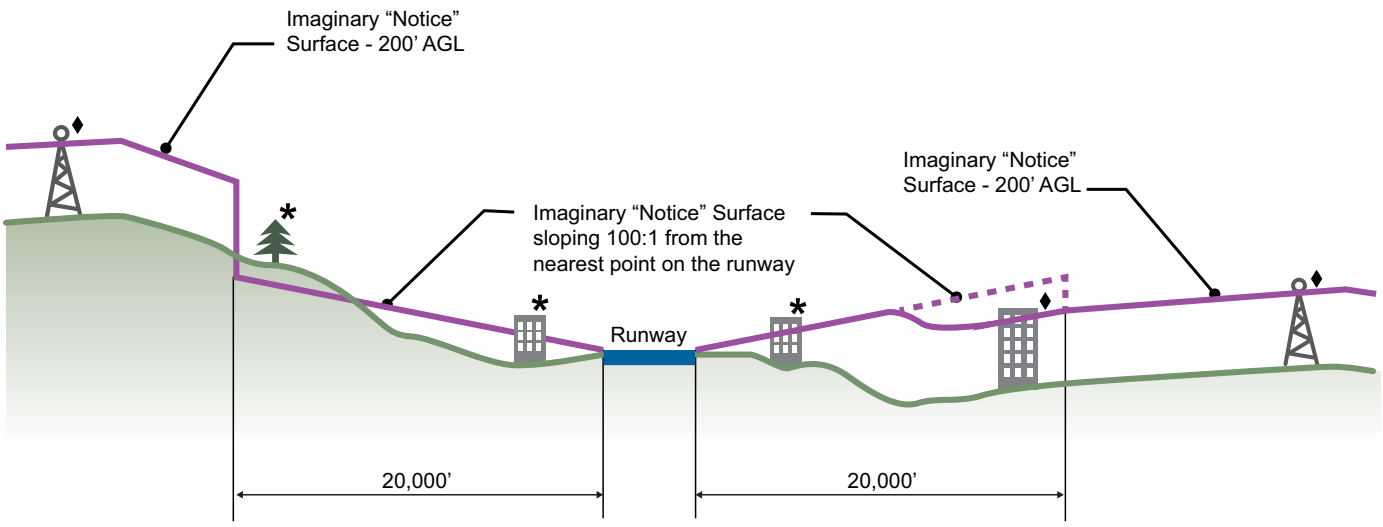
Exhibit 4-2 presents an example illustration related to the 14 CFR Part 77 Notification Criteria.

1 Title 14, Code of Federal Regulations, Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace,* Subpart B, Notice Requirements, §77.7.

2 Federal Aviation Administration, Department of Obstruction Evaluation/Airport Airspace Analysis (OE/AAA), *Notice Criteria Tool*, https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm.

3 Title 14, Code of Federal Regulations, Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace,* Subpart B, Notice Requirements, §77.9(a).

Federal law requires sponsors of certain proposed projects to file with the FAA a Notice of Proposed Construction or Alteration (FAA Form 7460-1). This applies to proposed objects taller than 200 feet above the ground anywhere in the United States and shorter objects within 20,000 feet of runways longer than 3,200 feet or within 10,000 feet of shorter runways. This requirement applies to all proposed objects including structures, antennas, trees, mobile objects, and temporary objects, such as construction cranes. For more information, refer to this website.[2]



♦ 14 CFR §77.9(a) Any proposed construction or alteration more than 200 feet in height above ground level (AGL) at its site requires notice.
✱ 14 CFR §77.9(b) Any proposed construction or alteration penetrating imaginary surfaces in proximity to runways or heliports requires notice.

Notes:

1. Note: Proposed construction or alteration that is lower than 200 feet AGL and is lower than the 100:1 notification surfaces may require notification under other requirements. Please see §77.9(c) and §77.9(d)

2. https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm

Source: Adapted from FAA Order JO 7400.2J, Procedures for Handling Airspace Matters, Figures 5-2-1 and 5-2-2.

Prepared by: Ricondo & Associates, Inc., June 2013.

Exhibit 4-2

Notice of Federal Requirement

4.2 Hazards

Hazards are obstructions or other adverse objects that FAA aeronautical study concludes would have a "substantial adverse effect" on a "significant volume of aeronautical operations."[4] Objects that are hazards to navigation have been so determined because they are not sufficiently clear from the normal pathways of aircraft, would affect the useable length of an existing or planned runway, or because they result in certain other adverse effects, such as electromagnetic interference, control tower visibility hindrances, or pilot distraction.[5]

Policy A.3 Hazards

Hazards, as determined by the FAA, are incompatible with the airspace protection policies and are not allowed.

4.3 Compatibility of Structures and Objects

After receiving a Form 7460-1 Notice of Proposed Construction or Alteration, the FAA undertakes an obstruction evaluation and aeronautical study to determine the effect of the proposed structure or object on the use of airspace. Through its study, the FAA determines if the proposed structure or object would be an obstruction to air navigation, a hazard to air navigation, or neither.

Policy A.4 Compatible Structure or Object

A proposed structure or object is compatible with the airspace policies if the FAA determines that it is not an obstruction to air navigation.

Policy A.5 Conditionally Compatible Obstructions

If a proposed structure or object is determined to be an obstruction, it may be made conditionally compatible with this ALUCP if all the following apply:

1. As a result of an aeronautical study, the FAA determines that the obstruction would not be a hazard to air navigation
2. FAA analysis determines that the object would not cause any of the following:
   - **(a)** An increase in the ceiling or visibility minimums for an existing or planned instrument procedure[6]
   - **(b)** A reduction of the operational efficiency and capacity of NOLF IB

[4] Federal Aviation Administration, Order JO 7400.2J, *Procedures for Handling Airspace Matters*, Sections 6-3-3 and 6-3-4.
[5] Federal Aviation Administration, Order JO 7400.2J, *Procedures for Handling Airspace Matters*, Section 6-3-3.
[6] A planned procedure is one that is formally on file with the FAA or that is consistent with the FAA-approved Airport Layout Plan.

(c) Conflict with visual flight rules (VFR) airspace

3. Sponsors of a proposed structure or object must comply with the findings of FAA aeronautical studies (e.g., reduce structure height, install obstruction lighting systems and/or painting/marking of structures) performed under Part 77 regulations.[7]

4.4 Standards for the Protection of Flight Safety

Local agencies must consult with the FAA, the ALUC and the Commander of Naval Base Coronado when proposed land use projects within the Airspace Protection Boundary may cause any hazard described in the following sections.

Policy A.6 Standards for the Protection of Flight Safety

Policy A.6.1 Sources of Glare

Highly reflective materials may cause visual after-images or flash blindness in pilots, thus compromising flight safety. Such materials are incompatible unless the ALUC finds that either of the following conditions applies:

1. The project sponsor has prepared a technical study, certified by a lighting engineer or an expert approved by the ALUC, demonstrating to the ALUC's satisfaction that the proposed building materials would not create reflections intense enough to cause visual after-images or flash blindness in pilots on approach to either runway end at any time of day during any season of the year.
2. The FAA has reviewed the land use project and has issued a final Notice of Determination within which it raises no objections to the potential glare impacts of the project.

The FAA, in cooperation with the U.S. Department of Energy, has made available to the public a Solar Glare Analysis Tool that can be used to determine the potential for solar energy projects to cause glint and glare severe enough to interfere with the vision of pilots and controllers at airport traffic control towers. See Appendix B for information about this tool.

[7] Federal Aviation Administration, Advisory Circular 70/7460-1K, *Obstruction Marking and Lighting.*

Policy A.6.2 Lighting

The following lighting systems are incompatible with this ALUCP when casting light toward the approach paths of aircraft:

- Searchlights
- Laser lights
- Sequenced flashing lights
- Stroboscopic lights

Any other lighting systems that, in the ALUC's determination, produce effects that mimic airport identification lighting, runway end identification lighting or runway approach lighting are also incompatible with this ALUCP.

Policy A.6.3 Sources of Dust, Water Vapor and Smoke

Land use projects that, in the opinion of the ALUC, may create columns of dust, steam, water vapor, or smoke dense enough to impair pilot vision and compromise flight safety are incompatible with this ALUCP.

Policy A.6.4 Electromagnetic Interference

Sources of electromagnetic interference with aircraft instrumentation and ground-based radar and navigational aids are incompatible with this ALUCP. If a land use project may result in electromagnetic interference, the ALUC must consult with the FAA to ensure that the FAA is aware of the potential for electronic interference. The ALUC must require the project sponsor to modify the land use project to comply with any FAA recommendations and conditions.

Policy A.6.5 Sources of Thermal Plumes

Land use projects that, in the opinion of the ALUC, may create thermal plumes with the potential to interfere with the safe control of aircraft are incompatible with this ALUCP. Thermal plumes rising 200 feet or more above the ground at upward velocities of 14.1 feet per second or greater are capable of jeopardizing the safe control of aircraft.

Policy A.6.6 Bird Attractants

The following land uses, if they have the potential to attract birds, are incompatible with this ALUCP and are not permitted within the Airport

Influence Area (AIA).[8]

1. Agricultural, recreational, open space activities and facilities that include:
   - **(a)** Aquaculture activities conducted outside of fully enclosed buildings
   - **(b)** Water features incorporated into landscaping, open space areas or golf courses are incompatible unless they have less than 2,500 square feet of surface area and include measures to control hazardous wildlife
2. Waste Disposal Operations
   - **(a)** Municipal solid waste landfills
   - **(b)** Trash transfer stations that handle waste, are not fully enclosed or that lack ventilation and air filtration systems adequate to control odors escaping to the outdoors (odor masking is not acceptable)
   - **(c)** Commercial or institutional composting operations that accept food waste
3. Water Management Facilities
   - **(a)** Storm water management facilities that create above-ground standing water, unless required by other provisions of municipal, county, or State law. Where storm water detention ponds are necessary and must be allowed, measures should be taken to minimize the risks of attracting potentially hazardous wildlife.
   - **(b)** Wastewater treatment facilities and associated settling ponds, including any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes and artificial marshes designed for wastewater treatment.
   - **(c)** Wetlands mitigation projects, unless they provide unique functions that must remain onsite or are otherwise directed by state or federal law, state or federal regulatory decision, or court order.
   - **(d)** Dredge spoil containment areas (also known as confined disposal facilities) if the spoils contain material that would attract hazardous wildlife.

[8] Federal Aviation Administration, Advisory Circular 150/5200-33B, *Hazardous Wildlife Attractants on or Near Airports.*

CHAPTER 5
Overflight Compatibility Policies

Chapter 5 provides an overflight area boundary map for Naval Outlying Landing Field Imperial Beach (NOLF IB) and applicable policies relating to aircraft overflight notification.

Appendix E5 provides the technical basis for delineating the overflight area boundary and establishing the policies.

In addition to the policies and standards established by this chapter, a project sponsor must also review all policies and standards established by this ALUCP.

The policies of this chapter apply only to new development or redevelopment. The policies do not apply to existing land uses.

A list of the overflight compatibility policies is provided below.

Policy O.1	Overflight Boundary
Policy O.2	Overflight Notification

Overflight Compatibility Policies

Policy O.1 Overflight Boundary

The overflight boundary, as depicted on **Exhibit 5-1**, establishes the area where the policies of this chapter apply.

Policy O.2 Overflight Notification

Local agencies must adopt an ordinance mandating that the owner of any new dwelling unit located within the overflight area indicated on Exhibit 5-1 must record an overflight agreement with the Office of the County Recorder.

Alternative methods of providing overflight notification are acceptable if approved by the Airport Land Use Commission.

See **Appendix B** for a sample of an overflight notification agreement.

LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Overflight Area Boundary
- Water

north

0 3,600 ft.

Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads, rivers and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield); Ricondo & Associates, Inc., 2013, (overflight area boundary).

Prepared by: Ricondo & Associates, Inc., March 2014.

Exhibit 5-1

Overflight Area Boundary

Airport Land Use Compatibility Plan for

Naval Outlying Landing Field Imperial Beach

Volume 2

PREPARED FOR:

San Diego County Regional Airport Authority

Adopted October 15, 2015

PREPARED BY:

RICONDO & ASSOCIATES, INC.

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Appendix A

Land Use Classification Definitions

APPENDIX A

Land Use Classification Definitions

The land uses listed in the noise and safety compatibility standards (**Table 2-1** and **Table 3-1**) are based on the classification system used in the AICUZ study.[1] That system is derived from the *Standard Land Use Coding Manual* (SLUCM), published by the U.S. Government in 1965.[2] The SLUCM is a comprehensive, hierarchical land use coding system. Each type of land use is assigned a unique code number with up to four digits. The first digit represents the highest level of generalization of land use type, as follows:

1 - Residential	4 - Transportation, Communication and Utilities	7 - Cultural, Entertainment and Recreational
2 - Manufacturing	5 – Trade	8 - Resource Production and Extraction
3 - Manufacturing (cont'd)	6 – Services	9 - Undeveloped Land and Water Areas

The second digit represents a more specific type of land use, the third digit an even more specific type of use, and the fourth digit the most specific level of detail. **Table A-1** below illustrates the hierarchical nature of the classification system.

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1 The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California,* prepared for NAVFAC-SW, 2011., Appendix C.

2 U.S. Urban Renewal Administration, Bureau of Public Roads. *Standard Land Use Coding Manual*, U.S. Government Printing Office, 1965.

Table A-1: Illustration of SLUCM Land Use Classification System

LAND USE CATEGORIES			
One-Digit Level	**Two-Digit Level**	**-Three-Digit Level**	**Four-Digit Level**
2 - Manufacturing	21 – Food and Kindred Products	211 – Meat Products	2111 – Meat Packing
			2112 – Sausages and Other Prepared Meat Products
			2113 – Poultry and Small Game Dressing and Packing
		212 –Dairy Products	2121 – Creamery butter
			2122 – Cheese, natural and processed
			2123 – Condensed and evaporated milk
			2124 – Ice cream and frozen desserts
			2125 – Fluid milk processing

Source: U.S. Urban Renewal Administration, Bureau of Public Roads. *Standard Land Use Coding Manual*, U.S. Government Printing Office, 1965, p. 35.
Prepared by: Ricondo & Associates, Inc., August 2013.

The noise and safety compatibility standards tables in this ALUCP (**Table 2-1** and **Table 3-1**) include SLUCM codes for each land use category. This is provided to assist planners and developers in implementing the ALUCP and to provide a clear correlation with the land use compatibility recommendations of the AICUZ study. Thus, in administering the ALUCP, the primary source of land use classification guidance should be the SLUCM. Secondary sources of guidance on land use classification include:

- American Planning Association, *Land-Based Classification Standards*, http://www.planning.org/lbcs.
- U.S. Department of Labor, Bureau of Labor Statistics, North American Industry Classification System (NAICS) http://www.bls.gov/bls/naics.htm.
- S. Mark White, Classifying and Defining Uses and Building Forms: Land-Use Coding for Zoning Regulations, *Zoning Practice*, No. 9, American Planning Association, September 2005.

The land use categories in **Tables 2-1** and **3-1** differ in several respects. The following section of this appendix describes each land use category listed in **Table 2-1,** Noise Compatibility Standards,, including the SLUCM codes for land uses assigned to the ALUCP land use category. Section A-2 describes the land uses that are unique to **Table 3-1**, Safety Compatibility Standards.

A.1 Land Uses in Table 2-1

RESIDENTIAL

Single-Family, Multi-Family, Mobile Homes

11 – Household units, including houses and apartments, such as single-family detached and attached housing units, townhomes, apartment homes and condominium developments.

14 – Mobile home parks or courts.

Group Quarters

12 – Group quarters. Facilities where people live together and share a common kitchen on a more than temporary basis such as rooming and boarding houses, college dormitories, fraternity and sorority houses, group homes, half-way houses, convents and monasteries. This category does not include nursing homes, congregate care facilities or prisons.

Residential Hotels

13 – Residential hotels. Hotels that have 75 percent or more of the available accommodations occupied by permanent guests (i.e., persons who reside more than 30 days).

COMMERICAL, OFFICE, SERVICE, TRANSIENT LODGING

Hotel, Motel, Resort, Guest Camp

15 – Transient lodging, including hotels, tourist courts and motels.

751 – Resorts, including dude ranches, health resorts, ski resorts, hunting and fishing clubs and general resorts providing recreation areas in addition to hotel accommodations.

Office – Medical/Dental, Professional Services, Civic

Buildings that provide banking, business, civic and professional services.

61 – Finance, insurance and real estate services. This includes financial institutions that

provide uses related to the exchange, lending, borrowing and safe-keeping of money.

631 – Advertising services, including general advertising services, outdoor advertising services, and other advertising services.

632 – Consumer and mercantile credit reporting services in addition to adjustment and collection services.

633 – Duplicating mailing and stenographic services, including direct mail advertising services, blueprinting and photocopying services.

635 – News syndicate services.

636 – Employment services.

65 – Professional services, including medical and other health services such as physician, dental, medical laboratory, dental laboratory and other services that provide uses related to the diagnosis and treatment of human illness and physical malfunction that can be performed in an office setting, including doctor's and dentist's offices. This includes out-patient clinics. This category does not include hospitals, out-patient surgery centers, congregate care facilities, or nursing and convalescent homes.

Professional services also include legal and other professional services related to the practice of a vocation requiring specialized training or education, including insurance, architecture, engineering, law offices, accounting, etc.

671 – Government services, specifically, executive, legislative, and judicial functions related to the delivery of government and public services, including city halls, post offices, court houses, chambers of commerce, charitable organizations, etc.

8221 – Veterinarian services.

8222 – Animal hospital services.

Wholesale & Retail Sales, Eating/Drinking Establishment, Personal Services, Funeral Chapel/Mortuary

51 – Wholesale trade consists of either the sale or arrangement of the purchase of goods to other businesses. Wholesale trade is normally operated from a warehouse or office. This includes the wholesale trade of motor vehicles, automotive equipment, drugs, chemicals, allied products, dry goods, apparel, groceries, farm products, electrical goods, hardware, plumbing, and heating equipment and supplies. Commercial, industrial, farm, professional, transportation and other machinery and equipment are also included.

52 – Retail trade of building materials, hardware, and farm equipment. These establishments primarily retail materials and supplies for home building or repairs. They also sell other products, such as paint, glass, wallpaper, lumber, plumbing goods, electrical goods, tools, housewares, hardware, and, sometimes, lawn and garden supplies.

53 – General merchandise, including convenience markets, department stores, mail order houses, limited price variety stores, merchandise vending machine operators, direct selling organizations, and dry goods.

54 – Food, including groceries, meat, fish, fruits, vegetables, candy, nuts, confectioneries, dairy products, and bakeries.

55 – Retail trade of automotive, marine craft, aircraft, and accessories. The typical functions of these establishments include the sale of gasoline, motor vehicles, auto parts, tires and other auto-related merchandise.

56 – Apparel and accessories for men, women, children and infants including furnishings, accessories, shoes, custom tailoring, furriers and fur apparel.

57 – Furniture, home furnishings, and equipment also include floor coverings, draperies, curtains, upholstery, china, glassware, and metalware.

58 – Eating and drinking establishments, which include uses that prepare or serve food or beverages for consumption on the premises or for direct sale to the public for consumption off the premises. This also includes both establishments serving only food as well as those serving both food and alcoholic beverages.

59 – Other retail trade, which may include pets, drugstores, liquor, antiques, secondhand merchandise, books, stationery, sporting goods, bicycles, farm and garden supplies, jewelry, fuel, florists, cigars, cigarettes, newspapers, magazines, cameras and photographic supplies, gifts, novelties, souvenirs and optical goods.

62 – Personal services, which include laundering, dry cleaning, dyeing, photographic, beauty, barber, funeral, crematory, apparel repair, shoe repair, alteration and cleaning pickup services. This category does not include cemeteries.

Repair Services (e.g., Auto, Electrical, Furniture, Car Washes, Contract Construction Services)

64 – Repair services include automobile repair and wash services, in addition to electrical, radio, television, watch, clock, jewelry, reupholstery, furniture, and armature rewinding services. It also includes an area or structure equipped with facilities for washing automobiles, service garages and other structures that have bays for automobile service. It may also include car rental services.

66 – Contract construction services include general and building construction services in addition to special construction trade services. Special construction trade services may include plumbing, heating and air conditioning, painting, paper hanging, decorating, electrical, masonry, stonework, tile setting and plastering, carpentering and wood flooring, roofing and sheet metal, concrete, and water well drilling services.

Sport/Fitness Facility

7425 – Gymnasiums and athletic clubs. These are areas for indoor sports and fitness activities, including court sports (tennis, volleyball and racquetball) and other sports (e.g. gymnastics, wrestling, basketball, swimming and exercise).

Auditorium, Concert Hall, Theatre

721 – Entertainment assembly includes specialized theaters for showing movies or motion pictures, concert halls and theaters intended for live performances including dinner theaters, where meals are served during or after live performance plays. This category also includes cineplexes-- structures with multiple movie theaters, each theater capable of providing performances independent of the others in the complex.

Amphitheaters, Outdoor Music Shells

7211 – Amphitheater, an open air venue for live performance.

7213 – Drive-in movies.

EDUCATIONAL, INSTITUTIONAL, PUBLIC SERVICES

Assembly – Adult (Religious, Fraternal, Other)

An establishment for a mass assembly of people for social, cultural, or religious purposes.

691 – Religious activities, including churches, synagogues, and temples.

699 – Other miscellaneous services, including business associations, professional membership organizations, and labor unions, in addition to civic, social and fraternal organizations.

7119 – Other cultural activities not including libraries, museums, or art galleries.

723 – Public assembly for miscellaneous purposes in auditoriums, exhibition halls, and meeting rooms. Many also have kitchen and banquet facilities and an auditorium for special events. Trade shows, public shows, conventions, food functions, receptions, dances, banquets, assemblies and other activities are typically hosted in these structures.

729 – Other public assembly, not elsewhere coded. This does not include entertainment assembly, sports assembly or public assembly in auditoriums or exhibition halls.

Assembly – Children (Instructional Studios, Cultural Heritage Schools, Religious, Other)

691 – Religious activities, including churches, synagogues, and temples. These religious education or devotional facilities are intended for the exclusive use of children. This does not include parochial schools providing all-purpose, accredited elementary, secondary, or higher education.

7119 – Other cultural activities, not including libraries, museums, or art galleries specifically catered towards children.

729 – Other public assembly includes establishments for the assembly of children (age 0-18 years, regardless of the amount of time spent on the premises), for educational, social, cultural, or recreational purposes. This includes instructional studios that provide classes of any type including recreational, artistic, dance, etc. Other meeting places such as for organizational purposes are also included. These establishments do not include nurseries, pre-k schools, child day care centers, K-12 schools, nor do these establishments include entertainment assembly, sports assembly or public assembly in auditoriums or exhibition halls.

Cemetery

624 – Funeral and crematory services including cemeteries, which include land that is specifically designated as a burial ground where the remains of deceased people are buried or are otherwise interred.

Child Day Care and School (Preschool, Kindergarten through Grade 12), Adult School (College, University, Vocational/Trade)

68 – Educational services, including nursery, elementary, junior high, middle and senior high schools. Nursery schools are facilities other than family day care homes, in which less than 24-hours per day of nonmedical care and supervision are provided to children in a group setting. This also includes employer-sponsored centers, nurseries and pre-kindergarten schools. Elementary schools usually include the first four to the first eight grades and often a kindergarten. A middle school usually includes grades five to eight or six to eight, and a senior high school includes grades nine to twelve or ten to twelve. Educational services also include colleges, universities, and special training schools. This includes vocational, trade, business, stenographic, barber, and beauty schools. They may also include art, music, dancing, driving, and correspondence schools. These establishments also furnish academic or technical courses and grant degrees, certificates or diplomas at the associates, baccalaureate or graduate levels.

Fire and Police Stations

672 – Government services that offer protective functions, such as police protection, fire protection, civil defense, and related activities. Police establishments provide criminal and civil law enforcement, police, traffic safety and other activities related to the enforcement of the law and preservation of order. Combined police and fire departments are included. Fire Station: Fire and rescue establishments engage in firefighting and other related fire protection activities. These establishments may also provide fire protection along with ambulance or rescue services.

Jail, Prison

674 – Government services including correctional institutions such as prisons. These government establishments manage and operate correctional institutions. Their facilities are generally designed for the confinement, correction and rehabilitation of offenders sentenced by a court.

Library, Museum, Gallery

7111 – Libraries are establishments providing library or archive services engaged in maintaining collections of documents (e.g., books, journals, newspapers and music) and facilitating the use of such documents (recorded information regardless of its physical form and characteristics) as are required to meet the informational, research, educational or recreational needs of their users. These establishments may also acquire, research, store, preserve and generally make accessible to the public historical documents, photographs, maps, audio material, audiovisual material and other archival material of historical interest. All or portions of these collections may be accessible electronically.

7112 – Museums preserve and exhibit objects of artistic, historical, cultural or educational value.

7113 – Art galleries are established for the purpose of public exhibitions of works of art.

Medical Care – Hospital, Out-Patient Surgery Center, Congregate Care, Nursing and Convalescent Home

6513 – Hospital services provide medical, diagnostic and treatment services. These establishments often offer physician, nursing and specialized accommodation services for inpatient care.

6516 – Sanitariums, convalescent, and rest home services provide for the professional treatment of an illness or injury. Examples include:

- Congregate Care Facility: Establishments providing meals and other services in low-income and federally subsidized housing. Many establishments now provide such services to other non-subsidized housing facilities. Services include housekeeping, laundry, transportation, recreational programs and other convenience services.
- Nursing Facility/Convalescent Home: Establishments providing inpatient nursing and rehabilitative services and accommodating patients for extended care. These establishments have licensed health care staff serving patients and other support staff for continuous personal care services. Convalescent homes/hospitals, inpatient care hospices, nursing homes and rest homes with nursing care are a few examples of services these establishments provide.

6517 – Medical clinics with out-patient services are health care facilities where surgical procedures not requiring an overnight hospital stay are performed.

INDUSTRIAL

Vehicle Storage – Construction, Bus, Motor Freight, Aircraft

4214 – Bus garaging and equipment maintenance.

4222 – Motor freight garaging and equipment maintenance.

4315 – Aircraft storage and equipment maintenance.

Manufacturing/Processing

Uses that process, fabricate, assemble treat or package finished parts or products with or without the use of explosive or petroleum materials.

21 – Food and kindred products include meat, dairy, fruits, vegetables, grains, bakery products, sugar, beverages and other food and kindred products. Establishments in this category primarily produce food products for intermediate or final consumption in a process that primarily uses raw materials from livestock or agricultural products. Establishments in the food and beverage subcategory transform livestock and produce into products for intermediate or final consumption; or they manufacture beverages. These products are typically sold to wholesalers or retailers; however, also included here are bakery and candy establishments that produce on the premises for later consumption. Beverage manufacturing includes the manufacture of nonalcoholic and fermented and distilled alcoholic beverages. Ice manufacturing, while not a beverage, is also included because it uses the same production process as water purification.

22 – Textile mill products include textile mills, textile product mills, and apparel manufacturers. Broadly they can be characterized as those that: (a) transform natural or synthetic fiber into products (such as yarn or fabric) to be further manufactured into textile products; and (2) manufacture textile products (apparel and other) by knitting, cutting, and sewing fabric. Production processes may include preparing and spinning fiber, knitting or weaving fabric, or textile finishing. This category includes establishments that work with materials owned by others and those that manufacture custom garments for individual clients. Tailors and apparel contractors are also included.

23 – Apparel and other finished products made from fabrics, leather, and similar materials. This includes all types of apparel in addition to fur goods, hats, caps, and other types of miscellaneous apparel and accessories.

24 – Lumber and wood products (except furniture), such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, mobile homes, and prefabricated wood buildings. Manufacturing may include sawing, planing, shaping, laminating, or

assembling wood products starting from logs or lumber. Included are establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products.

25 – Furniture and fixtures establishments manufacture furniture and related articles, such as mattresses, window blinds, cabinets, fixtures, furniture parts, and frames. Processes include the cutting, bending, molding, laminating, and assembling materials, such as wood, metal, glass, plastics, and rattan. Aesthetic and functional design also plays an important part in the production of furniture. Design services may be performed by the furniture establishment's work force or may be purchased from industrial designers. Some of the processes used in furniture manufacturing are similar to processes in other manufacturing categories (such as wood manufacturing, metal manufacturing, and plastics manufacturing). However, furniture manufacturing is distinguished as a separate category due to the combination of multiple production processes. Manufacturers of transportation equipment seats and furniture in addition to medical-type furniture are not included in this category.

26 – Paper and allied product establishments primarily manufacture paper. Paper manufacturers make pulp, paper, or converted paper products (e.g. paper bags). Excluded are photosensitive papers, which are classified in chemical and plastics.

27 – Printing, publishing, and allied industries primarily offer printing-related products. Printing establishments print products (e.g. newspapers, books, periodicals, and greeting cards) and perform support activities, such as bookbinding, plate making services, and data imaging. Clothing printers are included if their primary activity is printing, not clothing manufacturing (e.g. T-shirt printing is included, but fabric printing is not).

28 – Chemicals and allied product establishments process and transform organic and inorganic raw materials, plastics and rubber, and form products by chemical processes. This also includes drug manufacturing and soap, detergent, and cleaning preparations. Perfumes, cosmetics, plants, varnishes lacquers, enamels, gum, wood chemicals, agricultural chemicals and others are included in this category.

29 – Petroleum refining and related industries also include paving and roofing materials, lubricating oils and greases. This includes facilities where hazardous materials are manufactured or processed. Hazardous materials are defined by the U.S. Environmental Protection Agency (EPA) as "substances that are considered severely harmful to human health and the environment."[3] In this ALUCP, facilities involving hazardous materials include:

- Facilities with aboveground storage tanks containing any of the following materials:
    - Flammable or combustible liquids, including fuels or other substances

[3] U.S. Environmental Protection Agency, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), http://www.epa.gov/osweroe1/content/hazsubs/cercsubs.htm, accessed January 12, 2012.

containing at least 5 percent petroleum, with individual tanks having a capacity greater than 6,000 gallons or total tank capacities greater than 12,000 gallons.[4]

- Liquefied petroleum, hydrogen and natural gases and cryogenic liquids with an individual tank capacity equivalent to 2,000 gallons of water or total tank capacities greater than 30,000 gallons.[5]
- Compressed gases in excess of 50,000 cubic feet on the premises.[6]

- Facilities involving the manufacturing or processing of toxic substances exceeding the threshold planning quantities for hazardous and extremely hazardous substances specified by the EPA.[7]
- Facilities involving the manufacturing or processing of explosive materials, including fireworks, in quantities exceeding 50 pounds.[8]
- Medical and biological research facilities manufacturing or processing toxic or infectious agents that are classified as Biosafety Level 2, 3 or 4 facilities.[9]

31 – Rubber and miscellaneous plastic products include tires, inner tubes, rubber footwear, reclaiming rubber, and other plastic products or fabricated rubber products.

32 – Stone, clay, and glass products in this subcategory transform, mine, and quarry nonmetallic minerals, such as sand, gravel, stone, clay, and refractory materials. Included are establishments that manufacture bricks, refractories, ceramics, glass, cement, concrete, lime, gypsum, abrasives, ceramic plumbing fixtures, statuary, cut stone products, and mineral wool. Processes used include grinding, mixing, cutting, shaping, and honing. Mining, beneficiating, and manufacturing often occur at a single location. Establishments that mine, quarry, or beneficiate, and then further process, are classified by their primary activity. For example, a mine that manufactures a more-finished product is classified here, while a mine that mines and beneficiates with little manufacturing of finished products, is classified under Mining.

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4 Based on building separation criteria from the National Fire Protection Association, NFPA 1, *Fire Code*, 2012 Edition, Chapter 42, Table 42.3.3.2.4.

5 Based on building separation criteria from the National Fire Protection Association, NFPA 1, *Fire Code*, 2012 Edition, Chapter 69, Table 69.3.3.1.

6 Based on building separation criteria from the National Fire Protection Association, NFPA 1, *Fire Code*, 2012 Edition, Chapter 63, Tables 63.3.6.2, 63.3.7.2.

7 Title 40, Code of Federal Regulations, Part 355, *Emergency Planning and Preparation*, Appendices A and B.

8 California Code of Regulations, Title 8, Subchapter 7 *General Industry Safety Orders*, Group 18 *Explosives and Pyrotechnics*, Article 114 *Storage of Explosives*.

9 Biosafety Level 2 facilities handle agents that pose moderate hazards to personnel and the environment. Biosafety Level 3 facilities handle agents that cause serious or potentially lethal disease through inhalation. Biosafety Level 4 facilities handle agents that cause life-threatening disease and for which there are no vaccines or treatments. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, and National Institutes of Health, *Biosafety in Microbiological and Biomedical Laboratories*, December 2009. (Biosafety Level 1 does not involve hazardous materials.)

33 – Primary metal industries smelt or refine metals, and transform metal into products (other than machinery, electronics, computers, or furniture). Establishments include those that manufacture alloys beginning with ore or concentrate, and those that recover metals from scrap or dross through secondary smelting and refining. Establishments may manufacture basic metal products, such as ingot, billet, sheets, strips, bars, rods, wires, and castings; or they may manufacture finished products. Also included are establishments that begin with manufactured metal shapes and further fabricate the shapes into a product. Processes include forging, stamping, bending, forming, machining, rolling, drawing, extruding, welding, and assembling.

34 – Fabricated metal products metal product manufacturing includes ordnance and accessories, machinery (including electrical) equipment and supplies, transportation equipment, and other fabricated metal products.

35 – Professional, scientific, and controlling instruments; photographic and optical goods, watches and clocks. These establishments are dedicated to the production of specialized instruments and devices for photographic and optical goods. This also includes the manufacturing of watches and clocks.

39 – Miscellaneous manufacturing including brooms, brushes, linoleum, asphalted felt base, other hard surface floor cover, matches, lamp shades, morticians' goods, fur dressing, dyeing, signs, advertising, umbrellas, parasols, canes, and others.

821 – Agricultural processing, including cotton ginning and compressing, grist milling services, corn shelling, hay baling, and services. This category also includes contract sorting, grading, and packaging of fruits and vegetables in addition to other types of agricultural processing.

Mining, Extractive Industry

Industries engaged with the discovery or extraction of natural resources.

85 – Mining activities.

89 – Other resource production or extraction.

Research and Development—Scientific, Technical

Uses engaged in scientific and technical research and testing leading to the development of new products and processes.

6391 – Research, development, and testing services.

Sanitary Landfill, Solid Waste Incinerator, Recycling Center, Solid Waste Transfer Station

Landfills are land for the disposal of nonhazardous solid waste. These may include on-site offices and equipment storage supporting the local waste collection process. These

establishments also manage recycling and resource recovery facilities that operate in conjunction with landfills. Incinerators are facilities for the burning of waste.

485 – Solid waste disposal including sanitary landfills and solid waste incinerators.

Warehousing/Storage – (excluding hazardous materials)

Uses engaged in long-term and short-term storage of goods in bulk. This includes public storage, mini-warehouse, mini-storage, public self-storage buildings, including recreational vehicle (RV) storage and other storage buildings but not including hazardous materials.

6373 – Refrigerated warehousing (except food lockers).

6374 – Food lockers (with or without food preparation facilities).

6375 – Household goods warehousing and storage.

6376 – General warehousing and storage services.

6379 – Other warehousing and storage services.

TRANSPORTATION, COMMUNICATION, UTILITIES

Auto Parking

46 – Automobile parking, including nonresidential off-street parking that is 5,000 square feet or greater (or approximately 17 parking spaces), and that serves no other single type of activity. This also includes parking on open lots and parking structures, including parking structures that house other activities. Other activities may include parking areas in an office building or at shopping centers. Parking areas of less than 5,000 square feet are not identified as a separate facility. Park and ride lots are also included if they are not associated with another land use.

Communication – Cell Phone, TV/Radio Tower

47 – Communication, including telephone, telegraph, radio, television and other communication, including buildings that house emergency communications transmission equipment and related offices, such as 911 emergency centers, disaster coordination facilities and essential communication facilities for disaster recovery and response.

Utilities – Electrical, Gas, Water, Wastewater, Wind Turbine, Photovoltaic Solar Array

This category includes utilities supplied by electric and gas in conventional and nonconventional ways. This category also includes water treatment, storage, irrigation, sewage disposals, and other utilities.

481 – Electric utility including electric transmission right-of-way, electric generation plants, electricity regulated substations, and other electric utility.

482 – Gas utility including gas pipeline right-of-way, gas production plants, natural or manufactured gas storage and distribution points, gas pressure control stations, and other gas utilities.

483 – Water utilities and irrigation including water pipeline right-of-way, water treatment plants, irrigation distribution channels, water pressure control stations, and other water utilities and irrigation.

484 – Sewage disposal including sewage treatment plants, sewage sludge drying beds, sewage pressure control stations, and other sewage disposal.

489 – Other utilities.

Electrical Power Generation Plant, Wind Turbine, Photovoltaic Solar Array, Electrical Substation

4812 – Electric generation plants that are conventionally fueled, including establishments that generate electrical power, including associated control facilities, distribution centers and other facilities.

4812 – Wind turbines and photovoltaic solar arrays which are not conventionally fueled.

4813 – Electricity regulating substations, including switching centers, transformer locations, and other power-related facilities that serve as storage or transit points in the distribution system.

Water, Wastewater Treatment Plant

This category includes water treatment plants, filtration plants, pumping stations and similar facilities for drinking water or irrigation and industrial supply. It also includes wastewater treatment plants that operate sewer systems or sewage treatment facilities. This category does not include septic pumping and other miscellaneous waste management services.

4832 – Water treatment plant.

4841 – Sewage treatment plants.

4842 – Sewage sludge drying beds.

4849 – Other sewage disposal.

Passenger Terminal (Air, Bus, Rail, Marine)

These establishments include air, bus, rail, and marine passenger terminals. Parking areas associated with these uses are included. Bus depots, buildings for bus passengers and freight, including ticketing, and passenger boarding are also included. Facilities for freight alone are not included.

4113 – Railroad terminals (passenger).

4115 – Railroad terminals (passenger and freight).

4122 – Rapid rail transit and street railway passenger terminals.

4211 – Bus passenger terminals (intercity).

4212 – Bus passenger terminals (local).

4213 – Bus passenger terminals (intercity and local).

4312 – Airport and flying field terminals (passenger).

4314 – Airport and flying field terminals (passenger and freight).

4411 – Marine terminals specifically for passengers, providing water transportation, including scenic and sightseeing, for passengers. Examples include the Cruise Ship Terminal/B Street Pier and the Embarcadero/North Harbor Drive.

4413 – Marine terminals (passenger and freight).

Cargo/Freight Terminal (Air, Bus, Rail, Marine)

4114 – Railroad terminals (freight).

4221 – Motor freight terminals, which are establishments that provide general freight trucking. They handle a wide variety of commodities, generally palletized and transported in a container or van trailer. Included are establishments operating as truckload (TL) or less than truckload (LTL) carriers.

4313 – Airport and flying field terminals specifically for freight.

4412 – Marine terminals specifically for freight. They provide temporary storage, loading and unloading of cargo shipped via water transportation. Examples include the National City and 10th Avenue Marine Terminals.

RECREATION, PARK, OPEN SPACE

Arena, Stadium

Indoor and outdoor facilities for spectator sports and entertainment performances. Structurally, the main distinction between a stadium and an arena is its size. Stadiums are larger than arenas and generally seat over 10,000 spectators whereas arenas generally seat over 5,000 spectators. The layout of seating and sight lines in stadiums follow a fixed sport (e.g., baseball or football), whereas arenas are designed around the flat, central space whose size is about the size of a basketball court. Arenas also host circuses, ice shows, indoor soccer, hockey games, horse shows and music concerts. Race tracks are used for individual racing activities, e.g., horse racing and automobile racing, as well as those used for several racing activities.

722 – Sports assembly facilities include stadiums, arenas and field houses, and race tracks.

Marina

744 – Marinas, which provide docking and storage facilities for pleasure craft owners. They may retail fuel and marine supplies, and may repair, maintain or rent pleasure boats in addition to operating facilities. Examples include Oceanside Harbor, Quivira Basin, Shelter Island, Harbor Island, Embarcadero and the Chula Vista marinas.

Park, Recreation (Golf Course, Tennis Court, Riding Stable, Water Sports)

74 – Recreational activities, which include sports, playgrounds, athletic areas, swimming areas, and other recreation such as camping and picnicking. Examples are Robb Field, Morley Field, Diamond Street Recreation Center and Presidio Park. Smaller neighborhood parks with a high level of use are also included. This category also includes golf courses with country clubs, golf courses without country clubs. This category does not include gymnasiums, or marinas.

76 – Parks, including those for general recreation, leisure and ornamental purposes. This land is devoted for the public's enjoyment and its recreational activities, ranging from passive to active uses.

Open space includes uses that may occur on land that has been left in a generally natural state and has been identified for public uses, habitat and wildlife preservation, scientific research, or the avoidance of hazards to the public. Open space areas include beaches, canyons, hillsides, etc. Examples are Torrey Pines State Reserve, Penasquitos Canyon Reserve, San Elijo Ecological Preserve and Nature Conservancy properties.

Nature Exhibits (Botanical Garden, Zoo)

712 – Nature exhibitions, which include planetariums, aquariums, botanical gardens and arboretums, and zoos.

Amusements (Fairground, Amusement Park, Shooting or Golf Driving Range, etc.)

73 – Fairgrounds and amusement parks. Large outdoor areas utilized for entertainment purposes. Amusement parks and fairgrounds may include penny arcades, miniature golf, golf driving ranges, go-cart tracks, and other amusements.

AGRICULTURE

Agriculture, Aquaculture

Establishments that grow fruit, nuts, root and tuber crops or edible plants and seeds, including community gardens. This category also includes establishments with livestock breeding and feeding.

81 – Agriculture, including the use of land for crops, livestock or poultry purposes.

82 – Agricultural related activities such as agricultural processing, animal husbandry, and horticulture services.

83 – Forestry activities and related services.

84 – Fishing activities and related services consists of services that grow plants and animals in a water medium, either indoors or outdoors.

A.2 Land Use Categories Unique to Table 3-1

Wholesale Trade

51 – Wholesale trade consists of either the sale or arrangement of the purchase of goods to other businesses. Wholesale trade is normally operated from a warehouse or office. This includes the wholesale trade of motor vehicles, automotive equipment, drugs, chemicals, allied products, dry goods, apparel, groceries, farm products, electrical goods, hardware, plumbing, and heating equipment and supplies. Commercial, industrial, farm, professional, transportation and other machinery and equipment are also included.

Retail Sales (except as listed below), Eating/Drinking Establishment, Personal Services, Funeral Chapel/Mortuary

53 – General merchandise, including convenience markets, department stores, mail order houses, limited price variety stores, merchandise vending machine operators, direct selling organizations, and dry goods.

54 – Food, including groceries, meat, fish, fruits, vegetables, candy, nuts, confectioneries, dairy products, and bakeries.

56 – Apparel and accessories for men, women, children and infants including furnishings, accessories, shoes, custom tailoring, furriers and fur apparel.

57 – Furniture, home furnishings, and equipment also include floor coverings, draperies, curtains, upholstery, china, glassware, and metalware.

58 – Eating and drinking establishments, which include uses that prepare or serve food or beverages for consumption on the premises or for direct sale to the public for

consumption off the premises. This also includes both establishments serving only food as well as those serving both food and alcoholic beverages.

59 – Other retail trade, which may include pets, drugstores, liquor, antiques, secondhand merchandise, books, stationery, sporting goods, bicycles, farm and garden supplies, jewelry, fuel, florists, cigars, cigarettes, newspapers, magazines, cameras and photographic supplies, gifts, novelties, souvenirs and optical goods.

62 – Personal services, which include laundering, dry cleaning, dyeing, photographic, beauty, barber, funeral, crematory, apparel repair, shoe repair, alteration and cleaning pickup services. This category does not include cemeteries.

Lumber, Building Material Sales

521 – Retail trade of lumber and other building materials.

Heating and Plumbing, Paint, Electrical, Hardware and Farm Equipment Sales

522 – Retail trade of heating and plumbing equipment.

523 – Retail trade of paint, glass, and wallpaper.

524 – Retail trade of electrical supplies.

525 – Retail trade of hardware and farm equipment.

Automotive, Marine Craft, Aircraft, and Heavy Equipment Sales

55 – Retail trade of automotive, marine craft, aircraft, and accessories. The typical functions of these establishments include the sale of gasoline, motor vehicles, auto parts, tires and other auto-related merchandise.

Manufacturing (except as listed below)

Uses that process, fabricate, assemble treat or package finished parts or products without the use of explosive or petroleum materials.

21 – Food and kindred products include meat, dairy, fruits, vegetables, grains, bakery products, sugar, beverages and other food and kindred products. Establishments in this category primarily produce food products for intermediate or final consumption in a process that primarily uses raw materials from livestock or agricultural products. Establishments in the food and beverage subcategory transform livestock and produce into products for intermediate or final consumption; or they manufacture beverages. These products are typically sold to wholesalers or retailers; however, also included here are bakery and candy establishments that produce on the premises for later consumption. Beverage manufacturing includes the manufacture of nonalcoholic and

fermented and distilled alcoholic beverages. Ice manufacturing, while not a beverage, is also included because it uses the same production process as water purification.

22 – Textile mill products include textile mills, textile product mills, and apparel manufacturers. Broadly they can be characterized as those that: (a) transform natural or synthetic fiber into products (such as yarn or fabric) to be further manufactured into textile products; and (2) manufacture textile products (apparel and other) by knitting, cutting, and sewing fabric. Production processes may include preparing and spinning fiber, knitting or weaving fabric, or textile finishing. This category includes establishments that work with materials owned by others and those that manufacture custom garments for individual clients. Tailors and apparel contractors are also included.

23 – Apparel and other finished products made from fabrics, leather, and similar materials. This includes all types of apparel in addition to fur goods, hats, caps, and other types of miscellaneous apparel and accessories.

28 – Chemicals and allied product establishments process and transform organic and inorganic raw materials, plastics and rubber, and form products by chemical processes. This also includes drug manufacturing and soap, detergent, and cleaning preparations. Perfumes, cosmetics, plants, varnishes lacquers, enamels, gum, wood chemicals, agricultural chemicals and others are included in this category.

31 – Rubber and miscellaneous plastic products include tires, inner tubes, rubber footwear, reclaiming rubber, and other plastic products or fabricated rubber products.

32 – Stone, clay, and glass products in this subcategory transform, mine, and quarry nonmetallic minerals, such as sand, gravel, stone, clay, and refractory materials. Included are establishments that manufacture bricks, refractories, ceramics, glass, cement, concrete, lime, gypsum, abrasives, ceramic plumbing fixtures, statuary, cut stone products, and mineral wool. Processes used include grinding, mixing, cutting, shaping, and honing. Mining, beneficiating, and manufacturing often occur at a single location. Establishments that mine, quarry, or beneficiate, and then further process, are classified by their primary activity. For example, a mine that manufactures a more-finished product is classified here, while a mine that mines and beneficiates with little manufacturing of finished products, is classified under Mining.

33 – Primary metal industries smelt or refine metals, and transform metal into products (other than machinery, electronics, computers, or furniture). Establishments include those that manufacture alloys beginning with ore or concentrate, and those that recover metals from scrap or dross through secondary smelting and refining. Establishments may manufacture basic metal products, such as ingot, billet, sheets, strips, bars, rods, wires, and castings; or they may manufacture finished products. Also included are establishments that begin with manufactured metal shapes and further fabricate the shapes into a product. Processes include forging, stamping, bending, forming, machining, rolling, drawing, extruding, welding, and assembling.

34 – Fabricated metal products metal product manufacturing includes ordnance and accessories, machinery (including electrical) equipment and supplies, transportation equipment, and other fabricated metal products.

35 – Professional, scientific, and controlling instruments; photographic and optical goods, watches and clocks. These establishments are dedicated to the production of specialized instruments and devices for photographic and optical goods. This also includes the manufacturing of watches and clocks.

Manufacturing - Low Intensity: Lumber, Wood; Furniture, Fixtures; Paper, Printing, Publishing

Uses that process, fabricate, assemble treat or package finished parts or products without the use of explosive or petroleum materials, that are low risk only.

24 – Lumber and wood products (except furniture), such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, mobile homes, and prefabricated wood buildings. Manufacturing may include sawing, planing, shaping, laminating, or assembling wood products starting from logs or lumber. Included are establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products.

25 – Furniture and fixtures establishments manufacture furniture and related articles, such as mattresses, window blinds, cabinets, fixtures, furniture parts, and frames. Processes include the cutting, bending, molding, laminating, and assembling materials, such as wood, metal, glass, plastics, and rattan. Aesthetic and functional design also plays an important part in the production of furniture. Design services may be performed by the furniture establishment's work force or may be purchased from industrial designers. Some of the processes used in furniture manufacturing are similar to processes in other manufacturing categories (such as wood manufacturing, metal manufacturing, and plastics manufacturing). However, furniture manufacturing is distinguished as a separate category due to the combination of multiple production processes. Manufacturers of transportation equipment seats and furniture in addition to medical-type furniture are not included in this category.

26 – Paper and allied product establishments primarily manufacture paper. Paper manufacturers make pulp, paper, or converted paper products (e.g. paper bags). Excluded are photosensitive papers, which are classified in chemical and plastics.

27 – Printing, publishing, and allied industries primarily offer printing-related products. Printing establishments print products (e.g. newspapers, books, periodicals, and greeting cards) and perform support activities, such as bookbinding, plate making services, and data imaging. Clothing printers are included if their primary activity is printing, not clothing manufacturing (e.g. T-shirt printing is included, but fabric printing is not).

39 – Miscellaneous manufacturing including brooms, brushes, linoleum, asphalted felt base, other hard surface floor cover, matches, lamp shades, morticians' goods, fur dressing, dyeing, signs, advertising, umbrellas, parasols, canes, and others.

Processing/Storage of Hazardous Materials

Facilities where hazardous materials are manufactured, processed or stored. Hazardous materials are defined by the U.S. Environmental Protection Agency (EPA) as "substances that are considered severely harmful to human health and the environment."[10] In this ALUCP, facilities involving hazardous materials include:

- Facilities with aboveground storage tanks containing any of the following materials:
  - Flammable or combustible liquids, including fuels or other substances containing at least 5 percent petroleum, with individual tanks having a capacity greater than 6,000 gallons or total tank capacities greater than 12,000 gallons.[11]
  - Liquefied petroleum, hydrogen and natural gases and cryogenic liquids with an individual tank capacity equivalent to 2,000 gallons of water or total tank capacities greater than 30,000 gallons.[12]
  - Compressed gases in excess of 50,000 cubic feet on the premises.[13]
- Facilities involving the manufacturing or processing of toxic substances exceeding the threshold planning quantities for hazardous and extremely hazardous substances specified by the EPA.[14]
- Facilities involving the manufacturing or processing of explosive materials, including fireworks, in quantities exceeding 50 pounds.[15]
- Medical and biological research facilities manufacturing or processing toxic or infectious agents that are classified as Biosafety Level 2, 3 or 4 facilities.[16]

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10 U.S. Environmental Protection Agency, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), http://www.epa.gov/osweroe1/content/hazsubs/cercsubs.htm, accessed January 12, 2012.

11 Based on building separation criteria from the National Fire Protection Association, NFPA 1, *Fire Code*, 2012 Edition, Chapter 42, Table 42.3.3.2.4.

12 Based on building separation criteria from the National Fire Protection Association, NFPA 1, *Fire Code*, 2012 Edition, Chapter 69, Table 69.3.3.1.

13 Based on building separation criteria from the National Fire Protection Association, NFPA 1, *Fire Code*, 2012 Edition, Chapter 63, Tables 63.3.6.2, 63.3.7.2.

14 Title 40, Code of Federal Regulations, Part 355, *Emergency Planning and Preparation*, Appendices A and B.

15 California Code of Regulations, Title 8, Subchapter 7 *General Industry Safety Orders*, Group 18 *Explosives and Pyrotechnics*, Article 114 *Storage of Explosives*.

16 Biosafety Level 2 facilities handle agents that pose moderate hazards to personnel and the environment. Biosafety Level 3 facilities handle agents that cause serious or potentially lethal disease through inhalation. Biosafety Level 4 facilities handle agents that cause life-threatening disease and for which there are no vaccines or treatments. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, and National Institutes of Health, *Biosafety in Microbiological and Biomedical Laboratories*, December 2009. (Biosafety Level 1 does not involve hazardous materials.)

29 – Petroleum refining and related industries also include paving and roofing materials, lubricating oils and greases.

6379 – Other warehousing and storage services, including the warehousing and storage of hazardous materials.

Electrical Power Generation Plant (conventionally fueled)

4812 – Electric generation plants that are conventionally fueled, including establishments that generate electrical power, including associated control facilities, distribution centers and other facilities.

Wind Turbine, Photovoltaic Solar Array

4812 – Wind turbines and photovoltaic solar arrays which are not conventionally fueled.

Electrical Substation

4813 – Electricity regulating substations, including switching centers, transformer locations, and other power-related facilities that serve as storage or transit points in the distribution system.

Water, Wastewater Treatment Plant

This category includes water treatment plants, filtration plants, pumping stations and similar facilities for drinking water or irrigation and industrial supply. It also includes wastewater treatment plants that operate sewer systems or sewage treatment facilities. This category does not include septic pumping and other miscellaneous waste management services.

4832 – Water treatment plant.

4841 – Sewage treatment plants.

4842 – Sewage sludge drying beds.

4849 – Other sewage disposal.

Appendix B

Implementation Tools and Documents

APPENDIX B

Implementation Tools and Documents

This appendix provides information helpful to the implementation of this ALUCP.

- Applications for ALUCP Consistency Determinations – Submittal Requirements
- Airport Overflight Agreement
- Solar Glare Hazard Analysis Tool
- Implementation Guide
- Review Procedures

Applications for ALUCP Consistency Determinations—Submittal Requirements

A proposed land use plan, regulation or project submitted to the Airport Land Use Commission (ALUC) for an ALUCP consistency determination, in accordance with **Section 1.9** in **Chapter 1,** shall include the information described below.

Land Use Plans and Regulations

The following information must be submitted for all consistency determination applications for the ALUC's review of land use plans and regulations such as general, specific, community or other land use plan adoptions or amendments; land use code adoptions or amendments or rezones.

(a) Map(s) indicating County Assessor's parcel(s) affected by the proposed plan and/or regulation (unless it is applicable to the local agency's entire jurisdiction)

(b) Contact information for local agency project manager (name, agency/department name, address, phone, fax, email)

(c) Text of the ordinance, code, or plan to be adopted, describing permitted and prohibited uses by land use designation or zone and any related development standards regarding structure height, residential density, floor area ratio; if the policy amends existing text, a complete version in strikeout/underline format

(d) Date application for proposed plan/regulation was deemed complete per the California Government Code by the local agency

Land Use Projects

The following information must be submitted for all consistency determination applications for the ALUC's review of land use projects.

(a) Property location by street address (or intersection) and County Assessor's Parcel Number(s)

(b) Contact information for local agency project manager (name, agency/department name, address, phone, fax, email)

(c) Description of land use project to include:

- Proposed use(s)
- Building area(s) and height(s) above grade
- Maximum ground elevation above mean sea level
- Lot coverage
- Area of parcel(s)
- Floor area ratio
- For residential uses – number of dwelling units
- For nonresidential uses – number of people occupying proposed use

(d) Either a grant deed or title report, in the name of the current property owner

(e) If FAA notification is required for proposed structures – Part 77 determination

(f) Site plan, floor plans, and dimensioned elevations

(g) Date project application was deemed complete per the California Government Code by the local agency

Airport Overflight Agreement

Recorded for the benefit of San Diego County Regional Airport Authority serving as the Airport Land Use Commission for San Diego County and U.S. Navy as operator of Naval Outlying Landing Field Imperial Beach

Return to:

(property owner)

(SPACE ABOVE FOR RECORDER'S USE)

AIRPORT OVERFLIGHT AGREEMENT

This Airport Overflight Agreement concerns the real property situated in _____ (*insert City or unincorporated Community of* _____), County of San Diego, State of California, described as *(insert or attach legal description)*: _____ _____ _____.

This Airport Overflight Agreement provides disclosure of the condition of the above described property in recognition of, and in compliance with _____ (*insert local zoning ordinance section or other implementation document reference*), and related state and local regulations and consistent with the San Diego County Airport Land Use Commission's policies for overflight agreements provided in the Airport Land Use Compatibility Plan for Naval Outlying Landing Field Imperial Beach.

This property is located in the Overflight Area for the Airport Land Use Compatibility Plan for Naval Outlying Landing Field Imperial Beach. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to an airport and aircraft operations (for example, noise, vibration, overflights or odors). Individual sensitivities to those annoyances can vary from person to person. You should consider what airport annoyances, if any, affect the Property before you complete your purchase and whether they are acceptable to you.

The undersigned owner(s) of the property subject to this agreement hereby agree, for themselves and their successors, to the conditions associated with this Airport Overflight Agreement. This Airport Overflight Agreement shall run with the Property and shall be binding upon all parties having or acquiring any right, title or interest in the Property.

OWNER(S)

_____ _____
Name Date

_____ _____
Name Date

(Attach California All Purpose Acknowledgement)

Solar Glare Hazard Analysis Tool

The increasing interest in renewable sources of energy has produced dramatic technological advances in the 21st Century. Solar technologies have been employed in a variety of settings in California and across the country. The FAA has taken an interest in these developments as they may interfere with the safe operation of aircraft in the immediate environs of airports. Under certain circumstances, glint and glare from mirrors in solar arrays and from photovoltaic cells can interfere with the vision of pilots and airport traffic controllers.

In coordination with the U.S. Department of Energy, the FAA has made available to the public a tool for evaluating the potential for solar installations to cause problematic glint and glare along the approach paths to airport runways. The tool is available at this website: https://share.sandia.gov/phlux. Users must register to gain access to the tool, but registration is free of charge.

For more information about FAA policies related to the installation of solar facilities on and near airports, refer to the FAA Airports' website site at http://www.faa.gov/airports/environmental/.

Implementation Guide

This guide is provided to help affected local agencies when modifying their general plans and other local regulations to be consistent with this ALUCP and to facilitate ALUC review of those local agency plans and regulations.

General Plan

A general plan, and any specific, community, or other land use plan may be more restrictive than this ALUCP. However, these plans may not be more permissive than this ALUCP. General plan amendments will be required if there are any conflicts with the ALUCP (unless those conflicts represent existing conditions).

Land Use Element — General plan land use designations may not exceed ALUCP safety compatibility standards. Designations reflecting existing conditions already in excess of ALUCP safety standards do not render a general plan inconsistent with this ALUCP. However, new development of vacant property, redevelopment or a change of use within an existing structure must comply with ALUCP safety standards. Additionally, prohibited land uses are not allowed within the safety zones.

Noise Element — Maximum noise exposure limits for land uses established in a general plan may not be more permissive than the limits established by this ALUCP. However, a general plan may establish more restrictive limits with respect to aviation-related noise than for noise from other sources, in consideration that aviation-related noise is often judged to be more objectionable than other types of noise. Prohibited land uses within the noise contours established by this ALUCP are not allowed.

Zoning Ordinance or Other Regulatory Documents

If a local agency chooses to implement this ALUCP through its zoning ordinance or other regulatory documents, the following items should be addressed. Modification of a general plan to achieve consistency with this ALUCP is typically not necessary if this option is selected. Modifications would typically be required to eliminate any conflicting language and to make reference to the separate regulatory document.

Intensity Limitations on Nonresidential Uses — While most zoning ordinances are not based on people per acre intensities for nonresidential land uses, such policies can be established by other performance-oriented criteria that correspond to this ALUCP. These include limits on building area, floor area ratios, habitable floors, or other design parameters equivalent to the usage intensity criteria.

Prohibition of Incompatible Uses — Incompatible land uses, as established in the ALUCP, are not allowed within the safety zones or noise contours.

Height Limitations and Other Hazards to Flight — To protect airspace, limitations must be set on the height of new structures and other objects equivalent to the maximum heights established by this ALUCP as derived from Part 77 of Federal Aviation Regulations and the Threshold Siting Surfaces. Restrictions must also be established on other land use characteristics that can cause hazards to flight such as visual or electronic interference with navigation and uses that attract birds.

Sound Attenuation Requirements — This ALUCP requires sound attenuation of structures for certain new uses within high noise-impact areas to reduce aircraft-related noise to an acceptable level. These criteria apply to new residences, schools, and other buildings housing noise-sensitive uses. Local regulations must include equivalent criteria.

Nonconforming Uses and Reconstruction — Local agency regulations regarding nonconforming uses and reconstruction must be equivalent to or more restrictive than the policies and standards relating to existing incompatible uses in this ALUCP. Local agency definitions of these terms will differ from those in this ALUCP, therefore separate provisions must be made to address these policies.

Review Procedures

In addition to incorporation of ALUC compatibility criteria, local agency implementing documents must specify the manner in which land use plans, regulations and projects will be reviewed for consistency with the compatibility standards.

Actions Always Requiring ALUC Review — All local agency legislative actions require ALUC review regardless of whether or not the agency has an ALUCP implementation plan that has been approved by the ALUC and adopted by the local agency's governing body, or if the local agency has overruled this ALUCP. These legislative actions include the adoption of or amendments to a general plan or any specific, community, or other land use plans. Also included are amendments to a zoning ordinance (such as rezones) or building code which would impact matters regulated by this ALUCP.

Process for Compatibility Reviews by Local Agencies — Local agencies must establish project processing procedures that will be used to ensure that ALUCP compatibility policies and standards are addressed during project reviews, whether discretionary or ministerial. This can be accomplished by a standard review procedure checklist that includes reference to ALUCP compatibility standards and use of a GIS-based program to identify all parcels within the airport influence area.

Variances and Deviations — Local agency procedures for granting variances and deviations to a zoning ordinance must include provisions to ensure that they do not result in a conflict with ALUCP compatibility standards. Any variance or deviation that involves issues of noise, safety, airspace protection, or overflight compatibility, as addressed in the ALUCP, must always be referred to the ALUC for review.

Condition Satisfaction and Enforcement — Policies must be established to ensure compliance with ALUCP compatibility standards during both the permitting process and the lifetime of the development. Enforcement procedures are especially necessary with regard to adhering to limitations on safety zone densities and intensities.

Appendix C

References and Guidance

APPENDIX C
References and Guidance

This appendix provides a list of references and guidance sources helpful to the implementation and administration of this ALUCP.

ACRP Report 27, Enhancing Airport Land Use Compatibility, Airport Cooperative Research Program, Transportation Research Board, 2010.

California Building Code, Title 24, Part 2, Chapter 12, Section 1207.11.3, *Airport Noise Sources*

California Business and Professions Code, Division 4, Part 2, Chapter 1, *Subdivided Lands*, Article 2, *Investigation, Regulation and Report*

California Civil Code, Division 2, Part 4, *Acquisition of Property*

California Code of Civil Procedure, Part 2, Title 10, Chapter 2, *Actions for Nuisance, Waste, and Willful Trespass, in Certain Cases, on Real Property*, §731a

California Code of Regulations, Title 8, Subchapter 7, *General Industry Safety Orders*, Group 18 *Explosives and Pyrotechnics*, Article 114, *Storage of Explosives*

California Code of Regulations, Title 21, Division 2.5, Chapter 6, *Noise Standards*, Section 5037(f)

California Department of Transportation, Division of Aeronautics, California *Airport Land Use Planning Handbook*, October 2011

California Government Code, Title 7, *Planning and Land Use*, Division 1, *Planning and Zoning*

California Public Utilities Code, Division 9, Part 1, Chapter 4, *Airports and Air Navigation Facilities*

City of San Diego, *General Plan, Economic Prosperity Element,* March 10, 2008

City of San Diego, General Plan: Land Use and Community Planning Element,

City of San Diego – Community Plans

City of Imperial Beach, General Plan

Federal Aviation Administration, Advisory Circular 70/7460-1K, *Obstruction Marking and Lighting*

Federal Aviation Administration, Advisory Circular 150/5200-33B, *Hazardous Wildlife Attractants on or Near Airports*

Federal Aviation Administration, Advisory Circular 150/5200-34, *Construction or Establishment of Landfills near Public Airports*

Federal Aviation Administration, Advisory Circular 150/5300-13A, *Airport Design*

Federal Aviation Administration, Advisory Circular 150/5300-33, *Hazardous Wildlife Attractants on or near Airports*

Federal Aviation Administration, Order JO 7400.2J, *Procedures for Handling Airspace Matters*, Paragraph 7-1-3

National Fire Protection Association, NFPA 1, *Fire Code*, 2012 Edition

Partnership for Air Transportation Noise and Emissions Reduction (PARTNER), REPORT N0. PARTNER COE-2008-001, *Land Use Management and Airport Controls*, December 2007

State of California, Governor's Office of Planning and Research, *California Advisory Handbook for Community and Military Compatibility Planning,* February 2006

The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Study Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California,* prepared for NAVFAC-SW, 2011.

Title 14, Code of Federal Regulations, Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*, Subpart B, *Notice Requirements*

Title 14, Code of Federal Regulations, Part 77, *Safe Efficient Use and Preservation of the Navigable Airspace*, Subpart C, *Standards for Determining Obstructions to Air Navigation or Navigational Aids or Facilities*

Title 14, Code of Federal Regulations, Part 77, *Safe Efficient Use and Preservation of the Navigable Airspace*, Subpart D, *Aeronautical Studies and Determinations*

Title 40, Code of Federal Regulations, Part 355, *Emergency Planning and Notification*, Appendices A and B

U.S. Department of Defense, *Air Installations Compatible Use Zones,* DoDI 4165.57, November 1977

U.S. Department of Defense, *Air Installation Compatible Use Zones (AICUZ) Program,* OPNAV Instruction 11010.36C, October 2008

U.S. Department of Health and Human Services, *Biosafety in Microbiological and Biomedical Laboratories*, December 2009

U.S. Environmental Protection Agency, *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA)

United States Military Unified Facilities Criteria, *Airfield and Heliport Planning and Design*, UFC 3-260-01, May 2006.

Appendix D

Definitions and Acronyms

APPENDIX D
Definitions and Acronyms

This appendix provides a list of definitions and acronyms used in this ALUCP.

Definitions

14 CFR Part 77 — The part of Title 14 of the Code of Federal Regulations that deals with the safe and efficient use of the navigable airspace. Part 77 sets forth requirements for notice to the FAA of certain proposed construction or alteration, establishes standards for identifying obstructions to navigable airspace, and provides for aeronautical studies of obstructions to determine their effect on the safe and efficient use of airspace.

Accident Potential Zones (APZs) — A set of safety-related zones defined by AICUZ studies for areas beyond the ends of military airport runways. Typically, three types of zones are established: a clear zone closest to the runway end, then APZ I and APZ II. The potential for aircraft accidents and the corresponding need for land use restrictions are greatest with the clear zone and diminish with increased distance from the runway.

Air Carriers — Commercial aircraft operators carrying passengers or cargo for hire and including certificated air carriers, air taxis (including commuters), supplemental air carriers and air travel clubs.

Air Installation Compatible Use Zones (AICUZ) — A land use compatibility plan prepared by the U.S. Department of Defense for military airfields. AICUZ plans address noise and safety concerns and serve as recommendations to local governments bodies having jurisdiction over land uses surrounding these facilities.

Aircraft Accident	An occurrence incident to flight in which, as a result of the operation of an aircraft, a person receives a fatal or serious injury or an aircraft receives substantial damage. Except as provided below, substantial damage means damage or structural failure that adversely affects the structural strength, performance, or flight characteristics of the aircraft and that would normally require major repair or replacement of the affected component. Engine failure, damage limited to an engine, bent fairings or cowling, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered substantial damage.
Aircraft Operation	The airborne movement of aircraft at an airport or about an en route fix or at other point where counts can be made. At an airport, an operation is counted for each landing and each departure, such that a touch-and-go flight is counted as two operations.
Airport Elevation	The highest point of an airport's useable runways, measured in feet above mean sea level.
Airport Influence Area (AIA)	The area in which current and projected future airport-related noise, safety, airspace protection or overflight factors may significantly affect future land uses, necessitate restrictions on land use or warrant the disclosure of potential airport impacts to buyers of residential property.
Airspace Protection Area	The area beneath the airspace protection surfaces for NOLF IB.
Airspace Protection Surfaces	Imaginary surfaces in the airspace surrounding airports, as defined for an individual airport in accordance with criteria set forth in 14 CFR Part 77, Subpart C, and FAA Order 8260.3B, U.S. Standard for Terminal Instrument Procedures (TERPS). These surfaces establish the maximum height that objects on the ground can reach without creating obstructions or hazards to the use of the airspace by aircraft approaching, departing or maneuvering in the vicinity of an airport.
Ambient Noise Level	The level of noise that is all encompassing within a given environment for which a single source cannot be determined. It is usually a composite of sounds from many and varied sources close to and far from the receiver.

Avigation Easement	An avigation easement is a particular form of easement that may convey, for example, the right of passage over the property and the right to cause associated impacts including noise.
Ceiling	Height above the earth's surface to the lowest layer of clouds or obscuring phenomena.
Clear Zone (CZ)	The military airfield equivalent to runway protection zones at civilian airports. Clear zones are trapezoid-shaped areas off the ends of runways and helipads, the size of which vary depending on the nature of the approach to the runway and the approach category of the aircraft using the runway.
Closed Traffic Pattern	The closed traffic pattern, or closed flight tracks, is military terminology for a touch-and-go flight track pattern.
Community Noise Equivalent Level (CNEL)	CNEL is used to describe the total noise level in a community over a given 24-hour period. It is a 24-hour, time-weighted, cumulative noise metric. Acoustical scientists developed CNEL to aid in predicting the effects of noise on communities. CNEL describes the total noise in a 24-hour period, with the addition of 4.8 dB to evening noise events (between 7:00 p.m. and 10:00 p.m.) and 10 dB to nighttime noise (between 10:00 p.m. and 7:00 a.m.). The evening and nighttime weights are added because noise in those periods is more disturbing to people than daytime noise. In aircraft noise studies, CNEL is calculated for an average day during a given study year. CNEL levels are typically mapped as noise contours at intervals of 5 dB. Also, see "decibel."
Community Planning Area (CPA)	Community Planning Areas are neighborhoods in San Diego for which the City prepares community land use plans. Over 40 CPAs are in San Diego. The combination of all community plans constitutes the Land Use Element of the City's General Plan. The community plans must work as part of the General Plan and must not contain policies or recommendations that are contradictory to any element of the General Plan or to other community plans. Since the 1960s, when the first community plans in the City were undertaken, Community Planning Groups have participated with City officials in the development of those plans.

Decibel (dB)

A unit of measure describing the pressure level of a sound, equal to the logarithm of the ratio of the sound pressure to the pressure of a reference level equivalent to a sound barely audible to an unimpaired human ear. Because the human ear is more sensitive to sound at specific frequencies (or pitches), special weighting scales have been developed so that sound measurements can be adjusted to accurately describe sounds that people hear.

The A-weighting scale is most common. The A-weighted decibel is often indicated by "dBA." Where the context clearly indicates that the A-weighting scale is being used, as in this ALUCP, the "A" is usually dropped and the term "dB" is used. Also, see "Community Noise Equivalent Level (CNEL)."

Deed Notices

Deed notices are official statements recorded with a property deed. They note the presence of aircraft overflights above the property and describe the potential effects of the overflights.

Displaced Threshold

A landing threshold that is located at a point on the runway other than the designated beginning of the runway. Also, see "Threshold."

Easement

An easement is a legal document that gives one entity the right to use a part of the real estate owned by another entity, but only as specified in the easement document.

Findings

Legally relevant conclusions that describe a government agency's analysis of facts, regulations and policies, and that bridge the analytical gap between raw data and ultimate decision.

Floor Area Ratio (FAR)

For this ALUCP, this term means the gross building square footage (excluding parking garages) divided by the entire site's square footage (site area).

General Aviation (GA)

That portion of civil aviation that encompasses all facets of aviation except air carriers.

Global Positioning System (GPS)	A navigational system that utilizes a network of satellites to determine a positional fix on or above the earth. Developed and operated by the U.S. Department of Defense, GPS has been made available to the civilian sector for surface, marine and aerial navigational use. For aviation purposes, the current form of GPS guidance provides en route aerial navigation and selected types of nonprecision instrument approaches.
Gross Acreage	The total area of a development project, before lots are platted and public rights-of-way, parks and other public properties are dedicated. Also, see "Net Acreage."
Handbook	The *California Airport Land Use Planning Handbook*, published by the Caltrans Division of Aeronautics (October 2011).
Hazard	An object exceeding an obstruction standard, or creating other adverse aeronautical effects, that the FAA has determined would have a "substantial adverse effect" to a "significant volume of aeronautical operations."[1]
Hazardous Materials	Substances that are considered severely harmful to human health and the environment.[2] Examples include highly flammable, explosive, corrosive, and toxic materials.
Helipad	A small, designated area, usually with a prepared surface, on a heliport, airport, landing/takeoff area, apron/ramp, or movement area used for takeoff, landing, or parking of helicopters.
Instrument Approach Procedure	A series of predetermined maneuvers by reference to flight instruments from the beginning of the initial approach to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en route obstacle clearance criteria apply. Also, see "Nonprecision Approach Procedure" and "Precision Approach Procedure."
Instrument Flight Rules (IFR)	Rules governing the procedures for conducting instrument flight.
Instrument Landing System (ILS)	A precision instrument approach system that normally consists of the following electronic components and visual aids: (1) Localizer; (2) Glide Slope; (3) Outer Marker; (4) Middle Marker; (5) Approach Lights.

[1] Federal Aviation Administration, Order JO 7400.2H, Procedures for Handling Airspace Matters, March 10, 2011 Sections 6-3-3 and 6-3-4.

[2] U.S. Environmental Protection Agency, *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA), http://www.epa.gov/osweroe1/content/hazsubs/cercsubs.htm (accessed January 12, 2012).

Land Use Plans and Regulations	Any general plan, community plan, specific plan, precise plan, zoning ordinance, rezone, building regulation or any amendments to these policy and regulatory documents. Land use plans and regulations also include any school district, community college district or special district master plans or amendments to master plans.
Land Use Project	A land use project is a proposed development that requires a ministerial or discretionary permit or approval from a local agency or that is sponsored by a local agency and involves any of the following: construction of a new building; enlargement of the floor area of an existing building; the subdivision of land; a change of use within an existing structure (land uses are defined in Appendix A of this ALUCP); or an increase in the height of a structure or object. When a land use project includes a land use plan amendment or rezone, it is reviewed as a land use plan and regulation.
Local Agency	In this ALUCP, the term "local agency" means the County of San Diego and any municipality with land use regulatory and permitting authority. It also includes school districts, community college districts and special districts with the authority to build and operate public buildings and facilities.
Mean Sea Level (MSL)	An elevation datum using mean sea level as its reference elevation.
Navigational Aid (NAVAID)	Any visual or electronic device airborne or on the surface that provides point-to-point guidance information or position data to aircraft in flight.
Net Acreage	Net acreage refers to the building lot area available for development, excluding land dedicated for public purposes, such as streets or parks. See "Gross Acreage."
Noise	Noise is unwanted sound. Sound is created by variations in air pressure and is measured in terms of pressure level. The decibel (dB) scale has been developed to describe sound pressure level. Also, see "decibel" and "Community Noise Equivalent Level (CNEL)."
Noise Contours	Continuous lines of equal noise level usually drawn around a noise source, such as an airport or highway. The lines are typically drawn in 5-decibel increments so that they resemble elevation contours in topographic maps.

Noise-Sensitive Land Uses	Land uses for which the associated primary activities, whether indoor or outdoor, are susceptible to disruption by loud noise events, such as sleeping rooms, activities where a quiet indoor environment is needed, such as classrooms, office areas, meeting rooms, performance halls or contemplative areas.
Nonconforming Use	As used in this ALUCP, a nonconforming use is an existing land use that is inconsistent with the noise or safety policies and standards for one of the following reasons: (1) the use is incompatible or (2) the use does not comply with the policies and standards that would make it acceptable as a conditional use
Nonprecision Approach Procedure	An instrument approach procedure providing only lateral guidance. Also, see "Instrument Approach Procedure."
Obstacle	An object that would penetrate an obstacle clearance surface or exceed other specific clearance requirements for a specific flight procedure, as defined by FAA instrument flight procedure design criteria. An obstacle is known as a "controlling obstacle" when a flight procedure is designed around that obstacle as the limiting factor.
Obstruction	An object that, upon evaluation, is determined by the FAA to require proper marking, lighting and identification in aeronautical publications so that it may be easily recognized by pilots of aircraft navigating through the airspace. FAA obstruction standards are defined in Title 14, Code of Federal Regulations (CFR) Part 77 (Part 77), Subpart C.
Occupancy Factor	An estimate of the amount of floor area attributable to an occupant of a nonresidential land use. It is used to estimate the total number of people occupying a nonresidential use during periods of typical activity. It does not indicate maximum structural capacity, maximum peak occupancy, or maximum occupancy allowed under any health or safety codes.
Overflight	Any distinctly visible or audible passage of an aircraft over an area.

Overlay Zone	A special purpose zoning district. The regulations within an overlay zone supplement the requirements of the underlying standard zoning districts (typically residential, commercial, or industrial). Overlay zones are used to achieve a special purpose, such as flood hazard protection or the preservation of a historic district, without directly changing the underlying land use in the affected area.
Precision Approach Procedure	An instrument approach procedure providing both lateral and vertical guidance. Also, see "Instrument Approach Procedure."
Project Sponsor	In this ALUCP, the term "project sponsor" refers to any person or entity having a legal interest in a property, including a local agency, landowner, nonresidential tenant who submits an application to a local agency for review of a proposed project on such property.
Real Estate Disclosure	This term refers to state law that requires sellers of residential property within an airport influence area (AIA) to notify buyers of potentially adverse effects from airport activity.
Runway Protection Zone (RPZ)	Two-dimensional, trapezoid-shaped areas defined off the ends of runways at civil airports. The FAA advises airports to acquire RPZs and, if possible, clear all objects from the RPZs. If that is not practicable, land use controls should be adopted to prohibit housing, places of public assembly and fuel facilities.
Safety Zone	For the purpose of airport land use planning, an area near an airport in which land use restrictions are established to protect the safety of the public from potential aircraft accidents.
Standard Instrument Departure (SID)	A published procedure which describes specific maneuvers that aircraft departing an airport under IFR are to follow.
TERPS (U.S. Standard for Terminal Instrument Procedures)	The U.S. Standard for Terminal Instrument Procedures (FAA Order 8260.3B) includes criteria for the protection of airspace needed for the safe execution of instrument approach and departure procedures. TERPS airspace surfaces are designed to provide minimum required obstacle clearance for aircraft operating in the airspace. Unlike Part 77 obstruction surfaces, which can be penetrated without necessarily creating a hazard to air navigation, any object of growth or construction penetrating a TERPS surface would become a hazard and an obstacle to flight.

Threshold	The beginning of that portion of the runway usable for landing. Also, see "Displaced Threshold."
Touch-and-Go	An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway.
Traffic Pattern	The traffic flow that is prescribed for aircraft landing at, taxiing on or taking off from an airport. The components of a typical traffic pattern are upwind leg, crosswind leg, downwind leg, base leg and final approach.
Visual Flight Rules (VFR)	Rules that govern the procedures for conducting flight under visual conditions.
Zoning	A police power measure, usually enacted by units of local government, in which the community is divided into districts or zones within which permitted and special uses are established, as are regulations governing lot size, building bulk, placement and other development standards. Requirements vary from district to district, but they must be uniform within districts. A zoning ordinance includes a map and the text of the regulations.

Acronyms

AC	Advisory Circular
AGL	Above Ground Level
AIA	Airport Influence Area
AICUZ	Air Installation Compatible Use Zone
ALP	Airport Layout Plan
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
ANOMS	Airport Noise and Operations Monitoring System
ASDA	Accelerate-Stop Distance Available
APZs	Accident Potential Zones
CAGR	Compound Annual Growth Rate
Caltrans	California Department of Transportation
CBC	California Building Code
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
CPA	Community Plan Area
CZ	Clear Zone
dB	Decibel
dBA	Decibel, A-weighted
DME	Distance Measuring Equipment
DNH	Determination of No Hazard
DOH	Determination of Hazard
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
GA	General Aviation
GPS	Global Positioning System
IFR	Instrument Flight Rules
ILS	Instrument Landing System
INM	Integrated Noise Model
LDA	Landing Distance Available

LOC	Localizer
MSL	Mean Sea Level
NADEP	Naval Aviation Depot
NAS	Naval Air Station
NAVAID	Navigational Aid
NAVFAC	Naval Facilities Engineering Command
NBC	Naval Base Coronado
NM	Nautical Miles
NOLF	Naval Outlying Landing Field
NPH	Notice of Presumed Hazard
OFA	Object Free Area
OFZ	Obstacle Free Zone
RNAV	Area Navigation
ROC	Required Obstacle Clearance
RON	Remain-overnight
RPZ	Runway Protection Zone
RSA	Runway Safety Area
SANDAG	San Diego Association of Governments
SanGIS	San Diego Geographic Information Source
SCR	Substantial Conformance Review
SDCRAA	San Diego County Regional Airport Authority
SDIA	San Diego International Airport
SID	Standard Instrument Departure
TACAN	Tactical Air Navigation
TERPS	U.S. Standard for Terminal Instrument Procedures
TODA	Takeoff Distance Available
TORA	Takeoff Run Available
TSS	Threshold Siting Surface
VFR	Visual Flight Rules
VOR	Very High Frequency Omni-Directional Range

Appendix E

Technical Analysis

APPENDIX E

Technical Analysis

E1: Naval Outlying Landing Field Imperial Beach

Naval Outlying Landing Field Imperial Beach (NOLF IB) is situated on 1,293 acres and is approximately 14 miles south of downtown San Diego in the City of Imperial Beach, California.[1] NOLF IB is surrounded by varying existing urban land uses to the north, agricultural lands to the east and the Tijuana River to the south and west. NOLF IB is a part of the Naval Base Coronado (NBC) installation and is the site of much of the Navy's West Coast helicopter training. Helicopters stationed at Naval Air Station (NAS) North Island routinely fly to NOLF IB to conduct training and practice. Pilots complete traffic pattern training and fly instrument approaches at the facility[2]

E1.1 Airfield Description

NOLF IB consists of two runways and five helicopter pads. The runways are parallel to one another in an east-west direction. Runway 9-27 is 4,999 feet in length and 340 feet in width, with two white dashed "centerlines," each 70 feet in board from the runway edge. This configuration allows simultaneous helicopter operations. Runway 8-26 is 2,239 feet in length, 150 feet in width, and is painted on the south edge of the parking apron.

1 U.S. Department of Defense, *Air Installation Compatible Use Zones (AICUZ) Study Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach*, California, 2011, p. 2-4.

2 U.S. Department of Defense, *Air Installation Compatible Use Zones (AICUZ) Study Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach,* California, 2011, p. 1-1, 2-7.

Support facilities and hangars are located in the northeastern portion of the base while the helicopter pads are located south of the runways, as depicted in **Exhibit E1-1**.[3] While NOLF IB is able to accommodate fixed wing operations NOLF IB is primarily used for rotary operations.

E1.2 Operations

This section discusses the instrument flight procedure, runway use, and existing operations for NOLF IB. The use of the runway system and the airspace in the immediate NOLF IB vicinity is a key consideration in airport land use compatibility planning. Air traffic control procedures directly influence the patterns of noise exposure, airspace protection areas, aircraft overflights, and the location and configuration of safety zones.

The instrument procedure at NOLF IB is directly relevant to the airspace protection factor of the ALUCP as airspace surfaces are defined according to FAA criteria to meet obstacle clearance requirements.

E1.2.1 Instrument Approach Procedure

Instrument approaches provide electronic and visual guidance to the runway. They also provide guidance for missed approaches when pilots are unable to see the runway at the minimum decision altitude. The published instrument approach procedure at NOLF IB is the nonprecision COPTER TACAN approach. The instrument approach consists of following the 255 degree radial along three fixes before landing at NOLF IB. The three fixes and their distance from the TACAN in nautical miles (nm) are as follows:

- ZIPAD (4nm)
- RUMGE (3nm)
- CESVI (1.3nm)

In the event that there is a missed approach, the aircraft must climb to 1600 feet MSL via the 75 degree radial then intercept the 270 degree radial to the FOLTA fix. The aircraft must remain within 5.2nm DME when established in the holding pattern. When the aircraft is given clearance to land, it must proceed on the 75 degree radial to the JULAS fix and continue on the standard instrument approach discussed above. **Exhibit E1-2** depicts the instrument approach procedure, including the missed approach, for Runway 27.

[3] U.S. Department of Defense, *Air Installation Compatible Use Zones (AICUZ) Study Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach*, California, 2011, pp. 3-1, 6-5.

LEGEND

- Airport Property Boundary
- Runways
- Taxiways
- Airfield Structures

north

0 600 ft.

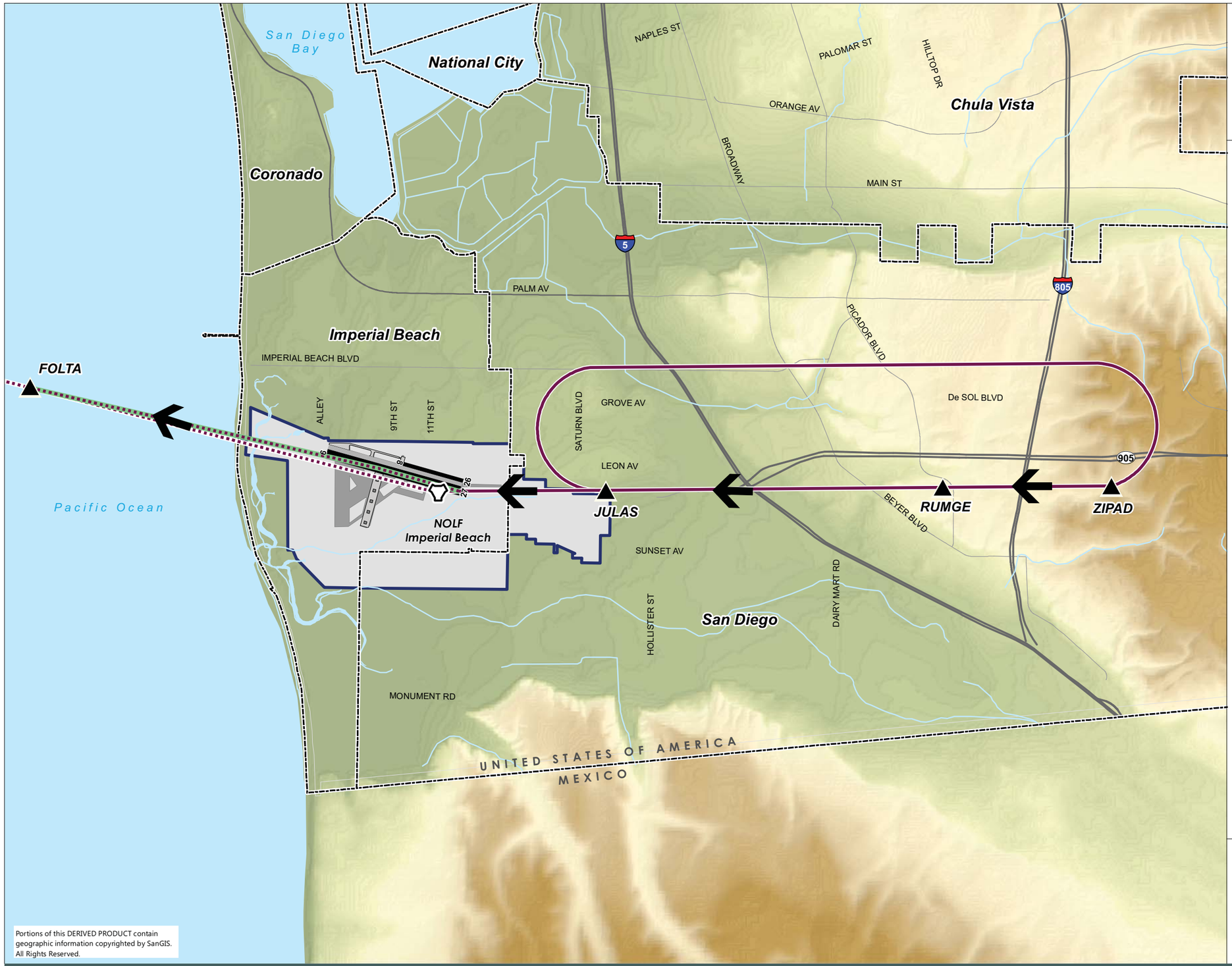
Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield); ESRI, 2013, (aerial image).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit E1-1

Airport Diagram



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Water
- Missed Approach Procedure[1]
- Obstacle Departure Procedure
- Instrument Approach Procedure[1]
- Airspace Fix[2]
- Tactical Air Navigation System (TACAN)

Terrain Elevations (in feet MSL)

High : 255

Low : 1

north

0 3,600 ft.

Notes:
1. The routes shown depict approximate routes as published on National Aeronautical Charting Office charts. Actual aircraft flight tracks over the ground will vary based on air traffic control procedures, aircraft types, and weather conditions.
2. Airspace fixes may include intersections of VOR radials and/or RNAV/GPS waypoints.
3. Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads, rivers and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, terrain); FAA North American Charting Office (NACO) digital Terminal Procedures Publication (d-TPP) Approach and Departure Procedures, Valid July 25, 2013 – August 22, 2013; Ricondo & Associates, Inc., 2013, (overflight area boundary).

Prepared by: Ricondo & Associates, Inc., March 2014.

Exhibit E1-2

Approach and Departure Procedures

E1.2.2 Takeoff Minimums and (Obstacle) Departure Procedure

Departures are authorized for military rotorcraft only on Runway 27 where special takeoff minimums and departure procedures apply. Departures at NOLF IB are not authorized on Runways 8, 9, or 26. The obstacle departure procedure at NOLF IB, depicted on Exhibit E1-2, requires aircraft departing on Runway 27 to climb to 2,000 feet MSL on a 272-degree heading to intercept the NOLF IB TACAN on the 270-degree radial (NRS TACAN R-270). The rotorcraft must be at or above 800 MSL when 1.5 nautical miles from the NOLF IB TACAN (NRS 1.5 DME). At a minimum, the ATC climb rate must be 600 feet per nautical mile until 800 feet MSL is achieved and:

- Takeoff occurring no later than 3,038 feet MSL prior to the departure end runway (DER), or
- Cross the departure end runway at or above 320 feet MSL.

E1.2.3 Runway and Helicopter Pad Use

Operations at NOLF IB also include interfacility departures and arrivals between NOLF IB and NAS North Island in addition to touch-and-go procedures. Runway 27 is utilized for the majority of the interfacility and touch-and-go operations, while the remaining operations are split among the five helicopter pads.

Only one aircraft type, the H-60 helicopter, operates at NOLF IB. The H-60 is a rotary-wing aircraft, known as the Seahawk, equipped for military missions at NOLF IB.

E1.2.4 Aircraft Flight Operations

A diverse set of missions is flown by stationed and transient aircraft at NOLF IB. Aircraft operations involving deployment to and from ships, post-Naval Aviation Depot (NADEP) maintenance check flights, fleet replacement training, operational support flights, transient operations, and pilot currency are routinely flown in the area.[4] **Table E1-1** presents a historical perspective of aircraft flight operations at NOLF IB. As indicated, the total number of aircraft flight operations at NOLF IB has generally increased since 1998.

[4] U.S. Department of Defense, *Air Installation Compatible Use Zones (AICUZ) Study Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach*, California, 2011, p. 3-4.

Table E1-1 Historical Annual Operations for NOLF IB

Year	NOLF IB Annual Operations				Totals
	Military		Civilian		
	Navy/Marine Corps	Other	Air Carrier	General Aviation	
1998	216,783	2,262	0	156	219,201
1999	218,413	4,352	0	72	222,837
2000	174,675	5,656	0	32	180,363
2001	203,838	5,631	0	16	209,485
2002	233,776	5,076	0	52	238,904
2003	249,171	4,057	0	50	253,278
2004	238,784	4,009	0	8	242,801
2005	212,523	10,945	0	261	223,729
2006	224,518	14,234	0	40	235,792
2007	219,737	14,028	0	173	233,938
2008	261,016	6,154	0	44	267,214
2009	275,207	9,004	0	122	284,333

Sources: Air Installation Compatible Use Zones (AICUZ) Update, Table 3-2; NAS North Island Air Traffic Control, 2006, 2010
Prepared by: Ricondo & Assobciates, Inc., June 2013.

E1.3 NOLF IB Study Area

The study area for the NOLF IB ALUCP is the Airport Influence Area (AIA). The AIA is "the area in which current and projected future airport-related noise, safety, airspace protection, or overflight factors/layers may significant affect land use or necessitate restrictions on land use."[5]

The AIA defines the boundary where this ALUCP applies. The AIA is "the area in which current and projected future airport-related noise, safety, airspace protection, or overflight factors/layers may significantly affect land use or necessitate restrictions on land use."[6]

Within the AIA, various boundaries applying to each of the four compatibility factors are defined. The AIA is divided into Review Areas 1 and 2, as depicted in Exhibit 1-1 in Chapter 1 of this ALUCP

The differences in impacts within these two areas require different policies and review procedures.

[5] California Business and Professions Code 11010(b)(13)(B).
[6] California Business and Professions Code 11010(b)(13)(B).

- Review Area 1 is defined by the combination of the 60 dB CNEL noise contour and the outer boundary of all safety zones. All ALUCP policies and standards apply within Review Area 1.
- Review Area 2 is defined by the combination of the airspace protection and overflight boundaries beyond Review Area 1. Only airspace protection and overflight policies and standards apply within Review Area 2.

The AIA includes portions of the cities of Chula Vista, Coronado, Imperial Beach, National City, and San Diego, as depicted on Exhibit 1-1 in Chapter 1 of this ALUCP. The AIA also includes lands managed by the San Diego Unified Port District.

E1.4 Existing Land Use

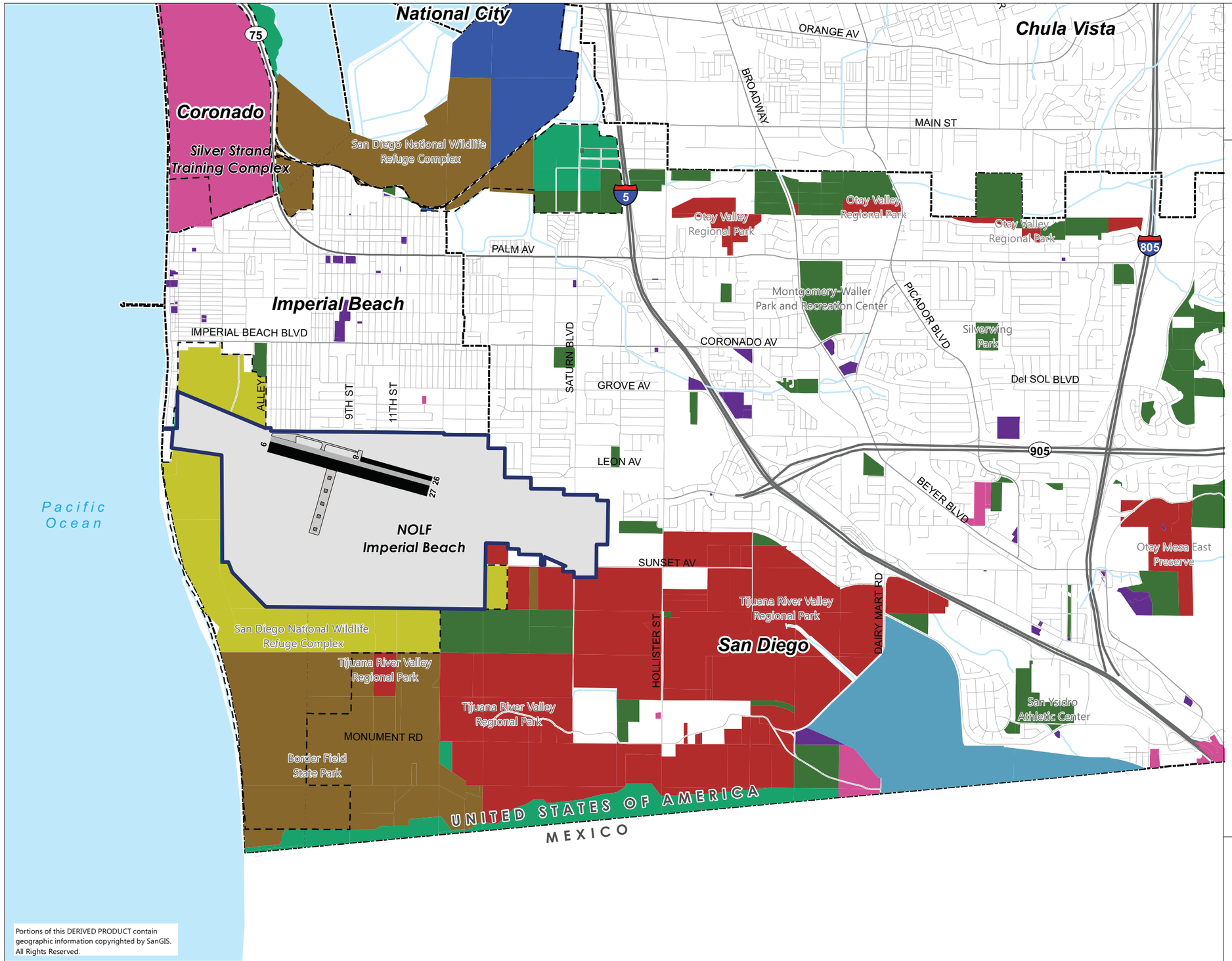
Per Exhibits E2-2 in Appendix E1 and E3-2 in Appendix E3, the NOLF IB off-airport environs are predominantly used for open space, agricultural and residential land uses. Existing land uses immediately north of the airfield are heavily urbanized and residential in nature with single family and multi-family residential development located adjacent to the northern property boundary. The westernmost edge of the airfield abuts beachfront single and multi-family residential development. Open space park and preserve land associated with the Tijuana River Valley surrounds the property on the southwestern and southern periphery. Agricultural and rural residential uses related to agriculture exist to the south and southeast of the property.

E1.5 Public Lands

As depicted on **Exhibit E1-3**, much of the land in the NOLF IB environs is publically owned and managed by local, state and federal entities.

The public lands on portions of the airport environs located on the west and extending to the southeast of the airfield are predominately rural and natural in character. The Tijuana River Valley Regional Park and portions of the San Diego National Wildlife Refuge Complex are located west and south of NOLF IB. The Tijuana River Valley Regional Park is owned and managed by the County of San Diego. The San Diego National Wildlife Refuge Complex is owned, in part, by the U.S. Fish and Wildlife Service (FWS) while other portions are owned by the State of California and local governments.

Much less of the land north and east of the airfield is publically owned. Aside from a portion of the San Diego National Wildlife Refuge Complex that extends from the westernmost protrusion of the airfield north to Imperial Beach Boulevard, most of the public lands are local community parks and institutional centers scattered throughout urbanized areas.



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- National Wildlife Refuge
- Airport Property Boundary
- Water

Public Land Ownership

- City Owned Park Land
- Local Government Institutional Land
- County Owned Park Land
- State Owned Park Land
- State Owned Institutional Land
- U.S. Fish and Wildlife Service
- International Boundary and Water Commission
- Federally Owned Institutional Land
- Other Federally Owned Open Space

north

0 3,000 ft.

Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads, rivers and highways, public land ownership, parks); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield); US Fish and Wildlife Service, February 2014 (National Wildlife Refuge Areas).

Prepared by: Ricondo & Associates, Inc., June 2014.

Exhibit E1-3

Public Lands

APPENDIX E
Technical Analysis

E2: Noise Compatibility Factor

E2.1 Defining Noise

Noise is unwanted sound. Sound is created by variations in air pressure and is measured in terms of pressure level. The decibel (dB) scale has been developed to describe sound pressure level. Because the human ear is more sensitive to sound at specific frequencies (or pitches), special weighting scales have been developed so that sound measurements can be adjusted to accurately describe sounds that people hear. The A-weighting scale is most common. The A-weighted decibel is often indicated by "dBA." Where the context clearly indicates that the A-weighting scale is being used, as in this ALUCP, the "A" is usually dropped and the term "dB" is used.

For airport noise studies, California law requires that noise be described using the Community Noise Equivalent Level (CNEL) metric.[1] CNEL is used to describe the total noise level in a community over a 24-hour period. Scientists and engineers refer to CNEL as a "24-hour, time-weighted, cumulative noise metric." Acoustical scientists developed CNEL to aid in predicting the effects of noise on communities. CNEL describes the total noise in a 24-hour period, with the addition of 4.8 dB to evening noise events (between 7:00 p.m. and 10:00 p.m.) and 10 dB to nighttime noise (between 10:00 p.m. and 7:00 a.m.). The evening and nighttime weights are added because noise in those periods is more disturbing to people than daytime noise. In aircraft noise studies, CNEL is calculated for an average day during a given study year. CNEL levels are mapped as noise contours at intervals of 5 dB.

[1] Title 21, California Code of Regulations, Subchapter 6, *Noise Standards*, Section 5012.

E2.2 Federal, State and Local Regulations and Guidance Related to Aircraft Noise

Since the 1960s aircraft noise has been the subject of numerous federal, state and local laws and policies aimed at reducing its impact on communities located in the vicinity of airports. These laws and policies have resulted in a wide range of programs operating at all levels of government. These programs can be classified into four broad categories:

- Programs to reduce the noise produced by aircraft
- Noise abatement programs to shift aircraft noise to areas where it will be less disturbing
- Noise mitigation programs to reduce the adverse effects of aircraft noise on noise-sensitive land uses
- Land use compatibility planning to promote the development of compatible land uses and to avoid the development of noise-sensitive land uses in high-noise areas

E2.2.1 Summary of Federal Regulations

Congress has enacted legislation over the past 40 years requiring the reduction of noise in new aircraft designs and requiring the retirement of the loudest aircraft from the civilian aircraft fleet.

Congress has also enacted legislation providing assistance to airport operators desiring to develop and implement noise compatibility plans and programs. The Federal Aviation Administration (FAA) promulgated the regulations governing this voluntary program in Title 14, Code of Federal Regulations (14 CFR) Part 150, Airport Noise Compatibility Planning. After completing a Part 150 Noise Compatibility Program (NCP), airport operators are eligible for funding assistance to implement FAA-approved measures in the NCP.

Department of Defense Instruction (DoDI) 4165.57 establishes the Air Installation Compatible Use Zones (AICUZ) program for military air installations.[2] The intent of the AICUZ program is to ensure air installation personnel are informed on the subject of land use compatibility and engaged in local community planning around military air installations. Specific policy guidance regarding the AICUZ program includes the following:

- The protection of public health and safety from potentially negative impacts associated with noise and safety around military air installations while ensuring the continued operational viability of military facilities
- Promoting cooperation with local planning authorities to encourage compatibility of land uses

[2] Department of Defense Instruction 4165.57, *Air Installations Compatible Use Zones (AICUZ)*, May 2, 2011.

- Reducing the need for land acquisitions to the minimum necessary to maintain operational integrity of air installations
- Encouraging on-base land use compatibility

E2.2.2 California Airport Noise Regulations

The State of California has enacted legislation to encourage the reduction of airport noise impacts and to mitigate the impact of noise on residents. Noise is generally considered the most extensive impact associated with airports because its effects are often experienced well beyond the airport boundary. One of the specific purposes cited by the California legislature in creating the airport land use compatibility planning process was to "minimize the public's exposure to excessive noise … within areas around public airports…"[3]

California Code of Regulations, Title 21, Subchapter 6, describes airport noise standards developed by the California Department of Transportation (Caltrans), as directed by the state legislature in Section 21669 of the State Aeronautics Act. The regulations establish 65 dB CNEL as the "level of noise acceptable to a reasonable person residing in the vicinity of an airport."[4]

Land uses described as incompatible with noise above 65 dB CNEL are:

- Residences (all types)
- Schools (public and private)
- Hospitals and convalescence homes
- Places of worship

According to the law, these uses are made compatible with noise above 65 dB CNEL if an avigation easement for noise is granted to the airport operator or if the buildings are sound-attenuated to reduce outdoor noise levels to 45 dB CNEL or less indoors in all habitable rooms.[5]

The statute explains that a "noise impact area" exists around an airport if any incompatible uses are within the 65 dB CNEL contour. Airports with noise impact areas are to establish noise monitoring programs and establish measures to reduce and ultimately eliminate the noise impact area. Until the noise impact area is eliminated, these airports are required to operate under variances issued by Caltrans.

E2.2.3 California Building Code

Title 24 of the California Code of Regulations, known as the California Building Code (CBC), sets 45 dB CNEL as the acceptable interior noise exposure for residential structures (other than

[3] California Public Utilities Code §21670(a)(2).
[4] Title 21, California Code of Regulations, Subchapter 6, *Noise Standards*, Section 5006.
[5] Title 21, California Code of Regulations, Subchapter 6, *Noise Standards*, Section 5014.

detached single-family residences) and other noise sensitive land uses. In areas where airport noise exposure levels exceed 60 dB CNEL, interior spaces require sound attenuation or an acoustical analysis to demonstrate that airport noise would be attenuated to meet the 45 dB standard. The noise level is to be derived from the established ALUCP or, if an ALUCP does not exist, from the noise element of the applicable city or county general plan.[6]

E2.2.4 California Airport Land Use Planning Handbook

The *California Airport Land Use Planning Handbook* (the *Handbook*) prepared by Caltrans includes an extensive discussion of aircraft noise and the factors that Airport Land Use Commissions (ALUCs) should consider in establishing noise compatibility standards and criteria.

Those factors are:

- Background noise levels in the community – aircraft noise at any given level can be more disturbing in communities with low ambient noise levels than in louder urban settings
- Previous community experience with the noise source and community attitudes toward aircraft noise – the introduction of new noise sources can be particularly disturbing to many residents

The *Handbook* suggests that the 60 dB CNEL is an acceptable compatibility threshold at most airports. It is particularly appropriate in mild climates where windows are often open.[7]

E2.3 Technical Analysis

California law requires that ALUCPs for military airports must be consistent with the safety and noise standards in the AICUZ studies prepared for those airports.[8] This section describes the AICUZ program, as administered by the U.S. Navy and the noise analysis from the 2011 AICUZ study prepared for NOLF IB.

E2.3.1 Department of the Navy AICUZ Program Guidance

Department of the Navy guidance for air installation noise compatibility calls for undertaking a noise study to develop noise exposure contours based on a future operational scenario. The prospective noise contours should reflect installation-specific operational characteristics such as flight tracks, aircraft fleet mix, aircraft flight characteristics, and the time and frequency of operations. The projections for types of aircraft and operational intensity are to be based on unclassified estimates for future mission requirements. When future estimates are not available, current year noise contours can be an acceptable substitute. The noise contours should be graphically presented in an AICUZ study, and practical alternatives that reduce noise

6 California Building Code, Title 24, Part 2, Chapter 12, Section 1207.11.3, *Airport Noise Sources.*
7 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 4-7.
8 California Public Utilities Code, §21675(b).

impacts on surrounding communities while preserving mission capability should be considered.

Department of the Navy guidance requires use of the CNEL descriptor in the state of California. The CNEL noise contour maps are to be based on Average Annual Day (AAD) operations unless use of the Average Busy Day (ABD) is more appropriate for a particular setting. AICUZ noise maps for installations in California must depict the 60, 65, 70, 75 and 80 dB CNEL contours. If there is a history of local noise complaints occurring outside of the 60 dB CNEL contour, then use of lower noise contours may be warranted. The noise contours for rotary-wing facilities must be developed with the Rotorcraft Noise Model (RNM) program until the Advanced Acoustic Model (AAM) is approved by the Department of Defense.

Once contours have been developed, Department of the Navy guidance requires the noise exposure area to be divided into three noise zones with varying recommended land use restrictions. Noise Zone 1 is the area outside the 65 dB CNEL contour and is considered an area with minimal noise impacts where land use restrictions are not necessary. Noise Zone 2 is between 65 and 75 dB CNEL and is considered an area with moderate noise impacts where land use restrictions become necessary. Noise Zone 3 is the area inside the 75 dB CNEL contour with the most restrictive land use controls.

A noise compatibility table with noise policy recommendations is published by the Department of the Navy. The table utilizes Standard Land Use Coding Manual[9] classifications cross-referenced with the noise zones described above to prescribe noise compatibility policies. Compatibility policy recommendations may take into account local sound attenuation regulations, building code standards, and restrictive use easements already in place.

E2.3.2 2011 AICUZ Study for Imperial Beach

The Navy completed an AICUZ study for Naval Air Station (NAS) North Island and NOLF IB in 2011.[10] The AICUZ study for NOLF IB presents noise contour maps developed in a separate noise exposure study. [11]

The AICUZ noise exposure study prepared noise contour maps for the current condition and prospective future condition. The noise contours were developed using the Rotorcraft Noise Model (RNM) Version 7.2.4 noise modeling program, in accordance with Department of the Navy guidance.[12]

9 U.S. Department of Transportation, Federal Highway Administration, *Standard Land Use Coding Manual*, March 1977.

10 The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Study Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California,* prepared for NAVFAC-SW, 201.

11 Wyle, Aviation Services, Wyle Report WR10-18: *AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California*, September 2010.

12 Wyle, Aviation Services, Wyle Report WR10-18: *AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California*, September 2010, p 3.

Data for the following variables were included in the noise modeling input files:

- Altitude and mean annual temperature
- Runway layout (runway end location, runway end elevation, length, displaced threshold dimensions)
- Aircraft flight track definitions
- Aircraft approach and departure climb profiles
- Runway use and flight track utilization by aircraft type

In addition, the RNM uses a digital terrain file representing the topography in the area around the airfield. This allows the calculated noise levels to accurately reflect the distance of aircraft from the varying ground surface elevations throughout the area.

The baseline scenario, representing current conditions, was based on the average number of annual operations for the 7-year period from 2003 through 2009. During that period, an average of 248,726 annual operations occurred, equating to 387[13] Average Annual Daily (AAD) flight operations.[14] The aircraft fleet includes only helicopters, all of which are variants of the H-60 Seahawk. The noise study assumes 28% of the operations at NOLF IB occur during the evening (1900-2200) and two percent occurring during the nighttime period (2200-0700). Touch-and-go operations make up 86% of total flight operations at NOLF IB. The remainder is split between arrivals and departures, including interfacility operations between NAS North Island and NOLF IB.

Table E2-1 summarizes baseline operations at NOLF IB by type of operation and time of day.

Table E2-1: NOLF IB Baseline Average Daily Operations by Type and Time of Day

Operation Type	0700 – 1900	1900 – 2200	2200 - 0700	Total
Departures	31.76	13.42	0.91	46.09
Arrivals	31.64	13.51	0.95	46.09
Touch and Go	206.24	82.50	5.89	294.63
Total	269.64	109.43	7.75	386.81

Source: Wyle, Aviation Services, Wyle Report WR10-18: AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California, September 2010, Table 6.
Prepared by: Ricondo & Associates, Inc., June 2013.

[13] The annual operations total counts each touch-and-go as two operations – an arrival and a departure. The AAD operations count treats each touch-and-go as a single operation.

[14] Wyle, Aviation Services, Wyle Report WR10-18: *AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California*, September 2010, pp 2-3.

Prospective future noise contours were developed for an operational tempo that could be expected to occur in calendar year 2020. The prospective scenario assumes exclusive use of the airfield by H-60 helicopters and a 30% increase in operations. The prospective contours are based on 503[15] Average Annual Daily operations, as indicated in **Table E2-2**. Due to the increased operations, the prospective future contours for NOLF IB increase slightly from the baseline. The AICUZ utilizes the prospective contours as the basis for its noise compatibility recommendations.[16]

Table E2-2: NOLF IB Prospective Future Average Daily Operations by Type and Time of Day

Operation Type	0700 – 1900	1900 – 2200	2200 - 0700	Total
Departures	41.29	17.45	1.18	59.92
Arrivals	41.13	17.56	1.23	59.92
Touch and Go	268.11	107.24	7.66	383.02
Total	350.53	142.26	10.07	502.86

Source: Wyle, Aviation Services, Wyle Report WR10-18: AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California, September 2010, Table 11.
Prepared by: Ricondo & Associates, Inc., June 2013.

Table E2-3 presents runway utilization summary data for operations occurring on Runway 27 and Helipads 1- 5, depicted on **Exhibit E1-1**.

Exhibit E2-1 depicts the prospective noise contours at NOLF IB. The 70 and 75 dB CNEL contours are fully contained on the facility property. The 65 dB CNEL extends off the property to the southeast and south. The 60 dB CNEL contour also extends off the property to the southeast and south. A small part of the 60 dB CNEL contour also extends north of Tower Road.

An unusual feature of the prospective noise contours is the noncontiguous portion of the 60 and 65 dB CNEL contours, south of Monument Road. This reflects the effect of high terrain directly beneath a flight track used for departures from NOLF IB. As the helicopter fly over this high terrain, they are close enough to the ground to produce noise at the 60 to 65 dB CNEL level. (See **Exhibit E5-1** for a portrayal of the flight tracks at NOLF IB.)

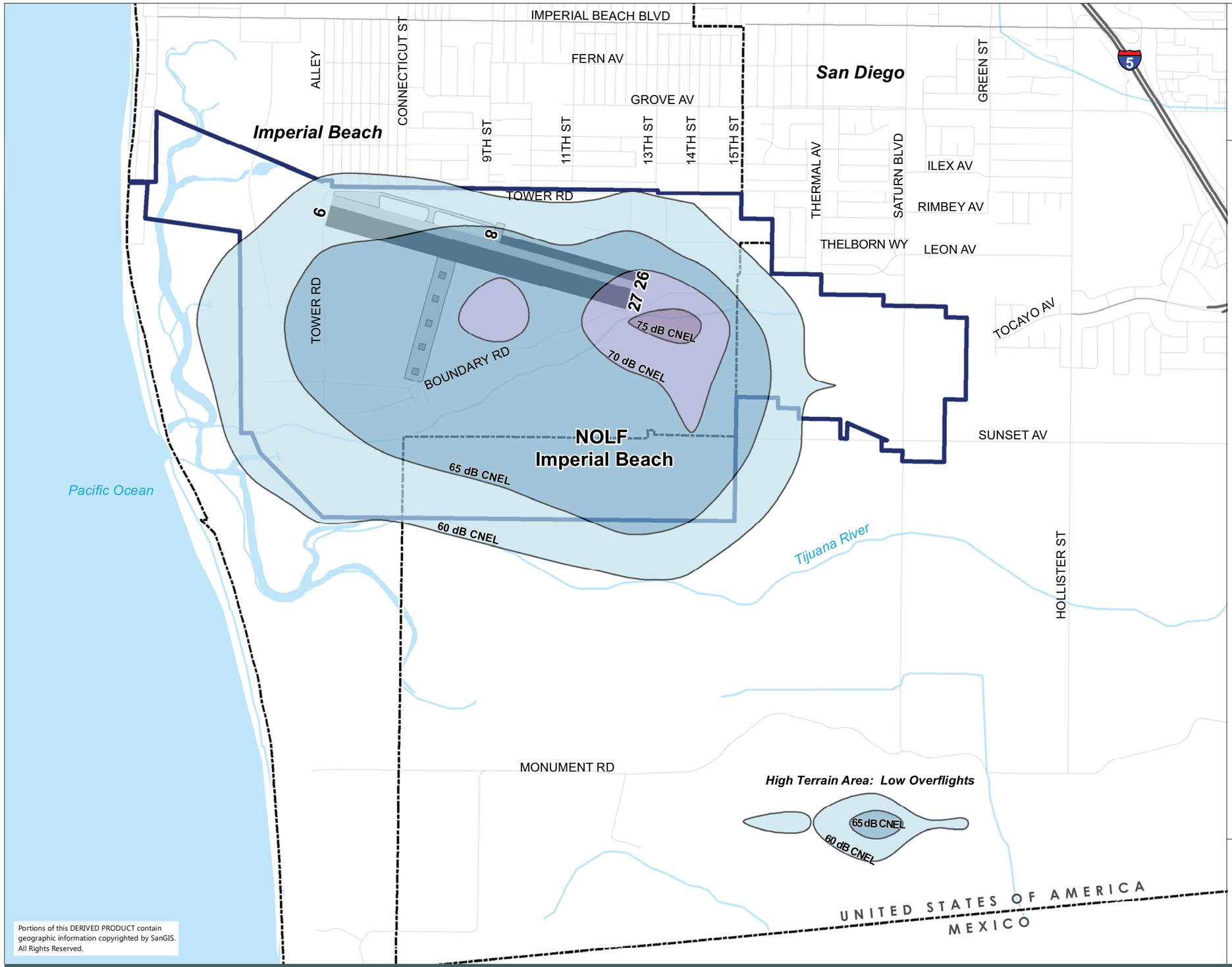
Exhibits E2-2 and **E2-3** depict the noise contours with respect to existing land use and general plan land use.

[15] The AAD operations count treats each touch-and-go as a single operation.

Table E2-3: NOLF IB Baseline and Prospective Future Runway Utilization

Operation Type	Runway/Helipad	Utilization
Departures		
	27	100%
Interfacility Departures		
	27	45%
	P1	12%
	P2	17%
	P3	8%
	P4	14%
	P5	4%
Arrivals		
	27	100%
Interfacility Arrivals		
	27	44%
	P1	8%
	P2	17%
	P3	7%
	P4	17%
	P5	7%
Touch-and-Go		
	27	44%
	P1	8%
	P2	17%
	P3	7%
	P4	17%
	P5	7%

Source: Wyle, Aviation Services, Wyle Report WR10-18: AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California, September 2010, Table 6 and Table 11.
Prepared by: Ricondo & Associates, Inc., June 2013.



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Water

Forecast Noise Exposure Ranges:

- 60 - 65 dB CNEL
- 65 - 70 dB CNEL
- 70 - 75 dB CNEL
- 75 + dB CNEL

north

0 1,600 ft.

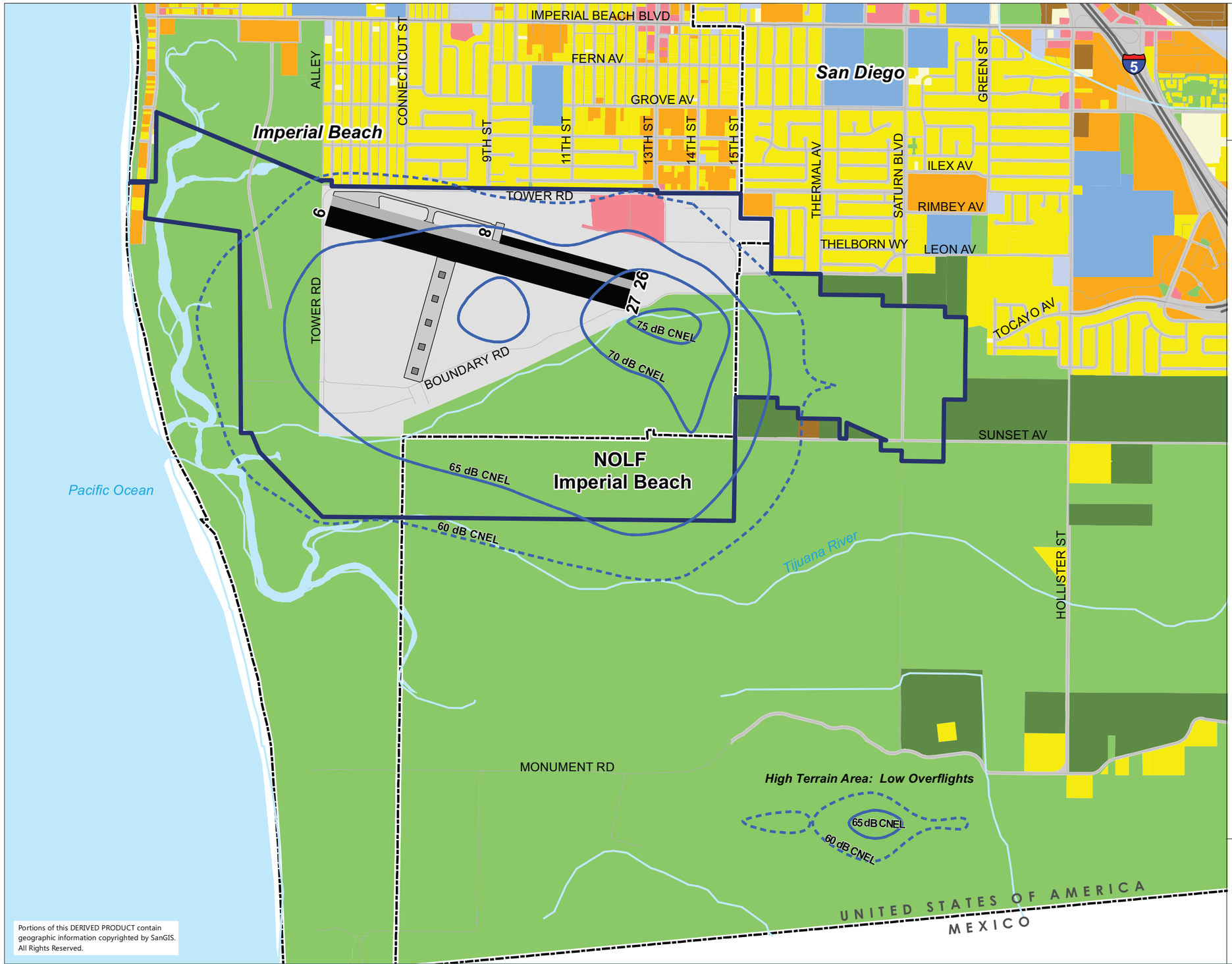
Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads, rivers and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, noise contours).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit E2-1

Prospective Noise Contours



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Prospective Noise Contours

Existing Land Use

- Residential - Single Family
- Residential - Multi-Family
- Mobile Homes
- Mixed Use
- Shopping Centers
- Commercial and Office
- Heavy Industrial
- Light Industrial
- Extractive Industry
- Education
- Institutions
- Open Space, Parks, Recreation
- Agriculture
- Military
- Transportation, Communication, Utilities
- Undeveloped
- Water

north

0 1,600 ft.

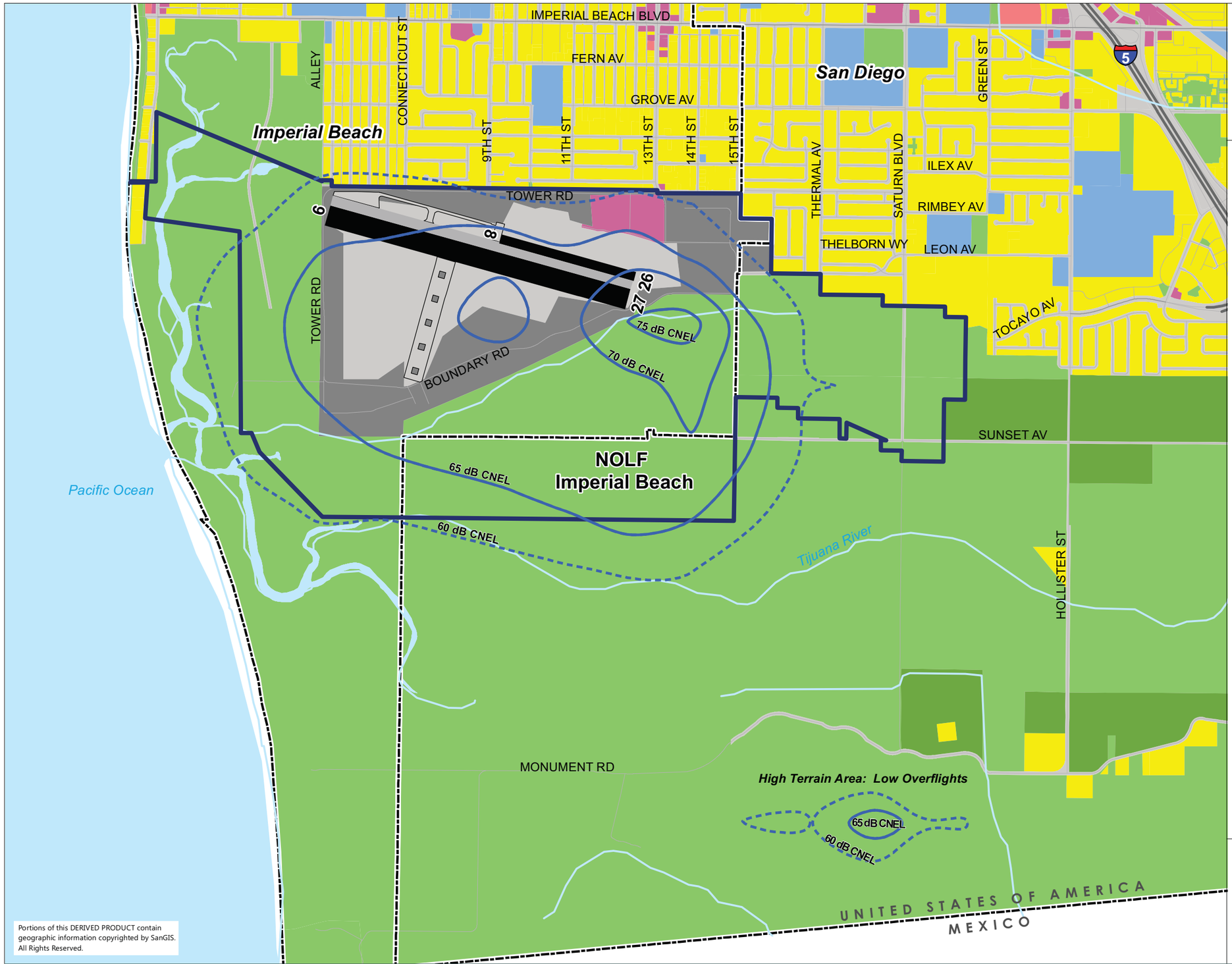
Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways, existing land use); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, noise contours).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit E2-2

Prospective Noise Exposure and Existing Land Use



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Prospective Noise Contours

General Plan Land Use

- Residential
- Commercial
- Mixed Use
- Institutional
- Military
- Open Space and Recreation
- Transportation, Communications, Utilities
- Agriculture
- Water

north

0 1,600 ft.

Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways, general plan land use); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, noise contours).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit E2-3

Prospective Noise Exposure and General Plan Land Use

E2.4 Noise Compatibility Policy Considerations

The objective of the noise compatibility policies and standards of the ALUCP is to ensure that new development within the noise compatibility boundary (AICUZ prospective noise contours) is compatible with the level of noise to which it is exposed.

According to state law, the ALUCPs for military airports must be consistent with the AICUZ studies for the facilities. The Department of the Navy divides air installation noise exposure areas into 3 zones in AICUZ studies. Noise Zones 1, 2, and 3 are associated with ascending levels of noise impacts. Noise Zone 1 is the area around the installation with noise exposure of less than 65 dB CNEL. Noise Zone 2 is the area exposed to noise levels ranging from 65–74 dB CNEL where AICUZ compatibility criteria recommend prohibitions on residential development and a few other noise sensitive uses such as nursing homes, outdoor music venues, and facilities for public assembly. Noise Zone 3 is the area exposed to noise levels of 75 dB CNEL and higher. The most restrictive noise compatibility criteria are recommended for this area. The specific noise compatibility recommendations of the NOLF IB AICUZ study, summarized in Table E2-4, provide the basis for the noise compatibility policies and standards presented in Chapter 2 of this ALUCP.

Table E2-4 (1 of 2) Land Use Compatibility Guidance

LAND USE		Suggested Land Use Compatibility						
		Noise Zone 1 (CNEL)		Noise Zone 2 (CNEL)		Noise Zone 3 (CNEL)		
SLUCM No.	LAND USE NAME	<55	55–64	65–69	70–74	75–79	80–84	85+
	Residential							
11	Household units	Y	Y [1]	N [1]	N [1]	N	N	N
11.11	Single units: detached	Y	Y [1]	N [1]	N [1]	N	N	N
11.12	Single units: semidetached	Y	Y [1]	N [1]	N [1]	N	N	N
11.13	Single units: attached row	Y	Y [1]	N [1]	N [1]	N	N	N
11.21	Two units: side-by-side	Y	Y [1]	N [1]	N [1]	N	N	N
11.22	Two units: one above the other	Y	Y [1]	N [1]	N [1]	N	N	N
11.31	Apartments: walk-up	Y	Y [1]	N [1]	N [1]	N	N	N
11.32	Apartments: elevator	Y	Y [1]	N [1]	N [1]	N	N	N
12	Group quarters	Y	Y [1]	N [1]	N [1]	N	N	N
13	Residential hotels	Y	Y [1]	N [1]	N [1]	N	N	N
14	Mobile home parks or courts	Y	Y [1]	N	N	N	N	N
15	Transient lodgings	Y	Y [1]	N [1]	N [1]	N [1]	N	N
16	Other residential	Y	Y [1]	N [1]	N [1]	N	N	N
20	*Manufacturing*							
21	Food and kindred products; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
22	Textile mill products; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
23	Apparel and other finished products; products made from fabrics, leather, and similar materials; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
24	Lumber and wood products (except furniture); manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
25	Furniture and fixtures; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
26	Paper and allied products; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
27	Printing, publishing, and allied industries	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
28	Chemicals and allied products; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
29	Petroleum refining and related industries	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
30	*Manufacturing (continued)*							
31	Rubber and misc. plastic products; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
32	Stone, clay, and glass products; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
33	Primary metal products; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
34	Fabricated metal products; manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
35	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	Y	Y	Y	25	30	N	N
39	Miscellaneous manufacturing	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
40	*Transportation, communication, and utilities*							
41	Railroad, rapid rail transit, and street railway transportation	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
42	Motor vehicle transportation	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
43	Aircraft transportation	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
44	Marine craft transportation	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
45	Highway and street right-of-way	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
46	Automobile parking	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
47	Communication	Y	Y	Y	25 [5]	30 [5]	N	N
48	Utilities	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
49	Other transportation, communication, and utilities	Y	Y	Y	25 [5]	30 [5]	N	N

Table E2-4 (2 of 2) Land Use Compatibility Guidance

LAND USE		Suggested Land Use Compatibility						
		Noise Zone 1 (CNEL)		Noise Zone 2 (CNEL)		Noise Zone 3 (CNEL)		
SLUCM No.	LAND USE NAME	<55	55–64	65–69	70–74	75–79	80–84	85+
50	*Trade*							
51	Wholesale trade	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
52	Retail trade—building materials, hardware and farm equipment	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
53	Retail trade—shopping centers	Y	Y	Y	25	30	N	N
54	Retail trade—food	Y	Y	Y	25	30	N	N
55	Retail trade—automotive, marine craft, aircraft and accessories	Y	Y	Y	25	30	N	N
56	Retail trade—apparel and accessories	Y	Y	Y	25	30	N	N
57	Retail trade—furniture, home furnishings and equipment	Y	Y	Y	25	30	N	N
58	Retail trade—eating and drinking establishments	Y	Y	Y	25	30	N	N
59	Other retail trade	Y	Y	Y	25	30	N	N
60	*Services*							
61	Finance, insurance, and real estate services	Y	Y	Y	25	30	N	N
62	Personal services	Y	Y	Y	25	30	N	N
62.4	Cemeteries	Y	Y	Y	Y [2]	Y [3]	Y [4,11]	Y [6,11]
63	Business services	Y	Y	Y	25	30	N	N
63.7	Warehousing and storage	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
64	Repair services	Y	Y	Y	Y [2]	Y [3]	Y [4]	N
65	Professional services	Y	Y	Y	25	30	N	N
65.1	Hospitals, other medical facilities	Y	Y [1]	25	30	N	N	N
65.16	Nursing homes	Y	Y	N [1]	N [1]	N	N	N
66	Contract construction services	Y	Y	Y	25	30	N	N
67	Government services	Y	Y [1]	Y [1]	25	30	N	N
68	Educational services	Y	Y [1]	25	30	N	N	N
69	Miscellaneous	Y	Y	Y	25	30	N	N
70	*Cultural, entertainment, and recreational*							
71	Cultural activities (churches)	Y	Y [1]	25	30	N	N	N
71.2	Nature exhibits	Y	Y [1]	Y [1]	N	N	N	N
72	Public assembly	Y	Y [1]	Y	N	N	N	N
72.1	Auditoriums, concert halls	Y	Y	25	30	N	N	N
72.11	Outdoor music shells, amphitheaters	Y	Y [1]	N	N	N	N	N
72.2	Outdoor sports arenas, spectator sports	Y	Y	Y [7]	Y [7]	N	N	N
73	Amusements	Y	Y	Y	Y	N	N	N
74	Recreational activities (golf courses, riding stables, water recreation)	Y	Y [1]	Y [1]	25	30	N	N
75	Resorts and group camps	Y	Y [1]	Y [1]	Y [1]	N	N	N
76	Parks	Y	Y [1]	Y [1]	Y [1]	N	N	N
79	Other cultural, entertainment, and recreation facilities	Y	Y [1]	Y [1]	Y [1]	N	N	N
80	*Resource production and extraction*							
81	Agriculture (except livestock)	Y	Y	Y [8]	Y [9]	Y [10]	Y [10,11]	Y [10,11]
81.5	Livestock farming	Y	Y	Y [8]	Y [9]	N	N	N
81.7	Animal breeding	Y	Y	Y [8]	Y [9]	N	N	N
82	Agriculture-related activities	Y	Y	Y [8]	Y [9]	Y [10]	Y [10,11]	Y [10,11]
83	Forestry activities	Y	Y	Y [8]	Y [9]	Y [10]	Y [10,11]	Y [10,11]
84	Fishing activities	Y	Y	Y	Y	Y	Y	Y
85	Mining activities	Y	Y	Y	Y	Y	Y	Y
89	Other resource production or extraction	Y	Y	Y	Y	Y	Y	Y

Table E2-4 Key:

SLUCM Standard Land Use Coding Manual, U.S. Department of Transportation.

Y (Yes) Land use and related structures compatible without restrictions.

N (No) Land use and related structures are not compatible and should be prohibited.

Y* (Yes with Restrictions) Land use and related structures are generally compatible. However, see note(s) indicated by the superscript.

N* (No with Exceptions) Land use and related structures are generally incompatible. However, see notes indicated by the superscript.

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, or 35 The numbers refer to NLR levels. Land use and related structures generally are compatible; however, measures to achieve NLR of 25, 30, or 35 must be incorporated into design and construction of structures. Measures to achieve an overall noise reduction do not necessarily solve noise difficulties outside the structure, and additional evaluation is warranted. Also, see notes indicated by superscripts where they appear with one of these numbers.

DNL Day Night Average Sound Level.

CNEL Community Noise Equivalent Level (Normally within a very small decibel difference of DNL).

Ldn Mathematical symbol for DNL.

Notes:

1.

a) Although local conditions regarding the need for housing may require residential use in these zones, residential use is discouraged in CNEL 65–69 and strongly discouraged in CNEL 70–74. The absence of viable alternative development options should be determined and an evaluation should be conducted locally prior to local approvals, indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these zones.

b) Where the community determines that these uses must be allowed, measures to achieve and outdoor to indoor NLR of at least 25 dB in CNEL 65–69 and NLR of 30 dB in CNEL 70–74 should be incorporated into building codes and be in individual approvals; for transient housing, an NLR of at least 35 dB should be incorporated in CNEL 75–79.

c) Normal permanent 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, upgraded Sound Transmission Class ratings in windows and doors and closed windows year-round. Additional consideration should be given to modifying NLR levels based on peak noise levels or vibrations.

d) NLR criteria will not eliminate outdoor noise problems. However, building location and site planning, design, and use of berms and barriers can help mitigate outdoor noise exposure NLR particularly from ground-level sources. Measures that reduce noise at a site should be used wherever practical in preference to measures that protect only interior spaces.

2. Measures to achieve NLR of 25 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.

3. Measures to achieve NLR of 30 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.

4. Measures to achieve NLR of 35 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.

5. If project or proposed development is noise sensitive, use indicated NLR; if not, land use is compatible without NLR.

6. No buildings.

7. Land use compatible provided special sound reinforcement systems are installed.

8. Residential buildings require NLR of 25.

9. Residential buildings require NLR of 30.

10. Residential buildings not permitted.

11. Land use not recommended, but if community decides use is necessary, hearing protection devices should be worn.

Source: Department of Navy, Chief of Naval Operations OPNAVINST 11010.36C/Commandant of Marine Corps MCO 11010.16 of 9 Oct 2008. As reported in The Onyx Group, Air Installation Compatible Use Zones (AICUZ) Update, Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California, prepared for NAVFAC-SW, 2011, Table C-1.
Prepared by: Ricondo & Associates, Inc., July 2013.

The noise compatibility policies and standards in **Chapter 2** of this ALUCP were developed based on the AICUZ noise compatibility criteria. AICUZ noise compatibility criteria were adapted to be consistent with previous ALUCPs developed for the urban airports in San Diego County. The ALUCP divides the noise exposure area into four noise ranges for the purpose of prescribing compatibility criteria rather than the three noise zones utilized by the AICUZ study. This has essentially divided the AICUZ Noise Zone 2 into two, five dB interval ranges (65-70 dB and 70-75 dB). Noise Zones 1 and 3 correspond to the <65 and >75 dB CNEL noise exposure ranges respectively. The compatibility criteria associated with each noise exposure range were adapted from the corresponding AICUZ noise zone guidance.

An additional six land use categories not specifically mentioned in the AICUZ study have been included in the ALUCP noise compatibility matrix. These uses have been included for consistency with other ALUCPs previously adopted by the ALUC.

- Assembly – Children
- Convention Center
- Fire and Police Stations
- Sport/Fitness Facility
- Theater – Movie/Live Performance/Dinner
- Aquaculture

APPENDIX E

Technical Analysis

E3: Safety Compatibility Factor

E3.1 Defining Safety Compatibility

Safety compatibility refers to land use policies intended to reduce the consequences of aircraft accidents within areas where the potential risk of accidents is a concern. The safety compatibility factor for Naval Outlying Landing Field Imperial Beach (NOLF IB) is based on the safety-related criteria and recommendations provided in the *Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach*.[1] The AICUZ study designated two safety zones, the Clear Zone (CZ) and the Accident Potential Zone (APZ) I, within which land use compatibility criteria and recommendations are proposed.

E3.2 Federal Guidance

The U.S. Department of Defense and the Department of the Navy provide safety compatibility guidance for local land use planning and regulatory agencies through the AICUZ program, although the federal government lacks direct jurisdiction over local land use planning or approval of land use plans, regulations and projects. The AICUZ guidance includes criteria for defining three sets of safety zones: Clear Zones (CZ) and Accident Potential Zones (APZ) I and II.

[1] The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Update, Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California*, prepared for NAVFAC-SW, 2011.

- **Clear Zones.** The clear zones conform to the geometry of the designated takeoff safety zones. This is the area beneath the VFR approach/departure surface, beginning 200 feet off the runway end and extending outward to a point where the approach/departure surface is 50 feet above the runway (or helicopter landing pad) elevation. The AICUZ guidance recommends the designation of clear zones for all visual flight rules (VFR) runways and landing pads.
- **APZ I.** APZ I extends beyond the clear zone along the approach/departure surface until that surface rises to 150 feet above the elevation of the established landing area. The AICUZ guidance recommends the designation of APZ I for any visual flight rules (VFR) runway and landing pad.
- **APZ-II.** APZ-II is an area beyond APZ I where there is still some accident risk potential at a level lower than that of APZ I. APZ II is not usually employed for rotary-wing facilities unless warranted by local accident history.[2]

IFR helicopter facilities are not required to have clear zones or APZs due to the strict land use controls associated with IFR landing areas.

The Department of the Navy provides a land use compatibility guidance table for incorporation into AICUZ studies.[3] The table includes recommendations regarding the compatibility of various land uses within the different safety zones. Maximum residential densities and nonresidential floor area ratios (FARs) are also indicated for land uses that are considered conditionally compatible within the safety zones.

A 5- to 10-year operations projection is useful when developing APZs and compatibility policies. Typically referred to as the prospective scenario, it ensures the military operational tempo is accounted for while providing some degree of stability and confidence for local communities to develop long-range plans. Recommended land uses should be based on standard community planning practices for acceptability and ease of implementation.

E3.3 State Regulations and Guidance

E3.3.1 State Education Code

The California Education Code, Section 17215, restricts school districts and charter schools from purchasing or leasing school sites within two nautical miles of an existing or planned runway. School boards considering such sites must notify the State Department of Education, which informs Caltrans.

Caltrans has 30 days to investigate the site and issue a report with a recommendation on the acquisition proposal. If Caltrans does not support the site acquisition, the school board or charter school may not acquire the site for school development. If Caltrans supports the

[2] OPNAV Instruction 11010.36C, October 2008.
[3] OPNAV Instruction 11010.36C, Table 2, October 2008.

acquisition, the school board or charter school may acquire the site, after holding a public hearing.

E3.3.2 State of California Guidance

Caltrans has prepared *the California Airport Land Use Planning Handbook* (the *Handbook*) as required by state law.[4] The law requires that Airport Land Use Commissions (ALUCs) be guided by the *Handbook* in developing airport land use compatibility plans and policies. At military airports, the law requires that ALUCPs must be consistent with the applicable AICUZ study.[5] See **Chapter 1** of this ALUCP for additional background information.

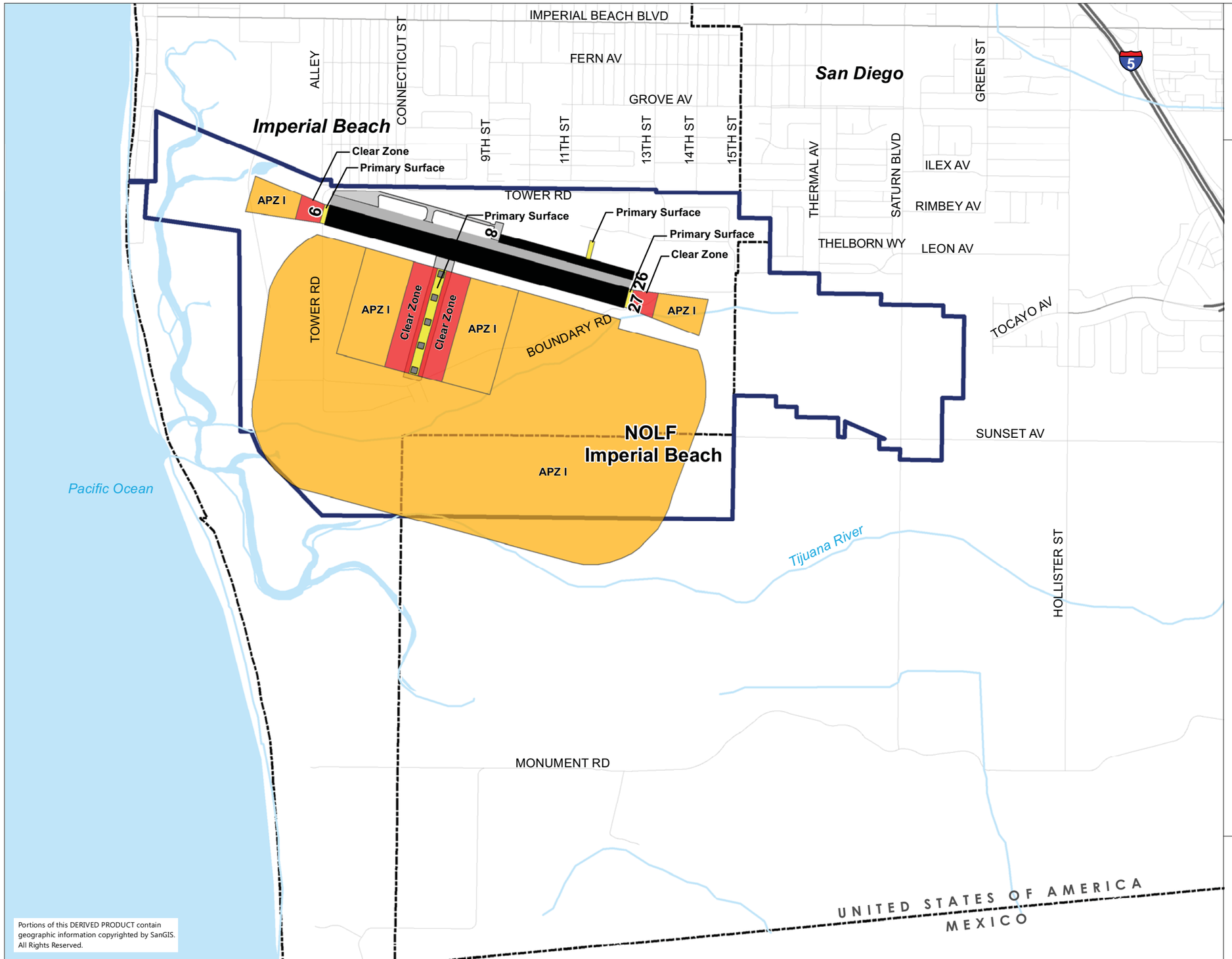
The *Handbook* discusses the importance of the concept of risk in defining airport safety compatibility zones and land use policies. Risk is the product of two factors – (1) the probability of an aircraft accident at any location and (2) the consequences if an accident should one occur. The components of risk vary based on the operations at any given airport. Accidents tend to be much more common among light general aviation aircraft than commercial air carrier aircraft, for example. The consequences of light aircraft accidents, however, are much less severe than for commercial aircraft. Indeed, the consequences of air carrier accidents can be quite severe given the size of the aircraft, the large quantities of fuel they can carry, and their relatively high speeds.

The *Handbook* indicates the AICUZ guidelines provide an appropriate basis for safety compatibility policies at military air installations.[6] According to the *Handbook*, ALUCs may elect to use the AICUZ guidance directly. However, the AICUZ guidance should be carefully reviewed by the ALUC to ensure specific operational characteristics and local land use patterns are properly addressed. The ALUC should revise compatibility criteria when warranted by operational and local concerns.[7]

E3.4 Safety Zone Designations

Exhibit E3-1 depicts clear zones and APZ-I areas per the NOLF IB AICUZ Study. Clear zones and APZ-I areas are designated for Helipads 1 through 5 and at both ends of the primary runway (Runway 9-27). The AICUZ study also designates an additional APZ-I beneath the closed traffic pattern (the oval-shaped area south of the runway) where there is high traffic intensity. Land use compatibility criteria are recommended for areas within the clear zones and APZ-I. Where restrictions on nonresidential development are warranted, recommended maximum FARs are provided according to land use type. Residential dwelling units are not compatible in the clear zones or APZ-I according to the AICUZ criteria. The clear zones are on base property, and the APZ I areas extend off the property only in small areas directly south and southwest of the installation.

4 California Public Utilities Code §21674.7.
5 California Public Utilities Code §21675(b).
6 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 3-26.
7 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 3-27.



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LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Water

Safety Compatibility Zones:

- Primary Surface
- Accident Potential Zone (APZ) I
- Clear Zone (CZ)

north

0 1,600 ft.

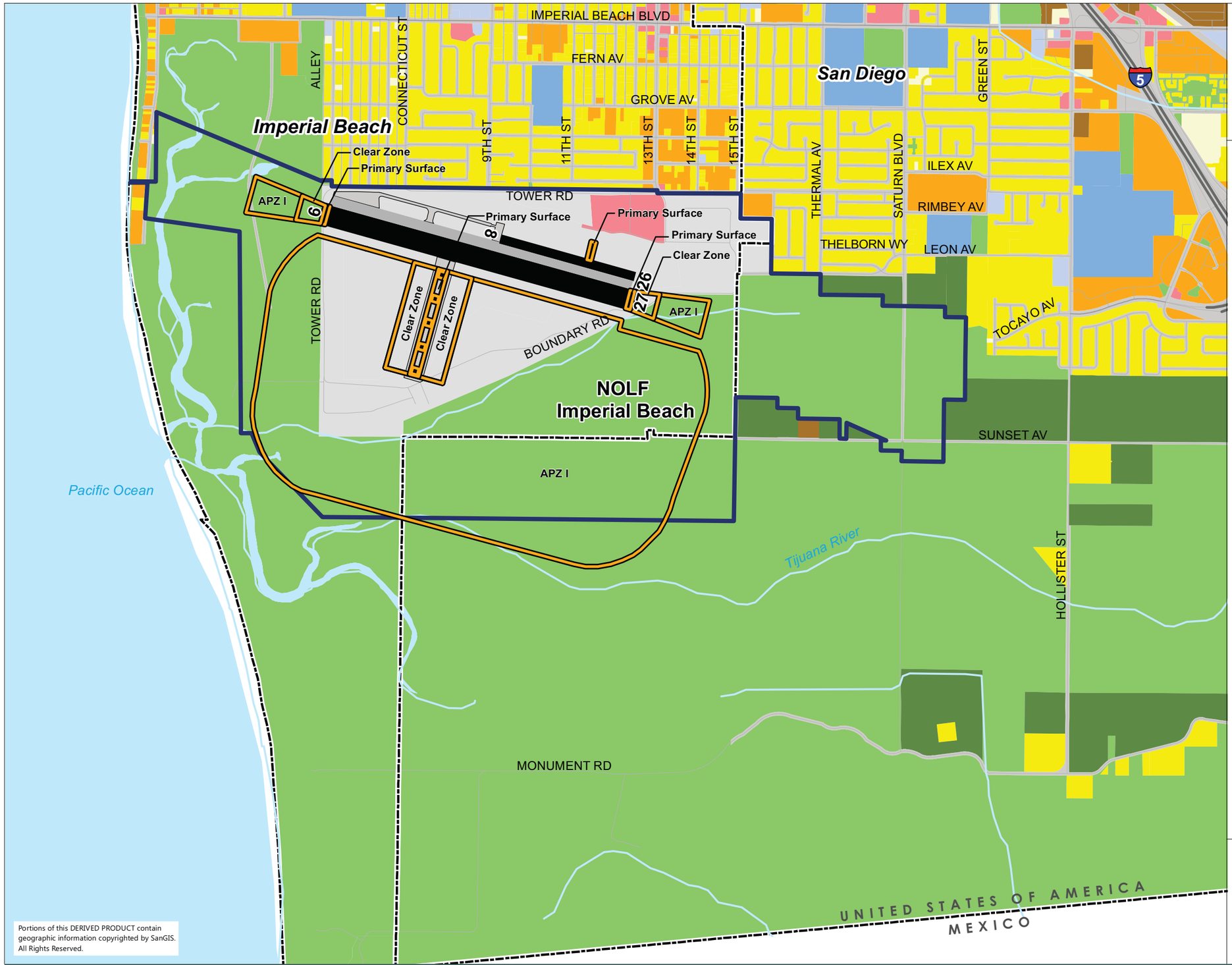
Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads, rivers and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, safety zones).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit E3-1

Accident Potential Zones



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LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Accident Potential Zones (APZ)

Existing Land Use

- Residential - Single Family
- Residential - Multi-Family
- Mobile Homes
- Mixed Use
- Shopping Centers
- Commercial and Office
- Heavy Industrial
- Light Industrial
- Extractive Industry
- Education
- Institutions
- Open Space, Parks, Recreation
- Agriculture
- Military
- Transportation, Communication, Utilities
- Undeveloped
- Water

north

0 1,600 ft.

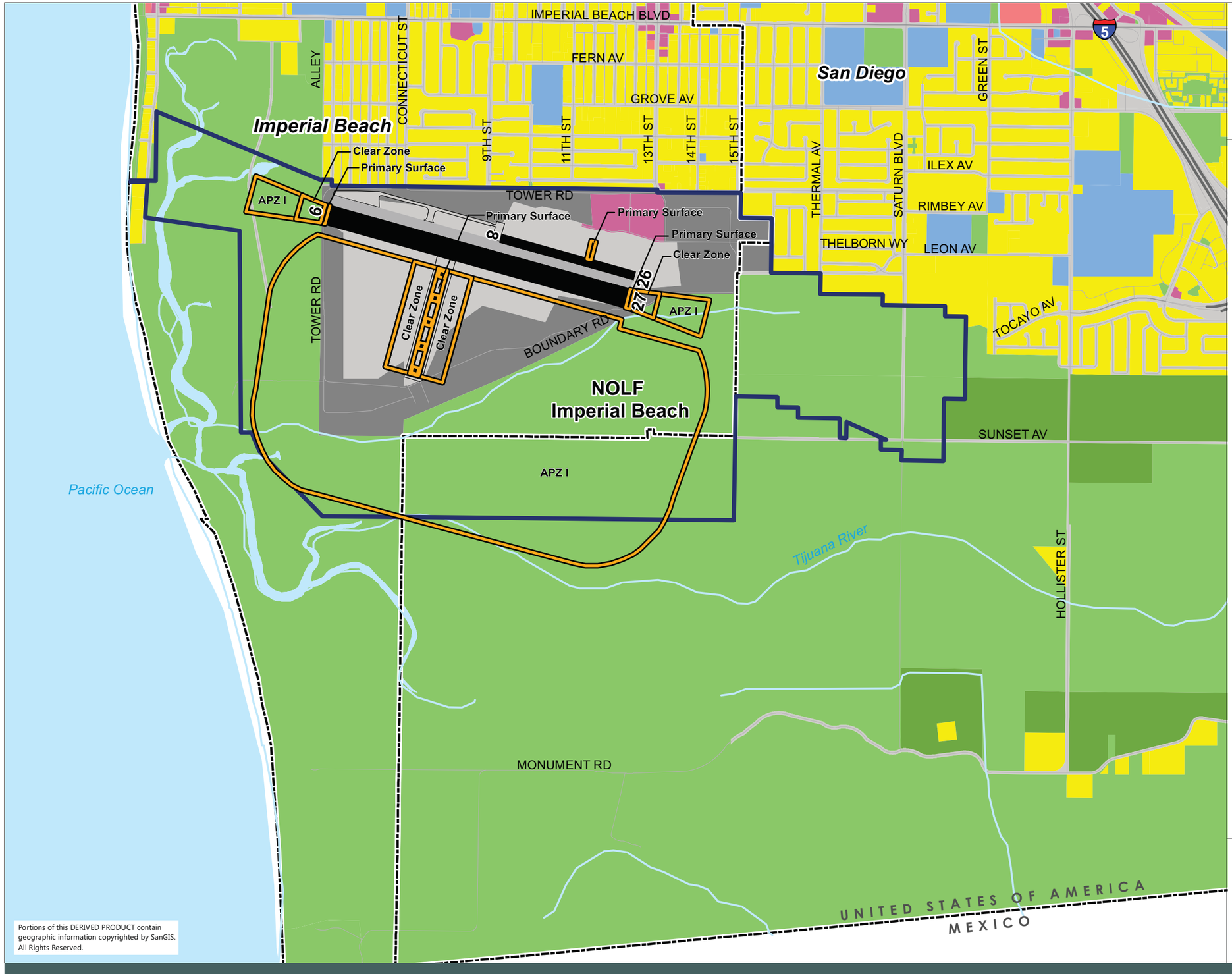
Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways, exisiting land use); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, safety zones).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit E3-2

Accident Potential Zones and Existing Land Use



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Accident Potential Zones (APZ)

General Plan Land Use

- Residential
- Commercial
- Industrial
- Mixed Use
- Institutional
- Military
- Open Space and Recreation
- Transportation, Communications, Utilities
- Indian Reservations
- Agriculture
- Water

north

0 1,600 ft.

Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways, general plan land use); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, safety zones).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit E3-3

Accident Potential Zones and General Plan Land Use

E3.5 Existing Land Use and General Plan Land Use Designations

Exhibit E3-2 depicts existing land use within the proposed safety zones. The existing land uses are currently open space areas in the City of San Diego Tijuana River Valley Community Planning Area and the City of Imperial Beach.

Exhibit E3-3 depicts land use plan designations in the area based on the City of Imperial Beach General Plan and the two City of San Diego community plans applying within the area.

E3.5.1 City of Imperial Beach General Plan and Local Coastal Plan

The City of Imperial Beach bounds NOLF IB on the north, south, and west. The general plan land use element establishes the policies governing the distribution of land uses in the City of Imperial Beach. According to the general plan land use map, low and medium density residential uses are designated north of NOLF IB and open space is designated on the west and south.[8]

E3.5.2 City of San Diego General Plan

The City of San Diego General Plan Land Use and Community Planning Element establishes citywide land use policies and implements a framework of individual community planning areas (CPAs) to address community level issues and detailed land use distribution.[9] NOLF IB is bounded on the east and south by the Otay Mesa-Nestor and Tijuana River Valley CPAs.

E3.5.2.1 Otay Mesa-Nestor Community Plan

According to the Otay Mesa-Nestor Community Plan, Community Land Use map, very low, low, and medium density planned residential uses and open space are designated east of NOLF IB.[10]

E3.5.2.2 Tijuana River Valley Local Coastal Program Land Use Plan

The Tijuana River Valley Local Coastal Program Land Use Plan emphasizes preservation and restoration of the river valley. As such, most of the land area has been designated for long-term preservation as open space.[11] The remaining land area (12%) is existing agricultural land. According to the community plan, the land south of NOLF IB is planned as open space.[12]

E3.6 Safety Compatibility Policy Considerations

This section presents proposed safety compatibility goals and objectives for this ALUCP, a review of the recommended AICUZ recommendations relating to safety policies and

8 City of Imperial Beach, *City of Imperial Beach General Plan & Local Coastal Plan*, October 19, 1994 (Updated October 2010), p. H-28.
9 City of San Diego, City of San Diego General Plan, March 2008, p. LU-3.
10 City of San Diego, Otay Mesa-Nestor Community Plan, May 6, 1997, Figure 2.
11 City of San Diego, Tijuana River Valley Local Coastal Program Land Use Plan, December 8, 1976 (Amended June 1, 1999), p. 2.
12 City of San Diego, Tijuana River Valley Local Coastal Program Land Use Plan, December 8, 1976 (Amended June 1, 1999), Figure 1.

standards, and an explanation of how the AICUZ recommendations are proposed to be adapted as proposed ALUCP policies and standards.

E3.6.1 Proposed Safety Compatibility Goal and Objectives

The following goal and objectives are the foundation of the safety compatibility policies and standards at NOLF IB.

Goal: Minimize the consequences of aircraft accidents and emergency landings to people and property on the ground.

Objectives:

- Preserve the compatible land use pattern within the proposed safety zones for NOLF IB.
- Avoid the future development of new land uses which the AICUZ advises to be prohibited within the safety zones.

E3.6.2 Recommended AICUZ Safety Compatibility Criteria

The AICUZ study includes recommended land use compatibility criteria for the clear zones and APZ I areas designated in the study. The AICUZ compatibility guidance is summarized in **Table E3-1**.[13] The AICUZ study utilized land use categories adapted from the Standard Land Use Coding Manual (SLUCM)[14] to provide an easily adaptable and familiar framework for local planners to incorporate AICUZ recommendations into their own plans.

The AICUZ guidance in **Table E3-1** indicates land use compatibility with a "Y" for compatible uses and "N" for incompatible uses. Some land uses are indicated as compatible ("Y") as long as specific supplementary criteria are met. The supplementary criteria, or conditions, are explained in the table notes or in the "Density Recommendation" column.

The AICUZ study recommends that construction of buildings within the Clear Zones not be allowed. Only a few open space uses are considered to be compatible within the clear zones, including crop farming, undeveloped land, and natural water features.

According to Table E3-1, only relatively low intensity nonresidential uses are considered compatible in APZ I. Maximum floor area ratios (FARs) are prescribed for the conditionally compatible uses. The FARs are calculated to yield nonresidential intensities of 25 people per acre in APZ I.

Residential development is considered incompatible in both the Clear Zone and APZ I.

[13] Table E3-1 includes recommended criteria for APZ II. That guidance does not apply to NOLF IB, as no APZ II areas are designated at NOLF IB.
[14] U.S. Department of Transportation, Federal Highway Administration, *Standard Land Use Coding Manual*, March 1977.

Table E3-1 (1 of 5) AICUZ Suggested Land Use Compatibility Criteria

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation	APZ-I Recommendation	APZ-II Recommendation	Density Recommendation
10	***Residential***				
11	Household units				
11.11	Single units: detached	N	N	Y[2]	Maximum density of 1-2 Du/Ac
11.12	Single units: semidetached	N	N	N	
11.13	Single units: attached row	N	N	N	
11.21	Two units: side-by-side	N	N	N	
11.22	Two units: one above the other	N	N	N	
11.31	Apartments: walk-up	N	N	N	
11.32	Apartments: elevator	N	N	N	
12	Group quarters	N	N	N	
13	Residential hotels	N	N	N	
14	Mobile home parks or courts	N	N	N	
15	Transient lodgings	N	N	N	
16	Other residential	N	N	N	
20	***Manufacturing***[3]				
21	Food and kindred products; manufacturing	N	N	Y	Maximum FAR 0.56 in APZ II
22	Textile mill products; manufacturing	N	N	Y	Same as above
23	Apparel and other finished products; products made from fabrics, leather, and similar materials; manufacturing	N	N	N	
24	Lumber and wood products (except furniture); manufacturing	N	Y	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
25	Furniture and fixtures; manufacturing	N	Y	Y	Same as above
26	Paper and allied products; manufacturing	N	Y	Y	Same as above
27	Printing, publishing, and allied industries	N	Y	Y	Same as above
28	Chemicals and allied products; manufacturing	N	N	N	
29	Petroleum refining and related industries	N	N	N	

Table E3-1 (2 of 5) AICUZ Suggested Land Use Compatibility Criteria

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation	APZ-I Recommendation	APZ-II Recommendation	Density Recommendation
30	***Manufacturing [3] (continued)***				
31	Rubber and misc. plastic products; manufacturing	N	N	N	
32	Stone, clay, and glass products; manufacturing	N	N	Y	Maximum FAR 0.56 in APZ II
33	Primary metal products; manufacturing	N	N	Y	Same as above
34	Fabricated metal products; manufacturing	N	N	Y	Same as above
35	Professional scientific, and controlling instruments; photographic and optical goods; watches and clocks	N	N	N	
39	Miscellaneous manufacturing	N	Y	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
40	***Transportation, communication, & utilities*** [4,5]				
41	Railroad, rapid rail transit, and street railway transportation	N	Y[5]	Y	Same as above.
42	Motor vehicle transportation	N	Y[5]	Y	Same as above
43	Aircraft transportation	N	Y[5]	Y	Same as above
44	Marine craft transportation	N	Y[5]	Y	Same as above
45	Highway and street right-of-way	N	Y[5]	Y	Same as above
46	Auto parking	N	Y[5]	Y	Same as above
47	Communication	N	Y[5]	Y	Same as above
48	Utilities	N	Y[5]	Y	Same as above
485	Solid waste disposal (landfills, incineration, etc.)	N	N	N	
49	Other transport, communication, and utilities	N	Y[5]	Y	See Note 5 below
50	***Trade***				
51	Wholesale trade	N	Y	Y	Maximum FAR of 0.28 in APZ I. & 0.56 in APZ II.
52	Retail trade—building materials, hardware and farm equipment	N	Y	Y	See Note 6 below
53	Retail trade[7] - shopping centers	N	N	Y	Maximum FAR of 0.16 in APZ II.
54	Retail trade—food	N	N	Y	Maximum FAR of 0.24 in APZ II
55	Retail trade—automotive, marine craft, aircraft and accessories	N	Y	Y	Maximum FAR of 0.14 in APZ I & 0.28 in APZ II
56	Retail trade—apparel and accessories	N	N	Y	Maximum FAR 0.28 in APZ II
57	Retail trade—furniture, home furnishings and equipment	N	N	Y	Same as above
58	Retail trade—eating and drinking establishments	N	N	N	
59	Other retail trade	N	N	Y	Maximum FAR of 0.16 in APZ II

Table E3-1 (3 of 5) AICUZ Suggested Land Use Compatibility Criteria

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation	APZ-I Recommendation	APZ-II Recommendation	Density Recommendation
60	***Services***[6]				
61	Finance, insurance, and real estate services	N	N	Y	Maximum FAR of 0.22 for "General Office/Office park" in APZ II
62	Personal services	N	N	Y	Office uses only. Maximum FAR of 0.22 in APZ II
62.4	Cemeteries	N	Y[9]	Y[9]	
63	Business services (credit reporting; mail, stenographic, reproduction; advertising)	N	N	Y	Max. FAR of 0.22 in APZ II
63.7	Warehousing and storage services	N	Y	Y	Max. FAR 1.0 APZ I; 2.0 in APZ II
64	Repair services	N	Y	Y	Max. FAR of 0.11 APZ I; 0.22 in APZ II
65	Professional services	N	N	Y	Max. FAR of 0.22 in APZ II
65.1	Hospitals, nursing homes	N	N	N	
65.1	Other medical facilities	N	N	N	
66	Contract construction services	N	Y	Y	Max. FAR of 0.11 APZ I; 0.22 in APZ II
67	Government services	N	N	Y	Max FAR of 0.24 in APZ II
68	Educational services	N	N	N	
69	Miscellaneous	N	N	Y	Max. FAR of 0.22 in APZ II
70	***Cultural, entertainment, and recreational***				
71	Cultural activities	N	N	N	
71.2	Nature exhibits	N	Y[10]	Y[10]	
72	Public assembly	N	N	N	
72.1	Auditoriums, concert halls	N	N	N	
72.11	Outdoor music shells, amphitheaters	N	N	N	
72.2	Outdoor sports arenas, spectator sports	N	N	N	
73	Amusements—fairgrounds, mini-golf, driving ranges; amusement parks	N	N	Y	
74	Recreational activities (including golf courses, riding stables, water recreation)	N	Y[10]	Y[10]	Max. FAR of 0.11 APZ I; 0.22 in APZ II
75	Resorts and group camps	N	N	N	
76	Parks	N	Y[10]	Y[10]	Same as 74
79	Other cultural, entertainment, & recreation facilities	N	Y[9]	Y[9]	Same as 74
80	***Resource production and extraction***				
81	Agriculture (except livestock)	Y[4]	Y[11]	Y[11]	
81.5, 81.7	Livestock farming and breeding	N	Y[11,12]	Y[11,12]	
82	Agriculture-related activities	N	Y[11]	Y[11]	Max FAR of 0.28 APZ I; 0.56 APZ II no activity which produces smoke, glare, or involves explosives

Table E3-1 (4 of 5) AICUZ Suggested Land Use Compatibility Criteria

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation	APZ-I Recommendation	APZ-II Recommendation	Density Recommendation
83	Forestry activities [13]	N	Y	Y	Same as Above
84	Fishing activities [14]	N[14]	Y	Y	Same as Above
85	Mining activities	N	Y	Y	Same as Above
89	Other resource production or extraction	N	Y	Y	Same as Above
90	***Other***				
91	Undeveloped land	Y	Y	Y	
93	Water areas	N[15]	N[15]	N[15]	

Key:

SLUCM Standard Land Use Coding Manual, U.S. Department of Transportation

Y (Yes) Land use and related structures are normally compatible without restriction.

N (No) Land use and related structures are not normally compatible and should be prohibited.

Yx (Yes with restrictions) Land use and related structures are generally compatible. However, see notes indicated by the superscript.

Nx (No with exceptions) Land use and related structures are generally incompatible. However, see notes indicated by the superscript.

FAR Floor area ratio. A floor area ratio is the ratio between the square feet of floor area of the building and the site area. It is customarily used to measure nonresidential intensities.

Du/Ac Dwelling units per acre. This metric is customarily used to measure residential densities.

Table E3-1 (5 of 5) AICUZ Suggested Land Use Compatibility Criteria

Notes:

1. A "Yes" or a "No" designation for compatible land use is to be used only for general comparison. Within each, uses exist where further evaluation may be needed in each category as to whether it is clearly compatible, normally compatible, or not compatible due to the variation of densities of people and structures. In order to assist installations and local governments, general suggestions as to FARs are provided as a guide to density in some categories. In general, land use restrictions that limit commercial, services, or industrial buildings or structure occupants to 25 per acre in APZ I and 50 per acre in APZ II are the range of occupancy levels considered to be low density. Outside events should normally be limited to assemblies of not more than 25 people per acre in APZ I and not more than 50 people per acre in APZ II.

2. The suggested maximum density for detached single-family housing is one to two Du/Ac. In a planned unit development (PUD) of single-family detached units, where clustered housing development results in large open areas, this density could possibly be increased provided the amount of surface area covered by structures does not exceed 20 percent of the PUD total area. PUD encourages clustered development that leaves large open areas.

3. Other factors to be considered: labor intensity, structural coverage, explosive characteristics, air pollution, electronic interference with aircraft, height of structures, and potential glare to pilots.

4. No structures (except airfield lighting), buildings, or aboveground utility/ communications lines should normally be located in Clear Zone areas on or off the installation. The Clear Zone is subject to severe restrictions. See UFC 3-260-01 "*Airfield and Heliport Planning and Design*" dated 10 November 2001 for specific design details.

5. No passenger terminals and no major aboveground transmission lines in APZ I.

6. Within SLUCM code 52, Max FARs for lumber yards (SLCUM code 521) are .20 in APZ – I and 0.40 in APZ – II. For hardware/paint and farming equipment stores, SLUCM Code 525, the Max FARs are 0.12 in APZ I and 0.24 in APZ II.

7. A shopping center is an integrated group of commercial establishments that is planned, developed, owned, or managed as a unit. Shopping center types include Strip, Neighborhood, Community, Regional, and Super Regional facilities anchored by small businesses, supermarket or drug store, discount retailer, department store, or several department stores, respectively. Included in this category are such uses as Big Box Discount Clubs, Home Improvement Superstores, Office Supply Superstores, and Electronics Superstores. The maximum recommended FAR for SLUCM 53 should be applied to the gross leasable area of the shopping center rather than attempting to use other recommended FARs listed in Table 3 under Retail or Trade.

8. Low-intensity office uses only. Accessory uses such as meeting places and auditoriums are not recommended.

9. No chapels are allowed within APZ I or APZ II.

10. Facilities must be low intensity, and provide no tot lots, etc. Facilities such as clubhouses, meeting places, auditoriums, and large classrooms are not recommended.

11. Includes livestock grazing but excludes feedlots and intensive animal husbandry. Activities that attract concentrations of birds, creating a hazard to aircraft operations, should be excluded.

12. Includes feedlots and intensive animal husbandry.

13. Lumber and timber products removed due to establishment, expansion, or maintenance of Clear Zones will be disposed of in accordance with appropriate DOD Natural Resources Instructions.

14. Controlled hunting and fishing may be permitted for the purpose of wildlife management.

15. Naturally occurring water features (e.g., rivers, lakes, streams, wetlands) are compatible.

Source: Department of Navy, Chief of Naval Operations OPNAVINST 11010.36C/Commandant of Marine Corps MCO 11010.16 of 9 Oct 2008. As reported in The Onyx Group, Air Installation Compatible Use Zones (AICUZ) Update, Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California, prepared for NAVFAC-SW, 2011, Table C-2.
Prepared by: Ricondo & Associates, Inc., July 2013.

E3.6.3 Adaptation of AICUZ Recommendations as ALUCP Standards

The proposed land use compatibility standards relating to safety are described in Chapter 3, Table 3-1 of this ALUCP.

Table 3-1 differs from the AICUZ compatibility recommendations summarized in Table E3-1 in three key ways. Table 3-1 features an alternative classification of land uses, lists occupancy factors, and lists AICUZ prescribed alternative intensity limits in people per acre.

The land use categories listed in Table 3-1 are adapted from the compatibility matrices developed for San Diego International Airport. These land use categories were used to provide consistency with the ALUCP for San Diego International Airport. The intent is to maintain use of a classification system already familiar to local planners.

Occupancy factors are listed to aid project applicants in determining the intensity in people per acre of proposed buildings. The occupancy factor is a measure of the square feet per person generally attributable to specific land uses. The occupancy factor can be used to calculate building occupancy by dividing the building floor area by the occupancy factor to yield the estimated number of building occupants. Dividing the number of occupants by the site acreage provides the land use intensity in people per acre.

The AICUZ guidance indicates the FAR limits prescribed in Table E3-1 were calculated to correspond to an intensity limit of 25 people per acre in APZ I.[15] This metric for intensity is included in Table 3-1 to provide an intensity limit for structures associated with land use categories without listed maximum FARs, The people per acre intensity limit also gives project applicants whose structures may slightly exceed maximum FAR allowances an opportunity to demonstrate that their building, as proposed, would not exceed an intensity of 25 people per acre.

The *Handbook* guidance has been applied by assigning land uses into three compatibility categories:

- *Compatible* land uses are consistent with the ALUCP
- *Conditionally compatible* land uses are consistent only if applicable conditions are met
- *Incompatible* land uses are inconsistent with the ALUCP

The compatibility recommendations of the AICUZ study listed in **Table E3-1** have been adapted to reflect the three *Handbook* compatibility categories. Uses indicated as compatible in the AICUZ study are designated as compatible in the ALUCP. Uses indicated as being compatible by the AICUZ study but with supplementary recommendations to further reduce risk are designated conditionally compatible. Uses indicated as not compatible by the AICUZ study are designated as incompatible by this ALUCP.

[15] The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Update, Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California*, prepared for NAVFAC-SW, 2011, p. 6-1.

E3.6.3.1 Compatible Uses

Compatible land uses are consistent with the safety policies and standards of this ALUCP. This designation is indicative of a use with a "Y" entry in the applicable column of **Table E3-1**. Most land uses that do not require permanent structures are compatible in APZ I.

E3.6.3.2 Conditionally Compatible Uses

Conditionally compatible uses are those that can be made compatible within the safety zones if they are developed in compliance with certain conditions. Based on the AICUZ study, agricultural and open space uses are the only conditionally compatible uses in the Clear Zone. Nonresidential land uses of relatively low intensity are conditionally compatible in APZ I. The maximum allowable intensities in Table 3-1 in Chapter 3, described as maximum FARs, conform with the AICUZ guidance.[16]

E3.6.3.3 Incompatible Uses

The AICUZ study recommends that land uses involving permanent structures should be considered incompatible in the Clear Zone. In APZ I, all residential uses and high intensity nonresidential uses should be considered incompatible. This includes land uses involving chemicals, petroleum, or similar products. The AICUZ study also designates hospitals, nursing homes, schools and other educational services as incompatible uses in safety zones.

E3.6.3.4 Land Use Categories

The land use types listed in **Table 3-1, Land Use Compatibility Standards for Safety,** in Chapter 3 are adapted from the land uses listed in the AICUZ study, which are reproduced in **Table E3-1**.

The land use categories are referenced according to the applicable land use code found in the SLUCM.[17] The SLUCM was originally published in 1965 as a comprehensive land use coding system which could be referenced to integrate land use information from jurisdictions with differing land use classification schemes. The SLUCM is still a resource used by planners and is referenced in this ALUCP to assist planners in relating ALUCP land use classifications to their own land use plans.

Several additional land uses of special concern have been included in Table 3-1 in Chapter 3. The additional land use categories have been included in this ALUCP to provide specific compatibility criteria for activities not immediately identifiable in the AICUZ compatibility guidance. These land uses include Assembly – Children, Processing and Storage of Hazardous Materials, Sports/Fitness Facilities and other uses with attributes that make them of special concern to compatibility planners.

[16] The Onyx Group, *Air Installation Compatible Use Zones (AICUZ) Update, Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California*, prepared for NAVFAC-SW, 2011, p. 6-1.

[17] Urban Renewal Administration, Housing and Home Finance Agency and Bureau of Public Roads, Department of Commerce, *Standard Land Use Coding Manual*, 1965.

APPENDIX E

Technical Analysis

E4: Airspace Protection Factor

E4.1 Defining Airspace Protection

In the context of airport land use compatibility, airspace protection refers to the need to protect safe and efficient air navigation around Naval Outlying Landing Field Imperial Beach (NOLF IB). This is accomplished by limiting the heights of new structures and objects to ensure that they do not become hazards to air navigation.

Four key terms, each with a specific technical meaning, are used in this Appendix.

- Object—An element of natural growth, terrain or man-made structure.
- Obstacle—An object that would penetrate an obstacle clearance surface, or exceed other specific clearance requirements, for a specific flight procedure, as defined by Federal Aviation Administration (FAA) instrument flight procedure design criteria. An obstacle is known as a "controlling obstacle" when a flight procedure is designed around that obstacle as the limiting factor.
- Obstruction—An object that, upon evaluation, is determined by the FAA to require proper marking, lighting, and identification in aeronautical publications so that it may be easily recognized by pilots of aircraft navigating through the airspace. FAA obstruction standards are defined in Title 14, Code of Federal Regulations (14 CFR) Part 77 Subpart C.

- Hazard—An object exceeding an obstruction standard, or creating other adverse aeronautical effects, that the FAA has determined would have a "substantial adverse effect" to a "significant volume of aeronautical operations".

E4.2 Federal Regulations and Guidance

The airspace protection policies and standards of this Airport Land Use Compatibility Plan (ALUCP) reflect federal regulations and guidelines. The FAA has standards for assessing airspace obstructions and potential hazards to flight. The federal airspace regulatory framework is provided in 14 CFR Part 77 which describes:

(a) When notice of construction or alteration must be provided to the FAA (Part 77, Subpart B)

(b) Standards to determine obstructions to navigable airspace (Part 77, Subpart C)

(c) FAA's process to determine the effect of proposed construction or alteration on navigable airspace (Part 77, Subpart D)

In administering Part 77, the prime objectives of the FAA are to promote air safety and the efficient use of navigable airspace. However, the FAA has no authority to restrict or limit proposed construction.

E4.2.1 Federal Reporting Requirements

Part 77, Subpart B, §77.9, requires project sponsors to notify the FAA of any proposal to build or alter a structure or object that is:

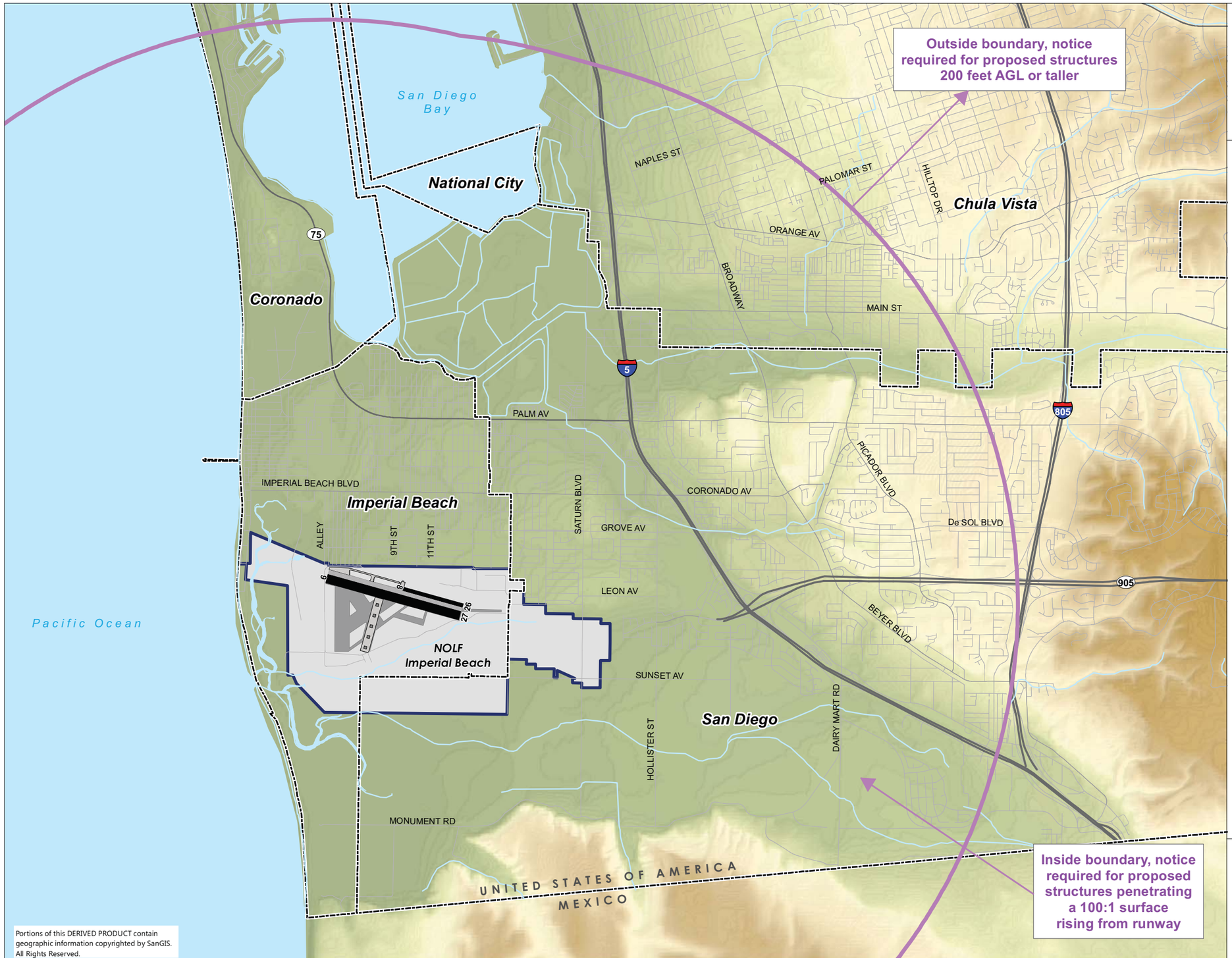
- Taller than 200 feet above ground level (AGL)
- Taller than the height of an imaginary surface extending outward and upward from the runway at a slope of 100 to 1 within 20,000 feet of any runway at an airport with at least one runway longer than 3,200 feet (such as the runway at NOLF IB)

Sponsors may also be required to notify the FAA of other proposed projects because of potential effects on navigational aids or for other reasons specified by the FAA.

If a project sponsor is required to notify the FAA regarding any proposal to build or alter a structure or object per Part 77, Subpart B, §77.9, the sponsor must submit to the FAA a completed FAA Form 7460-1 "Notice of Proposed Construction or Alteration". The FAA has developed an on-line tool to assist project sponsors in determining if they are required to notify the FAA. This is a requirement of federal law that applies whether or not state or local laws acknowledge it.[1]

Exhibit E4-1 depicts the Part 77, Subpart B, height notification area at NOLF IB.

[1] Federal Aviation Administration, Department of Obstruction Evaluation/Airport Airspace Analysis (OE/AAA), *Notice Criteria Tool*, https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm.



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Outer Boundary of 100:1 Zone
- Water

Terrain Elevations (in feet MSL)

High : 255

Low : 1

north 0 3,600 ft.

Notes:
1. The Subpart B airspace surface rises from the runway at a slope of 100:1 for a distance of 20,000 feet.
2. Federal law requires project applicants proposing to build structures exceeding the indicated elevations to file Form 7460-1 with the FAA. FAA then conducts an aeronautical study to determine whether the proposed structure would be an obstruction or a hazard to air navigation.
3. Airport elevation is 24 feet MSL.
4. MSL = Mean Sea Level
5. AGL = Above Ground Level

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, terrain); Ricondo & Associates, Inc., 2013, (Part 77 Subpart B Notification Boundary).

Prepared by: Ricondo & Associates, Inc., December 2013.

Exhibit E4-1

Part 77 Subpart B Notification Requirements

E4.2.2 Part 77 Obstruction Standards

An obstruction to air navigation is an object that exceeds any of the following federal obstruction standards:

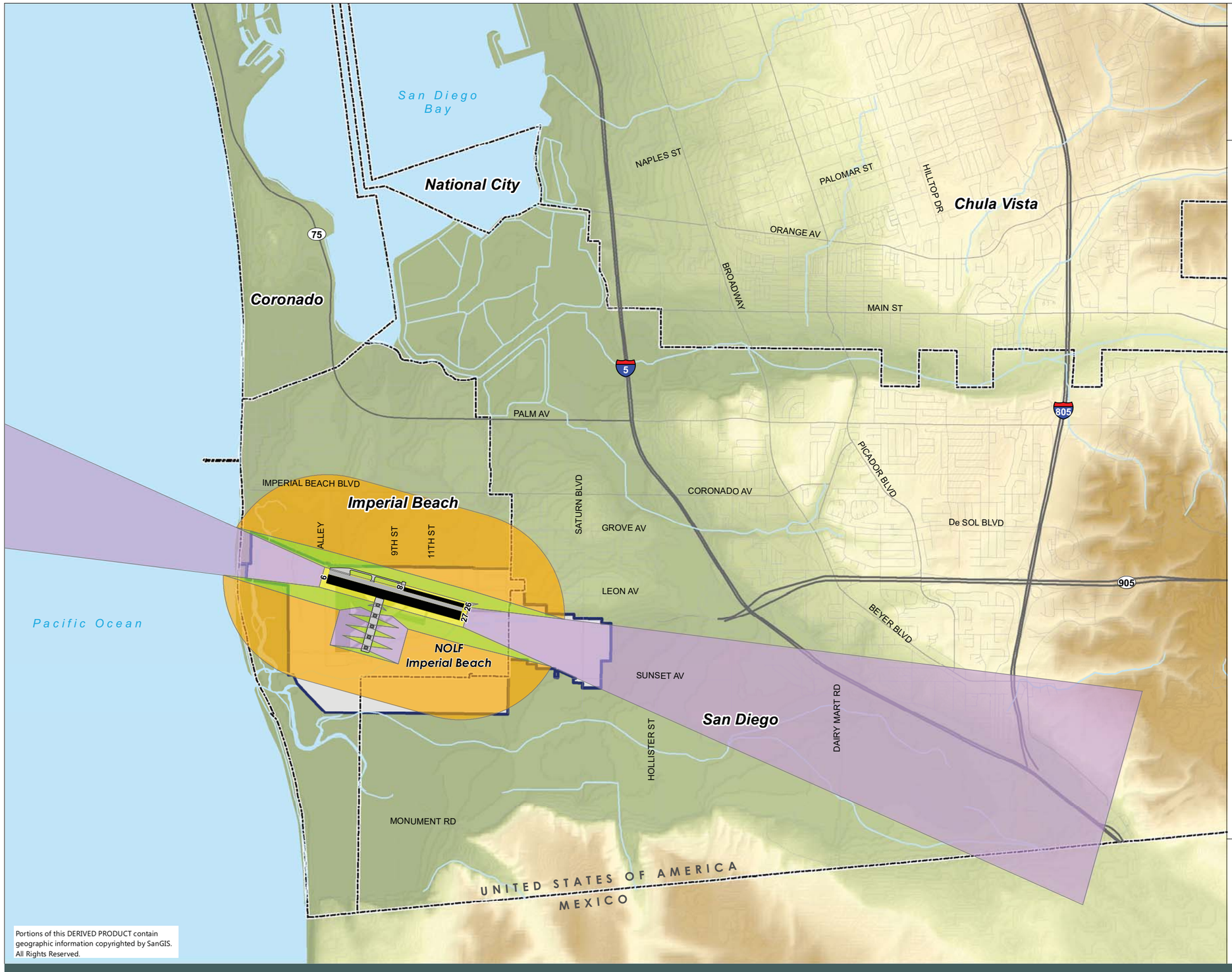
- A height of 499 feet AGL (§77.17(a)(1))
- A height 200 feet AGL or 200 feet above the airport elevation, whichever is higher, within three nautical miles of the airport (§77.17(a)(2))
- A height that encroaches into the required obstacle clearance areas separating designated flight altitudes from obstacles (§77.17(a)(3))
- A height that increases a minimum obstacle clearance under en-route criteria (§77.17(a)(4))
- The surface of a take-off and landing area of an airport or any imaginary surface defined around the airport in accordance with Part 77, Subpart C (§77.17(a)(5))

The airport obstruction standards can be mapped as imaginary airspace surfaces. **Exhibits E4-2** and **E4-3** depict the imaginary surfaces at NOLF IB defined according to the United States Military Unified Facilities Criteria (UFC) 3-260-01, *Airfield and Heliport Planning and Design*.

E4.2.3 TERPS Surfaces

The Part 77 obstruction standards refer to obstacle clearance areas and minimum obstruction clearance criteria defined in FAA Order 8260.3B, *U.S. Standard for Terminal Instrument Procedures* (TERPS). TERPS includes criteria for the protection of airspace needed for the safe execution of instrument approach and departure procedures.

Unlike Part 77 obstruction surfaces, which can be penetrated without necessarily creating a hazard to air navigation, TERPS surfaces are specifically defined to create a buffer between aircraft and permanent objects on the ground. This buffer is referred to as Required Obstacle Clearance (ROC). The mapped TERPS surfaces represent obstacle clearance surfaces, which incorporate the ROC for each instrument procedure. Objects penetrating TERPS surfaces would create new obstacles requiring adjustment of the flight procedures and reestablishment of the appropriate ROC.



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary

Unified Facilities Criteria Helicopter Object Clearance Surfaces

- Approach-Departure
- Horizontal
- Primary
- Transitional

Terrain Elevations (in feet MSL)

High : 255

Low : 1

north

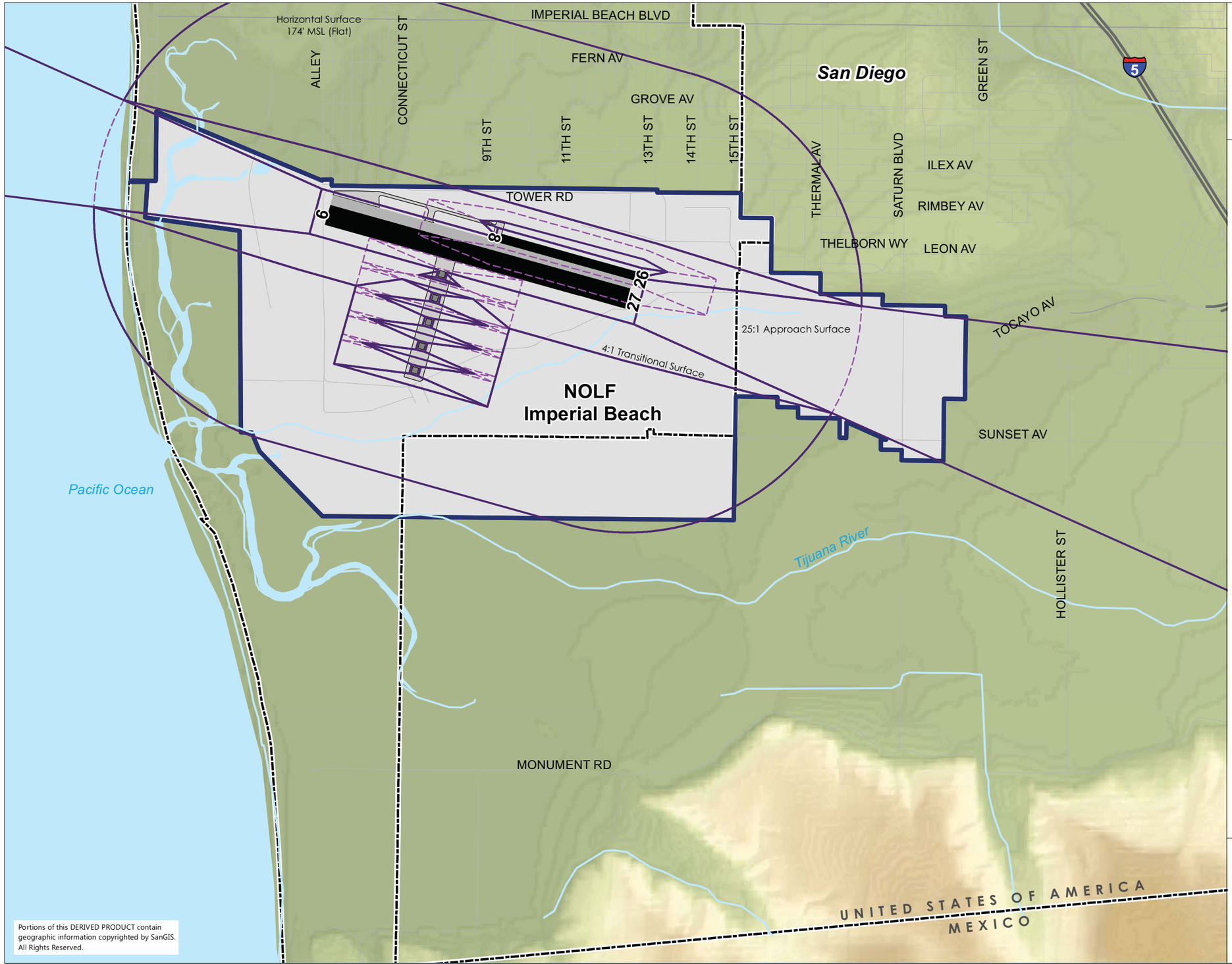
0 3,600 ft.

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, terrain); United States Military Unified Facilities Criteria (UFC) 3-260-01 Airfield and Heliport Planning and Design Dated 5-19-2006 (Unified Facilities Criteria Helicopter Object Clearance Surfaces).

Prepared by: Ricondo & Associates, Inc., March 2014.

Exhibit E4-2

Unified Facilities Criteria Helicopter Object Clearance Surfaces



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary

Unified Facilities Criteria Helicopter Object Clearance Surfaces

- Lower Surface
- Higher Surface

Terrain Elevations (in feet MSL)

High : 255

Low : 1

north

0 1,600 ft.

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, terrain); United States Military Unified Facilities Criteria (UFC) 3-260-01 Airfield and Heliport Planning and Design Dated 5-19-2006 (Unified Facilities Criteria Helicopter Object Clearance Surfaces).

Prepared by: Ricondo & Associates, Inc., October 2015.

Exhibit E4-3

Unified Facilities Criteria Helicopter Object Clearance Surfaces - Detail

Exhibit E4-4 depicts the TERPS approach surfaces at NOLF IB. NOLF IB has one instrument approach, the COPTER TACAN approach to Runway 27. The TERPS surfaces for this approach are flat surfaces at an altitude of 90 feet mean sea level (MSL).

E4.2.4 FAA Review Process and Determinations

After receiving a completed Form 7460-1, the FAA studies the effect of the proposed construction on the navigable airspace, as described in Part 77, Subpart D. The FAA's Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) process is described in detail in FAA Order JO 7400.2J, *Procedures for Handling Airspace Matters*. **Exhibit E4-5** depicts a flow chart illustrating the steps in the FAA's OE/AAA review process.

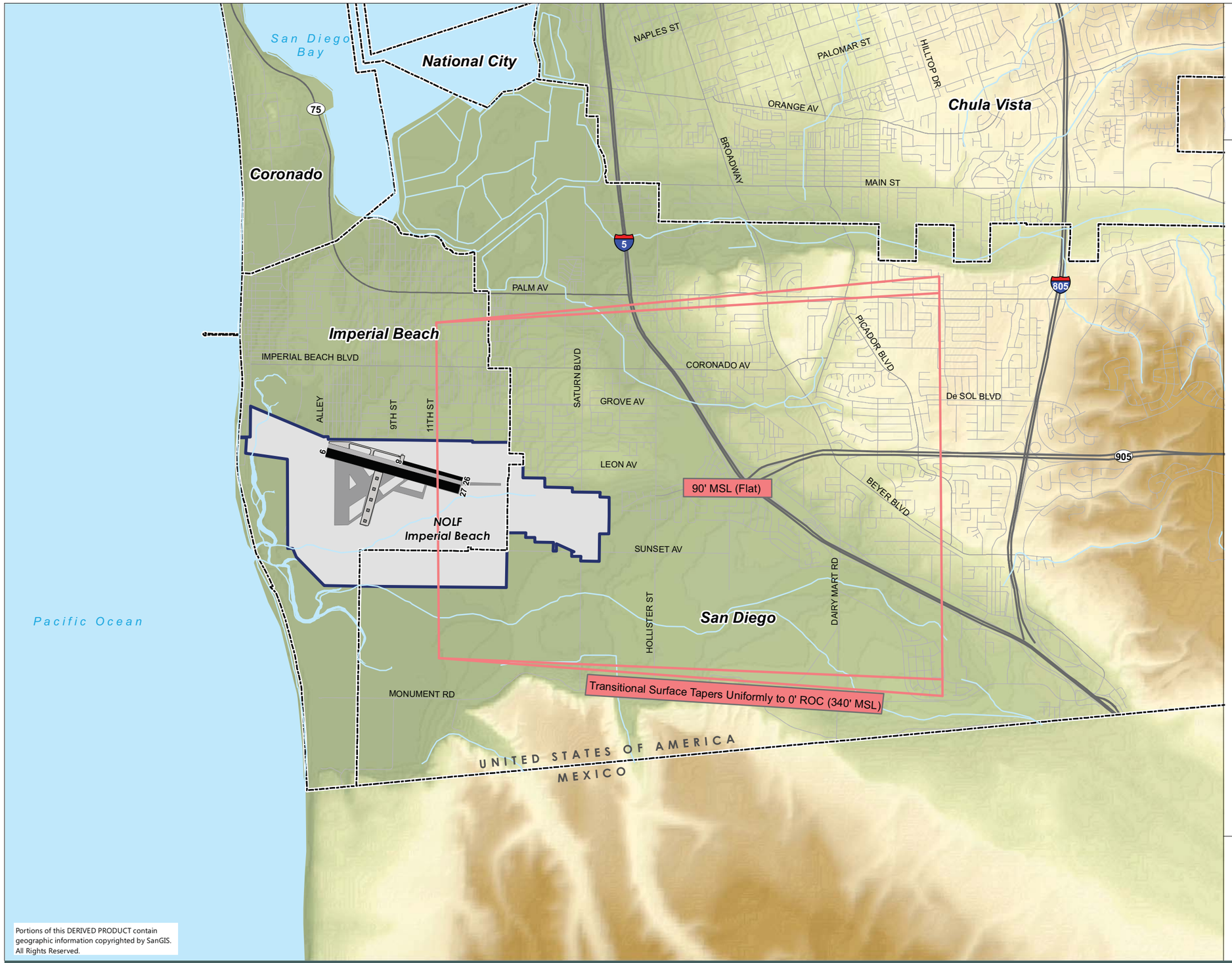
After completing its initial OE/AAA report, the FAA issues either a Determination of No Hazard (DNH) to air navigation or, if any obstruction standards are exceeded, a Notice of Presumed Hazard (NPH).[2]

FAA Determination of No Hazard (DNH)

The FAA issues a DNH when the aeronautical study concludes that the proposed project would be neither hazardous nor cause a substantial adverse impact to air navigation. If the proposed object would not exceed any obstruction standard, the DNH includes a Does Not Exceed (DNE) status determination, with no expiration date and no marking and lighting requirements. If the project has a height of greater than 200 feet AGL, the DNH includes marking and lighting recommendations.

A DNH also may be issued even if the proposed object would exceed an obstruction standard as long as it would not have a substantial adverse impact on air navigation. In such cases, the DNH is issued only after a preliminary NPH and a subsequent, more detailed FAA study or the project sponsor's agreement to resolve the concerns cited in the NPH. In those cases, the DNH may include obstruction marking and lighting recommendations.

[2] Federal Aviation Administration, Order JO 7400.2J, *Procedures for Handling Airspace Matters*, Paragraph 7-1-3.



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- TERPS Approach Surfaces

Terrain Elevations (in feet MSL)

High : 255

Low : 1

north

0 3,600 ft.

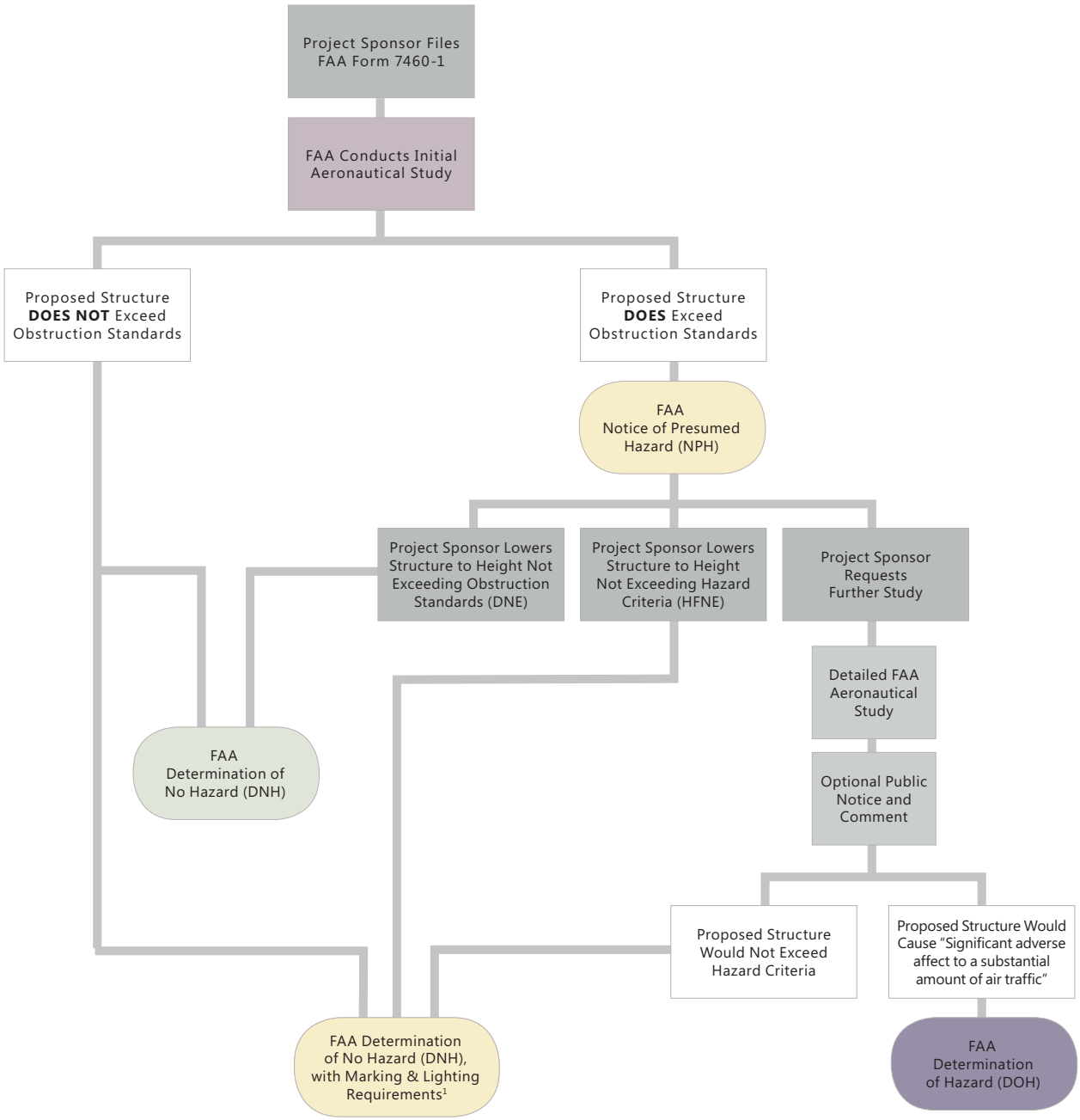
Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, terrain); Ricondo & Associates, Inc., 2013, (TERPS surface).

Prepared by: Ricondo & Associates, Inc., March 2014.

Exhibit E4-4

TERPS Approach Surfaces



Note:
1. FAA may request the marking and lighting of structures that do not exceed construction standards in certain circumstances where flight safety would be aided.

Source: Ricondo & Associates, Inc., April 2012, based on Federal Aviation Administration Air Traffic Organization Policy, Order JO 7400.2J, Procedures for Handling Airspace Matters, Paragraph 7-1-3.

Prepared by: Ricondo & Associates, Inc., June 2013.

Exhibit E4-5

Process for FAA Review of Proposed Construction or Alteration

FAA Notice of Presumed Hazard (NPH)

The FAA issues an NPH when the aeronautical study concludes that a proposed project exceeds obstruction standards. The NPH either recommends lowering the proposed object to the height not exceeding obstruction standards (DNE height) or cite a maximum "height for not exceeding" (HFNE) with respect to hazard criteria. The HFNE height may be noted if the proposal is near existing objects or other proposed objects that the FAA has already studied and for which it has already calculated hazard limitations.

After receiving an NPH, the project sponsor has the following options:

1. Lower the proposed height of the object so that it would not exceed obstruction standards (the DNE elevation). This routinely results in the FAA issuing a DNH
2. Lower the height of the object to the HFNE height, if one was indicated on the NPH. This routinely results in the FAA issuing of a DNH, with marking and lighting requirements
3. Request the FAA to perform further aeronautical study at the originally requested height
4. Request the FAA to perform further aeronautical study for an object at a height lower than the original proposal but not as low as the alternative height noted on the NPH letter

Upon receiving a request for further aeronautical study, the FAA initiates a complex study analyzing flight procedures, navigational aids (NAVAIDS), radar, and other factors in the airspace in the vicinity of the proposed object. The objective of this detailed aeronautical study is to determine whether the proposed object would have a significant adverse effect on a substantial amount of air traffic, and thereby constitute a hazard to air navigation. The most frequently applied criteria for hazard status determinations are TERPS criteria, but other criteria, such as visual flight rules (VFR) clearances, NAVAID considerations and air traffic procedures can be cited. Per Part 77, Subpart D, these factors can include:

1. The impact on arrival, departure and en route procedures for aircraft operating under VFR
2. The impact on arrival, departure and en route procedures for aircraft operating under instrument flight rules (IFR)
3. The impact on existing and planned public-use airports
4. Airport capacity of existing public-use airports and public-use airport development plans received before the issuance of the final determination
5. Minimum obstacle clearance altitudes, minimum IFR altitudes, approved or planned instrument approach procedures and departure procedures

6. The potential effect on air traffic control (ATC) radar, direction finders, ATC tower line-of-sight visibility and physical or electromagnetic interference (EMI) effects on air navigation and communication facilities
7. The aeronautical effects resulting from the cumulative impact of a proposed construction or alteration of an object when combined with the effects of other existing or proposed objects[3]

During the detailed aeronautical study, the FAA may circulate the proposal under the Public Notice process. A Public Notice describes the proposal and the amount by which it exceeds obstruction standards and other effects of the proposal. The Public Notice is posted on the publicly available portion of the FAA's OE/AAA website, and can also be sent directly to interested stakeholders.[4]

Interested stakeholders may submit comments on the proposal. Public Notice is the formal, and sometimes the only opportunity for third-party stakeholders (those other than the FAA and the project sponsor) to provide input in the OE/AAA process. The FAA must consider any comment of a significant aeronautical nature.

The FAA concludes the detailed aeronautical study process with a determination as to whether the proposed construction would constitute a hazard to air navigation. The FAA issues a Determination of Hazard to Air Navigation (DOH) where the detailed aeronautical study concludes that the proposed construction or alteration would exceed an obstruction standard and have a substantial aeronautical impact, and where negotiations with the project sponsor have failed to result in acceptance of a height not exceeding obstruction standards or hazard standards.

The FAA has no direct jurisdictional authority through which it can require the project sponsor to alter the proposed object to eliminate the hazard. That power rests with state and local land use regulatory agencies. Although the FAA has no direct land use regulatory authority, it can exert leverage on jurisdictions with land use regulatory authority that are also airport operators. The failure of an airport operator with land use regulatory authority to enforce an FAA DOH could be interpreted as a violation of Grant Assurances 20 and 21, which bind the airport operator to protect the approaches to the airport and to promote airport land use compatibility.[5] These grant assurances are binding on the San Diego County Regional Airport Authority (SDCRAA) because it has accepted federal airport grant money in the past.

[3] Title 14, Code of Federal Regulations, Part 77, *Safe, Efficient Use, and Preservation of Navigable Airspace*, Subpart D, *Aeronautical Studies and Determinations,* §77.29.

[4] Federal Aviation Administration, Department of Obstruction Evaluation/Airport Airspace Analysis (OE/AAA), https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=showSearchProposedCasesForm.

[5] Federal Aviation Administration, Department of Obstruction Evaluation/Airport Airspace Analysis (OE/AAA), *Grant Assurances*, http://www.faa.gov/airports/aip/grant_assurances/.

E4.3 State Regulations and Guidance

The State Aeronautics Act recognizes the Part 77 obstruction and hazard standards and provides the basis for local agencies and the California Department of Transportation (Caltrans) to enforce their protection. State law prohibits the construction or alteration of structures or objects that exceed Part 77 obstruction standards unless a permit is issued by Caltrans. The permit may be waived for a structure or object less than 500 feet above the ground if the FAA determines it would not be a hazard to air navigation.[6] In other words, an object that has been determined by the FAA to be a hazard can be built only if Caltrans issues a permit for its construction. To date, Caltrans has never issued a permit under these circumstances.

The 2011 edition of the *California Airport Land Use Compatibility Planning Handbook* (the *Handbook*) defers largely to FAA guidance concerning airspace protection. The *Handbook* advises the following:

- The compatibility strategy should be to limit the height of structures and objects so as not to cause hazards to flight
- The airspace protection boundary should correspond to the Part 77 imaginary surfaces, with consideration given to TERPS surfaces at airports where those surfaces are lower than the Part 77 surfaces
- Airport Land Use Commissions (ALUCs) should consider the potential for certain land uses to include features that may create hazards to flight, such as bird attractants, interference with visibility (distracting lights, smoke, or glare) and electromagnetic interference with aircraft and air traffic control communications and navigation instruments

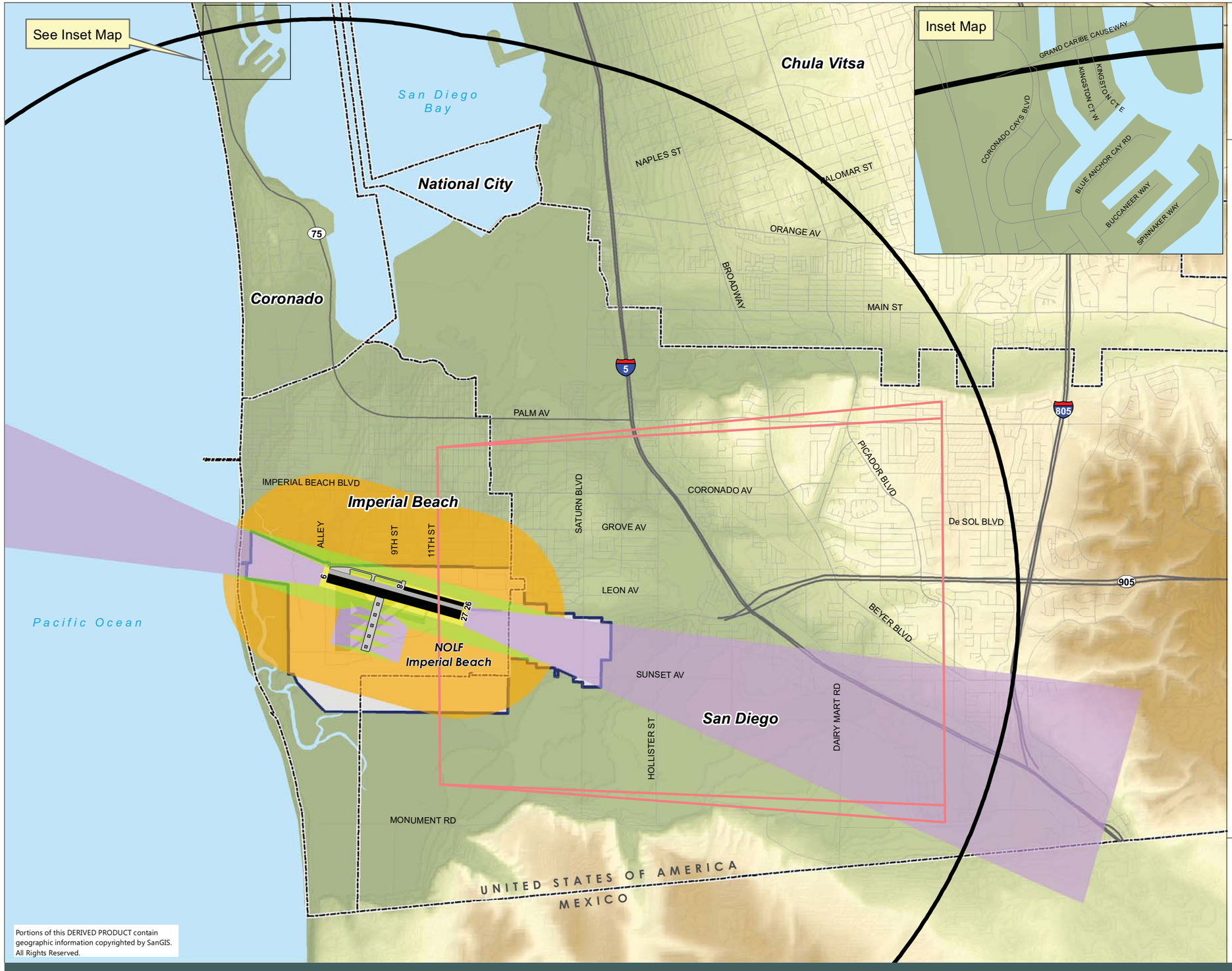
E4.4 Proposed Airspace Boundary

Exhibit E4-6 depicts all airspace protection surfaces discussed in the previous sections. **Exhibit E4-7** presents the proposed airspace protection boundary. It represents the outer boundary of the combined Part 77 Subpart B notification boundary, the imaginary airspace surfaces, and the TERPS approach surfaces.

E4.5 Airspace Protection Policy Considerations

The objective of the airspace protection policies and standards is to ensure new development around NOLF IB does not interfere with safe and efficient air navigation. This can be accomplished by ensuring local agency adherence to federal airspace protection guidance and regulations. Other policies and standards are needed to ensure that certain land use characteristics do not create non-structural hazards to aircraft in flight near NOLF IB.

[6] California Public Utilities Code §§21657, 21659(b).



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Subpart C Notification Area
- TERPS Surface

Unified Facilities Criteria Helicopter Object Clearance Surfaces

- Approach - Departure
- Horizontal
- Primary
- Transitional

Terrain Elevations (in feet MSL)

High : 255

Low : 1

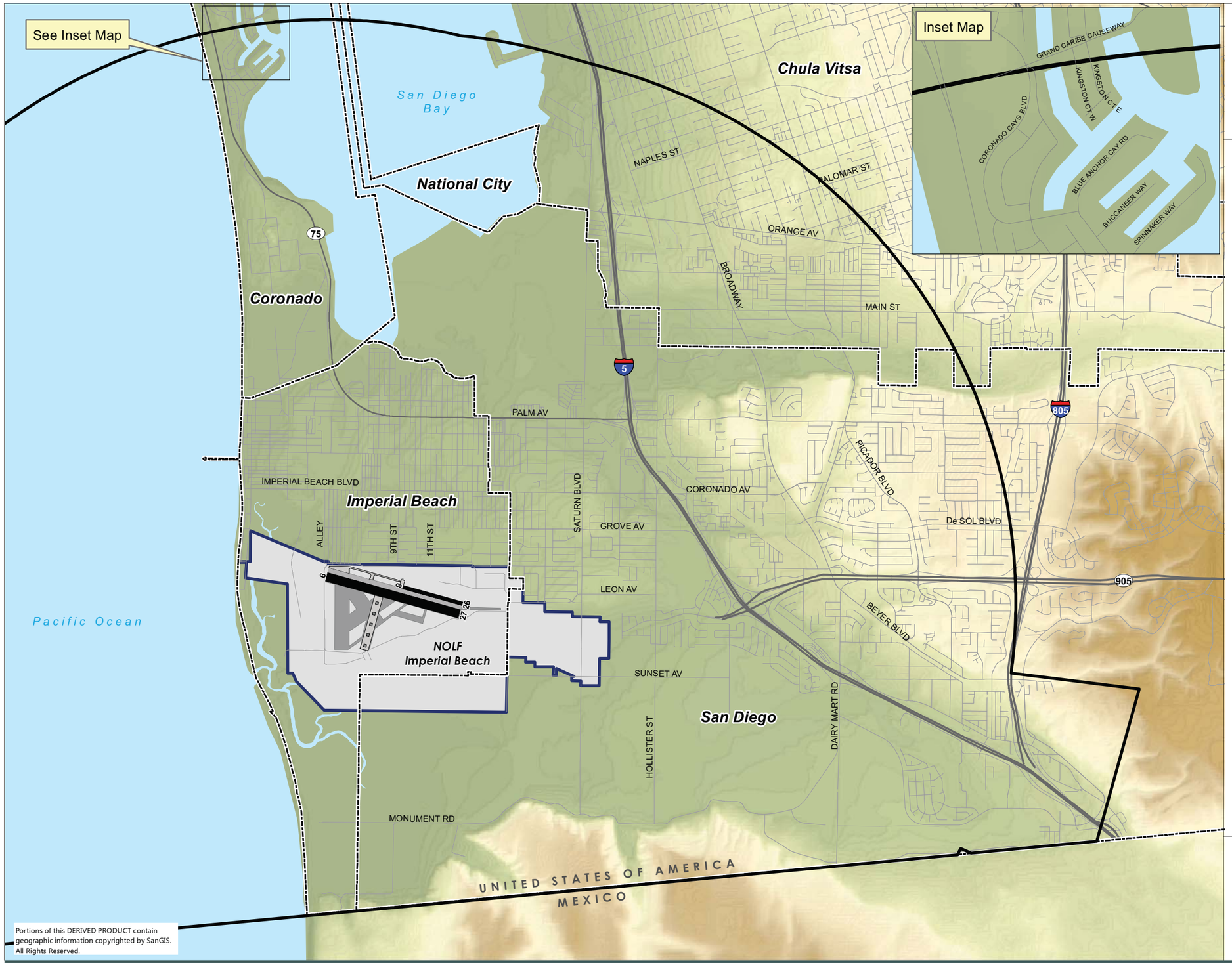
north 0 3,600 ft.

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, terrain); United States Military Unified Facilities Criteria (UFC) 3-260-01 Airfield and Heliport Planning and Design Dated 5-19-2006 (Unified Facilities Criteria Helicopter Object Clearance Surfaces); FAA Order 8260.3b United States Standard for Terminal Instrument Procedures (TERPS) Changes 1-25.

Prepared by: Ricondo & Associates, Inc., August 2014.

Exhibit E4-6

Combined Airspace Protection Surfaces



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Proposed Airspace Protection Boundary

Terrain Elevations (in feet MSL)

High : 255

Low : 1

north

0 3,600 ft.

Notes: 1. MSL = Mean Sea Level
2. Airport elevation is 24 feet MSL
3. The Airspace Protection Boundary is defined as the outer boundary of the combined Part 77 Subpart B surface boundaries.

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield, terrain); Ricondo & Associates, Inc., 2013, (proposed airspace protection boundary).

Prepared by: Ricondo & Associates, Inc., August 2014.

Exhibit E4-7

Proposed Airspace Protection Boundary

The *Handbook* advises ALUCs to establish airspace protection policies that would limit building heights to ensure that new structures or objects do not become hazards to air navigation. An effective way to accomplish this is to ensure that the FAA hazard and obstruction determinations are enforced as ALUCP policy. This approach, which has been taken in this ALUCP, has the following advantages:

- It ensures that structures or objects tall enough to potentially become obstructions or hazards are studied by FAA experts before being permitted by local agencies
- It ensures that recommendations of the FAA regarding marking and lighting are recognized by local agencies issuing the development permits
- It provides builders and developers with maximum flexibility, consistent with airspace protection imperatives
- It ensures that hazards to air navigation are not constructed
- It ensures that the responsible Navy officials operating NOLF IB are informed of proposed structures or objects

In accordance with *Handbook* guidance, ALUCP policies also address land use characteristics with the potential to interfere with the safety of flight in the airspace around NOLF IB.[7] These characteristics include:

- Glare of such severity as to interfere with pilot vision
- Lights that may be mistaken for airport identification and navigational lighting
- Dust, smoke and vapor that may obstruct pilot vision
- Thermal plumes with the potential to interfere with aircraft control
- Electromagnetic interference with communications and navigational signals
- Wildlife (especially bird) attractants

To the extent possible, performance standards and design criteria have been developed to provide the ALUC and local agencies with guidance in determining when these characteristics may become problematic for aircraft in flight. The experience of the California Energy Commission in power plant licensing cases is helpful in setting standards for glare and thermal plumes. The FAA has developed helpful guidance relating to the avoidance of hazardous wildlife attractants near airports.[8] Where uncertainties remain regarding what constitutes a potential flight hazard, this ALUCP recommends local agency consultation with FAA officials and Naval Base Coronado officials.

[7] California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, pp. 3-35, 4-35 - 4-40.

[8] Federal Aviation Administration, Advisory Circulars 150/5200-34, *Construction or Establishment of Landfills near Public Airports* and 150/5300-33, *Hazardous Wildlife Attractants on or near Airports*.

APPENDIX E

Technical Analysis

E5: Overflight Compatibility Factor

E5.1 Defining Overflight

In the context of airport land use compatibility, overflights are any distinctly visible or audible passage of aircraft through an area. Under this definition, the aircraft does not need to be directly above the receiver to be considered an overflight nor does the receiver need to be within the Community Noise Equivalent Level (CNEL) contour which represents the noise impact zone.

E5.2 State Regulations and Guidance

The State of California has no specific laws or regulations restricting or regulating aircraft overflights. The state does have a real estate disclosure law, however, which is intended to inform prospective buyers of new and existing residential property of the presence of nearby airports and the potential for airport-related impacts. Within the airport influence area (AIA) established in the applicable Airport Land Use Compatibility Plan (ALUCP), the state real estate disclosure law applies to the:

- Sale or lease of subdivided lands and condominium conversions
- Sale of residential properties with one to four dwellings units
- Sale of condominium and other common interest residential properties[1]

[1] California Business and Professions Code §11010; California Civil Code §§1102, 1102.6, 1103.4, 1353; California Code of Civil Procedure §731a.

The law requires that sellers of residential property and their agents disclose if the property is situated within an AIA. This measure is intended to provide the purchaser with notice that the property is in the vicinity of an airport and may be subject to airport related effects, including overflights.

See:

- California Business and Professions Code Section 11010
- California Civil Code Section 1102.6
- California Civil Code Section 1102.17 and Code of Civil Procedure Section 731a
- California Civil Code Sections 1103.4
- California Civil Code Section 1353

Under state law, real estate disclosure statements must use the following language.[2]

NOTICE OF AIRPORT IN VICINITY

This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.

E5.2.1 Handbook Guidance—Overflight Area Boundary

The *California Airport Land Use Planning Handbook* (the *Handbook*), prepared by the California Department of Transportation (Caltrans) Division of Aeronautics, advises airport land use commissions (ALUCs) to identify where overflight concerns are likely to occur. It notes that "many people are sensitive to the frequent presence of aircraft overhead even at low noise levels. These reactions can mostly be expressed in the form of annoyance."[3] The *Handbook* advises ALUCs to promote land use compatibility in those areas, if possible, and buyer awareness measures to inform potential real estate buyers of the presence of aircraft overflights.[4] The *Handbook* provides guidance for defining overflight areas. "Overflight boundaries often are established by an amalgamation of various data inputs, including noise contours, flight tracks, and even noise complaint patterns."[5] The *Handbook* suggests that

2 California Civil Code §1353
3 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 3-8.
4 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 3-9 – 3-10.
5 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 3-10.

other indicators of frequent aircraft overflights are traffic pattern routes, traffic pattern entry corridors, and instrument approach and departure routes.[6]

E5.2.2 Handbook Guidance—Overflight Area Policies

The *Handbook* explains that the most effective mechanism for addressing overflight annoyance is "to avoid establishment of noise-sensitive land uses in the portions of airport environs that are exposed to significant levels of aircraft noise".[7] The *Handbook* discusses three suggested overflight compatibility strategies:

- Promotion of the least noise-sensitive kinds of development
- Acoustical treatment of the most highly noise-sensitive land uses
- Buyer awareness measures

Given the large area over which overflight concerns often exist, only the last of these measures is practical in the vicinity of most airports. Regulation of noise-sensitive land uses and requirements for acoustical treatment are most commonly applied within CNEL noise contours representing areas of significant noise exposure and are difficult to justify within a larger overflight area subject to lower noise levels.

The *Handbook* suggests that techniques to promote awareness of the potential for frequent aircraft overflight can be effective in preventing highly sensitive individuals from purchasing or renting property in overflight areas.[8] ALUCs have no authority over real estate transactions and cannot require "real estate disclosure" as that term is typically defined and understood. The role of the ALUC in real estate disclosure is limited to its authority to establish the AIA, within which the disclosure provisions of state law apply. The *Handbook* recommends that the ALUC alert real estate agents active in the affected area of the extent of the AIA.[9] The *Handbook* also suggests that ALUCs consider the use of recorded deed notices to promote disclosure of airport-related overflight impacts.

E5.2.3 Real Estate Disclosure vs. Overflight Notification

In this ALUCP, the term "real estate disclosure" refers to state law that requires sellers of new and existing residential properties, within an AIA, to notify buyers of potentially adverse effects from airport activity.[10]

"Overflight notification" refers to the policies in this ALUCP that apply only to **new** residential development. Notification must occur within a defined overflight area boundary. Overflight notification policies are based on the *Handbook* guidance.

6 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 3-111.
7 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. H-15.
8 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 4-13.
9 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 4-14.
10 California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 4-14.

E5.2.4 Recorded Deed Notices

Deed notices (referred to as overflight notifications in the Urban and SDIA ALUCPs) are official statements recorded with a property deed. They note the presence of aircraft overflights above the property and describe the potential effects of the overflights. Since deed notices are part of the official property record, they would appear in a title report prepared for buyers at the time of closing on a property sale. Deed notices can be required by a local government at the time of development permit approval. Deed notices can be written to note the presence of the property in an area subject to frequent aircraft overflights.

Deed notices have limited effectiveness as disclosure tools. Deed notices are likely to be brought to a buyer's attention only after the buyer has committed to buy the property, at which time the buyer can withdraw from the purchase only at substantial cost and inconvenience. An additional drawback is that recorders in some counties may not record them because they do not affect the title to the property. According to the *Handbook*, the state Department of Real Estate has advised that this obstacle can be overcome if the county board of supervisors adopts an ordinance requiring the recordation of deed notices.[11]

E5.3 Technical Analysis

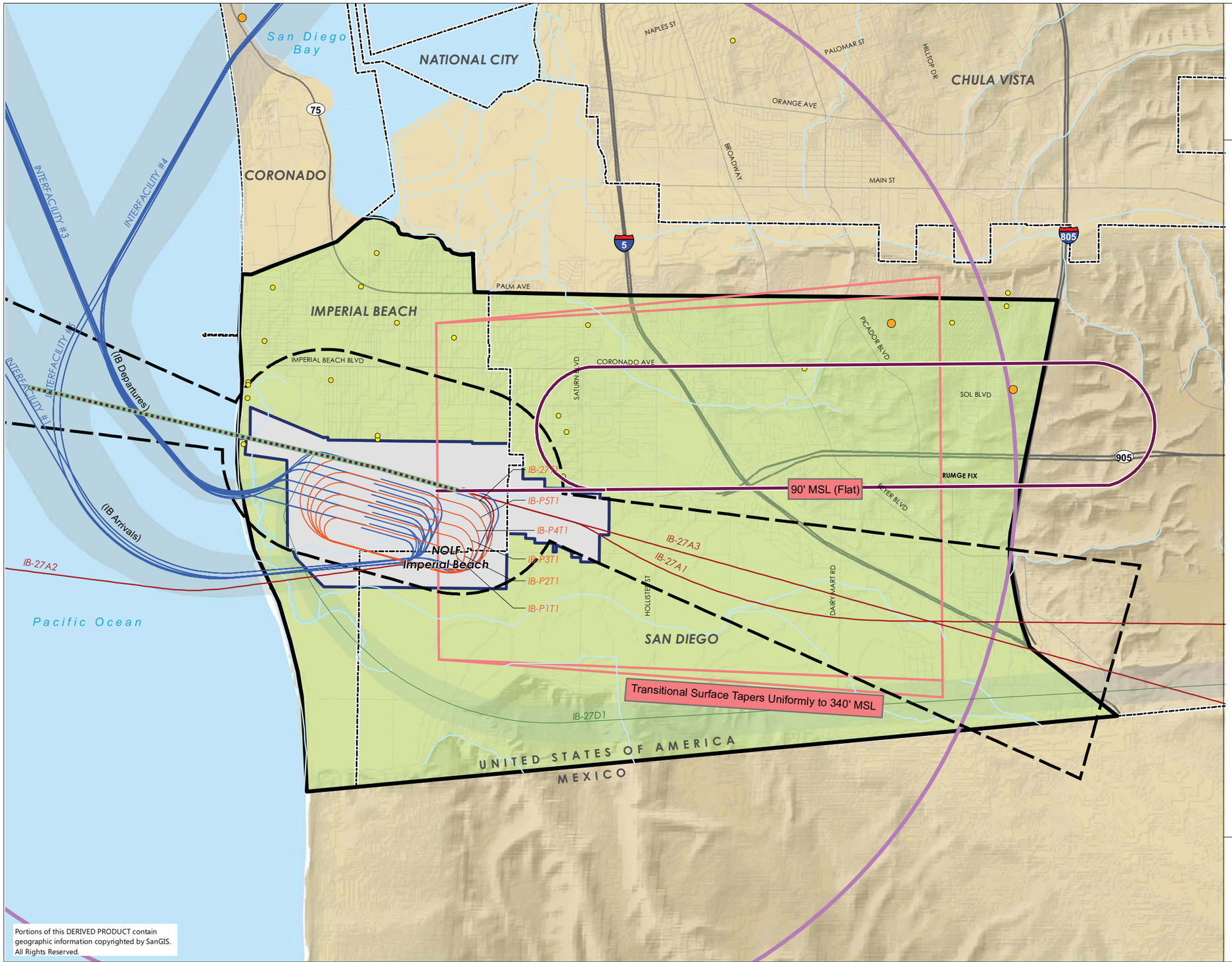
The overflight boundary for the Naval Outlying Landing Field Imperial Beach (NOLF IB) combines the following:

- Areas exposed to frequent overflights
- Areas where noise complaints have been filed over the past several years
- Areas beneath airspace protection surfaces

Each of these considerations is an indicator either of areas subject to overflight or areas where people have registered concerns about noise or overflights. The areas of frequent overflight and airspace protection are expected to remain essentially the same, even though the AICUZ anticipates a 30 percent increase in flight operations relative to its baseline scenario. This is because the aircraft type, that currently operates at NOLF IB, variants of the H-60 Seahawk helicopter and its aircraft flight patterns, including its instrument approach route, are also projected to remain the same.

Flight tracks, noise complaint locations and airspace protection areas are discussed in the following sections. **Exhibit E5-1** depicts the overflight indicators, i.e., generalized flight tracks, noise complaint locations and the outer boundaries of the imaginary airspace and TERPS surfaces at NOLF IB.

[11] California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 4-14.



LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Imaginary Surface
- Subpart B Notification Area
- TERPS Surface
- Obstacle Depature Procedure
- Instrument Approach Procedure
- Overflight Area Boundary

Flight Patterns

- Arrivals
- Departures
- Interfacility
- Closed

Noise Complaints

- 1-5
- 6-16

north

0 3,600 ft.

Note: MSL = Mean Sea level.

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads and highways); San Diego County Regional Airport Authority, Airport Noise Mitigation Department, August 2011 (average daily operations below 3,000 feet MSL and location of noise complaints); Ricondo & Associates, Inc., March 2011, based on FAA Federal Aviation Regulations, Part 77, Objects Affecting Navigable Airspace (Part 77 Subpart B outer boundary), and Federal Aviation Administration Order 8260.3B, United States Standards for Terminal Instrument Procedures, (Runway 27 TERPS approach surfaces outer boundary).

Prepared by: Ricondo & Associates, Inc., June 2014.

Exhibit E5-1

Overflight Indicators

E5.3.1 Flight Tracks

Flight tracks at NOLF IB include five operation types: departures, interfacility departures (to NAS North Island), arrivals, interfacility arrivals (from NAS North Island), and touch-and-gos. The dominant type of flight operation is the touch-and-go, accounting for 86 percent of the total flight operations.[12]

To aid in the definition of an overflight area boundary, the generalized flight tracks prepared for the AICUZ study were mapped. The pattern of flight tracks was based on a seven-year average of the total flight operations at NOLF IB between CY2003 and CY2009. This created a set of generalized flight tracks used for NOLF IB's baseline noise scenario.

NOLF IB operates predominantly in a west flow configuration, with arrivals from the east and departures to the west on Runway 27 and Helipads 1 through 5, as indicated in Exhibit E5-1.

E5.3.2 Noise Complaint Locations

While complaints are not a precise indicator of serious overflight problems that can be objectively measured and evaluated, the overall geographic pattern of noise complaints can be helpful in defining the boundaries of an area where overflight notification is warranted. In urbanized areas, it is common for complaints to be filed by people residing in areas outside the CNEL contours that define the area of significant noise impact (usually the 60 or 65 dB CNEL contour).[13]

Noise complaint locations for the ten-year period from 1999 through 2009 were mapped for the AICUZ study and are reproduced in **Exhibit E5-1**. The noise complaint pattern is widely scattered and primarily located north of the installation boundary, the only area near the facility with substantial housing development.

E5.3.3 Airspace Protection Areas

Imaginary airspace boundaries are helpful in defining an overflight zone.[14] These surfaces are defined to protect the airspace within which low altitude overflights can be expected. TERPS approach surfaces also define areas of low altitude airspace. Refer to **Appendix E4** of this ALUCP for a detailed analysis of Part 77 and TERPS approach surfaces.

[12] Wyle, Aviation Services, Wyle Report WR10-18: *AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California*, September 2010, p 2.

[13] Partnership for AiR Transportation Noise and Emissions Reduction (PARTNER), REPORT N0. PARTNER COE-2008-001, *Land Use Management and Airport Controls,* December 2007.

[14] California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. L-10.

E5.3.4 Proposed Overflight Boundary

Exhibit E5-2 depicts the proposed overflight area boundary for NOLF IB. The proposed overflight area boundary has been delineated to encompass the following areas:

- Areas exposed to frequent overflights
- Areas where noise complaints have been filed from 1999 to 2009
- Areas beneath imaginary airspace and TERPS approach surfaces

After accounting for those indicators of low altitude overflight, the boundary was adjusted to correspond to readily identifiable geographic features.

E5.4 Overflight Policy Considerations

The main objective of overflight policies is to notify people about the presence of aircraft overflights near airports in order for them to make informed decisions regarding purchase or lease of real estate property in the affected areas. Therefore, public awareness is the policy alternative of choice for addressing public annoyance specifically due to overflight.

LEGEND

- Major Roads
- Highways
- Municipal Boundaries
- Airport Property Boundary
- Overflight Area Boundary
- Water

north

0 3,600 ft.

Note: Airfield elevation is 24 feet above mean sea level (MSL)

Sources: San Diego Geographic Information Source (SanGIS), 2008 and 2011 (municipal boundaries, roads, rivers and highways); Naval Facilities Engineering Command, Air Installation Compatible Use Zones (AICUZ) Update for Naval Air Station North Island and Naval Outlying Field Imperial Beach, California, 2011, (airport property boundary, runways, airfield); Ricondo & Associates, Inc., 2013, (overflight area boundary).

Prepared by: Ricondo & Associates, Inc., March 2014.

Exhibit E5-2

Proposed Overflight Area Boundary

Appendix F

Correspondence with Caltrans Division of Aeronautics

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS
1120 N STREET, SUITE 3300
P.O. BOX 942874, MS–40
SACRAMENTO, CA 94274-0001
PHONE (916) 654-4959
FAX (916) 653-9531
TTY 711
www.dot.ca.gov

Flex your power!
Be energy efficient!

September 18, 2013

Ms. Angela Jamison, Manager
Airport Planning
San Diego County Regional Airport Authority
P.O. Box 82766
San Diego, CA 92138-2776

Dear Ms. Jamison:

The California Public Utilities Code, (PUC) section 21675 (a) requires that airport land use compatibility plans (ALUCP) be based on adopted airport master plans. When no airport master plan exists, or is not current, the ALUCP should be based on a current Airport Layout Plan (ALP). It is not necessary that a formal ALP be drawn. A more simplified diagram of the airport may be used for planning purposes.

On August 22, 2013, the California Department of Transportation, Division of Aeronautics, received your letter requesting the review and acceptance of the Naval Outlying Landing Field Imperial Beach (NOLF IB) diagram for the purpose of updating an ALUCP.

This letter serves as the Division of Aeronautics review and acceptance of the submitted Naval Outlying Landing Field Imperial Beach diagram, for the inclusion into the ALUCP. Please note that any proposed changes must be reviewed and accepted by the Division of Aeronautics to ensure the State's participation. If you have any questions, please contact me at (916) 654-7075 or by email at ron.bolyard@dot.ca.gov.

Sincerely,

Ron Bolyard

RON BOLYARD, Aviation Planner
Office of Aviation Planning
Division of Aeronautics

SAN DIEGO COUNTY
REGIONAL AIRPORT AUTHORITY

P.O. BOX 82776, SAN DIEGO, CA 92138-2776
619.400.2400 WWW.SAN.ORG

August 20, 2013

Mr Ron Bolyard
Office of Aviation Planning
California Department of Transportation
Division of Aeronautics
P.O. Box 942874
Sacramento, California 94274-0001

Re: Naval Outlying Landing Field Imperial Beach Airport Land Use Compatibility Plan

Dear Mr Bolyard:

California Public Utilities Code Section 21675(a) requires an airport land use compatibility plan (ALUCP) to be based upon a long-range airport master plan or an airport layout plan (ALP), with the approval of the California Department of Transportation, Division of Aeronautics. As Naval Outlying Landing Field Imperial Beach (NOLF IB) does not have a long-range master plan or ALP, we are submitting for your consideration a copy of the airfield diagram extracted from the 2011 Air Installation Compatible Use Zones (AICUZ) Update for NOLF IB and Naval Air Station North Island.

The San Diego County Regional Airport Authority (SDCRAA) intends to prepare an ALUCP based upon the AICUZ study findings for NOLF IB as directed by Public Utilities Code Section 21675(b). Acting in capacity as the Airport Land Use Commission (ALUC) for San Diego County, SDCRAA is seeking written acceptance by the Caltrans Division of Aeronautics of the enclosed airfield diagram and related material for use by the ALUC in connection with its compatibility planning and preparation of the ALUCP for NOLF IB.

The enclosed information has been extracted from the AICUZ Update and will facilitate your review of the airfield diagram. Please address your response to me by September 9, 2013. If you have any questions regarding the enclosed information or would like to discuss any of the materials further, please call me at (619) 400-2464 at your convenience. Thank you for your consideration.

Yours truly,

Angela Jamison

Angela Jamison
Manager, Airport Planning

SAN DIEGO
INTERNATIONAL
AIRPORT

Enclosures:

Attachment 1:	Airport Background Summary Data
Figure 3-2:	Airfield Diagram For NOLF Imperial Beach
Figure 4-9:	Prospective Noise Contours NOLF Imperial Beach
Figure 5-4:	NOLF Imperial Beach Accident Potential Zones

cc (with enclosures):

Terry Barrie, Caltrans Aeronautics
Derek Kantar, Caltrans Aeronautics
Chris Schmidt, Caltrans District 11
Amy Gonzalez, SDCRAA General Counsel
Mark Johnson, Ricondo & Associates Inc.

1. Airport Background Data

Table 1 – NOLF-IB Airport Features Summary

GENERAL INFORMATION	DESCRIPTION
FAA Identifier	NRS
Airport Ownership	U.S. Navy
Year Established[1]	1944
Property Size	1,293 acres
Predominant Operations[1]	Rotary-wing, training
Airport Elevation[2]	23.6 ft.
Runways	
8/26	
Runway Dimensions[2]	2241 feet long, 150 feet wide
Pavement Strength (Gross Aircraft Weight)[2]	
Single Wheel:	32,000 lbs.
Double Wheel:	51,000 lbs.
Effective Runway Gradient	0.1%
Approach Surface[1]	
8	25:1
26	25:1
9/27	
Runway Dimensions[2]	4999 feet long, 340 feet wide
Pavement Strength (Gross Aircraft Weight)[2]	
Single Wheel:	55,000 lbs.
Double Wheel:	72,000 lbs.
Double Tandem:	107,000 lbs.
Effective Runway Gradient	0.2%
Approach Surface[1]	
9	25:1
27	25:1
Landing Pads[1]	

	1
	2
	3
	4
	5
Dimensions (All Pads)[1]	100 feet long, 100 feet wide
Hours of Operation[1]:	0800 - 2230 PST, 0800 - 2300 PDT (M-TH); 0800 - 1800 (F)

[1]The Onyx Group, Air Installation Compatible Use Zones (AICUZ) Update, Naval Air Station North Island and Naval Outlying Landing Field Imperial Beach, California, prepared for NAVFAC-SW, 2011.

[2]AirportIQ 5010, http://www.gcr1.com/5010WEB/airport.cfm?Site=NRS&AptSecNum=3 (accessed August 2013).

Sources: As noted in footnotes 1 and 2 above.
Prepared by: Ricondo & Associates, Inc., August 2013.

Table 2 – NOLF-IB Baseline Average Daily Operations by Type and Time of Day

OPERATION TYPE	0700 – 1900	1900 – 2200	2200 - 0700	TOTAL
Departures	31.76	13.42	0.91	46.09
Arrivals	31.64	13.51	0.95	46.09
Touch and Go	206.24	82.50	5.89	294.63
Total	269.64	109.43	7.75	386.81

Source: Wyle, Aviation Services, Wyle Report WR10-18: AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California, September 2010, Table 6.

Prepared by: Ricondo & Associates, Inc., June 2013.

Table 3 – NOLF-IB Prospective Future Average Daily Operations by Type and Time of Day

OPERATION TYPE	0700 – 1900	1900 – 2200	2200 – 0700	TOTAL
Departures	41.29	17.45	1.18	59.92
Arrivals	41.13	17.56	1.23	59.92
Touch and Go	268.11	107.24	7.66	383.02
Total	350.53	142.26	10.07	502.86

Source: Wyle, Aviation Services, Wyle Report WR10-18: AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California, September 2010, Table 11.

Prepared by: Ricondo & Associates, Inc., June 2013.

Table 4 – NOLF-IB Baseline and Prospective Future Runway Utilization

OPERATION TYPE	RUNWAY/HELIPAD	UTILIZATION
Departures		
	27	100%
Interfacility Departures		
	27	45%
	P1	12%
	P2	17%
	P3	8%
	P4	14%
	P5	4%
Arrivals		
	27	100%
Interfacility Arrivals		
	27	44%
	P1	8%
	P2	17%
	P3	7%
	P4	17%
	P5	7%
Touch-and-Go		
	27	44%
	P1	8%
	P2	17%
	P3	7%
	P4	17%
	P5	7%

Source: Wyle, Aviation Services, Wyle Report WR10-18: AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California, September 2010, Table 6 and Table 11.

Prepared by: Ricondo & Associates, Inc., June 2013.

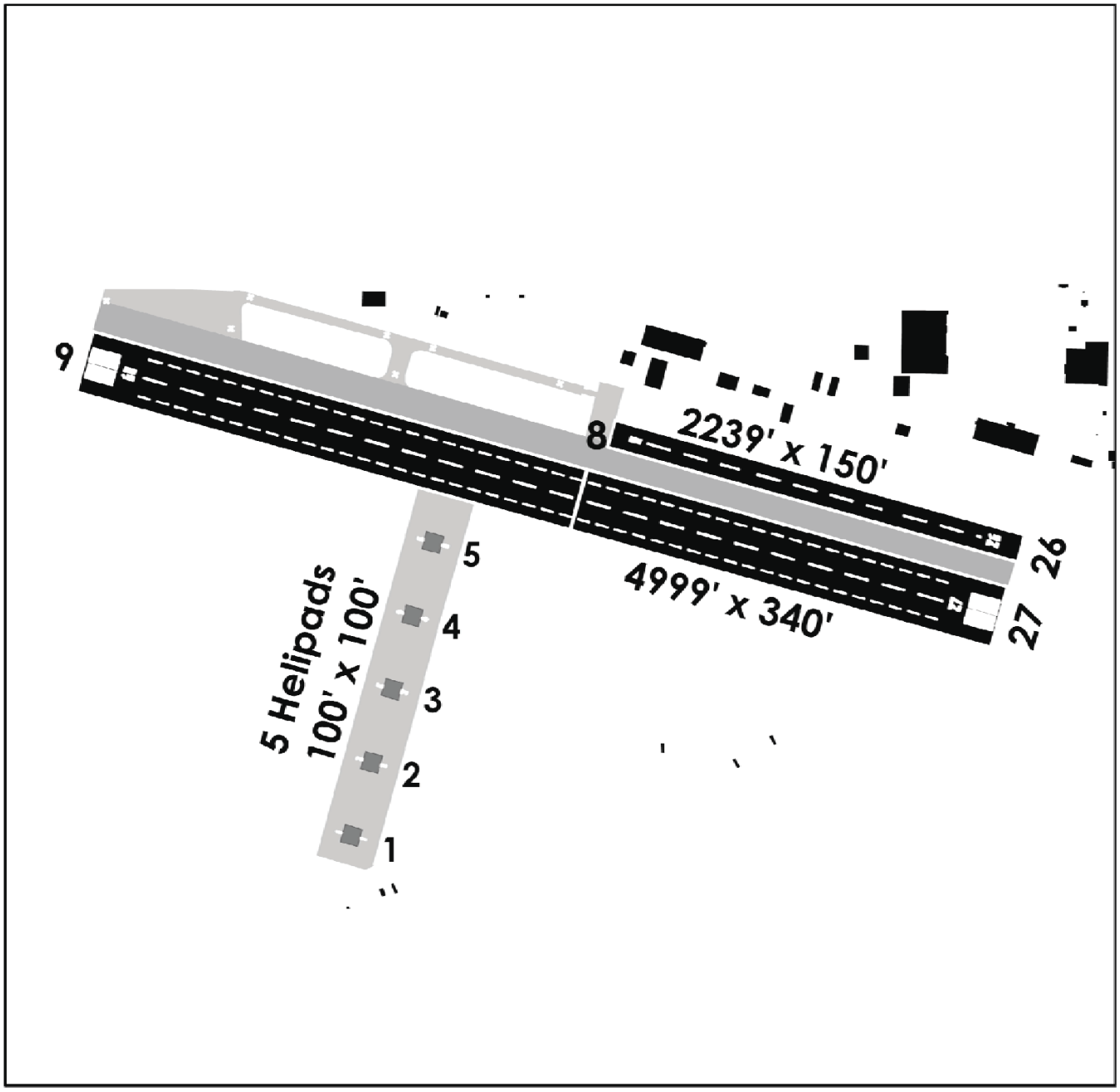


Figure 3-2
Airfield Diagram for
NOLF Imperial Beach

Source: NAVFAC SW GIS Data, 2006

0 500 1,000 Feet

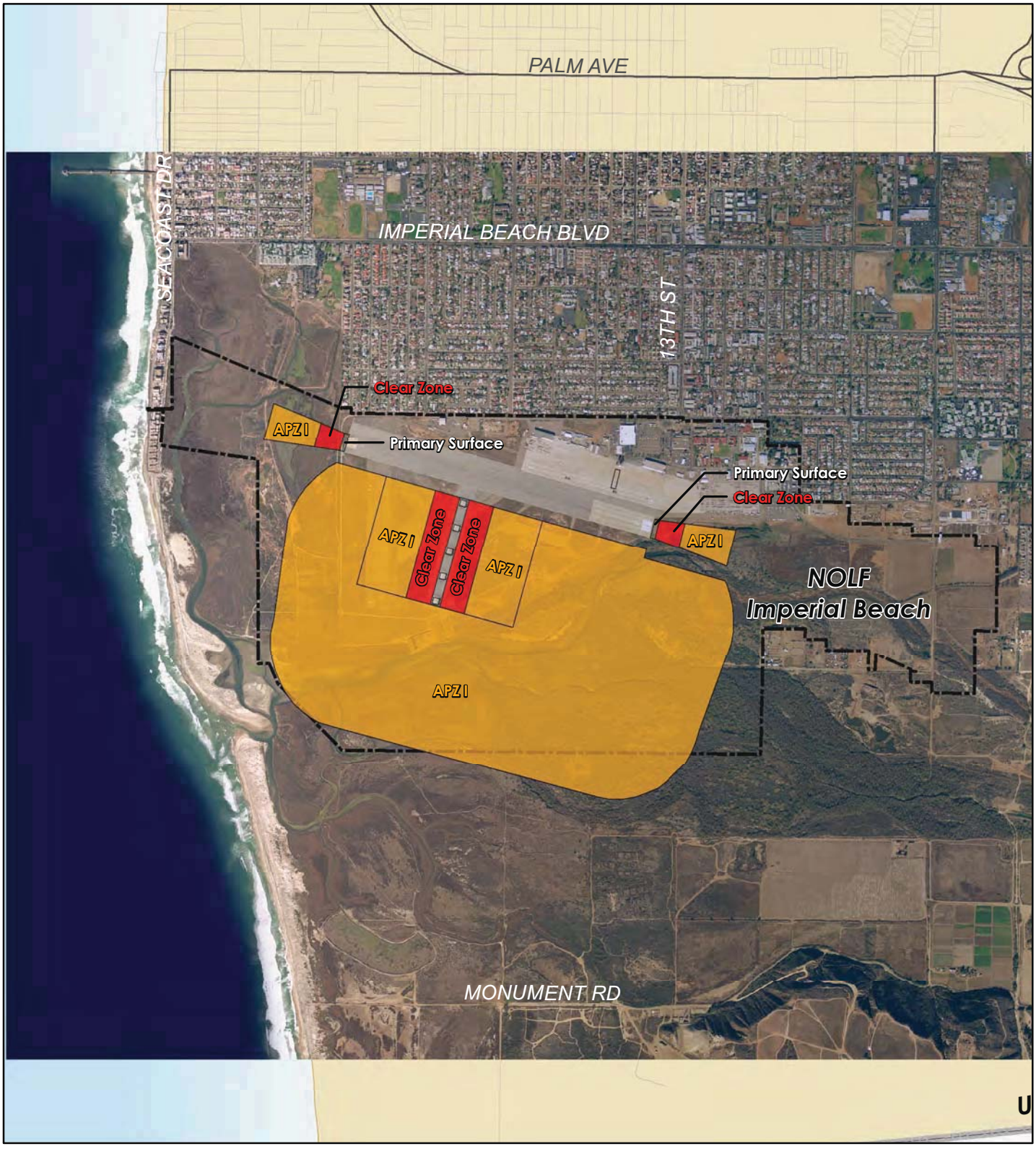
9 8 26 27

Figure 4-9
Prospective Noise Contours
NOLF Imperial Beach

Aerial depiction is for planning purposes, specific real estate decisions should be confirmed by normal surveying.
Source: Wyle Labs Noise Study, 2010 (Contours) and NAVFAC SW, 2006 (Aerial).

0 1,000 2,000 Feet

TRUE NORTH
MAGNETIC NORTH
Magnetic Declination 12° 35' E



9
8
26
27

Primary Surface
Clear Zone
APZ I

Figure 5-4
NOLF Imperial Beach
Accident Potential Zones

Aerial depiction is for planning purposes, specific real estate decisions should be confirmed by normal surveying.
Source: The Onyx Group (APZs) and NAVFAC SW, 2006 (Aerial).

0 1,500 3,000
Feet

TRUE NORTH
MAGNETIC NORTH
Magnetic Declination 12° 35' E