



APPENDIX B

Airport Noise Advisory, Technical and Citizen Advisory Committees Presentations and Responses to Input

APPENDIX B AIRPORT NOISE ADVISORY, TECHNICAL AND CITIZEN ADVISORY COMMITTEES PRESENTATIONS AND RESPONSES TO INPUT

B.1 PRESENTATIONS

The following are the presentation material discussed at each Technical Advisory Committee (TAC) and Citizen Advisory Committee (CAC) meeting. This appendix also includes the presentation to the Airport Noise Advisory Committee (ANAC) on June 19, 2019. The presentation included an overview of the results and recommended actions for consideration by ANAC. All presentation material was posted to the San Diego County Regional Airport Authority's (the Authority) website (<https://www.san.org/Airport-Noise/FAR-Part-150?EntryId=12485>) after each meeting.

B.1.1 CAC MEETING #1 – MARCH 22, 2018



Welcome

Citizen Advisory Committee Meeting #1

March 22, 2018

Agenda

- Introductions
- Citizen Advisory Committee (CAC)
- Study Overview:
 - Part 150 Study Update
 - Flight Procedure Evaluation
- Anticipated Meeting Schedule
- Identification of 2 CAC Members for Technical Advisory Committee (TAC)
- Questions
- Next Meeting

Introductions

San Diego County Regional Airport Authority (Airport Authority)

- Owns and operates the airport
- Main Contact: Ms. Sjohnna Knack, Program Manager

14 CFR Part 150 Consultant Team – In Procurement Process

- Part 150 focus:
 - Areas exposed to CNEL levels at or higher than 65 dBA
 - FAA will only fund abatement/mitigation at or higher than CNEL 65 dBA
- Several flight procedure recommendations to reduce noise outside CNEL 65 dBA
- SDCRAA to conduct flight procedure evaluation outside the 150 Study process

Introductions (continued)



Flight Procedure Analysis Consultant Team

- Project Lead: Mr. Stephen Smith
- Ricondo & Associates, Inc.
- Mead & Hunt



Citizen Advisory Committee

- Formation
 - Role
- Responsibilities
- Conduct and Logistics

Citizen Advisory Committee (CAC)

-  Formation of Citizen Advisory Committee (CAC)
 - Purpose: Advise on the Part 150 Noise Compatibility Study
 - Interested residents applied for participation
-  High level of interest: 40+ applications for 15 CAC seats
-  Applicants selected to allow for fair representation of communities

CAC's Advisory Role - Flight Procedure Evaluation

-  Provide input to the Technical Advisory Committee (TAC).
 - ANAC recommendations
 - New noise considerations
-  Provide two members to serve on TAC to represent CAC input.
-  Represent your community.

CAC Member Responsibilities

-  Attend every meeting.
-  Come to meeting with an open mind.
-  Represent your community in a professional and respectful manner.
-  Respect other committee members views and opinions.
-  Ask questions as a means to reach a better understanding on a topic.
-  Provide meaningful input.

CAC Meeting Conduct and Logistics

-  Operated on a consensus basis.
-  Conducted in a professional and respectful manner.
-  Facilitated by an experienced meeting facilitator.
 - Stay on agenda
 - Be sensitive to meeting time
 - Let every committee member share their thoughts
-  CAC meetings will be open to the public to observe.
-  Statements to the press can only represent the individual not the committee.



Flight Procedure Evaluation

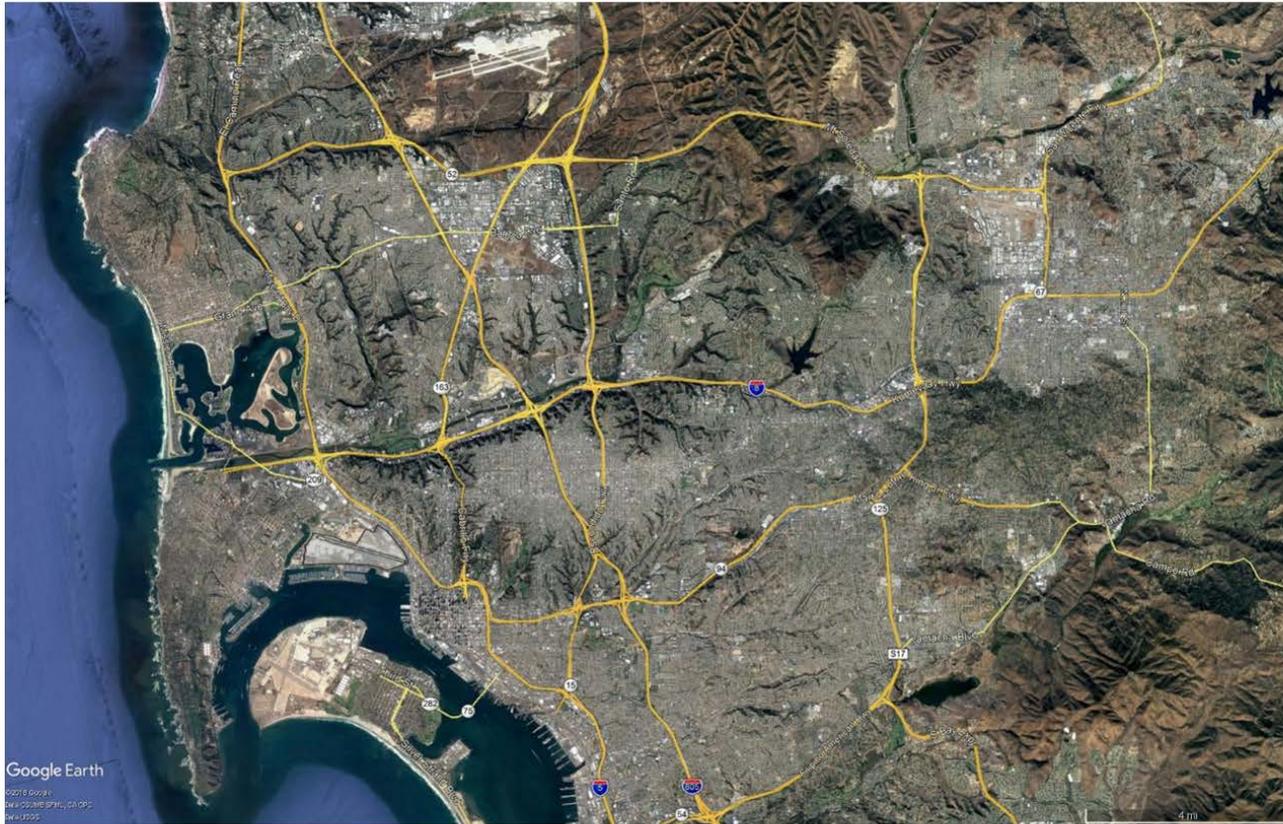
- ANAC Sub-Committee Recommendations
 - Purpose
 - Process
- Important Factors

Flight Procedure Evaluation

-  The Airport Noise Advisory Committee (ANAC), through the Subcommittee, proposed multiple flight procedure recommendations to reduce aircraft noise.
-  In Dec 2017, Airport Authority Board accepted the Action Plan to assess ANAC recommendations.
-  Flight Procedure Evaluation Purpose:
 - Evaluate flight procedures affecting areas outside 65 CNEL.
 - Gather community input on these procedures.

FAA has ultimate control over implementing flight procedure changes

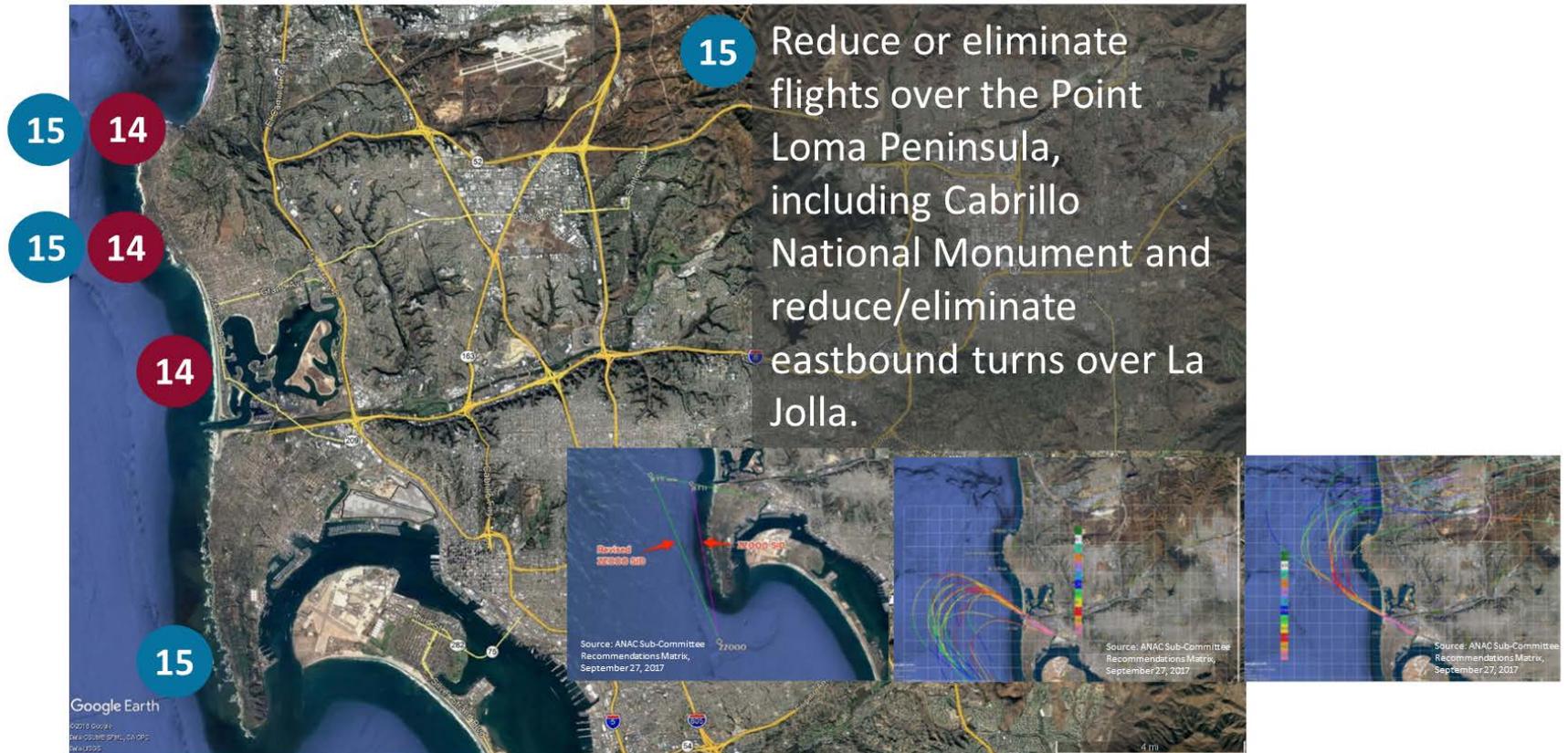
ANAC Recommendations - Flight Procedures



ANAC Recommendations - Flight Procedures



ANAC Recommendations - Flight Procedures



ANAC Recommendations - Flight Procedures



ANAC Recommendations - Flight Procedures



ANAC Recommendations - Flight Procedures



ANAC Recommendations - Flight Procedures



Conceptual Flight Procedure Analysis Processes

Requirements

- Scope of Project
- ANAC Subcommittee Recommendations

Conceptual Flight Procedure Analysis Processes



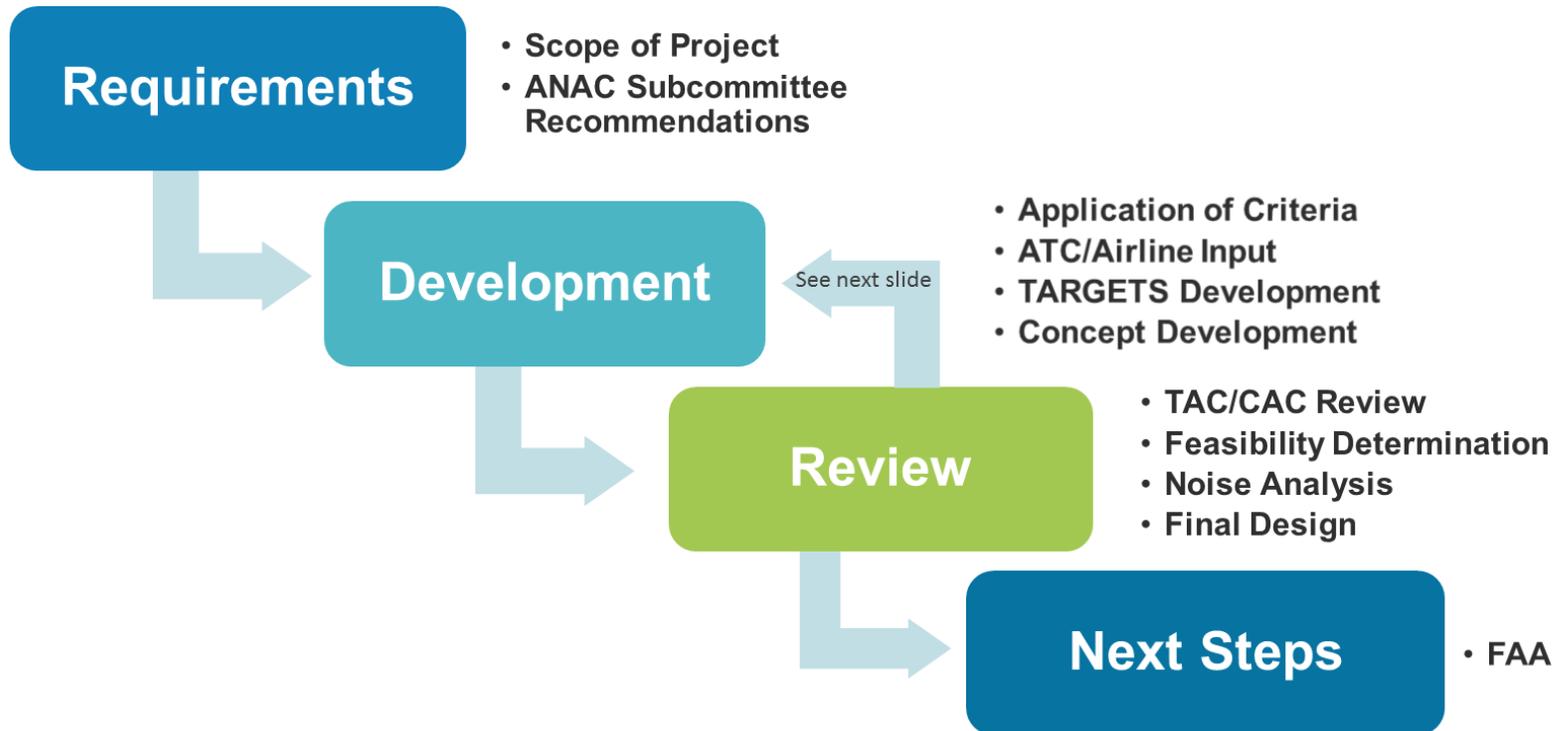
Conceptual Flight Procedure Analysis Processes



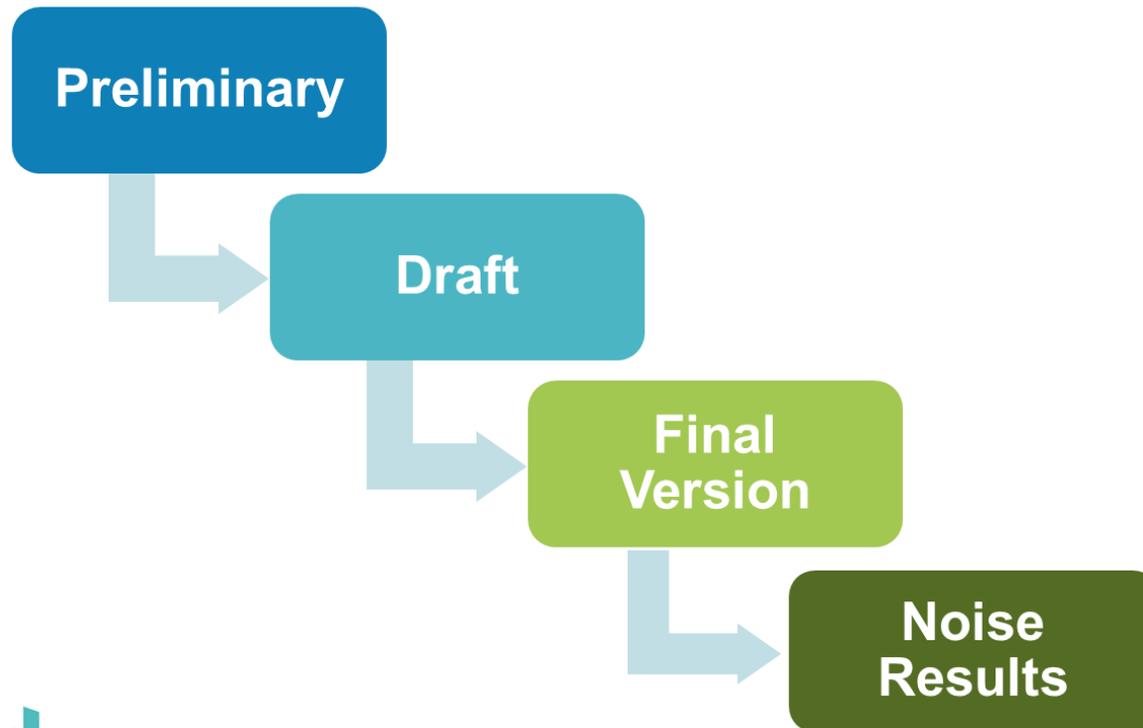
Conceptual Flight Procedure Analysis Processes



Conceptual Flight Procedure Analysis Processes



Development/Review Steps



Preliminary

Design concept procedures within parameters that meet intent of ANAC recommendations. If a design is not possible to address a recommendation, reasons will be documented.

Draft

Consider input from TAC on Version 1 designs and adjust where possible. Reasons for input that cannot be accommodated will be documented.

Final

Consider input from CAC/TAC on Version 2 designs and adjust where possible. Reasons for input that cannot be accommodated will be documented.

Noise Results

Calculate noise on Final Version designs and compare with Baseline levels to determine potential change. Review final designs and noise changes with CAC and TAC.

7100.41 Phase 1 - Preliminary Activities

A Process to Evaluate Safety, Risk, Benefit, Feasibility, Readiness, and Performance



Initial Coordination

• Does the Proposal Meet FAA Goals and Objectives?
If Yes, Baseline Analysis. If No, STOP



Baseline Analysis

• Analysis of Baseline Data and Benefits
• Does the Proposal Meet FAA Goals and Objectives? If Yes, Go to Development Phase. If No, Re-evaluate Baseline Analysis or STOP



Approval

• If Accepted go to Development Phase. If Not Accepted Back to Baseline Analysis or STOP

Process - Concept Design

Design Parameters

- Do not change aircraft flight paths at or below 3,000 feet above SDIA's elevation
- Do not impact safety
- Meet FAA design criteria
- Fit within existing airspace and maintain existing airspace hand-off areas
- Do not impact capacity of SDIA
- Do not move noise to new non-compatible areas

Operations Data and Design Tool

- Evaluate post-Metroplex operations
- Use FAA's Terminal Area Route Generation, Evaluation and Traffic Simulation (TARGETS) design tool to design concept procedures.

Process - Aircraft Noise Analysis



Methodology: Use Aviation Environmental Design Tool (AEDT)

- Use FAA ATO methodology to assess potential impacts
- Calculate noise levels for closely-spaced grid points
- Analyze difference between alternative and baseline



Flight Track and Operation Patterns

- Develop AEDT flight tracks and altitude profiles for traffic flows based on best radar and flight operations data



Noise Model Outputs

- Calculate Community Noise Equivalent Noise Level (CNEL)
- Calculate change in CNEL between an alternative and the baseline.

Important Factors



Will:

- Propose designs compatible with existing air traffic environment
- Gather critical input from CAC and TAC during design process
- Coordinate with FAA ATO staff during concept design process
- Develop required information for FAA consideration the “Preliminary Activities” phase of the FAA Order 7100.41a process, if necessary
- Calculate change in noise levels for specific procedures

Important Factors

Will not:

- Evaluate recommendations to reduce noise at or higher than CNEL 65 dBA – reserved for Part 150 Study
- Propose designs that require FAA waivers
- Propose designs that will negatively impact SDIA capacity
- Conduct all steps in FAA Order 7100.41A
- Evaluate non-SDIA traffic overflights
- Evaluate “restriction” type proposals that require 14 CFR Part 161 study

Process - Stakeholder Input

Review



Citizen Advisory Committee (CAC)

- Input on ANAC recommendations and related goals
- At least two meetings to review draft/final concepts
- One meeting to review conclusions



Technical Advisory Committee (TAC)

- Broader stakeholder group: Airline(s), commuter carrier(s), corporate operator(s) and FAA ATO.
- Input to confirm procedures are operationally viable and identify potential issues
- At least three meetings to review iterative/draft/final concepts
- One meeting to review conclusions



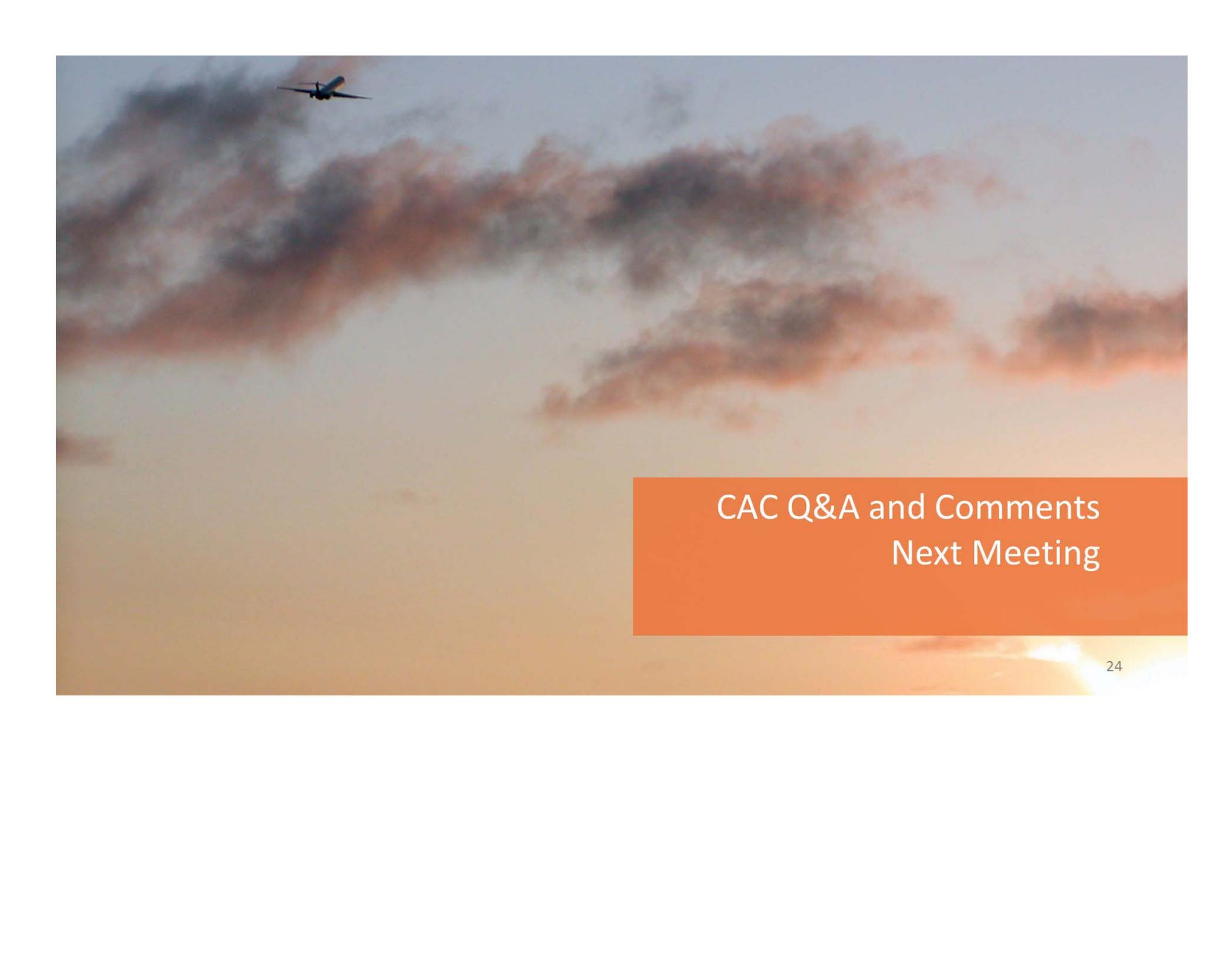
Anticipated Meeting Schedule

CAC Flight Procedure Analysis Meeting Timeline





Select 2 CAC Members for
Technical Advisory Committee



CAC Q&A and Comments
Next Meeting

B.1.2 TAC MEETING #1 – APRIL 5, 2018



Welcome

Technical Advisory Committee Meeting #1

April 5, 2018

Agenda

- Introductions
- Technical Advisory Committee (TAC)
- Study Overview:
 - Part 150 Study
 - Flight Procedure Evaluation
- Anticipated Meeting Schedule
- Questions
- Next Meeting

Introductions

San Diego County Regional Airport Authority (SCRAA)

- Owns and operates the airport
- Main Contact: Ms. Sjohnna Knack, Program Manager

14 CFR Part 150 Consultant Team – In Procurement Process

Part 150 focus:

- Areas exposed to CNEL levels at or higher than 65 dBA
- FAA will only fund abatement/mitigation at or higher than CNEL 65 dBA

Several flight procedure recommendations to reduce noise outside CNEL 65 dBA

SDCRAA to conduct flight procedure evaluation outside the 150 Study process

Introductions (cont.)

Flight Procedure Evaluation Consultant Team

- Ricondo & Associates, Inc.
- Mead & Hunt
- Project Lead: Mr. Stephen Smith



Technical Advisory Committee

- Formation
 - Role
- Responsibilities
- Conduct and Logistics

Technical Advisory Committee (TAC)

-  Purpose: Provide input on technical process and policy/regulation for the Part 150 Noise Compatibility Study and the Flight Procedures Evaluation Study
-  Represents San Diego International Airport (SAN) stakeholder groups
 - Federal Aviation Administration (FAA) Airports and Air Traffic Organization (ATO)
 - Users: Airline, Commuter and Corporate General Aviation
 - SDCRAA Airport (various departments)
 - Local government jurisdictions
 - Community representatives around SAN: Airport Noise Advisory Committee (ANAC) and Citizen Advisory Committee (CAC)

TAC's Advisory Role - Flight Procedure Evaluation

-  Provide technical input to Airport Authority and consultant
-  Input on concept procedure designs
 - Safety feedback
 - Operational feedback
 - Benefit/cost feedback
-  Represent your stakeholder group.

TAC Member Responsibilities

-  Attend every meeting.
-  Come to meeting with open-mind.
-  Conduct discussions in a professional and respectful manner.
-  Respect other committee members views and opinions.
-  Ask questions as a means to reach a better understanding on a topic.
-  Provide meaningful input.

TAC Meeting Conduct and Logistics

-  Operated on a consensus basis.
-  Conducted in a professional and respectful manner.
-  Facilitated by an experienced meeting facilitator.
 - Stay on agenda
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 - Let every committee member share their thoughts
-  TAC meetings will be open to the public to observe.
-  Statements to the press can only represent the individual not the committee.



Flight Procedure Evaluation

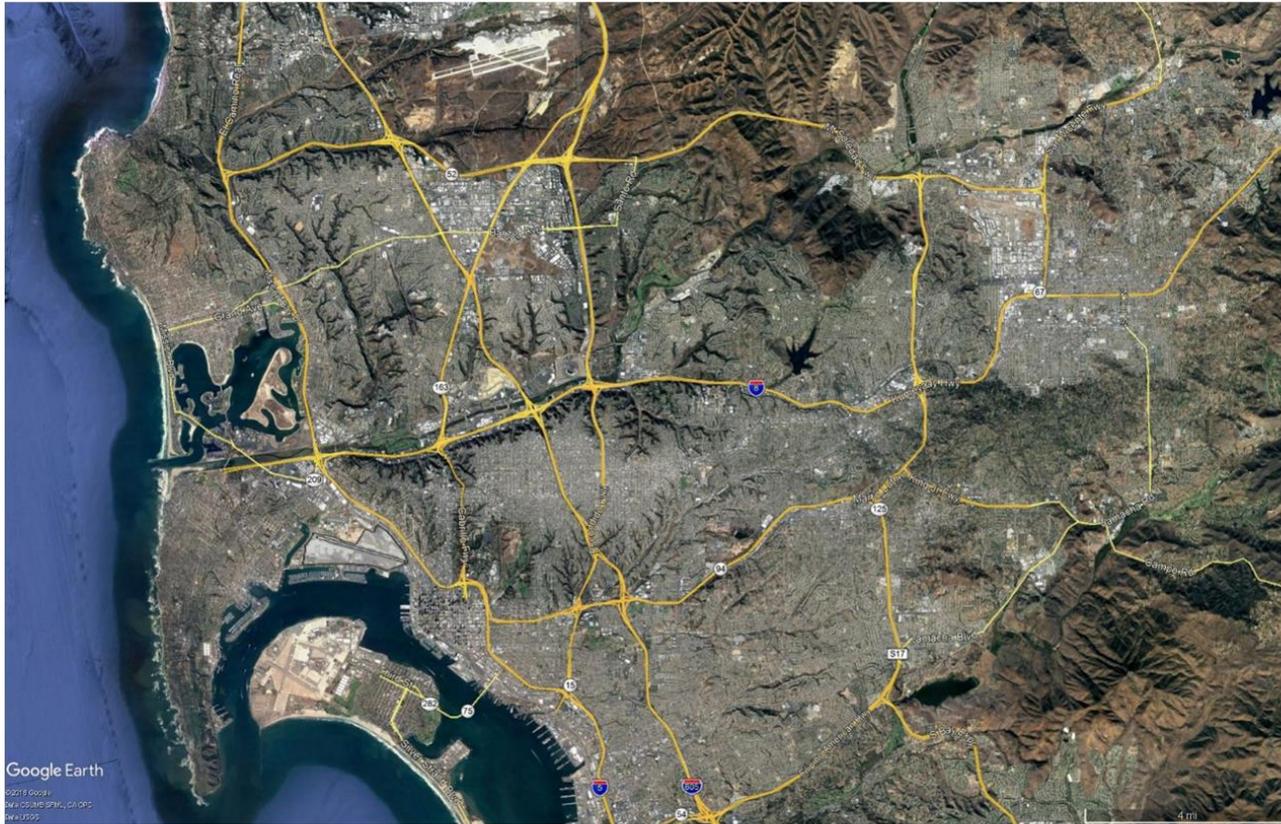
- ANAC Sub-Committee Recommendations
 - Purpose
 - Process
- Important Factors

Flight Procedure Evaluation

-  The Airport Noise Advisory Committee (ANAC) proposed multiple flight procedure recommendations to reduce aircraft noise.
-  In Dec 2017, Airport Authority Board accepted the Action Plan to assess ANAC recommendations.
-  Flight Procedure Evaluation Purpose:
 - Evaluate flight procedures affecting areas outside 65 CNEL.
 - Flight procedures closer to the airport will be evaluated in the Part 150 study.
 - Gather community input on these procedures.

FAA has ultimate control over implementing flight procedure changes

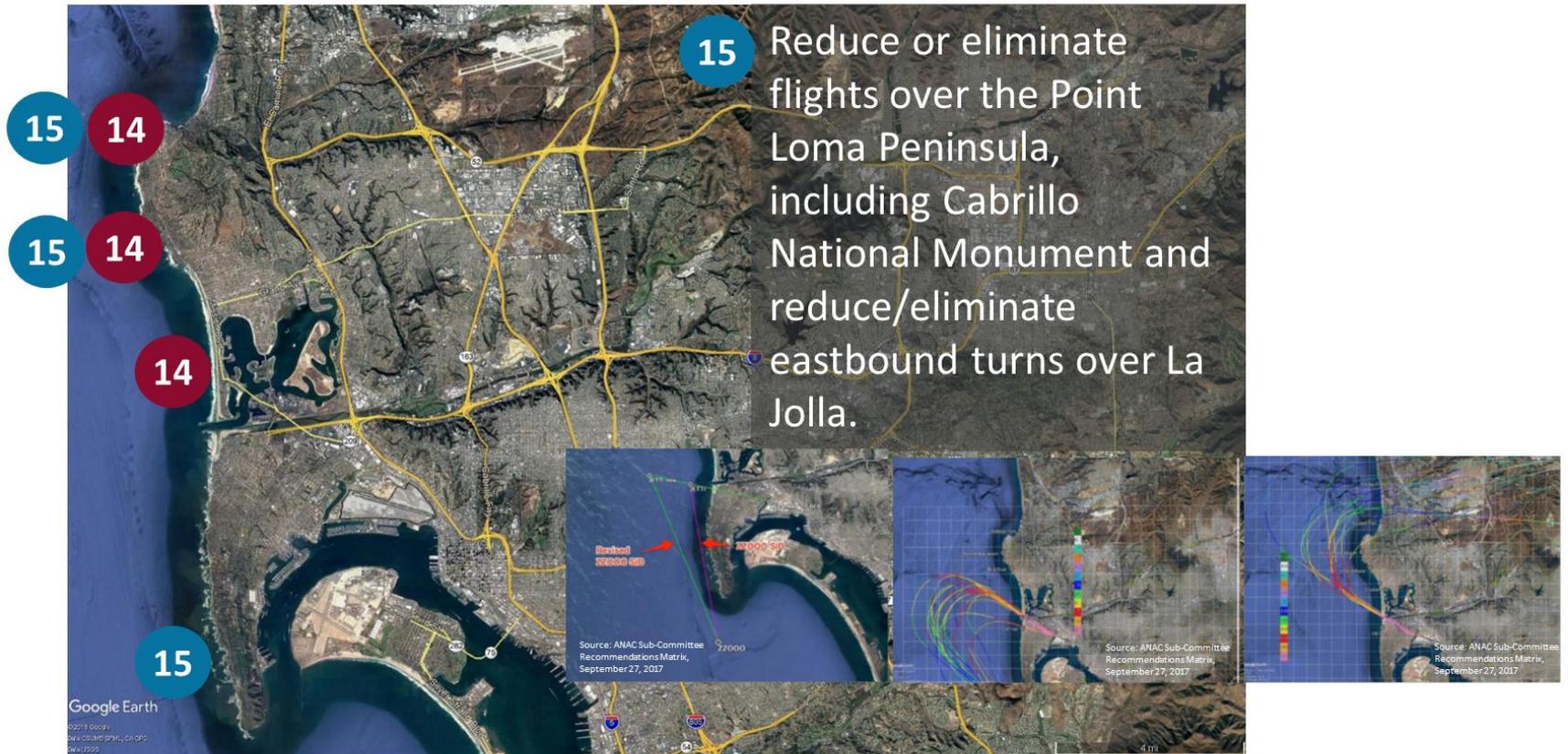
ANAC Recommendations - Flight Procedures



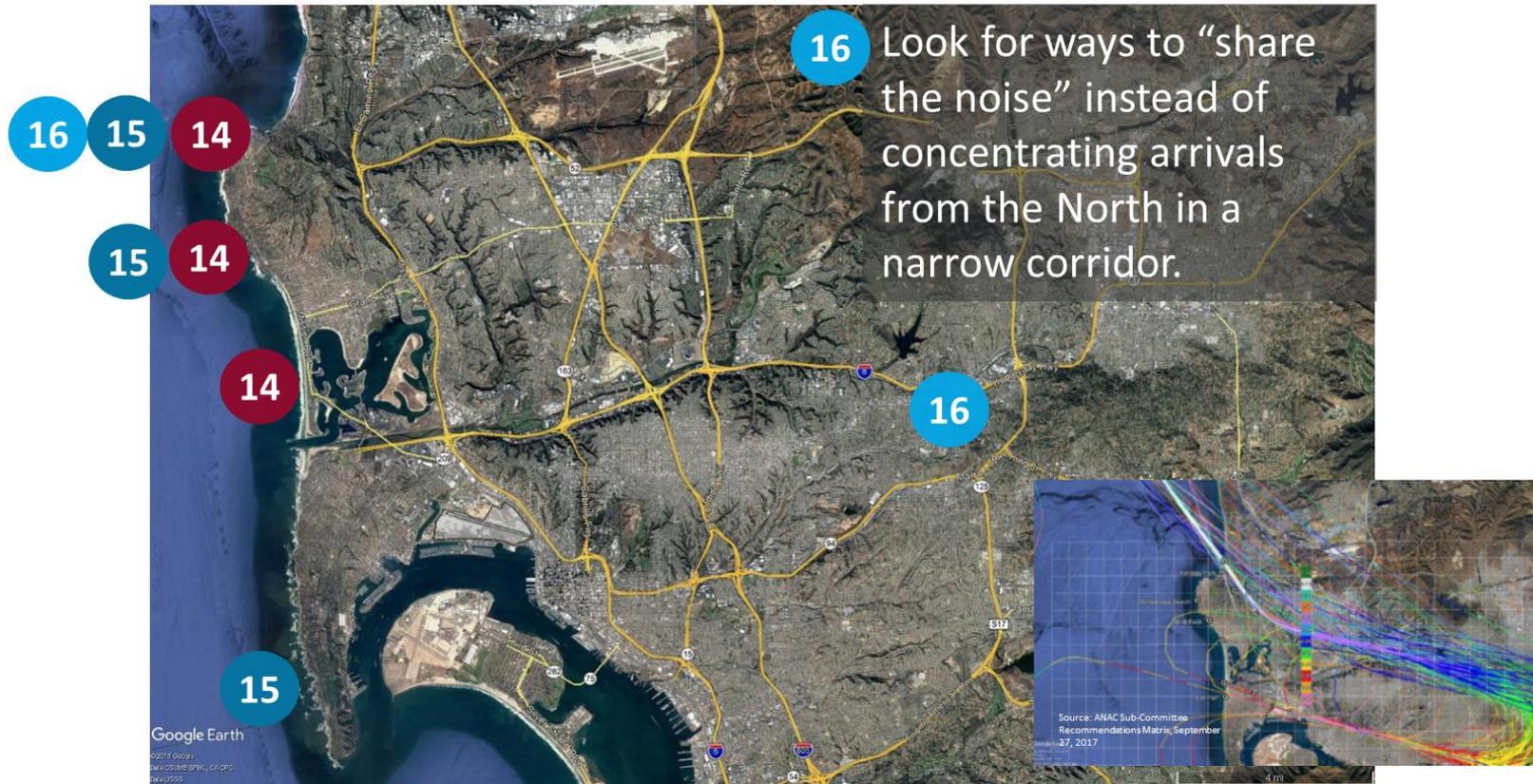
ANAC Recommendations - Flight Procedures



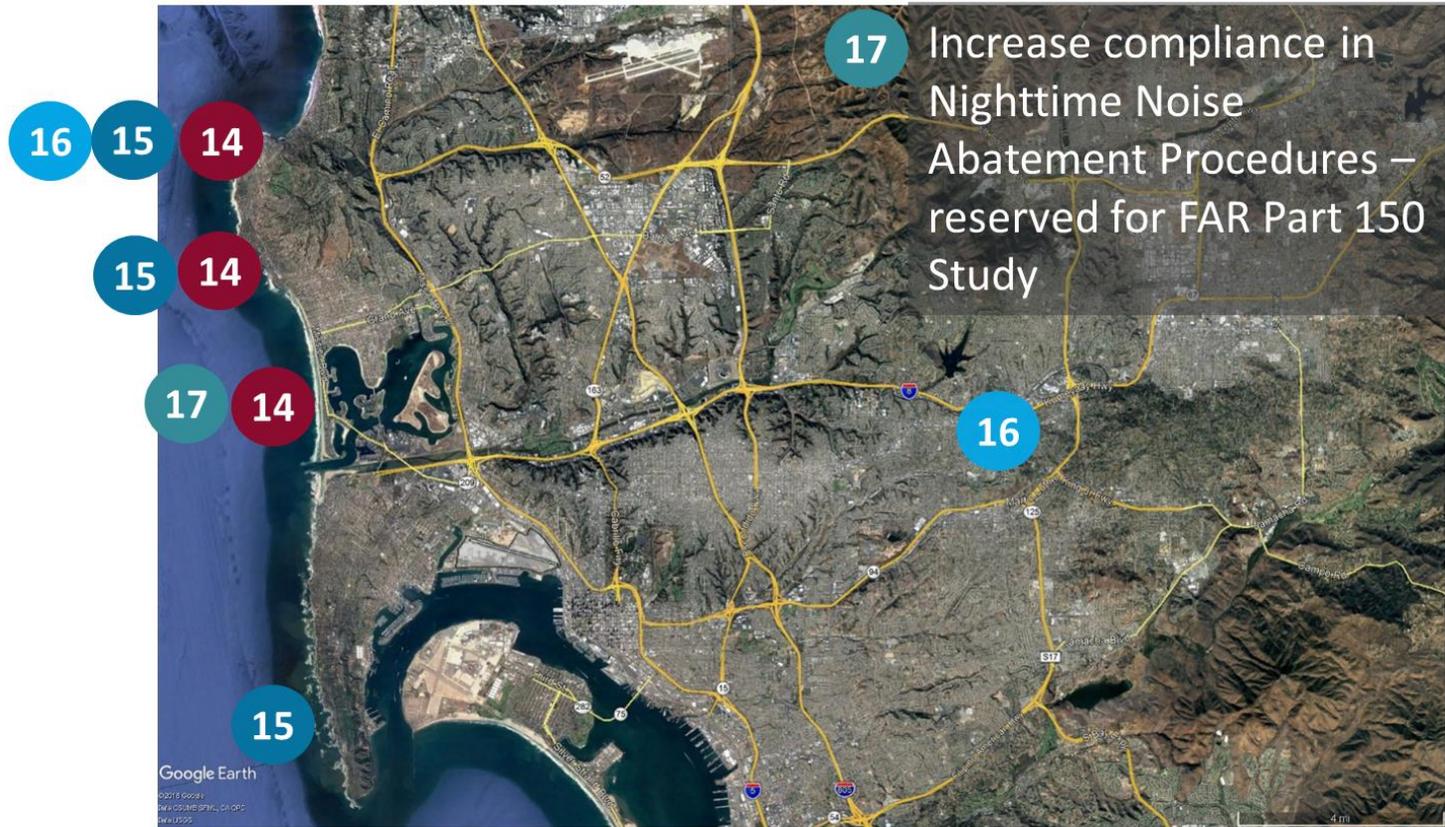
ANAC Recommendations - Flight Procedures



ANAC Recommendations - Flight Procedures



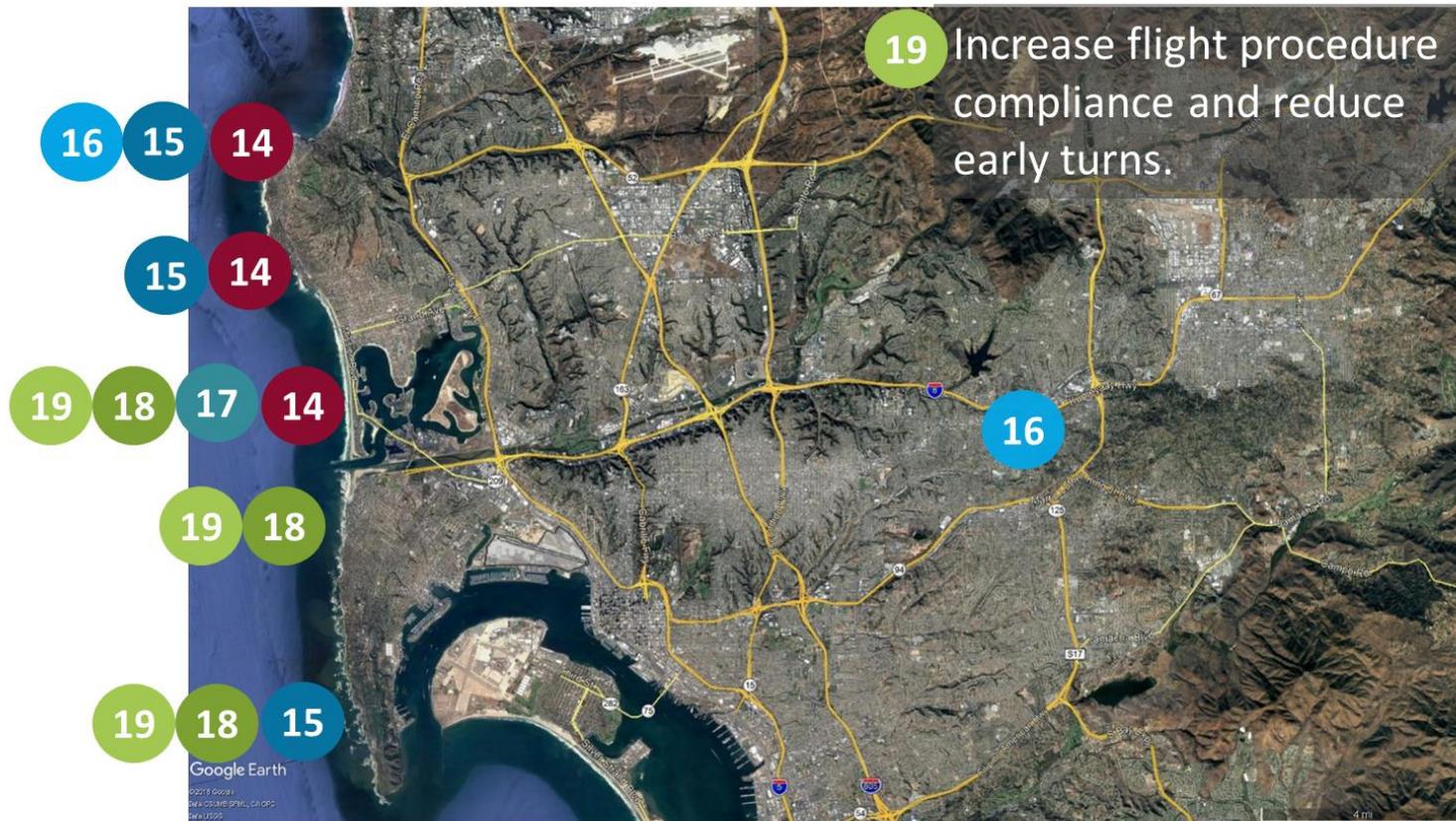
ANAC Recommendations - Flight Procedures



ANAC Recommendations - Flight Procedures

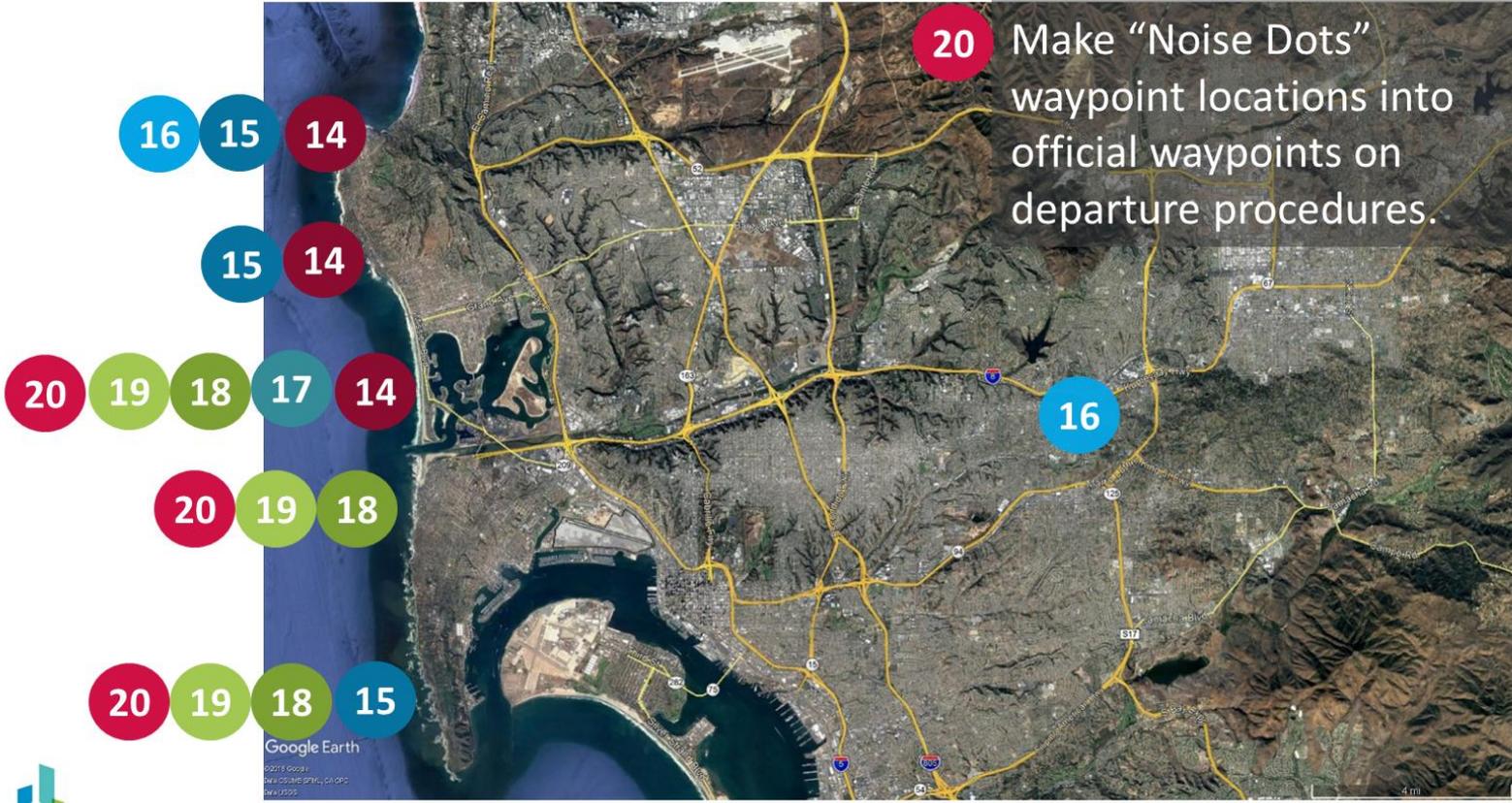


ANAC Recommendations - Flight Procedures



ANAC Recommendations - Flight Procedures

20 Make "Noise Dots" waypoint locations into official waypoints on departure procedures.



SDIA Conceptual Flight Procedure Analysis Processes

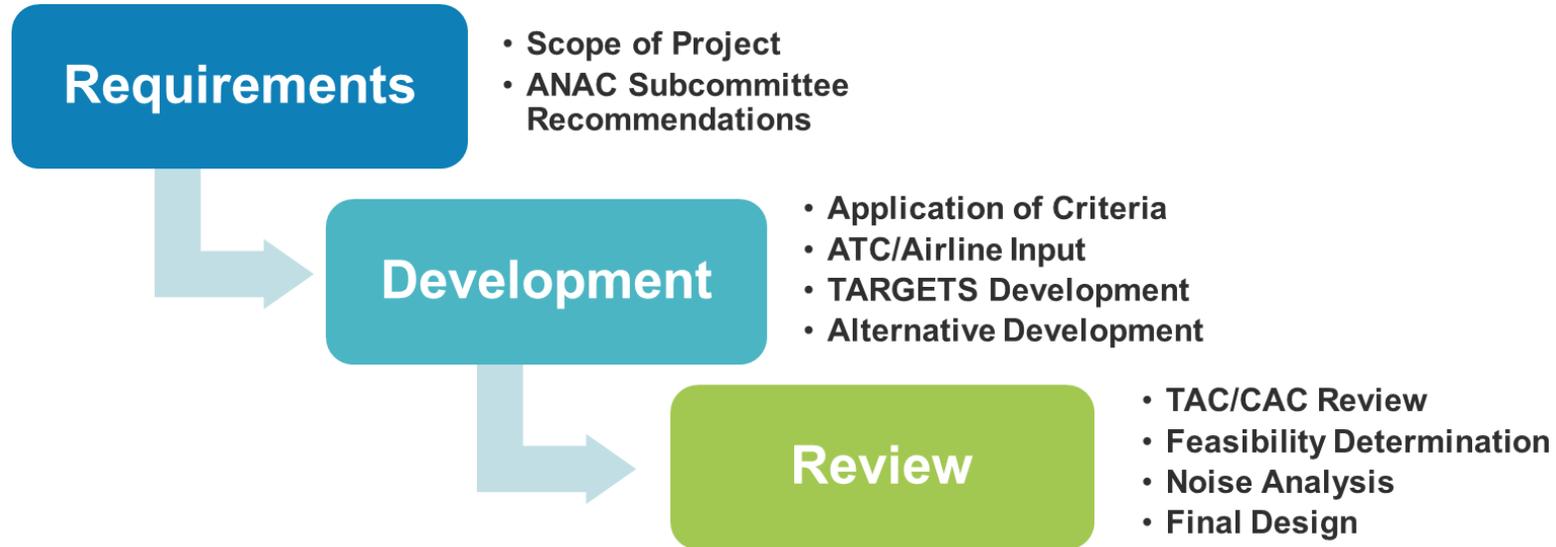
Requirements

- Scope of Project
- ANAC Subcommittee Recommendations

SDIA Conceptual Flight Procedure Analysis Processes



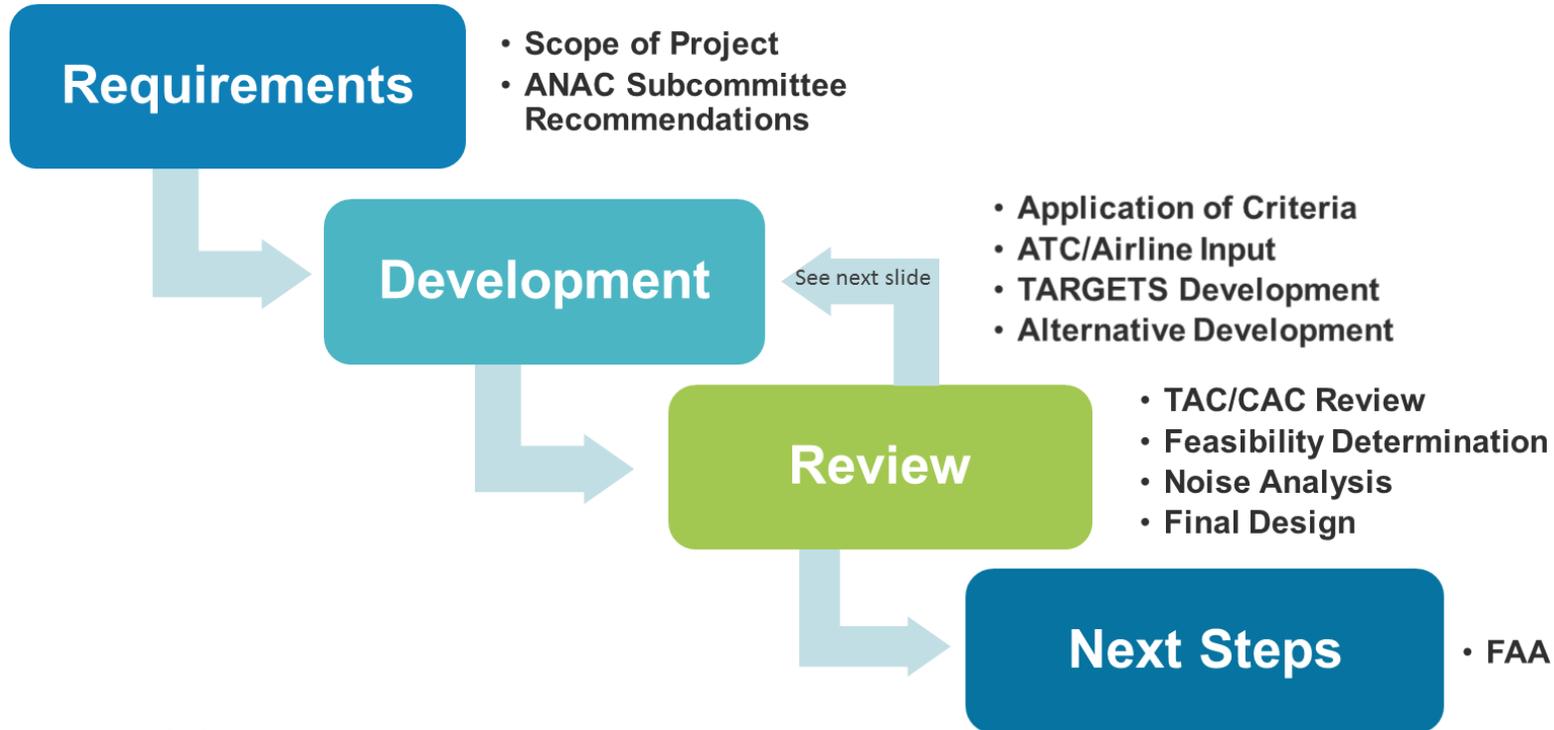
SDIA Conceptual Flight Procedure Analysis Processes



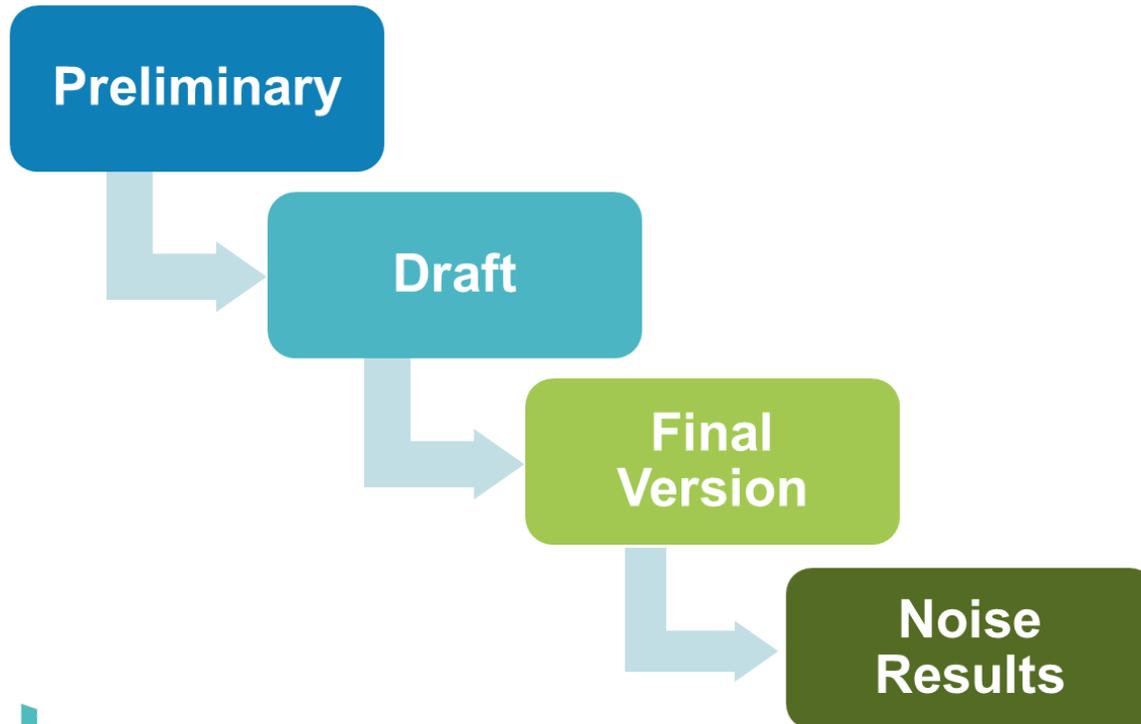
SDIA Conceptual Flight Procedure Analysis Processes



SDIA Conceptual Flight Procedure Analysis Processes



Development/Review Steps



Preliminary

Design concept procedures within parameters that meet intent of ANAC recommendations. If a design is not possible to address a recommendation, reasons will be documented.

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Consider input from TAC on Version 1 designs and adjust where possible. Reasons for input that cannot be accommodated will be documented.

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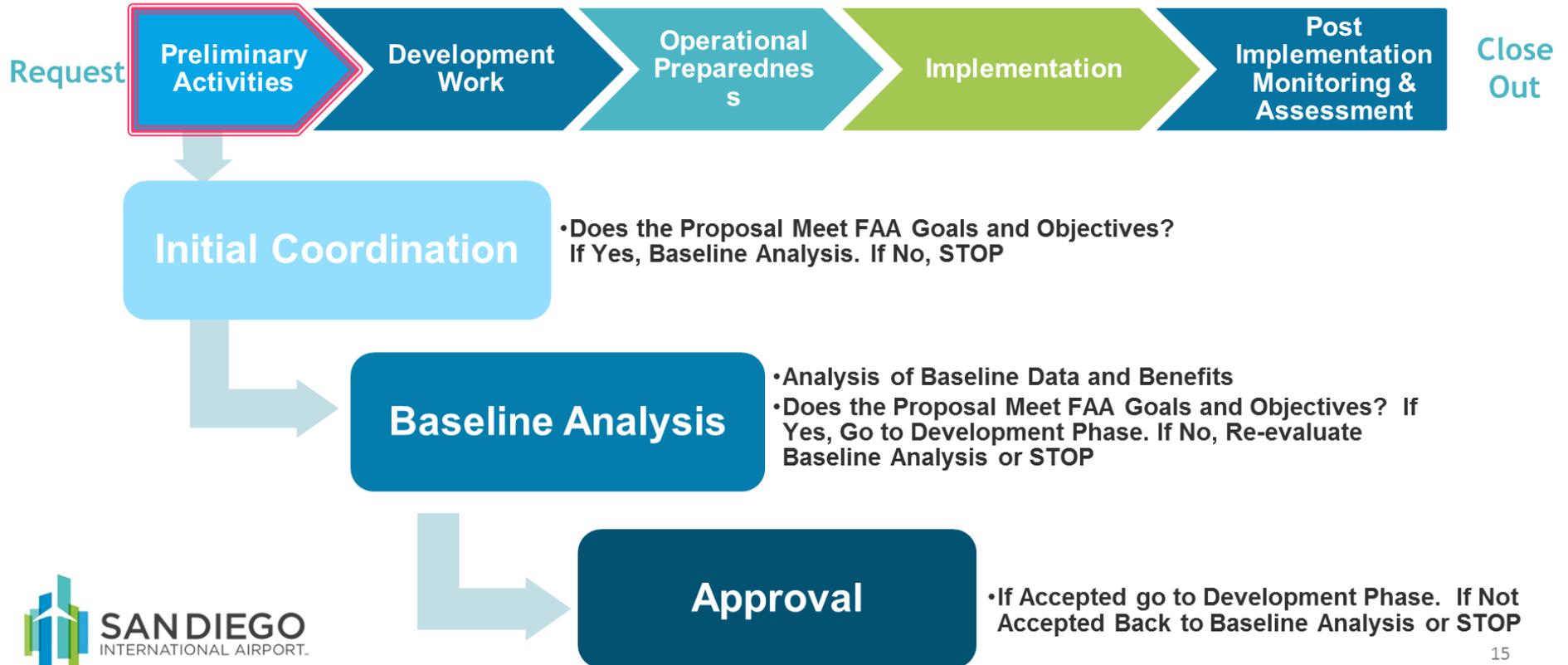
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Noise Results

Calculate noise on Final Version designs and compare with Baseline levels to determine potential change. Review final designs and noise changes with CAC and TAC.

7100.41 Phase 1 - Preliminary Activities

A Process to Evaluate Safety, Risk, Benefit, Feasibility, Readiness, and Performance



Process - Concept Design



Design Parameters

- Do not change aircraft flight paths over areas exposed to CNEL 65 or higher
- Do not impact safety
- Meet FAA design criteria
- Fit within existing airspace and maintain existing airspace hand-off areas
- Do not impact capacity of SDIA
- Do not move noise to new non-compatible areas



Operations Data and Design Tool

- Evaluate post-Metroplex operations
- Use FAA's Terminal Area Route Generation, Evaluation and Traffic Simulation (TARGETS) design tool to design concept procedures.

Process - Aircraft Noise Analysis



Methodology: Use Aviation Environmental Design Tool (AEDT)

- Use FAA ATO methodology to assess potential impacts
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Flight Track and Operation Patterns

- Develop AEDT flight tracks and altitude profiles for traffic flows based on best radar and flight operations data



Noise Model Outputs

- Calculate Community Noise Equivalent Noise Level (CNEL)
- Calculate change in DNL and CNEL between an alternative and the baseline.

Important Factors

✓ Will:

- Propose designs compatible with existing air traffic environment
- Gather critical input from CAC and TAC during design process
- Coordinate with FAA ATO staff during concept design process
- Develop required information for FAA consideration the “Preliminary Activities” phase of the FAA Order 7100.41a process, if necessary
- Calculate change in noise levels for specific procedures

Important Factors

✘ Will not:

- Evaluate recommendations to reduce noise at or higher than CNEL 65 dBA – reserved for Part 150 Study
- Propose designs that require FAA waivers
- Propose designs that will negatively impact SDIA capacity
- Conduct all steps in FAA Order 7100.41A
- Evaluate non-SDIA traffic overflights
- Evaluate “restriction” type proposals that require 14 CFR Part 161 study

Process - Stakeholder Input



Citizen Advisory Committee (CAC)

- Input on ANAC recommendations and related goals
- At least two meetings to review draft/final concepts
- One meeting to review conclusions



Technical Advisory Committee (TAC)

- Broader stakeholder group: Airline(s), commuter carrier(s), corporate operator(s) and FAA ATO.
- Input to confirm procedures are operationally viable and identify potential issues
- At least three meetings to review iterative/draft/final concepts
- One meeting to review conclusions



Anticipated Meeting Schedule

TAC Flight Procedure Analysis Meeting Timeline



★ = Citizen Advisory Committee Meetings



TAC Q&A and Comments
Next Meeting

B.1.3 TAC MEETING #2 – MAY 31, 2018

**San Diego County Regional Airport Authority (SDCRAA)
Flight Procedure Evaluation
Technical Advisory Committee Meeting #2**

San Diego International Airport

May 31, 2018

DRAFT Deliberative Document – For Discussion Purposes Only

Agenda

- Introductions
- Project Objectives
- Meeting Goals
- ANAC Recommendation 14 Design Concepts
- ANAC Recommendation 15 Design Concepts
- ANAC Recommendation 16 Design Concepts
- Next Steps

Introductions to Design Team

- Steve Smith – Ricondo, Project Manager
- Robert Varani – Ricondo, RNAV Procedure Concept Lead
- Kevin L. Markwell – Ricondo, Air Traffic Control Operations Lead

Project Objectives

- Evaluate and determine feasibility of potential procedure designs to meet the intent of ANAC recommendations
- Provide preliminary design concepts for RNAV SIDS and STARS based on:
 - Safety
 - FAA Performance Based Navigation (PBN) design criteria
 - FAA ATC Rules, Policies, and Procedures
- Conduct noise screening analysis on feasible alternatives
- Provide recommendations to SDCRAA

Meeting Goals

- Review preliminary design concepts
- Gather technical input from Technical Advisory Committee on:
 - Achieving ANAC recommendation intent
 - Potential operational issues/concerns

Design Parameters

- ✖ Do not change aircraft flight paths over areas exposed to CNEL 65 or higher
- ✖ Do not impact safety
- ✖ Meet FAA design criteria
- ✖ Fit within existing airspace and maintain existing airspace hand-off areas
- ✖ Do not impact capacity of SDIA
- ✖ Do not move noise to new non-compatible areas

Acronyms

- DF = Direct to a Fix
- Kts = Knots
- MDA = Minimum Descent Altitude
- MVA = Minimum Vectoring Altitude
- MSL = Mean Sea Level
- NM = Nautical Miles
- PBN = Performance Based Navigation
- RNAV = Area Navigation
- RNP = Required Navigational Performance
- SIAP = Standard Instrument Approach Procedure
- SID = Standard Instrument Departure Procedure
- STAR = Standard Instrument Arrival Route
- TARGETS = Terminal Area Route Generation Evaluation and Traffic Simulation
- VA = Heading to an Altitude
- WP = Waypoint

ANAC Noise Recommendation 14 – Reduce Noise in Mission Beach, Pacific Beach, and La Jolla

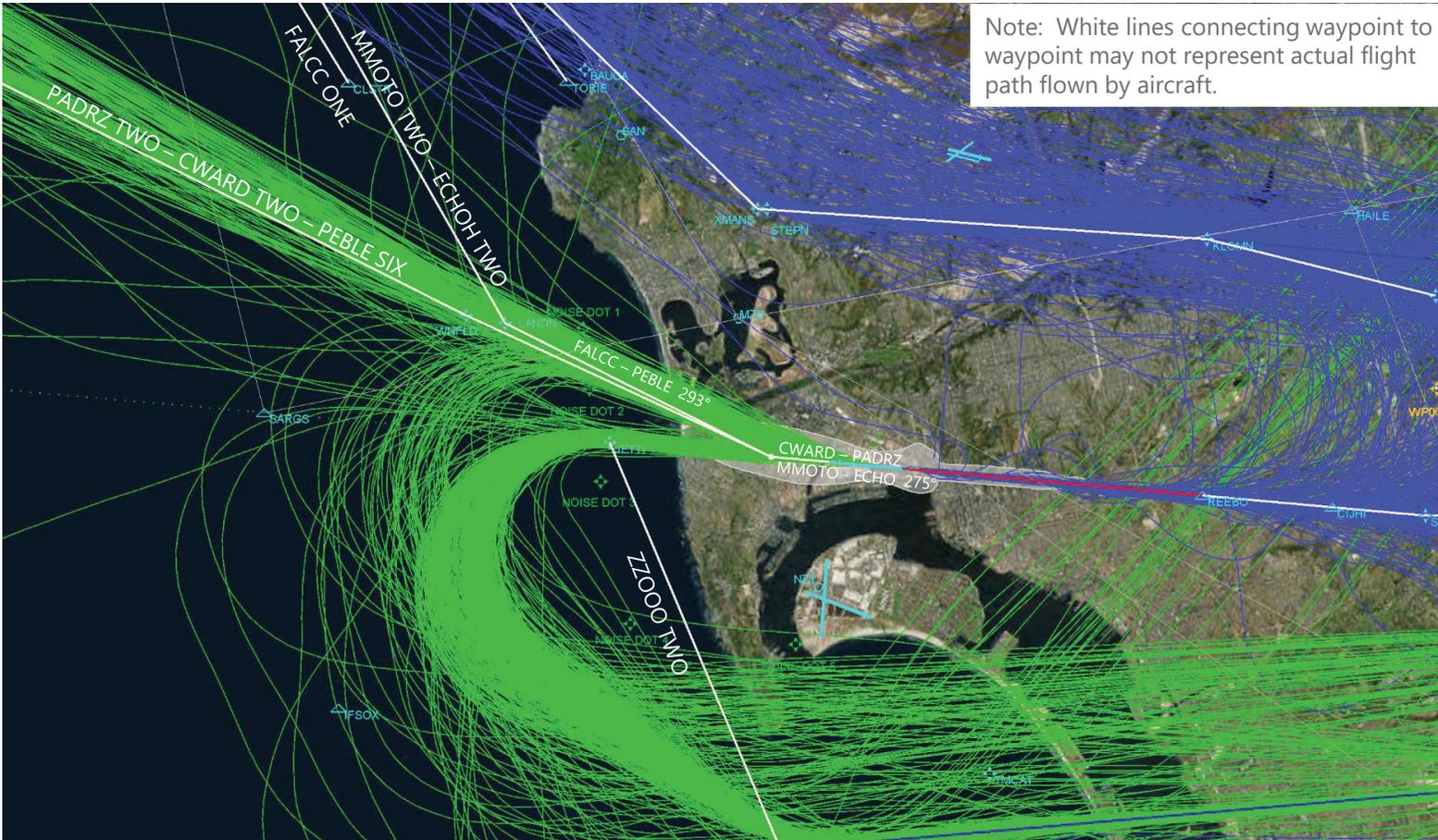
ANAC Noise Recommendation 14

Revise PADRZ SID or create a new procedure to reduce increased noise in La Jolla, Mission Beach and Pacific Beach To be studied as part of the FAR Part 150 Study

1. Move the WNFLD and LANDN waypoints south so as to align with the relocated Noise Dot #1 at 290° (15° separation from JETTI at 275°) and designate as “Flyover” waypoints in their respective SID’s, consistent with JETTI.
2. Establish within the PADRZ SID procedure a horizontal distance from end of runway (1.0 miles) along a fixed heading which must be satisfied along with altitude before a right turn can be initiated to preclude flights that quickly attain the current 520’ altitude and turn right of and prior to Noise Dot #1 before correcting to WYNFLD which results in aircraft flying farther north over Mission Beach.
3. PADRZ ONE SID As currently designed the PADRZ ONE departure leaves aircraft very close to and almost paralleling the coast along La Jolla, increasing noise impacts significantly. We recommend moving the WNFLD and KERNL waypoints 1.5NM south of their current positions. This will ensure aircraft proceed more directly off the coast without paralleling the shore and adds less than a mile of track distance to PADRZ.
4. Create a new procedure: BROCK-1 (alternative 1) Request FAA to revise PADRZ SID and establish new waypoint BROCK1. Adds min increased flight time and takes aircraft further offshore before turning to northern destinations. This will help all coastal neighborhoods with noise issues.
5. Create a new procedure: BROCK-2 (alternative 2 - preferred) Relocate Waypoints WNFLD and LANDN 0.75 miles directly south or adopt BROCK recommendation. Maintain 274 Departure until Altitude 520 or greater. Maintain 274 departure heading until 520 foot altitude or greater and the aircraft have reached (new) flyover waypoint 0.25 to 0.5 miles from the end of the runway before turning towards WNFLD, LANDN or new BROCK Waypoint.
6. Do not move the PADRZ SID further south to avoid negative noise impacts on the south side communities of the Point Loma Peninsula.

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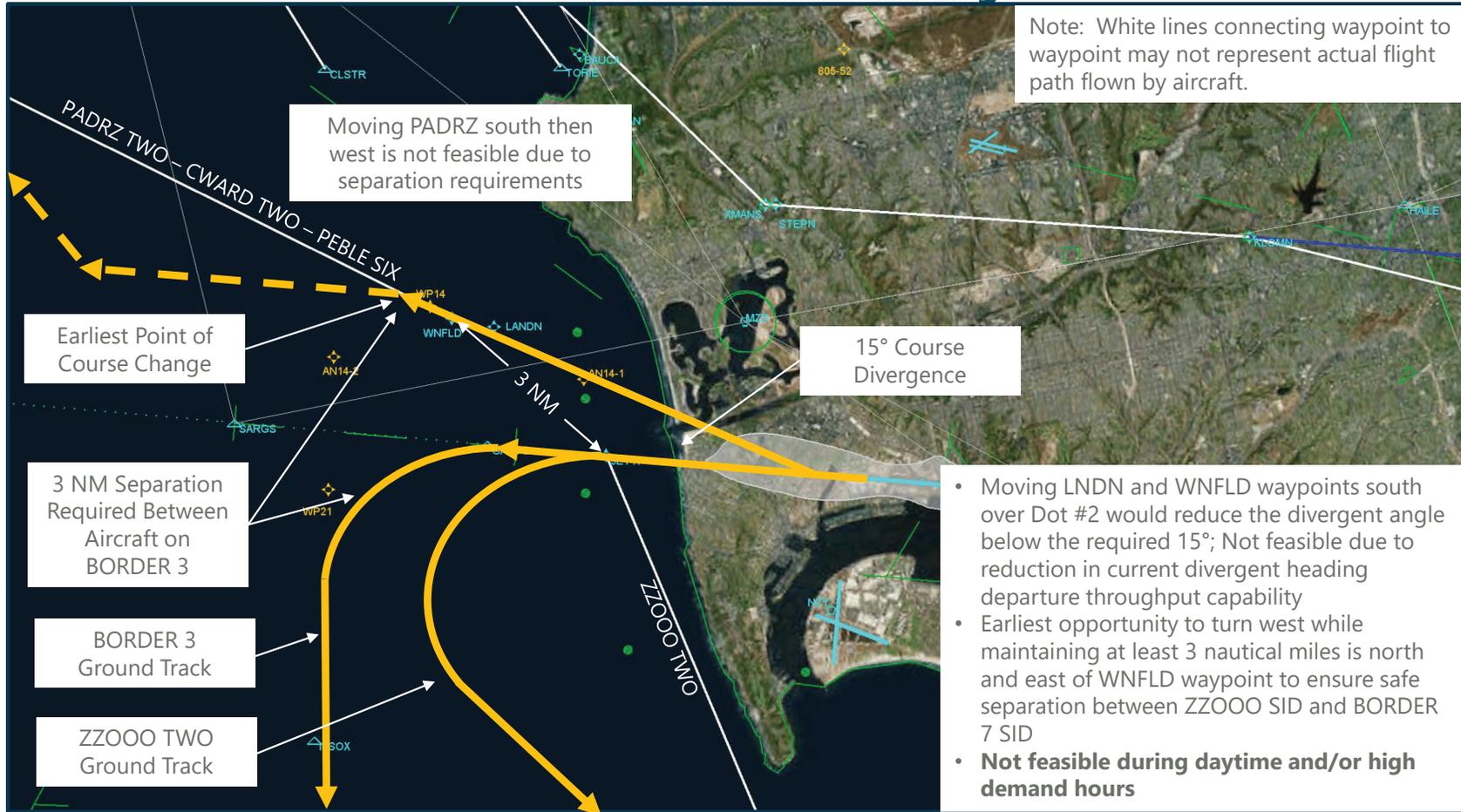
ANAC Noise Recommendation 14 – Existing Flight Tracks



ANAC Noise Recommendation 14 – Initial Review

1. *Move LNDN and WNFLD waypoint south in line with Dot #2:*
 - The magnetic heading from the departure end of Runway 27 is 287°, which is 12° from 275° heading. Moving LNDN and WNFLD waypoints south over Dot #2 would reduce the divergent angle below the required 15°.
 - Not feasible due to reduction in current divergent heading departure throughput capability
2. *Establish within the PADRZ SID procedure a horizontal distance from end of runway (1.0 miles) along a fixed heading which must be satisfied along with altitude before a right turn:* Change to initial heading design will be evaluated in FAR Part 150 Study
3. *Move WNFLD and KERNL waypoints 1.5 miles south of current location:*
 - If aircraft turn more westerly prior to reaching WNFLD, the divergence angle is no longer 15° ; therefore, the procedure must ensure aircraft heading south and north are laterally separated by 3 nautical miles (note: FAA ATC applies an additional buffer between 0.5 to 1 nautical mile to the 3 nautical mile requirement)
 - The earliest opportunity to turn west is north and east of WNFLD waypoint to ensure separation between ZZOOO SID and BORDER 7 SID
4. *Create BROCK-1 procedure:* Is not feasible during daytime hours for same reasons as #3 above, but a procedure similar to the BROCK recommendations for nighttime operations when all traffic is on a 290° heading (existing VA to DF coding) is feasible (see ANAC 14 Alternatives 1, 2 and 3)
5. *Create BROCK-2 procedure:* See #4 above

ANAC Noise Recommendation 14 – Day Time Issues

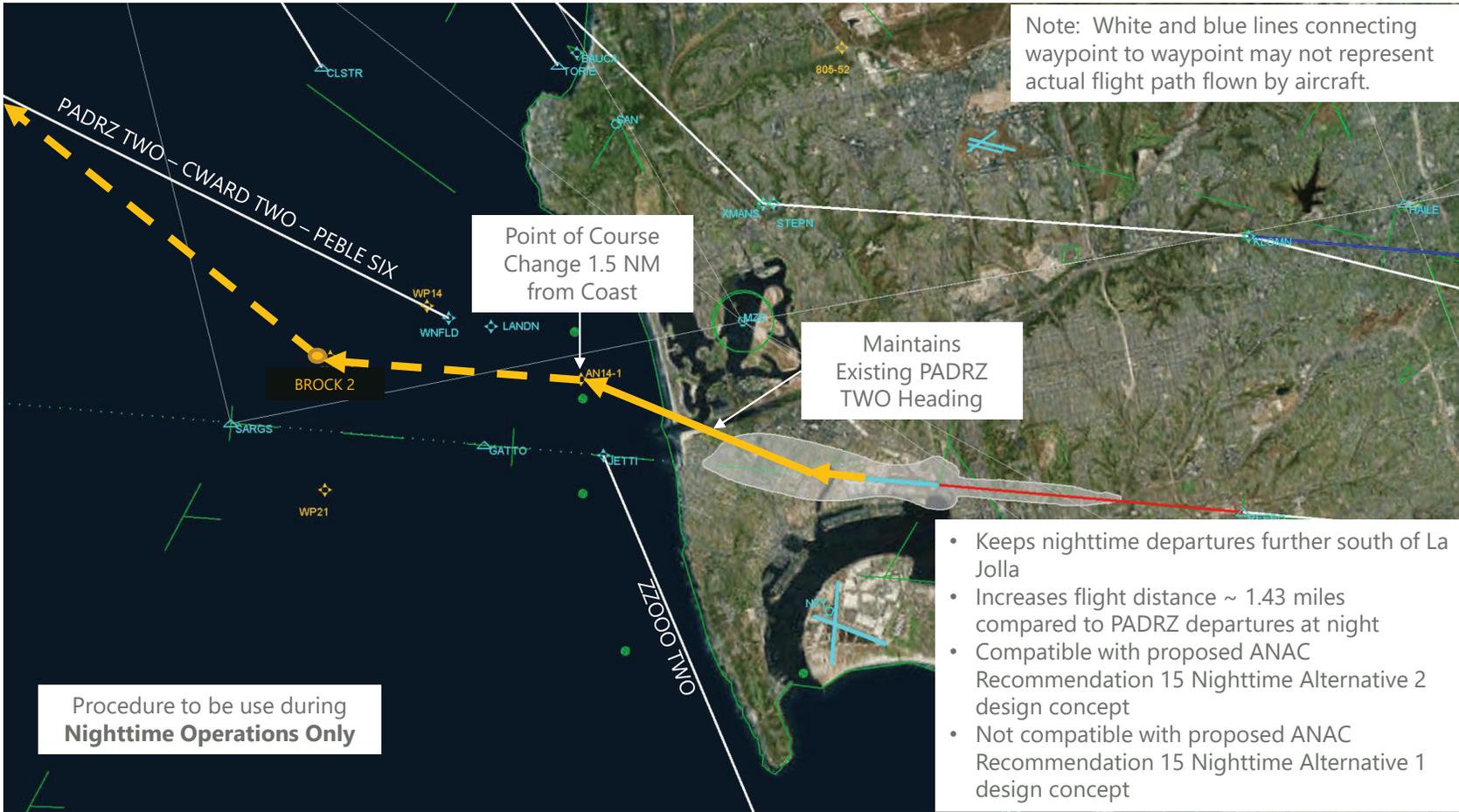


ANAC Noise Recommendation 14 – Nighttime Alternatives

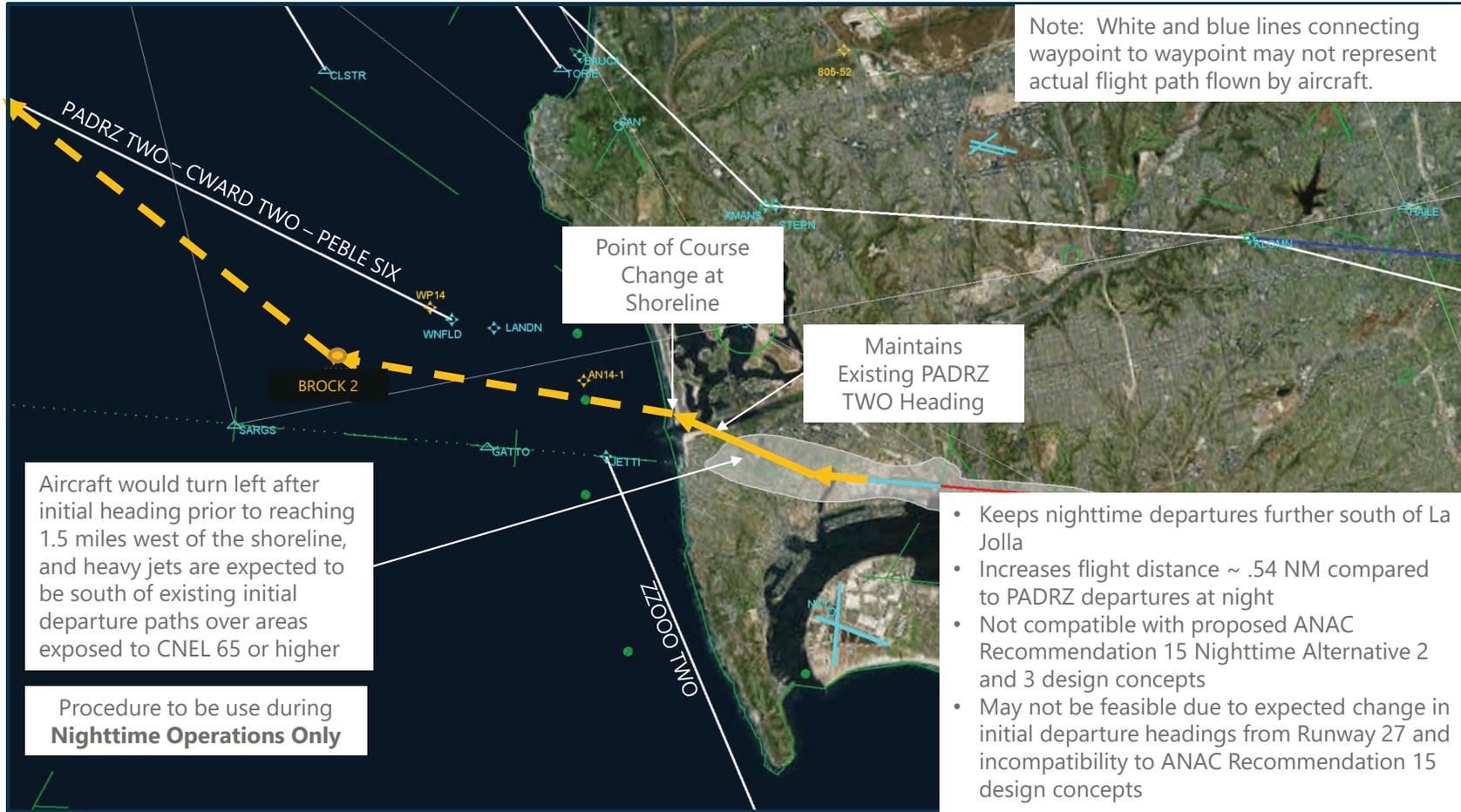
- Alternative 1 - Turn at 1.5 nautical mile (NM) from shoreline
 - Maintains existing initial departure design (VA to DF leg coding)
 - Consistent with FAA Dot agreement
 - Projected flight track on initial heading is consistent with current flight tracks
- Alternative 2 – Turn at shoreline
 - Maintains initial departure design (VA to DF leg coding)
 - Turn location prior to Noise Dot agreement
 - Projected flight track on initial heading is consistent with current flight tracks
- Alternative 3 – Turn at earliest point possible
 - Maintains existing initial departure design
 - Turn occurs where existing design (VA to DF leg coding) heading intersects the DNL 65 contour
 - Turn location prior to FAA Dot agreement
 - Projected flight track on initial heading strays from current flight tracks to the south (potential for change in DNL 65 area)
- All Alternatives not feasible during Contra-Flow operations (arrivals on Runway 9 and departures on Runway 27)

DRAFT Deliberative Document – For Discussion Purposes Only

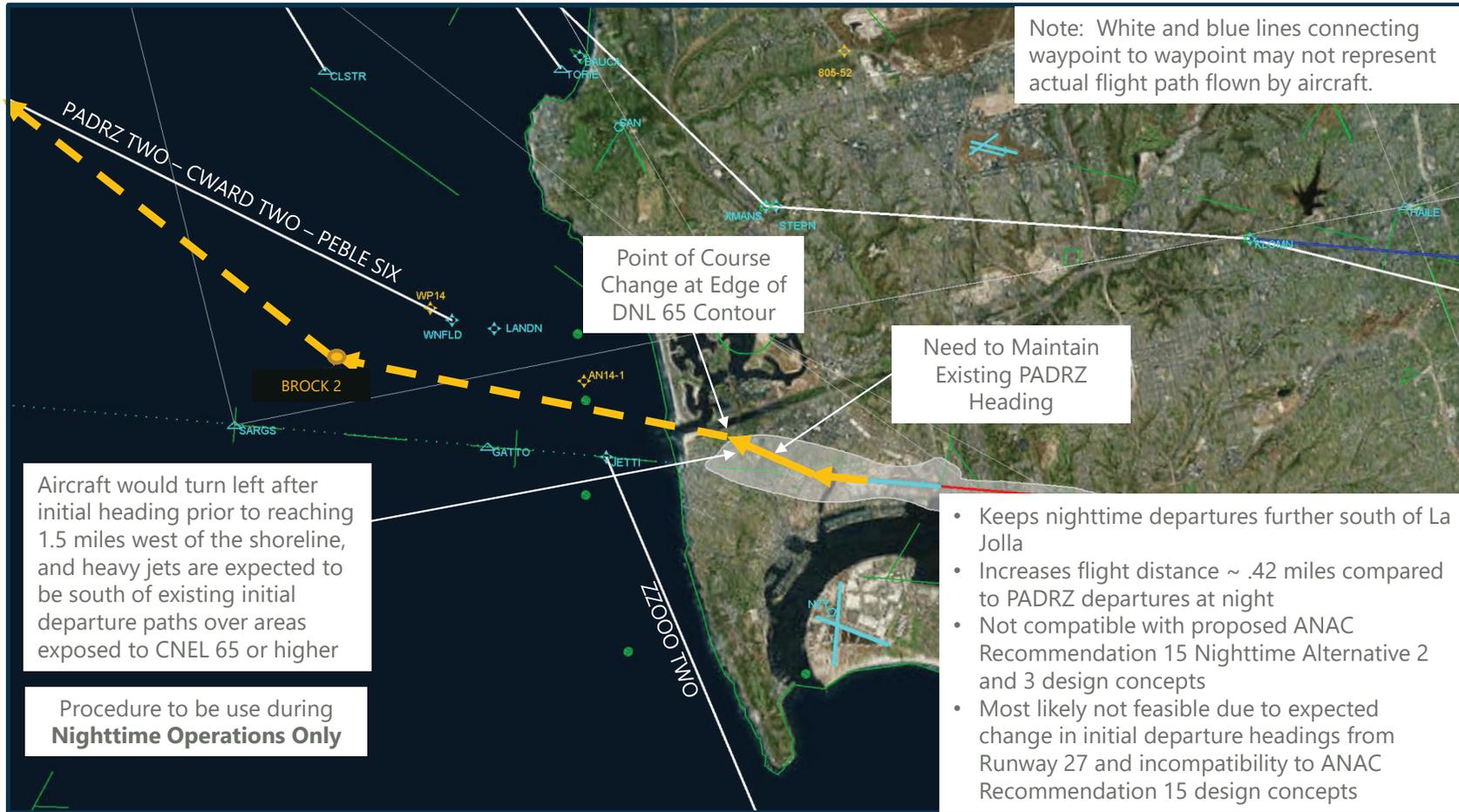
ANAC Noise Recommendation 14 – Alt 1 Turn at 1.5 NM



ANAC Noise Recommendation 14 – Alt 2 Turn at Shoreline



ANAC Noise Recommendation 14 – Alt 3 Turn at DNL 65



ANAC Noise Recommendation 15 – Reduce Noise Over the Point Loma Peninsula and La Jolla

ANAC Noise Recommendation 15

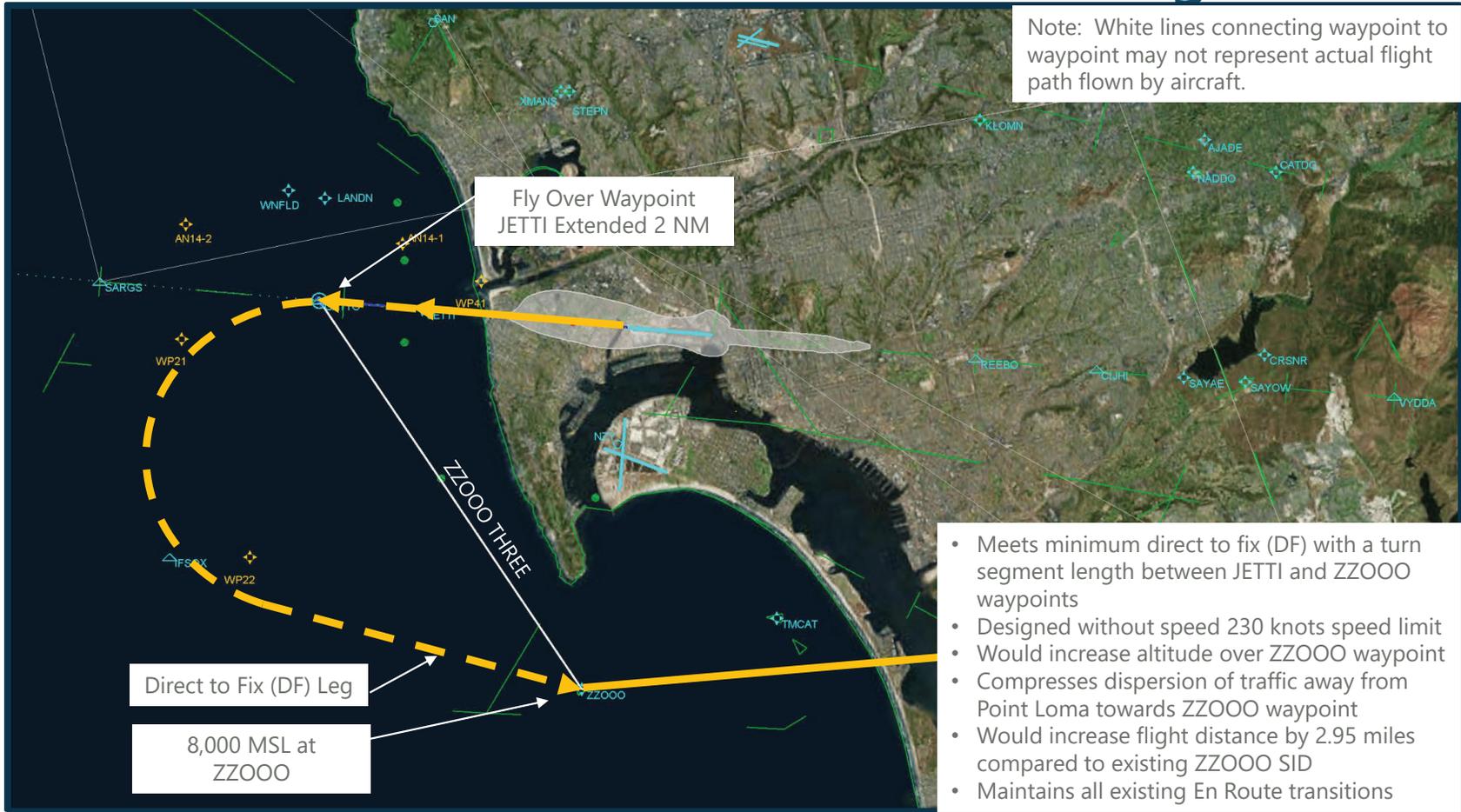
Revise ZZ000 to significantly reduce or eliminate flights over the Point Loma Peninsula, including Cabrillo National Park and reduce or eliminate eastbound turns over La Jolla. To be studied as part of the FAR Part 150 Study

1. East bound flights should reach a minimum of 8K feet before crossing over ZZ000 to minimize thrusters and reduce duration of noise impacts over Point Loma.
2. FAA\TRACON to discourage the practice of redirecting flights off of their filed ZZ000 flight plan departure, to turn north then east over La Jolla. FAA to increase minimum SID flyover\flyby altitudes to encourage increased climb rates.
3. FAA\TRACON to direct that ALL SAN departure separation be limited to between JETTI (275°) and the historical Red Noise Dot #1 (290° vectors from the end of runway 27) for LNSAY, BORDER, PEBLE and ZZ000, etc. (plus all new Metroplex SID's); Prohibit 250° to 275° departure vector range, except for specific safety events ("Runway 27 STAR Missed Approach Wave Off").
4. Follow ZZ000 procedure, comply with the JETTI flyover waypoint and consider the establishment of a minimum vectoring altitude for Eastbound turns.
5. The ZZ000 ONE departure as currently designed puts departing aircraft to close to the Point Loma peninsula and the southern end of coastal La Jolla, subjecting residents to increased and at times incessant noise from departing aircraft. Aircraft need to be further offshore before beginning the turn south to the ZZ000 waypoint. We recommend replacing the JETTI waypoint with a waypoint along the same track from the departure end of runway 27 that is 2 NM further west, located at approximately 32.75360N -117.25755W.

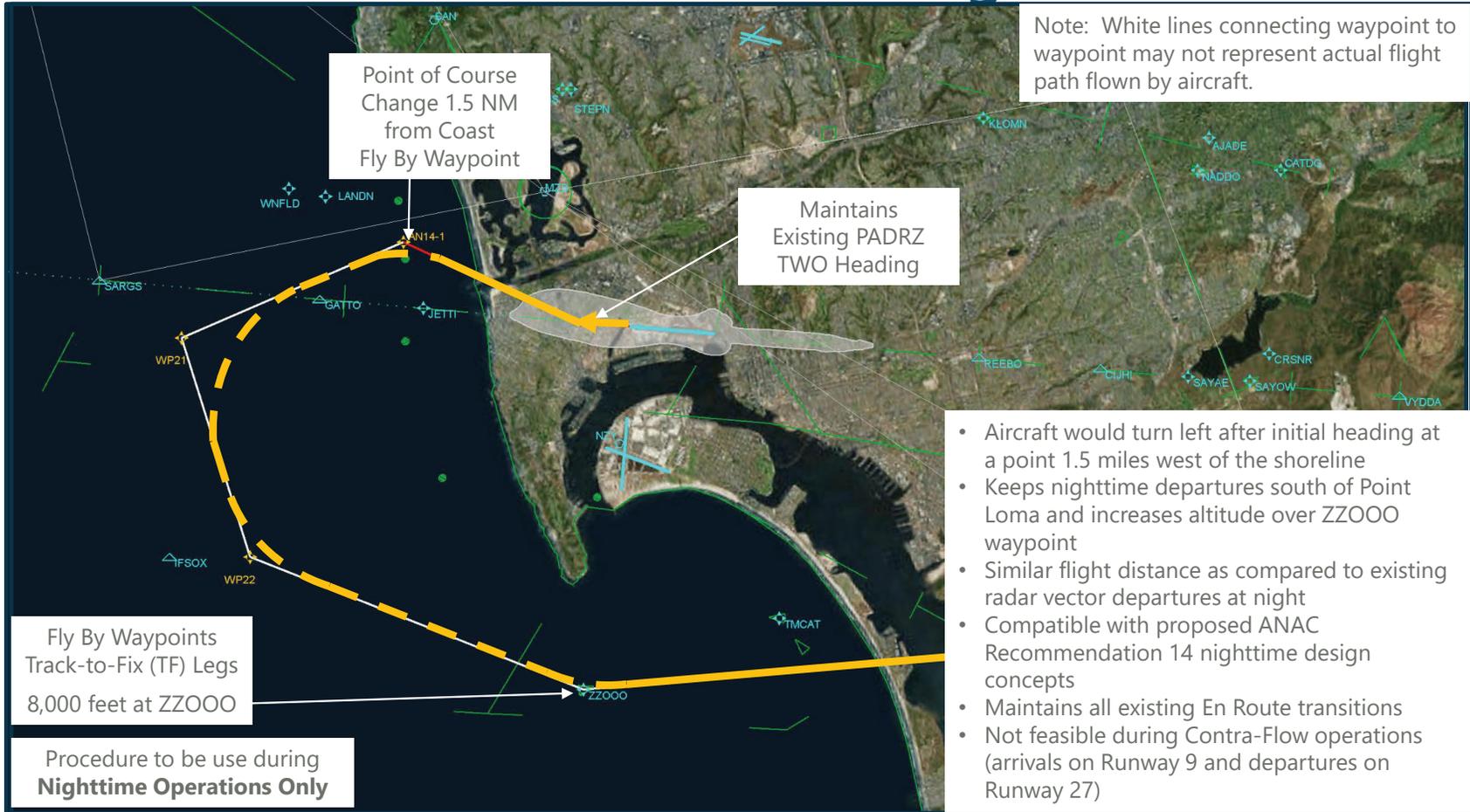
ANAC Noise Recommendation 15 – Initial Review

1. *East bound flights should reach a minimum of 8K feet before crossing over ZZOOO:* A requirement of 8,000 MSL at ZZOOO waypoint is not feasible based on existing design of procedure, but may be possible if existing procedure design is modified (see ANAC 15 Alternative 1).
2. *Redirecting flights off of their filed ZZOOO flight plan departure, to turn north then east over La Jolla:* If an RNAV SID is implemented for eastbound departures on a directed 290° heading and thence directed towards ZZOOO waypoint, it would decrease frequency of traffic vectored north then east over La Jolla (ANAC 15 Alternatives 2 and 3 addresses this issue).
3. *Direct that ALL SAN departure separation be limited to between JETTI (275°) and the historical Red Noise Dot #1 (290° vectors from the end of runway 27):* Initial or directed heading at departure to be addressed in FAR Part 150 Study.
4. *Comply with the JETTI flyover waypoint and consider the establishment of a minimum vectoring altitude for Eastbound turns:* ZZOOO SID complies with recommendation for flight paths within 275° heading. ZZOOO SID is an RNAV procedure and has no minimum vectoring altitudes (MVA). MVA is driven by obstacle clearance. If the intent is to raise the altitude on specific segments, MVA is not a feasible method.
5. *Aircraft need to be further offshore before beginning the turn south to the ZZOOO waypoint:* Increasing distance from Point Loma shoreline as aircraft turn back to the east would require a modification to ZZOOO SID design (see ANAC 15 Alternative 1). Moving the JETTI waypoint further west is intended to raise altitude over ZZOOO and increase distance from the Point Loma shoreline (see ANAC 15 Alternative 1).

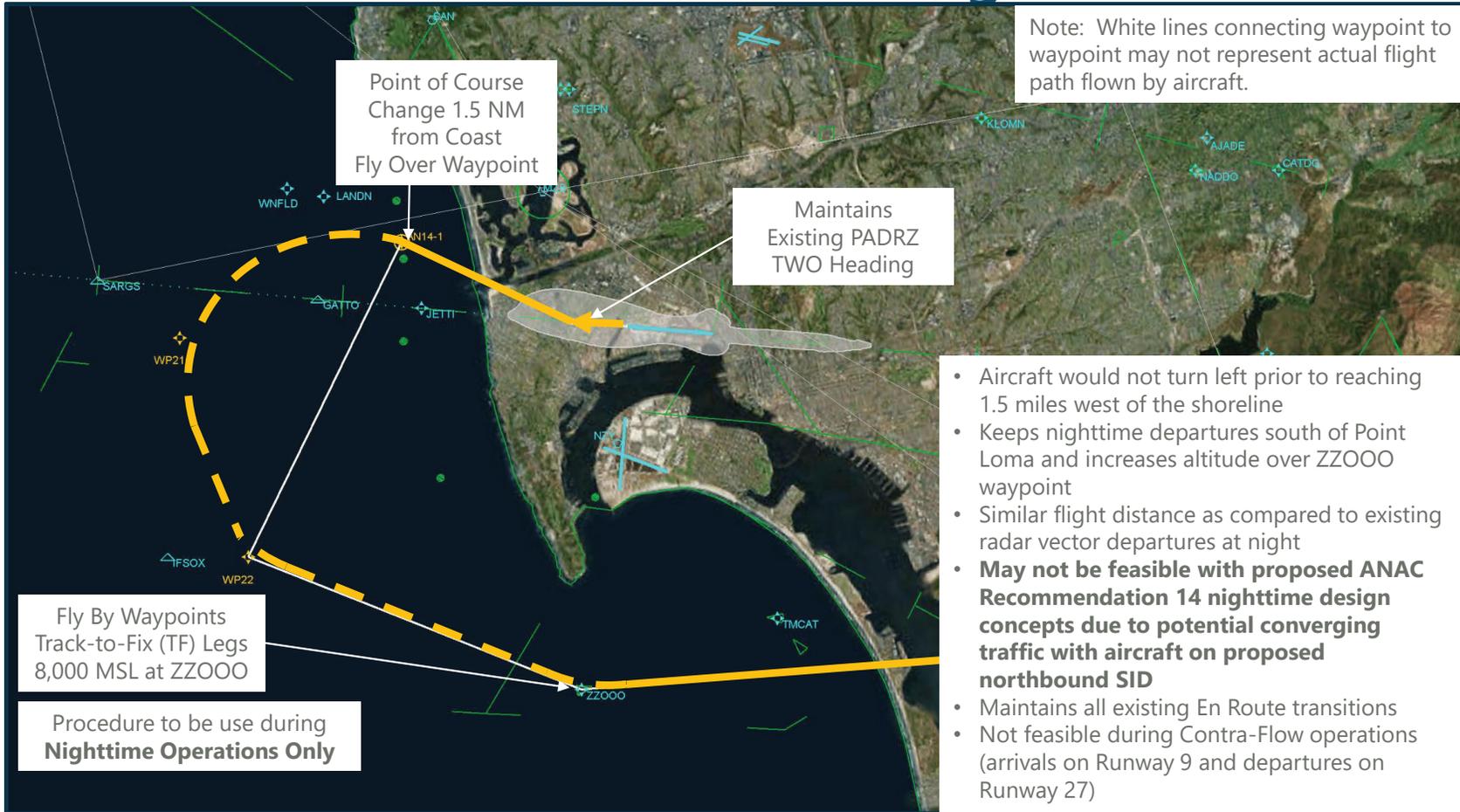
ANAC Noise Recommendation 15 – Alt 1 Design



ANAC Noise Recommendation 15 – Night Alt 2



ANAC Noise Recommendation 15 – Night Alt 3



ANAC Noise Recommendation 16 – Reduce Arrival Noise Over La Jolla and East County Communities

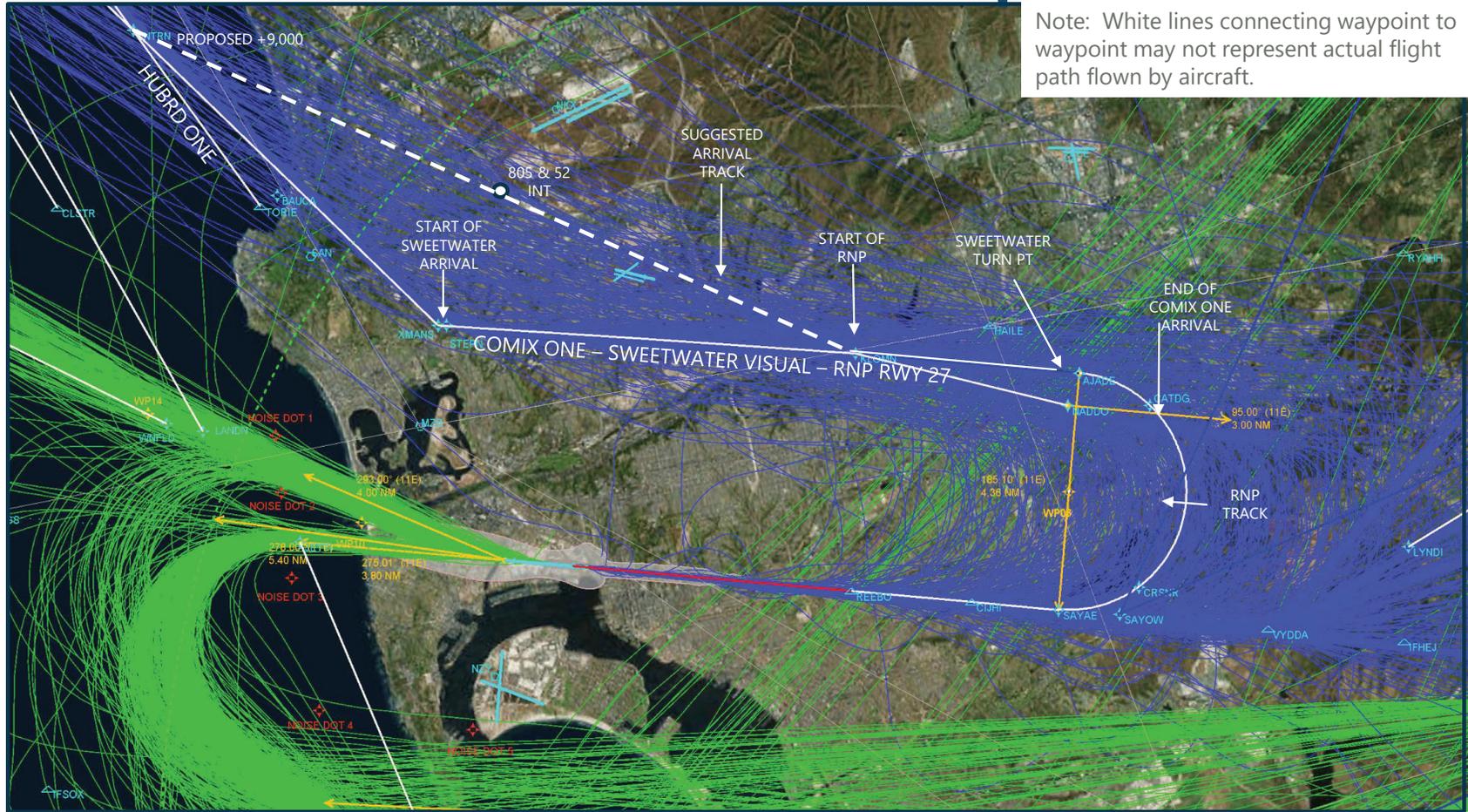
ANAC Noise Recommendation 16

Reassess and revise the entire arrival corridor in a manner that more appropriately “shares the noise” instead of concentrating arrivals from the North in a very narrow corridor.

1. Revise COMIX STAR procedure in order to shift flights that Metroplex has moved and concentrated farther South (the downwind leg) over less populated areas and restore prior altitude.
2. Shift the way point XMANS on the COMIX STAR north to a location that is over the interstate freeway 805 and 52 with the constraint to remain clear of MCAS Miramar's airspace. It would come ashore over Torrey Pines State Park before connecting with KLOMN.
3. Increase Min. Altitude at LNTRN (LCOVE) at or above 10,000. This change would result in aircraft flying over less populated areas, including industrial businesses, thus reducing the noise impact and saving time/fuel. This proposed path is closer to the historical flight tracks pre-NextGen.
4. COMIX ONE STAR: The RNAV-only COMIX ONE arrival is very similar to the existing non-RNAV BAYVU arrival in terms of ground track with a key difference being that the COMIX arrival has an “at or above 8,000 feet” altitude restriction on its last offshore waypoint (LANTRN). The BAYVU arrival has an “at or above 9,000 feet” restriction at its nearly identically-located LCOVE waypoint. This has resulted in aircraft being lower and noisier over La Jolla. We recommend changing the LANTRN waypoint’s altitude restriction to “at or above 9,000 feet”.

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ANAC Noise Recommendation 16 - Graphic

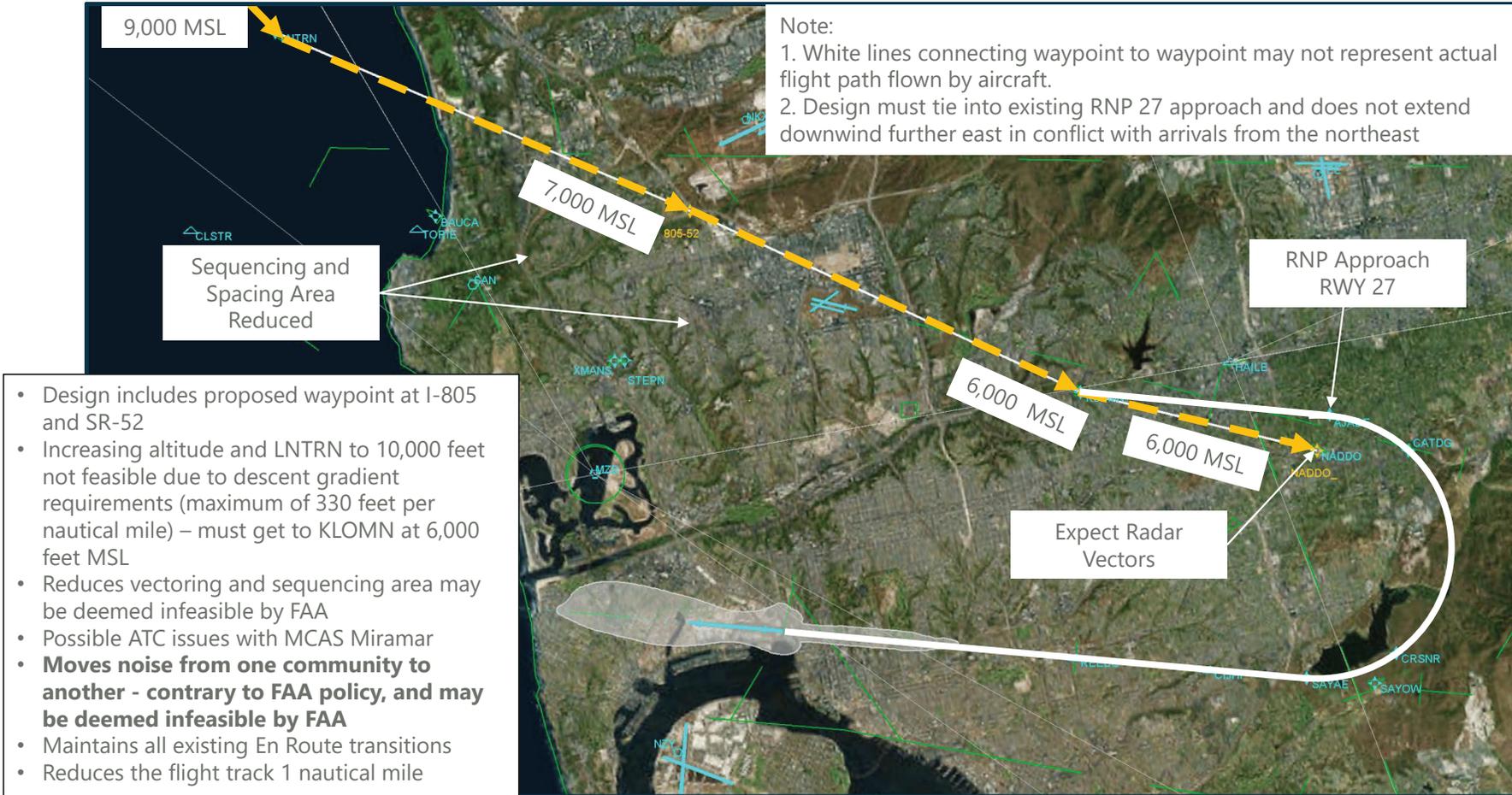


Note: White lines connecting waypoint to waypoint may not represent actual flight path flown by aircraft.

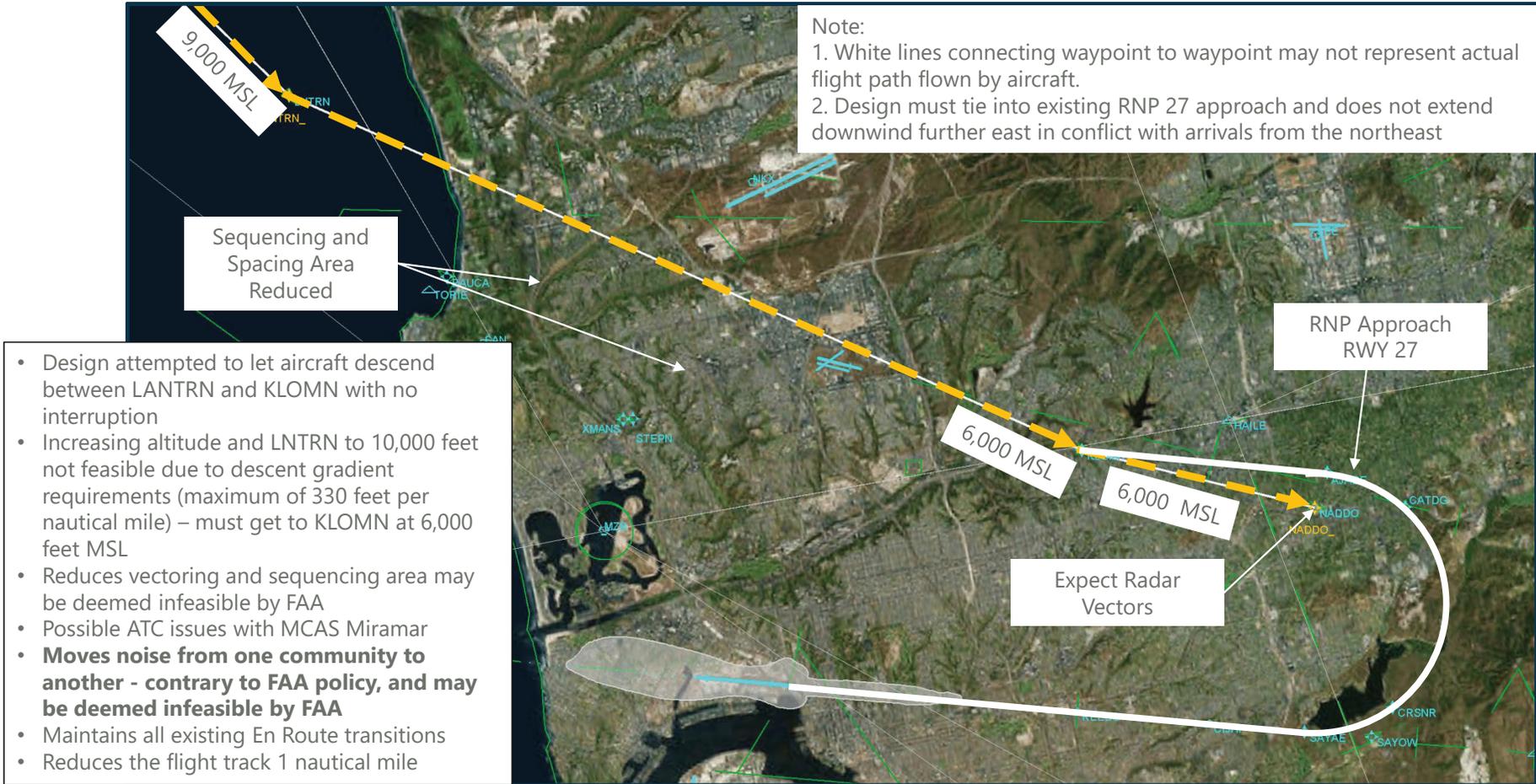
ANAC Noise Recommendation 16 – Initial Review

1. *Revise COMIX STAR procedure in order to shift flights over less populated areas and restore prior altitude:* Leg between KLOMN waypoint to NADDO waypoint was designed to prevent Class B airspace excursions. This leg cannot be changed until the Class B redesign is complete. Path may be modified post Class B design.
2. *Shift the way point XMANS on the COMIX STAR north to a location that is over the interstate freeway 805 and 52:* Crossing the shoreline over Torey Pines State Park and heading to XMAN waypoint shifted north over I-805 and SR-52 would reduce the flight track 1 nautical mile (NM) (see ANAC Recommendation 16 Alternative 1 and 2)
 - Reduction in vectoring and sequencing area may be deemed infeasible by FAA
 - Possible ATC issues with Miramar Marine Corps Air Station
 - Moving noise from one community to another is contrary to FAA policy, and may be deemed infeasible by FAA – aircraft overflight location moved over another community and aircraft are lower in altitude
3. *Increase Min. Altitude at LNTRN (LCOVE) at or above 10,000:* Increasing LNTRN to 10,000 feet is not feasible based on current design
 - Increasing to 10,000 feet would exceed the descent gradient criteria (maximum of 330 feet per nautical mile) from LNTRN to KLOMN waypoint at 6,000 feet MSL along the existing COMIX path.
 - Increasing altitude at LNTRN to 10,000 feet along route shifted north would also exceed descent gradient criteria.
4. *Change the LANTRN waypoint's altitude restriction to "at or above 9,000 feet":* According to FAA information posted on the FAA Instrument Flight Procedure Gateway Production page for SAN, the COMIX TWO STAR is expected raise the altitude from at or above 8,000 to at or above 9,000 feet at the LNTRN waypoint.

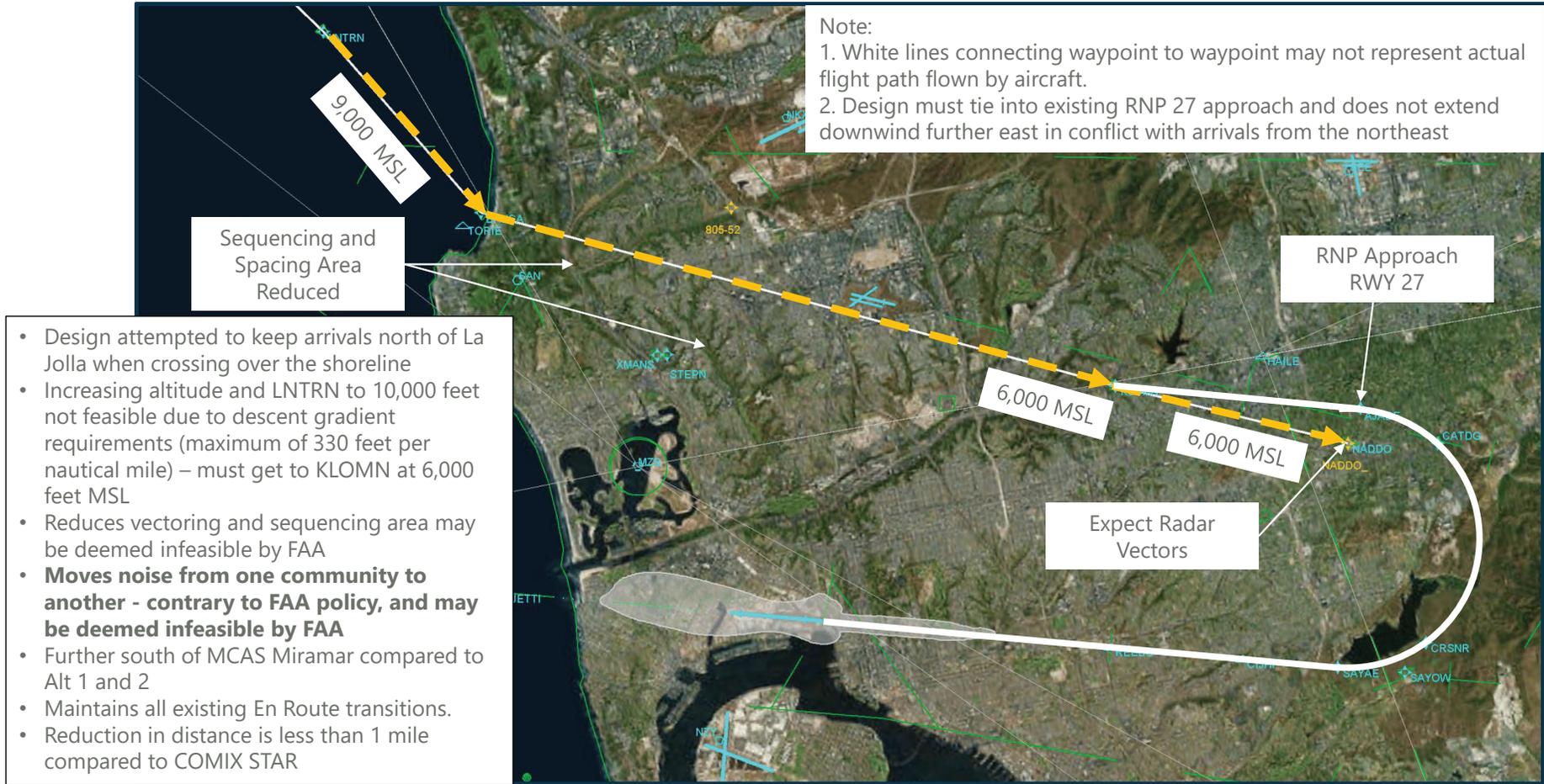
ANAC Noise Recommendation 16 – Alt 1



ANAC Noise Recommendation 16 – Alt 2



ANAC Noise Recommendation 16 – Alt 3



Discussion

Next Steps – Action Items and Next TAC Meeting

B.1.4 CAC MEETING #2 – JULY 19, 2018

**San Diego County Regional Airport Authority (SDCRAA)
Flight Procedure Evaluation
Citizen Advisory Committee Meeting #2**

San Diego International Airport

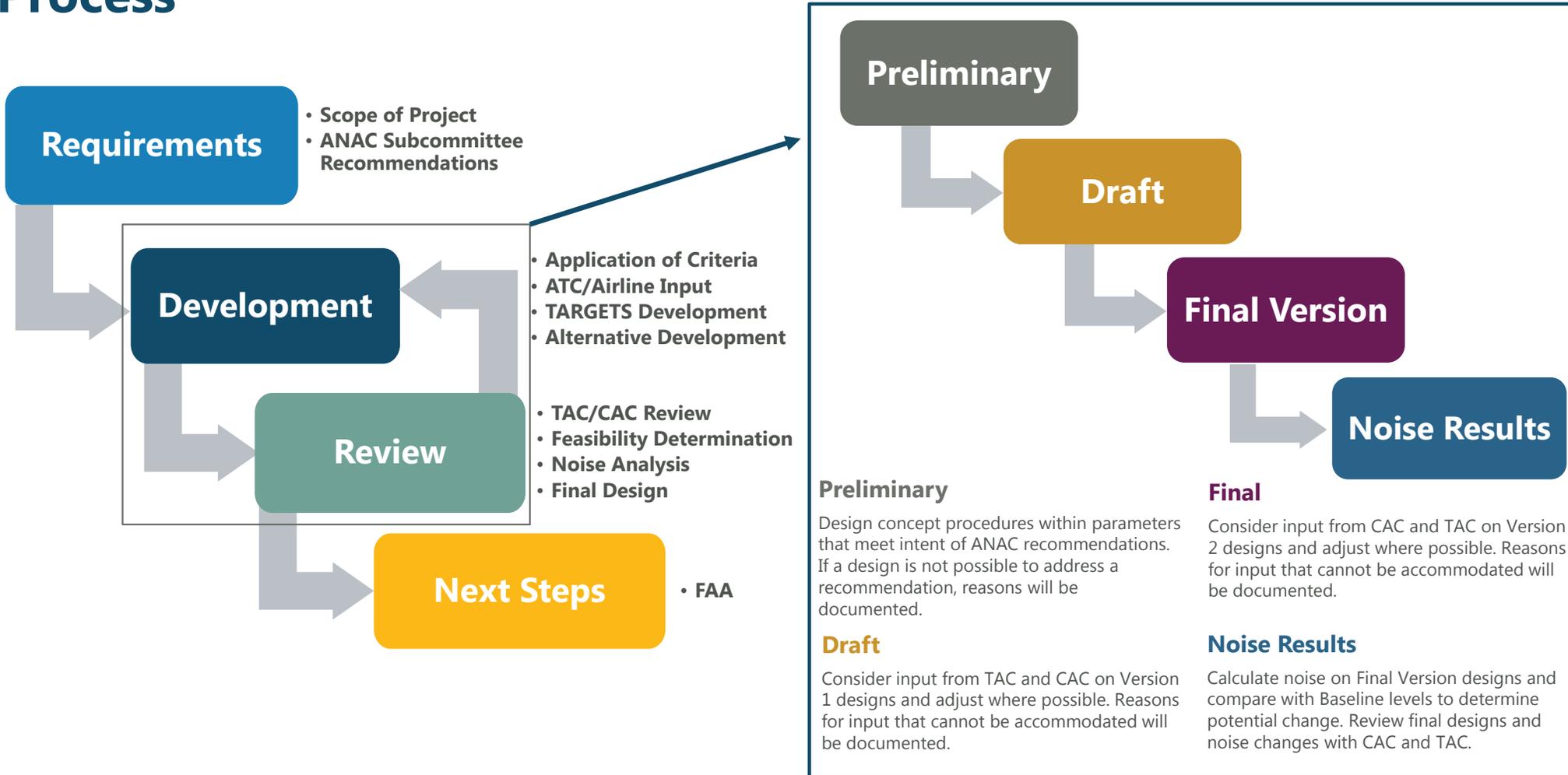
July 19, 2018

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Agenda

- Process
- Project Objectives
- Meeting Goals
- Design Parameters
- Acronyms
- ANAC Recommendation 14 Design Concepts and TAC Input
- ANAC Recommendation 15 Design Concepts and TAC Input
- ANAC Recommendation 16 Design Concepts and TAC Input
- Concept Designs - Process Considerations
- Next Steps

Process



Project Objectives

- Evaluate and determine feasibility of potential procedure designs to meet the intent of ANAC recommendations
- Provide preliminary design concepts for RNAV SIDS and STARS based on:
 - Safety
 - FAA Performance Based Navigation (PBN) design criteria
 - FAA ATC Rules, Policies, and Procedures
- Conduct noise screening analysis on feasible alternatives
- Provide recommendations to SDCRAA

Meeting Goals

- Review preliminary design concepts
- Inform CAC of TAC input (so far) on preliminary designs
- Gather input from Citizen Advisory Committee on achieving ANAC recommendation intent

Design Parameters

- ✘ Do not change aircraft flight paths over areas exposed to CNEL 65 or higher
- ✘ Do not impact safety
- ✘ Meet FAA design criteria
- ✘ Fit within existing airspace and maintain existing airspace hand-off areas
- ✘ Do not impact capacity of SDIA
- ✘ Do not move noise to new non-compatible areas

Acronyms

- DF = Direct to a Fix
- ELSO = Equivalent Lateral Spacing Operations
- Kts = Knots
- MDA = Minimum Descent Altitude
- MVA = Minimum Vectoring Altitude
- MSL = Mean Sea Level
- NM = Nautical Miles
- PBN = Performance Based Navigation
- RNAV = Area Navigation
- RNP = Required Navigational Performance
- SIAP = Standard Instrument Approach Procedure
- SID = Standard Instrument Departure Procedure
- STAR = Standard Instrument Arrival Route
- TARGETS = Terminal Area Route Generation Evaluation and Traffic Simulation
- VA = Heading to an Altitude
- WP = Waypoint

ANAC Noise Recommendation 14 – Reduce Noise in Mission Beach, Pacific Beach, and La Jolla

ANAC Noise Recommendation 14

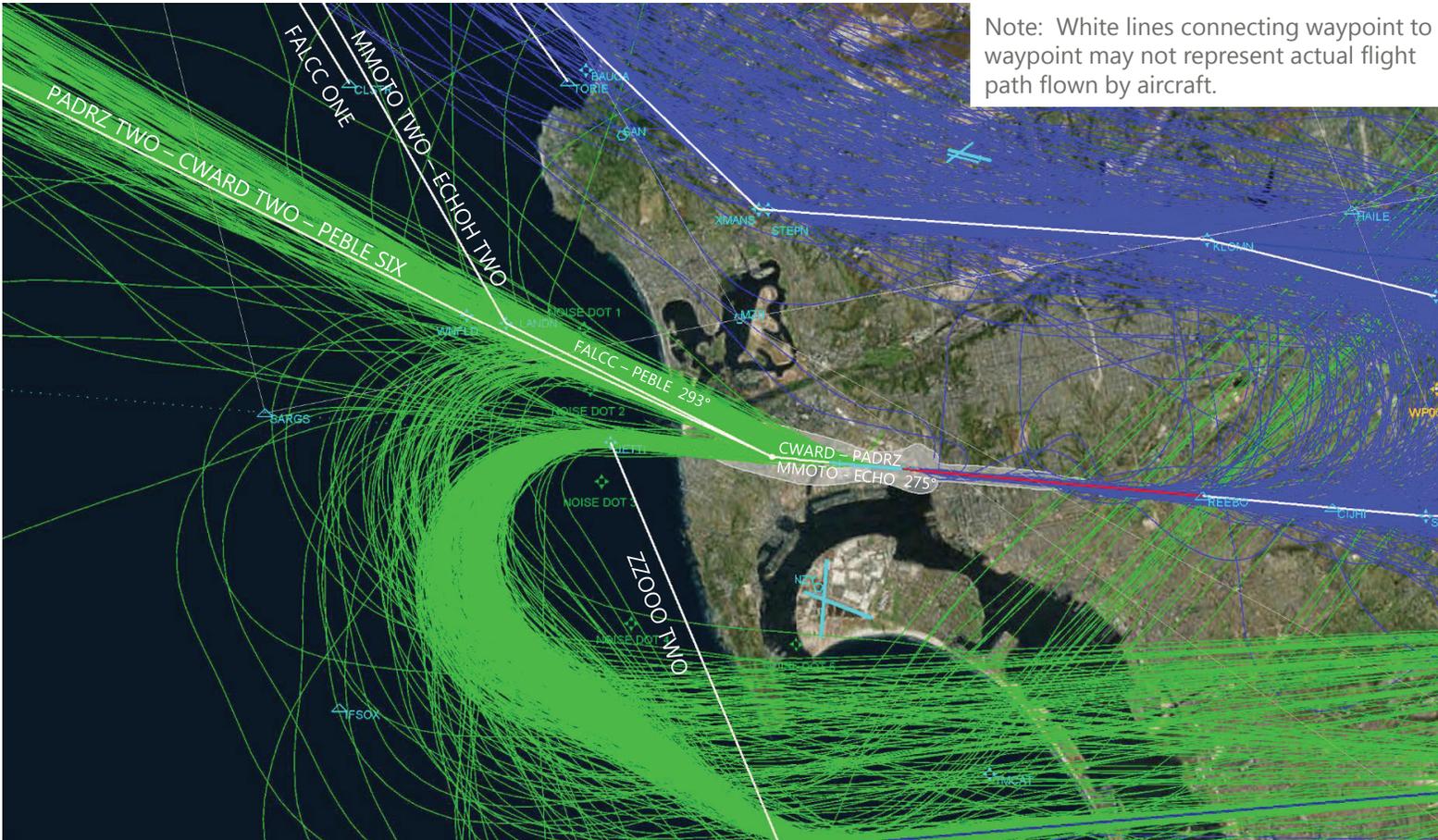
Revise PADRZ SID or create a new procedure to reduce increased noise in La Jolla, Mission Beach and Pacific Beach To be studied as part of the FAR Part 150 Study

1. Move the WNFLD and LANDN waypoints south so as to align with the relocated Noise Dot #1 at 290° (15° separation from JETTI at 275°) and designate as “Flyover” waypoints in their respective SID’s, consistent with JETTI.
2. Establish within the PADRZ SID procedure a horizontal distance from end of runway (1.0 miles) along a fixed heading which must be satisfied along with altitude before a right turn can be initiated to preclude flights that quickly attain the current 520’ altitude and turn right of and prior to Noise Dot #1 before correcting to WYNFLD which results in aircraft flying farther north over Mission Beach.
3. PADRZ ONE SID As currently designed the PADRZ ONE departure leaves aircraft very close to and almost paralleling the coast along La Jolla, increasing noise impacts significantly. We recommend moving the WNFLD and KERNL waypoints 1.5NM south of their current positions. This will ensure aircraft proceed more directly off the coast without paralleling the shore and adds less than a mile of track distance to PADRZ.
4. Create a new procedure: BROCK-1 (alternative 1) Request FAA to revise PADRZ SID and establish new waypoint BROCK1. Adds min increased flight time and takes aircraft further offshore before turning to northern destinations. This will help all coastal neighborhoods with noise issues.
5. Create a new procedure: BROCK-2 (alternative 2 - preferred) Relocate Waypoints WNFLD and LANDN 0.75 miles directly south or adopt BROCK recommendation. Maintain 274 Departure until Altitude 520 or greater. Maintain 274 departure heading until 520 foot altitude or greater and the aircraft have reached (new) flyover waypoint 0.25 to 0.5 miles from the end of the runway before turning towards WNFLD, LANDN or new BROCK Waypoint.
6. Do not move the PADRZ SID further south to avoid negative noise impacts on the south side communities of the Point Loma Peninsula.

Source: ANAC Subcommittee Recommendations (ANAC Approval), October 25, 2017

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ANAC Noise Recommendation 14 – Existing Flight Tracks



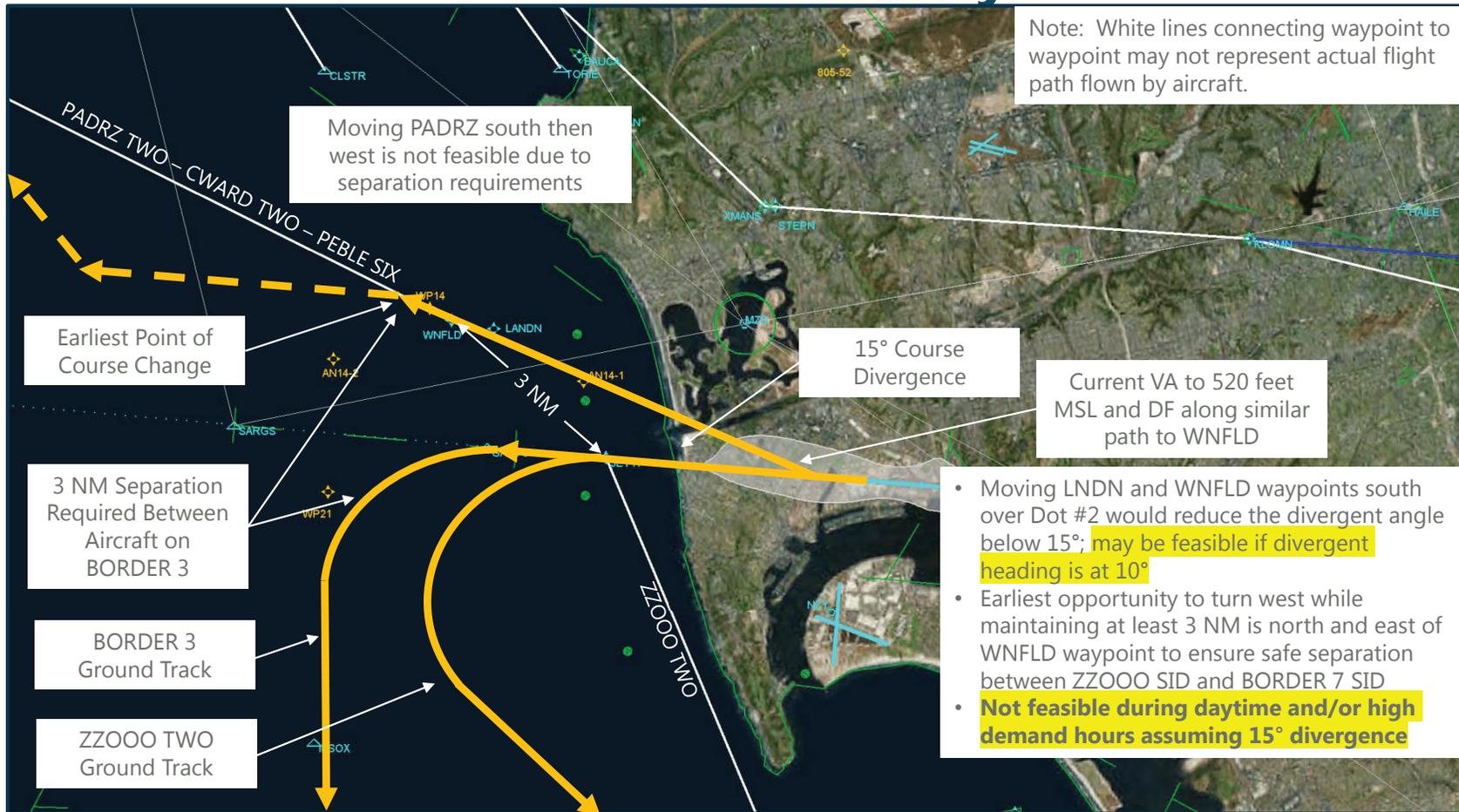
ANAC Noise Recommendation 14 – Initial Review

1. *Move LNDN and WNFLD waypoint south in line with Dot #2:*
 - The magnetic heading from the departure end of Runway 27 to Dot #2 is 287°, which is 12° from 275° heading. Moving LNDN and WNFLD waypoints south over Dot #2 would reduce the divergent angle below the required 15°. FAA Order 7110.65X allows for 10° divergence if both SIDS are RNAV, but would change initial runway heading and should be evaluated in the FAR Part 150 Study Update.
 - Not feasible due to reduction in current divergent heading departure throughput capability. May be feasible if initial course from runway end is based on 10° divergence (285° heading). Change to initial heading design should be evaluated in FAR Part 150 Study
2. *Establish within the PADRZ SID procedure a horizontal distance from end of runway (1.0 NM miles) along a fixed heading which must be satisfied along with altitude before a right turn:* Change to initial heading design would be evaluated in FAR Part 150 Study
3. *Move WNFLD and KERNL waypoints 1.5 NM miles south of current location:*
 - If aircraft turn more westerly prior to reaching WNFLD, the divergence angle is no longer 15° ; therefore, the procedure must ensure aircraft heading south and north are laterally separated by 3 NM (note: FAA ATC applies an additional buffer between 0.5 to 1 NM to the 3 NM requirement)
 - Assuming existing initial heading design, the earliest opportunity to turn west is north and east of WNFLD waypoint to ensure separation between ZZOOO SID and BORDER 7 SID
 - Assuming a 10 degree divergent heading, WNFLD location may move south of existing location.

ANAC Noise Recommendation 14 – Initial Review (cont'd)

5. *Create BROCK-1 procedure:* Is not feasible during daytime hours for same reasons as #3 above, but a procedure similar to the BROCK recommendations for nighttime operations after 10:00 pm when all traffic is on a 290° heading (existing VA to DF coding) is feasible (see ANAC 14 Alternatives 1, 2 and 3)
6. *Create BROCK-2 procedure:* See No. #4 above

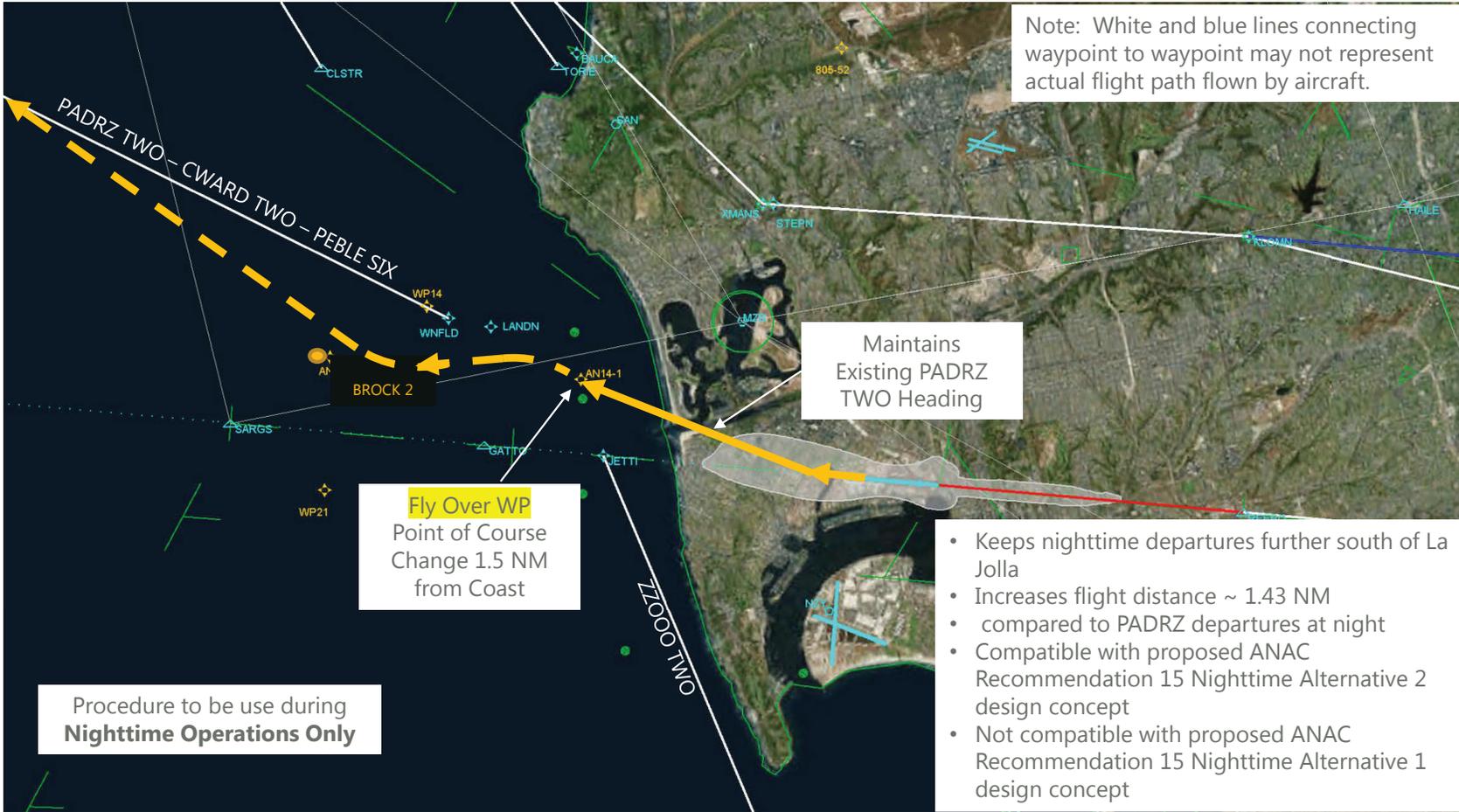
ANAC Noise Recommendation 14 – Day Time Issues



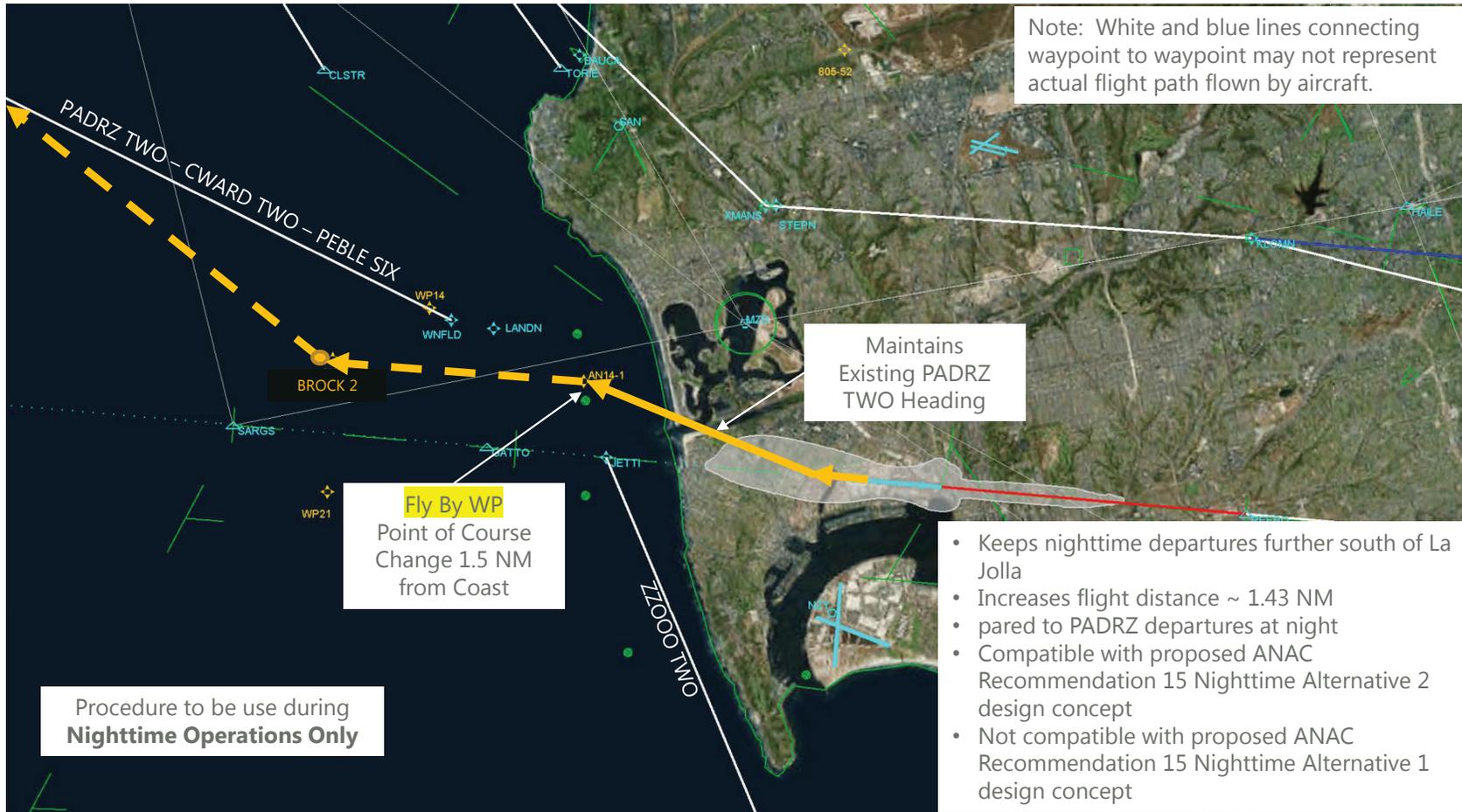
ANAC Noise Recommendation 14 – Nighttime Alternatives

- Alternative 1 - Turn at 1.5 NM from shoreline
 - Maintains existing initial departure design (VA to DF leg coding)
 - Consistent with FAA Dot agreement
 - Projected flight track on initial heading is consistent with current flight tracks
- Alternative 2 – Turn at shoreline
 - Maintains initial departure design (VA to DF leg coding)
 - Turn location prior to Noise Dot agreement
 - Projected flight track on initial heading is consistent with current flight tracks
- Alternative 3 – Turn at earliest point possible
 - Maintains existing initial departure design
 - Turn occurs where existing design (VA to DF leg coding) heading intersects the DNL 65 contour
 - Turn location prior to FAA Dot agreement
 - Projected flight track on initial heading strays from current flight tracks to the south (potential for change in DNL 65 area)
- All Alternatives not feasible during Contra-Flow operations (arrivals on Runway 9 and departures on Runway 27)

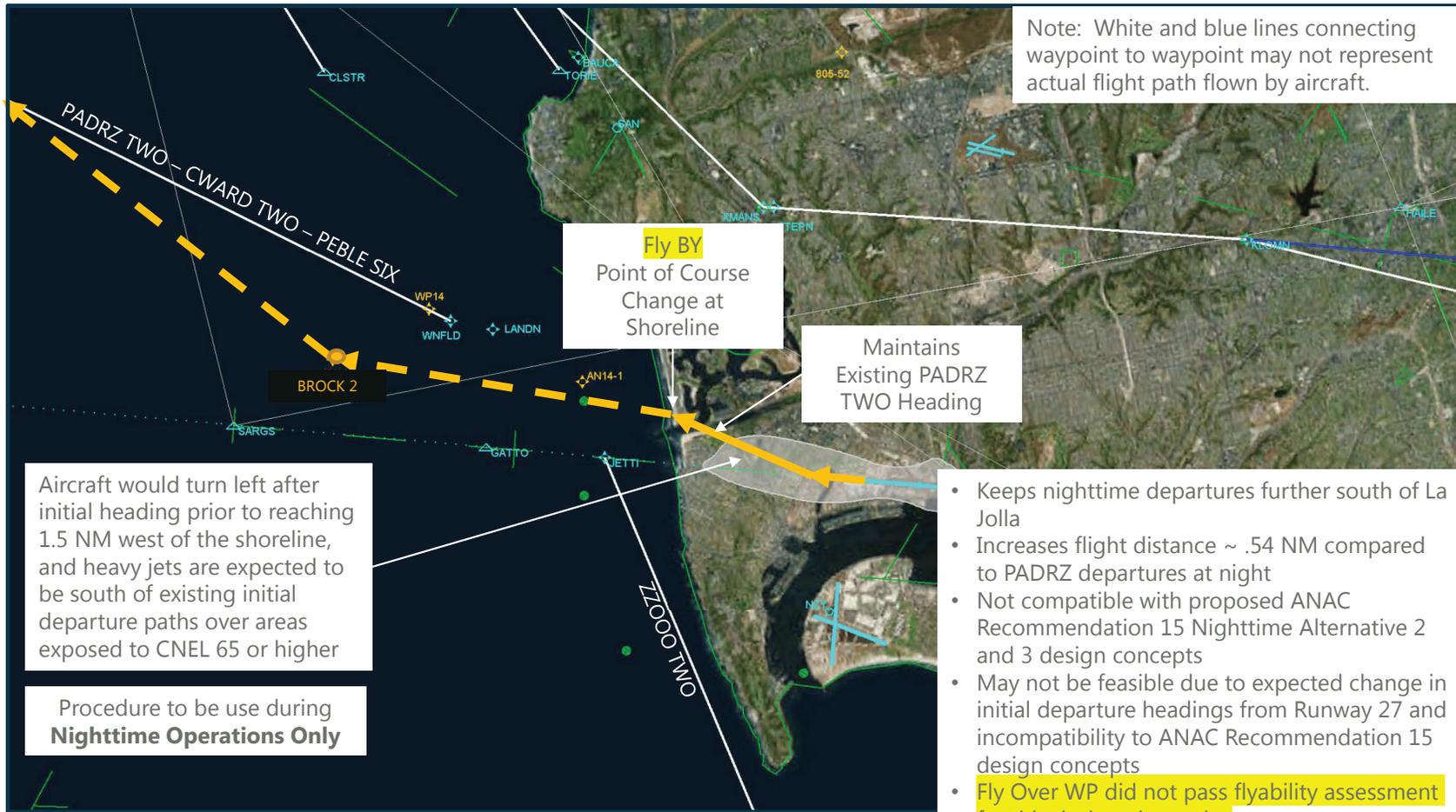
ANAC Noise Recommendation 14 – Alt 1 Turn at 1.5 NM



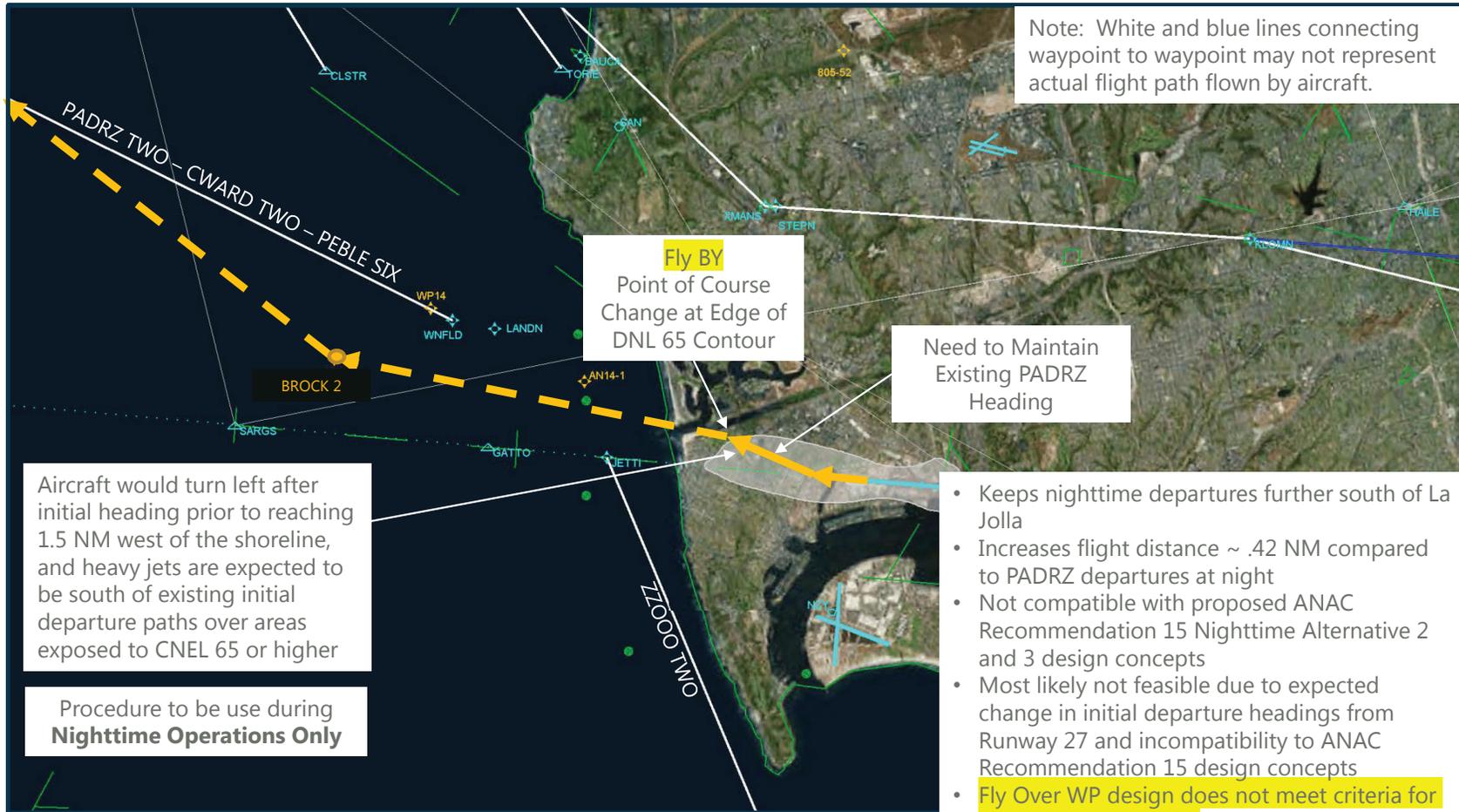
ANAC Noise Recommendation 14 – Alt 1 Turn at 1.5 NM



ANAC Noise Recommendation 14 – Alt 2 Turn at Shoreline



ANAC Noise Recommendation 14 – Alt 3 Turn at DNL 65



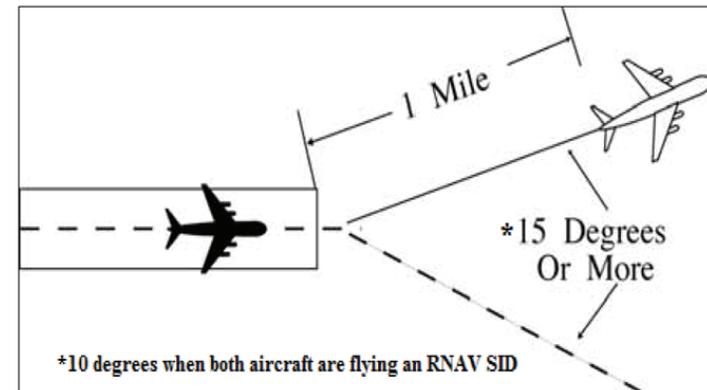
ANAC Noise Recommendation 14 – TAC Input Summary

- Initial heading:
 - Application of 10° divergent heading
 - Cross Mission Beach as far south as possible
 - Runway heading until 1 NM then turn on 290° heading
 - Not consistent with nighttime noise abatement heading
- Daytime
 - Application of 10° divergent heading
 - Move BORDER SID south so WNFLD can move south and still maintain 3 NM separation
- Alternative 1, 2 and 3
 - Prefer turn to west/northwest as close to shoreline as possible.
 - Preferences related to Fly Over or Fly By waypoint when aircraft turn west/northwest.
 - Alternative 1 and 2 provides flight crews ample time to fly a steady course after takeoff.
 - Alternative 3 is not viable option due to FMS performance issues
 - Do not mitigate nighttime noise for Mission Beach
- “Conflicts” with other sub-committee recommendations need to be resolved.

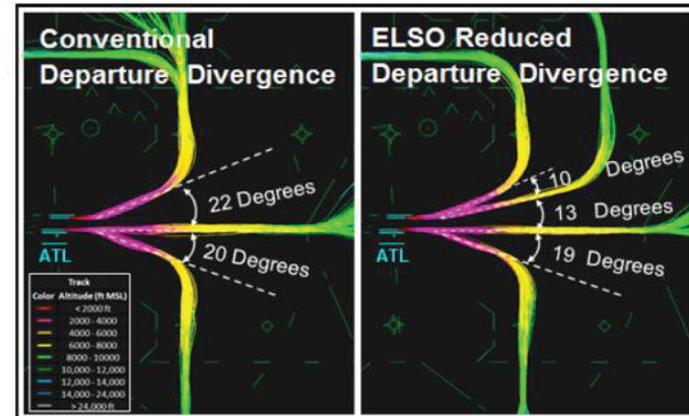
Equivalent Lateral Separation Operation (ELSO)

- NextGen enabled technology allowing reduced separation requirement from 15° to 10° for aircraft using PBN SIDs
- FAA Order 7110.65X, Change 1 – Air Traffic Control
 - Paragraph 5-8-1 (a) Provides criteria for simultaneous parallel and single runway operations allowing a minimum of 10° separation for aircraft operating on GPS PBN SID
- FAA JO 7210.3AA Change 1 - Facility Operation and Administration
 - Paragraph 10-3-15 – Equivalent Lateral Spacing Operations
- Currently implemented in ATL for simultaneous parallel operations
- Possible future implementations:
 - CLE, DEN, DET, FLL, MIA

FIG 5-8-1
Successive Departures



Source: Federal Aviation Administration Job Order 7110.65X, Air Traffic Control



Source: Federal Aviation Administration Webpage 2015

Application at SAN

- Application of criteria is feasible
- Will change flight pattern over areas exposed to CNEL 65 or greater and is one to two possible initial departure heading concepts for Runway 27
- Implementation at ATL suggests separation may begin at VA/DF or VA/CF turn point versus waypoints separated 10° from runway end - further local FAA coordination will be required as part of the alternative procedure design
- Local facility may require a buffer or slightly wider angle than 10° (e.g. 12°)
- All existing SIDs from Runway 27 to north/northwest would need to be redesigned to ensure consistency in initial departure operation
- Facilities Management Considerations (outlined in JO 7210.3AA)
 - Training
 - Letters of Agreement
 - Video maps showing departure tracks

ANAC Noise Recommendation 15 – Reduce Noise Over the Point Loma Peninsula and La Jolla

ANAC Noise Recommendation 15

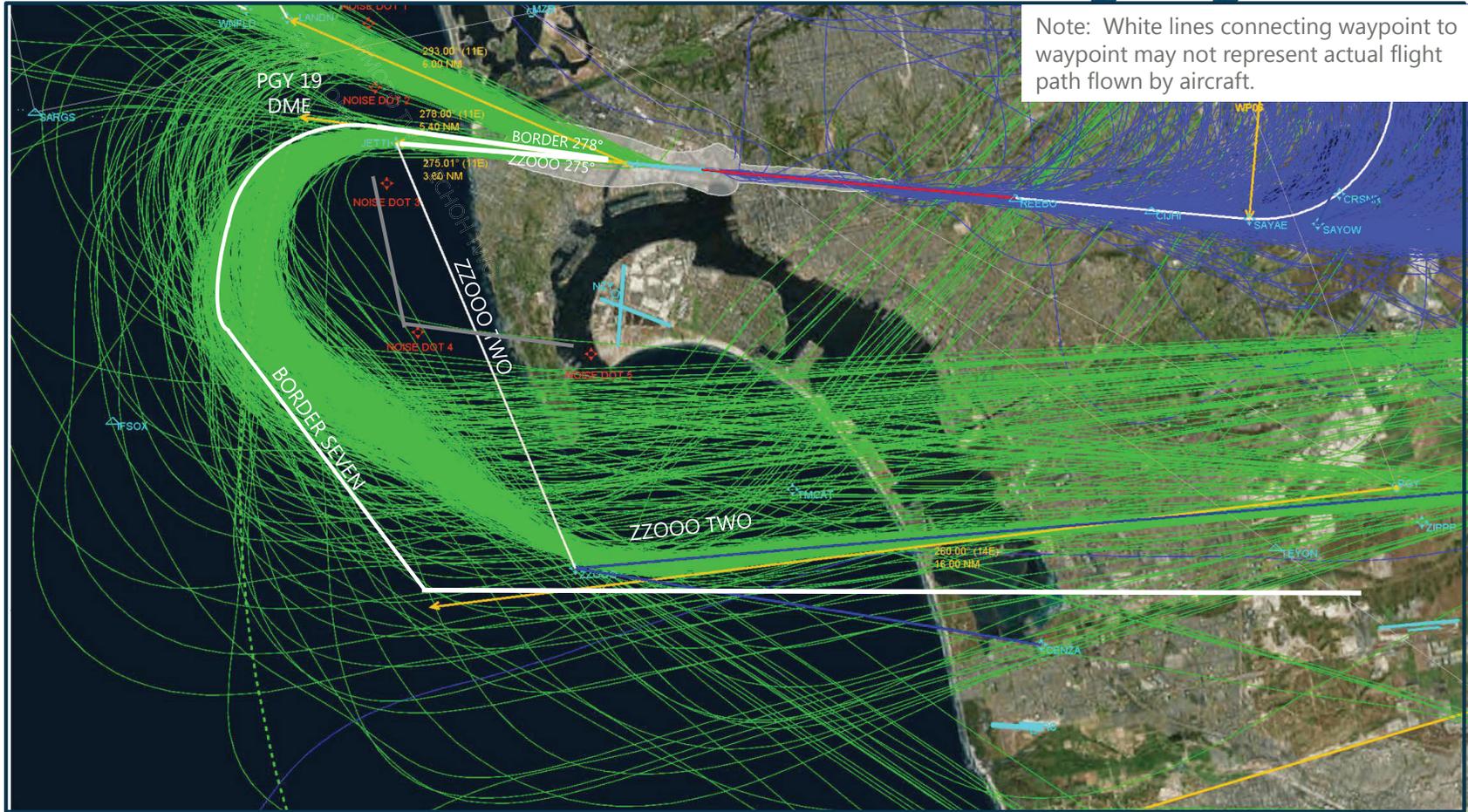
Revise ZZOOO to significantly reduce or eliminate flights over the Point Loma Peninsula, including Cabrillo National Park and reduce or eliminate eastbound turns over La Jolla. To be studied as part of the FAR Part 150 Study

1. East bound flights should reach a minimum of 8K feet before crossing over ZZOOO to minimize thrusters and reduce duration of noise impacts over Point Loma.
2. FAA\TRACON to discourage the practice of redirecting flights off of their filed ZZOOO flight plan departure, to turn north then east over La Jolla. FAA to increase minimum SID flyover\flyby altitudes to encourage increased climb rates.
3. FAA\TRACON to direct that ALL SAN departure separation be limited to between JETTI (275°) and the historical Red Noise Dot #1 (290° vectors from the end of runway 27) for LNSAY, BORDER, PEBLE and ZZOOO, etc. (plus all new Metroplex SID's); Prohibit 250° to 275° departure vector range, except for specific safety events ("Runway 27 STAR Missed Approach Wave Off").
4. Follow ZZOOO procedure, comply with the JETTI flyover waypoint and consider the establishment of a minimum vectoring altitude for Eastbound turns.
5. The ZZOOO ONE departure as currently designed puts departing aircraft to close to the Point Loma peninsula and the southern end of coastal La Jolla, subjecting residents to increased and at times incessant noise from departing aircraft. Aircraft need to be further offshore before beginning the turn south to the ZZOOO waypoint. We recommend replacing the JETTI waypoint with a waypoint along the same track from the departure end of runway 27 that is 2 NM further west, located at approximately 32.75360N -117.25755W.

Source: ANAC Subcommittee Recommendations (ANAC Approval), October 25, 2017

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ANAC Noise Recommendation 15 – Existing Flight Tracks

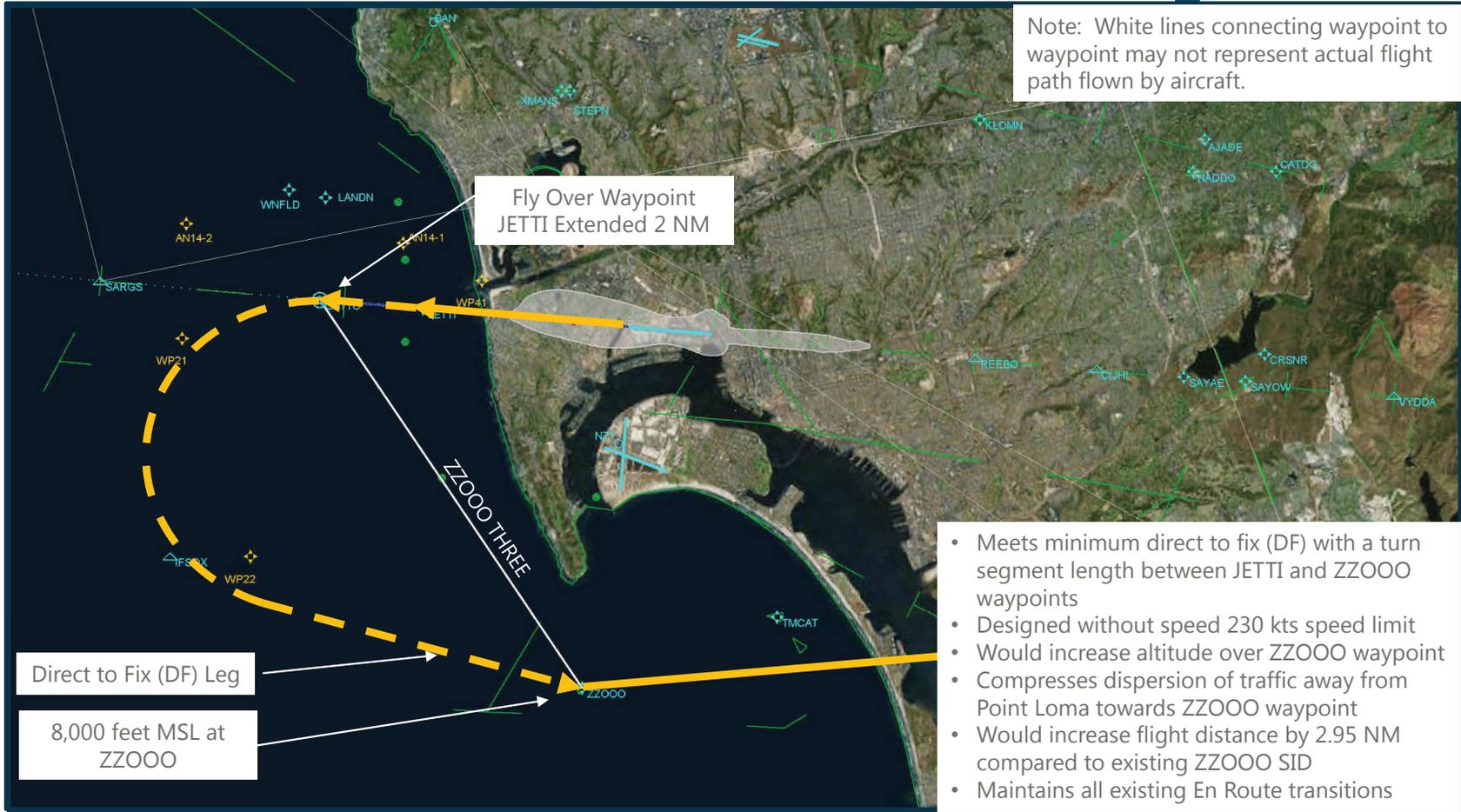


ANAC Noise Recommendation 15 – Initial Review

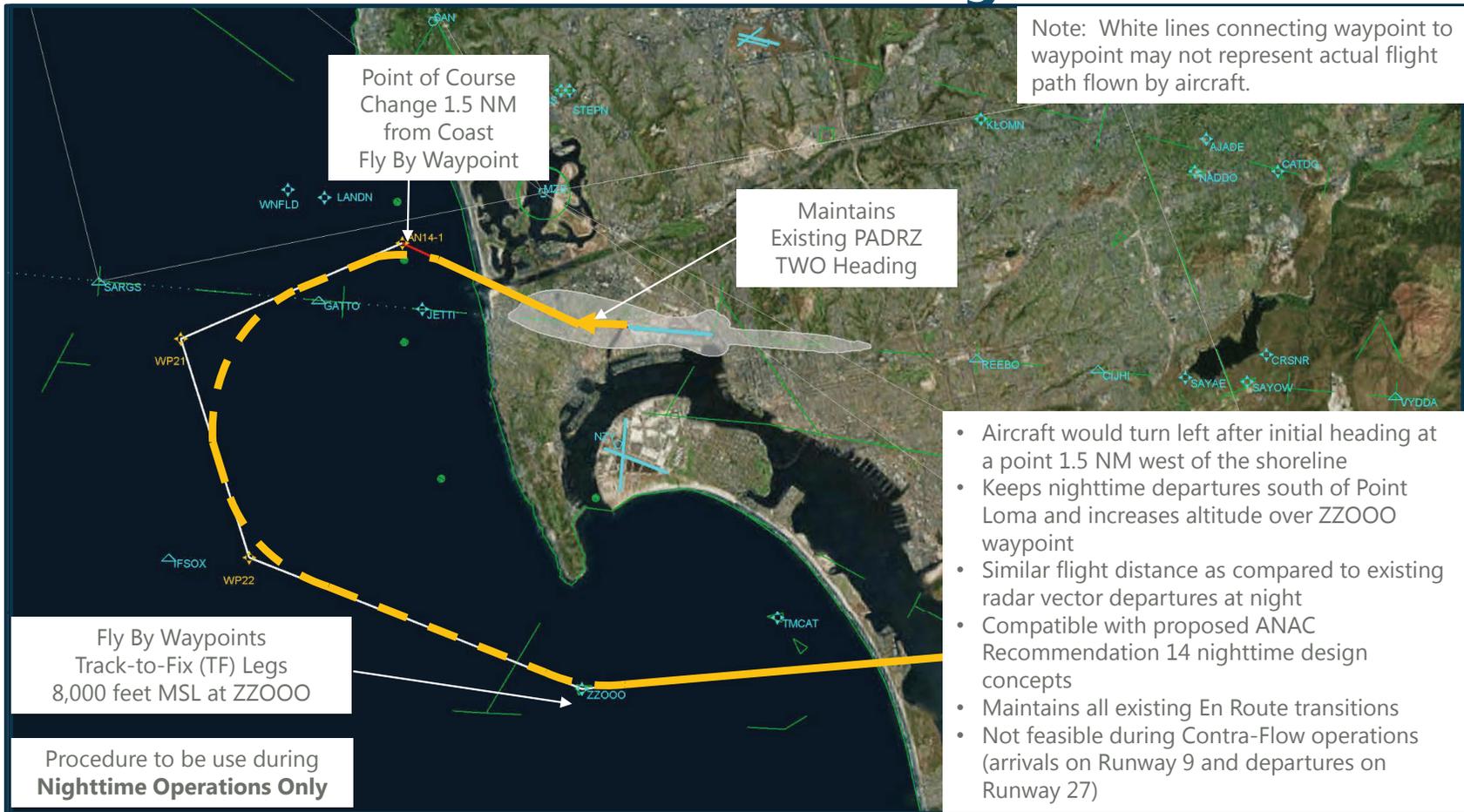
1. *East bound flights should reach a minimum of 8,000 feet MSL before crossing over ZZOOO:* A requirement of 8,000 feet MSL at ZZOOO waypoint is not feasible based on existing design of procedure, but may be possible if existing procedure design is modified (see ANAC 15 Alternative 1).
2. *Redirecting flights off of their filed ZZOOO flight plan departure, to turn north then east over La Jolla:* If an RNAV SID is implemented for eastbound departures on a directed 290° heading and thence directed towards ZZOOO waypoint, it would decrease frequency of traffic vectored north then east over La Jolla (ANAC 15 Alternatives 2 and 3 addresses this issue).
3. *Direct that ALL SAN departure separation be limited to between JETTI (275° heading) and the historical Red Noise Dot #1 (290° vectors from the end of Runway 27):* Initial or directed heading at departure to be addressed in FAR Part 150 Study.
4. *Comply with the JETTI flyover waypoint and consider the establishment of a minimum vectoring altitude for Eastbound turns:* ZZOOO SID complies with recommendation for flight paths within 275° heading. ZZOOO SID is an RNAV procedure and has no minimum vectoring altitudes (MVA). MVA is driven by obstacle clearance. If the intent is to raise the altitude on specific segments, MVA is not a feasible method.
5. *Aircraft need to be further offshore before beginning the turn south to the ZZOOO waypoint:* Increasing distance from Point Loma shoreline as aircraft turn back to the east would require a modification to ZZOOO SID design (see ANAC 15 Alternative 1). Moving the JETTI waypoint further west is intended to raise altitude over ZZOOO and increase distance from the Point Loma shoreline (see ANAC 15 Alternative 1).

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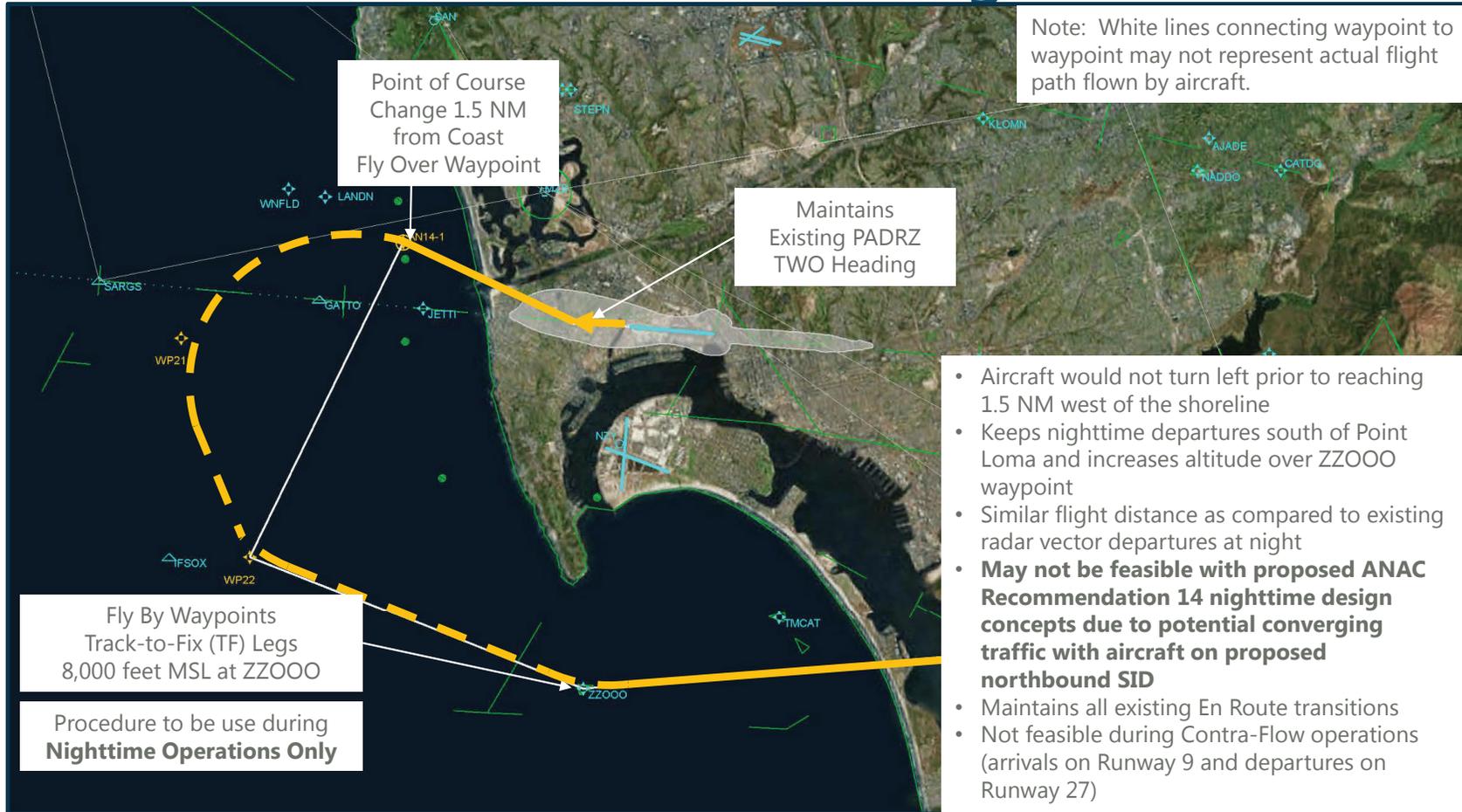
ANAC Noise Recommendation 15 – Alt 1 Design



ANAC Noise Recommendation 15 – Night Alt 2



ANAC Noise Recommendation 15 – Night Alt 3



ANAC Noise Recommendation 15 – TAC Input Summary

- Alternative 1
 - Moving JETTI further west may not result in an altitude increase if 230kt restriction is removed.
 - Turn radius following JETTI will vary more as compared today if 230kt speed restriction is eliminated
 - What is expected benefit of having aircraft at or above 8,000 feet MSL near ZZOOO waypoint?
 - Can this be considered a nighttime alternative as well to help mitigate nighttime noise over Mission Beach?
- Night Alternative 2
 - Provides a more consistent flight track
 - Does not help mitigate noise over Mission Beach
- Night Alternative 3
 - Turn radius following JETTI will vary more as compared today if 230kt speed restriction is eliminated
 - Prefer fly-over waypoint design (Point Loma representative)
- CAC: Alternative 1 - Can this design be considered as a nighttime departure procedure over Pt. Loma?
- CAC: Alternative 2 – This does not help mitigate noise over Mission Beach

ANAC Noise Recommendation 16 – Reduce Arrival Noise Over La Jolla and East County Communities

ANAC Noise Recommendation 16

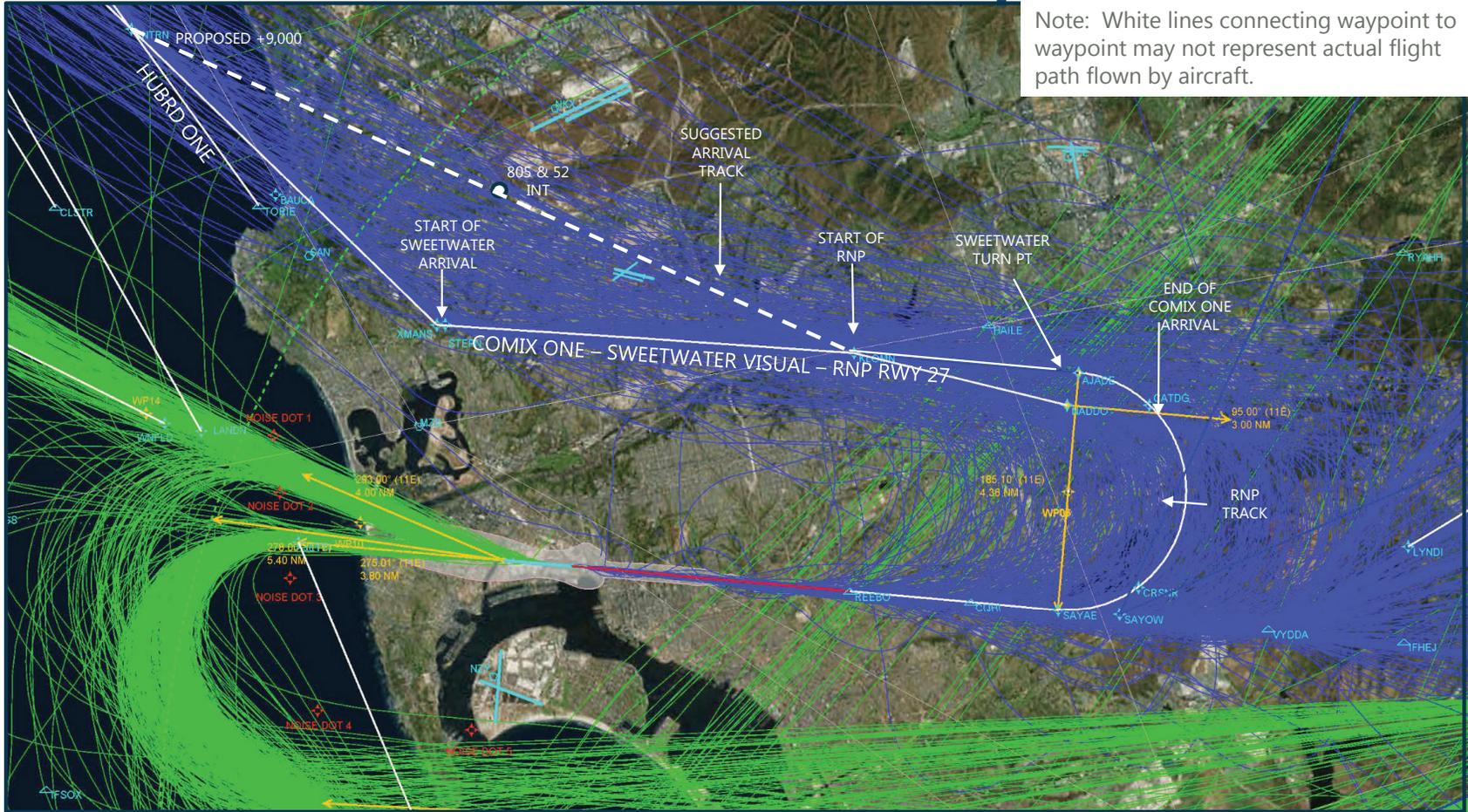
Reassess and revise the entire arrival corridor in a manner that more appropriately “shares the noise” instead of concentrating arrivals from the North in a very narrow corridor.

1. Revise COMIX STAR procedure in order to shift flights that Metroplex has moved and concentrated farther South (the downwind leg) over less populated areas and restore prior altitude.
2. Shift the way point XMANS on the COMIX STAR north to a location that is over the interstate freeway 805 and 52 with the constraint to remain clear of MCAS Miramar's airspace. It would come ashore over Torrey Pines State Park before connecting with KLOMN.
3. Increase Min. Altitude at LNTRN (LCOVE) at or above 10,000. This change would result in aircraft flying over less populated areas, including industrial businesses, thus reducing the noise impact and saving time/fuel. This proposed path is closer to the historical flight tracks pre-NextGen.
4. COMIX ONE STAR: The RNAV-only COMIX ONE arrival is very similar to the existing non-RNAV BAYVU arrival in terms of ground track with a key difference being that the COMIX arrival has an “at or above 8,000 feet” altitude restriction on its last offshore waypoint (LANTRN). The BAYVU arrival has an “at or above 9,000 feet” restriction at its nearly identically-located LCOVE waypoint. This has resulted in aircraft being lower and noisier over La Jolla. We recommend changing the LANTRN waypoint’s altitude restriction to “at or above 9,000 feet”.

Source: ANAC Subcommittee Recommendations (ANAC Approval), October 25, 2017

DRAFT Deliberative Document – For Discussion Purposes Only

ANAC Noise Recommendation 16 - Graphic



ANAC Noise Recommendation 16 – Initial Review

1. *Revise COMIX STAR procedure in order to shift flights over less populated areas and restore prior altitude:* Leg between KLOMN waypoint to NADDO waypoint was designed to prevent Class B airspace excursions. This leg cannot be changed until the Class B redesign is complete. Path may be modified post Class B design.
2. *Shift the way point XMANS on the COMIX STAR north to a location that is over the interstate freeway 805 and 52:* Crossing the shoreline over Torey Pines State Park and heading to XMAN waypoint shifted north over I-805 and SR-52 would reduce the flight track 1 NM (see ANAC Recommendation 16 Alternative 1 and 2)
 - Reduction in vectoring and sequencing area may be deemed infeasible by FAA
 - Possible ATC issues with Miramar Marine Corps Air Station
 - Moving noise from one community to another is contrary to FAA policy, and may be deemed infeasible by FAA – aircraft overflight location moved over another community and aircraft are lower in altitude
3. *Increase Min. Altitude at LNTRN (LCOVE) at or above 10,000:* Increasing LNTRN to 10,000 feet MSL is not feasible based on current design
 - Increasing to 10,000 feet MSL would exceed the descent gradient criteria (maximum of 330 feet per NM) from LNTRN to KLOMN waypoint at 6,000 feet MSL along the existing COMIX path.
 - Increasing altitude at LNTRN to 10,000 feet MSL along route shifted north would also exceed descent gradient criteria.

SEE NEXT SLIDE FOR UPDATED SUMMARY

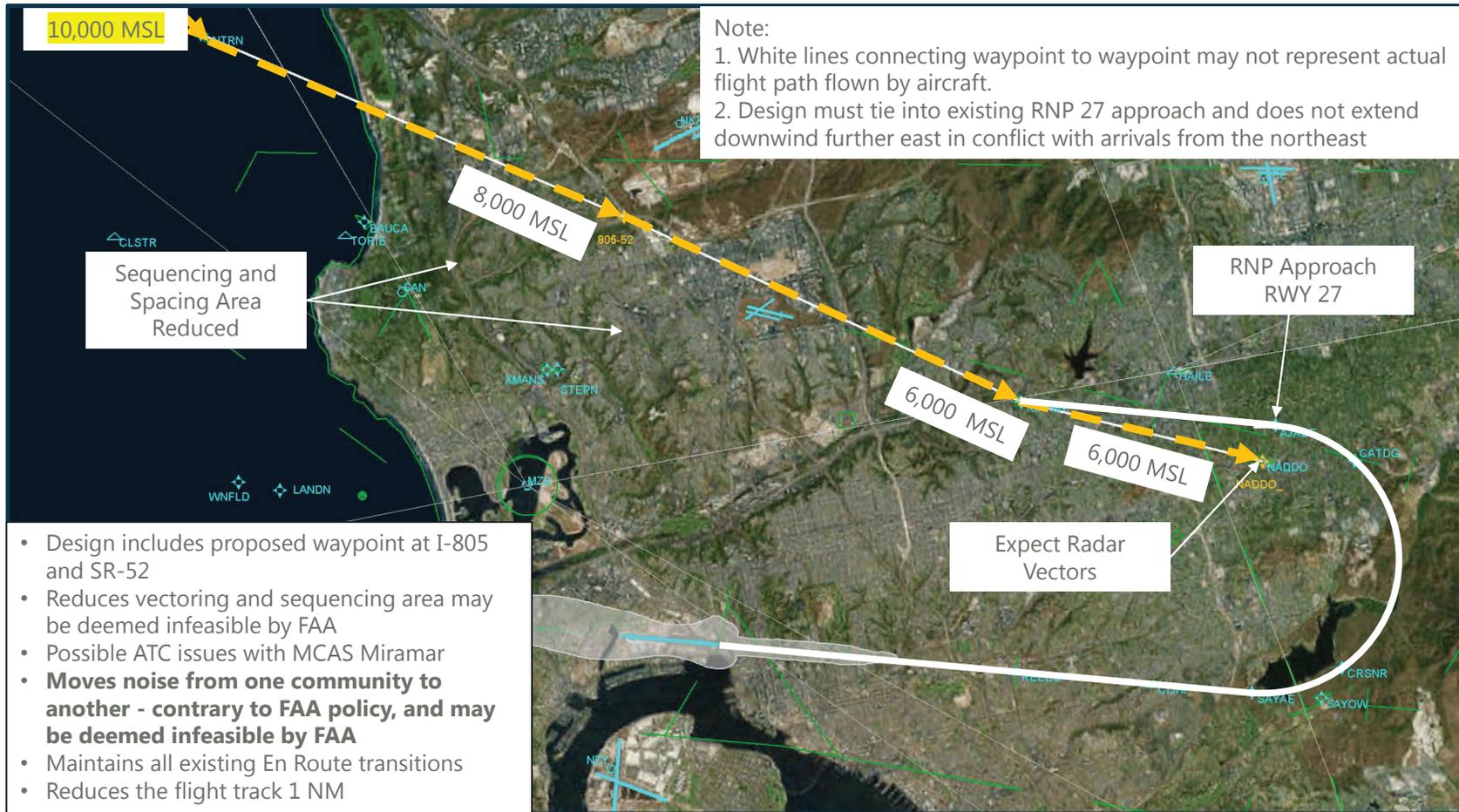
ANAC Noise Recommendation 16 – Initial Review

3. Increase Min. Altitude at LNTRN (LCOVE) at or above 10,000 (Cont.)

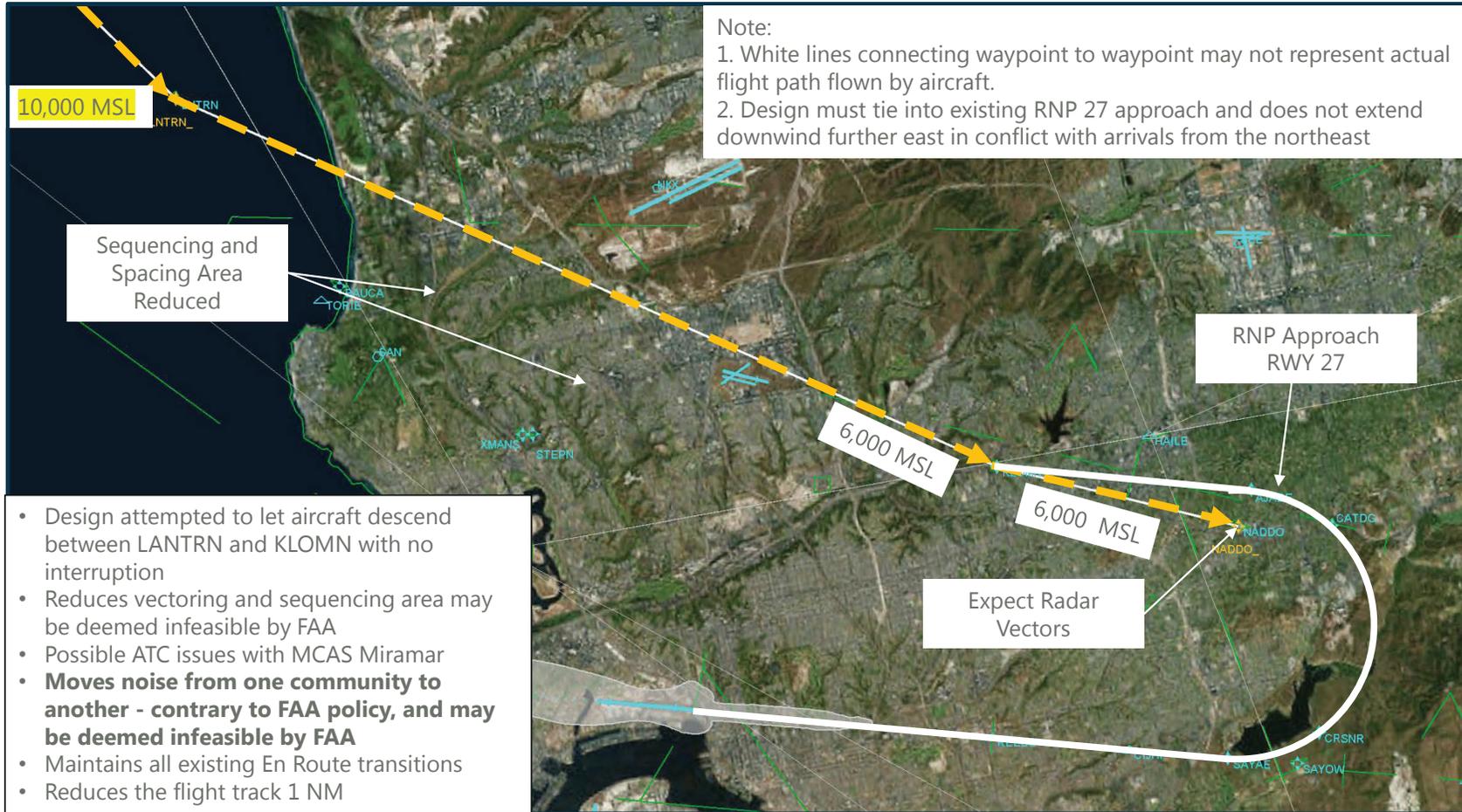
- Existing COMIX:
 - Changing the altitude to 10,000 feet MSL at LNTRN is not feasible as descent gradients are exceeded from LNTRN (10,000 feet) to XMAN (7,000 feet)
 - (3,000 feet/8NM = 375 feet per NM)
- Alternatives 1 and 2:
 - LNTRN @ 10,000 to 805-52WP @ 7,000 exceeds descent gradient criteria (3,000/7NM = 428 feet per NM)
 - These alternatives can be redesigned to achieve 10,000 feet at LNTRN
 - Coding changes for Alternative 1 include FLSHH and LNTRN to +10,000 feet and 805-52WP to 8,000 feet
 - Coding changes for Alternative 2 include FLSHH and LNTRN to +10,000 feet
 - No analysis on optimization conducted for each revised alternative. FAA TRACON and airline input required
- North Route:
 - Coding LNTRN to +10,000 and BAUCA to 9,000 meets design criteria
 - Does not pass flyability for low performance aircraft crossing COMIX at 15,000 feet

4. Change the LANTRN waypoint's altitude restriction to "at or above 9,000 feet": According to FAA information posted on the FAA Instrument Flight Procedure Gateway Production page for SAN, the COMIX TWO STAR is expected raise the altitude from at or above 8,000 to at or above 9,000 feet at the LNTRN waypoint.

ANAC Noise Recommendation 16 – Alt 1



ANAC Noise Recommendation 16 – Alt 2



ANAC Noise Recommendation 16 – Alt 3

+10,000 MSL



Sequencing and Spacing Area Reduced

RNP Approach RWY 27

Expect Radar Vectors

- Design attempted to keep arrivals north of La Jolla when crossing over the shoreline
- Reduces vectoring and sequencing area may be deemed infeasible by FAA
- **Moves noise from one community to another - contrary to FAA policy, and may be deemed infeasible by FAA**
- **Does not pass flyability for low performance aircraft crossing COMIX at 15,000 feet MSL**
- Further south of MCAS Miramar compared to Alt 1 and 2
- Maintains all existing En Route transitions.
- Reduction in distance is less than 1 NM compared to COMIX STAR

Note:
1. White lines connecting waypoint to waypoint may not represent actual flight path flown by aircraft.
2. Design must tie into existing RNP 27 approach and does not extend downwind further east in conflict with arrivals from the northeast

ANAC Noise Recommendation 16 – TAC Input

▪ Alternative 1

- KLOMN at 6,000 feet is difficult to make for the navigation software. Steep descents are not recommended with speed reductions in arrival procedures. This combination could lead some navigation software to reduce speed well before air traffic control would like the aircraft to be at a slower speed.
- Reference to historic flight tracks related to moving COMIX arrivals north.
- Based on maximum descent gradient, appears aircraft can be at 10,000 feet over LNTRN and 6,000 feet at KLOMN
- Suggestion to increase altitude at I-805/SR-53 waypoint
- Inquired about timing of Class B airspace change
- Alternative 1 is preferred to meet Recommendation 16 intent

▪ Alternative 2

- KLOMN at 6,000 feet is difficult to make for the navigation software. Steep descents are not recommended with speed reductions in arrival procedures. This combination could lead some navigation software to reduce speed well before air traffic control would like the aircraft to be at a slower speed.
- Reference to historic flight tracks related to moving COMIX arrivals north.

ANAC Noise Recommendation 16 – TAC Input (cont'd)

- Alternative 3
 - KLOMN at 6,000 feet is difficult to make for the navigation software. Steep descents are not recommended with speed reductions in arrival procedures. This combination could lead some navigation software to reduce speed well before air traffic control would like the aircraft to be at a slower speed.
 - Not preferred due to lower altitude crossing coastline, worse impact on La Jolla, and does not meet recommendation.

Concept Designs - Process Considerations

- Assumes proposed concepts make it through first two steps in FAA process
- Shorter duration in FAA process
 - Concepts that maintain initial departure runway headings
 - Noise screening may be adequate to determine potential noise impacts
 - No significant changes to noise for areas exposed to CNEL 65 or higher and/or reportable increases for areas exposed to levels between CNEL 45 and 65 – high likelihood FAA will conduct a categorical exclusion
- Longer duration in FAA process
 - Concepts that change initial departure runway headings
 - Cumulative aircraft noise analysis required to assess potential significant impacts
 - Potential for significant changes to noise for areas exposed to CNEL 65 or higher and/or reportable increases for areas exposed to levels between CNEL 45 and 65 – high likelihood FAA will require an Environmental Assessment or documented categorical exclusion with extensive community involvement outreach.

Next Steps – Action Items and Next CAC Meeting

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Next Steps

- Input period open until August 2nd
- Summarize and address comments
- Update viable alternatives
- Present updates and feasibility recommendations at August 30th TAC and CAC meetings

B.1.5 CAC AND TAC MEETING #3 – AUGUST 30, 2018

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**San Diego County Regional Airport Authority (SDCRAA)
Flight Procedure Evaluation
Technical Advisory Committee and Citizen Advisory Committee Meeting #3**

San Diego International Airport

August 30, 2018

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Agenda

- Meeting Goals
- Design Parameters
- Acronyms
- ANAC Recommendation 14 Design Concepts
- ANAC Recommendation 15 Design Concepts
- ANAC Recommendation 16 Design Concepts
- East County SDIA Arrivals from Northwest
- Next Steps

Meeting Goals

- Review design concept recommendations
- Review new draft concepts as result of preliminary draft concept discussions/input
- Gather input from Technical Advisory Committee (TAC) and Citizen Advisory Committee (CAC) on consultant team recommendations and refinements to design concepts

Design Parameters

- ✖ Be sensitive to aircraft flight path changes over areas exposed to CNEL 65 or higher
- ✖ Do not impact safety
- ✖ Meet FAA design criteria
- ✖ Fit within existing airspace and maintain existing airspace hand-off areas
- ✖ Do not impact capacity of SDIA
- ✖ Do not move noise to new non-compatible areas

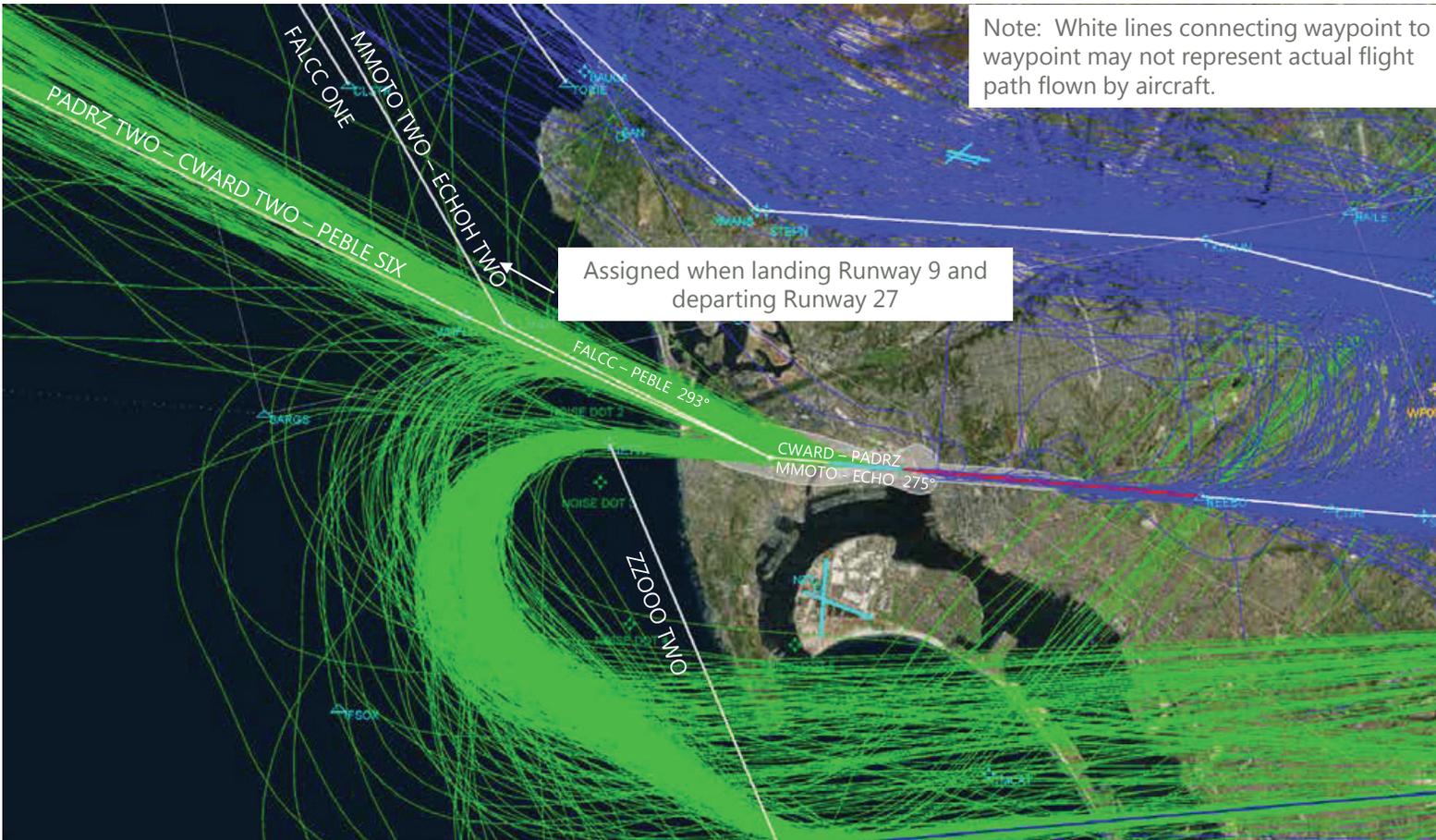
Acronyms

- DF = Direct to a Fix
- Kts = Knots
- MDA = Minimum Descent Altitude
- MVA = Minimum Vectoring Altitude
- MSL = Mean Sea Level
- NM = Nautical Miles
- PBN = Performance Based Navigation
- RNAV = Area Navigation
- RNP = Required Navigational Performance
- SIAP = Standard Instrument Approach Procedure
- SID = Standard Instrument Departure Procedure
- STAR = Standard Instrument Arrival Route
- TARGETS = Terminal Area Route Generation Evaluation and Traffic Simulation
- VA = Heading to an Altitude
- WP = Waypoint
- Fly Over WP = Aircraft will fly over the point before turning
- Fly By WP = Aircraft will start turn just before reaching the point and will not fly over the point during the turn

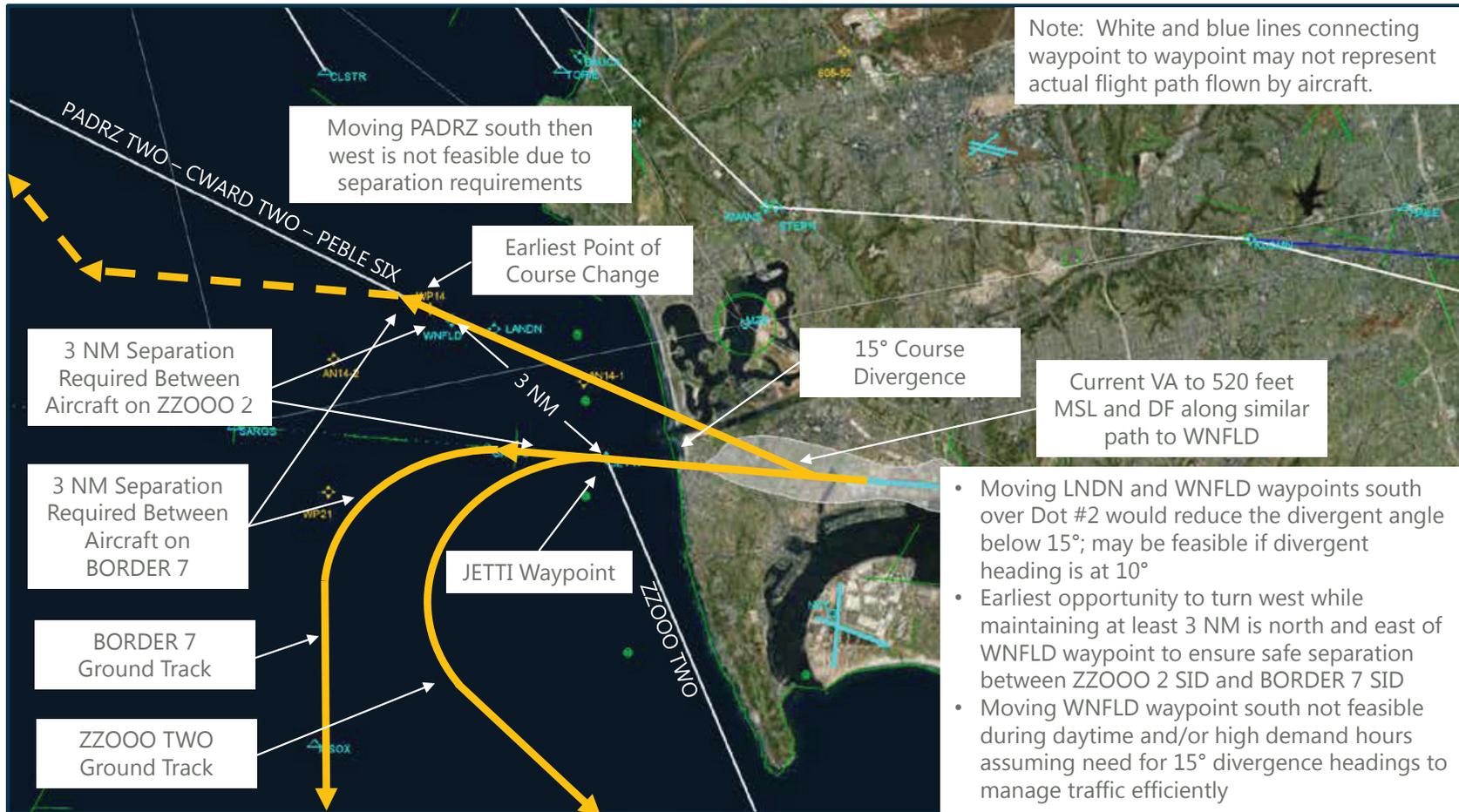
ANAC Noise Recommendation 14 – Reduce Noise in Mission Beach, Pacific Beach, and La Jolla

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ANAC Noise Recommendation 14 – Existing Flight Tracks



ANAC Noise Recommendation 14 – Day Time Issues



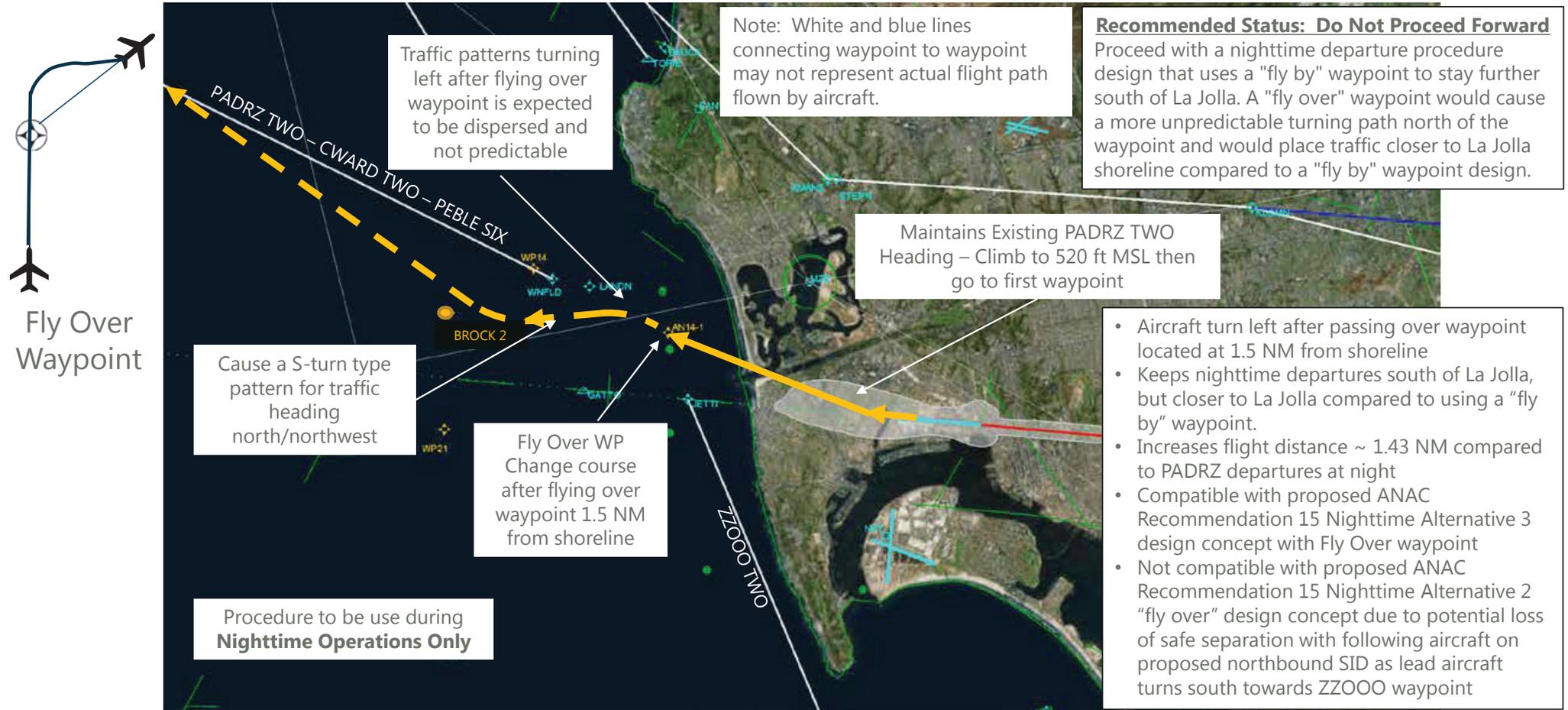
ANAC Noise Recommendation 14 - Alternatives

- **Alternative 1 – Fly By Turn at 1.5 NM from shoreline – Nighttime**
- Alternative 1 – Fly Over Turn at 1.5 NM from shoreline - Nighttime
- Alternative 2 – Fly By Turn at shoreline – Nighttime
- Alternative 3 – Fly By Turn at CNEL 65 contour - Nighttime
- ***Alternative 4 (new) – Fly By Turn between shoreline and 1.5 NM from shoreline - Nighttime***
- ***Alternative 5 (new) – ELSO 285° to Fly By waypoint at 1.5 NM thence to BROCK-2 - Nighttime***
- ***Alternative 6 (new) – ELSO 285°- Daytime***

Note: Items in **bold** are recommended to proceed forward for further assessment;
Items in ***bold italics*** require input from TAC/CAC

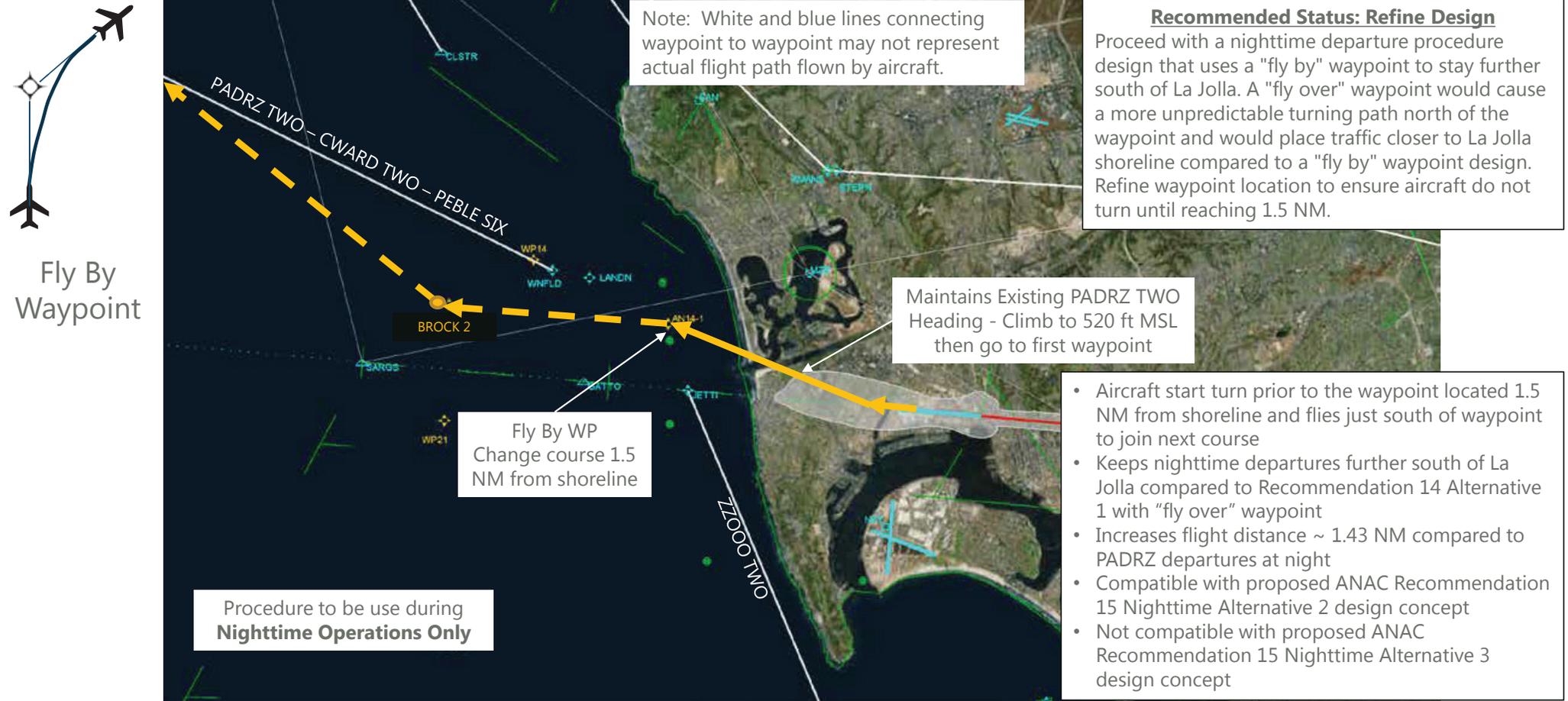
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ANAC Noise Recommendation 14 – Alt 1 “Fly Over” Turn at 1.5 NM



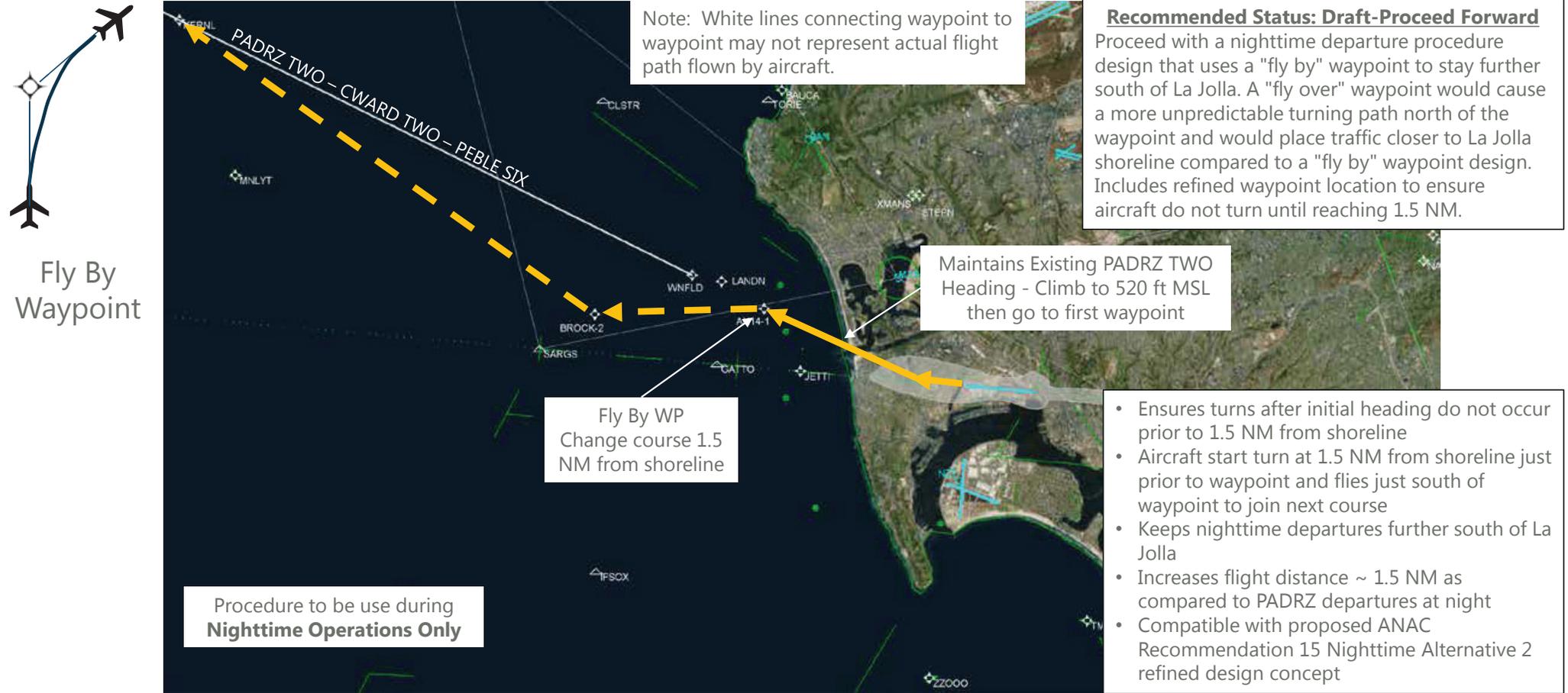
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ANAC Noise Recommendation 14 – Alt 1 “Fly By” Turn at 1.5 NM

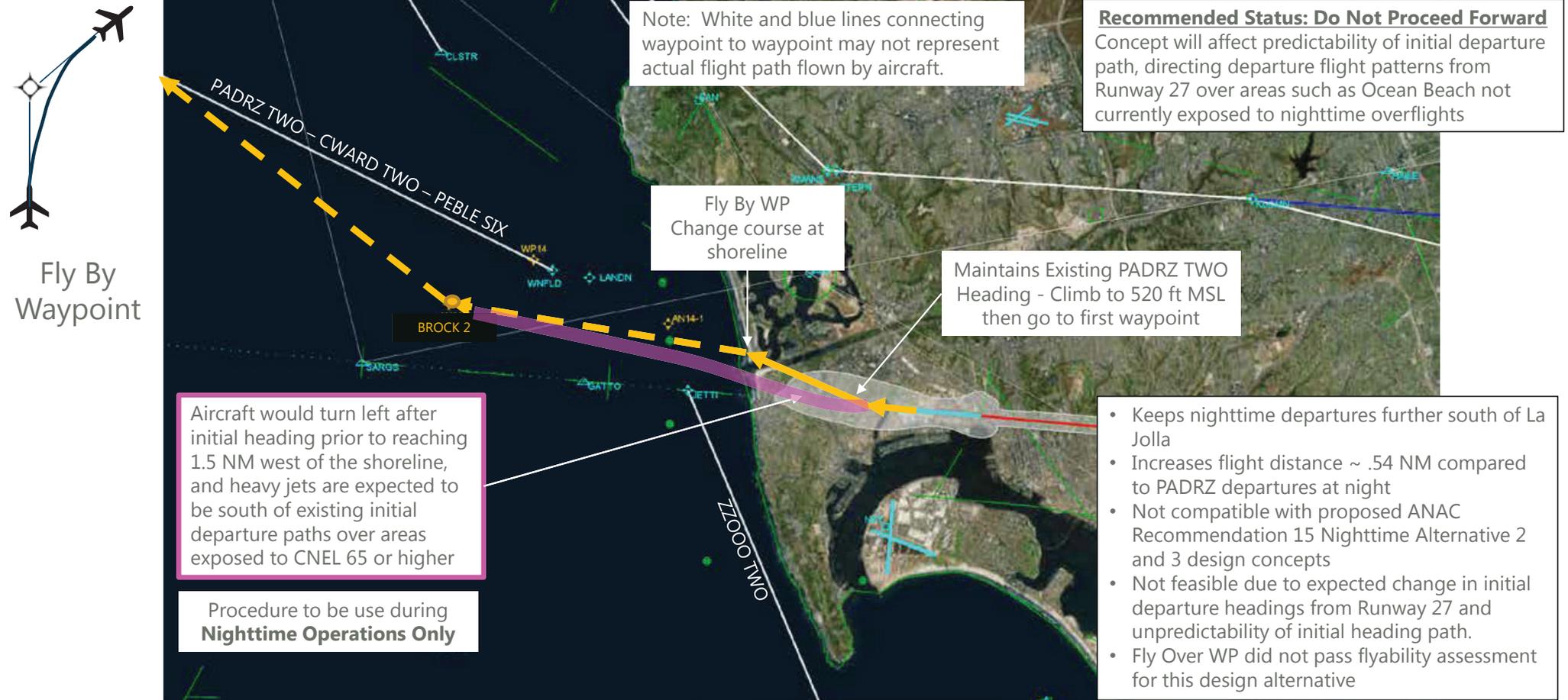


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ANAC Noise Recommendation 14 – Alt 1 “Fly By” Turn at 1.5 NM (Refined)

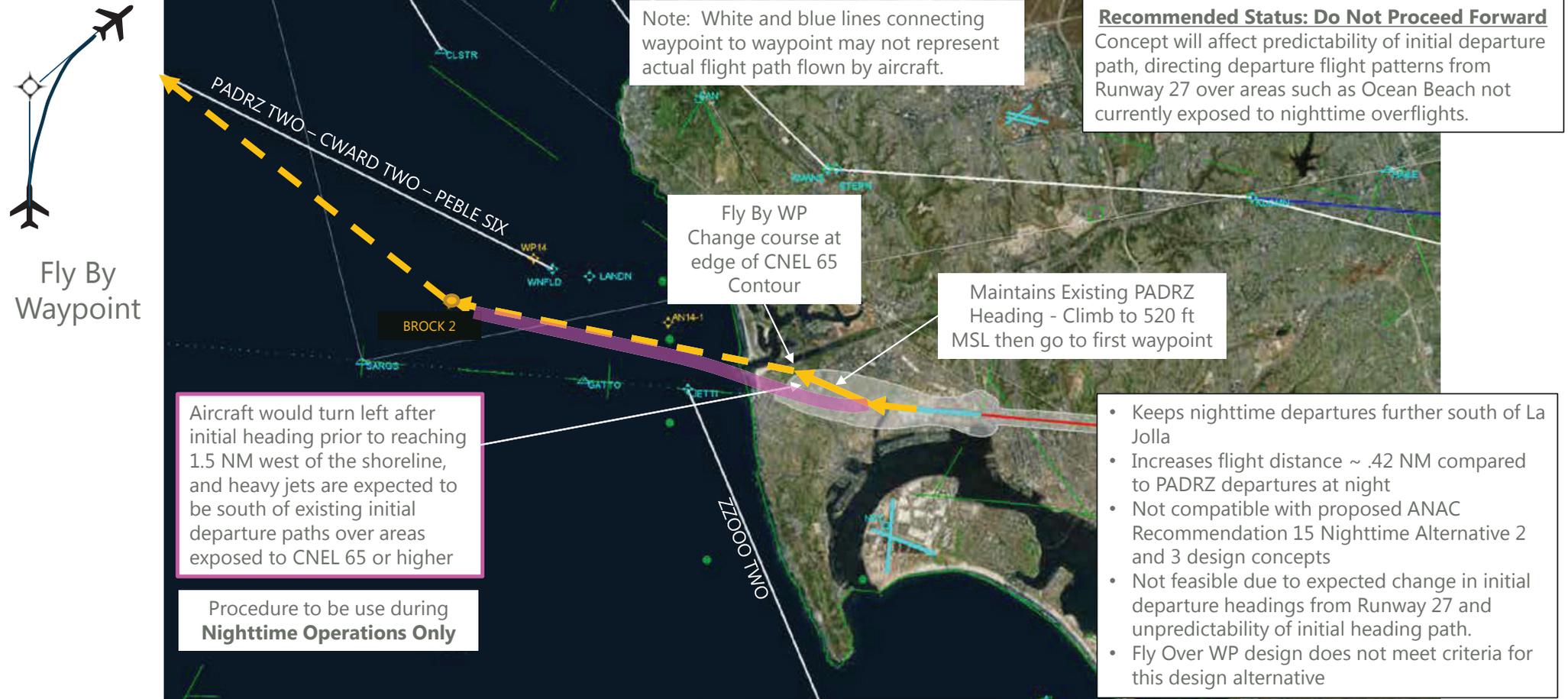


ANAC Noise Recommendation 14 – Alt 2 Turn at Shoreline



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ANAC Noise Recommendation 14 – Alt 3 Turn at CNEL 65 Contour



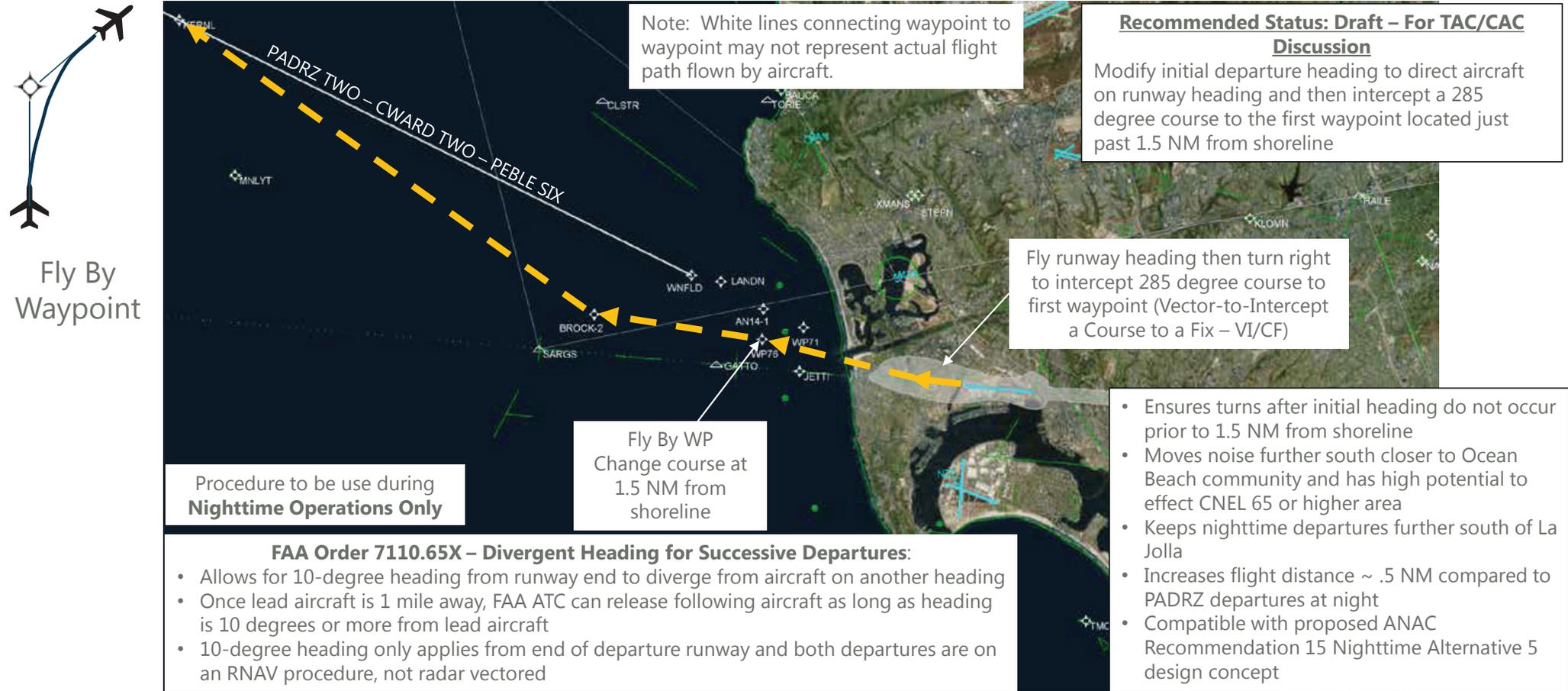
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ANAC Noise Recommendation 14 –Alt 4 Turn Between Shoreline and 1.5 NM

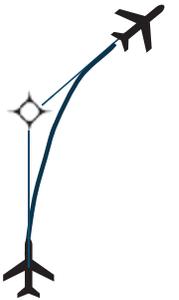


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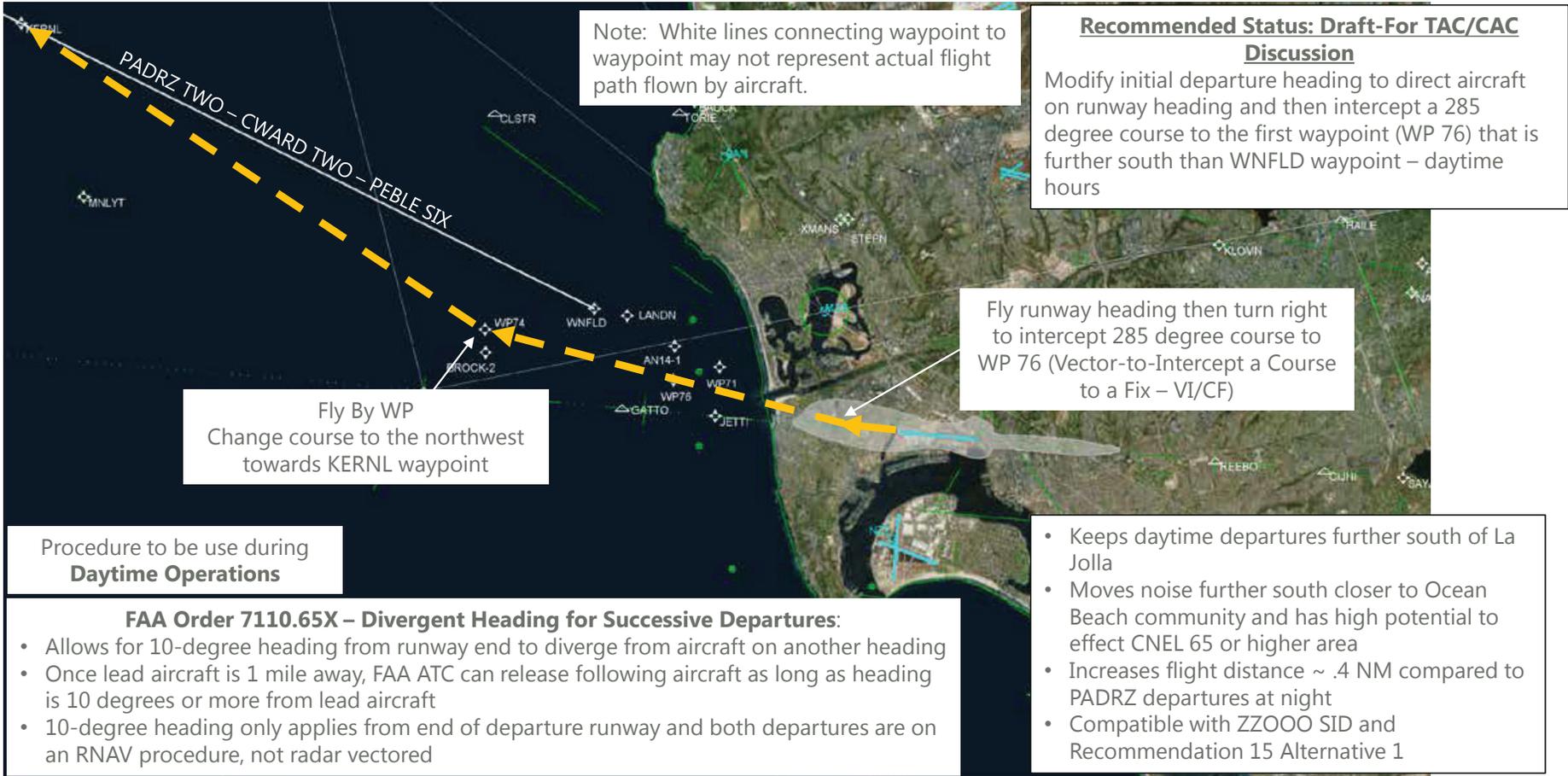
ANAC Noise Recommendation 14 – Alt 5 ELSO to Fly By Turn at 1.5 NM



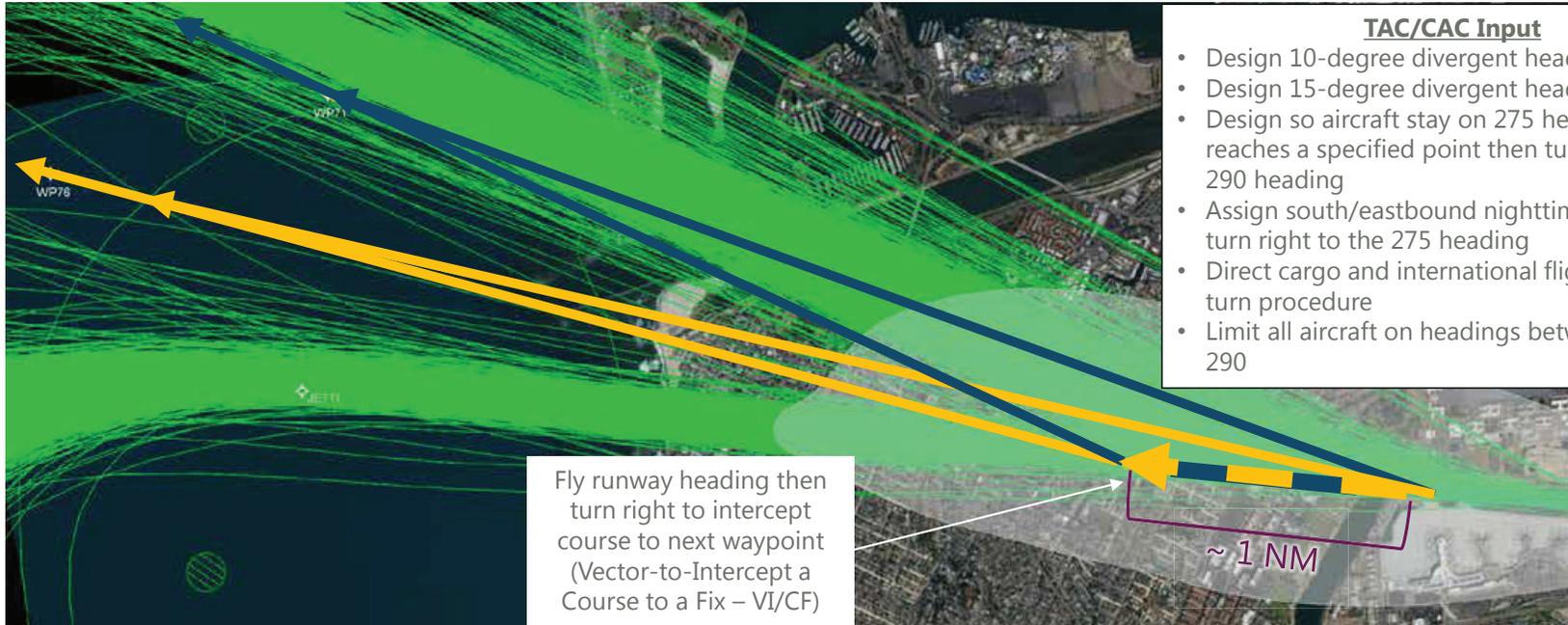
ANAC Noise Recommendation 14 – Alt 6 ELSO Day



Fly By Waypoint



ANAC Noise Recommendation 14 – Initial Heading Input



- ← Fly runway heading and turn right to join 285-degree magnetic course to first waypoint (Vector-to-Intercept a Course to a Fix-VI/CF)
- ← Fly runway heading and turn right to join 290-degree magnetic course to first waypoint (Vector-to-Intercept a Course to a Fix-VI/CF)
- Radar Flight Tracks:
 - North/Northwest Traffic on PADRZ SID – Fly runway heading until 520 feet MSL then turn right and go to WNFLD waypoint (Vector-to-Altitude then Direct to Fix – VA/DF) – heading to WNFLD depends on when aircraft reaches 520 feet MSL
 - South/East Traffic on ZZOOO SID - Stay on 275 to JETTI waypoint
 - South/East Traffic at Night – Issued 290 heading by SAN Air Traffic Control Tower and continue until 1.5 NM from shoreline

ANAC Noise Recommendation 15 – Reduce Noise Over the Point Loma Peninsula and La Jolla

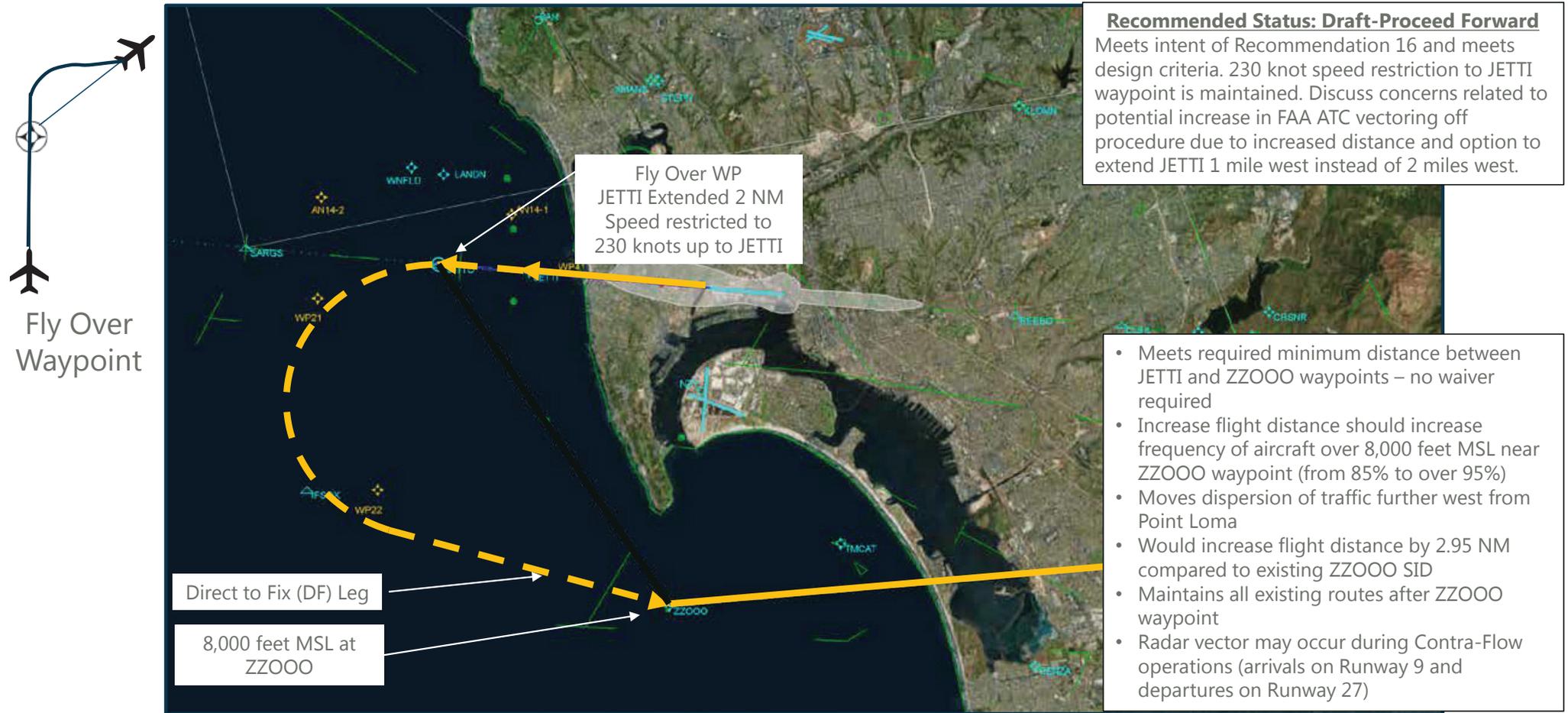
ANAC Noise Recommendation 15 - Alternatives

- **Alternative 1 – Extend JETTI Waypoint 2 NM West**
- **Alternative 2 – Fly By Turn at 1.5 NM then to ZZOOO Waypoint - Nighttime**
- Alternative 3 – Fly Over Turn at 1.5 NM then to ZZOOO Waypoint - Nighttime
- ***Alternative 4 (New) – Fly By Turn between shoreline and 1.5 NM from shoreline then to ZZOOO waypoint - Nighttime***
- ***Alternative 5 (New) – ELSO 285° to Fly By waypoint at 1.5 NM then to ZZOOO - Nighttime***

Note: Items in **bold** are recommended to proceed forward for further assessment;
Items in ***bold italics*** require input from TAC/CAC

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ANAC Noise Recommendation 15 – Alt 1 Extend JETTI Waypoint 2 NM West



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ANAC Noise Recommendation 15 – Alt 2 “Fly By” Turn at 1.5 NM



Recommended Status: Refine Design
Proceed with a nighttime departure procedure design that uses a "fly by" waypoint to stay further south of La Jolla. A "fly over" waypoint would cause a more unpredictable turning path north of the waypoint and would place traffic closer to La Jolla shoreline compared to a "fly by" waypoint design. Refine waypoint location to ensure aircraft do not turn until reaching 1.5 NM.

- Aircraft start turn prior to the waypoint located 1.5 NM from shoreline and flies just south of waypoint to join next course
- Keeps nighttime departures south of Point Loma and increases frequency of aircraft at or above 8,000 feet MSL near ZZ000 waypoint
- Compatible with proposed ANAC Recommendation 14 Alternative 1 "fly by" nighttime design concept
- Maintains routes after ZZ000 waypoint
- Not feasible during Contra-Flow operations (arrivals on Runway 9 and departures on Runway 27)

ANAC Noise Recommendation 15 – Alt 2 “Fly By” Turn at 1.5 NM (Refined)

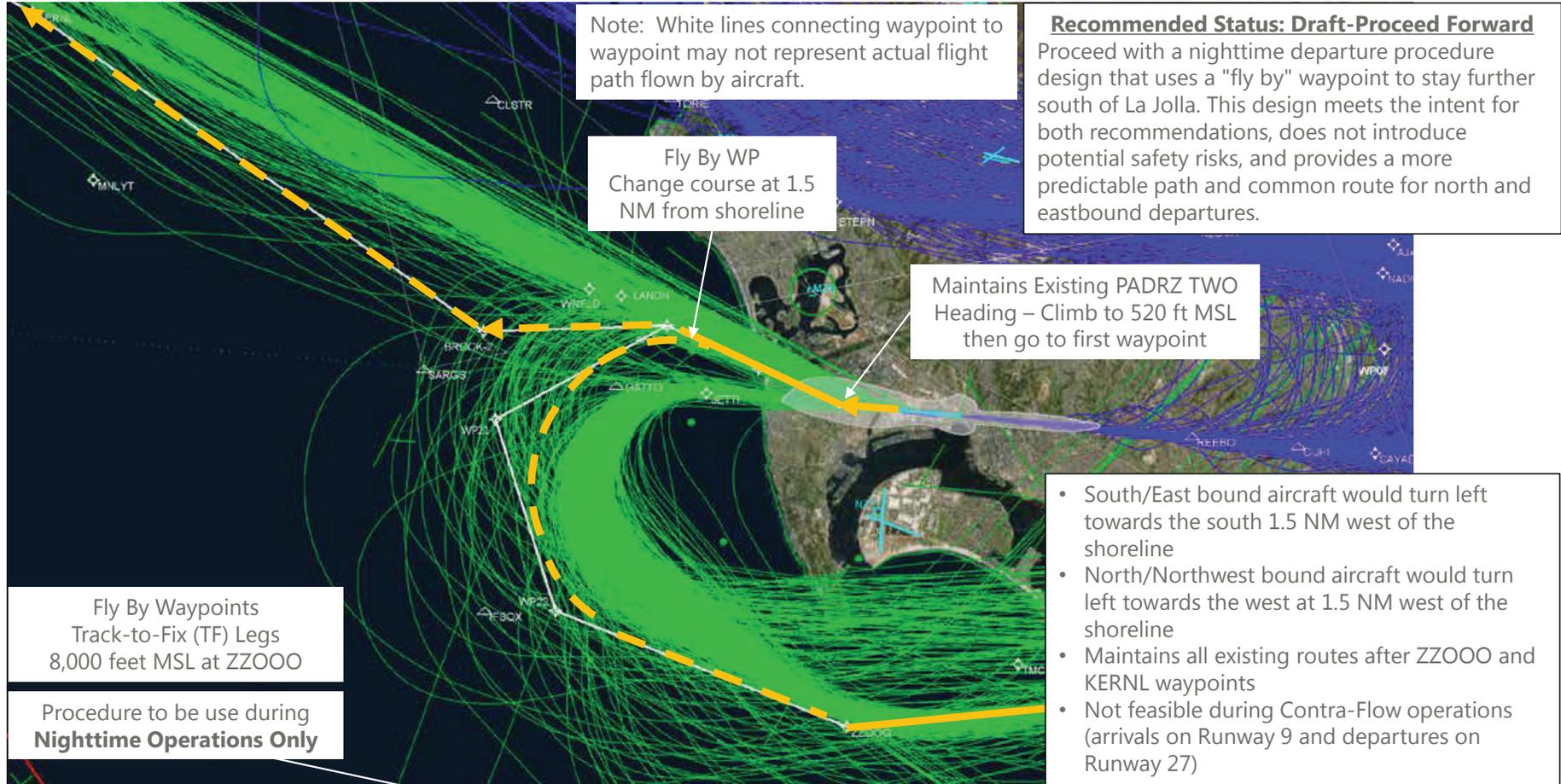


Recommended Status: Draft-Proceed Forward
Proceed with a nighttime departure procedure design that uses a "fly by" waypoint to stay further south of La Jolla. A "fly over" waypoint would cause a more unpredictable turning path north of the waypoint and would place traffic closer to La Jolla shoreline compared to a "fly by" waypoint design. Includes refined waypoint location to ensure aircraft do not turn until reaching 1.5 NM.

- Ensures turns after initial heading do not occur prior to 1.5 NM from shoreline
- Aircraft start turn at 1.5 NM from shoreline just prior to waypoint and flies just south of waypoint to join next course
- Keeps nighttime departures south of Point Loma and increases frequency of aircraft at or above 8,000 feet MSL near ZZ000 waypoint
- Compatible with proposed ANAC Recommendation 14 Alternative 1 "fly by" nighttime design concept
- Maintains routes after ZZ000 waypoint
- Not feasible during Contra-Flow operations (arrivals on Runway 9 and departures on Runway 27)

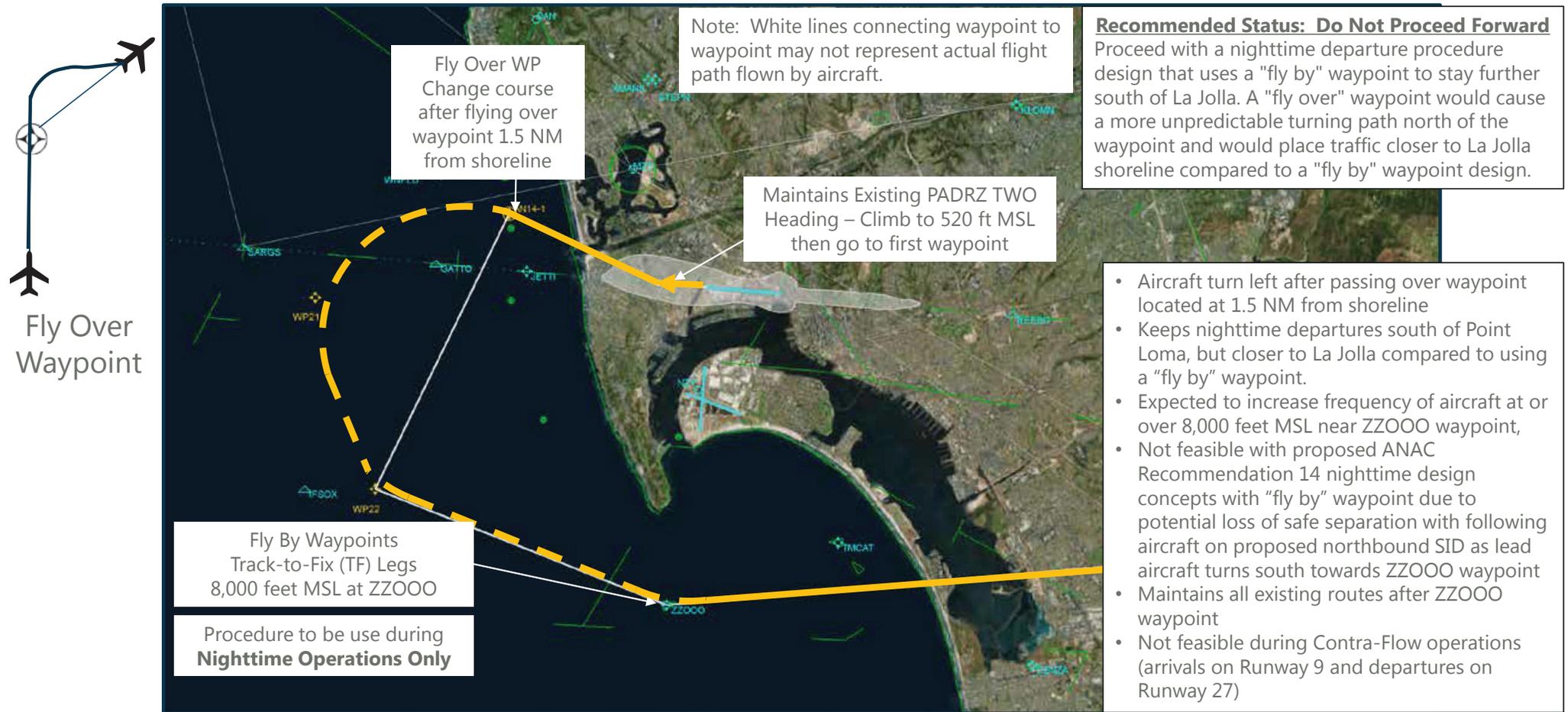
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Composite of Recommendation 14 Alt 1 “Fly By” and Recommendation 15 Alt 2



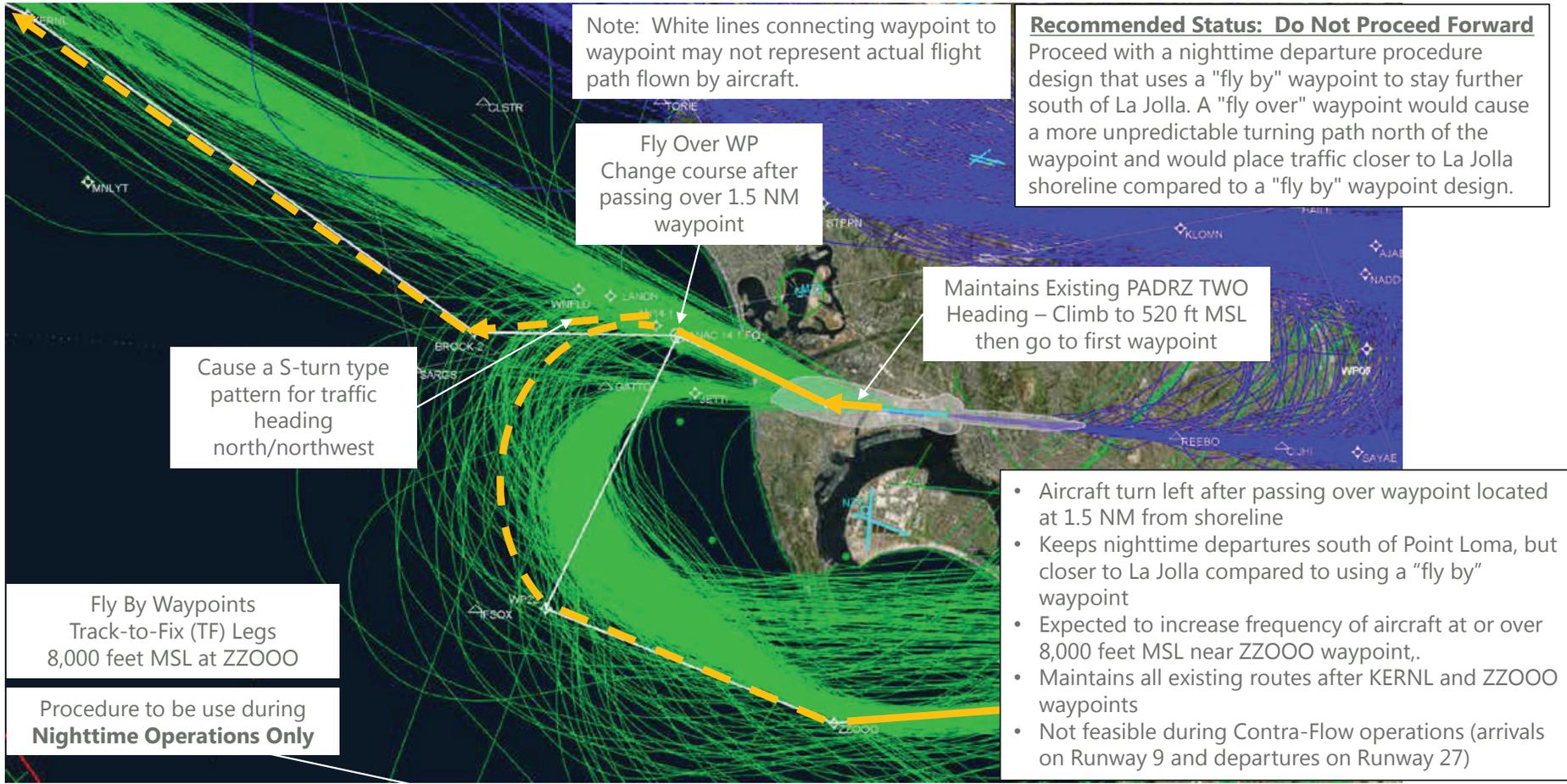
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ANAC Noise Recommendation 15 – Alt 3 “Fly Over” Turn at 1.5 NM



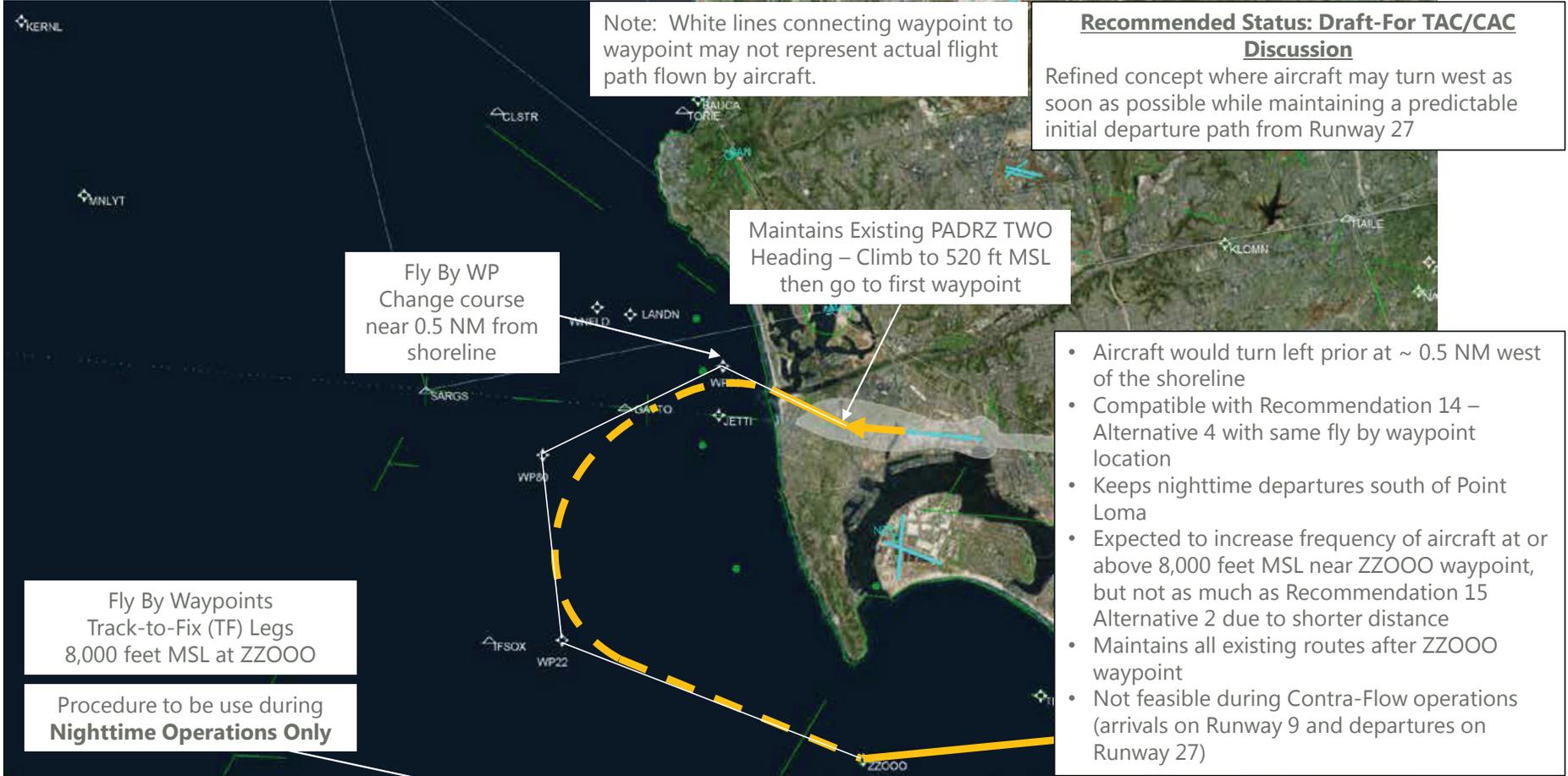
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Composite of Recommendation 14 Alt 1 “Fly Over” and Recommendation 15 Alt 3



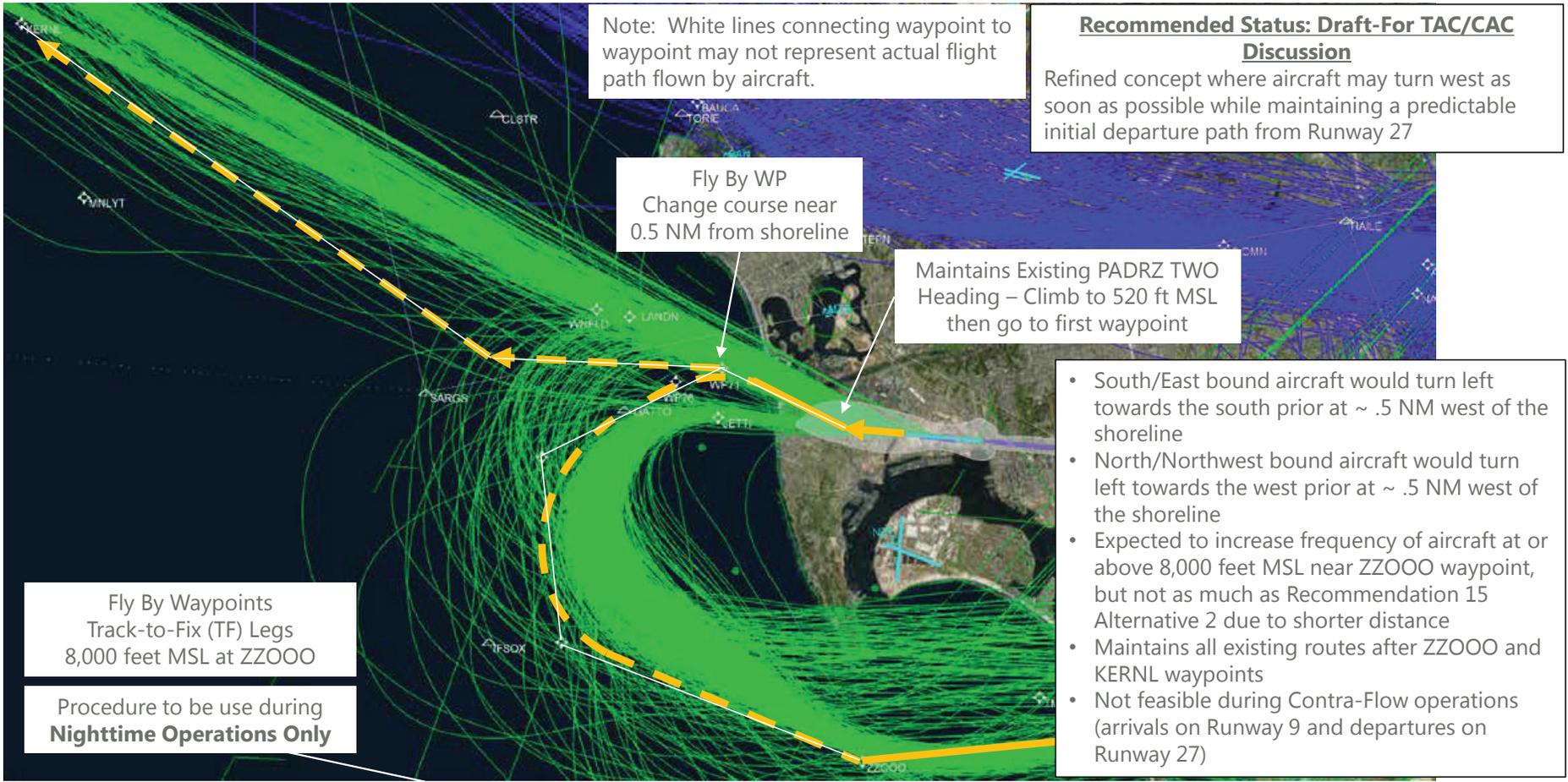
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ANAC Noise Recommendation 15 – Alt 4 Turn Between Shoreline and 1.5 NM

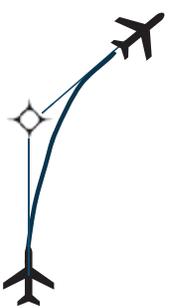


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Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4



ANAC Noise Recommendation 15 – Alt 5 ELSO to Fly By Turn at 1.5 NM



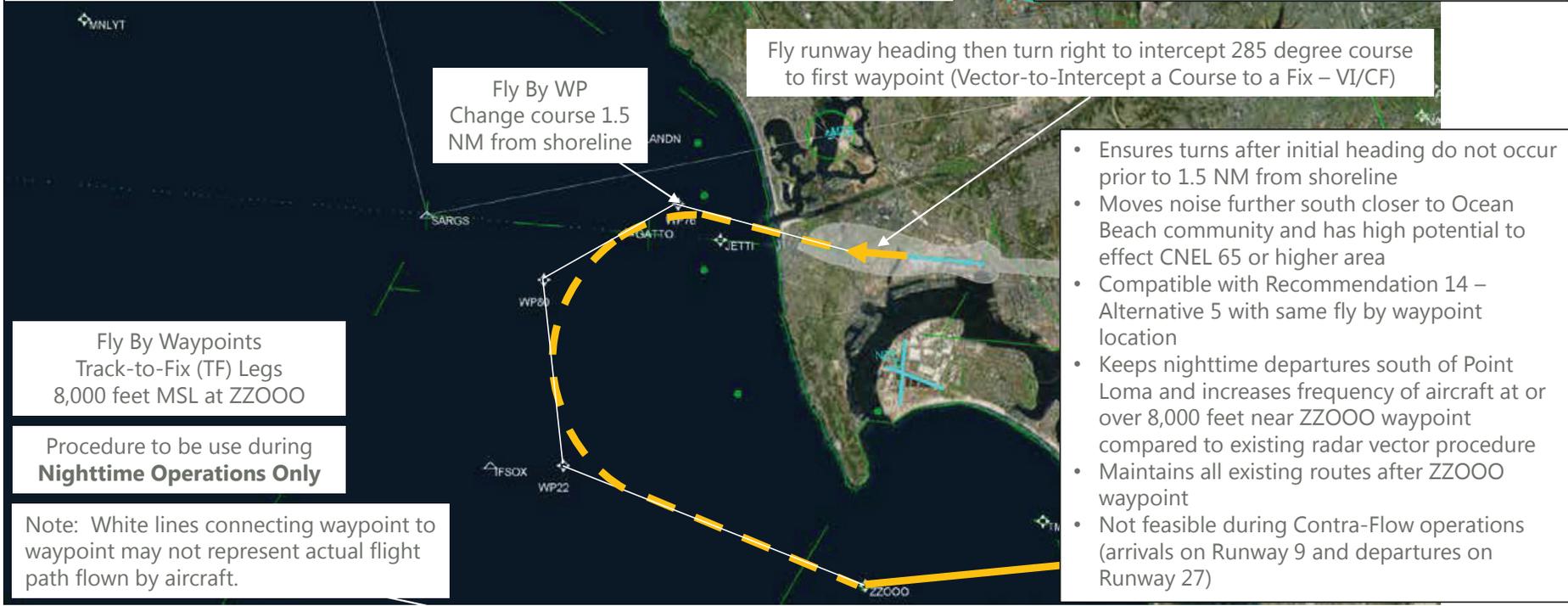
Fly By Waypoint

FAA Order 7110.65X – Divergent Heading for Successive Departures:

- Allows for 10-degree heading from runway end to diverge from aircraft on another heading
- Once lead aircraft is 1 mile away, FAA ATC can release following aircraft as long as heading is 10 degrees or more from lead aircraft
- 10-degree heading only applies from end of departure runway and both departures are on an RNAV procedure, not radar vectored

Recommended Status: Draft-For TAC/CAC Discussion

Modify initial departure heading to direct aircraft on runway heading and then intercept a 285 degree course to the first waypoint located just past 1.5 NM from shoreline



Fly runway heading then turn right to intercept 285 degree course to first waypoint (Vector-to-Intercept a Course to a Fix – VI/CF)

Fly By WP
Change course 1.5
NM from shoreline

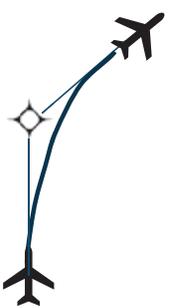
- Ensures turns after initial heading do not occur prior to 1.5 NM from shoreline
- Moves noise further south closer to Ocean Beach community and has high potential to effect CNEL 65 or higher area
- Compatible with Recommendation 14 – Alternative 5 with same fly by waypoint location
- Keeps nighttime departures south of Point Loma and increases frequency of aircraft at or over 8,000 feet near ZZ000 waypoint compared to existing radar vector procedure
- Maintains all existing routes after ZZ000 waypoint
- Not feasible during Contra-Flow operations (arrivals on Runway 9 and departures on Runway 27)

Fly By Waypoints
Track-to-Fix (TF) Legs
8,000 feet MSL at ZZ000

Procedure to be use during
Nighttime Operations Only

Note: White lines connecting waypoint to waypoint may not represent actual flight path flown by aircraft.

Composite of Recommendation 14 Alt 5 and Recommendation 15 Alt 5



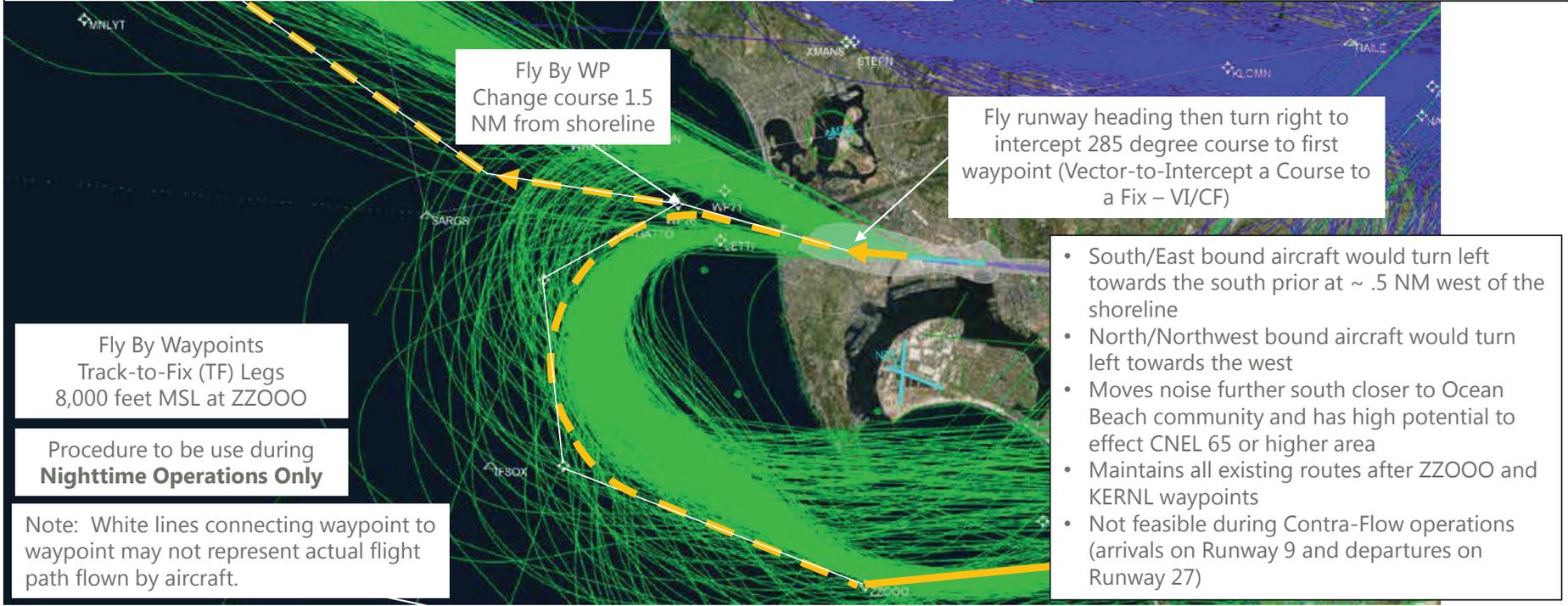
Fly By Waypoint

FAA Order 7110.65X – Divergent Heading for Successive Departures:

- Allows for 10-degree heading from runway end to diverge from aircraft on another heading
- Once lead aircraft is 1 mile away, FAA ATC can release following aircraft as long as heading is 10 degrees or more from lead aircraft
- 10-degree heading only applies from end of departure runway and both departures are on an RNAV procedure, not radar vectored

Recommended Status: Draft-For TAC/CAC Discussion

Modify initial departure heading to direct aircraft on runway heading and then intercept a 285 degree course to the first waypoint located just past 1.5 NM from shoreline

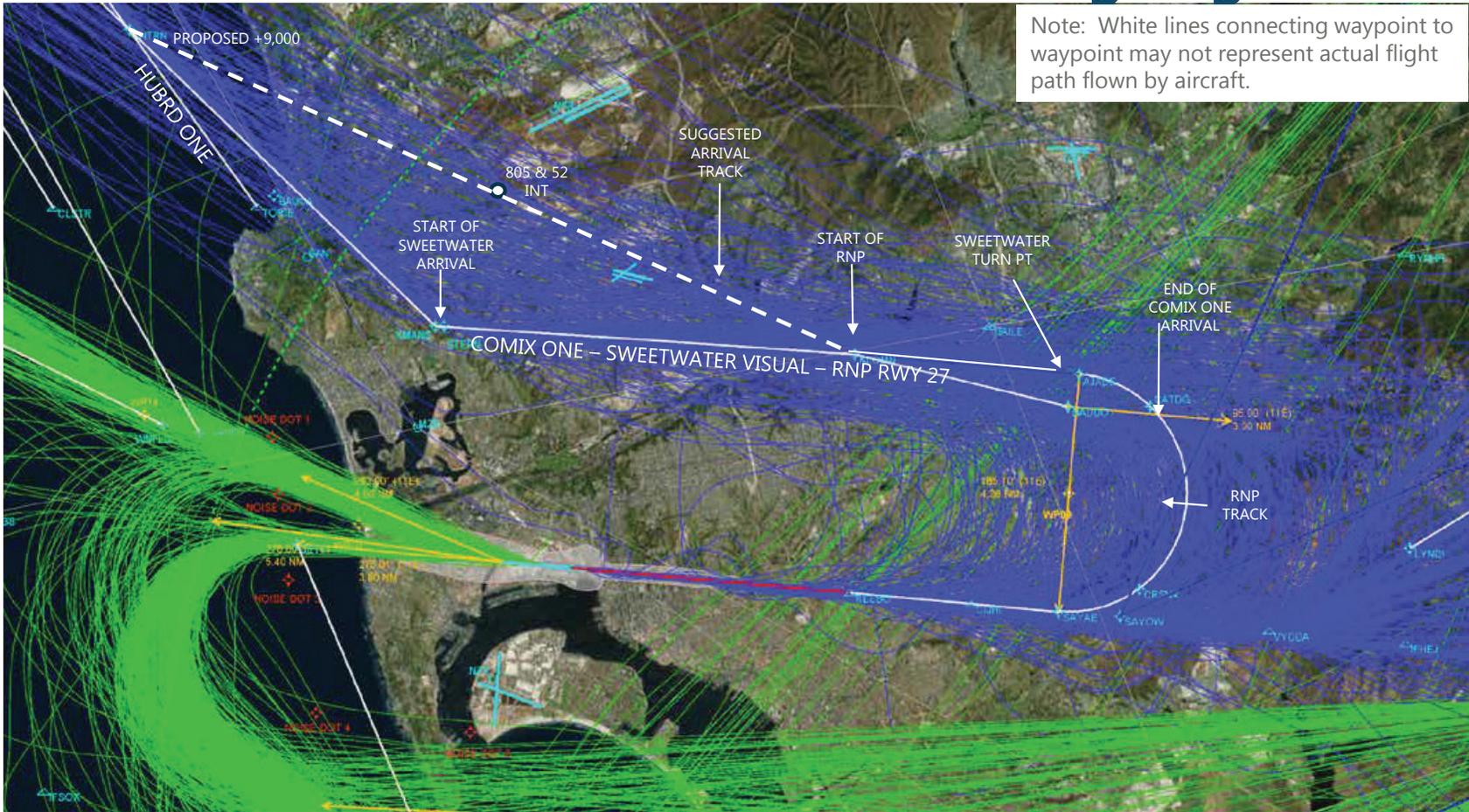


- South/East bound aircraft would turn left towards the south prior at ~ .5 NM west of the shoreline
- North/Northwest bound aircraft would turn left towards the west
- Moves noise further south closer to Ocean Beach community and has high potential to effect CNEL 65 or higher area
- Maintains all existing routes after ZZOOO and KERNL waypoints
- Not feasible during Contra-Flow operations (arrivals on Runway 9 and departures on Runway 27)

ANAC Noise Recommendation 16 – Reduce Arrival Noise Over La Jolla and East County Communities

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ANAC Noise Recommendation 16 – Existing Flight Tracks



Note: White lines connecting waypoint to waypoint may not represent actual flight path flown by aircraft.

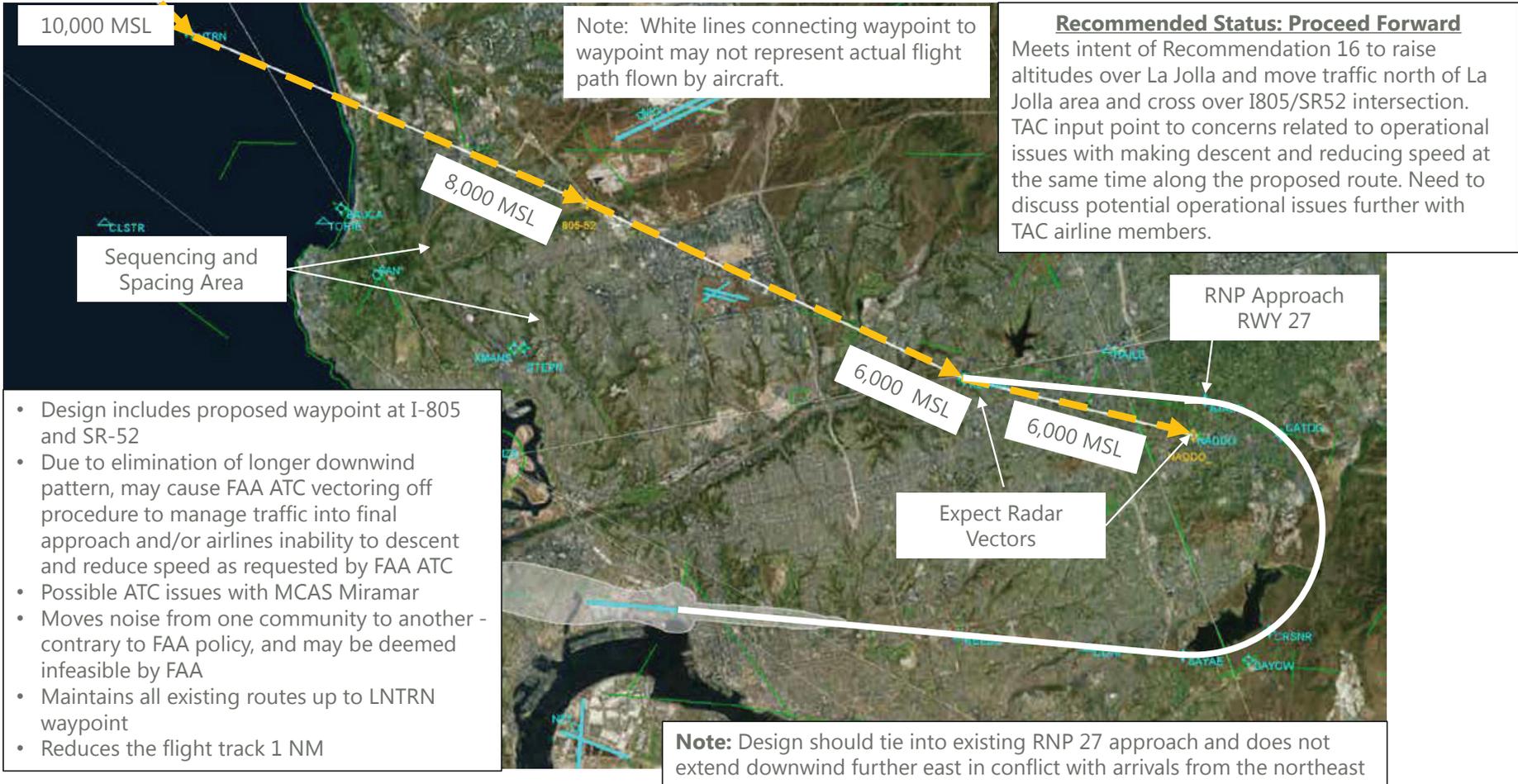
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ANAC Noise Recommendation 16 - Alternatives

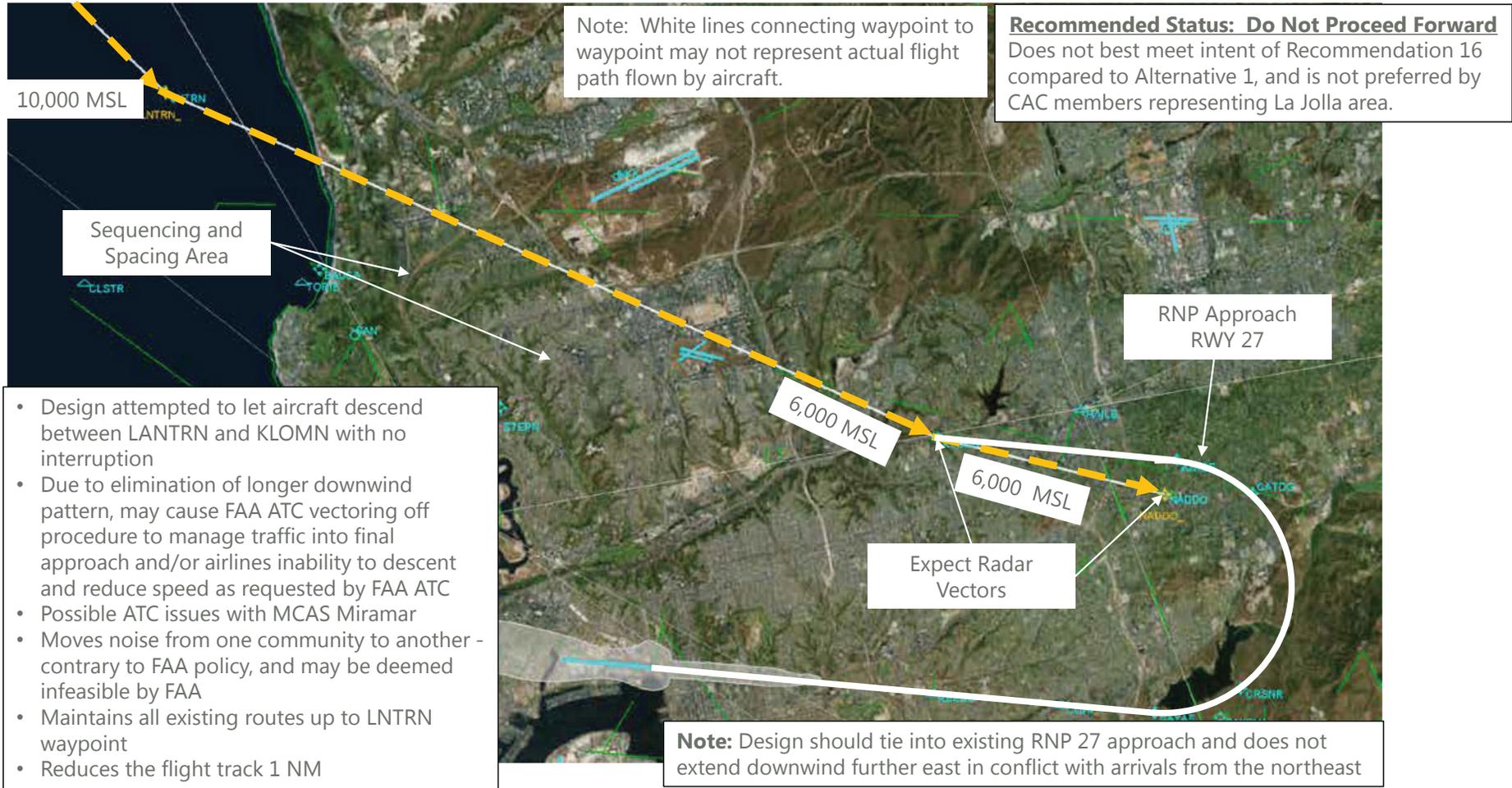
- **Alternative 1 – Modified COMIX Arrival – LNTRN to I805/SR52 to KLOMN waypoint**
- Alternative 2 – Modified COMIX Arrival – LNTRN to KLOMN waypoint
- Alternative 3 – Modified COMIX Arrival – BAUCA (Over La Jolla Shores Park) to KLOMN waypoint

Note: Item in **bold** is recommended to proceed forward for further assessment

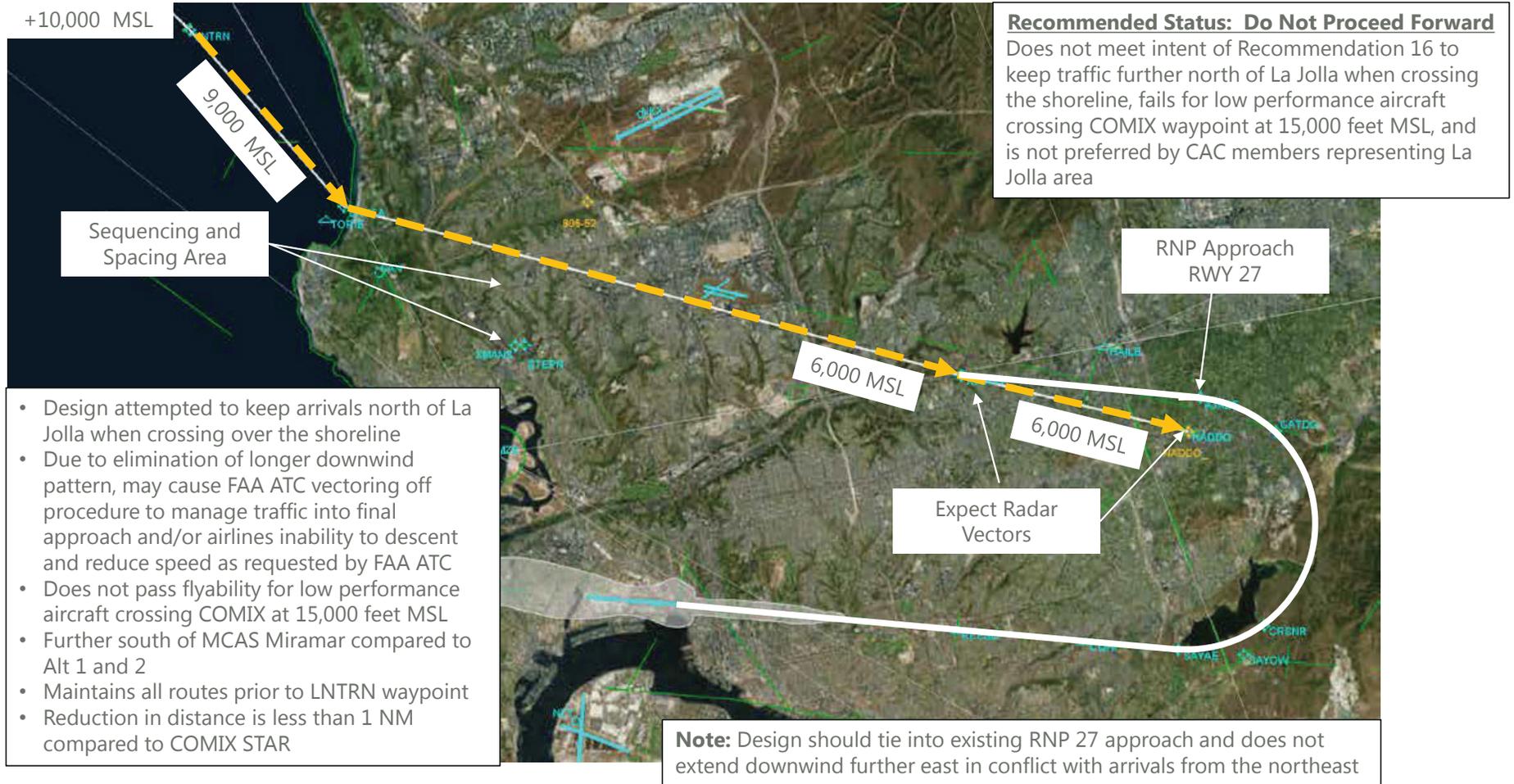
DRAFT Deliberative Document – For Discussion Purposes Only
ANAC Noise Recommendation 16 – Alt 1



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ANAC Noise Recommendation 16 – Alt 2

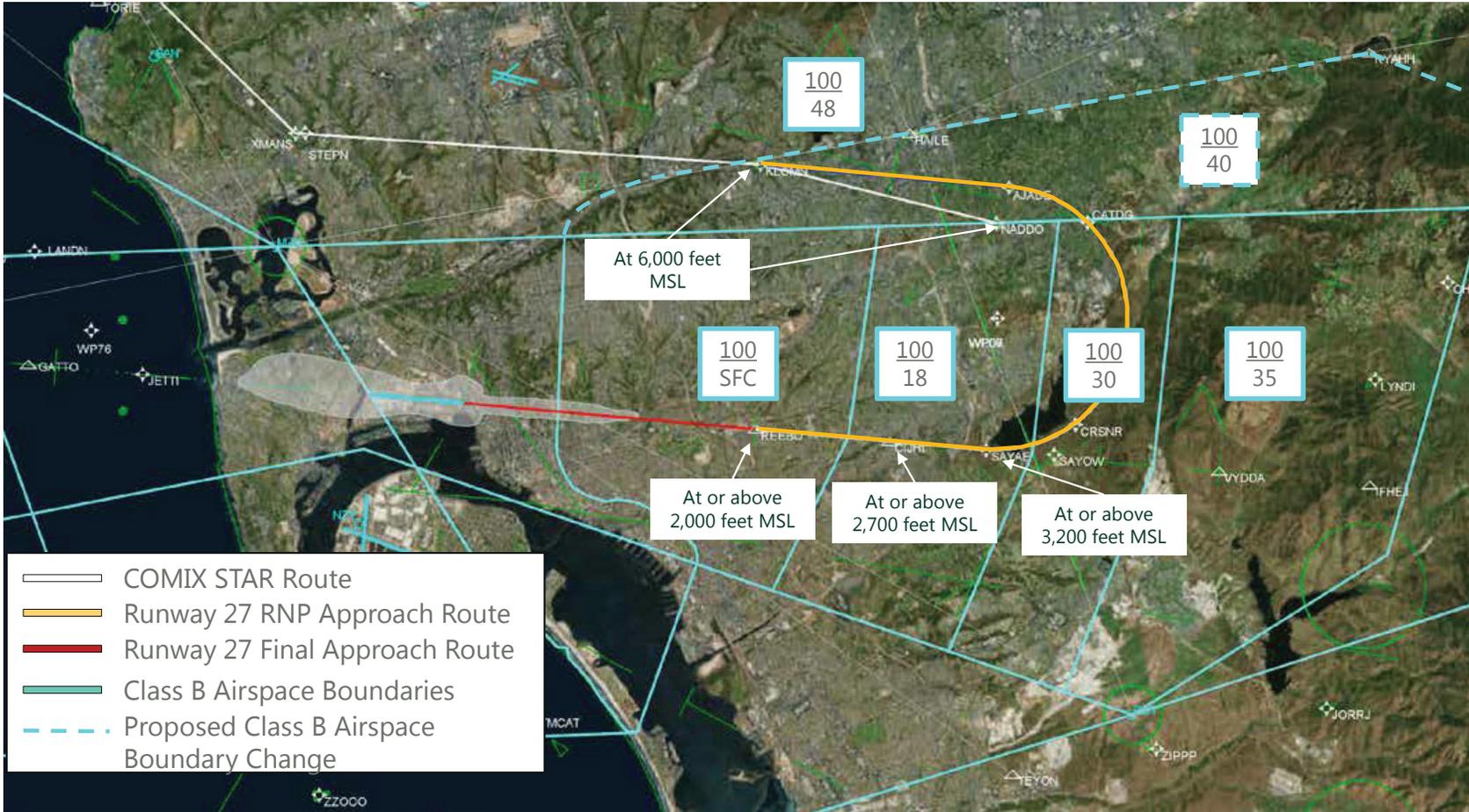


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ANAC Noise Recommendation 16 – Alt 3

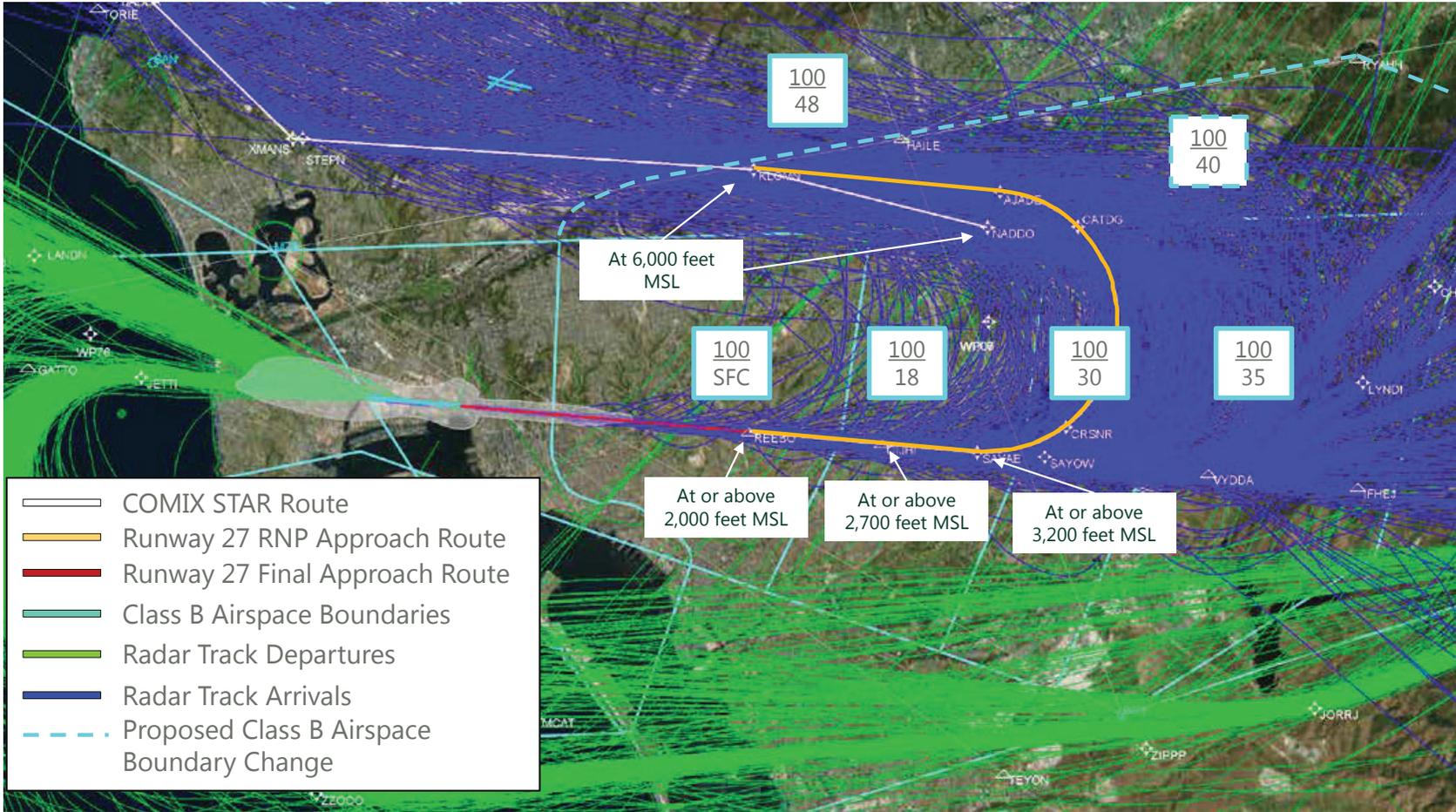


East County SDIA Arrival from Northwest

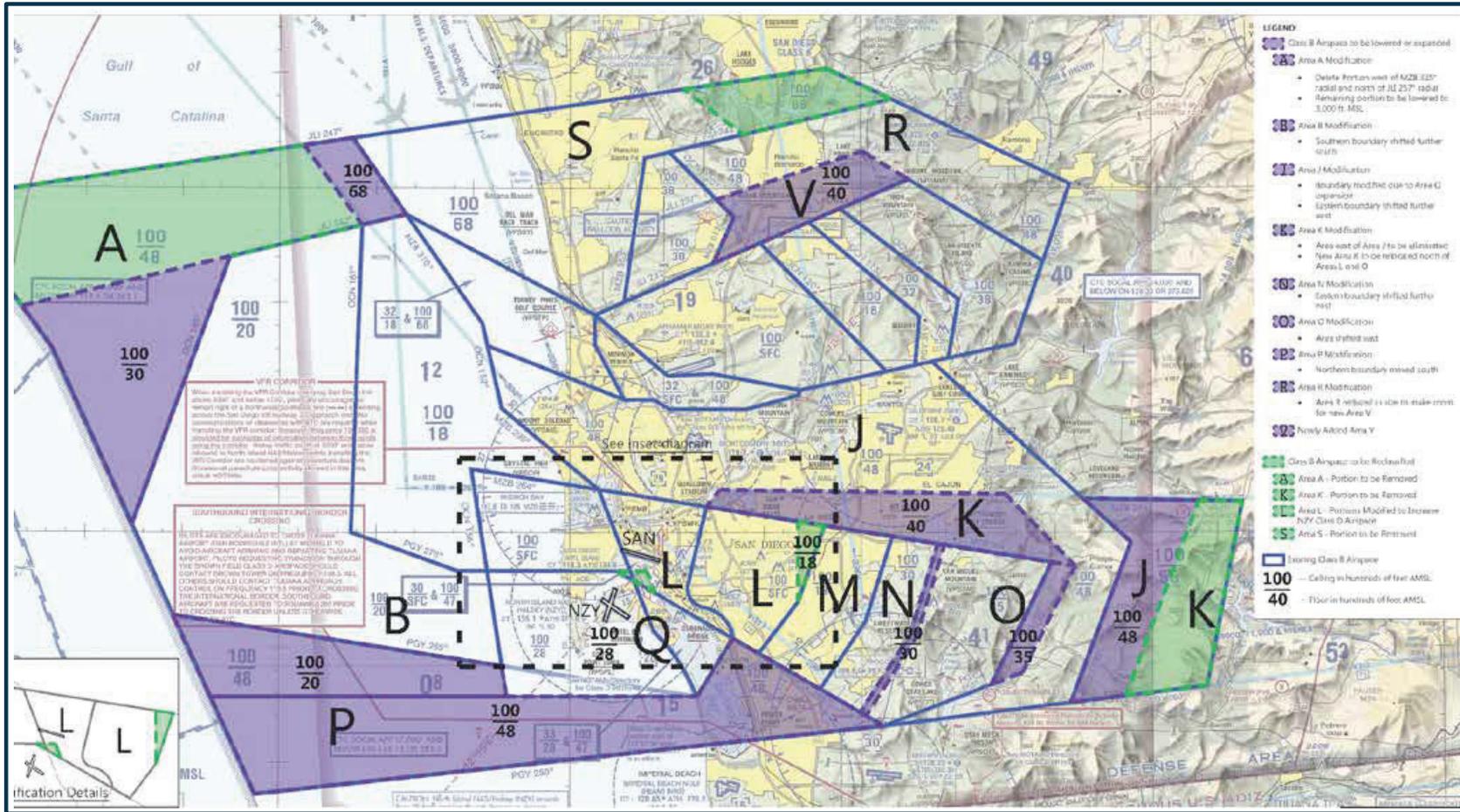
East County SAN Northwest Arrivals – Procedures and Class B Airspace



East County SDIA Northwest Arrivals Slide – West Flow Flight Patterns



East County Arrivals Slide – Class B Airspace Redesign



Next Steps – Action Items and Next TAC Meeting

Next Steps

- Input period open until September 13, 2018
- Review input provided by TAC and CAC members
- Recommend design concept refinements for Final Phase concept design
- Begin aircraft noise screening on Final Phase designs proceeding forward
- Present recommendations on Final Phase designs on October 11th CAC and TAC meeting
- Present aircraft noise screening results on all Final Phase designs by late November/early December

B.1.6 CAC AND TAC MEETING #4 – OCTOBER 25, 2018

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**San Diego County Regional Airport Authority (SDCRAA)
Flight Procedure Evaluation
Technical Advisory Committee and Citizen Advisory Committee Meeting #4**

San Diego International Airport

October 25, 2018

DRAFT Deliberative Document – For Discussion Purposes Only

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Agenda

- Meeting Goals
- Daytime Departure Final Concept Design
- Nighttime Departure Final Concept Designs
- Daytime/Nighttime Arrival Final Concept Design

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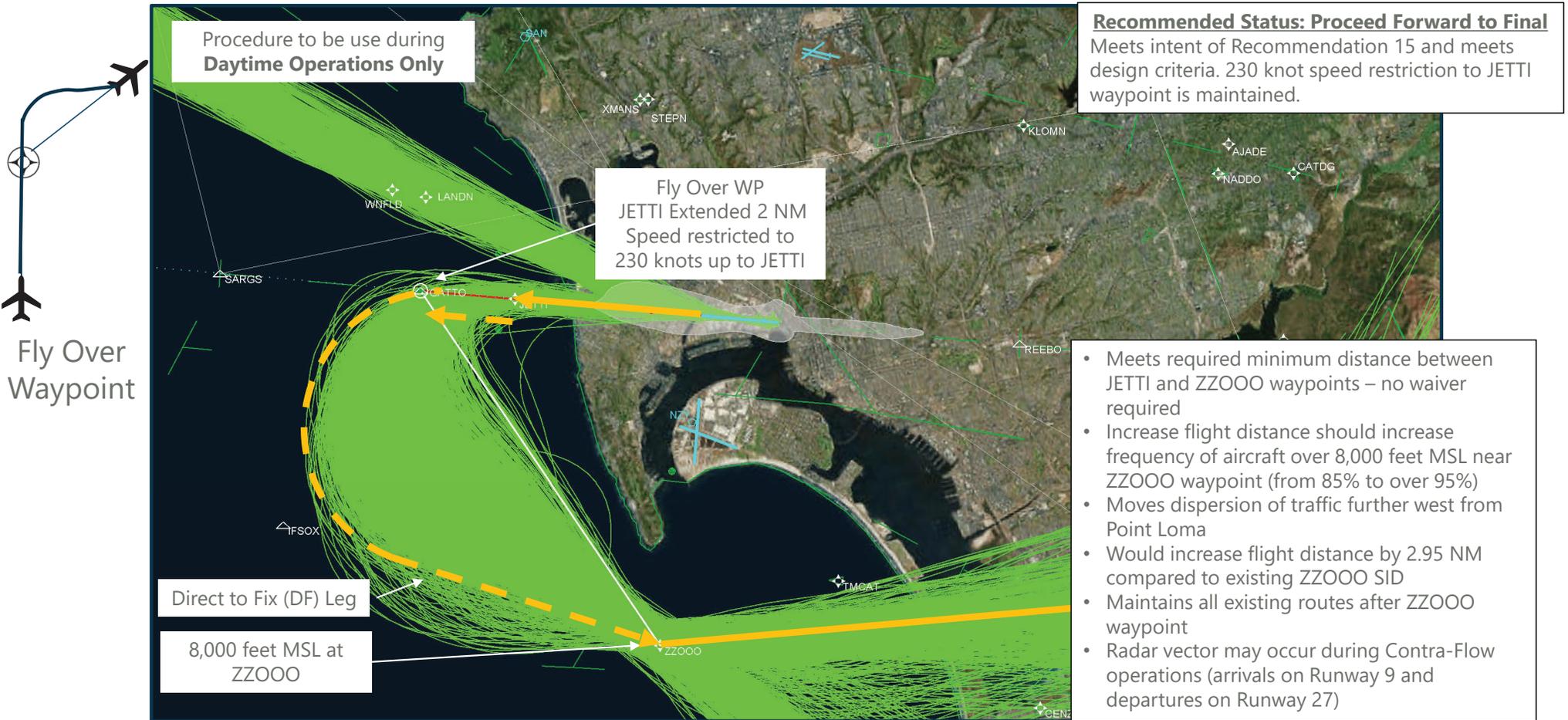
Meeting Goals

- Review final design concepts for noise screening analysis
- Discuss clarifications to comments and responses

Daytime Departures

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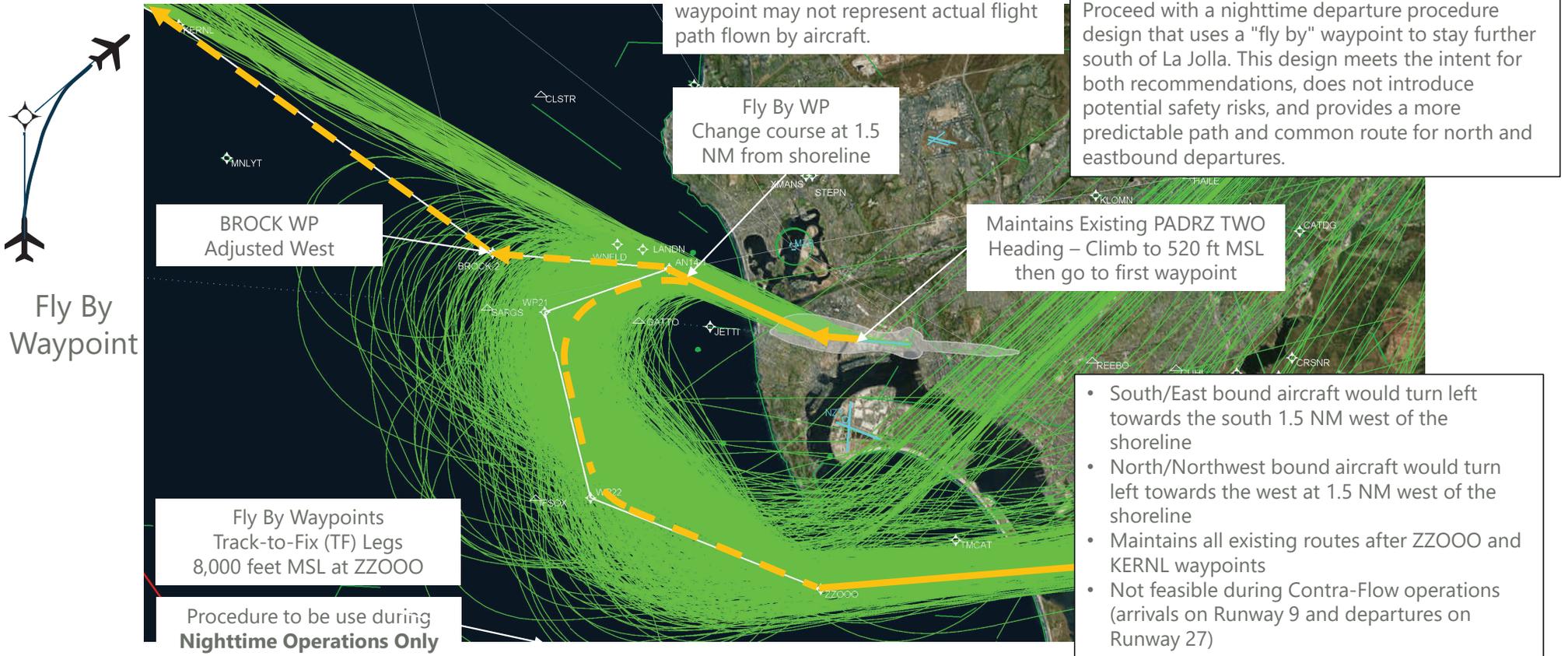
ANAC Noise Recommendation 15 – Alt 1 Extend JETTI Waypoint 2 NM West



Nighttime Departures

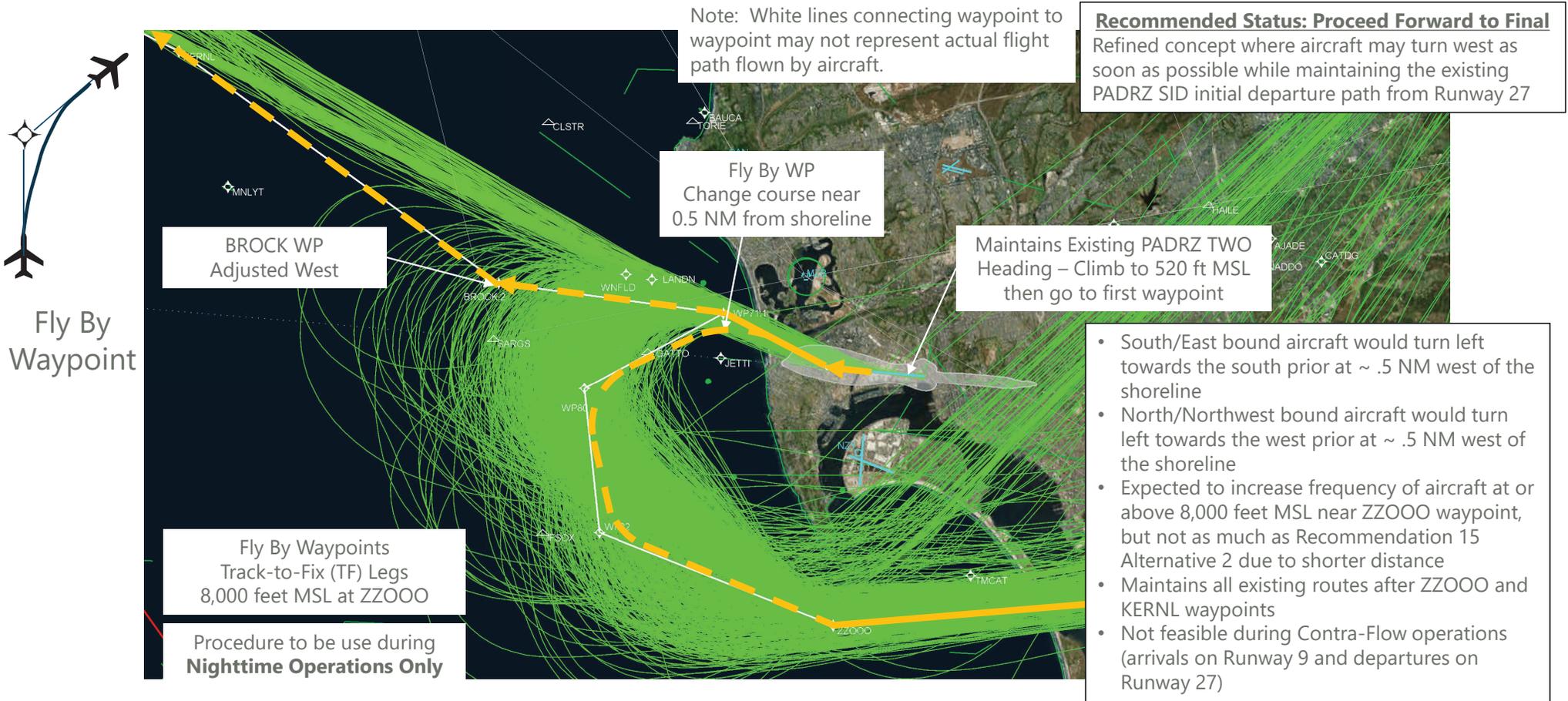
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Composite of Recommendation 14 Alt 1 “Fly By” Version 2 and Recommendation 15 Alt 2 Version 2



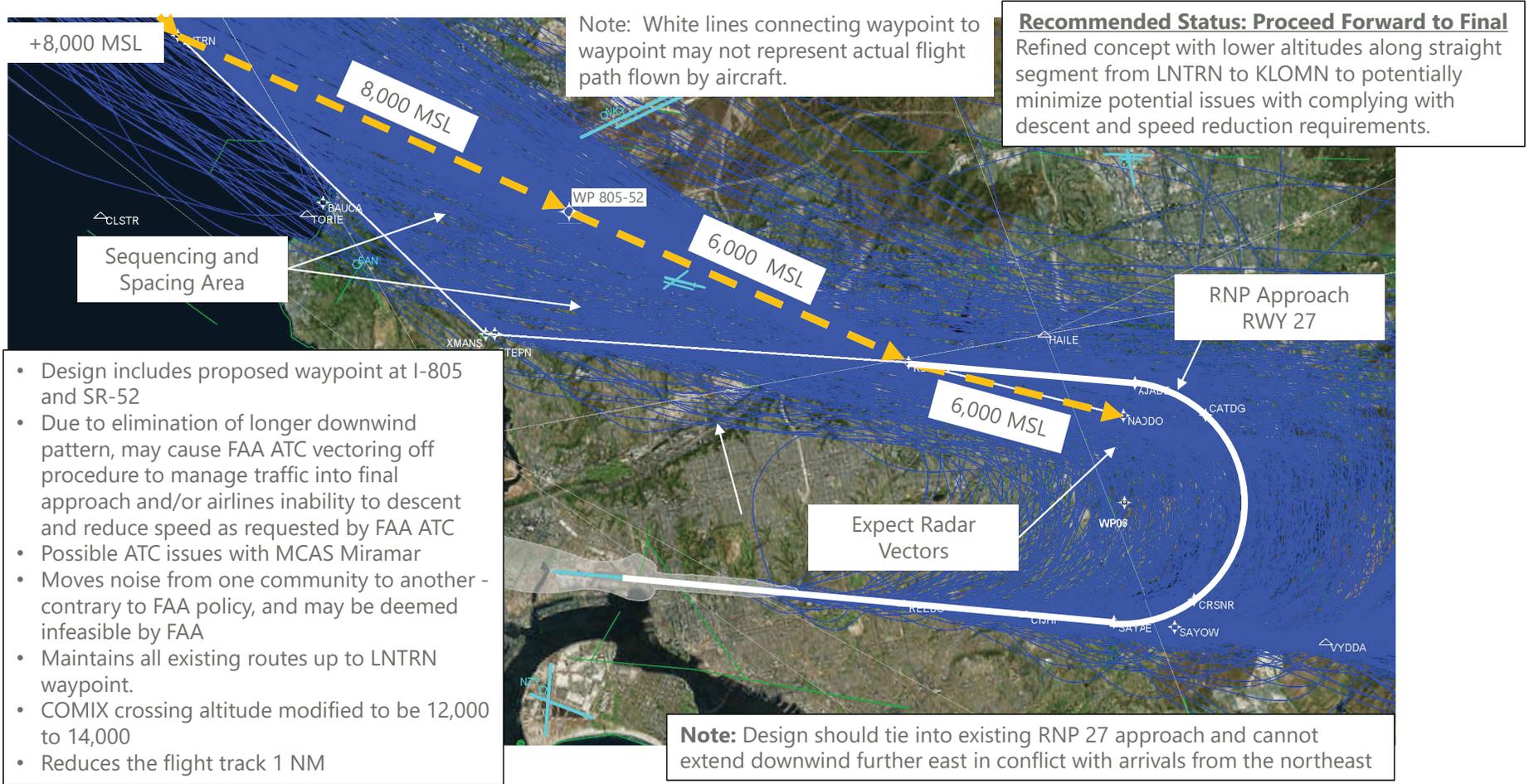
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Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4



Daytime/Nighttime Arrivals

ANAC Noise Recommendation 16 – Alt 1 Version 3



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Next Steps

- Conduct noise screening analysis

B.1.7 CAC AND TAC MEETING #5 – MARCH 28, 2019

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**San Diego County Regional Airport Authority (SDCRAA)
Flight Procedure Evaluation
Technical Advisory Committee and Citizen Advisory Committee Meeting #5**

San Diego International Airport

March 28, 2019

DRAFT Deliberative Document – For Discussion Purposes Only

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Agenda

- Meeting Goals
- Noise Screening Methodology
- Nighttime Departure Final Concept Designs
- Daytime Departure Final Concept Design
- Daytime/Nighttime Arrival Final Concept Design

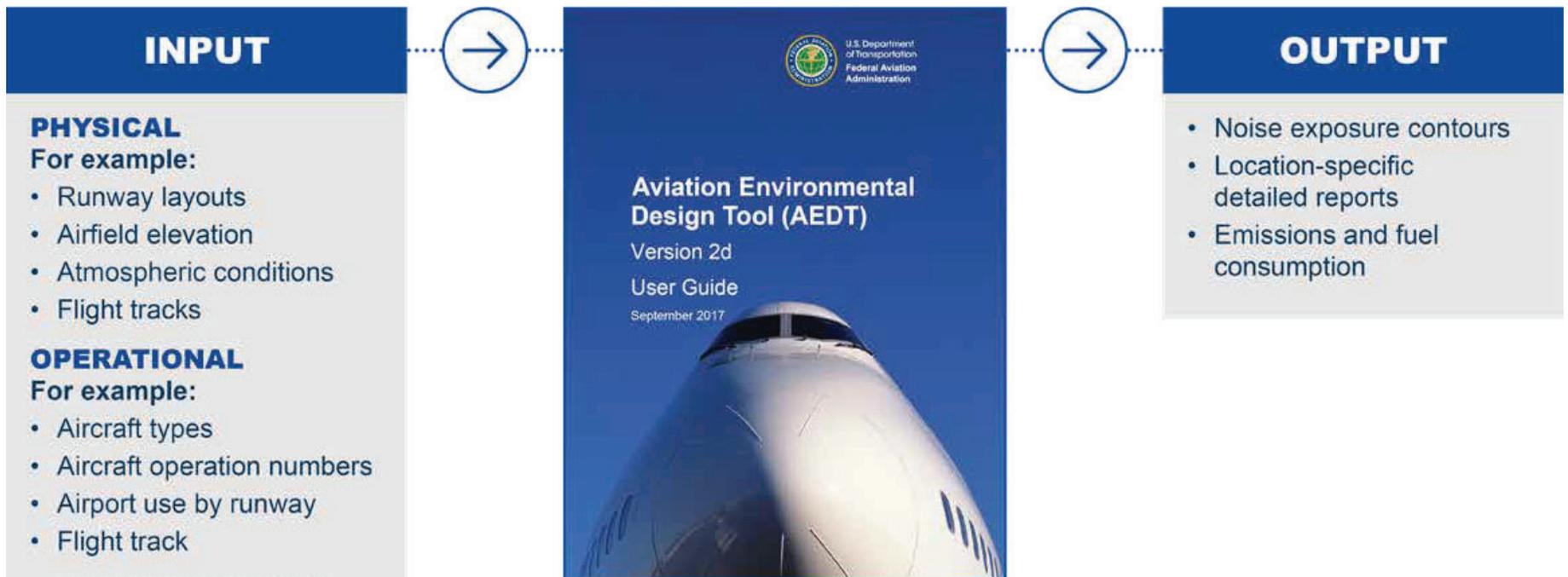
Meeting Goals

- Understand noise screening methodology
- Review noise screening results of final design concepts
- Gather input on recommendations

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Noise Screening Methodology - AEDT

- FAA Aviation Environmental Design Tool (AEDT) 2d noise model



Noise Screening

- **Intent:** Identify and estimate potential decrease or increase in noise caused by implementing a proposed concept RNAV design procedure
- **Approach:** Capture primary jet aircraft noise source from SDIA over community areas where proposed concepts are designed to reduce noise
- **Application:** Provide indications of potential changes in CNEL related to jet traffic subject to change as a result of a proposed concept.

Note: Results do not reflect the cumulative average annual day flight patterns and operations at SDIA; therefore not intended to represent overall existing noise exposure levels

Noise Screening Methodology - Baseline

- **Source:** Authority's Airport Noise and Operations Management System (ANOMS) flight operations and radar track data: May 2017 to December 2017
- **Operation focus:** Jet departures from Runway 27 and jet arrivals from northwest to Runway 27
- **Traffic flow focus:**
 - Northbound departures (e.g., PADRZ RNAV SID, CWARD RNAV SID, PEBLE SID and FAA ATC radar vectoring)
 - Eastbound departures (e.g., ZZOOO RNAV SID, BORDER SID, and FAA ATC radar vectoring)
 - Arrivals from northwest (e.g., COMIX RNAV STAR, HUBRD STAR and FAA ATC radar vectoring)

Noise Screening Methodology - Alternative

- **Modify** baseline RNAV noise model tracks to represent proposed final design flight path
- **Move** baseline RNAV operations to alternative RNAV noise model track
- **Maintain** non-RNAV noise model tracks and operations on tracks
- **Compare** CNEL values between Baseline and Alternative scenarios

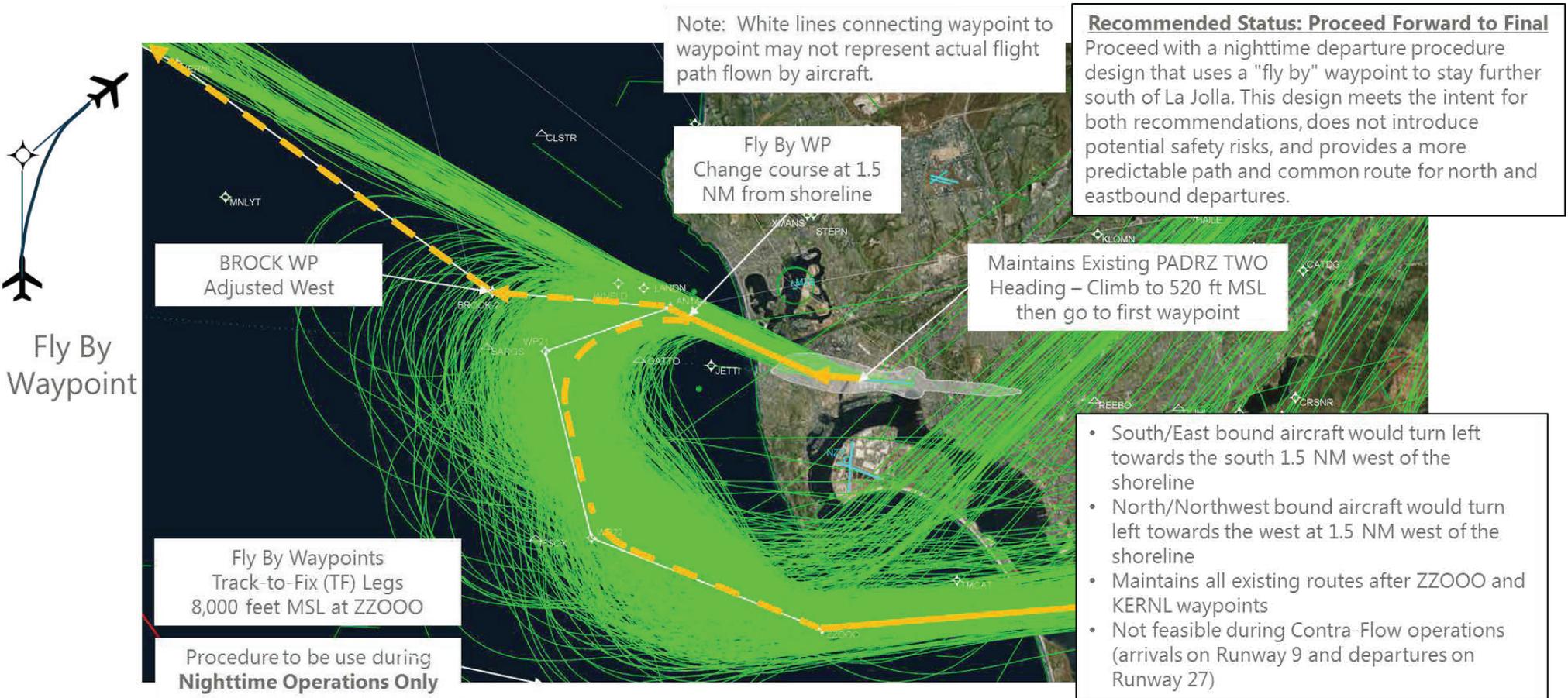
Modeled Scenarios

- **Scenario 1:** Recommendation 14 Alt 1 “Fly By” Version 2 and Recommendation 15 Alt 2 Version 2 (Nighttime Departures)
- **Scenario 2:** Recommendation 14 Alt 4 and Recommendation 15 Alt 4 (Nighttime Departures)
- **Scenario 3:** Recommendation 15 – Alt 1 Extend JETTI Waypoint 2 NM West (Daytime Departures)
- **Scenario 4:** Recommendation 16 – Alt 1 Version 3 (Daytime/Nighttime Arrivals)
- All scenarios include primary jet daytime, evening and nighttime operations and flight patterns over focused community areas
- Scenarios do not represent cumulative average annual day noise exposure levels

Nighttime Departures

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Composite of Recommendation 14 Alt 1 “Fly By” Version 2 and Recommendation 15 Alt 2 Version 2 – Final Design



DRAFT Deliberative Document – For Discussion Purposes Only

Composite of Recommendation 14 Alt 1 “Fly By” Version 2 and Recommendation 15 Alt 2 Version 2 – AEDT Baseline Noise Model Tracks

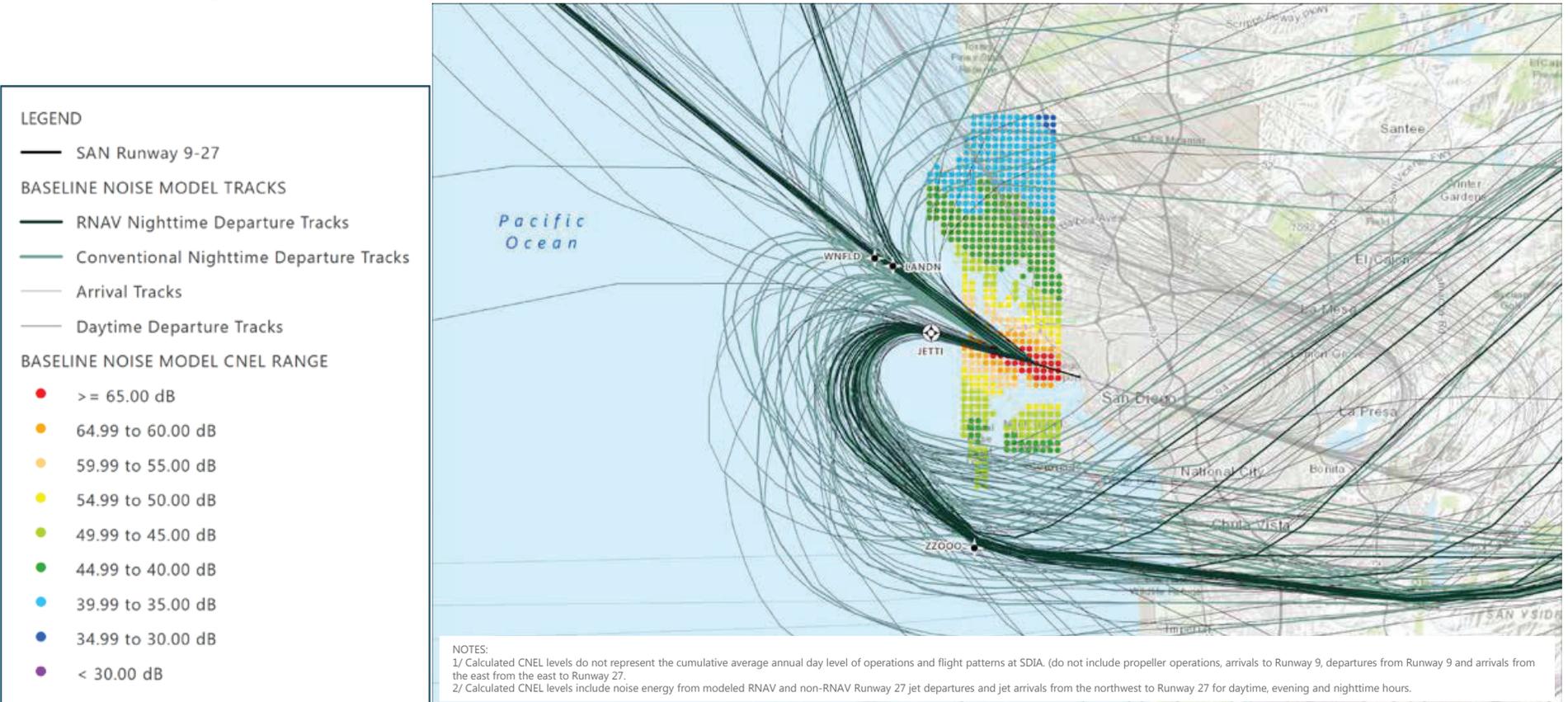


LEGEND

- SAN Runway 9-27
- BASELINE NOISE MODEL TRACKS**
- RNAV Nighttime Departure Tracks
- Conventional Nighttime Departure Tracks
- Arrival Tracks
- Daytime Departure Tracks

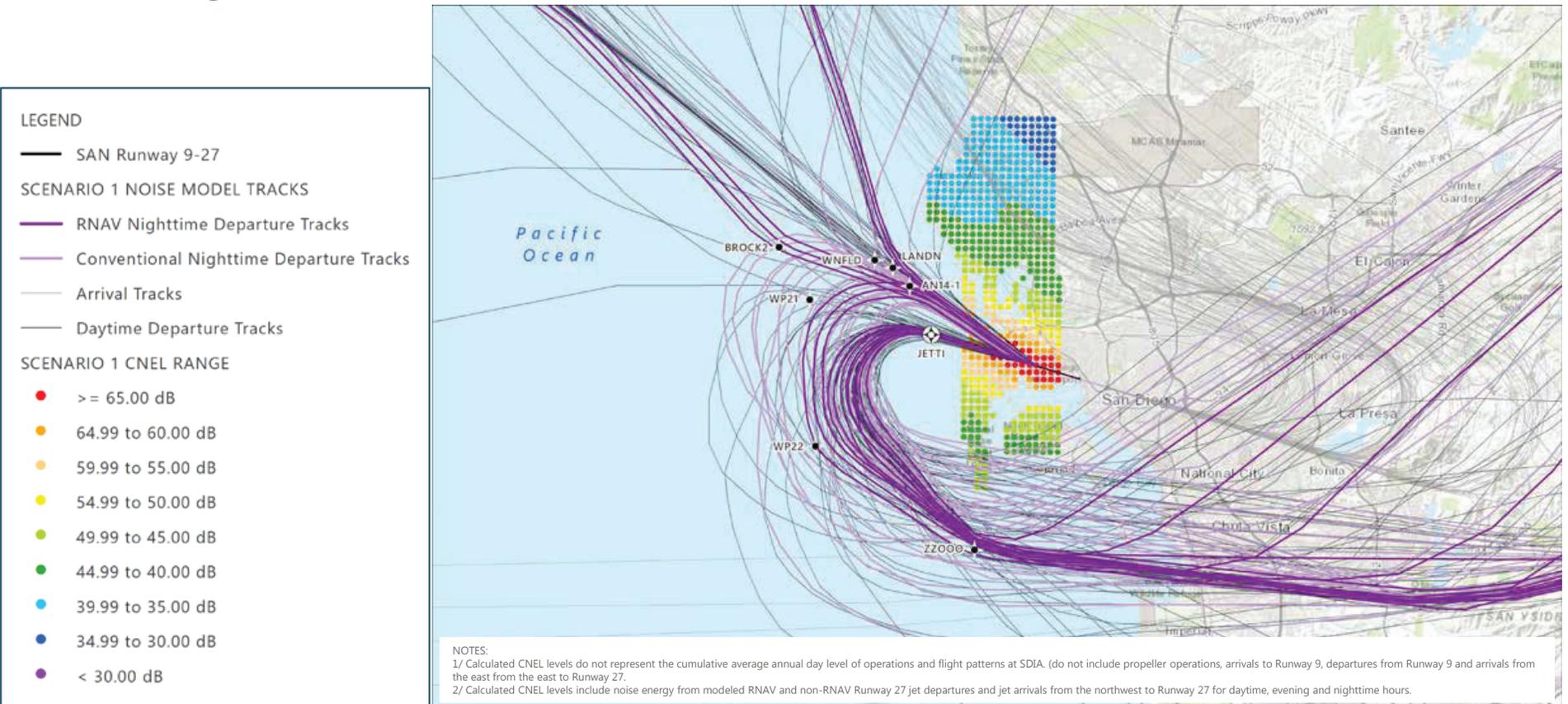
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Composite of Recommendation 14 Alt 1 “Fly By” Version 2 and Recommendation 15 Alt 2 Version 2 – AEDT Baseline Noise Model Tracks and CNEL Ranges



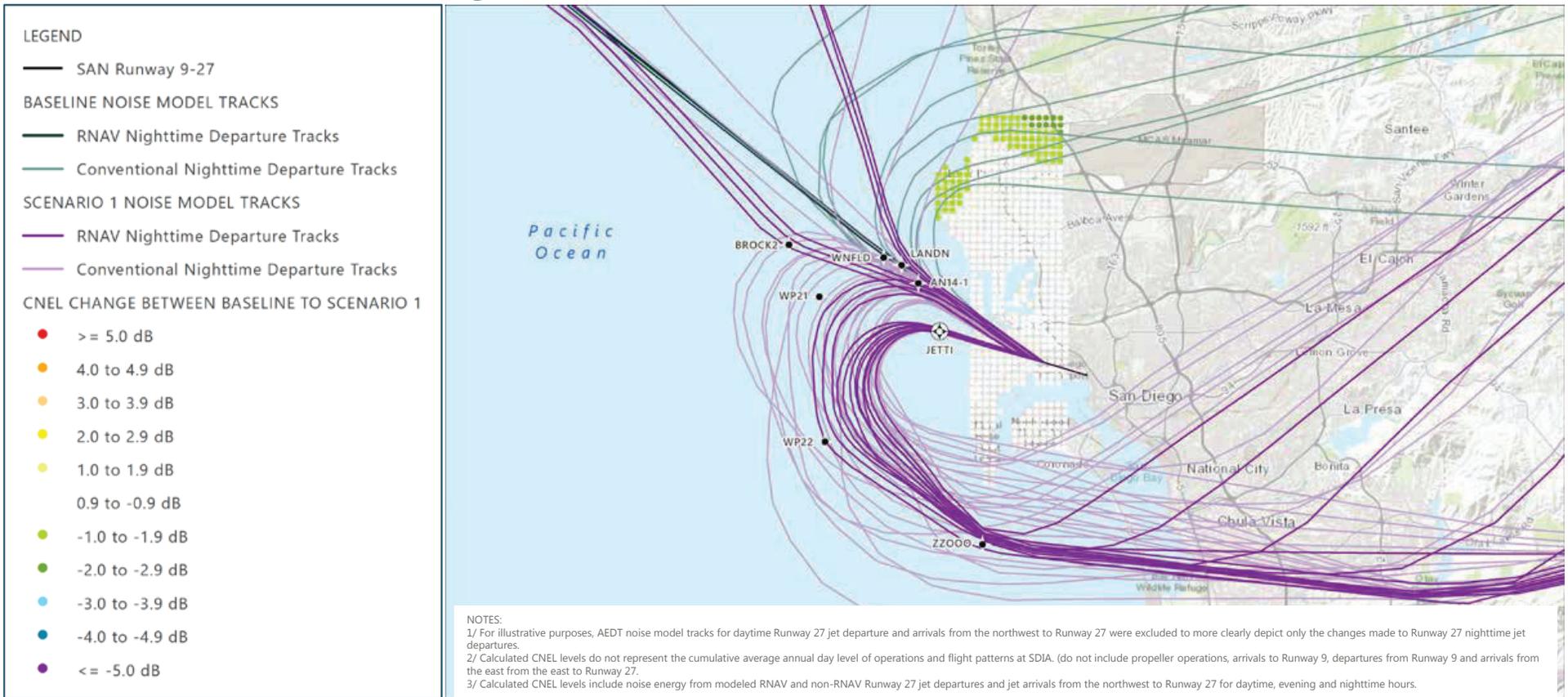
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Composite of Recommendation 14 Alt 1 “Fly By” Version 2 and Recommendation 15 Alt 2 Version 2 – AEDT Scenario 1 Noise Model Tracks and CNEL Ranges



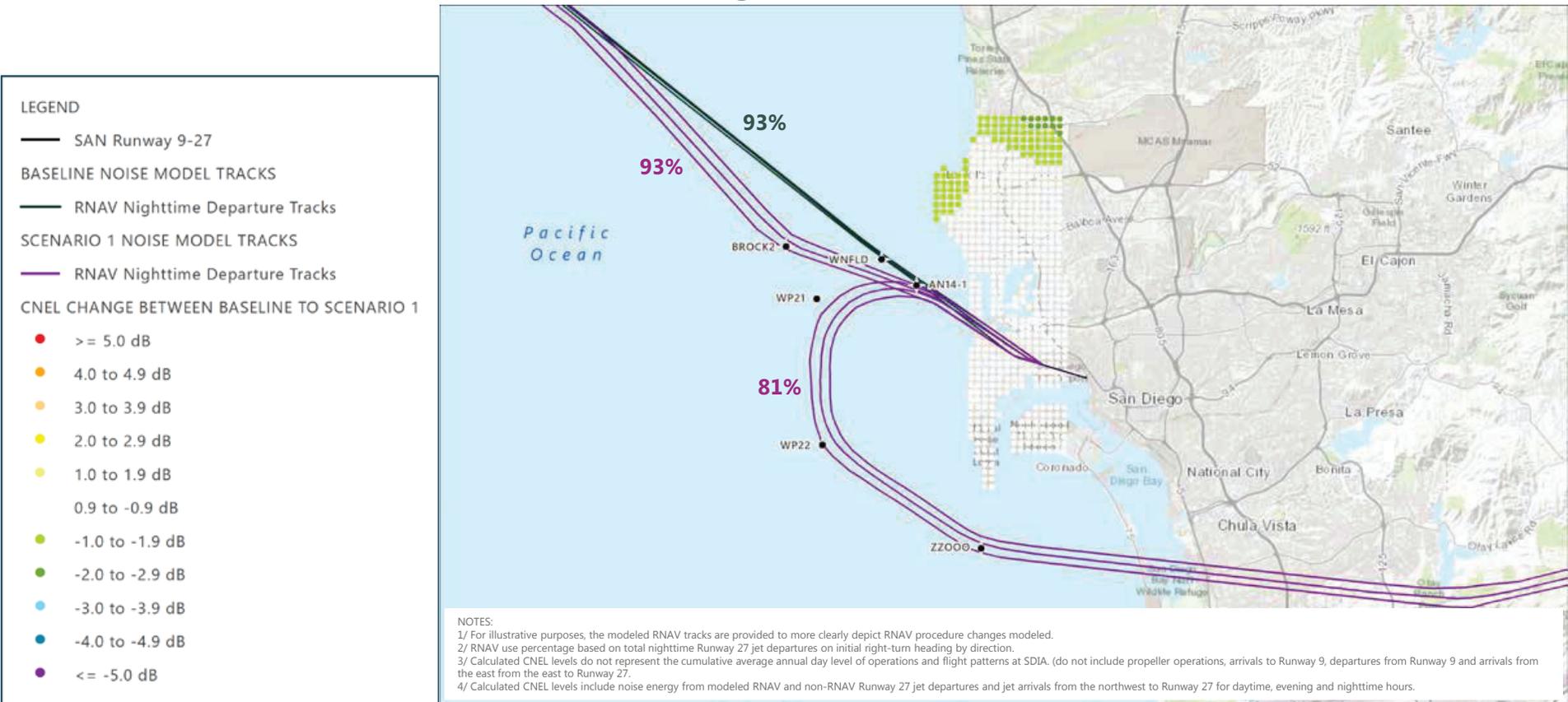
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Composite of Recommendation 14 Alt 1 “Fly By” Version 2 and Recommendation 15 Alt 2 Version 2 – AEDT Scenario 1/Baseline Noise Model Tracks and CNEL Changes



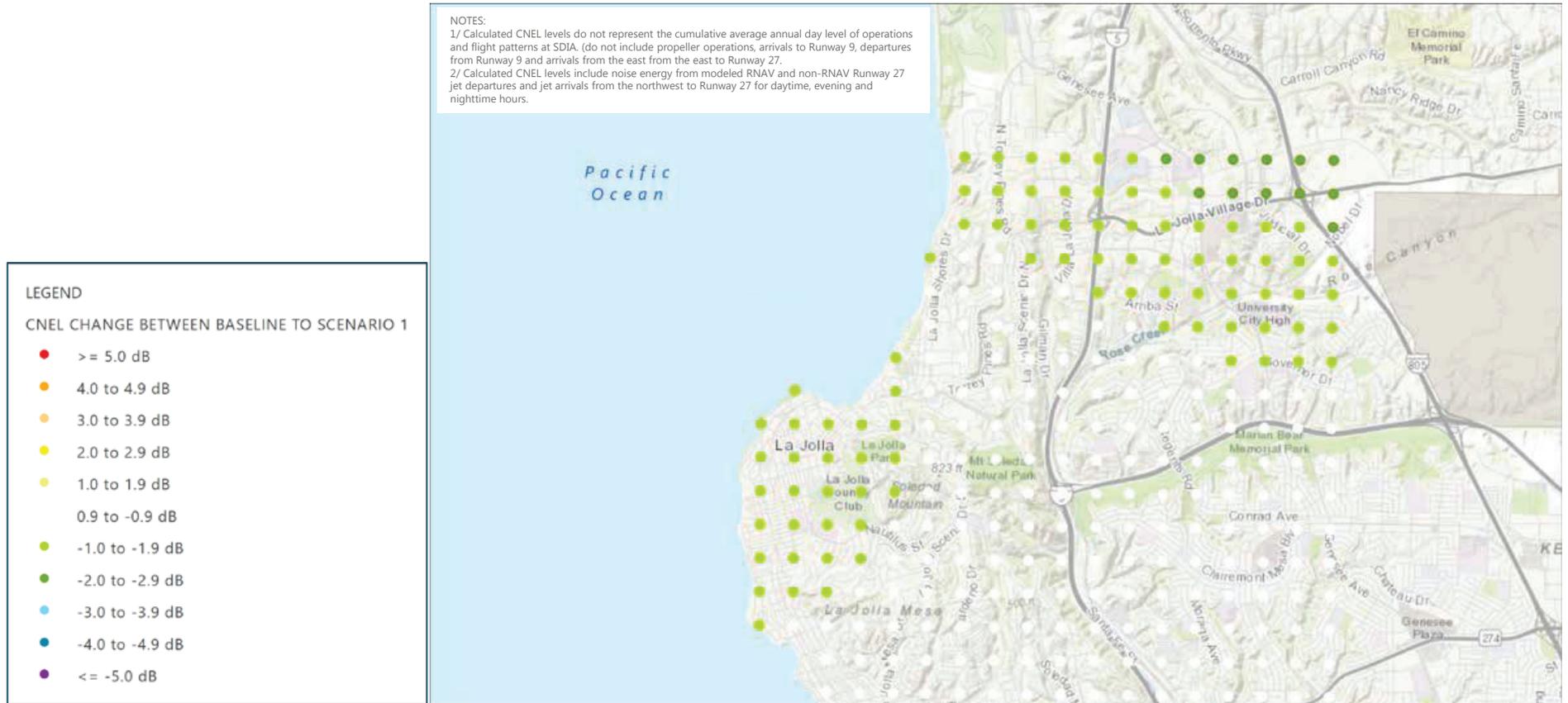
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Composite of Recommendation 14 Alt 1 “Fly By” Version 2 and Recommendation 15 Alt 2 Version 2 – AEDT Scenario 1/Baseline RNAV-Only Noise Model Tracks and CNEL Changes



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Composite of Recommendation 14 Alt 1 “Fly By” Version 2 and Recommendation 15 Alt 2 Version 2 – Changes in CNEL - North

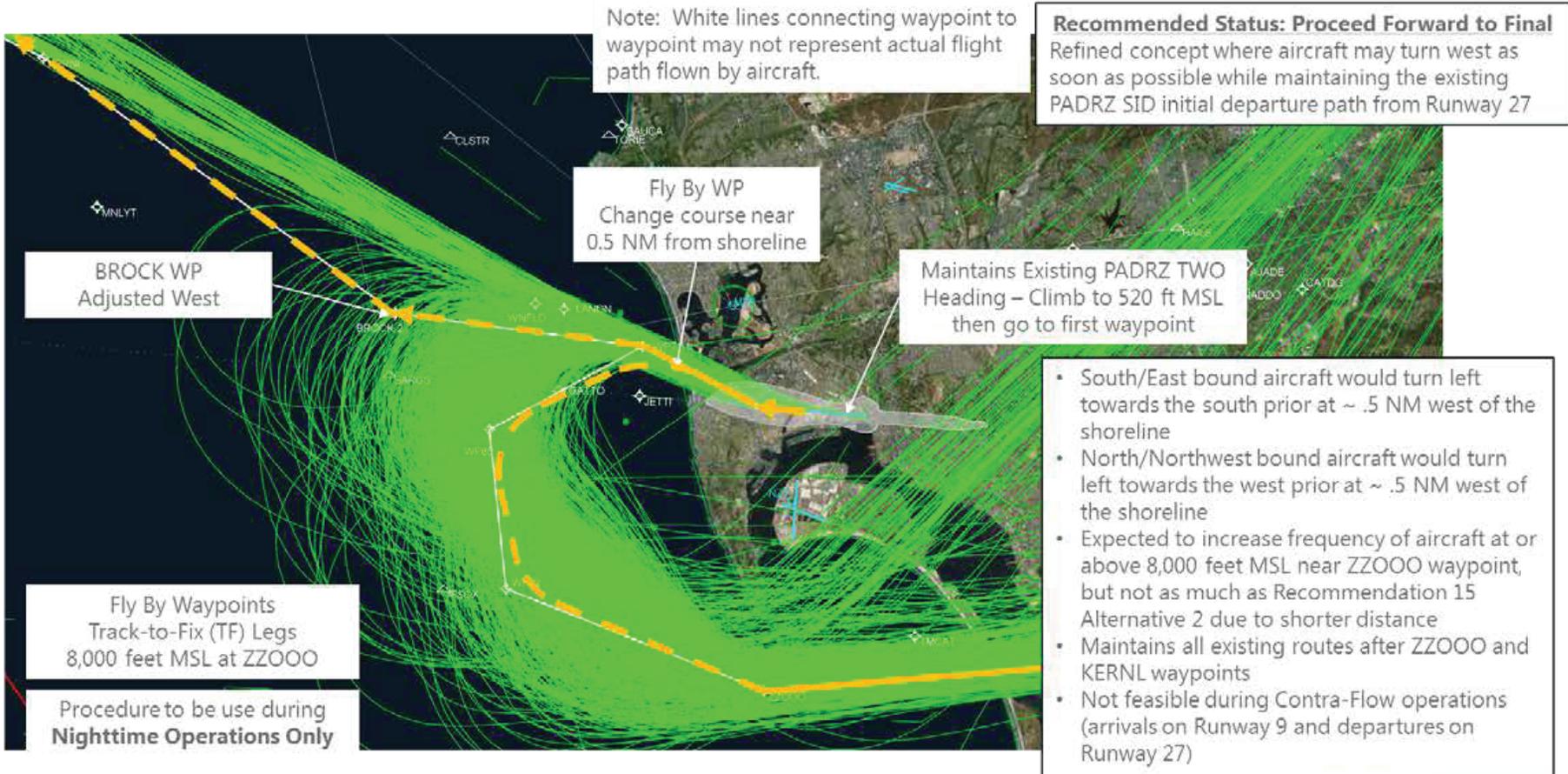


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Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4 – Final Design



Fly By
Waypoint



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Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4 – AEDT Baseline Noise Model Tracks

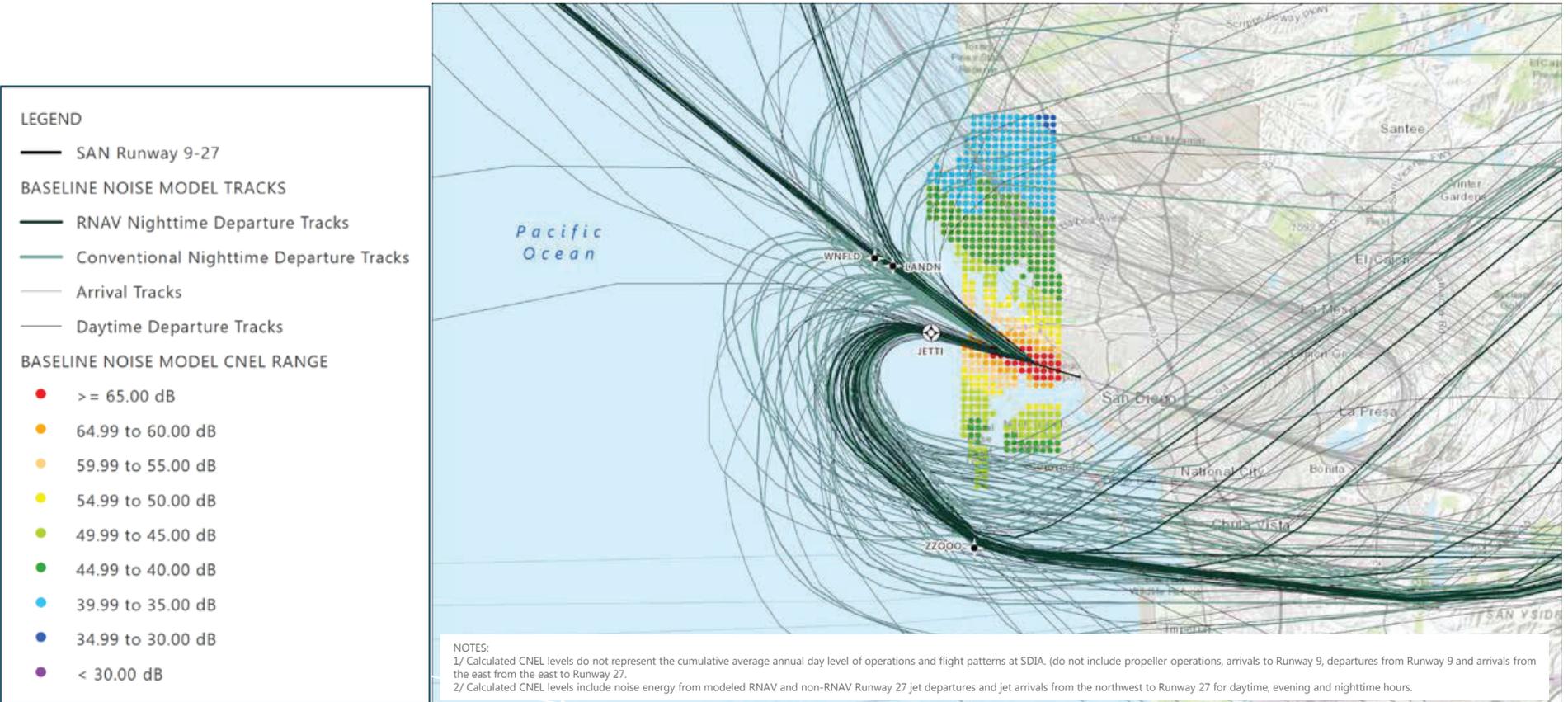


LEGEND

- SAN Runway 9-27
- BASELINE NOISE MODEL TRACKS**
- RNAV Nighttime Departure Tracks
- Conventional Nighttime Departure Tracks
- Arrival Tracks
- Daytime Departure Tracks

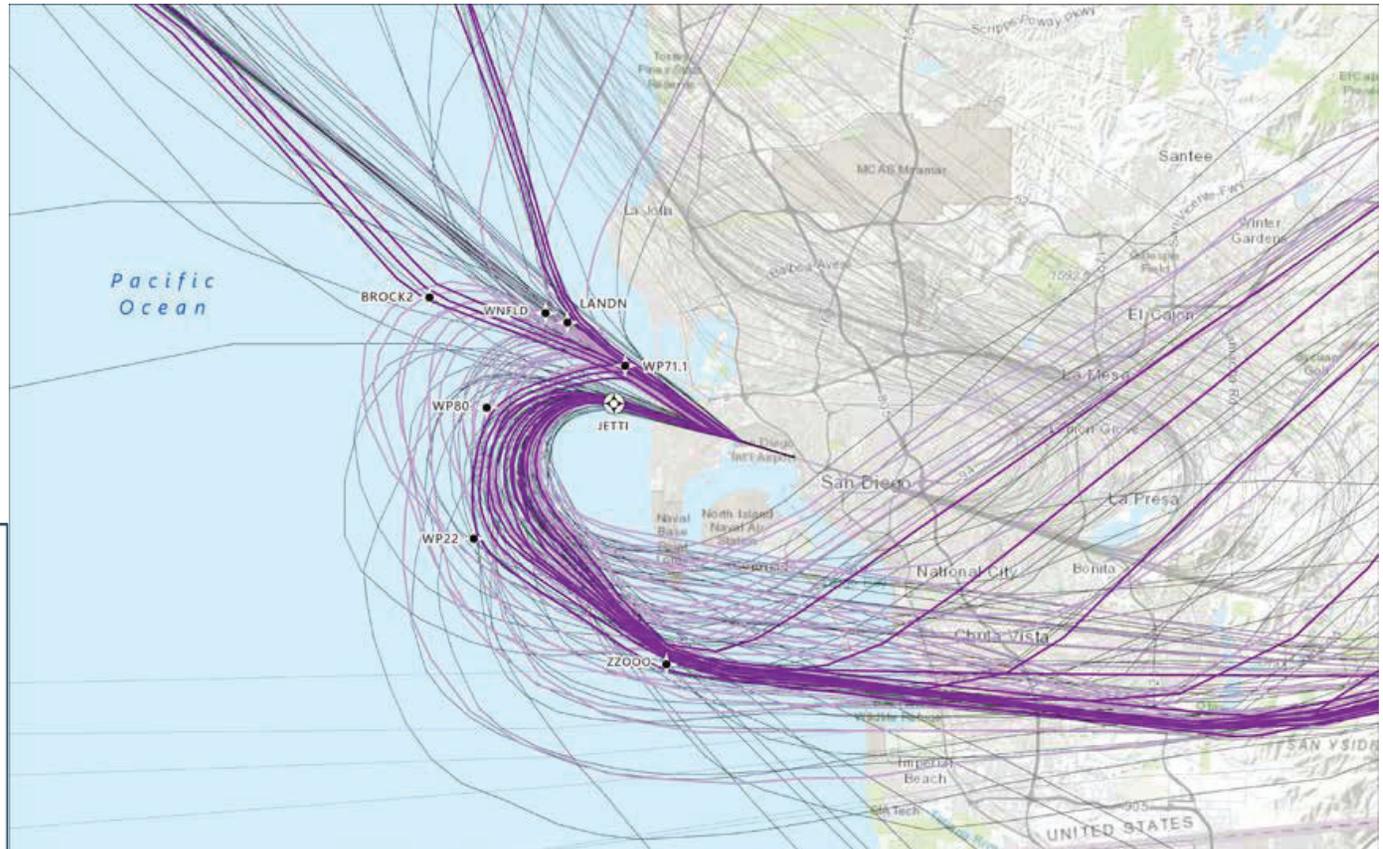
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Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4 – AEDT Baseline Noise Model Tracks and CNEL Ranges



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Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4 – AEDT Scenario 2 Noise Model Tracks

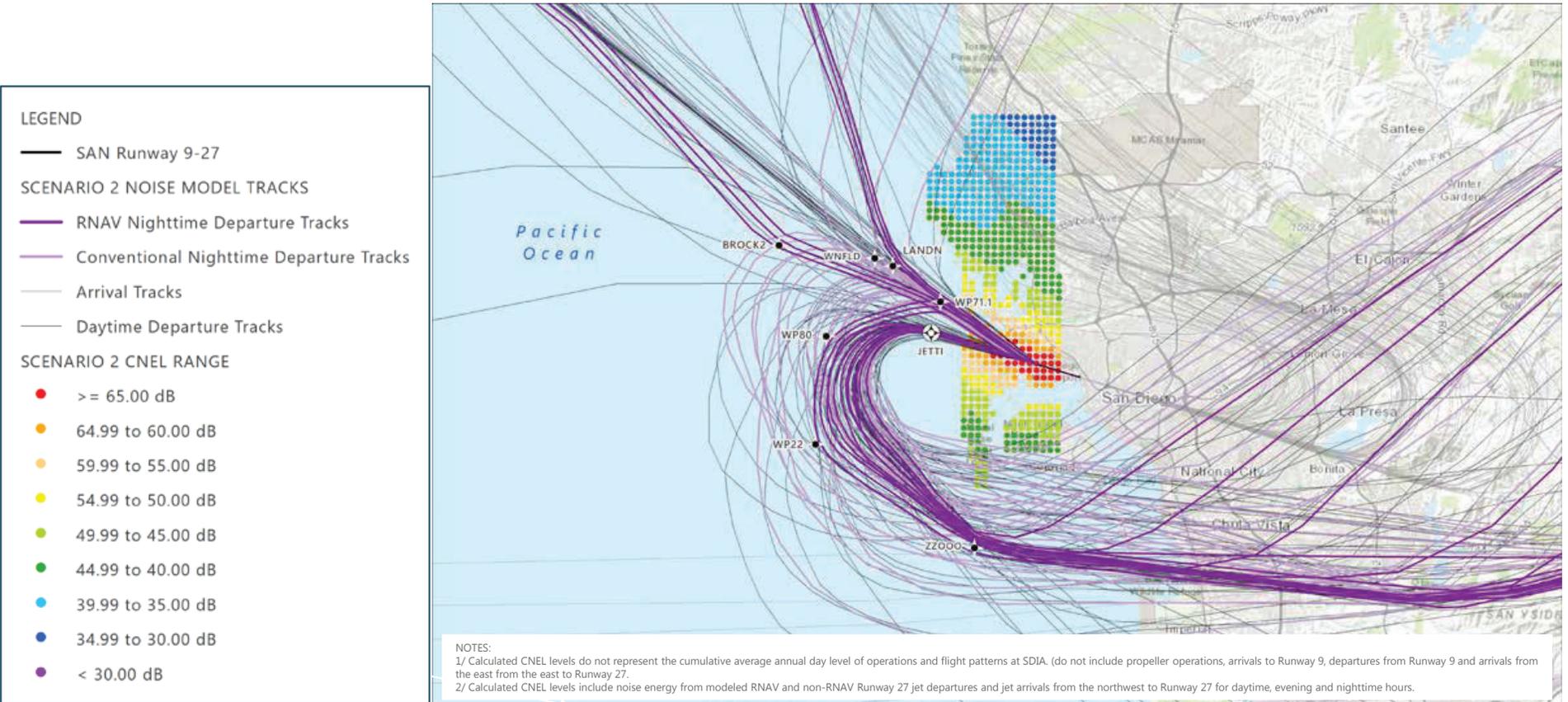


LEGEND

- SAN Runway 9-27
- SCENARIO 2 NOISE MODEL TRACKS**
- RNAV Nighttime Departure Tracks
- Conventional Nighttime Departure Tracks
- Arrival Tracks
- Daytime Departure Tracks

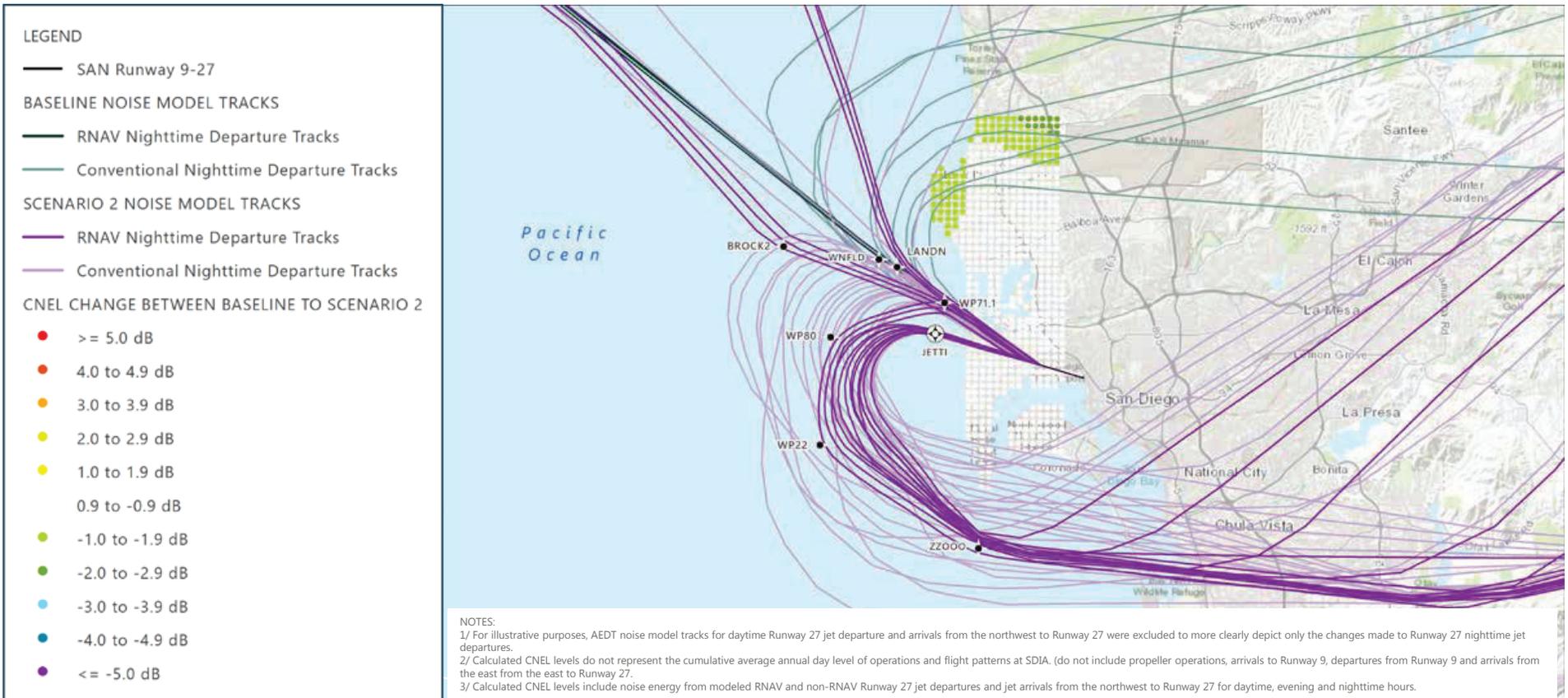
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Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4 – AEDT Scenario 2 Noise Model Tracks and CNEL Ranges



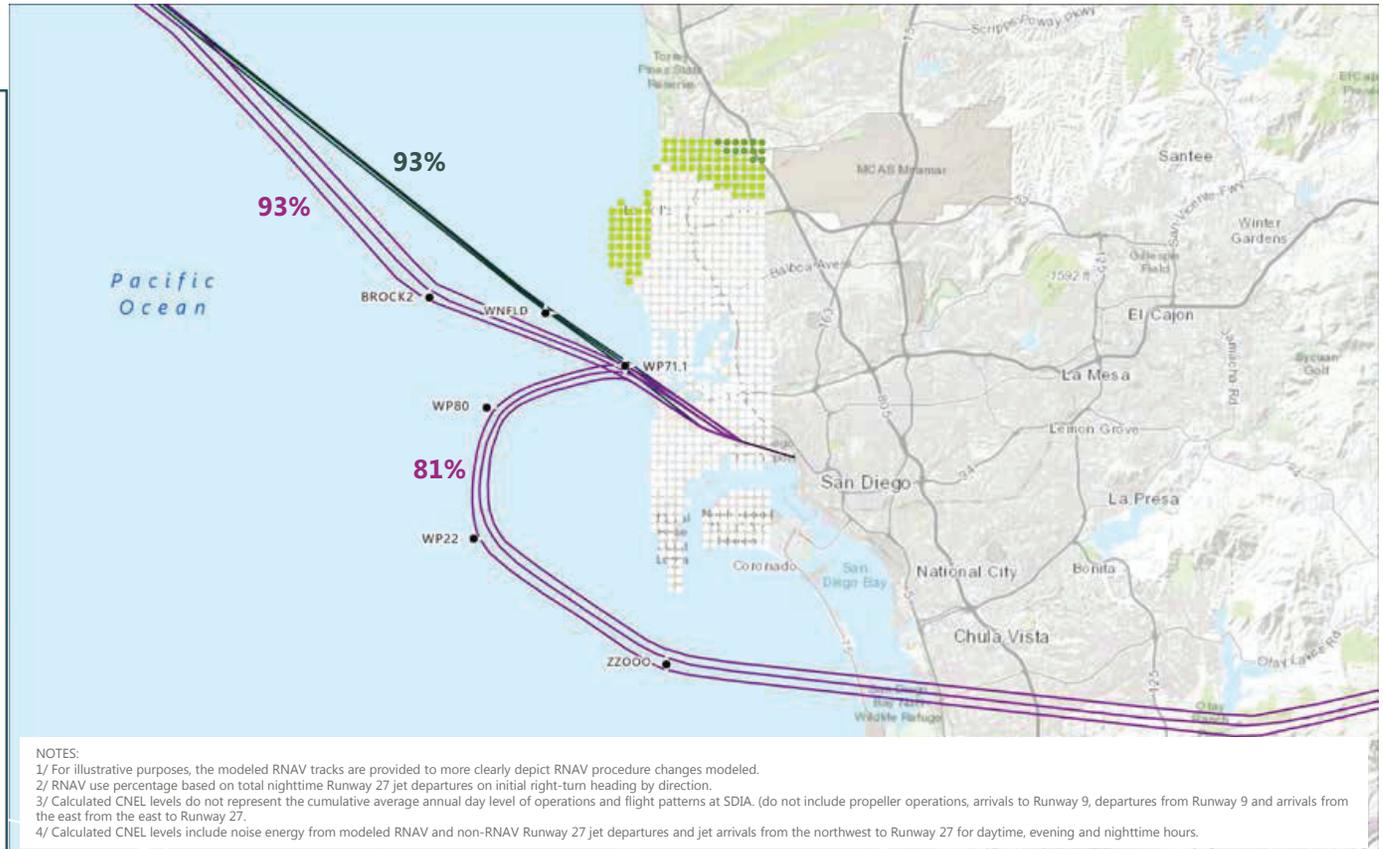
DRAFT Deliberative Document – For Discussion Purposes Only

Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4 – AEDT Scenario 2/Baseline Noise Model Tracks and CNEL Changes



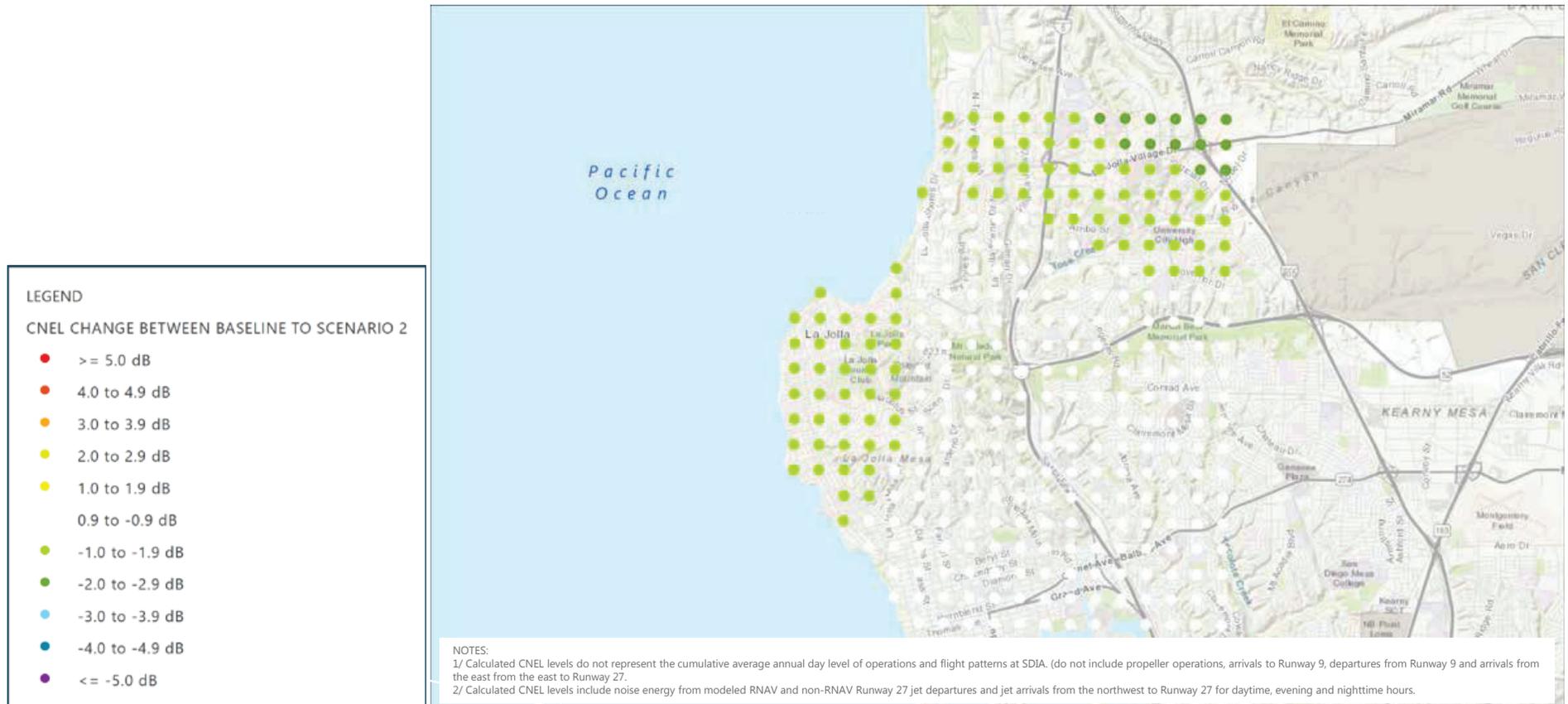
DRAFT Deliberative Document – For Discussion Purposes Only

Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4 – AEDT Scenario 2/Baseline RNAV-Only Noise Model Track and CNEL Changes



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Composite of Recommendation 14 Alt 4 and Recommendation 15 Alt 4 – Changes in CNEL - North



Daytime Departures

Recommendation 15 Alt 1 Extend JETTI Waypoint 2 NM West - Final Design



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Recommendation 15 Alt 1 Extend JETTI Waypoint 2 NM West - AEDT Baseline Noise Model Tracks



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Recommendation 15 Alt 1 Extend JETTI Waypoint 2 NM West - AEDT Baseline Noise Model Tracks and CNEL Ranges



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Recommendation 15 Alt 1 Extend JETTI Waypoint 2 NM West - AEDT Scenario 3 Noise Model Tracks



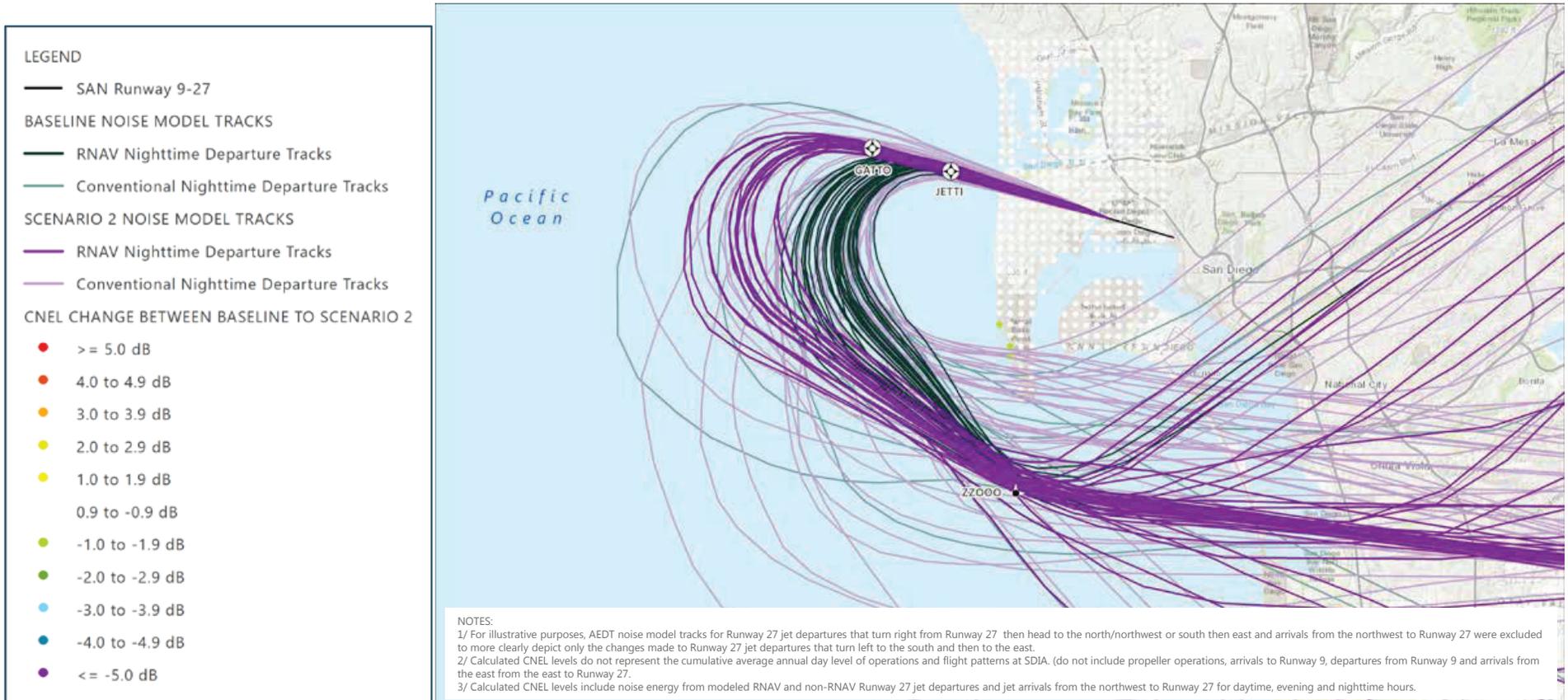
DRAFT Deliberative Document – For Discussion Purposes Only

Recommendation 15 Alt 1 Extend JETTI Waypoint 2 NM West - AEDT Scenario 3 Noise Model Tracks and CNEL Ranges



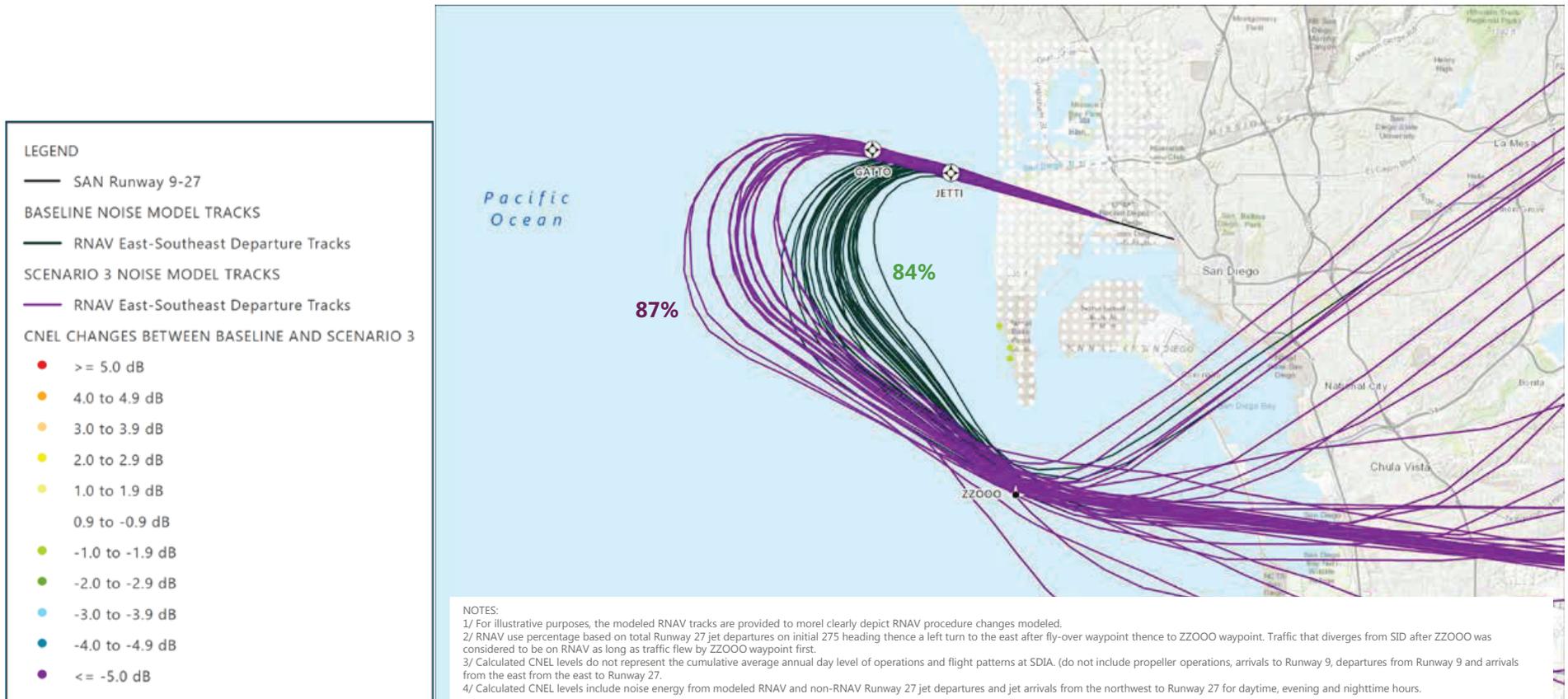
DRAFT Deliberative Document – For Discussion Purposes Only

ANAC Noise Recommendation 15 – Alt 1 Extend JETTI Waypoint 2 NM West AEDT Scenario 3/Baseline Noise Model Tracks and CNEL Changes



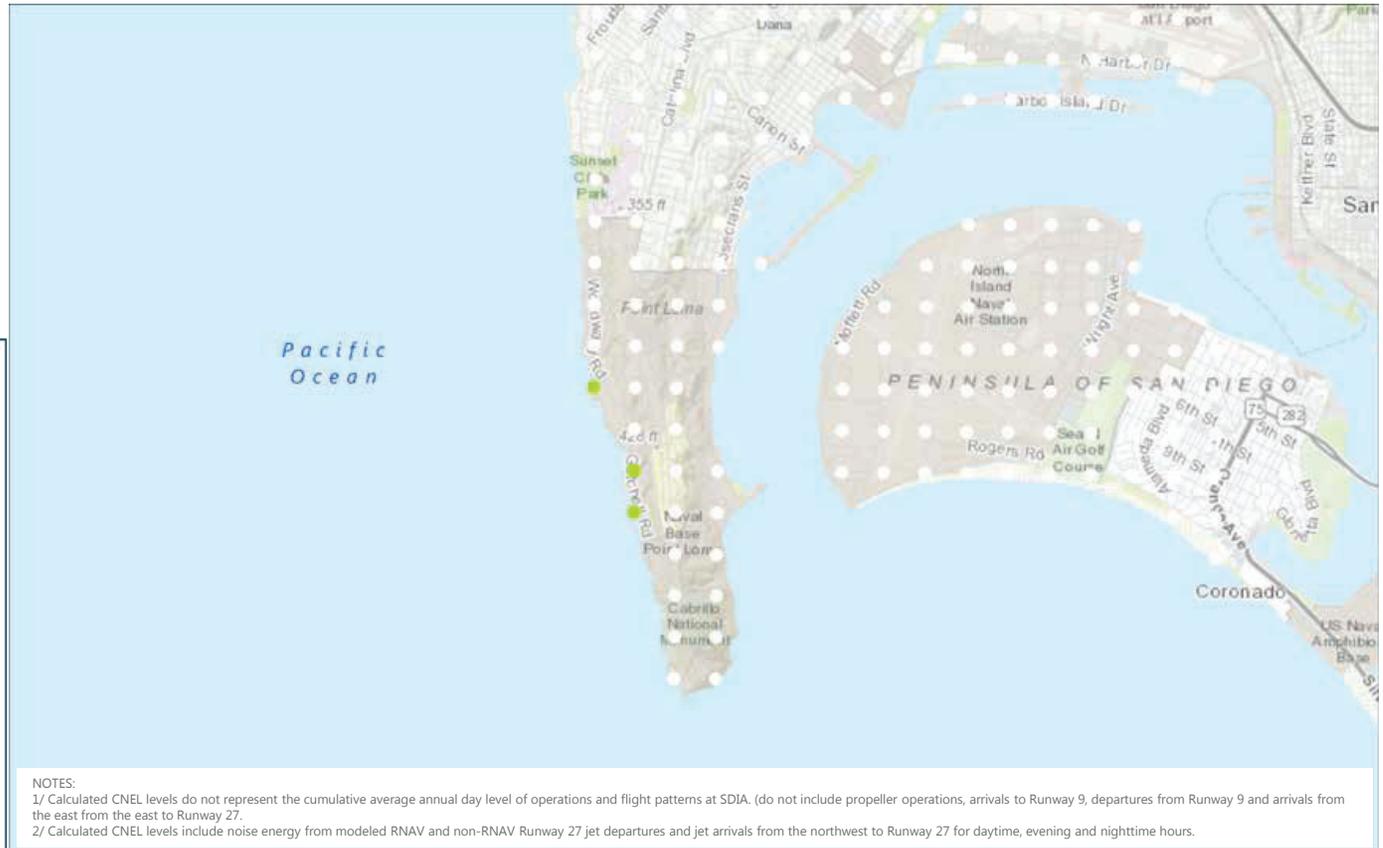
DRAFT Deliberative Document – For Discussion Purposes Only

ANAC Noise Recommendation 15 – Alt 1 Extend JETTI Waypoint 2 NM West AEDT Scenario 3/Baseline RNAV-Only Noise Model Track and CNEL Changes



DRAFT Deliberative Document – For Discussion Purposes Only

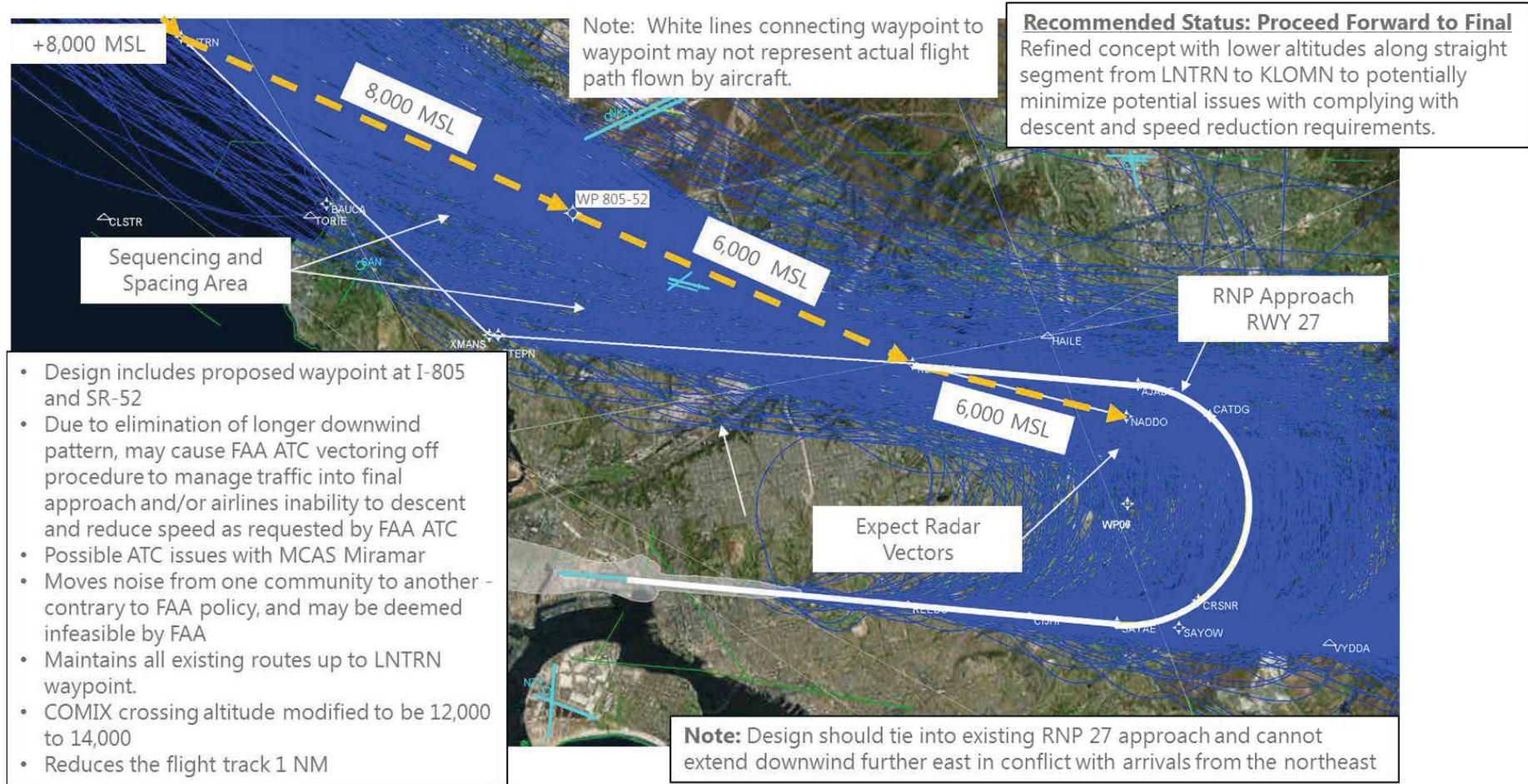
Recommendation 15 Alt 1 Extend JETTI Waypoint 2 NM West - Changes in CNEL - South



Daytime/Nighttime Arrivals

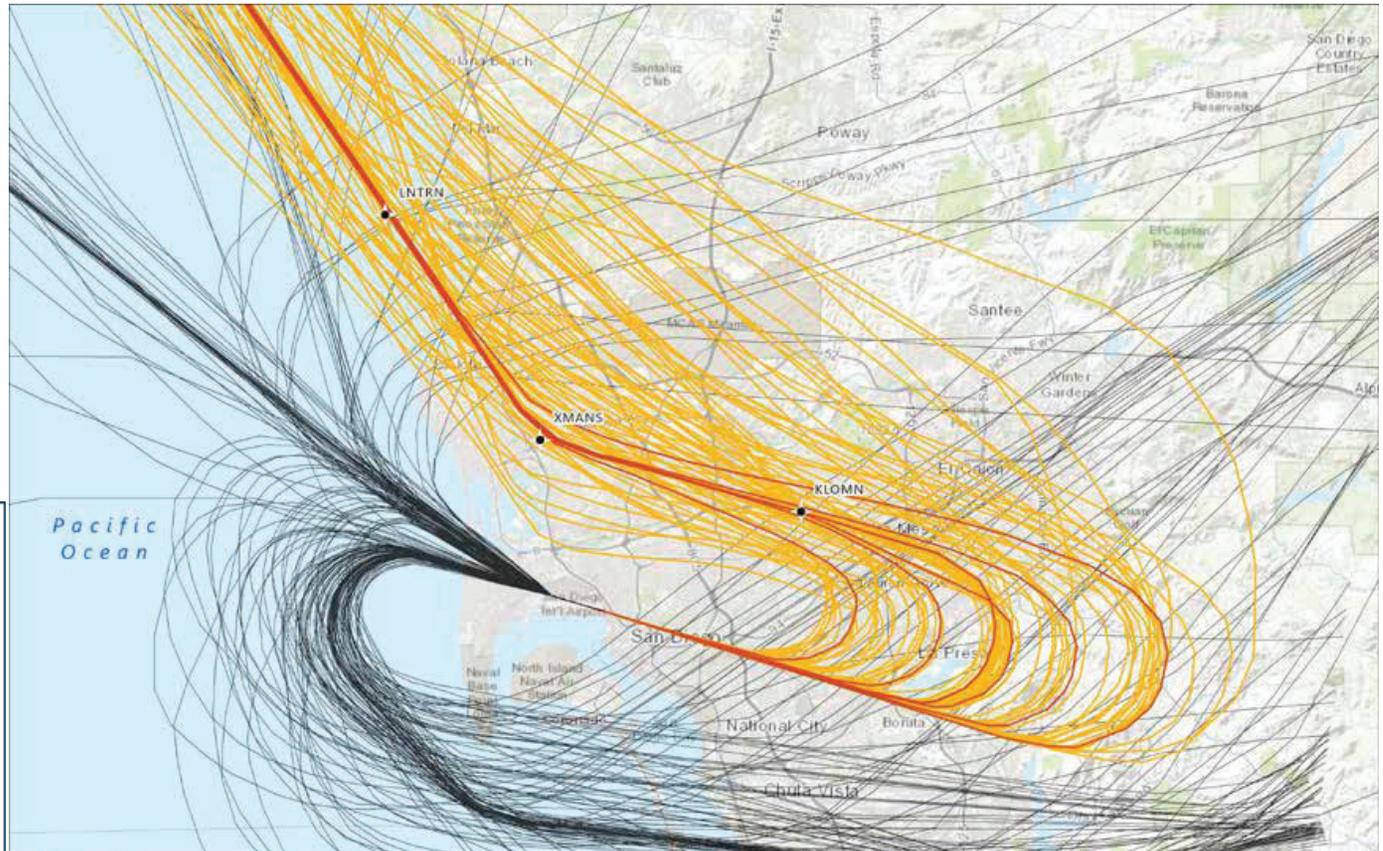
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ANAC Noise Recommendation 16 – Alt 1 Version 3 – Final Design



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Recommendation 16 Alt 1 Version 3 – AEDT Baseline Noise Model Tracks

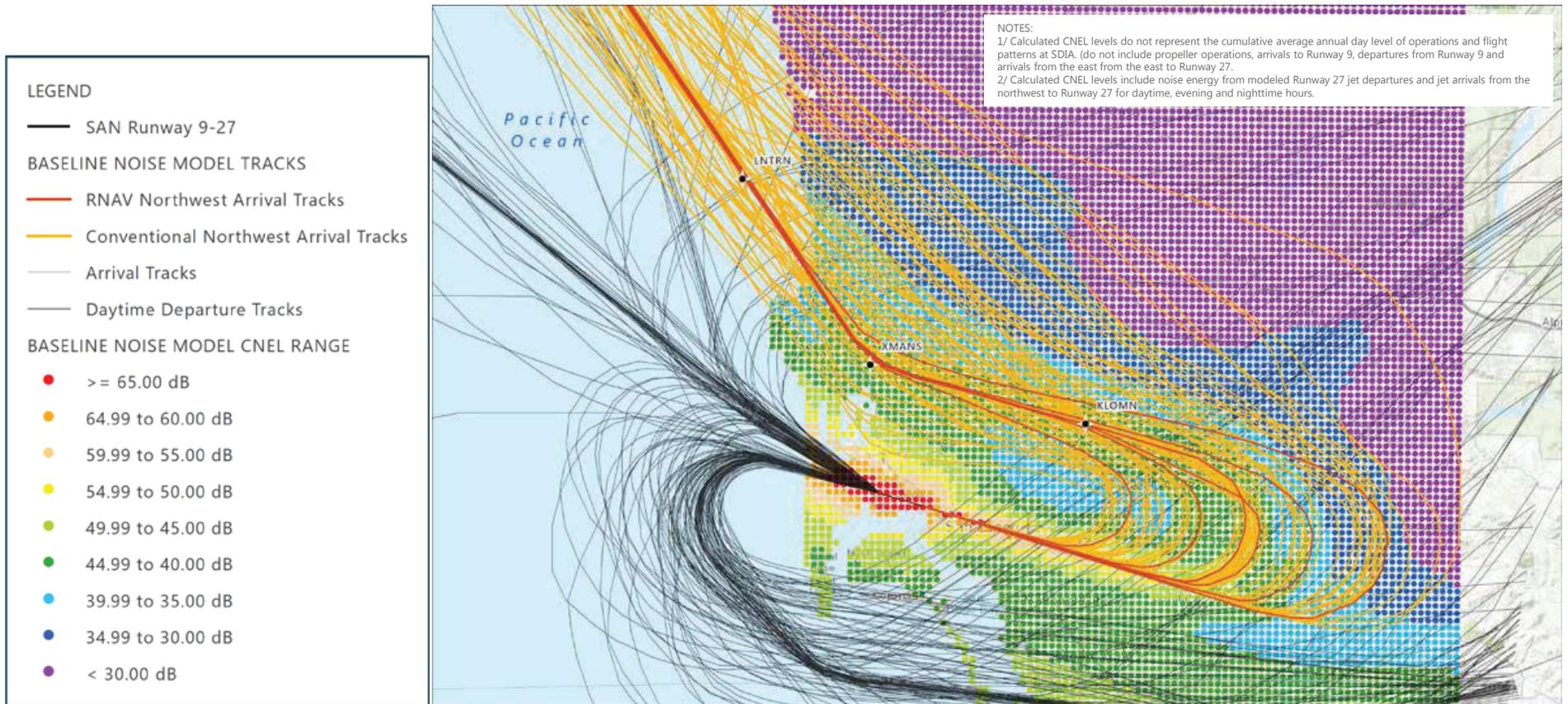


LEGEND

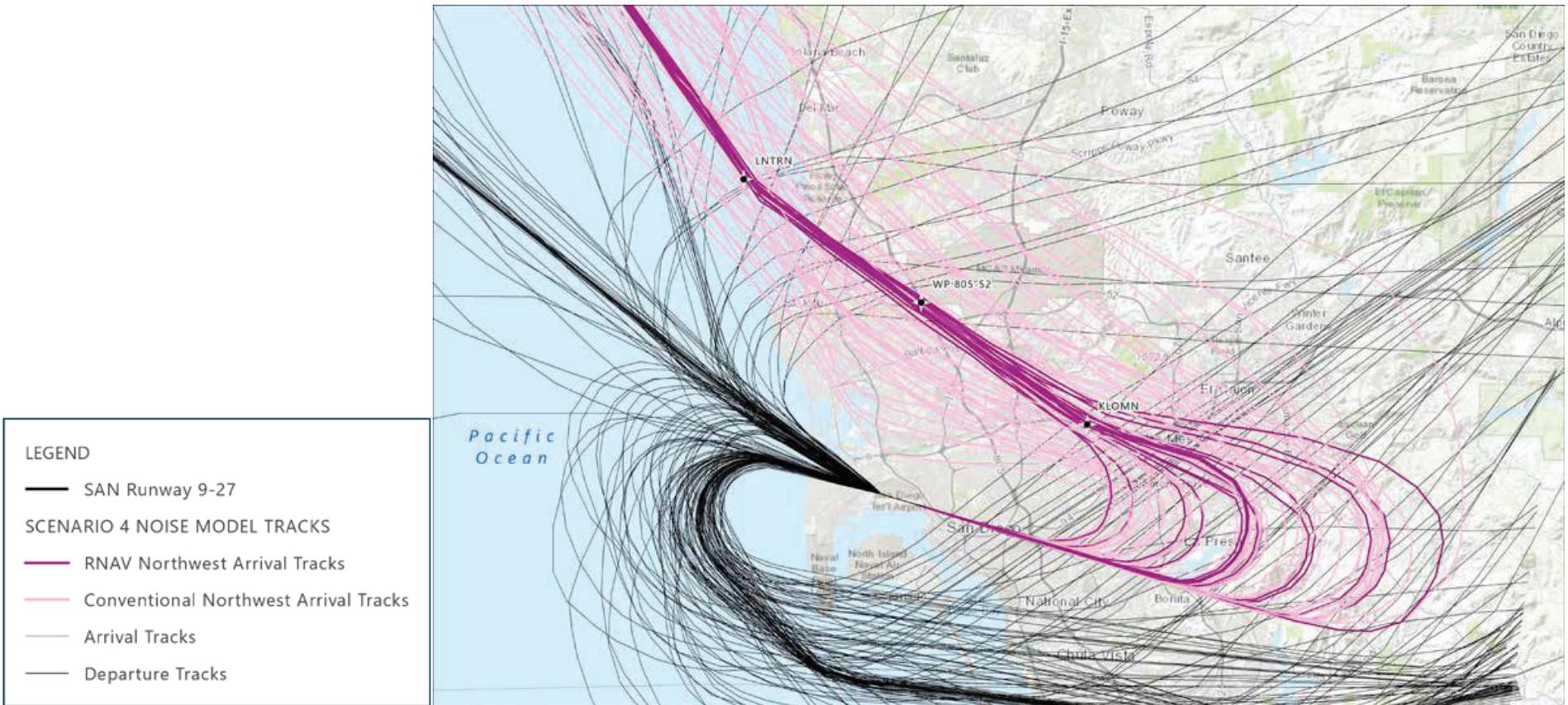
- SAN Runway 9-27
- BASELINE NOISE MODEL TRACKS**
- RNAV Northwest Arrival Tracks
- Conventional Northwest Arrival Tracks
- Arrival Tracks
- Daytime Departure Tracks

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Recommendation 16 Alt 1 Version 3 – AEDT Baseline Noise Model Tracks and CNEL Ranges

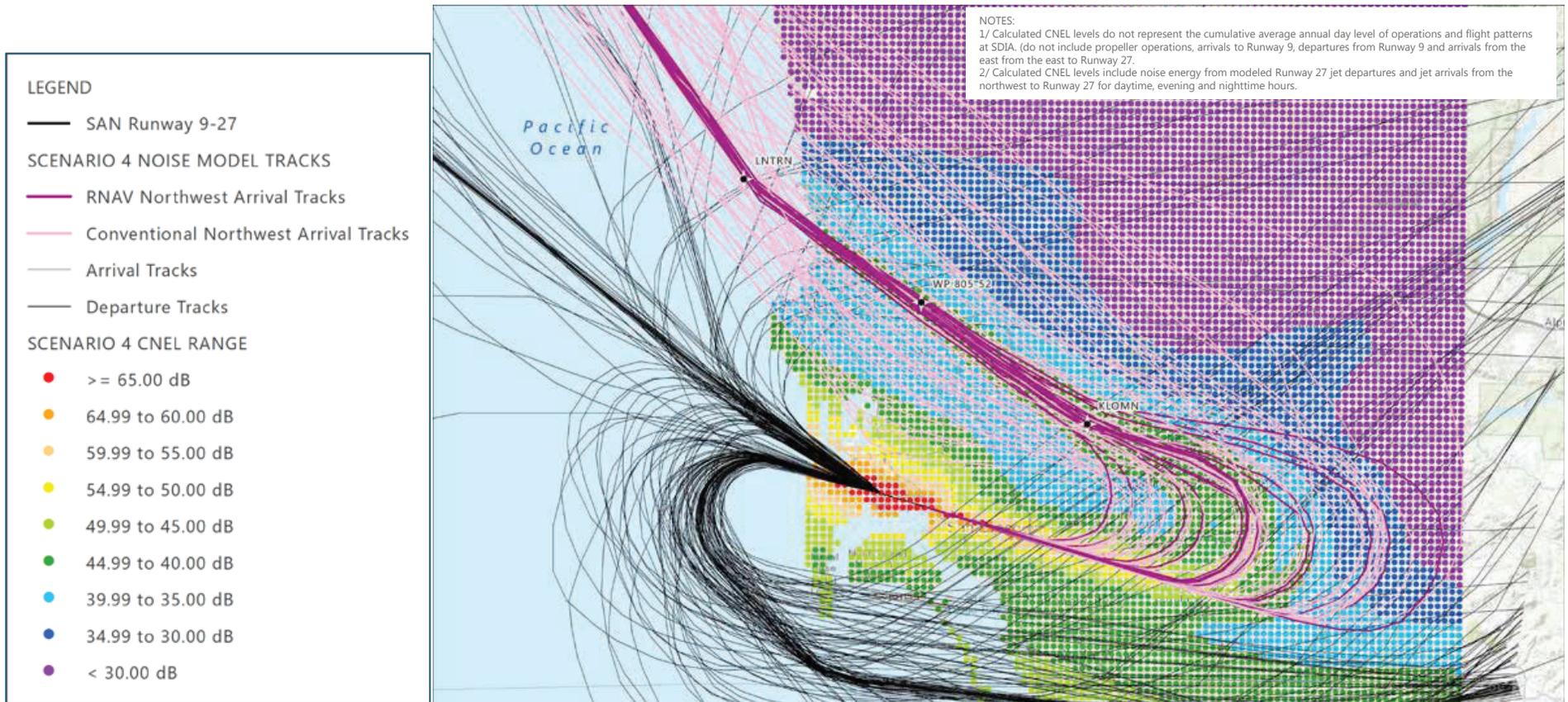


Recommendation 16 Alt 1 Version 3 – AEDT Scenario 4 Noise Model Tracks



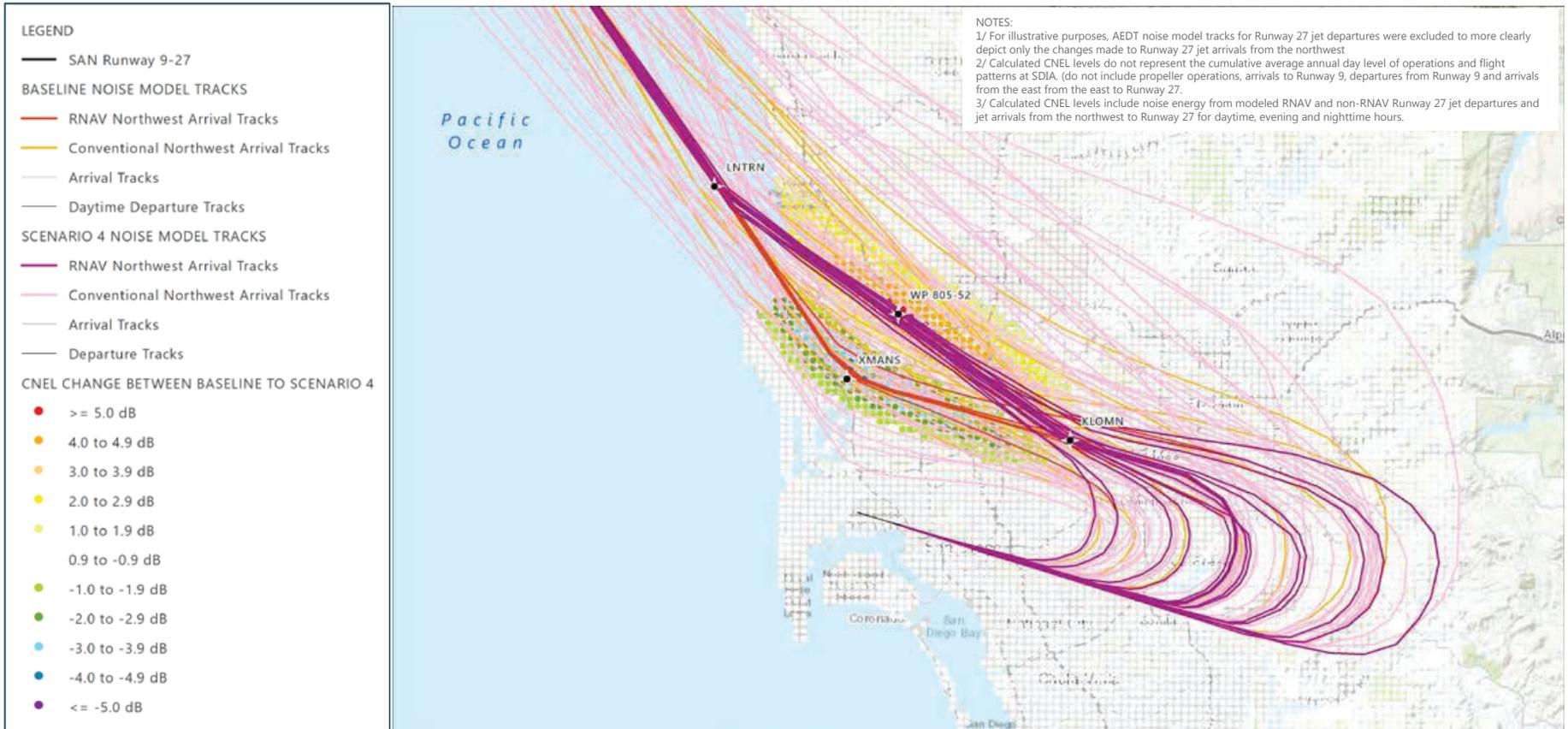
DRAFT Deliberative Document – For Discussion Purposes Only

Recommendation 16 Alt 1 Version 3 – AEDT Scenario 4 Noise Model Tracks and CNEL Ranges



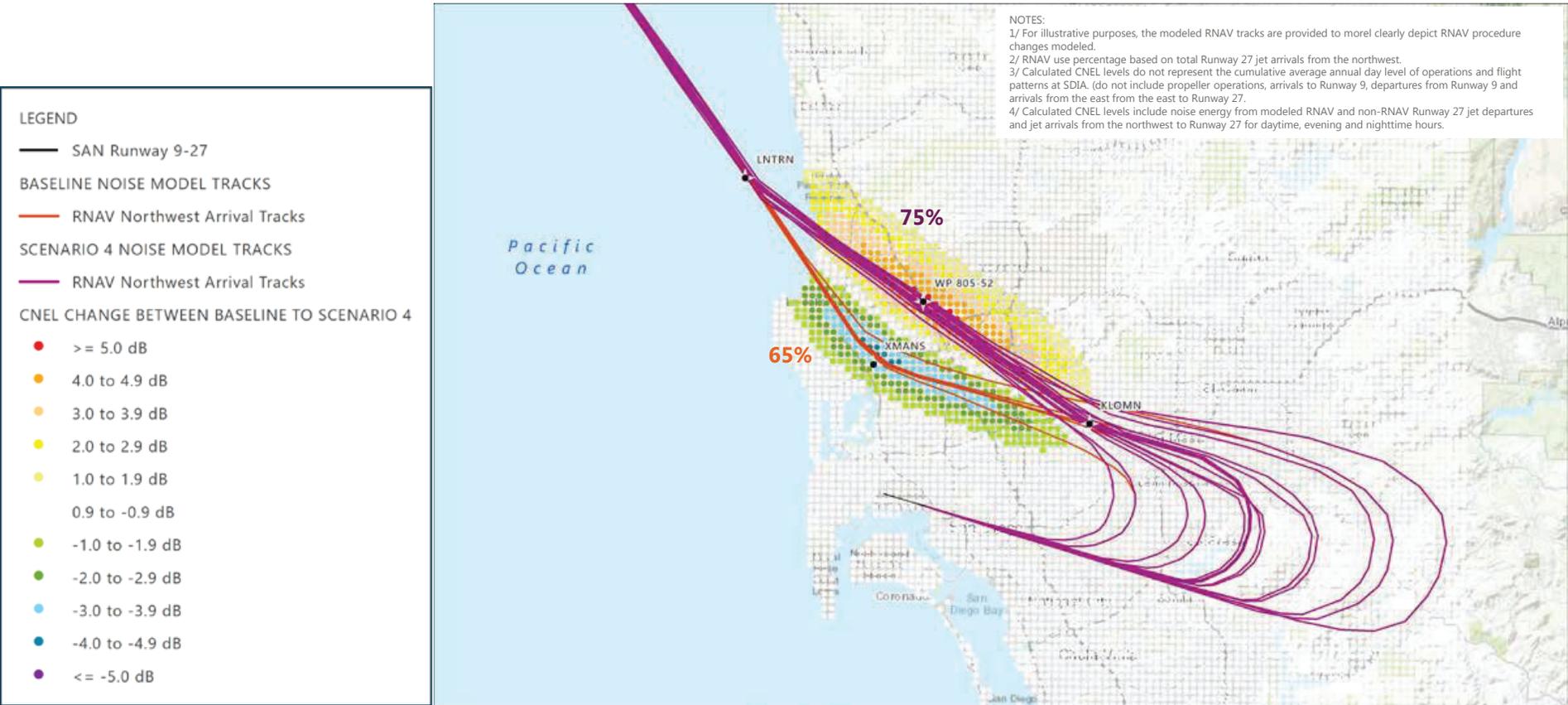
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Recommendation 16 Alt 1 Version 3 – AEDT Scenario 4/Baseline Noise Model Tracks and CNEL Changes

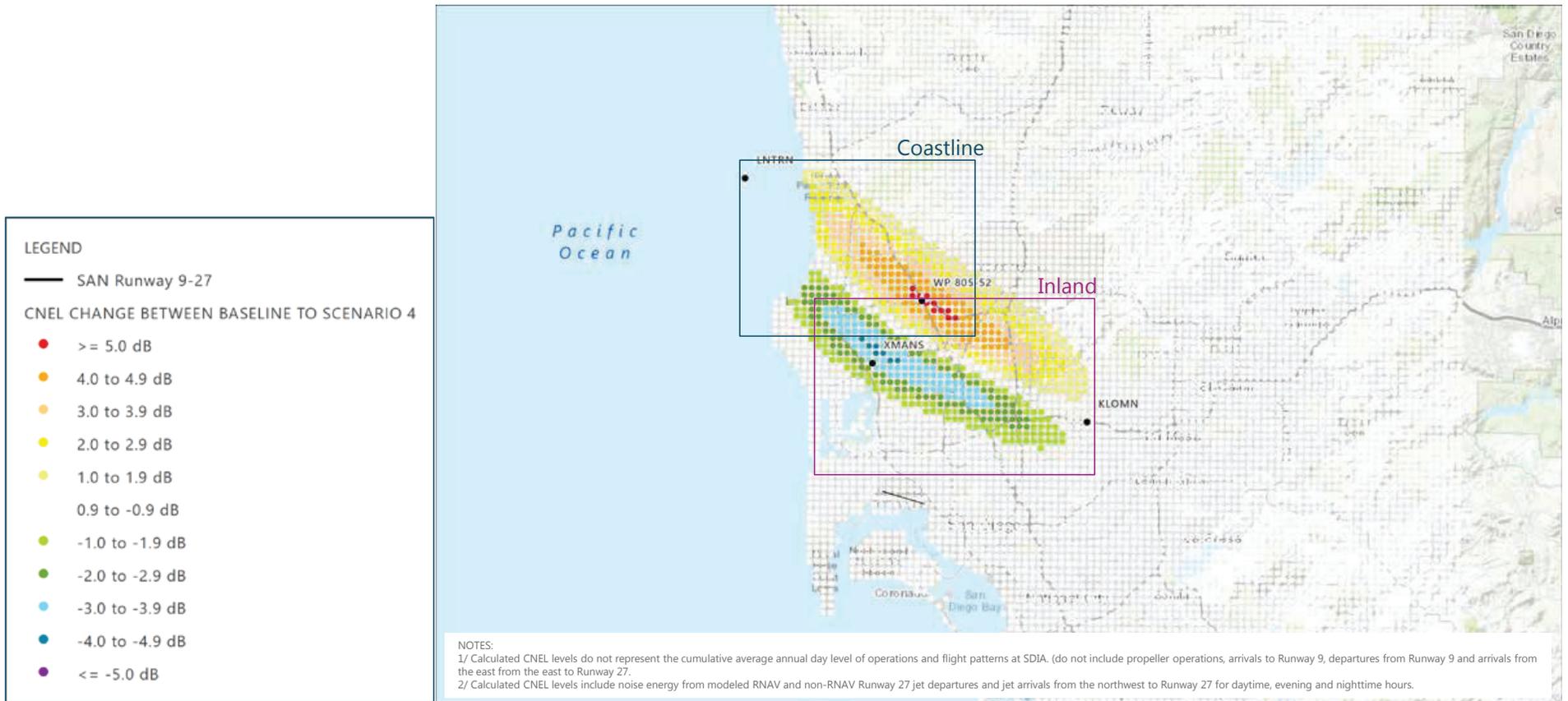


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Recommendation 16 Alt 1 Version 3 – AEDT Scenario 4/Baseline RNAV-Only Noise Model Tracks and CNEL Changes

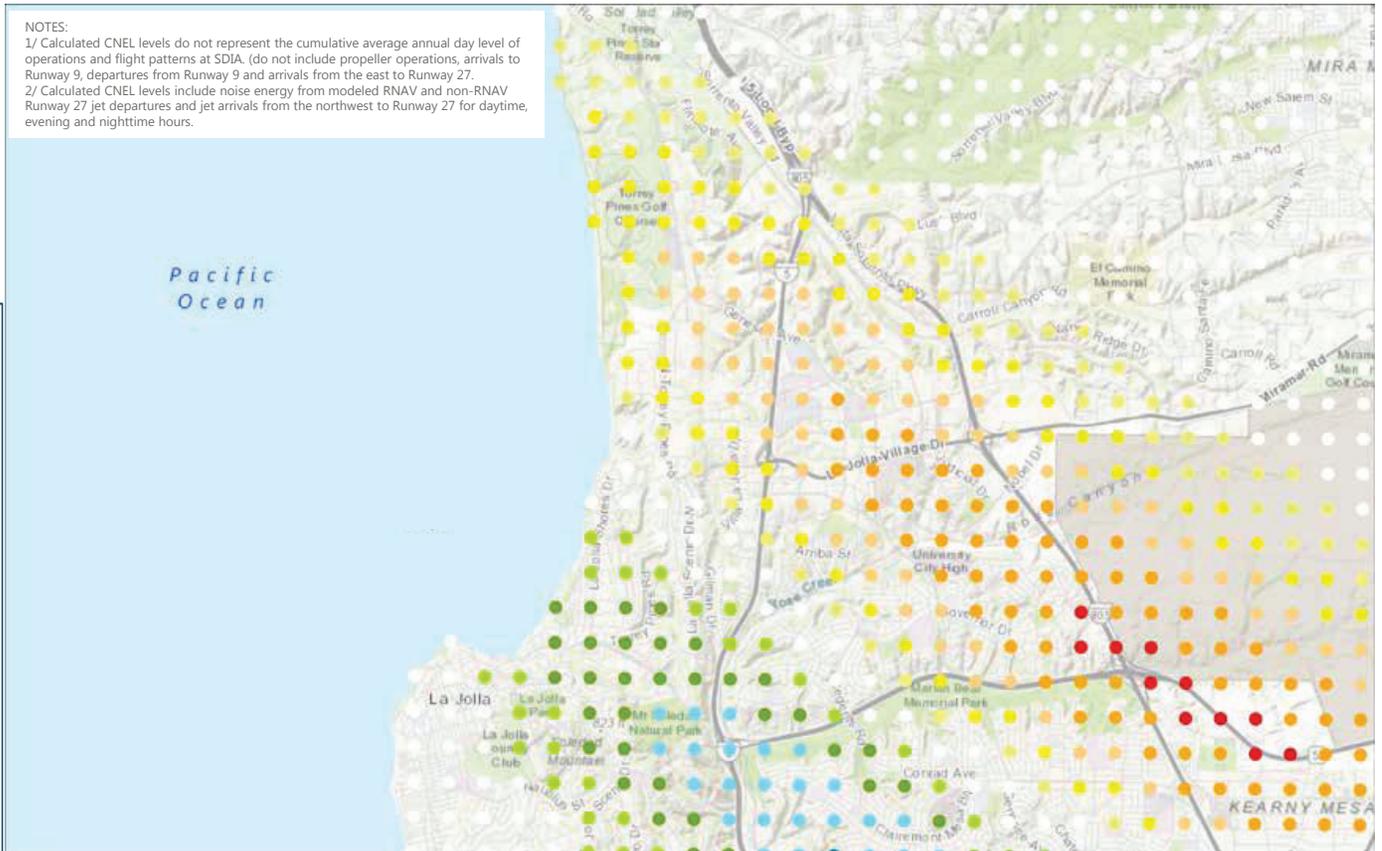
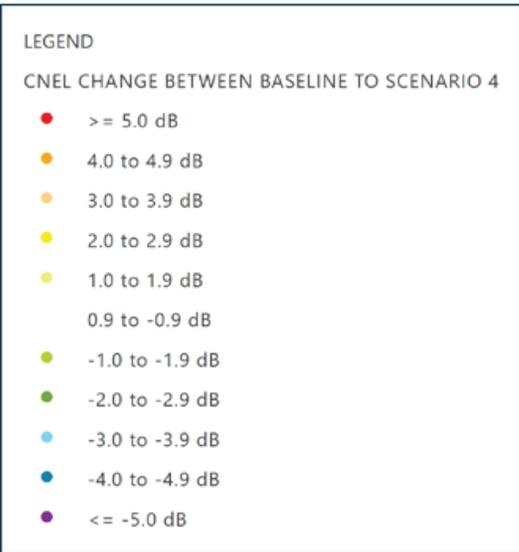


Recommendation 16 Alt 1 Version 3 – Changes in CNEL

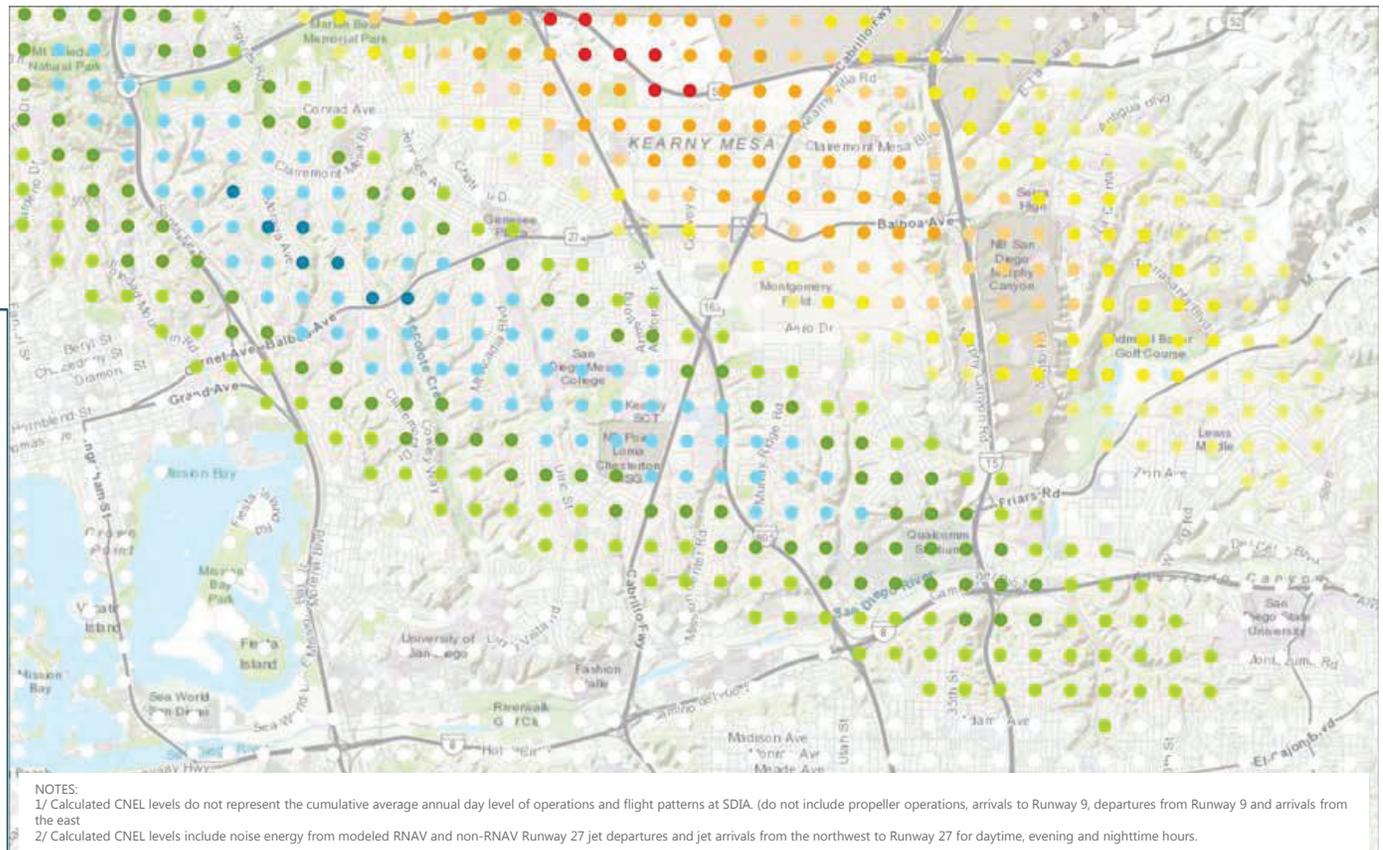


Recommendation 16 Alt 1 Version 3 – Changes in CNEL - Coastline

NOTES:
 1/ Calculated CNEL levels do not represent the cumulative average annual day level of operations and flight patterns at SDIA. (do not include propeller operations, arrivals to Runway 9, departures from Runway 9 and arrivals from the east to Runway 27.
 2/ Calculated CNEL levels include noise energy from modeled RNAV and non-RNAV Runway 27 jet departures and jet arrivals from the northwest to Runway 27 for daytime, evening and nighttime hours.



Recommendation 16 Alt 1 Version 3 – Changes in CNEL - Inland



Recommendations

- **ANAC 14 Alternative 4** – Proceed forward for further consideration (note: would require lifting 1.5 nautical mile early turn restriction at night)
- **ANAC 15 Alternative 4** – Proceed forward for further consideration (note: would require lifting 1.5 nautical mile early turn restriction at night)
- **ANAC 15 Alternative 1** – Proceed forward for further consideration
- **ANAC 16 Alternative 1 Version 3** - Do not proceed forward due to substantial increase in noise in areas such as University City and Kearny Mesa

Next Steps

- Present to ANAC for consideration
- ANAC to determine what to recommend to Authority Board
- Staff report to Authority Board on ANAC recommendation(s)

B.1.8 CAC AND TAC MEETING #6 – MAY 23, 2019

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**San Diego County Regional Airport Authority (SDCRAA)
Flight Procedure Evaluation
Technical Advisory Committee and Citizen Advisory Committee Meeting #6**

San Diego International Airport

May 23, 2019

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Meeting Goals

- Present and understand the update to the noise screening results for ANAC 14 Alternatives 1 and 4 (Nighttime Departure to the Northwest – Turn at 1.5 NM or at 0.5 NM)
- Review flight procedure recommendations based on input received after March 28, 2019
- Discuss and provide input on preference to ANAC 14 Alternative 1 or 4
- Discuss consultant recommendations on ANAC 18, 19 and 20 (Early Turns and FAA Noise Dots)

Alternative Name Change

Technical Name	Simplified Name
Recommendation 14 Alternative 1 Version 2	Nighttime Jet Departures to the Northwest – Turn at 1.5 NM
Recommendation 14 Alternative 4	Nighttime Jet Departures to the Northwest – Turn at 0.5 NM
Recommendation 15 Alternative 2 Version 2	Nighttime Jet Departures to the East – Turn at 1.5 NM
Recommendation 15 Alternative 4	Nighttime Jet Departures to the East – Turn at 0.5 NM
Recommendation 15 Alternative 1	Jet Departures to the East (6:30 a.m. to 10:00 p.m.)
Recommendation 16 Alternative 1 Version 3	All Day Jet Arrivals from Northwest

Recommendation 14 Alt 1 and 4 –Nighttime Jet Departures to the Northwest

- The Nighttime Jet Departure is intended only for jet departures between 10:00 p.m. and 6:30 a.m.
- Previous model results included approximately 9 average daily departures to the northwest between 6:30 a.m. and 7:00 a.m.^{1/}
- Approximately 3 jet departures to the northwest occur between 10:00 p.m. and 6:30 a.m. on an average day.^{1/, 2/}
- Noise screening models updated to reflect correct departure levels between 10:00 p.m. and 6:30 a.m. on proposed noise model tracks

NOTES:

1/ Based on the Authority's Airport Noise and Operations Management System (ANOMS) flight and radar data from May 2017 to December 2017.

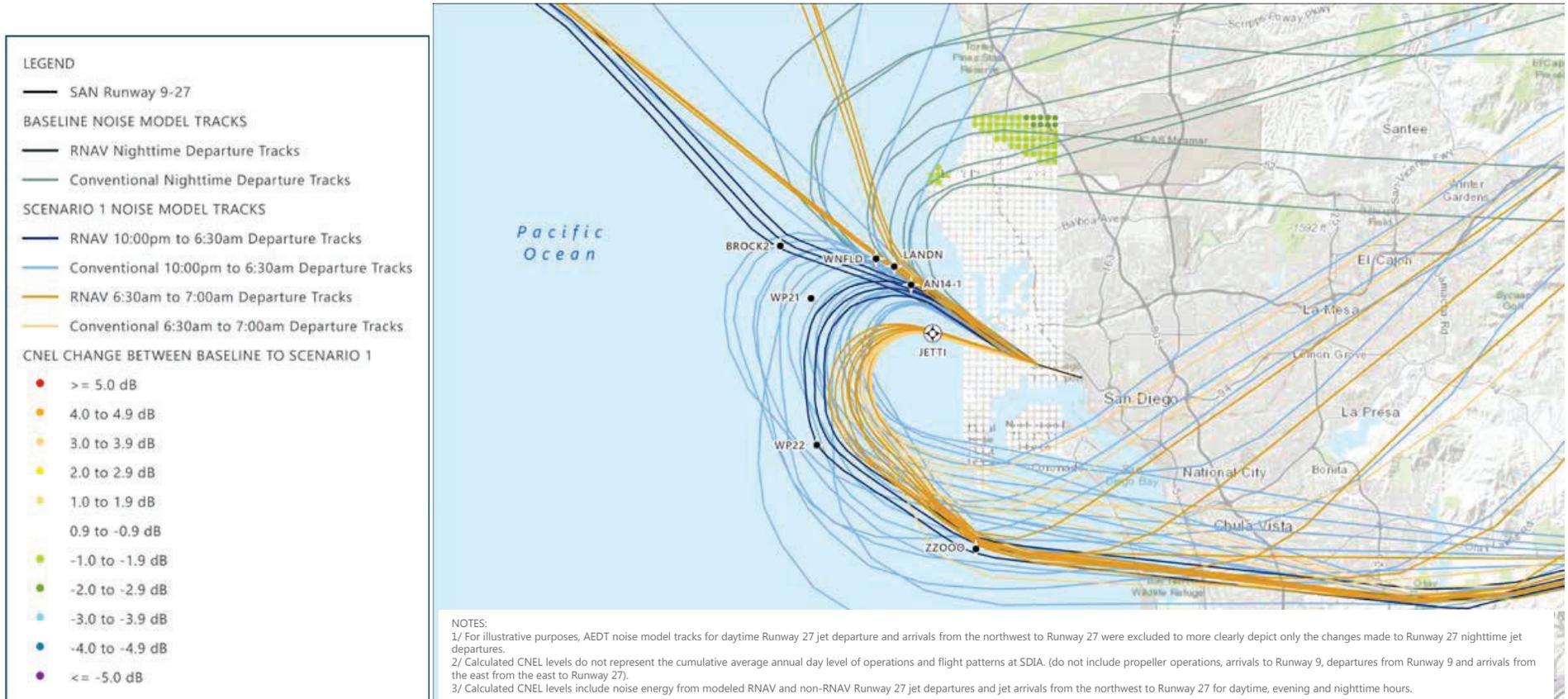
2/ This includes a small amount of operations that occur after the departure curfew between 11:30 p.m. and 6:30 a.m.

Scenario 1 Noise Screening Update

ANAC Recommendation 14 Alternative 1 Version 2 (Nighttime Jet Departures to the Northwest – Turn at 1.5 NM)
and Recommendation 15 Alternative 2 Version 2 (Nighttime Jet Departures to the East – Turn at 1.5 NM)

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Nighttime Jet Departures to the Northwest and East – Turn at 1.5 NM - AEDT Scenario 1/Baseline Noise Model Tracks and CNEL Changes

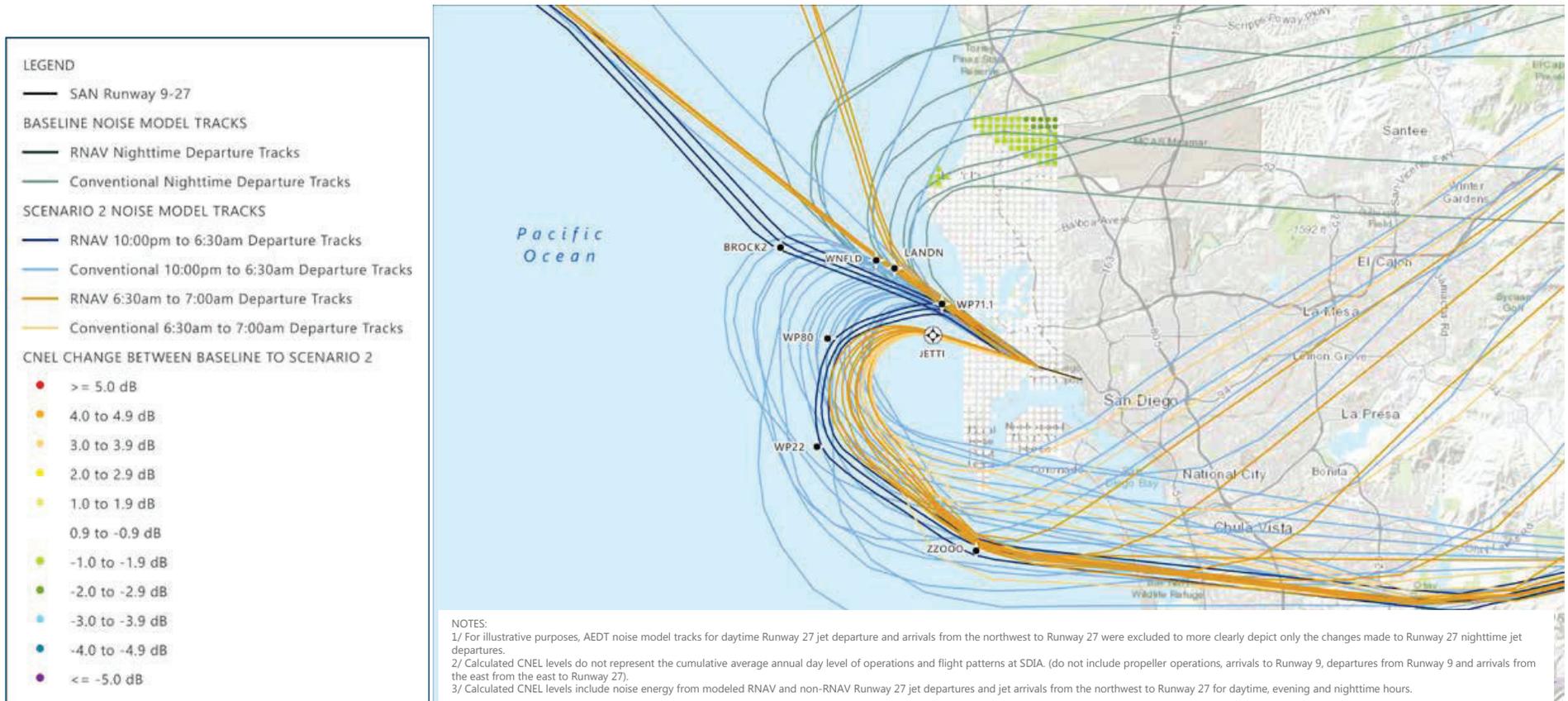


Scenario 2 Noise Screening Update

ANAC Recommendation 14 Alternative 4 (Nighttime Jet Departures to the Northwest – Turn at 0.5 NM) and Recommendation 15 Alternative 4 (Nighttime Jet Departures to the East – Turn at 0.5 NM)

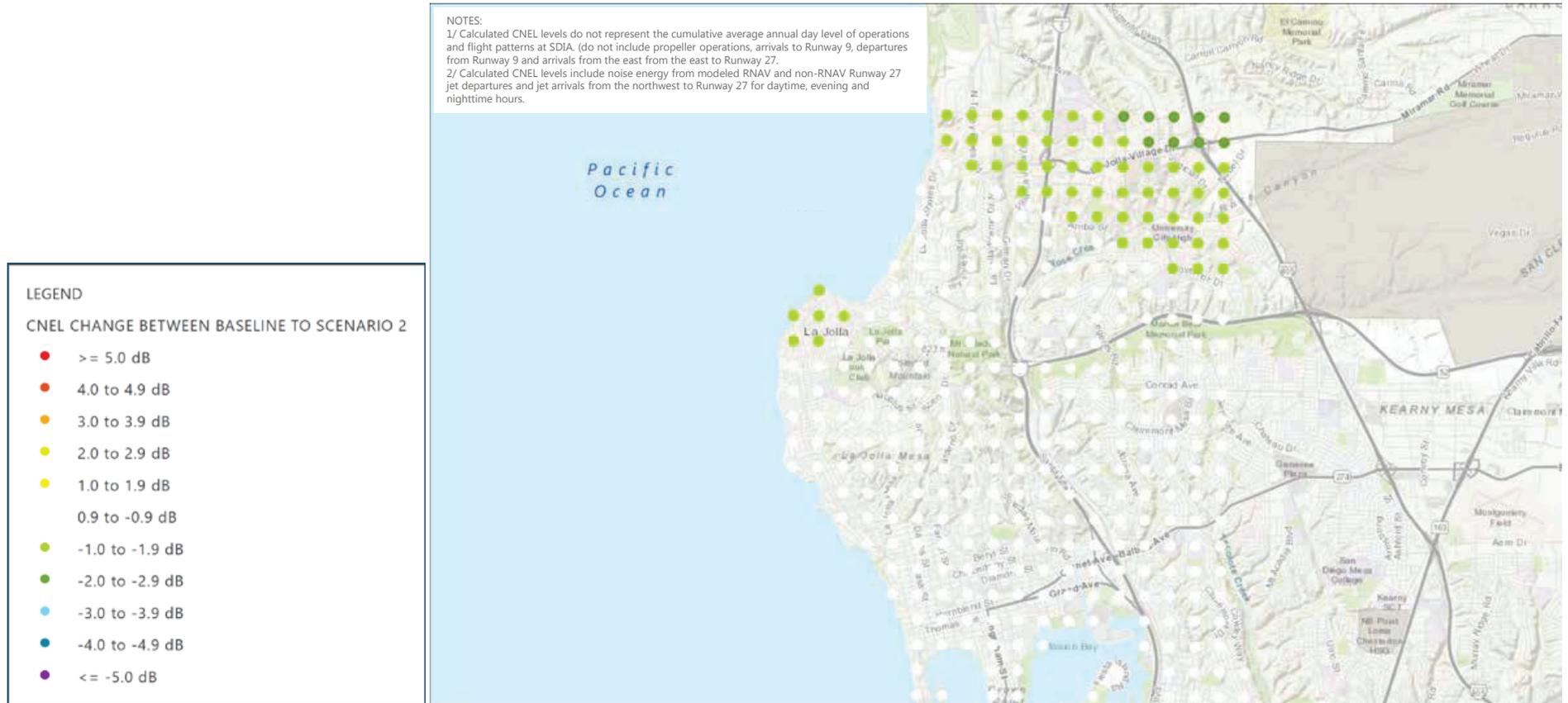
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Nighttime Jet Departures to the Northwest and East – Turn at 0.5 NM – AEDT Scenario 2/Baseline Noise Model Tracks and CNEL Changes



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Nighttime Jet Departures to the Northwest and East – Turn at 0.5 NM – Changes in CNEL – North - UPDATE



Consultant Recommendations - UPDATE

- **ANAC 14 Alternative 4 –Nighttime Jet Departures to the Northwest (Turn at 0.5 NM):** Hold from further consideration until ANAC Recommendation 17 and 21 analysis is completed under the Title 14 CFR Part 150 process. Adjustment to design may be required to accommodate findings for Recommendation 17 and 21.
- **ANAC 15 Alternative 4 –Nighttime Jet Departure to the East (Turn at 0.5 NM):** Hold Hold from further consideration until ANAC Recommendation 17 and 21 analysis is completed under the Title 14 CFR Part 150 process. Adjustment to design may be required to accommodate findings for Recommendation 17 and 21.
- **ANAC 15 Alternative 1 –Jet Departures to the East (6:30 a.m. to 10:00 p.m.):** Proceed forward for further consideration
- **ANAC 16 Alternative 1– All Day Jet Arrivals from Northwest:** Do not proceed forward due to substantial increase in noise in areas such as University City and Kearny Mesa

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TAC and CAC Input Required

- Jet Nighttime Departure Turn at 1.5 NM – complies with Early Turn restriction
- Jet Nighttime Departure Turn at 0.5 NM – does not comply with Early Turn restriction
- Only one of the above can be recommended

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Next Steps - UPDATE

- Present to ANAC for consideration
- ANAC make a recommendation to Authority Board

ANAC Recommendations 18, 19 and 20

Early Turns and Noise Dots

ANAC Recommendation 18 (Early Turns)

- **ANAC Recommendation:** Review if the current definition of an early turn, define what an early turn means and conduct comparative analysis to actual flight paths
- **Consultant Finding:**
 - Runway 27 jet departures or missed approaches that are vectored off an initial departure heading prior to 1.5 nautical miles west of the shoreline or those aircraft routed back (south and east bound) over residential areas of Point Loma north of Fort Rosecrans National Cemetery, with the exception of aircraft vectored off course to ensure safe separation.
 - The Authority’s methodology to identify early turns is appropriate based on independent definition of early turns, but should include missed approaches in the evaluation.



SOURCE: San Diego County Regional Airport Authority, February 2018 (noise dot locations); Ricondo & Associates, Inc., March 2019 (early turn violation example paths).

ANAC Recommendation 19 (Early Turns)

- ANAC Recommendation:** Work with FAA/ATC to modify flight procedures to increase compliance and reduce early turns, with consideration of aircraft performance.
- Consultant Finding:** The consultant reviewed all published departure procedures and concluded the designs comply with the early turn restriction. The early turn violations reported by the Authority to ANAC serve as evidence the existing procedures as defined increase compliance with early turn restrictions. In addition, the intent of this recommendation (to modify procedures to increase compliance) is met through the design evaluation efforts related to Recommendations 14 and 15.

Note: FAA air traffic control manages a very dynamic environment close to and several miles away from SDIA. They direct flights to address weather, safe separation, sequencing and/or operational efficiency issues present at the time an air traffic controller takes action. In many cases, management actions are related to traffic interaction several miles away from SDIA. Procedure designs cannot address every situation that requires speed or heading directions issued by a controller.

Early Turns by Year

YEAR	Early Turns	% Change
2013	829	--
2014	1,105	33
2015	1,293	17
2016	776	(40)
2017	420	(46)
2018	269	(36)
2019	125*	--

* Through March 31, 2019

ZZ000 RNAV SID implemented November 2016 and PADRZ RNAV SID implemented January 2017

SOURCE: San Diego County Regional Airport Authority, April 2019.

RNAV Use – May-December 2017

Runway 27 RNAV SIDs	Use (%)
ZZ000 RNAV	81%
PADRZ RNAV	96%

SOURCE: Ricondo & Associates, Inc., April 2019 (based on SDCRAA ANOMS radar data from May 2017 to December 2017 and maintaining RNAV path until ZZ000 or WNFLD waypoints).

ANAC Recommendation 20 (Noise Dots)

- **ANAC Recommendation:** FAA\TRACON to incorporate Red Dot waypoint locations into current and future SID's as part of the formal SID and STAR Procedures, so that Red Dots become waypoints on departure procedures and data is collected on waypoints.
- **Consultant Finding:** Incorporating noise dots as waypoints in existing or proposed SIDs is not feasible. The current Area Navigation (RNAV) departures comply with the early-turn restrictions. The focus should be to work with FAA on keeping aircraft on the RNAV departure procedures. An alternative concept to move Noise Dots #3 and #4 south of Point Loma was considered, but most likely will not be feasible based on preliminary feedback from FAA.



SOURCE: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, OpenStreetMap Contributors, and the GIS User Community, August 2018 (basemap); San Diego County Regional Airport Authority ANOMS data, 2018 (FAA noise dots); ESRI Data, 2010 (Airports); National Flight Data Center (NFDC), October 2018 (waypoint); Ricondo & Associates, Inc., October 2018 (alternatives).

B.1.9 ANAC– JUNE 19, 2019

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**San Diego County Regional Airport Authority (SDCRAA)
Flight Procedure Evaluation
ANAC Information Briefing**

San Diego International Airport

June 19, 2019

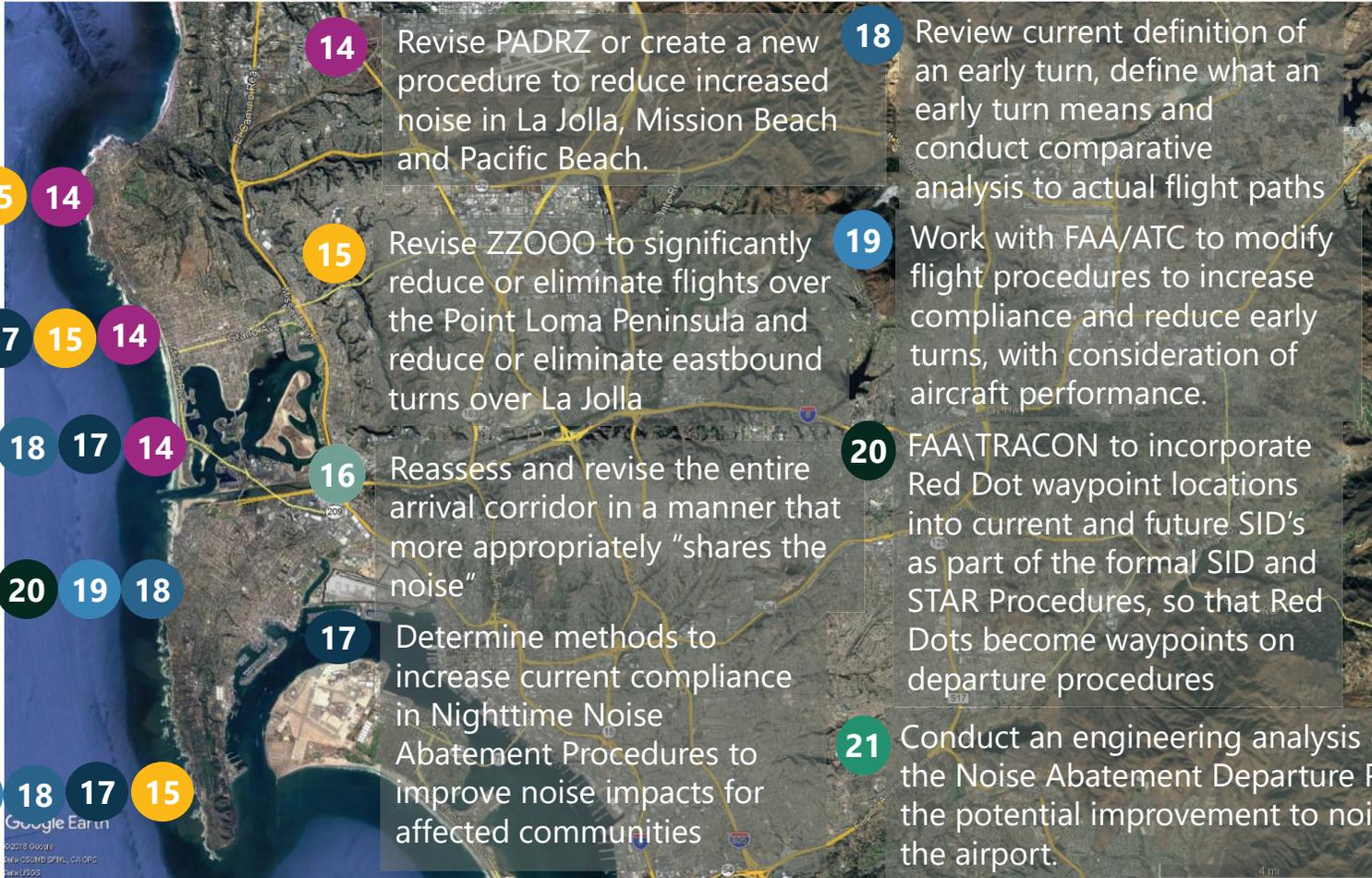
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Agenda

- ANAC Recommendations for Traffic Procedures
- Traffic Procedure Evaluation Overview
- Final Procedure Design Concept Details
- Early Turn and Noise Dot Evaluation
- Requested Actions for Consideration

ANAC Recommendations for Air Traffic Procedures

ANAC Recommendations



14 Revise PADRZ or create a new procedure to reduce increased noise in La Jolla, Mission Beach and Pacific Beach.

18 Review current definition of an early turn, define what an early turn means and conduct comparative analysis to actual flight paths

16 15 14

15 Revise ZZ000 to significantly reduce or eliminate flights over the Point Loma Peninsula and reduce or eliminate eastbound turns over La Jolla

19 Work with FAA/ATC to modify flight procedures to increase compliance and reduce early turns, with consideration of aircraft performance.

17 15 14

21 20 19 18 17 14

16 Reassess and revise the entire arrival corridor in a manner that more appropriately “shares the noise”

20 FAA\TRACON to incorporate Red Dot waypoint locations into current and future SID’s as part of the formal SID and STAR Procedures, so that Red Dots become waypoints on departure procedures

21 20 19 18

17 Determine methods to increase current compliance in Nighttime Noise Abatement Procedures to improve noise impacts for affected communities

21 Conduct an engineering analysis of modification to the Noise Abatement Departure Procedure to assess the potential improvement to noise contours around the airport.

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ANAC Recommendation Groupings

 Traffic Procedures – ANAC 14, 15, 16, 17 and 21

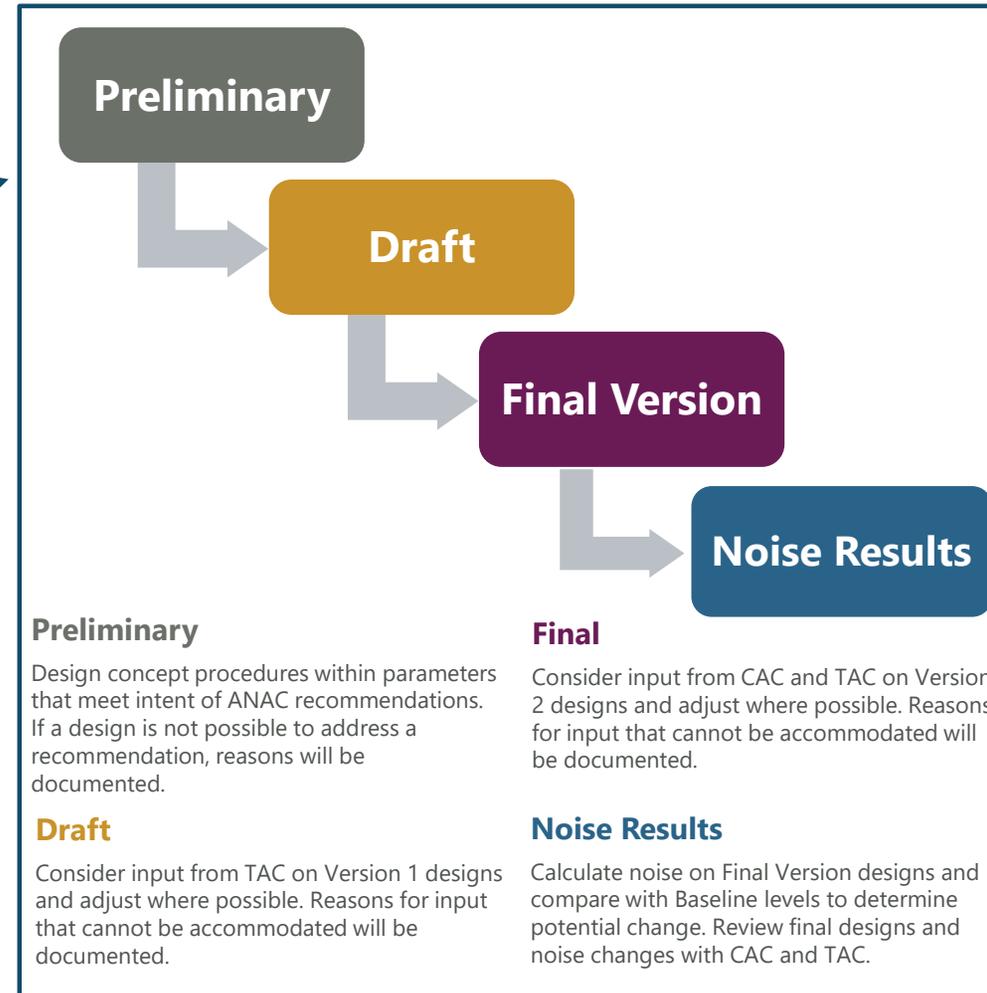
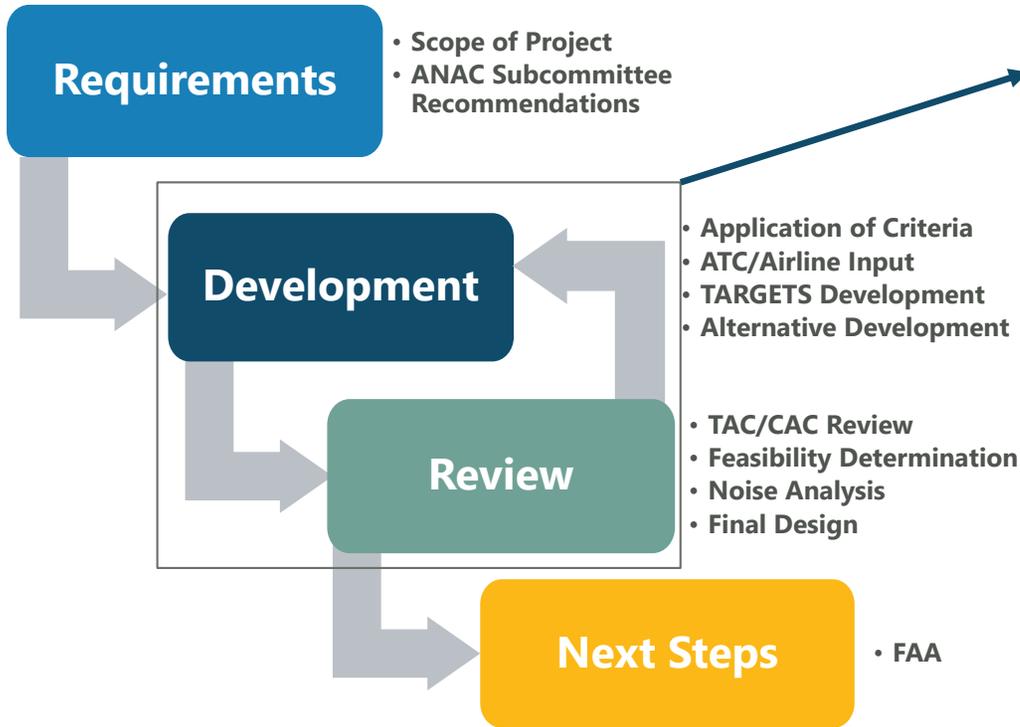
 Early Turns and Noise Dots – ANAC 18, 19 and 20

Traffic Procedure Evaluation Overview

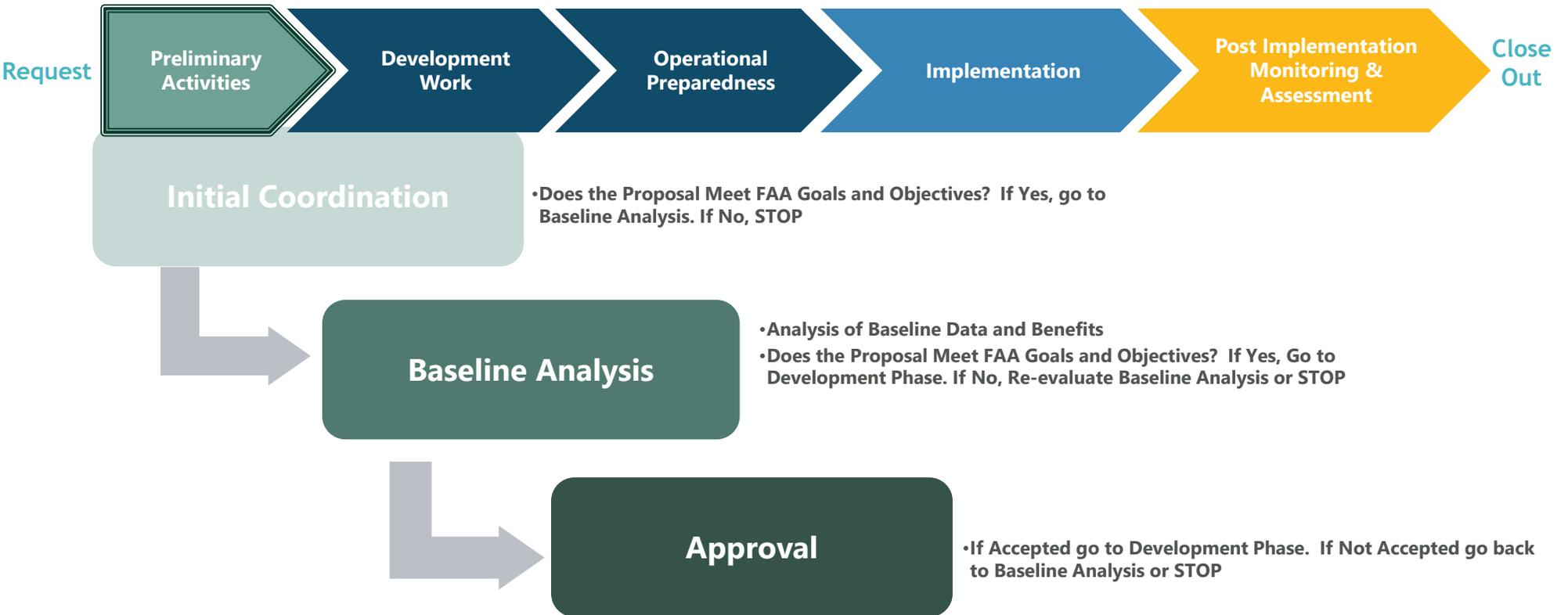
Evaluation Objectives

- ④ Meet ANAC recommendation intent
- ④ Determine feasibility
 - Safe
 - Meet FAA design criteria
 - Comply with FAA ATC Rules, Policies, and Procedures
 - Maintain SDIA airfield capacity
 - Consider FAA mission and goals
- ④ Calculate and assess changes in noise
- ④ Provide consultant recommendations to SDCRAA and ANAC

Evaluation Process



FAA Evaluation Process



Technical and Citizen Advisory Committee Input/Feedback

Citizen Advisory Committee (CAC)

- Input on ANAC recommendations and related goals
- Input on procedure design concepts

Technical Advisory Committee (TAC)

- Broader stakeholder group: Airline(s), commuter carrier(s), corporate operator(s) and FAA ATO.
- Input to confirm procedures are operationally viable and identify potential issues

Input/Feedback Process Summary



Coordinated with TAC and CAC

- Conducted 6 meetings related to traffic procedure evaluations
- Provided responses to comments between Preliminary Draft and Draft phases



Shared information to the public

- TAC/CAC meetings open for public to observe
- Shared all presentations with public on the website (<https://www.san.org/Airport-Noise/FAR-Part-150?EntryId=12485>)

Design Parameters

- ✖ Do not change aircraft flight paths over areas exposed to CNEL 65 or higher
- ✖ Do not impact safety
- ✖ Meet FAA design criteria
- ✖ Fit within existing airspace and maintain existing airspace hand-off areas
- ✖ Do not impact capacity of SDIA
- ✖ Do not move noise to new non-compatible areas

Evaluation Actions

✓ Did:

- Propose designs compatible with existing air traffic environment
- Gather critical input from CAC and TAC during design process
- Coordinate with FAA ATO staff during concept design process
- Develop information for FAA consideration during the “Preliminary Activities” phase of the FAA Order 7100.41a process, if necessary
- Calculate change in noise levels for specific procedures

Evaluation Actions

✘ Did not:

- Evaluate recommendations to reduce noise at or higher than CNEL 65 dBA – reserved for Part 150 Study
- Propose designs that require FAA waivers
- Propose designs that will negatively impact SDIA capacity
- Conduct all steps in FAA Order 7100.41A
- Evaluate non-SDIA traffic overflights
- Evaluate “restriction” type proposals that require 14 CFR Part 161 study

Potential Affect to CNEL 65

- ! Change to initial departure headings from Runway 27
 - Recommendation 17 – Nighttime Noise Abatement Procedure
 - Recommendation 21 - Modification to the Noise Abatement Departure Procedure
- 💡 **Consultant Recommendation:** Evaluate recommended changes under Title 14 Code of Federal Regulations Part 150 Study (14 CFR Part 150 Study) update

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Design Concept Evaluation Results Summary

ANAC Recommendations	Design Concepts Evaluated	14 CFR Part 150 Process	Final Design Concept
Recommendation 14 – Departures to the Northwest	8	2	2
Recommendation 15 – Departures to the East	6	1	3
Recommendation 16 - Arrivals from the Northwest	6	0	0
Total	20	3	5

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Final Design Concepts Evaluated

ANAC Recommendation	Alternative Name
Recommendation 14	Nighttime Jet Departures to the Northwest – Turn at 1.5 NM
Recommendation 14	Nighttime Jet Departures to the Northwest – Turn at 0.5 NM
Recommendation 15	Nighttime Jet Departures to the East – Turn at 1.5 NM
Recommendation 15	Nighttime Jet Departures to the East – Turn at 0.5 NM
Recommendation 15	Jet Departures to the East (6:30 a.m. to 10:00 p.m.)
Recommendation 16	All Day Jet Arrivals from Northwest

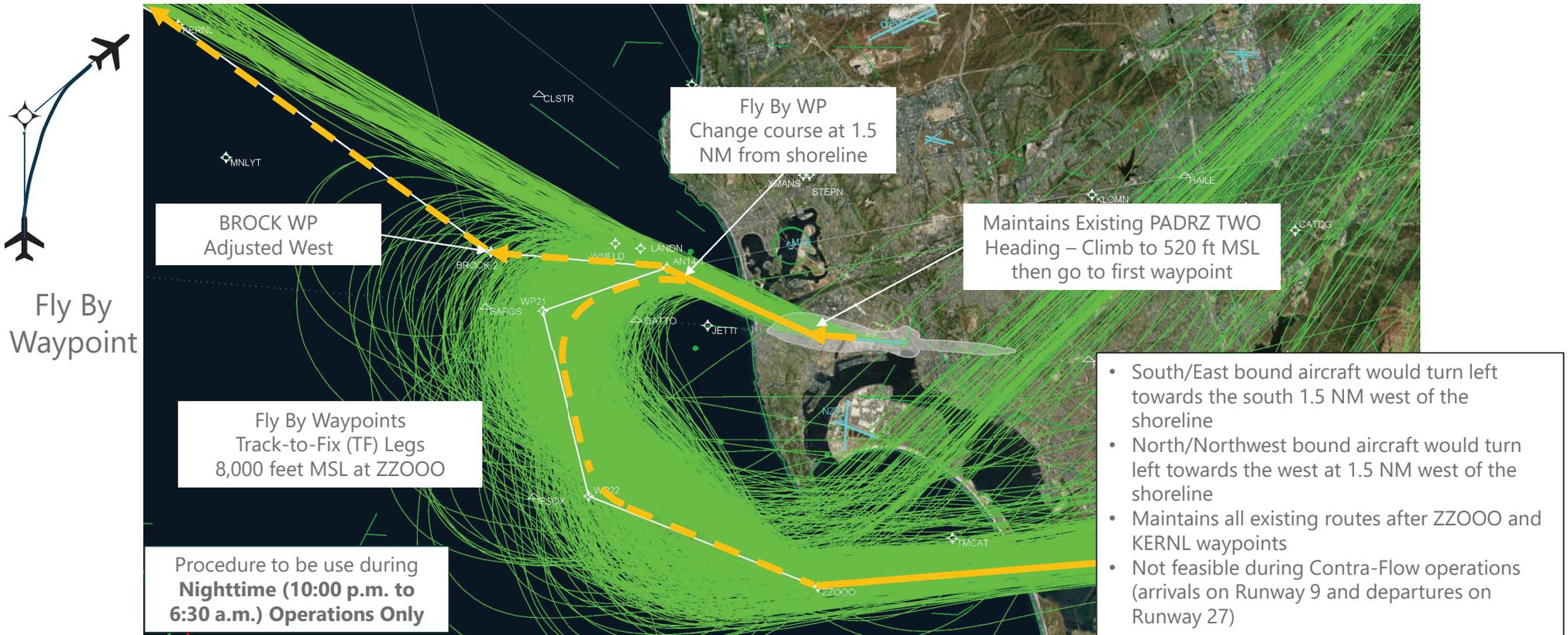
TAC/CAC Input on Final Design Concepts

- 🗣️ Prefer Early Turn restriction (no turns until 1.5 NM from shoreline) is maintained in all designs
 - Did not recommend Nighttime Jet Departures to the Northwest – Turn at 0.5 NM
 - Did not recommend Nighttime Jet Departures to the East – Turn at 0.5 NM
- 🗣️ Hold nighttime departure procedure design concepts until ANAC Recommendation 17 and 21 are addressed in 14 CFR Part 150 Study

Final Procedure Design Concept Details

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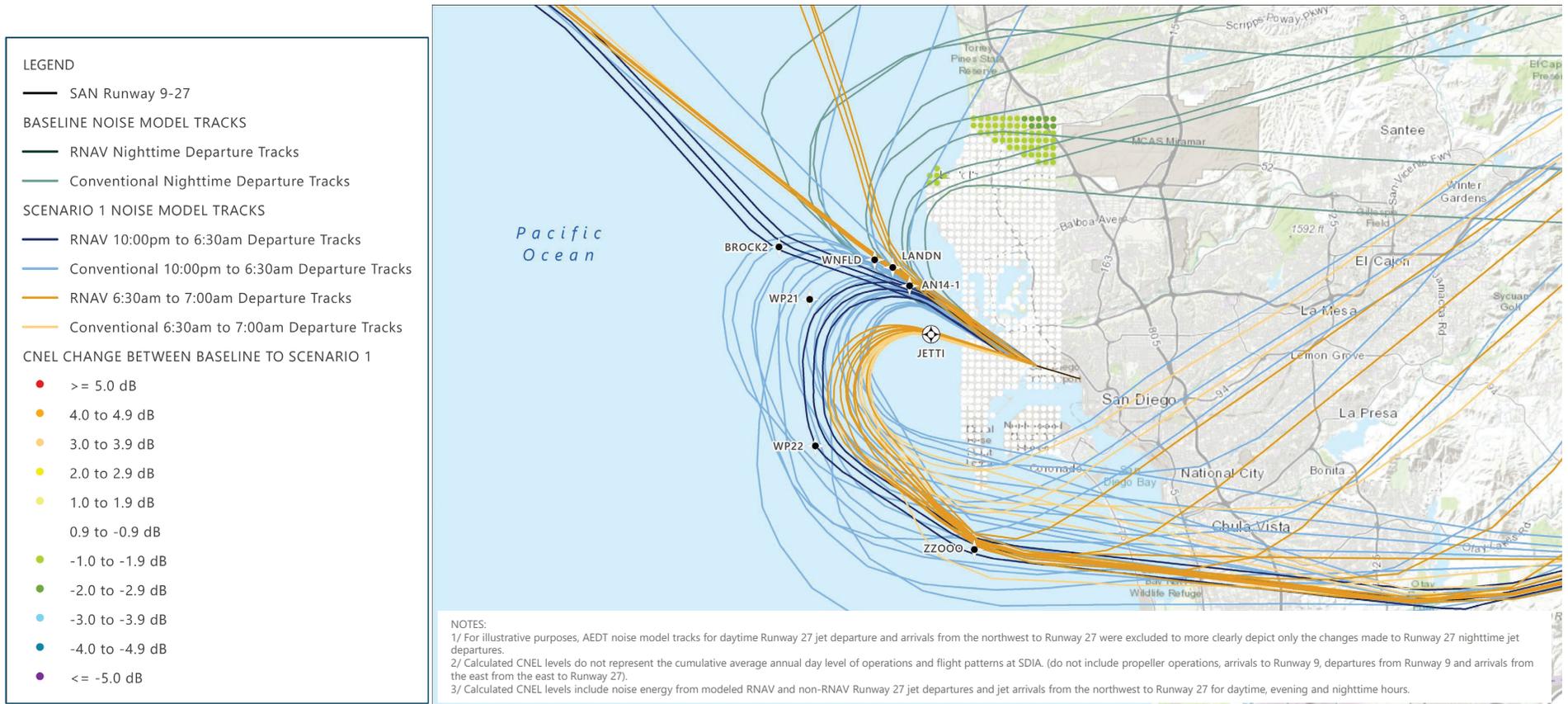
Nighttime Jet Departures to the Northwest and East – Turn at 1.5 NM



NOTE: White lines connecting waypoint to waypoint may not represent actual flight path flown by aircraft.

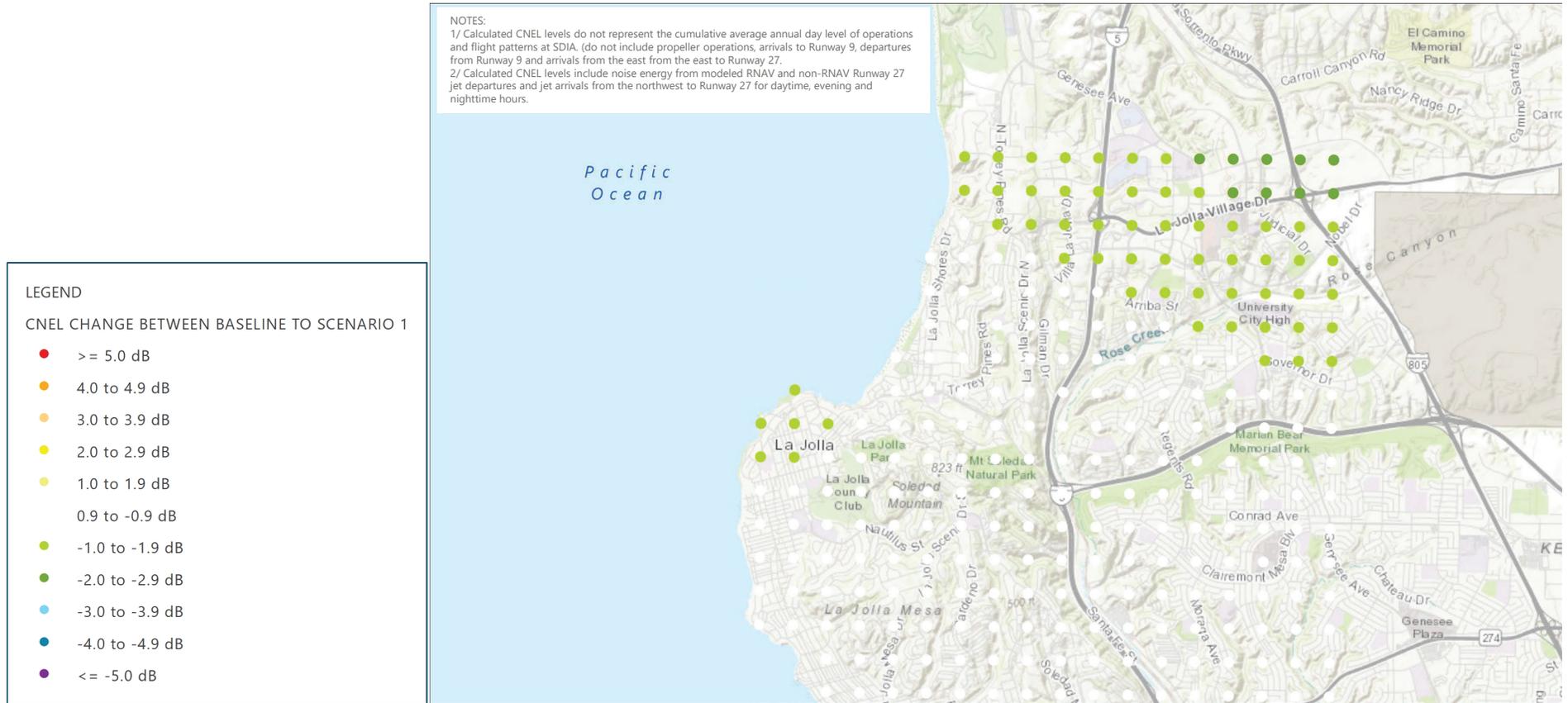
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Nighttime Jet Departures to the Northwest and East – Turn at 1.5 NM - AEDT Scenario 1/Baseline Noise Model Tracks and CNEL Changes



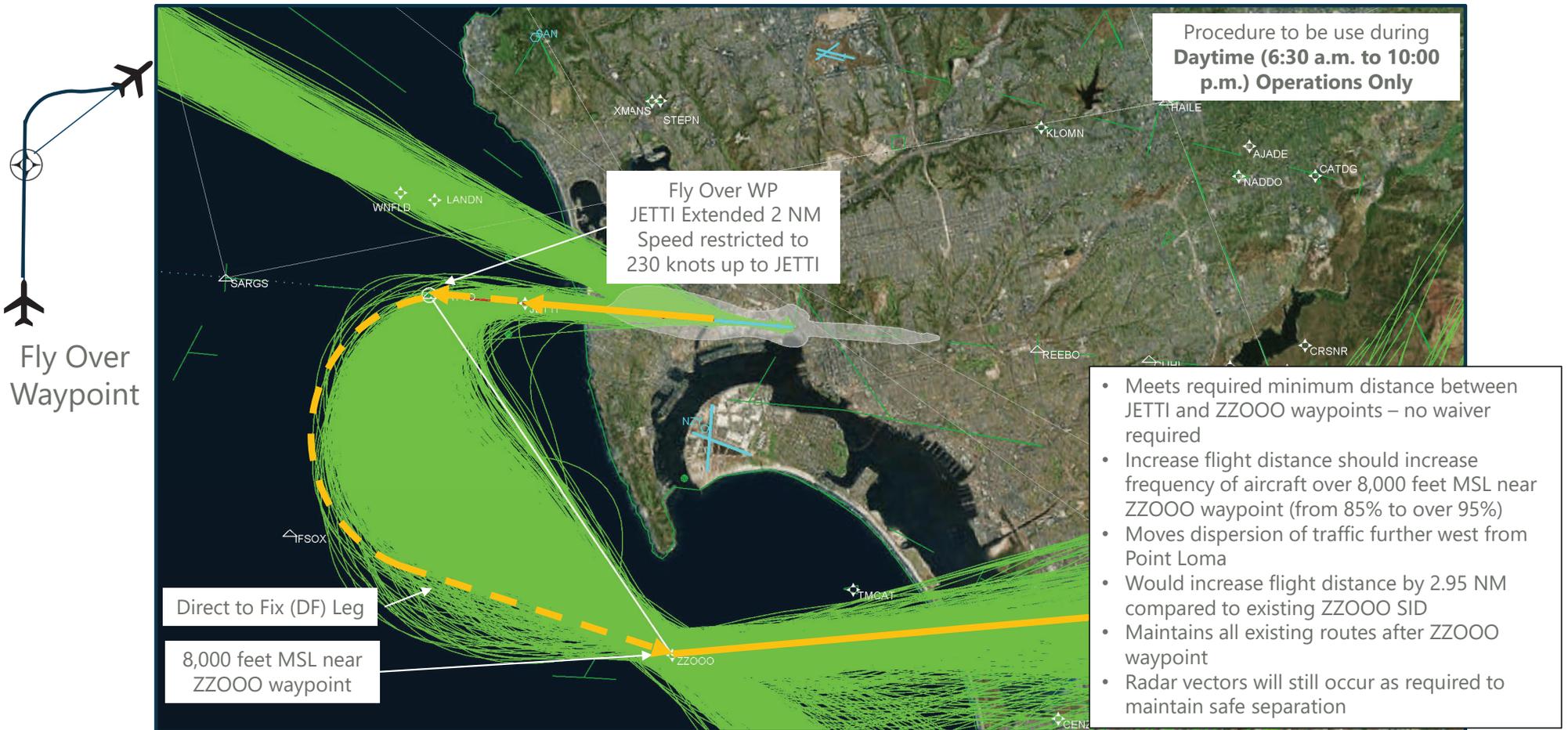
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Nighttime Jet Departures to the Northwest and East – Turn at 1.5 NM – Changes in CNEL – North - UPDATE



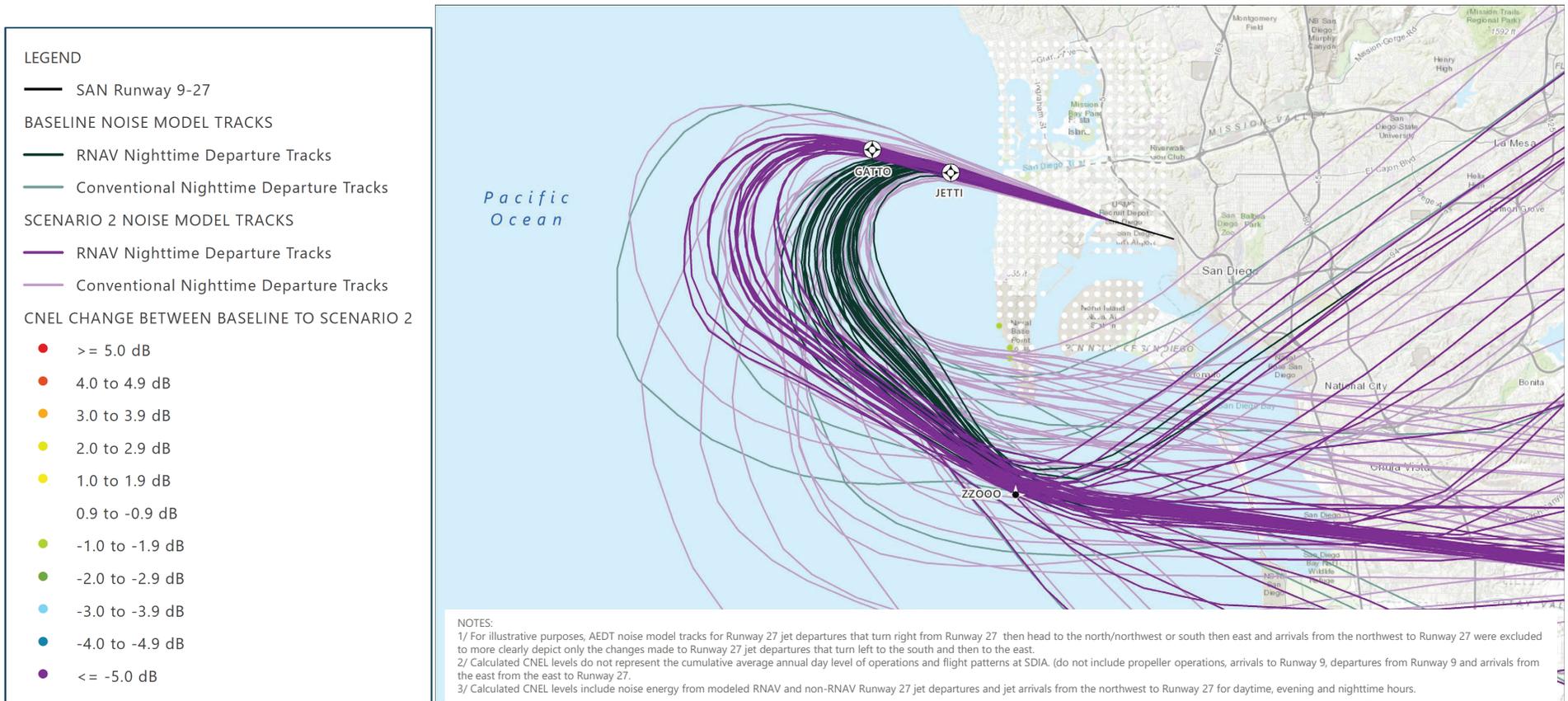
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Jet Departures to the East (6:30 a.m. to 10:00 p.m.)



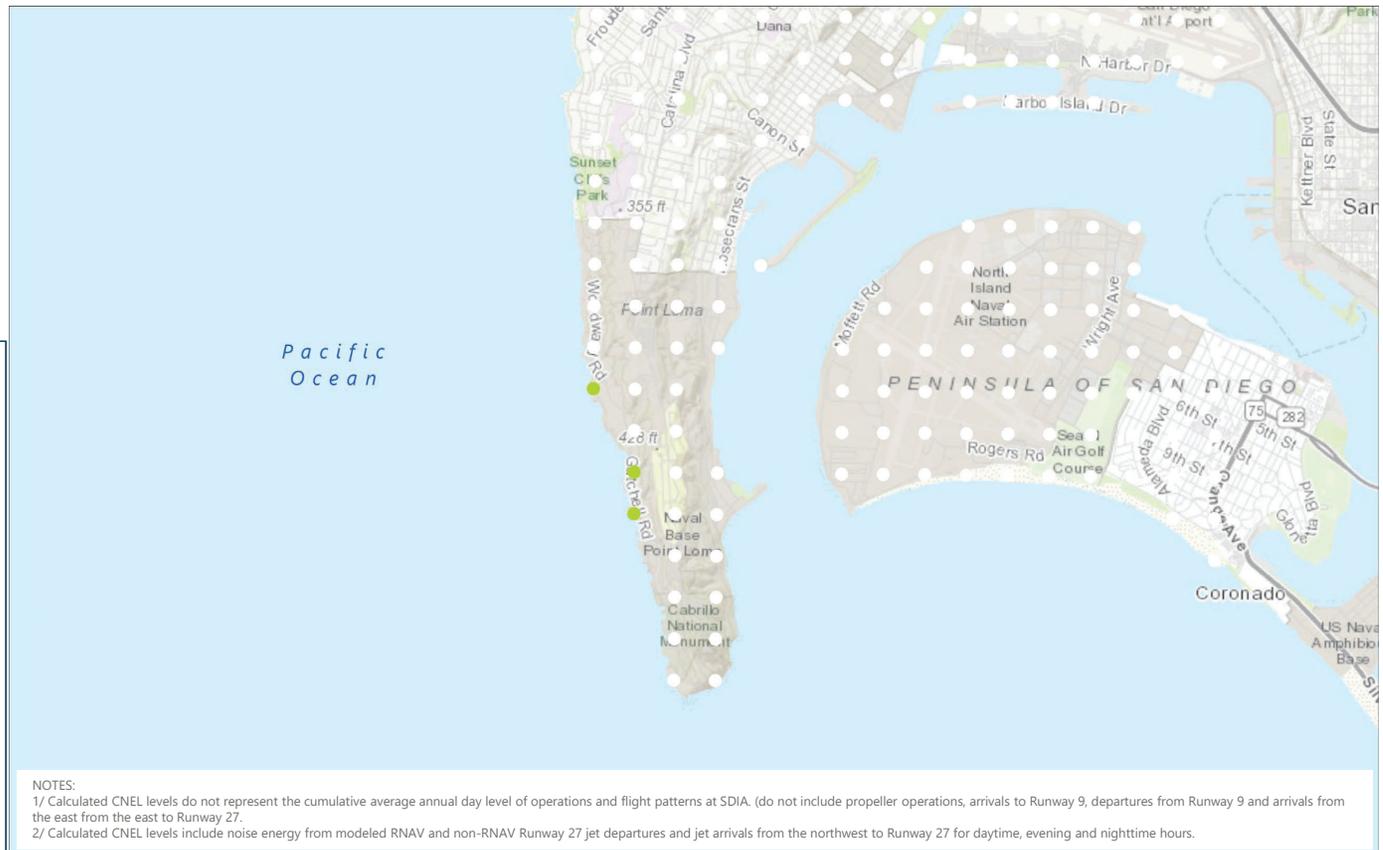
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Jet Departures to the East (6:30 a.m. to 10:00 p.m.) AEDT Alternative/Baseline Noise Model Tracks and CNEL Changes

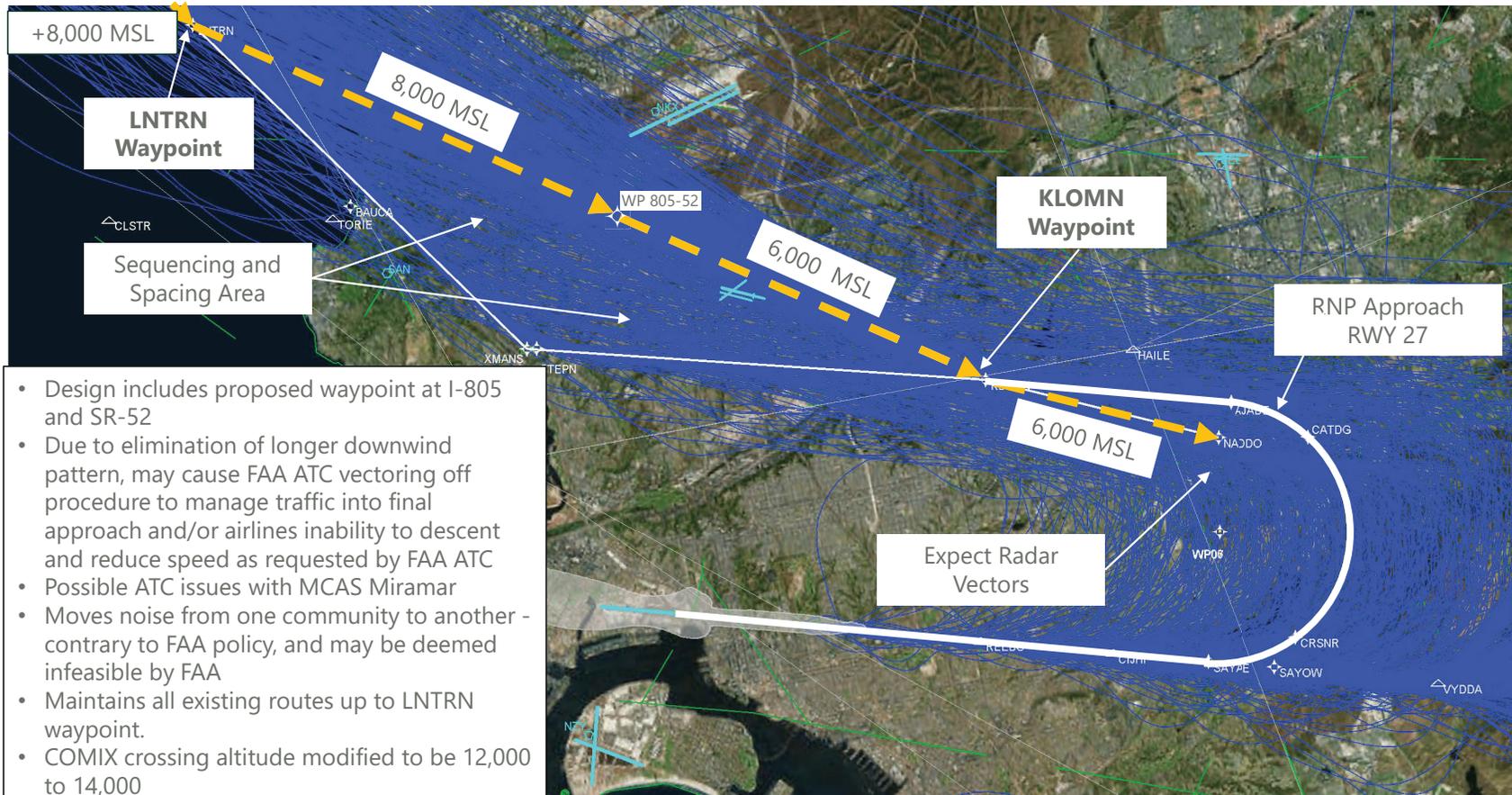


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Jet Departures to the East (6:30 a.m. to 10:00 p.m.) - Changes in CNEL - South



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All Day Jet Arrivals from the Northwest

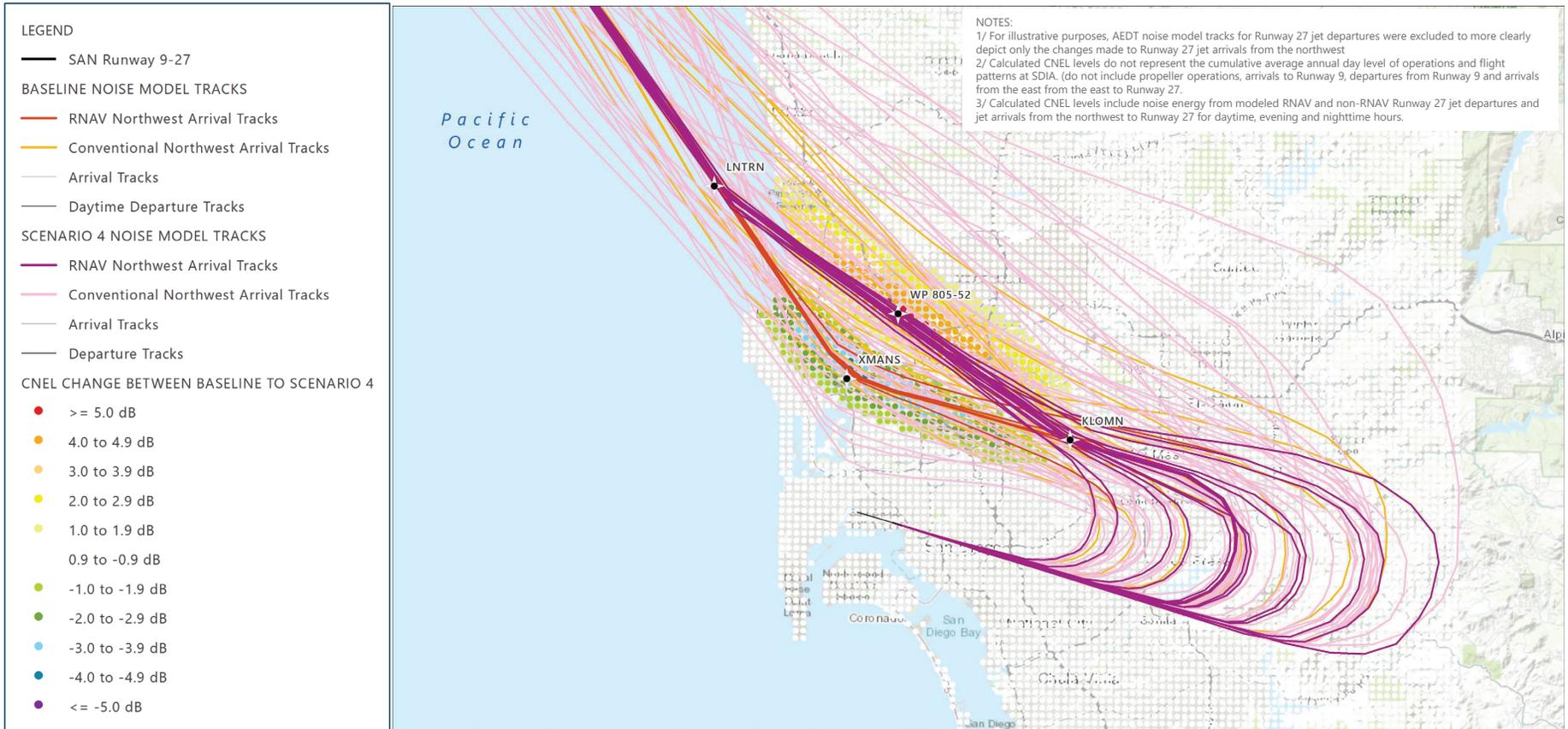


- Design includes proposed waypoint at I-805 and SR-52
- Due to elimination of longer downwind pattern, may cause FAA ATC vectoring off procedure to manage traffic into final approach and/or airlines inability to descent and reduce speed as requested by FAA ATC
- Possible ATC issues with MCAS Miramar
- Moves noise from one community to another - contrary to FAA policy, and may be deemed infeasible by FAA
- Maintains all existing routes up to LNTRN waypoint.
- COMIX crossing altitude modified to be 12,000 to 14,000
- Reduces the flight track 1 NM

NOTE: White lines connecting waypoint to waypoint may not represent actual flight path flown by aircraft.

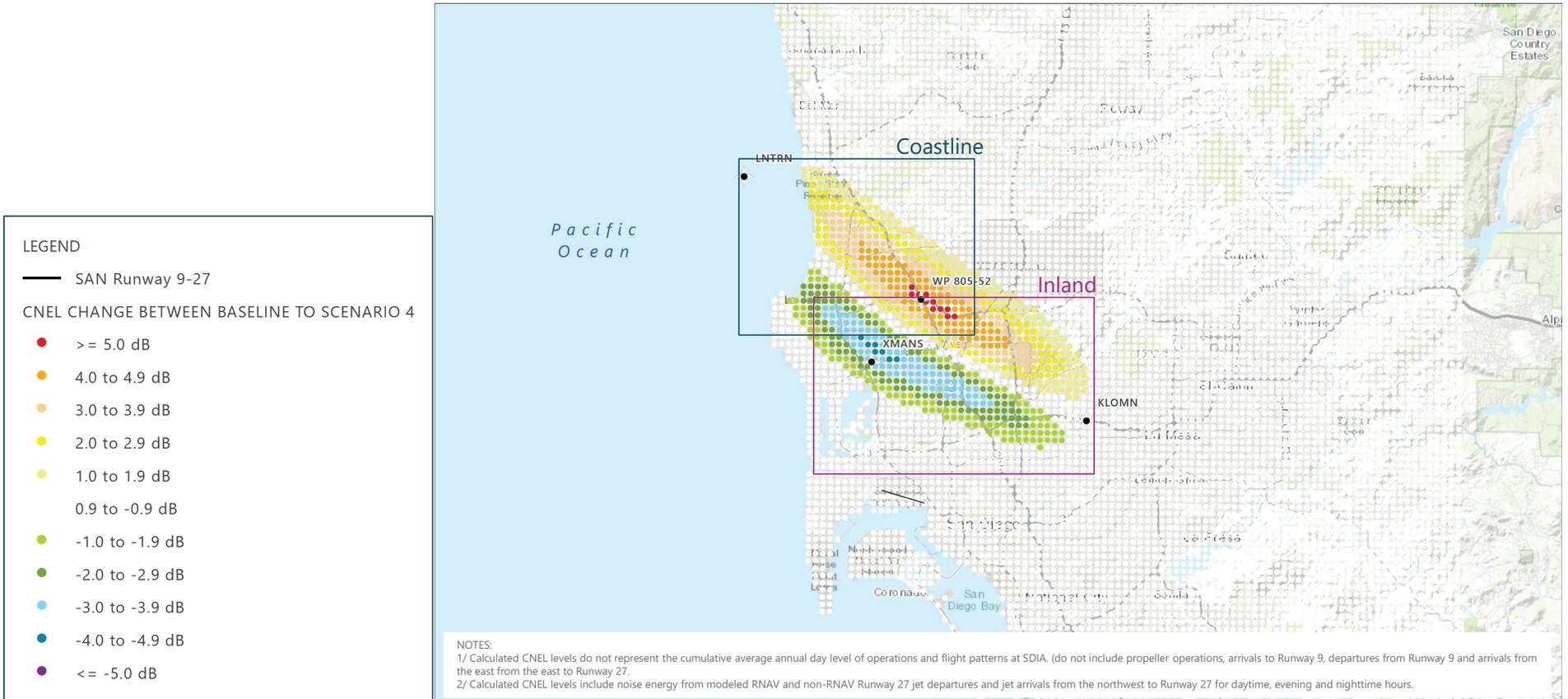
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All Day Jet Arrivals from the Northwest – AEDT Alternative/Baseline Noise Model Tracks and CNEL Changes



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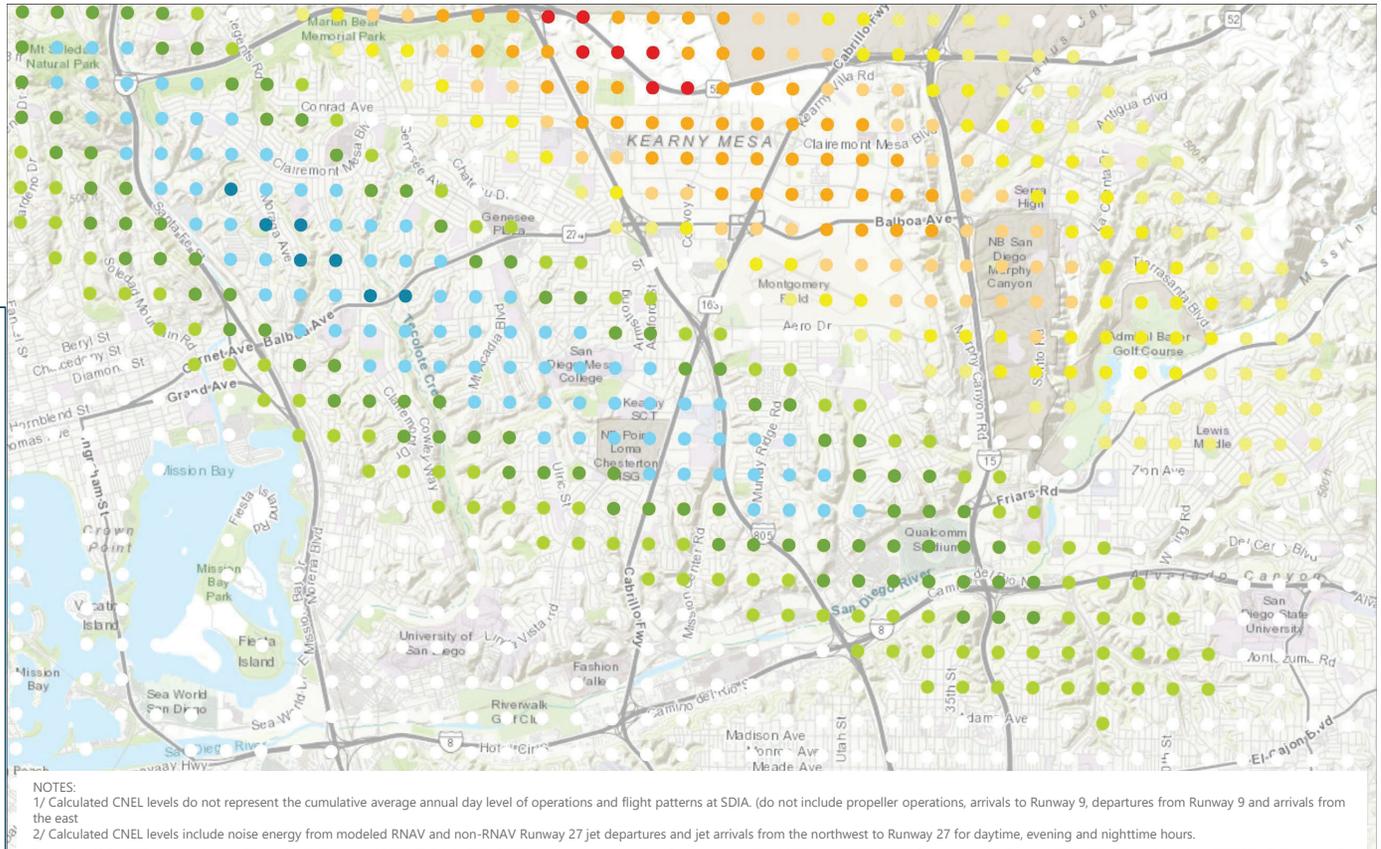
All Day Jet Arrivals from the Northwest – Changes in CNEL



All Day Jet Arrivals from the Northwest – Changes in CNEL - Coastline



All Day Jet Arrivals from the Northwest – Changes in CNEL - Inland



Consultant Recommendations

- Evaluate Nighttime Noise Abatement Departure changes (ANAC 17 and 21) under 14 CFR Part 150 Study update
- Hold nighttime departure procedure design concept for ANAC 14 and 15 until ANAC 17 and 21 are addressed in 14 CFR Part 150 Study
- Proceed forward with the Jet Departures to the East (6:30 a.m. to 10:00 p.m.) design concept
- Do **not** proceed forward with the All Day Jet Arrivals from the Northwest design concept

Early Turn and Noise Dot Evaluation

Early Turn and Noise Dot Evaluation

- **Recommendation 18** – *Early Turn* - 3rd Party review and definition of “Early Turn”
- **Recommendation 19** – *Early Turn* - Modify flight procedures to increase compliance and reduce early turns
- **Recommendation 20** – *Noise Dots* - Incorporate Red Dot waypoint locations into current and future SID’s as part of the formal SID and STAR Procedures
- **Status:** Consultant Team completed findings report and was distributed to TAC and CAC members and posted at the website on March 21, 2019

ANAC Recommendation 18 (Early Turns)

- **ANAC Recommendation:** Review current definition of an early turn, define what an early turn means and conduct comparative analysis to actual flight paths
- **Consultant Finding:**
 - Runway 27 jet departures or missed approaches that are vectored off an initial departure heading prior to 1.5 nautical miles west of the shoreline or those aircraft routed back (south and east bound) over residential areas of Point Loma north of Fort Rosecrans National Cemetery, with the exception of aircraft vectored off course to ensure safe separation.
 - The Authority’s methodology to identify early turns is appropriate based on independent definition of early turns, but should include missed approaches in the evaluation.



SOURCE: San Diego County Regional Airport Authority, February 2018 (noise dot locations); Ricondo & Associates, Inc., March 2019 (early turn violation example paths).

ANAC Recommendation 19 (Early Turns)

- ANAC Recommendation:** Work with FAA/ATC to modify flight procedures to increase compliance and reduce early turns, with consideration of aircraft performance.
- Consultant Finding:** The consultant reviewed all published departure procedures and concluded the designs comply with the early turn restriction. The early turn violations reported by the Authority to ANAC serve as evidence the existing procedures as defined increase compliance with early turn restrictions. In addition, the intent of this recommendation (to modify procedures to increase compliance) is met through the design evaluation efforts related to Recommendations 14 and 15.

Note: FAA air traffic control manages a very dynamic environment close to and several miles away from SDIA. They direct flights to address weather, safe separation, sequencing and/or operational efficiency issues present at the time an air traffic controller takes action. In many cases, management actions are related to traffic interaction several miles away from SDIA. Procedure designs cannot address every situation that requires speed or heading directions issued by a controller.

Early Turns by Year

YEAR	Early Turns	% Change
2013	829	--
2014	1,105	33
2015	1,293	17
2016	776	(40)
2017	420	(46)
2018	269	(36)
2019	125*	--

* Through March 31, 2019

ZZ000 RNAV SID implemented November 2016 and PADRZ RNAV SID implemented January 2017

SOURCE: San Diego County Regional Airport Authority, April 2019.

RNAV Use – May-December 2017

Runway 27 RNAV SIDs	Use (%)
ZZ000 RNAV	81%
PADRZ RNAV	96%

SOURCE: Ricondo & Associates, Inc., April 2019 (based on SDCRAA ANOMS radar data from May 2017 to December 2017 and maintaining RNAV path until ZZ000 or WNFLD waypoints).

ANAC Recommendation 20 (Noise Dots)

- **ANAC Recommendation:** FAA\TRACON to incorporate Red Dot waypoint locations into current and future SID's as part of the formal SID and STAR Procedures, so that Red Dots become waypoints on departure procedures and data is collected on waypoints.
- **Consultant Finding:** Incorporating noise dots as waypoints in existing or proposed SIDs is not feasible. The current Area Navigation (RNAV) departures comply with the early-turn restrictions. The focus should be to work with FAA on keeping aircraft on the RNAV departure procedures. An alternative concept to move Noise Dots #3 and #4 south of Point Loma was considered, but most likely will not be feasible based on preliminary feedback from FAA.



SOURCE: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, OpenStreetMap Contributors, and the GIS User Community, August 2018 (basemap); San Diego County Regional Airport Authority ANOMS data, 2018 (FAA noise dots); ESRI Data, 2010 (Airports); National Flight Data Center (NFDC), October 2018 (waypoint); Ricondo & Associates, Inc., October 2018 (alternatives).

Requested Actions for Consideration

Requested Actions for Consideration

- **Nighttime Jet Departures to the Northwest and East (ANAC 14 and 15)**
 - Hold nighttime departure design for ANAC 14 and 15 from further consideration until ANAC 17 and 21 are addressed
- **Jet Departures to the East (6:30 a.m. to 10:00 p.m.) (ANAC 15)**
 - Proceed forward for further consideration
- **Noise Dot Location (ANAC 20)**
 - Proceed forward with Noise Dot #4 and #5 relocation for further consideration

B.2 CAC AND TAC INPUT AND CONSULTANT TEAM RESPONSES

The Ricondo Team (the Team) considered input provided by CAC and TAC at the meetings and in writing. CAC and TAC written comments on materials presented at Meeting #2 (TAC: May 31, 2018; CAC: July 19, 2018), Meeting#3 (TAC: August 30, 2018; CAC: August 30, 2018), and Meeting #5 (TAC: March 28, 2019; CAC: March 28, 2019), and responses drafted by the Team are provided below in this Appendix.

B.2.1 CITIZEN ADVISORY COMMITTEE (CAC) MEETING #2 (JULY 19, 2018) INPUT AND CONSULTANT TEAM RESPONSES

DATE	NAME	REP.	CONCEPT	COMMENT #	COMMENT FROM CAC MEMBER	RESPONSE
7/20/18	Chris McCann	La Jolla Shores	Rec. 15 - Alternative 1	C-1	The issue of the maximum speed on the SID of 230 knots versus a more typical climb speed of 250 and the impact on climb rate did not appear to be based on any particular aircraft performance capability. Rather, the thinking seemed to simply be, if the aircraft is flying at a slower speed, resulting in a higher deck angle ("our nose would be higher") then it must be climbing faster, assuming the same thrust/weight/etc. In the case of the 737 at least (which represents a very large proportion of flights originating from SAN) a speed of 230 knots on the ZZOOO actually causes the aircraft to climb at a slower rate than a higher airspeed. I suspect this is true for most of the modern jets operating out of SAN.	The current speed restriction of 230 knots is set up to the JETTI waypoint. At the July Technical Advisory Committee (TAC) meeting, a TAC member (Alaska Airlines) stated that as aircraft speed up, the angle of climb is reduced based on the combination of aircraft performance and airline procedures, which impact climb performance. The TAC member expressed concerns related to achieving the expected altitude at the ZZOOO waypoint and inquired why 8,000 feet was recommended by the Airport Noise Advisory Committee (ANAC). The current speed restriction at the JETTI waypoint was set so aircraft can make the turn to ZZOOO waypoint. There is no speed restriction after JETTI. Therefore, increasing speed to JETTI is not feasible if the current ZZOOO Standard Instrument Departure (SID) design is maintained between JETTI and ZZOOO waypoint.
7/21/18	Mike Tarlton	Ocean Beach	Rec. 14 - ELSO	C-2	Very concerned about the committee recommendations having to do with Equivalent Lateral Separation Operations (ELSO). There were multiple variants of ELSO discussed with various recommendations sited as "feasible". Disagree that any are feasible given the premise that you should not dump noise from one community onto another. Moving the northern flight track from its current 290 heading to the "recommended" 285 heading will move noise both within the 65 CNEL and outside the 65 CNEL contour and it would be at the expense of OB residents to appease South Mission Beach Residents. The 285 heading would basically take noise that now goes over mostly commercial building in the Sports Arena Area and hits the very tip of South Mission Beach and dump that noise back on OB / Loma Portal / Point Loma Heights / Dog Beach Residents. This does not seem right and violates the "do not move noise" from one community (South Mission Beach in this case) to another community (OB / Point Loma) in this case. There is a reason the night procedures are all on the 290 heading. That is because there are fewer homes directly in the 65 CNEL contour on the 290 heading. Moving the 290 heading in the daytime to 285 will dump noise back onto residents that already are sandwiched between the 275 and 290 departure routes currently. Opposed to all the ELSO related recommendation in ANAC Noise Recommendation #14 that move WNFLD waypoint south and/or change the current northern departure heading from 290 to something closer to 275. Changing that heading to 285 is just dumping noise from South Mission Beach onto Dog Beach and does not seem fair.	The concepts apply the 10-degree divergent heading criteria described in Federal Aviation Administration (FAA) Order 7110.65X, <i>Air Traffic Control</i> , Paragraph 5-8-1(a). Aircraft are considered "safely separated" from ZZOOO Area Navigation (RNAV) SID departures if the aircraft continue to diverge at 10 degrees. An aircraft on a 275 heading and another on a 285 heading must both be assigned an RNAV departure that does not involve headings or vectors issued by air traffic control (ATC) when cleared to takeoff. While the consultant determined both a daytime and nighttime 10-degree divergent heading from Runway 27 are feasible from an operational standpoint, conflicting comments from various CAC members indicate the need for further review: members from the Mission Beach, Pacific Beach, and La Jolla communities support the feasibility of Equivalent Lateral Spacing Operations (ELSO), while members from Ocean Beach and Point Loma oppose ELSO because it would move flight tracks closer to, and over, their communities. In order to determine potential noise impacts, two ELSO procedures (one daytime and one nighttime) will be designed to qualitatively evaluate the noise effects of these options.
7/25/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 14 - ELSO	C-3	Strongly support further diligence on the ELSO 10degree separation concept. As currently applied in Atlanta, and as contemplated for San Diego, this appears to have strong merit. As I understand the proposal, the WNFLD waypoint could be moved south of its existing location. ELSO could be used to move departure tracks closer together, increasing the number of departure tracks thereby increasing the opportunity for dispersion. Alternatively ELSO could enable building a unique track over the least noise sensitive areas.	Refer to response to Comment #C-2.
7/25/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 14 - ELSO	C-4	Recognize that an ELSO recommendation might entail a longer FAA review process. However, in my view it is more important to get it right from the perspective of mitigating noise on the community and particularly La Jolla, as opposed to a less optimal procedure that might progress faster in the FAA review process. While no one wants delay, we do want long term optimal relief.	Comment noted.
7/25/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 14 - Daytime	C-5	Propose modifying the PADRZ/CWARD SID by changing the initial departure leg type to VI/CF followed by an RF leg, followed by TF to KERNL, with no additional changes to the rest of the route. This configuration would allow aircraft to depart the runway over the same initial ground track that they fly now, until reaching approximately 2.2 miles from the runway. At that point aircraft would execute a Radius to Fix (RF) turn to the west over the least populated areas, while also minimizing bank angle and reflected noise to the north. At the completion of the turn, aircraft would intercept a Track to Fix (TF) leg that diverges from the ZZOOO SID by 10 degrees using the ELSO rules. This design would reduce aircraft noise affecting La Jolla without negatively impacting ATC operations. We recognize that not all aircraft are currently capable of flying these types of SIDS, but as fleets become more sophisticated these routes can be increased.	For response to ELSO, refer to response to Comment #C-2. The proposed concept designed by La Jolla's consultant assumes ATC can change divergent headings while in flight after the initial departure from a runway. The La Jolla consultant's design attempts to maintain the initial runway heading currently in use to avoid changing noise exposure in areas exposed to the Community Noise Equivalent Level (CNEL) 65 or higher. The proposed La Jolla concept diverges aircraft at 15 degrees, converges aircraft back towards traffic on a 275 heading, and then diverges aircraft again when reaching a 285 course. FAA Order 7110.65X, <i>Air Traffic Control</i> , Paragraph 5-8-1(a) only recognizes divergence from the end of a runway, and it does not indicate that aircraft can diverge, converge, and then diverge again. The consultant team asked the FAA Southern California TRACON (SCT) about the diverge-converge-diverge concept design for an RNAV departure. FAA SCT expressed concerns related to above described portion of the concept and indicated that it most likely would not accept the design due to the convergence element. Second, the consultant team consulted with FAA Flight Standards staff to determine if the divergence criteria in FAA Order 7110.65X is limited to starting at the departure end of a runway. FAA Flight Standards staff confirmed that divergent headings described in Paragraph 5-8-1(a) are limited to the end of a runway, as depicted on Figure 5-8-2 in FAA Order 7110.65X (page 5-8-2. The proposed design also includes a Radial-to-Fix (RF) leg, which creates an arc type of route. This type of design requires more accurate navigation performance or Required Navigation Performance (RNP), which, in turn, requires additional equipment in the aircraft and additional training for pilots to be authorized to fly the procedure. As indicated by La Jolla's consultant, approximately 50 percent of all operators have the equipment and authorized pilots to fly the procedure. Therefore, another SID would still be required to accommodate those operators that are not equipped or authorized to operate an RNP procedure. Establishing two different departure procedures heading in the same direction

DATE	NAME	REP.	CONCEPT	COMMENT #	COMMENT FROM CAC MEMBER	RESPONSE
						(continued) add complexity to ATC operations and traffic management. For example, two flights on the same SID may conduct visual separations because both are on the same predictable route. If the aircraft are on different routes, the trailing aircraft may not be able to maintain visual separation from the lead aircraft. In this situation, FAA ATC would need to provide directions to maintain safe separation. This can affect the efficient movement of aircraft, and, therefore, would not likely be deemed feasible during the first two steps of FAA's PBN Implementation process. The existence of two procedures headed in the same direction can cause confusion with both controllers and pilots. FAA may consider introducing potential for confusion as introducing a new safety risk. Introduction of a new safety risk would not be considered feasible.
7/25/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 14 - Nighttime Alternative 1	C-6	Turn at 1.5 NM, to keep nighttime departures further south of La Jolla. Consider revising the PADRZ SID by moving both the WNFLD and KERNL waypoints 1.5NM south of their present locations. This will ensure aircraft proceed more directly off the coast without paralleling the shore and adds minimal distance to PADRZ. Use "fly by" rather than "fly over" waypoints, to keep traffic further away from the La Jolla shore.	Based on the intent of Recommendation 14, the consultant team's recommendation is to proceed with a nighttime departure procedure design that uses a fly-by waypoint (aircraft near the waypoint, but not over it), under which aircraft follow a westerly heading to remain farther south of La Jolla compared to the existing PADRZ SID. A fly-over waypoint (aircraft fly over the waypoint) would cause a more unpredictable turning path north of the waypoint and would place traffic closer to La Jolla shoreline compared to a fly-by waypoint design. Aircraft will turn inside of the fly-by waypoint, which maximizes the ability to stay as far south as possible from La Jolla. Other CAC members requested a fly-over waypoint to ensure aircraft comply with the Noise Dot Agreement. The draft fly-by procedure design would also keep aircraft from turning until they are 1.5 nautical miles (NM) from the shoreline by estimating where aircraft would likely begin the turn towards the west. The procedure design would involve a new waypoint to guide traffic in a westerly direction; therefore, moving WNFLD and KERNL waypoints is not necessary.
7/25/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 16 - New Concept	C-7	Discussed the COMIX TWO (RNAV) Arrival way points, and my question and suggestion that flights be routed from COMIX directly to KLOMN, rather than through or via LNTRN. This would appear to cover less distance, be more fuel efficient and route arrivals over more unincorporated and undeveloped land, further away from La Jolla. I believe that route would be closer to the Miramar landfill and the I805/SR52 intersection without infringing on Miramar Air Station's airspace. Fellow CAC member Alan Harris discussed that flight arrival data from pre-2013 shows flights on this sort of path, substantially further north from La Jolla. The fact that this arrival path was used in the past suggests its viability. Please consider whether this alternative is feasible	Directing arrival traffic from the COMIX waypoint to KLOMN waypoint would shift traffic crossing the shoreline over the southern portion of the Torrey Pines Golf Course (Alternative 1 design) to over Del Mar residents. Moving arrival traffic closer to Torrey Pines Golf Course would likely be preferred over establishing a new route over a residential area. Additionally, TAC airline members expressed concerns about procedures, such as the COMIX STAR, that require aircraft to descend and to reduce speed at the same time. The TAC airline members are concerned that Recommendation 16, Alternative 1 would require additional measures during descent while reducing speed (e.g., use of speed brakes) in order to comply with the procedure. This procedure will especially challenge newer generation aircraft with modern wing lift capabilities. The shorter distance of the proposed concept from the COMIX waypoint compared to Recommendation 16, Alternative 1 would most likely exacerbate concerns related to descending and speed reduction, and therefore, would not likely be feasible. Historically, the FAA has changed procedures in this area over the years as RNAV technology became more prevalent. The first RNAV for arrivals from the northwest was the BAYVU STAR, which was amended five times after initial implementation. Prior to the BAYVU STAR, a conventional STAR based on ground-based navigation and radar vectors was in place. If the procedure defined as Recommendation 16, Alternative 1 is deemed feasible, the FAA will compare future operations under it to a "No Action" condition in the same year, as required under the National Environmental Policy Act (NEPA) by following FAA Order 1050.1F, <i>Environmental Impacts: Policies and Procedures</i> , to determine if the proposed procedure would be expected to cause significant environmental impacts and reportable changes. The consultant team expects to conduct the comparison using FAA's Aviation Environmental Design Tool (AEDT) model if a design concept is deemed feasible based on design parameters. The No Action condition would be defined by conditions that would be in place if the proposed change is not implemented. Therefore, when comparing the proposed procedure to the No Action condition, the No Action condition would be represented by existing traffic patterns rather than a range of historical traffic patterns/procedures. Because the justification for the proposed procedure would be to reduce community noise exposure, it is unlikely that FAA would approve a procedure that shifts noise exposure from one community to another based on the comparison between No Action (existing traffic patterns) and the Proposed Action (proposed procedure change).
7/25/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 16 - LNTRN Altitude	C-8	If the COMIX to KLOMN flight path described above is not feasible, consider changing LNTRN to at or above 9,000' to better reflect the old BAYVU STAR profile over La Jolla.	Completed. The FAA modified the crossing altitude at the LNTRN waypoint from at or above 8,000 feet mean sea level (MSL) to at or above 9,000 feet MSL. This change is reflected in the COMIX 2 STAR procedure published May 28, 2018.
7/25/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 16 - Alternative 3	C-9	As discussed during the July 19 meeting, La Jolla advocates for rejecting ANAC Noise Recommendation 16 Alternative 3 as a non-starter for La Jolla. The path would bring flights closer to La Jolla and increase the noise impact over La Jolla Shores and the Muirlands.	Recommendation 16, Alternatives 2 and 3 concepts have been removed from further evaluation.

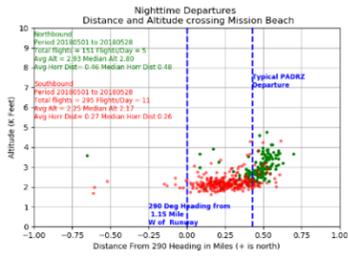
DATE	NAME	REP.	CONCEPT	COMMENT #	COMMENT FROM CAC MEMBER	RESPONSE
7/25/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 16 - Alternative 1	C-10	There is general public consensus that the "no shifting noise" policy is being unfairly applied in San Diego. Measuring flight noise as of the current date, rather than considering the conditions existing prior to implementation of NextGen Metroplex, misses the mark. The FAA changed flight paths by implementing Next Gen but did not reject those changes because they moved noise onto previously unaffected communities, like La Jolla. It is now paradoxical to refuse to make remedial changes because they would shift noise back to the areas previously impacted prior to the NextGen Metroplex implementation.	Under the SoCal Metroplex, the COMIX STAR flight track was shifted 1,200 feet south over the La Jolla area but the altitude as aircraft crossed the shoreline was increased. In a study conducted by BridgeNet International, (https://bit.ly/2DhDD6i starting on Page 22) it was determined that the "...changes were not in themselves sufficient to result in measurable changes in noise." Furthermore, analysis of 18 years of historic data (the SDCRAA's Airport Noise and Operations Monitoring System [ANOMS]) shows that, historically, aircraft were dispersed over the La Jolla neighborhoods. When the FAA implemented the first RNAV (satellite-based) procedure (BAYVU 1), the flight corridor became increasingly concentrated. The images below show 2 days of San Diego International Airport (SDIA) arrivals by year. Refer to response for Comment #C-7 regarding noise comparison analysis to determine potential impact.
						
<p>Source: Radar tracks based on the San Diego County Regional Airport Authority's Airport Noise and Operations Monitoring System (ANOMS), accessed September 2018.</p>						
7/25/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 15 - Alternative 1	C-11	Modify the ZZOOO SID by moving the JETTI waypoint two miles, or at a minimum one mile, further offshore. Use "fly by" rather than "fly over" way points. This should reduce the noise impact to the La Jolla shoreline without overly burdening the ATC system.	The current design concept for Recommendation 15, Alternative 1 moves the JETTI waypoint 2 NM west of its current location and maintains the fly-over waypoint designation.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 - Initial Heading	C-12	All right turn SID's (PEBLE 6, CWARD and PADRZ 2) should be slightly modified to restrict WNFLD, LANDN and RADAR headings no greater than 290 degrees from end of runway (rather than 287 to Noise Dot #2) to reflect 15 degree divergence (275 to 290); 275 (now JETTI) to 290 was the original commitment by FAA in 1998	Evaluating the initial right turn heading for Runway 27 departures should be evaluated (among other proposed initial headings, such as a 10-degree divergent heading) as part of the Title 14 CFR Part 150 Study update process (Part 150 Study update process) to assess the full potential effects on areas exposed to CNEL 65 or higher. Therefore, proposals to change the initial right-turn heading would be evaluated to cumulatively assess potential changes to the CNEL 65 and higher exposure area rather than rejecting these proposals outright.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 - Initial Heading	C-13	Takeoff minimums should also be modified to preclude headings right of 290 degrees or left of 275 as is currently occurring after attaining 500-520' causing significant impacts to South Mission Beach, and Fleetridge (Point Loma) as our tracking data indicates; "275 to 520 feet" is not working to restrict tracks as low as 265 and as high as 295 to 305 degrees ("S" curve); consider alternative Flyover waypoint at 1+ miles at 275 from end of runway, equivalent to the average 520' altitude location, replacing 520' altitude requirement	Refer to response to Comment #C-12. Take off minimums have the potential to change the CNEL 65 and higher exposure area and, thus, should be studied in the Part 150 Study update process.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 - Fly Over Waypoint	C-14	WNFLD\LANDN should be moved to this 290 heading (satisfying 15-degree divergence) and become a "Fly Over" waypoint; JETTI has successfully managed left turns as a "Fly Over" so right turns should have the same restrictions	Refer to response to Comment #C-12. Moving the WNFLD and LANDN waypoints may change the overflight location along the initial heading, which has the potential to change the CNEL 65 and higher exposure area. Therefore, this proposal should be studied in the Part 150 Study update process.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 20 - Incorporate Red Dot Waypoint Locations into current and future SIDs	C-15	Red Noise Dots should be relocated to the JETTI and WNFLD Fly Over waypoints; Variances from these "fly Over" requirements are what we need to monitor and enforce; cushioned locations offering a wider gate 265 to 295 degrees only distort the facts	Incorporating preferred waypoint locations into final design concepts for Recommendations 14 and 15 is recommended. The only fly-over waypoint carried forward is in Recommendation 15, Alternative 1, which maintains JETTI as a fly-over waypoint. The consultant team recommends for Recommendations 14 and 15 nighttime operations that include a right turn from Runway 27 based on existing PADRZ SID design, and a fly-by waypoint where aircraft change heading to a westerly direction to remain south of La Jolla. Refer to response to Comment #C-6 for a discussion of the benefit of fly-by waypoints. Recommendation 14, Night Alternative 1 would involve a new waypoint (depicted as BROCK-2) where traffic will head towards in a more westerly direction before heading northwest, therefore, rendering the use of WNFLD and KERNL waypoints not applicable. For eastbound departures that turn left, the design will route aircraft traffic west and south of Point Loma. This procedure will reduce the vectoring that currently occurs after 10:00 pm. In addition, other members of CAC proposed a design that would turn traffic towards the west prior to 1.5 NM from the shoreline. The consultant team plans to design a concept that turns departures west as soon as possible without changing initial headings of overflight patterns within the CNEL 65 and higher exposure area.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 - Daytime Issues	C-16	"BORDER 7 could be modified slightly: adjust slightly at PGY 19 (left turn to 123 degrees) to accommodate 3 NM separation from PEBLE, but only if still an issue after WNFLD moved to 290	Moving the BORDER SID south is not feasible because it would not address the 3-NM separation requirement between the PADRZ SID and the ZZOOO SID. If the BORDER SID was moved south, traffic on the PADRZ SID would still need to maintain a 3-NM separation from traffic over the JETTI waypoint. If the JETTI waypoint is moved farther west (per

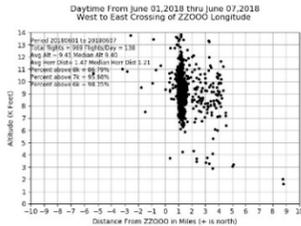
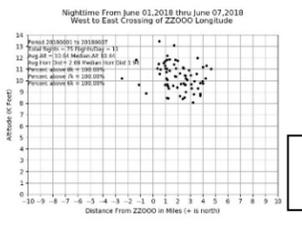
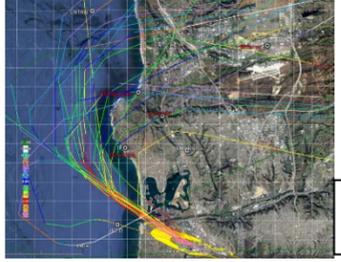
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					(continued) degrees; insert ZZOOO prior to POGGI to honor distance from Point Loma; very modest adjustment in actual track as current tracks cut the corner shy of 080 to POGGI	(continued) Recommendation 15, Alternative 1), the 3-mile separation from PADRZ SID would be still be required. In addition, it is anticipated that the FAA would require that the ZZOOO SID be similar to the proposed change to the BORDER SID to provide a consistent path between the two procedures in order to (1) reduce the complexity of managing traffic and (2) maintain the ability for visual separation between aircraft on a procedure.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15 - Alternative 1	C-17	Eastbound tracks (left turns) need to be: a) pushed west of coast per Alt 1, b) pushed higher at ZZOOO and c) restrained from being vectored north of ZZOOO by ATC	Recommendation 15, Alternative 1 extends traffic farther west along the 275 heading prior to turning south and extends the route distance so aircraft can reach higher altitudes near the ZZOOO waypoint. A published procedure does not prevent an air traffic controller from managing traffic (i.e., by vectoring) to maintain a safe and efficient operation. Some CAC members indicated concerns that increasing distance along the route would give reason for an air traffic controller to vector traffic off the ZZOOO SID more frequently. While the consultant team cannot anticipate the frequency of vectoring by an air traffic controller based on track distance or other conditions, this vectoring concern has been shared with FAA SoCal TRACON staff.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15 - Alternative 1	C-18	JETTI extension from 1 to 2 miles offshore, while maintaining 230 kts speed restriction to increase altitude (for most aircraft) at ZZOOO is preferable, as long as it does not encourage ATC vectoring that eliminates ZZOOO, causing increased tracks between Red Noise Dots #4 and #5 and ZZOOO	Refer to response to Comment #C-1.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 - Nighttime Alternative - Initial Heading	C-19	Takeoff minimums should also be modified to preclude headings right of 290 degrees as is currently occurring after attaining 500-520' causing significant impacts to South Mission Beach, as our tracking data indicates; "275 to 520 feet" is not working to restrict tracks as high as 295 to 305 degrees	Refer to response to Comment #C-13.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 - Nighttime Alternative	C-20	WNFLD\LANDN should be moved to this 290 heading (satisfying 15-degree divergence) and become a "Fly Over" waypoint; JETTI has successfully managed left turns as a "Fly Over" so right turns should have the same restrictions	Refer to response to Comment #C-12 regarding feasibility of the initial heading from Runway 27. Recommendation 14 Alternatives for nighttime operations do not rely on LANDN and WNFLD waypoints. A new proposed waypoint south of LANDN and WNFLD would be used to direct aircraft in a westerly direction to stay south of La Jolla after passing the first fly-by waypoint (1.5 NM from the shoreline or a point between the shoreline and 1.5 NM out). Designating this turning point as fly-by best meets the intent of Recommendation 14. The design maintains the existing initial heading design in order to maintain existing overflight traffic patterns over areas exposed to CNEL 65 and higher. If a recommended initial right turn heading is proposed during the Part 150 Study update process, the final design may be modified to accommodate the heading.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 - Alternative 1	C-21	Alternative 1 Nighttime with "Fly Over" at LANDN (or close thereto at 290 degrees), when moved to 290 degrees is most consistent with Agreement and is consistent with Recommendation 15 Alternative 3	Assuming the commenter is referencing the 1.5-NM turn in the Noise Dot Agreement, a fly-by waypoint design can also meet the intent of the Noise Dot Agreement as long as aircraft do not turn until 1.5 NM from the shoreline. The concept with a fly-by waypoint is equally predictable to meet the intent of the Agreement and best meets the intent of Recommendation 14. Refer to response to Comment #C-12 for discussion of the initial right-turn heading.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 - Alternatives 2 and 3	C-22	Concern over noise blast to Mission Beach\Bird Rock at left turn at LANDN	Recommendation 14, Night Alternatives 2 and 3 will not be carried forward due to potential changes in departure flight patterns from Runway 27. The designs are expected to produce less predictable paths and cause aircraft to fly over areas not currently exposed to nighttime overflights. The consultant team reviewed a design that would turn aircraft in a more westerly direction between the shoreline and 1.5 NM west of the shoreline without changing initial heading from the runway, because changes to the initial heading may affect residents in areas exposed to CNEL 65 or higher. If a right-turn heading is proposed as part of the Part 150 Study update process, it can be incorporated into the concept as well as the Recommendation 14 Night Alternative 1 concept.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 - Alternatives 2 and 3	C-23	Delete Alternative 2 and 3	Refer to response to Comment #C-22.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec.15 - Night Alternative 3 - Initial Heading	C-24	Move LANDN and WNFLD to 290 degrees (currently 293 degrees)	Refer to response to Comment #C-20.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15 - Night Alternative 3 - Initial Heading	C-25	Takeoff minimums should also be modified to preclude headings right of 290 degrees as is currently occurring after attaining 500-520' causing significant impacts to South Mission Beach, as our tracking data indicates; "275 to 520 feet" is not working to restrict tracks as high as 295 to 305 degrees	Refer to response to Comment #C-13.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15 - Night Alternative 3 - Initial Heading	C-26	WNFLD\LANDN should be moved to this 290 heading (satisfying 15-degree divergence) and become a "Fly Over" waypoint; JETTI has successfully managed left turns as a "Fly Over" so right turns should have the same restrictions	Refer to response to Comment #C-20 for movement of WNFLD/LANDN waypoints. An aircraft heading to ZZOOO and an aircraft heading to the northwest share the same initial route from Runway 27, so the point where they diverge should be the same waypoint and type (i.e., fly-by or fly-over). This design provides for safe separation between aircraft. A fly-over waypoint for Recommendation 15 Night Alternative 3 and a fly-by waypoint for Recommendation 14 Night Alternative 1 would introduce a new safety risk by potentially losing safe separation between aircraft (3 NM or more) as the lead aircraft turns left to the south after flying over the waypoint, and the aircraft following initiates a fly-by inside turn to the left to the west at the same waypoint. The FAA cannot consider a procedure feasible if it introduces a new safety risk in the ATC system. A fly-by waypoint best meets the intent of Recommendation 14, and it is not expected to cause aircraft currently vectored west and south of Point Loma to be lower than what occurs today. The design for Recommendation

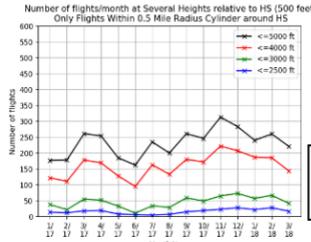
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						(continued) 15 Night Alternative 2 with a fly-by waypoint will also keep aircraft farther west of Point Loma and direct aircraft to the ZZOOO waypoint, which is expected to reduce headings issued by ATC that keep aircraft south of the Noise Dots but still over the southern tip of Point Loma.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15 - Night Alternative 3	C-27	Maintain 230 kt speed, Fly Over and Fly By restrictions	Aircraft heading in a northwesterly direction from Runway 27 do not currently have an airspeed restriction. The 230-knot speed restriction at JETTI for the ZZOOO SID is required to make the turn as it was designed. The proposed design for Recommendation 15 Alternative 3 does not require an airspeed restriction because the procedures directs aircraft to join tracks between waypoints. This design widens the turn compared to the existing ZZOOO SID procedure. The wider and more predictable path is expected to keep aircraft farther west of Point Loma, and to increase the frequency of flying at or above 8,000 feet MSL near the ZZOOO waypoint.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15 -Night Alternative 3	C-28	Fly By at WP2 and higher altitude at ZZOOO is benefit to Point Loma and to Coronado	Comment noted.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15 - Night Alternative 2	C-29	Delete Recommendation 15 Nighttime Alternative 2	Refer to response to Comment #C-26. Recommendation 15, Night Alternative 2 provides a better balance in meeting the intent of Recommendations 14 and 15 compared to Recommendation 15 Night Alternative 3, and it would not potentially introduce new safety risks or inefficiencies in the ATC system.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15 - Night Alternative 3 - Initial Heading	C-30	Nighttime traffic does not require divergence as all departures should be at 290, consistent with Agreement; this is by default a traffic constraint that honors the Agreement and needs to be maintained in the future	The commenter is correct. Aircraft are directed via a procedure or by headings issued by ATC along a similar path at night. Divergence is not applicable for nighttime departures from Runway 27, because a single heading is issued by ATC for all departures on Runway 27.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec.16 - Alternative 1	C-31	Historical alignment of approach was much further north, crossing the coast at south Del Mar (at the slough), close to Miramar and over the landfill. This is the least populated route.	Refer to response to Comment #C-10.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 16 - Alternative 1	C-32	"COMIX to KLOMN; Establish two recommendations; (1) pre Class B correction = now, and (2) post Class B correction = future; both to include: a. Move COMIX back to BAYVU location, 1.06 NM northeast b. Remove\minimize dog leg; move LNTRN, XMANS north c. Move KLOMN north and east (pre and further north post Class B correction) d. Adjust XMANS to altitude consistent with descent gradient, without dog leg e. Maintain altitude as long as possible; descent gradient (375'/mile) to reach KLOMN at 6,000, allows LNTRN at or above 11,000 MSL (LNTRN to KLOMAN = 15 NM or 4,950 altitude change; 6,000 + 4950 = 10,950 or 11,000 (without cushion)) f. Shifts noise BACK to original and much less populated area"	Refer to response to Comment #C-7 regarding the COMIX to KLOMN recommendation. As discussed at the kick-off meeting, this study effort will assess the feasibility of procedure designs within current procedure design criteria and ATC boundaries, which includes the Class B airspace. FAA is conducting a Class B redesign effort but provided no clear indication when and if the proposed redesign will be implemented. The proposed redesign does not change the operation of aircraft in the area in which aircraft descend between LNTRN and KLOMN. East of KLOMN, the redesign proposal adds a shelf that extends down to 4,000 feet MSL instead of the current 4,800-foot floor, which could keep aircraft descending along the downwind path within Class B airspace. a.) Relocating COMIX to another location can have a detrimental effect on maintaining an optimized descent from the enroute portion to COMIX and deconflict with other traffic in the airspace, which was a critical consideration in the design of COMIX. This occurs in the area where the Los Angeles Air Route Traffic Control Center (LA ARTCC) transfers control over to SCT. The consultant team recommends maintaining the current location of the COMIX waypoint to minimize potential feasibility concerns from FAA LA ARTCC and SCT. b.) Recommendation 16, Alternative 1 increases the attitude at LNTRN up to 10,000 feet MSL (consistent with the ANAC recommendation), removes the dog leg so traffic heads direct to the KLOMN waypoint, and adds a new waypoint over the I805/SR52 intersection with an altitude that is consistent with required descent gradients. c.) KLOMN serves as the initial approach fix to the RNP Runway 27 approach. Any change to KLOMN will require a change to the RNP Runway 27 approach location. Moving KLOMN farther east and/or north could require moving the base turn for the RNP approach farther east due to required optimal descent-rate and leg-length requirements prior to starting a turn to the south towards the final approach. Moving KLOMN farther east would also introduce potential terrain issues and conflict with arrivals from the northeast. Moving KLOMN would also change traffic routes along the downwind as traffic descends, which could cause additional noise concerns. Finally, moving KLOMN east and/or north also may result in potential conflicts with other airport traffic in this area as traffic descends to the Airport. d.) Assuming the commenter is referring to the proposed waypoint at the I805/SR52 intersection as "XMANS," the consultant team included an altitude in the procedures that is consistent with descent gradient requirements. e.) Refer to response to comment #C-10.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Recommendation 16 - Alternatives 2 and 3	C-33	Delete Alternatives 2 and 3	Refer to response to Comment #C-9.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	ELSO	C-34	Recommend that all above alternatives are pursued and implemented at the 15 degree\ 275-290 separation	Refer to response to Comment #C-12.
7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	ELSO	C-35	Pursue ELSO noise analysis to evaluate potential positive impacts vs. 15-degree standard	Refer to response to Comment #C-2.

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7/27/18	Casey Schnoor	Sunset Cliffs/Fleetridge	ELSO	C-36	Pursue the lengthy process of evaluating ELSO at 10-12 degrees, given potential NEPA requirements, timeframe to pursue with FAA, risks of restriction due to redistribution of noise from 293 degrees to 285, etc.	Refer to response to Comment #C-2.
7/29/18	Leonard Gross	Birdrock/ La Jolla	General	C-37	It appears you are constraining the solution space to have no changes in initial heading, no changes within 65 DL, and no moving of any traffic from one area to another, and no impact on KSAN capacity. However, the FAA considers a change of up to 1.5 dBA within 65 DNL boundary as insignificant, so small changes should be "allowed." Also note, that to get a 1.5 dBA change you would have to increase the air traffic in an area by about + 40%. Within areas outside 65 DNL the "no impact: level is 3 dBA (60 to 65) or 5 dBA (46 to 60). Perhaps you have taken the "minimum change approach" as an initial cut or to minimize potential problems in getting them approved? Or you are just "flagging" some of them as Part 150 issues, but the impression given is that they are "show stoppers" for some of the options. I think this was clarified a bit at the July 18 meeting. Indeed, it was more indicating potential problems and not necessarily a show stopper.	Refer to response to Comment #C-2. The commenter is correct about FAA's NEPA thresholds related to significant and reportable changes, but Title 14 CFR Part 150 also recognizes people who are newly exposed to CNEL 65 or higher no matter what the level of change is between a baseline and alternative. Evaluating potential effects with areas exposed to CNEL 65 or higher requires development of a cumulative noise exposure analysis that is reviewed and accepted by FAA. This and the sensitivity related to high levels of noise exposure for residents near SDIA is why changes to initial heading are best assessed through the Part 150 Study update process. If a preferred initial heading alternative is identified as a result of the process, the procedure designs can be adjusted as needed to accommodate it.
7/29/18	Leonard Gross	Birdrock/La Jolla	Rec. 14 - Daytime Issues	C-38	On Slide 13 you say that the moving the WNFLD and LNDN waypoints would violate the 15-degree separation and then impose the 3 NM "rule." This leads us to look at the 10-degree separation path. However, currently during nighttime flight we see aircraft paths that are only a few degrees apart for several miles. (see section 1.3 below). As shown in your slide 13, the westerly going portion of the BROCK-like path is parallel to the south going flights (i.e. NOT converging with them). The path shown on this chart is clearly no worse, and actually looks safer than takeoffs from parallel runways which are allowed. Please explain.	As discussed at CAC Meeting #2, aircraft operate along the same heading from Runway 27 after 10:00 p.m. In this situation, ATC waits to release the next departure until 3-NM separation can be achieved by the time the following aircraft is airborne. The divergence is not applied because aircraft are following behind along a single heading. There is variation in the track location due to multiple variables such as wind, aircraft performance, and the type of procedure (i.e., radar vectors or RNAV SID), but the aircraft are following a similar path (less than 15-degree divergence) and are separated laterally. The graphic provided by commenter depicts traffic heading south then east in yellow, and traffic heading northwest in red. The traffic shown in yellow at night is issued a 290 heading by the San Diego International Airport (SAN) Air Traffic Control Tower (ATCT) because there is no published SID for south/east traffic with a 290 heading. The traffic flows shown in red are issued the PADRZ SID and follow the RNAV procedures from the runway. There is some variance between the two flows, but the flows do not diverge more than 15 degrees; therefore, they are treated as though they are on the same heading and are laterally separated. Regarding the parallel portion of the route that goes to the west depicted on the Recommendation 14 Daytime Issues slide, the route indicates how soon aircraft can change course once the 3-NM separation is established.
						Source: Graphic provided by and referenced by commenter.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - Daytime Issues	C-39	The 10-degree divergence path option is a very important for LJ and MB as it addresses the daytime noise. The text gives a general idea of the challenges to get it implemented and clearly there are hurdles. What can be done now to get a better idea of it the likelihood that it would actually be implemented?	Refer to response to Comment #C-2.
7/29/18	Leonard Gross	Birdrock/La Jolla	Rec. 14 - Daytime Issues	C-40	Another way to look at the night traffic is with the actual tracks. It is very interesting that the nighttime departures have two paths that travel nearly parallel for several mile, and when they diverge they are not 3 NM separated. Why is this allowed and can it be exploited in SAN for daytime operations (i.e. see slide 13)	Refer to response to Comment #C-38. Use of a single heading occurs only during nighttime hours through 6:00 a.m. Use of a single heading for departures would not work during the daytime hours because high-demand periods would limit capacity into and out of SDIA.
						Source: Graphic provided by and referenced by commenter.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - Daytime Issues	C-41	Typo for Border 3 Departures, this probably should be Border 7	The commenter is correct, the slide should read "BORDER 7." All future graphics will be changed.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - Nighttime	C-42	Analysis of nighttime traffic has repeatedly shown that aircraft going south follow a different heading from those going north. Aircraft going north seem to be on a PADRZ heading while aircraft going south are a few degrees south of that. We do NOT WANT PADRZ to be defined as the nighttime departure procedure for all aircraft, as it would bring significantly more noise to MB, PB, and the southern coastal part of a La Jolla.	Refer to response to Comment #C-38 related to the dispersion depicted on the provided graphic. Normally, FAA prefers initial heading designs for RNAV procedures to be identical to those that share the same or a common path. This provides a more predictable path for aircraft. Further discussion with FAA will be required to determine if an identical design is a requirement. Currently, Mission Beach residents are seeking adjustments to the PADRZ initial route so that traffic is located similar to where traffic following a 290 heading operate (yellow in the graphic with Comment #C-38). Ocean Beach residents are concerned about moving traffic farther south. The proposed alternative identified by the commenter, among others including Mission Beach and Ocean Beach residents, and the potential effects the alternative may have on the area

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						(continued) exposed to CNEL 65 and higher must be considered. Potential effects on the area exposed to CNEL 65 and higher would be assessed as part of the Part 150 Study update process.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - Nighttime	C-43	The chart brings to mind one more alternative, turn at earliest point that does not impact 65 DNL boundary	Recommendation 14 Night Alternatives 2 and 3 were designs intended to turn aircraft in a westerly direction as soon as aircraft are beyond the area exposed CNEL 65 and higher. In both cases, the TARGETS flyability simulations indicated that more unpredictable paths from the runway could occur over the area exposed to CNEL 65 or higher. The designs will most likely increase dispersion over areas not frequently overflow by Runway 27 right-turn departures. The two turn locations were close to the area exposed to CNEL 65 or higher and to the shoreline. A design that turns aircraft somewhere between the shoreline and 1.5 NM from the shoreline without impacting traffic patterns close to the runway may be feasible. The consultant will look at a design between 1.5 NM and the shoreline that does not change the existing overflight patterns over areas exposed to CNEL 65 or higher.
7/29/2018	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - Nighttime Alternative 1	C-44	This does not take into account that there are two headings being flown at night.	Refer to response to Comment #C-38.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - Nighttime Alternative 1 - Fly Over Waypoint	C-45	"Last bullet in white box: "Not compatible with proposed ANAC Recommendation 15 Nighttime Alternative 1 design concept" Typo? I think this is supposed to say Nighttime Alternative 3 since there is no Nighttime Alternative 1 and slide 26 which is labeled "ANAC Noise recommendation 15 Alt 1 Design" is not a nighttime procedure. (By the way, it is confusing when the first Recommendation 15 night alternative (slide 17) is called alternative 2). How can this or the ANAC 15 be changed so they are "compatible"? "	The typo identified by the commenter will be corrected to read "Recommendation 15, Night Alternative 2." Recommendation 14, Night Alternative 1 - Fly Over includes a fly-over waypoint at the 1.5-NM turning point from shoreline. Recommendation 15, Night Alternative 2, includes a fly-by waypoint. To be compatible, both need to share the same type of waypoint at the 1.5-NM turning point. Because an aircraft heading to ZOOO and an aircraft heading to the northwest share the same initial route from Runway 27, the point where both diverge should be the same waypoint and type. This design would provide safe separation. A fly-over for Recommendation 14, Night Alternative 1 and a fly-by for Recommendation 15, Night Alternative 2 would introduce a risk of losing safe separation (3 NM or more) when the lead aircraft turns left after flying over the waypoint, and the following aircraft is about to conduct an inside turn at the same waypoint. This would likely introduce a new safety risk to the ATC system that cannot be considered feasible by the FAA.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - Nighttime Alternative 1 - Fly Over Waypoint	C-46	"Increases flight distance by approximately 1.4 NM" These seems high. Previous analysis showed a smaller distance. (Sorry but haven't gone back and checked this.)	The 1.4-NM distance is based on the estimated route, depicted in orange on Slide 15 of the CAC Meeting #2 presentation (July 19, 2018), up to the point where it joins back up with the existing procedure (white line).
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - Nighttime Alternative 1 - Fly By Waypoint	C-47	"Not compatible with proposed ANAC Recommendation 15 Nighttime Alternative 1 design concept" Appears to have same "typo" problem as slide 15	Refer to response to Comment #C-45. A fly-by waypoint best meets the intent of Recommendation 14 and is not expected to cause aircraft currently vectored west and south of Point Loma to be at a lower elevation than what occurs today. The design for Recommendation 15 Night Alternative 2 with a fly-by waypoint will also keep aircraft farther west of Point Loma and direct aircraft to the ZOOO waypoint, which is expected to reduce headings issued by ATC that keep aircraft south of the Noise Dots but allows aircraft to continue to operate over the southern tip of Point Loma.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - Nighttime Alternative 2	C-48	"Most likely not feasible due to expected change in initial departure heading from Runway 27..." Was this supposed to say "may not be feasible due to it requiring a change in initial departure heading", versus something else that is changing the initial heading from its current direction? Please explain	As discussed at CAC Meeting #2, the location of the fly-by waypoint at the shoreline is expected to cause less predictable paths near the airport as aircraft takeoff and begin the turn towards the waypoint. Based on the TARGETS flyability estimates, the heavy and low performing jet aircraft could end up flying over areas of Ocean Beach that are not currently exposed to overflights and can create wide dispersion instead of a more predictable desired path (e.g., along the 290 heading) prior to reaching the waypoint. The TARGETS flyability simulation indicated that heavy jets may skip the first waypoint and head towards the second one. This does not provide a desired repeatable and predictable path for noise abatement purposes; therefore, the consultant team recommended not to proceed further with this design.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - TAC Input	C-49	Note if WNFLD will be moved South for a 10-degree daytime procedure, we should also move KRNL south to assure the path continues as westward as possible.	If the 10-degree initial heading from Runway 27 is found to be feasible during the Part 150 Study update process, the consultant team will look at the opportunity to move the KERNL waypoint farther south as long as it meets design parameters and does not require relocating the GYWNN waypoint or removing the altitude restriction at GYWNN. As discussed at CAC Meeting #2, if a 10-degree heading is implemented, it would need to be included in other Runway 27 SID procedures like the MMOTO, CWARD, and ECHHO SIDs.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - TAC Input	C-50	"Not consistent with nighttime noise abatement heading." As discussed in section 1, there are at least two headings and none has been formally defined.	The bullet on slide 19 referenced by the commenter was a comment from a TAC community member. The intent of the commenter was to point out that the current initial heading design for PADRZ, which was maintained in the concept designs, does not reflect the historic nighttime noise abatement heading traffic patterns.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - TAC Input	C-51	Options 1,2 and 3 "Do not mitigate nighttime noise for Mission Beach" – Actually, they will if the path flown keeps the aircraft farther south than currently (i.e. those flights heading North)	Refer to response to Comment #C-2. A proposed 10-degree heading would reduce noise levels over Mission Beach but may adversely affect residents in Ocean Beach as indicated by comments provided by Ocean Beach CAC members. San Diego County Regional Airport Authority (SDCRAA) expects discussion and further evaluation of initial right-turn heading proposals would occur as part of the Part 150 Study update process.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Nighttime Noise Abatement Heading	C-52	This mistake in showing nighttime departures as PADRZ, is part and parcel of the fact that the noise abatement "agreement" has no formal documentation and in fact has changed over time. I believe	Noise abatement headings are considered valid noise abatement measures to be evaluated under the Part 150 Study update process. It is expected that they will be considered to address ANAC Recommendations 17 and 21 related to the Nighttime Noise Abatement Procedure.

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					(continued) other airports have noise abatement procedures (NAP) on their navigation charts, but for some reason we don't. Will this or the Part 150 formalize the nighttime headings?	
7/29/18	Leonard Gross	Birdrock/La Jolla	Nighttime Noise Abatement Heading	C-53	<p>Below is a Scatter-gram ("gate") plot for May 2018 which shows that a 290 and a PADRZ path are actually being flown at nighttime. This is very important since if the current initial headings are not to be changed, then one must understand what those departures really are! Also note that a 290-heading measured from a vertex at 1 NM from the end of the runway, actually puts the aircraft over the channel, and not over Mission Beach. However, we can see that they are actually North of the 290 heading and most travel over MB land. There should be an RNAV departure procedure that creates a "super highway" at the "agreed upon" 290- heading. (Think of that PADRZ red line shown below as moving south so it is centered over the channel.)</p>  <p>Source: Graphic provided by and referenced by commenter.</p>	Refer to response Comment #C-38.
7/29/2018	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - ELSO	C-54	Slide 20: ATL has used this for many years, any idea why the other airports listed have not yet gone operational with it? I think this was addressed at the meeting, but don't recall the answer.	Based on the consultant team's discussion with FAA staff familiar with ELSO, the primary reason that ELSO implementation has been slow is due to the potential effects on residents in areas exposed to day-night average sound levels (DNL) of 65 or higher. Noise analyses showed that Hartsfield-Jackson Atlanta International Airport (ATL) would not encounter this issue. Changing initial departure headings can have a direct effect on the shape of a noise exposure contour at DNL 65 and higher. If significant impacts (i.e., an increase of DNL 1.5 or higher for areas exposed to DNL 65 or higher levels) are possible, FAA would need to consider conducting an Environmental Impact Statement (EIS) and identifying mitigation.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - ELSO	C-55	Slide 20: On the top right figure, what does the 1 Mile arrow mean? Can aircraft have less than separation after 1 NM?	The 1 NM arrow indicates that FAA ATC can release the following departing aircraft once the lead aircraft is 1 NM away. The following aircraft will not be on the same route as the lead aircraft, which turned left and followed the solid line shown on the graphic. The following aircraft would turn right at a 15-degree divergent heading and follow the dashed line on the graphic. If the following aircraft was to follow the path indicated by the solid line, FAA ATC would need to hold the aircraft until the air traffic controller can make sure the aircraft will be 3 NM or greater behind the lead aircraft.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - ELSO	C-56	Slide 21: Typo: "one to two possible initial" should probably be "one of two possible options" What are these two possible options?	The referenced text on slide 20 was not a typo. One option is to design an initial heading at 285 degrees (10-degree divergence from 275). Another option is to design an initial heading at 290 degrees (15-degree divergent heading from 275). This is what was meant by "one to two possible initial departure headings." It is preferable to have both the south/east and north/northwest traffic operate along the same path using the same type of navigation (e.g., RNAV SID or ATCT-issued headings) to achieve a consistent and predictable path. A design could have a 285 heading or a 290 heading, but it is preferred to decide on one common path for all departures turning right from Runway 27. The common path should be agreeable to residents who reside south and north of the proposed path. This is why the initial heading analysis is expected to be discussed and assessed under the Part 150 Study update process.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 14 - ELSO	C-57	"Slide 21: "Implementation at ATL suggests separation may begin at VA/DF or VA/CF turn point versus separated 10 degrees from runway end – further local FAA coordination will be required as part of the alternate procedure design" Your interpretation would imply that at ATL they have to fly quite a bit from the runway before changing to 10 degrees, so what headings do they fly before getting to the VA/DF or VA/CF? Also, some of the FAA diagrams show the turn very near the end of the runway. My guess is they head to a VA/DF or VA/CF very close to the end of the runway, otherwise they would be flying parallel to the other runway until they hit the waypoint. That would be less safe than the 15-degree separation.	Aircraft departing from some of the runways at ATL may continue on the runway heading until about 1 NM from the departure end of the runway. In these cases, the RNAV design relies on a Vector-to-Intercept and Course-to-Fix (VI/CF) design. In other cases, aircraft begin the turn from the runway up to 1 NM from the departure end of the runway. This is based on an RNAV design using Vector-to-Altitude and Direct-to-Fix (VA/DF) design.

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7/29/18	Leonard Gross	Birdrock/La Jolla	Rec. 15 - Daytime Alternative 1	C-58	<p>A quick analysis of current paths around Pt Loma indicates that during the day virtually all (87%) are already achieving this and 96% are above 7K feet, and 100% are achieving it at night. Below, Figure 1.4-1 and Figure 1.4-2 illustrate this. The first shows a week of altitude/position relative to ZZOO during the daytime hours. The second is the same period of time but during nighttime operations, where 100% are above 8 K. Of course, they fly a different path than daytime departures. These charts do a lot to inform the analysis of the request and suggest that more noise reduction might be achieved by simply getting aircraft to fly over ZZOO rather than getting 100% of the flights at 8000'.</p> <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Source: Graphics provided by and referenced by commenter.</p>	Comment noted.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 15	C-59	Slide 23, Item 3: This is listed as a Part 150 item, but it seems like the concept has already been rejected since it would change initial headings and potentially modify 65 DNL boundary	The ANAC recommendation to limit aircraft headings between 275 and 290, including headings for propellers, was not rejected. Discussion and assessment of this recommendation is best conducted under the Part 150 Study update process due to potential effects this change may have on the CNEL 65 or higher exposure area. In addition, this recommendation should be assessed as a part of other proposed initial departure heading concepts under the Part 150 Study update process.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 15 - Initial Review	C-60	Slide 25, Item 1: "East bound flights should reach a minimum of 8,000 feet MSL before crossing over ZZOO: A requirement of 8,000 feet MSL at ZZOO waypoint is not feasible based on existing design of procedure, but may be possible if existing procedure design is modified (see ANAC 15 Alternative 1)" It See section 1.4, most of the aircraft are making this now; are "tweaks" possible rather than a redesign?	Recommendation 16, Alternative 1 is in essence a "tweak." By moving the JETTI waypoint farther west, it is expected that the aircraft altitudes would be higher compared to what presently occurs. Recommendation 16 also includes moving traffic farther west from the Point Loma shoreline, which Alternative 1 achieves.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 15 - Initial Review	C-61	Slide 25, item 2: "Redirecting flights off of their filed ZZOO flight plan departure, to turn north then east over La Jolla: If an RNAV SID is implemented for eastbound departures on a directed 290° heading and thence directed towards ZZOO waypoint, it would decrease frequency of traffic vectored north then east over La Jolla (ANAC 15 Alternatives 2 and 3 addresses this issue)." I don't understand this. These still do occur, see figure 2.11-1 below, but we don't want to establish a procedure that makes this official Is this suggesting having a 290 departure during the day? If so that would impact OB, MB, PB and LJ	The consultant team did not propose a procedure design that would direct eastbound traffic over La Jolla. The intent of the statement on slide 25 was to indicate a benefit to La Jolla if an RNAV SID was designed for nighttime departures heading to the ZZOO waypoint (Recommendation 15 night alternatives). SCT TRACON indicated that if there is an RNAV SID to ZZOO that includes the required nighttime heading to the right, the frequency of turning eastbound aircraft to the right to fly over La Jolla would decrease. Aircraft heading east at night are already issued a 290 heading. The proposed concept would provide an RNAV SID to replace radar vectoring towards ZZOO. The consultant team did not design a concept for ZZOO departures that includes a right turn from Runway 27 because the FAA can assign the procedure during daytime hours.
					 <p style="text-align: center;">Source: Graphics provided by and referenced by commenter.</p>	
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 15 - Nighttime Alternative 2	C-62	The beginning of this path is essentially the current nighttime procedure for south going flights. Those flights are already making the 8K altitude limit, so I'm not sure what this is proposing? Given similarly to current path near MB, it would not provide any benefit to that area. Would this help reduce the number of flights that travel too far north before turning to the south?	The intent of Recommendation 15 nighttime alternatives is to keep traffic near the ZZOO waypoint and south of Point Loma at night. Currently, the nighttime ZZOO departures are radar-vectored because there is no RNAV SID available during nighttime hours for ZZOO departures that make a right turn from Runway 27. As a result, some aircraft are vectored over the southern tip of Point Loma south of the Noise Dots.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 15 - Nighttime Alternative 3	C-63	"May not be feasible with proposed ANAC Recommendation 14 nighttime design concepts due to potential of converging traffic with aircraft on proposed northbound SID" What is the benefit of this relative to slide 27. What changes can made in either recommendation to eliminate the conflict?	An aircraft heading to ZZOO via an RNAV SID and an aircraft heading to the northwest (PADRZ SID) would share the same initial route from Runway 27 at night. The point where traffic diverges should occur at the same waypoint and have the same type of operation (i.e., fly-by or fly-over). This design provides for safe separation between aircraft. A fly-over for Recommendation 15 Night Alternative 3 and a fly-by for Recommendation 14 Night Alternative 1 has the potential to reduce the separation between aircraft below 3 NM and introduce a new safety risk into the ATC system. The separation can be jeopardized when the lead aircraft turns left to the south after flying over the waypoint, and the following aircraft is about to conduct an inside turn to the left towards the west at the same waypoint. Introducing a safety risk that does not exist in the ATC system can be considered not feasible by the FAA. A fly-by waypoint best meets the intent of Recommendation 14, and it is not expected to cause aircraft currently vectored west and south of Point Loma to be at

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						(continued) lower altitudes than what occurs today. The design for Recommendation 15 Night Alternative 2 with a fly-by waypoint would also keep aircraft farther west of Point Loma and direct aircraft to the ZZOOO waypoint, which is expected to reduce headings issued by ATC that keep aircraft south of the Noise Dots but still operate over the southern tip of Point Loma.
7/29/18	Leonard Gross	Birdrock/ La Jolla	Rec. 15 - TAC Input	C-64	“CAC Alternative 1 – Can this design be considered a nighttime departure path? CAC Alternative 2 - This does not mitigate noise over mission beach” What do CAC alternatives 1 and 2 refer to? Recommendation 15 options 1 and 2?	The TAC member who made the comment was referring to Recommendation 15, Alternative 1, which is intended for aircraft operations during the daytime to follow the 275 heading. The TAC member is inquiring about using the 275 heading at night for eastbound departures to reduce nighttime overflights near the Mission Beach area. The TAC member also indicated that Recommendation 15 nighttime designs continue to route traffic near Mission Beach, so they do not help reduce noise over Mission Beach.
7/29/18	Leonard Gross	Birdrock/ La Jolla	General - Nighttime Noise	C-65	The total number of nighttime departures represent about 20 flights a day versus out of a total of around 300 departures every 24 hours. Though clearly “any improvement is welcome,” the nighttime change represents only a small part of the traffic (Yes in DNL/CNEL metrics they get more weight because it is sleep time but the 10 decibel penalty makes this is equivalent to about 200 flights a day out of the 300, but that’s only if you accept the relevance of the DNL metric to actual annoyance.) However, it is the “delta” from current nighttime flights to any proposed change that is important. That is, the 10 dBA penalty is already baked into the current 65 DNL boundaries	Comment noted. Not only is the change in CNEL critical, so is newly exposing residents to aircraft noise levels of CNEL 65 or higher as it relates to land use compatibility.
7/29/18	Leonard Gross	Birdrock/La Jolla	COMIX Arrivals Over La Mesa	C-66	I previously had provided [CAC member name redacted] with a chart of aircraft below specific height near Helix High School. Unfortunately, that chart had an error. It has since been corrected and verified by looking at the KSan’s own website. Below is the updated chart. Does this problem merit analysis by the FPA team or is it an ATC issue that needs to be handled separately?	There are arrival procedures in place that direct traffic north of the CAC member’s residence, but she resides in an area where FAA ATC direct traffic using headings and altitude assignments to merge the arrivals into the final approach stream. This is a very dynamic situation to manage. The Authority plans to hold further discussions with the CAC member and the East County ANAC representative regarding the formation of the East County working group, which is intended to assess SDIA arrivals and possible means to address noise concerns in this area.
					 <p>Number of flights/month at Several Heights relative to HS (500 feet) Only Flights Within 0.5 Mile Radius Cylinder around HS</p> <p>Source: Graphics provided by and referenced by commenter.</p>	
7/29/18	Leonard Gross	Birdrock/ La Jolla	General	C-67	The labeling of alternatives is confusing, so much so that two of the slides is incorrectly referenced (see section comments 2.3 below and slide 29). Also, because of the separation by Recommendation number, it is hard to see how the items in Recommendation 14 relate to items in Recommendation 15, and why they are in conflict. It is also hard to tell what changes to current flows are being evaluated without the current procedure (or radar tracks) on the same chart. Currently you have to do a bit of page flipping to look at the “before and after” This is especially true of the Alternatives 16 charts. It clear why you organized the presentation like you did, but if there is a final version for this information, consider a different organization which addresses some of these presentation issues	Comment noted. The consultant will attempt to make future graphics easier to understand, while still providing the necessary technical details.
7/30/18	Dave Kujawa	Ocean Beach	General	C-68	Appreciate if the meetings contained less technical jargon. Many panel members have extensive aviation experience and appreciate their expertise. Some concepts should be explained in plain English at least once. For example, the differences between a fly-by waypoint and fly-over waypoint were not explained. Nor were the pros and cons of the differences between waypoint types explained adequately.	Comment noted. The consultant team will make every effort to simplify the presentation material and will make every attempt to define technical terms when used in presentations.
7/30/18	Dave Kujawa	Ocean Beach	General	C-69	Overall goals of the ANAC recommendations seem tilted to the goal of reducing noise north of Ocean Beach. While flight paths cross directly over Ocean Beach, many areas in Ocean Beach are outside of the 65 CNEL contour and are not covered by the Quieter Home Program. As such, proposals to reduce noise in other areas should not come at the expense of Ocean Beach.	Comment noted. As referenced in several previous responses, any changes that affect the CNEL 65 and higher exposure area, which includes area north of Ocean Beach, must be evaluated during the Part 150 Study update process.
7/30/18	Dave Kujawa	Ocean Beach	Rec. 14 - ELSO	C-70	Agree with the comments by Mr. Mike Tarlton’s email [Comment C-3] dated July 21, 2018. Narrowing the departure heading window would seem to move noise that now goes over mostly commercial buildings in the Sports Arena Area and hits the very tip of South back on OB / Loma Portal / Point Loma Heights / Dog Beach Residents. Thus, opposed to the ELSO related changes that were proposed.	Refer to response to Comment #C-2.
7/30/18	Dave Kujawa	Ocean Beach	Rec. 15 - Daytime	C-71	To further reduce noise in Ocean Beach, request TAC to consider using a route such as “Night Alternative 2” for daytime departures for large aircraft (e.g., direct flights to Europe and UPS/FEDEX planes). These aircraft are the loudest and the ones that are complained about most by OB residents.	The commenter proposes to distribute operations between two departure procedures to reduce noise. This means operations would be distributed between two different directions to reduce noise over a specific area. During the daytime, aircraft heading north/northwest are assigned the PADRZ RNAV SID or PEBLE Conventional SID, which direct aircraft to the right after takeoff. Aircraft headed to the south or east are assigned the ZZOOO RNAV SID or BORDER Conventional SID, which direct aircraft on runway heading or 275 degrees. This creates a 15-degree divergence, which allows FAA to release

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						(continued) departures after the lead aircraft is approximately 1 NM away instead of holding to wait for the leading aircraft to be 3 NM away. The nighttime alternative designs are applicable only when FAA issues a single heading or a procedure that directs traffic along a similar heading, which only occurs during nighttime hours. Introducing an aircraft headed south or east on the PADRZ RNAV SID path would require the aircraft to turn south and conflict with other aircraft assigned to the 275-degree path to the south/east. This would introduce a new safety risk in the ATC system and would potentially require following aircraft to hold on the runway until safe separation from the lead aircraft can be provided. Holding aircraft for departure can have a direct impact on the operational efficiency. The proposed measure could also have a direct effect on the CNEL 65 and higher exposure area; therefore, further discussion and assessment should be conducted under the Part 150 Study update process along with other proposed initial departure heading and procedure use measures.
7/31/18	Robin Taylor	Sunset Cliffs/ Ocean Beach	Rec. 14 - Nighttime	C-72	Since the impact to Ocean Beach/Point Loma is limited in each of the alternates all are acceptable. It is understood that any changes will take into account the greater population in the OB corridors as opposed to the South Mission Beach.	Commenter is correct that any evaluation related to changing initial runway departure headings will account for residents in Ocean Beach as well as Mission Beach. The Part 150 Study update process will include a noise exposure assessment for each proposed measure to determine potential benefits and effects. SDCRAA will gather input from TAC and CAC related to each measure. The main intent of a Title 14 CFR Part 150 study is to reduce noise exposure within the CNEL 65 or higher exposure area and to not cause an increase in noise at incompatible areas.
7/31/18	Robin Taylor	Sunset Cliffs/ Ocean Beach	Rec. 15	C-73	All options were acceptable as long as early turns are addressed in a different forum. As noted, even one early turn can cause residential backlash even if the vast number of airlines are tracking properly.	SDCRAA is actively monitoring early turns and reporting back to ANAC regarding number of early turns and probable causes for early turns, which are predominantly at the request of the FAA to maintain traffic separation for safety. Procedure concepts under evaluation maintain initial headings until aircraft pass shoreline. This Flight Procedure Evaluation effort is not assessing missed approaches and piston aircraft headings that differ from 275 or 290 issued headings.
7/31/18	Robin Taylor	Sunset Cliffs/ Ocean Beach	General	C-74	Want to state again that the aircraft speed reduction being carried out by MIT/MassPort be kept on the front burner and that all efforts should be taken to utilize the NASA Aircraft Noise Prediction Program (ANOPP) in future studies. Having worked in the aircraft industry, I know that the jet engine and nacelle technology have probably reached the pinnacle of noise reduction so the only other option for communities under the flight path (OB/South Mission Beach/Point Loma) is the reduction of airframe noise.	The commenter is referencing the National Aeronautics and Space Administration's (NASA's) Aircraft Noise Prediction Program (ANOPP) Version 2, which was used by the Massachusetts Institute of Technology (MIT) to assess airframe noise effects related to Boston Logan International Airport departures on an RNAV procedure. Because this Flight Procedure Evaluation is intended to determine if a concept has potential to make it through the FAA RNAV procedure development and implementation process, the FAA's approved noise model, AEDT, must be used to assess aircraft noise. ANOPP 2 is not yet recognized by the FAA as a valid model to support FAA environmental decisions. This may change in the long-term as FAA considers additional functionality in AEDT, including the ability to fully account for airframe noise changes arising from speed and configuration changes. FAA recently indicated plans to include airframe noise functionality as part of the next version of AEDT expected to be available after 2020.

SOURCE: Ricondo & Associates, Inc., October 2018.

B.2.2 CITIZEN ADVISORY COMMITTEE (CAC) MEETING #3 (AUGUST 30, 2018) INPUT AND CONSULTANT TEAM RESPONSES

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8/31/18	Leonard Gross	Birdrock/La Jolla	General	C-75	Thank you for all you efforts and for the selection of a such a great set of consultants. The Ricondo/Mead-Hunt team has a deep reservoir of knowledge and history, Stephen, in particular, always have a good "next level down" explanation for things that are not obvious to us amateurs. Because the FAA rules are so constraining, it is unclear that any meaningful route changes will come to La Jolla, but we certainly are getting our best shot at it!	Comment noted.
9/7/18	Robin Taylor	Sunset Cliffs/Ocean Beach	Rec. 14 - Alternative 5-ELSO to Fly By Turn at 1.5 NM (Nighttime) and Alternative 6-ELSO (Daytime)	C-76	These alternatives subject Point Loma Heights and Ocean Beach to fly overs and increased noise in areas not previously affected. Even if the study can show no impact the CNEL 65 area, the new path would end up subjecting Ocean Beach to both South and North bound traffic fly overs day and night. The population impacted by these options would be extreme (just look at a map) and all this to satisfy areas (PB, Bird Rock and LJ) who would see negligible improvement from everyday noise levels. Recommend elimination of 10 degree (ELSO) to any further study.	The consultant team recommended that the following be considered as part of the Title 14 Code of Federal Regulations (CFR) Part 150 Study update process (Part 150 Study update process) to evaluate whether they would result in a change to the area exposed to CNEL 65 and higher: (1) The 285-degree initial departure heading (or Equivalent Lateral Spacing Operations [ELSO]) from Runway 27. (2) Airport Noise Advisory Committee (ANAC) Recommendation 17, Compliance to the Nighttime Noise Abatement Agreement. (3) Other input provided by CAC members related to the initial departure heading from Runway 27 (presented on Slide 18 of the CAC Meeting #3 Presentation). Refer to response to Comment #C-2 for additional information.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 14 - Alternative 5-ELSO to Fly By Turn at 1.5 NM (Nighttime) and Alternative 6-ELSO (Daytime)	C-77	La Jolla continues to advocate for long term night and daytime relief from commercial aircraft noise associated with NextGen Metroplex. Accordingly, we first advocate for the ongoing study of the ELSO options, including "Alternative 5 ELSO to Fly By Turn at 1.5 NM (Night time)" and "Alternative 6 ELSO Day" as described in Ricondo's presentation for the CAC Meeting #3 held on August 30, 2018. We would like to see noise modeling results focused on these alternatives, which are based on modifying the initial departure heading to direct aircraft on the runway heading (275 degrees if I understand correctly) and then intercepting a 285 degree course to the first waypoint that is further south than WNFLD during daytime hours, and/or a first waypoint located just past 1.5NM from shoreline during night time hours. This approach will keep departures further south of La Jolla. We recognize that the impact could be in the 65 CNEL area and that accordingly, the proposal may be reviewed in the Part 150 Study. The increases in flight distances are marginal (.4-.5NM) compared to PADRZ departures and are compatible with proposed ANAC recommendation 15 Nighttime Alternative 5 and with ZZOOO SID and Recommendation 15, Alternative 1. La Jolla would be in favor of the 285 degree magnetic course to first waypoint, as depicted in the yellow lines on slide 18 of the presentation, but notes the options for modeling and consideration of course headings between 285-290 degrees as compromise tracks that have the objective of concentrating flight tracks south of the current radar flight tracks on the PADRZ SID.	Refer to response to Comment #C-76.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 14 – Alternative 1-Fly By Turn at 1.5 NM (Nighttime)	C-78	La Jolla further supports studying and noise modeling for the "Refined" ANAC Noise Recommendation 14, Alternative 1 "Fly By" Turn at 1.5 NM, for night time departures, in which the refined waypoint is located to ensure that aircraft do not turn until reaching 1.5NM. We advocate for study as to whether the BROCK2 waypoint should be designated a "Fly Over" waypoint, intended to keep planes further away from La Jolla.	The consultant team will proceed forward with the "refined" design for Recommendation 14, Alternative 1 Fly By Turn at 1.5 NM based on the design of the existing PADRZ standard Instrument Departure (SID) initial departure heading. The Federal Aviation Administration's (FAA's) guidance, defined in Order 8260.46F, <i>Departure Procedure Program</i> , paragraph 3-1-5(a), states the following regarding design of waypoints: Specify all waypoints as either fly-by or fly-over. (1) Use fly-by waypoints whenever possible. (2) Use fly-over waypoints only when operationally necessary or for obstacle clearance. (3) Design procedures using the fewest number of waypoints. The consultant team strongly recommends that the BROCK2 waypoint remain a fly-by waypoint, which is consistent with FAA guidance. The consultant team will evaluate adjusting the BROCK2 waypoint location farther west to mimic where aircraft would be if the current BROCK2 waypoint location was a fly-over waypoint along with a track-to-fix leg to ensure the inside turn dispersion of the fly-by waypoint is more predictable.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 14 – Alternative 4-Turn Between Shoreline and 1.5 NM (Nighttime)	C-79	We further advocate for additional study and noise modeling on ANAC Noise Recommendation 14, Alternative 4 Turn Between Shoreline and 1.5NM, which will keep night time departures further south of La Jolla without affecting initial departure path predictability, while only increasing flight distance by .75NM compared to the PADRZ departure at night.	Comment noted. As stated at CAC Meeting #3, the consultant team will proceed forward with the proposed design for Recommendation 14, Alternative 4 Turn between Shoreline and 1.5 NM (Nighttime) based on the design of the existing PADRZ SID initial departure heading.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 15 – Alternative 1-Extend JETTI	C-80	We believe the best alternative may be Alternative 1, which extends the JETTI "Fly Over" Waypoint 2NM west, which we believe will keep aircraft and noise further from La Jolla. However, we believe noise modeling is required to assess whether a fly over waypoint, prior to which speed is restricted to 230	Comment noted. The mentioned speed restriction is currently in place for the existing ZZOOO SID; therefore, any potential noise effects caused by aircraft increasing speed after the JETTI waypoint is already present. Because noise levels decrease as distance between the source and receiver increases, moving the JETTI waypoint farther west while maintaining the

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			Waypoint 2 NM West (Daytime)		(continued) knots, would result in increased acceleration engine blast noise directed at Mission Beach, Pacific Beach and La Jolla and whether that noise would be significant or marginal.	(continued) existing airspeed restriction would reduce noise exposure caused by the speed restriction. As stated at CAC Meeting #3, the consultant team will proceed forward with the proposed design for Recommendation 15, Alternative 1.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 15 - Alternative 2-Fly By Turn at 1.5 NM Refined (Nighttime)	C-81	The Alternative 2 "Fly By" Turn at 1.5NM (Refined) should be studied and noise modeled. The "fly by" alternative, which includes a refined waypoint location should keep aircraft further south of La Jolla.	Comment noted. As stated at CAC Meeting #3, the consultant team will proceed forward with the proposed refined design for Recommendation 14, Alternative 2 Fly By Turn at 1.5 NM (Nighttime) based on the existing design of the PADRZ SID initial departure heading.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 15 - Alternative 3-Fly Over Turn at 1.5 rNM (Nighttime)	C-82	We are opposed to Alternative 3, for a "Fly Over" turn at 1.5NM, which would appear to keep nighttime departures closer to La Jolla, compared to using the "Fly By" waypoint.	Comment noted. As stated in CAC Meeting #3 presentation, slide 26, the consultant team did not recommend proceeding forward with this design. The consultant team recommended to proceed with a nighttime departure procedure design that uses a fly-by waypoint that keeps traffic farther south of La Jolla. A fly-over waypoint would cause a more unpredictable turning path north of the waypoint and would place traffic closer to the La Jolla shoreline compared to a fly-by waypoint design.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 15 – Alternative 4-Turn Between Shoreline and 1.5 NM (Nighttime)	C-83	La Jolla is interested in the noise modeling data and study of Alternative 4, where aircraft may turn west as soon as possible (at around .5NM west of the shoreline), but is concerned that engine tail orientation and acceleration blast sound waves would adversely impact Mission Beach, Pacific Beach and La Jolla. We are curious whether setting the "fly by" waypoint further offshore, such as at 1.0 or 1.5NM would be better for the La Jolla oriented coast.	Comment noted. As stated at CAC Meeting #3, the consultant team will proceed with modeling noise exposure associated with the proposed procedure for Recommendation 15, Alternative 4 Turn between the Shoreline and 1.5 NM based on the design of the existing PADRZ SID initial departure heading.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 15 – Alternative 5-ELSO to Fly By Turn at 1.5 NM	C-84	Along those lines, La Jolla believes that Alternative 5 ELSO to Fly By Turn at 1.5NM would be optimal. We recognize that this approach would modify the initial departure heading and accordingly be subject to the Part 150 Study	Refer to response to Comment #C-76.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 16 - Alternative 1	C-85	La Jolla is overall in strongest favor of a modified arrival path that routes traffic over the I805 and State Route 52 interchange, and accordingly over less populated and primarily industrial areas. We support further study of Alternative 1, the Modified COMIX Arrival--LNTRN to I805/SR52 to KLOMN waypoint. We are mindful of the airlines concerns about an adequate distance to both descend and slow down, and accordingly, advocate for study of the arrival path(s) used prior to implementation of NextGen Metroplex. Overall, we are strongly in favor of Alternative 1, which would include a proposed waypoint at the 805/52 intersection and raising the altitude over LNTRN. However, we are mindful of airline concerns about descending and slowing at the same time, and the impact of speed brakes on noise. We are opposed to advocating for a solution which would be deemed infeasible or unsafe by the FAA.	The consultant team is concerned about the feasibility of Recommendation 16, Alternative 1, based on input from the Technical Advisory Committee (TAC) airline representatives provided at the August 30, 2018 TAC Meeting. The consultant team shared this feedback with CAC at CAC Meeting #3, as confirmed by CAC representatives that attended the TAC Meeting. Two airline representatives expressed concerns with the existing COMIX Standard Terminal Arrivals (STAR) procedure after the altitude at the LNTRN waypoint was raised from 8,000 feet Mean Sea Level (MSL) to 9,000 feet MSL. Descending and reducing speed at the same time while maintaining compliance with the procedure or air traffic controller instructions is difficult. Pilots use all available means to descend and slow the aircraft, including the use of speed brakes (i.e., panels on the top of the wings that, when extended into the airstream, produce drag to slow the aircraft down). The use of speed brakes is a last measure for pilots to slow an aircraft, and if it does not work, they are unable to maintain procedure compliance and must inform air traffic control (ATC). The airline representatives indicated that they intend to meet with FAA to discuss their concerns related to the challenges of complying with the existing COMIX STAR procedure, which is a longer route with lower altitudes compared to Recommendation 16, Alternative 1. For these reasons, the consultant team does not recommend carrying this procedure forward. At the CAC Meeting, the consultant team was asked to determine if lowering the altitude at LNTRN in Alternative 1 to 8,000 feet MSL would mitigate the issues raised by the airline representatives. The consultant team, with the San Diego County Regional Airport Authority's (SDCAA's) assistance, will seek TAC airline members feedback on lowering altitudes for Alternative 1 to mitigate descent and speed reduction concerns.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Rec. 16 - Alternative 2 and Alternative 3	C-86	We are opposed to Alternatives 2 and 3, which do not keep commercial air traffic further from La Jolla.	As stated in CAC Meeting #3 presentation, slides 36 and 37, the consultant team did not recommend carrying forward with the referenced designs. The designs did not best meet the intent of Recommendation 16 compared to Alternative 1, and they are not preferred by CAC members representing the La Jolla area.
9/12/18	Anthony Stiegler	Muirlands/La Jolla	Schedule	C-87	We look forward to the results of additional study, recommendations and noise modeling, which we understand will either be circulated or presented on or about October 11, 2018, and/or more detailed modeling in time for the CAC November meeting.	The consultant team expects to share the final design concepts with the CAC in October and to share noise screening results in December.
9/12/18	Gernot Trolf	Mission Beach	Initial Departure Heading	C-88	As the designate for Mission Beach my recommendation would be for night time and early morning departures to be as close as possible over the San Diego river. I believe it is heading 290. Additionally I believe a steeper climb would be in order. There is not much leeway to recommend anything else short of moving the airport.	Refer to response to Comment #C-76.
9/12/18	Dave Kujawa	Ocean Beach	General	C-89	I appreciate your efforts to simplify the presentations and impose more order during the meeting. I thought the second meeting was an improvement on the first (although I did talk to a few people after and one of them said that their "head was still spinning").	Comment noted.
9/12/18	Dave Kujawa	Ocean Beach	TAC Membership	C-90	Although probably too late to change, I did also want to formally object in writing to the policy that allows the same people to sit on both the TAC and on the CAC. This policy reduces the number of	The CAC representatives that serve on the TAC were nominated and elected by the CAC membership at the first CAC Meeting on March 22, 2018. The consultant team presents the same information to TAC and CAC and considers input from

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					(continued) independent thinkers on the committee and reduces public access to participate in the process. I also assume that the ANAC noise recommendations were crafted at least in part by some of these same people currently on the TAC and the CAC. Again, having the same people involved limits the discussion and reduces the opportunity for other members of the public access to adequately participate in the process.	(continued) both groups prior to formulating recommendations. As discussed at the CAC kick-off meetings, each CAC member is expected to represent the interests of the community in which they reside. Both meetings are open to the public, and presentations are provided to the public via the SDCRAA's website so that interested community members have an opportunity to reviewing the information shared with the CAC and provide feedback to their CAC representative. The two CAC members elected by CAC to participate at TAC meetings are expected to represent the CAC input, not just the communities that each individual represents.
9/12/18	Dave Kujawa	Ocean Beach	Rec. 14 - Alternative 5-ELSO to Fly By Turn at 1.5 NM (Nighttime) and Alternative 6-ELSO (Daytime); Rec. 15 – Alternative 5-ELSO to Fly By Turn at 1.5 NM	C-91	As for the specific of the meeting, I am opposed to pursuing the newly presented: 1. "Alternative 5 (new) – ELSO 285° to Fly By waypoint at 1.5 NM thence to BROCK-2 – Nighttime" 2. "Alternative 6 (new) – ELSO 285°- Daytime" 3. "Alternative 5 (New) – ELSO 285° to Fly By waypoint at 1.5 NM then to ZZOOO – Nighttime" As shown in slide 18, these proposals would shift the noise further south and concentrate flights over Ocean Beach. Thus, these plans do not "share the noise." Rather, they would substantially shift the current air traffic as seen in slide 18. Residents that do not currently experience direct flights overhead will not be pleased at all with this proposal. Moreover, I think it's obvious that such a change would require a change the contour of the CNEL 65 area. Thus, I do not think it is worth studying further. I also note that while the departure headings all look fairly close together on paper, I live directly under the current southernmost flight path shown in slide 18 (heading towards JETTI) and the difference in noise experienced at my house between planes departing on that heading and those departing on the current northernmost heading (toward WP71 in slide 18) is significant (obviously much louder for those flying the JETTI route). Thus, I know that changing the heading to WP76 as shown in slide 18 will significantly increase noise exposure to all residents of Ocean Beach. I also don't think that this change will significantly reduce noise in other northern neighborhoods. Thus, I am opposed to these proposals.	Refer to response to Comment #C-76.
9/12/18	Dave Kujawa	Ocean Beach	General	C-92	The other proposals [proposals that do not include ELSO heading] discussed during the meeting seemed reasonable and worthy of further study.	Comment noted.
9/12/18	Mike Tarlton	Ocean Beach	Rec. 14 - Alternative 3-Fly By Turn at CNEL 65 (Nighttime), Alternative 5-ELSO to Fly By Turn at 1.5 NM (Nighttime) and Alternative 6-ELSO (Daytime); Rec.15 – Alternative 5-ELSO to Fly By Turn at 1.5 NM	C-93	As I have stated in the past, I am adamantly opposed to any proposals in the chart deck that shift noise south from Mission Beach onto Ocean Beach residents. Specifically, for "Noise recommendation 14, I am opposed to pursuing: 1. Alternative 3 – Fly By Turn at CNEL 65 contour – Nighttime. 2. Alternative 5 (new) – ELSO 285° to Fly By waypoint at 1.5 NM thence to BROCK-2 – Nighttime 3. Alternative 6 (new) – ELSO 285°- Daytime For Noise recommendation 15, I am opposed to pursuing: 1. Alternative 5 (New) – ELSO 285° to Fly By waypoint at 1.5 NM then to ZZOOO – Nighttime Finally, it goes without saying, but I am also adamantly opposed to any composite recommendation that combines Recommendations 14 and 15 using the individual alternatives I listed above. As I am sure you are aware, all of the proposals I listed above would shift noise south and concentrate flights over Ocean Beach. Thus, these plans do not "share the noise." Rather, they would substantially shift the current air traffic as seen in slide 18 from Mission Beach to Ocean Beach. Residents that do not currently experience direct flights overhead will now experience significantly increased aircraft noise. Moreover, I am certain that such a change would require a change the contour of the CNEL 65 area. Thus, I do not think it is worth studying further. Additionally, while the departure headings all look fairly close together on paper, I live directly under the current southernmost flight path and the difference in noise experienced at my house between planes departing on that heading and those departing on the current northernmost heading is significant. It is much louder when aircraft fly toward JETTI that toward WP71 on chart 18. Thus, I know that changing the heading to south to WP76 as shown in slide 18 will significantly increase noise exposure to all residents of Ocean Beach. Ultimately, I am opposed to the above listed alternative proposals because they all push noise south onto Ocean Beach residents for the benefit of Mission Beach residents. As an Ocean Beach resident, I do not believe this is fair or reasonable.	Refer to response to Comment #C-76.
9/12/18	Mike Tarlton	Ocean Beach	General	C-94	The other proposals discussed during the meeting seemed reasonable and worthy of further study.	Comment noted.
9/13/18	Marie Knox	La Mesa	East County	C-95	I would like to start by commenting that East County was not represented in the ANAC subcommittee recommendations done in 2017. That has put East County at a disadvantage in the Part 150 Update because there are no recommendations regarding reducing noise in East County in the ANAC recommendations used to model this study.	SDCRAA announced at the August 30, 2018, CAC Meeting #3 that they intend to form an East County working group focused specifically on seeking opportunities to address San Diego International Airport (SDIA) arrival noise concerns over East County. One of the reasons for the working group is because East County was not involved in the ANAC Subcommittee. The Authority is working with the East County ANAC representative to identify representatives for communities in East County.

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9/13/18	Marie Knox	La Mesa	Class B Airspace	C-96	East County has been added onto the discussion in the Aug. 30th CAC meeting as the last item. The suggestion is that Class B airspace be changed. I spoke to Wayne Reiter at Montgomery Field Airport, who sits on the ANAC, about this suggestion and he said that lowering Class B airspace would cause an increase in noise in those areas where the airspace is lowered, it would push general aviation lower and he has not seen the FAA change any airspace in San Diego in the 20 years he has worked at Montgomery Field Airport. With that information, I do not see how that would be a feasible option. I called the Lead Airport Planner Manager, Jaime Duran, at the FAA Western Pacific Region, to ask him if he thought that lowering Class B airspace in San Diego would be a feasible solution. He did not return my call and I have not been able to get in touch with him on the phone. I will send him a letter and ask him in writing. I will let you know what his response is.	The FAA's proposed Class B change for Area K, which is depicted on slide 41 of the August 30, 2018, CAC Meeting PowerPoint slides, would lower the floor in Area K from 4,800 feet MSL to 4,000 feet MSL. If general aviation aircraft that do not want to or cannot enter the Class B airspace, they must stay below 4,800 feet today. If the FAA implements the proposed change, general aviation aircraft would need to stay below 4,000 feet MSL. Consistent with Mr. Wayne Reiter's feedback, lowering the Class B airspace has the potential to increase aircraft noise on the ground, which would require the FAA to conduct an environmental review, including announcing the intent to implement the change in the Federal Register. The public would have the opportunity to comment on the change through these processes. Lowering the Class B floor in Area K could provide an opportunity to route SDIA arrivals along the corridor in which they were located prior to the procedure change in November 2016.
9/13/18	Marie Knox	La Mesa	Rec. 16 – Alternative 1	C-97	As far as the ANAC Noise Recommendation #16 to reduce arrival noise over La Jolla by modifying COMIX arrival Lantern to I805/SR52 to KLOMN waypoints, I would comment that if doing that increases noise anywhere in East County, then it should not be considered.	Under the proposed design concept, traffic would be directed to the same KLOMN waypoint, located northwest of East County, that exists today. The proposed design concept is not expected to change the existing SDIA arrival traffic patterns over East County.
9/13/18	Marie Knox	La Mesa	Sweetwater Visual Approach	C-98	My suggestion for reducing noise in La Mesa, would be to ask TRACON to simply use the Sweetwater Visual which is the FAA published route. Stephen Smith of Ricondo and Assoc, says that this route is not being used and when I ask him what route is being used, he said he doesn't know. I ask that this study ask the FAA to follow their own procedures and use the Sweetwater Visual and if they are not using it, what route are they using? And on the route they are using, ask if there has been an Environmental Assessment and an Environmental Impact Study made on the route being used? And if so, how would I find that information.	The Sweetwater Visual charted visual approach is not a required procedure. A user must request the procedure, and FAA air traffic control would approve it depending on traffic conditions. In a previous meeting with the FAA Southern California TRACON (SCT), FAA indicated that receive few user requests for the charted visual approach. The commenter raises a good question, and the consultant team recommends further discussion with FAA as part of the East County effort. After aircraft on the COMIX STAR pass the KLOMN or NADDO waypoint, air traffic controllers issue headings, and speed and/or altitude restrictions to merge the traffic on to the final approach to Runway 27. Controller have issued assigned headings and speed and/or altitude restrictions for many years. The procedure added between the KLOMN and NADDO waypoint was implemented in November 2016 as part of the BAYVU 5 amendment. According to FAA, it determined that the procedure was categorically excluded from review under the National Environmental Policy Act (NEPA). The FAA added the Required Navigation Performance (RNP) approach to Runway 27, which starts at the KLOMN waypoint. The RNP approach is similar to the Sweetwater Visual charted visual approach, but it requires certified aircraft and authorized pilots to use the procedure. Approximately 50 percent or less of the operators are capable of using the procedure. This approach was evaluated as part of the SoCal Metroplex Environmental Assessment Proposed Action alternative.
9/13/18	Marie Knox	La Mesa	East County Working Group	C-99	Finally, thank you for agreeing to start a group to address the noise concerns for East County specifically. I wanted to ask if you have made in progress with this group. And I hope that a person has been chosen to represent South Park to sit on the CAC to take the place of David Twining.	Comment noted. Progress has been made to identify potential East County community representatives with the assistance of the ANAC East County representative.
9/13/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Requested Information	C-100	Disappointingly, the questions and requests of my email of August 28th were not fully addressed in the most recent TAC nor CAC meetings. I strongly believe that to incorporate these questions, answers and details as well as those from other CAC members into the pre meeting consultants considerations would have, as stated by a senior SDCRAA representative, "help[ing] spur discussion between CAC members, [it will] help ensure that everyone has the same information to inform their perspectives" and, in my view, promote a consensus recommendation. To not do so casts a shadow on the validity of this portion of the process, which it should be noted, is now entering its fourth year.	Refer to responses to Comments #C-12 through #C-36.
9/13/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Level of Modification	C-101	First and foremost, the consultant presentation is missing a critical component that should describe an evaluation of ANY option relative to the feasibility to gain FAA approval and implement the alternative. To evaluate the consultant alternatives to gain a CAC recommendation without understanding the respective feasibility of the alternative is a fool's errand and diminishes the credibility of this process. The consultants need to fully disclose as to each alternative, the type of modification as described below, as well as the respective time lines and hurdles to accomplish as the relative timeframes and challenges to obtain the various FAA approvals are substantially different: a. "minor modification to an existing SID", b. "new SID" or c. "major modification to an existing SID";	The consultant team will provide professional judgement on the degree of change each proposed concept will involve. The commenter should understand that the final determination related to the degree of change is made by the FAA after the agency completes the first step in the performance based navigation (PBN) implementation process.
9/13/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Order of Discussion	C-102	As one who is very familiar with the concepts being presented, I (along with other CAC members) continue to find it very difficult and frustrating to attempt to track the consultants progression of options across both nighttime and daytime applications. The consultants presentation slides nor their discussion do not clearly segregate nor identify the significant difference between daytime and nighttime issues and goals as established by the ANAC Subcommittee. <u>In fact, the Nighttime Noise Abatement Procedure issues were contained within ANAC Subcommittee recommendation #17, which is not currently being directly addressed, NOT recommendations 14 and 15.</u> This nighttime\daytime separation and understanding is critical for CAC members to fully evaluate the options presented as they have materially different issues and goals to consider.	Refer to response to Comment #C-103 related to separating daytime and nighttime concepts for future presentations. At the first CAC meeting on March 22, 2018, the consultant team informed CAC that Recommendation 17 would be addressed and evaluated under the Part 150 Study update process.

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9/13/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Order of Discussion	C-103	Therefore, I would again, <u>strongly</u> suggest that the slides and the discussion order be revised to reflect as noted below, Daytime issues and alternatives and then Nighttime issues and alternatives (by adding recommendation #17): Doing so would significantly aid in the discussion: a. recommendations 14 & 15 " <u>Daytime</u> " operations i. right turn ii. left turn b. recommendations 14 & 15 " <u>Nighttime</u> " operations i. right turn ii. left turn c. recommendation 16 d. recommendation 17	The consultant team will organize the Final concepts presentations for the final proposed concept designs in a manner similar to the commenter's request.
9/13/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Fly By versus Fly Over Waypoint	C-104	I remain unconvinced that the alleged predictability of "fly by" waypoints versus "fly over" would cause a favorable impact to the beach communities as it implies that ATC will respect the intent, which we know to be a bold assumption. Our day to day experience clearly demonstrates significant room for broad ATC interpretation of what is allowable for "fly by" versus a very clear definition for "fly over", arguably conflicting with the consultants recommendations.	As long as FAA air traffic controllers keep the aircraft on an Area Navigation (RNAV) Standard Instrument Departure (SID), one can expect the aircraft to operate close to the designed path. The consultant team's proposed "track-to-fix" designs and "start of turn anticipation" calculations for nighttime procedures indicate that traffic on the RNAV SID are expected to operate along a more predictable path compared to the "fly-over and direct-to-fix" design of the existing ZZOOO SID. Some variance, due the different types of Flight Management Systems (FMS) equipped on an aircraft and aircraft performance, should be expected, but not to the level presently observed at the ZZOOO waypoint. Based on evaluations conducted by SDCRAA, compliance with 1.5 NM turn agreement has substantially improved since the existing RNAV SIDs were implemented. As long as FAA air traffic controllers keep aircraft on the RNAV SID procedure, aircraft should predictably operate as expected. The primary mission of air traffic control is to provide the safest and most efficient air traffic system; therefore, air traffic controller intervention is warranted at time to maintain the dynamic nature of the ATC system. For this reason, 100 percent compliance with the procedures should not be expected.
9/13/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 17	C-105	I am unaware of any ANAC Subcommittee goal to "move" nighttime traffic south from LJ. The primary ANAC Subcommittee goal (#17) was to "...ensure that ATC is only turning aircraft off this procedure (the 290 heading) for safety reasons only." That is to say, get the traffic reliably BACK to the long term agreement defined by the 290 heading and OFF of the new TRACON habit of nighttime departures on the PADRZ SID (294 degrees). It was established by the consultants (Rob) during the last CAC meeting that the magnetic heading for "PADRZ TWO" was 294 degrees; therefore, ANY nighttime departure exiting on a PADRZ SID is in violation of the Nighttime Noise Abatement Procedure. It would also be highly appropriate for the consultants to recognize that PADRZ is NOT consistent with the Nighttime Noise Abatement Procedure and to support the position that recent use of the PADRZ 294 degree departure for the Nighttime Noise Abatement Procedure is not precedent setting as it is in direct violation of the established long term agreement.	ANAC Recommendation 14 states: "Revise PADRZ SID or create a new procedure to reduce increased noise in La Jolla, Mission Beach and Pacific Beach." The PADRZ SID serves daytime and nighttime departures to the north/northwest. Therefore, the intent of ANAC recommendation is to include both daytime and nighttime traffic and identify concepts that would move the traffic farther south of La Jolla. The consultant team confirmed this intent with CAC at the first CAC Meeting on March 22, 2018. Please refer to the response for Comment #C-76 comment related to the ANAC Recommendation 17 and initial departure headings from Runway 27.
9/13/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 17	C-106	While clearly recognizing that magnetic headings for future solutions may not be highly relevant to the consultants, magnetic headings and the point of axis\vertex (end of runway, 520' above MSL, etc) provide an important context and have a very strong role in the historical precedent setting facts that will directly influence what alternatives should be considered fair to all communities. Therefore, in the effort to respect historical agreements and to maintain a fair and historical impact on communities (i.e. Ocean Beach versus Mission Beach), we should recognize that magnetic headings and their axis are important and relevant. Therefore, again, please Identify the current magnetic headings for: a. end of runway to LANDN; b. 520' MSL to LANDN (est, recognizing this is a moving point) c. end of runway to WNFLD; d. 520' MSL to WNFLD e. end of runway to AN14-1; (Rec 14, Alt 1) f. 1.5 NM from shoreline (Rec 14, Alt 1); g. 520' MSL to AN14-1 h. end of runway to WP 7.1?? i. 0.5 NM from shoreline (Rec 14, Alt 4) j. End of runway to Noise Dot #1 k. 520' MSL to Noise Dot #1 l. End of runway to Noise Dot #2 m. 520' MSL to Noise Dot #2	As requested, the following table depicts the magnetic heading and true course (course over the surface in reference to the North Pole) between two points designated by the commenter. The magnetic and true course headings related to A14-1 and WP71 waypoints are based on the final design concepts, which were refined since the last versions for Rec. 14 Alternative 1/Rec. 15 Alternative 2 (Nighttime) and Rec. 14 Alternative 4/Rec. 15 Alternative 4 (Nighttime) were shown to CAC on August 30, 2018. To provide historic context, the magnetic heading and true course prior to the magnetic variation change in 2016 is provided. The true course never changes over time, but magnetic variation does over the years. Using the measured true courses between the points requested by the commenter, the table below depicts what the magnetic heading would have been prior to the magnetic variation change in 2016 and what it is after the change. The table also provides the initial headings for the PEBLE and BORDER Conventional SIDs prior to and after the magnetic variation change. The true course over the ground never changed when the PEBLE and BORDER SIDs were updated to account for the magnetic variation change. The "520' above MSL" point varies for each unique flight on a given day due to aircraft performance. The point where an aircraft will reach 520' Mean Sea Level (MSL) ranges between prior to the end of Runway 27 to just under one mile from the departure end of Runway 27. The commenter recognizes this is a moving point. For purposes of the commenter's request, the point used to measure the magnetic and true course heading is where at least half (50 percent) of all jet departures on the PADRZ SID reach 520' MSL. This does not mean aircraft reaching 520 feet MSL prior to or after this point is not in compliance with the PADRZ SID. In fact, they are in compliance. Based on a month of ANOMS radar track data, approximately 50 percent reach 520' MSL at a point approximately 820 feet west of the departure end of Runway 27.

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					<p>(continued) n. Identify what magnetic deviation you are using; within the past 24 months, FAA revised the full complement of SID's with a new deviation factor. While these changes would likely be minimal, they do come into play and clarity on the matter would be helpful.</p>	<p>(continued)</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">11-DEGREE MAGNETIC VARIATION (2016-CURRENT)</th> <th colspan="2">14-DEGREE MAGNETIC VARIATION (1965-2015)</th> </tr> <tr> <th>MAGNETIC HEADING</th> <th>TRUE COURSE</th> <th>MAGNETIC HEADING</th> <th>TRUE COURSE</th> </tr> </thead> <tbody> <tr> <td>a. End of Runway to LANDN</td> <td>293</td> <td>304</td> <td>290</td> <td>304</td> </tr> <tr> <td>b. 520' to LANDN</td> <td>293</td> <td>304</td> <td>290</td> <td>304</td> </tr> <tr> <td>c. End of Runway to WNFLD</td> <td>292</td> <td>303</td> <td>289</td> <td>303</td> </tr> <tr> <td>d. 520' to WNFLD</td> <td>292</td> <td>303</td> <td>289</td> <td>303</td> </tr> <tr> <td>e. End of Runway to AN14-1</td> <td>291</td> <td>302</td> <td>288</td> <td>302</td> </tr> <tr> <td>f. End of Runway to 1.5NM from Shoreline</td> <td>No Waypoint Exists in Proposed Design Concepts-Refer to e.</td> <td>No Waypoint Exists in Proposed Design Concepts-Refer to e.</td> <td>No Waypoint Exists in Proposed Design Concepts-Refer to e</td> <td>No Waypoint Exists in Proposed Design Concepts-Refer to e</td> </tr> <tr> <td>g. 520; to AN14-1</td> <td>291</td> <td>302</td> <td>288</td> <td>302</td> </tr> <tr> <td>h. End of Runway to WP 71 [now WP88]</td> <td>292</td> <td>303</td> <td>289</td> <td>303</td> </tr> <tr> <td>i. End of Runway to 0.5 NM from Shoreline</td> <td>No Waypoint Exists in Proposed Design Concepts-Refer to h.</td> <td>No Waypoint Exists in Proposed Design Concepts-Refer to h.</td> <td>No Waypoint Exists in Proposed Design Concepts-Refer to h.</td> <td>No Waypoint Exists in Proposed Design Concepts-Refer to h.</td> </tr> <tr> <td>j. End of Runway to Noise Dot #1</td> <td>299</td> <td>310</td> <td>296</td> <td>310</td> </tr> <tr> <td>k. 520' to Noise Dot #1</td> <td>298</td> <td>309</td> <td>294</td> <td>309</td> </tr> <tr> <td>l. End of Runway to Noise Dot #2</td> <td>287</td> <td>298</td> <td>284</td> <td>298</td> </tr> <tr> <td>m. 520' to Noise Dot #2</td> <td>287</td> <td>298</td> <td>284</td> <td>298</td> </tr> <tr> <td>n. Current Magnetic Variation: 11-degrees</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>PEBLE SID Initial Heading</td> <td>293</td> <td>304</td> <td>290</td> <td>304</td> </tr> <tr> <td>BORDER SID Initial Heading</td> <td>278</td> <td>289</td> <td>275</td> <td>289</td> </tr> </tbody> </table>		11-DEGREE MAGNETIC VARIATION (2016-CURRENT)		14-DEGREE MAGNETIC VARIATION (1965-2015)		MAGNETIC HEADING	TRUE COURSE	MAGNETIC HEADING	TRUE COURSE	a. End of Runway to LANDN	293	304	290	304	b. 520' to LANDN	293	304	290	304	c. End of Runway to WNFLD	292	303	289	303	d. 520' to WNFLD	292	303	289	303	e. End of Runway to AN14-1	291	302	288	302	f. End of Runway to 1.5NM from Shoreline	No Waypoint Exists in Proposed Design Concepts-Refer to e.	No Waypoint Exists in Proposed Design Concepts-Refer to e.	No Waypoint Exists in Proposed Design Concepts-Refer to e	No Waypoint Exists in Proposed Design Concepts-Refer to e	g. 520; to AN14-1	291	302	288	302	h. End of Runway to WP 71 [now WP88]	292	303	289	303	i. End of Runway to 0.5 NM from Shoreline	No Waypoint Exists in Proposed Design Concepts-Refer to h.	No Waypoint Exists in Proposed Design Concepts-Refer to h.	No Waypoint Exists in Proposed Design Concepts-Refer to h.	No Waypoint Exists in Proposed Design Concepts-Refer to h.	j. End of Runway to Noise Dot #1	299	310	296	310	k. 520' to Noise Dot #1	298	309	294	309	l. End of Runway to Noise Dot #2	287	298	284	298	m. 520' to Noise Dot #2	287	298	284	298	n. Current Magnetic Variation: 11-degrees					PEBLE SID Initial Heading	293	304	290	304	BORDER SID Initial Heading	278	289	275	289
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9/13/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 – Daytime/Nighttime	C-107	<p>Recognizing that the fairness of a solution is influenced by factors that may be somewhat outside of the consultants scope, the context of the historical agreements and shifting of impacts back to former historical position are important and consistent with the ANAC Subcommittee efforts. I believe that a very viable solution that meets the ANAC Subcommittee and historical criteria would be a minor PADRZ modification:</p> <ul style="list-style-type: none"> a) move WNFLD and LANDN slightly south (by 0.35 NM +/-, approximately 2,100'; not the few hundred feet as described by the consultants in the meeting) to a location with an axis bearing 290 degrees from preferably: <ul style="list-style-type: none"> (i) AN14-1 (as a "flyby"), or (ii) an estimated point at "climb to 520' MSL" (not as clearly defined), and b) revise the newly located WNFLD to a "fly over". <p>I firmly believe that this alternative could provide a very "historically fair" community solution while effecting a "minor" adjustment to an existing SID, as well as:</p>	<p>The commenter's suggestion involves an adjustment that changes overflight patterns over areas exposed to CNEL 65 or higher noise levels. Refer to response to Comment #C-12.</p>																																																																																									

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					<p>(continued)</p> <ul style="list-style-type: none"> (i) feasibly replace the Nighttime Noise Abatement Procedure with a formal SID (the revised PADRZ), rather than ATC vectoring (ii) meet the ANAC Subcommittee goal of moving PADRZ SID departures to the original 290 degrees (iii) maintain the 15 degree separation (iv) avoid significant challenges by relocating impacts south of previously established routes (south of 290 degrees as in the 285 degree ELSO proposal) (v) Offer a "minor" adjustment to an existing SID that may require a "NextGen adjustment", thereby less FAA review and approval hurdles, over a shorter period <p>Therefore, may I request that you please incorporate this specific alternative with those to be considered and discussed in our October CAC meeting as a solution to Recommendation #14 daytime, Recommendation #14 and #15 Nighttime and Recommendation #17.</p>	
9/13/18	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 16	C-108	<p>Please reconsider all potential options for Recommendation #16. Prior to the more recent FAA changes, impacts from arrivals were far less negative. Also recognizing that not all current increases in negative impacts are a result of aircraft design that constrain the descent. So, as Mr. Harris has attempted to point out, a current solution should lie in the consultants understanding of the historical routes. In my opinion, to offer no firm alternatives nor recommendations to address this significant problem is not remotely close to an acceptable position for CAC, nor does it reach to meet the ANAC Subcommittee goals</p>	<p>The consultant team plans to proceed with Recommendation 16, Alternative 1, if an adjustment can be made that addresses concerns shared by the TAC airline representatives. La Jolla CAC members indicated a preference for Alternative 1 if it would not impact safety. A La Jolla CAC member recommended considering lowering the altitude at LNTRN, and another inquired about airspeed. The consultant team will seek input from the TAC airline representatives and FAA regarding the suggestions.</p> <p>The airlines/users input is critical to determining feasibility of air traffic procedures. During the PBN implementation process, FAA will seek airline and user feedback on a proposed procedure design. The consultant team's past experience with this process indicates that user and/or airline concerns can result in a procedure design being rejected. Ultimately, if a user or airline will not accept a procedure, it will never be used. If FAA expects use to be very low, the FAA will not implement the procedures due to the limited benefit it would provide. Safety concerns about a procedure typically result in rejection of the design concept.</p>
9/13/18	Alan Harris	Pacific Beach	Rec. 16 - Alternative 1	C-109	<p>Speaking with other commercial airline pilots I submit the follow comments modeling and future study. Recommendation 16, Alt 1 Arrivals</p> <ol style="list-style-type: none"> 1. Drop the initial approach airspeed below 230k...closer to 210k [A. Harris sent email on 9/14/18 to correct "below 200k airspeed" to "below 230K...closer to 210K"... this will solve the issue of too fast approach that was a concern of the Pilot into SAN. It will have minimal impacts to additional fuel and time in the air. The airline priorities of getting on the ground sooner should not come at the expense set of residents on the ground. The current path of design is setting up any recommendation as an automatic failure. 2.The CAC recommendation was not to shift air traffic to Del Mar, but to shift traffic back to pre Next Gen flights. 	<p>The existing COMIX STAR restricts airspeed at 230 knots at LNTRN waypoint, and 210 knots at the KLOMN waypoint. Alternative 1 maintains these same airspeed restrictions. The consultant team, with SDRCAA's assistance, will seek input from FAA and the TAC airline representatives to determine if it is feasible to reduce the airspeed over LNTRN waypoint from 230 to 210 knots.</p> <p>Recommendation 16, Alternative 1, does not cross over Del Mar. At CAC Meeting #3, the consultant team indicated that, based on a proposal from a CAC member during the CAC Meeting #2, aircraft would fly over Del Mar to go direct to KLOMN from the COMIX waypoint. The consultant team did not recommend the proposal because it would relocate traffic over the Del Mar community.</p>
9/13/18	Leonard Gross	Birdrock/La Jolla	General	C-110	Thanks for the reminder. Fortunately, most of my questions got answered at the meeting.	Comment noted.

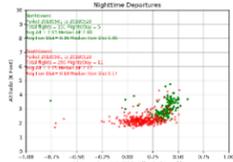
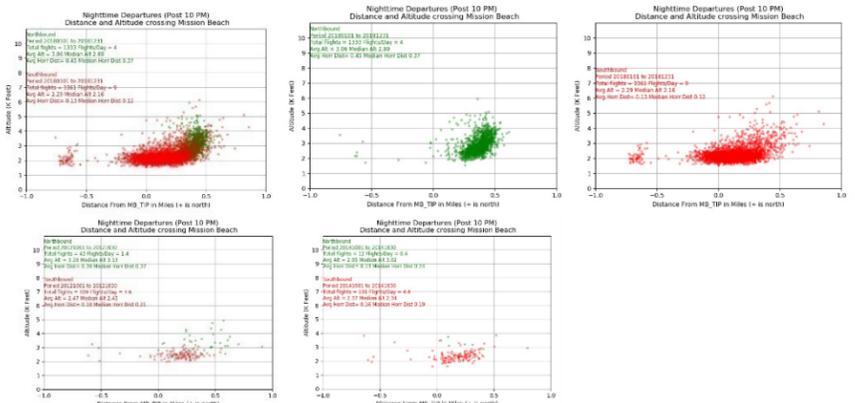
SOURCE: Ricondo & Associates, Inc., October 2018.

B.2.3 CITIZEN ADVISORY COMMITTEE (CAC) MEETING #5 (MARCH 28, 2019) INPUT AND CONSULTANT TEAM RESPONSES

DATE	NAME	REP.	CONCEPT	COMMENT #	COMMENT FROM CAC MEMBER	RESPONSE
3/28/19	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 13	C-111	I believe that a thorough review of the RIC Recommendations against ALL of the specific and detailed elements, i.e. background/rational and procedure suggestions of the unanimously SDCRAA approved ANAC Subcommittee Recommendations (please see attached original) is merited by Riconco, TAC and CAC, as many of the details of the Subcommittee goals are not being addressed by Riconco nor included within the RIC Recommendations	<p>The consultant team considered the recommendations for air traffic procedures approved by ANAC on October 18, 2017, and reviewed all ANAC subcommittee suggestions for each recommendation, as follows:</p> <ul style="list-style-type: none"> At the first CAC meeting on March 22, 2018, the consultant team reviewed each ANAC recommendation to confirm with the CAC which recommendations would be assessed. The consultant team then assessed the feasibility of the ANAC subcommittee suggestions for those recommendations. The consultant team presented the results of the feasibility assessment of ANAC subcommittee suggestions at the July 19, 2018, CAC meeting. The consultant team briefed CAC the reasons why specific suggestions were considered not feasible. For feasible ANAC subcommittee suggestions, the consultant team presented details on multiple procedure concepts, including the rationale for and purpose of the concepts. This procedure evaluation process was iterated over three more CAC meetings. The consultant team considered CAC input (during meeting discussions as well as responses to written comments) to ensure proposed procedure designs were consistent with the goals and intent of the overarching ANAC recommendation. Throughout this process, concepts were modified and eliminated based on CAC and TAC input, as well as based on noise screening results. <p>Procedure design concepts were subject to noise screening. If a concept was found to increase noise levels, the consultant team did not recommend carrying the concept forward. As such, Recommendation 16 Alternative 1 was eliminated from further consideration because of the potential noise increases the change will cause.</p> <p>The proposed nighttime RNAV jet departure procedures for Recommendation 14 and 15 would provide a qualitative noise benefit to communities, such as La Jolla and Point Loma, although the consultant team determined that the procedures should be withheld from further consideration <u>until</u> Recommendation 17 (nighttime noise abatement heading) is addressed under the Part 150 Study update process based on CAC comments. Refer to response to Comment C-59 for the reason Recommendation 17 will be evaluated under the Part 150 Study.</p> <p>The proposed change to the daytime eastbound jet departure procedure (ZZOOO SID) positively addressed the intent of Recommendation 15. Based on noise screening results, although the consultant team advised CAC of potential concerns by FAA and the airlines related to the increase in flight distance.</p> <p>In conclusion, the only ANAC recommendation that could not be addressed was ANAC Recommendation 16. In support of this recommendation, the consultant team evaluated seven different RNAV arrival procedure designs. Several designs were based on suggestions from the ANAC subcommittee. Five of the seven procedure designs were eliminated based on CAC feedback for not meeting the intent of Recommendation 16. One design was eliminated due to aircraft performance and safety concerns expressed by a TAC airline representative. The one remaining design (Recommendation 16 Alternative 1 Version 3) was determined to cause a noticeable increase in noise levels in some communities. In summary, the consultant team was unable to identify a feasible procedure design to meet the intent of ANAC Recommendation 16.</p>
3/28/19	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 17	C-112	<p>The Nighttime procedure proposals represented within the attached presentation have a material baseline flaw. Ricondo is using Recommendation 14 and 15 for Nighttime applications, however, these RIC Recommendations are mute on the application of Recommendation 17. The intent of Recommendation 17 was to maintain and enforce the Nighttime Noise Abatement Procedure (Letter Agreement; SCT\SAN\ATCT) that calls for a 290 departure heading for both left and right turns.</p> <p>The RIC Recommendation 14/15 procedure specifically calls for PADRZ (295) SID departure routing for nighttime. This is in direct conflict with the intent of ANAC recommendation #17 and the Nighttime Noise Abatement Procedures (i.e. 290 degree departures). It also suggests a new but undefined waypoint that appears consistent with a 295 departure heading. The recently sent\posted "update on ANAC Recommendations" states that recommendation #17 is; "In Process; Consultant will be reviewing this in the Part 150 Study update." This is flawed reasoning\process as; a) the waypoints and departure routes are clearly impacting area outside of the 65dB CNEL contour\Part 150 study, and b) the existing 290 heading of the Nighttime Procedure should be maintained in this Flight Procedure Analysis process as the existing "base line", and only changed, if deemed appropriate in conjunction with the Part 150 (as your memo states), not the reverse as proposed.</p> <p>Please also note that Ricondo has previously been informed of this inconsistency with Recommendation #17</p>	<p>Refer to response to Comment #C-12 regarding Recommendation 17 and the nighttime noise abatement heading. CAC members suggested multiple alternatives for the nighttime noise abatement heading. The consultant team recommended that these alternatives be evaluated as part of the Part 150 Study update process.</p> <p>The Recommendation 14 and 15 nighttime departure procedure designs follow the initial heading of the existing PADRZ RNAV to maintain existing traffic patterns over areas exposed to CNEL 65 and higher. Because northbound and eastbound traffic would share the same right turn path, FAA would require the same initial heading in the RNAV procedure design for these two traffic flows. The consultant team advised CAC at the March 28, 2019, meeting to consider holding the recommended nighttime departure designs for Recommendation 14 and 15 from further consideration given dependences with Recommendation 17 (initial noise abatement departure heading from Runway 27 that the nighttime departure procedure designs would share). Based on comments received after the meeting, the consultant team recommends holding Recommendation 14 and 15 nighttime departure procedure designs until Recommendation 17 is addressed under the Part 150 Study update process. If a recommended nighttime noise abatement initial heading is proposed for Recommendation 17 during the study, the final design for the nighttime departure procedure design concepts related to Recommendation 14 and 15 may be modified to accommodate the heading.</p>
3/28/19	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 Alternative 1 and 4/Rec. 15 Alternative 2 and 4	C-113	<p>Various portions of the detailed elements, i.e. background/rational and procedure suggestions in ANAC #14 have not been addressed or were quickly dismissed by Riconco.</p> <p>RIC Recommendation: 14 Alternative 1 Version 2 and 15 Alternative 2 Version 2 (slide 10 Nighttime) – Was not addressed in the final RIC Recommendations for undeclared reasons</p>	<p>As described in response to Comment #C-111, the consultant team reviewed the feasibility of all ANAC subcommittee suggestions for the ANAC recommendations and presented the results of the feasibility assessment at the July 19, 2018, CAC meeting. The consultant team then developed multiple procedure concepts for feasible suggestions and assessed the concepts in the three-phase traffic procedure evaluation process. The consultant team briefed CAC members of each concept and provided responses to specific comments from CAC members throughout the process.</p>

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					<p>(continued) RIC Recommendation ANAC 14 Alternative 4 (slide 18 Nighttime) – Proceed forward for further consideration (note: would require lifting 1.5 nautical mile early turn restriction at night); [note: highlighted by commenter]</p> <p>RIC Recommendation ANAC 15 Alternative 4 (slide 18 Nighttime) – Proceed forward for further consideration (note: would require lifting 1.5 nautical mile early turn restriction at night); [note: highlighted by commenter]</p>	<p>(continued) Recommendation 14 Alternative 1 Version 2 and Recommendation 15 Alternative 2 Version 2 were not recommended to be carried forward because they are similar to Recommendation 14 and 15 Alternative 4. Procedure concepts for both were designed to meet the same intent, and the FAA would not implement both because they serve the same traffic at the same time. The consultant team recommended Recommendation 14 and 15 Alternative 4 because it provides more distance between the route and the La Jolla area compared to Recommendation 14 Alternative 1 and 15 Alternative 2. If FAA finds Recommendation 14 and 15 Alternative 4 is not feasible during their RNAV procedure evaluation process, Recommendation 14 Alternative 1 and 15 Alternative 2 could serve as a revised design for FAA consideration.</p> <p>The consultant team advised CAC that the procedure design for Recommendation 14 and 15 Alternative 4 would require FAA to lift the early turn restriction on aircraft assigned the departure procedures between 10:00 p.m. and 6:30 a.m. because the procedure includes a turn prior to 1.5 nautical miles from the shoreline.</p>
3/28/19	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 14 Alternative 1/Rec 15 Alternative 2	C-114	<p>I do not support these 2 RIC Recommendations for the following:</p> <ol style="list-style-type: none"> 1. flawed base line using ZZOOO and PADRZ (slide 10 clearly shows this proposed procedure aligning with WNFLD\LANDN at 295 degrees) rather than 290 Nighttime Noise Abatement Procedure (Letter Agreement; SCT\SAN\ATCT); Nighttime routing deteriorated by acceptance of PADRZ and ZZOOO departures in lieu of 290, negatively impacting OB, MB and BR (slide 16); this appears to be an attempt to eliminate the long standing 290 departure heading commitment 2. Undefined location of proposed Fly By Way Point; Fly By Way Point should be “Fly Over WP” to assure their statement of “a waypoint to provide a more predictable path” (as in the predictability of JETTI) 3. Left turns are clearly too close to shoreline at 0.5 NM; Nighttime routing deteriorated by turns allowed at 0.5 NM off shoreline versus 290 past JETTI, negatively impacting OB, MB and BR, but improvements to LJ (slide 22/23); 4. Noise comparison charts (slides 15/16) do not reflect turn closer to shoreline, do not reflect at 290 departure heading; creates a false “baseline” (at 295 vs. 290 degree headings) for noise comparisons; proposed left turns for a Fly By commencing prior to 0.5 NM from shoreline will predictably redirect jet wash noise toward Bird Rock and Mission Beach notably 1 full mile +- closer and therefore lower to shoreline, than a Fly Over WP in the same location (slide 16); 5. Validates a “new normal” for nighttime departures directed onto PADRZ, at 295 degrees 6. Memorializes the recent increased negative impact incurred by Mission Breach and Bird Rock from the ATC shift away from the Nighttime procedure to PADRZ. 	<ol style="list-style-type: none"> 1. The consultant team developed the baseline screening model on radar track data from the Authority’s ANOMS system, capturing data from May 2017 through December 2017 (post-Metroplex implementation). When developing noise model tracks for the baseline screening model, the consultant team was sensitive to maintaining the initial departure headings reflected in the radar data. Baseline models must reasonably represent existing conditions, and the consultant team is confident the baseline screening model reflects existing departure patterns. 2. The proposed location of the fly-by waypoint is defined in the TARGETS procedure design. Refer to response to Comment #C-6 regarding the recommendation to use a fly-by waypoint instead of a fly-over waypoint. 3. The noise screening results did not indicate a negative noise effect in Ocean Beach, Mission Beach, or the Bird Rock area of La Jolla. The consultant team understands concerns related to the initial departure heading and recommends holding Recommendation 14 and 15 Alternative 4 from further consideration until Recommendation 17 is addressed under the Part 150 Study update process. If some CAC members prefer Recommendation 14 Alternative 1 and Recommendation 15 Alternative 2, the consultant team could present both designs to ANAC for consideration, but ANAC must choose one of the two for reasons described in the response to Comment #C-113. 4. Refer to responses to items 1 and 3, above. 5. The consultant team presented the noise screening results and recommended that proposed RNAV departure procedures be designed to meet the intent of Recommendation 14 and 15. The consultant team acknowledged in previous meetings the nighttime noise abatement heading (Recommendation 17) still needs to be addressed but that this would best be done as part of the Part 150 Study update process. Based on comments received after the March 28, 2019, meeting, the consultant team recommends holding further consideration of Recommendation 14 and 15 until Recommendation 17 is addressed. 6. Refer to response to item 5, above.
3/28/19	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15	C-115	<p>Various portions of the detailed elements, i.e. background/rational and procedure suggestions in ANAC #14 have not been addressed or were quickly dismissed by Ricondo, particularly the redirection of flights inside of ZZOOO and right turns over La Jolla</p>	<p><i>The consultant team assumes the commenter is referencing ANAC Recommendation 15 because the comment was provided under a header titled “Recommendation 15.”</i></p> <p>As described in response to Comment #C-111, the consultant team reviewed the feasibility of all ANAC subcommittee suggestions for the ANAC recommendations and presented the results of the feasibility assessment at the July 19, 2018, CAC meeting. The consultant team then developed multiple procedure concepts for feasible suggestions and assessed the concepts in the three-phase traffic procedure evaluation process. The consultant team briefed CAC members of each concept and provided responses to specific comments from CAC members throughout the process.</p> <p>The proposed RNAV jet departure designs for Recommendation 15 Alternative 2 and 4 address the frequency of redirected flights and right turns over La Jolla. As presented at multiple CAC meetings, the routing of jets heading east and directed to make a right turn over La Jolla occurs primarily during nighttime hours. An RNAV departure procedure is not published for the routing of eastbound jet aircraft when nighttime noise abatement procedures are in effect between 10:00 p.m. and 6:30 a.m.). In some instances, ATC will direct aircraft to make a right turn instead of left. Based on discussion with FAA, a published RNAV departure procedure would reduce instances of aircraft turning right over La Jolla. A published RNAV departure procedure for eastbound departures that turns left would also reduce the frequency of radar vector operations. Based on early-turn reports published by the Authority for each ANAC meeting, the number of early-turn violations has substantially decreased since the RNAV departure procedures were implemented. The consultant team expects the same result for nighttime departures if Recommendation 15 Alternative 2 or 4 is implemented.</p> <p>Note that a published RNAV departure procedure will not eliminate all ATC redirected flights. Air traffic management is dynamic, and when required to maintain safe separation, an FAA air traffic controller will redirect traffic.</p>
3/28/19	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 15 - Alternative 1	C-116	<p>RIC Recommendation: 15 Alternative 1 (slide 27 - Daytime) – This was not offered in the final RIC Recommendations for undeclared reasons I support reconsideration of this RIC Recommendation for the following:</p> <ol style="list-style-type: none"> 1. The extension of the JETTI location farther west will allow for greater separation and potentially discourage ATC from releasing aircraft off of the ZZOOO SID, which allows routes inside of ZZOOO and over Point Loma; this element was not discussed by Ricondo 	<p>The commenter may be referencing a previous version of the presentation that was shared with CAC members. The consultant team replaced this version after realizing that the recommendation for Recommendation 15 Alternative 1 was omitted. An updated version was shared with CAC members and posted to the website on March 22, 2019 (prior to the March 28, 2019, CAC meeting). The consultant team’s recommendation was to move Recommendation 15 Alternative 1 forward for further consideration.</p> <ol style="list-style-type: none"> 1. The consultant team briefed CAC at the March 28, 2019, CAC meeting that moving the location of JETTI farther west could reduce the frequency of ATC releasing aircraft off the ZZOOO SID, but would not eliminate the action. There are

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					<p>(continued) 2. The extension of the JETTI location farther west will allow for the opportunity to gain greater altitude upon transiting ZZOOO</p> <p>3. The intent of ANAC #15 has not been adequately addressed by the RIC Recommendations</p>	<p>(continued) some instances when ATC redirects departures because an aircraft cannot meet the required altitude at the JORJJ waypoint (near a popular parachute jump zone). The proposed design increases flight distance, which can provide an aircraft more space to meet the altitude restriction. The design does not discourage ATC from taking necessary action to maintain safe separation and operational efficiency – the primary mission of the FAA. Therefore, use of the RNAV is assumed to be similar to use under existing conditions. An FAA air traffic controller redirects aircraft to maintain safe separation for many reasons; therefore, increasing the flight distance to JETTI would not mitigate all situations under which an FAA air traffic controller would redirect an aircraft.</p> <p>2. The consultant team agrees and reported to CAC members the expectation that more aircraft on the ZZOOO SID would be at or above 8,000 feet MSL near the ZZOOO waypoint.</p> <p>3. As described in response to Comment #C-111, the consultant team reviewed the intent and feasibility of all ANAC subcommittee suggestions for the ANAC recommendations and presented the results of the feasibility assessment at the July 19, 2018, CAC meeting. The consultant team then developed multiple procedure concepts for feasible suggestions and assessed the concepts in the three-phase traffic procedure evaluation process. The consultant team briefed CAC members of each concept and provided responses to specific comments from CAC members throughout the process.</p> <p>The consultant team was tasked to identify potential procedure concepts intended to reduce or eliminate flights over the Point Loma peninsula, and concluded the ANAC subcommittee suggestion to move JETTI waypoint two miles further west was feasible and recommended to move forward for further consideration. The design promotes more frequent flights at or above 8,000 feet MSL near the ZZOOO waypoint</p> <p>As discussed at the July 19, 2018 CAC meeting, the Authority and the consultant team have no legal purview to discourage FAA ATC from redirecting flights for safe separation and/or operational efficiency but can encourage FAA to use a procedure as much as possible. Discouraging FAA ATC to meet air traffic regulations and requirements to maintain a safe and efficient National Airspace System is not feasible. Limiting all aircraft between 275 and 290 can potentially affect the CNEL 65, and should be assessed under the Part 150 Study. Establishing a minimum vector area over Point Loma is not feasible because such an area is reserved for obstruction clearance requirements only.</p>
3/28/19	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 16 - Alternative 1	C-117	<p>RIC Recommendation: ANAC 16 Alternative 1 Version 3 (slide 36 - Daytime/Nighttime Arrivals) - Do not proceed forward due to substantial increase in noise in areas such as University City and Kearny Mesa I do not support this RIC Recommendation for the following:</p> <ol style="list-style-type: none"> To not proceed with any efforts offers ZERO improvements to current conditions impacting arrival communities (slide 44/45) ANAC 16 Alt 1, Ver 3 offers SIGNIFICANT material improvement for LJ and Pacific Beach over recent FAA designed impacts In FACT, it relocates noise BACK to where it RECENTLY was, over significant uninhabited area (NAS Miramar, Landfill), before FAA realigned STAR This insufficient effort does not remotely come close to addressing ANAC #17 	<ol style="list-style-type: none"> The consultant team evaluated seven different RNAV arrival procedure designs to meet the intent of Recommendation 16. Several designs were based on suggestions from the ANAC subcommittee. Five of the seven procedure designs were eliminated based on CAC feedback for not meeting the intent of Recommendation 16. One design was eliminated due to aircraft performance concerns expressed by a TAC airline representative. The one remaining design was determined to cause a noticeable increase in noise levels in some communities. In summary, the consultant team was unable to identify a feasible procedure design to meet the intent of ANAC Recommendation 16. The commenter is correct regarding reductions in noise levels in areas such as La Jolla, but the alternative would result in a noticeable increase in noise levels over communities such as the University of California San Diego area, University City, and Kearny Mesa. Increasing noise in one community to decrease noise in another is not an effective noise abatement approach unless the communities that would be exposed to the increase were part of the process and had the opportunity to provide input into the decision. The consultant team does not recommend proceeding forward due to the potential increase in noise over some communities. This evaluation criterion was shared with the CAC at the beginning of this process. Refer to response to Comment #C-10. Recommendation 17 is related to the nighttime noise abatement heading for departures. Recommendation 16 is associated with jet arrivals from the north/northwest. A nighttime noise abatement heading for arrivals to SDIA does not exist.
3/28/19	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 13	C-118	<p>In summary, I believe our work within the Flight Procedure Analysis Study to be significantly incomplete. Therefore, before any presentation to ANAC on RIC Recommendations, we must properly assess this study's status as to ANAC Recommendations 14, 15, 16 & 17, to satisfy ANAC Recommendation #13. It is therefore also appropriate that Ricondo compile a specific summary analysis and evaluation of how and where their current RIC Recommendations: 1) positively, 2) negatively or 3) do not address the specific and detailed elements, i.e. background/rational and procedure suggestions of the unanimously SDCRAA approved ANAC Subcommittee Recommendations regarding the overall alignment of current SID's and STARs, Procedures and Agreements (ANAC Recommendation #13).</p>	<p>Refer to response to Comment #C-111.</p>
3/29/19	Leonard Gross	Birdrock/ La Jolla	Rec. 14/15/17	C-125	<p>I did the chart below last summer and it is very significant with respect to the "initial heading" of nighttime departures. It shows that the bulk of the nighttime flights are southbound and "currently" they cross MB south of the northbound flights. The Northbound are presumably on "PADRZ-like" initial course. The southern guys are on 290-like. The importance of this is far reaching:</p> <ol style="list-style-type: none"> Moving southern nighttime departure to be PADRZ is actually going against "current paths" for the bulk of the nighttime flights Since there are so many flights doing 290 that means that 290 is already the ground track for most of the nighttime flights within 65 DNL. That is, using 290 as the initial departure for the BROCK nighttime 	<ol style="list-style-type: none"> The consultant team understands that the traffic patterns for the initial headings of eastbound and northbound departures differ slightly (refer to response to Comment #C-38). When designing an RNAV procedure, FAA requires traffic operating in the same direction share a common route; therefore, the proposed procedures for Recommendation 14 and 15 nighttime departures were designed to direct aircraft on the same path. The proposed RNAV procedure designs maintains the existing PADRZ RNAV SID heading to maintain an existing RNAV initial heading path. The consultant team recommends holding the nighttime departure procedure design concepts until Recommendation 17 is addressed under the Part 150 Study.

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					<p>(continued) procedure is not likely to cause much of shift within 65 DNL, since the "290" nighttime flights are already in the baseline.</p> <p>3 Importantly, using 290 will move some traffic further from people in MB and also increase the improvement that was seen with you current design in the PB/LJ areas.</p> <p>I think all this adds up to needing to "re run" the proposed nighttime departures using a different initial heading. At a minimum, it means the nighttime procedure should not be passed to the AA board until this variation is examined and/or verified as being viable with respect to the 65 DNL changes.</p> <p>Referenced plot chart:</p> 	<p>(continued) 2. The noise screening model was not designed to model the cumulative CNEL 65 noise exposure area; therefore, the consultant team cannot confirm the commenter's conclusion. The Part 150 Study update process will assess potential changes to the cumulative CNEL 65 noise exposure area.</p> <p>3. The commenter is correct, but the proposed procedures would also move traffic closer to Ocean Beach and increase overflights over areas currently within the CNEL 65 noise exposure area and may cause newly impacted residents. Therefore, changes to initial departure headings will be assessed under the Part 150 Study update process.</p> <p>Based on comment received after the March 28, 2019, meeting, the consultant team recommends postponing nighttime departure final design until Recommendation 17 (nighttime noise abatement heading) is addressed under the Part 150 Study update process. Note that CAC members proposed multiple suggestions related to nighttime noise abatement headings, including the ELSO heading. If the Part 150 Study update process results in a final recommendation, the consultant team recommends incorporating the initial heading into the Recommendation 14 and 15 nighttime departure procedure designs.</p>
3/31/19	Leonard Gross	Birdrock/ La Jolla	Rec. 14/15/17	C-126	<p>One plot contains north/south going flights over the same period that Ricondo used for their FPA noise analysis. To show the portion "overlapped", I also generated separate N and South bound on their own plots. The last two plots are from one month in 2012 and 2014, where you see similar distribution. To be clear, the distances are along a line of longitude that passes through the tip of MB. I'd appreciate your thoughts on this and how we can speed up examination of alternative initial "headings." for nighttime departures.</p> 	<p>The consultant team collected radar data between May 2017 and December 2017 for use in developing the noise screening model. Refer to response to Comment #C-125 for information about the timing to evaluate nighttime noise abatement headings.</p>
4/5/19	Mike Tarlton	Ocean Beach	Rec. 13	C-119	<p>At the highest level, in order to be consistent with ANAC Recommendation #13, it would be great if Ricondo compiled a specific summary of how and where the RIC Recommendations positively or negatively address the ANAC Recommendations regarding the overall alignment of current SID's and STARs, Procedures and Agreements. I believe this would help us pull the thread all the way from individual recommendation to actual impact.</p>	<p>Refer to response to Comment #C-111.</p>
4/5/19	Mike Tarlton	Ocean Beach	Rec. 14 Alternative 1 and 4/Rec. 15 Alternative 2 and 4	C-120	<p>Various portions of the detailed elements, i.e. background/rational and procedure suggestions in ANAC #14 have not been addressed or were quickly dismissed by Ricondo.</p> <p>RIC Recommendation: 14 Alternative 1 Version 2 and 15 Alternative 2 Version 2 (slide 10 Nighttime): Was not addressed in the final RIC Recommendations for undeclared reasons</p> <p>RIC Recommendation ANAC 14 Alternative 4 (slide 18 Nighttime) – Proceed forward for further consideration (note: would require lifting 1.5 nautical mile early turn restriction at night) [note: highlighted by commenter]</p> <p>RIC Recommendation ANAC 15 Alternative 4 (slide 18 Nighttime) – Proceed forward for further consideration (note: would require lifting 1.5 nautical mile early turn restriction at night) [note: highlighted by commenter]</p>	<p>Refer to response to Comment #C-113.</p>
4/5/19	Mike Tarlton	Ocean Beach	Rec 17	C-121	<p>The Nighttime procedure proposals represented within the attached presentation have a material baseline flaw. Ricondo is using Recommendation 14 and 15 for Nighttime applications, however, these RIC Recommendations are mute on the application of Recommendation 17. The intent of Recommendation 17 was to maintain and enforce the Nighttime Noise Abatement Procedure (Letter Agreement; SCT\SAN\ATCT) that calls for a 290 departure heading for both left and right turns. The RIC Recommendation 14/15 procedure specifically calls for PADRZ (295) SID departure routing for</p>	<p>Refer to response to Comment #C-112.</p>

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					<p>(continued) nighttime. This is in direct conflict with the intent of ANAC recommendation #17 and the Nighttime Noise Abatement Procedures (i.e. 290 degree departures). It also suggests a new but undefined waypoint that appears consistent with a 295 departure heading. The recently sent\posted "update on ANAC Recommendations" states that recommendation #17 is; "In Process; Consultant will be reviewing this in the Part 150 Study update." This is flawed reasoning\process as the existing 290 heading of the Nighttime Procedure should be maintained in this Flight Procedure Analysis process as the base line, and only changed, if deemed appropriate by the Part 150, not the reverse as proposed.</p> <p>Please also note that Ricondo has previously been informed of this inconsistency with Recommendation #17.</p>	
4/5/19	Mike Tarlton	Ocean Beach	Rec. 14 Alternative 1/Rec 15 Alternative 2	C-122	<p>I do not support these 2 (14 & 17) Recommendations for the following:</p> <ol style="list-style-type: none"> 1. Flawed base line using ZZOOO and PADRZ (slide 10 clearly shows this proposed procedure aligning with WNFLD\LANDN at 295 degrees) rather than 290 Nighttime Noise Abatement Procedure (Letter Agreement; SCT\SAN\ATCT); Nighttime routing deteriorated by acceptance of PADRZ and ZZOOO departures in lieu of 290, negatively impacting OB, MB and BR (slide 16); this appears to be an attempt to eliminate the long standing 290 departure heading commitment 2. Undefined location of proposed Fly By Way Point; Fly By Way Point should be "Fly Over WP" to assure their statement of "a waypoint to provide a more predictable path" (as in the predictability of JETTI) 3. Left turns are clearly too close to shoreline at 0.5 NM; Nighttime routing deteriorated by turns allowed at 0.5 NM off shoreline versus 290 past JETTI, negatively impacting OB, MB and BR, but improvements to LJ (slide 22/23); 4. Noise comparison charts (slides 15/16) do not reflect turn closer to shoreline, do not reflect at 290 departure heading; creates a false "baseline" (at 295 vs. 290 degree headings) for noise comparisons; proposed left turns for a Fly By commencing prior to 0.5 NM from shoreline will predictably redirect jet wash noise toward Bird Rock and Mission Beach notably 1 full mile +- closer and therefore lower to shoreline, than a Fly Over WP in the same location (slide 16); 5. Validates a "new normal" for nighttime departures directed onto PADRZ, at 295 degrees 6. Memorializes the recent increased negative impact incurred by Mission Breach and Bird Rock from the ATC shift away from the Nighttime procedure to PADRZ. 	Refer to response to Comment #C-114.
4/5/19	Mike Tarlton	Ocean Beach	Rec. 15	C-123	<p>Various portions of the detailed elements, i.e. background/rational and procedure suggestions in ANAC #14 have not been addressed or were quickly dismissed by Ricondo, particularly the redirection of flights inside of ZZOOO and right turns over La Jolla</p>	Refer to response to Comment #C-115.
4/5/19	Mike Tarlton	Ocean Beach	Rec. 15 - Alternative 1	C-124	<p>RIC Recommendation: 15 Alternative 1 (slide 27 - Daytime): This was not offered in the final RIC Recommendations for undeclared reasons. I support reconsideration of this RIC Recommendation for the following:</p> <ol style="list-style-type: none"> 1. The extension of the JETTI location farther west will allow for greater separation and potentially discourage ATC from releasing aircraft off of the ZZOOO SID, which allows routes inside of ZZOOO and over Point Loma; this element was not discussed by Ricondo 2. The extension of the JETTI location farther west will allow for the opportunity to gain greater altitude upon transiting ZZOOO 	Refer to response #1 and #2 for Comment #C-116.
4/8/19	Gernot Trolf	Mission Beach	Rec. 17	C-127	<p>As a mission Beach resident I hear a lot of complaints about the new routing by night time take offs and of course early morning take offs as well. Most people are suggesting the old route over the channel (River, 290 degrees) to reduce this noise. Can this be implemented again?</p>	Recommendation 17 includes evaluating the nighttime noise abatement heading. CAC members offered multiple suggestions, which are expected to be evaluated under the Part 150 Study update process.
4/9/19	Leonard Gross	Birdrock/ La Jolla	Rec. 14 and 15 Nighttime Departures	C-128	<p>How will the nighttime paths that pass directly over OB and Mission Beach be changed by the proposed post 10 PM departure procedure? This may be a boundary issue between the FPA and Part 150, but the FPA had to assume something for that part of the flight path. From the PowerPoint charts it was a bit unclear.</p>	The RNAV designs for Recommendation 14 and 15 nighttime departures are the same as the existing PADRZ SID—aircraft stay on the runway heading until reaching 520 feet MSL, at which point aircraft proceed directly to the first waypoint. The first waypoint was placed along the expected path from Runway 27 to the WNFLD waypoint. The intent was to maintain the initial heading traffic pattern observed for the PADRZ SID because it is the only existing RNAV SID with a right turn. Based on comments received from CAC members after the March 28, 2019, meeting, the consultant team recommends postponing further consideration of the nighttime jet departure procedure designs until Recommendation 17 (nighttime noise abatement heading) is addressed under the Part 150 Study update process.
4/9/19	Leonard Gross	Birdrock/ La Jolla	Rec. 17	C-129	<p>Right now, my data analysis (sent previously) shows that the southbound flights (290-ish degrees) are actually a bit south of the northbound flights when they pass over MB. Some fear the southbound will be directed to be on the same path (PADRZ at 293-ish degrees) as the northbound – that is, shifted north. This is not a large shift, but most likely one that MB, PB and Birdrock will "sense." The majority of nighttime flights are southbound! I know Ricondo's analysis indicated "no CNEL change" for the</p>	The commenter would be correct if the proposed design for Recommendation 14 and 15 nighttime jet departures was implemented; however, aircraft issued the 290 heading by SDIA Air Traffic Control Tower are south of the PADRZ SID traffic. As indicated by the commenter's charts (refer to Comments #C-125 and #C-126), aircraft on the 290 heading are widely dispersed and some are located over same area as the PADRZ SID traffic. Based on comments received from CAC members after the March 28, 2019, meeting, the consultant team recommends postponing further consideration of

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					(continued) proposed nighttime path over MB and PB, but there needs to be clarity on what path was used in the analysis, and what those areas should expect if that change was implemented.	(continued) proposed designs of nighttime departure procedures until Recommendation 17 (nighttime noise abatement heading) is addressed under the Part 150 Study update process.
4/10/19	Casey Schnoor	Sunset Cliffs/Fleetridge	Rec. 13	C-130	I would also like to re-suggest that Riconco provide a comprehensive status\explanation to all elements, including a response to the subtext provided by the Subcommittee (see attached) for each individual ANAC Recommendation (#14, 15, 16 and 17) currently being addressed, in advance of the ANAC presentation. I am confident that the ANAC committee will be looking for a full and comprehensive accounting at this level of detail to their unanimously supported Recommendations.	Refer to response to Comment #C-111.
4/19/19	Anthony Stiegler	Muirlands/La Jolla	Next Steps	C-131	At least some residents in La Jolla, including me as a CAC member and La Jolla's ANAC representative, Matthew Price, advocate for advancing the Flight Path & Procedures Study recommendations from Ricondo to the Airport Authority now, with a recommendation that the AA in turn advance them now to the FAA for consideration, rather than waiting for the conclusion of the Part 150 Study.	Based on comments received from CAC members after the March 28, 2019, meeting, the consultant team recommends postponing further consideration of the proposed designs of nighttime departure procedures until Recommendation 17 (nighttime noise abatement heading) is addressed under the Part 150 Study update process.
4/19/19	Anthony Stiegler	Muirlands/La Jolla	Rec. 17	C-132	We are further concerned with the Night Time Noise Abatement Agreement compliance, and the apparent failure to adhere to the 290 degree heading for night time departures. Flights departing on the PADRZ heading are at 295 degrees, which adversely affects La Jolla.	Based on comments received from CAC members after the March 28, 2019, meeting, the consultant team recommends postponing further consideration of the proposed designs of nighttime departure procedures until Recommendation 17 (nighttime noise abatement heading) is addressed under the Part 150 Study update process.

SOURCE: Ricondo & Associates, Inc. May 2019.

B.2.4 TECHNICAL ADVISORY COMMITTEE (TAC) MEETING #2 (MAY 31, 2018) INPUT AND CONSULTANT TEAM RESPONSES

DATE	NAME	REP.	CONCEPT	COMMENT #	COMMENT FROM TAC MEMBER	RESPONSE
6/12/18	Lynae Craig	Alaska Airlines	Rec. 15 Alternative 1 (Daytime)	T-1	Moving JETTI further west may not provide intended results if speed restriction is lifted and climb rate is reduced. What is the expected benefit of having aircraft at or above 8,000 ft at ZZOOO	The concept would maintain the speed restriction at JETTI, which was assigned to ensure aircraft can make the designed turn between the JETTI and ZZOOO waypoints. The intent of Recommendation 15 is to not only increase the altitude of traffic near the ZZOOO waypoint, but also to shift traffic farther west from Point Loma's shoreline to reduce noise. By increasing the altitude and distance of traffic from the shoreline, the distance between the noise source (aircraft) and receivers on the ground increases, which reduces the sound level on the ground due to noise propagation. Based on a cursory analysis using San Diego County Regional Airport Authority's (SDCRAA's) Airport Noise and Operations Management System (ANOMS) and information provided by a Community Advisory Committee (CAC) member, approximately 85 percent of aircraft on the ZZOOO Standard Instrument Departure (SID) are at or above 8,000 feet when they are near the ZZOOO waypoint. Therefore, Recommendation 15 is expected to increase the frequency of aircraft being above 8,000 feet mean sea level (MSL) when they are near the ZZOOO waypoint.
6/12/2018	Lynae Craig	Alaska Airlines	Rec. 15 Alternative 1 (Daytime)	T-2	What are the altitudes over JETTI waypoint	A cursory radar track penetration gate altitude analysis was conducted using SDCRAA's ANOMS system. Gates were drawn perpendicular to the ZZOOO SID traffic over the JETTI and ZZOOO waypoints. Between May 13 and June 13, 2018, the average altitude of Runway 27 departures on the ZZOOO SID over JETTI waypoint was 2,922 feet MSL. Approximately 65 percent of ZZOOO SID departures were between 2,000 and 3,000 feet MSL, and 30 percent between 3,000 and 4,000 feet MSL. The average altitude for Runway 27 departures on the ZZOOO SID near the ZZOOO waypoint was 9,366 ft MSL, and 85 percent of all departures on the ZZOOO SID were at or above 8,000 feet MSL.
6/14/18	Chris McCann	CAC	Rec. 14 - Equivalent Lateral Spacing Operation	T-3	Provided reference to FAA Order 7100.65X regarding 10 degree divergence for successive departures	Comment noted.
6/14/18	Chris McCann (on behalf of Gary Wannacott)	CAC	Rec. 14 - Initial Departure Heading	T-4	Inquired as to why the proposed delay the turn to the right until the aircraft is both above 520 feet and 1 mile from the end of the runway for the PADRZ SID would be relegated to the 14 CFR Part 150 Study, and the potential effect of delaying turn up to 1 mile from the end of Runway 27.	The referenced element of the Airport Noise Advisory Committee (ANAC) recommendation would change the location of the departure track over areas exposed to Community Noise Equivalent Level (CNEL) 65 or higher. As discussed during the TAC Kickoff Meeting, changes to traffic over area exposed to CNEL 65 or higher, which is the area for which noise abatement procedures have been designed, must be cumulatively assessed for noise exposure impacts. A cumulative noise assessment is not included in the Flight Procedure Evaluation effort; the assessment is conducted as part of a Title 14 Code of Federal Regulations (CFR) Part 150 Study update process (Part 150 Study update process). Evaluating the initial right turn heading for Runway 27 departures should be evaluated among other proposed initial headings, such as a 10-degree divergent heading, to assess the full potential effects on areas exposed to CNEL 65 or higher. This does not mean any proposal to change the initial right turn heading is rejected but just that it would be evaluated in a cumulative assessment of noise exposure to identify potential changes to the CNEL 65 exposure area. A minor procedure change could have a noise exposure change that would be considered significant. Final phase concept designs can be adjusted to accommodate the final initial departure heading recommendation that comes out of the Part 150 Study update process.
6/14/18	Chris McCann (on behalf of Len Gross)	CAC	Rec. 14 - Alternative 1 and 2 Nighttime	T-5	The initial heading should result in crossing Mission Beach as far south as possible, toward the unpopulated channel.	Refer to response to Comment #T-4 for discussion of changes to the initial heading from Runway 27.
6/15/18	Chris McCann (on behalf of Len Gross)	CAC	Rec. 14 - Alternative 1 and 2 Nighttime	T-6	The turn toward the "west/north-west" should be as close to the shoreline as possible, to reduce noise further up the coast line.	Recommendation 14 Night Alternatives 2 and 3 were concept designs intended to turn aircraft in a westerly direction as soon as traffic was past the CNEL 65 and higher exposure area. In both cases, the Terminal Area Route Generation and Traffic Simulation (TARGETS) flyability simulations indicated more unpredictable paths would result from the Runway 27 over area exposed to CNEL 65 or higher. The concept designs are anticipated to increase dispersion over areas not frequently overflow by Runway 27 right-turn departures. The two turn locations evaluated were close to the CNEL 65 or higher exposure area and at the shoreline. A design that turns aircraft somewhere between the shoreline and 1.5 nautical miles (NM) from the shoreline without impacting traffic patterns close to the runway may be feasible. The consultant team will design a nighttime procedure concept for Recommendations 14 and 15 that would include a westerly turn somewhere between the shoreline and 1.5 NM from the shoreline without affecting the ability to provide a predictable initial departure path from Runway 27.
6/16/18	Chris McCann (on behalf of Len Gross)	CAC	Rec. 14 - Alternative 1 and 2 Nighttime	T-7	"Conflicts" with other sub-committee recommendations need to be resolved. This should be based on "overall" reduction of noise level and/or modifying one or both of the trajectories	Recommendation 14 Night Alternative 1 - Fly Over includes a fly-over waypoint 1.5 NM from the shoreline. Recommendation 15 Night Alternative 2 includes a fly-by waypoint. To be compatible, both need to share the same type of waypoint at the 1.5 NM turning point. Because an aircraft heading to the ZZOOO waypoint and an aircraft heading to the northwest share the same initial route from Runway 27, the point where both diverge should be the same waypoint and type of operation (e.g., fly-by or fly-over). A design such as this would ensure the required separation between aircraft to support safe operations. A fly-over for Recommendation 14 Night Alternative 1 and a fly-by for Recommendation 15 Night Alternative 2 would introduce a new safety risk into the air traffic control (ATC) system because the minimum safe separation distance (i.e.,

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						(continued) 3 NM or greater) could be compromised as the lead aircraft turns left to the south after flying over the waypoint and the following aircraft initiates an inside turn to the left to the west at the same waypoint. Introducing this new safety risk in the ATC system would not be considered feasible by the Federal Aviation Administration (FAA). A fly-by waypoint best meets the intent of Recommendation 14 and is not expected to cause aircraft currently vectored west and south of Point Loma to be at lower altitudes than those they are at today. The design for Recommendation 15 Night Alternative 2 with a fly-by waypoint would also keep aircraft farther west of Point Loma and direct aircraft to the ZZOOO waypoint, which is expected to reduce headings issued by ATC that keep aircraft south of the Noise Dots but still over the southern tip of Point Loma.
6/17/18	Chris McCann (on behalf of Len Gross)	CAC	Rec. 14 - Equivalent Lateral Spacing Operation	T-8	Proposed a concept called EMBEE with a 10 degree initial heading from Runway 27 to a waypoint called EMBEE. This would meet intent during daytime hours.	The commenter is correct that a procedure with a 10-degree divergent heading for departures turning right from Runway 27 could operate farther south compared to the existing PADRZ SID route during daytime hours. If two distinct Area Navigation (RNAV) SIDS for a single runway are defined, FAA Order 7110.65X, <i>Air Traffic Control</i> , allows for a 10-degree divergence in lieu of the required 15-degree divergent angle. The proposed concept has merit and meets the intent of Recommendation 14. The concern is that this concept would change the pattern of departure traffic over areas exposed to CNEL 65 or higher and would likely increase noise exposure for Ocean Beach residents. The consultant team will design a daytime departure procedure based on a 10-degree divergent right turn (285 degrees) from Runway 27. The route will continue along a 285-degree heading to keep traffic farther south of La Jolla. The consultant team will also design a nighttime departure procedure that will turn aircraft to a 285 heading and continue to a point 1.5 NM west of the shoreline, at which it would then turn west to stay farther south of La Jolla. The consultant team will qualitatively assess potential impacts related to the design and seek input from the TAC and the CAC about potential effects. The consultant team will be sensitive to balancing noise concerns for Ocean Beach and Mission Beach residents.
6/18/18	Chris McCann (on behalf of Len Gross)	CAC	Rec. 14 - Nighttime Noise Abatement Heading	T-9	There is no written record of the noise abatement agreement, so no one really knows what it means to abide by it. There is some consistency in people referencing a 290-degree initial heading, but no consistent specification for the vertex from which it is measured. Departures to the south are somewhat closer to the channel, and northbound departures on PADRZ are north of the channel.	The San Diego International Airport (SAN) Airport Traffic Control Tower (ATCT) has conducted the nighttime noise abatement heading for all jet departures after 10:00 p.m. for several years. Departures to the south are issued a heading by SAN ATCT when cleared for takeoff because a SID does not exist for southbound departures turning right from Runway 27. Northbound departures turn following the PADRZ RNAV SID. The difference in navigation and procedure causes slight differences in the location of aircraft overflights. Therefore, the ANAC recommended a measure to assess the Nighttime Noise Abatement heading, and the consultant team recommended that this be assessed as part of the Part 150 Study update process because it has the potential to change the CNEL 65 or higher exposure area.
6/18/18	Chris McCann (on behalf of Len Gross)	CAC	Rec. 14 - Nighttime Noise Abatement Heading	T-10	Should be talking about RNAV procedures and deviations from them, not conformance to an old and poorly defined agreement. In the near-term, no significant weight should be put on consistency with the noise dots or noise abatement agreement. Instead, the best possible solution consistent with the real problem constraints should be generated.	The consultant team is evaluating procedure design concepts in accordance with ANAC recommendations. The ANAC recommended that the consultant team consider the Noise Dot Agreement as a factor in this evaluation, but the Noise Dot Agreement should not limit the identification and review of concepts that turn aircraft prior to 1.5 NM from the shoreline if the concepts meet ANAC recommendations.
6/13/18	Chris Bear & John McFerren	SkyWest Airlines	Rec. 14 - Alternative 1 Nighttime	T-11	Provides flight crews ample time to fly a steady course after takeoff.	Comment noted.
6/13/18	Chris Bear & John McFerren	SkyWest Airlines	Rec. 14 - Alternative 2 Nighttime	T-12	Seems to have low impact to flight path distance and operationally provides more distance between the shoreline turn and Brock2 waypoint. In our opinion, this option seems to be the best of the 3.	Refer to response to Comment #T-6.
6/13/18	Chris Bear & John McFerren	SkyWest Airlines	Rec. 14 - Alternative 3 Nighttime	T-13	Creating a waypoint this close to the initial departure flight path with a proceeding VA to DF coding is not advised. This could create some navigational anomalies within some flight management systems. An example of a common anomaly is the navigation computer (FMS) sequencing late and conducting a 360 degree turn back around to pass over this close-in waypoint.	Refer to response to Comment #T-6.
6/13/18	Chris Bear & John McFerren	SkyWest Airlines	Recommendation 15 - Alternative 1 Daytime	T-14	Without a set speed for aircraft to follow till ZZOOO, the turn radius and flight tracks will be variable.	The consultant team will maintain the current ZZOOO SID 230 knots speed restriction in the concept design up to the JETTI waypoint. The speed restriction was set to ensure aircraft can make the turn from JETTI to the ZZOOO waypoint. The consultant team expects some dispersion as aircraft move between JETTI and ZZOOO similar to that which occurs for traffic using the current ZZOOO SID. The dispersion is expected to be acceptable as long as aircraft are farther west of Point Loma compared to existing conditions.
6/13/18	Chris Bear & John McFerren	SkyWest Airlines	Recommendation 15 - Alternative 2 Nighttime	T-15	This option provides a more consistent flight path track.	The commenter is correct regarding a consistent flight path due to the track-to-fix design.
6/13/18	Chris Bear & John McFerren	SkyWest Airlines	Rec. 15 - Alternative 3 Nighttime	T-16	Without a set speed for aircraft to follow till ZZOOO, the turn radius and flight tracks will be variable.	Because this alternative includes a fly-over waypoint 1.5 NM from the shoreline, a direct-to-fix design is included, similar to the existing ZZOOO SID. The commenter is correct related to dispersion, but the point where traffic disperses is expected to be farther west of Point Loma compared to where existing ZZOOO SID traffic disperses. If the design concept moves forward, the consultant team will assess the need for a speed restriction to make the turn feasible between the proposed fly-over waypoint and the ZZOOO waypoint.

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6/13/18	Chris Bear & John McFerren	SkyWest Airlines	Rec.16 - Alternative 1	T-17	KLOMN at 6000 feet is already difficult to make for the navigation software. Steep descents are not recommended with speed reductions in arrival procedures. This combination could lead some navigation software to reduce speed well before air traffic control would like the aircraft to be at a slower speed.	The concept design meets standard descent gradient criteria, but the consultant team understands potential issues related to reducing speed while descending, especially for newer aircraft with high lift ratio wings. The consultant team will seek further input from airline TAC members related to the descent design for Alternative 1.
6/13/18	Chris Bear & John McFerren	SkyWest Airlines	Rec. 16 - Alternative 2	T-18	KLOMN at 6000 feet is already difficult to make for the navigation software. Steep descents are not recommended with speed reductions in arrival procedures. This combination could lead some navigation software to reduce speed well before air traffic control would like the aircraft to be at a slower speed.	The consultant team recommends elimination of Alternatives 2 and 3 from further evaluation based on CAC input.
6/13/18	Chris Bear & John McFerren	SkyWest Airlines	Rec. 16 - Alternative 3	T-19	KLOMN at 6000 feet is already difficult to make for the navigation software. Steep descents are not recommended with speed reductions in arrival procedures. This combination could lead some navigation software to reduce speed well before air traffic control would like the aircraft to be at a slower speed.	Refer to response to Comment #T-18
6/14/18	Debbie Watkins	ANAC	Rec. 14 - Nighttime Noise Abatement Heading	T-20	Purposes of this process is to look at the feasibility of the Nighttime Noise Abatement Procedure that was implemented in the late 1990's to mitigated airplane noise over the Point Loma community as part of their community plan update by moving all departing nighttime flights over the Mission Beach community. Discussion needs to be had to determine whether this procedure is meant to be followed into perpetuity with modifications or eliminated	The Nighttime Noise Abatement heading is expected to be evaluated as part of the Part 150 Study update process, as discussed during the TAC Kick-off Meeting. Changing the location or use of the existing traffic pattern may affect the area exposed to CNEL 65 or higher, and TAC members may propose multiple concepts to address noise concerns. The Part 150 Study update is the appropriate process to assess potential benefits and impacts of procedure changes on the area exposed to CNEL 65 or higher.
6/14/18	Debbie Watkins	ANAC	Rec. 14 - Alternative 1 Nighttime	T-21	This does not help mitigate the nighttime noise over Mission Beach.	The proposed design for Recommendation 14, Alternative 1 (Nighttime) maintains the existing initial departure heading to ensure overflight patterns do not change over areas exposed to CNEL 65 or higher. A change to the initial departure heading is expected to be evaluated as part of the Part 150 Study update process as discussed during the TAC Kick-off Meeting. Refer to response to Comment #T-4.
6/14/18	Debbie Watkins	ANAC	Rec. 14 - Alternative 3 Nighttime	T-22	This does not help mitigate the nighttime noise over Mission Beach.	Refer to response to Comment #T-6.
6/14/18	Debbie Watkins	ANAC	Rec. 15 - Alternative 1 Daytime	T-23	Can this design be considered as nighttime departure procedure over Point Loma?	The commenter appears to suggest two nighttime departure headings: 275 and a preferred right-turn heading. This proposal would reduce the number of flights that make a right turn and operate near/over Mission Beach at night. Because this would have a direct effect on areas exposed to CNEL 65 and higher, the consultant team recommends this proposal be assessed as part of the Part 150 Study update process and be considered as an alternative measure under the Nighttime Noise Abatement heading recommendation.
6/14/18	Debbie Watkins	ANAC	Rec. 15 - Alternative 2 Nighttime	T-24	This does not help mitigate the nighttime noise over Mission Beach.	The proposed design for Recommendation 15, Alternative 2 (Nighttime), maintains the existing initial departure heading to maintain existing overflight patterns over areas exposed to CNEL 65 or higher. A change to the initial departure heading would be evaluated as part of the Part 150 Study update process as discussed during the TAC Kick-off Meeting. Refer to response to Comment #T-4.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec.14 - Alternative 2 Nighttime	T-25	Not consistent with nighttime noise abatement heading.	Refer to response to Comment #T-6 related to Recommendation, 14 Alternative 2 (Nighttime). The commenter is referencing the 290 heading from Runway 27 as the nighttime noise abatement heading. Refer to response to Comment #T-4 related to initial departure heading assessment.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 14 - Fly Over Waypoint	T-26	Recommendation 14 inclusion of a "fly over" waypoint not addressed.	The consultant team addressed the use of a fly-over waypoint for Recommendation 14, Alternative 1, at 1.5 NM from the shoreline and included the procedure design in the CAC Meeting #2 presentation for consideration. The consultant team's recommendation is to proceed with a nighttime departure procedure design that uses a fly-by waypoint where aircraft change heading in a westerly direction to stay farther south of La Jolla. A fly-over waypoint would cause a more unpredictable turning path north of the waypoint and would place traffic closer to La Jolla shoreline compared to a fly-by waypoint design. The draft procedure design will also keep traffic from turning until 1.5 NM from the shoreline by defining the turn to a westerly direction based on estimates of where aircraft are anticipated to begin the turn.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 14 - Initial Review	T-27	"The magnetic heading from the departure end of Runway 27 is 287°" does not make sense.	The statement in quotes, from a TAC Meeting #2 slide, is related to the magnetic heading from the end of Runway 27 to the current Noise Dot #2. The statement was intended to clarify that an initial heading to Noise Dot #2 would not meet the 15-degree divergent angle from 275 degrees. The consultant team understands the commenter is referencing an ANAC Subcommittee suggestion to move Noise Dot #1 to location 1.5 NM west of the shoreline on a 290-degree magnetic heading from the departure end of Runway 27. A fly-over waypoint would be placed in the procedure design at that point. The consultant team is concerned that changes in the suggested design's flight patterns over the CNEL 65 and higher exposure area would result in a noise effect. Refer to response to Comment #T-4 related to initial departure heading changes.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 14 - Daytime	T-28	Moving LNDN and WNFLD south in line with 290 heading from Runway 27 would provide the required 15 degree divergence.	A 290-degree heading from the departure end of Runway 27 would provide a 15-degree divergent angle from the 275 heading. The effect on the location of the LNDN and WNFLD waypoints would depend on the initial heading design for an

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						(continued) RNAV procedure. The consultant team is concerned that changes in the suggested design's flight patterns over the CNEL 65 or higher exposure area would result in a noise effect. Refer to response to Comment #T-4 related to initial departure heading changes.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 14 - Daytime	T-29	Move BORDER SID further south in order to accommodate earlier turn towards a more westerly heading for PADRZ SID departures to maintain 3 mile separation.	Moving the BORDER SID south is not feasible because it would not address the 3-NM separation requirement between aircraft on the PADRZ and ZZOOO SIDs. If the BORDER SID is moved south, traffic on the PADRZ SID would still need to maintain a 3-NM separation from traffic over the JETTI waypoint. If the JETTI waypoint is moved farther west (per Recommendation 15, Alternative 1), the 3-NM separation from the PADRZ SID would be still be required. In addition, it is anticipated that the FAA would require that the ZZOOO SID be similar to the proposed change to the BORDER SID to provide a consistent path between the two procedures in order to (1) reduce the complexity of managing traffic, and (2) maintain the ability for visual separation between aircraft on the procedures.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 15 - Night Alt 3	T-30	Prefer "fly over" waypoint design.	Refer to response to comment #T-7.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 16	T-31	Inquired about timing of Class B airspace change.	At the time this response was drafted, the FAA Southern California TRACON (SCT) is not certain when the Class B changes will be implemented. All the necessary work is complete, and documentation has been submitted to FAA Headquarters.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 16	T-32	Existing flights over I-805 and SR-52	<p>The commenter suggests that because flights are currently directed over the I-805/SR-52 intersection, potential changes in aircraft noise exposure should not be a factor that contributes to the elimination of Recommendation 16, Alternative 1. ATC does direct aircraft over the intersection of I-805 and SR-52, but this occurs less frequently than assigning aircraft the COMIX Standard Terminal Arrival (STAR) procedure. Therefore, the change in use between directing aircraft over the intersection and the COMIX STAR would affect noise exposure.</p> <p>Under the SoCal Metroplex, the COMIX STAR flight track was shifted 1,200 feet south over the La Jolla area but the altitude as aircraft crossed the shoreline increased. In a study conducted by BridgeNet International, (https://bit.ly/2DhDD6j starting on Page 22) it was determined that the "...changes were not in themselves sufficient to result in measurable changes in noise." Furthermore, analysis of 18 years of historic data (SDCRAA's ANOMS) shows that, historically, aircraft were dispersed over the La Jolla neighborhoods. When the FAA implemented the first RNAV (satellite-based) procedure (BAYVU 1), the flight corridor became increasingly concentrated. The images below show 2 days of SDIA arrivals by year.</p>  <p>Source: Radar tracks based on the San Diego County Regional Airport Authority's Airport Noise and Operations Monitoring System (ANOMS), accessed September 2018.</p>
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 16	T-33	Historically arrivals were north of Alternatives 1, 2 and 3 pre-NextGen and allowed for higher altitudes over Miramar.	As discussed in the response to Comment #T-32, the assessment of noise impacts pursuant to NEPA compares the traffic patterns expected to be in use in a future year to traffic patterns with the proposed procedural change in place. Historical traffic patterns, that have since changed, are not evaluated in the assessment of noise impacts under NEPA.

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6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 16	T-34	Inquired on what the maximum altitude arrivals can be at LNTRN waypoint while meeting the 330' descent rate criteria.	Based on additional review, aircraft crossing over LNTRN at 10,000 feet MSL under Alternative 1 can meet design criteria. The consultant team will require input from airlines and FAA to confirm. Airlines expressed concerns about the ability under the initial design to safely descend and slow down at the same time.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 16 - Alt 1	T-35	Recommends moving forward with Alternative 1 design.	Comment noted.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 16 - Alt 2	T-36	Inquired why aircraft could not be at 10,000 feet above LNTRN assuming 330' descent rate and get to KLOMMN at 6,000 feet. It appears based on distance between the two points and the descent rate, aircraft could do it.	Refer to response to Comment #T-18.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 16 - Alt 2	T-37	Prefers Recommendation 16 Alt 1 with a maximum at or above altitude over LNTRN waypoint and along the path after LNTRN.	Refer to response to Comment #T-18.
6/15/18	Melissa Hernholm (on behalf of Casey Schnoor)	CAC	Rec. 16 - Alt 3	T-38	Concept does not meet intent of recommendation, lowers minimum altitude when crossing the shoreline, and has worse impact on La Jolla.	Refer to response to Comment #T-18.

SOURCE: Ricondo & Associates, Inc., October 2018.

B.2.5 TECHNICAL ADVISORY COMMITTEE (TAC) MEETING #3 (AUGUST 30, 2018) INPUT AND CONSULTANT TEAM RESPONSES

DATE	NAME	REP.	CONCEPT	COMMENT #	COMMENT FROM TAC MEMBER	RESPONSE
9/13/18	Debbie Watkins	ANAC	Rec. 14	T-39	I agree with consultants to eliminate the proposed designs discussed in the presentation and proceed with noise modeling: ANAC Noise Recommendation 14 - Alternatives <ul style="list-style-type: none"> ▪ Alternative 1 - Fly by Turn ▪ Alternatives 4 (not good for Mission Beach); 5 & 6 (benefits Mission Beach but moves noise further south closer to OB) -still want noise analysis on these 3 new designs 	The consultant team will proceed forward with noise modeling Recommendation 14—Alternative 1 Fly By Turn at 1.5 NM and Alternative 4 Turn between Shoreline and 1.5 NM. Alternatives 5 and 6 are related to the 285-degree heading (or Equivalent Lateral Spacing Operations [ELSO]). The consultant team recommends advancing the 285-degree initial departure heading from Runway 27, Recommendation 17, Compliance to the Nighttime Noise Abatement Agreement, and other input provided by CAC members related to the initial departure heading from Runway 27 (presented on Slide 18 of the TAC Meeting #3 presentation) to the Part 150 Study update process given the potential for these changes to affect the area exposed to CNEL 65 or higher. Refer to response to Comment #T-4.
9/13/18	Debbie Watkins	ANAC	Rec. 15	T-40	I agree with consultants to eliminate the proposed designs discussed in the presentation and proceed with noise modeling: ANAC Noise Recommendation 15 - Alternatives - Proceed with noise modeling <ul style="list-style-type: none"> ▪ Alternative 1 ▪ Alternative 2 ▪ Alternative 4 & 5 	The consultant team will proceed with noise modeling of Recommendation 15, Alternative 1 (Move JETTI waypoint 2 NM West), Alternative 2 (turn at fly-by waypoint at 1.5 NM), and Alternative 4 (Turn between Shoreline and 1.5 NM). Alternative 5 is related to the 285-degree heading (or ELSO). Refer to response to Comment #T-4 related to the 285-heading and other initial heading concepts.
9/13/18	Debbie Watkins	ANAC	Rec. 16	T-41	ANAC Recommendation 16 -- no comments.	Comment noted.
9/14/18	Christopher Bear	SkyWest	Rec. 16	T-42	As we talked about during the ongoing discussions we would always prefer routing and profiles that reduce airtime and thus fuel burn requirements. The same holds true for lower altitudes so that a stabilized yet shorter approach can be had.	The consultant team is evaluating a potential design revision to lower altitudes in Alternative 1. Based on input provided by the TAC airline representatives, the current design for Alternative 1 is not feasible due to safety and increased workload for pilots/controllers.
9/14/18	Christopher Bear	SkyWest	Rec. 14 and 15	T-43	As far as departure corridors we are not as concerned since the variances regarding proposed and current are so minor. With regard to requirements for maintaining track alignment on departure; we do that anyway since RNAV is so precise and the flight director guidance is being flown by our pilots at all times unless being vectored.	Comment noted.
9/18/18	Lynae Craig	Alaska Airlines	Rec.16	T-44	I did get some feedback on the proposed change to the COMIX RNAV STAR and responses to the questions below. <ol style="list-style-type: none"> 1. Changing the ground track between LNTRN and KLOMN appears to be in direct conflict with Miramar airspace. (north of the MZB 084 degree radial) 2. The existing tracks on the Recommendation 16 Alternative 1 map show the majority of flights precisely follow the published STAR, with some following the direct path as recommended. Those that went direct would have been at times the controller saw there wouldn't be a conflict and allowed it. It's an exception, not a normal use of that airspace. 3. Changing the speed at LNTRN to 200kts would require the aircraft to be dirty (flaps out) for an additional 16 miles. That's not something that airlines would be able to support, and likely not meet the community's goal of quieter flights. 4. KLOMN is the IAF for the public and special RNP approaches. Changing the location or altitude of that waypoint would negatively impact the RNP approaches. 5. Reducing the at or above 9000 ft. altitude at LNTRN to at or above 8000 ft on the existing COMIX STAR/path, would be acceptable from the pilot perspective, but unsure how that would impact ATC. 	The following are responses to each item provided by the commenter: <ol style="list-style-type: none"> 1. The consultant team coordinated with SCT prior to TAC Meeting #3. FAA did not indicate a direct conflict with Miramar airspace. FAA indicated potential need to adjust sectors and/or standard operating procedures, but they cannot provide a full assessment until the proposed concept is submitted for consideration under the PBN Implementation process. 2. The consultant team understands that flights not on the COMIX RNAV STAR are directed by SCT via headings, airspeed, and/or altitude; the flights are provided direction when there is no conflicting traffic. Refer to response to Comment #T-32. 3. Comment noted. 4. The consultant team concurs with the commenter, which is why all proposed designs for Recommendation 16 do not change the location or altitude of the KLOMN waypoint. 5. The consultant team is evaluating a design concept that would lower altitude at LNTRN to 8,000 feet MSL, but then goes direct to the I805/SR52 intersection and then to the KLOMN waypoint. SCT did not indicate high-level concerns as long as the COMIX waypoint remains at the same location with aircraft above 12,000 feet MSL at COMIX waypoint, and the LEJEN waypoint location and altitudes remain the same. SCT could not provide any additional specifics until a concept is formally submitted for review.

SOURCE: Ricondo & Associates, Inc. October 2018.

B.2.6 TECHNICAL ADVISORY COMMITTEE (TAC) MEETING #5 (MARCH 28, 2019) INPUT AND CONSULTANT TEAM RESPONSES

DATE	NAME	REP.	CONCEPT	COMMENT #	COMMENT FROM TAC MEMBER	RESPONSE
4/19/19	Debbie Watkins	ANAC	Rec. 14 Alternative 4 and Rec.15 Alternative 4	T-45	<p>There are 2 recommendations of concern to us in Mission Beach. ANAC 14 Alternative 4 and ANAC 15 Alternative 4. They both propose to move the nighttime departure flight paths over the jetty area of Mission Beach from the 290-degree nighttime departure heading, which has been implemented since the 1990's, to the new Next-Gen PADRZ waypoint. One recommendation would have planes change course at 1.5 NM west of the shoreline and one would change course .5 NM west of the shoreline. The purpose would be to reduce aircraft noise over La Jolla. However, the noise modeling analysis for these 2 proposed recommendations shows that the noise will increase over Mission Beach by 1 decibel. I question whether the actual decibel level is actually higher but for this purpose, any increase over an already noise-impacted community is one of the metrics used by the FAA in determining whether to make flight path procedure changes.</p> <p>An important objective for me regarding aircraft noise and the Nighttime Departure "Procedure" over the years is to reduce the aircraft noise and not increase the noise in the Mission Beach community, even 1 db. As you know, the Mission Beach community is impacted by aircraft noise from 6:30 AM to 11:30 PM. All nighttime departures from 10 PM – 11:30 PM are already directed over the Mission Beach community. Any increase in operations at the airport, increases the aircraft noise Mission Beach receives every day and night.</p> <p>I plan to vote to not recommend sending these two recommendations to the Airport Authority because aircraft noise would increased over an already noise impacted community. New flight procedures will be reviewed under the Part 150 study, including the Nighttime Noise Abatement Procedure. Perhaps it is time to consider another flight procedure for nighttime departures along with the current Nighttime Noise Abatement Procedure so Mission Beach does not continue to receive the brunt of all departing flights from 10 – 11:30 PM. We can call it SLEPN – short for Sleeping.</p>	Based on comments received from CAC members after the March 28, 2019, meeting, the consultant team recommends postponing further consideration of the proposed designs of nighttime departure procedures until Recommendation 17 (nighttime noise abatement heading) is addressed under the Part 150 Study update process.

SOURCE: Ricondo & Associates, Inc. May 2019.

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