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

San Diego International Airport

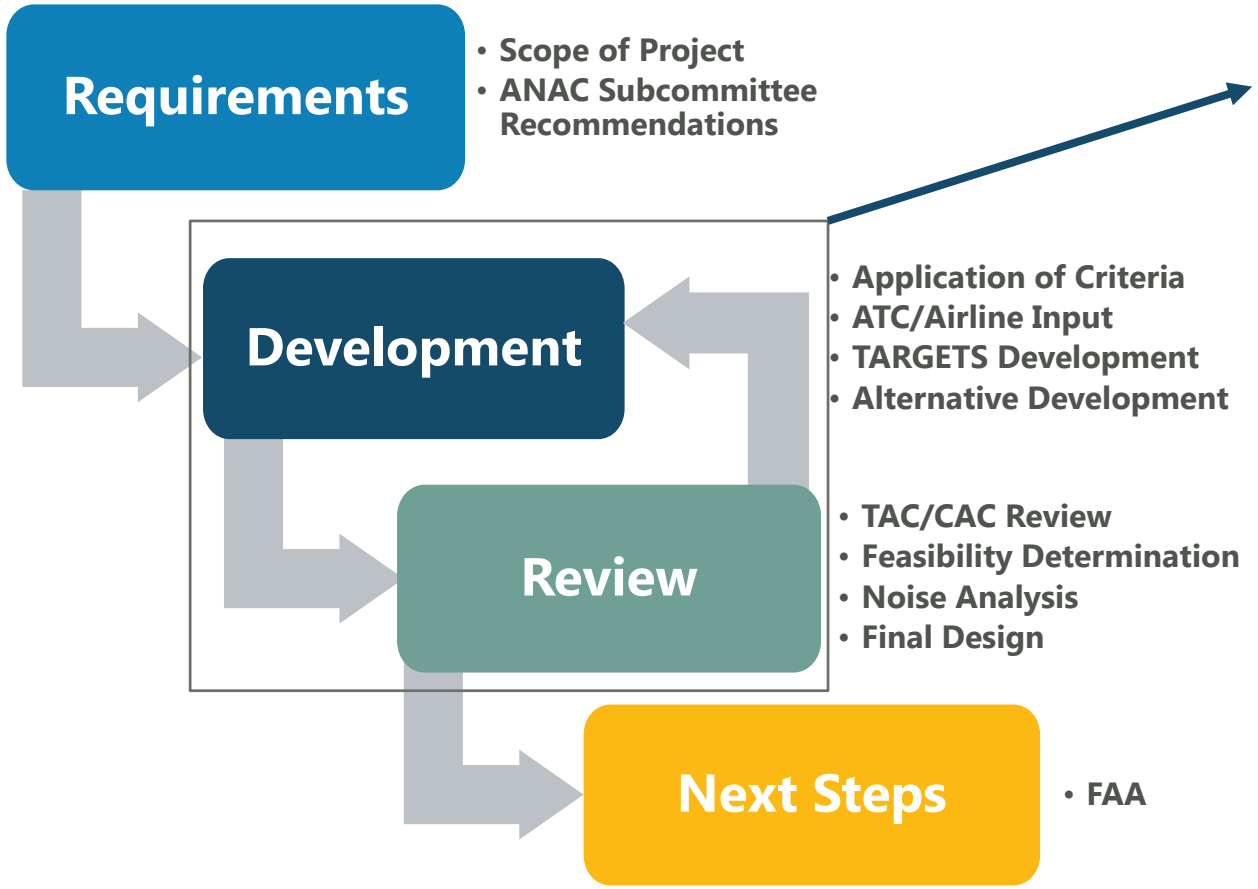
July 19, 2018

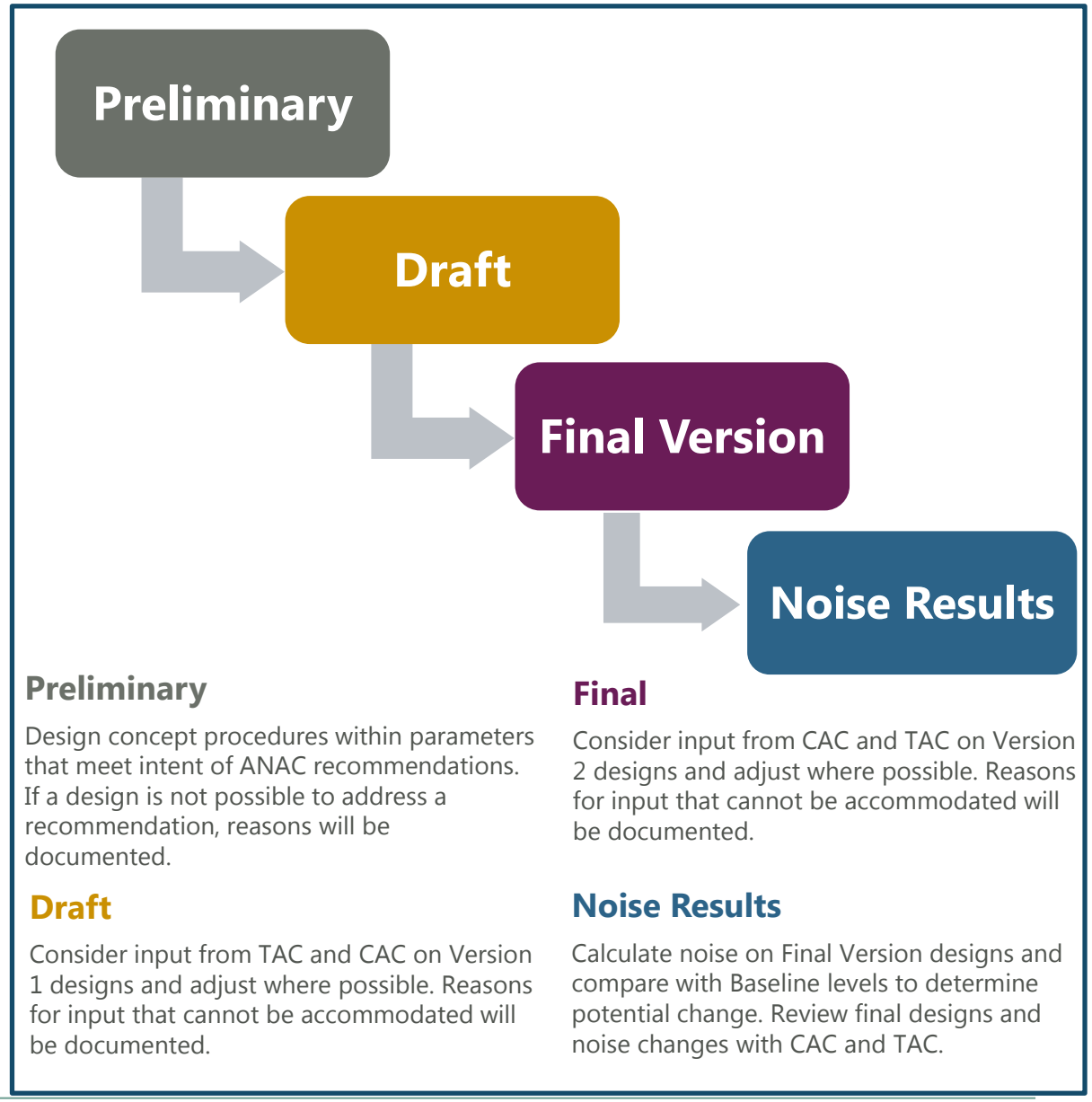
DRAFT Deliberative Document – For Discussion Purposes Only

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





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

Final

Consider input from CAC and 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.

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

Updated Slide

ANAC Noise Recommendation 14

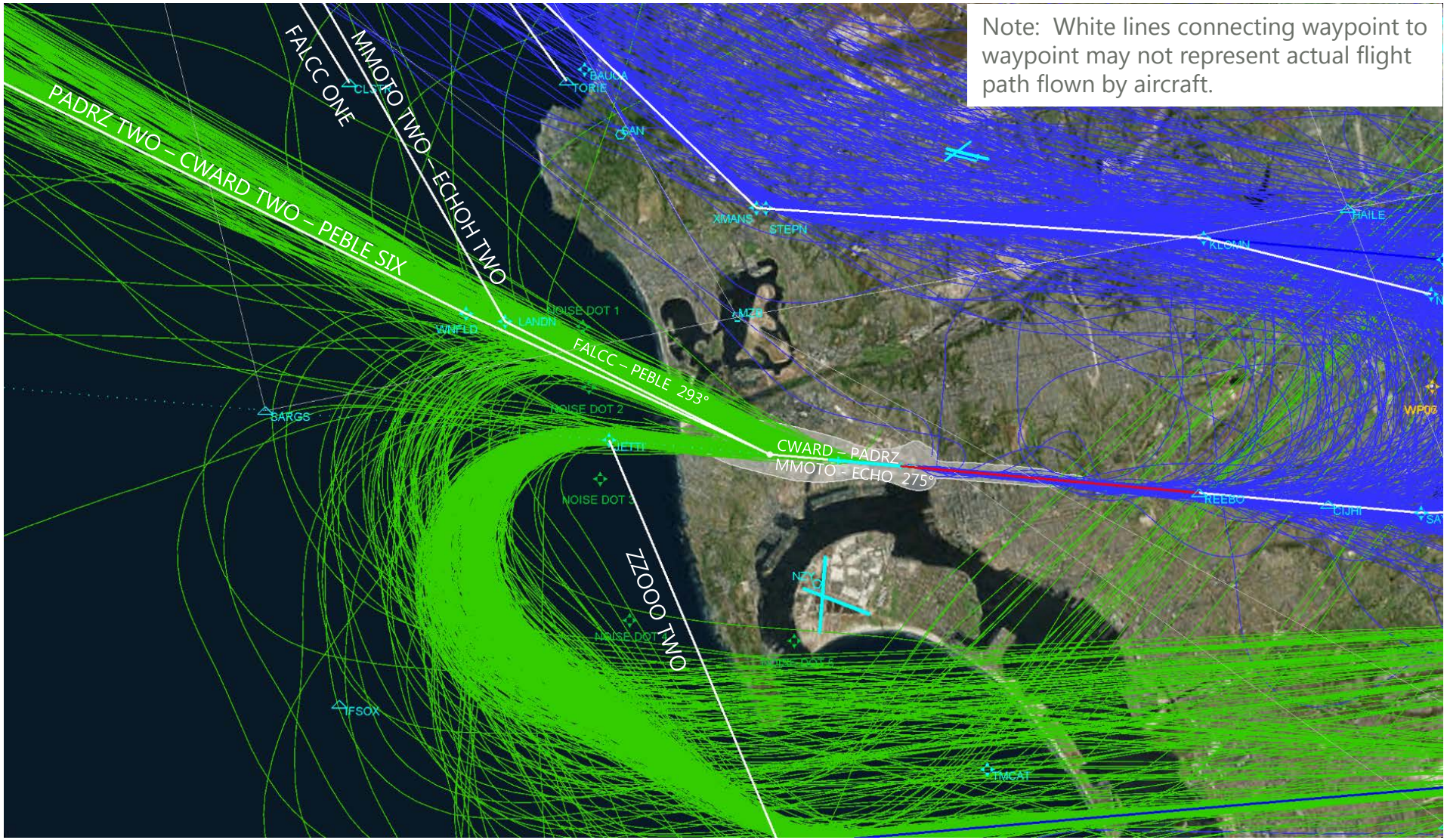
Revise PADRZ SID or create a new procedure to reduce increased noise in La Jolla, Mission Beach and Pacific Beach

☐ 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

ANAC Noise Recommendation 14 – Existing Flight Tracks



Updated Slide

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

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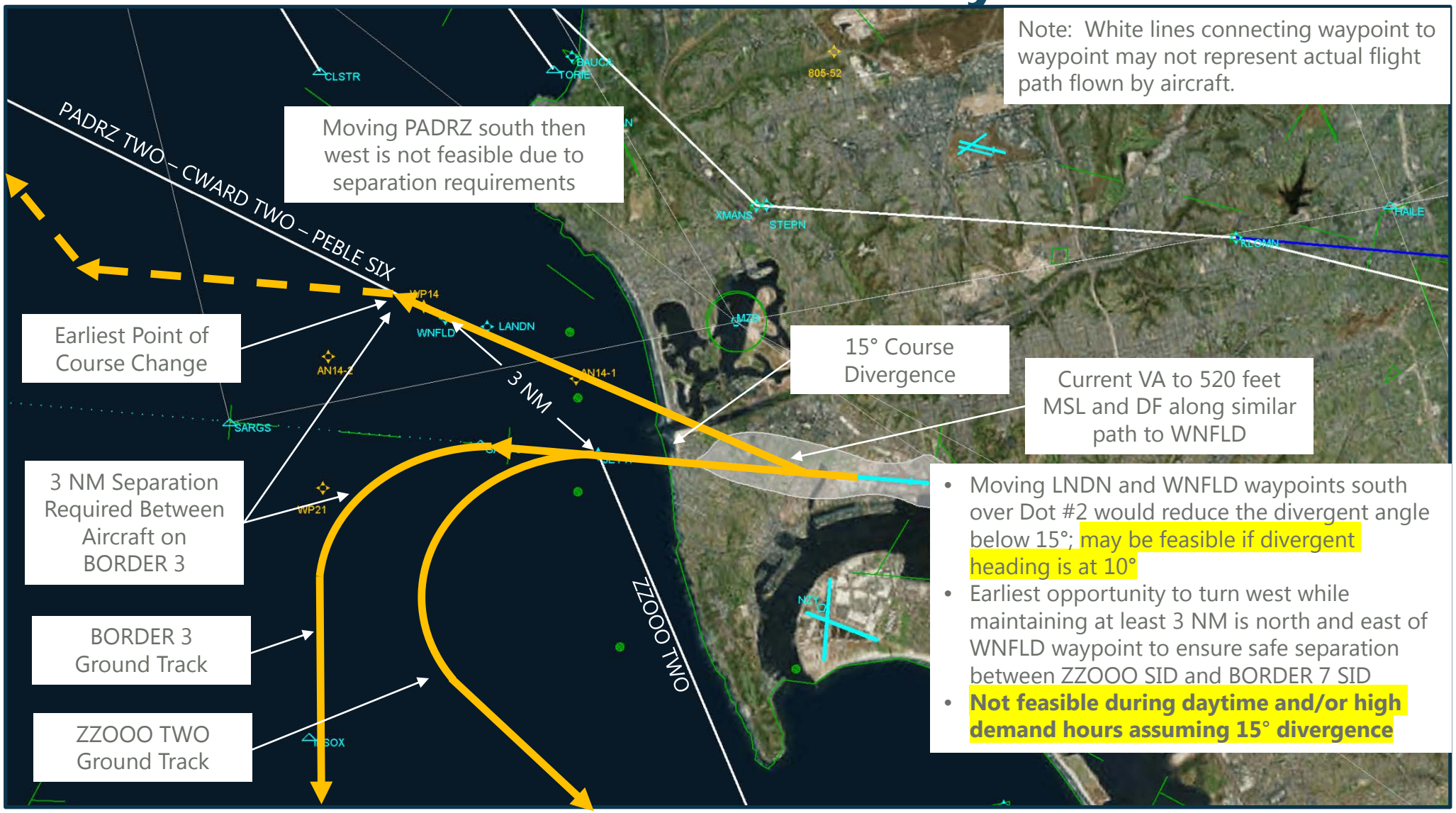
ANAC Noise Recommendation 14 – Day Time Issues



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)

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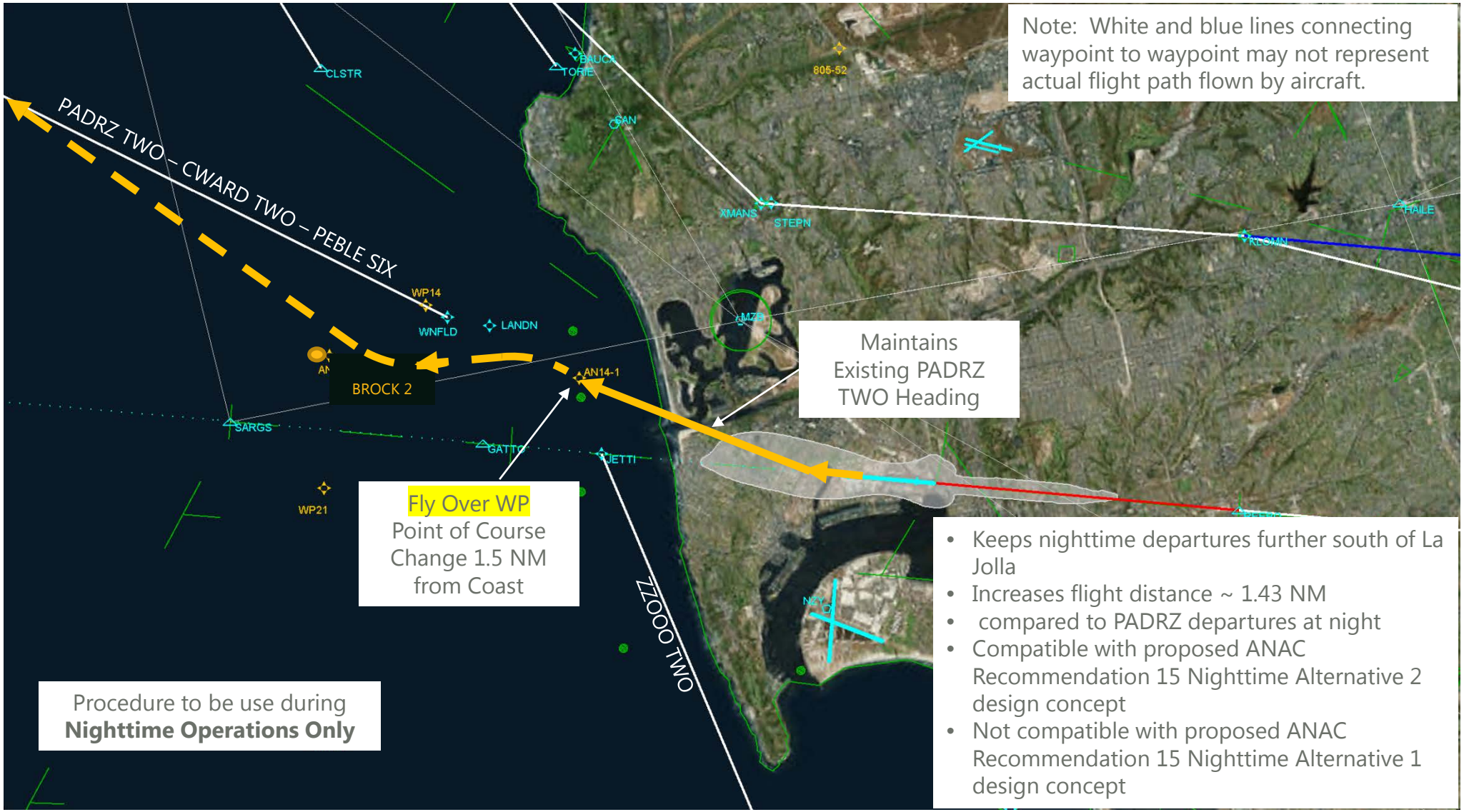
ANAC Noise Recommendation 14 – Alt 1 Turn at 1.5 NM



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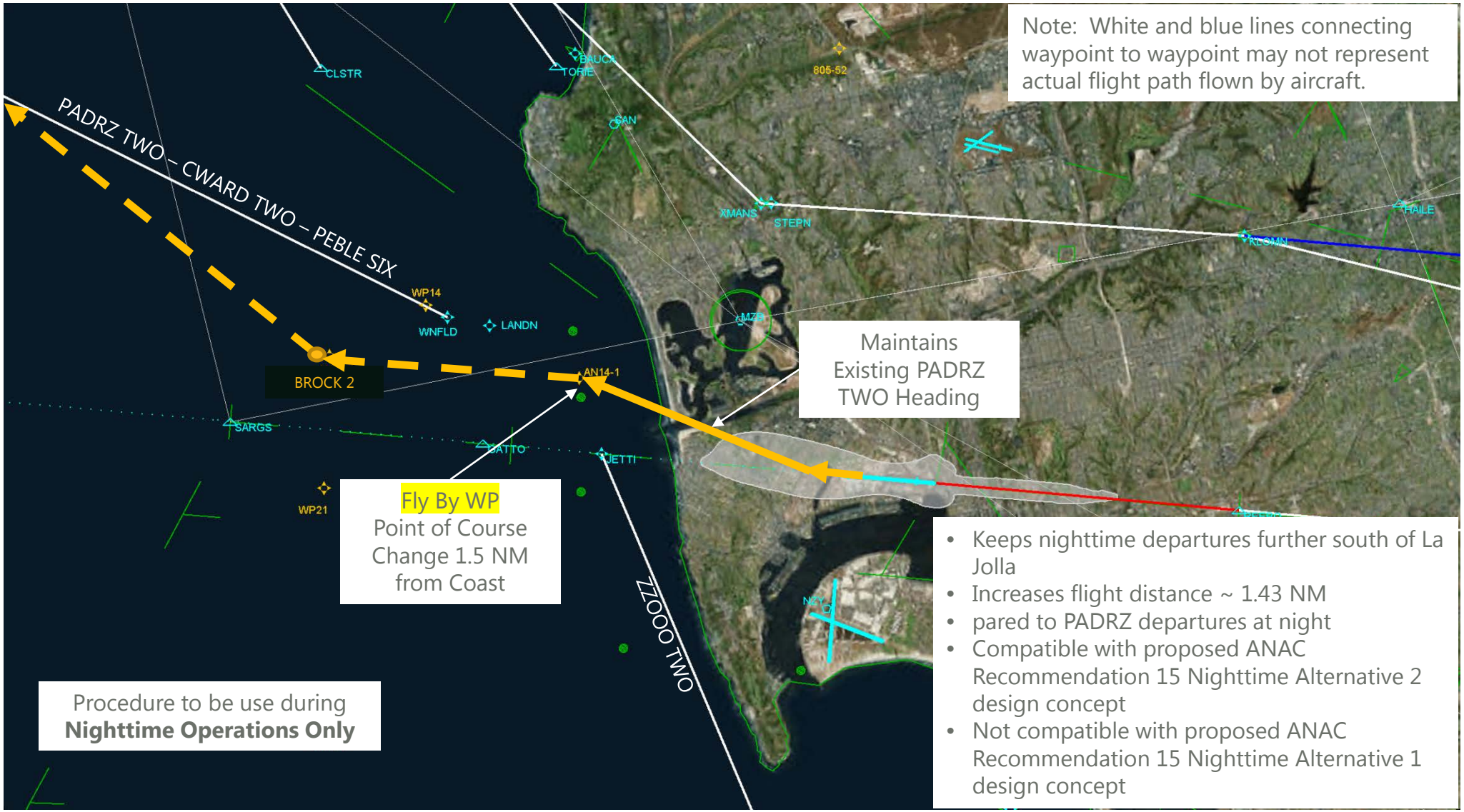
ANAC Noise Recommendation 14 – Alt 1 Turn at 1.5 NM



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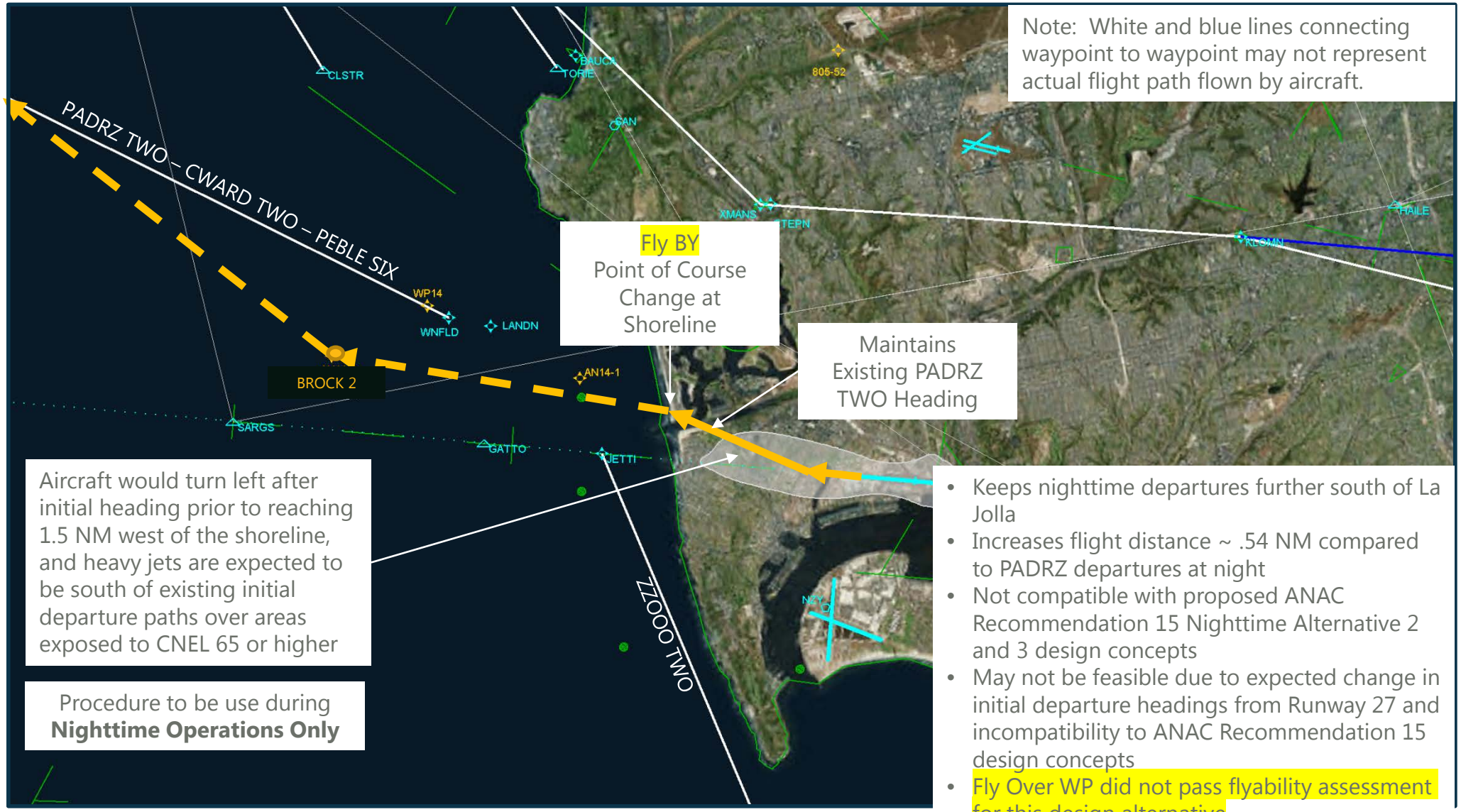
ANAC Noise Recommendation 14 – Alt 2 Turn at Shoreline



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

Fly BY
Point of Course Change at Shoreline

Maintains Existing PADRZ TWO Heading

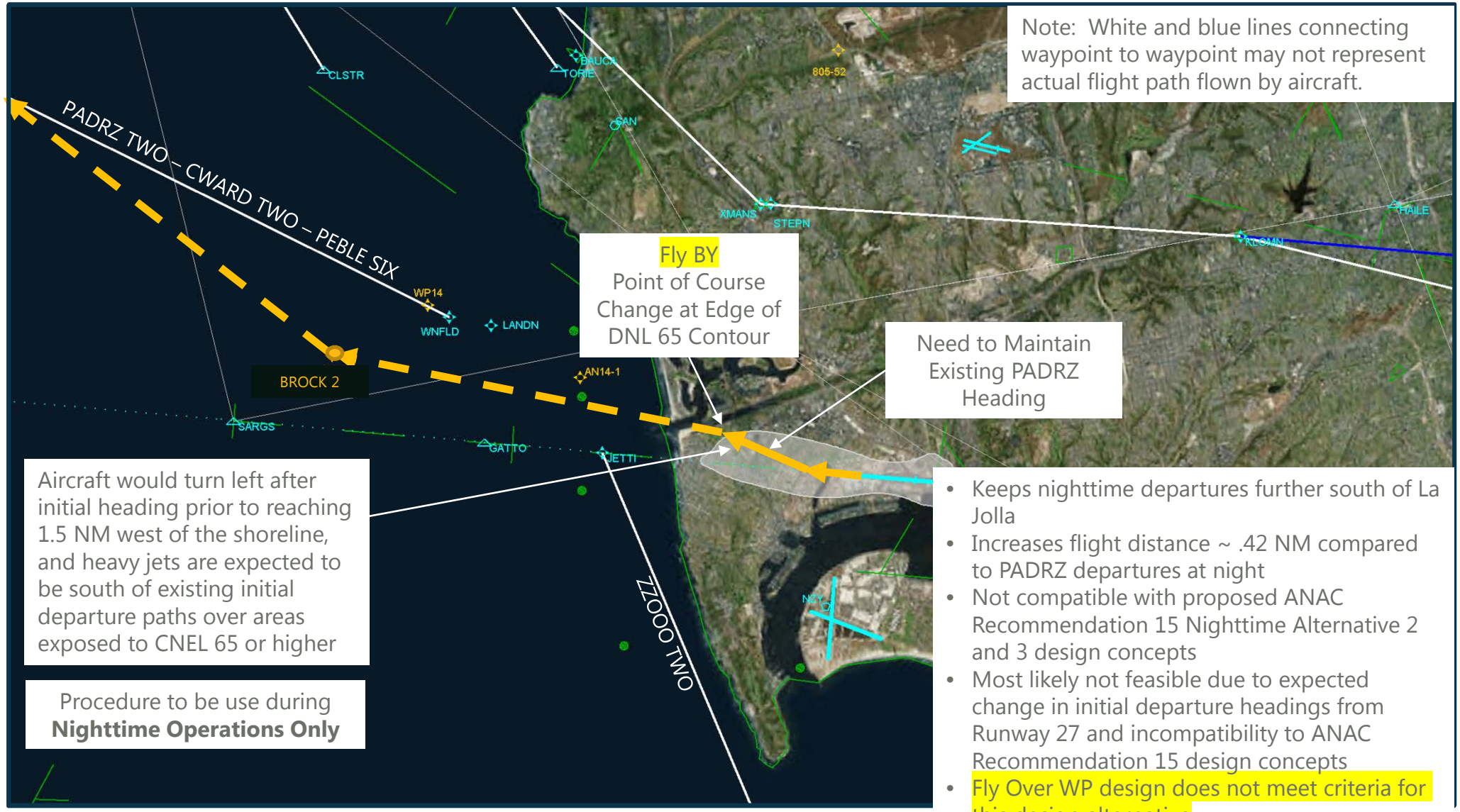
Aircraft would turn left after initial heading prior to reaching 1.5 NM west of the shoreline, and heavy jets are expected to be south of existing initial departure paths over areas exposed to CNEL 65 or higher

Procedure to be use during **Nighttime Operations Only**

- Keeps nighttime departures further south of La Jolla
- Increases flight distance ~ .54 NM compared to PADRZ departures at night
- Not compatible with proposed ANAC Recommendation 15 Nighttime Alternative 2 and 3 design concepts
- May not be feasible due to expected change in initial departure headings from Runway 27 and incompatibility to ANAC Recommendation 15 design concepts
- Fly Over WP did not pass flyability assessment for this design alternative

Updated Slide

ANAC Noise Recommendation 14 – Alt 3 Turn at DNL 65



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

Fly BY
Point of Course Change at Edge of DNL 65 Contour

Need to Maintain Existing PADRZ Heading

Aircraft would turn left after initial heading prior to reaching 1.5 NM west of the shoreline, and heavy jets are expected to be south of existing initial departure paths over areas exposed to CNEL 65 or higher

Procedure to be use during **Nighttime Operations Only**

- Keeps nighttime departures further south of La Jolla
- Increases flight distance ~ .42 NM compared to PADRZ departures at night
- Not compatible with proposed ANAC Recommendation 15 Nighttime Alternative 2 and 3 design concepts
- Most likely not feasible due to expected change in initial departure headings from Runway 27 and incompatibility to ANAC Recommendation 15 design concepts
- Fly Over WP design does not meet criteria for this design alternative

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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.

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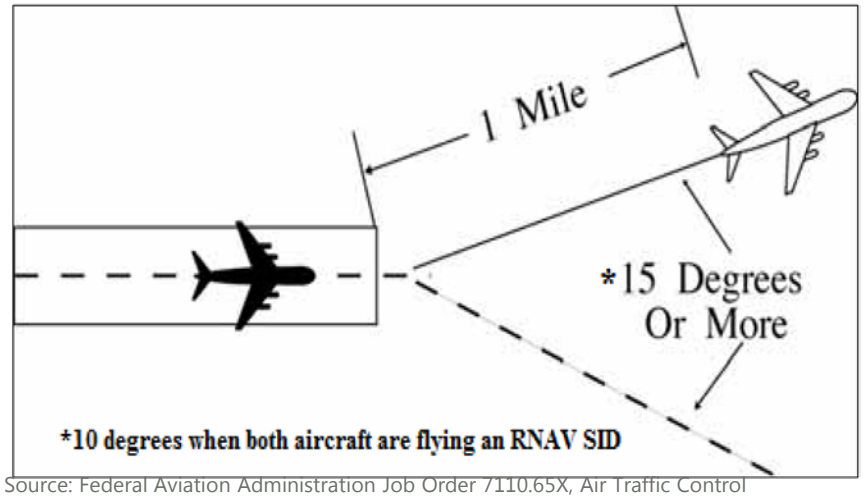
Equivalent Lateral Separation Operation (ELSO)

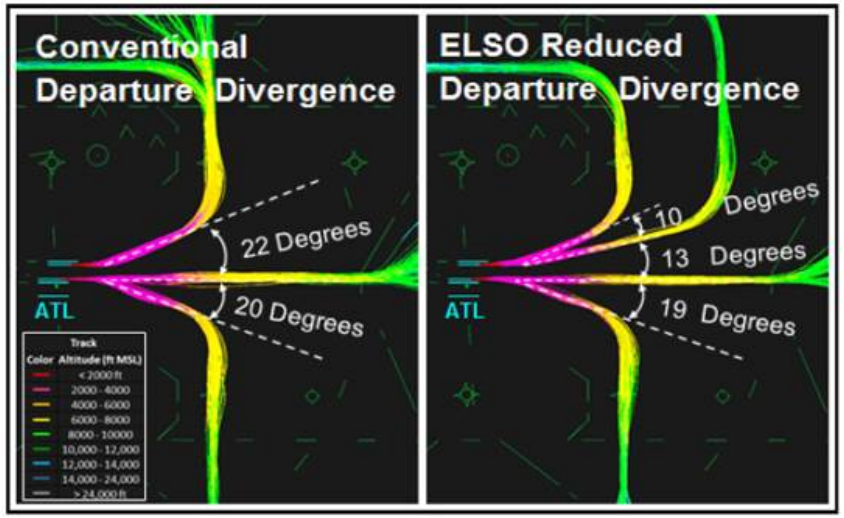
- NextGen enabled technology allowing reduced separation requirement from 15° to 10 ° for aircraft using PBN SIDs
- FAA Order 7110.65X, Change 1 – Air Traffic Control
  - Paragraph 5-8-1 (a) Provides criteria for simultaneous parallel and single runway operations allowing a minimum of 10° separation 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

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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 then 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

Updated Slide

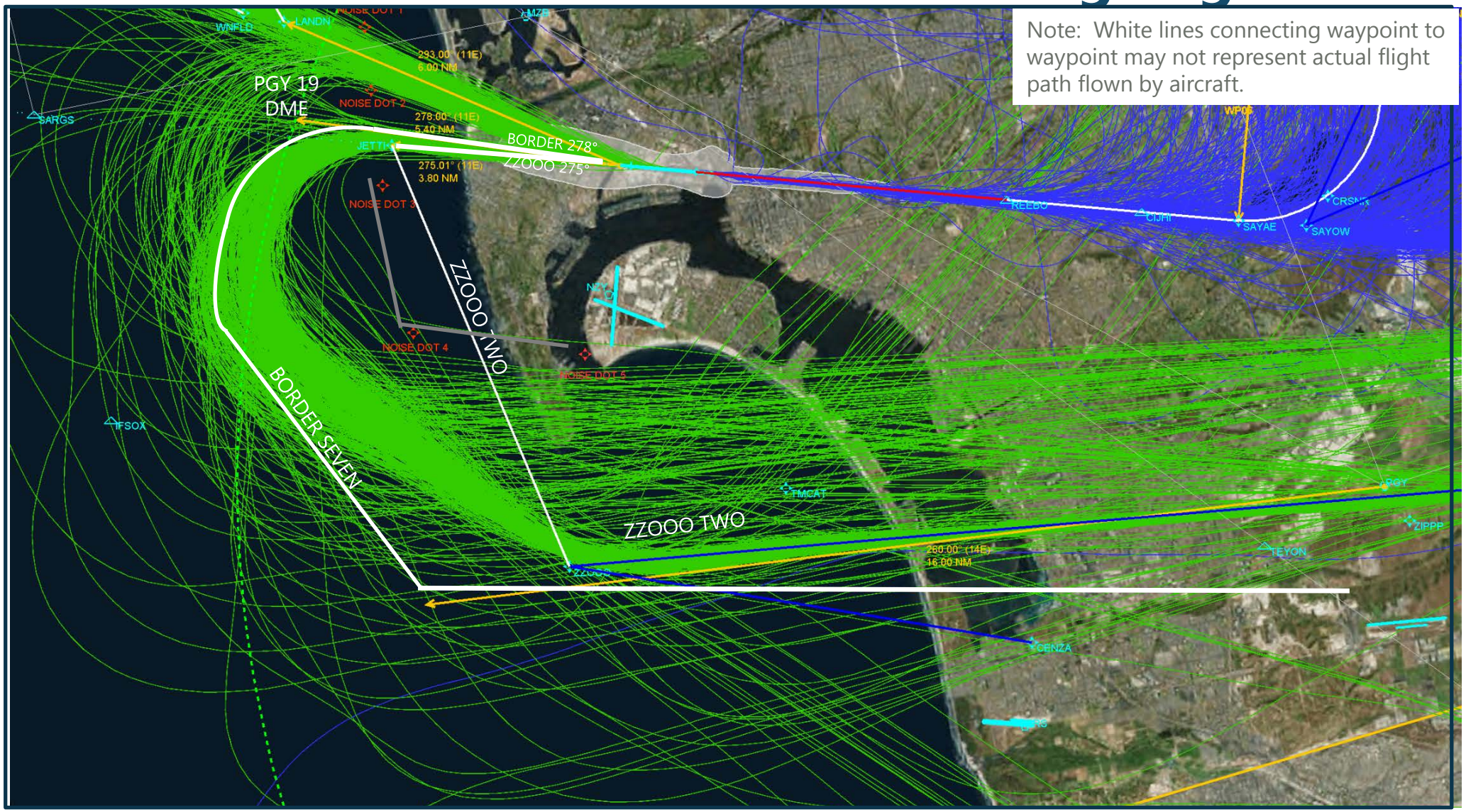
ANAC Noise Recommendation 15

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

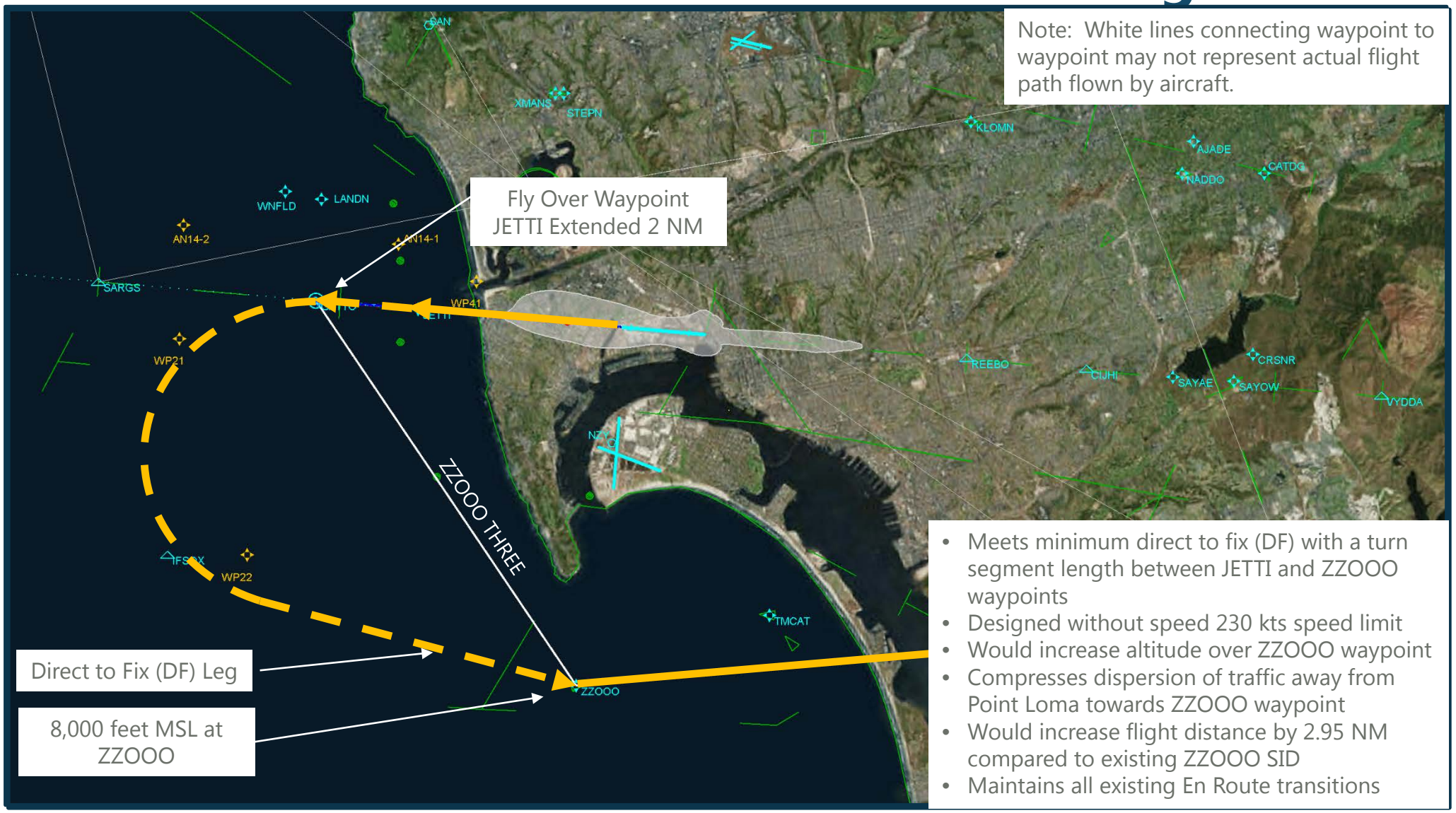
ANAC Noise Recommendation 15 – Existing Flight Tracks



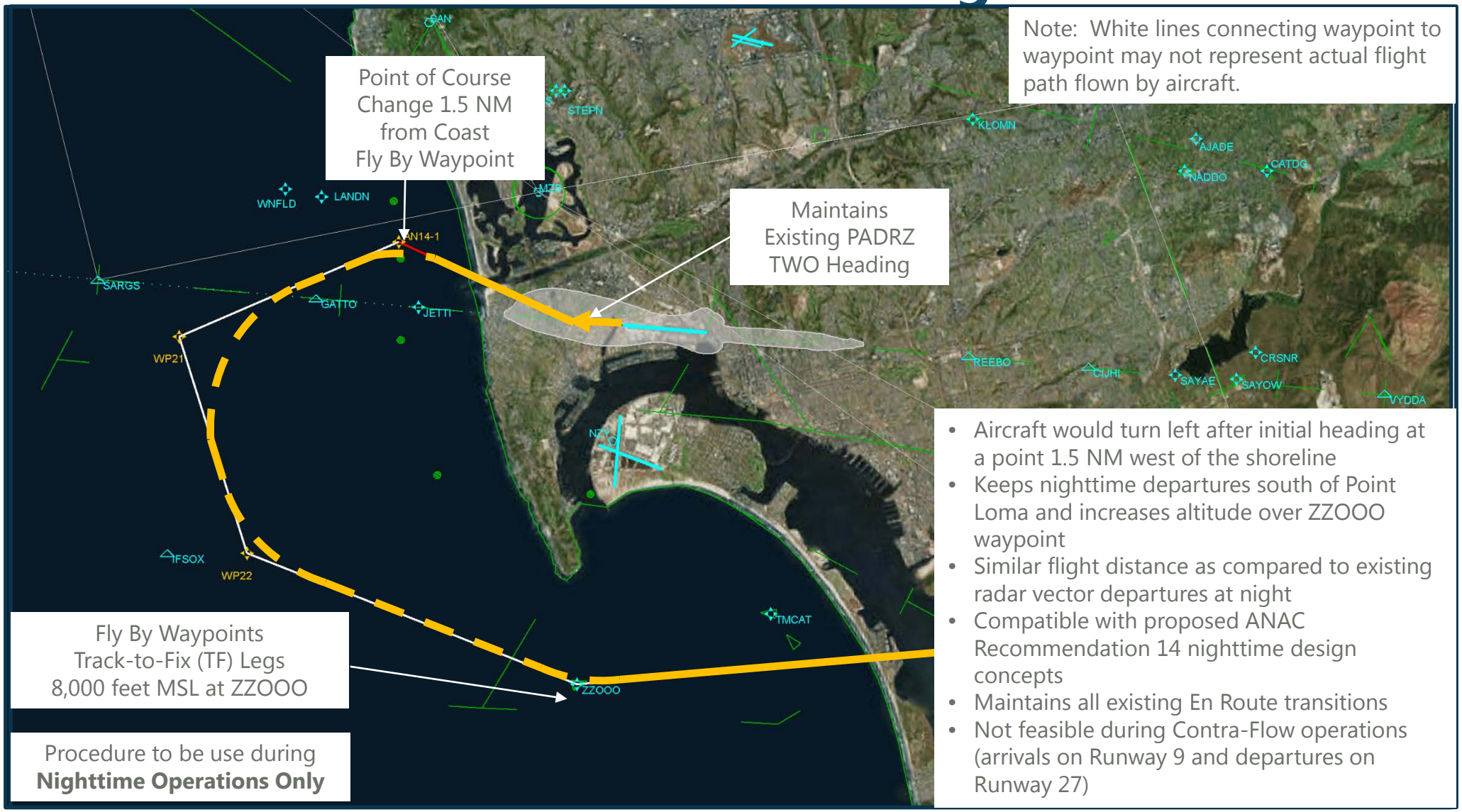
ANAC Noise Recommendation 15 – Initial Review

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).

ANAC Noise Recommendation 15 – Alt 1 Design

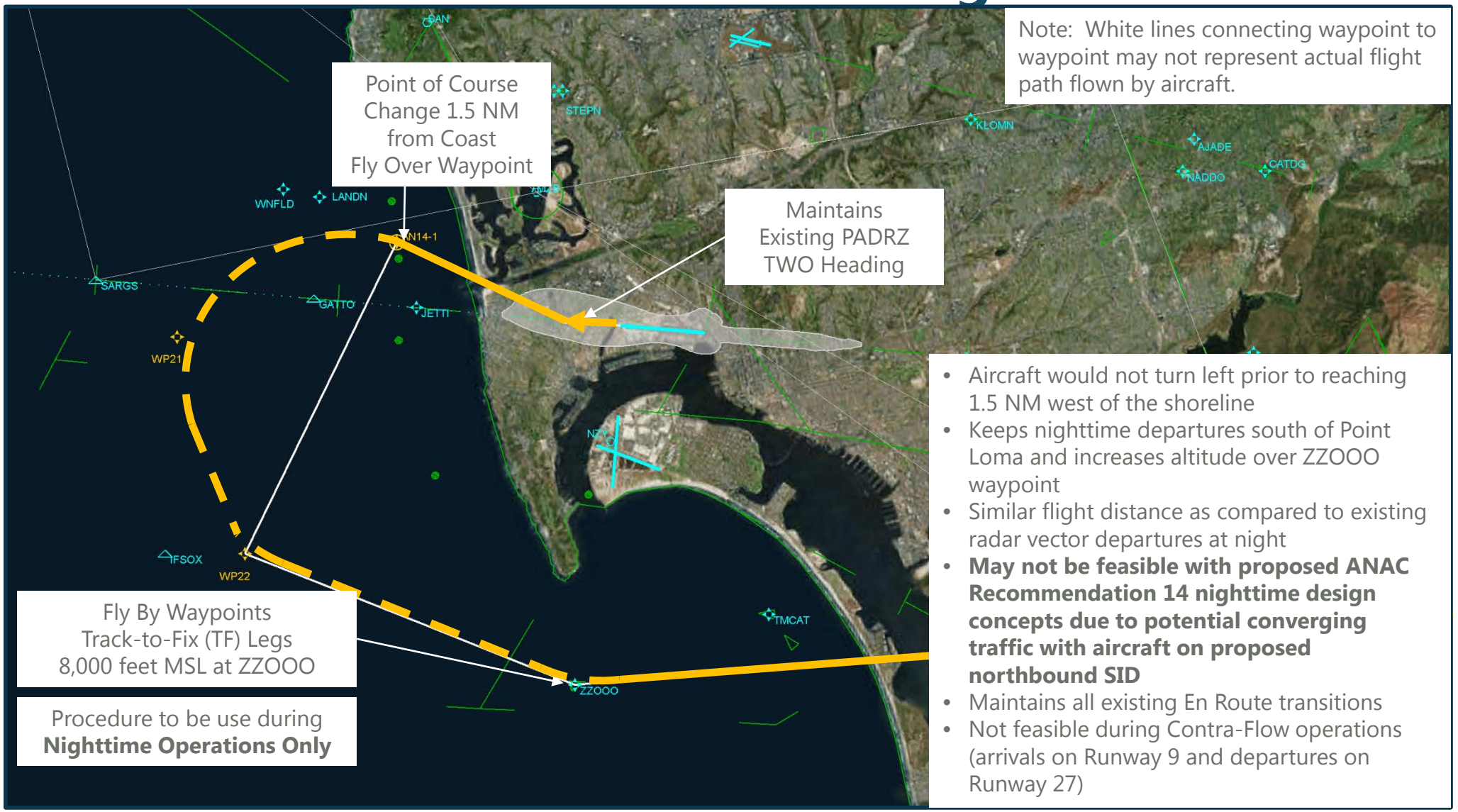


ANAC Noise Recommendation 15 – Night Alt 2



- Aircraft would turn left after initial heading at a point 1.5 NM west of the shoreline
- Keeps nighttime departures south of Point Loma and increases altitude over ZZOOO waypoint
- Similar flight distance as compared to existing radar vector departures at night
- Compatible with proposed ANAC Recommendation 14 nighttime design concepts
- Maintains all existing En Route transitions
- Not feasible during Contra-Flow operations (arrivals on Runway 9 and departures on Runway 27)

ANAC Noise Recommendation 15 – Night Alt 3



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

- Aircraft would not turn left prior to reaching 1.5 NM west of the shoreline
- Keeps nighttime departures south of Point Loma and increases altitude over ZZOOO waypoint
- Similar flight distance as compared to existing radar vector departures at night
- **May not be feasible with proposed ANAC Recommendation 14 nighttime design concepts due to potential converging traffic with aircraft on proposed northbound SID**
- Maintains all existing En Route transitions
- Not feasible during Contra-Flow operations (arrivals on Runway 9 and departures on Runway 27)

New Slide Not Show in TAC Briefing

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

Updated Slide

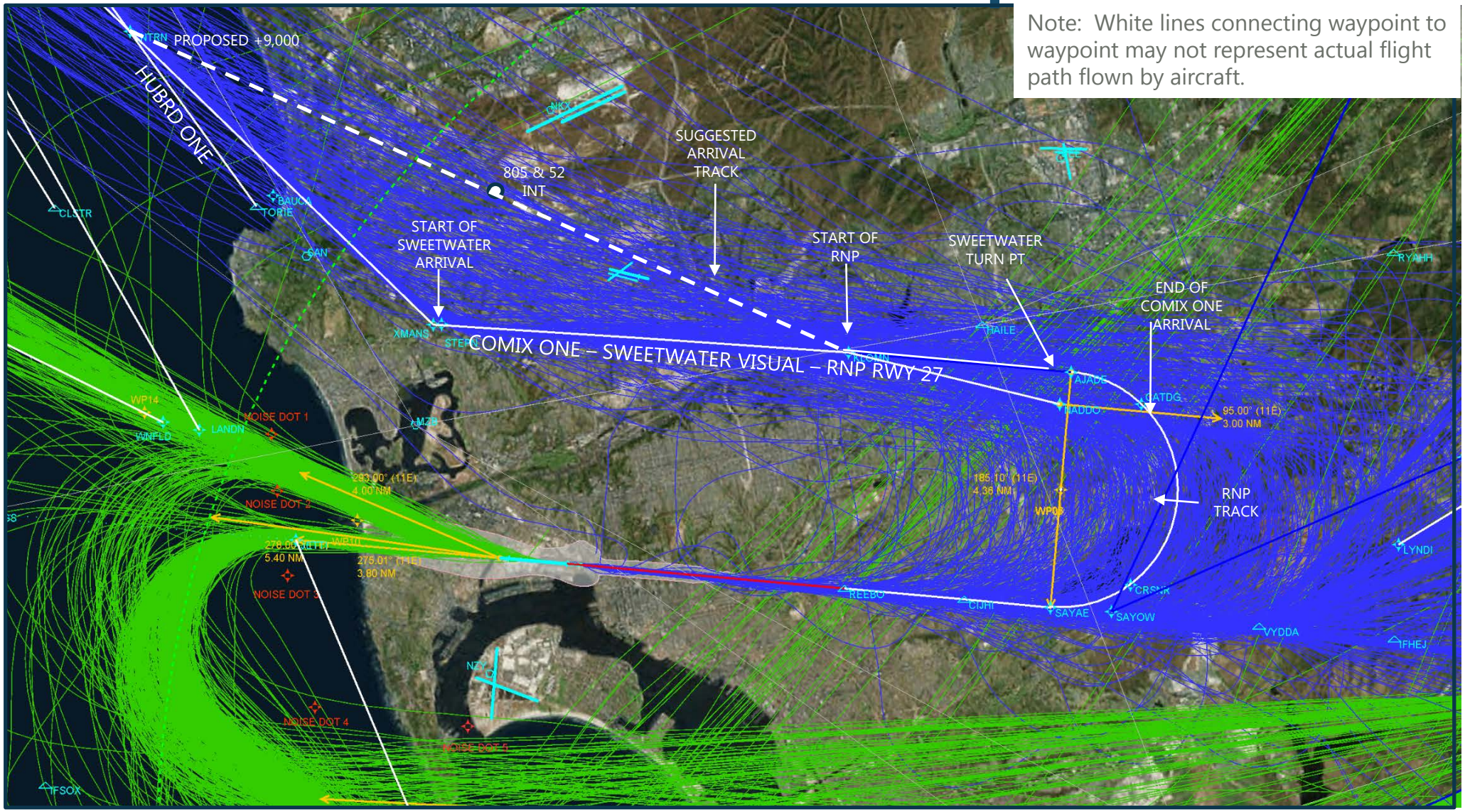
ANAC Noise Recommendation 16

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

ANAC Noise Recommendation 16 - Graphic



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

Updated Slide

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

Updated Slide

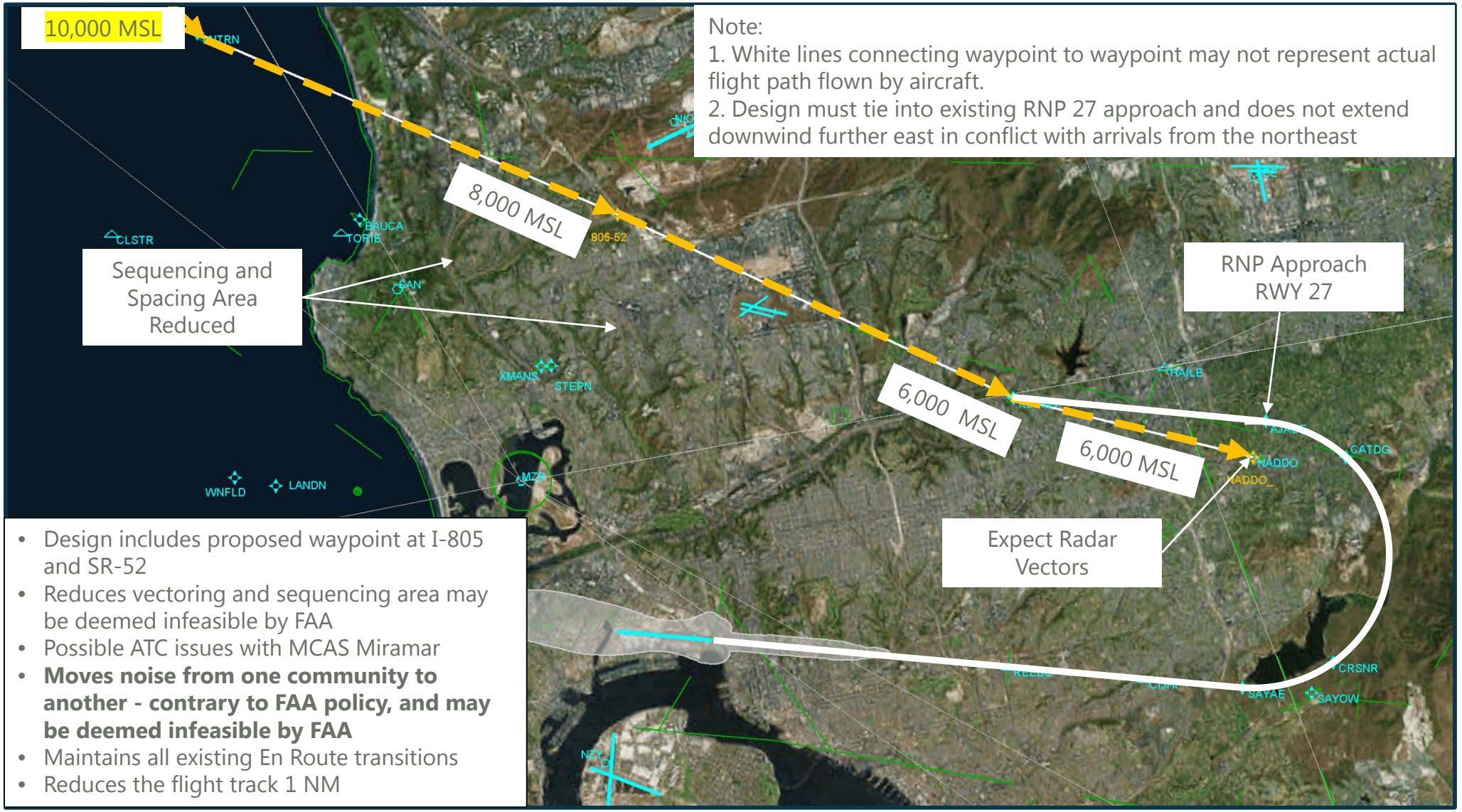
ANAC Noise Recommendation 16 – Initial Review

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.*

Updated Slide

ANAC Noise Recommendation 16 – Alt 1



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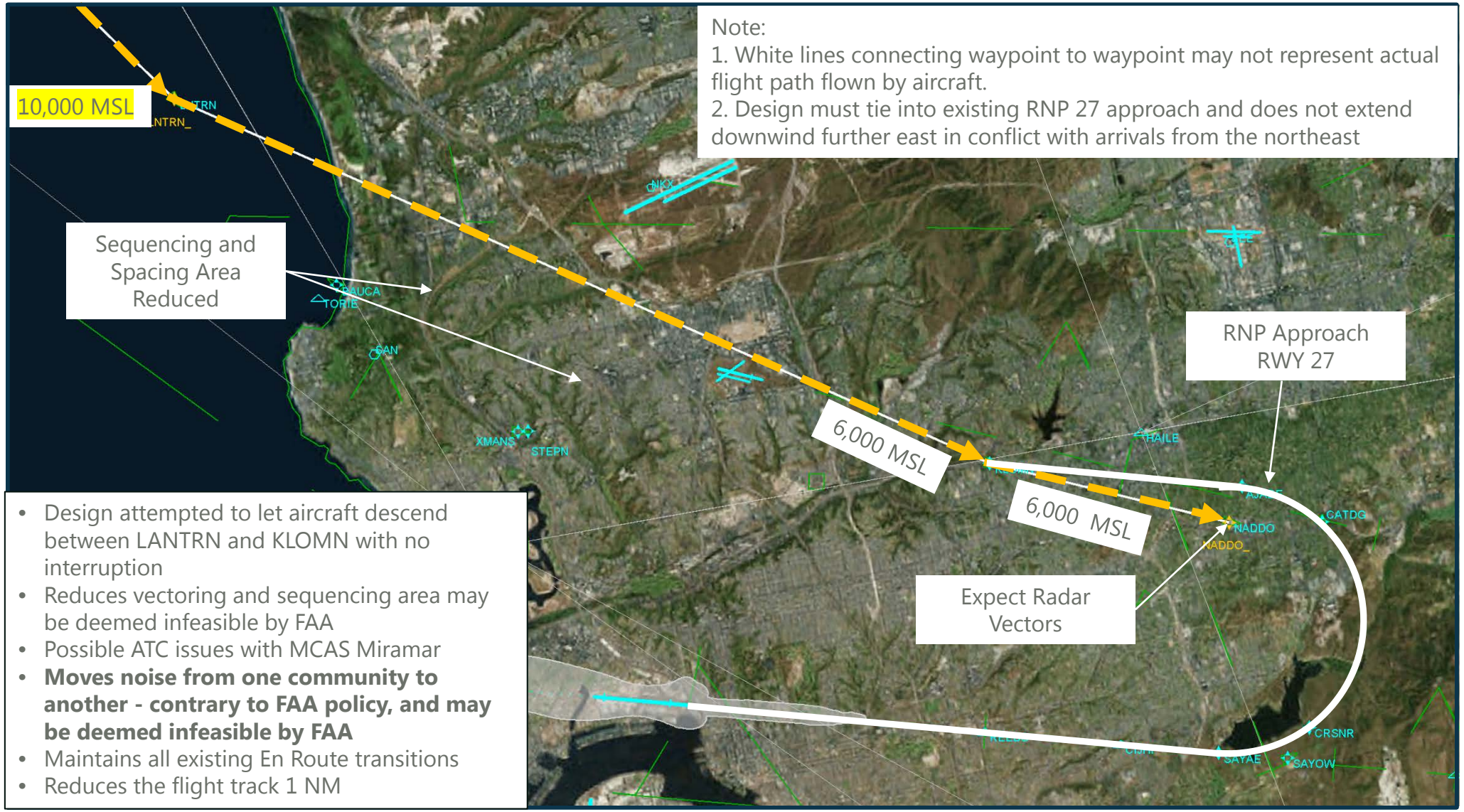
ANAC Noise Recommendation 16 – Alt 2

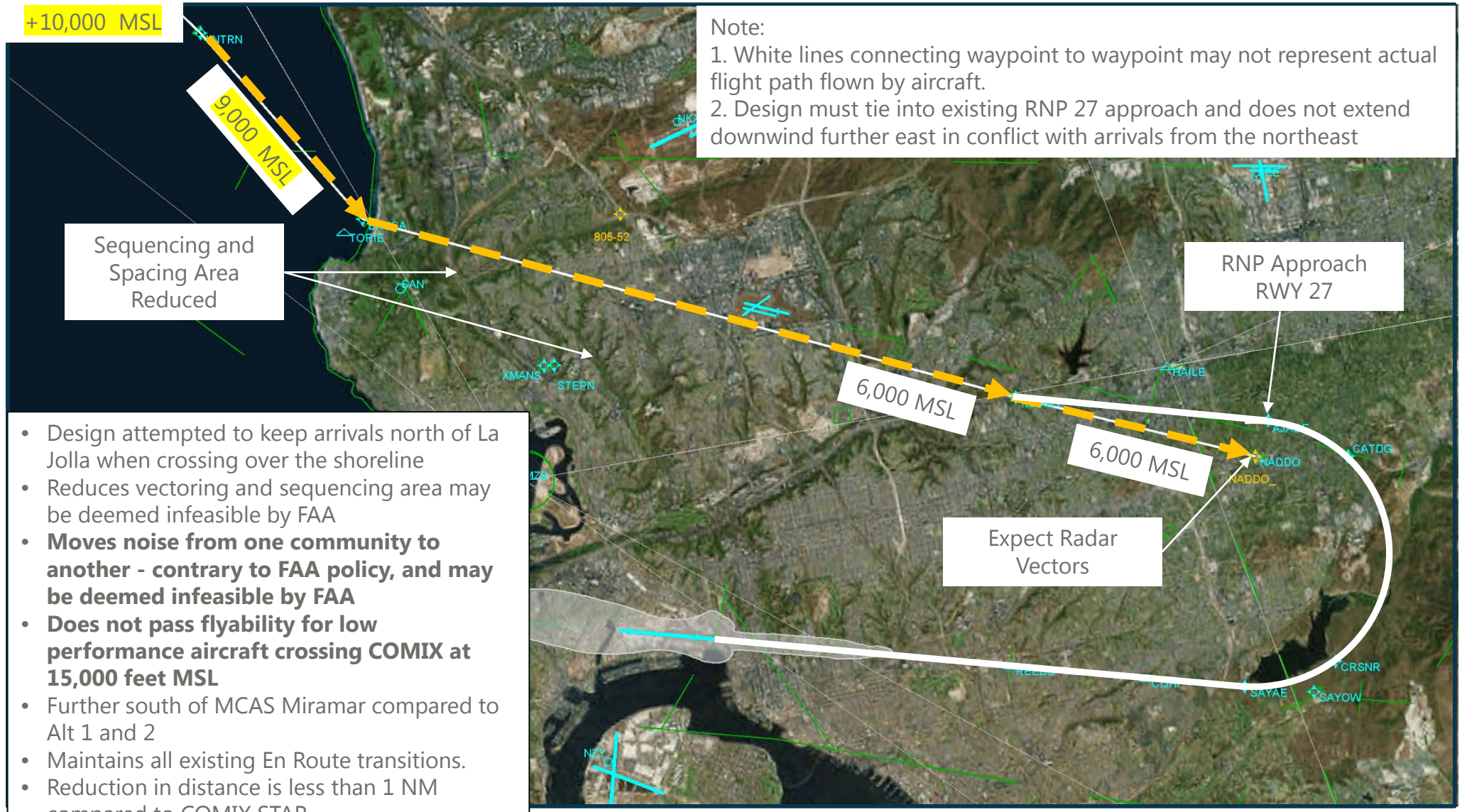


Note:
1. White lines connecting waypoint to waypoint may not represent actual flight path flown by aircraft.
2. Design must tie into existing RNP 27 approach and does not extend downwind further east in conflict with arrivals from the northeast

- Design attempted to let aircraft descend between LANTRN and KLOMN with no interruption
- Reduces vectoring and sequencing area may be deemed infeasible by FAA
- 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 En Route transitions
- Reduces the flight track 1 NM

Updated Slide

ANAC Noise Recommendation 16 – Alt 3



- 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

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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.

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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

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