SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

Airport Noise Advisory Committee (ANAC) Agenda

Wednesday, June 16, 2021
4:00 P.M.

This meeting of the Airport Noise Advisory Committee (ANAC) will be conducted pursuant to the provisions of California Executive Order N-29-20 which suspends certain requirements of the Ralph M. Brown Act. During the current State of Emergency and in the interest of public health, all Board members will be participating in the meeting electronically. In accordance with the Executive Order, there will be no members of the public in attendance at the Board Meeting. We are providing alternatives to in-person attendance for viewing and participating in the meeting. In lieu of in-person attendance, members of the public may submit their comments in the following manner.

Comment on Non-Agenda Items

Public comments on non-agenda items must be submitted to the Authority Clerk at clerk@san.org no later than 4:00 p.m. the day prior to the posted meeting in order to be eligible to be read into the record. The ANAC facilitator will read the first 30 comments received by 4:00 p.m. the day prior to the meeting into the record; each of these comments will be read for up to three minutes or for the time determined by the ANAC facilitator. The maximum number of comments to be read into the record on a single issue will be 16. All other comments submitted, including those received after 4:00 p.m. the day prior and before 8:00 a.m. the day of the meeting, will be provided to ANAC and submitted into the written record for the meeting.

Comment on Agenda Items

Public comment on agenda items may be submitted to the Authority clerk at clerk@san.org. Comments received no later than 8:00 a.m. on the day of the meeting will be distributed to the ANAC and included in the record.

Live Comments on Agenda and Non-Agenda Items

If you'd like to speak to the ANAC live during the meeting, please follow these steps to request to speak:

- **Step 1**: Fill out the online **Request to Speak Form** to speak during the meeting via Zoom. The form must be submitted by 4 p.m. the day before the meeting or by 4:00 p.m. the Friday before a Monday meeting. After completing the form, you'll get instructions on how to call in to the meeting.

- **Step 2:** Watch the meeting via YouTube located at the following link: https://youtu.be/sOzZupZbpYA

- **Step 3:** When the ANAC begins to discuss the agenda item you want to comment on, or comes to the Public Comment item on the agenda, call into the meeting with the phone number and Meeting ID you received when you submitted your Request to Speak Form, you will be placed in a waiting area. ***Please do not call until the item you want to comment on is being discussed.***

Note: There is a delay between the ANAC meeting and the YouTube livestream. **You must mute the YouTube livestream** before speaking.

- **Step 4:** When it is time for public comments on the item you want to comment on, the ANAC facilitator will invite you into the meeting and unmute your phone. The ANAC facilitator will then ask you to state your name and begin your comments.

How to Watch the Meeting

You may also view the meeting online via YouTube at the following link: https://youtu.be/sOzZupZbpYA

Requests for Accessibility Modifications or Accommodations

As required by the Americans with Disabilities Act (ADA), requests for agenda information to be made available in alternative formats, and any requests for disability-related modifications or accommodations required to facilitate meeting participation, including requests for alternatives to observing meetings and offering public comment as noted above, may be made by contacting the Authority Clerk at (619) 400-2550 or clerk@san.org. The Authority is committed to resolving accessibility requests swiftly in order to maximize accessibility.

This Agenda contains a brief general description of each item to be considered. The indication of a recommended action does not indicate what action (if any) may be taken. ***Please note that agenda items may be taken out of order.*** If comments are made to the ANAC without prior notice or are not listed on the Agenda, no specific answers or responses should be expected at this meeting pursuant to State law.

WELCOME:

ROLL CALL:

PRESENTATIONS:

- **Update on ANAC Recommendations/Part 150**
  Sjohnna Knack, Airport Authority

- **Update on New T1 Environmental Impact Report, Noise Mitigation Measures**
  Sjohnna Knack, Airport Authority
  Justin Cook, ANAC Acoustician

- **Current Aircraft Noise Trends**
  Jim Payne, Airport Authority

NON-AGENDA PUBLIC COMMENT:
Non-Agenda Public Comment is reserved for members of the public wishing to address the ANAC on matters for which another opportunity to speak **is not provided on the Agenda**, and which is within the jurisdiction of the ANAC. Please submit a completed speaker slip to the Authority Clerk. ***Each individual speaker is limited to three (3) minutes.***

Note: Persons wishing to speak on specific items should reserve their comments until the specific item is taken up by the ANAC.

ACTION ITEMS

1. **APPROVAL OF MEETING SUMMARY:**
   RECOMMENDATION: Approve the meeting summary of the May 5, 2021, ANAC meeting.

2. **DISCUSSION AND POSSIBLE ACTION ON FAA REQUEST TO REVIEW MAGNETIC DRIFT**

NEXT ANAC MEETING AUGUST 18, 2021

ADJOURNMENT

MEETING SUMMARY

Airport Noise Advisory Committee

Date|Time 05/05/2021 4:00 p.m.

Meeting called to order by: Heidi Gantwerk

In Attendance

Name	Affiliation	In Attendance
Community Planning Groups Within the 65 dB contour		
Celestin Fausino	Greater Golden Hill Planning Committee	No
Tania Fragomeno	Downtown Community Planning Council	Yes
Anthony Ciulla	Ocean Beach Planning Board	Yes
Chris Cole	Uptown Planners	Yes
Judy Holiday	Midway-Pacific Highway Community Planning Group	Yes
Char-Lou Benedict	Community Resident at Large within 65 dB CNEL - East	Yes
Fred Kosmo	Peninsula Community Planning Board	Yes
Community Planning Groups Outside the 65 dB contour		
Jonathan Cole	Pacific Beach Planning Group	No
Michael Herron	Valley De Oro Community Planning Group	No
Matthew Price	La Jolla Community Planning Association	Yes
Deborah Watkins	Mission Beach Precise Planning Board	Yes
Aviation Stakeholders		
Olivier Brackett	San Diego County Airports	Yes
Jorge Rubio	City of San Diego Airports	No
Carl "Rick" Huenefeld	MCRD	Yes
Robert Bates	Airline Pilot (Active)	Yes
Kallie Glover	Performance Engineer, Delta Air Lines	Yes
Dave Ryan	NBAA	Yes
Ex-Officio Non-Voting Members		
Justin Cook	Acoustical Engineer	Yes
Jawad Al Baghdadi	Congress, 53rd District for Rep. Sara Jacobs	Yes
Joshua Coyne	San Diego City Council, District 2, for Jennifer Campbell	No*
Anthony Nguyen	Congress, 52nd District for Rep. Scott Peters	Yes
David Flores	S.D. County Board of Supervisors, District 1	No
John Nelson	FAA Representative	Yes
Ivan Gutierrez	FAA Representative	Yes
Presenters		
Steve Smith	Ricondo	Yes
Kate Andrus	Mead & Hunt	Yes
Heidi Gantwerk	Facilitator	Yes

SDCRAA Staff

Dennis Probst, Brendan Reed, Sjohnna Knack, Roman Lanyak, Jim Payne

13 voting members in attendance

*Members contacted staff ahead of time and are considered excused.

1. Welcome and Introductions

Note: This meeting was rescheduled after the April 21st, 2021 had to be postponed due to technical issues.

Heidi Gantwerk, facilitator for the Airport Noise Advisory Committee (ANAC), opened the meeting at 4:00 p.m. with introductions. Ms. Gantwerk briefly shared the agenda and read the Executive Order N-29-20.

2. Roll Call

Heidi Gantwerk called a committee member roll call for attendance. Attendance is reflected on page 1.

3. Action Items

Note: A copy of the information in the presentations can be found via our website using the following link:

https://www.san.org/Airport-Authority/Meetings-Agendas/ANAC?EntryId=13986

a. Additional Data Review and Possible Action on Nighttime Departure Procedures

Steve Smith, Ricondo, presented an update of the two nighttime RNAV departure procedures. The Citizen Advisory Committee (CAC) and Technical Advisory Committee (TAC) had asked that ANAC place the two procedures on hold pending results of the Part 150 and any potential procedures that might change the initial departure heading. Steve presented results for final review by ANAC.

Public Comment:

Gary Wonacott, resident of South Mission Beach, read his submitted public comment into the record on agenda item 3.a. His public comment is located on the san.org website.[1]

Questions from ANAC:

Deborah Watkins asked for clarification on what the ANAC was voting on and clarification on the two procedures.

Steve Smith explained the proposed nighttime (10:00 p.m. to 6:30 a.m.) RNAV departure procedure to the Northwest (PADRZ) is the same as what was originally proposed in the Flight Procedure Study. He then explained the nighttime RNAV departure procedure to the East (ZZOOO) was modified because during the requested noise assessment they found that it exposed new people to the 65 CNEL when the initial leg followed the PADRZ route. To avoid new noise exposures, a modification to the nighttime RNAV departure to the East

[1] ANAC Public Comment 042121; pg. 2, https://www.san.org/DesktopModules/Bring2mind/DMX/API/Entries/Download?EntryId=14356&Command=Core_Download&language=en-US&PortalId=0&TabId=487

(ZZOOO) was made so that the initial leg mimics the 290 heading, in order to maintain current conditions.

Deborah Watkins recommended that ANAC look at ways to improve the proposed options. She suggested the development of a nighttime RNAV departure procedure over the channel or the 290 utilizing the proposed BROCK waypoint for East and Northwest flights with appropriate noise modeling study assessing effects on Mission Beach to help eliminate constant thunder of airplane noise. She stated that she is not ready to vote for the proposed procedure as it does nothing for Mission Beach.

Matthew Price said he thinks there will be an element of relief to Mission Beach with the proposed modification for the ZZOOO pathway. He asked if the procedure will formalize a turn at AN14-1 with the nighttime ZZOOO design.

Steve Smith said yes, as long as they're assigned, they will turn inside of AN14-1 waypoint, then join the track and continue on. By formalizing the procedure, they expect the right turns over La Jolla to be reduced.

Matthew Price said he believes the proposed option provides some relief at night for all the communities and supports to move forward given the limited flexibility to make any changes.

Sjohnna Knack reminded ANAC that with the implementation of the RNAV procedures ZZOOO and PADRZ in 2016 and 2017, early turns in Mission Beach and Point Loma were reduced.

Robert Bates stated that he believes the proposal is the best solution to maintain the status quo given the limited resources and space. In his opinion, codifying the departures will decrease the early turns. He asked if there's a way to make the vectored RNAV procedure for eastbound traffic simpler for the pilots and if there's been discussion with the FAA on what the best coding for that procedure might be.

Steve Smith said regarding the design it's not necessary based on the criteria to have a fixed point and that the details will get worked out through the procedure development process. He said they have not spoken to the FAA regarding best coding because when it's submitted, the FAA will process it and address concerns that pilots may have. He explained that the term codify is not a requirement or restriction and most likely used because you load coding into the navigation boxes of the aircraft.

Char-Lou Benedict asked if there were any more detailed satellite maps showing how many homes are located under the path.

Sjohnna Knack said impacts inside the 65 CNEL contour will be discussed in the Part 150 presentation.

Fred Kosmo said he supports the proposal and asked if there would be more impacts to Ocean Beach with the magnetic shift. He suggested that if they move the proposal forward, it should be revised periodically so that the 290 vector does not move farther South and further impact Ocean Beach.

Sjohnna Knack stated the proposal is to maintain the existing nighttime flight paths over Ocean Beach. She reassured that if the procedure was approved and implemented by the FAA, the Authority's Noise staff monitors those regular updates on a daily basis through their airport noise and operations monitoring system (ANOMS).

John Nelson, with the FAA, said the FAA does adjust procedures in accordance with magnetic variation reviews.

Jim Payne stated once you have a flight procedure, it will receive the magnetic variation updates as the other procedures do, and we won't have to worry about the drift anymore.

Judy Holiday asked if the FAA moves forward with the proposed nighttime departure procedures, is it possible to do some noise modeling outside of the 65. She believes it's a good idea to have an established procedure and asked if there can be ongoing conversations on ways to mitigate the noise in the Mission Beach area outside the 65.

Sjohnna Knack stated that there was noise analysis done outside the 65 dB CNEL and based on that modeling, they were unable to find a specific flight path change that did not shift noise. She explained that it would be an ongoing effort of Noise staff to look at new and emerging technologies and what other airports are doing to reduce noise.

Tania Fragomeno asked, as it relates to the shading on the eastbound departures slide, if it alleviates the concern expressed in the public comments and Deborah's comments earlier.

Sjohnna Knack said the shading was done specifically to address those concerns and that they are keeping it as is today instead of having all aircraft fly on the same route as the PADRZ.

Justin Cook echoed and supports Matthew Price's comments that no further insight could be gained from doing additional noise modeling given all the different alternatives the Part 150 team looked at.

Dave Ryan said operationally he sees no issues with either of the proposals.

Heidi Gantwerk proposed a motion to request that the Airport Authority staff submit the two nighttime RNAV departure procedures to the FAA for their review in the IFP gateway.

Matthew Price put forward the motion, it was seconded by Anthony Ciulla.

Fred Kosmo proposed an amendment that the FAA conduct magnetic variation testing now and in the future to make sure that the path stays in the same spot. He requested that ANAC give a specific directive to the FAA to ask them to take magnetic variation into consideration.

John Nelson stated that's something that would not be submitted through the IFP gateway.

Steve Smith concurred with John Nelson, that it's not something that gets submitted through the IFP gateway, it's not a part of PBN design process. He stated that the proposed procedures all have fixed waypoints and don't rely on a magnetic heading, even though they're put in as reference. The eastbound proposal includes a heading that is issued by air traffic control and the heading is based on a magnetic heading. Mr. Smith also stated this is

something that the Airport Authority has always monitored and when they see trends, they communicate this with the FAA.

Matthew Price proposed to leave the current motion and to take up consideration at the next meeting, a letter to the FAA for them to review procedures that may have been impacted by magnetic drift.

John Nelson said that would be a request that the FAA would be happy to consider.

Deborah Watkins said she appreciates the fact that they do need an established nighttime noise procedure. She supports the eastbound departure procedure for this particular procedure, but she cannot support the Northwest procedure for the PADRZ.

ACTION: Moved by Matthew Price and seconded by Anthony Ciulla to request that the Airport Authority staff submit the two nighttime RNAV departure procedures to the FAA for their review in the IFP gateway. Motion carried by the following votes: YES – Kosmo, Ciulla, Holiday, Fragomeno, Cole, Benedict, Price, Brackett, Huenefeld, Bates, Glover, Ryan; NO – Watkins. The motion was approved.

b. Part 150 Noise Compatibility Study Update – Review and Recommendation to Send to Airport Authority Board

Kate Andrus from Mead & Hunt presented on the Part 150 study draft recommendations, as well as the process they have been through the last couple months, review of the public comments, the last meeting with the CAC/TAC, and what they're hearing from everybody about the study and the recommendations.

Public Comment:

Nancy Palmtag, resident of Loma Portal and member of the Citizens Advisory Committee, read her submitted public comment into the record on agenda item 3.b. Her public comment is located on the san.org website.[2]

Questions from ANAC:

Anthony Ciulla thanked Nancy for her comments and thought her perspective was valuable. He said living just outside the 65 decibel (dB) contour at the moment, he can appreciate the headaches that people have living in it. He stated he has the information he needs to make a vote.

Fred Kosmo said he thinks that they should form a new ANAC subcommittee for highly technical issues so that ANAC can continue to follow these recommendations as they go to the FAA. He believed having a group of concerned citizens to help the process move forward and inform ANAC is something they should consider.

Sjohnna Knack stated the Authority Noise staff will include the Part 150 recommendations as a standing agenda item and discuss progress at all ANAC meetings.

[2] ANAC Public Comment 042121; pg. 5, https://www.san.org/DesktopModules/Bring2mind/DMX/API/Entries/Download?EntryId=14356&Command=Core_Download&language=en-US&PortalId=0&TabId=487

Matthew Price thanked CAC/TAC and consultants for their work, supports the NADP, GBAS and a Subcommittee. He does not agree with the FAA's noise shifting position and feels that many of the rejected alternatives should be moved forward.

Chris Cole thanked the consultants, committee, and CAC/TAC for their work. He requested that in the future, especially when the ANAC has to vote on items with noise impacts, anticipated noise impacts on particular areas are included in the presentations.

Deborah Watkins thanked everyone that participated in the Part 150. She said that she agrees that the noise abatement departure procedure is something good and will push it forward.

Robert Bates stated that he has been a big supporter of looking at working with the airlines to modify the vertical portion of the departure and NADP. He asked Kallie Glover if she could speak to Delta as far as the performance factor and how the airlines choose which runways, aircraft, and airports to switch from a distant NADP to a closer in NADP. From his experience, he believes it's something that will have a lot of benefits to the 65 CNEL area, as well as other areas.

Rick Huenefeld agrees with the consultants that SAN is located in a mature environment and that this is not the first time these things have been discussed, He made one strong supportive argument for one of the administrative recommendations, that it's absolutely critical that there be a deployable mobile noise monitoring system, and that the community should direct where that system goes.

Olivier Bracket expressed his appreciation to the staff, consultants, and committee and is impressed with the hard work put into the study.

Dave Ryan on behalf of the business aviation community thanked everyone for all the hard work that went into the study. They appreciate being able to participate.

Kallie Glover commented to Robert Bates about how Delta chooses an NADP 1 versus 2, that they review each regular airport, usually twice a year, and whatever is in the AIP determines where they get NADP 1 or 2.

Heidi Gantwerk proposed a motion to request that the Part 150 Noise Exposure Map and Noise Compatibility Program be sent to the Airport Authority Board to accept and submit to the FAA for their assessment.

ACTION: Moved by Fred Kosmo and seconded by Rick Huenefeld to request that the Part 150 Noise Exposure Map and Noise Compatibility Program be sent to the Airport Authority Board to accept and submit to the FAA for their assessment.

Motion carried by the following votes: YES – Kosmo, Ciulla, Watkins, Fragomeno, Cole, Benedict, Brackett, Huenefeld, Bates, Glover, Ryan; ABSTAIN: Price; ABSENT: Holiday. The motion was approved.

4. Action Items

a. Approval of February 17, 2021 Meeting Summary

Chris Cole made a motion to approve the meeting summary from the February 17, 2021 meeting. It was seconded by Char-Lou Benedict. Motion carried by the following votes: YES - Kosmo, Ciulla, Watkins, Fragomeno, Cole, Benedict, Price, Brackett, Huenefeld, Bates, Glover, Ryan. The motion was approved.

5. Public Comment

There were six public comments that were emailed to the Authority Clerk by the deadline posted on the agenda. The public comments were distributed to the ANAC members and posted online[3].

6. Next Meeting/Adjourn

Next meeting is June 16, 2021.

Meeting was adjourned.

[3] ANAC May 5, 2021 Public Comment, https://www.san.org/Airport-Authority/Meetings-Agendas/ANAC?EntryId=13986

ANAC SUBCOMMITTEE RECOMMENDATIONS – As of June 8, 2021

CURFEW PENALTIES

Recommendation – PASSED: In Favor = 7, Opposed = 1	**STATUS**
1. Increase the amount of fines assessed on the airlines for curfew violations commensurate with the increase in cost of living. Continue to maintain multiplier.	**Complete:** Presentation by SDCRAA at 10/17/18 ANAC, low levels of current curfew violations doesn't support increase.
2. Use 100% of curfew violations fines for noise mitigation efforts, including but not limited to, additional noise monitoring, home upgrades not covered by QHP, engineering studies, community awareness, etc. In addition, the San Diego County Regional Airport Authority (SDCRAA) should make community members aware of these fines and how they are being used to reduce noise impacts.	**Complete:** Presentation by SDCRAA at 10/17/18 and 2/20/19. Penalty fines will be used for QHP treatments.

SUBCOMMITEE CONTINUATION

Recommendation - PASSED: In Favor = 4, Opposed = 2, Abstain = 1	**STATUS**
3. Continue the subcommittee to ensure continued community input from affected neighborhoods. Post applications on the website for 2017/2018 seats.	**Complete:** SDCRAA created CAC for Part 150. The first CAC meeting was held on 3/22/18.

FAA AIR TRAFFIC CONTROL RADIO FREQUENCIES

Recommendation - PASSED: Unanimous	**STATUS**
4. FAA to provide full public access to TRACON SoCal Arrivals and Departures live radio broadcast frequencies including live FAA feeds (as provided at LAX) via LiveATC.net or similar.	**Complete:** Online in December 2017.
5. SDCRAA to archive and make publically available on its website ATC of Clearance Delivery, Ground Control, Tower and Approach/Departure, SoCal Arrival and Departure Control radio communications for prior 6-month period.	**Complete:** Online in December 2017 with 30-day history.

ANAC COMMITTEE

Recommendation - PASSED: Unanimous	**STATUS**
6. SDCRAA to make all raw noise related data available to the public.	**Complete:** Available via request to Noise Office and online flight tracking.
7. Modify ANAC Committee Policy to add one representative each from Pacific Beach, Bird Rock, La Jolla, Point Loma Heights, and other directly impacted communities.	**Complete:** Policy updated in March of 2018 (presented in February of 2018). New members started in June 2018. Four new community members were added outside the 65 dB contour.

QUIETER HOME PROGRAM

Recommendation - PASSED: Unanimous	**STATUS**
8. Review alternative funding sources to expand the homes treated by the Quieter Home Program (QHP) to noise-impacted homes outside the current noise contour.	**Complete:** Presentation by SDCRAA at 2/21/18 ANAC mtg. No known alternative sources for funding.

9. SDCRAA to track and report to ANAC at each meeting the count and specific circumstances where applicants are denied Air Conditioning (AC) installations in their QHP applications so that ANAC may consider recommendations to pursue the FAA reconsider the terms of the AC prohibitions.	**Complete:** All owners are offered three ventilation options to be consistent with FAA eligibility.

NOISE MONITORING AND MITIGATION

Recommendation – PASSED: Unanimous	STATUS
10. Conduct portable noise monitoring in areas that express concerns about aircraft noise that do not have a permanent noise monitoring site close by. Initially these locations should include Mission Beach parallel to Noise Dot #1, Fleetridge, South Fleetridge, Point Loma Heights, Dana Middle School or the Wooded Area on the bayside of the Point.	**Complete:** In addition to 23 noise monitoring sites, a portable noise monitoring program was analyzed in Chapter 8 and included as a recommendation in Chapter 9.
11. Study the feasibility and benefit of noise barriers/airport noise mitigation on the bay side of the airport and runways across from the Car Rental agency.	**Complete:** This was analyzed in the Part 150 Study and documented in Chapter 8.

ADDITIONAL SDCRAA ANALYSIS

Recommendation – PASSED: Unanimous	STATUS
12. SDCRAA to conduct additional analysis and publish this data as part of ANAC data package, this information should include: a. Missed approaches as it relates to the noise dots (complaint vs. non-compliant both left and right), by time of day.	**Complete:** Included in monthly Tableau online statistics starting in February of 2018, with the exception of: f. Published on 4/18/18 in ANAC member package

b. Missed approaches to the left of the JETTI waypoint, in between JETTI and the original Noise Dot #1 (which is now Noise Dot #2) and to the right of the original Nosie Dot #1 (which is now Noise Dot #2). c. Include the definition and calculation of early turn's departures to the left of the JETTI waypoint and to the right of the original Noise Dot #1 (which is now Noise Dot #2). d. ZZOOO departures that are outside/south of ZZOOO waypoint, noise dot compliant but not outside ZZOOO waypoint, early turns to the left and aircraft that are cleared direct to the MTBAL waypoint. e. Include airline information associated with missed approaches, curfew violations, and early turns. f. Report on noise events using the number above (Nx or N65) to indicate how many loud aircraft noise events are occurring. g. Report all noise complaints by time, date, flight number, and neighborhood (reinstate historical noise complaint reporting). h. SDCRAA to publish 55dB CNEL contour on their website. i. Conduct an independent audit of the accuracy of web-based Flight Tracking system. j. Implement a range of ways to educate the community on how to use Flight Tracker. k. Track conformance to the "290 degree" departure heading (from end of Runway 27) to the Nighttime Noise Abatement Procedure.	g. Not feasible to publish all noise complaints but monthly stats are included for neighborhoods. h. Published in 4/18/18 ANAC Member package i. ANOMS system accepted by Caltrans in December of 2019 j. Five public workshops were held in various communities in 2018

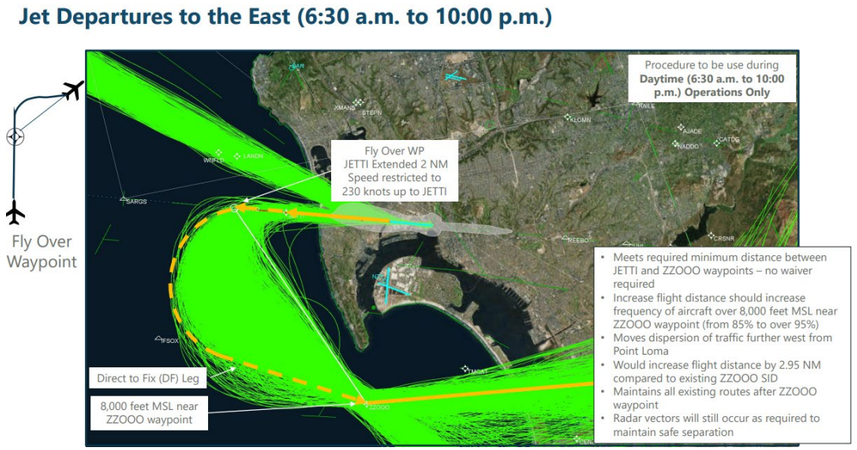
FLIGHT PROCEEDURE CHANGES - OVERALL

Recommendation – Combined Recommendations 13-21 – PASSED Unanimous	**STATUS**
13. SDCRAA will engage an independent third party consultant, with public involvement, to provide a full and honest analysis and evaluation of the overall alignment of	**Complete:** SDCRAA engaged an independent third-party consultant, by hiring Ricondo & Associates, Inc., to provide a full and honest analysis and evaluation to address

current SID's, STAR's and Procedures and Agreements. Note: ANAC would like to stay involved in the process to remain informed and provide input.	recommendations/suggestions related to ANAC 14 through 20 Recommendations. This effort was called the Flight Procedure Study and all documentation is located on the airport's website. https://www.san.org/Airport-Noise/FAR-Part-150?EntryId=13501&Command=Core_Download

Flight Procedure Study Summary:

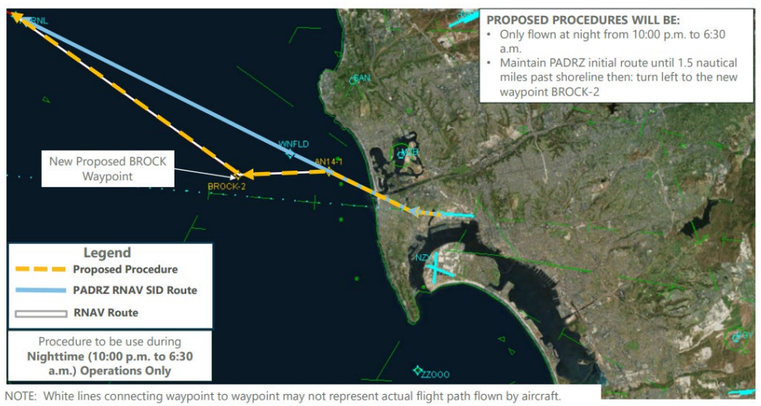
From March 2018 – May 2019, the CAC/TAC reviewed 20 flight procedure modifications. Based on parameters agreed to by the CAC/TAC, four procedures were determined to be feasible for further review by the FAA. Two of these procedures went to ANAC on June 16, 2019, and were approved to move forward to the FAA and the other two went before ANAC on May 5, 2021, and were approved to move forward to the FAA. Those final recommendations are summarized on the next pages



1. To extend where aircraft turn and reduce noise in La Jolla, Pacific Beach, Mission Beach, Ocean Beach and Point Loma, request amendment to ZZOOO RNAV SID (Departures to Eastern destinations) to move JETTI waypoint out two miles. This procedure was approved by ANAC in June of 2019 and submitted in the FAA's IFP Gateway (location to request flight procedure changes) on behalf of ANAC on August 19, 2019. Currently under review by the FAA.

2. To increase compliance and reduce early turns over Point Loma, request the FAA move noise dots #4 & #5. Request sent to the FAA on behalf of ANAC on August 19, 2019 with a response back from the FAA on November 5, 2019, stating it was not feasible.

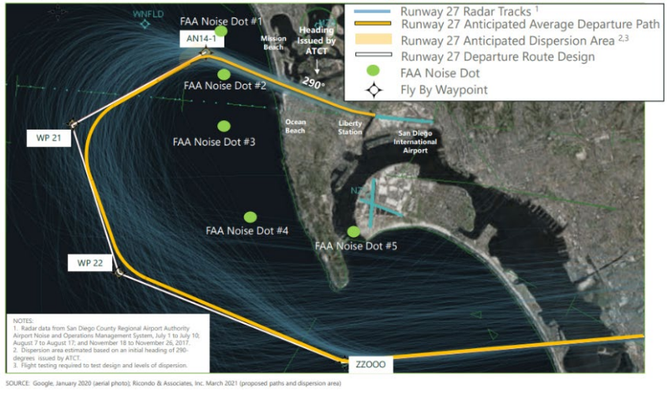
Proposed Nighttime RNAV Procedures to the Northwest (PADRZ)



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

3. To reduce noise in La Jolla, Pacific Beach and Mission Beach, during nighttime hours, create a new RNAV departure to fly initial PADRZ heading and then add a new waypoint to fly aircraft further away from the shoreline. This request was determined feasible for nighttime hours only and approved by ANAC on May 5, 2021 and submitted to the FAA on May 26, 2021. Copies of the submittal can be found in the member materials here.

Nighttime (10:00 pm – 6:30 am) Eastbound Departures – Vector to RNAV Design



SOURCE: Google, January 2020 (aerial photo); Ricondo & Associates, Inc. March 2021 (proposed paths and dispersion area)

4. To reduce noise in Point Loma, Ocean Beach and La Jolla (from aircraft taken off course) during nighttime hours, create a new RNAV departure with an Airport Traffic Control Tower issued heading as an initial leg to maintain current dispersion from 290-degree nighttime heading and then add a new waypoint where aircraft join a similar route as ZZOOO SID. This request was determined feasible for nighttime hours only and approved by ANAC on May 5, 2021 and submitted to the FAA on May 26, 2021. Copies of the submittal can be found in the member materials here.

FLIGHT PROCEEDURE CHANGES – PADRZ SID

Recommendation (to be included as a subset of #13)	**STATUS**
PROCEEDURE SUGGESTIONS – PADRZ SID: 14. Revise PADRZ or create a new procedure to reduce increased noise in La Jolla, Mission Beach and Pacific Beach. Several members of the subcommittee worked to develop potential revised procedures designed to reduce noise impacts. The suggestions below are included as, and meant to be, examples to clarify the desired outcome and to bring up potential alternatives to the current procedure.	
a. Move the WNFLD and LNDND waypoints south so as to align with the relocated Noise Dot #1 at 290 (15 degree separation from JETTI at 275 degrees) and designate as “Flyover” waypoints in the respective SID’s, consistent with JETTI.	**Complete:** This recommendation was eliminated as item d. below was determined to be more feasible, during nighttime hours only.

b. 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 the Noise Dot #1 before correcting to WYNFLD which results in aircraft flying farther north over Mission Beach.	**Completed:** This was analyzed in the Part 150 update in the Alternative 1 series, in Chapter 7. This recommendation shifts noise over new, non-compatible uses within the 65 dB and therefore was not recommended.
c. 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.	**Completed:** This recommendation was eliminated as item d. below was determined to be more feasible, during nighttime hours only.
d. Create a new procedure BROCK-2 (Alternative 1) Request FAA to revise PADRZ SID and establish new waypoint BROCK1. Adds min increased flight time and takes aircraft further off-shore before turning to northern destinations. This will help all coastal neighborhoods with noise issues.	**Completed:** This was deemed feasible during nighttime hours between 10:00 p.m. to 6:30 a.m. Based on ANAC's vote on May 5, 2021, staff submitted this procedure to the FAA on May 26, 2021, on behalf of ANAC for their review. Copies of the submittal can be found in the member materials located here.
e. Create a new procedure BROCK-1 (alternative 2 – preferred) Relocate waypoints WNFLD and LNDN 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	**Completed:** This recommendation was eliminated as item d. above was determined to be more feasible, during nighttime hours only.

greater and the aircraft have reached (new) flyover waypoint 0.25 to 0.5 miles from the end of the runway before turning toward WNFLD, LANDN or new BROCK Waypoint.	
f. Do not move the PADRZ SID further south to avoid negative noise impacts on the south side communities of the Point Loma Peninsula.	**Completed:** Reviewed in Chapter 7 and determined that PADRZ would stay on existing route to avoid impacting new, non-compatible land uses within the 65 dB contours.

FLIGHT PROCEEDURE CHANGES – ZZOOO SID

Recommendation (to be included as a subset of #13)	**STATUS**
PROCEEDURE SUGGESTIONS – ZZOOO SID: 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. Several members of the subcommittee worked to develop potential revised procedures designed to reduce noise and enforce compliance with Noise Dots and the ZZOOO procedure over Point Loma. Those suggestions are included as, and meant to be, examples to clarify the desired outcome and to bring up potential alternatives to the current procedure.	
a. Eastbound flights should reach a minimum of 8K feet before crossing over ZZOOO to minimize thrusters and reduce duration of noise impacts over Point Loma.	**Completed:** Altitudes at the ZZOOO waypoint were evaluated in the Flight Procedure Study and found that the majority of aircraft on the ZZOOO RNAV SID are at or above 8,000'. The proposed concept submitted to FAA in August of 2019 extends the current ZZOOO RNAV flight path, which is expected to increase the frequency of jet aircraft that fly the ZZOOO RNAV SID which is published for aircraft to be at or above 8,000' at the ZZOOO waypoint.

b. 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.	**Completed:** It is anticipated the proposed nighttime RNAV SIDs are implemented, it would reduce the frequency of FAA redirecting flights north then east over La Jolla.
c. FAA/TRACON to direct that ALL SAN departure separation be limited to between JETTI (275 degrees) and the historical Red Noise Dot #1 (290 degree 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").	**Completed:** The Flight Procedure Study concluded that "prohibiting" departure headings between 250 and 275 will have a direct effect on airfield efficiency; therefore, this was not considered further in the study.
d. Follow ZZOOO procedure, comply with the JETTI flyover waypoint and consider the establishment of a minimum vectoring altitude for Eastbound turns.	**Completed:** The Flight Procedure Study concluded that Minimum Vector Altitude (MVA) is driven only by obstacle clearance, and it is a reference for FAA ATC when vectoring aircraft not on a defined procedure. Modifying the MVA is not a feasible method to raise altitudes.
e. The ZZOOO ONE departure as currently designed puts departing aircraft close to 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 2NM	**Completed:** Consultant recommended a modification to the ZZOOO RNAV SID that extended the JETTI waypoint further west and included a more predictable design. TAC, CAC and ANAC accepted the modification and requested it proceed to FAA for review and implementation. The proposed modification was submitted to FAA for consideration on August 19, 2018.

further west, located at approximately 32.75360N - 117.25755W.	

FLIGHT PROCEEDURE CHANGES – COMIX STAR

Recommendation (to be included as a subset of #13)	**STATUS**
PROCEEDURE SUGGESTIONS – COMIX STAR: 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. Several members of the subcommittee worked to develop potential revised procedures to COMIX STAR designed to reduce the increased noise that has resulted from the implementation of Metroplex and NextGen. Those suggestions are included as, and meant to be, examples to clarify the desired outcome and to bring up potential alternatives to the current procedure.	**Completed:** Under the Flight Procedure Study the consultant evaluated multiple recommendations to revise the COMIX RNAV STAR to address noise concerns. Based on the noise screening analysis, the Consultant recommended not to proceed forward with the proposed concept because it would increase aircraft noise to noticeable levels for communities who are not frequently overflown. The TAC, CAC and ANAC concurred with the consultant's recommendation.
a. Revise COMIX STAR procedure in order to shift flights that Metroplex has moved and concentrated father South (the downwind leg) over less populated areas and restore prior altitude.	
b. Shift the waypoint 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.	

c. 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 flights pre-NextGen.	
d. 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 LANTRN waypoint's altitude restriction to "at or above 9,000 feet".	

NIGHTTIME NOISE ABATEMENT PROCEDURE

Recommendation	**STATUS**
17. Determine methods to increase current compliance in Nighttime Noise Abatement Procedures to improve noise impacts for affected communities and ensure that ATC is only turning aircraft off this procedure for safety reasons only.	**Completed:** After analysis in Chapter 7 of the Part 150, it was determined that any change to the existing 290-heading would impact new non-compatible land uses. Modifications to the Nighttime RNAV for east-bound departures were made and submitted to FAA.

FAA NOISE DOTS

Recommendation	STATUS
18. Review if the current definition of an early turn, and define what an early turn means and conduct comparative analysis of actual flight paths.	**Completed:** Consultant did review the three recommendations in the Flight Procedure Study. The Consultant provided a definition of early turns and indicated Area Navigation and current design of SID procedures comply with preventing early turns. The Consultant did recommend modifications to two FAA Noise Dots which were accepted by TAC, CAC and ANAC. The Authority sent a request to FAA to consider the modifications on August 19, 2019. FAA concluded the movements will impact efficient movement of traffic; and determined it was not feasible.
19. Work with FAA/ATC to modify flight procedures to increase compliance and reduce early turns, with consideration of aircraft performance.	
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 and data is collected on waypoints. a. Reposition FAA Noise Dot #1 from its current position at 295-degrees (implemented by FAA/AA without public notice) to its "original" pre 2005 position at 290 degrees from the end of SAN Runway 27 and 1.5 miles off the coast. b. Reposition FAA Noise Dot #3 from its current position at 265 degrees (implemented by the FAA/AA without public notice) to its "original" pre 2005 position of 275 degrees (JETTI) and 1.5 miles off of the coast. c. Reposition FAA Noise Dot #4 from its current location (west of Fort Rosecrans) to coincide with the ZZOO waypoint to deter regular Early left turns inside of ZZOOO which continue to occur at the direction of ATC in direct conflict with the SID routing. ZZOOO was specifically designed by FAA to provide an efficient and cost effective departure for eastbound traffic and to mitigate impacts to affected DOT Section 4(f) resources (including Fort Rosecrans, Cabrillo National Monument) and the peninsula community.	

NOISE ABATEMENT PROCEDURE (NADP)

Recommendation	STATUS
21. Have SDCRAA conduct an engineering analysis of modification to the Noise Abatement Departure Procedure to assess the potential improvement to noise contours around the airport.	**Completed:** This is a recommendation in Chapter 9 of the Part 150.

Federal Aviation Administration

Instrument Flight Procedure (IFP) Request Process

Submit Your IFP Request

Please review the details of your request. Use the 'back' button to make corrections.

First Name: Sjohnna
Last Name: Knack
Telephone: 619-400-2639
Email: sknack@san.org
Role: Others (Pilot,NBAA, AOPA)
Type of Procedure: DP/SID (Other)
Company or Organization: Airport Noise Advisory Committee
Airport Rep Name: Sjohnna Knack
Airport Rep Email: sknack@san.org
Airport Rep Phone: 619-400-2639
Aircraft Type: Fixed Wing (default)
Navigation System Type: PBN (Performance Based Navigation) - Examples: RNAV (RNP), RNAV STAR
Type of request: Original
NPIAS: Yes
Meets infrastructure and obstacle survey standards: Yes
Are there environmental concerns: Yes
Explanation of environmental concerns: The primary environmental concern is noise over the noise-sensitive areas beyond the end of Runway 27, which are predominately residential. The intent of this nighttime (10 p.m. to 6:30 a.m.) procedure is to maintain the noise exposure within the DNL 65 (CNEL in California) by maintaining the existing flight paths off the runway prior to the shoreline, while reducing noise exposure levels for coastal communities to the north of the airport (e.g., La Jolla) by moving the flight path westbound before proceeding northwest. The procedure changes occur primarily over the ocean. Therefore, there is no potential for reportable increase in noise for noise sensitive area. Further definition of the noise sensitive areas can be found in the Draft FAR Part 150 Report available at https://sannoisestudy.com/project-overview/widgets/10429/documents. The traffic patterns below the mixing height level of 3,000 feet above the ground are not expected to change and no impact to air quality is anticipated. ANAC expects FAA will conduct an independent environmental review as required in the PBN Process described in FAA Order 8260.58B.
Altimeter setting available: Yes
DP/SID serves all runways: No
Runway to be aligned: Runway 27
Preferred Routing Description: The routing of the procedure is as follows: DER Runway 27 (VA – DF) to flyby waypoint located at N324659.55,W1171730.46 to (TF) flyby waypoint located at N324725.72,W1172144.18 to (TF) KERNL and thence to the existing en route structure as defined in the PADRZ SID. A TARGETS distribution package is available upon your request. The location of the first waypoint is critical to ensure aircraft stay on the initial departure heading until 1.5 nautical miles from the shoreline and flight track locations and dispersion remain the same as existing patterns. Testing conducted by FAA may find a need to adjust the first

NIGHTTIME RNAV DEPARTURE PROCEDURE TO THE NORTHWEST (PADRZ).

waypoint in order to meet the two requirements. If so, the Authority requests FAA coordinate with them on behalf of ANAC on any proposed changes.

Request Justification: ANAC spent nearly two years working with local communities, specifically Point Loma, Ocean Beach, Mission Beach, Pacific Beach and La Jolla, to reduce noise impacts. The submitted procedure design was recommended as part of the San Diego County Regional Airport Authority sponsored flight procedure study with technical and citizen advisory group input to review the feasibility of various standard instrument procedure modifications to reduce noise. The study relied upon FAA's TARGETS procedure design tool to ensure the design met FAA PBN design criteria without waivers; reviewed with SCT TRACON subject matter experts to identify potential concerns and use of FAA's AEDT noise grid analysis to ensure noise impacts were not shifted over other communities. The intent of the procedure is to maintain the noise exposure within the DNL 65 (CNEL in California) by maintaining the existing flight patterns (location and lateral dispersion) off the runway while reducing nighttime noise exposure levels for coastal communities to the north of the airport by keeping aircraft further south of north coastal communities compared to the PADRZ RNAV SID before proceeding northwest. The submitted procedure meets FAA PBN design criteria, is not expected to cause significant or reportable noise increases; and is expected to provide a reduction in noise for communities located to the north and south of the airport.

Other Remarks: The intent of the procedure is to reduce noise exposure levels for coastal communities north of the airport and is submitted on behalf of the SAN Airport Noise Advisory Committee (ANAC) to address noise concerns associated with the existing PADRZ SID between 10:00 p.m. and 6:30 a.m. The submitted procedure is a proposed original RNAV SID. The intent is to keep the same flight path from Runway 27 (based on runway heading and climb to 520 feet Mean Sea Level at 500 feet per nautical mile, then direct to fix design) up to the shoreline to prevent any change in noise exposure levels at or above CNEL 65. The remaining design is intended to provide a repeatable path that keeps aircraft further south of La Jolla (by turning west) as compared to the current PADRZ RNAV SID path. The scope of this request is for the evaluation and test of the proposed design to ensure the flight track location and dispersion are similar to those that exist today over areas exposed to CNEL 65 or higher levels; assessment that the procedure is flyable as a VA-DF to an initial waypoint that keep the same dispersion from Runway 27 to the shoreline; confirmation that the procedure will maintain aircraft on the initial departure heading until reaching 1.5 nautical miles from the shoreline, confirmation the procedure can be integrated into existing air traffic operations; evaluation of any potential environmental effects; and for the development and implementation of the procedure. The Authority is open to adjustments, if needed, to resolve potential design and/or operational concerns. In addition, TARGETS design and AEDT noise model files are available upon request to aid in FAA's initial review.

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Federal Aviation Administration

Instrument Flight Procedure (IFP) Request Process

Submit Your IFP Request

Please review the details of your request. Use the 'back' button to make corrections.

First Name: Sjohnna
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Company or Organization: Airport Noise Advisory Committee
Airport Rep Name: Sjohnna Knack, SAN, on behalf of ANAC
Airport Rep Email: sknack@san.org
Airport Rep Phone: 619-400-2639
Aircraft Type: Fixed Wing (default)
Navigation System Type: PBN (Performance Based Navigation) - Examples: RNAV (RNP), RNAV STAR
Type of request: Original
NPIAS: Yes
Meets infrastructure and obstacle survey standards: Yes
Are there environmental concerns: Yes
Explanation of environmental concerns: The primary environmental concern is noise over the noise-sensitive areas beyond the end of Runway 27, which are predominately residential. The intent of this procedure is to maintain the noise exposure within the DNL 65 (CNEL in California) by maintaining the existing flight path off the runway prior to the shoreline while reducing noise exposure levels for coastal communities to the north and west of the airport. The procedure changes occur primarily over the ocean. Therefore, there is no potential for reportable increase in noise for noise sensitive area. Further definition of the noise sensitive areas can be found in the Draft FAR Part 150 Report available at https://sannoisestudy.com/project-overview/widgets/10429/documents. The traffic patterns below the mixing height level of 3,000 feet above the ground are not expected to change and no impact to air quality is anticipated. ANAC expects FAA will conduct an independent environmental review as required in the PBN Process described in FAA Order 8260.58B.
Altimeter setting available: Yes
DP/SID serves all runways: No
Runway to be aligned: Runway 27
Preferred Routing Description: For nighttime eastbound departures between 10:00 p.m. and 6:30 a.m. that are issued an amendment to the ZZOOO RNAV SID for the nighttime noise abatement heading of 290-degrees. The procedure requires a vector to RNAV design using a VM leg to an initial fix to ensure the initial flight path follow the same flight path as today in the area prior to the shoreline over those exposed to CNEL 65 or higher. The routing of the procedure is as follows: DER Runway 27 (VM at 290 degree heading issued by ATCT) to flyby waypoint (Initial Fix of RNAV procedure) located at N324659.55,W1171730.46 to (TF) flyby waypoint located at N324535.06, W1172151.77, to (TF) flyby waypoint located at N324125.23, W1172118.32 to (TF)

NIGHTTIME RNAV DEPARTURE PROCEDURE TO THE EAST (ZZOOO).

ZZOOO and onto the en route structure defined as part of the ZZOOO SID. A TARGETS distribution package is available upon your request.

Request Justification: ANAC spent nearly two years working with local communities, specifically Point Loma, Ocean Beach, Mission Beach, Pacific Beach and La Jolla, to reduce noise impacts. The submitted procedure design was recommended as part of the San Diego County Regional Airport Authority sponsored flight procedure study with technical and citizen advisory group input to review the potential feasibility of various standard instrument procedure modifications to reduce noise. The study relied upon FAA's TARGETS procedure design tool to ensure the design met FAA PBN design criteria without waivers. The intent of the procedure is to maintain the noise exposure within the DNL 65 (CNEL in California) by maintaining the existing flight patterns (location and lateral dispersion) off the runway while reducing nighttime noise exposure levels for coastal communities to the north and south of the airport. There is no RNAV SID for eastbound departures at night. This will provide a predictable and repeatable RNAV SID that will aid in reducing ATC workload. It will also reduce right turns towards the north and east over La Jolla. The submitted procedure meets FAA PBN design criteria, is not expected to cause significant or reportable noise increases; and expected to provide a reduction in noise for communities located to the north and south of the airport.

Other Remarks: The intent of the procedure is to reduce noise exposure levels for coastal communities north and south of the airport and is submitted on behalf of the SAN Airport Noise Advisory Committee (ANAC) to address noise concerns associated with the existing conventional vectoring for eastbound departures between 10:00 p.m. and 6:30 a.m. The submitted procedure is a proposed original RNAV SID. The intent is to keep the same flight path from Runway 27 (ATCT issued 290 heading) up to the shoreline to prevent any change in noise exposure levels at or above CNEL 65. The remaining design is intended to provide a repeatable path that keeps aircraft further west of the Point Loma peninsula compared to existing radar vector traffic patterns and join the ZZOOO waypoint staying south of the Point Loma peninsula. A published RNAV SID will also reduce the frequency of right turns towards the east that fly over La Jolla. The procedure is designed for Runway 27 turbojet operations during west flow nighttime hours (10:00 pm – 6:30 am). The scope of this request is for the evaluation and test of the proposed design to ensure the flight track location and dispersion are similar to those that exist today over areas exposed to CNEL 65 or higher levels; assessment that the procedure is flyable as a VM to an initial waypoint that requires a turn to the south to join a track; confirmation that the procedure will maintain aircraft on the initial departure heading until reaching 1.5 nautical miles from the shoreline, confirmation the procedure can be integrated into existing air traffic operations; evaluation of any potential environmental effects; and for the development and implementation of the procedure. The Authority is open to adjustments, if needed, to resolve potential design and/or operational concerns. In addition, TARGETS design and AEDT noise model files are available upon request to aid in FAA's initial review.

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Update on Noise Mitigation Measures

NEW T1 Environmental Impact Report

Date | 06/8/2021

1. Expansion of SDCRAA's Sound Insulation Program

If Federal Funding permits, the Airport Authority will expand the average number of homes completed on an annual basis and expand the program to include non-residential uses such as places of worship and schools.

The non-residential program was started in late 2020, with design of two places of worship/preschools (Seventh Day Adventist Church and Point Loma Presbyterian). It is estimated that 350 units will be completed in CY 2021 and next year that number will increase due to a large multi-family apartment complex starting construction (Loma Palisades). Updates on number of units in process can be viewed monthly on our website here:
https://public.tableau.com/app/profile/noise.disclosure/viz/SANQHPDashboard/SANQHP

2. Update Noise Exposure Map Every Five Years

The Airport Authority will update the aircraft noise exposure maps every five years, in accordance with FAA Part 150 guidelines.

The Airport Authority Board approved the Noise Exposure Map (and Noise Compatibility Program) on June 3, 2021, staff anticipates submitting to the FAA by the end of June 2021 for FAA review. Upon FAA approval, the Noise Exposure Maps will be updated in five years.

3. Create a Mobile Noise Monitoring Program

A mobile noise monitoring program will be established to augment the Airport Authority's permanent noise monitors.

Per item No. 2, above, the Airport Authority Board approved the Noise Compatibility Program to submit to the FAA for their review. One of the recommendations in the Program was to obtain portable noise monitors. If approved by the FAA, the Airport will apply for Federal grants to purchase noise monitors and start a mobile noise monitoring program after grants are received.

4. Assess the Findings of the 2018 FAA Reauthorization Act – Related Noise Studies

The 2018 FAA Reauthorization Act includes a requirement for the FAA to complete various studies related to aircraft noise impacts. The Airport Authority will review those studies, once completed, to help inform and update the noise mitigation programs and policies.

Staff continues to monitor FAA action on noise research and studies. Currently there are no changes that would cause changes to any of the Airport Authority's aircraft noise programs.

See attached memo from acoustical consultants, HMMH, that outlines each noise item and status.

5. Utilize Curfew Violation Penalty Fines to Help Fund Aircraft Noise Mitigation Programs

The Airport Authority Finance Department has developed a process to use all curfew penalties for the Quieter Home Program. In 2020, curfew penalties were $20,000, which is a significant decrease from previous years and is related to COVID operational impacts and runway closures for construction.

White Paper: June 2021 Status Update on 2018 FAA Reauthorization Noise Provisions

This white paper presents HMMH's analysis of the status of implementation of noise provisions contained within the FAA Reauthorization Act of 2018 (H.R. 302, Pub. L. 115–254) and implications for US airports.

As background, the Federal Aviation Administration (FAA) Reauthorization Act of 2018 reauthorizes the FAA and other programs until the end of fiscal year 2023. The bill was passed by Congress on October 3, 2018 and was signed by President Donald Trump on October 5, 2018. Title I, Authorizations, devotes an entire Subtitle D to "Airport Noise and Environmental Streamlining". Among the twenty-two provisions enacted by the Subtitle, fourteen deal directly or indirectly with aircraft noise. Since 2018, the FAA has made varying level of efforts to implement, respond to, and address the noise provisions directed by Congress for them to undertake.

The noise provisions of Subtitle D fall into several broad categories:

Studies: As described below, there are few provisions in the Reauthorization bill that have direct influence on US airports. Many of the provisions require FAA to conduct or complete studies regarding aircraft noise effects and/or resulting policy, including the FAA's noise annoyance survey (Sections 173, 187, and 188). Section 189 requires a health impacts study that will affect a number of airports (Boston, Chicago, the District of Columbia, New York, the Northern California Metroplex, Phoenix, the Southern California Metroplex, Seattle, or such other area as may be identified by the FAA). Section 186 would require the GAO to conduct a study evaluating the potential phase out of Stage 3 aircraft. The provision also requires consultation with airports and community stakeholders.

NextGen: There are a number of provisions targeted to addressing some of the challenges that have arisen from NextGen implementation, including a review of stakeholder engagement in Metroplex studies (Section 176) and the appointment of regional ombudsmen (Section 180). Section 179 requires FAA to conduct a study to review and evaluate the relationship between jet aircraft approach and takeoff speeds and corresponding noise

impacts on communities surrounding airports. Though not directly related to NextGen, this is likely a result of proposals made by MIT at Boston-Logan from a study addressing challenges that have arisen there from RNAV implementation.

Supersonic: Section requires FAA to "exercise leadership in the creation of Federal and international policies, regulations and standards relating to the certification and safe and efficient operation of civil supersonic aircraft." FAA is already doing this, but this provision reemphasizes the importance of FAA leadership in this area.

Miscellaneous: Section 182 requires the mandatory use of the New York North Shore Helicopter Route in Long Island. Section 172 allows flights by stage 2 aircraft at a small number of airports (this appears to be targeted to MRO operations at a small airport in Louisiana).

The only provisions specifically directed at airports are described below:

- Section 174, Updating Airport Noise Exposure Maps: This provision requires that airport operators update their Noise Exposure Maps (NEMs) if there is a change in operations that would result in a "substantial new noncompatible use", or would "significantly reduce noise over existing noncompatible uses" occurring during the period of the then-current NEM (including forecast period) or during Noise Compatibility Program implementation. Many FAA regions and ADOs already have this policy in place, so there would likely be no practical effect to airports from this provision.
- Section 175, Addressing Community Noise Concerns: This provision requires FAA to consider the feasibility of implementing dispersal headings for new RNAV departure procedures below 6,000 AGL, if: (1) requested by the airport, (2) it would not have safety of efficiency implications, and (3) it would not increase noise over other noise-sensitive areas. It provides a possible option for airport influence over flight paths, but also put them in the uncomfortable position regarding whether and when to make such requests (as public concern with its actions or inaction).
- Section 190 allows airports to apply for FAA grant funding for environmental mitigation (Section 190) for pilot environmental mitigation programs that would "measurably reduce or mitigate aviation impacts on noise, air quality, or water quality at the airport or within 5 miles of the airport.

The FAA has made progress on implementing the provisions focusing on noise. Over the past year, the FAA has published the results of their Neighborhood Environmental Survey (NES) which was a multi-year research effort to quantify the effects of aircraft noise exposure on communities around commercial service airports in the United States. The goal of the research was to provide an updated and nationally representative curve showing the relationship between aircraft noise exposure and community annoyance for the US. This study addressed some of Section 173, and Section 187. Some members of Congress have expressed their frustration with the progress of Section 173 provisions, and this is a focus of the Quiet Skies Caucus. In terms of community engagement, the FAA has responded to Section 176 and Section 180 by issuing updated reports to Congress on their enhanced community engagement efforts and appointment of noise ombudsmen. Continuing research is ongoing on many of the provisions.

Table 1 summarizes these provisions, in the order in which they appear in the bill, along with the implications for US airports. For each provision, our interpretation of implications for airports are provided in the third column of the table. An update on the status of implementation and/or results is provided in the fourth column.

Table 1. FAA Reauthorization Noise Provisions

Section	Purpose	Implications for US Airports	June 2021 Update
SEC. 172. AUTHORIZATION OF CERTAIN FLIGHTS BY STAGE 2 AIRCRAFT	Permits 1 or more operators of a stage 2 aircraft to operate that aircraft in nonrevenue service into not more than 4 medium hub airports or non-hub airports.	This provision was added to allow a maintenance, repair and overhaul provider at an airport in Louisiana to service aircraft from Latin America. No effect to most airports.	Measure implemented; consider complete.
SEC. 173. ALTERNATIVE AIRPLANE NOISE METRIC EVALUATION DEADLINE	Requires FAA to complete research on alternative noise metrics as a possible replacement to DNL within one year.	This is already in FAA's research roadmap, but this provision will accelerate that work. This will be difficult for FAA to accomplish in the time identified. Airports should track FAA activity on this provision.	Measure is not complete; members of Congress are continuing to push the FAA for further action. Letters sent on 9/23/2020[1] and 3/10/2021[2] request efforts to continue. As part of the release of the Neighborhood Environmental Survey (NES), the FAA provided an overview on their ongoing Aircraft Noise Policy and Research Efforts[3] and requested comments, stating: "The FAA is inviting comments on these concerns to assist the agency in assessing how resources should be directed to better understand and manage the factors underlying the concern from aircraft noise exposure."
SEC. 174. UPDATING AIRPORT NOISE EXPOSURE MAPS	Requires that airport operators update their Noise Exposure Maps (NEMs) if there is a change in operations that would result in a "substantial new noncompatible use" or would "significantly reduce noise over existing noncompatible uses" occurring during the period of the then-current NEM (including forecast period) or during Noise Compatibility Program implementation.	Many FAA regions and ADOs already have this policy in place, so there will likely be no practical change to airports from this provision. Most airports already update their maps regularly.	Program Guidance Letter (PGL) updated 2/27/2020[4]. Considered complete in as much as ADOs are implementing the policy where applicable.
SEC. 175. ADDRESSING COMMUNITY NOISE CONCERNS.	Requires FAA to consider the feasibility of implementing dispersal headings for new RNAV departure procedures below 6,000 AGL, if: (1)	This provision will provide a possible option for airport influence over flight paths, but also put them in the	Massport is currently pursuing development of dispersed RNAV procedures as part of the Logan Airport Block 2 recommendations[5]. This effort is a collaboration with the FAA, MIT, HMMH,

[1] https://bass.house.gov/media-center/press-releases/bass-and-28-house-members-send-letter-federal-aviation-administration
[2] https://thedcline.org/2021/03/11/press-release-norton-quiet-skies-caucus-send-letter-to-faa-on-aircraft-noise/
[3] https://www.federalregister.gov/documents/2021/01/13/2021-00564/overview-of-faa-aircraft-noise-policy-and-research-efforts-request-for-input-on-research-activities
[4] https://www.faa.gov/airports/aip/guidance_letters/media/R-PGL-19-06-Environmental-and-Noise.pdf

[5] https://www.faa.gov/air_traffic/community_involvement/bos/media/Runway_4L_Final.pdf

Section	Purpose	Implications for US Airports	June 2021 Update
	requested by the airport, (2) it would not have safety of efficiency implications, and (3) it would not increase noise over other noise-sensitive areas.	uncomfortable position regarding whether and when to make such requests (as public concern with its actions or inaction). Airports need to remain actively involved with FAA as it designs new RNAV routes; they may also want to share this information with airport stakeholders.	and Massport[6]. A modeling update was presented in April 2021 to the Massport Community Advisory Committee (MCAC); they plan to present the Block 2 report and recommendations at the June 24, 2021 meeting. Broadly, the FAA is pursuing collaboration with airports interested in pursuing elements of this provision.
SEC. 176. COMMUNITY INVOLVEMENT IN FAA NEXTGEN PROJECTS LOCATED IN METROPLEXES	Requires FAA to prepare a report (within 180 days) containing: (1) recommendations for improving community involvement for NextGen projects in Metroplexes like the SoCal Metroplex; (2) discussion of how and when the FAA will engage airports and communities in PBN proposals, and (3) lessons learned from NextGen projects.	FAA has issued guidance on community engagement and may consider that they are ahead of this requirement (except for issuing report). Airports may want to comment on FAA's report, if provided an opportunity (unlikely).	The FAA issued a report to congress[7] on July 1, 2020, thus completing this provision. The FAA concluded*: "The FAA has developed a process that considers best practices and lessons learned for conducting CI during Metroplex and PBN projects. A standardized approach to how and when the FAA engages airports and other stakeholders during Metroplex projects was developed and deployed for those projects still in progress and has been adapted for use on future PBN projects. Policy and guidance documents have been updated, renewing the FAA's commitment to involving the comm unity and reflecting the additional CI activities and stakeholder engagement expected to happen during PBN projects. The FAA is continually working to develop further tools, guidance, resources, and practices to effectively involve stakeholders."*
SEC. 179. AIRPORT NOISE MITIGATION AND SAFETY STUDY.	Requires FAA to conduct a study to review and evaluate existing studies and analyses of the relationship between jet aircraft approach and takeoff speeds and corresponding noise impacts on communities surrounding airports.	This provision will require a safety analysis of the speed changes that MIT has proposed in their work at BOS. FAA will have two years to do the study, after which airports might consider implementing as part of a review of its Noise Compatibility Program (NCP). In practice, this provision	FAA issued a report to Congress on December 23, 2020[8]. Additional research is needed, some potential benefits were identified, however in conclusion the FAA states: *"These challenges require further study and are being supported by the FAA through the ASCENT Center of Excellence."* The FAA is continuing research.

[6] https://www.massport.com/media/4npatojz/massport-november-board-meeting-deck_11-19-20.pdf
[7] https://www.faa.gov/about/plans_reports/congress/media/Community_Involvement_in_NextGen_Projects_PL_115-254_Sec176.pdf
[8] https://www.faa.gov/about/plans_reports/congress/media/Airport_Noise_Mitigation_Safety_Study_report_PL115-254_Sec179.pdf

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		puts FAA in the position of reviewing the procedures, which have gained significant attention and interest among community groups. Airports should monitor FAA progress on this provision.	
SEC. 180. REGIONAL OMBUDSMEN.	Not later than one year, FAA is required to designate an individual to be the Regional Ombudsman for the region to address "issues regarding aircraft noise, pollution, and safety".	FAA already is in the process of hiring regional noise specialists, who will likely serve in this role. Airports should monitor FAA progress on this provision and make efforts to meet with the Regional Ombudsman.	The FAA has appointed an ombudsman[9] for each of the nine FAA regions. The FAA website[10] has been updated with current contact information for the ombudsman, as well as a link to the new noise complaint portal[11].
SEC. 181. FAA LEADERSHIP ON CIVIL SUPERSONIC AIRCRAFT.	Requires FAA to "exercise leadership in the creation of Federal and international policies, regulations and standards relating to the certification and safe and efficient operation of civil supersonic aircraft.	FAA is already doing this through ICAO. Airports should monitor FAA progress on this provision.	The FAA published a report to Congress on April 27, 2020[12]. Work is ongoing, to which the FAA states: *"The second rulemaking, required under Section 181(e)(1) of the Act, will propose new landing and takeoff (LTO) noise certification standards for supersonic aircraft. This rule will update 14 CFR Part 36 to include supersonic airplanes in its applicability. The FAA published an NPRM in March 20203. The FAA anticipates having a final rule in place in early 2022 that would allow certification for subsonic operation of these new airplanes. Beyond these two current rulemakings, the FAA continues to develop information relevant to reviewing available aircraft noise and performance data to determine whether 14 CFR 91.817 and Appendix B of part 91 may be amended (per section (f)(5) of Section 181). The FAA will continue to work closely with NASA and eagerly awaits the results of the NASA X-59 and other research initiatives."*
SEC. 182. MANDATORY USE OF THE NEW YORK NORTH SHORE HELICOPTER ROUTE.	FAA will initiate a review of (1) noise impacts of the North Shore Route for communities, including	This provision is limited to Long Island, New York.	On August 5, 2020, the FAA extended the requirement for helicopters to use the New

[9] https://www.faa.gov/about/office_org/headquarters_offices/apl/noise_emissions/airport_aircraft_noise_issues/noise_ombudsman/

[10] https://www.faa.gov/noise/inquiries/

[11] https://noise.faa.gov/noise/pages/noise.html

[12] https://www.faa.gov/about/plans_reports/congress/media/FAA_Leadership_Civil_Supersonic_Aircraft.pdf

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	communities in locations where aircraft are transitioning to or from a destination or point of landing; (2) enforcement of applicable flight standards, including requirements for helicopters operating on the relevant route to remain at or above 2,500 feet mean sea level; and (3) availability of alternative or supplemental routes to reduce the noise impacts of the regulations, including the institution of an all water route over the Atlantic Ocean.		York North Shore Helicopter Route for two years, until August 5, 2022[13].
SEC. 186. STAGE 3 AIRCRAFT STUDY.	Requires the General Accountability Office to conduct a study evaluating the potential phase out of Stage 3 aircraft. The provision also requires consultation with airports and community stakeholders.	Airports should analyze their fleet mix to determine specific repercussions. This might also be an opportunity to proactively engage with community.	The GAO published a report "Information on a Potential Mandated Transition to Quieter Airplanes" in August 2020[14]. The 33-page report concluded that: *"According to stakeholders GAO interviewed, a phase-out of jet airplanes that are certificated as meeting stage 3 standards would provide limited noise reduction and limited other benefits and could be costly and present other challenges."*
SEC. 187. AIRCRAFT NOISE EXPOSURE	Requires that the FAA complete "ongoing review of the relationship between aircraft noise exposure and its effects on com-munities" within two years. It specifically requires FAA to revise its Part 150 land use compatibility guidelines (14 CFR 150).	In practice, this will accelerate FAA policy work that is already underway. Changes in FAA's use of the DNL 65 dB threshold for land use compatibility, significant environ-mental and other purposes could substantially affect community relations, noise programs and environmental reviews. Airports should monitor FAA progress on this provision.	The FAA published the Neighborhood Environmental Survey (NES) on January 13, 2021[15]. A webinar was hosted by the FAA on February 22, 2021. The FAA is reviewing comments received on the NES and will continue to provide updates as to what, if any influence the results have on 14 CFR Part 150.
SEC. 188. STUDY REGARDING DAY-	Within one year, FAA is required to evaluate	This is similar to Section 173, except requires	The FAA issued a report to Congress on April 14, 2020[16] detailing results of their

[13] https://www.federalregister.gov/documents/2020/08/07/2020-17334/extension-of-the-requirement-for-helicopters-to-use-the-new-york-north-shore-helicopter-route
[14] https://www.gao.gov/assets/gao-20-661.pdf
[15] https://www.faa.gov/regulations_policies/policy_guidance/noise/survey/
[16] https://www.faa.gov/about/plans_reports/congress/media/Day-Night_Average_Sound_Levels_COMPLETED_report_w_letters.pdf

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NIGHT AVERAGE SOUND LEVELS.	alternative metrics to the current average day-night level standard, such as the use of actual noise sampling and other methods, to address community airplane noise concerns.	consideration of measured noise levels, and an accelerated schedule (one year instead of two). Airports should monitor FAA progress on this provision.	analysis for SEC. 188 and SEC. 173 of the FAA Reauthorization Act. The report found that: *"Finally, while the DNL metric is FAA's decision-making metric, other supplementary metrics can be used to support further disclosure and aid in the public understanding of community noise effects"* Members of Congress continue to pursue further evaluations as described in the status of SEC 173.
SEC. 189. STUDY ON POTENTIAL HEALTH AND ECONOMIC IMPACTS OF OVERFLIGHT NOISE	Requires FAA to engage a university to conduct a health study in a number of metropolitan areas (Boston, Chicago, the District of Columbia, New York, the Northern California Metroplex, Phoenix, the Southern California Metroplex, Seattle, or such other area as may be identified by the FAA), focusing on: "incremental health impacts on residents living partly or wholly underneath flight paths most frequently used by aircraft flying at an altitude lower than 10,000 feet, including during takeoff or landing"; and "an assessment of the relationship between a perceived increase in aircraft noise, including as a result of a change in flight paths that increases the visibility of aircraft from a certain location, and an actual increase in aircraft noise, particularly in areas with high or variable levels of non-aircraft-related ambient noise."	The results of any such study will undoubtedly affect discussions regarding noise programs and project environmental reviews. Airports should monitor FAA progress on this provision.	The FAA has initiated these studies and provided a brief update in January 2021[17] with the publication of the Neighborhood Environmental Survey (NES) in the federal register. *In partnership with academic researchers that are being led by the Boston University School of Public Health, the FAA is working to understand the relationship between aircraft noise exposure and cardiovascular health. In addition to the aforementioned community and physiological impacts, the FAA is also working with researchers at Massachusetts Institute of Technology (MIT) to conduct an empirical assessment of the economic impacts to businesses located underneath aircraft flight paths. This assessment will take into account the economic benefits from aviation activities, as well as potential environmental and health impacts that might reduce economic productivity. The FAA is also in the developmental stage of a research project that would build on existing work done by MIT that has used housing value data to reveal the willingness of people to pay to avoid aircraft noise exposure. This research is intended to serve as a follow on to the NES, to determine whether the findings of that survey on residents' sensitivity to aviation noise is also reflected in their "revealed preferences" when making housing location decisions."*
SEC. 190. ENVIRONMENTAL	Provides for FAA grants of up to $2.5M to six airports to carry out pilot	Provides a funding mechanism for innovative mitigation	On May 5, 2021[18], the FAA released a federal notice of funding opportunity for Environmental Mitigation Pilot Program"

[17] https://www.federalregister.gov/documents/2021/01/13/2021-00564/overview-of-faa-aircraft-noise-policy-and-research-efforts-request-for-input-on-research-activities

[18] https://www.federalregister.gov/documents/2021/05/10/2021-09856/notice-of-funding-opportunity-for-environmental-mitigation-pilot-program

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MITIGATION PILOT PROGRAM	environmental mitigation programs that would "measurably reduce or mitigate aviation impacts on noise, air quality, or water quality at the airport or within 5 miles of the airport." The federal share of this project would be up to 50%, and projects must be carried out by a consortium of entities that includes two or more of the following: businesses, educational or research organizations, state or local governments, and/or federal laboratories.	programs. Airports might consider submitting a grant application for such a grant. Note that federal funding is only 50%, and the grant must be submitted by a consortium that includes business, research organizations, or federal laboratories.	Pre-applications are due by July 9, 2021. "*FAA may make grants from the Airport Improvement Program's noise and environmental set-aside (49 U.S.C. 47117(e)(1)(A)). Each project is limited to not more than $2,500,000 in federal funding. The federal share of the cost of the project carried out under the program is 50 percent and requires 50 percent in airport matching funds.*"

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