



## AGENDA

### SANTA CLARA/SANTA CRUZ COUNTIES AIRPORT/COMMUNITY ROUNDTABLE

#### **SPECIAL MEETING** of the Roundtable

**May 26, 2021  
1:00 – 4:00 PM PDT**

*This meeting will be conducted in accordance with State of California Executive Order N-29-20, dated March 17, 2020. All members of the Committee will participate by video conference, with no physical meeting location.*

Members of the public wishing to observe the special meeting live may do so at:

[https://www.youtube.com/channel/UCtPEgHsvTSnRcJUCQxX2Ofw?view\\_as=subscriber](https://www.youtube.com/channel/UCtPEgHsvTSnRcJUCQxX2Ofw?view_as=subscriber)  
[Youtube.com](#) → SCSC Roundtable Channel

Members of the public wishing to comment on an item on the agenda may do so in the following ways:

1. Email comments to [scscroundtable@gmail.com](mailto:scscroundtable@gmail.com) by 3:00 p.m. on May 25, 2021. Emails will be forwarded to the Committee. Emails received after 3:00 p.m. and prior to the Chair announcing that public comment is closed may be noted or may be read into the record by the Chair at the meeting (up to 3 minutes) at the discretion of the Chair. **IMPORTANT:** Identify the Agenda Item number in the subject line of your email. All emails received will be entered into the record for the meeting.
2. Provide oral public comments during the meeting by following the link to register in advance to access the meeting via Zoom Webinar: <https://esassoc.zoom.us/j/84610857135>
  - a. You will be asked to enter an email address and a name. Your email address will not be disclosed to the public. After registering, you will receive an email with instructions on how to connect to the meeting. If you prefer not to provide an email, you may call in to the meeting (listed below) and view the live stream on the SCSC Roundtable YouTube Channel.  
  
Dial: +1 669 219 2599 or +1 213 338 8477 or +1 346 248 7799 or +1 206 337 9723 or +1 646 518 9805 or +1 470 250 9358 or 833 548 0282 (Toll Free) or 877 853 5247 (Toll Free) or 888 788 0099 (Toll Free) or 833 548 0276 (Toll Free)  
  
Webinar ID: 846 1085 7135
  - b. When the Chair announces the item on which you wish to speak, click the “raise hand” feature in Zoom. Speakers will be notified shortly before they are called to speak.
  - c. When called to speak, please limit your comments to the time allotted (up to 3 minutes, at the discretion of the Chair).
  - d. For those individuals participating by phone, you may use the following controls as appropriate.

Press \*9 - Raise hand

Press \*6 - Toggle mute/unmute

1:00 PM	<ol style="list-style-type: none"> <li>1. Welcome/Review of the Meeting Format – <i>Steve Alverson, Roundtable Facilitator</i></li> <li>2. Call to Order and Identification of Members Present – <i>Chairperson Bernald</i></li> </ol> <p>Summary of SCSC Roundtable Special Meeting Format – SCSC Roundtable Legal Counsel, Kirsten Powell</p>	Information  Information
1:15 PM	<ol style="list-style-type: none"> <li>3. Consent Agenda <ol style="list-style-type: none"> <li>a.) Summary of SCSC Roundtable Legal Counsel's Scope of Work, Kirsten Powell</li> <li>b.) SCSC Roundtable Chair sending recommendation to the Cities Association regarding consultant contract extension.</li> </ol> <p>Possible actions include:</p> <ul style="list-style-type: none"> <li>- Approval of Legal Counsel Scope of Work.</li> <li>- Approval of Roundtable Chair sending recommendation to the Cities Association that the contract with ESA be extended to December 31, 2021.</li> </ul> <p>Public Comment</p> </li> </ol>	Information/ Action
1:30 PM	<ol style="list-style-type: none"> <li>4. Overview of the FAA's Neighborhood Environmental Survey - <i>Steve Alverson, Roundtable Facilitator</i></li> </ol> <p>Possible actions include approval of Roundtable Chair preparing and sending letter to the Congressional Offices to encourage Congressional representatives to continue to convey Roundtable positions on aircraft noise impacts and FAA noise research. Roundtable Chairperson and ESA to draft letter based on Roundtable member input.</p> <p>Public Comment</p>	Information/ Action
1:45 PM	<ol style="list-style-type: none"> <li>5. Committee Reports <ol style="list-style-type: none"> <li>a.) Legislative Committee – <i>Legislative Committee Chair Lisa Matichak</i> <ul style="list-style-type: none"> <li>- Report out from the December 16, 2020 Legislative Committee meeting.</li> </ul> </li> <li>b.) Technical Working Group – <i>Technical Working Group Committee Chair Anita Enander</i> <ul style="list-style-type: none"> <li>- Report out from the December 15, 2020 Technical Working Group meeting.</li> </ul> </li> </ol> <p>Public Comment</p> </li> </ol>	Information
3:00 PM	<ol style="list-style-type: none"> <li>6. Ad Hoc Committee Report – <i>Chairperson Bernald</i></li> </ol> <p>Update regarding the Ad Hoc Committee's ongoing discussions with the Cities Association.</p> <p>Public Comment</p>	Information

3:30 PM 7. Oral Communications/Public Comment - *Speakers are limited to a maximum of two minutes or less depending on the number of speakers. Roundtable members cannot discuss or take action on any matter raised under this agenda item.* Information

3:40 PM 8. Member Discussion Information  
- Chair's Report

- Report/Update on recent FAA procedure status (BRIXX, etc.), and FAA public briefing to be held virtually this summer.
- Summary of draft resolution to be considered at the next regular SCSC Roundtable meeting regarding the adoption of a "quarterly" meeting schedule for future regular meeting dates, if/and when approved to meet by the Cities Association. (Tentative Schedule).

Public Comment

4:00 PM 9. Adjournment – *SCSC Roundtable Chairperson*

**Materials to be provided during the meeting:**

- Presentation of the electronic agenda packet

# memorandum

date May 20, 2021

to Roundtable Members and Interested Parties

cc

from Steve Alverson, Santa Clara/Santa Cruz Counties Airport/Community Roundtable Facilitator

subject Review of the Federal Aviation Administration (FAA) Instrument Flight Procedures (IFP) Information Gateway

The FAA’s Instrument Flight Procedures Information Gateway (“IFP Gateway”) is a website used by the FAA to distribute aircraft instrument flight procedure details (“charts”) to the general public.<sup>1</sup> The FAA also uses the IFP Gateway to share its IFP Production Plan, which includes details on IFPs under development or amendment along with development status and tentative publication dates. Environmental Science Associates (ESA) monitors the IFP Gateway for proposed changes to IFPs associated with Norman Y. Mineta San Jose International Airport (SJC), San Francisco International Airport (SFO), and Oakland International Airport (OAK). Changes to IFPs associated with these airports may affect communities in Santa Clara and Santa Cruz counties.

The FAA publishes IFPs on a 56-day publication cycle. The most recent publication date was April 22, 2020. The following information provides details on the IFP development process and IFPs under development or amendment.

## Stages of IFP Development

Development of IFPs typically follows five stages, described below. Depending on the nature of the IFP development or amendment, not all of these stages may occur.

1. **FPT (Flight Procedures Team):** This team reviews potential IFPs for feasibility and coordinates IFP development with relevant FAA lines of business and staff offices.
2. **DEV:** Procedure development.
3. **FC (Flight Check):** The FAA performs a flight inspection of the procedure.
4. **PIT (Production Integration Team):** This team prepares procedure details to support publication.

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<sup>1</sup> [https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/procedures/](https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/)



5. **CHARTING:** Procedures are made available to the public, typically in graphical, text, and electronic formats.

### IFP Development Status Indicators

The following terms are employed by the FAA to identify the status of the IFP during the development process.

<b>At Flight Check</b>	The procedure is with FAA staff responsible for flight inspection.
<b>Awaiting Publication</b>	The procedure has been developed and is awaiting an upcoming publication date.
<b>Awaiting Cancellation</b>	The procedure will be removed from FAA flight procedure databases on an upcoming publication date.
<b>Complete</b>	Procedure development has finished.
<b>On Hold</b>	Procedure development has been paused while awaiting further information.
<b>Pending</b>	Detailed development of the procedure will begin in the future.
<b>Published</b>	The procedure has been made publicly available.
<b>Terminated</b>	Development has terminated for the procedure.
<b>Under Development</b>	The procedure is being developed by the FAA.

### Key Terms

The following acronyms are employed by the FAA to describe the IFP, including some of the navigational equipment necessary to accommodate the IFP.

<b>ATC</b>	Air Traffic Control
<b>AMDT</b>	Amendment
<b>CAT</b>	Category
<b>DME</b>	Distance Measuring Equipment
<b>DP</b>	Departure Procedure
<b>GPS</b>	Global Positioning System
<b>GLS</b>	Ground-Based Augmentation System (GBAS) Landing System
<b>IAP</b>	Instrument Approach Procedure
<b>ILS</b>	Instrument Landing System
<b>LOC</b>	Localizer
<b>LDA</b>	Localizer Type Directional Aid
<b>RNAV</b>	Area Navigation
<b>RNP</b>	Required Navigation Performance
<b>RWY</b>	Runway
<b>SA</b>	Special Authorization
<b>SID</b>	Standard Instrument Departure
<b>STAR</b>	Standard Terminal Arrival Route
<b>TBD</b>	To Be Determined

### Management of FAA IFP Production During the COVID-19 Pandemic

On April 16, 2020, the FAA issued a memorandum (distributed with the May 27, 2020 IFP Gateway memorandum) discussing changes to IFP production during the COVID-19 pandemic. FAA noted that IFP production has been impacted by precautions taken to protect the health and safety of FAA Flight Inspection aircrews<sup>2</sup> due to the pandemic. Among the work that may continue during the pandemic is completion of IFP procedure amendments that do not require flight inspection; periodic IFP reviews and inventory maintenance; compilation and utilization of a list of completed IFP work that can be flown by Flight Inspection aircrews if operations are warranted; and coordination with FAA Flight Inspection Operations on IFP requests associated with National Airspace System Safety/Efficiency. This includes IFP related requests such as returning navigational aids to service and providing support to Flight Inspection Operations by ensuring satisfaction of IFP requirements at Focus 40 airports. IFP requirements include satisfaction of instrument approach procedure prerequisites, collection of airport land survey data, collection of airport data, and satisfaction of an initial environmental review. Both OAK and SFO are Focus 40 airports. SJC is not a Focus 40 airport. The memorandum further states that no new or amended IFP will be validated by Flight Inspection without prior FAA approval.

### IFP Status

The following tables provide status updates on IFP production for procedures serving OAK, SFO, and SJC. Information highlighted in **turquoise** has been updated since the January 11, 2021 SCSC Roundtable IFP Gateway Review.

Norman Y. Mineta San Jose International Airport				
IFP in Production Plan	Type of IFP	Status	Scheduled Publication Date	Additional Notes (If Applicable)
RNAV (GPS) Y RWY 30L, AMDT 4	IAP	Pending	12/02/2021	No further information available on the IFP Gateway at this time.
RNAV (GPS) Y RWY 30R, AMDT 4	IAP	Pending	12/02/2021	No further information available on the IFP Gateway at this time.
RNAV (RNP) Z RWY 30L, AMDT 4	IAP	Pending	12/02/2021	No further information available on the IFP Gateway at this time.
RNAV (RNP) Z RWY 30R, AMDT 3	IAP	Pending	12/02/2021	No further information available on the IFP Gateway at this time.

<sup>2</sup> The FAA’s Flight Inspection Operations Group is responsible for ensuring the safety of instrument flight procedures in the National Airspace System. Flight Inspection aircrews evaluate and validate ground and space-based navigational aids and conduct airborne inspection of all instrument flight procedures under both ideal and adverse weather conditions.

Norman Y. Mineta San Jose International Airport				
IFP in Production Plan	Type of IFP	Status	Scheduled Publication Date	Additional Notes (If Applicable)
FAIRGROUDS VISUAL RWY 30 L/R, AMDT 8	IAP	Awaiting Publication	6/17/2021	<p>The proposed amendments would address ATC safety issues by providing additional separation of aircraft between arrival flight procedures into SJC, as well as other area airports, while continuing to provide safe and efficient operations. Additionally, the proposed amendments intended to fulfill a subset of the recommendations submitted by the Select Committee on South Bay Arrivals.</p> <p>New waypoint locations to allow efficient transition from BRIXX THREE:</p> <ul style="list-style-type: none"> <li>JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>YADUT WP: 37°11'48.57"N/122°01'3.74"W</li> </ul> <p>Procedure changes were Categorically Excluded (CatExed) under NEPA with RNAV (RNP) Z RWY 30L, AMDT 3, RNAV (RNP) Z RWY 30 R, AMDT 2, and BRIXX (RNAV) THREE STAR on 12/01/2020.</p>
RNAV (RNP) Z RWY 30L, AMDT 3	IAP	Awaiting Publication	6/17/2021	<p>The proposed amendments would address ATC safety issues by providing additional separation of aircraft between arrival flight procedures into KSJC, as well as other area airports, while continuing to provide safe and efficient operations. Additionally, the proposed amendments intended to fulfill a subset of the recommendations submitted by the Select Committee on South Bay Arrivals.</p>
RNAV (RNP) Z RWY 30 R, AMDT 2	IAP	Awaiting Publication	6/17/2021	<p>The proposed amendments for both the RNAV (RNP) RWY 30L AMDT 3 and RWY 30R AMDT 3 include new waypoint locations to allow efficient transition from BRIXX THREE:</p> <ul style="list-style-type: none"> <li>JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>YADUT WP: 37°11'48.57"N/122°01'3.74"W</li> <li>HEPAP WP: 37°11'57.20"N/121°58'57.88"W</li> </ul> <p>Procedure changes were CatExed with FAIRGROUDS VISUAL RWY 30 L/R and BRIXX (RNAV) THREE STAR on 12/01/2020.</p>

Norman Y. Mineta San Jose International Airport				
IFP in Production Plan	Type of IFP	Status	Scheduled Publication Date	Additional Notes (If Applicable)
STAR BRIXX (RNAV) THREE SAN JOSE CA KSJC	IAP	Awaiting Publication	6/17/2021	<p>The proposed amendments would address ATC safety issues by providing additional separation of aircraft between arrival flight procedures into KSJC, as well as other area airports, while continuing to provide safe and efficient operations. Additionally, the proposed amendments intended to fulfill a subset of the recommendations submitted by the Select Committee on South Bay Arrivals.</p> <p>Changes to the procedure include the following:</p> <ul style="list-style-type: none"> <li>• Move the JILNA waypoint (WP) 1.3 nautical mile (NM) southwest. The geographic coordinates of the new location of JILNA WP would be 37°13'54.92"N/122°09'56.50"W.</li> <li>• Add 105° heading after JILNA WP.</li> <li>• Remove current YADUT WP from the procedure.</li> <li>• Remove Minimum En Route Altitudes (MEAs) from Common</li> <li>• Route to conform to air traffic control criteria.</li> <li>• New name would be BRIXX THREE RNAV STAR (BRIXX THREE).</li> </ul> <p>Procedure changes were CatExed with FAIRGROUNDS VISUAL RWY 30 L/R, AMDT 8, RNAV (RNP) Z RWY 30L, AMDT 3, and RNAV (RNP) Z RWY 30 R, AMDT 2 on 12/01/2020.</p>
STAR SILCN (RNAV) FIVE SAN JOSE CA KSJC	IAP	Awaiting Publication	6/17/2021	<p>The procedure notes were amended to change transition references from east/west to landing north/south to avoid pilot confusion. Changes were made to reduce pilot confusion. Procedure changes were CatExed on 11/04/2020.</p>
SID SPTNS (RNAV) ONE SAN JOSE CA KSJC		Pending	1/27/2022	No further information available on the IFP Gateway at this time.
SID TECKY (RNAV) FOUR SAN JOSE CA KSJC		Pending	1/27/2022	No further information available on the IFP Gateway at this time.
STAR RAZRR (RNAV) FIVE SAN JOSE CA KSJC		Pending	1/27/2022	No further information available on the IFP Gateway at this time.
STAR SILCN (RNAV) FOUR SAN JOSE CA KSJC		Pending	1/27/2022	No further information available on the IFP Gateway at this time.
RNAV (RNP) Z RWY 12L, AMDT 2B	RNAV STAR	Removed	4/22/2021	This procedure has been removed from the IFP Gateway. Status unknown.
RNAV (RNP) Z RWY 12R, AMDT 3B	RNAV STAR	Removed	4/22/2021	This procedure has been removed from the IFP Gateway. Status unknown.


San Francisco International Airport				
IFP in Production Plan	Type of IFP	Status	Scheduled Publication Date	Additional Notes (If Applicable)
GLS RWY 19R, Orig	GLS IAP	Pending	12/2/2021	No further information available on the IFP Gateway at this time.
GLS RWY 28L, Orig.	GLS IAP	Pending	12/2/2021	No further information available on the IFP Gateway at this time.
GLS RWY 19L, Orig.	GLS IAP	Pending	12/2/2021	No further information available on the IFP Gateway at this time.
GLS RWY 28R, Orig.	GLS IAP	Pending	12/2/2021	No further information available on the IFP Gateway at this time.
ILS or LOC RWY 19L, AMDT 23	IAP	Pending	12/2/2021	No further information available on the IFP Gateway at this time.
RNAV (GPS) RWY 19L, AMDT 4	IAP	Pending	12/2/2021	No further information available on the IFP Gateway at this time.
RNAV (GPS) RWY 19R, AMDT 4	IAP	Pending	12/2/2021	No further information available on the IFP Gateway at this time.
TIPP TOE VISUAL RWY 28L/R, AMDT 3	IAP	Removed	12/2/2021	This procedure has been removed from the IFP Gateway. Status unknown.
GLS OVERLAY RNAV (GPS) RWY 19L, AMDT 3	GLS IAP	Removed	10/7/2021	This procedure has been removed from the IFP Gateway. Status unknown.
GLS OVERLAY RNAV (GPS) RWY 19R, AMDT 2	GLS IAP	Removed	10/7/2021	This procedure has been removed from the IFP Gateway. Status unknown.
GLS OVERLAY RNAV (GPS) RWY 28L, AMDT 6	GLS IAP	Removed	10/7/2021	This procedure has been removed from the IFP Gateway. Status unknown.
GLS OVERLAY RNAV (GPS) Z RWY 28R, AMDT 6	GLS IAP	Removed	10/7/2021	This procedure has been removed from the IFP Gateway. Status unknown.
SAHEY FOUR (RNAV)	RNAV SID	Awaiting Publication	8/12/21	<p>This procedure replaces the SID SAHEY THREE (RNAV) SID reported in the last memo. Summary of changes made: final segments of the CISKO, EBAYE, AND LOSHN transitions deleted from the procedure; transitions now terminate at KTINA, SUSEY, and KAYEX fixes, edited procedure pilot notes. Procedure amendments reduce pilot confusion, provide ATC ability to remove coordination between approach control and ARTCC.</p> <p>Procedure changes were CatExed with changes made to OAK procedures KATFH THREE RNAV SID and CNDEL FIVE SID and SFO procedures SSTIK SID and WESLA SID on 12/07/20.</p>

San Francisco International Airport				
IFP in Production Plan	Type of IFP	Status	Scheduled Publication Date	Additional Notes (If Applicable)
SSTIK FIVE (RNAV)	RNAV SID	Awaiting Publication	8/12/21	This procedure replaces the SSTIK FOUR (RNAV) SID reported in the last memo. Summary of changes made: final segments of the CISKO, EBAYE, AND LOSHN transitions deleted from the procedure; transitions now terminate at KTINA, SUSEY, and KAYEX fixes, edited procedure pilot notes. Procedure amendments reduce pilot confusion, provide ATC ability to remove coordination between approach control and ARTCC.  Procedure changes were CatExed with changes made to OAK procedures KATFH THREE RNAV SID and CNDEL FIVE SID and SFO procedures SAHEY FOUR SID and WESLA SID on 12/07/20.
WESLA FIVE (RNAV)	RNAV SID	Awaiting Publication	8/12/21	This procedure replaces the SID WESLA FOUR (RNAV) SID reported in the last memo. Summary of changes made: final segments of the CISKO, EBAYE, AND LOSHN transitions deleted from the procedure; transitions now terminate at KTINA, SUSEY, and KAYEX fixes, edited procedure pilot notes. Procedure amendments reduce pilot confusion, provide ATC ability to remove coordination between approach control and ARTCC.  Procedure changes were CatExed with changes made to OAK procedures KATFH THREE RNAV SID and CNDEL FIVE SID and SFO procedures SAHEY FOUR SID and SSTIK FIVE SID on 12/07/20.
POINT REYES THREE	STAR	Removed	6/17/2021	This procedure has been removed from the IFP Gateway. Status unknown.
STINS FOUR	STAR	Awaiting Publication	6/17/2021	This procedure was amended by removal of the Santa Rosa VOR from the procedure chart. No courses, tracks, or altitudes were changed.  Procedure changes were CatExed on 06/01/2020.
ILS PRM RWY 28L (SIMULTANEOUS CLOSE PARALLEL), AMDT 3A	IAP	Canceled	4/22/2021	Flight procedure cancelled per Flight Procedures Team on January 25, 2021.
LDA PRM RWY 28R, AMDT 2B	IAP	Canceled	4/22/2021	Flight procedure cancelled per Flight Procedures Team on January 25, 2021.
LDA/DME RWY 28R, AMDT 2B	IAP	Canceled	4/22/2021	Flight procedure cancelled per Flight Procedures Team on January 25, 2021.
RNAV (GPS) PRM RWY 28L (CLOSE PARALLEL), AMDT 2	IAP	Canceled	4/22/2021	Flight procedure cancelled per Flight Procedures Team on January 25, 2021.
RNAV (GPS) PRM X RWY 28R, AMDT 1B	IAP	Canceled	4/22/2021	Flight procedure cancelled per Flight Procedures Team on January 25, 2021.

Oakland International Airport				
IFP in Production Plan	Type of IFP	Status	Scheduled Publication Date	Additional Notes (If Applicable)
QUAKE TWO	SID	Removed	11/5/2020	This SID was published on 11/5/2020.
ILS OR LOC RWY 12, AMDT 9	IAP	Removed	Unknown	This procedure has been removed from the IFP Gateway.
RNAV (GPS) Y RWY 12, AMDT 4	IAP	Removed	Unknown	This procedure has been removed from the IFP Gateway.
AANET TWO	RNAV STAR	Removed	Unknown	This procedure has been removed from the IFP Gateway. AANET ONE RNAV STAR, published on 03/05/15 remains in effect.
WNDSR THREE	RNAV STAR	Removed	Unknown	This procedure has been removed from the IFP Gateway. WNDSR TWO RNAV STAR, published on 10/15/15 remains in effect.
SID CNDEL FIVE (RNAV) OAKLAND CA KOAK	RNAV SID	Under Development	8/12/2021	The CNDEL FOUR SID, published 09/13/18, remains in effect. This procedure serves departures to the southeast. Summary of changes made: final segments of the CISK0, EBAYE, AND LOSHN transitions deleted from the procedure; transitions now terminate at KTINA, SUSEY, and KAYEX fixes; updated route description for all runways from “climb heading” to “climb on heading”; updated airport name from “METROPOLITAN OAKLAND INTL” to “METRO OAKLAND INTL.”  Procedure changes were CatExed with changes made to KATFH THREE RNAV SID and SFO procedures SAHEY SID, SSTIK SID, and WESLA SID on 12/07/20.
SID KATFH THREE (RNAV) OAKLAND CA KOAK	RNAV SID	Under Development	8/12/2021	The KATFH TWO SID, published 08/20/15, remains in effect. This procedure serves departures to the southeast. Summary of changes made: final segments of the CISK0, EBAYE, AND LOSHN transitions deleted from the procedure, transitions now terminate at KTINA, SUSEY, and KAYEX; updated route description for all runways from “climb heading” to “climb on heading”; updated airport name from “METROPOLITAN OAKLAND INTL” to “METRO OAKLAND INTL.”; deleted Takeoff Obstacle Notes and added “See Form 8260-15A, Takeoff Minimum and Obstacle Departure Procedures (ODP)”; Changed chart “Top Altitude 3000” to “Top Altitude: Assigned by ATC-FPT/ATC request”; Added “Maintain ATC assigned altitude” to DP route description.  Procedure changes were CatExed with changes made to CANDL FIVE RNAV SID and SFO procedures SAHEY SID, SSTIK SID, and WESLA SID on 12/07/20.

## SJC Attachments



Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: CVFP	Estimated Chart Date: 06/17/2021	APWS Task ID: A68CDDE171674288BE7A70D3A9CCA435	APWS Project ID: 8858DF385BA241FE9209983F1CA9C311
Procedure: APPROACH FAIRGROUNDS VISUAL RWY 30 L/R AMDT 8		Enroute: YES	Specialist: Gorman, Barbara		Agreement Number:
Airport ID: KSJC			Airport City: SAN JOSE		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<p>Procedure Comments: ACTIVE DATA USED FOR AIRPORT AND RUNWAYS. CONTACT: JON DENTON (AJV-A432) 405.954.5467</p> <p style="text-align: center;"><i>Digitally signed by</i> <b>JON DENTON</b> Mar 15, 2021</p>					
					

<b>FIPC BASIC FORM</b>					
<b>PROCEDURE:</b> APPROACH FAIRGROUNDS VISUAL RWY 30 L/R AMDT 8		<b>AIRPORT NAME:</b> NORMAN Y MINETA SAN JOSE INTL		<b>AIRPORT ID:</b> KSJC	<b>SPECIAL CONTROL NO:</b> S-02-274-21
<b>FAC ID:</b> KSJC		<b>CITY:</b> SAN JOSE INTERNATIONAL		<b>ST:</b> CA	<b>ORIG CHART DATE:</b> 06/17/2021
<b>DFL TYPE:</b> CVFP	<b>THIRD PARTY:</b> <input type="checkbox"/> YES	<b>EST. TIME ON SITE:</b> 0.5	<b>REIMB. NUMBER:</b>	<b>PTS TASK ID:</b>	
<b>PREFLIGHT NOTES</b>					
<b>REVIEWER:</b>				<b>DATE:</b>	
<b>COMMENTS:</b>				<b>CHECK ONE:</b>	
				<input type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT	
				<b>YES</b>	<b>NO</b>
				<b>CPV COMPLETE?</b>	
				<b>X</b>	
<b>PROCEDURE RESULTS</b>					
<b>INSPECTION DATE:</b> 03/12/2021	<b>CREW #:</b> VN234	<b>N #:</b> N83	<b>INSTRUMENT PROCEDURE STATUS:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT		<b>ARINC CODING:</b> <input type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT
<b>FLIGHT INSPECTOR SIGNATURE:</b> daniel c favorite @ 03/12/2021 13:08			<b>PRINTED NAME:</b> FAVORITE, DANIEL CHARLES		<b>NOTAM INITIATED?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<b>FLIGHT INSPECTOR REMARKS:</b> 1. Procedure flown sat. AIS verify course from JILNA To YADUT. FIG = 105°; Current JILNA - YADUT = 101°; amended JILNA - YADUT = 093°. Pls review and update.					
<b>IN-FLIGHT OBSTACLE REPORT</b>					
<b>OBSTRUCTION ID #:</b>	<b>COORDINATES OR LOCATION:</b>	<b>GNSS ALTITUDE (MSL):</b>	<b>BAROMETRIC ALTITUDE (MSL):</b>	<b>HEIGHT ABOVE GROUND LEVEL:</b>	

# FAIRGROUNDS VISUAL RWYS 30L/R

SAN JOSE, CALIFORNIA

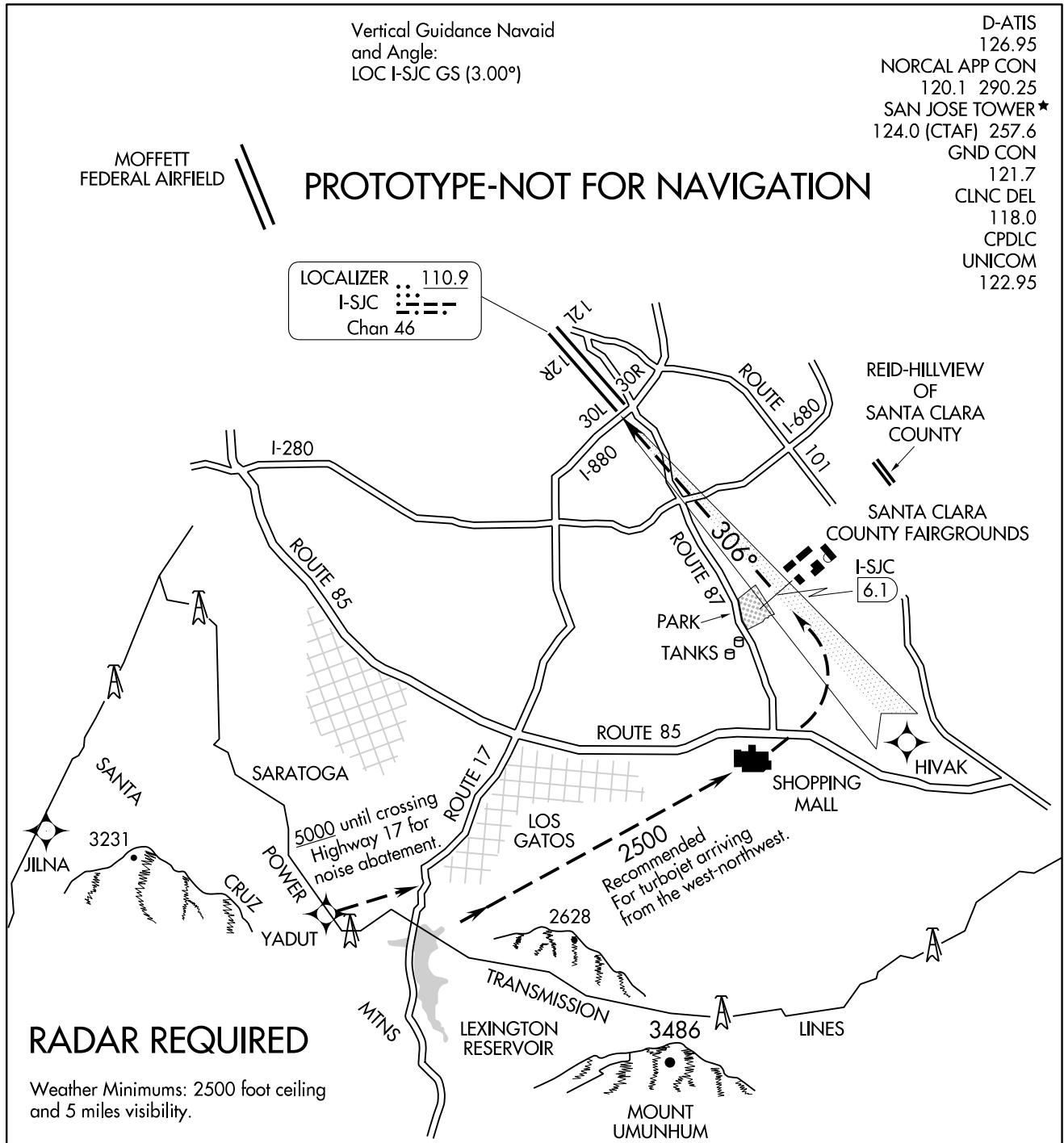
Vertical Guidance Navaid  
and Angle:  
LOC I-SJC GS (3.00°)

- D-ATIS 126.95
- NORCAL APP CON 120.1 290.25
- SAN JOSE TOWER★ 124.0 (CTAF) 257.6
- GND CON 121.7
- CLNC DEL 118.0
- CPDLC
- UNICOM 122.95

MOFFETT  
FEDERAL AIRFIELD

## PROTOTYPE-NOT FOR NAVIGATION

LOCALIZER 110.9  
 I-SJC  
 Chan 46



### RADAR REQUIRED

Weather Minimums: 2500 foot ceiling and 5 miles visibility.

### FAIRGROUNDS VISUAL APPROACH RUNWAYS 30L/R

When cleared for Fairgrounds Visual Approach, aircraft should turn final no closer than I-SJC 6.1 DME for noise abatement.

NOTE: Closely spaced parallel visual approaches may be in progress to Runways 30L/R. In the event of a go-around on Runway 30L, proceed straight-ahead heading 300°, or on Runway 30R, turn right heading 120°, climb and maintain 4000, or as directed by ATC.

# FAIRGROUNDS VISUAL RWYS 30L/R

SAN JOSE, CALIFORNIA

Amdt 7 17173

# FAIRGROUNDS VISUAL RWYS 30L/R

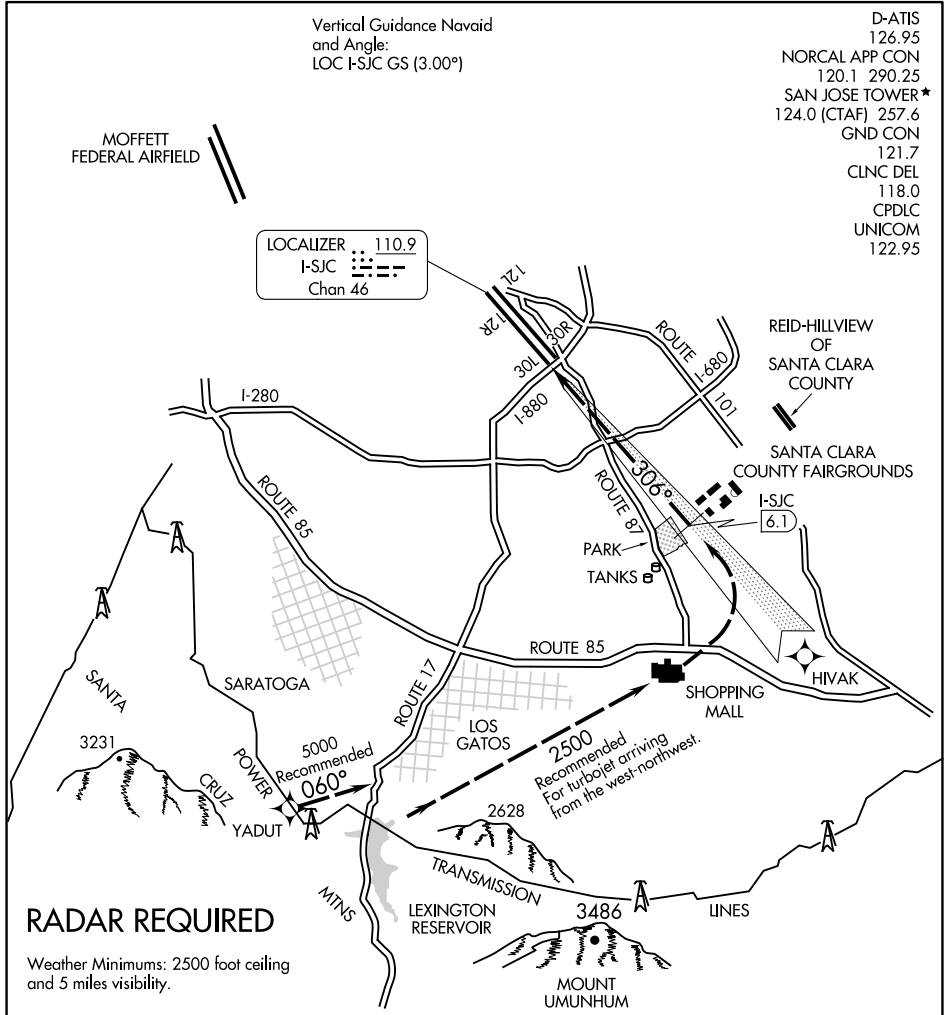
SAN JOSE, CALIFORNIA

Vertical Guidance Navaid  
 and Angle:  
 LOC I-SJC GS (3.00°)

D-ATIS 126.95  
 NORCAL APP CON 120.1 290.25  
 SAN JOSE TOWER\* 124.0 (CTAF) 257.6  
 GND CON 121.7  
 CLNC DEL 118.0  
 CPDLC  
 UNICOM 122.95

MOFFETT  
 FEDERAL AIRFIELD

LOCALIZER 110.9  
 I-SJC  
 Chan 46



SW-2, 31 DEC 2020 to 28 JAN 2021

SW-2, 31 DEC 2020 to 28 JAN 2021

## RADAR REQUIRED

Weather Minimums: 2500 foot ceiling and 5 miles visibility.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
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## FAIRGROUNDS VISUAL APPROACH RUNWAYS 30L/R

When cleared for Fairgrounds Visual Approach, aircraft should turn final no closer than I-SJC 6.1 DME for noise abatement.

NOTE: Closely spaced parallel visual approaches may be in progress to Runways 30L/R. In the event of a go-around on Runway 30L, proceed straight-ahead heading 300°, or on Runway 30R, turn right heading 120°, climb and maintain 4000, or as directed by ATC.

# FAIRGROUNDS VISUAL RWYS 30L/R

SAN JOSE, CALIFORNIA

Amdt 7 21JUL16

37°22'N-121°56'W

NORMAN Y MINETA SAN JOSE INTL (SJC)

**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
CATEGORICAL EXCLUSION DECLARATION**

**Norman Y Mineta San Jose International Airport**

**BRIXX THREE ARRIVAL (RNAV)  
RNAV (RNP) Z RUNWAY 30L  
RNAV (RNP) Z RUNWAY 30R  
FAIRGROUNDS VISUAL RUNWAYS 30L/R**

**Description of Action:**

The Federal Aviation Administration (FAA) is proposing to amend multiple air traffic procedures that serve Norman Y. Mineta San Jose International Airport (KSJC). The procedures that are proposed to be amended are:

- BRIXX TWO Area Navigation (RNAV) Standard Terminal Arrival Route (STAR)
- RNAV (Required Navigation Performance [RNP]) Z Runway (RWY) 30L
- RNAV (RNP) Z RWY 30R
- Fairgrounds Visual RWYs 30L/R

The proposed amendments would address air traffic control (ATC) safety issues by providing additional separation of aircraft between arrival flight procedures into KSJC, as well as other area airports, while continuing to provide safe and efficient operations. Additionally, the proposed amendments intended to fulfill a subset of the recommendations submitted by the Select Committee on South Bay Arrivals.<sup>1</sup>

The specific proposed changes to BRIXX TWO and the associated procedures included in this project are shown in the following table:

<b>Procedure(s)</b>	<b>Description of proposed changes</b>
BRIXX TWO RNAV STAR	<ul style="list-style-type: none"> <li>• Move the JILNA waypoint (WP) 1.3 nautical mile (NM) southwest. The geographic coordinates of the new location of JILNA WP would be 37°13'54.92"N/122°09'56.50"W.</li> <li>• Add 105° heading after JILNA WP.</li> <li>• Remove current YADUT WP from the procedure.</li> <li>• Remove Minimum En Route Altitudes (MEAs) from Common Route to conform to air traffic control criteria.</li> <li>• New name would be BRIXX THREE RNAV STAR (BRIXX THREE)</li> </ul>

<sup>1</sup> The Select Committee on South Bay Arrivals (Select Committee), which was comprised of county and city officials from the San Francisco Peninsula, was tasked with addressing aircraft noise concerns and reviewing the FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties. Three U.S. Congressional Representatives for California approved the Select Committee's recommendations and requested that the FAA implement those recommendations as soon as possible. The FAA first determined if a new requested procedure was initially feasible, flyable, and operationally acceptable from a safety point of view, and then conducted its formal environmental and safety reviews for this new federal action. (References: SC 1.2 R1 (Pg. 11), SC 1.2 R2 (Pg. 11), and SC 1.2 R4 (Pg. 12).

RNAV (RNP) Z RWY 30L	New waypoint locations to allow efficient transition from BRIXX THREE: <ul style="list-style-type: none"> <li>• JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>• YADUT WP: 37°11'48.57"N/122° 01'3.74"W</li> <li>• HEPAP WP: 37°11'57.20"N/121°58'57.88"W</li> </ul>
RNAV (RNP) Z RWY 30R	New waypoint locations to allow efficient transition from BRIXX THREE: <ul style="list-style-type: none"> <li>• JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>• YADUT WP: 37°11'48.57"N/122° 01'3.74"W</li> <li>• HEPAP WP: 37°11'57.20"N/121°58'57.88"W</li> </ul>
Fairgrounds Visual RWYs 30L/R	New waypoint locations to allow efficient transition from BRIXX THREE: <ul style="list-style-type: none"> <li>• JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>• YADUT WP: 37°11'48.57"N/122° 01'3.74"W</li> </ul>

In accordance with FAA Order 1050.1F, Paragraph 5-2, regarding Extraordinary Circumstances, the FAA has reviewed the proposed amendments for factors and circumstances in which a normally categorically-excluded action may have a significant environmental impact requiring further analysis. The FAA has determined that no extraordinary circumstances exist for the proposed action.

**Declaration of Exclusion:**

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1F.

**Basis for this Determination:**

An Initial Environmental Review (IER) was completed and reviewed by the Western Service Center. This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1C, "Procedures for Considering Environmental Impacts," and FAA Order 1050.1F.

The applicable categorical exclusion is:

***5-6.5.i. - Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima.***

**Recommended by:**

**Facility Airspace Manager Review/Concurrence**

Signature: FRANCINE K MALABO Digitally signed by FRANCINE K MALABO Date: 2020.12.01 14:40:20 -08'00' Date: \_\_\_\_\_  
 Name: Francine K. Malabo  
 Air Traffic Manager  
 NorCal TRACON

**Concurrence by:**

**Western Service Area Environmental Specialist**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name: Ryan Weller  
 Environmental Protection Specialist, Operations Support Group  
 Western Service Center, AJV-W25

**Approval by:**

**Western Service Area Director or Designee Approval**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name: B. G. Chew  
 Acting Group Manager, Operations Support Group  
 Western Service Center, AJV-W2

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: IAP	Estimated Chart Date: 06/17/2021	APWS Task ID: 56F1A44E8C7D4181B1B2B659C9A2806A	APWS Project ID: 8858DF385BA241FE9209983F1CA9C311
Procedure: RNAV (RNP) Z RWY 30L AMDT 3		Enroute: NO	Specialist: Gorman, Barbara		Agreement Number:
Airport ID: KSJC			Airport City: SAN JOSE		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type: Hold FC Slot			

**Procedure Comments:**

ACTIVE DATA USED FOR AIRPORT AND RUNWAYS.  
REMOVE NOTAM 9/9587  
CONTACT: JON DENTON (AJV-A432) 405.954.5467

2/17/21: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 1/13/21.

1. REMOVED INITIAL SEGMENTS BORED TO SWIGS, SWIGS TO KLIDE.
2. REMOVED CHART PLANVIEW NOTE AT BORED: (RNP 0.40).
3. REMOVED ADDITIONAL FLIGHT DATA: CHART MINIMUM 5200 AT BORED.
4. REMOVED ADDITIONAL FLIGHT DATA: CODE APPROACH TRANSITION FROM KLIDE.
5. REMOVED BORED AND SWIGS FROM 8260-2 FILE.

*Digitally signed by*

**JON DENTON**

Mar 15, 2021



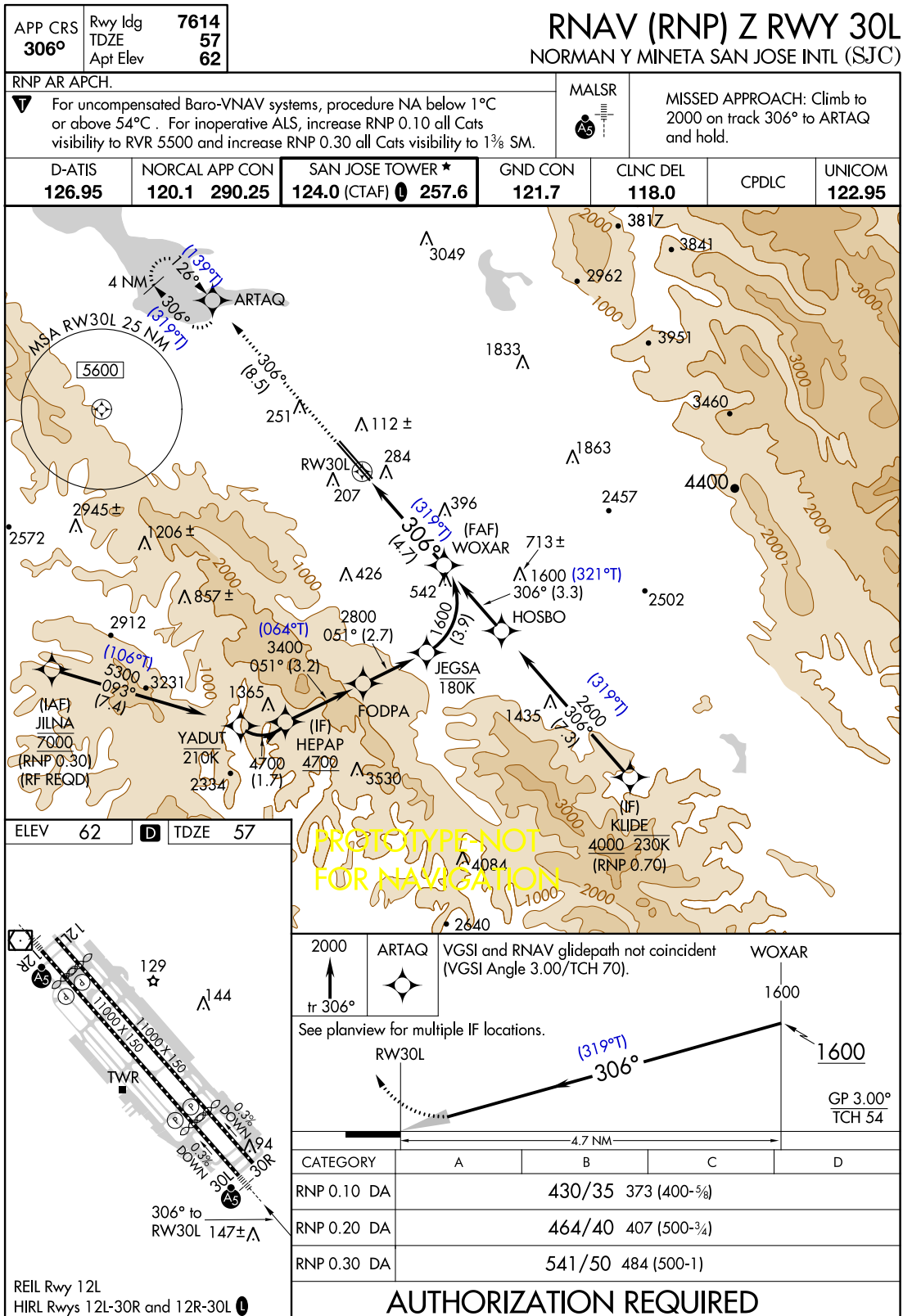


<b>FIPC BASIC FORM</b>					
<b>PROCEDURE:</b> RNAV (RNP) Z RWY 30L AMDT 3		<b>AIRPORT NAME:</b> NORMAN Y MINETA SAN JOSE INTL		<b>AIRPORT ID:</b> KSJC	<b>SPECIAL CONTROL NO:</b> SG-02-276-21
<b>FAC ID:</b> KSJC30L.03Z		<b>CITY:</b> SAN JOSE		<b>ST:</b> CA	<b>ORIG CHART DATE:</b> 06/17/2021
<b>DFL TYPE:</b> PROC/P	<b>THIRD PARTY:</b> <input type="checkbox"/> YES	<b>EST. TIME ON SITE:</b> 0.4	<b>REIMB. NUMBER:</b> AC0683	<b>PTS TASK ID:</b>	
<b>PREFLIGHT NOTES</b>					
<b>REVIEWER:</b>				<b>DATE:</b>	
<b>COMMENTS:</b>				<b>CHECK ONE:</b>	
				<input type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT	
					<b>YES</b> <b>NO</b>
				<b>CPV COMPLETE?</b> <input checked="" type="checkbox"/> X <input type="checkbox"/>	
<b>PROCEDURE RESULTS</b>					
<b>INSPECTION DATE:</b> 03/12/2021	<b>CREW #:</b> VN234	<b>N #:</b> N83	<b>INSTRUMENT PROCEDURE STATUS:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT		<b>ARINC CODING:</b> <input type="checkbox"/> SAT <input checked="" type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT
<b>FLIGHT INSPECTOR SIGNATURE:</b> daniel c favorite @ 03/12/2021 13:03			<b>PRINTED NAME:</b> FAVORITE, DANIEL CHARLES		<b>NOTAM INITIATED?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<b>FLIGHT INSPECTOR REMARKS:</b> Procedure flown sat as submitted .					
<b>IN-FLIGHT OBSTACLE REPORT</b>					
<b>OBSTRUCTION ID #:</b>	<b>COORDINATES OR LOCATION:</b>	<b>GNSS ALTITUDE (MSL):</b>	<b>BAROMETRIC ALTITUDE (MSL):</b>	<b>HEIGHT ABOVE GROUND LEVEL:</b>	

SAN JOSE, CALIFORNIA

AL-693 (FAA)

FIG



**AUTOMATED AL-693 RNAV (RNP) Z RWY 30L**  
**AUTOMATED AL-693 RNAV (RNP) Z RWY 30L**

SW-2  
01-26-21  
COMPILER: JUN  
REVIEWER:  
DBL CHKR:  
EFF: FIG

AUTHORIZATION REQUIRED

SAN JOSE, CALIFORNIA  
Amdt 3 FIG

37°22'N-121°56'W

NORMAN Y MINETA SAN JOSE INTL (SJC)  
**RNAV (RNP) Z RWY 30L**

SAN JOSE, CALIFORNIA

AL-693 (FAA)

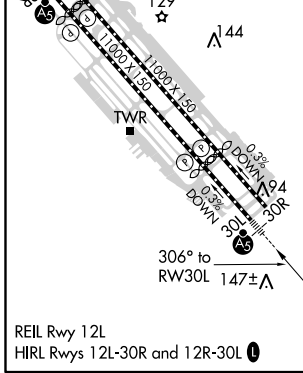
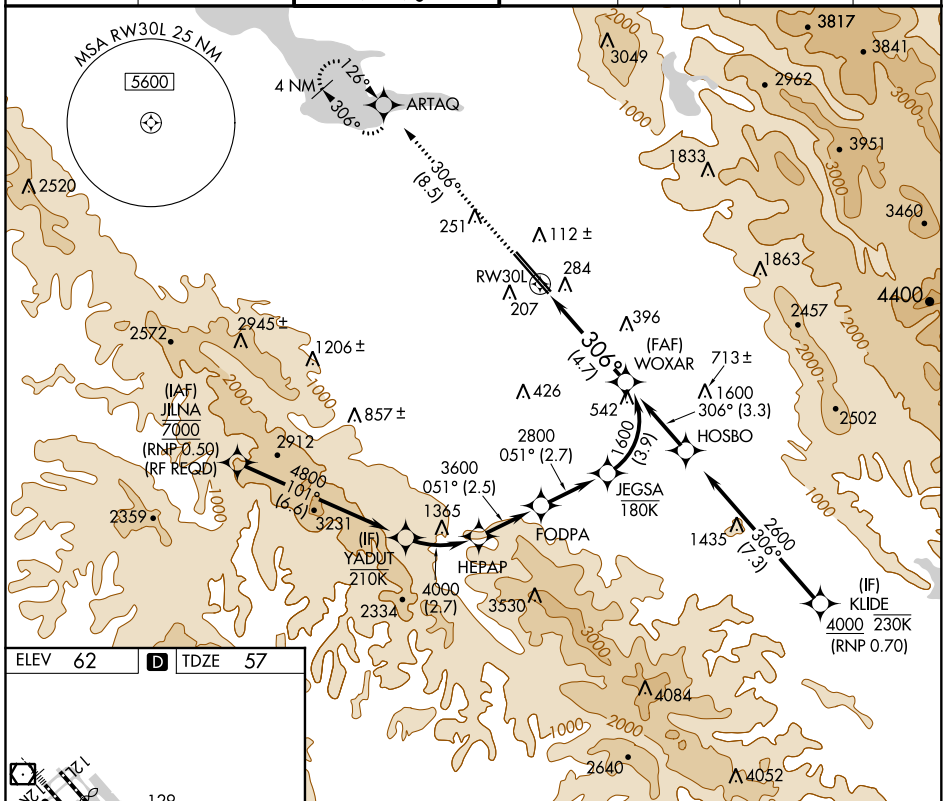
20366

APP CRS	Rwy Idg	<b>7614</b>
<b>306°</b>	TDZE	<b>57</b>
	Apt Elev	<b>62</b>

## RNAV (RNP) Z RWY 30L

NORMAN Y MINETA SAN JOSE INTL (SJC)

<p><b>▽</b> For uncompensated Baro-VNAV systems, procedure NA below -1°C (31°F) or above 54°C (130°F). GPS required. For inoperative MALSR, increase RNP 0.15 all Cats visibility to RVR 6000 and increase RNP 0.30 all Cats visibility to 1½ mile.</p>				<p><b>MALSR</b></p>		<p><b>MISSED APPROACH:</b> Climb to 2300 on track 306° to ARTAQ and hold.</p>	
D-ATIS	NORCAL APP CON	SAN JOSE TOWER *	GND CON	CLNC DEL	CPDLC	UNICOM	
<b>126.95</b>	<b>120.1 290.25</b>	<b>124.0 (CTAF) 0 257.6</b>	<b>121.7</b>	<b>118.0</b>		<b>122.95</b>	



2300	ARTAQ	VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 70).	WOXAR	
tr 306°			1600	
See planview for multiple IF locations.				
RW30L			1600	
		306°	GP 3.00° TCH 54	
-4.7 NM				
CATEGORY	A	B	C	D
RNP 0.15 DA		421/40	364 (400-¾)	
RNP 0.30 DA		544/60	487 (500-1¼)	
<b>AUTHORIZATION REQUIRED</b>				

SAN JOSE, CALIFORNIA  
Amdt 2A 21JUL16

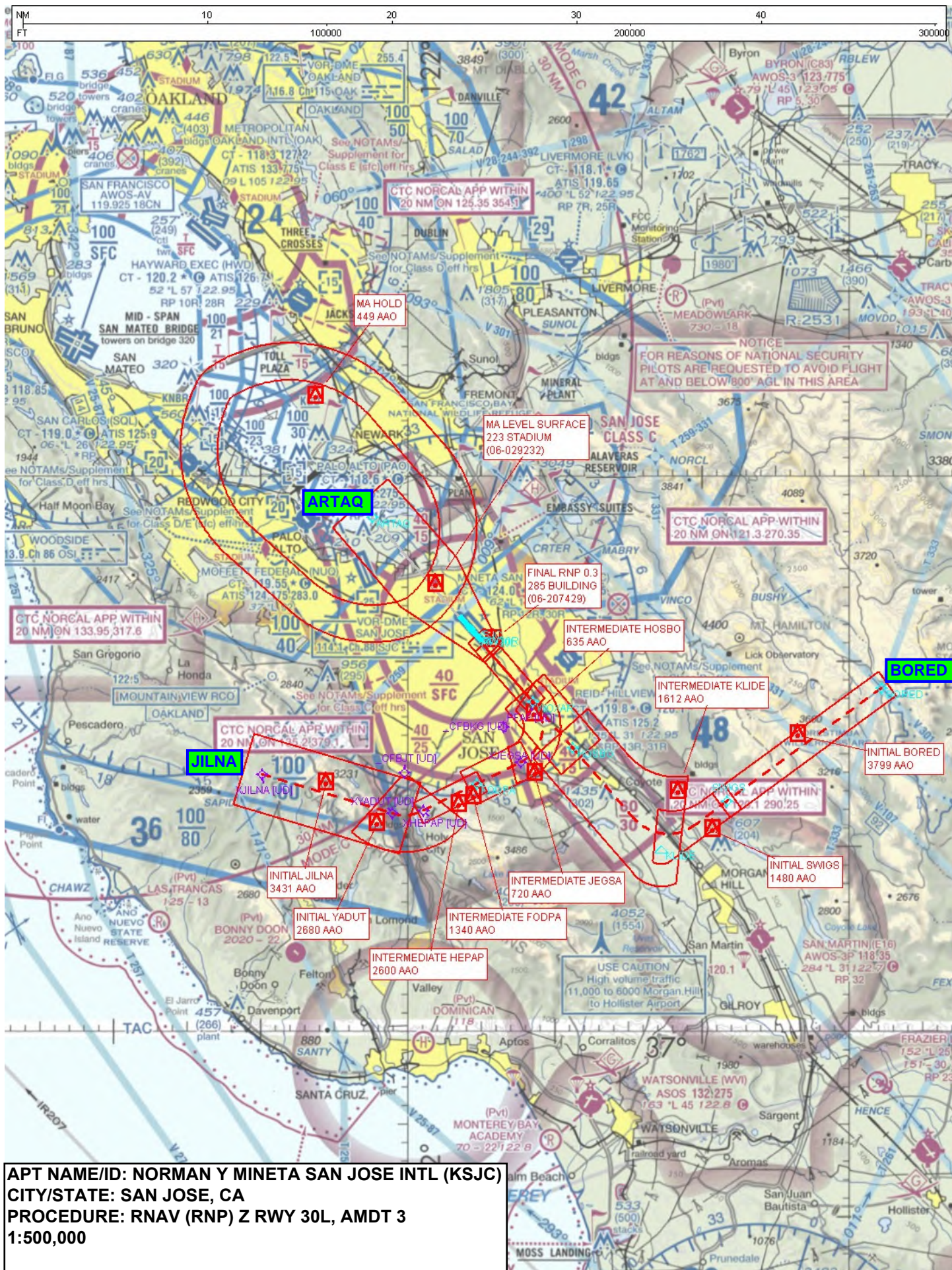
37°22'N-121°56'W

NORMAN Y MINETA SAN JOSE INTL (SJC)  
**RNAV (RNP) Z RWY 30L**

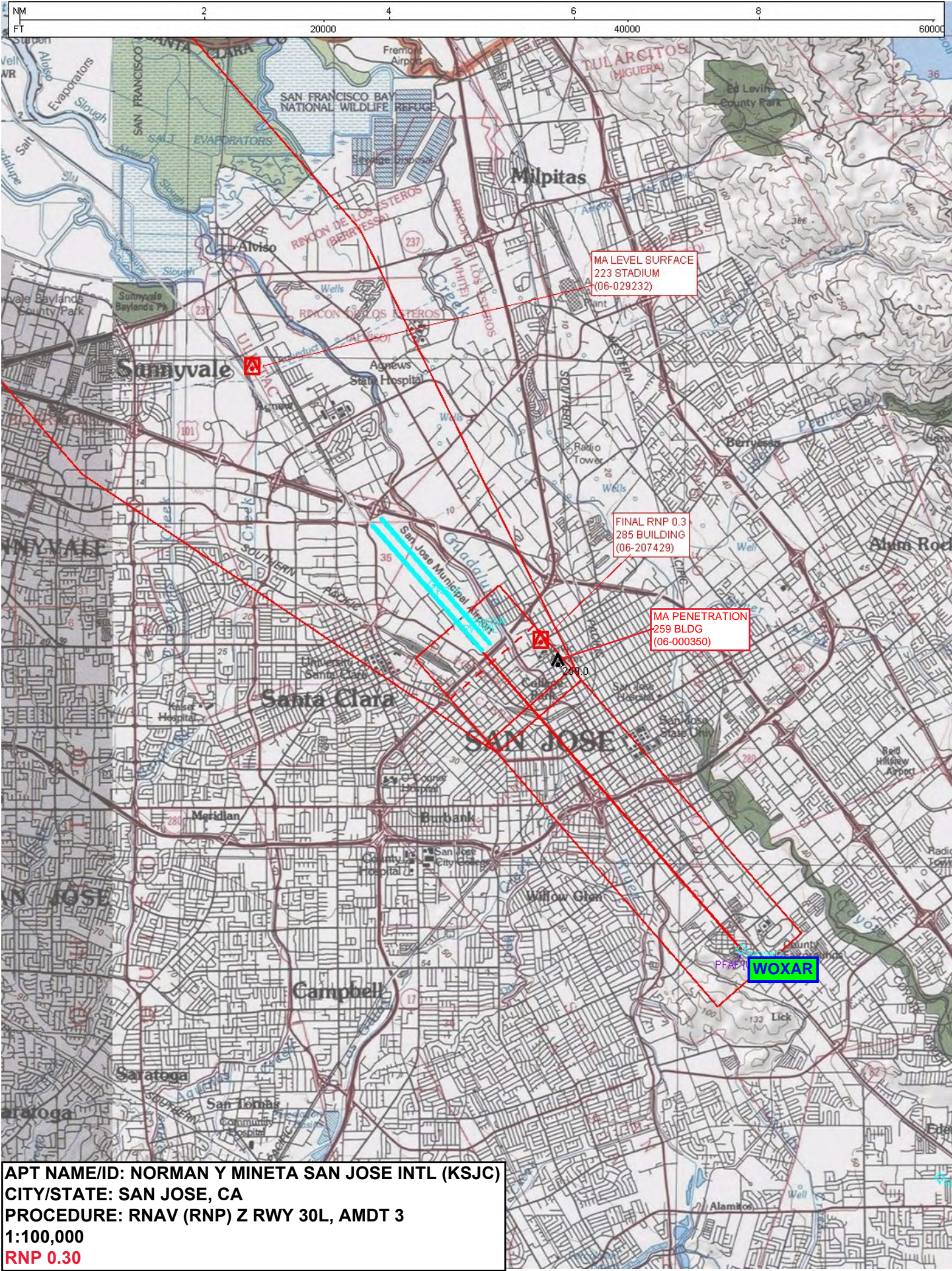
SW-2, 31 DEC 2020 to 28 JAN 2021

SW-2, 31 DEC 2020 to 28 JAN 2021



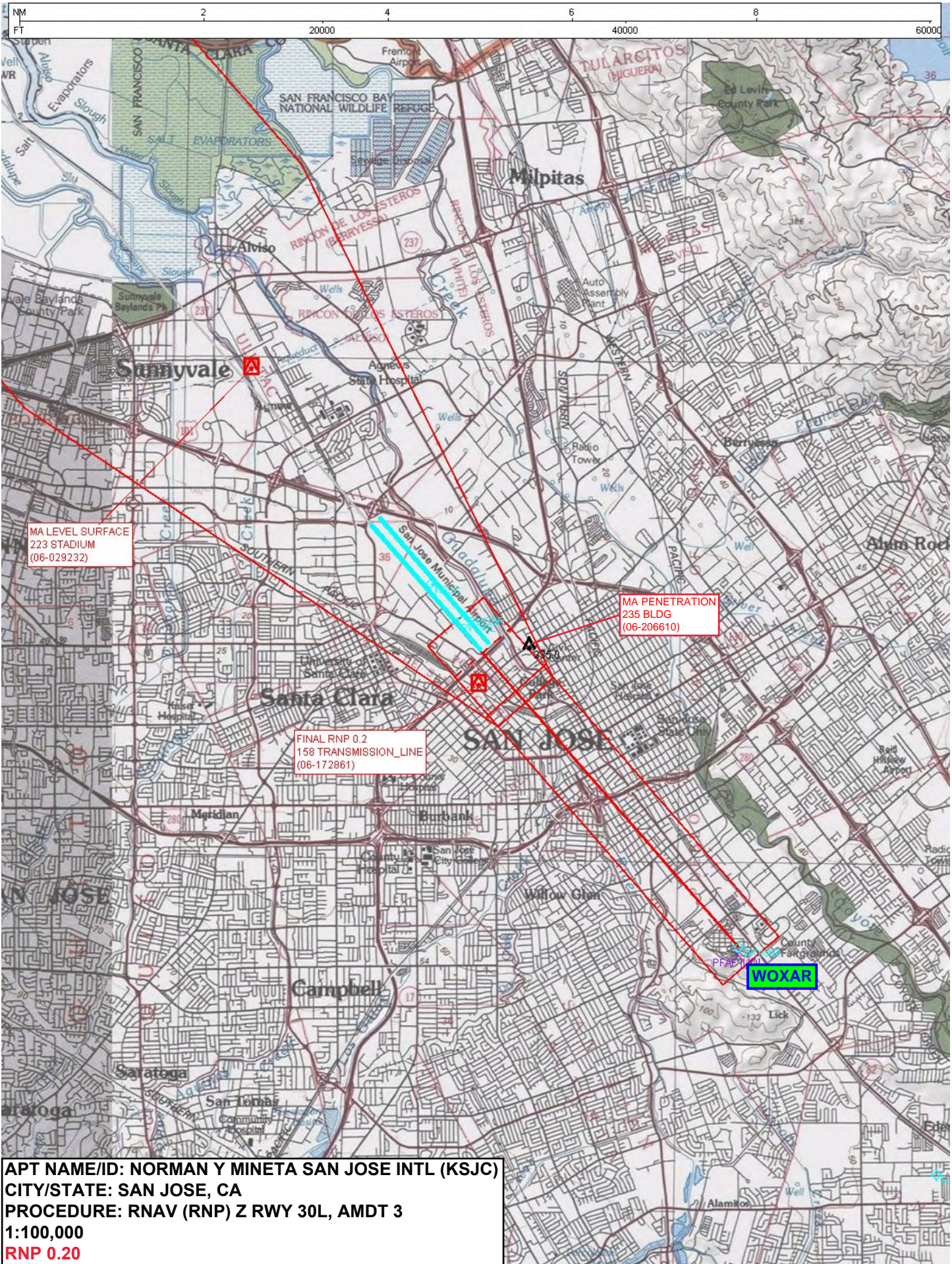






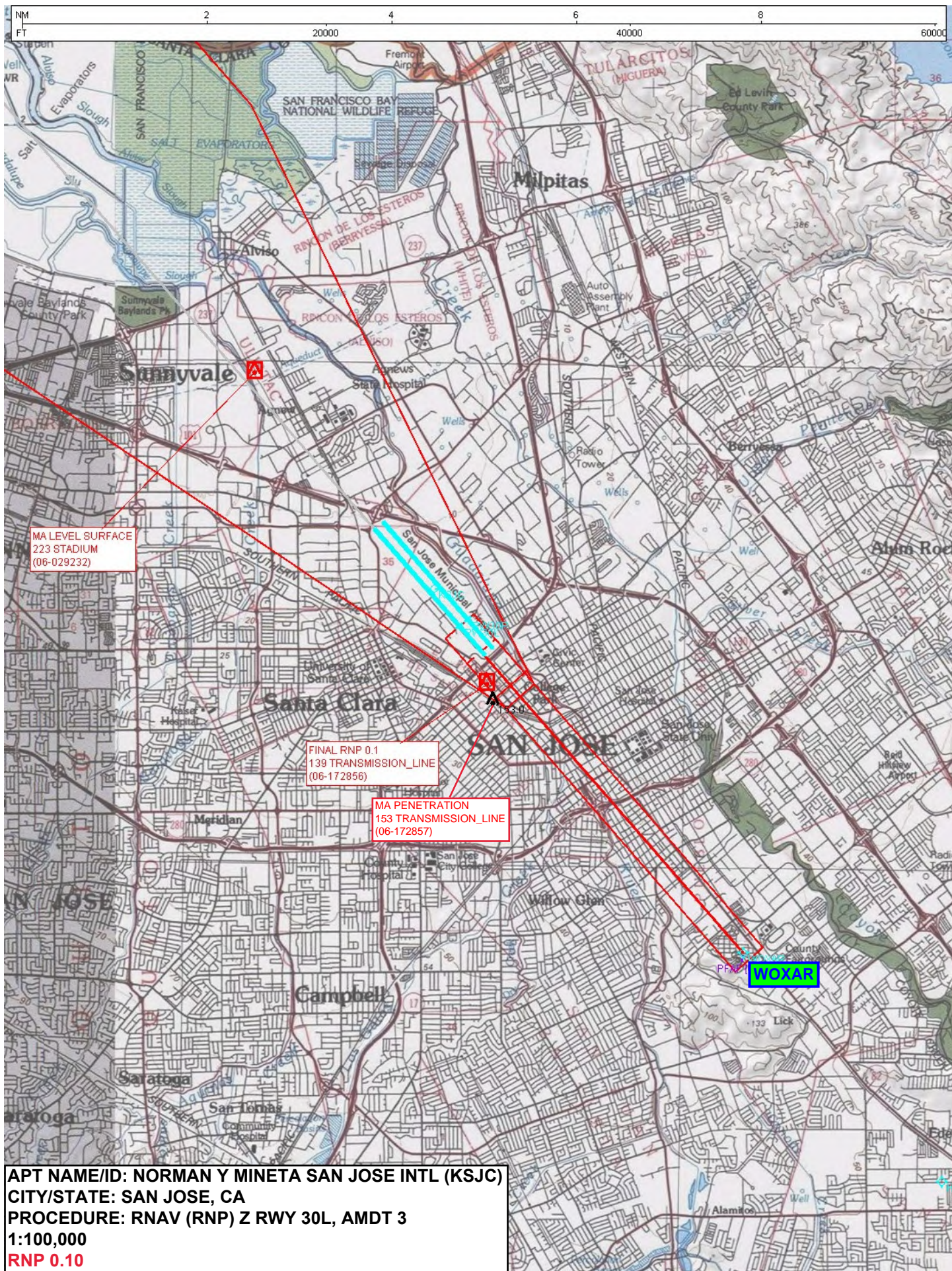
**APT NAME/ID: NORMAN Y MINETA SAN JOSE INTL (KSJC)**  
**CITY/STATE: SAN JOSE, CA**  
**PROCEDURE: RNAV (RNP) Z RWY 30L, AMDT 3**  
**1:100,000**  
**RNP 0.30**





**APT NAME/ID: NORMAN Y MINETA SAN JOSE INTL (KSJC)**  
**CITY/STATE: SAN JOSE, CA**  
**PROCEDURE: RNAV (RNP) Z RWY 30L, AMDT 3**  
**1:100,000**  
**RNP 0.20**





**APT NAME/ID: NORMAN Y MINETA SAN JOSE INTL (KSJC)**  
**CITY/STATE: SAN JOSE, CA**  
**PROCEDURE: RNAV (RNP) Z RWY 30L, AMDT 3**  
**1:100,000**  
**RNP 0.10**



**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
CATEGORICAL EXCLUSION DECLARATION**

**Norman Y Mineta San Jose International Airport**

**BRIXX THREE ARRIVAL (RNAV)  
RNAV (RNP) Z RUNWAY 30L  
RNAV (RNP) Z RUNWAY 30R  
FAIRGROUNDS VISUAL RUNWAYS 30L/R**

**Description of Action:**

The Federal Aviation Administration (FAA) is proposing to amend multiple air traffic procedures that serve Norman Y. Mineta San Jose International Airport (KSJC). The procedures that are proposed to be amended are:

- BRIXX TWO Area Navigation (RNAV) Standard Terminal Arrival Route (STAR)
- RNAV (Required Navigation Performance [RNP]) Z Runway (RWY) 30L
- RNAV (RNP) Z RWY 30R
- Fairgrounds Visual RWYs 30L/R

The proposed amendments would address air traffic control (ATC) safety issues by providing additional separation of aircraft between arrival flight procedures into KSJC, as well as other area airports, while continuing to provide safe and efficient operations. Additionally, the proposed amendments intended to fulfill a subset of the recommendations submitted by the Select Committee on South Bay Arrivals.<sup>1</sup>

The specific proposed changes to BRIXX TWO and the associated procedures included in this project are shown in the following table:

<b>Procedure(s)</b>	<b>Description of proposed changes</b>
BRIXX TWO RNAV STAR	<ul style="list-style-type: none"> <li>• Move the JILNA waypoint (WP) 1.3 nautical mile (NM) southwest. The geographic coordinates of the new location of JILNA WP would be 37°13'54.92"N/122°09'56.50"W.</li> <li>• Add 105° heading after JILNA WP.</li> <li>• Remove current YADUT WP from the procedure.</li> <li>• Remove Minimum En Route Altitudes (MEAs) from Common Route to conform to air traffic control criteria.</li> <li>• New name would be BRIXX THREE RNAV STAR (BRIXX THREE)</li> </ul>

<sup>1</sup> The Select Committee on South Bay Arrivals (Select Committee), which was comprised of county and city officials from the San Francisco Peninsula, was tasked with addressing aircraft noise concerns and reviewing the FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties. Three U.S. Congressional Representatives for California approved the Select Committee's recommendations and requested that the FAA implement those recommendations as soon as possible. The FAA first determined if a new requested procedure was initially feasible, flyable, and operationally acceptable from a safety point of view, and then conducted its formal environmental and safety reviews for this new federal action. (References: SC 1.2 R1 (Pg. 11), SC 1.2 R2 (Pg. 11), and SC 1.2 R4 (Pg. 12).



RNAV (RNP) Z RWY 30L	New waypoint locations to allow efficient transition from BRIXX THREE: <ul style="list-style-type: none"> <li>• JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>• YADUT WP: 37°11'48.57"N/122° 01'3.74"W</li> <li>• HEPAP WP: 37°11'57.20"N/121°58'57.88"W</li> </ul>
RNAV (RNP) Z RWY 30R	New waypoint locations to allow efficient transition from BRIXX THREE: <ul style="list-style-type: none"> <li>• JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>• YADUT WP: 37°11'48.57"N/122° 01'3.74"W</li> <li>• HEPAP WP: 37°11'57.20"N/121°58'57.88"W</li> </ul>
Fairgrounds Visual RWYs 30L/R	New waypoint locations to allow efficient transition from BRIXX THREE: <ul style="list-style-type: none"> <li>• JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>• YADUT WP: 37°11'48.57"N/122° 01'3.74"W</li> </ul>

In accordance with FAA Order 1050.1F, Paragraph 5-2, regarding Extraordinary Circumstances, the FAA has reviewed the proposed amendments for factors and circumstances in which a normally categorically-excluded action may have a significant environmental impact requiring further analysis. The FAA has determined that no extraordinary circumstances exist for the proposed action.

**Declaration of Exclusion:**

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1F.

**Basis for this Determination:**

An Initial Environmental Review (IER) was completed and reviewed by the Western Service Center. This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1C, "Procedures for Considering Environmental Impacts," and FAA Order 1050.1F.

The applicable categorical exclusion is:

***5-6.5.i. - Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima.***

**Recommended by:**

**Facility Airspace Manager Review/Concurrence**

Signature: FRANCINE K MALABO Digitally signed by FRANCINE K MALABO Date: 2020.12.01 14:40:20 -08'00' Date: \_\_\_\_\_  
 Name: Francine K. Malabo  
 Air Traffic Manager  
 NorCal TRACON

**Concurrence by:**

**Western Service Area Environmental Specialist**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name: Ryan Weller  
 Environmental Protection Specialist, Operations Support Group  
 Western Service Center, AJV-W25

**Approval by:**

**Western Service Area Director or Designee Approval**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name: B. G. Chew  
 Acting Group Manager, Operations Support Group  
 Western Service Center, AJV-W2

**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
WESTERN SERVICE AREA**

**CATEGORICAL EXCLUSION DECLARATION**

**Norman Y Mineta San Jose International Airport**

**ILS or LOC RUNWAY 30L  
ILS RUNWAY 30L (SA CAT I – II)  
RNAV (RNP) Z RUNWAY 30L  
RNAV (RNP) Z RUNWAY 30R**

**Description of Action:**

The FAA is proposing to amend the following approach procedures to the Norman Y Mineta San Jose International Airport (KSJC) in San Jose, California:

1. Instrument Landing System (ILS) or Localizer (LOC) Runway (RWY) 30 Left (L)
2. ILS RWY 30L (Special Approach [SA] Category [CAT] I – II)
3. Area Navigation (RNAV) (Required Navigation Performance [RNP]) RWY 30L
4. RNAV (RNP) RWY 30 Right (R)

The following amendments are proposed for each of the four approach procedures listed above:

1. Add an Initial Approach Fix (IAF) at BORED.
2. Add a Step Down Fix (SDF) at SWIGS.
3. Add an initial segment BORED to SWIGS and then to the existing Intermediate Fix (IF) KLIDE.

The IAF BORED, SDF SWIGS and the initial segment BORED-SWIGS-KLIDE are present on the RNAV (GPS) Y RWY 30L approach procedure.

The PRIEST (ROM) Very High Frequency Omnidirectional Range (VOR) navigational aid (NAVAID) will be decommissioned as part of the national VOR Minimum Operating Network (MON) Program. As a result, the Tango or “T” Route, T-333, will be rerouted and the IAF KLIDE will no longer be on the route. The BORED-SWIGS-KLIDE segment mimics and replaces the T-333 segment being moved. T-333 will now connect from the IAF BORED to the IAF GILRO.

The FAA Air Traffic Organization established a noise screening process to help determine the need for a detailed noise analysis of air traffic actions. The MITRE Corporation's Center for Advanced Aviation System Development prepared a guidance document, *Guidance for Noise Screening of Air Traffic Actions (MITRE Guidance)*, to assist the FAA and others involved in proposed air traffic actions with a solid and repeatable approach to noise screening.

The Traffic (TRAF) Test is used to determine if the number of operations on a particular route or procedure is high enough to generate noise levels that exceed noise screening thresholds. The TRAF Test considers aircraft types and the altitudes flown. The TRAF Test was used to evaluate the new segments. Based on the results of the TRAF Tests, potential noise impacts are not expected based on the number of operations on the new segments; therefore, further noise screening is not required.

**Declaration of Exclusion:**

FAA reviewed the above referenced proposed action, and the undersigned determined it to be categorically excluded from further environmental documentation according to FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1F.

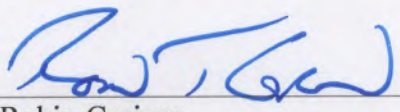
**Basis for this Determination:**

The Aircraft Procedure Environmental Pre-Screening Filter was completed and reviewed by the Western Service Center. This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1C, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1F.

The proposed procedure meets the following categorical exclusions contained in FAA Order 1050.1F:

**5-6.5.i. Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima.**

Facility Manager Review/Concurrence

Signature:  \_\_\_\_\_

Name: Robin Greisen  
Acting Air Traffic Manager  
Northern California Terminal Radar Approach Control (NCT)

Service Area Environmental Specialist Review/Concurrence


Signature: \_\_\_\_\_

Name: Augustin Moses  
Environmental Protection Specialist, Operations Support Group,  
Western Service Center, AJV-W25

Service Area Director Review/Concurrence, if necessary

Signature: \_\_\_\_\_

Name: Paul C. Litke  
Acting Director, Air Traffic Operations  
Western Service Area, AJTW

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: IAP	Estimated Chart Date: 06/17/2021	APWS Task ID: 79CE396254EE45B08FC4F0495FDE1CE0	APWS Project ID: 8858DF385BA241FE9209983F1CA9C311
Procedure: RNAV (RNP) Z RWY 30R AMDT 2		Enroute: NO	Specialist: Gorman, Barbara		Agreement Number:
Airport ID: KSJC			Airport City: SAN JOSE		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type: Hold FC Slot			
<p><b>Procedure Comments:</b> ACTIVE DATA USED FOR AIRPORT AND RUNWAYS. CONTACT: JON DENTON (AJV-A432) 405.954.5467</p> <p>2/17/21: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 1/15/21. 1. REMOVED INITIAL SEGMENTS BORED TO SWIGS, SWIGS TO KLIDE. 2. REMOVED CHART PLANVIEW NOTE AT BORED: (RNP 0.40). 3. REMOVED ADDITIONAL FLIGHT DATA: CHART MINIMUM 5200 AT BORED. 4. REMOVED ADDITIONAL FLIGHT DATA: CODE APPROACH TRANSITION FROM KLIDE.</p>					
					

<b>FIPC BASIC FORM</b>					
<b>PROCEDURE:</b> RNAV (RNP) Z RWY 30R AMDT 2		<b>AIRPORT NAME:</b> NORMAN Y MINETA SAN JOSE INTL		<b>AIRPORT ID:</b> KSJC	<b>SPECIAL CONTROL NO:</b> SG-02-279-21
<b>FAC ID:</b> KSJC30R.02Z		<b>CITY:</b> SAN JOSE		<b>ST:</b> CA	<b>ORIG CHART DATE:</b> 06/17/2021
<b>DFL TYPE:</b> PROC/P	<b>THIRD PARTY:</b> <input type="checkbox"/> YES	<b>EST. TIME ON SITE:</b> 0.4	<b>REIMB. NUMBER:</b> AC0683	<b>PTS TASK ID:</b>	
<b>PREFLIGHT NOTES</b>					
<b>REVIEWER:</b>				<b>DATE:</b>	
<b>COMMENTS:</b>				<b>CHECK ONE:</b>	
				<input type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT	
				<b>YES</b>	<b>NO</b>
				<b>CPV COMPLETE?</b>	
				<b>X</b>	
<b>PROCEDURE RESULTS</b>					
<b>INSPECTION DATE:</b> 03/12/2021	<b>CREW #:</b> VN234	<b>N #:</b> N83	<b>INSTRUMENT PROCEDURE STATUS:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT		<b>ARINC CODING:</b> <input type="checkbox"/> SAT <input checked="" type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT
<b>FLIGHT INSPECTOR SIGNATURE:</b> daniel c favorite @ 03/12/2021 13:04			<b>PRINTED NAME:</b> FAVORITE, DANIEL CHARLES		<b>NOTAM INITIATED?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<b>FLIGHT INSPECTOR REMARKS:</b> Procedure flown sat as submitted.					
<b>IN-FLIGHT OBSTACLE REPORT</b>					
<b>OBSTRUCTION ID #:</b>	<b>COORDINATES OR LOCATION:</b>	<b>GNSS ALTITUDE (MSL):</b>	<b>BAROMETRIC ALTITUDE (MSL):</b>	<b>HEIGHT ABOVE GROUND LEVEL:</b>	

SAN JOSE, CALIFORNIA

AL-693 (FAA)

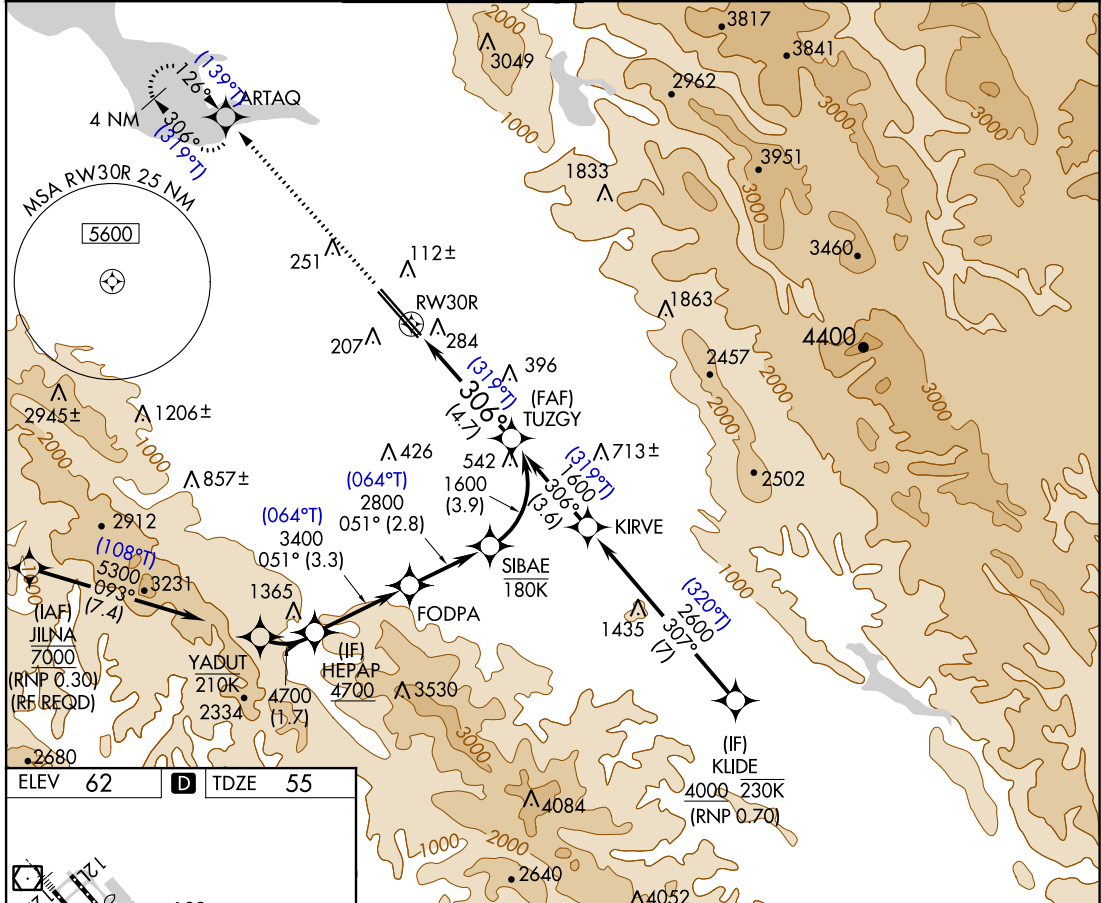
FIG

APP CRS <b>306°</b>	Rwy Idg <b>7597</b>
	TDZE <b>55</b>
	Apt Elev <b>62</b>

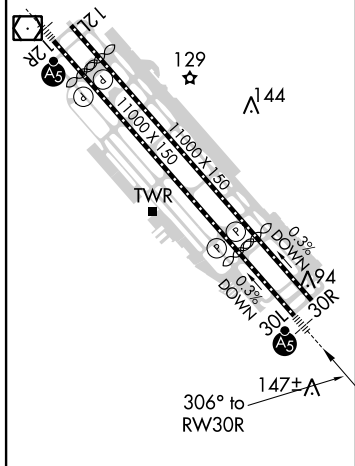
# RNAV (RNP) Z RWY 30R

NORMAN Y MINETA SAN JOSE INTL (SJC)

RNP AR APCH.		MISSED APPROACH: Climb to 600 then climb to 2000 direct ARTAQ and hold.				
▼ For uncompensated Baro-VNAV systems, procedure NA below -1°C or above 54°C. GPS required.						
D-ATIS <b>126.95</b>	NORCAL APP CON <b>120.1 290.25</b>	SAN JOSE TOWER ★ <b>124.0 (CTAF) 0 257.6</b>	GND CON <b>121.7</b>	CLNC DEL <b>118.0</b>	CPDLC	UNICOM <b>122.95</b>



ELEV 62	TDZE 55
---------	---------



600	2000	ARTAQ	VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 69).	TUZGY
↑	↑	✧		1600
See planview for multiple IF locations.				1600
RW30R				GP 3.00° TCH 55
4.7 NM				

CATEGORY	A	B	C	D
RNP 0.11 DA		377-1	322 (400-1)	
RNP 0.20 DA		472-1½	417 (500-1½)	
RNP 0.30 DA		538-1¾	483 (500-1¾)	

**AUTHORIZATION REQUIRED**

REIL Rwy 12L  
HIRL Rwy 12L-30R and 12R-30L

SAN JOSE, CALIFORNIA  
Amdt 2 FIG

NORMAN Y MINETA SAN JOSE INTL (SJC)  
37°22'N-121°56'W  
**RNAV (RNP) Z RWY 30R**

**AUTOMATED AL-693 RNAV (RNP) Z RWY 30R**  
**AUTOMATED AL-693 RNAV (RNP) Z RWY 30R**

SW-2  
01-27-21  
COMPILER: JUN  
REVIEWER:  
DBL CHKR:  
EFF: FIG



SAN JOSE, CALIFORNIA

AL-693 (FAA)

20366

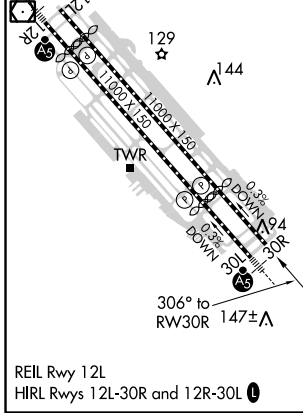
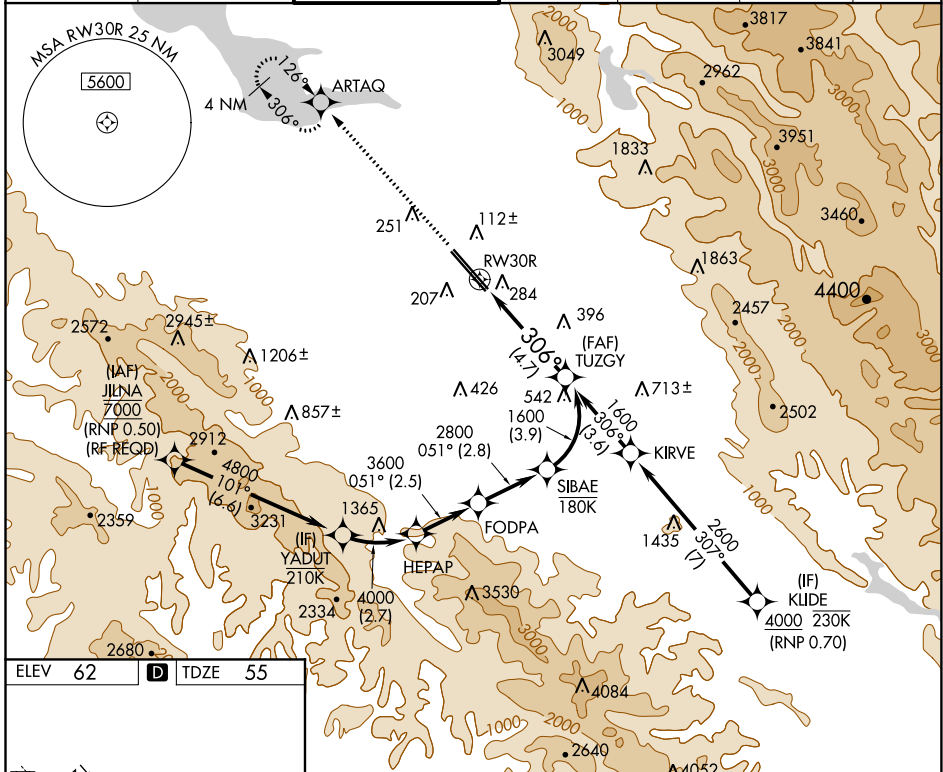
APP CRS	Rwy Idg	<b>7597</b>
<b>306°</b>	TDZE	<b>55</b>
	Apt Elev	<b>62</b>

**RNAV (RNP) Z RWY 30R**  
NORMAN Y MINETA SAN JOSE INTL (SJC)

**▽** For uncompensated Baro-VNAV systems, procedure NA below -1°C (31°F) or above 54°C (130°F). GPS required.

MISSED APPROACH: Climb to 600 then climb to 2300 direct ARTAQ and hold.

D-ATIS	NORCAL APP CON	SAN JOSE TOWER *	GND CON	CLNC DEL	CPDLC	UNICOM
<b>126.95</b>	<b>120.1 290.25</b>	<b>124.0 (CTAF) 0 257.6</b>	<b>121.7</b>	<b>118.0</b>		<b>122.95</b>



ELEV 62	<b>D</b>	TDZE 55		
600	2300	ARTAQ	VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 69).	TUZGY
↑	↑	✧		1600
See planview for multiple IF locations.				
RW30R		306°		1600
GP 3.00° TCH 55				
4.7 NM				
CATEGORY	A	B	C	D
RNP 0.11 DA		404-1 $\frac{1}{8}$	349 (400-1 $\frac{1}{8}$ )	
RNP 0.20 DA		475-1 $\frac{3}{8}$	420 (500-1 $\frac{3}{8}$ )	
RNP 0.30 DA		541-1 $\frac{5}{8}$	486 (500-1 $\frac{5}{8}$ )	
<b>AUTHORIZATION REQUIRED</b>				

SAN JOSE, CALIFORNIA  
Amdt 1A 21JUL16

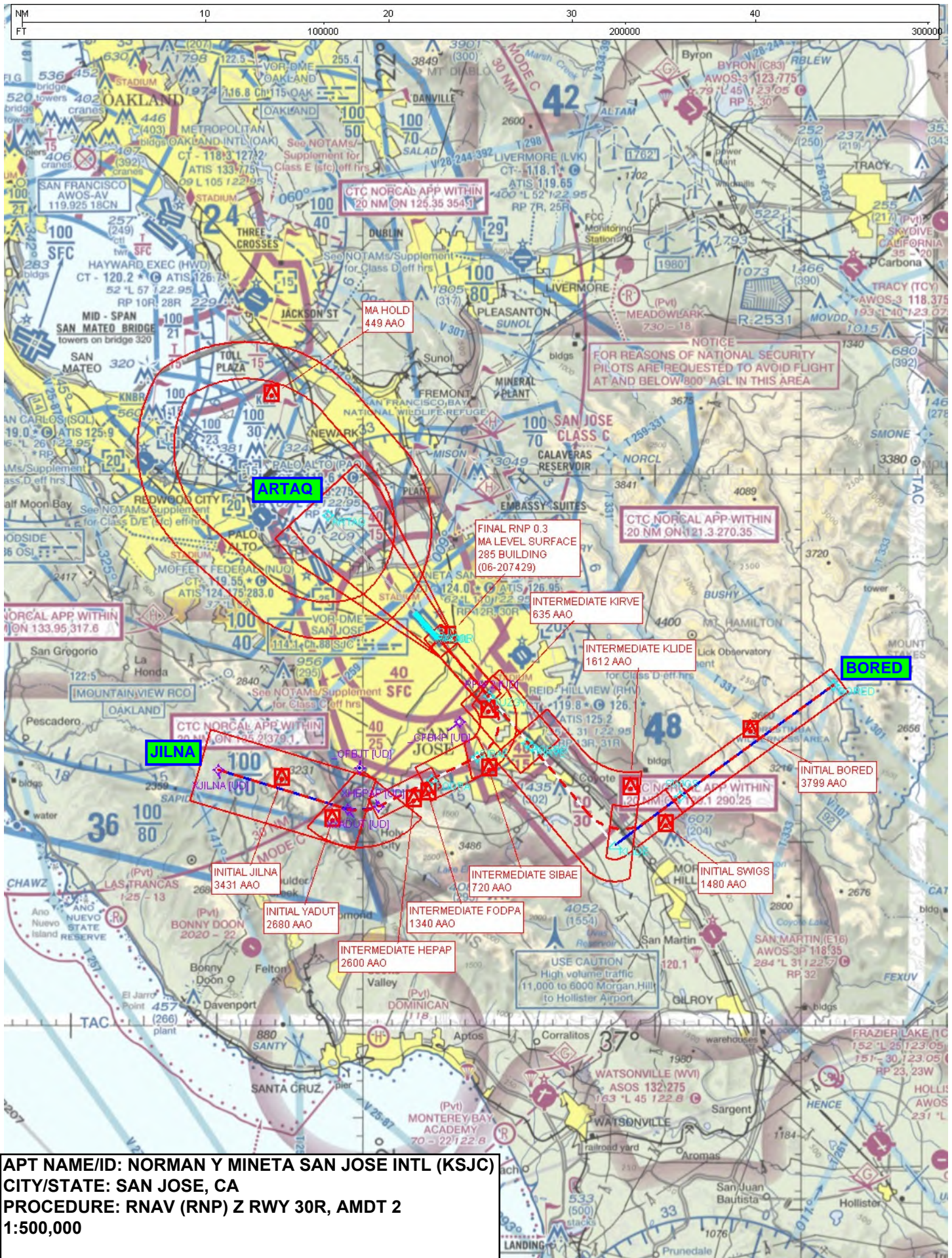
NORMAN Y MINETA SAN JOSE INTL (SJC)  
RNAV (RNP) Z RWY 30R

37°22'N-121°56'W

SW-2, 31 DEC 2020 to 28 JAN 2021

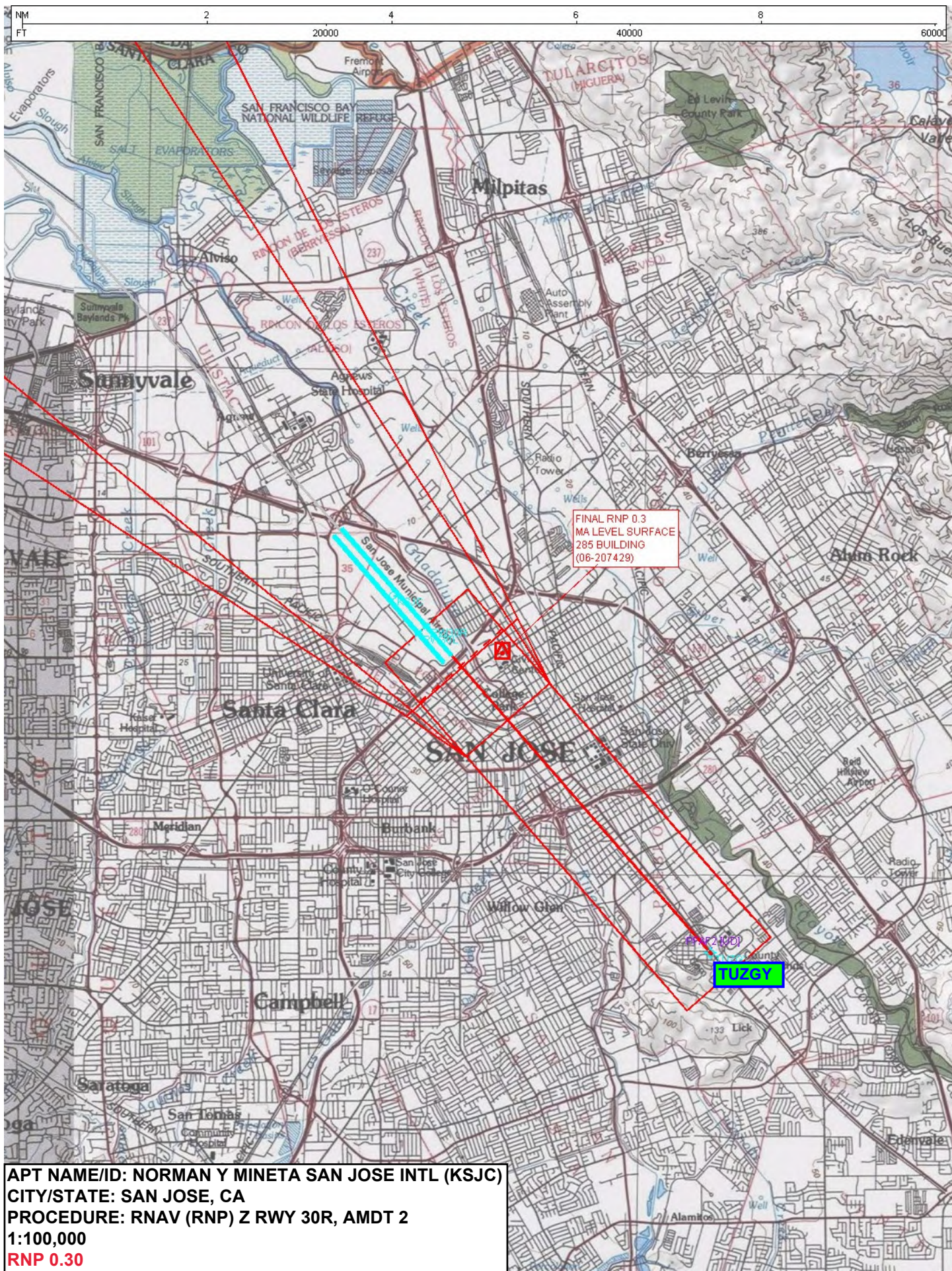
SW-2, 31 DEC 2020 to 28 JAN 2021





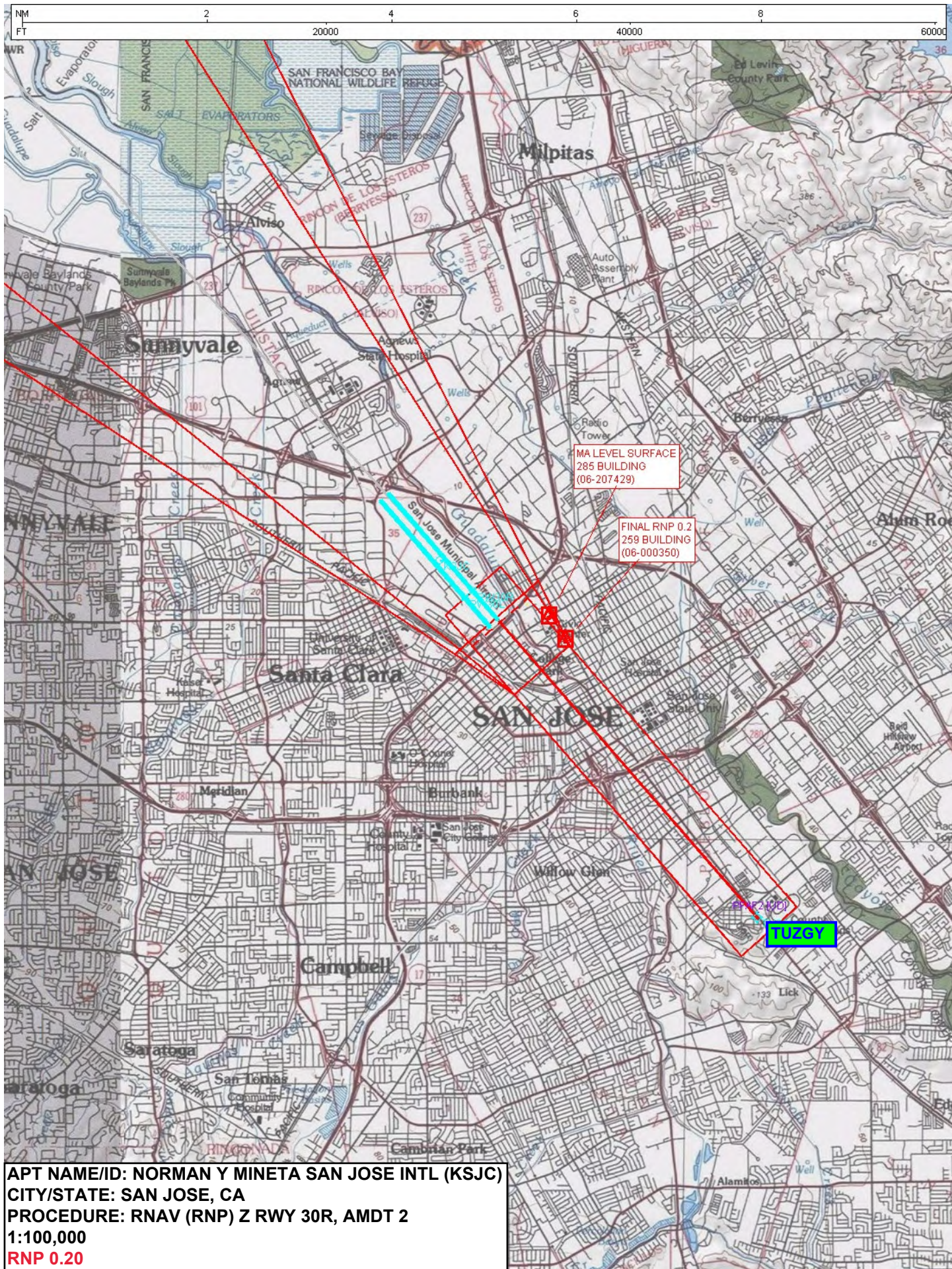
APT NAME/ID: NORMAN Y MINETA SAN JOSE INTL (KSJC)  
 CITY/STATE: SAN JOSE, CA  
 PROCEDURE: RNAV (RNP) Z RWY 30R, AMDT 2  
 1:500,000





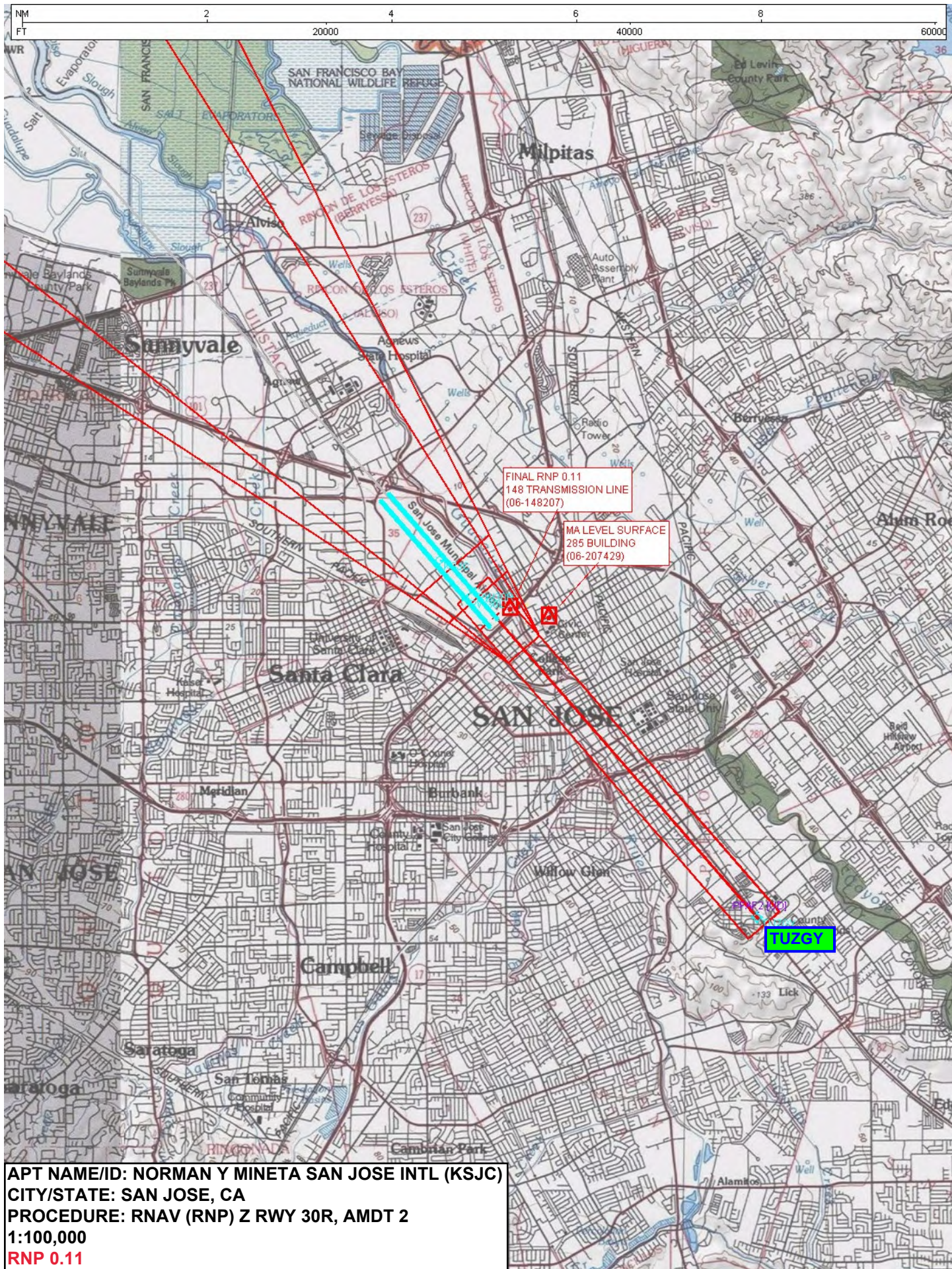
**APT NAME/ID: NORMAN Y MINETA SAN JOSE INTL (KSJC)**  
**CITY/STATE: SAN JOSE, CA**  
**PROCEDURE: RNAV (RNP) Z RWY 30R, AMDT 2**  
**1:100,000**  
**RNP 0.30**





APT NAME/ID: NORMAN Y MINETA SAN JOSE INTL (KSJC)  
CITY/STATE: SAN JOSE, CA  
PROCEDURE: RNAV (RNP) Z RWY 30R, AMDT 2  
1:100,000  
**RNP 0.20**





APT NAME/ID: NORMAN Y MINETA SAN JOSE INTL (KSJC)  
CITY/STATE: SAN JOSE, CA  
PROCEDURE: RNAV (RNP) Z RWY 30R, AMDT 2  
1:100,000  
RNP 0.11



**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
CATEGORICAL EXCLUSION DECLARATION**

**Norman Y Mineta San Jose International Airport**

**BRIXX THREE ARRIVAL (RNAV)  
RNAV (RNP) Z RUNWAY 30L  
RNAV (RNP) Z RUNWAY 30R  
FAIRGROUNDS VISUAL RUNWAYS 30L/R**

**Description of Action:**

The Federal Aviation Administration (FAA) is proposing to amend multiple air traffic procedures that serve Norman Y. Mineta San Jose International Airport (KSJC). The procedures that are proposed to be amended are:

- BRIXX TWO Area Navigation (RNAV) Standard Terminal Arrival Route (STAR)
- RNAV (Required Navigation Performance [RNP]) Z Runway (RWY) 30L
- RNAV (RNP) Z RWY 30R
- Fairgrounds Visual RWYs 30L/R

The proposed amendments would address air traffic control (ATC) safety issues by providing additional separation of aircraft between arrival flight procedures into KSJC, as well as other area airports, while continuing to provide safe and efficient operations. Additionally, the proposed amendments intended to fulfill a subset of the recommendations submitted by the Select Committee on South Bay Arrivals.<sup>1</sup>

The specific proposed changes to BRIXX TWO and the associated procedures included in this project are shown in the following table:

<b>Procedure(s)</b>	<b>Description of proposed changes</b>
BRIXX TWO RNAV STAR	<ul style="list-style-type: none"> <li>• Move the JILNA waypoint (WP) 1.3 nautical mile (NM) southwest. The geographic coordinates of the new location of JILNA WP would be 37°13'54.92"N/122°09'56.50"W.</li> <li>• Add 105° heading after JILNA WP.</li> <li>• Remove current YADUT WP from the procedure.</li> <li>• Remove Minimum En Route Altitudes (MEAs) from Common Route to conform to air traffic control criteria.</li> <li>• New name would be BRIXX THREE RNAV STAR (BRIXX THREE)</li> </ul>

<sup>1</sup> The Select Committee on South Bay Arrivals (Select Committee), which was comprised of county and city officials from the San Francisco Peninsula, was tasked with addressing aircraft noise concerns and reviewing the FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties. Three U.S. Congressional Representatives for California approved the Select Committee's recommendations and requested that the FAA implement those recommendations as soon as possible. The FAA first determined if a new requested procedure was initially feasible, flyable, and operationally acceptable from a safety point of view, and then conducted its formal environmental and safety reviews for this new federal action. (References: SC 1.2 R1 (Pg. 11), SC 1.2 R2 (Pg. 11), and SC 1.2 R4 (Pg. 12).

RNAV (RNP) Z RWY 30L	New waypoint locations to allow efficient transition from BRIXX THREE: <ul style="list-style-type: none"> <li>• JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>• YADUT WP: 37°11'48.57"N/122° 01'3.74"W</li> <li>• HEPAP WP: 37°11'57.20"N/121°58'57.88"W</li> </ul>
RNAV (RNP) Z RWY 30R	New waypoint locations to allow efficient transition from BRIXX THREE: <ul style="list-style-type: none"> <li>• JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>• YADUT WP: 37°11'48.57"N/122° 01'3.74"W</li> <li>• HEPAP WP: 37°11'57.20"N/121°58'57.88"W</li> </ul>
Fairgrounds Visual RWYs 30L/R	New waypoint locations to allow efficient transition from BRIXX THREE: <ul style="list-style-type: none"> <li>• JILNA WP: 37°13'54.92"N/122°09'56.50"W</li> <li>• YADUT WP: 37°11'48.57"N/122° 01'3.74"W</li> </ul>

In accordance with FAA Order 1050.1F, Paragraph 5-2, regarding Extraordinary Circumstances, the FAA has reviewed the proposed amendments for factors and circumstances in which a normally categorically-excluded action may have a significant environmental impact requiring further analysis. The FAA has determined that no extraordinary circumstances exist for the proposed action.

**Declaration of Exclusion:**

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1F.

**Basis for this Determination:**

An Initial Environmental Review (IER) was completed and reviewed by the Western Service Center. This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1C, "Procedures for Considering Environmental Impacts," and FAA Order 1050.1F.

The applicable categorical exclusion is:

***5-6.5.i. - Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima.***

**Recommended by:**

**Facility Airspace Manager Review/Concurrence**

Signature: FRANCINE K MALABO Digitally signed by FRANCINE K MALABO  
Date: 2020.12.01 14:40:20 -08'00' Date: \_\_\_\_\_  
 Name: Francine K. Malabo  
 Air Traffic Manager  
 NorCal TRACON

**Concurrence by:**

**Western Service Area Environmental Specialist**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name: Ryan Weller  
 Environmental Protection Specialist, Operations Support Group  
 Western Service Center, AJV-W25

**Approval by:**

**Western Service Area Director or Designee Approval**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name: B. G. Chew  
 Acting Group Manager, Operations Support Group  
 Western Service Center, AJV-W2



**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
WESTERN SERVICE AREA**

**CATEGORICAL EXCLUSION DECLARATION**

**Norman Y Mineta San Jose International Airport**

**ILS or LOC RUNWAY 30L  
ILS RUNWAY 30L (SA CAT I – II)  
RNAV (RNP) Z RUNWAY 30L  
RNAV (RNP) Z RUNWAY 30R**

**Description of Action:**

The FAA is proposing to amend the following approach procedures to the Norman Y Mineta San Jose International Airport (KSJC) in San Jose, California:

1. Instrument Landing System (ILS) or Localizer (LOC) Runway (RWY) 30 Left (L)
2. ILS RWY 30L (Special Approach [SA] Category [CAT] I – II)
3. Area Navigation (RNAV) (Required Navigation Performance [RNP]) RWY 30L
4. RNAV (RNP) RWY 30 Right (R)

The following amendments are proposed for each of the four approach procedures listed above:

1. Add an Initial Approach Fix (IAF) at BORED.
2. Add a Step Down Fix (SDF) at SWIGS.
3. Add an initial segment BORED to SWIGS and then to the existing Intermediate Fix (IF) KLIDE.

The IAF BORED, SDF SWIGS and the initial segment BORED-SWIGS-KLIDE are present on the RNAV (GPS) Y RWY 30L approach procedure.

The PRIEST (ROM) Very High Frequency Omnidirectional Range (VOR) navigational aid (NAVAID) will be decommissioned as part of the national VOR Minimum Operating Network (MON) Program. As a result, the Tango or “T” Route, T-333, will be rerouted and the IAF KLIDE will no longer be on the route. The BORED-SWIGS-KLIDE segment mimics and replaces the T-333 segment being moved. T-333 will now connect from the IAF BORED to the IAF GILRO.

The FAA Air Traffic Organization established a noise screening process to help determine the need for a detailed noise analysis of air traffic actions. The MITRE Corporation's Center for Advanced Aviation System Development prepared a guidance document, *Guidance for Noise Screening of Air Traffic Actions (MITRE Guidance)*, to assist the FAA and others involved in proposed air traffic actions with a solid and repeatable approach to noise screening.

The Traffic (TRAF) Test is used to determine if the number of operations on a particular route or procedure is high enough to generate noise levels that exceed noise screening thresholds. The TRAF Test considers aircraft types and the altitudes flown. The TRAF Test was used to evaluate the new segments. Based on the results of the TRAF Tests, potential noise impacts are not expected based on the number of operations on the new segments; therefore, further noise screening is not required.

**Declaration of Exclusion:**

FAA reviewed the above referenced proposed action, and the undersigned determined it to be categorically excluded from further environmental documentation according to FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1F.

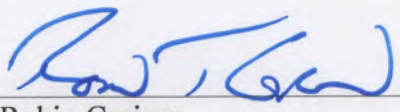
**Basis for this Determination:**

The Aircraft Procedure Environmental Pre-Screening Filter was completed and reviewed by the Western Service Center. This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1C, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1F.

The proposed procedure meets the following categorical exclusions contained in FAA Order 1050.1F:

**5-6.5.i. Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima.**

Facility Manager Review/Concurrence

Signature:  \_\_\_\_\_

Name: Robin Greisen  
Acting Air Traffic Manager  
Northern California Terminal Radar Approach Control (NCT)

Service Area Environmental Specialist Review/Concurrence



Signature: \_\_\_\_\_

Name: Augustin Moses  
Environmental Protection Specialist, Operations Support Group,  
Western Service Center, AJV-W25

Service Area Director Review/Concurrence, if necessary

Signature: \_\_\_\_\_

Name: Paul C. Litke  
Acting Director, Air Traffic Operations  
Western Service Area, AJTW

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 06/17/2021	APWS Task ID: 41D49B1903FF4AC3B978E10B8B9DB39D	APWS Project ID: 333278DE7D3E45CFB3F7F737BC3988B3
Procedure: STAR BRIXX (RNAV) THREE SAN JOSE CA KSJC		Enroute: YES	Specialist: Blanco, Joseph		Agreement Number:
Airport ID: KSJC		Airport City: SAN JOSE		State: CA	
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<p>Procedure Comments: AMEND - STAR BRIXX THREE (RNAV) TO MOVE JILNA, ADD VM LEG TO JILNA, REMOVE YADUT, REMOVE MEAS.</p> <p>CONTACT ALLAN WILL 405.954.6103</p> <p>1 EA APPROVAL LETTER</p>					
					
<p>01/27/2021</p> 					



# Federal Aviation Administration

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## Memorandum

Date: October 26, 2020

To: Manager, Flight Procedures & Airspace Group (AFS-420)  
THRU: Manager, Flight Procedures Team, FAA, ATO  
Western Service Center, Operations Support Group, AJV-W24

From: Derek Wofe & Chris Thomas, WSC-OSG PBN Co-Leads

Subject: Approval Request: Norman Y Mineta, San Jose, CA (KSJC), BRIXX  
Standard Terminal Arrival (STAR)

---

Requesting approval to omit an altitude restriction on the BRIXX STAR termination fix at JILNA Waypoint.

The requirement in Order 8260.3D, paragraph 2-2-7. F. (2) states:

“If the STAR authorizes radar vectors after the termination fix, an altitude is required at the termination fix. . .”

The STAR authorizes radar vectors after the termination fix and includes a final altitude restriction of “At” 12000 (above the minimum vectoring altitude (MVA)) at BRIXX Waypoint—which precedes the STAR termination fix JILNA Waypoint.

There is an operational need to have the BRIXX STAR terminate at JILNA Waypoint due to ATC airspace boundaries and traffic density.

(BRXX.BRIXX3) FIG

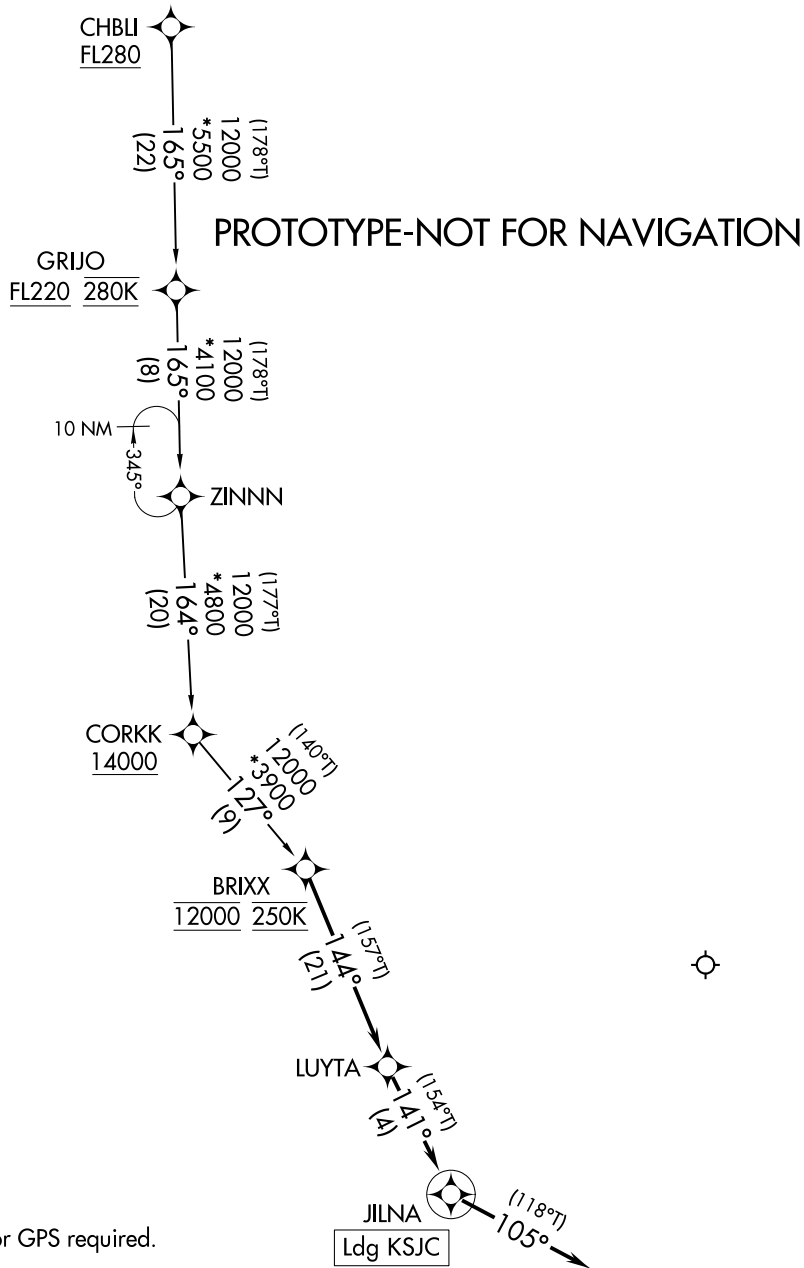
**BRIXX THREE ARRIVAL (RNAV)**

AL-693 (FAA)

NORMAN Y MINETA SAN JOSE INTL (SJC)

SAN JOSE, CALIFORNIA

OAKLAND CENTER  
 125.85 323.0  
 NORCAL APP CON  
 133.95 317.6  
 D-ATIS  
 126.95  
 SAN JOSE TOWER \*  
 124.0 257.6  
 GND CON  
 121.7



NOTE: RADAR required.  
 NOTE: RNAV 1.  
 NOTE: DME/DME/IRU or GPS required.

NOTE: Chart not to scale.

**ARRIVAL ROUTE DESCRIPTION**

CHBLI TRANSITION (CHBLI.BRIXX3)

From BRIXX on track 144° to LUYTA, then on track 141° to JILNA, then on heading 105° or as assigned by ATC. Expect RADAR vectors to final approach course.

**AUTOMATED AL-693 BRIXX ARRIVAL**

SW-2  
 1-26-21  
 COMPILER: HD  
 REVIEWER:  
 DBL CHKR:  
 EFF: FIG

**BRIXX THREE ARRIVAL (RNAV)**

(BRXX.BRIXX3) FIG Amdt 1

SAN JOSE, CALIFORNIA

NORMAN Y MINETA SAN JOSE INTL (SJC)

(BRXX.BRIXX3) FIG

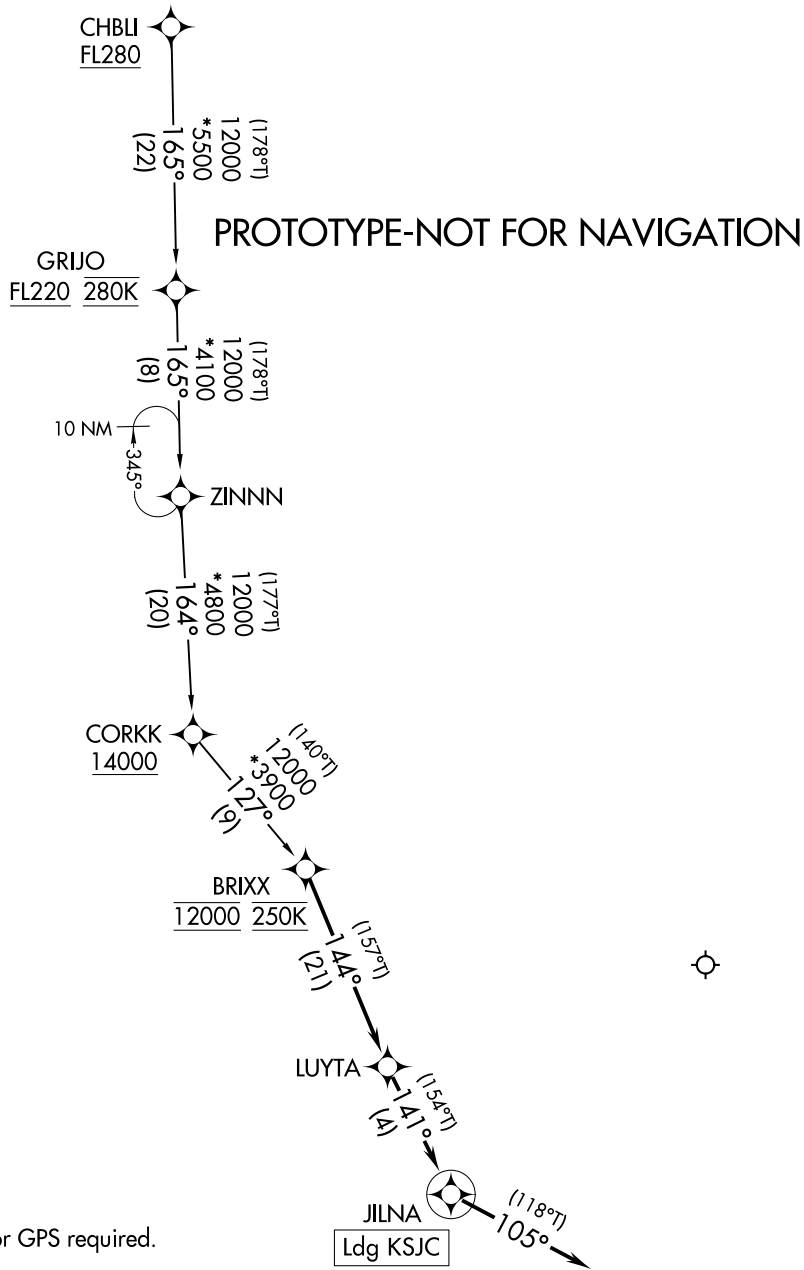
**BRIXX THREE ARRIVAL (RNAV)**

AL-693 (FAA)

NORMAN Y MINETA SAN JOSE INTL (SJC)

SAN JOSE, CALIFORNIA

OAKLAND CENTER  
125.85 323.0  
NORCAL APP CON  
133.95 317.6  
D-ATIS  
126.95  
SAN JOSE TOWER \*  
124.0 257.6  
GND CON  
121.7



NOTE: RADAR required.  
NOTE: RNAV 1.  
NOTE: DME/DME/IRU or GPS required.

NOTE: Chart not to scale.

**ARRIVAL ROUTE DESCRIPTION**

CHBLI TRANSITION (CHBLI.BRIXX3)

From BRIXX on track 144° to LUYTA, then on track 141° to JILNA, then on heading 105° or as assigned by ATC. Expect RADAR vectors to final approach course.

**AUTOMATED AL-693 BRIXX ARRIVAL**

SW-2  
1-26-21  
COMPILER: HD  
REVIEWER:  
DBL CHKR:  
EFF: FIG

**BRIXX THREE ARRIVAL (RNAV)**

(BRXX.BRIXX3) FIG Amdt 1

SAN JOSE, CALIFORNIA

NORMAN Y MINETA SAN JOSE INTL (SJC)

DME ESV KSJC [IFPA] BRIXX3 RNAV STAR\_20201026\_1403 MDT.

DME ESVs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
None								

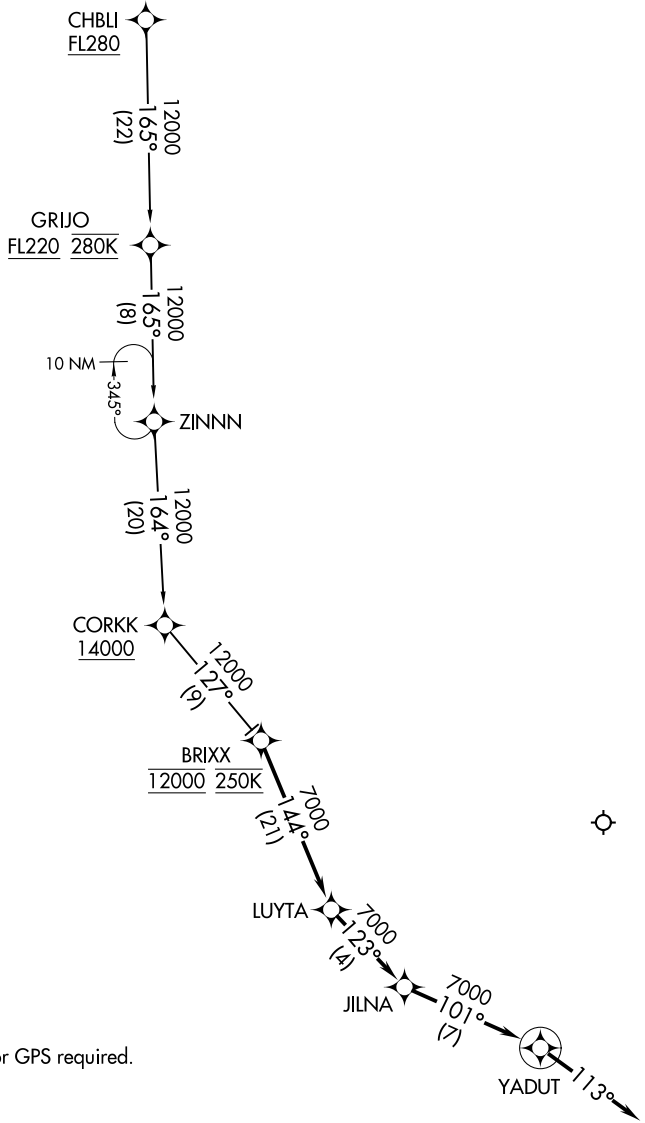


BRXX TWO ARRIVAL (RNAV)

AL-693 (FAA)

NORMAN Y MINETA SAN JOSE INTL (SJC)  
SAN JOSE, CALIFORNIA

OAKLAND CENTER  
125.85 323.0  
NORCAL APP CON  
133.95 317.6  
D-ATIS  
126.95  
SAN JOSE TOWER ★  
124.0 257.6  
GND CON  
121.7



NOTE: RADAR required.  
NOTE: RNAV 1.  
NOTE: DME/DME/IRU or GPS required.

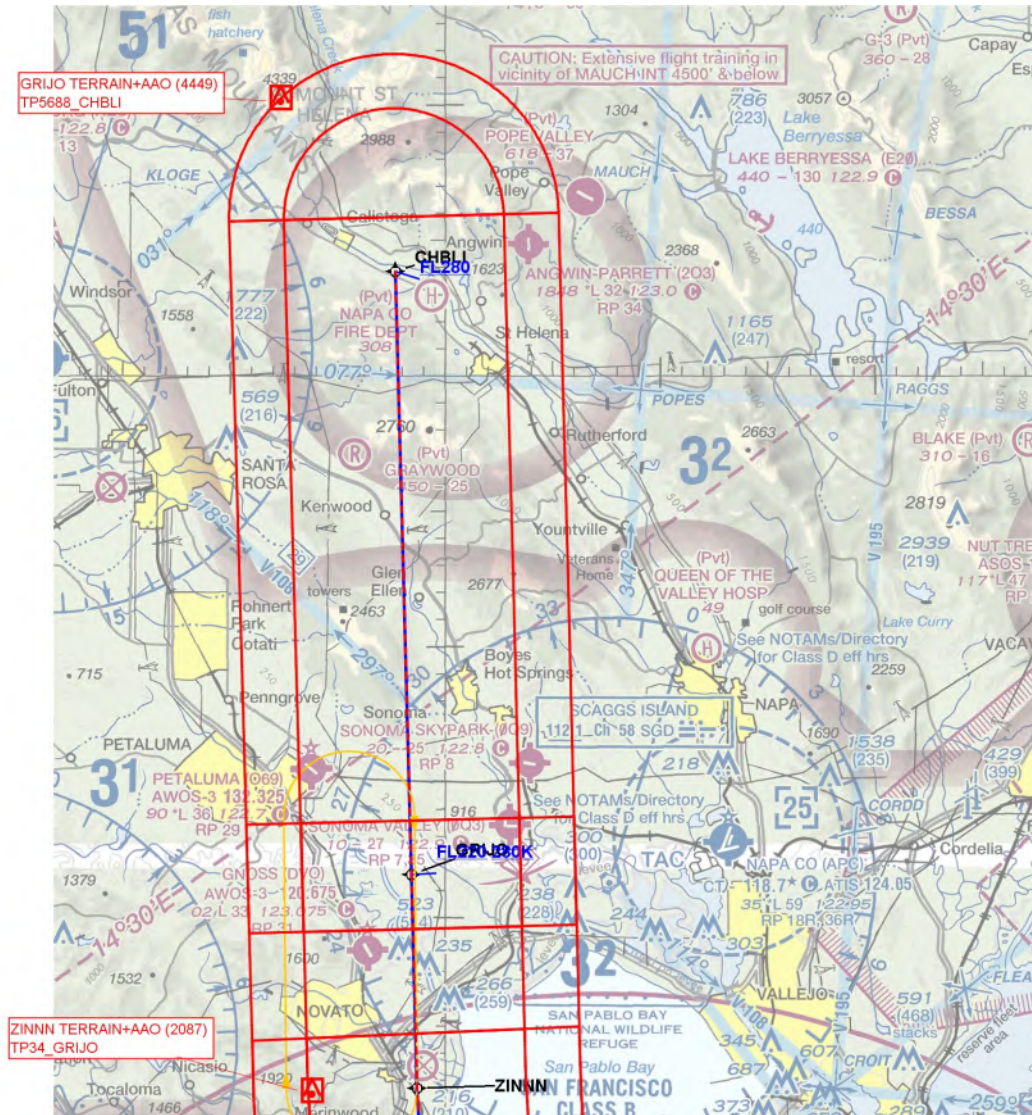
NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

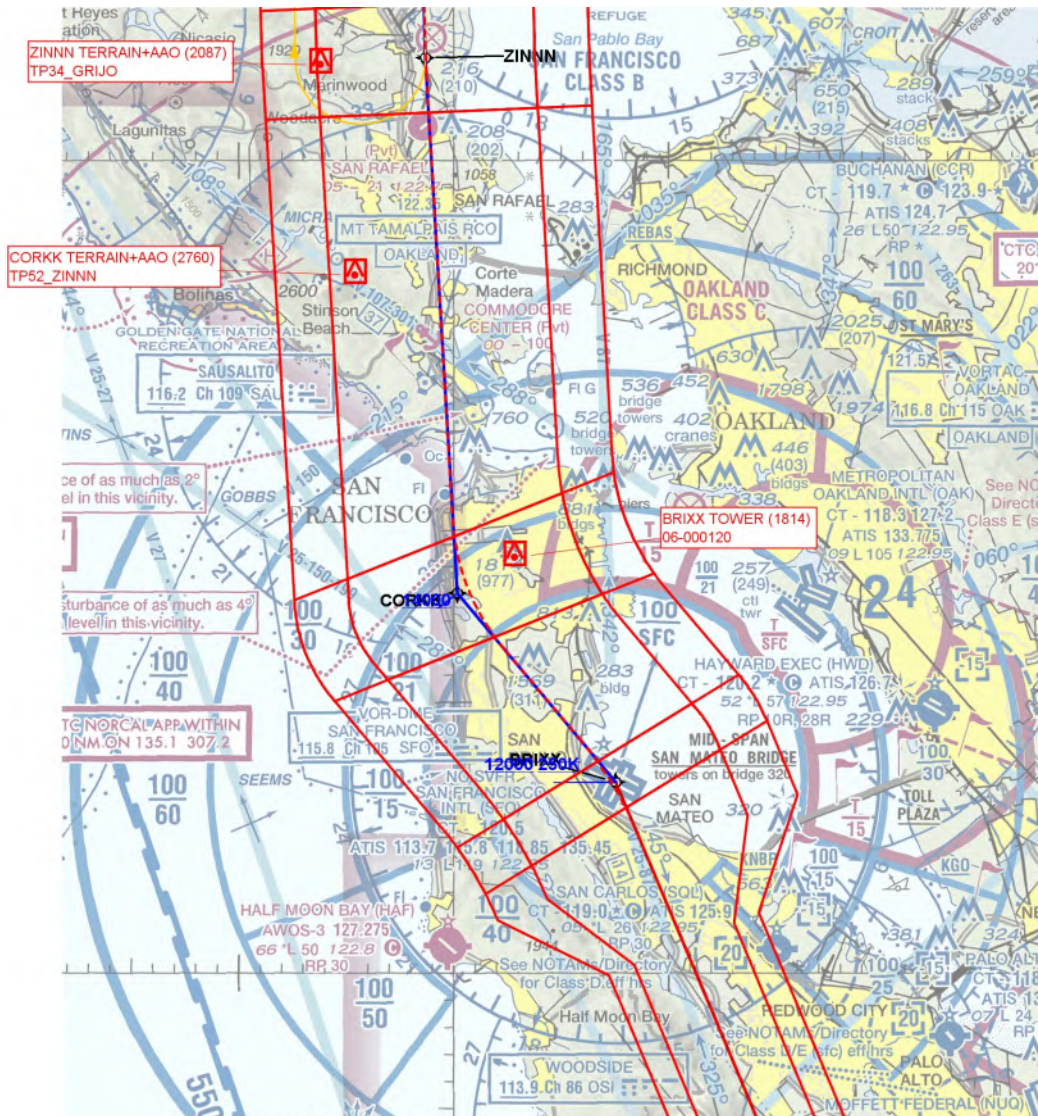
CHBLI TRANSITION (CHBLI.BRXX2)

From BRXX on track 144° to LUYTA, then on track 123° to JILNA, then on track 101° to YADUT, then on track 113°. Expect RADAR vectors to final approach course.

BRXX TWO ARRIVAL (RNAV)

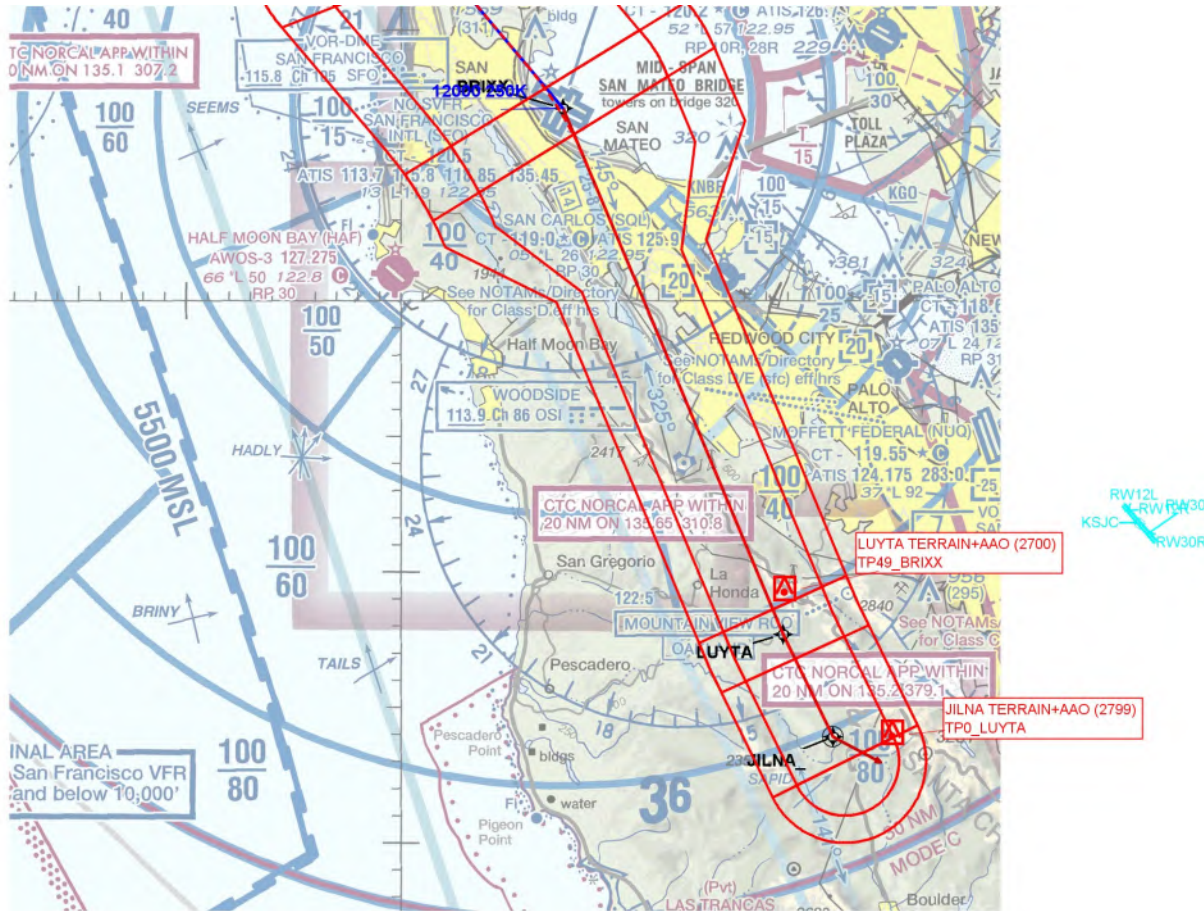


BRIXX (RNAV)



BRIXX (RNAV)





BRIXX (RNAV)

## Appendix 5. Air Traffic Initial Environmental Review (IER)

Facility: Northern California TRACON

Date: December 1, 2020

Prepared by: Vikas Uberoi

Phone: (206) 231-2481

***NOTE:** This IER provides basic information about the proposed action to better assist in preparing for the environmental analysis phase of a proposed action. Although it requests information in several categories, not all the data may be available initially; however, it does represent information, in accordance with FAA Order 1050.1, Environmental Impacts: Policies and Procedures, which ultimately will be needed for preparation of the appropriate environmental document. If the Instrument Flight Procedure (IFP) Environmental Pre-Screening Filter is used for initiating the environmental review process, and it passes the initial screening, then the IER is unnecessary. Additional guidance on the identification of potential environmental impacts by environmental category is available in the 1050.1 Desk Reference.*

### Section 1. Proposed Project Description

Describe the proposed project. Include general information identifying procedure(s) and/or airspace action(s) to be implemented and/or amended. Identify the associated airports and/or facilities.

- 1.1.** Describe the operational and/or environmental benefits that may result if the proposed action is implemented.

The Federal Aviation Administration (FAA) is proposing to amend multiple air traffic procedures that serve Norman Y. Mineta San Jose International Airport (KSJC). The procedures that are proposed to be amended are:

- BRIXX TWO Area Navigation (RNAV) Standard Terminal Arrival Route (STAR)
- RNAV (Required Navigation Performance [RNP]) Z Runway (RWY) 30L
- RNAV (RNP) Z RWY 30R
- Fairgrounds Visual RWYs 30L/R

The proposed amendments would address air traffic control (ATC) safety issues by providing additional separation of aircraft between arrival flight procedures into KSJC, as well as other area airports, while continuing to provide safe and efficient operations. Additionally, the proposed amendments intended to fulfill a subset of the recommendations submitted by the Select Committee on South Bay Arrivals.<sup>1</sup>

<sup>1</sup> The Select Committee on South Bay Arrivals (Select Committee), which was comprised of county and city officials from the San Francisco Peninsula, was tasked with addressing aircraft noise concerns and reviewing the FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties. Three U.S. Congressional Representatives for California approved the Select Committee's recommendations and requested that the FAA implement those recommendations as soon as possible. The FAA first determined if a new requested procedure was initially feasible, flyable, and operationally acceptable from a safety point of view, and then conducted its formal environmental and safety reviews for this new federal action. (References: SC 1.2 R1 (Pg. 11), SC 1.2 R2 (Pg. 11), and SC 1.2 R4 (Pg. 12).

2/28/19

JO 7400.2M

**1.1.1.** Is a reduction of fuel cost and/or energy consumption anticipated as a result of the proposed action?

Yes  No  N/A

Fuel consumption is not applicable to the purpose and need of the project.

**1.1.1.a.** If so, can it be quantified, and how?

Yes  No  N/A

Not applicable to the purpose and need of the project.

**1.1.1.b.** If not quantifiable, describe the approximate anticipated benefits in lay terms.

Not applicable to the purpose and need of the project.

**1.1.2.** Describe any additional operational and/or environmental benefits that may result from the proposed action.

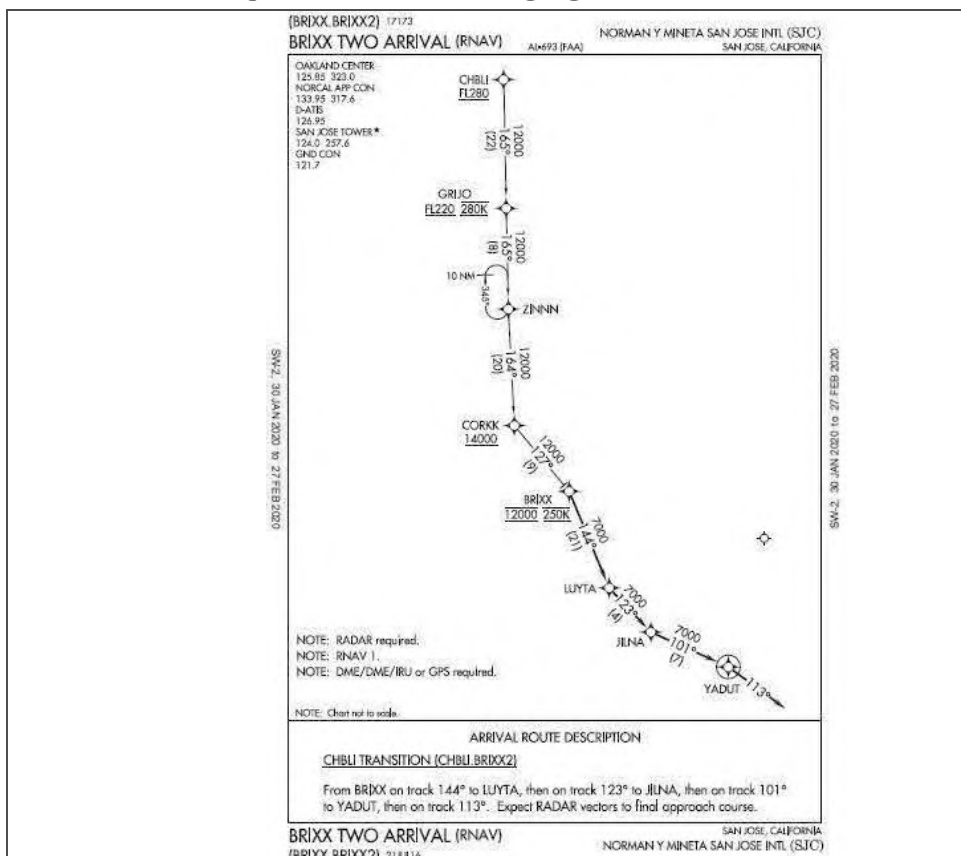
No additional benefits are applicable to the purpose and need of the project.

**1.2.** Describe the existing procedure(s) (the no action alternative) in full detail. Provide the necessary chart(s) depicting the current procedure(s). Describe the typical fleet mix, including (if possible) the number and types of aircraft on the route (both annually and average day) and depict their altitude(s) along the route.

Currently, pertinent to this project, the following procedures are in use at KSJC:

- BRIXX TWO RNAV STAR (BRIXX TWO)
- RNAV (RNP) Z RWY 30L
- RNAV (RNP) Z RWY 30R
- Fairgrounds Visual RWYs 30L/R

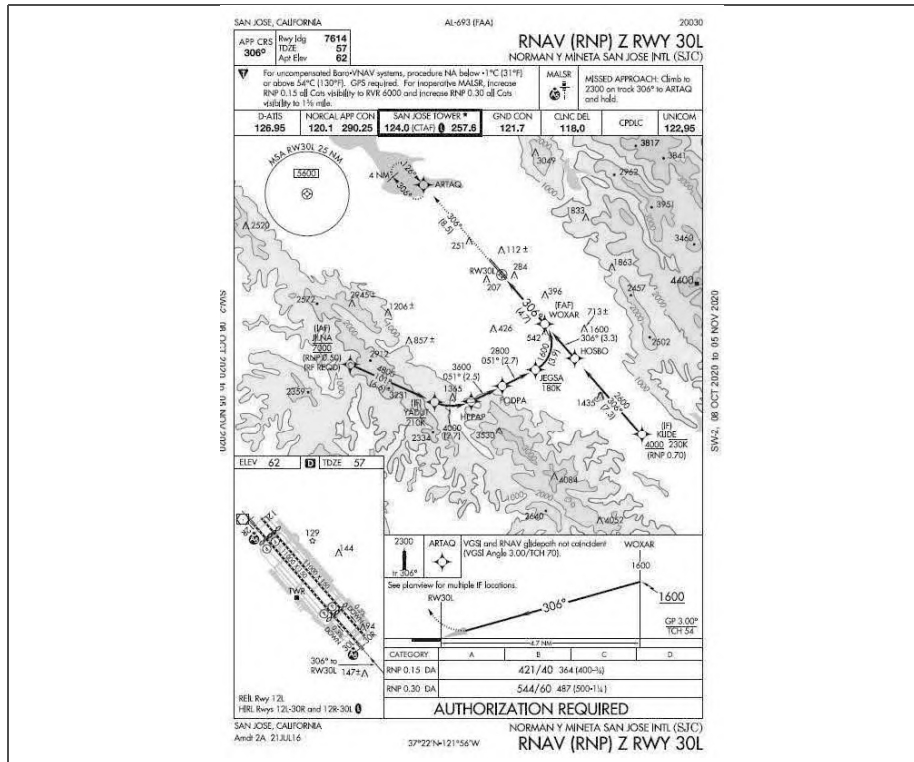
BRIXX TWO is depicted in the following figure:



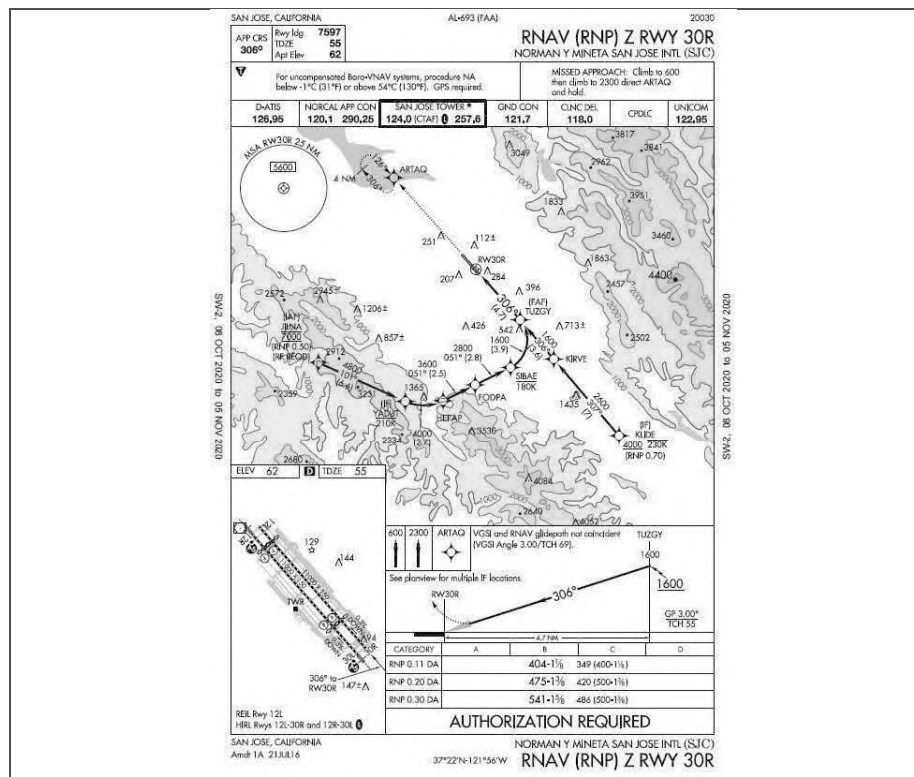
2/28/19

JO 7400.2M



The current RNAV (RNP) Z RWY 30L approach is depicted in the following figure:



The current RNAV (RNP) Z RWY 30R approach is depicted in the following figure:





Flight Procedures Cover Page	Task Action: Abbreviated Amendment	Task Type: STAR	Estimated Chart Date: 06/17/2021	APWS Task ID: A882C8BF12514C27BE24B7EED818357C	APWS Project ID: 74365EFC02E415F918B685D5FE7841D
Procedure: STAR SILCN (RNAV) FIVE SAN JOSE CA KSJC		Enroute: YES	Specialist: Blanco, Joseph		Agreement Number:
Airport ID: KSJC		Airport City: SAN JOSE		State: CA	
Facility ID:	Facility Type:	Flight Inspection Remark Type:			
<p><b>Procedure Comments:</b>  AMEND - STAR SILCN FIVE (RNAV) TO CHANGE ALL REFERENCE FROM WEST/EAST TO NORTH/SOUTH TO AVOID PILOT CONFUSION  PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJF-10) MEMO, APRIL 29, 2020 SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED.  CONTACT ALLAN WILL 405.954.6103</p>					
					Digitally signed by <b>MARY MCDONALD</b> 12 Feb 01, 2021 
					01/25/2021 



## Federal Aviation Administration Categorical Exclusion Declaration

**Date:** 11/04/20

**IFP:** Roller, Ted (Theodore.ctr.roller@faa.gov)

**Airport Contact:** -

**Request ID:** KSJC\_2092

**Single or Multiple Procedure:** Multiple

**Procedure Name(s):** SILCN

**Procedure Request Description:**

Proposed Changes to Notes on the SILCN Standard Terminal Arrival (STAR) Procedure -

Old Notes:

NOTE: WEST TRANSITION INDICATES RWY 30 L/R.

NOTE: EAST TRANSITION INDICATES RWY 12 L/R.

NOTE: EXPECT WEST TRANSITION UNLESS OTHERWISE ADVISED.

New Notes:

NOTE: LANDING NORTH INDICATES RWYS 30L/R.

NOTE: LANDING SOUTH INDICATES RWYS 12L/R.

NOTE: EXPECT LANDING NORTH UNLESS OTHERWISE ADVISED.

Justification: Multiple complaints from industry about the NOTES on the SILCN STAR. The names of the transitions reference air traffic control (ATC) airspace configurations and the general landing direction but are opposite of the flight path flown. These names continue to cause confusion in the cockpit. The "West Transition" is used when the airspace configuration is West Plan and SJC is landing to the West (or North) on RWYs 30L/R. This transition is actually straight into the runways. The "East Transition" takes the aircraft west of the airport on a transition leg that is a west downwind but they make a 180 and land on RWYs 12L/R. The fact that the flight path on the flight management system (FMS) shows the "East Transition" as being west of the airport has lead many pilots to select the wrong transition and they either start to fly the wrong leg or are too high.

Other Remarks: This IFP request was submitted on behalf of American Airlines and Northern California TRACON.

Benefits of Proposed Action - Eliminate controller/pilot confusion.

### Declaration of Exclusion:

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1.

**Basis for this Determination:**

This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1.

**The applicable Categorical Exclusion is:**

**5-6.5.k:** Publication of existing air traffic control procedures that do not essentially change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. (ATO, AVS)

**The above flight procedure has been developed within the accepted parameters.**

Concurrence/Reviewed By: **VIKAS UBEROI** Digitally signed by VIKAS UBEROI  
Date: 2020.11.04 07:18:51 -08'00' Date: \_\_\_\_\_

Title: Environmental Protection Specialist - Contract

Approved By: **RYAN WADE WELLER** Digitally signed by RYAN WADE WELLER  
Date: 2020.11.04 16:50:29 -08'00' Date: \_\_\_\_\_

Title: Environmental Protection Specialist - AJV-W250

## SFO Attachments

Flight Procedures Cover Page	Task Action: Abbreviated Amendment	Task Type: SID	Estimated Chart Date: 08/12/2021	APWS Task ID: AEB36EEAD7EA46A6929180D4F9AC23AC	APWS Project ID: B07EAB3559FC426C8F07DDACFE114E1B
Procedure: SAHEY THREE (RNAV)		Enroute: YES	Specialist: Jackson, Frank		Agreement Number:
Airport ID: KSFO			Airport City: SAN FRANCISCO		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type:			
<p>Procedure Comments: ABBREVIATED AMENDMENT.</p> <p>PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJF-10) MEMO, APRIL 29, 2020 SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED.</p> <p>CONTACT: DON LANIER, AJV-A431 LEAD, 405.954.8242.</p>					

QUALITY  
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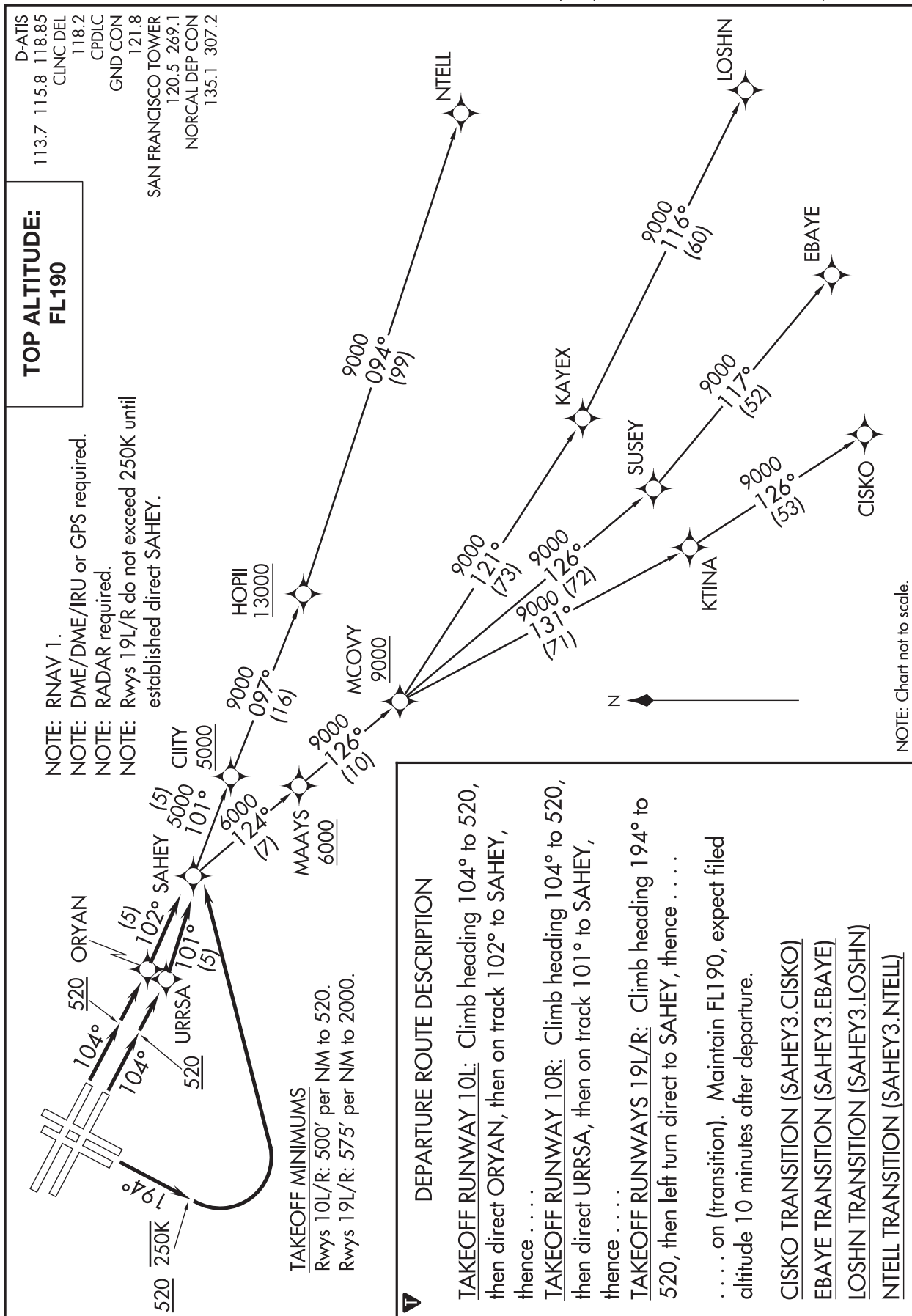
(SAHEY3.SAHEY) 17341

# SAHEY THREE DEPARTURE (RNAV)

AL-375 (FAA)

SAN FRANCISCO INTL (SFO)  
SAN FRANCISCO, CALIFORNIA

SW-2, 25 FEB 2021 to 25 MAR 2021



SW-2, 25 FEB 2021 to 25 MAR 2021

SAHEY THREE DEPARTURE (RNAV)  
(SAHEY3.SAHEY) 20AUG15

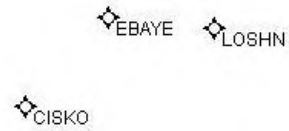
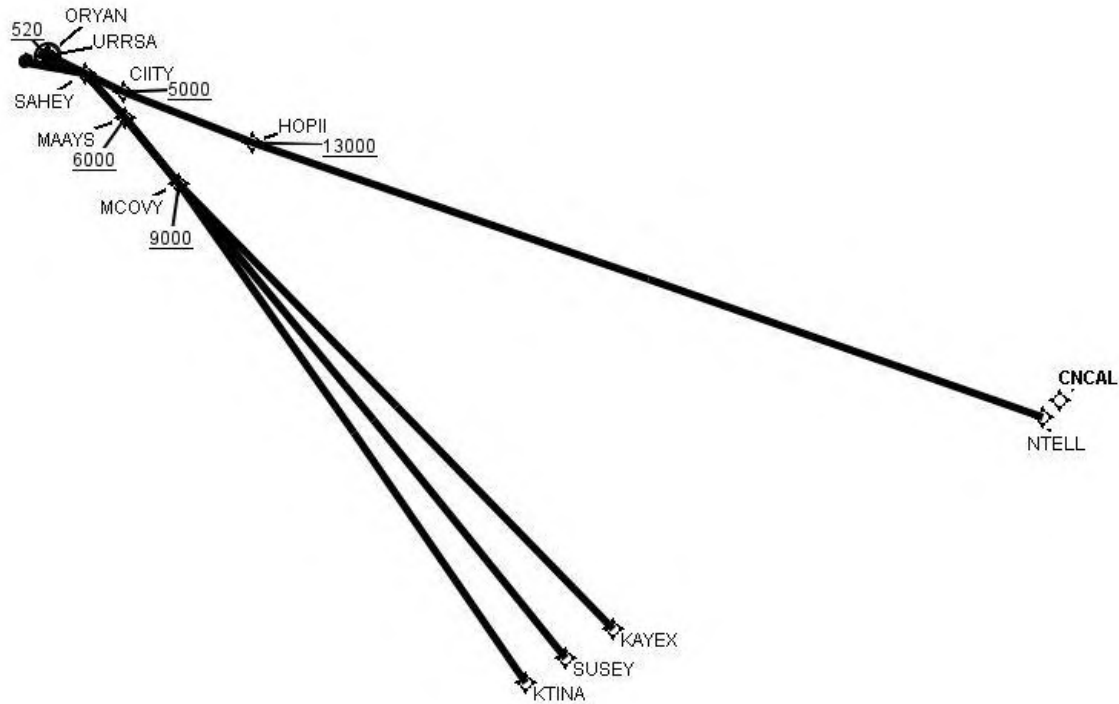
SAN FRANCISCO, CALIFORNIA  
SAN FRANCISCO INTL (SFO)

FEDERAL AVIATION ADMINISTRATION  
 FLIGHT STANDARDS SERVICE  
 GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet. MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation.  
 Distances are in nautical miles (NM). Visibilities are in statute miles (SM) or feet RVR unless otherwise indicated. Graphic depiction attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SAHEY	FOUR	SAHEY4.SAHEY	THREE	8/20/2015	

Graphic Depiction 1



12/7/2020

IFP Environmental Pre-screening Filter

## Federal Aviation Administration Categorical Exclusion Declaration

**Date:** 12/07/20

**IFP:** Roller, Jeanette (jeanette.ctr.roller@faa.gov)

**Airport Contact:** -

**Request ID:** KSFO\_20119

**Single or Multiple Procedure:** Multiple

**Procedure Name(s):** San Francisco KSFO SIDs: SAHEY, SSTIK, WESLA Oakland KOAK SIDs: CNDEL & KATFH

**Procedure Request Description:**

The Federal Aviation Administration (FAA) is proposing to shorten en route transitions and remove the CISKO, EBAYE and LOSHN waypoints for the following procedures:

- SAHEY, SSTIK, and WESLA Standard Instrument Departures (SIDs) at San Francisco International Airport (KSFO)
- CNDEL and KATFH SIDs at Metropolitan Oakland International Airport (KOAK)

All five SIDs will end at KTINA, SUSEY and KAYEX waypoints.

**Procedure Benefits:**

- Provide ATC benefits to remove coordination between approach control and ARTCC.
- Reduces pilot confusion.

**Publication Actions:**

- Adding, amending, removing notes to procedures
- Coding changes with no track/altitude changes

**Declaration of Exclusion:**

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1.

**Basis for this Determination:**

This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1,



12/7/2020

IFP Environmental Pre-screening Filter

**The applicable Categorical Exclusion is:**

**5-6,5,k:** Publication of existing air traffic control procedures that do not essentially change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. (ATO, AVS)

**The above flight procedure has been developed within the accepted parameters.**

Concurrence/Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

Title: Environmental Protection Specialist - Contract

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Title: Environmental Protection Specialist – AJV-W250

Flight Procedures Cover Page	Task Action: Abbreviated Amendment	Task Type: SID	Estimated Chart Date: 08/12/2021	APWS Task ID: AB84BB89EDB942C8B328395355CA54C3	APWS Project ID: B07EAB3559FC426C8F07DDACFE114E1B
Procedure: SSTIK FIVE (RNAV)		Enroute: YES	Specialist: Jackson, Frank		Agreement Number:
Airport ID: KSFO			Airport City: SAN FRANCISCO		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type:			
<p>Procedure Comments: ABBREVIATED AMENDMENT.</p> <p>PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJF-10) MEMO, APRIL 29, 2020 SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED.</p> <p>CONTACT: DON LANIER, AJV-A431 LEAD, 405.954.8242.</p>					

QUALITY  
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CHECKED

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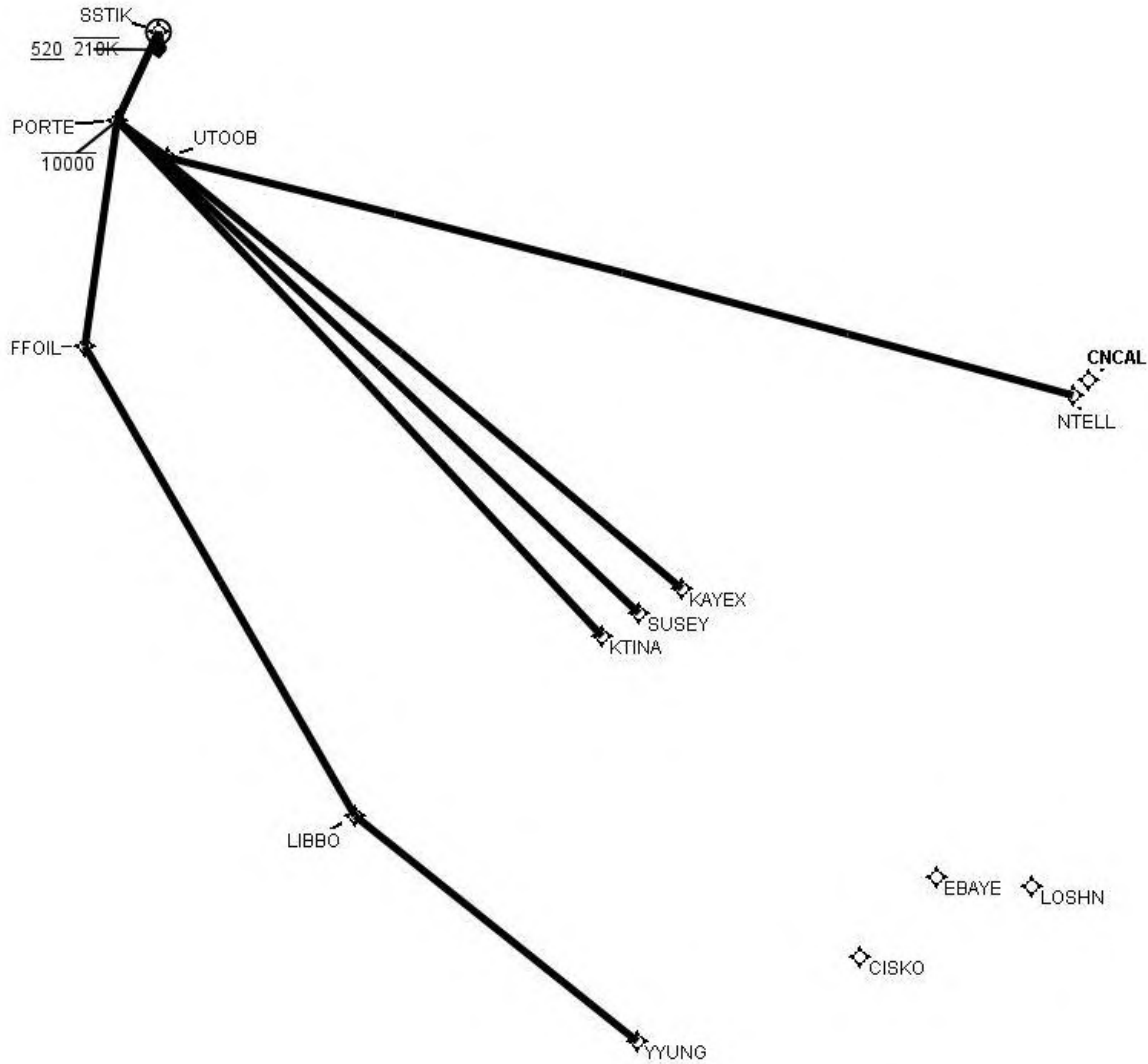


FEDERAL AVIATION ADMINISTRATION  
 FLIGHT STANDARDS SERVICE  
 GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet. MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation.  
 Distances are in nautical miles (NM). Visibilities are in statute miles (SM) or feet RVR unless otherwise indicated. Graphic depiction attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SSTIK	FIVE	SSTIK5.SSTIK	FOUR	9/13/2018	

Graphic Depiction 1



12/7/2020

IFP Environmental Pre-screening Filter

## Federal Aviation Administration Categorical Exclusion Declaration

**Date:** 12/07/20

**IFP:** Roller, Jeanette (jeanette.ctr.roller@faa.gov)

**Airport Contact:** -

**Request ID:** KSFO\_20119

**Single or Multiple Procedure:** Multiple

**Procedure Name(s):** San Francisco KSFO SIDs: SAHEY, SSTIK, WESLA Oakland KOAK SIDs: CNDEL & KATFH

**Procedure Request Description:**

The Federal Aviation Administration (FAA) is proposing to shorten en route transitions and remove the CISKO, EBAYE and LOSHN waypoints for the following procedures:

- SAHEY, SSTIK, and WESLA Standard Instrument Departures (SIDs) at San Francisco International Airport (KSFO)
- CNDEL and KATFH SIDs at Metropolitan Oakland International Airport (KOAK)

All five SIDs will end at KTINA, SUSEY and KAYEX waypoints.

**Procedure Benefits:**

- Provide ATC benefits to remove coordination between approach control and ARTCC.
- Reduces pilot confusion.

**Publication Actions:**

- Adding, amending, removing notes to procedures
- Coding changes with no track/altitude changes

**Declaration of Exclusion:**

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1.

**Basis for this Determination:**

This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1,

12/7/2020

IFP Environmental Pre-screening Filter

**The applicable Categorical Exclusion is:**

**5-6,5,k:** Publication of existing air traffic control procedures that do not essentially change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. (ATO, AVS)

**The above flight procedure has been developed within the accepted parameters.**

Concurrence/Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

Title: Environmental Protection Specialist - Contract

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Title: Environmental Protection Specialist – AJV-W250



Flight Procedures Cover Page	Task Action: Abbreviated Amendment	Task Type: SID	Estimated Chart Date: 08/12/2021	APWS Task ID: FDA609A423FE4505A5890865AD079DCA	APWS Project ID: B07EAB3559FC426C8F07DDACFE114E1B
Procedure: WESLA FOUR (RNAV)		Enroute: YES	Specialist: Jackson, Frank		Agreement Number:
Airport ID: KSFO			Airport City: SAN FRANCISCO		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type:			
<p>Procedure Comments: ABBREVIATED AMENDMENT.</p> <p>PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJF-10) MEMO, APRIL 29, 2020 SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED.</p> <p>CONTACT: DON LANIER, AJV-A431 LEAD, 405.954.8242.</p>					

QUALITY  
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QUALITY  
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(WESLA4.WESLA) 18256

# WESLA FOUR DEPARTURE (RNAV)

AL-375 (FAA)

SAN FRANCISCO INTL (SFO)  
SAN FRANCISCO, CALIFORNIA

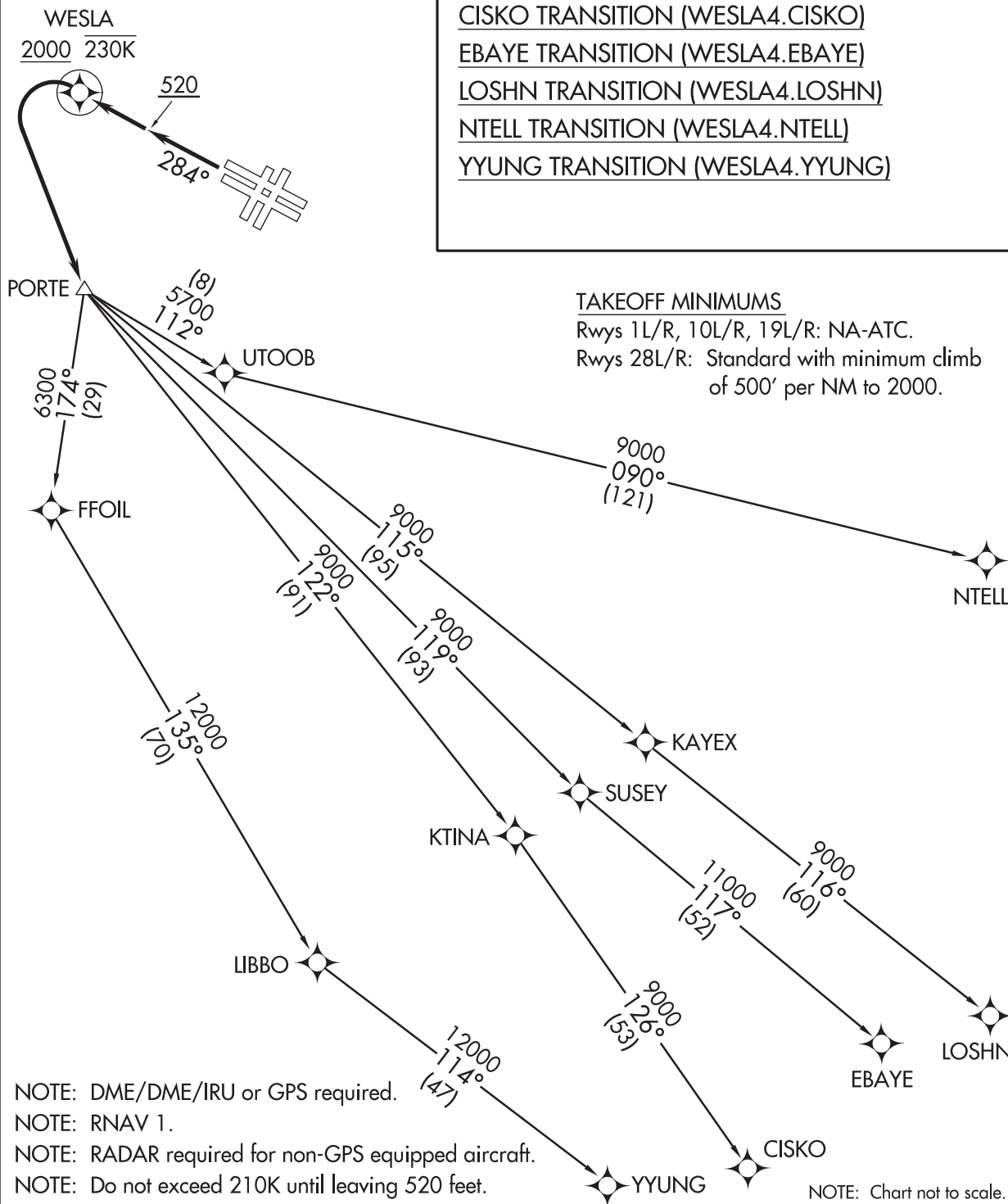
D-ATIS  
113.7 115.8 118.85  
CLNC DEL  
118.2  
CPDLC  
GND CON  
121.8  
SAN FRANCISCO TOWER  
120.5 269.1  
NORCAL DEP CON  
135.1 307.2

**TOP ALTITUDE:**  
**3000**

**DEPARTURE ROUTE DESCRIPTION**  
**TAKEOFF RUNWAYS 28L/R:** Climb heading 284° to 520, then direct WESLA at or above 2000 at or below 230K, then left turn direct PORTE, thence . . . .  
 . . . . on (transition) maintain 3000, expect filed altitude 10 minutes after departure.

- CISCO TRANSITION (WESLA4.CISCO)
- EBAYE TRANSITION (WESLA4.EBAYE)
- LOSHN TRANSITION (WESLA4.LOSHN)
- NTELL TRANSITION (WESLA4.NTELL)
- YYUNG TRANSITION (WESLA4.YYUNG)

**TAKEOFF MINIMUMS**  
 Rwy 1L/R, 10L/R, 19L/R: NA-ATC.  
 Rwy 28L/R: Standard with minimum climb of 500' per NM to 2000.



NOTE: DME/DME/IRU or GPS required.  
 NOTE: RNAV 1.  
 NOTE: RADAR required for non-GPS equipped aircraft.  
 NOTE: Do not exceed 210K until leaving 520 feet.

SW-2, 25 FEB 2021 to 25 MAR 2021

SW-2, 25 FEB 2021 to 25 MAR 2021

# WESLA FOUR DEPARTURE (RNAV)

(WESLA4.WESLA) 13SEP18

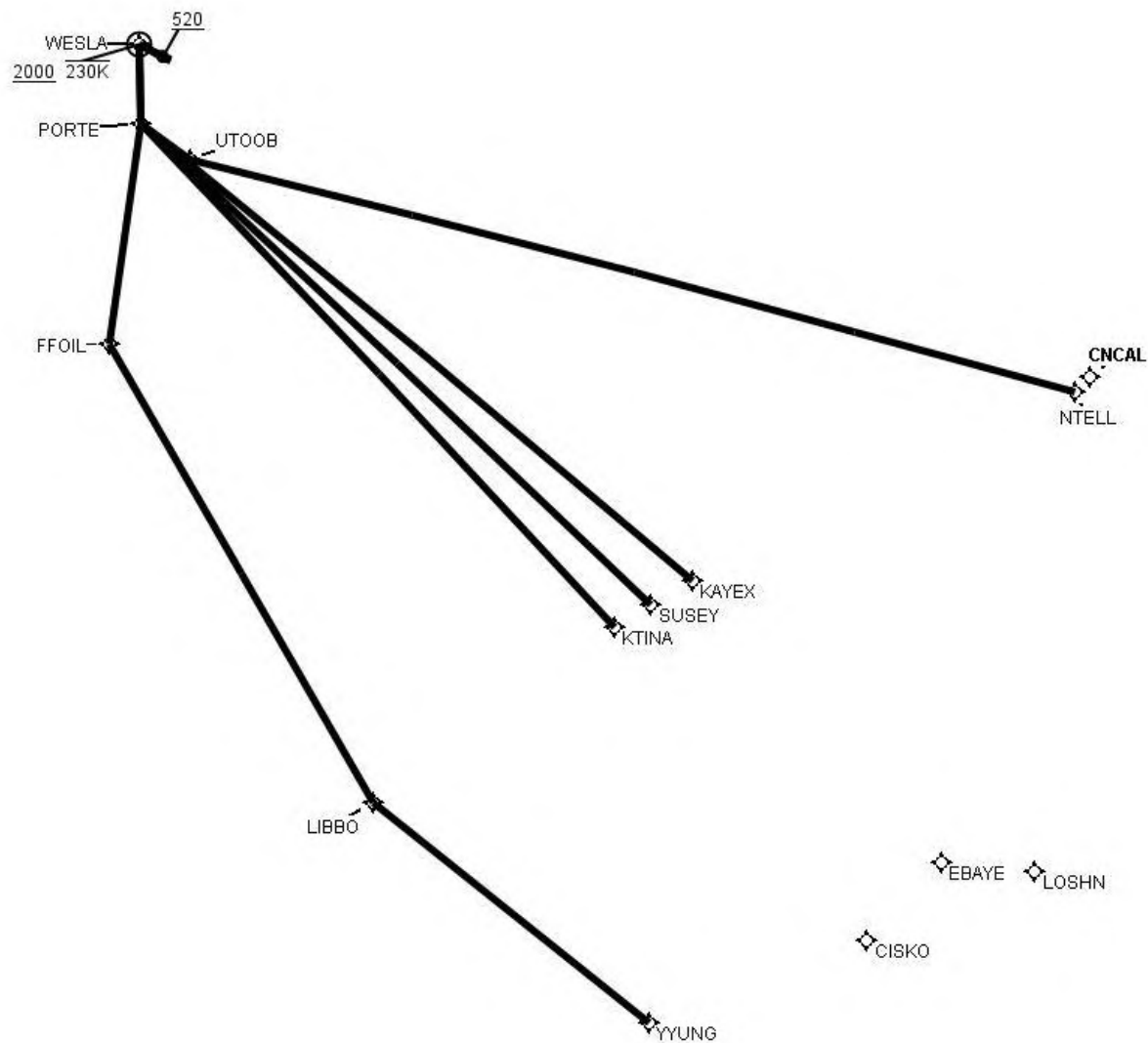
SAN FRANCISCO, CALIFORNIA  
SAN FRANCISCO INTL (SFO)

FEDERAL AVIATION ADMINISTRATION  
 FLIGHT STANDARDS SERVICE  
 GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet. MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation.  
 Distances are in nautical miles (NM). Visibilities are in statute miles (SM) or feet RVR unless otherwise indicated. Graphic depiction attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
WESLA	FIVE	WESLA5.WESLA	FOUR	9/13/2018	

Graphic Depiction 1



12/7/2020

IFP Environmental Pre-screening Filter

## Federal Aviation Administration Categorical Exclusion Declaration

**Date:** 12/07/20

**IFP:** Roller, Jeanette (jeanette.ctr.roller@faa.gov)

**Airport Contact:** -

**Request ID:** KSFO\_20119

**Single or Multiple Procedure:** Multiple

**Procedure Name(s):** San Francisco KSFO SIDs: SAHEY, SSTIK, WESLA Oakland KOAK SIDs: CNDEL & KATFH

**Procedure Request Description:**

The Federal Aviation Administration (FAA) is proposing to shorten en route transitions and remove the CISKO, EBAYE and LOSHN waypoints for the following procedures:

- SAHEY, SSTIK, and WESLA Standard Instrument Departures (SIDs) at San Francisco International Airport (KSFO)
- CNDEL and KATFH SIDs at Metropolitan Oakland International Airport (KOAK)

All five SIDs will end at KTINA, SUSEY and KAYEX waypoints.

**Procedure Benefits:**

- Provide ATC benefits to remove coordination between approach control and ARTCC.
- Reduces pilot confusion.

**Publication Actions:**

- Adding, amending, removing notes to procedures
- Coding changes with no track/altitude changes

**Declaration of Exclusion:**

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1.

**Basis for this Determination:**

This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1,



12/7/2020

IFP Environmental Pre-screening Filter

**The applicable Categorical Exclusion is:**

**5-6,5,k:** Publication of existing air traffic control procedures that do not essentially change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. (ATO, AVS)

**The above flight procedure has been developed within the accepted parameters.**

Concurrence/Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

Title: Environmental Protection Specialist - Contract

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

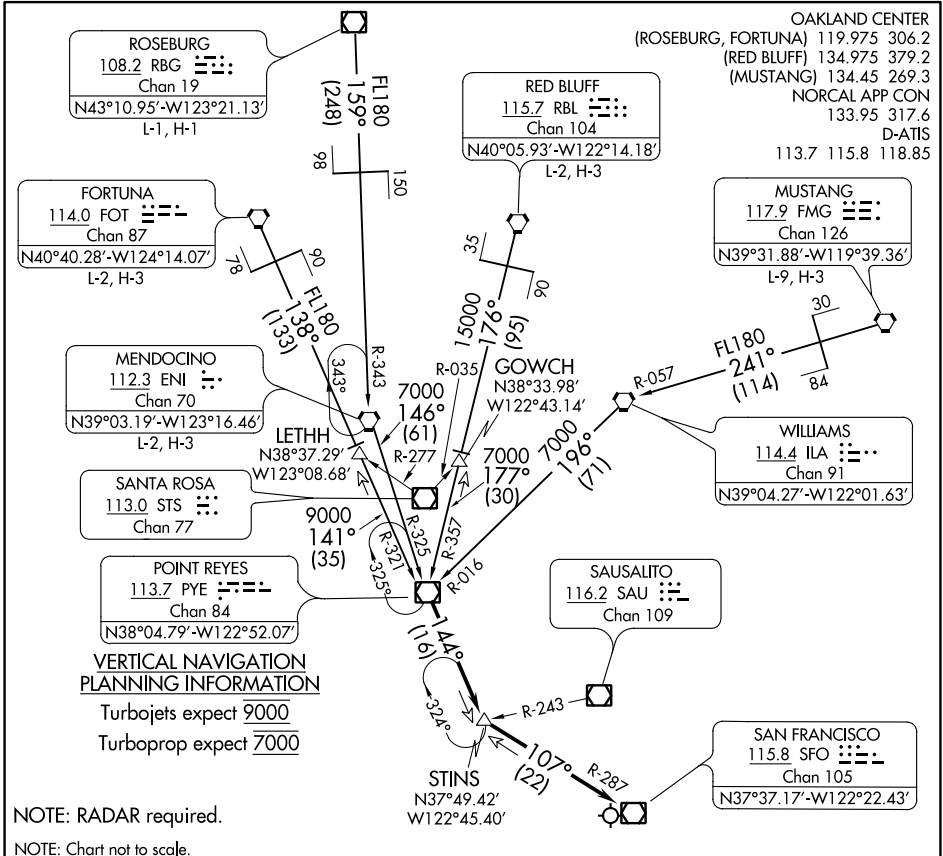
Title: Environmental Protection Specialist – AJV-W250

Flight Procedures Cover Page	Task Action: Abbreviated Amendment	Task Type: STAR	Estimated Chart Date: 06/17/2021	APWS Task ID: EA624E017AEA4C4295BBEF745F16BC4C	APWS Project ID: 4413CB91D65B4CA1A59988962BE84F98
Procedure: STAR STINS FOUR SAN FRANCISCO CA KSFO		Enroute: YES	Specialist: Barnes, Kellie		Agreement Number:
Airport ID: KSFO			Airport City: SAN FRANCISCO		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type:			
<p>Procedure Comments: STS VOR MON</p> <p>PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJF-10) MEMO, APRIL 29, 2020 SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED.</p> <p>CONTACT ALLAN WILL 405-954-6103</p>					
<p>01/29/2021</p> <p>QUALITY 14 CHECKED</p> <p>QUALITY 41 CHECKED</p>					

# STINS THREE ARRIVAL

AL-375 (FAA)

SAN FRANCISCO INTL (SFO)  
SAN FRANCISCO, CALIFORNIA



SW-2, 31 DEC 2020 to 28 JAN 2021

SW-2, 31 DEC 2020 to 28 JAN 2021

## ARRIVAL ROUTE DESCRIPTION

- FORTUNA TRANSITION (FOT.STINS3):** From over FOT VORTAC on FOT R-138 to LETHH INT, then on PYE R-321 to PYE VOR/DME. Thence. . .
- MENDOCINO TRANSITION (ENI.STINS3):** From over ENI VORTAC on ENI R-146 and PYE R-325 to PYE VOR/DME. Thence. . .
- MUSTANG TRANSITION (FMG.STINS3):** From over FMG VORTAC on FMG R-241 and ILA R-057 to ILA VORTAC, then on ILA R-196 and PYE R-016 to PYE VOR/DME. Thence. . .
- RED BLUFF TRANSITION (RBL.STINS3):** From over RBL VORTAC on RBL R-176 to GOWCH INT, then on PYE R-357 to PYE VOR/DME. Thence. . .
- ROSEBURG TRANSITION (RBG.STINS3):** From over RBG VOR/DME on RBG R-159 and ENI R-343 to ENI VORTAC, then on ENI R-146 and PYE R-325 to PYE VOR/DME. Thence. . .
- . . . From over PYE VOR/DME on PYE R-144 to STINS INT, thence on SFO R-287 to SFO VOR/DME. Expect RADAR vectors to final approach course.

# Federal Aviation Administration Categorical Exclusion Declaration

**Date:** 06/01/20

**IFP:** Oleck, Perry (perry.j.oleck@faa.gov)

**Airport Contact:** -

**Request ID:** KSFO\_20227

**Single or Multiple Procedure:** Multiple

**Procedure Name(s):** Point Reyes 3 Arrival STINS 3 Arrival

**Procedure Request Description:**

Remove Santa Rosa (STS) VOR from the procedures charts. No courses, tracks, or altitudes will be changed.

**Declaration of Exclusion:**

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1.

**Basis for this Determination:**

This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1.

**The applicable Categorical Exclusion is:**

**5-6.5.k:** Publication of existing air traffic control procedures that do not essentially change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. (ATO, AVS)

**The above flight procedure has been developed within the accepted parameters.**

Concurrence/Reviewed By: Vikas Uberoi Digitally signed by Vikas Uberoi  
Date: 2020.06.01 05:10:24 -07'00' Date: \_\_\_\_\_

Title: Environmental Protection Specialist - Contract

Approved By: RYAN WADE WELLER Digitally signed by RYAN WADE WELLER  
Date: 2020.06.01 13:12:35 -07'00' Date: \_\_\_\_\_

Title: Lead Environmental Protection Specialist - AJV-W25



## OAK Attachments

Flight Procedures Cover Page	Task Action: Abbreviated Amendment	Task Type: SID	Estimated Chart Date: 08/12/2021	APWS Task ID: C2AD00A89FBE4CD383F8E1826779F6AF	APWS Project ID: 592ADE882AFD4ADFB0A596EF686259EF
Procedure: CNDEL FIVE (RNAV)		Enroute: YES	Specialist: Jackson, Frank		Agreement Number:
Airport ID: KOAK			Airport City: OAKLAND		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type:			
<p>Procedure Comments: ABBREVIATED AMENDMENT.</p> <p>REVISED CISKO, EBAYE, AND LOSHN TRANSITIONS, DELETED LAST SEGMENT. PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJF-10) MEMO, APRIL 29, 2020 SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED.</p> <p>CONTACT: DON LANIER, AJV-A431 LEAD, 405.954.8242.</p>					

QUALITY  
15  
CHECKED

QUALITY  
5  
CHECKED

(CNDEL4.CNDEL) 18256

# CNDEL FOUR DEPARTURE (RNAV)

AL-294 (FAA)

METROPOLITAN OAKLAND INTL (OAK)  
OAKLAND, CALIFORNIA

D-ATIS 133.775  
 CLNC DEL  
 121.1  
 CPDLC  
 GND CON  
 121.9 (Rwys 28L/R)  
 121.75 (Rwy 30)  
 OAKLAND TOWER  
 118.3 291.65 (Rwys 28L/R)  
 127.2 256.9 (Rwy 30)  
 NORCAL DEP CON  
 135.1 307.2

**TOP ALTITUDE:**  
**10000**

## DEPARTURE ROUTE DESCRIPTION

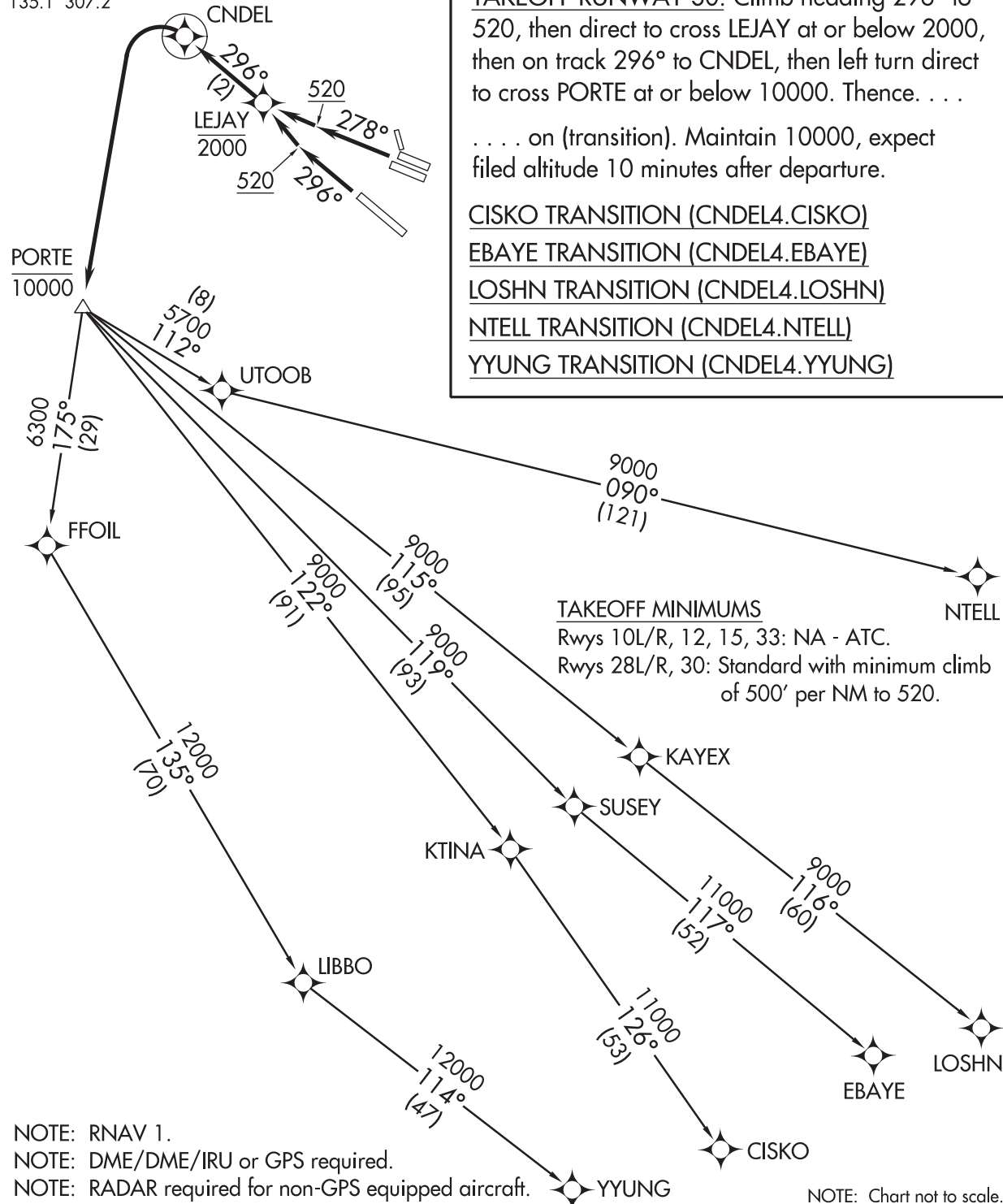
**TAKEOFF RUNWAYS 28L, 28R:** Climb heading 278° to 520, then direct to cross LEJAY at or below 2000, then on track 296° to CNDEL, then left turn direct to cross PORTE at or below 10000. Thence. . . .

**TAKEOFF RUNWAY 30:** Climb heading 296° to 520, then direct to cross LEJAY at or below 2000, then on track 296° to CNDEL, then left turn direct to cross PORTE at or below 10000. Thence. . . .

. . . . on (transition). Maintain 10000, expect filed altitude 10 minutes after departure.

- CISCO TRANSITION (CNDEL4.CISCO)
- EBAYE TRANSITION (CNDEL4.EBAYE)
- LOSHN TRANSITION (CNDEL4.LOSHN)
- NTELL TRANSITION (CNDEL4.NTELL)
- YYUNG TRANSITION (CNDEL4.YYUNG)

SW-2, 25 FEB 2021 to 25 MAR 2021



SW-2, 25 FEB 2021 to 25 MAR 2021

# CNDEL FOUR DEPARTURE (RNAV)

(CNDEL4.CNDEL) 13SEP18

OAKLAND, CALIFORNIA  
METROPOLITAN OAKLAND INTL (OAK)

12/7/2020

IFP Environmental Pre-screening Filter

## Federal Aviation Administration Categorical Exclusion Declaration

**Date:** 12/07/20

**IFP:** Roller, Jeanette (jeanette.ctr.roller@faa.gov)

**Airport Contact:** -

**Request ID:** KSFO\_20119

**Single or Multiple Procedure:** Multiple

**Procedure Name(s):** San Francisco KSFO SIDs: SAHEY, SSTIK, WESLA Oakland KOAK SIDs: CNDEL & KATFH

**Procedure Request Description:**

The Federal Aviation Administration (FAA) is proposing to shorten en route transitions and remove the CISKO, EBAYE and LOSHN waypoints for the following procedures:

- SAHEY, SSTIK, and WESLA Standard Instrument Departures (SIDs) at San Francisco International Airport (KSFO)
- CNDEL and KATFH SIDs at Metropolitan Oakland International Airport (KOAK)

All five SIDs will end at KTINA, SUSEY and KAYEX waypoints.

**Procedure Benefits:**

- Provide ATC benefits to remove coordination between approach control and ARTCC.
- Reduces pilot confusion.

**Publication Actions:**

- Adding, amending, removing notes to procedures
- Coding changes with no track/altitude changes

**Declaration of Exclusion:**

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1.

**Basis for this Determination:**

This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1,



12/7/2020

IFP Environmental Pre-screening Filter

**The applicable Categorical Exclusion is:**

**5-6,5,k:** Publication of existing air traffic control procedures that do not essentially change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. (ATO, AVS)

**The above flight procedure has been developed within the accepted parameters.**

Concurrence/Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

Title: Environmental Protection Specialist - Contract

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

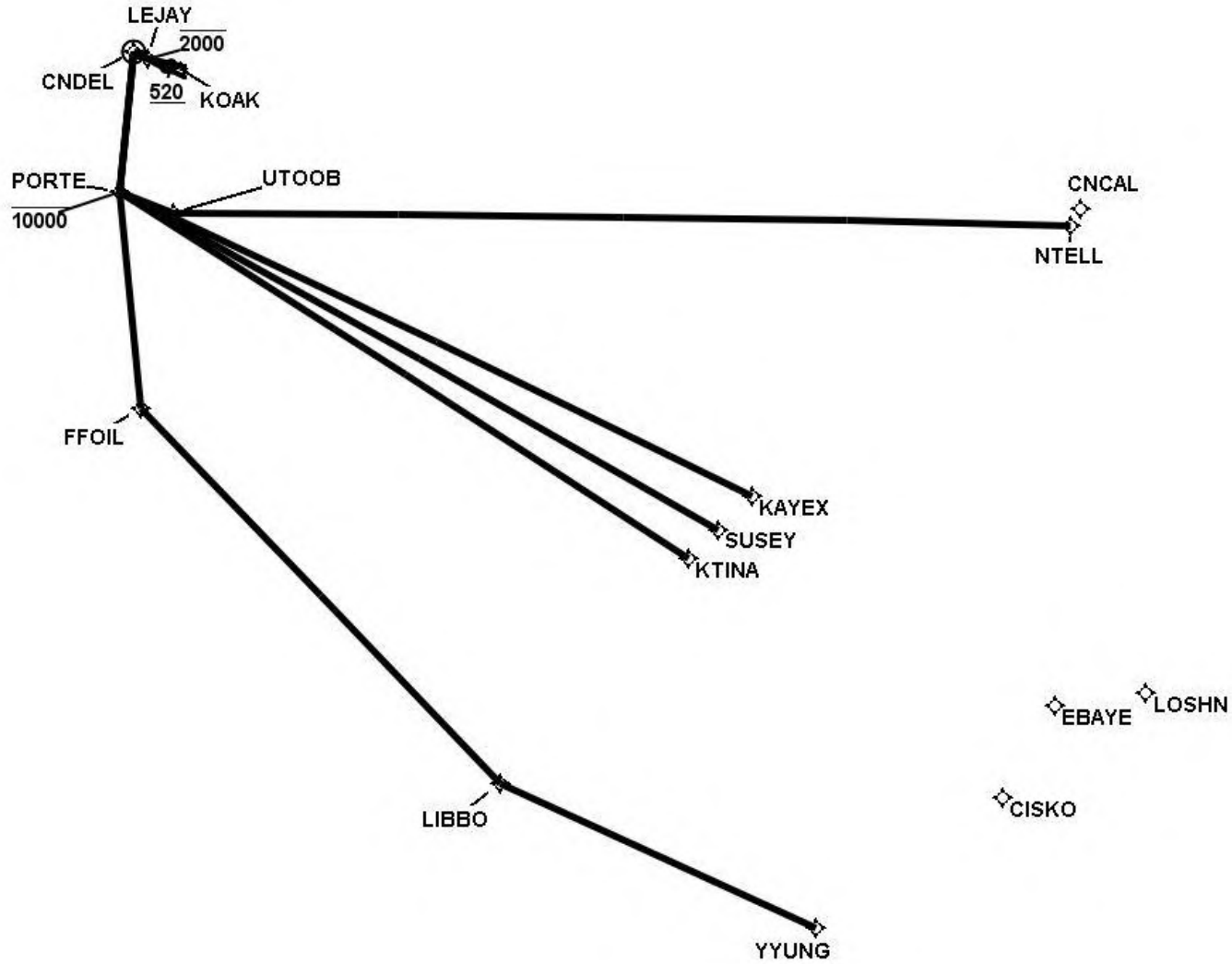
Title: Environmental Protection Specialist – AJV-W250

FEDERAL AVIATION ADMINISTRATION  
 FLIGHT STANDARDS SERVICE  
 GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet. MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation.  
 Distances are in nautical miles (NM). Visibilities are in statute miles (SM) or feet RVR unless otherwise indicated. Graphic depiction attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
CNDEL	FIVE	CNDEL5.CNDEL	FOUR	09/13/2018	

Graphic Depiction 1



Flight Procedures Cover Page	Task Action: Abbreviated Amendment	Task Type: SID	Estimated Chart Date: 08/12/2021	APWS Task ID: 634520ADDC634430A1C89F8683CD0BAC	APWS Project ID: 592ADE882AFD4ADFB0A596EF686259EF
Procedure: KATFH THREE (RNAV)		Enroute: YES	Specialist: Jackson, Frank		Agreement Number:
Airport ID: KOAK			Airport City: OAKLAND		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type:			
<p>Procedure Comments: ABBREVIATED AMENDMENT.</p> <p>PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJF-10) MEMO, APRIL 29, 2020 SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED.</p> <p>CONTACT: DON LANIER, AJV-A431 LEAD, 405.954.8242.</p>					

QUALITY  
15  
CHECKED

QUALITY  
5  
CHECKED

OLD

(KATFH2.KATFH) 17285

# KATFH TWO DEPARTURE (RNAV)

AL-294 (FAA)

METROPOLITAN OAKLAND INTL (OAK)  
OAKLAND, CALIFORNIA

D-ATIS 133.775  
 CLNC DEL 121.1  
 CPDLC  
 GND CON 121.9 (Rwys 10L/R)  
 121.75 (Rwy 12)  
 OAKLAND TOWER 118.3 291.65 (Rwys 10L/R)  
 127.2 256.9 (Rwy 12)  
 NORCAL DEP CON 135.1 307.2

**TOP ALTITUDE:**  
**3000**



## DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 10L, 10R: Climb heading 098° to 520, then right turn direct to cross ROWLY at/below 3000, then on track 150° to cross VYYDA at/below 4000, then on track 150° to cross KATFH at/above 6000. Thence. . . .

TAKEOFF RUNWAY 12: Climb heading 116° to 520, then direct to cross ROWLY at/below 3000, then on track 150° to cross VYYDA at/below 4000, then on track 150° to cross KATFH at/above 6000. Thence. . . .

. . . .on (transition). Expect filed altitude 10 minutes after departure.

CISCO TRANSITION (KATFH2.CISCO)

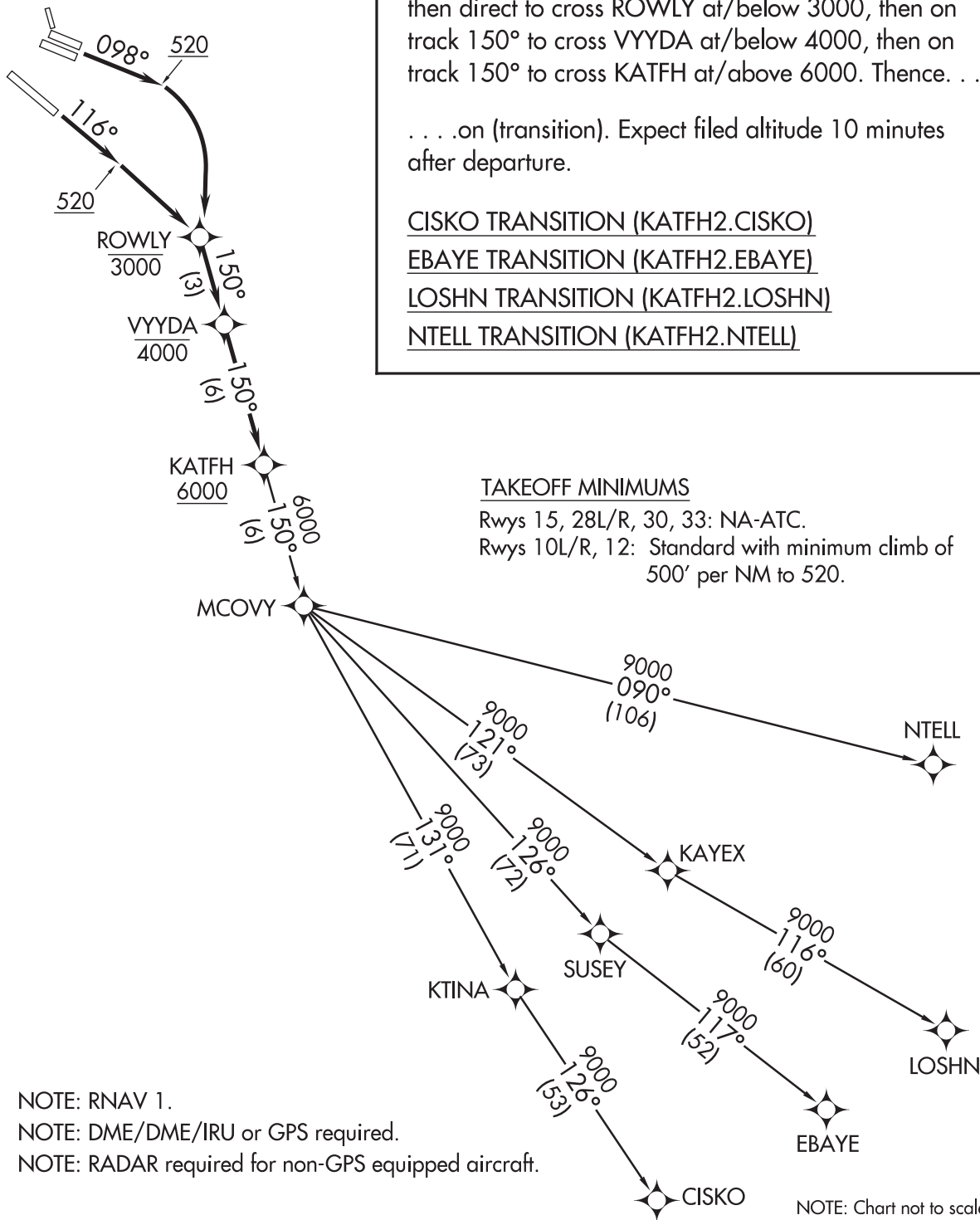
EBAYE TRANSITION (KATFH2.EBAYE)

LOSHN TRANSITION (KATFH2.LOSHN)

NTELL TRANSITION (KATFH2.NTELL)

### TAKEOFF MINIMUMS

Rwys 15, 28L/R, 30, 33: NA-ATC.  
 Rwys 10L/R, 12: Standard with minimum climb of 500' per NM to 520.



NOTE: RNAV 1.  
 NOTE: DME/DME/IRU or GPS required.  
 NOTE: RADAR required for non-GPS equipped aircraft.

SW-2, 25 FEB 2021 to 25 MAR 2021

SW-2, 25 FEB 2021 to 25 MAR 2021

# KATFH TWO DEPARTURE (RNAV)

(KATFH2.KATFH) 20AUG15

OAKLAND, CALIFORNIA  
METROPOLITAN OAKLAND INTL (OAK)

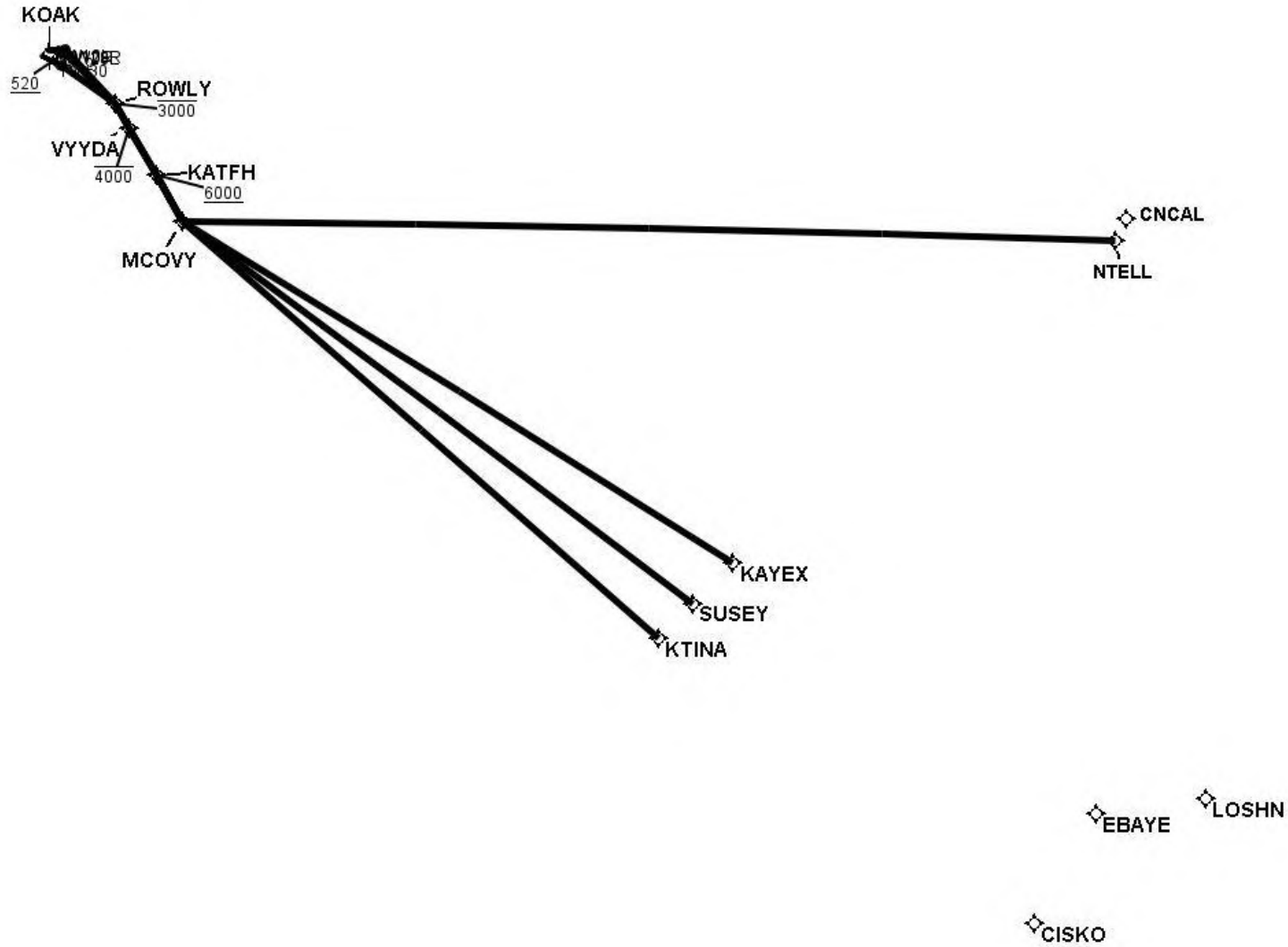


FEDERAL AVIATION ADMINISTRATION  
 FLIGHT STANDARDS SERVICE  
 GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet. MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation.  
 Distances are in nautical miles (NM). Visibilities are in statute miles (SM) or feet RVR unless otherwise indicated. Graphic depiction attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
KATFH	THREE	KATFH3.KATFH	TWO	20 AUG 2015	

Graphic Depiction 1



12/7/2020

IFP Environmental Pre-screening Filter

## Federal Aviation Administration Categorical Exclusion Declaration

**Date:** 12/07/20

**IFP:** Roller, Jeanette (jeanette.ctr.roller@faa.gov)

**Airport Contact:** -

**Request ID:** KSFO\_20119

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- Reduces pilot confusion.

**Publication Actions:**

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- Coding changes with no track/altitude changes

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12/7/2020

IFP Environmental Pre-screening Filter

**The applicable Categorical Exclusion is:**

**5-6,5,k:** Publication of existing air traffic control procedures that do not essentially change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. (ATO, AVS)

**The above flight procedure has been developed within the accepted parameters.**

Concurrence/Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

Title: Environmental Protection Specialist - Contract

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Title: Environmental Protection Specialist – AJV-W250

**LOGAN & POWELL LLP  
 15466 LOS GATOS BLVD., SUITE 109  
 LOS GATOS, CA 95032  
 (408) 402-9542**

**March 31, 2021**

**ATTORNEY-CLIENT FEE CONTRACT**

This ATTORNEY-CLIENT FEE CONTRACT ("Contract") is entered into by and between the Cities Association of Santa Clara County, referred to as "Client", and Logan & Powell LLP, hereinafter "Attorney".

1. **CONDITIONS.** This Contract will not take effect, and Attorney will have no obligation to provide legal services until Client returns a signed copy of this Contract to Attorney.

2. **SCOPE AND DUTIES.** Attorney agrees to provide legal services to assist Client with facilitating the meetings of the Santa Clara/Santa Cruz Roundtable. Client shall be truthful with Attorney, cooperate with Attorney, keep Attorney informed of developments, abide by this Contract, promptly pay Attorney's fees and keep Attorney advised of Client's address, telephone number and whereabouts.

3. **DEPOSIT.** Client shall deposit \$0.00, and shall promptly pay all invoices for services and costs as specified in Section 6. Should the scope of representation expand into litigation, Attorney reserves the right to increase the amount of the deposit. Client hereby authorizes Attorney to use deposit for costs, expenses and services rendered to or on behalf of Client. Any unused portion will be refunded to Client at the conclusion of Attorney's services.

4. **LEGAL FEES.** Client agrees to pay for legal services at the following rates:

Partner	\$275 per hour
Sr. Associate	\$200 per hour

Attorney charges in minimum units of .1 hours. The rates are subject to change with 90 days written notice.

5. **COSTS AND EXPENSES.** In addition to paying legal fees, Client shall reimburse Attorney for all costs and expenses incurred by Attorney, including, but not limited to, technical consultants, process servers' fees, fees fixed by law or assessed by courts or other agencies, court reporters' fees, long distance telephone calls, messenger and other delivery fees, postage, facsimile, online computer research fees, in-office photocopying at \$.25 per copy, parking, mileage at \$.58 per mile, investigation expenses, consultants' fees, expert witnesses fees, and other similar items. Client authorizes Attorney to incur



all reasonable costs and to hire any investigators, consultants or expert witnesses reasonably necessary in Attorney's judgment.

6. **PAYMENT OF FEES.** Attorney shall provide Client with monthly statements for all fees and costs incurred during the preceding month. Client shall pay Attorney's services and expenses within 30 days after each statement date. Failure to pay the full amount of fees and costs within the 30 day period shall be grounds for termination of Attorney's services. A late charge in the amount of 1-1/2% per month will be applied to all amounts not paid within the 30 days.

7. **LIEN.** Client hereby grants Attorney a lien on any and all claims or causes of action that are the subject of Attorney's representation under this Contract. Attorney's lien will be for any sums due and owing to Attorney at the conclusion of Attorney's services. The lien will attach to any recovery Client may obtain, whether by arbitration award, judgment, settlement or otherwise.

8. **DISCHARGE AND WITHDRAWAL.** Client may discharge Attorney at any time. Attorney may withdraw with Client's consent or for good cause. Good cause includes Client's breach of this Contract; Client's refusal to cooperate with Attorney or to follow Attorney's advice on a material matter or any other fact or circumstance that would render Attorney's continuing representation unlawful or unethical.

9. **CONCLUSION OF SERVICES.** When Attorney's services conclude, all unpaid charges shall become immediately due and payable. After Attorney's services conclude, Attorney will, upon Client's request, deliver Client's file to Client along with any Client funds or property in Attorney's possession.

10. **CLIENT FILES.** After closing Client's legal files, Attorney will retain files per the following schedule:

- a) Non-litigation files will be kept for a period of two (2) years; and
- b) Litigation files will be kept for a period of five (5) years.

If Client desires files or wants Attorney to retain files longer than the above schedule, Client will advise Attorney, in writing, prior to the expiration of the file retention period.

11. **DISCLAIMER OR GUARANTEE.** Nothing in this Contract and nothing in Attorney's statements to Client are to be construed as a promise or guarantee about the outcome of Client's matter. Attorney makes no such promises or guarantees. Attorney's comments about the outcome of Client's matter are expressions of opinion only.

12. **ENTIRE AGREEMENT.** This Contract contains the entire understanding between the parties with respect to the subject matter. There are no representations, agreements or understandings, whether oral or written between or among the parties relating to the subject matter of this Agreement, which are not fully expressed herein.

13. **EFFECTIVE DATE.** This Contract will take effect when Client has performed the

conditions stated in Section 1, but its effective date will be retroactive to the date Attorney first provided services. The date at the beginning of this Contract is for reference only. Even if this Contract does not take effect, Client will be obligated to pay Attorney the reasonable value of any services Attorney may have performed for Client.

CLIENT:  
Cities Association of Santa Clara  
County

ATTORNEY:  
Logan & Powell, LLP

By: \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Kirsten M. Powell, Managing Partner



Santa Clara/Santa Cruz Counties  
Airport/Community Roundtable

# Overview of FAA Aircraft Noise Policy and Research Efforts ESA

January 27, 2021

# FAA's Neighborhood Environmental Survey (NES)



## The FAA's Neighborhood Environmental Survey (NES)

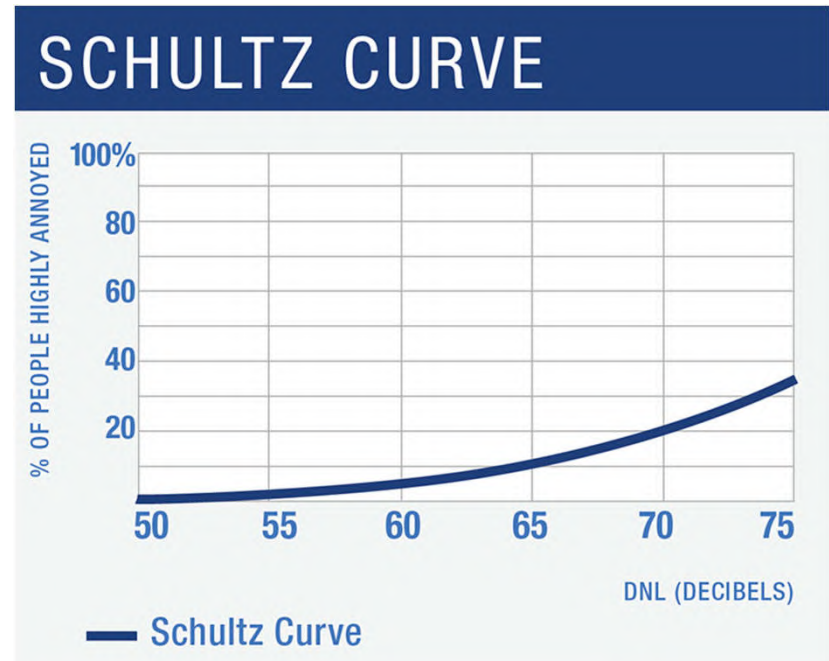
- January 13, 2021 - FAA released the findings of its long-awaited Neighborhood Environmental Survey (NES).
  - A multi-year research effort to quantify the relationships between aircraft noise exposure and community annoyance around commercial service airports in the U.S.
  - Conducted to improve the FAA's understanding of community annoyance with aircraft noise and to help determine if the FAA needs to update its 40-year-old aircraft noise policy.
- The survey included 10,000 people near 20 airports across the U.S. and was performed in 2015 and 2016.
- Communities were selected to be a representative sample of U.S. community response to aircraft noise. The FAA used various statistical methods to control for biases related to income and other factors.
- Link to NES: [https://www.faa.gov/regulations\\_policies/policy\\_guidance/noise/survey/](https://www.faa.gov/regulations_policies/policy_guidance/noise/survey/)

*preliminary data – subject to change*



## NES Background and Context

- FAA noise policy is based on a curve relating DNL to community annoyance, produced by T.J. Schultz in the 1970s
- The Schultz curve was last reviewed and validated in 1992 by a federal interagency working group
- The FAA NES was performed to “ensure that FAA's continued efforts to reduce the effects of aircraft noise exposure on communities is based upon accurate information”

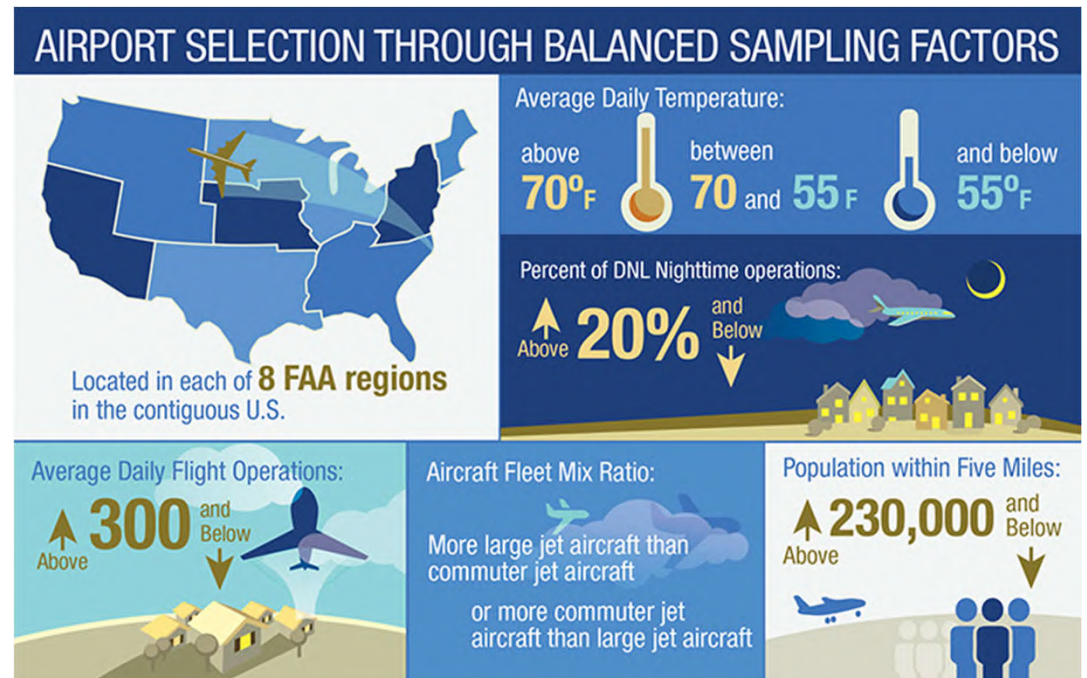


*preliminary data – subject to change*



## Survey Airport Communities

- Airport communities were selected for the survey using a variety of screening factors.
- Operators of selected airports were not notified of their airport's presence in the NES.

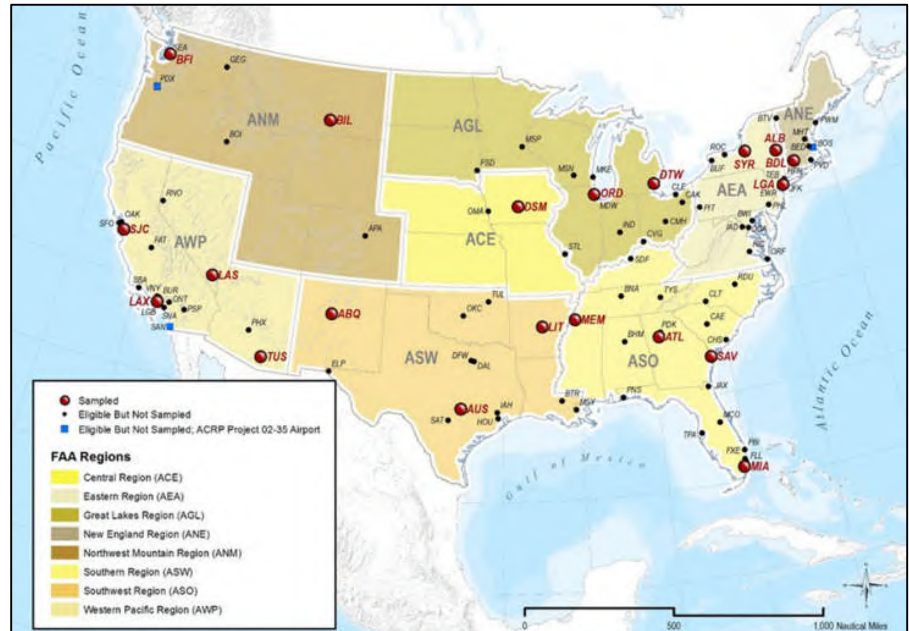


*preliminary data – subject to change*



## Survey Airport Communities (cont.)

- Surveys were sent to community members by mail, with a \$2 gift card as an incentive. Surveys asked about annoyance on a variety of environmental topics, one of which was aircraft noise.
- Respondents were also invited to participate in a follow-up phone survey, with a \$10 gift card as an incentive.
- Communities around SJC were surveyed for the NES.



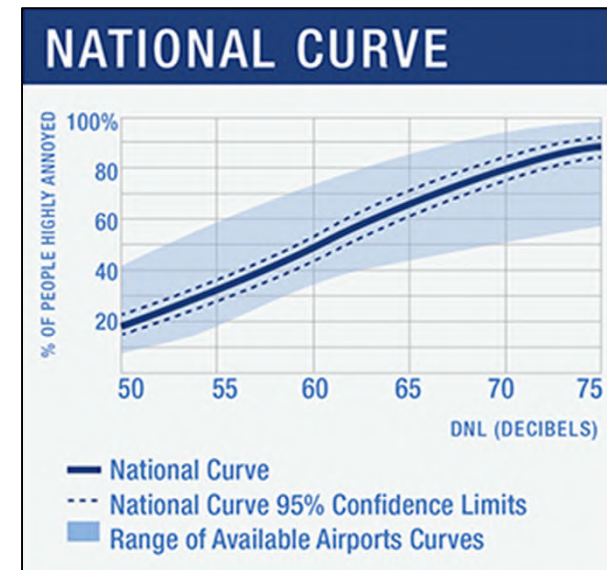
preliminary data – subject to change





## Analysis of the Neighborhood Environmental Survey

- The FAA used the NES results to produce a new national curve relating aircraft noise exposure to community annoyance
- NES results show more people are “highly annoyed” at a given noise exposure level compared to historical data
  - ~66% of respondents were highly annoyed at 65 DNL, compared with 12.3% in the Schultz curve
  - ~20% of respondents were highly annoyed at 50 DNL, compared with 1.7% in the Schultz curve

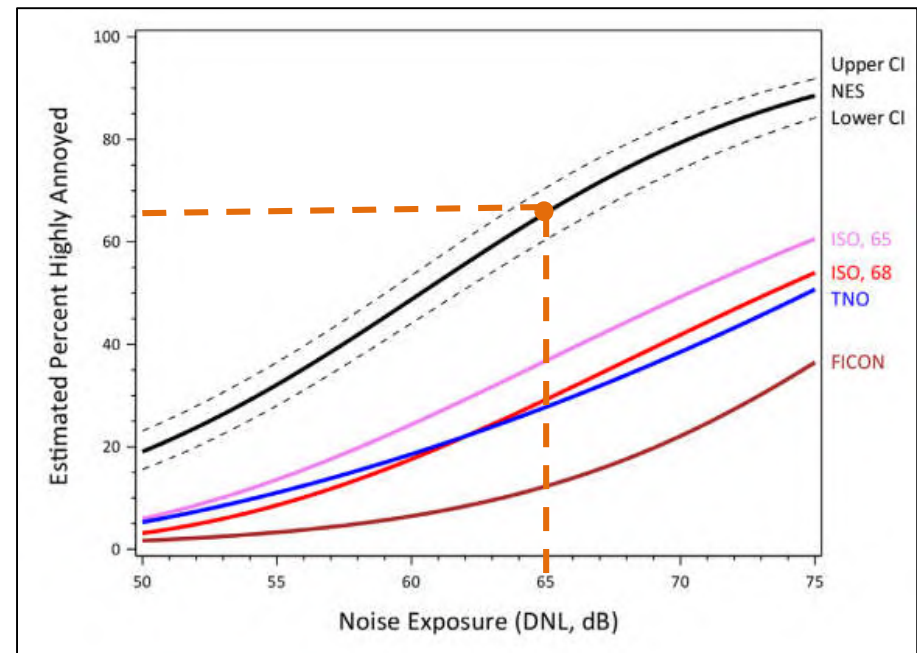


*preliminary data – subject to change*



## Analysis of the Neighborhood Environmental Survey (cont.)

- The NES national curve shows more people highly annoyed by aircraft noise than multiple other curves produced to date, taking into account confidence intervals (CIs)
- In the image at right, the following curves are shown for comparison
  - Federal Interagency Committee on Aircraft Noise (FICON), 1992
  - Two International Standards Organization (ISO) curves
  - The Netherlands Organisation for Applied Scientific Research (TNO)



*preliminary data – subject to change*



## Aviation Noise Policy Has Not Changed

- The NES national curve does not represent a new aviation noise policy. The existing noise metrics and thresholds in FAA Order 1050.1F and other noise regulations/policies still apply.
- The FAA has a long-standing history of noise research and is continuing to study noise impacts to health and welfare, noise abatement, and mitigation techniques.
- The FAA “will not make any determinations based on the findings of these research programs for the FAA's noise policies, including any potential revised use of the Day-Night Average Sound Level (DNL) noise metric, until it has carefully considered public and other stakeholder input along with any additional research needed to improve the understanding of the effects of aircraft noise exposure on communities.”

*preliminary data – subject to change*



## FAA is Requesting Feedback on Further Noise Research to Inform Future Noise Policy

### FAA is requesting comments in three areas:

1. Effects of Aircraft Noise on Individuals and Communities;
  2. Noise Modeling, Noise Metrics, and Environmental Data Visualization; and
  3. Reduction, Abatement, and Mitigation of Aviation Noise
- FAA also requests input on the factors that may be contributing to the increase in annoyance shown in the survey results.
  - Provide your comment to the FAA by March 15, 2021 at: [http://www.regulations.gov/#!submitComment;D=FAA\\_FRD\\_OC\\_0001-20316](http://www.regulations.gov/#!submitComment;D=FAA_FRD_OC_0001-20316)

Federal Register  
Notice:

<http://federalregister.gov/d/2021-00564>

Full text:

[https://www.faa.gov/regulations\\_policies/policy\\_guidance/noise/survey/](https://www.faa.gov/regulations_policies/policy_guidance/noise/survey/)

Comments due: March 15, 2021 (ref. Docket Number FAA-2021-0037)

*preliminary data – subject to change*







# SCSC Roundtable

Questions?

Item \_\_\_\_\_

## Legislative Committee Informational Update at SCSC Roundtable Meeting

May 26, 2021

The Legislative Committee met on December 16, 2020. There were two major topics on the agenda. A recap of the discussion and direction provided follows.

- Noise Metrics – The Legislative Committee discussed the second draft of policies for a new approach to noise metrics. The second draft was written by Steve Alverson from ESA. It was based upon the first draft written by Member Glenn Hendricks, input from other committee members, public input, and input from technical staff at ESA.

The input on the second draft included a directive to have ESA add a summary at the beginning of the paper, re-format the document to add clarity to the main points, and provide to Legislative Committee Chairperson Lisa Matichak for review and approval before bringing it to SCSC Roundtable Chairperson Mary-Lynne Bernald and the full SCSC Roundtable for approval. It was suggested that Committee Chairperson Matichak provide a short list of how the full SCSC Roundtable may want to use this position paper in the future.

- Public Health & Environmental Impact on Noise & Emissions – Member Kathy Watanabe verbally shared a second plan for a public health position paper and proposed use of the paper. There was an emphasis placed on how this second plan incorporated committee member and public input from the previous meeting of the Legislative Committee. Committee members continued discussion of how the position paper could be updated, and additional information that should be included.

Since the December 16, 2020 Legislative Committee meeting, ESA has drafted the third version of the policies which is attached.

Attachment – Third draft of policies on noise metrics

## **SCSC Roundtable's Position on the Federal Aviation Administration's (FAA) Aircraft Noise Metrics to Identify Noise Impacts from Proposed Flight Procedure Changes**

### **Summary:**

Based on feedback from the members of the SCSC Roundtable Legislative Committee, members of the public, and input from SCSC Roundtable consultant staff, this position paper has been drafted to address the issues surrounding the noise metrics used by the FAA in the environmental review process. Specifically, this position paper addresses the concerns that such noise metrics, and the way they are being used, are not effective in determining the impact to people on the ground. For example, tens of thousands of people make complaints about aircraft noise associated with air traffic changes where the FAA has concluded that there will be no impacts. Roundtables, like the SCSC Roundtable, are then formed to try to address the issue. Therefore, something is missing in this process, and the SCSC Roundtable is proposing recommendations to help address this issue.

### **Problem Statement:**

The millions of aircraft noise complaints and public discord that has resulted from the FAA's implementation of the NorCal Metroplex and other Metroplex projects throughout the country has demonstrated that the FAA's existing tools, noise metrics, and thresholds of significance have not effectively or accurately assessed the actual impact of aircraft noise on residents and noise sensitive resources. As a result, the FAA, elected officials, airport/community roundtables, and affected members of the public spend countless hours addressing aircraft noise issues that could have been resolved in the procedure design and/or environmental analysis process.

### **Failure of the FAA's Existing Aircraft Noise Analysis Process:**

The current FAA Orders that govern the FAA's environmental reviews under the National Environmental Policy Act (NEPA), do not include sufficiently specific language to direct the FAA to fully consider and disclose the impact of aircraft noise and overflights on residents and noise sensitive resources when it is making determinations about the appropriateness of flight procedure changes. In fact, the FAA has relied on NEPA's Categorical Exclusion (CatEx) process to approve flight procedure changes that have shifted and concentrated aircraft flight tracks over

noise sensitive areas without disclosing the nature of the change in noise exposure and overflights or holding public meetings to solicit input on the proposed changes. As a result, thousands of residents who are impacted by the change express their concerns to their local, state, and federal elected representatives, local roundtables, and the FAA only to learn that the FAA's environmental process has been completed and there is no recourse for minimizing the new aircraft noise and overflight impacts.

To make matters worse, when the FAA has utilized the Environmental Assessment (EA) process under NEPA to disclose potential noise impacts due to changes in flight procedures over populated areas, there are no impacts to disclose because the FAA relies exclusively on the 65 dBA Day/Night Average Sound Level (DNL) as the impact threshold. Levels of 65-dBA DNL typically occur within a few miles of an airport's runways. As a result, flight procedure changes that occur miles from an airport will never trigger an exceedance of the 65-dBA DNL threshold. The SCSC Roundtable believes that there is a national urgency to correct this systemic flaw in the FAA's environmental process, which if corrected will benefit communities, the national air transportation system, aircraft operators, and the FAA.

#### **The Solution:**

***The FAA should use a different noise metric(s) besides DNL to identify and mitigate potential aircraft noise exposure and overflight hotspots as experienced by people on the ground before flight procedure implementation.***

For example, through the Aviation Environmental Design Tool (AEDT), the FAA has a suite of supplemental metrics to help identify where problems may occur. Once the problem areas are identified, the FAA can work with Air Traffic Organization (ATO) staff, industry partners, the local roundtable, and the public to explore methods of ameliorating those problems. In addition, to the benefit of developing an approach that minimizes aircraft noise exposure, this approach provides the FAA an opportunity to share its work with the public before procedure implementation.

***In addition to supplemental noise metrics, the FAA should use tools such as its Terminal Area Route Generation Evaluation & Traffic Simulation (TARGETS) tool and non-noise metrics to assess potential change in aircraft noise and overflights experienced on the ground.***

For example, the TARGETS tool or other appropriate tools should be used to analyze flight track density, changes in the number of overflights on a per person

basis, changes in operations based on the availability of the flight procedure, and identify noise sensitive areas that will be newly overflowed, and use similar non-noise metrics to determine the full breadth of the potential change in aircraft noise and overflights that people will experience on the ground.

Finally, after implementation of a procedure, the FAA should gather actual data to evaluate if the noise exposure from the procedure is at the predicted levels, determine if the aircraft operations levels are as predicted, calculate the actual overflights on a per-person basis, and make the necessary adjustments to ensure the aircraft noise exposure, operations levels, and flight track concentrations are within the predicted ranges.

### **Appropriate Balance:**

The SCSC Roundtable agrees that safety of air travel is paramount. However, the SCSC Roundtable believes that the rules governing the FAA's environmental processes should be amended to ensure that "the impact of aircraft noise on people and noise sensitive resources" is given the same decision making weight as "the efficient use of the airspace for aircraft operators".

### **Recommendations:**

The following conceptual language changes must be included in the appropriate FAA Reauthorization bill or similar FAA-related bills – until this language or similar language has been adopted for use by the FAA in fulfilling its obligations under NEPA.

- Utilizing supplemental noise metrics, the FAA must establish new analysis methods and noise/overflight standards to accurately assess the actual noise and overflight impacts of flight procedure changes to people on the ground. This includes the application of cumulative and single-event noise metrics to assess impacts on human annoyance, sleep, health, learning, public spaces, and natural quiet.
- The FAA must modify its existing flight procedure approval processes to include and utilize the new supplemental noise metrics and overflight density and intensity when approving any flight procedure modification.
- When the FAA is reviewing/approving any flight procedure, it must collect noise measurements at homes and noise sensitive uses (using new supplemental noise metrics). These noise measurements will include actual



pre-change conditions, actual post-change conditions, and a post-implementation review process to ensure the “after” condition is an improvement in aircraft noise exposure as measured at homes and noise sensitive uses than was defined in the approved flight procedure.

- If the post-implementation noise measurements are higher than those defined in the approved flight procedure’s environmental documentation, the FAA is required to modify the flight procedures until the measured noise levels are at or lower than the approved levels.
- FAA’s Orders and Desk Reference governing the FAA’s environmental processes must be amended to ensure that “the impact of aircraft noise on people and noise sensitive resources” is given the same decision making weight as “the efficient use of the airspace for aircraft operators”.

The intent of the proposed language changes above is to protect residents and noise sensitive resources as the FAA considers changing the flight procedures/path/frequency over them.

Draft

**RESOLUTION NO.**

**RESOLUTION OF THE SANTA CLARA/SANTA CRUZ COUNTIES  
AIRPORT/COMMUNITY ROUNDTABLE ESTABLISHING  
REGULAR MEETING DATES**

WHEREAS, the Santa Clara/Santa Cruz Counties Airport Community Roundtable (“Roundtable”) was created in 2018 by local agencies in Santa Clara and Santa Cruz Counties to address community concerns related to noise from aircraft operating to and from, and not limited to, San Francisco International Airport and San Jose International Airport; and

WHEREAS, the Roundtable adopted bylaws regulating the business of the Roundtable on March 27, 2019; and

WHEREAS, pursuant to the bylaws, the Roundtable membership shall establish, by adopted resolution, the date, time and place for regular Roundtable meetings.

NOW, THEREFORE, the Santa Clara/Santa Cruz Counties Airport Community Roundtable hereby establishes regular meetings on the fourth Wednesday in the months of January, April, July, and October. Meetings will be held at 1:00pm at \_\_\_\_\_ or at such other location permitted by law.

Regularly adopted and passed this 26<sup>th</sup> day of May, 2021, by the following vote:

AYES:

NOES:

ABSENT:

Approved: \_\_\_\_\_  
Mary-Lynne Bernald, Chairperson

Attest: \_\_\_\_\_

## **SCSC Roundtable All Correspondence**

**January 22, 2020 – January 26, 2020**

All correspondence compiled prior to the January 22nd cutoff date for agenda posting is accessible on the SCSC Roundtable website at this link location:

<https://scscroundtable.org/meetings/sc-sc-roundtable-january-27-2021-virtual/#/tab-agenda-packet>

Correspondence received after the January 22nd deadline, but prior to the January 26th is provided in this packet for reference, as well as any additional correspondence received between January 26th and May 21st, 2021.

**January 22, 2021**

**From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

Responding to FAA Request for Input on Agency Noise Research Activities  
All interested individuals and organizations:

As you are aware, the FAA is seeking public input on its noise research activities to provide them with information that will help to update the agency's national noise policy. The deadline for submitting this information to the FAA is March 15, 2021. The next Forum meeting is April 21, 2021. So, in order to meet the FAA's deadline for receiving input, I have revised the attached January 18, 2021 memo that summarized the FAA's January 13, 2021 notice in the Federal Register to provide instructions to the Forum and other interested individuals and organizations about how and when to submit comments, either to the FAA directly or to the Forum through the facilitator. I have set February 15, 2021 as the deadline to receive any and all comments to be submitted to the FAA by the Forum.

Timely responses will be appreciated, and there is nothing to stop anyone from submitting their input prior to February 15. The information you will need is contained in the attached revision to the January 18 memo.

Thank you for your consideration.

Please contact me with any questions.

Mike McClintock,  
Forum Facilitator

**Attachment Name**

**20210122\_Mike\_McClintok\_SCSCRoundtable\_Responding to FAA Request for Input**

## MEMORANDUM

### OAKLAND AIRPORT-COMMUNITY NOISE MANAGEMENT FORUM

**Date:** January 18, 2021 [Revised 1-23-2021]  
**To:** Forum members and all interested parties  
**From:** Mike McClintock, Forum Facilitator  
**Subject:** Recent FAA Activities of Interest

On January 13, 2021, the FAA released information that should be of interest to the Forum, as well as other interested parties:

- Overview of FAA Aircraft Noise Policy and Research Efforts: Request for Input on Research Activities to Inform Aircraft Noise Policy (see Part I, below); and
- FAA Neighborhood Environmental Survey (see Part II, Pg. 11).

These two notices came in too late to be included in the agenda for the January 20, 2021 Forum meeting, but there were questions at the meeting. The following are, for the most part, unedited extracts from the two notices in case anyone has not been able to access the actual Federal Register notices. ***Should you wish to comment directly to the FAA, either as an individual or as an organization, please send your comments directly to the FAA at any of the addresses listed below, and in the format requested. The deadline for submitting input to the FAA is March 15, 2020.***

**Comments Invited by the FAA:** The FAA recognizes that a range of factors may be driving concerns due to aircraft noise. However, as outlined in this notice, a broad understanding of aircraft noise and its potential impacts is needed in order to better manage and reduce concerns from aviation noise. 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. Comments that focus on the questions listed below will be most helpful. The more specific the comments, the more useful they will be in the FAA's considerations, e.g.

- What, if any, additional investigation, analysis, or research should be undertaken in each of the following three categories as described in this notice:
  - Effects of Aircraft Noise on Individuals and Communities;
  - Noise Modeling, Noise Metrics, and Environmental Data Visualization; and
  - Reduction, Abatement, and Mitigation of Aviation Noise?
- As outlined in this notice, the FAA recognizes that a range of factors may be driving the increase in annoyance shown in the Neighborhood Environmental Survey results compared to earlier transportation noise annoyance surveys—including survey methodology, changes in how commercial aircraft operate, population distribution, how people live and work, and societal response to noise. The FAA requests input on the factors that may be contributing to the increase in annoyance shown in the survey results.
- What, if any, additional categories of investigation, analysis, or research should be undertaken to inform FAA noise policy?

***You may also submit your input to the Forum for transmittal to the FAA. Input for the Forum must be received by February 15, 2021. Send your comments to:***

***Mike McClintock, Forum Facilitator at [glomike65@aol.com](mailto:glomike65@aol.com) or  
 1411 Northview Ct.  
 Mount Vernon, WA 98274***



*The Forum’s input to the FAA will not include any personally identifiable information (PII), but any input from organizations may be sourced for the information of the FAA.*

*Below are the subject areas that the FAA is seeking input on. They are described in more detail below in Part I, “Overview of FAA Research on Aircraft Noise.” Please organize/categorize your comments on the basis of the following outline, for example “1. Sleep Disturbance,” or “2. Supplemental Noise Metrics.”*

**1. Effects of Aircraft Noise on Individuals and Communities:**

- Speech Interference and Children’s Learning;
- Neighborhood Environmental Survey;
- Health and Human Impacts Research;
- Impacts to Cardiovascular Health;
- **Sleep Disturbance**; and
- Economic Impacts

**2. Noise Modeling, Noise Metrics, and Environmental Data Visualization**

- Aviation Environmental Design Tool;
- Noise Screening;
- Environmental Data Visualization; and
- **Supplemental Noise Metrics**

**3. Reduction, Abatement, and Mitigation of Aviation Noise**

- Aircraft Source Noise Reduction;
- Noise Abatement;
- Noise Mitigation Research; and
- Aircraft Noise Policy Background

**PART I--OVERVIEW OF FAA AIRCRAFT NOISE POLICY AND RESEARCH EFFORTS: REQUEST FOR INPUT ON RESEARCH ACTIVITIES TO INFORM [FAA] AIRCRAFT NOISE POLICY [Federal Register, Vol. 86, No. 8, January 13, 2021, P. 2722]**

In this notice the FAA has released a summary of its research programs on civil aircraft noise and is inviting public comment on the scope and applicability of these research initiatives to address aircraft noise. The FAA will not make any determinations based on the findings of these research programs for the FAA’s noise policies, including any potential revised use of the Day-Night Average Sound Level (DNL) noise metric until it has carefully considered public and other stakeholder input along with any additional research needed to improve the understanding of the effects of aircraft noise exposure on communities.

**Timeline:** Comments on this notice must identify the docket number and be received **by the FAA on or before March 15, 2021.**

**Docket Number: FAA-2021-0037**

**Addresses:** Send comments identified by docket number FAA–2021–0037 using any of the following methods:

- **Federal eRulemaking Portal:** Go to <http://www.regulations.gov> and follow the online instructions for sending your comments electronically.
- **Mail:** Send comments to Docket Operations, M–30; U.S. Department of Transportation, 1200 New Jersey Avenue SE, Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.

- **Hand Delivery or Courier:** Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- **Fax:** Fax comments to Docket Operations at (202) 493–2251.

**Privacy:** The FAA will post all comments it receives, without change, to <http://www.regulations.gov>, including any personal information the commenter provides. Using the search function of the docket website, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the Federal Register published on April 11, 2000 (65 FR 19477–19478), as well as at <http://DocketsInfo.dot.gov>.

**Docket:** Background documents or comments received may be read at <http://www.regulations.gov> at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

**For Further Information Contact:** Mr. Donald Scata, Office of Environment and Energy (AEE–100), Federal Aviation Administration, 800 Independence Ave. SW, Washington, DC 20591. Telephone: (202) 267–0606. Email address: [NoiseResearchFRN@faa.gov](mailto:NoiseResearchFRN@faa.gov).

## Background

According to the FAA's Federal Register notice:

- The number of people living in areas exposed to significant levels of aircraft noise (i.e., DNL/CNEL 65 dB) in the U.S. has declined from ~7 million to just over 400,000 since 1970; while the number of commercial air passenger enplanements has gone from ~ 200 million in 1975 to ~ 930 million in 2018.
- The single most important factor in this decline was the phased transition to quieter aircraft; along with cooperative efforts by airports, airlines and other aircraft operators, State and local governments, and communities to reduce the number of people exposed to significant levels of aircraft noise through airport noise compatibility planning, mitigation projects, and acoustically-insulating homes, schools and other noise-sensitive facilities.
- The introduction of Performance Based Navigation (PBN) procedures, as needed to safely and efficiently modernize the national air transportation system, has also provided noise benefits for many by allowing for new and more efficient flight paths, but has in some places resulted in community concerns, particularly related to increased concentration of flights.
- In 2016, the FAA released an update to the FAA Community Involvement Manual to reaffirm the FAA's commitment to inform and involve the public, and to give meaningful consideration to community concerns and views as the FAA makes aviation decisions that affect community interests.
- The FAA has since developed and begun implementing a comprehensive and strategic approach to transform and enhance FAA community involvement practices, including working through airport community roundtables, to equitably discuss opportunities to shift or, when possible, reduce aircraft noise exposure.

## Overview of FAA Research on Aircraft Noise

According to the Federal Register notice, the FAA recognizes that aircraft noise remains a primary concern for many stakeholders, and is actively working to understand, manage, and reduce the environmental

impacts of global aviation through research, technological innovation, policy, and outreach to benefit the public. With the vision of removing environmental constraints on aviation growth by achieving quieter, cleaner, and more efficient air transportation, the FAA has worked closely with a number of industry, academic, and governmental stakeholders to assemble a comprehensive portfolio of research activities (including leveraging research undertaken by others) aimed at guiding investments in scientific studies, analytical tools, and innovative technologies to better understand and manage aircraft noise. However, due to the complex nature of aircraft noise and the varied priorities and concerns of stakeholders, no single set of findings can completely guide decision making. A broad understanding of aircraft noise and any potential impacts, from many different perspectives, is therefore needed.

Summaries of the FAA's key research, tools, and technology programs designed to potentially inform its aircraft noise policy are provided below.

## 1. Effects of Aircraft Noise on Individuals and Communities

- **Speech Interference and Children's Learning** -- Much of the FAA's current understanding on speech interference due to noise was established by the Environmental Protection Agency (EPA) in the 1970s. The findings from these early research assessments are still relevant for today's considerations on the impacts from aircraft noise. However, the FAA is also investigating whether there are related considerations warranting more detailed studies. One area in particular is the potential effects of aviation noise on reading comprehension and learning motivation in children. Initial research in this area has shown there are challenges in designing effective studies, and this continues to be an area of interest to better inform noise mitigation and abatement strategies for schools and other noise-sensitive facilities. While additional research in this area is still being explored, the FAA has invested more than \$440 million in sound insulation treatments at schools around the country in order to mitigate any potential issues related to aircraft noise.
- **Health and Human Impacts Research** -- While community annoyance due to aircraft noise exposure provides a useful summary measure that captures public perceptions of noise, a full understanding of the impact of noise on communities requires a careful consideration of the potential physiological impacts as well. Knowledge of physiological impacts could also help the FAA develop targeted measures to address aircraft noise. Emerging research capabilities are providing new opportunities to examine specific impacts of noise on humans. When these are examined in a holistic manner with research on community annoyance, they could further inform aircraft noise policy considerations. The FAA is conducting research on the potential impacts of aircraft noise on cardiovascular health and sleep disturbance, as described below.
- **Impacts to Cardiovascular Health** -- 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. The researchers are doing this by leveraging existing national longitudinal health cohorts wherein statistically large numbers of people provide data about their health on a periodic basis over the course of many years. These studies are typically used to understand the relative risk of different factors like diet on different health outcomes like heart disease. The Boston University team is expanding the list of factors to include aircraft noise exposure such that it can be placed in context with other factors that could increase one's risk of cardiovascular disease. The team is leveraging existing collaborations with well-recognized and respected health cohorts including the Nurses' Health Studies and the Health Professionals Follow-Up Study, as well as a complementary study at Boston University that is examining the Women's Health Initiative cohort through funding from the National Institutes of Health.

- **Sleep Disturbance** -- The FAA is working with a team led by the University of Pennsylvania School of Medicine to conduct a national sleep study that will quantify the impact of aircraft noise exposure on sleep. The study will collect nationally representative information on the probability of being awoken by aircraft noise exposure. The study will start with input being requested from approximately 25,000 respondents through a mail survey. These surveys will be used to determine the eligibility of respondents for a detailed field study that will involve roughly 400 volunteers. The volunteers in the detailed field study will use equipment provided by the research team to collect both noise and electrocardiography data in their homes while they sleep. The electrocardiography data combined with information on the level of aircraft noise exposure will advance our understanding of the physiological effects of aircraft noise on sleep.
- **Economic Impacts** -- 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 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 Neighborhood Environmental Survey (described in the next section), 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.
- **Neighborhood Environmental Survey (NES)**--To review and improve the agency's understanding of community response to aircraft noise, the FAA initiated the Neighborhood Environmental Survey (NES) to help inform ongoing research and policy priorities on aviation noise. Section 187 of the FAA Reauthorization Act of 2018 11 requires the Administrator of the FAA to "conclude the Administrator's ongoing review of the relationship between aircraft noise exposure and its effects on communities around airports . . . [and] submit to Congress a report containing the results of the review." Due to the interest from Congress and other stakeholders in the findings of this research, an expanded summary is provided in this notice below. The full text of the NES report, including a detailed description of the methodology and findings, as well as additional background material to help inform readers, is available on the FAA's website at: [www.faa.gov/go/aviationnoise](http://www.faa.gov/go/aviationnoise).

**Overview of the Survey** -- Working with statisticians and noise experts,<sup>12</sup> the FAA worked with other Federal agencies that have statutory, regulatory, or other policy interests in aviation noise, to conduct a nationwide survey to update the scientific evidence on the relationship between aircraft noise exposure and its annoyance effects on communities around airports, based on today's aircraft fleet and operations. The NES included a range of questions on a variety of environmental concerns, including aviation noise exposure. The team of expert consultants (including HMMH), under direction from the FAA, surveyed residents living around representative U.S. airports, drawing upon well-established research methods in order to ensure scientific integrity and historical continuity with prior studies, while also employing advancements in techniques for noise modeling and social surveys. The NES consisted of over 10,000 mail responses from residents in communities around 20 statistically representative airports across the Nation, making it the single largest survey of this type undertaken at one time. In addition to the mail responses, the consultants also conducted a follow-up phone survey, which included over 2,000 responses to a series of more detailed questions. The FAA is now considering the full NES results, in conjunction with

additional research findings as they become available, to determine how they may inform its noise policy considerations.

- **Overview of Community Response to Noise**-- Historically, two of the main types of information considered by the FAA and other Federal agencies in relating noise exposure to community response have been: (1) Case studies analyzing individual and group actions (e.g., complaints or legal action) taken by residents of communities in response to noise; and (2) social surveys (such as the NES) that elicit information from community residents regarding their level of noise-induced annoyance. Annoyance is defined as a “summary measure of the general adverse reaction of people to noise that causes interference with speech, sleep, the desire for a tranquil environment, and the ability to use the telephone, radio, or television satisfactorily.” The results of social surveys of noise-induced annoyance are typically plotted as “dose-response curves” on a graph showing the relationship between the level of DNL cumulative noise exposure and the percentage of the population that is “highly annoyed.”

Current FAA noise policy is informed by a dose-response curve initially created in the 1970s known as the Schultz Curve. This dose-response curve is generally accepted as a representation of noise impacts and has been revalidated by subsequent analyses over the years. The dose-response relationship it depicts has provided the best tool available to predict noise-induced annoyance for several decades. In 1992, the Federal Interagency Committee on Noise (FICON) reviewed the use of the Schultz Curve, and created an updated version of the curve using additional social survey data. The updated dose response curve was found to agree within one to two percent of the original curve, leading FICON to conclude that “the updated Schultz Curve remains the best available source of empirical dosage-effect to predict community response to transportation noise.” According to the 1992 FICON Report, the DNL-annoyance relationship depicted on the Schultz Curve “is an invaluable aid in assessing community response as it relates the response to increases in both sound intensity and frequency of occurrence.” Although the predicted annoyance, in terms of absolute levels, may vary among different communities, the Schultz Curve can reliably indicate changes in the level of annoyance for defined ranges of sound exposure for any given community. While the validity of the dose-response methodology used to create the Schultz Curve remains well supported, its underlying social survey data, including the additional data used by FICON to update the curve, is now on average more than 40 years old and warrants an update. The NES was conducted to create a new nationally representative dose-response curve to understand how community response to aircraft noise may have changed.

The NES’s collection of a nationally representative dataset on community annoyance in response to aircraft noise provides a contemporary update to the Schultz Curve, including technical refinements to improve its reliability. As with the Schultz Curve, the NES describes community annoyance in terms of the percentage of people who are “highly annoyed” and describes aircraft noise exposure in terms of the DNL noise metric. Based on the 1992 FICON Report, discussed previously, both the percentage of population highly annoyed and the DNL noise metric have continued to be recognized for this purpose including by FICON’s successor, the Federal Interagency Committee on Aviation Noise in its 2018 report.

**NES Results** -- Compared with the Schultz Curve representing transportation noise, the NES results show a substantially higher percentage of people highly annoyed over the entire range of aircraft noise levels (i.e., from DNL 50 to 75 dB) at which the NES was conducted. This includes an increase in annoyance at lower noise levels. The NES results also show proportionally less change in annoyance from the lower noise levels to the higher noise levels. Comparing the percent



of population highly annoyed due to noise exposure between the updated Schultz Curve for transportation noise in the 1992 FICON Report and the NES:

- At a noise exposure level of DNL 65 dB, the updated Schultz Curve from the 1992 FICON Report indicated that 12.3 percent of people were highly annoyed, compared to between 60.1 percent and 70.9 percent within a 95 percent confidence limit from the NES.
- At a noise exposure level of DNL 60 dB, the updated Schultz Curve from the 1992 FICON Report indicated that 6.5 percent of people were highly annoyed, compared to between 43.8 percent and 53.7 percent within a 95 percent confidence limit from the NES.
- At a noise exposure level of DNL 55 dB, the updated Schultz Curve from the 1992 FICON Report indicated that 3.3 percent of people were highly annoyed, compared to between 27.8 percent and 36.8 percent within a 95 percent confidence limit from the NES.
- At a noise exposure level of DNL 50 dB, the updated Schultz Curve from the 1992 FICON Report indicated that 1.7 percent of people were highly annoyed, compared to between 15.4 percent and 23.4 percent within a 95 percent confidence limit from the NES.

Graphics comparing the updated Schultz Curve from the 1992 FICON Report and the curve from the NES are provided on the FAA website at [www.faa.gov/go/aviationnoise](http://www.faa.gov/go/aviationnoise).

Advancements in Survey Methodology -- Earlier work to understand community response to noise, including Schultz's dose-response analysis, was based on the premise that the annoyance from any source of noise would be the same for a given DNL noise level. However, more recent work has shown that aircraft noise often results in higher levels of annoyance compared to the same level of noise from ground transportation sources.<sup>21</sup> There have been relatively few surveys of communities in the United States about aircraft noise undertaken over the last four decades. However, other countries around the world have conducted aircraft noise surveys during this time considering aircraft noise separately from noise from other modes of transportation. The results of these surveys, as reflected in a dose-response relationship published by the International Organization for Standardization, have consistently shown higher levels of annoyance than exhibited by the Schultz Curve. Informed by these results, the national dose-response curve in the NES report reflects only responses to the question about aircraft noise exposure.

Other Factors -- In addition to enhancements in survey techniques and changes to the way aircraft operate, there are likely other factors contributing to a change in the way communities respond to aircraft noise. Future work is needed to fully understand the specific drivers behind these reasons, but several possibilities include:

- Changes to where people are choosing to live, including societal migration to increasingly urban environments. Additionally, growth and changes to the makeup of suburban communities and their proximity to urban hubs may also be influencing factors on community expectations for aircraft noise exposure.
- How people work and live, including influencing factors such as increased in-home business and teleworking in today's economy. Changes in expectations for spending time outdoors versus indoors and the associated aircraft noise exposure may also be a factor.
- The rise of social media, the internet, and other national and global information sources, leading to an increased awareness and perception of local and national noise issues.
- Overall societal response to noise due to a combination of these or other factors.

In addition to the NES, which focuses on annoyance, the FAA is also engaged in a range of research initiatives aimed at providing information on other impacts of aircraft noise, including effects on children's learning, sleep disturbance, and potential health effects. Each of these

research initiatives focuses on a distinct type of potential adverse effect associated with aviation noise exposure. The potential adverse effects explored by these initiatives may also be factors influencing the annoyance reported by the NES. However, research in these areas is still ongoing and therefore was not specifically addressed by the NES. Additional details on these research programs are provided below.

## 2. Noise Modeling, Noise Metrics, and Environmental Data Visualization

As a core component of FAA's work to address aircraft noise, as well as a requirement of its environmental regulatory commitments, the FAA must maintain the ability to accurately quantify aircraft noise exposure around airports and throughout the National Airspace System. High-fidelity modeling is the only practical method to accomplish this objective, as aircraft noise needs to be quantified over relatively large scales in an efficient and consistent manner. For more than four decades, the FAA has worked closely with industry, academic, and governmental stakeholders to advance research and development in aircraft noise modeling. This effort advances the analytical tools, metrics, data, and standards required to provide high quality results to inform the public and other stakeholders about noise exposure levels. The FAA has also been actively exploring ways to use emerging technologies to visualize environmental data including noise exposure.

- **Aviation Environmental Design Tool** -- The Aviation Environmental Design Tool (AEDT) is the FAA's required noise and environmental modeling application for all U.S. domestic regulatory analyses requiring FAA review. The AEDT also provides analysis support for the International Civil Aviation Organization—Committee on Aviation Environmental Protection, and is used as a research and assessment tool by other Federal agencies, universities, and industry stakeholders. Through collaborations with government, university, and industry partners, the FAA actively manages AEDT to ensure that features and capabilities are developed to meet expanding environmental analysis needs, and to ensure that as new data and technologies become available they are incorporated in order to enhance modeling accuracy and efficiency. The AEDT builds on a legacy of noise modeling development, and is based on detailed aircraft-specific noise measurements and internationally accepted aircraft performance models and standards. A dynamic development process is used to create new versions of AEDT. This process allows for new features and capabilities to be added as needed, for example, when required by policy updates or informed by emerging research findings.
- **Noise Screening** -- Building from the high-fidelity noise modeling capabilities available through AEDT, the FAA is also working to develop an updated noise screening tool. This updated noise screening tool will use a simplified noise modeling process to facilitate an expedited review of proposed Federal actions where significant noise impacts are not expected. Such an approach is beneficial where a proposed Federal Action is limited in scope and could qualify for a categorical exclusion under the FAA's procedures for implementing the National Environmental Policy Act (NEPA). The primary goal of updating the noise screening tool is to decrease the amount of time that an analyst will need to conduct an assessment while also ensuring a fully validated result that is readily understandable by the public. While the output from a noise screening tool cannot provide the same level of detail as a comprehensive modeling tool, the simplified process provides for an expedited initial view of any potential changes in aircraft noise exposure.
- **Environmental Data Visualization** -- The FAA has been developing ways to utilize geospatial data to improve the agency's ability to communicate environmental data to the public. For example, the FAA has designed an Environmental Visualization Tool to take advantage of the availability of high-quality geospatial data to deliver an agency-wide resource using a consistent,

common visual language. Once fully implemented, this common visualization platform will serve the needs of multiple environmental programs within the FAA, including those presenting aircraft noise data to the public.

- **Supplemental Noise Metrics** -- The FAA's primary noise metric, DNL, was developed and validated to identify significant aviation noise exposure for land use and mitigation planning as well as for determining significant change in noise exposure under NEPA review. In some cases, however, it can be useful to supplement DNL with the use of other noise metrics. While other noise metrics may not provide as complete an understanding of the cumulative noise exposure from activity around an airport and its associated airspace, they often can provide opportunities to communicate the specific characteristics of noise changes due to the unique aspects of a proposed action. The FAA's NEPA procedures address the use of supplemental noise metrics. To assist the public in understanding noise impacts, and to better facilitate communication among communities interested in systematic departure flight track dispersion, the FAA is working to assess the use of potential supplemental metrics. For a supplemental metric to be effective in evaluating potential means of achieving flight track dispersion, and to ensure that communities understand the impacts of dispersion (i.e., that dispersion does not eliminate noise but rather it may move noise to other neighborhoods), the supplemental metric will need to effectively communicate the changes in noise exposure that will occur in all of the communities affected by the change, both those that would be exposed to less noise and those that would be exposed to more noise.

### 3. Reduction, Abatement, and Mitigation of Aviation Noise

To directly address noise concerns, the FAA sponsors multiple research programs to explore different concepts for aircraft noise reduction. As aircraft noise is a complex issue, no single concept is capable of providing a universal solution. However, by conducting research across different areas, the FAA is developing solutions to reduce noise at its source, abate noise through operations, and mitigate the effects of noise on communities. The intent of this approach is to have a variety of options to reduce the noise being experienced by those living near airports around the country and to have options that could be tailored to specific airports.

- **Aircraft Source Noise Reduction** -- As noted previously, the single most influential factor in the historical decline in noise exposure was the phased transition to quieter aircraft. Through the public-private partnership of the Continuous Lower Energy, Emissions, and Noise (CLEEN) Program, the FAA and industry are working together to develop technologies that will enable manufacturers to create aircraft and engines with lower noise and emissions as well as improved fuel efficiency. The technologies being accelerated by the CLEEN Program have relatively large technological risk. Government resources help mitigate this risk and incentivize aviation manufacturers to invest and develop these technologies. By cost-sharing the development with the FAA, industry is willing to accept the greater risk and can better support the business case for this technological development. Once entered into service, the CLEEN technologies will provide societal benefits in terms of reduced noise, fuel burn, and emissions throughout the fleet for years to come. In addition to the benefits provided by technologies developed under the CLEEN, the program leads to advances in the analysis and design tools that are used on every aircraft or engine product being made by these companies; this extends the benefits of the CLEEN Program well beyond the individual technologies being matured.

As new aircraft and engine technologies lead to quieter aircraft over time, the FAA works to establish aircraft certification standards based on noise stringency requirements. These standards are a requirement of the airworthiness process and are described in 14 CFR part 36. These

requirements do not force manufactures to develop new technology. However, as new noise reduction technologies emerge they do ensure that new aircraft continue to meet increasingly quieter standards within the bounds of what is technologically feasible and economically reasonable.

- **Noise Abatement** -- The FAA is also supporting multiple efforts to identify means to abate noise through changes in how aircraft are operated in the airspace over communities. In the immediate vicinity of an airport, use of voluntary noise abatement departure procedures (NADP) has been a longstanding technique available to reduce noise. Recent research is examining the effectiveness of these procedures and identifying means of improving their use.

As the FAA works to modernize the National Airspace System, new aircraft flight procedures have been designed to take advantage of PBN technologies. To better understand both the environmental benefits and challenges posed by PBN, the FAA is working to re-examine ways to routinely consider noise during flight procedure design. This effort includes an exploration of how PBN can better control flight paths and move them away from noise-sensitive areas, how changes in aircraft performance could be safely managed to reduce noise, and how systematic departure flight track dispersion can be implemented to abate noise concerns.

In a recent partnership with the Massachusetts Port Authority (Massport) and MIT, the FAA jointly contributed to research considering how Area Navigation (RNAV) PBN procedures could be designed and implemented to reduce noise. Multiple concepts were explored that highlighted how collaborations between the FAA, airport operators, and community members can produce innovative noise abatement strategies.

A recently completed analysis of operational procedures that resulted from the Massport-MIT-FAA partnership shows that for modern aircraft on departure, changes in aircraft climb speed have minimal impact on the overall aircraft departure noise. The current best practice for NADP, using International Civil Aviation Organization distant community or ‘‘NADP-2’’ departure procedure, has been shown to minimize modeled noise impacts. This analysis also shows that for modern aircraft on arrival, changes in approach airspeed could have a noticeable impact (reductions of 4-8 dBA) on the overall aircraft noise at relatively large distances from touching down (between 10 and 25 nautical miles from the runway). While NADP procedures have the potential to reduce community noise, they may also have implementation challenges that will need to be overcome. Research is ongoing at MIT to address these challenges. In addition to airplane operations, the FAA is also examining the potential for helicopter noise abatement through changes in operational procedures. The FAA has partnered with the Volpe Center, the National Aeronautics and Space Administration, the Pennsylvania State University, and operator organizations to explore new ways to safely fly rotorcraft while also reducing noise through the Fly Neighborly Program.

- **Noise Mitigation Research** -- Noise mitigation is the effort to take actions to reduce the impact of aircraft noise exposure that occurs. The primary mitigation strategies involve encouraging responsible land use planning in airport communities and, where appropriate, the application of sound insulation treatments to eligible homes or other noise-sensitive public buildings (e.g., schools or hospitals). In extreme cases where sound insulation technologies cannot provide adequate mitigation, the acquisition of residential homes and conversion to nonresidential land use is also an option. As sound insulation treatment costs have continued to rise and new research on the human impacts from noise becomes available, the FAA is exploring the cost-benefit calculus of existing noise mitigation strategies and technologies in order to better direct where and how limited mitigation resources should be applied. Recent academic research 31 and internal

assessments have raised questions about the benefits of sound insulation relative to the costs. While the relative benefits of sound insulation for noise exposures above DNL 65dB will depend on the individual home treatment costs, minimal benefit can be expected for sound insulation treatments applied for noise exposures below DNL 65dB.

- **Aircraft Noise Policy Background** -- Community response to noise has historically been a primary factor underlying the FAA’s noise-related policies, including the establishment of DNL 65 dB as the threshold of “significant” aircraft noise exposure. The FAA has been using a DNL of 65 dB as the basis for:
  - Setting the agency’s policy goal of reducing the number of people exposed to significant aircraft noise;
  - the level of aircraft noise exposure below which residential land use is “normally compatible,” as defined in regulations implementing the Aviation Safety and Noise Abatement Act of 1979, and
  - the level of aircraft noise exposure below which noise impacts of FAA actions in residential areas are not considered “significant” under section 102(2)(C) of the National Environmental Policy Act of 1969.

Research results, as reflected in the programs and studies described in this notice, will provide new information on how aircraft noise in communities near airports may be effectively managed and will inform future decision making on the FAA’s aircraft noise policies.

However, as previously stated, the FAA will not make any determinations on implications from these emerging research results for FAA noise policies until it has carefully considered public and other stakeholder input, and assesses the factors behind any increases in community impacts from aircraft noise exposure. Unless and until any changes become effective, all existing FAA regulations, orders, and policies remain in effect. The FAA is committed to informing and involving the public, and to giving meaningful consideration to community concerns and views as the FAA makes aviation decisions that affect them.

\*\*\*\*\*

## **PART II—FAA NEIGHBORHOOD ENVIRONMENTAL SURVEY**

[[https://www.faa.gov/regulations\\_policies/policy\\_guidance/noise/survey/#intro](https://www.faa.gov/regulations_policies/policy_guidance/noise/survey/#intro)]

The FAA conducted a nationwide survey regarding annoyance related to aircraft noise and is seeking public comment. Please review the survey introduction, [read the survey report](#), and [provide your comments](#).

Below is an introduction to the survey and an overview of the methodology, results, and public comments requested.

[Introduction](#)

[Methodology](#)

[Results](#)

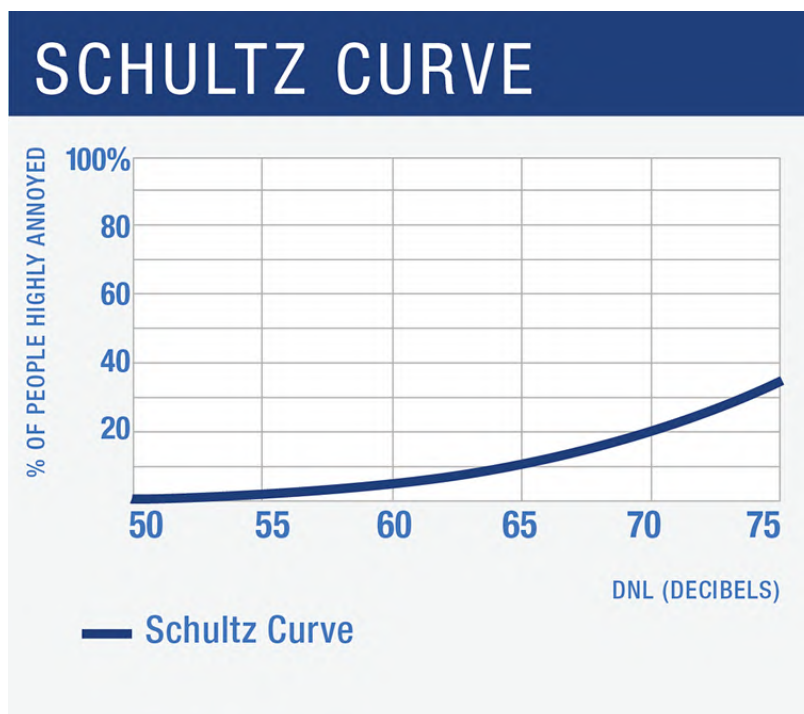
[Public Comments Requested](#)

## **INTRODUCTION**

### **RATIONALE FOR A NEW SURVEY**



While the Schultz Curve remains the accepted standard for describing transportation noise exposure-annoyance relationships, its original supporting scientific evidence and social survey data were based on information that was available in the 1970s. The last in-depth review and revalidation of the Schultz Curve was conducted in 1992. More recent analyses have shown that aviation noise results in higher annoyance than other modes of transportation. Recent international social surveys have also generally shown higher annoyance than the Schultz Curve. These analyses and survey data indicate that the Schultz Curve may not reflect the current U.S. public perception of aviation noise:



To ensure that FAA's continued efforts to reduce the effects of aircraft noise exposure on communities is based upon accurate information, FAA conducted a nationwide survey to measure the relationship between aircraft noise exposure and annoyance in communities near airports. This survey would capture the community response to a modern fleet of aircraft as they are being flown today and it would use best practices in terms of noise analysis and data collection. The responses from the survey have been used to create a new National Curve.

The Survey results show that there has been a substantial change in the public perception of aviation noise, relative to the Schultz Curve, and will ultimately inform future FAA noise initiatives.

## METHODOLOGY

### OVERVIEW

The FAA surveyed more than 10,000 residents living near 20 representative airports via a mailed questionnaire. The questionnaire was presented to the public as a *Neighborhood Environmental Survey* and asked the recipient if different environment concerns bother, disturb, or annoy them. Noise from aircraft was one of the thirteen environmental concerns that were covered in the Survey. Since the aircraft noise question was one of 13 environmental concerns listed, the recipient did not know this was in fact an airport community noise survey. The data from the Survey, the single largest survey of this type undertaken at one time, was used to calculate the new National Curve and provides a contemporary picture of response to aircraft noise exposure. A follow up phone survey was also offered to the 10,000 mail

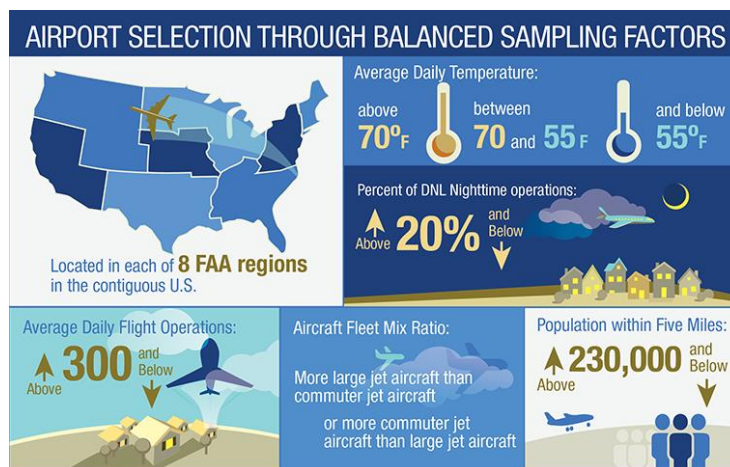
survey respondents, and just over 2,000 elected to participate. The phone survey was designed to provide additional insights on how the mail survey respondents feel about aircraft noise.

### METHODOLOGY SPECIFICS:

**Airport Selection** -- At the outset of the work, the FAA assembled a team of statisticians, survey experts and aircraft noise experts to determine the best methods for conducting the survey. The team decided to survey communities around a representative set of airports. A statistical approach was used to develop a set of airports that would be representative of the entire nation. A total of 95 airports met the initial criteria that ensured the selected airports would have a minimum number of jet aircraft operations and households exposed to noise:



From the 95 airports meeting the initial criteria, a final set of 20 airports was selected for the survey by using a method referred to as "balanced sampling." The FAA chose a set of six factors to ensure that the 20 airports selected for the survey shared the same characteristics as the original set of 95 airports.



**Population Selection** -- For each of the 20 airports selected, household addresses were considered based on their aircraft noise exposure. A DNL of 50 dB was chosen as the minimum noise exposure to be eligible for inclusion in the survey. In order to ensure households exposed to a range of noise levels were considered, the Survey aimed to obtain a distribution of respondents in five groups of 5-decibel increments (50-55 DNL dB, 55-60 DNL dB, etc.). Of the selected airports, there was a smaller pool of households

exposed to noise levels above DNL 65dB than households exposed to lower noise levels. The drop-off in households for noise levels above DNL 70dB was even more pronounced. As a result, the number of respondents for these noise levels were smaller than the other categories.

Total Number of Survey Responses	
DNL dB Categories	Survey Respondents
50-55	3,592
55-60	3,481
60-65	2,016
65-70	914
70+	325
<b>Total</b>	<b>10,328</b>

**Mail Survey Data Collection** -- The U.S. Postal Service Computerized Delivery Sequence File (CDSF) was used to develop the addresses to which the Survey would be sent. The Survey was distributed to each selected household by the U.S. Postal Service (and via express mail in some cases) in six separate "waves" over a 12-month period starting in October 2015. English and Spanish versions were distributed to each household, along with a pre-paid \$2 gift card as an incentive. The survey was sent to 40,000 households and over 10,000 people responded to the Survey by filling out the questionnaire and sending it back to the research team.



The survey questionnaire followed the recommendations of the leading international research organization on noise-induced effects on human beings. It included the key question: "Thinking about the last 12 months or so, when you are here at home, how much does each of the following bother, disturb, or annoy you?" For this question there were 13 different environmental topics, and survey respondents were asked to rate their annoyance on a scale from one to five (five being most annoyed).

Response data from questions were then analyzed, but with the focus placed on the responses to item "e" in the list, namely "Noise from Aircraft." This question is highlighted in the figure below for clarity, but all questions were presented equally in surveys issued to respondents.

Rate each on a scale of 1-5, with 5 meaning **"most annoying."**

Thinking about the last 12 months or so, when you are here at home, how much does each of the following **bother, disturb, or annoy you?**

a. Noise from cars trucks or other road traffic	b. Smells or dirt from road traffic	c. Smoke, gas or bad smells from anything else	d. Litter or poorly kept up housing
e. Noise from aircraft	f. Your neighbors' noise or other activities	g. Any other noises you hear when you are here at home. If this bothers or annoys you, what is the noise?	
h. Undesirable business, institutional or industrial property		i. A lack of parks or green spaces	j. Inadequate public transportation
k. The amount of neighborhood crime	l. Poor city or county services	m. Any other problems that you notice when you are here at home. If this bothers or annoys you, what is the problem?	

**Phone Survey Data Collection** -- Mail survey respondents were also invited to participate in a follow up phone survey. A \$10 gift card was offered as an incentive and approximately two thousand respondents agreed to participate. The phone survey included a wide range of questions designed to provide further information about the reasons why respondents may be concerned about aircraft noise. While the results are insightful, it is important to note that the phone survey findings do not maintain the same statistical robustness as the primary mail survey.

Noise Modeling -- Using the FAA's Integrated Noise Model (INM), DNL was computed twice for each airport. Note that although INM was replaced in 2015 by the FAA's Aviation Environmental Design Tool (AEDT), the noise modeling for the survey had begun prior to the release of AEDT and had been used to inform the selection the respondents. The use of INM was maintained for consistency throughout the project.

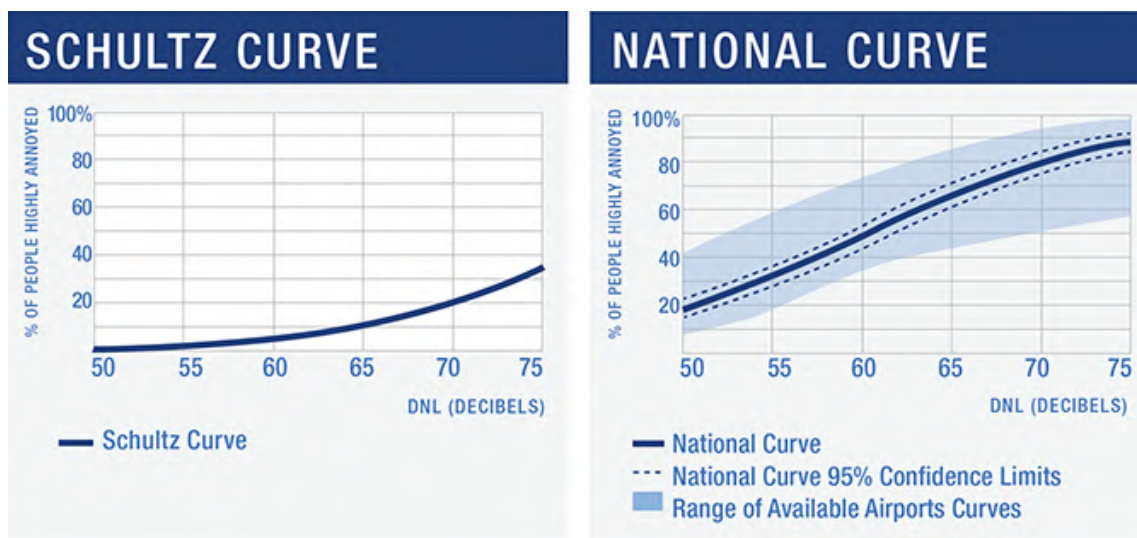
The first DNL computation determined which addresses would receive the mail Survey. To determine the noise model inputs, a year of radar flight tracking data from 2012-2013 was used, which includes data detailing aircraft flight paths, runway usage, time of day flight occurrences, and aircraft type.

The second DNL computation for each of the 20 airports adjusted these inputs to reflect actual 2015 aircraft operations levels. This coincided with the Survey distribution. Updated noise levels were then paired with the Survey response data to create the National Curve.

## RESULTS

A new National Curve was created by combining the Survey responses from the question on "Noise from Aircraft" with the modeled aircraft noise levels. Compared with the existing Schultz Curve, the new National Curve shows a substantial increase in the percentage of people who are highly annoyed by aircraft noise over the entire range of aircraft noise levels considered, including at lower noise levels.





The new Survey was designed to use a consistent approach across each airport community surveyed. This has allowed for an enhanced ability to provide additional statistical information about the new results, such as the 95% Confidence Limits and range of results from each of the 20 airports, as shown on the plot above. This was not possible with the older Schultz Curve.

When comparing the two curves, a variety of factors should be considered. Both analyses were conducted using the best survey data and understanding available at their time. However, many changes and advances have occurred in the 40 years since the Schultz Curve was created.

Potential factors for these differences still need to be explored; but to provide additional insight, mail survey respondents were also invited to participate in a detailed phone survey aimed at understanding the underlying reasons for annoyance to aircraft noise. The majority of phone survey respondents who were likely to be annoyed by aircraft noise indicated that they have experienced being "Startled", "Frightened", or "Awakened" by aircraft at home. Those who were bothered, disturbed, or annoyed by "General Traffic Noise" or "Smells" were also more likely to be annoyed by aircraft noise.

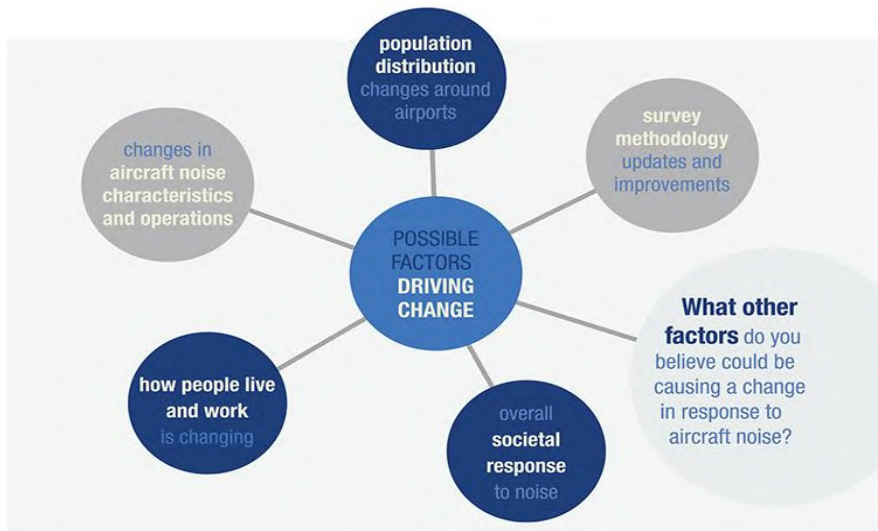
For additional information on the Survey, the [FAA has prepared a detailed technical report](#):



## PUBLIC COMMENTS REQUESTED

The [FAA has issued a Federal Register Notice \(FRN\)](#) to share the breadth of ongoing efforts at FAA on aircraft noise and to seek comment from the public [***NB: this link will take you to the information set forth above in Part I of this memo***]. The FAA recognizes that a range of factors may be driving the increase in annoyance shown in the Neighborhood Environmental Survey results compared to earlier transportation noise annoyance surveys. Within the FRN, the FAA is requesting input on the factors that may be contributing to the increase in annoyance shown in the survey results. The FAA is also interested in hearing from the public on what, if any, additional investigation, analysis, or research should be undertaken to inform FAA noise policy.





**FAA WANTS TO HEAR FROM YOU. WHAT DO YOU THINK ABOUT:**

 <p>Factors that may be contributing to the <b>increase in annoyance</b> shown in the Survey results</p>	 <p><b>Additional investigation</b> or analysis on:</p> <ul style="list-style-type: none"> <li>• Effects of Aircraft Noise on individuals and Communities</li> <li>• Noise Modeling, Noise Metrics, and Environmental Data Visualization</li> <li>• Reduction, Abatement, and Mitigation of Aviation Noise</li> </ul>	 <p>Additional categories of <b>investigation, analysis, or research</b> that should be undertaken to inform FAA noise policy</p>
 <p>View the <b>Federal Register Notice</b>, where you can provide your comments on the FAA's noise research program.</p>		

**[ADDENDUM] AIRPORT NOISE REPORT ALERT**

*Airport Noise Report (ANR)*, the only newsletter published exclusively for those interested in the complex topic of aircraft noise, reports that the FAA recently released the findings of its long-awaited Neighborhood Environmental Survey, which was conducted to improve the agency’s understanding of community response to aircraft noise and help determine if the FAA needed to update its 40-year-old aircraft noise policy.

The FAA survey, done to assess community annoyance to aircraft noise, consisted of over 10,000 mail responses in communities around 20 unnamed “statistically representative” airports across the United States. It is the single largest survey of its kind undertaken at one time.

The survey results are stunning, notes the *ANR*:

Comparing the percent of population highly annoyed due to noise exposure in the updated “Schultz Curve” – which serves as the basis for FAA’s current almost 40-year-old aviation noise policy – and the new Neighborhood Environmental Survey (NES) shows the following:

- At a noise exposure level of DNL 65 dB, the updated Schultz Curve indicated that 12.3 percent of people were highly annoyed, compared to between 60.1 percent and 70.9 percent within a 95 percent confidence limit from the NES.
- At a noise exposure level of DNL 60 dB, the updated Schultz indicated that 6.5 percent of people were highly annoyed, compared to between 43.8 percent and 53.7 percent within a 95 percent confidence limit from the NES.
- At a noise exposure level of DNL 55 dB, the updated Schultz Curve indicated that 3.3 percent of people were highly annoyed, compared to between 27.8 percent and 36.8 percent within a 95 percent confidence limit from the NES.
- At a noise exposure level of DNL 50 dB, the updated Schultz Curve indicated that 1.7 percent of people were highly annoyed, compared to between 15.4 percent and 23.4 percent within a 95 percent confidence limit from the NES.

FAA said it is “now considering the full NES results, in conjunction with additional research findings as they become available, to determine how they may inform its noise policy considerations.”

The NES findings were included in a Jan. 13 FAA Federal Register notice inviting public comment by March 15 on the scope and applicability of various agency research initiatives on the effects of aircraft noise on individuals and communities; noise modeling and metrics; and reduction, abatement, and mitigation of aviation noise.

FAA said it “will not make any determinations based on the findings of these research programs for the FAA’s noise policies including any potential revised use of the Day-Night Average Sound Level (NDL) noise metric, until it has carefully considered public and other stakeholder input along with any additional research needed to improve the understanding of the effects of aircraft noise exposure on communities.

**To download the FAA’s Federal Register notice, google:**

Overview of FAA Aircraft Noise Policy and Research Efforts: Request for Input on Research Activities to Inform Aircraft Noise Policy

**END**

**January 23, 2021**

**From**

Greg Hyver

**To**

SCSC Roundtable

**Message**

SCSC Roundtable - Virtual Meeting - January 27, 2021 - Zoom Webinar Link and Agenda Packet Posted

Is there a way to provide a simple update on when SERFR will be moved without the public having to interpret this by watching lengthy videos of government-speak? Just a 2-3 sentence summary and a projected date when the switch-over will take place? I, along with many others who I speak to on Nextdoor, just can't digest, or have the time to digest, the meeting videos.

**January 23, 2021**

**From**

Fredric Wells

**To**

SCSC Roundtable

**Message**

Agenda Item 3, FAA Aircraft Noise Policy

Regarding item 3 on your agenda, the latest ""FAA Aircraft Noise Policy and Research Efforts"", I am disappointed that there is no statement or language regarding the effect of aircraft noise in areas under flight paths further away from the airports – it still seems much too focused on nearby neighborhoods. Santa Cruz County is seemingly far away from SFO, but due to topography and the requirements placed on incoming aircraft to remain in certain airspace, we are enduring noise levels similar to that of being right next to an airport. How does the FAA take into account our area, if it is never even considered as part of the noise evaluation? There needs to be language that includes areas that may be impacted, even from further distances.

I would like to reiterate: 5 years ago, the people of Santa Cruz County were suddenly the recipient of the noise of related to a change in flight path to SFO due to NextGen. Since then, we have suffered with this noise, with the exception that the pandemic caused a decrease in airplane traffic. We did not receive any notice of this flight path change until it happened. After many public meetings, the FAA said that they would return to the old flight path, if at all possible. Now, it appears that the FAA is proceeding at an agonizingly slow pace to change back to the old route over Santa Cruz County (albeit with improvements), citing safety concerns and necessary environmental reviews. I would like the FAA to provide regular updates on where they stand on this process, and showing progress being made. I'm not seeing the process moving along. I want Santa Cruz County residents to be informed, with public notices sent out to our local newspapers and TV stations, and also to our elected officials with the County Board of Supervisors, so the public can stay informed.

**January 24, 2021**

**From**

Alastair Fyfe

**To**

SCSC Roundtable

**Message**

Please clarify discrepancies in FAA's FWG meetings regarding proposed SERFR changes

Dear SCSC Roundtable members:

At the July 22 meeting, FAA representative Sky Laron briefed Roundtable members on the status of the proposed shift to the current SERFR STAR track. Much of the subsequent discussion was taken up with suggestions for improving FAA program management. However nothing in the SCSC charter suggests any responsibility to provide program management advice to the FAA. Instead, as stated in the FAA's Guidelines

For Community Involvement, "A roundtable can assist and advise the FAA on community outreach or information needs, and help the FAA understand community priorities".

To date there has been remarkably little discussion among SCSC members on two crucial aspects of the proposed change to the SERFR track: (1) in light of the repeated retractions by the City of Los Altos Hills, along with frequently-voiced objections by Santa Cruz City and County, does community consensus support the track shift ? and (2) do the changes the FAA proposes to implement actually meet what the Select Committee voted on?

With regards to the second question, please note the attached letter to the FAA Ombudsman's office regarding discrepancies between the two Full Working Group (FWG) meetings held by the FAA. It's apparent from the minutes of the 2018 FWG meeting that FAA internal offices unanimously opposed the proposed track shift.

"FWG consensus: Do not proceed with the redesign/relocation of the SERFR STAR track to the BSR arrival track".

Shifting SERFR west will concentrate flight traffic to a narrower region and thus concentrate noise. The impact will be greatest on Santa Cruz residents, though the city and county no longer have representatives on the Roundtable. Local communities need to be informed as to why this proposal should move forward in light of strong opposition from both affected residents and internal FAA offices responsible for flight traffic control.

Thank you for your consideration

Alastair Fyfe

**Attachment Name**

**20210124\_Alastair\_Fyfe\_SCSCRoundtable\_Please Clarify Discrepancies in FAA**



January 23, 2021

Dear Mr. Laron,

I am writing to you as the designated contact for the FAA Aviation Noise Ombudsman Office for the Western-Pacific Region to request your office provide information on the FAA's internal design meetings for the "Big Sur Overlay" route proposed for SFO southern arrivals.

The FAA is investigating changes to the current SERFR STAR track in response to recommendations 1.2R1 and 1.2R2 of the 2016 report of the Select Committee on South Bay Arrivals. In response to these recommendations, the FAA convened two meetings of a Full Working Group (FWG) to evaluate the feasibility and design of changes to the current SERFR STAR. The first meeting occurred May 8, 2018 and the second on June 4-5, 2019. The minutes of both meetings were obtained through the Freedom of Information Act and are available at the urls:  
<https://www.dropbox.com/s/tx3dlya8qmcnpya/fwg2018.pdf>  
<https://www.dropbox.com/s/dhxjkuwqo52ywf6/fwg2019.pdf>

The meeting minutes raise two specific questions I hope your office will address.

1) With respect to recommendations 1.2R1 and 1.2R2, the two meetings reached opposite conclusions. This discrepancy needs to be explained to the public. The minutes for the 2018 meeting conclude with the following statement **"FWG consensus: Do not proceed with the redesign/relocation of the SERFR STAR track to the BSR arrival track"**.

In summarizing that meeting's discussions, Josh Haviland, FWG Co-Lead, asked attending representatives for the stakeholders involved whether "the request to reposition the SERFR arrivals track back to BSR arrival track was feasible, flyable, and operationally acceptable". The unanimous reply, from representatives of NCT (Northern California TRACON), ZOA (FAA Oakland ARTCC) and industry was "No".

Notwithstanding the above consensus, the June 2019 meeting moved in the opposite direction. Significantly, none of the objections raised at the 2018 meeting in opposition to the proposed changes were re-evaluated on the basis of additional information. Instead, the meeting focused on the details of implementing a route design, regardless of whether it was "feasible, flyable, and operationally acceptable".

The public needs to be informed as to why the 2018 evaluation of the proposed route change by seasoned FAA professionals was overridden and replaced with a design implementation, regardless of impact.

2) The mission statements approved at both meetings are nearly identical "Per the Select Committee recommendations: Develop a new procedure to transition SERFR traffic to the Big Sur (BSR) STAR track" (2018) and "Per the select committee recommendations: amend the SERFR RNAV STAR tracks to transition the Big Sur (BSR) STAR track at WWAVS" (2019). Nevertheless, the nine criteria set out by the Select Committee in 1.2R2 as conditions to accompany the track shift of 1.2R1 were only considered at the 2018 meeting. There is no record of any discussion of these criteria at the 2019 meeting.

The Select Committee's Final Report clearly states that the twin recommendations be considered jointly. Why were these criteria ignored at the 2019 meeting?

From the available record, the inescapable conclusion is that the route design that emerged from the 2019 FWG meeting does not implement what the Select Committee voted to recommend. Furthermore, the 2019 meeting summarily ignores the earlier 2018 assessment that the track shift is not "feasible, flyable, and operationally acceptable"

The proposed track, if implemented, will significantly reduce arrival flight traffic dispersion, particularly over Santa Cruz County. This will concentrate noise and adversely impact communities to the west of the current SERFR track. Clarity on both these questions is crucial to the communities that would be affected by this proposal.

Thank you for your consideration,  
Alastair Fyfe  
Brookdale, CA

Cc:  
FAA Supervisory Senior Administrator Faviola Garcia  
FAA Western Regional Administrator Raquel Girvin  
Congressperson Anna Eshoo  
Congressperson Jimmy Panetta

January 25, 2021

**From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

Re: Forum proposal re FAA survey

Matt:

Thank you for your memo. The format of CLASS' ""Proposal for Forum Comments..." is very concise, and in the format that I am hoping to receive from other commenters. With this email I am forwarding your memo to Forum members and other interested parties. I will include CLASS' proposal in the draft input to the FAA that will be reviewed by Forum members prior to going to the FAA.

Thank you for your input.

Mike McClintock

Forum Facilitator

-----Original Message-----

From: matt classalameda

To: glomike65

Sent: Mon, Jan 25, 2021 5:41 pm

Subject: FW: Forum proposal re FAA survey

Hi Mike,

Attached please find the ""FAA's Neighborhood Environmental Survey"" on CLASS letterhead, incase you decide to share with others. Regards, Matt

Matt Pourfarzaneh, Ph.D.

CLASS, President

**Attachment Name**

**20210125\_Mike\_McClintok\_SCSCRoundtable\_Re Forum Proposal re FAA Survey**

**Date:** January 25, 2021  
**TO:** Mike McClintock, Forum Facilitator  
**From:** Matt Pourfarzaneh, CLASS President  
**Subject:** Memo from CLASS to Noise Forum -- FAA's Neighborhood Environmental Survey.

As you know, the FAA has released its "Neighborhood Environmental Survey" inviting public comment on FAA's research regarding aircraft noise. The notice indicates that "FAA will not make any determinations based on the findings of these research programs for the FAA's noise policies, including any potential revised use of the Day-Night Average Sound Level (DNL)<sup>1</sup> noise metric, until it has carefully considered public and other stakeholder input along with any additional research needed to improve the understanding of the effects of aircraft noise exposure on communities."

To date, federal standards for evaluating aviation noise impacts have emphasized and largely been limited to, a noise level indicator that evaluates *average* noise levels. This noise indicator, referred to as DNL, or the similar metric of community noise exposure level (CNEL)<sup>2</sup> used in California legislation, to evaluate noise is misleading and inaccurate. We believe a response to this survey will be a good opportunity to request that the FAA consider single-event noise (SEL) and come away from the limited 65 CNEL metric they currently use to evaluate noise impacts.

### **Why Is Use of DNL/CNEL Measurements Insufficient?**

CNEL averages noise events over a 24-hour period. Although CNEL provides one way to measure noise, when it is used as the *only* measure of noise, CNEL does not provide a true or complete picture of what individuals will actually hear as a result of changes in the noise environment. People hear individual noise events; they do not hear noise *averaged* over a

<sup>1</sup> DNL is the average noise level over a 24-hour period. The noise level measurements between the hours of 10pm and 7am are artificially increased by 10 decibels.

<sup>2</sup> CNEL is equivalent to the DNL with the addition of an evening period from 7 PM to 10 PM when noise level measurements are boosted 5 dB to account for the approximate decrease in background community noise by 5 dB during this period.

twenty-four-hour period. Aviation noise events, particularly in communities in close proximity to airports are unrelenting and extraordinarily disruptive. All aspects of single-event noise impacts from a given Project, including noise shift related to changes in flight tracks, should therefore be analyzed for single event noise impacts.

The FAA has established a CNEL of less than 65 dBA as being “normally acceptable” with residential land uses, despite research and public testimony that a CNEL threshold of 65 dBA is not sufficient to protect the public’s health and welfare. However, intermittent and impulsive noises, such as aircraft overflights, have been found to be more disturbing to sleep than continuous noise sources. Thus, people exposed to a CNEL of lower than 65 dBA may be significantly disturbed by aircraft noise, sometimes for many hours a day. The FAA’s own survey demonstrates this point. Results of the FAA’s survey indicate that two thirds of people living within the 65 DNL contour are highly annoyed by aircraft noise. In addition, relative changes in single-event noise levels have been found to be predictive of sleep disturbance in residents neighboring airports. Yet, people exposed to noise, particularly those who would be newly exposed to aircraft noise due to new flight operations or temporary construction-related aircraft noise increases, should not be ignored in analysis of aircraft noise simply because noise levels in their communities fall below a CNEL of 65 dBA.

Moreover, evaluations assessing the health effects of aircraft noise should analyze impacts of noise on speech communication, sleep disturbance, learning effects, and work performance effects. Such noise impacts can lead to serious physiological and psychological health effects. Ample studies and reports exist documenting the health impact of aircraft noise. Such an analysis must focus on the SEL noise levels, which are unrelenting and extraordinarily disruptive.

### **The Standard for Noise Evaluation in California.**

The standard for evaluation of noise impacts in California is to evaluate not only noise over the course of a 24-hour period, but also single-event noise because that is how humans experience noise. In *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners*, the court held that a lead agency “cannot simply ignore the CEQA standard of significance for assessing noise [and] the credible expert opinion calling for further evaluation of the impact of single event noise.” (2001) 91 Cal.App.4th 1344, 1382. *King & Gardiner Farms, LLC v. Cty. of Kern* (2020) 45 Cal.App.5th 814, 894, as modified on denial of reh’g (Mar. 20, 2020) (holding that the agency failed to consider the magnitude of the increase in noise, and thus

**Citizens’ League for Airport Safety and Serenity**

A corporation of homeowner associations formed to protect safety, health & welfare  
of people living in communities near Oakland airport.

3195 Mecartney Road, Alameda, CA 94502    [www.classalameda.com](http://www.classalameda.com)    [info@classalameda.com](mailto:info@classalameda.com)



to “accurately describe how changes in noise levels affect human beings.”). A description of how noise affects a community without meaningful quantitative and qualitative analysis of “the community reaction to aircraft noise, including sleep disturbance” renders an EIR inadequate. *Berkeley Keep Jets Over the Bay Com.*, 91 Cal.App.4th at 1380-81. The court in *Berkeley Keep Jets Over the Bay Committee* expressly referred to single-event noise analysis as an appropriate method for measuring disturbance. *Id.*

**Proposal for Forum Comments: FAA Should Require the SEL Noise Metric for Noise Impact Studies.**

FAA’s method of using only day-night averages to evaluate noise does not reflect what people experience. We request that the Forum respond to the FAA’s survey regarding the noise metric for noise impact studies. To inform that response, we request that the Forum engage technical assistance from HMMH or another technical consultant experienced in the evaluation of noise impact analysis. We propose that the consultant could research the state-of-the-art methods for evaluating noise on communities and perform a survey of CEQA and other analysis documents prepared for recent development proposals at California airports. We anticipate that such a survey would show that single-event noise analysis is now the industry standard, as evidenced by recent noise evaluations for the Burbank Airport in 2016 and for the San Jose International Airport Master Plan in 2019. The Forum can then submit the survey results to FAA as evidence that single-event noise analysis should be the required standard for analysis of aviation noise impacts on communities.

Given that the Forum represents the participating communities, we think this information would be invaluable to educate Forum members and to present to the FAA to advance more thorough evaluation of aircraft noise impacts on our communities.

Sincerely,

Matt Pourfarzaneh, Ph.D.

**January 26, 2021**

**From**

Don Jackson

**To**

SCSC Roundtable

**Message**

Public comment regarding Agenda item 3, 2021-01-27 SCSC Roundtable meeting

I am requesting to have this public comment read into the record during agenda item 3 at the 1/27/2021 meeting.

In the Neighborhood Environmental Survey Analysis report, section 10 "Data Files Available for Further Analyses", it states:

The FAA is making sets of data available for further analyses by others.

Section 10.1 provides a synopsis of the noise modeling data set.

Other sets of questionnaire output data are in two use classifications – public and restricted. Sections 10.2 and 10.3 describe the Public Use File (PUF)

How/where can the "Noise Modeling Data" (section 10.1) and "Public Use Files" (PUF) (section 10.2) be obtained/accessed?

Regards,

Don Jackson

**January 26, 2021**

**From**

Jennifer Landesmann

**To**

SCSC Roundtable

**Message**

SCSC - today's meeting Agenda Item 4

Dear SCSC,

I would like to thank you for the legislative committee's work to embark on the work to address FAA's National Environmental Protection Act NEPA practices, CatEx, and Metrics issues. The legislative committee's Noise Metrics Position Paper on today's agenda has excellent input for the work ahead; however, the fundamental difference in how you are addressing our grievances about how FAA treats NEPA, CatEx, and metrics - as items for future legislation - instead of using current laws, rules and pathways is a problem because of the many impending procedures that our communities will be affected by and that cannot wait for considerations in future legislation.

I hope that today you can please respond to the following:

1) Please share why you are positioning supplemental metrics as something for future legislation when it's already in current FAA's own provisions?

Section 11.4 in the FAA Environmental Policy Guidance, NEPA Desk Reference, dated February 2020.

"The Federal Interagency Committee on Noise (FICON) report, "Federal Agency Review of Selected Airport Noise Analysis Issues<sup>10</sup>," dated August 1992, concluded that the DNL is the recommended metric and should continue to be used as the primary metric for aircraft noise exposure. Subsequent review has confirmed there are no new descriptors or metrics of sufficient scientific standing to substitute for the present DNL cumulative noise exposure metric. However, DNL analysis may optionally be supplemented on a case-by-case basis to characterize specific noise impacts."

Furthermore, On April 14 FAA delivered a Report to Congress on two noise provisions pursuant to the FAA Reauthorization Act of 2018 that was signed into law on October 5, 2018, Sections 188 and 173. Section 173 was not fulfilled but 173 has no bearing on supplemental metrics. For supplemental metrics, Section 188 is very clear.

Report to Congress FAA Reauthorization Act of 2018(Pub. L. 115-254) Section 188

Section 5 Noise Metrics in use by FAA:

Page 11 "While DNL is used for all FAA noise-based decision-making purposes, the FAA encourages the use of other supplemental metrics as a communication tool to highlight unique situations where applicable. Section 8 will discuss the use of noise metrics for supplemental purposes."

Section 8 Role of Supplemental Metrics:

page 16 "As discussed in Section 3, FAA's environmental decision-making for noise must use a metric that considers the magnitude, duration, and frequency of the noise events under study. The DNL noise metric uniquely meets these requirements. However, in specific situations, additional information focused on a more targeted type of noise exposure may require the use of supplemental noise metrics. "

"There is no single supplemental metric that is preferable in all situations and the selection of an appropriate supplemental metric depends on the circumstances of each analysis. However, where warranted, consideration

of established supplemental metrics is encouraged.”

Page 17 of the FAA 188 report “in specific situations, additional information focused on a more targeted type of noise exposure may require the use of supplemental noise metrics.” (Nextgen procedures are “targeted” type noise.)

also in Section 8 “Individually, supplemental metrics may not fully consider the magnitude, duration, and frequency of the noise events, but may be used to support further disclosure and aid in the public understanding of community noise exposure.<sup>38</sup> Supplemental noise analyses are often useful to describe aircraft noise exposure from unique operational situations or for noise sensitive locations to assist in the public’s understanding.”

With this report, the FAA makes clear that they encourage supplemental metrics and concede that no single metric can cover all situations.

Furthermore, ESA has explained that the pathway to get supplemental metrics in NEPA documents is to ask the FAA’s Environmental Protection Officer for a given NEPA determination.

2) Whereas the FAA has previously advised that you can have a say in the level of environmental reviews. The Ombudsman should also have a role in addressing concerns before procedures are published - if you cannot use these to help us now what is left?

3) The claim that the planned GBAS procedures are "identical" actions to something previous - that has not even been disclosed, and knowing that "previous" never had an adequate NEPA process is very problematic. If you are sending NEPA and metrics to an approach of future legislation - what help can we expect from you to represent us on GBAS or further FAA matters?

As long as we do not have credible NEPA projections and noise maps that the public can respond to in due process, and these appeals get ignored year after year, it is causing serious transparency problems not only here but elsewhere and I implore that you please consider using the document you have for future legislative language to help advocate for people now.

Thank you,

Jennifer

**January 26, 2021**

**From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

FYI: Letter from Congressional Representatives B. Lee and M. DeSaulnier to FAA Administrator S. Dickson

Forum Members and all:

The attached letter is to FAA Administrator Steve Dickson from Reps. Barbara Lee and Mark DeSaulnier with re ""Proposed NextGen Modifications to the Northern California Metroplex."" The letter requests that the FAA provide information concerning its community engagement practices and to ""include a direct line of communication between our constituents and the FAA...[concerning the proposed change to the WNDSR arrival procedure].""

Please thank Reps. Lee and DeSaulnier for their interest in this matter.

Mike McClintock  
Forum Facilitator

**Attachment Name**

**20210126\_Mike\_McClintok\_SCSCRoundtable\_FYI Letter from Congressional Rep**



**Congress of the United States**  
**Washington, DC 20515**

January 25, 2021

The Honorable Steve Dickson  
Administrator  
Federal Aviation Administration  
800 Independence Ave, SW  
Washington, DC 20591

**RE: Proposed NextGen Modifications to the Northern California Metroplex**

Dear Administrator Dickson:

We are writing in regard to the Federal Aviation Administration's (FAA's) intention to make additional Air Traffic Control (ATC) modifications to the Northern California Metroplex, with particular respect to procedures related to the Oakland International Airport (OAK). We understand that the most recently described modifications to the WND SR Area Navigation (RNAV) procedure could impact the path of certain flights arriving to OAK from the north.

The Port of Oakland notified our offices that since the introduction of the NextGen program in the San Francisco Bay Area in 2015, OAK and other airports throughout the region have received a significant increase in noise-related complaints from our constituents, primarily because of the increased concentration of aircraft activity along certain arrival and departure routes.

OAK leadership and stakeholders affiliated with the Oakland Airport/Community Noise Management Forum ("Noise Forum") were recently notified of the FAA's intention to implement a modification to the WND SR Standard Terminal Arrival route into OAK. This proposed procedure would apparently shift flights from their current course along the East Bay hills and move them westward to a course that overflies a denser population situated among certain unincorporated areas of West Contra Costa County and the cities of Richmond, El Cerrito, Albany, and Berkeley, among other impacted areas.

The presentation by FAA representatives and discussions on the proposed changes during the July and October 2020 OAK Noise Forum meetings have generated concerns from our constituents. Primarily, it does not appear that the FAA is conducting a meaningful public outreach and engagement process to inform potentially impacted residents of this proposed change. Additionally, FAA staff have been unable to clearly detail the type of environmental analysis that will be conducted to analyze the impacts of this modification and whether any direct outreach to impacted stakeholders will be initiated as part of that environmental review. In addition, we have concerns about how the proposed changes will affect communities that historically have suffered from environmental injustices – including higher levels of air and noise pollution.

The FAA Reauthorization Act of 2018 directed the FAA to enhance the Agency's community engagement practices related to airplane noise impacts on communities. We respectfully request that you provide us with information on your agency's efforts related to this matter, that they be consistent with both the spirit and the letter of the Reauthorization Act, and that they include a direct line of communication between our constituents and the FAA about this proposed change. Finally, we ask that you keep our offices informed with any further FAA decisions related to this flight route modification.

Thank you for taking the time to consider our thoughts on this matter. We look forward to your response.

Sincerely,



Barbara Lee  
Member of Congress



Mark DeSaulnier  
Member of Congress

cc: Raquel Girvin, FAA Western-Pacific Regional Administrator  
Bryant L. Francis, Director of Aviation, Port of Oakland  
Oakland Airport/Community Noise Management Forum Members

**January 26, 2021**

**From**

Alastair Fyfe

**To**

SCSC Roundtable

**Message**

Comment for today's meeting

Hello, I had planned to comment at today's meeting during the public comment period but am not able to attend because of a net/power outage. It seems that, at the chair's discretion, emailed comments can be read out. Please consider reading the following for any agenda item that seems appropriate.

""Dear Roundtable members, please note the request letter addressed to the FAA's Ombudsman Office that was included in an email addressed to you earlier this week. The request asks for clarification of the opposite consensus reached by the two FWG meetings convened by the FAA to evaluate possible changes to the SERFR track.""

Thanks for considering this comment,  
Alastair Fyfe

**January 26, 2021**

**From**

Even Wasserman

**To**

SCSC Roundtable

**Message**

RE: SCSC Roundtable - Virtual Meeting - January 27, 2021 - Zoom Webinar Link and Agenda Packet Posted - MEETING CANCELLED

Dear SCSC Roundtable Members and Interested Parties,

This notification is being sent out to confirm that the SCSC Roundtable public meeting today, Wednesday, January 27, 2021 is cancelled and will be held at a later date to be determined. There will be no broadcasted meeting.

The meeting is cancelled as legal counsel has withdrawn representation of the SCSC Roundtable for unavoidable circumstances. The SCSC Roundtable Ad Hoc Committee will meet with members of the Cities Association Executive Board in the near future to address how to proceed.

This cancelation notice has also been posted on the SCSC Roundtable website. \*Please note that the Zoom Webinar link will no longer be active\*

Thank you,  
Evan Wasserman | ESA

# **SCSC Roundtable All Correspondence**

## **January 26, 2021 – May 21, 2021**

All correspondence compiled prior to the January 22nd cutoff date for agenda posting is accessible on the SCSC Roundtable website at this link location:

<https://scscroundtable.org/meetings/sc-sc-roundtable-january-27-2021-virtual/#/tab-agenda-packet>

Correspondence received after the January 22nd deadline, but prior to the January 26th has also been provided earlier in this packet for reference.

**January 26, 2021**

**From**

Jennifer Landesmann

**To**

SCSC Roundtable

**Message**

SCSC - today's meeting Agenda Item 4

Dear SCSC,

I would like to thank you for the legislative committee's work to embark on the work to address FAA's National Environmental Protection Act NEPA practices, CatEx, and Metrics issues. The legislative committee's Noise Metrics Position Paper on today's agenda has excellent input for the work ahead; however, the fundamental difference in how you are addressing our grievances about how FAA treats NEPA, CatEx, and metrics - as items for future legislation - instead of using current laws, rules and pathways is a problem because of the many impending procedures that our communities will be affected by and that cannot wait for considerations in future legislation.

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Furthermore, On April 14 FAA delivered a Report to Congress on two noise provisions pursuant to the FAA Reauthorization Act of 2018 that was signed into law on October 5, 2018, Sections 188 and 173. Section 173 was not fulfilled but 173 has no bearing on supplemental metrics. For supplemental metrics, Section 188 is very clear.

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Thank you,

Jennifer

**January 26, 2021**

**From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

FYI: Letter from Congressional Representatives B. Lee and M. DeSaulnier to FAA Administrator S. Dickson

Forum Members and all:

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Please thank Reps. Lee and DeSaulnier for their interest in this matter.

Mike McClintock  
Forum Facilitator

**Attachment Name**

**20210126\_M\_McClinton\_LETTER - OAK Flight Pattern Change**

**Congress of the United States**  
**Washington, DC 20515**

January 25, 2021

The Honorable Steve Dickson  
Administrator  
Federal Aviation Administration  
800 Independence Ave, SW  
Washington, DC 20591

**RE: Proposed NextGen Modifications to the Northern California Metroplex**

Dear Administrator Dickson:

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The FAA Reauthorization Act of 2018 directed the FAA to enhance the Agency's community engagement practices related to airplane noise impacts on communities. We respectfully request that you provide us with information on your agency's efforts related to this matter, that they be consistent with both the spirit and the letter of the Reauthorization Act, and that they include a direct line of communication between our constituents and the FAA about this proposed change. Finally, we ask that you keep our offices informed with any further FAA decisions related to this flight route modification.

Thank you for taking the time to consider our thoughts on this matter. We look forward to your response.

Sincerely,



Barbara Lee  
Member of Congress



Mark DeSaulnier  
Member of Congress

cc: Raquel Girvin, FAA Western-Pacific Regional Administrator  
Bryant L. Francis, Director of Aviation, Port of Oakland  
Oakland Airport/Community Noise Management Forum Members

**January 27, 2021****From**

Alastair Fyfe

**To**

SCSC Roundtable

**Message**

Comment for today's meeting

Hello, I had planned to comment at today's meeting during the public comment period but am not able to attend because of a net/power outage. It seems that, at the chair's discretion, emailed comments can be read out. Please consider reading the following for any agenda item that seems appropriate.

"Dear Roundtable members, please note the request letter addressed to the FAA's Ombudsman Office that was included in an email addressed to you earlier this week. The request asks for clarification of the opposite consensus reached by the two FWG meetings convened by the FAA to evaluate possible changes to the SERFR track."

Thanks for considering this comment,

Alastair Fyfe

**February 12, 2021****From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

Fwd: FAA to Hold Webinar on Aviation Noise Effects and Mitigation Research Portfolio  
Dear SCSC Roundtable members:

Forum members and all:

You may be interested in signing-in to this webinar.

Mike McClintock

Forum Facilitator



Subject: FAA to Hold Webinar on Aviation Noise Effects and Mitigation Research Portfolio"

FAA to Hold Webinar on Aviation Noise Effects

and Mitigation Research Portfolio

WASHINGTON – The Federal Aviation Administration (FAA) will hold a public webinar to present its recently-released Noise Research Portfolio and Neighborhood Environmental Survey on Monday, Feb. 22, 2021, at 6:00 p.m. ET.

The webinar will provide an overview of the agency's noise research program, including the survey, followed by a live question and answer session. It will be held on the Zoom platform and livestreamed across social media on the FAA's Facebook, Twitter, YouTube and LinkedIn accounts. You can register to attend the webinar on our website.

The FAA is sharing information on its aircraft noise research programs that include initiatives related to the effects of aviation noise impacts on the public, efforts to mitigate such noise exposure, and research on public perception of aviation noise. This information includes the results of the Neighborhood Environmental Survey, a multi-year research effort to review and improve FAA's understanding of community response to noise. The survey included responses from more than 10,000 people living near 20 airports across the country, and the results show an increased level of reported annoyance due to aircraft noise in contrast to earlier surveys.

The FAA is seeking public comment on its noise research program, including the Neighborhood Environmental Survey and any additional areas recommended for further investigation. The public comment period opened January 13, 2021, and the notice is published in the Federal Register. A link to the notice is also available on the FAA's Aviation Noise website.

Successfully addressing noise requires continued collaboration among all aviation stakeholders. In this regard, the FAA's research programs provide important insight into the relationship between aircraft noise exposure and the well-being of people living in communities surrounding our nation's airports. As part of FAA's broader research on aircraft noise, this survey data and the research related to noise abatement will be used to inform the collaborative efforts to address noise issues.

The FAA actively engages with airport authorities, aircraft manufacturers, airlines, state and local governments and communities to address noise concerns. Its decades-long effort with these partners includes collaboration with airport authorities and community groups to implement noise abatement procedures safely when operationally feasible. The agency also works with local governments to encourage responsible land use planning that avoids building residential housing in areas that will be exposed to significant airplane noise.

Today's civilian aircraft fleet is quieter than at any time in the history of jet-powered flight, and FAA continues to work with manufacturers and air carriers to reduce noise at the source. In fact, over the last four decades, the number of Americans exposed to significant aviation noise near airports has been reduced from 7 million to just over 400,000—more than a 94 percent reduction. During the same period, the number of annual passengers increased from around 200 million per year to more than 900 million per year.

**February 19, 2021****From**

Evan Wasserman

**To**

SCSC Roundtable

**Message**

ATAC White Paper on Supplemental Aviation Noise Metrics

Dear SCSC Roundtable Members and Interested Parties,

As we anticipate that this information may be of interest to both the SCSC Roundtable and community members, we are forwarding the following attachment for your reference.

Please see the attached white paper made public earlier this week by ATAC on the use of supplemental noise metrics in understanding noise impacts relative to the dispersion of aircraft. The paper was written to address noise issues while implementing PBN procedures, but also gives some great examples of how to utilize the supplemental metrics for increased understanding of noise impacts generally. A link to this paper has also been provided on the SCSC Roundtable website here.

Thank you,

SCSC Roundtable Consultant/Facilitator

Evan Wasserman

**Attachment Name****20210218\_E\_Wasserman**

# Supplemental Aviation Noise Metrics: Assisting Communities in Understanding Noise Impacts Relative to Dispersion of Aircraft

Timothy Swing, AICP

trs@atac.com

Manager of Airport Operations and Environmental Analysis, ATAC

## Executive Summary

---

The FAA was recently tasked with evaluating alternative noise metrics to DNL. When combined with the recent requirement that the FAA analyze dispersion for all new and/or revised departure procedures below 6,000 feet, the use of supplemental metrics to better inform decision makers and the public is more necessary than ever. The FAA encourages the use of supplemental metrics where appropriate,<sup>1</sup> and one of the most significant challenges facing urban airports and the communities they serve is the analysis of the concentration of aircraft which results from the use of Area Navigation (RNAV) and other Performance Based Navigation (PBN) procedures.

ATAC has leveraged our extensive history conducting environmental evaluations (of more than 860 PBN procedures at over 100 U.S. airports) to examine the best uses of supplemental metrics. ATAC's industry-leading approach applies analysis-quality FAA-derived aircraft movement data, an accurate and complete engine to airframe mapping methodology, and the latest noise metrics within AEDT. In this paper we demonstrate supplemental metrics that further define the impacts of shifting noise distribution or concentration of aircraft over specific areas due to the use of RNAV and other PBN initiatives. These supplemental metrics provide information beyond what is available from the standard DNL metric and should be used to empower and better inform decision makers and the general public. Airports and the communities they serve need to fully understand the distribution of aircraft and how the noise associated with aircraft operations is the result of varied factors, including the altitude of aircraft, the phase of flight, and the number of events over a particular point. For skilled analysis of existing conditions, recent or proposed changes, or your own proposed change to airspace procedures utilizing supplemental metrics, contact ATAC, the aviation analysis experts, at 1 (408) 736-2822.

## Problem Statement

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Area Navigation (RNAV) procedures and other Performance Based Navigation (PBN) are, by their very design, intended to offer more precision, reliability, and predictability than conventional (land-based navigational aid) procedures. RNAV-1 requires aircraft to be not more than 1 Nautical Mile (NM) away from their prescribed routing for 95% of the total flight time.<sup>2</sup> Conversely, conventional procedures generally operate within wider corridors of the defined route.<sup>3</sup> This reduced route deviation associated with PBN procedures is depicted in **Exhibit 1** below. The ability to concentrate aircraft within less space allows the FAA to create a more efficient National Airspace System (NAS). The primary metric utilized by the Federal Aviation Administration (FAA) for aircraft noise exposure continues to be the day-night

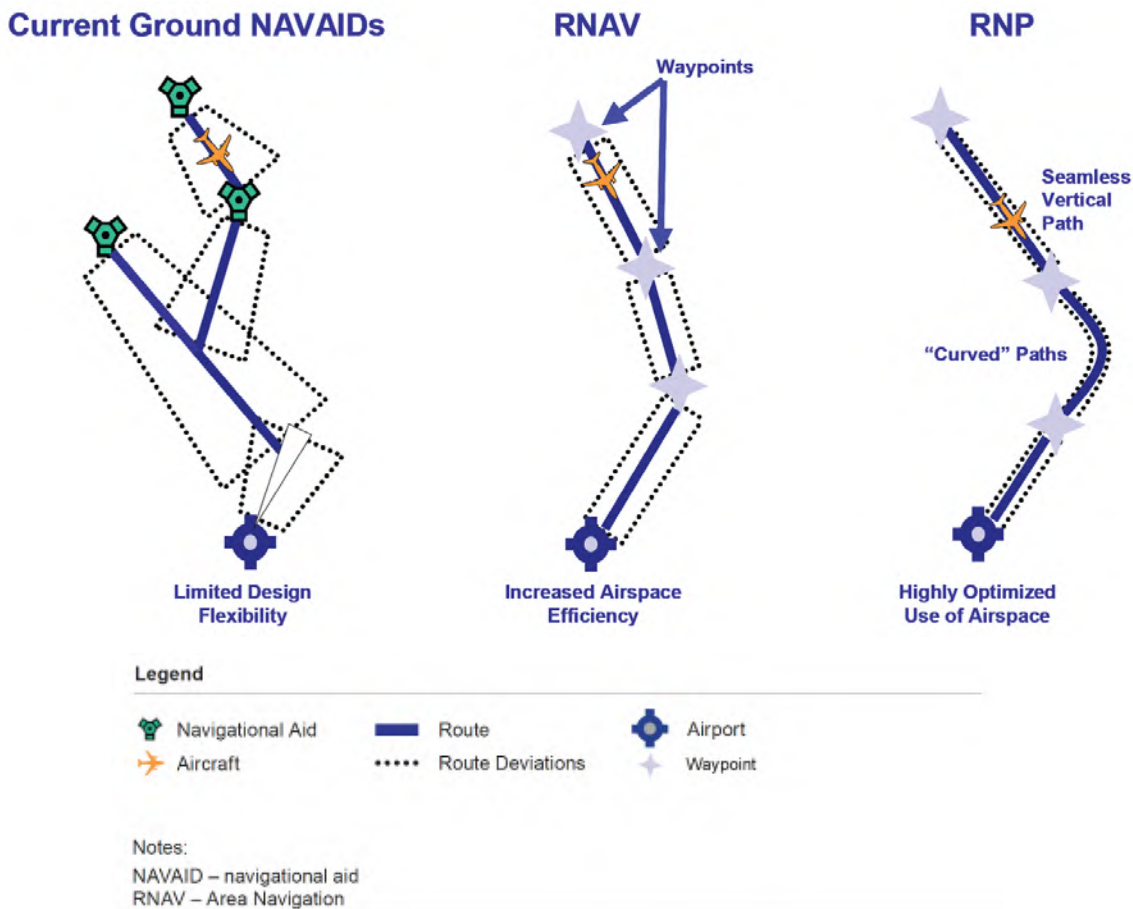
<sup>1</sup> U.S. Federal Aviation Administration, Report to Congress, *FAA Reauthorization Act of 2018* (Pub. L. 115-254), Sec 188 and Sec 173, April 14, 2020.

<sup>2</sup> U.S. Federal Aviation Administration, U.S Terminal and En Route Area Navigation (RNAV) Operations, AC 09-100A, change 2.

<sup>3</sup> U.S. Federal Aviation Administration, *Performance Based Navigation*, Workshop for Air Traffic Controllers, June 2017.

average sound level (DNL). DNL may be supplemented with other metrics to further characterize specific noise impacts.<sup>4</sup> However, the day-night average sound level (DNL) used to assess potential noise impacts is, as stated, a noise metric that provides an average noise level for a 24-hour period, and therefore does not directly illustrate the increase in the frequency of events at a specific location that can result from PBN implementation.

**Exhibit 1 Navigational Comparison – Conventional/RNAV/RNP**



Source: U.S. Department of Transportation, Federal Aviation Administration, "Performance-Based Navigation (PBN) Brochure," October 2009.

In January 2018, the U.S. Senate and House Congressional Representatives reauthorized federal aviation programs. The *FAA Reauthorization Act of 2018* requires the FAA, when proposing a new RNAV departure procedure or amending an existing procedure that would direct aircraft between the surface and 6,000 feet Above Ground Level (AGL), to consider the feasibility of dispersed headings.<sup>5</sup> This is only required if the affected airport operator, in consultation with the communities affected, submits a request to the FAA Administrator. Assessing current and future rates of dispersion requires accurate data and a full understanding of proposed procedure designs. The difficulty in assessing the existing and potential concentration of aircraft over noise sensitive areas is further exacerbated by the number of methods that can be used to disperse aircraft along the route. Divergent headings, manual vector legs,

<sup>4</sup> U.S. Federal Aviation Administration, Order 1050.1F, B-1.6, *Supplemental Noise Analysis*.

<sup>5</sup> U.S. Senate and House of Representatives, *FAA Reauthorization Act of 2018*, January 3, 2018.

and open SIDs all have the potential to disperse aircraft over noise sensitive areas, but the best alternative, allowing for the most effective dispersal while not conflicting with the safe and efficient operation of the NAS, may not be readily identifiable utilizing only the DNL metric. In addition, the concentration of aircraft may reduce the overall noise for communities if the routes are placed over noise-compatible (non-residential) areas, thereby making the concentration of aircraft a desirable outcome.<sup>6</sup>

While no single noise metric can cover all scenarios involving aircraft noise,<sup>7</sup> the current standard DNL metric is influenced by the magnitude, duration, and frequency of aircraft noise events. However, additional information can be gained with the use of supplemental metrics in specific situations.<sup>8</sup> Given the many situations that may arise and the number of supplemental metrics available, it may be necessary to augment the DNL results with other metrics to inform decision makers about the potential impacts to the surrounding communities that are not readily apparent without additional analysis.

In addition, the effect of noise exposure on people can differ due to numerous factors including location (urban versus rural), climb/descent rates, aircraft power settings, time of day, frequency, duration, and altitude. Noise annoyance is more a qualitative understanding based upon many factors<sup>9</sup> and is difficult to quantify as individual perceptions vary. Recently the U.S. Conference of Mayors and National League of Cities have adopted resolutions regarding lowering the 65 DNL threshold for significant impacts and including the use of alternative metrics to DNL. The FAA recently released a Neighborhood Environmental Survey that provides additional evidence that individuals are becoming highly annoyed by aviation noise at much lower volumes than previously recorded.<sup>10</sup> The ability to quantify noise impacts utilizing supplemental metrics beyond the DNL results is critical to proposing or implementing changes to air navigation procedures while addressing community annoyance.

As PBN procedures are implemented to serve airports across the United States, supplemental metrics will better inform the decision makers and surrounding communities regarding the dispersion or concentration of aircraft. The next section provides a background for supplemental metrics and their use and is followed by a solutions-based approach to utilizing supplemental metrics.

## Background

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Airports and their associated community noise groups (Roundtables) have requested supplemental noise metrics to augment the DNL values found within National Environmental Policy Act (NEPA) documents. The Federal Interagency Committee On Noise (FICON) has endorsed the use of supplemental noise metrics since the early 1990s.<sup>11</sup> Many airport roundtables have also requested the use of supplemental metrics and endorsed this position. In response to the FAA's analysis of supplemental noise metrics, 29 members of the U.S. House of Representatives recently requested

<sup>6</sup> CANSO, *Use of Performance Based Navigation (PBN) for Noise Management*, 2020.

<sup>7</sup> U.S. Federal Aviation Administration, Report to Congress, *FAA Reauthorization Act of 2018* (Pub. L. 115-254), Sec 188 and Sec 173, April 14, 2020.

<sup>8</sup> U.S. Federal Aviation Administration, Report to Congress, *FAA Reauthorization Act of 2018* (Pub. L. 115-254), Sec 188 and Sec 173, April 14, 2020.

<sup>9</sup> Federal Aviation Administration. [https://www.faa.gov/regulations\\_policies/policy\\_guidance/noise/community/](https://www.faa.gov/regulations_policies/policy_guidance/noise/community/), accessed September 3, 2020.

<sup>10</sup> Federal Aviation Administration.

[https://www.faa.gov/regulations\\_policies/policy\\_guidance/noise/survey/#results](https://www.faa.gov/regulations_policies/policy_guidance/noise/survey/#results)

<sup>11</sup> Ian Waitz, Jessica Townsend, Joel Cutcher-Gershenfeld, Edward Greitzer, and Jack Kerrebrock, Report to the United States Congress, *Aviation and the Environment*, December 2004.



additional study.<sup>12</sup> The demand for supplemental metrics has increased as the NAS has been updated using Next Generation technology including RNAV and other PBN procedures to create more efficient, predictable, and repeatable air routes.

The FAA regulates the maximum noise level that an individual civil aircraft can emit through requiring aircraft to meet certain noise certification standards.<sup>13</sup> As such, aircraft noise footprints have become smaller over the years as engines and airframes have been designed to reduce noise. Conversely, the number of flights in the U.S. has increased significantly over the past decade, and RNAV routes may concentrate those relatively quieter flights over smaller areas of land. The FAA forecast for domestic air carrier traffic shows that it is expected to grow over the next 20 years at 1.8 percent per year.<sup>14</sup>

Noise metrics fall into various categories including exposure, maximum level, time-above, time-audible, and number above. There are also different ways to weight the metrics based upon human hearing characteristics and other factors. For this paper, all results are provided in A-weighted metrics, which is consistent with the weighting used in the FAA's current regulatory metrics. A-weighted metrics have been adjusted to account for the way humans hear, specifically adjusting for the fact that the human ear is less sensitive to lower audio frequencies.

DNL is an A-weighted exposure metric that provides an average value based on the events within a 24-hour period, where the nighttime flights are weighted with a 10dB penalty to account for increased sensitivity to nighttime noise. While many have argued for additional exposure metrics such as Community Noise Equivalent Level (CNEL) and Day Night Evening Noise Level (DNEL), these metrics most often produce similar (albeit slightly higher) noise results to DNL and are therefore not analyzed in this paper. In addition, since these metrics would be applied to both the existing conditions and the proposed alternative(s), the differences (increases and decreases) in the noise results is most often comparable (and often have the same percentage change) to the changes found in the DNL metric. One additional metric that is currently utilized in Europe but not currently included in AEDT is  $L_{\text{night}}$ <sup>15</sup> which the World Health Organization guidance suggests using to study sleep disturbances for individuals subject to noise above  $L_{\text{night}}$  40 dB (note:  $L_{\text{night}}$  can be manually calculated utilizing the results of an AEDT study). Other AEDT supported supplemental metrics are defined in **Table 1**.

With regard to community annoyance, a question often posed is “are more frequent quieter flights less impactful than louder infrequent flights?”<sup>16</sup> The traditional DNL metric treats both scenarios in a similar fashion by averaging the events over the course of a 24-hour period. In other words, small numbers of loud operations can result in the same DNL as a large number of relatively quiet operations. This can allow an increase in concentration of aircraft flying over RNAV routes without a significant or reportable increase in the DNL noise metric.

A-weighted maximum level (LMAX) is the maximum sound level of a single event over a point on the ground. Number Above Noise Level (NANL) metrics provide the number of flights over a specific receptor within a study, and the noise threshold provides context for the level of sound associated with

<sup>12</sup> <https://norton.house.gov/media-center/press-releases/norton-bass-and-27-house-members-send-letter-to-federal-aviation?fbclid=IwAR3hFf1ZLyC47MhobdAUSTRahr4Q-krPhyW-IDcHqWu3absdoLII zRVrJs>, accessed September 24, 2020.

<sup>13</sup> [www.faa.gov/about/office\\_org/headquarters\\_offices/apl/noise\\_emissions/airport\\_aircraft\\_noise\\_issues/levels/](http://www.faa.gov/about/office_org/headquarters_offices/apl/noise_emissions/airport_aircraft_noise_issues/levels/), accessed September 3, 2020.

<sup>14</sup> U.S. Federal Aviation Administration, *FAA Aerospace Forecast Fiscal Years 2019-2039*.

<sup>15</sup>  $L_{\text{night}}$  is the sound pressure level averaged over the year for the night time period only.

<sup>16</sup> FAA, *Presentation on Noise and Emission Challenges*, UC Davis Aviation Noise and Emissions Symposium, February 25-27, 2018, Long Beach, California.

the event. When LAMAX is combined with a Number Above metric, the output is the number of events (flights) that exceed the defined LAMAX threshold. This operational acoustic metric can provide the public an opportunity to view increases and decreases in the number of events from a given baseline and proposed action scenario that are above a certain threshold, and therefore serves as a good metric for assessing impacts on the human environment due to concentration and/or dispersion of flights.

Time-above and time-audible are additional supplemental metrics that can help the public understand the impacts associated with flights over specific areas by measuring the time aircraft are above a certain noise threshold as measured at a point on the ground, or for how long they are emitting audible noise above the ambient noise level over a single point on the ground.

Supplemental metrics, such as NANL, can identify areas that are subjected to increases and decreases in the frequency of flight operations that may not register a noticeable change with regard to the relative DNL value but still produce a change in noise impacts that is noticeable to the public.

**Table 1 Available AEDT Noise Metrics**

Metric Type	AEDT Name	Standard Name	Definition/Full Name
<b>A-Weighted Noise Metrics</b>			
Exposure	SEL	$L_{AE}$	A-Weighted Sound Exposure Level
	DNL	$L_{dn}$	Day Night Average Sound Level
	CNEL	$L_{den}$	Community Noise Equivalent Level
	LAEQ	$L_{AeqT}$	Equivalent Sound Level
	LAEQD	$L_d$	Day-average noise level
	LAEQN	$L_n$	Night-average noise level
Maximum Level	LAMAX	$L_{ASmx}$	A-Weighted Maximum Sound Level
Time-Above	TALA	$T_{ALa}$	Time-Above A-Weighted Level
Time-Audible	TAUD	$T_{Aau}$	Time-Audible
	TAUDSC	$T_{AudSC}$	Time-Audible with Overlapping Events Method (Statistical Compression)
	TAUDP	$T_{AudP}$	Time-Audible Percent
	TAUDPSC	$T_{AudPSC}$	Time-Audible Percent with Overlapping Events Method (Statistical Compression)
<b>C-Weighted Noise Metrics</b>			
Exposure	CEXP	$L_{CE}$	C-Weighted Sound Exposure Level
	CDNL	$L_{cdn}$	C-Weighted Day Night Average Sound Level
Maximum Level	LCMAX	$L_{CSmx}$	C-Weighted Maximum Sound Level
Time-Above	TALC	$T_{ALC}$	Time-Above C-Weighted Level
<b>Tone-Corrected Perceived Noise Metrics</b>			
Exposure	EPNL	$L_{EPN}$	Effective Perceived Noise Level
	NEF	$L_{NEL}$	Noise Exposure Forecast
	WECPNL	$L_{WECPN}$	Weighted Equivalent Continuous Perceived Noise Level
Maximum Level	PNLTM	$L_{PNTSMx}$	Tone-Corrected Maximum Perceived Noise Level
Time-Above	TAPNL	$T_{APNL}$	Time-Above Perceived Noise Level
<b>Number Above Noise Level Metric</b>			
Number Above Noise Level	NANL	NANL	Number Above Noise Level

Source: U.S. Federal Aviation Administration, *Aviation Environmental Design Tool User Manual*. March 2020.

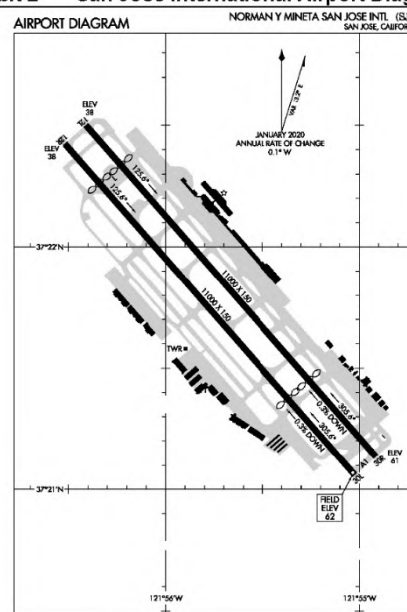
## Solution

ATAC has extensive experience with FAA policy, existing large-scale modeling, localized-scale modeling, aircraft variability, and surveillance data viability. ATAC has combined this experience to establish the latest modeling and data sourcing capabilities for airports and communities seeking to better understand the noise impacts of PBN implementation via accurate aircraft supplemental noise reporting capabilities. On the data side, the FAA has two widely accepted surveillance track data delivery programs<sup>17,18</sup> that provide analysis-quality aircraft track data for noise and emissions calculations. One is the FAA's System Wide Information Management (SWIM) program, a National Airspace System (NAS)-wide information system that includes surveillance data. ATAC serves as both a provider of data to the FAA's SWIM feed and a consumer of the data products available. The other data source is the FAA's Performance Data Analysis and Reporting System (PDARS) program. From its inception, ATAC has developed PDARS to produce analysis-quality aircraft 3D track data while also employing its own Intellectual Property (IP) to further understand events occurring within the NAS. With over one hundred additional parameters culled from aircraft track metadata, ATAC, NASA, and FAA researchers utilize this data for the daily creation and distribution of over 1,500 FAA aircraft-track-derived nationwide, regional, aircraft-specific, and airport-specific reports that include go-arounds, general sector counts, anomaly metrics, and other FAA safety defined data. Both data sources can be ingested into ATAC's SkyView Data Services platform, a comprehensive set of software tools for gathering aviation performance and supporting data, measuring and baselining operations, and helping to design, implement, and evaluate operational improvements. SkyView contains configurable data collection, air traffic data visualization, analysis, reporting, and management modules that can be tailored to your needs.

ATAC has been involved with the development of aviation noise models for the FAA for several decades, having served as a lead developer for the FAA's Integrated Noise Model (INM) and currently serving as a lead developer for FAA's AEDT. ATAC is currently supporting the FAA to deliver regular updates to AEDT – ATAC's intimate knowledge of the software, combined with our extensive, unparalleled experience with its use, incorporates those elements of analysis and data sourcing that provide high quality aircraft noise results, building upon the best and most valid underlying data. ATAC does not accomplish this in a vacuum, instead relying upon the very best science emerging from the FAA and the Department of Transportation (DOT) Volpe National Transportation System Center (NTSC) outreach to inform key FAA decision makers.

Applying this expert knowledge of surveillance data and AEDT, ATAC has developed a process that begins with the data viability from the various sources at a selected airport. For the purposes of this report, ATAC selected the airport

**Exhibit 2 San Jose International Airport Diagram**



Sources: Federal Aviation Administration, Aeronav, Aeronautical Information Services (Airport Diagram).

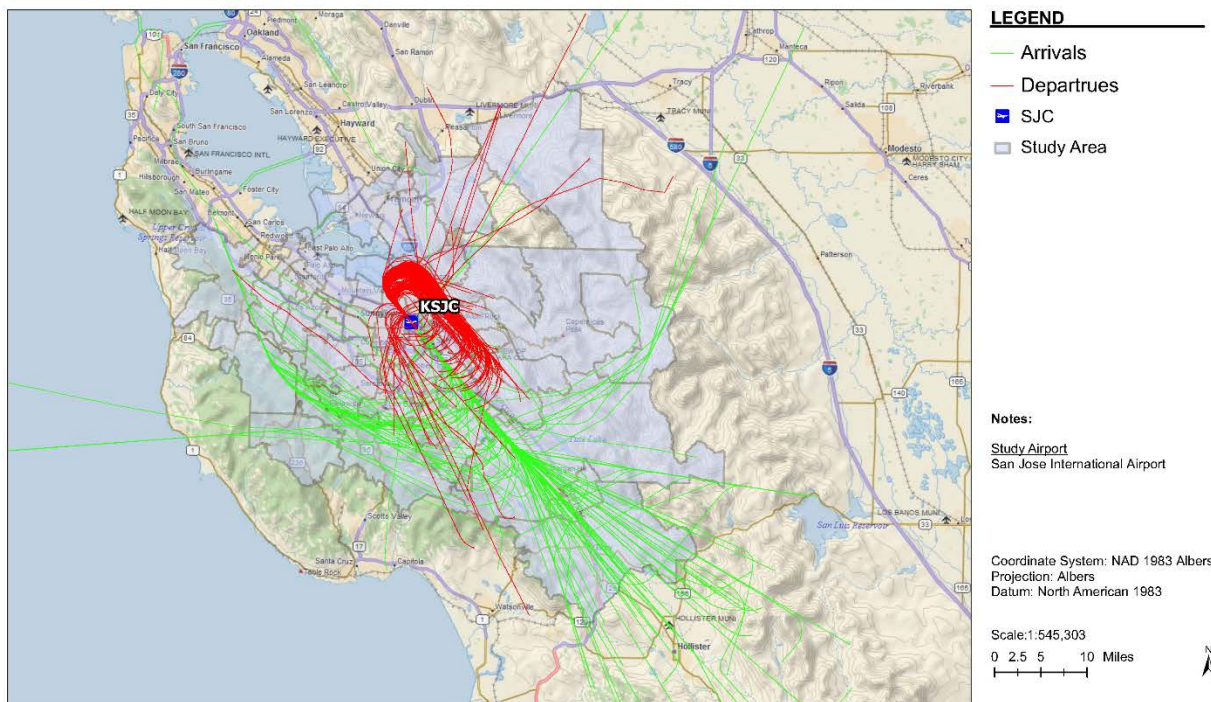
<sup>17</sup> U.S. Federal Aviation Administration, System Wide Information Management System (SWIM), 2020, ([https://www.faa.gov/air\\_traffic/technology/swim/](https://www.faa.gov/air_traffic/technology/swim/) [Accessed September 5, 2020]).

<sup>18</sup> U.S. Federal Aviation Administration, Performance Data Analysis and Reporting System (PDARS), 2020 ([https://www.faa.gov/about/office\\_org/headquarters\\_offices/ato/service\\_units/systemops/perf\\_analysis/perf\\_to\\_ols/](https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/perf_analysis/perf_to_ols/) [Accessed September 3, 2020]).

out the front door of our headquarters office in Santa Clara, California: Norman Y. Mineta San Jose International Airport (KSJC). ATAC selected a February 2020 date from which to collect a 24-hour time period of aircraft operations data at SJC. This data pull, derived from FAA SWIM data and augmented by ATAC’s SkyView Data Services ADS-B feed, included civilian and commercial aircraft of all types, including those not assigned an Instrument Flight Rules (IFR) transponder code, known as “1200s” after the Visual Flight Rules (VFR) transponder code these aircraft use to fly VFR. This resulted in 269 total arriving aircraft and 271 departing aircraft flights.

For the purposes of this analysis, ATAC analyzed all arrivals and departures into and out of SJC up to an altitude of 10,000 feet Mean Sea Level (MSL). Certain aircraft did not achieve 10,000 feet MSL, and for those instances, the flight tracks were cut at the study area boundary.<sup>19</sup> Aircraft city pairs were determined utilizing the information obtained within the surveillance data, and used to input assumed aircraft arrival and departure weights. Standard AEDT weather was used, however, ATAC does have the capability and practice in applying AEDT’s high-definition weather data. AEDT altitude controls derived from the aircraft trajectory data were used to define the vertical flight profiles to accurately model the real-world flight procedures. SJC has 2 runway surfaces (offering east and west departures/arrivals), and the airport remained in a west flow (departures to the west) for the selected 24-hour period. The fleet mix consisted of commercial airline, general aviation (GA) charter, and GA private use aircraft. The flight operations data was annualized to generate the metrics reported. **Exhibit 3** depicts the flight tracks used for this analysis.

**Exhibit 3 San Jose International Airport Flight Tracks**



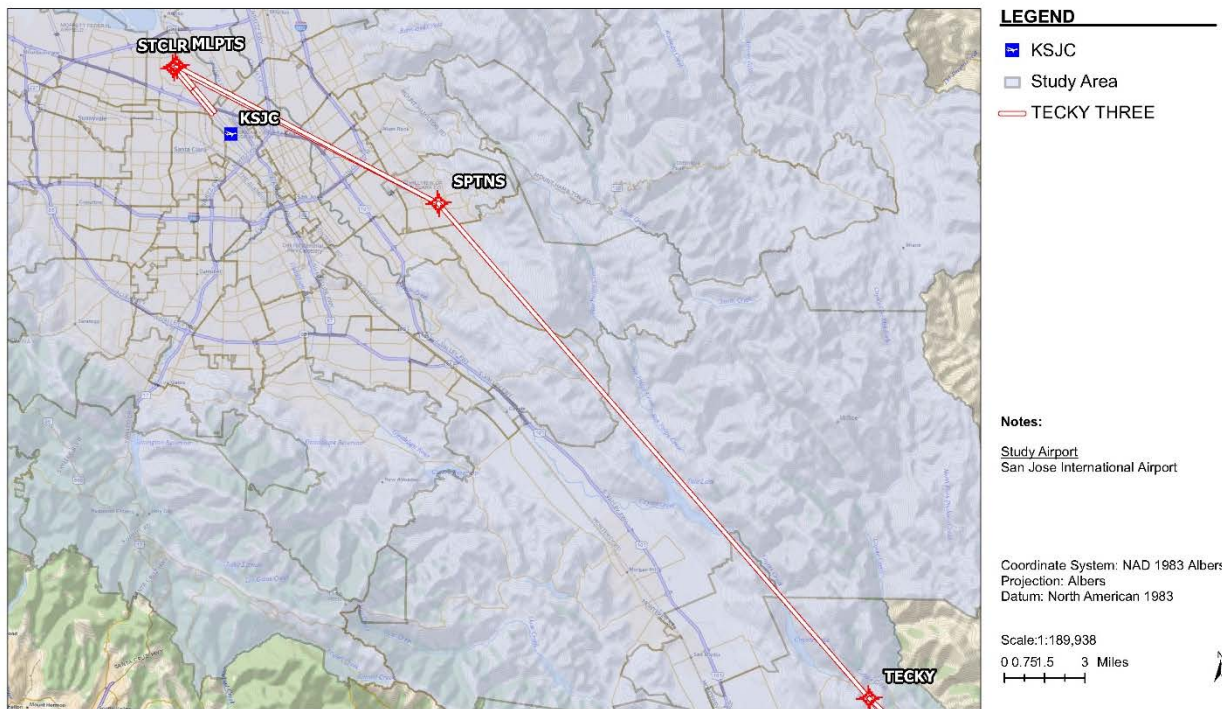
Sources: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020, (2020 AEDT Analysis).

<sup>19</sup> The Study Area includes all Census tracts within 15 NM of the airport, an area large enough to encapsulate all results for all metrics within the study area and includes 44,290 unique points.



For this example, the RNAV TECKY THREE departure out of SJC was analyzed. **Exhibit 4** depicts the routing of the procedure as defined by the waypoints. Note that the link and node structure form a direct point-to-point routing that is not synonymous with the actual path aircraft will take while flying the route. Specifically, the routing from MLPTS and STCLR would require aircraft to make an immediate turn of approximately 160 degrees to the south to follow the path to SPTNS. The route legs associated with the TECKY THREE Runway 30L and 30R runway transitions are listed in **Table 2**. The route legs are VA-DF (Vector to Altitude- Direct to Fix), DF-DF (Direct to Fix- Direct to Fix), and DF-TF (Direct to Fix – Track to Fix) legs. The VA-DF legs require aircraft to fly to a certain altitude while flying a certain heading (Vector to Altitude [VA]) (note: this is usually the runway heading when it is the first leg from the runway) before proceeding directly to a fix (Direct to Fix [DF]). The next legs are DF-DF, where aircraft proceed directly from one fix to another. The last legs in the runway transition are DF-TF (Direct to Fix, followed by a Track to Fix [TF]). A TF leg requires an aircraft to track a certain heading to intercept the fix. The VA fix allows for minimal variability due to aircraft type, aircraft weight, and weather impacts on the aircraft’s performance causing the aircraft to reach the prescribed altitude at various points along the ground. The DF and TF fixes allow for less variability as the aircraft are either proceeding directly to a fix or flying a track to a fix. Since there are no open portions of the procedure and no manual vectors, aircraft that are directed to fly the procedure will have minimal variation without intervention from Air Traffic Control.

#### Exhibit 4 TECKY THREE Departure Procedure



Note: The TECKY THREE continues beyond the exhibit in the en route environment beyond the study area to the southeast.

Source: U.S. Census Bureau, 2019 (2019 TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace Procedures). Delorme World Basemap, 2020. ATAC Corporation, 2020, (2020 AEDT Analysis).



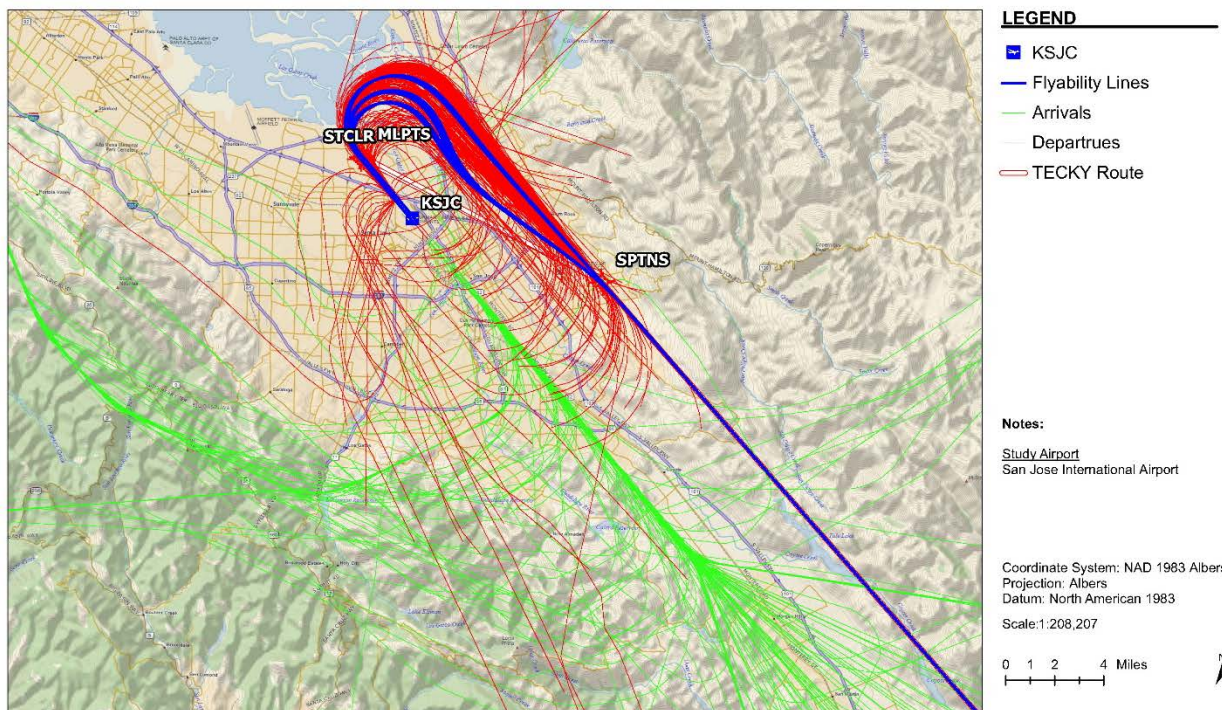
**Table 2**      **TECKY THREE Runway Transitions**

Runway	Fix Name	Leg Type	Leg Description
30L	N/A	VA	Fly vector (runway heading) until reaching prescribed altitude
30L	STCLR	DF	Fly directly to the fix
30L	SPTNS	DF	Fly directly to the fix
30L	TECKY	TF	Fly track to the fix
30R	N/A	VA	Fly vector (runway heading) until reaching prescribed altitude
30R	MLPTS	DF	Fly directly to the fix
30R	SPTNS	DF	Fly directly to the fix
30R	TECKY	TF	Fly track to the fix

Source:            U.S. Federal Aviation Administration, *Aviation Environmental Design Tool User Manual*. (March 2020), 2020 Code of Instrument Flight Procedures (Airspace Procedures).

To better understand the routing of aircraft, ATAC typically utilizes the flyability feature in the FAA's Terminal Area Route Generation and Traffic Simulation (TARGETS) program to accurately identify the areas where aircraft will be flying. However, in this example, since it is an existing procedure, the flyability routing can be compared with existing flight tracks. **Exhibit 5** depicts the flyability lines superimposed over the flight tracks that were cut at an altitude of 10,000 feet MSL. The flyability lines determine where most aircraft will fly and they vary due to aircraft size and performance. It should be noted that the geometry related to the procedure affects the dispersion of aircraft inasmuch as the turning radius can vary among aircraft, leading to greater dispersion along portions of routes with significant turns and less dispersion along straight portions of the route.

**Exhibit 5 TECKY THREE Flyability Lines**



Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures) (TARGETS Flyability Lines), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020 (2020 AEDT Analysis).

In addition to the TECKY THREE, the conventional procedures LOUPE FIVE and SJC THREE traverse the same area near the airport. **Table 3** provides the distribution of aircraft among the three procedures. The TECKY THREE accounts for nearly 95 percent of all flights over the area depicted in **Exhibit 5**.

**Table 3 Flight Track Distribution by Departure Procedure**

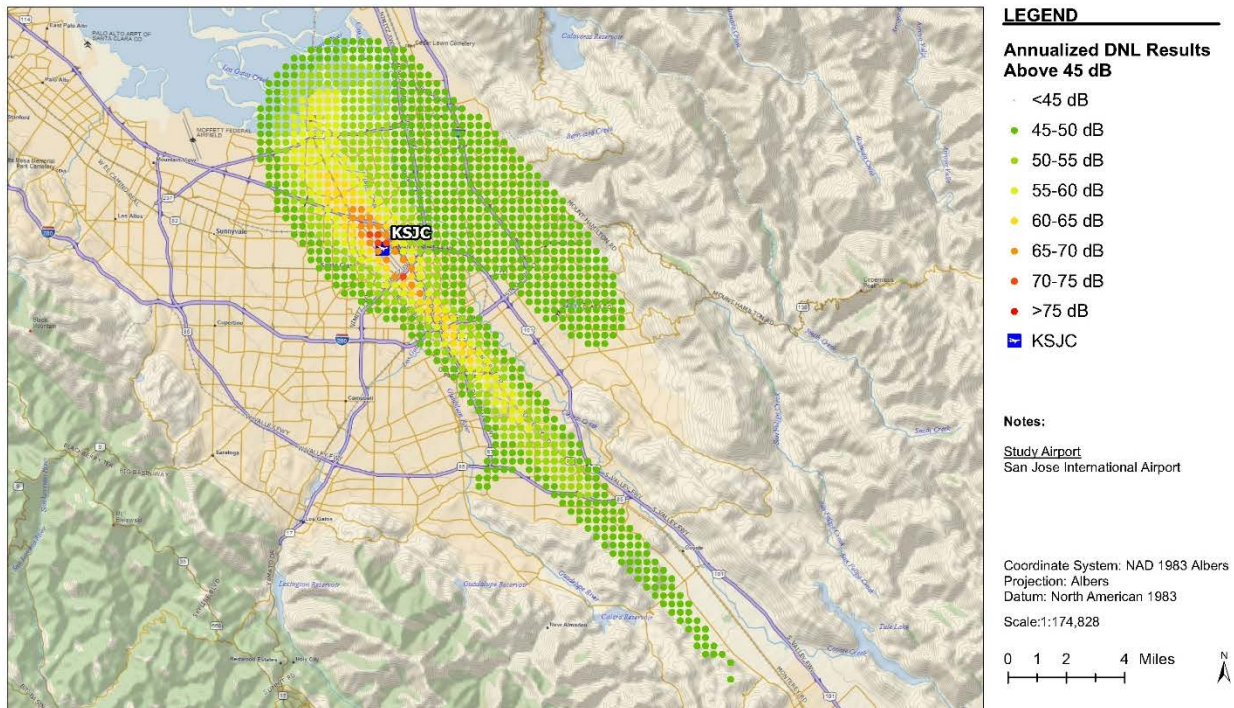
Procedure	Operations Count	Percent of Operations
TECKY THREE	210	94.6%
LOUPE FIVE	3	1.4%
SJC THREE	9	4.1%

Note: Only tracks following the primary departure flow were counted (i.e., left hand turns were not counted).

Source: ATAC Corporation, 2020, (2020 AEDT Analysis) (SkyView Data Services surveillance data).

Utilizing the results from this analysis, ATAC developed a series of exhibits depicting both the DNL values for receptor points within the study area and the Number of events Above Noise Level 60 dBA LAMAX (NANL60). The receptor points consist of an evenly-spaced grid, one quarter NM apart throughout the study area. **Exhibit 6** depicts receptor locations with DNL noise values above 45 DNL, while **Exhibit 7** depicts receptor locations where the NANL60 is greater than one.

### Exhibit 6 DNL Noise Receptors Above 45 DNL

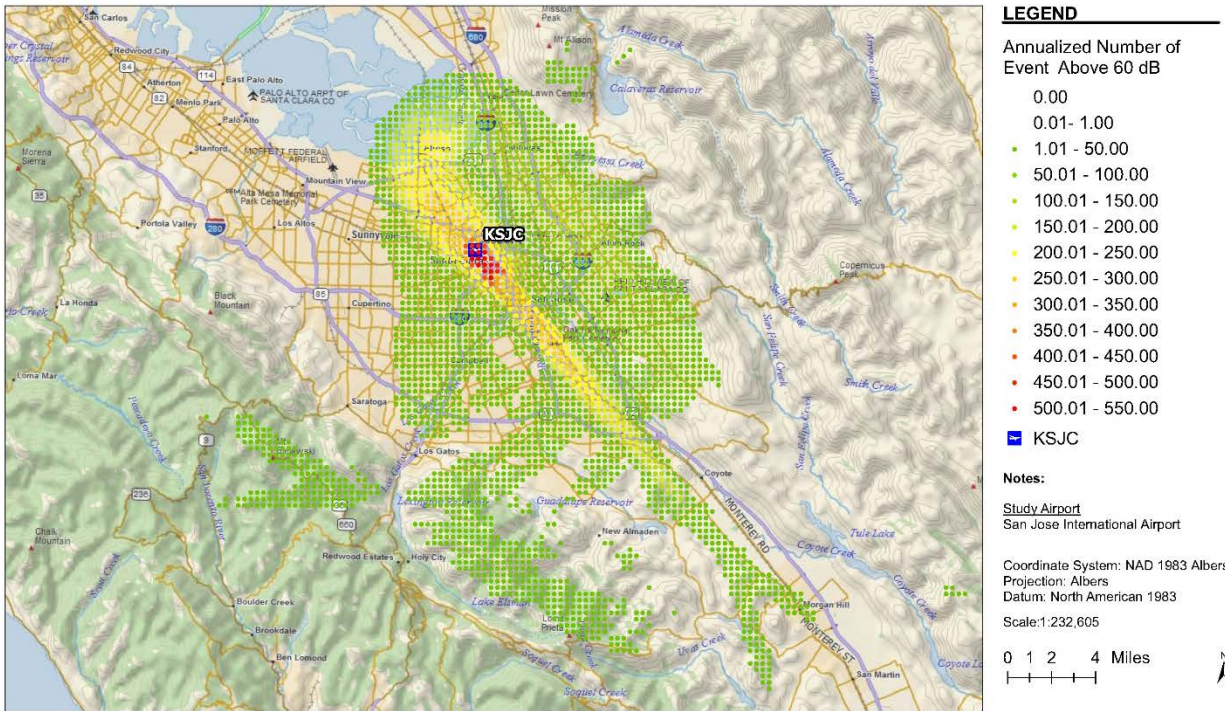


Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures) Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020 (2020 AEDT Analysis).



As evidenced by the larger number of receptors depicted in **Exhibit 7** when compared to **Exhibit 6**, it is possible to have noise events above 60 dB LAMAX and remain below the 45 DNL threshold. Conversely, it is possible to have zero noise events above 60 dB LAMAX but have a DNL value greater than 45.

**Exhibit 7 Average Annualized Number of Events Above 60 dB LAMAX**



Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020 (2020 AEDT Analysis).

**Table 4** depicts the number of receptors with noise values within each of the given DNL ranges. The NANL60 LAMAX can vary significantly within the same DNL range. In other words, you may have many relatively quiet events, or you may have infrequent loud events that are categorized within the same DNL range. In **Table 4**, we can see that the maximum NANL60 LAMAX value that occurred over a receptor that remained below 45 DNL was 48.98 events. Conversely, there were receptors that had zero NANL60 LAMAX and registered in the 45-50 DNL range. The greatest variation in NANL60 LAMAX events was found within the 60-65 DNL range, which covers DNL values that are typically of great interest for airport noise studies. Within this DNL range the minimum NANL60 value over any receptor was 249.99, while the largest value was 525.02, resulting in a span of NANL60 of 275.03.

**Table 4 DNL Range Comparison to Number of Events Above 60 dB LAMAX**

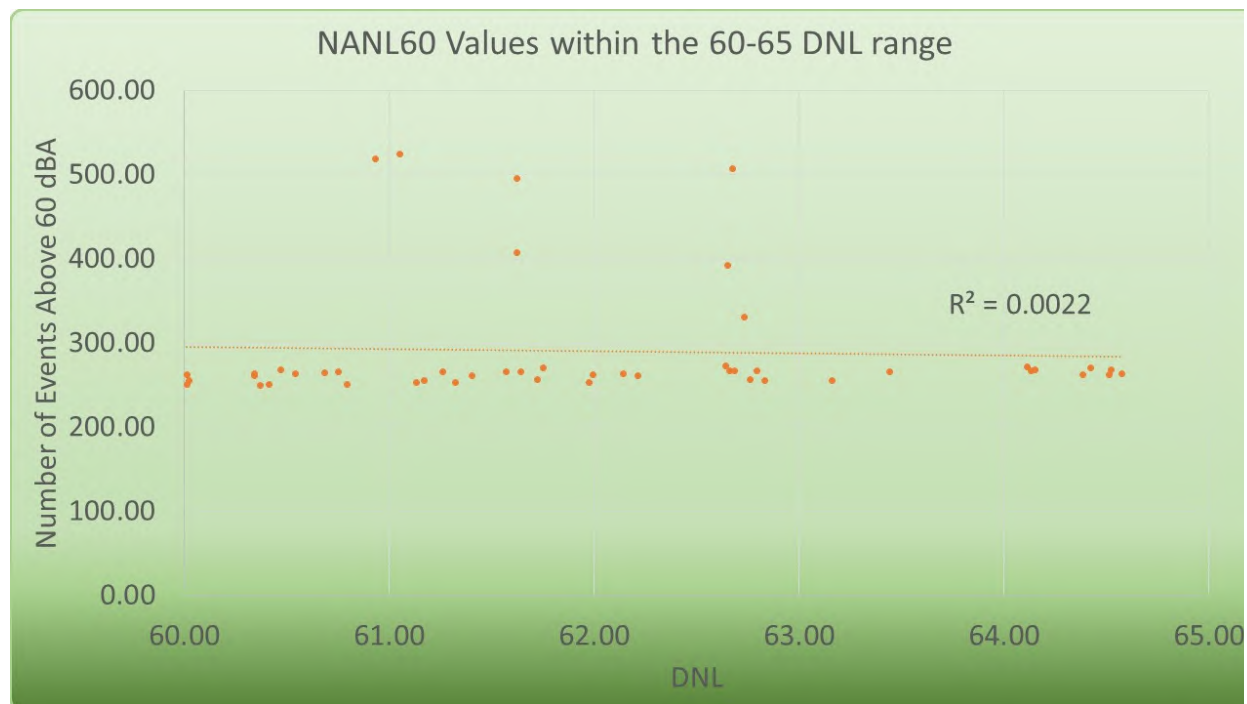
DNL Range	Number of Receptors in DNL Range	Minimum Number of Events Above 60 dB	Average Number of Events Above 60 dB per Receptor	Maximum Number of Events Above 60 dB at a Receptor	Span of Number of Events Above 60 dB
<45 dB	43,023	0.00	0.29	48.98	48.98
45-50 dB	783	0.00	50.77	160.02	160.02
50-55 dB	267	19.02	153.22	257.00	237.98
55-60 dB	141	206.01	244.06	432.01	226.01
60-65 dB	48	249.99	290.15	525.02	275.03
65-70 dB	19	267.00	356.58	539.00	272.00
70-75 dB	5	332.99	439.00	533.01	200.02
>75 dB	4	536.00	537.24	539.00	2.99

Source: ATAC Corporation (2020 AEDT Analysis), September 2020.



While some of the variation can be attributed to the differing DNL values within the range (e.g., 60 dB DNL having less noise and therefore an expected lower number of events versus 65 dB DNL), the scatter plot depicted in **Exhibit 8** shows that there is very little correlation between the variation in the NANL60 LAMAX values and the DNL value within the range for this analysis.

**Exhibit 8 Scatter Plot for DNL 60-65 NANL60 LAMAX Values**

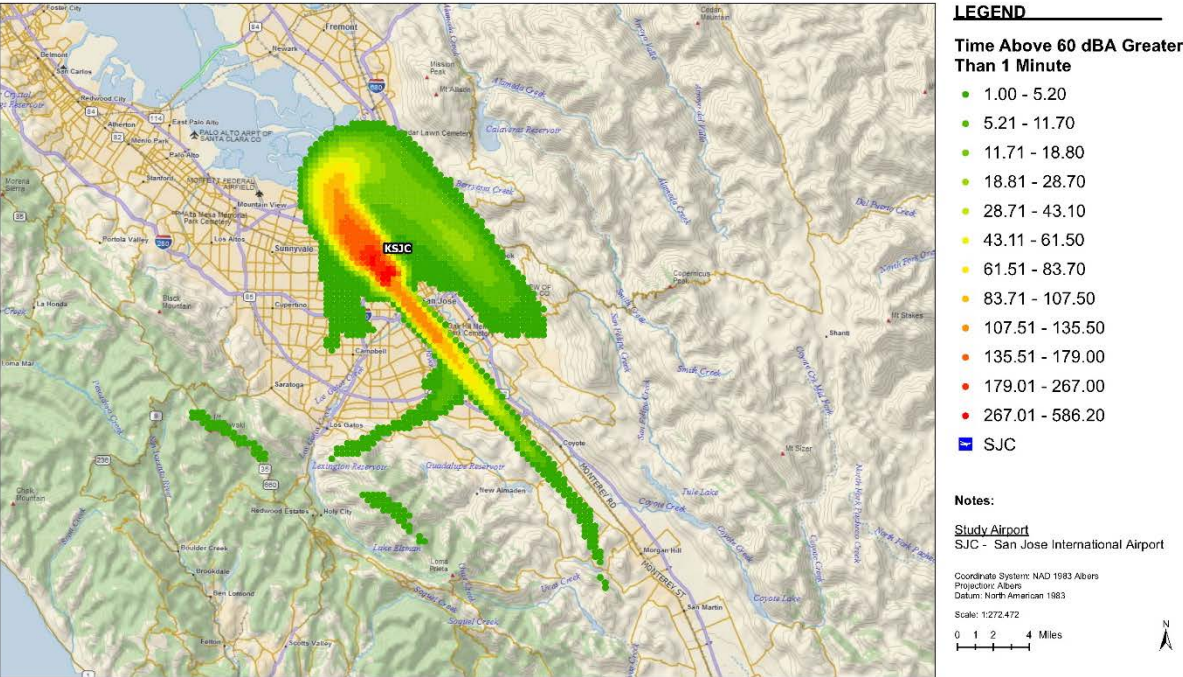


Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020 (2020 AEDT Analysis).

Additional analysis related to the NANL60 LAMAX metric can be found in **Appendix A** of this paper.

Another metric that provides similar results to the NANL60 LAMAX metric is the Time Above A-Weighted (TALA) metric. While the results of the TALA60 LAMAX metric are similar to the NANL60 LAMAX results, it does provide additional context to the public by defining the time above 60 dB LAMAX over a given receptor. **Exhibit 9** depicts the TALA 60 LAMAX results in minutes above 60 dB LAMAX for each receptor for the AAD. When compared with **Exhibit 6**, we can see that there are areas that fall below the 45 DNL threshold and still have aircraft events that register above 60 dB. Conversely, there are areas that do not register any time above 60 dB and fall into the 45-50 DNL range.

**Exhibit 9 Average Annualized Time Above 60 dBA**



Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020, 2020 AEDT Analysis.

**Table 5** depicts the minimum, average, and maximum time in minutes that receptors in the various DNL ranges were exposed to noise above 60dB. The minimum time above 60 dB above 45 DNL was 0 minutes and the maximum was 586.2 minutes for a receptor reporting a DNL value above 75 dB DNL.

**Table 5 DNL Range Comparison to Time (in minutes) Above 60 dB LAMAX**

DNL Range	Number of Receptors in DNL Range	Minimum Time of Events Above 60 dB	Average Time of Events Above 60 dB per Receptor	Maximum Time of Events Above 60 dB at a Receptor	Span of Time of Events Above 60 dB
<45 dB	43,023	0.00	0.04	6.60	6.60
45-50 dB	783	0.00	8.54	27.00	27.00
50-55 dB	267	3.90	39.70	88.00	84.10
55-60 dB	141	62.80	103.59	194.60	131.80
60-65 dB	48	116.10	148.36	242.30	126.20
65-70 dB	19	118.40	214.34	385.10	266.70
70-75 dB	5	206.70	266.58	345.80	139.10
>75 dB	4	183.40	356.63	586.20	402.80

Source: ATAC Corporation (2020 AEDT Analysis), September 2020.

When TALA60 LAMAX is compared to the DNL results of the example, we can see a great amount of variation within the DNL ranges as it relates to the time of events above 60 dB LAMAX. The greatest span is found in the 65-70 DNL range, with a minimum of 118.4 minutes and a maximum of 385.1 minutes. While the average time above increases correspondingly to the DNL ranges, the variability within each DNL range captures significant differences in the way the DNL results are achieved. **Exhibit 10** depicts Google Earth files providing detailed noise parameters developed, including the DNL, NANL60 LAMAX, and the average per event TALA60 LAMAX.



**Exhibit 10 DNL, NANL60 LAMAX, TALA60 LAMAX Summary**


Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020, 2020 AEDT Analysis.

In our example analysis, the NANL60 LAMAX metric was able to identify areas that experience high numbers of noise events above the 60 dB LAMAX threshold. The TALA60 LAMAX metric provided additional context related to the duration of events above the threshold. Providing these two additional metrics (NANL 60 LAMAX and TALA 60 LAMAX) with the DNL results allows an individual to compare how the DNL values are achieved, either through a relatively few loud and/or long events or through a relatively large number of quieter and/or shorter duration events. This can help procedure designers and policy makers make informed decisions (e.g., attempting to disperse a relatively low number of flights might not result in the same benefits as dispersing a relatively large number of flights).

The analysis also identified the current leg types associated with the TECKY THREE procedure which dictate the amount of flight track dispersion and, therefore, noise concentration. Additional analysis of potential amendments to the TECKY THREE could include the use of vector to altitude followed by a manual vector (VA-VM) leg, where the ATC controller manually controls the aircraft after reaching a certain prescribed altitude, thereby increasing dispersion. In addition, the use of open SIDS, where the RNAV legs terminate, followed by radar vectors, to rejoin the RNAV route at a later point may be proposed by the airport in an effort to disperse aircraft along the route of travel. Additional analysis of the example above can be found in **Appendix A**.

Additional metrics that may support the further understanding of aircraft noise concentration and warrant additional analysis are currently being explored by ATAC. Metrics related to the number of events above the ambient noise level may help discern what events are disproportionately impactful for communities and also allow for communities and the FAA to better plan aircraft routes that would

maintain noise exposure below the surrounding ambient noise levels. Additionally, the NANL and TALA metrics may be further refined to account for the day/evening/night splits, presenting the results with three different values for each time period.

## Conclusion

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Supplemental metrics empower the FAA, airports, decision makers, and the public by providing additional context to the noise associated with airport operations. Along with the DNL noise values, the public can glean the number of events above a certain threshold in their area of interest, and when combined with the TALA metric, it can provide the public with an average amount of time above a threshold for each event. This additional context can help entities better understand the public's perception of the noise generated by the aircraft and can be used to prioritize the concerns of the public.

The analysis of concentration and dispersion of aircraft operations due to PBN procedures and purposeful design can be further analyzed contextually by utilizing the NANL, TALA, and other supplemental noise metrics as appropriate. The 60 dB noise level used in the NANL60 LAMAX and TALA60 LAMAX noise metrics is associated with normal conversations and background music.<sup>20</sup> Therefore, it can be used to identify areas that will receive increased and decreased activity related to proposed new and amended procedures that may impact people's lives. The analysis would provide the airport and communities an opportunity to work proactively with the FAA, identifying potential areas of concern while informing the public of the existing conditions and any potential changes proposed.

Per the FAA Reauthorization Act of 2018, airports can request that the FAA conduct additional analysis on the potential dispersion of RNAV departure routes below 6,000 feet. During this process, airports can present the findings of a NANL60 LAMAX/TALA60 LAMAX analysis to pinpoint areas impacted by concentration of aircraft in an effort to find where aircraft dispersion may be of benefit. Further, land-use authorities can identify areas that are sensitive to aircraft noise and areas that are not, thereby encouraging the FAA to utilize the flexibility of RNAV procedures to fly routes most compatible with both the existing and planned land uses surrounding airports.

Aircraft noise pollution and its consequences are present today, and ATAC – utilizing the robust AEDT<sup>21</sup> model, its unparalleled expert staff, and its own additional proprietary software built up over the last two decades – can assist airports and the FAA with identifying the most compatible routing while maintaining the safety and efficiency of the NAS. ATAC firmly believes the FAA, all airports, airlines, and the communities they serve should strive for reporting integrity and building public trust in noise modeling and data analysis. In conducting environmental assessments that analyzed over 750 PBN procedures, ATAC has concluded the best method to accomplish these environmental evaluations is to combine accurate aircraft track data with ATAC's modeling and analysis capabilities, including the use of supplemental metrics as appropriate.

ATAC can provide noise analysis services for airports of all sizes and locations, providing traditional DNL results and robust supplemental analysis. If you or your airport would like to have a noise analysis conducted, call ATAC, the aviation analysis experts, at (408) 736-2822.

<sup>20</sup> Center for Disease Control and Prevention, *Loud Noise Can Cause Hearing Loss*.

[https://www.cdc.gov/nceh/hearing\\_loss/what\\_noises\\_cause\\_hearing\\_loss.html](https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html) (accessed 09/28/20).

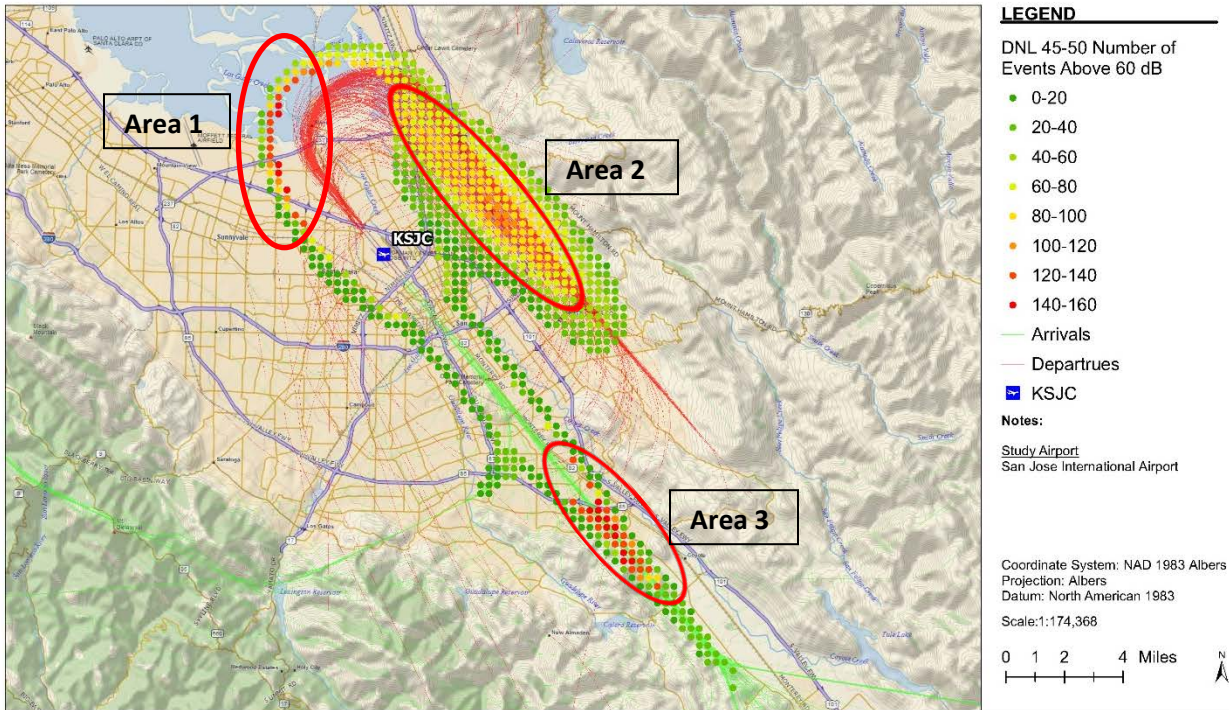
<sup>21</sup> U.S. Federal Aviation Administration, *Aviation Environmental Design Tool*, (<https://aedt.faa.gov/> [Accessed September 2, 2020]).



**Appendix A – Additional Analysis**

**Exhibit A.1** depicts the NANL60 LAMAX for the 45-50 DNL range. The range in the number of events spans from 0 to 160. As would be expected, the NANL60 LAMAX directly correlates to the proximity of the noise receptor to the airport, with several registering a relatively large number of events near the upwind leg of the departures (Area 1). There are also a large number of events in the area under the flight tracks further along the route of travel (Area 2). Several of the noise receptors close to the airport’s final approach also register a relatively large number of events above 60 dB LAMAX as a result of the aircraft’s proximity to the ground and the concentration of aircraft on final approach (Area 3).

**Exhibit A.1 DNL 45-50, Number of Events Above 60 dB**

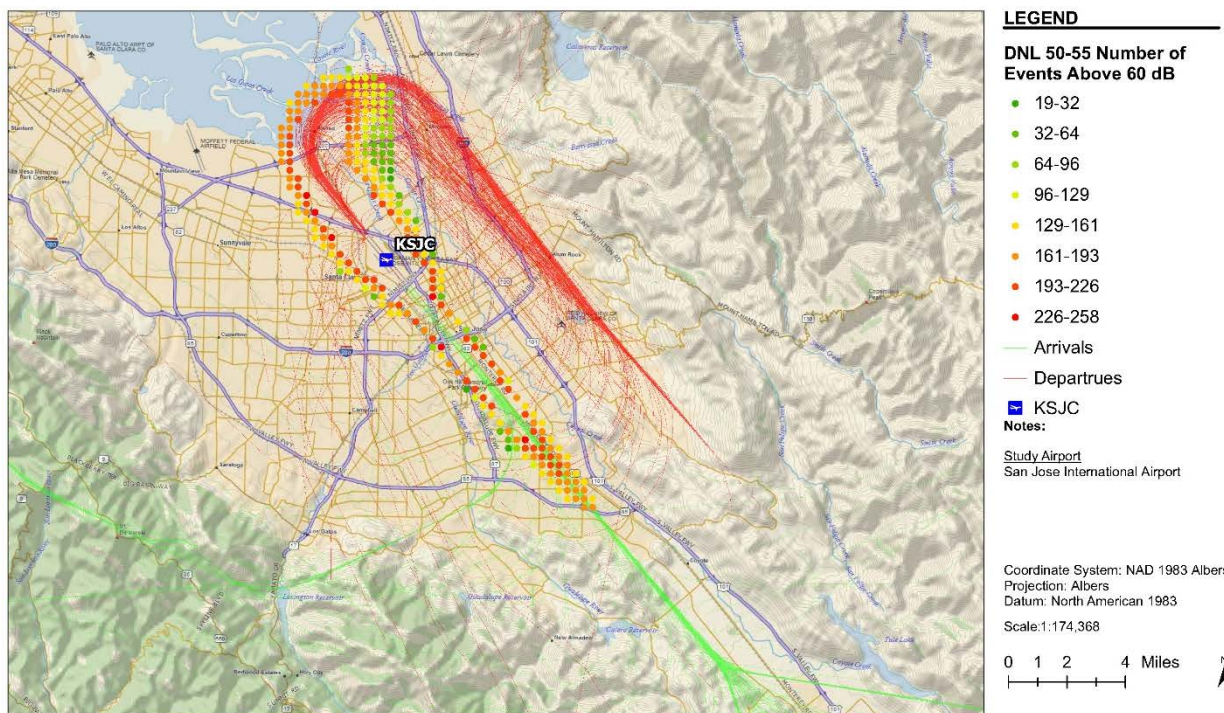


Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020 (2020 AEDT Analysis).

**Exhibit A.2** depicts the NANL60 LAMAX for the 50-55 DNL range centroids. It becomes even more clear that the number of events above 60 dB LAMAX is directly related to the receptor’s proximity to the ground (nearness to the airport) and the center of the flow of aircraft. As RNAV increases the number of aircraft operating near the center of the flow, the NANL60 results in this area increase. Noise receptors close to the airport and close to the center of the flight tracks reveal higher values associated with the number above than those noise centroids that are higher in altitude and/or further away from the flow

of aircraft. While these increases are similar to those shown by the DNL metric, NANL 60 dB LAMAX provides additional context to the results by quantifying the number of events.

**Exhibit A.2 DNL 50-55, Number of Events Above 60 dB LAMAX**

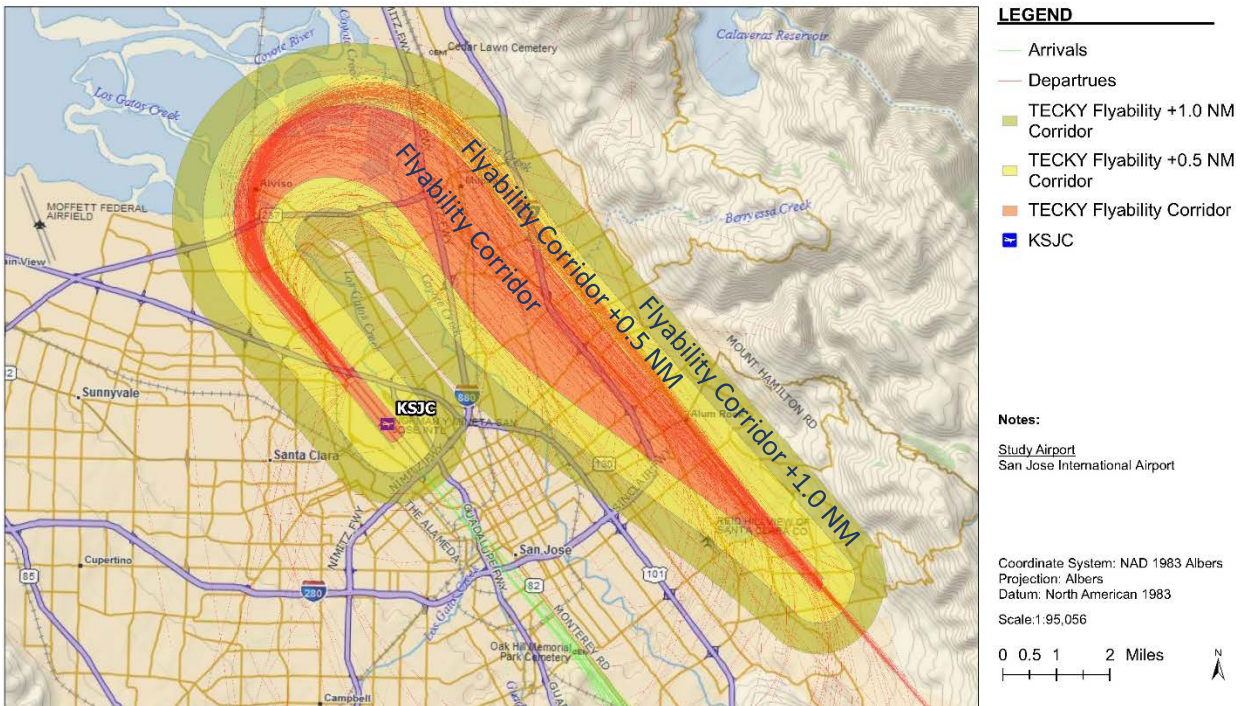


Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020, (2020 AEDT Analysis).

Another means of visualizing the impacts of dispersion as it relates to the number of events above 60 dB LAMAX is to create corridors that encapsulate various areas near a procedure. **Exhibit A.3** depicts three corridors associated with the TECKY THREE procedure. The first corridor represents the area below the flyability lines. The second extends from the flyability corridor 0.5 NM. The last corridor extends an additional 0.5 NM (a total of one NM away from the flyability corridor). A majority of the flights operate within the flyability corridor and the 0.5 NM corridor.



### Exhibit A.3 TECKY THREE Flyability Corridors

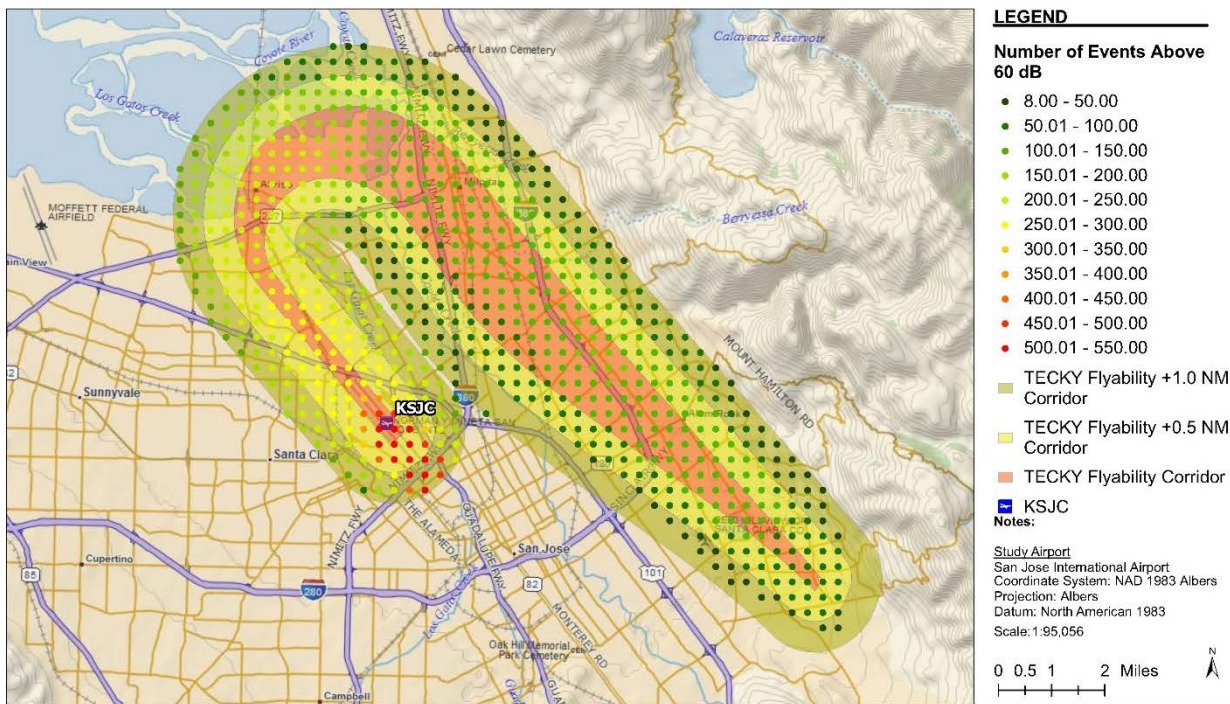


Note: Corridors were cut at the DNL >45 DNL range

Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020 (2020 AEDT Analysis).

**Exhibit A.4** depicts the number of events above 60 dB for the three corridors. Again, we can see that the NANL60 LAMAX is directly correlated to the proximity to the airport and the proximity to the flow of traffic. While **Exhibit A.4** does not provide the same level of granularity of the previous exhibits, it does provide a more complete picture as to the distribution of flights and its relation to the NANL60 LAMAX events.

**Exhibit A.4 TECKY THREE Flyability Corridors with Number Above 60 dB Results**



Note: Corridors were cut at the DNL >45 DNL range

Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020 (2020 AEDT Analysis).

**Table A.1** provides a comparison of the NANL60 LAMAX events for each of the corridors. While the median number of events correlates to the proximity of the flight tracks, the average of NANL60 LAMAX events is highest in the first 0.5 NM corridor immediately adjacent to the flyability corridor. The least number of events are found in the outermost corridor. These results are consistent with the RNAV-1 criteria and confirm the predictability of the TARGETS flyability lines.

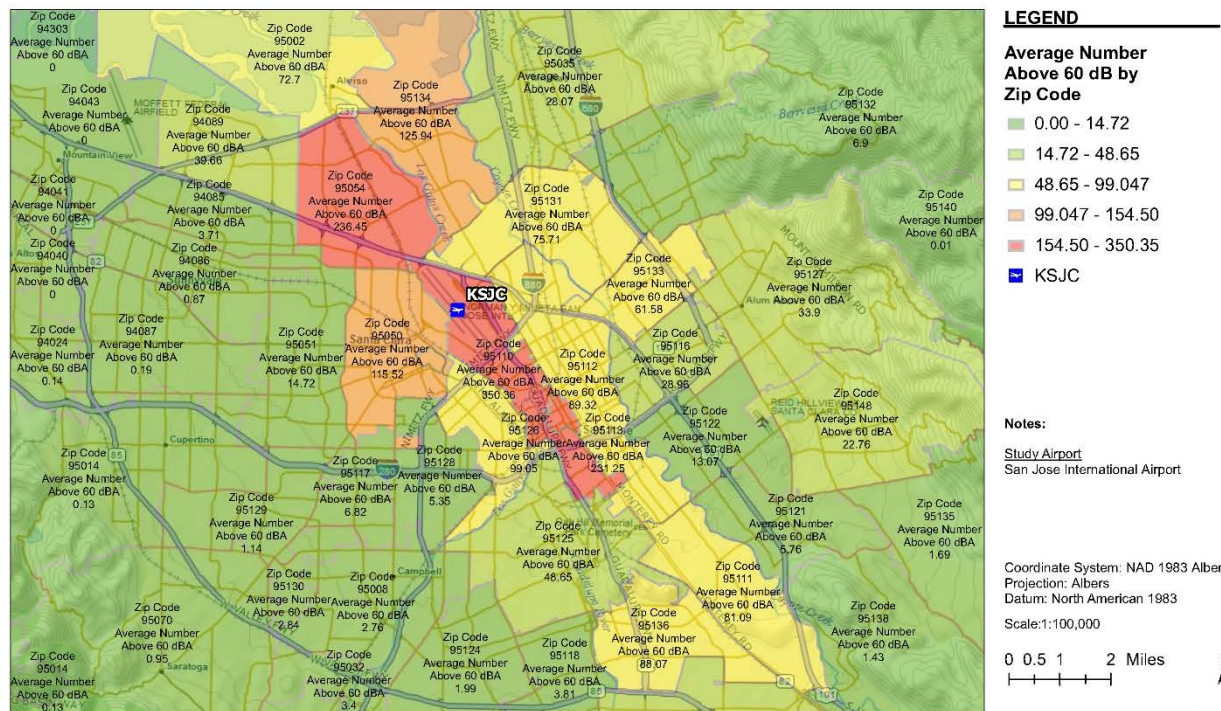


**Table A.1 NANL60 dB LAMAX Results Within the Flyability Corridors**

	Minimum Number of Events Receptors	Average Number Events Above 60 dB LAMAX	Maximum Number of Events Above 60 dB LAMAX	Median Number of Events Above 60 dB LAMAX
Flyability Corridor 0-0.5 NM From Flyability Corridor 0.5 to 1 NM From Flyability Corridor	29.02	116.35	536.99	87.02
	17.01	131.92	539.00	82.02
	7.99	98.24	536.00	60.01

Source: ATAC Corporation (2020 AEDT Analysis), September 2020

**Exhibit A.5 Average Number Above 60 dB by Zip Code**



Source: U.S. Census Bureau, 2019 (TIGER/Line Shapefiles (machine-readable data files), (U.S. states, zip codes, airports); Federal Aviation Administration, 2020 Code of Instrument Flight Procedures (Airspace procedures), Delorme World Basemap, 2020 (Map). ATAC Corporation, 2020, 2020 AEDT Analysis.



**Exhibit A.5** depicts the least granular analysis by providing the average number of events above 60 dB LAMAX by Zip Code. While this does not provide detail for individual properties or areas, it does provide a high-level analysis that can provide context to any DNL analysis that is conducted. In addition, analysis can be conducted by the census tract or block level; however, the general public may not be as familiar with those geographies.

**February 24, 2021**

**From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

Fwd: ALERT -- N.O.I.S.E. Meeting - DC Congresswoman and Quiet Skies Caucus Chair Eleanor Holmes Norton to Speak at March 3rd NOISE Meeting

FYI. You may be interested in logging-in to this virtual meeting.

Mike McClintock  
Forum Facilitator  
415-203-9097

-----Original Message-----

From: Aviation N.O.I.S.E. <contact@aviation-noise.org>

To: glomike65@aol.com

Sent: Wed, Feb 24, 2021 3:26 pm

Subject: ALERT -- N.O.I.S.E. Meeting - DC Congresswoman and Quiet Skies Caucus Chair Eleanor Holmes Norton to Speak at March 3rd NOISE Meeting

Alert: Congressional Quiet Skies Caucus Chair Congresswoman Eleanor Holmes Norton to Address NOISE Meeting-March 3rd, 2021

Dear N.O.I.S.E. members and friends:

As a reminder, The N.O.I.S.E. Board will be hosting a Virtual Meeting March 3rd from 2-4 PM Central to discuss long-awaited Neighborhood Environmental Survey (NES) and the opportunity for public comment. In addition to discussing the NES, we are excited to announce that the Chair of the Congressional Quiet Skies Caucus, D.C. Congresswoman Eleanor Holmes Norton will be joining us to speak about her role as the Quiet Skies Caucus chair and issues upcoming in the 117th Congress on aviation and airport noise.

Please see below for the zoom link information and look for an agenda later this week!

ejtranter@locklaw.com is inviting you to a scheduled Zoom meeting.

Topic: N.O.I.S.E. Community Workshop  
Time: Mar 3, 2021 03:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

<https://locklaw.zoom.us/j/84167046935?pwd=RytTRWtENndCbVFEWjhCMGJ4dEp6QT09>

Meeting ID: 841 6704 6935

Passcode: A\*iET2Bf

One tap mobile

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+16468769923,,84167046935#,,,,\*98038314# US (New York)

Dial by your location

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+1 646 876 9923 US (New York)

+1 312 626 6799 US (Chicago)

+1 346 248 7799 US (Houston)

+1 408 638 0968 US (San Jose)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)  
Meeting ID: 841 6704 6935  
Passcode: 98038314  
Find your local number: <https://locklaw.zoom.us/j/kcBKnN68gR>

Thank you!

Emily Tranter  
Executive Director  
N.O.I.S.E.

**February 27, 2021****From**

Jane Manning

**To**

SCSC Roundtable

**Message**

White paper

Thank you for alerting us to the ATAC white paper on alternative noise metrics. I would appreciate receiving similar future information as well.

Thank you also to Board members, staff, and consultants, for all of the hard work you have done on the airplane noise issue in the south Counties! It was an incredible service! Your work gave much-needed visibility to the growing noise problem in Santa Cruz County, which will not otherwise happen without a regional body like this.

I don't expect to ever learn definitively whether Santa Cruz County-related political rot was part of why the Cities Association withdrew support, but I know that Mr Palacios did his best to work on this and I especially appreciate that fact.

All the best

Jane Manning

resident, South Skyline area of the Santa Cruz Mtns

**March 1, 2021**

**From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

Fwd: ALERT -- N.O.I.S.E. 2021 Spring Meeting Agenda

FYI:

-----Original Message-----

From: Aviation N.O.I.S.E. <contact@aviation-noise.org>

To: glomike65@aol.com

Sent: Mon, Mar 1, 2021 1:20 pm

Subject: ALERT -- N.O.I.S.E. 2021 Spring Meeting Agenda

ALERT -- N.O.I.S.E. 2021 Spring Meeting Agenda

Dear N.O.I.S.E. members and friends:

Please click here to see the agenda for our spring meeting this Wednesday, March 3rd. We are so excited to welcome D.C. Congresswoman and Quiet Skies Caucus Chair, Eleanor Holmes Norton to our meeting as our key note speaker.

The N.O.I.S.E. Board and staff will also be giving a 2021 federal update and overview/discussion of the recently released FAA Neighborhood Environmental Survey. Click here to see the N.O.I.S.E. public comment that we will be submitting to the FAA ahead of the March 15th public comment deadline. We look forward to a discussion and questions around the survey and individual public comment during our meeting.

Please RSVP to N.O.I.S.E. National Coordinator Vince Spinner at [vinces@primacysg.com](mailto:vinces@primacysg.com) and see the Zoom information below:

Join Zoom Meeting

<https://locklaw.zoom.us/j/84167046935?pwd=RytTRWtENndCbVFEWjhCMGJ4dEp6QT09>

Meeting ID: 841 6704 6935

Passcode: A\*iET2Bf

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+16468769923,,84167046935#,,,,\*98038314# US (New York)

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+1 646 876 9923 US (New York)

+1 312 626 6799 US (Chicago)

+1 346 248 7799 US (Houston)

+1 408 638 0968 US (San Jose)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

Meeting ID: 841 6704 6935

Passcode: 98038314

Find your local number: <https://locklaw.zoom.us/j/84167046935?pwd=RytTRWtENndCbVFEWjhCMGJ4dEp6QT09>

Thank you!

Emily Tranter  
Executive Director  
N.O.I.S.E.



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National Organization to Insure A Sound Controlled Environment, 415 2nd ST NE, Suite 210, Washington, DC 20002

SafeUnsubscribe™ glomike65@aol.com

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**March 17, 2021**

**From**

Darlene Yaplee

**To**

SCSC Roundtable

**Message**

URGENT ACTIONS requested given SCSC RT suspension and NES results

Representative Eshoo, Representative Khanna, Representative Panetta,

Unless the Cities Association of Santa Clara County allows the SCSC RT to resume meeting before March 31, 2021, **we ask for alternative mechanisms for our communities to receive information and provide comments on potential aviation impacts from FAA planned changes.** In addition, and regardless of the SCSC RT resuming or not its activities, **we request in particular that the FAA postpone the implementation of the BSR Overlay and BRIXX THREE through December 31, 2021 at a minimum** given that the noise impact estimates done as part of the environmental review process are no longer reliable as demonstrated in the FAA Neighborhood Environmental Survey (NES) results.

- The SCSC Roundtable (RT) was formed for municipalities and community members to collaborate on seeking solutions to reduce aviation noise. With the current suspension of the SCSC RT, our communities are without a mechanism to communicate with and receive information from the FAA at a time when the FAA continues to work unilaterally on future changes that may impact our communities and when the FAA noise impact assessments are being called into question because of the recently published NES.
- Per the Quiet Skies Caucus letter to Administrator Dickson on March 10, 2020, *“Fundamentally, the survey results demonstrate that the method the FAA uses to measure aircraft noise is deeply flawed. Even the FAA acknowledges that, “Compared with the existing Schultz Curve, the new National Curve shows a substantial increase in the percentage of people who are highly annoyed by aircraft noise over the entire range of aircraft noise levels considered, including at lower noise levels.” These metrics are the very foundation of the FAA’s understanding of aircraft noise in the United States. If these metrics are not reliable, that calls into question the FAA’s entire framework of regulations and programs to reduce aircraft noise.”* The NES results should trigger **a sea change in aviation noise policy and regulations** because they refute the long-standing Schultz curve and FICON data, which have been the foundations of aviation noise policy for over 40 years. In light of the NES results, it cannot be business as usual for the FAA.

We have listed below **requests for three time critical items** for our communities, namely the **BSR Overlay** arrival to SFO, the upcoming **BRIXX THREE** arrival to SJC, and the **lack of FAA responses** on two SCSC RT November 2020 letters on BDEGA and PIRAT arrivals to SFO.

Please take action now to avoid further negative aviation noise impacts on our communities.

Regards,

Darlene Yaplee and Marie-Jo Fremont

**BIG SUR OVERLAY TO SFO**

- Despite repeated requests, the FAA has been withholding information on the BSR Overlay for almost 3 years. This pattern started in May 2018 when the FAA did not communicate to elected officials and the Community that the FAA had concluded that the BSR Overlay, as recommended by the Select Committee in 2016, was not feasible; it continued in June 2019 when Raquel Girvin, FAA Western Region Administrator, put in place a communication embargo on attendees of the BSR Overlay June 4-5, 2019 Full Working Group meeting; and it continued by the FAA not providing updates on the BSR Overlay after repeated requests at SCSC RT meetings. The lack of FAA response led the SCSC RT to make a [formal written request to the FAA on August 11, 2020](#) for a detailed BSR Overlay update, including a detailed project schedule. As stated in the SCSC RT request, the expectation was for the FAA to forward the RT a detailed project schedule in less than 45 days, which would in turn be posted on the SCSC RT website. The FAA did not forward a detailed schedule within 45 days, and did not present at the October 28, 2020 RT meeting given Rep Eshoo's office request on October 20, 2020 that "the FAA defer briefings to the Roundtables on any issues impacting Santa Cruz County until next year in light of the ongoing crisis in Santa Cruz County relating to the devastating [sic] CZU Fire and its ongoing impacts" (page 258 of the [October 28, 2020 SCSC RT meeting packet](#)).
- The only BSR Overlay information available to the community so far is based on FOIA information obtained last year, and is of great concern because the proposed BSR Overlay does not honor the Select Committee recommendation 1.2 R1 made in November 2016, which was to use the BSR ground track over the entire route from the Monterey Bay to the San Francisco Bay.
  - The FOIA information received indicates that the proposed BSR Overlay does not follow the old BSR ground track after Los Altos/Los Altos Hills: using a new ground track means that the FAA will be shifting the noise to new communities, which violates the Select Committee recommendation 1.2 R1, the FAA's claim that it will not move noise without agreement by the community, and the FAA's condition of participation in the SCSC RT that Select Committee recommendations not be reopened. Note that the Community did not agree on a new ground track for the BSR Overlay.
- We understand that the Community, including residents in the Santa Cruz mountains, are now ready to receive detailed information from the FAA on the BSR Overlay. Regardless of the SCSC RT meetings being suspended, nothing should prevent the FAA from providing details on their proposed BSR Overlay, information that could then be posted on the SCSC RT website.
- **Request 1: Ask the FAA to send a BSR Overlay detailed presentation to the SCSC RT by April 15, 2021, and then have the SCSC RT post the FAA presentation on the RT website within 3 business days as well as notify interested community members.** The FAA presentation must:
  - Include a detailed comparison of the old BSR procedure and the proposed BSR Overlay over the entire route from the Monterey Bay to the San Francisco Bay. The comparison should not be limited to ground tracks but must also include at a minimum a comparison of speed requirements, altitude requirements, angles of descent, expected locations of deployment of flaps and slats, thrust levels, and vectoring instructions.
  - Describe the anticipated changes in noise impacts for representative communities along the flight path from the Monterey Bay all the way to SFO as well as how the estimated noise impacts have been calculated (e.g. what tools were used, what assumptions have been made).
  - Share detailed results of the environmental review analysis if completed, or preliminary results that are available with a targeted schedule for completing the environmental review.

- **Request 2: Ask the FAA to hold a virtual meeting on the BSR Overlay on or around April 30, 2021 for the FAA to present the BSR Overlay detailed presentation.**
  - The FAA is capable of holding virtual meetings. They recently hosted a nationwide NES meeting on February 22, 2021 and announced the meeting through the SCSC RT.
  - FAA technical experts must be present at the virtual meeting.
  - It would be preferred if the FAA were willing to answer questions live. At a minimum, participants should, however, be able to post questions via chat with the expectations that the FAA will answer the questions within 30 days on a best effort basis.
- **Request 3: Ask the FAA to postpone finalizing the BSR Overlay environmental review and posting the procedure on the IFP gateway to December 31, 2021 at the earliest to honor the FAA assurances on October 28, 2020 that the BSR Overlay will not move forward without the the Community being briefed and involved.** Postponing is needed given the NES results and the fact that our communities do not have an active roundtable that can engage with the FAA.
  - At the October 28, 2020 SCSC RT meeting, Tamara Swann, FAA Deputy Regional Administration, stated, “I just want to assure you that our response in today’s letter ‘uh’ we have every intention of not moving forward without providing you the opportunity to have a briefing and be involved. We wanted to recognize what Karen Chapman had requested a week or two ago as a plight of the community that is severely affected by those procedures” ([timestamp 1:17:10](#)).

#### STAR BRIXX (RNAV) THREE TO SJC

- A new BRIXX THREE procedure has been posted on the IFP Gateway with the comment period ending on April 12, 2021, which is less than 30 days away. The IFP Gateway information indicates that groundtracks will be changed (waypoint JILNA at 7,000 ft will be moved; headings before and after JILNA will not be the same as in BRIXX TWO) and the procedure will terminate earlier than before, which could result in more noise over communities near the end of the procedure and afterwards.
- The FAA has not communicated any information on BRIXX THREE to the SCSC RT even though the FAA has been working on it since October 2020, if not earlier, and that these changes could potentially impact some SCSC RT communities.
- The FAA has supposedly committed to a robust and transparent community engagement process, and has reiterated that they will not shift noise without community agreement. Despite these claims, the FAA continues to pursue changes such as BRIXX THREE without informing and consulting with potentially impacted communities.
- Finally, it is surprising to see the FAA posting BRIXX changes given that the FAA commented multiple times over the years that BRIXX changes would not occur until the SERFR replacement (e.g. the BSR Overlay) would be finalized because of the interdependency between BRIXX and SERFR/BSR Overlay (BRIXX goes under SERFR). To the best of our knowledge, the BSR Overlay has not been finalized (see section above).
- **Requests 4 : Ask the FAA to provide detailed information on BRIXX THREE to the SCSC RT by April 30, 2021. The detailed information must include:**
  - A comparison of BRIXX TWO and BRIXX THREE, including but not limited to changes in ground tracks, altitudes, speeds, angles of descent, waypoints, vectored headings, expected locations for deployment of flaps and slats, thrust levels as well as changes in noise impacts for representative communities along the flight path all the way to SJC.
  - The anticipated noise impacts changes between BRIXX THREE and BRIXX TWO, including a description of the assumptions made and the tools used to estimate the anticipated changes in noise impact.

- The details of the BRIXX THREE environmental review, including but not limited to the assumptions made, the noise screening tools or noise modeling tool used, and some evidence of airport support.
- An explanation on how the BRIXX THREE changes relate to the proposed BSR Overlay.
- **Request 5: Ask the FAA to commit in writing to extend the BRIXX THREE comment period by at least 3 months to July 12, 2021 and postpone the BRIXX THREE publication date to December 31, 2021** given the recent NES results and the fact that our communities do not have an active roundtable that can engage with the FAA.

**BDEGA and PIRAT arrivals to SFO**

The SCSC RT is still awaiting response from the FAA on two separate letters dated 11/24/2020 regarding [BDEGA](#) and [PIRAT](#).

- **Request 6: Ask the FAA to formally respond by April 30, 2021 to the questions listed in the 2 letters that the SCSC RT sent almost 4 months ago.**
  - Nothing prevents the FAA from replying in writing to the SCSC RT, who in turn can post the FAA responses on the website, and notify interested parties of the new correspondence.

**March 23, 2021**

**From**

Gary Walk

**To**

SCSC Roundtable

**Message**

New Submission from Contact Us

**Name**

Gary Walk

**Email**

[garyengwalk@yahoo.com](mailto:garyengwalk@yahoo.com)

**Phone**

(646) xxx-xxxx

**Message**

Hello, I just became aware of the SCSC. I live in the Communications Hill neighborhood in San Jose and am becoming increasingly concerned with the level of noise from planes on their incoming flight path to SJC. Now that the pandemic seems to be subsiding, plane traffic into SJC is increasing, but even during the past year, planes seem to be flying lower than ever.



My concern is that the flight paths and the FAA's decisions behind them do not take into account The Communications Hill community, parts of which are brand new and previously unpopulated, and the fact that it sits 300 feet or more above sea level. Planes fly directly above us and since we are situated at a higher altitude than other communities, we hear the jet noise a lot more than people situated at lower altitudes.

I'm writing you to see if there's anything that I can do to advocate for myself and my neighbors. I'm eager to participate in future roundtable meetings and to voice my concerns to the FAA and any other relevant agencies or representatives if they're willing to listen.

Thanks,

Gary

**March 23, 2021**

**From**

Cheryl Poland

**To**

SCSC Roundtable

**Message**

Cities Association's decision to deactivate the Santa Clara Santa Cruz Roundtable

Hon. Marico Sayoc,

I am a Los Gatos homeowner, since 1999. I write to you, in your capacity both as Mayor of Los Gatos and as President of the Cities Association of Santa Clara County, out of concern about the Cities Association's inexplicable decision to deactivate the Santa Clara Santa Cruz Roundtable, leaving residents in both counties without a forum to address aircraft noise concerns.

As you know thousands of Los Gatos residents were detrimentally impacted by changes in the air space brought about by the FAA's NextGen program, when In March 2015 two new commercial flight procedures were routed above our homes - the SERFR southern arrivals to SFO and the BRIXX pacific arrivals to SJC. Thanks to the Select Committee on South Bay Arrivals' super-majority vote to return SERFR to the legacy BSR ground track, Los Gatos residents have a clear path toward the resolution of the devastating aircraft noise impacts caused by the current SERFR and BRIXX procedures.

In my capacity as lead for Quiet Skies NorCal (QSNC), representing the aircraft noise concerns of thousands of residents across Santa Clara and Santa Cruz counties (including more than a thousand Los Gatos residents) I can tell you that the recent deactivation of the Roundtable by the Cities Association has caused great concern in our community. To date, the Cities Association have provided our community with no information regarding its reason for deactivating the Roundtable, nor what its plans are to reactivate it. (Note the QSNC letter dated January 14, 2021 to the Cities Association detailing how crucial the Roundtable is for residents of both counties.)

With the deactivation of the Roundtable, Los Gatos residents no longer have a forum to address aircraft noise concerns. And this loss of the Roundtable comes at an extremely critical time with the new BRIXX (Three) procedure and the new SERFR (Five) procedure in final stages of implementation. Both of these procedures are meant to resolve the devastating aircraft noise impacts that Los Gatos residents have suffered for the past 6 years. Without the Roundtable, Los Gatos residents are left in the dark regarding the details of these new procedures and, in the case of SERFR Five, its publish date. How will Los Gatos residents receive, review and respond to updates from the FAA regarding BRIXX and SERFR?

I ask that the Cities Association immediately inform residents of Santa Clara and Santa Cruz counties of its plan to reactivate the Roundtable. Time is short – the new BRIXX Three procedure has a June 17 publish date. The new SERFR Five procedure has been finalized and is pending community outreach prior to publishing. Our community is very concerned that the Cities Association decision to deactivate the Roundtable will delay the community outreach process and in turn delay SERFR Five’s publish date. Any delay of these new procedures would be absolutely unacceptable to the community, as would any further delay in reactivating the Roundtable.

I ask that the Cities Association honor Congresswoman Eshoo’s request to provide a long term forum for aircraft noise concerns in the South Bay by immediately reactivating the Roundtable. I look forward to your response.

Yours truly,

Cheryl Poland

cc:

Congresswoman Anna Eshoo

Cities Association of Santa Clara County

Santa Clara Santa Cruz Roundtable

**March 25, 2021**

**From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

Fwd: FAA Noise Portal Briefing and Links

Forum Members and all:

Attached is the FAA PowerPoint briefing, and a copy of the privacy statement from our January meeting. The privacy language appears in a pop-up that people have to accept before submitting a noise inquiry.

Below are links to FAA noise sites:

Main FAA Noise Page: <https://www.faa.gov/noise/>

Noise Portal: <https://noise.faa.gov/noise/pages/noise.html>

Mike McClintock  
Forum Facilitator

**Attachment Name**


20210325\_M\_McClintok

# FAA Noise Portal


## Partnering Airports Overview

**Discussion with:**  
Oakland Airport/Community Noise  
Management Forum

**Date:** January 20, 2021




Federal Aviation  
Administration




## Noise Portal – Purpose and Goals

**Purpose:** *to identify how the FAA can more efficiently and effectively respond to and address noise complaints in a clear, consistent and repeatable manner that is responsive to the public and applies the best use of FAA resources.*




**Part 1**

Identify and implement improved and consistent agency-wide policy and procedures for the FAA's process to respond to noise complaints / inquiries, and



**Part 2**

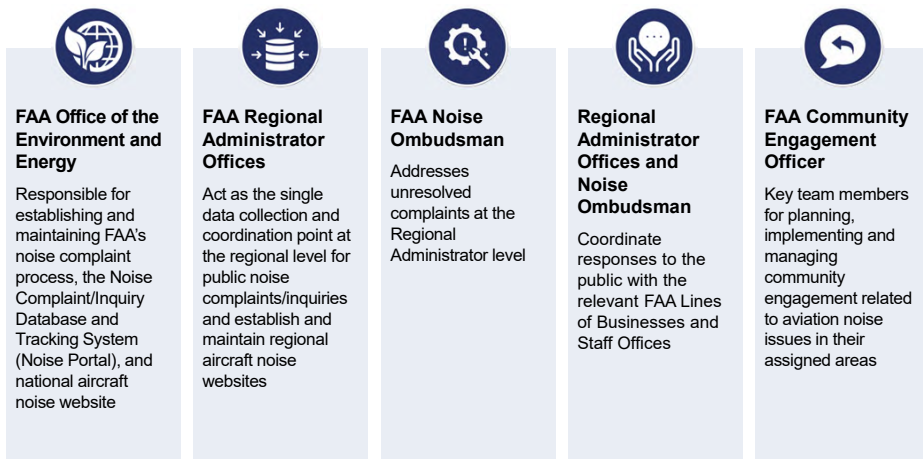
Identify and evaluate potential actions that the FAA might take to better address the underlying issue raised by complaints, particularly regarding the implementation of NextGen procedures.



Federal Aviation  
Administration

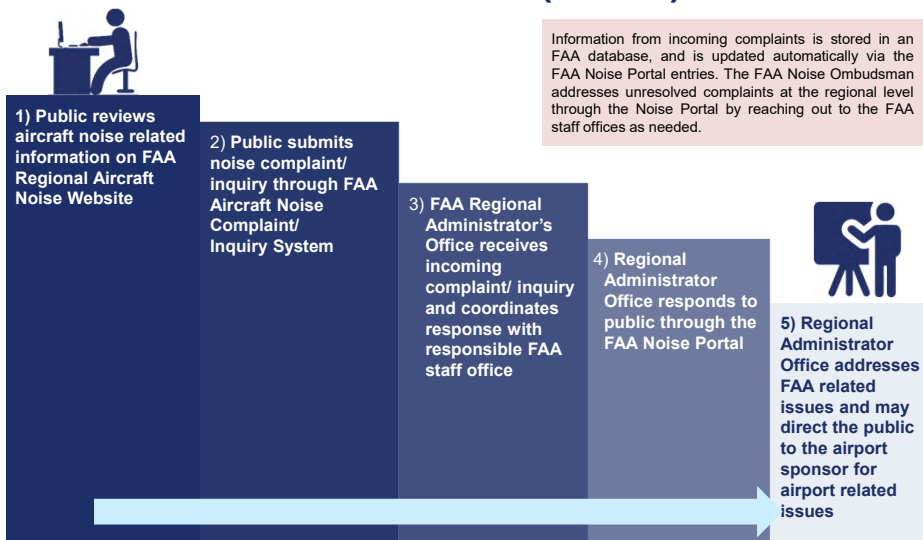
1

## Noise Portal Process (FAA Roles & Responsibilities)



Federal Aviation Administration

## FAA Noise Portal Process (Public)



Federal Aviation Administration

# Why FAA is Partnering with Airports

1. Minimize duplication of efforts
2. Avoid contradictory, inconsistent messaging
3. Set up channels for communication and information sharing
4. Strengthen relationships



Federal Aviation Administration

# FAA Policy on Addressing Aircraft Noise Complaints / Inquiries from the Public

**Introduction:** Addressing aircraft related noise is a shared responsibility among the FAA, airport sponsors, airlines, state and local government, and communities.

**Policy:** FAA seeks to efficiently and effectively respond to and address FAA related aircraft noise complaints and inquiries from the public in a clear, consistent, and repeatable manner that is responsive and applies the best use of FAA resources.

**Highlights from the FAA policy include:**

- Establishing and utilizing the FAA website to provide the public with up-to-date information regarding on-going projects including FAQs, public meetings and educational information on FAA noise and policy issues.
- Identifying specific information the public must include for the FAA to fully address the complaints/inquiry.
- Utilizing the FAA Noise Portal for consistent reporting and tracking of noise complaints and inquiries.
- Accepting and registering noise complaints and inquiries with the necessary information submitted through the FAA Noise Portal, by postal mail, or by voice message.
- Not accepting noise complaints or inquiries from third party automated applications or devices.
- Not responding to the same general complaint or inquiry from the same individual more than once.
- Coordinating with partnering airport sponsors to share applicable noise complaint/inquiry data.
- Providing timely responses to aircraft noise and inquiries.
- Focusing on the content of the noise complaints/inquiries FAA receives not the volume



Federal Aviation Administration



**Questions**



 Federal Aviation Administration

6

**March 26, 2021**

**From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

(no subject)

Forum members and all:

It's taken them a while, but the Washington Post finally got around to noticing this (see link below):

"FAA study finds noise from airplanes, helicopters far more annoying than other sources"

The study focused on the effect of air traffic on people who live near airports.

Read in The Washington Post: <https://apple.news/Ag5OnX0Y6QAK4o8qu1yJyrQ>

Thanks to EJDG for the heads up.

Mike McClintock  
Forum Facilitator  
415-203-9097

**March 26, 2021**

**From**

Jennifer Landesmann

**To**

SCSC Roundtable

**Message**

Letter to Representative Eshoo

Please find attached copy of letter to Representative Eshoo regarding GBAS procedures at SFO.

Jennifer Landesmann on behalf of Sky Posse Palo Alto

**Attachment Name**

**20210331\_J\_Landesmann\_Letter to Rep Anna Eshoo March**

## Sky Posse Palo Alto

2225 East Bayshore Avenue, Suite 200, Palo Alto, CA 94303

March 31, 2021

The Honorable Anna Eshoo  
United States House of Representatives  
District Office  
698 Emerson Street  
Palo Alto, California 94301

Dear Representative Eshoo,

We hope you are well and thank you for your leadership during these challenging times. We understand that there are many competing priorities but we need your help on a time sensitive issue - to prevent the FAA from using a Categorical Exemption (CatEx) to expedite changes for a new landing system at SFO, thus dispensing with environmental assessment and review of the project, and excluding citizen input and participation. CatEx should be reserved for federal actions such as the purchase of office supplies, not airspace changes with real effects on the human and natural environment. Citizens that will be affected need your help to address this issue because the SCSC Roundtable is [currently inactive](#) and the FAA Ombudsman and FAA Community Engagement Officers will only respond to airports, roundtables and members of Congress. **As early as possible, please ask the FAA to do a full environmental review for SFO's new landing system 'ground-based augmentation system (GBAS) and to include any changes that can exacerbate problems.**

On March 24, the FAA disclosed at the SFO Roundtable that "*public comment is not anticipated*" for the first/initial precision navigation procedures for "GBAS", suggesting that the FAA anticipates using CatEx for what is definitely a new alternative landing system for SFO. The FAA is falsely claiming that GBAS is "the same" as the current landing system. GBAS is not the same as the current landing system and therefore, by NEPA regulations, should require analysis and public comment. The FAA's internal process, which they call "environmental review," is not adequate quantitative analysis - previous FAA NEPA declarations have shown vast inaccuracies and misused NEPA to bypass citizen involvement.

**We are most concerned about the initial/first set of "GBAS" procedures that the FAA is making decisions about by May 29th.** These procedures are anticipated to INCREASE noise which should be disclosed to the public with details of where more noise is expected. A second set of GBAS procedures that SFO calls "innovative procedures" has an indefinite timeline that *may or may not happen, and may or may not change noise levels*. We suggest that the FAA consolidate both sets for assessment; there is no apparent reason to rush the first set of procedures, and a review of the initial set could yield potential mitigation to reduce noise before GBAS is implemented.

Any environmental assessment done by FAA should employ up-to-date methods of ascertaining impacts--which is not currently the case. The FAA and SFO are using metrics and screening methods that cannot adequately assess GBAS despite the FAA having state-of-the-art [tools](#) to do so. It is our understanding that the FAA designates an "Environmental Protection Officer" to whom a request can be made to use supplemental metrics which [FAA's NEPA rules](#) provide for their application. The FAA must make clear exactly how other relevant supplemental metrics can be added for GBAS. The FAA's [approved tool](#), and its latest upgrade "AEDT 3d," has options we request be considered.

**Noise monitoring in your district will be very important** before SFO deploys GBAS. Noise monitors are necessary to cross-check traffic and noise forecasts. Also, noise mitigation initiatives such as the SFO Fly Quiet program work with noise monitors and the last noise monitor South of SFO is in [Redwood City](#).

Since 2018, the FAA has instituted [policies](#), methods, and communication tools to broaden opportunities for public engagement. This has been a notable topic of discussion at the SCSC Roundtable. The following brief video clips illustrate some of these opportunities for enhanced public involvement.

### **3 minute video replay**

[FAA and SCSC Roundtable 3/27/19](#): *FAA commits to early notification and involvement processes.*

### **3.5 minute video replay**

[FAA and SCSC Roundtable 6/26/19](#): *FAA shares how enhanced engagement can potentially happen.*

The Department of Transportation (DOT) needed to have enhanced and upgraded FAA's NEPA practices before they began deploying Nextgen; it is shocking that they sat on the Neighborhood Environmental Survey [NES](#) results for four years, and a hearing is in order to learn why this unwarranted delay happened.

The FAA's arbitrariness with National Environmental Policy Act (NEPA) responsibilities has had calamitous consequences for your constituents, denying citizens the right to transparent, adequate, and fair assessments of federal actions, with resulting effects on health, productivity and the environment. Your leadership is urgently needed to address these concerns.

Kind regards,

Sky Posse Palo Alto

Copy:  
SCSC Roundtable  
SFO Roundtable

April 9, 2021

**From**

Mike McClintok

**To**

SCSC Roundtable

**Message**

OAK Forum April 21 Meeting Notice and Agenda Materials

All:

Attached are the meeting notice and agenda for the April 21 Forum meeting, along with other agenda materials. The April 21 Forum meeting will be a virtual meeting via Zoom. Login instructions are on the back of the meeting notice.

There has been nothing new to date from the FAA. We are looking for updates at the April meeting.

Mike McClintock  
Forum Facilitator

**Attachment Name**

20210409\_M\_McClintok\_Forum 4-21-2021 Meeting Agenda (public sign-in)  
20210409\_M\_McClintok\_2020\_QuarterlyAircraftNoise\_04Q  
20210409\_M\_McClintok\_DRAFT Minutes 1-20-2021 Forum Mtg  
20210409\_M\_McClintok\_Noise Abatement Report\_04Q-2020  
20210409\_M\_McClintok\_OAK Forum Response to FAA Request for Input (FAA-2021-037) 3-11-2021



**April 14, 2021**

**From**

Faviola Garcia

**To**

SCSC Roundtable

**Message**

FAA Community Informational Briefing Regarding Northern California Airspace and the Select Committee Recommendations

Good afternoon,

I am writing to inform you that the FAA has begun coordination to plan for a virtual community informational briefing this summer. The briefing will include an overview of airspace operations in Northern California and an update to the recommendations that the Select Committee provided to the FAA, including the SERFR procedure amendment. During the briefing, community members will be able to ask questions about the items that the FAA discusses. The FAA will record the session post it on the agency's Northern California Community Involvement website soon after the briefing.

We will provide additional details about the briefing in the coming weeks on the community involvement website at [https://www.faa.gov/air\\_traffic/community\\_involvement/norcal/](https://www.faa.gov/air_traffic/community_involvement/norcal/).

Please help us share this information with your airport communities.

Thank you,

Faviola Garcia

Supervisory Senior Advisor

Federal Aviation Administration

Office of the Regional Administrator

**May 5, 2021**

**From**

Karen Chapman

**To**

SCSC Roundtable

**Message**

Question from Rep. Eshoo's Office

Hello,

Are you still taking public comment relative to FAA?

Thanks,

Karen

Rep. Eshoo

**May 6, 2021**

**From**

Larri Frelow

**To**

SCSC Roundtable

**Message**

The City of San José Airport Commission Meeting on May 10, 2021

Good Afternoon,

To the Offices of Senator Feinstein, Congresswomen Speier and Eshoo, Congressmen Khanna, and Panetta with copies to SFO, SJC, SFO Roundtable, and SCSC.

This email message is sent on behalf of Raquel Girvin, Regional Administrator, Federal Aviation Administration (FAA), Western-Pacific Region.

In the spirit of continued communication and to keep you informed about aviation matters within the region. The City of San José Airport Commission will be holding their Regular Meeting, which is open to the public, on May 10, 2021, at 6:00 pm local. The Federal Aviation Administration will be a briefing on the proposed modification to the BRIXX RNAV STAR flight procedure. The BRIXX RNAV STAR flight procedure provides directions to arriving planes, which fly over the Santa Cruz Mountains, to approach the Mineta San Jose International Airport for landing from the south during normal north flow operations.

The direct link to the agenda is: [https://www.flysanjose.com/sites/default/files/commission/2021-05%20Commission%20Meeting%20Agenda%20Commission\\_0.pdf](https://www.flysanjose.com/sites/default/files/commission/2021-05%20Commission%20Meeting%20Agenda%20Commission_0.pdf)

Sincerely,

Larri Frelow

Program Analyst

Congressional Liaison

Office of the Regional Administrator (AWP-1)

FAA Western-Pacific Region

**May 6, 2021**

**From**

Phoebe Weiman

**To**

SCSC Roundtable

**Message**

FAA presentation on BRIXX procedure - May 10

Dear SCSC Roundtable members and alternates,

The FAA is giving a brief presentation to the San José Airport Commission on May 10 about a slight modification they are making to the BRIXX arrival procedure.

The meeting is open to the public (via Zoom online) and will start at 6pm. This item will be covered in Section VI of the Airport Commission agenda. Details on the agenda and how to join the meeting are available at: <https://www.flysanjose.com/node/8081>

Phoebe Weiman

Airport Planner

ESA | Environmental Science Associates

**May 6, 2021**

**From**

SCSC Roundtable

**To**

Karen Chapman

**Message**

Question from Rep. Eshoo's Office

Hi Karen,

Can you clarify your question? Are you referring to the FAA's Neighborhood Environmental Survey?

Thank you,

SCSC Roundtable consultant staff

**May 6, 2021**

**From**

Karen Chapman

**To**

SCSC Roundtable

**Message**

Question from Rep. Eshoo's Office

I'm asking if you (SCSCRT) are still taking general comments from constituents complaining about aircraft noise?

**May 6, 2021****From**

SCSC Roundtable

**To**

Karen Chapman

**Message**

Question from Rep. Eshoo's Office

Hi Karen,

The short answer to your question is yes, we are still taking general comments from constituents.

As the SCSC Roundtable was put on hold for a time, general comments were always accepted but no consultant activity was authorized. Members of the public are still welcome to email public comments to the [scscroundtable@gmail.com](mailto:scscroundtable@gmail.com) email address. The SCSC Roundtable has now been authorized to hold a special meeting on May 26, 2021 (virtually). As with all SCSC Roundtable meetings, we include a public comment period for each agenda item. If general comments are emailed to the [scscroundtable@gmail.com](mailto:scscroundtable@gmail.com) email address ahead of time, they will be marked for inclusion with the public agenda packet for the May 26th meeting for SCSC Roundtable members to reference. All prior public comments received since the last meeting will be included with the agenda packet.

In terms of the meeting content, the agenda is still being finalized, and notification will be sent out when the agenda has been posted on the website. In general, the agendas are posted the Friday before the upcoming Wednesday meeting.

<https://scscroundtable.org/meetings/>

I hope this helps answer your question.

Regards,

SCSC Roundtable consultant staff

**May 6, 2021****From**

Karen Chapman

**To**

SCSC Roundtable

**Message**

Question from Rep. Eshoo's Office

Thank you! Adding my colleagues.



May 7, 2021

**From**

Phoebe Weiman

**To**

SCSC Roundtable

**Message**

FAA Community Informational Briefing Regarding Northern California Airspace and the Select Committee Recommendations

Dear SCSC Roundtable members and alternates,

Please see the email below with information about the FAA Community Informational Briefing Regarding Northern California Airspace and the Select Committee Recommendations from Faviola Garcia.

From: Garcia, Faviola (FAA)

Subject: FAA Community Informational Briefing Regarding Northern California Airspace and the Select Committee Recommendations

Good afternoon,

I am writing to inform you that the FAA has begun coordination to plan for a virtual community informational briefing this summer. The briefing will include an overview of airspace operations in Northern California and an update to the recommendations that the Select Committee provided to the FAA, including the SERFR procedure amendment. During the briefing, community members will be able to ask questions about the items that the FAA discusses. The FAA will record the session post it on the agency's Northern California Community Involvement website soon after the briefing.

We will provide additional details about the briefing in the coming weeks on the community involvement website at [https://www.faa.gov/air\\_traffic/community\\_involvement/norcal/](https://www.faa.gov/air_traffic/community_involvement/norcal/).

Please help us share this information with your airport communities.

Thank you,

Faviola Garcia

Supervisory Senior Advisor

Federal Aviation Administration

Office of the Regional Administrator

**May 11, 2021**

**From**

Karen Chapman

**To**

SCSC Roundtable

**Message**

Test

Is this a working email?

**May 11, 2021**

**From**

SCSC Roundtable

**To**

Karen Chapman

**Message**

Test

Good afternoon Karen,

This email address is working and you can send communication through.

As mentioned last week, members of the public are still welcome to email public comments to the [scscroundtable@gmail.com](mailto:scscroundtable@gmail.com) email address. The SCSC Roundtable has now been authorized to hold a special meeting on May 26, 2021 (virtually). As with all SCSC Roundtable meetings, we include a public comment period for each agenda item. If general comments are emailed to the [scscroundtable@gmail.com](mailto:scscroundtable@gmail.com) email address ahead of time, they will be marked for inclusion with the public agenda packet for the May 26th meeting for SCSC Roundtable members to reference.

Thank you,

Regards,

SCSC Roundtable consultant staff

**May 11, 2021**

**From**

Phoebe Weiman

**To**

SCSC Roundtable

**Message**

FAA Presentation and Information on the BRIXX Arrival Procedure

Dear SCSC Roundtable Members and Interested Parties,

The FAA Presentation on BRIXX (from the 5/10/2021 San Jose Airport Commission meeting) has been posted to the SCSC Roundtable website for reference at the following location <https://scscroundtable.org/documents/faa-presentation-on-brix/>

Additionally, last night at the San Jose Airport Commission meeting, the FAA's Acting Community Engagement Officer communicated that the FAA is planning to hold a "virtual workshop" regarding the Select Committee recommendations sometime this summer to engage with the public, and that further details would be provided by the FAA once the meeting date is selected. As more information is available we will post to the website.

Airport Commission website:

<https://www.flysanjose.com/node/8081>

Regards,

SCSC Roundtable consultant staff,

Phoebe Weiman

Airport Planner