



# Meeting Announcement

## Technical Working Group

**Wednesday, November 24, 2021**  
**12:00 p.m. – 1:30 p.m.**

**\*BY VIDEO CONFERENCE ONLY\***

Please click the link below to join the webinar:

<https://smcgov.zoom.us/j/91839253029>

Or Dial-in:

US: +1(669)900-6833 Webinar ID: 918 3925 3029

Note: To arrange an accommodation under the Americans with Disabilities Act to participate in this public meeting, please call (650) 363-4220 at least 2 days before the meeting date.

\*\*Please see instructions for written and spoken comments at the end of this agenda.

## AGENDA

### Call to Order

### Public Comment on Items NOT on the Agenda

## AGENDA ITEMS

1. **Approve Remote Meetings Resolution (5-min)** pg. 3
2. **GBAS Project Update, Innovative Approach Evaluation and Noise Monitoring Update**
  - a. Nov 24, 2021 Presentation SFO pg. 8
  - b. Resolution No. 93-01, No Noise Shifting pg. 36
3. **NIITE/HUSSH Implementation Update (5-min)**
4. **Title 21 Update – SFO Noise Office (5-min)**
  - Q3-2021
  - Backlog 2009-2016
  - Airport Use of ANEEM for non-Title 21 Noise Measurement Sites

### **FUTURE ITEMS FOR DISCUSSION**

- [Airport Commission 10/19/2021 Agenda](#) – Item on [Airport Rules and Regulations](#)
- GAO Recommendations Enhanced Noise Metrics Report
- Airport Director Report update
- Airport Use of ANEEM for non-Title 21 Noise Measurement Sites
- Fly Quiet Awards Update

**\*\*Instructions for Public Comment during Videoconference Meeting**

During videoconference of the Technical Working Group subcommittee meeting, members of the public may address the Roundtable as follows:

**Written Comments:**

Written public comments may be emailed in advance of the meeting. Please read the following instructions carefully:

1. Your written comment should be emailed to [amontescardenas@smcgov.org](mailto:amontescardenas@smcgov.org).
2. Your email should include the specific agenda item on which you are commenting.
3. Members of the public are limited to one comment per agenda item.
4. The length of the emailed comment should be commensurate with two minutes customarily allowed for verbal comments, which is approximately 250-300 words.
5. If your emailed comment is received by 12:00 pm on the day before the meeting, it will be provided to the Roundtable and made publicly available on the agenda website under the specific item to which comment pertains. The Roundtable will make every effort to read emails received after that time but cannot guarantee such emails will be read during the meeting, although such emails will still be included in the administrative record.

**Spoken Comments:**

Spoken public comments will be accepted during the meeting through Zoom. Please read the following instructions carefully:

1. The November 24, 2021 Legislative meeting may be accessed through Zoom online at <https://smcgov.zoom.us/j/91839253029>. The meeting ID: 918 3925 3029. The meeting may also be accessed via telephone by dialing in +1-669-900-6833, entering meeting ID: 918 3925 3029, then press #.
2. You may download the Zoom client or connect to the meeting using the internet browser. If you are using your browser, make sure you are using current, up-to-date browser: Chrome 30+, Firefox 27+, Microsoft Edge 12+, Safari 7+. Certain functionality may be disabled in older browsers including Internet Explorer.
3. You will be asked to enter an email address and name. We request that you identify yourself by name as this will be visible online and will be used to notify you that it is your turn to speak.
4. When the Roundtable Chairperson calls for the item on which you wish you speak click on "raise-hand" icon. You will then be called on and unmuted to speak.
5. When called, please limit your remarks to the time limit allotted.



San Francisco International  
Airport/Community Roundtable

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November 18, 2021

**TO:** Technical Working Group Subcommittee

**FROM:** Michele Rodriguez, Roundtable Coordinator

**SUBJECT:** Resolution to make findings allowing continued remote meetings under Brown Act

**RECOMMENDATION:**

Adopt a resolution finding that, as a result of the continuing COVID-19 pandemic state of emergency declared by Governor Newsom, meeting in-person would present imminent risks to the health or safety of attendees.

**BACKGROUND:**

On June 11, 2021, Governor Newsom issued Executive Order N-08-21, which rescinded his prior Executive Order N-29-20 and set a date of October 1, 2021 for public agencies to transition back to public meetings held in full compliance with the Brown Act.

On September 16, 2021, the Governor signed AB 361, a bill that formalizes and modifies the teleconference procedures implemented by California public agencies in response to the Governor's Executive Orders addressing Brown Act compliance during shelter-in-place periods. AB 361 allows a local agency to continue to use teleconferencing under the same basic rules as provided in the Executive Orders when certain circumstances occur or when certain findings have been made and adopted by the local agency.

AB 361 also requires that, if the state of emergency remains active for more than 30 days, the agency must make findings by majority vote every 30 days to continue using the bill's exemption to the Brown Act teleconferencing rules. The findings are to the effect that the need for teleconferencing persists due to the nature of the ongoing public health emergency and the social distancing recommendations of local public health officials. Effectively, this means that local agencies must agendize a Brown Act meeting once every thirty days to make findings regarding the circumstances of the emergency and to vote to continue relying upon the law's provision for teleconference procedures in lieu of in-person meetings.

AB 361 provides that Brown Act legislative bodies must return to in-person meetings on October 1, 2021, unless they choose to continue with fully teleconferenced meetings because a specific declaration of a state or local health emergency is appropriately made. AB 361 allows local governments to continue to conduct virtual meetings as long as there is a

gubernatorially-proclaimed public emergency in combination with (1) local health official recommendations for social distancing or (2) adopted findings that meeting in person would present risks to health. AB 361 is effective immediately as urgency legislation and will sunset on January 1, 2024.

After initial approval from the Technical Working Group today 11/24/21, the Technical Working Group must adopt and approve a Resolution every 30-days or at each meeting to continue meeting virtually.

**DISCUSSION:**

Because local rates of transmission of COVID-19 are still in the “substantial” tier as measured by the Centers for Disease Control, we recommend that your Board or Commission avail itself of the provisions of AB 361 allowing continuation of online meetings by adopting findings to the effect that conducting in-person meetings would present an imminent risk to the health and safety of attendees. A resolution to that effect and directing staff to return each 30 days with the opportunity to renew such findings, is attached hereto.

**FISCAL IMPACT:**

None

## RESOLUTION NO. TWG21-01

### RESOLUTION FINDING THAT, AS A RESULT OF THE CONTINUING COVID-19 PANDEMIC STATE OF EMERGENCY DECLARED BY GOVERNOR NEWSOM, MEETING IN PERSON FOR TECHNICAL WORKING GROUP SUBCOMMITTEE MEETINGS OF THE SAN FRANCISCO INTERNATIONAL AIRPORT/COMMUNITY ROUNDTABLE WOULD PRESENT IMMINENT RISKS TO THE HEALTH OR SAFETY OF ATTENDEES

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**WHEREAS**, on March 4, 2020, the Governor proclaimed pursuant to his authority under the California Emergency Services Act, California Government Code section 8625, that a state of emergency exists with regard to a novel coronavirus (a disease now known as COVID-19); and

**WHEREAS**, on June 4, 2021, the Governor clarified that the “reopening” of California on June 15, 2021 did not include any change to the proclaimed state of emergency or the powers exercised thereunder, and as of the date of this Resolution, neither the Governor nor the Legislature have exercised their respective powers pursuant to California Government Code section 8629 to lift the state of emergency either by proclamation or by concurrent resolution in the state Legislature; and

**WHEREAS**, on March 17, 2020, Governor Newsom issued Executive Order N-29-20 that suspended the teleconferencing rules set forth in the California Open Meeting law, Government Code section 54950 et seq. (the “Brown Act”), provided certain requirements were met and followed; and

**WHEREAS**, on September 16, 2021, Governor Newsom signed AB 361 that provides that a legislative body subject to the Brown Act may continue to meet without fully complying with the teleconferencing rules in the Brown Act provided the legislative

body determines that meeting in person would present imminent risks to the health or safety of attendees, and further requires that certain findings be made by the legislative body every thirty (30) days or when meeting next; and,

**WHEREAS**, California Department of Public Health (“CDPH”) and the federal Centers for Disease Control and Prevention (“CDC”) caution that the Delta variant of COVID-19, currently the dominant strain of COVID-19 in the country, is more transmissible than prior variants of the virus, may cause more severe illness, and that even fully vaccinated individuals can spread the virus to others resulting in rapid and alarming rates of COVID-19 cases and hospitalizations (<https://www.cdc.gov/coronavirus/2019-ncov/variants/delta-variant.html>); and,

**WHEREAS**, the CDC has established a “Community Transmission” metric with 4 tiers designed to reflect a community’s COVID-19 case rate and percent positivity; and,

**WHEREAS**, the County of San Mateo currently has a Community Transmission metric of “substantial” which is the second most serious of the tiers; and,

**WHEREAS**, the Technical Working Group of the San Francisco International Airport/Community Roundtable (Roundtable) has an important governmental interest in protecting the health, safety and welfare of those who participate in its meetings; and,

**WHEREAS**, in the interest of public health and safety, as affected by the emergency caused by the spread of COVID-19, the Technical Working Group of the Roundtable deems it necessary to find that meeting in person would present imminent

risks to the health or safety of attendees, and thus intends to invoke the provisions of AB 361 related to teleconferencing;

**NOW, THEREFORE, IT IS HEREBY DETERMINED AND ORDERED** that

1. The recitals set forth above are true and correct.
2. The Roundtable finds that meeting in person would present imminent risks to the health or safety of attendees.
3. Staff is directed to return no later than thirty (30) days after the adoption of this resolution or at their next regular meeting with an item for the Technical Working Group of the Roundtable to consider making the findings required by AB 361 in order to continue meeting under its provisions.
4. Staff is directed to take such other necessary or appropriate actions to implement the intent and purposes of this resolution.

\* \* \* \* \*

Unanimously adopted at the Technical Working Group Subcommittee meeting of November 24, 2021.

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Ricardo Ortiz  
Chairperson

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Date



# San Francisco International Airport GBAS and GLS

SFO Roundtable Technical Working Group

November 24, 2021





# Topics Covered

1. Current GBAS Project Timeline
2. Interpreting Innovative Group 1 Procedures
3. Interpreting AEDT Results in CFPPs
4. GBAS/GLS Vision (Group 2 Procedure Development Process)

For Community Evaluation Only - Not Intended for Navigation

<b>GLS-TT RWY 28L (EDDDY)</b>	<b>Revision 1</b>
	Changes: New

GLS instrument approach to runway 28L, originating southeast of the airport, starting at EDDY.

This approach is an identical overlay of the existing Tipp Toe Charted Visual Flight Procedure (CVFP) approach, in use today, under VFR conditions. The GLS version of the approach converts optional CVFP published altitudes into required minimum IFR altitudes.

**Project Goals**

- ✓ Noise reduction
- ✓ ILS Redundancy
- ✓ Efficiency
- ✓ Reduce Delays

Graphic Depiction:

**TIPP TOE VISUAL RWY 28L/R**

**PROTOTYPE-NOT FOR NAVIGATION**

**RADAR REQUIRED**

Vertical Guidance Navaid and Angle: LOC-MFO (GS 2.85°)

Weather Minimums: SFO 2100/15 or SFO 1000/3, with 5 mi visibility in equatorial quadrant (200° clockwise to 120°) and San Mateo AWOS 2400/5 (if AWOS inoperative, SGL 2400/5)

San Francisco, California

ALL 575 8948

GLS RWY 28L

San Francisco Intl (SFO)

115.7 115.8 118.85

134.5 338.2

120.5 269.1

121.8

118.2

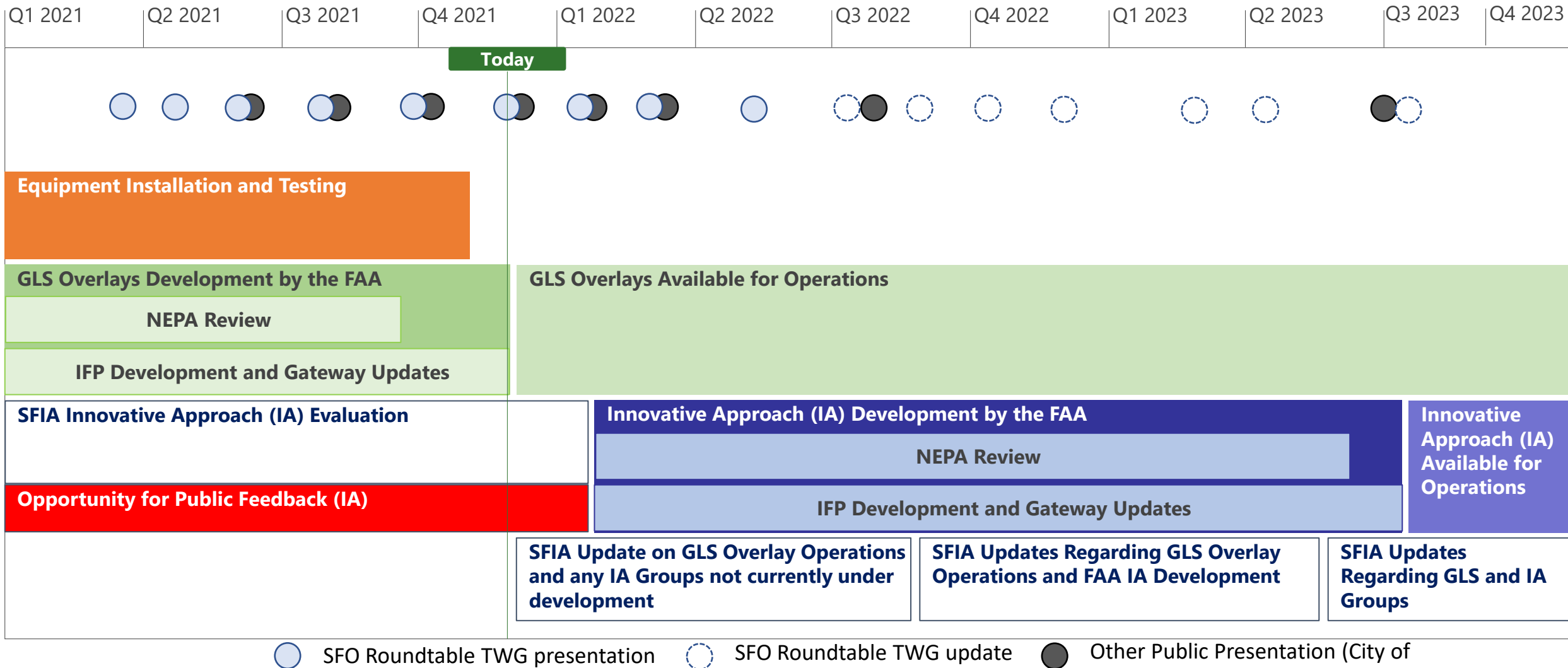
PROTOTYPE-NOT FOR NAVIGATION

San Francisco Intl (SFO)

GLS RWY 28L



# SFO GBAS Estimated Schedule and Planned Outreach



- SFO Roundtable TWG presentation
- SFO Roundtable TWG update
- Other Public Presentation (City of Palo Alto, SCSC, LATO/IGWG, etc)

# GBAS Innovative Approach Evaluation Status

## Group 1 Innovative GLS Concepts For Evaluation

Developed through a flight procedures subcommittee to identify criteria, ATC and flyability challenges

23 initial concepts were divided into three “groups” of conceptual approaches

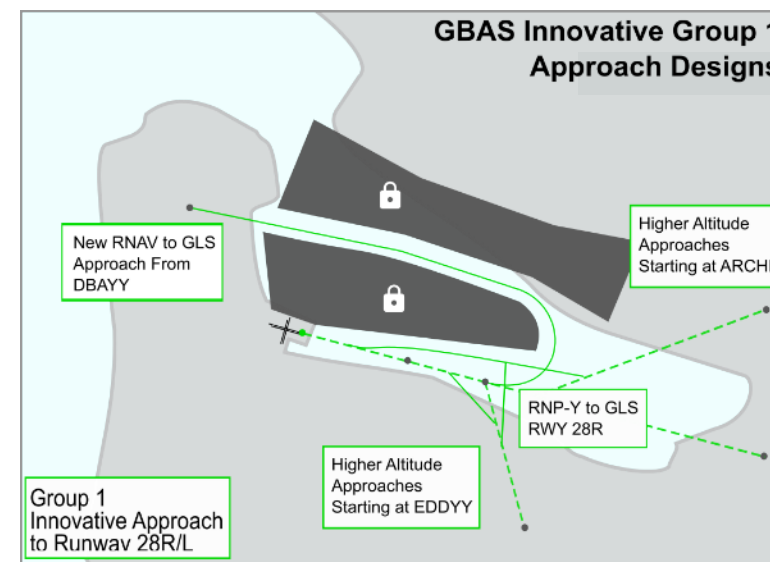
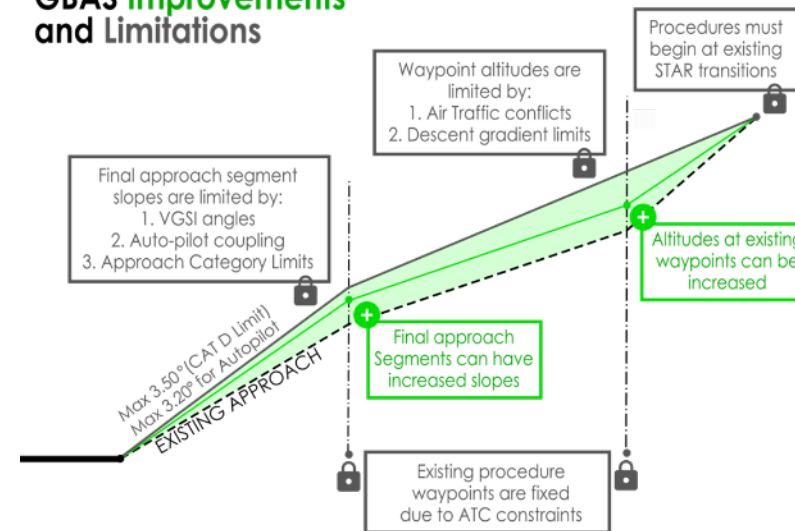
Group 1 focuses on what can be published and flown within the next 3 years\*

- 28R – 5 Concepts
- 28L – 2 Concepts
- 10R – 1 Concept
- 10L – 1 Concept


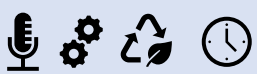



Procedures are divided into 14 CFPPs, but if all were acceptable to the community then only 9 total SIAP for development would be requested via the FAA IFP Gateway

\*Estimated development timeline is dependent on promptly making a submission through the FAA IFP Gateway

## GBAS Improvements and Limitations

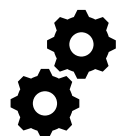


# Group 1 Innovative GLS Approaches

Runway	Community Package	Description	Project Goals	Approval Group	Submitted to IFP Gateway
28R	GLS-DB Rwy 28R (DBAYY)	Overwater/Dispersion Opportunity		A	0 of 1
28R	GLS-BVE Rwy 28R (EDDYY)	Visual approaches that currently provide noise benefits converted to GLS		B	0 of 3
28R	GLS-BV Rwy 28R (ARCHI)				
28L	GLS-TT Rwy 28L (EDDYY)				
28R	GLS-TT Rwy 28R (EDDYY)				
28R	GLS-R Rwy 28R (EDDYY)	Highest possible altitudes over South Bay Cities		C	0 of 1
28R	GLS-R Rwy 28R (ARCHI)				
28L	GLS-A Rwy 28L (EDDYY)	Higher altitude versions of existing RNAV approaches		D	0 of 2
28L	GLS-A Rwy 28L (FAITH)				
28L	GLS-A Rwy 28L (ARCHI)				
28R	GLS-A Rwy 28R (EDDYY)				
28R	GLS-A Rwy 28R (ARCHI)				
10L	GLS-A Rwy 10L (STINS)	Introduces first precision approach to runway 10L/R		E	0 of 2
10R	GLS-A Rwy 10R (STINS)				



Noise Reduction



ILS Redundancy



Efficiency



Reduce Delays

# Group 1 Innovative GLS Approaches

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28L	GLS-A Rwy 28L (FAITH)				
28L	GLS-A Rwy 28L (ARCHI)				
28R	GLS-A Rwy 28R (EDDYY)				
28R	GLS-A Rwy 28R (ARCHI)				
10L	***GLS-A Rwy 10L (STINS)	Introduces first precision approach to runway 10L/R		E	0 of 2
10R	***GLS-A Rwy 10R (STINS)				

CFPP Modeled Noise Reduction

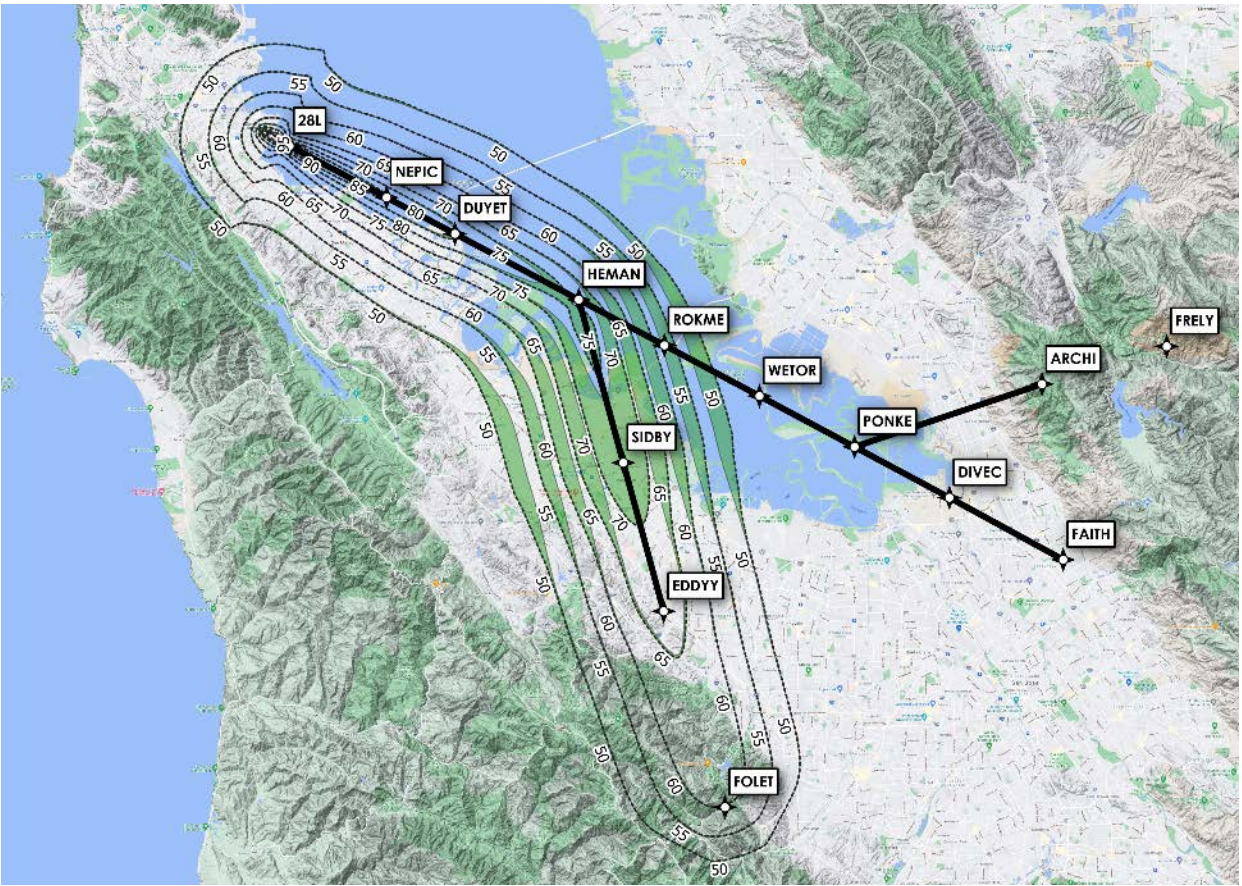
CFPP Modeled Noise Neutral

CFPP Modeled Noise Reduction with small Noise Increases

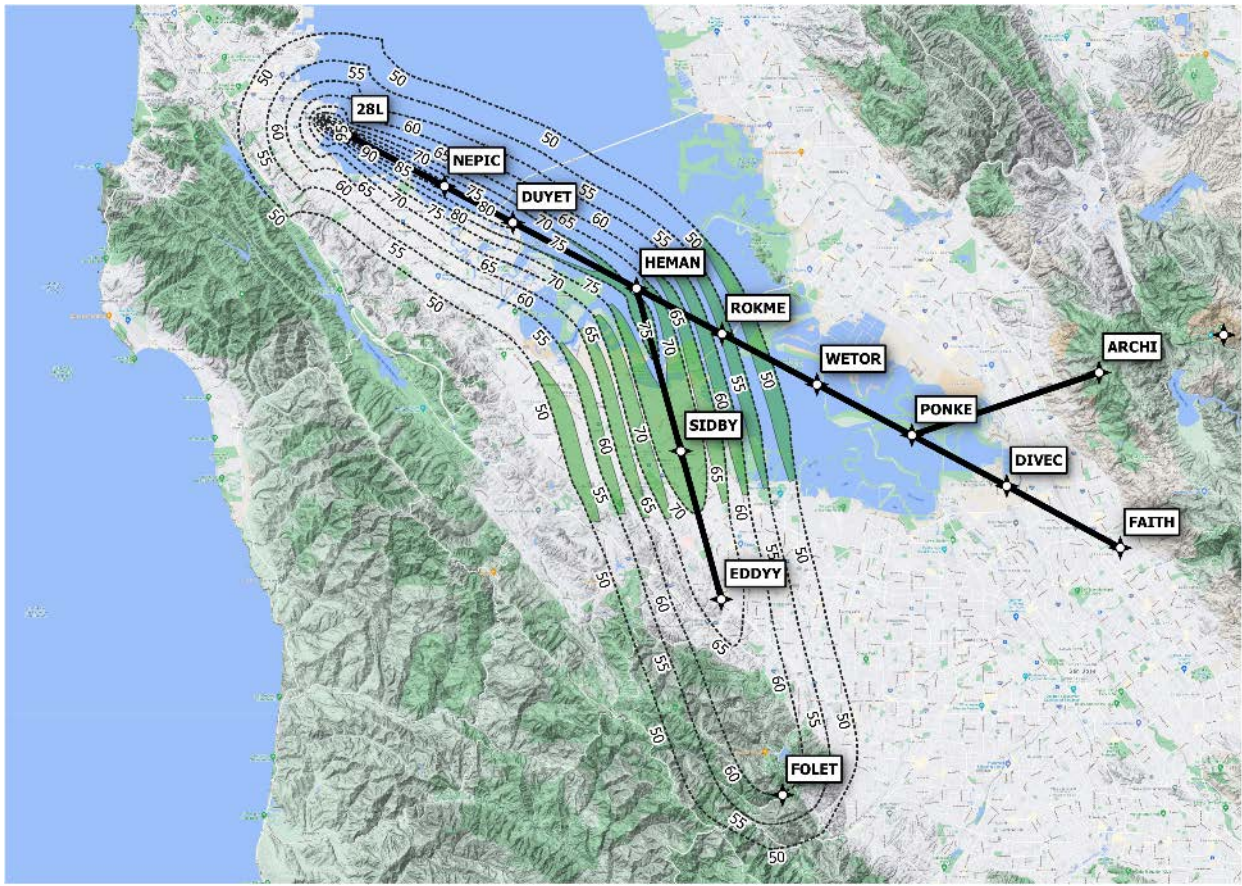
\*Enabling existing noise reduction procedure to be more frequently used by aircrafts  
 \*\*CFPP model being updated  
 \*\*\*Extremely infrequently used procedure

# Insight on Interpreting CFPP SEL Noise

## GLS-A Rwy 28L EDDYY/FOLET Transition for Narrowbody 1



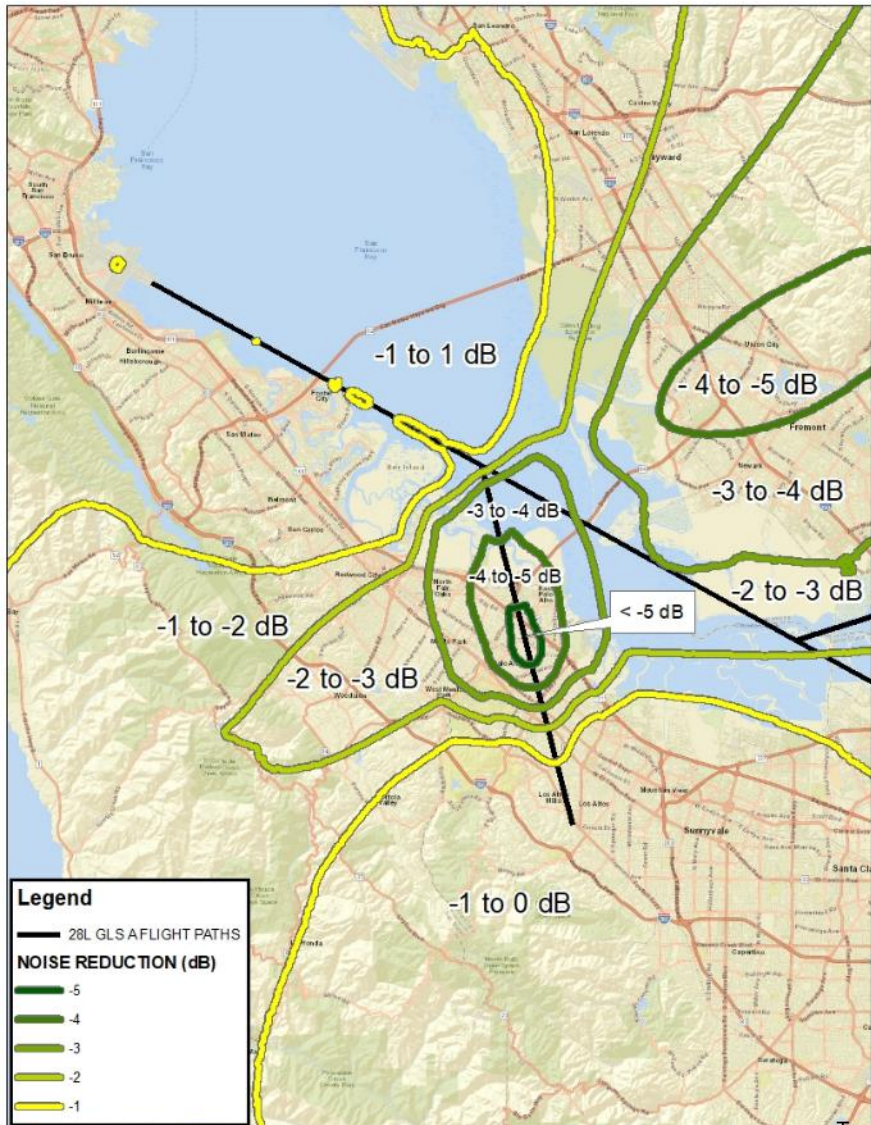
Dashed Lines = 5 dBA SEL  
 Green Regions  $\leq -0.1$  dBA (Quieter)  
 Purple Regions  $\geq +0.1$  dBA (Louder)



Dashed Lines = 5 dBA SEL  
 Green Regions  $< -1.0$  dBA (Quieter)  
 Purple Regions  $> +1.0$  dBA (Louder)

# Insight on Interpreting CFPP SEL Noise

## GLS-A Rwy 28L EDDYY/FOLET Transition for Narrowbody 1



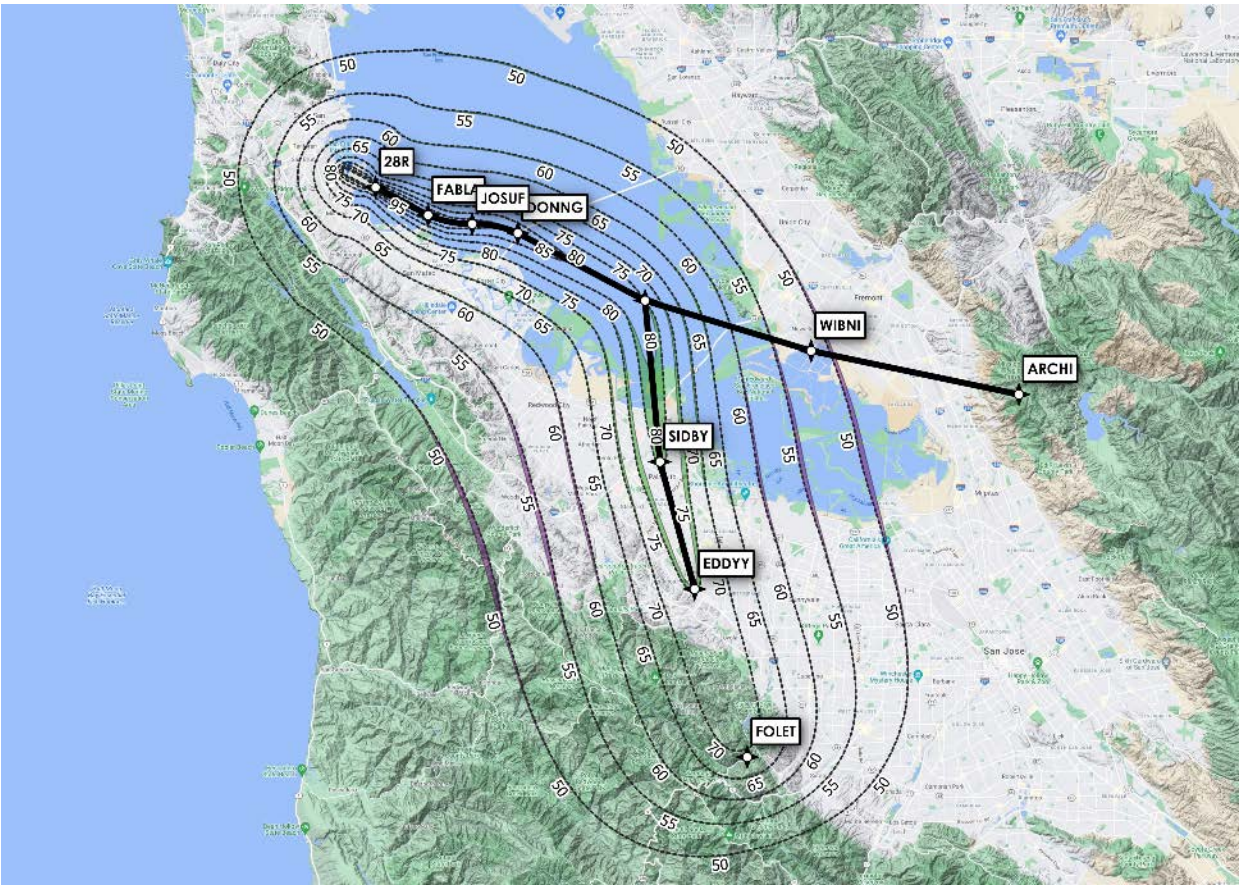
### Narrowbody Difference Contours

No areas with a noise increase > 1.0 dB

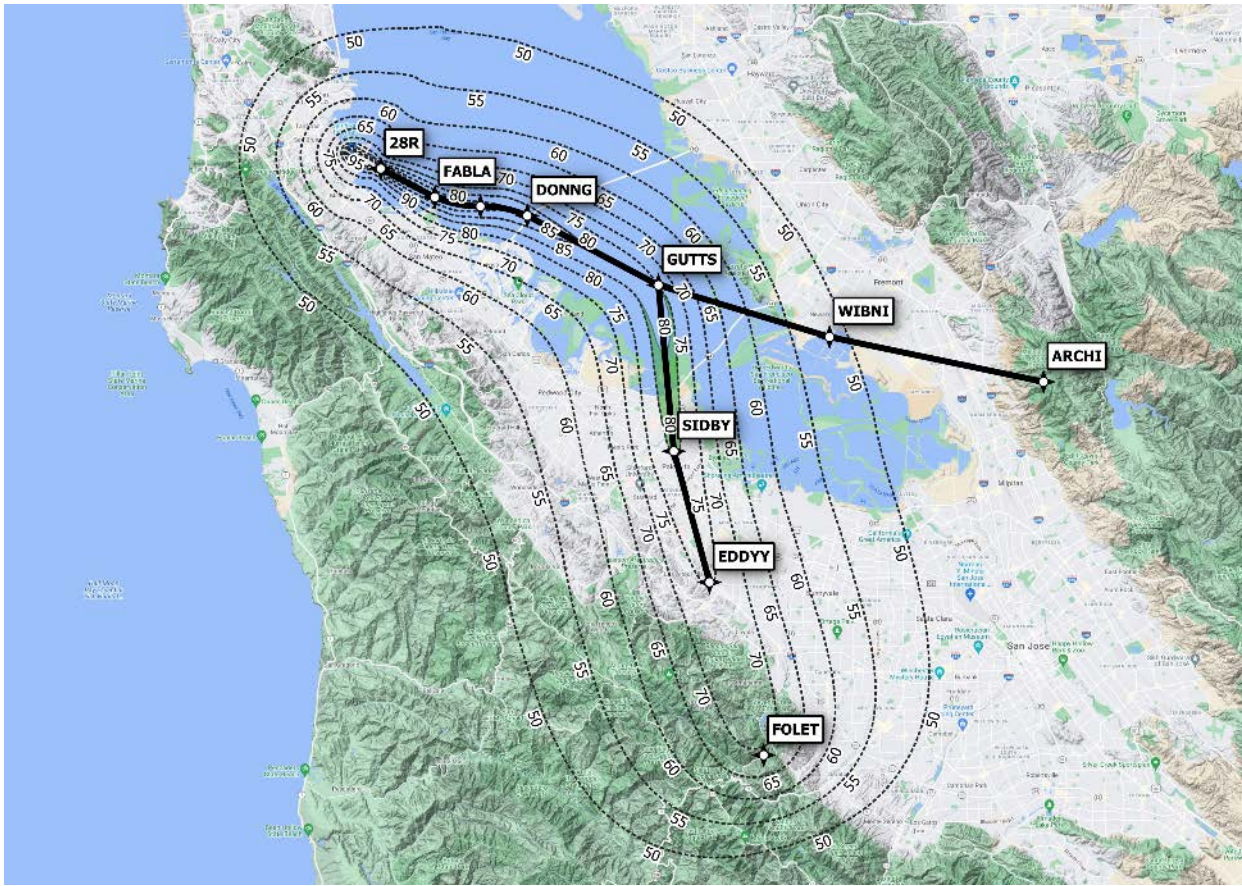
Greatest noise reduction is 5.3 dB

# Insight on Interpreting CFPP SEL Noise

## GLS-R Rwy 28R EDDYY/FOLET Transition for Widebody 2



Dashed Lines = 5 dBA SEL  
 Green Regions <= -0.1 dBA (Quieter)  
 Purple Regions >= +0.1 dBA (Louder)

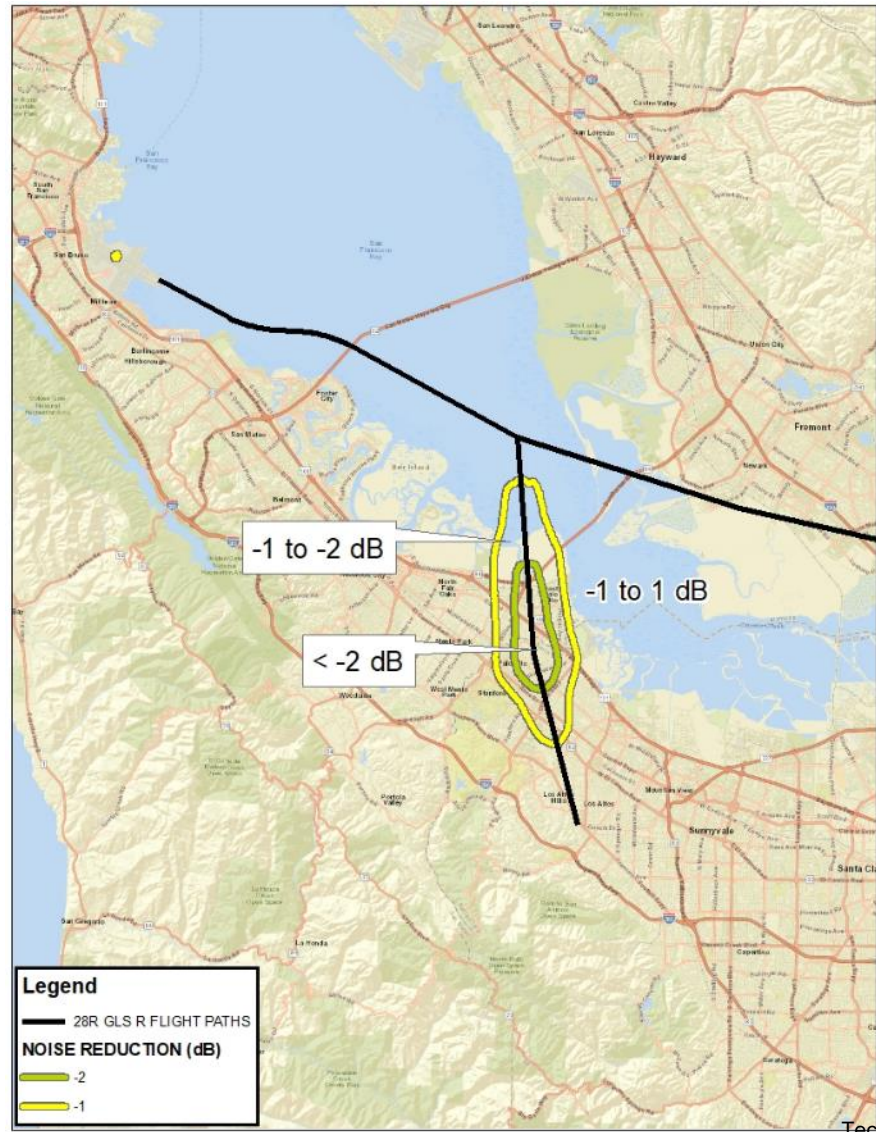


Dashed Lines = 5 dBA SEL  
 Green Regions < -1.0 dBA (Quieter)  
 Purple Regions > +1.0 dBA (Louder)



# Insight on Interpreting CFPP SEL Noise

## GLS-R Rwy 28R EDDYY/FOLET Transition for Widebody 2

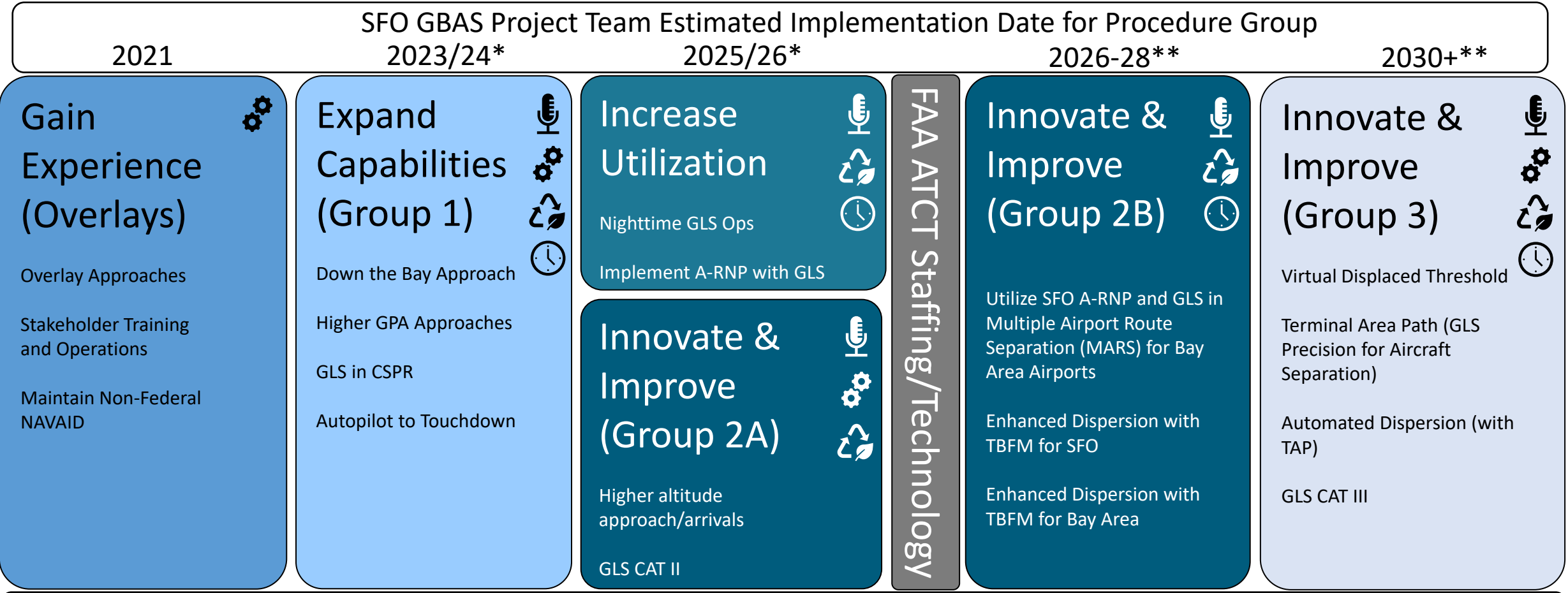


### Widebody Difference Contours

No areas with a noise increase > 1.0 dB

Greatest noise reduction is 2.8 dB

## SFO GBAS Project Team Estimated Implementation Date for Procedure Group



**Measure** Utilization, System Availability, Noise, ATCT Feedback and Pilot Feedback

**Collaborate** Research, Technology, Criteria, Infrastructure and Experience through interactions with FAA, Global Aviation Community, Academia and Residents of the Bay Area

\*Timeline estimates are based on FAA Production Capabilities and Feedback From Communities Technical Working Group 11/24/21  
 \*\*Timeline estimates are based on generalized feedback from Flight Procedures Subcommittee Participants and may increase or decrease depending on factors beyond the GBAS project

# Group 1 Innovative Approach Completed and Planning for Group 2A

## SFO GBAS Project Team has uploaded new CFPPs for Innovative GLS Procedure Concepts

- The SFO GBAS Project team is uploading Community Flight Procedure Packages (CFPPs) to evaluate the difference between Innovative GLS Approach concepts and the nearest existing approaches
  - 14 CFPPs (1 for each Innovative GLS Approach and Starting Point)
  - Includes 2 New CFPPs for Tipp Toe
  - 4 Aircraft Types
- The CFPPs will continue to be updated based on flight evaluation results, potential changes to the procedures or additional supporting information
  - GLS-R Rwy 28R is being updated to match recommendations by residents and TWG participants to eliminate possible noise increases near Foster City

## SFO GBAS Project Team is beginning evaluation of Group 2A Procedures

For Community Evaluation Only - Not Intended for Navigation

<b>GLS-TT RWY 28L (EDDYY)</b>	<b>Revision 1</b>
	Changes: New

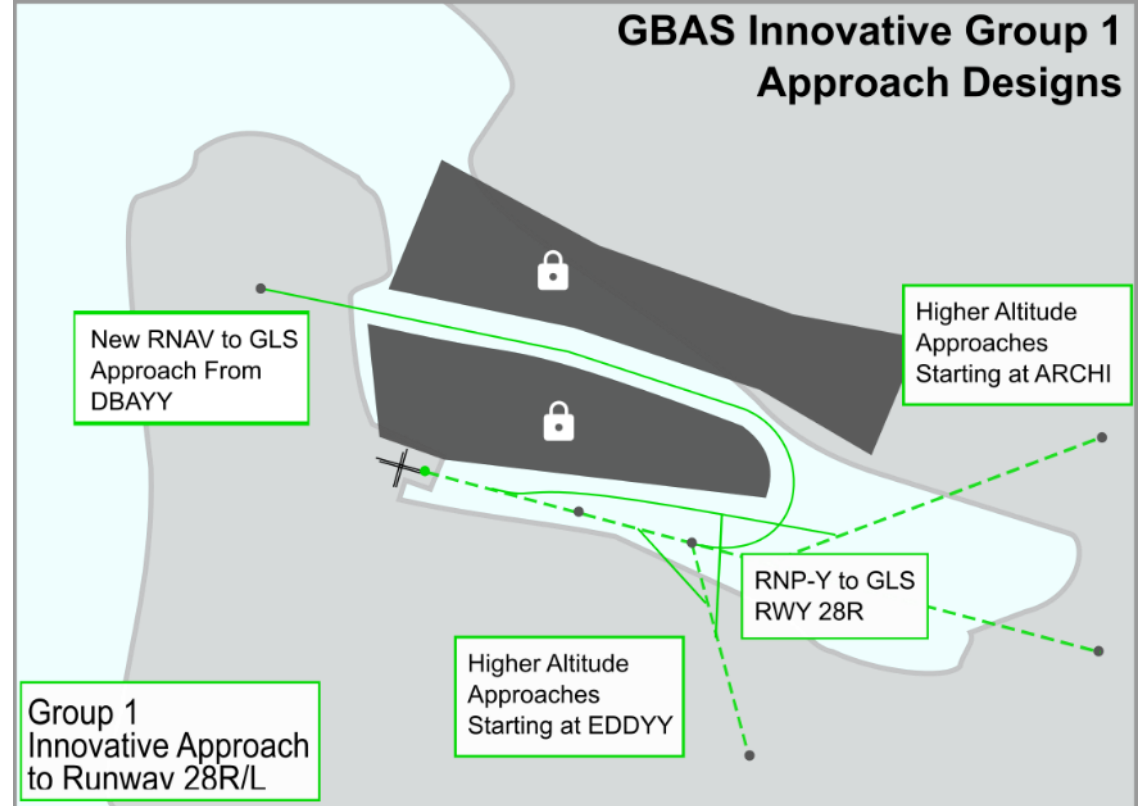
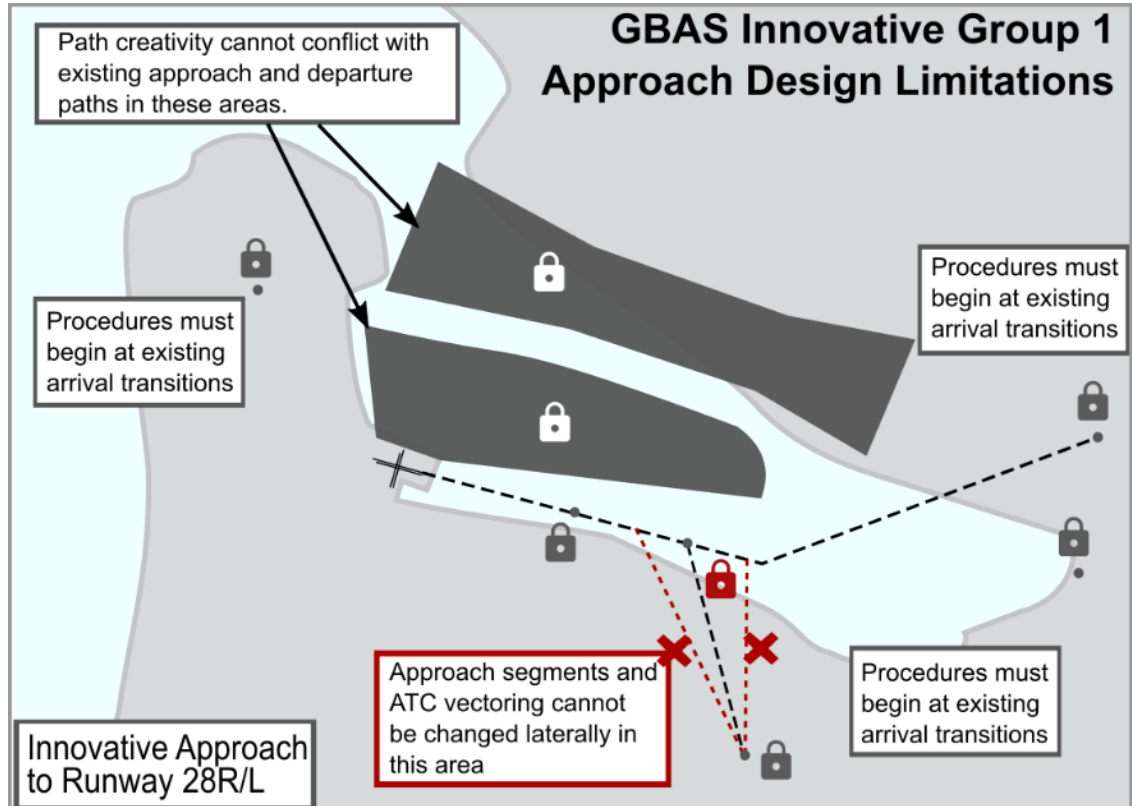
Google Earth

<p>GLS Instrument approach to runway 28L originating southeast of the airport, starting at EDDYY.</p> <p>This approach is an identical overlay of the existing Tipp Toe Charted Visual Flight Procedure (CVFP) approach, in use today, under VFR conditions. The GLS version of the approach converts optional CVFP published altitudes into required minimum IFR altitudes.</p>	<p><b>Project Goals</b></p> <ul style="list-style-type: none"> <li>✓ Noise reduction</li> <li>✓ ILS Redundancy</li> <li>✓ Efficiency</li> <li>✓ Reduce Delays</li> </ul>
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<https://noise.flysfo.com/>

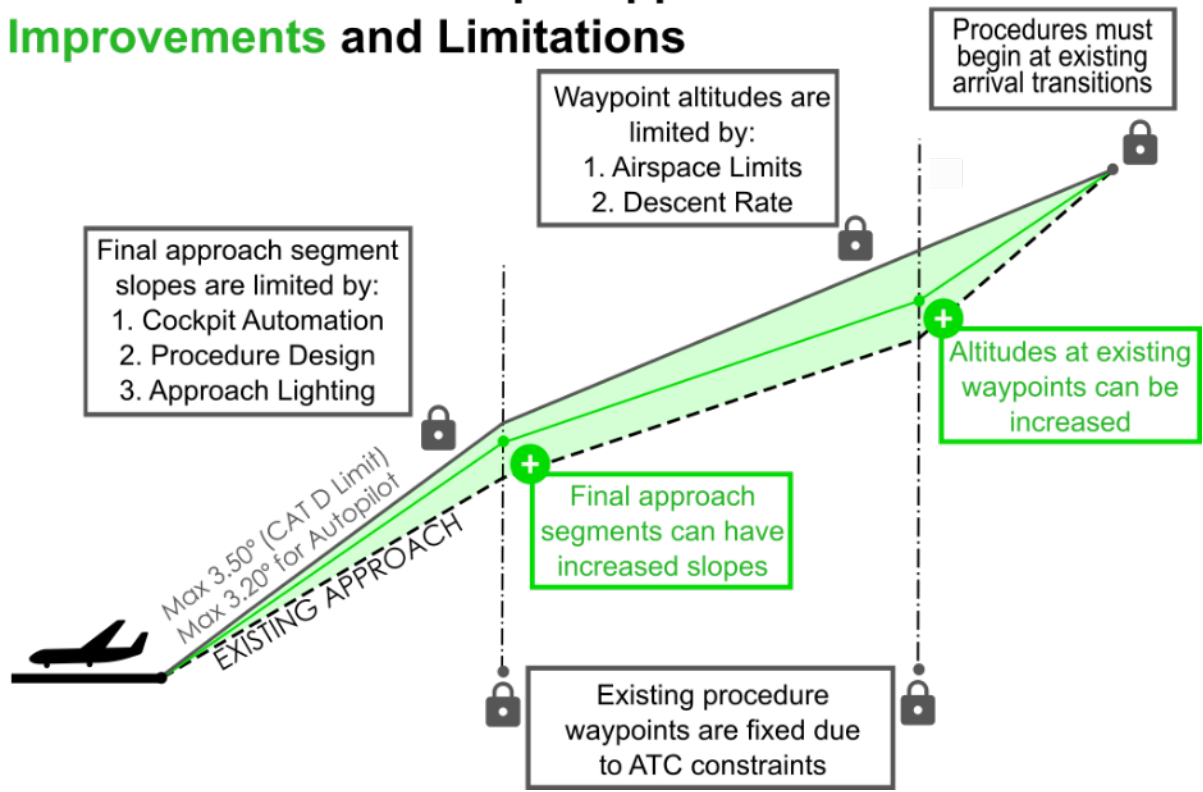
<https://noise.flysfo.com/2021/05/14/gbas-innovative-approach-procedures/>

# Group 1 Innovative Approaches

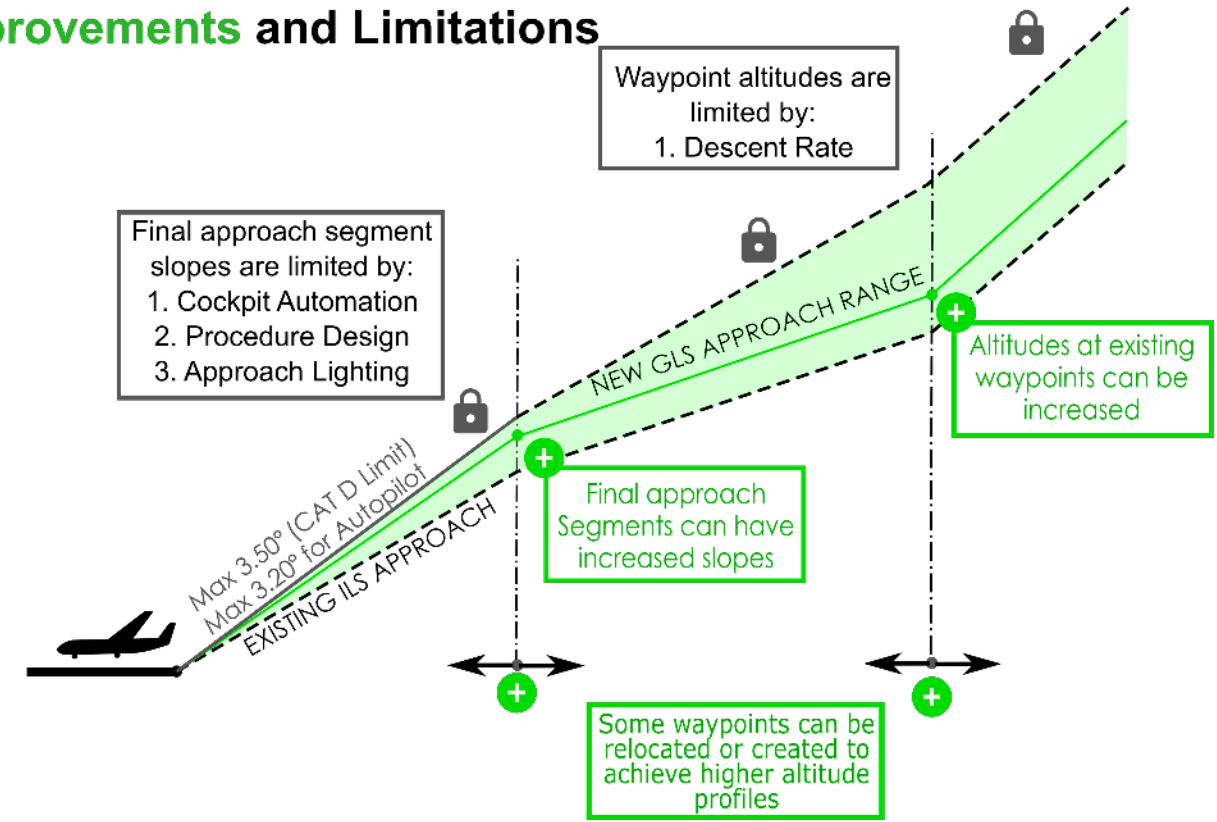


# Comparison of Group 1 Innovative Approaches to Group 2A

## GBAS Innovative Group 1 Approach Improvements and Limitations



## GBAS Innovative Group 2A Approach Improvements and Limitations



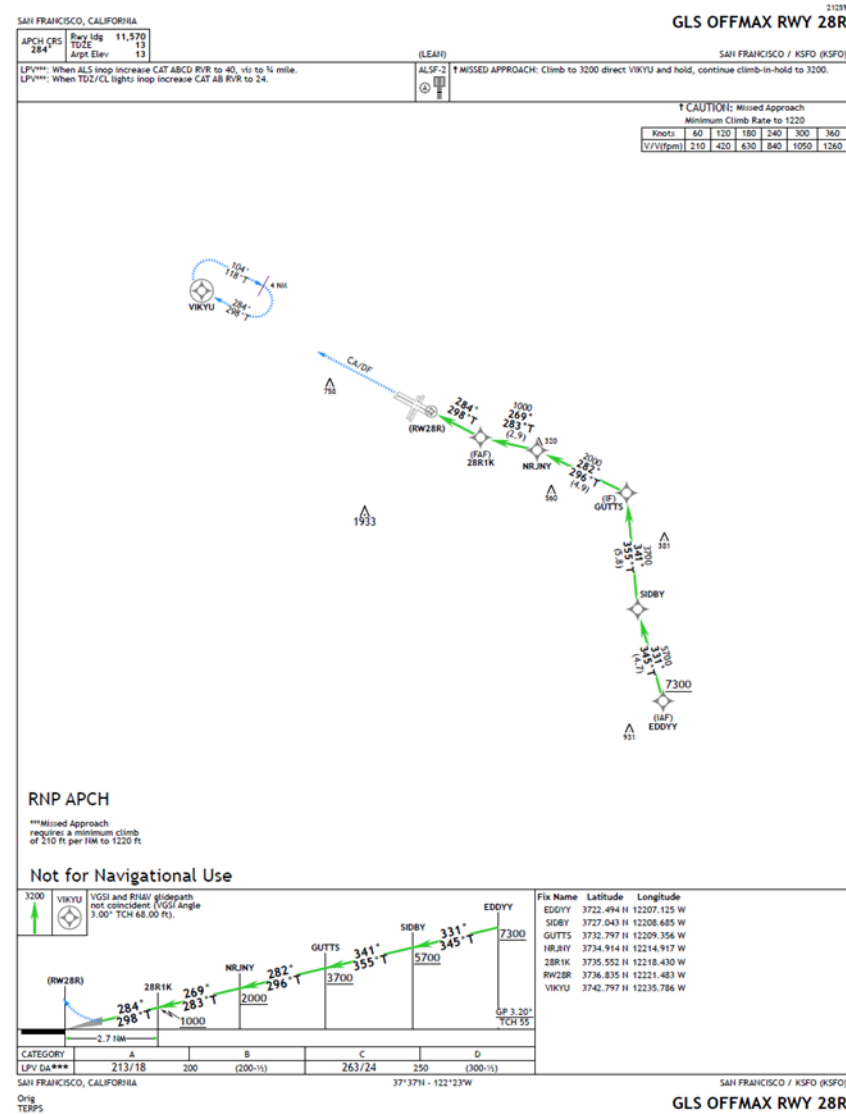
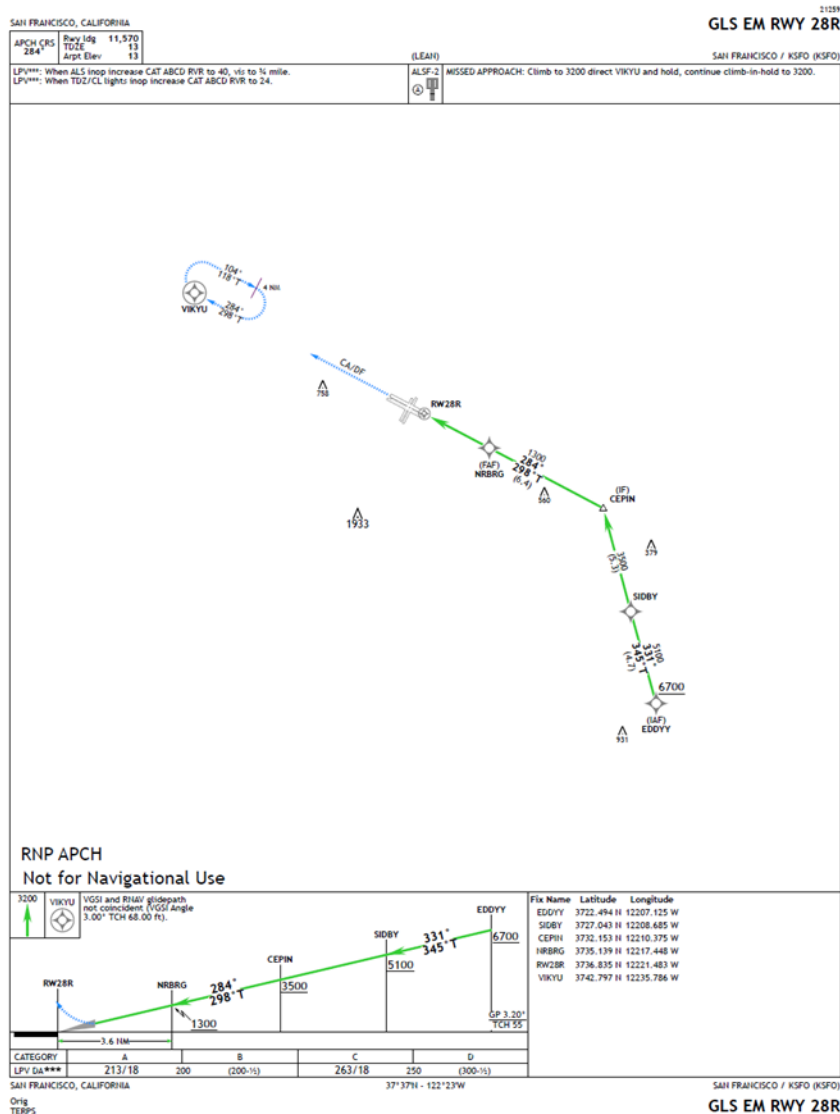
# Preliminary Group 2A Concepts

Altitudes at EDDYY between 6700ft and 7300ft

Higher altitudes require

Would require changes to SERFR (Either higher altitude at EDDYY or new parallel offset to FOLET-EDDYY terminating at a new waypoint)

Higher altitudes over residential areas are achieved by aircraft initially descending along RNP-Y path over the Bay



## SFO GBAS Project Team is Working On

- Update GLS-R Rwy 28R to eliminate potential noise increase near Foster City
- UAL Flight Evaluations
- Noise Measurement Reports
- Commissioning and Operation of GBAS
- Group 2A Procedure Examples and Potential Noise Reduction Analysis

## SFO GBAS Project Team is Seeking

- Feedback on Group 1 Innovative GLS Approach Concepts
- Approval for Community Flight Procedure Packages (CFPP) to proceed to IFP Gateway

# Questions



<https://noise.flysfo.com>



# Backup Material



# Important SFO GBAS Milestones

**28SEP21** – FAA Instrument Procedure Gateway Updated with GLS Overlay Procedures

**25-28OCT21** – FAA Flight Inspection/Validation of GBAS and Overlay GLS Approaches

**DEC21** – Opportunity for UAL Flight Evaluation

**02DEC21** – Earliest start date for GLS Overlay Approach Procedures

**DEC21** – Target date for SFO to request FAA Development of Group 1 Innovative GLS Procedures

## Aeronautical Information Services

- Alerts/Notices
- NOTAMs
- Catalog of Products
- Digital Products
- Order FAA Products
- Aeronautical Data
- Obstruction Evaluation
- Obstacle Data
- Critical CME List
- Instrument Flight Procedures Information Gateway**
  - IFP Optimization
  - IFP Request Form
  - IFP Announcements & Reports
  - PBN Implementation Plan
  - IFP Initiation
  - IFP Inventory Summary
- Aeronautical Charting Meeting
- Air Transportation Information Exchange Conference (ATIEC)
- FAQs
- Chart Discrepancies

Charts (51) | IFP Production Plan (13) | **IFP Coordination (10)** | IFP Documents (NDBR) (54)

**IFP Coordination** - All coordinated developed/amended procedure forms forwarded to Flight Check or Charting for publication.

Please see the document titled "IFP Announcements and Reports (gov)" in the IFP Announcements/Reports page to see the list of IAPs related to this FAA initiative.

Filter Options

Showing results 1 - 10 of 10

Procedure	Airport Name	Airport ID	City/State	Comments	
GLS RWY 19LORIG	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-26-2021	Notify Me Email FAA
GLS RWY 19R ORIG	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-26-2021	Notify Me Email FAA
GLS RWY 28L ORIG	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-26-2021	Notify Me Email FAA
GLS RWY 28R ORIG	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-26-2021	Notify Me Email FAA
ILS PRM RWY 28L (SIMULTANEOUS CLOSE PARALLEL AMDT 3A)	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA
LDA PRM RWY 28R AMDT 2B	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA
LDA/DME RWY 28R AMDT 2B	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA
MOLEN NINE DEPARTURE	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-11-2021	Notify Me Email FAA
RNAV (GPS) PRM RWY 28L (CLOSE PARALLEL) AMDT 2	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA
RNAV (GPS) PRM X RWY 28R AMDT 1B	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA

[https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/procedures/application/newProcedure?results&tab=productionPlan&nasrid=SFO#searchResultsTop](https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/application/newProcedure?results&tab=productionPlan&nasrid=SFO#searchResultsTop)

- Aeronautical Information Services
- Alerts/Notices
- NOTAMs
- Catalog of Products
- Digital Products
- Order FAA Products
- Aeronautical Data
- Obstruction Evaluation
- Obstacle Data
- Critical DME List
- Instrument Flight Procedures Information Gateway
- IFP Optimization
- IFP Request Form
- IFP Announcements & Reports
- PBN Implementation Plan
- IFP Initiation
- IFP Inventory Summary
- Aeronautical Charting Meeting
- Air Transportation Information Exchange Conference (ATIEC)
- FAQs
- Chart Discrepancies

Charts (51) | IFP Production Plan (13) | IFP Coordination (10) | IFP Documents (NDRR) (54)

**IFP Coordination** - All coordinated developed/amended procedure forms forwarded to Flight Check or Charting for publication.

Please see the document titled "IFP Announcements and Reports (gov)" in the IFP Announcements/Reports page to see the list of IAPs related to this FAA initiative.

Filter Options

Showing results 1 - 10 of 10

Procedure	Airport Name	Airport ID	City/State	Comments	
GLS RWY 19LORIG	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-26-2021	Notify Me Email FAA
GLS RWY 19R ORIG	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-26-2021	Notify Me Email FAA
<b>GLS RWY 28L ORIG</b>	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-26-2021	Notify Me Email FAA
GLS RWY 28R ORIG	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-26-2021	Notify Me Email FAA
ILS PRM RWY 28L (SIMULTANEOUS CLOSE PARALLEL)AMDT 3A	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA
LDA PRM RWY 28R AMDT 2B	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA
LDA/DME RWY 28R AMDT 2B	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA
MOLEN NINE DEPARTURE	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 10-11-2021	Notify Me Email FAA
RNAV (GPS) PRM RWY 28L (CLOSE PARALLEL) AMDT 2	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA
RNAV (GPS) PRM X RWY 28R AMDT 1B	SAN FRANCISCO INTL	SFO (KSFO)	SAN FRANCISCO, CA	Comment period ends: 02-26-2021	Notify Me Email FAA

## FAA has published the basis for their decision to use a Categorical Exclusion from pursuing additional environmental analysis in accordance with FAA Order 1050.1F

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#### SFO SAN FRANCISCO/SAN FRANCISCO INTL

Folder Name: 5FF9C5443B7D4CE3A532E4F7271CA1D4-SFO

File Name	Size	Date	Type
CA_KSFO_GLS RWY 28L_ORIG_8260-2.pdf	4,170,067 bytes	09/28/2021 04:35:08 PM	PDF
<b>CA_KSFO_GLS RWY 28L_ORIG_S.pdf</b>	4,872,890 bytes	09/28/2021 04:35:15 PM	PDF
CA_KSFO_GLS RWY 28L_ORIG_F.pdf	1,561,914 bytes	09/28/2021 04:35:05 PM	PDF

For specific questions/comments about airports and/or procedures, please use the "E-Mail FAA" links next to the appropriate Procedure(s). For general questions/comments, please submit an [Aeronautical Inquiry](#).

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

San Francisco International Airport, CA

GLS RWY 19L  
GLS RWY 19R  
GLS RWY 28L  
GLS RWY 28R  
ILS or LOC RWY 19L  
RNAV (GPS) RWY 19L  
RNAV (GPS) RWY 19R

**Description of Action:**

The Federal Aviation Administration (FAA) is proposing to implement four new (Ground Based Augmentation System (GBAS))Landing System (GLS) approach procedures for Runways (RWY) 19 Left (L)/Right (R) and RWYs 28L/R at the San Francisco International Airport (KSFO), San Francisco, California. Additionally, the missed approaches for Instrument Landing System (ILS) or Localizer (LOC) RWY 19L and Area Navigation (RNAV) (Global Positioning System [GPS]) RWY 19L/R will be amended to provide for safer simultaneous operations with closely spaced parallel runways.

GBAS/GLS approaches provide an alternative to the ILS approach procedures and support the full range of approach and landing operations. GBAS provides Category I (CAT I) precision approach minimums. GLS procedures can reduce the approach minima and enable more efficiency by allowing simultaneous operations during lower ceilings and visibility conditions. Additionally, GLS approaches offer redundancy for adequately equipped aircraft if ILS approaches are not available.

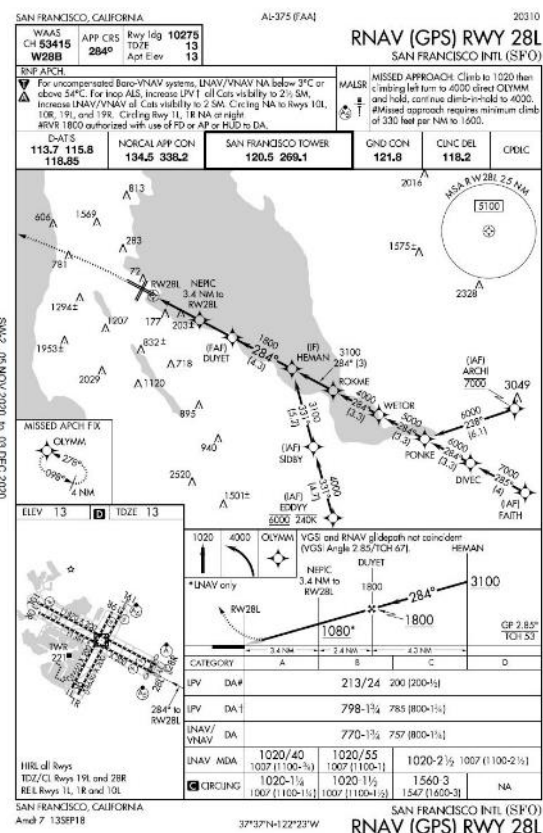
Generally, aircraft arrive on RWYs 28L/28R at KSFO. To accommodate traffic demands, KSFO typically operates simultaneous arrivals and departures to RWYs 28L and 28R. During weather periods that exceed a 3,000-foot ceiling and five statute mile visibility, air traffic control (ATC) sequences arrivals utilizing visual separation between aircraft. During low visibility conditions, preventing the use of visual separation between arrivals—approximately 20% of the time on an annual basis—the airport must operate single stream arrivals, which significantly increases delays and reduces airport access. The proposed GLS procedures would improve simultaneous operations to RWYs 28L/28R by lowering the weather requirements.

Additionally, there are no precision approaches to RWY 19R due to the proximity of rising terrain and airport infrastructure. Runways 19L/19R are typically used for landing approximately 5 percent of the time. For arrivals to RWYs 19L/19R, there is only a single ILS CAT I procedure to RWY 19L, and two RNAV (GPS) procedures. When the weather is below CAT I, arrivals are limited to a single stream on the ILS on RWY 19L. This approach conflicts with nearby Oakland International Airport traffic. The proposed GLS approach procedures to RWY 19L/R would improve efficiency in the airspace and enable improved access during

[https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/procedures/application/newProcedure?results&tab=productionPlan&nasrl=CA\\_KSFO\\_GLS\\_RWY\\_28L\\_ORIG\\_S.pdf&id=SFO#searchResultsTop](https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/application/newProcedure?results&tab=productionPlan&nasrl=CA_KSFO_GLS_RWY_28L_ORIG_S.pdf&id=SFO#searchResultsTop)

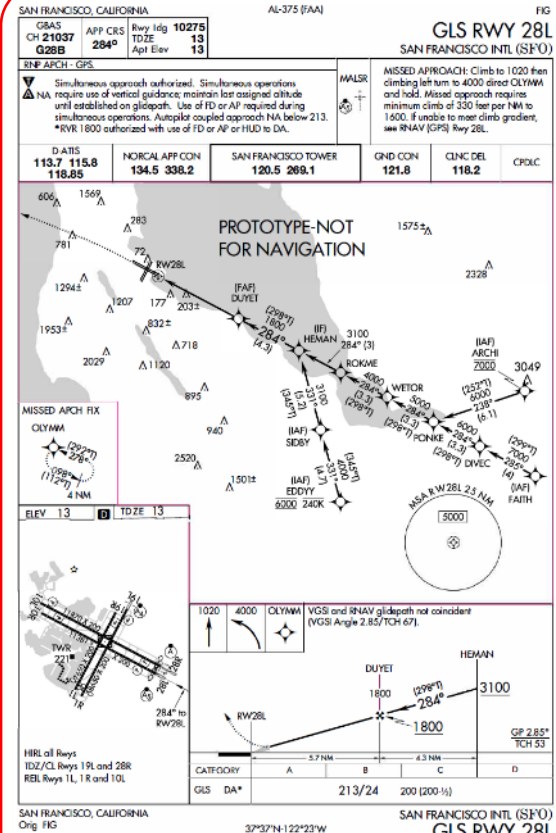
Packet Page 27

# SFO GLS Overlay Approach Comparison: 28L/28R



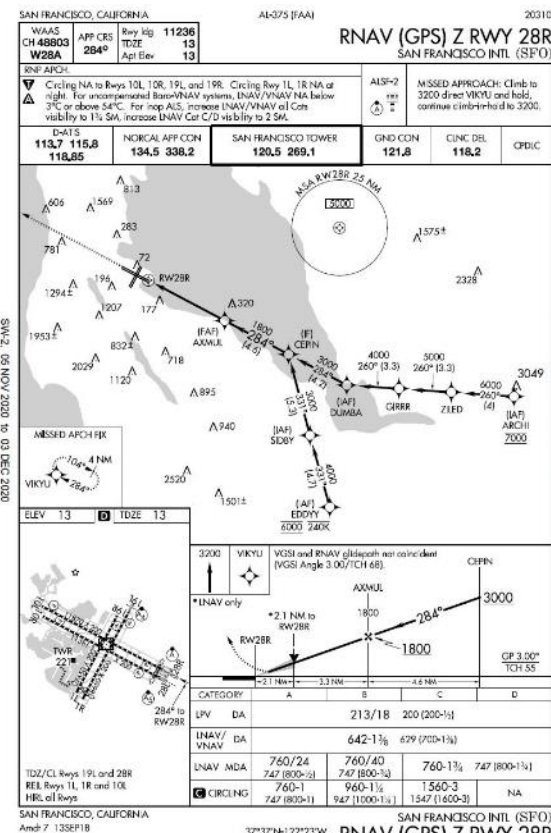
## RNAV (GPS) RWY 28L

- GPA: 2.85°
- FAF: DUYET 1,800ft
- IAF: EDDYY 6,000ft @ 240KIAS



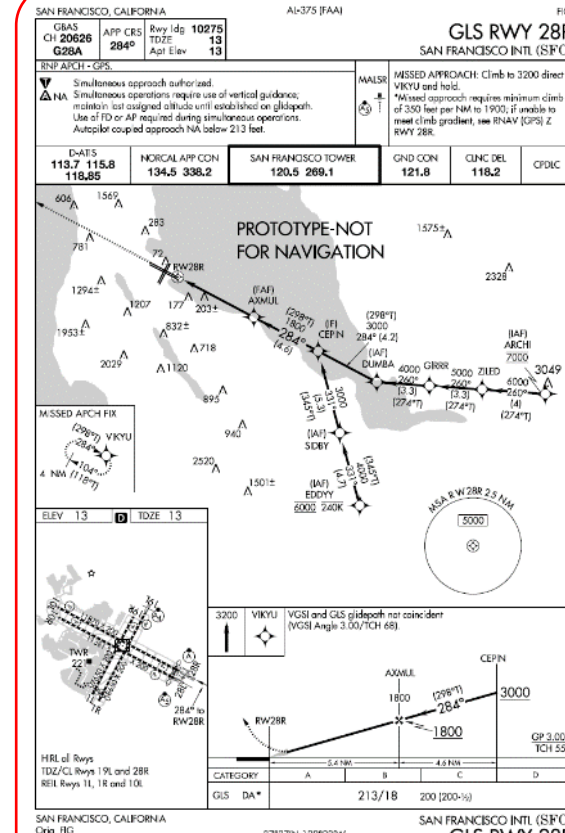
## GLS RWY 28L

- GPA: 2.85°
- FAF: DUYET 1,800ft
- IAF: EDDYY 6,000ft @ 240KIAS



## RNAV (GPS) Z RWY 28R

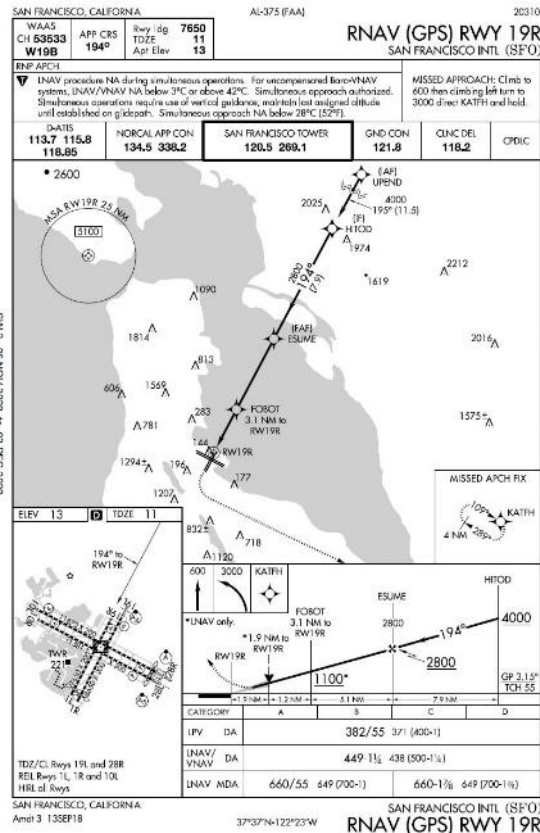
- GPA: 3.00°
- FAF: AXMUL 1,800ft
- IAF: EDDYY 6,000ft @ 240KIAS



## GLS RWY 28R

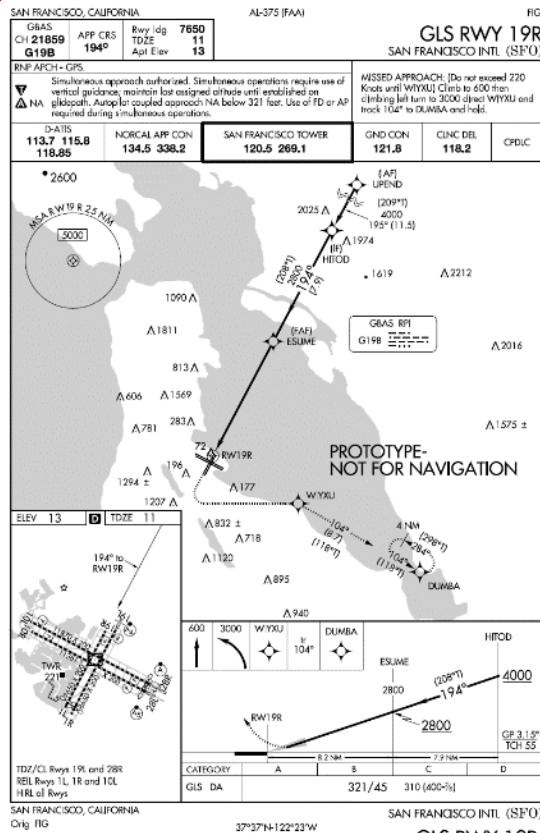
- GPA: 3.00°
- FAF: AXMUL 1,800ft
- IAF: EDDYY 6,000ft @ 240KIAS

# SFO GLS Overlay Approach Comparison: 19R/19L



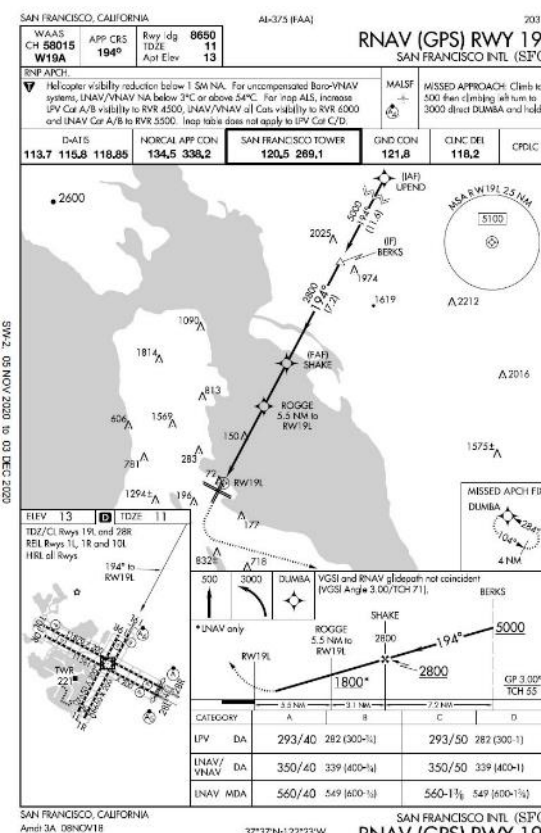
## GLS RWY 19R

- GPA: 3.15°
- FAF: ESUME 2,800ft
- IAF: UPEND 5,000ft



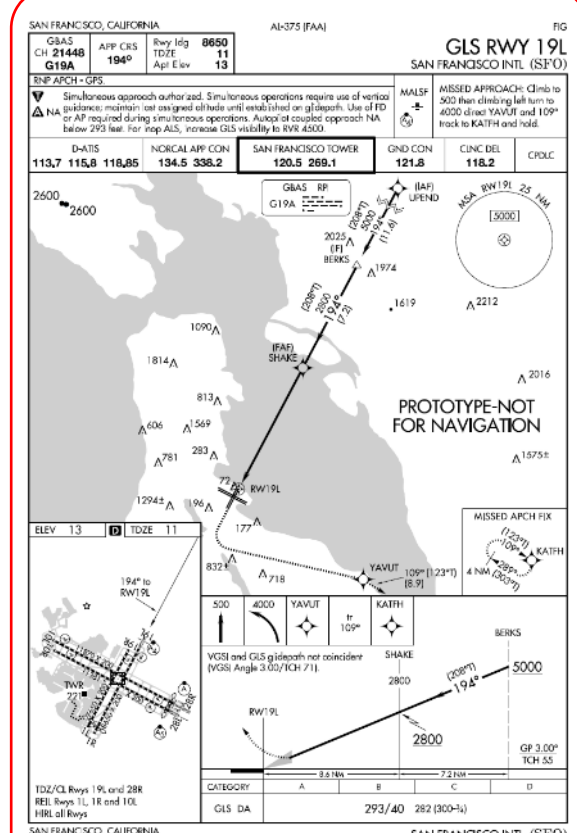
## GLS RWY 19R

- GPA: 3.15°
- FAF: ESUME 2,800ft
- IAF: UPEND 5,000ft



## RNAV (GPS) RWY 19L

- GPA: 3.00°
- FAF: SHAKE 2,800ft
- IAF: UPEND 5,000ft



## GLS RWY 19L

- GPA: 3.00°
- FAF: SHAKE 2,800ft
- IAF: UPEND 5,000ft

# New CFPPs: GLS-TT Rwy 28L and 28R

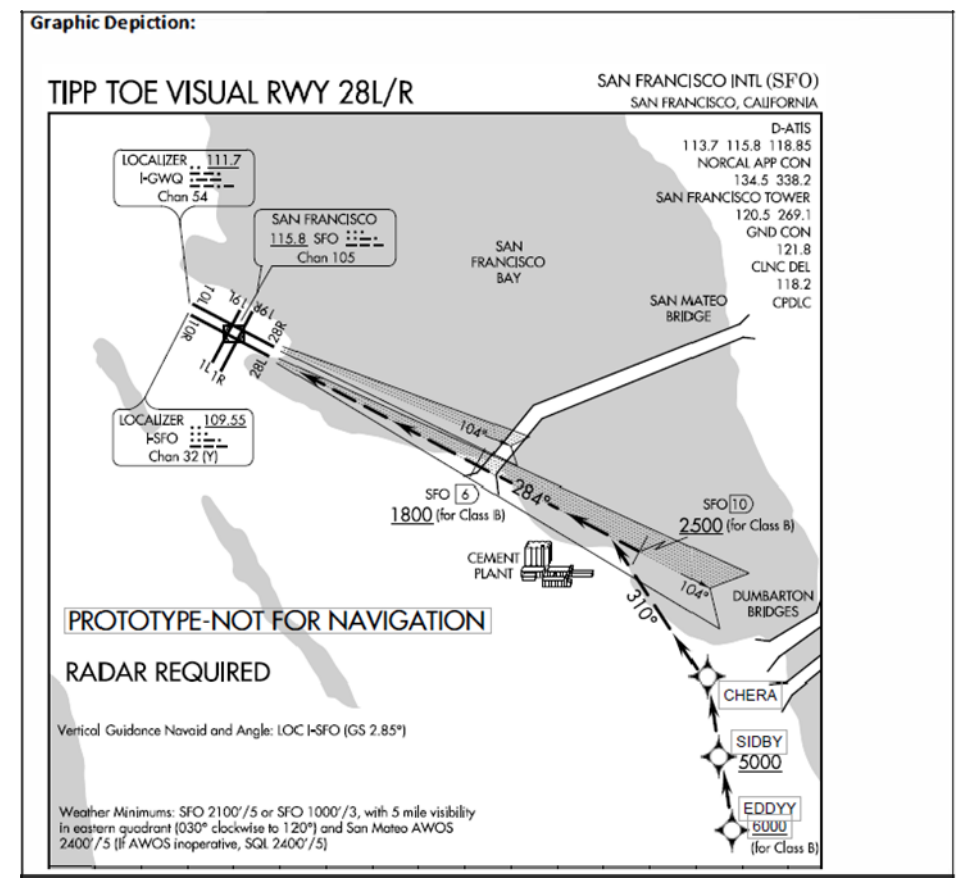
## Conversion of Tipp Toe Visual Rwy 28L/R

Community feedback from SFO Roundtable TWG indicated a desire to explore additional innovative GLS approach options to runway 28L

- Achieve noise reduction through higher GPA and altitudes over residential areas
- Increase likelihood of aircraft and ATC usage under VFR conditions
- Provide opportunities in the future to enable some level of path dispersion

SFO GBAS Flight Procedures Subcommittee evaluated the existing, and soon to be updated, CVFP and identified a conversion to GLS for 28L and 28R

Procedure is part of Group 1 Innovative approach options for consideration by residents of the Bay Area in 2021



## Flight Evaluation of SFO GLS Approaches



**United Airlines has offered to support the community evaluation of both the overlay and innovative GLS approach concepts by performing evaluation flights for the purposes of noise data collection<sup>\*</sup>, <sup>\*\*</sup>**

The flights will occur in November of 2021

The Flight Procedures Subcommittee, aided by the SFO GBAS Project Team, will use the information from the test flights to

1. Verify that overlay GLS approaches are not louder than current approaches
2. Evaluate initial AEDT v3D / BADA 4 SEL noise predictions (presented in the CFPPs) vs noise monitor results
3. Make adjustments to the AEDT v3D / BADA 4 noise predictions where applicable

*\*UAL flight test information may not precisely reflect the current AEDT/BADA modeling assumptions*

*\*\*SFO GBAS Project team may not be able to modify the BADA 4 models to take advantage of detected noise results due to differences in aircraft weight, pilot technique, ambient conditions and data samples per procedure*

# Group 1 Innovative GLS Approach Evaluation with United Airlines



Measure Sound Near Downtown San Francisco

Measure Sound Near Noise Monitor Locations (A – F)

Measure Sound Near San Bruno Gap

Runway	Community Package	Approval Group	Submitted to IFP Gateway
28R	GLS-DB Rwy 28R (DBAYY)	A	0 of 1
28R	GLS-BVE Rwy 28R (EDDYY)	B	0 of 3
28R	GLS-BV Rwy 28R (ARCHI)		
28L	GLS-TT Rwy 28L (EDDYY)		
28R	GLS-TT Rwy 28R (EDDYY)	C	0 of 1
28R	GLS-R Rwy 28R (EDDYY)		
28R	GLS-R Rwy 28R (ARCHI)		
28L	GLS-A Rwy 28L (EDDYY)	D	0 of 2
28L	GLS-A Rwy 28L (FAITH)		
28L	GLS-A Rwy 28L (ARCHI)		
28R	GLS-A Rwy 28R (EDDYY)		
28R	GLS-A Rwy 28R (FAITH)		
10L	GLS-A Rwy 10L (STINS)	E	0 of 2
10R	GLS-A Rwy 10R (STINS)		



# Additional Noise Monitoring Locations for UAL Flight Evaluation

## Locations

- A** Tevis Pl. & Center Dr., Palo Alto (near SIDBY)
- B** Jesuit Retreat Center of Los Altos (Prior to EDDYY)
- C** Donald Dr. & Arastradero Rd., Palo Alto
- D** Yerba Santa Ave. & Los Altos Ave., Los Altos
- E** Cowper St. & Santa Rita Ave, Palo Alto
- F** Hollyburne Ave. & Hamilton Ave., Menlo Park



GBAS Noise Measurement Reports will be made available underneath the associated CFPP via <https://noise.flysfo.com/2021/05/14/gbas-innovative-approach-procedures/>

# Noise Monitoring Reports

- GBAS Noise Measurement Report will include:
  - Portable Noise Monitoring Terminal (PNMT) Report information
  - Detailed comparison of existing approaches and GLS approaches by test aircraft

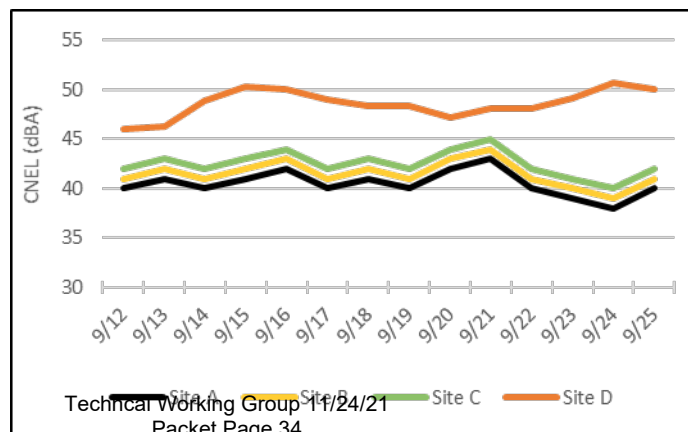
## Daily Noise Event Averages

Date	Site A			
	Noise Events	Avg SEL (dB)	Avg Lmax (dB)	Community Ambient (dB)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
<b>Daily Average</b>				
<b>Total Count</b>				

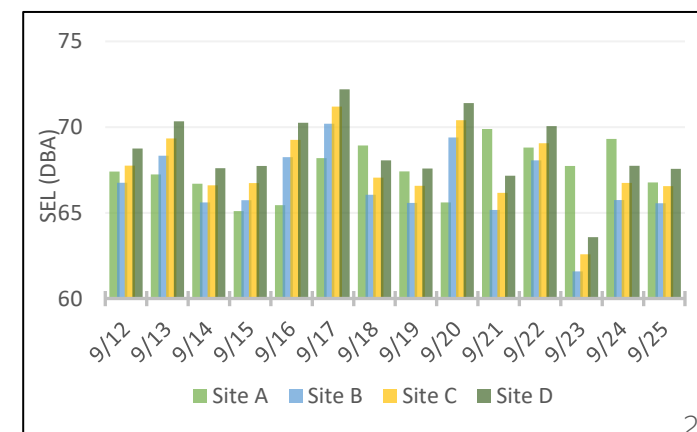
## SFO Aircraft by Time of Day

Site	Time of Day	Aircraft Noise Events								Community Noise
		Noise Events	Noise Events %	Avg SEL (dBA)	Min SEL (dBA)	Max SEL (dBA)	Avg Lmax (dBA)	Min Max (dBA)	Max Lmax (dBA)	Community Ambient (dB)
Site A	Day (7am-7pm)									
	Evening (7pm-10pm)									
	Night (10pm-7am)									

## CNEL Graphs



## Average SEL Graphs



# Noise Monitoring Reports

## Noise Levels of the Most Frequent Aircraft

Aircraft Type	Number of Arrivals	Site A		
		Ave Lmax (dB)	Ave SEL (dB)	Ave Duration (s)
Aircraft A				
Aircraft B				
Aircraft C				

## Noise Levels of the Loudest Aircraft Events

Airline / Aircraft Type	Time of Arrival	Site A		
		Ave Lmax (dB)	Ave SEL (dB)	Ave Duration (s)
Airline / Aircraft A				
Airline / Aircraft B				
Airline / Aircraft C				

## Comparison of Existing and GLS Approach Procedures

Aircraft Type	Number of Arrivals	Site A		
		Ave SEL (dB)	Ave Altitude (ft)	Ave Speed (knts)
Existing Procedure				
Test GLS Procedure				
Modeled GLS Procedure				

- Altitude and Gate Penetration Analysis
- Appendix and Glossary

**RESOLUTION NO. 93-01****RESOLUTION TO REAFFIRM AND MEMORIALIZE THE  
AIRPORT/COMMUNITY ROUNDTABLE'S LONGSTANDING POLICY  
OF NOT SHIFTING NOISE FROM ONE COMMUNITY TO ANOTHER RELATED TO AIRCRAFT  
OPERATIONS AT SAN FRANCISCO INTERNATIONAL AIRPORT**

---

**WHEREAS**, the Joint Land Use Study was prepared by the City and County of San Francisco and the County of San Mateo and approved by the Joint Powers Board in March 1980, and

**WHEREAS**, the Joint Land Use Study addressed community impacts, including aircraft noise impacts, associated with aircraft operations at San Francisco International Airport, and

**WHEREAS**, the Airport/Community Roundtable (Roundtable) was created in 1981, through a Memorandum of Understanding, to monitor the implementation of the recommendations of the Joint Land Use Study, including aircraft noise mitigation actions, and

**WHEREAS**, the Roundtable membership includes elected and appointed officials who represent communities and neighborhoods that are impacted by aircraft noise from aircraft operations at San Francisco International Airport, and

**WHEREAS**, the Roundtable monitors a performance-based aircraft noise mitigation program, interprets community concerns, and attempts to achieve additional noise mitigation through a cooperative sharing of authority brought forth by the aviation industry, Airport management, the Federal Aviation Administration (FAA), and the local government members of the Roundtable, and

**WHEREAS**, the Roundtable and the San Francisco Airports Commission have adopted a Joint Work Plan, to address aircraft noise impacts, as part of the mitigation program for the San Francisco International Airport Master Plan project that was approved by the Commission in November 1992, and

**Airport/Community Roundtable Resolution No. 93-01**  
**RE: Roundtable Policy Regarding Shifting of Aircraft Noise**

Page 2

WHEREAS, the Roundtable, the San Francisco Airports Commission, the Airport management, and the FAA have an informal agreement not to "shift" aircraft noise from one community in the Airport environs area to another, and

WHEREAS, several significant actions have occurred since the Roundtable was formed that provide a basis for the Roundtable's longstanding "informal" policy of not shifting aircraft noise from one community to another, as documented in a memo to the Roundtable Chairman, from the Roundtable Consultant/Project Manager, dated August 28, 1993 (revised September 22, 1993) that is attached and incorporated herein by reference; and

WHEREAS, no formal documentation exists of the Roundtable's longstanding policy regarding shifting of noise, in terms of Roundtable adoption of a formal policy statement; and

WHEREAS, the intent of the Roundtable's policy of not shifting aircraft-generated noise from one community to another is two-fold: (1.) for the Airport/Community Roundtable, as a group, to work with the San Francisco Airports Commission, the management of San Francisco International Airport, the Federal Aviation Administration, and the airlines that serve San Francisco International Airport to mitigate airport noise impacts in the communities and neighborhoods in the vicinity of San Francisco International Airport, and (2.) to memorialize the Roundtable member cities to work together, in a spirit of intergovernmental cooperation, to address airport noise issues related to aircraft operations at San Francisco International Airport and not to take any action as a group that would result in a shifting of aircraft-generated noise to any one or more communities or neighborhoods;

**Airport/Community Roundtable Resolution No. 93-01**  
**RE: Roundtable Policy Regarding Shifting of Aircraft Noise**

Page 3

NOW, THEREFORE BE IT RESOLVED, that the Airport/Community Roundtable reaffirms and memorializes its longstanding policy regarding the shifting of aircraft-generated noise, related to aircraft operations at San Francisco International Airport, as follows: "The Airport/Community Roundtable members, as a group, when considering and taking actions to mitigate noise, will not knowingly or deliberately support, encourage, or adopt actions, rules, regulations, or policies, that result in the "shifting" of aircraft noise from one community to another, when related to aircraft operations at San Francisco International Airport."

\* \* \* \* \*

Unanimously adopted by the Airport/Community Roundtable on December 1, 1993.

SIGNED:

Patrick W. Kelly  
Chair, Airport/Community Roundtable

December 9, 1993  
Date

\* \* \* \* \*

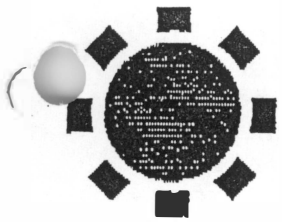
Attachment: August 28, 1993 memo (revised September 22, 1993) to Pat Kelly from Walter Gillfillan, re: Source of "no noise shift" policy, with the following attachments:

- San Francisco International Airport Noise Variance from the State Noise Standards, dated November 21, 1986; pages 6 and 7, Paragraph F.
- CALTRANS letter from Dick Dyer to Roger Chinn dated January 16, 1987
- Memorandum from Walter Gillfillan to the Roundtable, dated February 3, 1987; text on Page 2
- Roundtable Meeting Summary for Meeting No. 55, pages 1-3; meeting held on February 4, 1987; Agenda Item No. 2
- Joint Land Use Study document entitled "Summary of the Joint Action Plan"; Page 14, text under Action Area B, Flight Procedure Changes
- Roundtable Meeting Summary for Meeting No. 59, held on June 3, 1987; description of action taken on Agenda Item No. 5. rtreso.dfc

**ATTACHMENT TO:**

**AIRPORT/COMMUNITY ROUNDTABLE RESOLUTION NO. 93-01**

**RESOLUTION TO REAFFIRM AND MEMORIALIZE THE AIRPORT/COMMUNITY  
ROUNDTABLE'S LONGSTANDING POLICY OF NOT SHIFTING NOISE FROM ONE  
COMMUNITY TO ANOTHER RELATED TO AIRCRAFT OPERATIONS AT SAN FRANCISCO  
INTERNATIONAL AIRPORT**



**AIRPORT/COMMUNITY ROUNDTABLE**  
SAN FRANCISCO INTERNATIONAL AIRPORT  
LOCAL GOVERNMENTS IN SAN MATEO COUNTY

August 28, 1993 (Revised 9/22/93)

**MEMORANDUM**

TO: Pat Kelly

FROM: Walter Gillfillan

SUBJECT: Source of "no noise shift" policy

---

**BACKGROUND**

I have reviewed a number of documents including the JLUS, ANMAP, the variances issued in 1982, 1984 and 1986, the Roundtable work programs and I believe that I have discovered the origin of the "no noise shift" policy. In addition, I have found an motion in the Roundtable minutes that appears to be a formal action taken by the Roundtable reconfirming a policy of not shifting noise from one community to another.

To this information, I have added two measures to see just what the "noise shift" may have been in the period since the JLUS.

**ORIGIN OF THE POLICY**

There are four references in the documentation for the 1986 noise variance that suggest the source of the policy. As you may recall, the Roundtable and other cities agreed that a hearing would not be necessary; South San Francisco asked for a hearing. Negotiations between Larry Thelen (CALTRANS), Roberta Teglia (City of South San Francisco) and Lou Turpen (Airports Commission) produced a Settlement Agreement that avoided a hearing.

It was this Settlement Agreement between the City of South San Francisco and the Airport that formed the basis for a number of the conditions that appear in the CALTRANS variance. I believe, that the specific policy regarding the shifting of noise was among them. The four references that I found are enclosed. They are:

- Noise Variance dated November 25, 1986; Page 6, Paragraph F
- CALTRANS letter from Dick Dyer to Roger Chinn dated January 16, 1987
- My memorandum of February, 3, 1987 to the Roundtable; Page 2
- Minutes of the Roundtable Meeting No. 55 of February 4, 1987; Agenda item #2



I found no indication that the Roundtable was furnished a copy of the Settlement Agreement nor did they ever considered the elements of the agreement referred to in the correspondence prior to the issuance of the variance. If there was a separate document describing the agreement produced from the three-party negotiation, then CALTRANS, the Airport staff or the City of South San Francisco should have it.

#### OTHER REFERENCES

I found two other references to the shifting of noise:

- The first appeared in the JLUS document **Summary of The Joint Action Plan** (Page 14) in the text for Action Area B, Flight Procedure Changes. Here the passage notes,

"These changes should provide noticeable noise reductions in some neighborhoods, although slight increases may occur in others".

As you may recall, the metric that the JLUS was using to measure changes was CNEL. This statement would suggest that, in 1980, attaining significant noise reductions (as measured by CNEL) for some neighborhoods was a higher priority than a slight shifting of noise to others.

- The second reference appeared in the minutes of the Roundtable meeting of June 3, 1987. In this instance, there was an action in support of a Motion by Fred Smith (Brisbane) and a Second by Fred Howard (Pacifica) as follows:

"that the Airport/Community Roundtable support a request that the FAA, Roundtable, and the SFIA reaffirm their policy of not shifting noise from one community to another."

#### MEASUREMENTS OF NOISE SHIFT

Comments from residents of the communities behind Runways 01 departures clearly indicate that they have observed significant additional noise in recent years. The following evaluations have been made to describe what has happened with respect to the CNEL values and the number of operations during the time that the JLUS was conducted and the present situation.

**CNEL Metric** - As noted above, the JLUS used the CNEL metric as a basis for judging changes in noise exposure. The following are the

annual CNEL values at 6 Remote Monitoring Stations; two under the departure path from Runways 28 and four behind the departures on Runways 01.

<u>Year</u>	<u>Runways 28</u>		<u>Runways 01</u>			
	<u>RM 4</u>	<u>RM 6</u>	<u>RM 8</u>	<u>RM 9</u>	<u>RM 10</u>	<u>RM 11</u>
1977	70.1	67.8	69.4	64.0	60.5	67.9
1980	71.9	68.3	69.9	60.7	61.1	67.2
1985	69.4	65.9	68.1	61.6	58.6	62.7
1990	69.5	64.9	66.8	60.6	58.6	62.2
1992	69.2	65.2	66.4	59.9	58.0	61.3

Aircraft Operations - Notwithstanding the reduction in CNEL values; most complaints are on the basis of single-event, low frequency noise exposures. In the time period 1977 through 1992, there has been a change in the percentage of departures from Runways 28 (decrease) and Runways 01 (increase). Shown below are the data for airline operations:

<u>Year</u>	<u>Total Operations</u>	<u>Departures Runways 28</u>		<u>Departures Runways 01</u>		
		<u>%</u>	<u>No. Operations</u>	<u>%</u>	<u>No. Operations</u>	
					<u>Annual</u>	<u>Per Day</u>
1976	266,000	22	29,260	73	97,090	166
1985	268,000	19	25,460	77	103,180	283
1990	318,658	5	7,966	91	144,989	397
1992	293,047	14	20,513	73	106,962	293
1993*	166,620	19	15,712	65	54,268	258

\* January - July, 1993

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San Francisco International Airport  
Noise Variance November 21, 1986

1 not comply with Airports Commission noise regulations as  
2 set forth in Airports Commission Resolution No. 78-0131  
3 and Aircraft Operations Bulletin 85-07 to other Bay Area  
4 airports.

5  
6 E. In order to insure that State Noise Monitoring  
7 Regulations contained in Title XXI, Subchapter 6, Article  
8 8 of the California Administrative Code are complied with  
9 and that the noise contour lines are being developed  
10 accurately, the Airport agrees to have CalTrans review  
11 the Airport's noise monitoring system (including  
12 calibration of noise generation monitors and map  
13 preparation) and to take whatever action the Department  
14 of Transportation directs is necessary to achieve  
15 compliance.

16  
17 F. Airport shall not knowingly permit or authorize and shall  
18 oppose any activity which results in a shifting of  
19 aircraft generated noise from one community to another  
20 within the airport environs. This prohibition, however,  
21 shall not apply to temporary increases in CNEL'S  
22 resulting from temporary increased use of certain runways  
23 because of construction or repair of others, or for other  
24 causes beyond the control of the Airport (e.g. weather,  
25 or wind conditions), nor shall it apply to temporary  
26 increases in the CNEL boundaries resulting from tests

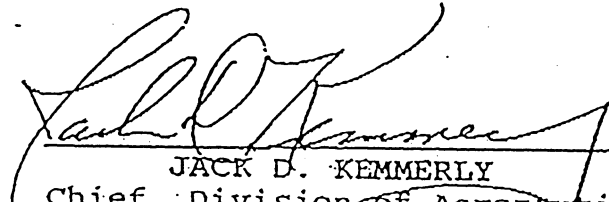
San Francisco International Airport  
Noise Variance November 21, 1986

1 conducted to determine the feasibility of noise  
2 mitigation measures. Airport shall consult potentially  
3 affected municipalities prior to conducting said tests.  
4

5 G. Airports Commission shall continue to process  
6 applications for operating permits from aircraft  
7 operators in accordance with the noise regulations set  
8 forth in Airports Commission Resolution No. 78-0131 and  
9 Airport Operations Bulletin 85-07.  
10

11 H. Airport shall require, as a condition to the renewal of  
12 leases, that airlines submit annual reports on the first  
13 day of September which reports shall include the  
14 airlines' plans for acquiring new aircraft within the  
15 year, the airlines' plans for re-engining existing  
16 aircraft and the expected impact of such plans upon noise  
17 reduction.  
18

19 DATED: November 21, 1986

  
20 JACK D. KEMMERLY  
21 Chief, Division of Aeronautics  
22  
23  
24  
25  
26

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**DEPARTMENT OF TRANSPORTATION****DIVISION OF AERONAUTICS**

1130 K STREET - 4TH FLOOR  
MAIL: P.O. BOX 942874  
SACRAMENTO, CA 94274-0001  
(916) 322-3090  
TDD (916) 323-7665



January 16, 1987

Mr. Roger Chinn  
Chairman, Community Roundtable  
City of Foster City  
Estero Municipal Improvement  
District  
610 Foster City Boulevard  
Foster City, CA 94404

Dear Mr. Chinn:

Enclosed is a copy of the variance to Section 5062 of the State Noise Standards which was recently issued to the San Francisco International Airport. As you may recall, a formal Administrative Hearing had been scheduled concerning the airport's variance application. However, an "eleventh hour" settlement conference was successful at achieving an agreement as to what should be included in the variance and the request for the hearing was withdrawn. We believe that the variance conditions resulting from the agreement are meaningful and consistent with the continuing efforts of the Airport/Community Roundtable.

The settlement agreement process engaged in by the parties, (the City of South San Francisco, the City and County of San Francisco, and Caltrans acting as facilitator), included the development of initial statements which were circulated to the other parties, and one long conference at which the differences between the parties were resolved. Mayor Roberta Teglia represented the City of South San Francisco, Airport Director Louis Turpen represented the City and County of San Francisco, and Larry Thelen represented Caltrans. The negotiations at the settlement conference were difficult and frank at times, but were based upon good faith and cooperative effort. It is the view of the Department of Transportation that the variance achieved through the settlement agreement process is an excellent product, given the overall situation. Both Mayor Roberta Teglia and Airport Director Louis Turpen should be congratulated for their personal efforts in this issue. In addition to developing an excellent product, the variance settlement process also averted the expense and the divisive atmosphere which accompany the administrative hearing process due to its quasi-judicial nature.

Mr. Roger Chinn  
Page 2  
January 16, 1987

This short description of the variance settlement process will probably be of interest to the membership of the Roundtable. I am planning to attend your February 4 meeting should you desire to have me discuss the issue further. Additionally, I have asked our Attorney, Larry Thelen, to attend with me, but I have not yet heard back from him. He has been out of town.

Although we cannot attend all the meetings of the Airport/Community Roundtable, we certainly support your activities. I have taken the liberty to send copies of this letter to those who are named herein, and to Marty Boat so that he may furnish copies to the Roundtable membership.

Sincerely,

JACK D. KEMMERLY, Chief  
Division of Aeronautics

*Richard G. Dyer*

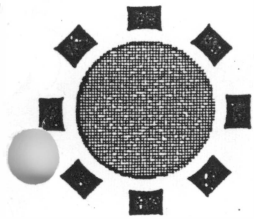
Richard G. Dyer  
Airport Environmental Specialist

Enclosure

cc: Mayor Roberta Teglia  
Louis Turpen  
Marty Boat  
Larry Thelen



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**AIRPORT/COMMUNITY ROUNDTABLE**  
SAN FRANCISCO INTERNATIONAL AIRPORT  
LOCAL GOVERNMENTS IN SAN MATEO COUNTY

February 3, 1987

**MEMORANDUM**

TO:

FROM: Walter E. Gillfillan

SUBJECT: Recent State Noise Standard Variance For San Francisco International Airport

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The conditions of this variance, as well as the process by which it was obtained, include some interesting aspects that may have relevance in other situations. The Airport/Community Roundtable is a forum that continued after the completion of the Airport Noise Control and Land Use Compatibility (ANCLUC)/Part 150 study at San Francisco International Airport (SFO).

After a tumultuous first variance hearing, the Airport/Community Roundtable was instrumental in working with CALTRANS, the Airport and surrounding communities to obtain the second variance; the original conditions were continued and there was no need for a hearing.

In the third variance effort, the City of South San Francisco elected to pursue a hearing even though the other Roundtable members did not. In subsequent negotiations, the Airport and the City reached a settlement agreement which included certain conditions in the variance; the request for a hearing was dropped.

The enclosed variance, recently issued by the California Department of Transportation (CALTRANS), reflects the settlement agreement between SFO and the City of South San Francisco.

Several items in this variance are noteworthy:

- The original noise study results continue to serve as the framework for the variance.
- The noise reduction target is described by the number of dwelling units within the 65 Community Noise Equivalent Level (CNEL) contour. The new variance includes

a further reduction in the original number of dwelling units (7,500 dwelling units by July, 1987 to 6,000 by June, 1990). This has been and will continue to be achieved by changes in the fleet mix and utilization of the Shoreline Departure route from Runway 28 and preferential nighttime departures from Runway 10.

- Homes purchased after the Part 150 notification date, homes that have been acoustically treated and homes acquired by the airport are specifically excluded under the variance.
- Like in the first and second variances, the Airport may set the maximum single-event noise levels as a condition of non-compliance with the dwelling units goal.
- The noise insulation program is identified and the process for funding and managing are described. The airport is the source of local matching funds, if Federal Aviation Administration (FAA) monies are used.
- The policy of not shifting noise from one community to another is defined.
- Leases with airlines require a report on their plans to reduce noise impacts.

a:variance

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AIRPORT/COMMUNITY ROUNDTABLE  
Meeting Summary

\*\*\*\*\*

Meeting Number 55  
Wednesday, February 4, 1987

\*\*\*\*\*

1. Roll Call

Chairman Roger Chinn called the meeting to order at 7:35 p.m. in the Council Chambers of Millbrae City Hall.

Members Present

Ron Wilson, San Francisco Airports  
Commission  
Tom Huening, County of San Mateo  
Fred Smith, Brisbane  
Gloria Barton, Burlingame  
Roger Chinn, Foster City  
Patrick Kelly, Hillsborough  
Mary Griffin and Bob Ironside,  
Millbrae  
Fred Howard, Pacifica  
Ed Simon, San Bruno  
Roberta Teglia and Dave Carbone,  
South San Francisco  
Naomi Patridge, Airport Land Use  
Committee

Not Represented

Colma  
Daly City  
Air Transport Association

Advisory Members

David Cross and Ed Lewis, FAA  
Ed Daley, Chief Pilot

Others Present

San Francisco International Airport: H. James, Duke Briscoe, Leon Bitners,  
Marvin Ellis, Arn Feener  
Caltrans: Dick Dyer (Division of Aeronautics); Larry Thelen (Legal Division)  
Airlines: Bill Smith (American); Don McGann (United); Sherwin B. Cribb  
(Mexicana)  
Press: D. J. Madden (San Mateo Times); Julie Wellik (Millbrae Sun); Lisa  
Thelen (KGO-TV)  
AIR Force: Sylvia Gregory  
Burlingame: John L. Gatt and Jean Ann Carroll  
Foster City: Carole McEwen, Tom Harney, Art Perry, James Klauke, John Oliver  
Hillsborough: Joyce Spence and Duane Spence  
Millbrae: Jessie Bracker, Nadyne Burke, Janice Burke  
San Bruno: Rose Urbach, Emma Beardsley  
Consultant: Walt Gillfillan, Project Manager  
Staff: Marty Boat, Roman Gankin - San Mateo County Planning Division

2. Report on Three-Year Noise Variance Awarded to SFIA by Caltrans

Dick Dyer of Caltrans Division of Aeronautics was introduced to discuss the matter. He referred to copies of the variance and his letter of transmittal which had been distributed to members. He mentioned the key roles of Roberta Teglia (South San Francisco), Lou Turpen (San Francisco International Airport), and Larry Thelen (Caltrans' attorney) in reaching the agreement.

Larry Thelen described the quasi-judicial process which is required in these cases. Because of the outstanding cooperation of all parties, it was possible to reach agreement relatively swiftly, without having to go through the complex hearing process. He outlined the major features of the agreement, including a program for progressive reduction of noise impacts on residential areas, with the Airport contributing at least \$200,000 per year for three years to be used to match other funds available for noise insulation. The agreement also calls for Caltrans to review and validate noise monitoring procedures used by the Airport, to the satisfaction of Caltrans.

Roberta Teglia stated that South San Francisco chose the variance procedure as a vehicle for making substantive progress in airport-related issues as a means to get beyond mere talking. This procedure was preferred to lengthy legal battles. She also pointed to the progress achieved in plans to reduce the count of noise-impacted residences, the firm commitment of San Francisco International Airport to a minimum annual contribution toward noise insulation programs, and the establishment of rules on easement agreements. The State will now act as a "third party" in noise monitor evaluation.

Ron Wilson clarified the agreements relating to funding of noise insulation, and outlined the programs now budgeted. A consultant will be employed to determine the feasibility of installing a noise suppression facility for engine run-ups. Other noise mitigation policies will be continued and enhanced.

Ed Simon commended South San Francisco for making progress in establishing the noise insulation commitments. Roberta Teglia thanked Mr. Thelen for his efforts in the successful conclusion of the agreement.

Mr. Thelen and Mr. Dyer responded to several questions from the audience regarding insulation standards and policies.

Walt Gillfillan stated that a revision of procedures in counting the total housing stock and the noise-impacted units would be desirable. It would be appropriate for the Airport to take a lead role in revising the counting techniques. Roberta Teglia also commented on some of the types of problems encountered in insulation programs, and Arn Feener offered some suggestions. Dick Dyer responded to several specific questions on insulation procedures and avigation easements proposed by Jessie Bracker, Rose Urbach, and others. Walt Gillfillan suggested that the Airport include provisions of the variance and other noise compatibility standards and policies in all agreements entered into by the Airport, so that

Airport/Community Roundtable Meeting Summary  
Meeting No. 55, February 4, 1987

Airport users will understand the conditions. Roberta Teglia referred to the preferred "noise easement" technique (as contrasted with "avigation easement") used by South San Francisco.

3. Approval of Meeting Summaries

After appropriate motions and seconds, the Roundtable meeting summaries for the months of September, October, and December 1986 were approved, with members not in attendance at those meetings abstaining. Approval of the meeting summary for August 1986 was deferred to the next meeting, at the request of Mary Griffin, as reported by Roger Chinn.

4. Airport Director's Report

Arn Feener summarized the Special Studies prepared for November and December, and responded to several questions. Walt Gillfillan pointed out two instances (Air Canada and Northwest) in December for noise levels for Runway 28 shoreline departures where Monitor 3 exceeded Monitor 15 ("wide shoreline"). Arn said that inquiries have been made of the airlines involved. The percentage of "successful" shorelines seems to be increasing, at least based on this sample study.

Regarding November complaints, a Foster City resident in the audience stated that his complaints did not appear to be noted in the report. Questions followed on the manner in which the Center tabulates "complaints." If a letter is received reporting a number of incidents, it is recorded as one complaint from that jurisdiction. Roger Chinn said he had received reports of problems with the manner in which complaints were received and handled by the Center. Courteous and rapid responses are needed. Arn Feener described standard complaint handling procedures. Roger Chinn asked for consideration and a response from Arn on the reported incidents of non-response to complaints, and the procedures for responding promptly and courteously to complaints from citizens.

Walt Gillfillan referred to the tabulation of number of complaints by city, and how these were interpreted. Patterns and trends in complaints and the nature of complaints are frequently more important than absolute numbers of complaints.

Arn stated that trends in the number of different people registering complaints is sometimes more important than the raw number of complaints. In response to a request from Roger Chinn, he agreed to attempt to analyze this. Discussion followed on the problem of evaluating volumes of complaints. Duane Spence advocated more detailed cross-tabulations of violations, complaints, notifications and airline responses.

5. January Workshop Report: Foster City Noise Mitigation Measures

Carole McEwen, Chairman of the Foster City Noise Abatement Committee, expressed appreciation for the workshop addressing their concerns, and referred to 14 recommendations of the Committee summarized in a letter to Lou Turpen. Among the most important items are amendments to the Jeppesen charts to include noise abatement procedures, vectoring of aircraft by Tracon, and preferential use of Runway 28R.

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- **Expanded Community Information Program** — Develop a community information program to involve and inform interested citizens and officials on the Noise Mitigation Plan, noise monitoring results, community concerns and related information.

*THIS PROGRAM WOULD RESULT IN IMPROVED AIRPORT MANAGEMENT AND NOISE MONITORING CAPABILITIES TO HELP IMPLEMENT THE NOISE MITIGATION PLAN.*

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## **B. FLIGHT PROCEDURE CHANGES**



Flight procedure changes are one means of reducing noise exposure in residential areas. Changes could be made in the use of runways, flight paths and flight procedures to reduce noise from operations which fly over or impact populated land areas. These changes should provide noticeable noise reductions in some neighborhoods, although slight increases may occur in others.

Specific aircraft operations which could be modified to reduce noise exposure in residential areas include the following:

- Aircraft departing on Runway 28 and flying over the San Bruno Gap and northern Peninsula communities.
- Aircraft departing on Runway 1 and creating a “backblast” effect on communities west of the Airport.
- Aircraft arriving on Runway 28 and flying over Foster City.
- Particularly noisy aircraft, especially those not certified by Federal Aviation Regulation Part-36.
- Aircraft operations taking place during the evening (7 to 10 P.M.) and nighttime (10 P.M. to 7 A.M.) hours when ambient noise levels and tolerance to noise intrusion is significantly lower than during the daytime.

RECOMMENDED ACTIONS. The following six actions focus on rerouting flights away from land areas, increasing altitudes or decreasing engine thrust during aircraft approaches and departures.

- **Nighttime Noise Abatement** — Establish Runway 10 as the preferential noise abatement departure runway from 1 to 6 A.M. to reduce takeoffs through the San Bruno Gap and backblast noise from Runway 1. In the medium-term, study the use of the Instrument Landing System (ILS) for Runway 19 arrivals, in cooperation with East Bay communities. In the long-term utilize a Microwave Landing System (MLS) for Runway 19 curved precision approaches, if feasible.

**Source: Joint Action Plan to Improve Compatibility Between San Francisco International Airport and San Mateo County Environs Area**

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AIRPORT/COMMUNITY ROUNDTABLE  
Meeting Summary

\*\*\*\*\*

Meeting Number 59  
Wednesday, June 3, 1987


\*\*\*\*\*

5. Brisbane/Pacifica Overflight Problem; Preliminary Report

ACTION:

Motion by Fred Smith (Brisbane), seconded by Fred Howard (Pacifica), that the

Airport/Community Roundtable:

- 
1. Support a request that the FAA, Roundtable, and SFIA reaffirm their policy of not shifting noise from one community to another;
  2. Support Brisbane's efforts to resolve the noise issue and recognize the existing noise problems Brisbane is experiencing;
  3. Support Brisbane's position to maintain its ability to seek judicial redress in the event it would withdraw its court action for the purpose of developing a dialogue;
  4. Form a subcommittee through Chairman Chinn to include Al Teglia for the purpose of negotiating a resolution to the problem between FAA and Brisbane; and
  5. Place this matter on the July Roundtable Agenda to review what progress has been made in resolving the problem.

Passed: Ayes - 10, Noes - 2.