



Meeting Agenda

Regular Meeting

Meeting No. 341
Wednesday, December 7, 2022 - 7:00 p.m.
BY VIDEO CONFERENCE ONLY
Please click the link below to join the webinar:
<https://smcgov.zoom.us/j/99504028352>
Or Dial in:
US: +1(669)900-6833 Webinar ID: 995 0402 8352

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.

PUBLIC PARTICIPATION:

List of attendees (using zoom sign-in credentials) will be displayed periodically throughout the meeting.

Written public comments can be emailed to amontescardenas@smcgov.org, and should include specific agenda item to which you are commenting. Spoken public comments will also be accepted on Items NOT on the Agenda, before adoption of Consent Agenda, and Regular Agenda during the meeting.

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

AGENDA

Call to Order / Roll Call / Declaration of a Quorum Present
Sam Hindi, Roundtable Chairperson

Public Comment on Items NOT on the Agenda

Speakers are limited to two minutes. Roundtable members cannot discuss or take action on any matter raised under this item.

Action to set Agenda and to Approve Consent Items

Sam Hindi, Roundtable Chairperson

CONSENT AGENDA

All items on the Consent Agenda are approved/accepted in one motion. A Roundtable Representative can make a request, prior to action on the Consent Agenda, to transfer a Consent Agenda item to the Regular Agenda. Any items on the Regular Agenda may be transferred on the Consent Agenda in a similar manner. Public Comment is received prior to approval of the Consent Agenda.

1. Approval of Draft Minutes

a. October 5, 2022 Regular Meeting

pg. 8

2. Airport Director's Reports

- a. September 2022 pg. 12
- b. October 2022 pg. 18

3. Approval of Resolution 22-07: Findings Allowing Continued Remote Meetings Under Brown Act pg. 24

REGULAR AGENDA

Public Comment received on Regular Agenda items prior to action.

4. **ACTION:** Approve Technical Working Group Recommendations for GBAS 2A Innovative Procedures Suggestions pg. 29
Sam Hindi, Roundtable Chairperson
Kathleen Wentworth, Roundtable Coordinator

PRESENTATIONS

Public Comment on Presentation items will be taken after the last item under presentations.

5. Chairman's Update
Sam Hindi, Roundtable Chairperson

6. Airport Director Update
Ivar Satero, Airport Director

- a. Noise Office Update
Bert Ganoung, Aircraft Noise Office Manager

7. HMMH Updates on other Airport Noise Roundtables pg. 44
Eugene Reindel, Technical Consultant

8. Subcommittee Updates

- a. [Technical Working Group Meeting of November 14, 2022](#)
Sam Hindi, Subcommittee Chairperson
- b. [Portable Noise Monitor Subcommittee Meeting of October 24, 2022](#)
Terry O'Connell, Subcommittee Chairperson
- c. [Ground-Based Noise Subcommittee Meeting of November 18, 2022](#)
Ann Schneider, Subcommittee Chairperson
- d. Legislative Subcommittee
Al Royse, Subcommittee Chairperson

9. FY Budget vs. Actuals
Kathleen Wentworth, Roundtable Coordinator

- a. FY 2021-2022 pg. 54
- b. YTD Q1 2022-2023 pg. 56

MEETING CLOSURE

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10. Member Communications / Announcements

Roundtable Members and Staff

11. Adjourn

Sam Hindi, Roundtable Chairperson

Information Only

- i. HMMH FAA IFP Information Gateway Review – October & November 2022 pg. 57
- ii. Airport Noise Report Vol. 34 No. 38 – November 18, 2022 pg. 61

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

During videoconference meetings of the SFO Airport/Community Roundtable, 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
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 7:00 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 ZOOM meeting at the following times: a) Items NOT on the Agenda; b) On Consent Calendar Agenda; c) after each Regular Agenda Items; and d) at the end of all Presentations. Please read the following instructions carefully:

1. The December 7, 2022 SFO Roundtable regular meeting may be accessed through Zoom online at <https://smcgov.zoom.us/j/99504028352>. The meeting ID: 995 0402 8352. The meeting may also be accessed via telephone by dialing in +1-669-900-6833, entering meeting ID: 995 0402 8352, 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.

Note: Public records that relate to any item on the open session Agenda (Consent and Regular Agendas) for a Regular Airport/Community Roundtable Meeting are available for public inspection. Those records that are distributed less than 72 hours prior to a Regular

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Meeting are available for public inspection at the same time they are distributed to all Roundtable Members, or a majority of the Members of the Roundtable. The Roundtable has designated the San Mateo County Planning & Building Department, at 455 County Center, 2nd Floor Redwood City, California 94063, for the purpose of making those public records available for inspection. The documents are also available on the Roundtable website at: www.sforoundtable.org.



Welcome

The Airport/Community Roundtable is a voluntary committee that provides a public forum to address community noise issues related to aircraft operations at San Francisco International Airport. The Roundtable encourages orderly public participation and has established the following procedure to help you, if you wish to present comments to the committee at this meeting via Zoom.

- You may email your comments ahead of time to amontescardenas@smcgov.org.
- To speak during the meeting you may use "raise-hand" feature through Zoom.
- The Roundtable Secretary will call your name; please state where you calling from to present your comments. Full instructions in agenda below.

The Roundtable may receive several speaker requests on more than one Agenda item; therefore, each speaker is limited to two (2) minutes to present his/her comments on any Agenda item unless given more time by the Roundtable Chairperson. The Roundtable meetings are recorded. Video file of meeting will posted to website once available. Please contact the Roundtable Coordinator for any request.

Roundtable Meetings are accessible to people with disabilities. Individuals who need special assistance or a disability-related modification or accommodation to participate in this meeting, or who have a disability and wish to request an alternative format for the Agenda, Meeting Notice, Meeting Packet, or other writings that may be distributed at the meeting, should contact the Roundtable Coordinator at least two (2) working days before the meeting at the phone or e-mail listed below. Notification in advance of the meeting will enable Roundtable staff to make reasonable arrangements to ensure accessibility to this meeting.



About the Roundtable

The Airport/Community Roundtable was established in May 1981, by a Memorandum of Understanding (MOU), to address noise impacts related to aircraft operations at San Francisco International Airport (SFO). The Airport is owned and operated by the City and County of San Francisco, but it is located entirely within San Mateo County. This voluntary committee consists of 24 appointed and elected officials from the City and County of San Francisco, the County of San Mateo, and several cities in San Mateo County (see attached Membership Roster). It provides a forum for the public to address local elected officials, Airport management, FAA staff, and airline representatives, regarding aircraft noise issues. The committee monitors a performance-based aircraft noise mitigation program, as implemented by Airport staff, interprets community concerns, and attempts to achieve additional noise mitigation through a cooperative sharing of authority brought forth by the airline industry, the FAA, Airport management, and local government officials. The Roundtable adopts an annual Work Program to address key issues. In 2022, the Roundtable is scheduled to meet on the first Wednesday of the following months: February, April, June, August, October and December. Regular Meetings are held on the first Wednesday of the designated month at 7:00 p.m. at the **David Chetcuti Community Room at Millbrae City Hall, 450 Poplar Avenue, Millbrae, California** unless noted. **Begining March 2020 all meetings will be held virtually via Zoom due to COVID-19.** Special Meetings and workshops are held as needed. The members of the public are encouraged to attend the meetings and workshops to express their concerns and learn about airport/aircraft noise and operations.

POLICY STATEMENT

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.”

(Source: Roundtable Resolution No. 93-01)

FEDERAL PREEMPTION, RE: AIRCRAFT FLIGHT PATTERNS

The authority to regulate flight patterns of aircraft is vested exclusively in the Federal Aviation Administration (FAA). Federal law provides that:

“No state or political subdivision thereof and no interstate agency or other political agency of two or more states shall enact or enforce any law, rule, regulation, standard, or other provision having the force and effect of law, relating to rates, routes, or services of any air carrier having authority under subchapter IV of this chapter to provide air transportation.”

(Source: 49 U.S.C. A. Section 1302(a)(1)).



Member Roster

November 2022

**CITY AND COUNTY OF SAN FRANCISCO
BOARD OF SUPERVISORS**

Ahsha Safai

**CITY AND COUNTY OF SAN FRANCISCO MAYOR'S
OFFICE**

Alexandra Sweet, (Appointed)

**CITY AND COUNTY OF SAN FRANCISCO AIRPORT
COMMISSION REPRESENTATIVE**

Ivar Satero, Airport Director (Appointed)
Alternate: Doug Yakel, Public Information Officer

**COUNTY OF SAN MATEO
BOARD OF SUPERVISORS**

Dave Pine
Alternate: Don Horsley

**CITY/COUNTY ASSOCIATION OF GOVERNMENTS
AIRPORT LAND USE COMMITTEE (ALUC)**

Carol Ford (Appointed)

TOWN OF ATHERTON

Bill Widmer
Alternate: Bob Polito

CITY OF BELMONT

Tom McCune
Alternate: Davina Hurt

CITY OF BRISBANE

Terry O'Connell
Alternate: Madison Davis

CITY OF BURLINGAME

Ricardo Ortiz
Alternate: Mike Brownrigg

TOWN OF COLMA

John Goodwin
Alternate: Joanne del Rosario

CITY OF DALY CITY

Pamela DiGiovanni
Alternate: Rod Daus-Magbual

CITY OF EAST PALO ALTO

Regina Wallace-Jones
Alternate: Antonio Lopez

CITY OF FOSTER CITY

Sam Hindi
Alternate: Jon Froomin

CITY OF HALF MOON BAY

Harvey Rarback
Alternate: Robert Brownstone

TOWN OF HILLSBOROUGH

Alvin Royse
Alternate: Christine Krolik

CITY OF MENLO PARK

Cecilia Taylor
Alternate: Ray Mueller

CITY OF MILLBRAE

Ann Schneider
Alternate: Anne Oliva

CITY OF PACIFICA

Mike O'Neill
Alternate: Sue Vaterlaus

TOWN OF PORTOLA VALLEY

Jeff Aalfs
Alternate: Craig Hughes

CITY OF REDWOOD CITY

Jeff Gee
Alternate: Giselle Hale

CITY OF SAN BRUNO

Tom Hamilton

CITY OF SAN CARLOS

John Dugan
Alternate: Adam Rak

CITY OF SAN MATEO

Amourence Lee
Alternate: Diane Papan

CITY OF SOUTH SAN FRANCISCO

Mark Addiego
Alternate: Mark Nagales

TOWN OF WOODSIDE

Vacant
Alternate: Richard Brown

ROUNDTABLE ADVISORY MEMBERS

AIRLINES/FLIGHT OPERATIONS

Chief Pilot Lawrence Ellis, United Airlines

FEDERAL AVIATION ADMINISTRATION

Erik Amend, Acting Regional Administrator
Faviola Garcia, Deputy Regional Administrator (A)
Alana Jaress, Community Engagement Officer
Joseph Bert, Team Manager, Western Service Center

ROUNDTABLE STAFF

Kathleen Wentworth, Roundtable Coordinator
Angela Montes, Roundtable Administrative Secretary
Gene Reindel, Technical Consultant (HMMH)

SFO AIRPORT NOISE OFFICE STAFF

Nupur Sinha, Director of Planning & Environmental Affairs
Bert Ganoung, Aircraft Noise Office Manager

SFO Airport/Community Roundtable

Meeting No. 340 Minutes
Wednesday, October 5, 2022

Call to Order / Roll Call / Declaration of a Quorum Present

Roundtable Chairperson, Sam Hindi, called the Regular Meeting of the SFO Airport/Community Roundtable to order, at approximately 7:04 p.m., via teleconference. Roundtable Coordinator, Kathleen Wentworth, called the roll. A quorum (at least 13 Regular Members) was present as follows:

REGULAR MEMBERS PRESENT

Doug Yakel – City and County of San Francisco Airport Commission
Dave Pine – County of San Mateo Board of Supervisors
Carol Ford – C/CAG Airport Land Use Committee (ALUC)
Terry O’Connell – City of Brisbane
Ricardo Ortiz – City of Burlingame
John Goodwin – Town of Colma
Sam Hindi – City of Foster City
Al Royse – Town of Hillsborough
Cecilia Taylor – City of Menlo Park
Ann Schneider – City of Millbrae
Jeff Aalfs – Town of Portola Valley
Tom Hamilton – City of San Bruno
Mark Addiego – City of South San Francisco

REGULAR MEMBERS ABSENT

City and County of San Francisco Board of Supervisors
City and County of San Francisco Mayor’s Office
Town of Atherton
City of Belmont
City of Daly City
City of East Palo Alto
City of Half Moon Bay
City of Pacifica
Town of Portola Valley
City of Redwood City
City of San Carlos
City of San Mateo
Town of Woodside

ROUNDTABLE STAFF

Kathleen Wentworth – Roundtable Coordinator
Angela Montes Cardenas – Roundtable Administrative Secretary
Lisa Aozasa – County of San Mateo, Planning & Building, Deputy Director
Eugene Reindel – Roundtable Technical Consultant (HMMH)

ADDITIONAL ATTENDEES

Brian Perkins – Senior Policy Advisor to Congresswoman Jackie Speier

SAN FRANCISCO INTERNATIONAL AIRPORT STAFF

Bert Ganoung – Aircraft Noise Office Manager
Christian Valdes – Senior Managing Consultant, SFO

FAA STAFF

Faviola Garcia – Acting Deputy Regional Administrator

Alana Jaress – Community Engagement Officer

Joseph Bert – Team Manager, Western Service Center

Carlette Young – Acting Supervisory Senior Advisor

Chairman Hindi recognized that the meeting is taking place on the ancestral homeland of Ramaytush Ohlone.

Public Comments for Items NOT on the Agenda (00:06:27)

Chairman Hindi opened public comments.

Jennifer Landesmann from Palo Alto commented on process issues on FAA presentations on having 100 percent consensus.

Chairman Hindi closed public comments.

Action to set Agenda and to Approve Consent Items 1-3 (00:09:01)

Chairman Hindi opened and closed public comment on consent items 1 through 3, no comments were received.

ACTION: Ricardo Ortiz **MOVED** to set agenda and to approve consent items 1-3. The motion was seconded by Terry O'Connell and **CARRIED**, roll call vote passed.

4. Adopt Conflict of Interest Code for the San Francisco Airport Community Roundtable, as revised by the California Fair Political Practices Commission (00:11:20)

Lauren Carroll, Deputy County Attorney, gave a verbal update to the Membership. She noted that the Fair Political Practices Commission (FPPC) had made some revisions to the draft Conflict of Interest Code previously presented to the Members. She specified the revision and referred to the memo included in the agenda packet.

Conversation ensued with Vice Chair Royse, Member Schneider, and Member Ortiz.

Chairman Hindi opened and closed public comment for item 4, no comments were received.

ACTION: Al Royse **MOVED** to adopt Conflict of Interest Code for the San Francisco Airport Community Roundtable as revised by the California Fair Political Practices Commission. The motion was seconded by Ann Schneider and **CARRIED**, roll call vote passed.

5. Chairman's Update (00:22:50)

Chairman Hindi gave a verbal update to the Membership. His update included a change in the Town of Woodside's assigned representative, notice that the Portable Noise Monitor Placement Subcommittee will be reconvening, new feature to public meetings showing list of attendees present, and MCTV will now rebroadcast regular meetings to certain cities.

6. Airport Director Update (00:26:45)

Doug Yakel gave a verbal update to the Membership. He spoke on the Airport strike, passenger traffic, airlines resuming service, Shoreline Protection Program, and new FAA Noise Insulation Program.

a. SFO Noise Office Update

Mr. Ganoung gave a verbal update to the Membership and shared slides. He gave an update on the current Noise Insulation Program, elaborated on the new FAA Noise Insulation Program, revised noise thresholds, and new reporting metrics.

b. GBAS 2A Concepts – Comments and suggestions from the public for GBAS 2A procedures
Mr. Ganoung shared slides from the Technical Working Group presentation on September 20, 2022. Suggestions should be submitted within the next month to sfo.gbas@flysf.com.

Chairman Hindi opened public comment.

Jennifer Landesmann from Palo Alto spoke on the comment letter she submitted and said the FAA does not consider public input.

Darlene Yaplee from Palo Alto said that SFO must engage with cities impacted by GBAS and are not represented on the Roundtable.

Mark Shull from Palo Alto spoke on GLS procedures and decision to build these procedures on top of SERFR.

Chairman Hindi closed public comment.

Conversation ensued with Member O'Connell, Member Schneider, Member Taylor and Mr. Yakel.

7. NIITE/HUSSH Update (00:56:56)

Joseph Bert, FAA Team Manager, Western Service Center gave a brief update to the Membership. An extensive presentation was given at the Technical Working Group meeting on September 20, 2022. He shared slides as part of his summarized verbal update. Conversation ensued with Member Ortiz and Mr. Bert.

8. Subcommittee Updates

a. Technical Working Group Meeting of September 20, 2022 (01:02:35)

Chairman Hindi gave a verbal update to the Roundtable and summarized the September 20, 2022 meeting. The topics discussed were summarized. Meeting may [viewed here](#). Conversation ensued with Member Schneider and Mr. Ganoung.

b. Legislative Subcommittee Meeting of September 15, 2022 (01:08:35)

Subcommittee Chairperson Royse gave a verbal update to the Roundtable and summarized the September 15, 2022 meeting. The topics discussed were summarized. Meeting may [viewed here](#). Conversation ensued with Member O'Connell.

c. Ground-Based Noise Subcommittee (01:15:50)

Subcommittee Chairperson Schneider gave a brief update to the membership. The next GBN Subcommittee meeting will be in November 2022. She noted a presentation that was given to

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National League of Cities members. Ms. Wentworth noted that she will be meeting with the National League of Cities' Legislative Director for Transportation and Infrastructure Services and Federal Advocacy. Conversation ensued with Vice Chair Royse and Member O'Connell.

Chairman Hindi opened public comment for all presentation items.

Jennifer Landesmann from Palo Alto spoke on National League of Cities lobbyist and shared her top concerns.

Chairman Hindi closed public comment.

9. Member Communications/Announcements (Minute 01:28:10)

None.

10. Adjourn

Chairman Hindi adjourned the meeting at approximately 8:30 p.m.

Roundtable action minutes are considered draft until approved by the Roundtable at a regular meeting. A video recording of this meeting is available on the Roundtable's website.



Airport Director's Report

Presented at the December 7, 2022
Airport/Community Roundtable Meeting

Aircraft Noise Office
September 2022



San Francisco
International
Airport

Aircraft Noise Levels

September 2022

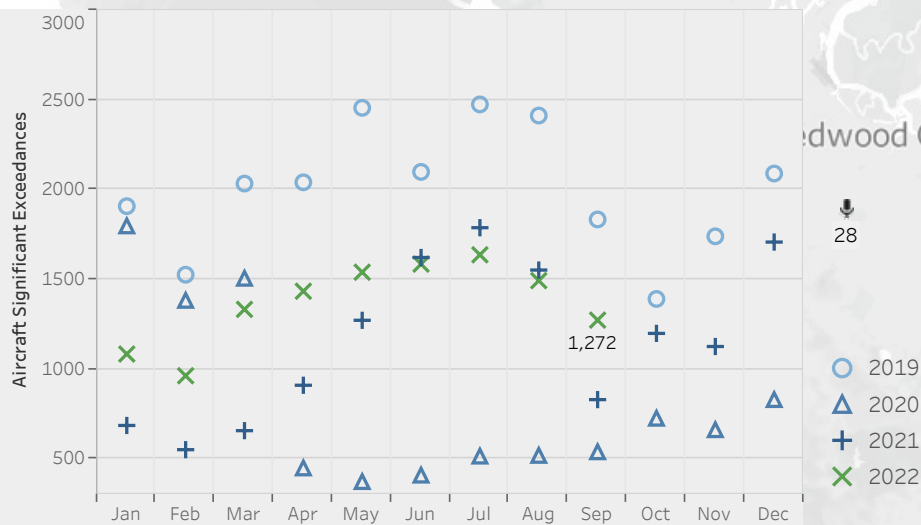
The map shows 29 aircraft noise monitoring locations that keep track of noise levels in the communities around the airport. The Community Noise Exposure Level (CNEL) metric is used to assess and regulate aircraft noise exposure in communities surrounding the airport.

Site	City	Aircraft			Community	
		Noise Events (AVG Day)	CNEL (dBA)	SEL (dBA)	LMax (dBA)	CNEL (dBA)
1	San Bruno	112	71	94	82	67
2	San Bruno	73	55	81	68	63
3	SSF	40	52	79	68	60
4	SSF	105	66	89	77	59
5	San Bruno	121	65	87	75	61
6	SSF	95	63	87	75	57
7	Brisbane	19	47	79	67	58
8	Millbrae	16	52	85	73	65
9	Millbrae	10	41	79	64	58
10	Burlingame	6	39	79	65	57
11	Burlingame	9	39	76	65	57
12	Foster City	300	61	81	70	57
13	Hillsborough	3	38	83	66	56
14	SSF	91	58	82	71	59
15	SSF	133	57	81	69	58
16	SSF	79	57	82	70	57
17	SSF	84	57	81	69	58
18	Daly City	84	62	86	75	59
19	Pacifica	75	58	83	73	56
20	Daly City	87	51	78	65	59
21	San Francisco	36	45	77	64	61
22	San Bruno	64	56	81	70	62
23	San Francisco	71	57	87	69	61
24	San Francisco	66	50	77	65	60
25	San Francisco	19	42	78	65	56
26	San Francisco	6	38	77	65	57
27	San Francisco	6	36	78	66	57
28	Redwood City	7	40	78	65	53
29	San Mateo	81	50	78	65	57

Noise Monitor's CNEL values (top) are derived from actual measured events and are used to validate the 65dBA CNEL noise footprint. Aircraft and Community monthly CNEL average for each monitor site are provided, along with daily average aircraft counts with the average Sound Exposure Level (SEL) and Maximum Level (LMax).

The graph below shows aircraft noise events that produced a noise level higher than the maximum allowable decibel value established for a particular monitoring site.

Significant Exceedances



Operations

September 2022

Monthly Ops	AVG Daily Ops	12 Month AVG	YOY Growth
30,425	1,014	28,525	16%

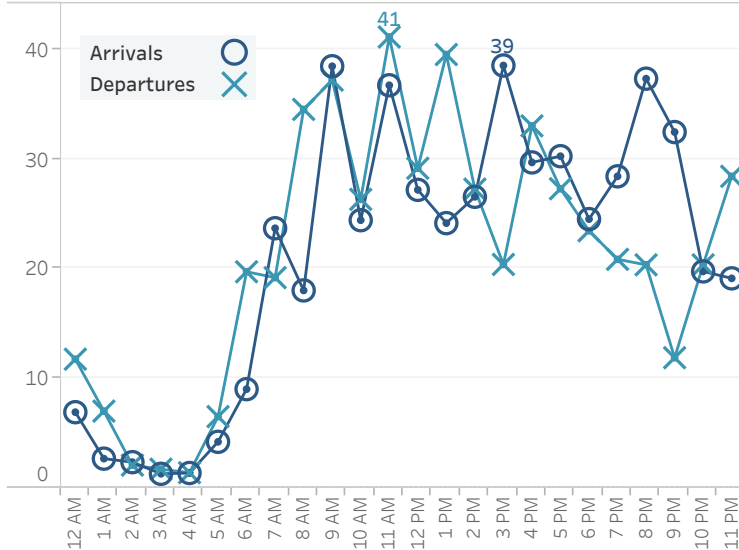
Major Arrival and Departure Routes (West Flow)



West Flow is depicted in the above image and is a predominate flow at SFO.

West Flow
98%

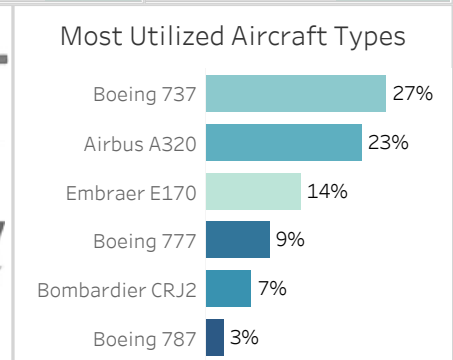
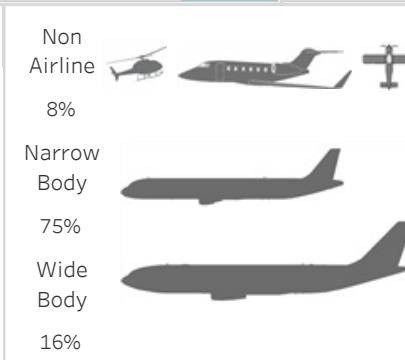
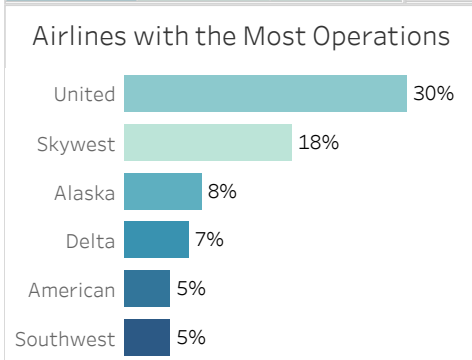
September 2022 Average Day (Hourly)



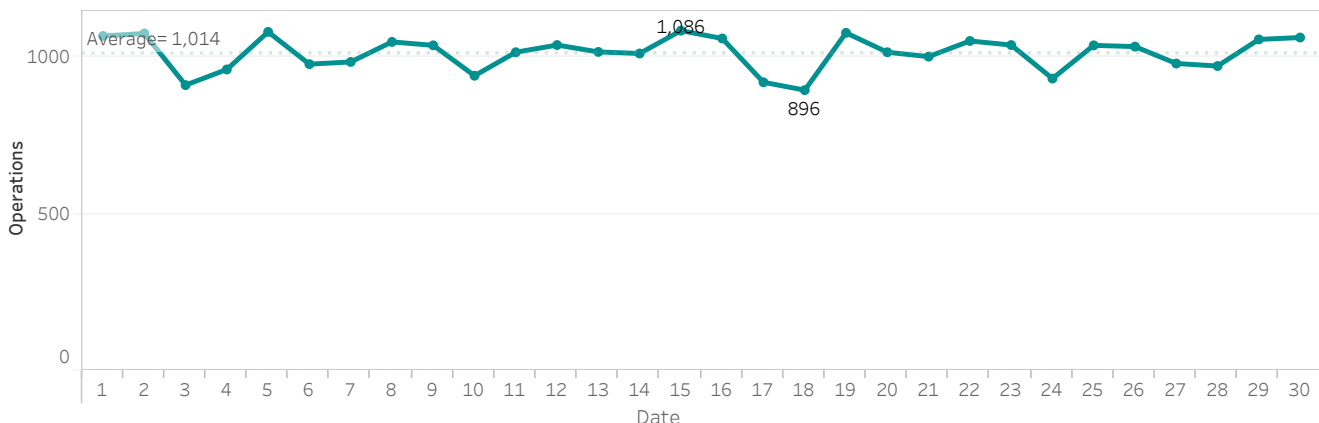
Top Destinations		
Los Angeles	JFK	San Diego
7%	4%	4%

Down the Bay vs Peninsula	
1.1 Down the Bay Visual	41%
1.2 BDEGA Arrival	59%

Arrival Route	Percentage	Departure Route	Percentage
1. BDEGA	29%	A. GAP	19%
2. DYAMD	37%	B. SSTIK	29%
3. SERFR	29%	C. NIITE	10%
4. PIRAT	5%	D. TRUKN RWY 01	41%
		D. TRUKN RWY 28	2%



Daily Aircraft Operations



Runway Usage and Nighttime Operations

Leftmost Runway Utilization table shows percent of runway usage for arrivals and departures by runway based on air carrier operations using jet, regional jet, and turboprop aircraft. Late Night Preferential Runway Use table depicts departure runway usage between 1am - 6am for jet aircraft for the whole month (top) and during nighttime hours only (bottom). Percentages [%] are rounded to the nearest whole number.

Runway Utilization

	Arrivals	Departures
01 L/R		79% 11,134
10 L/R	0% 3	2% 349
19 L/R	2% 328	
28 L/R	98% 13,712	18% 2,571

Late Night Preferential Runway Use (1 am - 6 am)

	Departures
10 L/R	2% 10
01 L/R	44% 204
28 L/R	54% 254

Runway Utilization

	Arrivals	Departures
	28L	28R
	39%	61%
Night (10pm-7am)		
	20%	80%

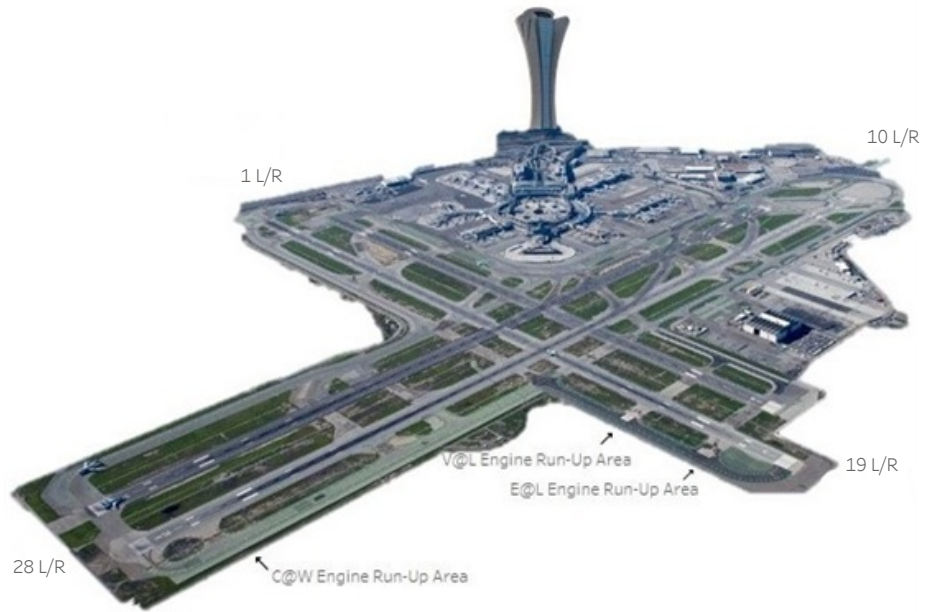
Nighttime Power Run-Ups

10pm-7am

Alaska Airlines	5
American Airlines	11
United Airlines	8

A power runup is a procedure used to test an aircraft engine after maintenance is completed. This is done to ensure safe operating standards prior to returning the aircraft to service. The Aircraft power settings range from idle to full power and may vary in duration.

Designated Power Runup locations are 19 L/R depicted on the airfield map (right) with airlines nighttime power runup counts shown above.



Hourly Nighttime Operations

○ 12 AM □ 1 AM + 2 AM × 3 AM * 4 AM ◇ 5 AM



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
12 AM	24	32	24	15	23	21	11	10	17	13	8	22	12	12	15	18	15	15	47	17	21	18	23	18	19	24	15	16	12	25
1 AM	8	7	7	10	9	6	12	8	5	7	10	10	6	9	14	9	13	10	17	9	10	5	15	7	8	13	10	8	7	10
2 AM	5	8	5	5	3	3	3	4	8	7	3	4	5	2	3	2	5	4	5	4	4	4	4	4	5	2	4	4	3	3
3 AM	3	1	3	2	2	1	2	4	4	1	1	2	2	1	2	2	2	2	1	2	2	1	1	1	4	2	4	5	1	1
4 AM	1	3		3	3	2			1	4		2	1	1		1	1	1	3	2	1	2	1		1	1			3	
5 AM	14	12	12	9	11	10	11	13	11	10	10	11	11	14	12	11	9	10	8	10	10	11	9	10	12	8	13	8	11	10

Noise Reports

September 2022

Noise Reporters / Noise Reports

	Noise Reporters	Noise Reports
Atherton	4	103
Belmont	2	2
Brisbane	14	350
Burlingame	1	1
Daly City	11	1,656
East Palo Alto	1	3
El Granada	1	1,635
Foster City	6	48
Hillsborough	3	55
Menlo Park	8	1,344
Millbrae	4	21
Montara	1	530
Pacifica	16	845
Portola Valley	20	14,582
Redwood City	9	689
San Bruno	8	910
San Carlos	1	119
San Francisco	19	2,930
San Mateo	10	1,060
South San Francisco	9	1,457
Woodside	8	1,733
Alameda	2	2
Aptos	2	10
Ben Lomond	1	3
Berkeley	1	784
Capitola	4	462
Castro Valley	1	15
Cupertino	2	207
Emerald Hills	6	1,149
Felton	3	147
Fremont	1	245
Los Altos	60	10,998
Los Altos Hills	12	1,483
Los Gatos	41	6,653
Moraga	3	316
Mountain View	17	3,341
Oakland	14	3,632
Palo Alto	115	24,270
Richmond	5	240
San Jose	1	1
Santa Cruz	64	14,046
Scotts Valley	32	5,830
Soquel	34	6,314
Stanford	3	658
Sunnyvale	3	54
Union City	1	312
Watsonville	1	75
Grand Total	585	111,320

Roundtable

Other

Reporters Annual AVG

601

Reports Annual AVG

111,410

New Reporters

19

New Reporters Top City

Richmond
South San Francisco

Furthest Report

64 miles

Reports per SFO Operation

4

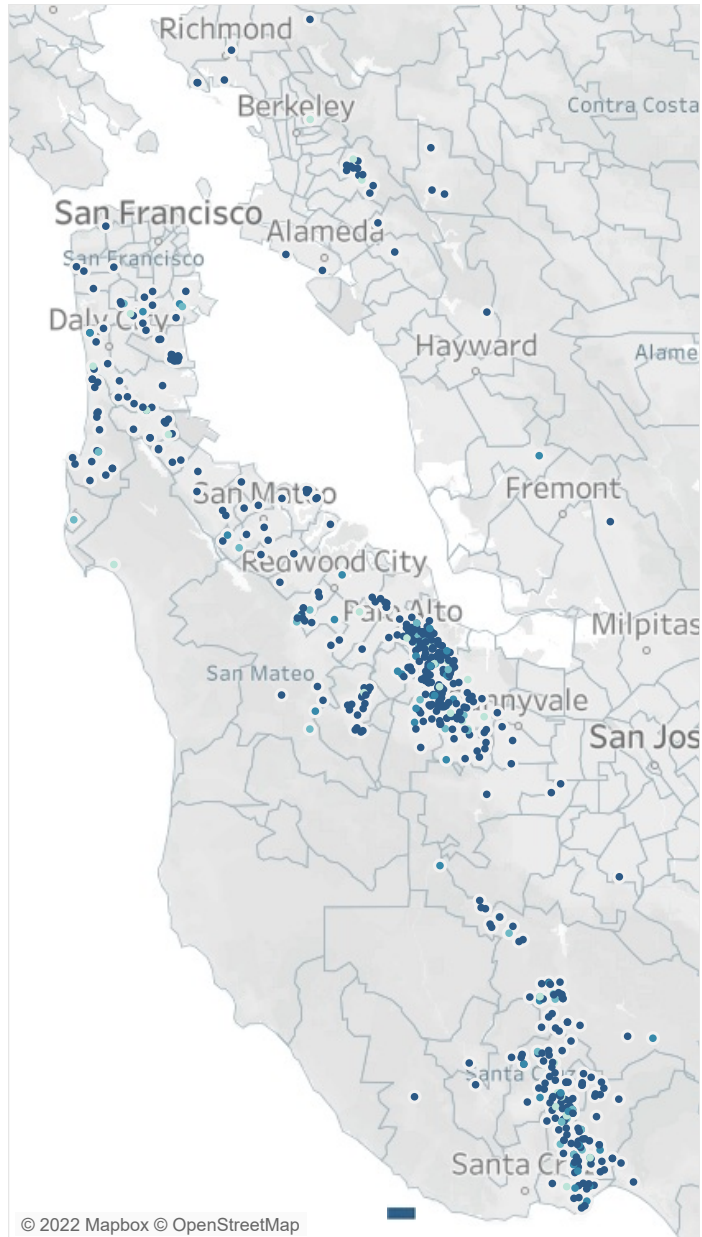
Top Aircraft Types

A320
B737
E75L

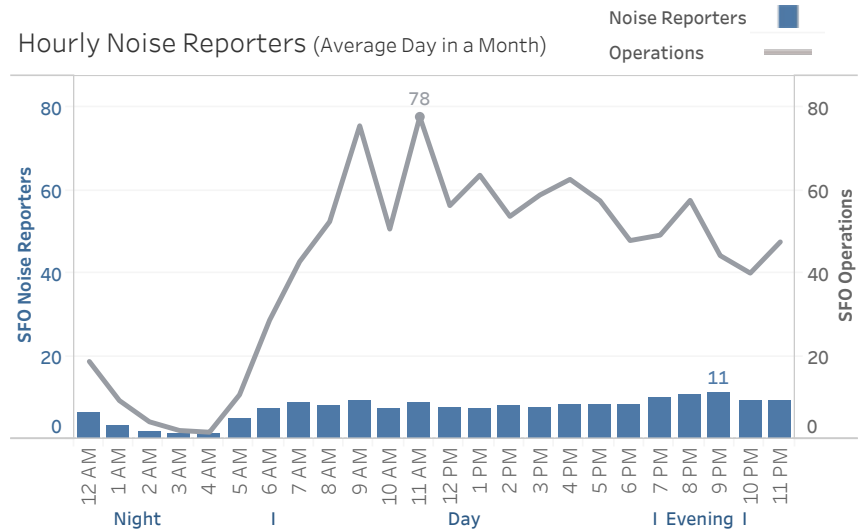
Top Flight Numbers

KAL214
DAL2657
UAL739
UAL2247

Noise Reporters Location Map

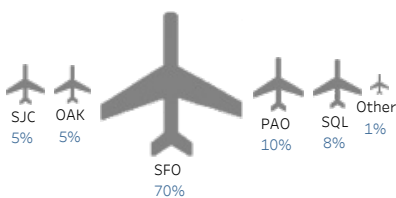


Hourly Noise Reporters (Average Day in a Month)



Notes: Address validation Relies on USPS-provided ZIP Code look up table and USPS-specified default city values.

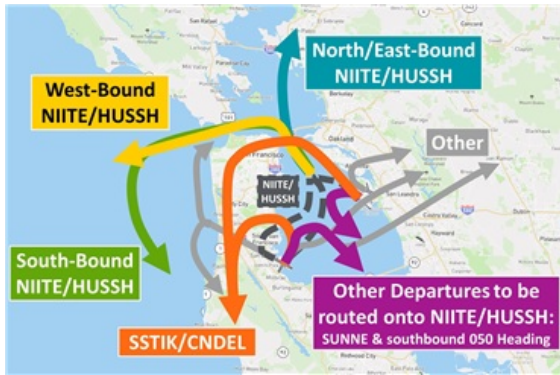
Noise Reports by Airport



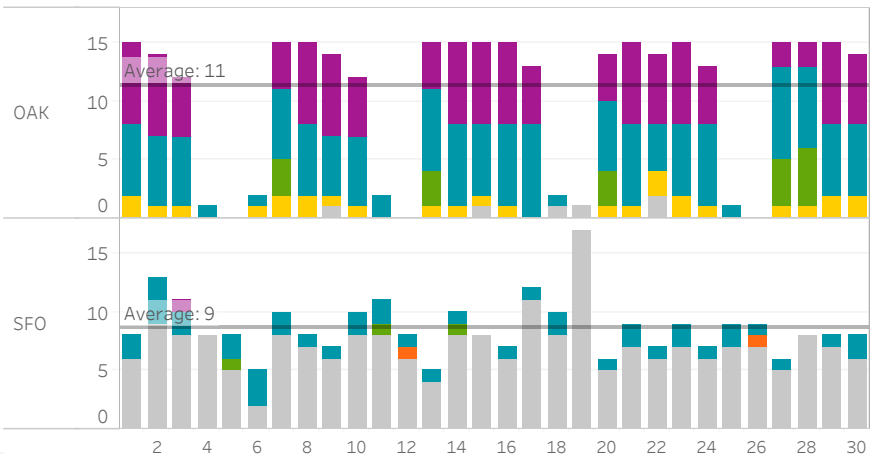
99% of noise reports correlate to a flight origin/destination airport.

Source: SFO Intl Airport Noise Monitoring System

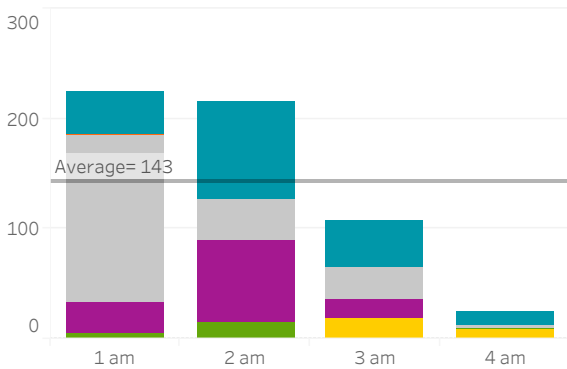
NIITE to GOBBS 1 am to 5 am (September 2022)



Count of Departures per Night



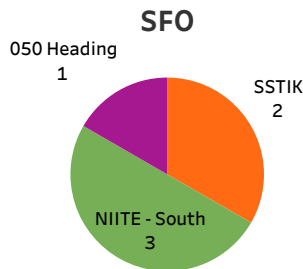
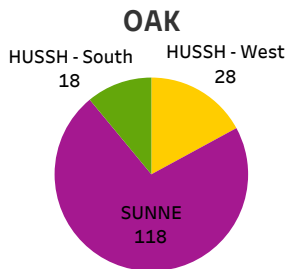
Average Total Departures per Hour



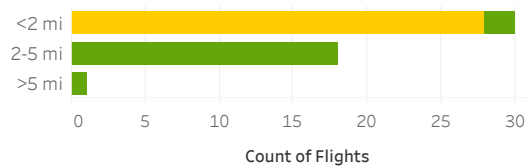
Departure Runway Usage

OAK		SFO				
12	30	01L	01R	10L	28L	28R
1%	99%	3%	10%	1%	58%	28%

CNDEL and SSTIK Departures vs HUSSH and NIITE



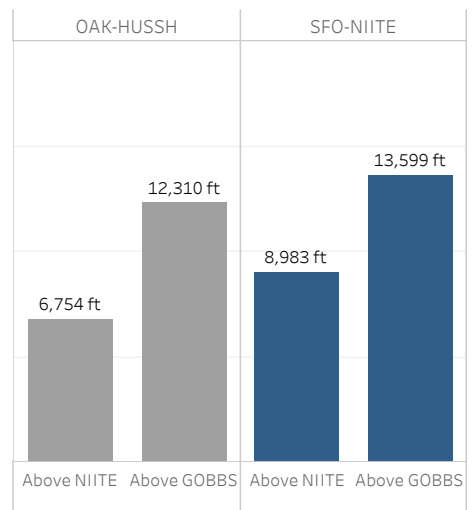
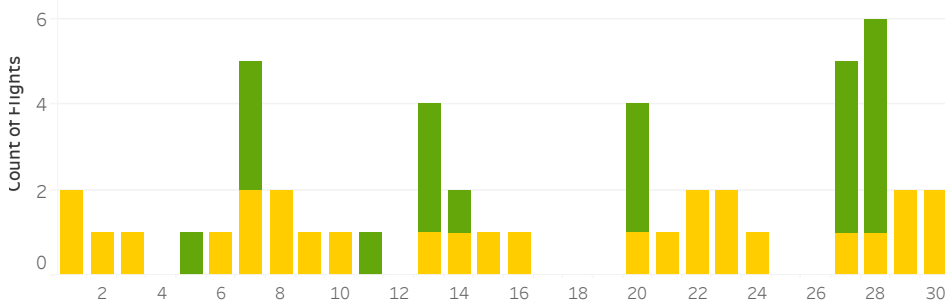
How Close are Aircraft Flying to GOBBS?



Average Altitude at NIITE and GOBBS

Legend for Average Altitude:

- NIITE/HUSSH - South (Green)
- NIITE/HUSSH - West (Yellow)





Airport Director's Report

Presented at the December 7, 2022
Airport/Community Roundtable Meeting

Aircraft Noise Office
October 2022



San Francisco
International
Airport

Aircraft Noise Levels

October 2022

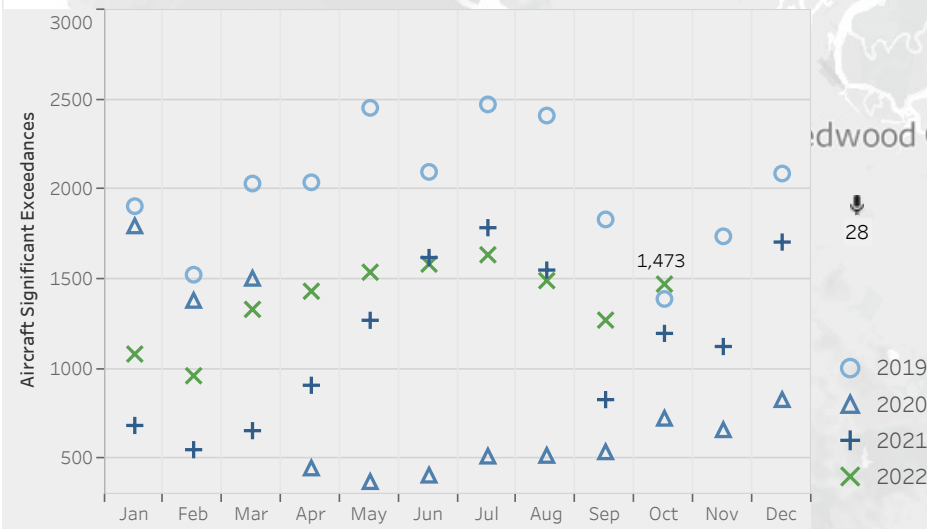
The map shows 29 aircraft noise monitoring locations that keep track of noise levels in the communities around the airport. The Community Noise Exposure Level (CNEL) metric is used to assess and regulate aircraft noise exposure in communities surrounding the airport.

Site	City	Aircraft			Community	
		Noise Events (AVG Day)	CNEL (dBA)	SEL (dBA)	LMax (dBA)	CNEL (dBA)
1	San Bruno	118	71	94	82	67
2	San Bruno	79	54	80	68	63
3	SSF	47	50	79	67	59
4	SSF	111	66	89	77	58
5	San Bruno	105	65	88	76	61
6	SSF	101	63	87	75	56
7	Brisbane	24	47	80	66	58
8	Millbrae	16	53	84	73	65
9	Millbrae	10	42	79	65	58
10	Burlingame	6	37	76	64	57
11	Burlingame	8	39	76	64	57
12	Foster City	320	62	82	71	57
13	Hillsborough	3	37	82	66	55
14	SSF	98	58	83	71	58
15	SSF	147	58	81	69	58
16	SSF	81	57	82	71	55
17	SSF	86	56	81	69	57
18	Daly City	86	62	87	75	58
19	Pacifica	75	58	84	73	55
20	Daly City	89	50	77	65	59
21	San Francisco	31	43	76	63	60
22	San Bruno	69	55	81	70	62
23	San Francisco	82	53	80	68	60
24	San Francisco	89	56	83	68	67
25	San Francisco	18	42	78	65	56
26	San Francisco	4	37	78	65	57
27	San Francisco	6	52	93	68	60
28	Redwood City	8	39	78	65	52
29	San Mateo	81	50	79	64	56

Noise Monitor's CNEL values (top) are derived from actual measured events and are used to validate the 65dBA CNEL noise footprint. Aircraft and Community monthly CNEL average for each monitor site are provided, along with daily average aircraft counts with the average Sound Exposure Level (SEL) and Maximum Level (LMax).

The graph below shows aircraft noise events that produced a noise level higher than the maximum allowable decibel value established for a particular monitoring site.

Significant Exceedances



Operations

October 2022

Monthly Ops	AVG Daily Ops	12 Month AVG	YOY Growth
30,946	998	28,852	13%

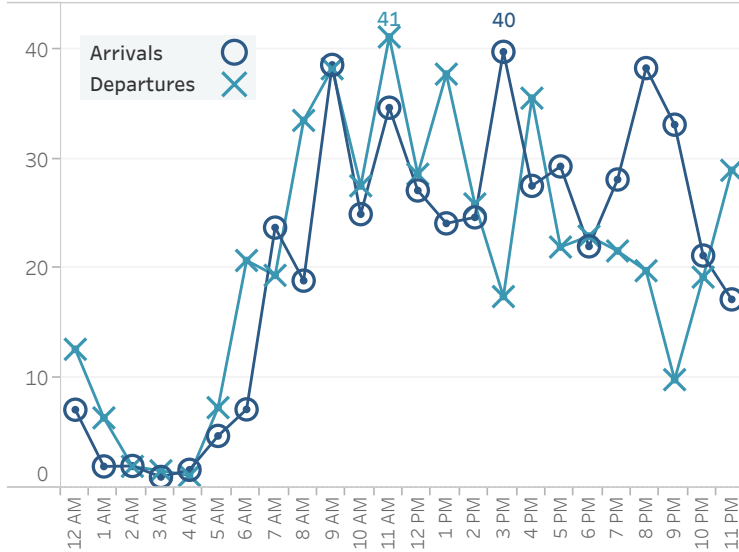
Major Arrival and Departure Routes (West Flow)



West Flow is depicted in the above image and is a predominate flow at SFO.

West Flow
100%

October 2022 Average Day (Hourly)

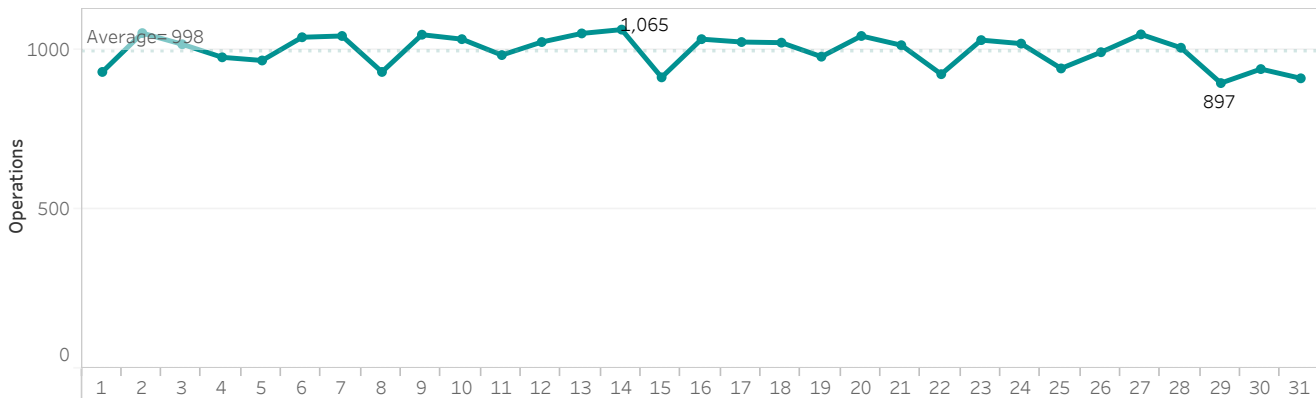


Top Destinations			Down the Bay vs Peninsula	
Los Angeles	Seattle	JFK	1.1 Down the Bay Visual	35%
7%	4%	4%	1.2 BDEGA Arrival	65%

Arrival Route		Departure Route	
1. BDEGA	29%	A. GAP	20%
2. DYAMD	39%	B. SSTIK	31%
3. SERFR	27%	C. NIITE	10%
4. PIRAT	5%	D. TRUKN RWY 01	38%
		D. TRUKN RWY 28	2%

Airlines with the Most Operations	Aircraft Types
<ul style="list-style-type: none"> United: 31% Skywest: 18% Alaska: 8% Delta: 7% American: 5% Southwest: 5% 	<ul style="list-style-type: none"> Boeing 737: 27% Airbus A320: 24% Embraer E170: 13% Boeing 777: 9% Bombardier CRJ2: 7% Boeing 787: 3%

Daily Aircraft Operations



Runway Usage and Nighttime Operations

Leftmost Runway Utilization table shows percent of runway usage for arrivals and departures by runway based on air carrier operations using jet, regional jet, and turboprop aircraft. Late Night Preferential Runway Use table depicts departure runway usage between 1am - 6am for jet aircraft for the whole month (top) and during nighttime hours only (bottom). Percentages [%] are rounded to the nearest whole number.

Runway Utilization

	Arrivals	Departures
01 L/R		81% 11,576
10 L/R		0% 8
28 L/R	100% 14,319	19% 2,742

Late Night Preferential Runway Use (1 am - 6 am)

	Departures
10 L/R	2% 9
01 L/R	54% 269
28 L/R	44% 219

Runway Utilization

	Arrivals	Departures
	28L	28R
	40%	60%
Night (10pm-7am)		
	30%	70%

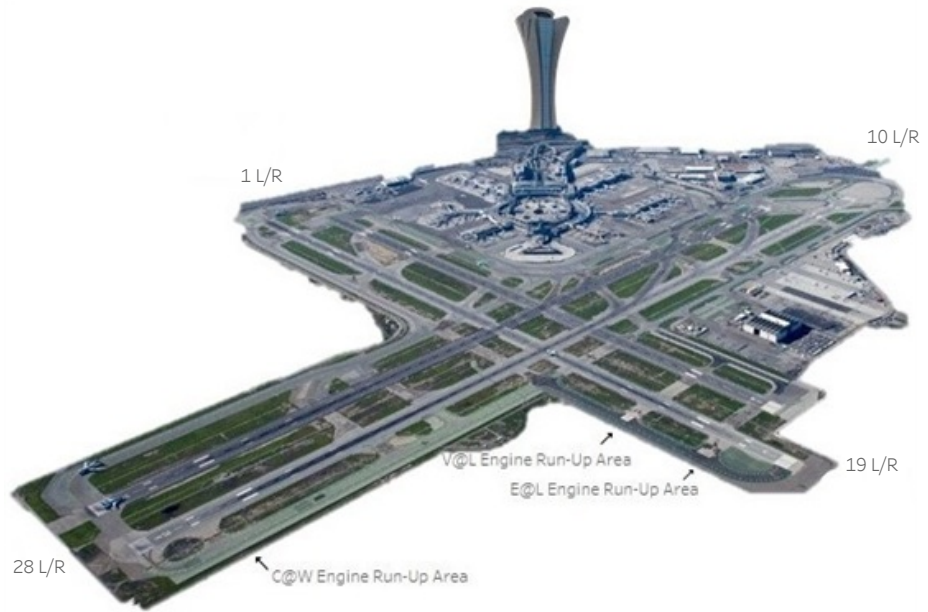
Nighttime Power Run-Ups

10pm-7am

Alaska Airlines	2
American Airlines	4
United Airlines	9

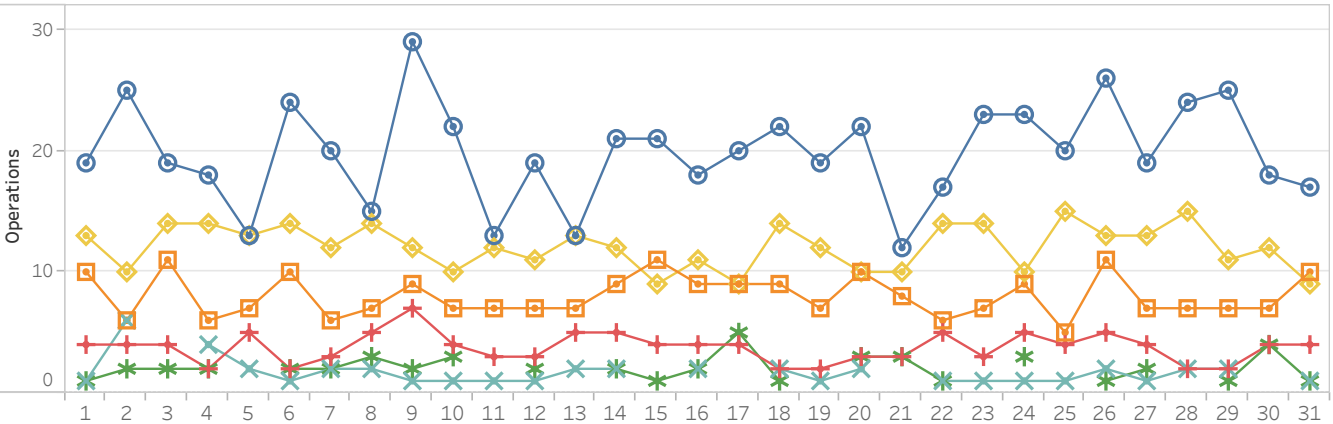
A power runup is a procedure used to test an aircraft engine after maintenance is completed. This is done to ensure safe operating standards prior to returning the aircraft to service. The Aircraft power settings range from idle to full power and may vary in duration.

Designated Power Runup locations are 19 L/R depicted on the airfield map (right) with airlines nighttime power runup counts shown above.



Hourly Nighttime Operations

○ 12 AM □ 1 AM + 2 AM × 3 AM * 4 AM ◇ 5 AM



Noise Reports

Noise Reporters Location Map

October 2022

	Noise Reporters / Noise Reports	
Roundtable		
Atherton	3	216
Belmont	1	7
Brisbane	12	352
Burlingame	1	75
Daly City	8	1,743
East Palo Alto	1	1
El Granada	1	1,007
Foster City	5	367
Hillsborough	2	85
Menlo Park	13	1,299
Millbrae	6	29
Montara	1	565
Pacifica	11	843
Portola Valley	19	12,844
Redwood City	7	324
San Bruno	6	848
San Carlos	2	165
San Francisco	20	3,134
San Mateo	9	986
South San Francisco	8	731
Woodside	6	1,717
Other		
Alameda	1	1
Aptos	2	16
Ben Lomond	2	11
Berkeley	1	520
Boulder Creek	3	8
Capitola	4	43
Castro Valley	2	17
Cupertino	1	74
Emerald Hills	6	1,770
Felton	3	77
Fremont	1	252
Los Altos	53	10,171
Los Altos Hills	11	1,251
Los Gatos	39	6,227
Moraga	3	118
Mountain View	18	2,752
Oakland	10	3,356
Palo Alto	112	19,462
Richmond	4	169
San Lorenzo	1	1
Santa Cruz	52	10,087
Saratoga	1	3
Scotts Valley	28	4,611
Soquel	32	3,524
Stanford	4	645
Sunnyvale	1	4
Union City	1	720
Watsonville	1	69
Grand Total	539	93,297

Reporters Annual AVG

588

Reports Annual AVG

108,317

New Reporters

8

New Reporters Top City

Palo Alto
South San Francisco

Furthest Report

64 Miles

Reports per SFO Operation

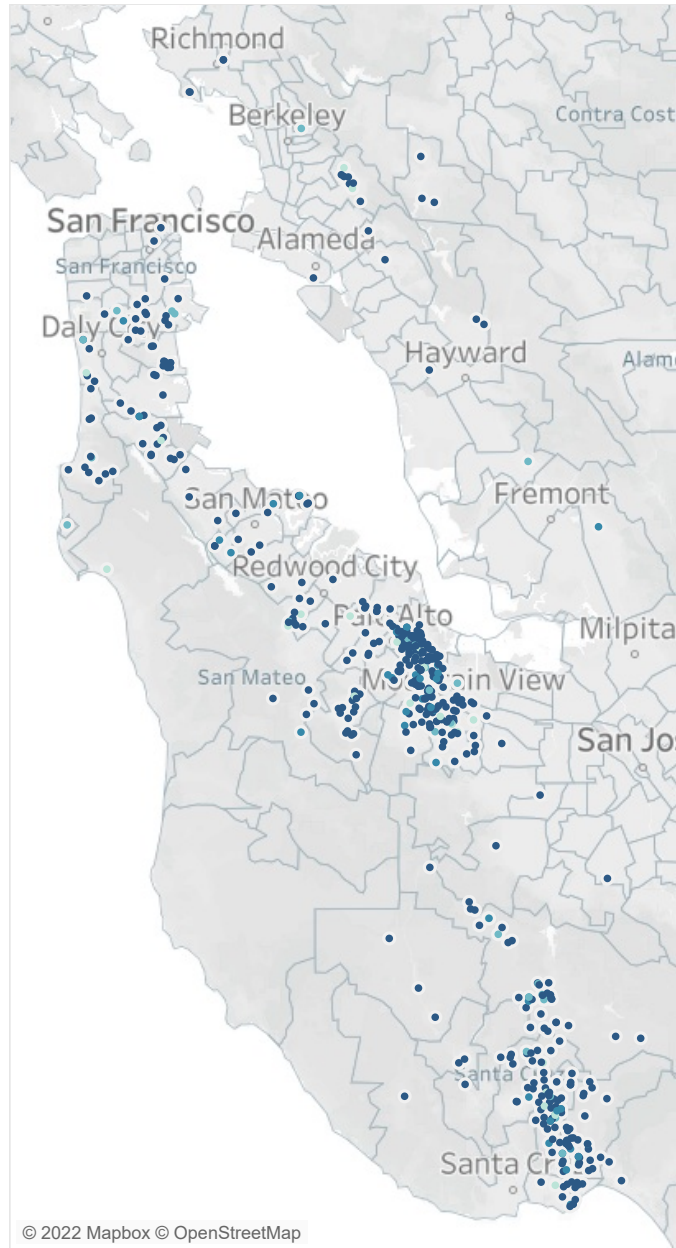
3

Top Aircraft Types

A320
B737
E75L

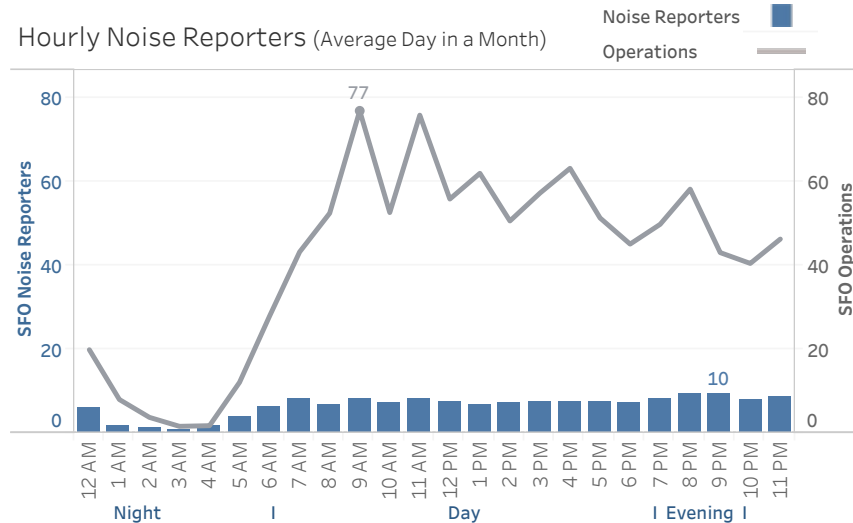
Top Flight Numbers

DAL2657
KAL214
UAL2247



© 2022 Mapbox © OpenStreetMap

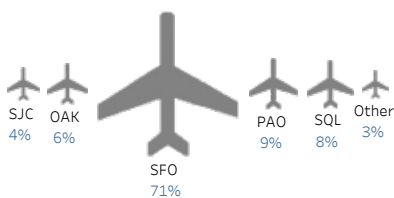
Hourly Noise Reporters (Average Day in a Month)



Source: SFO Intl Airport Noise Monitoring System

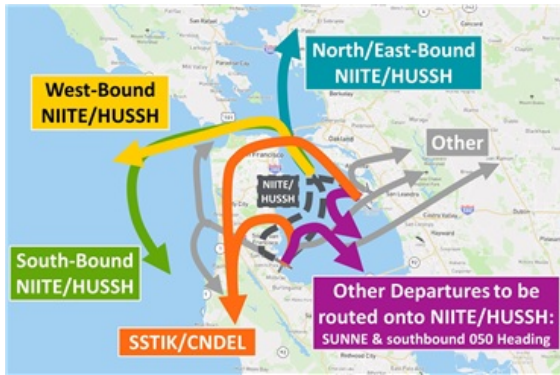
Notes: Address validation Relies on USPS-provided ZIP Code look up table and USPS-specified default city values.

Noise Reports by Airport

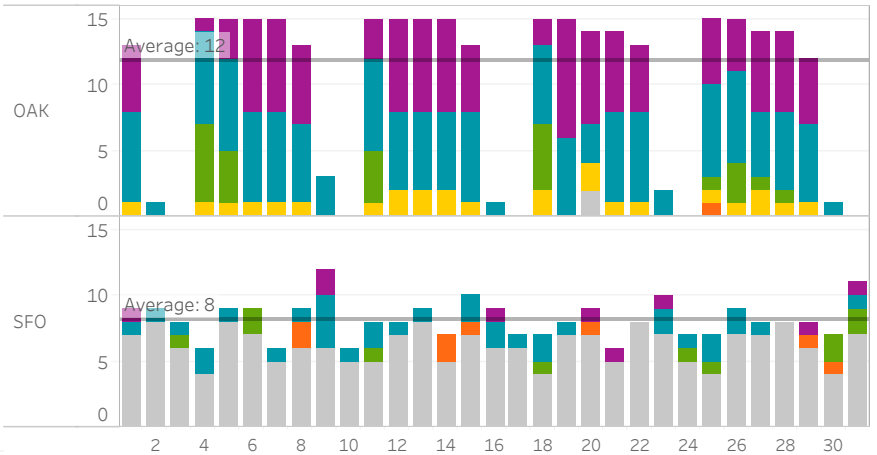


99% of noise reports correlate to a flight origin/destination airport.

NIITE to GOBBS 1 am to 5 am (October 2022)

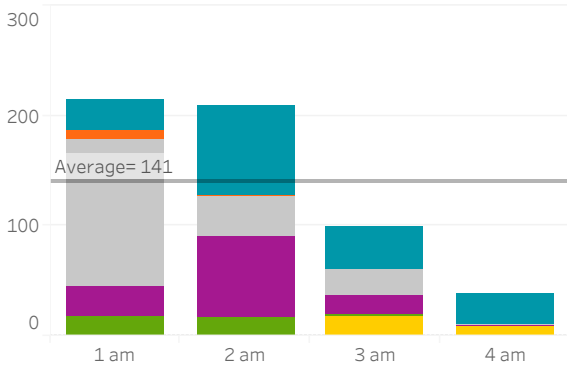


Count of Departures per Night



- 050/SUNNE
- NIITE/HUSSH - West
- NIITE/HUSSH - North & East
- SSTIK/CNDEL
- NIITE/HUSSH - South
- Other

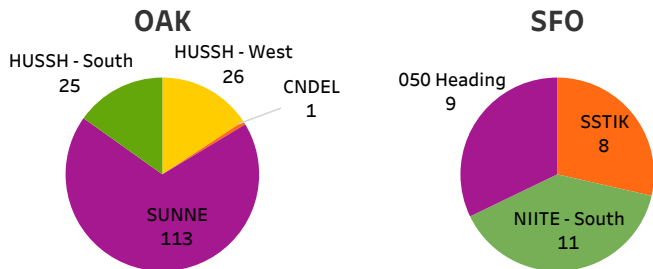
Average Total Departures per Hour



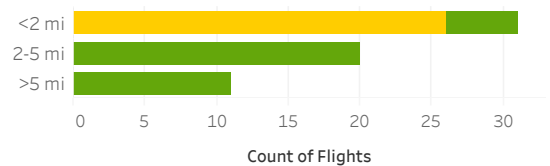
Departure Runway Usage

OAK	SFO					
	01L	01R	10L	10R	28L	28R
30	6%	15%	2%	1%	58%	18%
100%						

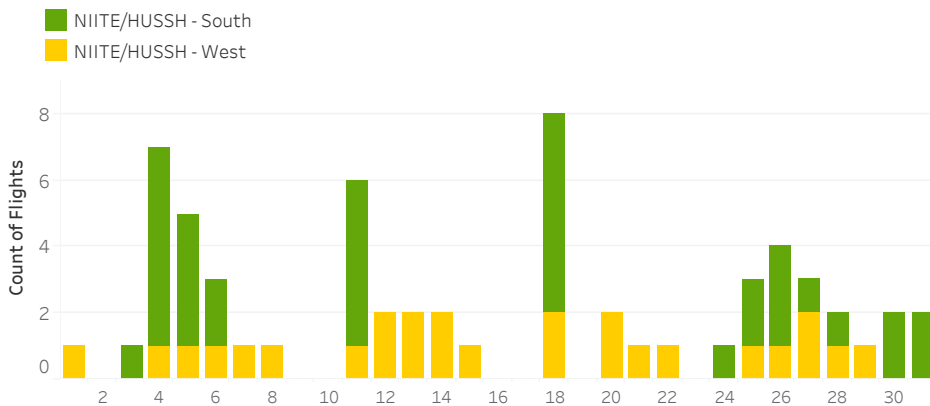
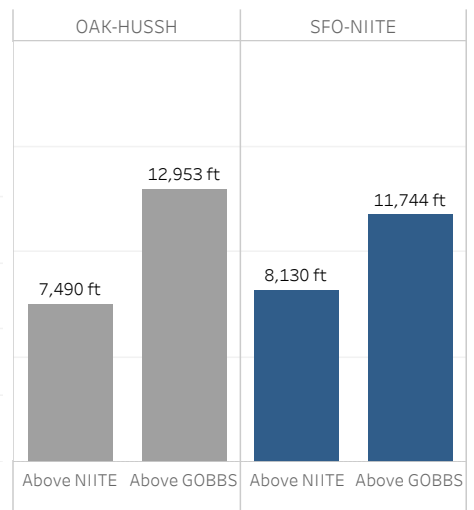
CNDEL and SSTIK Departures vs HUSSH and NIITE



How Close are Aircraft Flying to GOBBS?



Average Altitude at NIITE and GOBBS





November 30, 2022

TO: Roundtable membership and interested parties

FROM: Kathleen Wentworth, Roundtable Coordinator

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

BACKGROUND

On June 11, 2021, Governor Newsom issued Executive Order N-08-21, which rescinded his prior Executive Order N-29-20 and which waived, through September 30, 2021, certain provisions of the Brown Act relating to teleconferences/remote meetings. The Executive Order waived, among other things, the provisions of the Brown Act that otherwise required the physical presence of members of a local agency or other personnel in a particular location as a condition of participation or as a quorum for a public meeting. These waivers set forth in the Executive Order were to expire on October 1, 2021.

On September 16, 2021, the Governor signed Assembly Bill (AB) 361, a bill that codifies certain teleconference procedures that local agencies have adopted in response to the Governor's Brown Act-related Executive Orders. Specifically, AB 361 allows a local agency to continue to use teleconferencing under the same basic rules as provided in the Executive Orders under certain prescribed circumstances or when certain findings have been made and adopted by the local agency.

In order to continue to hold video and teleconference meetings, the membership will need to review and make findings every 30 days or thereafter that the state of emergency continues to directly impact the ability of the members to meet safely in person and that state or local officials continue to impose or recommend measures to promote social distancing. If the membership does continue to hold video and teleconference meetings, to meet the requirements of AB 361, the membership will need to adopt a resolution at every meeting.

The San Mateo County Board of Supervisors has adopted a resolution to continue remote meetings and encouraged other local agencies to make similar findings.

The membership previously found, and it remains the case, that public meetings pose risks for COVID-19 spread for several reasons. These meetings may bring together people from throughout a geographic region, increasing the opportunity for COVID-19 transmission. Further, the open nature of public meetings makes it difficult to enforce compliance with vaccination, physical distancing, masking, cough and sneeze etiquette, or other safety measures. Moreover, some of the safety measures used by private businesses to control these risks may be less effective for public agencies.

These factors continue to combine and directly impact the ability of members of the Roundtable to meet safely in person and to make in-person public meetings imminently risky to health and safety.

Resolution to make findings allowing continued remote meetings under Brown Act

November 30, 2022

Page 2 of 2

As noted above, under AB 361, local agency bodies were required to return to in-person meetings on October 1, 2021, unless they chose to continue with fully teleconferenced meetings and made the prescribed findings related to the existing state of emergency. At its meeting of October 5, 2022, the membership adopted a resolution wherein the membership found, among other things, that as a result of the continuing COVID-19 state of emergency, meeting in-person would present imminent risks to the health or safety of attendees.

The October 5, 2022 resolution also directed staff to bring an item to the membership prior to its next meeting to consider making the findings required by AB 361 in order to continue meeting under its provisions.

We recommend that the Membership continue to 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 a 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.

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.

FISCAL IMPACT

None

ATTACHMENT(S)

a. Resolution No. 22-07

RESOLUTION NO. 22-07

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

RESOLVED, by the San Francisco Airport Community Roundtable that

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 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, the San Francisco International Airport/Community Roundtable has an important interest in protecting the health and safety of attendees, and welfare of those who participate in its meetings; and

WHEREAS, at its meeting October 5, 2022, the San Francisco Airport/Community Roundtable adopted, by unanimous vote, a resolution wherein the membership found, *inter alia*, that as a result of the continuing COVID-19 state of emergency, meeting in person would present risks to the health or safety of attendees; and

WHEREAS, The San Francisco Airport/Community Roundtable has not met since its regular meeting in October 5, 2022; and

WHEREAS, the membership has reconsidered the circumstances of the state of emergency and finds that the state of emergency continues to impact the ability of members of the Roundtable to meet in person because there is a continuing threat of COVID-19 to the community, and because membership meetings have characteristics that give rise to risks to health and safety of meeting participants (such as the increased mixing associated with bringing people together from across the community); and

WHEREAS, in the interest of public health and safety, as affected by the emergency caused by the spread of COVID-19, the membership deems it necessary to

find that meeting in-person would present imminent risks to the health and 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 San Francisco Airport Community 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.

* * * * *

Adopted at the Regular meeting of _____.

Chairperson

Date



November 29, 2022

TO: SFO Airport/Community Roundtable Members and Alternates
FROM: Kathleen Wentworth, Roundtable Coordinator
SUBJECT: Possible Roundtable Suggestions for GBAS Innovative Procedures

EXECUTIVE SUMMARY

At their November 14, 2022 meeting, the SFO Airport/Community Roundtable (SFORT) Technical Working Group (TWG) considered ten possible suggestions for GBAS Innovative Procedures which could be submitted by the SFORT to the San Francisco International Airport (SFO) Ground Based Augmentation System (GBAS) Team for their consideration as possible Innovative GBAS flight arrival procedures. After the presentation of the ten suggestions to the TWG and discussion, it was the consensus of the three members of the TWG that all ten GBAS suggestions be brought to the full SFORT for their review and action.

BACKGROUND

The complete background, details and images for these ten suggestions are contained in the attached memo and image which were originally presented at the TWG. These ten “suggestions” are merely concepts or ideas; their submission does not obligate the SFORT in any way.

RECOMMENDATION

It is recommended that the SFORT members review and submit these suggestions to the SFO GBAS Team for their consideration as possible Innovative GBAS flight arrival procedures.

ATTACHMENTS

- a. Staff memo to the Technical Working Group: “Roundtable Suggestions for GBAS Innovative Procedures”
- b. Image: SFO West Flow – Arrivals
- c. Ten “Suggestions” for possible submission to SFO Roundtable/SFO GBAS Team





San Francisco International
Airport/Community Roundtable
455 County Center, 2nd Floor
Redwood City, CA 94063
T (650) 363-4220
F (650) 363-4849
www.sforoundtable.org

November 10, 2022

TO: SFO Roundtable Members & Alternates
FROM: Kathleen Wentworth, Roundtable Coordinator
SUBJECT: Roundtable *Suggestions* for GBAS Innovative Procedures



EXECUTIVE SUMMARY: Attached are ten *Suggestions* for possible GBAS flight procedures. These are being submitted to the Technical Working Group (TWG) for review, consideration and to determine if the TWG wishes to refer any suggestions to the SFO Airport Community Roundtable (SFORT) Members at the December 7, 2022 Roundtable meeting.

BACKGROUND: The FAA describes GBAS as a “Ground Based Augmentation System [which] augments the existing Global Positioning System (GPS) used in U.S. airspace by providing corrections to aircraft in the vicinity of an airport in order to improve the accuracy of, and provide integrity for, these aircrafts' GPS navigational position.” In addition, it has some enhanced flexibility in the design of GBAS procedures. **GBAS works only with arrival procedures to augment approaches for landing.** Its coverage extends out from the SFO airport for about 23 miles. It is *not designed* to work with procedures for takeoffs and departures.

As you well know, the SFO GBAS team is working far in advance of actual procedure design. They have asked that any GBAS suggestions or concepts for innovative ideas be submitted as soon as possible.

Attachment B in this memo includes ten Suggestion pages. Each Suggestion page is a mere concept – a suggestion that, if this subcommittee desires, can be submitted to the SFORT for submission to the SFO GBAS Team for their consideration and analysis. None of the Suggestion pages is a proposal; none of the *Suggestions* is a vetted or analyzed flight procedure. The GBAS team has requested suggestions from the public and has said that they prefer a basic suggestion that they can build on. If the SFO GBAS Team decides to design a procedure based on any of these or other Roundtable suggestions—or *any suggestion*—any proposed GBAS procedure will be subject to all applicable FAA regulations and processes as well as to SFO processes including presentation to the SFORT for review.

There are many reasons why a suggestion that sounds promising, may not succeed as a flight procedure – even a GBAS flight procedure. The Bay Area is compact and hosts three major airports sharing the airspace. Stringent, important FAA safety regulations -including adequate separation between flight paths – is a critical factor. Sometimes, there is just no space available for even the best of suggestions.

Most of the landings at SFO are to runways 28L and 28R (referred to as SFO’s “west flow” pattern) with a smaller number of landings on runways 19L and 19R. The landings on 19L and 19R typically occur when we have strong winds from the southeast – usually during rainy weather (referred to as SFO’s “southeast flow” pattern). (There are also very few landings during a year on runways 10L/R and 01L/R).

You will note that most of these ten *Suggestions* propose flight procedures which are: incremental, at nighttime, or apply to approaches and landings on runways 28L or 28R. There are mostly incremental improvements suggested because the constricted airspace offers very few opportunities for totally new flight procedures, so we have suggested improvements in existing flight procedures. But at night, when there are fewer other airplanes to get in the way, there may be more flexibility in options for improving the flight paths. And most *Suggestions* incorporate landings at 28L or 28R because that is where the overwhelmingly number of landings at SFO occur.

The flight path images – both those showing existing flight paths and those showing suggested new flight paths are very approximate. Because of airspace constraints, much of the SFO traffic is vectored (turned) away off of the published flight path either for safety or for airline efficiency, so there is not always a narrow path of actual flight tracks. In many images, we chose to show a possible path for a new GBAS by illustrating an existing offset approach such as the SFO RNAV(RNP)Y approach. GBAS has the potential to improve even on this approach.

Suggestion 1: Down the Bay. The GBAS team has already proposed GLS Down the Bay procedures. The suggested modification in this packet is a modest change to this GBAS Down the Bay Approach which would keep the final approach flight path offset to 28R – farther over the Bay - thereby reducing noise to mid-Peninsula Bayside cities.

Suggestions 2A-2B-2C: New GBAS offset arrival to 28R. This group of 3 *Suggestions* are variations on a concept that at minimum during the nighttime (and maybe also lower traffic hours during the day). Each of the *Suggestions* would apply to flights arriving on the **BDEGA** Arrival, **SERFR** Arrival or **PIRAT** Arrival. These three arrivals typically (but not always) approach and land on runway 28L. This suggested modification would route the arrivals to fly past the 28L path and to join a new GBAS procedure designed to maximize the offset to have airplanes approach and land on 28R.

Suggestions 3A-3B-3C: New GBAS procedure with longer circuitous route to an offset arrival to 28R. This group of three *Suggestions*, which is a nighttime only suggestion, builds on the 2A-2B-2C group of *Suggestions*, but adds that a plane would **fly a longer circuitous path over the Bay** before joining an offset route to 28R. It is anticipated that this concept of circuitous routing over the Bay will create additional flight mileage which could be used to dissipate aircraft altitude. This opportunity to dissipate “excess altitude” later in the approach **may allow the altitudes to be higher, and thus quieter, in the earlier portions of the arrival over highly populated communities.**

Suggestion 4: New GBAS procedure for an overwater route to Runways 19L and 19R. This suggestion is for a new route when SFO is using the southeast flow pattern and landing on runways 19L and 19R. Although this southeast flow pattern takes place on fewer of days in the year, the impact on residents is significant. Flights from the south are typically routed north up the San Mateo County coastline inland over residential areas at relatively low altitudes and then turned north/northeasterly over San Francisco neighborhoods at low altitudes. The suggested route would keep the northbound flights over the ocean away from the land near the coast and would direct the flights over the waters of the Golden Gate until joining the landing pattern for runway 19L/19R. It would also incorporate a holding pattern over the ocean – maybe near GOBBS – where airplanes can hold without impacting residents.

Suggestion 5: New GBAS procedure to replace the SERFR at night by incorporating an eastern arrival to the Bay with an offset approach to 28R. This suggestion would replace the SERFR Arrival for nighttime only. The SERFR flights fly from Los Angeles (LAX) and other airports to the Bay Area. This suggestion would create a newly combined route composed of much of an existing route, a new short connector segment and a new GBAS offset approach that would be similar to, but likely improved, from other offset approaches to 28R.

Suggestion 6: New GBAS procedure for dual offset approaches to runways 28L AND 28R. This suggestion has been made many times over the years by various entities and residents from Foster City, East San Mateo and other cities and residents. A recommendation for dual offset approaches was made by the Roundtable in their 2016 Recommendations to the FAA as part of the NorCal Initiative. This suggestion is challenging. But GBAS may be the technology which can achieve it – today or in the very near future. While today’s GBAS range at SFO is about 23 miles, apparently there are extended range GBAS options available. Because GBAS can use innovative flight path designs, such as curved paths, it might be possible to solve the challenge of 28L and 28R aircraft path separation in the crowded, shared Bay airspace by being able to use a curved flight path and only having to “curve out” the two runway approach paths over a short distance.

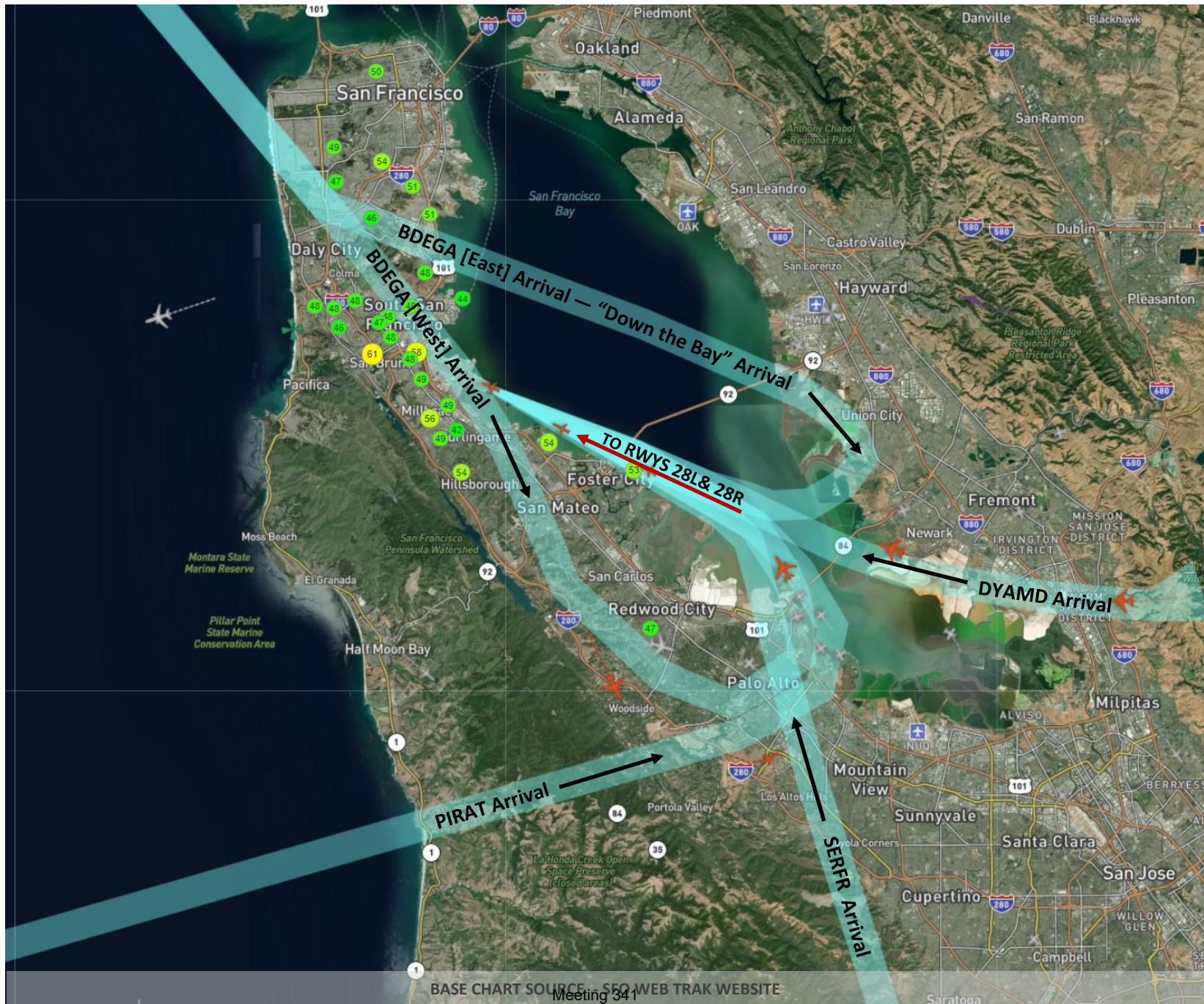
It’s not too late...If you have an idea, concept, suggestion for how to improve an approach into SFO or have a suggestion for a new approach to landing design procedure, you can discuss it at the TWG meeting or you can submit it directly to the SFO GBAS Team - SFO.GBAS@flysfo.com. Just a couple of sentences will be sufficient, but sooner is better.

RECOMMENDATION: It is recommended that the Technical Working Group refer these *Suggestions*, along with other appropriate suggestions proffered at the TWG meeting, to the SFO Roundtable Members at the December 7, 2022 Roundtable meeting.

ATTACHMENTS:

- a. Image: SFO West Flow – Arrivals
- b. Ten *Suggestions* for possible submission to SFO Roundtable/SFO GBAS Team

SFO West Flow — Arrivals



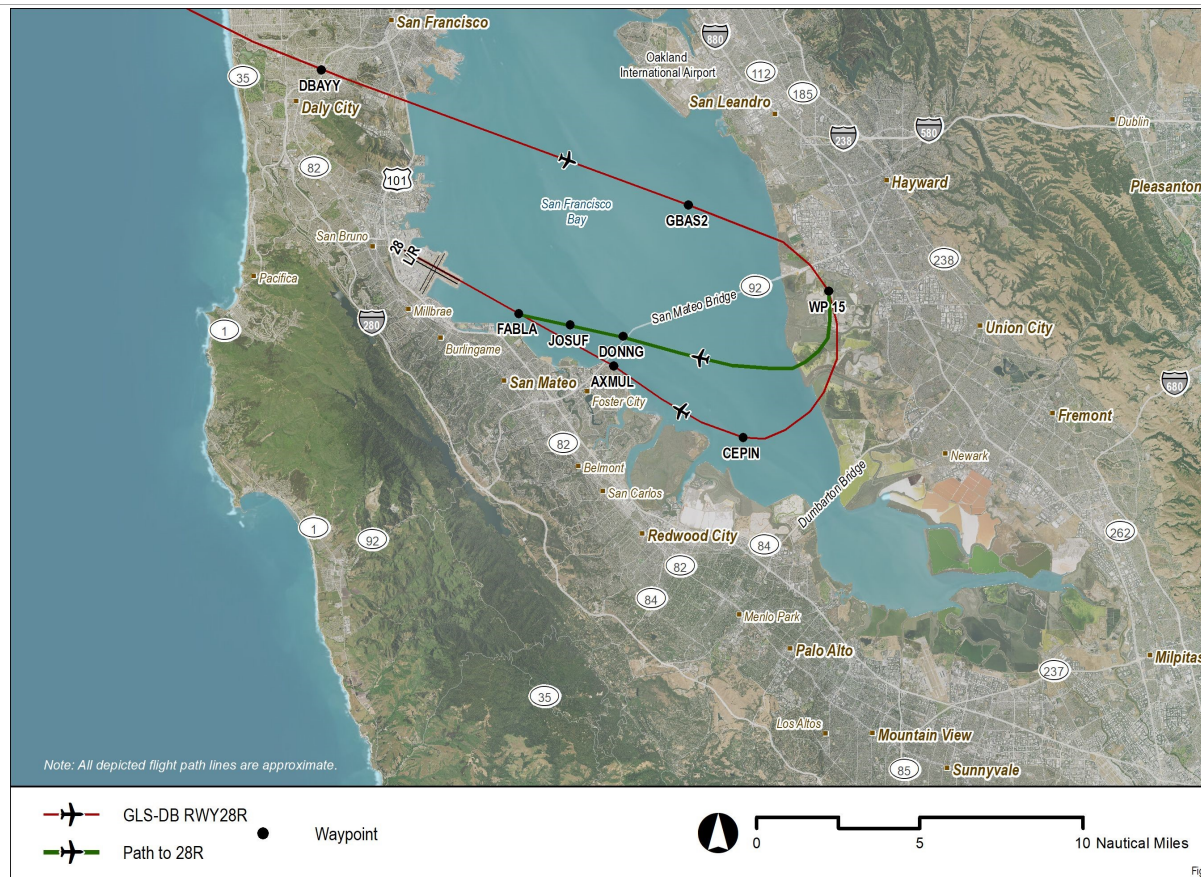
BASE CHART SOURCE: SFO WEB TRAK WEBSITE

Below is a **Suggestion**— by the SFO ROUNDTABLE to the SFO GBAS Team —for their consideration and analysis.
THIS IS NOT A PROPOSAL — THIS IS NOT A VETTED OR ANALYZED FLIGHT PROCEDURE.

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1	SFO	WEST FLOW	ARVL	DAY NIGHT	GBAS	GBAS SUGGESTION: Modify all the proposed GBAS “Down the Bay” arrivals to couple each with an offset approach and landing to 28R.
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As generally depicted in the proposed **GBAS “Down the Bay**. An airplane can fly the initial portion of the GBAS “Down the Bay” and at an appropriate point, when the aircraft starts a right turn towards the San Mateo Bridge, the plane should head toward the vicinity of DONNG intersection. Upon reaching the San Mateo Bridge, airplane turns left to intercept the ILS 28R localizer, other appropriate approach to 28R or to visually line up with 28R extended centerline to land on 28R (not Rwy 28L).



EXAMPLE: suggested modification of the GBAS “Down the Bay” (red line) to incorporate an offset path to 28R until passing the San Mateo Bridge (green line)

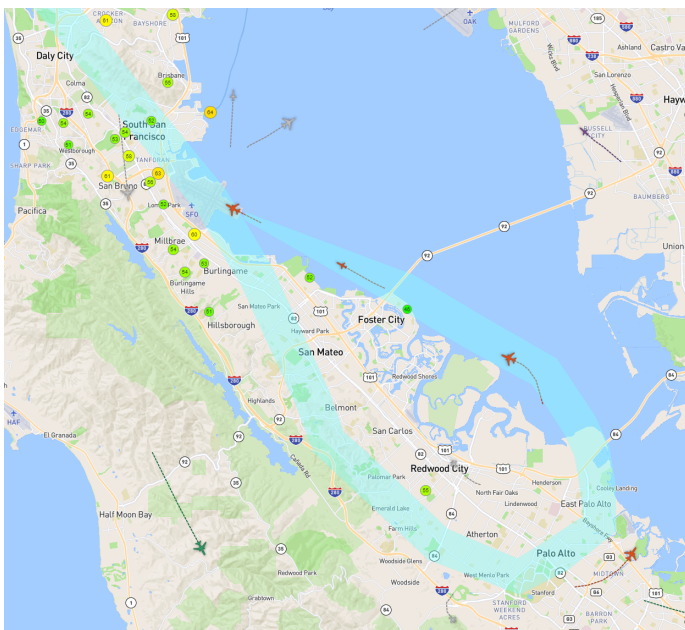
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2A	SFO	WEST FLOW	ARVL	DAY NIGHT	GBAS	GBAS SUGGESTION: BDEGA Arrivals to fly a new GBAS path that connects the BDEGA Arrival to a new 28R offset approach that maximizes offset in the vicinity of the final approach to 28R, fol-lowed by a landing on 28R.
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Via the **BDEGA ARRIVAL** [including aircraft on the arrival path as well as aircraft being vectored] from an approximate point where BDEGA flights are typically as-signed a heading to connect to ILS 28L...instead of turning toward the 28L path...instead to continue via a path to a **Rwy28R offset** approach such as a newly created GBAS path that can maximize offset in the vicinity of the final approach to 28R.

NOTE 1: *It is important that any new track does not alter flight paths of existing BDEGA arrivals while over residential areas.*
NOTE 2: *It is suggested that this approach could be used at night and perhaps at certain times of the day when traffic will allow.*



BDEGA Arrival path as shown on the SFO Flight Trak website.



Green line: suggested offset path to 28R until passing the San Mateo Bridge

Below is a **Suggestion**— by the SFO ROUNDTABLE to the SFO GBAS Team —for their consideration and analysis.
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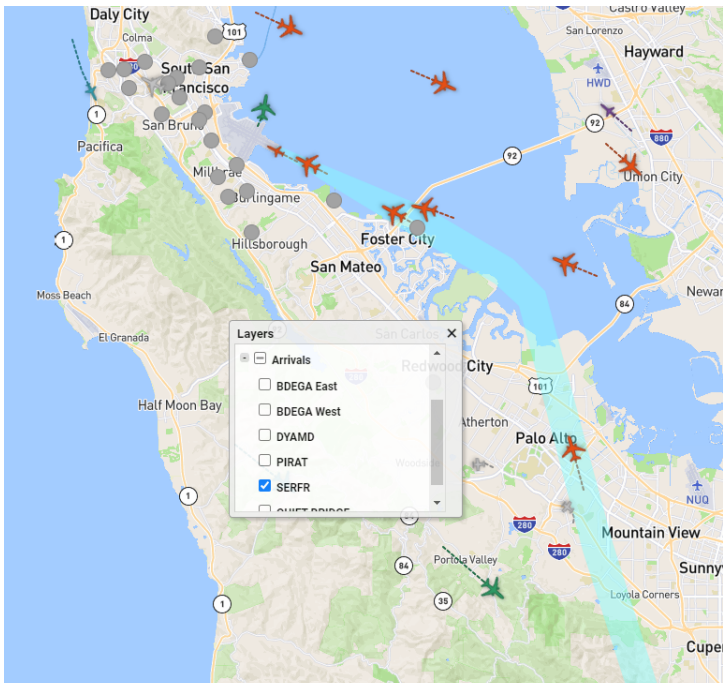
If the SFO GBAS Team decides to design a procedure based on this *Suggestion*—or *any suggestion*—any proposed GBAS procedure will be subject to all applicable FAA regulations and processes as well as SFO processes including presentation to the SFO Roundtable for review.

2B	SFO	WEST FLOW	ARVL	DAY NIGHT	GBAS	GBAS SUGGESTION: SERFR Arrivals to fly a new GBAS path that connects the SERFR Arrival/ILS28L transition from the vicinity of Highway 84 to a new 28R offset approach that maximizes offset in the vicinity of the final approach to 28R, then landing on 28R.

Via the **SERFR ARRIVAL** [including aircraft on the published arrival path as well as aircraft being vectored] could connect from the existing path of the SERFR Arrival/ILS28L transition until clear of residential areas. After passing Highway 84, continue via a path to a **Rwy 28R offset approach** such as a newly created GBAS path that can maximize offset in the vicinity of the final approach to 28R.

NOTE 1: *It is important that any new track does not alter flight paths of existing SERFR arrivals while over residential areas.*

NOTE 2: *It is suggested that this approach might be used at night and perhaps at certain times of the day when traffic will allow.*



SERFR Arrival path as shown on the SFO Flight Trak website.



Green line: suggested offset path to 28R until passing the San Mateo Bridge

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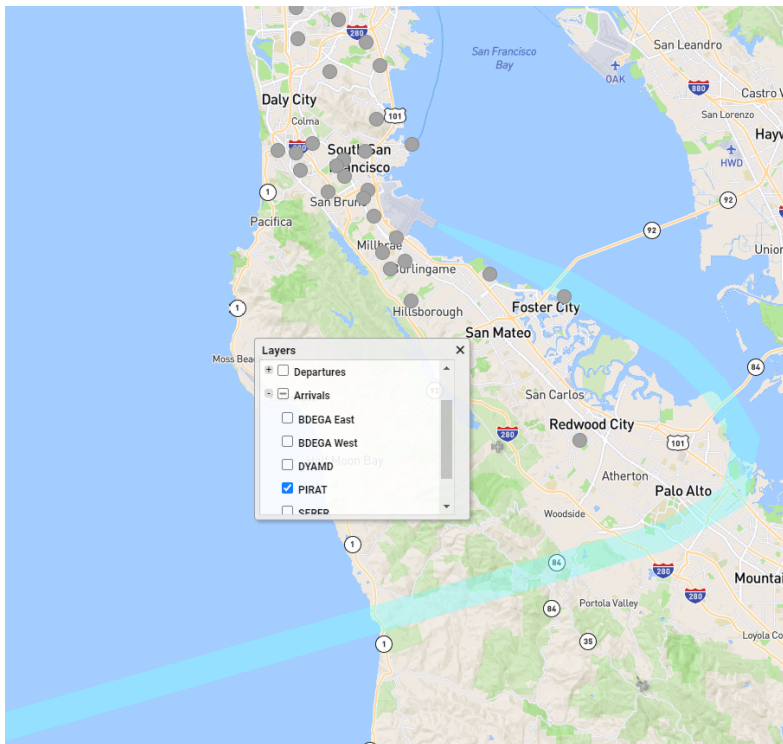
If the SFO GBAS Team decides to design a procedure based on this *Suggestion*—or *any suggestion*—any proposed GBAS procedure will be subject to all applicable FAA regulations and processes as well as SFO processes including presentation to the SFO Roundtable for review.

2C	SFO	WEST FLOW	ARVL	DAY NIGHT	GBAS	GBAS SUGGESTION: PIRAT Arrivals to fly a new GBAS path that connects the PIRAT Arrival to a new 28R offset approach that maximizes offset in the vicinity of the final approach to 28R, then landing on 28R.
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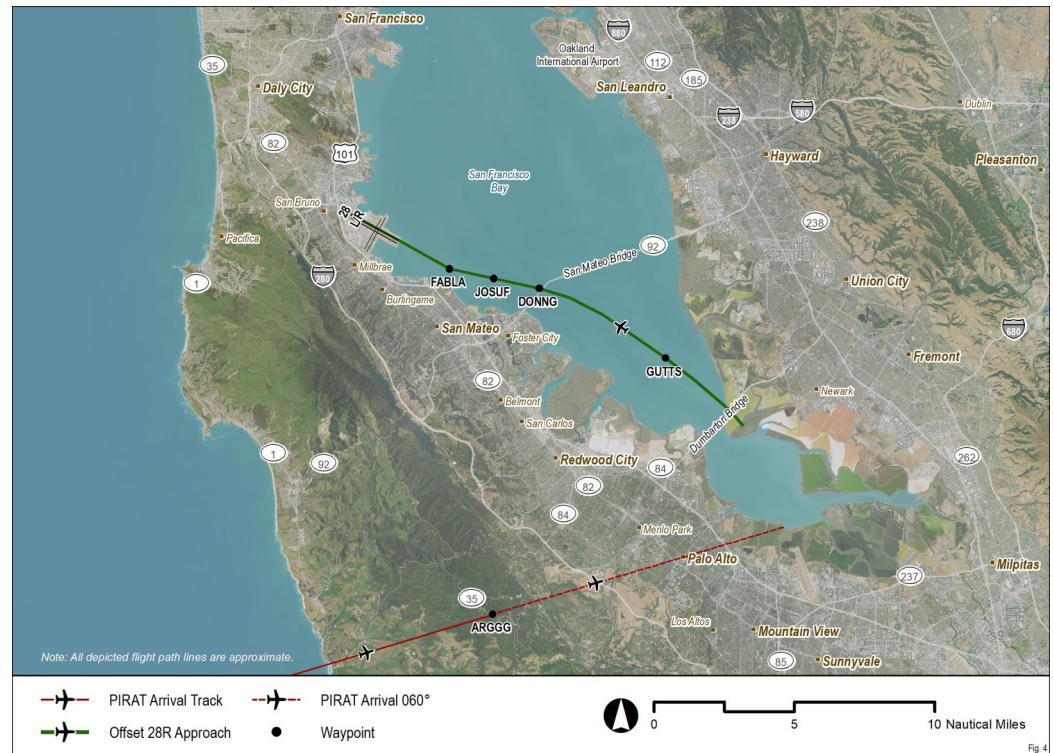
Via the **PIRAT ARRIVAL** [including aircraft on the published arrival path as well as aircraft being vectored] from an approximate point where PIRAT flights are typically assigned a heading to intercept the ILS 28L...instead of turning toward the 28L path, instead continue via a path to a **Runway 28R offset approach** such as a newly created GBAS path that can maximize offset in the vicinity of the final approach to 28R.

NOTE 1: *It is important that any new track does not alter flight paths of existing PIRAT arrivals while over residential areas.*

NOTE 2: *It is suggested that this approach might be used at night and at certain times of the day when traffic will allow.*



PIRAT Arrival path as shown on the SFO Flight Trak website.



Red line: PIRAT Arrival track and 060° heading.

Green Line: suggested offset path to 28R until passing the San Mateo

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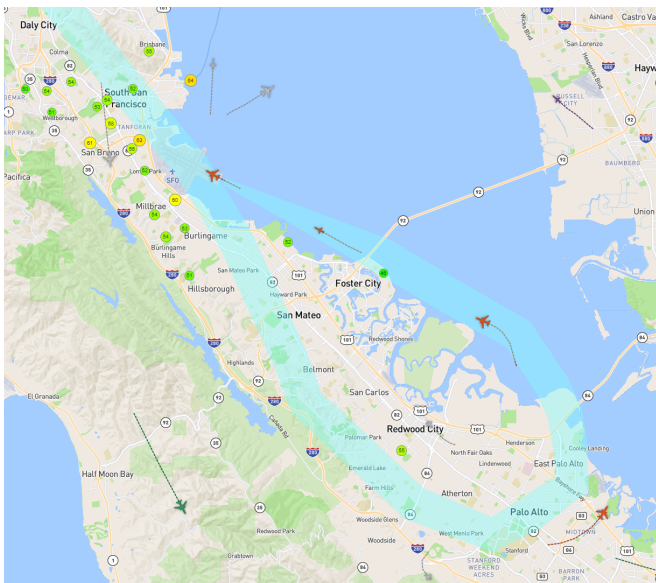
3A	SFO	WEST FLOW	ARVL	NIGHT ONLY	GBAS	GBAS SUGGESTION: BDEGA Arrivals to fly a new GBAS path that connects the BDEGA Arrival via a longer circuitous route over the Bay to a new 28R offset approach that maximizes offset in the vicinity of the final approach to 28R, followed by a landing on 28R.
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Via the **BDEGA ARRIVAL** [including aircraft on the arrival path as well as aircraft being vectored], from an approximate point where BDEGA flights are typically assigned a heading to connect to the ILS 28L...instead, the plane could fly a longer circuitous path utilizing the available airspace over the Bay and then to connect via a path to the vicinity of DONNG intersection at the San Mateo Bridge, and then to turn left to intercept the ILS 28R localizer, GBAS or other appropriate approach to 28R or visually line up with the 28R extended centerline to land on 28R (not Rwy 28L).

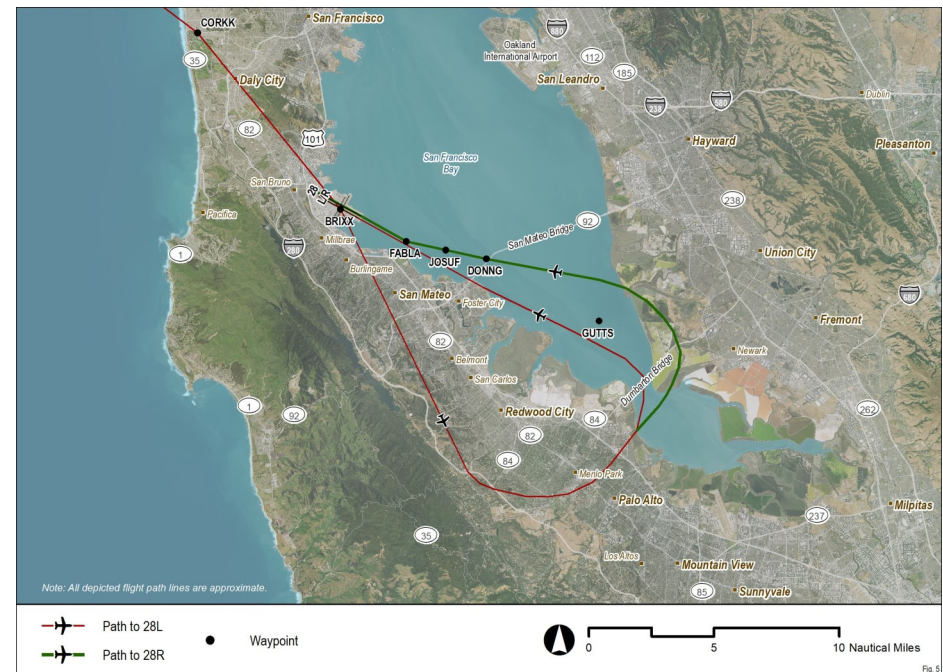
NOTE 1: *It is important that any new track does not alter flight paths of existing BDEGA arrivals while over residential areas.*

NOTE 2: *It is anticipated that this concept of circuitous routing over the Bay will create additional flight mileage which could be used to dissipate aircraft altitude. This opportunity to dissipate “extra altitude” later in the approach may allow the altitudes to be higher, **thus quieter**, in the earlier portions of the arrival over highly populated communities.*

NOTE 3: *It is suggested that this approach might be used during certain night hours when traffic will allow.*



BDEGA Arrival path as shown on the SFO Flight Trak website.



Green line: Suggested wide circuitous offset path to 28R until passing the San Mateo Bridge

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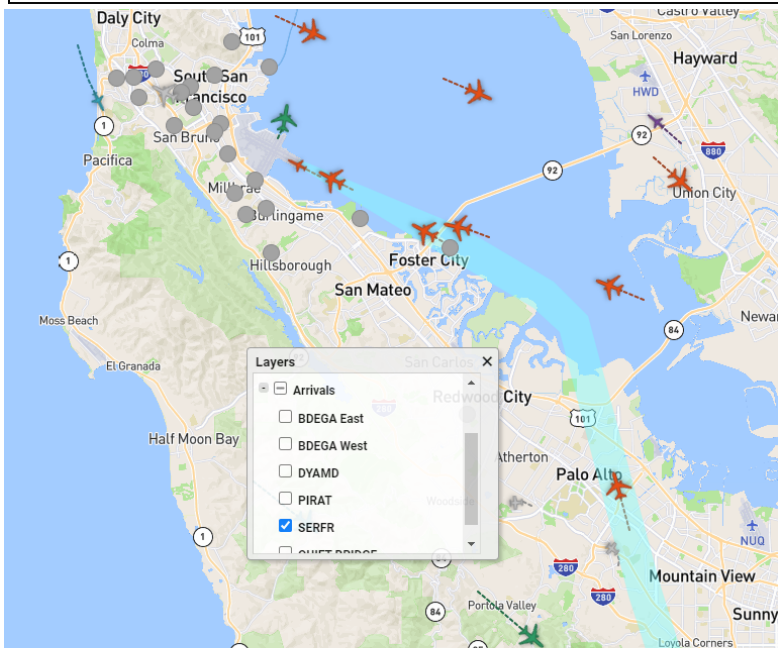
3B	SFO WEST FLOW	ARVL	NIGHT ONLY	GBAS	GBAS SUGGESTION: SERFR Arrivals to fly a new GBAS path that connects the SERFR Arrival via a longer circuitous route over the Bay and then to connect via a path to the vicinity of DONNG intersection at the San Mateo Bridge, and then to turn left to intercept the ILS 28R localizer, GBAS or other appropriate approach to 28R or visually line up with the 28R extended centerline to land on 28R (not Rwy 28L).
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Via the **SERFR ARRIVAL** [including aircraft on the arrival path as well as aircraft being vectored], instead of turning directly onto the 28L path, the plane could fly a longer circuitous path utilizing the available airspace over the Bay and then to connect via a path to the vicinity of DONNG intersection at the San Mateo Bridge, and then to turn left to intercept the ILS 28R localizer, GBAS or other appropriate approach to 28R or visually line up with the 28R extended centerline to land on 28R (not Rwy 28L).

NOTE 1: *It is important that any new track does **not alter flight paths of existing SERFR arrivals** while over residential areas.*

NOTE 2: *It is anticipated that this concept of circuitous routing over the Bay will create additional flight mileage which could be used to dissipate aircraft altitude. This opportunity to dissipate “extra altitude” later in the approach may allow the altitudes to be higher , **thus quieter**, in the earlier portions of the arrival over highly populated communities.*

NOTE 3: *It is suggested that this approach might be used during certain night hours when traffic will allow.*



SERFR Arrival path as shown on the SFO Flight Trak website.



Green line: suggested wide circuitous offset path to 28R until passing the San Mateo Bridge

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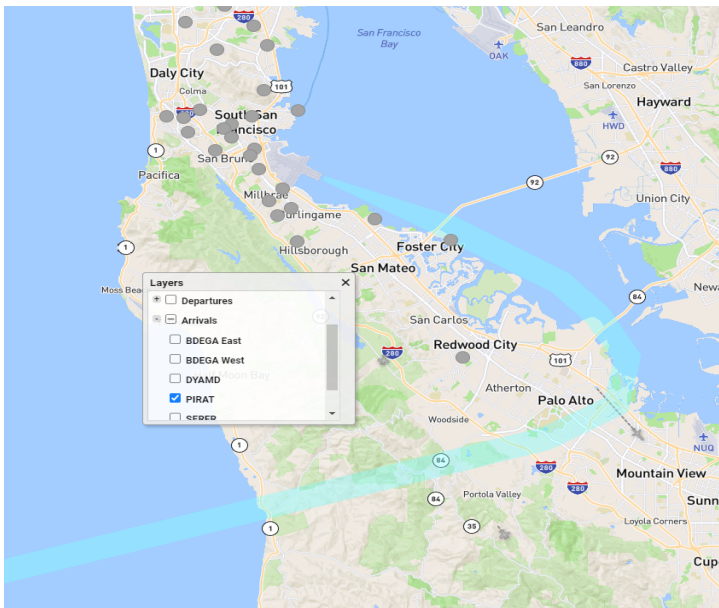
3C	SFO	WEST FLOW	ARVL	NIGHT ONLY	GBAS	GBAS SUGGESTION: From the PIRAT arrival via the typical routing until reaching the Bay shoreline, at which point, the plane would fly a longer circuitous route over the Bay to a landing on 28R [not 28L].
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Via the **PIRAT ARRIVAL** [including aircraft on the arrival path as well as aircraft being vectored], instead of turning onto the 28L path, the plane could fly a circuitous path utilizing the available airspace over the Bay and then to connect via a path to the vicinity of DONNG intersection at the San Mateo Bridge, and then to turn left to intercept the ILS 28R localizer, GBAS or other appropriate approach to 28R or visually line up with the 28R extended centerline to land on 28R (not Rwy 28L).

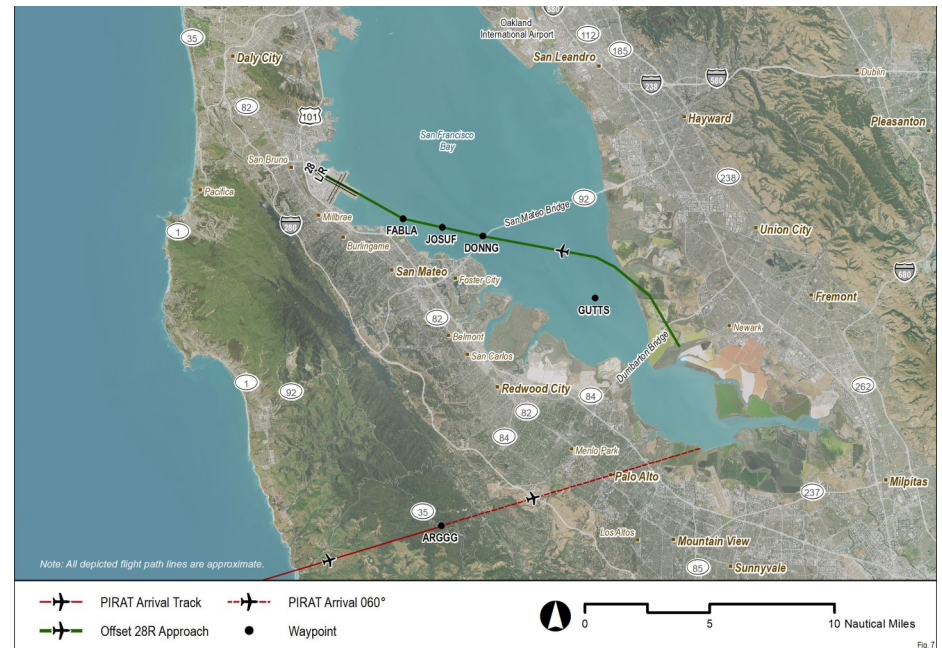
NOTE 1: *It is important that any new track does **not alter flight paths of existing PIRAT arrivals** while over residential areas.*

NOTE 2: *It is anticipated that this concept of circuitous routing over the Bay will create additional flight mileage which could be used to dissipate aircraft altitude. This opportunity to dissipate “extra altitude” later in the approach may allow the altitudes to be higher, thus quieter, in the earlier portions of the arrival over highly populated communities.*

NOTE 3: *It is suggested that this approach might be used during certain night hours when traffic will allow.*



PIRAT Arrival path as shown on the SFO Flight Trak website.



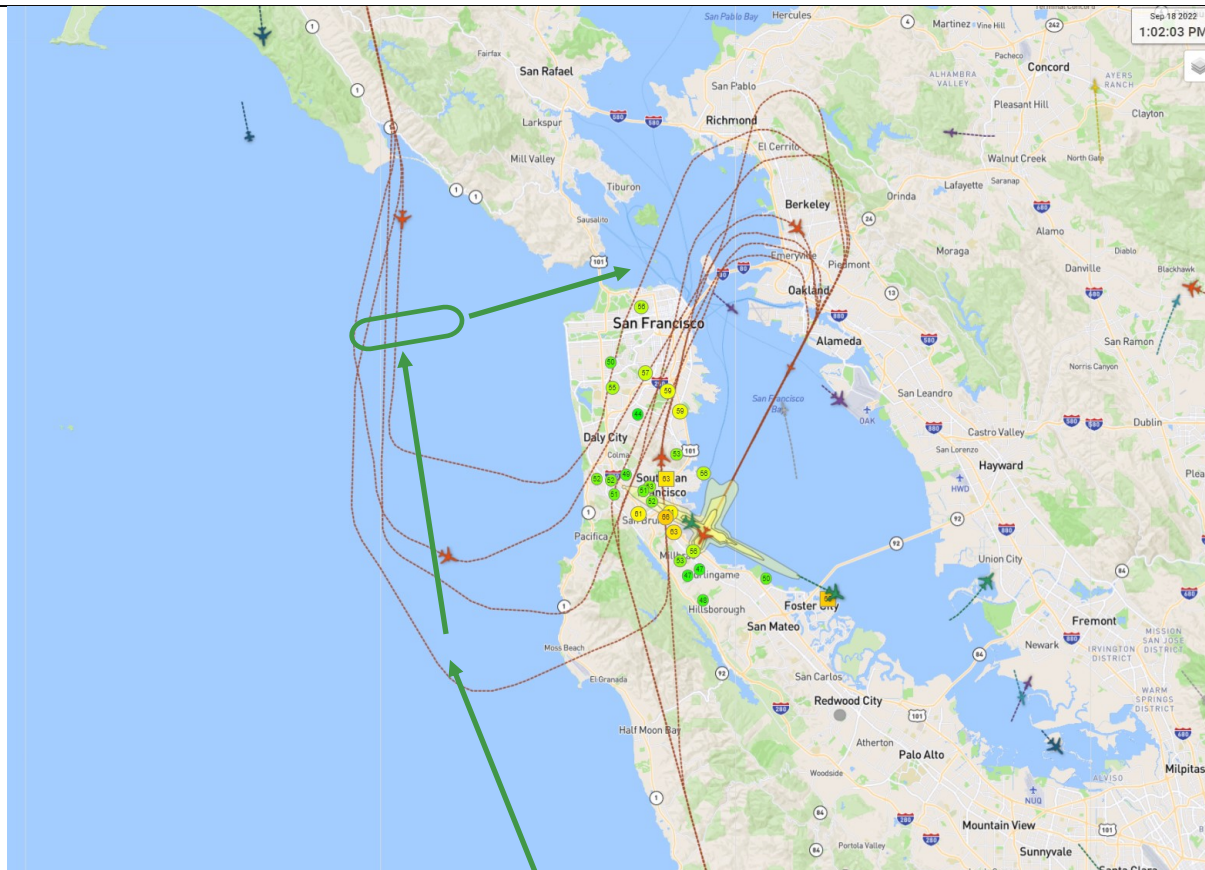
Green line: suggested wide circuitous offset path to 28R until passing the San Mateo Bridge

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4	SFO	SOUTH-EAST FLOW	ARVL	DAY NIGHT	GBAS	<p>GBAS SUGGESTION: New GBAS flight procedure to be used in Southeast Flow to route flights offshore, use (as necessary) a holding pattern, and route planes single file through the Golden Gate on their downwind leg.</p>
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In place of current typical routing during southeast flow, which routes flights inland up the San Mateo County coastline over residential areas and across San Francisco at low altitudes, it is suggested that that a new GBAS flight procedure could route flights *near* the San Mateo County coastline, but out over the ocean by several miles. Additionally, to avoid low altitude flight over the center of San Francisco on the downwind leg to Runways 19L/R, consider a holding fix (perhaps in the vicinity of GOBBS) where planes could hold and be routed single file over the water of the Golden Gate to join the downwind leg.



Red lines indicate actual flight tracks over coast and San Francisco on September 18, 2022 from SFO Flight Trak website

Green lines indicate a suggestion only for a possible GBAS procedure largely remaining over water

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5	SFO WEST FLOW	ARVL NIGHT GBAS	<p>GBAS SUGGESTION: As an alternative to the use of the SERFR Arrival at nighttime, consider the use of another largely existing route which could connect to a new GBAS offset approach to 28R which could largely overlie existing offset 28R approaches.</p>
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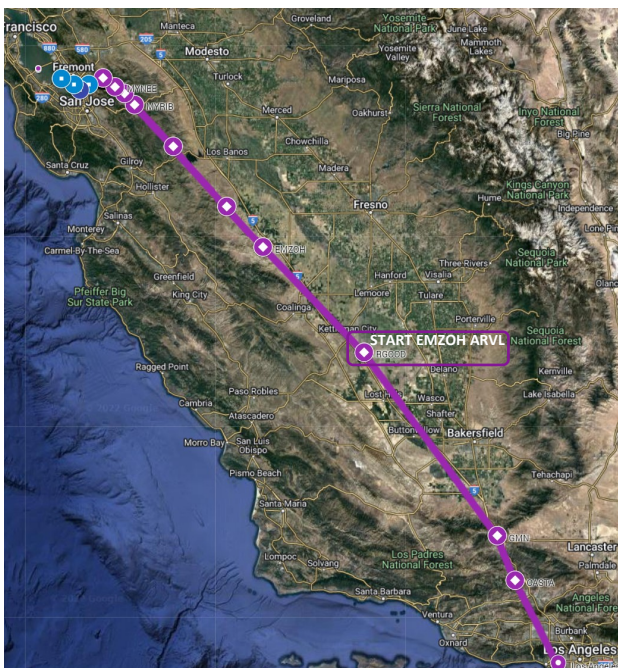
During night hours, a **SERFR alternative procedure** could be designed to allow flights which currently file for **SERFR** to fly another route combining an existing route such as the OAK EMZOH Arrival which starts about half way between LAX and the Bay Area and could connect to the existing SFO DYAMD Arrival or connect to the SFO RNAV(RNP)Y or better yet connect to a new GBAS path that could maximize offset for a Runway 28R approach and landing.

Designing such a procedure would take close collaboration with the FAA in the use of existing paths and connecting existing paths. Designing such a procedure may not be available immediately as the current range of the SFO GBAS is about 23 miles from SFO. However, extended range GBAS systems are apparently available.

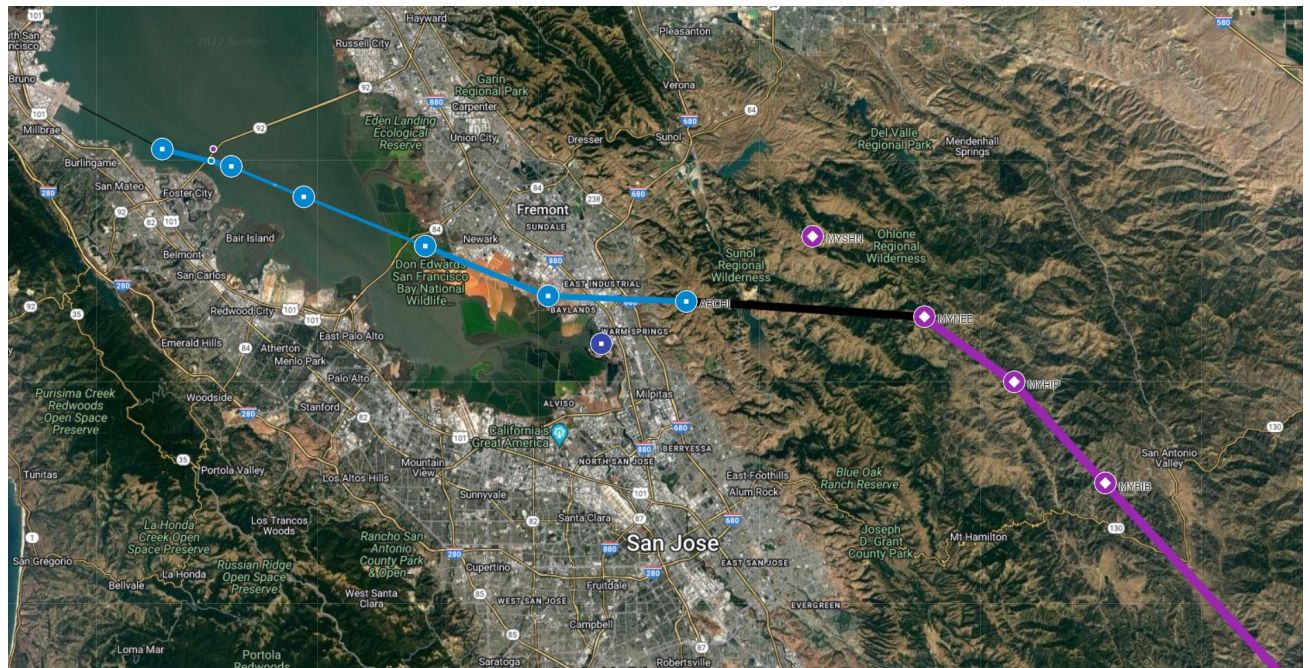
NOTE 1: It is suggested that this approach might be used during **nighttime hours** when traffic and other procedures will allow.

NOTE 2: Use of this suggestion should be balanced against possible decreased ability to the use of the GBAS Down the Bay Arrival at the same time.

NOTE 3: This is but one way to route nighttime flights to arrive so as to be able to use an overwater approach to SFO.



EXAMPLE: LAX to BAY AREA with (OAK) EMZOH Arrival [existing routing]



EXAMPLE: (OAK) EMZOH Arrival to MYNEE Waypoint [existing routing] TO [BLACK] ROUTE [not existing] TO OFFSET ARRIVAL to 28R (EXAMPLE shown here is the existing RNAV(RNP)Y to SFO)

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6	SFO	WEST FLOW	ARVL	DAY NIGHT	GBAS	GBAS SUGGESTION: Design a new GBAS procedure to allow almost simultaneous dual offset approaches to Runways 28L <u>AND</u> 28R .
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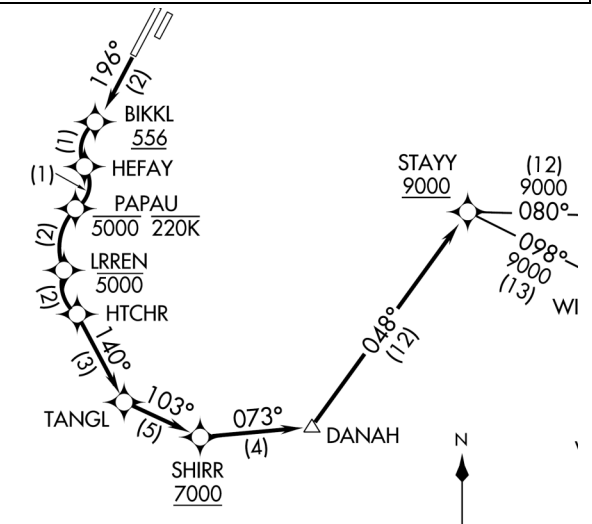
In 2016, as part of the FAA’s NorCal Initiative, the SFO Roundtable submitted a number of recommendations to the FAA for flight procedures, including DUAL OFFSET (almost simultaneous) approaches to 28L & 28R (see color image below). This would allow dual approaches with *both* paths offset from Peninsula cities along the Bay. The FAA’s response at that time to the concept of dual flight paths was that they would not meet the “required separation standards”.

As GBAS, FAA and airplane technologies continue to evolve, these dual offset approaches may now be or may soon become feasible. The dual paths to 28L and 28R probably won’t look like the rudimentary SFORT concept image from 2016 below — instead, it may have two curved paths or even one or two zig zag paths (an example of zig zag paths is the Orange County STAYY Departure—image below). Use of this type of unusual style of paths might require that only a small section of the approach paths might need to “curve out” toward the middle of the Bay, thereby reducing the length of the approach path that would be needed to overcome airplane separation challenges.

NOTE: The use of Dual Offset approaches could be limited to VMC (visual meteorological conditions) or limited to other conditions or restrictions.

**EXECUTIVE WORKING OUTLINE
 SFO AIRPORT/COMMUNITY ROUNDTABLE RESPONSE TO FAA INITIATIVE**

RWY 28 APPROACHES Foster City	Determine the feasibility of creating dual offset (VMC or IMC) RNAV, RNAV (RNP) or other type of approach to Runway 28L and to Runway 28R.	This requested concept would create two offset paths with both the 28L path and the 28R path remaining well clear of Foster City and other bayside communities until past the San Mateo Bridge when aircraft would then line up with each runway for landing.
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STAYY FOUR DEPARTURE (RNAV)

While the STAYY flight procedure at Orange County Airport is a Departure (not an GBAS-appropriate Arrival), the curved zig zag path is an example of using technology available today.

Update on Activities of Other Roundtables

December 2022

The Broward County Aviation Department Airport Noise Abatement Committee

- The FAA implemented the South-Central Florida Metroplex procedures August 2021
- ANAC members request FAA assign, and pilots use, the RNAV procedures as much as possible
- In August 2022, BCAD met with the FAA, airline representatives, and chief pilots to discuss the Fort Lauderdale-Hollywood International Airport (FLL) Area Navigation (RNAV) procedures and usage
 - All participants noted their preference is to use the RNAV procedures when possible
 - Monthly reports show relatively low RNAV usage (< 70% for departures and < 40% for arrivals)
- BCAD continues to reach out to FAA and airlines requesting increased use of the published RNAV procedures

The Charlotte Douglas International Airport Community Roundtable

- At the request of the FAA, CLT convened the ACR in 2017 to find practical solutions and recommendations for the FAA to consider in addressing community noise concerns
- In 2020 the ACR put forth a slate of 6 recommendations for FAA consideration
 - 3 arrival procedures and 3 departure procedures
- FAA requested the 3 departure procedures be analyzed as part of the upcoming Part 150 update, which began in 2022
 - The ACR has representation on the Part 150 Technical Advisory Committee
- FAA is currently in the design process to raise arrival altitudes on all downwind legs
 - If successful, this would eliminate one of the other ACR arrival recommendations
- FAA is unable to currently implement the ACR request to use continuous descent on a greater percentage of the arrivals into CLT

The DC Metroplex BWI Community Roundtable

- The FAA began its phased implementation for the Washington, D.C. Metroplex in February 2014
- Due to adverse community reaction, the FAA requested the Maryland Department of Transportation Maryland Aviation Administration (MDOT MAA) establish a roundtable to address noise issues related to the DC Metroplex aircraft procedures
- The Roundtable was formed in 2017 to work with MDOT MAA, FAA, and Airlines to:
 - **Disperse** operations, Keep aircraft **higher longer**, and Relieve populated areas by **relocation of flight paths**
- September 2019 the Roundtable submitted a package of proposed flight procedures changes to the FAA's Performance Based Navigation (PBN) Working Group

Note: Roundtable experienced a nearly 2-year delay in engagement with FAA caused by lawsuits filed by the State of Maryland and the COVID pandemic
- August 2022 the FAA presented proposed RNAV procedures that required modification to the Roundtable's request and the Roundtable unanimously voted in favor for the FAA proposed-changes

These procedures are currently in the FAA's Operational, Environmental and Safety Review phase. The next step is for the FAA to start the initial environmental review under NEPA

The LAX/Community Noise Roundtable

- The Roundtable was created in September 2000 to provide an interactive forum to address current aircraft noise issues associated with aircraft operations to, from and at Los Angeles International Airport
- The FAA began its phased implementation for the Southern California Metroplex (SoCal Metroplex) project in February 2014 with Phase 3 implementation in April 2017
- Since the FAA's implementation of the Southern California Metroplex, the Roundtable has focused primarily on solving the noise concerns from the affected communities that have noticed changes in operations and/or noise levels
 - Concentration and low altitude of flights on the north downwind arrival path
 - Relocation of the LADYJ flight path that turns north after departing over the ocean
 - Relocation of the JUUSE Waypoint further offshore
- FAA is proceeding with the relocation of LADYJ through their new flight procedure process
- FAA and Roundtable have set up a technical working group to focus on the north downwind arrivals and JUUSE Waypoint – began meeting November 2022

The Oakland Airport-Community Noise Management Forum

- The FAA began its phased implementation for the Northern California Metroplex procedures in November 2014
- On March 24, 2017, the OAK Noise Forum presented the FAA with a 73-page report containing 34 recommendations and 3 process questions
 - The report asked the FAA to identify and adjust six (6) specific procedures and/or relocate specific waypoints
- The Noise Forum formed a Subcommittee to address NextGen related noise concerns and focus the requests made to the FAA
 - OAKLAND Five departure heading will change from 296 degrees to 290, lessening the noise over Alameda
The change is currently going through environmental review and is schedule for January 25, 2024
 - The NextGen subcommittee is still considering two (2) of the original OAK Noise Forum's recommendations: HUSSH and WNDSR
FAA has considered the recommendations "not feasible" and is prepared to work with the Noise Forum
- FAA has communicated they are trying to reduce the number of charted visual approaches
 - The development of any new charted visual approaches would require justification over the RNAV RNP
- OAK has hired a new airspace consultant LEAN consulting to help propose alternatives to the FAA by working with the Subcommittee and OAK staff

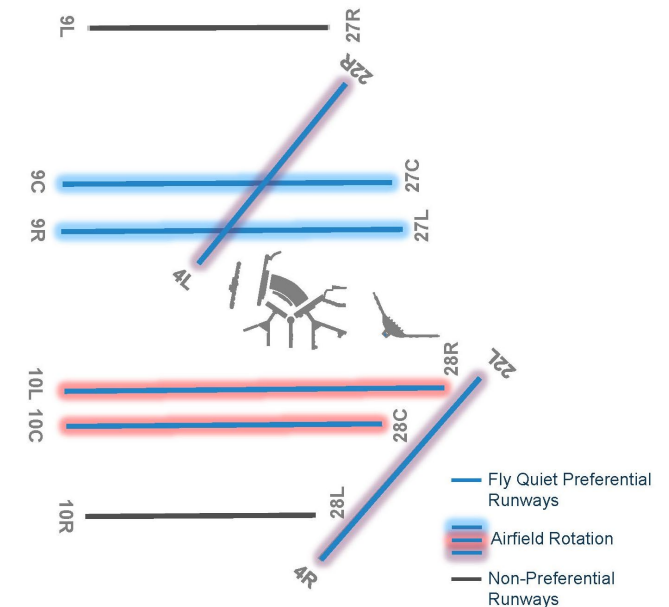
The O'Hare Noise Compatibility Commission

- The ONCC was established in 1996 under an Intergovernmental Agreement (IGA), which is renewed every five years by each member's governing body
 - Oversees noise management efforts
 - Participates in planning of noise mitigation projects to be implemented at the airport
 - Oversees an effective and impartial noise monitoring system
 - Advises City on O'Hare-related noise issues
- Chicago's O'Hare International Airport recently completed a modernization program (OMP) that realigned the runways (6 parallel east/west runways and 2 crosswind runways)
- The ONCC created Fly Quiet committee with the goal to come to a consensus on a new plan to minimize and equally distribute aircraft noise at night

The O'Hare Noise Compatibility Commission Fly Quiet Program

- The ONCC Criteria for the Fly Quiet Program at O'Hare included:
 - Establish a Nighttime Noise Abatement Program that achieves a more balanced distribution of noise exposure
 - Establish Weekly Runway Rotation Schedule. Each period should consist of one arrival and one departure runway and a secondary plan for opposite wind conditions. All available runways should be utilized.
 - Establish Flight Path Rotation Schedule – Establish a weekly departure procedure rotation schedule to compliment the runway rotation schedule in order to achieve a more balanced and equitable distribution of noise exposure.
 - Alternate Periods of East and West Flow.
 - Avoid Consecutive Impacts
 - Utilize Runways Full Length for Departures.
 - Avoid Overuse of Any Single Runway.
 - Require ONCC Fly Quiet Committee Review
- The Chicago Aviation Department has requested the FAA review the proposed Fly Quiet Program
- After FAA review, it will proceed to implementation

PROPOSED FLY QUIET



The O'Hare Noise Compatibility Commission

- The ONCC currently has six committees:
 - Executive, Fly Quiet, Residential, School, Technical, and Ad-Hoc
- Other updates include:
 - Residential sound insulation continues having treated over 11,500 homes to date (currently over 350 in construction and nearly 550 in design)
 - Soon to add three fixed noise monitors to their monitoring system

The San Diego International Airport Noise Advisory Committee

- The ANAC was created in 1981 to provide a forum for collaborative discussion of aircraft noise issues and other related matters
- The FAA began its phased implementation for the Southern California Metroplex (SoCal Metroplex) project in February 2014 with Phase 3 implementation in April 2017
- ANAC requested a flight procedure change to take aircraft further offshore after departure before making their turns to the south and then east so that they are at a higher altitude when approaching the shoreline
 - FAA implemented the new procedure in July 2022
 - San Diego County Regional Airport Authority reported an average increase in altitude of 2,300 feet during the first 30 days of implementation



November 29, 2022

TO: SFO Airport/Community Roundtable Members and Alternates
FROM: Kathleen Wentworth, Roundtable Coordinator
SUBJECT: Comparison of FY2021-2022 Budget to Actual Revenue and Expenses

EXECUTIVE SUMMARY

In accordance with the procedures of the SFO Airport/Community Roundtable (SFORT) attached is the FY2021-2022 Budget vs. Actual financial statement, showing that actual expenses were significantly less than budgeted, actual revenue was slightly higher than budgeted, and the *Contingency Fund Reserve* was not used. This resulted in an increase in the Roundtable Trust Fund.

BACKGROUND

This report presents the FY2021-2022 budget as compared to the FY2021-2022 actual revenue and expenses.

Roundtable FY2021-2022 *Revenue* increased by \$1,000 with the addition of the Town of Colma for a partial year as a Roundtable member. (East Palo Alto later became a Roundtable member, paying dues during FY2022-2023)

Expenses decreased primarily due to the impact of Covid on operations as well as decreased staffing and consultant costs. *Staffing and Coordination* services decreased by \$12,463. *Administration/Operations* costs decreased by \$5,185 due to the elimination of meeting room charges, lower website costs, no cost for data storage and conference services, no charges for office expenses and equipment and lower costs for video services. *Project, Programs & Other* decreased by \$3,990 due to limited conference costs, no field trips and the postponed Fly Quiet Awards presentation. The *Contingency Fund Reserve* of \$40,000 allocated as an expense in the original budget was not used.

The *Uncommitted Funds/Year End Balance* (Roundtable Trust Fund) increased by the amount of the increased revenue, the decreased expenses, and unused *Contingency Fund Reserve*. The Roundtable Trust Fund was projected at the end of FY2021-2022 to be \$359,580 and the actual Trust Fund amount was \$422,218. Putting aside the \$40,000 Contingency Fund Reserve, this represents a real increase in the Trust Fund of \$22,638.

RECOMMENDATION

This document is presented for your review; no action is required.

ATTACHMENT

a. Budget vs. Actuals for FY2021-2022

SFORT BUDGET vs. ACTUALS FOR FY21-22

Last Edit 11/28/2022

A	SOURCES	2021-2022	
		BUDGET	ACTUAL
	Revenue		
	San Francisco Airport Commission	\$ 220,000	\$ 220,000
	Roundtable Membership	\$ 40,500	\$ 41,500
	<i>In Kind Contributions from Millbrae</i>		
		\$ 260,500	\$ 261,500

	BUDGET	ACTUAL
Other Sources		
Fund Balance	\$ 390,699	\$ 390,699

SOURCES TOTAL	\$ 651,199	\$ 652,199
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B	EXPENSES	2021-2022	
		BUDGET	ACTUAL
	Staffing & Coordination		
	County of San Mateo Coordination Services	\$ 143,719	\$ 95,732
	Roundtable Aviation Technical Consultant	\$ 90,000	\$ 125,524
		\$ 233,719	\$ 221,256

	BUDGET	ACTUAL
Administration/Operations		
Meeting Room * In-Kind Millbrae		
Postage / Printing	\$ -	\$ 169
Website	\$ 1,800	\$ 146
Data Storage & Conference Services	\$ 900	\$ -
Miscellaneous Office Expenses/Equipment	\$ 1,500	\$ -
Video Services	\$ 4,000	\$ 2,700
	\$ 8,200	\$ 3,015

	BUDGET	ACTUAL
Projects, Programs, & Other		
Noise Conferences Attendance, Coordinator	\$ 1,500	\$ -
Noise Conferences Attendance, Members	\$ 2,000	\$ 560
TRACON Field Trip(s)	\$ 750	\$ -
Airport Noise Report subscription	\$ 850	\$ 850
N.O.I.S.E. Membership	\$ 4,300	\$ 4,300
Fly Quiet Awards	\$ 300	\$ -
Special Study		
	\$ 9,700	\$ 5,710

	BUDGET	ACTUAL
Contingency Fund		
Reserve	\$ 40,000	\$ -
	\$ 40,000	\$ -

EXPENSES SUBTOTAL	\$ 291,619	\$ 229,981
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UNCOMMITTED FUNDS / YEAR END BALANCE	PROJECTED	ACTUAL
	\$ 359,580	\$ 422,218

SFORT BUDGET vs. ACTUALS FOR FY22-23 Q1

Last Edit 11/30/2022

SOURCES	2022-2023	
	<u>BUDGET</u>	<u>ACTUAL</u>
Revenue		
San Francisco Airport Commission	\$220,000	\$ -
Roundtable Membership	\$42,000	\$ 34,500
<i>In Kind Contributions from Millbrae</i>		
	\$262,000	\$ 34,500

Other Sources	<u>BUDGET</u>	<u>ACTUAL</u>
Fund Balance	\$292,887	\$ 422,218

SOURCES TOTAL	\$554,887	\$ 456,718
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EXPENSES	2022-2023	
	<u>BUDGET</u>	<u>ACTUAL</u>
Staffing & Coordination		
County of San Mateo Coordination Services	\$148,031	\$ 37,101
Roundtable Aviation Technical Consultant	\$90,000	\$ 13,939
	\$238,031	\$ 51,040

ADMINISTRATION / OPERATIONS	<u>BUDGET</u>	<u>ACTUAL</u>
Meeting Room * In-Kind Millbrae		
Postage / Printing	\$300	
Website	\$1,800	\$ 107
Data Storage & Conference Services	\$900	
Miscellaneous Office Expenses/Equipment	\$1,500	
Video Services	\$7,000	\$ 660
	\$11,500	\$ 767

PROJECTS, PROGRAMS, & OTHER	<u>BUDGET</u>	<u>ACTUAL</u>
Noise Conferences Attendance, Coordinator	\$1,500	
Noise Conferences Attendance, Members	\$3,000	
TRACON Field Trip(s)	\$750	
Airport Noise Report subscription	\$850	
N.O.I.S.E. Membership	\$4,300	
Fly Quiet Awards	\$300	
Special Study		
	\$10,700	\$ -

CONTINGENCY FUND	<u>BUDGET</u>	<u>ACTUAL</u>
Reserve	\$40,000	
	\$40,000	\$ -

EXPENSES SUBTOTAL	\$300,231	\$ 51,807
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UNCOMMITTED FUNDS / YEAR END BALANCE	<u>PROJECTED</u>	<u>ACTUAL</u>
	\$254,656	\$ 404,911



MEMORANDUM

To: SFO Community Roundtable Members and Interested Parties
From: Jason R. Stoddard, Senior Airspace Analyst
Eugene M. Reindel, Vice President
Date: October 11, 2022
Subject: Federal Aviation Administration (FAA) Instrument Flight Procedures (IFP)
Information Gateway Review
Reference: HMMH Project Number 312310

At the request of the Roundtable, Harris Miller Miller & Hanson Inc. (HMMH) is monitoring and reviewing updates to procedures published onto the FAA's IFP Information Gateway in the regions of San Francisco International Airport (SFO), Metropolitan Oakland International Airport (OAK), and Norman Y. Mineta San Jose International Airport (SJC).

After analyzing the documents posted, HMMH determines proposed changes and the reason for the changes. The FAA IFP Information Gateway published one update at SFO and two updates at SJC. One comment period at SFO is currently open. The next publication is expected on November 3, 2022.

Important Terms and Items:

- FAA Stage Definitions
 1. FPT: Procedures are coordinated with Air Traffic, Tech Ops and Airports for feasibility, preparation, and priority (FPO)
 2. DEV: Development of the procedures
 3. FC: FAA Flight Inspection of the developed procedures
 4. PIT: Production Integration Team (TS)
 5. CHARTING: Procedures at Arnav Products Charting for publication (NACO)
- FAA Status Definitions
 1. At Flight Check: At Flight Inspection for procedure validation
 2. Awaiting Publication: At Arnav Products Charting for publication
 3. Complete: Procedure development action finished
 4. On Hold: Procedure waiting data/information to allow it to proceed/continue to next stage
 5. Pending: Procedure development work on-going
 6. Published: Procedure charted and published
 7. Under Development: Procedure is being worked on by the FAA
 8. Terminated: Procedure/project terminated
- Glossary
 - RNAV: Area Navigation
 - IAP: Instrument Approach procedure
 - STAR: Standard Terminal Arrival Route
 - SID: Standard Instrument Departure
 - GPS: Global Positioning System
 - ILS: Instrument Landing System
 - LOC: Localizer

Updates:

- SFO GNNRR THREE DEPARTURE (RNAV)
 - Status changed to At Flight Check
 - Scheduled Publication Date of December 29, 2022

- SJC RNAV (GPS) Y RWY 30L AMDT 5
 - Status changed to Under Development
 - Scheduled Publication Date of February 23, 2023

- SJC RNAV (GPS) Y RWY 30R AMDT 5
 - Status changed to Under Development
 - Scheduled Publication Date of February 23, 2023

Open Comment Periods:

- GNNRR THREE DEPARTURE (RNAV) at SFO
 - Comment period ends October 12, 2022
 - Changes:
 - ALLBE, BAART, and ALANN transitions would be removed
 - BEBOP and CINNY transitions would be added
 - Minimum crossing altitude of at or above 2,400 ft (MSL) would be added at GNNRR waypoint
 - Climb gradient for Runway 28L would be changed to: 500 ft per nautical mile up to an altitude of 514 ft (MSL) then 380 ft per nautical mile up to an altitude of 1,400 ft (MSL)
 - Climb gradient for Runway 28R would be changed to: 500 ft per nautical mile up to an altitude of 1,300 ft (MSL)
 - * All changes to transitions occur over the ocean and after waypoint GNNRR
 - * The FAA does not anticipate the altitudes of aircraft to decrease with the amended procedure

 - Concerns can be submitted via
[https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Aeronautical_Inquiries/?details=SFO%20\(%20KSFO\)%20SAN%20FRANCISCO%20INTL,%20SAN%20FRANCISCO,%20CA%20-%20GNNRR%20THREE%20\(RNAV\)&procedureName=GNNRR%20THREE%20\(RNAV\)&airportCode=%20SFO&airportName=SAN%20FRANCISCO%20INTL&airportState=CA](https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Aeronautical_Inquiries/?details=SFO%20(%20KSFO)%20SAN%20FRANCISCO%20INTL,%20SAN%20FRANCISCO,%20CA%20-%20GNNRR%20THREE%20(RNAV)&procedureName=GNNRR%20THREE%20(RNAV)&airportCode=%20SFO&airportName=SAN%20FRANCISCO%20INTL&airportState=CA)

Next Publication:

We do not expect any updates in the November 3, 2022 publication.



MEMORANDUM

To: SFO Community Roundtable Members and Interested Parties
From: Jason R. Stoddard, Senior Airspace Analyst
Eugene M. Reindel, Vice President
Date: November 10, 2022
Subject: Federal Aviation Administration (FAA) Instrument Flight Procedures (IFP)
Information Gateway Review
Reference: HMMH Project Number 312310

At the request of the Roundtable, Harris Miller Miller & Hanson Inc. (HMMH) is monitoring and reviewing updates to procedures published onto the FAA's IFP Information Gateway in the regions of San Francisco International Airport (SFO), Metropolitan Oakland International Airport (OAK), and Norman Y. Mineta San Jose International Airport (SJC).

After analyzing the documents posted, HMMH determines proposed changes and the reason for the changes. The FAA IFP Information Gateway published one update at SFO and two updates at SJC. One comment period at SFO is currently open. The next publication is expected on December 1, 2022.

Important Terms and Items:

- FAA Stage Definitions
 1. FPT: Procedures are coordinated with Air Traffic, Tech Ops and Airports for feasibility, preparation, and priority (FPO)
 2. DEV: Development of the procedures
 3. FC: FAA Flight Inspection of the developed procedures
 4. PIT: Production Integration Team (TS)
 5. CHARTING: Procedures at Arnav Products Charting for publication (NACO)
- FAA Status Definitions
 1. At Flight Check: At Flight Inspection for procedure validation
 2. Awaiting Publication: At Arnav Products Charting for publication
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 4. On Hold: Procedure waiting data/information to allow it to proceed/continue to next stage
 5. Pending: Procedure development work on-going
 6. Published: Procedure charted and published
 7. Under Development: Procedure is being worked on by the FAA
 8. Terminated: Procedure/project terminated
- Glossary
 - RNAV: Area Navigation
 - IAP: Instrument Approach procedure
 - STAR: Standard Terminal Arrival Route
 - SID: Standard Instrument Departure
 - GPS: Global Positioning System
 - ILS: Instrument Landing System
 - LOC: Localizer

Updates:

- SFO GNNRR THREE DEPARTURE (RNAV)
 - Status changed to Awaiting Publication
 - Scheduled Publication Date of December 29, 2022

- SJC RNAV (GPS) Y RWY 30L AMDT 4A
 - Status changed to Awaiting Publication
 - Scheduled Publication Date of February 23, 2023

- SJC RNAV (GPS) Y RWY 30R AMDT 4B
 - Status changed to Awaiting Publication
 - Scheduled Publication Date of February 23, 2023

Open Comment Periods:

- GNNRR THREE DEPARTURE (RNAV) at SFO
 - Comment period ends November 30, 2022
The following changes are expected:
 - ALLBE, BAART, and ALANN transitions would be removed
 - BEBOP and CINNY transitions would be added
 - Minimum crossing altitude of at or above 2,500 ft (MSL) would be added at GNNRR waypoint
 - Climb gradient for Runway 28L would be changed from: 500 ft per nautical mile up to an altitude of 820 ft (MSL) to: 500 ft per nautical mile up to an altitude of 513 ft (MSL) then 380 ft per nautical mile up to an altitude of 1,400 ft (MSL)
 - Climb gradient for Runway 28R would be changed from: 500 ft per nautical mile up to an altitude of 820 ft (MSL) to: 500 ft per nautical mile up to an altitude of 1,300 ft (MSL)

* All changes to transitions occur over the ocean and after waypoint GNNRR

- Concerns can be submitted via
[https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Aeronautical_Inquiries/?details=SFO%20\(%20KSFO\)%20SAN%20FRANCISCO%20INTL,%20SAN%20FRANCISCO,%20CA%20%20GNNRR%20THREE%20\(RNAV\)&procedureName=GNNRR%20THREE%20\(RNAV\)&airportCode=%20SFO&airportName=SAN%20FRANCISCO%20INTL&airportState=CA](https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Aeronautical_Inquiries/?details=SFO%20(%20KSFO)%20SAN%20FRANCISCO%20INTL,%20SAN%20FRANCISCO,%20CA%20%20GNNRR%20THREE%20(RNAV)&procedureName=GNNRR%20THREE%20(RNAV)&airportCode=%20SFO&airportName=SAN%20FRANCISCO%20INTL&airportState=CA)

Next Publication:

We do not expect any updates in the December 1, 2022 publication.

Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 34, Number 38

November 18, 2022

Research

FOUR NEW AIRCRAFT NOISE PROJECTS ADDED TO ASCENT ROSTER IN FY 2022, REDAC TOLD

Four new projects addressing aircraft noise were added to the list of research efforts being undertaken by FAA's Center of Excellence for Alternative Jet Fuels and Environment (ASCENT) in FY 2022.

The projects were discussed by Jim Hileman, Chief Scientific and Technical Advisor in FAA's Office of Environment and Energy, in his presentation at the Oct. 5 meeting of FAA's Research Engineering and Development Advisory Committee (REDAC).

Following are brief summaries provided by FAA of the new ASCENT noise projects and the universities conducting them:

- **ASCENT Project 82 - Integrated Noise and CO2 Standard Setting Analysis (Georgia Tech and MIT)**

The research team will support the development of integrated environmental

(Continued on p. 153)

Research, from p. 152

standards on landing and takeoff noise and carbon dioxide (CO₂) emissions at the International Civil Aviation Organization's (ICAO) Committee on Aviation Environmental Protection (CAEP).

This new project will develop tools to assess the impact of technologies and design changes to control aircraft noise and emissions, and then evaluate the costs of implementing such changes to aircraft and engine designs. This is the first time that two stringencies will be assessed in an integrated fashion.

The overarching goal of this project is to enhance and update the assumptions used in the decision-making process based on a quantitative assessment of environmental benefits of new aircraft and engine technologies and the costs associated with achieving those benefits.

The FAA will use the updated data, information, and tools to inform and support data-driven decision making by the CAEP. The development of integrated noise and CO₂ emissions standards will require insights into the interdependencies associated with different stringency options in order to properly assess their benefits and impacts. This work will ensure that decisions within the CAEP process will be based on the best available information.

• ASCENT Project 84 - Noise Modeling of Advanced Air Mobility Flight Vehicles (MIT)

This project will develop first principles noise models of Urban Air Mobility (UAM) and Advanced Air Mobility (AAM) vehicle configuration(s) to improve community noise calculations of these aircraft as they fly various operating states.

Various vehicle configurations are currently under consideration for feasibility for use in UAM and AAM operations, including but not limited to short takeoff and landing configurations, tilt-rotor vertical takeoff and landing (VTOL), and tilt-duct VTOL configurations, each of which has unique sources and operating modes.

Thus, targets of opportunity will be identified to estimate the noise levels and develop Aviation Environmental Design Tool (AEDT) compatibility for these vehicles and operating modes. The work will be expanded to generalized AAM operations.

The developed models will be used to make preliminary noise footprint estimates for a variety of configurations. This is important given the limited existing noise data. The noise analysis models will also be applicable to study potential noise abatement methodologies through source noise modifications as well as procedure modifications.

• ASCENT Project 86 - Study on the use of broadband sounds to mitigate sleep disruption due to aircraft noise (Univ. of PA)

Sound insulation of bedrooms is costly and typically only granted to residents living relatively close to the airport. The goal of this project is to investigate the effects of different kinds of aviation noise on sleep under controlled laboratory conditions and to investigate whether some of the sleep disturbing effects can be mitigated either by introducing broadband noise into the bedroom or by wearing earplugs.

The study will be performed in the Chronobiology Isolation Laboratory in the Hospital of the University of Pennsylvania. This newly constructed facility includes four acoustically isolated bedrooms and a high-fidelity sound system.

This project will investigate the effects of earplugs and broadband noise on sleep and the potential of earplugs and broadband noise to mask aviation noise and thus mitigate its negative consequences on sleep quality and sleep recuperation.

It will quantify differences in exposure-response functions between maximum level and awakening probability among different types of the investigated aviation noise sources (e.g., commercial aircraft, helicopters, and drones).

• ASCENT Project 94- Probabilistic Unmanned Aircraft System (UAS) Trajectory and Noise Estimation Tool (Ga Tech Research Corp.)

A summary of this project will be provided when available.

Health Effects Studies

ANR also asked FAA for an update on the two projects ASCENT is conducting on the relationship between exposure to aircraft noise and cardiovascular disease and on sleep.

• ASCENT Project 3: Cardiovascular Disease and Aircraft Noise Exposure (Boston Univ)

FAA said it has not yet received the final report on this three-year project, which was mandated in Section 189 of the FAA Reauthorization Act of 2018.

• Status information of a multi-airport field study on the effects of aircraft noise on sleep to be done by the Univ. of PA. Linked to ASCENT Project 017 preliminary study

The work on the sleep study is ongoing, FAA said. Thus far, the project team has enrolled, and been working with, approximately a quarter of the total study participants that are anticipated to be required for the completion of the study.