



# Meeting Announcement

## Technical Working Group

**WEDNESDAY, SEPTEMBER 4, 2024**

**3:30 p.m. – 5:00 p.m.**

**\*VIA HYBRID ACCESS\***

Foster City Council Chambers Conference Room  
620 Foster City Blvd., Foster City, CA 94404

Public may also join the webinar:

<https://smcgov.zoom.us/j/83795058060>

Or Dial-in:

US: +(669) 444 – 9171 Webinar ID: 837 9505 8060

This meeting of the Technical Working Group (TWG) will be in person at the above-mentioned address. Members of the public will be able to participate in the meeting remotely via the Zoom platform or in person at 620 Foster City Boulevard, Foster City, CA 94404. For information regarding how to participate in the meeting, either in person or remotely, please refer to the instructions at the end of the agenda.

### **HYBRID PUBLIC PARTICIPATION:**

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

The TWG Subcommittee meeting may be accessed through the above-mentioned Zoom webinar. Members of the public may also attend this meeting physically in the Foster City Council Chambers Conference Room at 620 Foster City Blvd. Foster City, CA 94404.

\*Written public comments can be emailed to [SFORoundtable@smcgov.org](mailto:SFORoundtable@smcgov.org) and should include the specific agenda item to which you are commenting.

\*Spoken public comments will also be accepted during the meeting in-person or via Zoom on Items NOT on the Agenda and for each Agenda Item at the option of the speaker.

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

### **ADA Requests**

Individuals who require 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 packet or other writings that may be distributed at the meeting, should contact SFO Roundtable Staff at [SFORoundtable@smcgov.org](mailto:SFORoundtable@smcgov.org) as early as possible but no later than 10:00 am the day before the meeting at Notification in advance of the meeting will enable Staff to make reasonable arrangements to ensure accessibility to this meeting, the materials related to it, and your ability to comment.

## AGENDA

### Call to Order

### Public Comment on Items NOT on the Agenda

#### 1. Select Nighttime (10pm-7am) Flight Procedures and Flight Tracks: SFO SSTIK Departures and SFO Runways 28L and 28R Approaches

##### a. Introduction and Overview

Pg. 5

Sam Hindi, SFO Roundtable TWG Chair

Kathleen Wentworth, SFO Roundtable Coordinator

*Attachment: Overview of Select Flight Paths for SFO Runways 28L and 28R Approaches & SFO SSTIK Departures*

##### b. SFO Noise Office - Flight Data Collection Demonstration Using ANOMS and Gates

Bert Ganoung, SFO Aircraft Noise Office Manager

##### c. Flight Data Analysis

Pg. 27

Eugene Reindel, HMMH, Technical Consultant to the Roundtable

Jason Stoddard, HMMH Airspace Analyst

*Attachment: HMMH Select Nighttime (10pm-7am) Flight Procedures and Flight Tracks: SFO SSTIK Departures and SFO Runway 28L and 28R Approaches*

##### d. Discussion and Next Steps

Sam Hindi, SFO Roundtable TWG Chair

#### 2. Adjourn

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

During the TWG Subcommittee hybrid meeting, members of the public may address the Membership 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 [SFORoundtable@smcgov.org](mailto:SFORoundtable@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 5:00 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:**

**In-person Participation:**

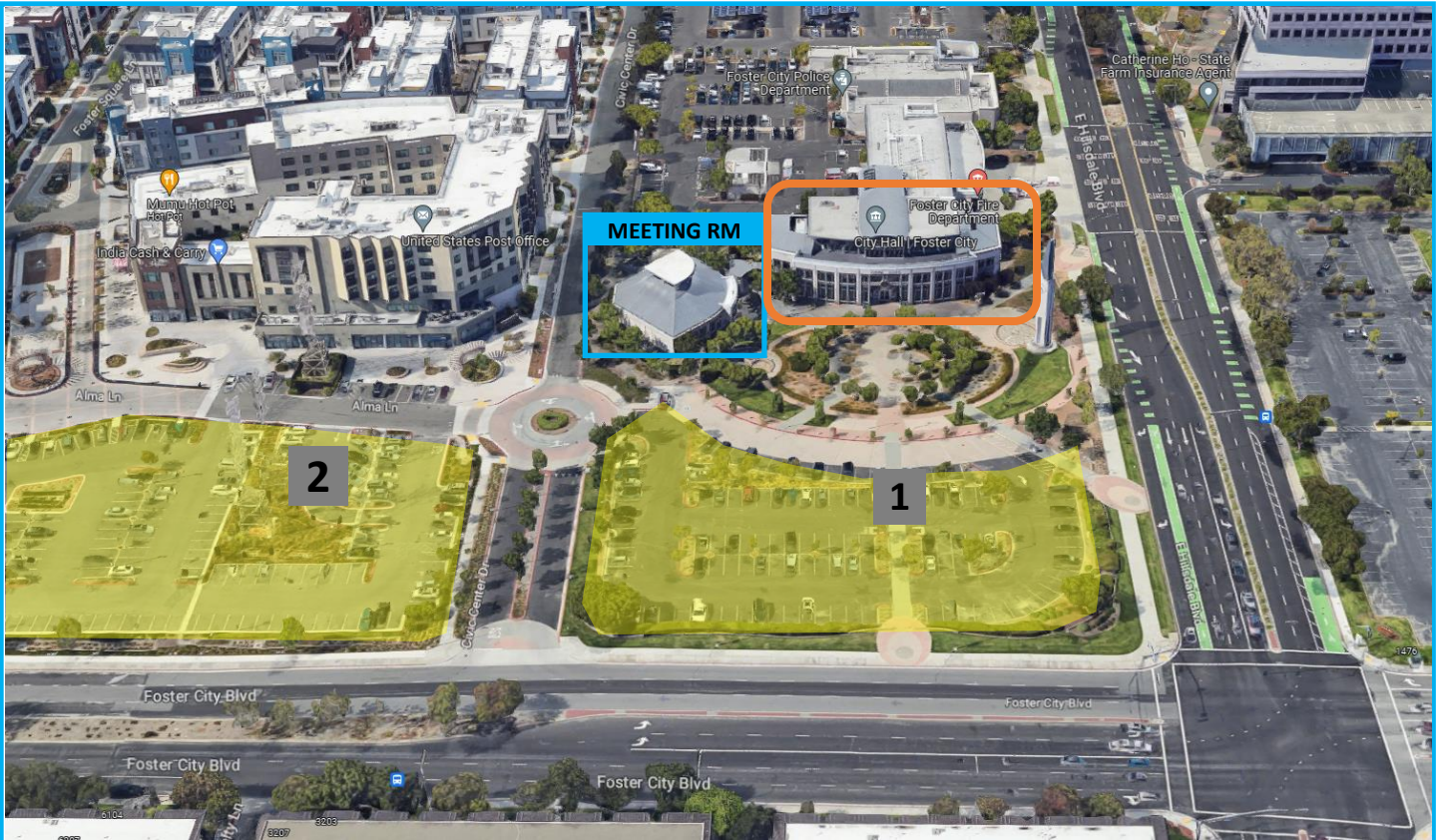
1. If you wish to speak to the Membership, please fill out a speaker's slip located at the entrance. If you have anything you wish distributed to the Membership and included in the official record, please hand it to the Clerk who will distribute the information to the Membership and Staff.

**Via Teleconference (Zoom):**

1. The TWG Subcommittee meeting may be accessed through Zoom online at <https://smcgov.zoom.us/j/83795058060> Webinar ID: 837 9505 8060. The meeting may also be accessed via telephone by dialing in +(669) 444 – 9171, entering webinar then press #.
2. Members of the public can also attend this meeting physically in the Foster City Council Chambers Conference Room at 620 Foster City Blvd, Foster City, CA 94404.
3. 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.
4. 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.
5. When the 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.

**\*Additional Information:**

For any questions or concerns regarding Zoom, including troubleshooting, privacy, or security settings, please contact Zoom directly.



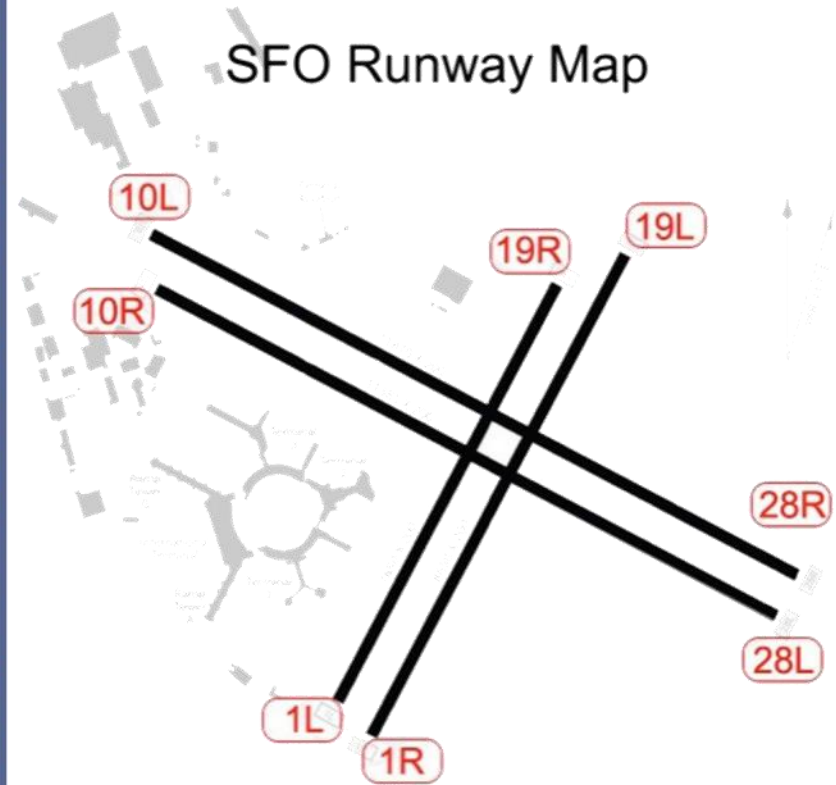
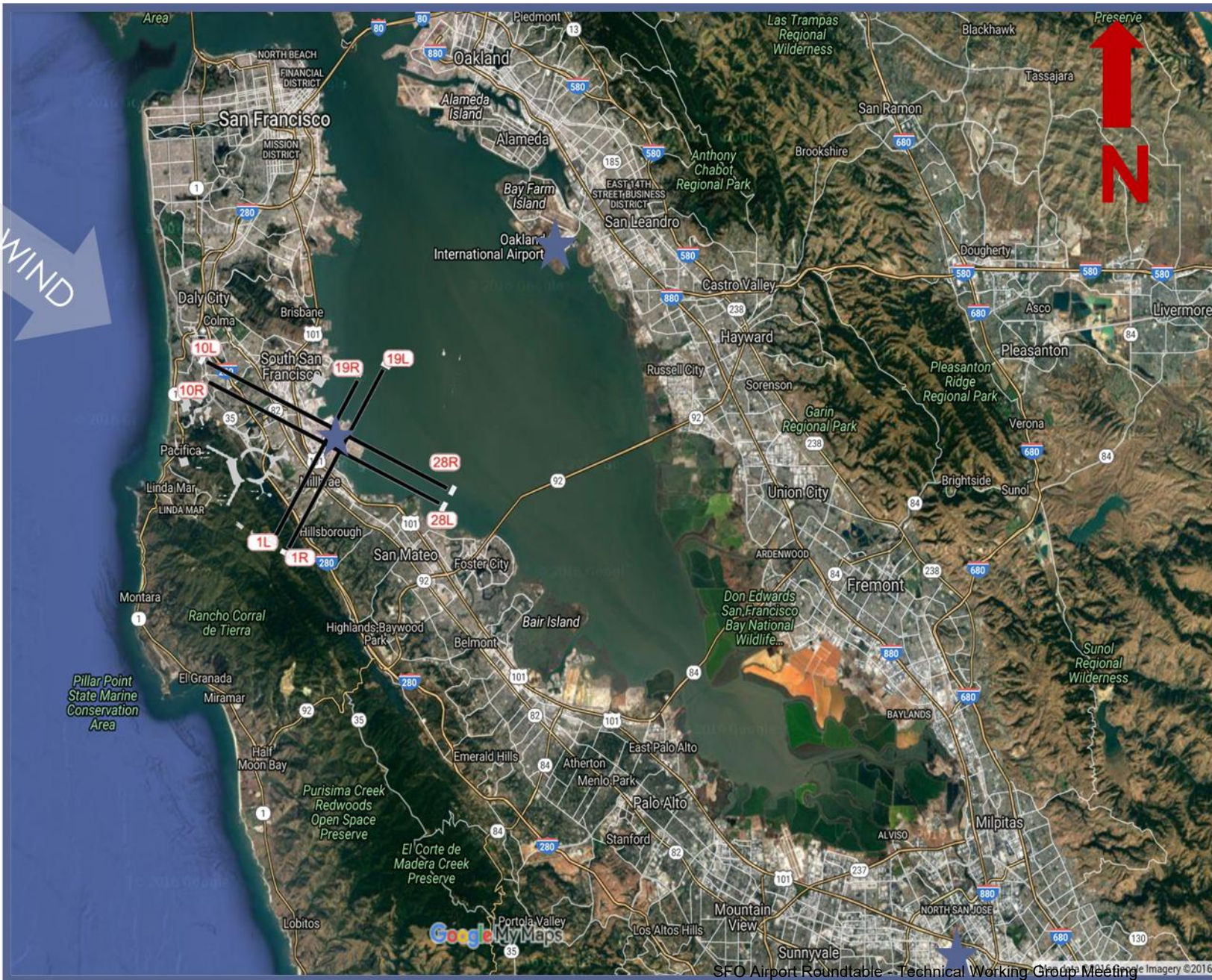
**SFO Roundtable -- Technical Working Group Meetings**  
**Foster City Council Chambers Conference Room**  
**620 Civic Center Drive, Foster City**



- PARKING:** 1. Parking in front of City Hall  
2. Parking in adjacent parking lot

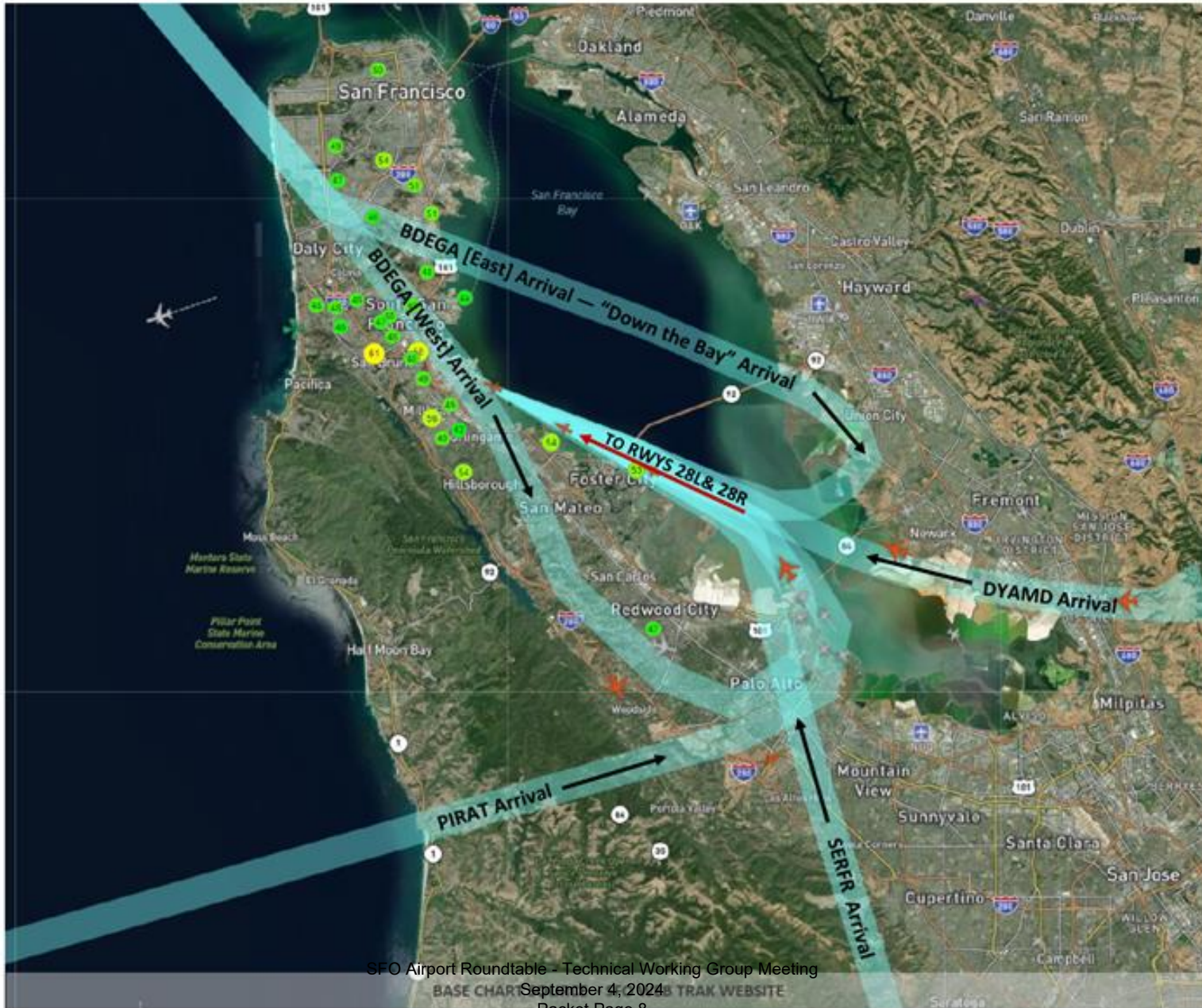
**ENTRANCE:** Main entrance will be locked. Follow signs to a secondary entrance **to the right of the main entrance.**

OVERVIEW OF SELECT  
SFO RUNWAYS **28L** AND **28R** APPROACHES  
&  
SFO **SSTIK** DEPARTURES



# SFO RUNWAYS **28L** AND **28R** ARRIVALS AND APPROACHES

# SFO West Flow — Arrivals

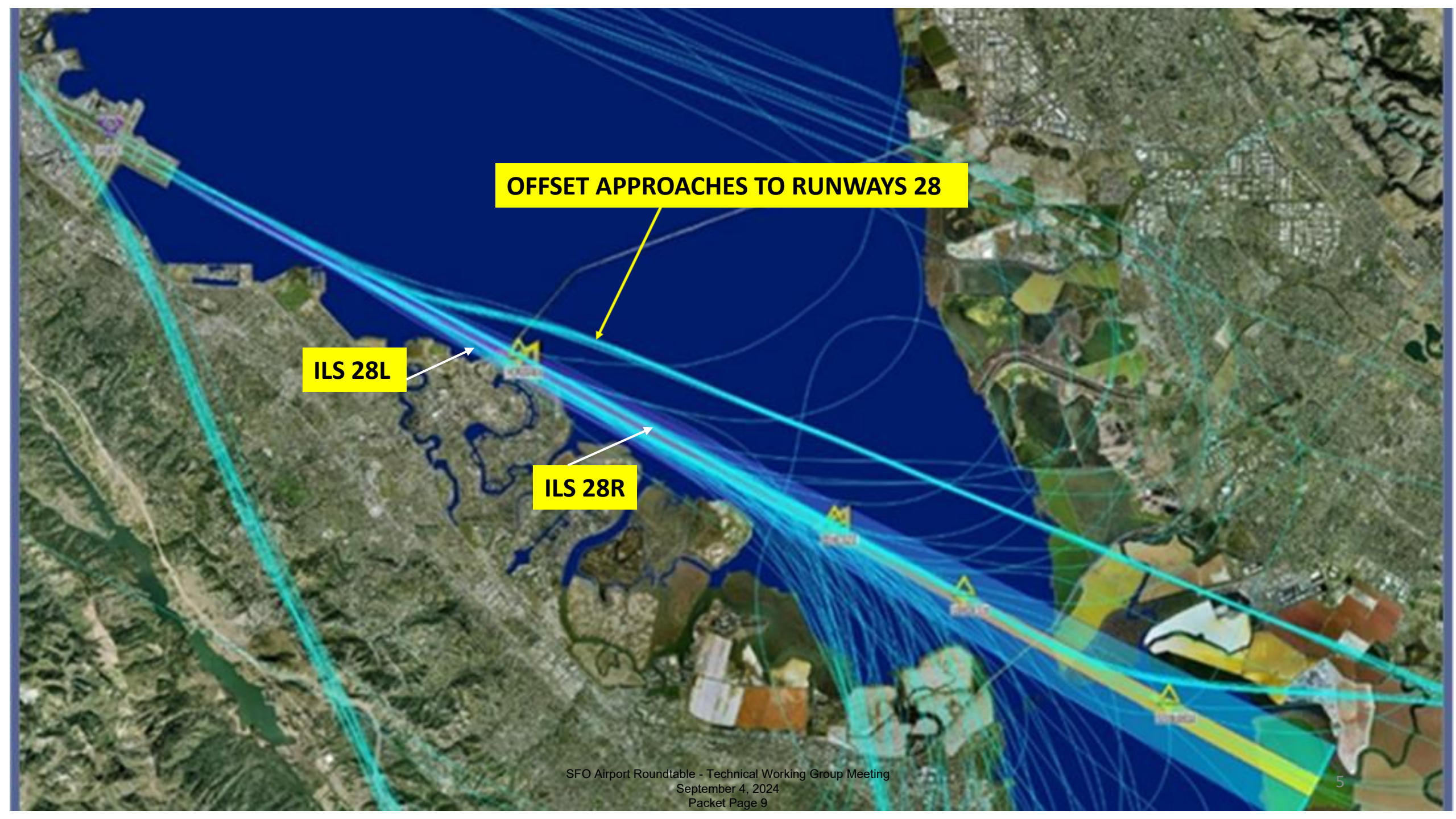




**OFFSET APPROACHES TO RUNWAYS 28**

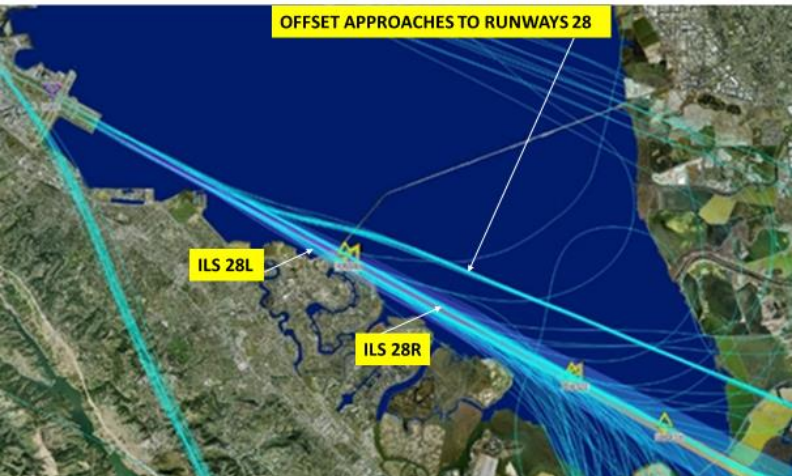
**ILS 28L**

**ILS 28R**



# SFO Airport Director's Report

## 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		18% 2,802
10 L/R		0% 4
28 L/R	100% 15,601	82% 12,901

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

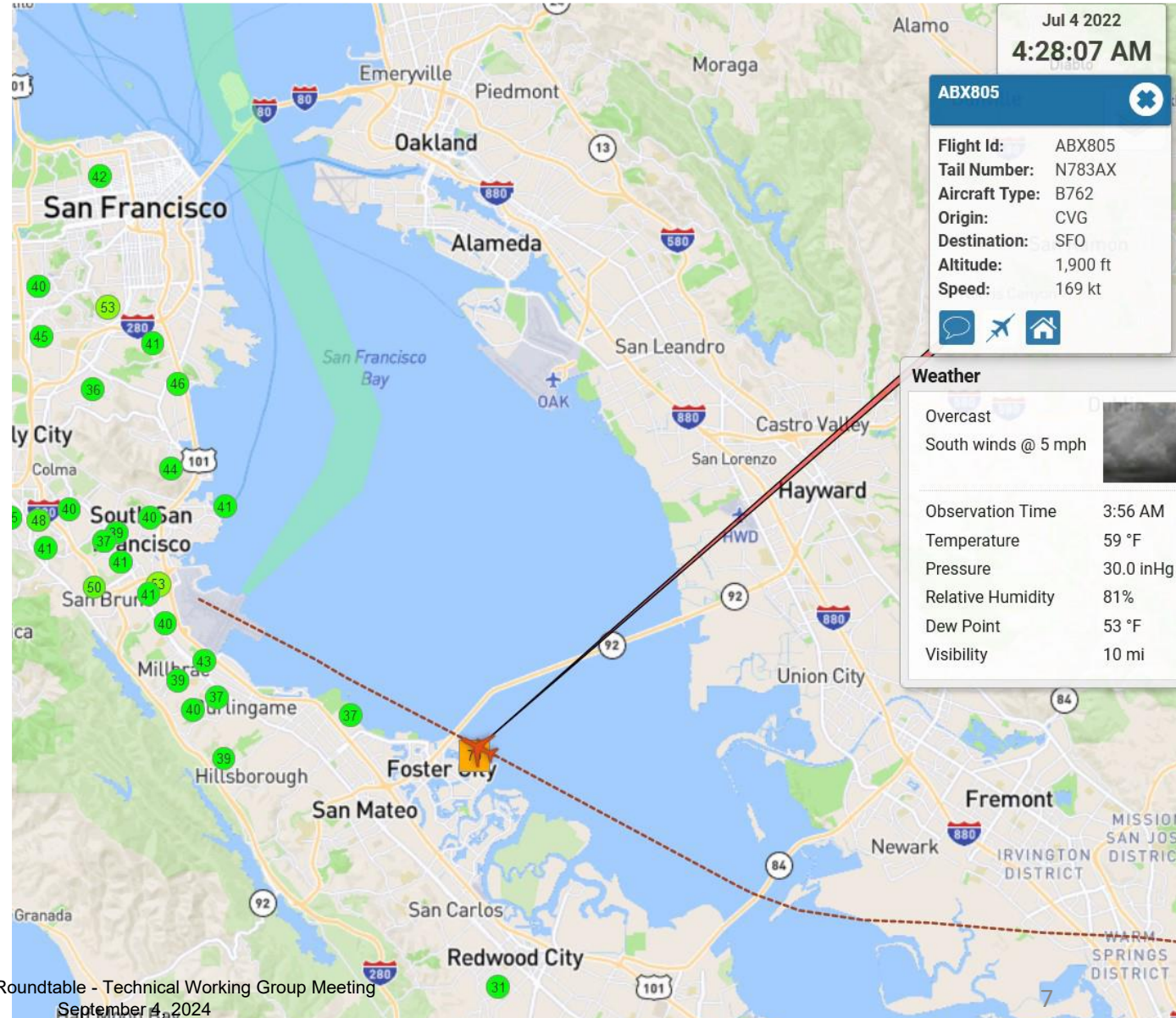
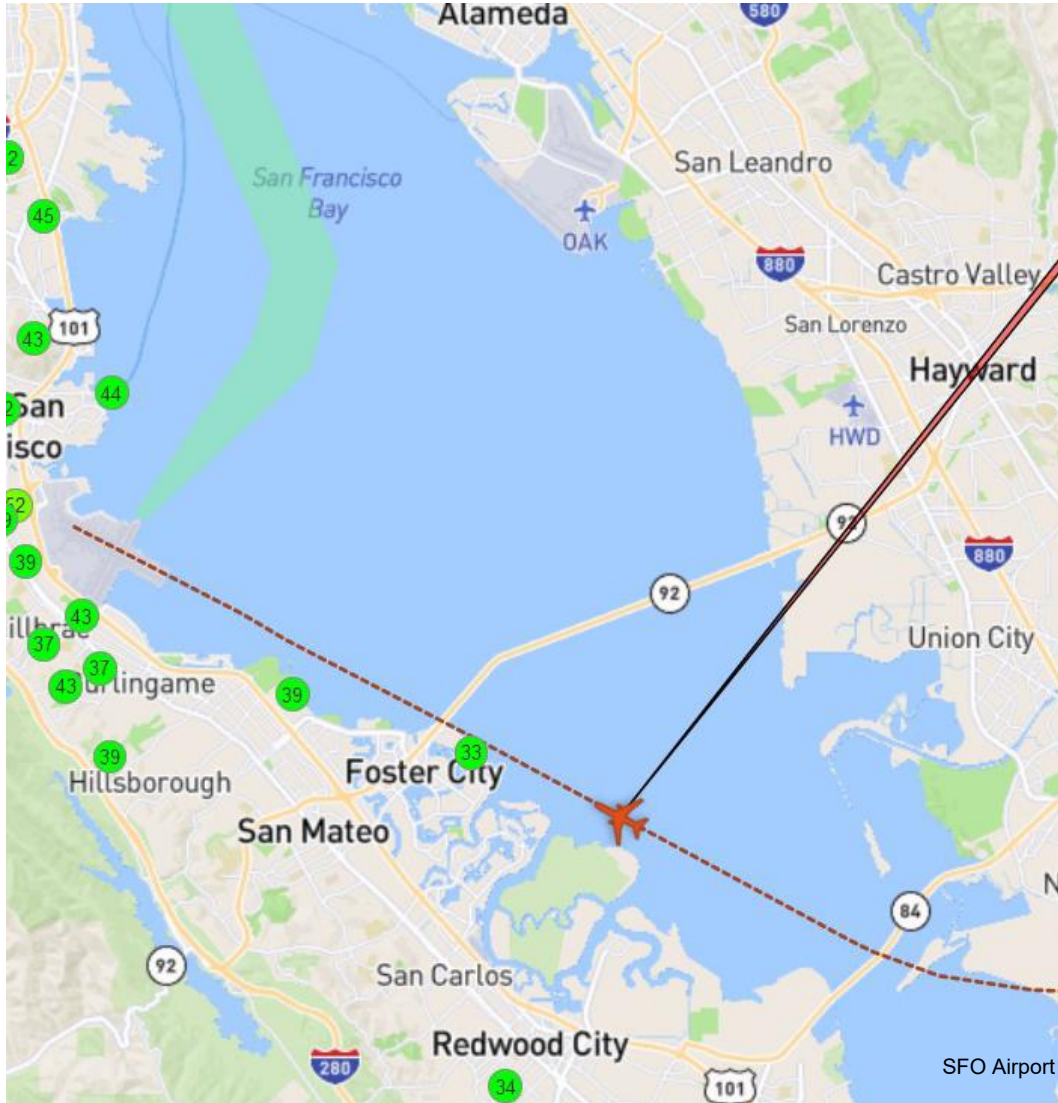
	Departures
10 L/R	0% 2
01 L/R	15% 83
28 L/R	85% 464

### Runway Utilization

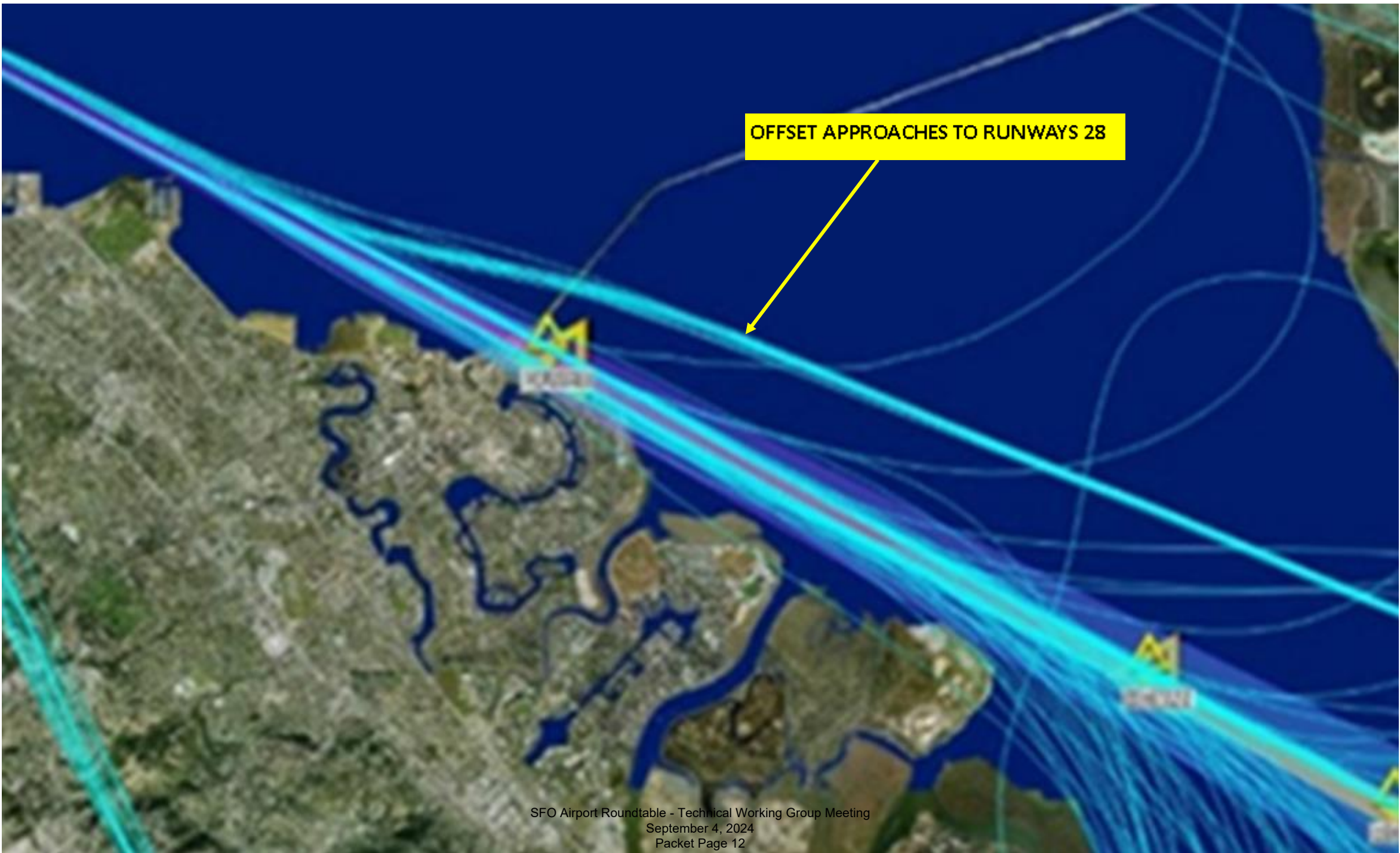
	Arrivals	
	28L	28R
	33%	67%
Night (10pm-7am)		
	17%	83%

# FOSTER CITY NOISE MONITOR @ 4:28am

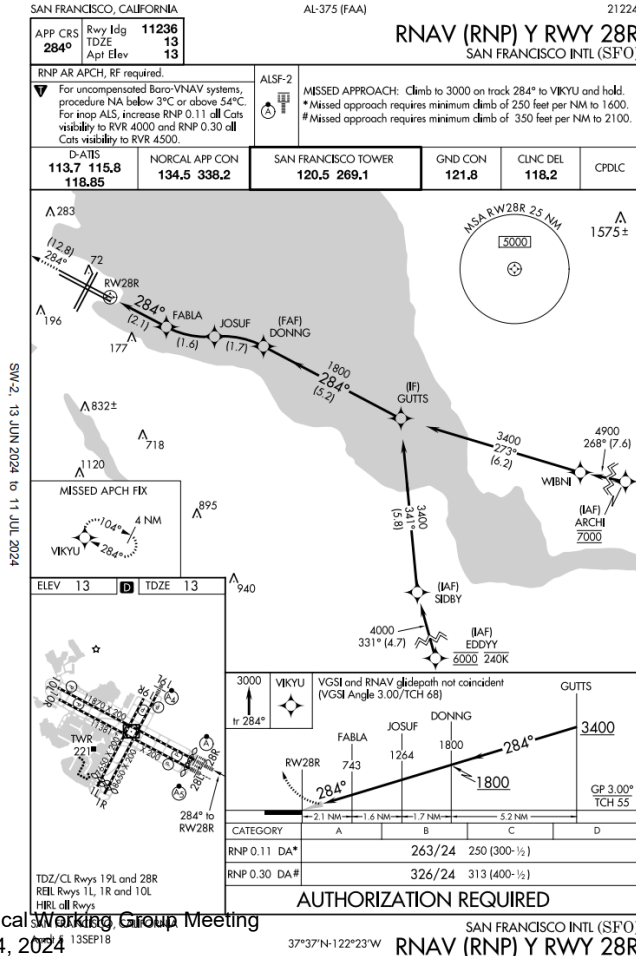
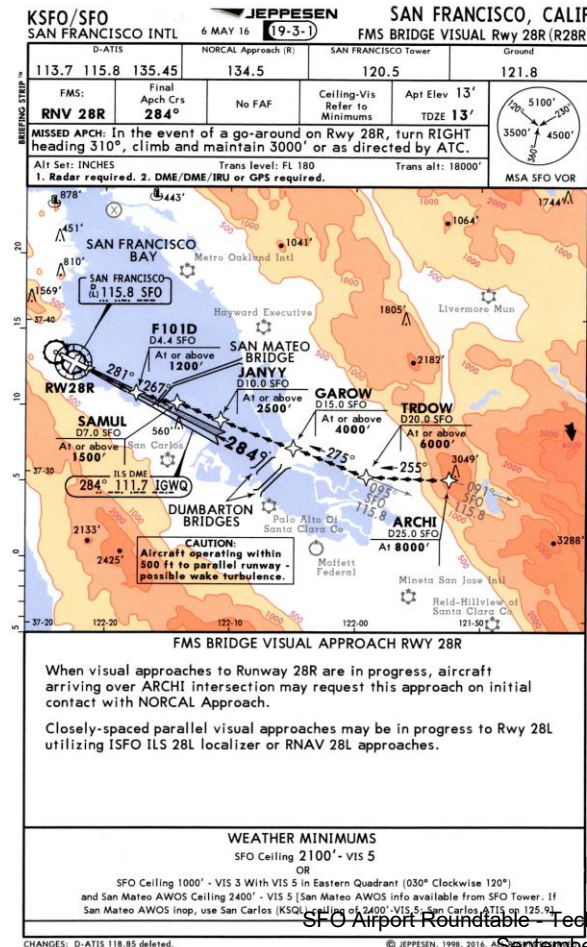
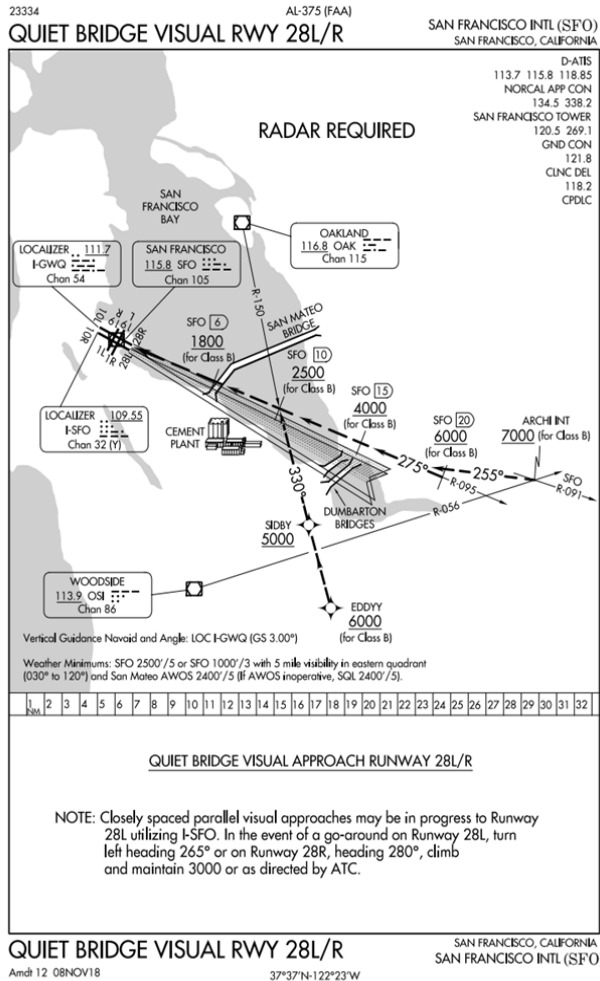
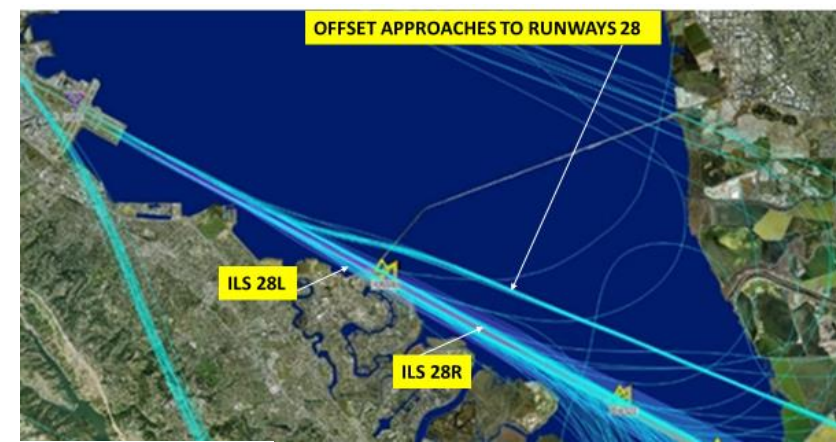
-B767 airplane landing 28R - causes noise monitor increase from 33dBA to 71dBA



**OFFSET APPROACHES TO RUNWAYS 28**



# Examples of OFFSET Published Approaches to Runways 28L/R



**FUTURE**

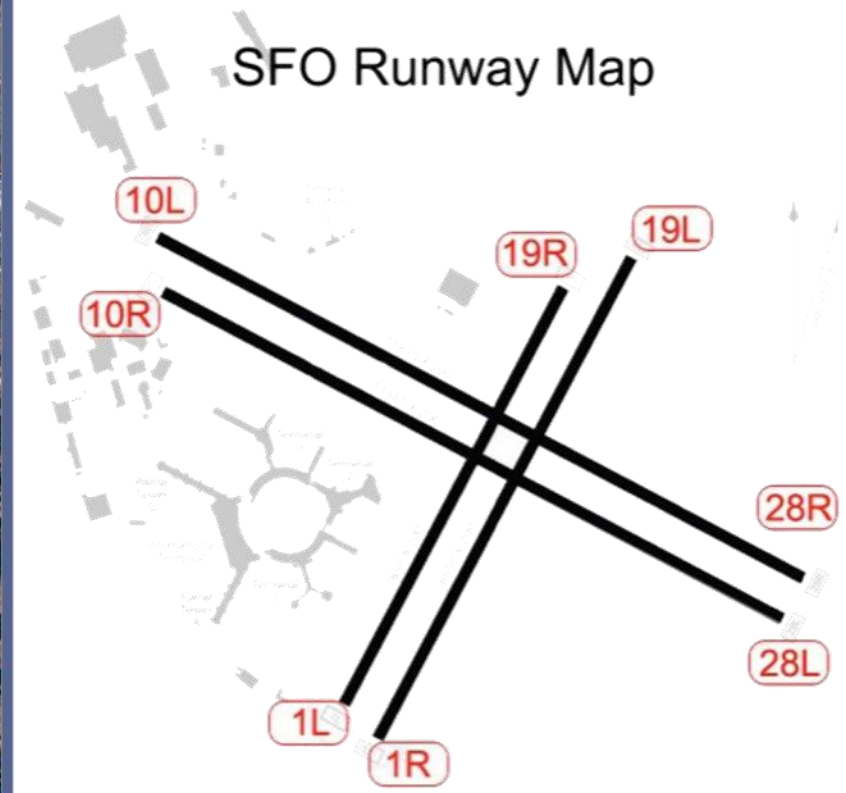
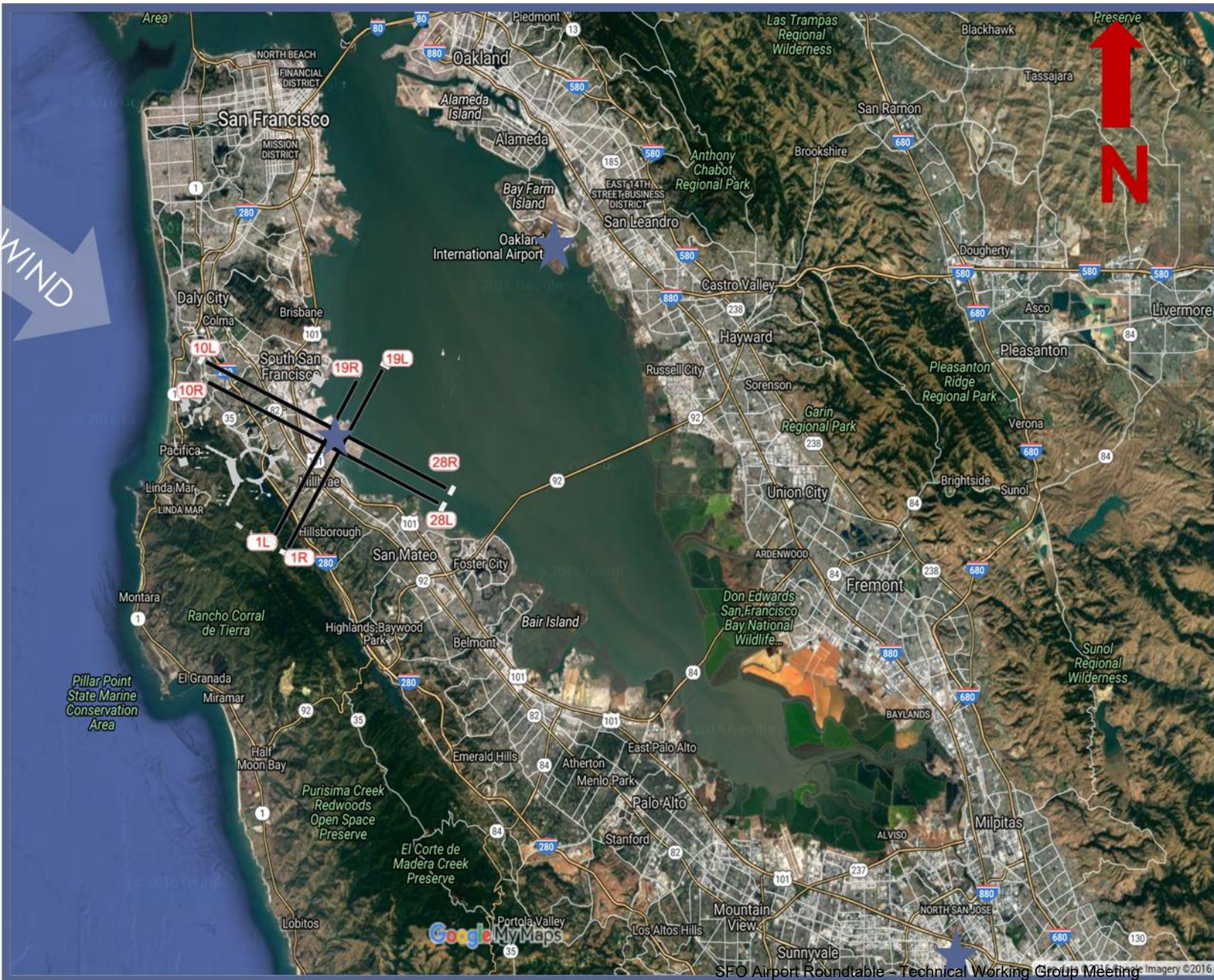
**Runway 28L/R  
GBAS  
OFFSET  
Approaches**

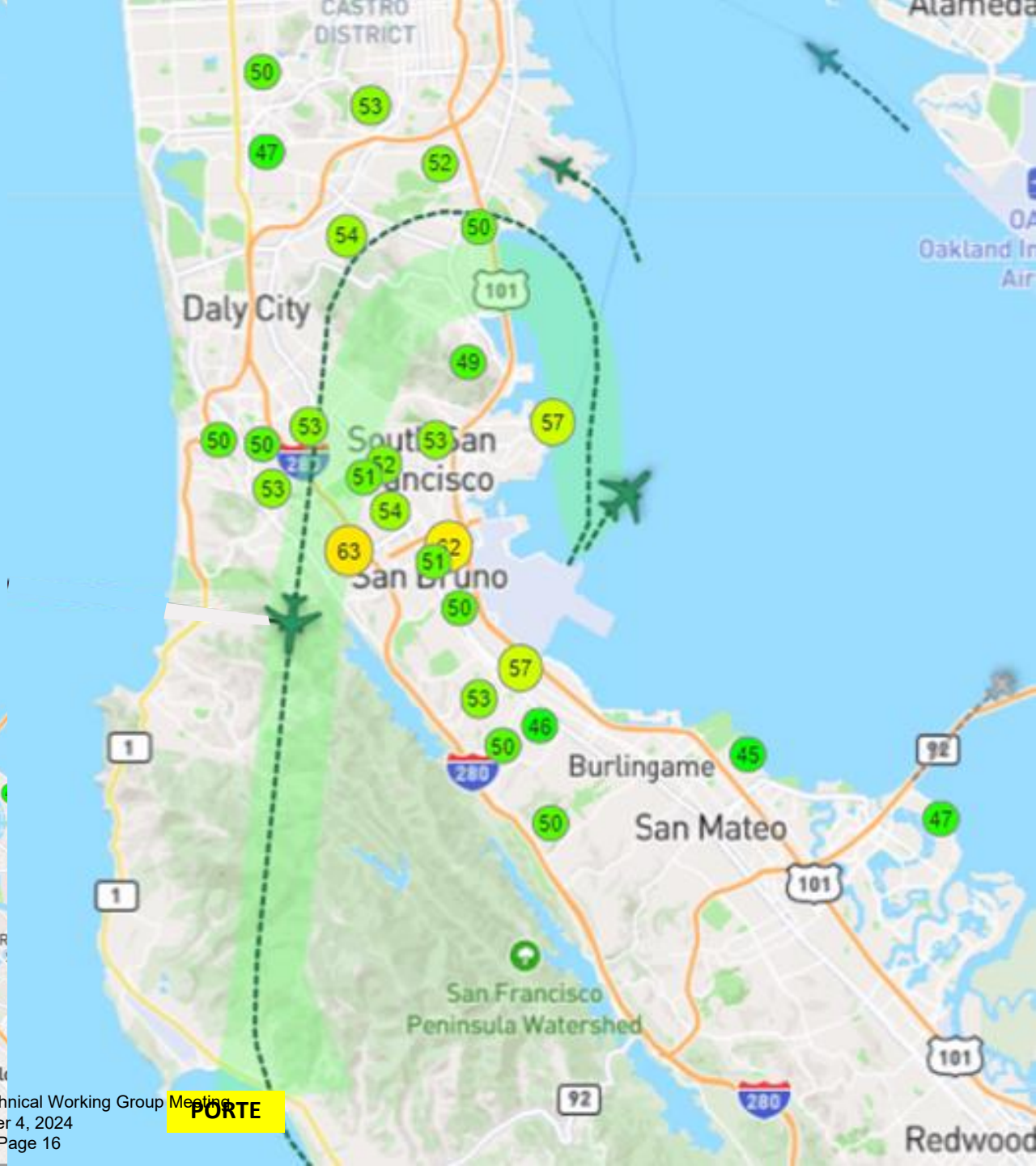
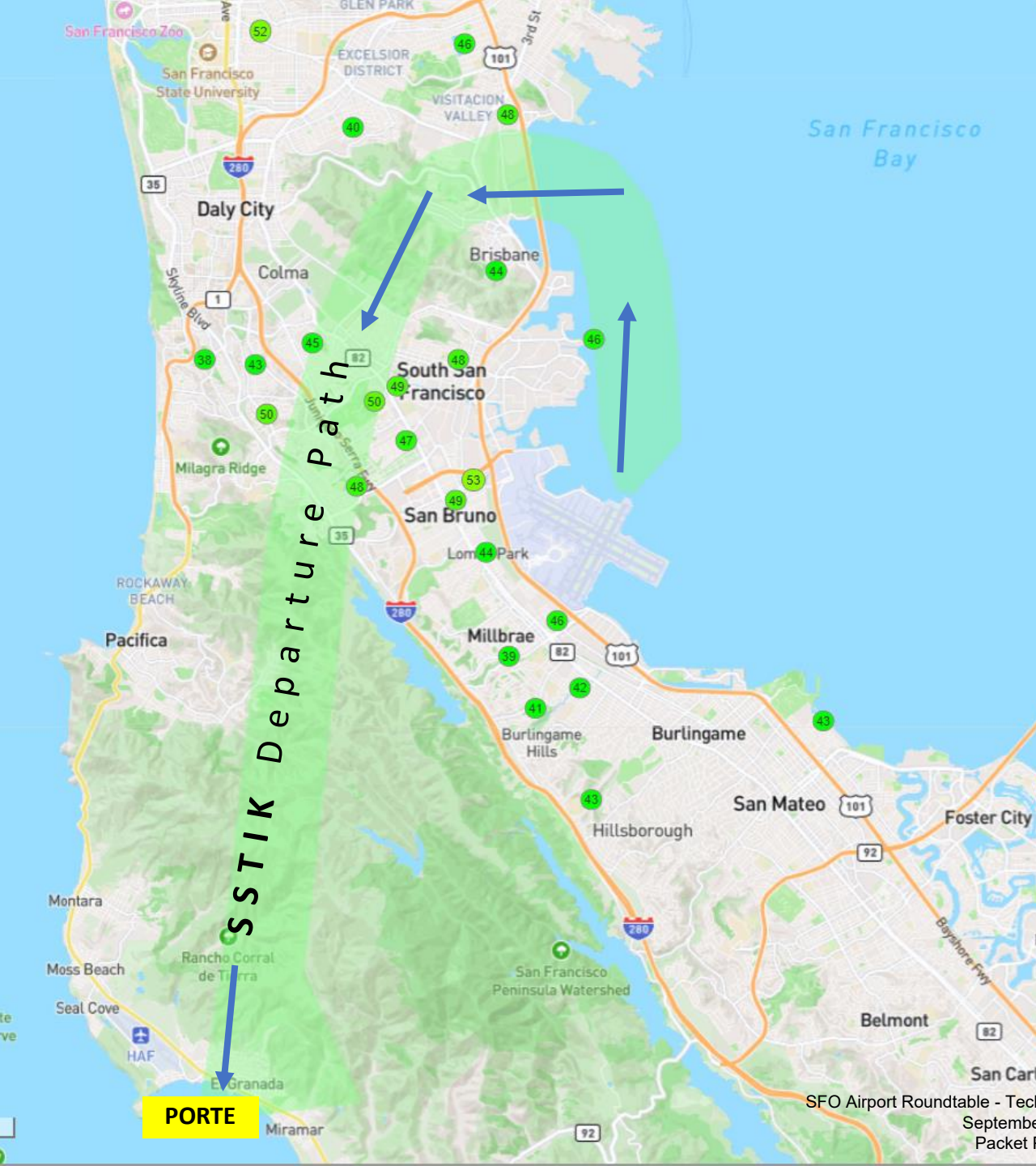
SW-2, 13 JUN 2024 to 11 JUL 2024

SW-2, 13 JUN 2024 to 11 JUL 2024

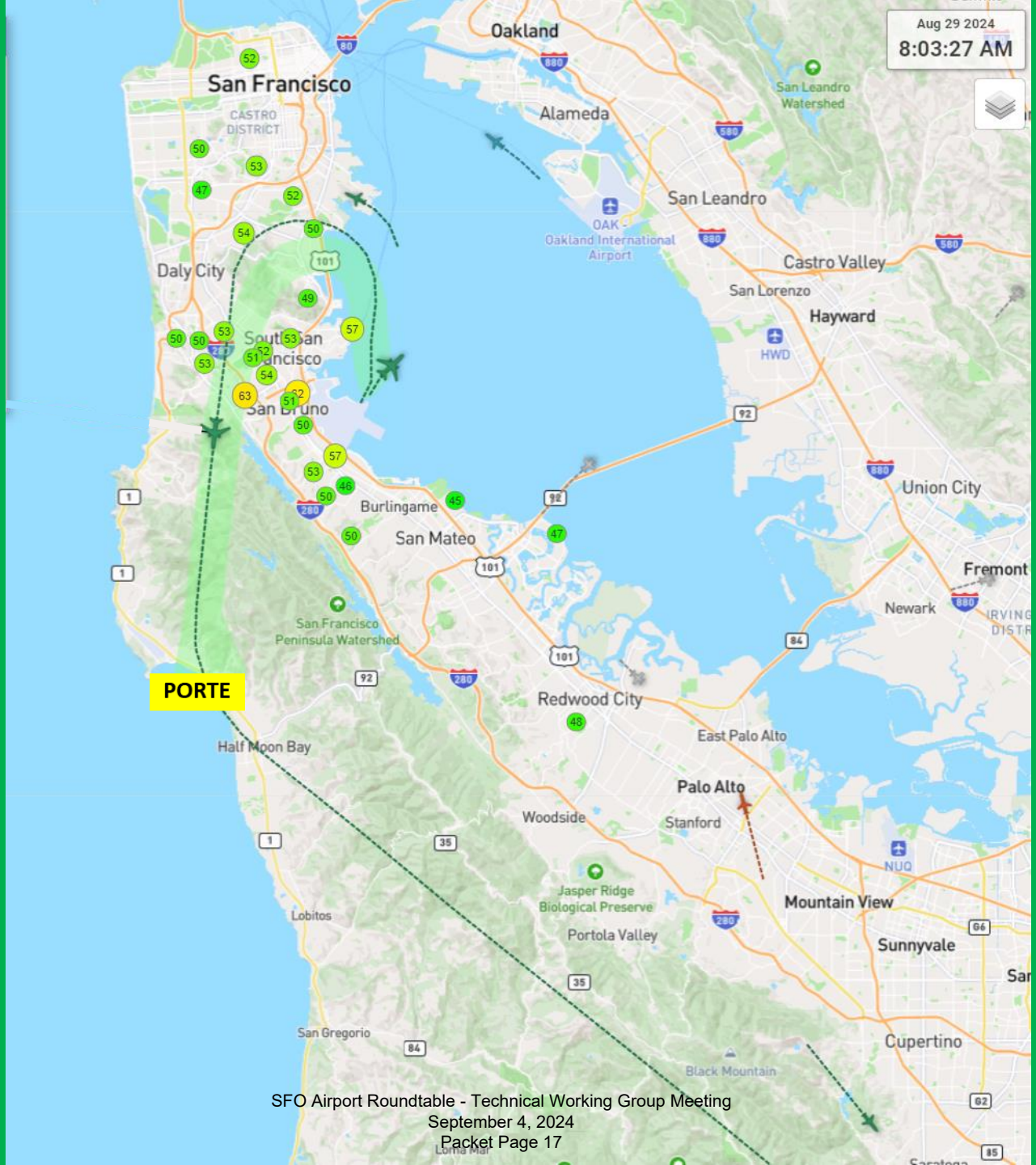
SW-2, 13 JUN 2024 to 11 JUL 2024

# SFO SSTIK DEPARTURE FROM RUNWAYS 1L & 1R



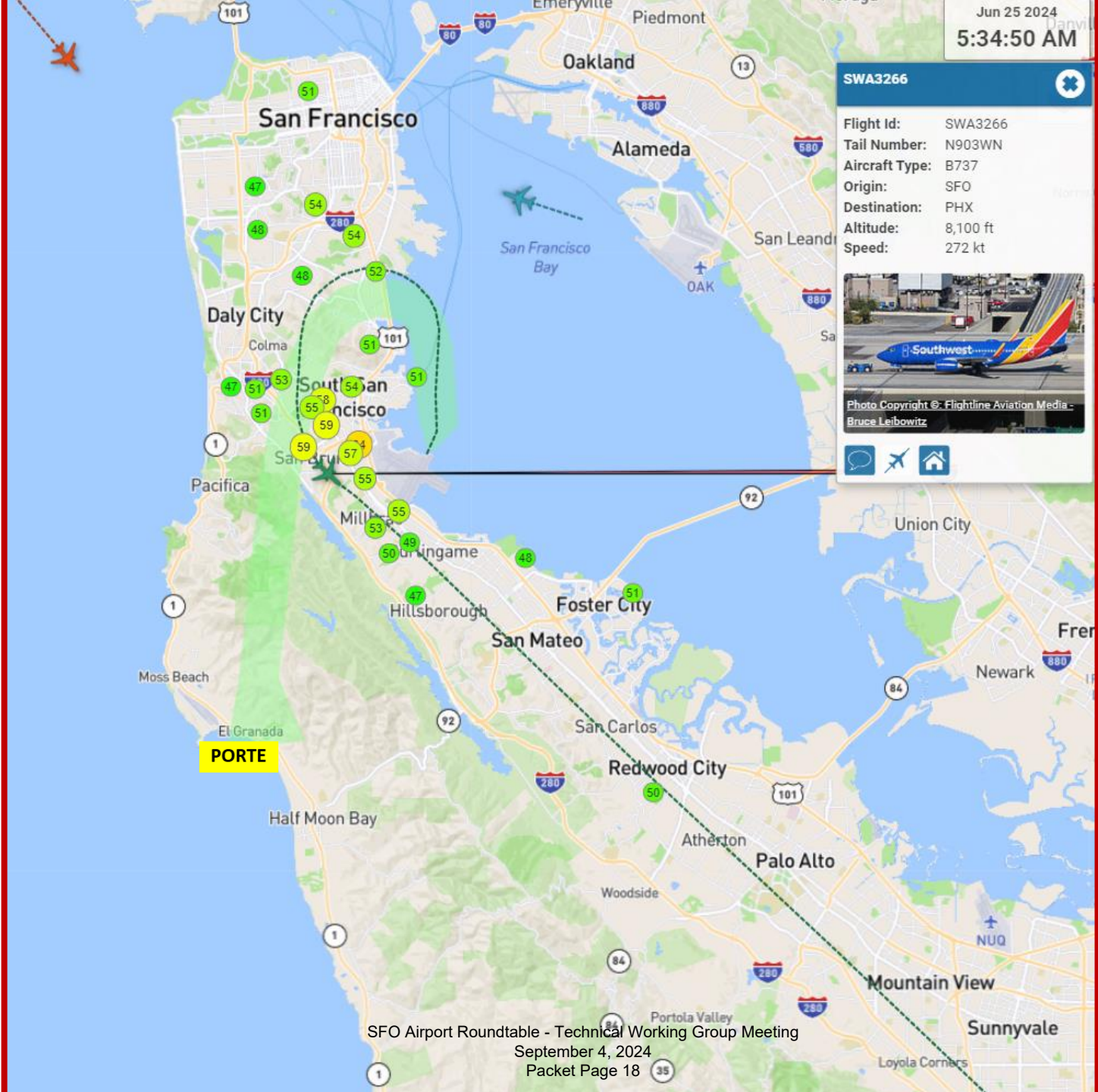


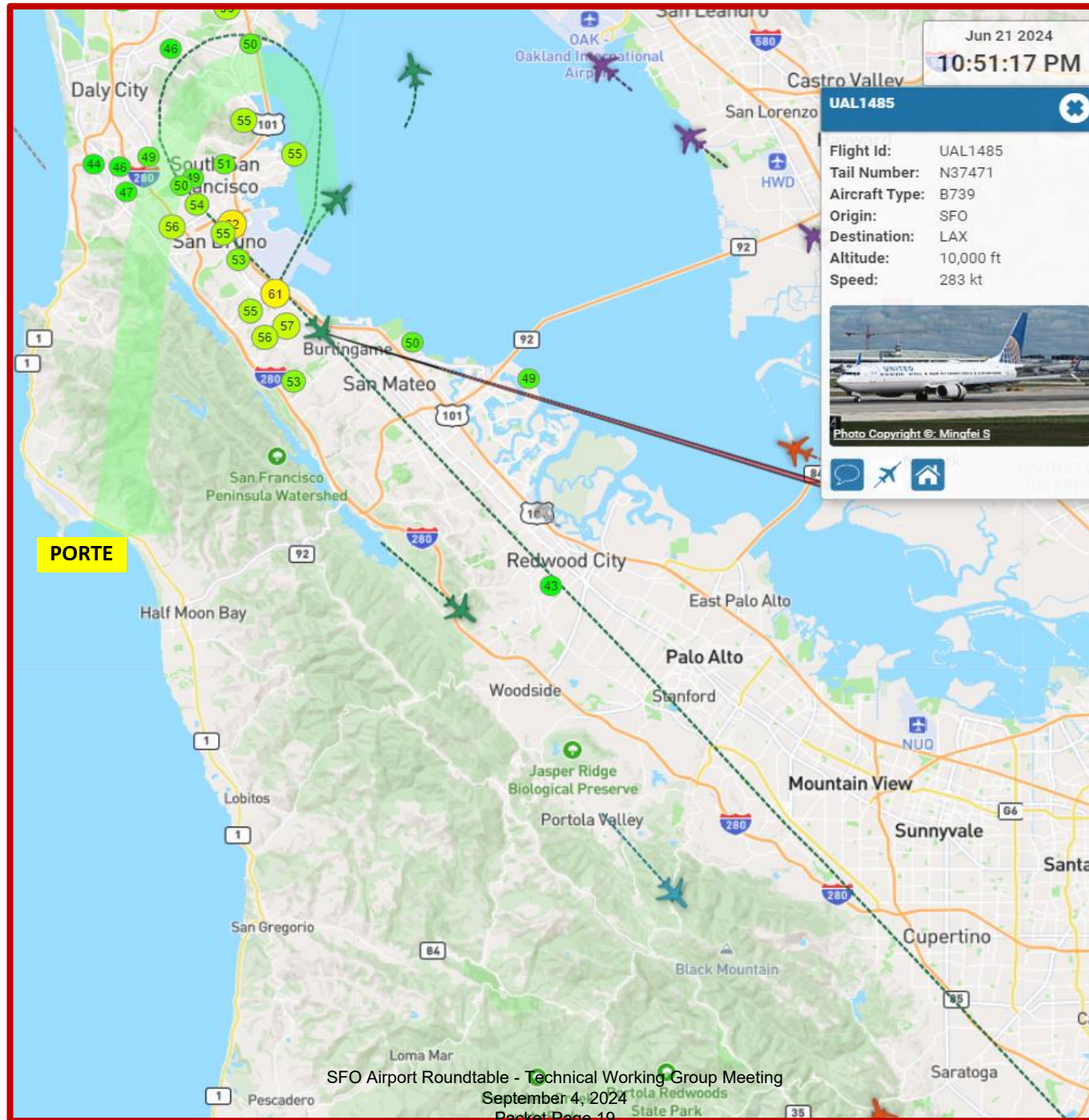


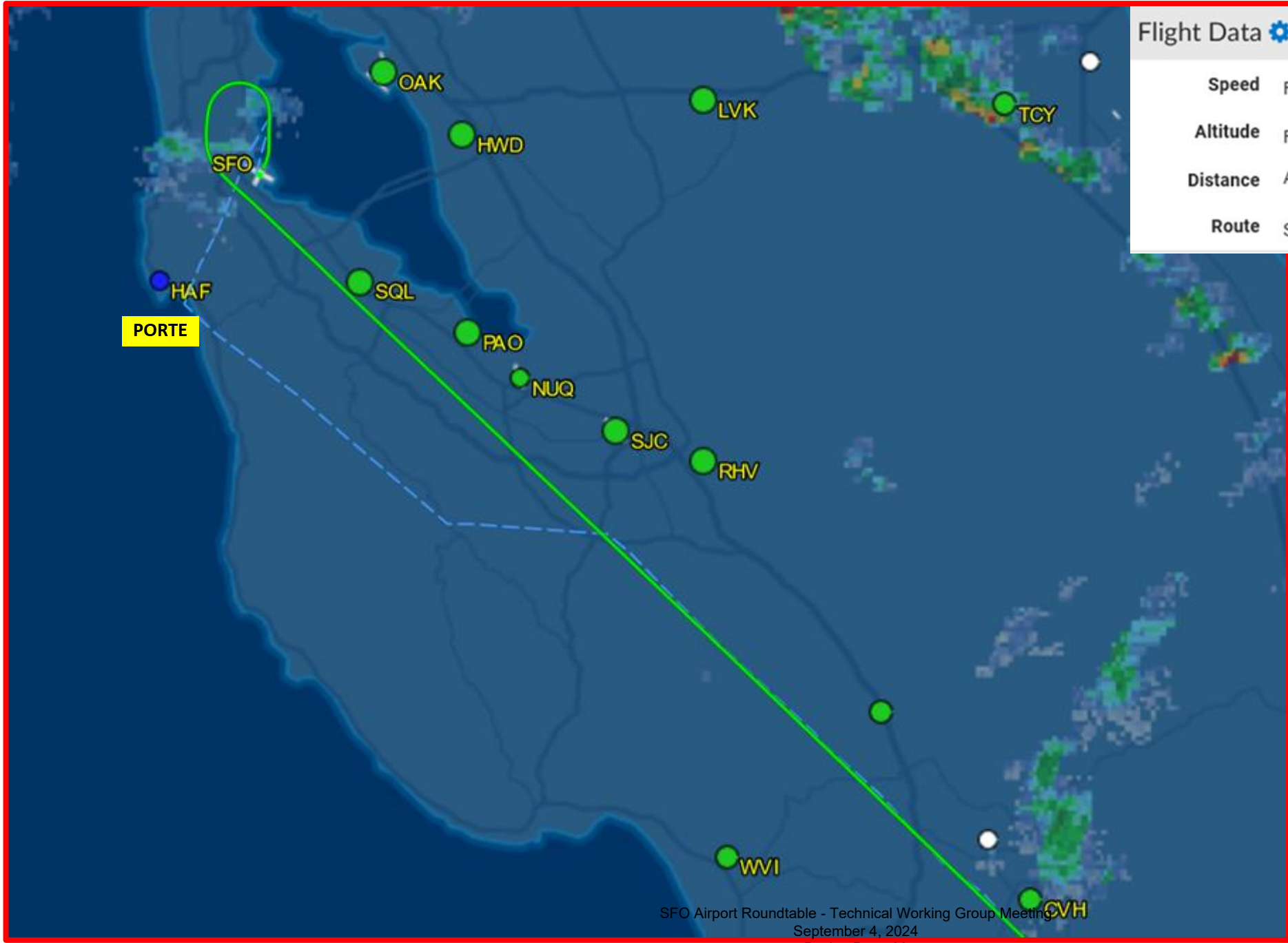


**PORTE**

Aug 29 2024  
8:03:27 AM

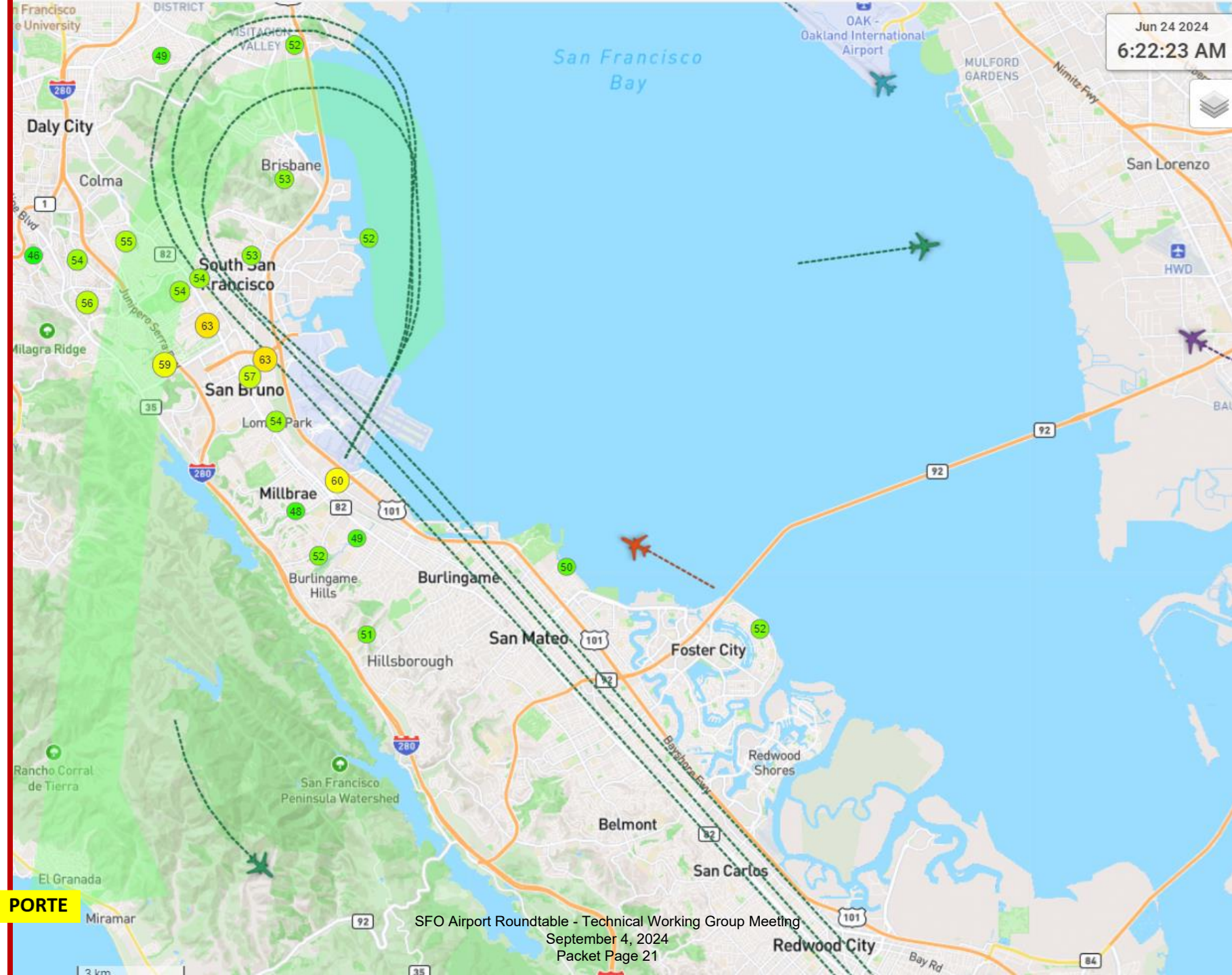






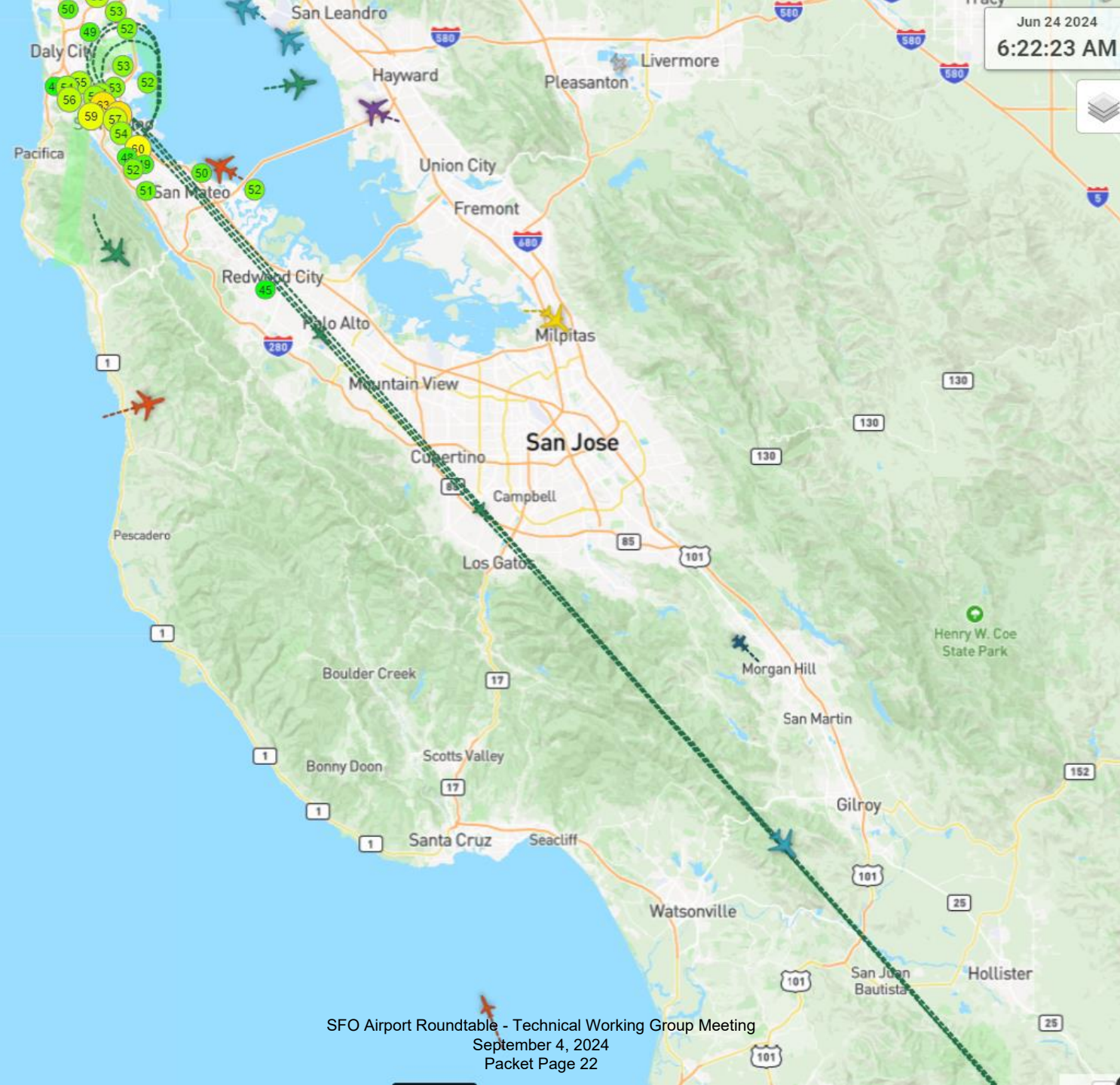
Flight Data

<b>Speed</b>	Filed: 458 kts
<b>Altitude</b>	Filed: 39,000 ft
<b>Distance</b>	Actual: 606 nm (Planned: 566 nm/Direct: 565 nm)
<b>Route</b>	SSTIK5 KAYEX LOSHN BOILE BLH HYDRR1



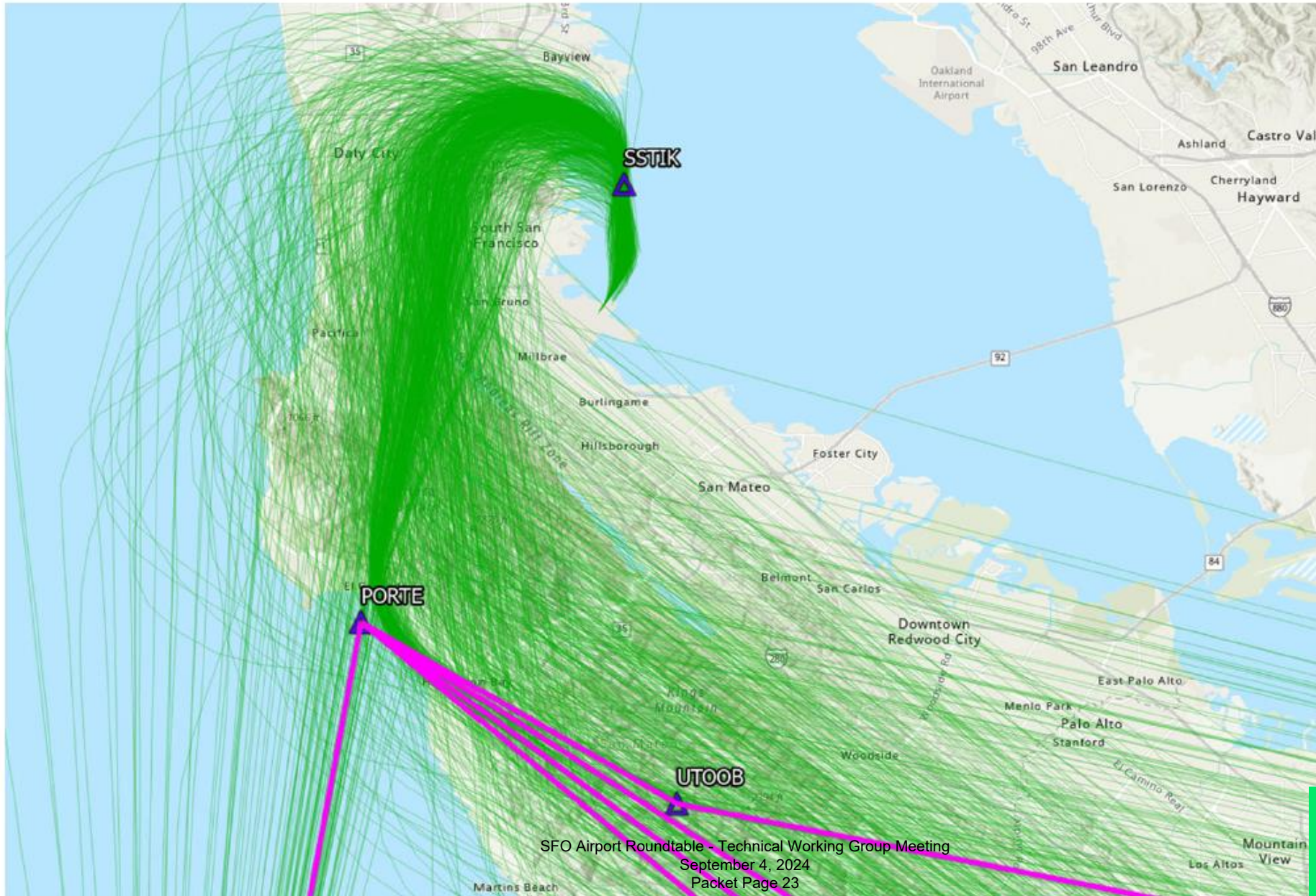
**PORTE**

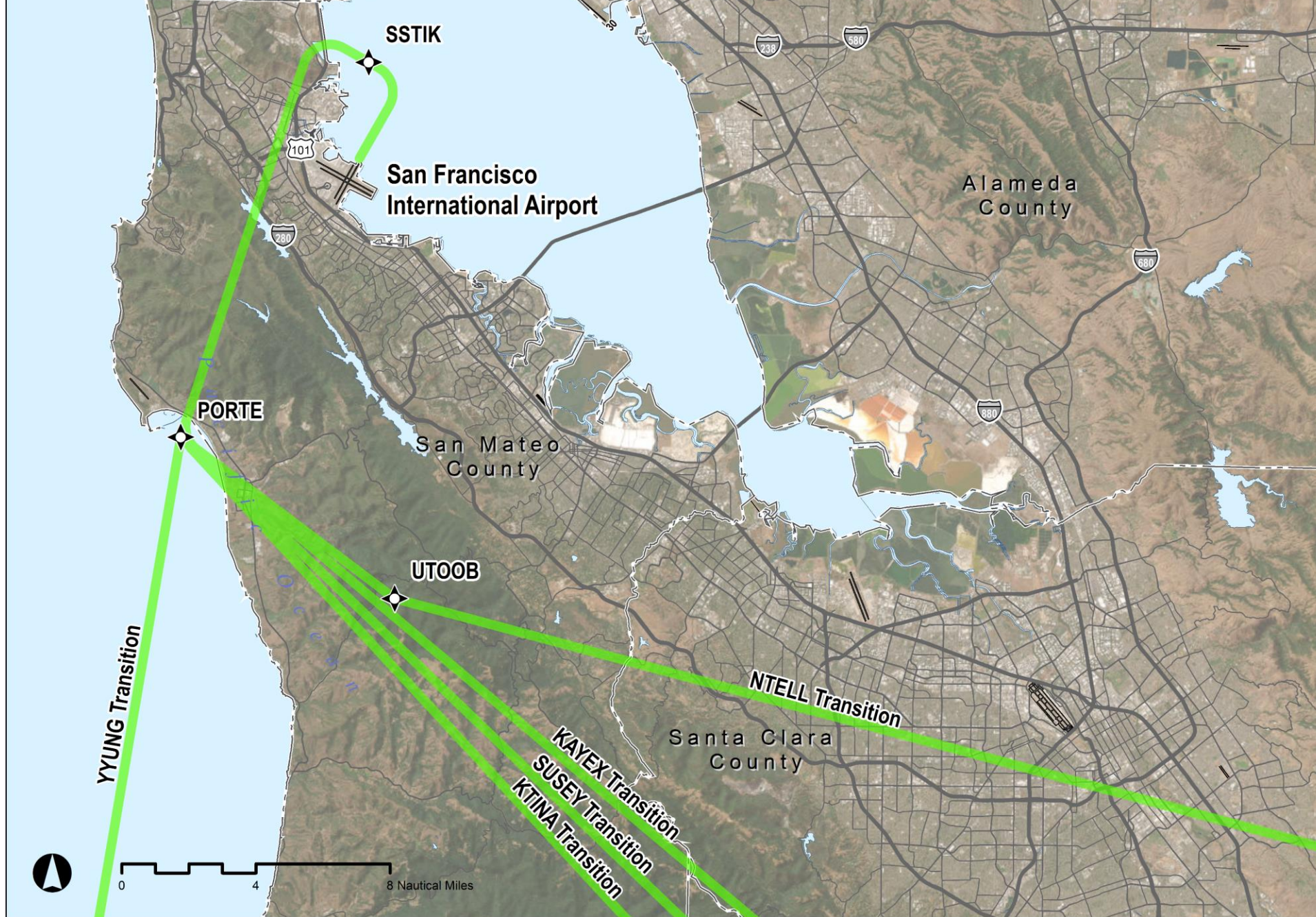
Jun 24 2024  
6:22:23 AM



# SSTIK departure procedure with tracks closer to airport.

12 random days  
in 2023









**PORTE**

**UTOOB**

**FFOIL**

**NTELL**

**KAYEX**

**SUSEY**

**KTINA**

**LIBBO**

**YYUNG**



**END**

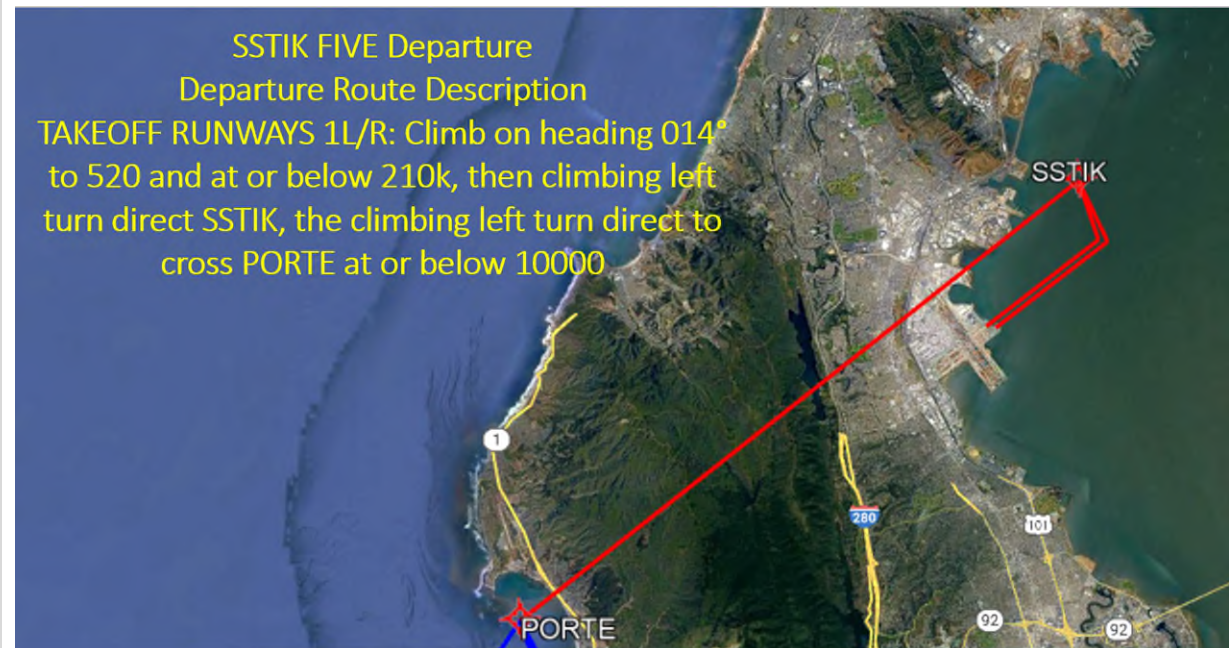
# *Evaluation Results of 2 Flight Procedures During the Night (10pm-7am)*

## **SSTIK Departures and 28L Arrivals**

September 2024

# Flight Procedures

- SSTIK Departure



- Runway 28L Arrivals



## Weather Information

Adverse weather conditions were analyzed for both data sets using archival weather data and no significant weather events regarding precipitation, visibility, or wind were determined to be a factor in the vast majority of deviations.

## SSTIK Data

- The data set includes 510 separate flights between 5/23/2023 and 10/31/2023.
- All flights either deviated from the SSTIK Standard Instrument Departure or were following an alternative departure procedure between the hours of 10pm and 7am.
- All flights contained within the data set penetrated the “STIKK TIGHT TURN” gate shown on the following slide.

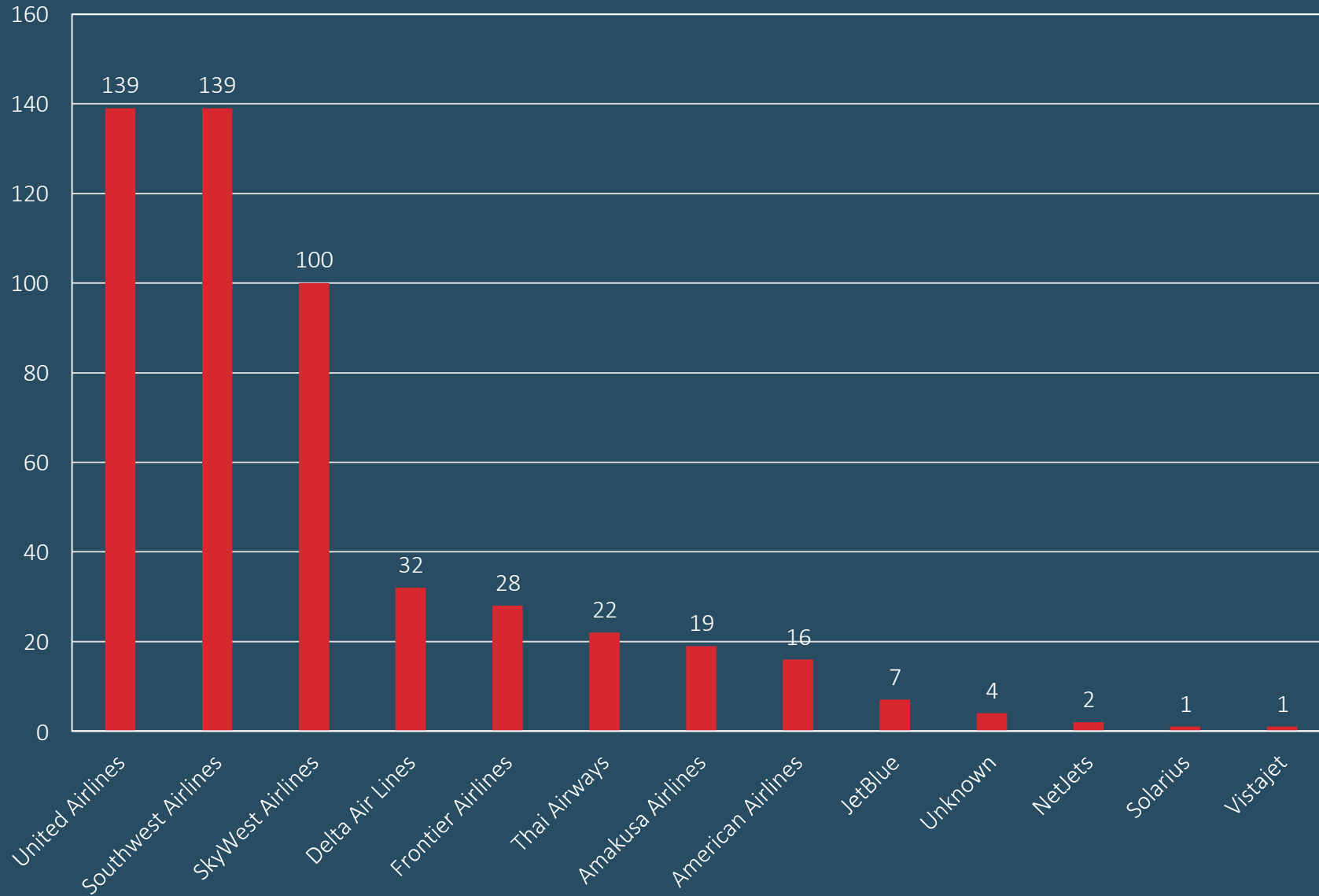
# SSTIK FIVE Departure

## Departure Route Description

TAKEOFF RUNWAYS 1L/R: Climb on heading 014° to 520 and at or below 210k, then climbing left turn direct SSTIK, the climbing left turn direct to cross PORTE at or below 10000



### Number of Flights

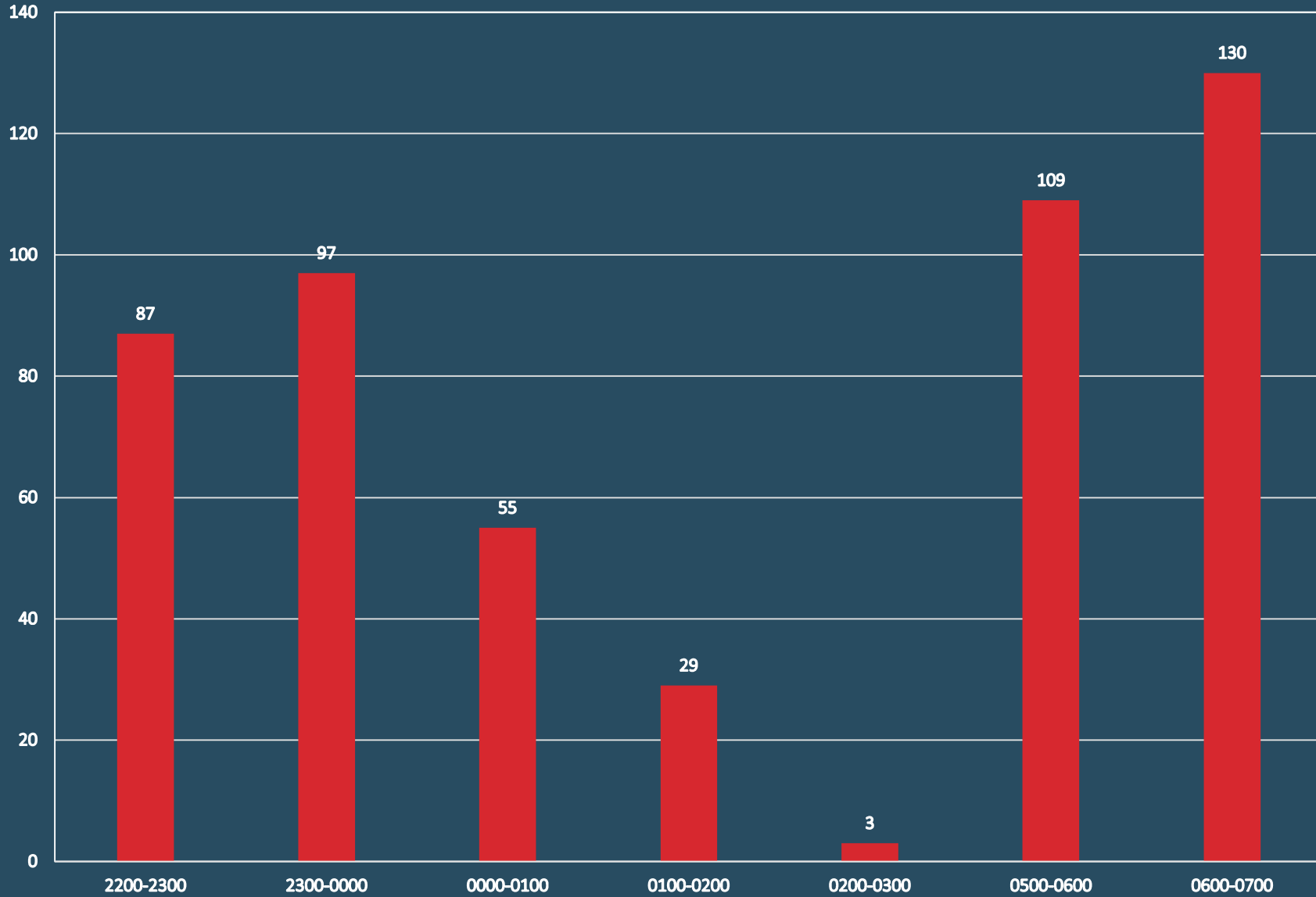


## Flight Deviations By Airline





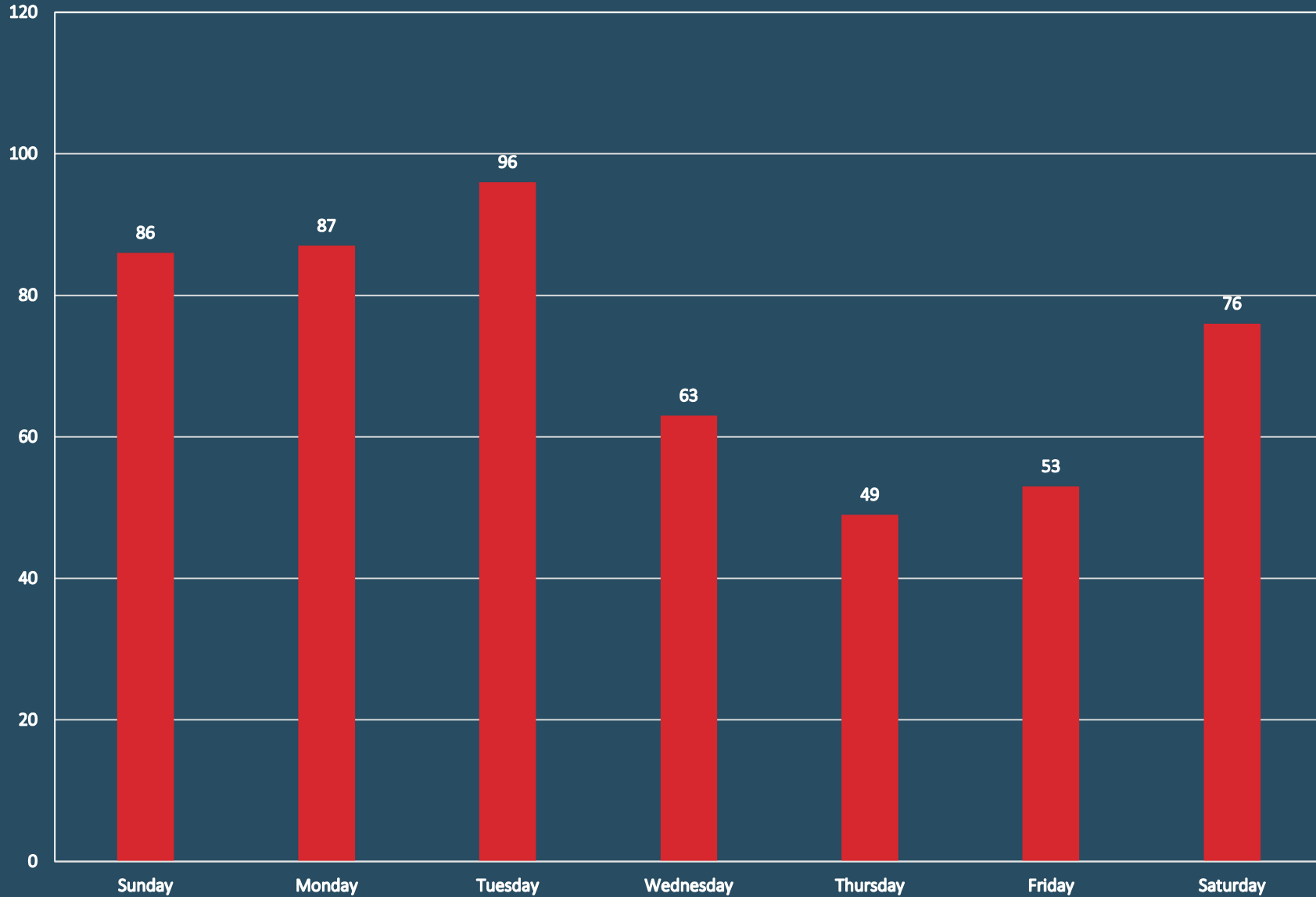
### Number of Flights



### Flight Deviations by Hour



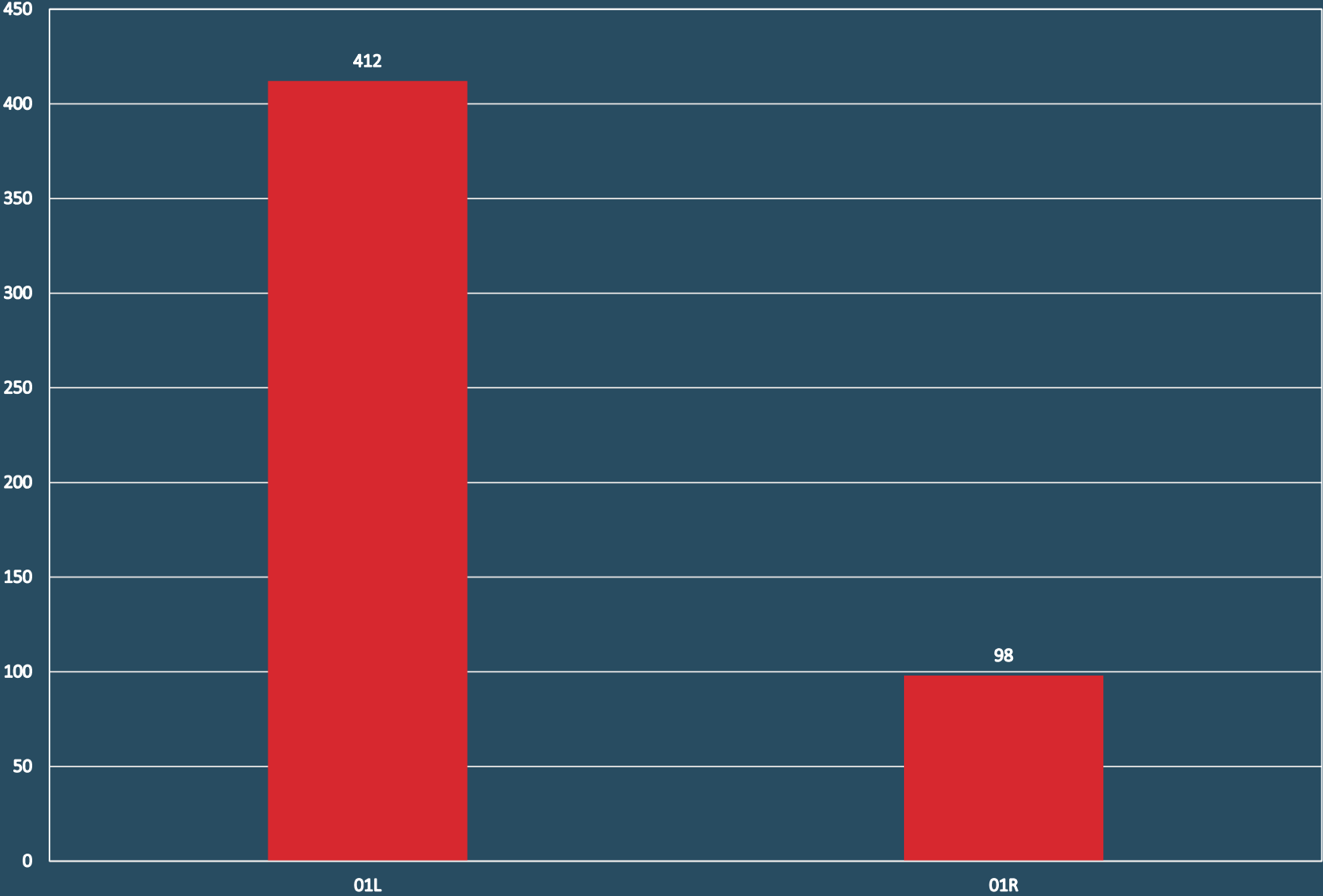
### Number of Flights



### Flight Deviations by Day



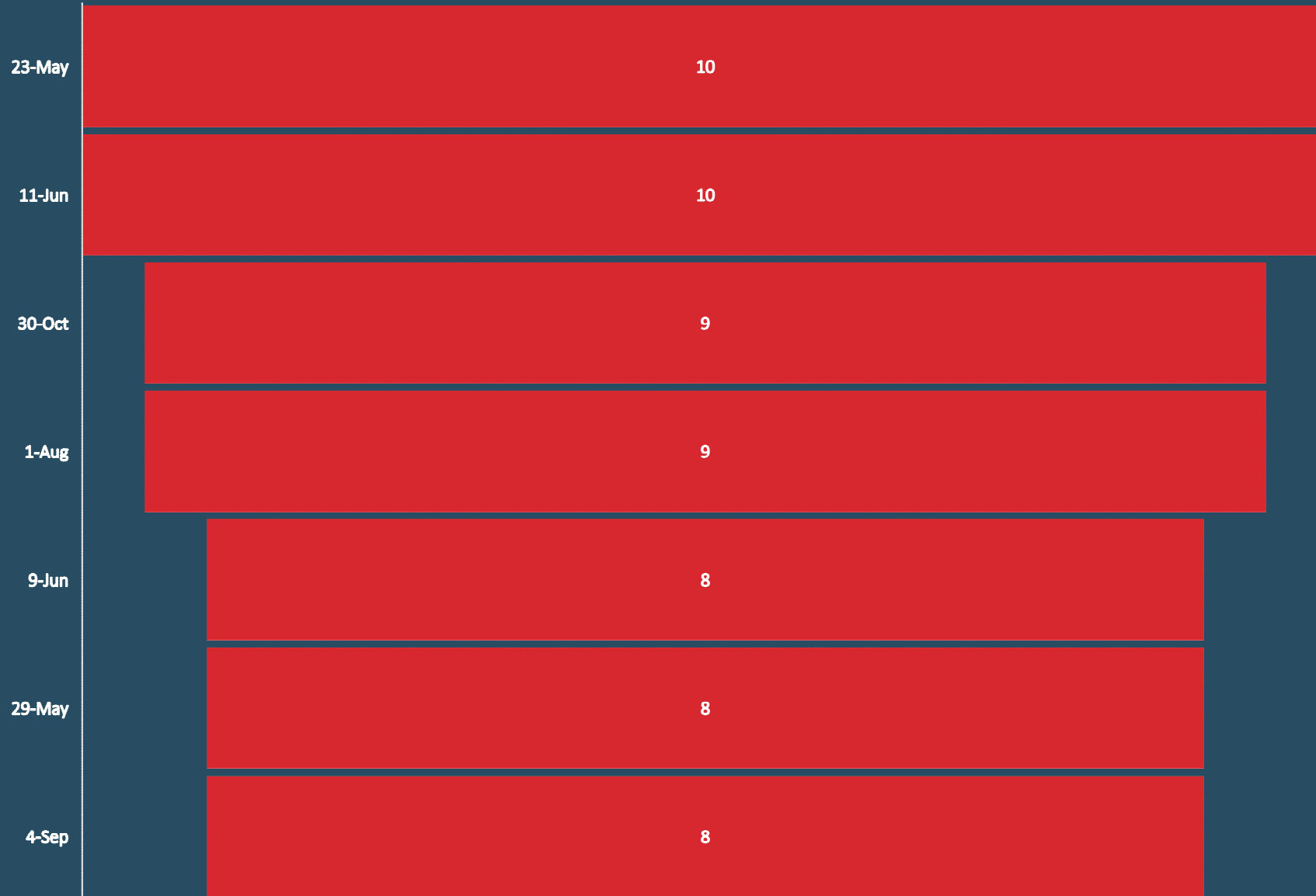
### Number of Flights



Flight Deviations  
by Runway

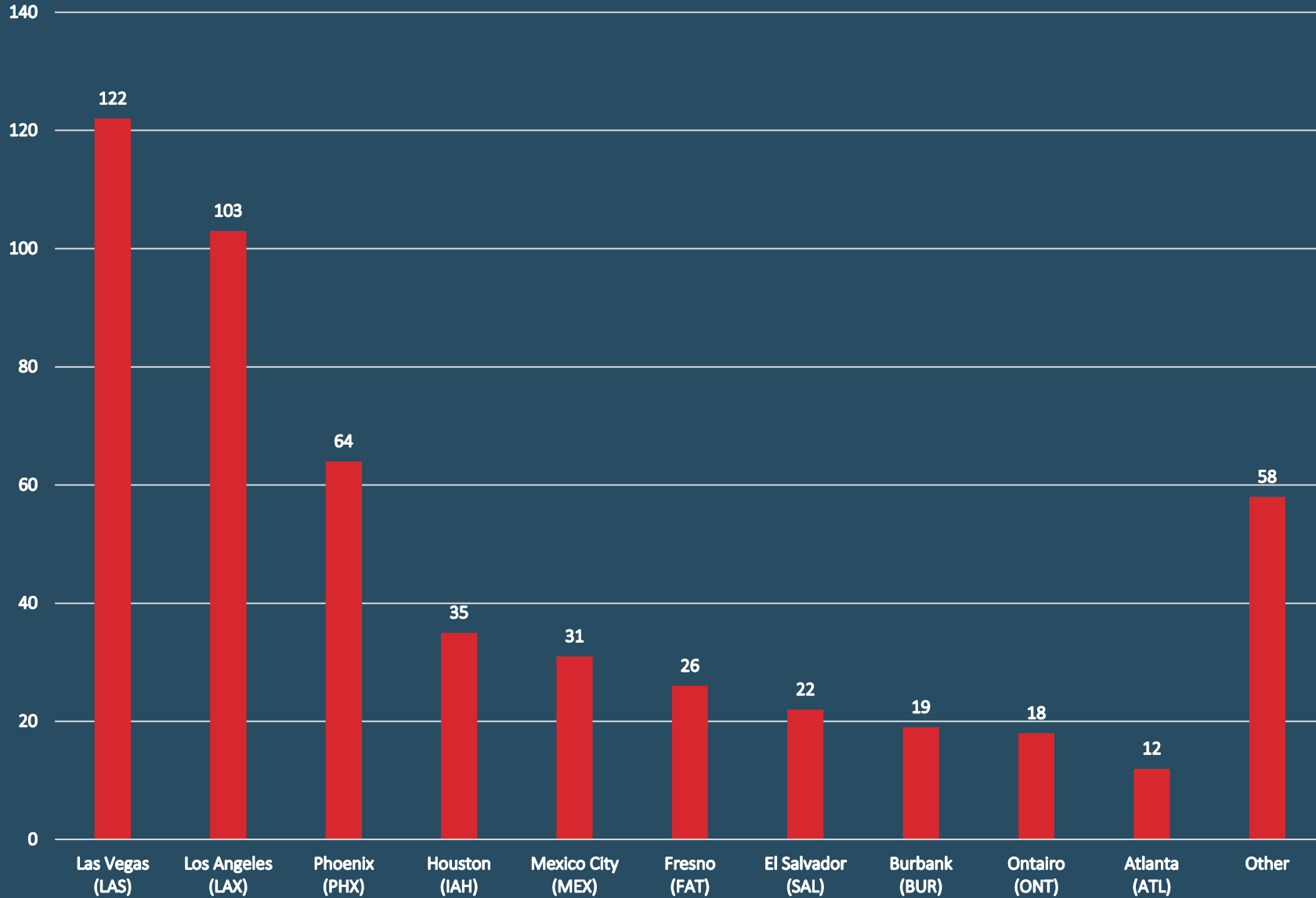


## Number of Flights



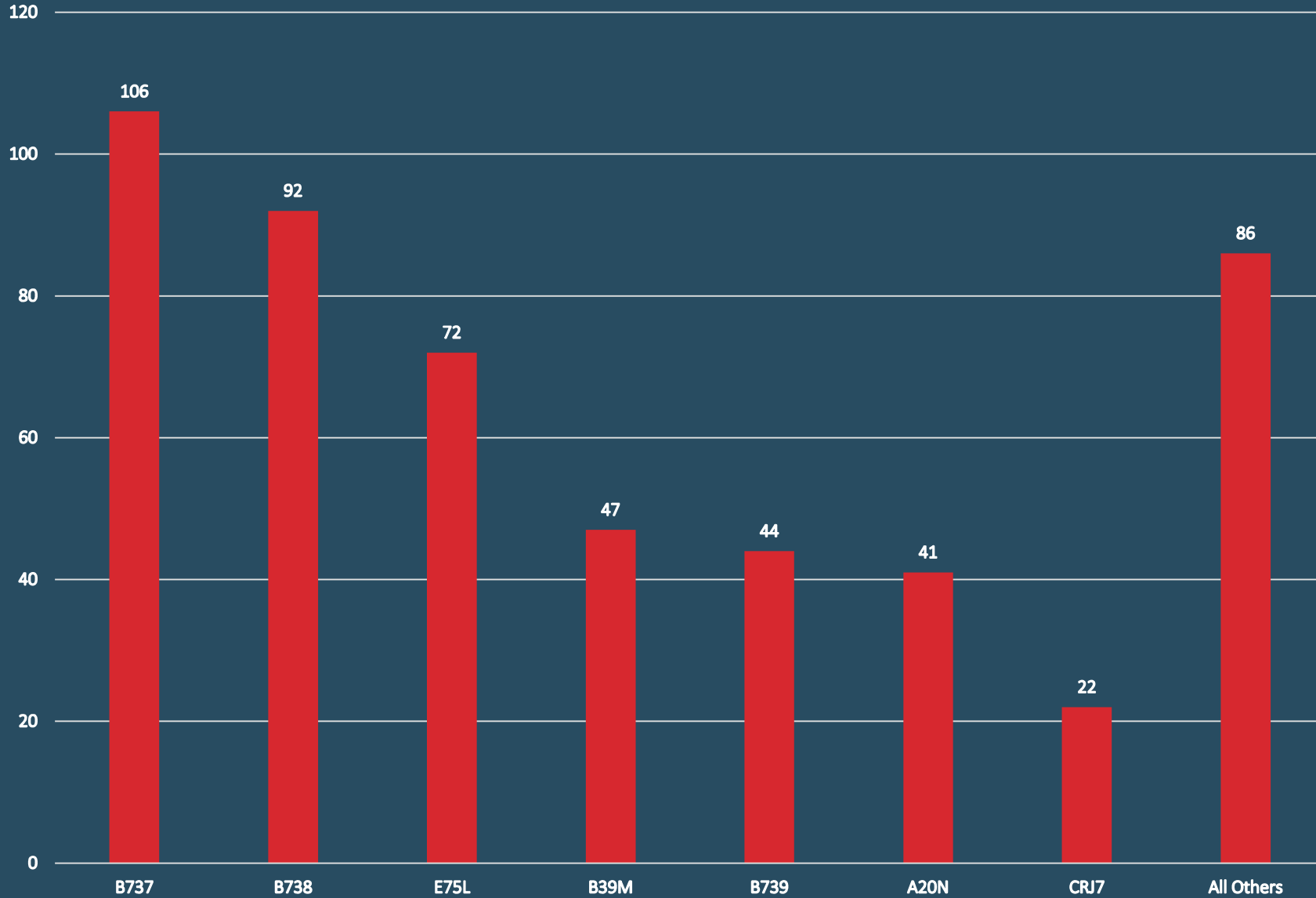
Flight Deviations  
by Date

## Number of Flights



## Flight Deviations by Destination

## Number of Flights



Deviations by  
Aircraft Type

## Runway 28 Data

- The data set includes 4,541 separate flights between 4/1/2023 and 10/31/2023 provided by SFO.
- All flights were determined to have deviated from Fly Quiet Recommendations for arrivals to Runways 28L/R between the hours of 10 pm and 7 am and deviated from the preferred path by an average of 5,156 ft.
- All flights contained within the data set penetrated the “Fly Quiet Foster City” gate shown on the following slide.



Fly Quiet Foster City Gate

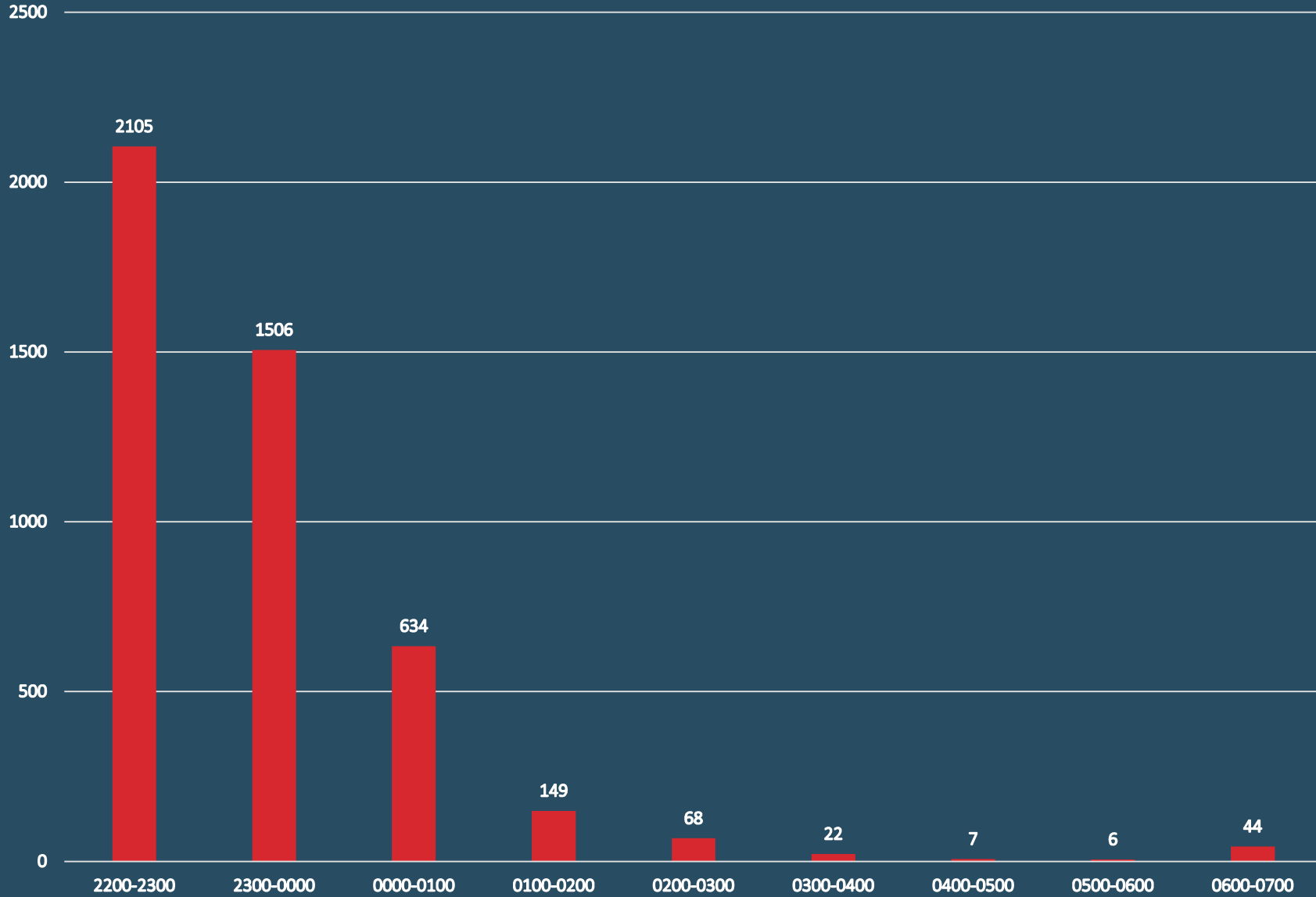
Quiet Bridge Visual Approximate Path

RNP Y RWY 28R



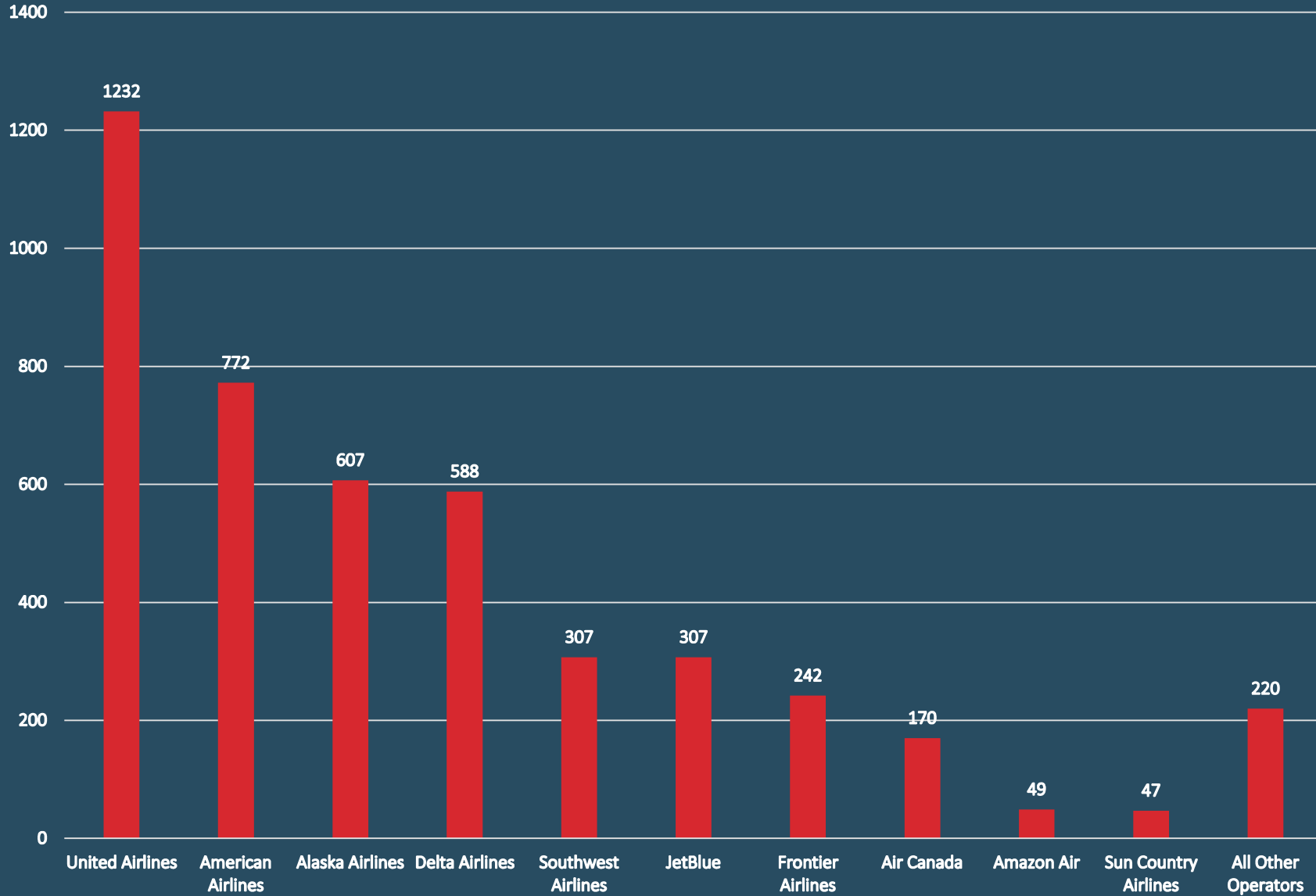


## Number of Flights



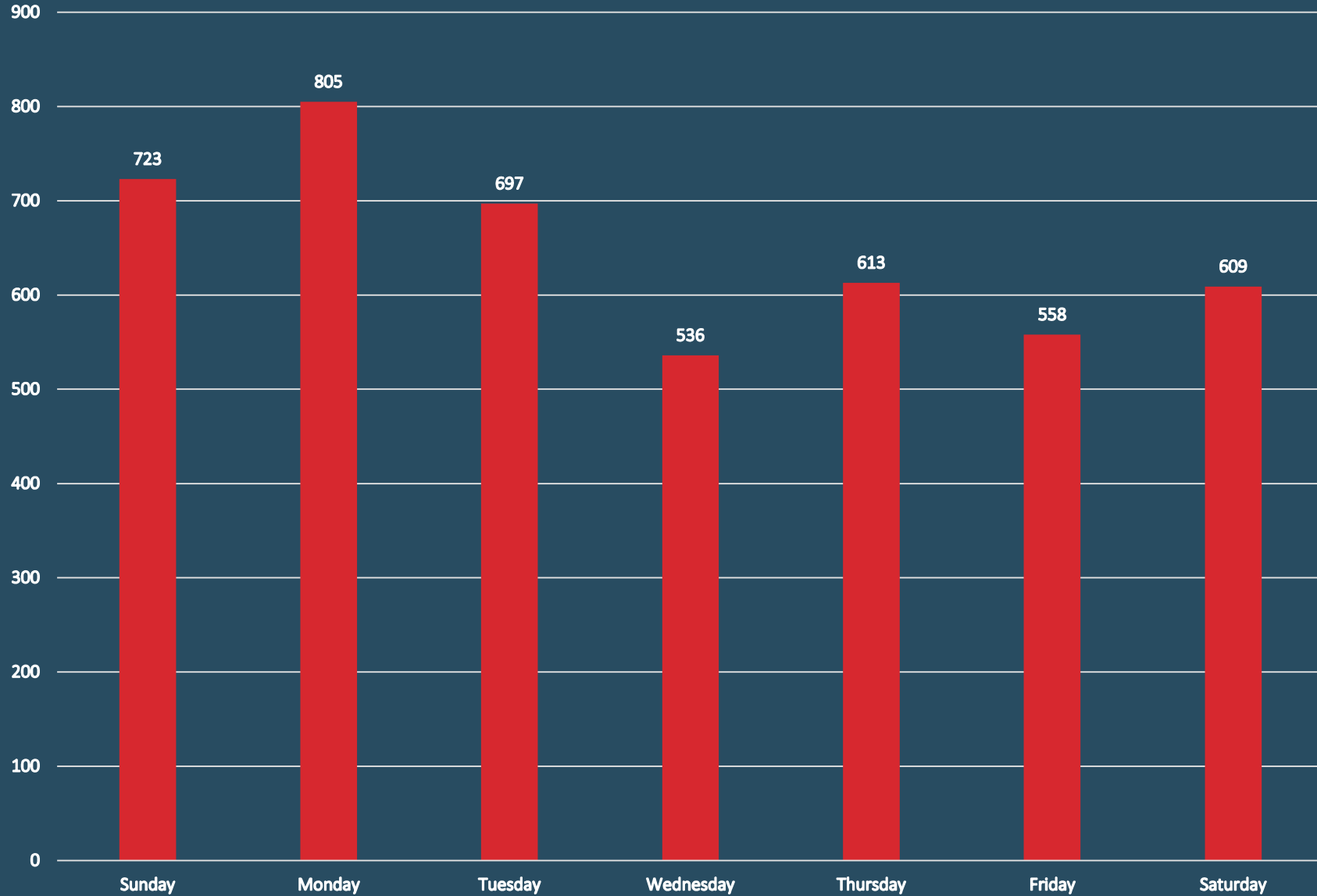
## Flight Deviations by Time

## Number of Flights



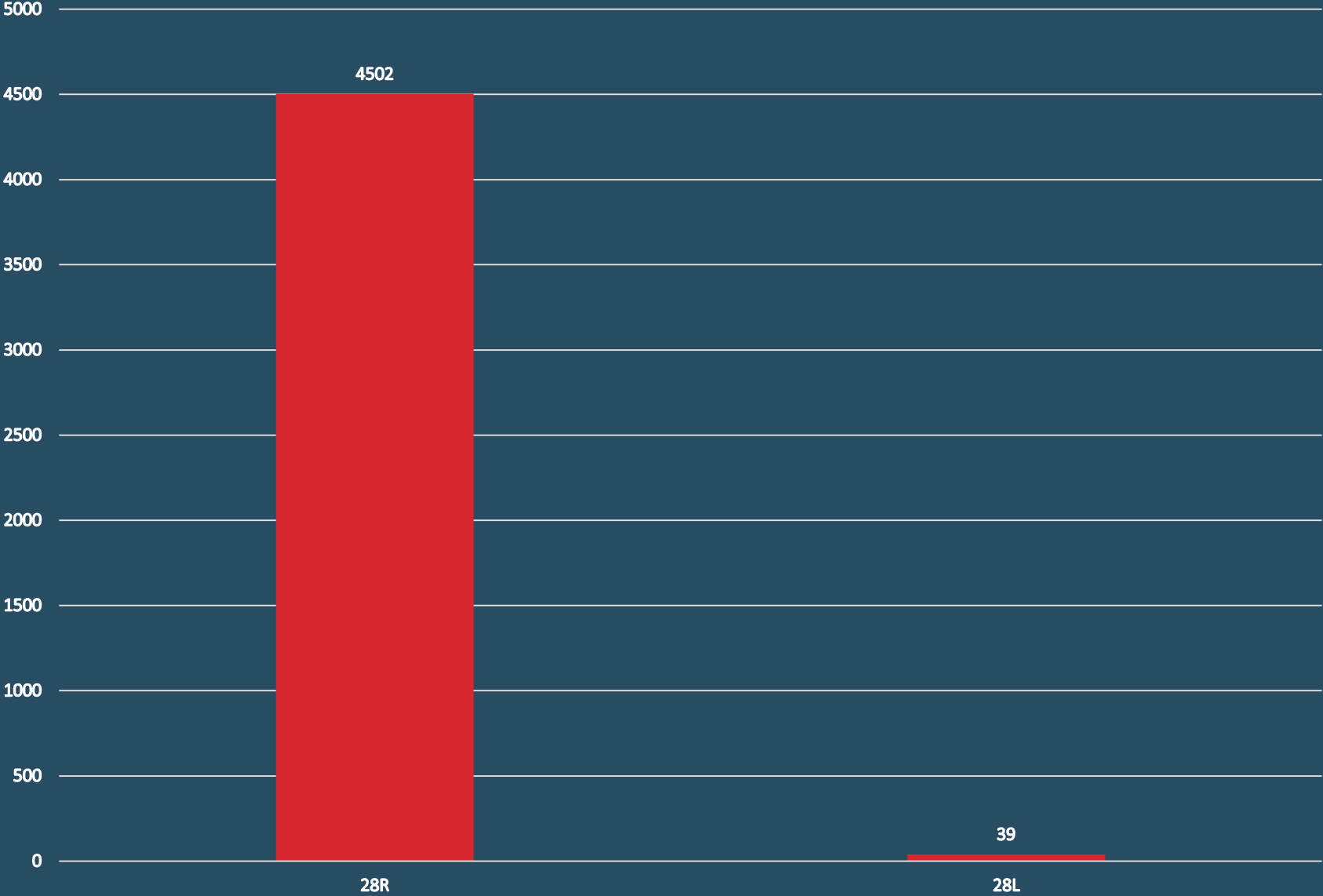
## Flight Deviations by Airline Operator

## Number of Flights



Flights Deviations  
by Day

# Number of Flights



Flights by Arrival Runway

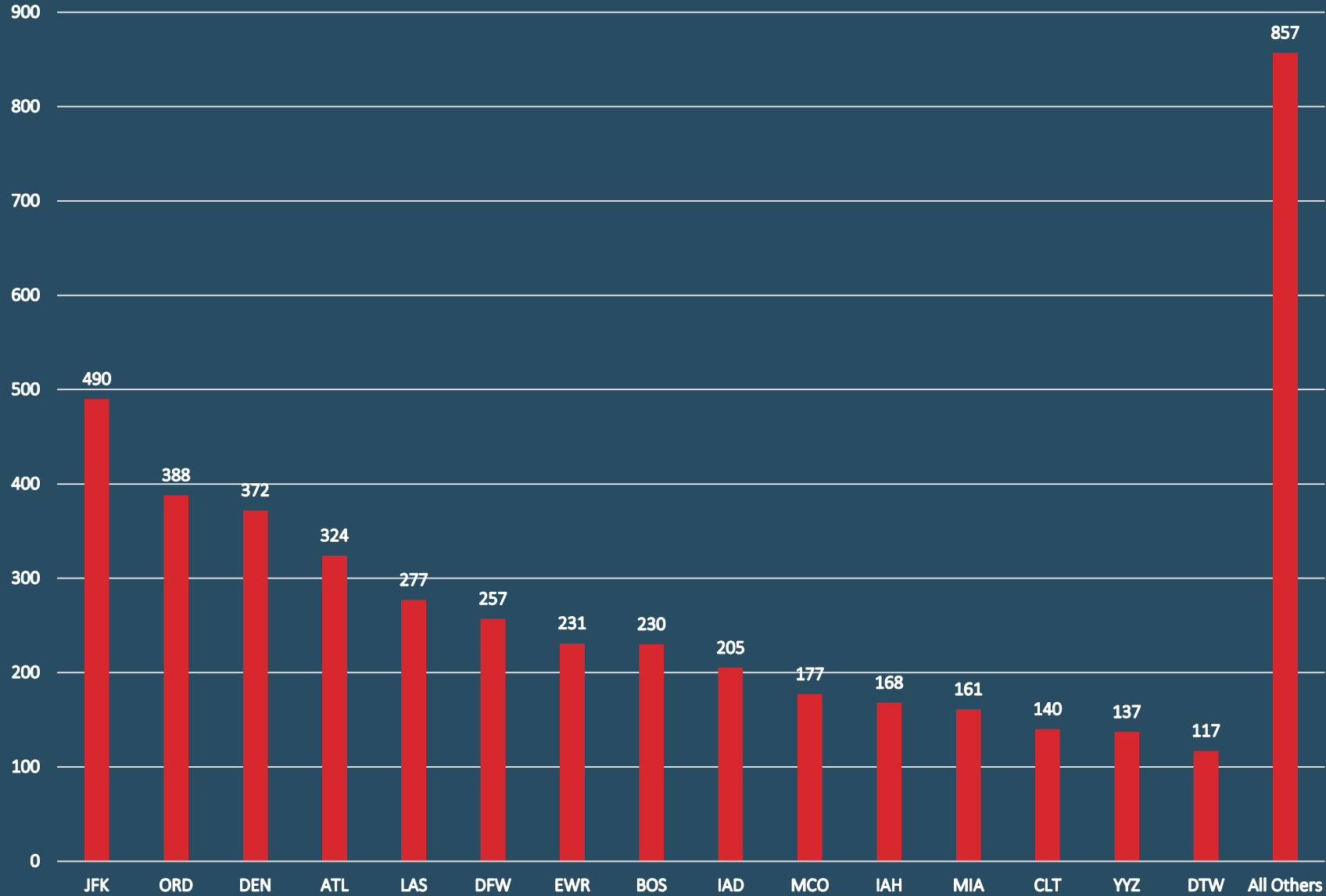


## Number of Flights



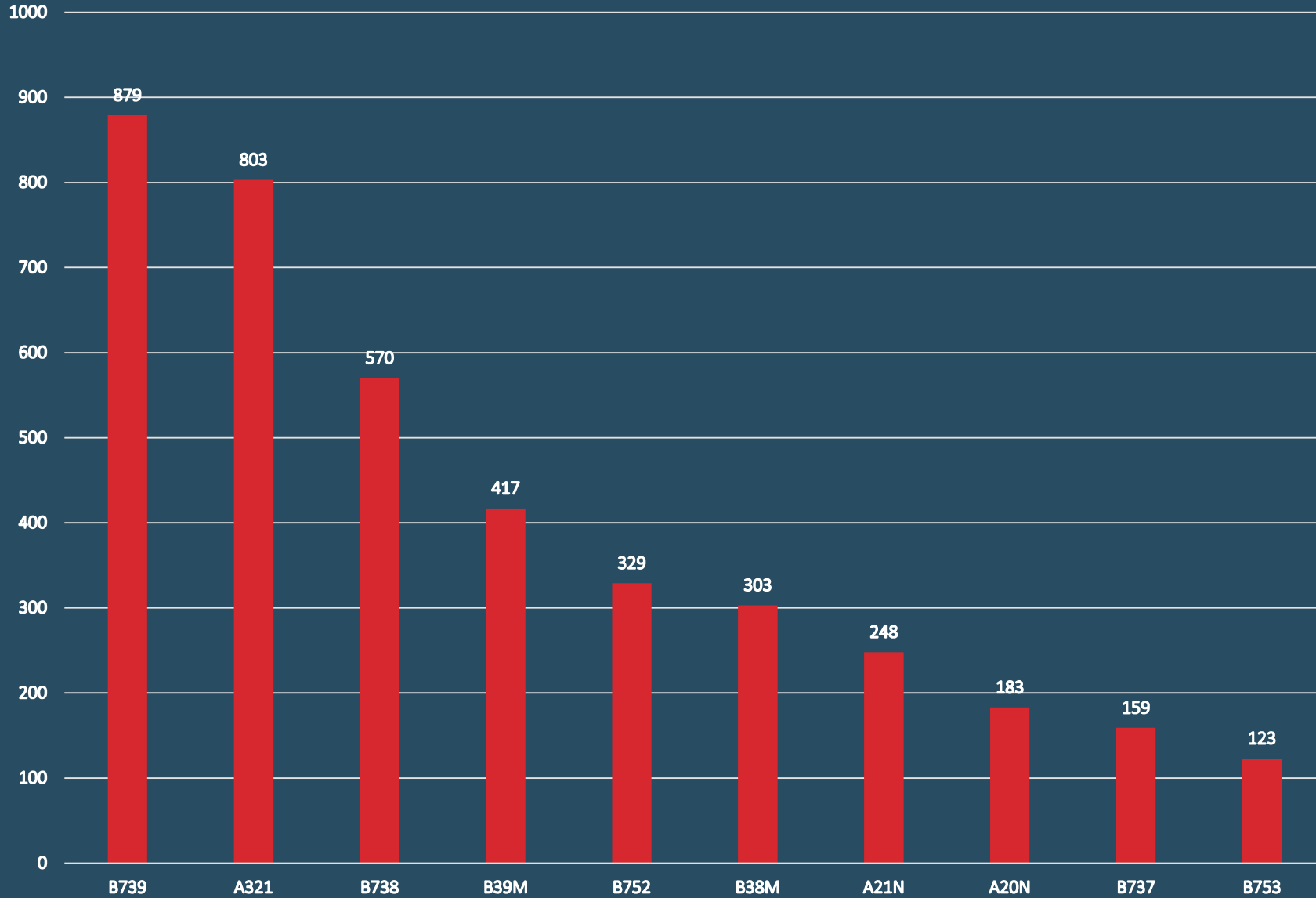
Flight Deviations  
by Date: Top 10

## Number of Flights



## Flight Deviations by Origin

## Number of Flights



Number of Flights  
by Aircraft Type  
Top 10

# Additional Information

## RNP AR Operator Authorization

August 20, 2024

### Fully Authorized (all aircraft)

Alaska
American
Frontier
Horizon
JetBlue
Republic
Southwest
United

### Partially Authorized

Airline	Authorized	Not Authorized
Delta	ALL except:	A330-200/300 (Early 2025 Authorized) B712
FedEx	B757/B767 B777	A300 MD11 (Early 2025 Authorized)
SkyWest	ERJ-175	CRJ-2/7/9
UPS	B757/B767 MD11/A300	B747 (Mid 2025)
Air Canada	All except:	A319/A320/A321/A330
Executive Jet	CL35, CL60, GL5T, GL7T, GLEX, C68A	Comprises 58% of the Fleet Query Pilots for Authorization
Business Fleet	Some Authorized	Query Pilots

### Not Authorized (all aircraft)

Air Shuttle Mesa
Air Wisconsin
Allegiant
CommutAir
Endeavor
Envoy
GoJet
Hawaiian
Piedmont
PSA
Spirit Air





## Additional Information

### **FMS Bridge Visual Approach RWY 28L/R**

- Maintained by United Airlines and provided to air carriers who request it via their Certificate Management Office (CMO)
- Similar to RNAV Visual
- Never “blessed” (just accepted) by FAA
- Pilots can request the FAA maintained CVFP Bridge Visual if they don’t have the FMS Bridge Visual

# Further Discussion

- Additional questions and or clarification of information provided
- Possible next steps

# Questions?

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# Thank you

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Questions or comments:  
[jstoddard@hmmh.com](mailto:jstoddard@hmmh.com)

**WRITTEN PUBLIC COMMENT  
FOLLOWS THIS PAGE**

**This was originally submitted as written public comment for the Technical Working Group agenda item #3 for the meeting of July 16, 2024. That agenda item was rescheduled to the TWG meeting of September 4, 2024.**

**Sent:** Monday, July 15, 2024 1:30 PM  
**Subject:** SFO Roundtable-Technical Working Group Subcommittee  
**Foster city airplane noise**

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Hello Kathleen and Sam,

I hope this message finds you well. As we prepare for tomorrow's meeting, I wanted to write in to address the significant issue of airplane noise and its profound impact on health, particularly within households where there are elderly individuals and young children. We've observed that flights from the southeast primarily use offset arrivals while others do not. We understand the need for one airplane to be closer to Foster City during parallel landings. However, often when there's only one airplane landing, the offset approach isn't utilized.

1. It is imperative that we focus on maximizing over-bay approaches using GBAS, especially for large aircraft and during quiet hours. The noise generated by routine cargo and airliner at low altitude during these periods can be particularly disruptive and detrimental to the well-being of residents.
2. I would like to draw attention to the Boeing 777-222 aircraft, which has been identified as producing notably higher levels of noise and utilizing speed brakes more frequently compared to other aircraft models. It would be beneficial for us to explore any specific factors contributing to these noise levels and investigate potential solutions to mitigate them.
3. Additionally, could you please provide an update on the status of implementing the dual offset approach? Understanding when this strategy will be put into production will be crucial for addressing noise concerns effectively.

As we discuss these points in the meeting, I believe it's essential to consider not only the technical aspects but also the human impact of airplane noise. Finding sustainable solutions that prioritize community well-being is paramount. I look forward to our discussion and collaborating on strategies to minimize the impact of airplane noise on our community.

Thank you for your attention to these matters.

**Chi-Jen Lin**  
**Foster City**