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San Diego International Airport
East County Working Group - Aircraft Noise Concerns

Meeting #1

PRESENTED TO:
SDIA East County Working Group

PRESENTED BY:
Stephen C. Smith

PRESENTED ON:
December 6, 2018

Agenda

- Introductions
- Meeting Objective
- East County Working Group
- Overview of Air Traffic Evaluation
  - Air Traffic Evaluation Objective
  - Air Traffic Evaluation Process Overview
  - FAA Process Overview
- Understanding East County Concerns related to Aircraft Noise and Overflights
  - Historic and existing SDIA arrival traffic patterns over East County
  - Existing published flight procedures
  - Future air traffic environment changes
  - Workgroup concerns
- Next Steps

Introductions

👤 East County Working Group Facilitator

  – Ms. Heidi Gantwerk

👤 San Diego County Regional Airport Authority (Airport Authority)

  – Owns and operates the airport

  – Main Contact: Ms. Sjohnna Knack, Program Manager

👤 Flight Procedure Analysis Consultant Team

  – Project Lead: Mr. Stephen Smith

  – Ricondo & Associates, Inc.

👤 East County Working Group Members

Meeting Objective

- Understand role of the East County Working Group
- Confirm intent and expectations of the Air Traffic Evaluation effort
- Educate members on overall SDIA arrival traffic patterns
- Discover overall noise concerns/issues from working group

East County Working Group

East County Working Group

👥 Purpose:

💬 Inform Authority of SDIA aircraft noise concern/issues for East County

💬 Provide input to Authority on potential noise abatement recommendations

👥 Members selected to allow for fair representation of East County communities

Member Responsibilities

Attend every meeting.

Come to meeting with an open mind.

Represent your community in a professional and respectful manner.

Respect other committee members views and opinions.

Ask questions as a means to reach a better understanding on a topic.

Provide meaningful input.

Meeting Conduct and Logistics

Operated on a consensus basis

Conducted in a professional and respectful manner

Facilitated by an experienced meeting facilitator

- Stay on agenda
- Be sensitive to meeting time
- Let every committee member share their thoughts

Meetings will be open to the public to observe

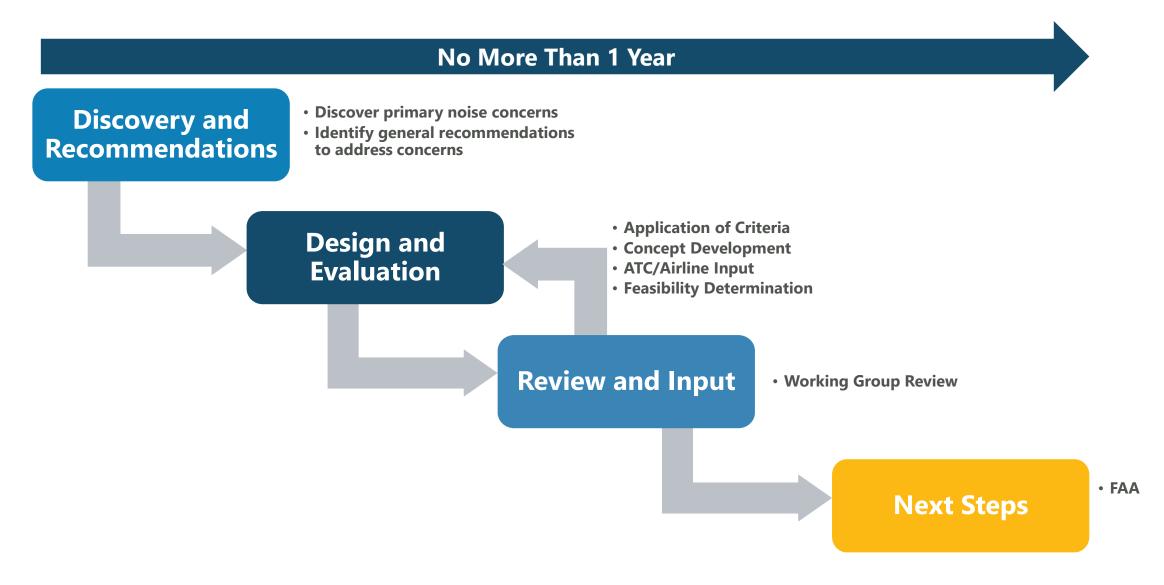Statements to the press can only represent the individual not the committee

Overview of Air Traffic Evaluation:

Process Overview

East County Air Traffic Evaluation Objective

Discover and identify SDIA aircraft noise concerns/issues in East County

Identify air traffic related concepts to address concerns/issues

Design potential procedure designs to meet the intent

Determine feasibility of potential procedure designs

East County Air Traffic Evaluation Process Overview

No More Than 1 Year →

Discovery and Recommendations
- Discover primary noise concerns
- Identify general recommendations to address concerns

Design and Evaluation
- Application of Criteria
- Concept Development
- ATC/Airline Input
- Feasibility Determination

Review and Input
- Working Group Review

Next Steps
- FAA

Design and Evaluation Parameters

Design Parameters

- Do not change aircraft flight paths at or below 3,000 feet above SDIA's elevation
- Do not impact safety
- Meet FAA design criteria
- Fit within existing airspace
- Do not impact capacity of SDIA
- Do not move noise to new non-compatible areas

Operations Data and Design Tool

- Evaluate post-November 2016 operations
- Use FAA's Terminal Area Route Generation, Evaluation and Traffic Simulation (TARGETS) design tool to design concept procedures.

Important Factors

✓ Will:

– Propose designs compatible with existing air traffic environment

– Gather critical input from East County Working Group during design process

– Coordinate with FAA ATO staff during concept design process

✗ Will not:

– Propose designs that require FAA waivers

– Propose designs that will negatively impact SDIA capacity

– Conduct all steps in FAA Order 7100.41A

– Evaluate non-SDIA traffic overflights

– Evaluate "restriction" type proposals that require 14 CFR Part 161 study

Set Realistic Expectations

? What are we doing here?

- Understand noise concerns for individual communities and East County as a whole

- Discover and develop ideas to address noise concerns

- Determine if the ideas are feasible for both short- and long-term relief

- Assess overall effect a feasible idea has on the communities within East County

? Will there be aircraft noise relief?

- Implementation of feasible concepts relies on FAA and airline support

- Maintain a balance to address all community concerns in East County as a whole and those for individual communities in East County

- Maintain a balance between airport/air traffic efficiency and noise relief

? How long will it take to get noise relief if found to be feasible?

- Can take between 2 and 5 years: depends on the proposed concept and environmental review requirements

- Concepts requiring new technology and airline investment can take even longer than 5 years

Overview of Flight Procedure Analysis:

FAA Process Overview

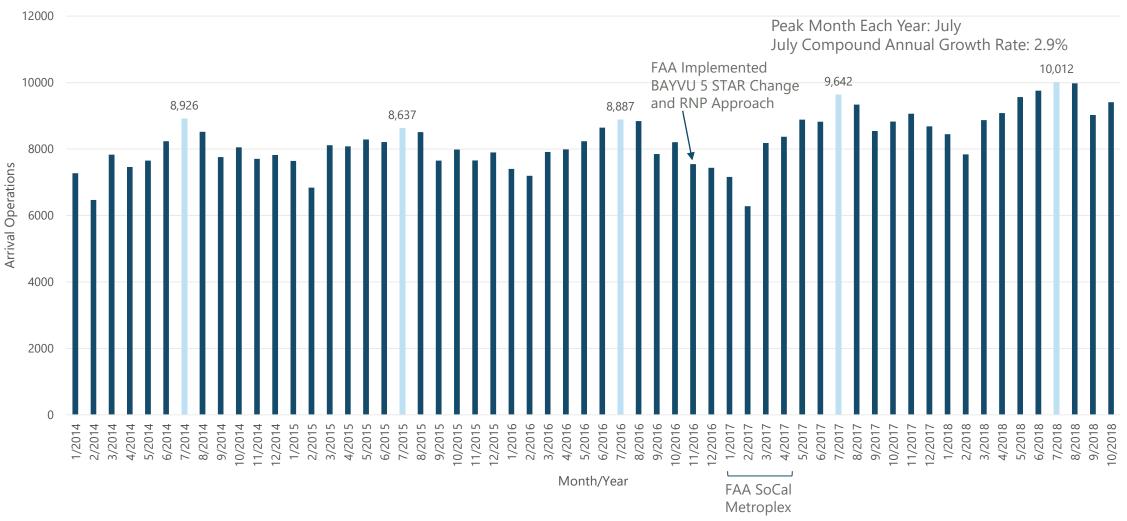# FAA Process and 7100.41 Phase 1 - Preliminary Activities

A Process to Evaluate Safety, Risk, Benefit, Feasibility, Readiness, and Performance

Between 2 to 5 Years

| Preliminary Activities | Development Work | Operational Preparedness | Implementation | Post Implementation Monitoring & Assessment |

Initial Coordination

- Does the Proposal Meet FAA Goals and Objectives? If Yes, Baseline Analysis. If No, STOP

Baseline Analysis

- Analysis of Baseline Data and Benefits
- Does the Proposal Meet FAA Goals and Objectives? If Yes, Go to Development Phase. If No, Re-evaluate Baseline Analysis or STOP

Approval

- If Accepted go to Development Phase. If Not Accepted Back to Baseline Analysis or STOP

Understanding East County Concerns related to Aircraft Noise and Overflights

Historic and Existing SDIA Arrival Traffic Patterns over East County

Runway 27 Arrivals – Monthly Operations Since 2014

Total Monthly Arrivals to Runway 27

Peak Month Each Year: July
July Compound Annual Growth Rate: 2.9%

FAA Implemented BAYVU 5 STAR Change and RNP Approach

8,926   8,637   8,887   9,642   10,012

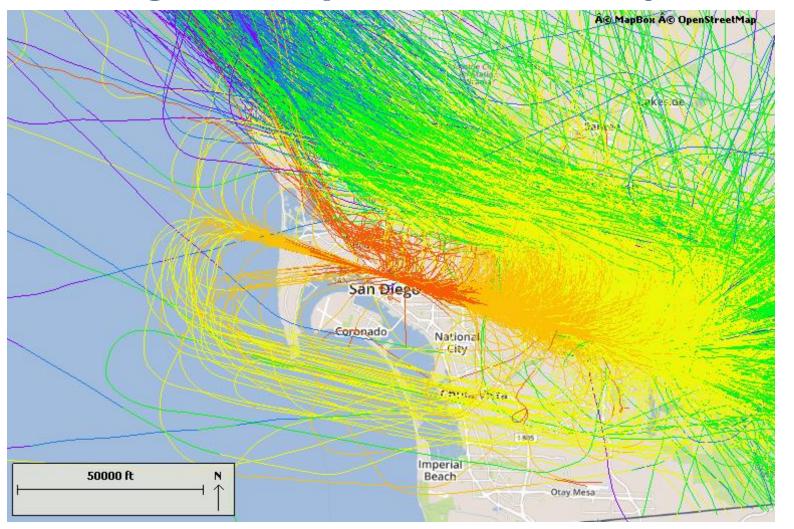FAA SoCal Metroplex

Runway 27 Arrivals - Flight Tracks
San Diego Metropolitan Area - July 2014

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.
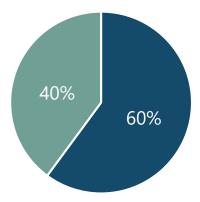
Runway 27 Arrivals - Flight Tracks by Altitude San Diego Metropolitan Area - July 2014

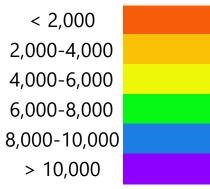Percentage of Arrivals from North/Northwest and East

- East
- North/Northwest

Track Altitude Ranges (feet above SDIA airfield elevation)

- < 2,000
- 2,000-4,000
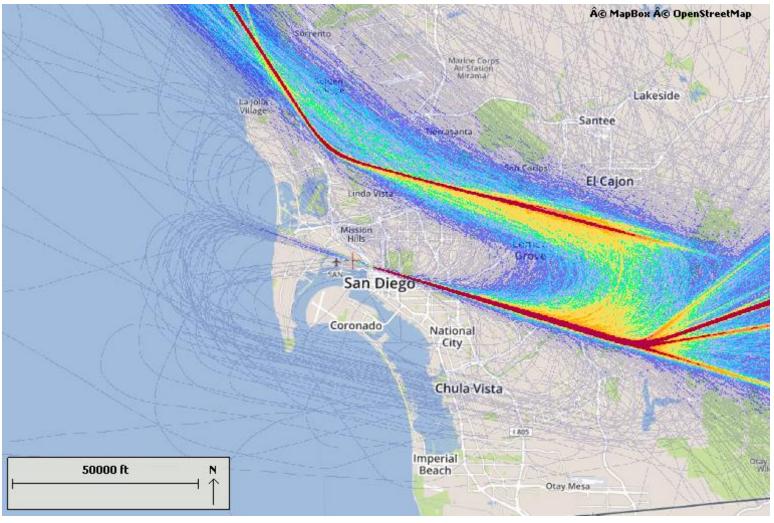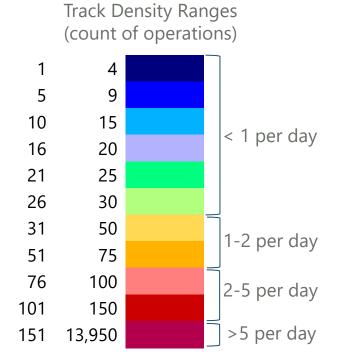- 4,000-6,000
- 6,000-8,000
- 8,000-10,000
- > 10,000

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.   NOTES: SDIA airfield elevation is 17 feet MSL; Total Runway 27 arrivals was 8,926 for July 2014

Runway 27 Arrivals - Flight Track Density Analysis San Diego Metropolitan Area - July 2014

Track Density Ranges
(count of operations)

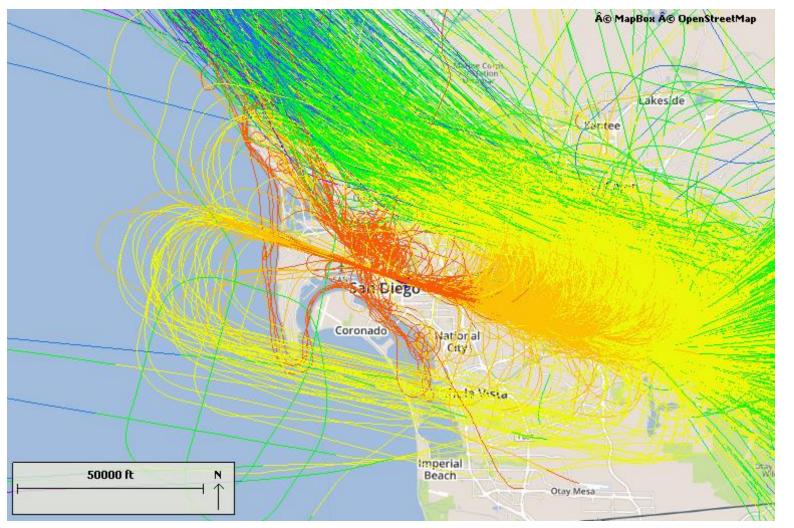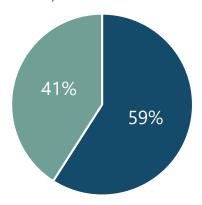|			
1	4		
5	9		
10	15		< 1 per day
16	20		
21	25		
26	30		
31	50		1-2 per day
51	75		
76	100		2-5 per day
101	150		
151	13,950		>5 per day

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.

Note: Total Runway 27 arrivals was 8,926 for July 2014

Runway 27 Arrivals - Flight Tracks by Altitude San Diego Metropolitan Area - July 2015
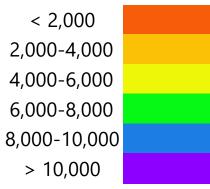

Percentage of Arrivals from North/Northwest and East

■ East ■ North/Northwest

Track Altitude Ranges
(feet above SDIA airfield elevation)

< 2,000
2,000-4,000
4,000-6,000
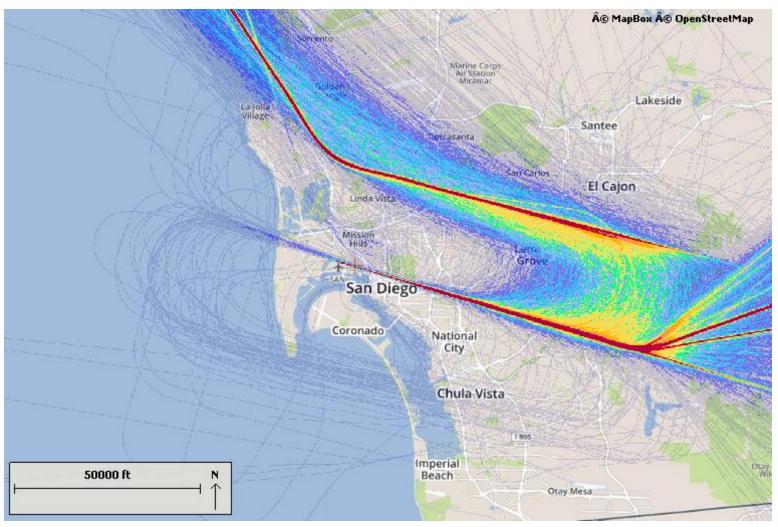6,000-8,000
8,000-10,000
> 10,000

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.   NOTES: SDIA airfield elevation is 17 feet MSL; Total Runway 27 arrivals was 8,637 for July 2015

Runway 27 Arrivals - Flight Track Density Analysis San Diego Metropolitan Area - July 2015
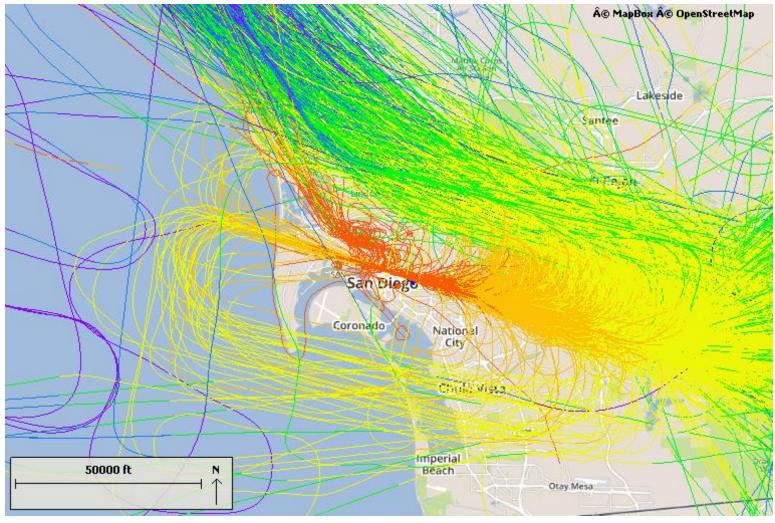

Track Density Ranges
(count of operations)

From	To	Frequency
1	4	< 1 per day
5	9	
10	15	
16	20	
21	25	
26	30	
31	50	1-2 per day
51	75	
76	100	2-5 per day
101	150	
151	13,950	>5 per day

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.
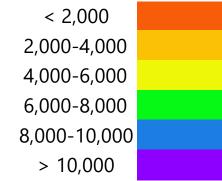
Note: Total Runway 27 arrivals was 8,637 for July 2015

Runway 27 Arrivals - Flight Tracks by Altitude San Diego Metropolitan Area - July 2016

Percentage of Arrivals from North/Northwest and East

41%   59%

■ East   ■ North/Northwest

Track Altitude Ranges
(feet above SDIA airfield elevation)

< 2,000
2,000-4,000
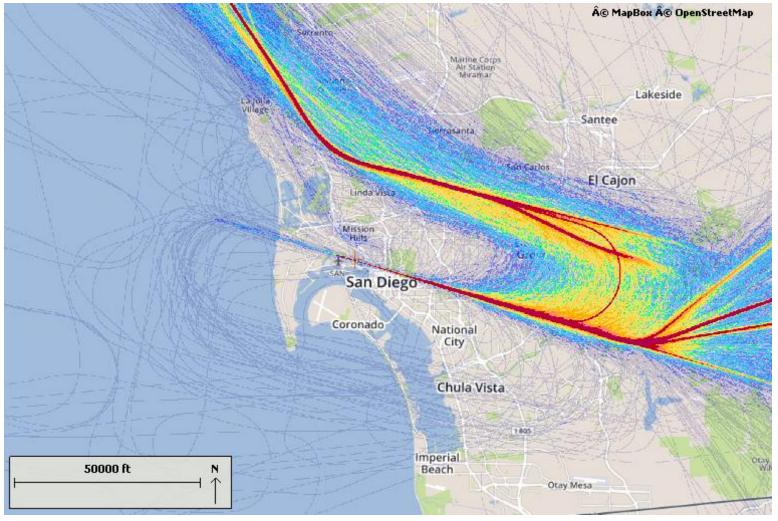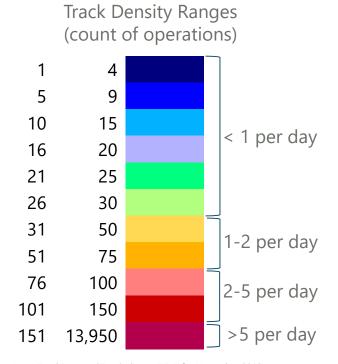4,000-6,000
6,000-8,000
8,000-10,000
> 10,000

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.   NOTES: SDIA airfield elevation is 17 feet MSL; Total Runway 27 arrivals was 8,887 for July 2016

Runway 27 Arrivals - Flight Track Density Analysis San Diego Metropolitan Area - July 2016
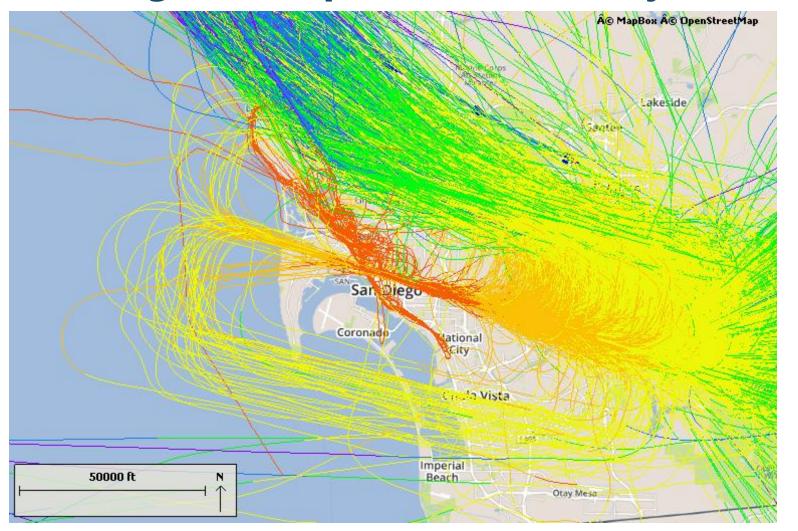

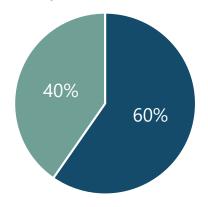SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.

Note: Total Runway 27 arrivals was 8,887 for July 2016

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Runway 27 Arrivals - Flight Tracks by Altitude
San Diego Metropolitan Area - November 2016

Track Altitude Ranges
(feet above SDIA airfield elevation)

Range	
< 2,000	
2,000-4,000	
4,000-6,000	
6,000-8,000	
8,000-10,000	
> 10,000	

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.   NOTES: SDIA airfield elevation is 17 feet MSL; Total Runway 27 arrivals was 7,547 for November 2016

Runway 27 Arrivals - Flight Track Density Analysis
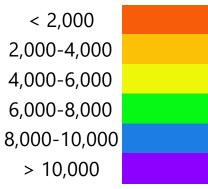# San Diego Metropolitan Area - November 2016

Track Density Ranges
(count of operations)

1	4	
5	9	
10	15	< 1 per day
16	20	
21	25	
26	30	
31	50	1-2 per day
51	75	
76	100	2-5 per day
101	150	
151	13,950	>5 per day

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.

Note: Total Runway 27 arrivals was 7,547 for November 2016

Runway 27 Arrivals - Flight Tracks by Altitude San Diego Metropolitan Area - July 2017

Percentage of Arrivals from North/Northwest and East

40% 60%

■ East ■ North/Northwest

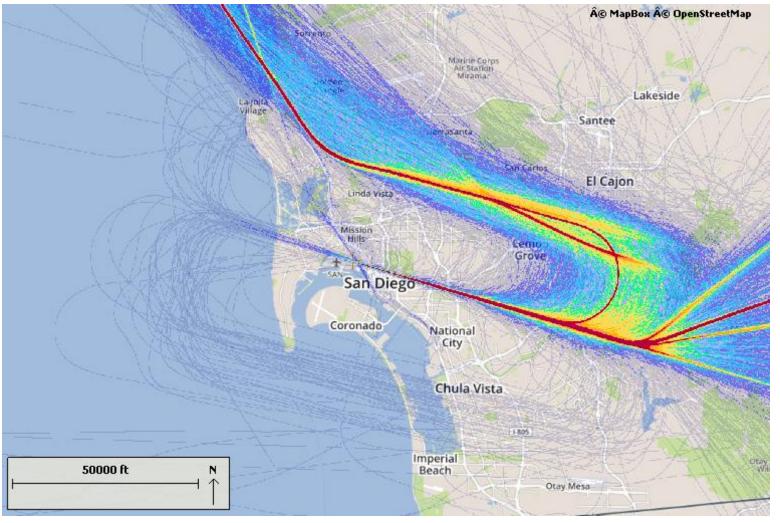Track Altitude Ranges
(feet above SDIA airfield elevation)

< 2,000
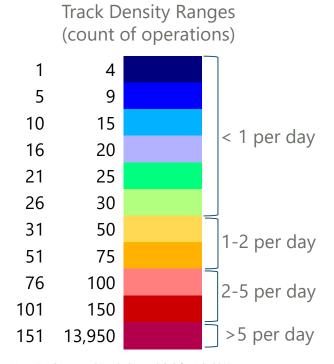2,000-4,000
4,000-6,000
6,000-8,000
8,000-10,000
> 10,000

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.   NOTES: SDIA airfield elevation is 17 feet MSL; Total Runway 27 arrivals was 9,642 for July 2017

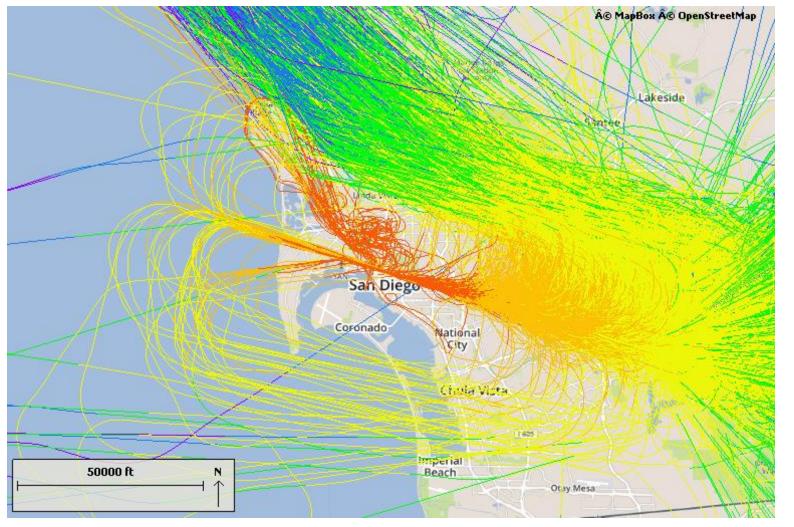# Runway 27 Arrivals - Flight Track Density Analysis San Diego Metropolitan Area - July 2017

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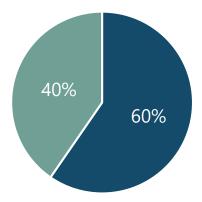
Note: Total Runway 27 arrivals was 9,642 for July 2017

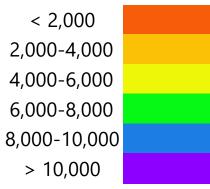# Runway 27 Arrivals - Flight Tracks by Altitude San Diego Metropolitan Area - July 2018

Percentage of Arrivals from North/Northwest and East
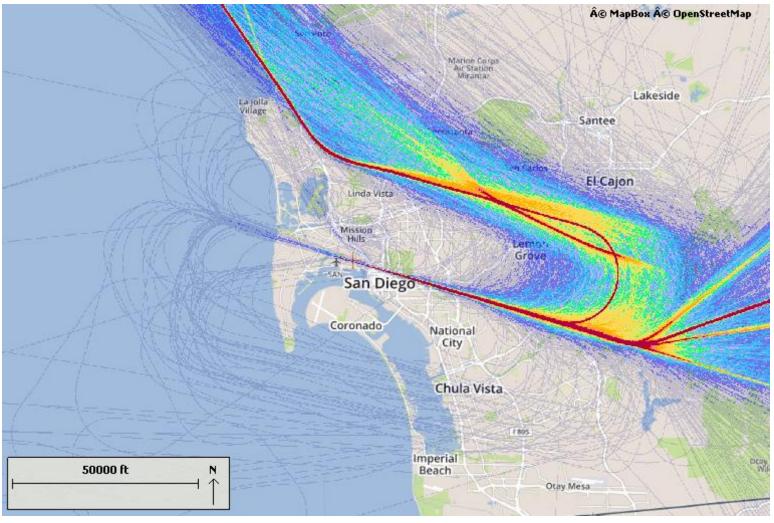
■ East   ■ North/Northwest

Track Altitude Ranges
(feet above SDIA airfield elevation)

< 2,000
2,000-4,000
4,000-6,000
6,000-8,000
8,000-10,000
> 10,000

Runway 27 Arrivals - Flight Track Density Analysis San Diego Metropolitan Area - July 2018

Track Density Ranges
(count of operations)

1	4	
5	9	
10	15	
16	20	< 1 per day
21	25	
26	30	
31	50	
51	75	1-2 per day
76	100	2-5 per day
101	150	
151	13,950	>5 per day

SOURCE: : San Diego County Regional Airport Authority Airport Noise and Operations Management System, November 2018.

Note: Total Runway 27 arrivals was 10,012 for July 2018

Understanding East County Concerns related to Aircraft Noise and Overflights

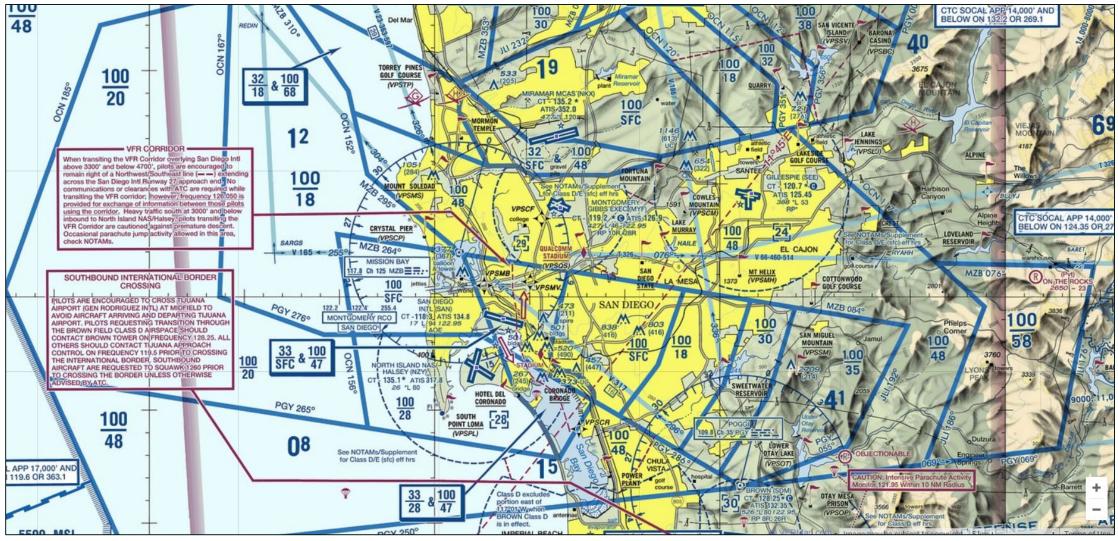Class B and Existing Published Flight Procedures

Class B Airspace

- Controlled (radar monitored by a controller and in contact with pilot) airspace from the ground to 10,000 feet MSL surrounding each of the nation's busiest airports, including SDIA.

- The configuration of each Class B airspace area is individually tailored to contain operations below 10,000 feet MSL to/from a major airport, and is defined three-dimensionally with multiple layers (some Class B airspace areas resemble upside-down wedding cakes).

- Operating Rules and Pilot/Equipment Requirements:

  - 1. ATC Clearance. Regardless of weather conditions, an ATC clearance is required prior to operating within Class B airspace.

  - 2. Pilot Certification.

  - 3. Equipment. (a) Two-way radio; and (b) Unless otherwise authorized by ATC, an operable radar beacon transponder with automatic altitude reporting equipment.

- Class B airspace is charted on Sectional Charts, Instrument Flight Rule (IFR) En Route Low Altitude charts, and Terminal Area Charts where appropriate.

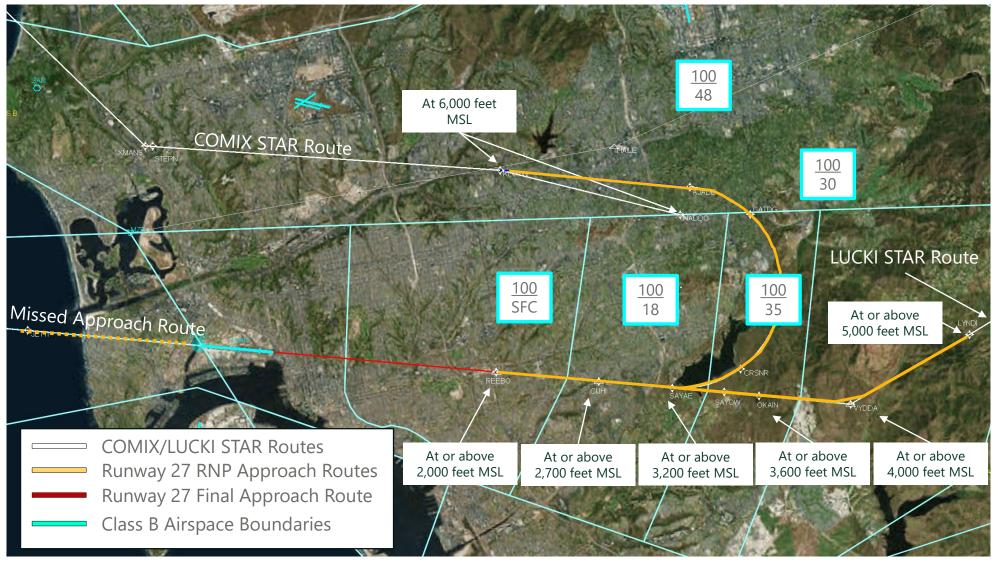Reference Aeronautical Information Manual (AIM) Paragraph 3-2-3

San Diego Class B Airspace

East County SAN Northwest Arrivals – Published Procedures and Class B Airspace

Mean Sea Level (MSL) – height above sea level; Above Ground Level (AGL) – height above the ground
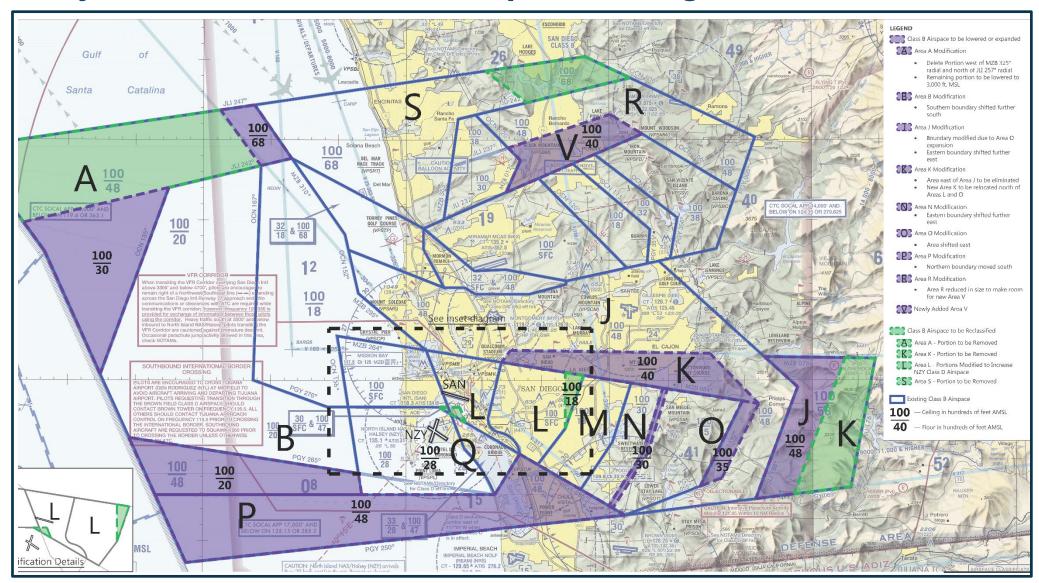
Understanding East County Concerns related to Aircraft Noise and Overflights
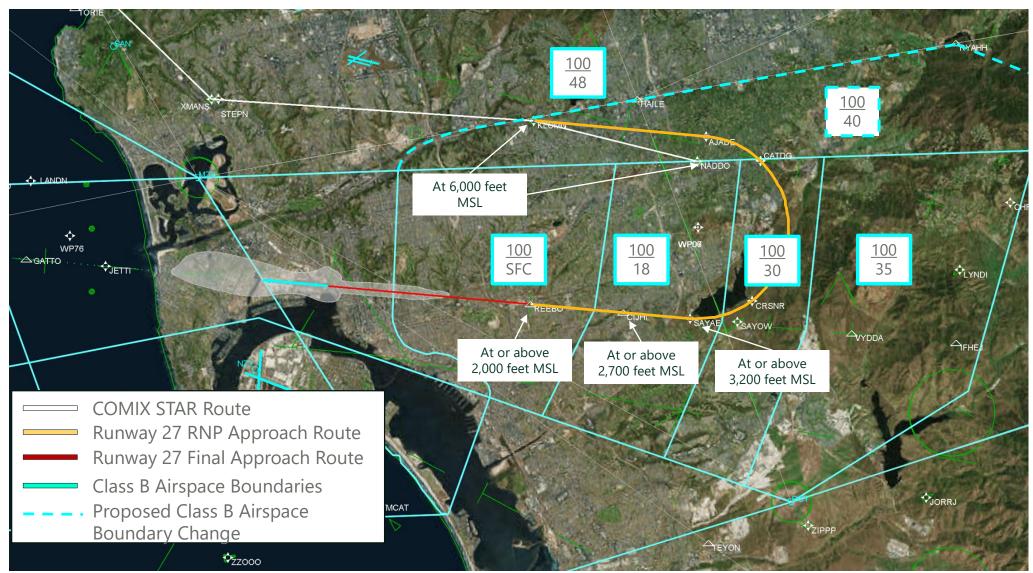
Potential Future Changes

East County Arrivals Slide – Class B Airspace Redesign

East County SAN Northwest Arrivals – Procedures and Class B Airspace

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Understanding East County Concerns related to Aircraft Noise and Overflights

Workgroup Concerns – Open Discussion

Next Steps

Next Steps

- Review issues/concerns and consolidate
- Assess potential high level concepts to address concerns