

**Federal Aviation Administration (FAA)**  
**SoCal Metroplex Project**  
**LAWA Briefing to City Council IGTC&T Committee**

**Los Angeles World Airports**  
**Noise Management**  
**June 7, 2016**

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- **NextGen and Performance Based Navigation:**
  - Today, most airports still widely use ground-based navigation technologies to manage air traffic in the National Air Space (NAS)
  - The movement to the next generation of aviation is shifting to smarter, satellite-based and digital technologies, along with new procedures that strive to make air travel more convenient, predictable and environmentally friendly
  - As part of a larger NextGen implementation Program, FAA is moving towards satellite-based navigation and reducing reliance on ground-based navigation
  - FAA is now seeking to optimize airspace procedures and working to transition to a full Performance Based Navigation (PBN) by 2030
    - FAA and Airlines are investing 40 billion
  - FAA developed Metroplex Program to streamline implementation of PBN at larger metropolitan areas with complex airspace

**What is a Metroplex?** A large geographic area covering multiple airports, serving major metropolitan areas and a diversity of aviation stakeholders (NAS users, FAA, and other lines of business and airport operators).

- Process is structured to provide solutions on a regional scale, rather than focusing on a single airport or set of procedures by optimizing airspace and procedures.

FAA's Metroplex Program goals are to improve airspace efficiency and reduce complexity

- **Optimize** flight paths and climb/descent profiles
- **Promote** RNAV (Area Navigation) “everywhere”
- **Promote** RNP (Required Navigational Performance) “where beneficial”
- **Integrate** airspace and procedure design
- **Decouple** operations arriving and departing adjacent airports

Atlanta  
Charlotte  
Cleveland-Detroit  
D.C.  
Denver  
Houston  
Las Vegas  
North Texas  
Northern California  
Phoenix  
South Central Florida  
Southern California

Metroplex locations

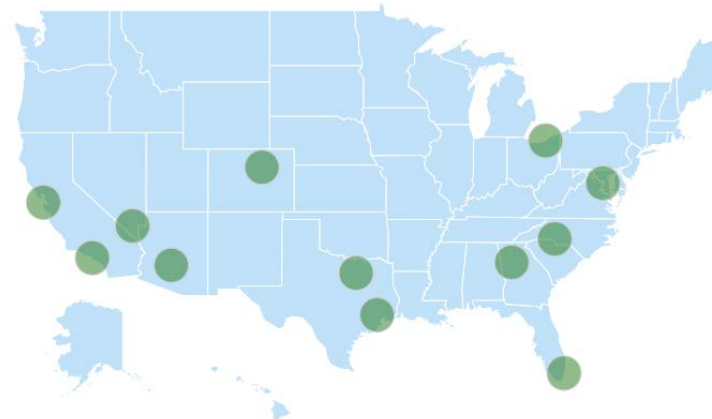
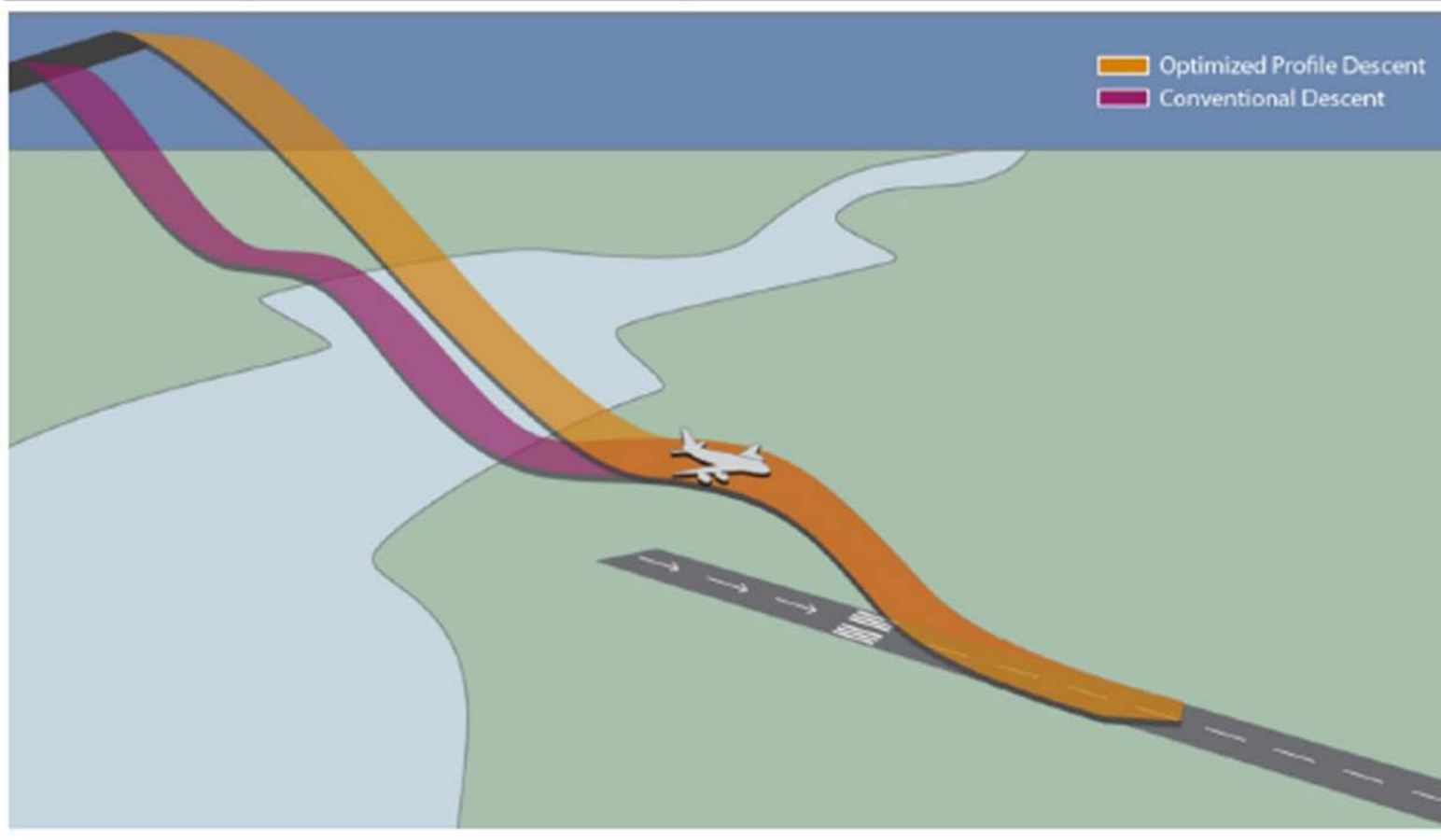


Exhibit 1-6 Optimized Profile Descent Compared to a Conventional Descent

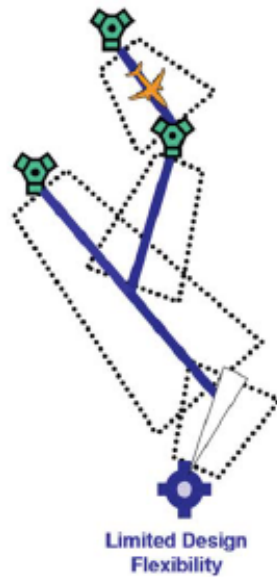


Source: ATAC Corporation, December 2012.  
Prepared by: ATAC Corporation, October 2013.

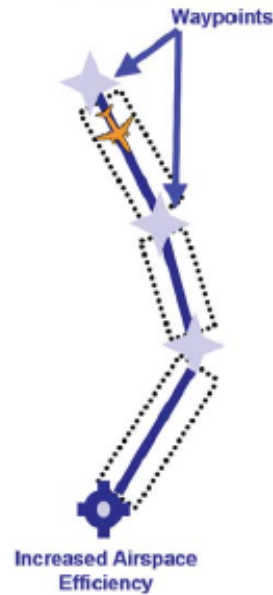
Source: Final Environmental Assessment for Northern California Optimization of Airspace and Procedures in the Metroplex, July 2014

Exhibit 1-5 Navigational Comparison – Conventional/RNAV/RNP

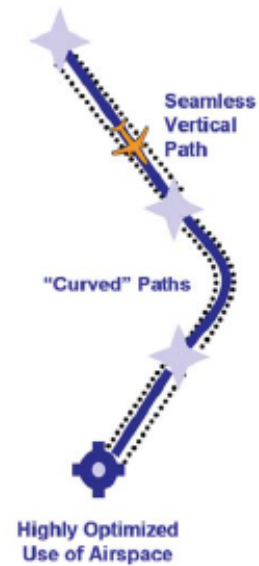
### Current Ground NAVAIDs



### RNAV



### RNP



#### Legend



#### Notes:

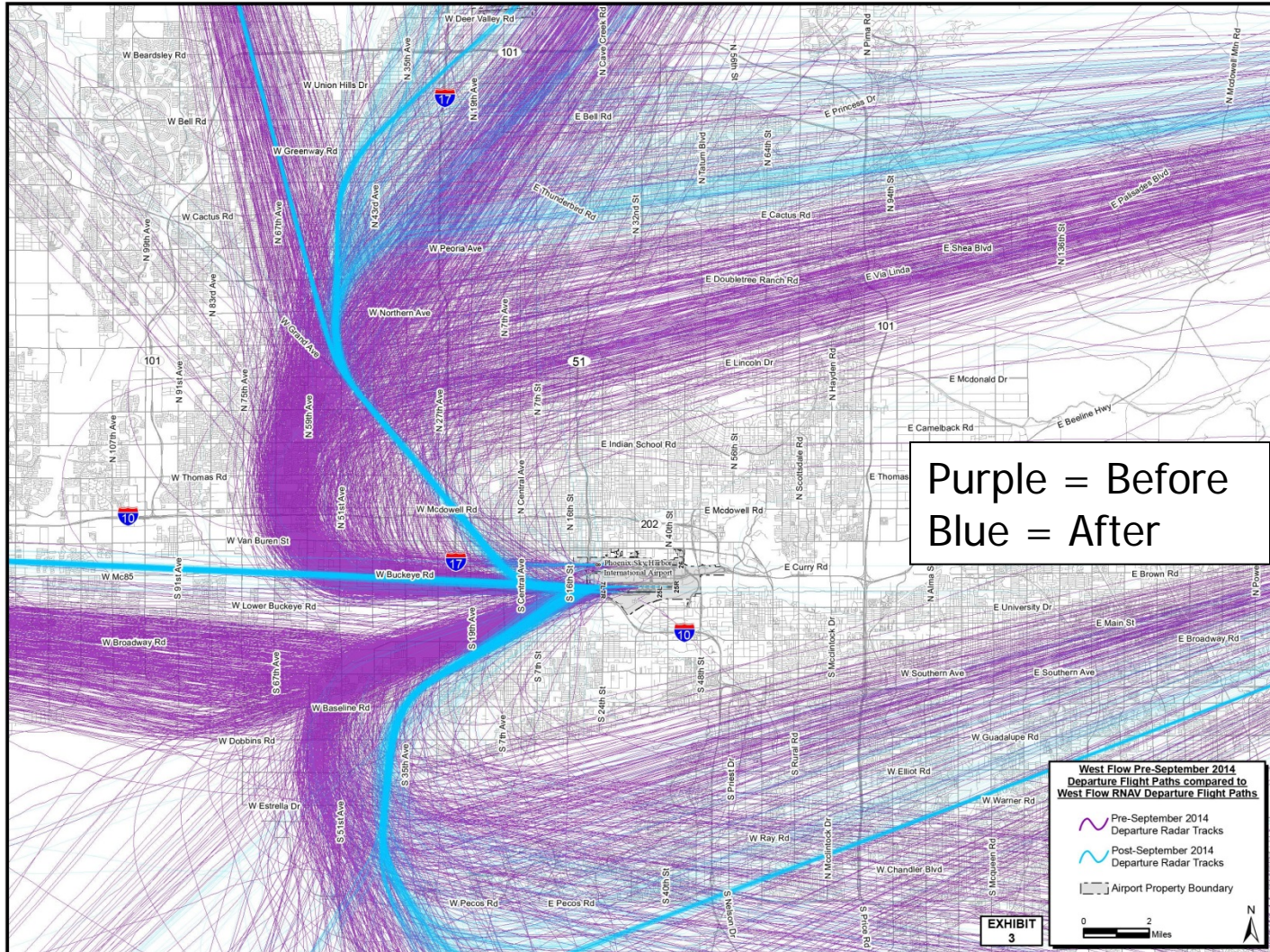
NAVAID – navigational aid  
RNAV – Area Navigation

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

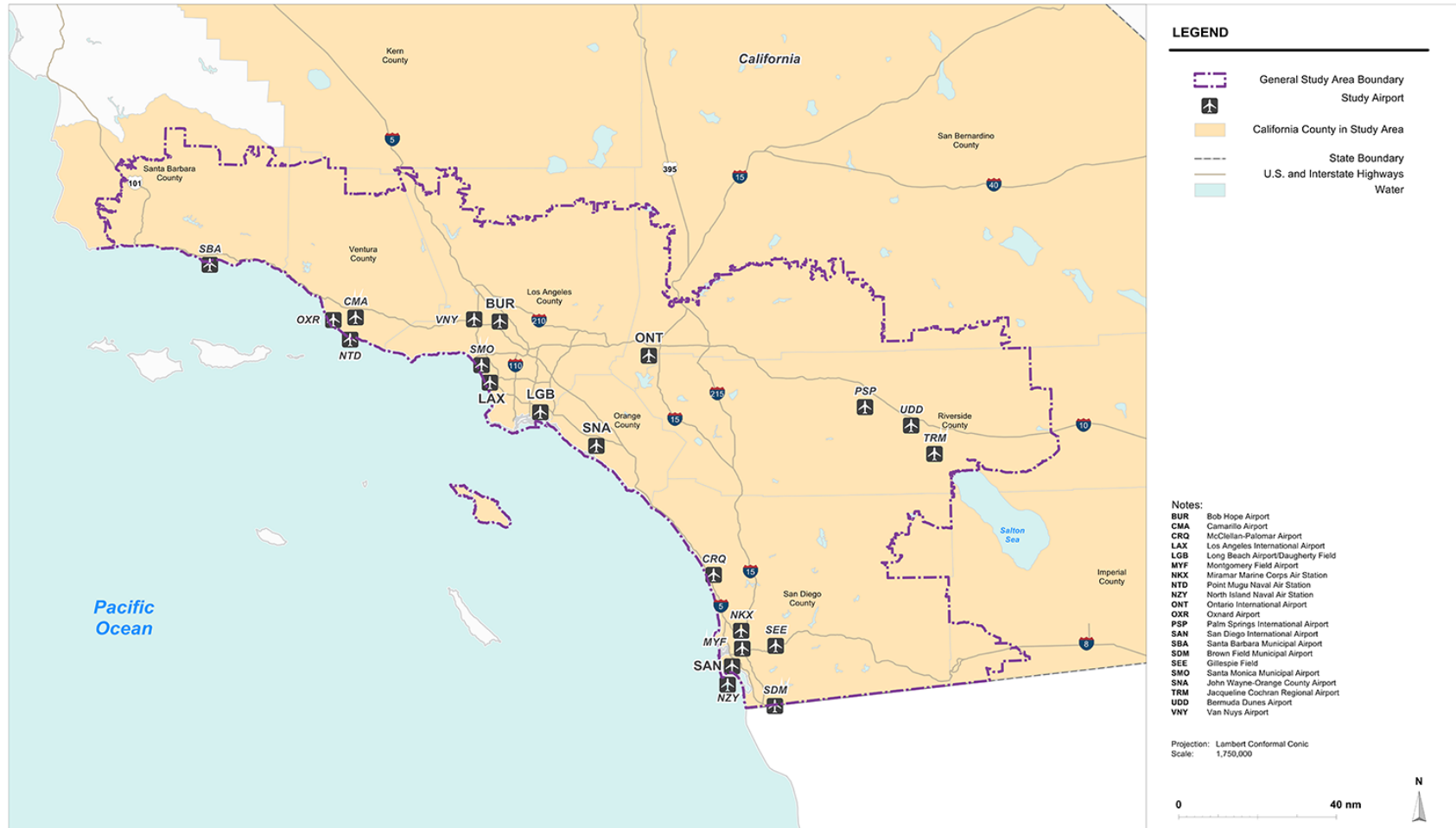
Prepared by: ATAC Corporation, March 2013.

# Example of Flight Tracks Before and After RNAV Implementation at Phoenix Sky Harbor Int'l Airport

Before & After September 18, 2014 Flight Departures to the West



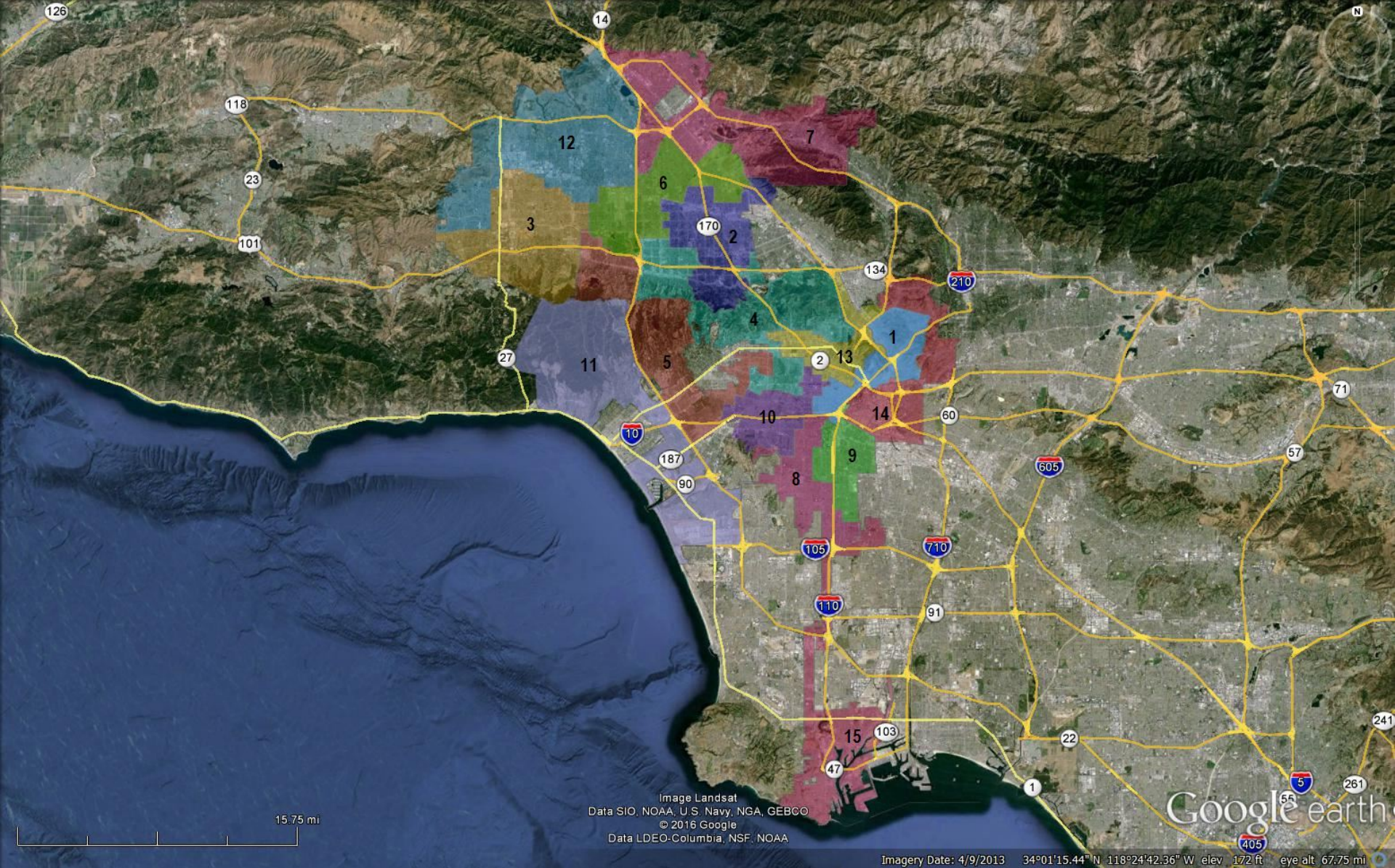
# SoCal Metroplex - General Study Area



Sources: National Atlas of the United States of America: U.S. County Boundaries, 2005; U.S. State Boundaries, 2005; and Water Bodies, 2005; Bureau of Transportation Statistics: National Transportation Atlas Database National Highway Planning Network, 2012; FAA: NFDC Airport database, 2014; ATAC Corporation: Study Area Boundary, 2014.  
Prepared by: ATAC Corporation, April 2014.

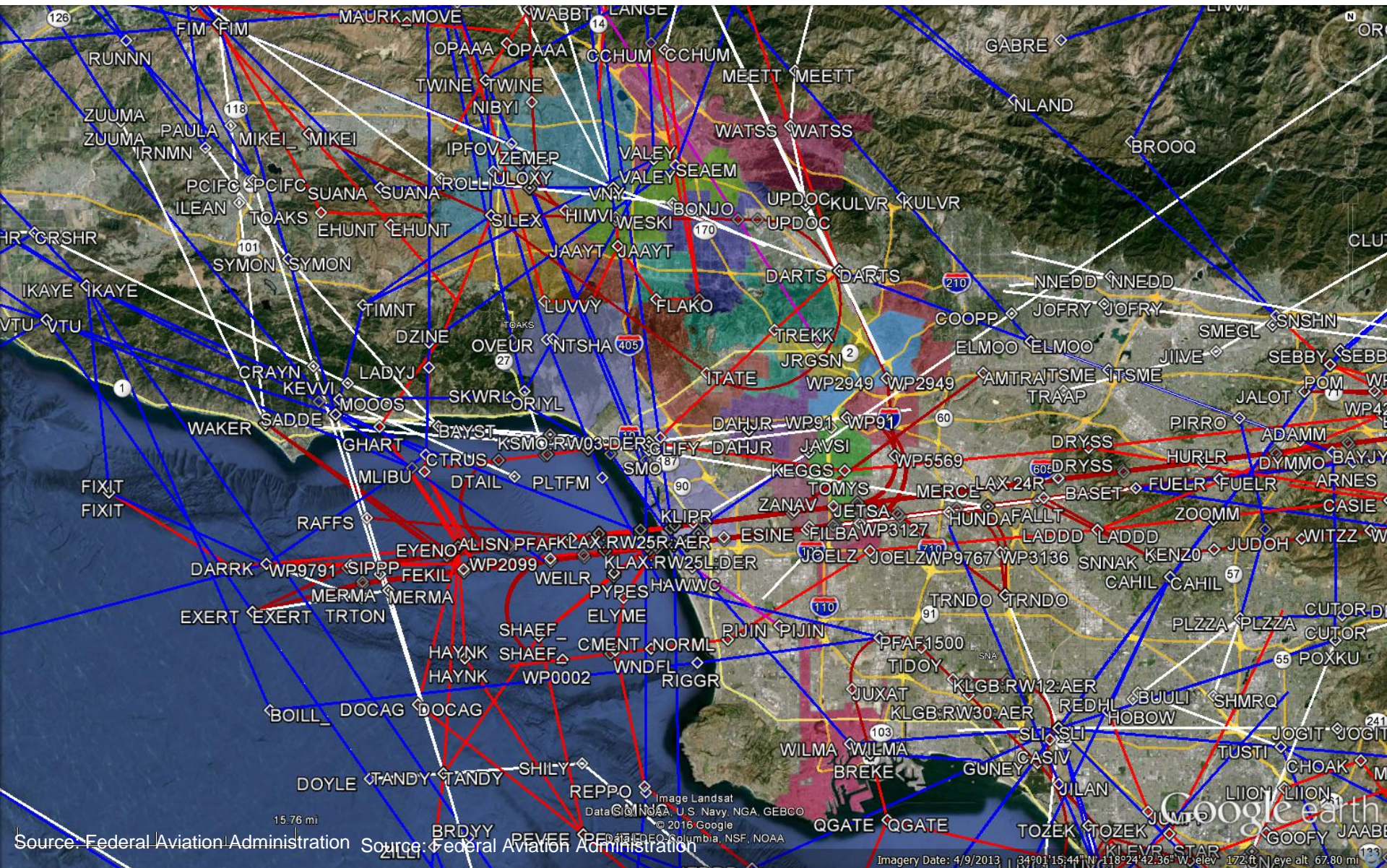
Exhibit 4-1

# City Council Districts



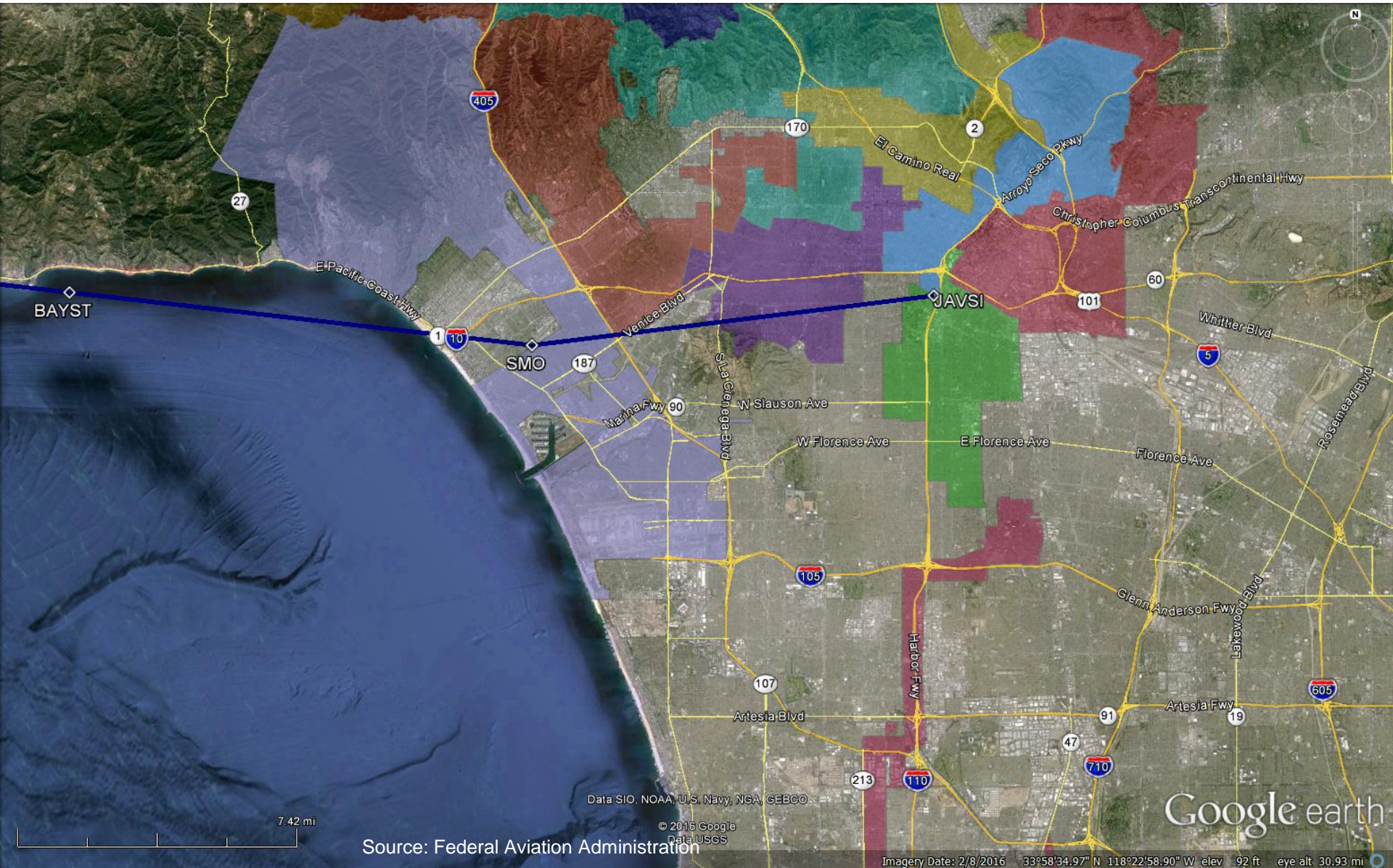


# SoCal Metroplex - Proposed Procedures



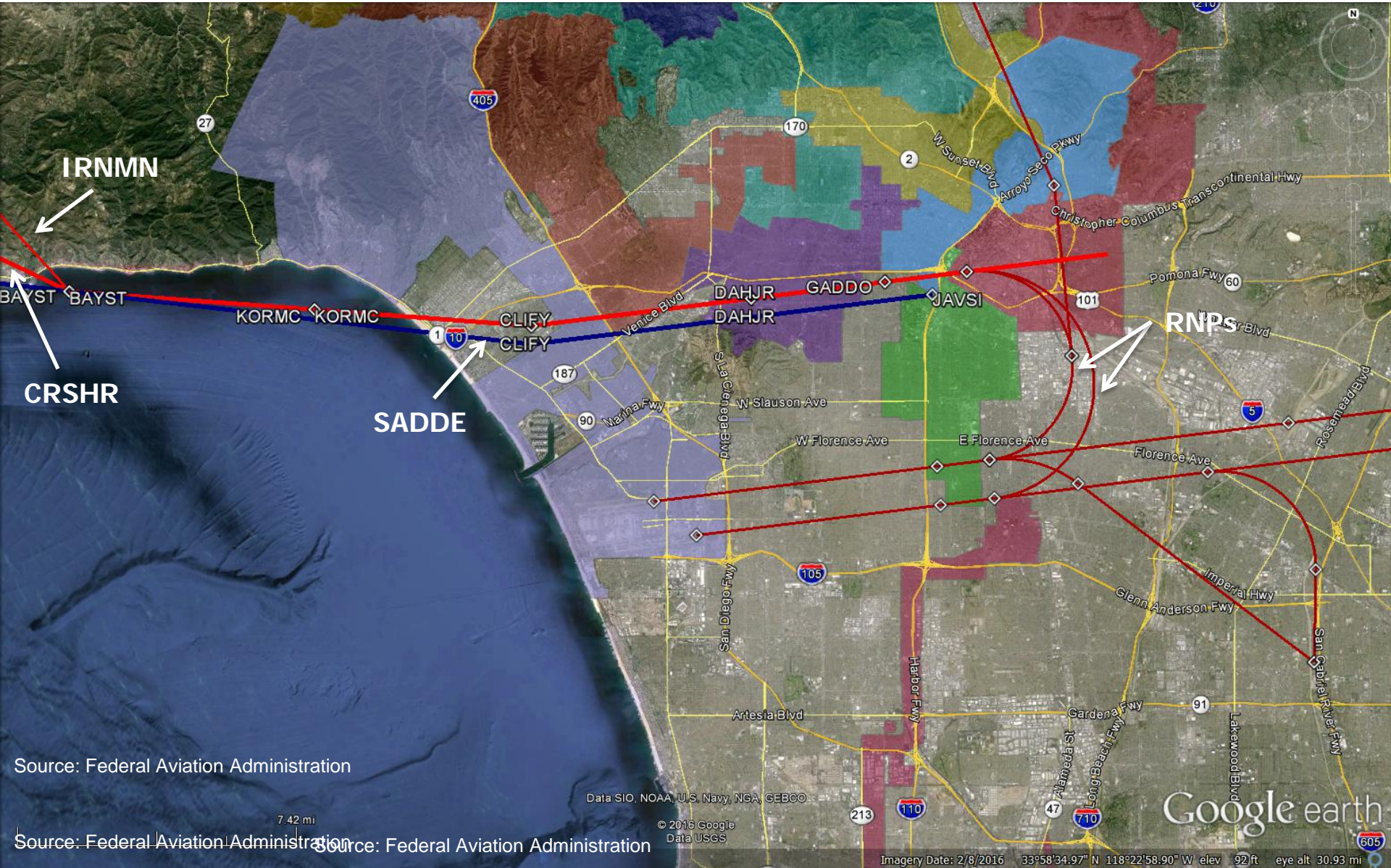
# LAX North Arrival Downwind Leg

## Current Procedure: SADDE 6



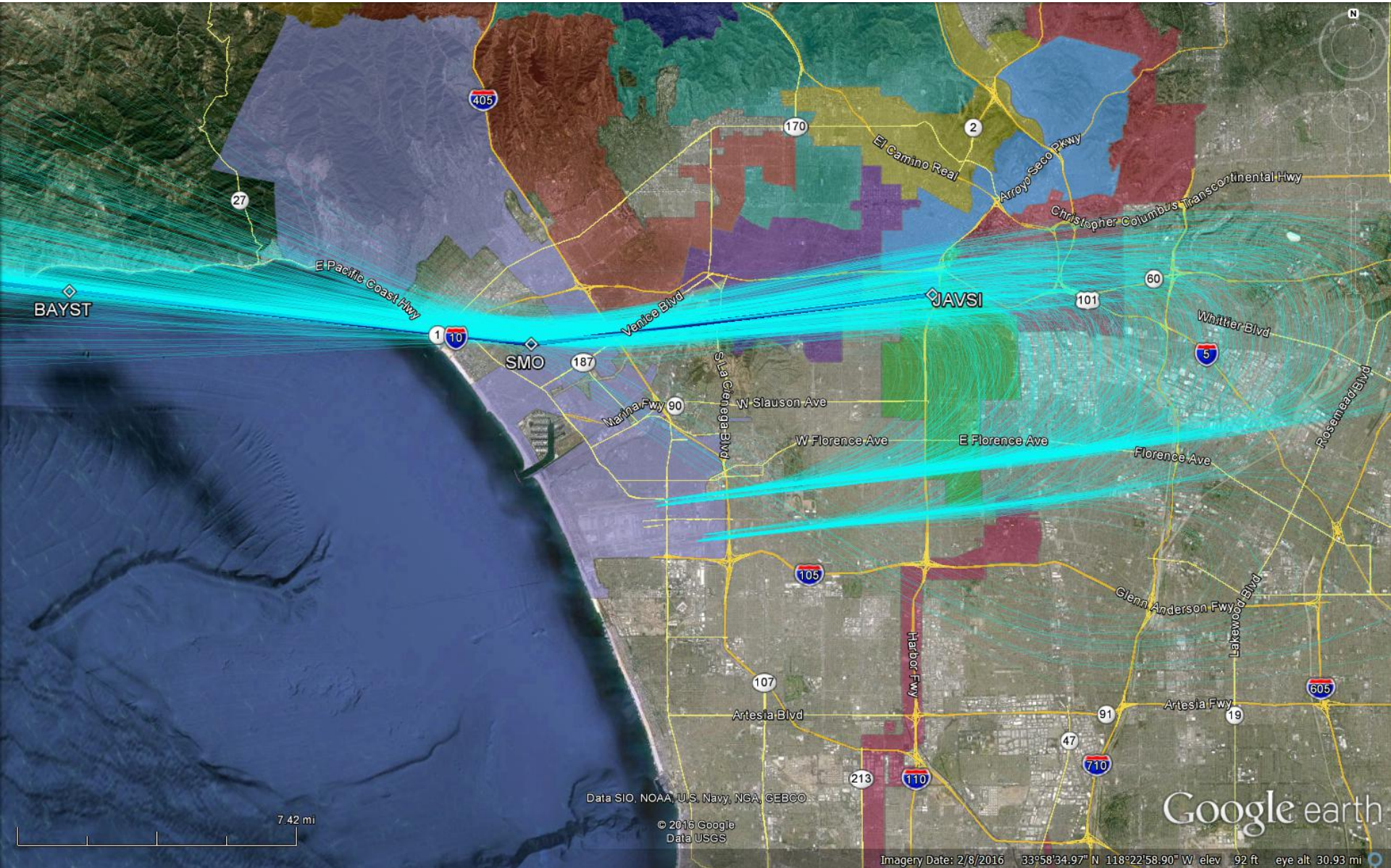
# LAX North Arrival Downwind Leg

## SADDE6 vs. Proposed CRSHR and IRNMN RNAVs and RNP



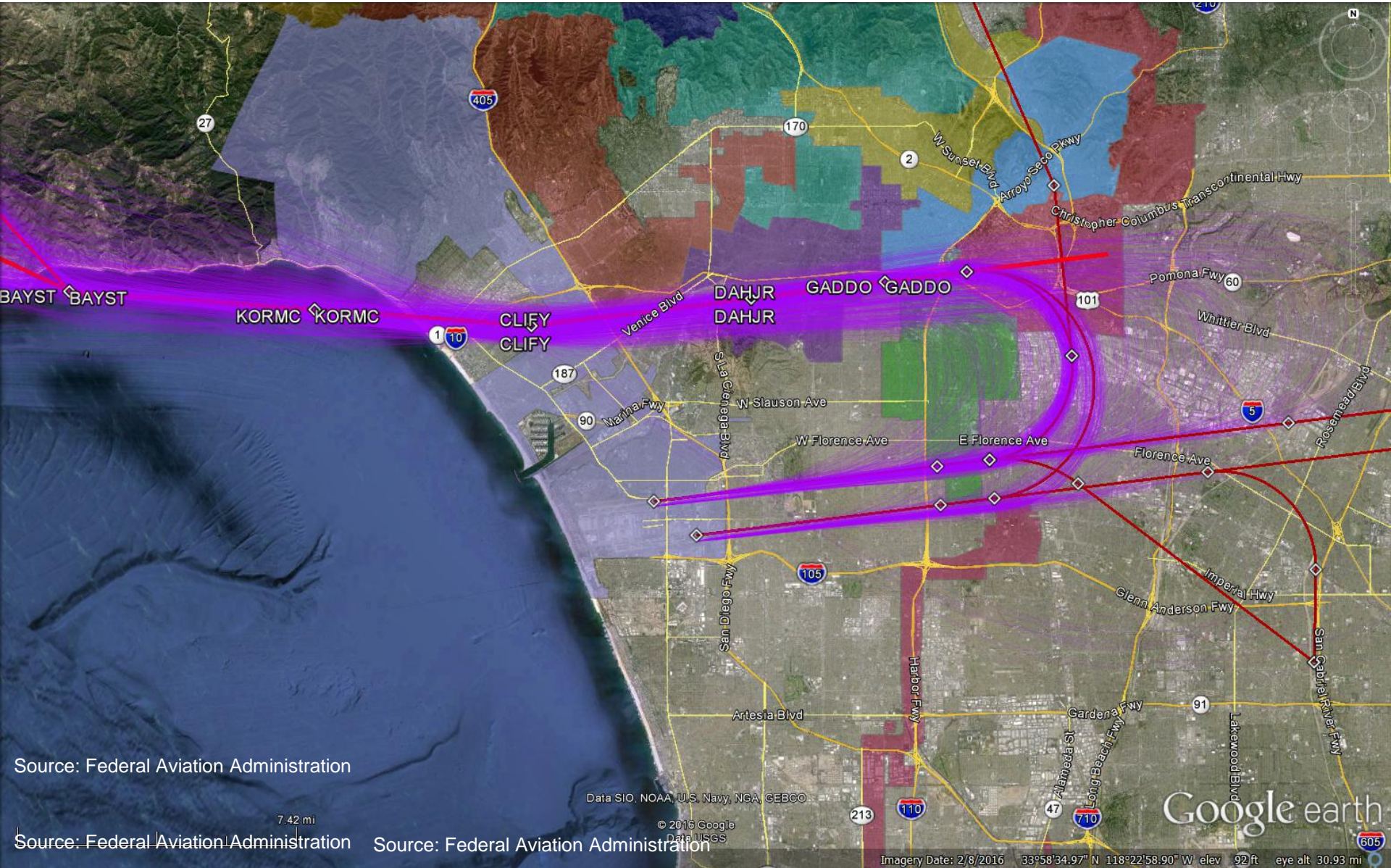
# LAX North Arrival Downwind Leg

## Current Flight Tracks: SADDE 6



# LAX North Arrival Downwind Leg

## Proposed Flight Tracks: CRSHR and IRNMN RNAVs and RNP



# Communities Potentially Affected by LAX RNAV/RNP and STAR Procedures

## North Downwind and Base Legs:

Santa Monica

**Palms**

**Mar Vista**

Culver City

**West Adams**

**Jefferson Park**

**University Park**

Vernon

Huntington Park

South Gate

Maywood

Bell

**Downtown L.A.**

Baldwin Hills

## LA City Council Districts:

Mike Bonin (11)

Paul Koretz (5)

Herb J. Wesson, Jr. (10)

Marqueece Harris-Dawson (8)

Curren D. Price, Jr. (9)

## Congressional Districts:

Lieu (33)

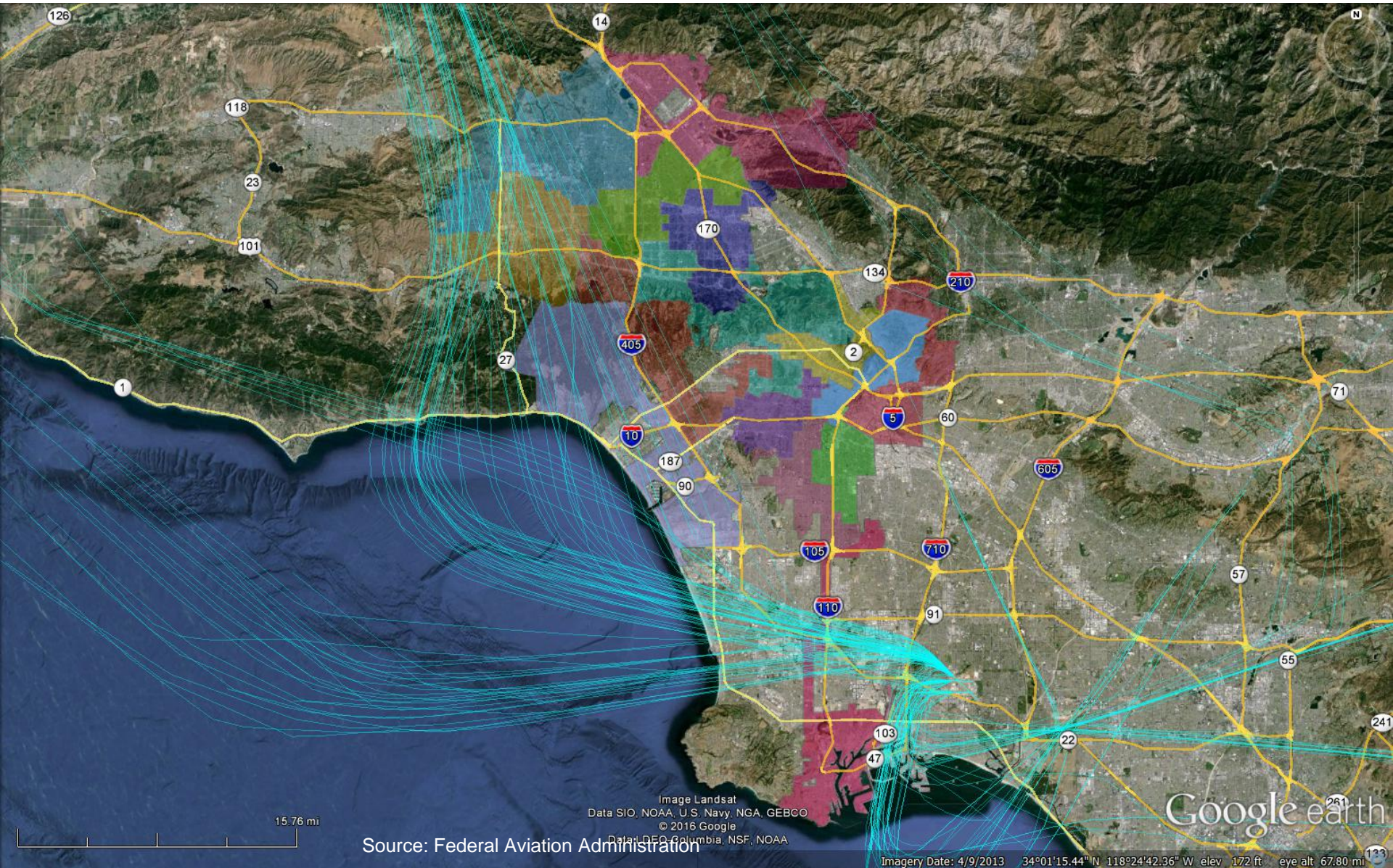
Bass (37)

Roybal-Allard (40)

**Green – City of L.A.  
communities**

# LGB Departure Procedure

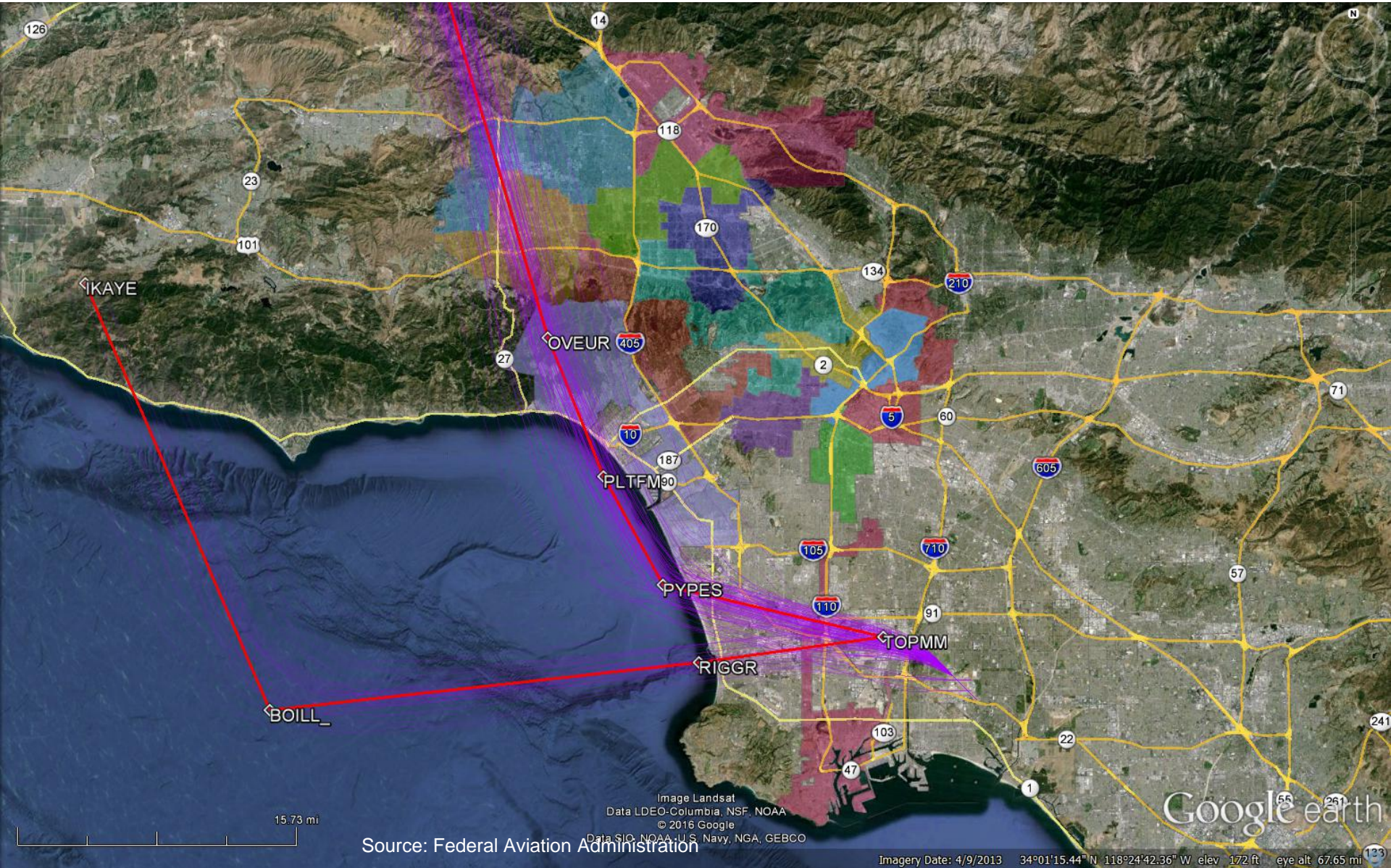
## Current Procedure: ANAHM4 and West Departures (vector)



Source: Federal Aviation Administration

# LGB Departure Procedure

## Proposed Procedure: TOPMN





# Communities Potentially Affected by LGB TOPMN SID

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## Communities:

Playa del Rey

Venice

Pacific Palisades

Marina del Rey

Santa Monica

## LA City Council Districts:

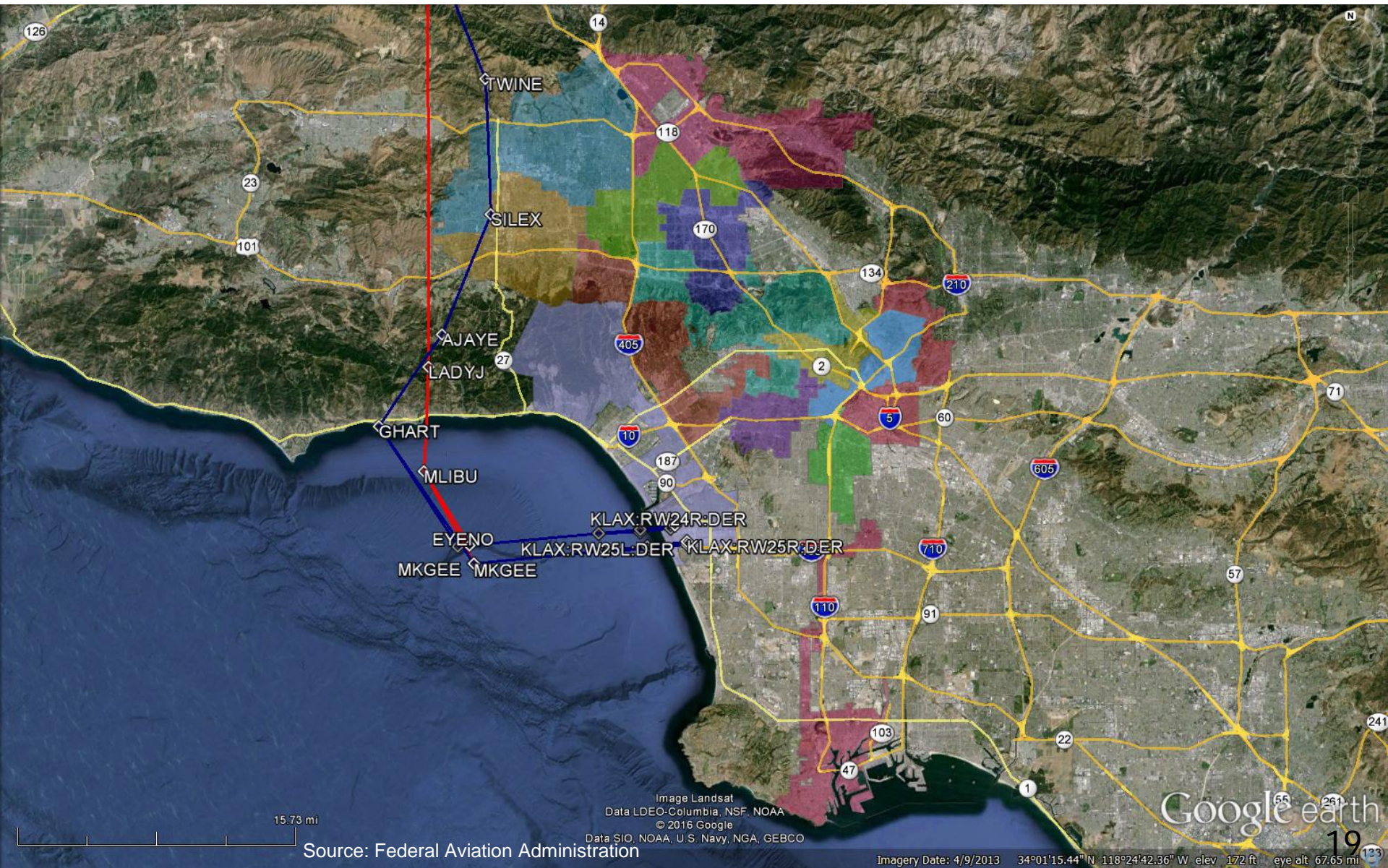
Mike Bonin (11)

Green – City of L.A.  
communities



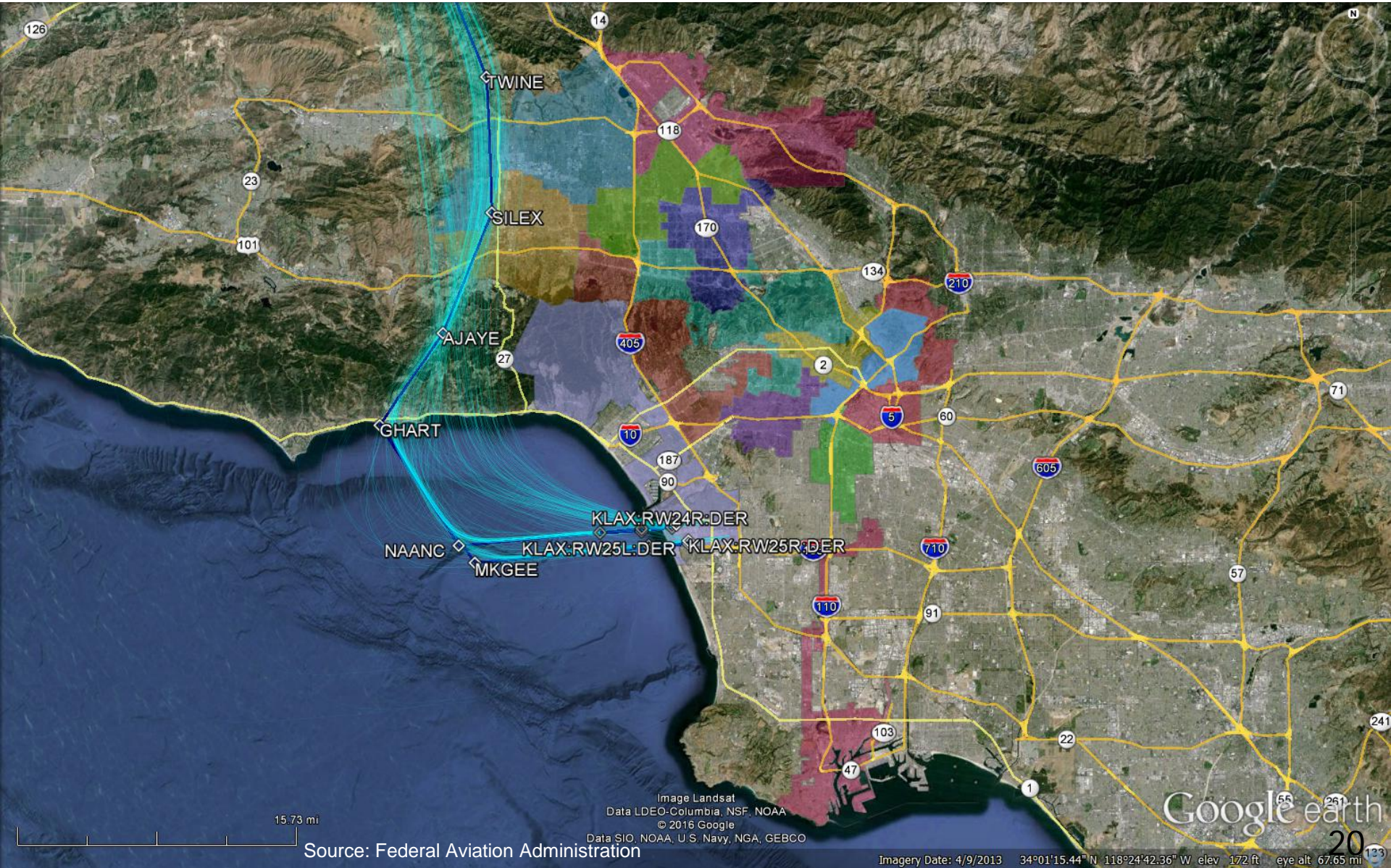
# LAX Departure Procedure

## Proposed Procedure: MLIBU SID vs. CASTA SID



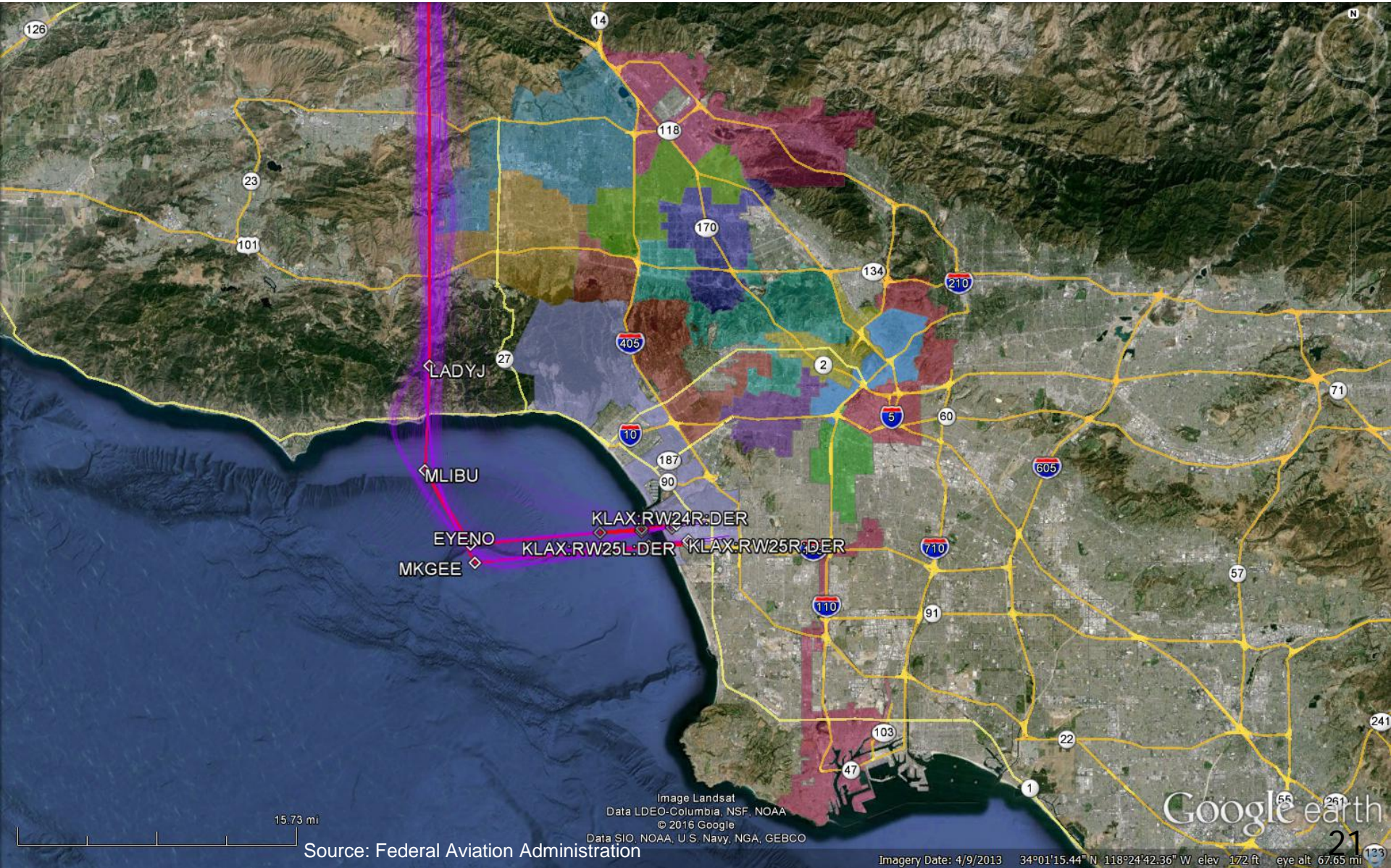
# LAX Departure Procedure

## CASTA SID Current Flight Tracks



# LAX Departure Procedure

## MLIBU SID Proposed Flight Tracks



# Communities Potentially Affected by LAX MLIBU SID

## Communities:

Malibu  
Agoura Hills  
Calabasas  
Simi Valley

Woodland Hills  
West Hills  
Canoga Park

## Congressional Districts:

Lieu (33)  
Knight (25)  
Brownley (26)

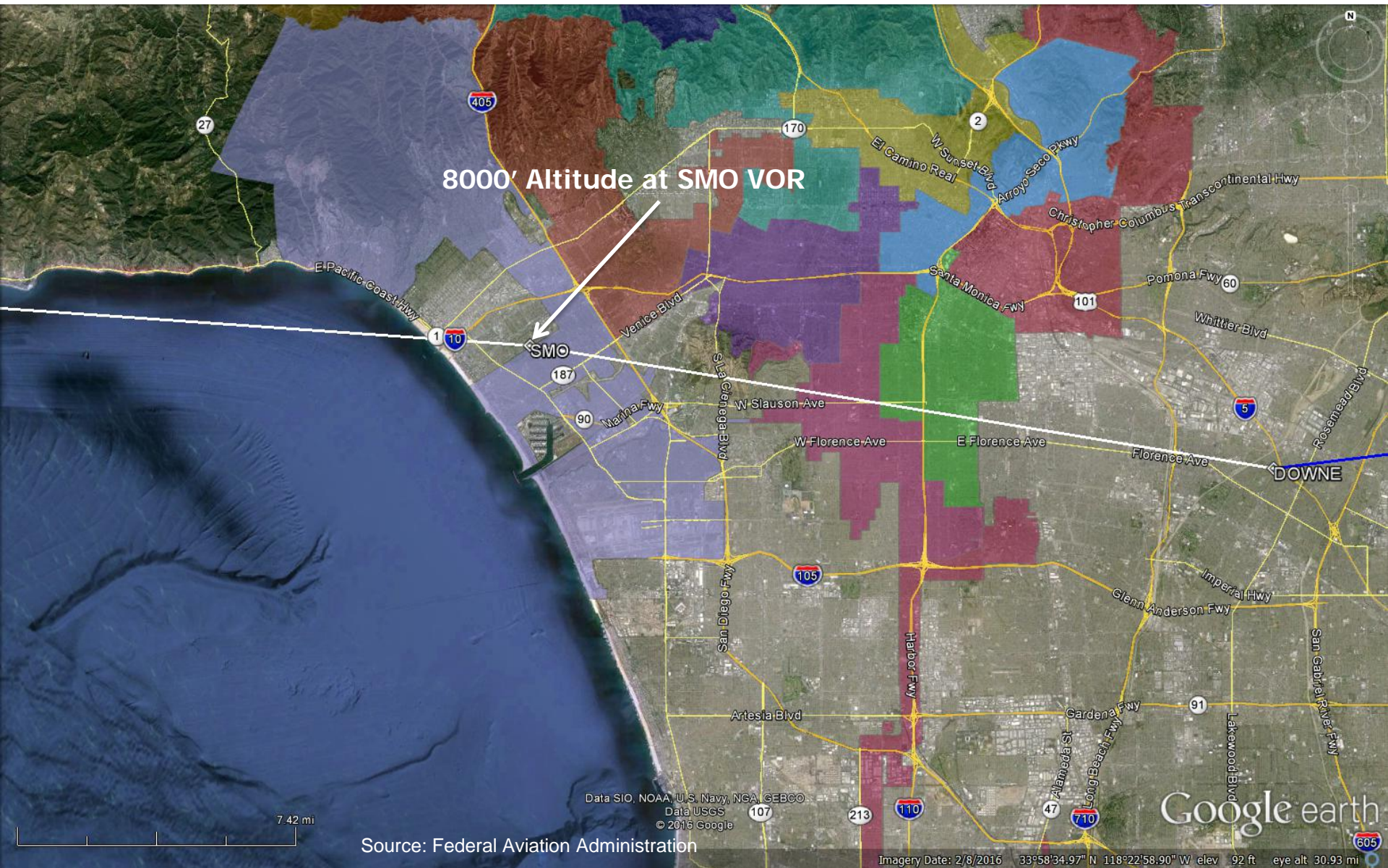
## LA City Council Districts:

Bob Blumenfield (3)  
Mitchell Englander (12)

Green – City of L.A.  
communities

# LAX Over-Ocean Arrivals

## Current Procedure: RDEYE2 STAR

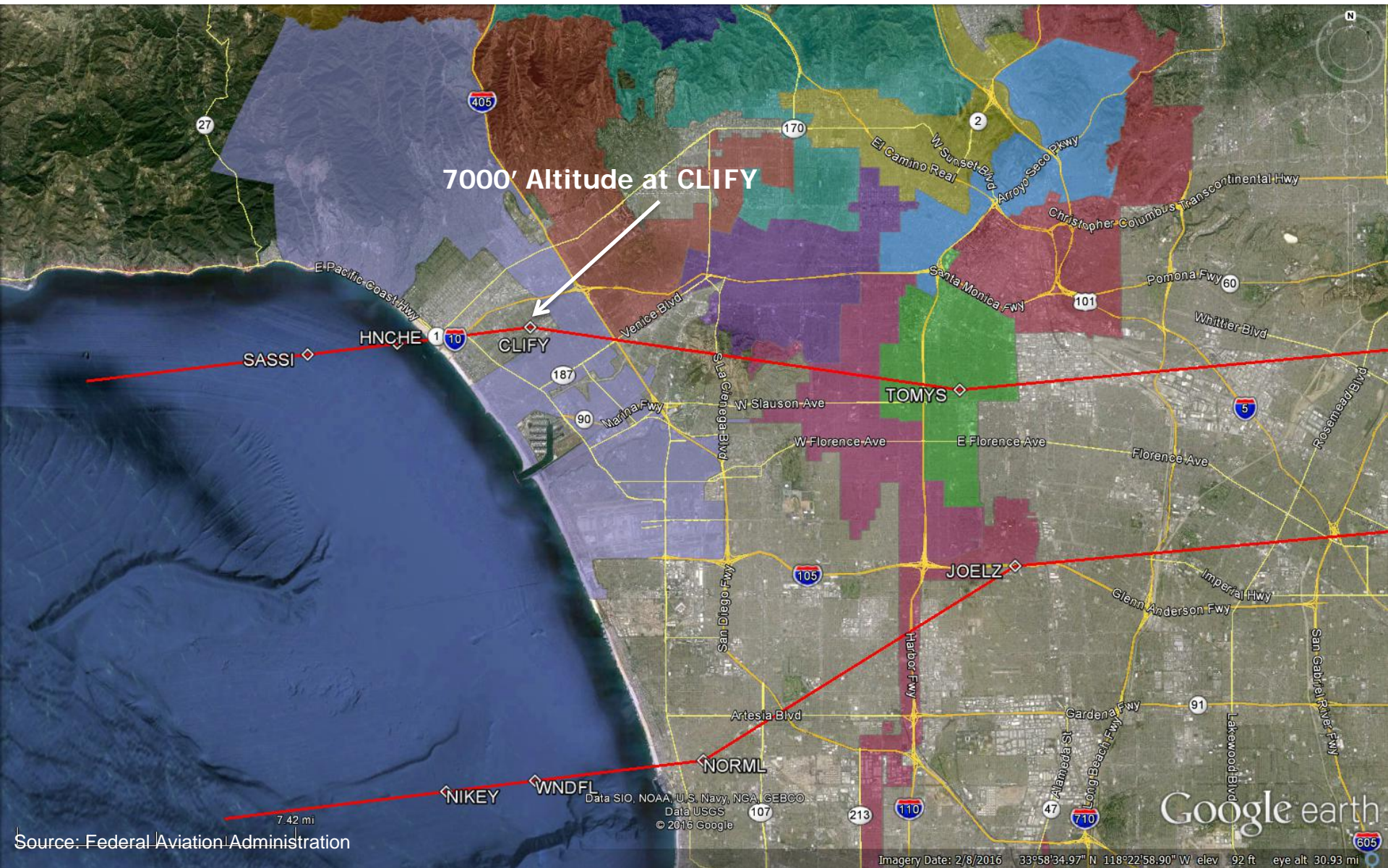


Source: Federal Aviation Administration

Imagery Date: 2/8/2016 33°58'34.97" N 118°22'58.90" W elev 92 ft eye alt 30.93 mi

# LAX Over-Ocean Arrivals

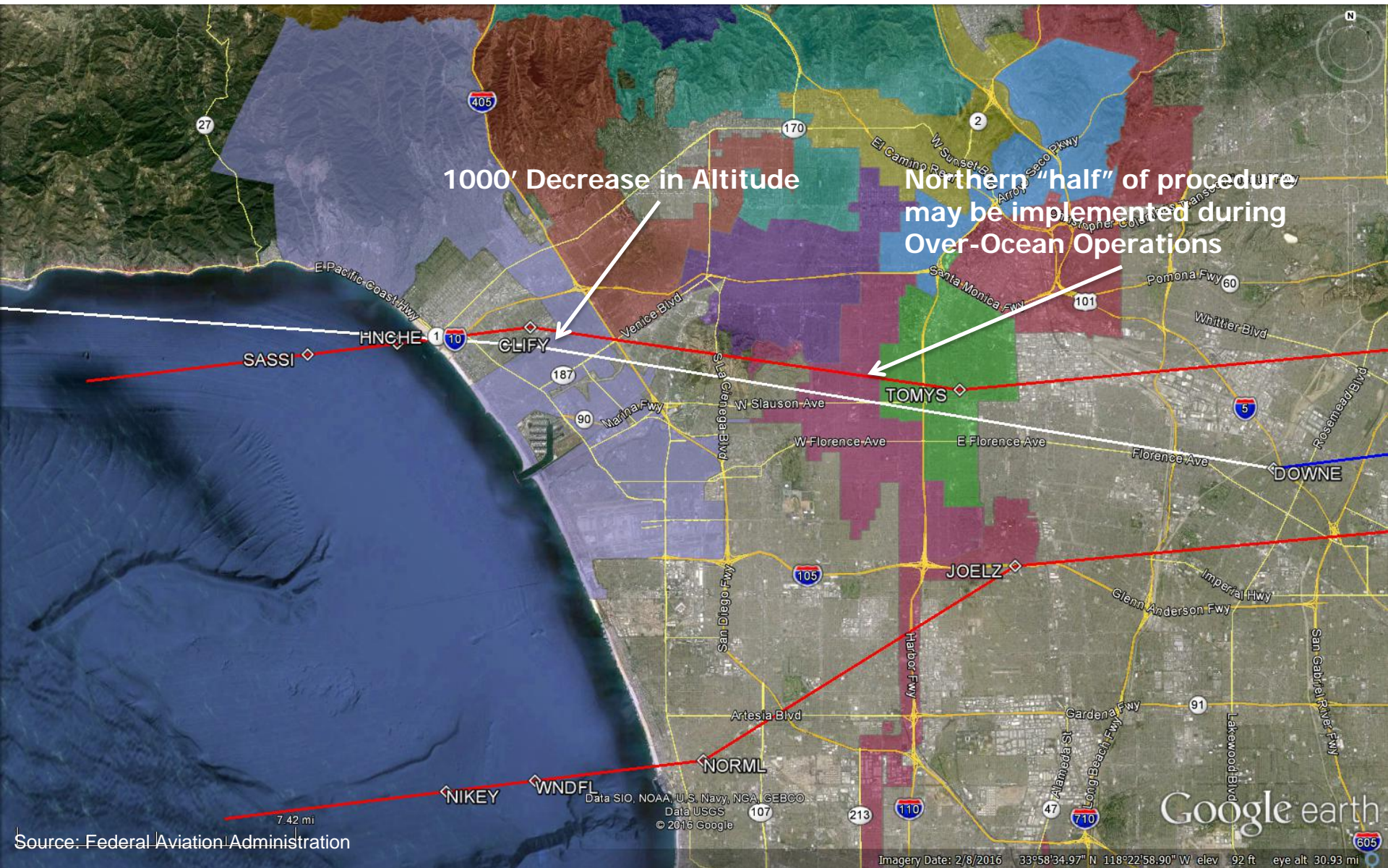
## Proposed Procedures: BIGBR and BRUEN STARs





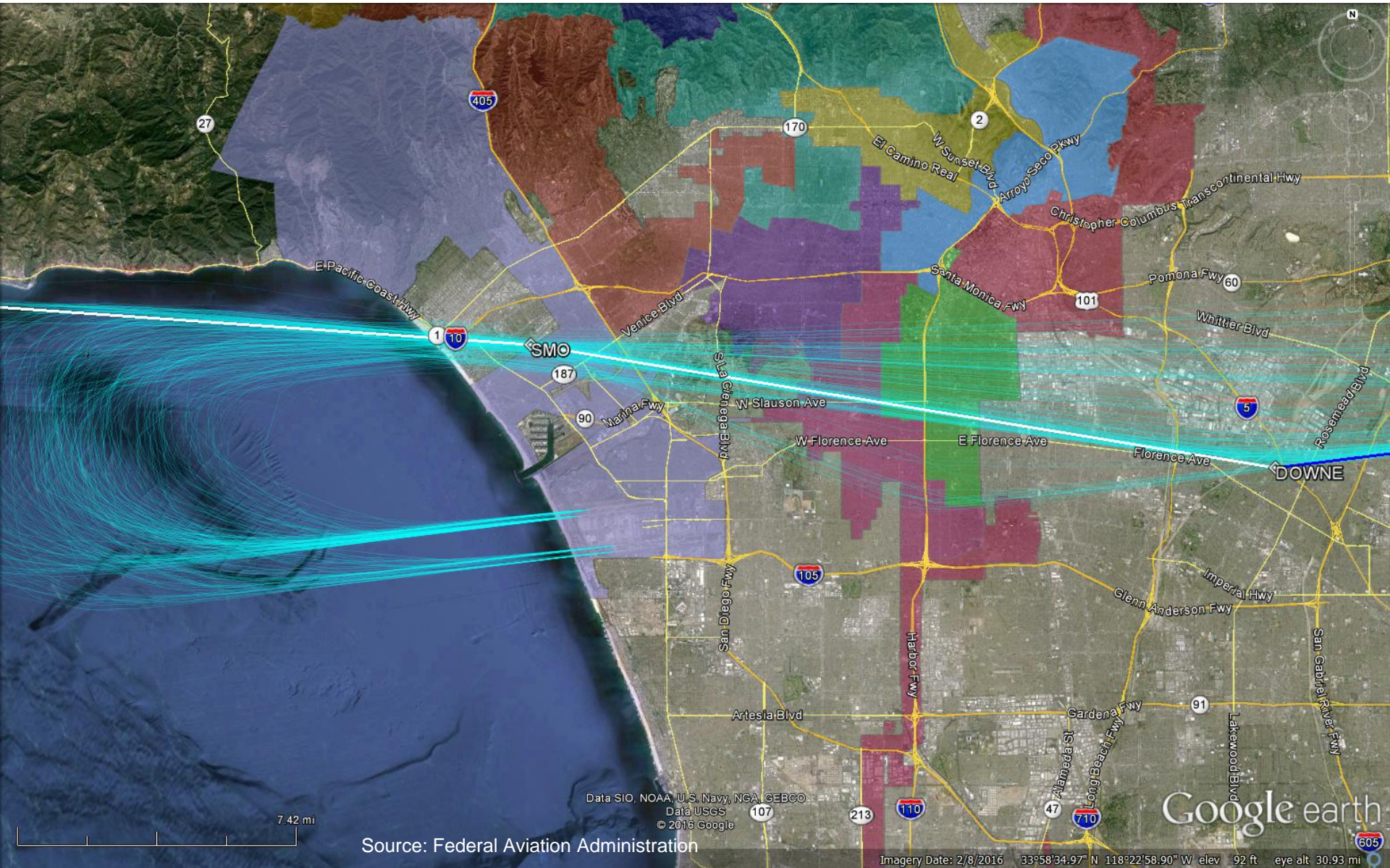
# LAX Over-Ocean Arrivals

## REDEYE2 vs BIGBR and BRUEN



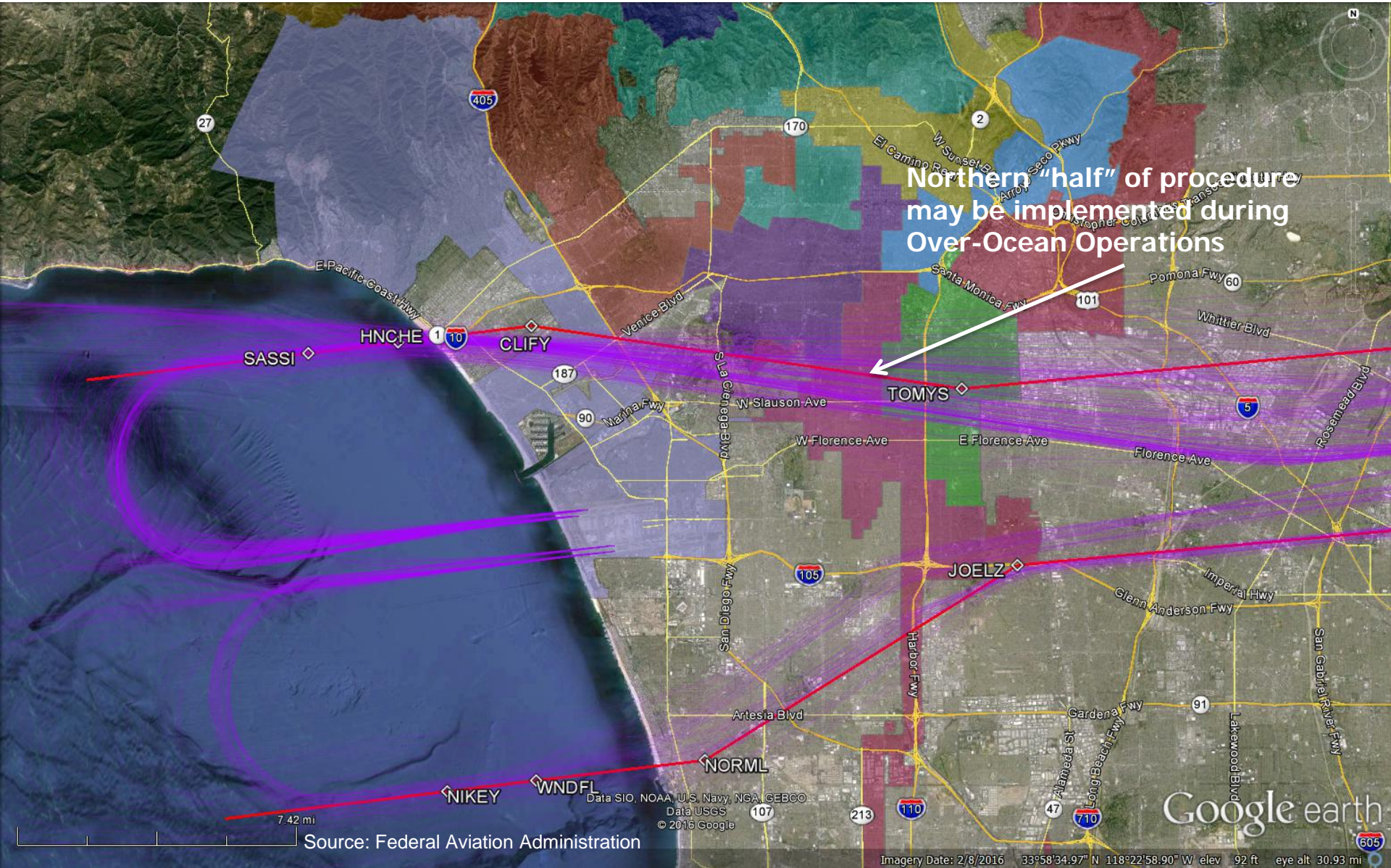
# LAX Over-Ocean Arrivals

## Current Flight Tracks: RDEYE2



# LAX Over-Ocean Arrivals

## Proposed Flight Tracks: BIGBR and BRUEN



# Communities Potentially Affected by LAX Over Ocean BIGBR/BRUEN Procedures

## Communities:

Santa Monica

**Palms**

**Mar Vista**

Culver City

**South Los Angeles**

## LA City Council Districts:

Mike Bonin (11)

Marqueece Harris-Dawson (8)

Curren D. Price, Jr. (9)

## Congressional Districts:

Lieu (33)

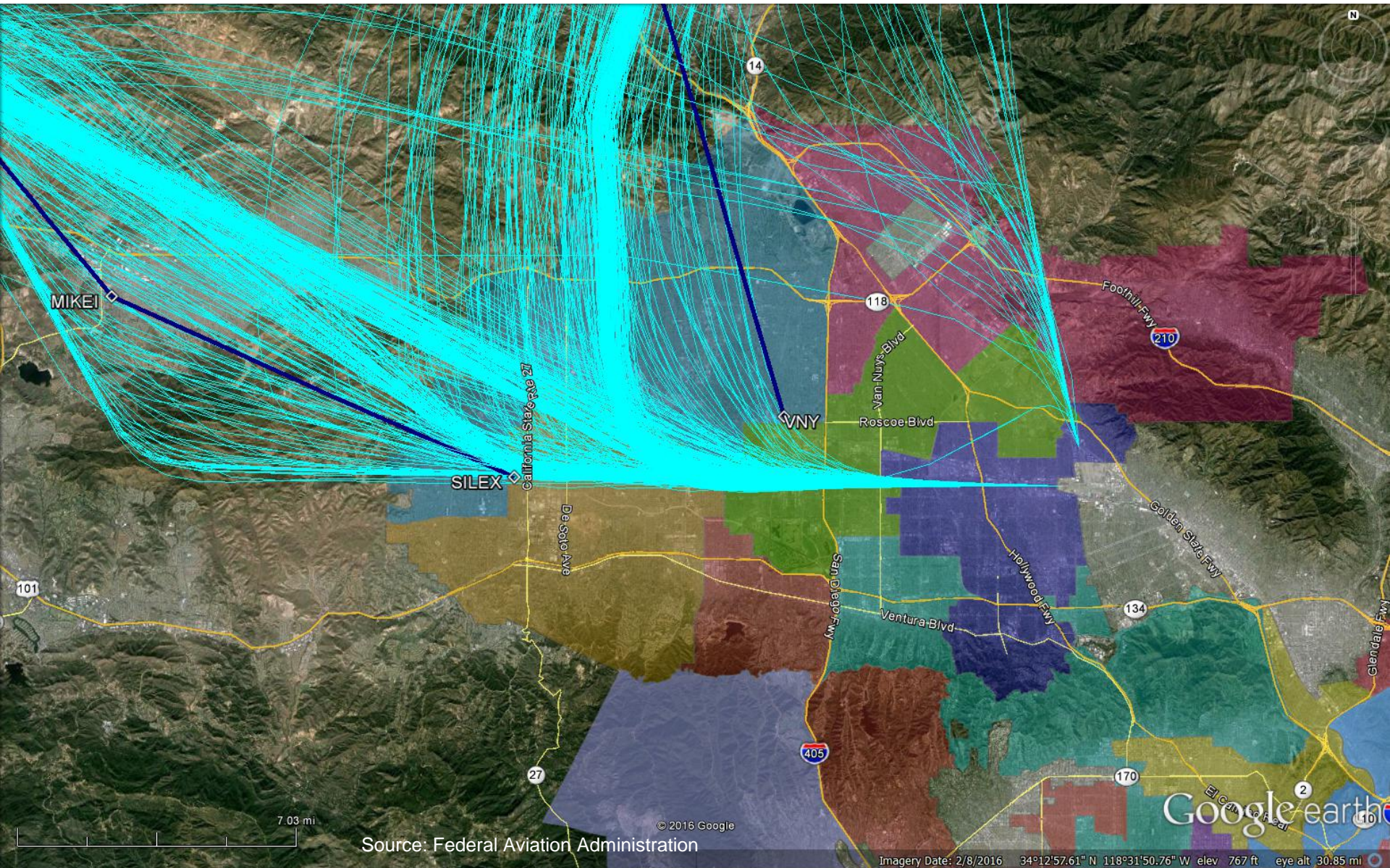
Bass (37)

Roybal-Allard (40)

**Green – City of L.A.  
communities**

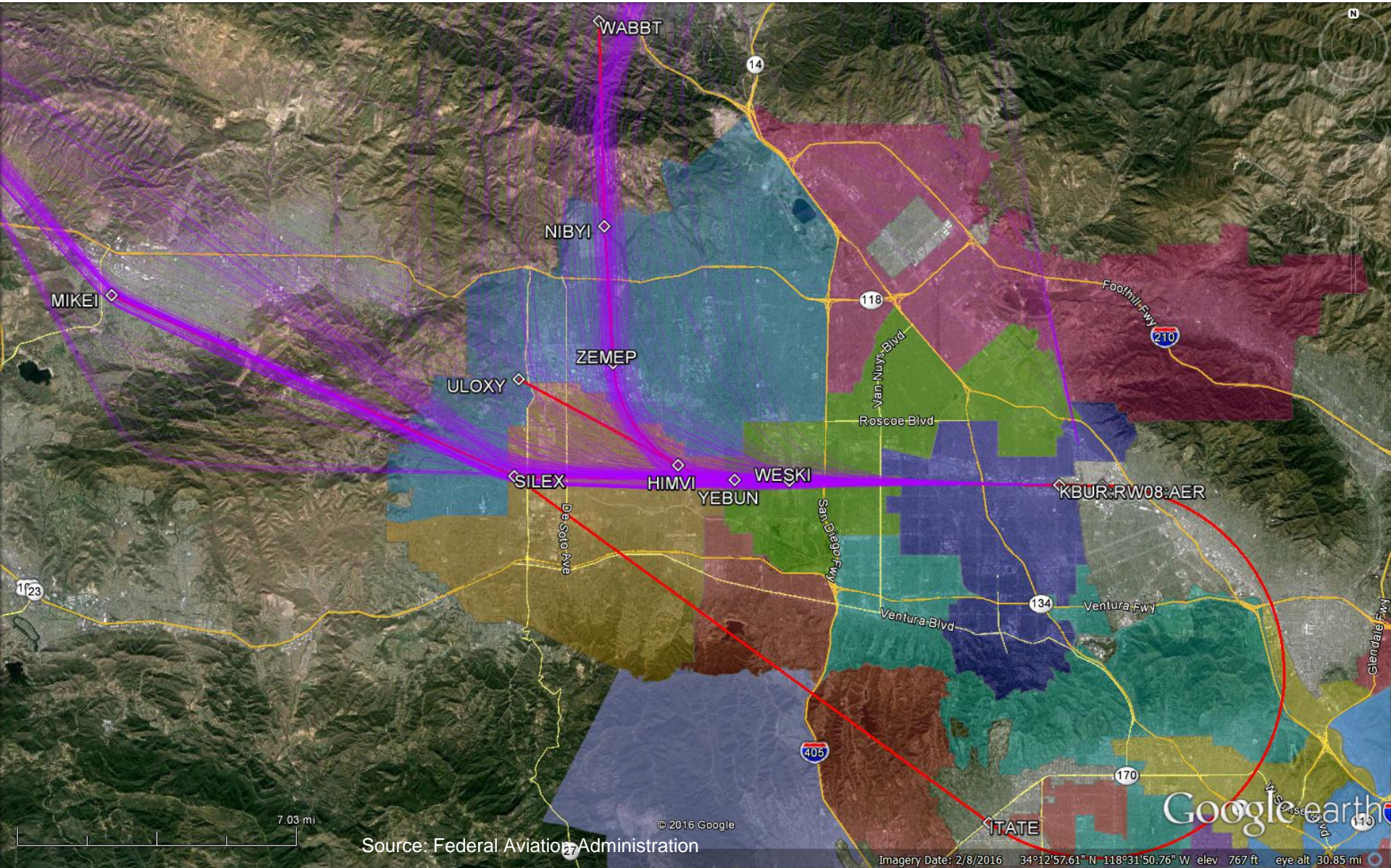
# BUR Arrival Procedure

## Current Procedures: LYNXX8 (Conv) and CEEME2 RNAV



# BUR Arrival Procedure

## Proposed Procedure: RNAV for Rwy 08



# Communities Potentially Affected by BUR RNAV

## Communities:

Porter Ranch

Chatsworth

Canoga Park

West Hills

## LA City Council Districts:

Bob Blumenfield (3)

Mitchell Englander (12)

## Congressional Districts:

Sherman (30)

Knight (25)

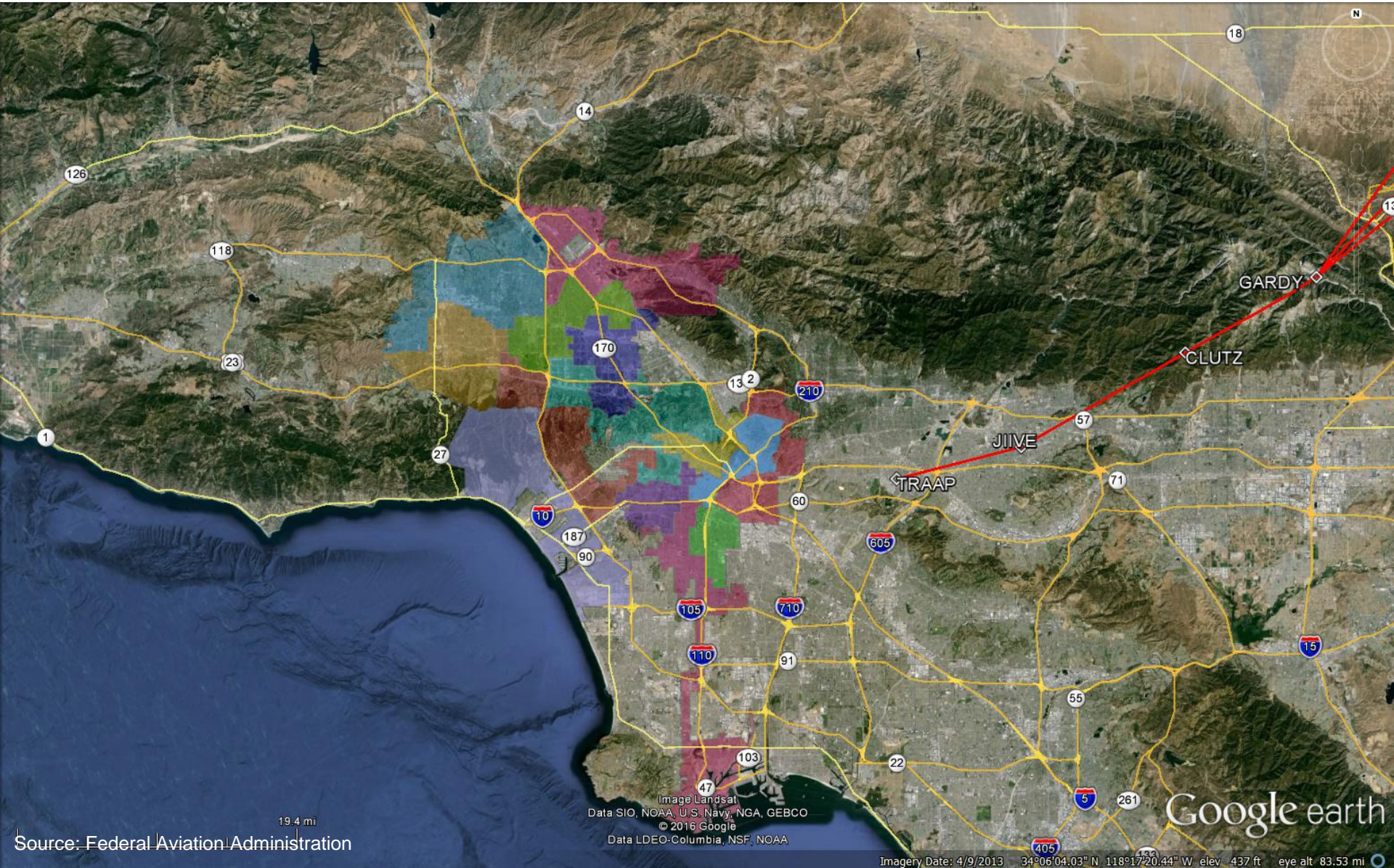
Green – City of L.A.  
communities





# LAX East Operations Departures

## Proposed Procedure: GARDY



Source: Federal Aviation Administration



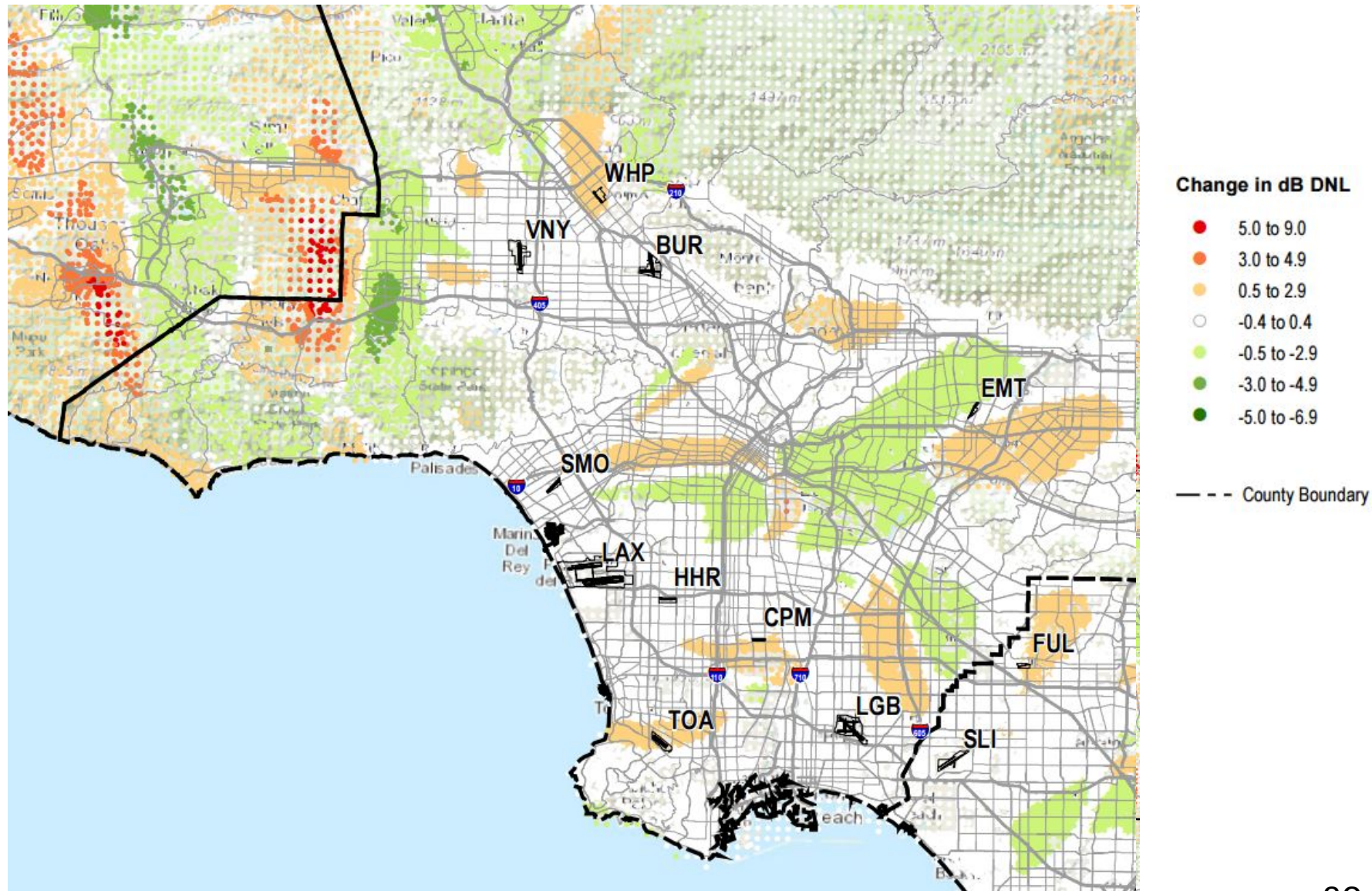




- **FAA EA Threshold of Significance:**
  - Changes to procedures limited to those that can be achieved without producing significant noise increases
- **FAA’s Environmental Assessment (EA) Results:**
  - No Significant Noise Increases:
    - +1.5 dB w/in the 65 DNL
  - No Reportable Noise Increases:
    - +3 dB in DNL 60 to 65
    - +5 dB in DNL 45 to 60
- As part of the EA process, LAWA submitted two comment letters requesting additional time to evaluate the changes, and suggesting FAA do additional outreach and provide additional information.
- Over 3000 comment letters were submitted to FAA, raising concerns about the potential impacts of the proposed procedure changes, and in some cases proposing alternative solutions to the proposed procedures.



# SoCal Metroplex – Changes in Noise Levels



## SoCal Metroplex Schedule:

- Process intended to be 3-years start to finish
  - Study and Scoping – 3 months
  - Design Development – 6-9 months
  - Operational, Environmental, Safety Review – 16 months
  - Implantation and Training – 9-15 months
  - Post-Implementation Review – 3-6 months
- Project Began in Summer 2012
- Draft EA Released – June 2015
- Comment Period – Ended October 2015 (extended twice)
- Response to Comments/Final EA: Projected Summer 2016
- FONSI: Projected Later in 2016
- Implementation of Procedures in 2 phase:
  - Late 2016 and Spring 2017 – may be further delayed



- **Once the new procedures are implemented, the community may notice:**
  - Nothing at all
  - Decreased aircraft overflights and noise levels
  - Increased aircraft overflights and noise levels
  - Concentrated flight tracks over a narrow area
  - Increased aircraft altitudes/distance from flight tracks
  - Decreased aircraft altitudes/distance from flight tracks
  - Aircraft where they have not flown previously on a regular basis
- **The exact effects will depend on the types of changes the FAA plans to make and where those changes are made**