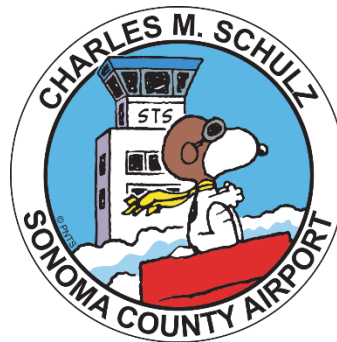


APPROACH DEVELOPMENT FEASIBILITY STUDY

Community Outreach Meeting

(November 1st and 2nd 2023)

Charles M. Schulz – Sonoma County Airport



AGENDA

STS APPROACH DEVELOPMENT FEASIBILITY STUDY

- Project Team Introduction
- Logistics & Format
- Project Background
- Meeting Objectives
- Study Objectives
- Project Tasks
- High Level Approach
 - Overarching Principles



WHO IS ATTENDING



Jon Stout

Airport Manager

Mr. Stout is responsible for the daily management and long-term development of Charles M. Schulz – Sonoma County Airport (KSTS).

Jon has overseen the daily operations of Sonoma County Airport since June 2002. He oversees the Airport's annual budget, capital expenditures and long-term development



Vinnie Khera

Project Manager

20+ years of experience in the management and technical aspects of Aviation Project Management. 18+ Years of Airport & Airspace Planning, Systems Engineering, Research, Development, Integration and Modeling/Simulation coupled with Program and Functional Management.

WHO IS ATTENDING



Jeffrey Cochrane
*Lead Senior Analyst
Co-Lead Stakeholder &
Community Outreach*

Over 25 years of experience in providing airspace design and Air Traffic Management (ATM) optimization support in conjunction with the implementation of projects in various locations worldwide. Former Director of Navigation and Airspace at NAV CANADA.



Patty Daniel
*Senior Analyst
Lead Stakeholder &
Community Outreach*

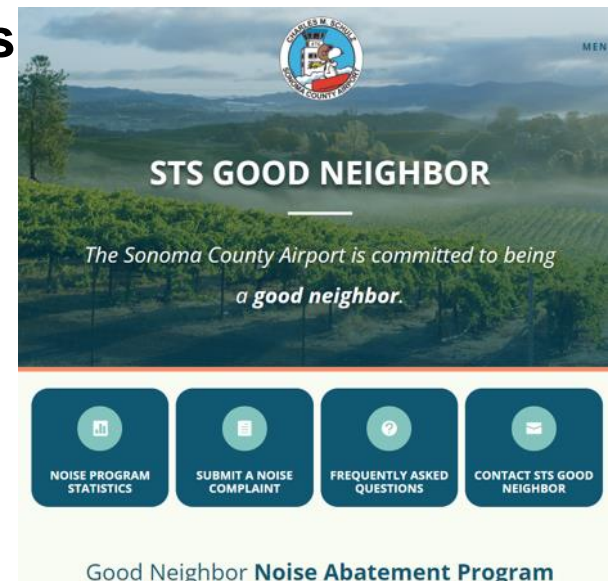
Retired FAA Airspace & Procedures manager with over 40 years of experience. Ms. Daniel is a former air-traffic control specialist/manager from CA, experienced in airspace and procedures, and Performance Based Navigation (PBN).

LOGISTICS

MEETING FORMAT

- **Hear from the team**
- **Stations with information on existing environment**
 - Basic and Current Information
- **Court Reporter for Comments and Concerns**
 - Good Neighbor Website
 - Will be addressed via formal response

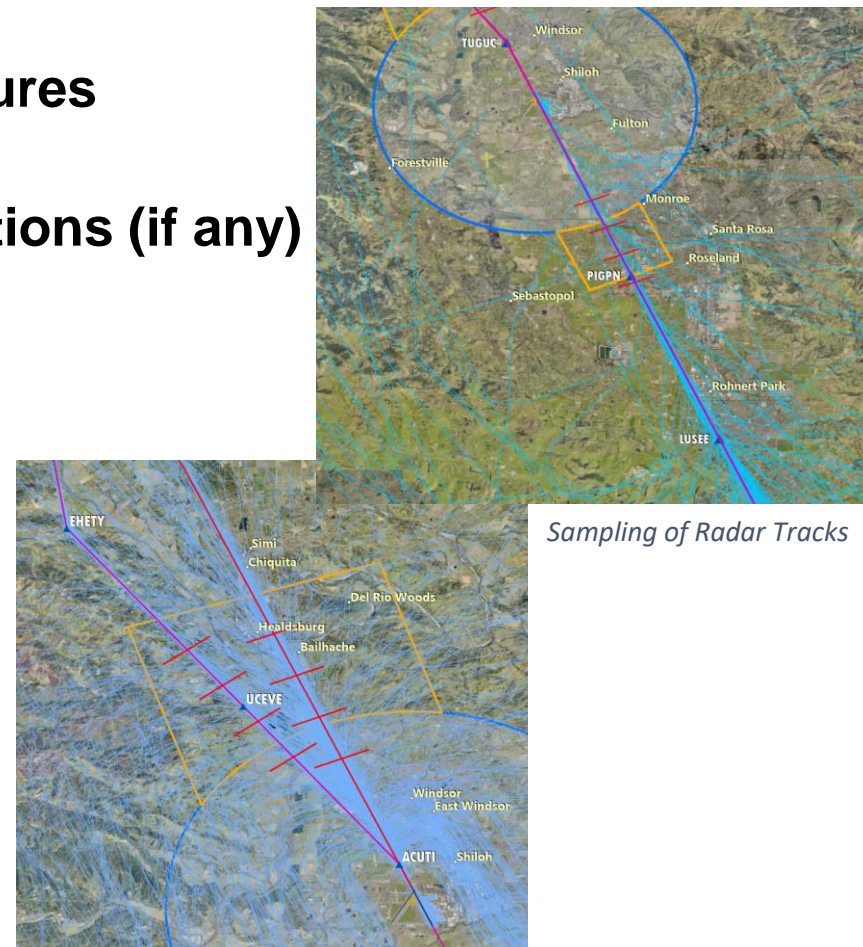
STS Good Neighbor Site



PROJECT BACKGROUND

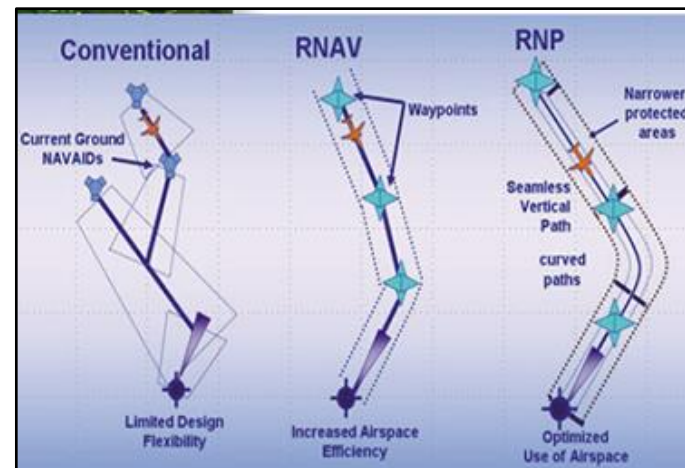
Why is the Airport Sponsoring an Approach Feasibility Study

- **Assess Existing Published Procedures**
- **Evaluate conceptual alternative options (if any)**
- **Noise Concerns**
 - Be a good neighbor



Meeting Objectives

- Meet the approach feasibility study team
- Provide background into the 'What & Why'
- Understand The Process
 - Provide insight into the complex nature of Airspace & Procedure Development & Implementation
 - Long and Pre-Defined Process (Federal Regulations)
- Allow for a forum to receive constructive input
 - Questions via court report or Good Neighbor website



Types of Approach Procedures

LEGEND

- Arrival
- Departure
- Station
- Noise Sensitive Area
- Caution Area For Navigation/Procedures

NOISE ABATEMENT PROCEDURES SHOULD BE USED ONLY WHEN CONSISTENT WITH THE SAFE OPERATION OF AIRCRAFT

DEPARTING AIRCRAFT:

- Delay turns until clearing the runway end and reaching an altitude of at least 400' MSL (500' AGL)
- Climb at best angle until crossing airport boundaries and then climb at best rate of climb
- If able, reduce power and yaws when reaching the airport boundary and remain as high as practical over residential areas

APPROACHING AIRCRAFT:

- Remain as high as practical until entering the FDP or glidepath unless otherwise directed by ATIS

SOUTH FLOW:

- Wind permitting, aircraft are requested to use Run 20 for departure operations and Run 14 for arrival operations
- Arrivals from the east
- Clearly the PG&E subdivision located 2.5 miles east of the Airport to minimize flight over residential areas
- Expect a left downwind to Run 14. Noise is a standard pattern when transiting east of the Airport
- Complete base turn south of Shiloh Rd.

NORTH FLOW:

- Wind permitting, aircraft are requested to use Run 32 for departure and arrival operations
- Touch-and-go operations are discouraged between 2200 and 0700 Monday through Saturday and 2100 to 0900 Sundays and holidays

TOUCH-AND-GO OPERATIONS:

- Touch-and-go operations are discouraged between 2200 and 0700 Monday through Saturday and 2100 to 0900 Sundays and holidays

AIRCRAFT NOISE LIMITS:

Flights are requested to ensure that their operations comply with these limits prior to operating at the Airport. Pilots are responsible for determining compliance with these noise limits.

Daytime Noise Limit
0500 - 2200: 65.0 dBA

Nighttime Noise Limit
2200 - 0600: 71.0 dBA

The noise limits are based on departure noise levels as published in Advisory Circular 36-3. For a copy of the most recent AC 36-3, see www.faa.gov/regulations_policies/handbooks_manuals/

Flights are requested to operate their aircraft at the most reduced power settings in the traffic pattern or while entering the pattern consistent with safety.

NOTES:

Airport does have California Department of Forestry operations from mid June through early October that may include fire banners up to 1000' in height.

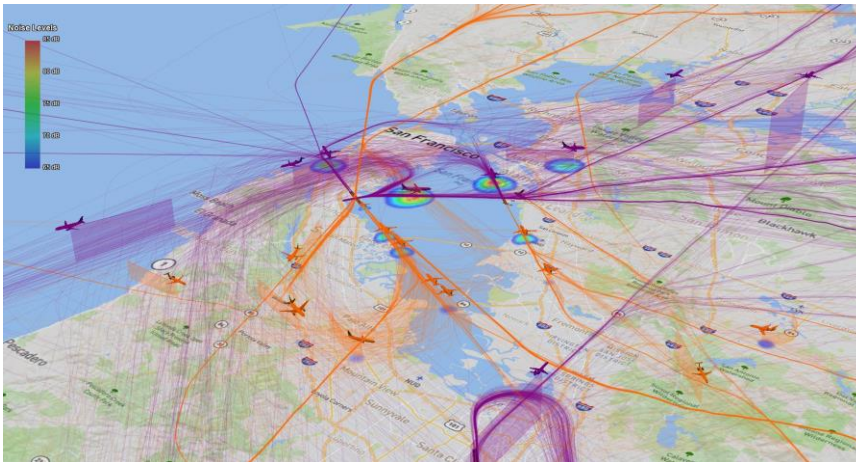
Aircraft noise limits are not applicable to emergency and government service aircraft.

Fly. Neighborly!

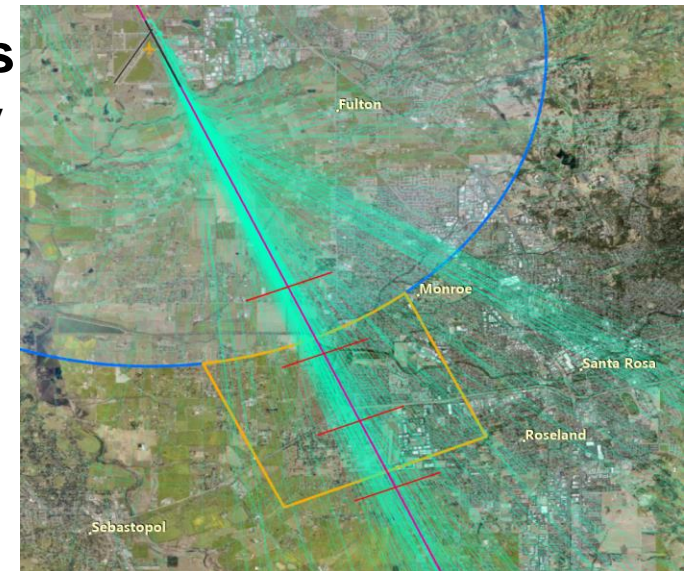
Good Neighbor Site

Study Objectives

- **Assess Existing Airspace/Procedure Design & Usage**
- **Evaluate Surrounding Area & Terrain**
- **Assess and Evaluate Alternative Designs**
 - Based on criteria, understanding the benefits, if any



Sample of Radar Tracks



Runway 14 Departure Track Analysis

UNDERSTANDING THE ENVIRONMENT

Existing Conditions

Two Runways – Primary 14/32 and Secondary 02/20

14/32 Precision

One Departure Procedure

Charlie Eight

Four Approach Procedures

Instrument Landing System (ILS)

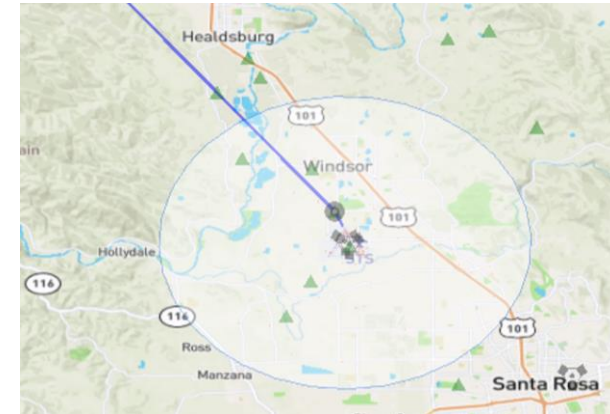
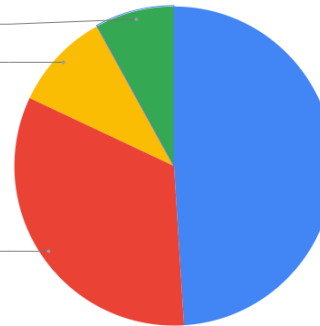
3 RNAVs (One Overlay)

Commercial Service Airlines

Predominantly Group II Acft. (Small Regional Jets) with some Group III (Narrowbody Jet Aircraft)

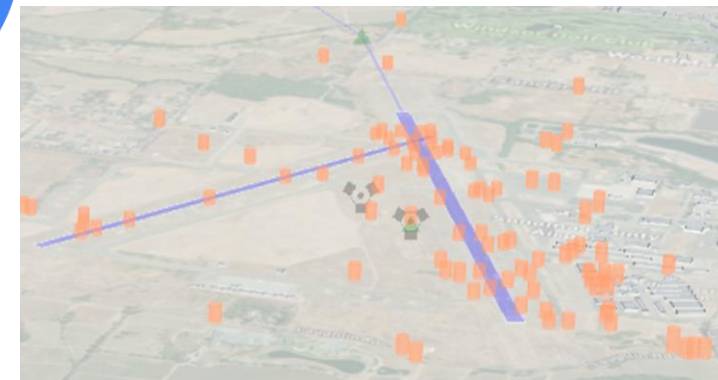
STS Traffic Mix (Average total operations per day: 233)

Commercial
8.0%
Air Taxi
10.0%



Approach to Rwy. 14

Transient GA
49.0%



Sampling of existing obstructions

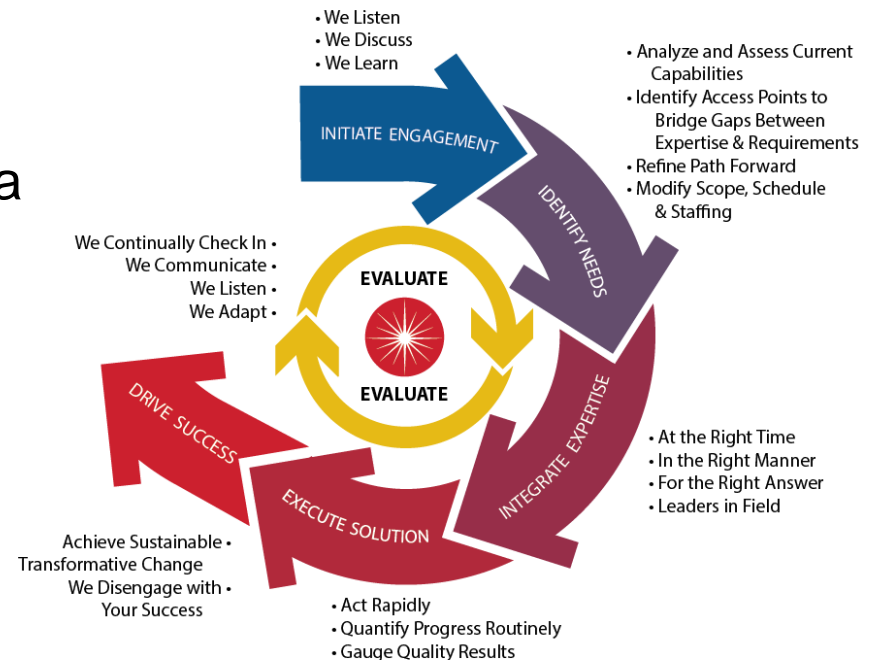
PROJECT TECHNICAL TASKS

Phased Approach

Our team will use an accepted international reference for airspace and procedure concept development and implementation, the International Civil Aviation Organization (ICAO) Doc 9992 process found in the Manual on the Use of Performance-based Navigation (PBN) in Airspace Design

Phase I Approach

- Review Existing Procedures
- Review & Manage Obstruction Data
- Develop New 'Concepts'
 - Departure Procedures
 - Arrival Procedures

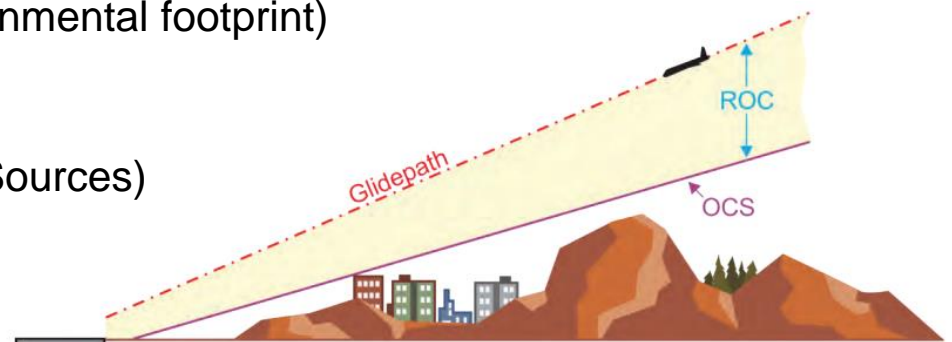
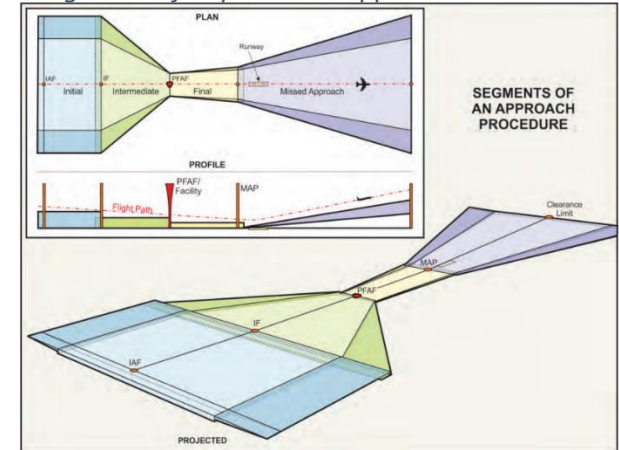


PROJECT APPROACH

Some Guiding Principles

- Aircraft operational capabilities and constraints
 - Equipment capabilities and operational certifications
- Missed approach procedures and impacts
- Obstruction Issues
- Safety
 - Operational safety will not be compromised
 - Flight paths need to be designed with procedural separation in mind
- Design Criteria
 - The extent possible aim to maximize Greenhouse gas (GHG) reductions and reduce noise (Reduce or maintain the environmental footprint)
- Evaluate all inputs
 - Stakeholders
 - (Good Neighbor and Other Data Sources)

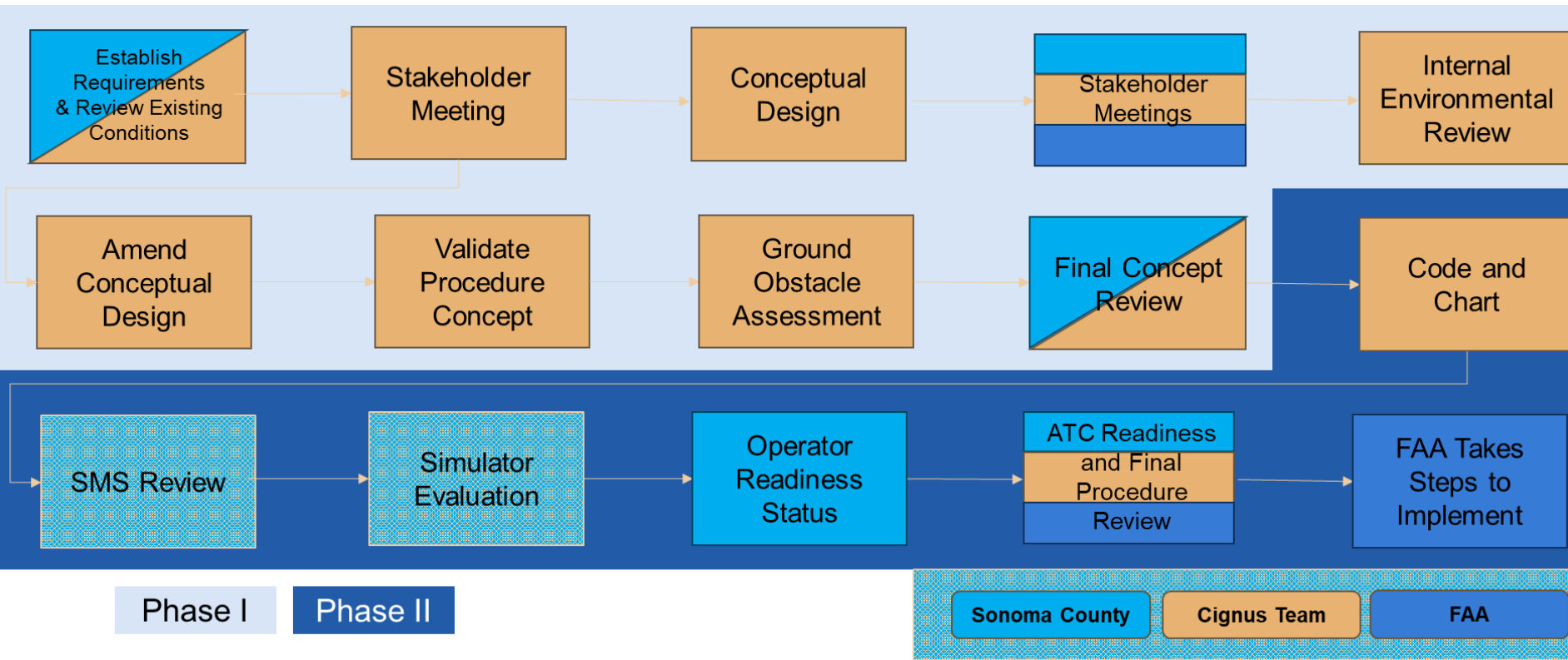
Segments of Departure & Approach Procedures



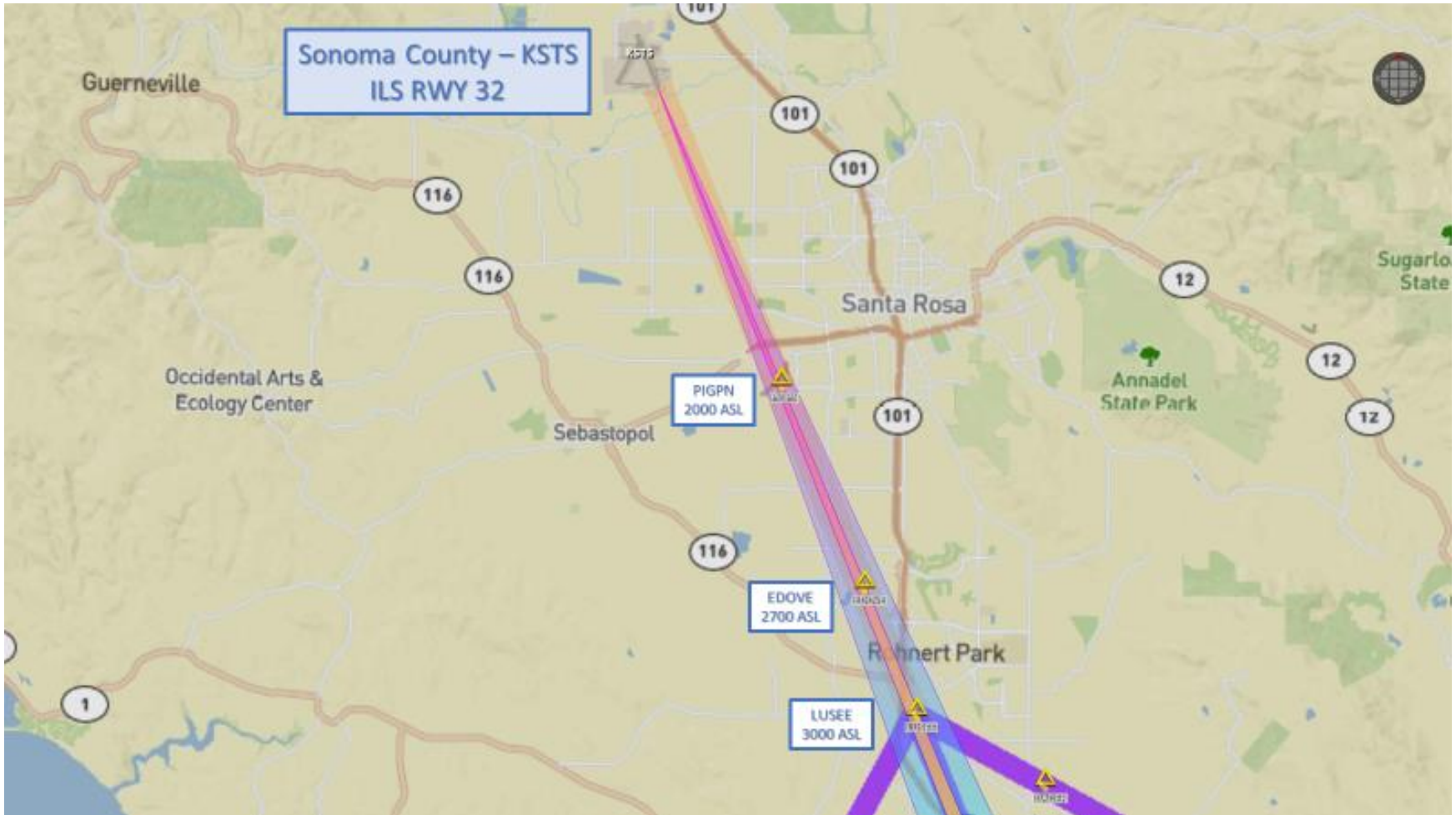
Procedure Development Considerations

MANDATED PROCESS

Feasibility Study Process



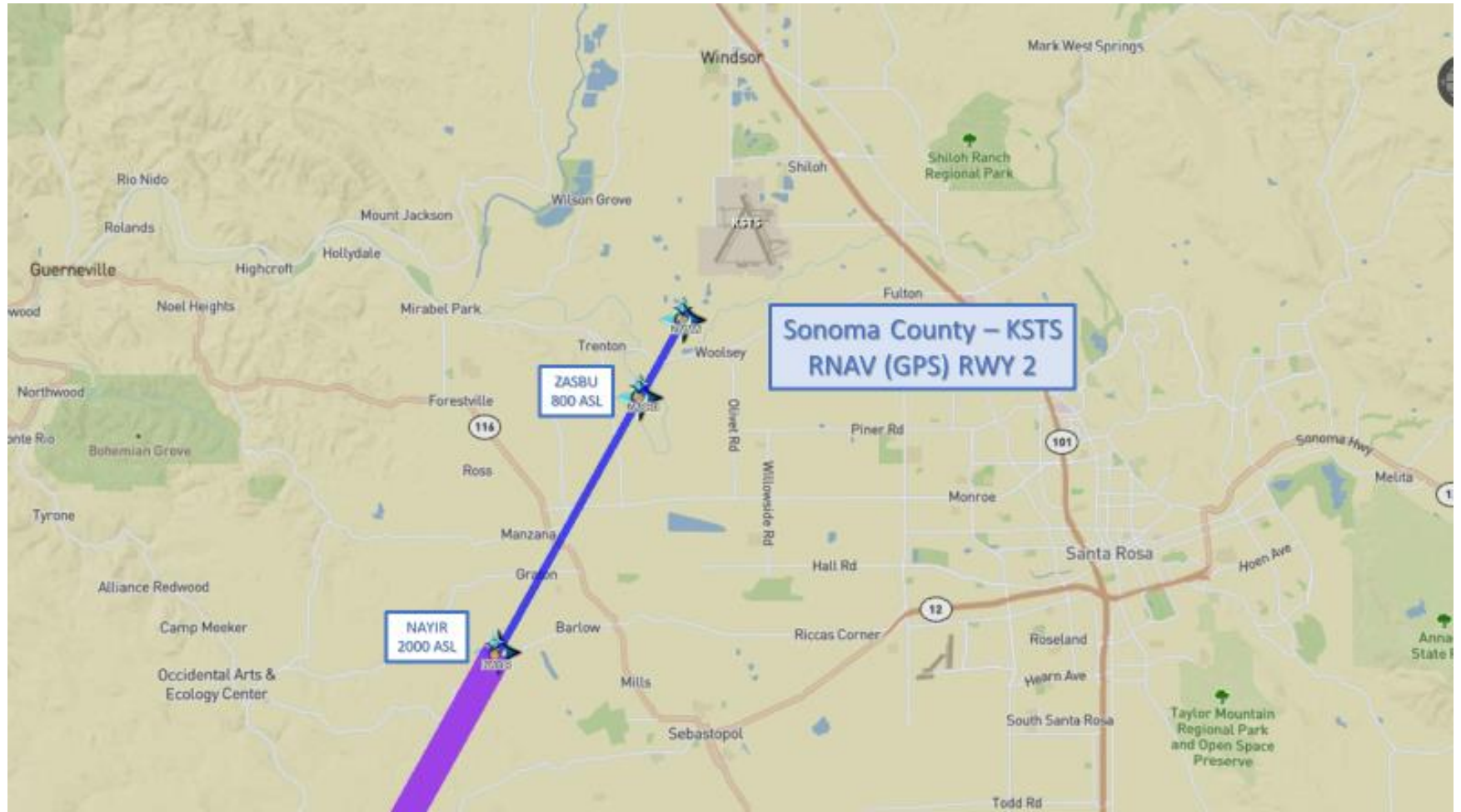
ILS for RWY 32



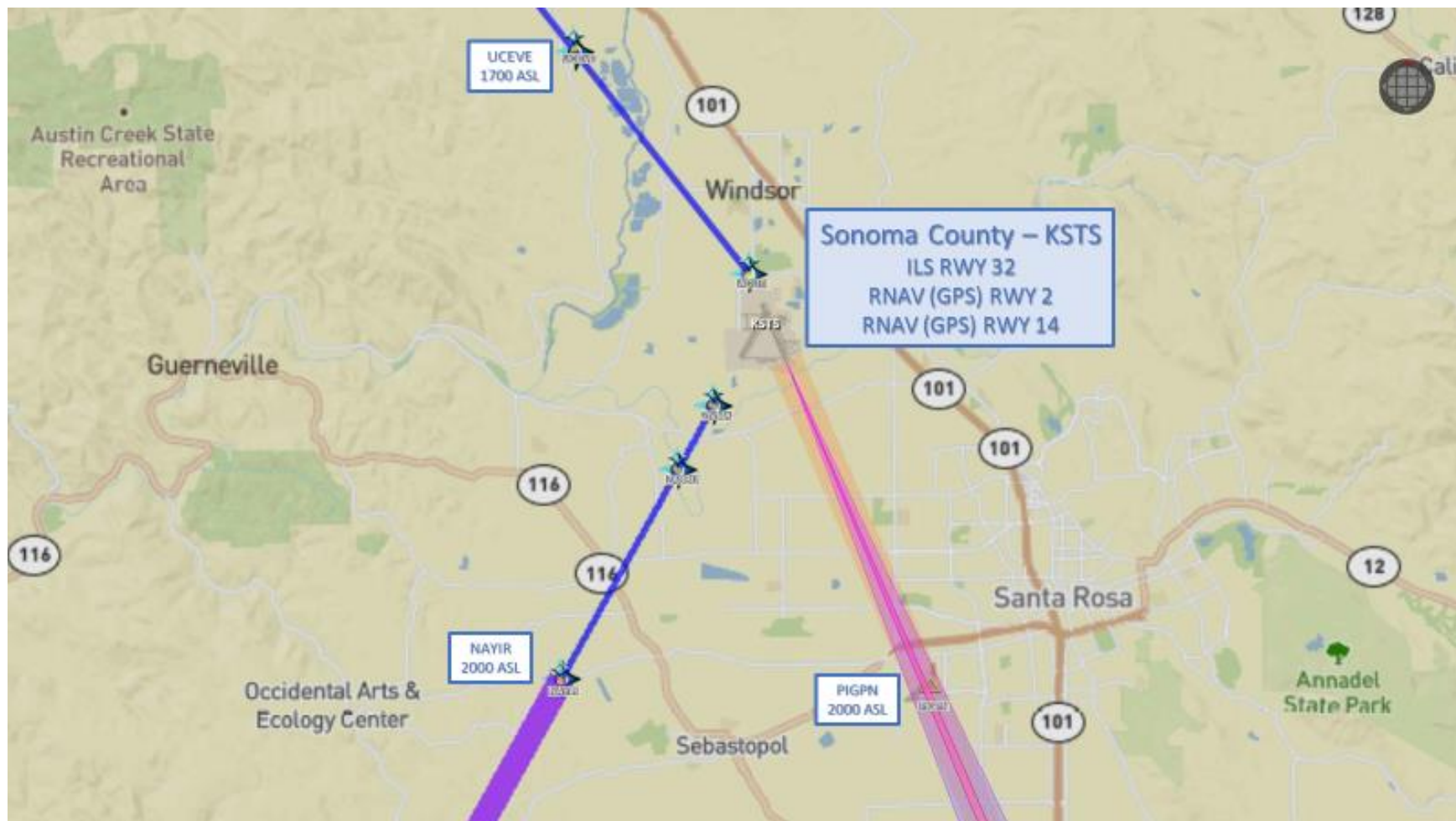
RNAV (GPS) to Rwy 14



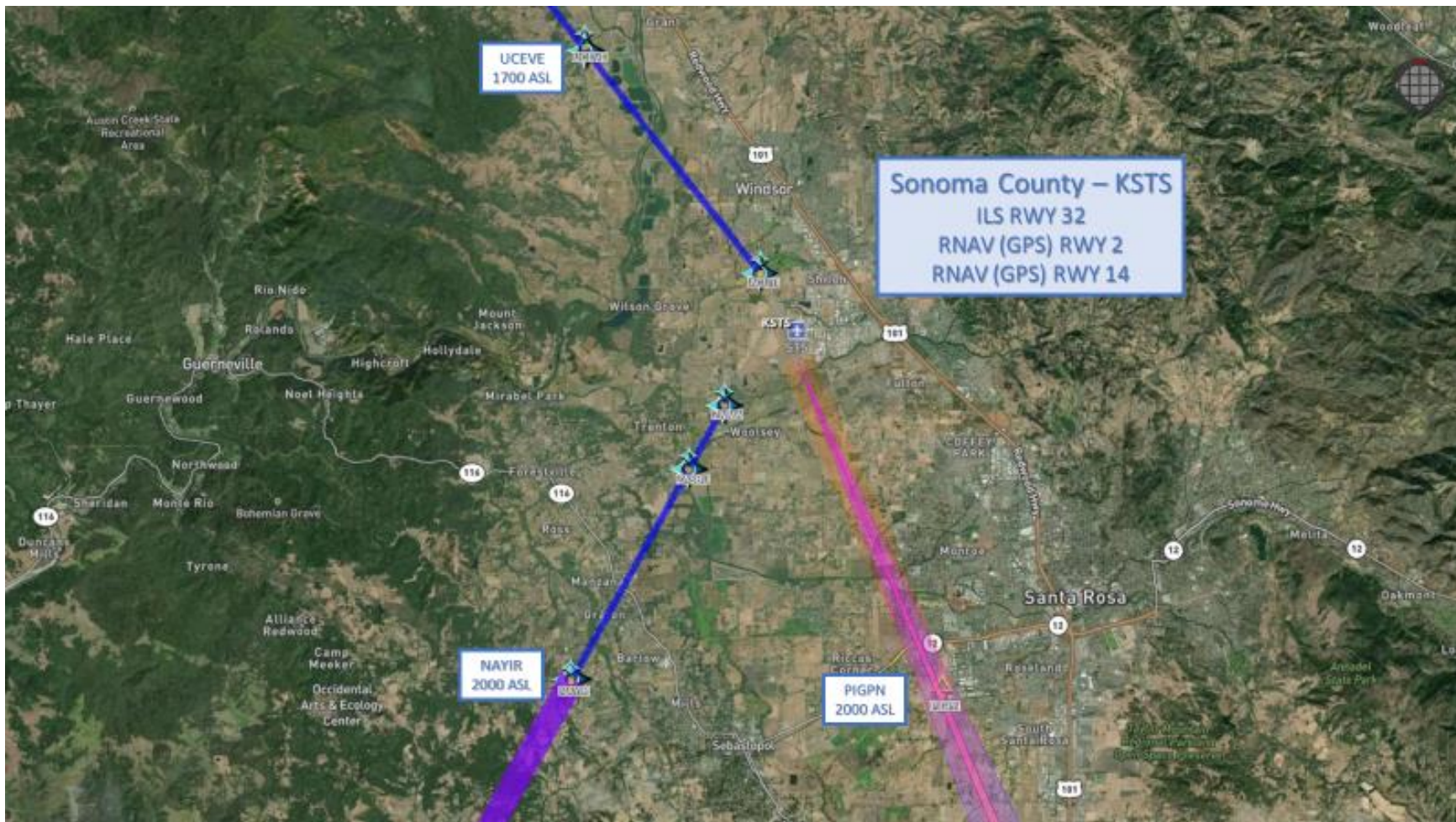
RNAV (GPS) to RWY 2



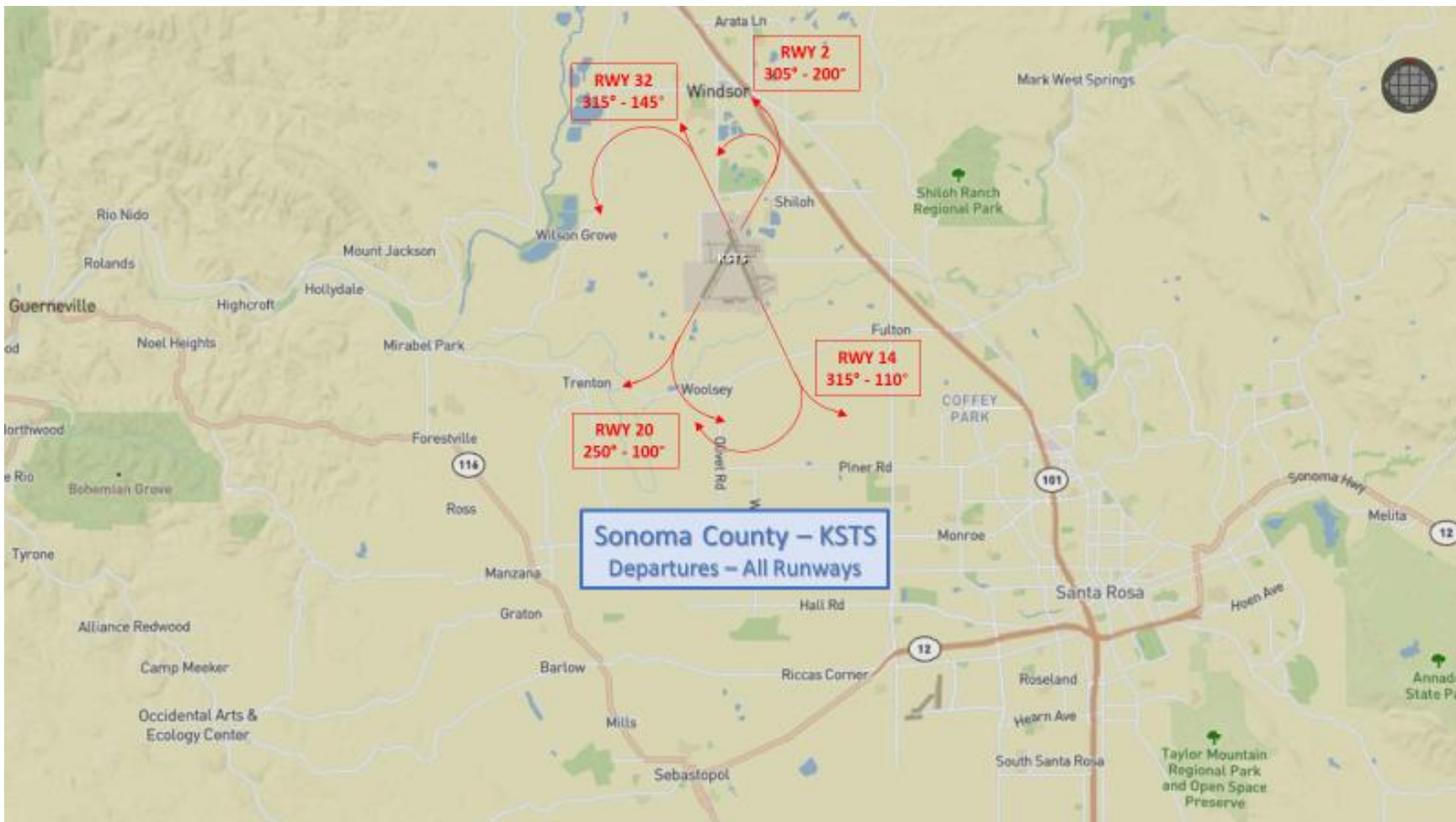
Approach Procedures (View I: Combined)



Approach Procedures (View II: Combined)



Departure Procedures (View I: Combined)



Next Steps

- Current Workshops
 - Comments & Questions - November 15
 - Responses to Comments & Questions – Mid-December
- Future Workshops – Approach Procedures Concepts
 - Spring 2024
- Board of Supervisors Approval for Phase II (Development)
 - Summer 2024
- Phase II Steps
 - Procedure Development and FAA approval – 24-36 months
 - Development of Fly Quiet Program – 12-36 months
 - Update VFR Noise Abatement Pilot Guide – 12 months

QUESTIONS OR COMMENTS

 Court Reporter Present OR Scan QR code below

 <https://publicportal.vector-us.com/?airportCode=KSTS>

 <https://stsgoodneighbor.com/study/>

The airspace at the Airport is governed by the Federal Aviation Administration. These programs are voluntary, and the Airport is not authorized to control flight operations or limit the number of flights or types of aircraft using our facilities. The FAA is the only organization that can control and direct aircraft operations.



APPROACH FEASIBILITY WORKSHOP

Scan the QR code or visit:

stsgoodneighbor.com/study

to view materials and submit comments.

Responses will be published at a later date.



TALLER DE VIABILIDAD DE LA APROXIMACIÓN

Escanear el código QR o visitar

stsgoodneighbor.com/study

para ver materiales y enviar preguntas.

Las respuestas se publicarán en fecha venidera.



Acronyms

- ATM Air Traffic Management
- FAA Federal Aviation Administration
- GHG Greenhouse Gas
- GPS Global Positioning System
- ICAO International Civil Aviation Organization
- ILS Instrument Landing System
- KSTS Charles M. Schultz Sonoma County Airport
- NAVAIDS Navigation Aids
- OCS Obstacle Clearance Surfaces
- PBN Performance Based Navigation
- PBN Performance-based Navigation
- RNAV Area Navigation
- RNP Required Navigation Performance
- ROC Required Obstacle Clearance
- RWY Runway
- SMS Safety Management System