Airspace & Flight Procedures

Hardy Bullock

What are the goals?

1. Recommend procedures to reduce community annoyance, enhance safety, and promote efficiency.
2. Survey existing procedures and analyze results relative to current GIS data for housing and land use.
3. Advocate for KTRK with the FAA.
4. Present solutions for visual flight procedures.
5. Present methods for disseminating information to pilots about KTRK.
6. Show development paths for Special Procedures and Specific Publications that enhance airspace use at KTRK.

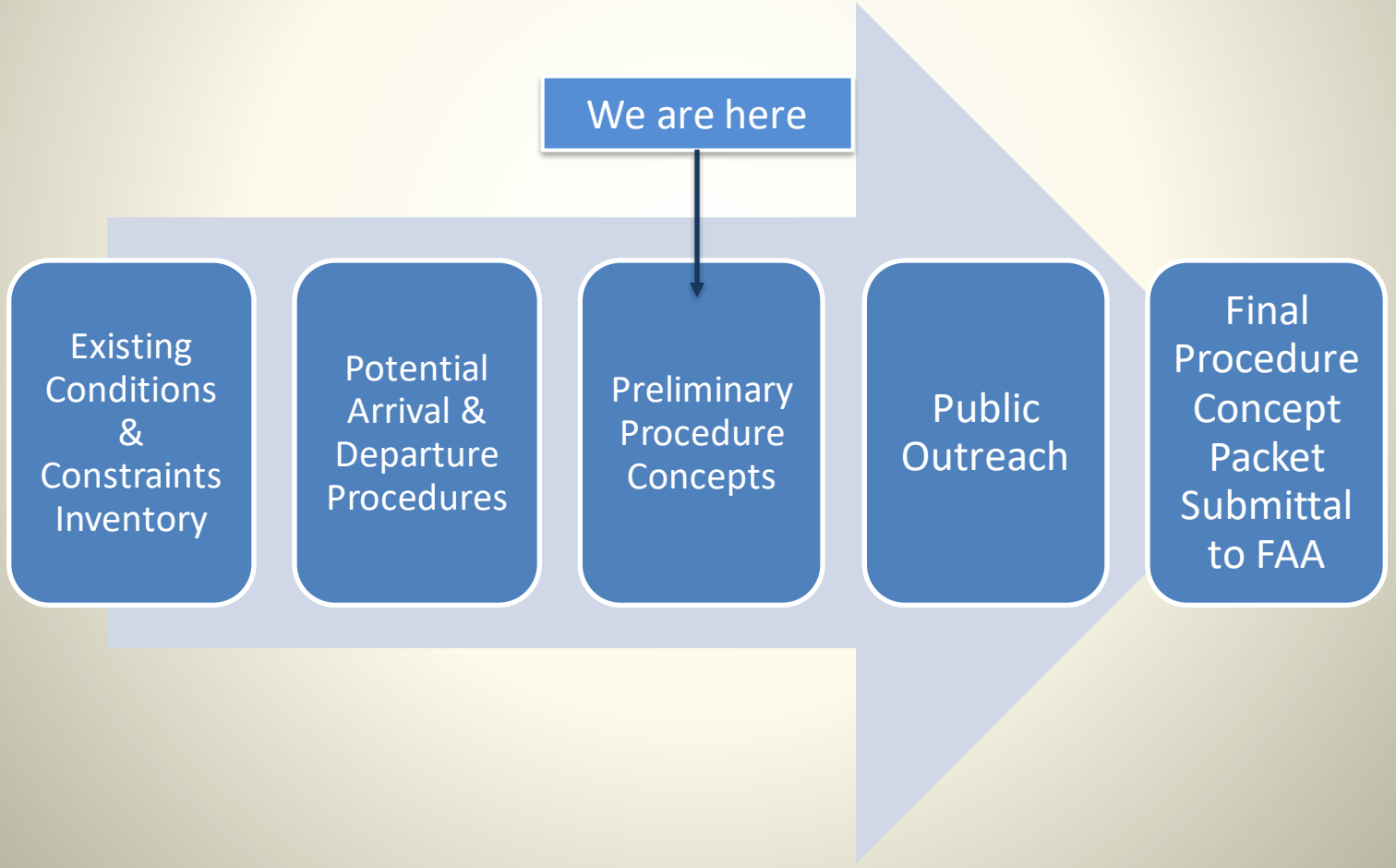
Facts and Basics

- The Federal Aviation Administrations owns, maintains, controls, and enforces the airspace above the surface of the airport.
- Flight Procedures are the most technically complex initiative KTRK is engaged on.
- Flight Procedures directly affect safety of flight and airspace capacity.
- Flight Procedures are part of a complex system that connects the national airspace system.
- Flight Procedures are the final phase or the initial phase of flight. They work in unison with the enroute structure and the transitional structure.
- Flight Procedures are a multi-dimensional set of directions for pilots:

(Lateral+Vertical+Gradient+ref.Velocity+Visibility= Flight Procedure)

- Airports rarely adopt the responsibility of creating, modifying or removing flight procedures.
- Airports often prescribe unofficial, ad-hoc Noise Abatement Procedures (voluntary)

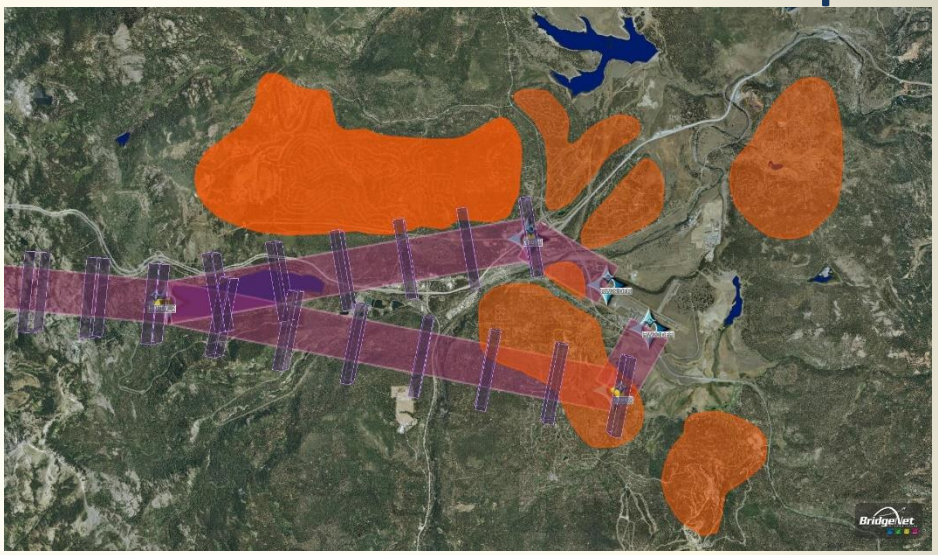
Project Schedule



Procedure Concept Criteria

1. Must provide environmental benefits – reduced emissions, noise, and track miles.
2. Serve all runways to enhance runway utilization and reduce environmental impact on specific neighborhoods.
3. Meet current FAA procedure design criteria.
4. Meet current FAA terrain and obstruction requirements.
5. Meet current PBN design criteria.
6. Provide independent operations from current procedures at:
    - South Lake Tahoe Airport (KTVL)
    - Reno/Tahoe International Airport (KRNO)
    - Sacramento International Airport (KSMF)
7. Be available to the majority of aircraft that use KTRK.

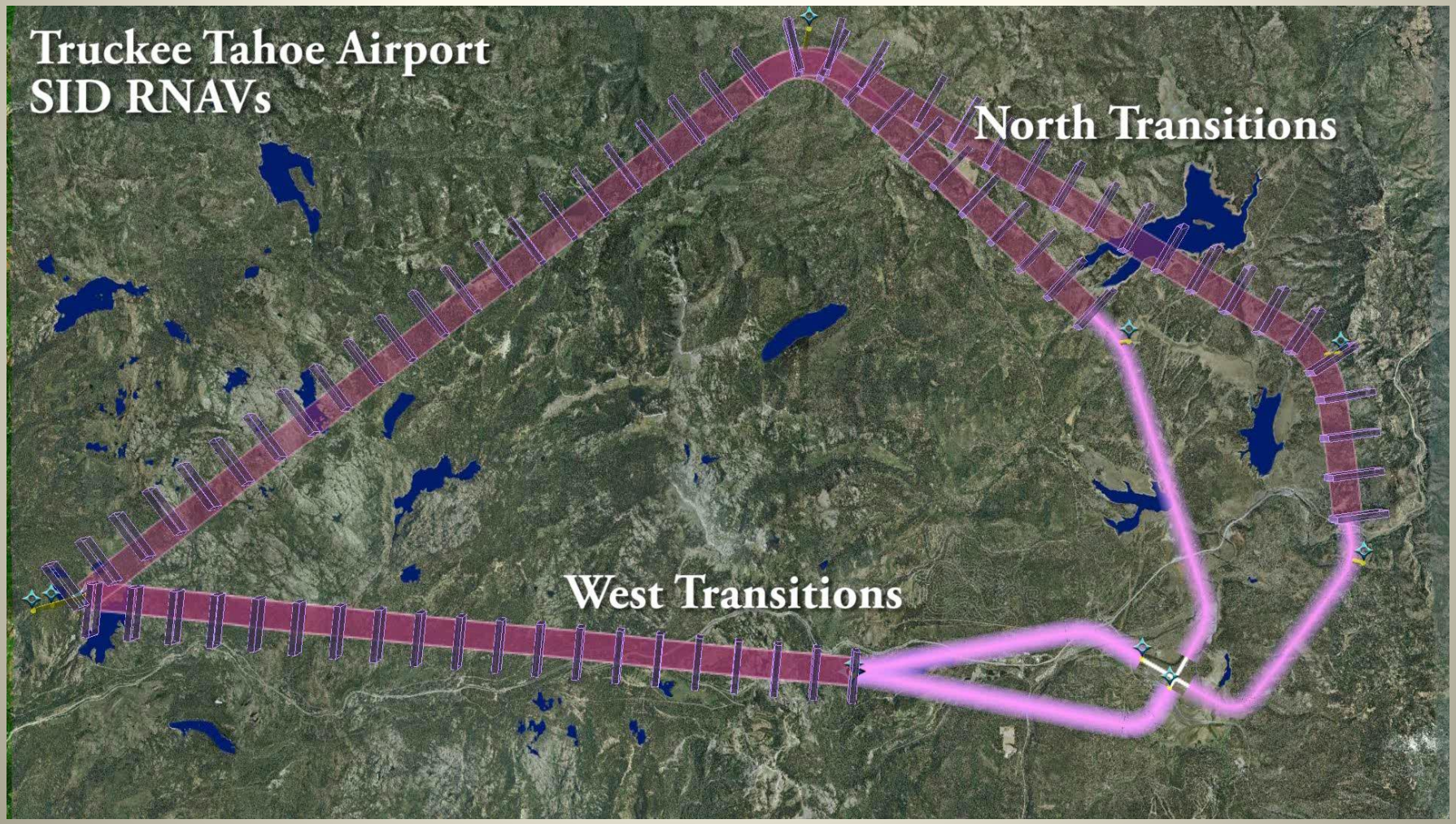
HARDY RNAV Standard Instrument Departure



Procedure goals:

1. Provide separation from South Lake Tahoe operations.
2. Use historic noise abatement routes.
3. Remain over compatible land uses.
4. Create RNAV path that is consistent for the community and pilots.

HARDY 1


Truckee Tahoe Airport
SID RNAVs
North Transitions
West Transitions

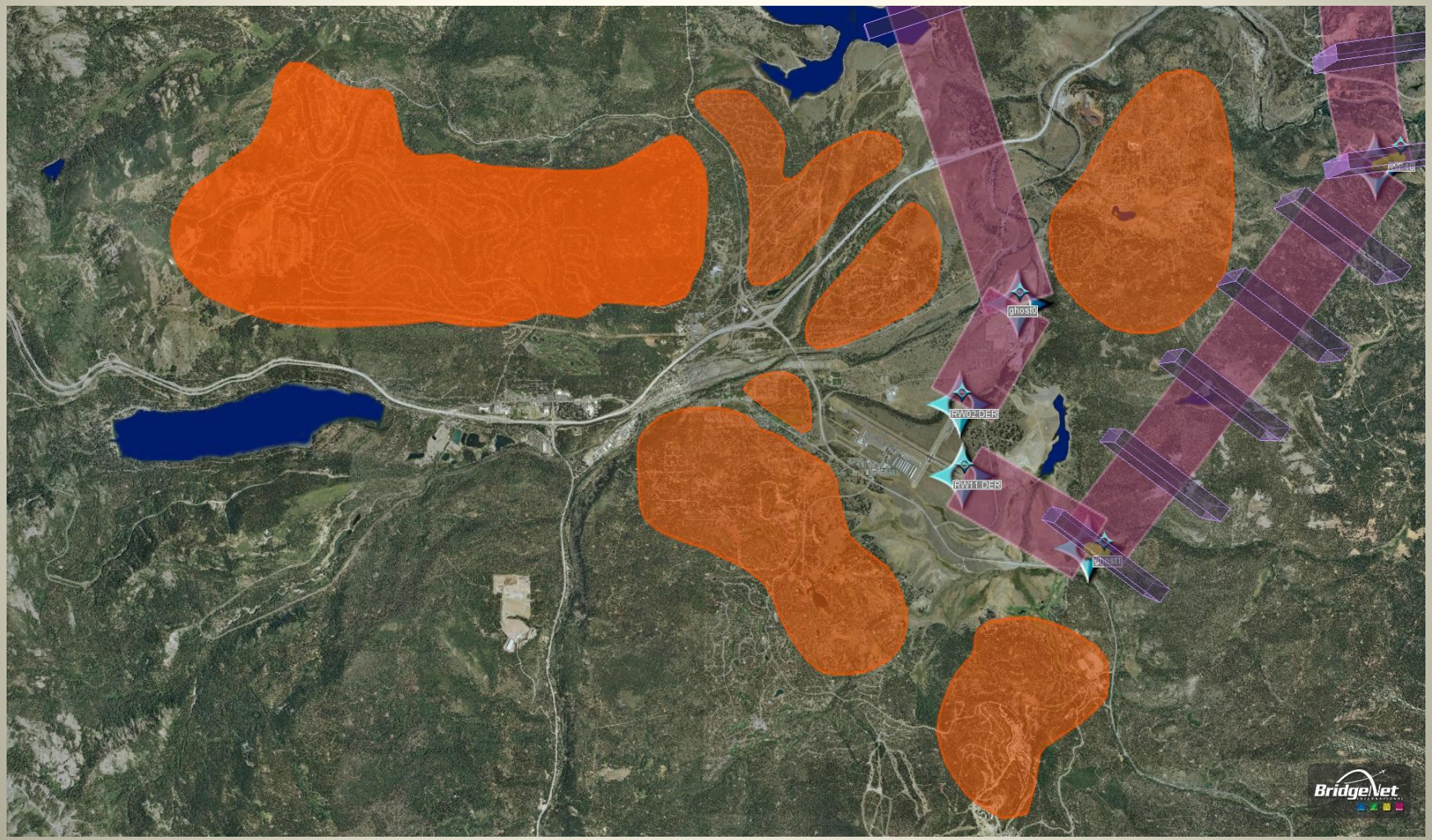
BULOK RNAV Standard Instrument Departure

- Depart and climb runway heading, Runway 02, turning northwest over aggregate plant.
- Remain south of Glenshire Road.
- Depart and climb runway heading, Runway 11, for approximately 1 mile.
- Turn towards the northeast, remain south of Glenshire development.

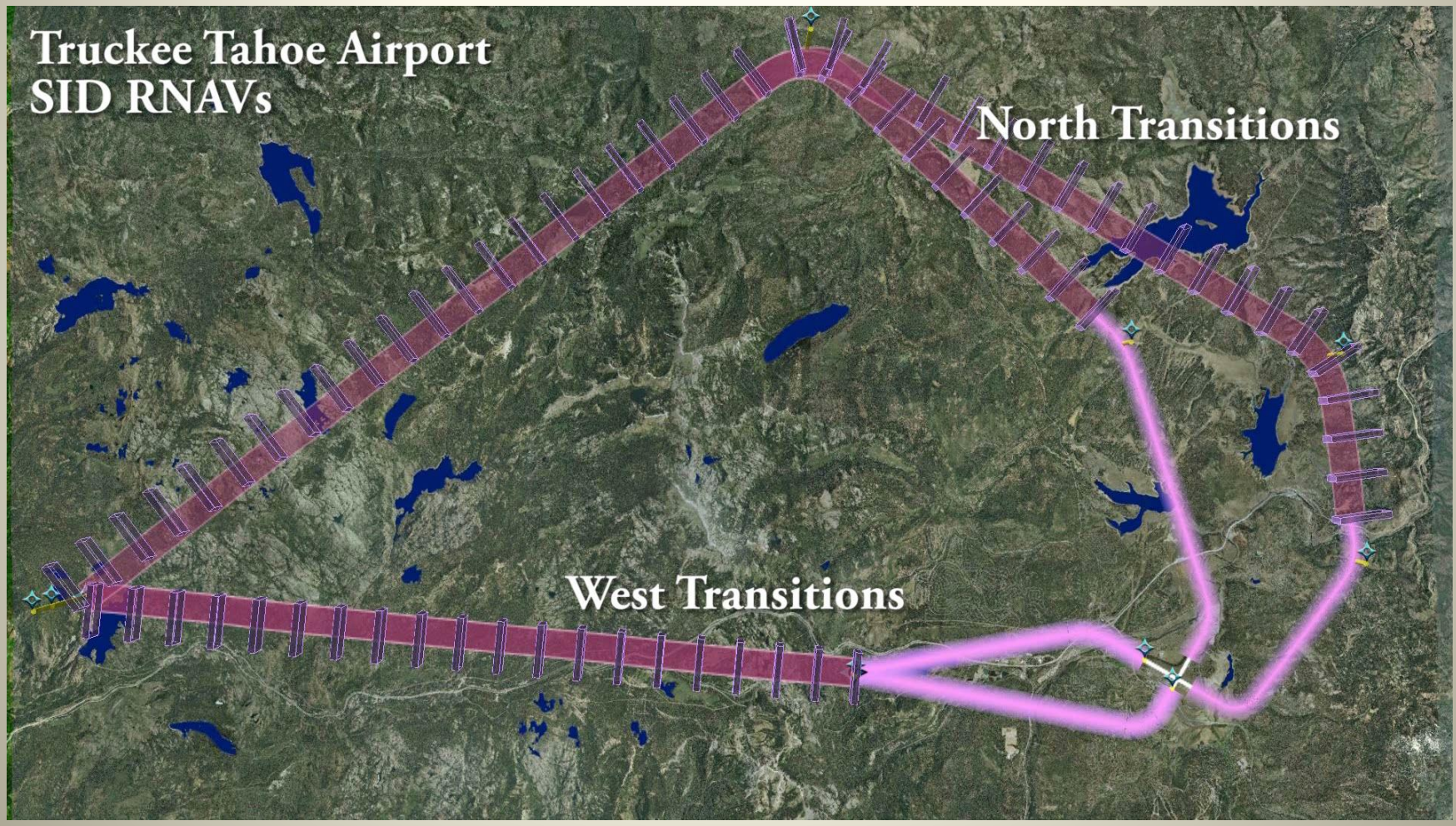
Procedure goals:

1. Provide separation from South Lake Tahoe operations.
2. Remain over compatible land uses.
3. Create RNAV path that is consistent for the community and pilots.
4. Create equitable runway use.

BULOK RNAV Standard Instrument Departure



BULOK 1


Truckee Tahoe Airport
SID RNAVs
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COMPLETED

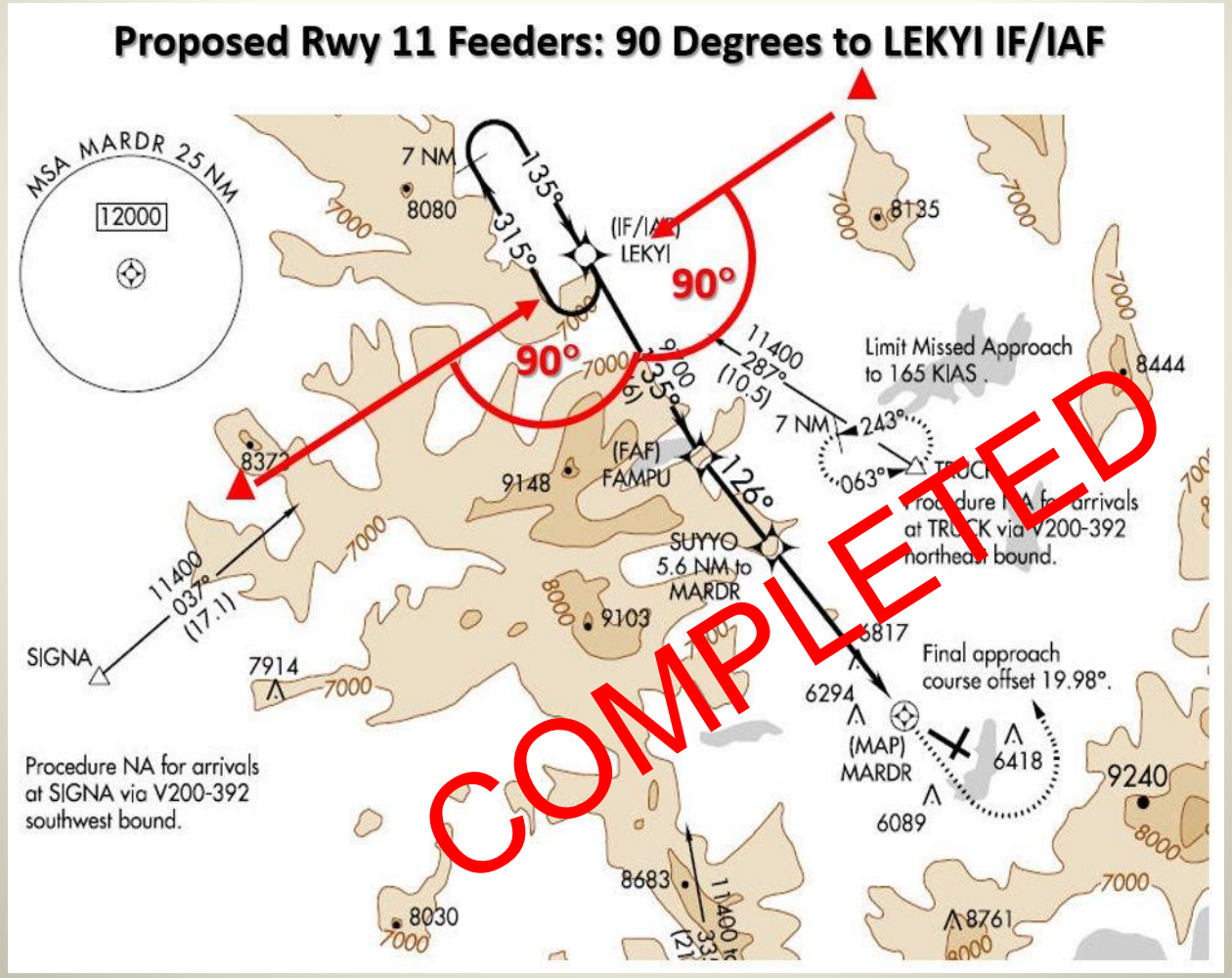
Runway 11 Feeder Fix Amendment

- Create additional reporting point for arriving aircraft.
- Remove use of holding pattern and reversing course.
- Changes to procedure are in the en route portion of the flight, not the terminal area , i.e. Truckee Class D/E airspace.

Procedure goals:

1. Provide smooth transition from en route to local airspace.
2. Reduce air traffic delays to KTRK resulting in ground holds and track miles.
3. Give the en route air traffic controllers additional tools to route aircraft into and out of KTRK.

Runway 11 Arrival Route



COMPLETED

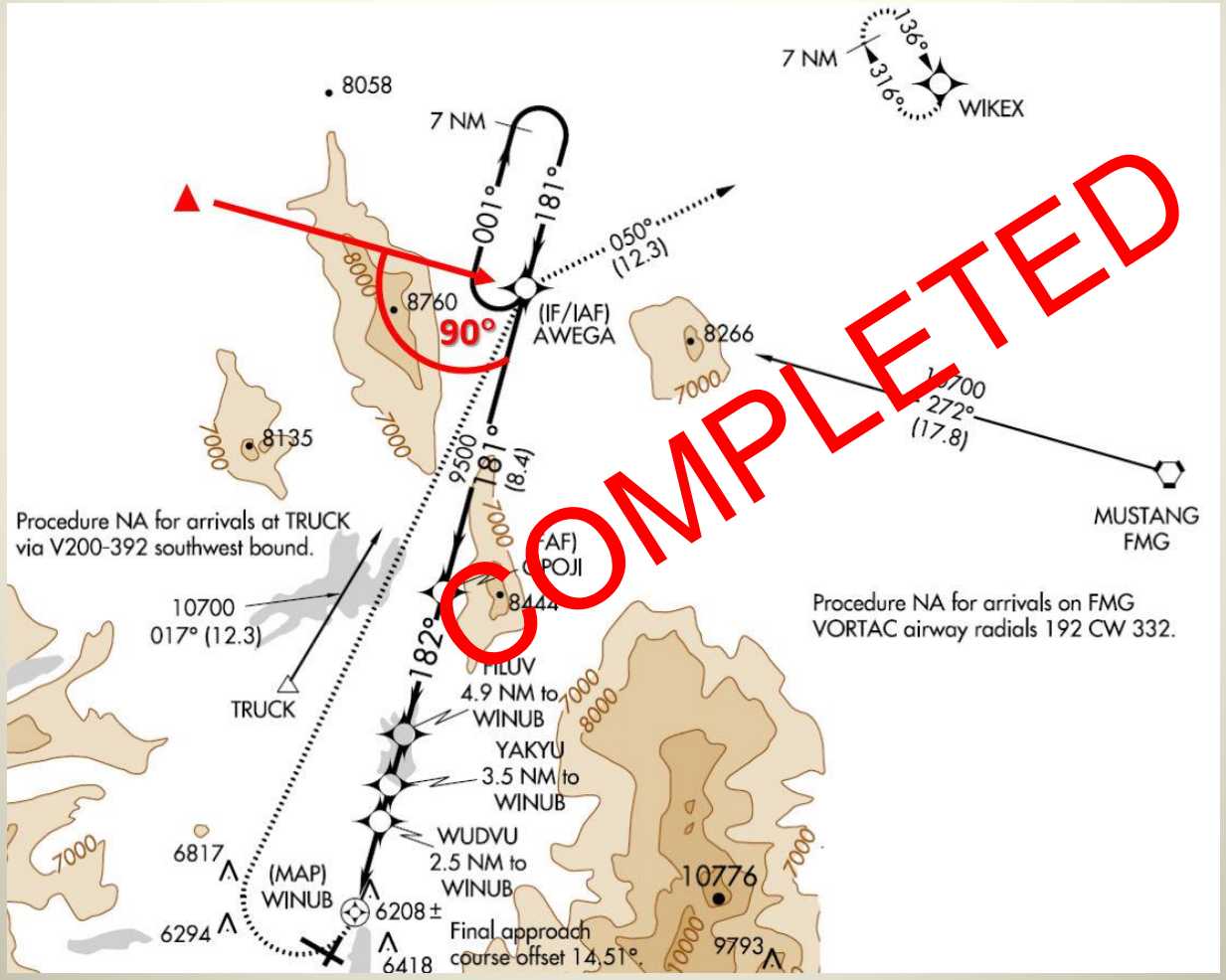
Runway 20 Arrival Route

- Create reporting point to the west of the airport.
- Reduce use of easterly reporting point, Mustang Waypoint, which increases unnecessary track miles.
- Changes to procedure are in the en route portion of the flight, not the terminal area , i.e. Truckee Class D/E airspace.

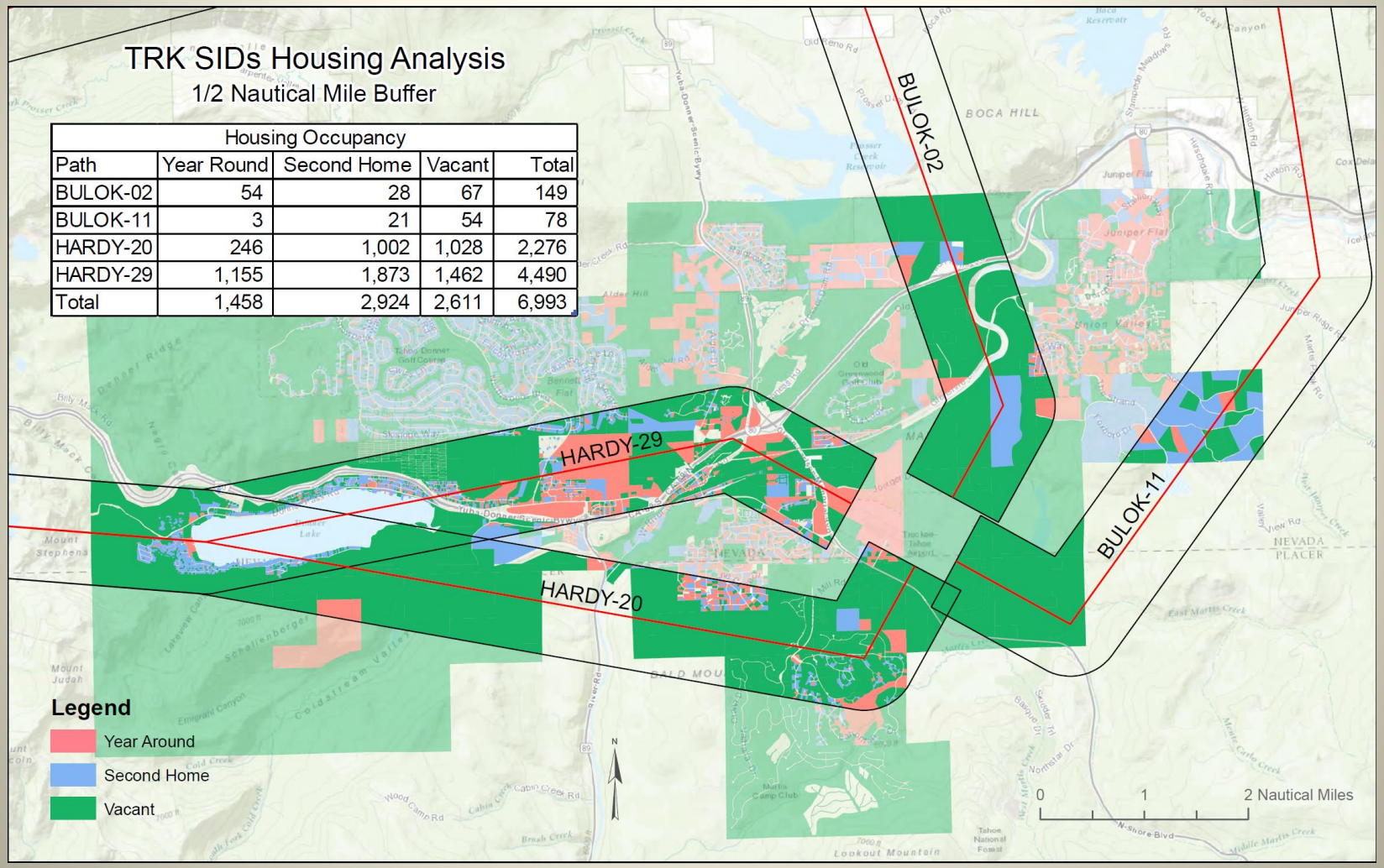
Procedure Goals:

1. Reduce use of Mustang waypoint due to interaction with KRNO.
2. Provide smooth transition from en route to local airspace.
3. Reduce air traffic delays to KTRK.
4. Give the en route air traffic controllers additional tools to route aircraft into and out of KTRK.

Runway 20 Arrival Route



Housing Analysis



Land Use

Housing Occupancy				
Path	Year Round	Second Home	Vacant	Total
BULOK-02	54	28	67	149
BULOK-11	3	21	54	78
HARDY-20	246	1,002	1,028	2,276
HARDY-29	1,155	1,873	1,462	4,490
Total	1,458	2,924	2,611	6,993

Findings

1. Certified departures off every runway are feasible and possible.
2. Certified arrivals are problematic based on terrain.
3. Standard Terminal Arrival Routes (STAR) & Standard Instrument Departures (SID) create a common point for controllers to hand off planes so tower controllers can guide them to the airport. These help support Visual Flight Procedures.
4. A valid obstruction survey is required to implement procedures. COMPLETED
5. The tower will promote the use of certain procedures and equitable runway use. COMPLETED

Next Step Recommendations

- Ensure notional procedure designs reduce environmental impacts.
- Conduct targeted outreach.
- Present results and project summary to the Board.
- Engage consultant.
- Engage FAA.