Bakersfield to Palmdale
Supplemental Alternatives Analysis
February 2012

CALIFORNIA High-Speed Rail

U.S. Department of Transportation
Federal Railroad Administration

Section Description

Bakersfield to Palmdale

Three Subsections

Edison:

11.2 miles

Tehachapi:

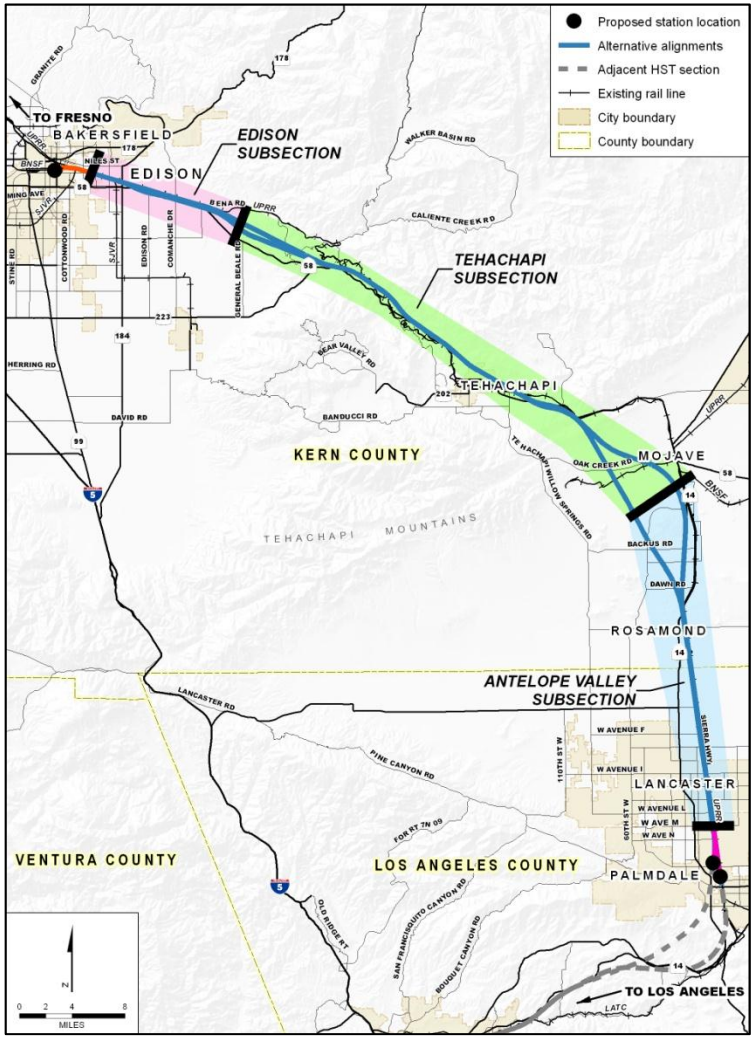
40.5 miles

Antelope Valley:

25.6 miles

Tie-in to Bakersfield Station

Tie-in to Palmdale Station



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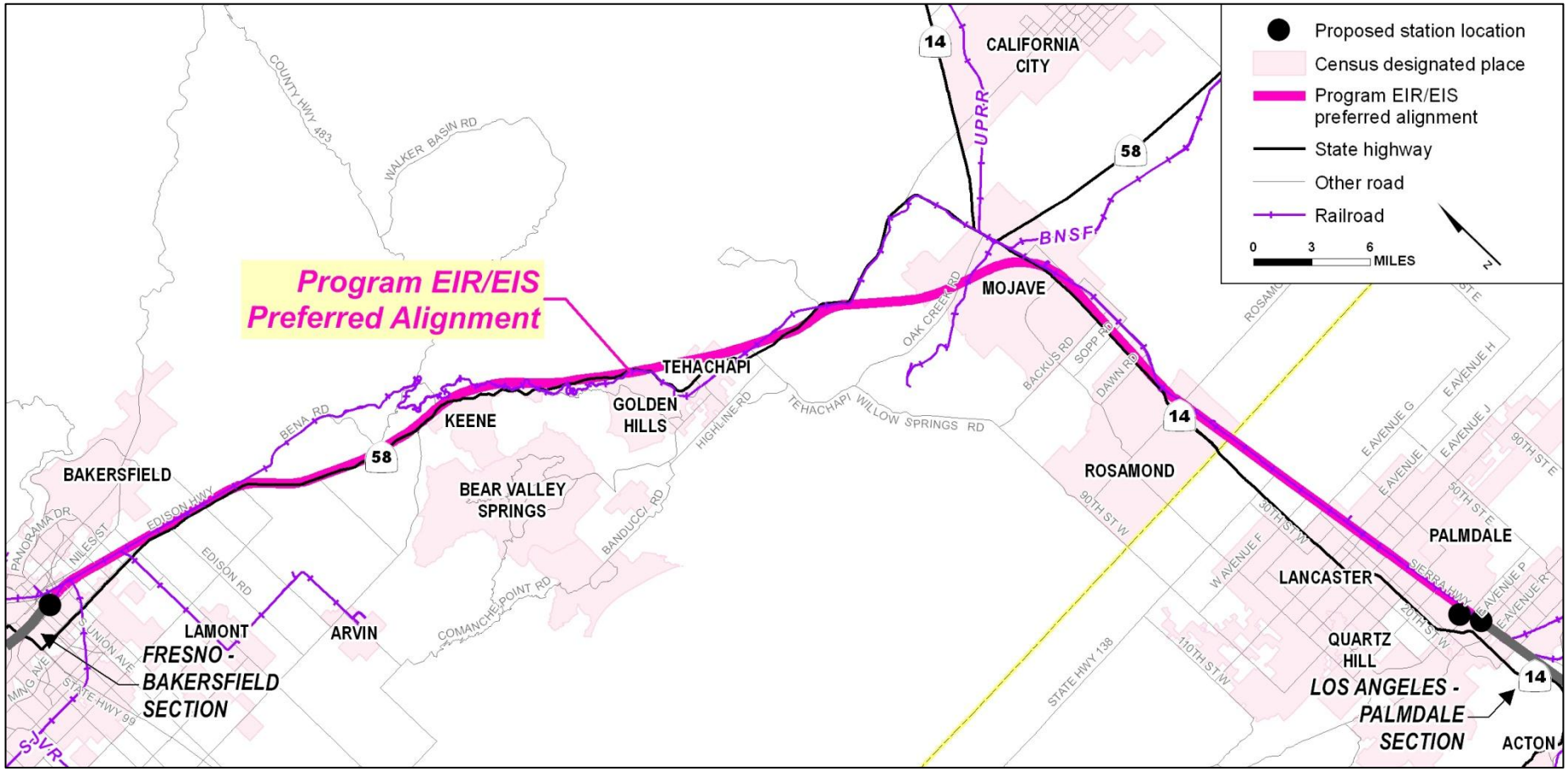
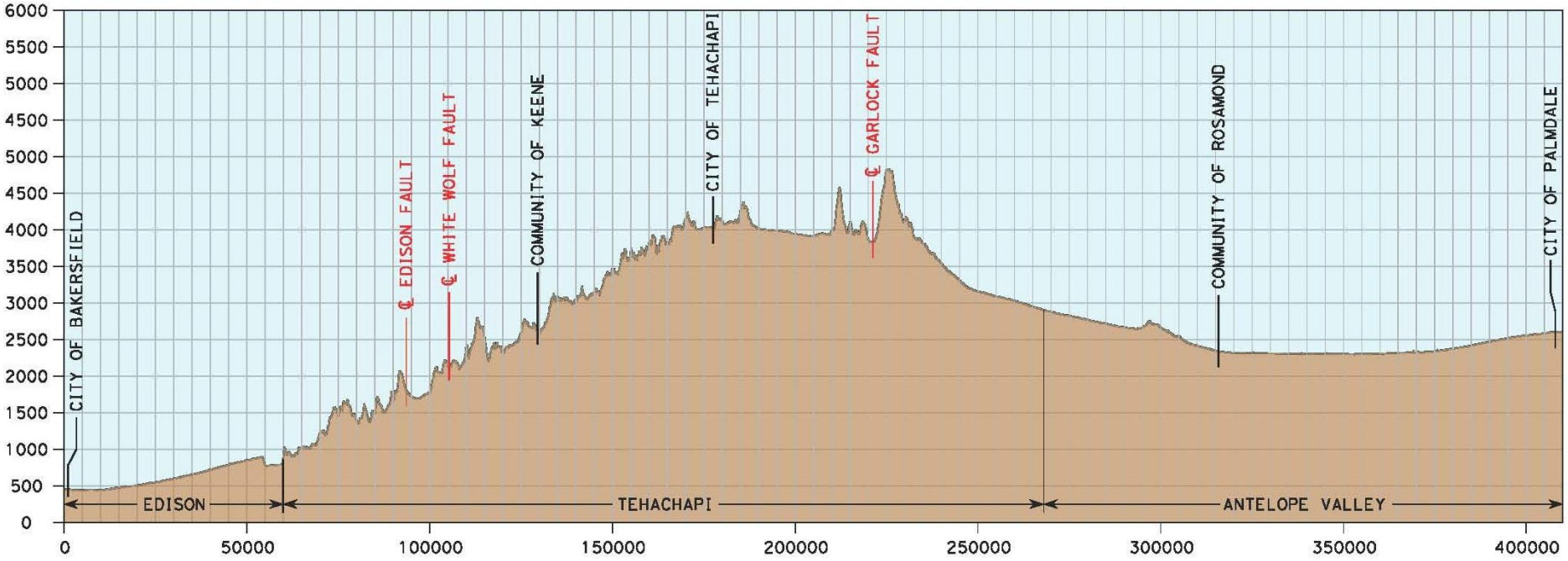
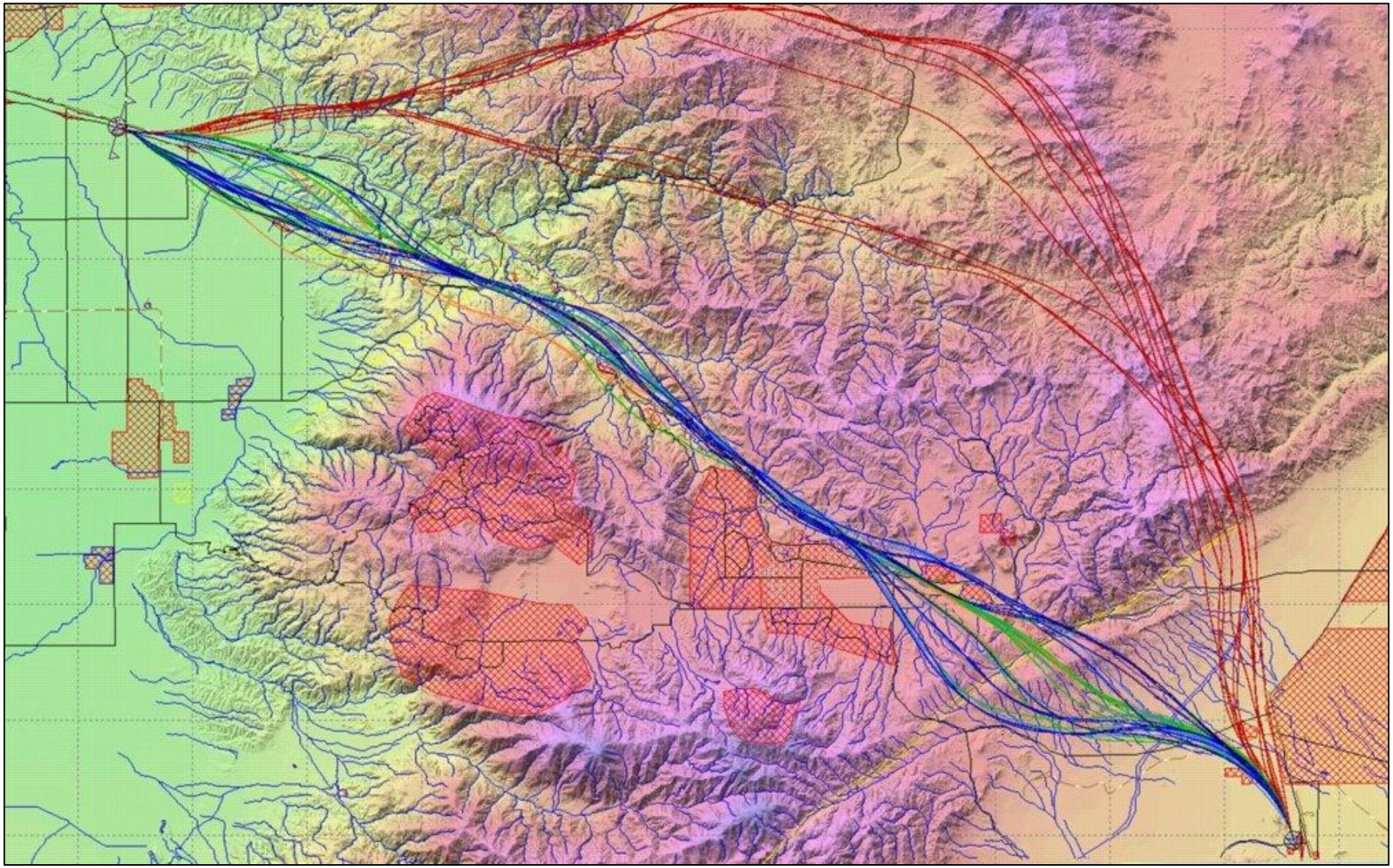
Programmatic Alignment
Bakersfield to Palmdale



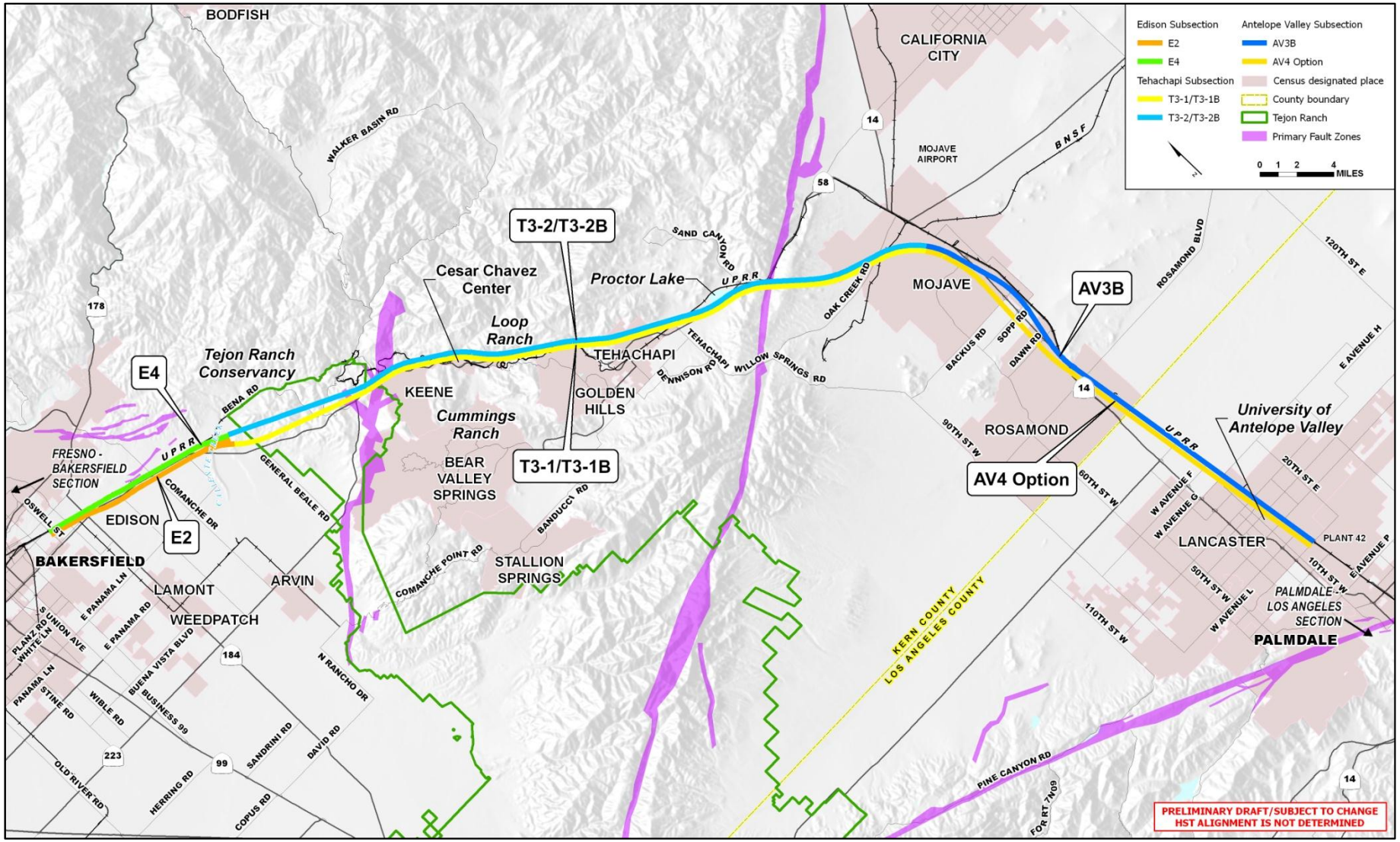
Bakersfield to Palmdale Topographic Profile



Quantm-Generated Alignments



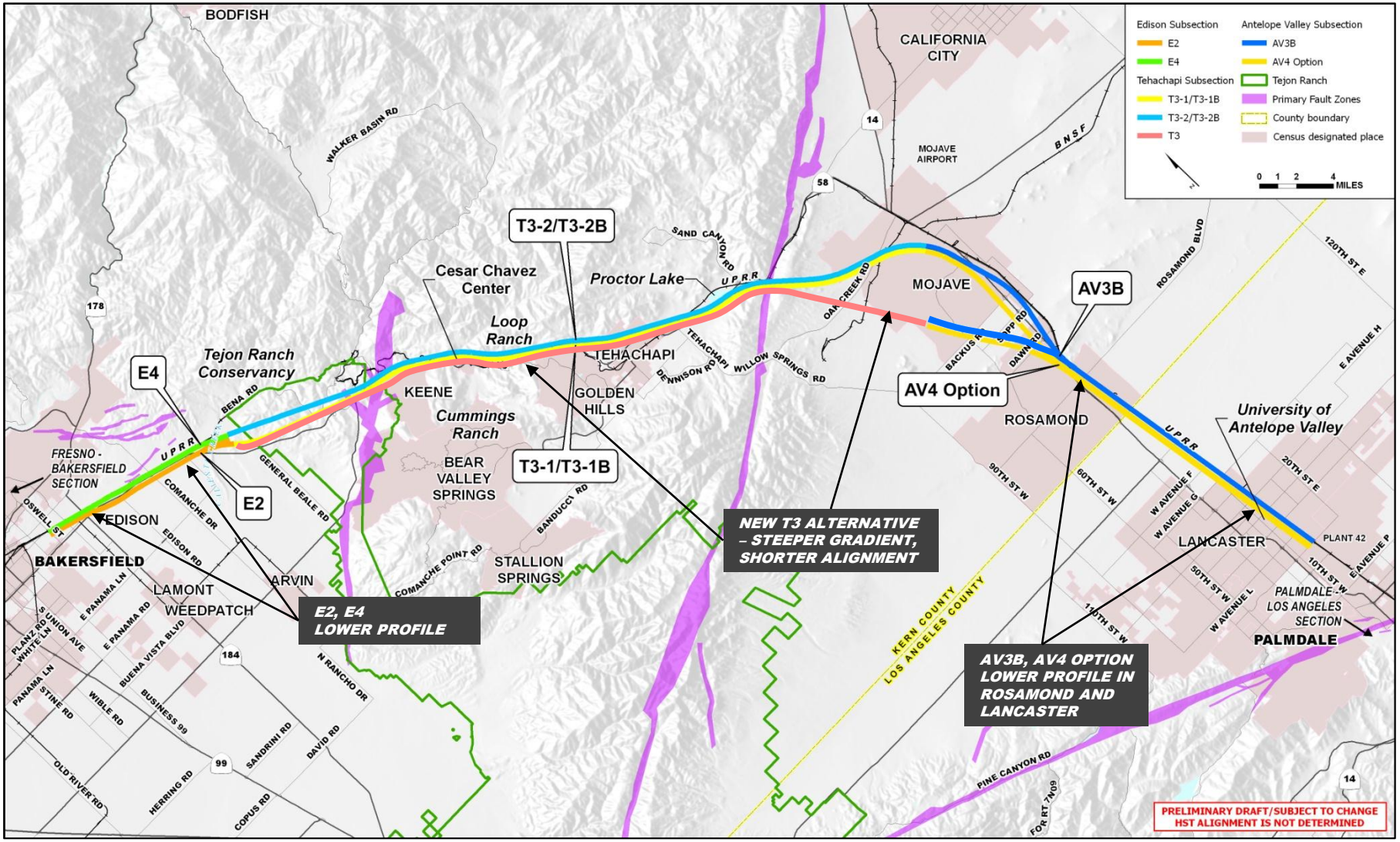
Previously Advanced Alignments (Preliminary AA - September 2010)



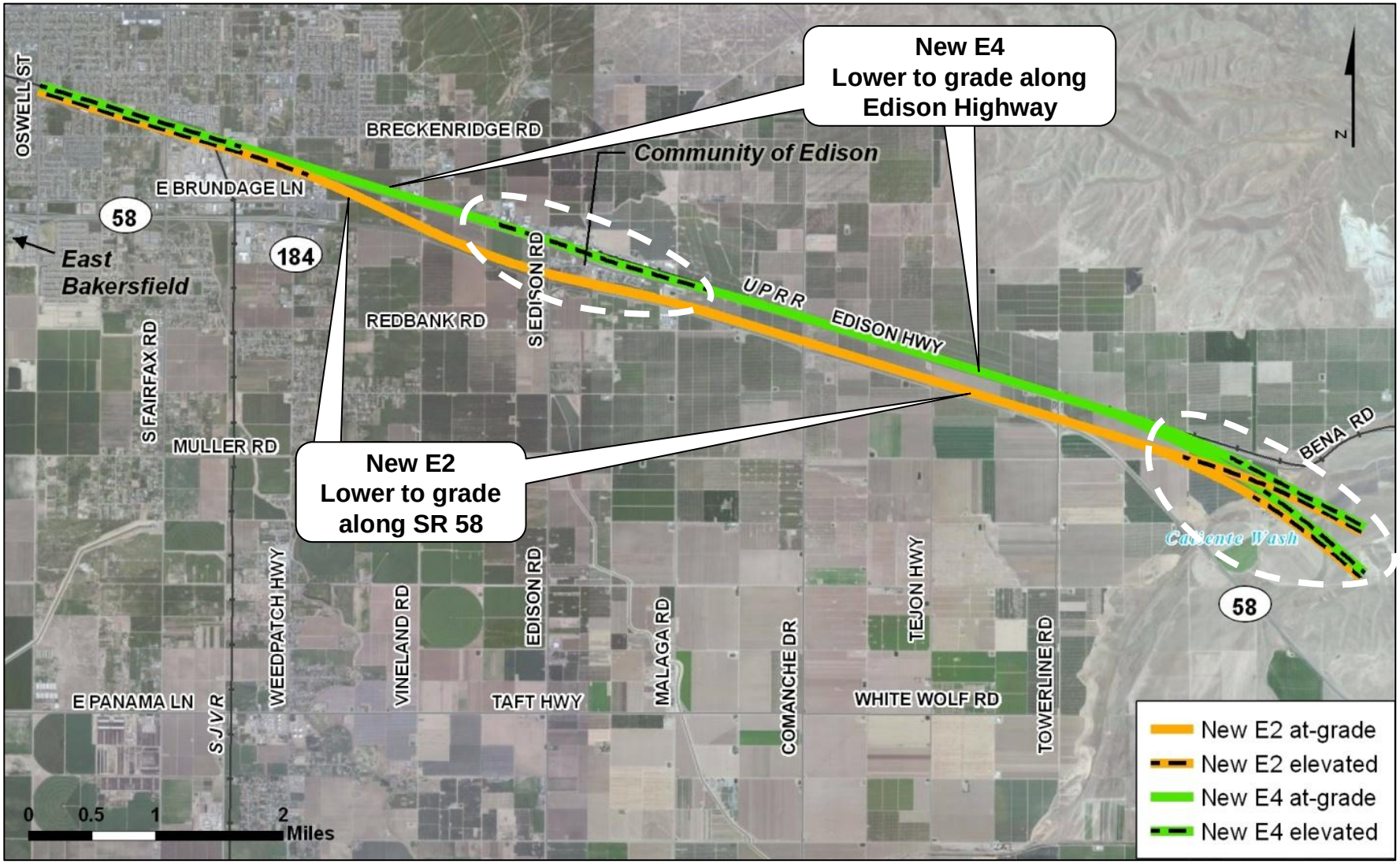
Supplemental Alternatives Analysis
Study Objectives

- Reduce Environmental Impacts
- Address Stakeholder Concerns
- Contain Cost
  - Lower Profiles
  - Reduced Viaduct/Tunnel Length
  - Shortened Alignment

Modifications to the Alternatives

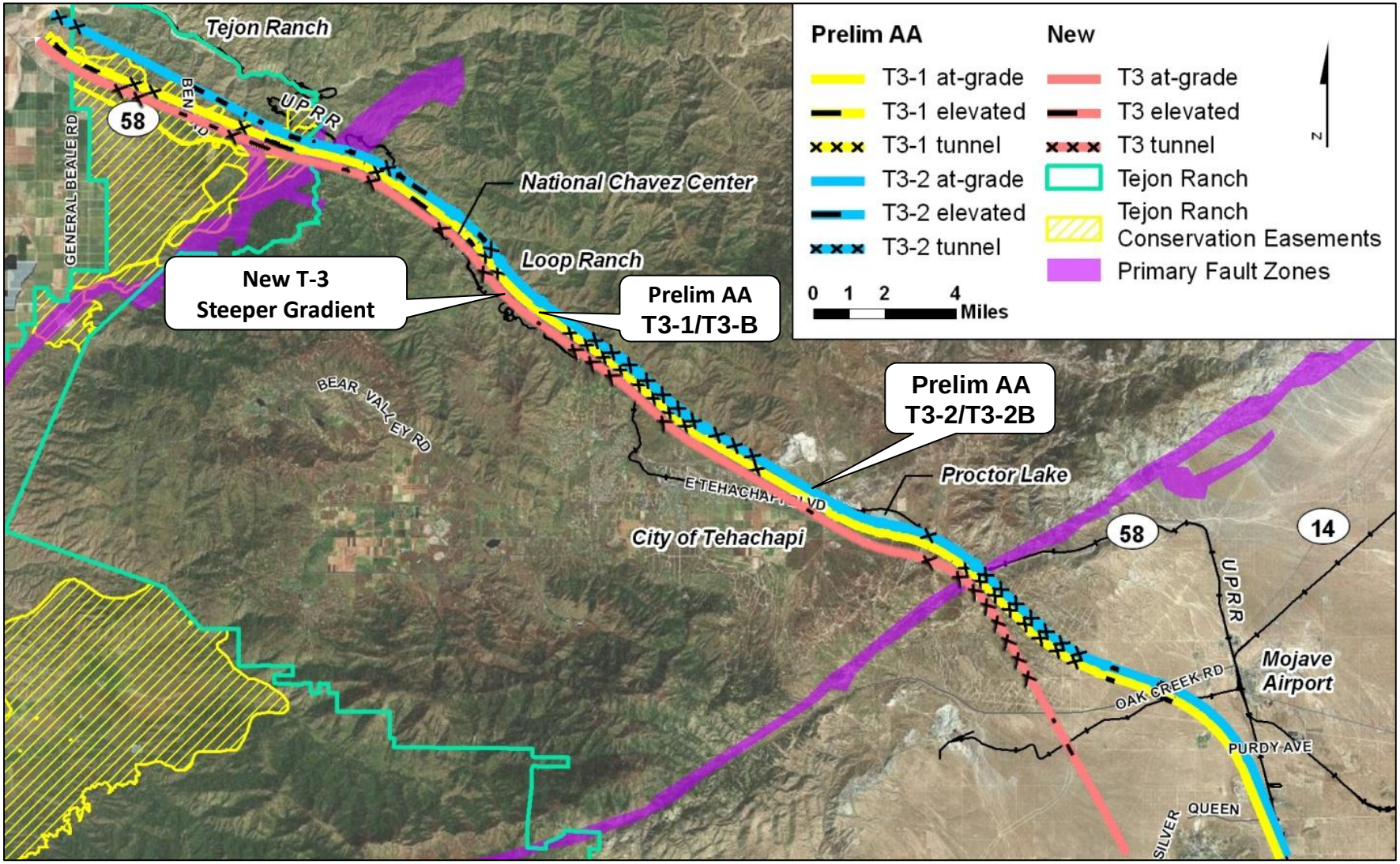


Modified Edison Alignments

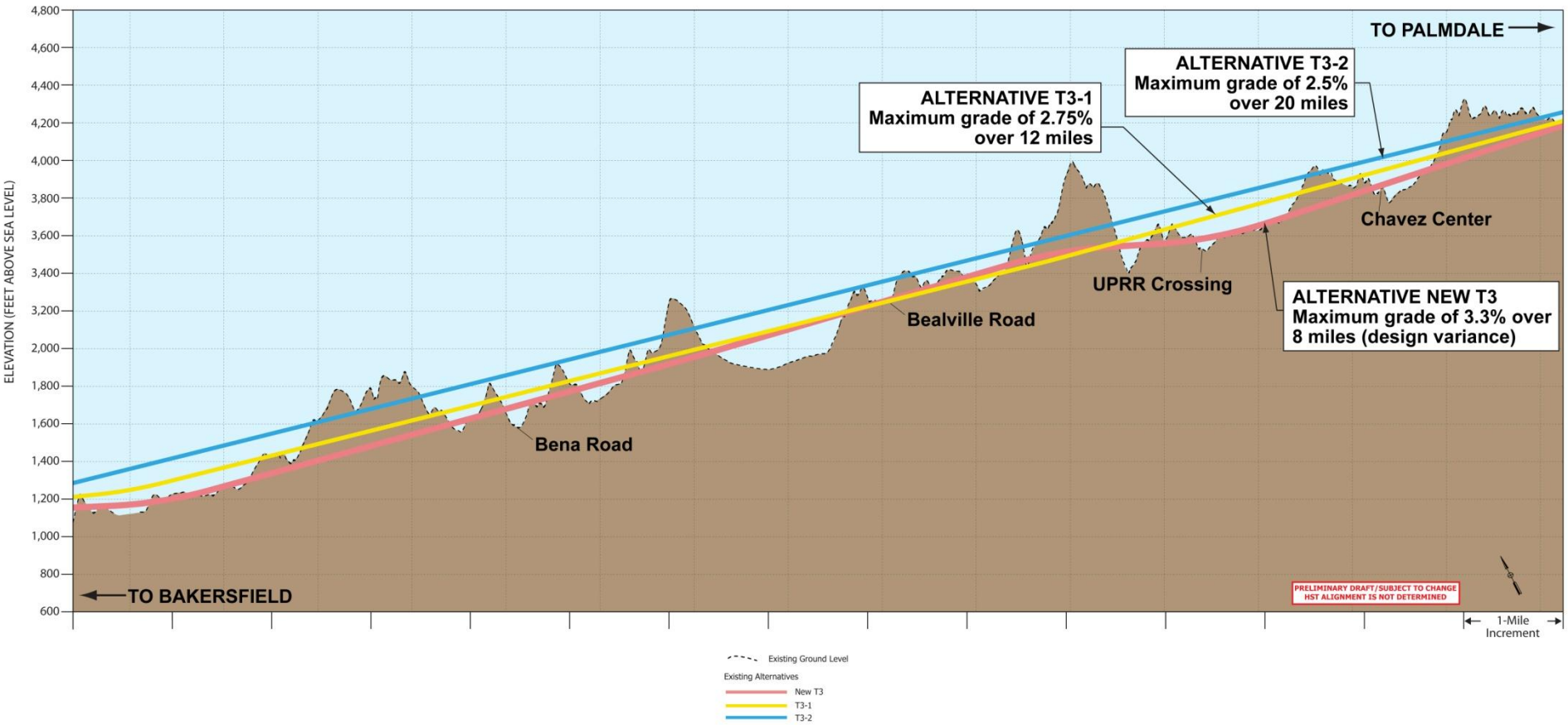


Viaduct Illustration

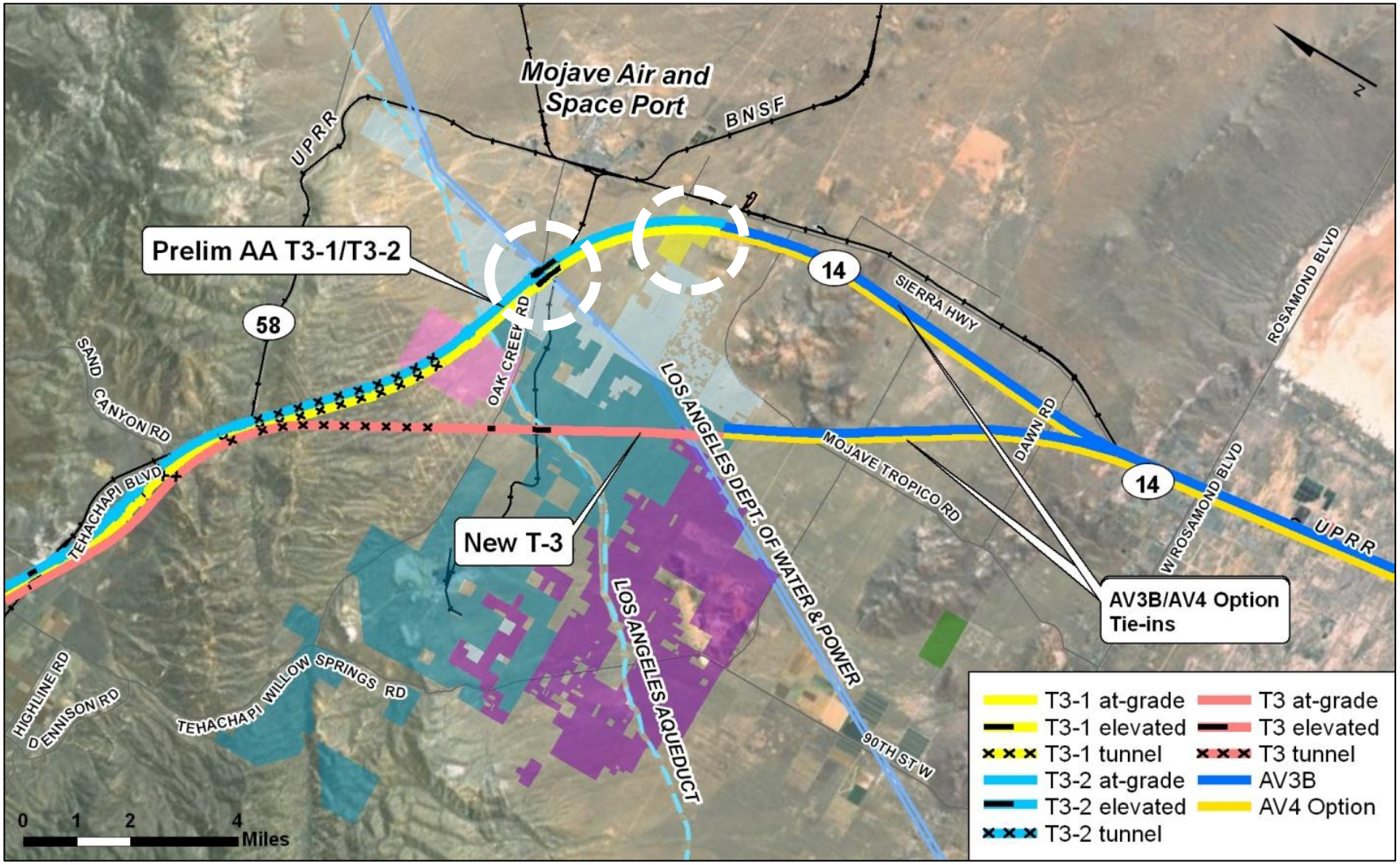
New Tehachapi Alternative (T3)



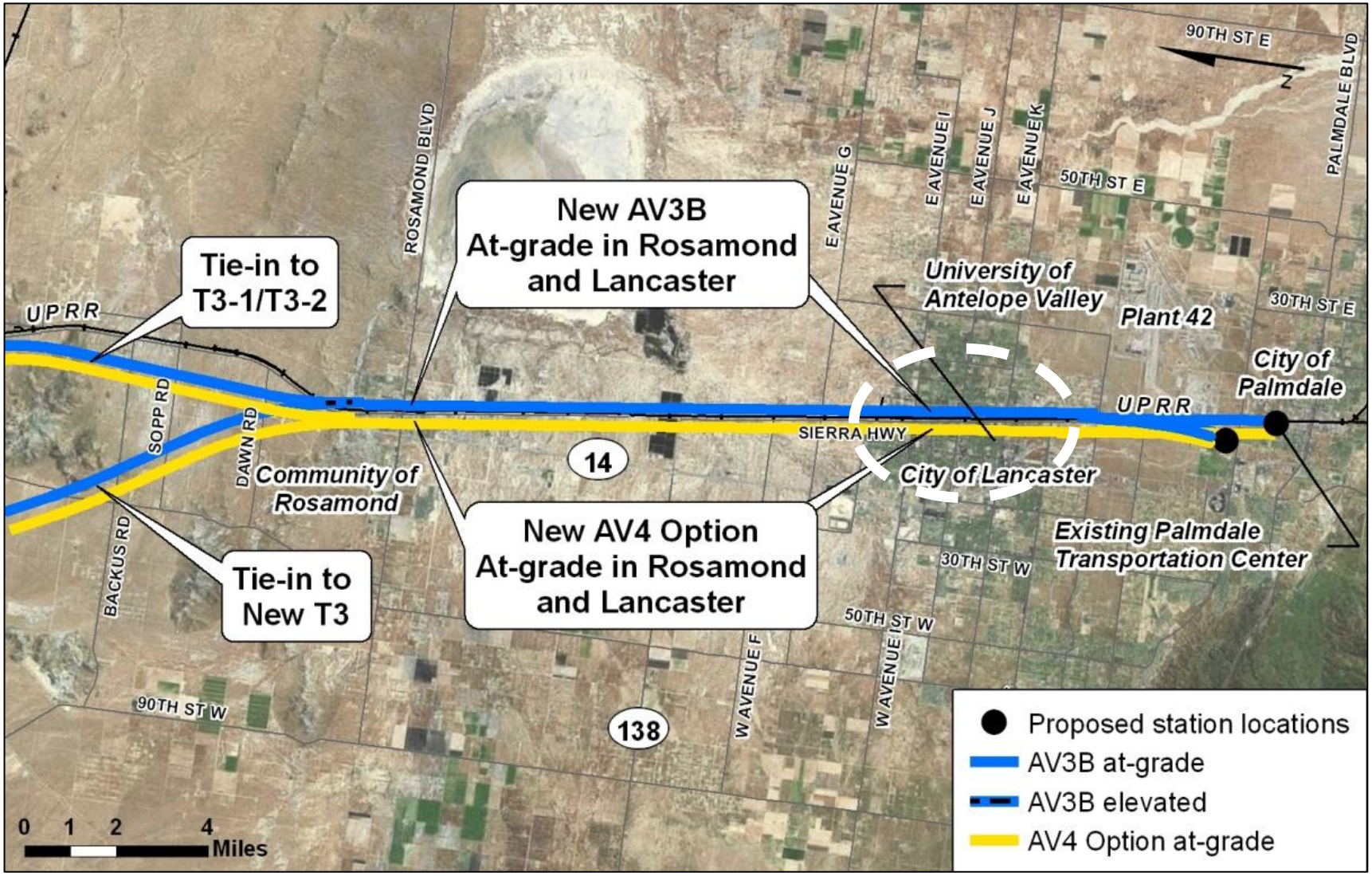
Tehachapi Alternatives
New T3 Steeper Gradient



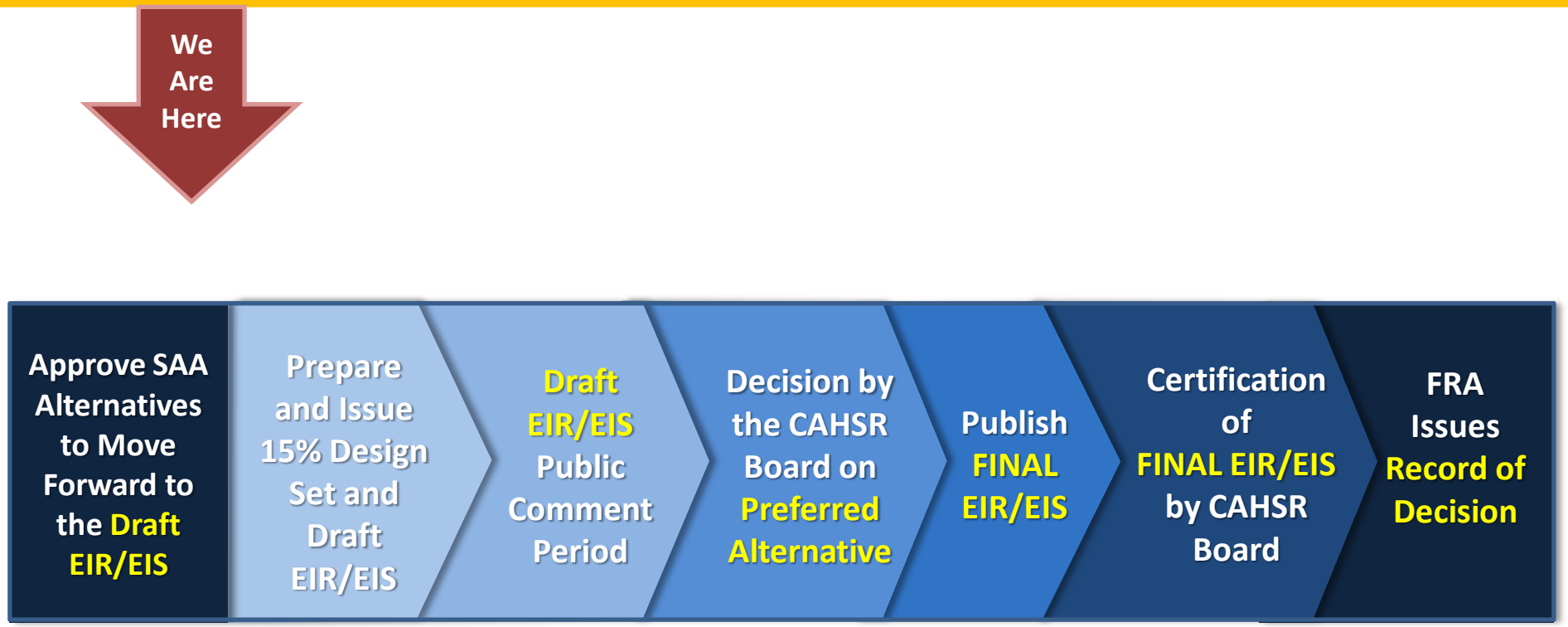
Tehachapi Alternatives
Shorter New T3 Alignment



Modified Antelope Valley Alignments

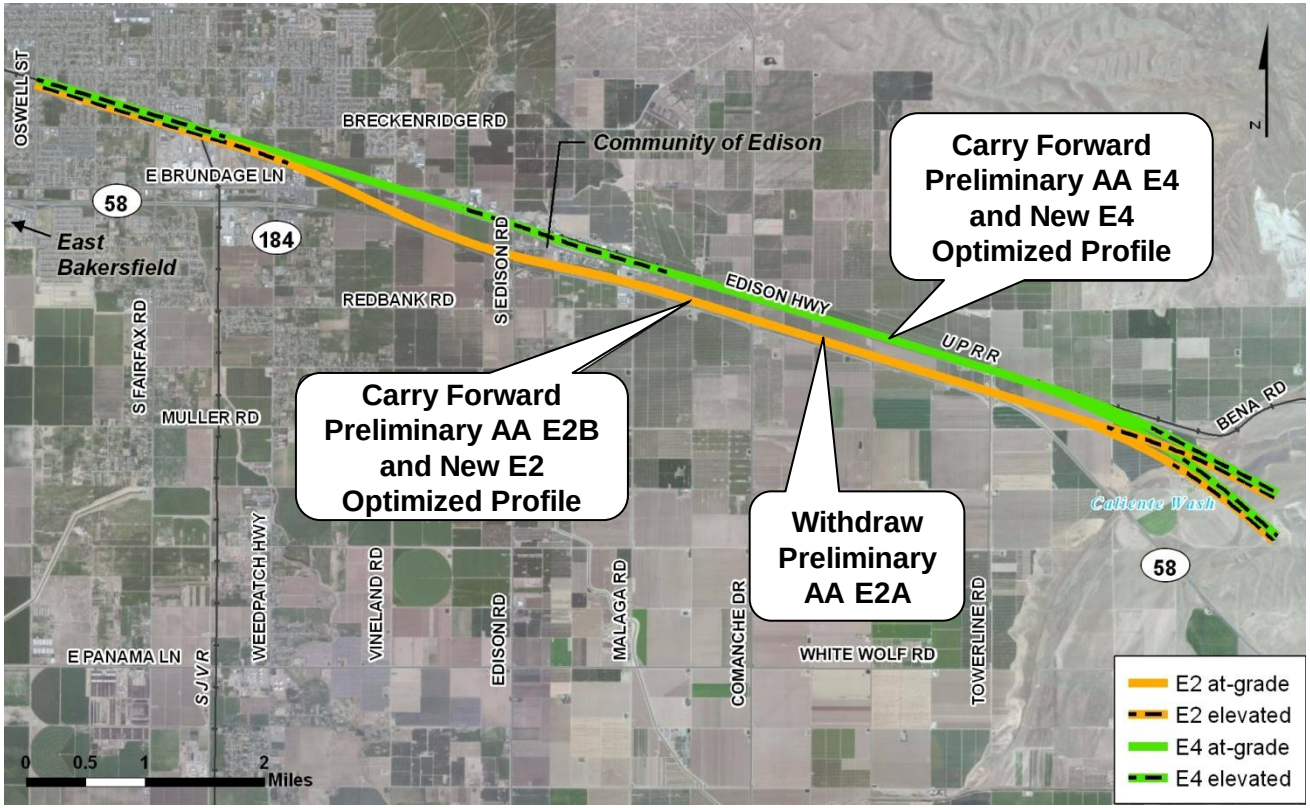


Next Steps


We Are Here
Approve SAA Alternatives to Move Forward to the Draft EIR/EIS
Prepare and Issue 15% Design Set and Draft EIR/EIS
Draft EIR/EIS Public Comment Period
Decision by the CAHSR Board on Preferred Alternative
Publish FINAL EIR/EIS
Certification of FINAL EIR/EIS by CAHSR Board
FRA Issues Record of Decision

Recommendations for Edison Alignments

- Carry forward Preliminary AA E2B (elevated) and New E2 (at-grade) to determine the optimal profile
- Carry forward Preliminary AA E4 (elevated) and New E4 (primarily at-grade) to determine optimal profile
- Withdraw Preliminary AA E2A



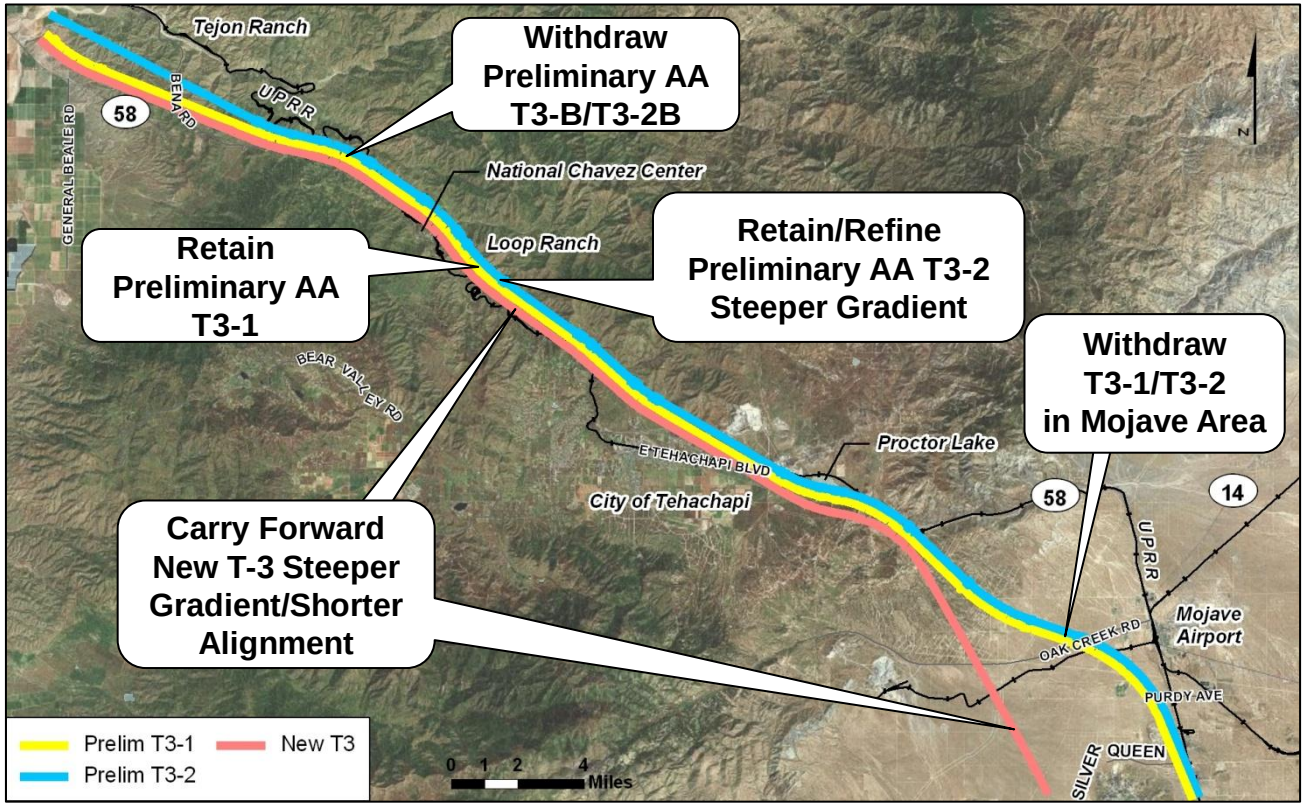
Recommendations for Tehachapi Alignments

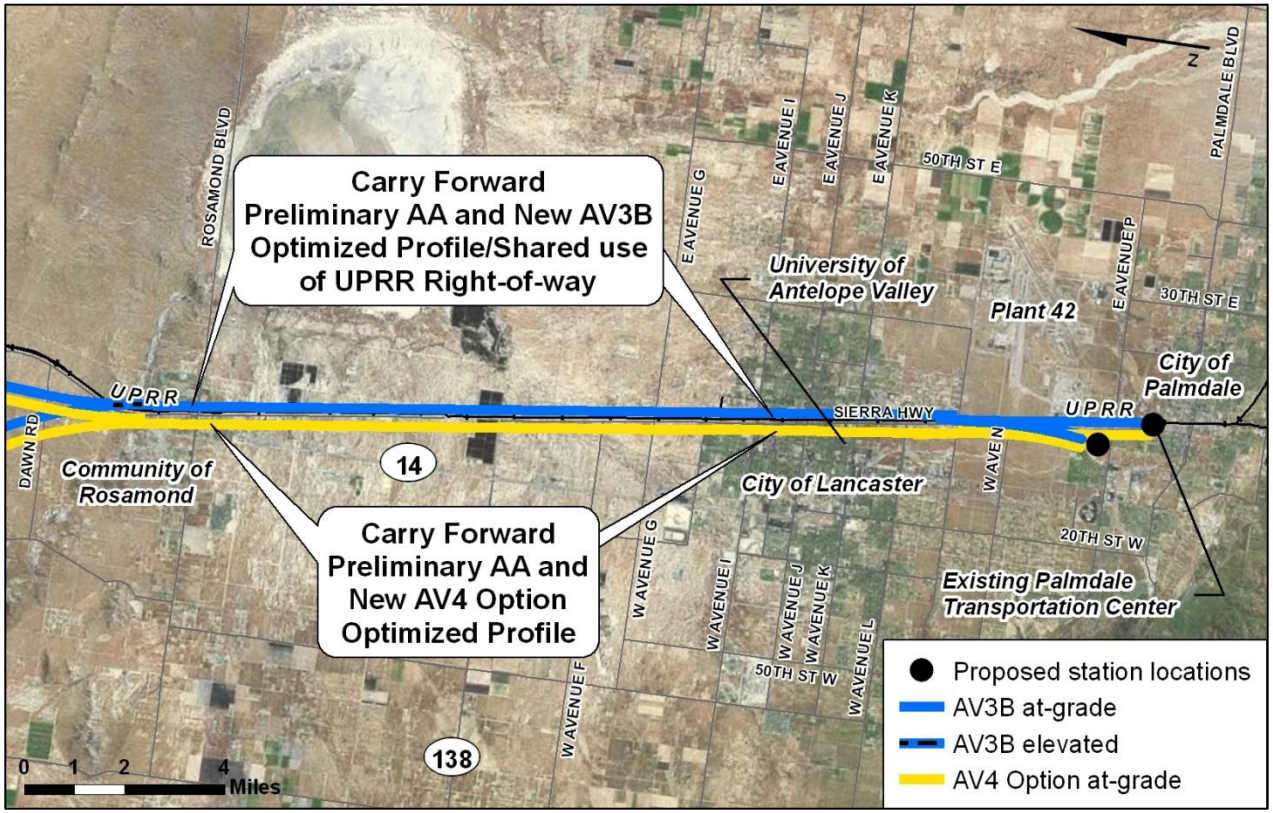
Tehachapi Incline Area:

- Carry forward New T3 (red) and Preliminary AA T3-1 (yellow)
- Refine Preliminary AA T3-2 (blue) using New T3 gradient variance
- Withdraw Preliminary AA T3-B and Preliminary AA T3-2B (phase break alternatives)

Mojave Area:

- Carry forward New T3 (red), but withdraw Preliminary AA T3-1 and Preliminary AA T3-2 (blue & yellow)



Recommendations for Antelope Valley Alignments

- Carry forward Preliminary AA AV3B (primarily elevated) and New AV3B (at-grade) to determine the optimal profile and shared use of UPRR right-of-way
- Carry forward Preliminary AA AV4 (primarily elevated) Option and New AV4 Option (at-grade) to determine the optimal profile