

California High-Speed Rail Authority

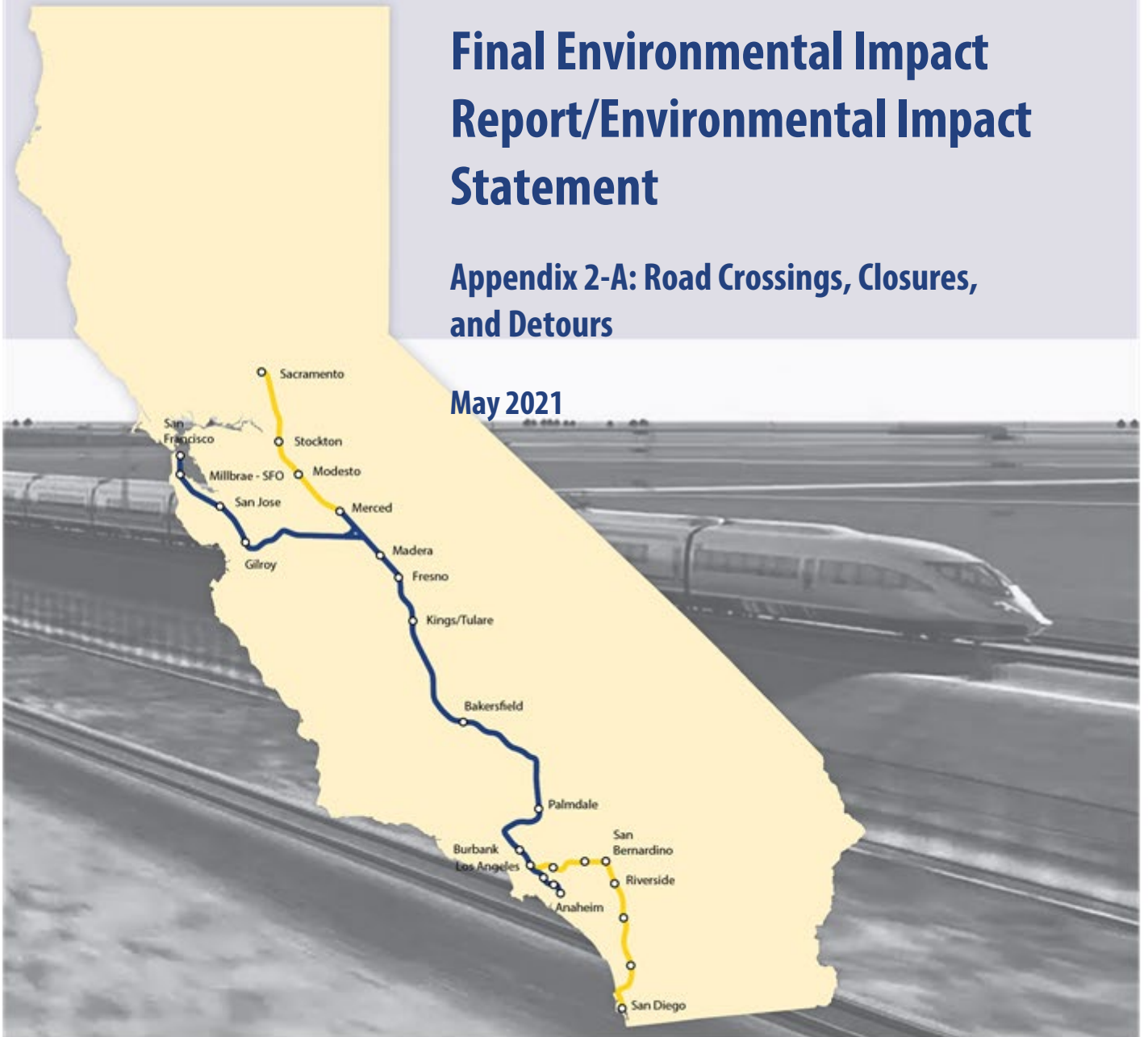
# ***Bakersfield to Palmdale***

## ***Project Section***

### **Final Environmental Impact Report/Environmental Impact Statement**

#### **Appendix 2-A: Road Crossings, Closures, and Detours**

**May 2021**



The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.

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## APPENDIX 2-A: ROAD CROSSINGS

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**Table 2-A-1 Road Crossings**

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
<b>Bakersfield</b>			
Alts 1, 2, 3, 5	Oswell Street	Oswell Street is a four-lane paved road that is grade separated from the UPRR tracks and Edison Highway on an overpass. Two ramps connect Edison Highway to Oswell Street.	HSR would pass over the road on a viaduct.
Alts 1, 2, 3, 5	Fairfax Road	Fairfax Road is a four-lane paved road that is grade separated from the UPRR tracks and Edison Highway on an overpass. Two ramps connect Edison Highway to Fairfax Road.	HSR would pass over the road on a viaduct.
Alts 1, 2, 3, 5	SR 184/Weedpatch Highway/ Morning Drive	Morning Drive is a four-lane road south of Edison Highway and a two-lane road to the north. Morning Drive intersects Edison Highway and the UPRR tracks at-grade.	Morning Drive would be an underpass below UPRR, and HSR would pass over Morning Drive on an elevated viaduct.
Alts 1, 2, 3, 5	E Brundage Lane	E Brundage Lane is a two-lane paved road south of Edison Highway. E Brundage Lane intersects Edison Highway and the UPRR tracks at-grade.	E Brundage Lane would be realigned south of HSR and tie into Vineland Road.
Alts 1, 3, 5	Vineland Road	Vineland Road is a two-lane paved road that is grade separated over SR 58 and crosses the UPRR tracks at-grade.	Vineland Road would pass under HSR, and be back at grade with Edison Highway and UPRR.
Alt 2	Vineland Road	Vineland Road is a two-lane paved road that is grade separated over SR 58 and crosses the UPRR tracks at-grade.	HSR would pass over the road on a viaduct.
<b>Edison</b>			
Alts 1, 3, 5	Edison Road	Edison Road is a two-lane road that has a grade separated diamond interchange with SR 58.	Edison Road would pass under HSR and the relocated SR 58, with relocated ramps accessing SR 58 in both westbound and eastbound directions.
Alt 2	Edison Road	Edison Road is a two-lane road that has a grade separated diamond interchange with SR 58.	HSR would pass over the road on a viaduct.
Alts 1, 3, 5	Malaga Road	Malaga Road is a two-lane paved road that is grade separated crossing over SR 58.	Malaga Road would be re-aligned to pass under HSR and relocated SR 58.

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
Alt 2	Malaga Road	Malaga Road is a two-lane paved road that is grade separated crossing over SR 58.	HSR would pass over the road on a viaduct.
Alts 1, 3, 5	Comanche Drive	Comanche Drive is a two-lane road that has a grade separated diamond interchange with SR 58.	Comanche Drive would pass under HSR and relocated SR 58, with relocated ramps accessing SR 58 in both westbound and eastbound directions.
Alt 2	Comanche Drive	Comanche Drive is a two-lane road that has a grade separated diamond interchange with SR 58.	HSR would pass over the road on a viaduct.
Alts 1, 3, 5	Tejon Highway	Tejon Highway is a two-lane paved road that is grade separated crossing over SR 58.	Tejon Highway would be re-constructed to pass under HSR and relocated SR 58.
Alt 2	Tejon Highway	Tejon Highway is a two-lane paved road that is grade separated crossing over SR 58.	HSR would pass over the road on a viaduct.
Alts 1, 3, 5	Towerline Road	Towerline Road is a two-lane road that has a grade separated diamond interchange with SR 58.	Towerline Road would pass under HSR and relocated SR 58, with relocated ramps accessing SR 58 in both westbound and eastbound directions.
Alt 2	Towerline Road	Towerline Road is a two-lane road that has a grade separated diamond interchange with SR 58.	HSR would pass over the road on a viaduct. The EB SR 58 ramps would be re-aligned.
Alt 2	SR 58 (17750+00)	SR 58 is an existing four-lane state highway.	HSR would pass over the road on a viaduct.
Alts 1, 3, 5	Neumarkel Road	Existing dirt road.	Neumarkel Road would be shifted to the east and pass under HSR.
Alt 2	Neumarkel Road	Existing dirt road.	HSR would pass over the road on a viaduct.
Alts 1, 2, 3, 5	Bena Road	Two-lane paved road.	HSR would pass over the road on a viaduct.
Alts 1, 2, 3, 5	General Beale Road	Existing dirt road.	General Beale Road would be raised vertically and pass over HSR on a new roadway structure.
Alts 1, 2, 3, 5	Edison Highway	Edison Highway is a four-lane paved road separated by a raised median.	Edison Road would be reduced to a two-lane road for approximately 2.4 miles to provide room for HSR viaduct bridge piers.
Alts 1, 2, 3, 5	Caliente Bodfish Road (18159+00)	Existing two-lane paved road.	Caliente Bodfish Road would be re-aligned and pass under the HSR.
Alts 1, 2, 3, 5	Bealville (18306+00)	Existing two-lane paved road.	Bealville Road would be relocated to the west and pass over the HSR on a new roadway structure.

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
<b>Keene</b>			
Alts 1, 2, 3, 5	Tehachapi Woodford Road	Existing dirt road.	HSR would pass over Tehachapi Woodford Road on viaduct.
Alts 1, 2, 3, 5	SR 58 (18730+00)	SR 58 is an existing four-lane state highway.	HSR would pass over SR 58 on viaduct.
Alts 1, 2, 3, 5, CCNM	SR 58 (18785+00)	SR 58 is an existing four-lane state highway.	SR 58 would be re-aligned and pass over HSR on a new roadway structure.
Alts 1, 2, 3, 5	SR 58 (18835+00)	SR 58 is an existing four-lane state highway.	HSR would pass over SR 58 on viaduct.
Alts 1, 2, 3, 5	SR 58 (18872+00)	SR 58 is an existing four-lane state highway.	HSR would pass over SR 58 on viaduct.
RFND CCNM	SR 58 (18750+00)	SR 58 is an existing four-lane state highway.	SR 58 would be realigned with new on and off ramps for Broome Road.
<b>Tehachapi</b>			
Alts 1, 2, 3, 5, RFND CCNM	Burnett Road	Existing two-lane paved road.	Burnett Road would be re-aligned to northwest of its existing alignment.
Alts 1, 2, 3, 5, RFND CCNM	Challenger Drive	Existing two-lane paved road.	Challenger Drive would be realigned to the northwest. HSR would pass over the road on viaduct.
Alts 1, 2, 3, 5, RFND CCNM	Dennison Road	Existing two-lane paved road.	Dennison Road would be realigned to the northwest and tie into realigned Challenger Drive.
Alts 1, 2, 3, 5	Goodrick Drive	Existing two-lane paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5, RFND CCNM	SR 58 (19091+00)	SR 58 is an existing four-lane state highway.	HSR would pass over SR 58 on viaduct.
Alts 1, 2, 3, 5	Tehachapi Boulevard	Existing two-lane paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Valley Boulevard (19146+00)	Existing dirt road.	Valley Boulevard would be realigned and tie into Steuber Road.
Alts 1, 2, 3, 5	Steuber Road	Existing two-lane paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	E Abajo Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Abajo Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
Alts 1, 2, 3, 5	Orchard Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Highline Road	Existing two-lane paved road.	Highline Road would pass over HSR on a new roadway structure.
Alts 1, 2, 3, 5	Tehachapi Willow Springs Road (19243+00)	Existing two-lane paved road.	Tehachapi Willow Springs Road would pass over HSR on a new roadway structure.
<b>Mojave</b>			
Alts 1, 2, 3, 5	Cameron Road	Existing two-lane paved road.	HSR would pass over road on viaduct. The road would be extended to tie into realigned Tehachapi Willow Springs Road.
Alts 1,2, 5	Tehachapi Willow Springs Road (19462+00)	Existing two-lane paved road.	Tehachapi Willow Springs Road would be realigned to the south and pass over the Pacific Crest Trail on a new roadway structure.
Alt 3	Tehachapi Willow Springs Road (19462+00)	Existing two-lane paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 5	Tehachapi Willow Springs Road (19670+00)	Existing two-lane paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 5	Oak Creek Road	Existing dirt road.	Oak Creek Road would be realigned to pass over HSR. HSR would be in a tunnel at the crossing.
Alt 3	Oak Creek Road	Existing dirt road.	HSR would pass over road on viaduct.
Alt 3	115th Street W	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 5	Robert Ranch Road	Existing dirt road.	HSR would pass over road on viaduct.
Alt 3	Robert Ranch Road	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 5	110th Street	Existing dirt road.	Road would be re-aligned and HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Trotter Avenue	Existing dirt road.	HSR would pass over road on viaduct.
Alt 3	110th Street	Existing dirt road.	Road would be re-aligned and HSR would pass over road on viaduct.



Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
Alts 1, 2, 3, 5	Aqueduct Road	Existing dirt road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	General Petroleum Road	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Backus Road	Existing two-lane paved road.	Closed at the HSR crossing with a cul-de-sac constructed on the east side. West side will be realigned.
Alts 1, 2, 3, 5	105th Street	Existing dirt road.	Road would be re-aligned and HSR would pass over road on viaduct.
<b>Rosamond</b>			
Alts 1, 2, 3, 5	Montiverde Road	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	100th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 5	Acosta Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Toy Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Highgate Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Bright Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Sandra Way	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	Vim Avenue	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	Condado Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Tingle Avenue	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	95th Street	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
Alts 1, 2, 3, 5	Champagne Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 5	McConnell Avenue	Existing dirt road.	HSR would pass over road on viaduct.
Alt 3	McConnell Avenue	Existing dirt road.	HSR would pass over road on viaduct. Closed at the HSR crossing on the west side. A cul-de-sac would be constructed.
Alts 1, 2, 3, 5	Tehachapi Willow Springs Road (20009+00)	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Dawn Road	Existing dirt road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	85th Street W	Existing dirt road.	Road would be re-aligned, HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Favorito Avenue	Existing dirt road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	80th Street W	Existing dirt road.	Road would be re-aligned, HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Ace Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Sweetser Road	Existing dirt road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Brightstar Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Lodestar Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	70th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Irone Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	67th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Felsite Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
Alts 1, 2, 3, 5	65th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Rosamond Boulevard	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Gobi Avenue	Existing dirt road.	Road would be closed with a cul-de-sac constructed on the west side only.
Alts 1, 2, 3, 5	60th Street W	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Astoria Avenue	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Holiday Avenue	Existing dirt road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	58th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	57th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	55th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	52nd Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	50th Street	Existing dirt road.	Road would be re-aligned and HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Willow Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Gaskell Road	Existing dirt road.	Gaskell Road would be realigned to tie into relocated 50th Street.
Alts 1, 2, 3, 5	Cathy Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Roland Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Elder Avenue	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	45th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
Alts 1, 2, 3, 5	W Avenue A	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Avenue A-4	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Avenue A-8	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	40th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Avenue A-12	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	W Avenue B	Existing dirt road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	35th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	32nd Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Avenue B-12	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	W Avenue C	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	30th Street	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	27th Street	Existing dirt road.	Closed at the HSR crossing with cul-de-sacs constructed on either side.
Alts 1, 2, 3, 5	Avenue C-14	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	25th Street	Existing dirt road.	Road closed at W Avenue D and east of HSR, with cul-de-sac added.
Alts 1, 2, 3, 5	W Avenue D	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Avenue D-4	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	22nd Street W	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
Alts 1, 2, 3, 5	SR 14	Existing four-lane State Highway.	HSR would pass over SR 14 on viaduct.
Alts 1, 2, 3, 5	15th Street	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	W Avenue E	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	Avenue E-4	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	Avenue E-8	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	Avenue E-10	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	15th Street W	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	12th PI W	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
<b>Lancaster</b>			
Alts 1, 2, 3, 5	W Avenue F	Existing at-grade paved road.	HSR would pass over road on viaduct.
Alts 1, 2, 3, 5	10th Street W	Existing dirt road.	Closed at the HSR crossing and have a cul-de-sac constructed at the end.
Alts 1, 2, 3, 5	W Avenue G	Existing two-lane paved road with an at-grade crossing of the UPRR track.	W Avenue G would be grade separated by raising the roadway profile and constructing overpasses over HSR and UPRR. The profile of Sierra Highway would be raised to meet the grade of W Avenue G.
Alts 1, 2, 3, 5	W Avenue H	Existing paved road having seven lanes within the crossing area. The existing road is grade separated on an overpass above Sierra Highway and UPRR.	W Avenue H would be reconstructed on a higher alignment on a new roadway bridge spanning Sierra Highway, HSR, and UPRR.

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
Alts 1, 2, 3	W Avenue I	Existing paved road having six lanes within the crossing area. The existing road crosses Sierra Highway and two UPRR tracks at grade.	W Avenue I would be grade separated with an underpass passing beneath Sierra Highway, HSR, and UPRR. Access to W Avenue I from Sierra Highway would be maintained via existing roads north of W Avenue I with a new signalized intersection on Sierra Highway north of W Avenue I. Yucca Avenue and Trevor Avenue would be lowered to tie into Avenue I.
Alt 5	W Avenue I	Existing paved road having six lanes within the crossing area. The existing road crosses Sierra Highway and two UPRR tracks at grade.	W Avenue I would be grade separated with an overpass spanning Sierra Highway, HSR, and UPRR. Access to W Avenue I from Sierra Highway would be maintained by constructing a new road connecting a signalized intersection Sierra Highway south of W Avenue I to a signalized intersection on W Avenue I west of Sierra Highway.
Alts 1, 2, 3, 5	W Lancaster Boulevard	Existing paved two-lane road west of Sierra Highway that crosses Sierra Highway and two UPRR tracks at grade. East of Sierra Highway, the road becomes four lanes.	W Lancaster Boulevard would be grade separated with an underpass passing beneath Sierra Highway, HSR, UPRR, and Yucca Avenue. Sierra Highway would no longer be directly accessible.
Alts 1, 2, 3, 5	W Avenue J	W Avenue J is a six-lane road that intersects Sierra Highway and the UPRR tracks at-grade.	W Avenue J would be grade separated with a new roadway overpass spanning Sierra Highway, HSR, and UPRR tracks. The connection to Sierra Highway would be maintained by constructing a new road connection from a new signalized intersection on Sierra Highway south of W Avenue J to a new signalized intersection west of Sierra Highway on W Avenue J.
Alts 1, 2, 3, 5	W Avenue K	W Avenue K is a six-lane road that intersects Sierra Highway and the UPRR tracks at-grade.	W Avenue K would be grade separated with a new roadway overpass spanning HSR and UPRR tracks. Sierra Highway would be relocated west of its existing location. A new signalized intersection would be constructed where the relocated Sierra Highway intersects W Avenue K.

Alternative	Road	Existing Conditions Description	Proposed Modification <sup>1</sup>
Alts 1, 2, 3, 5	W Avenue L	W Avenue L is a five-lane road (three EB and two WB) that is grade separated with a roadway overpass spanning Sierra Highway and UPRR tracks. Two Ramps provide access from Sierra Highway to W Avenue L.	W Avenue L would be raised with a new roadway overpass spanning two lead tracks for the LMF, HSR, Metrolink tracks, and UPRR tracks. Sierra Highway would be relocated to the west of its existing location. The existing ramps would be removed and a new signalized intersection would be constructed where the relocated Sierra Highway intersects W Avenue L.
Alts 1, 2, 3, 5	W Avenue M	W Avenue M is a four-lane road that intersects Sierra Highway, Metrolink, and UPRR tracks at grade.	W Avenue M would be re-aligned to the south of its existing location at the crossing. A new flyover roadway bridge would span the LMF, HSR, Metrolink track and UPRR track. Sierra Highway would be relocated to the west of its existing location. A new signalized intersection would be constructed where the relocated Sierra Highway intersects W Avenue M.
<b>Palmdale</b>			
Alts 1, 2, 3, 5	Avenue N	W Avenue N is a two-lane road that ends at a three-way intersection with Sierra Highway. East of the railroad tracks W Avenue N ends at Valley Line Road.	The HSR would be constructed in a trench and W Avenue N would cross on a new roadway overpass which is at grade with the existing W Avenue N.
Alts 1, 2, 3	Sierra Highway (20820+00)	Sierra Highway is a two-lane paved road that transitions to a four-lane road near W Avenue H.	Sierra Highway would be relocated to the west of its existing location. The relocated road would be constructed as a four-lane road with a Class 1 bike path located along the east side. The relocated Sierra Highway would be grade separated with a new overpass spanning the HSR.

Source: California High Speed Rail (2016)

<sup>1</sup> All proposed grade crossing configurations pending California Public Utilities Commission approval.

Alt(s) = Alternative(s)

SR = State Route

EB = eastbound

UPRR = Union Pacific Railroad

HSR = high-speed rail

WB = westbound

LMF = light maintenance facility

**Table 2-A-2 Road Modifications**

Alternative	Roadway <sup>1</sup>	Location	Proposed Modification
Alts 1, 3, 5	SR 58	17491+00 to 17761+00	Realignment
Alts 1, 2, 3, 5	Caliente Bodfish Road	18170+00	Realignment
Alts 1, 2, 3, 5	Woodford Tehachapi Road	18545+00	Modification
Alts 1, 2, 3, 5, RFND CCNM	Dennison Road	Challenger Drive	Realignment
Alts 1, 2, 3, 5, RFND CCNM	Challenger Drive	Burnett Rd	Realignment
Alts 1, 2, 3, 5	Oak Creek Road	Tehachapi Willow Springs Road	Realignment
Alt 2	SR 58/Towerline Road Eastbound Ramps	17724+00 to 17744+00	Realignment
Alt 5	Sierra Highway	North of Avenue G to Avenue O	Realignment
Alts 1, 2, 3, 5	Primrose Drive	Avenue H	Modification
Alt 5	Beech Avenue	Avenue H-8	Closure
Alts 1, 2, 3, 5	Beech Avenue	Avenue I	Modification
Alt 5	Date Avenue	Avenue I	Closure
Alts 5	Cedar Avenue	Avenue I	Closure
Alts 1, 2, 3, 5	Trevor Avenue	Avenue I	Modification
Alts 5	Spearman Avenue	Avenue I	Modification
Alts 1, 2, 3, 5	Yucca Avenue	Avenue I	Modification
Alt 5	Ivesbrook Street	Sierra Highway	Closure
Alts 5	W Jackman Street	Yucca Avenue	Closure
Alts 1, 2, 3	Trevor Avenue	Lancaster Boulevard	Modification
Alts 1, 2, 3, 5	Beech Avenue	Lancaster Boulevard	Modification
Alts 1, 2, 3, 5	Sierra Highway	Lancaster Boulevard	Modification
Alts 1, 2, 3, 5	Yucca Avenue	Lancaster Boulevard	Modification
Alts 1, 2, 3, 5	Trevor Avenue	Avenue J	Closure
Alts 1, 2, 3, 5	Cedar Avenue	Avenue J	Modification



Alternative	Roadway <sup>1</sup>	Location	Proposed Modification
Alts 1, 2, 3, 5	Beech Avenue	Avenue J	Closure
Alt 5	Date Avenue	Avenue J	Modification
Alts 1, 2, 3	Sierra Highway	North of Avenue K to Avenue O	Realignment
Alt 5	Avenue J-2	Sierra Highway	Modification
Alt 5	Avenue J-8	Sierra Highway	Modification
Alts 1, 2, 3, 5	Division Street	Avenue K	Modification
Alts 1, 2, 3, 5	Carriage Lane/Pioneer Court	Division St	Closure
Alts 1, 2, 3, 5	Avenue L-4	Sierra Highway	Modification
Alts 1, 2, 3, 5	Enterprise Parkway	Sierra Highway	Closure
Alts 1, 2, 3, 5	Forbes Street	Enterprise Parkway	Closure
Alts 1, 2, 3, 5	Avenue L-8	Sierra Highway	Closure
Alts 1, 2, 3, 5	Avenue L-9	Sierra Highway	Closure
Alts 1, 2, 3, 5	Division Street	Sierra Highway	Closure
Alts 1, 2, 3, 5	Avenue L-12	Sierra Highway	Closure
Alts 1, 2, 3, 5	4th Street W	Avenue M	Modification
Alts 1, 2, 3, 5	Valley Line Road	Avenue M	Closure
Alts 1, 2, 3, 5	3rd Street E	Avenue M	Modification
Alts 1, 2, 3, 5	4th Street E	Avenue M	Modification

Source: California High Speed Rail (2016)

<sup>1</sup> Unnamed roads, minor dirt roads, or roads with improvements 50 linear feet beyond curb returns or less are not listed.

Alt = Alternative

HSR = high-speed rail

SR = State Route

**Table 2-A-3 Permanent Dirt Road Closures**

Alternative	Roadway	Location <sup>1</sup> (Station <sup>2</sup> )
Alts 1, 2, 3, 5	Unknown	17446+00
Alts 1, 2, 3, 5	Unknown	17468+50
Alts 1, 2, 3, 5	Unknown	17483+00
Alts 1, 2, 3, 5	Muller Rd	17783+00
Alts 1, 2, 3, 5	Unknown	17800+50
Alts 1, 2, 3, 5	Unknown	17815+50
Alts 1, 2, 3, 5	Unknown	17873+00
Alts 1, 2, 3, 5	Unknown	17907+00
Alts 1, 2, 3, 5	Unknown	17923+00
Alts 1, 2, 3, 5	Unknown	17974+00
Alts 1, 2, 3, 5	Unknown	17989+00
Alts 1, 2, 3, 5	Unknown	18233+50
Alts 1, 2, 3, 5	Unknown	18324+00
Alts 1, 2, 3, 5, RFND CCNM	Unknown	18433+50
Alts 1, 2, 3, 5, RFND CCNM	Unknown	18462+00
Alts 1, 2, 3, 5	Unknown	18464+50
Alts 1, 2, 3, 5	Unknown	18476+00
Alts 1, 2, 3, 5, CCNM	Unknown	18512+50
RFND CCNM	Unknown	18515+00
RFND CCNM	Unknown	18562+00
RFND CCNM	Unknown	18582+00
RFND CCNM	Unknown	18610+00
CCNM	Unknown	18657+00
Alts 1, 2, 3, 5, CCNM	Unknown	18671+00
Alts 1, 2, 3, 5	Unknown	18716+00
RFND CCNM	Unknown	18745+00
RFND CCNM	Unknown	18787+00
Alts 1, 2, 3, 5	Unknown	18896+00
RFND CCNM	Unknown	18906+00
Alts 1, 2, 3, 5	Unknown	19003+00
Alts 1, 2, 3, 5, RFND CCNM	Unknown	19012+00
RFND CCNM	Unknown	19063+00
Alts 1, 2, 3, 5	Unknown	19065+50
RFND CCNM	Unknown	19088+00
Alts 1, 2, 3, 5	Unknown	19132+00
Alts 1, 2, 3, 5	Unknown	19135+00
Alts 1, 2, 3, 5	White Oak Drive	19162+00
Alts 1, 2, 3, 5	Unknown	19187+00

Alternative	Roadway	Location <sup>1</sup> (Station <sup>2</sup> )
Alts 1, 2, 3, 5	Unknown	19195+00
Alts 1, 2, 3, 5	Orchard Street	19200+00
Alts 1, 2, 3, 5	Unknown	19232+00
Alts 1, 2, 3, 5	Unknown	19238+00
Alts 1, 2, 3, 5	Unknown	19258+50
Alts 1, 2, 3, 5	Unknown	19426+50
Alts 1, 2, 5	Unknown	19428+50
Alts 1, 2, 3, 5	Unknown	19435+00
Alts 1, 2, 5	Unknown	19441+50
Alts 1, 2, 3, 5	Unknown	19451+00
Alts 1, 2, 5	Unknown	19455+00
Alts 1, 2, 3, 5	Unknown	19457+50
Alt 3	Unknown	19464+00
Alt 3	Unknown	19467+00
Alt 3	Unknown	19475+00
Alt 3	Unknown	19479+00
Alts 1, 2, 5	Unknown	19606+50
Alt 3	Unknown	19610+00
Alts 1, 2, 5	Unknown	19633+00
Alt 3	Unknown	19647+00
Alt 3	Unknown	19649+00
Alt 3	Unknown	19651+00
Alts 1, 2, 5	Unknown	19660+00
Alt 3	Unknown	19683+00
Alts 1, 2, 5	Unknown	19686+50
Alt 3	Unknown	19689+50
Alts 1, 2, 5	Unknown	19700+50
Alts 1, 2, 5	Unknown	19704+50
Alt 3	Unknown	19705+50
Alts 1, 2, 5	Laguna Ave	19714+00
Alts 1, 2, 5	Unknown	19716+00
Alt 3	Unknown	19721+00
Alt 3	Unknown	19738+50
Alts 1, 2, 5	Unknown	19741+00
Alt 3	Candice Avenue	19851+00
Alt 3	Starry Avenue	19858+50
Alts 1, 2, 5	Unknown	19764+00
Alts 1, 2, 5	Unknown	19823+00
Alts 1, 2, 5	General Petroleum Rd	19843+00

Alternative	Roadway	Location <sup>1</sup> (Station <sup>2</sup> )
Alts 1, 2, 5	Starry Avenue	19865+50
Alt 3	Fletcher Avenue	19866+00
Alts 1, 2, 5	Fletcher Avenue	19872+50
Alts 1, 2, 5	Lucille Way	19887+00
Alt 3	Unknown	19893+50
Alt 3	Unknown	20032+00
Alts 1, 2, 5	Unknown	20035+00
Alts 1, 2, 3, 5	Unknown	20104+00
Alts 1, 2, 3, 5	Unknown	20115+00
Alts 1, 2, 3, 5	Unknown	20142+50
Alts 1, 2, 3, 5	Unknown	20147+50
Alts 1, 2, 3, 5	Unknown	20150+50
Alts1, 2, 3, 5	Unknown	20157+00
Alts 1, 2, 3, 5	Unknown	20199+00
Alts 1, 2, 5	Jackson Avenue	20268+00
Alts 1, 2, 3, 5	Unknown	20295+00
Alts 1, 2, 3, 5	Unknown	20235+00
Alts 1, 2, 3, 5	Unknown	20326+00
Alts 1, 2, 3, 5	Unknown	20330+00
Alts 1, 2, 3, 5	Unknown	20333+50
Alts 1, 2, 3, 5	Unknown	20464+00
Alts 1, 2, 3, 5	W Avenue C 8	20591+00
Alts 1, 2, 3, 5	W Avenue C 12	20606+50
Alts 1, 2, 3, 5	Unknown	20733+50
Alts 1, 2, 3, 5	Unknown	20778+00
Alts 1, 2, 3, 5	Unknown	20793+00

Source: California High Speed Rail (2016)

<sup>1</sup> Because many unnamed dirt roads in the project vicinity will be permanently closed, the location of these dirt roads (as well as other named roads) has been identified by station number.

<sup>2</sup> A station is the horizontal measurement along the centerline of a project. Distances are measured and points are identified on plans with reference to station numbers. One hundred feet make up a highway station and increase from the beginning to the end of the HSR project.

Alt = Alternative

HSR = high-speed rail

**Table 2-A-4 Temporary Road Closures**

Alternative	Roadway Change	Location	Construction/Temporary Impacts	Operational/Permanent Impacts
Alts 1, 3, 5	Edison Road – modified grade separation	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alt 2	Edison Road – no change (HSR would pass over the road on a viaduct)	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alts 1, 3, 5	Malaga Road – modified grade separation	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alt 2	Malaga Road – no change (HSR would pass over the road on a viaduct)	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alts 1, 3, 5	Comanche Drive – modified grade separation	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alt 2	Comanche Drive – no change (HSR would pass over the road on a viaduct)	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alts 1, 3, 5	Tejon Highway – modified grade separation	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alt 2	Tejon Highway – no change (HSR would pass over the road on a viaduct)	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alts 1, 3, 5	Towerline Road – modified grade separation	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alt 2	Towerline Road – no change (HSR would pass over the road on a viaduct)	SR 58	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alts 1, 2, 3, 5	W Avenue G – new grade separation	Sierra Highway/ UPRR	Yes – detour could temporarily change emergency response routes	Yes – beneficial improvement (road would be grade separated)
Alts 1, 2, 3, 5	W Avenue H – modified overhead	Sierra Highway/ UPRR	Yes – detour could temporarily change emergency response routes	No – similar to existing conditions (road remains grade separated)
Alts 1, 2, 3, 5	W Avenue I – new grade separation	Sierra Highway/ UPRR	Yes – detour could temporarily change emergency response routes	Yes – beneficial improvement (road would be grade separated)
Alts 1, 2, 3, 5	W Milling Street – new grade separation	Sierra Highway/ UPRR	Yes – detour could temporarily change emergency response routes	Yes – beneficial improvement (road would be grade separated)

Alternative	Roadway Change	Location	Construction/Temporary Impacts	Operational/Permanent Impacts
Alts 1, 2, 3, 5	W Avenue J – new grade separation	Sierra Highway/ UPRR	Yes – detour could temporarily change emergency response routes	Yes – beneficial improvement (road would be grade separated)
Alts 1, 2, 3, 5	W Avenue K – new grade separation	Sierra Highway/ UPRR	Yes – detour could temporarily change emergency response routes	Yes – beneficial improvement (road would be grade separated)
Alts 1, 2, 3, 5	Avenue L – modified grade separation and new signalized intersection	Sierra Highway/ UPRR	Yes – detour could temporarily change emergency response routes	Yes – beneficial improvement (a new signalized intersection would be added)
Alts 1, 2, 3, 5	Avenue M – new grade separation and relocated signalized intersection	Sierra Highway/ UPRR	Yes – detour could temporarily change emergency response routes	Yes – beneficial improvement (road would be grade separated)

Alt(s) = Alternative(s)

SR = State Route

UPRR = Union Pacific Railroad

HSR = high-speed rail

**Table 2-A-5 Temporary Road Detours**

Alternative	Roadway	Location
Alts 1, 2, 3, 5	E Brundage Lane	Oswell Street to Fairfax Road
Alts 1, 2, 3, 5	E Brundage Lane	Fairfax Road to Morning Drive
Alts 1, 2, 3, 5	E Brundage Lane	Morning Drive to Edison Highway
Alts 1, 3, 5	Redbank Road	Weedpatch Highway to Vineland Road
Alts 1, 3, 5	Redbank Road	Vineland Road to Edison Road
Alts 1, 3, 5	Muller Road	Edison Road to Malaga Road
Alts 1, 3, 5	Muller Road	Malaga Road to Comanche Drive
Alts 1, 3, 5	Muller Road	Comanche Drive to Tejon Highway
Alts 1, 2, 3, 5	10th Street (west side)	Avenue G to Avenue H
Alt 2	10th Street (west side)	Avenue G to Avenue H
Alts 1, 2, 3, 5	Division Street (east side)	Avenue G to Avenue H
Alts 2	Division Street (east side)	Avenue G to Avenue H
Alts 1, 2, 3, 5	10th Street (west side)	Avenue H to Avenue G
Alt 2	10th Street (west side)	Avenue H to Avenue G
Alts 1, 2, 3, 5	Division Street (east side)	Avenue H to Avenue G
Alt 2	Division Street (east side)	Avenue H to Avenue G
Alts 1, 2, 3, 5	10th Street (west side)	Avenue I to Avenue J
Alt 2	10th Street (west side)	Avenue I to Avenue J
Alts 1, 2, 3, 5	Division Street (east side)	Avenue I to Avenue J
Alt 2	Division Street (east side)	Avenue I to Avenue J
Alts 1, 2, 3, 5	Date Avenue (west side)	West Side: Milling Street to Date Avenue–Lancaster Boulevard
Alt 2	Date Avenue (west side)	Milling Street to Lancaster Boulevard
Alts 1, 2, 3, 5	Division Street (east side)	Milling Street to Avenue I
Alt 2	Division Street (east side)	Milling Street to Avenue I
Alts 1, 2, 3, 5	10th Street (west side)	Avenue J to Avenue K
Alt 2	10th Street (west side)	Avenue J to Avenue K
Alts 1, 2, 3, 5	Division Street (east side)	Avenue J to Avenue K
Alt 2	Division Street (east side)	Avenue J to Avenue K
Alts 1, 2, 3, 5	10th Street (west side)	Avenue K to Avenue J
Alt 2	10th Street (west side)	Avenue K to Avenue J
Alts 1, 2, 3, 5	Division Street (east side)	Avenue K to Avenue J
Alt 2	Division Street (east side)	Avenue K to Avenue J
Alts 1, 2, 3, 5	New Sierra Highway (west side)	Avenue L to Columbia Way (Avenue M)
Alt 2	New Sierra Highway (west side)	Avenue L to Columbia Way (Avenue M)
Alts 1, 2, 3, 5	Challenger Way (east side)	Avenue L to Avenue M
Alt 2	Challenger Way (east side)	Avenue L to Avenue M

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