

**Los Angeles and San Bernardino Counties, CA
District 7 – LA – 14 – PM 57.8 TO PM 64.1
District 8 – SBD – SR - 18 PM 84.3**

Project ID # 071200035 (EA:2600U)
SCH #2010091084

**Draft Environmental Impact Report/
Environmental Impact Statement
and Section 4(f) (De Minimis Findings)**



Volume 1 of 2

**Prepared by the
State of California Department of Transportation**

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 US Code 327.



September 2014



SCH Number: 201009084
07-LA/SB-New Route Alignment
PM: 07-LA-14 PM 57.8/64.1
08-SBd-SR-18 PM 84.3
EA: 2600U/071200035

**HIGH DESERT CORRIDOR PROJECT
FROM STATE ROUTE 14 TO STATE ROUTE 18
IN LOS ANGELES and SAN BERNARDINO COUNTY, CALIFORNIA**

**DRAFT ENVIRONMENTAL IMPACT REPORT/
ENVIRONMENTAL IMPACT STATEMENT
and Section 4(f) De Minimis Finding**

Submitted Pursuant to (State) Division 13, Public Resources Code
(Federal) 42 USC 4332(2)(c) and 49 USC 303 by the

THE STATE OF CALIFORNIA
Department of Transportation
and Los Angeles County Metropolitan Transportation Authority (Metro)

COOPERATING AGENCIES:
Federal Railroad Administration
Federal Aviation Administration, Western Pacific Region
U.S. Environmental Protection Agency, Region IX
U.S. Army Corps of Engineers
Advisory Council on Historic Preservation (ACHP)
Federal Bureau of Prisons

RESPONSIBLE AGENCIES:
California Transportation Commission
California Department of Fish and Wildlife
California Public Utilities Commission

Sept 30, 2014
Date of Approval


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Abstract

This Draft EIR/EIS addresses impacts of alternatives proposed for the High Desert Corridor (HDC) Project. This new multimodal east-west link would connect State Route (SR) 14 in Palmdale (Los Angeles County) and SR-18 in the Town of Apple Valley (San Bernardino County). The purpose of the proposed project is to address existing and future east-west transportation demand, travel safety and reliability within High Desert region, regional goods movement network, connectivity to regional transportation facilities, and greenhouse gas reduction goals movement. Expected environmental effects include impacts to aesthetics, land use and community cohesion, biological resources, air quality, noise, utilities, and Section 4(f) properties. This project is envisioned to be a green energy transportation improvement.

Summary

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro), proposes construction of the High Desert Corridor (HDC) as a new transportation facility in the High Desert region of Los Angeles and San Bernardino counties. The proposed 63-mile-long west-east facility (Figure S-1) would provide route continuity and relieve traffic congestion between State Route (SR) 14 in Los Angeles County and SR-18 and Interstate 15 (I-15) in San Bernardino County. Caltrans is the lead agency for the project pursuant to both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

Figure S-1 Proposed High Desert Corridor



Overview of Project Area

The High Desert is typically defined as the arid region north of the San Gabriel and San Bernardino mountain ranges. Starting in the northwestern corner of Los Angeles County near SR-138 and Interstate 5 (I-5), the High Desert extends east into Kern and San Bernardino counties in the shape of a horizontal “V” (Figure S-1). This expansive region is home to the Mojave Desert, Antelope and Victor valleys, and many small and large communities. While the central portion of the project area is currently sparsely developed, the HDC would connect large urban areas on the west and east ends. The communities through which the proposed HDC would cross include Palmdale, Victorville, Adelanto, and Apple Valley.

Purpose and Need

The purpose of the proposed action is to improve east-west mobility through the High Desert region of southern California by addressing present and future travel demand and mobility needs within the Antelope and Victor valleys. The proposed action is intended to achieve the following objectives:

- Increase capacity of west-east transportation facilities to accommodate existing and future transportation demand
- Improve travel safety and reliability within the High Desert region
- Improve the regional goods movement network
- Provide improved access and connectivity to regional transportation facilities, including airports and existing and future passenger rail systems, which include the proposed California high-speed rail (HSR) system and the proposed XpressWest HSR system
- Contribute to state greenhouse gas (GHG) reduction goals through the use of green energy features

The specific needs to be addressed by the proposed action include:

- Recent and future planned population growth within the High Desert region
- Limited and unreliable west-east connectivity within the High Desert region
- Regional demands for goods movement to support the growth of the regional economy
- Future demands for the use of green energy, including sustainability and green energy provisions in State law and policy

Proposed Action

The HDC Project would entail construction of a new multimodal link between SR-18 in San Bernardino County and SR-14 in Los Angeles County. It would connect some of the fastest growing residential, commercial, and industrial areas in southern California, including Palmdale, Lancaster, Adelanto, Victorville, Hesperia, and Apple Valley. As currently planned, the project would be implemented in three segments: the Antelope Valley segment, the High Desert segment, and the Victor Valley segment.

The 10-mile-long Antelope Valley segment would start from a new freeway-to-freeway SR-14/HDC interchange and extend east parallel with and near Avenue P-8 to 100th Street East in Palmdale. The right-of-way (ROW) to be acquired for this segment would accommodate ultimate expansion to four lanes in each direction plus a high-speed passenger rail line.

The 26-mile-long High Desert segment would extend from Palmdale to Adelanto, running in a west-east direction parallel and south of Palmdale Boulevard. The freeway would be three lanes in each direction, with ROW acquired to support an ultimate facility of four lanes in each direction plus a high-speed passenger rail line.

The 27-mile-long Victor Valley segment would generally follow the alignment of Air Expressway Boulevard, between Caughlin Road in Adelanto and Dale Evans Parkway east of I-15 in Apple Valley, and continuing southeasterly as an expressway to join SR-18 just east of Joshua Street. The freeway portion of this segment between Caughlin Road and I-15 would be six lanes wide, continuing to Dale Evans Parkway as a four- or six-lane freeway. ROW would be acquired to support a future freeway of four lanes in each direction plus a high-speed passenger rail line.

Caltrans is also considering how to integrate the following proposed modes of transportation and additional project features to create a multipurpose corridor:

Highway/Expressway: Caltrans proposes a new freeway/expressway that will environmentally clear up to four lanes of travel in each direction. The number of lanes selected will be based on the traffic analysis. When fewer lanes are initially justified, the ROW will be preserved for a potential future build-out of a four-lane freeway/expressway. The number of lanes selected will be based on

other considerations required under CEQA, NEPA, and other relevant laws.

HSR Feeder Service: Two proposed HSR projects are being evaluated for the potential linkages with the HDC: the California HSR and XpressWest. Metro, Caltrans, and San Bernardino Associated Governments (SANBAG) have agreed to study an HSR feeder service as part of the HDC that would potentially link these two major rail systems in Palmdale and Victorville, respectively, and would also connect with Metrolink in Palmdale. This would create the potential to connect the San Francisco, Central Valley, Los Angeles, Las Vegas, and San Diego regions through an HSR system.

Bicycle Route: The HDC Project would include bicycle facilities, extending 36 miles along the corridor from US 395 in Adelanto to the Palmdale Transportation Center. Coordination has been initiated to identify local routes for bicycle connections to the



Source: [Parsons, 2013](#) (Existing roadway in project area).
The HDC would improve east-west mobility through the High Desert region of southern California.



Source: [Google Earth, 2013](#).
The Palmdale Transportation Center could be a future hub for HSR.



Source: [www.trailink.com](#).
Proposed HDC bike path would provide nonmotorized access from Adelanto to Lancaster via the Sierra Highway Bike Path (shown).

master-planned bike routes within Adelanto and Palmdale. This bike facility would be designed to complement the proposed freeway/expressway and HSR feeder service without impeding on operational performance or compromising safety.

Green Energy: This project seeks to establish a truly sustainable corridor that addresses the goals set forth in landmark California legislation such as Assembly Bill (AB) 32 and Senate Bill (SB) 375. To this end, green energy generation, the development of a new transmission corridor, and provision for infrastructure to enable electric charging and alternative fueling stations will be considered for potential integration into the HDC. Based on results of the *Green Energy Feasibility Study Report* (June 2014), technologies that appear to be feasible for the HDC are solar installations near the necessary electric utility infrastructure and alternative fuel charging stations at selected interchanges.



Based on the above consideration, several project alternatives have been studied. Four build alternatives and the No Build Alternative were selected for evaluation in the Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS). The inclusion of green energy technologies (e.g., photovoltaic solar highways, non-fossil refueling stations, utility use of corridor ROW), bike paths along segments of the proposed project, vista points, and a multiuse pullout would be considered for all of the build alternatives. The alternatives are briefly described below.

- **The Freeway/Expressway Alternative** (four physical variations) would combine a controlled-access freeway and an expressway. The alignment will generally follow Avenue P-8 in Los Angeles County and just south of El Mirage Road in San Bernardino County, then extend east to Air Expressway Road near I-15, and finally curve south, ending at Bear Valley Road.

Variations to the general HDC alignment are proposed to minimize environmental impacts (Figure S-2).

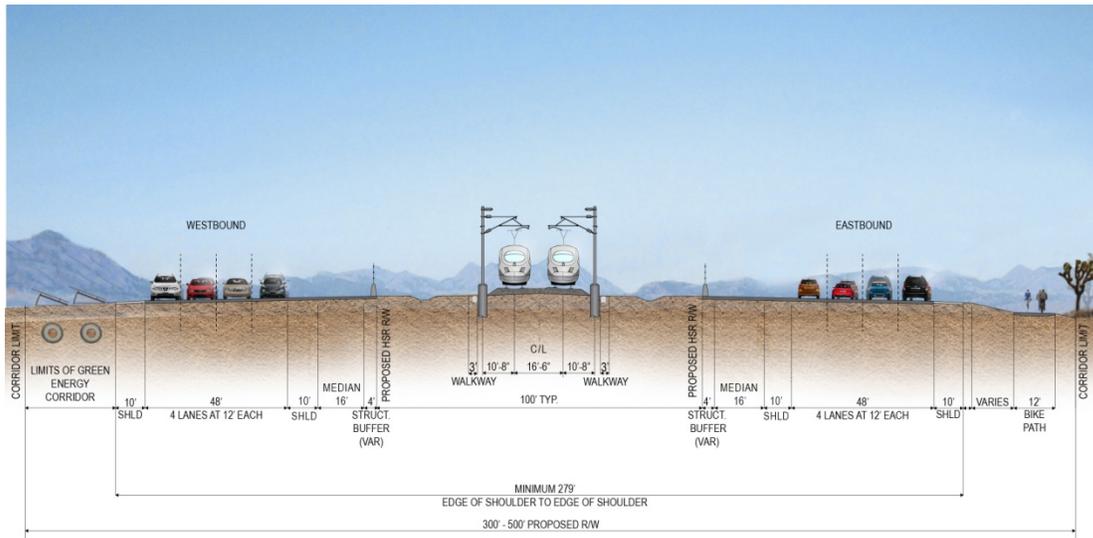
Figure S-2 High Desert Corridor Alignment Variations



- Variation A – Near Palmdale, the freeway/expressway would dip slightly south of the main alignment, approximately between 15th Street East and Little Rock Wash.
- Variation B – East of the county line, the freeway/expressway would flare out slightly south of the main alignment between Oasis Road and Coughlin Road. Variation B1 would be at the same location, but it would flare out a little less and pass through Krey Field.
- Variation D – Near Lake Los Angeles, the freeway/expressway would dip south of the main alignment, just south of Avenue R approximately between 180th Street East and 230th Street East.
- Variation E – Near Adelanto and Victorville, the freeway/expressway would dip south of the federal prison.
- **The Freeway/Tollway Alternative** would follow the same alignment as the Freeway/Expressway Alternative, but the section between 100th Street East and US 395 would be operated as a tollway. The toll segment would likely be an all Electronic Toll Collection (ETC) System. The operation would be completely electronic with no toll booths or traffic gates. Collection of tolls would occur at the speed of flowing traffic, which means that motorists never have to slow down; therefore, traffic would remain free flowing. Variations A, B, D, and E as described under the Freeway/Expressway Alternative were also considered.
- **The Freeway/Expressway Alternative with HSR Feeder/Connector Service** (Figure S-3) would be the same as the Freeway/Expressway Alternative, but with an HSR Feeder/Connector Service between the cities of Palmdale and Victorville. The HSR Feeder/Connector Service would utilize proven steel wheel-on-steel track technology with design and operating speeds of 180 mph and 160 mph, respectively. Variations A, B, D, and E were considered, but Variation A was later determined to be not a viable variation for this alternative. Two rail options (Option 1 and 7) in Palmdale were analyzed and as the design proceeds, three variations under each option were studied to avoid and minimize environmental impacts.

- **The Freeway/Tollway Alternative with HSR Feeder/Connector Service** would be the same as the Freeway/Tollway Alternative, but it would include an HSR Feeder/Connector Service (as described above) between the cities of Palmdale and Victorville. Variations A, B, D, and E were considered, but Variation A was later determined to be not a viable variation for this alternative. Two rail options (Option 1 and 7) in Palmdale were analyzed and as the design proceeds, three variations under each option were studied to avoid and minimize environmental impacts. Refer to the Freeway/Tollway Alternative for a description of tollway operation.

Figure S-3 Freeway/HSR Conceptual Cross Section



- **The No Build Alternative** would not provide new transportation infrastructure within the High Desert area to connect Los Angeles and San Bernardino counties. Only existing SR-138 safety corridor improvements in Los Angeles County and SR-18 corridor improvements in San Bernardino County would be constructed.

Identification of a preferred alternative will occur after the public review and comment period.

Joint California Environmental Quality Act/National Environmental Policy Act Document

The project is subject to State and federal environmental review requirements because it involves the use of federal funds from the Federal Highway Administration (FHWA). Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. Caltrans and Metro are the project proponents, and Caltrans is the lead agency under CEQA and NEPA. FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to Section 6005 of the Safe, Accountable,

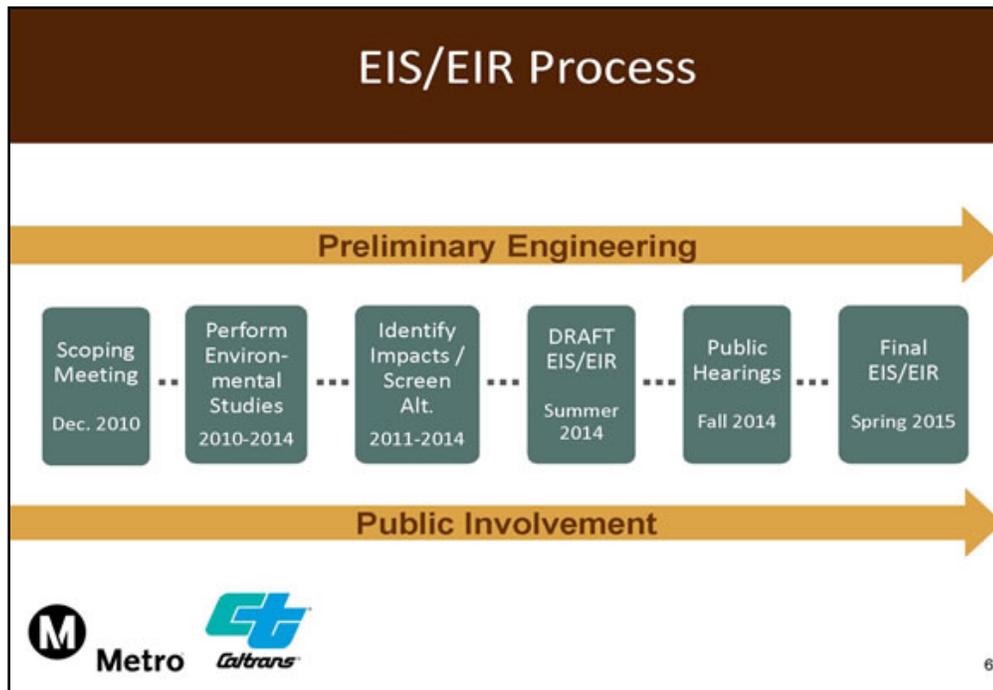
Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU), codified at 23 United States Code (U.S.C.) 327(a)(2)(a). With NEPA assignment, FHWA assigned, and Caltrans assumed, all U.S. Department of Transportation Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 U.S.C. 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA because NEPA is concerned with the significance of the project as a whole.

After receiving comments from the public and reviewing agencies, a Final EIR/EIS will be prepared. Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EIS will include responses to comments received on the Draft EIR/EIS and will identify the preferred alternative. After the Final EIR/EIS is circulated, if Caltrans decides to approve the project, a Notice of Determination will be published for compliance with CEQA, and a Record of Decision will be published for compliance with NEPA. If impacts cannot be mitigated below a level of significance, Caltrans will also prepare a Statement of Overriding Considerations.

The general HDC EIS/EIR process is depicted in Figure S-4.

Figure S-4 The HDC EIS/EIR Process



Project Impacts

No Build Alternative

The No Build Alternative may result in impacts to emergency services, traffic, and energy as listed below:

- Emergency Services – As future levels of service on local roads deteriorate, response times of emergency response vehicles may increase.
- Traffic and Transportation – In the year 2040, 23 and 45 of the 116 intersections in the project area will perform at Levels of Service E or F during the morning and afternoon peak hour, respectively.
- Energy – Fuel consumption by motor vehicles will increase due to idling in stop-and-go traffic and/or slow speeds through congested roadways.

Build Alternatives

The proposed project is listed in the 2012 financially constrained Regional Transportation Plan (RTP) Amendment No. 1, which was found to conform by Southern California Association of Governments (SCAG) on April 4, 2012, and FHWA and Federal Transit Administration (FTA) made a regional conformity determination finding on June 4, 2012. The project is also included in SCAG's financially constrained 2013 Federal Transportation Improvement Program (FTIP) No. 13-15, page 10 for Los Angeles County and page 8 for San Bernardino County. The SCAG 2013 FTIP was determined to conform by FHWA and FTA on December 18, 2013. The design concept and scope of the proposed project is consistent with the project description in the 2012 RTP, 2013 FTIP, and the "open to traffic" assumptions of SCAG's regional emissions analysis.

Table S-1 provides a brief comparison of the impacts associated with each of the build alternatives and their variations. In general, the impacts from the four build alternatives are the same or similar for most of the resources; however, impacts from the build alternatives with the HSR Feeder Service are slightly different from the build alternatives without the HSR Feeder Service for the following resources: land use, growth, farmland/grazing land, relocations, energy, Section 4(f), and cumulative impacts.

Table S-1 Summary of Major Potential Impacts from Alternatives

Environmental Resource	Potential Impacts				
	Freeway/ Expressway Alternative	Freeway/ Tollway Alternative	Freeway/ Expressway Alternative with HSR Feeder Service	Freeway/ Tollway Alternative with HSR Feeder Service	No Build Alternative
Land Use	<ul style="list-style-type: none"> Approximately 3,216 acres would be converted from existing use to transportation-related use. Variations would result in slight changes to these numbers. Provide infrastructure for surrounding land uses, improve access, and linkages between various residential communities, businesses, and facilities. Impacts are beneficial. 	Same as Freeway/ Expressway Alternative. Some constraint on construction impact timing possible.	<ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative with additional right-of-way (ROW) acquired for construction of the HSR alignment to connect to the Palmdale and Victorville rail station. Variations and rail options would result in slight differences in area of impact. Provide infrastructure for surrounding land uses, improve access, and linkages between various residential communities, businesses, and facilities. Impacts are beneficial. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service. Some constraint on construction impact timing possible.	No impacts. Slower changes to land use patterns may occur.
Parks and Recreation	<ul style="list-style-type: none"> Partial ROW acquisition of approximately 5 acres would be needed on the south side of the Westwinds Golf Course. Indirect impact to Rockview Nature Park by acquiring the parking lot in the Los Angeles Department of Power and Water's (LADPW) parcel. There would be no additional impacts resulting from any of the variations. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> Same as Freeway/Expressway Alternative. Variations and rail options: no additional impacts. 	Same as Freeway/ Expressway Alternative.	No impacts.
Growth	<ul style="list-style-type: none"> May shift future development toward the new interchanges in Palmdale and Victorville/Adelanto. Assist in achieving goals and policies of local general plans to attract investments to balance the current uneven supply of housing with more job-producing uses. Impacts would be the same for all variations. 	Same as Freeway/ Expressway Alternative. Potentially slower changes to growth patterns.	<ul style="list-style-type: none"> May shift future development toward the new interchanges in Palmdale and Victorville/Adelanto. Assist in achieving goals and policies of local general plans to attract investments to balance the current uneven supply of housing with more job-producing uses. May foster higher-density and mixed-use developments near the proposed rail stations in Palmdale and Victorville. May facilitate connections into Palmdale for passengers on XpressWest, a privately proposed HSR project between Las Vegas and Victorville. Impacts would be the same for all variations and rail options. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service. Potentially slower changes to growth patterns for tolled segments.	No impacts. Minimal growth potential between current urbanized areas.

Table S-1 Summary of Major Potential Impacts from Alternatives

Environmental Resource	Potential Impacts				
	Freeway/ Expressway Alternative	Freeway/ Tollway Alternative	Freeway/ Expressway Alternative with HSR Feeder Service	Freeway/ Tollway Alternative with HSR Feeder Service	No Build Alternative
Farmland/ Grazing Land	<ul style="list-style-type: none"> • Would convert approximately 252 acres of Important Farmland and 2,965 acres of Grazing Land to nonagricultural use. • Variations would result in slight changes to these numbers. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Would convert approximately 252 acres of Important Farmland and 2,965 acres of Grazing Land to nonagricultural use. • Would affect about 650 acres of sheep grazing land. • Variations would result in slight changes to these numbers. • The rail options would not result in any impacts. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.
Community Impacts	<ul style="list-style-type: none"> • Temporary construction impacts (i.e., traffic, noise, and air impacts during construction) would affect nearby communities. • Affected communities in developed areas would experience changes in access and circulation, growth, urbanization, and quality of life. • Residential, commercial/industrial, educational, and nonprofit properties would be acquired for the project ROW. • Variations A, B and B1 would result in similar impacts. • Variation D would result in less of an impact on the community of Lake Los Angeles. • Variation E would result in substantially more impacts to the community in Adelanto/Victorville. 	Same as Freeway/ Expressway Alternative. Tolling may have potential impacts to environmental justice populations unless mitigation is considered and included.	<ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. • The rail connection options would result in additional community impacts near Palmdale Station area. • Variation E would result in substantially more impacts to the community in Adelanto/Victorville 	<ul style="list-style-type: none"> • Same as Freeway/ Expressway Alternative with HSR Feeder Service. • Tolling may have potential impacts to environmental justice populations unless mitigation is considered and included 	<ul style="list-style-type: none"> • Increased traffic congestion and impaired mobility, longer travel times on local roadways, and increased air pollution and noise. The economic benefits associated with implementation of the HDC would not be realized.
Relocations	<ul style="list-style-type: none"> • Affecting 51 to 95 residential units, depending on variation selected. • Affecting 35 to 68 nonresidential units, depending on variation selected. • Replacement land is available. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Affecting 39 to 49 residential units, depending on variation selected. • An additional 18 residential units would be affected if Option 7 is selected (no additional residential units for Option 1) • Affecting 38 to 53 nonresidential units, depending on variation selected. • An additional 17 or 14 nonresidential units would be affected under Rail Options 1 and 7, respectively. • Replacement property is available. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No community relocations required.

Table S-1 Summary of Major Potential Impacts from Alternatives

Environmental Resource	Potential Impacts				
	Freeway/ Expressway Alternative	Freeway/ Tollway Alternative	Freeway/ Expressway Alternative with HSR Feeder Service	Freeway/ Tollway Alternative with HSR Feeder Service	No Build Alternative
Utilities/ Emergency Services	<ul style="list-style-type: none"> Utility facilities in the ROW subject to abandonment, removal, and/or relocation or replacement. May improve response times for emergency services. May need additional emergency personnel and equipment. May expose the Big Rock Wash area to potentially contaminated groundwater from the north and the northwest. May expose construction personnel to hydrocarbons, methane, and hydrogen sulfide during deep excavation or boring for bridge columns at two abandoned oil wells. Variations would result in similar impacts. 	<p>Same as Freeway/ Expressway Alternative. Tolling may require additional law enforcement services.</p>	<ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Additional service impacts and requirements near the Palmdale and Victorville rail stations. 	<ul style="list-style-type: none"> Same as Freeway/ Expressway Alternative with HSR Feeder Service. Tolling may require additional law enforcement services. 	<ul style="list-style-type: none"> No impacts to utilities and emergency services. As future levels of service on local roads deteriorate, response times of emergency response vehicles may increase.
Traffic and Transportation/ Pedestrian and Bicycle Facilities	<ul style="list-style-type: none"> Intersections performing at Level of Service (LOS) E or LOS F in year 2040: AM Peak – 2 of 159 PM Peak – 8 of 159 May sever several north–south running local roads that are planned for future development, requiring future grade separations, cul-de-sac turnarounds, and/or frontage roads. Portion of bus Route 32, Adelanto–Victorville North, would need to be rerouted if the HDC follows the Air Expressway alignment. Would require construction of new and revised interchange access points along I-15 and SR-14. Would increase demand for existing park-and-ride lots located in Palmdale. Variations would result in similar impacts. 	<p>Same as Freeway/ Expressway Alternative. Potential for diversion to local streets adjacent to tolled segments.</p>	<ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Additional Palmdale rail station area impacts. 	<ul style="list-style-type: none"> Same as Freeway/ Expressway Alternative with HSR Feeder Service. Potential for diversion to local streets adjacent to tolled segments. 	<ul style="list-style-type: none"> Intersections performing at LOS E or LOS F in year 2040: AM Peak – 23 of 116 PM Peak – 45 of 116 Continued limitations on east-west mobility.
Visual/ Aesthetics	<ul style="list-style-type: none"> Increase in urban character from additional highway lanes, reduction of desert landscape, and construction of soundwalls and other structures that could block views. Moderate overall visual impact. Variations would result in similar impacts. 	<p>Same as Freeway/ Expressway Alternative.</p>	<ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Additional visual impacts from HSR support facilities and Palmdale rail station. Variations would result in similar impacts. 	<p>Same as Freeway/ Expressway Alternative with HSR Feeder Service.</p>	<p>No impacts.</p>

Table S-1 Summary of Major Potential Impacts from Alternatives

Environmental Resource	Potential Impacts				
	Freeway/ Expressway Alternative	Freeway/ Tollway Alternative	Freeway/ Expressway Alternative with HSR Feeder Service	Freeway/ Tollway Alternative with HSR Feeder Service	No Build Alternative
Cultural Resources	<ul style="list-style-type: none"> • Eighteen National Register of Historic Places (NRHP) properties in area of potential effects (APE): <ul style="list-style-type: none"> – An Adverse Effect finding for ten properties: prehistoric archaeological sites CA-SBR-158; -6312; -12336; and historic archaeological sites CA-LAN-4361H; -4367H; -4362; CA-SBR-16961H; -16918H; -16915H; and prehistoric/historic site CA-SBR-10392H. – No Adverse Effect finding with implementation of Caltrans Section 106 PA Standard Conditions for three historic properties: prehistoric archaeological sites CA-SBR-182 and -66 (part of Topipabit Archaeological District); and a linear historic era property: Southern California Edison (SCE) Company Boulder Dam - San Bernardino Transmission Line (BDSBL). – No Adverse Effect finding for four linear historic properties: National Old Trails Highway; ATSF Railroad; SCE Kramer-Victorville Power Lines and Towers; and the Mojave Trail/Mojave Road/Government Road. • Variations would result in no additional impacts. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. • Variations would result in no additional impacts. • Additional impact areas for the Victorville rail station connection. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.
Hydrology and Floodplain	<ul style="list-style-type: none"> • Nominal increase in runoff would be exhibited within the various watersheds traversed by the corridor due to an increase in impervious surface area. • Variations would result in slightly greater runoff. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. Impacts slightly higher due to additional surface area. • Variations and rail connection options would result in slightly greater runoff. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.
Water Quality and Stormwater Runoff	<ul style="list-style-type: none"> • The velocity and volume of downstream flow is expected to increase. • Potential pollutant sources would be associated with motor vehicle operations, highway maintenance activities, illegal dumping, accidental spills, and landscaping care. • Variations would result in slightly greater runoff. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. Impacts slightly higher due to additional surface area. • Variations and rail connection options would result in slightly greater runoff. • Additional tunnel drainage necessary at Palmdale rail station and wye option areas. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.

Table S-1 Summary of Major Potential Impacts from Alternatives

Environmental Resource	Potential Impacts				
	Freeway/ Expressway Alternative	Freeway/ Tollway Alternative	Freeway/ Expressway Alternative with HSR Feeder Service	Freeway/ Tollway Alternative with HSR Feeder Service	No Build Alternative
Geology/Soils/ Seismic/ Topography	<ul style="list-style-type: none"> • May facilitate the movement of economic mineral resources (i.e., aggregate base, sand, and gravel) from the area. • May facilitate the development of more sand and gravel quarries. • Variations would result in minimal additional grading. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. • Variations would result in minimal additional grading. • Additional grading needed for all rail connection options. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.
Paleontology	<ul style="list-style-type: none"> • Ground disturbance within the project limits and at construction staging areas could disturb native materials, potentially impacting paleontological resources. • Variations would result in minimal additional ground disturbance. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. • Variations would result in minimal additional ground disturbance. • Additional areas of disturbance in Palmdale and Victorville rail connection areas. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.
Hazardous Waste or Materials	<ul style="list-style-type: none"> • May expose construction personnel to asbestos-containing materials (ACM) and lead-based paint (LBP) if not removed prior to construction. • May expose workers and the general public to ADL during construction and operation of the HDC in San Bernardino County. • May expose workers and the general public to unsafe levels of pesticides and/or herbicides. • May expose construction personnel to hydrocarbons, methane, and hydrogen sulfide during deep excavation or boring for bridge columns at two abandoned oil wells. • May expose workers or generate contaminated groundwater if dewatering is required. • May expose construction personnel to potentially contaminated soil underlying several commercial/industrial properties impacted (to be acquired) by this project. • Variations would result in similar impacts. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. • Lessened ability to adjust design for contamination avoidance under rail alternatives. • Variations would result in similar impacts. • Additional areas of disturbance in Palmdale and Victorville rail connection areas. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.
Air Quality	<ul style="list-style-type: none"> • May likely cause violations of the State 24-hour particulate matter less than 10 microns in diameter (PM₁₀) standard in both counties. • Variations would result in similar impacts. 	Similar to Freeway/ Expressway Alternative with minor differences related to toll avoidance.	<ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. • Minor additional improvements in emissions depending on auto diversions to rail trips. • Variations and rail connection options would result in similar impacts. 	Similar to Freeway/ Expressway Alternative with HSR Feeder Service with minor differences related to toll avoidance.	<ul style="list-style-type: none"> • Potential conflict with local government goals and policies for reducing air emissions within its jurisdiction.

Summary

Table S-1 Summary of Major Potential Impacts from Alternatives

Environmental Resource	Potential Impacts				
	Freeway/ Expressway Alternative	Freeway/ Tollway Alternative	Freeway/ Expressway Alternative with HSR Feeder Service	Freeway/ Tollway Alternative with HSR Feeder Service	No Build Alternative
Noise	<ul style="list-style-type: none"> Some residential areas, a school, a park, and a church within the project limits would be impacted as a result of this project alternative. Abatement measures considered. Variations would result in similar impacts. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. No measurable impact anticipated from HSR operation. Variations would result in similar impacts. Palmdale rail connection options would result in a small number of additional affected properties. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service. No impact anticipated from HSR operation.	No impacts.
Energy	<ul style="list-style-type: none"> Would result in energy consumption increase of 0.34 and 0.44 percent in 2020 and 2040, respectively. Variations would result in similar impacts. Increased energy consumption would be offset by the incorporation of sustainable energy facilities. 	Same as Freeway/ Expressway Alternative. Additional energy required by tolling is negligible.	<ul style="list-style-type: none"> Energy consumption increase of 0.37 and 0.46 percent in 2020 and 2040, respectively. Variations and rail connection options would result in similar impacts. Increased energy consumption would be offset by the incorporation of sustainable energy facilities. 	Same as Freeway/ Tollway Alternative with HSR Feeder Service.	<ul style="list-style-type: none"> Inefficient energy consumption due to extra fuel used while idling in stop-and-go traffic or moving at slow speeds through congested roadways.
Natural Communities	<ul style="list-style-type: none"> Would affect up to approximately 3,784 acres of natural plant communities. Could potentially result in a barrier to wildlife movement. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> Would affect up to approximately 4,651 acres of natural plant communities. Could potentially result in a barrier to wildlife movement. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.
Wetlands and Other Waters	<ul style="list-style-type: none"> With the implementation of avoidance/ minimization measures, impacts to Waters of the U.S. range from 2.03 acres to 3.54 acres, depending on which combination of variations and Mojave River bridge options is selected. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> With the implementation of avoidance/ minimization measures, impacts to Waters of the U.S. range from 4.32 acres to 4.70 acres, depending on which combination of variations and Mojave River bridge options is selected. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.
Plant Species	<ul style="list-style-type: none"> Could potentially affect alkali mariposa lily, white pygmy poppy, Booth's evening primrose, crowned muilla, and Mojave fish-hook cactus.. Would likely affect 16 other special-status plant species. Variations would have similar impacts. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> Same as Freeway/Expressway Alternative. Variations would have similar impacts. All rail connection options would likely result in greater impacts due to the larger footprint. 	Same as Freeway/ Expressway Alternative.	No impacts.

Table S-1 Summary of Major Potential Impacts from Alternatives

Environmental Resource	Potential Impacts				
	Freeway/ Expressway Alternative	Freeway/ Tollway Alternative	Freeway/ Expressway Alternative with HSR Feeder Service	Freeway/ Tollway Alternative with HSR Feeder Service	No Build Alternative
Animal Species	<ul style="list-style-type: none"> • Twenty (20) non-listed special-status wildlife species have the potential to occur within the project area. • Impacts to all non-listed special-status species would be low with implementation of avoidance, minimization, and mitigation measures, except the following: <ul style="list-style-type: none"> – Potentially substantial impact to raptor foraging habitat and burrowing owl. – Variations would have similar impacts. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Same as Freeway/Expressway Alternative • Variations would have similar impacts. • All rail connection options would likely result in greater impacts due to the larger footprint. 	Same as Freeway/ Expressway Alternative.	No impacts.
Threatened and Endangered Species	<ul style="list-style-type: none"> • Would have the potential to impact the golden eagle, Swainson’s hawk, and western yellow-billed cuckoo during construction. • Would impact desert tortoise and have the potential to impact Mohave ground squirrel. • Variations would have similar impacts, except: • Variation E would affect nesting habitat for the least Bell’s vireo and occupied critical habitat for the southwestern willow flycatcher. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Same as Freeway/Expressway Alternative. • Variations would have similar impacts, except the following: <ul style="list-style-type: none"> – Variation E for highway and rail would affect nesting habitat for the least Bell’s vireo and occupied critical habitat for the southwestern willow flycatcher. 	Same as Freeway/ Expressway Alternative.	No impacts.
Invasive Species	<ul style="list-style-type: none"> • Potential to spread invasive species to adjacent native habitats in the project area during construction. • Variations would have similar impacts. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Same as Freeway/Expressway Alternative. • Variations and rail connection options would have similar impacts. 	Same as Freeway/ Expressway Alternative.	No impacts.
Section 4(f)	<ul style="list-style-type: none"> • <i>De minimis</i> determination to four historic properties: National Trails Highway, ATSF Railroad, the BDSBL (only one tower would be relocated), and multicomponent resource consisting of the Mojave Trail, Mojave Road and Government Road (MR). • Some visual and air quality proximity impacts on the nearby parks during project construction and operation. • Variations would not result in a change in impacts, except that Variation E would avoid the <i>de minimis</i> impacts to the Westwinds Golf Course and Rockview Nature Park. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • <i>De minimis</i> determination to four historic properties: National Trails Highway, ATSF Railroad, BDSBL (7 towers would be relocated), and multicomponent resource consisting of the Mojave Trail, Mojave Road and Government Road (MR). • Some visual and air quality proximity impacts on the nearby parks during project construction and operation. • Noise and visual proximity impacts on St. Clair Parkway in Palmdale due to relocation of the rail tracks closer to the parkway. • Variations and rail connection options would not result in a change in impacts, except that Variation E (for highway and rail) would avoid the <i>de minimis</i> impacts to the Westwinds Golf Course and Rockview Nature Park. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	<ul style="list-style-type: none"> • No use and no impact to any Section 4(f) properties.

Table S-1 Summary of Major Potential Impacts from Alternatives

Environmental Resource	Potential Impacts				
	Freeway/ Expressway Alternative	Freeway/ Tollway Alternative	Freeway/ Expressway Alternative with HSR Feeder Service	Freeway/ Tollway Alternative with HSR Feeder Service	No Build Alternative
Cumulative Impacts	<ul style="list-style-type: none"> • Potential cumulative impacts to growth, farmland, emergency services, visual, and biological resources. • Variations would result in similar impacts. 	Same as Freeway/ Expressway Alternative.	<ul style="list-style-type: none"> • Impact to same species listed under the Freeway/Expressway Alternative. • Variations and rail connection options would not result in a change in impacts, except that Variation E with HSR would result in additional substantial impacts on the State and federally listed southwestern willow flycatcher and the least Bell's vireo species. 	Same as Freeway/ Expressway Alternative with HSR Feeder Service.	No impacts.

Avoidance, Minimization, and Mitigation Measures

The project will be designed to avoid and minimize impacts to environmental resources to the extent practicable. Standard conditions and mitigation measures have been identified to minimize impacts when avoidance is not possible. An Environmental Commitment Record will be prepared and approved as a condition to project approval.



Source: www.wikipedia.com
The community character along historic Route 66 would be maintained.



Source: <http://www.wildherps.com>.
Desert tortoise.

Coordination with Public and Other Agencies

Caltrans, in cooperation with Metro, has coordinated with numerous public agencies throughout the environmental process. There have been extensive outreach efforts as outlined in Chapter 5. These efforts started with scoping in September 2010, followed by progress meetings in April 2011, January 2012, February 2012, December 2012, July 2013, and July 2014.



Cities and towns in the project area are supportive of the HDC Project.

As part of the Coordination Plan conducted by Caltrans, the following agencies either have accepted or are being considered as Cooperating Agencies for this project.

Summary

- Federal Railroad Administration
- U.S. Federal Aviation Administration, Western Pacific Region
- U.S. Environmental Protection Agency, Region IX
- Advisory Council on Historic Preservation (ACHP)
- Federal Bureau of Prisons
- U.S. Army Corps of Engineers

Permits Required for the Project

Permits and approvals by agency that may be required for construction of the project are listed in Table S-2.

Table S-2 Project Permits and Approvals

Agency	Permit/Approval	Status
United States Fish and Wildlife Service (USFWS)	Biological Opinion	Threatened and Endangered Species Act Section 7 consultations are to be conducted following identification of a Preferred Alternative.
United States Army Corps of Engineers (USACE)	Clean Water Act Section 404 Permit for the discharge of dredge or fill materials into waters of the U.S.	Application to be submitted following identification of a Preferred Alternative.
Federal Emergency Management Agency (FEMA)	Conditional Letter of Map Revision and Letter of Map Revision	Coordination with FEMA during the design phase to ensure improvements are compatible with the floodplain.
Federal Highway Administration (FHWA)	Air Quality Conformity Determination	Before approval of the Final EIR/EIS, FHWA must make a finding that the project is consistent with requirements of the Clean Air Act (CAA).
Federal Aviation Administration (FAA)	FAA's Obstruction Evaluation/Airport Airspace Analysis process	Coordination with FAA during project design to ensure project features or mitigation measures would not obstruct airport/air space activities.
Department of Interior Bureau of Land Management	Paleontological Resource Use Permit	To be submitted for the potential to encounter paleontological resources on Bureau of Land Management property during construction.
California State Water Resources Control Board	Water Discharge Permit, approval of NOI to comply with General Construction Activity National Pollutant Discharge Elimination System (NPDES) Permit (Clean Water Act Section 402)	NOI to be submitted following identification of a Preferred Alternative and prior to construction.
California Department of Fish and Wildlife (CDFW)	Section 1602 Lake or Streambed Alteration Agreement	Section 1602 Notification is to be submitted and agreement obtained prior to the start of construction.
Region 6, Lahontan Regional Water Quality Control Board (RWQCB)	Water Quality Certification (Clean Water Act Section 401)	Application to be submitted following approval of a Preferred Alternative.

Table S-2 Project Permits and Approvals

Agency	Permit/Approval	Status
State Historic Preservation Officer (SHPO)	Approval of a Memorandum of Agreement (MOA) with FHWA	SHPO approval of the MOA will occur after a Preferred Alternative is identified prior to completion of the Final EIR/EIS.
Interested Native American Tribes	Section 106 of the National Historic Preservation Act (NHPA) to include, but not be limited to, determinations of eligibility, findings of effect, and future work that includes involvement with the MOA, Archaeological Monitoring Plan, and Data Recovery Plan	Native American Consultation for the HDC is ongoing.
Burlington Northern Santa Fe (BNSF) Railroad Company	Memorandum of Understanding (MOU) and a Construction and Maintenance Agreement between Caltrans and BNSF; approval of the proposed action, based on review of the Construction and Maintenance Agreement between Caltrans and BNSF	Prior to any construction within or above railroad ROW.
California Public Utilities Commission (CPUC)	General Order 131-D for relocation of electrical transmission lines between 50 and 20 kilowatts (kW); Certificate of Public Convenience and Necessity for relocations to electrical transmission lines and gas lines	Prior to any construction within or above railroad ROW; after certification of EIR/EIS and the filing of a Notice of Determination to complete the CEQA process.
Local Air Pollution Control Districts	Dust Control Permit and Approved Air Impact Assessment per Rule 9510, Indirect Source Review; Rule 8210, Limits to fugitive particulate matter emissions during construction activities	Permit to be acquired after project approval and prior to construction.
Utilities (e.g., power, water, gas, cable, communication)	Approvals to relocate, protect in place, or remove utility facilities	Prior to any construction activities that would affect utility facilities.
San Bernardino Flood Control District	Floodplain Encroachment Permit	During final design.

Unresolved Issues

The following issues are undergoing and would need to be resolved before the final environmental document is certified:

- Completion of Section 7 Consultation
- Completion of Section 106 Consultation
- Decision on Preferred Alternative
- Variation Decision on Palmdale Station Location

The following issues would need to be resolved before project implementation:

- Project funding
- Project phasing
- Public-Private Partnership (PPP) arrangement

Other Major Actions in the Proposed Project General Area

The following is a list of proposed major actions in the proposed project general area. A complete related project list is provided in Section 3.7, Cumulative Impacts.

- California High Speed Train (HST) System – The California High-Speed Rail Authority proposes a train system capable of operating at speeds in excess of 200 miles per hour (mph) on a fully grade-separated track serving the major metropolitan centers of California, including segments from Bakersfield to Palmdale and from Palmdale to Los Angeles.
- Route 395 Expressway – Caltrans will reconstruct U.S. Highway 395 (US 395) into a four-lane expressway and provide at-grade intersections for existing street crossings. Phase 1 will widen US 395 from SR-18/Palmdale Road to Chamberlaine Way in Adelanto, Phase 2 will widen US 395 from Chamberlaine Way to Desert Flower Road, and Phase 3 will involve work from I-15 to SR-18.
- XpressWest (formerly DesertXpress) – The Federal Railroad Administration is the lead agency for construction, operation, and maintenance of a high-speed passenger train between Victorville and Las Vegas, including stations and maintenance facilities at both ends of the rail alignment.
- State Route 138 Safety Improvement Project – Caltrans proposes to widen the shoulders from 2 to 8 feet, provide 2-foot-wide rumble strips near the edge of traveling roadway in each direction and provide 4-foot-wide median buffer with rumble strips on SR-138 between SR-138/SR-18 Junction (PM 69.3) and the San Bernardino County Line (PM 75.0). The Mitigated Negative Declaration was issued in April 2013.
- Palmdale Hybrid Power Project – The City of Palmdale proposes a 570-megawatt (MW) electric generating facility that combines the ultra-high efficiency clean-burning natural gas technology with solar energy to be located near Palmdale Regional Airport.
- Solar Project – The City of Adelanto is the lead agency for a 27-MW photovoltaic facility proposed on 205 acres at the southeast corner of Rancho and Emerald roads.
- Victorville 2 Hybrid Power Project – The City of Victorville proposes a hybrid natural gas-fired and solar thermal plant on three areas totaling 388 acres north of the Southern California Logistics Airport (SCLA).
- High Desert Detention Center – The City of Adelanto proposes construction of a 2,200-bed correctional facility at the northeast corner of Rancho Road and Raccoon Avenue. Phase 1 is complete, while Phases 2 and 3 are anticipated to be constructed in 2017.
- Adelanto Gateway Logistics Center – The City of Adelanto proposes an industrial park on 400 acres across from the SCLA at Air Expressway and Adelanto Road.
- Global Access (SCLA Development) – The City of Victorville proposed this multi-phase industrial development at the SCLA consisting of 43.5 million square feet for SCLA, 65 million square feet for the Southern California Logistics Centre, and 60 million square feet for the Southern California Rail Complex

Summary

- Desert Gateway Specific Plan – The City of Victorville proposes a 10,203-acre community at the interchange of the HDC and I-15, consisting of 26,100 housing units and other land uses (i.e., commercial, mixed-use, industrial and open space).

Summary

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