California High-Speed Rail Authority

Burbank to Los Angeles Project Section

Aesthetics and Visual Quality Technical Report

May 2020

CALIFORNIA High-Speed Rail Authority

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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ACRONYMS AND ABBREVIATIONS

Amtrak	National Railroad Passenger Corporation
Authority	California High-Speed Rail Authority
CEQA	California Environmental Quality Act
CMF	(Metrolink) Central Maintenance Facility
CPA	Community Plan Area
EIR	environmental impact report
EIS	environmental impact statement
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
HSR	high-speed rail
I	Interstate
IAMF	impact avoidance and minimization feature
KVP	key viewpoint
LAUS	Los Angeles Union Station
LMF	light maintenance facility
LOSSAN	Los Angeles-San Diego-San Luis Obispo (rail corridor)
Metro	Los Angeles County Metropolitan Transportation Authority
MOIF	maintenance of infrastructure facility
MOIS	maintenance of infrastructure siding facility
OCS	overhead contact system
PTC	positive train control
RSA	resource study area
SAA	Supplemental Alternatives Analysis
SR	State Route
TPSS	traction power supply station
UPRR	Union Pacific Railroad
U.S.	United States
U.S.C.	United States Code

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EXECUTIVE SUMMARY

This report documents efforts to identify potential visual effects that may occur as a result of construction and operations of the Burbank to Los Angeles Project Section of the California High-Speed Rail (HSR) Project.

The California High-Speed Rail Authority (Authority) proposes to construct, operate, and maintain an electric-powered HSR system in California. When completed, it will run from San Francisco to Los Angeles in under three hours, at speeds in excess of 200 miles per hour. The system will eventually extend to Sacramento and San Diego, with 800 miles of track and up to 24 stations.

The Burbank to Los Angeles Project Section is approximately 14 miles long and would travel through the cities of Burbank, Glendale, and Los Angeles on an existing railroad corridor. It would be located within a narrow and constrained urban environment, crossing major streets and highways, with portions adjacent to the Los Angeles River. The Burbank to Los Angeles Project Section would include HSR stations at Hollywood Burbank Airport and at Los Angeles Union Station (LAUS), as well as power substations along the alignment. The HSR alignment would be entirely grade-separated so that the proposed HSR service would not interrupt or interface with other modes of transport, including vehicles, bicycles, and pedestrians.

The HSR project (proposed project) would result in low to moderate visual changes throughout the resource study area (RSA). Built elements associated with construction and operation of the proposed project would generally alter the viewsheds represented by the 25 key viewpoints (KVP) selected for this analysis by adding, altering, or removing certain visual elements, as presented and discussed in this technical report. The most substantial visual changes would occur as a result of proposed grade separations. Although visual changes may be substantial and may have adverse effects in some areas, depending on the sensitivity, position, and angle of the viewer, these changes would not contribute to a change in the overall visual quality throughout the Burbank to Los Angeles Project Section. Under the HSR Build Alternative, no changes are proposed that would substantially disrupt scenic vistas, remove or destroy character-defining features, alter designated scenic corridors or views from State of California Designated Scenic Highways, or otherwise substantially compromise significant visual resources found throughout the Burbank to Los Angeles Project Section.

With implementation of the applicable design guidelines and regulations, such as the Authority's *Urban Design Guidelines for the California High Speed Train Project* (Authority 2011a) (Urban Design Guidelines) created for the project in 2011 and Impact Avoidance and Minimization Features (IAMF), adverse visual impacts that negatively affect existing viewer groups would be minimized. Furthermore, proposed project elements would be designed in keeping with the character of the existing rail corridor.

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1 INTRODUCTION

1.1 California High-Speed Rail System Background

The California High-Speed Rail Authority (Authority) is responsible for planning, designing, building, and operating the first high-speed passenger rail service in the nation. The California High-Speed Rail (HSR) System will connect the mega-regions of the state, contribute to economic development and a cleaner environment, create jobs, and preserve agricultural and protected lands. When it is completed, it will run from San Francisco to the Los Angeles basin in under three hours at speeds capable of exceeding 200 miles per hour. The system will eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations, as shown on Figure 1-1.[1] In addition, the Authority is working with regional partners to implement a statewide rail modernization plan that will invest billions of dollars in local and regional rail lines to meet the state's 21st century transportation needs.

The California HSR System is planned to be implemented in two phases. Phase 1 would connect San Francisco to Los Angeles and Anaheim via the Pacheco Pass and the Central Valley.[2] Phase 2 would connect the Central Valley to Sacramento, and another extension is planned from Los Angeles to San Diego. The California HSR System would meet the requirements of Proposition 1A,[3] including the requirement for a maximum nonstop service travel time between San Francisco and Los Angeles of two hours and 40 minutes.

1.2 Burbank to Los Angeles Project Section Background

The Burbank to Los Angeles Project Section would be a critical link in Phase 1 of the California HSR System connecting the San Francisco Bay Area to the Los Angeles Basin. The Authority and the Federal Railroad Administration (FRA) selected the existing railroad right-of-way as the corridor for the preferred alternative between Sylmar and Los Angeles Union Station (LAUS) in the 2005 *Statewide Program Environmental Impact Report/Environmental Impact Statement* (EIR/EIS) (Authority and FRA 2005). The Sylmar to Los Angeles railroad corridor includes Burbank, which is southeast of Sylmar. Therefore, the Project EIR/EIS for the Burbank to Los Angeles Project Section focuses on alignment alternatives along the existing Sylmar to Los Angeles railroad corridor.

The Burbank to Los Angeles Project Section was initially considered as part of the Palmdale to Los Angeles Project Section. The Authority and FRA announced their intention to prepare a joint EIR/EIS for the Palmdale to Los Angeles Project Section in March 2007. On March 12, 2007, the Authority released a Notice of Preparation, and the FRA published a Notice of Intent on March 15, 2007. Over the next several years, the Authority and FRA conducted scoping and prepared alternatives analysis documents for that section. The 2010 Palmdale to Los Angeles Preliminary Alternatives Analysis recommended alignment alternatives and station options for the Palmdale to Los Angeles Project Section based on the program-level corridor selected in 2005. The 2011 Palmdale to Los Angeles Supplemental Alternatives Analysis (SAA) focused specifically on the subsections from the community of Sylmar to LAUS, and reevaluated the alternatives and station options. In June 2014, the Authority published a Palmdale to Los Angeles SAA Report, which introduced the concept of splitting the Palmdale to Los Angeles Project Section into two sections. On July 24, 2014, the Authority released a Notice of Preparation and the FRA published a Notice of Intent to prepare EIR/EIS documents for the Palmdale to Burbank and Burbank to Los Angeles project sections.

[1] The alignments on Figure 1-1 are based on Authority/FRA decisions made in the 2005, 2008, and 2012 Programmatic EIR/EIS documents.

[2] Phase 1 may be constructed in smaller operational segments, depending on available funds.

[3] http://www.catc.ca.gov/programs/hsptbp.htm.

Source: California High-Speed Rail Authority and Federal Railroad Administration (2017)

Figure 1-1 California High-Speed Rail System

One of the main reasons for the project section split was the Initial Operating Section[4] concept and its interim terminus in the San Fernando Valley, which was discussed in the Authority's 2012 and 2014 Business Plans. Additionally, the Authority and FRA determined that separate environmental documents would be more beneficial to address environmental impacts and conduct stakeholder outreach. The key environmental resources likely to be impacted were different between the two sections, and separate environmental documents better supported project phasing and sequencing.

In April 2016, the Authority released the Burbank to Los Angeles SAA, which refined the previously studied alignments. Additionally, the Authority released the 2016 Palmdale to Burbank SAA, which refined the concepts at the Burbank Airport Station and the alignments from south of the Burbank Airport Station to Alameda Avenue in the City of Burbank. The 2016 Burbank to Los Angeles SAA Report proposed to evaluate one build alternative south of Alameda Avenue to LAUS. The subsection between the Burbank Airport Station and Alameda Avenue was studied in the 2016 Palmdale to Burbank SAA, which proposed two station options and two alignment options. Table 1-1 summarizes the conclusions of the two SAA reports.

Table 1-1 2016 Supplemental Alternatives Analysis Recommendations for the Burbank to Los Angeles Project Section

Alternative	Alignment/ Station	Area/Station	Alignment/Station Type
No Project Alternative			
HSR Build Alternative	Alignments	Burbank Airport Station to Alameda Avenue	Alignment Option A (Surface) Alignment Option B (Below-Grade and Surface)
		Alameda Avenue to LAUS	Surface Alignment
	Stations	Burbank Airport Station	Station Option A (Surface) Station Option B (Below-Grade)
		LAUS	Surface Station Option

Sources: California High-Speed Rail Authority and Federal Railroad Administration (2016). "Palmdale to Burbank Supplemental Alternatives Analysis"; "Burbank to Los Angeles Supplemental Alternatives Analysis."
HSR = High-Speed Rail
LAUS = Los Angeles Union Station

Since the release of the two SAA documents in 2016, the design has undergone further refinements. The surface options from Burbank Airport to Alameda Avenue (Alignment Option A and Station Option A) have been eliminated from consideration. The below-grade options (Alignment Option B and Station Option B) have been refined in order to minimize potential environmental effects and reduce cost. Therefore, this environmental document evaluates one build alternative for the project section.

FRA requires logical termini for project level analysis. The Authority has determined that logical termini are defined by stations, with Burbank Airport Station as the northern terminus and LAUS as the southern terminus for the Burbank to Los Angeles Project Section. These two stations are also termini for the Palmdale to Burbank and Los Angeles to Anaheim Project Sections. The analysis for the Burbank Airport Station is consistent with what is included in the Palmdale to Burbank EIR/EIS. Similarly, the analysis for LAUS is consistent with what is included in the Los Angeles to Anaheim EIR/EIS.

[4] The Initial Operating Section was the first segment planned for construction and operations, as outlined in the 2014 Business Plan. The segment permitted operation of HSR service from Merced to the San Fernando Valley. The 2016 Business Plan revised the initial segment termini to the Central Valley and Silicon Valley.

1.3 Project Description Purpose

This project description describes the project for use during environmental impact analyses to complete technical reports to inform the Burbank to Los Angeles Project Section EIR/EIS. The basis of this project description is the HSR Build Alternative as defined in the *Burbank to Los Angeles Project Section Draft Preliminary Engineering for Project Definition* document. This project description describes the physical design elements of the project and does not define all operating plans and scenarios, construction plans, or capital and operating costs. This project description will serve as the basis for Chapter 2, Alternatives, of the project EIR/EIS. Chapter 2 of the EIR/EIS will include additional detail beyond the content of this report.

This report documents the detailed aesthetics and visual quality analysis conducted for the Burbank to Los Angeles Project Section of the California HSR System. This report includes the following:

- A brief description of the project and the alternatives under study
- A discussion of the statutes and regulations pertinent to aesthetics and visual quality
- A description of the existing conditions, including aesthetics and visual quality in the study area
- A description of the analytical methodologies and assumptions used for this study
- The results of these analyses, including effects or benefits resulting from the project

2 PROJECT DESCRIPTION

The Burbank to Los Angeles Project Section of the California HSR System is approximately 14 miles long, crossing the cities of Burbank, Glendale, and Los Angeles on an existing railroad corridor. HSR for this project section would be within a narrow and constrained urban environment, crossing major streets and highways and, in some portions, adjacent to the Los Angeles River. The Los Angeles County Metropolitan Transportation Authority (Metro) owns the railroad right-of-way, the Southern California Regional Rail Authority owns the track and operates the Metrolink commuter rail service, the National Railroad Passenger Corporation (Amtrak) provides intercity passenger service, and the Union Pacific Railroad (UPRR) holds track access rights and operates freight trains.

This section describes the No Project Alternative and the HSR Build Alternative to be evaluated in the Burbank to Los Angeles Project EIR/EIS.

2.1 No Project Alternative

Under the No Project Alternative, the California HSR System would not be built. The No Project Alternative represents the condition of the Burbank to Los Angeles Project Section as it existed in 2015, and as it would exist without the HSR System at the horizon year (2040).

The No Project Alternative assumes that all currently known programmed and funded improvements to the intercity transportation system (highway, transit, and rail) and reasonably foreseeable local land development projects (with funding sources identified) would be developed by 2040. The No Project Alternative is based on a review of the following: regional transportation plans for all modes of travel; the State Transportation Improvement Program; the Federal Transportation Improvement Program; Southern California Regional Rail Authority strategic plans, transportation plans and programs for Los Angeles County; airport master plans; and city and county general plans.

2.2 High-Speed Rail Build Alternative

The HSR Build Alternative includes new and upgraded track, maintenance facilities, grade separations, drainage improvements, communications towers, security fencing, passenger train stations, and other necessary facilities to introduce HSR service into the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Corridor from near Hollywood Burbank Airport to LAUS. In portions of the alignment, new and upgraded tracks would allow other passenger trains to share tracks with the HSR system. HSR stations would be located near Hollywood Burbank Airport and at LAUS. The alignment would be entirely grade-separated at crossings, meaning that roads, railroads, and other transport facilities would be located at different heights so the HSR system would not interrupt or interface with other modes of transport, including vehicle, bicycle, and pedestrian.

For most of the project section, the HSR alignment would be within the existing railroad right-of-way, which is typically 70 to 100 feet wide. The HSR alignment includes northbound and southbound electrified tracks for high-speed trains. The right-of-way would be fenced to prohibit pedestrian and public or unauthorized vehicle access.

The project footprint (the area required to build, operate, and maintain HSR service) is based on the following elements of design: station areas, hydrology, track, roadway, structures, systems, and utilities.

Figure 2-1 shows an overview of the Burbank to Los Angeles Project Section.

Source: California High-Speed Rail Authority (2019)

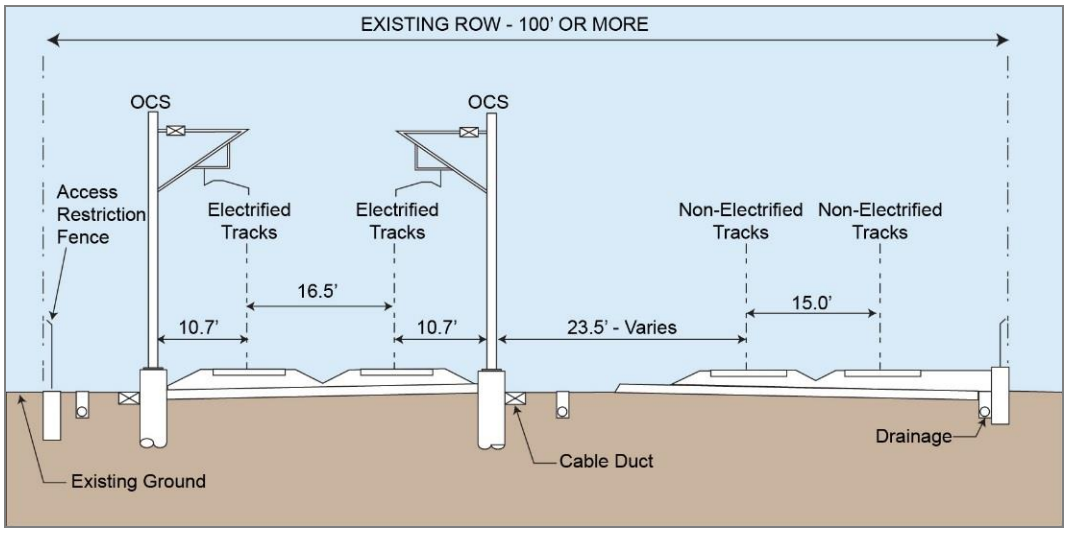
Figure 2-1 Overview of Burbank to Los Angeles Project Section

The Burbank to Los Angeles Project Section includes a combination of at-grade, below-grade, and retained-fill track, depending on corridor and design constraints. The at-grade and retained-fill portions of the alignment would be designed with structural flexibility to accommodate shared operations with other passenger rail operators. Throughout most of the project section (between Alameda Avenue and State Route [SR] 110), two new electrified tracks would be placed along the west side of the existing railroad right-of-way and would be useable for HSR and other passenger rail operators. The existing non-electrified tracks would be realigned closer to the east side of the existing right-of-way, for a total of four tracks; these realigned, non-electrified tracks would be usable for freight and other passenger rail operators, but not for HSR. Figure 2-2 illustrates the placement of the new electrified tracks and realigned, non-electrified tracks relative to the existing tracks.

Source: California High-Speed Rail Authority (2019)

Figure 2-2 New Electrified and Non-Electrified Tracks Within Existing Right-of-Way

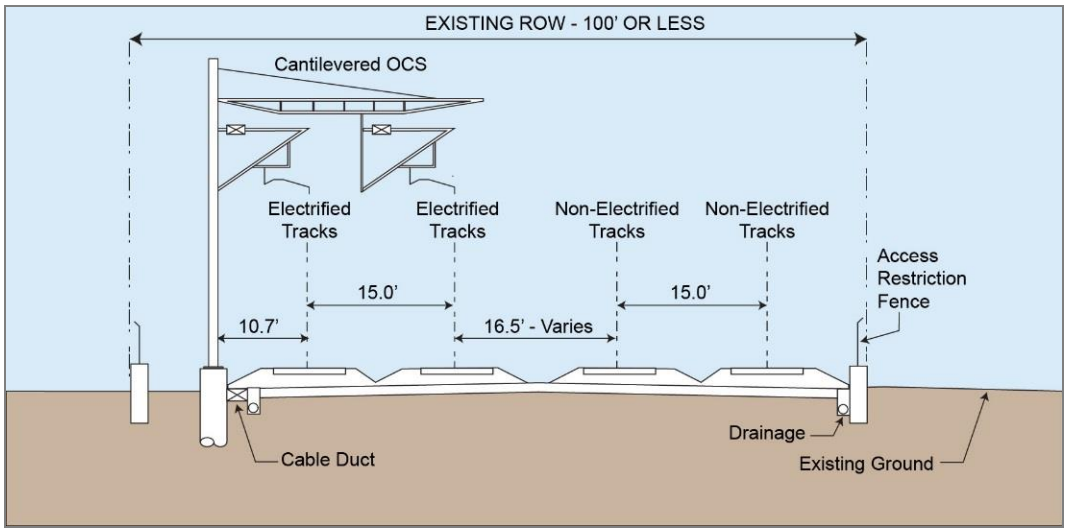
Throughout most of the Burbank to Los Angeles Project Section, the electrified track centerline and the non-electrified track centerline would have a minimum separation of 23.5 feet, and the northbound and southbound electrified tracks would have a separation of 16.5 feet, following the Authority's *Technical Memorandum 1.1.21 Typical Cross Sections for 15% Design*. These standard separations are illustrated on Figure 2-3.



Source: California High-Speed Rail Authority (2019)
This illustration shows the standard separations between the electrified and non-electrified tracks in areas where the railroad right-of-way is at least 100 feet wide. (Figure not to scale.)

Figure 2-3 Standard Track Separations within Non-Constrained Right-of-Way

However, in several areas of the corridor, the right-of-way is less than 100 feet wide, a threshold that constrains the design. As a result, reduced track separations were used in these constrained areas in order to stay within the existing right-of-way to the greatest extent possible and thus minimize property impacts. The reduced separations between the electrified and non-electrified track centerlines would be a minimum of 16.5 feet, and between the two electrified track centerlines would be 15 feet. The narrower cross-section separations are illustrated on Figure 2-4.



Source: California High-Speed Rail Authority (2019)
This illustration shows the narrow separations between the electrified and non-electrified tracks, which would minimize property impacts in areas where right-of-way is constrained. The reduced separations are applied in areas where the railroad right-of-way is less than 100 feet wide. (Figure not to scale.)

Figure 2-4 Reduced Track Separations within Constrained Right-of-Way

2.2.1 HSR Build Alternative Description

The following section describes the HSR Build Alternative in greater detail. Figure 2-5 (Sheets 1 to 3) shows the HSR Build Alternative, including the HSR alignment, new/modified non-electrified tracks, and roadway crossings.

The HSR alignment would begin at the underground Burbank Airport Station and would consist of two new electrified tracks. After exiting the underground station, the alignment would travel southeast beneath the Hollywood Burbank Airport runway in a tunnel, which would be constructed using the sequential excavation method without any disruptions to airport operations. The alignment from south of the airport to where it would join the Metrolink Ventura Subdivision would be constructed as cut-and-cover, and the alignment would then transition to a trench within the Metrolink Ventura Subdivision. The existing Metrolink Ventura Subdivision tracks would be realigned north within the existing right-of-way, and an existing UPRR siding track between Buena Vista Street and Beachwood Drive would be realigned north of the relocated Metrolink Subdivision tracks within the existing right-of-way. These non-electrified tracks would remain at-grade. The trench, which would be south of and parallel to the relocated non-electrified tracks, would be dedicated for HSR tracks only. Figure 2-6, Figure 2-7, and Figure 2-8 depict the typical cross-sections of the below-grade portion of the alignment. During construction of the below-grade alignment, shoofly tracks would be provided to support Metrolink operations. The proposed shoofly tracks would be aligned between Hollywood Way and Buena Vista Street outside the existing right-of-way and would result in temporary roadway impacts to Vanowen Street.

The HSR tracks would transition from the trench and emerge to at-grade within the existing railroad right-of-way near Beachwood Drive in the City of Burbank Near Beachwood Drive, the HSR tracks would curve south out of the existing railroad right-of-way and cross Victory Place on a new railroad bridge, which would be directly south of the existing Victory Place bridge. South of Burbank Boulevard, the HSR tracks would re-enter the railroad right-of-way and run parallel to the Metrolink Antelope Valley Subdivision tracks. Between Burbank Boulevard and Magnolia Boulevard, several UPRR industry tracks west of the right-of-way would be removed.

Continuing south, the HSR alignment would pass the Downtown Burbank Metrolink Station, which would be modified. HSR tracks would be placed within the existing parking lot west of the southbound platforms, and new pedestrian connections and relocated parking would be provided. Section 2.6.1 provides more details on design modifications for the Downtown Burbank Metrolink station.

Source: California High-Speed Rail Authority (2019)

Figure 2-5 HSR Build Alternative Overview

(Sheet 1 of 3)

Source: California High-Speed Rail Authority (2019)

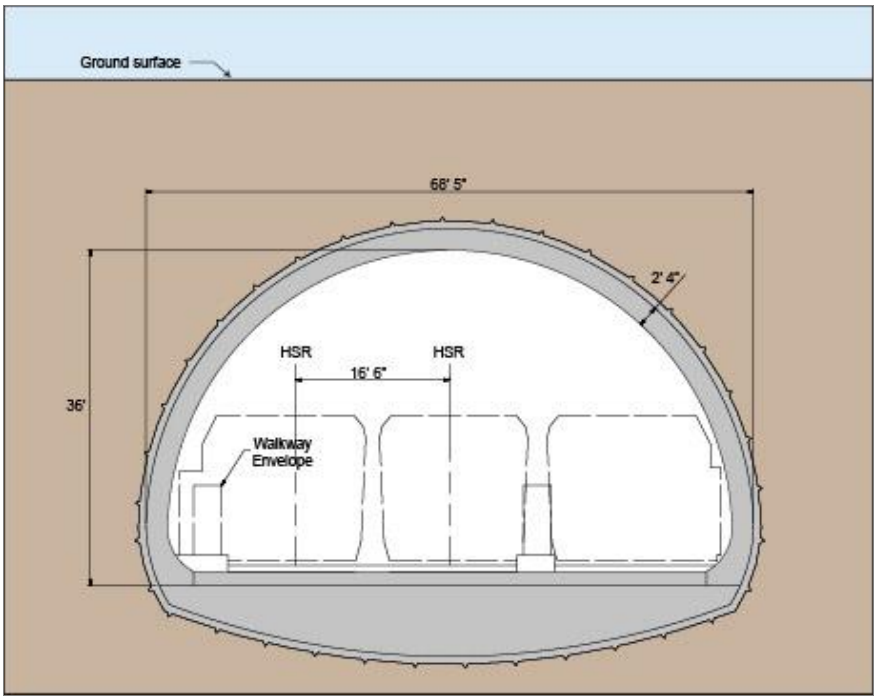
Figure 2-5 HSR Build Alternative Overview

(Sheet 2 of 3)

Source: California High-Speed Rail Authority (2019)

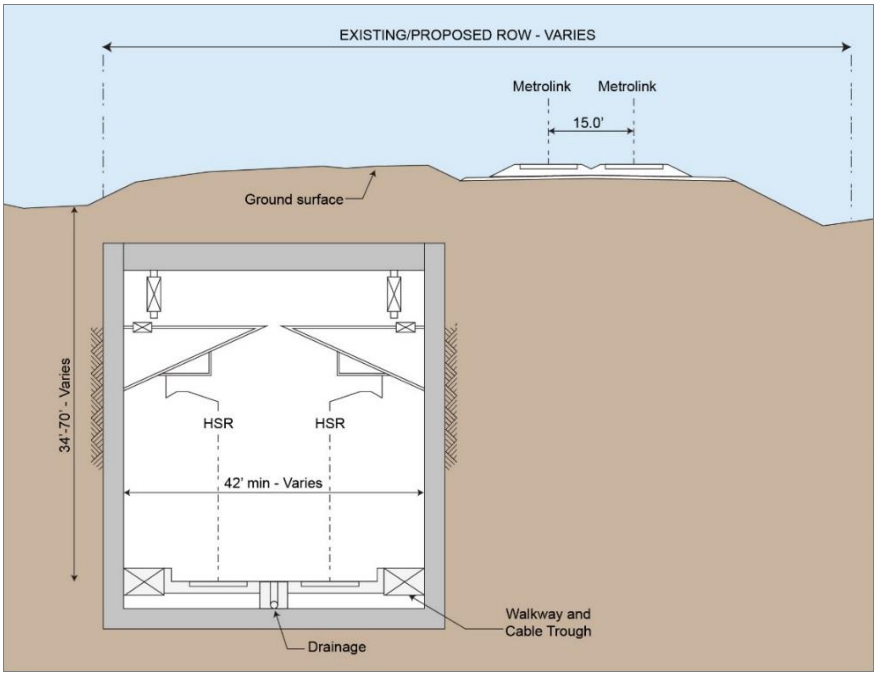
Figure 2-5 HSR Build Alternative Overview

(Sheet 3 of 3)



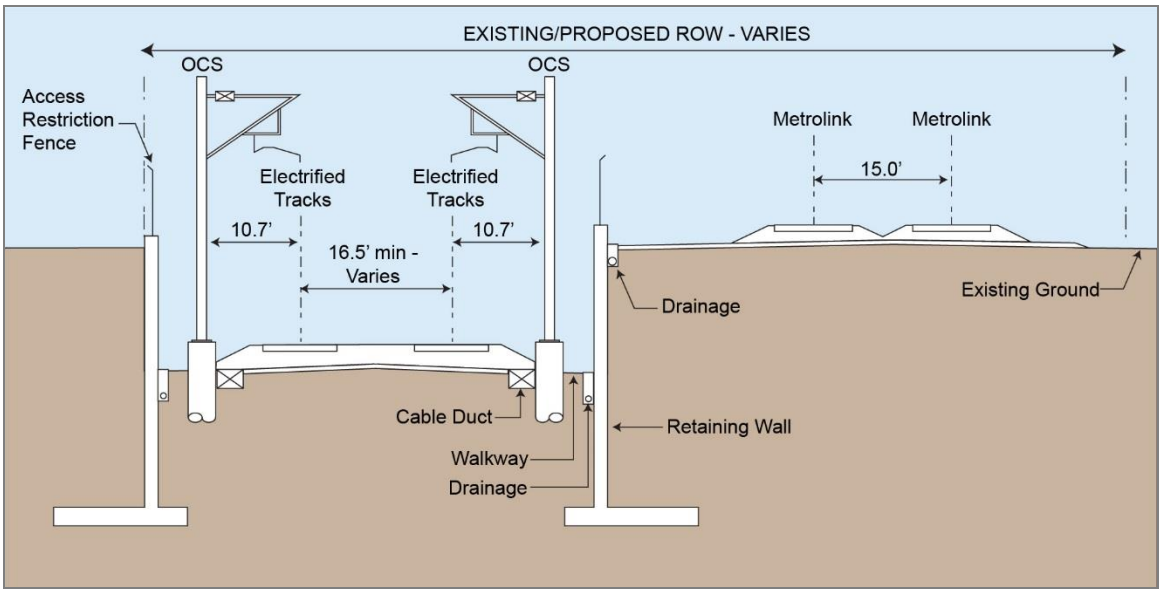
Source: California High-Speed Rail Authority (2019)

Figure 2-6 Typical Tunnel Cross-Section



Source: California High-Speed Rail Authority (2019)

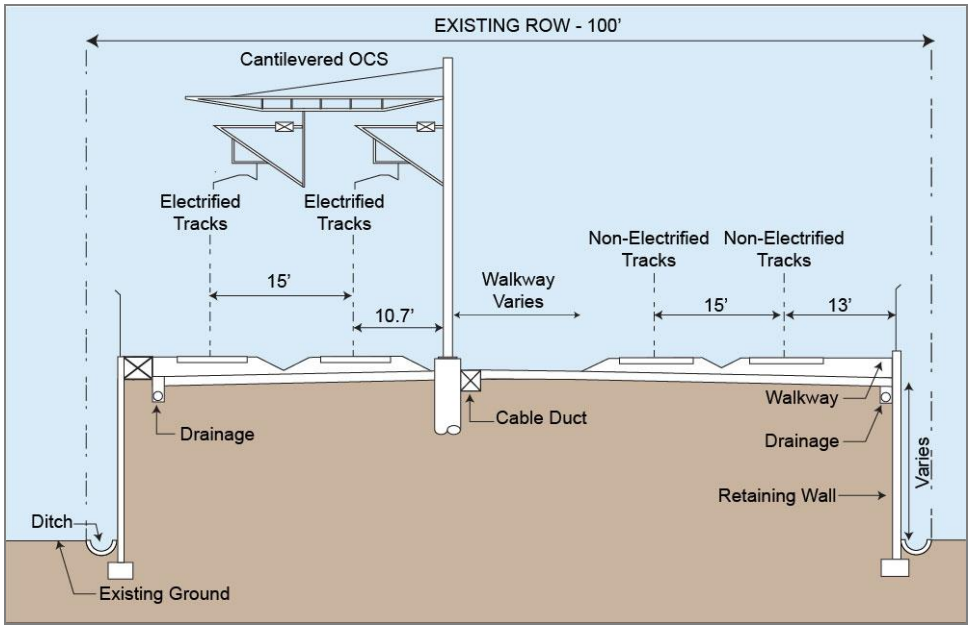
Figure 2-7 Typical Cut-and-Cover Tunnel Cross-Section



Source: California High-Speed Rail Authority (2019)

Figure 2-8 Typical Trench Cross-Section

Between Olive Avenue to the north end of the Metrolink Central Maintenance Facility (CMF), the existing non-electrified tracks would be shifted east within the right-of-way to accommodate the addition of the electrified tracks within the right-of-way. Throughout this area, both sets of tracks would be at-grade, with a retained fill segment between Western Avenue and SR 134. Figure 2-9 shows a typical cross-section of the alignment on retained fill.

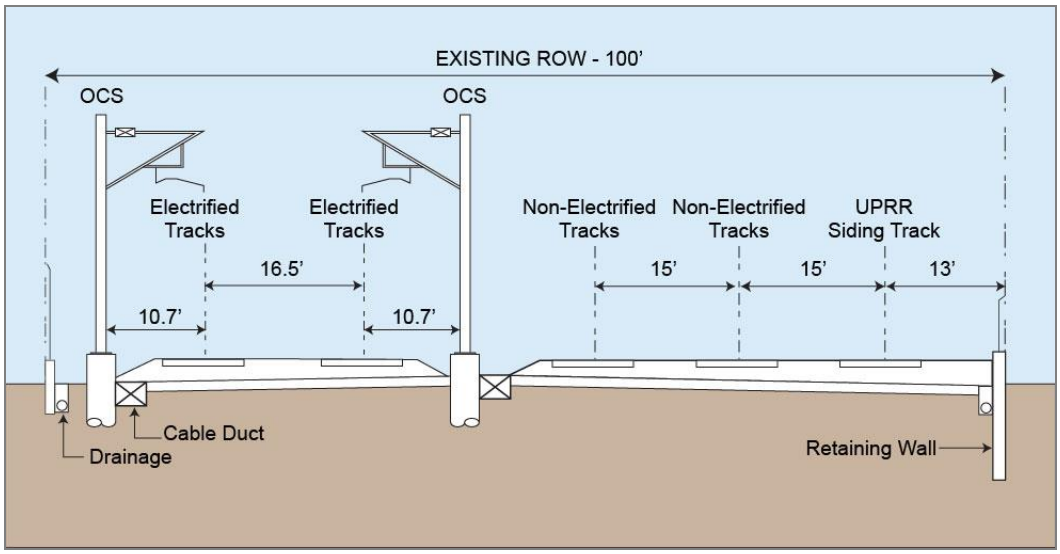


Source: California High-Speed Rail Authority (2019)

Figure 2-9 Typical Retained-Fill Cross-Section

The alignment would cross Verdugo Wash, where an existing railroad bridge would be rebuilt as a new clear-span structure, to accommodate the additional set of electrified tracks. The alignment

would continue south within the existing railroad right-of-way, which follows the Glendale and Los Angeles city borders. Between SR 134 and Chevy Chase Drive, a UPRR siding track would be realigned to the east of the non-electrified tracks, for a total of five tracks within the right-of-way through this area. This siding track is currently located at the Metrolink Central Maintenance CMF but would need to be relocated to accommodate HSR at the CMF. Figure 2-10 shows the typical cross-section for this area.



Source: California High-Speed Rail Authority (2019)

Figure 2-10 Typical Cross-Section Between State Route 134 and Chevy Chase Drive

The alignment would pass by the Glendale Metrolink Station (originally known as the Southern Pacific Railroad Depot), a known historical resource listed on the National Register of Historic Places and located north of Glendale Boulevard. No modifications would be needed for the Glendale Metrolink Station. At Tyburn Street, the alignment would enter the City of Los Angeles. Continuing south, the two sets of tracks would diverge at the north end of the Metrolink CMF. The electrified tracks would travel along the west side of the CMF, and the non-electrified, mainline tracks would travel along the east side of the facility.

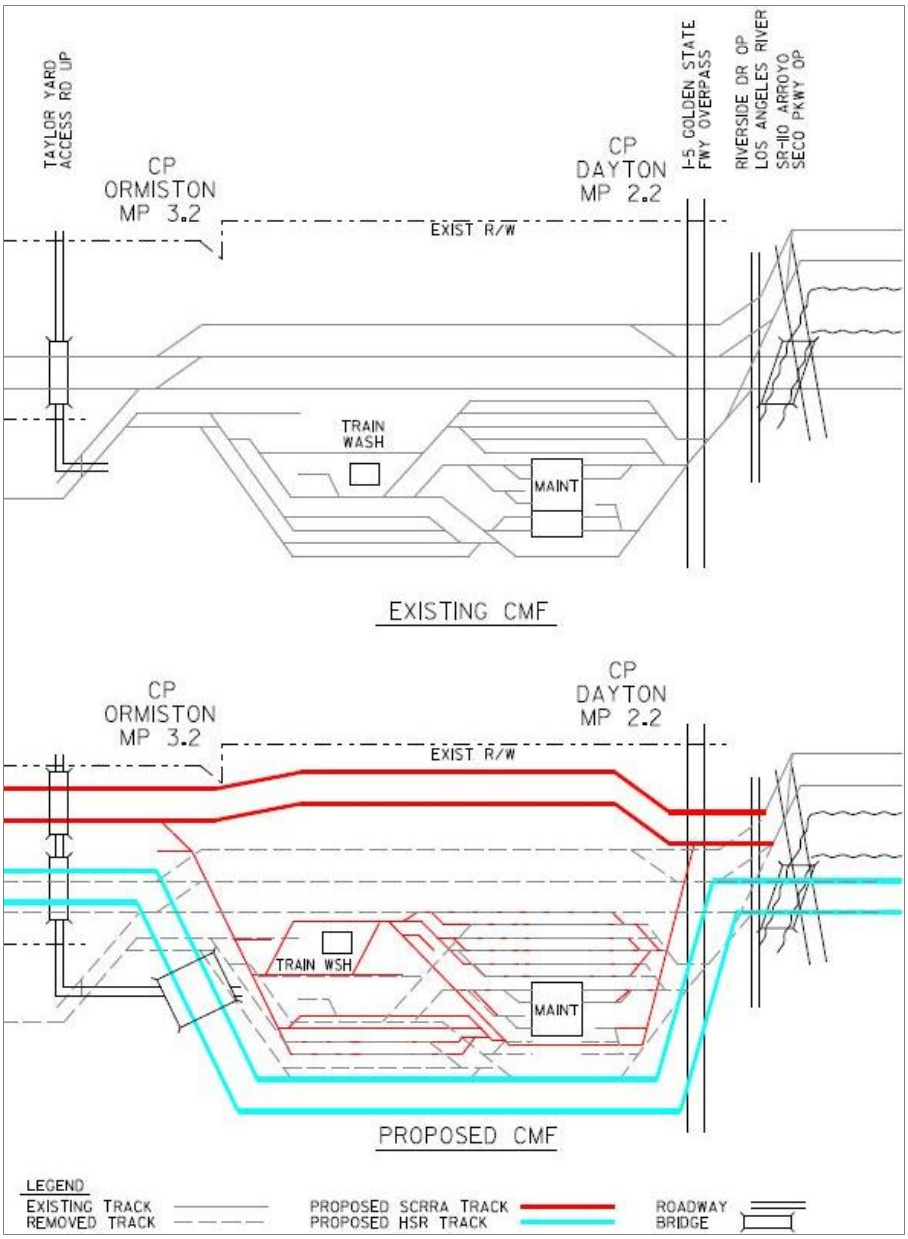
The CMF is Metrolink's major daily servicing location and maintenance facility in the region. The Burbank to Los Angeles Project Section proposes reconfiguring the various yard and maintenance facilities within the CMF to accommodate HSR, while maintaining as many of the existing yard operations as possible. Figure 2-11 displays a schematic diagram of the existing CMF and the proposed changes, which include new mainline-to-yard track connections, partial demolition of the existing maintenance shop, a revised roadway network with reconfigured parking areas, track relocation shifts, and construction to provide additional storage capacity. Additionally, several facilities would need to be relocated or reconstructed within the CMF, including a train washing/reclamation building, a yard pump house, and two service and inspection tracks. Utilities would also need to be relocated with the CMF, including domestic and fire water, underdrains and reconstructed catch basins, power facilities, fueling facilities and storage tanks, and sanitary sewer systems. The proposed design would not be able to accommodate wheel truing operations or progressive maintenance bays; these would relocate to another Metrolink facility. All other facilities and infrastructure would remain in place. The construction work at the CMF would be phased to minimize the disruption to the existing operations and to maintain the key operational facilities.

At the south end of the CMF, the two electrified and two non-electrified tracks would converge briefly within the right-of-way and then diverge again south of Figueroa Street. The electrified

tracks would cross over to the west bank of the Los Angeles River on the existing Metrolink Downey Bridge. The existing tracks on the Downey Bridge would be electrified, which would allow for both HSR and passenger rail operations. The non-electrified tracks would remain on the east bank of the Los Angeles River and cross the Arroyo Seco on an existing railroad bridge, which would not require modifications. These non-electrified tracks would connect with the existing tracks on the east bank, which currently serve UPRR and nonrevenue trains. An illustrative cross-section for this area is shown on Figure 2-12.

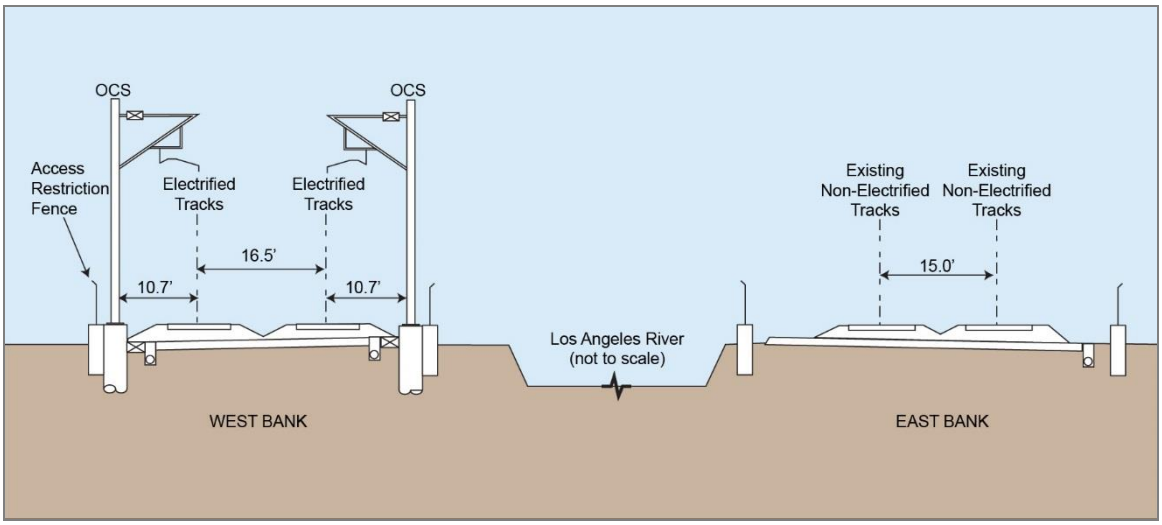
South of Main Street, on the east bank of the river, the existing tracks would be modified at Mission Junction to be used by freight and passenger rail. They would cross the Los Angeles River on the existing Mission Tower bridge to join the electrified tracks within the railroad right-of-way. The existing Mission Tower bridge has two tracks, but currently only one track is functional and used by Metrolink. The HSR Build Alternative would replace the trackwork to conform to the most current design standards and specifications, which may require a retrofit to the bridge.

The two sets of tracks would continue south to terminate at LAUS. The electrified tracks and HSR station platforms would be located on the west side of the station, while the non-electrified tracks would merge with the Metrolink and Amtrak tracks. The configuration at LAUS is described in further detail in Section 2.3.2.



Source: Burbank to Los Angeles Draft Preliminary Engineering for Project Description Design Submittal (2019)

Figure 2-11 Diagram of Existing and Proposed Metrolink Central Maintenance Facility



Source: California High-Speed Rail Authority (2019)
The electrified tracks would cross the Los Angeles River just north of State Route 110 and run along the west bank of the river. The non-electrified tracks would run along the east bank of the river. (Figure not to scale.)

Figure 2-12 Typical Cross-Section from State Route 110 to Mission Junction

2.2.2 Roadway Crossings

The HSR Build Alternative would cross a total of 34 roadways, 15 of which would require modifications. Figure 2-5 shows the crossings throughout the project section, and Table 2-1 lists their configurations before and after the introduction of the HSR Build Alternative.

Modifications to existing crossings

- Victory Place: a new bridge for the HSR tracks would be constructed directly south of the existing railroad bridge over Victory Place, and the roadway would be lowered to cross under the new bridge.
- Burbank Boulevard: the roadway bridge would be reconstructed to cross over the tracks, and Burbank Boulevard would be raised in elevation on the west side.
- Alameda Avenue: the railroad bridge would be reconstructed to be wider.
- Colorado Street: the railroad bridge would be reconstructed to be wider.
- Los Felix Boulevard: the railroad bridge would be reconstructed to be wider, and the roadway would be lowered slightly
- Glendale Boulevard: the railroad bridge would be reconstructed to be wider, and the roadway would be lowered slightly
- Kerr Road: the railroad bridge would be reconstructed to be wider, and the roadway would be lowered slightly

New grade separations

- Buena Vista Street: the crossing would be modified and remain at-grade for Metrolink and UPRR tracks, but a new undercrossing would be constructed to grade-separate the HSR tracks only from the roadway.
- Sonora Avenue: a new roadway undercrossing would be constructed, with the tracks slightly raised on retained fill and the roadway slightly lowered (see Section 2.6).
- Grandview Avenue: a new roadway undercrossing would be constructed, with the tracks slightly raised on retained fill and the roadway slightly lowered (see Section 2.6).

- Flower Street: a new roadway undercrossing would be constructed, with the tracks slightly raised on retained fill and the roadway slightly lowered (see Section 2.6).
- Goodwin Avenue: the road currently does not cross the railroad right-of-way, but the project would grade-separate it as a new roadway undercrossing (see Section 2.6).
- Main Street: a new roadway bridge would be constructed north of the existing Main street bridge, which would cross the railroad right-of-way and the Los Angeles River (see Section 2.6).

Closures

- Chevy Chase Drive: the roadway would be closed, and a new pedestrian undercrossing would be provided (see Section 2.6).
- Private driveway: a driveway that currently provides access to a Los Angeles Department of Water and Power facility parking lot would be closed, and the Los Angeles Department of Water and Power parking would be relocated to a new facility on Main Street.

Table 2-1 Roadway Crossings within the Burbank to Los Angeles Project Section

Roadway	Current Crossing Configuration	Proposed Crossing Configuration[1]
Buena Vista Street	At-Grade*	**At-Grade* (modified)** **Undercrossing** (new)**
Victory Place	Undercrossing"	Undercrossing* **Undercrossing (new)**
Burbank Boulevard	Overcrossing	**Overcrossing (modified)**
Magnolia Boulevard	Overcrossing	Overcrossing
Olive Avenue	Overcrossing	Overcrossing
Interstate 5	Overcrossing	Overcrossing
Alameda Avenue	Undercrossing	**Undercrossing (modified)**
Western Avenue	Overcrossing	Overcrossing
Sonora Avenue	At-Grade	**Undercrossing (new)**
Grandview Avenue	At-Grade	**Undercrossing (new)**
Flower Street	At-Grade	**Undercrossing (new)**
Fairmont Avenue	Overcrossing	Overcrossing
SR 134	Overcrossing	Overcrossing
Salem/Sperry St[2]	No Crossing	Overcrossing (Metro project)
Colorado Street	Undercrossing	**Undercrossing (modified)**
Goodwin Avenue	No Crossing	**Undercrossing (new)**
Chevy Chase Drive	At-Grade	**Closed**
Los Feliz Boulevard	Undercrossing	**Undercrossing (modified)**
Glendale Boulevard	Undercrossing	**Undercrossing (modified)**
Fletcher Drive	Undercrossing	Undercrossing
SR 2	Overcrossing	Overcrossing
Kerr Road	Undercrossing	**Undercrossing (modified)**
Interstate 5	Overcrossing	Overcrossing
Figueroa Street	Overcrossing	Overcrossing

Roadway	Current Crossing Configuration	Proposed Crossing Configuration[1]
SR 110	Overcrossing	Overcrossing
Metro Gold Line	Overcrossing	Overcrossing
Broadway	Overcrossing	Overcrossing
Spring Street	Overcrossing	Overcrossing
Main Street	At-Grade	**Overcrossing (new)**
Private LADWP road	At-Grade	**Closed**
Vignes Street	Undercrossing	Undercrossing
Cesar Chavez Avenue	Undercrossing	Undercrossing

Source: California High-Speed Rail Authority (2019)
[1] All proposed grade crossing configurations are pending Public Utilities Commission approval.
[2] Salem/Sperry Street would be grade-separated as a part of the Metro Doran Street and Broadway/Brazil Grade Separation Project. The project also proposes closing the existing at-grade railroad crossings at Doran Street and Broadway/Brazil Street. As the Metro project would be completed before the introduction of HSR service, the crossing configurations are considered part of the existing conditions for the HSR project.
**Crossings apply to Metrolink and/or UPRR tracks only*
***Crossing applies to HSR tracks only*
***Bold** denotes change from existing condition under the HSR Build Alternative.*
Overcrossing = Road over train tracks Undercrossing = Road under train tracks
HSR = High-Speed Rail SR = State Route
Source: California High-Speed Rail Authority and Federal Railroad Administration (2019)

2.3 Station Sites

The HSR stations for the Burbank to Los Angeles Project Section would be in the vicinity of Hollywood Burbank Airport and at LAUS. Stations would be designed to optimize access to the California HSR System, particularly to allow for intercity travel and connections to local transit, airports, highways, and the bicycle and pedestrian network. Both stations would include the following elements:

- Passenger boarding and alighting platforms
- Station head house with ticketing, waiting areas, passenger amenities, vertical circulation, administration and employee areas, and baggage and freight-handling service
- Vehicle parking (short-term and long-term)
- Pick-up and drop-off areas
- Motorcycle/scooter parking
- Bicycle parking
- Waiting areas and queuing space for taxis and shuttle buses
- Pedestrian walkway connections

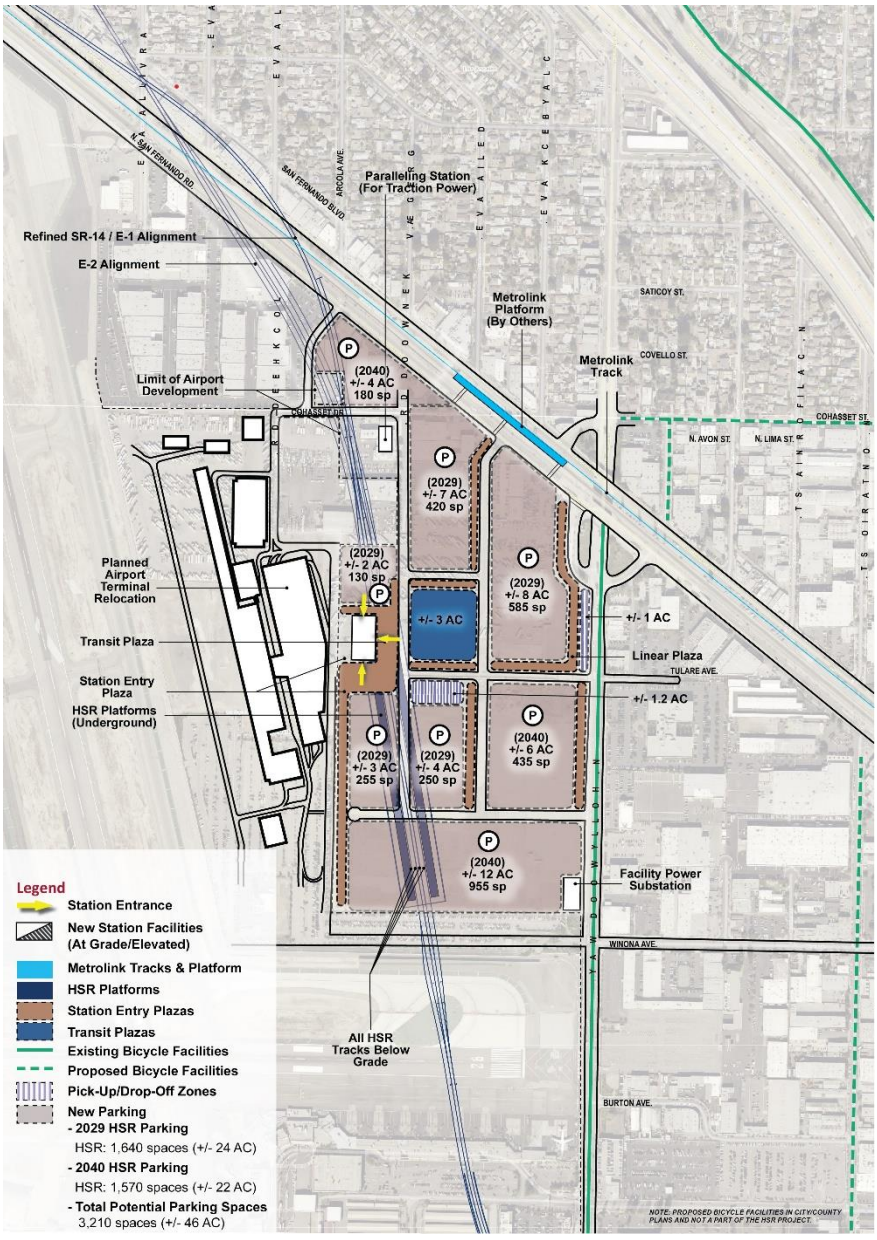
2.3.1 Burbank Airport Station

The Burbank Airport Station site would be located west of Hollywood Way and east of Hollywood Burbank Airport. The airport and ancillary properties occupy much of the land south of the Burbank Airport Station site, while industrial and light industrial land uses are located to the east and residential land uses are found north of the Burbank Airport Station site. Interstate 5 runs parallel to the station site, approximately 0.25 mile north of the proposed Metrolink platform.

The Burbank Airport Station would have both underground and aboveground facilities that would span approximately 70 acres. Station facilities would include train boarding platforms, a station building (that would house ticketing areas, passenger waiting areas, restrooms, and related facilities), pick-up/drop-off facilities for private autos, a transit center for buses and shuttles, and surface parking areas. Underground portions of the station would be beneath Cohasset Street,

along which runs the boundary between the City of Los Angeles to the north and the City of Burbank to the south. There would be two HSR tracks at the station.

The Burbank Airport Station would have up to 3,200 surface parking spaces. About 2,980 spaces would be located between the proposed Replacement Terminal and N Hollywood Way. An additional 220 spaces would be located in surface lots in the area bounded by Lockheed Drive to the west, Cohasset Street to the south, and N San Fernando Boulevard to the north and east. The preliminary station layout concept plan is shown on Figure 2-13. The Burbank to Los Angeles Project Section EIR/EIS analyzes the Burbank Airport Station project footprint displayed on Figure 2-13 as permanently impacted because no additional temporary construction easements are identified beyond the permanent area required to construct, operate, and maintain the station. This is the assumption based on the current level of design.



Source: California High-Speed Rail Authority (2019)

Figure 2-13 Preliminary Station Concept Layout Plan, Burbank Airport Station

2.3.2 Los Angeles Union Station

The existing LAUS campus and surrounding tracks are being reconfigured as a part of the Metro Link Union Station (Link US) [5] Project. The Metro Link US Project would reconfigure the station entry tracks from north of Mission Junction and construct an elevated structure through the station arrival and boarding area, which would extend south over U.S. Route 101 and come back to grade near First Street. Reconfiguration would occur over two construction phases. The first phase would include an elevated structure for non-HSR passenger rail operators between Vignes Street and First Street. The second phase would add additional tracks to the structure for use by HSR. The Metro Link US EIR/EIS, on which the Authority is a cooperating agency, would evaluate these changes, along with an expanded passenger concourse area and changes to the Metro Gold Line. These changes would be completed prior to the introduction of HSR service.

While Metro would environmentally clear and construct the trackwork and new passenger concourse, the HSR project would require additional modifications within the Link US area. HSR improvements include raising the platform heights and installing an overhead contact system. The Burbank to Los Angeles Project EIR/EIS evaluates these modifications, as well as potential increases in traffic associated with the introduction of HSR service.

The proposed HSR station at LAUS would include up to four HSR tracks and two 870-foot platforms (with the possibility of extending to 1,000 feet). The HSR system would share passenger facilities, such as parking and pick-up/drop-off, with other operators. HSR would require 1,180 parking spaces in 2029 and 2,010 spaces in 2040. This new demand may be met by existing underutilized parking supply within 0.5 mile of LAUS. This parking would be shared with other LAUS service providers and businesses.

[5] Link US will transform LAUS from a “stub-end” station to a “run-through” station by extending tracks south over U.S. Route 101. The project will add a new passenger concourse that will provide improved operational flexibility for rail service. The Draft FIR is available at: https://www.metro.net/projects/link-us/final-ei-report/.

Sources: California High-Speed Rail Authority (2019); Los Angeles Metropolitan Transportation Authority (2018)

Figure 2-14 Preliminary Station Elements Plan, Los Angeles Union Station

2.4 Maintenance of Infrastructure

The California HSR System includes four types of maintenance facilities: maintenance of infrastructure facilities (MOIF), Maintenance of infrastructure siding facilities (MOIS), heavy maintenance facilities, and light maintenance facilities (LMF).[6] The California HSR System would require one heavy maintenance facility for the system, located in the Central Valley. The design and spacing of maintenance facilities along the HSR system do not require the Burbank to Los Angeles Project Section to include any of the maintenance facilities within the limits of the project section.

For purposes of environmental analysis, FRA and the Authority have defined each project section to have the capability to operate as a stand-alone project in the event that other project sections

[6] Maintenance facilities are described in the Authority's *Summary of Requirements for O&M Facilities* (2013).

of the HSR system are not constructed. Because this project section does not provide a heavy maintenance facility or MOIF, an independent contractor would need to be retained to handle all maintenance functions for vehicles and infrastructure if this project section were built as a stand-alone project for purposes of independent utility. Independent utility is discussed further in Section 2.9.

2.4.1 Maintenance of Infrastructure Facilities

The HSR system infrastructure will be maintained from regional MOIFs located at approximately 150-mile intervals. Each MOIF is estimated to be approximately 28 acres in size and would provide a location for regional maintenance machinery servicing storage, materials storage, and maintenance and administration. The MOIFs could be co-located with the MOIS within each 75-mile segment. The MOIFs would be located outside of the Burbank to Los Angeles Project Section.

2.4.2 Maintenance of Infrastructure Sidings

The MOISs would be centrally located within the 75-mile maintenance sections on either side of each MOIF. Each MOIS would support MOIF activities by providing a location for the layover of maintenance of infrastructure equipment and temporary storage for materials. The MOIS is estimated to be about 4 acres in size. The MOISs would be located outside of the Burbank to Los Angeles Project Section.

2.4.3 Heavy Maintenance Facility

Only one heavy maintenance facility is required for the HSR system, and it would be within either the Merced to Fresno Project Section or the Fresno to Bakersfield Project Section. The heavy maintenance facility would include all activities associated with train fleet assembly, disassembly, and complete rehabilitation; all on-board components of the trainsets; and overnight layover accommodations and servicing facilities. The site would include a maintenance shop, a yard Operations Control Center building, one traction power substation (TPSS), other support facilities, and a train interior cleaning platform.

2.4.4 Light Maintenance Facility

An LMF would be used for all activities associated with fleet storage, cleaning, repair, overnight layover accommodations, and servicing facilities. The LMF closest to the Burbank to Los Angeles Project Section would be sited in proximity to LAUS but within the Los Angeles to Anaheim Project Section, and would likely support the following functions:

- **Train Storage:** Some trains would be stored at the LMF prior to start of revenue service.
- **Examinations in Service:** Examinations would include inspections, tests, verifications, and quick replacement of certain train components on the train.
- **Inspection:** Periodic inspections would be part of the planned preventive maintenance program requiring specialized equipment and facilities.

The LMF site will be sized to support the level of daily revenue service dispatched by the nearby terminal at the start of each revenue service day. The Authority defines three levels of maintenance that can be performed at an LMF:

- **Level I:** Daily inspections, pre-departure cleaning, and testing
- **Level II:** Monthly inspections
- **Level III:** Quarterly inspections, including wheel-truing

A Level I LMF is proposed on the west bank of the Los Angeles River at the existing Amtrak Railroad Yard. The facility would be where the current BNSF Railway storage tracks are located and would require their relocation.

2.5 Ancillary and Support Facilities

2.5.1 Electrification

Trains on the California HSR System would draw power from California's existing electricity grid distributed via an overhead contact system. The Burbank to Los Angeles Project Section would not include the construction of a separate power source, although it would include the extension of power lines from potential TPSSs to a series of independently owned power substations positioned along the HSR corridor if necessary. The transformation and distribution of electricity would occur in three types of stations:

- TPSSs transform high-voltage electricity supplied by public utilities to the train operating voltage. TPSSs would be adjacent to existing utility transmission lines and the right-of-way, and would be located approximately every 30 miles along the HSR system route.
- Switching stations connect and balance the electrical load between tracks, and switch overhead contact system power on or off to tracks in the event of a power outage or emergency. Switching stations would be midway between, and approximately 15 miles from, the nearest TPSSs. Each switching station would be 120x80 feet and be adjacent to the HSR right-of-way.
- Paralleling stations, or autotransformer stations, provide voltage stabilization and equalize current flow. Paralleling stations would be located approximately every 5 miles between the TPSSs and the switching stations. Each paralleling station would approximately be 100x80 feet and located adjacent to the right-of-way.

Table 2-2 lists the proposed switching station and paralleling station sites within the Burbank to Los Angeles Project Section. A TPSS is not required for the Burbank to Los Angeles Project Section because of the HSR system's facilities spacing requirements. The Burbank to Los Angeles Project Section would be able to use the TPSSs within the Palmdale to Burbank Project Section and/or Los Angeles to Anaheim Project Section. In the event the other project sections of the HSR system are not constructed, a standalone TPSS would be required within the Burbank to Los Angeles Project Section for purposes of independent utility. Independent utility is discussed further in Section 2.8.

Table 2-2 Traction Power Facility Locations for the Burbank to Los Angeles Project Section

Type of Facility	Location
Paralleling Station	Los Angeles, south of Main Street between railroad right-of-way and Los Angeles River
Switching Station	Los Angeles, south of Verdant Street and west of railroad right-of-way

Source: California High-Speed Rail Authority and Federal Railroad Administration (2019)

2.5.2 Signaling and Train-Control Elements

To reduce the safety risks associated with freight and passenger trains, the National Transportation Safety Board, FRA, and other agencies have mandated Positive Train Control (PTC). PTC is a train safety system designed to automatically implement safety protocols and provide communication with other trains to reduce the risk of a potential collision. The U.S. Rail Safety Improvement Act of 2008 requires the implementation of PTC technology across most railroad systems; in October 2015, Congress extended the deadline for implementation to December 31, 2018. The FRA published the Final Rule regarding PTC regulations on January 15, 2010.

Communication towers and ancillary facilities are included in the Burbank to Los Angeles Project Section to implement the FRA PTC requirements. PTC infrastructure consists of integrated command, control, communications, and information systems for controlling train movements that improve railroad safety by significantly reducing the probability of collisions between trains,

casualties to roadway workers and equipment, and over-speed accidents. PTC is especially important in "blended"[7] corridors, such as in the Burbank to Los Angeles Project Section, where passenger and freight trains need to share the same tracks safely.

PTC for the HSR project would use a radio-based communications network that would include a fiber-optic backbone and communications towers approximately every 2 to 3 miles, depending on the terrain and selected radio frequency. The towers would be located in the fenced HSR corridor in a fenced area of approximately 20x15 feet, including a 10x8-foot communications shelter and a 6- to 8-foot-diameter, 100-foot-tall communications pole. These communications facilities could be co-located within the TPSSs. Where communications towers cannot be located with TPSSs or other HSR facilities, the communications facilities would be located near the HSR corridor in a fenced area of approximately 20 feet by 15 feet.

2.6 Early Action Projects

As described in the 2016 Business Plan, the Authority has made a commitment to invest in regionally significant connectivity projects in order to provide early benefits to transit riders and local communities while laying a solid foundation for the HSR system. These early actions will be made in collaboration with local and regional agencies. These types of projects include grade separations and improvements at regional passenger rail stations, which increase capacity, improve safety, and provide immediate benefits to freight and passenger rail operations. Local and regional agencies may take the lead on coordinating the construction of these early action projects. Therefore, they are described in further detail below and are analyzed within the Burbank to Los Angeles Project Section EIR/EIS to allow the agencies, as Responsible Agencies under CEQA, to adopt the findings and mitigation measures as needed to construct these projects.

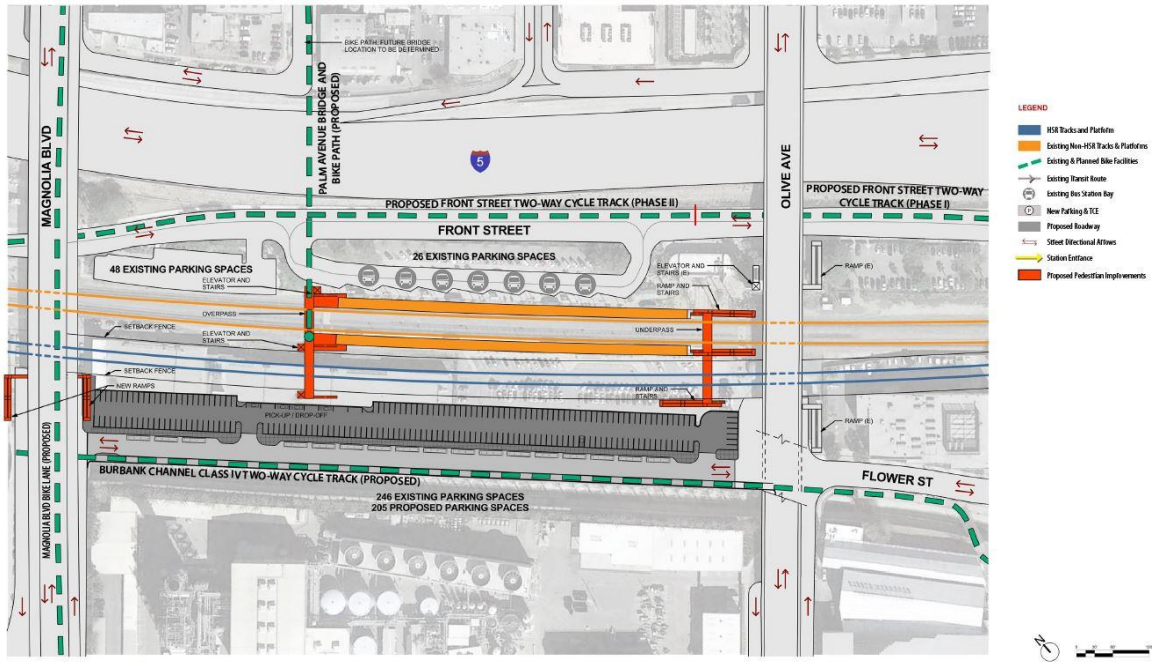
2.6.1 Downtown Burbank Metrolink Station

Although the HSR system will not serve the Downtown Burbank Metrolink Station, modifications at the station would be required to ensure continued operations of existing operators. The HSR tracks would be located within the existing parking lot west of the southbound platforms; the platforms and existing Metrolink tracks would not change. The parking would be relocated to between Magnolia Boulevard and Olive Avenue, and Flower Street would be extended from where it currently ends at the south side of the Metrolink Station. Pedestrian bridges would be provided for passengers to cross over the HSR tracks to access the Metrolink platforms. Other accessibility improvements would include additional vehicle parking, bus parking, and bicycle pathways. Figure 2-15 shows the proposed site plan for the Downtown Burbank Metrolink Station.

2.6.2 Sonora Avenue Grade Separation

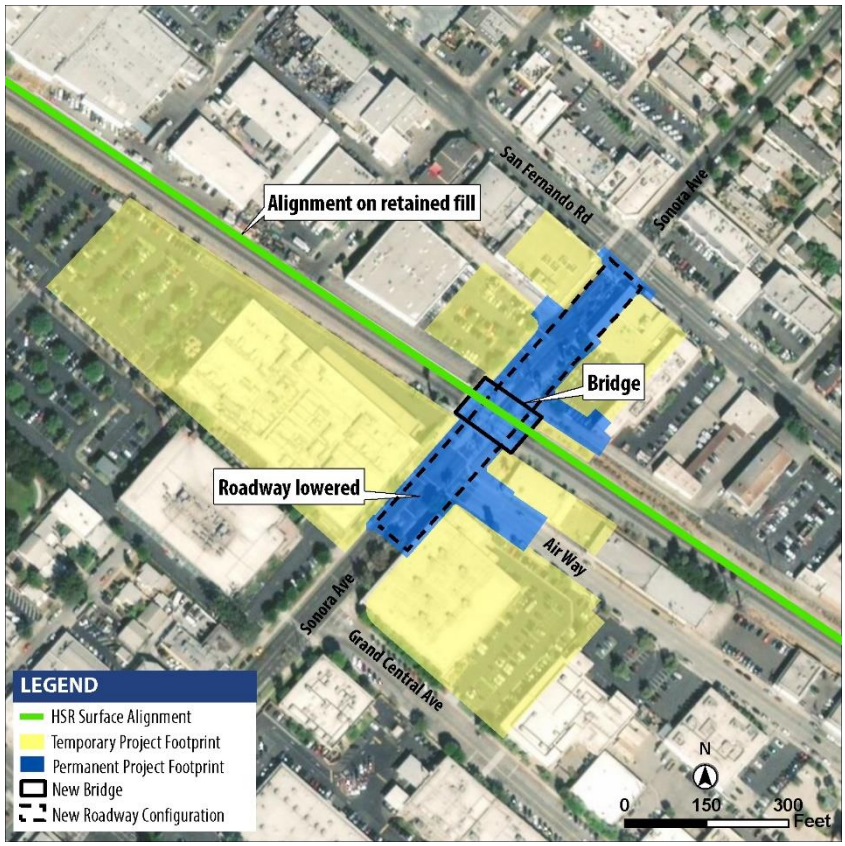
Sonora Avenue is an existing at-grade crossing. The existing roadway configuration consists of two traffic lanes in both the eastbound and westbound directions. The Burbank to Los Angeles Project Section proposes a "hybrid" grade separation, with Sonora Avenue slightly depressed and the HSR alignment and non-electrified tracks raised on a retained-fill structure. A 10-foot-wide median would be added and the lanes would be narrowed, so the overall width of Sonora Avenue would not change. Sonora Avenue would be lowered in elevation between Air Way and San Fernando Road, and the lowest point of the undercrossing would be approximately 10 feet below the original grade. The height of the new retained-fill structure would be approximately 28 feet. Figure 2-16 shows the temporary and permanent project footprint areas.

[7] California HSR Project Business Plans (http://www.hsr.ca.gov/About/Business_Plans/) suggest blended railroad systems and operations. These terms refer to integrating the HSR system with existing intercity, and commuter and regional rail systems through coordinated infrastructure (blended systems) and scheduling, ticketing, and other means (blended operations).



Source: California High-Speed Rail Authority (2019)

Figure 2-15 Downtown Burbank Metrolink Station Site Plan



Source: California High-Speed Rail Authority (2019)

Figure 2-16 Sonora Avenue Grade Separation Footprint

2.6.3 Grandview Avenue Grade Separation

Grandview Avenue is an existing at-grade crossing. The existing roadway configuration consists of three traffic lanes in both the eastbound and westbound directions. The Burbank to Los Angeles Project Section proposes a "hybrid" grade separation, with Grandview Avenue slightly depressed and the HSR alignment and non-electrified tracks raised on retained fill. Grandview Avenue would be lowered in elevation between Air Way and San Fernando Road, and the lowest point of the undercrossing would be approximately 3 feet below original grade. The lanes and overall width of Grandview Avenue would not change. The height of the new retained-fill structure would be approximately 30 feet. Figure 2-17 shows the temporary and permanent project footprint areas.

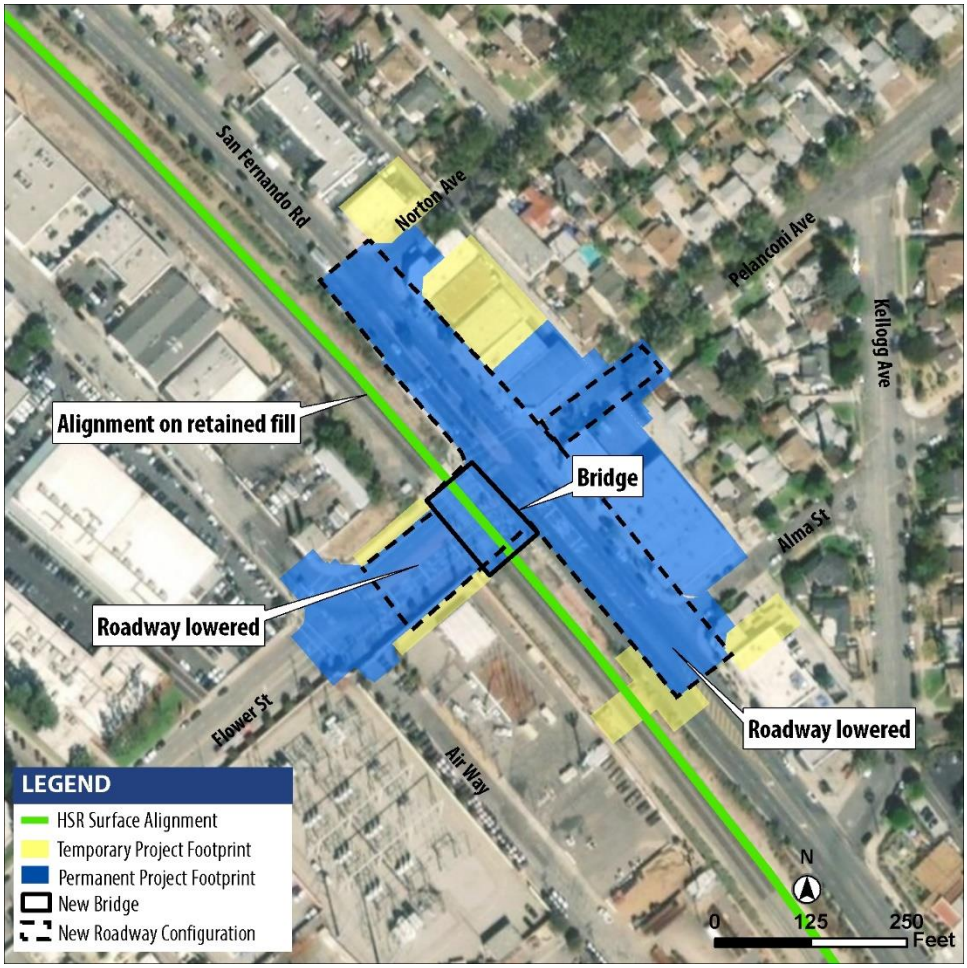
Source: California High-Speed Rail Authority (2019)

Figure 2-17 Grandview Avenue Grade Separation Footprint

2.6.4 Flower Street Grade Separation

Flower Street is an existing at-grade crossing, with Flower Street ending in a T-shaped intersection with San Fernando Road, which runs parallel on the east side of the railroad right-of-way. Existing Flower Street consists of two traffic lanes in both the westbound and eastbound directions, with a right-turn-only lane in the westbound direction. The Burbank to Los Angeles

Project Section proposes a "hybrid" grade separation, with Flower Street and San Fernando Road slightly depressed, and the HSR alignment and non-electrified tracks raised on a retained-fill structure. Flower Street would be lowered in elevation between Air Way and San Fernando Road, and the lowest point of the undercrossing would be approximately 10 feet below original grade. The existing median would be modified on Flower Street, and the overall width of Flower Street would remain the same. San Fernando Road would be lowered in grade between Norton Avenue and Alma Street, and Pelanconi Avenue would be extended to connect to San Fernando Road. The height of the new retained-fill structure would be approximately 28 feet. Figure 2-18 shows the temporary and permanent project footprint areas.



Source: California High-Speed Rail Authority (2019)

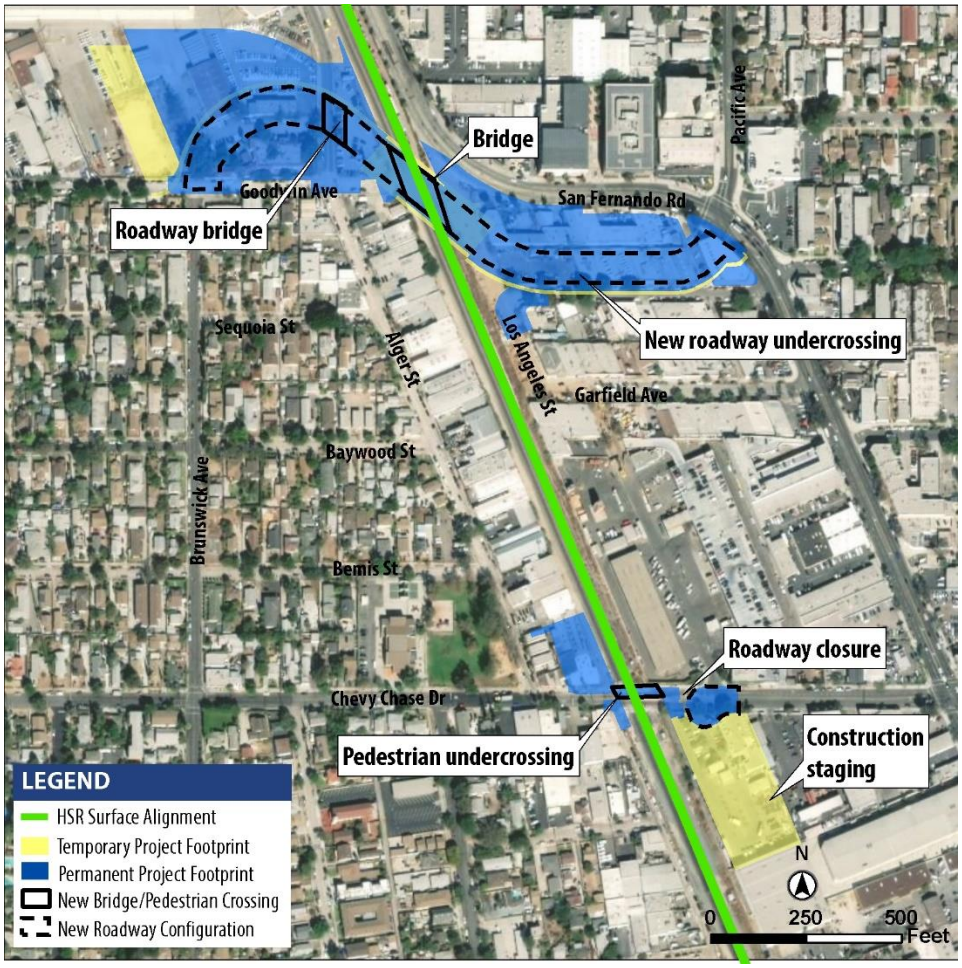
Figure 2-18 Flower Street Grade Separation Footprint

2.6.5 Goodwin Avenue/Chevy Chase Drive Grade Separation

There is currently no crossing at Goodwin Avenue, which ends in a cul-de-sac on the west side of the railroad right-of-way. The Burbank to Los Angeles Project Section proposes a grade separation, with Goodwin Avenue realigned and depressed to cross under a new railroad bridge supporting the HSR and non-electrified tracks. A new roadway bridge would also be required to carry Alger Street over the depressed Goodwin Avenue, connecting to W San Fernando Road. The new depressed roadway would curve north from Brunswick Avenue, cross under the new roadway and railroad bridges, and connect with Pacific Avenue on the east side of the railroad

right-of-way. The lowest point of the undercrossing would be approximately 28 feet below original grade.

Chevy Chase Drive is an at-grade crossing. With the construction of a new grade separation at Goodwin Avenue, Chevy Chase Drive would be closed on either side of the rail crossing and a pedestrian undercrossing would be provided. Figure 2-19 shows the temporary and permanent project footprint areas for Goodwin Avenue and Chevy Chase Drive.



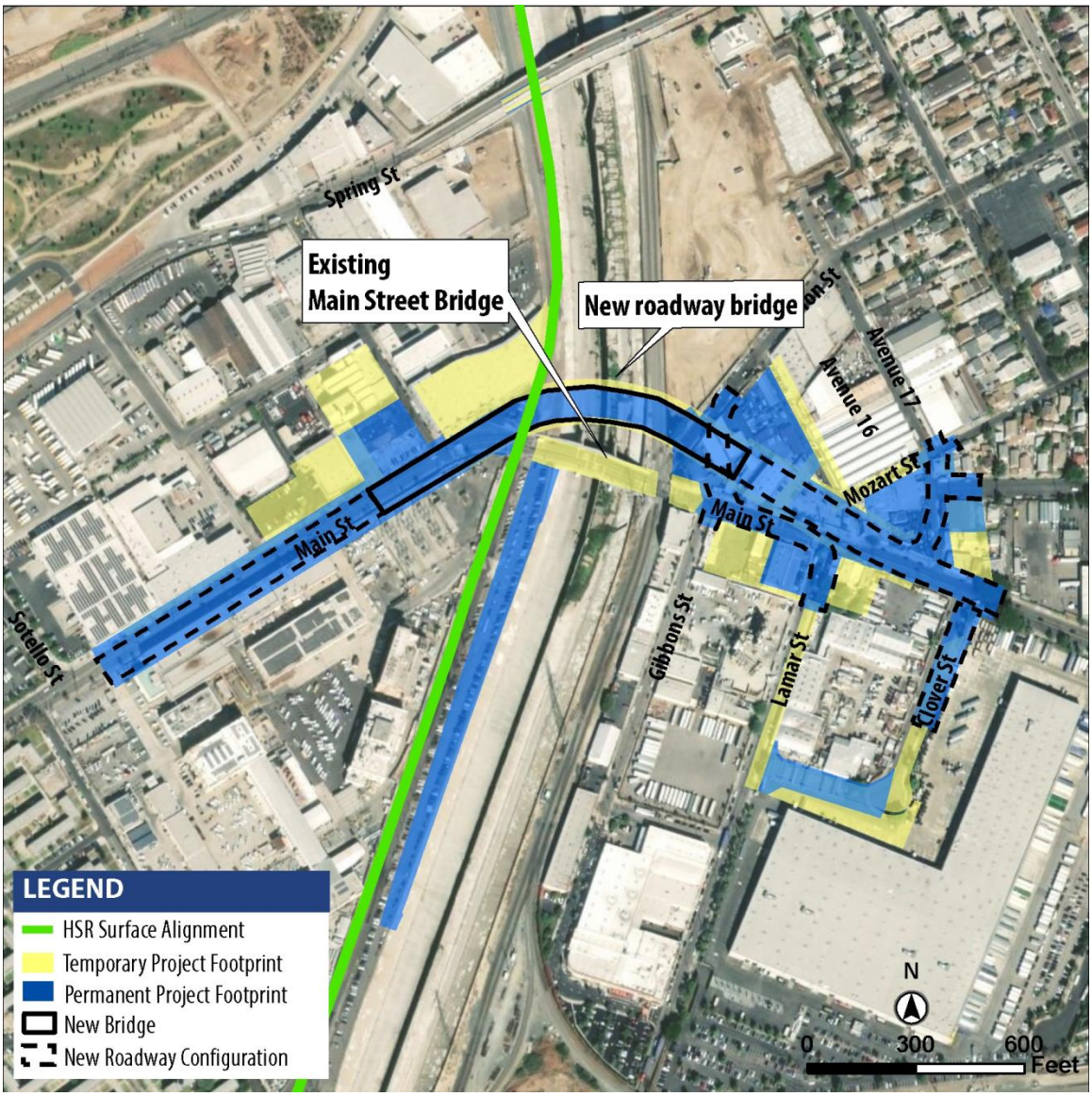
Source: California High-Speed Rail Authority (2019)

Figure 2-19 Goodwin Avenue Grade Separation

2.6.6 Main Street Grade Separation

Main Street is an existing at-grade crossing. It crosses the existing tracks at-grade on the west bank of the Los Angeles River, crosses over the river on a bridge, and then crosses the existing tracks at-grade on the east bank of the river. The existing bridge carries two traffic lanes in both directions. The Burbank to Los Angeles Project Section proposes a grade separation, with a new Main Street bridge spanning the tracks on the west bank, the Los Angeles River, and the tracks on the east bank. The new Main Street bridge would be 86 feet wide and 75 feet high at its highest point over the Los Angeles River and would place three columns within the river channel. Main Street would be raised in elevation, starting from just east of Sotello Street on the west side of the Los Angeles River. The new bridge would come down to grade at Clover Street on the east side of the Los Angeles River. Several roadways on the east side of the Los Angeles River would be reconfigured, including Albion Street, Lamar Street, Avenue 17, and Clover Street. The

existing Main Street bridge would not be modified, but it would be closed to public access. Figure 2-20 shows the temporary and permanent project footprint areas.



Source: California High-Speed Rail Authority (2019)

Figure 2-20 Main Street Grade Separation Footprint

2.7 Project Construction

For the Burbank to Los Angeles Project Section of the California HSR System, specific construction elements would include at-grade and underground track, grade-separated roadway crossings, retaining walls, and installation of a PTC system. Surface track sections would be built using conventional railroad construction techniques. A typical construction sequence includes clearing, grubbing, grading, and compacting the railbed; applying crushed rock ballast; laying track; and installing electrical and communications systems. The at-grade track would be laid on an earthen railbed topped with rock ballast approximately 3 feet off the ground. Fill and ballast for the railbed would be obtained from permitted borrow sites and quarries.

Retaining walls are used when it is necessary to transition between an at-grade and elevated profile. In this project section, retained fill would be used between Western Avenue and SR 134. The tracks would be raised in elevation on a retained-fill platform made of reinforced walls, much like a freeway ramp. Short retaining walls would have a similar effect and would protect the adjacent properties from a slope extending beyond the proposed rail right-of-way.

The preferred construction method for the tunnel alignment underneath the Burbank Airport runway is SEM. The tunnel alignment south of the airport would be constructed using cut-and-cover.

Pre-construction activities would be conducted during final design and would include geotechnical investigations, interpretation of anticipated ground behavior and ground support requirements, identification of staging areas, initiation of site preparation and demolition, relocation of utilities, and implementation of temporary, long-term, and permanent road closures. Additional studies and investigations to develop construction requirements and worksite traffic control plans would be conducted as needed.

Major construction activities for the Burbank to Los Angeles Project Section would include earthwork and excavation support, systems construction, bridge and aerial structure construction, and railway systems construction (including trackwork, traction electrification, signaling, and communications).

During peak construction periods, work is envisioned to be underway at several locations along the route simultaneously, with overlapping construction of various project elements. Working hours and the number of workers present at any time would vary depending on the activities being performed but could be expected to extend to 24 hours per day, seven days per week.

2.8 Independent Utility of the Burbank to Los Angeles Project Section

The Burbank to Los Angeles Project Section would have independent utility if it is able to operate as a standalone project in the event the other project sections of the HSR system are not constructed. As none of the four types of maintenance facilities would be located within the limits of the Burbank to Los Angeles Project Section, all maintenance functions for vehicles and infrastructure would be handled through an independent contractor to achieve independent utility. For power, one potential location for a TPSS has been preliminarily identified within the project section. Because the addition of a TPSS would alter the spacing of the other systems facilities, further design and environmental study would be required to environmentally clear the TPSS site and the alteration of the other systems facilities in the absence of the Palmdale to Burbank and Los Angeles to Anaheim project sections being built and operated.

Any electrical interconnections between a potential future TPSS site and existing utility providers would also have to be environmentally evaluated and cleared in subsequent documentation.

2.9 Operations of the Burbank to Los Angeles Project Section

The conceptual HSR service plan for Phase 1, starting in 2029, begins with service between Los Angeles/Anaheim running through the Central Valley from Bakersfield to Merced, and traveling northwest into the Bay Area. Subsequent sections in Phase 2 of the HSR system include a southern extension from Los Angeles to San Diego and an extension from Merced to north of Sacramento. These extensions do not have an anticipated implementation date.

Currently, the Metrolink Ventura and Antelope Valley Lines, Amtrak Pacific Surfliner and Coast Starlight, and UPRR freight trains operate within the Burbank to Los Angeles Project Section. As the proposed HSR Build Alternative is within the active LOSSAN passenger and freight rail corridor, all existing operators would have to change their operation patterns and frequency. New and realigned tracks would change the tracks on which the various users operate, with passenger rail and freight trains shifted closer to the east side of the right-of-way. With the introduction of HSR service, the proposed general operational characteristics are shown in Table 2-3.

Table 2-3 Existing and Future Trains per Day in the Los Angeles–San Diego–San Luis Obispo Rail Corridor Within the Burbank and Los Angeles Project Section

Operator	2016 Existing Conditions	2029 Opening Day	2040 Horizon Year
California High-Speed Rail Authority[1]	N/A	196	196
Metrolink[2]	61	99	99
Amtrak[3]	12	16	18
UPRR[4]	11	18	23

[1] 2029 Opening Day and 2040 Horizon Year projections are from the California High-Speed Rail Authority's "Year 2029 and Year 2040 Concept Timetable for EIR/EIS Analysis."
[2] Existing Conditions data are from the 2016 Metrolink Schedule (effective October 3, 2016); 2029 Opening Day projections are extrapolated from the 2016 Metrolink 10-Year Strategic Plan, "Growth Scenario 2: Overlay of Additional Service Patterns."
[3] Existing Conditions data are from the 2016 LOSSAN Corridor Schedule; 2029 Opening Day projections are extrapolated from 2012 LOSSAN Corridorwide Strategic Implementation Plan "Long-Term Operations Analysis" (increase of approximately one train every four years for the Amtrak Pacific Surfliner and no growth for the Amtrak Coast Starlight between Hollywood Burbank Airport and LAUS).
[4] Existing Conditions data are from the 2012 LOSSAN Corridorwide Strategic Implementation Plan "Long-Term Operations Analysis"; 2029 Opening Day projections are extrapolated from the 2012 LOSSAN Corridorwide Strategic Implementation Plan "Long-Term Operations Analysis" (increase of approximately one train every two years for UPRR between Hollywood Burbank Airport and LAUS).
Amtrak = National Railroad Passenger Corporation
LAUS = Los Angeles Union Station
N/A = not applicable
UPRR = Union Pacific Railroad

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3 LAWS, REGULATIONS, AND ORDERS

Federal, state, and local laws, regulations, orders or plans applicable to aesthetics and visual quality in the Burbank to Los Angeles Project Section are listed below.

3.1 Federal

3.1.1 United States Department of Transportation Act (Section 4(f)) (Department of Transportation Act 49 United States Code §303)

Compliance with Section 4(f) is required for transportation projects undertaken by an operating administration of the U.S. Department of Transportation or that may receive federal funding and/or discretionary approvals. Section 4(f) protects the natural beauty of publicly owned land of parks, recreational areas, and wildlife refuges, as well as historic sites of national, state, or local significance located on public or private land. The Authority may not approve the use of a Section 4(f) property, as defined in 49 U.S.C. § 303(c), unless it determines that there is no feasible and prudent alternative to avoid the use of the property and the action includes all possible planning to minimize harm resulting from such use, or the project has a *de minimis* impact on the Section 4(f) property consistent with the requirements of 49 U.S.C. § 303(d).

3.1.2 Federal Railroad Administration, Procedures for Considering Environmental Impacts (64 Federal Register 28545)

On May 26, 1999, the FRA released *Procedures for Considering Environmental Impacts* (FRA 1999). These FRA procedures supplement the Council on Environmental Quality Regulations (40 Code of Federal Regulations [C.F.R.] Part 1500 et seq.) and describe FRA's process for assessing the environmental impacts of actions and legislation proposed by the agency and for the preparation of associated documents (42 United States Code 4321 et seq.). The FRA *Procedures for Considering Environmental Impacts* states that "the EIS should identify any significant changes likely to occur in the natural environment and in the developed environment. The EIS should also discuss the consideration given to design quality, art, and architecture in project planning and development as required by U.S. Department of Transportation Order 5610.4." These FRA procedures state that an EIS should consider possible impacts on aesthetics and visual quality.

3.1.3 National Historic Preservation Act (54 U.S.C. Section 300101, et seq.)

The National Historic Preservation Act establishes the federal government policy on historic preservation. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. Potential adverse effects include changes in the physical features of the property's setting that contribute to its historic significance, or introduction of visual elements that diminish the integrity of the property's significant historic features.

3.1.4 Federal Land Policy and Management Act (43 United States Code 1701, et seq., 102(a), 103(c), 201(a), 505(a))

The Federal Land Policy and Management Act requires that public lands be managed to protect and minimize damage to scenic and aesthetic values. Under the Federal Land Policy and Management Act, the Bureau of Land Management uses a Visual Resource Management System (113 Stat. 224, Public Law 106-45-A, August 10, 1999) to manage resources under its jurisdiction. As applicable to sections within or affecting areas managed by the Bureau of Land Management, the evaluation of aesthetic and visual quality shall consider the rules or guidance under the Visual Resource Management System for the purpose of applying area specific management priorities.

3.2 State

3.2.1 California Environmental Quality Act (Section 21000 et seq.) and California Environmental Quality Act Guidelines (Section 15000 et seq.)

The California Environmental Quality Act (CEQA) and the CEQA Guidelines require state and local agencies to identify the significant environmental impacts of their actions, including potential significant aesthetic and visual impacts, and to avoid or mitigate those impacts when feasible.

3.2.2 State Scenic Highways (California Streets and Highways Code §§260 to 263)

The State Scenic Highways Program lists highways that are either eligible for designation as a scenic highway or are already designated as a scenic highway. A highway may be designated as scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view (California Department of Transportation 2019). The Streets and Highways Code establishes state responsibility for protecting, preserving, and enhancing the natural scenic beauty of California's scenic routes and areas that require special scenic conservation and treatment.

3.3 Regional and Local

Various regional and local plans are relevant to assessing the proposed project's impacts on aesthetics and visual quality. The following sections describe the general plans and ordinances associated with the cities of Burbank, Glendale, and Los Angeles.

3.3.1 General Plans

3.3.1.1 County of Los Angeles General Plan

The Conservation and Natural Resources Element includes goals relevant to aesthetics and visual quality issues within the RSA. One such goal is Goal C/NR 13, **"**Protect visual and scenic resources."

3.3.1.2 City of Burbank General Plan

The City of Burbank is in the eastern portion of the San Fernando Valley within Los Angeles County. The City of Burbank encompasses approximately 17.1 square miles and is located in the central portion of Los Angeles County approximately 12 miles north of downtown Los Angeles. Scenic vistas identified in the City of Burbank General Plan (2013) within the City of Burbank include views of the Verdugo Mountains[8] to the northeast and views of the eastern Santa Monica Mountains to the south. Additionally, downslope views from hillside development on the Verdugo Mountains toward the City of Burbank and the Santa Monica Mountains beyond are also considered to be a valued resource. Scenic resources within the City of Burbank include public parks and open space, such as Wildwood Canyon Park, Stough Park, Johnny Carson Park, and Brace Canyon Park. The architecture of historic structures, such as Burbank City Hall and the Portal of the Folded Wings Shrine to Aviation in Valhalla Memorial Park, are also scenic resources that represent aspects of the city's history. The City of Burbank's residential, commercial, and industrial neighborhoods contain numerous examples of historic architectural styles, including Craftsman, Colonial, Mediterranean, Prairie, Googie, Art Deco, and Mission Revival. Historic commercial signs throughout the city also contribute as scenic resources, such as the Bob's Big Boy and Safari Inn signs.

The City of Burbank General Plan Land Use Element contains a mix of land uses planned for residential, commercial, industrial, open space, institutional, airport, and right-of-way purposes.

[8] Los Angeles County identified the Verdugo Mountains as a Significant Ecological Area. Los Angeles County Planning. http://planning.lacounty.gov/assets/upl/project/gp_2035_2014-FIG_9-3_significant_ecological_areas.pdf.

The City of Burbank General Plan contains seven elements, including a Land Use Element and an Open Space and Conservation Element. The following general plan policies are relevant to assessing the aesthetics and visual quality impacts of the proposed project.

Land Use Element (Adopted 2013)

- **Policy 8.8:** Ensure that new development is compatible with the topography and geology of the hillside area and is incorporated into the natural setting.
- **Policy 8.10:** Consider and address the preservation of scenic views in the hillside area.

Open Space and Conservation Element (Adopted 2013)

- **Policy 7.1:** Identify visually prominent ridgelines and establish regulations to promote their preservation.
- **Policy 7.4:** Balance both public good and private property rights when considering the restoration of viewsheds.

3.3.1.3 City of Glendale General Plan

The City of Glendale is in the southeastern portion of the San Fernando Valley within Los Angeles County. The City of Glendale General Plan contains nine elements, including an open space and conservation element. The following general plan policies, goals, and objectives are relevant to assessing the aesthetics and visual quality impacts of the project.

Open Space and Conservation Element (Adopted 1993)

- **Policy 4:** Natural and man-made aesthetic features should be recognized and identified as important resources to the community that require proper management.
  - **Goal 5:** Preserve prominent ridgelines and slopes in order to protect Glendale's visual resources.
    - **Objective 2:** Establish standards and design criteria which minimize the visual intrusion/impact of development in hillside areas.

3.3.1.4 City of Los Angeles General Plan

The City of Los Angeles General Plan Land Use Element consists of 35 Community Plan Areas (CPA) that are the official guide to future development in the City of Los Angeles. The Burbank to Los Angeles Project Section is located in the following CPAs: the Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon CPA, the Northeast Los Angeles CPA, the Central City North CPA, and the Boyle Heights CPA.

The Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon CPA lies in the northeast quadrant of the City of Los Angeles and is approximately 15 miles north of downtown Los Angeles. The Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon CPA sets forth goals, objectives, polices, and programs that pertain to Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon. These reflect the broader issues, goals, objectives, and policies provided by the Citywide General Plan Framework Element. The following Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon CPA polices, goals, and objectives are relevant to assessing the aesthetics and visual quality impacts of the proposed project.

Open Space

- **Goal 5:** A community with sufficient open space in balance with new development to serve the recreational, environmental, health and safety needs of the community and to protect environmental and aesthetic resources.
  - **Policy 5-1.1:** Encourage the retention of passive and visual open space which provides a balance to the urban development of the Community.

  - **Policy 5-1.5**: Protect Scenic Corridors by establishing development controls in harmony with each corridor's individual scenic character.

The Northeast Los Angeles CPA encompasses the hills and valleys lying east of the Los Angeles River and north of the Boyle Heights CPA. The Northeast Los Angeles CPA sets forth goals, objectives, polices, and programs that pertain to Northeast Los Angeles. These reflect the broader issues, goals, objectives, and policies provided by the Citywide General Plan Framework Element. The following Northeast Los Angeles CPA policies, goals, and objectives are relevant to assessing the aesthetics and visual quality impacts of the proposed project.

Open Space

- **Goal 4:** Sufficient open space, in balance with development, to serve the recreational, environmental, and health needs of the community and to protect environmental and aesthetic resources.
  - **Objective 4-1:** To preserve existing views in hillside areas.

The Central City North CPA is located south of Sunset Boulevard/Cesar Chavez Avenue, north of the Santa Monica Freeway (I-10), east of the Harbor Freeway (I-110) and west of Alameda Street. The Central City North CPA sets forth goals, objectives, polices, and programs that pertain to Central Los Angeles. These reflect the broader issues, goals, objectives, and policies provided by the Citywide General Plan Framework Element. The following Central City North CPA policies, goals, and objectives are relevant to assessing the aesthetics and visual quality impacts of the proposed project.

Open Space and Recreation

- **Policy 4-2.1:** To foster physical and visual links between a variety of open spaces and public spaces Downtown.

The Boyle Heights CPA is situated at the eastern boundary of the City of Los Angeles and is bordered by the City of Vernon to the south, the unincorporated community of East Los Angeles to the east, the communities of Lincoln Heights and El Sereno to the north, and the Los Angeles River and downtown Los Angeles to the west. The Boyle Heights CPA sets forth goals, objectives, polices, and programs that pertain to Boyle Heights. These reflect the broader issues, goals, objectives, and policies provided by the Citywide General Plan Framework Element. The following Boyle Heights CPA policies, goals, and objectives are relevant to assessing the aesthetics and visual quality impacts of the proposed project.

Recreation

- **Policy:** Preserve and improve the existing recreation and park facilities and park space.

4 METHODS FOR EVALUATING EFFECTS

This section defines the resource study area (RSA) for aesthetics and visual quality and describes the methodology for the impact analysis as well as the specific assessment method used in this technical report.

4.1 Definition of Resource Study Area

The RSA[9] is the study area for environmental investigations specific to aesthetic and visual resources. The RSA takes into account the visual effects of proposed improvements and operations in relation to existing visual quality and character, scenic resources, and types of viewers. In defining the RSA, distance zones are largely determined by the extent to which the proposed project is visible. For direct effects on aesthetics and visual quality in urban environments, the RSA extends a minimum of 0.25 mile from either the side of the proposed project centerline, depending on the visibility of the proposed project components. Defining the RSA considers the area's landform (topography), land cover (vegetation and structures), and atmospheric conditions (dust, fog, and precipitation) that can limit human sight. Visual resources identified in the RSA include public parks, recreation areas, and historic sites potentially subject to Section 4(f) and Section 106 effects, as described further in Section 5.1. Figure 4-1 shows the RSA.

Considering the anticipated scale of the proposed project and the urban environment of the Burbank to Los Angeles Project Section, the zone of highest visual concern is not generally expected to extend beyond a foreground distance of 0.25 mile from the proposed project centerline. Beyond foreground viewing distances of 0.25 mile, the proposed project would have a limited visual presence because existing features (i.e., trees, buildings, fences) can obscure background views. Where the proposed project is elevated on berms or low structures, the area of visual effect may increase correspondingly to as much as 0.5 mile. Where the proposed project would be elevated in urban areas, the potential visibility of the proposed project could increase dramatically because of the height of adjacent structures and high number of viewers.

4.2 Methodology for Effect Analysis

The methodology used in this technical report to evaluate aesthetic and visual quality impacts is based on the *California High-Speed Rail Environmental Methodology Guidelines, Version 5* (Authority, November 2015, as amended), as well as the *Guidelines for the Visual Impact Assessment of Highway Projects,* published by the Federal Highway Administration (FHWA Guidelines) (2015). The FHWA Guidelines (2015) include four phases: Establishment, Inventory, Analysis, and Mitigation. Figure 4-2 shows the Visual Impact Assessment process and the intersection of the physical environment with people's perceptions of that environment, as presented in the FHWA handbook.

The first step in the Visual Impact Assessment process is to *establish* the RSA and its landscape unit(s) based on the proposed project characteristics and the physical environment's limits on visibility. The RSA is described in Section 4.1. The three landscape units that have been identified for the Burbank to Los Angeles Project Section are the Upper San Fernando Valley, the Lower San Fernando Valley, and Downtown Los Angeles, as described further in Section 5.1. In addition, 25 key viewpoints (KVP) were established to provide representative examples of existing views of the landscape, as seen by viewer groups within each landscape unit and as described in Section 5.1. KVPs are also used to illustrate how the proposed project would change these views, as described in Sections 6.3 and 6.4.

The second step is an *inventory* of specific visual resources, viewer groups, and the viewers' perceptions and preferences of visual quality in the RSA. The inventory of existing visual resources, viewer groups, viewer preferences, and visual quality is provided in Section 5.1.

[9] The RSA for aesthetics and visual quality is the same as the area of visual effect, as defined in FHWA's *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA HEP-15-029).

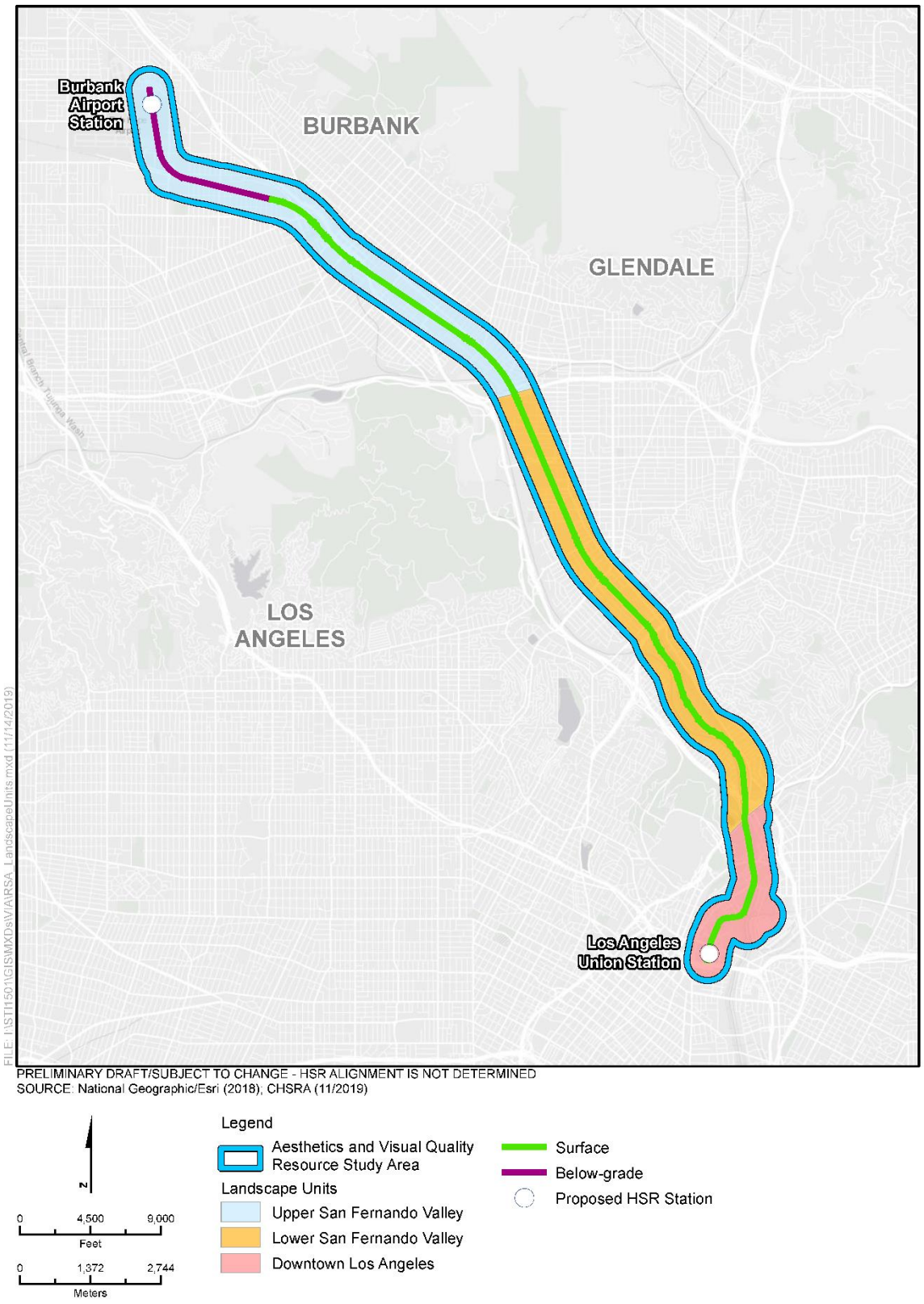
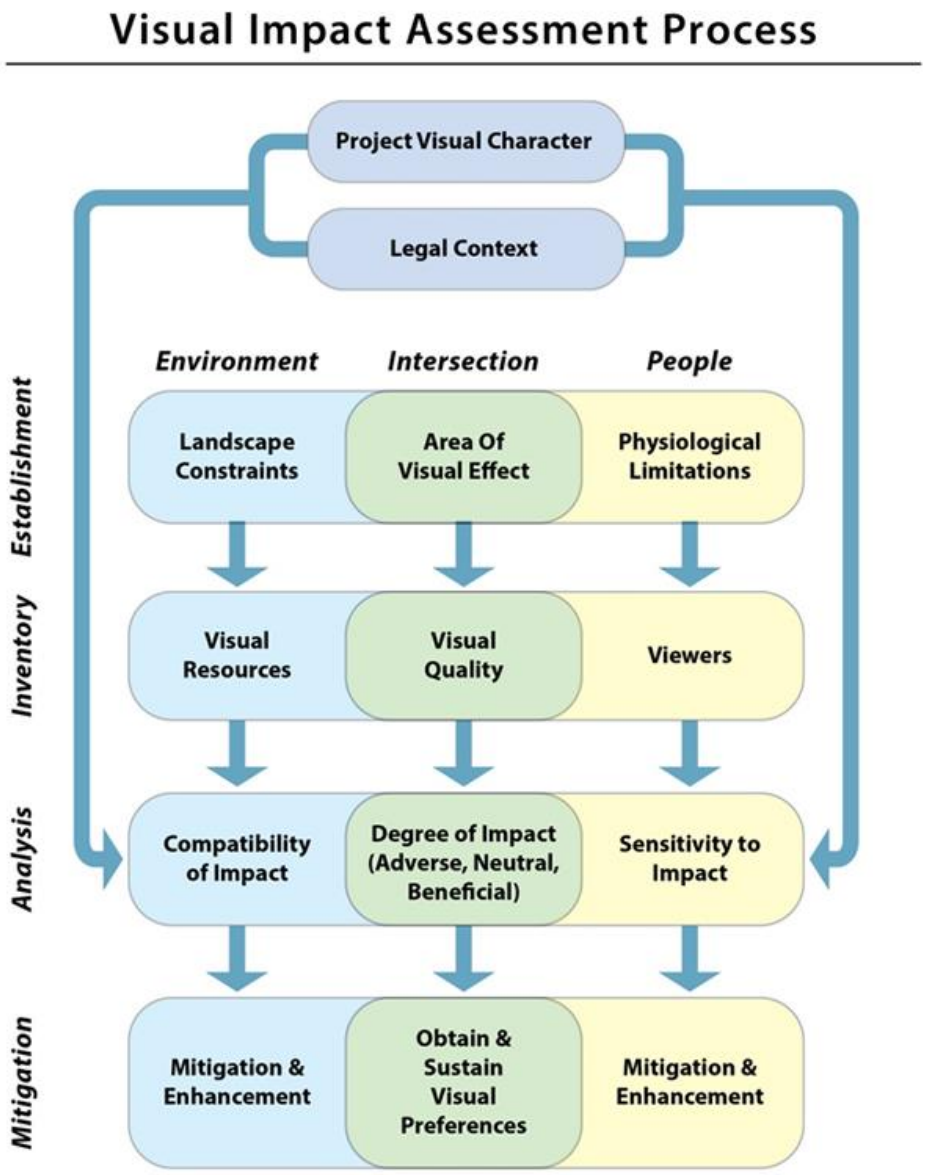


Figure 4-1 Aesthetics and Visual Quality Resource Study Area



Source: FHWA (2015)

Figure 4-2 Federal Highway Administration Visual Impact Assessment Process Flow Diagram

The third step is to *analyze* and objectively evaluate whether the proposed project has a beneficial, adverse, or neutral effect on visual quality based on the proposed project's compatibility with its setting and the sensitivity of viewers. The analysis of the overall visual quality after implementation of the proposed project is provided in Section 6 of this Aesthetics and Visual Quality Technical Report.

The last step is to describe *mitigation* measures to minimize aesthetic effects. Mitigation measures will be provided in the Aesthetics and Visual Quality section of the EIR/EIS for the Burbank to Los Angeles Project Section.

4.2.1 Assessment Method

The assessment method used in this technical report qualitatively measures aesthetic and visual quality effects by considering the existing visual resources, the capacity of the visual environment to absorb the proposed project, the viewer sensitivity (viewer exposure and viewer awareness) to such change, and the change in overall visual quality. This section describes how existing and future viewer sensitivity to change and visual quality are qualitatively measured.

A visual resource is a site, object, or landscape feature that contributes to the visual character of the surrounding area or is important because of its visual characteristics or scenic qualities. Visual character is an impartial description of the defining features, landscape pattern, and distinctive qualities of the landscape. According to the FHWA Guidelines (2015), visual resources and the environments they dominate can be divided into three categories: natural, cultural, and project. Natural visual resources include land, water, vegetation, and animals that compose the natural environment. Cultural visual resources include buildings, structures, and artifacts that compose the cultural environment. Project visual resources include geometrics, structures, and fixtures that compose the project environment. Visual resources also include state-designated scenic routes and views toward and within natural areas, parks, and urban areas identified as having historical or cultural significance or that include buildings of similar significance or notable landmark status.

Inherent within the measure of the change in visual resources is the capacity of the visual environment to absorb the proposed project. Visual landscapes have a capacity to seamlessly absorb a project that blends harmoniously with the existing scenic character of a landscape. For instance, the addition of a newly proposed skyscraper in a highly urbanized, dense city center is unlikely to adversely affect the existing visual character and quality of the environment in which it is proposed because the existing visual conditions have the capacity to absorb this change without substantially affecting the character and quality of the visual environment. Conversely, if the same structure were proposed in a highly rural environment, this type of construction would not fit with the existing character and visual quality of the surrounding conditions. Thus, the existing condition, context, and visual character of the environment affect the degree of impact.

4.2.1.1 Viewers

The population affected by the proposed project is referred to as *viewers*. The FHWA Guidelines (2015) divide viewer groups into two distinct entities: neighbors (views of the road) and travelers (views from the road). This analysis focuses on neighbor viewer groups.

Viewer sensitivity is the anticipated reaction from viewers based on their perception of change in visual resources. Viewer sensitivity is categorized as low, moderate, and high. *Viewer sensitivity* is a product of *viewer exposure* (proximity, extent, and duration) and *viewer awareness* (attention, focus, and protection). The following definitions apply to viewer exposure:

Federal Highway Administration Guidelines divide neighbor viewer groups into the following types:

- Residential
- Recreational
- Institutional
- Civic
- Retail
- Commercial
- Industrial
- Agricultural

- **Proximity** refers to distance from the viewing object. The farther away a scene or object is from a viewer ("background views"), the less exposure that viewer has. Conversely, the closer the viewer is to an object or scene ("foreground views"), the more exposure the viewer has.
- **Extent** refers to the number of people who will be viewing the scene or object. The greater this number, the higher the overall viewer exposure.
- **Duration** measures how long the scene or object is visible to viewers. With respect to a moving observation point (e.g., a vehicle on a scenic highway), the more narrow the view and the faster one travels, the shorter the duration.

The following definitions apply to viewer awareness:

- **Attention** correlates with routine. The more routine the scene is to a viewer, the less sensitive the viewer becomes. By contrast, the more unique a scene is to a viewer, the more sensitive the viewer will be to the scene.
- **Focus** refers to the ability to apprehend details. If a view has no specific visual element or point on which the viewer is focused, the viewer will be less sensitive to details of that scene.
- **Protection** is provided by restrictions that authorities and the community place on changes to a particular view or object being viewed. This protection can be legal or social.

Low viewer sensitivity may exist when there are few viewers who experience a defined view or when potential views of the project are screened or filtered by intervening terrain, structures, or landscaping (low viewer exposure). Low viewer sensitivity may also occur where viewers are not particularly concerned about the quality of views due to their activity type (low viewer awareness), such as a commuter on a freeway. Moderate viewer sensitivity may occur where views of a project are distant enough that the project does not dominate the view (moderate viewer exposure), or where viewer activity is not focused on visual quality and expectations are moderate, such as office workers or shoppers (moderate viewer awareness). High viewer sensitivity occurs where a project is highly prominent, open to view, and seen by relatively high numbers of viewers (high viewer exposure) and where viewer concern and expectations of visual quality is also high, as in a rural park where scenery is a primary focus, or in a residential neighborhood (high viewer awareness).

The FHWA Guidelines (2015) identify members of each type of viewer group, delineating the standard visual preferences of that particular type. Typically, recreational and residential viewers are assumed to have higher levels of viewer sensitivity to project impacts than people working or passing through a viewshed, as described further in Section 4.2.2. Residents are generally assumed to have a high level of interest in or preference for cultural order and natural harmony. Residents experience long-term exposure to changes in their natural and cultural environments and therefore generally express concern for those environments. Recreational viewers often have high levels of concern with natural harmony and cultural order, particularly in settings where scenery is a central focus of the visitor's experience. In contrast, viewers at their places of work are generally assumed to have moderate levels of viewer sensitivity, while commuters are generally assumed to have low levels of viewer sensitivity, particularly in industrial settings. Motorists and commuters are generally assumed to have moderate levels of sensitivity unless noteworthy scenic vistas would be affected or the affected roadways have scenic designation. Participants in some types of active recreation may have a lower level of viewer sensitivity because scenery may not be central to the recreation experience.

4.2.1.2 Visual Quality

Visual quality is a result of the interactive experience between viewers and their environment. Individual viewers may evaluate visual resources in different ways and reach varying conclusions about visual quality. Therefore, the FHWA Visual Impact Assessment guidelines recognize three types of visual perception corresponding to each of the three types of visual resources:

- When viewing the components of a scene's natural environment, viewers inherently evaluate (like or dislike) the *natural harmony* of the existing scene, determining whether the composition is harmonious or inharmonious.
- When viewing the components of the cultural environment, viewers evaluate the scene's *cultural order,* determining whether the composition is orderly or disorderly.
- When viewing the project environment, viewers evaluate the *coherence* of the project components, determining whether the project's composition is internally coherent or incoherent.

In this analysis, the characterization of existing visual quality serves as the baseline for evaluating potential effects. Visual quality is generally described as either low, moderately low, moderate,

moderately high, or high. As described in the FHWA Guidelines, viewer sensitivity to the effects to visual resources influences the degree of effect on visual quality. Effects on visual quality are identified as either *beneficial, adverse, or neutral.* The degree of visual effect is determined by evaluating the compatibility of the effect and *viewer sensitivity* to the effect.

Compatibility is defined as the ability of the environment to absorb the proposed project, with both the project and the environment having harmonious or congruent visual character. The proposed project can be considered compatible (not contrasting) or incompatible (contrasting) with the natural, cultural, or project environments.

4.2.2 Landscape Units

The RSA is divided into landscape units, or the geographic units in which project effects are assessed. Landscape units are defined by viewsheds, landscape type, and land use type, including the existing visual character and types of viewers. A landscape unit can be conceived of as a spatially defined area with a particular visual identity—a distinctive "outdoor room." It can be large or small depending on how the landscape is divided into analytically manageable geographic areas.

Dividing the landscape into natural, cultural, and project visual resources is an artificial but useful analytical tool. However, this is not how people view and interpret the landscape. People do not dissect the landscape when viewing it; rather, they experience it as an overall composition with interplay among nature, culture, and the project. Therefore, after describing the natural, cultural, and project environments as independent components, Section 5.1 evaluates the overall composition of the Upper San Fernando Valley Landscape Unit, the Lower San Fernando Valley Landscape Unit, and the Downtown Los Angeles Landscape Unit.

KVPs have been identified within each landscape unit. These KVPs are used to illustrate whether the proposed project would be compatible or incompatible with a particular views. KVPs represent specific locations in a landscape unit from which a proposed project would be visible to viewers. KVPs are very useful for depicting the visual character and visual quality found in a landscape unit. These locations are typically selected to either represent (1) typical views from common types of viewing areas, such as certain highways or residential areas with exposure to the project, or (2) specific high sensitivity areas such as parks, scenic viewpoints, and historic districts that may be affected by a proposed project. The effect determination for an individual KVP may not be the same as the effect determination for the entire landscape unit in which the KVP is located. This is because when determining effects, the entire landscape unit is considered, not just one specific location, and the condition of the viewed landscape as seen from a sensitive or unique KVP may be different from that of the entire landscape unit.

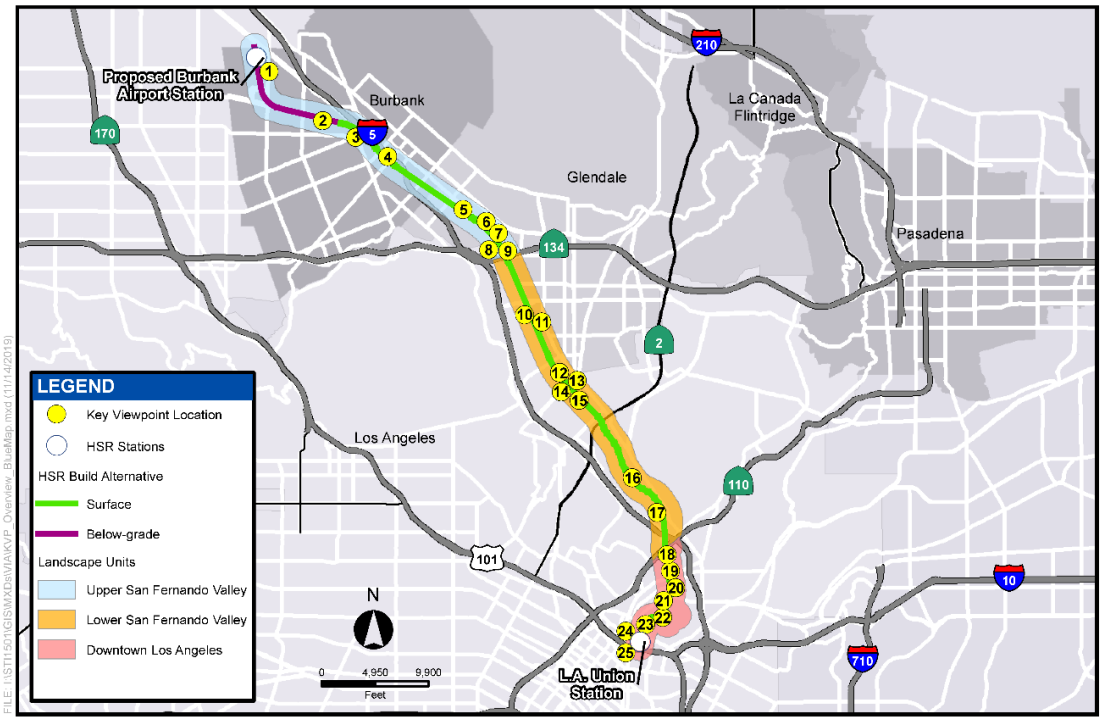
Twenty-six KVPs were established as the basis for the assessment of visual impacts. An overview map (Figure 4-3) of the 25 KVPs is provided below.

The locations are also mapped in Appendix B and are described further in Section 5.1. Visual simulations from the KVPs are presented in Section 6 of this Aesthetics and Visual Quality Technical Report to illustrate how the proposed project features interact with the existing visual environment.

4.3 Evaluating Impacts under the National Environmental Policy Act

Guidance from federal agencies specifies the following factors to consider when determining the significance of an impact to aesthetics and visual resources:

- Introduction of elements that would conflict with the visual character of an historic district, state, or federally or state-listed or eligible historic property
- Substantial effects to a park, recreational destination, or other feature or area identified as an important visual resource
- Introduction or alteration of features that substantially contrasts with the inherent or established character of a view or landscape



Source: California High-Speed Rail Authority and Federal Railroad Administration (2018)

Figure 4-3 Key Viewpoint Overview

- Blocking, removing, or changing a regionally or locally important visual resource or view that results in a dramatic change in the visual character or quality of the resource or view
- Consideration of viewer response where a negative response would increase the perceived impact of a visual change

National Environmental Policy Act impact conclusions are documented in the Aesthetics and Visual Quality section of the EIR/EIS.

4.4 Determining Significance under the California Environmental Quality Act

Based on the CEQA Guidelines, the proposed project would have a significant impact if it would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a designated State Scenic Highway corridor.
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, a significant impact is one that would conflict with applicable zoning and other regulations governing scenic quality.
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

CEQA impact determinations are documented in the Aesthetics and Visual Quality section of the EIR/EIS.

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5 AFFECTED ENVIRONMENT

This section describes existing important visual resources, shows the locations of the three landscape units within the project section, and describes key views and existing visual quality in each landscape unit.

Visual resources are components of the natural, cultural, or project environments that are capable of being seen. A visual resource is any site, object, or feature of the landscape that is capable of being seen. As discussed above in Section 4, Methods for Evaluating Effects, *natural visual resources* include land, water, vegetation, and animals that compose the natural environment. *Cultural visual resources* include buildings, structures, and artifacts that compose the cultural environment. *Project visual resources* include geometrics, structures, and fixtures that compose the project environment. Visual resources also include state-designated scenic routes and views toward and within natural areas, parks, and urban areas identified as having historical or cultural importance or that include buildings of similar importance or notable landmark status.

Noteworthy visual resources that were identified throughout each landscape unit and within the RSA are discussed in more detail below. Visual resources in the RSA were evaluated based on several factors: size, scale, and massing; overall visual interest and contribution to local visual character; architectural importance or uniqueness; cultural/historical importance; proximity to the rail corridor; and available lines of sight to or from the resource and the proposed alignment. The visual resources inventory includes several parks, recreational facilities, and cultural resources. For further discussion on the HSR Build Alternative's potential effects on those resources, please see the respective technical reports and EIR/EIS sections for those resource areas.

Visual quality is a result of the interactive experience between viewers and their environment. Under the FHWA's visual quality analysis system, visual quality is determined by evaluating the viewed landscape's characteristics in terms of natural harmony, cultural order, and project coherence. The analysis of natural harmony, cultural order, and project coherence informs the overall visual quality ratings. Visual quality is rated as low, moderate-low, moderate, moderate-high, or high. To determine overall visual quality, the natural harmony, cultural order, and project coherence are also rated, and the ratings of these three factors determine the overall visual quality. The existing visual quality of the RSA was determined by analysts who are familiar with the Authority's and FHWA's methodology and who visited the RSA on several occasions. Changes in visual character and viewer sensitivity determine the degree of impact on visual quality from a proposed project, which is rated as beneficial, neutral, or adverse.

5.1 Existing Visual Resources

Visual resources are components of the natural, cultural, or project environments that are capable of being seen. A visual resource is any site, object, or feature of the landscape that is capable of being seen. Visual resources within the Burbank to Los Angeles Project Section are illustrated on Figure 5-1 and described in more detail in the following sections.

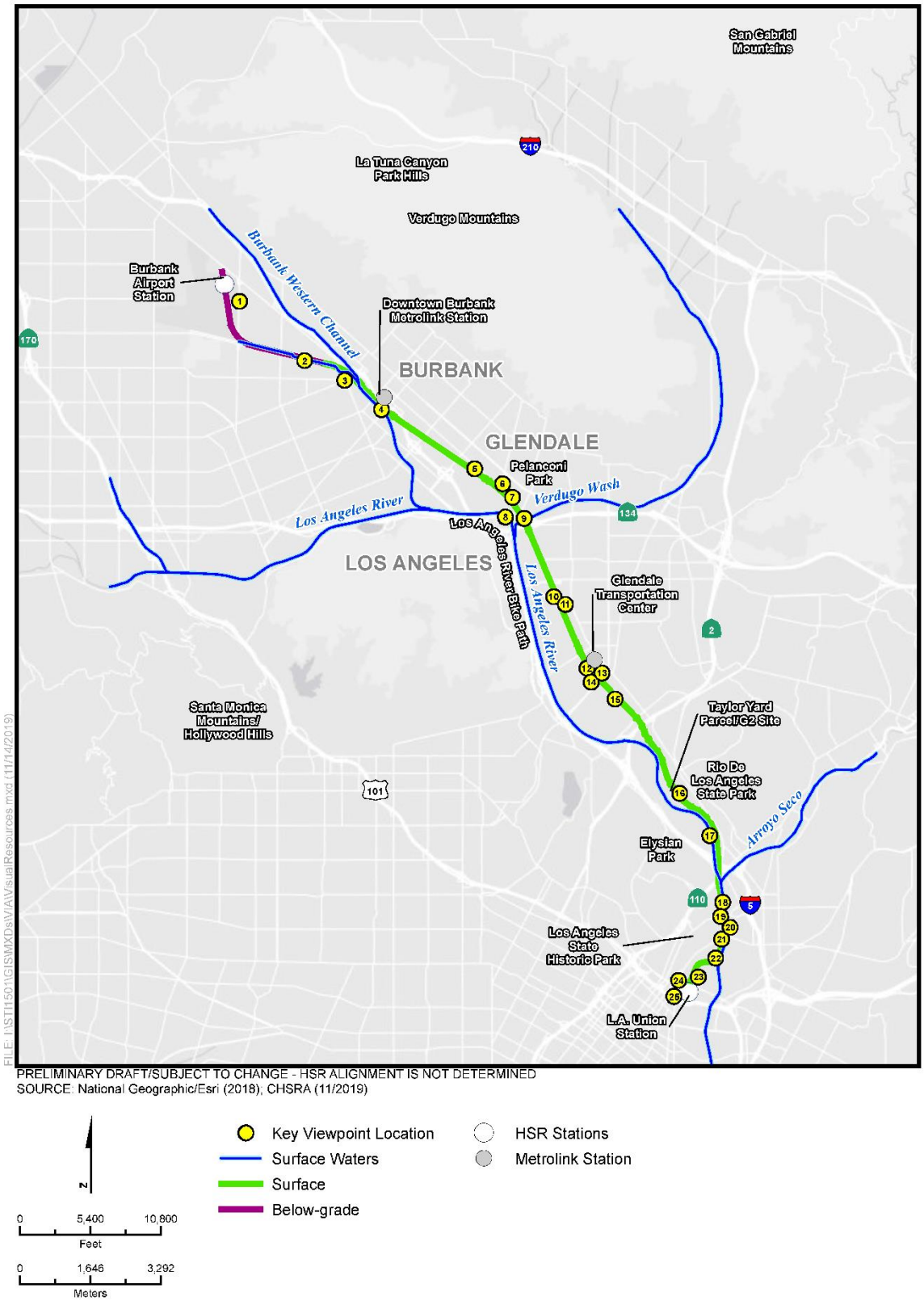


Figure 5-1 Visual Resources

5.1.1 Upper San Fernando Valley Landscape Unit

The Upper San Fernando Valley Landscape Unit extends from Hollywood Burbank Airport to SR 134 (approximately 6.5 miles) and includes portions of the cities of Los Angeles, Burbank, and Glendale. The cultural environment of the Upper San Fernando Valley Landscape Unit generally consists of industrial and commercial uses adjacent to the existing rail corridor (part of the project environment) and Hollywood Burbank Airport. Residential uses are also part of the cultural environment but are often buffered from the existing rail corridor and Hollywood Burbank Airport by commercial or industrial properties. The natural environment of the Upper San Fernando Valley Landscape Unit, which includes the San Gabriel Mountains, primarily consists of elements outside the project footprint but viewed from the RSA. The visual character throughout the Upper San Fernando Valley Landscape Unit is typified by the existing rail corridor and industrial/ commercial corridor as well as development surrounding the existing railroad corridor.

5.1.1.1 Visual Resources in the Upper San Fernando Valley Landscape Unit

San Gabriel Mountains (Natural Environment)

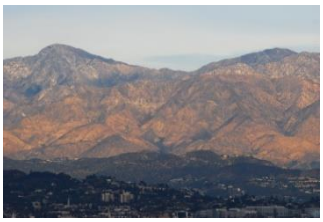
The San Gabriel Mountains are a mountain range located in northern Los Angeles County. The mountain range is part of the Transverse Ranges and lies between the Los Angeles Basin and the Mojave Desert, with I-5 bordering to the west and I-15 bordering to the east.

La Tuna Canyon Park Hills (Natural Environment)

The 1,100-acre La Tuna Canyon Park provides trail access into the steep upper reaches of the Verdugo Mountains. The La Tuna Canyon trail connects with the Verdugo Fire Road (also called the Backbone Road), which offers 13 miles of trails across almost the whole length of the Verdugo Mountains.

Downtown Burbank Metrolink Station (Cultural Environment)

The Downtown Burbank Metrolink Station is a passenger rail station located near downtown Burbank. It is served by Metrolink's Antelope Valley Line to Lancaster and its Ventura County Line to East Ventura, both terminating at LAUS.

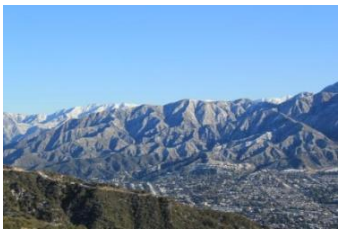


Santa Monica Mountains/Hollywood Hills (Natural Environment)

This mountain range extends approximately 40 miles east-west from the Hollywood Hills in Los Angeles to Point Mugu in Ventura County. The range is of moderate height (the maximum elevation is 3,111 feet), with no particularly craggy or prominent peaks outside the Sandstone Peak and Boney Mountains area. While rugged and wild in many areas, the range includes a substantial amount of human activity and development, including houses, roads, businesses, and recreational centers.

Pelanconi Park (Natural Environment)

This park, located at 1000 Grandview Avenue in the City of Glendale, provides a playground, a basketball court, a baseball field, and picnic spots.



Verdugo Mountains (Natural Environment)

The Verdugo Mountains are a northwest-southwest-trending, lens-shaped series of ridges approximately 9 miles long and varying from 3 to 4 miles in width. The mountains are separated on the north and northeast from the main body of the San Gabriel Mountains by extensive alluvial fans of the Sunland-Tujunga and La Crescenta areas. Big Tujunga Wash borders the Verdugo Mountains on the north, and the San Fernando Valley borders the mountains on the south-southwest. On the east, the Verdugo Wash separates the Verdugo Mountains from the San Rafael Hills.

Los Angeles River (Natural Environment)

The historic Los Angeles River starts in the Simi Hills and Santa Susana Mountains and flows through Los Angeles County, from Canoga Park in the western end of the San Fernando Valley, nearly 48 miles southeast to its mouth in the City of Long Beach. The Los Angeles River now flows through a concrete channel on a fixed course, which was built after a series of floods in the early 20th century.

Los Angeles River Bike Path (Cultural Environment)

pedestrian path in the greater Los Angeles area running northeast along the Los Angeles River. The Los Angeles River Bike Path consists of two main sections, the Long Beach to Vernon section and the Glendale Narrows Elysian Valley section within the Upper San Fernando Valley Landscape Unit, as well as additional shorter sections that currently do not connect with each other along the river.

Verdugo Wash (Natural Environment)

Verdugo Wash is a 9.4-mile-long tributary of the Los Angeles River in the City of Glendale.

5.1.1.2 Viewers

There are a variety of land uses throughout the Upper San Fernando Valley Landscape Unit and, therefore, a variety of viewers and viewer groups. Primary viewer groups include various industrial and commercial business workers, as well as residents/recreationists in areas that neighbor the existing railroad corridor. Other primary viewer groups include motorists, commuters, haulers, transit riders, pedestrians, and bicyclists who use local roadways and thoroughfares that are parallel to, traverse, and/or are otherwise adjacent to the existing railroad corridor.

Table 5-1 provides standardized descriptions of these viewer groups.

Table 5-1 Upper San Fernando Valley Landscape Unit—Existing Viewer Groups and Preferences

Viewer Group	Viewer Group Preferences
Residential Viewers	Residential viewers are owners or renters. Therefore, residential viewers tend to be uninterested in change unless they have been able to participate in defining the change.
Recreational Viewers	Recreational viewers provide or participate in active and passive recreational uses such as organized sporting events, indoor and outdoor leisure activities, and cultural events. Recreational viewers are often focused on their recreational activity, and although they tend to be unsupportive of visual changes that would negatively affect the recreational setting, they tend to be supportive of visual improvements that enhance their recreational experience. Recreational services provided for visitors can be permanent, while the visitors themselves are more transitory.
Retail Viewers	Retail viewers include merchants that sell goods and services and the shoppers who buy them. Merchants generally want heightened visibility free of competing visual intrusions, while shoppers need to be able to easily find their destination and, once there, concentrate on the shopping experience. Merchants tend to be more permanent than shoppers, although shoppers often frequent the same stores repeatedly, giving them a sense of permanence.
Commercial Viewers	Commercial viewers are those occupying or using office buildings, warehouses, and other commercial structures. Commercial viewers' visual preferences vary depending on the business and may be more aligned with retail, institutional, or industrial viewers' visual preferences than those of residential viewers. Workers are often permanent, while visitors and customers are transitory.
Institutional Viewers	Institutional viewers provide or receive services from such places as schools or hospitals that provide social services to the community. Consequently, institutions often promote a public image to adjacent viewers. Therefore, the presentation of their buildings and grounds is critical, and they tend to be well maintained. Signage or orientation and wayfinding are commonly associated with institutional facilities. Workers and employees of the institution are present for longer durations, while visitors are more transitory.
Civic Viewers	Civic viewers provide or receive services from a government organization, such as a military reservation or a federal, state, or local agency. Views of government facilities may or may not be desired, depending on the particular organization and work being performed. Workers and employees of the civic uses are present for longer durations, while visitors are more transitory.
Industrial Viewers	Industrial viewers mine or harvest raw materials; manufacture goods and services; or transport goods, services, and people, and often require large amounts of land that has limited exposure to the public. Industrial viewers' visual preference is generally utilitarian unless they want to enhance the public presentation and views of their facility. Industrial viewers tend to be primarily workers, with few transitory visitors.
Agricultural Viewers	Agricultural viewers are agricultural workers in fields and pastures who maintain crops or herd animals. Cultural order and natural harmony are critical components of the landscape. Some agricultural viewers are permanent, but many are transient, although they may return to the same area seasonally.
Travelers	Travelers can include pedestrians, cyclists, motorists, and rail users who use various modes of transportation for commuting, touring, and shipping. Pedestrians use only their feet (or a wheelchair or other device), most often on a sidewalk or trail. Cyclists use bicycles at greater speeds than pedestrian travel, and may use trails, traffic lanes, and sidewalks. Motorists use vehicles with engines (e.g., cars, trucks, buses, motorcycles, mopeds, or any other technology that is not self-propelled, regardless of fuel source). Motorists move at higher speeds than other groups. By necessity, the driver of a motor vehicle focuses less on the view outside the vehicle. The driver's primary interest is in project coherence, although natural harmony and cultural order also provide resources used for wayfinding. Good natural harmony and cultural order can increase driver attentiveness. Passengers within vehicles and railcars move at high rates of speed and may be focused on views outside the vehicle or railcar, or on activities within the vehicle or railcar (e.g., talking, reading, working, eating, people watching, or napping). Passengers prefer evidence of

Viewer Group	Viewer Group Preferences
	good natural harmony and cultural order. Commuters travel the same route regularly, have a repeated routine, and are often single drivers, but they may also be passengers. Trips can include commuting to work or to a favorite or frequent destination (e.g., campground, cabin, sports arena, or relative's home). Tourists travel individually or in groups through an area for enjoyment, often with a set destination. Their trips are generally more adventurous, cover longer distances, and take more time than commuting trips. Shippers are generally single drivers moving goods on routine routes of varying distances.

Source: California High-Speed Rail Authority and Federal Railroad Administration (2016)

5.1.1.3 Visual Quality

Table 5-2 measures the existing visual character of the affected environment by qualitatively rating the natural harmony, cultural order, and project coherence to determine the existing visual quality of KVPs 1 through 9. Viewer groups and viewer preference are taken into account when determining existing visual quality.

Table 5-2 Upper San Fernando Valley Landscape Unit—Existing Visual Quality

KVP #	KVP Photo and Description	Natural Harmony	Cultural Order	Project Coherence	Primary Viewer Group	Existing Visual Quality
1	 *Existing view from N Hollywood Way in the City of Burbank, looking northwest*	Moderate	Moderate	Low	Motorists using N Hollywood Way	Moderate-Low
2	 *Existing view from Pacific Avenue in the City of Burbank, looking northeast*	Moderate-High	Moderate	Moderate	Motorists using W Pacific Avenue	Moderate
3	 *Existing view from W Burbank Boulevard in the City of Burbank, looking northeast*	Moderate-High	Moderate	Low	Motorists using W Burbank Boulevard	Moderate

KVP #	KVP Photo and Description	Natural Harmony	Cultural Order	Project Coherence	Primary Viewer Group	Existing Visual Quality
4	 *Existing view from N Front Street in the City of Burbank, looking southwest*	Moderate-High	Moderate-High	Moderate	Visitors and commuters traveling through the downtown Burbank Metrolink station	Moderate-High
5	 *Existing view from Sonora Avenue in the City of Glendale, looking south*	Low	Moderate	Low	Pedestrians using Sonora Avenue	Moderate-Low
6	 *Existing view from Pelanconi Park in the City of Glendale, looking southwest*	Moderate	Moderate	Low	Recreational visitors to Pelanconi Park	Moderate-Low
7	 *Existing view from Pelanconi Avenue/Flower Street in the City of Glendale, looking southwest*	Low	Moderate	Low	Residents and pedestrians using Flower Street/ Pelanconi Avenue	Low

KVP #	KVP Photo and Description	Natural Harmony	Cultural Order	Project Coherence	Primary Viewer Group	Existing Visual Quality
8	 *Existing view from the Los Angeles River Bike Path in the City of Glendale, looking northeast*	High	Moderate	Moderate	Pedestrians and bicyclists using the Los Angeles River Bike Path	Moderate-High
9	 *Existing view from San Fernando Road over the Verdugo Wash in the City of Glendale, looking southwest*	Low	Moderate	Low	Motorists using San Fernando Road	Moderate-Low

Source: California High-Speed Rail Authority and Federal Railroad Administration (2016)
KVP = key viewpoint

5.1.2 Lower San Fernando Valley Landscape Unit

5.1.2.1 Visual Resources in the Lower San Fernando Valley Landscape Unit

The Lower San Fernando Valley Landscape Unit extends from SR 134 to SR 110 (approximately 3.4 miles) and includes portions of the cities of Glendale and Los Angeles. The City of Glendale is divided into 34 neighborhoods, which are delineated by streets, washes, and mountain ridges. Each neighborhood has a unique history and character, and as these neighborhoods developed, they were incorporated to become the City of Glendale. Land uses within this landscape unit include, but are not limited to, single-family and multifamily residential neighborhoods, educational facilities, commercial businesses and services, and light industrial and manufacturing uses, as well as parks and open space. Similar to the Upper San Fernando Valley Landscape Unit, the residential uses within this landscape unit are buffered by commercial or industrial uses adjacent to the existing rail corridor. The visual character through the Lower San Fernando Landscape Unit is typified by the industrial/commercial corridor and development surrounding the existing railroad corridor, as well as the residential neighborhoods throughout the City of Glendale.

Glendale Transportation Center (Cultural Environment)

The historic Glendale Transportation Center is an Amtrak and Metrolink rail station in the City of Glendale. Originally known as the Glendale Southern Pacific Railroad Depot, the Glendale Transportation Center was built by the Southern Pacific Railroad in the Mission Revival Style in 1923. In 1997, it was listed on the National Register of Historic Places.

Rio de Los Angeles State Park (Cultural Environment)

Rio de Los Angeles State Park is a California State Park along the Los Angeles River, north of downtown Los Angeles in the neighborhood of Cypress Park. The 247-acre park includes restored wetlands featuring native plants, as well as sports fields, a children's playground, and a recreation building. The park was built on a brownfield abandoned freight-switching facility called Taylor Yard, which was used by the UPRR and later the Southern Pacific Railroad from 1920s through 1985.

Los Angeles River (Natural Environment)

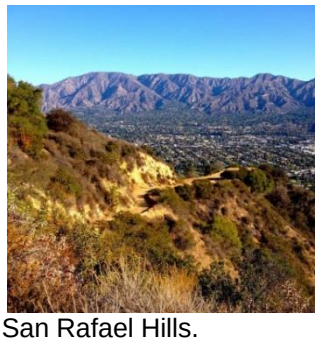
The historic Los Angeles River starts in the Simi Hills and Santa Susana Mountains and flows through Los Angeles County, from Canoga Park in the western end of the San Fernando Valley nearly 48 miles southeast to its mouth in Long Beach. The Los Angeles River now flows through a concrete channel on a fixed course, which was built after a series of floods in the early 20th century.

Los Angeles River Bike Path (Cultural Environment)

The Los Angeles River Bike Path is a Class I bicycle and pedestrian path in the greater Los Angeles area running northeast along the Los Angeles River. The Los Angeles River Bike Path consists of two main sections, the Long Beach to Vernon section and the Glendale Narrows Elysian Valley section within the Lower San Fernando Valley Landscape Unit, as well as additional shorter sections that currently do not connect with each other along the river.

Verdugo Mountains (Natural Environment)

The Verdugo Mountains are a northwest-southwest-trending, lens-shaped series of ridges approximately 9 miles long and varying from 3 to 4 miles in width. The mountains are separated on the north and northeast from the main body of the San Gabriel Mountains by extensive alluvial fans of the Sunland-Tujunga and La Crescenta areas. Big Tujunga Wash borders the Verdugo Mountains on the north, and the San Fernando Valley borders the mountains on the south-southwest. On the east, the Verdugo Wash separates the Verdugo Mountains from the San Rafael Hills.



San Gabriel Mountains (Natural Environment)

The San Gabriel Mountains are a mountain range located in northern Los Angeles County. The mountain range is part of the Transverse Ranges and lies between the Los Angeles Basin and the Mojave Desert, with I-5 to the west and I-15 to the east.

Taylor Yard Parcel/G2 Site (Cultural Environment)

Taylor Yard is a 41-acre former railyard with more than 2 miles of Los Angeles River frontage located near downtown Los Angeles, opposite Elysian Park just north of the Arroyo Seco. It is the largest undeveloped parcel along the Los Angeles River, and the City of Los Angeles intends to purchase this parcel in order to restore and revitalize the land for public use. More details regarding the restoration of Taylor Yard are provided in the Los Angeles River Revitalization Master Plan (City of Los Angeles 2007).

5.1.2.2 Viewers

There are a variety of land uses throughout the Lower San Fernando Valley Landscape Unit and, therefore, a variety of viewers and viewer groups. Primary viewer groups include various industrial and commercial business workers, as well as residents/recreationists in areas that neighbor the existing railway and HSR Build Alternative. Other viewer groups include motorists, commuters, haulers, transit riders, pedestrians, and bicyclists who use local roadways and thoroughfares that are parallel to, traverse, and/or are otherwise adjacent to the existing railroad corridor.

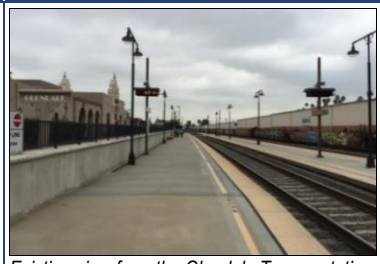
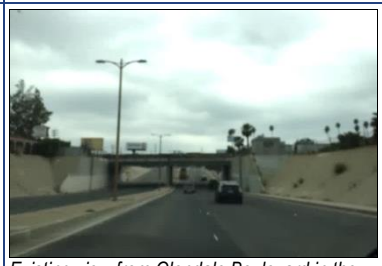
Table 5-1 provides standardized descriptions of these viewer groups.

5.1.2.3 Visual Quality

Table 5-3 measures the existing visual character of the affected environment by qualitatively rating the natural harmony, cultural order, and project coherence to determine the existing visual quality of KVPs 10 through 17. Viewer groups and viewer preference are taken into account when determining existing visual quality.

Table 5-3 Lower San Fernando Valley Landscape Unit—Existing Visual Quality

KVP #	KVP Photo and Description	Natural Harmony	Cultural Order	Project Coherence	Primary Viewer Group	Existing Visual Quality
10	 *Existing view from W San Fernando Road in the City of Los Angeles, looking east*	Low	Low	Low	Motorists using Alger Street	Low
11	 *Existing view from San Fernando Road in the City of Los Angeles, looking west*	Low	Low	Low	Motorists using San Fernando Road	Low

KVP #	KVP Photo and Description	Natural Harmony	Cultural Order	Project Coherence	Primary Viewer Group	Existing Visual Quality
12	 *Existing view from the Glendale Transportation Center in the City of Los Angeles, looking southeast*	Low	Moderate	Moderate	Visitors and commuters traveling through the historic Glendale Transportation Center	Moderate
13	 *Existing view from Glendale Boulevard in the City of Los Angeles, looking southwest*	Low	Moderate	Moderate	Motorists using Glendale Boulevard	Moderate-Low
14	 *Existing view from Casitas Avenue in the City of Los Angeles, looking northeast*	Low	Low	Low	Residents and pedestrians using Casitas Avenue	Low
15	 *Existing view from Casitas Avenue in the City of Los Angeles, looking northeast*	Low	Low	Low	Residents and pedestrians using Casitas Avenue	Low
16	 *Existing view from Rio de Los Angeles State Park in the City of Los Angeles, looking southwest*	High	Moderate	Moderate	Visitors to Rio de Los Angeles State Park	Moderate-High

KVP #	KVP Photo and Description	Natural Harmony	Cultural Order	Project Coherence	Primary Viewer Group	Existing Visual Quality
17	 *Existing view from the Los Angeles River Bike Path in the City of Los Angeles, looking southeast*	Low	Moderate	Low	Pedestrians and bicyclists using the Los Angeles River Bike Path	Moderate-Low

Source: California High-Speed Rail Authority and Federal Railroad Administration (2016)
KVP = key viewpoint

5.1.3 Downtown Los Angeles Landscape Unit

5.1.3.1 Visual Resources in the Downtown Los Angeles Landscape Unit

The Downtown Los Angeles Landscape Unit extends from SR 110 to LAUS (approximately 4.5 miles) and is wholly located in the City of Los Angeles. This landscape unit generally consists of land uses for manufacturing, warehousing, rail yards, and other commercial uses. The visual character throughout is typified by the industrial/commercial corridor and development surrounding the existing railroad corridor.

Elysian Park (Natural Environment)

Elysian Park, the second-largest park in the City of Los Angeles at 600 acres, is the oldest park in the city, founded in 1886 by the Elysian Park Enabling Ordinance. Elysian Park encompasses Chavez Ravine where Dodger Stadium is located.

Los Angeles State Historic Park (Cultural Environment)

Los Angeles State Historic Park is a within the Chinatown neighborhood of the City of Los Angeles. Also known as the Cornfield, the former Southern Pacific Railroad River Station and brownfield site consists of a long open space between Spring Street and the tracks of the Metro Gold Line. Located outside the main commercial and residential area in the northeast portion of Chinatown, the area is adjacent and southeast of the Elysian Park neighborhood. Los Angeles State Historic Park is not listed on the National Register of Historic Places. It is a local City of Los Angeles Historic-Cultural Monument, called the River Station Area.

Los Angeles Union Station (Cultural Environment)

LAUS was built in 1939 and is located in downtown Los Angeles at 800 N Alameda Street, between U.S. Route 101 and E Cesar Chavez Avenue. LAUS was added to the National Register of Historic Places in 1980. It is a major transportation hub, providing access to Amtrak, Metrolink, the Metro Rail Red Line to North Hollywood, and the Metro Rail Gold Line to Pasadena, along with several surface transportation modes. The station is a mix of Spanish Mission, Moorish, and Streamline Moderne architectural styles. The station is also adjacent to the

Metro agency building in Gateway Plaza, a 26-floor office tower opened in 1995, as well as the Metropolitan Water District Building.

5.1.3.2 Viewers

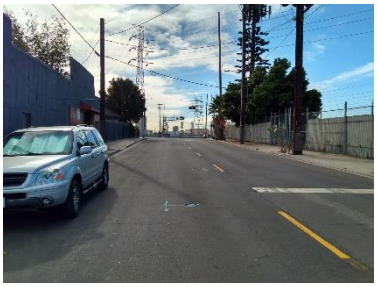
There are a variety of land uses throughout the Downtown Los Angeles Landscape Unit and, therefore, a variety of viewers and viewer groups. Primary viewer groups include employees of and visitors to businesses throughout the downtown Los Angeles industrial corridor, as well as residents/recreationists in areas that neighbor the existing railway. Other primary viewer groups include motorists, commuters, haulers, transit riders, pedestrians, and bicyclists who use local roadways and thoroughfares that are parallel to, traverse, and/or are otherwise adjacent to the existing railroad corridor.

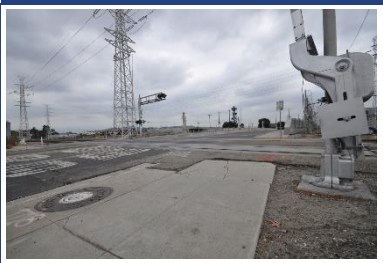
Table 5-1 provides standardized descriptions of viewer groups.

5.1.3.3 Visual Quality

Table 5-4 measures existing visual character of the affected environment by qualitatively rating the natural harmony, cultural order, and project coherence to determine the existing visual quality of KVPs 18 through 25. Viewer groups and viewer preference are taken into account when determining existing visual quality.

Table 5-4 Downtown Los Angeles Landscape Unit—Existing Visual Quality

KVP #	KVP Photo and Description	Natural Harmony	Cultural Order	Project Coherence	Primary Viewer Group	Existing Visual Quality
18	 *Existing view from Elysian Park in the City of Los Angeles, looking southeast*	High	Moderate	Moderate	Visitors to Elysian Park	Moderate-High
19	 *Existing view from Los Angeles State Historic Park in the City of Los Angeles, looking northeast*	Low	Moderate	Low	Visitors to Los Angeles State Historic Park	Moderate-Low
20	 *Existing view from Albion Street in the City of Los Angeles, looking south*	Low	Low	Low	Pedestrians, cyclists, and motorists using Albion Street	Low

KVP #	KVP Photo and Description	Natural Harmony	Cultural Order	Project Coherence	Primary Viewer Group	Existing Visual Quality
21	 *Existing view from N Main Street in the City of Los Angeles, looking east*	Low	Low	Low	Pedestrians, cyclists, and motorists using N Main Street	Low
22	 *Existing view from Leroy Street in the City of Los Angeles, looking southeast*	Low	Low	Low	Residents and pedestrians using Leroy Street	Low
23	 *Existing view from Bauchet Street in the City of Los Angeles, looking southwest*	Low	Moderate	Low	Pedestrians and motorists using Bauchet Street	Moderate-Low
24	 *Existing view from E Cesar Chavez Avenue in the City of Los Angeles, looking southeast*	Moderate	Moderate	Moderate	Motorists or pedestrians using E Cesar Chavez Avenue	Moderate
25	 *Existing view from the Mosaic at Union Station Apartments in the City of Los Angeles, looking southeast*	Moderate	Moderate	Low	Residents and pedestrians traveling to or from the Mosaic at Union Station Apartments	Moderate-Low

Source: California High-Speed Rail Authority and Federal Railroad Administration (2016)
KVP = key viewpoint

6 EFFECTS ANALYSIS

6.1 Introduction

This section describes the visual character of the proposed project and uses the RSA and landscape units that were established; the 25 KVPs (presented on Figure 4-3); and the inventory of specific visual resources, viewer groups, and viewers' sensitivity to the change in visual character to analyze the overall visual quality after implementation of the proposed project. Visual simulations are used to depict the visual changes that would result from the introduction of the proposed project and form the basis for the visual quality effect presented in Table 6-1, Table 6-2, and Table 6-3, which summarize the HSR Build Alternative's visual impacts by landscape unit.

6.2 No Project Alternative

Under the No Project Alternative, the proposed project would not be constructed. Within the Burbank to Los Angeles Project Section, visual changes and aesthetic and visual quality effects would occur from other planned and committed projects to be constructed by or before 2040. Projects would be designed and built within the framework of the laws, ordinances, regulations, and statutes of the respective planning jurisdictions. As such, their aesthetic effects likely would be neutral to beneficial.

6.3 High-Speed Rail Build Alternative

6.3.1 Construction Impacts

Substantial construction work would be required to accommodate the HSR Build Alternative. However, the presence of construction materials, equipment, on-site workers, and other associated improvements, such as roadway/track realignments, would temporarily alter the existing visual environment throughout the Burbank to Los Angeles Project Section, and is expected to last for approximately 5 years.

Construction activities would introduce heavy equipment and associated vehicles, including backhoes, compactors, tractors, cranes, and trucks, into the views of all viewer groups. Temporary visual changes would also result from the erection of support structures, such as falsework platforms and approach structures necessary to construct the proposed project undercrossings at Sonora Avenue, Grandview Avenue, Flower Street, and Goodwin Avenue, as well as the overcrossing at Main Street.

Construction activities would include earthwork, rail bed or column and guideway construction, and associated truck hauling and other major material and equipment movement and storage, any of which could potentially cause substantial visual intrusions in any given area, as these activities would be highly visible. Grading or excavation could involve the release of dust, which could affect visibility. The proposed project would comply with local requirements and best management practices, including AQ-IAMF #1: Fugitive Dust Emissions (to limit dust) and CUL-IAMF#6 (to protect historic building resources).

Construction staging areas could introduce visual changes to their immediate surroundings, with unsightly, visually chaotic aggregations of stored material and equipment. A total of approximately 8 construction staging areas have been identified for the proposed project, although they may be changed during construction. Construction activities may also involve the use of temporary structures (e.g., trailers, fencing, and parking). Although lighting would be directed downward and on-site, lighting of these temporary structures and for nighttime construction could spill over to off-site areas, resulting in disturbances to nearby residents and motorists.

Because of the lengthy construction period, visual effects would be substantial if they are located near any high-sensitivity receptors, such as recreationists or residents. However, once construction is complete, construction equipment would be removed and construction staging areas and temporary structures would be dismantled. Nonetheless, construction activities potentially represent adverse changes to visual quality.

6.3.1.1 Viewer Sensitivity

As discussed above in Section 5.1.1.1, the primary viewer groups in the Upper San Fernando Valley Landscape Unit include industrial and commercial business workers and residents adjacent to the proposed Burbank Airport Station. Generally, industrial and commercial workers have a lower awareness of visual changes in the environment and, therefore, lower sensitivity. Viewers, such as residents, who have high awareness and exposure might have an adverse reaction, as construction activities and the presence of construction equipment and materials are usually considered to be a visual nuisance.

As discussed above in Section 5.1.2.1, primary viewer groups in the Lower San Fernando Valley Landscape Unit include various industrial and commercial business workers, as well as residents/recreationists in areas that neighbor the existing railway and proposed alignment; employees and patrons of similarly located businesses; and motorists, commuters, haulers, transit riders, pedestrians, and bicyclists who use local roadways and thoroughfares that are parallel to, traverse, and/or are otherwise adjacent to the existing railway and the HSR Build Alternative. Generally, viewer preference for lower-sensitivity groups, such as commuters and haulers, would likely be neutral, whereas more sensitive visual receptors, such as residents, might have an adverse reaction, as construction activities and the presence of construction equipment and materials are usually considered to be a visual nuisance.

As discussed above in Section 5.1.3.1, primary viewer groups include employees of and visitors to businesses throughout the downtown Los Angeles industrial corridor as well as residents/ recreationists in areas that neighbor the existing railway. Other primary viewer groups include motorists, commuters, haulers, transit riders, pedestrians, and bicyclists who use local roadways and thoroughfares that are parallel to, traverse, and/or are otherwise adjacent to the existing railway and the HSR Build Alternative. Generally, viewer preference for lower-sensitivity groups, such as commuters and haulers, would likely be neutral, whereas more sensitive visual receptors, such as residents, might have an adverse reaction, as construction activities and the presence of construction equipment and materials are usually considered to be visually obtrusive.

Overall, however, given the viewers' familiarity with the existing rail corridor, and the temporary nature of construction, viewer sensitivity to project construction throughout the Burbank to Los Angeles Project Section would be low to moderate-low.

6.3.1.2 Visual Quality

Although construction activities potentially represent substantial adverse changes to visual quality, these changes are considered to be temporary, as construction equipment, materials, and support structures would be installed at the beginning of the construction period and removed upon completion of the proposed project. Therefore, proposed construction activities would not contribute to a substantial change in overall visual quality. Permanent visual elements that would be introduced during the construction period and remain after the completion of construction, such as columns and elevated guideway structures, are evaluated below in operation effects (Section 6.3.1.2, Section 6.3.2.1, and Section 6.3.2.2), and are factored into the visual change, viewer sensitivity, and visual quality effect presented in Table 6-1, Table 6-2, and Table 6-3.

6.3.2 Operational Impacts

6.3.2.1 Upper San Fernando Valley Landscape Unit

Once operational, built elements that would be introduced into the RSA throughout the Upper San Fernando Valley Landscape Unit as a part of the proposed project would include the trains (rolling stock), tracks, an OCS, a grade separation, support structures, and landform alterations associated with grading/realignment; lighting and signage; roadway realignments for under/ overcrossings; removal of vegetation; removal of existing structures; and new landscaping and revegetation. These changes are depicted below in the visual simulations for KVPs 1 through 9. All of the proposed KVPs are typical views from common types of viewing areas. The resulting overall visual quality effect is summarized in Table 6-1.

Key Viewpoint 1

Visual Change

The proposed Burbank Airport Station (captured by KVP 1 on N Hollywood Way looking northwest [Figure 6-1]) would add station facilities closer to Hollywood Way, such as the transit center. The area along Hollywood Way would be transformed into a transit center for buses and shuttles, with shelters and small buildings scattered throughout. Station features would be visible from nearby residences and to motorists, bicyclists, and pedestrians traveling along N Hollywood Way. The proposed transit center would be heavily landscaped with trees, enhancing the presently low level of natural harmony. Pick-up/drop-off facilities for private automobiles, a transit center for buses and shuttles, and surface parking areas would be visible to motorists, bicyclists, and pedestrians traveling along N Hollywood Way. However, although there are sidewalks on the majority of the streets surrounding Hollywood Burbank Airport, the area is generally not pedestrian-friendly due to the lack of pedestrian-oriented buildings abutting the sidewalk. The proposed Burbank Airport Station would introduce a moderate visual change to the area.

Separate from the Burbank to Los Angeles Project Section, the Burbank-Glendale-Pasadena Airport Authority is moving forward to build a two-story, 14-aircraft-gate replacement terminal at Hollywood Burbank Airport. About 2,450 parking spaces would be located between the replacement terminal and N Hollywood Way. The replacement terminal would be developed prior to the development of the Burbank to Los Angeles Project Section and would add to the existing industrial and commercial visual character of the area around Hollywood Burbank Airport.

Viewer Sensitivity

Motorists using N Hollywood Way are the primary viewer group represented by KVP 1. Overall viewer exposure would be low due to the dynamic view (the viewshed of a traveler moving along a highway is dynamic; it is constantly changing) and short viewing durations. Viewer awareness of commuting motorists would be low because the more routine the scene is to a viewer, the less sensitive the viewer is. On the other hand, viewer awareness of visiting motorists would be high, as the scene would be more unique to visitors and the viewer would thus be more sensitive to it. Given an overall exposure ranking of low and an average awareness ranking of moderate, overall viewer sensitivity to KVP 1 would be moderate.

Visual Quality

Because the majority of the project features included in the proposed Burbank Airport Station would not alter the visual character along N Hollywood Way, the Burbank Airport Station would improve cultural order. Therefore, even with moderate viewer sensitivity, the overall visual quality effect would be beneficial.

Existing view from N Hollywood Way in the City of Burbank, looking northwest

Simulated view of the HSR Build Alternative/Station from N Hollywood Way in the City of Burbank, looking northwest

Figure 6-1 Key Viewpoint 1

Key Viewpoint 2

Visual Change

The below-grade alignment (captured by KVP 2 on Pacific Avenue looking northeast [Figure 6-2]) would be transitioning from below-grade to surface in this location, and the trains would be within a trench. The visual simulation for KVP 2 illustrates that the HSR Build Alternative would be visible to pedestrians and motorists at this location. Visual changes to the area would be low due to the existing Metrolink and UPRR non-electrified tracks (that would be relocated within the existing rail corridor). The visual simulation for KVP 2 also captures the view of the Verdugo Mountains and illustrates that even with the introduction of overhead catenary lines into the viewshed, the HSR Build Alternative would not interrupt existing views of the Verdugo Mountains for motorists using Pacific Avenue. The minimal visual change is attributed to several factors, including the existing utility lines in the viewshed, the Metrolink and UPRR non-electrified tracks (which would be relocated within the existing rail corridor), and the fact that the HSR Build Alternative would not exceed the height of the existing surrounding warehouse buildings.

Viewer Sensitivity

Motorists using W Pacific Avenue are the primary viewer group represented by KVP 2. Overall viewer exposure would be low due to the dynamic view and short viewing durations. Viewer awareness of commuting and touring motorists would be low due to the low visual change. Given an exposure ranking of low and an awareness ranking of low, overall viewer sensitivity to the project features in KVP 2 would be low.

Visual Quality

Given that the HSR trains would be adjacent to existing Metrolink and UPRR tracks (which would be relocated within the right-of-way), utility lines are currently present, and the viewer sensitivity in the area is low, the overall visual quality effect would be neutral.

Existing view from Pacific Avenue in the City of Burbank, looking northeast

Simulated view of the HSR Build Alternative from Pacific Avenue in the City of Burbank, looking northeast

Figure 6-2 Key Viewpoint 2

Key Viewpoint 3

Visual Change

The HSR alignment (captured by KVP 3 on W Burbank Boulevard looking northeast [Figure 6-3]) parallels the Metrolink tracks along San Fernando Road. The existing Burbank Boulevard roadway bridge would be reconstructed to cross over the electrified and non-electrified tracks, and Burbank Boulevard would be raised in elevation on the west side. The visual simulation for KVP 3 captures the grade separation, and illustrates that the proposed project would be barely visible by motorists at this location and visual changes to the area would be low. The visual simulation for KVP 3 also captures the view of the Verdugo Mountains, and illustrates that the HSR Build Alternative would not interrupt existing views of the Verdugo Mountains for motorists using W Burbank Boulevard.

Viewer Sensitivity

Motorists using W Burbank Boulevard are the primary viewer group represented by KVP 3. Overall viewer exposure would be low due to the barely visible proposed project features. Commuting and visiting motorists would have low visual awareness, due to the low visual change. Given an exposure ranking of low and an awareness ranking of low, overall viewer sensitivity to the proposed project features in KVP 3 would be low.

Visual Quality

Given that the modification to the existing grade separation is minor, the train would be barely visible by motorists at this location, and viewer sensitivity in the area would be low, the overall visual quality effect would be neutral.

Existing view from W Burbank Boulevard in the City of Burbank, looking northeast

Simulated view of the HSR Build Alternative from W Burbank Boulevard in the City of Burbank, looking northeast

Figure 6-3 Key Viewpoint 3

Key Viewpoint 4

Visual Change

The HSR Build Alternative would travel past the existing Burbank Metrolink station (captured by KVP 4 on N Front Street looking southwest [Figure 6-4]). As part of an early action project (more details provided in Section 2.6 of this report) of the HSR Build Alternative, the Metrolink Station would be modified. HSR tracks would be placed within the existing parking lot west of the southbound platforms, new pedestrian connections would be provided, and parking would be relocated. Visitors and commuters waiting on the station platform would experience a high exposure to the proposed modifications. The visual simulation for KVP 4 shows the waiting area of the northbound downtown Burbank Metrolink station for visitors traveling through the Burbank Metrolink station. Commuters, like all travelers, are particularly interested in project coherence. They are also interested in cultural order and natural harmony to the extent that it contributes to wayfinding. KVP 4 illustrates that the HSR Build Alternative would not interrupt existing views for Metrolink users and would not alter the existing project coherence. Therefore, visual changes to the area would be low.

Viewer Sensitivity

Visitors and commuters traveling through the downtown Burbank Metrolink station are the primary viewer groups represented by KVP 4. Visitors and commuters waiting on the station platform would be in close proximity to the proposed project and would have a high exposure to any visual changes caused by the proposed project. However, viewer awareness of commuting motorists would be low because the more routine the scene is to a viewer, the less sensitive the viewer is. Although viewer exposure would be high, given the low viewer awareness and the fact that KVP 4 is located in an existing station, viewer sensitivity in the area would be low.

Visual Quality

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts.

Given that the proposed project would not alter the visual character of the existing downtown Burbank Metrolink station or interrupt existing views, and given the low viewer sensitivity in the area, the overall visual quality effect would be neutral.

Existing view from N Front Street in the City of Burbank, looking southwest

Simulated view of the HSR Build Alternative from N Front Street in the City of Burbank, looking southwest

Figure 6-4 Key Viewpoint 4

Key Viewpoint 5

Visual Change

South of Alameda Avenue, the HSR Build Alternative proposes to grade-separate Sonora Avenue as an early action project (more details provided in Section 2.6 of this report) to maintain the functionality of the HSR Build Alternative and reduce conflicts. KVP 5 represents views for pedestrians using Sonora Avenue. Figure 6-5 illustrates the proposed grade separation where Sonora Avenue would be lowered in elevation for a length of approximately 650 feet between Air Way and San Fernando Road. The lowest point of the undercrossing would be approximately 8 feet below the original grade. The height of the new retained-fill structure would be approximately 28 feet. The visual simulation for KVP 5 illustrates that the proposed grade separation and overhead catenary lines would interrupt existing views of the Santa Monica Mountains/Hollywood Hills for pedestrians along Sonora Avenue and would result in a high visual change to the area. AVQ-IAMF#1: Aesthetic Options would reduce the aesthetic and visual effects of the HSR Build Alternative by applying design approaches to integrate structures within a community and to reduce the intrusiveness of large structures. AVQ-IAMF #2: Aesthetic Review Process would increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences.

Viewer Sensitivity

Pedestrians using Sonora Avenue are the primary viewer group represented by KVP 5. KVP 5 is located near the intersection of San Fernando Road/Sonora Avenue. Many pedestrians were spotted during the field visit, and there are numerous commercial stores within walking distance from the residential neighborhoods along San Fernando Road. It is anticipated that the local residents using Sonora Avenue for shopping purposes would experience a high level of exposure to visual changes given the duration of travel time as well as the extent of pedestrians using Sonora Avenue. However, there are no apprehending details (no specific visual element or focal point on which the viewer is focused) in KVP 5, and many pedestrians would experience a low level of awareness of visual changes given the existing Metrolink tracks and the surrounding commercial and light industrial uses. Although viewer exposure would be high, given the low viewer awareness and the fact that KVP 5 is located adjacent to the Metrolink tracks, viewer sensitivity in the area would be low.

Visual Quality

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts.

Although awareness of and sensitivity to visual change would be low, the permanent construction of the grade separation would introduce a prominent visual element to the existing cultural environment. The project's overall visual character would be incompatible with the visual character of the existing cultural environment and the overall visual quality effect would be adverse.

Existing view from Sonora Avenue in the City of Glendale, looking south

Simulated view of the HSR Build Alternative from Sonora Avenue in the City of Glendale, looking south

Figure 6-5 Key Viewpoint 5

Key Viewpoint 6

Visual Change

The project proposes to grade-separate Grandview Avenue as an early action project (more details provided in Section 2.6 of this report) to maintain the functionality of the HSR Build Alternative and reduce conflicts. KVP 6 represents views for recreational visitors to Pelanconi Park. Figure 6-6 illustrates the proposed grade separation where Grandview Avenue would be slightly lowered approximately 2 to 3 feet to cross under the HSR Build Alternative and the relocated Metrolink non-electrified tracks of the existing rail corridor on the retained fill. The HSR Build Alternative would be built on approximately 30 feet of retained fill and there would be an additional 24 feet to the top of the overhead catenary structure. The visual simulation for KVP 6 illustrates that the proposed grade separation and overhead catenary lines would interrupt existing views of the Santa Monica Mountains/Hollywood Hills for recreational visitors to Pelanconi Park and would result in a high visual change to the area. AVQ-IAMF#1 would reduce the aesthetic and visual effects of the HSR Build Alternative by applying design approaches to integrate structures within a community and to reduce the intrusiveness of large structures. AVQ-IAMF #2: Aesthetic Review Process would increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences.

Viewer Sensitivity

It is anticipated that recreational visitors to Pelanconi Park would experience a high level of exposure to visual changes given the proximity of the park to the proposed grade separation. Recreational viewers are often focused on their recreational activity. However, if visitors to the park are participating in passive activities, their focus could remain on the existing view of the Santa Monica Mountains/Hollywood Hills, and their overall awareness of visual change would be high. Given the high viewer exposure to and awareness of visual change, viewer sensitivity in the area would be high.

Visual Quality

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts.

The permanent construction of the grade separation would introduce a prominent visual element to the existing cultural environment. The scale of the proposed grade separation would be visually compatible with the surrounding existing two-story commercial buildings and light industrial uses near the existing tracks. However, the proposed grade separation would be out of scale with the existing one story residential uses near Pelanconi Park, and the project scale would contrast with the existing cultural environment. The project's overall visual character would be incompatible with the visual character of the existing cultural environment, and the overall visual quality effect would be adverse.

Existing view from Pelanconi Park in the City of Glendale, looking southwest

Simulated view of the HSR Build Alternative from Pelanconi Park in the City of Glendale, looking southwest

Figure 6-6 Key Viewpoint 6

Key Viewpoint 7

Visual Change

The project proposes to grade-separate Pelanconi Avenue/Flower Street as an early action project (more details provided in Chapter 2) to maintain the functionality of the HSR Build Alternative and reduce conflicts. KVP 7 represents views for residents and pedestrians using Flower Street/Pelanconi Avenue. Figure 6-7 illustrates the proposed grade separation where Flower Street would be lowered in elevation between Air Way and San Fernando Road. The lowest point of the undercrossing would be approximately 10 feet below original grade. The existing median would be modified on Flower Street, but the overall width of Flower Street would remain the same. San Fernando Road would be lowered in grade between Norton Avenue and Alma Street, and Pelanconi Avenue would be extended to connect to San Fernando Road. The height of the new retained-fill structure would be approximately 28 feet. The visual simulation for KVP 7 shows that the proposed grade separation would obstruct existing views of the Santa Monica Mountains/Hollywood Hills and illustrates that the HSR Build Alternative would interrupt existing views for pedestrians using Flower Street. The proposed grade separation would introduce a high visual change in the area. AVQ-IAMF#1 would reduce the aesthetic and visual effects of the HSR Build Alternative by applying design approaches to integrate structures within a community and to reduce the intrusiveness of large structures. AVQ-IAMF #2: Aesthetic Review Process would increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences.

Viewer Sensitivity

Residents and pedestrians using Flower Street/Pelanconi Avenue are the primary viewer groups represented by KVP 7. These primary viewer groups live or visit those living in close proximity to existing commercial and light industrial land uses as well as the Metrolink tracks. Viewer groups represented by KVP 7 would experience a high level of exposure to the proposed project. However, viewer awareness of visual change would be low given the close proximity to existing commercial and light industrial land uses as well as the Metrolink tracks. Given an exposure ranking of high and an awareness ranking of low, overall viewer sensitivity would be moderate.

Visual Quality

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts.

Although awareness of and sensitivity to visual change would be low, the permanent construction of the grade separation would introduce a prominent visual element to the existing cultural environment. The project's overall visual character would be incompatible with the visual character of the existing cultural environment, and the overall visual quality effect would be adverse.

Existing view from Pelanconi Avenue/Flower Street in the City of Glendale, looking southwest

Simulated view of the HSR Build Alternative from Pelanconi Avenue/Flower Street in the City of Glendale, looking southwest

Figure 6-7 Key Viewpoint 7

Key Viewpoint 8

Visual Change

The HSR Build Alternative is visible from the Los Angeles River Bike Path (captured by KVP 8 on the Los Angeles River Bike Path looking northeast [Figure 6-8]). The visual simulation for KVP 8 captures the proposed surface alignment, which includes the side profile of rail cars and OCS, and illustrates the low visual change in the area. The visual simulation for KVP 8 also captures the view of the Los Angeles River, and illustrates that the HSR Build Alternative would not interrupt existing views of the Los Angeles River and the San Gabriel Mountains for pedestrians and bicyclists using the Los Angeles River Bike Path.

Viewer Sensitivity

Pedestrians and bicyclists using the Los Angeles River Bike Path are the primary viewer groups represented by KVP 8. Cyclists travel at greater speeds than pedestrians, thus exposure for cyclists would be low due to the dynamic view and short viewing durations. Exposure for pedestrians would also be low due to the distance between the pedestrian and the proposed project on the opposite side of the Los Angeles River. Viewer awareness of pedestrians or bicyclists would depend on the routine of the viewer. If bicycling or walking along the Los Angeles River Bike Path is a routine, then the viewer awareness is low. Conversely, if traveling along the Los Angeles River Bike Path is a new venture for the pedestrian or bicyclist, then the viewer awareness is high. Given an overall exposure ranking of low and an average awareness ranking of moderate, overall viewer sensitivity would be moderate-low.

Visual Quality

Given that the proposed project would not interrupt existing views of the Los Angeles River and the San Gabriel Mountains for pedestrians and bicyclists using the Los Angeles River Bike Path, and given the moderate viewer sensitivity in the area, the overall visual quality effect would be neutral.

Existing view from the Los Angeles River Bike Path in the City of Glendale, looking northeast

Simulated view of the HSR Build Alternative from the Los Angeles River Bike Path in the City of Glendale, looking northeast

Figure 6-8 Key Viewpoint 8

Key Viewpoint 9

Visual Change

North of SR 134 (the southern limit of the Upper San Fernando Valley Landscape Unit), the HSR Build Alternative crosses the Verdugo Wash where an existing Metrolink bridge would be rebuilt as a new, wider clear-span structure to accommodate the additional tracks for HSR (captured in KVP 9 on San Fernando Road looking southwest [Figure 6-9]). The visual simulation for KVP 9 shows the view of Verdugo Wash, and illustrates that the HSR Build Alternative would not interrupt existing views of Verdugo Wash for travelers using San Fernando Road and would introduce a low visual change in the area.

Viewer Sensitivity

Motorists using San Fernando Road are the primary viewer group represented by KVP 9. Motorists typically travel faster than other primary viewer groups, which decreases the viewshed and shortens the duration of exposure. Additionally, the drivers of motor vehicles focus less on the view outside the vehicle. Overall viewer exposure would be low due to the dynamic view and short viewing durations. Viewer awareness of commuting motorists would be low because the more routine the scene is to a viewer, the less sensitive the viewer is. On the other hand, viewer awareness of touring motorists would be high, as the scene would be more unique to tourists, and the viewer would thus be more sensitive to it. Given an overall exposure ranking of low and an average awareness ranking of moderate, overall viewer sensitivity would be moderate.

Visual Quality

Given that the HSR Build Alternative would introduce a new, wider clear-span structure in the same location as the existing structure and overhead catenary lines that would not interrupt existing views of Verdugo Wash for travelers using San Fernando Road, and given the moderate viewer sensitivity in the area, the overall visual quality effect would be neutral.

Existing view from San Fernando Road in the City of Glendale, looking southwest

Simulated view of the HSR Build Alternative from San Fernando Road in the City of Glendale, looking southwest

Figure 6-9 Key Viewpoint 9

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts.

Table 6-1 summarizes anticipated effects.

Table 6-1 Upper San Fernando Valley Landscape Unit—Summary of Visual Effects

KVP	Visual Change	Viewer Sensitivity	Visual Quality Effect
1	Moderate	Moderate	Beneficial
2	Low	Low	Neutral
3	Low	Low	Neutral
4	Low	Low	Neutral
5	High	Low	Adverse
6	High	High	Adverse
7	High	Moderate	Adverse
8	Low	Moderate-Low	Neutral
9	Low	Moderate	Neutral

Source: California High-Speed Rail Authority and Federal Railroad Administration (2016)
KVP = key viewpoint

6.3.2.2 Lower San Fernando Valley Landscape Unit

Once operational, the built elements that would be introduced into the RSA throughout Lower San Fernando Valley Landscape Unit as a part of the proposed project would be similar to those described in the Upper San Fernando Valley Landscape Unit. They would include the trains (rolling stock), tracks, grade separations, support structures, and landform alterations associated with grading/realignment; lighting and signage; roadway realignments for under/overcrossings; removal of vegetation; removal of existing structures; and new landscaping and revegetation. These changes are depicted below in the visual simulations for KVPs 10 through 17. All of the proposed KVPs are typical views from common types of viewing areas. The resulting overall visual quality effect is summarized in Table 6-2.

Key Viewpoint 10

Visual Change

The project proposes to grade-separate Goodwin Avenue as an early action project (more details provided in Chapter 2) in order to maintain the functionality of the HSR Build Alternative and reduce conflicts. KVP 10 represents views for motorists using W San Fernando Road/Alger Street Figure 6-10 illustrates the proposed grade separation where Goodwin Avenue would be realigned and depressed to cross under a new railroad bridge supporting the HSR and non-electrified tracks. The realignment of Goodwin Avenue would remove the existing parking lot north of Goodwin Avenue. A new roadway bridge would also be required to carry Alger Street over the depressed Goodwin Avenue, connecting to W San Fernando Road. A sidewalk on Alger Street would replace the existing shoulder where trucks currently park along Alger Street. The new depressed roadway would curve north from Brunswick Avenue, cross under the new roadway and railroad bridges, and connect with Pacific Avenue on the east side of the railroad right-of-way. The lowest point of the undercrossing would be approximately 17 feet below original grade. The visual simulation for KVP 10 illustrates that the HSR Build Alternative would introduce new views of the Verdugo Mountains to residents along the west side of Alger Street. The visual simulation for KVP 10 shows that the proposed grade separation would introduce a high visual change in the area. AVQ-IAMF#1 would reduce the aesthetic and visual effects of the HSR Build Alternative by applying design approaches to integrate structures within a community and to reduce the intrusiveness of large structures. AVQ-IAMF #2: Aesthetic Review Process would increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences

Viewer Sensitivity

Motorists using Alger Street are the primary viewer group represented by KVP 10. Overall viewer exposure for motorists would be low due to the dynamic view and short viewing durations. There are no apprehending details in the foreground or background of KVP 10. Given that motorists typically travel faster than other primary viewer groups, which decreases the viewshed, the overall awareness for motorists would be low. Given the exposure ranking of low and awareness ranking of low, overall viewer sensitivity to the project features in KVP 10 would be low.

Visual Quality

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts.

Given the presence of the Metrolink tracks, the existing commercial and light industrial uses on the east side of Alger Street, and the low viewer sensitivity in the area, the proposed project components in KVP 10 would not be out of character with the existing cultural order. Also, with implementation of AVQ-IAMF#1, and AVQ-IAMF #2, the grade separation would be designed to reduce intrusiveness to primary viewer groups. Therefore, the overall visual quality effect would be beneficial.

Existing view from W San Fernando Road in the City of Los Angeles, looking east

Simulated view of the HSR Build Alternative from W San Fernando Road in the City of Los Angeles, looking east

Figure 6-10 Key Viewpoint 10

Key Viewpoint 11

Visual Change

As mentioned under KVP 10, the HSR Build Alternative proposes to grade-separate Goodwin Avenue as an early action project (more details provided in Chapter 2), with Goodwin Avenue realigned and depressed to cross under a new railroad bridge supporting the HSR and non-electrified tracks. KVP 11 represents views for motorists using San Fernando Road. Figure 6-11 illustrates the proposed grade separation where Goodwin Avenue would be realigned and depressed to cross under a new railroad bridge supporting the HSR and non-electrified tracks. The visual simulation for KVP 11 shows that the proposed grade separation would introduce a high visual change in the area. AVQ-IAMF#1 would reduce the aesthetic and visual effects of the HSR Build Alternative by applying design approaches to integrate structures within a community and to reduce the intrusiveness of large structures. AVQ-IAMF #2: Aesthetic Review Process would increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences

Viewer Sensitivity

Motorists using San Fernando Road are the primary viewer group represented by KVP 11. Overall viewer exposure for motorists would be low due to the dynamic view and short viewing durations. There are no apprehending details in the foreground or background of KVP 11. Given that motorists typically travel faster than other primary viewer groups, which decreases the viewshed, the overall awareness for motorists would be low. Given the exposure ranking of low and awareness ranking of low, overall viewer sensitivity to the project features in KVP 11 would be low.

Visual Quality

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts.

Given the presence of the Metrolink tracks, the existing commercial and light industrial uses on the west side of San Fernando Road, and the low viewer sensitivity in the area, the proposed project components in KVP 11 would not be out of character with the existing cultural order. Also, with implementation of AVQ-IAMF#1, and AVQ-IAMF #2, the grade separation would be designed to reduce intrusiveness to primary viewer groups. Therefore, the overall visual quality effect would be beneficial.

Existing view from San Fernando Road in the City of Los Angeles, looking west

Simulated view of the HSR Build Alternative from San Fernando Road in the City of Los Angeles, looking west

Figure 6-11 Key Viewpoint 11

Key Viewpoint 12

Visual Change

The HSR Build Alternative would travel past the historic Glendale Transportation Center (captured by KVP 12 from the Glendale Transportation Center looking southeast [Figure 6-12]). With the HSR Build Alternative, the Glendale Transportation Center would be modified with HSR tracks, overhead catenary lines, and a fence placed on the west side of the station. The HSR Build Alternative does not propose any changes to the historic Glendale Transportation Center building. The visual simulation for KVP 12 shows the view of the historic Glendale Transportation Center from the train platform, and illustrates that the HSR Build Alternative would not interrupt existing views of the Glendale Transportation Center for Metrolink users from the train platform. However, the existing storage units behind the HSR track/train would be removed. Therefore, the HSR Build Alternative would alter existing views for Metrolink users on the train. Project features in KVP 12 would not alter the existing project coherence, and visual changes to the area would be low.

Viewer Sensitivity

Visitors and commuters traveling through the historic Glendale Transportation Center are the primary viewer groups represented by KVP 12. Visitors and commuters waiting on the station platform would be in close proximity to the proposed project and would have a high exposure to any visual changes caused by the proposed project. However, viewer awareness of commuting motorists would be low because the more routine the scene is to a viewer, the less sensitive the viewer is. Although viewer exposure would be high, given the low viewer awareness and the fact that KVP 12 is located in an existing station, viewer sensitivity in the area would be low.

Visual Quality

Given that the proposed project would not alter the visual character of the existing historic Glendale Transportation Center or interrupt existing views, and given the low viewer sensitivity in the area, the overall visual quality effect would be neutral.

Existing view from the Glendale Transportation Center in the City of Glendale, looking southeast

Simulated view of the HSR Build Alternative from the Glendale Transportation Center in the City of Glendale, looking southeast

Figure 6-12 Key Viewpoint 12

Key Viewpoint 13

Visual Change

The HSR Build Alternative parallels the Metrolink tracks through the City of Glendale (captured by KVP 13 on Glendale Boulevard looking southwest [Figure 6-13]). The existing railroad bridge over Glendale Boulevard would be rebuilt and widened to accommodate the HSR Build Alternative. The visual simulation for KVP 13 shows the addition of fencing and overhead catenary lines for the HSR Build Alternative. The visual simulation for KVP 13 illustrates that the scale of the new bridge and additional HSR tracks would be visually compatible with the existing project and cultural environment and would not interrupt existing views motorists have of Glendale Boulevard. Visual changes to the area would be moderate-low.

Viewer Sensitivity

Motorists using Glendale Boulevard are the primary viewer group represented by KVP 13. Overall viewer exposure would be high due to the close proximity of the existing Metrolink Bridge to motorists using Glendale Boulevard, and due to the high number of viewers who use Glendale Boulevard. However, viewer awareness of commuting and touring motorists would be low due to the lack of specific visual elements in KVP 13. Given an exposure ranking of high and an awareness ranking of low, overall viewer sensitivity to the proposed project features in KVP 13 would be moderate.

Visual Quality

Although the proposed widening of the existing railroad bridge over Glendale Boulevard would introduce a moderate-low visual change in the area, and the overall viewer sensitivity would be moderate, the modifications to the bridge would not be out of character with the existing cultural order and the overall visual quality effect would be neutral.

Existing view from Glendale Boulevard in the City of Los Angeles, looking southwest

Simulated view of the HSR Build Alternative from Glendale Boulevard in the City of Los Angeles, looking southwest

Figure 6-13 Key Viewpoint 13

Key Viewpoint 14

Visual Change

As the HSR Build Alternative travels south through the City of Glendale, the adjacent land uses become more residential (captured by KVP 14 on Casitas Avenue looking northeast [Figure 6-14]). The visual simulations for KVP 14 illustrate that even with the introduction of overhead catenary lines into the viewshed, the HSR Build Alternative would not interrupt existing views for residents or pedestrians using Casitas Avenue, and would introduce a moderate-low visual change in the area.

Viewer Sensitivity

Residents and pedestrians using Casitas Avenue are the primary viewer groups represented by KVP 14. These primary viewer groups live or visit those living in close proximity to existing commercial and light industrial land uses as well as the Metrolink tracks. Viewer groups represented by KVP 14 would experience a high level of exposure to the proposed project. However, viewer awareness of residents or visitors would be moderate, given the lack of visual elements in KVP 14. Given an exposure ranking of high and an awareness ranking of moderate, overall viewer sensitivity would be moderate-high.

Visual Quality

Although the proposed widening of the existing Metrolink bridge over Glendale Boulevard would introduce a moderate-low visual change in the area, and the overall viewer sensitivity would be moderate-high, the modifications to the Metrolink bridge would not be out of character with the existing cultural order and the overall visual quality effect would be neutral.

Existing view from Casitas Avenue in the City of Los Angeles, looking northeast

Simulated view of the HSR Build Alternative from Casitas Avenue in the City of Los Angeles, looking northeast

Figure 6-14 Key Viewpoint 14

Key Viewpoint 15

Visual Change

The HSR Build Alternative would run parallel to the relocated, non-electrified tracks within the right-of-way (captured by KVP 15 on Casitas Avenue looking northeast [Figure 6-15]). The visual simulations for KVP 15 illustrate that even with the introduction of overhead catenary lines into the viewshed, the HSR Build Alternative would not interrupt existing views for residents or pedestrians using Casitas Avenue, and would introduce a moderate-low visual change in the area.

Viewer Sensitivity

Residents and pedestrians using Casitas Avenue are the primary viewer groups represented by KVP 15. These primary viewer groups live or visit those living in close proximity to existing commercial and light industrial land uses as well as the existing Metrolink tracks. Viewer groups represented by KVP 15 would experience a high level of exposure to the proposed project. However, viewer awareness of residents or visitors would be moderate due to the lack of visual elements in KVP 15. Given an exposure ranking of high and an awareness ranking of moderate, overall viewer sensitivity would be moderate-high.

Visual Quality

Although the proposed project would introduce a moderate-low visual change in the area and the overall viewer sensitivity would be moderate-high, the addition of the HSR Build Alternative would not be out of character with the existing cultural order and the overall visual quality effect would be neutral.

Existing view from Casitas Avenue in the City of Los Angeles, looking northeast

Simulated view of the HSR Build Alternative from Casitas Avenue in the City of Los Angeles, looking northeast

Figure 6-15 Key Viewpoint 15

Key Viewpoint 16

Visual Change

The HSR Build Alternative would be visible from Rio de Los Angeles State Park (captured by KVP 16 from Rio de Los Angeles State Park looking southwest [Figure 6-16]). The visual simulation for KVP 16 shows the addition of fencing and the overhead catenary lines for the HSR Build Alternative, as well as a view of the existing railroad corridor, the Taylor Yard Parcel/G2 Site, and Elysian Park. The HSR Build Alternative and the relocated non-electrified tracks within the existing rail corridor would introduce a moderate visual change in the area.

Viewer Sensitivity

Visitors to Rio de Los Angeles State Park are the primary viewer group represented by KVP 16. It is anticipated that the recreational visitors to Rio de Los Angeles State Park would experience a high level of exposure to visual changes, given the proximity of the walking trail to the proposed HSR Build Alternative. However, many pedestrians would experience a low level of awareness of visual changes, given the existing Metrolink tracks within the railroad corridor. Although viewer exposure would be high, given the low viewer awareness and the fact that KVP 16 is located adjacent to the existing Metrolink tracks, viewer sensitivity in the area would be moderate.

Visual Quality

Although the HSR Build Alternative would introduce a moderate visual change in the area and the overall viewer sensitivity would be moderate, the addition of the HSR Build Alternative would not be out of character with the existing cultural order and the overall visual quality effect would be neutral.

Existing view from Rio de Los Angeles State Park in the City of Los Angeles, looking southwest

Simulated view of the HSR Build Alternative from Rio de Los Angeles State Park in the City of Los Angeles, looking southwest

Figure 6-16 Key Viewpoint 16

Key Viewpoint 17

Visual Change

Before reaching SR 110 (the southern limit of the Lower San Fernando Valley Landscape Unit), the HSR Build Alternative approaches the Metrolink CMF, which is Metrolink's major daily servicing location and maintenance facility in the region (captured by KVP 17 on the Los Angeles River bike path looking southeast [Figure 6-17]). The HSR alignment would be located along the west side of the CMF. The visual simulation for KVP 17 shows the addition of the overhead catenary lines for the HSR Build Alternative, which is barely visible through the existing vegetation. The visual simulation for KVP 17 also captures the view of the Los Angeles River and illustrates that the HSR Build Alternative would not interrupt existing views of the Los Angeles River as viewed by pedestrians and bicyclists using the Los Angeles River Bike Path. The Build Alternative would introduce a moderate-low visual change in the area.

Viewer Sensitivity

Pedestrians and bicyclists using the Los Angeles River Bike Path are the primary viewer groups represented by KVP 17. Cyclists use bicycles at greater speeds than pedestrian travel, and exposure for cyclists would be low due to the dynamic view and short viewing durations. Exposure for pedestrians would also be low due to the distance between pedestrians and the proposed project on the opposite side of the Los Angeles River. Viewer awareness of pedestrians or bicyclists would depend on the routine of the viewer. If biking or walking along the Los Angeles River bike path is a routine, then the viewer awareness is low. On the other hand, if traveling along the Los Angeles River bike path is a new venture for the pedestrian or bicyclist, then the viewer awareness is high. Given an overall exposure ranking of low and an average awareness ranking of moderate, overall viewer sensitivity would be moderate.

Visual Quality

Given that the proposed project would not interrupt existing views of the Los Angeles River for pedestrians and bicyclists using the Los Angeles River Bike Path, and given the moderate viewer sensitivity in the area, the overall visual quality effect would be neutral.

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts. Although new visual elements would be introduced, the addition of the HSR Build Alternative would not be out of character with the existing cultural order, and the overall visual quality effect would be neutral.

Existing view from the Los Angeles River Bike Path in the City of Los Angeles, looking southeast

Simulated view of the HSR Build Alternative from the Los Angeles River Bike Path in the City of Los Angeles, looking southeast

Figure 6-17 Key Viewpoint 17

Table 6-2 summarizes anticipated effects.

Table 6-2 Lower San Fernando Valley Landscape Unit—Summary of Visual Effects

KVP	Visual Change	Viewer Sensitivity	Visual Quality Effect
10	High	Low	Beneficial
11	High	Low	Beneficial
12	Low	Low	Neutral
13	Moderate-Low	Moderate	Neutral
14	Moderate-Low	Moderate-High	Neutral
15	Moderate-Low	Moderate-High	Neutral
16	Moderate	Moderate	Neutral
17	Moderate-Low	Moderate	Neutral

Source: California High-Speed Rail Authority and Federal Railroad Administration (2016)
KVP = key viewpoint

6.3.2.3 The Downtown Los Angeles Landscape Unit

Once operational, built elements that would be introduced into the RSA throughout the Downtown Los Angeles Landscape Unit as a part of the proposed project would be similar to those described in Landscape Units 1 and 2. They would include the trains (rolling stock), tracks, grade separations, support structures, and landform alterations associated with grading/realignment; lighting and signage; roadway realignments for an overcrossing; removal of vegetation; removal of existing structures; addition of intrusion protection railings to the historic bridges, and new landscaping and revegetation. These changes are depicted below in the visual simulations for KVPs 18 through 25. All of the proposed KVPs are typical views from common types of viewing areas. The resulting overall visual quality effect is summarized in Table 6-3.

Key Viewpoint 18

Visual Change

South of SR 110 (the northern limit of the Downtown Los Angeles Landscape Unit), the HSR Build Alternative would parallel the Los Angeles River, with HSR trains on the west bank of the river and non-electrified trains on the east bank (captured by KVP 18 from Elysian Park looking southeast [Figure 6-18]). The visual simulation for KVP 18 shows the view of the Los Angeles River. KVP 18 illustrates that the HSR Build Alternative would not interrupt existing views of the Los Angeles River for visitors to Elysian Park and would introduce a low visual change in the area because of the existing rail corridor.

Viewer Sensitivity

Visitors to Elysian Park are the primary viewer group represented by KVP 18. Exposure for visitors would be low due to the distance between the hiking trail and the proposed project. Viewer awareness of pedestrians would depend on how routine the view is. If walking along the hiking trail is a routine, then the viewer awareness is low. If walking the trail is a new venture for the visitor, then the viewer awareness is high. Given an exposure ranking of low and an average awareness ranking of moderate, overall viewer sensitivity would be moderate-low.

Visual Quality

Given that the proposed project would not interrupt existing views of the Los Angeles River for visitors to Elysian Park, and given the moderate-low viewer sensitivity in the area, the overall visual quality effect would be neutral.

Existing view from Elysian Park in the City of Los Angeles, looking southeast

Simulated view of the HSR Build Alternative from Elysian Park in the City of Los Angeles, looking southeast

Figure 6-18 Key Viewpoint 18

Key Viewpoint 19

Visual Change

The HSR Build Alternative would be visible from Los Angeles State Historic Park (captured by KVP 19 from Los Angeles State Historic Park looking northeast [Figure 6-19]). The visual simulation for KVP 19 captures the proposed surface alignment, which includes the side profile of rail cars and the overhead catenary lines, and illustrates the low visual change to the area. The visual simulation for KVP 19 illustrates that the HSR Build Alternative would not interrupt existing views for visitors to Los Angeles State Historic Park.

Viewer Sensitivity

Visitors to Los Angeles State Historic Park are the primary viewer group represented by KVP 19. It is anticipated that the recreational visitors to Los Angeles State Historic Park would experience a high level of exposure to visual changes, given the proximity of the park to the proposed HSR Build Alternative. Many visitors to Los Angeles State Historic Park would congregate in the middle of the park and would not typically focus on the adjacent rail corridor. However, many visitors would experience a low level of awareness of visual changes, given the existing Metrolink tracks. Although viewer exposure would be high, given the low viewer awareness and the fact that KVP 19 is located adjacent to the existing Metrolink tracks, viewer sensitivity in the area would be low.

Visual Quality

The HSR Build Alternative would introduce a low visual change in the area, and the overall viewer sensitivity would be low. Therefore, the addition of the HSR Build Alternative would not be out of character with the existing cultural order, and the overall visual quality effect would be neutral.

Existing view from Los Angeles State Historic Park in the City of Los Angeles, looking northeast

Simulated view of the HSR Build Alternative from Los Angeles State Historic Park in the City of Los Angeles, looking northeast

Figure 6-19 Key Viewpoint 19

Key Viewpoint 20

Visual Change

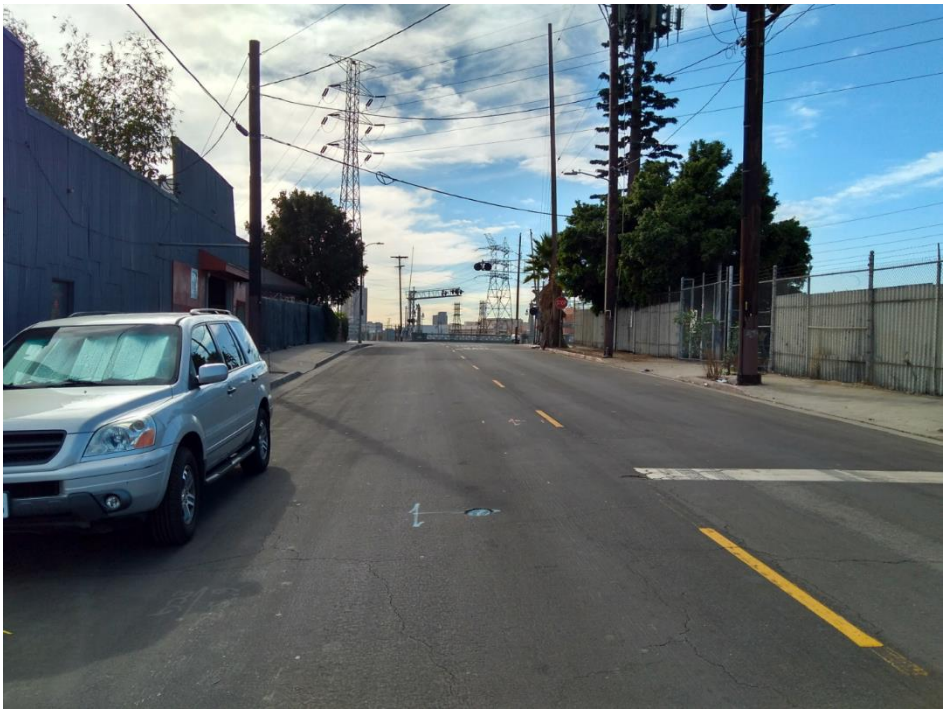
The HSR Build Alternative proposes to grade-separate Main Street as an early action project (more details provided in Section 2.6 of this report), with a new Main Street bridge spanning the tracks on the west bank, the Los Angeles River, and the tracks on the east bank (captured by KVP 20 on Albion Street looking southwest [Figure 6-20]). The new Main Street bridge would be 86 feet wide and 75 feet high at its highest point over the Los Angeles River, and would place three columns within the river channel. Main Street would be raised in elevation starting just east of Sotello Street on the west side of the Los Angeles River; the new bridge would come down to grade at Clover Street on the east side of the Los Angeles River. Several roadways on the east side of the Los Angeles River would be reconfigured, including Albion Street, Lamar Street, Avenue 17, and Clover Street. The existing Main Street bridge would not be modified, but it would be closed to public access. The visual simulation for KVP 20 illustrates that by introducing a new vertical feature in the viewshed (road overcrossing), the HSR Build Alternative would introduce a high visual change in the area. The new vertical feature would introduce a new raised structure in the cultural environment. However, the proposed grade separation would not be incompatible with the surrounding industrial land uses. AVQ-IAMF#1 would reduce the aesthetic and visual effects of the HSR Build Alternative by applying design approaches to integrate structures within a community and to reduce the intrusiveness of large structures. AVQ-IAMF #2: Aesthetic Review Process would increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences

Viewer Sensitivity

Pedestrians, cyclists, and motorists using Albion Street are the primary viewer groups represented by KVP 20. Overall viewer exposure to visual changes for motorists would be low due to the dynamic view and short viewing durations. Overall viewer exposure to visual changes for cyclists and pedestrians would be high due to the wider view and longer viewing durations. There are no apprehending details in the foreground or background of KVP 20. Given that motorists typically travel faster than other primary viewer groups, which decreases the viewshed, the overall awareness for motorists would be low. On the other hand, cyclists and pedestrians may linger for longer periods of time, which could increase focus on the proposed grade separation, and the overall awareness of visual change for cyclists and pedestrians would be moderate-high. It is important to note that cyclists and pedestrians have a slight preference for cultural order and tend to either consciously or unconsciously evaluate the composition of the viewscape and determine if it is orderly or disorderly. Although cyclists and pedestrians would have a higher exposure to and more awareness of a visual change than motorists, their sensitivity to change is also influenced by how the visual change fits into the existing cultural order. Given the average exposure ranking of moderate (low for motorists and high for pedestrians) and an average awareness ranking of moderate-low (low for motorists and moderate-low for cyclists and pedestrians), overall viewer sensitivity to the project features in KVP 20 would be moderate.

Visual Quality

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts.



Existing view from Albion Street in the City of Los Angeles, looking south

Simulated view of the HSR Build Alternative from Albion Street in the City of Los Angeles, looking south

Figure 6-20 Key Viewpoint 20

Given the existing commercial and light industrial uses adjacent to Albion Street, and the moderate viewer sensitivity in the area, the proposed project components in KVP 20 would not be out of character with the existing cultural order. Also, with implementation of AVQ-IAMF#1, and AVQ-IAMF #2, the grade separation would be designed to reduce intrusiveness to primary viewer groups. Therefore, the overall visual quality effect would be neutral.

Key Viewpoint 21

Visual Change

As mentioned under KVP 20, the HSR Build Alternative proposes a grade separation as an early action project (more details provided in Section 2.6 of this report), with a new Main Street bridge spanning the tracks on the west bank, the Los Angeles River, and the tracks on the east bank (captured by KVP 21 on N Main Street looking east [Figure 6-21]). The visual simulation for KVP 21 illustrates that by introducing a new vertical feature in the viewshed (a road overcrossing), the HSR Build Alternative would introduce a high visual change in the area. AVQ-IAMF#1 would reduce the aesthetic and visual effects of the HSR Build Alternative by applying design approaches to integrate structures within a community and to reduce the intrusiveness of large structures. AVQ-IAMF #2: Aesthetic Review Process would increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences

Viewer Sensitivity

Pedestrians, cyclists, and motorists using N Main Street are the primary viewer groups represented by KVP 21. Overall viewer exposure to visual changes for motorists would be low due to the dynamic view and short viewing durations. Overall viewer exposure to visual changes for cyclists and pedestrians would be high due to the wider view and longer viewing durations. There are no apprehending details in the foreground or background of KVP 21. Given that motorists typically travel faster than other primary viewer groups, which decreases the viewshed, the overall awareness for motorists would be low. Cyclists and pedestrians, on the other hand, may linger for longer periods of time, which could increase focus on the proposed grade separation; therefore, the overall awareness of visual change for cyclists and pedestrians would be moderate-high. It is important to note that cyclists and pedestrians have a slight preference for cultural order and tend to either consciously or unconsciously evaluate the composition of the viewscape and determine if it is orderly or disorderly. Although cyclists and pedestrians would have a higher exposure to and more awareness of a visual change than motorists, their sensitivity to change is also influenced by how the visual change fits into the existing cultural order. Given the average exposure ranking of moderate (low for motorists and high for pedestrians) and an average awareness ranking of moderate-low (low for motorists and moderate-low for cyclists and pedestrians), overall viewer sensitivity to the HSR project features in KVP 21 would be moderate.

Visual Quality

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts.

Given the presence of the Metrolink tracks, the existing commercial and light industrial uses adjacent to N Main Street, and the moderate viewer sensitivity in the area, the proposed project components in KVP 21 would not be out of character with the existing cultural order. Also, with implementation of AVQ-IAMF#1, and AVQ-IAMF #2, the grade separation would be designed to reduce intrusiveness to primary viewer groups. Therefore, the overall visual quality effect would be neutral.

Existing view from N Main Street in the City of Los Angeles, looking east

Simulated view of the HSR Build Alternative from N Main Street in the City of Los Angeles, looking east

Figure 6-21 Key Viewpoint 21

Key Viewpoint 22

Visual Change

The non-electrified tracks on the east bank of the river would cross the river on the existing Mission Tower Bridge, which would require a second track but would not require changes to the existing bridge structure (captured by KVP 22 on Leroy Street looking southeast [Figure 6-22]). The visual simulation for KVP 22 illustrates that the HSR Build Alternative would not interrupt existing views for visitors to, or residents of, the William Meade Homes, located on Leroy Street. The HSR Build Alternative would introduce a low visual change in the area.

Viewer Sensitivity

Residents and pedestrians using Leroy Street are the primary viewer groups represented by KVP 22. These primary viewer groups live or visit those living in close proximity to the Metrolink tracks. Viewer groups represented by KVP 22 would experience a high level of exposure to the proposed project. However, viewer awareness of residents or visitors would be moderate given the lack of visual elements in KVP 22. Given an exposure ranking of high and an awareness ranking of moderate, overall viewer sensitivity would be moderate-high.

Visual Quality

The proposed project would introduce a low visual change in the area, and the overall viewer sensitivity would be moderate-high. The addition of the HSR Build Alternative would not be out of character with the existing cultural order, and the overall visual quality effect would be neutral.

Existing view from Leroy Street in the City of Los Angeles, looking southeast

Simulated view of the HSR Build Alternative from Leroy Street in the City of Los Angeles, looking southeast

Figure 6-22 Key Viewpoint 22

Key Viewpoint 23

Visual Change

When approaching LAUS, the HSR Build Alternative would parallel the Metrolink tracks (captured by KVP 23 on Bauchet Street looking southwest [Figure 6-23]). The visual simulation for KVP 23 shows the proposed project (which would include the tracks, fencing, and side profile of rail cars) and illustrate the low visual change in the area. The visual simulation for KVP 23 illustrates that the HSR Build Alternative would not interrupt existing views for pedestrians or motorists using Bauchet Street.

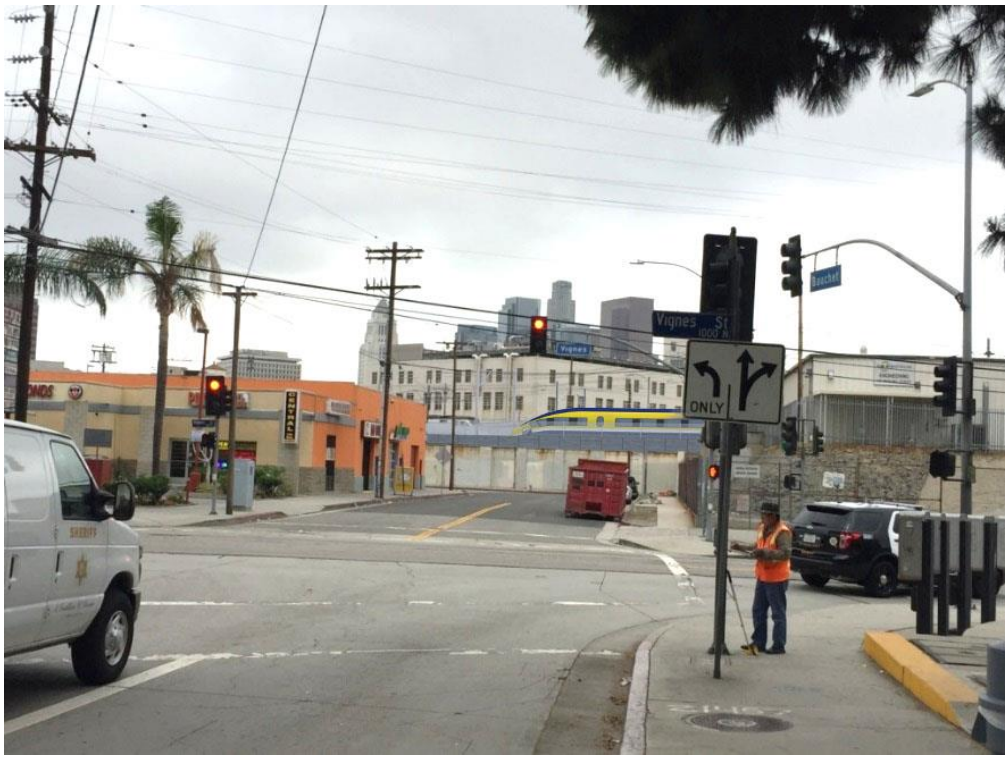
Viewer Sensitivity

Pedestrians and motorists using Bauchet Street are the primary viewer groups represented by KVP 23. Overall viewer exposure would be low due to the dynamic view and short viewing durations caused by the visual interruption of surrounding buildings. Viewer awareness of commuting motorists or pedestrians would be low because the more routine the scene is to a viewer, the less sensitive the viewer is. On the other hand, viewer awareness of touring motorists or pedestrians would be high, as the scene would be more unique to tourists, and the viewer would thus be more sensitive to visual changes in the area. Given an overall exposure ranking of low and an average awareness ranking of moderate, overall viewer sensitivity would be moderate-low.

Visual Quality

The proposed project would introduce a low visual change in the area, and the overall viewer sensitivity would be moderate. Moreover, the addition of the HSR Build Alternative would not be out of character with the existing land uses and cultural order, and the overall visual quality effect would be neutral.

Existing view from Bauchet Street in the City of Los Angeles, looking southwest



Simulated view of the HSR Build Alternative from Bauchet Street in the City of Los Angeles, looking southwest

Figure 6-23 Key Viewpoint 23

Key Viewpoint 24

Visual Change

When approaching LAUS, the HSR Build Alternative would cross the existing Metrolink bridge over E Cesar Chavez Avenue (captured by KVP 24 on E Cesar Chavez Avenue looking southeast [Figure 6-24]). The existing Metrolink bridge over E Cesar Chavez Avenue could be modified by the Link US Project in the future (more details provided in Section 2.3.2 in this report). Any potential visual effects as a result of Metro's Link Union Station Project would be analyzed

Any potential visual effects as a result of Metro's Link Union Station Project would be analyzed under a separate environmental document. The visual simulation for KVP 24 shows the addition of fencing and overhead catenary lines for the HSR Build Alternative. The visual simulation for KVP 24 illustrates that the HSR Build Alternative would not interrupt existing views for pedestrians or motorists using E Cesar Chavez Avenue, and would introduce a moderate visual change in the area.

Viewer Sensitivity

Motorists or pedestrians using E Cesar Chavez Avenue are the primary viewer groups represented by KVP 24. Overall viewer exposure would be high due to the close proximity of the existing Metrolink Bridge to motorists or pedestrians using E Cesar Chavez Avenue and due to the high number of commuters who use E Cesar Chavez Avenue. However, viewer awareness of commuting motorists or pedestrians would be low due to the lack of specific visual elements in KVP 24. Given an exposure ranking of high and an awareness ranking of low, overall viewer sensitivity to the proposed project features in KVP 24 would be moderate.

Visual Quality

The addition of fencing and overhead catenary lines would introduce a moderate visual change and the overall viewer sensitivity would be moderate. The addition of the HSR Build Alternative would not be out of character with the existing cultural order and the overall visual quality effect would be neutral.

Existing view from E Cesar Chavez Avenue in the City of Los Angeles, looking southeast

Simulated view of the HSR Build Alternative from E Cesar Chavez Avenue in the City of Los Angeles, looking southeast

Figure 6-24 Key Viewpoint 24

Key Viewpoint 25

Visual Change

The proposed HSR station at LAUS would be a surface station, with up to four HSR tracks and two 800-foot platforms, with the possibility of extending to 1,000 feet. The raised tracks shown in the visual simulation in Figure 6-25[10] would be completed as part of Metro's Link US Project (more details provided in Section 2.6 in this report). The proposed HSR Build Alternative would raise the platform height and install the OCS. The Link US Project components (raised tracks) and HSR project components (HSR trains and OCS) are all captured by KVP 25 from the Mosaic at Union Station Apartments looking southeast [Figure 6-25]). Any potential visual effects as a result of the Metro's Link US Project would be analyzed under a separate environmental document. The visual simulation for KVP 25 illustrates that the HSR Build Alternative would not interrupt existing views for visitors to or residents of the Mosaic at Union Station Apartments, and the HSR Build Alternative would introduce a moderate visual change in the area. Additionally, the addition of tracks and platforms to LAUS would not cause any visual quality issues related to the historic part of LAUS.

Viewer Sensitivity

Residents and pedestrians traveling to or from the Mosaic at Union Station Apartments are the primary viewer groups represented by KVP 25. These primary viewer groups live or visit those living in close proximity to existing commercial and industrial land uses as well as the existing LAUS. Viewer groups represented by KVP 25 would experience a high level of exposure to the proposed project. However, viewer awareness of residents or visitors would be low. Given an exposure ranking of high and an awareness ranking of low, overall viewer sensitivity would be moderate.

Visual Quality

The proposed project features would introduce a moderate visual change to the area, and the overall viewer sensitivity is moderate. However, the introduction of HSR at LAUS would not alter the existing visual character of LAUS, and the overall visual quality effect would be neutral.

Although the proposed project would introduce visual changes in some areas, AVQ-IAMF #1: Aesthetic Options and AVQ-IAMF #2: Aesthetic Review Process would govern these changes for non-station structures. AVQ-IAMF #1 would reduce the aesthetic and visual effects of the HSR Build Alternative by providing urban design guidelines to be evaluated and applied, increasing the compatibility of the proposed project features within an existing, specific local design context. AVQ-IAMF #2: Aesthetic Review Process would also increase the compatibility of the proposed project by requiring consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operational impacts. Although new visual elements would be introduced, adverse effects to overall visual quality are not expected, as summarized below in Table 6-3.

[10] The simulated view of KVP 25 shows existing conditions and does not show the cumulative change that will take place based on the preferred alternative for the Link Us Project that Metro will identify in the future.

Existing view from the Mosaic at Union Station Apartments in the City of Los Angeles, looking southeast

Simulated view of the HSR Build Alternative from the Mosaic at Union Station Apartments in the City of Los Angeles, looking southeast

Figure 6-25 Key Viewpoint 25

Table 6-3 Downtown Los Angeles Landscape Unit—Summary of Visual Effects

KVP	Visual Change	Viewer Sensitivity	Visual Quality Effect
18	Low	Moderate-Low	Neutral
19	Low	Low	Neutral
20	High	Moderate	Neutral
21	High	Moderate	Neutral
22	Low	Moderate-High	Neutral
23	Low	Moderate-Low	Neutral
24	Moderate	Moderate	Neutral
25	Moderate	Moderate	Neutral

Source: California High-Speed Rail Authority and Federal Railroad Administration (2016)
KVP = key viewpoint

6.4 Station Sites

As discussed above in Section 1, the Burbank to Los Angeles Project Section would include two stations: the Burbank Airport Station and LAUS.

6.4.1 Construction Impacts

Construction of the stations would involve visual disruptions typical of large-scale construction activities and the presence of construction workers/materials. Although temporary visual disruptions are expected, contractors would use best management practices to further reduce and/or avoid substantial aesthetic impacts during construction. Contractors would use appropriate screening (i.e., temporary fencing with opaque materials) to buffer views of construction equipment as well as materials and soil in construction staging areas. Site managers would conduct regular site inspections to ensure that staging areas are clean and orderly, to the extent practicable, and that construction debris is removed from public rights-of-way and adjacent properties/roadways. Through implementation of the IAMFs listed in Section 7 and the Urban Design Guidelines (Authority 2011a) developed for the proposed project to ensure the proposed project elements would conform to their visual environment, adverse construction-period effects on visual resources would be avoided or substantially minimized.

6.4.2 Operational Impacts

Operation of the Burbank Airport Station would increase vehicle and foot traffic in its immediate area. Residential viewers in this area could perceive this traffic as decreasing the cultural order, but the modern design of the station could increase the currently industrial area elements of project coherence. Viewers of the station would include motorists traveling along N Hollywood Way, N San Fernando Boulevard and San Fernando Road; residential neighbors; and commercial neighbors. Residential neighbors would be relatively sensitive to visual changes. Travelers would view these structures for a short duration and commercial neighbors would be primarily focused on work, so these viewer groups would be relatively insensitive to these structures. A detailed operational effect analysis is provided in Section 6.3.2 for the KVPs that represent views of the proposed options for the Burbank Airport Station (KVP 1).

An HSR station is proposed to be located at the existing LAUS. Built elements associated with the HSR station, as described above in Section 6.3.2.2 and depicted in the visual simulation at KVP 25, would include an OCS and raised platforms. The OCS would not be a new visual element, as the light-rail Metro Gold Line already introduced it at LAUS. Through adherence to pertinent policies and regulations (as discussed in Section 3.2) developed for the proposed project, potential effects on visual resources would be avoided or substantially minimized during operation. The proposed HSR station would not substantially alter or degrade existing views

within the area or result in a change in overall visual quality. A detailed operational effect analysis is provided in Section 6.3.2.3 for the KVPs that represent views of LAUS (KVPs 23, 24, and 25).

6.5 Maintenance Facility

As described in Section 2.4, no maintenance facilities are proposed to be constructed within the Burbank to Los Angeles Project Section. The Burbank to Los Angeles Project Section would be served by the heavy maintenance facility and LMF in other project sections, or maintenance would be handled through an independent contractor. Therefore, no further analysis of maintenance facilities is included in this technical report prepared for the Burbank to Los Angeles Project Section.

6.6 Ancillary Structures

The transformation and distribution of electricity for the California HSR System would occur in three types of stations: TPSSs, paralleling stations, and switching stations.

The Burbank to Los Angeles Project Section would be able to use the TPSSs located within the Palmdale to Burbank Project Section and/or the Los Angeles to Anaheim Project Section. In the event that the other project sections of the HSR system are not constructed, a standalone TPSS would be required within the Burbank to Los Angeles Project Section for purposes of independent utility. Two potential locations for a TPSS have been preliminarily identified within the project section. Because the addition of a TPSS would alter the spacing of the other system facilities, further design and environmental study would be required to environmentally clear the TPSS site and the alteration of the other system facilities in the absence of the Palmdale to Burbank and Los Angeles to Anaheim project sections being built and put in operation.

Communication towers would be placed where spacing between the co-location sites exceeds three miles and would be approximately 100 feet in height. Their height would make them visually prominent. Where appropriate, communication towers would be partially screened from public view by landscaping.

The OCS consists of electrical wires and supporting poles above the rail that provide power to the trainsets. When associated with at-grade and elevated guideways, the OCS would be visible from surrounding areas.

A switching station is proposed within the City of Los Angeles, south of Verdant Street and west of the railroad right-of-way in the Lower San Fernando Valley Landscape Unit. The switching station would be approximately 9,600 square feet in area. A paralleling station is proposed within the City of Los Angeles, south of Main Street between the railroad right-of-way and the Los Angeles River in the Lower San Fernando Valley Landscape Unit. The paralleling station would be approximately 8,000 square feet in area. Where appropriate, the switching and paralleling stations would be screened from public view by landscaping and a wall or fence.

The proposed switching station and paralleling station would be constructed and installed in accordance with the applicable regulations and the Urban Design Guidelines (Authority 2011a). Due to their relative size and placement adjacent to the existing rail corridor within highly developed areas, adverse effects on the visual setting would be avoided or substantially minimized.

6.7 Cumulative Impacts

This section presents potential cumulative impacts based on current knowledge of the Burbank to Los Angeles Project Section. Subsequent to this technical report, the Authority will further refine the cumulative impacts described herein and present the information in Section 3.18 of the EIR/EIS.

Cumulative impacts are those resulting from past, present, and reasonably foreseeable future actions, combined with the potential visual impacts of the proposed project. The RSA for the cumulative impacts analysis is limited to locations that have clear sightlines to the built elements proposed as part of the project. In this case, the RSA for the cumulative impacts analysis is the

same as the visual/aesthetics RSA, which was previously described in Section 4 of this Aesthetics and Visual Quality Technical Report. As such, the cumulative RSA boundaries extend approximately 0.25 mile from the proposed project centerline.

The combined visual effect of the proposed project and other development projects planned, recently in construction, or currently in construction would change the visual elements throughout the RSA. The proposed project, however, would not contribute to substantial changes to the visual character of the region or its overall visual quality. Implementation of the general plans discussed in Section 3 of this Aesthetics and Visual Quality Technical Report and in the Southern California Association of Governments' 2012–2035 Regional Transportation Plan would contribute to growth and development within and surrounding the RSA.

Temporary construction impacts associated with the proposed project would not result in cumulative visual impacts because they would be temporary.

Operational impacts would generally be low to moderate, as discussed above, and would alter viewsheds in the immediate project vicinity. Planned development and other development projects would also alter the existing visual character of the area in the long term as seen from Landscape Units 1, 2, and 3. Overall, the proposed project would have only an incremental contribution to cumulative impacts related to visual changes in the area because it would not substantially alter the existing visual landscape or degrade the visual quality of the project vicinity.

7 IMPACT AVOIDANCE AND MINIMIZATION FEATURES

The HSR Build Alternative incorporates standardized HSR features to avoid and minimize impacts. These features are referred to as IAMFs. The Authority will implement these measures during project design and construction to avoid or reduce impacts.

The following IAMFs would be implemented to avoid and/or minimize adverse effects on aesthetics and visual quality.

AQ-IAMF#1: Fugitive Dust Emissions

During construction, the Contractor shall employ the following measures to minimize and control fugitive dust emissions. The Contractor shall prepare a fugitive dust control plan for each distinct construction segment. At a minimum, the plan shall describe how each measure would be employed and identify an individual responsible for ensuring implementation. At a minimum, the plan shall address the following components unless alternative measures are approved by the applicable air quality management district.

- Cover all vehicle loads transported on public roads to limit visible dust emissions, and maintain at least 6 inches of freeboard space from the top of the container or truck bed.
- Clean all trucks and equipment before exiting the construction site using an appropriate cleaning station that does not allow runoff to leave the site or mud to be carried on tires off the site.
- Water exposed surfaces and unpaved roads at a minimum three times daily with adequate volume to result in wetting of the top 1 inch of soil but avoiding overland flow. Rain events may result in adequate wetting of top 1 inch of soil thereby alleviating the need to manually apply water.
- Limit vehicle travel speed on unpaved roads to 15 miles per hour (mph).
- Suspend any dust-generating activities when average wind speed exceeds 25 mph.
- Stabilize all disturbed areas, including storage piles that are not being used on a daily basis for construction purposes, by using water, a chemical stabilizer/suppressant, hydro mulch or by covering with a tarp or other suitable cover or vegetative ground cover, to control fugitive dust emissions effectively. In areas adjacent to organic farms, the Authority would use non-chemical means of dust suppression.
- Stabilize all on-site unpaved roads and off-site unpaved access roads, using water or a chemical stabilizer/suppressant, to effectively control fugitive dust emissions. In areas adjacent to organic farms, the Authority would use non-chemical means of dust suppression.
- Carry out watering or presoaking for all land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities.
- For buildings up to 6 stories in height, wet all exterior surfaces of buildings during demolition.
- Limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at a minimum of once daily, using a vacuum type sweeper.
- After the addition of materials to or the removal of materials from surface or outdoor storage piles, apply sufficient water or a chemical stabilizer/suppressant

AVQ-IAMF#1: Aesthetic Options

Prior to construction the Contractor shall document, through issue of a technical memorandum, how the Authority's aesthetic guidelines have been employed to minimize visual impacts. The Authority seeks to balance providing a consistent, project-wide aesthetic with the local context for the numerous high-speed rail non-station structures across the state. Examples of aesthetic options would be provided to local jurisdictions that can be applied to non-standard structures in the high-speed rail system. Refer to Aesthetic Options for Non-Station Structures, 2017.

AVQ-IAMF#2: Aesthetic Review Process

Prior to construction, the Contractor shall document that the Authority's aesthetic review process has been followed to guide the development of non-station area structures. Documentation shall be through issuance of a technical memorandum to the Authority. The Authority would identify key non-station structures recommended for aesthetic treatment, consult with local jurisdictions on how best to involve the community in the process, solicit input from local jurisdictions on their aesthetic preferences, and evaluate aesthetic preferences for potential cost, schedule, and operational impacts. The Authority would also evaluate compatibility with project-wide aesthetic goals, include recommended aesthetic approaches in the construction procurement documents, and work with the contractor and local jurisdictions to review designs and local aesthetic preferences and incorporate them into final design and construction. Refer to Aesthetic Options for Non-Station Structures, 2017.

CUL-IAMF#6: Pre-Construction Conditions Assessment, Plan for Protection of Historic Built Resources, and Repair of Inadvertent Damage

Prior to Construction (any ground disturbing activities that are within 1,000 feet of a historic built property), the Contractor may be required to assess the condition of construction-adjacent historic properties, and prepare a Plan for the Protection of Historic Built Resources and Repair of Inadvertent Damage. The MOA and Built Environment Treatment Plan (BETP) would stipulate for which properties the plan is to be prepared. MOA signatories and consulting parties may comment on the adequacy of the assessments. Protection measures would be developed in consultation with the landowner or land-owning agencies as well as the SHPO and the MOA signatories and consulting parties, as required by the Programmatic Agreement. As the design progresses, additional properties may be identified by the Authority as requiring this plan. The plan shall record existing conditions in order to (1) establish a baseline against which to compare the property's post-project condition, (2) to identify structural deficiencies that make the property vulnerable to project construction related damage, such as vibration, and (3) to identify stabilization or other measures required to avoid or minimize inadvertent adverse effects. The plan would be further described in the BETP and be prepared by an interdisciplinary team, including (but not limited to) as appropriate, an architectural historian, architect, photographer, structural engineer, and acoustical engineer. Ambient conditions would be used to identify buildings that are sensitive receptors to construction-related vibration and require vibration monitoring during construction activities. Additional protective measures may be required if the property is vacant during construction.

The plan content shall be outlined in the BETP and is to be completed and approved by the Authority, with protective measures implemented before construction begins within 1,000 feet of the subject building. The plan shall describe the protocols for documenting inadvertent damage (should it occur), as well as notification, coordination, and reporting to the SHPO, MOA signatories, and the owner of the historic property. The plan shall direct that inadvertent damage to historic properties shall be repaired in accordance with the Secretary of the Interior's (SOI) Standards for the Treatment of Historic Properties (U.S. Department of the Interior, 1995). The plan shall be developed in coordination with the Authority and FRA, and shall be submitted to the SHPO for review and approval. Protective plans would be required for buildings that would be moved as part of the project mitigation, including stabilization before, during, and after relocation; protection during temporary storage; and relocation to a new site, followed by rehabilitation.

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9 PREPARER QUALIFICATIONS

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APPENDIX A: SUMMARY OF VISUAL EFFECT RATINGS BY KEY VIEWPOINT

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APPENDIX B: DETAILED MAP OF KEY VIEWPOINTS

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