

- Viewpoint No. 4

Location: Looking west along Moore Street toward Caltrain Corridor, Burlingame. Elevated HST embankment crosses view from left to right (south to north) above existing tracks in background.

Location: Looking west along Moore Street toward Caltrain Corridor, Burlingame. Elevated HST embankment crosses view from left to right (south to north) above existing tracks in background.

Reason for selection of viewpoint: View is typical of sections of HST in the Peninsula and East Bay where residential districts are adjacent to the corridors. Issues are raised regarding both “functional” impacts (e.g. horizontal view blockage, shadow-casting) and “context” impacts (e.g., scale, historic consistency).

Typology: Urban Mixed Use.

Description: Typically historic or early post-World II residential neighborhoods characterized by small to mid-sized houses on small lots, narrow streets, mature street landscaping, low-income to middle-class residents. Typology also includes retail, commercial, and institutional mixed uses along arterial streets (e.g. shops, schools, low-rise offices, filling stations). Dominant visual features in neighborhoods are street trees, modestly landscaped front yard set-backs, traditional domestic architecture, and above-ground utilities (power and telephone poles) along streets or in back alleys. Typical arterial streets (e.g., El Camino Real) feature loosely-organized commercial buildings with varied architectural styles, heights, setbacks, signage, and levels of upkeep. Streetscapes feature automobiles and surface parking as dominant visual elements.

**Figure 2.2-7: Location of Viewpoint 4**



**Figure 2.2-8: Viewpoint 4**

- Viewpoint No. 5

Location: Looking east along Fruitvale Avenue (south Oakland) toward UPRR corridor. HST runs at-grade along corridor from left to right (north to south). Fruitvale Avenue passes under corridor through a new underpass; approach downgrade begins immediately behind camera position.

Reason for selection of viewpoint: View is typical of two common conditions along East Bay and Peninsula corridors: at-grade (or low elevated) passage through predominantly industrial contexts and new grade separated crossings required by HST operations.

Typology: Urban Industrial.

Description: Typology is urban mixed-use with industrial uses predominating over other uses (retail, commercial, institutional, minimal or marginal residential). Visual context is unorganized and features industrial complexes and structures of widely-varied areas, sizes and scales. Urban design and aesthetic features are typically absent. Levels of streetscape and property upkeep vary widely but are typically low. Dominant visual features vary significantly by location and may include distinctive industrial skylines (e.g., smoke stacks), high-tension power lines, heavy industrial traffic (freight trains, trucks, etc.) elevated transportation corridors (e.g., freeways, BART) and background views of mountains.

Figure 2.2-9: Location of Viewpoint 5

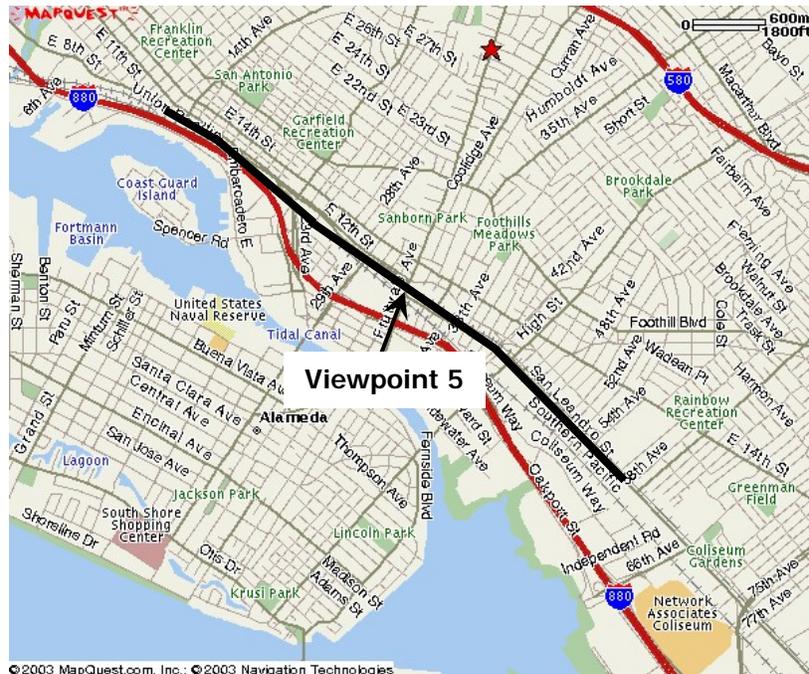


Figure 2.2-10: Viewpoint 5



- Viewpoint No. 6

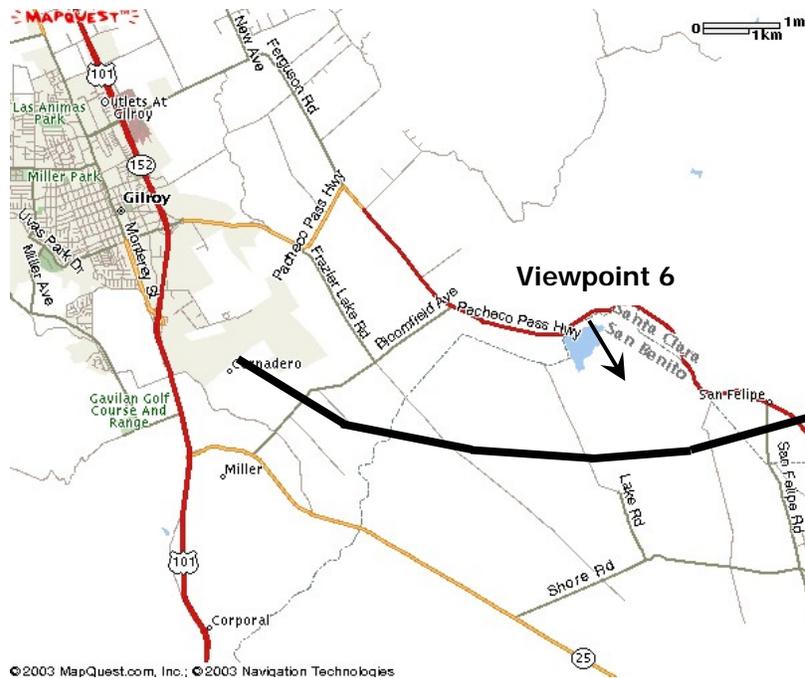
Location: Looking southeast across farm fields and wetland from overlook on SR-152 between Gilroy and village of San Felipe. HST crosses wetland from right to left (west to east) on low viaduct in middle background.

Reason for selection of viewpoint: Context is especially scenic in this location with prominent vistas from higher ground along highway. Also, view is typical of other wetland crossings (East Bay shoreline, Orestimba Creek Valley, San Joaquin and Merced River crossings).

**Typology:** Coastal Valley.

**Description:** Flat or rolling landscapes ringed with low hills and mountains in background. Agricultural elements are comparable to Central Valley but overall typology is significantly more verdant and visually “soft”. Mountain ridges preclude long horizontal vistas typical of the Central Valley and settlement patterns (villages, fields, roadways, utilities) are shaped to fit the varied topography. Dominant visual elements are vistas of agricultural bottom land and wetlands framed by background views of green hills, ridges, and mountains.

**Figure 2.2-11: Location of Viewpoint 6**



**Figure 2.2-12: Viewpoint 6**



### 3.0 METHODOLOGY FOR VISUAL ANALYSIS

The visual resource analysis for this program-level EIR/EIS is focused on a broad comparison of potential impacts to visual resources (particularly scenic resources or sensitive viewing areas) along corridors for each of the alternatives (high-speed train and modal alternatives) and around stations. The potential impacts for each of these alternatives are compared with the No-Project Alternative.

Because the region covers a number of different types of landscapes over a large geographic area (open-rural landscape, highly vegetated natural area, densely developed urban landscape, open barren landscape, etc), a typology of landscapes is used to characterize the landscapes in the region that are within ¼ mile of the alternative corridors and stations. An example of each type of landscape is described in terms of the fore-ground, middle-ground and back-ground dominant features that make up its distinguishable color, texture, line, and form. The typology includes landscapes that are particularly scenic in the region, as well as landscapes that are typical. This makes up the baseline existing conditions against which the analysis of change or impact for each of the alternatives is compared. Photographs of the existing features for each of about six landscapes illustrate the dominant line, form, color and texture for that landscape type (example). The viewing points for each photograph of each landscape type are shown on the project Geographic Information System (GIS) map.

The summary tables for the region are then completed that identify scenic/visual resources within the ¼ mile study area for each of the corridor segments and around station sites for the high-speed train alternative, and along highway corridors and around airports for the Modal Alternative. Reference to the unique scenic landscapes and the typical landscapes described and illustrated in the typologies is made in the tables.

For two of the key viewpoints, the high-speed train alternatives are then photo-simulated on the landscape photographs to illustrate if, and how, the dominant visual features that characterize the landscape would change if the alternative were implemented. Of particular concern are elevated structures (guideways or overpasses), and tunnel portals. Also of concern are the potential shadow effect of elevated structures and the light and glare effects of the alternatives. These changes, or visual impacts, are described and ranked as 'high', 'medium', or 'low' in the summary table according to the potential extent of change to scenic visual resources.

CEQA criteria for significant visual impacts includes, would the project:

- 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 state scenic highway?
- Substantially degrade the existing visual character or quality of the site and its surroundings?
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Each of the CEQA criteria is considered in the ranking of potential impacts.

## 4.0 VISUAL IMPACTS

### 4.0.1 Typology: Central Valley Agricultural Landscape

General Description: Typology is characterized by flat land overlaid by an orderly Cartesian geometry of crop fields, farm roads, fence and pole lines, and wind breaks, punctuated by barns, houses, sheds, water towers and other agriculture-related structures. Overall dominant visual feature is horizontal ground plane.

Foreground Visual Features: Dominant features (except in village settings) are farm fields of varied colors and textures depending on time of year, planting and harvesting cycles, and crop types. Typical supporting elements are fence and utility lines, roadside ditches, and tree rows.

Middle Ground Visual Features: Typical features (depending on location) include agricultural structures (farm houses, barns, silos, etc.), tree rows, and high-tension power lines.

Background Visual Features: Dominant feature is the distant horizon line with views of mountains near the east and west sides of the valley. Other features include skyline views of tall agricultural or industrial structures (grain elevators, smoke stacks, etc.).

Visual Impact of HST Structures: Typical structure is an elevated fill to carry HST over crossroads. The fill is comparable visually to tall levees along the San Joaquin and Sacramento Rivers. Although the fill's straight-line plan and profile is compatible with the "Cartesian" geometry of agricultural settlement, its elevation breaks the visual continuity of the flat landscape, blocking middle ground and background horizontal vistas. For structures adjacent to or close to the fill, additional impacts include shadow-casting and overarching scale.

Site Photo: Viewpoint No. 1 (see Figure 4.2-2).

Note: A visual simulation is not provided for this viewpoint. For a similar condition, refer to the visual simulation, "Rural Residential", in the Bakersfield to Merced region (not covered by this report).

### 4.0.2 Typology: Traditional Urban Town Center

General Description: Typology represents the historic cores of a cities or smaller urban communities in the Bay Area, primarily located along the Peninsula UPRR Caltrain Corridor. These settings are characterized by mixed residential, commercial, and institutional uses in early to mid-20<sup>th</sup> Century contiguous buildings, average building heights of two to three stories, minimal setbacks from streets, mature public landscaping, and pedestrian-oriented streetscapes. The dominant visual feature is the streetscape with its picturesque architecture and channeled vistas.

Foreground Visual Features: Dominant features include immediate building fronts, street furniture, street trees, pedestrian activity and adjacent moving and parked automobiles. Colors, textures, lines, and other visual elements are varied and depend on location.

Middle Ground Visual Features: Elements are similar to foreground but individual elements are subservient to an overall sense of street width, contiguous building fronts, and forced perspective views along street corridors. Buildings set back from the street (often "formal" or civic uses such as court houses or train stations) are often first experienced as middle ground views.

**Background Visual Features:** Mountains are the dominant background feature in many communities, as viewed primarily along east-west streets. Other background elements may include tall buildings or industrial structures rising behind foreground and middle ground views, and elevated transportation structures (railroads, freeways) crossing street vistas.

**Visual Impact of HST Structures:** Visual impacts of HST structures are primarily limited to elevated trackways and stations (or aerial station platforms at historic stations). Context impacts which can significantly degrade traditional urban character include overarching scale, historically inappropriate structure types, and conflicting architecture (a problem particular to historic train stations). Functional impacts include shadow-casting and blockage of horizontal vistas from ground or upper levels of adjacent buildings.

**Site Photo:** Viewpoint No. 2 (see Section 2.2-4).

**Figure 4.2-2: Visual Simulation with HSR: Viewpoint 2**



### 4.0.3 Typology: Coastal Mountain

**General Description:** Typology represents coastal mountain (and mountain valley) topography characterized by rolling to steep-sloped grassland with shrubs, clumps of oaks and other native (or traditional introduced) tree species, and wooded bottom land. Settlement patterns vary, from none within a specific viewshed to small farms or ranches (in bottom lands), isolated roadside businesses, and widely dispersed small communities. This typology is typically experienced visually from a highway, such as SR 152, ascending a valley or crossing a mountain pass.

**Foreground Visual Features:** Typical foreground features include highway elements (pavement, shoulders, delineators, etc.), immediate topographic features (outcrops, road cuts), roadside landscaping (tall mature trees in particular) and roadside settlements.

**Middle Ground Visual Features:** In valley settings, middle ground features are typically dominant. Features may include hillsides with green grassy slopes and trees, prominent topographic features, and lateral views of streambeds and wetlands (often verdant or heavily wooded).

**Background Visual Features:** Background features include frontal and lateral skyline views of mountain peaks and ridge tops, and expansive vistas of open land and distant mountains as viewed from the

mouths of mountain valleys. The changing directions of mountain valleys also create a variety of closed and open hillside vistas which are experienced sequentially.

**Visual Impact of HST Structures:** In mountain settings, the negative visual impacts of HST are primarily “visual scaring” caused by large-scale cutting and filling and the introduction of engineered structural elements into the natural landscape, such as viaducts, bridges, and tunnel portals. The effects of these changes can be severe and may significantly compromise scenic contexts and values. Most impacts arise from the sheer scale of structures, incompatible visual elements (straight lines and edges, raw cuts and fills, bare concrete finishes, utilitarian shapes, etc.), the altering of natural topography, and the blockage of key sight lines and vistas.

**Site Photo:** Viewpoint No. 3 (see Figure 2.2-6).

**Figure 4.2-3: Visual Simulation with HSR: Viewpoint 3**



#### 4.0.4 Typology: Urban Mixed-Use

**General Description:** This typology (interspersed with the Urban Industrial typology) is typical of urban settings along much of the HST corridors in the Peninsula, East Bay and San Jose sections. The typical setting is an historic or early post-World II residential neighborhood characterized by small to mid-sized houses on small lots, narrow streets, mature street landscaping, and low-income to middle-class residents. The setting also includes retail, commercial, and institutional mixed uses along arterial streets (e.g. shops, schools, low-rise offices, filling stations).

**Foreground Visual Features:** In residential neighborhoods, dominant features include street trees, modestly landscaped front yard set-backs, traditional domestic architecture, and above-ground utilities (power and telephone poles) along streets or in back alleys. Arterial streets feature immediate streetscape elements (trees, lights, furniture), and views of loosely-organized commercial buildings with varied architectural styles, heights, setbacks, signage, and levels of upkeep.

**Middle Ground Visual Features:** Similar to middle ground views in the Traditional Town Center typology, foreground elements are augmented by an overall sense of street widths, consistent building set-backs, and channeled perspective views along street corridors.

**Background Visual Features:** Similar to the background views in the Traditional Town Center typology, elements include mountains, skyline views of tall buildings and industrial structures, and elevated transportation structures crossing streets.

Visual Impact of HST Structures: In terms of visual impacts, the Traditional Town Center and Urban Mixed Use typologies are comparable. The primary distinction is that residential neighborhoods are considered more sensitive to these impacts, particularly as caused by elevated HST embankments and viaducts. Horizontal view blockage can serve to divide neighborhoods at the level of perception which influences issues such as community pride and property values. Residential uses are also particularly vulnerable to other negative visual impacts (overarching scale, shadow-casting, inappropriate design details, etc.).

Site Photo: Viewpoint No. 4 (see Figure 2.2-8).

Note: A visual simulation is not provided for this viewpoint. For a similar condition, refer to the visual simulation, "Little Italy", in the San Diego to Los Angeles region (not covered by this report).

#### 4.0.5 Typology: Urban Industrial

General Description: This typology (interspersed with the Urban Mixed Use typology) is typical of urban settings along much of the HST corridors in the Peninsula, East Bay and San Jose sections. This typology is characterized by industrial uses predominating over other urban mixed uses such as retail, commercial, institutional, and minimal or marginal residential. The visual context is generally unorganized and features industrial complexes and structures of widely-varied areas, sizes and scales. Urban design and aesthetic features are typically absent.

Foreground Visual Features: Predominant foreground features (near to the railroad corridors that HST shares) include railway lines and turnouts, industrial facilities with perimeter fences and gates, loading docks and driveways, dirt shoulders, and street-side overhead utilities. Landscape may include occasional street trees but plantings are unorganized or absent in many locations. Industrial vehicles (freight trains, trucks, containers, etc.) are dominant foreground elements.

Middle Ground Visual Features: Dominant features include views of large, tall, and complex industrial structures (factory buildings, power plants, smoke stacks, etc.) and channeled perspective views along railway and street corridors. High tension power lines (or other large-scaled overhead utilities) are prominent middle ground elements in many locations.

Background Visual Features: Dominant features include skyline views of tall industrial structures and elevated transportation corridors (e.g., freeways, BART), and channeled views of urban hillsides and mountain ridges, as viewed primarily along east-west streets.

Visual Impact of HST Structures: HST runs primarily at-grade through most industrial zones, with some sections on aerial structures (embankments or viaducts). Generally, visual impacts of HST are considered low in consideration of typically negative (or non-sensitive) baseline visual conditions. In short, standard HST structural types, scales, and design details are visually compatible with the utilitarian nature of typical urban industrial landscapes.

Site Photo: Viewpoint No. 5 (see Figure 2.2-10).

Note: A visual simulation is not provided for this viewpoint.

#### 4.0.6 Typology: Coastal Valley

**General Description:** This typology represents the landscape along the Caltrain/HST Corridor between San Jose and Gilroy, including the town of Morgan Hill and the village of San Felipe. The setting is characterized by flat or rolling landscapes ringed with low hills and mountains in background. Agricultural elements are comparable to the Central Valley but the overall context is significantly more verdant and visually “soft”. Mountain ridges preclude the long horizontal vistas typical of the Central Valley and settlement patterns (villages, fields, roadways, utilities) are shaped to fit the varied topography. Dominant visual elements are vistas of agricultural bottom land and wetlands framed by background views of green hills, ridges, and mountains.

**Foreground Visual Features:** Predominant foreground features include agricultural elements comparable to the Central Valley typology but with a greater emphasis on large trees dispersed in groups or concentrated in windrows along roads and fence lines. Agricultural structures (barns, farm house, etc.) tend to be older and more compactly placed than in the Central Valley.

**Middle Ground Visual Features:** The dominant middle ground features are wide frontal and lateral views of agricultural fields along freeways and local roads. These views are interspersed with a wide and growing variety of generally low-rise buildings in mixed-use developments, primarily along the SR-101 freeway near Morgan Hill and Gilroy. Tree rows, overhead utilities, and views of creeks and wetlands are other common middle ground features.

**Background Visual Features:** The dominant features are the skyline views of the mountains that flank the east and west sides of the valley. The mountain sides are comparable visually to those represented by the Coastal Mountain prototype. A particular feature of this landscape are a number of broad vistas from highways that run along higher ground at the valley edges, typified by the wetland views from SR-152 between Gilroy and San Felipe.

**Visual Impact of HST Structures:** Visual impacts in the agricultural sections between San Jose, Morgan Hill, and Gilroy are similar to impacts in the Central Valley, although not as severe because HST operates along an already-established railroad corridor. Impacts vary depending on location: HST runs primarily at grade but switches to embankment and viaduct sections as it passes through Morgan Hill and Gilroy (see also Traditional Urban Center typology). Between Gilroy and San Felipe, HST runs across a varied landscape of fields, rolling hills, and wetlands, crossing the wetland section on a low level viaduct. Impacts here are comparable to the Coastal Mountain typology: the viaduct is a hard-edged engineered structure imposed on a scenic, natural setting in full view of highway overlooks.

**Site Photo:** Viewpoint No. 6 (see Figure 2.2-12).

**Note:** A visual simulation is not provided for this viewpoint. For a similar condition, refer to the visual simulation, “San Elijo Lagoon”, in the San Diego to Los Angeles region (not covered by this report).

**Table 4.0-1: Detailed Analysis/Comparison Table/Potential Impacts to Visual Resources  
Bay Area to Merced Region**

	Scenic Corridors (Miles)	Scenic viewing points/overlooks number within ¼ mile	Impact Rating (H,M,L) *	Shadow Rating (H,M,L) *
<b>NO-PROJECT</b>				
<i>HIGHWAY IMPROVEMENTS</i>				
- US 101 / San Francisco to SFO	0	0		
- US 101 / SFO to Redwood City	0	0		
- US 101 / Redwood City to I-880	0	0	L	
- I-880 / US 101 to San Jose	0	0		
- US 101 / San Jose to Gilroy	20 Coastal Valley typology	8 Number of viewpoints estimated	L	L
- US 101 / Gilroy to SR-152	0	0	L	L
- SR-152 / US 101 to I-5	35 Pacheco Valley, Pacheco Pass, San Luis Reservoir	10 - 20 Number of viewpoints estimated	M	L
- SR-152 / I-5 to SR-99	0	0		
- I-80 / San Francisco to I-880	5 Bay Bridge crossing	4 - 6 Number of viewpoints estimated	New East Bay span	
- I-80 / I-880 to I-5 (Sacramento)	25 Carquinez Strait crossing and Delta	10 - 20 Number of viewpoints estimated		
- I-880 / I-80 to I-238	0	0	L	
- I-580 / I-880 to I-5 (via I-238)	15 Altamont Pass	5 Number of viewpoints estimated	L	L
- I-880 / I-238 to Fremont/Newark	0	0		

	Scenic Corridors (Miles)	Scenic viewing points/overlooks number within ¼ mile	Impact Rating (H,M,L) *	Shadow Rating (H,M,L) *
- I-880 / Fremont/Newark to US 101	0	0		
<b>AIRPORT IMPROVEMENTS</b>				
- Oakland International Airport	0	0	L	
- San Jose International Airport	0	0	L	
<b>MODAL</b>				
<b>HIGHWAY IMPROVEMENTS</b>				
- US 101 / San Francisco to SFO	0	0	M Improved freeway to freeway interchanges	M Improved freeway to freeway interchanges
- US 101 / SFO to Redwood City	0	0	L	L
- US 101 / Redwood City to I-880	0	0	M Improved freeway to freeway interchanges	M Improved freeway to freeway interchanges
- I-880 / US 101 to San Jose	0	0	M Improved freeway to freeway interchanges	M Improved freeway to freeway interchanges
- US 101 / San Jose to Gilroy	20 Coastal Valley typology	8 Number of viewpoints estimated	L	L
- US 101 / Gilroy to SR-152	0	0	L	L
- SR-152 / US 101 to I-5	35 Pacheco Valley, Pacheco Pass, San Luis Reservoir	10 - 20 Number of viewpoints estimated	H Cuts and fills, Gilroy to SR-156	H Cuts and fills, Gilroy to SR-156
- SR-152 / I-5 to SR-99	0	0	L	L
- I-80 / San Francisco to I-880	5 Bay Bridge crossing	4 - 6 Number of viewpoints estimated	L New East Bay span may be positive impact	
- I-80 / I-880 to I-5 (Sacramento)	25 Carquinez Strait crossing and Delta	10 - 20 Number of viewpoints estimated	L New Carquinez Bridge may be positive impact	L

	Scenic Corridors (Miles)	Scenic viewing points/overlooks number within ¼ mile	Impact Rating (H,M,L) *	Shadow Rating (H,M,L) *
- I-880 / I-80 to I-238	0	0	M Projected, non-specific	M Projected, non-specific
- I-580 / I-880 to I-5 (via I-238)	15 Altamont Pass	5 Number of viewpoints estimated	M Projected, non-specific	M Projected, non-specific
- I-880 / I-238 to Fremont/Newark	0	0	M Projected, non-specific	M Projected, non-specific
- I-880 / Fremont/Newark to US 101	0	0	M Projected, non-specific	M Projected, non-specific
<b>AIRPORT IMPROVEMENTS</b>				
- Oakland International Airport	0	0	M Projected, non-specific	L Projected, non-specific
- San Jose International Airport	0	0	M Projected, non-specific	L Projected, non-specific
<b>HST CORRIDOR &amp; STATION OPTIONS</b>				
<b><i>SAN FRANCISCO TO SAN JOSE</i></b>				
<u>Alignment</u>				
- Via UP (Caltrain Corridor)		0	M Embankment (Burlingame), grade separations	M Embankment (Burlingame), grade separations
<u>Stations</u>				
- San Francisco / Transbay Terminal		0	Station is underground	Station is underground
- San Francisco / 4 <sup>th</sup> & King		0	L Low due to context	L Platforms are elevated
- Millbrae / San Francisco Airport		0	L Platforms at grade	L Platforms at grade
- Redwood City (Option A)		2 Views from traditional town center	M Medium due to context	M Medium due to context
- Palo Alto (Option B)		2 Views from traditional town center	M Medium due to context	M Medium due to context
- Santa Clara (optional)		0	L Low due to context	

	Scenic Corridors (Miles)	Scenic viewing points/overlooks number within ¼ mile	Impact Rating (H,M,L) *	Shadow Rating (H,M,L) *
- San Jose / Diridon		2 Key views only, other views also apply	M Platforms are elevated	M Platforms are elevated
<b><i>OAKLAND TO SAN JOSE</i></b>				
<u>Alignments</u>				
- Via UP / Oakland to Industrial Way	0	0	L Mostly at-grade or non-sensitive contexts	L Alignment is mostly at-grade
- Via UP and I-880 / Industrial Way to San Jose	0	0	M High aerial structures along I-880	M High aerial structures along I-880
- Via BNSF (Niles Branch) / Industrial Way to San Jose	6 Town of Niles, Niles Creek, East Bay shoreline	4 Key views in Town of Niles, Niles Creek	M Niles Creek Aerial structure is high impact	M Niles Creek Aerial structure is medium impact
<u>Stations</u>				
- West Oakland (Option A)		0	Station is underground	Station is underground
- Oakland / 12 <sup>th</sup> Street (Option B)		0	Station is underground	Station is underground
- Oakland / Lake Merritt (Option C)		0	Station is underground	Station is underground
- Oakland / Jack London (Option D)		2 Views from scenic urban waterfront	M Projected, non-specific	M Projected, non-specific
- Coliseum / Oakland Airport		0	M Structures visible from Coliseum, BART	L Low due to context
- Union City (Option A)		1 Key view assumed	L Projected, non-specific	L Projected, non-specific
- Warm Springs (Option B)		1 Key view assumed	L Projected, non-specific	L Projected, non-specific
- San Jose / Diridon		2 Key views only, other views also apply	M Platforms are elevated	M Platforms are elevated

	Scenic Corridors (Miles)	Scenic viewing points/overlooks number within ¼ mile	Impact Rating (H,M,L) *	Shadow Rating (H,M,L) *
<b>SAN JOSÉ TO MERCED</b>				
<u>Alignments</u>				
- Via Northern Diablo Route and August Road / San José to Atwater	5 Orestimba Valley	3 View from I-5, views (estimated) also in valley	M Aerial structure (San Jose), cuts and fills (Orestimba Valley), portals	M Section of high impact in San Jose (aerial structure)
- Via UP (Caltrain Corridor) / San Jose to Gilroy	20 Scenic rural landscapes	3 Key views only, other views also apply	M Aerial structures in Morgan Hill, Gilroy	M Aerial structures in Morgan Hill, Gilroy
- Via Pacheco Pass and Henry Miller Road / Gilroy to Chowchilla	30 Gilroy to Pacheco Valley, San Luis Reservoir	10 - 20 Number of viewpoints estimated	H Cuts and fills, viaducts (wetlands, Pacheco Valley), portals	M Localized high impacts only
<u>Stations</u>				
- San Jose / Diridon		2 Key views only, other views also apply	M Platforms are elevated	M Platforms are elevated
- Morgan Hill (Option A)		1 Key view only, other views also apply	M Platforms are elevated	M Medium due to context
- Gilroy / Downtown (Option B)		1 Key view only, other views also apply	M Platforms are elevated	M Medium due to context
- Gilroy / Bypass (Option C)		1 Key view only, other views also apply	L Assumed, non-specific	L Low due to context
- Los Banos		1 Key view only, other views also apply	L Low due to context	L Low due to context

(\*) Impact Ratings:

- L: Low impacts - impacts requiring no or minor mitigation or impacts in non-sensitive locations (e.g. industrial zones).
- M: Medium impacts - impacts in sensitive locations (e.g. residential zones, scenic areas) suitable to mitigation by non-structural means.
- H: High impacts - impacts in sensitive locations that may require structural modifications (or changes to horizontal or vertical alignment) for effective mitigation or impacts.

Notes:

1. Empty cells indicate "No", insufficient (or no) data, or non-applicability of measurement or rating.
2. For corridors (highway and HST), impact ratings are averaged over length of applicable segment.

## 4.1 NO-PROJECT ALTERNATIVE

The No-Project Alternative for highways in the Bay Area to Merced region assumes reasonable incremental improvements through 2020. However, for the purposes of this analysis, this alternative does not result in significant changes to existing freeways or highways in terms of lanage or other improvements that would alter structural or visual contexts (see Section 3.0, *Modal Alternative, Deliberative Draft System Alternatives Definition*, December 2002). Another way of stating this is that all changes to structural and visual contexts caused by the highway Modal Alternative (see 1.3.2) are measured against current (2003) conditions as a baseline. For purposes of simplification, the same assumption is applied to the Modal Alternative for airports (Oakland and San Jose) in the region.

However, one corridor segment is identified as potentially receiving “moderate” high-contrast impacts from reasonably expected incremental improvements, primarily do to sensitive contexts. The western portion of the SR-152 segment between US 101 to I-5 is a winding, hilly 2-lane arterial highway from Gilroy to the junction with SR-156. Incremental changes such as shoulder widening or alignment straightening could impose moderate visual impacts due to cutting and filling.

## 4.2 MODAL ALTERNATIVE

### 4.2.1 Highway Modal Alternative

In the Bay Area to Merced region, the Modal Alternative for highways is defined as adding a lane in each direction (total of two lanes) to a number of freeways and regional highways (see Table 1.3-1) by widening horizontally. This change would require similar horizontal capacity improvements to intersecting roadways and ramps at most interchanges. Freeway to freeway interchanges would typically require more complex improvements, which would result in noticeable structural and visual changes, particularly to old or obsolete interchanges.

The visual impacts of these changes depend entirely on context and on the type of highway. For urban freeways in the Bay Area (e.g., US 101, I-880), negative impacts are likely to be modest or, at worst, moderate. Although these changes will have moderate to high effects on other forms of property impact (acquisition, noise, etc.), the freeways are already wide and visually obtrusive: the additions of a single lane in each direction will not, in most cases, significantly degrade existing visual contexts.

Visual changes will be generally more noticeable in rural or mountainous contexts; hence impacts will be more severe. Visual impacts in rural areas result from displacement of rural landscapes and features (e.g., fields, farm structures, tree rows) and, in mountainous regions, are the result of new (or enlarged) fills and cuts associated with highway widening or straightening. Highways most likely to be affected include U.S. 101 between San Jose (SR-85) and Gilroy (a rural context), SR 152 between Gilroy and I-5 (the route over scenic Pacheco Pass), and I-580 between the Livermore Valley and I-5 (the route over Altamont Pass).

The highway section most sensitive to visual degradation is SR-152 between Gilroy and the junction with SR-156, north of Hollister. This winding two-lane highway traverses agricultural and mountainous landscapes, passing through scenic rural, village and wetland settings. Widening and straightening would significantly alter the visual contexts in this section.

### 4.2.2 Airport Modal Alternative

At this stage of study, visual impacts associated with the Modal Alternative for airports are conjectural. The primary features of the alternative include an additional runway each at San Jose International Airport (SJC) and Oakland International Airport (OAK) with associated improvements to terminals (additional gates), parking, access roadways, and interchanges with adjacent freeways. Although visual

impacts will result from these changes, it is not possible to identify or quantify such impacts without actual physical planning and design concepts. However, for purposes of this study, visual impacts are assumed to be moderate outside the immediate perimeters (existing or expanded) of the two airports.

### 4.3 HIGH-SPEED TRAIN ALTERNATIVE

Visual impacts of the High Speed Train Alternative vary significantly depending on the interaction of context and type of railway structure. In the Bay Area to Merced region, contexts range from intensely urban to uninhabited and include a full complement of urban land uses, agricultural and small town settings, and scenic mountain and wetland environments. Structural types include existing at-grade railway corridors, elevated embankments and viaducts, deep fills and cuts (mountainous regions), and tunnels. The following is a summary of projected visual impacts within the Bay Area to Merced region.

#### 4.3.1 San Francisco to San Jose

Between downtown San Francisco and San Jose, the High Speed Train (HST) alternative will share trackage with commuter rail services along the existing UPRR Caltrain corridor. The specific alternative under study combines HST with Caltrain express (or "skip-stop") services operating on a number of new elevated or tunneled segments being developed under a general Caltrain improvement program that also includes electrification.

The Caltrain corridor operates through a mix of urban industrial, residential, commercial, and mixed use contexts, including a number of traditional town centers. Like many existing freeways in the region, its primary visual impacts are already set historically. Additional impacts resulting from the combined HST and Caltrain improvement program are limited to new elevated sections and their approaches. Key impacts are:

1. Along the whole corridor, electrification will introduce a system of overhead contact wires with associated poles, catenary cables, and other support structures. These elements are similar visually to high voltage power lines. Impacts would range from negligible, in industrial areas, to moderate in some key residential areas with houses backing up directly to the corridor. Note that the entire surface Caltrain corridor will be electrified, not just the express sections shared with HST.
2. Certain portions of the corridor will be elevated, typically on an embankment. Depending on context, visual impacts will range from moderate to high. Particularly in residential sections (e.g. Burlingame), impacts will include blockage of views, blockage of early morning or late afternoon sun, and overarching visual scale.
3. Grade-crossings are being systematically eliminated along the whole corridor, resulting in a number of new overpasses and underpasses along major streets. Like embankments, overpasses impose localized impacts on views, natural light penetration, and urban scale. Severities of impacts depend entirely on local contexts.

#### 4.3.2 Oakland to San Jose

The Oakland to San Jose alternatives operate along both existing railroad corridors and along freeway rights-of-way. Conditions and impacts are very similar to those along the Caltrain Corridor (see above) although more of the Oakland to San Jose corridor runs through less-sensitive heavy industrial contexts. Running together along the main UPRR corridor south from Oakland, the alternatives split in north Hayward. One option follows the circuitous BNSF "Niles Branch" railway corridor. The other option continues south on the UPRR main line and then along the right-of-way of the I-880 freeway. Both alternatives recombine in the existing railway yard north of San Jose's Diridon Station.

Visual impacts described above for the Caltrain Corridor generally apply also to the Oakland to San Jose alternatives (see above). However, impacts are particularly significant along three segments:

1. The Niles Branch passes through a number of residential areas and through the historic community of Niles. A major elevated section (viaduct) carries HST around the east end of Niles and over Niles Creek at the mouth of Niles Canyon. This structure is highly visible from the residential areas of Niles (north side of Niles Creek) and from a major arterial street to the east, Mission Boulevard. Because the structure fundamentally changes the historic and visual context, visual impacts would range from moderate to high depending on viewer location.
2. A long section of the Niles Branch crosses wetlands and salt evaporation lagoons along the shore of the East Bay, south of Auto Mall Parkway. Although this area is relatively remote and mostly not accessible to the public, it is a significant natural and visual resource. HST will cross this section on a low embankment (above existing railroad grade), introducing a long, linear element comparable to a levee into the landscape.
3. HST along the I-880 Corridor runs on a high elevated viaduct, its elevation required to clear overpasses and interchanges along the freeway. This structure is a major new feature in the visual landscape. Although generally compatible with existing freeway structures, the height of the viaduct will make it visible from long distances, thus changing the visual context in a broad swath along the corridor between Fremont and San Jose.

#### 4.3.3 San Jose to Merced

The San Jose to Merced alternatives operate in urban contexts in metro San Jose, and then through a mix of agricultural, small town, and natural contexts between San Jose and the Merced region. Corridor conditions and visual impacts in metro San Jose are generally comparable to those between San Jose and Oakland or San Francisco (see above). Impacts on other contexts are summarized as follows:

1. From San Jose to Gilroy, HST runs primarily at grade (or on low embankment sections) along the existing UPRR Caltrain Corridor. Visual impacts are limited to the introduction of the electrification system into the agricultural landscape. However, in the communities of Morgan Hill and Gilroy, HST runs on an elevated viaduct causing significant changes to historic and visual contexts and imposing moderate to high visual impacts due to shadowing, overarching scale, and view blockage.
2. The "Northern Diablo" alternative crosses over Coyote Creek and U.S. 101 immediately south of SR-85 and enters a highly visible tunnel portal on the hillside east of the freeway. Although not incompatible with freeway structures in the area, the elevated viaduct passes directly over a South San Jose residential area and is highly visible from long distances and many directions. Depending on viewer location, visual impacts would range from moderate to high.
3. The section from Gilroy to the Central Valley passes through a mix of highly scenic agricultural, wetland, village, and mountain valley contexts, all of which are significantly altered by HST structures. Visual impacts are primarily due to inconsistencies with historic and visual contexts, not to functional impacts such as immediate view blockage and overshadowing. Areas most sensitive to HSR-caused context change are between Gilroy and the village of San Felipe (rural and wetland vistas) and through the lower Pacheco Creek Valley (major tunnel portals, cuts and fills, and flyover structures).
4. Both Central Valley alternatives (Northern Diablo and Pacheco Pass) cross the Central Valley primarily on straight-line elevated fills adjacent to east-west road corridors. These structures are significant visual features in the agricultural landscape, comparable to the high levees along the Sacramento and San Joaquin Rivers. Although visual impacts are mitigated by the valley's manmade landscape and vast visual scale, the embankments do impose low to moderate impacts (view blockage, shadowing, scale) within their quarter-mile impact zones.

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# APPENDIX A - VIEWPOINT LOCATION MAP

