Appendix J. Visual Impact Assessment and Supplement to Visual Impact Assessment

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VISUAL IMPACT ASSESSMENT

El Camino Real Roadway Renewal Project

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Statement of Compliance: Produced in compliance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements, as appropriate, to meet the level of analysis and documentation that has been determined necessary for this project.

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VISUAL IMPACT ASSESSMENT
El Camino Real Roadway Renewal Project

I. PURPOSE OF STUDY

The purpose of this visual impact assessment (VIA) is to document potential visual impacts caused by the proposed project and propose measures to lessen any detrimental impacts that are identified. Visual impacts are demonstrated by identifying visual resources in the project area, measuring the amount of change that would occur as a result of the project, and predicting how the affected public would respond to or perceive those changes.

II. PROJECT DESCRIPTION

The project proposes to preserve and extend the life of the roadway and improve ride quality, improve drainage efficiency to reduce localized flooding, enhance user visibility and safety, and enhance pedestrian infrastructure and bring it into compliance with Title II of the Americans with Disabilities Act along a 3.6 mile stretch of State Route 82 (SR-82), otherwise known as El Camino Real Boulevard (El Camino Real).

This construction will require street tree removal, including many trees within the historic Howard-Ralston Eucalyptus Tree Rows (Tree Rows). Roadway and sidewalk design will be modified where feasible to protect historic trees while meeting the project's purpose and need. Additionally, construction methods will be chosen to minimize impact to the trees. Where trees must be removed, replacement trees will be planted in coordination with the local community with the goal of maintaining tree rows along this portion of El Camino Real.

This VIA examines 5 alternatives, including the no-build alternative. The alternatives assessed in this study are:

No Build Alternative: Under the No Build Alternative, the SR 82 facility between the project limits would remain in its current condition. The needed repairs described under the project's purpose and need would not be implemented. The No Build Alternative serves as a benchmark for comparison to the proposed Build Alternatives. Ongoing maintenance issues include inadequate Americans with Disabilities access, impaired driver visibility, and poor structural integrity of trees. It can be expected that these issues will continue, and the following practices currently would continue to be used.

- Pronounced areas of damage in the pavement surface and sidewalks would be patched and/or repaired as needed and to the extent feasible given physical constraints.
- Localized flooding and downed utility lines would be responded to as quickly as possible to restore disrupted traffic operations and other access.
- When removal is required, trees that are a part of the Tree Rows would continue to be replaced with Elms per Caltrans agreement with the State Historic Preservation Office (SHPO).

Features Common to All Build Alternatives:

- To address the structural inadequacy of the roadway, the entire pavement structural section would be reconstructed, including removal of existing road base and pavement, re-compaction of sub-grade, reconstruction of road base, and installation of new asphalt flexible pavement.

- Existing sidewalks and curb ramps would be reconstructed, and pedestrian crossing pavement markings and signals upgraded where applicable to provide an accessible path of travel. An estimated 183 curb ramps need upgrading at 43 intersections within the project limits. Accessible Pedestrian Signals (APS) and Pedestrian Countdown Timers (PCT) would be installed throughout the corridor.
- Pedestrian Hybrid Beacons (PHB) would be installed at Bellevue Avenue, Willow Avenue, and Palm Drive.
- An additional 34 new drainage inlets would be installed, and 25 of the existing 79 roadway drainage inlets would be modified within the project limits.
- Associated relocation, adjustment and upgrading of traffic signal poles, light poles, signs, utility cabinets, fire hydrants and other utilities (such as gas, fiber optic cables, sewer and water lines) in the vicinity may be required to conform to infrastructure upgrades within the scope of the project.
- Driveways throughout the project corridor may be reconstructed or modified in conjunction with curb and gutter and sidewalk construction.

Build Alternative 1: Roadway Rehabilitation and Infrastructure Upgrade: The reconstructed roadway would maintain the current lane configuration, with either standard 11-foot travel lanes and reduced width 2-foot shoulders (48-foot wide roadway) or non-standard 10-foot travel lanes and reduced width 2-foot shoulders (44-foot wide roadway, which most closely resembles existing conditions).

Build Alternative 2: Roadway Rehabilitation and Infrastructure Upgrade with Underground Utilities: This alternative would encompass all improvements under Build Alternative 1, and additionally all existing overhead utilities (electrical distribution, telecommunication, and TV lines) would be relocated under the roadway.

Build Alternative 3: Roadway Rehabilitation with Road Diet: This alternative would encompass all improvements under Build Alternative 1, but would reconfigure the travel lanes from two travel lanes each direction to one standard 11-foot wide travel lane each direction, a 12-foot wide continuous center left turn lane and 2-foot wide shoulders (38-foot wide roadway) between post mile 12.3 and 15.2. The curb and gutter line would be shifted 3 feet toward the median in each direction to allow for a wider planting strip and to minimize construction impacts to existing trees. Bus pull-outs would also be constructed at the 21 bus stops within the project limits to allow buses to pull out of the traffic lanes when stopped. At bus pull-out locations the roadway would be widened up to 7 feet for a length of 150 feet and the pull out would taper on either end to meet the roadway.

Build Alternative 4: Roadway Rehabilitation with Road Diet with Underground Utilities: This alternative would encompass all improvements under Build Alternative 3, and additionally all existing overhead utilities (electrical distribution, telecommunication, and TV lines) would be relocated under the roadway.

III. PROJECT LOCATION AND SETTING

The project location and setting provides the context for determining the type and severity of changes to the existing visual environment. The terms *visual character* and *visual quality* are defined below and are used to further describe the visual environment. The project setting is also referred to as the corridor or

project corridor which is defined as the area of land that is visible from, adjacent to, and outside the highway right-of-way, and is determined by topography, vegetation, and viewing distance.

The proposed project is located on SR-82 between East Santa Inez Avenue in San Mateo and Millbrae Avenue in the City of Millbrae in San Mateo County, California. The landscape is characterized by moderately developed, flat terrain divided up by tree-lined streets and one to three story buildings. While the San Francisco Bay Area is known for its hills and shoreline, neither is visible form the project corridor. The land use within the corridor is primarily moderate density urban and suburban residential and commercial development with apartment buildings, single family homes, shopping centers, churches and city offices.

SR-82 is also known as El Camino Real and it runs between and parallel to United States Route 101 (US 101), Interstate 280 (I-280), and Caltrain. It links San Jose and San Francisco, providing primarily local access along its length. The portion of the route within the project limits is a four to six-lane conventional highway with no High Occupancy Vehicle (HOV) or Transit-Priority lanes. Transit service within the project area is provided by San Mateo County Transit District (SamTrans).

The Howard-Ralston Eucalyptus Tree Rows are within the project corridor. The official boundaries of the tree rows are from Ray Drive/ Rosedale Avenue to Peninsula Avenue and make up 2.2 miles of the project length. The trees are a scenic, cultural, and environmental resource, and are listed in the National Register of Historic Places. The Tree Rows consist of extremely large Eucalyptus trees and English Elms planted in the 1870s, along with other Eucalyptus and tree species planted since that time.

SR-82 throughout the project limits is not a designated or eligible State Scenic Highway.

The map below identifies the project area.

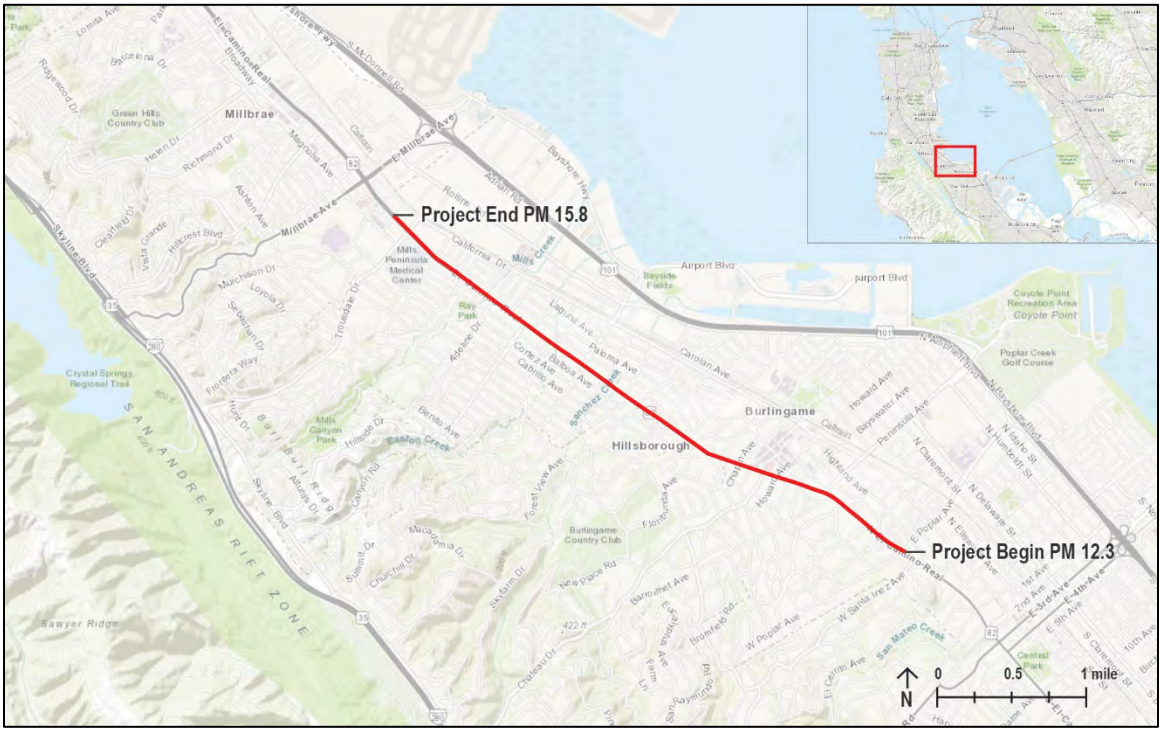


FIGURE 1: PROJECT AREA—The project area consists of a 3.6-mile segment of California State Route 82 in the cities of Millbrae, Burlingame, Hillsborough and San Mateo.

IV. ASSESSMENT METHOD

This visual impact assessment generally follows the guidance outlined in the publication *Visual Impact Assessment for Highway Projects* published by the Federal Highway Administration (FHWA) in March 1981.

The following steps were followed to assess the potential visual impacts of the proposed project:

A. Define the project location and setting.
B. Identify visual assessment units and key views.
C. Analyze existing visual resources, resource change and viewer response.
D. Depict *(or describe)* the visual appearance of project alternatives.
E. Assess the visual impacts of project alternatives.
F. Propose measures to offset visual impacts.

Field measurements, computer modeling, and photo matching were used to ensure the accuracy of photo-simulations, other project representations and visual analysis.

Critical to the assessment of the resource change anticipated under these project alternatives is an understanding of the scope of tree removal required for this project. For the purposes of this analysis, tree removals were carefully considered with the preliminary data available. Field surveys of existing trees were conducted to determine general condition of trees and their likely resilience to anticipated construction impacts. Through analysis of both tree health and construction impacts of the various design alternatives, preliminary assessments of anticipated tree removals were generated. Maps of these anticipated

removals are included as an appendix to this Visual Impact Assessment. It should be noted that additional arborist reviews may prompt a revision of this visual impact assessment.

V. VISUAL ASSESSMENT UNITS AND KEY VIEWS

Visual assessment units of an area are well-defined "outdoor rooms" with their own visual character and visual quality. It's not feasible to analyze every view of a project. Key views within visual assessment units are identified from publicly accessible places with representative views of the project corridor or views to particular areas of interest within the project corridor to capture existing visual resources and assess proposed changes.

The El Camino Real Roadway Renewal project runs along flat land through moderately dense, low-rise development for the length of the project corridor, and thus is contained within a single visual assessment unit. A combination of key views has been selected to represent characteristic project changes and to highlight changes particular to each build alternative.

For this project, the following key views have been identified:

- Key View 1 – From south of the Hillside Drive Intersection with El Camino Real looking south on El Camino Real.
- Key View 2 – From south of the Forest View Avenue Intersection with El Camino Real looking south on El Camino Real.
- Key View 3 – From south of the Carol Avenue Intersection with El Camino Real looking south on El Camino Real.

The map below illustrates the key views for the project.

Figure 2: This map delineates the key views that will be used to assess visual impacts that may be caused by the proposed project.

VI. VISUAL RESOURCES AND RESOURCE CHANGE

Resource change is assessed by evaluating the visual character and the visual quality of the visual resources that comprise the project corridor before and after the construction of the proposed project. Resource change is one of the two major variables in the equation that determine visual impacts (the other is *viewer response*, discussed below in *Section VII Viewers and Viewer Response*).

Visual Resources

Visual resources of the project setting are defined and identified below by assessing visual character and visual quality in the project corridor.

VISUAL CHARACTER

Visual character includes attributes such as form, line, color, texture, and is used to describe, not evaluate; that is these attributes are neither considered good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change. Changes in visual character can be identified by how visually compatible a proposed project would be with the existing condition by using visual character attributes as an indicator. For this project the following attributes were considered:

Form - visual mass or shape

Line - edges or linear definition

Dominance - position, size, or contrast

Scale - apparent size as it relates to the surroundings

Diversity - a variety of visual patterns

Continuity - uninterrupted flow of form, line, color, or textural pattern

The visual character of the proposed project will be somewhat compatible with the existing visual character of the corridor. The four-lane expanse of roadway is bordered on either side with low-rise building masses and street trees creating an enclosed and intimate neighborhood scale. The project does not introduce new visual elements to the corridor, and primarily replaces existing features including roadway pavement, drainage facilities, sidewalks, driveways, curb and gutter and curb ramps. New pedestrian crossing signals would be installed throughout the corridor, and three pedestrian hybrid beacons (PHB) would be installed at Bellevue Avenue, Willow Avenue, and Palm Drive. These new signals will appear similar to existing signals in the corridor and will therefore be compatible with visual character.

The large, mature street trees define the visual character of the corridor. There are over 600 trees lining both sides of El Camino Real within the project. 252 of the nearly 400 trees within the Howard-Ralston Tree Rows are the extremely large Eucalyptus trees over 100 years old. The scale of the extremely large historic Eucalyptus trees dominates the visual experience of the corridor. While the tree-lined character of this portion of El Camino Real is continuous throughout the project area, the visual mass of the historic Eucalyptus trees is very different from that of the younger street trees that have been planted more recently. The visual appearance of these remaining trees varies in form, size and age. Some of the trees are exhibiting signs of compromised health and vigor.

Different zoning laws have significantly affected the character of El Camino Real within the various cities through which it passes. Within Burlingame which makes up most of the project length, local ordinances have prohibited removal of trees and have severely limited commercial development, which often seeks to remove trees to improve visibility of businesses and signage. Local zoning decisions have also maintained a relatively narrow road width, as compared with the width of the roadway on either end of the project corridor in Millbrae and San Mateo. In these areas, the roadway has been widened to accommodate increased traffic and on-street parking. Burlingame's narrow street and large trees together create a sense of enclosure and intimacy absent in other portions of El Camino Real.

Throughout much of the project corridor, development limits long views to the roadway ahead, and this is most pronounced where the massive, tall trees limit the horizon view to a narrow sliver in the distance. In contrast, the horizon view opens up at wider intersections, particularly where commercial developments are fronted by parking lots. While the oldest trees were planted in the late 19th century, development has occurred over several decades, resulting in a rich diversity of architectural styles. This diversity is enhanced by the varying residential, commercial, religious and civic land uses within the corridor.

VISUAL QUALITY

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the project corridor. Public attitudes validate the assessed level of quality and predict how changes to the project corridor can affect these attitudes. This process helps identify specific methods for addressing each visual impact that may occur as a result of the project. The three criteria for evaluating visual quality are defined below:

Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.

Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.

Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

The visual quality of the existing corridor will be altered by the proposed project. The Howard-Ralston Eucalyptus Tree Rows establish a vividness as a group and as individual specimens. The degree to which they are out of scale with even the largest of typical street trees is immediately compelling and memorable.

Intactness of the corridor is moderate. The visual features are typical of a suburban environment with a mix of mostly residential and some low-rise shopping areas. Utilities, traffic lights, street signs, and other infrastructure are all consistent with this time of environment. The strong presence and maturity of the street trees throughout most of the corridor supports the feeling of intactness.

The incremental nature of development in the corridor has influenced the unity of the setting. Buildings of different scales and architectural styles being located side by side, with quaint 1920's single family residences sometimes adjacent to 1960's three-story multi-family residences. These factors tend to detract from unity, and intactness to a lesser extent. Unity is also affected by other conditions including tree spacing and gaps in the tree rows, a somewhat haphazard assortment of trees and extremely variable architectural styles. Spacing between the trees varies from less than 5' to over 100' due to driveways, utilities and attrition of older trees over time. Large trees have been replaced with new, smaller trees, and

various other trees have been planted at different times as infill within the rows of street trees. The large Eucalyptus are the primary element tying the visual setting together and are largely responsible for the degree of cohesiveness it does have.

Resource Change

Resource change varies with each alternative and is discussed below.

No Build Alternative: No near-term resource change would result from the No Build Alternative. SR-82 within the project limits would not be modified from its current state. However, as the older trees reach the end of their lifespan and maintenance repairs are implemented to maintain traffic operations and pedestrian accessibility, it is expected that trees will require incremental removal. Per Caltrans agreement with the State Historic Preservation Office (SHPO), trees that contribute to the eligibility of the Tree Rows that require removal would continue to be replaced with Elms.

Resource Change Common to All Build Alternatives:

For all Build Alternatives the primary cause of resource change would be the result of impacts to existing street trees. The construction required to rehabilitate the roadway, sidewalk, and drainage involves extensive excavation within the root systems of existing mature trees. Given the age, size and general condition of the older trees, it is expected that many trees would not survive this disturbance and would thus require removal. The large, older trees are the defining feature of this corridor and are primarily responsible for its visual character and quality. Removal of these trees has the potential to cause a high level of resource change. For all Build Alternatives there are approximately 240 trees requiring removal, although the make-up and locations of trees needing removal varies. The discussion of the individual Build Alternatives below addresses Resource Change similarities and differences among these alternatives.

All Build Alternatives would reconstruct roadway, sidewalks, driveways, curb and gutter and curb ramps. These improvements are ground plane changes that do not typically affect visual character or quality. However, as the condition of the roadway and sidewalks is in an extreme state of disrepair, it is expected that these changes will enhance the project corridor's visual quality along with its functionality.

Another primary component of work for all build alternatives is the replacement of drainage inlets and underground drainage facilities. As this work will appear nearly identical to the existing facilities, no visual character or quality change is expected from this work.

Fourteen retaining walls within the project limits will be removed and replaced with new retaining walls in all alternatives. Existing retaining walls accommodate grade differences between adjacent properties and sidewalk and roadway. These low walls, approximately 2 feet in height. Construction work adjacent to the walls is anticipated to impact the walls and will therefore require their replacement. The newly constructed walls will be similar in size, shape and character to the existing walls.

All Build Alternatives would replace pedestrian crossing signals, including Accessible Pedestrian Signals (APS) and Pedestrian Countdown Timers (PCT) throughout the corridor. At three locations - Bellevue Avenue, Willow Avenue, and Palm Drive - Pedestrian Hybrid Beacons (PHB) would be installed. While these are above ground elements, they are typical features of local streets within the area and are already present. As such they would not contribute to resource change. The same is true for the incidental relocation, adjustment and upgrading of traffic signal poles, light poles, signs, utility cabinets, fire hydrants and other utilities (such as gas, fiber optic cables, sewer and water lines) that may be required to conform to the primary infrastructure upgrades.

Resource Change Build Alternative 1: Roadway Rehabilitation and Infrastructure Upgrade:

The reconstructed roadway under this alternative would closely resemble existing conditions. The current number of lanes and narrow shoulders would be replaced in their existing locations. Roadway reconstruction would require a two-foot excavation depth within the roadway and curb and gutter. This excavation can be expected to cause serious damage to the structural root systems of the large, mature trees that are at the curb and gutter. This can be expected to cause serious root system disturbance and damage that would require trees to be removed. There are an estimated 235 trees required for removal. This includes 50% of the Tree Rows and 41% of all established trees that contribute to the tree-lined character. Replacement tree planting would be installed in planting areas of size as existing in fewer numbers and wider spacing due to sight distance requirements. Where overhead utility lines and associated power poles are located, replacement planting locations and tree sizes would be further limited. According to PG&E's guidelines, *Right Tree, Right Place*, only tree species that grow no taller than 25 feet at maturity should be used underneath power lines. Trees that grow taller than 25 feet at maturity should be planted at least 50 feet away from these power lines. Additionally, no tree should be planted within 10 feet of power poles. While PG&E allows existing large trees to remain under power lines, the canopies of these large trees are severely pruned to maintain clearance around the lines. Due to the amount of tree removal and the limitations on providing replacement tree planting, the vividness, intactness and unity of the setting will be substantially altered. Resource change would be high for this alternative.

Resource Change Build Alternative 2: Roadway Rehabilitation and Infrastructure Upgrade with Underground Utilities:

This alternative would have the same impacts to mature trees as Build Alternative 1. Resource change would differ as a result of the underground relocation of existing overhead utilities (electrical distribution, telecommunication, and TV lines). Additional impacts to trees are not expected due to this work as the undergrounded utilities are proposed to be installed within the roadway, rather than in the more typical locations under sidewalks and planting areas. Access vaults would be located in the sidewalk near intersections where trees are not generally present for corner sight distance requirements.

Undergrounding utilities would enhance visual quality, increasing intactness and unity. The utility poles and wires of the existing overhead infrastructure create a haphazard appearance and interfere with street tree canopy. The presence of the lines on only one side of the street, coupled with the awkwardly pruned tree canopies, results in an unbalanced visual affect. Placing the lines below ground would result in a less cluttered, more visually balanced streetscape. It also allows for taller and fuller tree canopy growth for existing trees, while creating more opportunities to plant large replacement trees without PG&E requirements regarding tree species, planting locations and pruning practices underneath their overhead facilities. Even without the limitations of overhead utilities, replacement tree planting would be provided in lower numbers and less density than the current condition due to sight distance requirements and other physical constraints. The tree removal of the large trees, and reduced replacement tree planting would alter the vividness, intactness and unity of the corridor. Resource change would be moderate to moderate-high for this alternative.

Resource Change Build Alternative 3: Roadway Rehabilitation with Road Diet:

This alternative would encompass all improvements under Build Alternative 1. However, resource change would differ due to reconfiguration of the travel lanes from two travel lanes each direction to one travel lane each direction with a continuous center left turn lane and 2-foot wide shoulders. The new curb and gutter line would be reconstructed 3 feet toward the centerline in each direction and the existing curb

and gutter would be partially removed or left in place in order to minimize disturbance to tree root systems and allow for a wider planting strip. Bus pullouts would be constructed to allow busses to pull out of the traffic lane to make stops. The overall narrowed roadway width would allow preservation of some large, mature trees in proximity to the existing curb and gutter that would require removal in Alternative 1. However, other trees would require removal at the bus pull outs. There are an estimated 230 trees required for removal, which includes 46% of the Tree Rows and 39% of all established trees that contribute to the tree-lined character. Due to the amount of tree removal and the limitations on providing replacement tree planting, the vividness, intactness and unity of the setting would be substantially altered. Resource change would be moderate-high to high.

Resource Change Build Alternative 4: Roadway Rehabilitation with Road Diet with Underground Utilities:

This alternative would encompass all improvements and the associated resource change under Build Alternative 3. In addition, existing overhead utilities (electrical distribution, telecommunication, and TV lines) would be relocated under the roadway. As in Alternative 2, relocating the lines below ground would result in a less cluttered, more visually balanced streetscape. The absence of overhead lines will allow for greater tree canopy growth for existing trees and create more room to plant large replacement trees without PG&E requirements underneath their overhead facilities. Vividness, intactness and unity would change causing a resource change of moderate to moderate high.

VII. VIEWERS AND VIEWER RESPONSE

The population affected by the project is composed of *viewers*. Viewers are people whose views of the landscape may be altered by the proposed project—either because the landscape itself has changed or their perception of the landscape has changed.

Viewers, or more specifically the response viewers have to changes in their visual environment, are one of two variables that determine the extent of visual impacts that will be caused by the construction and operation of the proposed project. The other variable is the change to visual resources discussed earlier in *Section VII Visual Resources and Resource Change*.

Types of Viewers

There are two major types of viewer groups for highway projects: highway neighbors and highway users. Each viewer group has their own particular level of *viewer exposure* and *viewer sensitivity*, resulting in distinct and predictable visual concerns for each group which help to predict their responses to visual changes.

HIGHWAY NEIGHBORS (Views *to* the Road)

Highway neighbors are people who have views *to* the road. They can be subdivided into different viewer groups by land use. For example, residential, commercial, industrial, retail, institutional, civic, educational, recreational, and agricultural land uses may generate highway neighbors or viewer groups with distinct reasons for being in the corridor and therefore having distinct responses to changes in visual resources. For this project the following highway neighbors were considered:

- Residents along El Camino Real within the project corridor
- Commercial occupants along El Camino Real within the project corridor

HIGHWAY USERS (Views *from* the Road)

Highway users are people who have views *from* the road. They can be subdivided into different viewer groups in two different ways—by mode of travel or by reason for travel. For example, subdividing highway users by mode of travel may yield pedestrians, bicyclists, transit riders, car drivers and passengers, and truck drivers. Dividing highway users or viewer groups by reason for travel creates categories like tourists, commuters, and haulers. It is also possible to use both mode and reason for travel simultaneously, creating a category like *bicycling tourists,* for example. For this project the following highway users were considered:

- Regular commuters that travel frequently along the corridor
- Commercial trucks serving the businesses along the corridor
- Pedestrians traveling the sidewalks along the corridor

Viewer Response

Viewer response is a measure or prediction of the viewer's reaction to changes in the visual environment and has two dimensions as previously mentioned, viewer exposure and viewer sensitivity.

VIEWER EXPOSURE

Viewer exposure is a measure of the viewer's ability to see a particular object. Viewer exposure has three attributes: location, quantity, and duration. *Location* relates to the position of the viewer in relationship to the object being viewed. The closer the viewer is to the object, the more exposure. *Quantity* refers to how many people see the object. The more people who can see an object or the greater frequency an object is seen, the more exposure the object has to viewers. *Duration* refers to how long a viewer is able to keep an object in view. The longer an object can be kept in view, the more exposure. High viewer exposure helps predict that viewers will have a response to a visual change.

Viewers from the road: Regular commuters travel in relatively high numbers daily. Much of the day traffic is light to moderate and vehicles travel at the 35 miles per hour (MPH) speed limit. Traffic can be heavy during commute hours significantly slowing vehicle travel. This results in moderate to moderate-high exposure. Commercial truck drivers have infrequent to frequent exposure to the corridor. Pedestrians along the corridor are predominantly residents, less numerous than vehicle travelers but with frequent exposure at slow speeds. Taken together, these viewers have a moderate-high exposure to the highway.

Viewers to the road: Residents and commercial occupants along the corridor have daily exposure for long hours. These viewers have a high exposure to the highway.

VIEWER SENSITIVITY

Viewer sensitivity is a measure of the viewer's recognition of a particular object. It has three attributes: activity, awareness, and local values. *Activity* relates to the preoccupation of viewers—are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings. The more they are actually observing their surroundings, the more sensitivity viewers will have of changes to visual resources. *Awareness* relates to the focus of view—the focus is wide and the view general or the focus is narrow and the view specific. The more specific the awareness, the more sensitive a viewer is to change. *Local values* and attitudes also affect viewer sensitivity. If the viewer group values aesthetics in general or if a specific visual resource has been protected by local, state, or

national designation, it is likely that viewers will be more sensitive to visible changes. High viewer sensitivity helps predict that viewers will have a high concern for any visual change.

The Howard-Ralston Eucalyptus Tree Rows are widely known and valued in the broader community due to their striking appearance and historic status. Within the city of Burlingame, the Tree Rows are a source of pride and identity. The tree rows were planted in the 1870s to promote development along the corridor through beautification of the roadway. There is a history of protecting the tree rows dating back to 1908. Notably, the city of Burlingame passed the first of its kind zoning ordinance in 1930, restricting commercial development along El Camino Real to protect the tree rows. Additionally, the city designated the portion of the tree rows within their city limits as a "Heritage Grove" in 1975, and the San Mateo Sites Committee has designated the tree rows within Burlingame as a "Point of Historic Significance". The city's long history of protecting the Tree Rows ultimately led to their listing on the National Register of Historic Places.

This high level of sensitivity to potential changes to the Tree Rows led to the formation of a Task Force in 2017 prior to the beginning of this project. The Task force explored opportunities for improving the safety of the roadway and sidewalks while retaining the character and health of "The Grove". Their study evaluated expected construction impacts to the Tree Rows and the potential for minimizing these impacts where feasible. Ultimately, the Task Force provided recommendations that addressed correcting functional and safety deficiencies, avoiding impacts to existing trees, maximizing replacement planting of trees unavoidably impacted, and improving pedestrians' sense of comfort and safety.

The long history of efforts to protect the Tree Rows and the character of El Camino Real demonstrates viewers' extremely high sensitivity to changes affecting these resources.

Viewers from the road: Regular commuters have a moderate-high sensitivity to visual change; they are very familiar with the corridor and Tree Rows specifically but tend to be more focused on navigating the traffic along their commutes than the surroundings. These viewers have moderate to moderate-high sensitivity.

Viewers to the road: Residents and workers at sites along the highway have a high level of sensitivity, as they are intimately familiar with the visual environment and particularly focused on changes to the historic tree rows that line the highway. These viewers have high sensitivity.

GROUP VIEWER RESPONSE

The narrative descriptions of viewer exposure and viewer sensitivity for each viewer group were merged to establish the overall viewer response of each group.

Overall viewer response is anticipated to be high for changes that impact the mature tree rows. A large segment of the tree rows is locally recognized and protected in addition to being listed in the National Register of Historic Places. Changes to the roadway that do not impact the historic trees are anticipated to have a much lower viewer response.

APPLICABLE LOCAL, STATE, AND FEDERAL POLICIES

Under the National Environmental Policy Act (NEPA), it is the responsibility of the federal government to use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S. Code (USC) 4331(b) 2). In its implementation of NEPA, the

FHWA directs that final decisions regarding projects be made in the best overall public interest, taking into account adverse environmental impacts, including destruction or disruption of aesthetic values (23 USC 109(h)).

The California Environmental Quality Act (CEQA) mandates that the State take all action necessary to provide the people of the State with "enjoyment of aesthetic, natural, scenic, and historic environmental qualities" (California Public Resource Code (PRC) Sec. 21001(b)).

The jurisdictions within the project limits all have regulations that govern trees, especially the type of trees within the project limits. Examples include:

- Burlingame Municipal Code, Title 11 which regulates actions throughout the City regarding trees and vegetation. The Howard-Ralston Eucalyptus Tree Rows are considered "protected trees" by Burlingame.

- Burlingame's Zoning Code Table 25.40-3 (Section 25.40.040) defines the minimum width of these setbacks along El Camino Real as 15 to 20 feet, and the setbacks must include a walk zone, landscape planters, and 5-foot-wide tree wells.

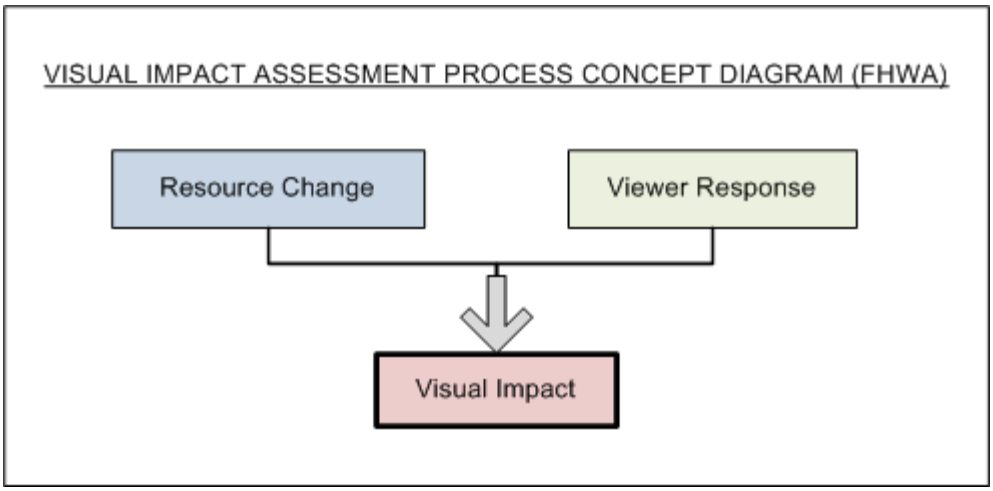
- Millbrae's Municipal Code Chapter 8.60 regulates the City's Tree Protection and Urban Forestry Program, which was established to maintain established trees and maximize tree cover; promote a stable and sustainable urban forest; and promote and maintain the aesthetic value of the community.

- San Mateo's Municipal Code Chapter 13.52 sets forth the City's Heritage Tree Ordinance which states the City has been forested with a variety of healthy and valuable trees which must be protected and preserved for the health and welfare of its citizens.

- Hillsborough Municipal Code Chapter 14.04 sets forth the Town's Tree Removal Ordinance with the intent to establish regulations for the removal of trees in order to retain as many trees as possible (consistent with the ordinance) and maintain the reasonable economic enjoyment of private property.

VIII. VISUAL IMPACT

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. These impacts can be beneficial or detrimental. Cumulative impacts and temporary impacts due to the contractor's operations are also considered. A generalized visual impact assessment process is illustrated in the following diagram:



The table below provides a reference for determining levels of visual impact by combining resource change and viewer response.

TABLE 1
Visual Impact Ratings Using Viewer Response and Resource Change

		Viewer Response (VR)				
Resource Change (RC)	Blank	Low (L)	Moderate-Low (ML)	Moderate (M)	Moderate-High (MH)	High (H)
	Low (L)	L	ML	ML	M	M
	Moderate-Low (ML)	ML	ML	M	M	MH
	Moderate (M)	ML	M	M	MH	MH
	Moderate-High (MH)	M	M	MH	MH	H
	High (H)	M	MH	MH	H	H

Visual Impacts by Visual Assessment Unit and Alternative

Because it is not feasible to analyze all the views in which the proposed project would be seen, it is necessary to select a number of key views associated with visual assessment units that would most clearly demonstrate the change in the project's visual resources. Key views also represent the viewer groups that have the highest potential to be affected by the project considering exposure and sensitivity. In addition, these key views will be analyzed for each proposed alternative.

This VIA also considers the potential impacts of a No-Build Alternative. The following section describes and illustrates visual impacts, compares existing conditions to the proposed alternatives, and includes the predicted viewer response. Visual simulations show proposed project alternatives 20 year after construction to best represent permanent visual impacts.

KEY VIEW (KV) 1 – From south of the Hillside Drive Intersection with El Camino Real looking south on El Camino Real.

KV-1 Existing Condition

Key View 1 demonstrates the diversity of the tree-lined character of this portion of El Camino Real. There are a variety of tree species and forms in this Key View with both moderate-sized Sycamores in the foreground and taller evergreens and Eucalyptus in the middle and background. The visual mass of the trees creates a feeling of enclosure and their canopy dominates long views. Both the regular spacing of trees and continuous canopy add to the unity of the visual setting, while also providing a visual screen between adjacent buildings and the roadway environment. Overhead utilities and utility poles are hidden within the mass tree trunks and canopy. While not immediately obvious, the poor condition of the sidewalks and roadway surface slightly detract from the visual quality.

The Existing Condition can also be used to represent the No Build Alternative. In the near future, it is likely the older larger Eucalyptus in the middle and background would be removed and replaced with Elm trees. Since there is a variety of trees of different ages and sizes in this key view, removal of these individual trees will be only moderately apparent.

Viewer Response

At this Key View, roadway users are expected to have moderate to moderate-high sensitivity and neighbors are expected to have moderate-high to high sensitivity to changes. The rows of mature trees within this view are expected to have value to both roadway users and neighbors. However, the different ages, sizes, and types of trees make it less vivid than portions of the corridor where the older, extremely large Eucalyptus rows are more intact. Sensitivity will be moderate to moderate-high. As most roadway travelers use the corridor regularly on their work or school commutes and on local trips, exposure is moderate to moderate high for roadway users. Roadway neighbors who live and

work in this area will have high exposure. The overall level of viewer response for this key view is moderate-high.

KV-1 Proposed Condition – Alternative 1

Resource Change

In this alternative, most of the trees in the Key View would require removal in order to replace drainage infrastructure along the southbound side of El Camino Real and to reconstruct driveways on the northbound side. The loss of these trees changes the visual setting notably, dramatically altering the tree-lined character and cohesiveness of the view. While the existing roadway configuration and width is retained, the view becomes more open and the intimate feeling is diminished without the double rows of large trees and their enclosing canopy in the foreground. Utility lines and poles are more visible revealing visual clutter. New street trees help to restore the visual character and quality of the existing condition. However, their much smaller scale post-construction and reduced number does not reestablish the same visual quality as the existing condition with its uniform mature tree canopy. Current restrictions on tree planting adjacent to utility poles and underneath power lines limit the number of replacement trees and their mature size along the southbound side of the street. Since trees cannot be planted within 10 feet of a pole, and trees underneath power lines must not reach a height over 25' at maturity, the visual character and quality would be permanently changed. By locating the sidewalk at the curb near the intersection as seen on the southbound side of the street, corner sight distance is maintained, and tree planting is maximized. Beyond the required area of clear sight distance, the sidewalk meanders back to its current location behind the planting strip to provide a buffer between pedestrians and traffic. New street surfaces and sidewalks improve visual quality to some degree. The overall level of resource change is moderate-high to high post construction and moderate-high 20 years after construction.

KV-1 Proposed Condition – Alternative 2

Resource Change

Alternative 2 results in similar changes to the visual environment as Alternative 1 due to the loss of trees. The view is more open than the existing condition and the intimate feeling is diminished without the large trees and enclosing canopy. Unlike Alternative 1, this alternative would remove utility poles and relocate the utility lines underground. The undergrounding of overhead utilities in this view both improve unity and allow more space for replacement tree planting. New street trees help to restore the tree-lined character and cohesiveness of the view. While immediately post-construction the new trees' much smaller scale results in lower visual quality, over time the replacement trees would reach a stature matching current conditions. This alternative also allows more trees to be replanted without the power pole restrictions. New street surfaces and sidewalks improve visual quality to some degree. The overall level of resource change is moderate-high post-construction and moderate-low 20 years after construction.

KV-1 Proposed Condition – Alternative 3

Resource Change

Alternative 3 results in the same loss of trees as Alternatives 1 and 2. Here too, the view is more open than the existing condition and the intimate feeling is diminished without the large trees and enclosing canopy. Unlike Alternatives 1 and 2, this alternative changes the roadway lane configuration from two travel lanes in each direction with shoulders to one travel lane in each direction with a 2-foot shoulder and a continuous center left turn lane. The curb line is moved three feet into the existing roadway to the edge of the new shoulder.

Unlike Alternatives 1 and 2, a new bus pull-out would be constructed on southbound El Camino at an existing bus stop and is visible in the foreground of this key view. The bus pull-out widens the roadway cross-section along its 150-foot length. There is insufficient right of way to plant trees adjacent to the bus pullout, creating a break in the line of trees. Construction of the bus pull-out results in fewer replacement trees in this key view. Along northbound El Camino and beyond the bus pull-out in the southbound direction, there is enhanced green space from the widened planting strip. The shoulder and wider planted buffer along with new street and sidewalk surfaces improve visual quality over existing conditions. The newly planted street trees help to restore the tree-lined character, though they will not achieve a mature stature for many years. The newly planted trees on the southbound size will be of a smaller stature, even at maturity, to avoid conflicts with overhead utilities. Fewer in number and smaller in size, the replacement trees on the southbound side no longer provide a visual screen between adjacent buildings and the roadway environment. The overall level of resource change is moderate-high to high post construction and moderate-high 20 years after construction.

KV-1 Proposed Condition – Alternative 4

Resource Change

Alternative 4 results in the same loss of trees as the other alternatives. Consequently, the view is more open than the existing condition and the intimate feeling is diminished without the large trees and enclosing canopy. As in Alternative 3, this alternative changes the roadway lane configuration, shifts the curb line towards the center of the roadway and adds a bus pull-out. Like Alternative 3, the roadway cross-section is widened at the bus pull-out precluding replacement tree planting in this area and creating a break in the line of trees. In areas other than the bus pull-out, there is enhanced green space from the widened planting strip.

Unlike Alternative 3, this alternative would relocate the utility lines and poles underground. As in Alternative 2, the undergrounding of overhead utilities in this view both reduce visual clutter and allow more space for replacement tree planting. New street trees help to restore the tree-lined character and cohesiveness of the view. While post-construction the new trees' much smaller scale results in lower visual quality, over time the replacement trees would reach a stature matching current conditions. This alternative also allows more and larger trees to be replanted without the power pole restrictions within the widened planting area. This makes the canopy restoration notably better in Alternative 4 than in Alternative 3. New street surfaces and sidewalks improve visual quality to some degree. The overall level of resource change is moderate-high post-construction and moderate 20 years after construction.

KEY VIEW (KV) 2 – From south of the Forest View Avenue Intersection with El Camino Real looking south on El Camino Real.

KV-2 Existing Condition

Key View 2 demonstrates the tree-lined character of this portion of El Camino Real, and the prominence of the century-old Eucalyptus trees in the visual experience of this highway. The visual mass of the extremely large Eucalyptus trees creates a feeling of enclosure, limits the view of the sky, masks the visual clutter of overhead utilities and provides a visual screen between adjacent buildings and the roadway environment. Both the tight spacing of trees and continuous canopy enhance vividness and unity, tying the visual setting together and creating a strong sense of cohesiveness. While not immediately obvious, the poor condition of the sidewalks, roadway surface and retaining walls slightly detract from the visual quality.

The Existing Condition can also be used to represent the No Build Alternative. The gradual loss of these cherished trees is less poignant than larger scale removal. However, given the advanced age and generally compromised health of the Eucalyptus trees in this view, the need for removal is reasonably anticipated in the foreseeable future. Replacement Elms would be planted as existing trees require removal.

Viewer Response

Both roadway users and neighbors are expected to have high sensitivity to changes at this Key View due to its distinctiveness and memorability. Exposure is moderate to moderate high for roadway users as most roadway travelers use the corridor regularly on their work or school commutes and local trips. Roadway neighbors who live and work in this area will have high exposure. The overall level of viewer response for this key view is high.

KV-2 Proposed Condition – Alternative 1

Resource Change

In this Alternative, most of the trees within the key view will require removal in order to replace retaining walls that will be disturbed from road and sidewalk construction along both sides of El Camino Real. The loss of trees changes the visual setting dramatically. While the existing roadway configuration and width is retained, the view becomes more open and the intimate feeling for highway users, and privacy enjoyed by highway neighbors is diminished without the large trees and enclosing canopy. Utility lines and poles are more visible revealing visual clutter. A new Pedestrian Hybrid Beacon is also visible in the distance at the Palm Drive pedestrian crossing. New street trees help to restore the tree-lined character and cohesiveness of the view. However, their much smaller scale post-construction and reduced number does not have the same visual quality as the existing condition with its rows of towering, mature trees. One positive outcome of having to replace all the trees in this key view is that the replacement street trees can be relocated in between the roadway and sidewalk creating a buffer from traffic for pedestrians.

As noted for Key View 1, current restrictions on tree planting adjacent to utility poles and underneath power lines limit the number of replacement trees as well as their mature size along the southbound side of the street. This greatly reduces the visual character and quality from the existing condition post-construction. While Eucalyptus varieties or other tall tree species may be planted on the northbound side, these would not be feasible for the southbound side. Even over time the stature of the replacement trees on the southbound side of the road would never approach that of the existing Eucalyptus trees. New street surfaces, sidewalks and retaining walls improve visual quality to some degree. The overall level of resource change is high post construction. 20 years after construction the replacement trees would reduce the level of resource change to moderate-high as their canopies increase in size and begin to enclose the street.

KV-2 Proposed Condition – Alternative 2

Resource Change

This Alternative includes the same improvements as Alternative 1, and the associated effects to visual character and quality described above are the same. Unlike Alternative 1, this alternative would relocate the utility lines and poles underground. The undergrounding of overhead utilities in this view both reduces visual clutter and allows for the planting of larger replacement trees. Without power pole restrictions, more trees can also be planted. New street trees in similar numbers help to restore the tree-lined character and cohesiveness of the view. This key view shows Eucalyptus species on the northbound side, and Elm and other varieties on the southbound side. The Elms, with their smaller trunk size, would provide greater visibility for driveway users, and allow for a greater number of replacement trees to be installed in the planted buffer. Elms and other species would have different visual qualities from the current and replacement Eucalyptus but would still contribute to the visual quality of the roadway. While post-construction the new trees' much smaller scale results in lower visual quality, over time the replacement trees would bring visual quality closer to current conditions. New street surfaces, sidewalks and retaining walls improve visual quality to some degree. The overall level of resource change is high post construction. 20 years after construction the replacement trees would reduce the level of resource change to moderate as their canopies increase in size and begin to enclose the street and create a screen between adjacent buildings and the roadway environment.

KV-2 Proposed Condition – Alternative 3

Resource Change

In this key view, Alternative 3 has nearly the same tree loss as Alternatives 1 and 2, apart from one large Eucalyptus preserved in the foreground. This results in a more open view than the existing condition and a diminished sense of intimacy and privacy without the large trees and their enclosing canopy. Unlike Alternatives 1 and 2, this alternative changes the roadway lane configuration and cross-section from two travel lanes in each direction with shoulders to one travel lane in each direction with 2-foot shoulders and a continuous center left-turn lane. The curb line is moved three feet into the existing roadway to the edge of the new shoulder allowing for a widened and relocated planted buffer between the roadway and sidewalk. The widened planting strip increases the unpaved surfaces in the view, and along with new street and sidewalk surfaces, improves visual quality over existing conditions. The newly planted street trees help to restore the tree-lined character, though they will not achieve a mature stature for many years. The overall level of resource change is moderate-high to high post construction and moderate-high 20 years after construction.

KV-2 Proposed Condition – Alternative 4

Resource Change

This Alternative includes the same improvements as Alternative 3, and the associated affects to visual character and quality described above are the same. Unlike Alternative 3, this alternative would relocate the utility lines and poles underground. The undergrounding of overhead utilities in this view both reduces visual clutter and allows more space for replacement planting of large-statured trees, as in Alternative 2. New street streets in similar scale and number help to restore the tree-lined character and cohesiveness of the view. As in the other Alternatives, a variety of tree species would likely be selected. While post-construction, the new trees' much smaller scale results in lower visual quality, over time the replacement trees would bring visual quality closer to current conditions. New street surfaces, sidewalks and retaining walls improve visual quality to some degree, along with the widened planted buffer between the roadway and sidewalk. The overall level of resource change is high post construction. 20 years after construction the replacement trees would reduce the level of resource change to moderate-low as their canopies increase in size and begin to enclose the street.

KEY VIEW (KV) 3 – From south of the Carol Avenue Intersection with El Camino Real looking south on El Camino Real.

KV-3 Existing Condition

Like Key View 2, Key View 3 demonstrates the tree-lined character of El Camino Real, and the prominence of the century-old Eucalyptus trees in the visual experience. Even adjacent to the relatively larger two to three-story multi-family residential buildings in this view, the trees remain dominant. The visual mass of the extremely large Eucalyptus trees creates a feeling of enclosure and screens development in long views. Both the close spacing of trees and continuous canopy enhance vividness and unity, tying the visual setting together and creating a strong sense of cohesiveness. While not immediately obvious, the poor condition of the sidewalks and roadway surface slightly detract from the visual quality.

The Existing Condition can also be used to represent the No Build Alternative. The gradual loss of these cherished trees is less poignant than larger scale removal. However, given the advanced age and generally compromised health of the Eucalyptus trees in this view, the need for removal is reasonably anticipated in the foreseeable future. Removed trees would be replaced with Elm trees and would not achieve the same stature as the current Eucalyptus, even at maturity.

Viewer Response

Both roadway users and neighbors are expected to have high sensitivity to changes at this Key View due to its distinctiveness and memorability. Exposure is moderate to moderate high for roadway users as most roadway travelers use the corridor regularly on their work or school commutes and local trips. Roadway neighbors who live and work in this area will have high exposure. The overall level of viewer response for this key view is high.

KV-3 Proposed Condition – Alternative 1

Resource Change

In this alternative, many trees visible in the Key View primarily along the northbound side of El Camino Real will require removal in order to replace sidewalks, driveways, and curb and gutter. While the existing roadway configuration and width is retained, the view becomes more open and the intimate feeling is diminished without the large trees and their enclosing and screening canopy. This is more pronounced in this key view due to the larger scale of the buildings and the greater setback to the front of the buildings along northbound El Camino Real. The retention of some large, mature trees along the southbound side of El Camino Real helps to maintain a degree of character and quality, and utility lines and poles remain mostly hidden in their canopy. New street trees help to further restore the tree-lined character and cohesiveness of the view. However, their much smaller scale post-construction and reduced number for sight distance requirements does not have the same visual quality as the existing condition, with its double rows of towering, mature trees. New street surfaces and sidewalks would improve visual quality to some degree. Over time as the older preserved trees near the end of their lifespan and require replacement, the visual presence of overhead utility lines and poles would become more dominant. Replacement trees on southbound El Camino Real would be limited in size and number due to utility restrictions. The overall level of resource change is moderate-high to high post construction. 20 years after construction the level of resource change would still be considered moderate-high.

KV-3 Proposed Condition – Alternative 2

Resource Change

This alternative includes the same improvements as Alternative 1, and the associated affects to visual character and quality described above are the same in this key view. Unlike Alternative 1, this alternative would relocate the utility lines and poles underground. In the near-term this has a nominal effect on visual character and quality since the overhead utilities are largely hidden in the canopies of the retained trees. New street streets in similar numbers help to restore the tree-lined character and cohesiveness of the view. Post-construction the new trees' much smaller scale results in lower visual quality. However, the replacement tree species would reach a large stature at maturity, which would bring visual quality closer to current conditions as the trees grow. Additionally, without the restrictions of overhead utilities, these large-statured species could continue to be replanted in the future when the older trees need to be removed. New street surfaces and sidewalks improve visual quality somewhat. The overall level of resource change is moderate-high to high post construction. Twenty years after construction the replacement trees would reduce the level of resource change to moderate as their canopies increase in size and begin to enclose the street.

KV-3 Proposed Condition – Alternative 3

Resource Change

Unlike Alternatives 1 and 2, Alternative 3 retains many trees along the northbound side of the street due to the relocation of the curb and gutter three feet into the existing roadway. The roadway is reconfigured from two travel lanes in each direction with shoulders to one travel lane in each direction with 2-foot shoulders and a continuous center left-turn lane. The shifted curb line allows for a widened planting area, which serves as a buffer between the roadway and sidewalk on the northbound side of the street. The retention of large, mature Eucalyptus trees along both sides of El Camino Real help to maintain character and quality, as well as the sense of enclosure and intimacy. As in Alternative 1, the utility lines and poles remain mostly hidden in tree canopy. New street trees help to restore the tree-lined character and cohesiveness of the view. However, their much smaller scale post-construction does not have the same visual quality as the existing condition with its more continuous, double rows of towering, mature trees. Additionally, the overhead utility lines and poles on the southbound side of the street limit the size and number of replacement trees. Over time as the older preserved trees near the end of their lifespan and require replacement, the visual presence of overhead utility lines and poles would become more dominant and small species of trees would replace them, resulting in a further degradation of visual quality on the southbound side. New street surfaces and sidewalks would improve visual quality to some degree. The overall level of resource change is moderate to moderate-high post construction. 20 years after construction the replacement trees would reduce the level of resource change to moderate.

KV-3 Proposed Condition – Alternative 4

Resource Change

This alternative includes the same improvements as Alternative 3, and the associated affects to visual character and quality described above are the same in this key view. Unlike Alternative 3, this alternative would relocate the utility lines and poles underground. In the near-term this has a nominal effect on visual character and quality since the overhead utilities are largely hidden in the canopies of the retained trees. Over time as these older trees near the end of their lifespan and require replacement, the absence of this infrastructure would result in less visual clutter. New street streets in similar numbers help to restore the tree-lined character and cohesiveness of the view. While post-construction the new trees' much smaller scale results in lower visual quality, the replacement trees would bring visual quality closer to current conditions as they mature. Additionally, without the restrictions of overhead utilities, trees of larger mature size could be replanted in the future when the older trees need to be removed. New street surfaces and sidewalks improve visual quality somewhat. The overall level of resource change is moderate post construction. 20 years after construction the replacement trees would reduce the level of resource change to low as the replacement trees reach a mature stature.

SUMMARY OF VISUAL IMPACTS

Resource change among the Key Views is a factor of the amount of tree removal, the character and quality of the trees removed, the pattern of removal and the ability to replace them. Viewer response is Moderate High to High across the Key Views and contributes to higher levels of Visual Impact overall. A summary of visual impacts has been prepared for the Key Views:

KEY VIEW (KV) 1 – From south of the Hillside Drive Intersection with El Camino Real looking south on El Camino Real.

This Key View represents portions of the corridor that are lined with a variety of large, mature trees where a high level of tree removal is required due to construction impacts, in this case drainage improvements. The trees are a mix of species and forms. The loss of these large, mature trees constitutes a moderate-high resource change and viewer response is moderate-high. The same amount of tree removal is required across alternatives. This Key View also demonstrates the effects of bus pull-outs. Differences in resource change among the alternatives are largely associated with the differences in replacement tree planting. Alternatives 2 and 4 provide replacement tree planting most similar to existing visual quality and character, allowing for both a greater overall number of trees, and more trees of larger stature with the utilities undergrounded and planting restrictions avoided. These alternatives also allow planting a similar size of tree on both sides of the street, improving the unity of the scene. Alternative 2 provides the greatest opportunity for replacement tree planting since Alternative 4 cedes some planting area to the bus pull-out. The ratio of paved and unpaved surfaces is roughly equivalent as the widened planting strips in Alternative 3 and 4 are offset by the added roadway cross-section of the bus pull out. The visual impact at this Key View is moderate-high for Alternatives 1, 3, and 4, and moderate for Alternative 2.

KEY VIEW (KV) 2 – From south of the Forest View Avenue Intersection with El Camino Real looking south on El Camino Real.

This Key View represents portions of the corridor that are lined with the namesake Eucalyptus trees of the Howard-Ralston Eucalyptus Tree Rows where a high level of tree removal is required due to construction impacts, in this case reconstruction of retaining walls. These trees are all extremely large Eucalyptus. The loss of these large, character-defining Eucalyptus constitutes a high resource change. Viewer response is high. Nearly the same amount of tree removal is required across alternatives. One Eucalyptus in the Key View is retained in Alternatives 3 and 4 that is removed in Alternatives 1 and 2 due to different impacts from curb and gutter reconstruction. Differences in resource change among the alternatives are largely associated with the differences in replacement tree planting, and to a lesser extent the ratio of paved and unpaved surfaces. Alternatives 2 and 4 provide replacement tree planting most similar to existing visual quality and character both a greater overall number of trees, and more trees of larger stature with the utilities undergrounded and planting restrictions avoided. These alternatives also allow planting a similar size of tree on both sides of the street, improving the unity of the scene. Alternatives 3 and 4 increase the amount of unpaved surface or green space due to the widened planter strips. A resource change of moderate-low is lowest for Alternative 4 for this reason. The visual impact at this Key View is high for Alternatives 1 and 3, and moderate-high for Alternative 2 and 4.

KEY VIEW (KV) 3 – From south of the Carol Avenue Intersection with El Camino Real looking south on El Camino Real.

This Key View represents portions of the corridor that are lined with the namesake Eucalyptus trees of the Howard-Ralston Eucalyptus Tree Rows with varying amounts of tree removal among alternatives. The impacted trees are primarily the extremely large Eucalyptus with some other large trees. Depending on the number of trees removed, the resource change is low to moderate-high. Viewer response is high. All Alternatives require the same tree removal on the southbound side of the street due to driveway reconstruction. Construction impacts at the curb line require all the large trees on

the northbound side of the street to be removed in Alternatives 1 and 2. This long stretch of removal results in a greater degree of resource change. The northbound Eucalyptus are retained in Alternatives 3 and 4 because the existing curb and gutter are only partially removed and reconstructed at a distance from the trees. Remaining differences in resource change among the alternatives are associated with the amount of replacement tree planting possible. Alternatives 2 and 4 provide replacement tree planting most similar to existing visual quality and character, allowing a greater overall number of trees, and more trees of larger mature with the utilities undergrounded and planting restrictions avoided. These alternatives also allow planting a similar size of tree on both sides of the street, improving the unity of the scene. Alternatives 3 and 4 have slightly wider sidewalks on the southbound side of the street and widened planter strips along the southbound side. The lowest resource change is low for Alternative 4 due to substantially more tree retention. The highest resource change is high for Alternative 1 due to greater tree removal and smaller sized and reduced numbers of replacement trees. The visual impact at this Key View is high for Alternatives 1, moderate-high for Alternatives 2 and 3, and moderate for Alternative 4.

The table below summarizes and compares the narrative ratings for visual resource change, viewer response and visual impacts between alternatives for each key view.

TABLE 2
Summary of Key View Narrative Ratings

KEY VIEW	ALTERNATIVE 1		
	Resource Change	**Viewer Response**	**Visual Impact**
1	**MH**	**MH**	**MH**
2	**MH**	**H**	**H**
3	**MH**	**H**	**H**

TABLE 3
Summary of Key View Narrative Ratings

KEY VIEW	ALTERNATIVE 2		
	Resource Change	**Viewer Response**	**Visual Impact**
1	**ML**	**MH**	**M**
2	**M**	**H**	**MH**
3	**M**	**H**	**MH**

TABLE 4 Summary of Key View Narrative Ratings			
KEY VIEW	ALTERNATIVE 3		
	Resource Change	**Viewer Response**	**Visual Impact**
1	**MH**	**MH**	**MH**
2	**MH**	**H**	**H**
3	**M**	**H**	**MH**

TABLE 5 Summary of Key View Narrative Ratings			
KEY VIEW	ALTERNATIVE 4		
	Resource Change	**Viewer Response**	**Visual Impact**
1	**M**	**MH**	**MH**
2	**ML**	**H**	**MH**
3	**L**	**H**	**M**

SUMMARY OF VISUAL IMPACTS BY ALTERNATIVE

All Build Alternatives will result in an overall moderate-high to high level of resource change with moderate-high to high viewer response. Due to the large numbers of trees necessary for removal to complete project improvements, visual impact immediately post construction will also be moderate-high to high across project alternatives. There are some differences in permanent visual impacts as assessed at 20 years after construction. A summary of visual impacts has been prepared for the following alternatives:

Build Alternative 1: Roadway Rehabilitation and Infrastructure Upgrade: This alternative has the highest level of visual impact among alternatives. Slightly more tree removal is required for this alternative. In some areas, this removal occurs in longer continuous stretches due to conflicts between existing curb line and large trees. This is best demonstrated with Key View 3. Additionally, replacement planting is limited due to the presence of overhead utilities and associated poles. For this reason, this alternative allows for the smallest number of replacement trees within the project limits, and severely limits the mature size of replacement trees to prevent conflicts with overheard utilities. The overall visual impact for this alternative is high.

Build Alternative 2: Roadway Rehabilitation and Infrastructure Upgrade with Underground Utilities: This alternative has an equal amount of tree removal to Alternative 1. However, more replacement tree planting with larger trees is possible due to the undergrounding of overhead utilities. Undergrounding utilities also reduces visual clutter along the corridor. The benefits attributable to undergrounding utilities reduce the overall visual impact from Alternative 1. This alternative has an overall visual impact of moderate.

Build Alternative 3: Roadway Rehabilitation with Road Diet: This alternative has slightly less tree removal overall than Alternatives 1 and 2. Reducing the number of lanes and shifting the curb and gutter line toward the centerline in each direction allows retention of many trees that are at the existing curb line. However, different trees require removal to install bus pull-outs. This can be seen in Key View 1. Overall the trees to be removed for bus pull-outs are fewer in number and in shorter stretches than those with curb line conflicts in Alternatives 1 and 2. The presence of overhead utilities limits replacement planting. As with Alternative 1, fewer and smaller trees than the existing condition will be replanted under utility lines. The increased width of planting strips provided for street trees is likely to promote larger and healthier growth in the longer term. The overall visual impact for this alternative is moderate-high.

Build Alternative 4: Roadway Rehabilitation with Road Diet with Underground Utilities: This alternative has the same degree of tree removal as Alternative 3. However, more replacement tree planting with larger trees is possible due to the undergrounding of overhead utilities. Undergrounding utilities will also reduce visual clutter along the corridor. As with Alternative 3, the greater width of planting strips provided for street trees is expected to promote larger and healthier growth in the long term. This alternative has an overall visual impact of moderate.

IX. PROJECT VISUAL IMPACT SUMMARY

All four alternatives have a similar magnitude of tree removal, with some small qualitative differences among them. These qualitative differences are attributable to differences in removal of established trees (2% variation) and extremely large Eucalyptus that are so important to the visual character and quality of the project area (8% variation). There is also some variation in the distribution of mature trees anticipated for removal. Alternatives 1 and 2 include a few locations of longer stretches of continuous tree removal as a result of the trees' proximity to existing curbs. These trees are retained in Alternatives 3 and 4. However, Alternatives 3 and 4 require tree removals at bus pull-out locations that are not needed for Alternatives 1 and 2. The removals in Alternatives 3 and 4 for bus pull-outs are generally shorter stretches and more widely spaced.

The most dramatic difference among alternatives is regarding replacement tree planting. The undergrounding of overhead utilities in Alternatives 2 and 4 allow for more and larger species of replacement tree planting than Alternatives 1 and 3. The removal of poles provides space for additional trees and without the conflict of overhead wires, larger-statured trees can be planted such that their mature size is less dissimilar to the existing trees to be removed.

Overall Visual Impact for the four alternatives ranges from moderate to moderate high for Alternatives 2 and 4 and from moderate-high to high for Alternatives 1 and 3. Undergrounding of overhead utilities in Alternatives 2 and 4 results in the greatest benefit to visual resources.

Temporary Construction Visual Impacts

Various types of large-scale equipment would be used for construction of project improvements, including cranes for tree removal. This equipment, construction activities and storage of materials would result in general visual clutter for the duration of construction.

X. CUMULATIVE VISUAL IMPACT

Cumulative impacts are those resulting from past, present and reasonably foreseeable future actions, combined with the potential visual impacts of this project. For this project, it has been determined that cumulative visual impacts may occur due to incremental removal of the over 100-year-old trees of the Howard Ralston Eucalyptus Tree Rows. As the older trees reach the end of their lifespan, they will require removal. If Caltrans' agreement with the State Historic Preservation Office (SHPO) remains in place, trees that contribute to the eligibility of the Tree Rows that require removal will continue to be replaced with Elms. Over time, the oldest trees along the project corridor will ultimately be removed and replaced with young, much smaller, trees. The visual prominence of these extremely large historic trees will continue to diminish, and the visual quality and character of this portion of El Camino Real will also be lessened.

XI. AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Caltrans and the FHWA mandate that a qualitative/aesthetic approach should be taken to address visual quality loss in the project area. This approach fulfills the letter and the spirit of FHWA requirements because it addresses the actual cumulative loss of visual quality due to a project. This approach also results in avoidance, minimization, and/or mitigation measures that can lessen or compensate for a loss in visual quality. The inclusion of aesthetic features in the project design, discussed in *Section II*, can help generate public acceptance of a project. This section describes additional avoidance, minimization, and/or mitigation measures to address specific visual impacts. These will be designed and implemented with concurrence of the District Landscape Architect.

The following measures to avoid or minimize visual impacts will be incorporated into the project:

1. Tree removal should be minimized to the extent feasible through design modifications including but not limited to sidewalk meanders around existing trees, sidewalk ramping over tree roots, and adjustment of driveway conforms to sidewalks and roadway.

2. Damage to trees identified for preservation should be minimized to the extent feasible through construction practices including but not limited to the use of protective fencing or other physical barriers and the minimization of root pruning and damage during excavation through hand digging, hydraulic or pneumatic air excavation technology, and / or directional boring within tree driplines.

3. Trees and vegetation outside of clearing and grubbing limits shall be protected from the contractor's operations, equipment, and materials storage.

4. Soils within planting areas shall be protected from the contractor's operations, equipment and materials storage to maintain suitable growing conditions for existing and replacement street trees including avoiding compaction and introduction of materials inconducive to plant growth. Corrective amendments and treatments should be used if planting area soils are negatively impacted.

5. Construction activities in residential areas should limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed.

The following mitigation measures to offset visual impacts will be incorporated into the project:

1. Replacement street tree planting. Tree removal will be required for all build alternatives. Following completion of roadway construction, replacement street trees will be planted sufficient to restore the tree-lined character of the project corridor over time, as simulated in the Key Views.

2. Permanent irrigation. A permanent irrigation system will be required to support establishment of replacement street tree planting.

3. Plant Establishment Plan. A three- year plant establishment plan will be required to ensure establishment of the replacement street tree planting.

4. Long-term Management Plan. A 20-year management plan will be required to guide removal and replacement of older, retained trees and long-term care of newer replacement street tree planting.

XII. CEQA VISUAL IMPACTS SUMMARY

CEQA Guidelines, under Aesthetics, lists the following four questions to be addressed regarding whether the potential impacts of a project are significant.

1. Would the project have a substantial adverse effect on a scenic vista?

   No designated scenic vistas would be affected by the proposed project alternatives. The topography is flat and buildings and landscaping border both sides of the roadway limiting project views to the immediate surroundings. Consequently, there are no adverse impacts to a scenic vista.

2. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

   El Camino Real within the project limits is not a designated as a State Scenic Highway. Consequently, the project would not substantially degrade scenic resources within a state scenic highway.

3. Would the project in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

   The project is located in a highly urbanized area on State right-of-way that traverses San Mateo, Burlingame, Hillsborough, and Millbrae. However, due to the presence of a highly valued visual and historic resource within the project limits, this section discusses both if the project would substantially degrade the existing visual character of the public view and if the project conflicts with applicable zoning and other regulations governing scenic quality.

   As described in Section III. Project Location and Setting and Section IV. Visual Resources and Resource Change, there are over 600 trees lining both sides of El Camino Real within the project. The Howard-Ralston Eucalyptus Tree Rows extend for 2.2 miles of the project length from Ray Drive/ Rosedale Avenue to Peninsula. The trees are a scenic, cultural, and environmental resource, and are listed in the National Register of Historic Places. The Tree Rows consist of extremely large Eucalyptus trees and English Elms planted in the 1870s, along with other Eucalyptus and tree species planted since that time. 252 of the nearly 400 trees within the Howard-Ralston Tree Rows are the extremely large Eucalyptus trees over 100 years old. The scale of the extremely large historic Eucalyptus trees dominates the visual experience of the corridor and defines its character and visual quality. The historic tree rows, along with the other existing established trees, are the primary visual resource in the project limits.

   Within Burlingame, the Howard-Ralston Eucalyptus Tree Rows are a source of pride and identity. There is a history of protecting the tree rows dating back to 1908. Notably, Burlingame passed the first of its kind zoning ordinance in 1930, restricting commercial development along El Camino Real to protect the tree rows. Additionally, the city designated the portion of the tree rows within

their city limits as a “Heritage Grove” in 1975, and the San Mateo Sites Committee has designated the tree rows within Burlingame as a “Point of Historic Significance.” Section VII Viewers and Viewer Response notes various local regulations that govern preservation, removal and planting conditions for trees within their jurisdictions, especially the type of trees within the project limits.

All Build Alternatives would require removal of approximately 235 trees, including 195 trees that contribute to the Howard-Ralston Eucalyptus Tree Rows. Section VII Visual Impacts discusses the nature of this resource change in detail. The loss of trees changes the visual setting dramatically, altering the tree-lined character and cohesiveness of public views. Views within the project setting would become more open and lack the intimate feeling of the double rows of large trees and their enclosing canopy. This change to scenic resources would result in a decline in the overall visual quality of the project corridor. Implementation of the avoidance, minimization, and mitigation measures for all alternatives would restore the tree-lined character and visual quality to some degree 20 years after construction. Replacement tree planting will achieve a tree-lined street character, but not of the visual quality attributable to the densely planted 100-foot tall trees within the Howard-Ralston Eucalyptus Tree Rows. For this reason, the project would substantially degrade the existing visual character or quality of public views.

4. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

   Project improvements include replacement of lighted pedestrian crossing signals throughout the project limits. As these are already present no new light source would be created. Additionally, at three intersections, new pedestrian hybrid beacons to be installed. Pedestrian hybrid beacons are normally off unless activated by a pedestrian and will therefore not create a new source of substantial light. Temporary sources of light and glare would potentially occur as a result of nighttime construction activities. With recommended avoidance and minimization measures, this temporary light source would be managed to avoid adverse effects. Therefore, no new sources of substantial light of glare will adversely affect views in the project area.

XIII. CONCLUSIONS

The visual resource of the Howard-Ralston Tree Rows is highly valued by the community, and the necessary project improvements under all Build Alternatives will remove approximately half of these trees. The loss of these trees will permanently affect the visual quality and character of the environment . Substantial declines in visual quality in combination with high levels of viewer sensitivity and exposure are likely to result in significant adverse impacts.

Replacement of trees is important to minimize this visual impact. The intent of the above measures is to establish replacement tree planting and to provide for the management of the retained trees over the next 20 years. The visual impact assessment found that proposed Alternative 1 at Key View 2 and 3 and Alternative 3 at Key View 2 would have potentially adverse impacts. These impacts could be reduced but not eliminated with recommended minimization and mitigation measures.

APPENDIX

Potential Removal & Retention of Existing Trees - Alternative 1 & 2

Note: Based on Preliminary Layout Plans for the purposes of evaluating environmental impacts.

0 37.5 75 150 225 300 Feet

Legend

- Existing Sidewalk or Curb
- Existing Utility Pole
- Existing Retaining Wall
- Existing Driveway
- Existing Tree
- Visual Contributor
- Potential Visual Contributor
- Contributes to Tree Rows
- Contributes to Other Cultural Resources
- Existing Tree Potentially Removed

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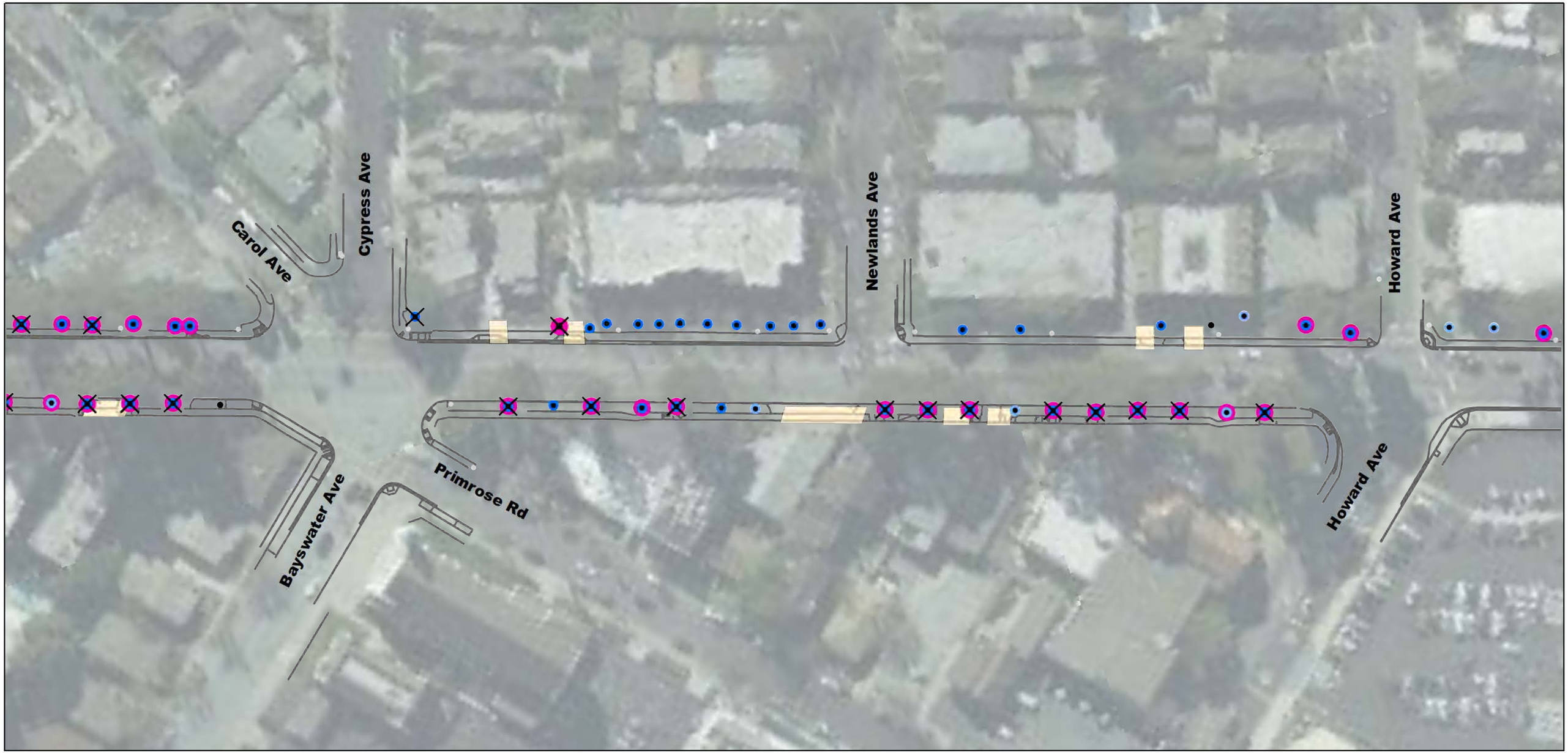

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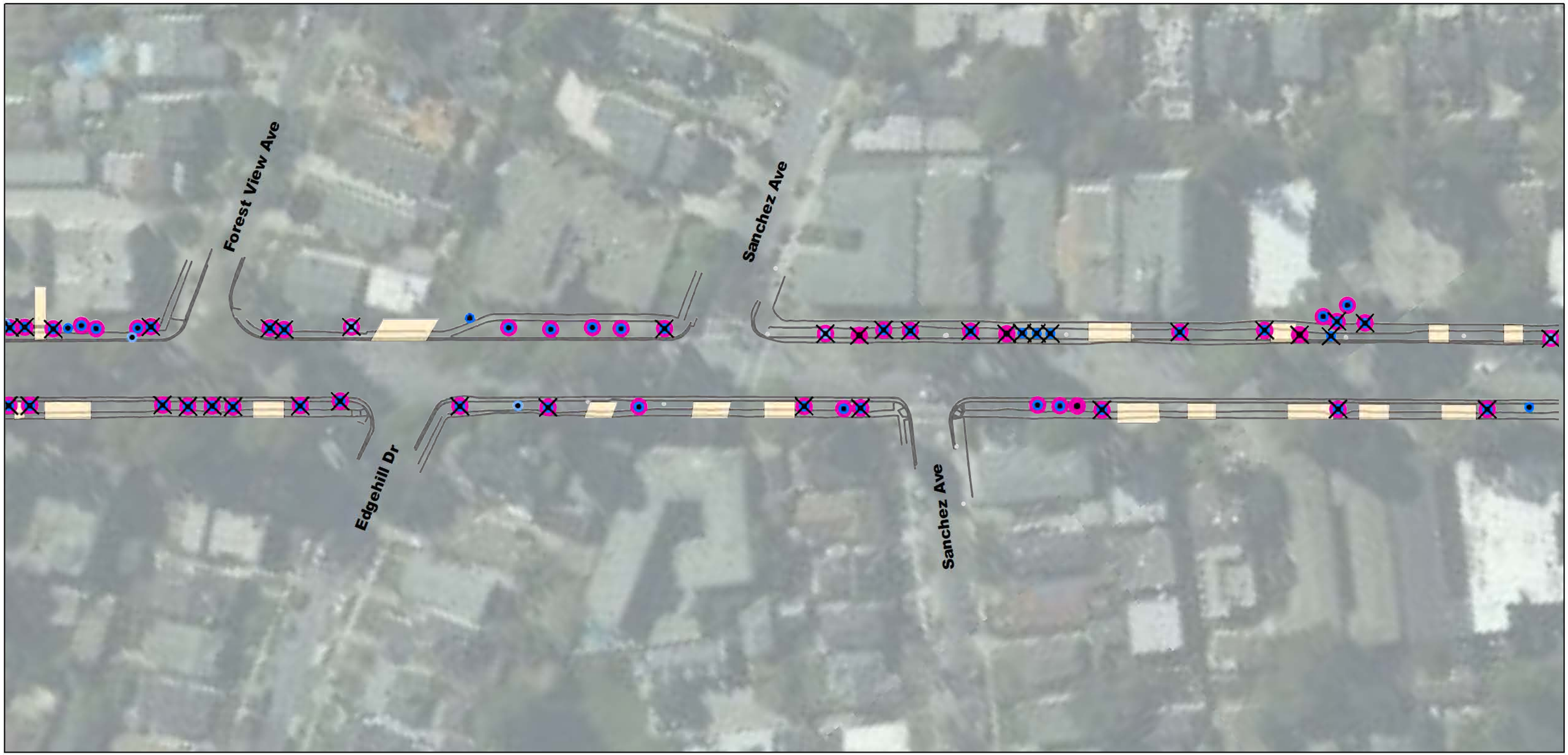

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Potential Removal & Retention of Existing Trees - Alternative 3 & 4

Note: Based on Preliminary Layout Plans for the purposes of evaluating environmental impacts.

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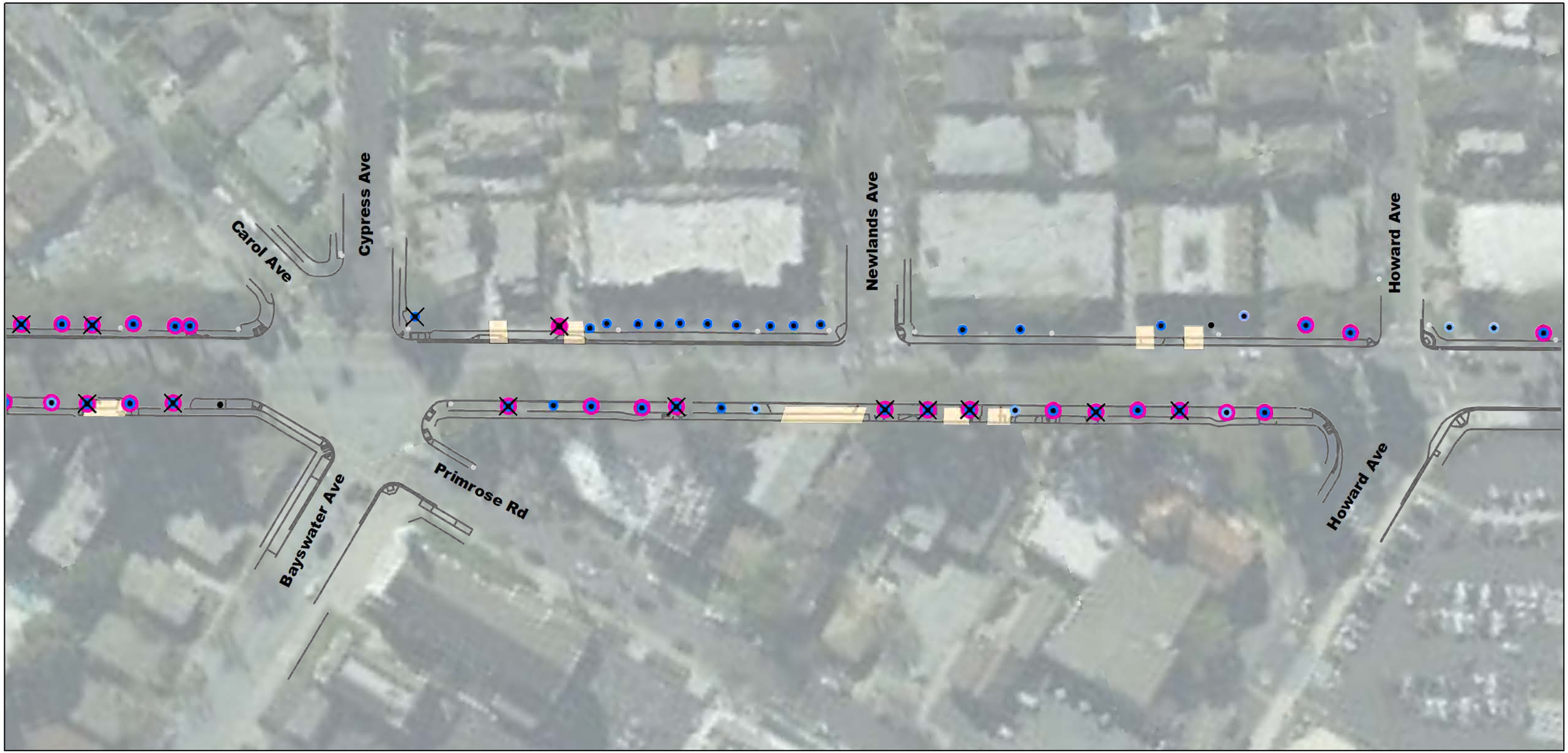

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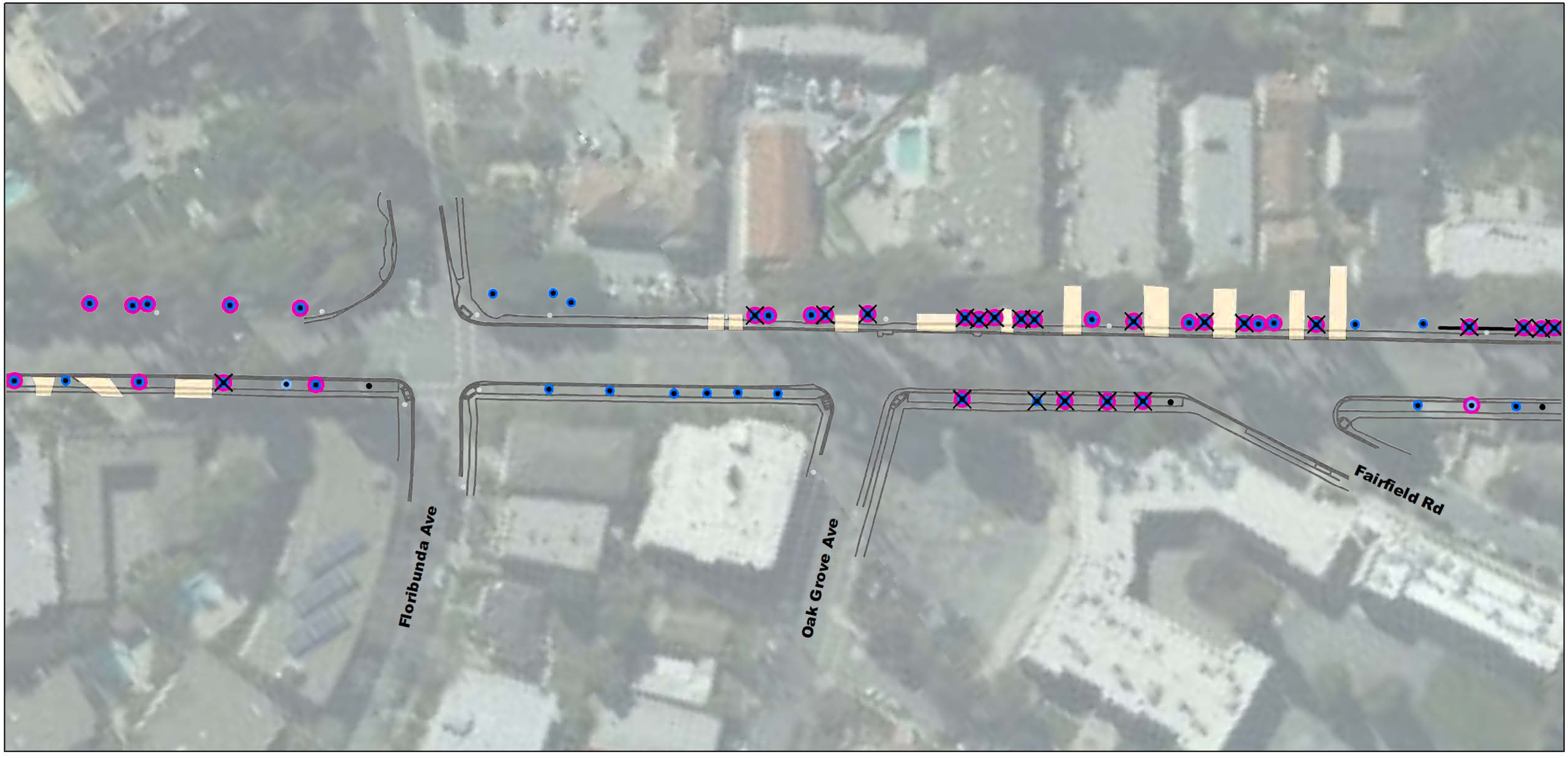

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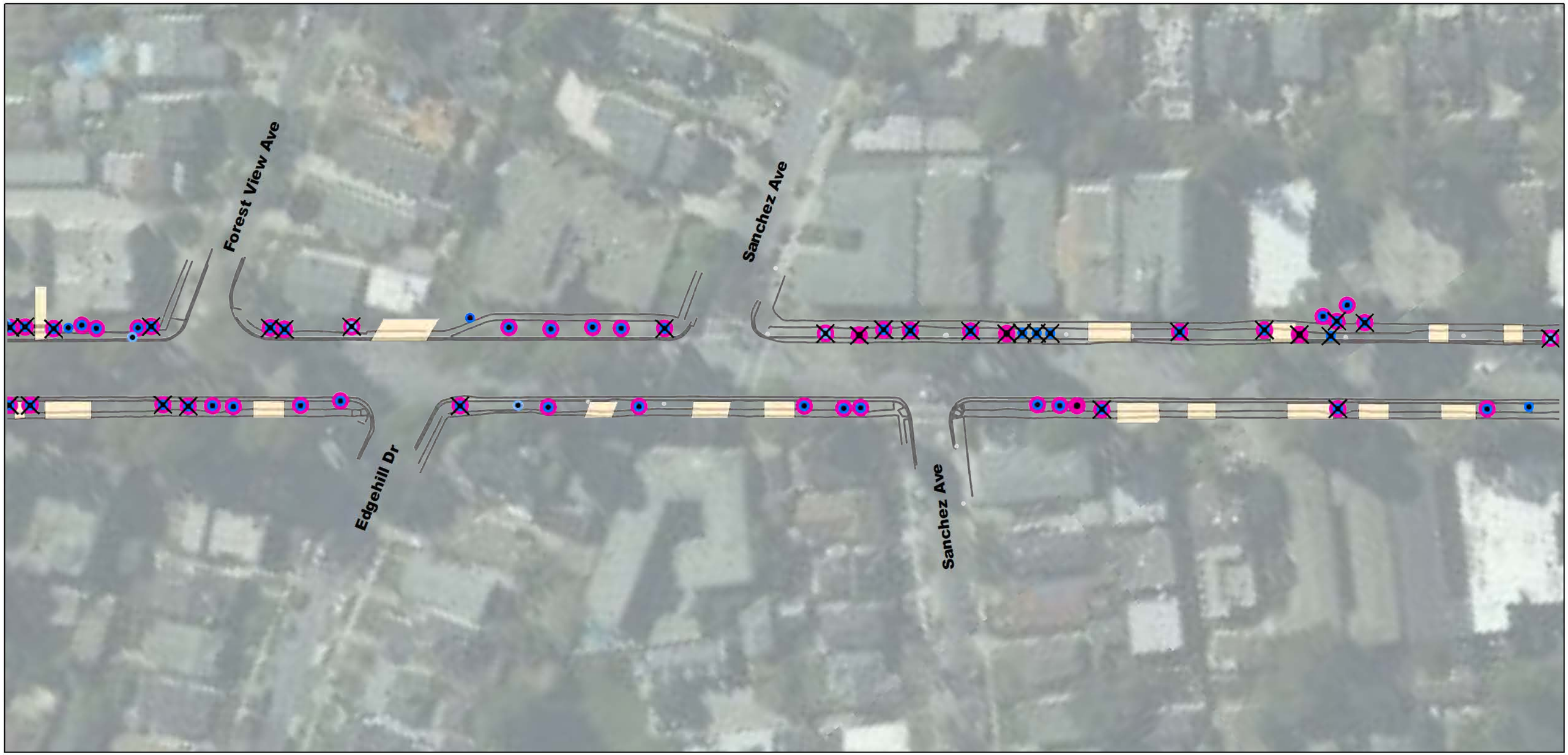

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Memorandum

To: YOLANDA RIVAS
SENIOR ENVIRONMENTAL PLANNER
ENVIRONMENTAL PLANNING

Date: May 5, 2021

File: 04-SM-82-12.3/15.8 PM
ID 0420000075
EA 04-0K81U0
(formerly 0K8100

From: KIMBERLY WHITE
Senior Landscape Architect
Branch Chief - San Francisco,
San Mateo and Santa Clara Counties
Office of Landscape Architecture

JEANNE GORHAM
District Landscape Architect
Office Chief
Office of Landscape Architecture

Subject: **SUPPLEMENT TO VISUAL IMPACT ASSESSMENT: EL CAMINO REAL ROADWAY RENEWAL PROJECT, SAN MATEO COUNTY, FEBRUARY 2021**

The purpose of this memorandum is to document a change in the estimated tree removals since the Visual Impact Assessment, El Camino Real Roadway Renewal Project, San Mateo San Mateo County, CA was approved on February 24, 2021.

The VIA assessed the impacts that would occur from five alternatives, including the no-build alternative.

The four build alternatives were:

1. Roadway Rehabilitation Without Undergrounding Utilities
2. Roadway Rehabilitation With Undergrounding Utilities
3. Road Diet Without Undergrounding Utilities
4. Road Diet With Undergrounding Utilities

Since that time the alternatives have been simplified. The two "Roadway Rehabilitation" alternatives (#1 and #2, above) have been combined into one build alternative with the option to underground utilities. The "Road Diet" alternatives (#3 and #4, above) have been eliminated from further consideration.

As discussed in the VIA visual character and quality for the project corridor is largely associated with the large, mature street trees lining both sides of El Camino Real. There are roughly 700 street trees throughout the 3.6-mile project

limits. The Howard-Ralston Eucalyptus Tree Rows, which are listed on the National Register of Historic Places, stretch for 2.2 miles of the project. Just over 600 of the project's street trees fall within the Tree Rows, and nearly 400 of those trees contribute to the historic listing.

For all Build Alternatives the primary cause of resource change would be the result of impacts to existing street trees. The construction required to rehabilitate the roadway, sidewalk, and drainage involves extensive excavation within the root systems of existing mature trees. Given the age, size and general condition of the older trees, it is expected that many trees would not survive this disturbance and would thus require removal.

Tree removal estimates in the VIA were based on our Office's tree condition field survey and Caltrans Design's preliminary plans showing proposed construction adjacent to existing trees. Based on this information, Landscape Architecture and Design arrived at an estimate of approximately 250 tree removals for all build alternatives.

Since the VIA was prepared, Caltrans has retained the services of HortScience/ Bartlett Consulting. HortScience performed an arborist inspection of 224 trees within the project area to assess their health and structure, as well as the likely impacts to the trees from construction. Their preliminary findings indicate that a higher number of tree removals is expected. At this time, an estimated 300 -350 of the approximately 700 trees in the project limits would be removed, including approximately 250 trees that contribute to the Howard-Ralston Eucalyptus Tree Rows. This estimate is 50 - 100 trees greater than the VIA evaluated.

The increased estimate of tree removals would not change the conclusions of the VIA. The VIA concluded that the loss of trees within the project would have a permanent effect on the visual quality and character of the environment. Substantial declines in visual quality in combination with high levels of viewer sensitivity and exposure are likely to result in adverse impacts.

The Avoidance, Minimization and Mitigation Measures included in the VIA are focused on the replacement of removed trees. Re-establishment of street trees along El Camino Real will reduce the level of visual impact within a 20 year time frame at which point the trees will have reached a size and maturity that would restore the visual character and quality of El Camino's tree-lined street.