
Attachment B

Detailed Description of the Proposed Changes

Description of Recommended Light Rail Alternative

The following section integrates the approved components of the Light Rail Alternative from the 2005 Final Environmental Impact Report (EIR), 2007 Supplemental EIR, and the 2014 Subsequent Mitigated Negative Declaration (MND) with the proposed changes to provide a complete project description of the Recommended Light Rail Alternative.

Recommended Light Rail Alternative

The Recommended Light Rail Alternative would extend light rail along Capitol Expressway from the existing Alum Rock Light Rail Station to the Eastridge Transit Center a distance of approximately 2.4 miles. Light rail will operate primarily in the median of Capitol Expressway within exclusive and semi-exclusive rights-of-way. Property acquisition for the project would be minimized through the removal of two high-occupancy vehicle (HOV) lanes on Capitol Expressway between Story Road and Tully Road. The project will include new light rail stations at Story Road (aerial) and Eastridge Transit Center (at-grade). The project will also include traction power substations at Ocala Avenue and Eastridge Transit Center. Relocation and replacement of a number of 115-kilovolt steel lattice electrical transmission towers with Tubular Steel Poles (TSP).

Figure 1 shows the location of the Recommended Light Rail Alternative.

Benefits of the Recommended Light Rail Alternative are related to speed and travel time. The light rail trains would travel at high speeds and would be minimally impacted by roadway congestion. As a result, travel times for the Recommended Light Rail Alternative would generally be faster, more reliable and dependable than other modes.

In addition, the Recommended Light Rail Alternative would benefit transit users by providing a direct light rail connection to the Bay Area Rapid Transit (BART) at the Milpitas BART Station.

Background. The Eastridge to BART Regional Connector Project is the last portion of the larger Capitol Expressway Corridor Project that transforms Capitol Expressway into a multi-modal boulevard offering pedestrian improvements, bus rapid transit (BRT), light rail transit (LRT), and convenient connections to the regional transit system. VTA first addressed pedestrian access and improved safety measures along Capitol Expressway between Quimby Road and Capitol Avenue. This was completed in Fall 2012 and included new sidewalks, street lighting, and landscaping . VTA also replaced the Eastridge Transit Center, which was completed in 2015.

In June 2016, VTA Board of Directors approved \$70 million to complete design, acquire right of way and relocate utilities for the project. In October 2016, VTA Board of Directors approved a full funding plan for the project. In June 2018, voters approved Regional Measure 3, which included \$130 million in funding for the project.

URBAN DESIGN

Since the conceptual engineering phase of the Capitol Expressway Corridor Project, there has been a consistent effort to incorporate attractive, urban design elements into the Light Rail Alternative. These principles reflect the policy guidance of the PAB. The following section highlights the key urban design elements of the Light Rail Alternative.

Urban Design Principles

- Transform the expressway from an auto-oriented corridor to a multi-modal boulevard.
- Establish pedestrian and bicycle linkages along and across the corridor to connect neighborhoods to activity centers.
- Design stations to facilitate safe and convenient pedestrian access and to convey the personality and identity of adjacent neighborhoods.
- Introduce special treatments along the edges of the boulevard to reduce visual and noise impacts and to create a more positive relationship with adjacent neighborhoods.
- Promote opportunities for transit-oriented development that will enhance ridership and the quality of life of the surrounding community.

STATIONS AS NEIGHBORHOOD GATEWAYS

The design of stations and their relationship with the adjacent neighborhoods is critical to promote a viable transit environment. Convenience, safety, and ease of access for residents and employees arriving by foot, bike, bus, or car are primary design objectives. Additionally, stations can create identities and gateways to communities. Stations can also provide opportunities for neighborhood-serving retail

uses and/or a mix of commercial, residential, and recreational uses. The Recommended Light Rail Alternative will be consistent with the goal to integrate high-quality design enhancements, designed by artists and project architects, that reflect the identity of the communities and neighborhoods in which they are located.

There are numerous examples of community influenced design enhancements that have been incorporated into VTA's existing light rail stations. For example, at Alum Rock Station, artists working in coordination with the community designed special railings, shelter canopy glass, pavers, art tile benches, and entry markers.

ALIGNMENT DESCRIPTION

The Recommended Light Rail Alternative would be designed to reduce travel time and to support higher speed transit operations with signal priority or grade separation at congested intersections. Construction of the light rail would alter the roadway geometry along some portions of Capitol Expressway. Perhaps the most dramatic change would be the removal of existing HOV lanes between Story Road and Tully Road to provide the additional right-of-way to accommodate light rail. While some property needs would be required for improvements and for utility relocations, especially at stations and substations, the removal of the HOV lanes would minimize the need for additional property for the Recommended Light Rail Alternative and would be consistent with past policy decisions in the City of San Jose's Evergreen Specific Plan, Evergreen Specific Plan Transportation Improvements EIR and the Evergreen-East Hills Development Policy.

Alum Rock LRT Station to Story Road

The light rail alignment would begin at the existing Alum Rock LRT Station on the Santa Teresa to Alum Rock LRT Line. In this section of the corridor, an aerial guideway would be constructed for the full distance from south of the Alum Rock LRT Station to south of Story Road to support higher speed transit operations and minimize congestion at major intersections. The guideway would be located largely in the median of Capitol Avenue and Capitol Expressway. The aerial guideway would include concrete columns supported on piled foundations. The aerial guideway would also include aerial sound walls where necessary to mitigate noise levels. Visual simulations of the aerial guideway are provided in Section 3.16, Visual Quality, and a detailed discussion of the proposed aerial sound walls is provided in Section 3.12, Noise and Vibration, of the Subsequent Initial Study for the Recommended Light Rail Alternative. At its northern end, the aerial structure would cross the northbound lanes of Capitol Avenue and Capitol Expressway and transition to an alignment in the median of Capitol Expressway. The light rail alignment would continue on the aerial structure over Story Road.

Story Road to Eastridge Transit Center

From south of Story Road, the Recommended Light Rail Alternative would continue on an aerial guideway for 1.25 miles to north of Tully Road. Before reaching Tully

Road, the aerial guideway would transition from median-running north of Tully Road to side-running south of Tully Road. The light rail alignment would continue on the aerial structure over Tully Road and return to grade on an embankment structure as it terminates at the Eastridge Transit Center

CROSSINGS

The Recommended Light Rail Alternative would include rail crossings along the corridor as shown in Table 1.

PROPOSED STATIONS AND PARK-AND-RIDE FACILITIES

Two new stations are included with the Recommended Light Rail Alternative between the northern terminus at the existing Alum Rock LRT Station and the southern terminus at the existing Eastridge Transit Center. The stations would be located approximately 1.0 miles apart. The placement of the proposed stations was based on the desire to balance convenient passenger access and minimize travel time delay. The following sections describe each station along the alignment of the Recommended Light Rail Alternative.

Alum Rock LRT Station (existing)

At its northern end, the Light Rail Alternative would connect to the existing light rail network at the Alum Rock LRT Station on the Santa Teresa to Alum Rock Line. The two lines would meet at the station, and the Santa Teresa to Alum Rock Line would be through-routed with the Recommended Light Rail Alternative. Both lines would share the existing station platform and could operate in the same corridor. No improvements are anticipated at this station.

Story Station (proposed)

The Recommended Light Rail Alternative includes a two-level station in the median of Story Road with a mezzanine level and an elevated center platform. Since the traffic volumes and pedestrian/bicycle activity at the Story Road intersection are high, a single set of pedestrian overcrossings (POC) would be located south of Story Road connecting the southern corners of the intersections to the station. From the mezzanine level, an elevator and stairs would provide access to the station platform. The Recommended Light Rail Alternative would restrict pedestrian access to the Story Station at the median to emergency purposes only.

Figure 2 shows the proposed project features at Story Station.

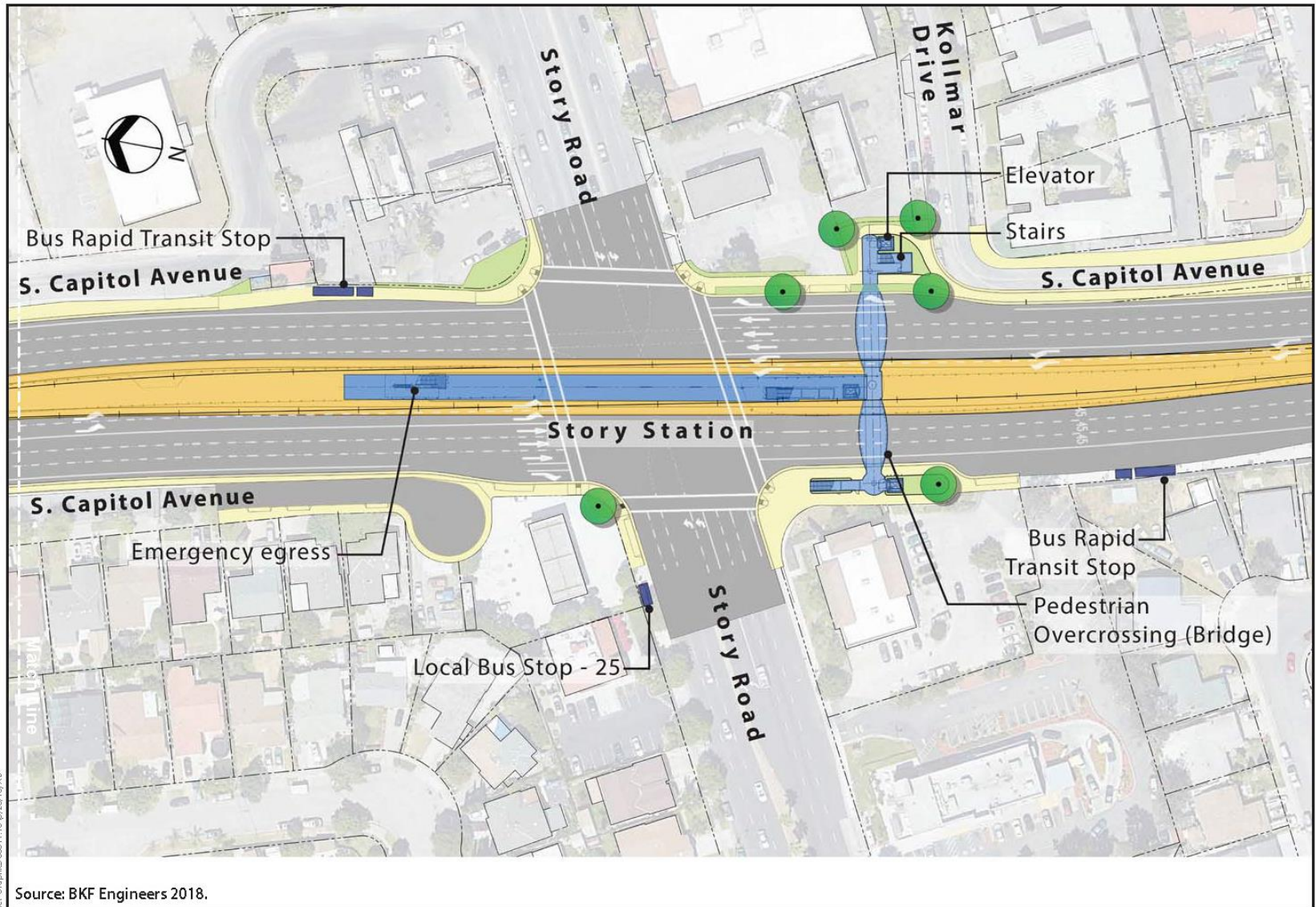


Figure 2 Proposed Story Station

Table 1 Rail Crossings of the Recommended Light Rail Alternative

Cross Street	Track Stationing	Number of Tracks	Pedestrians	Automobiles	Safety Risks	Proposed Crossing Type	Proposed Safety Devices (At Grade Crossings)
Wilbur Avenue/Nuestra Castillo Court	+965+00	2	1 Crosswalk	2 Lanes	VTA buses, Left turns from Wilbur to southbound Capitol Avenue	At-grade (existing crossing with t-signals)	T-signals, Traffic signals
Northbound Capitol Avenue	+974+00	2	2 Sidewalks	2 Lanes	High roadway traffic volumes	Grade separated, Aerial	n/a
Northbound Capitol Expressway	+978+00	2	1 Sidewalk	4 Lanes	High roadway traffic volumes	Grade separated, Aerial	n/a
Story Road	+995+00	2	2 Crosswalks	6 Through lanes, 4 turn lanes	High auto and pedestrian traffic volumes. Left turn movements	Grade separated, Aerial	n/a
Ocala Avenue	+1037+00	2	2 Crosswalks	4 Through lanes, 2 Turn lanes	School children, School buses, Heavy volume of LT movements	Grade separated, Aerial	n/a
Cunningham Avenue	+1050+00	2	2 Crosswalks	2 Lanes	Light traffic volumes, low risk	Grade separated, Aerial	n/a
SB Capitol Expressway	+1067+00	2	1 Sidewalk	3 Lanes	Heavy roadway traffic volumes	Grade separated, Aerial	n/a

Table 1 Rail Crossings of the Recommended Light Rail Alternative

Cross Street	Track Stationing	Number of Tracks	Pedestrians	Automobiles	Safety Risks	Proposed Crossing Type	Proposed Safety Devices (At Grade Crossings)
Swift Lane	+1073+00	2	2 Sidewalks	2 Lanes	Light traffic volumes, low risk	Grade separated, Aerial	n/a
Tully Road	+1078+00	2	2 Sidewalks	6 Lanes, 4 Turn lanes	Heavy roadway traffic volumes	Grade separated, Aerial	n/a
Northern Pedestrian Crossing to Platform	+1086+00	1	1 Crossing of SB track	None	Incoming and departing trains	At-grade	Crossing gates, Flashing Lights, and Bells
Southern Pedestrian Crossing to Platform	+1089+80	1	1 Crossing of SB track	None	Train movements in and out of tail track	At-grade	Crossing gates, Flashing Lights, and Bells

Notes:

Shaded rows indicate proposed rail crossing changes to the approved project.

Source: VTA, 2018.

Eastridge Station (proposed)

The Eastridge Transit Center is currently the second busiest transfer point in the VTA system, with significant bus transfer activity and a Park-and-Ride lot. Most bus routes serving the Downtown/East Valley area terminate at or pass through the center. The Recommended Light Rail Alternative includes an at-grade station with one platform, tail tracks, and one traction power substation at the Eastridge Station. Additional project work at the Eastridge Station would include the following:

- Tail tracks, including a pocket track;
- Diamond crossover on the ballasted section of track;
- Passenger access at north and south ends of station;
- Platform raised on retained fill; and

Figure 3 shows the proposed project features at the Eastridge Station.

Park-and-Ride Facilities

Two existing Park-and-Ride lots are located along the alignment: Alum Rock Station and Eastridge Transit Center.

To serve the Recommended Light Rail Alternative, there would be no increase in parking at Alum Rock Station due to space constraints. The Eastridge Park-and-Ride Lot currently includes 180 parking spaces due to the relocation of VTA Paratransit staff and vehicles to a remodeled building at this location in September 2017. VTA is proposing to increase the parking to approximately 200 spaces.

SUPPORT SYSTEMS

In addition to the primary alignment, stations, and Park-and-Ride facilities, the Recommended Light Rail Alternative would incorporate light rail support systems, including traction power and substations, overhead contact, communications, signaling, gates, Intrusion Detection System, closed-circuit television (CCTV) cameras, a fare collection system, and noise and vibration abatement. Support systems are described in the following sections.

Traction Power System and Substations

A traction power system is a distribution system that converts high-voltage commercial electrical power received from substations to medium-voltage direct current (DC) and distributes it to the light rail vehicles via the overhead catenary or contact wire as they travel along the alignment. A traction power system consists of the power distribution mechanism and electrical substations. For the Recommended Light Rail Alternative, the traction power system

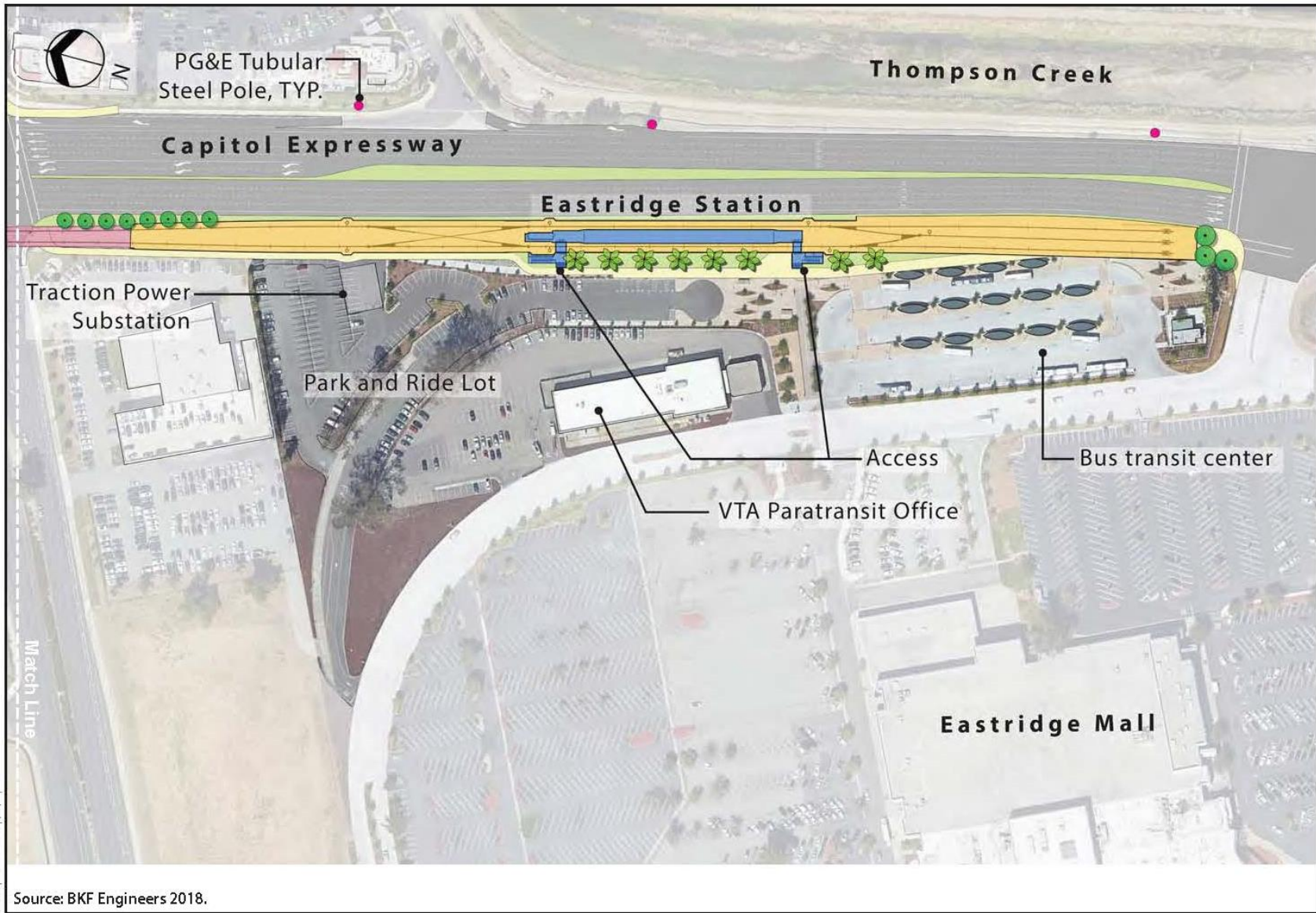


Figure 3 Recommended Light Rail Alternative at Eastridge Station

would provide the potential for three-car light rail trains operating at speeds up to 55 mph on approximately 5-minute headways, as provided by VTA Service Design Guidelines. During peak periods of use, such as during special events, the traction power system is anticipated to accommodate 3-minute headways.

The alignment would require a total of two substations, not including one existing substation south of the Alum Rock LRT Station near the Park-and-Ride lot shown in Figure 2.

Locations for new substations include the following:

- Southwest corner of Capitol Expressway and Ocala Avenue
- Eastridge Transit Center

Electrical power would be supplied to each traction power substation (TPSS) by an underground feeder from the electrical utility distribution system. Alternate substations would be equipped with two primary feeders from the utility company and an automatic transfer switch to supply reliable power to the substation. Each TPSS would be contained in a prefabricated substation housing that is factory wired to accommodate internal components and built on a concrete foundation. Foundations would be equipped with embedded conduit to accommodate incoming alternating current primary power cables, control and communication cables, and the DC feeder cables to the overhead contact system.

The estimated size for each TPSS building would be approximately 650–750 square feet in area and 12–15 feet in height. Parcels used as substation sites would need to be large enough to provide for side clearance from passing trains and automobiles and to allow a service vehicle to park, unless convenient parking is available on an adjacent roadway.

Overhead Contact System

The overhead contact system (OCS) would be an auto-tensioned simple catenary (ATSC) consisting of a contact wire, a messenger wire, and counterweight terminations (see Figure 4). This configuration represents the typical application for the VTA light rail system. The height of the contact wire would conform to the requirements of *VTA Light Rail Design Criteria Manual* and the California Public Utilities Commission's (CPUC's) General Order 95 (California Public Utilities Commission 1941). All OCS poles, except counterweight poles, would be constructed as tubular, hollow, tapered, round poles made of rigid galvanized steel.



Figure 4 Overhead Contact System at Alum Rock Station

Counterweight poles would be nontapered. The pole height would be adjusted to suit the contact wire height and match the existing system as closely as possible. The OCS poles would be located between the tracks or on the outside of the tracks, depending on space restrictions.

Communications Systems

The communications equipment and design would be fully compatible with the communications system that serves VTA's existing light rail operations. A wayside cable system, fiber optic cable, and two-way radio system would link light rail

stations and TPSSs with the existing Operations Control Center. The communications system would consist of the following main components:

- Public address system with two-way voice announcement linking the Operations Control Center and the light rail stations.
- Two-way radio system with two-way voice announcement linking the Operations Control Center and light rail vehicles.
- Capability to monitor and control the TPSS switchgear functions from the Operations Control Center via the remote terminal units and wayside cable system.
- Cable transmission system designed to incorporate both the backbone communications distribution (fiber optics) and metallic distribution.

Wayside cabling would utilize a combined systems duct installed continuously along the corridor.

Signaling and Gates System

The signal system for the Recommended Light Rail Alternative would be an extension of the existing light rail signal system and functionally compatible with the existing lines. The signal system would include a wayside color light aspect with no cab signal and Automatic Block Signaling (ABS). (*Wayside color light aspect* refers to a signal at the side of the tracks indicating the next block is either clear or occupied.) The signal system would be designed to support the train headway goals of the Recommended Light Rail Alternative. Generally, the alignment would not be gated except at the at-grade pedestrian crossing at Eastridge Station.

Intrusion Detection System

Intrusion detection would be provided at the ends of the station platforms and at the aerial guideway approach embankments to provide warning of people either trespassing or walking in restricted areas. This information would be provided to VTA Operations Control Center to initiate a response from VTA security and to alert train operators to proceed with caution.

VEHICLE STORAGE FACILITIES

The Recommended Light Rail Alternative does not include any new vehicle maintenance and overnight storage facilities. Heavy maintenance activities for vehicles used on this line would continue to be performed at the existing Guadalupe Light Rail Division on Younger Street in San Jose.

PEDESTRIAN AND LANDSCAPING ENHANCEMENTS

A separate project constructed pedestrian and landscaping improvements at various locations along Capitol Expressway between Capitol Avenue and Quimby Road. The

Recommended Light Rail Alternative will relocate or upgrade these improvements where there are conflicts with the proposed alignment, especially where additional right-of-way is required for aerial guideways, stations, and utility relocations. The enhancements could include sidewalk, landscaping, or a multi-use path consisting of sidewalk, landscaping, and street lighting.

Between Foxdale Drive and Ocala Avenue, VTA will not replace the existing sidewalk along the west side of Capitol Expressway with a new multi-use path and landscaping for a distance of about 1,500 feet in order to minimize the acquisition of property from the backyards of adjacent residences.

To accommodate bicyclists to the greatest extent possible, curb lanes on both sides of Capitol Expressway will be 17–18 feet for the entire length to allow use of the shoulders by bicycles.

CAPITOL EXPRESSWAY ROADWAY LANE CONFIGURATIONS.

In addition to restriping, a slight reduction in lane width, and minor modifications to traffic lanes, the project would revise the roadway lane configurations along Capitol Expressway. The could include resurfacing Capitol Expressway with rubberized, open-graded asphalt concrete (OGAC).¹ Detailed track plans and profiles showing the proposed geometric design changes are included in Attachment C of the SEIR-2. The proposed roadway lane configuration includes the following.

- *Four traffic lanes in each direction north of Story Road.* Both of the existing high-occupancy vehicle lanes (one northbound and one southbound) would be converted to general purpose traffic lanes, resulting in a total of four general purpose lanes in each direction between Story Road and Capitol Avenue. One southbound inner general purpose lane would end at the introduction of the left turn pockets at Story Road. This would be accomplished by the widening of Capitol Expressway and a reduction of the median.
- *Right turn lanes.* Exclusive right turn lanes on Capitol Expressway would be added at Story Road, Cunningham Avenue, and Tully Road intersections.
- *Bicycle Slot.* At the locations where exclusive right turn lanes are added or maintained on Capitol Expressway, bicycle slots would be included to the left of the right turn lanes. Figure 5 includes pictures of a typical bicycle slot with bicycle detector.
- *Left turn lanes.* Longer left turn lanes on Capitol Expressway would be added at the following intersections: northbound and southbound at Story Road, northbound at Ocala Avenue, and southbound at Tully Road. At Ocala Avenue, one northbound left turn lane would be removed.

¹ Recent studies by Caltrans indicate that OGAC produces noticeably less vehicle noise than other pavement types (i.e., concrete and conventional asphalt).

- *Left turn pocket.* A second left turn pocket would be maintained on northbound Capitol Expressway at Story Road.



a. View of an example bike slot facing west at Lawrence Expressway and Cabrillo Avenue in the City of Santa Clara.



b. View of a bike detector embedded in a bike slot. The purpose of a bike detector is to detect a bicyclist approaching an intersection and communicate with the traffic signal cabinet to provide enough time for cyclists to safely cross an intersection.

Source: VTA and ICF 2018.

Figure 5 Representation Of Bicycle Slots

UTILITY RELOCATIONS

The project will include minor utility relocations (e.g., water, gas, communications, electric lines, sanitary sewer, stormwater, etc.), as necessary.

In addition, 6 steel lattice towers and 2 Tubular Steel Poles [TSPs] carrying the Pacific Gas & Electric Company's (PG&E) McKee-Piercy and Milpitas-Swift sections of the 115 kilovolt transmission lines would need to be relocated between Ocala Avenue and north of Quimby Road. A total of 10 new TSPs would be installed. It is anticipated that the TSPs would need to be up to 121 feet in height in order to clear the aerial guideway. As a result of the increase in height of the TSPs and the proximity to Reid-Hillview Airport, PG&E may need to install red light-emitting diode (LED) obstruction lighting on some or all of the new or modified towers or poles in accordance with Federal Aviation Administration (FAA) requirements. These lights would be powered by either solar panels or local distribution electric lines. One of the TSPs (No. 54) may require right-of-way from the Santa Clara Valley Water District for placing the TSP and its foundation. The new TSPs would be mounted on a drilled foundation. Figures 6a and 6b show the proposed project work for the electrical transmission facilities.

The new TSPs would be mounted on a drilled foundation, and construction of the foundation for TSP No. 53A, 54, and 55 may require temporary closure of the Thompson Creek Trail for safety during drilling, and foundation operations. For TSPs located immediately adjacent to Capitol Expressway, a pull-out area will be provided for safe ingress and egress of PG&E maintenance vehicles.

RIGHT-OF-WAY REQUIREMENTS

The majority of the improvements will be constructed within existing public right-of-way. There are a number of locations, however, where the Recommended Light Rail Alternative will require minor amounts of additional right-of-way. Based on preliminary designs, the locations where additional right-of-way will be required are listed in Table 2.

Easements and other right-of-way requirements may change (i.e., increase or decrease in size, change type, and/or change from permanent to temporary, etc.) during final design while being within the scope of the project and minor in nature. It is the intent of this environmental document to environmentally clear easements and other right-of-way requirements that are generally indicative of the type of work required, recognizing some adjustments may be necessary based on final design and/or working with individual property owners during the real estate acquisition process. Should modifications beyond the scope of the project trigger the need for additional environmental review pursuant to CEQA and NEPA, subsequent environmental analysis would be required.



Figure 6a Electrical Transmission Facilities



Figure 6b Electrical Transmission Facilities

Table 2 Preliminary Right-of-Way Requirements for the Recommended Light Rail Alternative

No.	Assessor's Parcel Number	Address	Existing Use	Right-of-Way Needed	Right-of-Way Requirement (square feet)		Partial or Full Right-of-Way Requirement
					Permanent	Temporary	
1	484-33-108	2701 Story Road	Business	TCE	0	237	Partial
2	488-01-041	2710 Story Road	Business	Partial Fee Take, TCE, Permanent Easement	1,175	1,845	Partial
3	488-01-002	1148 Kollmar Drive	Business	Partial or Full Fee Take, ¹ TCE	2,428	1,523	Partial
4	488-01-004	2710 Kollmar Drive	Multi-Family	TCE	0	687	Partial
5	488-01-037	2709 Sussex Drive	Single-Family	TCE	0	74	Partial
6	491-01-016	SE Corner of Capitol Expressway & Cunningham Avenue	Public	Partial Fee Take, TCE ²	514	701	Partial
7	491-02-073	3000 E. Capitol Expressway	Business	Partial Fee Take, TCE, Permanent Easement	2,246	1,757	Partial
8	491-02-074	3001 E. Capitol Expressway	Business	Partial Fee Take, TCE, Permanent Easement	8,496	10,582	Partial
9	491-02-069	2880 E. Capitol Expressway	Business	Permanent Easement	922	0	Partial
10	491-02-070	2950 E. Capitol Expressway	Business	Permanent Easement	1,582	0	Partial
11	491-02-071	2950 E. Capitol Expressway	Business	Permanent Easement	4,644	0	Partial
12	491-02-072	2990 E. Capitol Expressway	Business	TCE, Permanent Easement	1,194	1,917	Partial
13	491-02-066	Thompson Creek	Public	Permanent Easement	21,770	0	Partial
14	491-48-006	Thompson Creek	Public	Permanent Easement	4,706	0	Partial

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No.	Assessor's Parcel Number	Address	Existing Use	Right-of-Way Needed	Right-of-Way Requirement (square feet)		Partial or Full Right-of-Way Requirement
					Permanent	Temporary	
15	484-45-060	2686 Lombard Avenue	Single-Family	TCE	0	465	Partial
16	484-45-061	353 S. Capitol Avenue	Single-Family	TCE	0	337	Partial
17	484-45-062	455 S. Capitol Avenue	Single-Family	TCE	0	310	Partial
18	484-45-116	461 S. Capitol Avenue	Business	Partial Fee Take, TCE	2,277	2,223	Partial
19	484-34-015	1017 S. Capitol Avenue	Single-Family	TCE	0	250	Partial
20	484-34-016	1033 S. Capitol Avenue	Single-Family	Partial Fee Take, TCE	22	250	Partial
21	484-34-017	1049 S. Capitol Avenue	Single-Family	Partial or Full Fee Take, ¹ TCE	225	335	Partial
22	484-34-131	1091 & 1093 S. Capitol Avenue	Business	Partial or Full Fee Take ¹ , TCE	1,829	277	Partial
23	484-34-019	2695 Story Road	Business	Partial Fee Take, TCE	3,977	878	Partial
24	486-39-025	1330 Foxdale Loop	Multi-Family	TCE	0	4,593	Partial
25	486-43-106	2690 Story Road	Business	Partial Fee Take, TCE	1,479	3,343	Partial
26	486-43-108	2680 Story Road	Business	TCE. Permanent Easement	3	6	Partial
27	491-15-003	Reid-Hillview Airport	Public	Partial Fee Take, TCE, Permanent Easement	8,299	1,084	Partial
28	491-15-041	Swift Avenue	Utility	Partial Fee Take, TCE Permanent Easement ²	1,817	816	Partial
29	491-13-009	Reid-Hillview Airport	Public	Permanent Easement	1,401	0	Partial

Table 2 Preliminary Right-of-Way Requirements for the Recommended Light Rail Alternative

No.	Assessor's Parcel Number	Address	Existing Use	Right-of-Way Needed	Right-of-Way Requirement (square feet)		Partial or Full Right-of-Way Requirement
					Permanent	Temporary	
30	491-05-001	North of Airport Access Road	Public	TCE, Permanent Easement	1,699	106,481	Partial
31	491-05-020	Reid-Hillview Airport	Public	Partial Fee Take, Permanent Easement, TCE	16,598	5,169	Partial
32	491-04-012	290 E. Capitol Expressway	Business	Full Fee Take	3,030	0	Full
33	491-04-047	290 E. Capitol Expressway	Business	Full Fee Take	5,864	0	Full
34	484-33-110	2785 Mervyns Way	Public	Partial Fee Take, TCE	374	642	Partial
35	NA	NA ²	Public Right-of-Way	Permanent Easement	32,575	0	Partial
36	NA	NA ²	Public Right-of-Way	Permanent Easement	4,134	0	Partial
Total Right-of-Way Needed:					135,280	146,782	NA

Notes:

TCE = Temporary Construction Easement; NA = Not Applicable; IEE = Ingress Egress Easement

Partial Fee Take refers to the partial right-of-way need of a parcel; Full Fee Take refers to the full right-of-way need of a parcel.

¹ These areas are within public right-of-way, and do not have an Assessor's Parcel Number or address associated with them.

Source: BKF 2018.

OPERATING ASSUMPTIONS

For the purposes of environmental analysis, the operating assumptions are based on past, current, and reasonably foreseeable future service plans. The purpose is to assess the project’s effect on the environment under the “worst-case” conditions. The key operating assumptions are as follows:

- The Recommended Light Rail Alternative is assumed to operate on both the Santa Teresa to Alum Rock Line and the proposed new line from Mountain View to Alum Rock.
- The Recommended Light Rail Alternative is assumed to operate one to three-car train consists depending on ridership demands. Initially, VTA plans to operate two-car trains during peak hours in this corridor.
- The hours of operation are assumed to be between 4:30 a.m. and 1:30 a.m.
- Initially, VTA plans to operate on 15 minute headways on each line for 7.5 minute combined headways for both lines during peak hours. For the segment of the alignment between the Alum Rock LRT Station and Eastridge Transit Center, the estimated running time would be approximately 4.3 minutes, as shown in Table 3.
- Generally, the Recommended Light Rail Alternative will be designed for 55 mph operations.

Table 3 LRT Estimated Travel Time and Speed

LRT Segments	Distance/Average Speed/Time		
	Miles	mph	min.
Alum Rock TC to Story Station	0.6	25	1.4
Story Station to Eastridge Station	1.8	45	2.9
Corridor Total	2.4	35	4.3

Notes:

¹ Travel speed and time are assumed to be approximately the same for AM and PM hours as well as northbound and southbound directions as the aerial guideway would not be affected by vehicular traffic.

² Approximately 30 seconds of dwell time would be experienced at Story Station.

Source: BKF, 2018.

CONSTRUCTION SCENARIO

Project construction would take place over several years. Most of the construction work would occur in multiple locations along the project corridor between Alum Rock LRT Station and Eastridge Transit Center. Utility relocations would take place in 2019. Construction of the Recommended Light Rail Alternative is anticipated to begin in 2020 and end in 2024. Construction would consist of clearing and grubbing, grading, structural work, trackwork, and paving. Major construction at Eastridge Mall during the holiday season will be minimized to the extent practicable.

At the height of construction, a number of construction employees and equipment would occupy portions of the street, including the median and potentially including parking spaces, at active construction locations. In the most active areas, construction activities would periodically reduce the capacity of Capitol Expressway to two lanes in the northbound direction, and one lane in the southbound direction during non-peak hours of travel. Three travel lanes in each direction are expected to stay open during peak hours of travel. One left turn lane in each travel direction may be closed at intersections temporarily during various construction events. Lane closures would be contingent on the requirements and restrictions of the County of Santa Clara and the City of San Jose. If lane closures for construction activities are further restricted, an increase of approximately one year would be anticipated in the duration of project construction, moving the construction completion from 2024 to 2025.

In addition, construction activities may be necessary during night, early morning, and weekend periods to minimize traffic disruption. Construction activities at night may involve partial or complete intersection closures along Capitol Expressway at Capitol Avenue, Story Road, Ocala Avenue, Cunningham Avenue, Swift Lane and Tully Road. Complete expressway closures at night may occur in each travel direction (northbound and southbound) of Capitol Expressway for work on the proposed pedestrian overcrossing.

The aerial guideway sections would require extensive pile driving. It is anticipated that 6 to 12 piles would be driven per day for 3 to 6 days at each column site. The column sites are spaced approximately 120 to 130 feet apart. Pile driving could occur simultaneously at 2 locations along the alignment.

The main construction staging area would likely occur on vacant airport property between Cunningham Avenue and Tully Road subject to the concurrence of Santa Clara County Roads and Airports, and also at Eastridge Transit Center. . The median of expressway would also be used as a staging area for daily activities.