CHAPTER 3 BART SILICON VALLEY PROJECT DESCRIPTION

3.1 INTRODUCTION

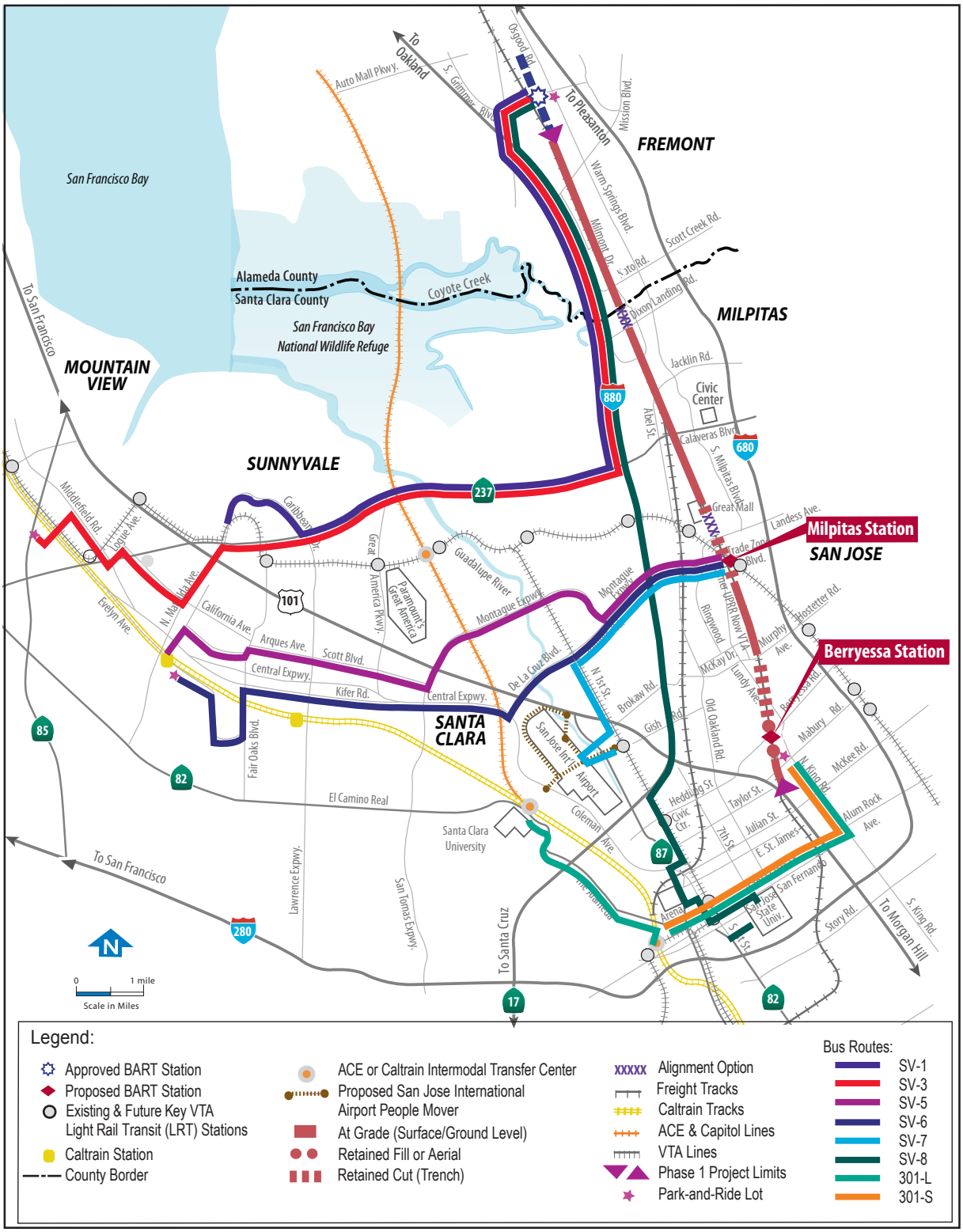
BART Silicon Valley is the extension of the Bay Area Rapid Transit (BART) system from its current planned terminus in Fremont (to be implemented by 2014) through Milpitas to San Jose. The extension would then descend into a subway tunnel, continue through downtown San Jose, and terminate at grade in Santa Clara near the Caltrain Station. The total length of the alignment would be 16.1 miles. This project, previously named the BART Extension Project, was analyzed in the following California Environmental Quality Act documents:

- 2004 *BART Extension to Milpitas, San Jose, and Santa Clara Final Environmental Impact Report* (FEIR),
- 2007 *BART Extension to Milpitas, San Jose, and Santa Clara Draft Supplemental Environmental Impact Report* (Draft SEIR), and
- 2007 *BART Extension to Milpitas, San Jose, and Santa Clara Final Supplemental Environmental Impact Report* (Final SEIR).

Throughout this document, the Draft SEIR and Final SEIR together are referred to as SEIR-1. BART Silicon Valley was approved in 2004 and 2007 following the preparation of the above-listed environmental documents. BART Silicon Valley is referred to as the "approved project" throughout this document.

Several design changes have occurred since the "approved project" in 2007. The most substantial change is that BART Silicon Valley would be constructed in phases. Although the Santa Clara Valley Transportation Authority (VTA) is committed to building the full 16.1-mile extension, the current state of the economy requires that BART Silicon Valley be built using a phased-construction approach.

This Second Supplemental EIR (SEIR-2) addresses design changes applicable to the first phase of BART Silicon Valley, which is referred to as the BART Silicon Valley Berryessa Extension (Phase 1). Phase 1 consists of the first 9.9 miles of BART Silicon Valley, beginning from the current planned terminus (approved BART Warm Springs Station) in Fremont through Milpitas to near Las Plumas Avenue in San Jose, on the former Union Pacific Railroad (UPRR) right-of-way (ROW), which is owned by VTA (see **Figure 3-1**). Phase 1 includes two stations: Milpitas Station (formerly Montague/Capitol Station) and Berryessa Station. Passenger service for Phase 1 would begin in 2018. The remaining 6.2 miles of



Source: VTA, 2010.

Figure 3-1: BART Silicon Valley Phase 1 - Berryessa Extension

BART Silicon Valley would be constructed when funding is available. Any additional design changes to the remaining 6.2 miles of BART Silicon Valley would be addressed under separate environmental review.

The reader should refer to the FEIR and SEIR-1 for the description and analysis of project features that have been retained in the Phase 1 alignment and the remaining 6.2 miles of BART Silicon Valley. The features of Phase 1 (including the design changes and the features retained from the previously approved project) are presented graphically in **Appendices C** and **D** for the alignment and stations, respectively. In addition, to facilitate an understanding of project aspects that have and have not changed, **Appendix B** includes plans that show the most current design (in blue) superimposed over the previous design (in red) for the alignment only. A description of various features that assist the reader's understanding of the electrical, communication, and other facilities required to operate BART Silicon Valley is included in the FEIR and SEIR-1. Electronic or hard copies of these documents are available upon request from VTA.

Definitions of the terms used in this SEIR-2 are included in **Chapter 9, Definitions, Abbreviations, and Acronyms**.

3.2 DESIGN CHANGES

There are 23 design changes evaluated in this SEIR-2 that were identified during the preliminary engineering design phase, when design plans progressed from the 35 percent level to the 65 percent level. This chapter describes these 23 design changes, which, when combined with the elements of the approved project as described in Chapter 2 of the SEIR-1, define BART Silicon Valley.

Table 3-1 provides a summary of the design changes in each city. In some cases, several options for the alignment and facility configurations are presented. This table also indicates the environmental analysis topics evaluated in **Chapter 4** that have been updated in response to each design change. All environmental analysis topics were evaluated for each design change; however environmental analysis topics not shown in **Table 3-1** did not require any updates. **Sections 4.2, Transportation**, **4.3, Air Quality**, **4.8, Energy**, **4.10, Greenhouse Gas Emissions**, and **4.15, Socioeconomics**, **Chapter 5, BART Core System Parking Analysis**, and **Chapter 6, Agency and Community Participation**, of this SEIR-2 include updated analyses that completely replace the respective sections in the SEIR-1.

Table 3-1: Design Changes

City	Design Change No.	BART Silicon Valley Feature	Approved Project (FEIR and SEIR-1)	Current Project Description (SEIR-2)	Environmental Analysis Section
Fremont, Milpitas, and San Jose	1	Phasing of BART Silicon Valley	No Phasing	Phase 1 would extend the BART alignment 9.9 miles to the Berryessa Station and terminate near Las Plumas Avenue in San Jose. The fleet requirements, operating plans, and ridership and parking forecasts have been updated for Phase 1. The schedule has also been updated, with passenger service to start in 2018 for Phase 1.	All sections
Fremont, Milpitas, and San Jose	2	Access Road from Fremont to San Jose	Not applicable.	Add an access road on the east side the alignment and within the UPRR ROW from Fremont to San Jose. If the BART At Grade Option is selected, add an access road bridge between the BART and UPRR tracks at Dixon Landing Road.	Cultural Resources Hazardous Materials Water Resources Construction: Air Quality, Cultural Resources, Biological Resources, Hazards, Water Resources
Fremont	3	Systems Facilities Alternate Location A	Not applicable.	Add an alternate location for High Voltage Substation SRC and Switching Station SRR.	Land Use Socioeconomics Visual Quality Biological Resources Water Resources Construction: Water Resources

Fremont	4	Starting point of Trackwork	The approved project begins at STA 45+00.	Phase 1 trackwork begins at STA 35+00.	Cultural Resources Hazardous Materials Noise and Vibration Socioeconomics Utilities Construction: Biological Resources, Cultural Resources, Energy, Greenhouse Gas Emissions, Hazardous Materials, Noise and Vibration
Fremont	5	Drainage Improvements at Toroges Creek (Line C)	Not applicable.	Add a box culvert at Toroges Creek (Line C).	Biological Resources Water Resources Construction: Air Quality, Biological Resources, Water Resources
Fremont	6	Eliminate Drainage Improvements at Unnamed creek	A new box culvert would be constructed by VTA at this unnamed creek.	This improvement is eliminated.	Biological Resources* Water Resources* Construction: Biological Resources, Water Resources*
Fremont	7	Eliminate Kato Road Grade Separation	Kato Road would be constructed as a roadway underpass.	This improvement is being constructed by the City of Fremont and has been eliminated from this project.	Hazardous Materials* Socioeconomics Construction: Hazardous Materials, Water Resources*
Milpitas	8	Dixon Landing Road Alignment	BART would be at grade over a new bridge structure over Dixon Landing Road.	There are two options for the alignment in this location: retained cut or at grade. The retained cut option includes 4 alternate locations for pump stations.	Hazardous Materials Noise and Vibration Socioeconomics Water Resources Construction: Hazardous Materials, Noise and Vibration, Water Resources

Milpitas	9	Eliminate Drainage Improvements at Berryessa Creek	A new multi-cell box culvert would be implemented.	This improvement is eliminated.	Biological Resources* Water Resources* Construction: Biological Resources, Water Resources*
Milpitas	10	Systems Facilities Alternate Location B	Not applicable.	Add alternate location for High Voltage Substation SRC and Switching Station SRR	Visual Quality Noise and Vibration* Socioeconomics Construction: Noise and Vibration*
Milpitas	11	Eliminate South Calaveras Future Station	This station was included in mid-town Milpitas.	This station has been eliminated.	Biological Resources* Land Use* Socioeconomics Visual Quality* Construction: Air Quality, Biological Resources*
Milpitas	12	Curtis Avenue to Trade Zone Boulevard	A retained cut long option was approved.	The length of the retained cut would change based on the Milpitas Wye Relocation Option selected.	Hazardous Materials Noise and Vibration Water Resources Construction: Hazardous Materials, Noise and Vibration, Water Resources
Milpitas	13	Milpitas Wye	An existing wye would be relocated.	There are now three options for the UPRR tracks entering the Wye.	Land Use Noise and Vibration Socioeconomics Utilities Construction: Socioeconomics
Milpitas	14	System Facility North of Montague Expressway	Traction Power Substation Site SME on the east side of the UPRR ROW.	Traction Power Substation Site SME would be located above the BART alignment.	Noise and Vibration Socioeconomics Construction: Noise and Vibration

Milpitas	15	Milpitas Station	Station included a 4-8 level parking structure and 16 bus bays on the east side of the station. A 60-foot-high radio tower would be provided. A pedestrian overcrossing would extend from the east side of Capitol Avenue to the Montague LRT station.	The parking structure was changed to 8 levels, 16 bus bays and four bus layover bays on the west side of the station; bus access from Capitol Avenue and bus only lane on South Milpitas Boulevard; bike path on South Milpitas Boulevard. A radio tower has been eliminated.	Noise Air Quality Land Use Visual Quality Construction: Socioeconomics
Milpitas	16	115 kilovolt Line Relocation at Milpitas Station	The existing 115 kV line at the Milpitas Station would not be relocated.	The existing 115 kV line at the Milpitas Station would be relocated in three locations.	Utilities Construction: Utilities
San Jose	17	Pump Station Facilities at Trade Zone Boulevard	Pump station was not included within the ROW for this facility.	Pump station north of Trade Zone Boulevard and west of the railroad corridor.	Noise and Vibration Socioeconomics
San Jose	18	Systems Facilities at Hostetter Road	A Train Control Building and Tractor Power Substation Site SMD was proposed.	A traction power substation site is proposed south of Hostetter Road and east of the railroad corridor.	Noise and Vibration Socioeconomics Construction: Noise and Vibration
San Jose	19	Pump Station Facilities at Sierra Road and Lundy Avenue	Pump station within ROW, south of Sierra Road.	Facilities north of Sierra Road and Lundy Avenue intersection and west of the railroad corridor.	Noise and Vibration Socioeconomics
San Jose	20	Berryessa Station	A location and layout for Berryessa Station was proposed. The Security Facility was not located at Berryessa Station	The location and layout of Berryessa Station has been altered with new location of station, transit center, access road and parking garage. The Security Facility is now located at Berryessa Station	Biological Resources Land Use Noise and Vibration Socioeconomics Water Resources Visual Quality

San Jose	21	Electrical Facilities near Las Plumas Road	Two system facilities sites were identified.	A new site was identified for the Gap Breaker Station, High Voltage Substation and Switching Station. The two previous sites were removed.	Noise and Vibration Socioeconomics Construction: Noise and Vibration, Socioeconomics
San Jose	22	Maintenance and Storage of BART Trains for Phase 1	Not applicable.	Configuration for terminus of Phase 1 is described. Storage would be provided near Berryessa Station. Maintenance facilities would be located at the existing BART District Hayward Yard location. (Hayward Main Shop improvements to be environmentally cleared by BART).	Cultural Resources Noise and Vibration Construction: Cultural Resources, Noise and Vibration
Multiple Cities	23	Construction Staging Areas (CSAs)	CSAs adjusted as described in Table 3-4.	CSAs adjusted as described in Table 3-4.	Noise and Vibration Socioeconomics Construction: Noise and Vibration, Socioeconomics

Note: * Environmental analysis section has been revised to remove discussion of the eliminated project feature.
Source: VTA, 2010.

The following description of the design changes is organized by the city in which changes would be located (i.e., Fremont, Milpitas, and San Jose). For comparison purposes, the 2007 approved project features related to each design change are described in *italic text* prior to the description of each project change.

Each of the 23 design changes is numbered to facilitate cross-referencing throughout the various chapters in this SEIR-2. The following description of changes references engineering stationing numbers.[1] Engineering stationing numbers are provided to assist the reader in locating Phase 1 features on the plans included in **Appendices B** and **C**.

In some instances, several options for the alignment, station configurations, and other features are presented. In these instances, an option would be selected and finalized in the Final SEIR-2.

3.2.1 DESIGN CHANGES IN MULTIPLE CITIES

The following two design changes are located within all three cities (i.e., Fremont, Milpitas, and San Jose): construction phasing and a new access road that would run along the entire Phase 1 portion of the alignment to an area in San Jose near Berryessa Station. Plans for the access road are provided in **Appendices B** and **C**.

3.2.1.1 Design Change 1. Phasing of BART Silicon Valley

The approved project does not include construction phasing.

The project description has been changed to include a phased-construction approach and resultant updates to fleet requirements, operating plans, ridership and parking, and schedule, as described below.

BART Silicon Valley would be built with a phased-construction approach. The first phase of BART Silicon Valley would be a 9.9-mile segment that would include stations in Milpitas and the Berryessa area of north downtown San Jose. The remaining 6.2 miles of BART Silicon Valley from the Berryessa area to Santa Clara would be developed as capital funding is identified. The previous discussion in **Section 3.1** of this chapter further describes construction phasing.

Since Phase 1 would be 6.2 miles shorter than the approved project, Phase 1 includes new VTA bus and BART fleet requirements, operating plan, ridership

[1] Engineering stationing numbers are sequential numbers of surveyed locations along an alignment displayed as an STA number. These numbers are included on the plans in **Appendices B** and **C**.

projections, and schedule, described below. These features are not compared to the previously approved project features because the approved project projections were for the entire 16.1-mile alignment.

The projected fleet requirements with and without Phase 1, based on 2007 fleet size and anticipated 2030 service levels, are shown below in **Table 3-2**.

Table 3-2: Fleet Size for Phase 1

Service	2007 Existing	2030 No Project Conditions	2030 Phase 1 Conditions
VTA Buses	525	509	509 - 594
VTA Light Rail Vehicles	100	100	100
BART Cars	669	956	1,030 – 1,041

Sources: Connetics Transportation Group and VTA, 2008.

If Phase 1 is implemented, an estimated VTA bus fleet of 509 to 594 vehicles would be needed to meet year 2030 service levels. The low end of the range represents no net change in the bus fleet compared to the Year 2030 No Project conditions, achieved through improved efficiency of operations and the substitution of high capacity (articulated) buses for standard buses where demand warrants. The high end of the range represents the worst case scenario where 85 additional 40-foot standard buses are needed to meet future demand and service levels. The total light rail fleet is not anticipated to change between now and 2030, with the total number of vehicles estimated at 100. VTA can accommodate the 2030 demand and still have a sufficient number of spare vehicles to accommodate breakdowns.

An estimated 74 to 85 additional BART vehicles would be required compared to Year 2030 No Project conditions. The BART fleet for the entire system with inclusion of Phase 1 would consist of 1,030 to 1,041 vehicles.

In regards to operating plans, with Phase 1 in 2030, BART would operate every day from 4:00 AM to 1:00 AM, with a combined 6-minute headway from 6:00 AM to 7:30 PM Monday through Saturday. After 7:30 PM Monday through Saturday, and all day on Sunday, the average headway would be 10 minutes.

Six new VTA bus routes would provide service to several major employment destinations, activity centers, and transit facilities in the Silicon Valley. Phase 1 would include an expansion of bus service from the approved Warm Springs BART Station or the proposed Milpitas Station, and various Silicon Valley destinations in Santa Clara County. This service would add to improvements planned in Valley Transportation Plan 2035 (VTP 2035), adopted by VTA in January 2009. Six new routes would serve Lockheed/Martin, Sunnyvale/Mountain View Industrial Parks, Oakmead (two routes), San Jose International Airport (SJIA), and San Jose Civic Center/San Jose State University

(SJSU)/Downtown San Jose. Three of the routes (serving Oakmead and SJIA) would originate at their northern ends at the BART Milpitas Station. The other three routes would originate at the approved Warm Springs BART Station. Some of VTA's local bus routes within the SVRTC also would be rerouted to serve BART stations. The new VTA bus routes would operate at 5- to 60-minute headways in the peak direction from about 5:00 AM to 9:00 AM in the morning peak and from 3:00 PM to 7:00 PM in the evening peak. Five of the six bus routes would also operate in the reverse-peak commute direction and in the midday at 20- to 60-minute headways. In addition to the routes described above, a high-frequency bus would be operated from the proposed Berryessa Station to downtown San Jose via King Street and Santa Clara Street. This bus line would have a short and long service, with the short service terminating at Diridon Station and the long service extending along The Alameda to Santa Clara. This service would operate at 5 minute peak headways for both the short and long service (combined headway of 2.5 minutes to downtown) and 10 minute headways off-peak.

Phase 1 would require four park-and-ride parking lots for the additional bus service. **Figures 3-2** through **3-5** show the location of the park-and-ride parking lots. The number of parking spaces required at each lot is based on projected parking demand for new VTA bus service. Demand for three of the four park-and-ride lots would be met within existing facilities located at the approved Warm Springs BART Station (303 spaces), the proposed Berryessa Station (753 spaces in the parking garage), and the existing Evelyn LRT Station in Mountain View (49 spaces). The fourth parking facility would be constructed in downtown Sunnyvale to accommodate 91 spaces.

Phase 1 would serve a projected total of 46,457 riders per day in 2030. **Table 3-3** summarizes parking demand at each station. **Table 3-3** summarizes parking demand at each station proposed under Phase 1 and in the existing BART core system outside of Santa Clara County, not including the approved Warm Springs BART Station. Parking demand would decrease at the approved Warm Springs BART Station with the Phase 1 extension into Santa Clara County.

Table 3-3: Phase 1 2030 Parking Demand

Station	Opening Year (2018) Parking Demand	2030 Parking Demand	2030 Parking Supply
Milpitas Station	1,260	2,260	2,260
Berryessa Station[a]	2,505	4,835	4,835
BART Core System	617	617	617
TOTAL	3,765	7,712	7,712

Note: a – Includes park-and-ride spaces for Phase 1 express/feeder service (approximately 750 in 2030).

Sources: Travel Demand Forecasts, Hexagon Transportation Consultants Inc., and VTA, 2008.

Source: Google Earth, CirclePoint, 2008.

Figure 3-2: Location of Warm Springs BART Station Park-and-Ride Lot

Source: Google Earth, CirclePoint, 2008.

Figure 3-3: Location of Berryessa Station Park-and-Ride Lot

Source: Google Earth, CirclePoint, 2008.

Figure 3-4: Location of Evelyn LRT Station Park-and-Ride Lot

Source: Google Earth, CirclePoint, 2008.

Figure 3-5: Location of downtown Sunnyvale Park-and-Ride Lot

In regards to the schedule, Phase 1 would take approximately eight years to construct and conduct start-up and testing activities as shown in **Figure 3-6**. Passenger service for Phase 1 would start in 2018, assuming funding is available.

3.2.1.2 Design Change 2. Access Road from Fremont to San Jose (STA 35+00 to STA 510+00)

The approved project included a maintenance access road to the east of the BART alignment and within the UPRR ROW from Hostetter Road to the intersection of Sierra Road and Lundy Avenue.

The project description has been changed to include an access road, as described below.

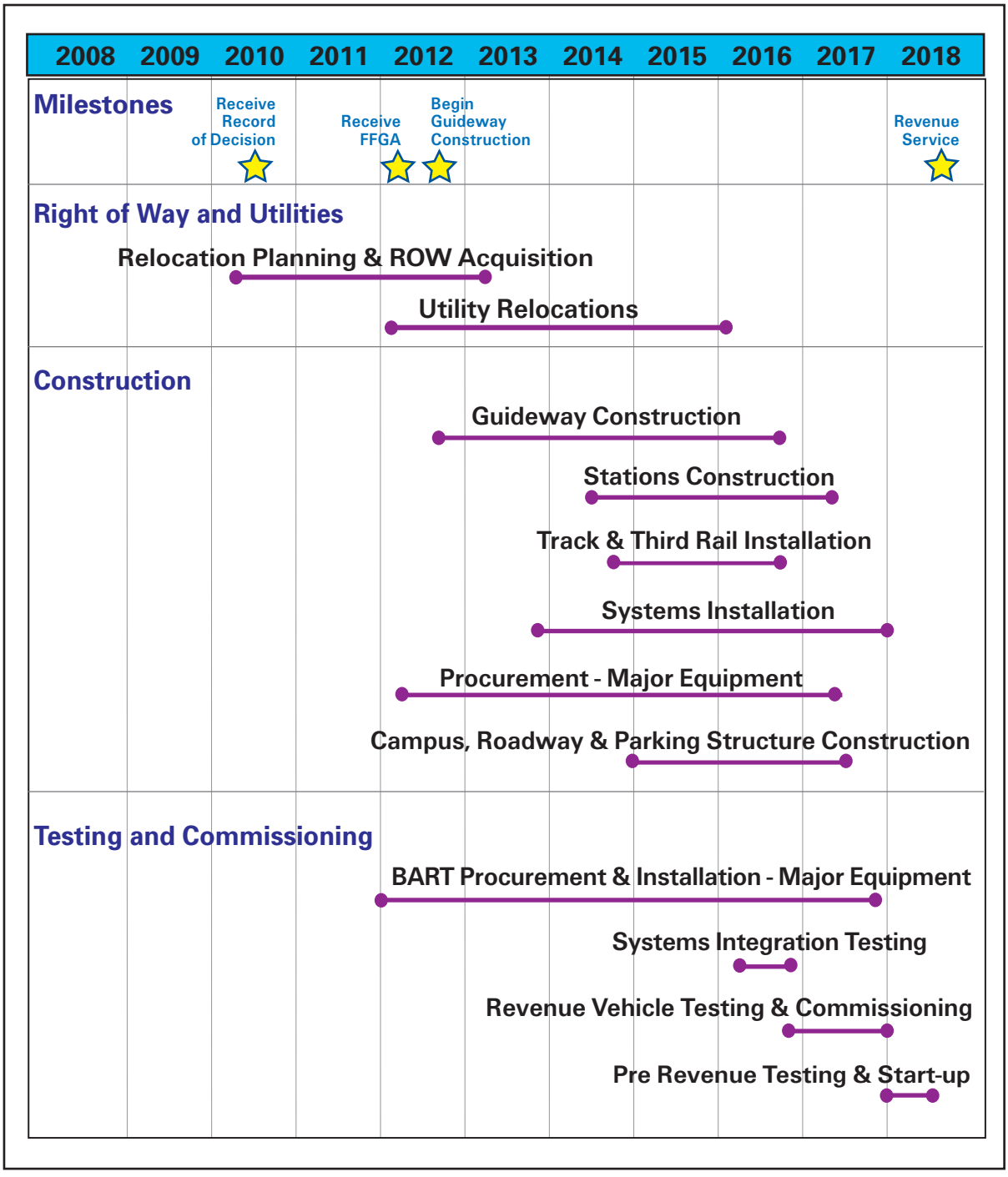
From the approved BART Warm Springs Station in Fremont to just north of Berryessa Road in San Jose, an access road would be constructed to the east of the alignment and within the UPRR ROW for maintenance and utility access. Ingress and egress to the access road would be provided from station areas, BART facility sites, public streets, or parking lots, as negotiated with landowners adjacent to the railroad corridor. The maintenance access road would be approximately 10 feet wide and would be made of an all-weather surface (such as gravel). The access road would terminate at approximately STA 510+00.

Design Change 8, Dixon Landing Road Alignment, (as described below in **subsection 3.2.3**) includes two BART alignment options at Dixon Landing Road—a Retained Cut Option[2] and an At Grade Option—that would alter the design of the access road. If the Retained Cut Option is selected, the access road would run adjacent to the BART alignment but at grade. If the At Grade Option is selected, the BART tracks would be at grade and Dixon Landing Road would be in a retained cut to pass beneath the BART alignment. A bridge for the access road would be constructed over Dixon Landing Road. All other access road bridges at grade-separated roadways have been environmentally reviewed and cleared by other entities.

3.2.2 CITY OF FREMONT

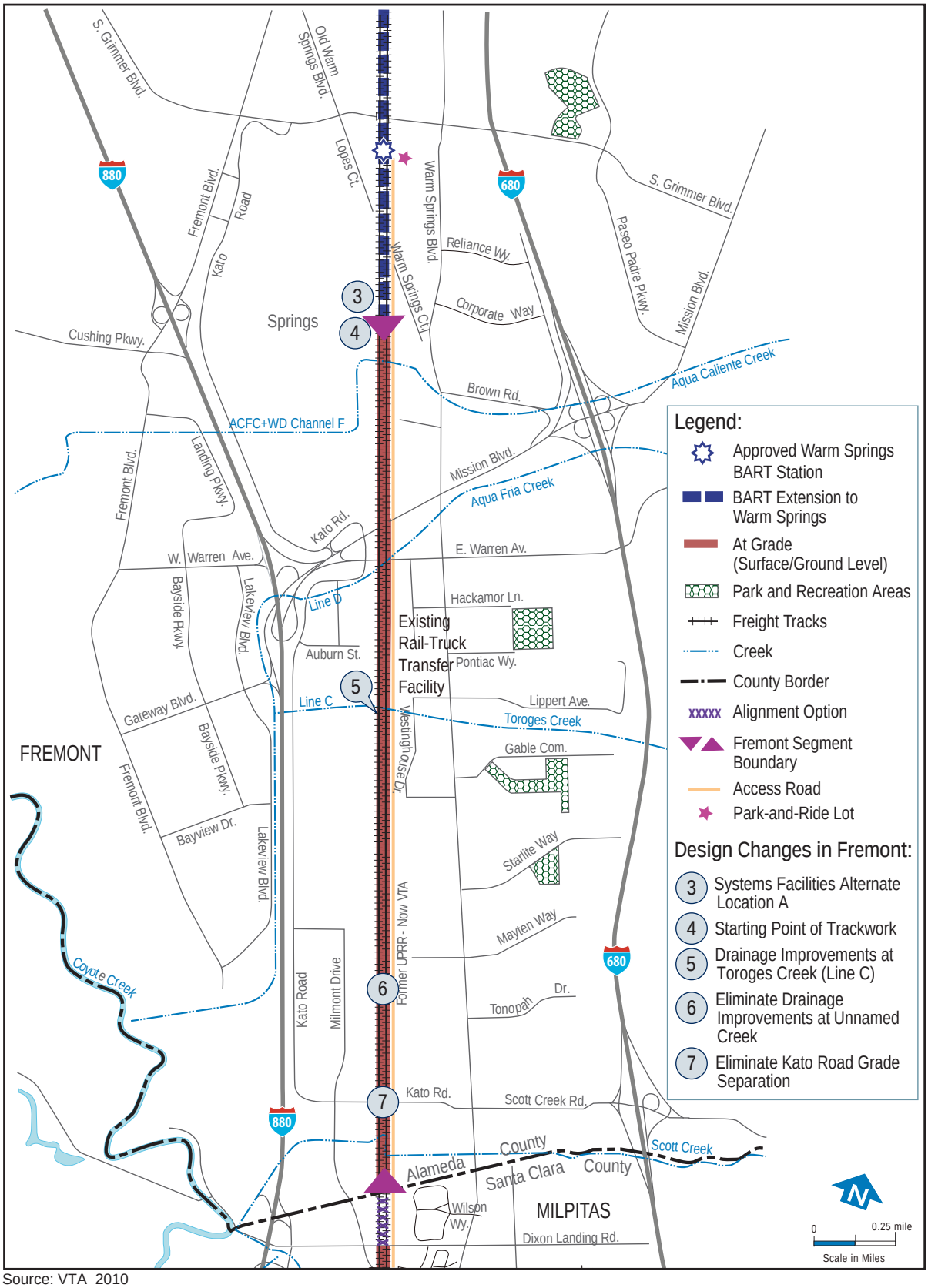
Phase 1 would begin slightly south of the approved BART Warm Springs Station. **Figure 3-7** shows the alignment in Fremont and the locations of the design changes. **Appendices B** and **C** provide detailed plans of the alignment through Fremont.

[2] "Retained cut" is a construction method in which tracks are placed below grade with walls on either side to support the earth.



Source VTA 2010

Figure 3-6: Phase 1 Construction Schedule



Source: VTA 2010

Figure 3-7: Design Changes in the City of Fremont

Design changes in Fremont include adding an alternate location for systems facilities, moving the starting point of the alignment approximately 900 feet north of the approved starting point, adding a drainage improvement at Toroges Creek, eliminating the drainage improvement at Line B,[3] and eliminating the grade separation at Kato Road. Additionally, the access road described above in **subsection 3.2.1** as Design Change 2, Access Road from Fremont to San Jose, would begin in Fremont.

3.2.2.1 Design Change 3. Systems Facilities Alternate Location A (STA 28+00)

Under the approved project, High Voltage Substation SRC, Traction Power Substation SRR, Switching Station SRR, and Train Control Building S28 would be located west of the UPRR ROW, with access provided from Railroad Court in Milpitas (STA 259+00). The high-voltage substation would require the installation of high-voltage (115-kilovolt [kV]) power feed lines that connect to nearby Pacific Gas & Electric Company (PG&E) towers/lines and/or PG&E substations. To provide 115-kV service from PG&E to High Voltage Substation SRC with adequate clearance between BART and the existing overhead high-voltage power lines, a new 60-foot-high, tapered, tubular steel tower would be constructed within PG&E's easement. A second, smaller tower/pole would also be constructed to the south and on the facility site. This tower/pole would allow the 115-kV line to transition down to the substation connection.

During preliminary engineering, an alternate location (Alternate Location A) for the High Voltage Substation SRC and Switching Station SRR was developed in Fremont. Phase 1 has been changed to include the new alternate location for this facility, as described below.

There are two alternate locations for High Voltage Substation SRC and Switching Station SRR: Alternate Location A is east of the UPRR Warm Springs Yard near Warm Springs Court, and Alternate Location B is in Milpitas near Railroad Court. Alternate Location B is described as Design Change 10, System Facilities Alternate Location B, below in **subsection 3.2.3** since it is located in Milpitas.

- **Alternate Location A.** The High Voltage Substation SRC and Switching Station SRR Alternate Location A would be located near STA 28+00. An existing 115-kV line is located west of the site and the UPRR Warm Springs Yard. If Alternate Location A is selected, the 115-kV line would be extended from an existing tower near STA 14+00 across the UPRR tracks to a new pole east of the alignment within the approved BART Warm

[3] Line B is an unnamed creek.

Springs Station parking lot. The new 115kV line would continue to a second pole east of the alignment and west of Warm Springs Court, and end at a third pole at the systems facilities site. All three new poles would be approximately 100-foot-high and made of tapered, tubular steel. This would allow the 115-kV line to cross BART and the UPPR tracks with sufficient clearance. The 115-kV line would transition down to the substation and would connect to the Alternate Location A systems facilities. Vehicular access to the Alternate Location A substation and switching station would be provided from Warm Springs Court.

3.2.2.2 Design Change 4. Starting Point of Trackwork (STA 35+00)

The approved project would begin slightly south of the approved BART Warm Springs Station in Fremont with a new, at grade, two-track BART rail line near the UPRR Warm Springs Yard (approximately 2,200 feet north of Mission Boulevard) and east of the existing ROW (STA 45+00).

During preliminary engineering, the starting point of Phase 1 trackwork was moved to approximately 900 feet north of the approved starting point. The BART alignment would now begin south of the approved BART Warm Springs Station in Fremont, at the southerly terminus of the BART Warm Springs Extension guideway, with a new, at grade, two-track BART rail line. Phase 1 trackwork would begin approximately at STA 35+00 near the UPRR Warm Springs Yard, east of the UPRR ROW, which is owned by VTA.

3.2.2.3 Design Change 5. Drainage Improvements at Toroges Creek (Line C) (STA 101+00)

The alignment for the approved project would continue at grade and cross over Toroges Creek (Line C), where a new box culvert would be constructed by other entities.

The BART alignment would now continue at grade and cross over Toroges Creek/Line C, where VTA would construct a new box culvert to accommodate BART and the access road that would be constructed to the east of the BART tracks (see Design Change 2, Access Road from Fremont to San Jose, above in **subsection 3.2.1**).

3.2.2.4 Design Change 6. Eliminate Drainage Improvements at Unnamed Creek (STA 146+00)

Under the approved project, BART would pass an unnamed creek (referred to in the SEIR-1 as Line B), where VTA would construct a new box culvert.

The construction of drainage improvements at the unnamed creek was completed as part of the Freight Railroad Relocation/Lower Berryessa Creek Project (FRR). The FRR Project relocated the UPRR freight railroad tracks from

the VTA ROW to approximately 45 feet to the west within the UPRR ROW, parallel to a second set of existing freight tracks. The FRR Project upgraded the drainage structure at the unnamed creek. Therefore, Phase 1 would not include construction of this new box culvert. This feature has been eliminated from Phase 1.

3.2.2.5 Design Change 7. Eliminate Kato Road Grade Separation (STA 167+00)

With the approved project, BART would cross on a new bridge structure over Kato Road, which VTA would reconstruct as a roadway underpass. VTA would also construct a new bridge for the UPRR to cross over Kato Road.

The grade separation of Kato Road and the construction of a new bridge for the UPRR are not included in Phase 1. These two features would be developed as part of the Kato Road Grade Separation Project, which will be constructed by the City of Fremont. Construction of a new bridge for BART to cross over Kato Road is still included in Phase 1, consistent with the approved project.

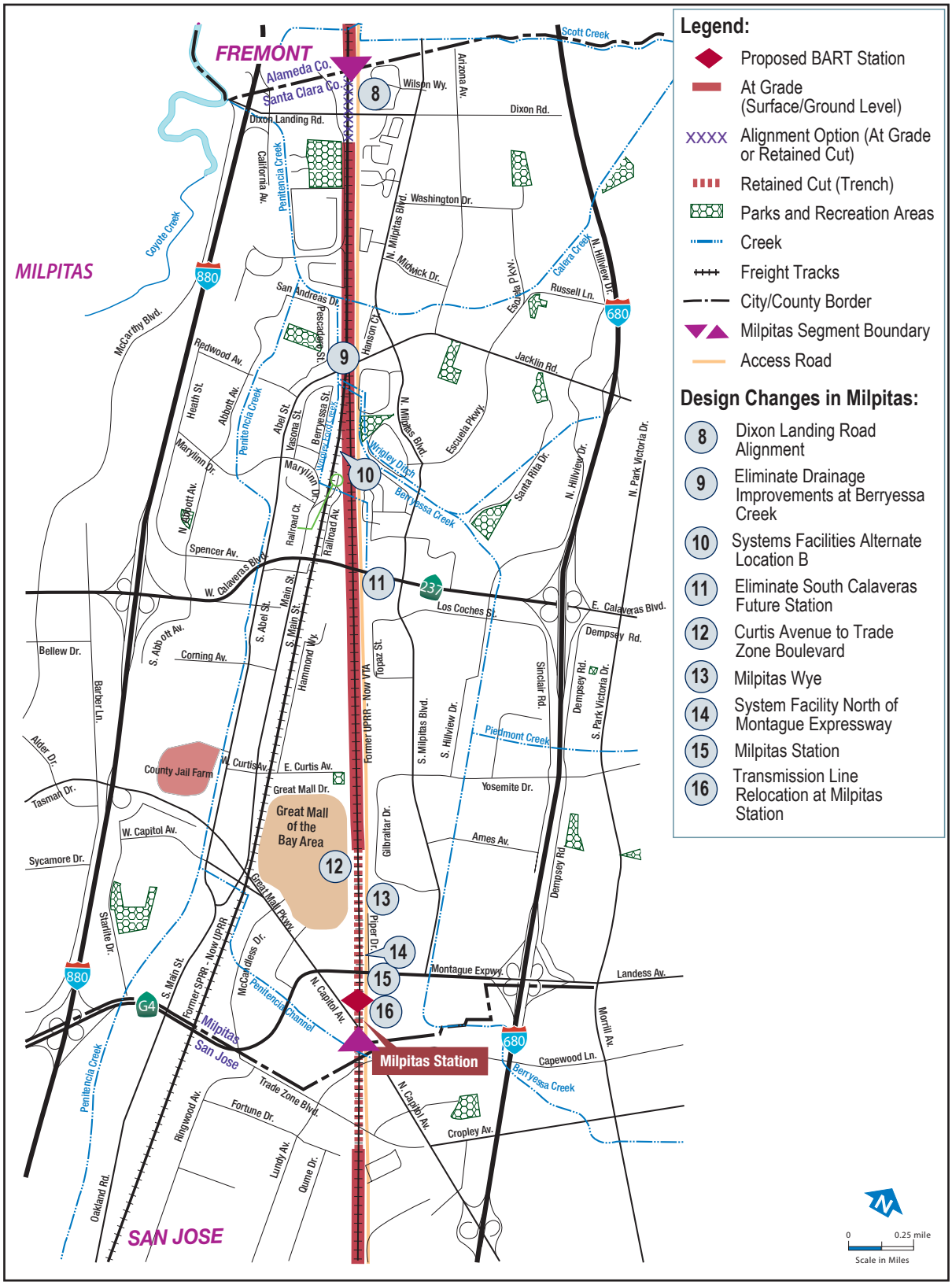
3.2.3 CITY OF MILPITAS

The design changes in Milpitas are shown in **Figure 3-8**. **Appendices B** and **C** provide detailed plans of the BART alignment through Milpitas.

Design changes in Milpitas include: adding alignment options at Dixon Landing Road; eliminating drainage improvements at Berryessa Creek; including alternate locations for systems facilities; eliminating the South Calaveras Future Station; modifying the retained cut between Curtis Avenue and Trade Zone Boulevard; adding three alternative locations for the Milpitas Wye; reconfiguring Milpitas Station; relocating a systems facility near Milpitas Station; relocating a PG&E 115-kV transmission line near Milpitas Station; and adding a maintenance access road. The maintenance access road is described above in **subsection 3.2.1** as Design Change 2, Access Road from Fremont to San Jose. In addition to these design changes, the previously approved Montague/Capitol Station has been renamed the Milpitas Station.

3.2.3.1 Design Change 8. Dixon Landing Road Alignment (STA 182+00 to STA 201+00)

The SEIR-1 considered two options for the alignment at Dixon Landing Road: at grade and retained cut. The VTA Board of Directors approved the at grade design in 2007 as part of the project. Under the approved project, BART would continue at grade and cross on a new bridge structure over Dixon Landing Road, which VTA would reconstruct as a roadway underpass. VTA would also construct a new bridge for the UPRR to cross over the roadway. An adjacent cross street to the west of the UPRR ROW (Milmont Drive) would also be lowered due to the new slope of Dixon Landing Road.



Source: VTA, 2010.

Figure 3-8: Design Changes in the City of Milpitas

Phase 1 now includes two options for the BART alignment—the retained cut and the at grade designs—starting from the Alameda/Santa Clara county line and Fremont/Milpitas city lines to south of Dixon Landing Road. A description of each option is provided below.

- **Retained Cut Option**. Under this option, BART would transition into a retained cut at county and city lines to south of Dixon Landing Road (STA 182+00 to 201+00). Dixon Landing Road would remain at grade and would be supported over the BART retained cut on a new roadway bridge structure. No changes to the UPRR tracks would be made, and the tracks would continue to cross Dixon Landing Road at grade.

  There are four alternate locations for the pump station under the Dixon Landing Road BART Retained Cut Option. Alternate Location A is north of Dixon Landing Road on the west side of the railroad corridor. Alternate Location B is south of Dixon Landing Road on the east side of the railroad corridor. Alternate Locations C and D are within the railroad corridor south of Dixon Landing Road, on the east and west side of the BART tracks, respectively.

- **At Grade Option**. Under this option, BART would continue at grade and cross on a new bridge structure over Dixon Landing Road (STA 191+00), which VTA would reconstruct as a roadway underpass. VTA would also construct a new bridge for the UPRR to cross over Dixon Landing Road. Milmont Drive, an adjacent cross street to the west of the UPRR ROW, would be lowered to allow it to intersect with the new slope of Dixon Landing Road.

3.2.3.2 Design Change 9. Eliminate Drainage Improvements at Berryessa Creek (STA 246+00)

With the approved project, BART would continue over Berryessa Creek on a new multi-cell box culvert that would be constructed by VTA.

The construction of the Berryessa Creek multi-cell box culvert (STA 246+00) is under construction as part of the FRR Project, as described above in **subsection 3.2.2**, Design Change 6, Eliminate Drainage Improvements at Unnamed Creek. Therefore, Phase 1 would no longer include construction of this new multi-cell box culvert.

3.2.3.3 Design Change 10. Systems Facilities Alternate Location B (STA 260+00)

Under the approved project, High Voltage Substation SRC, Traction Power Substation SRR, Switching Station SRR, and Train Control Building S28 would be located west of the UPRR ROW, with access provided from Railroad Court. The high-voltage substation would require installation of high-voltage (115-kV) power feed lines that connect to nearby existing PG&E towers/lines and/or PG&E

substations. To provide 115-kV service from PG&E to High Voltage Substation SRC with adequate clearance between BART and the existing overhead high-voltage power lines, a new 60-foot-high tapered, tubular steel tower would be constructed within PG&E's existing easement. A second, smaller tower/pole would also be constructed to the south and on the facility site. This tower/pole would allow the 115-kV line to transition down to the substation connection.

Phase 1 includes two alternate locations for High Voltage Substation SRC and Switching Station SRR: Alternate Location A and Alternate Location B. Alternate Location A was previously described above under **subsection 3.2.2** as Design Change 3, System Facilities Alternate Location A, and Alternate B is described below.

- **Alternate Location B.** Alternate Location B, similar to the approved systems facilities location, is in Milpitas near Railroad Court. Alternate Location B is on private property within a parking lot. If this location is selected, a PG&E 60-foot-high, tapered tubular steel tower would be constructed within PG&E's existing easement. A second, smaller tapered tubular steel pole would be constructed to the south, on the facility site. This pole would allow the 115-kV line to transition down to the substation. Access to the systems facilities would be provided from Railroad Court.

3.2.3.4 Design Change 11. Eliminate South Calaveras Future Station (STA 292+00)

Under the approved project, the South Calaveras Future Station area would be located in midtown Milpitas, south of Calaveras Boulevard, and on the east side of the UPRR ROW; it would be built after construction of the project when funding became available.

The South Calaveras Future Station has been eliminated. The ROW has been updated to reflect additional area needed for the High Rail Vehicle Access point off of Industrial Way.

3.2.3.5 Design Change 12. Curtis Avenue to Trade Zone Boulevard (STA 344+00 to STA 414+00)

In the approved project, the Retained Cut Long Option from the SEIR-1 was selected. BART would transition into a retained cut from south of Curtis Avenue, past the Milpitas/San Jose city lines, to south of Trade Zone Boulevard (STA 337+00 to 411+00). The length and depth of the retained cut would enable the freight track on the west side of the UPRR ROW to cross over the lowered BART

tracks to access a relocated locomotive wye[4] and an existing spur track. BART would continue in a retained cut past the Great Mall and would pass beneath Montague Expressway, Capitol Avenue, and Trade Zone Boulevard, each of which would be supported above BART on new roadway structures.

Under Phase 1, BART would transition into a retained cut from south of Curtis Avenue, continue past the Milpitas/San Jose city lines, and return to an at grade configuration south of Trade Zone Boulevard. The retained cut of BART would allow UPRR tracks to cross over the BART alignment to reach the Milpitas Wye. The starting point of the retained cut would vary depending on which Milpitas Wye Relocation Option is selected. The existing locomotive wye in Milpitas would be modified to one of the three configuration options described in Design Change 13, Milpitas Wye. For the Milpitas Wye With Spur Connection and Wye and Industrial Lead Options, the BART retained cut would begin at STA 344+00 and end at approximately STA 414+00. For No Wye/Industrial Lead Only Option, the BART retained cut would begin at STA 356+00 and end at STA 414+00.

3.2.3.6 Design Change 13. Milpitas Wye (STA 355+00)

There were two options for a locomotive wye in Milpitas in the SEIR-1: Relocated Milpitas Wye Option and No Wye Option. The Relocated Milpitas Wye Option was selected in the approved project. The approved Long Retained Cut Option alignment configuration was compatible with the relocation of the Milpitas Wye.

Phase 1 includes three alternative locations for the redesigned Milpitas Wye: Wye with Spur Connection Option, Wye and Industrial Lead Option, and No Wye/Industrial Lead Only Option.

- **Wye with Spur Connection Option.** Under this option (STA 355+00) the Milpitas Wye would be relocated to a similar location as under the approved project. The wye has been redesigned to modify the angle of the UPRR tracks as they enter the wye. The curve of the wye would be shallower than that of the approved wye option. The BART pump station would be relocated north to approximately STA 351+00. A UPRR at grade bridge over BART would be required from approximately STA 350+00 to STA 353+00. The UPRR tail track would be located east of the BART line. Piper Drive would be shortened and shifted to the east, away from the UPRR track. An additional 20-foot-wide ROW strip along the western VTA property line would be needed beginning at approximately STA 351+00 and ending at STA 354+00.

[4] A wye is an arrangement of tracks in a triangular shape that enables a train to turn around.

- **Wye and Industrial Lead Option.** Under this option (STA 355+00) the Milpitas Wye would be relocated to a similar location as under the approved project. Like the previous option, the wye has been redesigned to modify the angle of the UPRR tracks as they enter the wye. The curve of the wye would be shallower than that of the approved wye option. The BART pump station would be relocated north to approximately STA 351+00. Three UPRR at grade bridges over BART would be constructed from approximately STA 350+00 to STA 353+00, from STA 358+00 to STA 361+00, and from STA 362+00 to STA 365+00. This option would shift the UPRR connecting tail track west of the BART line. This westward shift would require an additional 20-foot-wide ROW strip along the western VTA property line beginning at approximately STA 351+00 and ending at STA 365+00.
- **No Wye/Industrial Lead Only Option.** This option is the "No Wye Option." It includes a connection of the UPRR rail from the tail track/yard lead to the northern leg of the existing Milpitas Wye. The UPRR tail track/yard lead would be located west of the BART line up to STA 362+00. This connection would serve the major industries east of the alignment. The southern leg of the existing wye would be decommissioned and removed. The pump station for BART would be located within the VTA ROW at approximately STA 366+00. A UPRR at grade bridge over BART would be required from approximately STA 362+00 to STA 364+00. This option would require an additional 20-foot-wide ROW strip along the western VTA property line beginning at approximately STA 351+00 and ending at STA 365+00 to accommodate the tail track/yard lead.

3.2.3.7 Design Change 14. System Facility North of Montague Expressway (STA 366+00)

Under the approved project, Traction Power Substation Site SME would be located just north of Montague Expressway on the east side of the UPRR ROW, within the footprint of the existing UPRR wye that would be abandoned (STA 366+00).

The location of this system facility has been changed in Phase 1. The Traction Power Substation Site SME would now be located just north of Montague Expressway and above the BART alignment on an at grade bridge over BART from approximately STA 366+00 to STA 368+00.

3.2.3.8 Design Change 15. Milpitas Station (STA 372+00)

In the approved project, the station was referred to as the Montague/Capitol Station. A four- to eight-level parking structure on 2 acres would be constructed at the north side of the station area, to the east of the station, along Montague Expressway. Additional surface parking and/or future transit facilities would be

located as needed within the station area.[5] A 16-bay bus transit center with "kiss-and-ride"[6] facilities would be located east of the station and south of the parking structure. A pedestrian overcrossing would extend from the east side of Capitol Avenue over the roadway to the adjacent Montague Light Rail Transit (LRT) station situated in the median of Capitol Avenue. An approximately 60-foot-high radio tower and an associated equipment shelter would be located west of the UPRR ROW and south of South Milpitas Boulevard.

The Montague/Capitol Station has been renamed the Milpitas Station under Phase 1. During preliminary engineering, the parking structure was modified to an eight-level parking structure. **Figure 3-9** shows the revised Milpitas Station layout. Access to the structure would be from an extension of South Milpitas Boulevard from Montague Expressway to Capitol Avenue, and a new frontage road that would be accessed via Montague Expressway. Gladding Court would be closed at Montague Expressway and a cul de sac would be constructed to maintain access.

The bus transit center would provide 16 bus bays, including four bays for bus holding or layovers while not in service. Bus access to the transit center would be from a signalized driveway on Capitol Avenue and from a bus-only lane on southbound South Milpitas Boulevard. A bike path would be provided along the southern edge of the ROW of South Milpitas Boulevard. A bicycle storage facility would be constructed southwest of the station building. A pedestrian overcrossing would extend from the existing Montague LRT station to the Milpitas BART Station. A radio tower would not be included in the Milpitas BART Station.

3.2.3.9 Design Change 16. 115 Kilovolt Line Relocation at Milpitas Station (STA 370+00)

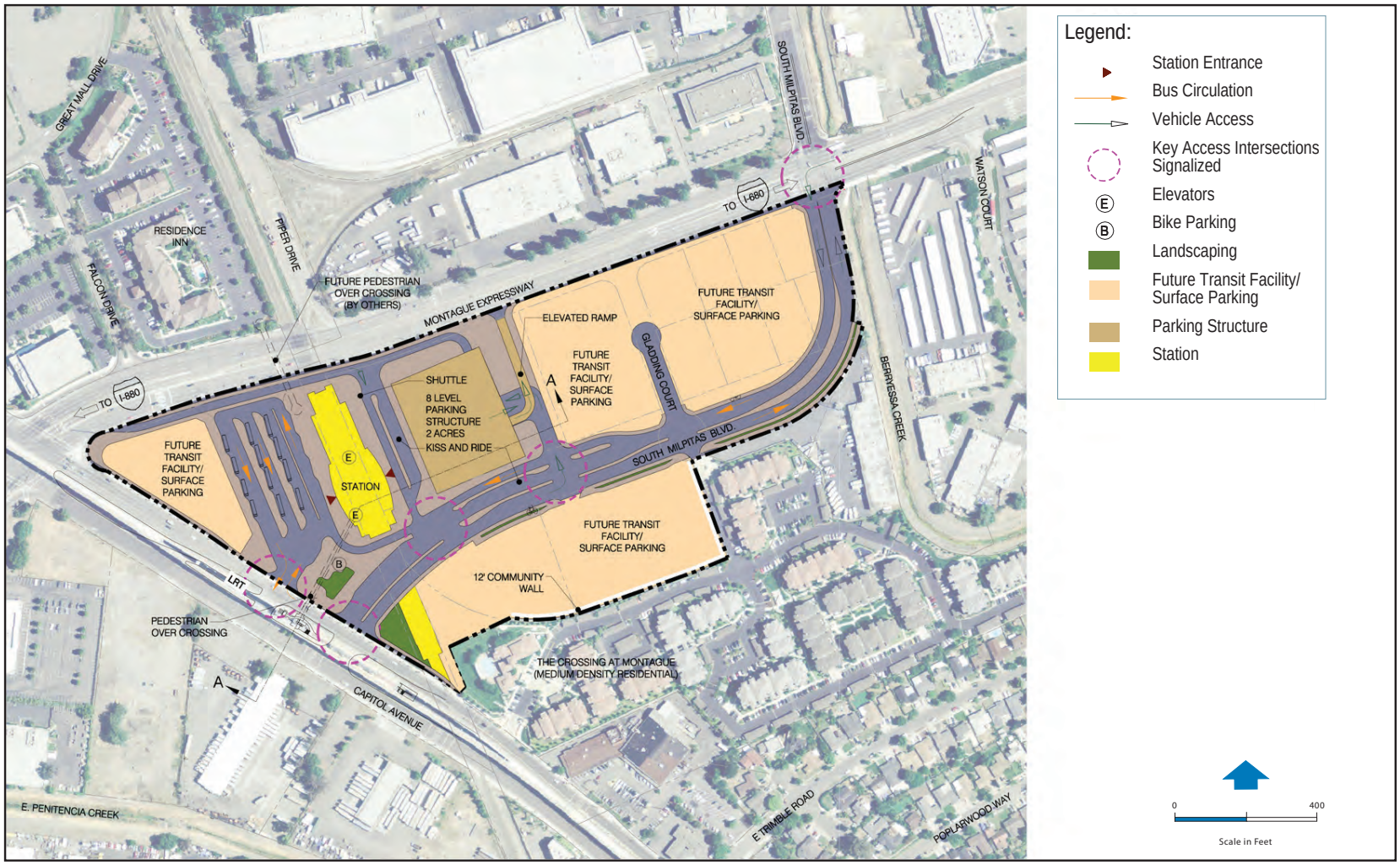
Relocation of the 115-kV line at the Milpitas Station was not included in the approved project.

Under Phase 1, the 115-kV transmission line along Montague Expressway would need to be relocated in three areas near the Milpitas Station, as follows:

- **Capitol Avenue/Montague Expressway Intersection.** There are two existing transmission poles that support an overhead line along the south side of Montague Expressway, between Capitol Avenue and the UPRR tracks. One of the existing poles is approximately 60 feet tall

[5] At the June 2007 Board of Directors meeting, the Board approved the Parking Structure with Surface Parking Option. The Surface Parking Option was eliminated.

[6] A passenger drop-off area.



Source VTA 2010

Figure 3-9: Milpitas Station Plan

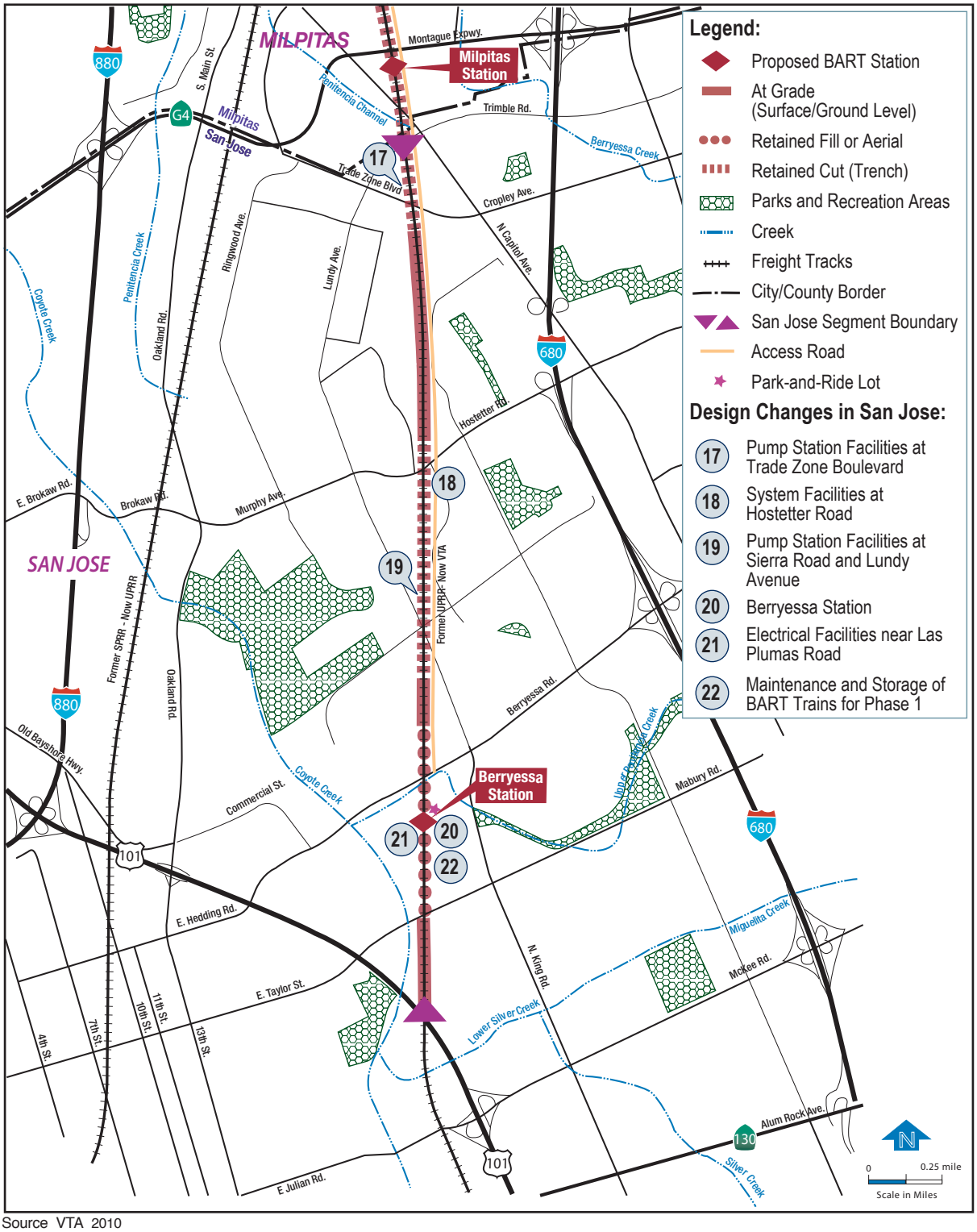
and made of wood, and the other is approximately 100 feet tall and made of steel with three arms. These transmission poles conflict with the proposed frontage road/bus lane entering Milpitas Station. The two poles would be relocated to the 10-foot median separating Montague Expressway and the proposed frontage road/bus lane. The two poles would be replaced in kind with poles of the same material and height.

- **Near Piper Drive.** There is one existing transmission pole that supports a PG&E 115-kV overhead line along the south side of Montague Expressway, between the UPRR tracks and South Milpitas Boulevard. The pole is approximately 60 feet tall and is made of wood. This transmission pole conflicts with the other utility relocations along the BART alignment and the frontage road/bus lane entering Milpitas Station. The pole would be relocated to the 10-foot median separating Montague Expressway and the proposed frontage road/bus lane. The transmission pole would be replaced with a similar 60-foot-tall wooden pole.
- **South Milpitas Boulevard/Montague Expressway.** There are five transmission poles at the intersection of South Milpitas Boulevard and Montague Expressway that conflict with the proposed improvements for South Milpitas Boulevard. One of the poles supports the 115 kV-line that runs along the south side of Montague Expressway. This pole would be relocated to the southeast corner of the intersection. Three 115-kV poles running north/south along the west side of South Milpitas Boulevard and crossing Montague Expressway would be relocated to the east. This relocation would require coordination with Santa Clara Valley Water District's planned improvements to Berryessa Creek. This transmission line would continue south across Montague Expressway and connect to the relocated 115-kV pole, which has been previously described. One pole on the north/south line, located south of Montague Expressway, would be relocated to the back of the sidewalk on the east side of South Milpitas Boulevard. These five poles would be replaced with similar 60-foot-tall wooden poles.

3.2.4 CITY OF SAN JOSE

Phase 1 in San Jose is shown in **Figure 3-10**, which also indicates the locations of the design changes. Plans showing the BART alignment are included in **Appendices B** and **C**.

Design changes in San Jose include: a new location for a pump station at Trade Zone Boulevard; a change in the type of system facilities at Hostetter Road; a new pump station at Sierra Road and Lundy Avenue; modifications to the Berryessa Station layout; the addition of an alternate site for electrical facilities; a change in the location of the maintenance and storage of BART trains; and the



Source VTA 2010

Figure 3-10: Design Changes in the City of San Jose

addition of a maintenance access road adjacent to the BART alignment. The maintenance access road is described above in **subsection 3.2.1** as Design Change 2, Access Road from Fremont to San Jose.

3.2.4.1 Design Change 17. Pump Station Facilities at Trade Zone Boulevard (STA 401+00)

The approved project did not include a pump station within the ROW for this facility.

Phase 1 would include a pump station located north of Trade Zone Boulevard on the west side of the railroad corridor.

3.2.4.2 Design Change 18. Systems Facilities at Hostetter Road (STA 460+00)

The approved project included a Train Control Building at Hostetter Road (STA 460+00) and a pump station nearby (STA 492+00). The approved project also included Traction Power Substation Site SMB (STA 415+00).

The Traction Power Substation Site SMB that has been renamed the Traction Power Substation Site SHO; would be located south of Hostetter Road on the east side of the railroad corridor, within the existing VTA ROW. The pump station at Hostetter Road would also be located on the southeast side of the alignment in the VTA ROW.

3.2.4.3 Design Change 19. Pump Station Facilities at Sierra Road and Lundy Avenue (STA 488+00)

The approved project includes a pump station within the UPRR ROW, south of Sierra Road.

Under Phase 1, this pump station has been moved to the other side of the Sierra Road and Lundy Avenue intersection. The pump station would be located north of the intersection on the west side of the railroad corridor.

3.2.4.4 Design Change 20. Berryessa Station (STA 533+00)

Under the approved project, Berryessa Station would be located at the north end of the station site and would contain an approximately 700-foot-long, 29-foot-wide center platform on the aerial structure. Pedestrian access to the station platform would be from a mezzanine situated at street level. Traction Power Substation SBE would be located at the north end of Berryessa Station under the BART aerial structure (STA 525+00).

There were two options for parking in the station area: (1) Parking Structure with Surface Parking Option and (2) Surface Parking Option. Under the Parking Structure with Surface Parking Option, a four- to six-level parking structure on 3.4 acres would be constructed at the south end of the site and to the west of the UPRR ROW. Additional surface parking and/or future transit facilities would be located as needed within the station area. Under the Surface Parking Option, surface parking and/or future transit facilities would be located as needed within the station area. Berryessa Way, an internal road within the Berryessa Station site, ran parallel to and east of the alignment, crossed under the aerial alignment midway down the station campus, and then ran parallel to and west of the alignment; it began in the north at Berryessa Road, crossed under the aerial alignment around the midpoint of the station campus, and then ran parallel to and west of the alignment, adjacent to the Coyote Creek riparian setback, before terminating in the south at Mabury Road. The station footprint would be set back approximately 150 to 200 feet from the tops of the banks of both Upper Penitencia Creek and Coyote Creek (except where access is provided from Berryessa Road).

Under Phase 1, the station has been shifted south along the aerial trackway structure. Traction Power Substation Site SBE has also been shifted south and would now be located near STA 542+00 within the BART alignment footprint, under the aerial structure. The Gap Breaker Station has also been relocated under the aerial structure, as described in Design Change 21, Electrical Facilities near Las Plumas Road. As a result of the station shift, the two BART crossovers have been relocated from south of the station to one on either side of the station (from STA 548+00 to STA 541+00, and from STA 538+00 to STA 526+00).

Station entrances would be provided on the north, south, and east sides of the station. The station would include a BART security building, with accompanying surface parking, located north of the station and east of the UPRR ROW.

The Surface Parking Option has been eliminated. The design of the parking facilities has been modified to include an eight-level parking structure on 4.3 acres on the southern half of the site and to the east of the UPRR ROW. Additional surface parking and/or future transit facilities would be located as needed within the station area.

Berryessa Station Way would extend from Berryessa Road to Mabury Road on the east side of the UPRR ROW. Berryessa Station Way would be constructed as a four-lane public street with a median. Berryessa Station Way would provide access to the bus transit center, both surface and structured parking facilities, and passenger loading areas. Five signalized intersections would be located along Berryessa Station Way to provide access to these facilities. A northbound bus-only lane would run parallel to and east of Berryessa Station Way to facilitate bus movements to the transit center. A portion of Lenfest Avenue would be realigned to the east as part of a new signalized intersection at Mabury Road.

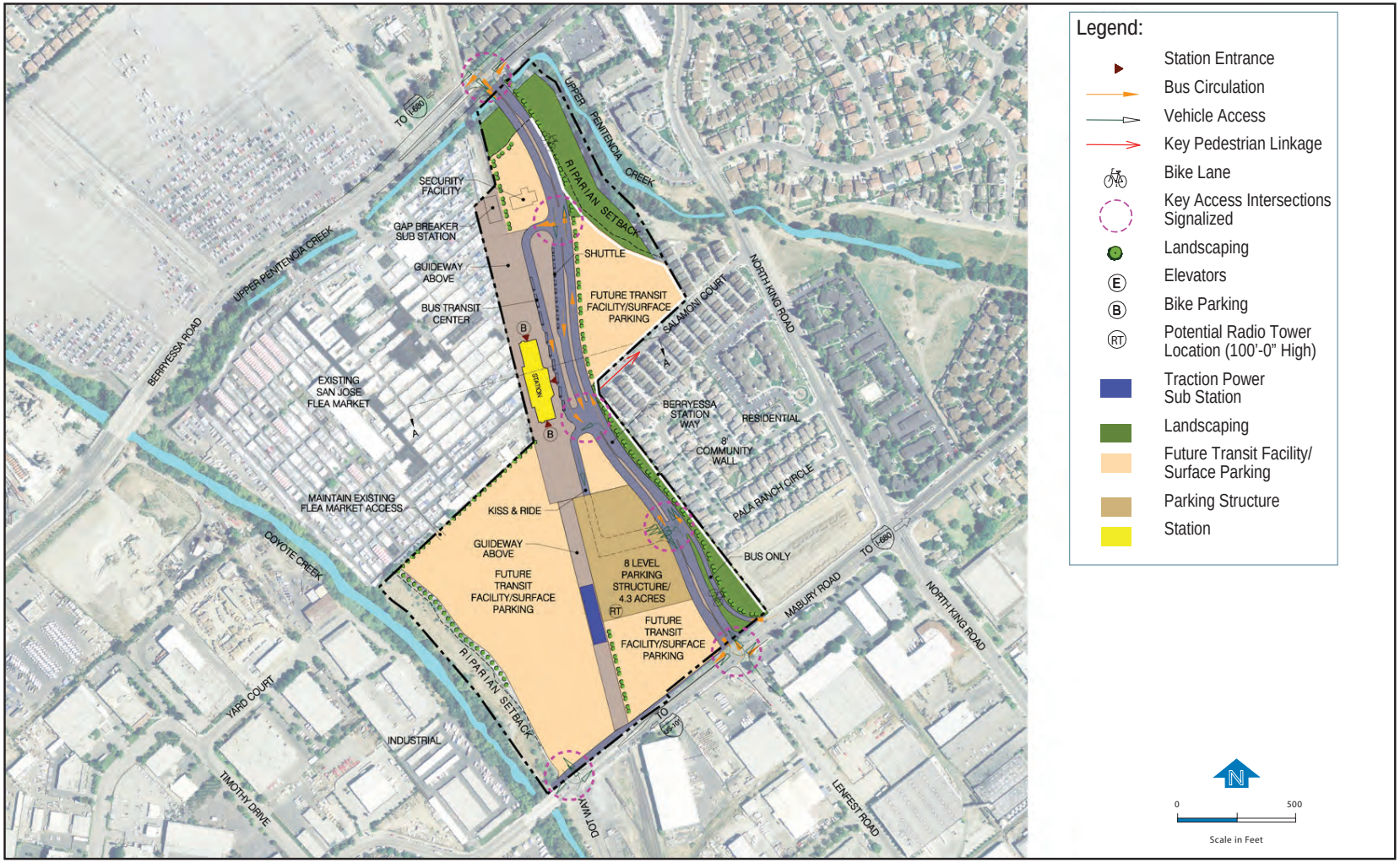
A bicycle and pedestrian connection would be provided at Salamoni Court. Dedicated bike paths and shared-use trails would be constructed east and west of Berryessa Station Way. A bike storage facility would be installed north of the station. **Figure 3-11** shows the revised Berryessa Station layout.

The Berryessa Station area would have either a 150-foot setback from the near banks of Upper Penitencia Creek and Coyote Creek or a 100-foot setback from the riparian tree dripline (outer edges of the tree canopy), whichever is greater. This setback distance conforms to the *San Jose Riparian Corridor Policy Study* guidelines (1999), which require "a minimum of 100 feet from the edge of the riparian corridor (or top of bank, whichever is greater)." Two exceptions to this setback would occur at the following locations: (1) where a new street on the east side of the UPRR ROW—Berryessa Station Way—crosses over Upper Penitencia Creek to/from Berryessa Road and (2) where an existing driveway would be reconstructed and pedestrian improvements made as requested by the City of San Jose at the northwest corner of DOT Way (a private street that leads to the San Jose Mabury Yard) and Mabury Road.

3.2.4.5 Design Change 21. Electrical Facilities near Las Plumas Road (STA 525+00)

Under the approved project, High Voltage Substation SMR, Switching Station SSM, Gap Breaker Station SXB, and Train Control Building S56 would be located south of Mabury Road on the west side of the ROW. An alternate site for High Voltage Substation SMR and Switching Station SSM would be west of the UPRR ROW at the southern end of the San Jose Mabury Yard near US Highway 101.

During preliminary engineering, a new site was identified for the Gap Breaker Station, High Voltage Substation, and Switching Station, and the two previous alternate locations were removed. In Phase 1, Gap Breaker Station SXB has been renamed Gap Breaker Station SXC, and the station has been relocated north from STA 553+00 to STA 525+00, within the BART alignment under the aerial structure. High Voltage Substation SMR has been renamed High Voltage Substation SLP, and Switching Station SSM has been renamed Switching Station SSL. The High Voltage Substation and Switching Station would be located east of the UPRR ROW and south of Las Plumas Avenue. As shown in the SEIR-1, a new high-voltage line would begin at the high-voltage substation and then run along Las Plumas Avenue to King Road for approximately 1,900 feet. The existing PG&E high-voltage line on King Road, which has four wooden poles approximately 180 feet apart, would be upgraded to a combination of wood and tubular steel poles up to 80 feet tall, extending for approximately 550 feet to the PG&E Mabury Substation.



Source VTA 2010

Figure 3-11: Berryessa Station Plan

3.2.4.6 Design Change 22. Maintenance and Storage of BART Trains for Phase 1

Under the approved project, the alignment transitioned into a tunnel configuration south of Las Plumas Avenue (STA 570+00). The BART alignment continued to the City of Santa Clara. The configuration for the terminus of Phase 1 was not included in the approved project. Refer to Design Change 1, Phasing of BART Silicon Valley, for a description of the changes related to phasing of the project.

The configuration for the terminus of Phase 1 is as follows: north of Berryessa Road the BART alignment would transition from an at grade configuration to retained fill north of Berryessa Road near STA 506+00. The alignment would then transition to an aerial structure near STA 519+00. BART crossover tracks on the aerial structure would provide for train storage and single-track operations around an occasionally stored train.

The alignment then would transition onto the aerial guideway over Berryessa Road, pass through the Berryessa Station area, continue over Mabury Road, and transition back to a retained fill at STA 552+00. The BART alignment would transition to an at grade configuration south of Mabury near STA 560+00. All facilities along this portion of the alignment have been altered, as described in Design Change 21, Electrical Facilities near Las Plumas Road.

South of Mabury Road, a maintenance of way siding track, which allows for the storage of track and wayside maintenance vehicles (such as ballast tampers, rail-grinders, track and tunnel vacuum, work train), high rail vehicles, and other miscellaneous vehicles, would be located to the east of the ROW and north of Las Plumas Avenue (from approximately STA 556+50 to 569+00). A high rail vehicle access point would be located at the end of the siding track, adjacent to Las Plumas Avenue. The two mainline BART tracks would also terminate at Las Plumas Avenue, ending in high rail vehicle access points (STA 569+00).

Maintenance facilities would be located at the existing BART District Hayward Yard and Shops location. BART is planning modifications to its existing primary shop building (Hayward Main Shop) to accommodate system needs, including the extension into Santa Clara County. BART is responsible for environmental clearance of the Hayward Main Shop improvements. In a separate project evaluating long-term system-wide maintenance needs, BART is considering other improvements at the Hayward Yard location and will carry out environmental review, design, and construction of those improvements.

VTA has made general arrangements with BART for the storage and maintenance of revenue vehicles for BART Silicon Valley through the mutual commitments established by the Comprehensive Agreement between VTA and BART dated November 19, 2001. This agreement provides that BART will be solely responsible for the operation and maintenance of all BART Silicon Valley facilities and equipment, including revenue vehicles, and that VTA has full

financial responsibility for the costs resulting from those activities, including a proportional share of the related costs for capital investments within the existing BART system.

3.2.5 CHANGES TO OTHER PHASE 1 FEATURES

In addition to the design changes described above, differences between the approved project and Phase 1 described in this SEIR-2 include changes to the construction staging areas (CSAs), BART core system access requirements, VTA and BART fleet requirements, and VTA and BART operating plans, ridership, and station boardings. While these are not necessarily design changes, they are listed here as such for consistency. Other than the construction staging areas, these changes were made primarily because of Federal Transit Administration (FTA) requirements for VTA's participation in the FTA New Starts Program.

3.2.5.1 Design Change 23. Construction Staging Areas

The CSAs for the approved project are described in **Table 3-4**.

The locations (footprints) of all permanent facilities would be used as CSAs, as each of these locations would involve some degree of construction equipment usage and storage, construction vehicle parking, and materials storage. These permanent facility locations would include station areas and electrical and communication facilities areas. In addition to the permanent facility footprints, specific CSAs have been identified. These areas would be used only during the construction period and have been modified since the 2007 project approval.

The previously approved CSAs that have been eliminated or reconfigured for this SEIR-2 are shown in **Table 3-4**. All CSAs in **Table 3-4** apply to the Phase 1 portion of BART Silicon Valley only.

Table 3-4: Changes to Construction Staging Areas

CSA	Approved Project (FEIR and SEIR-1)	Design Change
Mission Falls Court	This area would include 5.3 acres between Mission Falls Court and the UPRR ROW, which currently consists primarily of a vacant parcel. An additional 3.6 acres would be within an existing truck rail transfer facility. Access to the site would be from Mission Falls Lane.	The additional 3.6 acres has been eliminated.
Calaveras Boulevard	This area would include 8 acres south of Calaveras Boulevard between the UPRR ROW and Wrigley Creek. A portion of the area would be within the UPRR ROW. Access to the site would be from Industrial Way.	This CSA has been retained, with the footprint reduced to 4.2 acres to accommodate the Wrigley Creek Improvements Project (to be implemented by another entity).

CSA	Approved Project (FEIR and SEIR-1)	Design Change
Piper Drive	Not included in the FEIR/SEIR-1.	This new CSA would include 2.2 acres of the Piper Drive cul-de-sac north of Montague Expressway and east of the UPRR ROW to accommodate the staged construction of freight tracks for the Milpitas Wye (regardless of the option selected). Access to the site would be from Montague Expressway.
Mabury Road and US 101	This area would include 14.83 acres both east and west of the UPRR ROW between Mabury Road and US 101. Access to the site would be from Mabury Road and Las Plumas Avenue.	The footprint of this CSA was reduced to 10.5 acres.

Source: VTA, 2010.

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