



San Francisco to San Jose High-Speed Train Project EIR/EIS

Participating Agency Technical Working Group

September 2009





Agenda

1. Introductions/review project process
2. Technical Working Group overview
3. Alternatives analysis process
4. Initial development of alternatives
5. Alternatives analysis measures
6. Next steps/next meeting





Environmental Process

| | | | | |
|-----------------------|------------------------------------|-------------------------|-------------------------------------|--------------------------|
| 1. Initial Outreach | NOP/NOI | Scoping Meetings | Scoping Summary Report | Agency Coordination Plan |
| 2. Project Definition | Initial Project Alternatives | Alternatives Evaluation | Alternatives Analysis Reports | Project Description |
| 3. Draft EIR/EIS | Technical Reports | Draft EIR/EIS | Public Circulation of Draft EIR/EIS | Public Hearings |
| 4. Final EIR/EIS | Selection of Preferred Alternative | Responses to Comments | Final EIR/EIS | ROD/NOD |

Public Document

Technical Report

Outreach Activity





Purpose of Participating Agency Involvement

- To share information with cities, transportation and resource agencies about the HST project
- To inform agency representatives about the HST environmental process, its documents and solicit input





Participating Agencies Roles and Responsibilities

- To share information with HST team and feedback relevant information to key city/county/agency counterparts

- To provide early and timely input to the HST project and the environmental document
- To identify a representative (alternate) to attend scheduled meetings between June 2009 – December of 2011





2009-2010 TWG meeting schedule

September 2009 - TWG Meeting #2

- Development of Initial Alternatives

January 2010 – TWG Meeting #3

- Alternatives Analysis (AA) Draft Report
- Station Design Criteria
- Purpose and Need
- Station Needs Assessment

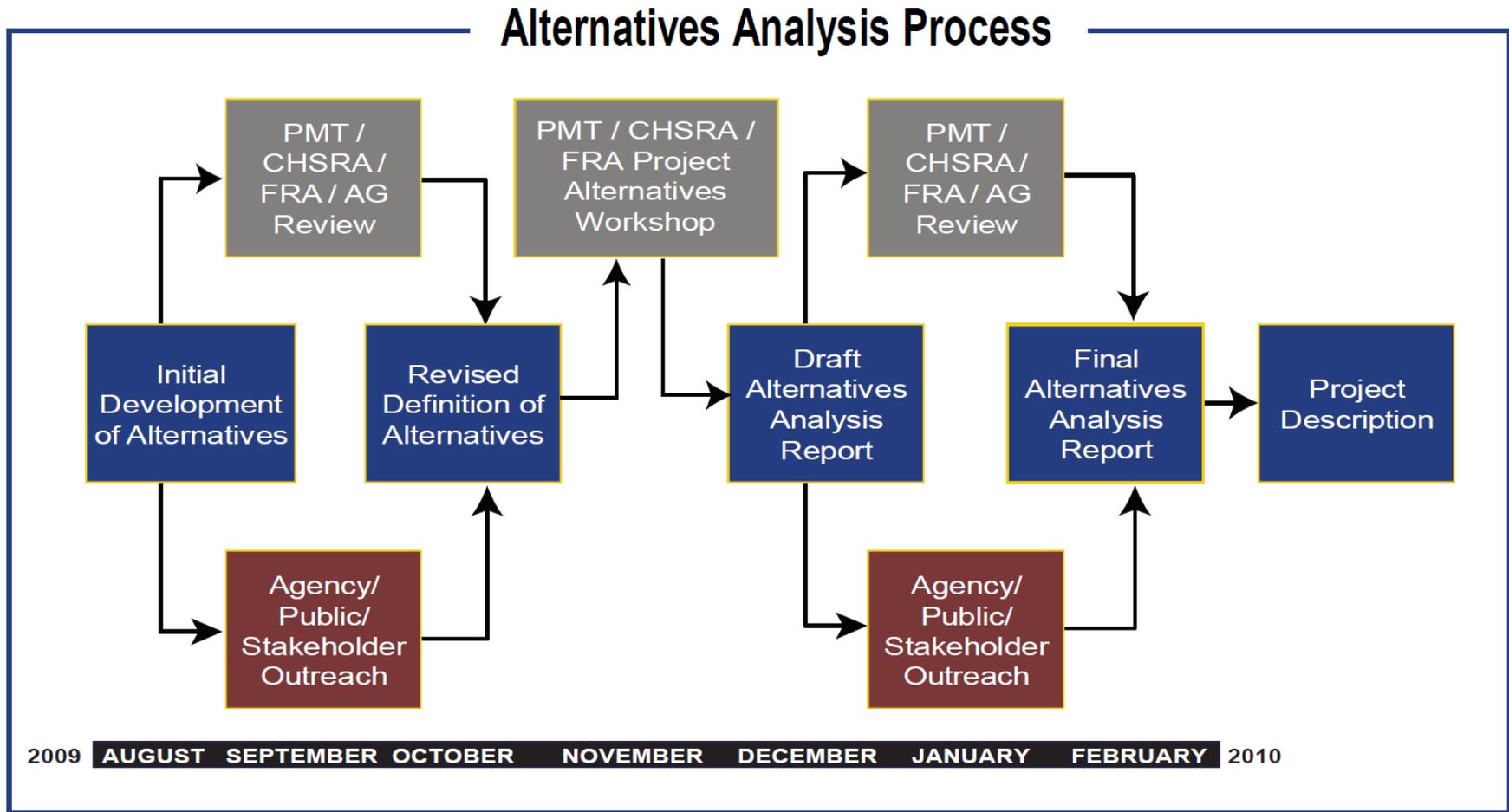
April 2010 – TWG Meeting #4

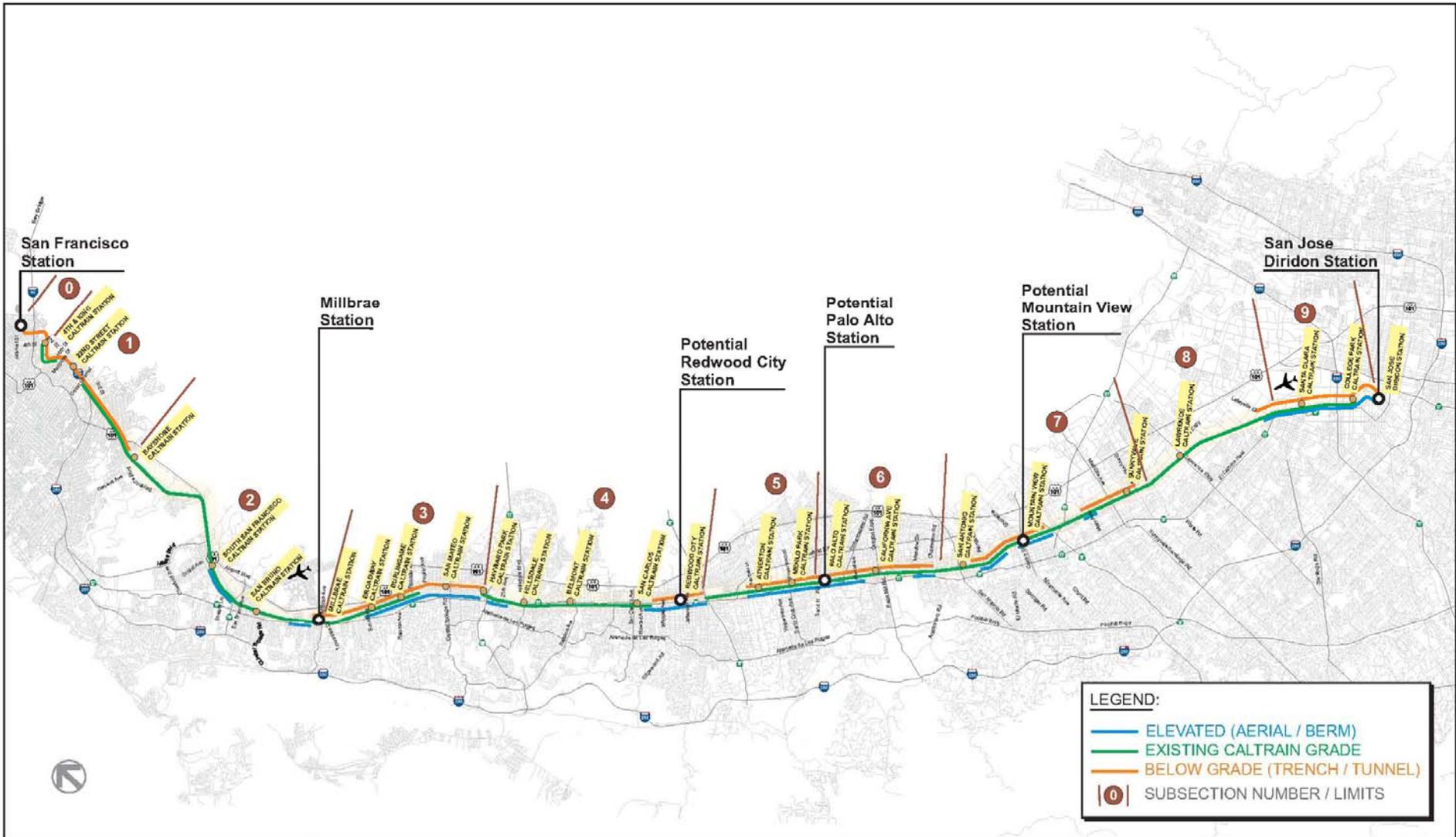
- Station concepts





Alternatives Analysis Process





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**San Francisco to San Jose
High-Speed Train Project
Subsections**



Subsection #0 (a)

Length: 2.0 miles Land Use: Urban

Transbay Transit Center to North of Common Street (MP. X.XX to MP. 0.79) - HST at Transbay/4th and King
 The Transbay Transit Center and the 4th and King Station Terminal will serve both HST and Caltrain.

- ELEVATED (AERIAL/BERM)
- EXISTING CALTRAIN GRADE
- BELOW GRADE (TRENCH/TUNNEL)



POTENTIAL CONSTRAINTS



HST STATION DESIGN OPTION



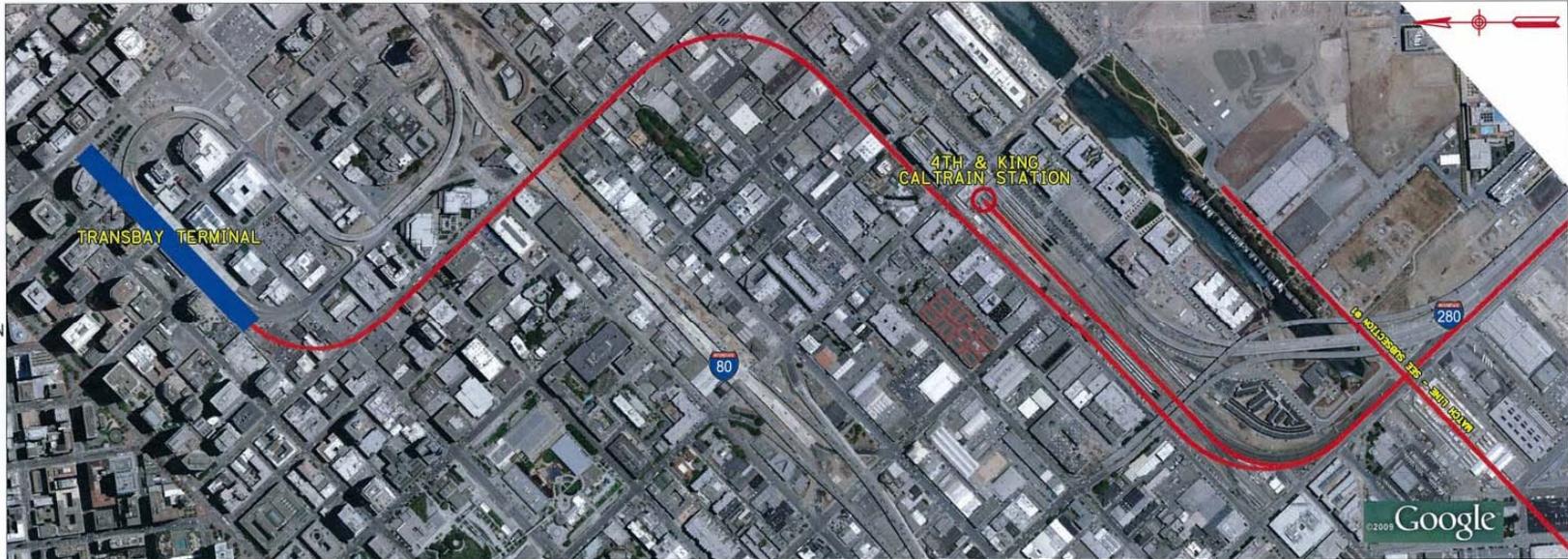
CALTRAIN STATION DESIGN OPTION



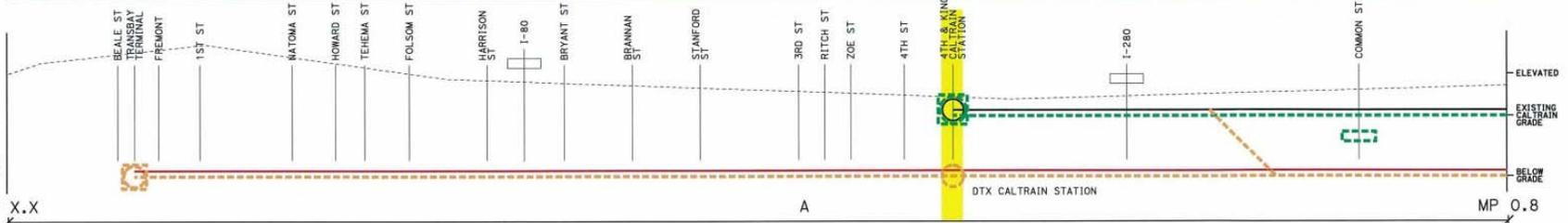
ROADWAY DESIGN OPTION



EXISTING GRADE SEPARATION



EXISTING TRACK



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Subsection #0 (b)

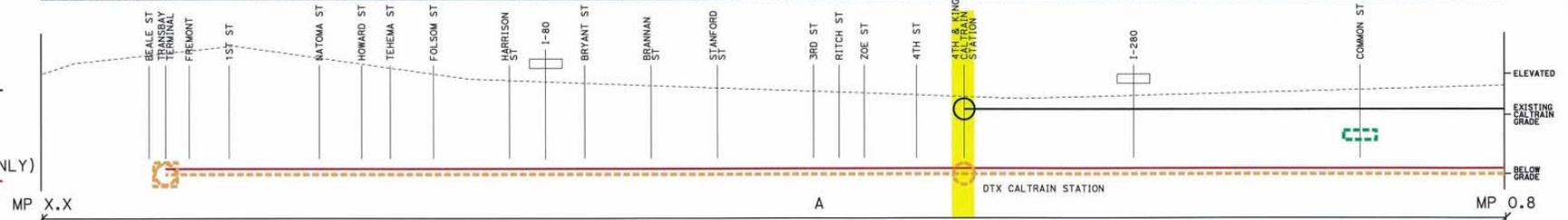
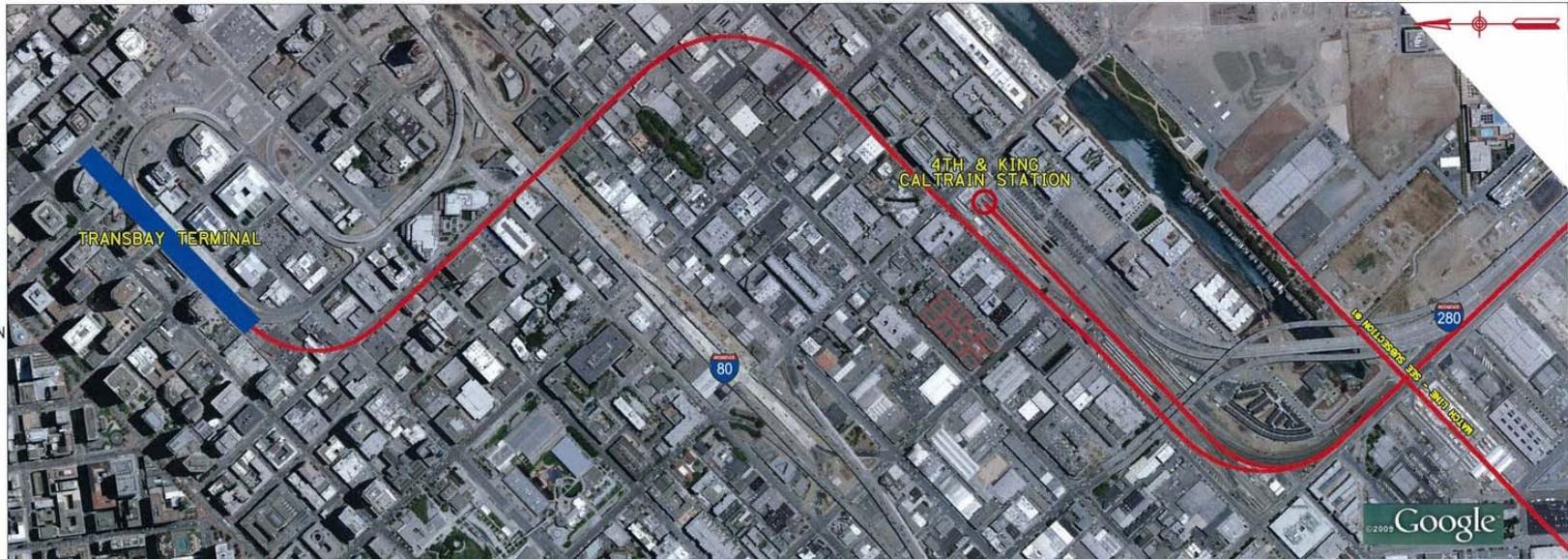
Length: 2.0 miles Land Use: Urban

Transbay Transit Center to North of Common Street (MP. X.XX to MP. 0.79) - HST at Transbay Terminal
 The Transbay Transit Center Terminal will serve both HST and Caltrain. Caltrain continues to utilize 4th and King Station.

- ELEVATED (AERIAL/BERM)
- EXISTING CALTRAIN GRADE
- BELOW GRADE (TRENCH/TUNNEL)



- POTENTIAL CONSTRAINTS
- HST STATION DESIGN OPTION
- CALTRAIN STATION DESIGN OPTION
- ROADWAY DESIGN OPTION
- EXISTING GRADE SEPARATION
- EXISTING TRACK
- PROGRAM EIR/EIS (REFERENCE ONLY)



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Subsection #0 (c)

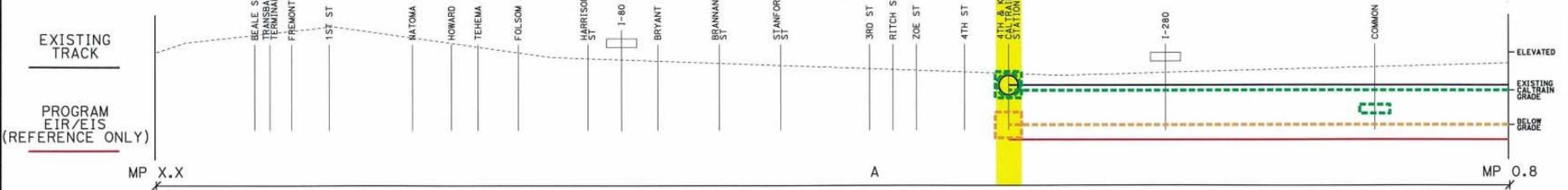
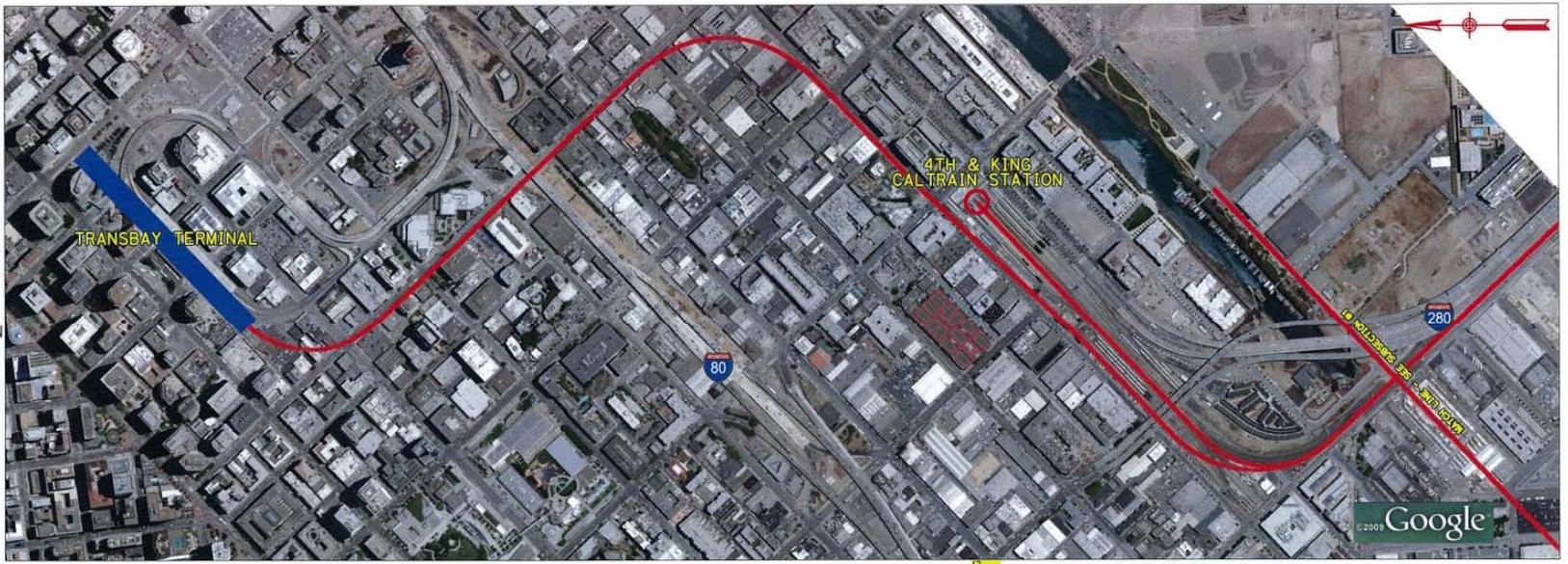
Length: 2.0 miles Land Use: Urban

Transbay Transit Center to North of Common Street (MP. X.XX to MP. 0.79) - HST at 4th and King Terminal
 The 4th and King Station Terminal will serve both HST and Caltrain.

- ELEVATED (AERIAL/BERM)
- EXISTING CALTRAIN GRADE
- BELOW GRADE (TRENCH/TUNNEL)



- POTENTIAL CONSTRAINTS
- HST STATION DESIGN OPTION
- CALTRAIN STATION DESIGN OPTION
- ROADWAY DESIGN OPTION
- EXISTING GRADE SEPARATION



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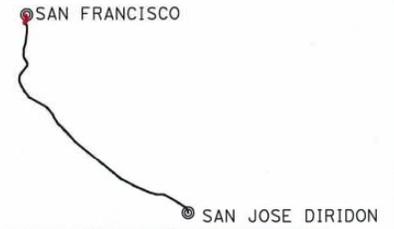


Subsection #0 (d)

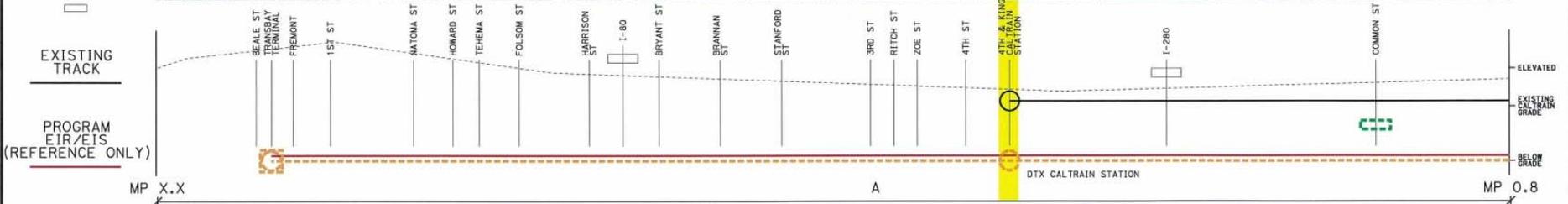
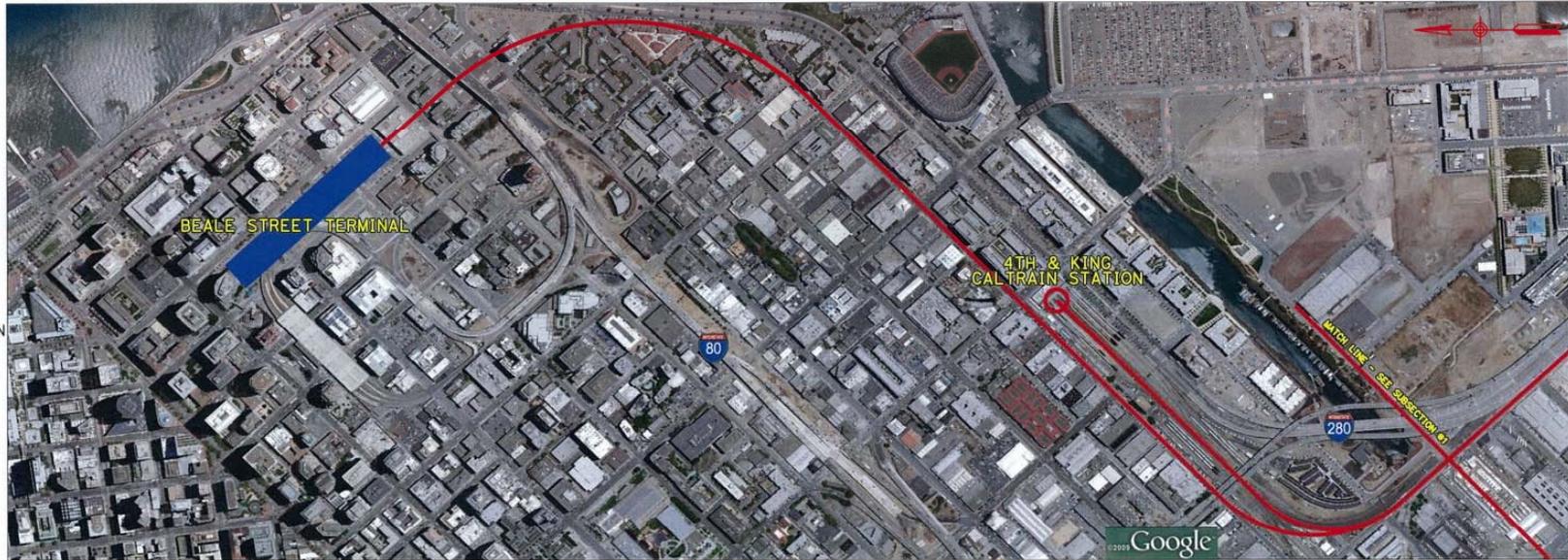
Length: 2.0 miles Land Use: Urban

Transbay Transit Center to North of Common Street (MP. X.XX to MP. 0.79) - HST at Transbay (Beale St Option) Terminal
 The Beale Street Wing Station Terminal will serve both HST and Caltrain. This would be the one station for HST trains in downtown San Francisco.

- ELEVATED (AERIAL/BERM)
- EXISTING CALTRAIN GRADE
- BELOW GRADE (TRENCH/TUNNEL)



- POTENTIAL CONSTRAINTS
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- HST STATION DESIGN OPTION
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- CALTRAIN STATION DESIGN OPTION
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- ROADWAY DESIGN OPTION
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- EXISTING GRADE SEPARATION
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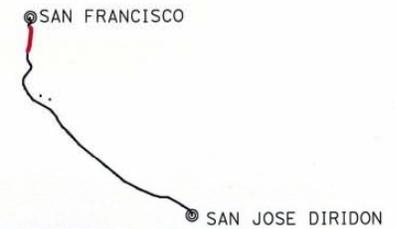
Subsection #1

Length: 4.9 miles Land Use: Urban

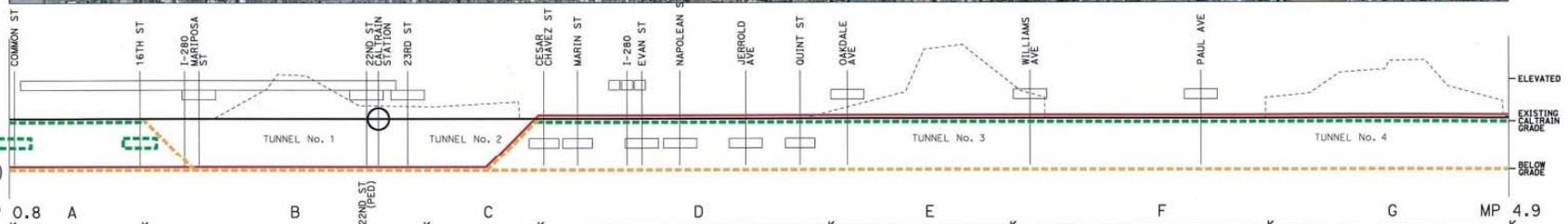
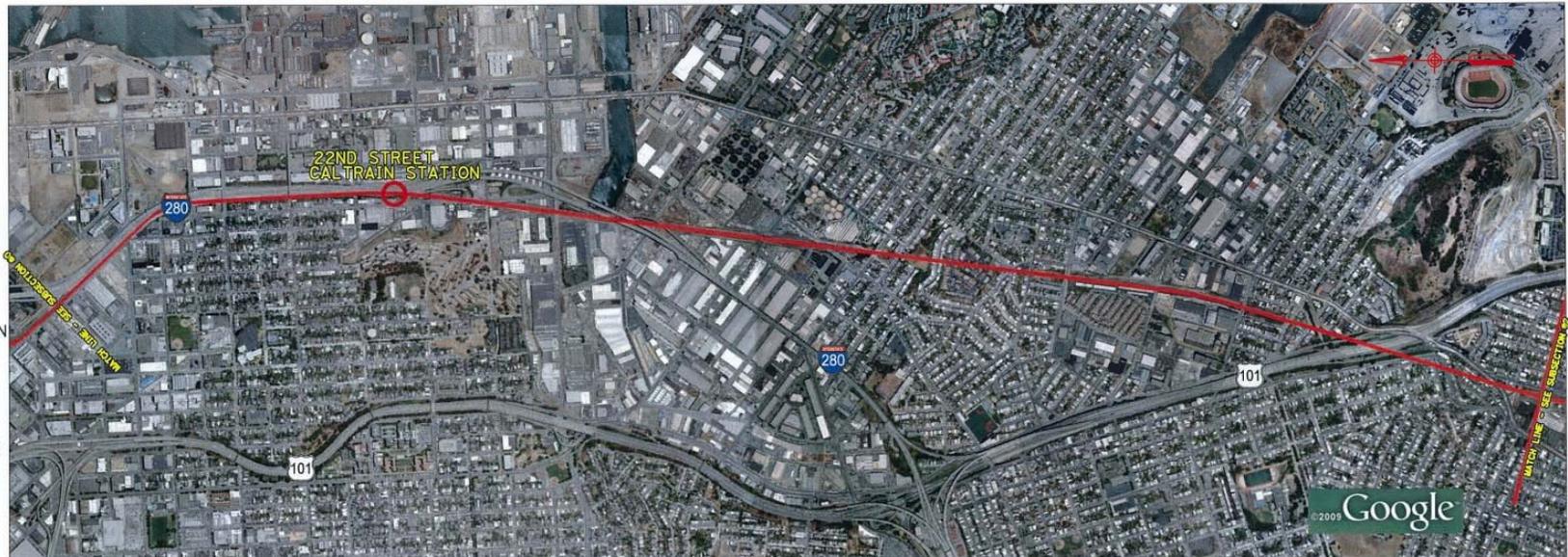
North of Common Street to South Portal Tunnel No. 4 (MP. 0.79 to MP. 4.94)

This subsection is located within the City and County of San Francisco. Except for two crossings near Mission Bay, all other street crossings in this subsection are grade separated. The existing Caltrain alignment passes through a series of hills and valleys necessitating 4 tunnels and several embankment and trench segments. The I-280 freeway structure above the tracks and its supporting columns are constraints in the northern portion of the subsection.

- - - ELEVATED (AERIAL/BERM)
- - - EXISTING CALTRAIN GRADE
- - - BELOW GRADE (TRENCH/TUNNEL)



- POTENTIAL CONSTRAINTS
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- HST STATION DESIGN OPTION
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- CALTRAIN STATION DESIGN OPTION
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- ROADWAY DESIGN OPTION
▬ ▬ ▬
- EXISTING GRADE SEPARATION
▬
- EXISTING TRACK
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- PROGRAM EIR/EIS (REFERENCE ONLY)
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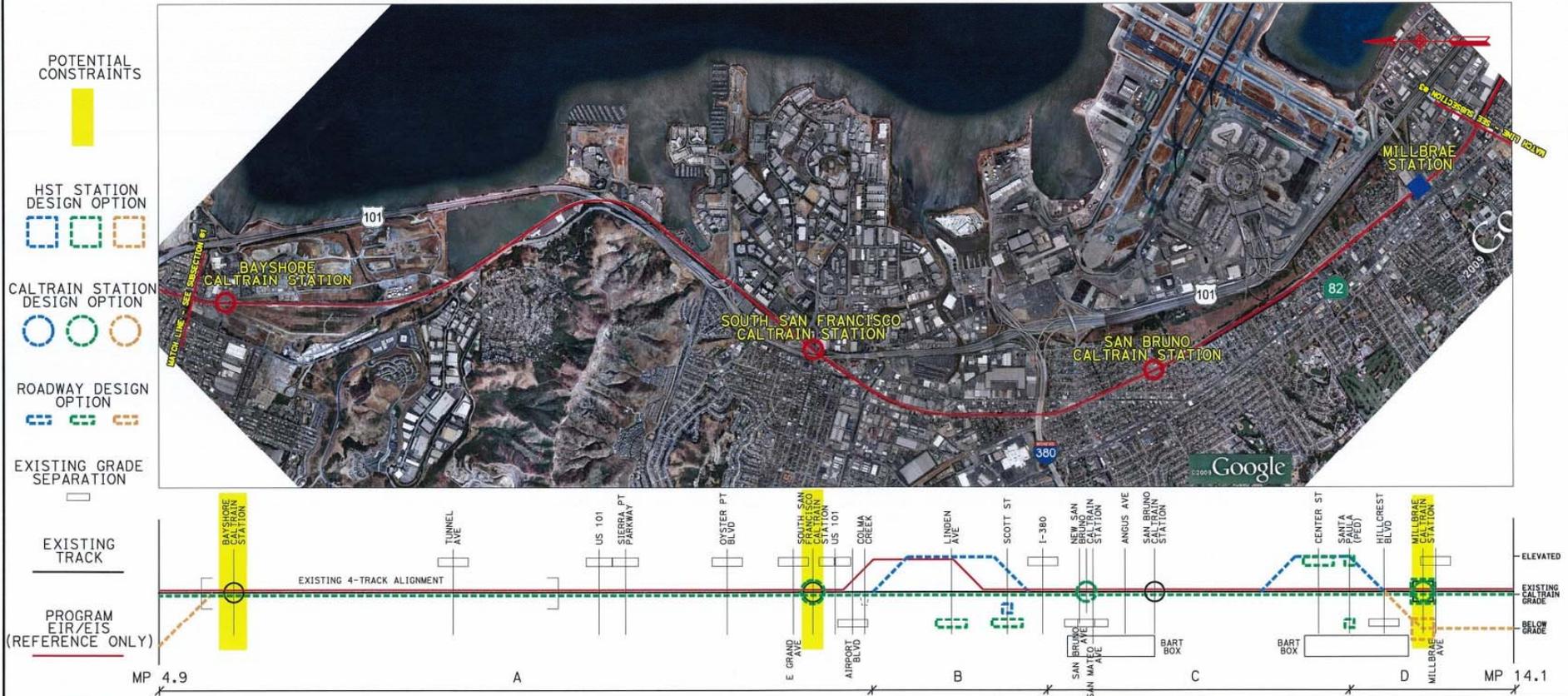


Subsection #2

Length: 9.2 miles Land Use: Urban

South Portal Tunnel No. 4 to South of Millbrae Avenue (MP. 4.94 to MP. 14.15)

This subsection is located in the Cities of Brisbane, South San Francisco, San Bruno and Millbrae. The existing Caltrain alignment is at-grade in this subsection and many crossings are grade separated. The northern portion of this subsection is completely grade separated and includes an existing 4-track segment in Brisbane. In the southern portion of the subsection, BART runs underneath and alongside the Caltrain tracks.



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Subsection #3

Length: 5.0 miles Land Use: Urban

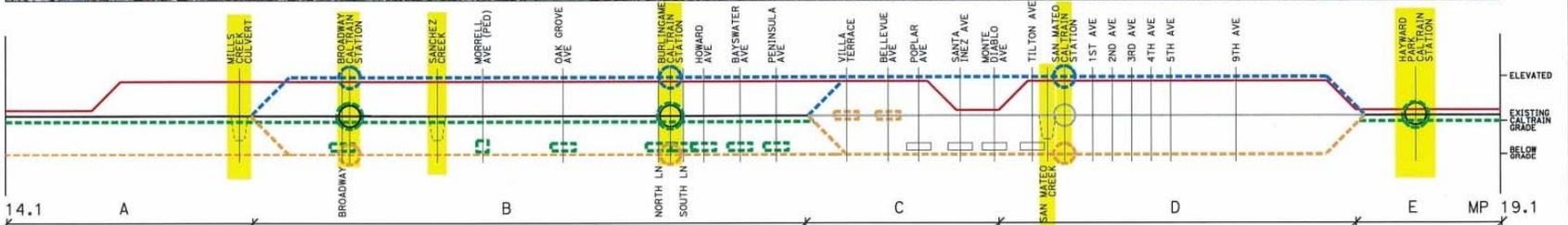
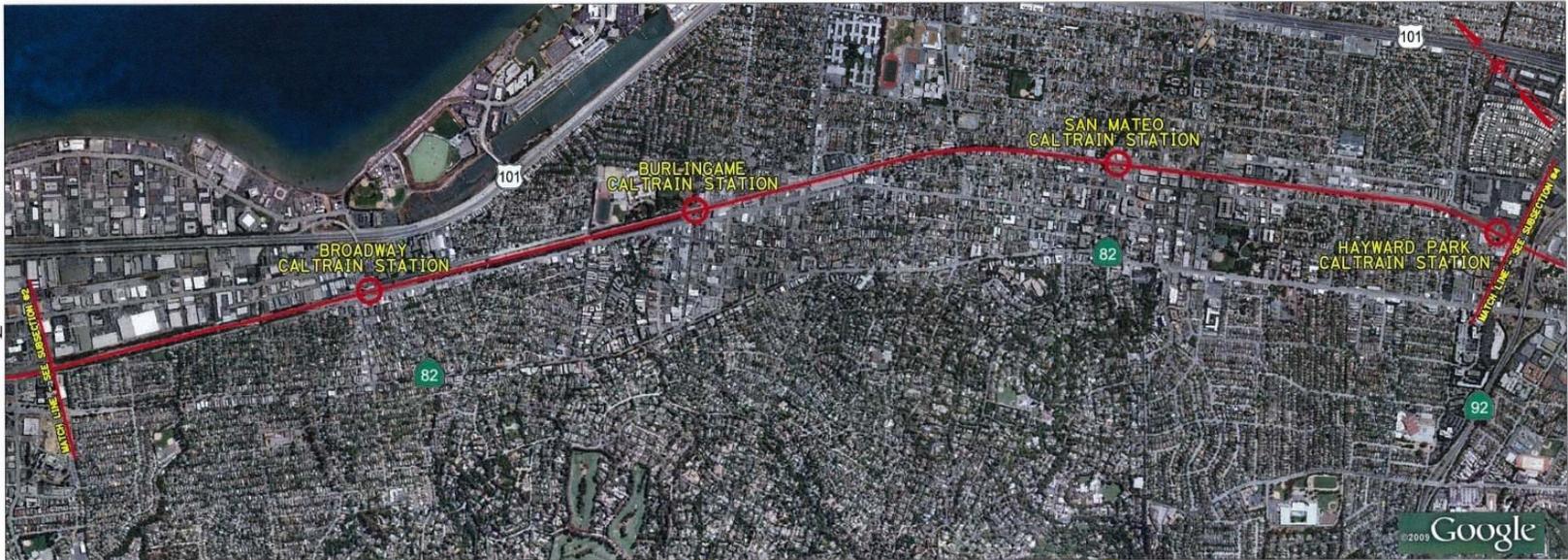
South of Millbrae Avenue to North of Highway 92 (MP. 14.15 to MP. 19.10)

This subsection is located in the Cities of Burlingame and San Mateo. In this subsection, the Caltrain tracks are primarily at-grade as are most of the crossings; those that are grade-separated have sub-standard clearances. This subsection includes a tight area through downtown San Mateo where a number of closely spaced at-grade crossings are an integral part of the street grid.

- ELEVATED (AERIAL/BERM)
- EXISTING CALTRAIN GRADE
- BELOW GRADE (TRENCH/TUNNEL)



- POTENTIAL CONSTRAINTS
- HST STATION DESIGN OPTION
- CALTRAIN STATION DESIGN OPTION
- ROADWAY DESIGN OPTION
- EXISTING GRADE SEPARATION
- EXISTING TRACK
- PROGRAM EIR/EIS (REFERENCE ONLY)



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Subsection #4

Length: 8.1 miles Land Use: Urban

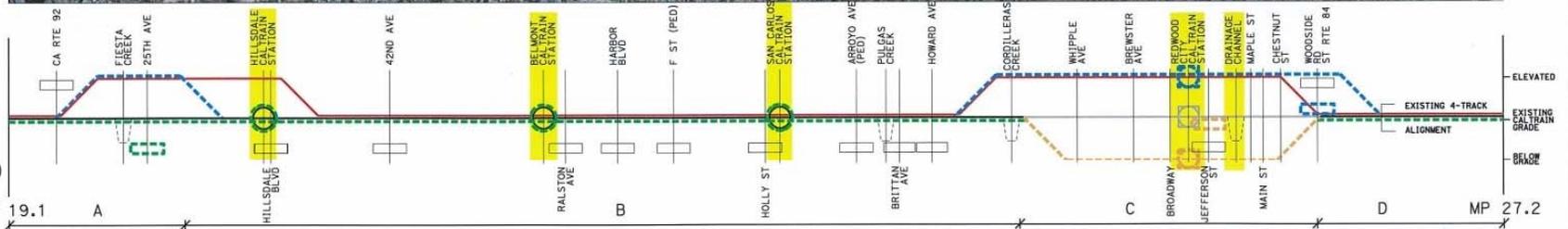
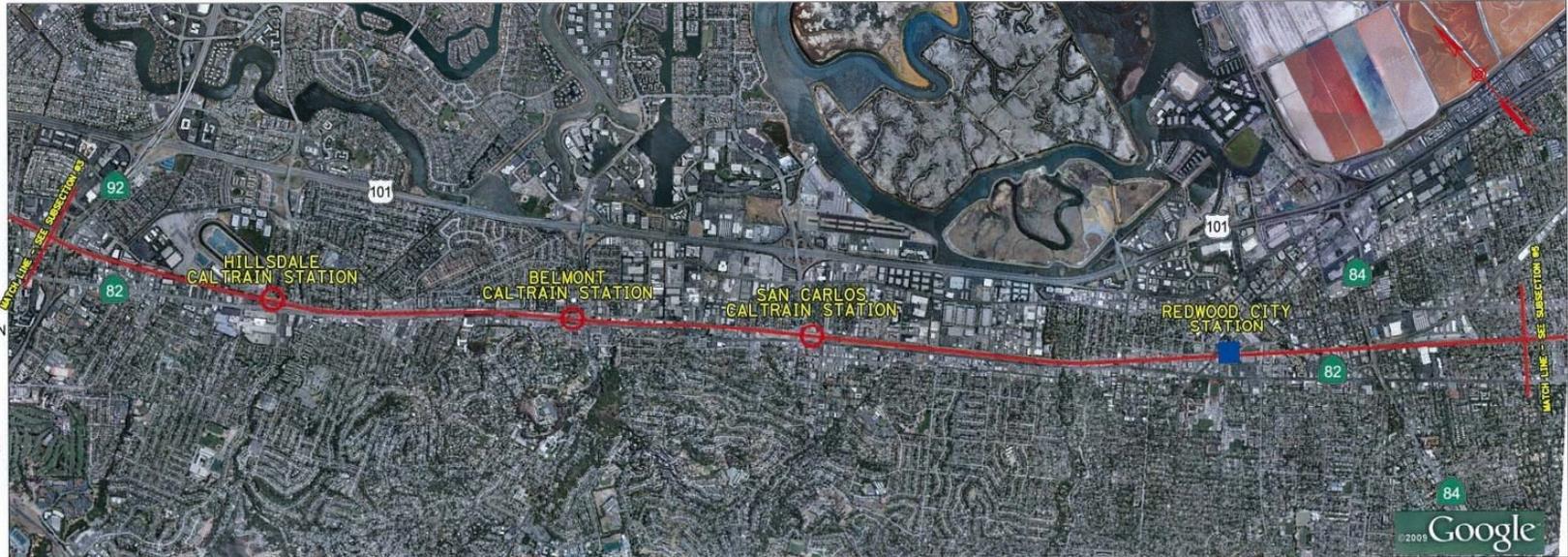
North of Highway 92 to North of 5th Avenue (MP. 19.10 to MP. 27.17)

This subsection is located in the Cities of San Mateo, Belmont, San Carlos and Redwood City. For most of the northern portion of this subsection, the existing Caltrain tracks are on a recently constructed embankment that passes over the cross streets. In the southern portion of this subsection the at-grade Caltrain tracks pass through a number of at-grade crossings in downtown Redwood City. There is an existing 4 track segment at the southern end of this subsection.

- - - - - ELEVATED (AERIAL/BERM)
- - - - - EXISTING CALTRAIN GRADE
- - - - - BELOW GRADE (TRENCH/TUNNEL)



- POTENTIAL CONSTRAINTS
- HST STATION DESIGN OPTION
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- ROADWAY DESIGN OPTION
- EXISTING GRADE SEPARATION
- EXISTING TRACK
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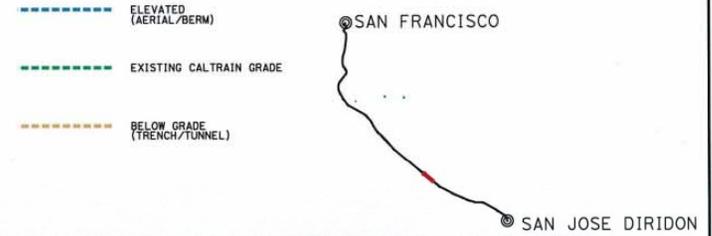


Subsection #5

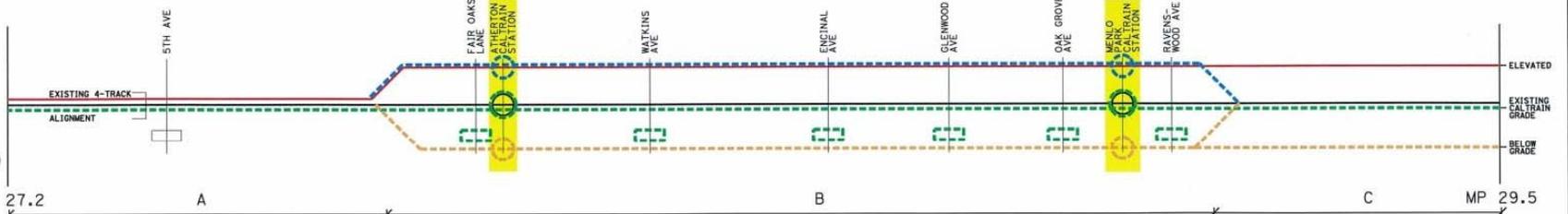
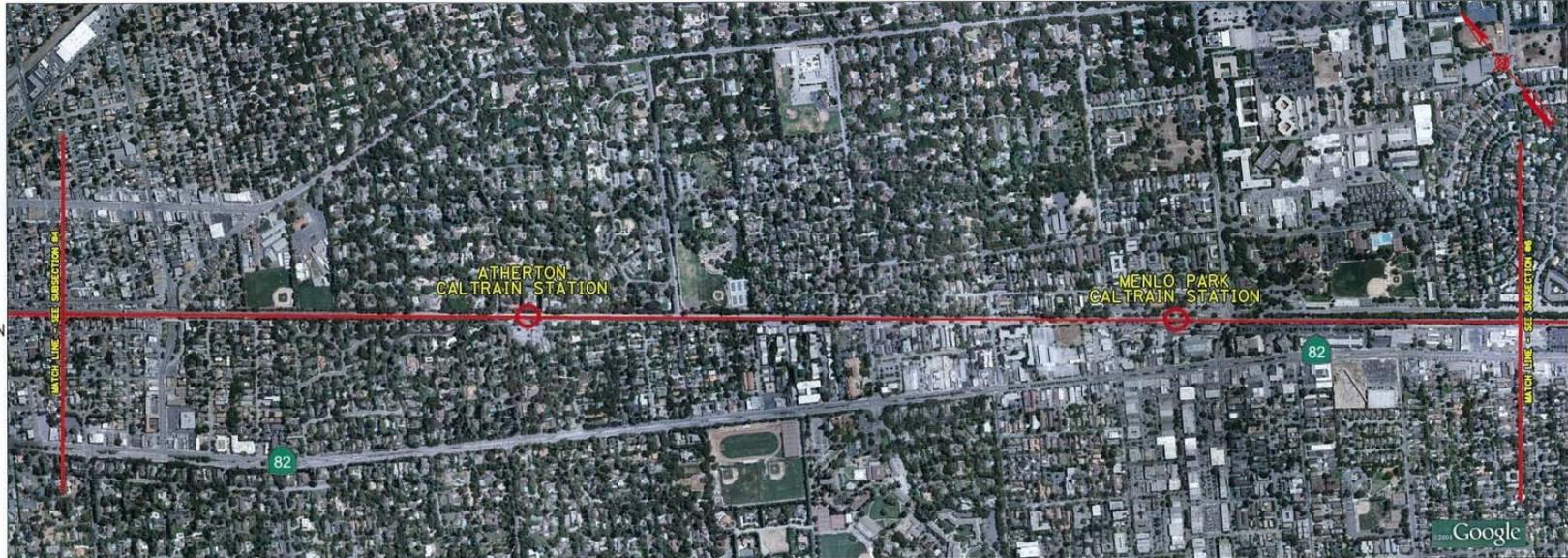
Length: 2.3 miles Land Use: Urban

North of 5th Avenue to North of SCL/SM County Line (MP. 27.17 to MP. 29.5)

This subsection is located in the Cities of Atherton and Menlo Park, with a small portion in unincorporated San Mateo County. The Caltrain tracks are at-grade, and with one exception, all street crossings are at-grade. Generally, the streets that cross the tracks are two-lane collectors serving residential areas. In most cases, these streets are integral parts of the local street network.



- POTENTIAL CONSTRAINTS
- HST STATION DESIGN OPTION
- CALTRAIN STATION DESIGN OPTION
- ROADWAY DESIGN OPTION
- EXISTING GRADE SEPARATION
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Subsection #6

Length: 4.0 miles Land Use: Urban

North of SCL/SM County Line to North of Adobe Creek (MP. 29.5 to MP. 33.53)
 This subsection is located in the City of Palo Alto. The Caltrain tracks are at-grade and all of the streets that are grade separated pass under the tracks. Several at-grade crossings occur between the grade separations. Alma Street runs alongside the Caltrain tracks for the entire length of this subsection.

- ELEVATED (AERIAL/BERM)
- EXISTING CALTRAIN GRADE
- BELOW GRADE (TRENCH/TUNNEL)



POTENTIAL CONSTRAINTS



HST STATION DESIGN OPTION



CALTRAIN STATION DESIGN OPTION



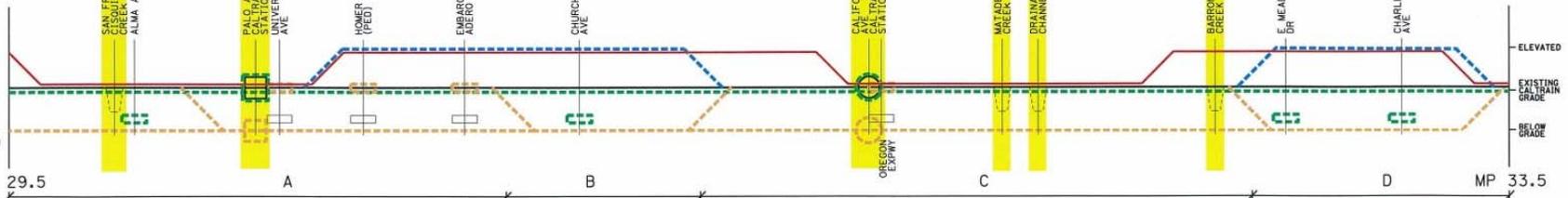
ROADWAY DESIGN OPTION



EXISTING GRADE SEPARATION



EXISTING TRACK



PROGRAM EIR/EIS (REFERENCE ONLY)



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Subsection #7

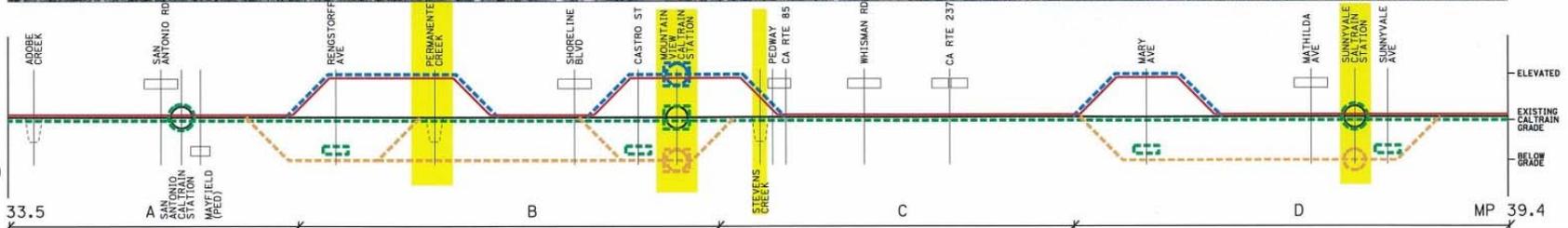
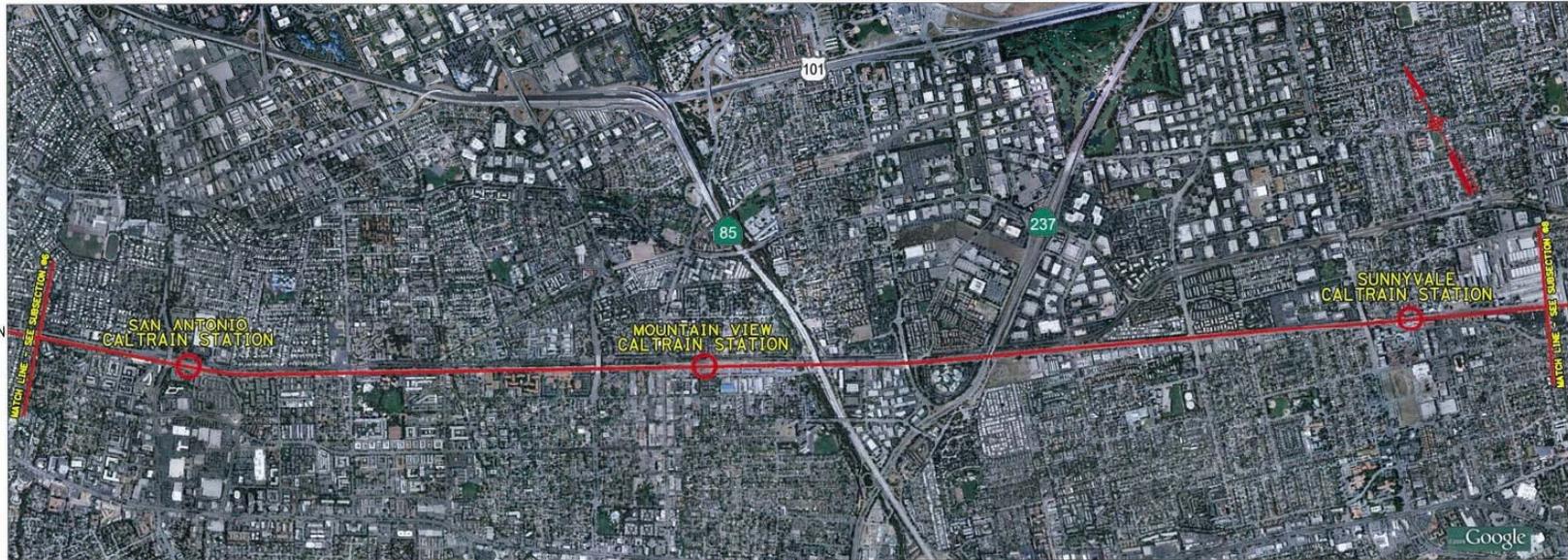
Length: 5.8 miles Land Use: Urban

North of Adobe Creek to North of Fair Oaks Avenue (MP. 33.53 to MP. 39.37)
 This subsection is located in the Cities of Mountain View and Sunnyvale. The Caltrain tracks are at-grade and all grade separated crossings pass over the tracks. Several at-grade crossings occur between the grade separations. Central Expressway and Evelyn Avenue run alongside the Caltrain tracks for a large portion of this subsection.

- ELEVATED (AERIAL/BERM)
- EXISTING CALTRAIN GRADE
- BELOW GRADE (TRENCH/TUNNEL)



- POTENTIAL CONSTRAINTS
- HST STATION DESIGN OPTION
- CALTRAIN STATION DESIGN OPTION
- ROADWAY DESIGN OPTION
- EXISTING GRADE SEPARATION
- EXISTING TRACK
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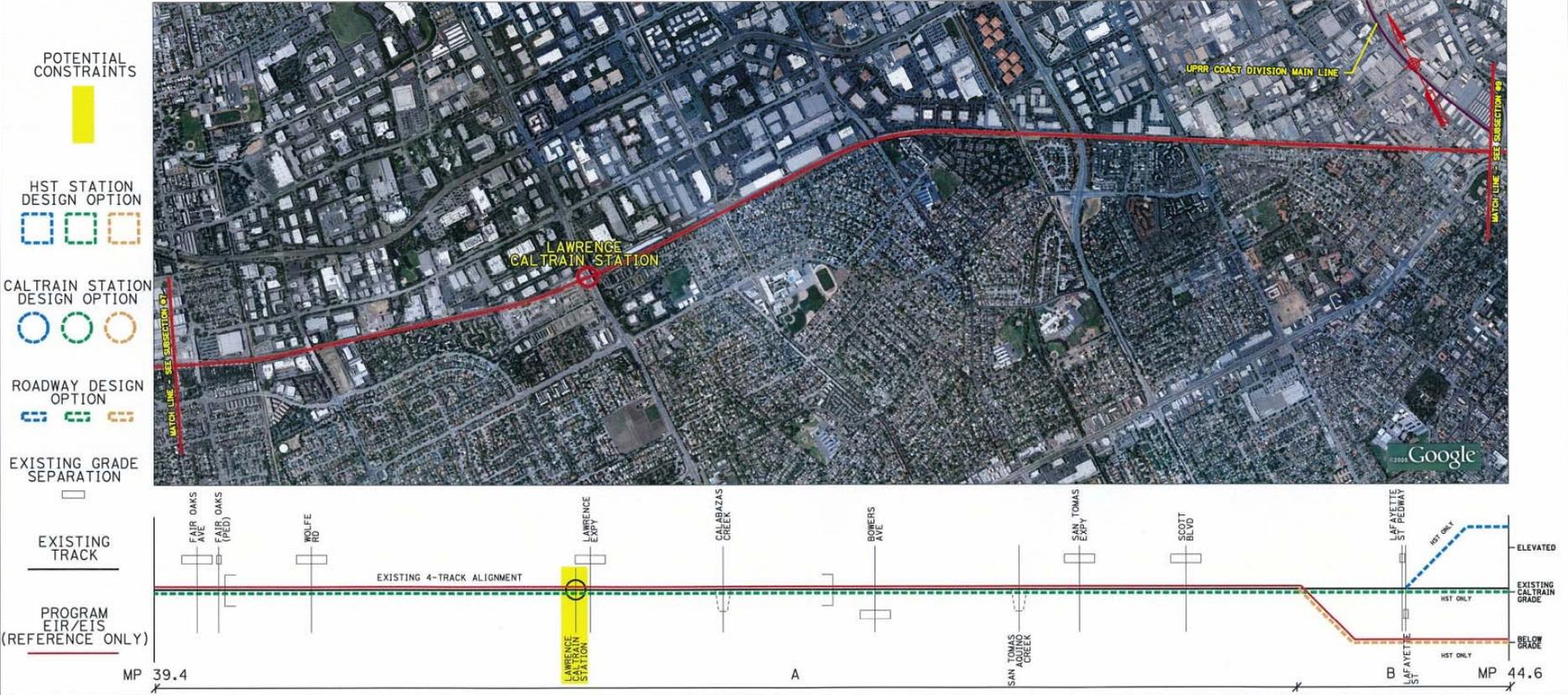
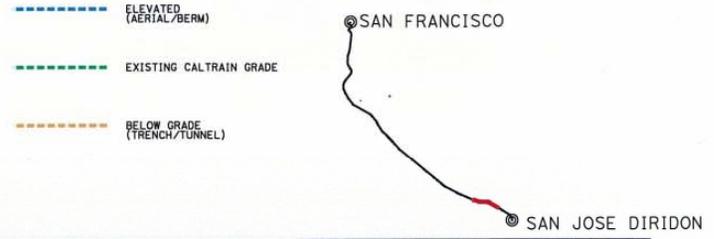
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Subsection #8

Length: 5.2 miles Land Use: Urban

North of Fair Oaks Avenue to South of De La Cruz Boulevard (MP. 39.37 to MP. 44.60)
 This subsection is located in the Cities of Sunnyvale and Santa Clara. The Caltrain tracks are at-grade and all crossings are grade separated. Most of the crossings pass over the tracks. This subsection includes an existing 4-track segment near Lawrence Expressway.



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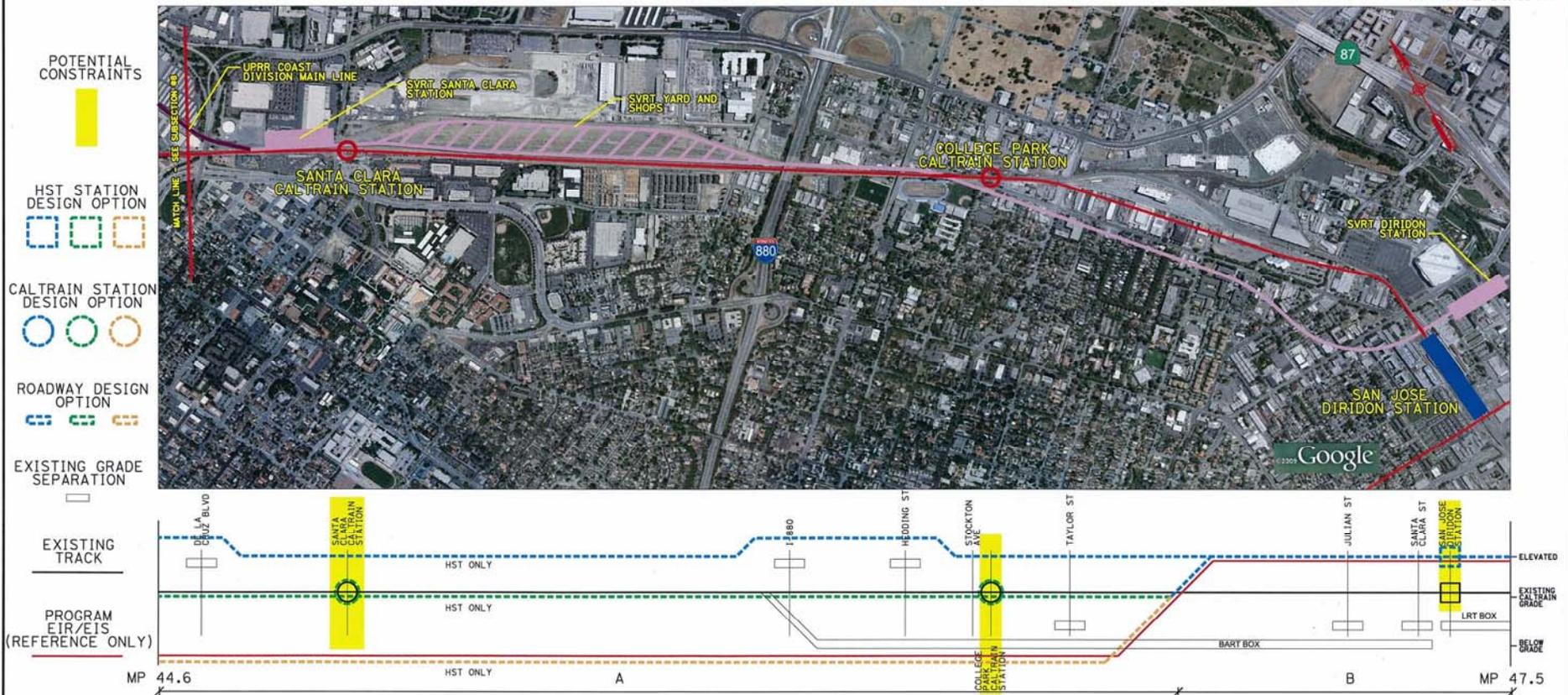


Subsection #9 (a)

Length: 2.9 miles Land Use: Urban

South of De La Cruz Boulevard to San Jose Diridon Station (MP. 44.60 to MP. 47.80)
 This subsection is located in the City of San Jose. The Caltrain tracks are at-grade and all crossings are grade-separated. Besides Caltrain, this subsection is also used by ACE, Capitol Corridor and Amtrak long distance passenger trains and UPRR through freight trains. The future BART extension will also run alongside this subsection, primarily in a tunnel.

- - - - - ELEVATED (AERIAL/BERM)
- - - - - EXISTING CALTRAIN GRADE
- - - - - BELOW GRADE (TRENCH/TUNNEL)



- POTENTIAL CONSTRAINTS
- HST STATION DESIGN OPTION
- CALTRAIN STATION DESIGN OPTION
- ROADWAY DESIGN OPTION
- EXISTING GRADE SEPARATION
- EXISTING TRACK
- PROGRAM EIR/EIS (REFERENCE ONLY)



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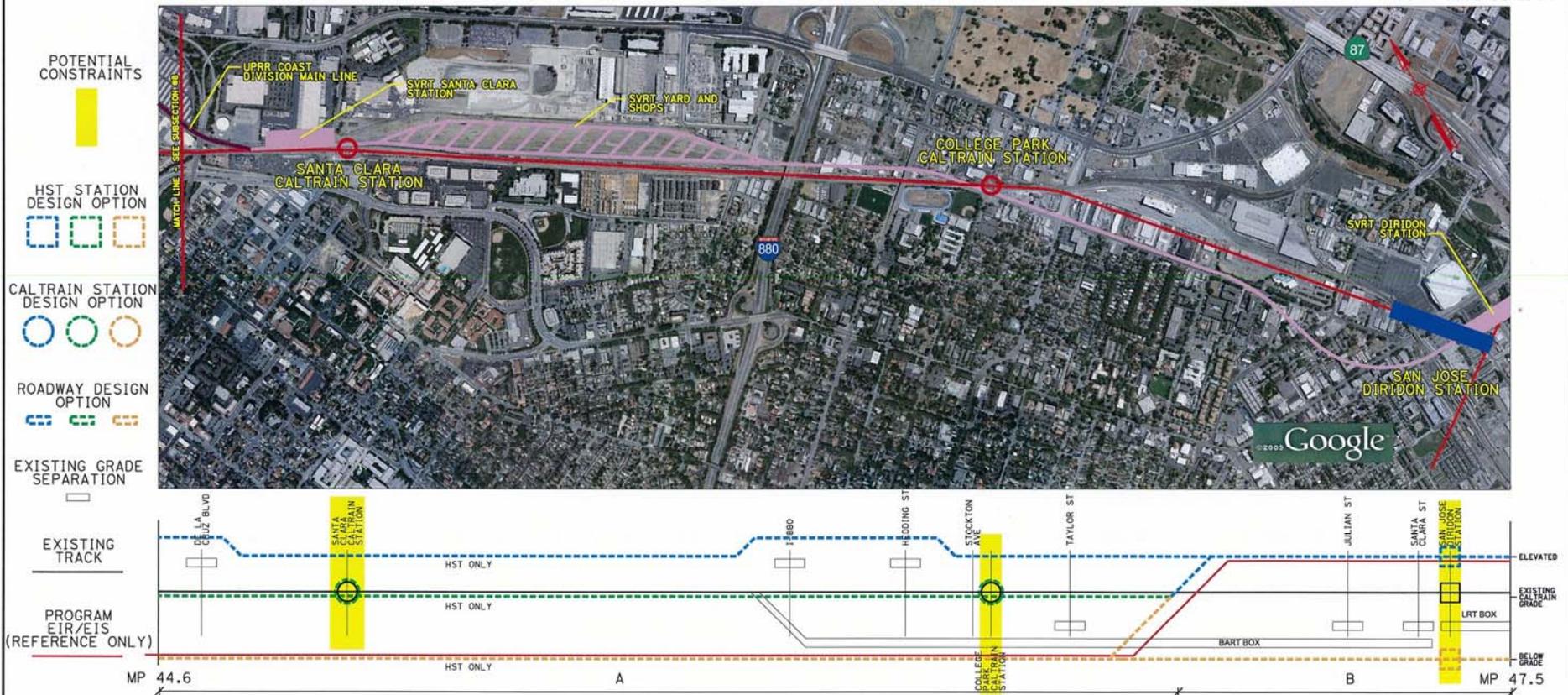
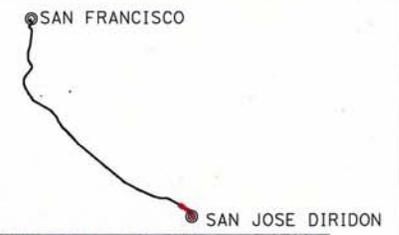
Subsection #9 (b)

Length: 2.9 miles Land Use: Urban

South of De La Cruz Boulevard to San Jose Diridon Station (MP. 44.60 to MP. 47.80)

This subsection is located in the City of San Jose. The Caltrain tracks are at-grade and all crossings are grade-separated. Besides Caltrain, this subsection is also used by ACE, Capitol Corridor and Amtrak long distance passenger trains and UPRR through freight trains. The future BART extension will also run alongside this subsection, primarily in a tunnel. The access alignment to the San Jose Diridon Station (for HST service) is modified to match the alternative downtown alignment being studied by the Mer-SJ HST Team.

- ELEVATED (AERIAL/BERM)
- EXISTING CALTRAIN GRADE
- BELOW GRADE (TRENCH/TUNNEL)



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Alternative Analysis Criteria

| Project Goal | Criteria |
|------------------------------------|--|
| Purpose and Need | Travel time; intermodal connectivity; and operation and maintenance costs. |
| Land Use Planning Support | Sites within ½ mile available for significant TOD; and consistency with existing land use plans and policies |
| Constructability | Vertical profile feasibility; horizontal profile feasibility; major utility relocation; effect on Caltrain operations; effect on critical traffic operations; construction footprints; effect on freight rail; and construction costs. |
| Neighborhood Compatibility | Property displacements; properties with access affected; local traffic effects; and development footprint (stations). |
| Environmental Compatibility | Sensitive species habitat; cultural resources; parklands, noise and vibration; visual/scenic; geologic/soils; and hazardous materials. |





Schedule Update

| Task List | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | |
|---|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------|----|----|---------------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Task : Project Management | [Blue bar spanning all quarters from 2009 Q1 to 2012 Q4] | | | | | | | | | | | | | | | |
| Task : Public Participation Program | [Blue bar spanning all quarters from 2009 Q1 to 2012 Q4] | | | | | | | | | | | | | | | |
| Task : Project Definition Alternative/Analysis | [Empty] | | | | | | | | | | | | | | | |
| Sub-Task : NOP/NOI | [Blue bar] | | | | | | | | | | | | | | | |
| Sub-Task : Project Scoping | [Blue bar] | | | | | | | | | | | | | | | |
| Sub-Task : Alternative Analysis | | | [Blue bar] | [Blue bar] | | | | | | | | | | | | |
| Task : Preliminary Engineering | [Empty] | | | | | | | | | | | | | | | |
| Sub-Task : 15% Preliminary Engineering | | | [Blue bar] | | | | | | | | | |
| Sub-Task : 30% Preliminary Engineering | | | | | | | | [Blue bar] | [Blue bar] | [Blue bar] | [Blue bar] | | | | | |
| Task : EIR/EIS Analysis | [Blue bar] | [Blue bar] | [Blue bar] | [Blue bar] | [Blue bar] | [Blue bar] | [Blue bar] | [Blue bar] | [Blue bar] | | | | | | | |
| Task : Draft/Final EIR/EIS | [Empty] | | | | | | | | | | | | | | | |
| Sub-Task : Prepare Administrative Draft EIR/EIS | | [Blue bar] | | | | | | | | |
| Sub-Task : Prepare Draft EIR/EIS | | | | | | | | [Blue bar] | [Blue bar] | | | | | | | |
| Sub-Task : Prepare Draft Final EIR/EIS | | | | | | | | | [Blue bar] | [Blue bar] | [Blue bar] | [Blue bar] | | | | |
| Sub-Task : Prepare Final EIR/EIS | | | | | | | | | | | | [Blue bar] | | | | |
| Task : EIR/EIS Certification & ROD | | | | | | | | | | | | | | | | [Red diamond] |





Next Steps

- Next Meetings
 - PWG #1 – Oct 2009
 - Alternative Analysis Open House – Sep/Oct 2009
 - TWG #3 – Jan 2010

