Circulation and Mobility Fact Sheets: How to Read Guide

This sheet serves as a "How to Read Guide" for the 21 fact sheets developed for the Caltrain corridor to compile existing conditions data. It will help readers digest the information provided on the corresponding fact sheets, fully defining each data point listed using icons and pictures that serve as helpful visual cues. The information we provide in this "How to Read Guide" will visually correspond with the areas on individual fact sheets where that graphic data is located. The 21 fact sheets depict the following areas:

- Caltrain Corridor-Wide
- San Francisco
- San Francisco/Brisbane to Colma Creek
- Colma Creek to Millbrae
- Millbrae
- Burlingame
- San Mateo
- Belmont and San Carlos
- Redwood City
- Atherton/Menlo Park
- Palo Alto
- Mountain View
- Sunnyvale
- Santa Clara
- San Jose to Caltrain/Union Pacific (UP) Line
- Caltrain/UP Line to Ford Road
- Ford Road to Metcalf Road
- Metcal Road to San Jose/Morgan Hill
- San Jose/Morgan Hill to East Middle Avenue
- East Middle Avenue to North of Las Animas Avenue
- Las Animas Avenue to North of 10th Street

1. Segment Name

Represents the identified segment of the Caltrain corridor

2. Segment Map

Displays the segment of the Caltrain corridor, Caltrain stations, equity priority communities (EPC), railroad crossings by type, the local transportation network, and key destinations. Additional details for the information displayed are described below.

- **EPC:** Represents census tracts that have a significant concentration of underserved populations such as households with low incomes and people of color[1]. More information is provided on Metropolitan Transportation Commission's (MTC) website here.
- **Corridor Crossings:** Differentiated by the following four crossing types listed[2]
  - **At-Grade:** A location where a roadway crosses railroad tracks on the same level
  - **At-Grade (Pedestrian):** A location where a pedestrian and/or bicycle path and railroad tracks cross each other at-grade
  - **Grade Separated:** A location where a roadway and railroad tracks cross each other at different levels
  - **Pedestrian Grade Separated:** A location where a pedestrian and/or bicycle path and railroad tracks cross each other at different levels
  - **Proposed New Grade Separated:** A location where a crossing does not currently exist but is proposed as part of active projects along the corridor.
- **Existing Transportation Network:** Existing bus transit routes and three levels of classified bicycle facilities[3].
- **Destinations:** The following listed destination types within one mile of the Caltrain corridor[4].
  - Airports
  - Public Places (community centers, courthouses, libraries, marketplaces, and city halls)
  - Healthcare Facilities (adult care, medical centers, and hospitals)
  - Hospitals with ER (emergency room service)
  - Fire Stations
  - Schools (public, private, and postsecondary)
  - Places of Worship
  - Landmarks (archaeological, art, attraction, battlefield, castle, fort, memorial, monument, ruins, and viewpoint)
  - Parks
  - Commercial Areas

Context

Corridor Crossings: Number of grade separated crossings (vehicle, pedestrian/bicycle), at-grade crossings, and pedestrian/bicycle grade-separated crossings located along the segment and within EPC[5].

- Supplementary crossing locations were included in addition to the identified 71 at-grade crossings to better understand circulation and mobility within jurisdictions. For example, the roadways that cross over the tunneled portion of the Caltrain corridor were included.

Stations: Stations within the segment and their approximate daily ridings[6].

Segment Information: Start and end of the segment (in mile post information per PCJPB track chart) and segment length (in miles).

Demand and Growth[7]

Daily Traffic (Average Annual) vs Roadway Segment Capacity: Vehicle demand vs the estimated capacity for roadways with at-grade crossings, roadways with grade separated crossings, and freeways that cross the corridor

Daily Traffic (Average Annual): Number of vehicles traveling on roadways that cross the Caltrain corridor within the segment in a day, averaged over a one-year period[8]

Roadway Segment Capacity: Planning level number of vehicles for the roadways that cross the Caltrain corridor within the segment can convey in a day[9]

- When traffic exceeds capacity, users experience increased wait times, queuing, and congestion on the roadway network.

Population: Estimated number of people and number of people per square mile based on 2018 census tracts within one mile of the Caltrain corridor[1]

Employment: Estimated number of jobs and number of jobs per square mile based on 2018 census blocks within one mile of the Caltrain corridor[10]

Anticipated Annual Growth (2015-2050): Compound annual growth in population and employment[11]

Equity

Seniors, People of Color, and Low Income Population: Percentage of the segment population who fit this category[1]

Household Income: Percentage of households within one mile of the Caltrain corridor by income range[18]

Area Median Income (AMI): Percentage of housing units within one mile of the corridor by AMI thresholds[19]

Connectivity

Crossings by Mode (Max Distance): Number of crossings along the segment by mode (vehicle, pedestrian[12], bicycle[13], and transit) measured by distance in miles between crossings[14]

Mode Split (All Trips): Percentage of all day weekday trips, by mode, that start/end within one mile of the Caltrain corridor[15]

Number of Trains in Peak Hour: Existing and future maximum number of trains operating on the Caltrain corridor for the segment during the peak hour[16]

Gate Down Time (Average Minutes in Peak Hour): Average existing and future gate down time estimates for at-grade crossings along the segment

- **Crossings >11 Min. Gate Down Time:** At-grade crossings along the segment with gate down time above 11 minutes[17]

Safety

Rail Crossing Incidents (2017-2021): Number of incidents between trains and roadway users (e.g., vehicle, pedestrian, and bicyclist)[20]

- **Incident Severity:** Degree of injury that resulted from the incident. Fatal incident resulted in death(s). Other incident resulted in injuries or no injuries.
- **Select Incident Types:** Select types based on incident report narrative. Car stalled incidents involved a vehicle being stalled, stuck, trapped, stopped or blocked on crossing. Apparent suicide incidents involved a user(s) attempting or succeeding in committing suicide. Other incidents involved drivers ignoring railroad gates or other reasons.

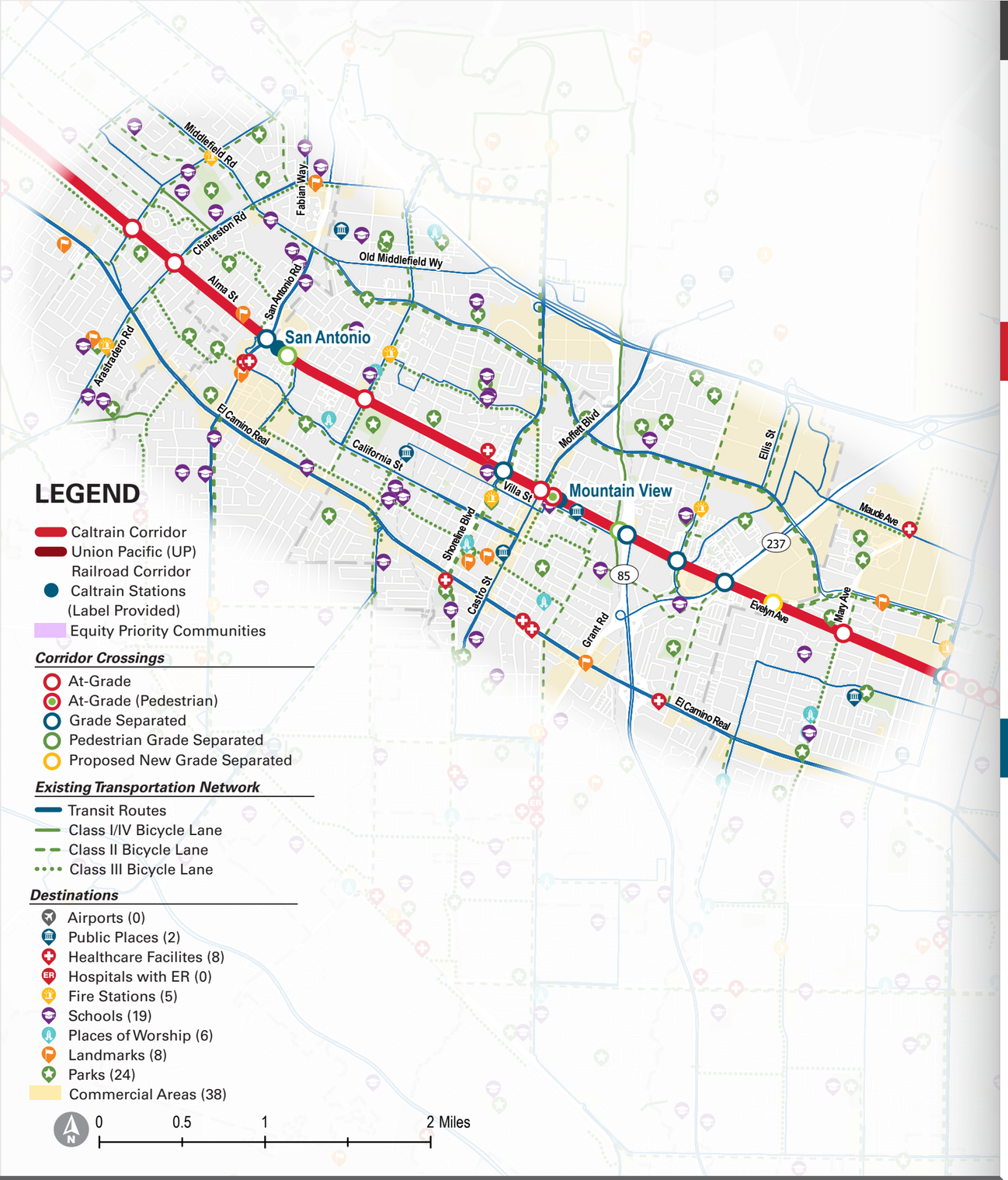
Street Traffic Incidents (2017-2021): Number of injury collisions between vehicles and other non-rail modes that occur on local roads within 250 feet of the railroad crossings along the segment[21]

- **Collision Severity:** Collision's degree of severity (highest level of injury in crash). Fatal collision resulted in death(s). Severe collision resulted in a serious injury. Other collision resulted with another visible injury or complaint of pain.
- **Collision Mode Involved:** Type of user involved in the collision including pedestrian, bicyclist, or vehicle only

Incidents/Crossings: Number of incidents divided by the total number of crossings along the segment

Footnotes:

1. *MTC EPC Data (Accessed December 2022).*
2. *Federal Rail Association (FRA) Crossing Inventory Data and Peninsula Corridor Joint Power Boards (PCJPB) Track Chart (Accessed December 2022).*
3. *MTC Transit and Bicycle Facilities Layers (Accessed December 2022).*
4. *Caltrans, California Health and Human Services, National Center for Education Statistics and Open Street Map (Accessed February 2023).*
5. *FRA Crossing Inventory and PCJPB Track Chart (Accessed March 2023); MTC EPC Data (Accessed December 2022).*
6. *Caltrain 2019 Annual Passenger Counts (Accessed January 2023).*
7. *Replica 2019 and 2021 Annual Average Daily Traffic (AADT), Caltrain 2020 Business Plan and Caltrans Functional Classification (Accessed January 2023).*
8. *Based on 2019 Replica model data, adjusted based on readily available daily traffic machine counts.*
9. *Based on the number of travel lanes, roadway classification, and theoretical capacities associated with roadway segment level of service (LOS) E.*
10. *Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) 2018 (Accessed January 2023).*
11. *MTC Plan Bay Area 2050 Model Forecast Data (Accessed January 2023).*
12. *Crossings for pedestrian mode include crossings where pedestrian access is provided (e.g., sidewalk in one or both directions) or the crossing is a designated pedestrian crossing.*
13. *Crossings for bicycle mode include crossings where Class I, II or IV are present at the crossing or the the crossing is a designated pedestrian crossing.*
14. *FRA Crossing Inventory and PCJPB Track Chart (Accessed March 2023); MTC Transit and Bike Facilities Layers (Accessed December 2022).*
15. *Replica Trips by Origin Data (Accessed March 2023).*
16. *Caltrain 2020 Business Plan and 2040 Long Range Service Vision (Accessed March 2023).*
17. *Caltrain 2020 Business Plan (Accessed March 2023).*
18. *2019 ACS 5-Year Estimates Table B19001 Block Group (Accessed April 2023).*
19. *U.S. Department of Housing and Urban Development (HUD) Comprehensive Housing Affordability Strategy (CHAS) 2019 ACS 5-Year Average (Accessed April 2023).*
20. *FRA Safety Data (Highway-Rail Grade Crossing Accident/Incident Report) (Accessed February 2023).*
21. *Transportation Injury Mapping System (TIMS) (Accessed February 2023).*



Mountain View

Context

5 Grade Separated Crossings
(0 in Equity Priority Communities)

2 At-Grade Crossings
(0 in Equity Priority Communities)

3 Pedestrian Crossings
(0 in Equity Priority Communities)

San Antonio Station
1,000 Riders

Mountain View Station
4,600 Riders

Palo Alto/Mountain View (MP 33.42) — **3.96 Miles** — *Bernardo Avenue (MP 37.38)*

Demand and Growth

Daily Traffic (Average Annual)
Roadway Segment Capacity

At-Grade:	54k	46k
Grade Separated:	61k	118k
Freeway:	160k	170k

151,700 Population
8,000 - people/square mile
1.5% - Anticipated Annual Growth (2015-2050)

72,800 Employment
5,600 - jobs/square mile
1.1% - Anticipated Annual Growth (2015-2050)

Equity

Population

Seniors	6.3%
People of Color	55.0%
Low Income	13.7%

Income Ranges
(Total Household: 53,200)

Under $25k	10%
$25k - $35k	3%
$35k - $50k	5%
$50k - $75k	8%
$75k - $100k	8%
Over $100k	66%

% 20 40 60 80 100

Area Median Income (AMI)
(Total Housing Units: 60,100)

Below 30% AMI	13%
30-50% AMI	8%
50-80% AMI	9%
Over 80% AMI	70%

% 20 40 60 80 100

Connectivity

Crossings by Mode (Max Distance in Miles)

7 (0.9)	7 (0.9)
6 (1.5)	6 (1.4)

Mode Split (All Trips)

3% - Freight
81% - Driver/Passenger
3% - Taxi/TNC
1% - Public Transit
13% - Biking/Walking

# of Trains
in Peak Hour

2018	2040
5	12

Gate Down Time
(Avg. Min. in Peak Hour)

2018	2040
11	20

Crossings >11 Min. Gate Down Time:
Castro Street

Safety

Rail Crossing Incidents
(2017-2021)

3 Total Rail Incidents

Incident Severity:
- Fatal: 2
- Other: 1

Select Incident Types:
- Car Stall: 1
- Apparent Suicide: 2
- Other: 0

0.3 - Incidents/Crossing

Street Traffic Incidents
(2017-2021)

35 Total At-Grade | **30** Total Grade Separated

Collision Severity:
- Fatal: 0
- Severe: 6
- Other: 59

Collision Mode Involved:
- Pedestrian: 5
- Bicyclist: 8
- Vehicle Only: 52

6.5 - Incidents/Crossing

Caltrain | Corridor Crossings STRATEGY

Crossing Details				Railroad Safety						Street Traffic Incidents							Daily Traffic	Active Transportation		Transit		Demographic
Crossing Label	City	Crossing Type	Current Crossing Position	Total Rail Incidents	Incident Severity: Fatal	Incident Severity: Other	Incident Type: Apparent Suicide	Incident Type: Car Stall	Incident Type: Other	Total Collisions	Collision Severity: Fatal	Collision Severity: Severe	Collision Severity: Other	Collision Involved: Pedestrian	Collision Involved: Bicyclist	Collision Involved: Vehicle Only	Adjusted Replica Model AADT (2019)	Pedestrian Facilities Present	Bicycle Facilities Present	Transit Line	Transit Route(s)	Equity Priority Community (EPC)?
San Antonio Road	Mountain View	Grade Separated	Overcrossing	0	0	0	0	0	0	4	0	1	3	0	0	4	30,100	No	No	Yes	SC:21 SC:32 SC:35	No
Mayfield Avenue Pedestrian Undercrossing	Mountain View	Pedestrian Crossing	Undercrossing	0	0	0	0	0	0	4	0	0	4	0	0	4	--	Yes	Yes	No	None	No
Rengstorff Avenue	Mountain View	At-Grade	At-Grade	1	1	0	1	0	0	22	0	1	21	1	3	18	18,600	Yes	No	Yes	SC:34 SC:40	No
Shoreline Boulevard	Mountain View	Grade Separated	Overcrossing	0	0	0	0	0	0	9	0	3	6	0	0	9	20,300	Yes	Class II	Yes	SC:34 SC:40	No
Castro Street	Mountain View	At-Grade	At-Grade	2	1	1	1	1	0	13	0	0	13	4	4	5	35,000	Yes	Class II	Yes	SC:21 SC:51 SC:81	No
Mountain View Station North Pedestrian Crossing	Mountain View	Pedestrian Crossing	At-Grade	0	0	0	0	0	0	0	0	0	0	0	0	0	--	Yes	Yes	No	None	No
Stevens Creek Trail Pedestrian Overcrossing	Mountain View	Pedestrian Crossing	Overcrossing	0	0	0	0	0	0	2	0	0	2	0	0	2	--	Yes	Class I	No	None	No
SR 85	Mountain View	Grade Separated	Overcrossing	0	0	0	0	0	0	5	0	0	5	0	0	5	88,200	No	No	No	None	No
Whisman Road	Mountain View	Grade Separated	Overcrossing	0	0	0	0	0	0	4	0	0	4	0	1	3	10,200	Yes	Class II	Yes	SC:185 SC: Express 185	No
SR 237	Mountain View	Grade Separated	Overcrossing	0	0	0	0	0	0	2	0	1	1	0	0	2	71,500	No	No	Yes	SC:185 SC: 200 SC: Express 185 SC:200 Shuttle	No