

Caltrain Electrification

CALTRAIN-BART SCHEDULE COORDINATION

Citizens Advisory Committee
August 21, 2024
Agenda Item 9



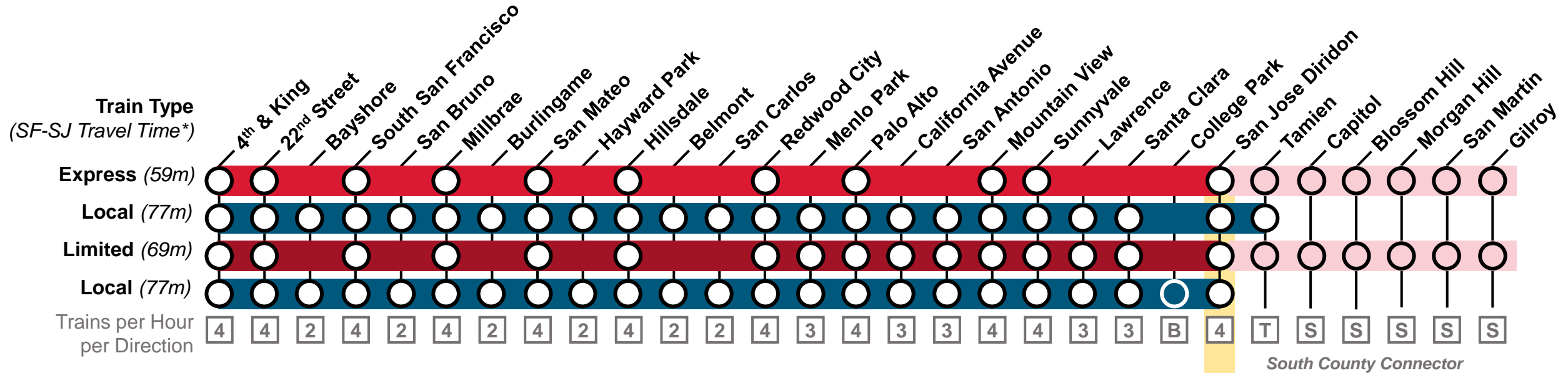
Agenda

Today's Meeting

1. **Electrification Service Plan Overview**
2. **BART Service Changes**
3. **Millbrae Transfer Optimization**
4. **Other Regional Agency Connections**
5. **Next Steps**

Weekday Peak Period Final Station Service Levels

Peak periods vary by station, generally covering 6:30AM-9:30AM and 3PM-7PM



LEGEND

○ Stop (one per hour per direction)

Stops per hour per direction

T Tamien Service
2 to 3 stops per hour in peak direction, 1 stop per hour in reverse-peak direction

B Bellarmine Service
2 stops per day per direction

S South County Connector Service
4 stops per day per direction with 1-2 trains per hour in the peak direction



Timed Cross-Platform Connection
Between South County Connector trains and Express or Limited trains in both directions

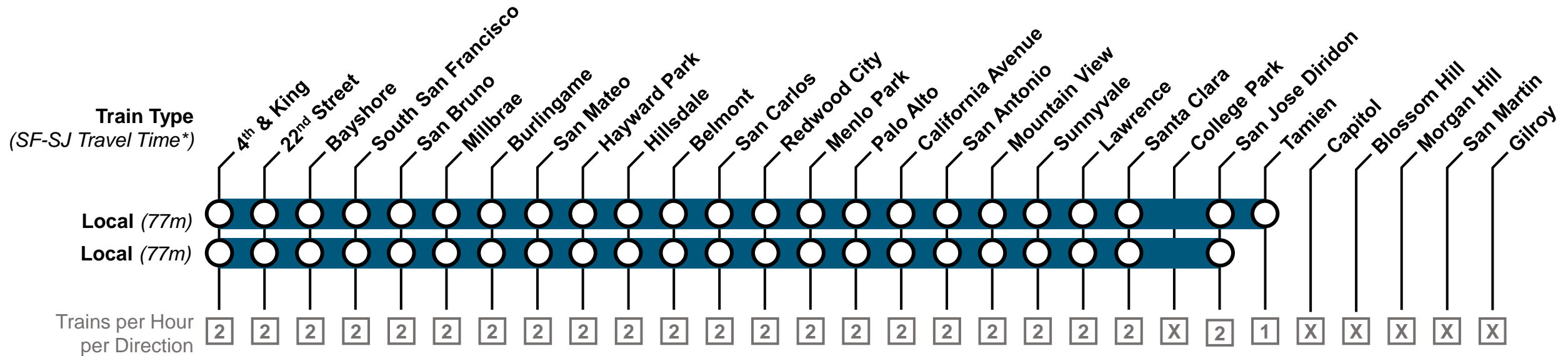
Diesel Service (4 Daily Roundtrips)
South County Connector between Gilroy and Diridon



*SF-SJ travel time refers to 4th & King to Diridon Station.

Weekday Off-Peak Final Station Service Levels

Off-peak periods vary by station, generally covering 5-6:30AM, 9:30AM-3PM, and 7PM-1AM



LEGEND

- Stop (one per hour per direction)
- X No Service
Peak Period service only

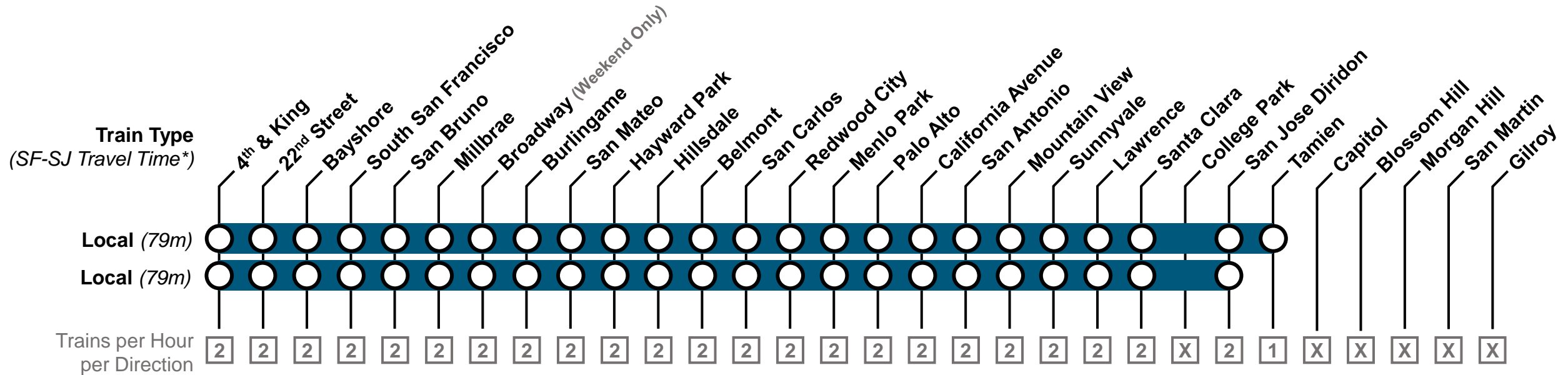
Stops per hour per direction

*SF-SJ travel time refers to 4th & King to Diridon Station.



Weekend Final Station Service Levels

Weekend service hours vary by station, generally covering 7AM-1AM



LEGEND

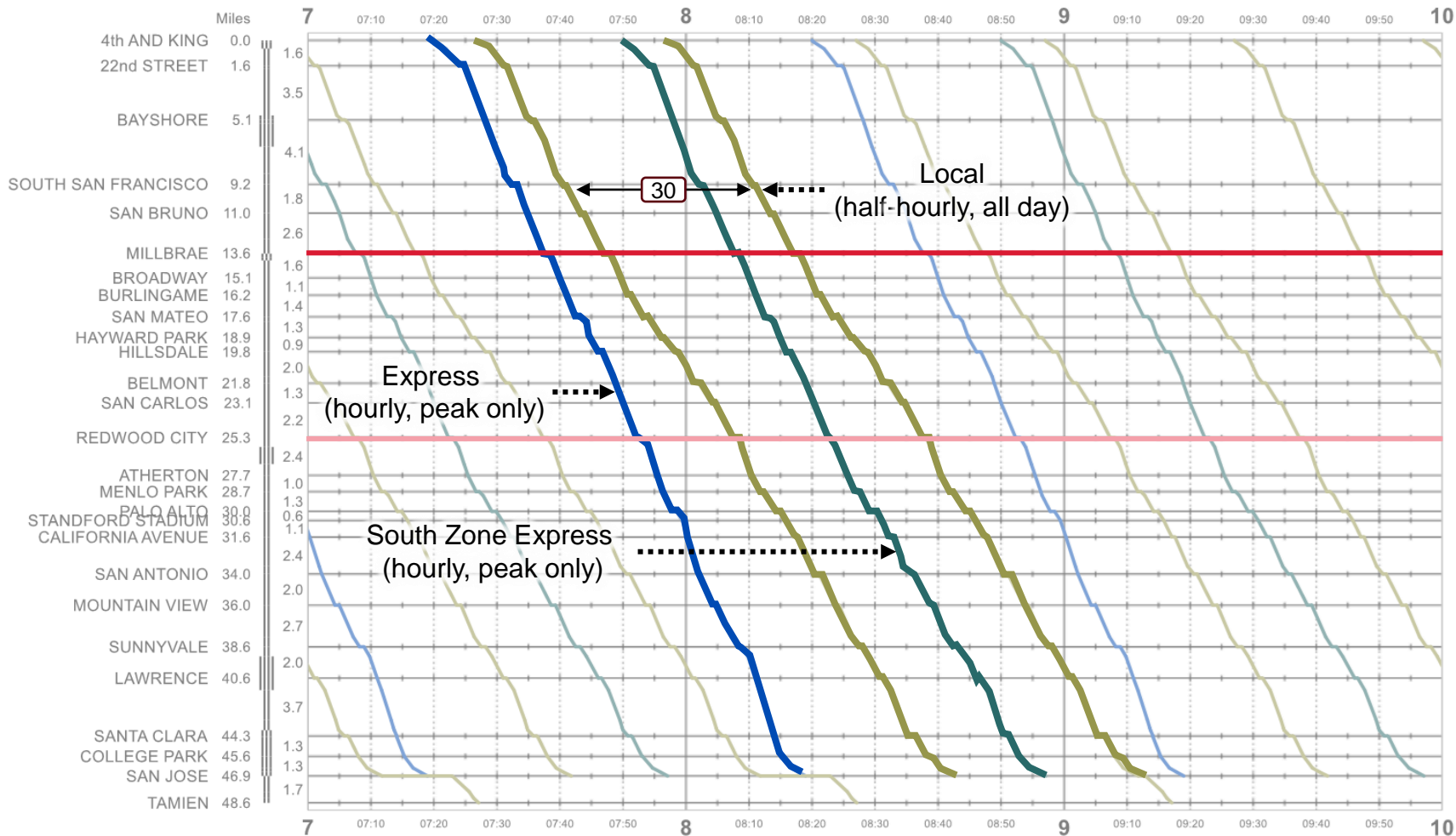
- Stop (one per hour per direction)
- ⊠ No Service (Weekday service only)

- # Stops per hour per direction

*SF-SJ travel time refers to 4th & King to Diridon Station.



Weekday Peak Hour String Chart



Caltrain developed a 30-min headway-based service plan for electrification service with 4TPH for peak and 2TPH for off-peak service



What Constraints Remain?



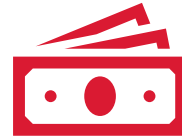
Infrastructure

Caltrain serves a mostly two track corridor with constrained terminal operations, which limits how it can provide service.



Fleet

Caltrain's mixed fleet of diesel and electric trains constrains what kinds of train service can be offered on the entire corridor.



Operating Budget

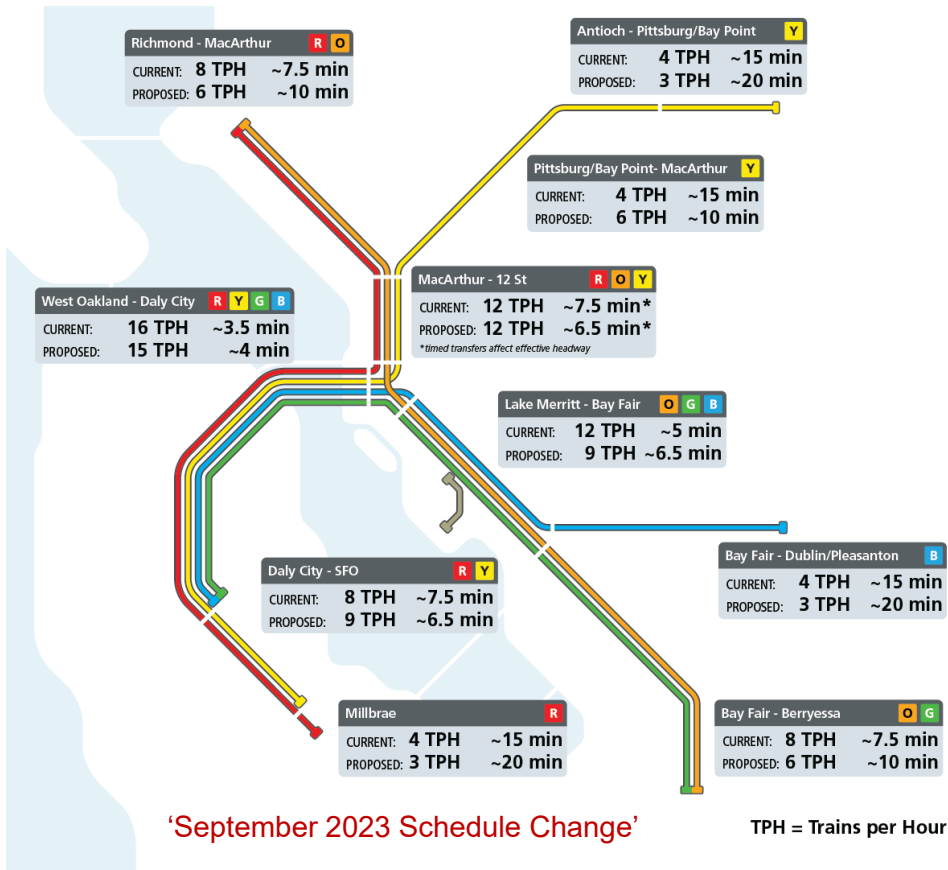
Consistent with the FY24-25 budget, Caltrain will provide 104 trains per day. With lower ridership and farebox revenue, Caltrain will delay further service expansion until ridership recovers or the fiscal situation improves.



Service Coordination

Timing transfers with all connecting transit agencies poses challenges.

BART Service Changes 2023-2024



BART's new schedule

beginning August 12, 2024

Easier connections with Caltrain at Millbrae

Yellow Line adjustments to reduce crowding

We're swapping the pattern of Pittsburg/Bay Point and Antioch trains to reduce crowding on trains that serve the transfer platform.

Blue Line to Orange Line transfer at Bay Fair returns

Even spacing between trains

Let's go.







Millbrae Transfer Optimization

In February, BART used HASTUS® Meet Builder feature to analyze the connection times for each train in both draft timetables.

Caltrain Planning used Excel to make recommendations on optimal “shifts,” based on the parameter that anything outside of a range of 5-19 minutes would not qualify as a good transfer.

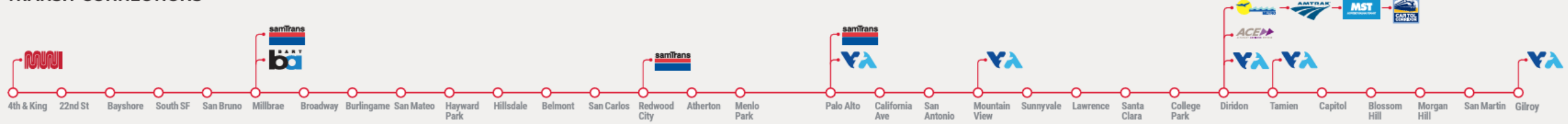
Millbrae Transfer Timetable

WEEKDAY					
NORTHBOUND			SOUTHBOUND		
 Caltrain ARRIVAL Time	 BART DEPARTURE Time	Minutes between Arrival and Departure Times	 BART ARRIVAL Time	 Caltrain DEPARTURE Time	Minutes between Arrival and Departure Times
5:39 AM	5:52 AM	0:13	6:07 AM	6:16 AM	0:09
6:04 AM	6:09 AM	0:05	6:27 AM	6:37 AM	0:10
6:33 AM	6:49 AM	0:16	6:47 AM	7:07 AM	0:20
7:03 AM	7:09 AM	0:06	7:07 AM	7:16 AM	0:09
7:24 AM	7:29 AM	0:05	7:27 AM	7:37 AM	0:10
7:33 AM	7:49 AM	0:16	7:47 AM	8:07 AM	0:20
8:03 AM	8:09 AM	0:06	8:07 AM	8:16 AM	0:09
8:24 AM	8:29 AM	0:05	8:27 AM	8:37 AM	0:10
8:33 AM	8:49 AM	0:16	8:47 AM	9:07 AM	0:20
9:03 AM	9:09 AM	0:06	9:07 AM	9:16 AM	0:09
9:24 AM	9:29 AM	0:05	9:27 AM	9:46 AM	0:19
9:33 AM	9:49 AM	0:16	10:07 AM	10:16 AM	0:09
9:54 AM	10:09 AM	0:15	10:27 AM	10:46 AM	0:19
10:24 AM	10:29 AM	0:05	11:07 AM	11:16 AM	0:09
10:54 AM	11:09 AM	0:15	11:27 AM	11:46 AM	0:19
11:24 AM	11:29 AM	0:05	12:07 PM	12:16 PM	0:09
11:54 AM	12:09 PM	0:15	12:27 PM	12:46 PM	0:19
12:24 PM	12:29 PM	0:05	1:07 PM	1:16 PM	0:09
12:54 PM	1:09 PM	0:15	1:27 PM	1:46 PM	0:19
1:24 PM	1:29 PM	0:05	2:07 PM	2:16 PM	0:09
1:54 PM	2:09 PM	0:15	2:27 PM	2:46 PM	0:19
2:24 PM	2:29 PM	0:05	3:07 PM	3:16 PM	0:09
2:54 PM	3:09 PM	0:15	3:27 PM	3:37 PM	0:10
3:24 PM	3:29 PM	0:05	3:47 PM	4:07 PM	0:20
4:03 PM	4:09 PM	0:06	4:07 PM	4:16 PM	0:09
4:24 PM	4:29 PM	0:05	4:27 PM	4:37 PM	0:10
4:33 PM	4:49 PM	0:16	4:47 PM	5:07 PM	0:20
5:03 PM	5:09 PM	0:06	5:07 PM	5:16 PM	0:09
5:24 PM	5:29 PM	0:05	5:27 PM	5:37 PM	0:10



Other Regional Transit Agency Connections

MAJOR CALTRAIN TRANSIT CONNECTIONS



CALTRAIN BUSINESS PLAN



Transfer Timetables

VTA, ACE, Capitol Corridor

WEEKDAY
MOUNTAIN VIEW STATION | VTA (Orange Line) TRANSFERS

to Caltrain NB				to VTA (Orange Line) EB							
VTA WB		Caltrain NB		Caltrain SB		VTA EB					
Train #	Arrival	Departure	Service Type	Transfer Time	Notes	Service Type	Arrival	Departure	Train #	Transfer Time	Notes
		5:02a	LOCAL					5:26			
		5:27a	LOCAL			LOCAL	5:53a	5:56		0:03	
		6:02a	LIMITED					6:10			
	6:00	6:17a	LOCAL	0:17				6:25			
	6:30	6:36a	EXPRESS	0:06				6:40			
		6:47a	LOCAL					6:54			
	6:45	7:02a	LIMITED	0:17		LOCAL	6:53a	7:09		0:16	
	7:02	7:17a	LOCAL	0:15		EXPRESS	7:04a	7:24		0:20	
	7:18	7:36a	EXPRESS	0:18		LOCAL	7:23a	7:39		0:16	
	7:33	7:47a	LOCAL	0:14		LIMITED	7:38a	7:53		0:15	

WEEKDAY
SANTA CLARA STATION | ACE TRANSFERS

to Caltrain NB				to ACE EB							
ACE WB		Caltrain NB		Caltrain SB		ACE EB					
Train #	Arrival	Departure	Service Type	Transfer Time	Notes	Service Type	Arrival	Departure	Train #	Transfer Time	Notes
		4:50a	LOCAL			LOCAL	6:05a				
		5:15a	LOCAL			LOCAL	7:05a				
		5:50a	LIMITED			LOCAL	7:35a				
		6:05a	LOCAL			LIMITED	7:50a				
ACE 01	6:10	6:35a	LOCAL	0:25		LOCAL	8:05a				
	6:10	6:50a	LIMITED	0:40		LOCAL	8:35a				
	6:10	7:05a	LOCAL	0:55		LIMITED	8:50a				
ACE 03	7:35	7:35a	LOCAL	0:00		LOCAL	9:05a				
	7:35	7:50a	LIMITED	0:15		LOCAL	9:35a				
	7:35	8:05a	LOCAL	0:30		LIMITED	9:50a				

WEEKDAY
SAN JOSE DIRIDON STATION | CAPITOL CORRIDOR TRANSFERS

to Caltrain NB				to Capitol Corridor EB							
Capitol Corridor WB		Caltrain NB		Caltrain SB		Capitol Corridor EB					
Train #	Arrival	Departure	Service Type	Transfer Time	Notes	Service Type	Arrival	Departure	Train #	Transfer Time	Notes
		4:43a	LOCAL			LOCAL	6:11a	6:18	524	0:07	
		5:08a	LOCAL			LOCAL	7:22a				
		5:43a	LIMITED			EXPRESS	7:18a				
		5:58a	LOCAL			LOCAL	7:41a				
		6:22a	EXPRESS			LIMITED	7:57a				
		6:28a	LOCAL			LOCAL	8:22a				
		6:43a	LIMITED			EXPRESS	8:18a	>>	8:48	528	0:30
		6:58a	LOCAL			LOCAL	8:41a	>>	8:48		0:07
521	7:15	7:22a	EXPRESS	0:07		LIMITED	8:57a				



Next Steps

- “Soft Launch”: Introduction of EMU’s into our current schedule started on August 11.
- **New Electrified Service Schedule goes into effect on September 21!**
- Ongoing participation in the operator-led Bay Area Transit Reliability and Accessibility Network Scheduling Framework and Equitable Regional **(TRANSFER)** Plan
 - Focuses on the recognized need to improve interagency transfer timing throughout the region.