



# 2017 SFMTA Facilities Framework Addendum

*6 October 2017 by Owen Adams Consulting with Laura Blake Architect*

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# Report

# Overview

## Introduction

In 2015, The San Francisco Municipal Transportation Agency (SFMTA) and the City committed to *MuniForward*, San Francisco's first public transit service increase in decades. To implement this service increase, the SFMTA is increasing its transit fleets and now needs to modernize and expand its facilities to maintain, operate, and store its fleets. The SFMTA's oldest transit facilities—Potrero, Presidio, and Kirkland—are at the end of their useful lives and need to be rebuilt. In addition, the Enforcement and Paratransit fleets and operations need permanent facilities.

In January 2017, the SFMTA released the *2017 SFMTA Facilities Framework* to address facility needs. This *Addendum* describes the SFMTA's pared down, refined scenarios to address its facility needs. It and the initial report were prepared by Owen Adams Consulting with Laura Blake Architect, in concert with SFMTA staff. Maintenance Design Group provided transportation expertise to refine facility requirements and transit facility concepts.

This report summarizes the refined shortlisted scenarios and recommended next steps. The appendices contain supporting materials including:

- Appendix 1: Transit Fleet Data
- Appendix 2: Facility Requirements
- Appendix 3: Facility Studies

## Refined Shortlisted Scenarios

The *2017 SFMTA Facilities Framework* included five scenarios which the SFMTA narrowed to three:

**Scenario 1A - New Facility:** Assumes a New Facility for Bus/Trolley Bus and Paratransit.

**Scenario 1B - New Facility:** Assumes a New Facility for Bus/Trolley Bus, and a separate Paratransit facility.

**Scenario 2A - Maximize Existing Facilities:** Assumes denser development of Presidio and Potrero sites for Bus/Trolley Bus and a Paratransit facility.

All scenarios include rebuilding of Potrero, Presidio, and Kirkland sites, but vary in the amount of SFMTA and joint use development. All scenarios include expansion of the MME yard for light rail vehicle (LRV) fleet growth, and assume jurisdictional transfer of 1200 15th Street to the SFMTA and use of it and the Scott Garage for Enforcement and non-revenue vehicle maintenance.

Scenarios 1A/1B use a New Facility as an interim bus/trolley bus facility. Scenario 2A uses the MME Expansion area as an interim trolley bus facility and Marin (or other lease) as an interim bus facility. Scenario 1A assumes Paratransit moves to a New Facility, while Scenario 1B and 2A assume the SFMTA provides or the vendor continues to provide a facility.

Joint use development in addition to core SFMTA needs is possible at each rebuild site as well as 1200 15th Street. The SFMTA will analyze possible types and amounts of joint development in the next phase of project development.



## Scenario Summary

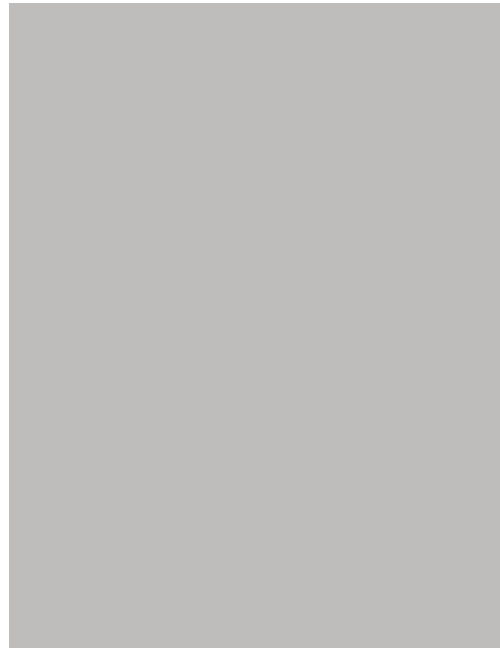
	Scenario 1A	Scenario 1B	Scenario 2A
<b>New Facility</b>	<ul style="list-style-type: none"> <li>• bus/trolley bus</li> <li>• paratransit</li> </ul>	<ul style="list-style-type: none"> <li>• bus/trolley bus</li> </ul>	
<b>MME</b>	<ul style="list-style-type: none"> <li>• rail</li> </ul>	<ul style="list-style-type: none"> <li>• rail</li> </ul>	<ul style="list-style-type: none"> <li>• interim trolley bus, then rail</li> </ul>
<b>Potrero</b>	<ul style="list-style-type: none"> <li>• rebuild with 2 levels for bus/trolley bus &amp; training</li> <li>• potential joint use above</li> </ul>	<ul style="list-style-type: none"> <li>• rebuild with 2 levels for bus/trolley bus &amp; training</li> <li>• potential joint use above</li> </ul>	<ul style="list-style-type: none"> <li>• rebuild with 3 levels for bus/trolley bus &amp; training</li> <li>• potential joint use above</li> </ul>
<b>Presidio</b>	<ul style="list-style-type: none"> <li>• rebuild for trolley bus</li> <li>• potential joint use adjacent</li> </ul>	<ul style="list-style-type: none"> <li>• rebuild for trolley bus</li> <li>• potential joint use adjacent</li> </ul>	<ul style="list-style-type: none"> <li>• rebuild with 2 levels for trolley bus</li> <li>• potential joint use adjacent</li> </ul>
<b>Kirkland</b>	<ul style="list-style-type: none"> <li>• rebuild with for bus</li> <li>• potential joint use above</li> </ul>	<ul style="list-style-type: none"> <li>• rebuild with for bus</li> <li>• potential joint use above</li> </ul>	<ul style="list-style-type: none"> <li>• rebuild for bus</li> <li>• potential joint use above</li> </ul>
<b>Scott</b>	<ul style="list-style-type: none"> <li>• NRV maintenance</li> <li>• enforcement parking</li> </ul>	<ul style="list-style-type: none"> <li>• NRV maintenance</li> <li>• enforcement parking</li> </ul>	<ul style="list-style-type: none"> <li>• NRV maintenance</li> <li>• enforcement parking</li> </ul>
<b>15th St</b> <small>(Occupied by Animal Care &amp; Control; to be transferred to SFMTA)</small>	<ul style="list-style-type: none"> <li>• enforcement</li> <li>• potential joint use above</li> </ul>	<ul style="list-style-type: none"> <li>• enforcement</li> <li>• potential joint use above</li> </ul>	<ul style="list-style-type: none"> <li>• enforcement</li> <li>• potential joint use above</li> </ul>
<b>Other (TBD)</b>		<ul style="list-style-type: none"> <li>• paratransit</li> </ul>	<ul style="list-style-type: none"> <li>• paratransit</li> </ul>

# Scenario 1A/1B

<p><b>1. New Facility</b>          Bus/Trolley Bus          &amp; Paratransit in 1A</p>
<p><b>2. Scott &amp; 15th St</b>          NRV Maintenance          Enforcement          Potential joint use above 15th St</p>
<p><b>3. MME</b>          Rail</p>
<p><b>4. Potrero</b>          Trolley Bus &amp; Training          Potential joint use above</p>
<p><b>5. Presidio</b>          Trolley Bus          Potential joint use adjacent</p>
<p><b>6. Kirkland</b>          Bus          Potential joint use above</p>
<p><b>7. Other (TBD)</b>          Paratransit in 1B</p>

**New Facility** - Developer-built multi-level bus/trolley bus and paratransit facility in Scenario 1A; bus/trolley bus facility in Scenario 1B

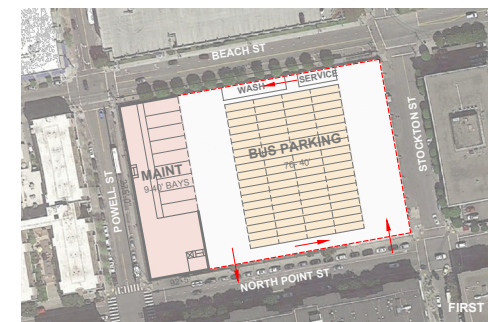
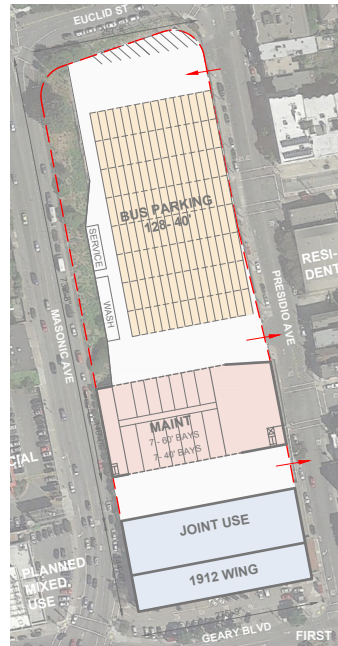
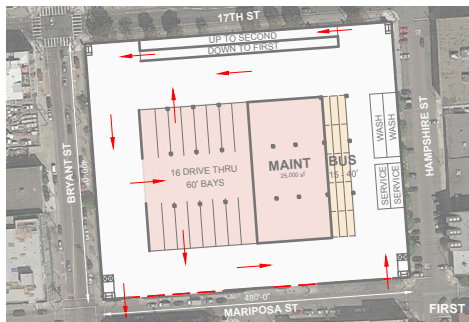
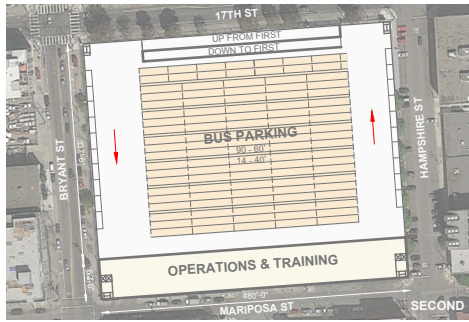
**MME** - Add rail in expansion area. See "Muni Metro East" Section starting on page 54.



**Potrero** - Rebuild as two level bus/trolley bus and training facility with potential joint use above. See “Potrero” Section starting on page 60.

**Presidio** - Rebuild as trolley bus facility with potential joint use adjacent. See “Presidio” Section starting on page 66.

**Kirkland** - Rebuild as bus facility with potential joint use above. See “Kirkland” Section starting on page 70.



# Scenario 2A

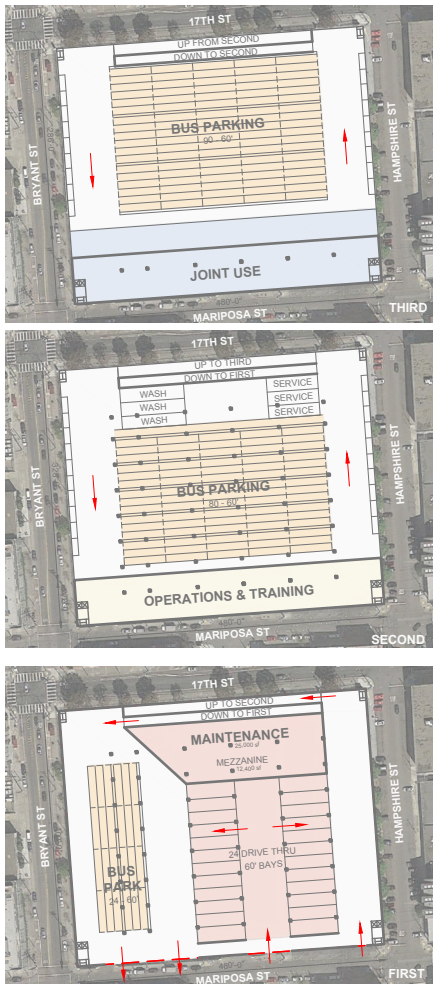
<p>1. <b>Scott &amp; 15th St</b>          NRV Maintenance          Enforcement          Potential joint use above 15th St</p>
<p>2. <b>MME</b>          Trolley Bus, then Rail</p>
<p>3. <b>Potrero</b>          Trolley Bus &amp; Training          Potential joint use above</p>
<p>4. <b>Presidio</b>          Trolley Bus          Potential joint use above</p>
<p>5. <b>Kirkland</b>          Bus          Potential joint use above</p>
<p>6. <b>Marin (or other)</b>          Interim Bus</p>
<p>7. <b>Other (TBD)</b>          Paratransit</p>

**MME** - Build facility and use for trolley bus prior to rail expansion. See “Muni Metro East” Section starting on page 54.





**Potrero** - Rebuild as three level bus/ trolley bus and training facility with potential joint use above. See “Potrero” Section starting on page 60.



**Presidio** - Rebuild as two level trolley bus facility with potential joint use adjacent. See “Presidio” Section starting on page 66.



**Kirkland** - Rebuild as bus facility with potential joint use above. See “Kirkland” Section starting on page 70.



# Schedules

Scenarios	Sites	2017	2018	2019	2020	2021	2022
Lease /Last Option Expirations			Enforcement Paratransit	Yosemite		Marin	
Fleet in excess of 2017 Facilities					38 Coach 1 LRV		
Fleet & Facility Update		Select one Scenario			Update		
<b>Scenario 1A</b> <ul style="list-style-type: none"> <li>New Bus/Trolley Bus &amp; Paratransit Facility</li> <li>Use New Facility as interim facility while rebuilding Potrero, Presidio, and Kirkland</li> </ul>	1. New Facility Bus/Trolley Bus, Paratransit	Terms/Entitlements	Design/Permit		Build		Move-In
	2. 15th St Enforcement & potential joint use	Pre-Design	Design		Permit/Bid	Build	
	3. MME Rail	Pre-Design & Procurement	Design		Permit/Bid	Build	
	4. Potrero Trolley Bus, Training & potential joint use	Joint Use Analysis & Entitlements		RFP	Design/Permit		
	5. Presidio Trolley Bus & potential joint use				Joint Use Analysis & Entitlements		RFP
	6. Kirkland Bus & potential joint use						
	<i>Marin or other lease</i>						Vacate
<b>Scenario 1B</b> <ul style="list-style-type: none"> <li>New Bus/Trolley Bus Facility</li> <li>Use New Facility as interim facility while rebuilding Potrero, Presidio, and Kirkland</li> </ul>	1. New Facility Bus/Trolley Bus	Terms/Entitlements	Design/Permit		Build		Move-In
	2. 15th St Enforcement	Pre-Design	Design		Permit/Bid	Build	
	3. MME Rail	Pre-Design & Procurement	Design		Permit/Bid	Build	
	4. Potrero Trolley Bus, Training & potential joint use	Joint Use Analysis & Entitlements		RFP	Design/Permit		
	5. Presidio Trolley Bus & potential joint use				Joint Use Analysis & Entitlements		RFP
	6. Kirkland Bus & potential joint use						
	7. Other (TBD) Paratransit <i>Marin or other lease</i>						Vacate
<b>Scenario 2A</b> <ul style="list-style-type: none"> <li>Maximize existing sites</li> <li>Use MME as interim facility while rebuilding Potrero and Presidio and Marin (or other lease) as interim facility while rebuilding Kirkland</li> </ul>	1. 15th St Enforcement & Joint use	Pre-Design	Design		Permit/Bid	Build	
	2. MME Interim Trolley Bus, then Rail	Pre-Design & Procurement	Design		Permit/Bid	Build	
	3. Potrero Trolley Bus, Training & potential joint use		Joint Use Analysis & Entitlements		RFP	Design/Permit	
	4. Presidio Trolley Bus & potential joint use					Joint Use Analysis & Entitlements	
	5. Kirkland Potrero Bus & potential joint use						
	6. Other (TBD) Paratransit						
	<i>Marin (or other lease)</i>						

2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
									Bayshore
		83 Coach 12 LRV Update					138 Coach 46 LRV Update		
<i>Potrero Fleet at New Facility</i>			<i>Presidio Fleet at New Facility</i>			<i>Kirkland Fleet at New Facility</i>			
Move-In									
Move-In									
	Build	Move-In							
	Design/Permit			Build	Move-In				
		Pre-Design & Procurement		Design	Permit/Bid		Build	Move-In	
<i>Potrero Fleet at New Facility</i>			<i>Presidio Fleet at New Facility</i>			<i>Kirkland Fleet at New Facility</i>			
Move-In									
Move-In									
	Build	Move-In							
	Design/Permit			Build	Move-In				
		Pre-Design & Procurement		Design	Permit/Bid		Build	Move-In	
Move-In									
Move-In	<i>Potrero Fleet at MME</i>			<i>Presidio Fleet at MME</i>		<i>LRV &amp; back shop</i>			
	Build		Move-In						
RFP	Design/Permit			Build		Move-In			
		Pre-Design & Procurement		Design	Permit/Bid		Build	Move-In	
							<i>Kirkland Fleet at Lease</i>		<i>Vacate</i>

# Recommended Next Steps

## Near Term Facility Framework Refinement

To ensure that the SFMTA has adequate facilities to maintain, operate, and store its new and growing transit fleets, it must proceed expeditiously. Numerous activities must progress on parallel tracks to meet the target rebuild schedule based on the SFMTA's service plan and fleet commitments:

### October – December 2017

- Review proposed New Facility concept and prepare performance specifications for all projects (new facility & rebuilds)
- Complete MME Categorical Exemption
- Begin Potrero rebuild joint use study to develop parameters and evaluate cost/benefit and schedule implications of procurement alternatives
- Begin Potrero EIR incorporating data from earlier studies
- Conduct Community Outreach Round 1 to introduce Facilities Framework and listen to community priorities
- Select a Facilities Framework Scenario based on comparative evaluation of costs and benefits

### January - June 2018

- Complete Potrero Transit and Joint Use concept and cost/benefit evaluation

### June - December 2018

- Conduct Community Outreach Round 2 during Potrero environmental evaluation
- Incorporate impacts into Potrero planning and EIR
- Refine Potrero funding and procurement

### 2019:

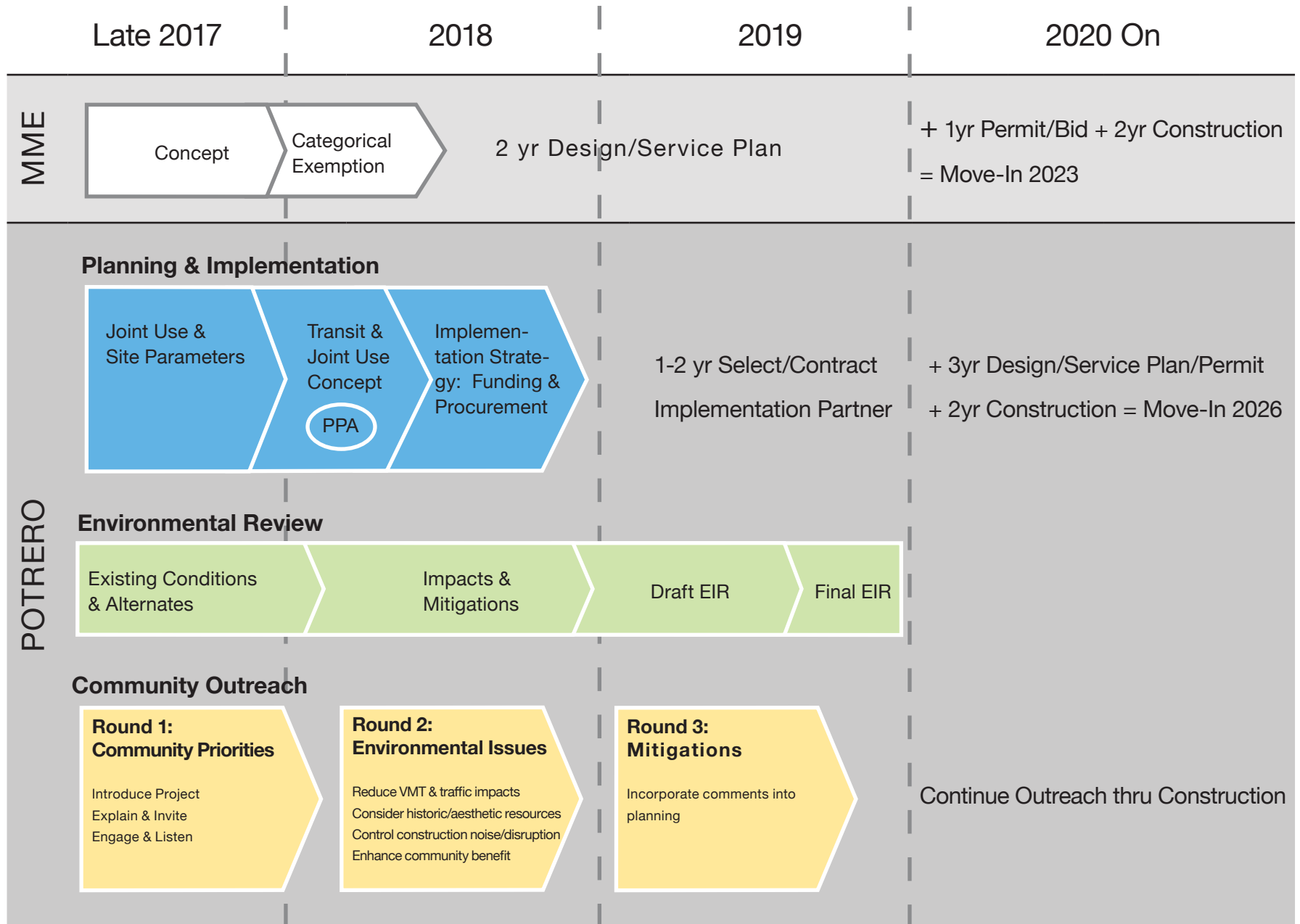
- Conduct Community Outreach Round 3 to address Potrero EIR Analysis of Impacts/Mitigations
- Complete and Issue Potrero EIR
- Complete MME design and service planning
- Finalize Potrero rebuild procurement and contract

## Long Term Facility Framework Updates

Some of the needs that drive the Facility Framework, such as staff and fleet, will change over time. When the SFMTA Transit Fleet Management Plan is updated, the Facilities Framework should also be updated. Given the difficulty in securing large sites suitable for SFMTA's needs, updates should aim to optimize the use of each site including consideration for building multi-level facilities for SFMTA use and potential compatible joint uses.



## Recommended Next Steps



WOODS GARAGE

PROCESSED: JUL 23, 2015 11:26A SAN FRANCISCO MUNICIPAL RAILWAY  
SIGN UP : 2015 T-FALL  
SERVICE : WEEKDAY  
DIVISION : POTRERO

PAGE: 1  
EFFECTIVE DATE: 09-26-2015  
LEAV  
TERM  
228 239  
441 452  
653 708  
858 918  
955 1103  
1210 1224  
0 PM & 6:30

REPORT: 448 OUT: 404 AT POTRERO-GARAGE  
LN T A RUN 340S 340S 340S 340S 340S 340S 340S 340S 340S 340S  
NO T P EXC NUM MKRT MCAL POST UNIN TERM

307  
REPORT: 448 OUT: 404 AT POTRERO-GARAGE  
LN T A RUN 340S 340S 340S 340S 340S 340S 340S 340S 340S 340S  
NO T P EXC NUM MKRT MCAL POST UNIN TERM

324  
PROCESSED: JUL 23, 2015 11:26A SAN FRANCISCO MUNICIPAL RAILWAY  
SIGN UP : 2015 T-FALL  
SERVICE : WEEKDAY  
DIVISION : POTRERO

REPORT: 500 OUT: 515 AT POTRERO-GARAGE  
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DUEOFF: 835 AT POTRERO-GARAGE  
SERVICE : 2015 T-FALL  
DIVISION : WEEKDAY

348-PULL OUT/IN AT WOODS GARAGE

PROCESSED: JUL 23, 2015 11:00AM SAN FRANCISCO MUNICIPAL RAILWAY  
SIGN UP : 2015 T-FALL  
SERVICE : SATURDAY  
DIVISION : POTRERO

REPORT: 484 OUT: 459 AT WOODS  
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IN: 1015 DUEOFF: 1015 AT POTRERO-GARAGE

303

PROCESSED: JUL 23, 2015 11:26A SAN FRANCISCO MUNICIPAL RAILWAY  
SIGN UP : 2015 T-FALL  
SERVICE : WEEKDAY  
DIVISION : POTRERO

REPORT: 411 OUT: 426 AT POTRERO-GARAGE  
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Table with columns: LN T A, NO T P EXC, RUN NUM, LYON, UNIN, UNIN, UNIN, COLM, CLAY, BEAL, MAIN, LEAV TERM

IN: 946 DUEOFF: 946 AT POTRERO-GARAGE

SAN FRANCISCO MUNICIPAL RAILWAY  
SERVICES : 2015 T-FALL  
PROCESSED: JUL 23, 2015

313

PROCESSED: AUG 12, 2015 3:08PM SAN FRANCISCO MUNICIPAL RAILWAY  
SIGN UP : 2015 T-FALL  
SERVICE : SATURDAY  
DIVISION : POTRERO

REPORT: 443 OUT: 458 AT POTRERO-GARAGE  
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IN: 118 DUEOFF: 135 AT POTRERO-GARAGE

SAN FRANCISCO MUNICIPAL RAILWAY  
SERVICES : 2015 T-FALL  
PROCESSED: AUG 12, 2015

Potrero

# Appendix 1: Transit Fleet Data

# Transit Fleet Growth and Facility Capacity Analysis

The SFMTA Transit Fleet Plan is comprised of the *2014 Transit Fleet Management Plan*, the *2017 Rubber Tire Update*, and the *2017 Strategic Plan for Historic Street Car Service*. The plan is based on the San Francisco County Transportation Authority (SFCTA) projection of a 40% increase in ridership from 2014 to 2040 and includes a 30% increase in buses and trolley buses and a 75% increase in light rail vehicles by 2030.

Currently the SFMTA operates its bus/trolley bus facilities at or near crush capacity (fleet parking in all yard parking lanes/track, all maintenance bays, and some aisles/aprons). Transit Specialist Maintenance Design Group recommends assuming planning capacity (fleet parking in all yard parking lanes/tracks and half of the maintenance bays), which allows more efficient maintenance operations and some flexibility in fleet assignment while maximizing site capacity.

## Assumptions

- Transit Fleet Plan is fully implemented.
- Potrero, Presidio, and Kirkland are rebuilt.
- Historic buses, non operating historic street cars and vehicles in acceptance programs prior to incorporation into fleet not included.
- Operate at or near crush capacity during the rebuilds and planning capacity once the rebuilds are complete.

## Existing Facilities Analysis

LRV fleet growth can be accommodated by adding track at Muni Metro East (MME). However without expanding or adding

a bus facility the bus fleet growth will exceed the capacity of SFMTA's facilities in 2030 by 50 to 140 buses, 50 if all facilities are at crush capacity and 140 if all the facilities are at planning capacity. (Table 1 on page 17).

## Scenario 1A/1B Analysis

Scenario 1A assumes that a New Facility serves as an interim facility to make up lost capacity while the SFMTA rebuilds its old facilities. The analysis estimates the required size of a New Facility (number of buses/trolley buses) when accounting for the impacts of rebuilding Potrero, Presidio, and Kirkland between 2025-2035. (Table 2 on page 18).

## Scenario 2A Analysis

Scenario 2A assumes that MME expansion area and Marin (or other leased facility) serve as interim facilities to make up lost capacity while rebuilding the old facilities. The analysis assumes that the Potrero and Presidio rebuilds occur before the MME expansion area is needed for rail growth and estimates the required size of the Potrero, Presidio, and Kirkland Facilities (number of buses/trolley buses) to accommodate the fleet growth (Table 3 on page 19).

## Table Legend

30'	Small Bus or Cable Car
40'	Standard Bus or Trolley Bus
50'	Historic Street Car or PCC (lengths vary)
60'	Articulated Bus or Trolley Bus
75'	Light Rail Vehicle
M	Maintenance Bay



## Fleet Plan and Facility Capacity Table 1 - Existing Facilities

2014 FLEET PLAN WITH 2017 RUBBER TIRE UPDATE AND 2017 PLAN FOR HISTORIC STREET CAR SERVICE																																
	2017					2020					2025					2030					2035				2040							
BUS/TROLLEY	30'	40'	60'			30'	40'	60'			30'	40'	60'			30'	40'	60'			30'	40'	60'	Total		30'	40'	60'				
Bus Fleet	30	392	203			30	357	224			30	365	269			30	365	324														
Trolley Fleet		200	80				185	93				185	93				185	93														
<b>Fleet Plan</b>	<b>30</b>	<b>592</b>	<b>283</b>			<b>30</b>	<b>542</b>	<b>317</b>			<b>30</b>	<b>550</b>	<b>362</b>			<b>30</b>	<b>550</b>	<b>417</b>														
RAIL	30'	50'	75'			30'	50'	75'			30'	50'	75'			30'	50'	75'			30'	50'	75'			30'	50'	75'				
Cable Car	40					40					40					40					40					40						
Historic & Milan		17					17					17					17					17					17					
PCC Street Car		33					33					33					33					33					33					
Light Rail Vehicle			151					215					226					260					260					260				
<b>Fleet Plan</b>	<b>40</b>	<b>50</b>	<b>151</b>			<b>40</b>	<b>50</b>	<b>215</b>			<b>40</b>	<b>50</b>	<b>226</b>			<b>40</b>	<b>50</b>	<b>260</b>			<b>40</b>	<b>50</b>	<b>260</b>			<b>40</b>	<b>50</b>	<b>260</b>				
<b>Bus and Trolley Facility Yard Capacity (parking lanes only)</b>																				Notes												
	30'	40'	60'	40' M	60' M	30'	40'	60'	40' M	60' M	30'	40'	60'	40' M	60' M	30'	40'	60'	40' M		60' M											
Flynn			102		14			102		14			102		14			102			14											
Islais Creek		127	64	0	0		77	72	9	10		77	72	9	10		0	121	9		10											
Kirkland		113		3			113		3			113		30'	3		113		3													
Woods	30	172		26		30	172		26		30	172		26		30	172		26			30	172		26							
Potrero		45	64	5	17		45	64	5	17		45	64	5	17		45	64	5		17		45	64	5	17						
Presidio		135		14			135		14			135		14			135		14				135		14							
<b>Facility Capacity</b>	<b>30</b>	<b>592</b>	<b>230</b>	<b>48</b>	<b>31</b>	<b>30</b>	<b>542</b>	<b>238</b>	<b>57</b>	<b>41</b>	<b>30</b>	<b>542</b>	<b>238</b>	<b>54</b>	<b>44</b>	<b>30</b>	<b>465</b>	<b>287</b>	<b>57</b>		<b>41</b>											
<b>Capacity Shortfall</b>		<b>0</b>	<b>-53</b>				<b>0</b>	<b>-79</b>				<b>-8</b>	<b>-124</b>				<b>-85</b>	<b>-130</b>														
<b>Bus and Trolley Facility Planning Capacity (parking lanes and half the maintenance bays)</b>																				does not include body paint												
Flynn			109		14			109		14			109		14			109			14											
Islais Creek		93	88	0	0		40	98	9	10		40	98	9	10		40	98	9		10											
Kirkland		114		3			114		3			114		30'			114		3													
Woods	30	202		26		30	202		26		30	202		26		30	202		26			30	202		26							
Potrero		47	72	5	17		47	72	5	17		47	72	5	17		47	72	5		17		47	72	5	17						
Presidio		141		17			141		17			141		17			141		17				141		17							
<b>Facility Capacity</b>	<b>30</b>	<b>597</b>	<b>269</b>	<b>51</b>	<b>31</b>	<b>30</b>	<b>544</b>	<b>279</b>	<b>60</b>	<b>41</b>	<b>30</b>	<b>544</b>	<b>279</b>	<b>57</b>	<b>41</b>	<b>30</b>	<b>544</b>	<b>279</b>	<b>60</b>		<b>41</b>											
<b>Capacity Shortfall</b>		<b>5</b>	<b>-14</b>				<b>2</b>	<b>-38</b>				<b>-6</b>	<b>-83</b>				<b>-6</b>	<b>-138</b>														
<b>Bus and Trolley Facility Crush Capacity (parking lanes, all maintenance bays and some aisles/aprons)</b>																					Includes buses in aisles About half the requires when all 60' buses Includes buses in aisles Includes buses in aisles and apron and some 60' buses Includes some 60' trolleys on deck											
Flynn			130		14			130		14			130		14			130		14												
Islais Creek		93	88	0	0		0	129	9	10		0	129	9	10		0	129	9	10												
Kirkland		142		3			142		3			142		30			142		3													
Woods	30	240		26		30	240		26		30	222	12	226		30	222	12	26													
Potrero		47	93	5	17		20	93	5	17		20	93	5	17		20	93	5	17			20	93	5	17						
Presidio		165		17			165		17			165		17			165		17				165		17							
<b>Facility Capacity</b>	<b>30</b>	<b>687</b>	<b>311</b>	<b>51</b>	<b>31</b>	<b>30</b>	<b>567</b>	<b>352</b>	<b>60</b>	<b>41</b>	<b>30</b>	<b>549</b>	<b>364</b>	<b>287</b>	<b>41</b>	<b>30</b>	<b>549</b>	<b>364</b>	<b>60</b>	<b>41</b>												
<b>Capacity Shortfall</b>		<b>95</b>	<b>28</b>				<b>25</b>	<b>14</b>				<b>-1</b>	<b>2</b>				<b>-1</b>	<b>-53</b>														

## Fleet Plan and Facility Capacity Table 2 - Scenario 1A/1B

Scenario 1A/1B																														
	2017					2020					2025					2030					2035					2040				
BUS	30'	40'	60'	Total	M	30'	40'	60'	Total	M	30'	40'	60'	Total	M	30'	40'	60'	Total	M	30'	40'	60'	Total	M	30'	40'	60'	Total	M
<b>Fleet Plan</b>	30	392	203	625		30	357	224	611		30	365	269	664		30	365	342	737		30	365	324	719		30	365	324	719	
Flynn			124		14			126		14			102		14			122		14			109		14			109		14
Islais Creek		52	79				40	98		19		40	98		19		2	129		19		81	72		16		81	72		19
Kirkland		128			3		115			3		113			3		135			3							82			9
Woods	30	212			26	30	202			26	30	202			26	30	228			26	30	224			26	30	202			26
Marin or Other																														
New Facility												47	69		12			91		10		60	143		18			183		24
<b>Facility Capacity</b>	30	392	203	625	43	30	357	224	611	62	30	402	269	701	74	30	365	342	737	72	30	365	324	719	74	30	365	364	759	92
<b>TROLLEY</b>		40'	60'		M		40'	60'		M		40'	60'		M		40'	60'		M		40'	60'		M		40'	60'		M
<b>Fleet Plan</b>		200	80	280			185	93	278			185	93	278			185	93	278			185	93	278			185	93	278	
Potrero		47	80		22		20	93		22							35	93		16		35	93		18		35	93		16
Presidio		153			14		165			14		165			14							135			14		135			14
New Facility												20	93		14		150			16		15			8		15			2
<b>Facility Capacity</b>		200	80	280	36		185	93	278	36		185	93	278	28		185	93	278	32		185	93	278	40		185	93	278	32
<b>RAIL</b>	30'	50'	75'		M	30'	50'	75'		M	30'	50'	75'		M	30'	50'	75'		M	30'	50'	75'		M	30'	50'	75'		M
Cable Car	40					40					40					40					40						40			
Historic & Milan		14					14					14					14					14					14			
PCC Street Car		41					41					41					41					41					41			
Light Rail Vehicle			151					215					226					260					260					260		
<b>Fleet Plan</b>	40	55	151	246		40	55	215	310		40	55	226	321		40	55	260	355		40	55	260	355		40	55	260	355	0
Cable Car	40					40					40					40					40						40			
Cameron Beach		24			1		48			1		48			1		48			1		48			1		48			1
Green			76		10		2	92		10		2	103		10		2	101		10		2	101		10		2	101		10
MME		33	75		15			105		15			105		15			115		15			115		15			115		15
MME Expansion																		42					42					42		
4th & King								18					18				5	2				5	2				5	2		
Other turn backs							5					5																		
<b>Facility Capacity</b>	40	57	151	248	26	40	55	215	310	26	40	55	226	321	26	40	55	260	355	26	40	55	260	355	26	40	55	260	355	26

**NOTES**

1. Fleet Plan comprised of 2014 Fleet Plan, 2017 Rubber Tire Update, and 2017 Plan for Historic Street Car Service.
2. Assumes historic bus fleet, non-operating historic rail cars and vehicles in acceptance programs are not stored in yards and therefore not included in this chart.
3. Black numbers are planning capacity, blue are crush capacity, green are extra capacity, and purple are estimated capacity. Planning capacity includes all parking lanes/tracks and half of the maintenance bays. For example 109 capacity at Flynn in 2040 includes 102 buses in lanes and 7 buses maintenance bays.
4. Red band indicates facility/site not available for use, and orange band indicates facility is a mixed bus and trolley bus facility.
5. Adding 1/2% - 1% bus growth from 2030 to 2040 would result in 34 to 73 additional buses

## Fleet Plan and Facility Capacity Table 3 - Scenario 2A

Scenario 2A																														
	2017					2020					2025					2030					2035					2040				
BUS	30'	40'	60'	Total	M	30'	40'	60'	Total	M	30'	40'	60'	Total	M	30'	40'	60'	Total	M	30'	40'	60'	Total	M	30'	40'	60'	Total	M
<b>Fleet Plan</b>	30	392	203	625		30	357	224	611		30	365	269	664		30	365	342	737		30	365	324	719		30	365	324	719	
Flynn			124		14			126		14			128		14			128		14			109		14			109		14
Islais Creek		52	79				40	98		19		40	98		19			129		19		81	72		16		81	72		19
Kirkland		128			3		115			3		123			3		135			3							81			9
Woods	30	212			26	30	202			26	30	202			26	30	228			26	30	228			26	30	203			26
Marin or Other													43		4		2	28		4		56			4					
Potrero																		57		4			150		18			145		18
<b>Facility Capacity</b>	30	392	203	625	43	30	357	224	611	62	30	365	269	664	66	30	365	342	737	70	30	365	331	726	78	30	365	326	721	86
<b>TROLLEY</b>		40'	60'		M		40'	60'		M		40'	60'		M		40'	60'		M		40'	60'		M		40'	60'		M
<b>Fleet Plan</b>		200	80	280			185	93	278			185	93	278			185	93	278			185	93	278			185	93	278	
Potrero		47	80		22		20	93		22							63	93		18			56		6			61		6
Presidio		153			14		165			14		165			14					14		185	40		20		185	32		20
MME Expansion												20	93		12		122			12					12					12
<b>Facility Capacity</b>		200	80	280	36		185	93	278	36		185	93	278	26		185	93	278	30		185	96	281	38		185	93	278	38
<b>RAIL</b>	30'	50'	75'		M	30'	50'	75'		M	30'	50'	75'		M	30'	50'	75'		M	30'	50'	75'		M	30'	50'	75'		M
Cable Car	40					40					40					40					40					40				
Historic & Milan		14					14					14					14					14					14			
PCC Street Car		41					41					41					41					41					41			
Light Rail Vehicle			151					215					226					260					260					260		
<b>Fleet Plan</b>	40	55	151	246		40	55	215	310		40	55	226	321		40	55	260	355		40	55	260	355		40	55	260	355	0
Cable Car	40					40					40					40					40					40				
Cameron Beach		24			1		48			1		48			1		48			1		48			1		48			1
Green			76		10		2	92		10		2	103		10		2	115		10		2	101		10		2	101		10
MME		33	75		15			105		15			105		15			105		15			115		15			115		15
MME Expansion																							42					42		
4th & King								18					18					18				5	2				5	2		
Other turn backs							5					5					5	22												
<b>Facility Capacity</b>	40	57	151	248	26	40	55	215	310	26	40	55	226	321	26	40	55	260	355	26	40	55	260	355	26	40	55	260	355	26

**NOTES**

1. Fleet Plan comprised of 2014 Fleet Plan, 2017 Rubber Tire Update, and 2017 Plan for Historic Street Car Service.
2. Assumes historic bus fleet, non-operating historic rail cars and vehicles in acceptance programs are not stored in yards and therefore not included in this chart.
3. Black numbers are planning capacity, blue are crush capacity, green are extra capacity, and purple are estimated capacity. Planning capacity includes all parking lanes/tracks and half of the maintenance bays. For example 109 capacity at Flynn in 2040 includes 102 buses in lanes and 7 buses maintenance bays.
4. Red band indicates facility/site not available for use, and orange band indicates facility is a mixed bus and trolley bus facility.
5. Adding 1/2% - 1% bus growth from 2030 to 2040 would result in 34 to 73 additional buses and require operating at crush capacity.





15 MIN  
PARKING  
7 AM - 6 PM

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# Appendix 2: Facility Requirements

# Overview

The facility requirements on the following pages are baseline requirements that describe general planning objectives and building quality as well as the space standards and facility programs for the SFMTA's new transit facilities. The requirements were developed with input from WSP Parsons Brinkerhoff and Maintenance Design Group, two transportation consultants and include best practices for modern transit facility design and flexibility to accommodate the SFMTA's current and planned mix of fleet vehicle sizes and technologies. The requirements are organized in three sections:

- Facility Criteria Outline
- Space Standards
- Facility Programs

## **Facility Criteria Outline**

The criteria outline provides a general description of planning objectives, building quality, and transit specialty needs.

## **Space Standards**

The standards describe the minimum dimensions, areas (square footage inside a room or boundary), and clear heights for typical facility functions. Where applicable the standards provide ratios of spaces to buses and supplementary notes regarding space capacity and/or fit-out.

## **Facility Programs**

The programs define the space requirements for the SFMTA's first new transit facilities including a New Facility and Potrero in Scenario 1A/1B, and MME and Potrero in Scenario 2A.



LA Division 13, Maintenance Design Group

# Facility Criteria Outline

The following is a general description of the planning objectives, building quality, and transit specialty needs for motor/trolley bus facilities and paratransit facilities.

<b>Planning Criteria</b>	
Design Life	75 years
Quality	The planning, design, and construction of the facility shall be high quality and long lasting, have the necessary spaces and systems to function well, provide a safe and healthy work environment, and be economical and resource efficient to operate and maintain.
Planning	The facility layout shall have a logical and efficient organization and flow to allow easy and safe access and circulation for staff, vehicles, and service providers. The layout shall be open and modular with the structure located to support building and equipment loads.
Flexibility	The facility shall be designed to be flexible. Vehicle parking, service and maintenance spaces shall have an open and modular layout to accommodate 40' and 60' motor buses, trolley buses, and future electric buses. Staff areas shall be designed with an open and modular space that can accommodate staffing and program changes over time. Training spaces shall be modular collocated spaces with movable partitions to accommodate one large group or several small groups.
Space Utilization	The facility shall include all required spaces and assignable square footages (area inside room or boundary) in the Facility Program as well as minimum dimensions and clearances defined in the Space Standards. Bus areas shall be planned to maximize fleet capacity, sharing where possible circulation between functions such as parking and maintenance bays.
Workspace	Workspaces shall be designed based on needs to be highly functional spaces with quality environments that support staff health, safety, and productivity with good lighting, good ventilation, and durable finishes.





Drive-Thru Maintenance Bays



Bus Ramp in two level facility



Mobile Column Lift



In Ground Lift

Projects by Maintenance Design Group

Safety	The facility shall have best practice safety features including fire life safety systems; fall protection; eye and ear protection; unobstructed circulation and equipment clear space; easy to use fluids collection; and good ventilation with positive pressure in staff areas.
Security	The facility shall have passive and active security. The site shall be fenced and have limited vehicular and pedestrian entries that are easy to find and visible. The facility shall have CCTV (video) at all exterior entries, in bus parking, and at fuel and electrical areas. The facility shall have card key readers at all exterior entries, suite entries, and support spaces.
Emergency Response	<p>The SFMTA Emergency Response Plan includes emergency transportation after a disaster and then owl service (late night service) plus several additional routes in the first stage of recovery. The number of buses needed during the initially response depends on the disaster. The first stage of recovery requires approximately 250 buses and 530 operators.</p> <p>To support initial response the facility shall be designed to be back in operation in 2-4 hours and able to dispatch 25% of its fleet for 72 to 96 hours without outside power, fuel, water or hardwired communications.</p> <p>To support recovery the facility shall be designed to dispatch ~25% of its fleet for 1 to 2 days without outside fuel for the facility of fleet.</p>
Future Electric Buses	The facility shall have the space, infrastructure, and rough-in to accommodate future electric buses including electrical capacity for the fleet, emergency generator capacity for ~25% of the fleet and space for either overhead fast-charge or plug-in slow charge and battery storage.
<b>Building Criteria</b>	
General	Provide detailed design and specifications for a durable industrial grade transit facility, quality construction monitored by regular site visits and special inspections, enhanced commissioning, and extended warranties. Design shall be developed and building built by architects, engineers, and contractors experienced in transit facility design and construction.

Structural	Provide structure and non-structural components designed to essential service standards.
Mechanical	Provide mechanical systems that are easy to maintain and modify, with adequate redundancy to continue to operate if one unit is down.
Electrical, Lighting, Telecommunications, and Fire Life Safety	Provide electrical, lighting, telecommunications and fire life systems as required for typical operations and emergency response. Provide electrical infrastructure for future electric fleet. Provide LED lamps where possible. Provide phone, data, radio, building systems, traction power, and signals.
Sustainability	Provide as required including Cal Green and LEED Gold.
<b>Transit Specialty Criteria</b>	
Yard Access	Provide a minimum of two vehicular entries/exist configured such that either could work as the entry/exit should the other be out of service.
Yard Paving	Provide compaction and concrete paving for bus loads and use.
Yard Lighting	Maximize pole spacing and align with parking lanes. Provide 3' tall concrete bases and good light fixture cut-off to mitigate light spill outside yard.
Bus Lifts	Provide bus lifts that accommodate both 40' and 60' buses.
Wash Racks	Provide automated drive through bus washers with water reclamation system for motor and trolley buses
Fuel Stations	Provide two tanks per facility with ~ 30,000-gal capacity per ~100 assigned buses (diesel hybrids)
Trolley Bus Charging	Provide overhead catenary for trolley bus charging in parking lanes and maintenance bays.
Integrated Pest and Wildlife Management	Provide facility design with integrated pest and wildlife prevention tactics including mitigation of pigeon harborage.

# Space Standards

The following space standards establish the minimum dimensions, areas (square footage inside a room or boundary) and clear heights for typical motor/trolley bus and paratransit facility functions. Where applicable the standards provide ratios of spaces to busses and supplementary notes describe basic space capacity and/or fit-out.

\* 40' refers to a standard motor or trolley bus and 60' refers to an articulated motor or trolley bus

\*\* m refers to motor bus and t refers to trolley bus

<b>Staging and Vehicle Circulation</b>					
<b>Function</b>	<b>Dimensions*</b>	<b>Area (s.f.)</b>	<b>Height**</b>	<b>Ratio</b>	<b>Notes</b>
Parking Lanes	12'x45' for 40' bus 12'x65' for 60' bus	540 for 40' bus 780 for 60' bus	14' m 19' t		19' allows overhead catenary for trolley bus charging
Aisles for 90 degree turns	65' when turning into parking lanes or service, 70' wide when turning into maintenance bays		14' m 19' t		Planning for 70' -75' allows for bollards, curbs and structure. Preferred circulation is counter clockwise.
Bypass Lane	20' wide		14' m 19' t		



Function	Dimensions*	Area (s.f.)	Height**	Ratio	Notes
One Way Ramp	15' wide		14' m 19' t		10% slope with 40' long 5% transition slope at the top and bottom
Forklift Circulation	10' wide		14'		Provide along back of maintenance bays and in storerooms
Operator Greeter		128			Station with restroom; one at entry and one at exit
Large Non-Revenue Vehicle	12' x 35'	420			
Standard Non-Revenue Vehicle	10' x 20'	200			

### **Maintenance**

Provide drive thru maintenance bays that accommodate 40' and 60' motor and/or trolley buses. Single drive thru bays are preferred, double drive thru bays are acceptable if the layout results in significant space and cost savings.

For a facility with 70% or more 40' motor and/or trolley buses the running repair bays for 40' buses may be 20' x 55' double drive thru or back in bays, all other bays shall be 20' x 75' drive thru bays for 40' or 60' buses.

For facility with all 40' motor and/or trolley buses, all bays may be 20' x 55' back in bays.

Add 5' to width of bays adjacent to walls

Provide vehicle exhaust reels, workbench, lubrication reels shared between two bays, full spectrum LED lighting between bays, air and electrical outlets, trench drains at overhead doors, concrete floors with light reflective dry shake hardener.

Provide trolley bus charging and space for future electric bus charging in bays.

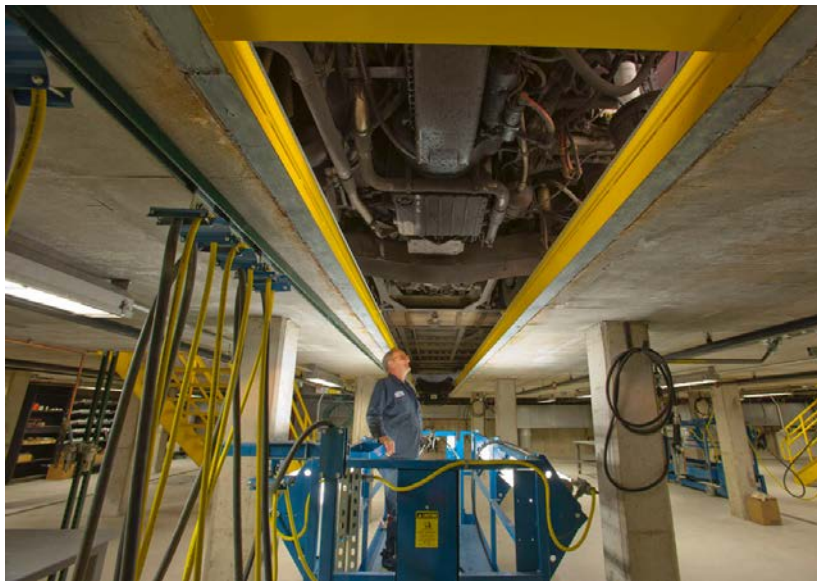
<b>Function</b>	<b>Dimensions*</b>	<b>Area (s.f.)</b>	<b>Height**</b>	<b>Ratio</b>	<b>Notes</b>
Running Repair Bay	20' x 55' for 40' bus 20' x 75' for 40' or 60' bus	1,500	19'	1 per 20 buses for 40' buses 1 per 15 buses for 60' buses	Blend of in-ground lifts and flat floors. Roof level work platforms with fall protection.
Preventive Maintenance Bay	20' x 75' for 40' or 60' bus	1,500	19'	1 per 50 buses	Lower Level Work Area
Heavy Repair and Brake Bay	20' x 75' for 40' or 60' bus	1,500	19'	1 per 125-150 buses	In-ground Lift Collocate with Brake Shop
Tire Bay	20' x 75' for 40' or 60' bus	1,500	19'	1 per 125-150 buses	Collocate with Tire Shop
Minor Body Repair Bay	20' x 75' for 40' or 60' bus	1,500	19'	1 per facility	Glass, panel, and other body part replacement
Body Repair Bay	30' x 75' for 40' or 60' bus	2,250	19'	1 per 250 buses	Anchor pots, vacuum system
Body Prep Bay	30' x 75' for 40' or 60' bus	2,250	19'	1 per 250 buses	Scaffolding, floor drains
Paint Bay	30' x 75' for 40' or 60' bus	2,250	19'	1 per 250 buses	Downdraft paint booth



Tire Carousel



Parts Storage



Lower Level Work Area



Work Lift

<b>Function</b>	<b>Dimensions*</b>	<b>Area (s.f.)</b>	<b>Height**</b>	<b>Ratio</b>	<b>Notes</b>
Chassis Wash Bay	25' x 75' for 40' or 60' bus	1,875	19'	1 per 150 – 200 buses	Drive on parallelogram lift. Co-locate with Bus Wash to share wet environment building systems
Common Work Area		500			For shared fixed shop equipment
Trolley Bus Electronics Shop		1000			
Portable Equipment Storage		600			For carts, jacks, diagnostic, and other portable equipment. Can be split into several locations.
Tool Box Storage				5 s.f. per bus	For mechanic tool boxes. Can be split into several locations
Tool Storage		150			For secure tool storage
Brake Shop				5 s.f. per bus	For~ 230 bus facility, provide 2 drum lathes, 2 disk lathes and racks for tire/wheel staging
Tire Shop		600			Office, tire changing equipment, and wheel balancer.
Tire Storage				5 s.f. per bus for 1 tire per bus	Tire Carousel
Lube Room		400 - 800			Locate and provide exterior doors for deliveries. For ~230 bus facility



Function	Dimensions*	Area (s.f.)	Height**	Ratio	Notes
					provides 2,000-gal engine oil, 500 gal ATF, 120-gal engine coolant, 120-gal gear oil, chassis grease.
Compressor Room		200			Provide base mounted air compressors and vertical receivers sized and placed to meet demand.
Bench Shop		300			Satellite shop/storage for replacing fare box, clipper card readers, automatic passenger counters and cameras on buses
<p><b>Service and Clean</b></p> <p>Provide drive thru service position that accommodates 40' and 60' buses typical. For facility with all 40' buses service position maybe be 20' x 60'.</p>					
Service Position	20' x 70' for 40' or 60' buses	1,400	16'	1 per 75 buses	Nightly servicing (fuel and/or interior clean), fluid level checks, tire bump. Also serves as detail day cleaning position.
Bus Washer	20' x 100' for 40' or 60' buses	2,000	18'	1 per 75 -150 buses	1/75 if paired with fuel. 1/150 if not paired with fuel
Water Reclamation	15' x 60'	900	16'	1 per facility, handles multiple bus washers	In-ground sumps, above ground pumps filters, and tanks

<b>Function</b>	<b>Dimensions*</b>	<b>Area (s.f.)</b>	<b>Height**</b>	<b>Ratio</b>	<b>Notes</b>
Cleaning Equipment Storage		200			Storage of cleaning carts, cleaning fluids, and cleaning equipment
<b>Parts</b>					
Part Storage				20 s.f./bus with HDSS	Provide high density storage systems (HDSS) including Vertical Lift Modules (VLM) and Stack Systems. 30% of area could be a mezzanine. Provide 30 s.f. /bus if use conventional pallet racks and shelving units. A portion of parts storage shall be designed to be easily converted to battery storage for future electric fleet.
Battery Storage		200 - 300			Well ventilated room with charging equipment and emergency shower/eye wash
Shopkeeper		120			Office
Parts Window		200			Counter with 2 positions
Shipping & Receiving		600			Receiving table, staging area
Loading Dock	15'x 60'	900			

Function	Dimensions*	Area (s.f.)	Height**	Ratio	Notes
<b>Mechanic and Operator Staff</b>					
Mechanic Lockers		7 sf/locker	9'		12" w x 18" d x full height (6') locker
Operator Lockers		3 sf/locker	9'		12" w x 18" d x half height (3') locker
Clean Uniform Lockers/ Hampers		2 sf/locker plus 50 sf	9'		Vendor provided lockers and hamper
Mechanic Break/Lunch		700 - 1,200	10'		Locate near maintenance bays For ~230 bus facility provide 1,200 s.f. For ~115 bus facility provide 700 s.f.
Operator Gilley		1,000 - 2,000	10'		For ~230 bus facility provide 2,000 s.f. For ~115 bus facility provide 1,000 s.f.
Operator Recreation		575 - 875	10'		Pool or ping pong table(s) and video games
Operator TV		220-400	9'		Separate to mitigate noise
Quiet Room		250 -400	9'		Separate to mitigate noise
Kitchenette/ Vending		200 - 525	9'		200 s.f. for 700 sf break/gilley 375 s.f. for 1000- 1200 sf break/gilley 525 s.f. for 2000 sf break/gilley

<b>Function</b>	<b>Dimensions*</b>	<b>Area (s.f.)</b>	<b>Height**</b>	<b>Ratio</b>	<b>Notes</b>
Single and All Gender Restroom	8' x 8'	64	8'		Accessible
Single and All Gender Restroom/Shower	10' x 15'	150	8'		Accessible with a couple lockers
Lactation Room		50	8'		Accessible
<b>Office and Bench Staff</b>					
Division Director, Superintendent	14' x 16'	224	9'		Enclosed office with small table and 4 chairs
Assistant Superintendent, Manager	10' x 12'	120	9'		Enclosed office with 2 guest chairs
Supervisor or staff who spend most of the day at desk	8' x 8'	64	9'		Open office (Workstation)
Administrative Assistant/ Clerical	8' x 6'	48	9'		Open Office (Workstation)



<b>Function</b>	<b>Dimensions*</b>	<b>Area (s.f.)</b>	<b>Height**</b>	<b>Ratio</b>	<b>Notes</b>
Intern, Hoteling, Resource (online library)	8' x 8'	64	9'		Open Office (Workstation) Configure to allow two people to share
Bench Staff	10' x 8'	80	9'		Work bench, side table, tool box
Lobby	10' x 12'	120+	9'		Seating for 3-4
Copy/Supply	10' x 12'	120	9'		One large copier and casework
File Storage	10' x 12'	120 - 240	9'		120 s.f. for (240) 15"x12"x10" boxes on 30" deep shelves 240 s.f. for (360) 15"x12"x10" boxes on 30" deep shelves
Kitchenette	10' x 12'	120	9'		
Office Staff Lockers		2 sf/locker	9'		12" w x 12" d x third height (2') locker
<b>Meeting and Training</b>					
Small Conference	10' x 12'	120	9'		For 4 - 6 people
Medium Conference	12' x 20'	240	9'		For 10 - 12 people
Large Conference/ Small Training	15' x 24'	360	10'		For 14 - 16 people

# Facility Programs

The facility programs are based on the required number of motor/trolley buses, the number of staff to operate and maintain them, and the space standards described in the previous section.

The required number of motor/trolley buses is the facility planning capacity needed to meet the *SFMTA Fleet Plan*, and includes buses parking in the yard bus parking lanes and half of the maintenance bays.

A summary of the number of buses (and LRVS at MME), maintenance bays and staff and the square footages for the new and rebuilt facilities in Scenario 1A/1B and Scenario 2A is shown on the following page. Note: The vehicle circulation and total area will vary depending on site configuration, number of levels, single or double (tandem) maintenance bays and the overall efficiency of the facility design. The New Facility total areas are not known at this time. The MME, Potrero, Presidio, and Kirkland vehicle circulation areas and total areas are based on the test fits included in this *Addendum*.

The detailed programs on the subsequent pages define the space requirements for the SFMTA's first new transit facilities in Scenario 1A/1B and Scenario 2A.

A New Facility in Scenario 1A/1B or MME in Scenario 2A will serve as an interim facility while rebuilding Potrero and Presidio. Therefore their fleet assignments will change during each rebuild. These facilities must accommodate motor and trolley buses as well as future electric buses. Refer to Appendix 2: Transit

Fleet Data for additional information.

Each facility program is organized into sections starting with fleet parking, maintenance bays/shops, service/clean, and parts, followed by staff maintenance, operations, shared spaces, and functions unique to a facility. The number of vehicles, maintenance bays and staff are highlighted in tan.

Within each section the functional spaces, unit size, number of spaces, and subtotal area are shown. These are totaled to determine the assignable square footage (areas inside rooms or boundaries assigned for specific uses). Markups are added to determine the usable square footage (assignable area plus area needed for a functional area such as an office suite).

## Facility Programs Summary

	Scenario 1A/1B New Facility	Scenario 1A/1B MME	Scenario 1A/1B Potrero	Scenario 1A/1B Presidio	Scenario 2A MME	Scenario 2A Potrero	Scenario 2A Presidio	Scenario 1A/1B/2A Kirkland
<i>Function</i>	<i>Number, Area (SF)</i>	<i>Number, Area (SF)</i>	<i>Number, Area (SF)</i>	<i>Number, Area (SF)</i>	<i>Number, Area (SF)</i>	<i>Number, Area (SF)</i>	<i>Number, Area (SF)</i>	<i>Number, Area (SF)</i>
<b>FLEET, BAYS, STAFF</b>								
Motor/Trolley Buses (LRVs in 1A/1B MME)	230	42	128	135	124	206	217	81
Maintenance Bays	26		16	14	14	24	20	9
Service & Wash Positions	6		4	2	2	6	6	2
Cleaning Staff	23		13	13	13	23	23	7
Minor Body Repair Staff	6		6	3	6	6	6	3
Body & Paint Staff	15							
Mechanics	150		85	90	80	135	140	55
Operators	400		220	240	173	360	380	140
<b>FACILITY</b>								
Parking	151,156		74,116	72,436	63,376	158,836	123,496	42,796
Service & Wash Positions	10,200		6,800	3,400	3,400	10,200	10,200	3,400
Bays	39,750		24,375	17,375	21,375	36,375	26,375	9,900
Shops, Service/Clean Support	21,366		14,239	12,779	13,078	19,772	18,725	8,881
Parts	7,392		5,038	5,302	3,960	6,864	7,106	1,683
Maintenance	11,663		7,035	9,186	6,929	10,749	15,185	6,597
Operations	14,448		9,564	9,654	9,353	14,418	14,508	8,588
Shared	6,114		4,497	4,974	3,441	6,114	6,114	3,882
Body and Paint	20,184							
Training			14,274			14,274		
<b>SUBTOTAL</b>	<b>282,274</b>		<b>159,938</b>	<b>135,106</b>	<b>124,911</b>	<b>277,602</b>	<b>221,709</b>	<b>85,726</b>
Lower Level Work Area Allowance			3,000	3,000	3,000	6,000	6,000	
MEP Allowance			3,000	3,000	3,000	6,000	6,000	1,500
Vehicle Circulation & Net To Gross			224,062	82,694	59,189	256,098	186,292	42,874
<b>APPROXIMATE TOTAL (see note)</b>			<b>390,000</b>	<b>223,800</b>	<b>190,100</b>	<b>545,700</b>	<b>420,000</b>	<b>130,100</b>
<b>PARATRANSIT (Scenario 1A only)</b>								
Cutaway Buses & Vans	160							
<b>FACILITY</b>								
Parking	50,600							
Bays, Shops and Parts	10,860							
Maintenance	847							
Operations	8,274							
<b>SUBTOTAL</b>	<b>70,581</b>							
Vehicle Circulation & Net to Gross								
<b>APPROXIMATE TOTAL (see note)</b>								

Note: The vehicle circulation and total area will vary depending on site configuration, number of levels, single or double (tandem) maintenance bays and the overall efficiency of the facility design. The New Facility total areas are not known at this time. The MME, Potrero, Presidio, and Kirkland vehicle circulation areas and total areas are based on the test fits included in this Addendum.

# Scenario 1A/1B New Facility Program

Function	Staff or Vehicles	Number of Spaces	Unit Size (sf)	Subtotal (sf)
<b>PARKING</b>				
40' Motor or Trolley Bus	110	110	540	59,400
60' Motor or Trolley Bus	110	110	780	85,800
Buses in Maintenance Bays included in facility capacity	10			
Operator Greeter Booth		2	128	256
<b>Total Motor and/or Trolley Buses</b>	<b>230</b>			
Large Non-Revenue Vehicle		5	420	2,100
Standard Non-Revenue Vehicle		18	200	3,600
<b>Assignable Area</b>				<b>151,156</b>
<b>BAYS &amp; SHOPS</b>				
Running Repair Supervisor	3	3	64	192
Control Room Clerk	2	2	64	128
Interim Shift Supervisor	1	1	64	64
Preventive Maintenance Supv.	2	2	64	128
40' Bus Running Repair			1,100	-
60' Bus Running Repair		14	1,500	21,000
40' Bus Preventive Maintenance			1,100	-
60' Bus Preventive Maintenance		5	1,500	7,500
40' Bus Brake/Heavy Repair Bay			1,100	-
60' Bus Brake/Heavy Repair Bay		2	1,500	3,000
40' Bus Tire Bay			1,100	-
60' Bus Tire Bay		2	1,500	3,000
40' Bus Minor Body Repair			1,100	-
60' Bus Minor Body Repair		1	1,500	1,500
40' Bus Chassis Wash			1,375	-
60' Bus Chassis Wash		2	1,875	3,750
<b>Total Bays</b>		<b>26</b>		
Common Work Area	2		500	1,000
Trolley Electronic Shop		1	1,000	1,000
Portable Equipment Storage		2	600	1,200
Tool Box Storage		1	1,150	1,150
Tool Storage		1	150	150
Brake Shop		1	1,150	1,150
Tire Shop		1	600	600
Tire Storage		1	1,150	1,150
Lube Room		1	800	800
Compressor Room		1	200	200
Bench Shop		1	300	300
<b>Assignable Area</b>	<b>8</b>			<b>48,962</b>
<b>Assignable to Usable (+20%)</b>				<b>58,754</b>

Function	Staff or Vehicles	Number of Spaces	Unit Size (sf)	Subtotal (sf)
<b>SERVICE &amp; CLEAN</b>				
Service Position		3	1,400	4,200
Bus Washer		3	2,000	6,000
Water Reclamation		1	900	900
Cleaning Equipment Storage		1	200	200
Service Supervisor Office		1	120	120
<b>Assignable Area</b>				<b>11,420</b>
<b>Assignable to Usable (+10%)</b>				<b>12,562</b>
<b>PARTS</b>				
Parts Storage		1	4,600	4,600
Battery Storage		1	300	300
Shopkeeper	2	1	120	120
Parts Window		1	200	200
Shipping & Receiving		1	600	600
Loading Dock		1	900	900
<b>Assignable Area</b>	<b>2</b>			<b>6,720</b>
<b>Assignable to Usable (+10%)</b>				<b>7,392</b>
<b>MAINTENANCE</b>				
<b>Administration</b>				
Superintendent	1	1	224	224
Assistant Superintendent	1	1	120	120
Senior Controller	1	1	120	120
Fleet Engineer	2	2	64	128
Quality Assurance/Warranty	6	6	64	384
Hoteling - Shared Workstation	4	4	64	256
Administrative Assistant	2	2	48	96
Budget Analyst	1	1	64	64
Trainer	1	1	64	64
Support Shop	1	1	64	64
Copy/Supply		1	120	120
Records Storage		1	200	200
Library/Online Resources		1	200	200
Cleaning Staff	<b>23</b>			
Minor Body Repair Staff	<b>6</b>			
Body & Paint Staff	<b>15</b>			
Mechanics	<b>150</b>			
Kitchenette/Vending		1	375	375
Break /Lunch		1	1,200	1,200
Quiet Room		1	375	375
Clean Uniform Lockers		194	2	388
Uniform Hampers		1	50	50
Men's Restroom/Shower		1	1,000	1,000



<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
Men's Locker		194	7	1,358
Women's Restroom/Shower		1	500	500
Women's Locker		49	7	340
All Gender Accessible Locker/Shower/Restroom		1	150	150
<b>Staff &amp; Assignable Area</b>	<b>214</b>			<b>7,776</b>
<b>Assignable to Usable (+50%)</b>				<b>11,663</b>
<b>OPERATIONS</b>				
<b>Administration</b>				
Superintendent	1	1	224	224
Assistant Superintendent	2	1	120	120
Trainer	1	1	120	120
Receiver	1	1	64	64
Dispatch	2	2	64	128
Administrative Assistant	4	4	48	192
Union	2	1	224	224
Copy/Supply		1	120	120
Records Storage		1	400	400
Uniform Storage		1	80	80
<b>Operators</b>	<b>400</b>			
Operator Check-In		1	500	500
Mail Boxes		1	120	120
Kitchenette/Vending		1	525	525
Gilley		1	2,000	2,000
Lockers		400	3	1,200
Recreation Area		1	875	875
TV Room		1	400	400
Quiet Room		1	400	400
Men's Restroom/Shower		1	870	870
Women's Restroom/Shower		1	870	870
All Gender Accessible Locker/Shower/Restroom		1	200	200
<b>Staff &amp; Assignable Area</b>	<b>413</b>			<b>9,632</b>
<b>Assignable to Usable (+50%)</b>				<b>14,448</b>
<b>SHARED</b>				
Lobby		1	150	150
Large Conference/Small Training		2	360	720
Fitness		1	600	600
Single Occupant Restrooms		4	64	256
Lactation Room		2	50	100
Building Engineer	1	1	200	200
Building Storage		1	400	400
Janitor		2	100	200

<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
Server		2	300	600
Bicycle Parking		1	250	250
Recycling		1	600	600
<b>Assignable Area</b>	<b>1</b>			<b>4,076</b>
<b>Assignable: Usable (+50%)</b>				<b>6,114</b>
<b>BODY AND PAINT</b>				
Body Repair Bay		2	2,250	4,500
Paint Preparation Bay		2	2,250	4,500
Paint Booth		2	2,250	4,500
Body Shop		1	1,600	1,600
Portable Equipment		1	1,600	1,600
Supervisors Office	1	1	120	120
<b>Assignable Area</b>				<b>16,820</b>
<b>Assignable to Usable (+20%)</b>				<b>20,184</b>
<b>TRAINING</b>				
Reception				
Manager				
Superintendent				
Assist Superintendents				
Supervisors				
Verification of Transit Training				
ARLT Staff				
Instructors				
Classroom				
Simulator Room				
Computer Lab				
Handouts Storage				
Training Aid Storage				
Uniform Storage				
Records Storage				
Records Archive Storage				
Copy/Supply				
Kitchenette/Vending				
Break				
Operator Locker				
Men's Restroom				
Women's Restroom				
Gender Neutral Restroom				
Accessible Changing Room				
<b>Staff &amp; Assignable Area</b>				
<b>Assignable to Usable (+50%)</b>				
<b>BUS SUBTOTAL</b>				<b>282,274</b>

Note: The subtotal area does not include lower level work areas, vehicular circulation, and building systems areas.

<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
<b>PARATRANSIT</b>	<b>(Scenario 1A only)</b>			
<b>PARKING</b>				
Cutaway Buses	150		324	48,600
Vans	10		200	2,000
<b>Assignable Area</b>				<b>50,600</b>
<b>BAYS, SHOPS &amp; PARTS</b>				
Maintenance Bays		7	800	5,600
Parts Room		1	600	600
Tire & Brake Shop		1	800	800
Fluids and Compressor		1	300	300
Equipment & Support		1	1750	1,750
<b>Assignable Area</b>				<b>9,050</b>
<b>Assignable to Usable (20%)</b>				<b>10,860</b>
<b>MAINTENANCE</b>				
Men's Locker	10	10	7	70
Men's Restroom		1	200	200
Women's Locker	5	5	7	35
Women's Restroom		1	150	150
Gender Neutral Locker/Restroom		1	150	150
<b>Assignable Area</b>				<b>605</b>
<b>Assignable to Usable (40%)</b>				<b>847</b>
<b>OPERATIONS</b>				
Lobby		1	120	120
General Manager	1	1	224	224
Assistant General Manager	1	1	120	120
HR Manager	1	1	120	120
Safety Manager	1	1	120	120
FTA or SFMTA Monitor	2	1	120	120
Counting and Payroll	2	1	120	120
Group Van Dispatch	1	1	64	64
Scheduling, Group Van, Admin	8	8	64	512
Field Supervisors	6	2	64	128
Trainers	1	1	64	64
Dispatch Supervisor	1	1	120	120
Dispatch	1	8	64	512
Call Center	1	8	36	288

<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
Dispatch Window		1	224	224
Copy/Supply		1	120	120
Mail Box Alcove		1	20	20
Dispatch /Call Center Locker Alcove		1	24	24
Office Coffee Alcove		1	30	30
Conference		1	240	240
Training Room		1	680	680
Driver Ready Room		1	500	500
Kitchenette		1	120	120
Driver Men's Locker		100	3	300
Driver Women's Locker		100	3	300
Men's Restroom		1	250	250
Gender Neutral Locker/Shower/Restroom		1	60	60
Women's Restroom		1	250	250
IT Room		1	80	80
Janitor		1	80	80
<b>Assignable Area</b>				<b>5,910</b>
<b>Assignable to Usable (40%)</b>				<b>8,274</b>
<b>PARATRANSIT SUBTOTAL</b>				<b>70,581</b>

Note: The subtotal areas do not include vehicular circulation and building systems areas.

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# Scenario 1A/1B Potrero Program

Function	Staff or Vehicles	Number of Spaces	Unit Size (sf)	Subtotal (sf)
<b>PARKING</b>				
40' Motor or Trolley Bus	90	90	540	48,600
60' Motor or Trolley Bus	29	29	780	22,620
Buses in Maintenance Bays included in facility capacity	9			
Operator Greeter Booth		2	128	256
<b>Total Motor and/or Trolley Buses</b>	<b>128</b>			
Large Non-Revenue Vehicle		2	420	840
Standard Non-Revenue Vehicle		9	200	1,800
<b>Assignable Area</b>				<b>74,116</b>
<b>BAYS &amp; SHOPS</b>				
Running Repair Supervisor	3	3	64	192
Control Room Clerk	2	2	64	128
Interim Shift Supervisor	1	1	64	64
Preventive Maintenance Supv.	1	1	64	64
40' Bus Running Repair			1,100	-
60' Bus Running Repair		9	1,500	13,500
40' Bus Preventive Maintenance			1,100	-
60' Bus Preventive Maintenance		3	1,500	4,500
40' Bus Brake/Heavy Repair Bay			1,100	-
60' Bus Brake/Heavy Repair Bay		1	1,500	1,500
40' Bus Tire Bay			1,100	-
60' Bus Tire Bay		1	1,500	1,500
40' Bus Minor Body Repair			1,100	-
60' Bus Minor Body Repair		1	1,500	1,500
40' Bus Chassis Wash			1,375	-
60' Bus Chassis Wash		1	1,875	1,875
<b>Total Bays</b>		<b>16</b>		
Common Work Area		1	500	500
Trolley Electronic Shop		1	1,000	1,000
Portable Equipment Storage		1	600	600
Tool Box Storage		1	640	640
Tool Storage		1	150	150
Brake Shop		1	640	640
Tire Shop		1	600	600
Tire Storage		1	640	640
Lube Room		1	400	400
Compressor Room		1	200	200
Bench Shop		1	300	300
<b>Assignable Area</b>	<b>7</b>			<b>30,493</b>
<b>Assignable to Usable (+20%)</b>				<b>36,592</b>

Function	Staff or Vehicles	Number of Spaces	Unit Size (sf)	Subtotal (sf)
<b>SERVICE &amp; CLEAN</b>				
Service Position		2	1,400	2,800
Bus Washer		2	2,000	4,000
Water Reclamation		1	900	900
Cleaning Equipment Storage		1	200	200
Service Supervisor Office		1	120	120
<b>Assignable Area</b>				<b>8,020</b>
<b>Assignable to Usable (+10%)</b>				<b>8,822</b>
<b>PARTS</b>				
Parts Storage		1	2,560	2,560
Battery Storage		1	200	200
Shopkeeper	1	1	120	120
Parts Window		1	200	200
Shipping & Receiving		1	600	600
Loading Dock		1	900	900
<b>Assignable Area</b>				<b>4,580</b>
<b>Assignable to Usable (+10%)</b>				<b>5,038</b>
<b>MAINTENANCE</b>				
<b>Administration</b>				
Superintendent	1	1	224	224
Assistant Superintendent	1	1	120	120
Senior Controller	1	1	120	120
Fleet Engineer	1	1	64	64
Quality Assurance/Warranty	3	3	64	192
Hoteling - Shared Workstation	2	2	64	128
Administrative Assistant	1	1	48	48
Budget Analyst	1	1	64	64
Trainer	1	1	64	64
Support Shop	1	1	64	64
Copy/Supply		1	120	120
Records Storage		1	100	100
Library/Online Resources		1	100	100
Cleaning Staff	<b>13</b>			
Minor Body Repair Staff	<b>6</b>			
Body & Paint Staff				
Mechanics	<b>85</b>			
Kitchenette/Vending		1	200	200
Break /Lunch		1	700	700
Quiet Room		1	200	200
Clean Uniform Lockers		98	2	196
Uniform Hampers		1	50	50
Men's Restroom/Shower		1	700	700

<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
Men's Locker		83	7	583
Women's Restroom/Shower		1	400	400
Women's Locker		15	7	103
All Gender Accessible Locker/Shower/Restroom		1	150	150
<b>Staff &amp; Assignable Area</b>	<b>117</b>			<b>4,690</b>
<b>Assignable to Usable (+50%)</b>				<b>7,035</b>
<b>OPERATIONS</b>				
<b>Administration</b>				
Superintendent	1	1	224	224
Assistant Superintendent	2	1	120	120
Trainer	1	1	120	120
Receiver	1	1	64	64
Dispatch	2	2	64	128
Administrative Assistant	2	2	48	96
Union	2	1	224	224
Copy/Supply		1	120	120
Records Storage		1	200	200
Uniform Storage		1	80	80
<b>Operators</b>	<b>220</b>			
Operator Check-In		1	500	500
Mail Boxes		1	120	120
Kitchenette/Vending		1	375	375
Gilley		1	1,000	1,000
Lockers		220	3	660
Recreation Area		1	575	575
TV Room		1	220	220
Quiet Room		1	250	250
Men's Restroom/Shower		1	550	550
Women's Restroom/Shower		1	550	550
All Gender Accessible Locker/Shower/Restroom		1	200	200
<b>Staff &amp; Assignable Area</b>	<b>231</b>			<b>6,376</b>
<b>Assignable to Usable (+50%)</b>				<b>9,564</b>
<b>SHARED</b>				
Lobby		1	150	150
Large Conference/Small Training		2	360	720
Fitness		1	500	500
Single Occupant Restrooms		2	64	128
Lactation Room		2	50	100
Building Engineer	1	1	200	200
Building Storage		1	200	200
Janitor		2	50	100

<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
Server		1	100	100
Bicycle Parking		1	200	200
Recycling		1	600	600
<b>Assignable Area</b>	<b>1</b>			<b>2,998</b>
<b>Assignable: Usable (+50%)</b>				<b>4,497</b>
<b>BODY AND PAINT</b>				
Body Repair Bay				
Paint Preparation Bay				
Paint Booth				
Body Shop				
Portable Equipment				
Supervisors Office				
<b>Assignable Area</b>				
<b>Assignable to Usable (+20%)</b>				
<b>TRAINING</b>				
Reception		1	120	120
Manager	1	1	224	224
Superintendent	1	1	120	120
Assist Superintendents	3	3	120	360
Supervisors	2	2	64	128
Verification of Transit Training	6	1	600	600
ARLT Staff	5	5	64	320
Instructors	12	12	30	360
Classroom		4	600	2,400
Simulator Room		2	300	600
Computer Lab		1	720	720
Handouts Storage		1	120	120
Training Aid Storage		1	800	800
Uniform Storage		1	120	120
Records Storage		1	120	120
Records Archive Storage		1	120	120
Copy/Supply		1	120	120
Kitchenette/Vending		1	200	200
Break		1	500	500
Operator Locker		60	3	180
Men's Restroom		1	570	570
Women's Restroom		1	570	570
Gender Neutral Restroom		1	64	64
Accessible Changing Room		2	40	80
<b>Staff &amp; Assignable Area</b>	<b>30</b>			<b>9,516</b>
<b>Assignable to Usable (+50%)</b>				<b>14,274</b>
<b>BUS SUBTOTAL</b>				<b>159,938</b>

Note: The subtotal area does not include lower level work areas, vehicular circulation, and building systems areas.



# Scenario 2A MME Program

Function	Staff or Vehicles	Number of Spaces	Unit Size (sf)	Subtotal (sf)
<b>PARKING</b>				
40' Motor or Trolley Bus	112	112	540	60,480
60' Motor or Trolley Bus		-	780	-
Buses in Maintenance Bays included in facility capacity	12			
Operator Greeter Booth		2	128	256
<b>Total Motor and/or Trolley Buses</b>	<b>124</b>			
Large Non-Revenue Vehicle		2	420	840
Standard Non-Revenue Vehicle		9	200	1,800
<b>Assignable Area</b>				<b>63,376</b>
<b>BAYS &amp; SHOPS</b>				
Running Repair Supervisor	3	3	64	192
Control Room Clerk	2	2	64	128
Interim Shift Supervisor	1	1	64	64
Preventive Maintenance Supv.	1	1	64	64
40' Bus Running Repair			1,100	
60' Bus Running Repair		7	1,500	10,500
40' Bus Preventive Maintenance			1,100	
60' Bus Preventive Maintenance		3	1,500	4,500
40' Bus Brake/Heavy Repair Bay			1,100	
60' Bus Brake/Heavy Repair Bay		1	1,500	1,500
40' Bus Tire Bay			1,100	
60' Bus Tire Bay		1	1,500	1,500
40' Bus Minor Body Repair			1,100	
60' Bus Minor Body Repair		1	1,500	1,500
40' Bus Chassis Wash			1,375	
60' Bus Chassis Wash		1	1,875	1,875
<b>Total Bays</b>		<b>14</b>		
Common Work Area		1	500	500
Trolley Electronic Shop		1	1,000	1,000
Portable Equipment Storage		1	600	600
Tool Box Storage		1	620	620
Tool Storage		1	150	150
Brake Shop		1	620	620
Tire Shop		1	600	600
Tire Storage		1	496	496
Lube Room		1	400	400
Compressor Room		1	200	200
Bench Shop		1	300	300
<b>Assignable Area</b>	<b>7</b>			<b>27,309</b>
<b>Assignable to Usable (+20%)</b>				<b>32,771</b>

Function	Staff or Vehicles	Number of Spaces	Unit Size (sf)	Subtotal (sf)
<b>SERVICE &amp; CLEAN</b>				
Service Position		1	1,400	1,400
Bus Washer		1	2,000	2,000
Water Reclamation		1	900	900
Cleaning Equipment Storage		1	200	200
Service Supervisor Office		1	120	120
<b>Assignable Area</b>				<b>4,620</b>
<b>Assignable to Usable (+10%)</b>				<b>5,082</b>
<b>PARTS</b>				
Parts Storage		1	2,480	2,480
Battery Storage		1	200	200
Shopkeeper	1	1	120	120
Parts Window		1	200	200
Shipping & Receiving		1	600	600
Loading Dock				-
<b>Assignable Area</b>				<b>3,600</b>
<b>Assignable to Usable (+10%)</b>				<b>3,960</b>
<b>MAINTENANCE</b>				
<b>Administration</b>				
Superintendent	1	1	224	224
Assistant Superintendent	1	1	120	120
Senior Controller	1	1	120	120
Fleet Engineer	1	1	64	64
Quality Assurance/Warranty	3	3	64	192
Hoteling - Shared Workstation	2	2	64	128
Administrative Assistant	1	1	48	48
Budget Analyst	1	1	64	64
Trainer	1	1	64	64
Support Shop	1	1	64	64
Copy/Supply		1	120	120
Records Storage		1	100	100
Library/Online Resources		1	100	100
Cleaning Staff	<b>13</b>			
Minor Body Repair Staff	<b>6</b>			
Body & Paint Staff				
Mechanics	<b>80</b>			
Kitchenette/Vending		1	200	200
Break /Lunch		1	700	700
Quiet Room		1	120	120
Clean Uniform Lockers		99	2	198
Uniform Hampers		1	50	50
Men's Restroom/Shower		1	700	700

<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
Men's Locker		84	7	589
Women's Restroom/Shower		1	400	400
Women's Locker		15	7	104
All Gender Accessible Locker/Shower/Restroom		1	150	150
<b>Staff &amp; Assignable Area</b>	<b>112</b>			<b>4,619</b>
<b>Assignable to Usable (+50%)</b>				<b>6,929</b>
<b>OPERATIONS</b>				
<b>Administration</b>				
Superintendent	1	1	224	224
Assistant Superintendent	2	1	120	120
Trainer	1	1	120	120
Receiver	1	1	64	64
Dispatch	2	2	64	128
Administrative Assistant	2	2	48	96
Union	2	1	224	224
Copy/Supply		1	120	120
Records Storage		1	200	200
Uniform Storage		1	80	80
<b>Operators</b>	<b>173</b>			
Operator Check-In		1	500	500
Mail Boxes		1	120	120
Kitchenette/Vending		1	375	375
Gilley		1	1,000	1,000
Lockers		173	3	519
Recreation Area		1	575	575
TV Room		1	220	220
Quiet Room		1	250	250
Men's Restroom/Shower		1	550	550
Women's Restroom/Shower		1	550	550
All Gender Accessible Locker/Shower/Restroom		1	200	200
<b>Staff &amp; Assignable Area</b>	<b>184</b>			<b>6,235</b>
<b>Assignable to Usable (+50%)</b>				<b>9,353</b>
<b>SHARED</b>				
Lobby		1	150	150
Large Conference/Small Training		1	360	360
Fitness		1	500	500
Single Occupant Restrooms		1	64	64
Lactation Room		2	50	100
Building Engineer	1	1	120	120
Building Storage				
Janitor		2	50	100

<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
Server		1	100	100
Bicycle Parking		1	200	200
Recycling		1	600	600
<b>Assignable Area</b>	<b>1</b>			<b>2,294</b>
<b>Assignable: Usable (+50%)</b>				<b>3,441</b>
<b>BODY AND PAINT</b>				
Body Repair Bay				
Paint Preparation Bay				
Paint Booth				
Body Shop				
Portable Equipment				
Supervisors Office				
<b>Assignable Area</b>				
<b>Assignable to Usable (+20%)</b>				
<b>TRAINING</b>				
Reception				
Manager				
Superintendent				
Assist Superintendents				
Supervisors				
Verification of Transit Training				
ARLT Staff				
Instructors				
Classroom				
Simulator Room				
Computer Lab				
Handouts Storage				
Training Aid Storage				
Uniform Storage				
Records Storage				
Records Archive Storage				
Copy/Supply				
Kitchenette/Vending				
Break				
Operator Locker				
Men's Restroom				
Women's Restroom				
Gender Neutral Restroom				
Accessible Changing Room				
<b>Staff &amp; Assignable Area</b>				
<b>Assignable to Usable (+50%)</b>				
<b>BUS SUBTOTAL</b>				<b>124,911</b>

Note: The subtotal area does not include lower level work areas, vehicular circulation, and building systems areas.

# Scenario 2A Potrero Program

Function	Staff or Vehicles	Number of Spaces	Unit Size (sf)	Subtotal (sf)
<b>PARKING</b>				
40' Motor or Trolley Bus		-		-
60' Motor or Trolley Bus	196	196	780	152,880
Buses in Maintenance Bays included in facility capacity	10			
Operator Greeter Booth		2	128	256
<b>Total Motor and/or Trolley Buses</b>	<b>206</b>			
Large Non-Revenue Vehicle		5	420	2,100
Standard Non-Revenue Vehicle		18	200	3,600
<b>Assignable Area</b>				<b>158,836</b>
<b>BAYS &amp; SHOPS</b>				
Running Repair Supervisor	3	3	64	192
Control Room Clerk	2	2	64	128
Interim Shift Supervisor	1	1	64	64
Preventive Maintenance Supv.	2	2	64	128
40' Bus Running Repair			1,100	
60' Bus Running Repair		14	1,500	21,000
40' Bus Preventive Maintenance			1,100	
60' Bus Preventive Maintenance		4	1,500	6,000
40' Bus Brake/Heavy Repair Bay			1,100	
60' Bus Brake/Heavy Repair Bay		2	1,500	3,000
40' Bus Tire Bay			1,100	
60' Bus Tire Bay		2	1,500	3,000
40' Bus Minor Body Repair			1,100	
60' Bus Minor Body Repair		1	1,500	1,500
40' Bus Chassis Wash			1,375	
60' Bus Chassis Wash		1	1,875	1,875
<b>Total Bays</b>		<b>24</b>		
Common Work Area		2	500	1,000
Trolley Electronic Shop		1	1,000	1,000
Portable Equipment Storage		2	600	1,200
Tool Box Storage		1	1,030	1,030
Tool Storage		1	150	150
Brake Shop		1	1,030	1,030
Tire Shop		1	600	600
Tire Storage		1	824	824
Lube Room		1	600	600
Compressor Room		1	200	200
Bench Shop		1	300	300
<b>Assignable Area</b>	<b>8</b>			<b>44,821</b>
<b>Assignable to Usable (+20%)</b>				<b>53,785</b>

Function	Staff or Vehicles	Number of Spaces	Unit Size (sf)	Subtotal (sf)
<b>SERVICE &amp; CLEAN</b>				
Service Position		3	1,400	4,200
Bus Washer		3	2,000	6,000
Water Reclamation		1	900	900
Cleaning Equipment Storage		1	200	200
Service Supervisor Office		1	120	120
<b>Assignable Area</b>				<b>11,420</b>
<b>Assignable to Usable (+10%)</b>				<b>12,562</b>
<b>PARTS</b>				
Parts Storage		1	4,120	4,120
Battery Storage		1	300	300
Shopkeeper	2	1	120	120
Parts Window		1	200	200
Shipping & Receiving		1	600	600
Loading Dock		1	900	900
<b>Assignable Area</b>				<b>6,240</b>
<b>Assignable to Usable (+10%)</b>				<b>6,864</b>
<b>MAINTENANCE</b>				
<b>Administration</b>				
Superintendent	1	1	224	224
Assistant Superintendent	1	1	120	120
Senior Controller	1	1	120	120
Fleet Engineer	2	2	64	128
Quality Assurance/Warranty	6	6	64	384
Hoteling - Shared Workstation	4	4	64	256
Administrative Assistant	2	2	48	96
Budget Analyst	1	1	64	64
Trainer	1	1	64	64
Support Shop	1	1	64	64
Copy/Supply		1	120	120
Records Storage		1	200	200
Library/Online Resources		1	200	200
Cleaning Staff	<b>23</b>			
Minor Body Repair Staff	<b>6</b>			
Body & Paint Staff				
Mechanics	<b>135</b>			
Kitchenette/Vending		1	375	375
Break /Lunch		1	1,200	1,200
Quiet Room		1	375	375
Clean Uniform Lockers		164	2	328
Uniform Hampers		1	50	50
Men's Restroom/Shower		1	1,000	1,000

<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
Men's Locker		139	7	976
Women's Restroom/Shower		1	500	500
Women's Locker		25	7	172
All Gender Accessible Locker/Shower/Restroom		1	150	150
<b>Staff &amp; Assignable Area</b>	<b>184</b>			<b>7,166</b>
<b>Assignable to Usable (+50%)</b>				<b>10,749</b>
<b>OPERATIONS</b>				
<b>Administration</b>				
Superintendent	1	1	224	224
Assistant Superintendent	2	1	120	120
Trainer	1	1	120	120
Receiver	1	1	64	64
Dispatch	2	2	64	128
Administrative Assistant	4	4	48	192
Union	2	1	224	224
Copy/Supply		1	120	120
Records Storage		1	400	400
Uniform Storage		1	80	80
<b>Operators</b>	<b>360</b>			
Operator Check-In		1	500	500
Mail Boxes		1	120	120
Kitchenette/Vending		1	525	525
Gilley		1	2,000	2,000
Lockers		360	3	1,080
Recreation Area		1	875	875
TV Room		1	400	400
Quiet Room		1	500	500
Men's Restroom/Shower		1	870	870
Women's Restroom/Shower		1	870	870
All Gender Accessible Locker/Shower/Restroom		1	200	200
<b>Staff &amp; Assignable Area</b>	<b>373</b>			<b>9,612</b>
<b>Assignable to Usable (+50%)</b>				<b>14,418</b>
<b>SHARED</b>				
Lobby		1	150	150
Large Conference/Small Training		2	360	720
Fitness		1	600	600
Single Occupant Restrooms		4	64	256
Lactation Room		2	50	100
Building Engineer	1	1	200	200
Building Storage		1	400	400
Janitor		2	100	200

<i>Function</i>	<i>Staff or Vehicles</i>	<i>Number of Spaces</i>	<i>Unit Size (sf)</i>	<i>Subtotal (sf)</i>
Server		2	300	600
Bicycle Parking		1	250	250
Recycling		1	600	600
<b>Assignable Area</b>	<b>1</b>			<b>4,076</b>
<b>Assignable: Usable (+50%)</b>				<b>6,114</b>
<b>BODY AND PAINT</b>				
Body Repair Bay				
Paint Preparation Bay				
Paint Booth				
Body Shop				
Portable Equipment				
Supervisors Office				
<b>Assignable Area</b>				
<b>Assignable to Usable (+20%)</b>				
<b>TRAINING</b>				
Reception		1	120	120
Manager	1	1	224	224
Superintendent	1	1	120	120
Assist Superintendents	3	3	120	360
Supervisors	2	2	64	128
Verification of Transit Training	6	1	600	600
ARLT Staff	5	5	64	320
Instructors	12	12	30	360
Classroom		4	600	2,400
Simulator Room		2	300	600
Computer Lab		1	720	720
Handouts Storage		1	120	120
Training Aid Storage		1	800	800
Uniform Storage		1	120	120
Records Storage		1	120	120
Records Archive Storage		1	120	120
Copy/Supply		1	120	120
Kitchenette/Vending		1	200	200
Break		1	500	500
Operator Locker		60	3	180
Men's Restroom		1	570	570
Women's Restroom		1	570	570
Gender Neutral Restroom		1	64	64
Accessible Changing Room		2	40	80
<b>Staff &amp; Assignable Area</b>	<b>30</b>			<b>9,516</b>
<b>Assignable to Usable (+50%)</b>				<b>14,274</b>
<b>BUS SUBTOTAL</b>				<b>277,602</b>

Note: The subtotal area does not include lower level work areas, vehicular circulation and building systems areas.







# Appendix 3: Facility Studies

# Map

SFMTA has facilities for its administration, transit fleets, streets, support, and enforcement functions. For clarity the facilities are grouped by function and typically referred to by their street names in the list below and throughout the report.



## **Administration**

South Van Ness - *1/11 South Van Ness Avenue*  
Market (*Transit Management Center*) - *1455 Market St*



## **Bus**

Flynn - *1940 Harrison St*  
Islais Creek - *1301 Cesar Chavez St*  
Kirkland - *2301 Stockton St and 151 Beach St*  
Woods - *1095 Indiana St*



## **Trolley**

Potrero - *2500 Mariposa St*  
Presidio - *949 Presidio Ave*



## **Rail**

Cable Car Barn - *1201 Mason St*  
Cameron Beach - *2301 San Jose Ave*  
Green & Annex - *San Jose Ave 425 Geneva Ave*  
Muni Metro East- *601 25th St*



## **Paratransit (Vendor)**

Tunnel - *575 Tunnel Ave, Brisbane*  
Industrial - *290 Industrial Way, Brisbane*



## **Streets, Support and Enforcement**

Bancroft (*Sign & Meter*) - *1508 Bancroft Ave*  
Bayshore (*Tow & Signal*)- *2650 Bayshore, Daly City*  
Bryant (*Overhead Lines*)- *1401 Bryant St*  
Burke (*Warehouse*)- *1570/1580 Burke Ave*  
Lenox (*Transit Control*) - *131 Lenox Way*  
Marin (*Swing Space*) - *1399 Marin St*  
Market (*Transit Management*) - *1455 Market St*  
Pennsylvania (*Offices & Shops*) - *700 Pennsylvania Ave*  
Scott (*NRV Maintenance*) - *1849 Harrison St*  
Yosemite (*Paint & NRV Parking*) - *1528 Yosemite Ave*  
Enforcement  
505 7th Street (*Office*)  
571 10th Street (*Parking*)  
6th and Townsend (*Parking*)  
2323 Cesar Chavez Street (*Parking*)  
450 7th Street (*Tow*)



# Muni Metro East

601 25th Street  
SFMTA owns  
Site: 16.9 acres  
Building: 163,000 sf  
Opened: 2008

## **Current Use**

Light Rail Vehicle Facility

## **Observations**

- *Has capacity for 125 LRVs and space to expand*
- *Potential to use expansion area for trolley prior to rail use*
- *Need to access expansion area from Cesar Chavez Street due to Homeless Navigation Center located in 25th Street right of way*
- *May need to upgrade nearby street overhead capacity for increased trolley use.*
- *Size maintenance positions and place structure to allow future conversion of trolley facility to multi-modal paint shop if desired.*

## **2040 Use Scenario 1A/1B**

Expanded Light Rail Facility

## **2040 Use Scenario 2A**

Interim Trolley Bus Facility, then Expanded Light Rail Facility

The studies on following are expansion test fits. See the Facility Programs Section starting “Facility Programs” Section starting on page 38 and the Site Master Planning Charrette Report for additional information.







**MME EXPANSION SITE**  
APPROXIMATELY 4 ACRES  
ZONING: 40X HEIGHT & BULK

**TEST FIT FOR SCENARIOS 1A/1B**

<b>FLEET YARD</b>	42 LRV
<b>AREA</b>	174,100 SF

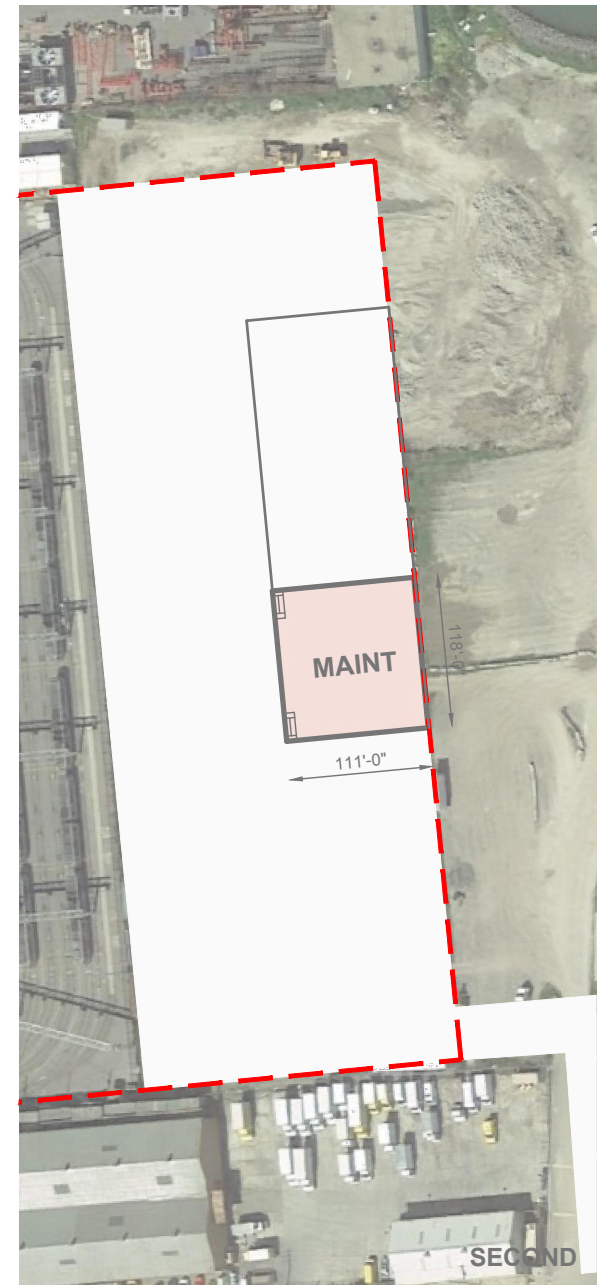
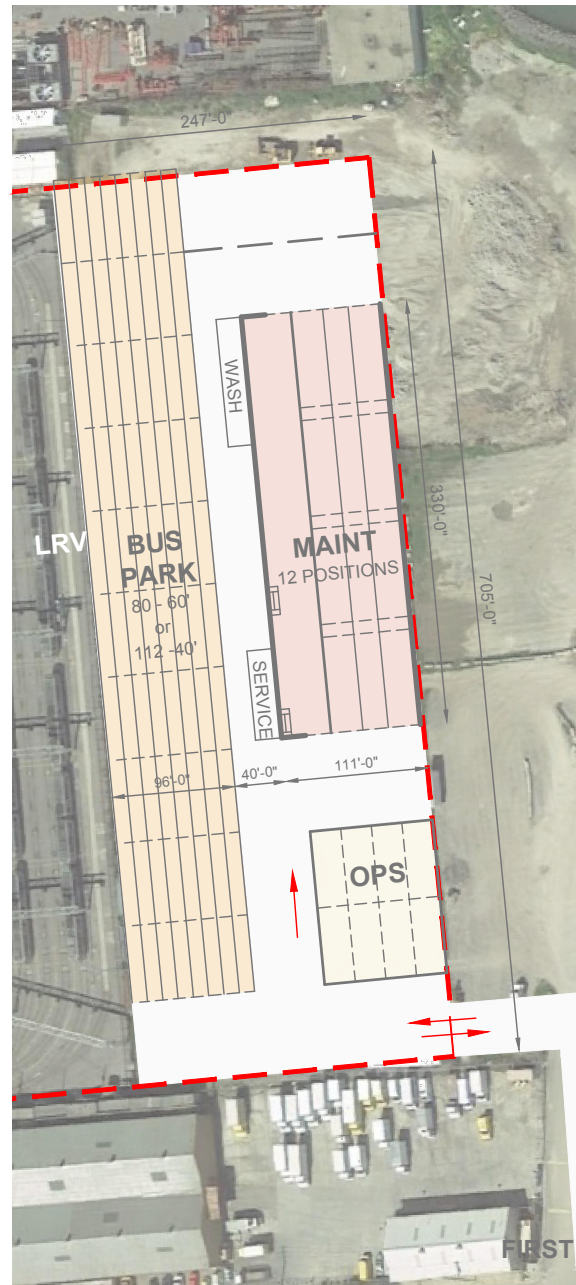


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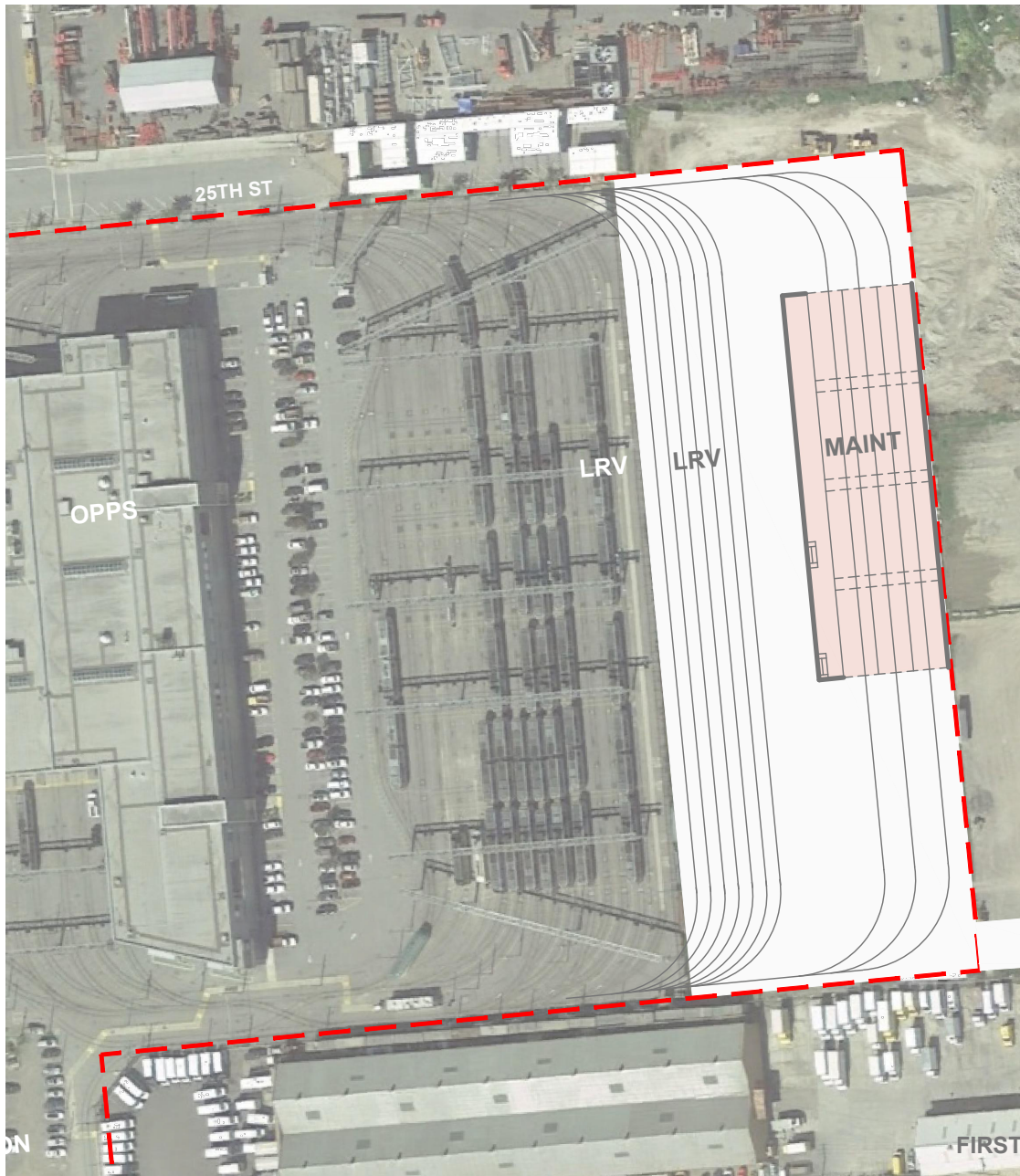
**MME EXPANSION AREA**  
 APPROXIMATELY 4 ACRES  
 ZONING: 40X HEIGHT & BULK

**TEST FIT FOR SCENARIO 2A**

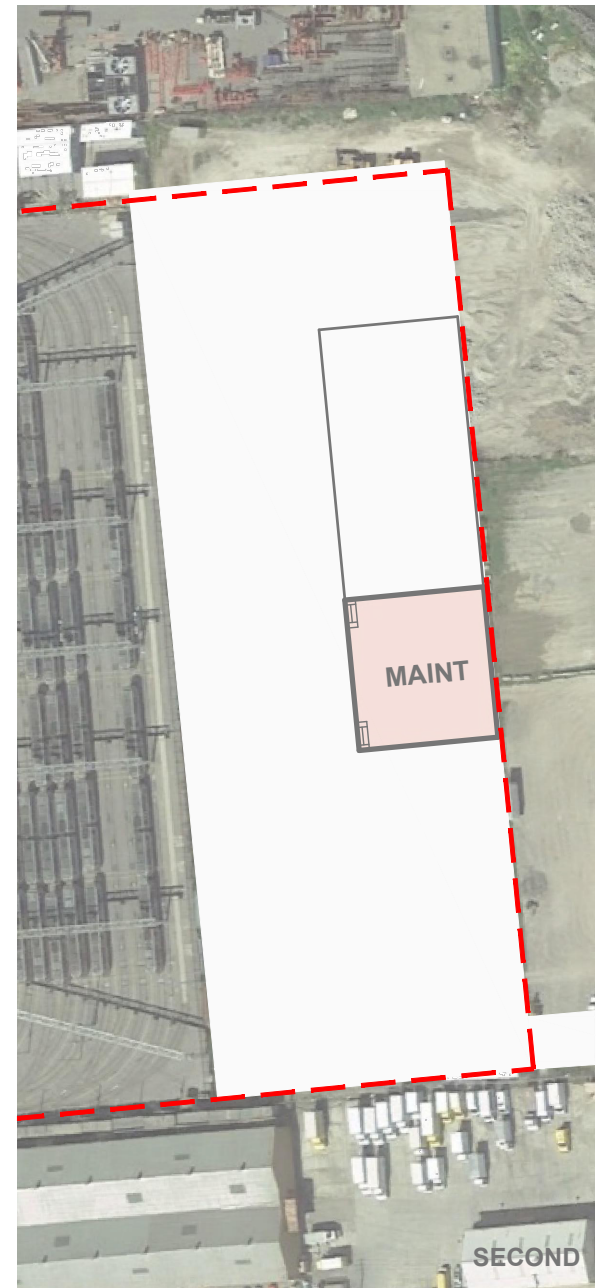
<b>FLEET</b>	
	60'T
PARKING	90
MAINTENANCE	12
<hr/>	
CRUSH TOTAL	92
OR	
	40'T
PARKING	112
MAINTENANCE	12
<hr/>	
CRUSH TOTAL	124
OR	
	42 LRV
<b>AREA</b>	
<b>YARD</b>	137,500 SF
<b>BUILDING</b>	
LOWER LEVEL	3,000 SF
FIRST FLOOR	36,600 SF
MEZZANINE	13,000 SF
<hr/>	
BUILDING	52,600 SF
<b>TOTAL (on-site)</b>	<b>190,100SF</b>
<b>DRIVEWAY</b>	<b>12,100 SF</b>
<b>TRAILERS</b>	<b>11,500 SF</b>







SFMTA  
LAURA BLAKE ARCHITECT



MME EXPANSION SCENARIO 2A  
1" = 150' SEPTEMBER 2017

# Potrero

2500 Mariposa Street

SFMTA owns

Site: 4.4 acres

Building: 109,000 sf

Opened: 1915

Renovated: 1990

## **Current Use**

Trolley Facility

## **Observations**

- *Only SFMTA 60' trolley facility*
- *100+ year old facility is physically and functionally deficient that needs to be rebuilt*
- *Potential to rebuild with similar sized trolley facility with joint use above or with larger bus/trolley facility with joint use above*

## **2040 Use Scenario 1A/1B**

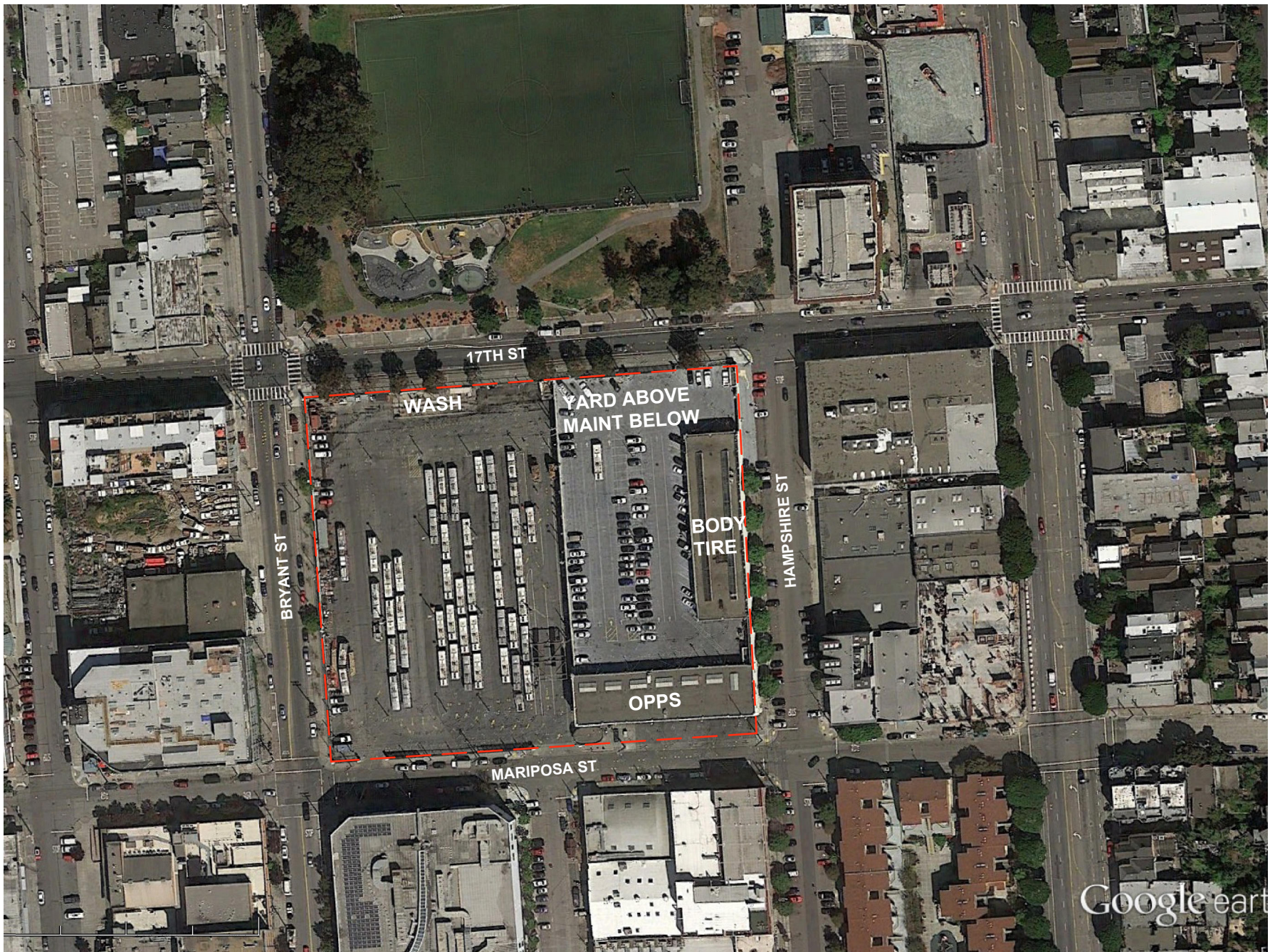
New 2 level Trolley Bus and Training Facility with potential joint use above

## **2040 Use Scenario 2A**

New 3 level Bus/Trolley Bus & Training Facility with potential joint use above

The studies on following are rebuild test fits. See the Facility Programs Section starting “Facility Programs” Section starting on page 38 and the Site Master Planning Charrette Report for additional information.







**POTRERO SITE**

APPROXIMATELY 4.4 ACRES / 192,000 SF  
 ZONING: 65X HEIGHT & BULK

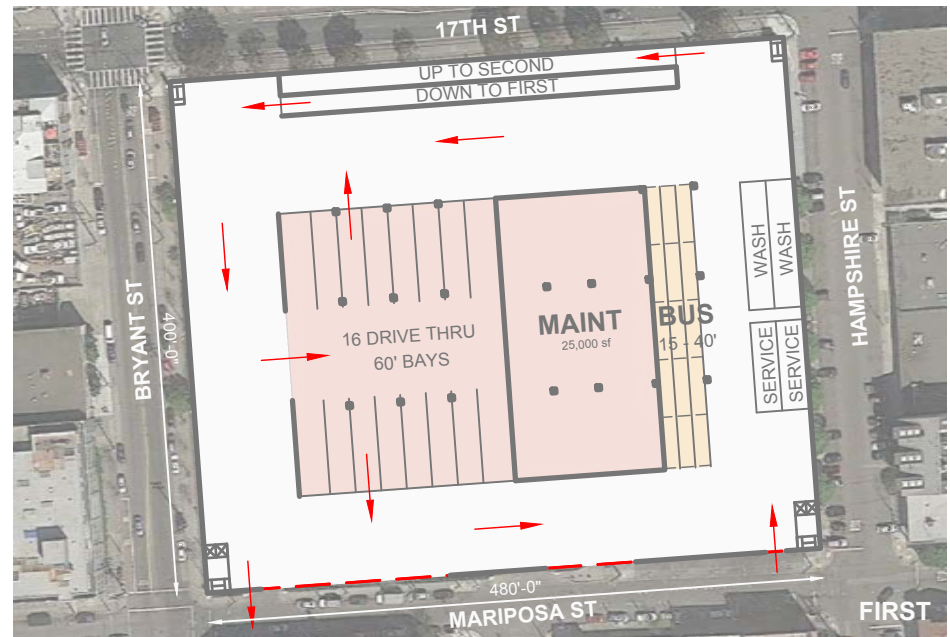
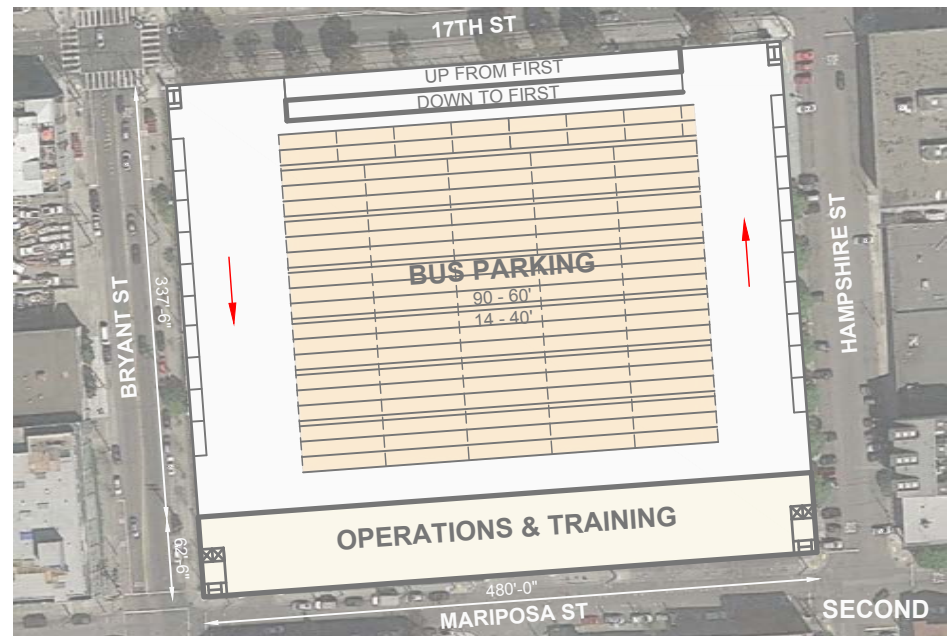
**SCENARIO 1A/1B REBUILD - 2 LEVELS SFMTA**

FLEET	40'T	60'T
FIRST	15	
SECOND	14	90
HALF OF MAINTENANCE BAYS	6	3
TOTAL	35	93

**AREA**

LOWER LEVEL	3,000 SF
FIRST FLOOR	192,000 SF
SECOND FLOOR	30,000 SF
SECOND FLOOR DECK	162,000 SF
MEP PENTHOUSE	3,000 SF
TOTAL	390,000 SF

TEST FIT ADAPTED FROM MDG CONCEPT  
 TYPE AND EXTENT OF OF JOINT USE TO BE DETERMINED



POTRERO REBUILD SCENARIO 1A

1" = 150' SEPTEMBER 2017

SFMTA

LAURA BLAKE ARCHITECT

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**POTRERO SITE**

APPROXIMATELY 4.4 ACRES / 192,000 SF

ZONING: 65X HEIGHT & BULK

**SCENARIO 2A REBUILD - 3 LEVELS SFMTA**

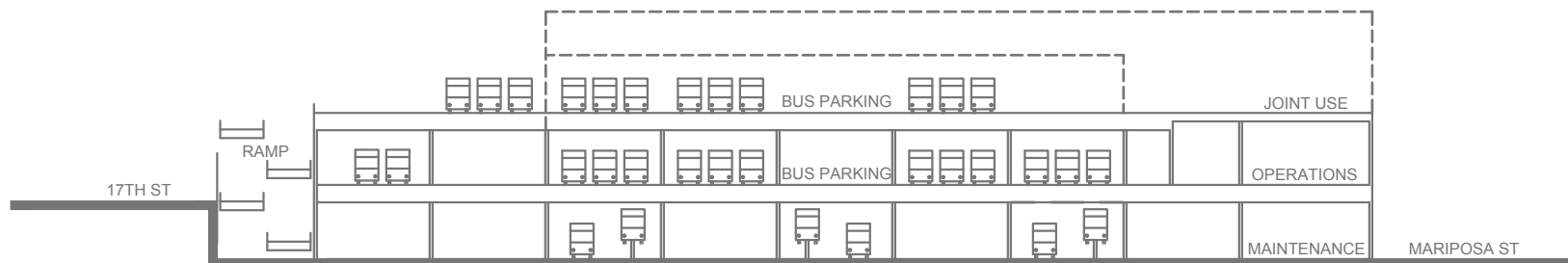
FLEET	40' M/T	60'M/T
FIRST		24
SECOND		80
THIRD		90
HALF OF MAINTENANCE BAYS		12
<b>TOTAL</b>		<b>206</b>

**AREA**

LOWER LEVEL	6,000 SF
FIRST FLOOR	192,000 SF
MEZZANINE	12,400 SF
SECOND FLOOR	192,000 SF
THIRD FLOOR DECK	137,300 SF
MEP PENTHOUSE	6,000 SF
<b>TOTAL</b>	<b>545,700 SF</b>

TEST FIT BASED ON MDG CONCEPT

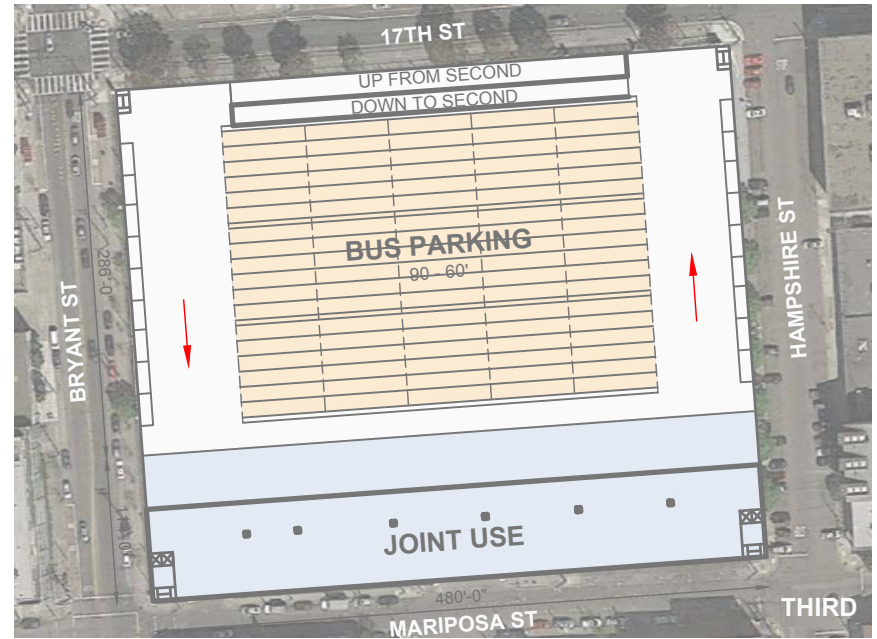
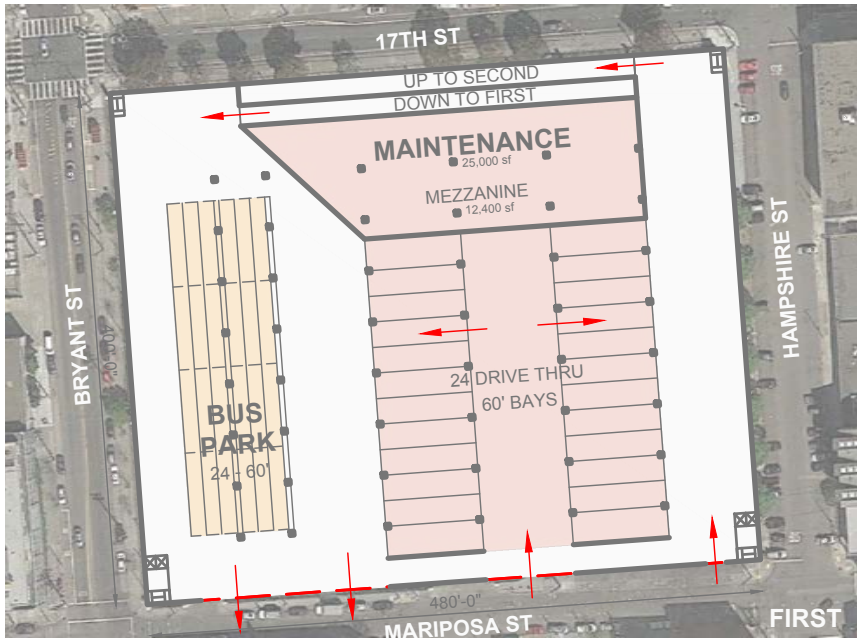
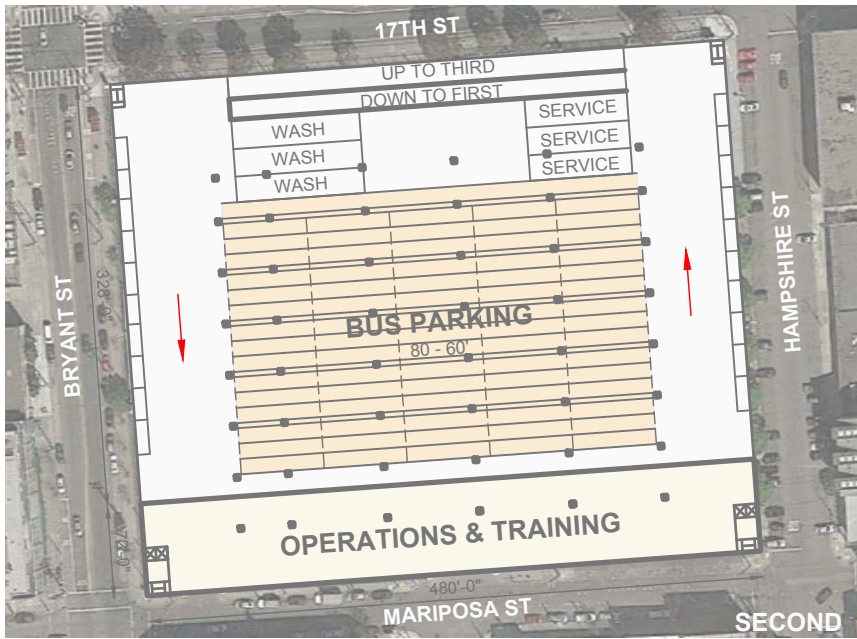
TYPE AND EXTENT OF OF JOINT USE TO BE DETERMINED



**SECTION**

SFMTA  
LAURA BLAKE ARCHITECT

POTRERO REBUILD SCENARIO 2A  
1" = 64' SEPTEMBER 2017



SFMTA  
 LAURA BLAKE ARCHITECT

POTRERO REBUILD SCENARIO 2A  
 1" = 150' SEPTEMBER 2017



# Presidio

949 Presidio Avenue

SFMTA owns

Site: 5.4 acres

Building: 158,000 sf

Opened: 1912

## **Current Use**

Trolley & Support Facility

40' Trolley Facility

Operator Training

Storage

Reprographics

Employee assistance

## **Observations**

- *100+ year old facility is physically and functionally deficient that needs to be rebuilt*
- *Potential to rebuild with similar sized trolley facility and adjoining joint use or rebuild with larger trolley facility and adjoining joint use*

## **2040 Use Scenario 1A/1B**

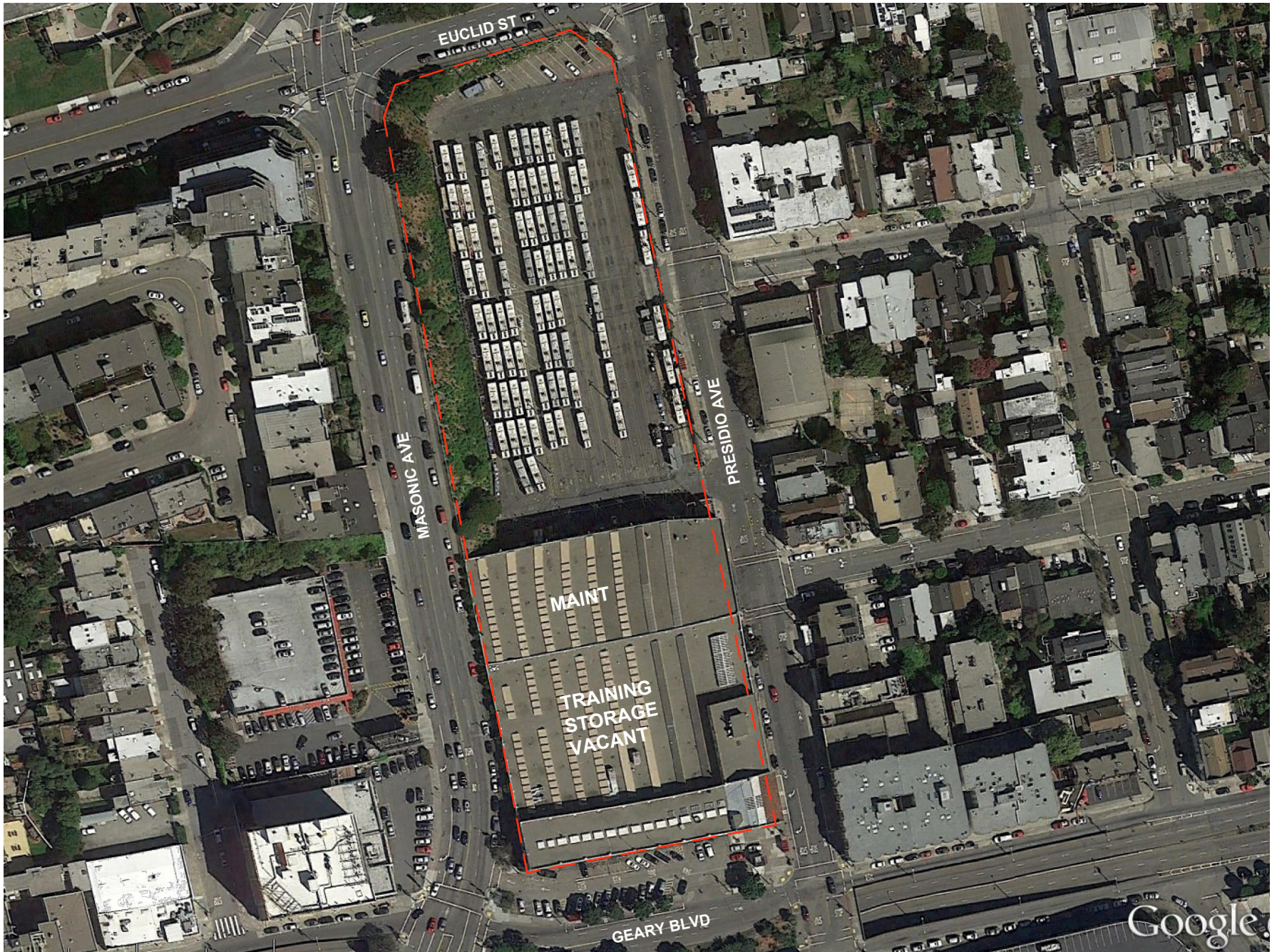
New 1 Level Trolley Bus Facility with potential joint use adjacent

## **2040 Use Scenario 2A**

New 2 Level Trolley Bus Facility with potential joint use adjacent

The studies on following pages are rebuild test fits See the Facility Programs Section starting “Facility Programs” Section starting on page 38 for additional information.







**PRESIDIO SITE**

APPROXIMATELY 5.4 ACRES  
 160E HEIGHT & BULK SOUTH  
 END, 40X REST OF SITE

**SCENARIO 1A/1B REBUILD  
 TEST FIT - 1 LEVEL OF SFMTA**

<b>FLEET</b>	40' T
FIRST	128
HALF OF MAINT BAYS	7
<b>TOTAL</b>	<b>135</b>

**AREA**

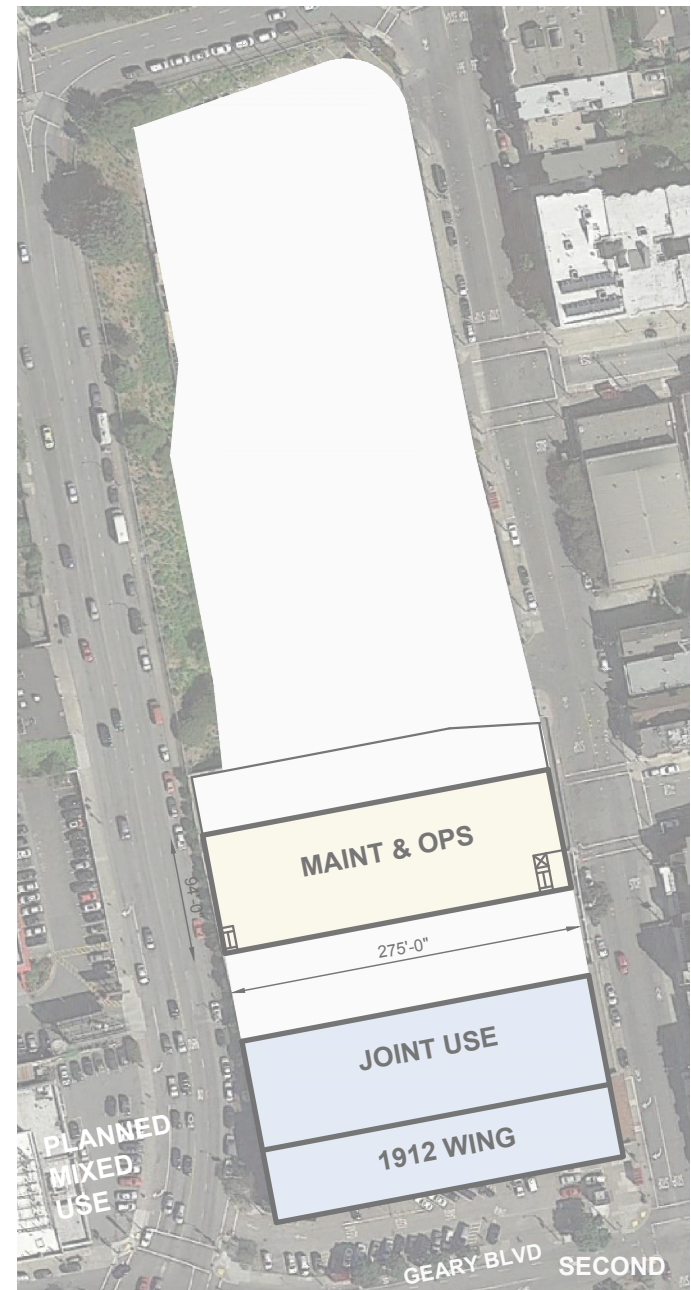
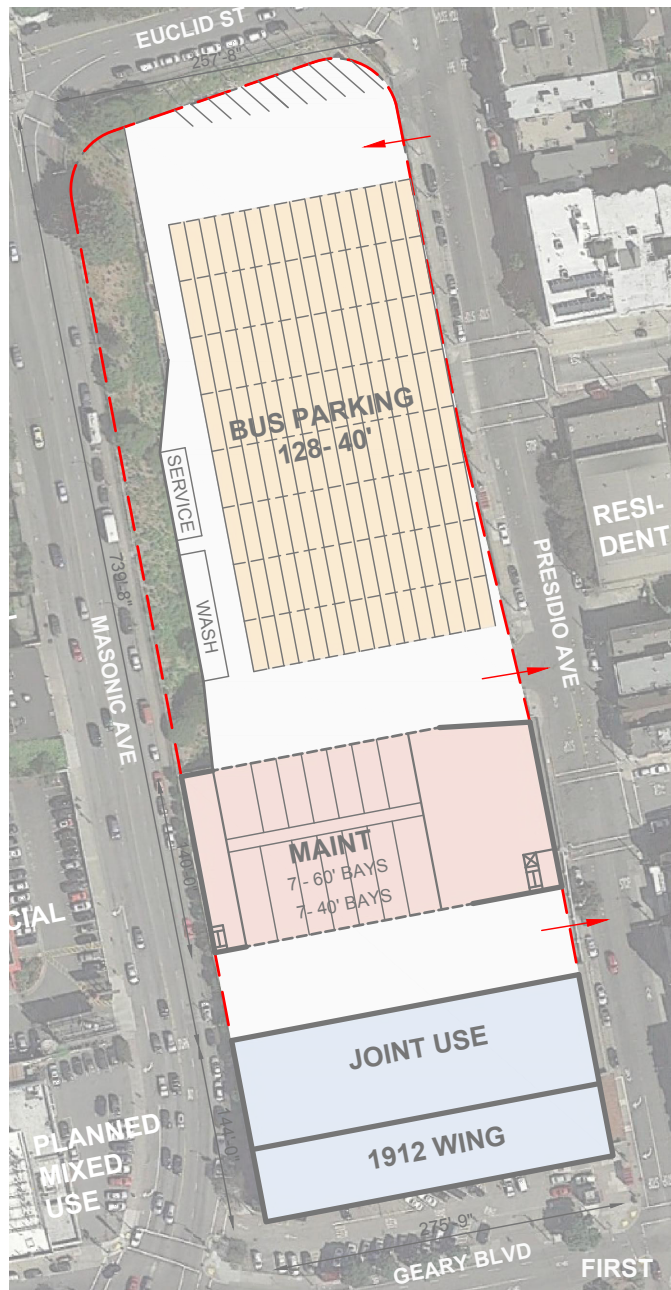
**YARD** 156,800 SF

**BUILDING**

LOWER LEVEL	3,000 SF
FIRST FLOOR	38,200 SF
SECOND FLOOR	25,800 SF
<b>TOTAL</b>	<b>67,000 SF</b>

**TOTAL 223,800 SF**

TYPE AND EXTENT OF OF  
 JOINT USE TO BE  
 DETERMINED



**PRESIDIO SITE**

APPROXIMATELY 5.4 ACRES  
 160E HEIGHT & BULK SOUTH  
 END, 40X REST OF SITE

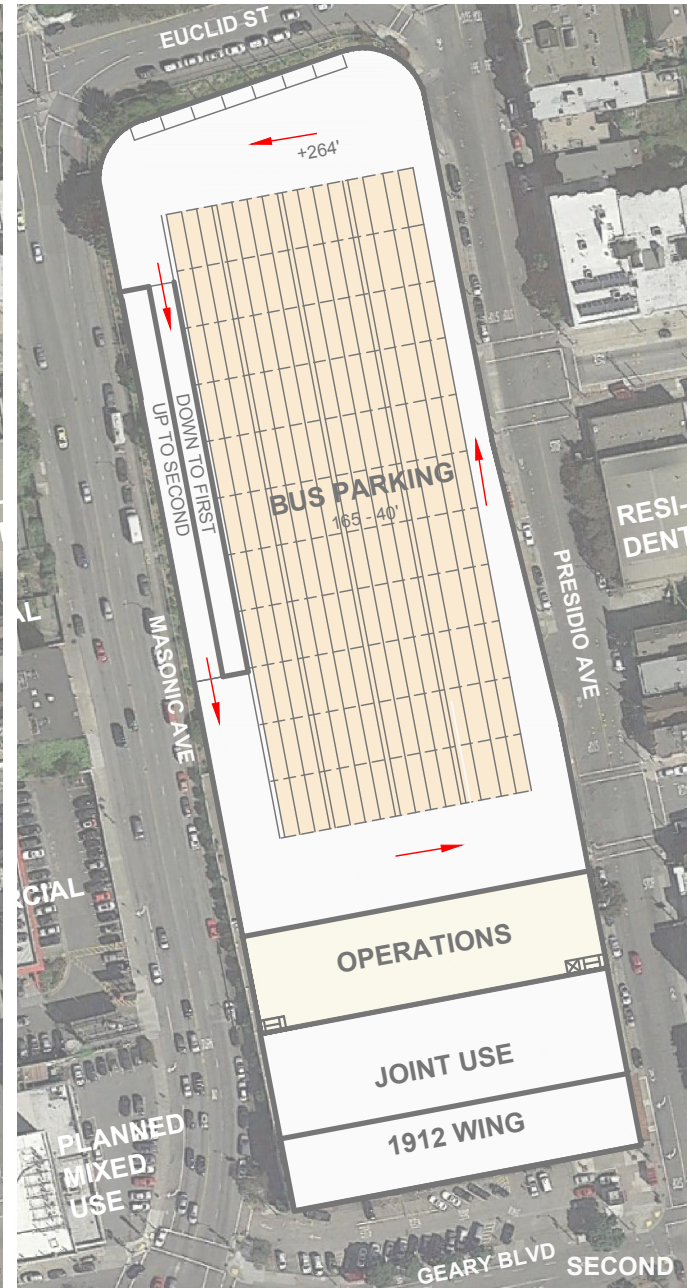
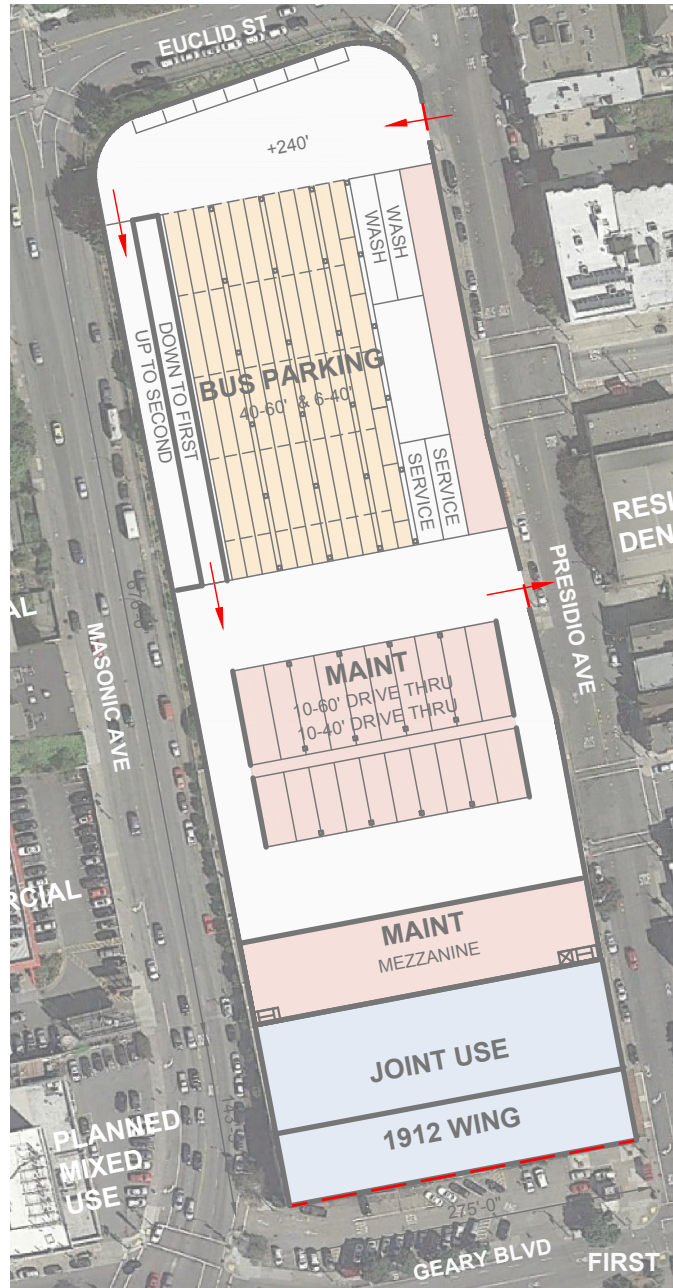
**SCENARIO 2A REBUILD TEST  
 FIT - 2 LEVELS OF SFMTA**

FLEET	40' T	60' T
FIRST	18	24
SECOND	165	
HALF BAYS	2	8
TOTAL	185	32

**AREA**

LOWER LEVEL	6,000 SF
FIRST FLOOR	195,000 SF
MEZZANINE	18,000 SF
SECOND FLOOR	173,700 SF
SECOND FLR DECK	21,300 SF
MEP PENTHOUSE	6,000 SF
TOTAL	420,000 SF

TYPE AND EXTENT OF OF  
 JOINT USE TO BE DETERMINED



# Kirkland

2301 Stockton Street  
and 151 Beach Street  
SFMTA owns  
Site: 2.6 acres  
Buildings: 13,200 sf  
Opened: 1950

## **Current Use**

Motor Coach Facility

## **Observations**

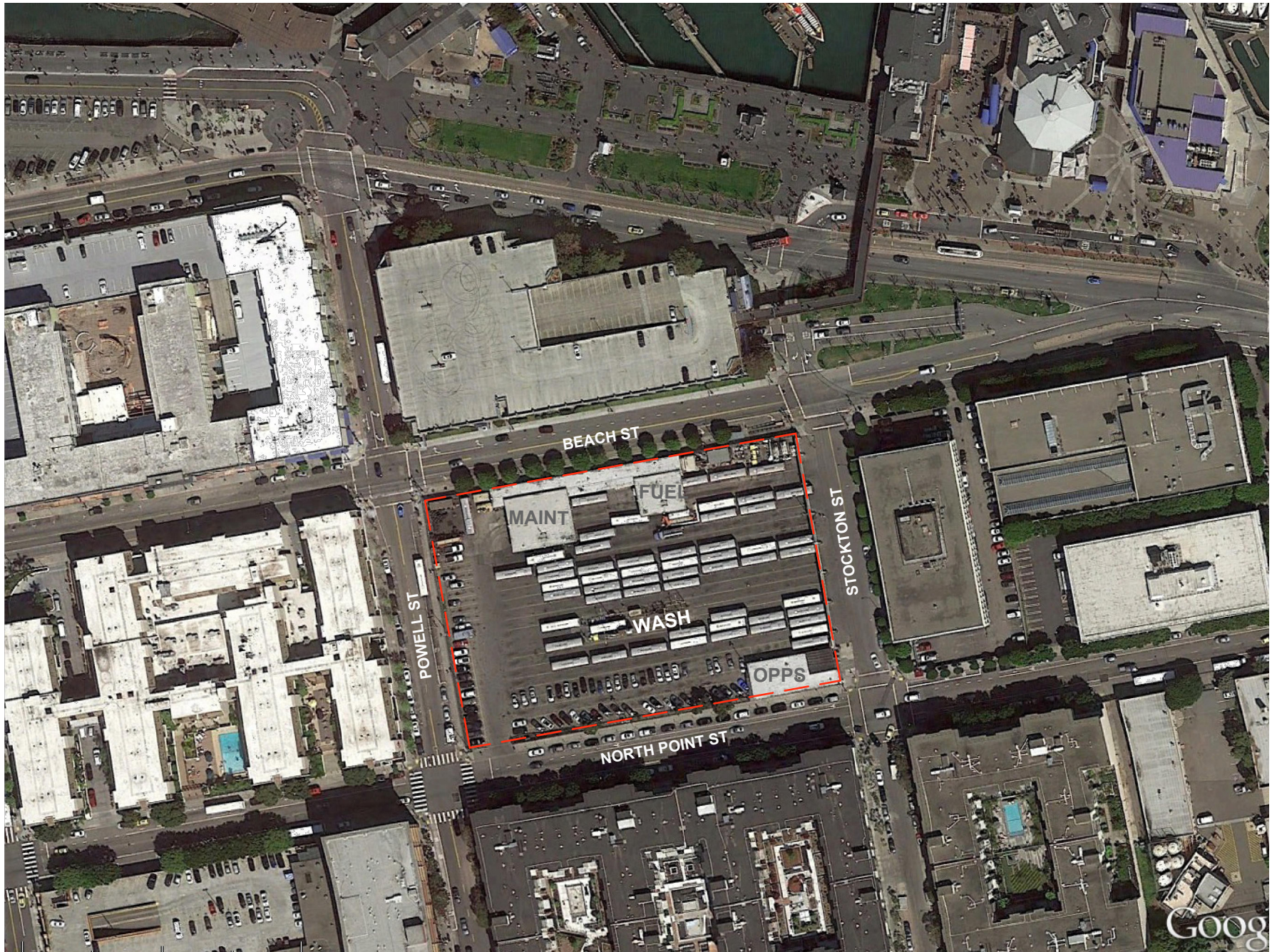
- *Crowded with limited maintenance capacity; heavy repair done at Woods*
- *Physically and functionally deficient and needs to be rebuilt*
- *Potential to rebuild bus facility with subway station and /or joint use*

## **2040 Use**

New 1 level Bus Facility  
with potential joint use  
above

The study on following pages are rebuild test fits  
See the Facility Programs Section starting “Facility Programs” Section starting on page 38 for additional information.







**KIRKLAND SITE**

APPROXIMATELY 2.6 ACRES  
 ZONING: HEIGHT & BULK 40-X

**SCENARIOS 1A/1B/2A REBUILD TEST FIT  
 - 1 LEVEL SFMTA**

<b>FLEET</b>	40' M
YARD	76
HALF MAINTENANCE BAYS	5
<b>TOTAL</b>	<b>81</b>

**AREA**

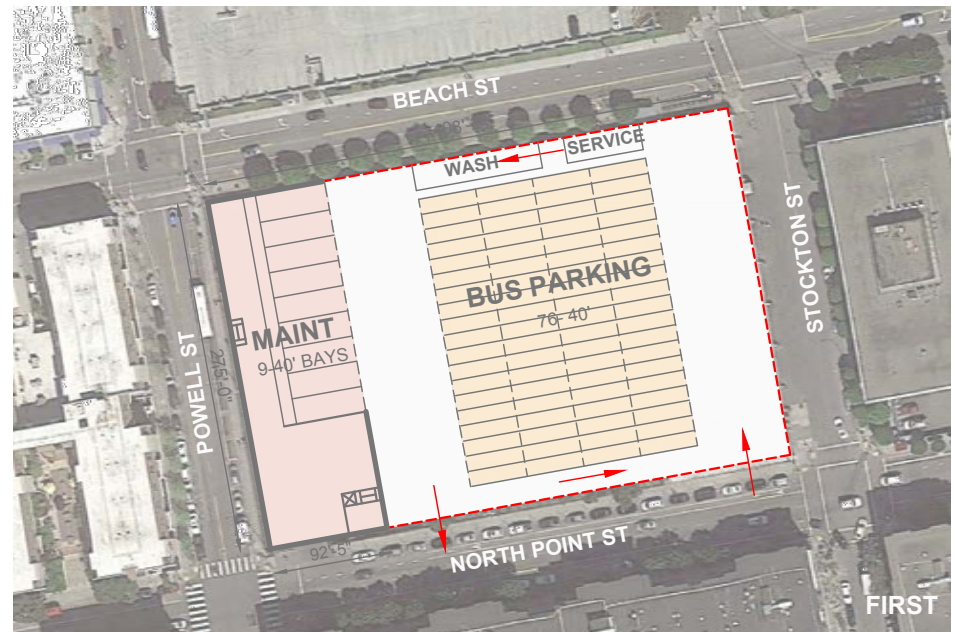
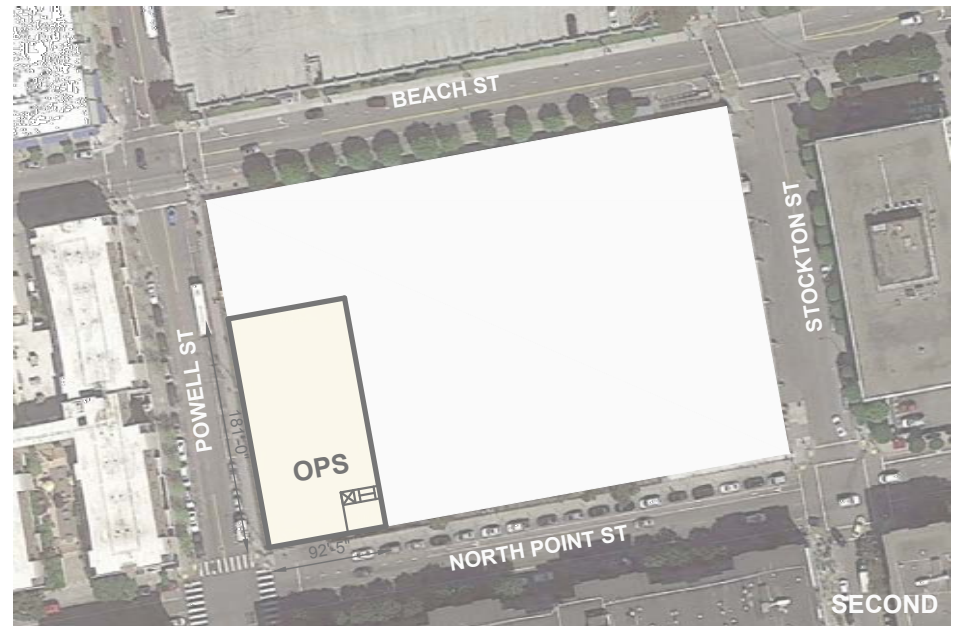
**YARD** 88,100 SF

**BUILDING**

FIRST FLOOR	25,300 SF
SECOND FLOOR	16,700 SF
<b>TOTAL</b>	<b>42,000 SF</b>

**TOTAL 130,100 SF**

TYPE AND EXTENT OF OF JOINT USE TO BE DETERMINED



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