Addendum to SFMTA's Real Estate and Facilities Vision for the 21st Century

Vision Refinement for Coach Facilities

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DRAFT

Prepared for:



Municipal Transportation Agency

Prepared by:



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Table of Contents

1.	Backg	ground		1
2.	Coach	n Fleet	Projections	2
3.	Coach	n Facilit	y Analysis and Findings	5
	a.	Bus Fl	eet Distribution	5
	b.	Optior	s for Additional Facility Capacity	6
	C.	Coach	Facility Discussion	7
		i.	Marin	7
		ii.	Islais Creek	8
		iii.	Burke	8
		iv.	Central Body Repair & Paint (MME)	9
		۷.	Woods	9
		vi.	Expanded Facility (or New Facility)	9
		vii.	Flynn	10
		viii.	Presidio	10
		ix.	Potrero	10
		х.	Kirkland	10
	d.	The C	oach Shuffle	11
4.	Imple	mentati	on Plan	12
	a.	Sched	ule	12
	b.	Projec	ted Cost	14
Ар	pendix	A: Fle	et Distribution	A-1
Ар	pendix	B: Fa	cility Drawings	B-1

TABLES

Table 1:	Comparison of Fleet Projections	2
Table 2:	Summary of Fleet Projection Comparison	3
Table 3:	Options for Additional Facility Capacity	6
Table 4:	The Coach Shuffle	.11
Table 5:	Estimated Project Cost Comparison	.14

A. BACKGROUND

As SFMTA enters its second century, it is confronting significant challenges:

- Aging and inefficient facilities are hindering operations; with certain facilities requiring complete reconstruction
- Key SFMTA facilities would be expected to suffer catastrophic damage in a major earthquake, potentially rendering major portions of the system unusable; the economic recovery of the City would require a fully functional transit system
- Facilities are operating at crush capacity and will not be able to accommodate anticipated fleet growth and mix required to meet ridership demand
- The entire system of real estate and facilities, which has evolved since the late 19th century, must be modernized and improved to meet the future needs of the SFMTA and the population of San Francisco
- There are inadequate resources to fund needed facility maintenance, modernization, and expansion

A report entitled *The SFMTA's Real Estate and Facilities Vision for the 21st Century* (Vision Report), dated February 5, 2013, was developed to provide a roadmap for addressing these challenges and focused on looking within the Agency to find ways to reconfigure, consolidate, or expand existing facilities to best meet operational needs while identifying cost savings and revenue-generating opportunities. SFMTA has embraced the "Vision Report" and the executive staff formed a multi-disciplinary Real Estate Vision Implementation Team that is tasked with actively working toward the implementation of the Vision.

The purpose of this Addendum to *The SFMTA Real Estate and Facilities Vision of the 21st Century* (Addendum) is to address the impacts of a larger and more rapid expansion of the coach fleet on the facilities that support the maintenance and operations of the motor and trolley coach fleet.

This Addendum focuses only on the coach facilities and does not address the rail, historic streetcar, non-revenue vehicle, transit oriented development (TOD), parking garages, or other ancillary facilities that were addressed in the original Vision report.

The Vision, in order to remain viable, must be updated periodically in order to respond to evolving conditions and to maintain proper focus on its implementation.

B. COACH FLEET PROJECTIONS

The original Vision was based on the 2010 SFMTA Transit Fleet Management Plan that showed fleet growth from 2010 to 2030. The fleet growth from 2010 to 2030 was assumed to be a straight-line projection. Table 1 shows that the coach fleet was originally projected to grow by 15%, however, the fleet growth was significantly higher for the articulated coach subfleet. The transit industry utilizes 40-foot "vehicle equivalents" to illustrate and understand the impacts of increasing the number of longer articulated buses, particularly in bus parking. See note 3 in Table 1 for definition of vehicle equivalents. While there was a 15% growth in the number of buses, there was a 21% increase in vehicle equivalents (VE's).

				Or	iginal Visio	n (1)		
		2010 2015		2020	2025	2030	2040	% change 2010 to 2030
1	Motor Coach 30'	30	29	28	27	25	NA	-17%
2	Motor Coach 40'	306	317	328	339	349	NA	14%
3	Motor Coach 60'	124	145	166	187	207	NA	67%
4	Trolley Coach 40'	240	226	212	198	184	NA	-23%
5	Trolley Coach 60'	73	85	97	109	121	NA	66%
6	Contingency Coach 40' (2)	-	-	-	-	-	NA	
7	Total Coaches	773	802	831	860	886	NA	15%
8	Total Vehicle Equivalents (3)	864	910	956	1,001	1,044	NA	21%

Table 1: Comparison of Fleet Projections

				Re	fined Visio	n (4)		
		2010 2015 2020		2025	2030	2040	% change 2010 to 2040	
9	Motor Coach 30'	30	30	30	30	30	30	0%
10	Motor Coach 40'	306	337	312	312	301	282	-8%
11	Motor Coach 60'	124	159	224	259	266	316	155%
12	Trolley Coach 40'	240	240	175	175	190	190	-21%
13	Trolley Coach 60'	73	93	105	105	105	110	51%
14	Contingency Coach 40'	-	50	50	50	50	50	
15	Total Coaches	773	909	896	931	942	978	27%
16	Total Vehicle Equivalents (3)	864	1,028	1,053	1,106	1,120	1,184	37%

(1) Based on the 2010 SFMTA Transit Fleet Management Plan

(2) The Contingency Fleet (also referred to as Reserve Fleet) was understood to be included in the figures above this line

(3) Vehicle Equivalents (VE) provides a common frame of reference to
40 foot coach equivalents. A 30' coach = a VE of 0.75. A 40' coach = a VE of 1.
A 60' coach = a VE of 1.5.

(4) Based on revised figures for 2014 Fleet Plan provided by SFMTA

Table 2 shows a summary of these projections from 2015 to 2040.

Table 2:	Summary	of Fleet	Projection	Comparison

TOTAL COACHES	2015	2020	2025	2030	2040
Original Vision Report	802	831	860	886	NA
Vision Report Addendum	909	896	931	942	978
Difference	107	65	71	56	NA

TOTAL 40' VEHICLE EQUIVALENTS	2015	2020	2025	2030	2040
Original Vision Report	910	956	1,001	1,044	NA
Vision Report Addendum	1,028	1,053	1,106	1,120	1,184
Difference	118	97	105	76	NA

Since the original Vision Report, the SFMTA planning staff refined the coach fleet projections and carried them out to 2040 with a total fleet growth of 27% and a growth in vehicle equivalents of 37%. This equates to almost 100 more coaches (and almost 150 vehicle equivalents more) than were considered in the original Vision Report. The refinements to the coach fleet

projections were done as part of an update to the Transit Fleet Plan, as done every 2 to 3 years. This update incorporated the latest jobs and housing projections from the Association of Bay Area Governments (ABAG) and SF Planning. In addition to the long range 2040 forecast, it included a 2020 forecast to better understand the near term needs. It was important to refine the projection of fleet needs through 2020 as the Transit Effectiveness Project's (TEP) service plan is anticipated to be implemented and the entire bus and trolley bus fleet will be replaced during this timeframe. From this analysis, a better understanding of the near term, pre-2020, versus long term, 2020 to 2040, needs was developed. To optimize the efficiency with which bus service is provided, for the bus routes with high frequency and large increases in capacity

Coach Fleet Increase From 2010 to 2014 Fleet Plan

- 15% to 27% growth in number of coaches
- 21% to 37% growth in vehicle equivalents
- Growth projection is larger and faster than originally projected

forecast, the Transit Fleet Plan proposes using 60-foot articulated buses as a greater percentage of the fleet in place of some 40-foot standard buses. The Transit Fleet Plan shows fleet expansion needs above that assumed in the original Vision Report, as well as a detailed

procurement plan through 2020 which exceeds the number of vehicles assumed in the original Vision Report.

Not only is the projected fleet size significantly larger, the growth is also accelerated. Tables 1 and 2 show that the fleet size originally projected by 2030, will now be reached before 2020.

Why did the 2014 fleet plan increase so significantly over the 2010 fleet plan? The following are some of the key reasons given for the increase.

- The motor coach fleet increased to serve the projected growth in ridership, particularly in the eastern portion of San Francisco and to/from major developments (Treasure Island, Hunters Point/Candlestick Point, etc.)
- Contingency fleet (also referred to as the reserve fleet) was recognized as a separate fleet to be accommodated
- The articulated (60 foot) motor coach fleet increased and the 40 foot motor coach fleet was reduced to realize service delivery efficiencies while meeting projected demand
- 2014 fleet plan ridership projections include 10 additional years (2040 vs. 2030) of ridership growth and increased vehicle demand
- 2014 fleet plan uses year by year vehicle procurement projections (previously interpolated)

How can this growth be accommodated? That is the primary question addressed in this Addendum report.

C. COACH FACILITY ANALYSIS AND FINDINGS

The Vision Report details the capabilities of each coach facility in the SFMTA system. All facilities are now operating at or beyond their capacity. Currently, the Flynn facility is the only one that can accommodate articulated (60 foot long) coaches, and it is already at crush capacity. Fortunately, Phase 1 of the Islais Creek facility has been completed and can accommodate the parking and nightly fueling and wash of articulated buses, but not maintenance. Phase 2 of Islais Creek includes the maintenance and operations facility, but that phase will not be complete until June, 2016. The Woods facility is a few blocks away from the

Islais Creek facility, but cannot accommodate maintenance of articulated buses without major modifications to the facility. The articulated buses parked at Islais Creek before Phase 2 is complete will need to be maintained at the Flynn facility.

The original Vision Report outlined how to best utilize existing SFMTA owned real estate and facilities to accommodate the projected fleet without the need for a new coach maintenance and operations facility. Increasing the fleet projections by 100 coaches (150 vehicle equivalents) will require development of a new maintenance and operations facility or expansion of an existing facility. Increasing the fleet projections by 100 coaches (150 vehicle equivalents) will require development of a new maintenance and operations facility or expansion of an existing facility.

Bus Fleet Distribution

Appendix A shows the proposed Bus Fleet Distribution at each facility. Note that the size of the coach fleet at each facility has been balanced with the capacity of the facility that was documented in the Vision Report. This maximizes the use of each facility while minimizing crush capacity and maintaining flexibility for expansion beyond the projected fleet size.

Options for Additional Facility Capacity

Even with the completion of Islais Creek (Phase 2) by June, 2016, the projected fleet increases will require additional capacity beyond what can be accommodated at existing coach facilities by 2020. Two options were identified and explored. The first was development of a new facility on a new site and second was expansion of an existing facility.

If a suitable site adjacent to an existing facility could be identified, the maintenance capacity at the existing site could eliminate the need to construct another maintenance facility. Table 3 summarizes the primary considerations for these two options

Table 3: Options for Additional Facility Capacity

New Facility	Expand Facility
 Capacity for 185 articulated coaches Site selection and acquisition required (approx. 11 acres) May be difficult to find a site to minimize deadhead cost Construct new maintenance, operations, and fuel/wash Timely property negotiations and demolition required 	 Capacity for 185 articulated coaches and provides parking capacity flexibility Smaller site acquisition required (approx. 3.5 acres), just for coach parking and fuel/wash (assuming additional maintenance facilities are not required) Street closures, if necessary and possible, could improve safety and security
✓ More expensive (\$170 M to \$220 M)	 ✓ Construct new fuel/wash (additional maintenance building may not be required) ✓ Timely property negotiations and demolition required ✓ Less land = less expense

The cost ranges shown above are for total project cost including land acquisition, planning/ environmental, design, demolition, construction, shop equipment, other soft cost (testing and fees), and escalation based on the schedule proposed herein.

Note that an option to develop a multilevel facility at Woods on the existing SFMTA owned site was also evaluated. This option was eliminated due to operational challenges and space constraints on the site which rendered the option unfeasible.

Coach Facility Discussion

This section provides a brief discussion regarding each facility. Note that a more detailed discussion for each facility is provided in the original Vision Report and the comments/ observations herein are intended to supplement that information. See Appendix B for site and facility plans that graphically illustrate how the coach distribution shown in Appendix A is accommodated at each facility.

The layouts were developed to:

- Confirm that the coach assignments can be accommodated
- Improve on-site coach movement for better safety and efficiency (i.e. minimizing operating cost)
- Illustrate that renovation and construction can
 occur without impacting coach operations

Coach facility development falls into two major dependent groups:

 Marin / Islais Creek / Burke / Central Body Repair and Paint (MME) / Woods/ Expanded or New Facility Coach facility development falls into two major dependent groups:

- Marin / Islais Creek / Burke
 / Central Body Repair and
 Paint (MME) / Woods/
 Expanded or New Facility
- Flynn / Presideo / Potrero / Kirkland

• Flynn / Presidio / Potrero / Kirkland

The facilities in the first group must be completed before construction/renovation work can begin on the second group

Marin / Islais Creek / Burke / Central Body Repair and Paint (MME), Woods, and Expanded or New Facility

Marin

(See Appendix B, Drawings M.1 to M.2)

Marin is currently occupied on a month-to-month lease from the Port, however, SFMTA is in the process of negotiating a multi-year Memorandum of Understanding (MOU) for the site and facility. MOW (Maintenance of Way) Rail Maintenance and Video are currently utilizing the building on-site, but alternate sites will need to be identified for both when the MOU expires.

The primary projected use of Marin will be to park the contingency (reserve) fleet until an existing facility can be expanded or a new facility developed.

This will require that the existing old PCC fleet (PCC Non-op fleet) currently on-site will need to be moved to another location and decisions will need to be made regarding which vehicles are worth restoring or keeping in storage for future restoration and which vehicles should be disposed as surplus. The Metro East facility was identified in the Vision Report to accommodate the historic streetcar fleet, including the PCC fleet.

The existing fueling facility at Marin is part of the MOU and will provide additional back-up fueling if needed.

Islais Creek

(See Appendix B, Drawings IC.1 to IC.7)

The use of the Islais Creek facility is essentially the same as shown in the original Vision Report. Phase 1 (coach parking and fuel and wash) has been completed and Phase 2 (maintenance and operations facility) is projected to be occupied by June, 2016. While Phase 2 is being constructed, up to 30 articulated motor coaches will be parked and serviced at the facility. This provides the space to accommodate the first wave of new articulated coaches scheduled for delivery in 2015. Maintenance on these coaches will need to be accomplished at the Flynn facility on an interim basis until Phase 2 is complete. The Flynn facility is almost 3 miles (15 minutes) away. Shuttling buses between Islais Creek and Flynn for maintenance 24 hours a day, 7 days a week, will increase deadhead and require additional maintenance staffing. The cost of the

Until Islais Creek - Phase 2 is complete:

- Maintenance will need to be done at the Flynn facility (3 miles and 15 minutes away)
- Shuttling buses for maintenance will require additional maintenance staffing and increase deadhead
- Estimated cost for additional deadhead and staffing = \$2 million per year

increased deadhead and staffing is estimated at approximately \$2 million per year.

A means for coaches to enter and exit the site during construction of Phase 2 will need to be identified.

The facility will ultimately be capable of maintaining both standard and articulated coaches when Phase 2 is completed.

Burke

(See Appendix B, Drawings B.1 to B.2)

There is no change in the proposed use of the Burke facility since the original Vision Report. Burke is currently the central warehouse facility. This function will remain with a few alterations and a portion of the facility will be developed for Component Rebuild, which will move from Woods to make way for relocating the Parts Storeroom at Woods.

Central Body Repair & Paint (MME)

(See Appendix B, Drawings BR.1 to BR.4)

There is no change in the proposed Central Body Repair and Paint Facility to be developed at MME since the original Vision Report. This facility will be designed to accommodate all modes including motor coaches (standard and articulated), trolley coaches (standard and articulated), historic streetcars, and light rail vehicles.

Woods

(See Appendix B, Drawings W.0 to W.9)

There is no change in the proposed use of the Woods facility since the original Vision Report. After Component Rebuild is relocated to Burke, the vacated space will be converted for use as the Parts Storeroom. The area vacated by the Parts Storeroom will be converted for other support space and circulation. After the Body Repair and Paint functions are relocated to the new Central Body Repair and Paint at MME, the vacated area will be upgraded for use as general repair bays.

This facility will be capable of maintaining both standard and articulated motor coaches.

Expanded Facility (or New Facility)

(See Appendix B, Drawings X.1 to X.6 for New Facility)

The comparison between these two options was addressed previously. If a suitable expansion site is identified, the recommendation is to expand due to the probable significant cost and critical time savings versus developing a new facility on a new site.

Either option will be capable of maintaining both standard and articulated motor coaches.

Flynn / Presidio / Potrero / Kirkland

This dependent grouping is similar to what was presented in the original Vision Report with the exception that the development of these facilities is now scheduled to be done after the first group of facilities. This approach accommodates the projected fleet expansion, however, it does not address the on-going concern related to the structural and seismic condition of the two oldest facilities in the system, Presidio and Potrero, or the continuing use of the seismically unsound Overhead Lines Facility that is scheduled to be part of the new rebuilt Presidio facility. Presidio and Potrero were also identified in the original Vision Report as prime candidates for transit oriented development or joint development. These opportunities will now be postponed.

Flynn

(See Appendix B, Drawings F.1 to F.5)

There is no change in the proposed use of the Flynn facility since the original Vision Report.

The facility will be electrified to accommodate trolley coaches (standard and articulated) while Presidio and Potreo are being reconstructed. This must be done before construction can start at Presidio and Potrero.

Note that before Flynn can be converted to accommodate trolley coaches, another facility (expanded facility or a new facility) must be operational to support the fleet of 129 articulated motor coaches from Flynn.

Before Flynn can be converted to accommodate trolley coaches, another facility (expanded facility or a new facility) must be operational to support a fleet of 129 articulated motor coaches

The facility will be capable of maintaining standard and articulated coaches (motor and trolley). Ultimately, the facility will be home for 120 articulated motor coaches.

Presidio

(See Appendix B, Drawings PR.1 to PR.2)

There is no change in the proposed use of the Presidio facility since the original Vision Report

Potrero

(See Appendix B, Drawings PO.0 to PO.7)

There is no change in the proposed use of the Potrero facility since the original Vision Report

Kirkland

(See Appendix B, Drawings K.1 to K.2)

There is no change in the proposed use of the Kirkland facility since the original Vision Report

Table 4: The Coach Shuffle



Table 4 shows the original "Shuffle" modified to reflect only coach related facility development.

D. IMPLEMENTATION PLAN

Schedule

The development of the coach related facilities must be choreographed to balance fleet growth, facility capacity, and availability of funding. The schedule shown on the next page balances the fleet growth and facility capacity. It is a relatively aggressive schedule that has one or more facilities under construction between 2014 and 2030. The estimated cost for development of facilities is addressed in the next section.

The first group of facilities (Marin / Islais Creek / Burke / Central Body Repair and Paint (MME) / Woods / Facility Expansion (or New Facility) must be completed by January, 2021 as shown in order to accommodate the projected fleet size and mix.

<u>Islais Creek – Phase 2 (maintenance and operations) must be complete by the end of</u> 2016 in order to support the projected fleet growth.

The schedule is the same for Facility Expansion or a New Facility. <u>Either route taken must</u> <u>result in an operational facility by January 2021 in order to support the projected fleet.</u> Facility Expansion includes site identification, acquisition and demolition of the site, and construction of a new fuel and wash building and new bus parking. A New Facility includes a new maintenance facility, new operations facility, new fuel and wash facility, and bus parking.

CRITICAL DEADLINES

(assuming fleet growth as projected)

- Islais Creek Phase 2 must be completed by the end of 2016
- ✓ Burke/Central Body Repair and Paint (MME)/ Woods / Facility Expansion (or New Facility) must be completed by January 2021
 - If these deadlines are not met, the projected fleet cannot be accommodated!

In addition to these critical deadlines, Flynn must be electrified before demolition and construction can start at Presidio or Potrero.

Note that the schedule shown for coach related facilities has no impact on the development of rail facilities shown in the original Vision Report.

Addendum to SFMTA Real Estate and Facilities Vision for the 21st Century Vision Refinement for Coach Facilities

	2014		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	202
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cility Expansion (or New Facility)							1	_		1		1				
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Design (Electrification)	+															
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Projected Cost

The basis used for developing the project cost was the same as that used in the original Vision Report based on industry standards (SFMTA cost may be higher).

Table 5 shows the total capital cost associated with the development of coach related facilities. These costs are shown for the Original Vision and the Refined Vision. The un-escalated costs are shown in 2012 dollars and the escalated costs include an annual inflation factor of 3 percent.

	Original Vision	Refined Vision
Un-escalated Cost	\$264 M	\$313 M to \$433 M
Escalated Cost	\$330 M	\$422 M to \$572 M
Range of Escalated	\$2.3 M (2013) to	\$0.9 M (2014) to
Annual Cost (1)	\$64.4 (2019)	\$88.9 M (2019)
Average Annual Cost (1)	\$20 M	\$25 M

Table 5: Estimated Project Cost Comparison (for Coach Related Facilities Only)

(1) Assuming Facility Expansion over New Facility

While the average annual cost (projected through 2030) is higher for the Refined Vision due to expanding a facility or developing a new facility, the cumulative annual cost is less for the Revised Vision until 2025 (assuming a site is expanded) due to postponing redevelopment of Presidio and Potrero.

These costs include soft costs (e.g., planning, design, construction management, surveying, and testing), hard (construction) costs, and land acquisition cost. The cost estimates are based on industry standards and are applied on a unit or square-foot basis where possible, with an appropriate contingency to account for San Francisco conditions.

Prior to inclusion in the Capital Improvement Plan, it is recommended that the SFMTA conduct an internal costing analysis and revise estimates accordingly and include escalation adjustments to determine final costs. As individual projects proceed, estimates should be updated as additional information becomes available.

As was stated in The Vision Report, these costs are significant; however, they will contribute to reducing SFMTA's state of good repair backlog, which was \$2.2 billion as of 2010.

In addition to the project costs shown above, the Refined Vision will incur about \$2 million per year (for approximately 2 years – 2015 and 2016) in additional operating cost due to shuttling buses between Islais Creek and Flynn for maintenance until Islais Creek – Phase 2 is completed in 2016.



APPENDIX A: FLEET DISTRIBUTION

Appendix A: Coach Fleet Distribution

The table below and continued on the next page shows the proposed Coach Fleet Distribution at each facility. Note that the size of the coach fleet at each facility has been balanced with the capacity of the facility that was documented in the Vision Report.

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2040
		1				IC Ph 2 Op	en (June, 2	2016)												
1 Fleet Projection	S (incl. spares)		2014 Tran	nsit Fleet	Plan DRAI	T, Noven	ber 2013							-						
2 Motor Coach		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
3 Motor Coach		323	323	337	337	337	323	312	312	312	312	312	312	312	307	307	301	301	301	282
4 Motor Coach	60'	124	124	159	159	159	194	224	224	224	224	224	259	259	259	259	266	266	266	316
5 Trolley Coach	n 40'	240	240	240	240	185	175	175	175	175	175	175	175	175	175	175	175	175	190	190
6 Trolley Coach		61	62	93	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	110
7 Contingency		40	40	50	50	50	50	50	<mark>50</mark>	50	50	50	50	50	50	50	50	50	<mark>50</mark>	50
8	30' and 40'	633	633	657	657	602	578	567	567	567	567	567	567	567	562	562	556	556	571	552
9	60'	185	186	252	264	264	299	329	329	329	329	329	364	364	364	364	371	371	371	426
10	Total	818	819	909	921	866	877	896	<mark>896</mark>	896	896	896	931	931	926	926	927	927	942	978
11 Marin		мои (2	2014 - 20	20)																
12 Contingency	- 40' Motor	40	40	50	50	50	50	50	<u>50</u>											
13 40' Vehicle	e Equiv.	40	40	50	50	50	50	50	50											
14 Capacity (4	40' VE)	57	57	57	57	57	57	57	57											
15 Islais Creek	5 Islais Creek Bid and Construction (6/2016 move-in)																			
16 Motor Coach	30'																			
17 Motor Coach						85	74	29	29	74	74	74	74	74	74	74	74	74	74	74
18 Motor Coach	60' (Note 3)			30	30	39	74	95	95	74	74	74	74	74	74	74	74	74	74	74
19 Contingency	- 40' Motor																			
20 Total Buse	s			30	30	124	148	124	124	148	148	148	148	148	148	148	148	148	148	148
21 40' Vehicle		0	0	45	45	143.5	185	171.5	171.5	185	185	185	185	185	185	185	185	185	185	185
22 Capacity (185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
<u>.</u>																				
	R	enovation	(1/2016 -	1/2018)																
23 Burke																				
24 Central Body & F	Paint	Const	truction (1,	/2017 - 1,	/2020)															
		1								_										
25 Woods	201 (11 - 1 - 2)	20			/2018 - 7,		20	20	20	20	20	20	20	20	20	20	20	20	20	20
26 Motor Coach		30 188	30 188	30 203	30 203	30 118	30 115	30 149	30 149	30 104	30 104	30 104	30 104	30 104	30 104	30 104	30 104	30 104	30 187	30 108
27 Motor Coach28 Motor Coach								-					-	104	104	104	104	104	187	108
		Clearan	ice exitir	ig bus v	vasner i	nexistii	ις ιοται		ποι αιτι	50	50	50	a buses 50	50	50	50	50	50		50
29 Contingency		218	210	222	222	140	145	170	179		50 184	184	184	184	50 184	184	184	50 184	217	188
30 Total Buse		-	218	233	233	148	145	179		184									217	
31 40' Vehicle		210.5 223	210.5 223	225.5 223	225.5 223	140.5 223	137.5 223	171.5 223	171.5	176.5 223	176.5	176.5 223	176.5 223	176.5 223	176.5 223	176.5 223	176.5 223	176.5 223	209.5 223	180.5
32 Capacity (4	40 VE)	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223
33 Expanded Facilit	ty (or new)		D,	emo/Con	struction (1/2019 - 1	1/ 2021)			(finis	h prior to	Presidio/	Potrero/K	irkland sta	art)					
34 Motor Coach	30'																			
35 Motor Coach	40' (Note 1)																	123	40	
36 Motor Coach										150	150	150	185	185	185	185	192	72	72	122
37 Contingency																			50	
38 Total Buse	s	0	0	0	0	0	0	0	0	150	150	150	185	185	185	185	192	195	162	122
39 40' Vehicle	e Equiv.	0	0	0	0	0	0	0	0	225	225	225	277.5	277.5	277.5	277.5	288	231	198	183
40 TOTAL BUSES		218	218	233	233	148	145	179	179	334	334					260	276		0.00	310
Including 50 reserve fleet												334	369	369	369	369	376	379	379	310

Coach Fleet Distribution (continued)

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2040
						IC Ph 2 Op	en (June, 2	2016)												
41	Flynn		Electrif	ication of	Flynn + O	verhead t	o Facility	(7/2021 -	1/2023)			(fi	inish prior	to Presid	io start)					
42	Motor Coach 30'																			
43	Motor Coach 40'																			
44	Motor Coach 60'	124	124	129	129	120	120	129	129									120	120	120
45	Trolley Coach 40'											165	165	165	10	10	10			
46	Trolley Coach 60'														105	105	105			
47	40' Vehicle Equiv.	186	186	193.5	193.5	180	180	193.5	193.5	0	0	165	165	165	167.5	167.5	167.5	180	180	180
48	Capacity (40' VE)	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
_		_																		
49	Presidio	Demo and Construction (1/2023 - 1/2026) (finish prior to Potrero start)																		
50	Trolley Coach 40'	165	165	165	165	165	165	165	165	165	165				165	165	165	165	165	165
51	Trolley Coach 60'																			
52	40' Vehicle Equiv.	165	165	165	165	165	165	165	165	165	165	0	0	0	165	165	165	165	165	165
53	Capacity (40' VE)	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
_		_																		
54	Potrero									Dem	o and Cor	struction	(7/2026 -	7/2028)				(finish pri	or to Kirkl	and start
55	Trolley Coach 40'	75	75	75	75	20	10	10	10	10	10	10	10	10				10	25	25
56	Trolley Coach 60'	61	62	93	105	105	105	105	105	105	105	105	105	105				105	105	110
57	40' Vehicle Equiv.	166.5	168	214.5	232.5	177.5	167.5	167.5	167.5	167.5	167.5	167.5	167.5	167.5	0	0	0	167.5	182.5	190
58	Capacity (40' VE)	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
_		_																		
59	Kirkland												Demo a	nd Constr	uction (7/	2028 - 1/	2031)			
60	Motor Coach 30'																			
61	Motor Coach 40' (Note 1)	135	135	134	134	134	134	134	134	134	134	134	134	134	129	129	123			100
62	Motor Coach 60'																			
63	Trolley Coach 40'																			
64	Trolley Coach 60'																			
65	40' Vehicle Equiv.	135	135	134	134	134	134	134	134	134	134	134	134	134	129	129	123	0	0	100
66	Capacity (40' VE)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Note 1: Could move more 40' buses from Kirkland to the new facility (or expanded facility) to further reduce congestion at Kirkland site.

Note 2: 30-foot coaches (all hybrids) could be moved to Kirkland to provide additional space on-site and displaced 40-foot coaches would move to new facility or Woods.

Note 3: Buses at Islais Creek prior to Phase 2 opening will be serviced at Islais Creek and maintained at Flynn. This will require shuttling buses between facilities, which will increase maintenance staffing needs.



APPENDIX B: FACILITY DRAWINGS

Appendix B includes drawings in the order shown below, which corresponds with the order in which the facilities are proposed to be developed.

<u>Marin</u>

M.1 (Site Plan 2013-2014) M.2 (Site Plan 2015-2020)

Islais Creek

IC.1 (Site Plan 2015-2016) IC.2 (Site Plan 2017) IC.3 (Site Plan 2018) IC.4 (Site Plan 2019-2020) IC.5 (Site Plan 2025-2040) IC.6 (Ground Floor Plan)

<u>Burke</u>

B.1 (Floor Plan Existing)B.2 (Floor Plan Ultimate)

Central Body Repair & Paint (MME)

BR.1 (Site Plan Ultimate)BR.2 (Proposed Floor Plan)BR.3 (Elevations)BR.4 (Rendering)

<u>Woods</u>

W.0 (Site Plan Existing)
W.1 (Site Plan 2013-2014)
W.2 (Site Plan 2015-2016)
W.3 (Site Plan 2017-2018)
W.4 (Site Plan 2019-2020)
W.5 (Site Plan 2021-2025)
W.6 (Site Plan 2030)
W.7 (Site Plan 2040)
W.8 (Floor Plan Existing)
W.9 (Floor Plan Proposed)

New Facility

X.1 (Site Plan 2021-2023)
X.2 (Site Plan 2024-2027)
X.3 (Site Plan 2028)
X.4 (Site Plan 2029)
X.5 (Site Plan 2030)
X.6 (Site Plan 2040)
Flynn
F.1 (Site Plan 2013-2014)
F.2 (Site Plan 2015, 2016, 2019)

F.2 (Site Plan 2015, 2016, 2019, 2020) F.3 (Site Plan 2020) F.4 (Site Plan 2025) F.5 (Site Plan 2030-2040)

<u>Presidio</u>

PR.1 (Site Plan Existing-2020) PR.2 (Site Plan 2025-2040)

<u>Potrero</u>

PO.0 (Site Plan Existing)
PO.1 (Site Plan 2013-2014)
PO.2 (Site Plan 2015)
PO.3 (Site Plan 2016)
PO.4 (Site Plan 2017)
PO.5 (Site Plan 2018-2025)
PO.6 (Site Plan 2029-2030)
PO.7 (Site Plan 2040)

<u>Kirkland</u>

K.1 (Site Plan 2013-2025) K.2 (Site Plan 2030-2040)

























DRAWING NUMBER	DRAWING TITLE	PARSONS			PROJECT NO.	13322FF
	BURKE	BRINCKERHOFF	THIS DRAWING IS CONCEPTUAL IN NATURE AND INTENDED FOR	SFMTA REAL ESTATE & FACILITIES VISION FOR	DRAWN BY	MM
	FLOOR PLAN	303 2ND BTREET SUITE TOO NORTH BAN FRANCISCO, CA 54107	INTERNAL SFMTA REVIEW ONLY		DATE	02/24/2014
B.1	EXISTING	TEL: (414) 343-4000 FAX: (415) 343-6001			SCALE	1* = 40'-0*





COMPONENT REBUILD

CUSTODIAL (?)

LOADING

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WAREHOUSE







DRAWING NUMBER	DADSON	PARSONS		PROJECT TITLE SFMTA REAL ESTATE & FACILITIES VISION FOR THE 21ST CENTURY	PROJECT NO.	13322FF
	BURKE	BRINCKERHOFF			DRAWN BY	MM
	FLOOR PLAN 343 3448 BYTHERY ULTIMATE 104 840 8474 TRL (414) 843 840871 TRL (414) 843 84807	303 SHD BYRNEY AUTTE TOO MONTH			DATE	02/24/2014
B.2		THE 4410 \$43-4600			SCALE	1* = 407-0*



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DRAWING NUMBER	DRAWING TITLE	PARSONS		PROJECT NO.	13322FF
	CENTRAL BODY	BRINCKERHOFF	SFMTA REAL ESTATE & FACILITIES VISION FOR	DRAWN BY	MM
	PROPOSED	16285 PARK TEN PLACE SUITE 400 MOUSTON, TEXAS 77084	THE 21ST CENTURY	DATE	02/24/2014
BR.2	BODY REPAIR & PAINT	TEL: (281) 888-7273 FAX: (281) 558-7202		SCALE	1*=30'-0"





DRAWING NUMBER			THIS DRAWING IS CONCEPTUAL IN NATURE AND INTENDED FOR INTERNAL SFMTA REVIEW ONLY	PROJECT TITLE SFMTA REAL ESTATE & FACILITIES VISION FOR THE 21ST CENTURY	PROJECT NO.	13322FF
	CENTRAL BODY				DRAWN BY	
	ELEVATIONS				DATE	02/24/2014
BR.3		TEL: (418) 243-4800 FAX: (418) 243-9801			SCALE	NTS





DRAWING NUMBER DRAWING TITLE CENTRAL BODY RENDERING		PARSONS		PROJECT TITLE	PROJECT NO.	13322FF
		BRINCKERHOFF	THIS DRAWING IS CONCEPTUAL IN NATURE AND INTENDED FOR INTERNAL SPMTA REVIEW ONLY	SFMTA REAL ESTATE & FACILITIES VISION FOR THE 21ST CENTURY	DRAWN BY	
	RENDERING				DATE	02/24/2014
BR.4		TEL: (414) 343-4000 FAID (415) 343-6591			SCALE	NTS

























DRAWING NUMBER	DRAWING TITLE	PARSONS		PROJECT TITLE	PROJECT NO.	13322FF
	WOODS	BRINCKERHOFF	THIS DRAWING IS CONCEPTUAL IN NATURE AND INTENDED FOR INTERNAL SEMTA REVIEW ONLY	SFMTA REAL ESTATE & FACILITIES VISION FOR	DRAWN BY	MM
	FLOOR PLAN	303 2ND STREET SUITE 700 NORTH BAN FRANCISCO, CA SA107	INTERNAL SEMITAREVIEW UNLY	THE 21ST CENTURY	DATE	02/24/2014
W.8	EXISTING	TEL: (416) 243-4800 FAX: (415) 243-8501			SCALE	1" = 40'-0"





SFMTA Municipal Transportation Agency





DRAWING NUMBER
DRAWING TITLE
PARSONS
PROJECT TITLE



















DRAWING NUMBER	DRAWING TITLE	PARSONS		PROJECT TITLE	PROJECT NO.	13322FF
	NEW FACILITY	BRINCKERHOFF	THIS DRAWING IS CONCEPTUAL IN NATURE AND INTENDED FOR INTERNAL SEMITA REVIEW ONLY	SFMTA REAL ESTATE & FACILITIES VISION FOR	DRAWN BY	MM
	SITE PLAN - 2029	16285 PARK TEN PLACE SUITE 400 HOUSTON, TEXAS 77064	INTERNAL SEMITA REVIEW ONLY	THE 21ST CENTURY	DATE	02/24/2014
X.4		TELI (281) 808-7273 FAX: (281) 558-7202			SCALE	1*=100'-0*





DRAWING NUMBER	DRAWING TITLE	PARSONS			PROJECT NO.	13322FF
	NEW FACILITY	BRINCKERHOFF	THIS DRAWING IS CONCEPTUAL IN NATURE AND INTENDED FOR INTERNAL SEMITA REVIEW ONLY	SFMTA REAL ESTATE & FACILITIES VISION FOR	DRAWN BY	MM
	SITE PLAN - 2030	16285 PARK TEN PLACE SUITE 400 HOUSTON, TEXAS 77084	INTERNAL SEMITA REVIEW ONLY	THE 21ST CENTURY	DATE	02/24/2014
X.5		TEL: (281) 888-7273 FAX: (281) 558-7282			SCALE	1*=100'-0*





VEHICLE ASSIGNMENT 60 Foot Diesel 122 PROJECT TITLE SFMTA REAL ESTATE & FACILITIES VISION FOR THE 21ST CENTURY PARSONS BRINCKERHOFF PROJECT NO. 13322FF NEW FACILITY THIS DRAWING IS CONCEPTUAL IN NATURE AND INTENDED FOR INTERNAL SFMTA REVIEW ONLY RAWN BY MM SITE PLAN - 2040 16285 PARK TEN PLACE SUITE 400 HOUSTON, TEXAS 77064 TEL: (281) 668-7273 FAX: (281) 558-7262 DATE 02/24/2014 X.6 CALE 1*=100









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