SFMTA
Municipal
Transportation
Agency

Completing a New Generation of Investment for Our Bus Fleet

SFMTA Board of Directors

April 18, 2017

Fleet Plan Overview

- Since 2013, SFMTA has transitioned from an old and unreliable fleet to a state-of-the-art vehicle program
- Current fleet replacement includes over 800 new vehicles, approximately 400 have arrived to date
- Executing the 40ft Trolley option for 185 new buses is the last critical step and will replace SFMTA's oldest vehicles

Fleet Plan Guiding Principles

- **Average Fleet Age:** Establish a consistent average fleet age of 5-8 years.
- **Sustainability:** Support the San Francisco Climate Action Plan and related City policies by continuing to invest in low and zero emission vehicles
- **Reliability:** Continue to improve service and prioritize reliability when procuring vehicles, maintaining vehicles and designing enhancements
- **Performance-Based Procurements:** Prioritize vehicle safety and reliability and encourage industry innovation and maintainability
- **Maintenance Standards:** Continue robust maintenance standards and practices established in 2014 including maintaining or exceeding Original Equipment Manufacturer (OEM) schedules

New Trolleys, More Hybrids, in 2017

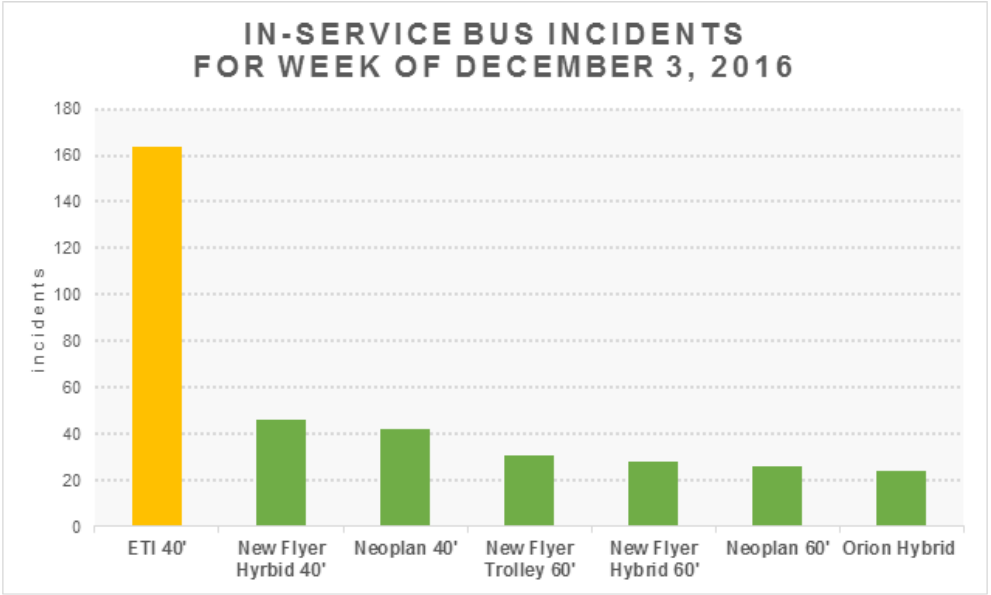
814 New Buses Planned and/or Delivered

- 2013-14: First 112 40ft Hybrids delivered
- 2015-18: An additional 200 40ft and 224 60ft Hybrids are underway
- 2015-2018: 60 60ft Trolleys arrive in 2016, 33 more planned by Spring 2018
- 2017-2019: 185 40ft Trolleys proposed

Trolley Contract Phase	40ft Trolley	60ft Trolley	Contract Status
Base	0	60	Exercised
2016 (Contract Mod #1)	0	33	Exercised
2017 (Contract Mod #2)	***185***	***0***	***Proposed***
Trolley Total	**185**	**93**	

Worst Performers Drag System Down

- At up to 17 years old, they are oldest in the system, well past useful life of 15 years
- Vehicles suffer from poor reliability - Trolley coaches account for over 40% of equipment related delays
- Parts hard to find since manufacturer out of business



Trolley Coaches Make Sense for SF

Topography – Trolley coaches can operate more easily on hills than motor coaches

Smoother & Quieter ride - Does not produce diesel engine noise that can disturb the neighborhood

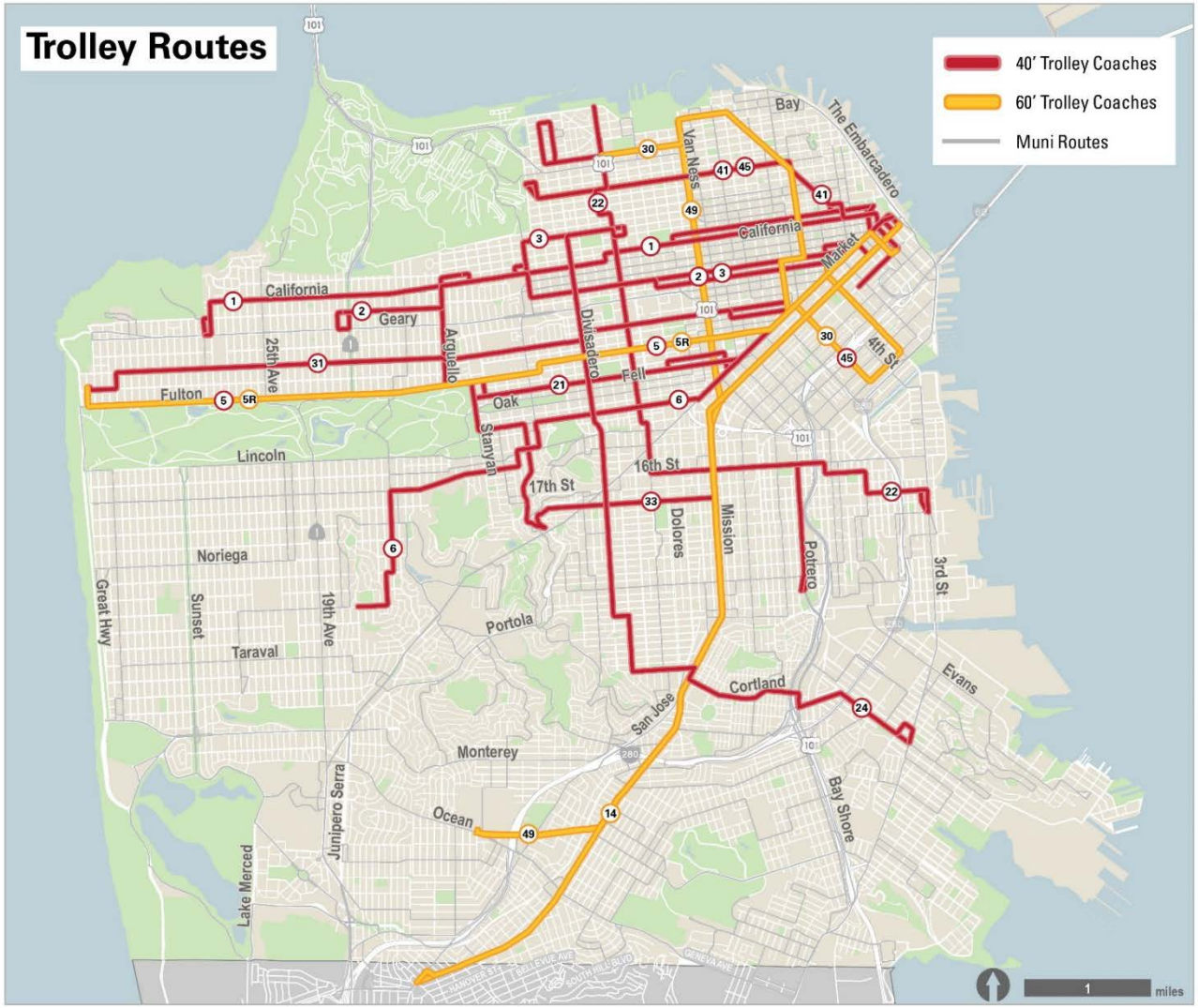
No Air Pollution – Trolleys contribute zero green house gases to the community

No Need for Fuel – No diesel and the electricity to power the trolleys is very low cost

Infrastructure Already Exists - Use existing overhead wiring throughout City

Trolley Network

- Approximately 200,000 trolley boardings a day
- Trolley customers make up 30% of total ridership
- 15 routes in the Trolley Network
- Includes some of the highest ridership in the system (e.g., 1 California, 14 Mission, 30 Stockton)



Community & Operator Feedback Informed Design

Bus design incorporates extensive input from Operators, people with disabilities and the general riding public

Key features include:

- Ergonomic Operator compartment
- Air conditioned climate control for passenger comfort
- Easily accessible with low floor design which requires no additional steps at the doors
- Generous amount of priority seating identified with international symbols
- More passenger capacity with perimeter seating
- Flip up seat to accommodate baby stroller
- More hand straps and yellow stanchions throughout for easy visibility

Operational Benefits

- Delivers enhanced reliability within our current operating and infrastructure environment
- Purchasing from New Flyer, who has more than 40 years experience building trolleys coaches

- State of the art battery system allows extended travel without overhead power if needed to support service disruptions, special events and Citywide construction
- Common parts with hybrids helps streamline maintenance

Environmental Benefits

Meets Climate Action Plan goals:

- **Green Energy:** Minimum fuel costs
- **Power** generated by Hetch Hetchy water reservoir, owned by the city, minimal costs
- **ZERO Emissions:** Definitely will not contribute to global warming

Potentially the Last Trolley Procurement

Battery industry has come a long way, but is not yet ready for San Francisco

- 40ft Trolley routes are our hilliest and most crowded (e.g., 1 California, 30 Stockton)
- Battery range not able to support 24 hour service on routes such as the 22 Fillmore and 24 Divisadero

Significant cost, time and uncertainties associated with support infrastructure

- Current fleet cannot last any longer – customers are already experiencing major breakdowns and only expected to get worse

Cost and Delivery Schedule

Schedule:

- First two buses arrive by the end of 2017!!!
- Production completed by Fall 2019

Cost:

- Cost per bus ~ $1.2M
- Total cost ~ $265M