SFMTA

Transportation 2050

2022 Muni Reliability and Street Safety Bond

SFMTA Board of Directors
November 2, 2021

Overview

January

Introducing T2050
Preliminary Needs & Solutions

Since the beginning of the year the SFMTA has been working **to develop a comprehensive plan to identify both the operational and infrastructure needs** of the transportation system – building on T2030 and T2045.

June

SFMTA 2021
Community Survey

July

SFMTA FY 2020
State of Good Repair Report

August

Transportation 2050
SFMTA 20-Year Capital Plan

October

T2050: 2022 Muni Reliability & Street Safety Bond

The proposed General Obligation **Program is the first in several funding initiatives** to fund the core of our transportation system and its operations, but also update and expand it to meet the needs of San Francisco today.

Transportation 2050 (T2050) presents possible futures and actions to address transportation needs and priorities in San Francisco.

Years of community planning, visioning and technical analysis

- Transportation Task Force 2013 (T2030)
- Transportation Task Force 2018 (T2045)
- ConnectSF
- Vision Zero Action Plan
- SFMTA 20-Year Capital Plan
- SFMTA State of Good Repair Report
- 2021 SFMTA Community Survey
- SFMTA 5-Year CIP
- SFMTA 2-Year Budget
- SF Transportation Plan

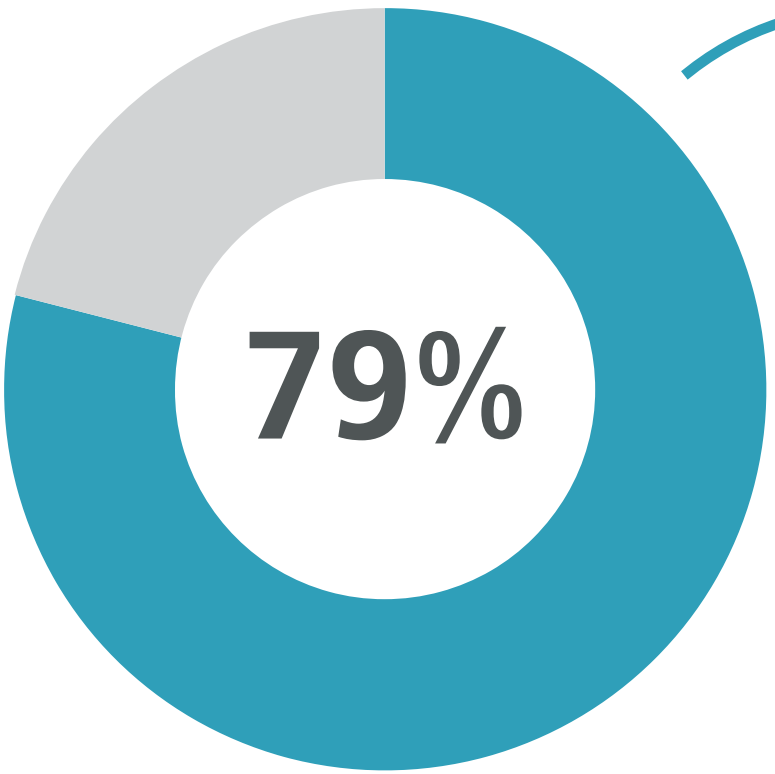
In Spring 2021, the SFMTA completed a Community Survey to help identify priorities post-pandemic.

June 2021

https://www.sfmta.com/reports/2021-sfmta-community-survey

Investing Equitably

A majority of survey respondents say it is "very important" or "extremely important" to ...

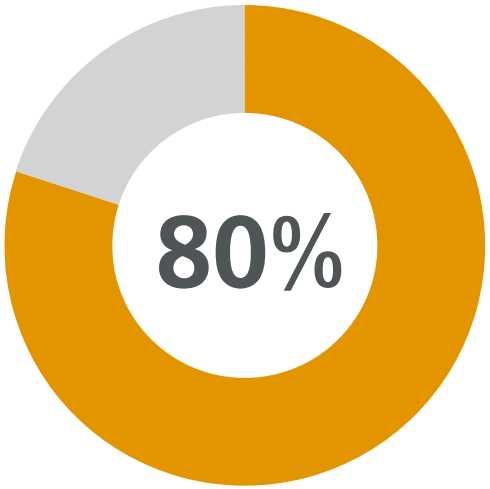


Increase and improve Muni service for the communities most dependent on transit

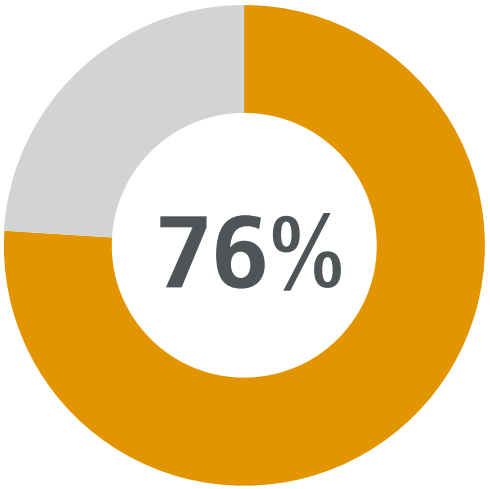
Source: San Francisco citywide survey conducted by FM3, April 2021

Fast and Convenient Transit

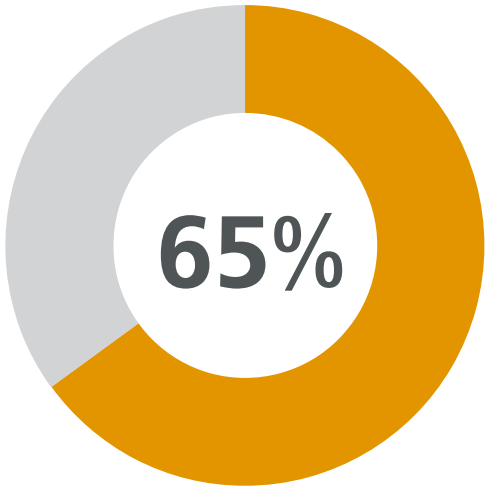
A majority of survey respondents say it is "very important" or "extremely important" to ...



Provide quick, convenient transit access to all parts of San Francisco



Reduce delays to make Muni more reliable

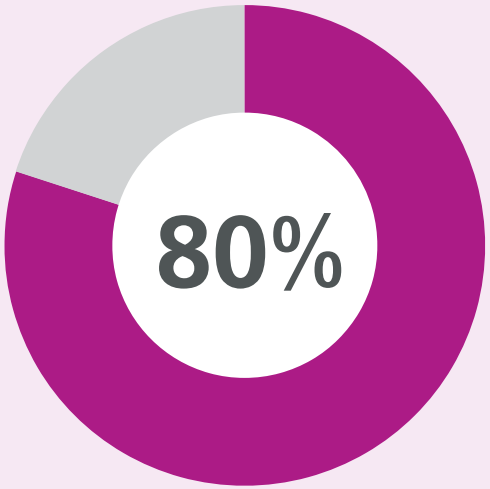


Reduce crowding on Muni

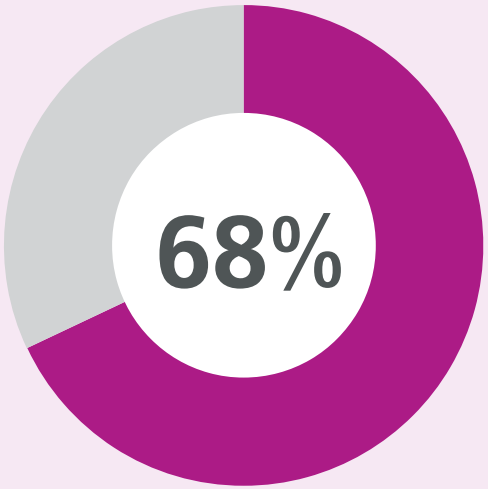
Source: San Francisco citywide survey conducted by FM3, April 2021

More Repairs and Maintenance

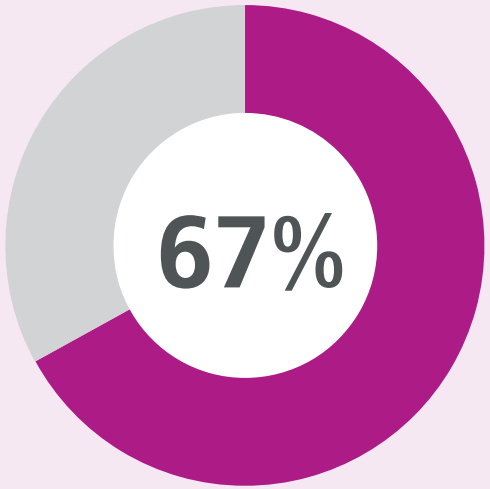
A majority of survey respondents say it is "very important" or "extremely important" to ...



Repair and maintain Muni equipment and facilities to ensure vehicles' safety, frequency, and reliability



Address the backlog of maintenance work

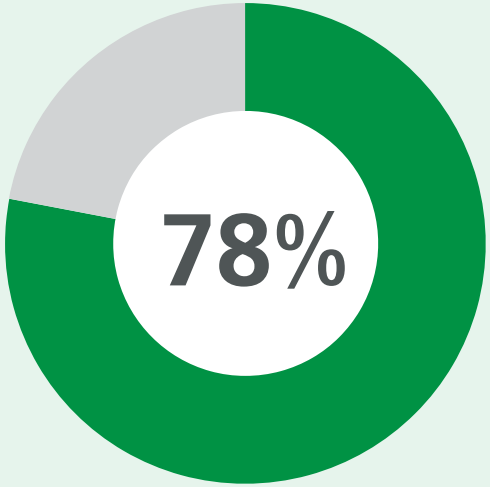


Rebuild San Francisco's aging rail network

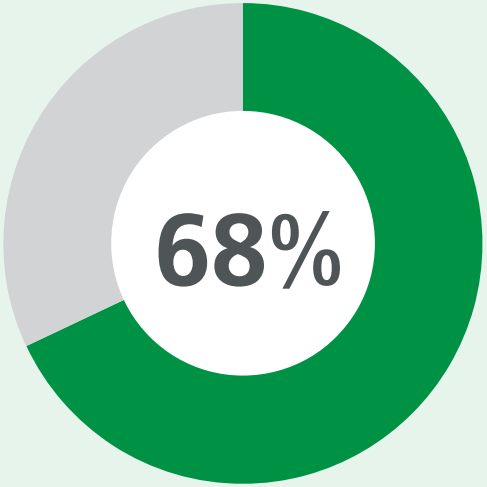
Source: San Francisco citywide survey conducted by FM3, April 2021

Improving Safety and Access

A majority of survey respondents say it is "very important" or "extremely important" to ...



Ensure Muni service is inclusive and accessible to all



Make street safety improvements for walking

Source: San Francisco citywide survey conducted by FM3, April 2021

What became clear is the immediate need is to invest in more maintenance and repairs, and make sure post-pandemic, the transportation system works.

July 2021

https://www.sfmta.com/reports/2021-sfmta-community-survey

What is State of Good Repair?

The SFMTA defines State of Good Repair as the condition in which the Agency's assets can operate at a full level of performance. State of Good Repair investment includes any spending that ensures an asset necessary for delivery of transportation service to the public or supportive of staff needs remain effective, efficient, reliable, and safe.

3.07

1 - 5 Scale
2.5 or greater in State of Good Repair

Age Based Condition Score of all infrastructure

$15.6B

Total Capital Inventory

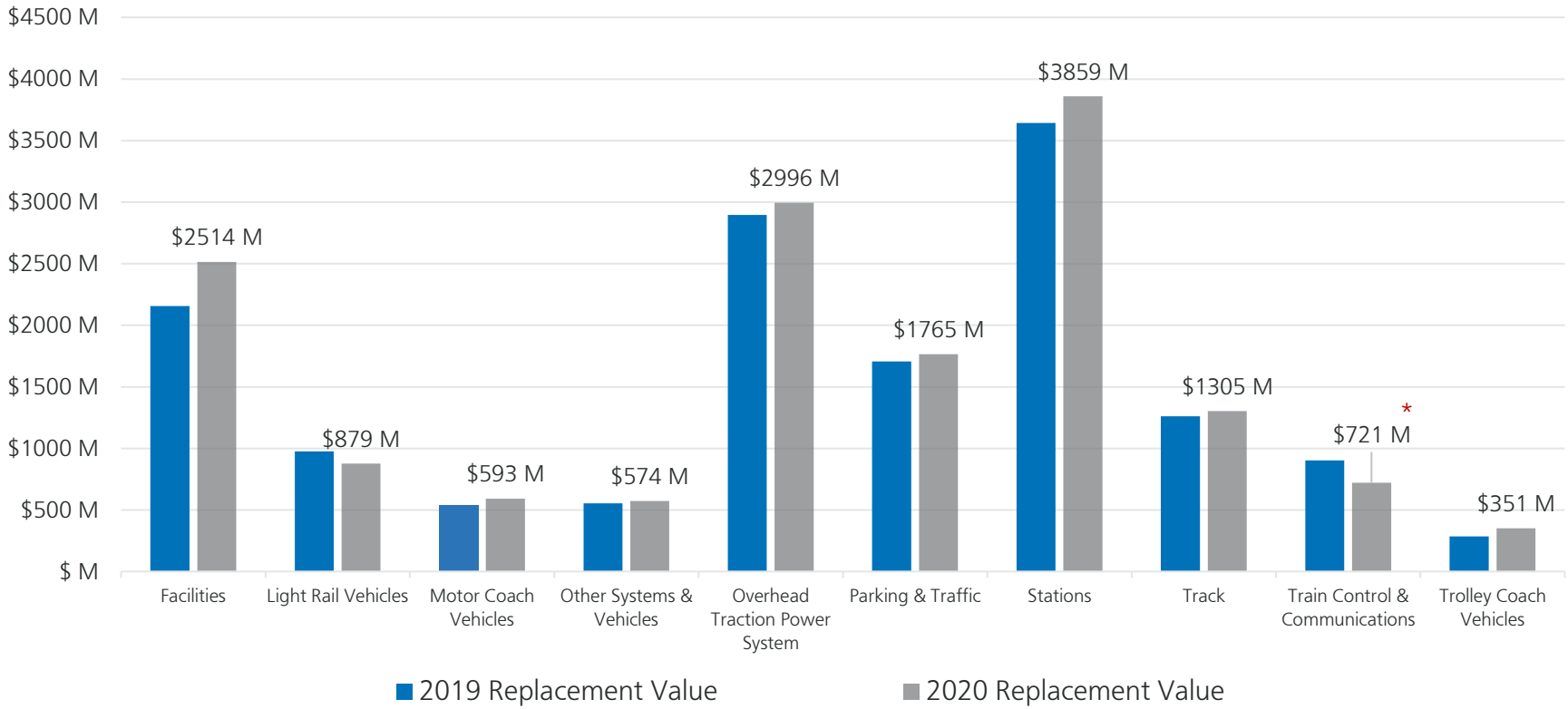
24.6%

Percent of SFMTA Assets operating beyond expected useful life

Reference: 2020 SFMTA State of Good Repair Report

State of Good Repair

The total SFMTA asset replacement value is estimated at $15.6 billion. Asset replacement value provides a baseline when assessing levels of investment across asset classes.

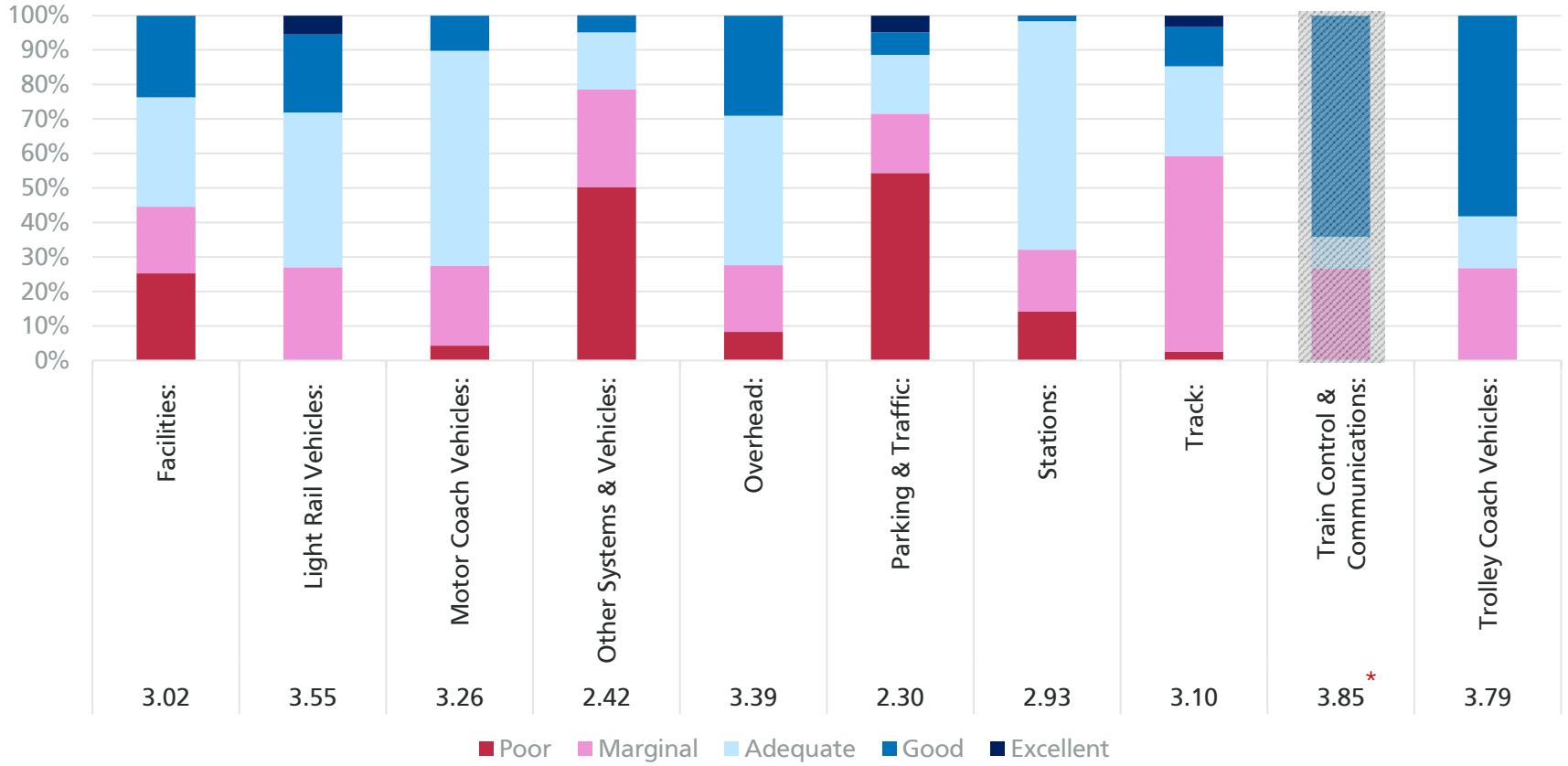


*The train control system is not accurately modeled in our analysis; we know the system is near the end of its useful life with a higher replacement value than presented in the 2020 SGR Report.

Reference: 2020 SFMTA State of Good Repair Report

State of Good Repair

Age Based Condition Scores are based on the age of an asset and use a scale of 1 to 5. The weighted average condition score for all SFMTA assets in FY2020 is 3.07.



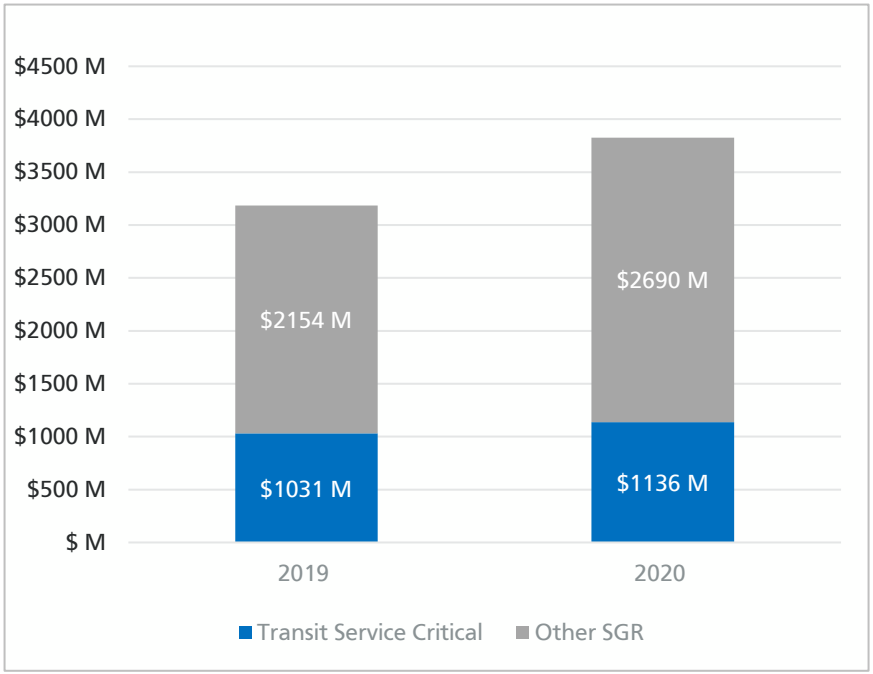
*The train control system is not accurately modeled in our analysis; we know the system is near the end of its useful life with a higher replacement cost than presented in the 2020 SGR Report.

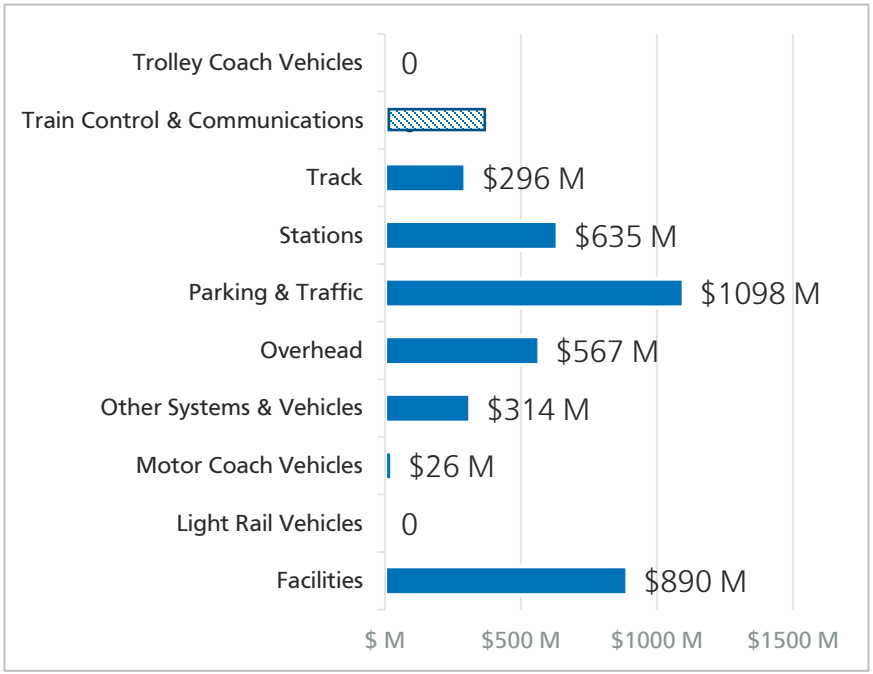
Reference: [2020 SFMTA State of Good Repair Report]

State of Good Repair

$3.83 B
Backlog

The value of assets beyond their useful life is $3.83 billion. This **backlog** represents deferred investments in infrastructure replacement or rehabilitation. The backlog represents assets where an end-of-lifecycle decisions needs to be made; either these assets will be retired, replaced in-kind, or upgraded with new technology or systems.

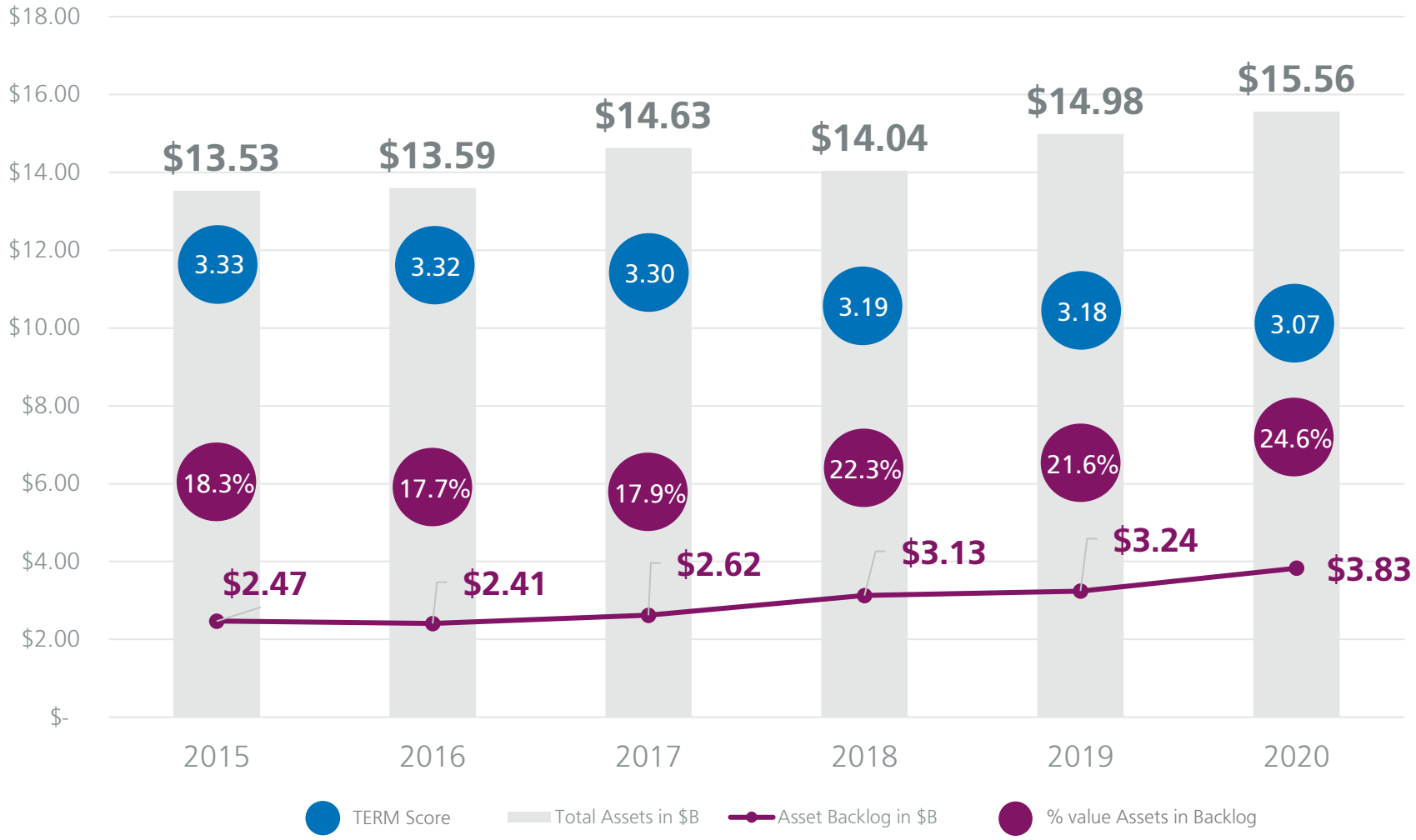




Reference: [2020 SFMTA State of Good Repair Report]

State of Good Repair

State of Good Repair Key Trends (in $B)

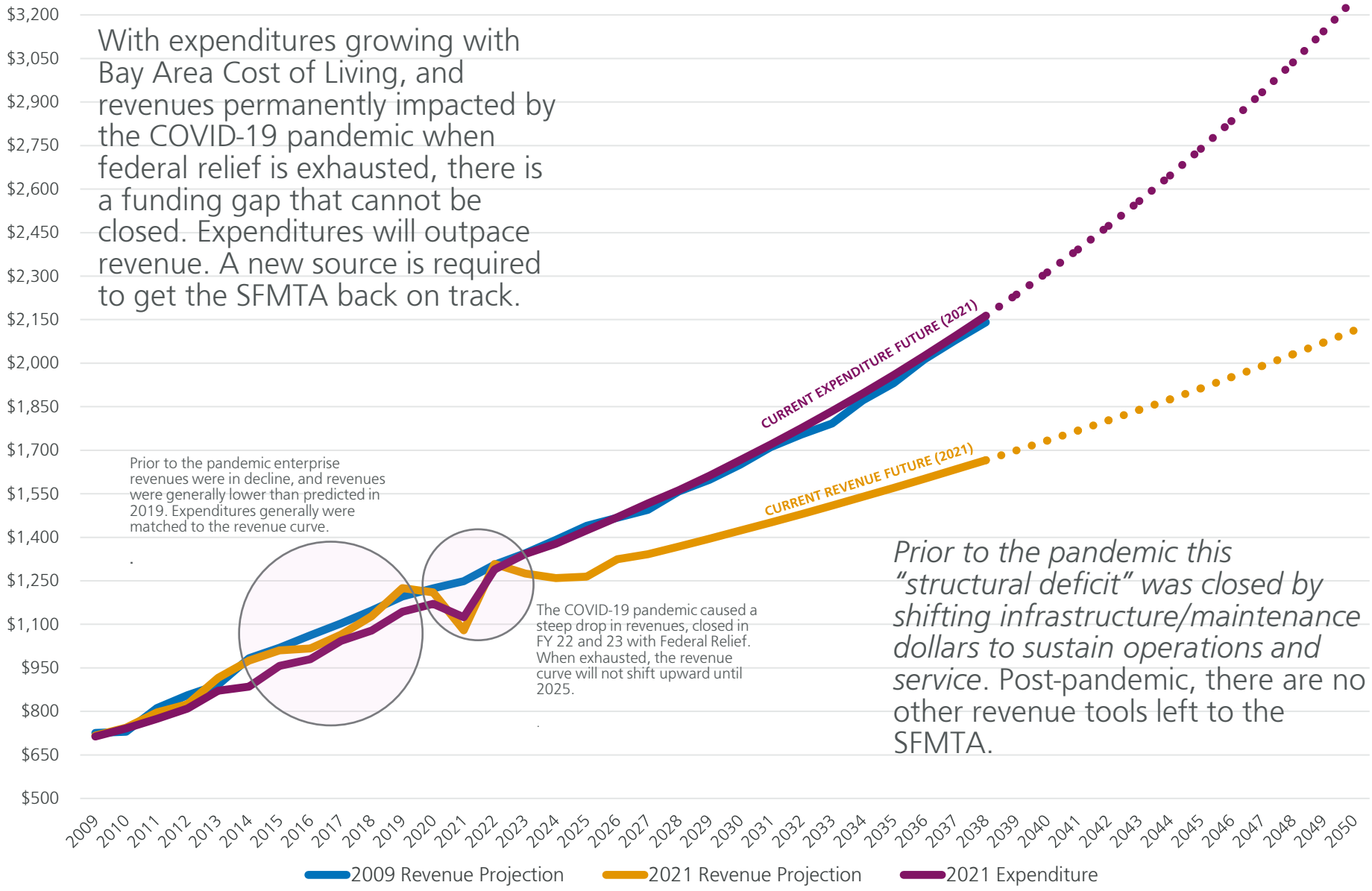


Reference: [2020 SFMTA State of Good Repair Report]

SFMTA Operating Revenues vs. Expenditure Projection 2009 vs 2021

in $millions

With expenditures growing with Bay Area Cost of Living, and revenues permanently impacted by the COVID-19 pandemic when federal relief is exhausted, there is a funding gap that cannot be closed. Expenditures will outpace revenue. A new source is required to get the SFMTA back on track.



Prior to the pandemic this "structural deficit" was closed by shifting infrastructure/maintenance dollars to sustain operations and service. Post-pandemic, there are no other revenue tools left to the SFMTA.

Informed by ConnectSF and various other planning efforts we completed an update of the City's transportation needs.

August 2021

https://www.sfmta.com/projects/transportation-2050

Transportation 2050 – Needs and Gaps

The SFMTA took the **vision of ConnectSF** and the capital needs in the agency's capital plan and looked at operational and capital needs for **the next 30-years**.

ConnectSF

- Vision for the Transportation System
- Supported by Federal / State / Local resources
- Includes investments in Service and Infrastructure

20 Year Capital Plan

- 20 Years of Fiscally Unconstrained Infrastructure Needs identified in long range plans as well as additional needs identified by stakeholders.
- Includes needs to maintain the system as well as expand.
- Informs 5-Year Constrained Capital Improvement Program

5- Year Capital Improvement Program (CIP)

- 5 - Year financially constrained program of projects
- Includes detailed revenue projections for 30+ funding sources (Sales Tax, Federal Funds, State Funds, Regional Funds)
- Programs funds to phases of project planning, design and implementation.

Reference: Transportation 2050

Transportation 2050 programmatic objectives reflect system and community needs.

INVESTING EQUITABLY

Fast and Convenient Transit

1. Create a Five-Minute Network
2. Expand the rail network

More Repairs and Maintenance

1. Make the transportation system work
2. Modernize the rail and subway system

Improving Safety and Access

1. Make streets safer
2. Make the transportation system universally accessible

The below reflects both *capital and operating needs* over the next 30-years.

$111.3B

What the vision will require us to spend over 30-years

$63.4B

We will spend over the next 30-years

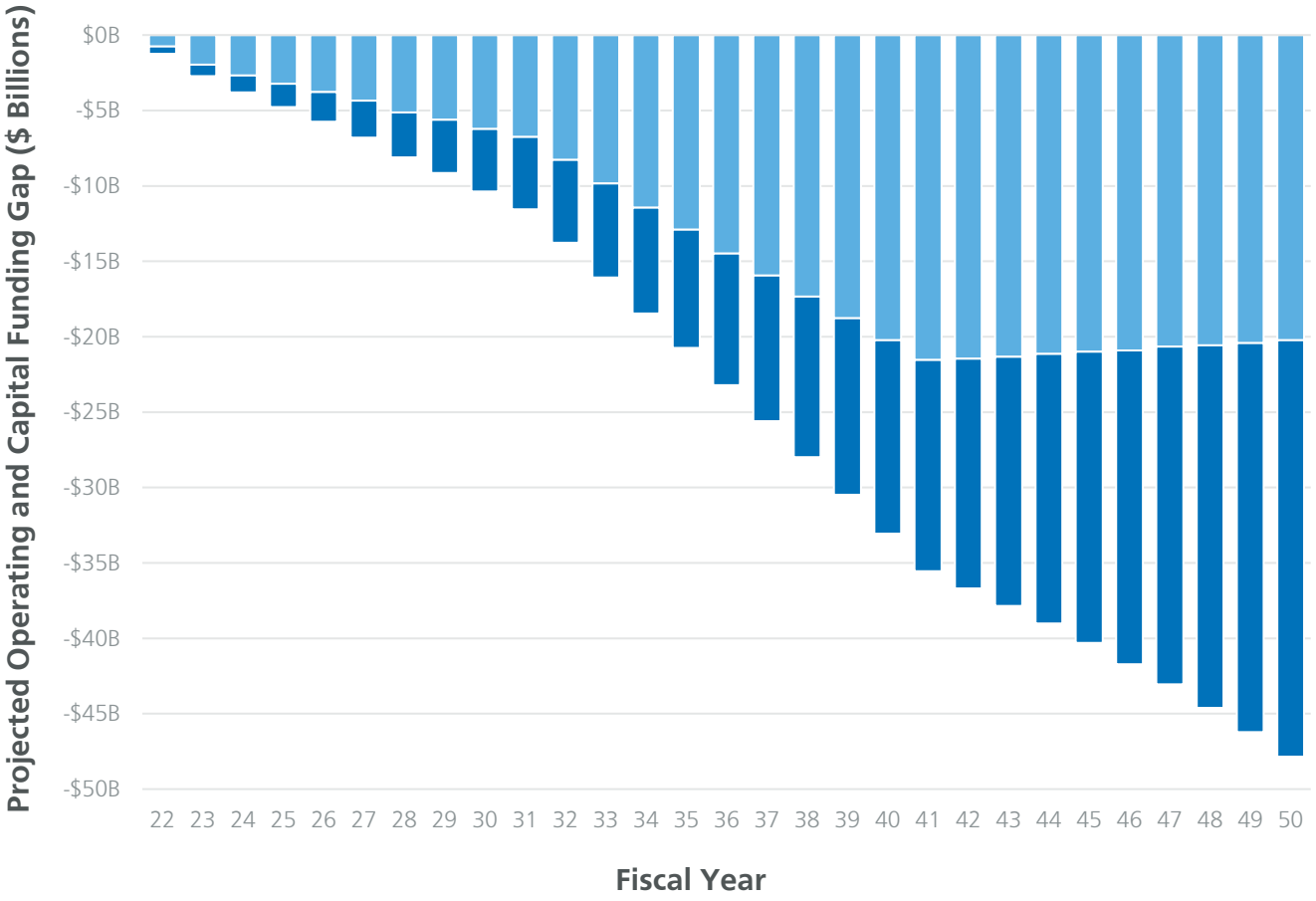
57% funded

($47.8B)

T2050 Funding Gap
Cumulative total over 30-years

43% funding gap

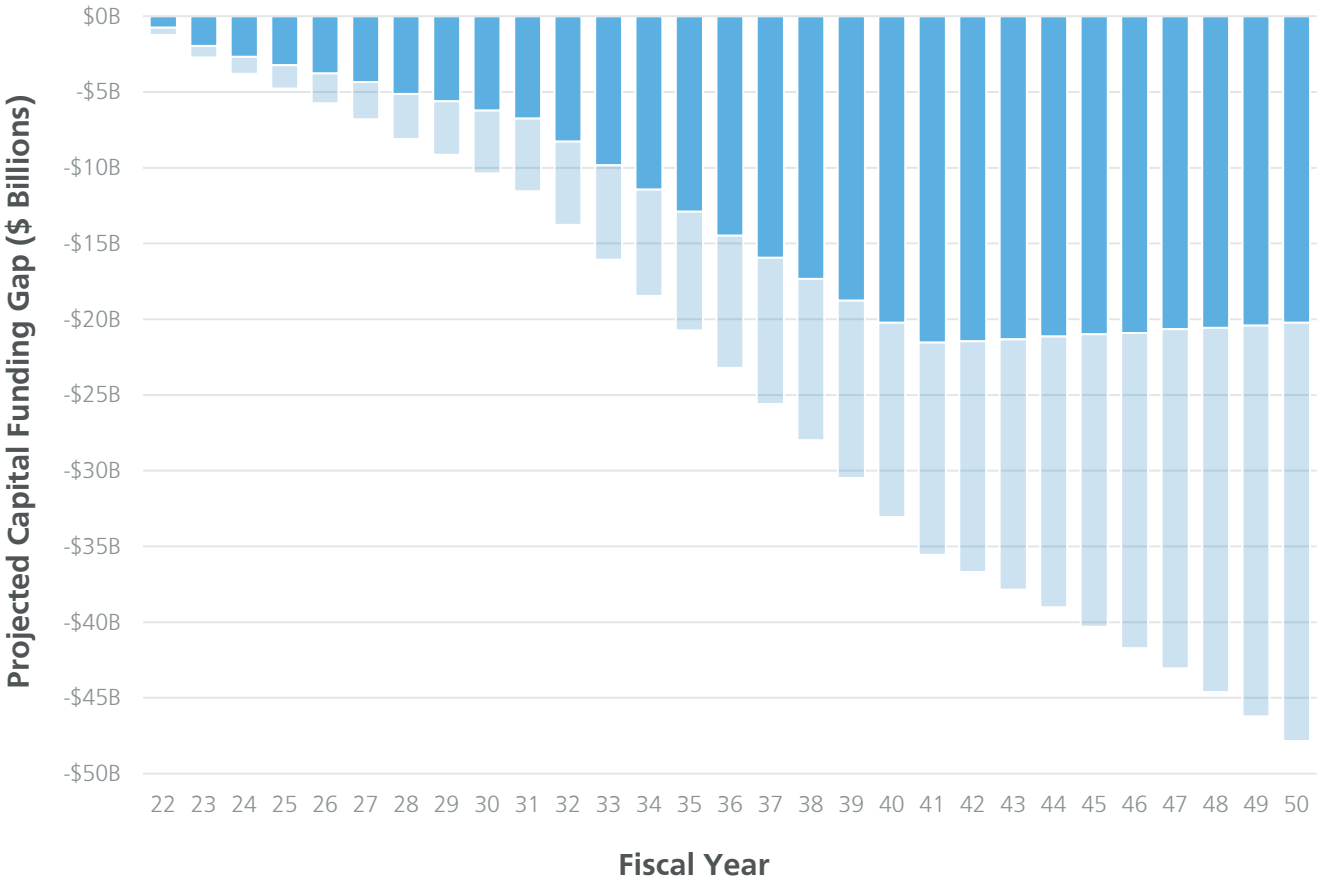
Capital and Operating Gaps are growing over time, we have completed a year-by-year analysis.



$1.6B

Average annual funding gap over the next 30 years, leading to a cumulative total gap of $47B

Capital Needs grow, but eventually flatten out *if* the infrastructure replacement backlog is closed.

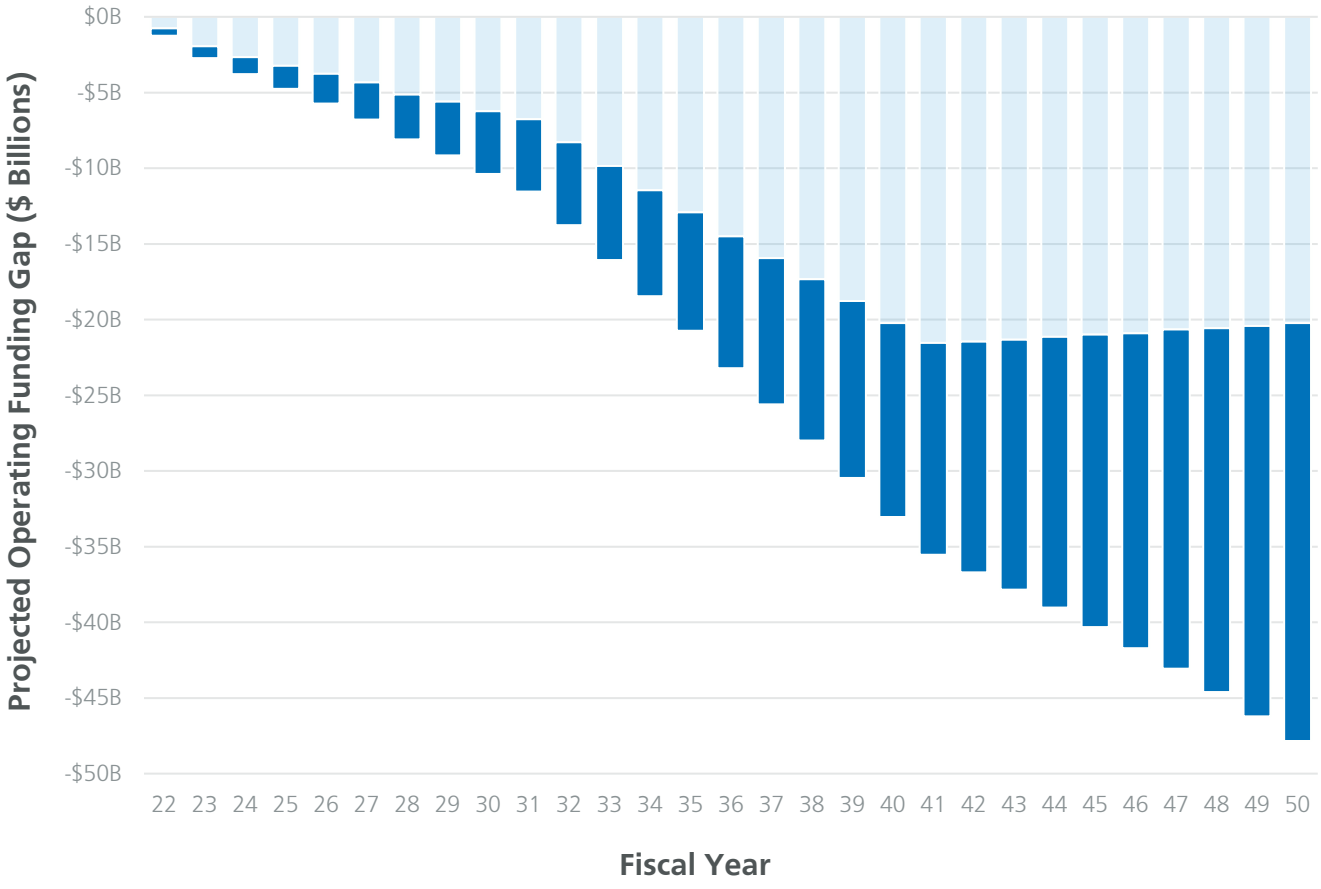


$674M

Average Annual Capital Funding Gap

To keep the system running smoothly and expand it based on your priorities

Operating needs grow with the cost of living and as infrastructure is expanded.



$921M

Average Annual Operating Funding Gap

To run trains and buses in line with your priorities

When looking at a 30-year window, the gap for capital is $20 billion.

$35.4B

What the vision will require us to spend over 30-years

$15.2B

We will spend over the next 30-years

43% funded

($20.2B)

T2050 Funding Gap
Cumulative total over 30-years

57% funding gap

For 10-years of capital/infrastructure we have refined our estimates to a year-by-year model.

$10.6B

What the vision will require us to spend over 10-years

$4.3B

We will spend over the next 10-years (all sources).

41% funded

($6.3B)

T2050 Funding Gap
Cumulative total over 10-years

59% funding gap

2014 Transportation and Road Improvement Bond

Improved Transit

MUNI FORWARD

- **Improving reliability:** Over 60 miles of reliability improvements, including transit-only lanes, bus bulbs and traffic signal priority
- **Creating a Rapid Network:** More Rapid bus lines and expanded frequency serving nearly 70% of all Muni customers

Safer Streets

VZ SF

- Protect people walking with **targeted safety improvements,** includes the 13% of streets where 75% of fatal injuries occur
- **Build bicycle network** upgrades; creating a safer, more well-defined bicycle network to reduce conflict and improve safety for all users

Program Summary

		Total Bond (in millions)
Improved Transit	Faster, More Reliable Transit	$191
	Accessibility Improvements	$30
	Muni Facility Upgrades	$70
	Major Transit Corridor Improvements	$28
	Caltrain Upgrades	$39
Safer Streets	Pedestrian Safety Improvements	$68
	Traffic Signal Improvements	$22
	Complete Streets Improvements	$52
	Total	**$500**

Performance and project delivery have been improving throughout the Bond based on lessons learned.

Funded Projects
56

Projects Open for Use
31

1st Issuance
98%
expended
→ Expected to be fully expended by end of 2021

2nd Issuance
87%
expended
→ Expected to be fully expended by middle of 2022

3rd Issuance
9%
expended
→ Expected to be fully expended by end of 2023

Significant lessons learned occurred during the implementation of the bond to improve project delivery.

2016

Internal process assessment
Project Delivery Framework

2017

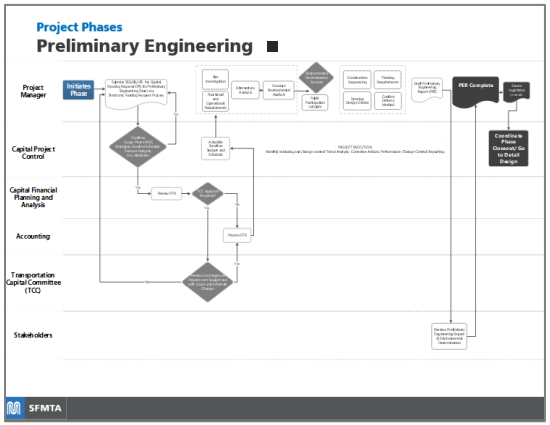
Establishment of a
Project Management Office (PMO)

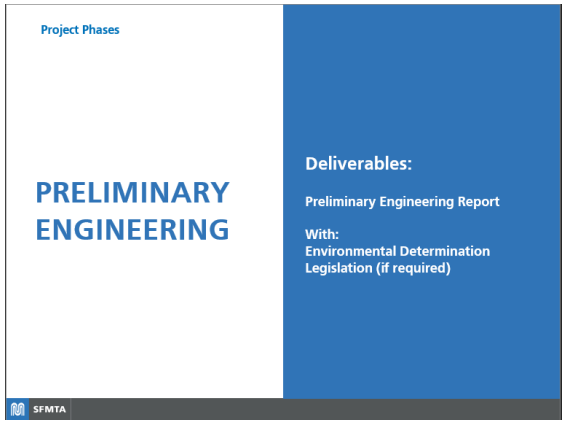
2018

Phasing
Cost Estimating

The result is an organizational mindset that focuses on investing in the workforce and **constant improvement** through lessons learned.

A core recommendation of the Project Delivery Framework was to map out standards for the project delivery process.





This work allows for **constant review, and refinement**, as certain processes need adjustment or additional controls need to be put in place.

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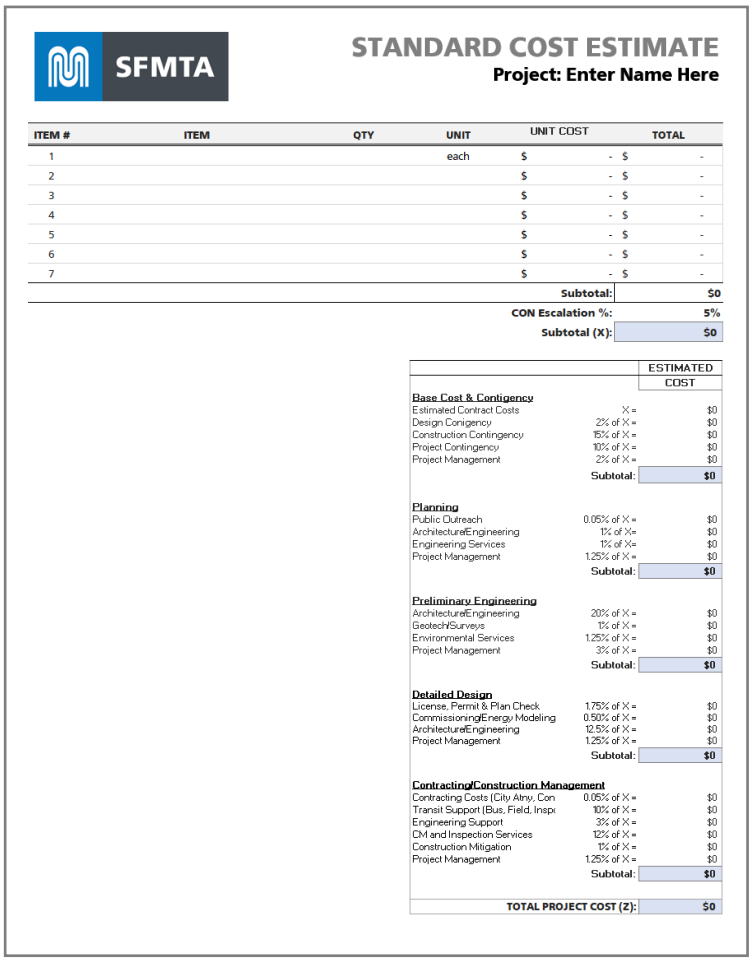


SFMTA

STANDARD COST ESTIMATE

Project: Enter Name Here

ITEM #	ITEM	QTY	UNIT	UNIT COST	TOTAL
1			each	$ -	$ -
2				$ -	$ -
3				$ -	$ -
4				$ -	$ -
5				$ -	$ -
6				$ -	$ -
7				$ -	$ -
				Subtotal:	**$0**
				CON Escalation %:	**5%**
				Subtotal (X):	**$0**

		ESTIMATED COST
Base Cost & Contigency		
Estimated Contract Costs	X =	$0
Design Conigency	2% of X =	$0
Construction Contingency	15% of X =	$0
Project Contingency	10% of X =	$0
Project Management	2% of X =	$0
	Subtotal:	**$0**
Planning		
Public Outreach	0.05% of X =	$0
Architectural/Engineering	1% of X=	$0
Engineering Services	1% of X=	$0
Project Management	1.25% of X =	$0
	Subtotal:	**$0**
Preliminary Engineering		
Architectural/Engineering	20% of X =	$0
Geotech/Surveys	1% of X =	$0
Environmental Services	1.25% of X =	$0
Project Management	3% of X =	$0
	Subtotal:	**$0**
Detailed Design		
License, Permit & Plan Check	1.75% of X =	$0
Commissioning/Energy Modeling	0.50% of X =	$0
Architectural/Engineering	12.5% of X =	$0
Project Management	1.25% of X =	$0
	Subtotal:	**$0**
Contracting/Construction Management		
Contracting Costs (City Atny, Con	0.05% of X =	$0
Transit Support (Bus, Field, Inspe	10% of X =	$0
Engineering Support	3% of X =	$0
OM and Inspection Services	12% of X =	$0
Construction Mitigation	1% of X =	$0
Project Management	1.25% of X =	$0
	Subtotal:	**$0**
	TOTAL PROJECT COST (Z):	**$0**

The agency is also focused on managing cost using improved tools.

A review of prior actual costs was completed to develop a new cost estimate template, requiring detailed hard costs, adding a tool for multi-year escalation and including new project cost needs such as bus substitution and construction mitigation (if required).

L Taraval

West of Sunset Blvd segment is nearing completion. Sunset Blvd to West Portal will issue Notice to Proceed this summer. Substantial completion scheduled for Fall 2023.

Improvements:

- Rail track overhead line replacement
- Water and sewer line replacement
- Surface repaving
- Curb ramp upgrades
- Concrete boarding islands and pedestrian bulbs
- Traffic signals
- New trees and landscaping

22 Fillmore (16th Street)

East of Potrero segment complete, 22 Bus now operating to Mission Bay. Construction west of Potrero to begin in early 2022.

Key Highlights:

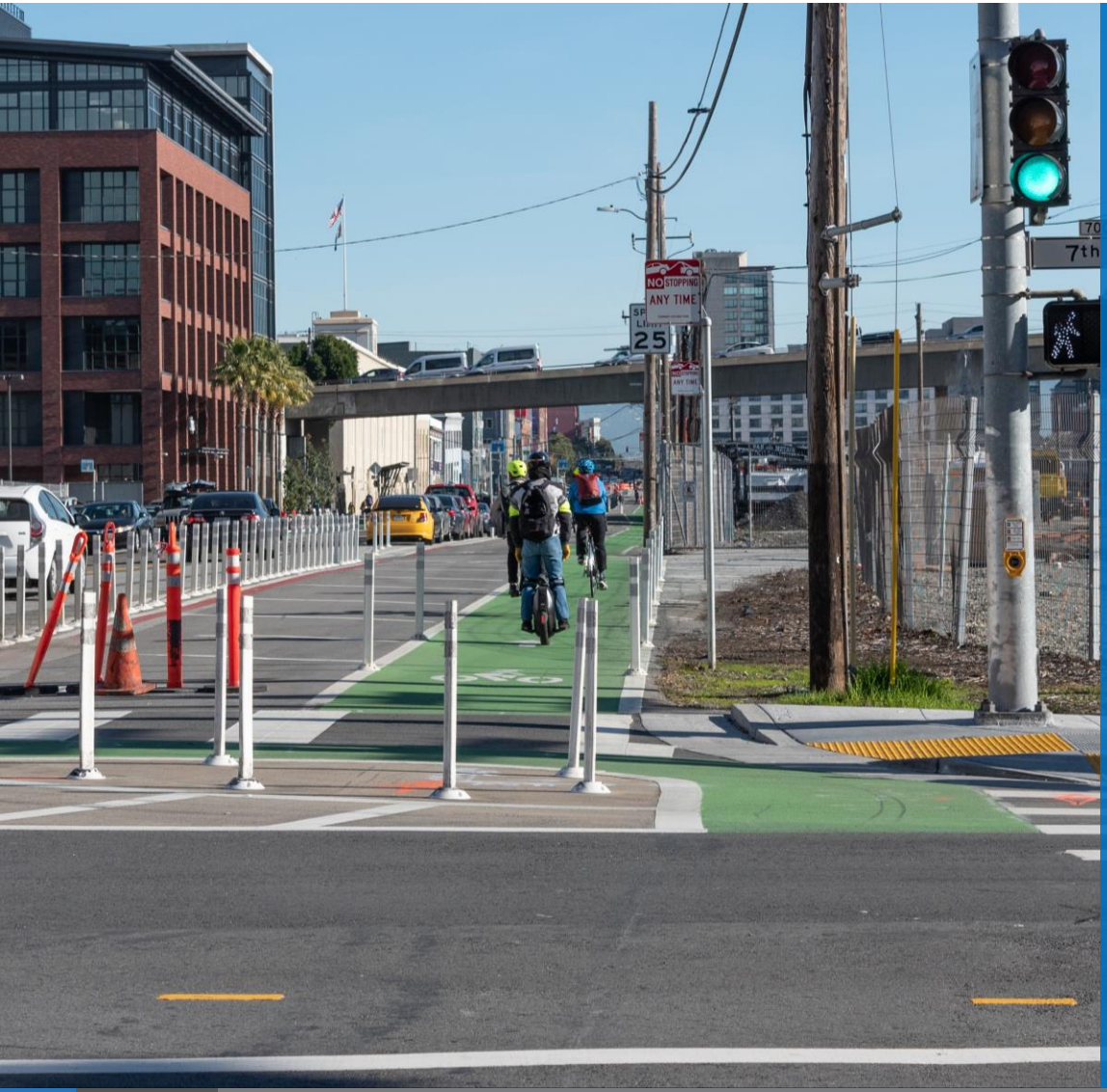
- Transit Only Lanes
- Accessible Pedestrian Signals and Visible Crosswalks
- New Bus Shelters and Boarding Islands
- Bus Bulbs for Easier/Safer Boarding
- Bus Priority Traffic Signals
- New Trees and Streetscape Improvements

28 19th Avenue

Construction is split into four segments. Currently working on the first segment from Lincoln to Noriega: contractors currently focused on sewer and water utility work. The next segment, from Noriega to Taraval, is estimated to start late summer/early fall.

Key Highlights:

- Transit priority and pedestrian safety improvements
- New transit bulbs at 13 intersections
- New pedestrian bulbs at 19 intersections



7th & 8th St South of Folsom Streetscape

Bicycle and pedestrian improvements along 7th and 8th Streets between Harrison Street and Market Street:

- Aligned with the Eastern Neighborhoods Transportation Implementation Planning Study
- Includes a new concrete buffered bike lane, concrete boarding islands, sidewalk bulbs
- New striping and safe hit posts

Safer Streets

Pedestrian Countdown Signals (PCS) added to 15 High Injury Corridors. Installation of audible pedestrian signals at 12 intersections on Potrero Avenue between 17th Street and 25th Street.

- New or improved signals at more than 28 high-injury network intersections
- Curb bulbs at 19 high-injury network intersections
- Construction of Geary Boulevard Pedestrian Improvements
- Additional pedestrian safety improvements coordinated with Muni Forward

Through the 2014 GO Bond, we invested heavily in the reliability and the safety of the transportation system.

Now, we must invest in the core infrastructure to make sure it works, while continuing to make improvements to safety and reliability.

2022 Muni Reliability and Street Safety Improvement Bond


Improvement


Reliability


Safety

What does this GO Bond mean for you?

EQUITY

- Affordable travel options
- Improved safety and health in underserved neighborhoods by reducing carbon emissions, slowing vehicle speeds, and dramatically improving bicycle and pedestrian infrastructure
- Increased access to good local jobs with reduced travel times
- Enhanced public transit service in underserved neighborhoods

FAST AND CONVENIENT TRANSIT

- Faster, more convenient public transit connections to destinations across the city and to regional public transit
- Less waiting for the train or bus and fewer delays when you're on board
- A more comfortable public transit ride, with less crowding

MORE REPAIRS AND MAINTENANCE

- Safer intersections with more visible signals for people driving
- Easier street crossings with new curb ramps and pedestrian countdown signals
- More reliable transit service using infrastructure and systems that are in good repair

IMPROVING SAFETY AND ACCESS

- Intersection improvements that increase accessibility for people with disabilities
- Improved loading access for business and residences
- Fewer collisions, fatalities, and injuries on our streets

Make the Transportation System Work Better
Repair, upgrade, and maintain aging facilities and equipment

$250M

Program Summary
To speed up Muni repairs and maintenance and keep public transit moving, we will repair, renovate, and modernize SFMTA bus yards, facilities, and equipment through the agency's Building Progress program.

Project Prioritization Criteria
- Equity
- Access
- Safety

Why is this program important?
Efficient and timely repairs to buses and trains increases Muni's reliability and saves the SFMTA money.

Larger yards provide needed space for a growing Muni fleet.

Improved working conditions for frontline staff give them modern tools and space to efficiently do their jobs in earthquake-ready facilities.

SFMTA is working towards a 100% zero-emission fleet as part of its leadership in confronting climate change. Renovated yards will support the electric vehicle charging infrastructure needed to achieve a zero-emissions fleet.

Make the Transportation System Work Better

Muni Network Improvements

$32M

Program Summary

Muni Network Improvements consist of smart traffic signals, wider sidewalks and bus bulbs, and dedicated transit lanes to reduce travel times and keep buses and rail moving.

Project Prioritization Criteria

- Ridership
- Service Frequency
- Equity
- Network Connectivity

Why is this program important?

Improvements will go to routes that carry 80% of Muni riders including passengers who depend most on public transportation.

Improvements will go to routes that have shown crowding during peak hours in winter of 2020.

Transit priority improvements have demonstrated 10-25% travel time savings in past projects. Collectively, these improvements support a more reliable bus and rail network.

Freeing buses from traffic allows Muni to serve more people with less resources. These savings can be reinvested in the system.

Make the Transportation System Work Better
Muni Rail Modernization, primarily upgrading the train control system.

Program Summary

Modernize systems that are key for operating the transit system. Replacing the aging train control system, wayside signals, switch machines, and supporting guideway infrastructure.

Project Prioritization Criteria

- Ridership
- Service Frequency
- Equity
- Network Connectivity

$32M

Why is this program important?

Modernized train management leads to more efficient operations and reduces bunches and gaps between trains.

New train communications systems allows for longer trains, reduced crowding, and capacity for future growth.

The current aging train control system is frequently responsible for slowdowns in the Market Street Subway, upgrading this system would make the schedule more dependable and travel times more consistent.

The new train control system will complement Muni's new light rail fleet to optimize the riding experience for Muni patrons.

Improve Street Safety and Traffic Flow

Traffic Signal and Street Crossing Improvements in Equity Neighborhoods

Program Summary

Traffic signal upgrades improve safety and visibility at intersections and other places where people may be crossing the street.

Project Prioritization Criteria

- Equity
- Collision History
- Traffic Volumes
- Multiple Mode Benefits

$32M

Why is this program important?

Signal upgrades make intersections work for everyone, especially people with disabilities and other vulnerable road users.

Improvements will be made on the High Injury Network where a preponderance of traffic deaths and severe injuries are concentrated. Streets in historically disadvantaged communities are almost twice as likely to be on the High Injury Network.

Improve Street Safety and Traffic Flow
On-Street Improvements

$32M

Program Summary
Redesigning major corridors of the public right of way enhances the quality and use of public spaces, improves safety for all street users, improves Muni access and service, and fixes critical aging transportation infrastructure.

Project Prioritization Criteria
- Collision History
- Equity Neighborhoods
- Nearby Destinations
- Community Requests

Why is this program important?
This program will focus on quality-of-life improvements along key corridors by providing a better experience for residents, visitors, and workers who bike, walk, and take transit.

The program builds on near-term improvements designed to address collision and fatality trends to transform corridor street design and make safety improvement more permanent.

Multimodal enhancements will support increased housing density, affordability, and mobility.

Corridor improvements to support existing and new investment in commercial corridors.

Improve Street Safety and Traffic Flow
Speed Management Program

$22M

Program Summary

Implement proven interventions to slow motor vehicle speeds and improve safety, such as application-based residential traffic calming, lowered speed limits along neighborhood corridors, and speed radar signs to improve driver awareness.

Project Prioritization Criteria

- Collision History
- Equity Neighborhoods
- Nearby Destinations
- Community Requests

Why is this program important?

Every year in San Francisco, about 30 people lose their lives and over 500 more are seriously injured while traveling on city streets.

The higher the speed of a crash, the higher the chances are that someone will be killed or seriously injured.

This program invests in street design that supports slower speeds to protect lives.

2022 Muni Reliability and Street Safety Improvement Bond

BOND COMPONENT	BUDGET
Make the Transportation System Work Better	
Speed up Muni repairs and keep public transit moving by repairing, upgrading, and maintaining aging facilities and equipment	$250 million
Enable faster, more reliable, and more frequent Muni service by improving public transit infrastructure	$32 million
Increase subway capacity, reduce delays, and deliver dependable, high-frequency transit by modernizing the Muni train control system	$32 million
Improve Street Safety and Traffic Flow	
Improve safety and visibility at intersections by upgrading traffic signals, signage, and crossings	$32 million
Strengthen walking, bicycling, and Muni connections along major corridors by redesigning streets and sidewalks	$32 million
Slow speeds and reduce crashes by implementing proven traffic calming and speed reduction tools	$22 million
TOTAL	$400 million

2022 Muni Reliability and Street Safety Improvement Bond

Source	Benefits	Short Term $/yr	Long Term $/yr
Transportation Special Tax	Dedicated tax for transportation, providing a predictable stable source for transit service and maintenance. May be bonded against for near-term capital infrastructure investment, reducing long term maintenance.	**$50** m/yr	**$60-70** m/yr
Parking Tax	Increase existing San Francisco Parking Tax with opportunities to reform or modify for transportation infrastructure, transit service and maintenance.	**$20** m/yr	**Declining**
CCSF General Obligation Bond Program	The SFMTA as part of the City GO Bond Program has allowed for critical infrastructure investment, safety improvements and transit reliability investments – reducing the cost of operations and long-term maintenance.	**$40** m/yr	**$50** m/yr
Federal Grants	The current proposed bi-partisan Infrastructure Bill provides opportunities for increased Federal support for up to 5-years for transportation infrastructure and maintenance campaigns.	**$35** m/yr	**$40** m/yr
State Grants	The current State budget designates significant additional dollars to transportation available through grants for transportation infrastructure.	**$7** m/yr	**Unknown**
Development Revenue	Development of SFMTA properties provide significant long-term opportunities to produce revenues that can go directly toward transportation infrastructure, transit service and maintenance.	**$5** m/yr	**$25-35** m/yr

Transportation 2050 will require numerous funding initiatives over time.

June 2022

Muni Reliability and Street Safety Improvement General Obligation Bond

$400 million

June 2022

San Francisco Transportation Sales-Tax Reauthorization (*led by SFCTA*)

$2.38 billion (over 30-years)

Future

Transportation Special Tax for Operations and Maintenance

$50 – 100 million (annual amount)

We will also.

Aggressively pursue federal and state grants and funding sources

Work to raise operating revenues through proactive development and policy initiatives

Thank You.

San Francisco
TRANSPORTATION 2050