



5. Measure RR BART Safety, Reliability and Traffic Relief Program Presentation

Bond Oversight Committee
January 20, 2023



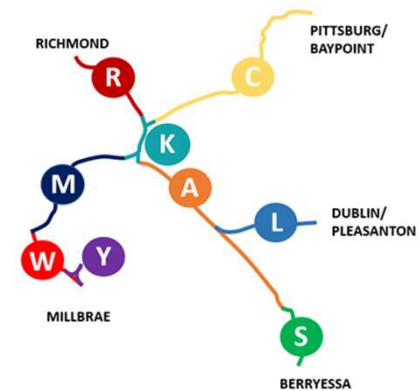
Bond Oversight Committee

Duties & Responsibilities

- Provide diligent, independent and public oversight over the expenditure of funds from the sale of District general obligation bonds
- Assess how bond proceeds are invested to ensure that all spending is authorized by the ballot measure
- Assess whether projects funded by bond proceeds are completed in a timely, cost-effective and quality manner consistent with the best interest of BART riders and District residents
- Publish an annual report that includes a detailed account of the Committee's activities including its expenditures

Executive Summary

- Through September 2022, \$1.43B of the Measure RR funds have been invested to complete 44% of the work
- Successes
 - Substantial Completion: M-line 34.5kV Cable Replacement
 - Complete Trackway Demolition and Restoration for TBT Retrofit
- Challenges
 - Material availability and delivery delays
 - Increased costs of labor and materials
 - C-Line Train derailment (cont'd)
 - Approval of permits from external agencies



# Projects in Planning	# Projects in Design	# Projects in Bid/Award	# Projects in Construction	# Projects Completed	TOTAL # Projects
3	36	17 (-1)	50 (-1)	47 (+2)	153

- + (Projects added in the phase)
- (Projects no longer in the phase)



5.A. Annual View of Measure RR BART Safety, Reliability and Traffic Relief Program



Calendar Year 2022 Program Successes

153 Projects Total
9 Projects Completed Construction



M-Line

- Completed 34.5kV Cable Replacement



Completed Station Modernizations

- Powell Street
- 19th Street

Warm Springs West

- Pedestrian Bridge Opening



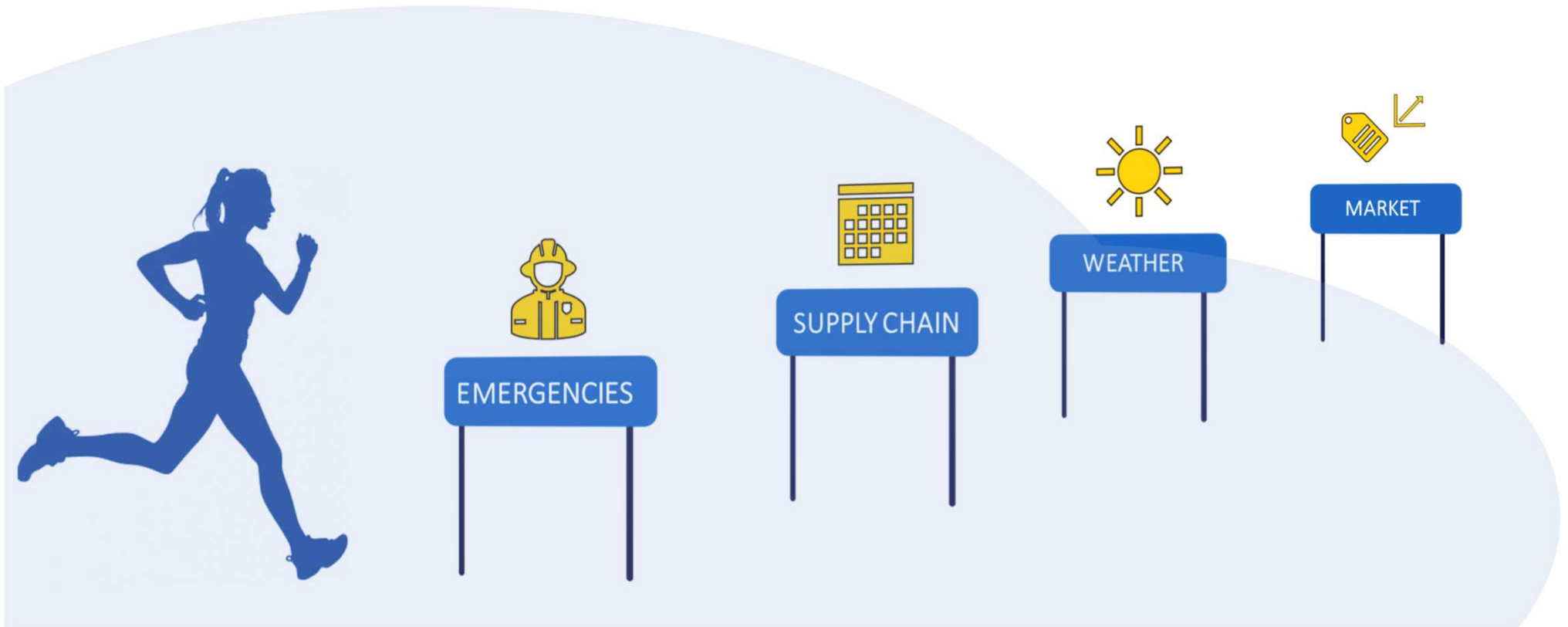
Transbay Tube Retrofit *

- Completed M2 Bore Retrofit
- Trackway Demolition and Restoration



* Not included in 9 complete however majority of work complete

Industry Challenges



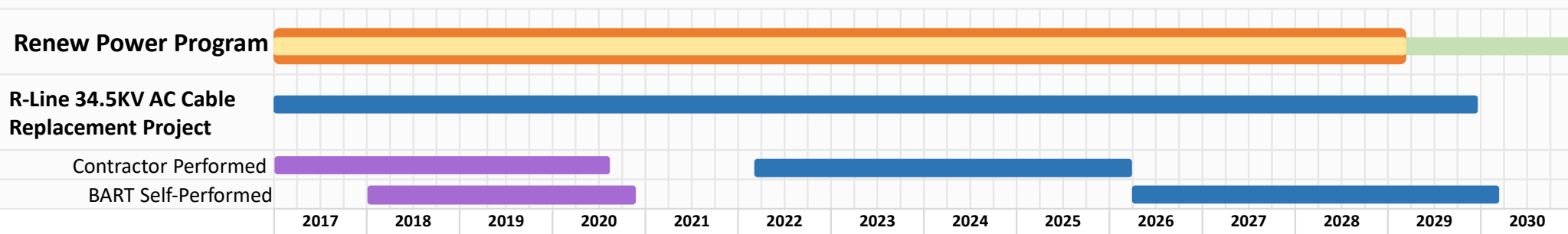
Mitigation Opportunities – Value Engineering



- Increase Life of Assets
e.g. **Concrete Ties vs. Wood Ties**
- Address Higher Severity Locations
e.g. **Tunnel Waterproofing**
- Modify Construction Methodology
e.g. **Oakland Yard Tracks**
- Opportunity for Expedited Work
e.g. **Rail Replacement Project**

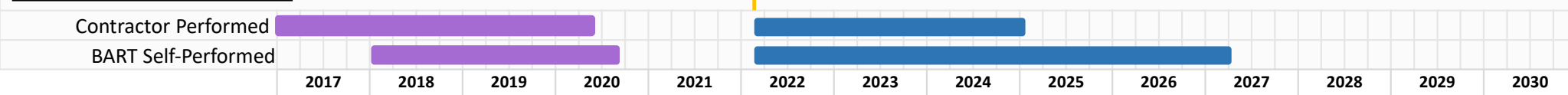
Mitigation Opportunities – Program Schedule

Pre Incident Schedule



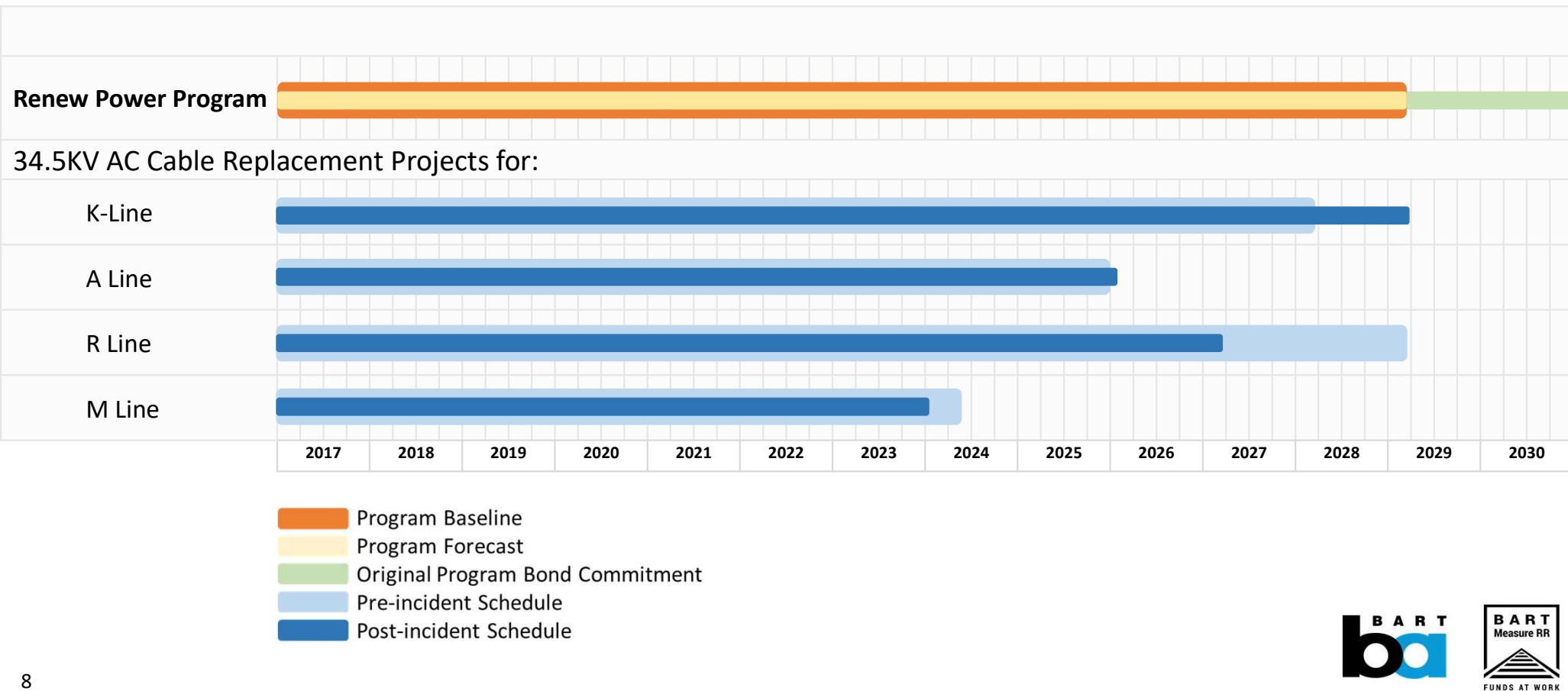
Incident Occurs March 2022

Post Incident Schedule



- Program Baseline
- Program Forecast
- Original Program Bond Commitment
- Project Specific Schedule-Construction
- Project Specific Schedule-Design

Mitigation Opportunities – Program Schedule



Mitigation Opportunities – Cost

UTILIZING IN-HOUSE RESOURCES



BID PACKAGES UNBUNDLING



VALUE ENGINEERING



ALTERNATIVE FUNDING SOURCES



CAPITALIZING ON SHUTDOWNS



Mitigation Opportunities – Alternate Funding Slope Stabilization Project



Forecasted the budget requirements of the projects' scope in comparison to the available funding

Cal OES grants = \$2.3M = 40% of the estimate

Unbundle construction contracts

- Solely RR for critical locations
- RR funds to expedite design/matching funds

2023 – Looking Forward



-  **A77 Track Interlocking Replacement**
-  **Oakland Yard Tracks**
-  **K Line Interlocking Replacement (near Rockridge Station)**
-  **Fire Alarm Replacement Phase 2**
-  **Civic Center Scissor Stairs**
-  **Balboa Park – Upper Plaza Project**

5.A.1. Q&A



5.B. Financial Overview Update

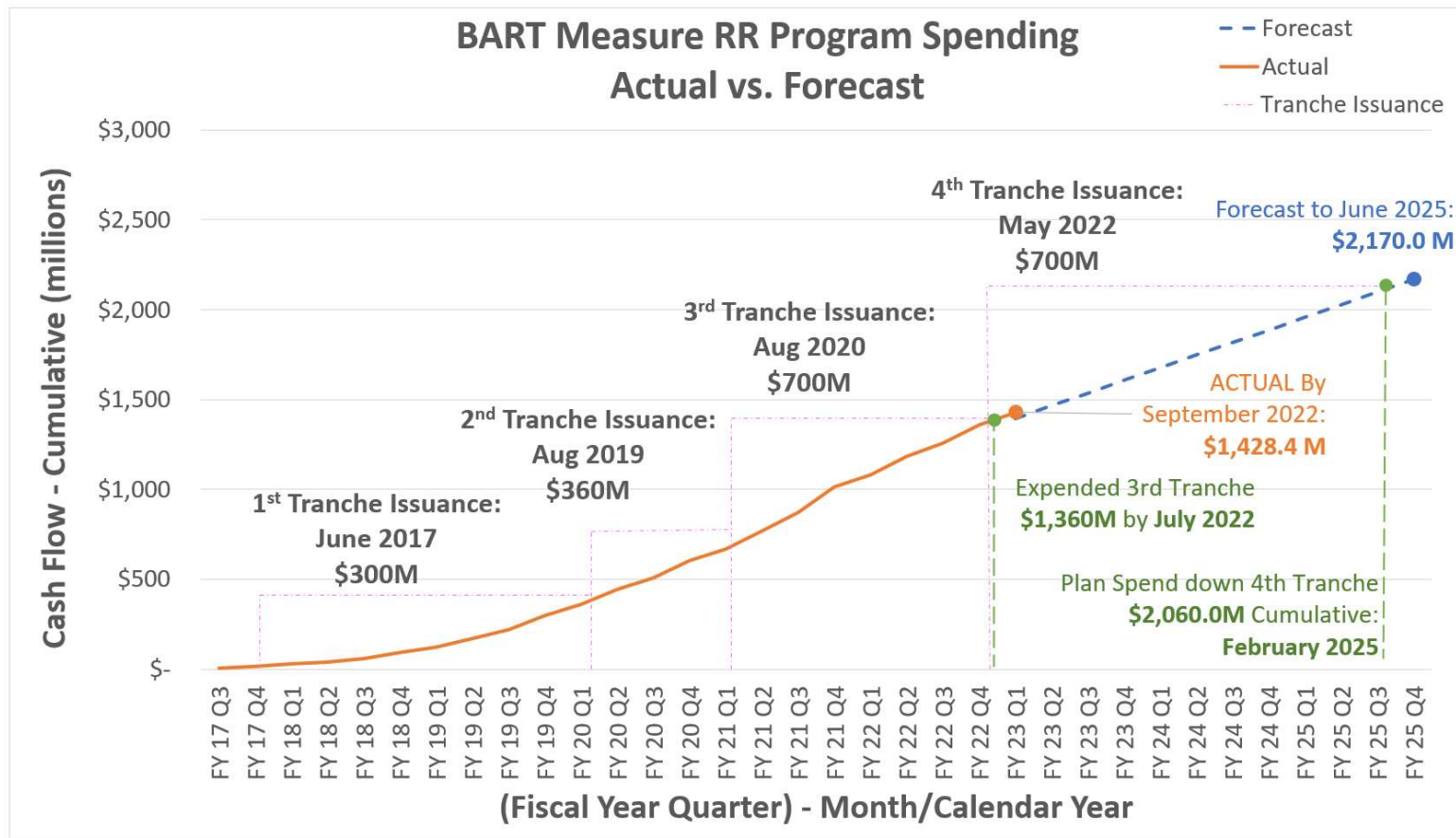


Measure RR Cashflow (\$ Millions) – Mid-Term & Long-Term Outlook

Program	Expended (thru June 2022)	Expended (thru September 2022)	Period Cashflow (July 2022 – September 2022)	% Expended out of Total Bond Investment	Forecast Expenditures	
					MID-TERM (thru 2025)	LONG-TERM (thru End of Bond)
Renew Track	\$334.2	\$346.7	\$12.5	55%	\$433.5	\$625
Renew Power Infrastructure	\$520.0	\$552.3	\$32.3	45%	\$868.0	\$1,225
Repair Tunnels & Structures	\$190.7	\$199.8	\$9.0	36%	\$318.3	\$549
Renew Mechanical	\$71.6	\$74.0	\$2.5	47%	\$133.0	\$156
Replace Train Control/Increase Capacity	\$63.9	\$64.9	\$1.0	16%	\$113.1	\$400
Renew Stations	\$51.7	\$57.0	\$5.3	27%	\$107.1	\$210
Expand Safe Access to Stations	\$37.9	\$39.0	\$1.1	29%	\$69.2	\$135
Design/Engineer to Relieve Crowding	\$87.3	\$94.7	\$7.5	47%	\$127.8	\$200
Total	\$1,357.3	\$1,428.4	\$71.2	41%	\$2,170.0	\$3,500



RR Overall Program Budget Progress



5.B.1. Q&A



5.C. Procurement Presentation





▶ Measure RR Update

- Overview of the BART Contracting Process
- 2023 Challenges and Opportunities



Overview of the BART Contracting Process

Pre-Advertisement

- Project Manager prepares a contracting plan for review by OCR and Procurement to determine unbundling opportunities and small business utilization plans
- Purchase Request package is prepared which includes final technical specifications and drawings, draft bid schedule, and other related bid documents
- Final bid/solicitation documents is prepared, reviewed, approved, printed and posted on BART's eBid system



Pre-Bid

- Coordinate and conduct the pre-bid conference
- Respond to all questions and inquiries that are received
- If necessary, make changes to the underlying bid documents



Bid

- Received bids/proposals
- Initiate and complete the bid review/proposal evaluation process for those meeting the minimum qualifications



Award/Post Award

- Award to the contract to the lowest price bid or highest ranked proposal
- Prepare the Executive Decision Document (EDD) for BART Board review/approval
- Secure Board approval
- Finalize all contract documents and sign agreement
- Issue Notice-to-Proceed (NTP)



Engineering and Construction – 2023 Challenges and Opportunities

- **Market Dynamics** – There will continue to be heightened uncertainty due to high inflation and rising interest rates. However, the overall forecast for the non-residential construction sector is positive as companies remain insulated from the economic slowdown, driven by strong infrastructure buildouts, and the substantial project backlogs developers and contractors have in their pipelines.
- **Supply Chain** – Over the past two years, the COVID-19 pandemic, transport bottlenecks, and geopolitical uncertainties have exposed vulnerabilities in the engineering and construction supply chain. These disruptions have raised material costs, confined production, and restricted freight movement. The ongoing disruptions are expected to drive the engineering and construction industry toward new business models that will bring new products and innovations to provide solutions in this rapidly changing industry.
- **Labor Shortages** – The engineering and construction industry remains significantly short of skilled workers. Labor availability in construction continues to decline, driven by declining interest in the industry, an aging population, and latent pressures in “competing” industries such as technology and trucking. Addressing the tight labor market and existing workforce amid shifting talent models will likely remain a priority for engineering and construction companies in 2023.

5.C.1. Q&A



5.D. 10 Minute Break






5.E. Human Resources/Staffing



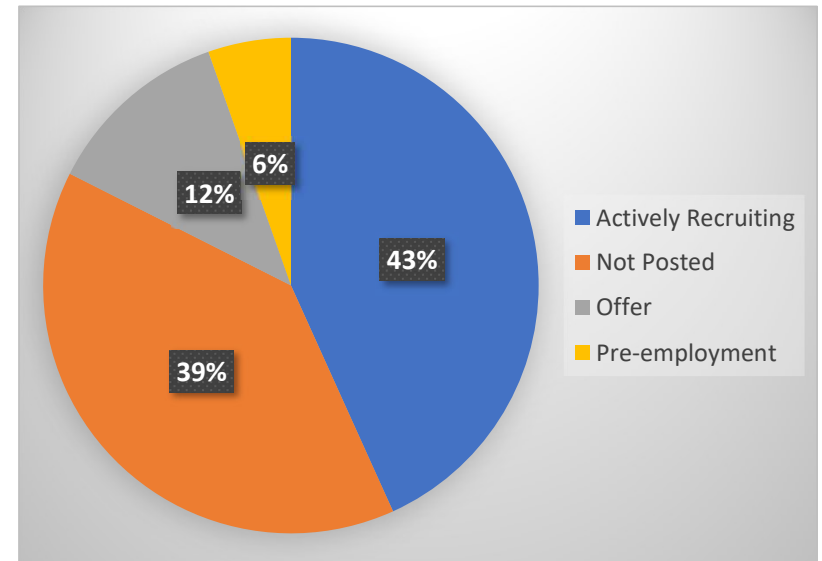
Recruitment Status Summary

Description	Number of Positions
Filled Positions	234
Vacant Positions	74
RR Positions Hired To Date	36

	Vacant Position Categories	Number of Positions
	Engineering	22
	Project Management/Support	23
	Construction Crews	29

Data as of 1/9/2023

VACANT MEASURE RR POSITIONS



Talent Acquisition Strategies – Vacant Positions

CREATING A STRONG BART TALENT SOURCING PRESENCE



- Leveraging Internal Partnerships
 - External Affairs
 - Workforce Development
 - Office of Civil Rights



- Strengthening External Workforce Partnerships
 - Community Based Organizations
 - Educational Institutions
 - Pre-apprenticeship Programs



- Leveraging Social Media Platforms
 - Updating Marketing
 - External Job Boards



5.E.1. Q&A



5.F. Small Business Outreach



RR Program Update – Small Business

Program	Total RR Commitment	Total RR SB Commitment	SB Commitment %	# of SB Contracts	Total RR Payments on RR Contracts	RR Payments to SBs	SB Payment %
Renew Track	\$156.6 M	\$34.3 M	22%	146	\$127.9 M	\$29.0 M	23%
Renew Power	\$411.3 M (+\$48 M)	\$120.1 M (+\$5 M)	29% (-3%)	326	\$260.2 M (+\$18 M)	\$115.3 M (+\$4 M)	44%
Repair Tunnels & Structures	\$152.4 M (+\$8 M)	\$30.7 M	20%	150	\$119.6 M	\$16.7 M	14%
Renew Mechanical	\$35.7 M	\$12.3 M	35%	79	\$26.0 M	\$9.7 M	37%
Replace Train Control/Increase Capacity	\$32.2 M	\$6.6 M	20%	119	\$24.2 M	\$2.8 M	12%
Renew Stations	\$152.3 M	\$28.6 M	19%	126	\$52.1 M (+\$8 M)	\$10.9 M	21%
Expand Safe Access to Stations	\$21.0 M	\$6.6 M	31%	170	\$14.3 M	\$4.9 M	34%
Design/Engineer to Relieve Crowding	\$137.1 M	\$34.8 M	25%	204	\$87.9 M (+\$9 M)	\$23.9 M (+\$2 M)	27%
Total	\$1,098.5 M (+\$60 M)	\$274.0 M	25%	1319 (+42)	\$712.4 M	\$213.2 M (+\$10 M)	30%

Notes: All amounts are based on RR fund percent only. Amounts are updated to October 31, 2022. Includes formal contracts only; does not include informal purchases or work performed by BART's own forces. SB totals include DBEs, MSBEs, SBs, and LSBs. Sources: RR commitments are based on RR Requisitions report, Procurement Sealed Bids Report and PeopleSoft Work Plans application. RR% for each project is based on Financial Analysts' report, RR Funds / Total Project Budget. Payments based on PeopleSoft and B2GNow.



RR Program Update – 2022 Outreach



Year in Review

- **46** outreach events held in calendar year 2022 with an average audience of **40** attendees*
- Highlights:
 - Update advertising campaign resulted in significant increase in attendance
 - **19** SBSS Trainings/Outreach Sessions Completed
 - BART Outreach—Meet Project Staff (M&E, Design, Stations, Procurement teams)

2023

- OCR will increase collaboration efforts to provide SBs with more access to SMEs throughout the District

*Attendance not captured at all events



5.F.1. Q&A



5.G. Public Outreach Update





▶ 5.G. Public Outreach Update

Presented by Chris Filippi (Communications), Jill Buschini (Marketing)
and Amanda Cruz (Government & Community Relations)

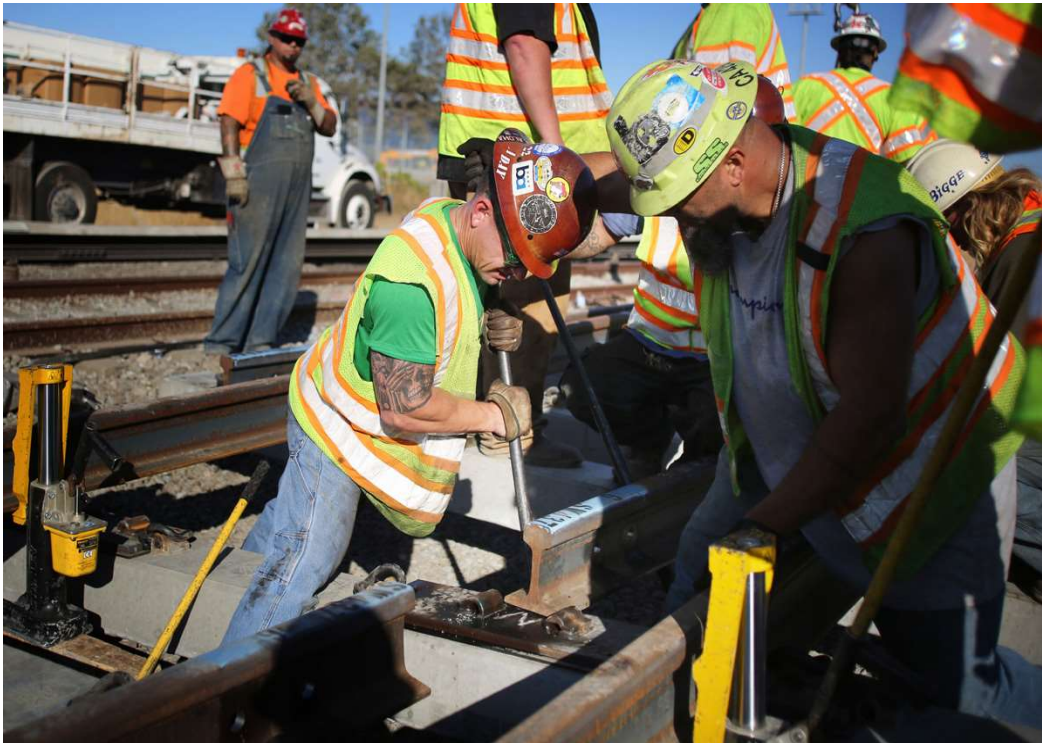


A Comprehensive Approach to Informing Public



- Office of External Affairs coordinates public outreach
 - Government and Community Relations, Marketing, and Communications staff
- Communication begins weeks before projects first impact riders/communities
- BART uses a variety of approaches, platforms, and languages to reach external stakeholders

Case Study: South Hayward Track shutdown



- 10 non-consecutive weekends in 2022
- South Hayward to Union City Stations
- Public outreach March - September
- Messaging focus:
 - Shutdown schedule
 - Bus bridge
 - Anticipated delays
 - Benefits of work
 - Neighborhood impacts

Traditional and Social Media

NEWS > TRANSPORTATION

BART announces 10-weekend track shutdown, bus transfers at South Hayward and Union City stations

The track work, which is starting this Saturday, will also occur on Memorial Day and Labor Day weekends



Passenger bulletin posted on bart.gov a month before with FAQ & Fact Sheet



News release sent to more than 300 reporters and news outlets



Multiple Twitter/Facebook posts before each shutdown weekend



Emails and texts sent each weekend to BART News subscribers




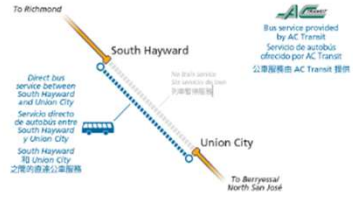
BART 
@SFBART | 329,522 followers



All day today and tomorrow the trackway between South Hayward and Union City will be closed for major track rebuild work.

Free @rideact bus shuttles will connect the two stations. Please plan added travel time if taking BART through the area. bart.gov/news/articles/...

**PLANNED WORK**
Sept. 3 - 5 - ALL DAY
Orange Line Berryessa/North San José - Richmond
Green Line Berryessa/North San José - Daly City
Buses replace trains between South Hayward and Union City.
Plan your trip at www.bart.gov/planner



Government and Community Relations



Mission Dolores Basilica

- Staff briefed BART Directors, local officials and staff
- Sent mailers in multiple languages to residents/businesses
- Outreach to neighborhood stakeholder groups:
 - Hayward Rotary, San Leandro Chamber of Commerce, and Hayward-South Alameda County NAACP

Marketing Outreach

South Hayward 和 Union City BART 車站之間將以免費 公車代替捷運列車

4 月 16-17 日	7 月 16-17 日
4 月 30 日 - 5 月 1 日	7 月 30-31 日
5 月 14-15 日	8 月 13-14 日
5 月 28-30 日 (陣亡將士紀念日週末)	9 月 3-5 日 (勞動節週末)
6 月 11-12 日	9 月 17-18 日

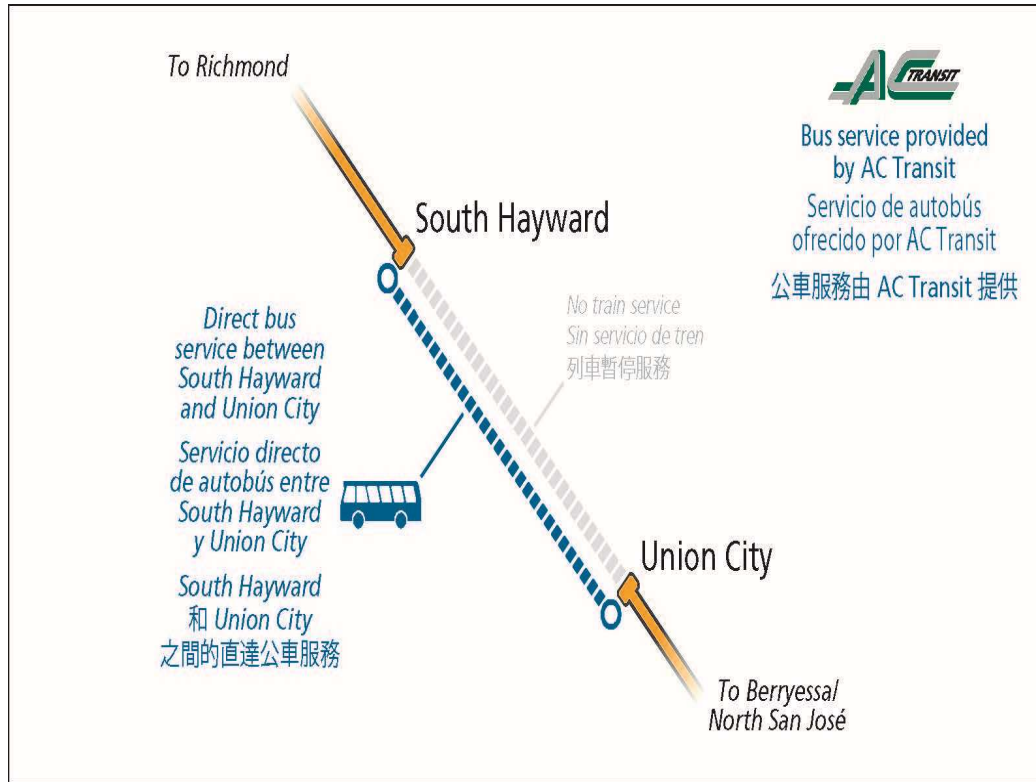
由於軌道安全工作的關係，乘客在這些周末期間若要往來於 South Hayward 和 Union City 之間，規劃行程應多計入 20-25 分鐘間。瀏覽 bart.gov 或致電 510.465.2278 查詢詳情。



- Targeted marketing campaigns launched two days before through each weekend
- Ads targeted impacted areas and people searching/discussing travel-related keywords
- Ads on Twitter, Facebook, Instagram, Google
- Media ad buys included ethnic print publications in Spanish, Mandarin, Cantonese, Korean, and Vietnamese



Outreach in BART System



- PA announcements in English, Spanish, and Chinese
- Systemwide digital platform signs
- Posters with project info, bus bridge map
- Info in BARTable This Week newsletter emailed to 90,000 subscribers

5.G.1. Q&A

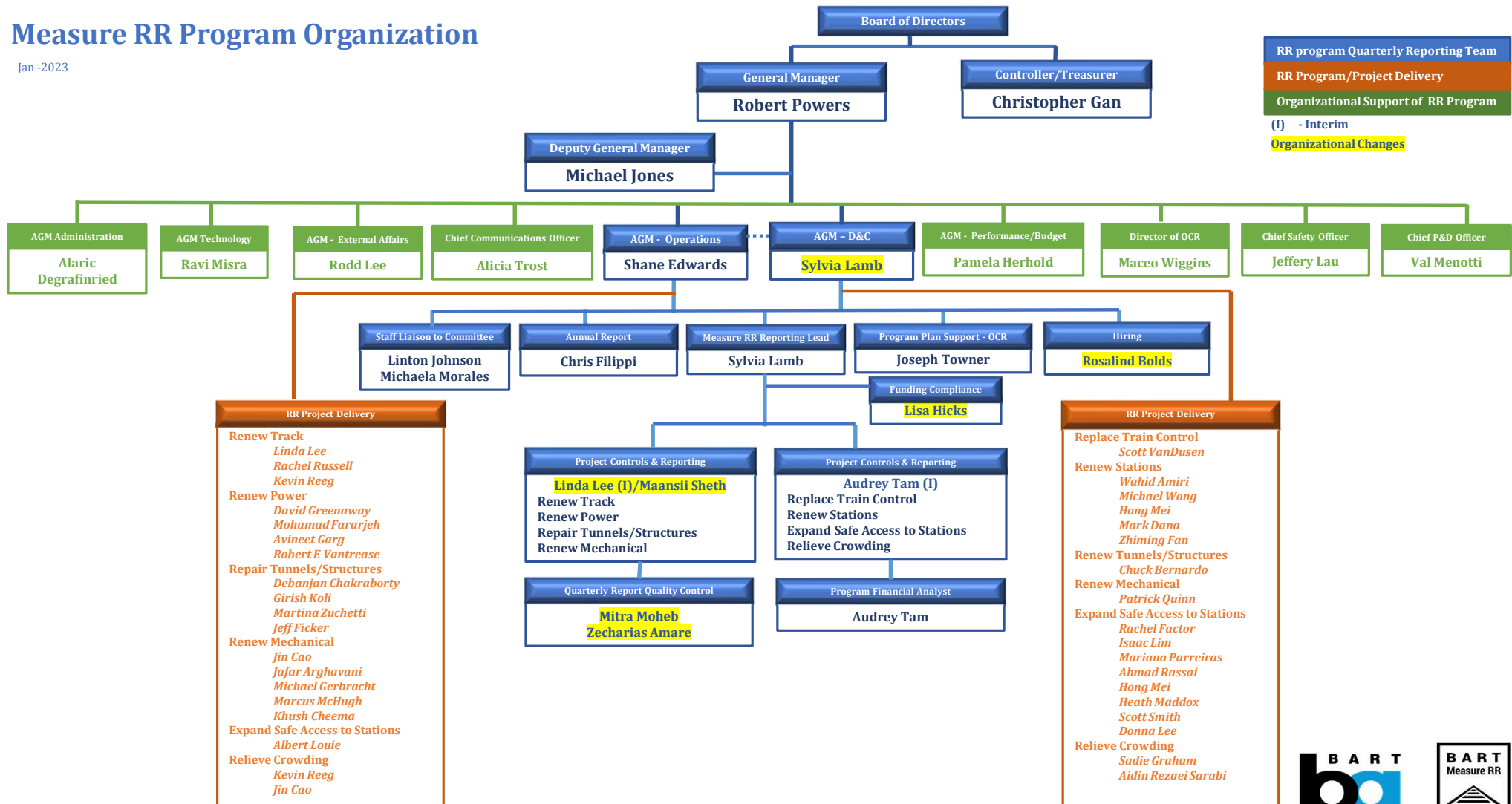


5.H. Measure RR Staff Organizational Chart



Measure RR Program Organization

Jan -2023



5.I. Appendix: Financial Outlook, Program Status & Milestones

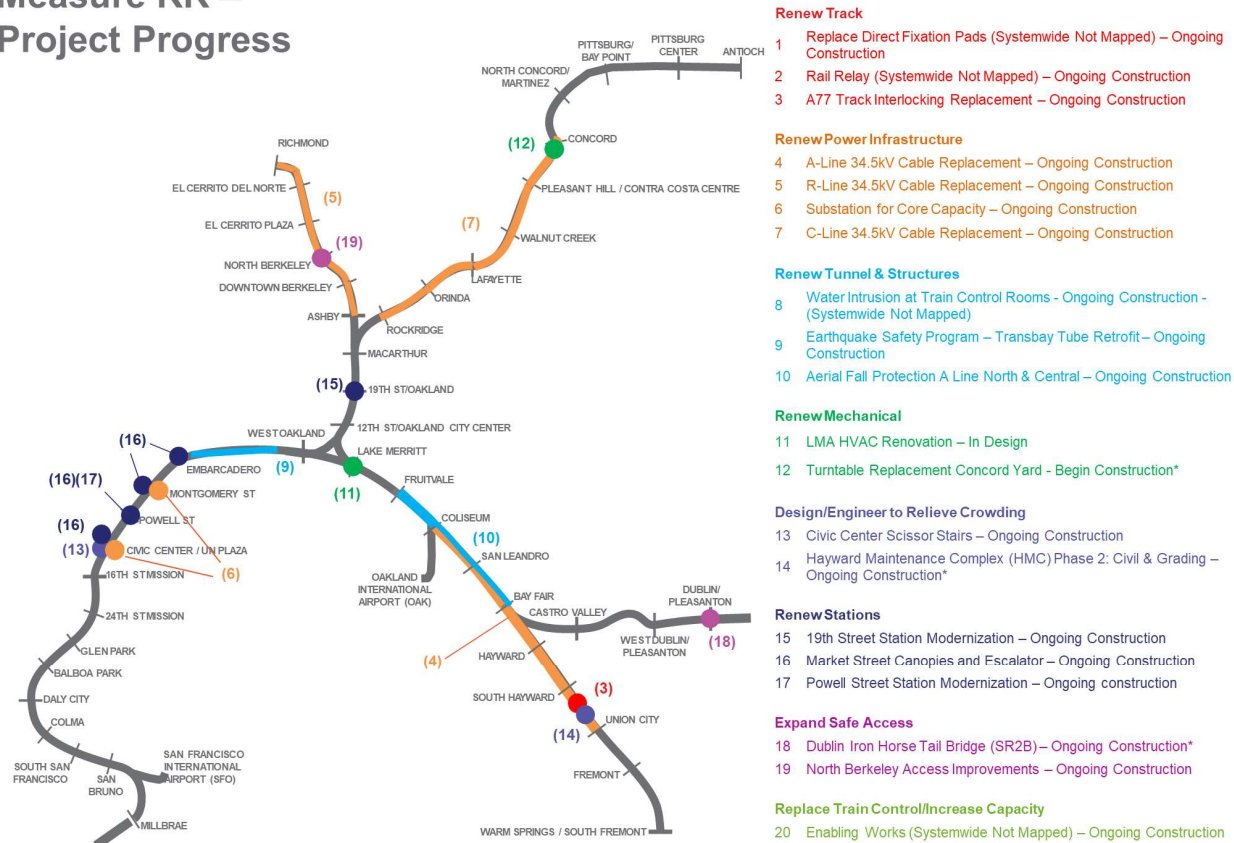


Work Progress Since Last Meeting



Examples of Active RR Projects in July 2022 – September 2022

Measure RR – Project Progress



Individual Program Milestones



Renew Track

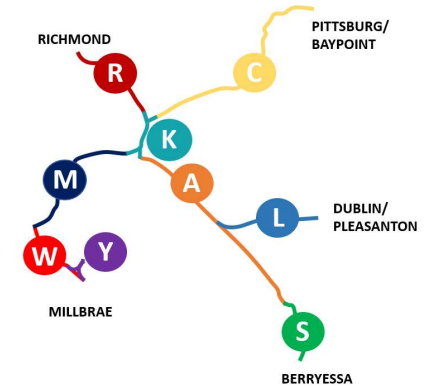
STATUS & MILESTONES

EXPENDED Thru 9/2022: **\$346.7**

FORECAST Thru 6/2025: **\$433.5**

TOTAL PROGRAM VALUE: **\$625**

PERIOD CASHFLOW: **\$12.5**



STATUS – Renew Track

# Projects in Planning	# Projects in Design	# Projects in Bid/Award	# Projects in Construction	# Projects Completed	TOTAL # Projects
0	2	1	8	9	20

MILESTONES

Completed (Jul 2022 – Sept 2022)	Q2 (Oct 2022 – Dec 2022)	Q3 (Jan 2023 – Mar 2023)	Q4 (Apr 2023 – Jun 2023)
<ul style="list-style-type: none"> Completion of Design K Line Interlocking Replacement (<i>near Rockridge Station</i>) Issued for Bid K Line Interlocking Replacement Special Trackwork (near MacArthur Station) 	<ul style="list-style-type: none"> Contract Award K Line Interlocking Replacement Special Trackwork (near MacArthur Station) Substantial Completion of Rail Reproiling (Systemwide) Issue for Bid for K Line Interlocking Replacement Traction Power Materials Complete Design of Richmond Yard Track Rehabilitation (Phase 1 Transfer Switches) 	<ul style="list-style-type: none"> Issue for Bid Richmond Yard Track Rehabilitation Special Trackwork (Phase 1 Transfer Switches) Begin Construction of K Line Interlocking Replacement (near Rockridge Station) <i>Substantial Completion of Construction A77 Track Interlocking Replacement</i> <i>Completion of Design K Line Interlocking Replacement (near MacArthur Station)</i> 	<ul style="list-style-type: none"> <i>Substantial Completion of Construction by BART forces Oakland Yard Tracks</i> <i>Substantial Completion of Construction of K Line Interlocking Replacement (near Rockridge Station)</i>

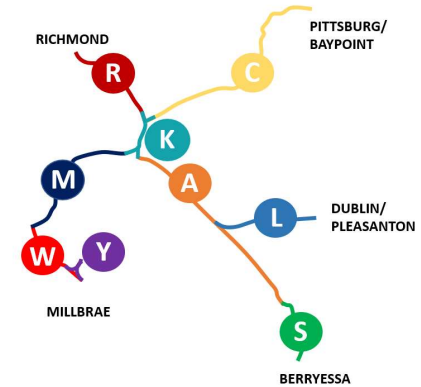
Watchlist:

- None

Italic: Modified milestones from previous report.

Renew Power STATUS & MILESTONES

EXPENDED Thru 9/2022: \$552.3
FORECAST Thru 6/2025: \$868.0
TOTAL PROGRAM VALUE: \$1,225
PERIOD CASHFLOW: \$32.3



STATUS – Renew Power Infrastructure

# Projects in Planning	# Projects in Design	# Projects in Bid/Award	# Projects in Construction	# Projects Completed	TOTAL # Projects
0	4	4	17	4	29

MILESTONES			
Completed (Jul 2022 – Sept 2022)	Q2 (Oct 2022 – Dec 2022)	Q3 (Jan 2023 – Mar 2023)	Q4 (Apr 2023 – Jun 2023)
<ul style="list-style-type: none"> Issued for Bid Walnut Creek Traction Power Substation Replacement <i>Substantial Completion of M-line 34.5kV Cable Replacement</i> 	<ul style="list-style-type: none"> Contract Award Station Fire Alarm Replacement Phase 3 Substantial Completion of CWS Transformer Replacement <i>Begin Construction K-line 34.5kV Cable Replacement (KOW – KTE)</i> 	<ul style="list-style-type: none"> Substantial Completion of Fire Alarm Replacement Phase 2 Design Completion for Fire Alarm Replacement Phase 4 Issue for Bid for the Cast Coil Transformer Replacement Project <i>Completion of Design for MET G Generator Replacement Project</i> 	<ul style="list-style-type: none"> <i>Issue for Bid PG&E Feed for Gap Breaker Project</i> <i>Notice to Proceed for Cast Coil Transformer Replacement</i> <i>Completion of Construction Phase 2 for Systemwide Stations Facilities Grounding Assessment</i>

Watchlist:

- Procurement Phase for Walnut Creek Traction Power Substation Replacement

Italic: Modified milestones from previous report.

Tunnels & Structures

STATUS & MILESTONES

EXPENDED Thru 9/2022: **\$199.8**

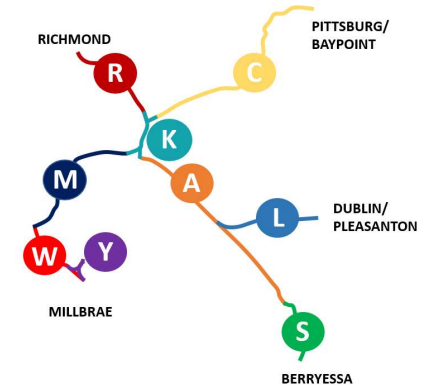
FORECAST Thru 6/2025: **\$318.3**

TOTAL PROGRAM VALUE: **\$549**

PERIOD CASHFLOW: **\$9.0**

STATUS – Repair Tunnels & Structures

# Projects in Planning	# Projects in Design	# Projects in Bid/Award	# Projects in Construction	# Projects Completed	TOTAL # Projects
0	9	1	8	8	26



MILESTONES			
Completed (Jul 2022 – Sept 2022)	Q2 (Oct 2022 – Dec 2022)	Q3 (Jan 2023 – Mar 2023)	Q4 (Apr 2023 – Jun 2023)
<ul style="list-style-type: none"> Completed Trackway Demolition and Restoration for TBT Retrofit <i>Began Construction for Water Intrusion at Escalator & Elevator</i> 	<ul style="list-style-type: none"> Completion of Construction Aerial Fall Protection (A Line North & Central) Completion of Design for Water Intrusion at Train Control Rooms (Package 2) Completion of M2 Bore Retrofit for TBT Retrofit 	<ul style="list-style-type: none"> Completion of Design for Slope Stabilization Systemwide <i>Complete Pump System Upgrade for TBT Retrofit</i> <i>Completion of Design for Tunnel Waterproofing at Oakland WYE (formerly R Line)</i> 	<ul style="list-style-type: none"> <i>Completion of Design for Tunnel Waterproofing at M Line</i> <i>Completion of Design for Water Intrusion at Train Control Rooms (Package 3)</i> <i>Completion of Construction for Water Intrusion at Escalator & Elevator</i> <i>Completion of Design for Street Grate and Vent Shaft (East Bay)</i>

Watchlist:

- Environmental Clearance for Slope Stabilization Systemwide

Italic: Modified milestones from previous report.

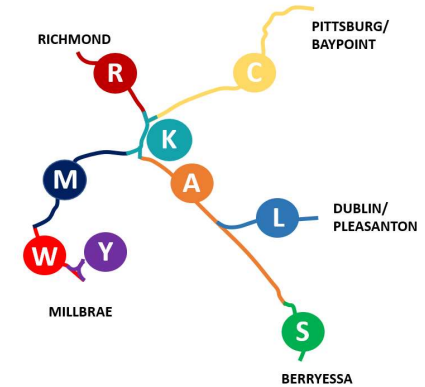


Renew Mechanical STATUS & MILESTONES

EXPENDED Thru 9/2022: **\$74.0**
 FORECAST Thru 6/2025: **\$133.0**
 TOTAL PROGRAM VALUE: **\$156**
 PERIOD CASHFLOW: **\$2.5**

STATUS – Renew Mechanical

# Projects in Planning	# Projects in Design	# Projects in Bid/Award	# Projects in Construction	# Projects Completed	TOTAL # Projects
1	7	3	4	11	26



MILESTONES			
Completed (Jul 2022 – Sept 2022)	Q2 (Oct 2022 – Dec 2022)	Q3 (Jan 2023 – Mar 2023)	Q4 (Apr 2023 – Jun 2023)
<ul style="list-style-type: none"> Began Construction for Fire Services at Hayward Yard 	<ul style="list-style-type: none"> <i>Begin Construction for Turntable Replacement Concord Yard</i> 	<ul style="list-style-type: none"> Issue for Bid Fire Suppression Upgrade Procurement of Concord Yard Dual Gauge Wheel Truing Equipment Completion of Design for LMA HVAC Renovation 	<ul style="list-style-type: none"> <i>Issue for Bid LMA HVAC Renovation</i> <i>Advertise Concord Yard Wheel Truing Facility</i>

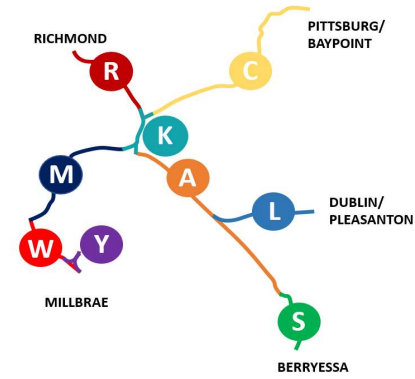
Watchlist:

- None

Italic: Modified milestones from previous report.

Replace Train Control STATUS & MILESTONES

EXPENDED Thru 9/2022: \$64.9
FORECAST Thru 6/2025: \$113.1
TOTAL PROGRAM VALUE: \$400
PERIOD CASHFLOW: \$1.0



STATUS – Replace Train Control / Increase Capacity

# Projects in Planning	# Projects in Design	# Projects in Bid/Award	# Projects in Construction	# Projects Completed	TOTAL # Projects
0	0	2	4	0	6

MILESTONES			
Completed (Jul 2022 – Sept 2022)	Q2 (Oct 2022 – Dec 2022)	Q3 (Jan 2023 – Mar 2023)	Q4 (Apr 2023 – Jun 2023)
<ul style="list-style-type: none"> Completed CBTC Preliminary Design Gate 2 and continue FDR Started Automatic Train Supervision (ATS) Human Machine Interface (HMI) & ATS sub-system requirement for Build Release 3 testing Began proof of concept installation at Hayward Test Track Advertised for Haz Mat on-call for Enabling Works 	<ul style="list-style-type: none"> <i>Start Phase 0 Test Track Migration Design Submittals</i> 	<ul style="list-style-type: none"> Completion of Vehicle Impacted Preliminary Design Review (PDR) <i>Issue NTP for Haz Mat on-call for Enabling Works</i> <i>Advertise Contract K-Line Enabling works</i> 	<ul style="list-style-type: none"> <i>Begin Construction Dublin Test Track</i> <i>Complete CBTC Oakland Lab Installation</i> <i>Start CBTC equipment installations at Hayward Test Track</i> <i>Install foundations at Dublin and Hayward Test Track</i>

Watchlist:

- CBTC Lab Installation – Securing Building Permit from City of Oakland

Italic: Modified milestones from previous report.



Renew Stations STATUS & MILESTONES

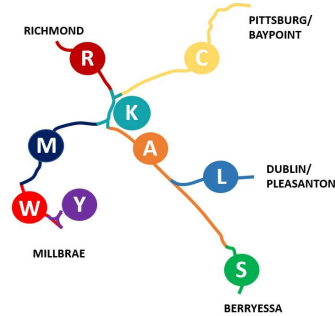
STATUS – Renew Stations

EXPENDED Thru 9/2022: **\$57.0**

FORECAST Thru 6/2025: **\$107.1**

TOTAL PROGRAM VALUE: **\$210**

PERIOD CASHFLOW: **\$5.3**



# Projects in Planning	# Projects in Design	# Projects in Bid/Award	# Projects in Construction	# Projects Completed	TOTAL # Projects
0	2	0	4	3	9

MILESTONES

Completed (Jul 2022 – Sept 2022)	Q2 (Oct 2022 – Dec 2022)	Q3 (Jan 2023 – Mar 2023)	Q4 (Apr 2023 – Jun 2023)
<ul style="list-style-type: none"> Completed last of 2nd Group and continue with 3rd Group of Market Street Escalators installation Completed new office, breakroom and utility room at Sector 6 – Powell Modernization Completed LED lighting at platform and trackside – Powell Modernization Completed painting at platform level – Powell Modernization Completed new Station Agent Booth and Fare Gate cutovers at the north end – 19th St Station Modernization. Completed new south end fare gate array – 19th St Station Modernization 	<ul style="list-style-type: none"> Completion of renovation of System Services Offices for Powell St. Station Modernization Completion of staircase LED lighting enhancement – Powell Modernization Installation of Light Box Art Work at Hallidie Plaza – Powell Modernization Completion of Art wall relocation – Powell Modernization <i>Construction Substantial Completion – Powell Modernization</i> Contract Completion for 19th St Station Modernization Completion of Embarcadero platform escalator P2 for Market Street Escalators Project. 	<ul style="list-style-type: none"> <i>Completion of the first four canopies at Embarcadero, Montgomery St., Powell St., and Civic Center for Market Street Entry Canopies Contract</i> <i>Installation of next canopies at each of Montgomery St., and Powell St., Stations for Market Street Entry Canopies Contract</i> <i>Completion of Montgomery Station platform escalator P4 for Market Street Escalators Project</i> 	<ul style="list-style-type: none"> <i>Completion of Powell Street Station platform escalator P3 for Market Street Escalators Project</i>

Watchlist:

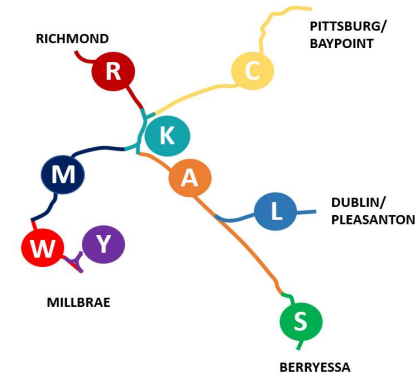
- None

Italic: Modified milestones from previous report.



Station Access STATUS & MILESTONES

EXPENDED Thru 9/2022: **\$39.0**
 FORECAST Thru 6/2025: **\$69.2**
 TOTAL PROGRAM VALUE: **\$135**
 PERIOD CASHFLOW: **\$1.1**



STATUS – Expand Safe Access to Stations

# Projects in Planning	# Projects in Design	# Projects in Bid/Award	# Projects in Construction	# Projects Completed	TOTAL # Projects
0	10	6	3	11	30

MILESTONES			
Completed (Jul 2022 – Sept 2022)	Q2 (Oct 2022 – Dec 2022)	Q3 (Jan 2023 – Mar 2023)	Q4 (Apr 2023 – Jun 2023)
<ul style="list-style-type: none"> Completed Design for 19th St. Active Access Improvement Project Began Construction of SR2B-funded City of Fremont Walnut Ave./Liberty St. protected intersection Advertised for the East Bay Greenway II Project Advertised for Wayfinding Improvements Phase 4 	<ul style="list-style-type: none"> <i>Re-Advertise for Accessibility Improvement (Phase 1 & 2)</i> Completion of construction of SR2B-funded SFMTA 5th Street Improvement project Begin Construction for Balboa Park – Upper Plaza Project Award for Wayfinding Improvements Phase 4 <i>Advertise for PA System Improvement</i> 	<ul style="list-style-type: none"> <i>Award for Accessibility Improvement (Phase 1 & 2)</i> <i>Award for PA System Improvement</i> Completion of design for Ashby Access Improvement Project <i>Completion of design for the Dublin/Pleasanton Access Improvement Project</i> NTP for East Bay Greenway II Project <i>Completion of Construction for 12th St. Bike Racks</i> 	<ul style="list-style-type: none"> <i>NTP for Accessibility Improvement (Phase 1 & 2)</i> <i>NTP for PA System Improvement</i>

Watchlist:

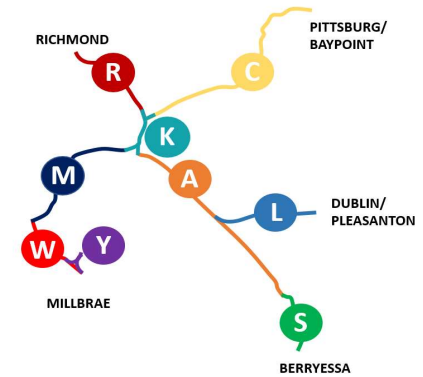
City of Pittsburg BART Ped/Bike Connectivity Project Construction

Italic: Modified milestones from previous report.



Relieve Crowding STATUS & MILESTONES

EXPENDED Thru 9/2022: **\$94.7**
 FORECAST Thru 6/2025: **\$127.8**
 TOTAL PROGRAM VALUE: **\$200**
 PERIOD CASHFLOW: **\$7.5**



STATUS – Design / Engineer to Relieve Crowding

# Projects in Planning	# Projects in Design	# Projects in Bid/Award	# Projects in Construction	# Projects Completed	TOTAL # Projects
2	2	0	2	1	7

MILESTONES			
Completed (Jul 2022 – Sept 2022)	Q2 (Oct 2022 – Dec 2022)	Q3 (Jan 2023 – Mar 2023)	Q4 (Apr 2023 – Jun 2023)
<ul style="list-style-type: none"> Mobilization for Hayward Maintenance Complex Phase 2: Civil/Grading Completed of Opportunities and Constraints Report and Freight Rail Coordination Study for Link21 (NTRC) 	<ul style="list-style-type: none"> Completion of Construction for Civic Center Platform Stairs <i>Link21 Public Outreach – Introduction to Concepts</i> 	<ul style="list-style-type: none"> Complete Design for Hayward Maintenance Complex 2: East Storage Yard <i>Link21: Cocreation Round 4 (NTRC)</i> 	<ul style="list-style-type: none"> <i>Public Outreach – Full list of Concepts for Link21 (NTRC)</i> <i>Completion of Travel Demand and Land Use Model for Link21 (NTRC)</i>

Watchlist:

- None

Italic: Modified milestones from previous report.

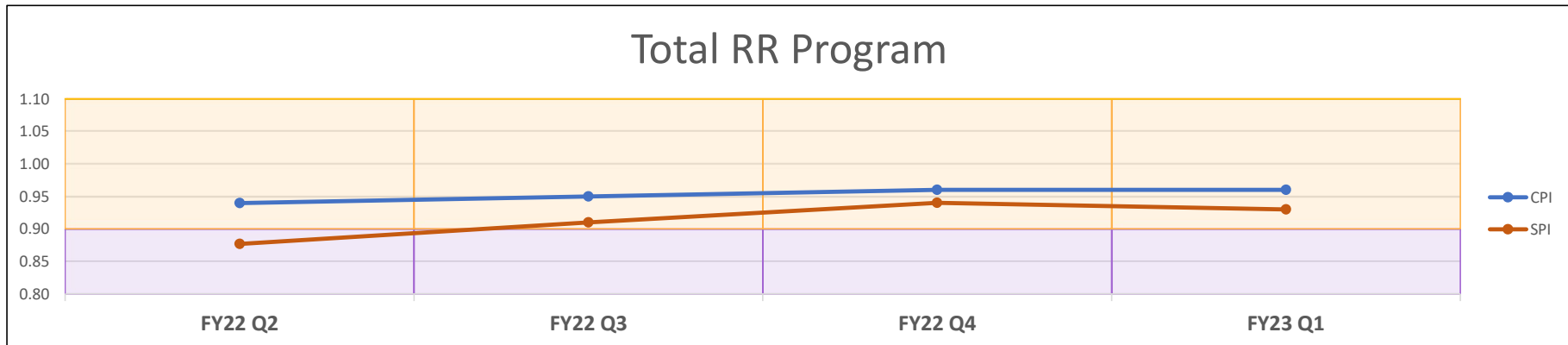


Budget and Schedule Status



Earned Value Rollup by Program As of September 2022

Goal: CPI and SPI between 0.9 and 1.1



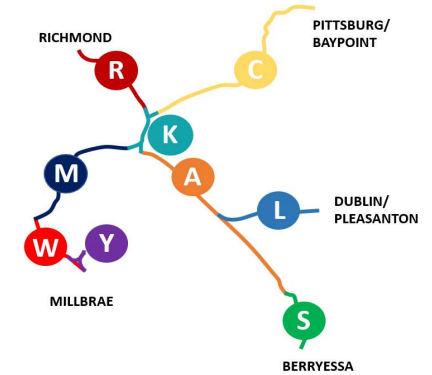
RR Program	Total RR Budget	Physical % Complete	Planned Value	Earned Value	RR Accrued to Date	CPI	SPI
Renew Track	\$625	64%	\$393.23	\$401.14	\$386.91	1.04	1.02
Renew Power	\$1,225	47%	\$679.05	\$576.79	\$661.50	0.87	0.85
Repair Tunnels and Structures	\$549	39%	\$209.68	\$212.17	\$207.23	1.02	1.01
Renew Mechanical	\$156	51%	\$80.99	\$80.24	\$78.35	1.02	0.99
Replace Train Control/ Increase Capacity	\$400	15%	\$71.84	\$61.52	\$65.10	0.95	0.86
Renew Stations	\$210	30%	\$61.56	\$62.03	\$58.11	1.07	1.01
Expand Safe Access to Stations	\$135	29%	\$42.40	\$39.00	\$36.08	1.08	0.92
Design/Engineer to Relieve Crowding	\$200	50%	\$107.56	\$99.62	\$99.86	1.00	0.93
Total	\$3,500	44%	\$1,646.32	\$1,532.53	\$1,593.14	0.96	0.93

CPI – Cost Performance Index SPI – Schedule Performance Index



Track Program Drill Down

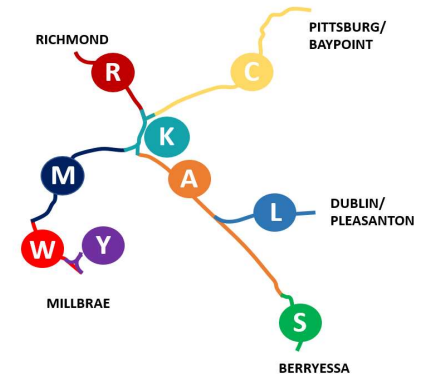
Project	Count
Number of Projects (>25% Spent)	17
CPI <0.9 or >1.1	2
SPI <0.9 or >1.1	1
Number of Risk Register Updates Performed in Previous Period	14
Number of Project(s) with Quality Reviews Performed in Previous Period	6



Project	Physical % Complete	CPI	SPI	Comments
Rail Re-Profiling	98%	1.24	0.99	Expended less than planned due to BART self performing some of the work.
Replace Direct Fixation Pads	83%	1.02	1.57	Realized efficiencies during construction.
Switch Replacement	53%	0.88	1.10	Realized efficiency from extended blanket hours but at higher cost.

Power Program Drill Down

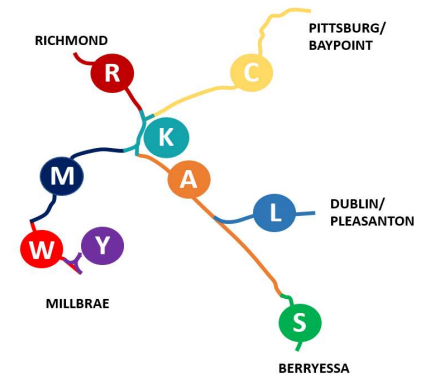
Project	Count
Number of Projects (>25% Spent)	19
CPI <0.9 or >1.1	6
SPI <0.9 or >1.1	4
Number of Risk Register Updates Performed in Previous Period	5
Number of Project(s) with Quality Reviews Performed in Previous Period	2



Project	Physical % Complete	CPI	SPI	Comments
Emergency Generator for Transbay Tube	94%	0.87	0.94	Costs increased due to administering complex change orders
M-Line 34.5kV AC Cable Replacement	94%	0.97	1.17	Project has reached substantial completion for cable installation ahead of schedule
San Leandro and Transbay Tube East Substation Replacements	91%	0.83	0.97	Costs of pre-requisite work increased due to complex site conditions. Working with contractor to minimize project impact
A-Line 34.5kV AC Cable Replacement	60%	0.84	1.08	Differing site conditions lead to multiple change orders. Working with contractor to minimize project impact
Substation for Core Capacity	60%	1.07	0.89	Delayed due to increased environmental remediation
Stations Emergency Lighting	54%	0.84	0.59	Change notice executed to address differing site conditions
R-Line 34.5kV AC Cable Replacement	39%	0.86	0.95	Accelerated installation impacted by R-Line emergency as work was performed over extended hours and multiple crews.
SFTS Transformer / Bus Upgrade	31%	0.69	0.31	Coordination with external agencies for transformer design, testing and installation plans

Tunnels & Structures Program Drill Down

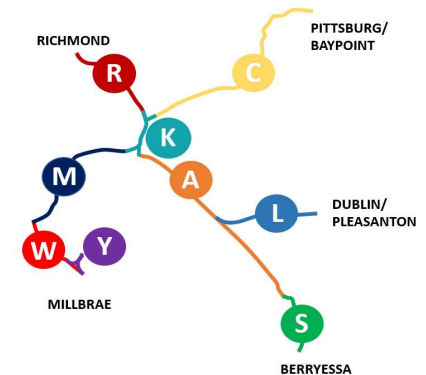
Project	Count
Number of Projects (>25% Spent)	26
CPI <0.9 or >1.1	3
SPI <0.9 or >1.1	3
Number of Risk Register Updates Performed in Previous Period	16
Number of Project(s) with Quality Reviews Performed in Previous Period	7



Project	Physical % Complete	CPI	SPI	Comments
Rehab Expansion Joints at Abutment	90%	1.19	0.92	Realized Efficiency in Design
Fences Systemwide	89%	0.86	0.91	CM charges as a result of negotiations and coordination are impacting costs. Contract has stopped work.
Water Intrusion Escalator/Elevator	80%	1.00	0.80	Installation progress impacted by R-Line emergency repairs
Wayside Regulatory Signage	52%	1.09	0.88	Resources reallocated to higher priority projects
Substation Roofs	41%	1.21	1.01	Easier locations are completed, which cost less.
Slope Stabilizations SWD	38%	0.99	0.82	Final Design is delayed due to Environmental Clearance

Mechanical Program Drill Down

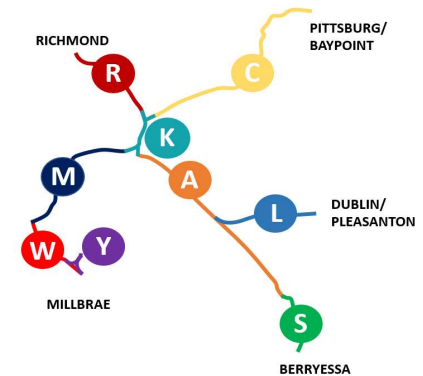
Project	Count
Number of Projects (>25% Spent)	21
CPI <0.9 or >1.1	1
SPI <0.9 or >1.1	1
Number of Risk Register Updates Performed in Previous Period	14
Number of Project(s) with Quality Reviews Performed in Previous Period	1



Project	Physical % Complete	CPI	SPI	Comments
Replace Fire Hoses and Piping	99%	1.24	0.99	Self-performed to improve efficiency.
Replace Backflow Preventers	52%	1.09	0.87	Change in deliver method (to self-performed) is causing a delay in completion, but a cost benefit.

Station Access Program Drill Down

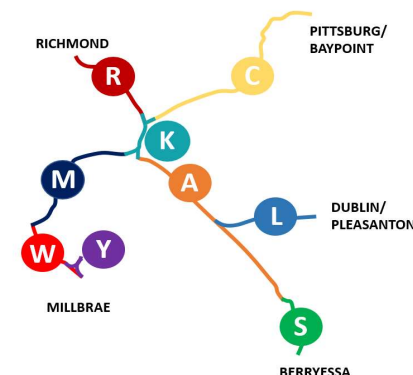
Project	Count
Number of Projects (>25% Spent)	15
CPI <0.9 or >1.1	1
SPI <0.9 or >1.1	0
Number of Risk Register Updates Performed in Previous Period	0
Number of Project(s) with Quality Reviews Performed in Previous Period	0



Project	Physical % Complete	CPI	SPI	Comments
North Berkeley Station Access Improvement	27%	0.92	0.69	Resources reallocated to higher priority projects

Relieve Crowding Program Drill Down

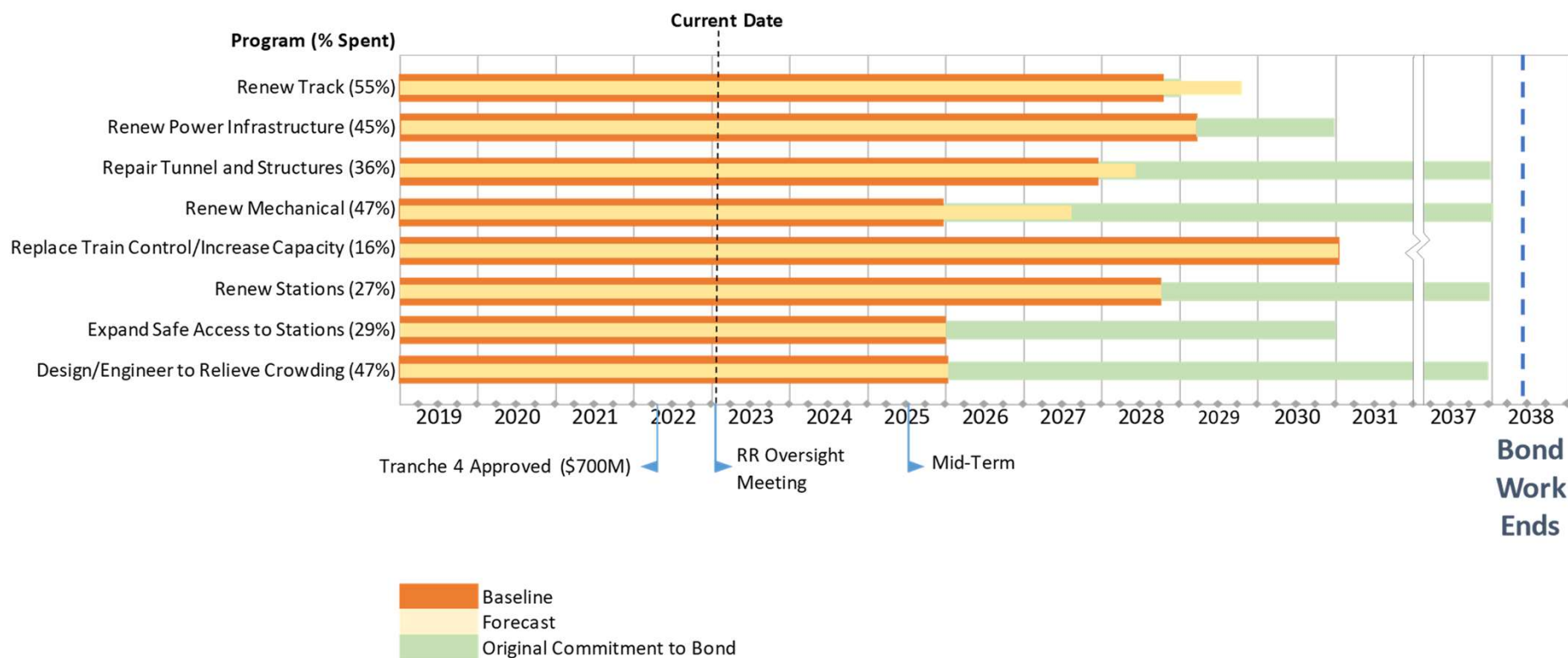
Project	Count
Number of Projects (>25% Spent)	5
CPI <0.9 or >1.1	1
SPI <0.9 or >1.1	2
Number of Risk Register Updates Performed in Previous Period	1
Number of Project(s) with Quality Reviews Performed in Previous Period	1



Project	Physical % Complete	CPI	SPI	Comments
Civic Center Scissor Stairs	83%	0.94	0.85	Stainless steel cladding fabricating taking longer than anticipated
Hayward Maintenance Phase 2	40%	1.13	0.78	Schedule recovery from stop notice issued to consultant team



Program Level Schedule Update



Next Steps

- Appoint 2023 Annual Report Sub-committee
- April 2023 Bond Oversight Meeting

Thank you!

