# **Chapter 4 - Capital Budget**



### Overview

Metro's FY2021-FY2026 Capital Improvement Program (CIP) totals \$9.7 billion with funding from the federal government, state and local contributions, and other sources. Of this amount, \$1.82 billion is planned for investment in FY2021.

The six-year CIP is focused on system preservation and state of good repair requirements identified in the Capital Needs Forecast (CNF). The plan also includes targeted investments to drive operating efficiency and improvements that will support service reliability and customer experience.

Metro's capital program is grouped into six major Investment Categories: Railcar, Rail Systems, Track & Structures Rehabilitation, Stations & Passenger Facilities, Bus & Paratransit, and Business Support. Each Investment Category is a group of Programs, which in turn are groups of Projects. Appendix D contains a page for each project in the capital program.

	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	6-Year
(Dollars in Millions)	Budget	Plan	Plan	Plan	Plan	Plan	Total
Railcar	\$279.8	\$257.3	\$332.8	\$346.6	\$454.1	\$565.2	\$2,235.7
Rail Systems	164.7	131.2	162.8	153.3	146.5	132.4	890.8
Track and Structure							
Rehabilitation	148.1	175.7	166.4	192.9	160.9	170.1	1,014.0
Stations and Passenger	E 4 E E	E0E 6	204.0	252.0	101.0	470.0	2.005.2
Facilities	545.5	525.6	391.2	252.0	191.9	179.2	2,085.3
Bus and Paratransit	207.8	225.4	292.5	313.2	284.3	215.7	1,538.9
Business Support	475.4	550.2	217.5	235.5	242.9	227.3	1,948.8
Grand Total	\$1,821.2	\$1,865.3	\$1,563.2	\$1,493.4	\$1,480.6	\$1,489.8	\$9,713.5
Revenue Loss from Capital							_
Projects	23.1	23.8	24.5	25.2	26.0	26.7	149.2
Debt Service - Dedicated							
Funding	31.1	52.3	84.1	104.2	121.1	140.0	532.8
Total Capital Program Cost	\$1,875.4	\$1,941.3	\$1,671.7	\$1,622.9	\$1,627.6	\$1,656.5	\$10,395.5

Capital investments are organized within these categories into four functional classifications: Safety, State of Good Repair & Minor Projects; Major Active Capital Projects; Development & Evaluation (D&E) Projects; and Future Major Projects.

### Safety, State of Good Repair & Minor Projects

Safety, State of Good Repair (SGR) & Minor Projects are the largest investment types in the capital program. This includes recurring and ongoing investments in the replacement, rehabilitation, and maintenance of existing assets to ensure the safety of Metro's infrastructure and to improve the reliability of the system. Prioritization of assets for replacement or rehabilitation is accomplished using the age and condition of specific assets. Examples of ongoing investments include:

- Railcar component maintenance and rehabilitation
- New buses and paratransit vehicles
- Rail crosstie and track fastener replacement
- Track circuit replacement
- Power cable replacement
- Parking garage rehabilitation
- Station lighting and cooling programs
- Elevator/escalator repair, rehabilitation, and replacement.

These programs also include those initiated through oversight recommendations or identified as capital maintenance needs. Minor projects that are not part of an on-going SGR program, but do not rise to the level of Major Projects in terms of scope and expenses, also fall into this investment type.

### Major Active Capital Projects

Major Active Capital Projects are large, multi-year construction and acquisition projects, such as the construction of a new maintenance facility or the acquisition of railcars. Several major capital projects are currently underway, including the following:

- New 8000–Series railcars
- Radio and wireless infrastructure upgrades
- Traction power upgrades to support additional 8car trains
- Fare collection modernization
- Completion of the Silver Line extension
- Construction of a new station at Potomac Yard
- Replacement of Bladensburg and Northern Bus Facilities
- WMATA office consolidation
- Rehabilitation of station platforms and other adjacent infrastructure

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### Development & Evaluation

Metro's D&E programs include activities that support the Authority's capital investments which are still under evaluation or in planning and development as either a Major Capital Project or SGR program. The D&E process ensures capital investments are efficient and effective and project risks are mitigated prior to initiation or commitment. The D&E process also helps ensure that projects have clearly defined schedules, and cost estimates scopes, appropriate consideration for risks and alternative solutions. Additional funding will be allocated when initiatives are sufficiently developed to advance to the next stage.

D&E activities establish project scopes and plans for existing needs in the CNF. For the FY2021-2026 capital program cycle, Metro has included D&E funding for a wide range of initiatives that are planned to bolster the system beyond its current capital improvement projects. Full cost estimates for these prospective projects will be identified when the needs are fully developed into Major Projects. The following needs are highlighted examples of activities that are included in the FY2021-FY2026 programs:

- Core station passenger circulation improvements
- Blue/Orange/Silver Line corridor reliability and throughput evaluation
- Train control modernization
- Bus transformation strategy
- Station passenger circulation improvements
- Bus facility rehabilitation
- Transit signal prioritization

### Future Major Projects

Future Major Projects are those that advance past the D&E process and will be executed in the future.

Projects in this category include those that have advanced through D&E and are planned for future implementation or are deemed to be essential and will require additional investment once D&E process has completed.

### Capital Priorities, Goals, and Strategy

Metro has developed a more structured methodology for capital project prioritization to focus on addressing longstanding capital needs and targeting critical assets before they are in danger of failure. This process assigns priorities to proposed capital projects based on the investment's impact on safety, performance, and alignment with the Authority's

strategic goals.

Projects submitted for inclusion in the program are reviewed by purpose, scope, projected schedule, and cost. They are ranked against four factors: primary strategic goals, supplemental strategic goals, project readiness for execution, and a review of available resources.

Alignment with Metro's primary strategic goals are determined by current performance indicators impacting the following:

- Ridership
- Fire/life safety/regulatory compliance
- Customer satisfaction
- Reliability
- Operational support

Projects or project elements that do not clearly address Metro's primary strategic goals are reviewed to assess their alignment with the following supplemental strategic drivers:

- Repairing existing assets
- Public commitments
- Contracts issued to vendor
- Employee satisfaction
- Ease of access to Metro Services
- Energy management/conservation
- Inspection/maintenance efficiency
- Ongoing preventive maintenance of assets
- Studies of current assets for improved efficiency

Proposed projects are then reviewed to determine whether they are ready to move forward and begin execution in the near term (FY2021 or FY2022). Specifically, Metro considers whether the appropriate procurement requirements are in place to provide for near term mobilization, as well as adequate resources being available for project execution.

Once the preliminary capital program is established based on the above criteria, all projects are subject to a final review for alignment with projected budgetary resources, as well as conflicts or duplication of efforts across programs or investment categories.

As Metro implements one of the largest capital investment programs in the transit industry to address ongoing infrastructure needs, the efficient use of available funding is vital. Economical investment of capital funds means ensuring that Metro remains an

affordable transit service provider, prioritizing safety and reliability initiatives, and promoting effective and efficient resource allocation and utilization.

### **Funding Sources**

The six-year capital funding plan for FY2021-2026 assumes Federal grant funding totaling \$2.26 billion over six years, with \$500.1 million in FY2021. This projection assumes Formula programs remain at FY2019 levels but does not assume congressional reauthorization of the Passenger Rail Investment and Improvement Act (PRIIA), or any Federal PRIIA funding past FY2021. The State match to PRIIA, totaling \$148.5 million per year, is assumed to continue even if the Federal program is not extended or replaced.

State and local capital contributions total \$5.9 billion from FY2021-2016, with \$1.0 billion in FY2021. These amounts exclude jurisdictional reimbursable projects. Dedicated funding of \$500 million per year is planned, along with \$148.5 million of State PRIIA. Formula match and System performance are limited to three percent growth annually, and total \$2.5 billion over the six-year period, with \$394.6 million in FY2021.

The capital budget also includes \$88.7 million in locally requested reimbursable projects in FY2021, with \$283 million planned for the six-year period.



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### Financial Plan - Allocation of State & Local Contributions

	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	6 Year
(Dollars in Millions)	Budget	Plan	Plan	Plan	Plan	Plan	Total
Federal Funding							
Federal Formula Programs	\$348.2	\$348.2	\$348.2	\$348.2	\$348.2	\$348.2	\$2,089.0
Federal PRIIA	148.5	0.0	0.0	0.0	0.0	0.0	148.5
Other Federal Grants	3.4	3.4	3.4	3.4	3.4	3.4	20.4
Total - Federal Grants	\$500.1	\$351.6	\$351.6	\$351.6	\$351.6	\$351.6	\$2,258.0
State & Local Funding Contributions							
District of Columbia							
Formula Match & System Performance	\$103.1	\$106.2	\$109.4	\$112.6	\$116.0	\$119.5	\$666.8
PRIIA	49.5	49.5	49.5	49.5	49.5	49.5	297.0
Dedicated Funding	178.5	178.5	178.5	178.5	178.5	178.5	1,071.0
Subtotal - District of Columbia	\$331.1	\$334.2	\$337.4	\$340.6	\$344.0	\$347.5	\$2,034.8
State of Maryland							
Montgomery County	\$41.8	\$43.1	\$44.4	\$45.7	\$47.1	\$48.5	\$270.7
Prince George's County	46.5	47.9	49.4	50.8	52.4	53.9	300.9
MD PRIIA	49.5	49.5	49.5	49.5	49.5	49.5	297.0
MD Dedicated Funding	167.0	167.0	167.0	167.0	167.0	167.0	1,002.0
Subtotal - Maryland	\$304.9	\$307.5	\$310.3	\$313.1	\$316.0	\$318.9	\$1,870.6
							- ,
Commonwealth of Virginia							
City of Alexandria	\$12.9	\$13.3	\$13.7	\$14.1	\$14.5	\$15.0	\$83.6
Arlington County	21.1	21.8	22.4	23.1	23.8	24.5	136.6
City of Fairfax	0.6	0.6	0.6	0.6	0.7	0.7	3.8
Fairfax County	38.0	39.1	40.3	41.5	42.8	44.1	245.8
City of Falls Church	0.9	0.9	0.9	0.9	1.0	1.0	5.5
Loudoun County	3	3.6	3.7	3.8	3.9	4.0	22.3
VA PRIIA	49.5	49.5	49.5	49.5	49.5	49.5	297.0
VA Dedicated Funding	154.5	154.5	154.5	154.5	154.5	154.5	927.0
CMAQ	0.9	0.9	0.9	1.0	1.0	1.0	5.7
Subtotal - Virginia	\$281.8	\$284.1	\$286.5	\$289.0	\$291.6	\$294.2	\$1,727.2
Jurisdiction Planning Projects	\$3.0	\$3.0	\$3.0	\$3.0	\$3.0	\$3.0	\$18.0
Silver Line (MWAA)	26.6	φ3.0 17.7	0.0	0.0	ψ3.0	ψ3.0	44.3
					-	-	
Potomac Yard (Alexandria)	59.1	88.9	33.9	38.6	-	-	220.4
Purple Line (MDOT)	0.1	0.2	0.0	0.0	-	-	0.3
Subtotal - Jurisdictional Reimbursable	<b>\$</b> 88.7	\$109.8	<b>\$</b> 36.9	<b>\$41.</b> 6	\$3.0	\$3.0	<b>\$2</b> 83.0
Total - State & Local	\$1,006.4	\$1,035.7	\$971.0	\$984.3	\$954.5	\$963.6	<b>\$</b> 5,915.6
Debt	\$368.9	\$554.1	\$349.1	\$287.0	\$321.5	\$341.3	\$2,221.9
Grand Total	\$1,875.4	\$1,941.4	\$1,671.7	\$1,622.9	\$1,627.6	\$1,656.5	\$10,395.5

# **Appendix D - Capital Projects**

The capital project pages in Appendix D are in sequential numerical order. The tables below indicate how the capital projects are grouped by Investment Category and Program.

Program/Project #	Project Name
Investment Category: Railcar	
Acquisition	
CIP0059	8000 Series Railcar Procurement
CIP0256	7000 Series Railcars Procurement
CIP8001	D&E Rail Car Replacement
CRB0019 19	Silver Line Phase 1 Railcars
CRB0020 01	Silver Line Phase 2 Railcars
Maintenance & Overhaul	
CIP0063	Railcar Rehabilitation Program
CIP0067	Rail Car Safety & Reliability Improvements
CIP0142	Railcar Preventive Maintenance
Maintenance Facilities	- Canada - C
CIP0145	Station and Yard Security Upgrades
CIP0204	Railcar Rooftop Access Platforms
CIP0225	Railcar Heavy Repair and Overhaul Facility
CIP0283	Railcar Maintenance Facility SGR Program
CIP0284	Yard Facility Rehabilitation
CIP8005	D&E Rail Yard Improvements
	·
Investment Category: Rail Syste	enis
Propulsion	D. II D In fact two two life was in
CIP0076	Rail Power Infrastructure Upgrades
CIP0252	Alternating Current (AC) Power Systems SOGR
CIP0253	Traction Power SOGR
CIP0286	Generator System Replacement
Signals & Communications	
CIP0136	Radio Infrastructure Replacement
CIP0251	Automatic Train Control SOGR
CIP0257	Emergency Trip Station Infrastructure
CIP0260	Track Inspector Location Pilot
CIP0350	RTU Reliability Project
CIP8009	D&E ATC & Communications Improvements
CIP8010	Automatic Train Control (ATC) Next Generation Implementation
<b>Investment Category: Track and</b>	I Structures Rehabilitation
Fixed Rail	
CIP0024	Track and Structures Rehabilitation
CIP0025	Track Maintenance Equipment
CIP0246	General Engineering Support
GIP0240	
CIP0247	Emergency Construction
	Emergency Construction Tunnel Lighting Replacement
CIP0247	
CIP0247 CIP0261 CIP8011	Tunnel Lighting Replacement
CIP0247 CIP0261 CIP8011 Structures	Tunnel Lighting Replacement D&E Fixed Rail Improvements
CIP0247 CIP0261 CIP8011 <b>Structures</b> CIP0262	Tunnel Lighting Replacement D&E Fixed Rail Improvements  Tunnel Water Leak Mitigation
CIP0247 CIP0261 CIP8011 Structures CIP0262 CIP0291	Tunnel Lighting Replacement D&E Fixed Rail Improvements  Tunnel Water Leak Mitigation Tunnel Ventilation
CIP0247 CIP0261 CIP8011 <b>Structures</b> CIP0262 CIP0291 CIP0294	Tunnel Lighting Replacement D&E Fixed Rail Improvements  Tunnel Water Leak Mitigation Tunnel Ventilation Bridge Rehabilitation
CIP0247 CIP0261 CIP8011 <b>Structures</b> CIP0262 CIP0291 CIP0294 CIP0348	Tunnel Lighting Replacement D&E Fixed Rail Improvements  Tunnel Water Leak Mitigation Tunnel Ventilation Bridge Rehabilitation Minnesota Avenue Aerial Structure Rehabilitation
CIP0247 CIP0261 CIP8011 <b>Structures</b> CIP0262 CIP0291 CIP0294	Tunnel Lighting Replacement D&E Fixed Rail Improvements  Tunnel Water Leak Mitigation Tunnel Ventilation Bridge Rehabilitation

Program/Project #	Project Name
nvestment Category: Station a	nd Passenger Facilities
Platforms & Structures	j
CIP0035	Bicycle & Pedestrian Facilities Improvements
CIP0087	Station Rehabilitation Program
CIP0088	Station Entrance Canopies
CIP0108	Rhode Island Avenue Metrorail Station Platform Rehabilitation
CIP0152	Parking Garage and Lot Rehabilitation
CIP0218	Station Upgrades
CIP0271	Metrorail Station Emergency Gates Replacement
CIP0274	Grosvenor Parking Garage Joint Development
CIP0279	Huntington Station Joint Development
CIP0307	Stations Platform Rehabilitation - Phase 2
CIP0308	Stations Platform Rehabilitation - Phase 3
CIP0306 CIP0309	
	Huntington Metrorail Station Additional Entrance
CIP8015	D&E Platform & Structures  New Potomac Yard Metrorail Station
CRB0013	
CRB0020	Silver Line Phase 2
CRB0127	Purple Line
CRB0133	Union Station Entrance Improvements
Vertical Transportation	
CIP0072	Elevator Rehabilitation Program
CIP0073	Escalator Rehabilitation
CIP0132	Escalator and Elevator Overhaul
CIP0185	Escalator Replacement
CIP8017	Vertical Transportation Improvements
Station Systems	
CIP0151	Station Cooling Systems Upgrade
CIP0219	Station Lighting Improvements
CIP0241	Raising Vent Shafts
CIP0242	Improving Drainage
CIP0255	Fare Collection Modernization Program
CIP0258	Fire Alarm System Upgrade
CIP0341	Standpipe Replacement Program
CIP8019	D&E Station Systems
Investment Category: Bus and	Paratransit
Acquisition	
CIP0006	Bus Acquisition Program
CIP0015	MetroAccess Fleet Acquisition Program
CIP8021	D&E Bus & Paratransit
Maintenance and Overhaul	
CIP0002	Metrobus OnBoard Location Equipment and Software Replacement
CIP0004	Bus Repair Equipment
CIP0004 CIP0005	Bus Rehabilitation Program
CIP0003 CIP0007	Metrobus Closed-Circuit Television (CCTV) Replacement Program
CIP0007 CIP0143	Bus Preventive Maintenance Program
	Dus Freventive Maintenance Program
Maintenance Facilities	Chamband Dankusay Deer Craillite
CIP0086	Shepherd Parkway Bus Facility
CIP0206	Carmen Turner Facility (CTF) Electrical Upgrade
CIP0311	Bladensburg Bus Garage Replacement - Bladensburg
CIP0312	Four Mile Run Bus Facility Rehabilitation
CIP0315	Bus Garage Replacement - Northern
CIP0319	Bus Maintenance Facility SOGR
CIP8025	D&E Bus Maintenance Facility

CIP8026

Future Bus Maintenance Facility

Program/Project #	Project Name
Passenger Facilities and Systems	
CIP0220	Metrobus Planning Program
CIP0221	Bus Customer Facility Improvements
CIP0266	Historic Bus Terminal Rehabilitation
CIP0275	New Carrollton Bus Bays Joint Development
CIP0322	Bus Passenger Fac./Systems Future Major Projects
CIP0326	Real-Time Bus and Rail Data Feed Development
Investment Category: Business Su	·
Information Technology	,ppo.:
CIP0042	Product Lifecycle Software Decommissioning
CIP0043	•
CIP0043 CIP0049	Bus Operations Support Software
	Management Support Software
CIP0056	Rail Operations Support Software
CIP0259	Timecard Software Integration and Analysis
CIP0269	Enterprise Asset Management Systems
CIP0330	New Data Center IT Infrastructure
CIP0331	Enterprise Resource Planning (ERP) Replacement
CIP0332	Fiber Installation
CIP0342	IT Hardware Replacement Program
CIP0343	Operating and Maintenance Applications
CIP0344	IT Program Management and Quality Assurance
CIP8029	D&E IT
MTPD	
CIP0102	Metro Transit Police Department (MTPD) District III Substation Construction
CIP8031	D&E MTPD
CIP8032	Future MTPD Major Projects
Support Equipment and Services	,
CIP0009	Service Vehicle Replacement Program
CIP0010	Environmental Compliance Program
CIP0029	Warehouse Vertical Store Unit
CIP0034	Revenue Collection Facility
CIP0036	Procurement Program Support
CIP0039	Core & System Development Program
CIP0131	Capital Program Financing
CIP0170	Roof Rehabilitation and Replacement
CIP0210	Track Pollution Prevention
CIP0210 CIP0211	Stormwater Facility Assessment
CIP0211 CIP0212	
CIP0212 CIP0213	Environmental Sustainability Lab
	Capital Program Development Support
CIP0270	Capital Delivery Program Support
	Otation Communication Design to
CIP0272	Station Commercialization Project
CIP0273	Facility Improvements
CIP0273 CIP0277	Facility Improvements Supply Chain Modernization
CIP0273 CIP0277 CIP0324	Facility Improvements Supply Chain Modernization Capital Program Financial Support
CIP0273 CIP0277 CIP0324 CIP0335	Facility Improvements Supply Chain Modernization Capital Program Financial Support Headquarters - District of Columbia
CIP0273 CIP0277 CIP0324 CIP0335 CIP0336	Facility Improvements Supply Chain Modernization Capital Program Financial Support Headquarters - District of Columbia Energy Management Upgrades
CIP0273 CIP0277 CIP0324 CIP0335 CIP0336 CIP0337	Facility Improvements Supply Chain Modernization Capital Program Financial Support Headquarters - District of Columbia Energy Management Upgrades Headquarters - Virginia
CIP0273 CIP0277 CIP0324 CIP0335 CIP0336 CIP0337 CIP0338	Facility Improvements Supply Chain Modernization Capital Program Financial Support Headquarters - District of Columbia Energy Management Upgrades Headquarters - Virginia Headquarters - Maryland
CIP0273 CIP0277 CIP0324 CIP0335 CIP0336 CIP0337 CIP0338 CIP0339	Facility Improvements Supply Chain Modernization Capital Program Financial Support Headquarters - District of Columbia Energy Management Upgrades Headquarters - Virginia Headquarters - Maryland First Responders Signs Updates
CIP0273 CIP0277 CIP0324 CIP0335 CIP0336 CIP0337 CIP0338	Facility Improvements Supply Chain Modernization Capital Program Financial Support Headquarters - District of Columbia Energy Management Upgrades Headquarters - Virginia Headquarters - Maryland
CIP0273 CIP0277 CIP0324 CIP0335 CIP0336 CIP0337 CIP0338 CIP0339	Facility Improvements Supply Chain Modernization Capital Program Financial Support Headquarters - District of Columbia Energy Management Upgrades Headquarters - Virginia Headquarters - Maryland First Responders Signs Updates
CIP0273 CIP0277 CIP0324 CIP0335 CIP0336 CIP0337 CIP0338 CIP0339 CIP0340	Facility Improvements Supply Chain Modernization Capital Program Financial Support Headquarters - District of Columbia Energy Management Upgrades Headquarters - Virginia Headquarters - Maryland First Responders Signs Updates Administration Facility Rehabilitation Program
CIP0273 CIP0277 CIP0324 CIP0335 CIP0336 CIP0337 CIP0338 CIP0339 CIP0340 CIP0347	Facility Improvements Supply Chain Modernization Capital Program Financial Support Headquarters - District of Columbia Energy Management Upgrades Headquarters - Virginia Headquarters - Maryland First Responders Signs Updates Administration Facility Rehabilitation Program Accounting Capital Program Support

CRB0018

Project Development Program - VA

# Metrobus Onboard Location Equipment and Software Replacement

Investment Category: Bus and Paratransit Investments

CIP: CIP0002

Investment Program:

Mode: Bus

Bus Maintenance/Overhaul

Location: Systemwide

Project or Program: Project

### Description

The design and equipment replacement of automatic vehicle location (AVL) units for buses. This equipment is vital to bus communications for location (GPS) and bus diagnostics. The replacements are bus state of good repair items that are critical to maintaining fleet reliability.

### **FY21 Planned Deliverables**

FY2021 is the second year of the 5 year replacement program which will conclude in FY2024. FY2021 includes design, acceptance and installation on the first group of buses.



### Cost (\$M)

Strategic	<b>Objectives</b>	Supported
1000		-









Total



FY21 Expected Fund Source(s)

\$2.0 Formula Programs

\$2.0

LTD Expenses	\$41.8
FY2020	\$1.4
FY2021	\$2.0
FY2022	\$4.0
FY2023	\$12.0
FY2024	\$15.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$33.0
Total Project Cost	\$76.2

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Planning	Development & Evaluation					Д			П			
ion	Project Development	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	1				<b>V</b>	<b>✓</b>	
Execution	Implementation	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>		П		1	<b>✓</b>	П

# **Bus Repair Equipment**

Investment Category: Bus and Paratransit Investments

Program

CIP: CIP0004

Investment Program:

Mode: Bus Bus Maintenance/Overhaul

Project or Program:

Location: Systemwide

### Description

This program replaces existing equipment that is past its useful life and provides new equipment for the repair and maintenance of the bus and non-revenue fleets. Additionally, this project supports construction of minor garage improvements.



### FY21 Planned Deliverables

The replacement of bus maintenance equipment related to parts washers, fork lifts, tool box kits, bus diagnostic equipment, and mechanic training equipment. Additionally, the replacement of 2 Engine and Transmission Dynameters, and the installation of 3 Bus Simulators are planned.

### Cost (\$M)

# Strategic Objectives Supported











FY21 Expected Fund Source(s)

Formula Programs \$3.0

> \$3.0 Total

FY2020	\$2.5
FY2021	\$3.0
FY2022	\$2.5
FY2023	\$2.5
FY2024	\$2.5
FY2025	\$2.5
FY2026	\$2.5
FY21-26 Total	\$15.5

Proj	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					H						
Planni	Development & Evaluation	<b>✓</b>				-JII,	-0	- 0				
по	Project Development	<b>✓</b>	<b>V</b>	1	<b>✓</b>	1	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>
execution	Implementation	<b>V</b>	<b>✓</b>	<b>✓</b>	1	<b>V</b>	1	1	<b>✓</b>	1	1	<b>V</b>

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Bus Rehabilitation Program

Investment Category: Bus and Paratransit Investments CIP: CIP0005

Investment Program: Bus Maintenance/Overhaul Mode: Bus

Project or Program: Program Location: Andrews Federal Bus Garage - Suitland; Carmen Turner Facility - Landover

### Description

This program performs rehabilitations at approximately 7.5 years of age and provides for the complete rehabilitation of bus mechanical, electrical and structural systems. Additionally, the project supports the procurement of components to replace those that can no longer be overhauled.

### FY21 Planned Deliverables

The overhaul of 100 buses is scheduled for FY2021, to include 100 engine and 120 transmission assemblies being rebuilt. 100 energy storage systems will be replaced along with the rehabilitation of 105 fare boxes. Various other components will be rebuilt as well to include axles, HVAC units, pro-heat units and steering boxes.



### Cost (\$M)

(\$)	(11)	Supported	(3)	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact
Y21 Expect	ed Fund Sou	rce(s)		
Formula	Programs			\$47
System F	Perform			\$22

FY21-26 Total	\$406.		
FY2026	\$61.9		
FY2025	\$61.9		
FY2024	\$67.9		
FY2023	\$75.2		
FY2022	\$70.0		
FY2021	\$69.9		
FY2020	\$49.2		

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					Ш				П		
Planni	Development & Evaluation					10	-0		П	П	-	- 0
no	Project Development			-				П			-	
Execution	Implementation	1	1	1	1	<b>V</b>	1	1	<b>V</b>	1	1	1
Exe	* Project Phase chart m	av contain		project	or progr	am initia			and bea	in in var	ious fisc	al v

Total

\$69.9

# **Bus Acquisition Program**

Investment Category: Bus and Paratransit Investments

CIP: CIP0006

Investment Program:

Mode: Bus

Project or Program: Program

Location: Post-Delivery inspections occur at Landover Bus Division - Landover

### Description

Acquisition and replacement of standard 30-foot and 40-foot buses and the longer articulated buses to ensure customers are provided with safe, reliable, and modern buses, and maintain an average fleet age of approximately 7.5 years, which is in accordance with the MetroBus Fleet Management Plan. Project also includes training and spare parts. The Fleet Management Plan adds buses for bus replacement as well as fleet expansion.

Bus and Paratransit Acquisition

### FY21 Planned Deliverables

In FY2021, Metro will acquire 122 buses. This is to replace 100-40 foot Clean Diesel buses, and 22 Articulated Clean Diesel buses.



### Cost (\$M)

# Strategic Objectives Supported Safety Cust. Sat. Reliability Ridership Op. Impact FY21 Expected Fund Source(s)

		14000
Formula Programs		\$64.4
Other Federal		\$9.6
	Total	\$74.0

FY21-26 Total	\$445.5
FY2026	\$75.5
FY2025	\$74.0
FY2024	\$74.0
FY2023	\$74.0
FY2022	\$74.0
FY2021	\$74.0
FY2020	\$69.9

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification											
	Development & Evaluation					П		П				0
Execution	Project Development						<b>V</b>	<b>✓</b>				
	Implementation	~	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	1	<b>V</b>	1	<b>✓</b>	<b>✓</b>

# Metrobus Closed-Circuit Television (CCTV) Replacement **Program**

Investment Category: Bus and Paratransit Investments

Program

CIP: **CIP0007** 

Investment Program:

Mode: Bus

Project or Program:

Location: Systemwide

### Description

Replace Metrobus closed-circuit television (CCTV) camera systems onboard all Metrobus vehicles to maintain a state of good repair on a lifecycle basis.

Bus Maintenance/Overhaul



### **FY21 Planned Deliverables**

In FY2021, Metro will begin life cycle replacement of Close-Circuit TV (CCTV) units for the entire bus fleet (1,583 buses). FY2021 will be year 1, of a 3 year program to replace CCTV units.

### Cost (\$M)



FY2020	\$0.5
FY2021	\$9.0
FY2022	\$9.0
FY2023	\$7.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$25.0

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					I						П
Planni	Development & Evaluation					Д			П	П	П	ū
Execution	Project Development	<b>✓</b>	<b>✓</b>							<b>V</b>		
	Implementation	1	<b>✓</b>	<b>✓</b>	<b>✓</b>						<b>✓</b>	<b>✓</b>

Total

\$9.0

# Service Vehicle Replacement Program

Investment Category: Business Support Investments

Support Equipment/Services

CIP: **CIP0009** 

Investment Program:

Mode: Bus

Project or Program: Program Location: Systemwide

### Description

Replace service vehicles that are past their useful life.

### **FY21 Planned Deliverables**

In FY2021, Metro has scheduled the replacement of service vehicles based on a prioritized list of mileage and need. Service vehicles include Passenger, Street Operation; Service Support, and Metro Transit Police vehicles.

### Cost (\$M)

## Strategic Objectives Supported Safety Cust. Sat.







### FY21 Expected Fund Source(s)

**Dedicated Funding** \$6.5

> \$6.5 Total

FY2020	\$13.3
FY2021	\$6.5
FY2022	\$6.5
FY2023	\$6.5
FY2024	\$6.5
FY2025	\$6.5
FY2026	\$6.5
FY21-26 Total	\$39.0

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification											
	Development & Evaluation					Щ						Ü
Execution	Project Development											
	Implementation	<b>V</b>	1	1	1	<b>✓</b>	1	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>

# **Environmental Compliance Program**

Investment Category: Business Support Investments

CIP: CIP0010

Investment Program:

Mode: Systemwide

Support Equipment/Services

Location: Systemwide

Project or Program: Program

### Description

This program designs and constructs upgrades and/or replaces equipment and facilities in order to maintain compliance with environmental regulations, responds to directives from environmental regulatory agencies, and minimizes risks of civil/criminal citations/fines. This project also designs and constructs the replacement of storage tank systems and tank monitoring systems at or near the end of their warranty periods, as well as the ground water remediation system at the New Hampshire Avenue chiller plant to prevent contamination and ensure environmental compliance. .

### FY21 Planned Deliverables

In FY2021, Metro will complete above ground storage tank removal at the Carmen Turner Facility, West Falls Church, and Southern Avenue Bus Garage Division and provide safety evaluations and certifications. Metro will also complete pre-construction activities at the New Hampshire Avenue chiller plant and issue a contract for construction to begin.



### Cost (\$M)

### Strategic Objectives Supported Safety Cust. Sat. Reliability Ridership FY21 Expected Fund Source(s)

System Perform	\$6.2

FY2020	\$5.5
FY2021	\$6.2
FY2022	\$8.3
FY2023	\$5.8
FY2024	\$5.9
FY2025	\$4.8
FY2026	\$4.8
FY21-26 Total	\$35.8

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification		1	П		Ш				П	П	
Planni	Development & Evaluation	<b>✓</b>	<b>✓</b>			П	-0			Ū-	-0	- 0
Execution	Project Development	<b>√</b>	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	<b>√</b>
	Implementation	~	<b>✓</b>	1	1	<b>✓</b>	1	1	<b>V</b>	<b>✓</b>	1	1

Total

\$6.2

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# MetroAccess Fleet Acquisition Program

Investment Category: Bus and Paratransit Investments CIP:

Investment Program: Bus and Paratransit Acquisition Mode: Access

Project or Program: Program Systemwide

### Description

Replace vehicles in the paratransit fleet (MetroAccess) on a lifecycle basis, consistent with the MetroAccess Fleet Plan. Vehicle replacement includes purchase of base vehicles and necessary retrofits to add paratransit equipment and features.

### FY21 Planned Deliverables

In FY2021, Metro will purchase 100 paratransit vans and continue to install CCTV, mobile data terminals and drive cam units on all new vehicles. Metro will also evaluate the performance of the sedans added to the fleet in FY2020, along with route efficiencies to determine the future mix of vans and sedans in the fleet replacement plan.



CIP0015

### Cost (\$M)

(2)	(121)	(2)	(B)	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impac

Formula Programs	\$12.0

FY2020	\$12.2
FY2021	\$12.0
FY2022	\$12.0
FY2023	\$12.0
FY2024	\$12.0
FY2025	\$12.0
FY2026	\$12.0
FY21-26 Total	\$72.0

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification			I		Ш						
Planning	Development & Evaluation					П	-,0				П	ū
- Lo	Project Development			-								
Execution	Implementation	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>V</b>	<b>V</b>	1	<b>✓</b>	<b>✓</b>

Total

\$12.0

# Track and Structures Rehabilitation

Investment Category: Track and Structures Rehabilitation

CIP: CIP0024

Investment Program: Fixed Rail

Mode: Rail

Location: Systemwide

Project or Program: Program

### Description

This program rehabilitates the track structure by replacing deteriorated fixed rail and structural components in addition to providing stabilization and tamping of track, along with improvements to the electrical and signal conductivity of running rail.



### **FY21 Planned Deliverables**

Metro will continue the systemwide state of good repair program, including stabilization and tamping of track, welding joints, and renewing crossties, fasteners, grout pads, drains, switches and sections of third rail.

### Cost (\$M)

# Strategic Objectives Supported

FY21 Expected Fund Source(s)











Cust. Sat. Reliability Ridership Op. I

Formula Programs	\$94.5
System Perform	\$0.6

Total	\$95.1
1 00 0000	

FY2020	\$114.4
FY2021	\$95.1
FY2022	\$97.5
FY2023	\$98.3
FY2024	\$88.0
FY2025	\$87.0
FY2026	\$87.0
FY21-26 Total	\$552.9

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>			<b>✓</b>	П	L		<b>V</b>			
Plan	Development & Evaluation	<b>✓</b>			<b>✓</b>	-10	-0		<b>✓</b>	<b>V</b>	<b>✓</b>	-0
no	Project Development	<b>✓</b>			<b>✓</b>			П.		T	<b>✓</b>	<b>✓</b>
Execution	Implementation	1	1	<b>✓</b>	<b>V</b>	<b>✓</b>	1	<b>V</b>	<b>V</b>	1	<b>V</b>	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Track Maintenance Equipment

Investment Category: Track and Structures Rehabilitation

Program

CIP: CIP0025

Investment Program: Fixed Rail

Project or Program:

Mode: Rail

1.00

Location: Commissioning for equipment will occur

at Greenbelt Rail Yard

### Description

This program replaces heavy-duty track equipment that has reached the end of its useful life and is no longer feasible to maintain. Track equipment is essential to the safe and efficient execution of track rehabilitation and maintenance work. Timely replacement of self-propelled track equipment maximizes equipment availability and reliability, and reduces delays due to equipment breakdowns which allows for efficient use of track outages.

### **FY21 Planned Deliverables**

Metro will take delivery of Dual Rail e-clip Installers, Ride-on Plate Inserters, and Swing Loaders.



### Cost (\$M)

### Strategic Objectives Supported











### FY21 Expected Fund Source(s)

System Perform		\$1.6
Dedicated Funding		\$2.3
	Total	\$3.9

FY2020	\$8.8
FY2021	\$3.9
FY2022	\$9.7
FY2023	\$24.7
FY2024	\$27.1
FY2025	\$14.3
FY2026	\$8.1
FY21-26 Total	\$87.7

Proj	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification  Development & Evaluation			<b>✓</b>		Ш				D	П		
		<b>✓</b>		<b>✓</b>	1	-11	-0			-	-0	
execution	Project Development	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>V</b>	<b>V</b>	1	<b>✓</b>
	Implementation	1	<b>V</b>	<b>✓</b>	1	<b>V</b>	1	1	<b>V</b>	1	<b>V</b>	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Warehouse Vertical Store Unit

CIP: Investment Category: Business Support Investments CIP0029

Mode: Systemwide Investment Program: Support Equipment/Services

Location: Metro Supply Facility Project or Program: Project

Various Storerooms at Railyards and

**Bus Garages** 

### Description

This project installs and reorganizes vertical and horizontal storage units, shelving and racking for storage of repair parts in order to allow greater storage capacity, inventory accuracy and enhanced safety. This project also upgrades parts storage systems with bar code systems for better parts location features.

### FY21 Planned Deliverables

In FY2021, this project will fund the procurement and replacement of vertical and horizontal storage units, warehouse security systems, and inventory control systems at the Metro Supply Facility and various storerooms located at railyards and bus garages.



### Cost (\$M)

Total \$1.8	Total Project Cost	\$11.0
	FY21-26 Total	\$1.8
	FY2026	\$0.0
Dedicated Funding \$1.8	FY2025	\$0.0
FY21 Expected Fund Source(s)	FY2024	\$0.0
	FY2023	\$0.0
Safety Cust. Sat. Reliability Ridership Op. Impact	FY2022	\$0.0
Strategic Objectives Supported	FY2021	\$1.8
Strategie Objectives Sugarded	FY2020	\$0.2
	LTD Expenses	\$9.0

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Plann	Development & Evaluation	<b>✓</b>				-Д-			П		П	- III
rtion	Project Development	<b>√</b>	<b>✓</b>									
Executi	Implementation	<b>V</b>	<b>V</b>	E		ogt.	-0	П.				.0

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Revenue Collection Facility Improvements

Investment Category: Business Support Investments

CIP: CIP0034

Mode:

Investment Program: Support Equipment/Services

Systemwide

Project or Program: Project Location: Alexandria

## Description

Assess, upgrade or replace structures, equipment, and systems, as needed, in the high security facility where Metro processes cash revenue.



### **FY21 Planned Deliverables**

In FY2021, Metro will complete the building assessment of the revenue collection facility and continue design of facility improvements.

### Cost (\$M)

							LTDE	xpens	es			\$2.7
							FY202	20				\$0.5
-	egic Objectives Supp		(0)	,			FY202	21				\$2.5
		3)	(S)	(	<b>6</b>		FY202	22				\$2.5
		ability F	Ridership	Op.	Impact		FY202	23				\$2.8
Y21 E	expected Fund Source(s)						FY202	24				\$0.0
Syst	tem Perform				\$	2.5	FY202	25				\$0.0
							FY202	26				\$0.0
						-	FY21-	26 To	tal			\$7.8
			Tot	al	\$	2.5	Total	Projec	t Cost			\$10.9
Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
ning	Needs Identification					П						
Planning	Development & Evaluation					-,0	-0					
lion	Project Development	<b>✓</b>						П				
Execution	Implementation		1	1	<b>✓</b>		П	П				D

# Bicycle & Pedestrian Facilities Improvements

Investment Category: Station and Passenger Facilities

Project

CIP:

Investment Program: Platforms & Structures

Project or Program:

Mode: Rail

Location: Systemwide

CIP0035

### Description

This project will increase bicycle parking capacity at Metrorail stations and improve bicycle and pedestrian connections to stations from local communities. Additionally, this project replaces bike racks and lockers that are structurally damaged.



### **FY21 Planned Deliverables**

In FY2021, Metro will begin replacing existing bike lockers and racks with new automated lockers and racks securable through a mobile application. Metro will also begin planning activities for new pedestrian walkways throughout the system.

### Cost (\$M)

### \$10.2 LTD Expenses \$1.5 FY2020 FY2021 \$0.5 FY2022 \$1.5 \$1.5 FY2023 \$1.5 FY2024 \$1.5 FY2025 \$1.5 FY2026 \$8.0 FY21-26 Total \$19.7 **Total Project Cost**

FY21 Expected Fund Source(s)

Strategic Objectives Supported











Dedicated Funding	\$0.5

\$0.5 Total

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification		1			П						
Development & Evaluation	<b>✓</b>	<b>✓</b>			П			П	П.	П	Ū
Project Development		1	1								
Implementation			1	<b>V</b>	<b>V</b>	1	1	<b>V</b>	1	<b>4</b>	1
	Development & Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development  V	Needs Identification  Development &  Evaluation  Project Development  V	Needs Identification  Development &  Evaluation  Project Development  V	Needs Identification  Development &  Evaluation  Project Development  V  V  V  V  V  V  V  V  V  V  V  V  V	Needs Identification  Development &  Evaluation  Project Development  V  V  V  V  V  V  V  V  V  V  V  V  V	Needs Identification  Development &  Evaluation  Project Development  V	Needs Identification  Development &  Evaluation  Project Development  V	Needs Identification  Development &  Evaluation  Project Development  V

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Procurement Program Support

Investment Category: Business Support Investments

Program

Support Equipment/Services

CIP: CIP0036

Investment Program:

Mode: Systemwide

Project or Program:

Location: Systemwide

### Description

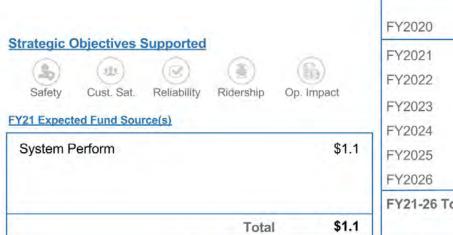
Staff support for capital program procurement activity.



### **FY21 Planned Deliverables**

In FY2021, Metro will continue to provide procurement support to facilitate planned capital projects.

### Cost (\$M)



FY2020	\$1.1
FY2021	\$1.1
FY2022	\$1.1
FY2023	\$1.1
FY2024	\$1.1
FY2025	\$1.1
FY2026	\$1.1
FY21-26 Total	\$6.6

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						
Planni	Development & Evaluation		П			П			П		П	
no	Project Development											
Execution	Implementation	<b>V</b>	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	<b>✓</b>	1	<b>V</b>	<b>✓</b>

# Core & System Development Program

Investment Category: Business Support Investments

CIP: CIP0039

Mode:

Investment Program:

Systemwide

Project or Program: Program Location: Systemwide

### Description

This program conducts near-term and long-range planning studies and produces plans for station enhancements that improve pedestrian flow, travel time, customer experience, vertical transportation, line or route operations, and station access. Funding for future year implementation of adopted plans is included in the future fiscal years.

Support Equipment/Services



### **FY21 Planned Deliverables**

In FY2021, Metro will continue to provide planning, review, and implementation of facility and passenger improvements systemwide.

### Cost (\$M)

# Strategic Objectives Supported











### FY21 Expected Fund Source(s)

**Dedicated Funding** \$12.6

Total	\$12.6
-------	--------

FY2020	\$3.1
FY2021	\$12.6
FY2022	\$5.6
FY2023	\$61.0
FY2024	\$97.3
FY2025	\$107.7
FY2026	\$80.3
FY21-26 Total	\$364.6

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification	<b>V</b>	1	<b>V</b>		1	П	П	<b>V</b>	П	П	
Plan	Development & Evaluation	<b>✓</b>	<b>✓</b>	<b>√</b>		<b>✓</b>			<b>✓</b>	Д		Ū
ion	Project Development	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>		П	1	В		
Execution	Implementation	<b>V</b>	1	<b>✓</b>	1	<b>✓</b>	1	1	<b>V</b>	1	1	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Product Lifecycle Software Decommissioning

Investment Category: Business Support Investments

CIP: CIP0042

Investment Program: IT

Mode: Systemwide

Project or Program: Program Location: Systemwide

### Description

WMATA's current product lifecycle management (PLM) software product will be decommissioned and its functionality will be incorporated into other applications to standardize asset condition tracking systemwide.



### **FY21 Planned Deliverables**

The project will begin and complete task related to decommissioning of the Windchill application.

### Cost (\$M)



FY2020	\$0.0
FY2021	\$0.5
FY2022	\$1.0
FY2023	\$1.0
FY2024	\$0.5
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$3.0

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						
Planni	Development & Evaluation		Ш			Д			Ш	П	П	
ion	Project Development		1									
Execution	Implementation		1	1	<b>✓</b>	1	П					П

Total

\$9.6 \$2.1

\$5.2

\$2.0

\$0.0

\$0.0

\$0.0

\$0.0

\$7.2

\$18.9

# Bus and Rail Scheduling System Improvements

Investment Category: Business Support Investments

Project

CIP: CIP0043

Investment Program: IT

Mode: Bus

.....

Project or Program:

Location: Systemwide

### Description

Replace bus scheduling system and upgrade rail scheduling system, so that both modes are scheduled in the same software package.



### **FY21 Planned Deliverables**

In FY2021, Metro will begin project planning, design and development for Phase 1 of the scheduling Bus and Rail system and complete MetroAccess scheduling system product implementation.

### Cost (\$M)

### LTD Expenses FY2020 Strategic Objectives Supported FY2021 FY2022 Safety Cust. Sat. Reliability Ridership Op. Impact FY2023 FY21 Expected Fund Source(s) FY2024 System Perform \$5.2 FY2025 FY2026 FY21-26 Total \$5.2 Total **Total Project Cost**

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						
Planning	Development & Evaluation		П			Д			П		П	П
uo	Project Development	<b>✓</b>				$(\Box)$						
Execution	Implementation	<b>V</b>	1	<b>✓</b>								

# Management Support Software

Investment Category: Business Support Investments CIP:

Investment Program: IT Mode: Systemwide

Project or Program: Project

### Description

This project will update software for the Metro access control system. The access control software will support the technical architecture communication with physical badge readers and allow badge holders access to Metro facilities based on the approved permissions configured in the software.

# CARRIE CARRIE AART 20 I G

CIP0049

Systemwide

### **FY21 Planned Deliverables**

In FY2021, Metro will complete the One Badge project by upgrading access software and adding badge readers, integrating Human Capital Model, and finalizing security protocols.

### Cost (\$M)

Location:



# Rail Operations Support Software

Investment Category: Business Support Investments

CIP: CIP0056

Investment Program: IT

Mode: Rail

Project or Program: Program

Location: Systemwide

### Description

This program will provide software updates and system integration between the Rail Operations Control Center (ROCC) and Passenger Information Display System (PIDS) at each station, ensuring real time train information is accurate and available to customers. This program will include implementation at new stations as they become operational.

### FY21 Planned Deliverables

In FY2021 Metro will perform upgrades to enhance Passenger Information Display Systems (PIDS). These upgrades include software to support digital media for Silver Line Phase II stations, integration of the Potomac Yard station, and new 55 inch PIDS displays being installed systemwide. The program will also implement performance dashboard software to monitor and report on the status of each PIDS in Metro's rail stations.



### Cost (\$M)

FY21-26 Total	\$36.8
FY2026	\$5.4
FY2025	\$5.9
FY2024	\$6.2
FY2023	\$5.4
FY2022	\$6.0
FY2021	\$7.9
FY2020	\$3.0

### Strategic Objectives Supported











## FY21 Expected Fund Source(s)

Dedicated Funding \$7.9

Total \$7.9

ct Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification					H						
					-Д	-0			- 0	-0	-,0
Project Development	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	1	<b>✓</b>
Implementation	1	1	1	1	~	1	1	V	1	1	1
	as e-years	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development   V  V	Needs Identification  Development & Evaluation  Project Development  V  V  V	Needs Identification  Development & Evaluation  Project Development  V V V V V	Needs Identification  Development & Evaluation  Project Development  V V V V V V V V V V V V V V V V V V	Needs Identification  Development & Evaluation  Project Development  V V V V V V V V V V V V V V V V V V	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development  V V V V V V V V V V V V V V V V V V	Needs Identification  Development & Evaluation  Project Development  V V V V V V V V V V V V V V V V V V

# 8000 Series Railcar Procurement

Investment Category: Railcar Investments CIP: CIP0059

Investment Program: Railcar Acquisition Mode: Rail

Project or Program: Project Systemwide

### Description

This project acquires 360 new railcars to replace the 2000 and 3000 Series fleets, and includes unfunded options for future railcar fleet expansion.

### **FY21 Planned Deliverables**

In FY2021, Metro will begin mobilization and kickoff meetings with the selected 8000 Series Railcar manufacturer, and initiate the conceptual and then the preliminary railcar design.



### Cost (\$M)

(320)	$(\mathbf{S})$	(疊)	(33)
Cust. Sat.	Reliability	Ridership	Op. Impac

LTD Expenses	\$3.7
FY2020	\$7.2
FY2021	\$73.2
FY2022	\$54.9
FY2023	\$106.3
FY2024	\$104.9
FY2025	\$167.7
FY2026	\$237.6
FY21-26 Total	\$744.6
Total Project Cost	\$755.5

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					H						
Planni	Development & Evaluation					П	- 0				П	
no	Project Development	<b>✓</b>	<b>✓</b>	<b>√</b>			<b>✓</b>		<b>√</b>		-	
Execution	Implementation	1	1	<b>V</b>	1	1	1	1	<b>V</b>	1	1	1

Total

\$73.2

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Railcar Rehabilitation Program

CIP: Investment Category: Railcar Investments CIP0063

Mode: Rail Investment Program: Railcar Maintenance/Overhaul

Location: Greenbelt Rail Yard; Brentwood Rail Project or Program: Program

Yard

### Description

This program will support scheduled overhauls in order to maintain railcar state of good repair, improve lifecycle safety and railcar reliability. Approximately one-fifth of the fleet (225 cars), are overhauled annually.



In FY2021, Metro will overhaul and conduct Scheduled Maintenance Service (SMS) of about 242 Railcars. The schedule will include 100 of he 2000/3000 Series, 78 of the 6000 Series, and 64 of the 7000 Series.



### Cost (\$M)

### Strategic Objectives Supported Safety Cust. Sat. Reliability Ridership FY21 Expected Fund Source(s) PRIIA \$60.6 System Perform \$3.8

FY2020	\$52.3
FY2021	\$64.5
FY2022	\$49.2
FY2023	\$49.2
FY2024	\$48.3
FY2025	\$46.2
FY2026	\$71.7
FY21-26 Total	\$329.1

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>				H						
Planni	Development & Evaluation	<b>✓</b>				Щ	-,0				П	
no	Project Development	<b>✓</b>	<b>✓</b>									
Execution	Implementation	1	1	1	1	~	1	1	<b>V</b>	1	1	1
ш	* Project Phase chart m	ay contain	multiple	project	or progr	am initia	atives the	at span	and beg	in in var	ious fisca	al years

Total

\$64.5

# Rail Car Safety & Reliability Improvements

Investment Category: Railcar Investments

Program

CIP: **CIP0067** 

Investment Program:

Project or Program:

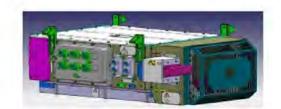
Mode: Rail

Railcar Maintenance/Overhaul

Location: Systemwide

### Description

This program performs engineering analysis, diagnosis, testing and resolution of safety, maintenance and operational issues relating to the railcar fleet and its interaction with track, automatic train control, communication and power systems, resolving compatibility issues across the various fleets and infrastructure related to changes and aging technology which improves the safety and reliability of railcars.



### FY21 Planned Deliverables

In FY2021, Metro will make final payments for Precision Station Stop, Converter Function Module, and Stop & Proceed software updates for 2000 /3000 and 6000 Series Railcars. Metro also plans to receive the remaining Bench Testing equipment units for Converter Function Modules for Railcar Maintenance/Overhaul Shops.

### Cost (\$M)

### Strategic Objectives Supported Safety Cust. Sat. Reliability





### FY21 Expected Fund Source(s)

PRIIA		\$2.4
	Total	\$2.4

FY2020	\$5.3
FY2021	\$2.4
FY2022	\$2.2
FY2023	\$2.2
FY2024	\$2.2
FY2025	\$2.2
FY2026	\$2.2
FY21-26 Total	\$13.4

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П				D		
Planni	Development & Evaluation					П	-,0		П	П	П	Ū
on	Project Development	<b>√</b>		-				П		10		
Execution	Implementation	~	1	1	1	<b>✓</b>	1	<b>V</b>	<b>V</b>	<b>✓</b>	1	<b>V</b>

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Elevator Rehabilitation Program

Investment Category: Station and Passenger Facilities

CIP: CIP0072

Mode: Rail

Investment Program: Vertical Transportation

Locations for FY2021 are under review.

Location: Systemwide

Project or Program: Program

### Description

Rehabilitate elevators at Metrorail stations across the system to improve performance and availability. Project includes the replacement of internal elevator components and upgrade of associated lighting while ensuring that code requirements are met and a state of good repair is achieved or maintained.

In FY2021, Metro will rehabilitate fourteen hydraulic elevators units.

# **FY21 Planned Deliverables**

Total

# Cost (\$M)



FY2020	\$6.6
FY2021	\$9.0
FY2022	\$9.5
FY2023	\$8.5
FY2024	\$8.5
FY2025	\$8.5
FY2026	\$8.5
FY21-26 Total	\$52.5

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification											
Planning	Development & Evaluation		П			П			П		П	
uo	Project Development											
Execution	Implementation	1	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>

\$9.0

# Escalator Rehabilitation

Investment Category: Station and Passenger Facilities

CIP: CIP0073

Investment Program: Vertical Transportation

Mode: Rail

Project or Program: Program

Location: Systemwide

### Description

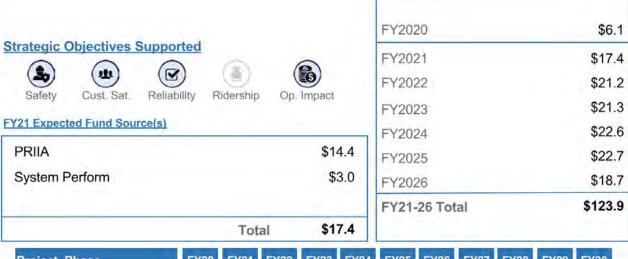
This program rehabilitates and replaces escalators as necessary to maintain escalator availability, safety and reliability. The escalators are rehabilitated with energy saving devices.



### FY21 Planned Deliverables

In FY2021, Metro will complete the rehabilitation of eight to ten units under the new 5-year Escalator Rehabilitation contract which totals 89 units. FY2021 will be the first year of new contract.

### Cost (\$M)



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ementation	1	1	1	1	<b>V</b>	1	1	<b>V</b>	1	1	1
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# Rail Power Infrastructure Upgrades

Investment Category: Rail Systems Investments CIP: CIP0076

Investment Program: Propulsion Mode: Rail

Project or Program: Project Shirley Highway, Van Dorn St. Greenleaf, Greenbelt, West Hyattsville, Ablion Rd., College Park, Queens Changl Rd. 31st

College Park, Queens Chapel Rd., 31st Avenue, and 6th & Gallatin St.

### Description

This project will upgrade and replace electrical infrastructure equipment to improve performance of the rail power system and accommodate additional eight-car trains. Upgrades to the rail power infrastructure include Traction Power Substations, Tie Breaker Stations, cabling, and transformers to both increase system capacity and reliability.

### FY21 Planned Deliverables

This project plans to complete Traction Power Substation equipment upgrades at Shirley Highway, Van Dorn Street, Greenleaf, Greenbelt, West Hyattsville, and Ablion Road. Tie Breaker Station equipment will be installed at College Park, Queens Chapel Road, 31st Avenue, and 6th & Gallatin Street. Systemwide cable meggering and cable replacement are on-going efforts throughout the year.



### Cost (\$M)

LTD Expenses	\$104.8
FY2020	\$54.7
FY2021	\$17.5
FY2022	\$17.9
FY2023	\$17.9
FY2024	\$17.9
FY2025	\$17.9
FY2026	\$17.9
FY21-26 Total	\$106.8
Total Project Cost	\$266.2

### Strategic Objectives Supported











FY21 Expected Fund Source(s)

Dedicated Funding		\$17.5
	Total	\$17.5

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification											
	Development & Evaluation					П	-,0			ъ	П	-,0
Execution	Project Development			-								
	Implementation	<b>✓</b>	<b>✓</b>	1	1	~	1	1	<b>V</b>	1	<b>✓</b>	<b>✓</b>

# Shepherd Parkway Bus Facility

Investment Category: Bus and Paratransit Investments

CIP: **CIP0086** 

Investment Program:

Mode: Bus

**Bus Maintenance Facilities** 

Project or Program: Project

Shephard Parkway Bus Garage - Blue Location:

Plains

### Description

This project will perform the design and construction of the Compressed Natural Gas (CNG) facility at Shephard Parkway.



### **FY21 Planned Deliverables**

In FY2021, Metro will complete design and construction of new CNG facility.

### Cost (\$M)

	FY2026 FY21-26 Total	\$3.2
	FY2025 FY2026	\$0.0
Formula Programs \$3.2	FY2025	\$0.0
Y21 Expected Fund Source(s)	FY2024	\$0.0
Safety Cust. Sat. Reliability Ridership Op. Impact	FY2023	\$0.0
(3) (4) (8) (8) (8)	FY2022	\$0.0
Strategic Objectives Supported	FY2021	\$3.2
Standards Older Branch Standards	FY2020	\$0.1
	LTD Expenses	\$2.1

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Plann	Development & Evaluation		П			-,0	-,0		ш			·,III
no	Project Development											
Execution	Implementation	1	1		E.	opt.	-17	П		п		. [

# Station Rehabilitation Program

Investment Category: Station and Passenger Facilities

CIP: CIP0087

Investment Program: Platforms & Structures

Mode: Rail

Project or Program: Program

Location: Systemwide

### Description

Twenty-four stations are scheduled for rehabilitation every year which results in each station receiving rehabilitation every four years. This program consists of evaluation of station condition, replacement of worn materials, and a thorough cleaning and power washing of all concrete and architectural features.

### FY21 Planned Deliverables

In FY2021, full rehabilitations of stations will consist of cleaning and power washing of all concrete and architectural features and repair of worn interior fixtures. The schedule of stations for FY2021 is still being determined.



### Cost (\$M)

### Strategic Objectives Supported











Op. Impac

### FY21 Expected Fund Source(s)

System Perform		\$9.2
Dedicated Funding		\$10.6
	Total	\$19.8

FY2020	\$11.0
FY2021	\$19.8
FY2022	\$19.0
FY2023	\$23.5
FY2024	\$19.6
FY2025	\$17.6
FY2026	\$18.0
FY21-26 Total	\$117.4

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification		<b>V</b>	П		H						
Development & Evaluation		<b>✓</b>	<b>✓</b>		10	-0			$\Box$	П	
Project Development			<b>✓</b>								
Implementation	<b>V</b>	1	<b>V</b>	<b>V</b>	<b>V</b>	1	1	<b>V</b>	1	1	1
	Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &	Needs Identification  Development &	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &	Needs Identification  Development &	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &	Needs Identification  Development &

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Station Entrance Canopies

Investment Category: Station and Passenger Facilities

CIP: CIP0088

Investment Program: Platforms & Structures

Mode: Rail

Project or Program: Project

Location: Systemwide

### Description

This project provides for installation of canopies over the remaining eleven stations with exposed escalators to protect both riders and escalators from weather. Canopies will aid in maintaining the State of Good Repair.



### FY21 Planned Deliverables

In FY2021, Metro will award the contract for station canopies and fixed stairwells at nine locations.

### Cost (\$M)



LTD Expenses	\$29.3
FY2020	\$9.0
FY2021	\$7.3
FY2022	\$5.6
FY2023	\$5.7
FY2024	\$3.0
FY2025	\$1.0
FY2026	\$1.0
FY21-26 Total	\$23.5
Total Project Cost	\$61.8

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification		1	H		H						
	Development & Evaluation		<b>✓</b>	<b>4</b>		П						0
Execution	Project Development	<b>✓</b>	<b>✓</b>	<b>✓</b>				П				
	Implementation	1	<b>V</b>	<b>V</b>	1	<b>V</b>	<b>✓</b>	<b>V</b>	<b>V</b>	1	<b>✓</b>	<b>✓</b>

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Metro Transit Police Department (MTPD) District III Substation Construction

Investment Category: Business Support Investments

CIP: CIP0102

Investment Program: MTPD

Mode: Systemwide

Project or Program: Project

Location: Prince George's County

# Description

Renovate existing child care facility at Morgan Boulevard station to serve as a police substation with administrative office workspace, locker rooms, break room, gym, interview rooms, and other workspaces.

# FY21 Planned Deliverables

This project will design and construct a new police substation in the vicinity of the Morgan Boulevard station in Maryland to provide adequate police coverage.



# Cost (\$M)

# Strategic Objectives Supported Safety Cust. Sat. Reliability Ridership Op. Impact FY21 Expected Fund Source(s) Dedicated Funding \$2.0

LTD Expenses	\$1.0
FY2020	\$1.0
FY2021	\$2.0
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$2.0
Total Project Cost	\$3.9

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Planning	Development & Evaluation	1				П			П		П	Ū
ion	Project Development	<b>✓</b>										
Execution	Implementation	<b>✓</b>	1					П			Ð	D

Total

\$2.0

# Rhode Island Avenue Metrorail Station Platform Rehabilitation

Investment Category: Station and Passenger Facilities

CIP: CIP0108

Investment Program: Platforms & Structures

Mode: Rail

Project or Program: Project

Location: Rhode Island Ave. Station

### Description

This project will rehabilitate the Rhode Island Avenue station platform structure, as well as life-safety systems and station ammenities to improve the customer experience.

# **FY21 Planned Deliverables**

Prior year construction was completed in two phases, addressing each side of the platform as well as portions of the structure that cross over the roadway below. This construction effort focused on concrete spalling and structural repair. A future year effort will address all other station systems and customer improvements to align this station with rehabilitation efforts and a state of good repair completed by the other Station Platform Rehabilitation Programs. No planned deliverables in FY21. Project will commence between FY2022 and FY2026.

# Strategic Objectives Supported











Reliability Ri

Op. Impact

### FY21 Expected Fund Source(s)

FY21 Funding Not Required



LTD Expenses	\$18.7
FY2020	\$0.0
FY2021	\$0.0
FY2022	\$0.0
FY2023	\$1.0
FY2024	\$9.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$10.0
Total Project Cost	\$28.7

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Planning	Development & Evaluation		П			П			П		П	Ū
lon	Project Development				<b>✓</b>							
Execution	Implementation				<b>✓</b>	<b>✓</b>					D	D

# Capital Program Financing

Investment Category: Business Support Investments

CIP: CIP0131

Mode:

Investment Program: Support Equipment/Services

Systemwide

Project or Program: Program

Location: Systemwide

# Description

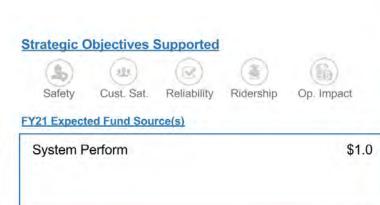
Availability fees and interest expense for Metro's short-term line of credit used for capital program expenditures.



# **FY21 Planned Deliverables**

In FY2021, Metro will continue to fund the lines of credit and interim financing costs necessary to finance capital program cash flow needs.

# Cost (\$M)



FY21-26 Total	\$6.0
FY2026	\$1.0
FY2025	\$1.0
FY2024	\$1.0
FY2023	\$1.0
FY2022	\$1.0
FY2021	\$1.0
FY2020	\$0.8

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Plann	Development & Evaluation					П			П		П	
no	Project Development											
Execution	Implementation	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>V</b>	<b>✓</b>	1	<b>✓</b>	<b>✓</b>

Total

\$1.0

# Escalator and Elevator Overhaul

Investment Category: Station and Passenger Facilities

Program

CIP: CIP0132

Investment Program: Vertical Transportation Mode: Rail

Project or Program:

Location: Systemwide

# Description

Rehabilitate or replace escalator and elevator components based on WMATA asset management criteria.



# **FY21 Planned Deliverables**

In FY2021, Metro will replace speed reducer motors, and rack and axle units; refurbish gearboxes, brake board and escalator steps. Additionally, production of 10,000 steps for replacement will begin.

# Cost (\$M)

# Strategic Objectives Supported









FY21 Expected Fund Source(s)

Safety

**Dedicated Funding** \$6.0

\$6.0 Total

FY2020	\$11.6
FY2021	\$6.0
FY2022	\$6.6
FY2023	\$6.6
FY2024	\$6.6
FY2025	\$6.6
FY2026	\$6.6
FY21-26 Total	\$39.2

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification											
	Development & Evaluation		П		П	Д			П			
execution	Project Development	<b>√</b>	<b>✓</b>	<b>√</b>	<b>√</b>	1	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>
	Implementation	<b>V</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	<b>V</b>	<b>V</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>

# Radio Infrastructure Replacement

Investment Category: Rail Systems Investments

CIP: CIP0136

Investment Program:

Mode: Rail

Signals & Communications

Location: Systemwide

Project or Program: Project

### Description

This project will replace the existing Metro Comprehensive Radio Communications System (CRCS) operating in 450-490 MHz frequency band (also referred to as T-Band) with a new system operating in the 700 MHz band, as required by the Federal Communications Commission (FCC) T-Band relocation requirement that affects the Metro's Ultra High Frequency radio system. The project will also install wireless signal communications throughout the tunnel system allowing customers to utilize cellular and data service while underground.

### FY21 Planned Deliverables

In FY2021, Metro plans to continue the 700/800 MHz Station installation, to order additional subscriber units in vehicles and handheld radios, and to install the remaining Metro box enclosures that connect that support the Distributed Antenna System (DAS) to cover Metro's above and underground system for both radio and cellular use.



# Cost (\$M)

LTD Expenses	\$179.6
FY2020	\$74.5
FY2021	\$60.5
FY2022	\$22.1
FY2023	\$19.1
FY2024	\$15.5
FY2025	\$16.3
FY2026	\$0.3
FY21-26 Total	\$133.9
Total Project Cost	\$387.9

# Strategic Objectives Supported



122









# FY21 Expected Fund Source(s)

PRIIA		\$60.0
System Perform		\$0.5
	Total	\$60.5

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
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# Railcar Preventive Maintenance

Investment Category: Railcar Investments

CIP: CIP0142

Investment Program:

Mode: Rail

Project or Program:

Location: Systemwide

# Description

Provide preventive maintenance of the railcar fleet.

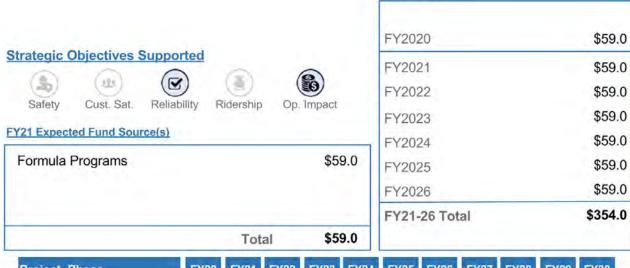
Program



# **FY21 Planned Deliverables**

Cost to inspect and perform scheduled maintenance on railcars.

Railcar Maintenance/Overhaul



Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					H						
Planning	Development & Evaluation		П			П			П		П	.0
no	Project Development											
Execution	Implementation	1	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>

# Bus Preventive Maintenance Program

Investment Category: Bus and Paratransit Investments

Program

CIP: CIP0143

Investment Program:

Project or Program:

Mode: Bus

Bus Maintenance/Overhaul

Location: Systemwide

# Description

Inspect and service buses and bus components to preserve and extend functionality of the vehicle.



# **FY21 Planned Deliverables**

Cost to inspect and perform scheduled maintenance on the bus fleet.



FY2020	\$1.0
FY2021	\$1.0
FY2022	\$1.0
FY2023	\$1.0
FY2024	\$1.0
FY2025	\$1.0
FY2026	\$1.0
FY21-26 Total	\$6.0

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification  Development & Evaluation					П							
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Execution	Project Development											
	Implementation	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>

# Station and Yard Security Upgrades

Investment Category: Railcar Investments

Railcar Maintenance Facilities Mode: Rail

Project or Program: Program

Location: Systemwide

CIP0145

CIP:

### Description

Investment Program:

This program will provide for the hardening and enhancement of security at various rail yards, stations, and facilities by installing CCTV surveillance and additional security measures.

# FY21 Planned Deliverables

In FY2021, Metro plans to evaluate current parking facility cameras and continue multi-system Life Safety and Security upgrades at various stations. Metro will also complete CCTV and security upgrades at Shady Grove, Greenbelt, and Glenmont yard facilities.



# Cost (\$M)

(2)	11	(3)		
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact
21 Expec	ted Fund Sou	rce(s)		

FY2020	\$9.9
FY2021	\$10.8
FY2022	\$12.5
FY2023	\$15.9
FY2024	\$17.9
FY2025	\$15.6
FY2026	\$9.2
FY21-26 Total	\$81.8

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification  Development & Evaluation					H					П		
						-Д	-0			- 10 -	-0-	- 0
Execution	Project Development	<b>✓</b>	<b>√</b>	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	1	<b>✓</b>
	Implementation	1	1	<b>✓</b>	1	<b>✓</b>	1	1	<b>V</b>	1	1	1

Total

\$10.8

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Station Cooling Systems Upgrade

Investment Category: Station and Passenger Facilities CIP: CIP0151

Investment Program: Station Systems Mode: Rail

Project or Program: Program Location: Systemwide

### Description

This program funds the rehabilitation of station air conditioning systems including, but not limited to, rehabilitation/replacement of chiller plants, cooling towers, ventilation systems, air handling units and ductwork.

# FY21 Planned Deliverables

In FY2021, Metro plans to design and replace chillers at Rosslyn, Stadium Armory, Van Ness-UDC, and L'Enfant Plaza. Station air conditioning units are planned for replacement at Pentagon, DuPont Circle, and Crystal City. Designs to be completed for station air conditioning units at Metro Center, Smithsonian, Judiciary Square, Gallery Place-Chinatown, Federal Triangle, Farragut West, Farragut North, Capitol South, and Potomac Avenue.

# -----

# Strategic Objectives Supported











FY21 Expected Fund Source(s)

Formula Programs \$11.6

Total \$11.6



FY2020	\$20.0
FY2021	\$11.6
FY2022	\$12.8
FY2023	\$16.8
FY2024	\$10.7
FY2025	\$10.9
FY2026	\$11.1
FY21-26 Total	\$74.0

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification			I		П						
Planni	Development & Evaluation					П	-,0		ū	П	П	-0
Execution	Project Development			B								
	Implementation	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	<b>V</b>	1	1	<b>✓</b>

# Parking Garage and Lot Rehabilitation

Investment Category: Station and Passenger Facilities

CIP: CIP0152

Investment Program:

Mode: Systemwide

Platforms & Structures

Location: Systemwide

Project or Program: Program

### Description

This program will rehabilitate parking structures including repair of horizontal concrete surfaces, slabs, soffits, beams, columns, walls; repair or replacement of post-tensioning anchorages, tendons, sheathing and expansion joints; application of traffic markings and traffic bearing membrane.



### **FY21 Planned Deliverables**

In FY2021, Metro will complete the rehabilitation of the parking garage located at Addison Road. Begin the rehabilitation of four parking garages to include Wheaton, PG Plaza, Anacostia and Glenmont. Complete rehabilitation of three surface lots located at Landover, Naylor Road, and Capitol Heights.

# Cost (\$M)

# Strategic Objectives Supported











FY21 Expected Fund Source(s)

Formula Programs		\$11.6
Dedicated Funding		\$0.2
	Total	\$11.8

FY2020	\$9.4
FY2021	\$11.8
FY2022	\$9.0
FY2023	\$10.0
FY2024	\$10.0
FY2025	\$13.0
FY2026	\$13.0
FY21-26 Total	\$66.8

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification  Development & Evaluation					П					П		
						Щ	- 0			П	-0	-,0
Execution	Project Development	<b>√</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	1	1	<b>√</b>	<b>✓</b>	<b>V</b>	1	<b>√</b>
	Implementation	<b>V</b>	<b>V</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	1	1	<b>V</b>	<b>✓</b>	1	<b>V</b>

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

\$22.0

\$9.3

\$5.8

\$6.0

\$4.9

FY30

# Roof Rehabilitation and Replacement

Investment Category: Business Support Investments

CIP: CIP0170

Investment Program:

Mode: Systemwide

Support Equipment/Services

Location: Systemwide

Project or Program: Program

### Description

Roof rehabilitation or replacement, as needed, at approximately 660 Metro locations. Project includes preparation of assessment report, sampling, removal, and installation of new roofing system.

# Carmen E. Turner Training Facility

# **FY21 Planned Deliverables**

In FY2021, Metro will complete roof replacements at Carmen Turner Facility Building D and Landover Bus Maintenance Building. Also, Metro will begin replacements at Metro Supply Facility and Open Material Storage Facility for completion in FY22.

# Cost (\$M)

FY2020

# Strategic Objectives Supported





Cust. Sat.







FY21 Expected Fund Source(s)

Formula Programs \$9.3

FY2021		
FY2022		
FY2023		
FY2024		

\$4.6 FY2025 \$4.6 FY2026

\$35.3 FY21-26 Total

		Tot	tal	\$	9.3					
Project Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	
Needs Identification										Ī

=	Needs identification											
Plan	Development & Evaluation	Ш				Д			П	П		
ion	Project Development	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>V</b>	<b>✓</b>
Execut	Implementation	<b>✓</b>	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>V</b>

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# Escalator Replacement

Investment Category: Station and Passenger Facilities

CIP: CIP0185

Investment Program: Vertical Transportation

Mode: Rail

Location: Systemwide

Project or Program: Program

# Description

Replacement of escalators that have reached the end of their useful life.



# **FY21 Planned Deliverables**

The replacement of eight units are planned for FY21, specific locations to be determined.



FY2020	\$11.4
FY2021	\$22.0
FY2022	\$33.7
FY2023	\$33.7
FY2024	\$33.7
FY2025	\$30.4
FY2026	\$20.4
FY21-26 Total	\$173.8

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification									D	П	
Planning	Development & Evaluation			Ü		Д						0
noi	Project Development	<b>√</b>	<b>✓</b>	<b>V</b>	<b>V</b>	1	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	1	<b>✓</b>
Execution	Implementation	1	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	1	<b>V</b>	<b>✓</b>	1	1	<b>✓</b>

# Railcar Rooftop Access Platforms

Investment Category: Railcar Investments CIP: CIP0204

Investment Program: Railcar Maintenance Facilities Mode: Rail

Project or Program: Project Shady Grove, Greenbelt, Branch Avenue, Alexandria, and Brentwood Rail

Yards

# Description

Construct and install railcar rooftop access platforms at Alexandria, Brentwood, Shady Grove, Branch Avenue, and Greenbelt railyards to allow safe and efficient maintenance of HVAC on the 7000-series trains. As part of the 6-year Capital Improvement Program, work will be done at Brentwood and Shady Grove railyards. The remaining railyards are scheduled as part of the 10-year Plan.

# FY21 Planned Deliverables

No planned deliverables in FY21. Project will resume between FY2022 and FY2026.



٠,	(111)		( <u>*</u> )	
afety	Cust. Sat.	Reliability	Ridership	Op. Impa
	Cust. Sat.		Ridership	Op. 1

LTD Expenses	\$6.1
FY2020	\$1.0
FY2021	\$0.0
FY2022	\$1.0
FY2023	\$1.0
FY2024	\$0.5
FY2025	\$0.5
FY2026	\$0.0
FY21-26 Total	\$3.0
Total Project Cost	\$10.1

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					I						
Planni	Development & Evaluation					П			П			.0
ntion	Project Development			<b>✓</b>								
Executi	Implementation	<b>✓</b>		<b>✓</b>	<b>✓</b>	<b>✓</b>	1	П	<b>✓</b>	1	<b>✓</b>	<b>✓</b>

# Carmen Turner Facility (CTF) Electrical Upgrade

Investment Category: Bus and Paratransit Investments CIP: CIP0206

Investment Program: Bus Maintenance Facilities Mode: Bus

Project or Program: Project Carmen Turner Facility - Landover

### Description

This project will provide a more reliable power source for Metro-critical functions at CTF. The project also reconfigures and realigns portions of the electrical distribution system for more efficient distribution.

# **FY21 Planned Deliverables**

No planned deliverables in FY2021. Project will resume between FY2022 and FY2026.



\$5)	(121)		(§)	
afety	Cust. Sat.	Reliability	Ridership	Op. Impact
	afety			

LTD Expenses	\$5.5
FY2020	\$0.0
FY2021	\$0.0
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$0.3
FY2025	\$0.0
FY2026	\$2.5
FY21-26 Total	\$2.8
Total Project Cost	\$8.2

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification											
Planni	Development & Evaluation					<b>✓</b>			П		П	Ū
ion	Project Development					<b>✓</b>		<b>V</b>				
Execution	Implementation  * Project Phase chart m							Ш	<b>V</b>		Д	D

# Pollution Prevention at Track Fueling Areas

Investment Category: Business Support Investments

CIP: CIP0210

Investment Program: Support Equipment/Services

Mode: Systemwide

Location: Systemwide

Project or Program: Program

# Description

Modify railyard equipment fueling areas to contain fuel spills and comply with environmental regulations.



# **FY21 Planned Deliverables**

In FY2021, Metro will modify track fueling areas at two yard locations.



Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Planning	Development & Evaluation	<b>✓</b>				Щ			П		П	ū
lon	Project Development	<b>✓</b>	<b>✓</b>	<b>V</b>								
Execution	Implementation				<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>			D

# Stormwater Facility Assessment

Investment Category: Business Support Investments

CIP: CIP0211

Investment Program:

Mode: Systemwide

Support Equipment/Services

Location: Systemwide

Project or Program: Program

### Description

This project identifies, evaluates, designs and implements modifications to Metro's existing storm water management infrastructure and facilities to provide best management practices which comply with federal, state, and local storm water management requirements.



# FY21 Planned Deliverables

In FY2021, Metro will provide design, rehabilitate and maintain storm water systems, including ponds and pretreatment structures, based on a comprehensive plan currently in development. Metro will also install underground utilities to convey storm water runoff to pretreatment structures and make necessary connections to the storm sewer system.



FY2020	\$0.4
FY2021	\$0.9
FY2022	\$1.6
FY2023	\$2.4
FY2024	\$2.4
FY2025	\$1.3
FY2026	\$0.6
FY21-26 Total	\$9.1

	Total	\$0.9
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Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification		<b>V</b>			П				D		
	Development & Evaluation		✓			П						
tion	Project Development	1	<b>✓</b>	1	1	<b>✓</b>	1	1	1	1	1	<b>✓</b>
Execut	Implementation	<b>V</b>	1	1	1	<b>V</b>	1	1	<b>V</b>	1	1	1
Exe	* Project Phase chart m	av contain	franci	project	or progr	homb	atives th	Retained	and bea	in in var	ious fisc	a

# Environmental Sustainability Lab

Investment Category: Business Support Investments

CIP: CIP0212

Mode:

Investment Program: Support Equipment/Services

Systemwide

Project or Program: Program

Location: Systemwide

### Description

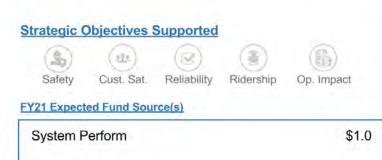
Develops and pilots projects to reduce consumption of energy and water, and to reduce waste.

# METRO'S SUSTAINABILITY TARGETS MILITARIANA 1000 100

# **FY21 Planned Deliverables**

In FY2021, Metro will support the development of four parking sites, as identified in the solar development plan currently underway, for future lease to third parties to install and use solar panels and power equipment. Metro will also continue making improvements to the waste management and recycling processes throughout the system.

# Cost (\$M)



FY2020	\$1.0
FY2021	\$1.0
FY2022	\$1.0
FY2023	\$1.0
FY2024	\$1.0
FY2025	\$1.0
FY2026	\$1.0
FY21-26 Total	\$6.0

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification											
Planning	Development & Evaluation		П		П	Д			П			U
ы	Project Development	<b>✓</b>	<b>✓</b>	<b>V</b>	1	<b>✓</b>	1	<b>✓</b>	<b>✓</b>	<b>V</b>	1	<b>✓</b>
Execution	Implementation	1	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	~	<b>✓</b>	<b>✓</b>	<b>V</b>

Total

\$1.0

# Capital Program Development Support

Investment Category: Business Support Investments

CIP: CIP0213

Investment Program: Support Equipment/Services

Project or Program:

Mode: Systemwide

Location: Systemwide

# Description

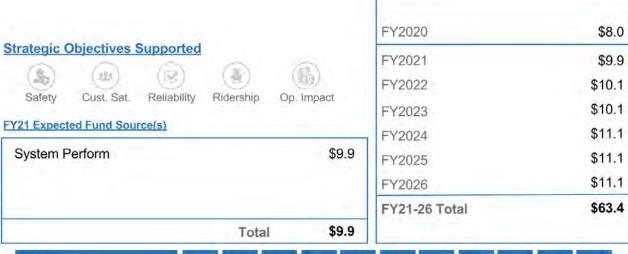
Provide project acquisition, scheduling, and management support for the portfolio of major construction projects.

Program



# FY21 Planned Deliverables

Continuation of business services and support of Metro's development of capital planning, programming, and transit asset management functions.



Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П	I					
Planning	Development & Evaluation		П			П					П	Ū.
no	Project Development							П				
Execution	Implementation	1	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>V</b>	1	<b>V</b>	<b>✓</b>

# Station Upgrades

Investment Category: Station and Passenger Facilities

CIP: **CIP0218** 

Investment Program: Platforms & Structures Mode:

Systemwide

Project or Program: Project Location: Systemwide

# Description

This project provides upgrades to stations throughout the system to improve passenger flow and customer experience.

# **FY21 Planned Deliverables**

By FY2021, Metro will complete the installation of bi-fold gates with emergency exit doors at five stations - Farragut North, Farragut West, Judiciary Square, Smithsonian, and L'Enfant plaza. Metro will also begin upgrades of wayfinding information and Passenger Information Displays (PIDS) at stations throughout the rail system.

# Cost (\$M)

Strategic	<b>Objectives</b>	Supported
	0	









Total



FY21 Expected Fund Source(s)

\$0.4 System Perform

\$0.4

LTD Expenses	\$1.2
FY2020	\$1.6
FY2021	\$0.4
FY2022	\$1.7
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$3.1
FY21-26 Total	\$5.2
Total Project Cost	\$8.0

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification	<b>V</b>	1			H	П	П				
	Development & Evaluation	<b>✓</b>	<b>✓</b>			-JII-	-0		<b>✓</b>	Д	П	ū
no	Project Development		<b>✓</b>	1				П	1			
execution	Implementation						-13	1	~	1	Д	D

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Station Lighting Improvements

Investment Category: Station and Passenger Facilities

CIP: CIP0219

Investment Program: Station Systems

Mode: Rail

Project or Program: Program

Location: Systemwide

# Description

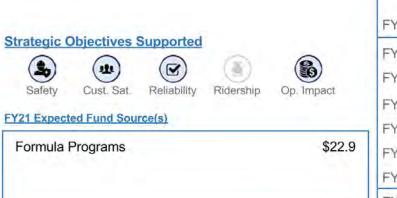
This program improves the lighting and illumination levels at mezzanines, lower level platforms, and track beds of Metrorail stations.



# FY21 Planned Deliverables

Metro will upgrade stations platform edge lights, above ground station lighting, and station site lights. In addition will upgrade ceiling systems, pylon locations, parapet lighting fixture installations, and center platform track beds at various locations.

# Cost (\$M)



FY2020	\$35.8
FY2021	\$22.9
FY2022	\$26.1
FY2023	\$43.3
FY2024	\$23.2
FY2025	\$28.1
FY2026	\$27.8
FY21-26 Total	\$171.4

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification		1			H						
Planni	Development & Evaluation		<b>✓</b>	П		П						
- Lo	Project Development	<b>√</b>	<b>✓</b>	В				П			-11	
Execution	Implementation	1	<b>✓</b>	1	1	<b>✓</b>	1	1	<b>V</b>	1	1	~

Total

\$22.9

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Metrobus Planning Program

Investment Category: Bus and Paratransit Investments

CIP: CIP0220

Investment Program:

Mode: Bus

Bus Passenger Facilities/Systems

Location: Systemwide

Project or Program: Program

### Description

Perform a broad range of Metrobus planning studies necessary to sustain the network of services and facilities. Efforts focus on service plans, customer information, facilities management, bus stop accessibility, transit operations, traffic management and service delivery.

# FY21 Planned Deliverables

In FY2021, Metro will complete four studies related to (1) Purple Line/Silver Line Connection Service Evaluation; (2) Service Evaluation Study for G2, D1, and D2 Routes; (3) Service Study/Review of Metro Extra Network Service; and (4) Update to the 5-Year Service Plan.



### Cost (\$M)

# Strategic Objectives Supported











### FY21 Expected Fund Source(s)

System Perform \$1.3

> \$1.3 Total

FY2020	\$1.6
FY2021	\$1.3
FY2022	\$1.3
FY2023	\$1.3
FY2024	\$1.3
FY2025	\$1.3
FY2026	\$1.3
FY21-26 Total	\$7.5

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification									D	П	
	Development & Evaluation			Ü		Д						-0
uo	Project Development	<b>√</b>	<b>✓</b>	<b>V</b>	<b>V</b>	1	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	1	<b>✓</b>
Execution	Implementation	1	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	1	<b>V</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>

# **Bus Customer Facility Improvements**

Investment Category: Bus and Paratransit Investments

CIP: CIP0221

Investment Program:

Mode: Bus

Project or Program: Program

Location: Systemwide

### Description

Project to sustain, replace or renovate Metrobus facilities and amenities to achieve a State of Good Repair and improve delivery of customer information. Additionally, this project will implement industry best practices and improve customer safety at the bus stops.

Bus Passenger Facilities/Systems



### **FY21 Planned Deliverables**

In FY2021, Metro will replace (80) identified bus shelter locations, (20) Digital Bus Signs, (113) bus map updates, and bus stop infrastructure improvements (route/sign poles, bus stop decals, wayfinding signage). Additionally, (110) Customer Electronic Information Displays will also be replaced.

# Cost (\$M)

# Strategic Objectives Supported











Op. Impact

### FY21 Expected Fund Source(s)

Formula Programs	\$5.2

Total	\$5.2

FY2020	\$4.0
FY2021	\$5.2
FY2022	\$11.1
FY2023	\$11.5
FY2024	\$3.5
FY2025	\$2.7
FY2026	\$1.2
FY21-26 Total	\$35.1

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification					H						
	Development & Evaluation					П	-0			П		Ū
no	Project Development	<b>√</b>	<b>✓</b>	B				П				
Execution	Implementation	<b>V</b>	<b>V</b>	1	<b>V</b>	~	1	1	<b>V</b>	1	<b>V</b>	1
ш	* Project Phase chart m	av contain	multiple	project	or progr	am initis	tives the	at enan	and had	in in var	nue fier	al Vas

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Railcar Heavy Repair and Overhaul Facility

Investment Category: Railcar Investments

CIP: CIP0225

Investment Program:

Mode: Rail

Railcar Maintenance Facilities

Location: Pennsy Dr. Landover

Project or Program: Project

### Description

This project will build a new Heavy Railcar Repair and Overhaul (HRO) Facility in Landover, MD in vicinity of CTF and Main Supply Facility. This will consolidate all Railcar Overhaul functions into a dedicated facility. Currently, Railcar rehabilitation and overhaul are split between Brentwood and Greenbelt Rail Yards.



# FY21 Planned Deliverables

Metro will complete acquisition and relocation, and begin design of new HRO facility and New Carrollton Yard Improvements.

	LTD Expenses FY2020	\$1.2 \$60.0
Strategic Objectives Supported  (S)  (E)	FY2021 FY2022	\$10.0 \$25.0
Safety Cust. Sat. Reliability Ridership Op. Impact  FY21 Expected Fund Source(s)	FY2023	\$25.0
Dedicated Funding \$10.0	FY2024 FY2025	\$45.0 \$98.0
	FY2026	\$133.0
	FY21-26 Total	\$336.0
Total \$10.0	Total Project Cost	\$397.2

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification		1	П		Ш						
	Development & Evaluation	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	П					П	
no	Project Development	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	✓			1			
execution	Implementation		1	1	1	<b>V</b>	1	1	~	1	1	D

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Raising Vent Shafts

Investment Category: Station and Passenger Facilities

CIP: CIP0241

Investment Program: Station Systems

Mode: Rail

Location: Systemwide

Project or Program: Project

# Description

This project will elevate surface barriers of vent shafts which will protect stations from flood waters entering into the rail system.



# **FY21 Planned Deliverables**

This project will continue to assess the effectiveness of previously raised vent shafts and evaluate more comprehensive flood mitigation solutions at stations.

Project Phase FY20 FY21 FY22 FY23 F		FY29 FY30
Total \$2.4	Total Project Cost	\$11.4
	FY21-26 Total	\$6.4
	FY2026	\$0.0
Other Federal \$2.4	FY2025	\$1.0
FY21 Expected Fund Source(s)	FY2024	\$1.0
	FY2023	\$1.0
Safety Cust. Sat. Reliability Ridership Op. Impact	FY2022	\$1.0
0 0 0 0	FY2021	\$2.4
Strategic Objectives Supported	FY2020	\$0.2
	LTD Expenses	\$4.9

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>		I								
Planni	Development & Evaluation	<b>✓</b>	<b>✓</b>	<b>4</b>	1	<b>✓</b>	<b>✓</b>		П	П.	П	Ū
ition	Project Development		<b>✓</b>	1	1	<b>✓</b>	<b>✓</b>					
Execut	Implementation							11		П	П	

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Improving Drainage

Investment Category: Station and Passenger Facilities

CIP: CIP0242

Investment Program: Station Systems

Mode: Rail

Project or Program: Program

Location: Systemwide

### Description

This project will replace and improve drainage pumping stations to support the Drainage/Flood/Piping replacement program for Flood Resiliency improvements. This project will also replace and improve drainage pumping stations and sewage ejector systems that have exceeded their lifecycle throughout the Metrorail system.

# FY21 Planned Deliverables

In FY2021, drainage pump station renewals are planned for completion at seven drainage pump locations. Construction is planned to begin at seven additional locations, and design is planned for completion at eighteen locations.



# Cost (\$M)

# Strategic Objectives Supported









Total



### FY21 Expected Fund Source(s)

Other Federal \$5.3

FY21-26 Total	\$48.7
FY2026	\$8.7
FY2025	\$8.7
FY2024	\$8.7
FY2023	\$8.7
FY2022	\$8.7
FY2021	\$5.3
FY2020	\$6.1

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						
Planni	Development & Evaluation					ĮĮ,					П	Ū
no	Project Development	<b>√</b>	<b>✓</b>	<b>V</b>	<b>V</b>	1		П			-11	
Execution	Implementation	<b>V</b>	~	<b>✓</b>	1	<b>✓</b>	1	<b>V</b>	<b>V</b>	<b>V</b>	1	<b>V</b>

\$5.3

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# General Engineering Support

Investment Category: Track and Structures Rehabilitation

CIP: CIP0246

Investment Program: Fixed Rail

Mode: Rail

Project or Program: Program

Location: Systemwide

# Description

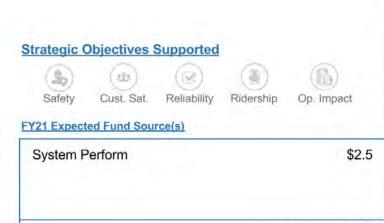
General engineering support services for the development of architectural/engineering concept designs to help define capital projects needed to resolve priority operational and maintenance problems.



# FY21 Planned Deliverables

Activities planned include on-call survey support, computer-aided design (CAD), and LiDAR scanning.

# Cost (\$M)



FY2020	\$3.1
FY2021	\$2.5
FY2022	\$2.6
FY2023	\$2.6
FY2024	\$2.6
FY2025	\$2.6
FY2026	\$2.6
FY21-26 Total	\$15.3

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification					П						
	Development & Evaluation					Д			П		П	
ь	Project Development											
Execution	Implementation	<b>✓</b>	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	<b>V</b>	1	<b>✓</b>	<b>✓</b>

Total

\$2.5

# **Emergency Construction Support**

Investment Category: Track and Structures Rehabilitation

Program

CIP: CIP0247

Investment Program: Fixed Rail

Mode: Rail

Project or Program:

Systemwide Location:

# Description

Supports emergency construction across the system.



# **FY21 Planned Deliverables**

This project will address emergency construction needs as they arise.



\$1.0 \$1.0
\$1.0
\$1.0
\$1.0
\$1.0
\$1.0
\$0.8

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						
Planning	Development & Evaluation				П	Ц			П		П	
no	Project Development											
Execution	Implementation	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>

# **Automatic Train Control SOGR**

Investment Category: Rail Systems Investments

Program

CIP: CIP0251

Project or Program:

Mode: Rail

Investment Program: Signals & Communications

> Location: Systemwide

# Description

The Automatic Train Control (ATC) rooms and associated Train Control Room (TCR) and wayside equipment are aging. Obsolete and failing equipment must be replaced at intervals ranging from 20 to 40 years.



### **FY21 Planned Deliverables**

In FY2021, Metro plans to complete the switch machine power supply replacements and continue the state of good repair program for high current bonds, interlocking, signals, circuit cable, switch machines, control cable insulation, and train control rooms.

# Cost (\$M)

# Strategic Objectives Supported Safety Cust. Sat. Reliability Ridership FY21 Expected Fund Source(s) PRIIA \$25.5 System Perform \$0.4

FY21-26 Total	\$183.5
FY2026	\$19.3
FY2025	\$24.6
FY2024	\$33.9
FY2023	\$45.5
FY2022	\$34.3
FY2021	\$25.9
FY2020	\$30.0

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification				<b>✓</b>	Ш	<b>V</b>					
Plann	Development & Evaluation				<b>✓</b>		<b>✓</b>			П		
ю	Project Development	<b>✓</b>		В	<b>✓</b>		<b>V</b>				-11	
Execution	Implementation	<b>V</b>	~	1	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>V</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>V</b>

Total

\$25.9

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Alternating Current (AC) Power Systems SOGR

Investment Category: Rail Systems Investments CIP:

Investment Program: Propulsion Mode: Rail

Project or Program:

Program

Location: Farragut West, Foggy Bottom, Arlington Cemetary, Crystal City, Deanwood, East Falls Church, Vienna, Gallery Place, Silver Spring

### Description

This program consists of continuously improving and maintaining existing AC power systems in a State of Good Repair (SOGR) in order to deliver safe and reliable Metrorail operations. Obsolete and failing equipment must be replaced at intervals ranging from eighteen to forty years.

### FY21 Planned Deliverables

This program will complete installation of new AC switchgear, transformers, cabling, and electrical panels for five station locations using existing equipment currently held in storage by Metro. AC switchgear upgrades which began in FY2020 at four locations will be completed. Uninterruptible Power Supplies (UPS) which mitigate utility service disruptions of communication equipment at stations, will be replaced systemwide at a rate of 20 units annually. Programmable Logic Control (PLC) panels will continue a three year replacement effort at various AC rooms systemwide where current technology has reached the end of its useful life and will conclude in FY2022.

### Strategic Objectives Supported











FY21 Expected Fund Source(s)

	Total	\$19.5
Dedicated Funding		\$11.5
System Perform		\$0.1
Formula Programs		\$7.9



CIP0252

EV2020	<b>#24.0</b>
FY2020	\$24.8
FY2021	\$19.5
FY2022	\$20.2
FY2023	\$26.6
FY2024	\$26.6
FY2025	\$26.6
FY2026	\$26.6
FY21-26 Total	\$146.1

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification					Ш						
Development & Evaluation			Ĭ.		Щ				Б		-,0
Project Development	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>V</b>	<b>✓</b>	1	1	1	1
Implementation	<b>V</b>	1	1	1	~	1	1	V	1	1	1
	Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development  V  V	Needs Identification  Development & Evaluation  Project Development  V  V	Needs Identification  Development & Evaluation  Project Development  V  V  V	Needs Identification  Development & Evaluation  Project Development  V  V  V  V  V  V  V  V  V  V  V  V  V	Needs Identification  Development & Evaluation  Project Development  V V V V V V V V V V V V V V V V V V	Needs Identification  Development & Evaluation  Project Development  V V V V V V V V V V V V V V V V V V	Needs Identification  Development & Evaluation  Project Development  V V V V V V V V V V V V V V V V V V	Needs Identification  Development & Evaluation  Project Development  V V V V V V V V V V V V V V V V V V

# Traction Power SOGR

Investment Category: Rail Systems Investments

Program

CIP: CIP0253

Investment Program: Propulsion Mode: Rail

Project or Program:

Location: Rosslyn, West Falls Church, Cleveland

Park

# Description

This program replaces traction power related components which are beyond or nearing the end of their useful life to maintain a reliable traction power system. This work includes equipment in both traction power substations and tie break stations, cabling, current and resistance testing, transformer replacements, and other ancillary components.



This program will replace cable tray at Rosslyn which has degraded. Traction Power Substation equipment will be replaced at West Falls Church and Cleveland Park. Priority transformer replacement at eight locations will be performed. Approximately 600 cables will be meggered and 6,800 linear feet of cable will be replaced per quarter.



# Cost (\$M)

# Strategic Objectives Supported











### FY21 Expected Fund Source(s)

	Total	\$38.5
Dedicated Funding		\$4.4
System Perform		\$3.6
Formula Programs		\$30.5

FY21-26 Total	\$211.7
FY2026	\$31.1
FY2025	\$34.1
FY2024	\$37.8
FY2023	\$39.1
FY2022	\$31.1
FY2021	\$38.5
FY2020	\$43.7

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification					Ш	I		<b>V</b>	П	П	
Development & Evaluation	<b>✓</b>	1			-II	-0		<b>✓</b>	JI-	-0	-,0
Project Development	<b>✓</b>	1	<b>✓</b>	1				<b>V</b>	1		
Implementation	<b>V</b>	1	1	1	~	1	1	1	1	1	1
	Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development  V	Needs Identification  Development &  Evaluation  Project Development  V  V	Needs Identification  Development &  Evaluation  Project Development  V  V  V	Needs Identification  Development &  Evaluation  Project Development  V  V  V  V  V  V  V  V  V  V  V  V  V	Needs Identification  Development &  Evaluation  Project Development  V  V  V  V  V  V  V  V  V  V  V  V  V	Needs Identification  Development &   Evaluation  Project Development  V  V  V  V  V  V  V  V  V  V  V  V  V	Needs Identification  Development &	Needs Identification  Development &	Needs Identification  Development &

# Fare Collection Modernization Program

Investment Category: Station and Passenger Facilities

Project

CIP: CIP0255

Investment Program:

Project or Program:

Mode: Systemwide

Station Systems

Location: Systemwide

# Description

Replacement of Metro's Fare Collection systems in rail stations and aboard Metrobuses.

# FY21 Planned Deliverables

Metro has begun a multi-phase systemwide replacement of the entire fare collection system. In FY2021, Metro will continue development and engineering of the new rail faregates and supporting systems and will begin installing the new gates. Design and procurement of new bus fareboxes and support equipment for Metro and regional operators will continue. Additionally, Metro will continue development to enable and deploy mobile payments.

# Strategic Objectives Supported











FY21 Expected Fund Source(s)

\$22.4 **Dedicated Funding** 

> \$22.4 Total

LTD Expenses	\$17.7
FY2020	\$26.0
FY2021	\$22.4
FY2022	\$48.9
FY2023	\$59.3
FY2024	\$35.8
FY2025	\$15.7
FY2026	\$8.5
FY21-26 Total	\$190.7
Total Project Cost	\$234.3

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification	1	1			П						
	Development & Evaluation	<b>✓</b>	1	Ш		-0	-0			TI.	Ш	-,0
lon	Project Development	<b>✓</b>	<b>✓</b>	1								
xecution	Implementation	<b>✓</b>	<b>V</b>	1	<b>✓</b>	<b>V</b>	1	<b>√</b>	10	G.	-17	.0

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# 7000 Series Railcars Procurement

Investment Category: Railcar Investments

Project

CIP: CIP0256

Investment Program:

Project or Program:

Mode: Rail

Railcar Acquisition

Location: Systemwide

# Description

This project procures 620 of the 7000 Series railcars to replace the 1000, 4000, 5000 Series fleets, plus 28 additional railcars.

# FY21 Planned Deliverables

In FY2021, Metro will make milestone payments for 130 railcars which completed two-year warranty period, complete enhanced troubleshooting on 7000 series vehicles, make software modifications related the Auto Train Control functions, and begin 7000 series railcar cab simulator production.



# Cost (\$M)

LTD Expenses	\$933.5
FY2020	\$140.0
FY2021	\$44.8
FY2022	\$44.0
FY2023	\$43.6
FY2024	\$36.5
FY2025	\$35.7
FY2026	\$30.0
FY21-26 Total	\$234.5
Total Project Cost	\$1,308.0

# Strategic Objectives Supported











# FY21 Expected Fund Source(s)

PRIIA		\$44.8
	Total	\$44.8

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					H						
Plan	Development & Evaluation		П			Щ			П		П	
ntion	Project Development	<b>✓</b>						П				
Executi	Implementation  * Project Phase chart m	<b>V</b>	<b>✓</b>	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>V</b>	<b>✓</b>	Д	D

# **Emergency Trip Station Infrastructure**

Investment Category: Rail Systems Investments

CIP: CIP0257

Mode: Rail

Investment Program: Signals & Communications

> Location: Systemwide

Project or Program: Project

### Description

The existing ETS system has an aging, deteriorating infrastructure and utilizes obsolete electrical components and communications technology. This project funds upgrades to the Rail Right-Of-Way (ROW) Emergency Trip Station (ETS) telephones. The new ETS Telephone system will replace the existing ETS telephone instruments with intelligent telephones that can perform self-diagnosis.

# FY21 Planned Deliverables

No planned deliverables in FY21. Project will commence between FY2022 and FY2026.



# Cost (\$M)

Strategic Ob	ectives	Supported
	-	











FY21 Expected Fund Source(s)

FY21 Funding Not Required

LTD Expenses	\$2.0		
FY2020	\$2.4		
FY2021	\$0.0		
FY2022	\$3.9		
FY2023	\$7.8		
FY2024	\$10.5		
FY2025	\$10.3		
FY2026	\$16.5		
FY21-26 Total	\$49.0		
Total Project Cost	\$53.4		

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification					П						
Development & Evaluation	<b>✓</b>		<b>✓</b>		Д			П		П	-0
Project Development			<b>✓</b>		<b>✓</b>		П				
Implementation			1	1	~	1	1	1	1	1	1
	Development & Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &				

# Fire Alarm System Upgrade

Investment Category: Station and Passenger Facilities

Program

CIP: CIP0258

Investment Program:

Project or Program:

Mode: Rail

Station Systems

Location: Systemwide

# Description

This program will upgrade fire alarm systems in the tunnels and stations.



# FY21 Planned Deliverables

In FY2021, Metro will continue drawings and design for tunnel fan supporting infrastructure. Completion of the Tunnel Smoke detection system pilot. Metro will also evaluate alternatives to improve alarm systems in administrative operations and maintenance facilities.

# Cost (\$M)



FY2020	\$3.5
FY2021	\$1.0
FY2022	\$1.5
FY2023	\$3.0
FY2024	\$3.5
FY2025	\$4.4
FY2026	\$7.5
FY21-26 Total	\$20.9

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification	<b>V</b>		H	<b>V</b>							
Planni	Development & Evaluation	<b>✓</b>	<b>✓</b>	<b>4</b>		<b>✓</b>			П			Ū
ion	Project Development	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>		П			- 🖂	
Execution	Implementation	~			<b>V</b>	~	1	1	<b>V</b>	1	1	1

Total

\$1.0

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Timecard Software Integration and Analysis

Investment Category: Business Support Investments

Investment Program: IT

Project or Program: Project

CIP: CIP0259

Mode: Systemwide

Location: Systemwide

# Description

Implement new automated time and attendance system for Metro employees.

# **FY21 Planned Deliverables**

Metro plans to complete the testing phase of the project by the first quarter of FY21, than transition into the training and deployment phase of the timekeeping solution which enables monitoring employee time and attendance, labor tracking, and data collection.

Total \$5.0	Total Project Cost	\$38.9
	FY21-26 Total	\$8.0
	FY2026	\$0.0
System Perform \$5.0	FY2025	\$0.0
FY21 Expected Fund Source(s)	FY2024	\$0.0
	FY2023	\$0.0
Safety Cust. Sat. Reliability Ridership Op. Impact	FY2022	\$3.0
Strategic Objectives Supported	FY2021	\$5.0
Stantonia Obiablica Successful	FY2020	\$8.8
	LTD Expenses	\$22.1

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					H	I					
Planning	Development & Evaluation		П			-,II,-	-0				П	ū
uo	Project Development											
Execution	Implementation	1	<b>✓</b>					П			D	D

# Track Inspector Location Pilot

Investment Category: Rail Systems Investments

CIP: CIP0260

Mode:

Investment Program:

Rail

Project or Program: Project Location: Systemwide

### Description

This project develops and pilots technology that will allow for accurate tracking and location of workers within the right-of-way. The solution will be evaluated for effectiveness and a determination will be made to move forward with the remainder of the system.

Signals & Communications



# FY21 Planned Deliverables

In FY2021, Metro will complete the installation of Wayside Worker Protection units and evaluate the effectiveness of the technology.

(2,	(121)	(3)	(3)	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact
System F	Perform			9
Jysteili	GHOITH			4

LTD Expenses	\$9.2
FY2020	\$1.8
FY2021	\$0.5
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$0.5
Total Project Cost	\$11.5

Project Phase		FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					H	П		<b>V</b>	П	П	
Plan	Development & Evaluation					-II-	0		<b>✓</b>	Д	П	10
Execution	Project Development	<b>✓</b>						П	1			
	Implementation	<b>✓</b>	1				40	10	<b>V</b>	1	1	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## **Tunnel Light Improvements**

Investment Category: Track and Structures Rehabilitation

Program

CIP: CIP0261

Investment Program: Fixed Rail Mode: Rail

Project or Program:

Location: Systemwide

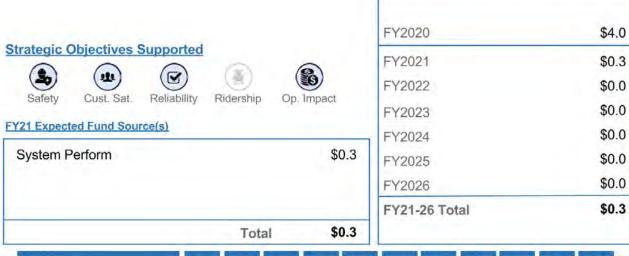
## Description

Replace tunnel lights and fixtures with LED lamps instead of fluorescents. These improvements will provide a safe environment for employees and create a more efficient operational environment. This investment is a recommendation from the 2017 agency wide energy audit and a safety corrective action plan.



## FY21 Planned Deliverables

In FY2021, Metro will complete lighting upgrades on tunnel segments throughout the rail system.



Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification					H						
	Development & Evaluation		П			-,0			П		П	ū
Execution	Project Development							П				
	Implementation	1	1									D

## **Tunnel Water Leak Mitigation**

Investment Category: Track and Structures Rehabilitation CIP: CIP0262

Investment Program: Structures Mode: Rail

Project or Program: Program Location: Systemwide

## Description

This program will address the water infiltration into the tunnel system through epoxy injection into the surrounding rock surface. Mitigating water intrusion reduces deterioration of assets and improves the safety and reliability of rail service.



## **FY21 Planned Deliverables**

In FY2019, a segment of tunnel originating at Medical Center, including the rail crossover tunnel cavern, and extending to the tunnel portal at I -495 on the Red Line, was completed. In FY2021, the effectiveness of this technology and solution will be evaluated for use in other tunnel segments systemwide.

## Cost (\$M)

## Strategic Objectives Supported









Total



#### FY21 Expected Fund Source(s)

**Dedicated Funding** \$1.4

FY21-26 Total	\$160.4
FY2026	\$45.0
FY2025	\$45.0
FY2024	\$45.0
FY2023	\$15.5
FY2022	\$8.5
FY2021	\$1.4
FY2020	\$8.0

Proj	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification	<b>V</b>				П						
	Development & Evaluation	<b>✓</b>	<b>✓</b>			Щ			П			
execution	Project Development	<b>√</b>	<b>V</b>	<b>V</b>				П				
	Implementation	<b>V</b>	1	<b>✓</b>	1	<b>✓</b>	1	<b>V</b>	<b>V</b>	1	<b>V</b>	<b>✓</b>

\$1.4

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## Historic Bus Terminal Rehabilitation

CIP: Investment Category: Bus and Paratransit Investments CIP0266

Mode: Bus Investment Program: Bus Passenger Facilities/Systems

Location: Chevy Chase, Calvert St. and Colorado Project or Program: Project

Ave.

## Description

Design and rehabilitate three historic bus terminals: Calvert Street, Chevy Chase, and Colorado Avenue. This will ensure terminals are in a State of Good Repair. All three facilities are obsolete and in failing condition.

## **FY21 Planned Deliverables**

In FY2021, Metro will begin the rehabilitation of three historic bus passenger facilities located at Chevy Chase, Calvert Street, and Colorado Avenue within the District of Columbia. The construction phase of the project will begin in FY2021 and are expected to be completed in FY2022.



## Cost (\$M)

LTD Expenses	\$0.0
FY2020	\$0.5
FY2021	\$1.4
FY2022	\$2.8
FY2023	\$0.6
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$4.7
Total Project Cost	\$5.2

## Strategic Objectives Supported











Cust. Sat.

FY21 Expected Fund Source(s)

**Dedicated Funding** \$1.4

> \$1.4 Total

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification					П						
	Development & Evaluation	<b>✓</b>				Ū,	-0					Ū
Execution	Project Development	<b>✓</b>										
	Implementation	1	<b>✓</b>	1	<b>✓</b>			П				D

## **Enterprise Asset Management Systems**

Investment Category: Business Support Investments

CIP: CIP0269

Investment Program: IT

Mode: Systemwide

Project or Program: Project

Location: Systemwide

## Description

This project develops an Asset Management System, using Metro's existing inventory software applications, that will create an asset hierarchy, structure, asset definitions and a standard protocol for inducting, maintaining, retiring and replacement of assets.



## FY21 Planned Deliverables

Implementation

Metro will continue to refine the systemwide asset hierarchy and ranking system, as well as data management support. Purchase of barcode scanners to continue as needed.

1

1

1

1

\* Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

1

1

1

1

							_						
							LTD E	xpens	es			\$0.	6
	and the same				FY20	20			\$1.9				
-	egic Objectives Supp		FY202	21			\$0.5						
		3)	(3)	(	Impact		FY20	22				\$0.	.5
			idership		FY202	23		\$0.5					
Y21 E	xpected Fund Source(s)		FY202	24		\$0.5							
Sys	tem Perform				\$	0.5	FY202	25		\$0.5			
							FY202	26				\$0.	.5
							FY21	26 To	tal			\$3.	.0
			Tot	al	\$	0.5	Total	Projec	t Cost			\$5.	.5
Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	
guir	Needs Identification					H				D	П		
Planning	Development & Evaluation		П			ЭŪ.	-,0			П	П	0	
ь	Project Development								1		- []		

## Capital Delivery Program Support

Investment Category: Business Support Investments

CIP: CIP0270

Investment Program: Support Equipment/Services

Mode: Systemwide

Project or Program: Program

Location: Systemwide

## Description

Project administration, planning, scheduling, and management support for the portfolio of major construction projects.



## FY21 Planned Deliverables

In FY2021, Metro will provide project planning, scheduling, and management services to the current portfolio of major capital construction projects.



FY2020	\$12.3
FY2021	\$19.7
FY2022	\$15.5
FY2023	\$10.5
FY2024	\$10.5
FY2025	\$10.5
FY2026	\$10.5
FY21-26 Total	\$77.2

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification					П						
Development & Evaluation					П			П	П	П	Ū
Project Development		<b>V</b>					П				
Implementation	1	1	1	1	1	1	1	1	1	1	1
	Development & Evaluation  Project Development	Needs Identification  Development &									

## Metrorail Station Emergency Gates Replacement

CIP:

CIP0271

Investment Category: Station and Passenger Facilities

Mode: Rail

Investment Program: Platforms & Structures

Project or Program: Project Systemwide

## Description

Replace Metrorail station emergency gates.

## **FY21 Planned Deliverables**

Metro plans to complete the replacement of swing-gates at station elevators and to begin architectural evaluation to address swing gates at stations where space constrains presented potential ADA issues. In conjunction with the deployment and reconfiguration of the new fare gates, the remaining emergency gates will be replaced with new gates equipped with access control card readers, magnetic locks and panic hardware to secure the rail system and reduce fare evasion.

## Strategic Objectives Supported











System Perform \$0.5

Total \$0.5



LTD Expenses	\$6.5
FY2020	\$2.0
FY2021	\$0.5
FY2022	\$0.5
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$1.0
Total Project Cost	\$9.5

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification					П						
	Development & Evaluation					-,0			П		П	ū
Execution	Project Development	<b>✓</b>										
	Implementation	1	1					П				D

\$9.5

## Station Commercialization Project

Investment Category: Business Support Investments

CIP: CIP0272

Investment Program:

Mode: Systemwide

Support Equipment/Services

Location: Systemwide

Project or Program: Project

## Description

This project will make investments in new equipment and space improvements designed to increase non-fare revenue in stations. Investments include addition of retail vendor space, upgrading digital displays, and improving signage and wayfinding, as well as other customer amenities.

## FY21 Planned Deliverables

In FY2021, Metro will install new digital displays and improved station signage at 8 Metrorail stations.



## Cost (\$M)

LTD Expenses

## Strategic Objectives Supported









Total



FY21 Expected Fund Source(s)

Dedicated Funding	\$10.0

	<b>EO</b>
Op.	Impact

FY2020	\$10.0		
FY2021	\$10.0		
FY2022	\$0.0		
FY2023	\$0.0		
FY2024	\$0.0		
FY2025	\$0.0		
FY2026	\$0.0		
FY21-26 Total	\$10.0		
Total Project Cost	\$29.5		

Proj	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>				H	I		<b>V</b>	П	П	
Plan	Development & Evaluation		П			-D-	-0		<b>V</b>	"D	-0	- 0
ution	Project Development	<b>✓</b>						П	1	1	1	
Executi	Implementation	<b>✓</b>	1							1	1	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

\$10.0

## **Facility Improvements**

Investment Category: Business Support Investments

CIP: **CIP0273** 

Investment Program:

Mode: Systemwide

Support Equipment/Services

Location: Systemwide

Project or Program: Program

## Description

This program provides upgrades to worker facilities, including breakrooms, bathrooms, and office spaces.



## FY21 Planned Deliverables

In FY2021, Metro will make upgrades to operation, maintenance, and administrative facilities. Those upgrades include Brentwood Railyard office reconfiguration, continuation of administration facilities breakroom upgrades and mechanical systems, replacement of office furniture systems at various railyards and bus garages, and continued replacement of LED lighting in various Metro facilities, including railcar maintenance shops and bus repair garages.

## Cost (\$M)

# Strategic Objectives Supported

Cust. Sat.











## FY21 Expected Fund Source(s)

System Perform		\$0.1
Dedicated Funding		\$5.7
	Total	\$5.8

FY2020	\$6.4
FY2021	\$5.8
FY2022	\$3.5
FY2023	\$2.2
FY2024	\$2.0
FY2025	\$2.0
FY2026	\$2.0
FY21-26 Total	\$17.5

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification		1		<b>✓</b>	Ш				П	П	
Plan	Development & Evaluation		<b>✓</b>		<b>✓</b>	-Щ-	-0			П-	-0	Ū
ion	Project Development	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>V</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>V</b>
Execution	Implementation	<b>V</b>	~	<b>✓</b>	1	<b>✓</b>	1	1	<b>V</b>	1	1	<b>V</b>

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Grosvenor-Strathmore Parking Garage Joint Development

CIP:

CIP0274

Investment Category: Station and Passenger Facilities

Mode: Rail

Investment Program: Platforms & Structures

## Description

Replace surface parking lot at Grosvenor-Strathmore Parking Garage with approximately 400 garage spaces.

## **FY21 Planned Deliverables**

In FY2021, Metro will complete the construction of the parking garage expansion at Grosvenor-Strathmore station.



## Cost (\$M)

(25)	(121)	(3)	( <del>*</del> )	(Eb)
Safety	Cust. Sat.	Reliability	Ridership	Op. Impac

LTD Expenses	\$2.1			
FY2020	\$12.0			
FY2021	\$1.5			
FY2022	\$1.5			
FY2023	\$0.0			
FY2024	\$0.0			
FY2025	\$0.0			
FY2026	\$0.0			
FY21-26 Total	\$3.0			
Total Project Cost	\$17.1			

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						
Planning	Development & Evaluation		Ш			Д			П		П	Ū
ion	Project Development	<b>✓</b>						П				
Execution	Implementation	1	1	<b>✓</b>				П				D

Total

\$1.5

## New Carrollton Bus Bays Joint Development

Investment Category: Bus and Paratransit Investments

Investment Program: Bus Passenger Facilities/Systems

Project or Program: Project

CIP: CIP0275

Mode: Bus

Location: New Carrollton Rail Station

## Description

This joint development project will complete roadwork and the bus loop at the New Carrollton station.

## **FY21 Planned Deliverables**

In FY2021, Metro will continue evaluation of additional bus loop improvements for joint development project at New Carrollton rail station.



## Cost (\$M)

Strategic C	Objectives S	Supported		
(2)	(11)	(8)	(3)	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact

## FY21 Expected Fund Source(s)

Dedicated Funding \$3.2

Total \$3.2

LTD Expenses	\$2.6
FY2020	\$2.4
FY2021	\$3.2
FY2022	\$4.3
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$7.5
Total Project Cost	\$12.6

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						
Plan	Development & Evaluation					Д			П		П	Ū
uo	Project Development	1						П	1			
xecution	Implementation	1	<b>V</b>	<b>✓</b>				12	<b>V</b>	1	П	

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## Supply Chain Modernization

Investment Category: Business Support Investments

Project

CIP: CIP0277

Investment Program:

Project or Program:

Mode: Rail

Support Equipment/Services

Location: Systemwide

## Description

Initial phase of multi-year project to modernize the supply chain for logistics, warehousing, planning, and ordering of inventory.



## FY21 Planned Deliverables

In FY2021, this project will provide a business process evaluation of modern technologies to improve WMATA's supply chain management of parts and supplies used by various maintenance employees.

#### Cost (\$M)

LTD Expenses	\$1.2
FY2020	\$1.0
FY2021	\$4.0
FY2022	\$4.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$8.0
Total Project Cost	\$10.3











## FY21 Expected Fund Source(s)

System Perform \$4.0 \$4.0 Total

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Plann	Development & Evaluation	<b>✓</b>				П	-0					-,0
uo	Project Development	<b>✓</b>	<b>✓</b>	<b>✓</b>								
Execution	Implementation							П	<b>V</b>	1	<b>V</b>	<b>✓</b>

## **Huntington Station Joint Development**

Investment Category: Station and Passenger Facilities

CIP: CIP0279

Investment Program:

Mode: Rail

Project or Program: Project

Location: Huntington Station

## Description

Joint development program to assess and determine possible future investment at Huntington station and adjacent properties.

Platforms & Structures



## FY21 Planned Deliverables

In FY2021, Metro will begin to work with a selected Master Developer for the Huntington Station area. Metro and the Master Developer will create a Master Plan for the station area, determine replacement parking needs, and work with Fairfax County to obtain approval of a Comprehensive Plan Amendment.

#### Cost (\$M)

LTD Expenses	\$0.0
FY2020	\$0.0
FY2021	\$1.3
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$1.3
Total Project Cost	\$1.3

## Strategic Objectives Supported











#### FY21 Expected Fund Source(s)

Dedicated Funding \$1.3

Total \$1.3

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П				D		
Plan	Development & Evaluation		1			П	-0			П	Ш	-0
tion	Project Development		<b>✓</b>					П	1			
xecut	Implementation						- 0	(1)	<b>✓</b>	Q.	-[]	D

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## Railcar Maintenance Facility SGR Program

Investment Category: Railcar Investments CIP:

Investment Program: Railcar Maintenance Facilities Mode: Rail

Project or Program: Project Systemwide

## Description

This project is for the replacement and/or renovation of Railcar Maintenance Facilities, equipment, and systems to achieve a state of good repair.

## FY21 Planned Deliverables

Refurbish the railcar washes at Greenbelt, New Carrollton, West Falls Church, Alexandria, and Shady Grove Rail Yards to meet the goal of washing up to 600 railcars per day.



CIP0283

## Cost (\$M)

(\$)	120	(3)	(B)	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impac

FY21 Expected Fund Source(s)							
Formula Programs	\$1.8						

LTD Expenses	\$0.0
FY2020	\$2.3
FY2021	\$1.8
FY2022	\$3.5
FY2023	\$3.7
FY2024	\$3.4
FY2025	\$3.4
FY2026	\$2.5
FY21-26 Total	\$18.1
Total Project Cost	\$20.4

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification			I		П						
Planr	Development & Evaluation	<b>✓</b>	<b>✓</b>			П			П			П
ntion	Project Development	<b>✓</b>	<b>✓</b>	1								
Executi	Implementation		1	1	1	<b>4</b>	1	1				

Total

\$1.8

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## Yard Facility Rehabilitation

Investment Category: Railcar Investments

Project

CIP: CIP0284

Investment Program:

Project or Program:

Mode: Rail

Railcar Maintenance Facilities

Location: Systemwide

## Description

This project is for Rail Yard facility (eight locations) rehabilitation to maintain buildings and equipment in a state of good repair.



## **FY21 Planned Deliverables**

Metro will begin replacement of non-metallic handrails and swing gates in Rail Yard Service and Inspection Shops to address safety issues. Additionally, will install a 25-ton overhead crane at the Shady Grove Rail Yard Service and Inspection Shop to replace existing unit.

## Cost (\$M)

# Strategic Objectives Supported





#### FY21 Expected Fund Source(s)

Safety

**Dedicated Funding** \$1.7

LTD Expenses	\$1.3
FY2020	\$7.0
FY2021	\$1.7
FY2022	\$6.0
FY2023	\$26.5
FY2024	\$28.0
FY2025	\$25.5
FY2026	\$20.0
FY21-26 Total	\$107.7
Total Project Cost	\$115.9

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification						В		<b>V</b>	D		
Planni	Development & Evaluation		Ш		<b>✓</b>	П			<b>V</b>	Д	П	
uo	Project Development	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>		- 🖂	
Execution	Implementation	<b>V</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	1	<b>V</b>	1	<b>✓</b>	1

Total

\$1.7

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Generator System Replacement

Investment Category: Rail Systems Investments

CIP: CIP0286

Investment Program: Propulsion

Mode: Rail

Project or Program: Project

Location: Systemwide

## Description

This project provides traction power supply reinforcement through the acquisition of mobile traction power substations as well as the replacement of permanent generators throughout system.



## FY21 Planned Deliverables

In FY2021, Metro plans to conduct surveys for the prioritization of permanent generator replacement.

## Cost (\$M)

# Strategic Objectives Supported











FY21 Expected Fund Source(s)

System Perform \$0.7

Total \$0.7

LTD Expenses	\$0.0
FY2020	\$0.0
FY2021	\$0.7
FY2022	\$0.7
FY2023	\$0.7
FY2024	\$0.7
FY2025	\$0.7
FY2026	\$0.7
FY21-26 Total	\$4.2
Total Project Cost	\$4.2

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification		1			П						
Planning	Development & Evaluation			Ü		П			П		П	
ion	Project Development			<b>✓</b>				П				
Execution	Implementation			1	✓	<b>✓</b>	1	<b>✓</b>	~	1	1	<b>✓</b>

## **Tunnel Ventilation**

Investment Category: Track and Structures Rehabilitation

Project

CIP: CIP0291

Investment Program: Structures

Project or Program:

Mode: Rail

Location: Cleveland Park

Woodley Park

Van Ness

#### Description

The tunnel ventilation and fan shaft rehabilitation project will upgrade components in vent shafts including, but not limited to: all electric, lighting, fans, communications, equipment, ladders, steps, smoke detectors, alarms and information technology infrastructure.



## FY21 Planned Deliverables

Metro will begin the Red Line pilot installation of tunnel ventilation systems at Cleveland Park, Woodley Park, and Van Ness stations which include upgrading and replacing fans, motors, supporting structure, and ancillary control systems. At the conclusion of the pilot and evaluation of its effectiveness, additional locations may be identified. Metro will also complete installation of new Programmable Logic Control (PLC) panels in all vent shafts throughout the system.

## Strategic Objectives Supported











FY21 Expected Fund Source(s)

PRIIA		\$0.5
Dedicated Funding		\$15.7
	Total	\$16.2

LTD Expenses	\$0.1
FY2020	\$4.2
FY2021	\$16.2
FY2022	\$18.1
FY2023	\$3.0
FY2024	\$3.0
FY2025	\$3.0
FY2026	\$3.0
FY21-26 Total	\$46.3
Total Project Cost	\$50.6

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Develop	Needs Identification	<b>V</b>				H	I	П	T	П	П	
	Development & Evaluation	<b>✓</b>	<b>✓</b>			-11	-0		1	Ш		- 0
execution	Project Development	<b>✓</b>	<b>✓</b>	1				П	1		✓	<b>✓</b>
	Implementation	<b>✓</b>	1	<b>✓</b>	<b>✓</b>	<b>V</b>	1	1	<b>V</b>	1	1	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## Bridge Rehabilitation

Investment Category: Track and Structures Rehabilitation CIP: CIP0294

Investment Program: Structures Mode:

Rail

Project or Program: Program Location: Systemwide

## Description

This program will rehabilitate bridge and aerial structures that have reached the end of their useful life.



## **FY21 Planned Deliverables**

Metro will begin rehabilitation of high priority bridges and aerial structures to replace anchor bolts, drains, bearings, expansion joints, checkered walkway/railings, grout pads, and concrete spalling. Additionally, will continue to advance design for next phase of bridge and aerial structure rehabilitation.

## Cost (\$M)

# Strategic Objectives Supported









Total



FY21 Expected Fund Source(s)

\$10.6 **Dedicated Funding** 

(	<b>E G</b>
Op.	Impact

\$2.5	FY2020
\$10.6	FY2021
\$18.8	FY2022
\$15.6	FY2023
\$25.8	FY2024
\$8.0	FY2025
\$3.5	FY2026
\$82.3	FY21-26 Total
	FY21-26 Total

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification	1	<b>V</b>	<b>✓</b>	<b>✓</b>	П						
Development & Evaluation	<b>V</b>	<b>✓</b>	<b>4</b>	<b>✓</b>	П			П	П	П	Ū
Project Development	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>						
Implementation	1	<b>V</b>	<b>✓</b>	<b>V</b>	<b>V</b>	1	1	<b>V</b>	1	1	<b>V</b>
	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development  V  V	Needs Identification  Development & Evaluation  Project Development  V  V  V	Needs Identification  Development & V V V V V P Project Development  V V V V V V V V V V V V V V V V V V V						

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

\$10.6

## Stations Platform Rehabilitation - Phase 2

Investment Category: Station and Passenger Facilities CIP:

Investment Program: Platforms & Structures Mode: Rail

Project or Program: Project East Falls Church, West Falls Church, Dunn Loring, Vienna

#### Description

Rehabilitation and repair of platforms at the following stations along the Orange Line in Virginia to address unsafe and deteriorating conditions: East Falls Church, West Falls Church, Dunn Loring, and Vienna. Customer experience improvements include slip-resistant tile, improved LED lighting, upgraded passenger shelters, new passenger information displays (PIDs), improved public address (PA) system, new closed-circuit television (CCTV) system, renovated bathrooms, and new bus shelters.

## **FY21 Planned Deliverables**

In FY2021, a summer shutdown (Memorial Day to Labor Day 2020) for Orange Line Stations (Vienna to East Falls Church) will encompass thirty-six systems that include, but are not limited to concrete platform repair, granite edges, paver tile, signage, shelters, PA systems, fire protection, sprinklers, CCTV, drainage, sewage ejector pumps, paint, and bathrooms.



**CIP0307** 

## Cost (\$M)

LTD Expenses	\$0.0
FY2020	\$154.1
FY2021	\$183.5
FY2022	\$20.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$203.5
Total Project Cost	\$357.6

## Strategic Objectives Supported











FY21 Expected Fund Source(s)

PRIIA		\$57.8
Dedicated Funding		\$125.7
	Total	\$183.5

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Plann	Development & Evaluation					П	-,0				П	ū
Execution	Project Development	<b>✓</b>		В.								
	Implementation	<b>V</b>	<b>V</b>	<b>✓</b>				П				D

## Stations Platform Rehabilitation - Phase 3

CIP: Investment Category: Station and Passenger Facilities **CIP0308** 

Mode: Rail Investment Program: Platforms & Structures

Location: Cheverly, Landover, New Carrollton, Project or Program: Project Addison Rd., National Airport, Arlington

Cemetary

#### Description

Rehabilitation and repair of platforms at the following stations along the Yellow, Blue, and Orange Lines in Virginia and Maryland to address unsafe and deteriorating conditions: Cheverly, Landover, New Carrollton, Addison Road, Ronald Reagan Washington National Airport, and Arlington Cemetery. Customer experience improvements include slip-resistant tile, improved LED lighting, upgraded passenger shelters, new passenger information displays (PIDs), improved public address (PA) system, new closed-circuit television (CCTV) system, renovated bathrooms, and new bus shelters.

## FY21 Planned Deliverables

In FY2021, a summer shutdown (Memorial Day to Labor Day 2021) for Orange and Blue Line Stations in Maryland and two stations in Virginia will encompass thirty-six systems that include, but are not limited to concrete platform repair, granite edges, paver tile, signage, shelters, PA systems, fire protection, sprinklers, CCTV, drainage, sewage ejector pumps, paint, and bathrooms.



## Cost (\$M)

LTD Expenses	\$0.0
FY2020	\$0.0
FY2021	\$110.0
FY2022	\$172.1
FY2023	\$86.7
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$368.8
Total Project Cost	\$368.8

## Strategic Objectives Supported





FY21 Expected Fund Source(s)







Formula Programs	\$8.3
System Perform	\$2.6
DEBT	\$99.1

Total	\$110.0

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
ning	Needs Identification	<b>V</b>										
Plan	Development & Evaluation		1	Ü,		Щ	-0		- []		-0	-,0
Execution	Project Development		<b>V</b>	В								П
	Implementation		1	<b>✓</b>	<b>✓</b>			П				D

## Huntington Metrorail Station Additional Entrance

CIP:

Investment Category: Station and Passenger Facilities

Mode: Rail

Investment Program: Platforms & Structures

Location: Huntington Station

**CIP0309** 

Project or Program: Project

## Description

This project will construct an additional pedestrian entrance to the Huntington Metrorail station to improve station circulation. It will also provide ADA access to the station during the demolition and reconstruction of the South Parking Garage.

## FY21 Planned Deliverables

This project began by installing footers for the new entrance structure during the South of National Summer Shutdown in FY2020. Construction of the new entrance is projected for future fiscal years.



	LTD Expenses FY2020
Safety Cust. Sat. Reliability Ridership Op. Impact  FY21 Expected Fund Source(s)	FY2021 FY2022 FY2023 FY2024
FY21 Funding Not Required	FY2025 FY2026 FY21-26 Total

LTD Expenses	\$0.0
FY2020	\$14.5
FY2021	\$0.0
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$5.0
FY2026	\$10.0
FY21-26 Total	\$15.0
Total Project Cost	\$29.5

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
ning	Needs Identification	1				I						П
Planning	Development & Evaluation					Ш	0				П	Ū
uo	Project Development	<b>✓</b>										
Execution	Implementation	1					<b>✓</b>	<b>V</b>	<b>V</b>	<b>✓</b>	D	

## Bus Garage Replacement - Bladensburg

Investment Category: Bus and Paratransit Investments

Investment Program: Bus Maintenance Facilities

Project or Program: Project

CIP: CIP0311

Mode: Bus

Location: Bladensburg Bus Division site

#### Description

Demolition and replacement of the existing bus maintenance and operations facility in Bladensburg, Maryland, to improve use and capacity of limited facility space. The new facility, designed to meet LEED Platinum certification, will have an on-site employee parking lot, multiple access points, parking for up to 300 buses, 25 maintenance bays, and a compressed natural gas (CNG) fueling station. The construction will take into account the needs of a potential future electric bus fleet

## FY21 Planned Deliverables

In FY2021, Metro will complete pre-construction activities, final design and demolition packages for new Bus Operations Building, as well as to complete the demolition of existing Bladensburg facilities.



## Cost (\$M)

# Strategic Objectives Supported Safety Cust. Sat. Reliability Ridership Op. Impact FY21 Expected Fund Source(s) Formula Programs \$7.5

LTD Expenses	\$0.0
FY2020	\$14.5
FY2021	\$7.5
FY2022	\$13.3
FY2023	\$53.8
FY2024	\$70.3
FY2025	\$42.2
FY2026	\$18.6
FY21-26 Total	\$205.7
Total Project Cost	\$220.2

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Planning	Development & Evaluation		П			Ц			П		П	-,0
no	Project Development	<b>√</b>						П				
Execution	Implementation	1	1	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	П			D	D

## Four Mile Run Bus Facility Rehabilitation

Investment Category: Bus and Paratransit Investments

CIP: CIP0312

Investment Program: Bus Maintenance Facilities

Mode: Bus

Location: Arlington

Project or Program: Project

## Description

Rehabilitate interior and exterior elements of the bus facility to maintain a State of Good Repair. Identify solutions to achieve operational requirements to meet short-term fleet capacity needs due to other bus facility rehabilitation projects.



## **FY21 Planned Deliverables**

The project will complete design for the renovation of bus service lanes at the four Mile Run Bus Garage.

## Cost (\$M)

(\$)	(121		( <del>3</del> )	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact

LTD Expenses	\$0.0
FY2020	\$0.4
FY2021	\$1.5
FY2022	\$4.5
FY2023	\$7.5
FY2024	\$3.3
FY2025	\$1.5
FY2026	\$0.0
FY21-26 Total	\$18.3
Total Project Cost	\$18.6

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification	<b>V</b>				П						
Planning	Development & Evaluation	<b>✓</b>				Д			П		П	-0
no	Project Development	<b>✓</b>	<b>✓</b>					П				
Execution	Implementation		1	1	✓	1	1	П		П		П

Total

\$1.5

## Bus Garage Replacement - Northern

Investment Category: Bus and Paratransit Investments

CIP: CIP0315

Investment Program: Bus Maintenance Facilities

Mode: Bus

Project or Program: Project

Location: Northern Bus Division site

#### Description

Demolition and replacement of the Northern Bus Garage in Washington, DC, which has been in use since 1907 and has structural deficiencies that prevent effective operation and to improve use and capacity of limited facility space. The new facility, will be designed to meet LEED Platinum certification, will be ready to support electric bus charging infrastructure, and will have an on-site employee parking lot, multiple access points and parking for up to 200 buses. Mixed-use retail will be incorporated into the new facility. Project will include significant environmental site cleanup and mitigate future effects to surrounding neighborhood. The historical facade of the garage will be retained.

## FY21 Planned Deliverables

In FY2021, Metro will complete pre-construction activities, final design and demolition packages for existing facilities, as well as to complete demolition of existing Northern facilities.



## Cost (\$M)

## Strategic Objectives Supported

FY21 Expected Fund Source(s)











Formula Programs \$8.5

Total \$8.5

LTD Expenses	\$0.4
FY2020	\$8.0
FY2021	\$8.5
FY2022	\$11.9
FY2023	\$25.7
FY2024	\$61.8
FY2025	\$83.3
FY2026	\$30.5
FY21-26 Total	\$221.8
Total Project Cost	\$230.2

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification			I		П						
Planni	Development & Evaluation	<b>✓</b>					-0					· D
lon	Project Development	<b>✓</b>	<b>V</b>	В				П				
Execution	Implementation		<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	П			П	D

# Bus Maintenance Facility SOGR

Investment Category: Bus and Paratransit Investments

CIP: CIP0319

Investment Program:

Mode: Bus

Project or Program: Program

Montgomery, Landover, Western, Four Mile, Bladensburg Location:

## Description

Renovation of Bus Maintenance facilities and equipment to achieve a state of good repair.

**Bus Maintenance Facilities** 



## **FY21 Planned Deliverables**

Replacement of Bus vaults for farebox collections at various Bus Garages.

## Cost (\$M)

(20)	(121		( <del>3</del> )	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact
1 Expect	ted Fund Sou	rce(s)		

FY2020	\$0.5
FY2021	\$1.1
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$1.1

Project Phase EV20 EV21 EV22	

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification		<b>V</b>			П						
Plan	Development & Evaluation		<b>✓</b>			П			П	П		
lion	Project Development		1									
Execut	Implementation  * Project Phase chart m	<b>✓</b>	1					11			Ę.	

.1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## Bus Passenger Fac./Systems Future Major Projects

Investment Category: Bus and Paratransit Investments

CIP: CIP0322

Investment Program:

Mode: Bus

Bus Passenger Facilities/Systems

Project or Program: Project Location: Systemwide

## Description

This project will make improvements to bus passenger accessibility at revenue facilities.

## FY21 Planned Deliverables

Begin systemwide bus stop accessibility survey to ensure Metrobus stops meet ADA accessibility requirements. Survey will include plans and prioritization for proposed improvements at deficient facilities.

## Cost (\$M)

(25)	(121)		( <u>*</u> )	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact
1 Evnec	ted Fund Sou	rco(s)		

LTD Expenses	\$0.0
FY2020	\$0.1
FY2021	\$0.5
FY2022	\$0.0
FY2023	\$3.5
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$3.9
Total Project Cost	\$4.0

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>		I	<b>✓</b>	П						
Planni	Development & Evaluation	<b>✓</b>	1		<b>✓</b>	-[]-					П	-0
rtion	Project Development		1		<b>✓</b>				1		$\Box$	
Execut	Implementation				<b>✓</b>				<b>V</b>	1	1	. []

Total

\$0.5

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Capital Program Financial Support

Investment Category: Business Support Investments

CIP: CIP0324

Investment Program: Support Equipment/Services

Systemwide

Location: Systemwide

Mode:

Project or Program: Program

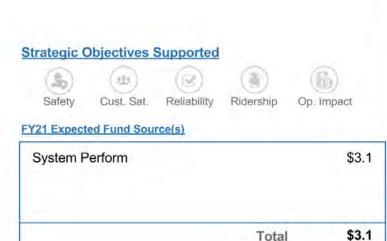
## Description

Provide financial support services for the capital program management of capital funds and grants.



## **FY21 Planned Deliverables**

Provide services that manage the funding of the capital program including management of grants, maintenance of financial systems, and alignment of capital cost to appropriate funding.



FY2020	\$3.1
FY2021	\$3.1
FY2022	\$3.1
FY2023	\$3.1
FY2024	\$3.1
FY2025	\$3.1
FY2026	\$3.1
FY21-26 Total	\$18.6

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification											
Planning	Development & Evaluation					Щ						0
on	Project Development										- 🗆	
Execution	Implementation	<b>✓</b>	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	<b>V</b>	1	<b>✓</b>	<b>✓</b>

## Real-Time Bus and Rail Data Feed Development

Investment Category: Bus and Paratransit Investments

CIP: CIP0326

Investment Program:

Mode: Bus

Project or Program: Project Location: Systemwide

## Description

Improvements to General Transit Feed Specifications (GTFS) realtime data feeds for bus and rail service.

Bus Passenger Facilities/Systems

## FY21 Planned Deliverables

This project will begin working towards delivering a real-time bus ontime performance and travel speed management dashboard and provide communications with a tool to communicate real time service times.



## Cost (\$M)

**Total Project Cost** 

FY21-26 Total	\$1.1
FY2026	\$0.0
FY2025	\$0.0
FY2024	\$0.0
FY2023	\$0.0
FY2022	\$0.0
FY2021	\$1.1
FY2020	\$0.0
LTD Expenses	\$0.0

\$1.1









Total



## FY21 Expected Fund Source(s)

System Perform \$1.1 \$1.1

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification		<b>V</b>			П						
Planni	Development & Evaluation		<b>✓</b>			-,0]-	-,0		П			-,0
- Lo	Project Development		<b>✓</b>									
Execution	Implementation											D

# New Data Center IT Infrastructure and Equipment

Investment Category: Business Support Investments

Project

CIP: CIP0330

Investment Program: IT

Mode: Systemwide

Project or Program: Pr

Location: Systemwide

## Description

As part of Metro's office consolidation initiative, a new data center will be constructed to replace the existing data center at the Jackson Graham building that is being vacated.



## FY21 Planned Deliverables

In FY2021, the design and construction planning for the new data center will begins along with the purchase of servers, racks, and networking equipment.

	LTD Expenses	\$0.2	
		300	
	FY2020	\$6.6	
Strategic Objectives Supported	FY2021	\$36.1	
	FY2022	\$69.5	
Safety Cust. Sat. Reliability Ridership Op. Impact	FY2023	\$0.0	
FY21 Expected Fund Source(s)	FY2024	\$0.0	
Dedicated Funding \$36.1	FY2025	\$0.0	
	FY2026	\$0.0	
	FY21-26 Total	\$105.6	
Total \$36.1	Total Project Cost	\$112.4	
Project Phase FY20 FY21 FY22 FY23 FY2	4 FY25 FY26 FY27 FY28	FY29 FY30	

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Planni	Development & Evaluation	<b>✓</b>				Щ			П		П	
uo	Project Development	1	<b>✓</b>									
Execution	Implementation	~	1	1								П

## Enterprise Resource Planning (ERP) Replacement

Investment Category: Business Support Investments

CIP: CIP0331

Mode:

Investment Program: IT

Systemwide

Project or Program: Project

Location: Systemwide

## Description

Metro's current Enterprise Resource Planning (ERP) system is being retired and will not be supported beyond FY2028. It is necessary to identify and implement a replacement for the current ERP to maintain business operations.



## FY21 Planned Deliverables

In FY 2021, the current ERP will receive upgrades and support needed to maintain operations. In addition, Metro will begin the needs assessment and planning required to select a ERP replacement.

## Cost (\$M)

LTD Expenses	\$0.0
FY2020	\$3.0
FY2021	\$6.6
FY2022	\$12.9
FY2023	\$18.6
FY2024	\$16.0
FY2025	\$24.0
FY2026	\$28.5
FY21-26 Total	\$106.6
Total Project Cost	\$109.5

## Strategic Objectives Supported











#### FY21 Expected Fund Source(s)

System Perform \$6.6

Total \$6.6

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification	<b>V</b>										
Development & Evaluation	1	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>		_ []			П	-,0
Project Development	<b>✓</b>		1	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	1			
Implementation	<b>V</b>	1	1	<b>✓</b>	<b>V</b>	1	1	~	1	1	1
	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development & V V V V V Project Development V V V V V V V V V V V V V V V V V V V	Needs Identification  Development &						

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## Fiber Installation

Investment Category: Business Support Investments

Project

CIP: CIP0332

Investment Program:

Mode: Systemwide

Project or Program:

Location: Systemwide

#### Description

Metro will install fiber optic cable along its Right-of-Way (ROW) to 590 ancillary locations in support of Supervisory Control and Data Acquisition (SCADA) and MetroNET services.



## **FY21 Planned Deliverables**

The project will complete the fiber optical cable strategy study in FY2021. Completion of the study will provide the organization the guidance to future develop the fiber solution scope and project schedule.

## Cost (\$M)

#### LTD Expenses \$1.2 \$0.9 FY2020 FY2021 \$0.5 FY2022 \$4.0 \$6.7 FY2023 \$1.5 FY2024 \$4.7 FY2025 \$9.0 FY2026 \$26.4 FY21-26 Total \$28.6 **Total Project Cost**

## Strategic Objectives Supported









Total



#### FY21 Expected Fund Source(s)

System Perform \$0.5 \$0.5

Pro	Project Phase		FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>		I		П						
Plan	Development & Evaluation	<b>✓</b>	<b>✓</b>	<b>✓</b>		Ū,	- II		П		П	
Execution	Project Development		<b>✓</b>	<b>✓</b>	<b>V</b>						- 🗆	
	Implementation			<b>V</b>	1	<b>V</b>	1	1	<b>V</b>	1	1	1
ш	* Project Phase chart m	av contain	multiple	project	or progr	am initia	atives the	at span	and beg	in in var	ious fisca	al vears

## Headquarters - District of Columbia

Investment Category: Business Support Investments

Project

CIP: CIP0335

Investment Program:

Project or Program:

Mode: Systemwide

Location: L'Enfant Plaza

## Description

This project is for the design and construction of the new Metro administrative office building at L'Enfant Plaza in the District of Columbia. The new building allows for Metro to consolidate operations from 10 locations to 4 locations.

Support Equipment/Services



## FY21 Planned Deliverables

In FY2021, Metro will continue construction of the new administrative office building located at L'Enfant Plaza in the District of Columbia. The DC location will have major construction with demolition of facade and interior, adding three floor to existing structure, reinforcement of concrete shear walls, adding structural concrete columns, and renovation of parking garage structure.

## Cost (\$M)

LTD Expenses	\$54.3			
FY2020	\$48.5			
FY2021	\$62.0			
FY2022	\$55.0			
FY2023	\$1.0			
FY2024	\$1.0			
FY2025	\$0.0			
FY2026	\$0.0			
FY21-26 Total	\$119.0			
Total Project Cost	\$221.8			

## Strategic Objectives Supported











## FY21 Expected Fund Source(s)

Dedicated Funding		\$7.2
DEBT		\$54.8
	Total	\$62.0

Pro	Project Phase		FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					H				D		
Plan	Development & Evaluation	<b>✓</b>	1			-Щ-	J		-[]	П	Ш	-,0
Execution	Project Development	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>			П				
	Implementation	<b>V</b>	~	<b>V</b>	<b>V</b>	<b>✓</b>		П			.01	. []
Ě	* Project Phase chart m	av contain			or progr	ram initia	atives th	at span	and bed	in in var	ious fisc	al ve

## **Energy Management Upgrades**

Investment Category: Business Support Investments

CIP: CIP0336

Investment Program:

Mode: Systemwide

Support Equipment/Services

Location: Systemwide

Project or Program: Project

## Description

This project will facilitate upgrades to energy use and management at Metro facilities based on the data gathered from the Energy Management System.

## FY21 Planned Deliverables

Metro will begin installing water or electric smart meters in Metro facilities to assess energy and water usage. Additionally, the smart meters will be integrated with the Enterprise Energy Monitoring Software (EEMS) to enable analysis and improved energy and water management practices.

## Cost (\$M)

LTD Expenses	\$0.0
FY2020	\$1.3
FY2021	\$0.2
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$1.3
FY2025	\$2.3
FY2026	\$2.4
FY21-26 Total	\$6.2
Total Project Cost	\$7.5











Cust. Sat. Reliability Ridership

Total

#### FY21 Expected Fund Source(s)

System Perform	\$0.2

ro	Project Phase		FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY3
guir	Needs Identification					П						
all	Development &								150			-

\$0.2

Evaluation Project Development ✓ 1 ✓ ✓ **√** Implementation

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## Headquarters Construction - Virginia

Investment Category: Business Support Investments

CIP: CIP0337

Investment Program:

Mode: Systemwide

Project or Program: Project

Location: Eisenhower Avenue

## Description

As part of Metro's regional office consolidation plan, a new office building will be constructed near the Eisenhower Avenue Metrorail station and adjacent to the Hoffman Town Center in Alexandria, Virginia. The building will be designed with the goal of achieving LEED Platinum certification and is part of the larger redevelopment of the Eisenhower Avenue corridor.

Support Equipment/Services

## FY21 Planned Deliverables

In FY2021, Metro will continue construction of the new administrative office building located at Eisenhower Avenue in Virginia. The VA location will have base building core and shell construction completed.



## Cost (\$M)

(\$)	(111)		(3)	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impac
	ted Fund Sou			
edicate	d Funding			

Total Project Cost	\$299.3			
FY21-26 Total	\$242.8			
FY2026	\$0.0			
FY2025	\$0.0			
FY2024	\$2.0			
FY2023	\$3.3			
FY2022	\$152.6			
FY2021	\$84.9			
FY2020	\$56.5			
LTD Expenses	\$0.0			

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification  Development & Evaluation	Needs Identification					H						
			П			-,II,-			П			ū
uo	Project Development	<b>√</b>	<b>✓</b>	В								
Execution	Implementation	1	<b>✓</b>	<b>✓</b>				П			П	D

Total

\$84.9

## Headquarters Construction - Maryland

Investment Category: Business Support Investments

CIP: **CIP0338** 

Investment Program:

Mode: Systemwide

Support Equipment/Services

Location: **New Carrollton** 

Project or Program: Project

## Description

New office in Maryland to consolidate employees near New Carrollton Metrorail station in Prince George's County, Maryland. The station is one of the region's most significant transit hubs and is served by Metro, MARC, multiple local and regional buses, Amtrak, Greyhound, and the future Maryland MTA Purple Line. The building will be designed with the goal of achieving LEED Platinum certification and is part of the continued development of New Carrollton.

## **FY21 Planned Deliverables**

In FY2021, Metro will continue construction of the new administrative office building located at New Carrollton in Maryland. The MD location will complete pre-construction activities related to design, environmental assessment, land surveying, and general site work preparation.



			LTD Expenses FY2020	\$0.0 \$10.8		
Strategic Objectives Sup	norted		F12020	Ψ10.0		
			FY2021	\$108.3		
(3)	<b>(3)</b>		FY2022	\$115.8		
		p. Impact	FY2023	\$2.0		
FY21 Expected Fund Source(s	1		FY2024	\$2.0		
Dedicated Funding		\$7.0	FY2025	\$0.0		
DEBT		\$101.3	FY2026	\$0.0		
			FY21-26 Total	\$228.1		
	Total	\$108.3	Total Project Cost	\$238.9		
Project Phase	FY20 FY21 FY2	2 FY23 FY24	FY25 FY26 FY27 FY28	FY29 FY30		
Needs Identification						
Needs Identification  Development &						

## First Responders Signs Updates

Investment Category: Business Support Investments

CIP: CIP0339

Mode: Systemwide

Investment Program: Support Equipment/Services

Location: Systemwide

Project or Program: Program

## Description

This project provides improved guidance signage for first responders to help them assess their location and direction throughout the system.



## **FY21 Planned Deliverables**

In FY2021, Metro will begin the design and installation of updated guideway signs for first responders.

## Cost (\$M)













#### FY21 Expected Fund Source(s)

\$0.5 System Perform \$0.5 Total

FY2020	\$0.3
FY2021	\$0.5
FY2022	\$1.0
FY2023	\$1.0
FY2024	\$1.0
FY2025	\$1.0
FY2026	\$1.0
FY21-26 Total	\$5.5

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>										
Planni	Development & Evaluation	<b>✓</b>	1			П			П		П	
execution	Project Development	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	✓	1	<b>✓</b>	1	1		
	Implementation			1	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	~	1	1	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

## Administrative Facility Rehabilitation Project

Investment Category: Business Support Investments

CIP: CIP0340 Mode:

Investment Program: Support Equipment/Services

Location: Systemwide

Systemwide

Project or Program: Project

## Description

This project provides for the rehabilitation of administration buildings at various locations.

## FY21 Planned Deliverables

In FY2021, Metro will evaluate current options for building rehabilitation of the Telegraph Road maintenance and administrative facility and prioritize options regarding use of the facility. Additionally, Metro will plan and schedule required near term improvements after evaluation.

Total \$0.5	FY21-26 Total Total Project Cost	\$3.5 \$3.5
	FY2026	\$0.0
System Fenomia 40.5	FY2025	\$0.0
System Perform \$0.5	FY2024	\$0.0
Y21 Expected Fund Source(s)	FY2023	\$2.0
Safety Cust. Sat. Reliability Ridership Op. Impact	FY2022	\$1.0
trategic Objectives Supported  (a)  (b)	FY2021	\$0.5
testania Obiantivas Suuranted	FY2020	\$0.0
	LTD Expenses	\$0.0

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>				П						
Planning	Development & Evaluation	<b>✓</b>	<b>✓</b>	<b>✓</b>		П			П		П	0
Execution	Project Development			1	<b>✓</b>	$\mathbb{T}^{(i)}$						
	Implementation								<b>✓</b>			D

# Standpipe Replacement Program

Investment Category: Station and Passenger Facilities

Program

CIP: CIP0341

Investment Program: Station Systems

Mode: Rail

Location: Systemwide

### Description

Project or Program:

This program will address the replacement of dry standpipes throughout the system that have reached the end of their useful life or need to be replaced based on asset condition.



### **FY21 Planned Deliverables**

In FY2021, Metro will complete about twenty-nine dry standpipe replacements across various lines and in tunnels.



FY2020	\$4.7
FY2021	\$6.8
FY2022	\$7.0
FY2023	\$9.5
FY2024	\$6.5
FY2025	\$7.5
FY2026	\$5.5
FY21-26 Total	\$42.8

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification											
Planning	Development & Evaluation					Щ						.0
no	Project Development										- 🗆	
Execution	Implementation	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	<b>V</b>	1	<b>✓</b>	<b>✓</b>

# IT Hardware Replacement Program

Investment Category: Business Support Investments

Program

CIP: CIP0342

Investment Program: IT

Mode: Systemwide

Project or Program:

Location: Systemwide

### Description

This program is focused on implementation of data center infrastructure technologies which can achieve higher operational efficiencies, increase service availability and reduce risk to the underlying business service networks. The communication networks enable resource and information sharing for business functions such as voice communications, email, internet access, rail and bus operations and monitoring, surveillance systems and administrative business systems.

### FY21 Planned Deliverables

In FY2021, Metro will upgrade or replace outdated hardware and software assets, perform network maintenance and expansion to support operational needs, and continue ongoing Authority-wide PC Desktop, laptop and tablet replacements.



### Cost (\$M)

# Strategic Objectives Supported











### FY21 Expected Fund Source(s)

Dedicated Funding \$18.3

Total \$18.3

FY2020	\$10.4
FY2021	\$18.3
FY2022	\$14.9
FY2023	\$14.9
FY2024	\$14.9
FY2025	\$11.7
FY2026	\$15.1
FY21-26 Total	\$89.7

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П				D	П	
Plan	Development & Evaluation					Щ		- 0		П	-0	- 0
ы	Project Development	<b>✓</b>	<b>√</b>	<b>V</b>	<b>✓</b>	1	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>V</b>	<b>✓</b>	<b>✓</b>
execution	Implementation	1	1	<b>✓</b>	1	<b>✓</b>	1	1	<b>V</b>	1	1	<b>V</b>

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Operating and Maintenance Applications

Investment Category: Business Support Investments

CIP: CIP0343

Investment Program: IT

Mode: Systemwide

Project or Program: Program

Location: Systemwide

### Description

This program provides software and security updates, corrections to software codes and maintains a state of good repair for critical systems including: Geographic Information System (GIS), Financial, Human Resources, security and safety, operational application for Rail, Bus, and Metro Access.



### FY21 Planned Deliverables

In FY2021, Metro will continue to complete improvements and ensure applications are maintaining a State of Good Repair for all applications Metro utilizes. The program will provide user support, database maintenance, user administration, system patching, and overhaul the organization's website with new platforms and user interfaces. Will continue to develop an enterprise-level service-oriented architecture (SOA) design to integrate various software platforms.

### Strategic Objectives Supported











FY21 Expected Fund Source(s)

System Perform	\$28.1

Total \$28.1

FY2020	\$21.9
FY2021	\$28.1
FY2022	\$28.9
FY2023	\$30.8
FY2024	\$29.8
FY2025	\$30.2
FY2026	\$31.0
FY21-26 Total	\$178.7

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification										E	0
Plan	Development & Evaluation					Щ	-0	-,0		Б	-11	-D
no	Project Development	1	<b>✓</b>	<b>✓</b>	<b>V</b>	1	1	<b>✓</b>	<b>V</b>	<b>V</b>	1	<b>✓</b>
execution	Implementation	1	1	<b>✓</b>	1	<b>✓</b>	1	<b>V</b>	<b>V</b>	<b>✓</b>	<b>V</b>	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# IT Program Management and Quality Assurance

Investment Category: Business Support Investments

CIP: CIP0344

Investment Program: IT

Mode: Systemwide

Project or Program: Program

Location: Systemwide

### Description

This program provides audit support, the establishment of improved IT process support model, standardization of change management and support services.



### FY21 Planned Deliverables

In FY2021, Metro will continue to support WMATA enterprise applications application in order to deliver IT capital investment that meets business needs efficiently. By developing and providing Quality Assurance support, creating testing environments, audit support, improved IT process support model, and standardization of change management.

### Cost (\$M)

# Strategic Objectives Supported Safety Cust. Sat. Reliability Ridership Op. Impact

FY2020	\$2.2
FY2021	\$1.9
FY2022	\$1.6
FY2023	\$1.6
FY2024	\$1.6
FY2025	\$1.6
FY2026	\$1.6
FY21-26 Total	\$9.9

### FY21 Expected Fund Source(s)

System Perform \$1.9

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification					П						
Development & Evaluation		П			П			П	П	П	
Project Development							П				
Implementation	1	1	1	1	1	1	1	1	1	<b>V</b>	1
	Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development &	Needs Identification Development & Evaluation Development University Development Development	Needs Identification  Development & Evaluation  Project Development	Needs Identification  Development &	Needs Identification  Development &			

Total

\$1.9

# Accounting Capital Program Support

Investment Category: Business Support Investments

CIP: CIP0347

Investment Program: Support Equipment/Services

Mode: Systemwide

Project or Program: Program

Location: Systemwide

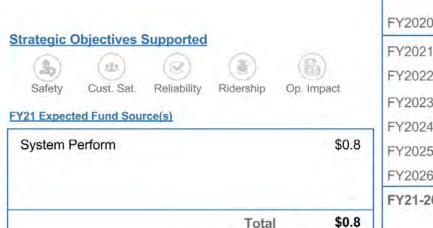
### Description

Accounting services for the capital program to facilitate planned capital projects.



### **FY21 Planned Deliverables**

In FY2021, Metro will continue to provide Accounting services to the capital program, including review and control of charges to the capital program.



FY2020	\$0.8
FY2021	\$0.8
FY2022	\$0.8
FY2023	\$0.8
FY2024	\$0.8
FY2025	\$0.8
FY2026	\$0.8
FY21-26 Total	\$4.5

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						
Planning	Development & Evaluation		П			П			П		П	.0
- uo	Project Development											
Execution	Implementation	~	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>

# Minnesota Avenue Aerial Structure Rehabilitation

Investment Category: Track and Structures Rehabilitation

Project

CIP: CIP0348

Investment Program: Structures

Mode:

Rail DC

Project or Program:

Location:

### Description

This project will retrofit hammerhead pier caps which support aerial guideways on Minnesota Avenue Bridge on the Orange Line. This retrofit construction will add a concrete pier cap box to each of the 60 bridge hammerheads to reinforce structures and extend the useful life of the structures by 75 years.

### FY21 Planned Deliverables

Metro will begin construction to retrofit 60 hammerhead pier caps on the Minnesota Avenue Bridge with concrete pier caps to reinforce existing bridge structure.



### Cost (\$M)

(\$)	(11)	<b>(E)</b>	(B)	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impac
1 Expect	ted Fund Sou	rce(s)		
edicate	d Funding			

LTD Expenses	\$0.0		
FY2020	\$1.0		
FY2021	\$6.0		
FY2022	\$6.0		
FY2023	\$4.8		
FY2024	\$0.0 \$0.0		
FY2025			
FY2026	\$0.0		
FY21-26 Total	\$16.8		
Total Project Cost	\$17.8		

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification			I		H						
Plan	Development & Evaluation	<b>✓</b>				Щ					П	
noitr	Project Development	<b>√</b>	<b>✓</b>	В								
Executi	Implementation		<b>V</b>	<b>✓</b>	<b>✓</b>		-0	П.	<b>V</b>	1	1	П

Total

\$6.0

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

\$0.0

\$6.5 \$6.5 \$0.0 \$0.0 \$0.0 \$13.0

# Grosvenor-Strathmore Aerial Structure Improvements

Investment Category: Track and Structures Rehabilitation CIP: CIP0349

Investment Program: Structures Mode: Rail

Project or Program: Project Location: MD

### Description

Perform pier cap retrofit and grout pad rehabilitation to the Grosvenor-Strathmore Metrorail Station aerial structures. This retrofit construction will extend the useful life of the pier caps by 75 years.

### FY21 Planned Deliverables

Implementation

Metro will begin construction on grout pads and to retrofit 20 hammerhead pier caps on the Grosvenor-Strathmore Aerial Bridge with concrete pier caps to reinforce existing bridge structure.



	LTD Expenses FY2020
Safety Cust. Sat. Reliability Ridership Op. Impact	FY2021 FY2022 FY2023 FY2024
Dedicated Funding \$6.5	FY2025 FY2026
Total \$6.5	FY21-26 Total Total Project Cost
Project Phase FY20 FY21 FY22 FY23 FY24	
Needs Identification	
Needs Identification  Development & Evaluation	
⊂ Project Development ✓ ✓	

# Remote Terminal Unit (RTU) Replacement Project

Investment Program: Signals & Communications Mode: Systemwide

Project or Program: Signals & Communications Location: Systemwide

Project or Program: Project

### Description

Replace Remote Terminal Units (RTUs) in Train Control Rooms (TCRs), signal communication rooms, and power rooms as they reach the end of their lifecycle with new technology that allows the remote monitoring of equipment.

### **FY21 Planned Deliverables**

Begin to gather business requirements, technology selection and create implementation schedule to replace Remote Terminal Units (RTUs).



### Cost (\$M)

(1)	(3/0)		(1)	(%)
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact

System Perform \$0.5

Total	\$0.5
IOtal	Ψ0.0

LTD Expenses	\$0.0
FY2020	\$0.3
FY2021	\$0.5
FY2022	\$1.1
FY2023	\$4.5
FY2024	\$7.0
FY2025	\$8.0
FY2026	\$10.0
FY21-26 Total	\$31.1
Total Project Cost	\$31.4

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
ning	Needs Identification	<b>✓</b>										
Planni	Development & Evaluation	<b>✓</b>	<b>✓</b>							П		
lon	Project Development	<b>✓</b>	<b>✓</b>	<b>✓</b>								
Execution	Implementation		<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>	1	<b>√</b>	<b>√</b>	<b>√</b>		

# D&E Rail Car Replacement

Investment Category: Railcar Investments CIP: CIP8001

Investment Program: Railcar Acquisition Mode: Rail

Project or Program: Project Systemwide

### Description

This project will address surveys, studies, engineering, and design tasks related to new Railcar acquisition efforts that may lead to future capital projects or programs.

### **FY21 Planned Deliverables**

No planned deliverables in FY21. Project will resume between FY2022 and FY2026.



### Cost (\$M)

Strategic O	bjectives	Supported











### FY21 Expected Fund Source(s)

FY21 Funding Not Required

LTD Expenses	\$0.0				
FY2020	\$0.5				
FY2021	\$0.0				
FY2022	\$0.0				
FY2023	\$0.0				
FY2024	\$0.5				
FY2025	\$0.3				
FY2026	\$0.0				
FY21-26 Total	\$0.8				
Total Project Cost	\$1.3				

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification	<b>V</b>				П	1			D		
Planning	Development & Evaluation	<b>✓</b>				<b>√</b>	1		П	<b>V</b>	П	-,0
ntion	Project Development	<b>✓</b>				<b>✓</b>				1		
xecut	Implementation										-[2]	D

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# **D&E Rail Yard Improvements**

Investment Category: Railcar Investments

Project

CIP: CIP8005

Investment Program:

Mode: Rail

Project or Program:

....

Location: Systemwide

### Description

This project will provide surveys, studies, engineering, and designs related to new Rail Yard Improvements which may lead to future capital projects or programs.

Railcar Maintenance Facilities



### **FY21 Planned Deliverables**

Begin the surveys, studies, engineering, and design tasks related to new Rail Yard Improvements.

(\$)	120	(8)		
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact
ystem F	Perform			9

LTD Expenses	\$1.7
FY2020	\$0.8
FY2021	\$1.0
FY2022	\$0.0
FY2023	\$0.5
FY2024	\$0.5
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$2.0
Total Project Cost	\$4.5

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification	<b>V</b>		I								
Planni	Development & Evaluation	<b>✓</b>	<b>✓</b>		<b>✓</b>	<b>✓</b>			П	$\square$		ū
tion	Project Development		1									
xecut	Implementation							100				П

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# **D&E ATC & Communications Improvements**

Investment Category: Rail Systems Investments CIP: CIP8009

Investment Program: Signals & Communications Mode: Rail

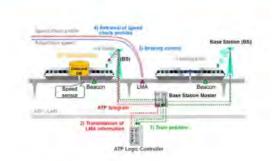
Project or Program: Program Location: Systemwide

### Description

This program provides surveys, studies, engineering, and designs related to new Signals and Communications Program efforts that may lead to future capital projects or programs.

### FY21 Planned Deliverables

In FY2021, Metro will continue studies to determine the feasibility of making significant long term investments in a next generation train control system.



### Cost (\$M)



FY2020	\$1.1
FY2021	\$0.5
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$0.5

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification	<b>V</b>				П					П	
Plan	Development & Evaluation	<b>✓</b>	<b>✓</b>			-,0,-	-0		П		П	-,0
ion	Project Development		<b>✓</b>					П				
Execution	Implementation	<b>V</b>								J.	-0.	D

Total

\$0.5

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Automatic Train Control (ATC) Next Generation Implementation

Investment Category: Rail Systems Investments

Program

CIP: CIP8010

Investment Program:

Mode: Rail

Project or Program:

Location: Systemwide

### Description

Design and install a new automatic train control (ATC) next generation system throughout the Metrorail system; the current system is at the end of its useful life. Metro has used ATC technology since the opening of the rail system and continues to develop and improve the ATC system to ensure a safe and reliable Metrorail service.

Signals & Communications

# Speed Beacon LMA Beacon Beacon Beacon I Trum position:

### FY21 Planned Deliverables

No planned deliverables in FY21. Project will commence between FY2022 and FY2026.



FY2020	\$0.0
FY2021	\$0.0
FY2022	\$0.0
FY2023	\$1.5
FY2024	\$3.5
FY2025	\$8.0
FY2026	\$10.0
FY21-26 Total	\$23.0

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						П
Planning	Development & Evaluation		П			-11	-0		-11	Д.	П	Ū
no	Project Development				✓	<b>✓</b>	1					
Execution	Implementation						1	1	<b>V</b>	1	<b>✓</b>	1

# **D&E Fixed Rail Improvements**

Investment Category: Track and Structures Rehabilitation CIP: CIP8011

Investment Program: Fixed Rail Mode: Rail

Project or Program: Program Location: Systemwide

### Description

This project supports the development and evaluation of new initiatives associated with fixed rail improvements.

### FY21 Planned Deliverables

In FY2021, design is planned for a 110 foot extension of a pocket track at the Orange and Blue/Silver Line junction near Minnesota Avenue. In addition, an assessment of the recently eliminated turn-backs on the Red and Yellow Lines will conclude and will determine the level of infrastructure investment and terminal/railyard operational adjustments required to support increased service and turnaround frequencies.

# 

### Cost (\$M)

FY2020	\$4.5
FY2021	\$1.2
FY2022	\$2.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$3.2

# Strategic Objectives Supported











### FY21 Expected Fund Source(s)

System Perform \$1.2

Total \$1.2

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>		I		H	Ta		<b>V</b>	D		
Plan	Development & Evaluation	<b>✓</b>	1			Щ	-0		<b>✓</b>	П	П	-,0
tion	Project Development	<b>✓</b>	<b>✓</b>	В				П	<b>✓</b>	B		
xecut	Implementation	1	<b>✓</b>	1	1		-17		<b>V</b>	1		D

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# **D&E Track Structures Improvements**

Investment Category: Track and Structures Rehabilitation CIP: CIP8013

Investment Program: Structures Mode: Rail

Project or Program: Program Location: Systemwide

### Description

This project will address surveys, studies, engineering, and design tasks related to new Structures Program efforts that may lead to future capital projects or programs.



### **FY21 Planned Deliverables**

In FY2021, Metro will continue engineering and design initiatives to improve the management and prioritization of track infrastructure maintenance activities. These include analysis of alternatives for the Blue, Orange, and Silver Lines to address crowding in trains and stations, as well as the installation of track heater control modules that would reduce unnecessary run time for third rail heaters.

### Cost (\$M)

# Strategic Objectives Supported

Safety







Total

### FY21 Expected Fund Source(s)

\$4.0 System Perform

FY2020 FY2021	\$0.9 \$4.0
FY2022	\$5.0
FY2023	\$1.0
FY2024	\$0.5
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$10.5

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification	<b>V</b>		H		П						
Plan	Development & Evaluation	<b>✓</b>	<b>✓</b>	<b>√</b>		Щ			П	Д.	П	Ū
ion	Project Development		<b>✓</b>	1	<b>✓</b>	<b>✓</b>				10-		
execution	Implementation					П	1	1	<b>V</b>	1	<b>✓</b>	1

\$4.0

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Yellow Line Portal Tunnel Remediation

Investment Category: Track and Structures Rehabilitation

CIP: CIP8014

Mode:

Investment Program: Structures Systemwide

Project or Program: Project Location: Systemwide

### Description

Project to address water intrusion issues at the Yellow Line Portal. Significant repairs to the steel lining after the L'Enfant Plaza Metrorail station are needed to mitigate water infiltration into the tunnel.



### **FY21 Planned Deliverables**

No planned deliverables in FY21. Project will commence between FY2022 and FY2026.

	LTD Expenses	\$0.0
201010411041104	FY2020	\$0.0
Strategic Objectives Supported	FY2021	\$0.0
Safety Cust. Sat. Reliability Ridership Op. Impact	FY2022	\$0.0
	FY2023	\$0.0
FY21 Expected Fund Source(s)	FY2024	\$0.0
	FY2025	\$0.0
FY21 Funding Not Required	FY2026	\$20.0
	FY21-26 Total	\$20.0
	Total Project Cost	\$20.0

Identification					_	_					
onmont 0											
ation					Д			П	П.	П	Ū
t Development							<b>✓</b>				
nentation			10.				1	<b>V</b>	1	<b>4</b>	1
1	Development	Development	Development	Development	Development entation	Development entation	Development entation	Development   nentation	Development	Development	Development

# **D&E Platform & Structures**

Investment Category: Station and Passenger Facilities

CIP: CIP8015

Investment Program:

Mode:

Rail

Project or Program:

Project

Location: Systemwide

### Description

This project will provide surveys, studies, engineering, and designs related to the new Platform & Structures Program efforts that may lead to future capital projects or programs.

Platforms & Structures

### **FY21 Planned Deliverables**

In FY2021, Metro will continue design and evaluation efforts for a proposed second entrance at Foggy Bottom-GWU, analyze proposed improvements to elevators and escalators in Metro Center to improve passenger flow within the station, analyze passenger circulation improvements at L'Enfant Plaza and McPherson Square. In additional to the listed projects, Metro will continue to evaluate platforms and structures in DC, Maryland, and Virginia to develop a prioritized list of projects.

### Strategic Objectives Supported











Reliability Ridership Op. Impact

FY21 Expected Fund Source(s)

\$2.3 System Perform

> \$2.3 Total



LTD Expenses	\$12.8
FY2020	\$7.1
FY2021	\$2.3
FY2022	\$1.3
FY2023	\$4.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$7.5
Total Project Cost	\$27.4

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>	1	<b>✓</b>	<b>✓</b>	П				П	П	
Plan	Development & Evaluation	<b>✓</b>	<b>✓</b>	1	<b>✓</b>	-0	-,0			0	-П	-0
noi	Project Development	<b>✓</b>	~	1	<b>✓</b>	T.		П		1		
xecution	Implementation	1	1	1	1	П	-0	1		1	Д	D

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Vertical Transportation Improvements

Investment Category: Station and Passenger Facilities

**CIP8017** 

CIP:

Investment Program: Vertical Transportation Mode: Rail

Project or Program: Project Location: Systemwide

### Description

This project will retrofit select Metrorail station elevators with fire alarm detection devices that will allow the elevator to be recalled in the event of an emergency.



### **FY21 Planned Deliverables**

Evaluate elevator recall fire alarm functions in Metrorail stations to ensure fire code adherence.

### Cost (\$M)

Strategic	Ob	ectives	Supported
		(10)	(2)









Total



FY21 Expected Fund Source(s)

**Dedicated Funding** \$0.2

LTD Expenses	\$0.0
FY2020	\$0.0
FY2021	\$0.2
FY2022	\$0.2
FY2023	\$0.2
FY2024	\$0.2
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$0.6
Total Project Cost	\$0.6

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification		1			П						
Planning	Development & Evaluation		1			ĮŪ,			П		П	
ion	Project Development		<b>✓</b>					П				
Execution	Implementation			1	✓	<b>✓</b>				П		D

\$0.2

# **D&E Station Systems**

Investment Category: Station and Passenger Facilities

Station Systems

CIP: CIP8019

Investment Program:

Mode:

Rail

Project or Program: Program

Location: Systemwide

### Description

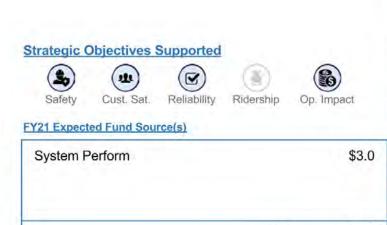
This project identifies improvements needed for Station System designs and evaluates potential solutions.



### **FY21 Planned Deliverables**

In FY2021, designs will continue for systemwide upgrades to Passenger Information Display System (PIDS) and Public Address (PA) System.

### Cost (\$M)



FY2020	\$0.5
FY2021	\$3.0
FY2022	\$8.5
FY2023	\$10.1
FY2024	\$9.3
FY2025	\$9.3
FY2026	\$9.3
FY21-26 Total	\$49.5

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification		1			П				D		
Planni	Development & Evaluation		Ü			Д					D	
rtion	Project Development	<b>✓</b>	1	1	1	✓	1	<b>✓</b>	1	1	1	<b>✓</b>
Executi	Implementation		1	1	1	1	1	1	~	1	1	1

Total

\$3.0

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# D&E Bus & Paratransit

Investment Category: Bus and Paratransit Investments

CIP: **CIP8021** 

Investment Program:

Mode: Bus

Bus and Paratransit Acquisition

Location: Systemwide

Project or Program: Project

### Description

This project will provide surveys, studies, engineering, and designs related to new Bus and Paratransit efforts that may lead to future capital projects or programs.

### **FY21 Planned Deliverables**

In FY21, Metro will develop the requirements necessary to launch a pilot of Battery Electric Bus with operation beginning in FY22.

### Cost (\$M)

2	(120)	(8)	(3)	
Safety	Cust. Sat.	Reliability	Ridership	Op. Impact
Expect	ted Fund Sou	rce(s)		
etom E	Perform			\$1.9

LTD Expenses	\$0.0
FY2020	\$0.7
FY2021	\$1.9
FY2022	\$3.8
FY2023	\$4.3
FY2024	\$0.0
FY2025	\$0.8
FY2026	\$0.3
FY21-26 Total	\$10.9
Total Project Cost	\$11.6

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>	1	<b>✓</b>		П				D	П	
Plan	Development & Evaluation	1	✓	1		- III	<b>✓</b>	1	-0	П	<b>V</b>	1
noi	Project Development	<b>✓</b>	1	1			1	<b>✓</b>			<b>√</b>	<b>✓</b>
execution	Implementation	<b>✓</b>	1	<b>✓</b>	<b>✓</b>				<b>V</b>	1	<b>4</b>	П

Total

\$1.9

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# D&E Bus Maintenance Facility

Investment Category: Bus and Paratransit Investments

Project

CIP: CIP8025

Investment Program:

Mode: Bus

Project or Program:

Location: Systemwide

### Description

This project will provide surveys, studies, engineering, and designs related to new Bus Maintenance Facilities that may lead to future capital projects or programs.

**Bus Maintenance Facilities** 



### **FY21 Planned Deliverables**

Conceptual design and programming for replacement of the Western bus facility.











FY21 Expected Fund Source(s)

\$0.8 System Perform

> \$0.8 Total

LTD Expenses	\$1.1
FY2020	\$0.4
FY2021	\$0.8
FY2022	\$0.0
FY2023	\$0.7
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$1.5
Total Project Cost	\$2.9

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification	<b>V</b>	1		<b>V</b>	П						П
Planning	Development & Evaluation	<b>✓</b>	<b>✓</b>	Ū,	<b>✓</b>	П			Ш	П.	П	-0
ion	Project Development	<b>✓</b>	<b>✓</b>		1							
xecution	Implementation							П.				П

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Future Bus Maintenance Facility

Investment Category: Bus and Paratransit Investments CIP:

Investment Program: Bus Maintenance Facilities Mode: Bus

Project or Program: Project Systemwide

### Description

This project will begin construction of new Bus Maintenance Facilities that are identified for replacement by the Bus Maintenance Facility D&E program.

### **FY21 Planned Deliverables**

No planned deliverables in FY21. Project expected to commence between FY2022 and FY2026.



CIP8026

### Cost (\$M)

\$	(111)	(≥)	(8)	(B)
Safety	Cust. Sat.	Reliability	Ridership	Op. Impac
	ed Fund Sour		Nidership	Ор. ппр

FY21 Funding Not Required

LTD Expenses	\$0.0
FY2020	\$0.0
FY2021	\$0.0
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$0.5
FY2025	\$1.2
FY2026	\$8.5
FY21-26 Total	\$10.2
Total Project Cost	\$10.2

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Develo	Needs Identification					I						
	Development & Evaluation					Щ						
Execution	Project Development					✓	1	П	1		✓	
	Implementation			10			1	1	~	1	<b>✓</b>	1

<sup>\*</sup> Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# D&E IT

Investment Category: Business Support Investments

CIP: CIP8029

Cost (\$M)

Investment Program:

Mode: Systemwide

Project or Program: Project Location: Systemwide

### Description

This project identifies emerging Information Technology needs and develops proposed solutions for evaluation to become potential future capital projects.



### FY21 Planned Deliverables

In FY21 Metro will develop proposed solutions to support regulatory and reporting requirements of Metro's Occupational Health and Wellness (OHAW) department, deliver train arrival prediction timelines to Passenger Information Display Signs (PIDS), and evaluate technology options for Metro Transit Police needs.



Safety







Total



FY21 Expected Fund Source(s)

\$2.8 System Perform

Total Project Cost	\$32.2
FY21-26 Total	\$20.6
FY2026	\$0.0
FY2025	\$0.0
FY2024	\$3.7
FY2023	\$9.0
FY2022	\$5.2
FY2021	\$2.8
FY2020	\$5.6
LTD Expenses	\$6.0

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Planning	Needs Identification	<b>V</b>		I		П	B	П	1	<b>V</b>	П	
	Development & Evaluation	<b>✓</b>	<b>✓</b>			П			<b>✓</b>	<b>✓</b>	<b>✓</b>	-0
execution	Project Development	<b>✓</b>	<b>✓</b>	1				П	1	1	<b>✓</b>	<b>✓</b>
	Implementation	<b>✓</b>		1	<b>✓</b>	<b>✓</b>		(1)	~	1	1	1

\$2.8

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# **D&E MTPD**

Investment Category: Business Support Investments

CIP: CIP8031

Mode:

Investment Program: MTPD

Systemwide

Project or Program: Project

Location: Systemwide

### Description

This project supports the development and evaluation of new potential MTPD initiatives.



### **FY21 Planned Deliverables**

In FY2021, Metro will continue studies on the development of a Law Enforcement Mobile Application, as well as a potential future consolidated training facility to include canine, emergency management, tunnel and first responder training.

### Cost (\$M)

LTD Expenses	\$0.1
FY2020	\$1.0
FY2021	\$0.7
FY2022	\$0.3
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$1.0
Total Project Cost	\$2.1

## Strategic Objectives Supported











### FY21 Expected Fund Source(s)

System Perform \$0.7

Total \$0.7

ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification	1		<b>V</b>		П	П	П	<b>V</b>	D		
Development & Evaluation	<b>✓</b>		<b>✓</b>		Щ	0		<b>✓</b>	<b>4</b>	D.	-,0
Project Development		<b>✓</b>	1					1	1		
Implementation		1					100		1	1	: []
	Development & Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development & Evaluation  Project Development  V	Needs Identification  Development &  Evaluation  Project Development  V  V  V  V  V  V  V  V  V  V  V  V  V	Needs Identification  Development &  Evaluation  Project Development	Needs Identification  Development &				

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# **Future MTPD Major Projects**

Investment Category: Business Support Investments

CIP: CIP8032

Investment Program: MTPD

Mode: Systemwide

Project or Program: Project

Location: Systemwide

### Description

This project represents any large scale future MTPD projects that have yet to be fully defined, but are known needs.



### FY21 Planned Deliverables

In FY2021, Metro Transit Police Department will continue the Threat and Vulnerability Assessment (TVA) remediation to develop and evaluate security improvements for rail stations and tracks, bridges, tunnels, railyard and bus maintenance facilities. Examples of improvements include installing fencing, railyard security gates, employee and pedestrian turnstiles, intrusion sensors and cameras, vegetation control, and other various security enhancements identified by the TVA.

### Strategic Objectives Supported











FY21 Expected Fund Source(s)

System Perform		\$1.7
	Total	\$1.7

LTD Expenses	\$0.0
FY2020	\$0.6
FY2021	\$1.7
FY2022	\$1.0
FY2023	\$1.0
FY2024	\$1.0
FY2025	\$1.0
FY2026	\$1.0
FY21-26 Total	\$6.7
Total Project Cost	\$7.3

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification			I		П						
Planr	Development & Evaluation	<b>✓</b>				П			П	Д	П	Ü
on	Project Development	1										
Execution	Implementation	<b>✓</b>	1	1	<b>V</b>	<b>✓</b>	1	1	<b>V</b>	1	<b>4</b>	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal year

# **D&E Support Equipment/Services**

Investment Category: Business Support Investments

CIP: **CIP8033** 

Investment Program:

Mode: Systemwide

Support Equipment/Services

Location: Systemwide

Project or Program: Project

### Description

This project is for the purchase of equipment, services, and systems that provide support to Metro's operation.

### **FY21 Planned Deliverables**

Metro will provide engineering services to survey replacement of non-revenue facility rooftop HVAC units beyond useful life. Additionally, will assess use of digital technology to create more efficient ways to utilize the corporate website, improve mobile access, expand wifi marketing, develop touch screen wayfinding, improve voice commanded devices, and enhance self-service communications to improve business operations and customer experience.

### Strategic Objectives Supported











Cust. Sat. FY21 Expected Fund Source(s)

\$0.3 System Perform

> \$0.3 Total



LTD Expenses	\$1.9
FY2020	\$0.3
FY2021	\$0.3
FY2022	\$0.5
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$0.8
Total Project Cost	\$3.0

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification	<b>V</b>	1			H	B	П	<b>V</b>	D		
Plann	Development & Evaluation	<b>✓</b>				-,0	-0		<b>✓</b>	Ш	П	-,0
Execution	Project Development	<b>✓</b>	1						1			
	Implementation		1	1	П		-0			Į.	-0	Ð

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Project Development Program - DC

Investment Category: Business Support Investments

Program

CIP: CRB0005

Investment Program:

Mode: Bus

Project or Program:

Location: Washington, DC

### Description

This program is supported by the District of Columbia to facilitate the planning and designing of transit oriented development and other projects that are of priority interest to the District of Columbia.

Support Equipment/Services

### FY21 Planned Deliverables

Metro will continue planning for Transit Oriented Development at Brookland and Fort Totten. Development and evaluation of station improvements will continue at Navy Yard-Ballpark. As well as, planning requirements for other station passenger circulation improvements, joint developments, and bus facilities as requested by the District of Columbia.

### Cost (\$M)

# Strategic Objectives Supported









Total



### FY21 Expected Fund Source(s)

Other Local \$1.0

\$1.0

FY2020	\$0.8
FY2021	\$1.0
FY2022	\$1.0
FY2023	\$1.0
FY2024	\$1.0
FY2025	\$1.0
FY2026	\$1.0
FY21-26 Total	\$6.0

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification					П						
Planning	Development & Evaluation			П		Щ	-J		-11			-0
on	Project Development							П				
Execution	Implementation	<b>V</b>	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	1	<b>V</b>	<b>V</b>	1	<b>✓</b>	<b>✓</b>

# Project Development Program - MD

Investment Category: Business Support Investments

Program

CIP: **CRB0009** 

Investment Program:

Mode: Rail

Project or Program:

Location: Maryland

### Description

This program is supported by the State of Maryland to facilitate the planning and designing of transit oriented development and other projects that are of priority interest to the State of Maryland.

Support Equipment/Services

### **FY21 Planned Deliverables**

Metro will continue planning for Transit Oriented Development at West Hyattsville, Morgan Boulevard, and Addison Road. Development and evaluation of station improvements will continue at Rockville. As well as, planning requirements for other station passenger circulation improvements, joint developments, and bus facilities as requested by localities in Maryland.

### Cost (\$M)

### \$0.9 FY2020 FY2021 \$1.0 FY2022 \$1.0 \$1.0 FY2023 \$1.0 FY2024 \$1.0 FY2025 \$1.0 FY2026 \$6.0 FY21-26 Total

### Strategic Objectives Supported









Ridership Op. Impact

### FY21 Expected Fund Source(s)

Other Local \$1.0

> \$1.0 Total

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification											П
Planni	Development & Evaluation		П			П	0				П	Ū
uo	Project Development							П				
Execution	Implementation	1	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>V</b>	<b>V</b>

# **New Potomac Yard Metrorail Station**

Investment Category: Station and Passenger Facilities

CIP: CRB0013

Investment Program: Platforms & Structures

Mode: Rail

Project or Program: Project Location: Alexandria

### Description

Design and construction of a new Metrorail Station between the Ronald Reagan Washington National Airport and Braddock Road Stations along the existing Blue and Yellow Lines.

### FY21 Planned Deliverables

In FY2021, Metro plans to begin the construction of buildings that will house train control, power and communication systems; install information technology equipment; and complete the track double cross-over and track cut-over installations between National Airport and Braddock Road stations.



Total \$59.1	Total Project Cost	\$290.4
	FY21-26 Total	\$220.4
	FY2026	\$0.0
Potomac Yard (Alexandria) \$59.1	FY2025	\$0.0
Y21 Expected Fund Source(s)	FY2024	\$38.6
	FY2023	\$33.9
Safety Cust. Sat. Reliability Ridership Op. Impact	FY2022	\$88.9
Strategic Objectives Supported	FY2021	\$59.1
and the second s	FY2020	\$27.5
	LTD Expenses	\$42.5

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					E.						П
Planning	Development & Evaluation		П		П	Ц			П	П	П	· D
uo	Project Development											
Execution	Implementation	1	1	1	<b>✓</b>	<b>✓</b>						D

# Project Development Program - VA

Investment Category: Business Support Investments

CIP: **CRB0018** 

Investment Program:

Mode: Rail

Project or Program: Program Location: Virginia

### Description

This program is supported by the Commonwealth of Virginia to facilitate the planning and designing of transit oriented development and other projects that are of priority interest to the Commonwealth of Virginia.

Support Equipment/Services



### **FY21 Planned Deliverables**

Metro will continue planning for Transit Oriented Development at West Falls Church, East Falls Church Transit Facilities, and Eisenhower Avenue Public Space Improvements. Metro will coordinate and begin planning the Huntington Bus Rapid Transit initiative, as well as, planning requirements for other station passenger circulation improvements, joint developments, and bus facilities as requested by

### localities in Virginia.

### Strategic Objectives Supported











### FY21 Expected Fund Source(s)

System Perform		\$0.6
Other Local		\$1.0
	Total	\$1.6

FY2020	\$1.8
FY2021	\$1.6
FY2022	\$1.1
FY2023	\$1.1
FY2024	\$1.1
FY2025	\$1.1
FY2026	\$1.0
FY21-26 Total	\$6.8

Pro	ject Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guin	Needs Identification	<b>V</b>				П						П
Planni	Development & Evaluation	<b>✓</b>				Щ			П	П.	П	Ū
ion	Project Development	<b>✓</b>	<b>√</b>									
Execution	Implementation	<b>✓</b>	1	<b>4</b>	<b>✓</b>	<b>V</b>	1	1	~	1	<b>4</b>	1

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Silver Line Phase 1 Railcars

Investment Category: Railcar Investments CIP: CRB0019\_19

Investment Program: Railcar Acquisition Mode: Rail

Project or Program: Project Systemwide

### Description

This project supports the procurement of the base option of 64 railcars for phase 1 construction of the Silver Line.

### **FY21 Planned Deliverables**

Final acceptance of Operation and Maintenance Manuals and Spare Parts Catalogs, portable and bench testing equipment, and delivery of as-built drawings are planned for FY2021.



### Cost (\$M)

(25)	(121)	(E)	(a)	(Fb)
Safety	Cust. Sat.	Reliability	Ridership	Op. Impac

LTD Expenses	\$0.0
FY2020	\$10.4
FY2021	\$7.8
FY2022	\$0.0
FY2023	\$0.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$7.8
Total Project Cost	\$18.2

Proj	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					П						
Plann	Development & Evaluation		П			-Д-			П		П	-,0
lon	Project Development											
Execution	Implementation	1	1		-171	OFT.		П		:0:		П

Total

\$7.8

# Silver Line Phase 2

CIP:

Investment Category: Station and Passenger Facilities

CRB0020

Mode: Rail Investment Program: Platforms & Structures

All new Phase II stations in Virginia - 3 Location: Project or Program: Project

in Fairfax County and 3 in Loudoun

County

### Description

This project supports Phase II construction, integration, and infrastructure improvements for the Silver Line expansion.



### **FY21 Planned Deliverables**

Project Development

Implementation

1

1

1

Metro will complete signage and graphics installation at six new stations, and are expected to begin revenue service in FY2021.

### Cost (\$M)

			LTD Expense	es		\$49.2
A source on a	1.2		FY2020			\$30.1
Strategic Objectives Supp	A A	ā	FY2021			\$15.9
( <u>s</u> ) ( <u>u</u> ) (			FY2022			\$17.7
		. Impact	FY2023			\$0.0
FY21 Expected Fund Source(s	1		FY2024		\$0.0	
MWAA		\$15.9	FY2025	\$0.0		
			FY2026			\$0.0
			FY21-26 Tot	tal		\$33.6
	Total	\$15.9	Total Project	t Cost		\$113.0
Project Phase	FY20 FY21 FY22	FY23 FY24	FY25 FY26	FY27 FY28	FY29	FY30
Needs Identification						
Needs Identification  Development & Evaluation			-0-0-	пп		
Control of the contro						

\* Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Silver Line Phase 2 Railcars

CIP: Investment Category: Railcar Investments CRB0020\_01

Mode: Rail Investment Program: Railcar Acquisition

Location: Systemwide Project or Program: Project

### Description

This project supports procurement of 64 railcars for phase 2 construction of the Silver Line.

### **FY21 Planned Deliverables**

Evaluation

**Project Development** 

Implementation

1

1

1

In FY2021, Metro will continue reliability testing for 64 railcars associated with software and engineering modifications to improve overall reliability.



### Cost (\$M)

		COST (21M)				
		LTD Expenses	\$133.6			
a source and a source	2-	FY2020	\$12.5			
Strategic Objectives Supported		FY2021	\$2.9			
		FY2022	\$0.0			
	FY2020 \$ FY2021 FY2022 FY2023 FY2024 FY2025 FY2026 FY21-26 Total Total \$2.9	\$0.0				
Y21 Expected Fund Source(s)		FY2024	\$0.0			
MWAA	\$2.9	FY2025	\$0.0			
		FY2026	\$0.0			
		FY21-26 Total	\$2.9			
	Total \$2.9	Total Project Cost	\$149.0			
Project Phase FY	Y20 FY21 FY22 FY23 FY24	FY25 FY26 FY27 FY28	FY29 FY30			
Needs Identification  Development &						
Development &						

\* Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Purple Line

Investment Category: Station and Passenger Facilities

Project

CIP: CRB0127

Investment Program:

Project or Program:

Mode: Rail

Platforms & Structures

Location: Bethesda, Silver Spring, College Park,

and New Carrollton.

### Description

The Purple Line is a planned 16-mile light rail transit line extending from Bethesda to New Carrollton. The Maryland Transit Administration (MTA), is managing the development of the line, which will connect to four Metrorail station locations - Bethesda, Silver Spring, College Park, and New Carrollton. This project includes design and engineering support to plan for and manage the impacts of the Purple Line on Metro facilities.



### FY21 Planned Deliverables

In FY2021, Metro will continue design on the Bethesda South Mezzanine, which is to start in late FY2020, with construction to begin in early FY2022. Metro will also continue engineering support efforts at the three other Metrorail Stations connecting to the Purple Line.

### Cost (\$M)

Total Project Cost	\$8.9
FY21-26 Total	\$0.3
FY2026	\$0.0
FY2025	\$0.0
FY2024	\$0.0
FY2023	\$0.0
FY2022	\$0.2
FY2021	\$0.1
FY2020	\$4.2
LTD Expenses	\$4.4

# Strategic Objectives Supported











### FY21 Expected Fund Source(s)

Other Local		\$0.1
	Total	\$0.1

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Needs Identification  Development & Evaluation					Ш	Ta.			D			
			П			Ū.	-B		-0	Ш	-0	- 0
xecution	Project Development					1		П				
	Implementation	<b>V</b>	<b>✓</b>	1	1		-17	П		Į.	П	П

Project Phase chart may contain multiple project or program initiatives that span and begin in various fiscal years

# Union Station Entrance Improvements

Investment Category: Station and Passenger Facilities

CIP: CRB0133

Investment Program: Platforms & Structures

Mode: Rail

Location: Union Station

Project or Program: Project

### Description

Provide congestion relief to the First St NE entrance at Union Station. The project will increase customer safety and improve customer circulation by providing additional space in the mezzanine, adding stairs and faregates, and relocating fare card vendors.



### **FY21 Planned Deliverables**

In FY2021, Metro will begin to implement the designed improvements of the Union Station Metrorail station First Street NE entrance, the expansion will include additional stairs in the north mezzanine, additional fare gates and the relocation of existing fare vending machines.

### Cost (\$M)

LTD Expenses	\$0.0
FY2020	\$0.6
FY2021	\$1.7
FY2022	\$1.2
FY2023	\$3.0
FY2024	\$0.0
FY2025	\$0.0
FY2026	\$0.0
FY21-26 Total	\$5.9
Total Project Cost	\$6.5

### Strategic Objectives Supported











### FY21 Expected Fund Source(s)

Other Local \$1.7

Pro	ect Phase	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
guir	Needs Identification					H						
Planning	Development & Evaluation		Ш			Щ			П		П	ū
Execution	Project Development	1	<b>V</b>	В								
	Implementation		<b>✓</b>	<b>✓</b>	<b>✓</b>							D