

# Fund 30020: Infrastructure Replacement and Upgrades

## Focus

Fund 30020, Infrastructure Replacement and Upgrades, supports the long-term needs of the County’s capital assets to maximize the life of County facilities, avoid their obsolescence, and provide for planned repairs, improvements, and restorations to make them suitable for organizational needs. Infrastructure replacement and upgrades is the planned replacement/upgrade of building subsystems such as roofs, electrical systems, heating, ventilation, and air conditioning (HVAC), plumbing systems, elevators, windows, flooring, parking lots, fire alarms, fire suppression, building automation systems, and emergency generators that have reached the end of their useful life. Without significant reinvestment in building subsystems, older facilities can fall into a state of ever-decreasing condition and functionality, and the maintenance and repair costs necessary to operate the facilities increase. Fairfax County will have a projected FY 2025 facility inventory of approximately 12 million square feet of space (excluding schools, parks, and housing facilities). This inventory continues to expand with the addition of newly constructed facilities, the renovation and expansion of existing facilities, and the acquisition of additional property. With such a large inventory, it is critical that a planned program of repairs and restorations be maintained. In addition, the age of a large portion of this inventory of facilities is reaching a point where major reinvestments are required in the building subsystems.

Many County facilities have outdated HVAC and electrical systems that are susceptible to failure or are highly inefficient energy users. These types of projects are prioritized based on maintenance reports and availability of parts. Roof and envelope replacement, repairs, and waterproofing are conducted in priority order based on an evaluation of maintenance and performance history. Repair and replacement of facility roofs and building envelopes are considered critical to avoid the serious structural deterioration that occurs from roof and envelope leaks. In addition, emergency generator systems and life safety systems are replaced based on equipment age, coupled with maintenance and performance history. Critical emergency repairs and renovations are accomplished under the category of emergency building repairs. These small projects abate building obsolescence and improve the efficiency and effectiveness of facilities and facility systems. The following table outlines, in general, the expected service life of building subsystems used to project infrastructure replacement and upgrade requirements, coupled with the actual condition of the subsystem component:

### General Guidelines for Expected Service Life of Building Subsystems

#### Conveying Systems

Conveying Technology	7 to 10 years
Elevator	15 to 25 years
Escalator	15 to 25 years

#### Electrical

Fire Alarms	15 years
Generators	25 years
Lighting	20 years
Service/Power	25 years

#### Finishes

Broadloom Carpet	7 years
Carpet Tiles	15 years
Systems Furniture	20 to 25 years

#### HVAC

Boilers	15 to 30 years
Building Control Systems	7 years
Equipment	20 years

#### Plumbing

Fixtures	30 years
Pipes and Fittings	30 years
Pumps	15 years

#### Roofs

Replacement	20 years
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#### Site

Paving	15 years
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## Fund 30020: Infrastructure Replacement and Upgrades

Each year, the Facilities Management Department (FMD) prioritizes and classifies infrastructure replacement and upgrade projects into five categories. Projects are classified as Category F: urgent/safety related, or endangering life and/or property; Category D: critical systems beyond their useful life or in danger of possible failure; Category C: life-cycle repairs/replacements where repairs are no longer cost effective; Category B: repairs needed for improvements if funding is available, and Category A: good condition.

The Board of Supervisors policy is to dedicate a portion of year end balances to a Capital Sinking Fund as a budgetary mechanism for funding Infrastructure Replacement and Upgrade requirements. Each agency maintains a prioritized list of needed infrastructure replacement and upgrade projects and reviews that list periodically throughout the year. Once the Board approves the allocation of the Sinking Fund at the Carryover Review, funds become available for prioritized projects. The Sinking Fund is dedicated to projects that are capital in nature and considered an asset improvement. To date, a total of \$84,020,366 has been allocated to FMD for critical infrastructure replacement and upgrade projects through the year-end allocation to the Sinking Fund. FMD has initiated several larger scale projects with funding from the Sinking Fund, including roof replacement at the Gerry Hyland South County Government Center, Huntington Community Center, and Juvenile Detention Center; HVAC system component replacement at the Herrity Building, Gerry Hyland South County Government Center, Annandale Center, Cathy Hudgins Community Center at Southgate and Michael R. Frey Animal Shelter; building improvements at the Bailey's Community Center, Adult Detention Center and Clifton Fire Station; fire alarm system replacement at the Government Center and Fairfax County Courthouse; elevator modernization at the Adult Detention Center; security gates replacement at the Fairfax County Courthouse and Courthouse Expansion; electrical improvements at the Government Center, and building automation system upgrades at Fairfax Center Fire Station, Great Falls Library, Mott Community Center, Providence Community Center, Sherwood Regional Library and the Fire Training Academy.

In February 2020, the Board of Supervisors and the School Board established a joint CIP working group to review the County's existing Financial Policies, consider the financing options available for capital projects, understand the capital project requirements identified for both the County and Schools, and evaluate the CIP and capital processes. The Committee arrived at a series of recommendations, which included gradually increasing General Obligation Bond Sale limits from \$300 million to \$400 million annually; dedicating the equivalent value of one penny on the Real Estate tax rate to the County and School capital program to support both infrastructure replacement and upgrade projects and debt service on the increased annual sales; and increasing the percentage allocated to the Capital Sinking Fund at year-end, as well as including Schools in the allocation. Based on resource constraints, the Committee's recommendation to dedicate the value of one penny has not been included in the FY 2025 Adopted Budget Plan. An investment totaling \$5 million, split equally between the County and Schools, was included, with the anticipation that this investment will grow in the coming fiscal years. When fully implemented, these recommendations will provide significant funding for infrastructure replacement and upgrades in the future.

An amount of \$2,500,000 has been included in FY 2025 to address six of the top priority category F projects. In addition, an amount of \$12,500,000 was funded as part of the *FY 2024 Third Quarter Review* for a total of \$15,000,000 to support the most critical FY 2025 identified projects. In recent years, it has been the Board of Supervisors' practice to fund some or all of the infrastructure replacement and upgrade projects using one-time funding as available as part of quarterly reviews. These projects, all Category F, are outlined in the table below, which includes projects funded as part of the FY 2025 Adopted Budget Plan and projects that were funded as part of the *FY 2024 Third Quarter Review*.

# Fund 30020: Infrastructure Replacement and Upgrades

## FY 2025 Infrastructure Replacement and Upgrade Program

Priority	Project Type	Facility	Category	Existing Conditions/Deficiencies	Estimate
<b>Projects funded as part of the FY 2025 Adopted Budget Plan:</b>					
1	Elevator	Adult Detention Center	F	<ul style="list-style-type: none"> <li>Maintenance intensive and increased system failure</li> <li>Parts are no longer available or are obsolete</li> <li>Disruption to building operations/end users</li> </ul>	\$250,000
2	Fire Suppression	West Springfield Police, Fire and Government Center	F	<ul style="list-style-type: none"> <li>Existing system has exceeded its life cycle</li> <li>Maintenance intensive</li> <li>Elevated potential for loss of property and equipment</li> </ul>	\$250,000
3	Electrical	Fairfax County Government Center	F	<ul style="list-style-type: none"> <li>Shorter life expectancy of IT equipment</li> <li>Shorter battery life due to frequent power outages</li> <li>Limited operators' ability to access, control, and monitor building systems during power outages</li> <li>Increased labor cost for IT personnel to reset equipment after each outage</li> </ul>	\$900,000
4	HVAC	Mott Community Center	F	<ul style="list-style-type: none"> <li>Maintenance intensive and increased system failure</li> <li>Parts are no longer available or are obsolete</li> <li>Disruption to building operations/end users</li> </ul>	\$550,000
5	Miscellaneous	Various Facilities	F	<ul style="list-style-type: none"> <li>Replacement of building subsystem components such as small water heaters and power distribution units</li> <li>Projects are prioritized based on existing conditions, availability of parts, and critical nature of failure</li> </ul>	\$250,000
6	HVAC	Mount Vernon Government Center and Police Station (partial funding)	F	<ul style="list-style-type: none"> <li>Maintenance intensive and increased system failure</li> <li>Parts are no longer available or are obsolete</li> <li>Disruption to building operations/end users</li> </ul>	\$300,000

## Fund 30020: Infrastructure Replacement and Upgrades

Priority	Project Type	Facility	Category	Existing Conditions/Deficiencies	Estimate
<b>Projects funded as part of the FY 2024 Third Quarter Review:</b>					
7	HVAC	Mount Vernon Government Center and Police Station (partial funding)	F	<ul style="list-style-type: none"> <li>Maintenance intensive and increased system failure</li> <li>Parts are no longer available or are obsolete</li> <li>Disruption to building operations/end users</li> </ul>	\$400,000
8	Roof	North County Government Center and Reston Police Station	F	<ul style="list-style-type: none"> <li>Damaged areas of the roof</li> <li>Water leaks</li> <li>Lightning protection system requires certification</li> </ul>	\$350,000
9	Fire Alarm	Herrity Building	F	<ul style="list-style-type: none"> <li>Maintenance intensive</li> <li>Parts difficult to obtain</li> <li>Elevated risk due to potential system malfunction</li> </ul>	\$4,000,000
10	Miscellaneous (Doors)	Herrity Building	F	<ul style="list-style-type: none"> <li>Increased failure</li> <li>Aluminum is corroding and seals are missing</li> <li>Maintenance no longer feasible</li> <li>Increased utilities costs</li> <li>Safety hazard</li> <li>Disruption to building operations/end users</li> </ul>	\$1,700,000
11	Building Envelope	Various Parking Garages (First phase of a multi-year program)	F	<ul style="list-style-type: none"> <li>Maintenance intensive and increased system failure</li> <li>Leaks through openings and failed drainage systems resulting in flooding and ponding</li> <li>Deterioration and corrosion of existing structures</li> <li>Pedestrian and vehicle hazards</li> </ul>	\$2,000,000
12	Paving	Fire Training Academy	F	<ul style="list-style-type: none"> <li>Maintenance no longer feasible</li> <li>Deteriorating conditions</li> <li>Potential for injuries to pedestrians</li> </ul>	\$300,000
13	Roof	Kings Park Library and Braddock District Government Center	F	<ul style="list-style-type: none"> <li>Maintenance intensive</li> <li>Water leaks</li> <li>Increased utilities costs</li> <li>Disruption to building operations/end users</li> </ul>	\$1,300,000
14	Electrical	Fairfax County Government Center	F	<ul style="list-style-type: none"> <li>Maintenance intensive</li> <li>Safety hazard</li> <li>Increased utilities costs</li> <li>Disruption to building operations/end users</li> </ul>	\$1,150,000

## Fund 30020: Infrastructure Replacement and Upgrades

Priority	Project Type	Facility	Category	Existing Conditions/Deficiencies	Estimate
15	HVAC	Old Historic Jail	F	<ul style="list-style-type: none"> <li>Maintenance intensive and increased system failure</li> <li>Parts are obsolete</li> <li>Disruption to building operations/end users</li> </ul>	\$600,000
16	Building Automation System	Old Historic Jail	F	<ul style="list-style-type: none"> <li>Maintenance intensive</li> <li>Parts are no longer available or are obsolete</li> <li>Increased utilities costs</li> <li>Disruption to building operations/end users</li> </ul>	\$450,000
17	Generator	West Springfield Police, Fire and Government Center	F	<ul style="list-style-type: none"> <li>Maintenance intensive</li> <li>Elevated potential for loss of operations controls due to inability to support power outages</li> <li>Disruption to building operations/end users</li> </ul>	\$250,000
<b>Total</b>					<b>\$15,000,000</b>

Analysis of these requirements is conducted annually, and projects may shift categories, become an emergency and be funded by the emergency systems failures project, or be eliminated based on other changes, such as a proposed renovation project.

### Changes to FY 2024 Adopted Budget Plan

*The following funding adjustments reflect all approved changes in the FY 2024 Revised Budget Plan since passage of the FY 2024 Adopted Budget Plan. Included are all adjustments made as part of the FY 2023 Carryover Review, FY 2024 Third Quarter Review, and all other approved changes through April 30, 2024.*

#### **Carryover Adjustments \$97,378,392**

As part of the FY 2023 Carryover Review, the Board of Supervisors approved an increase of \$97,378,392 due to the carryover of unexpended project balances in the amount of \$74,168,525 and an adjustment of \$23,209,867. This adjustment included an increase to the General Fund transfer of \$22,876,145, including: \$5,000,000 to support emergency systems failures that occur at aging County facilities throughout the year and \$17,876,145 for the Capital Sinking Fund. In addition, the adjustment included the appropriation of revenues in the amount of \$333,722 received in FY 2023 associated with reimbursements from the Virginia Department of Transportation (VDOT) and the Virginia State Police for their share of the operational costs at the McConnell Public Safety and Transportation Operations Center (MPSTOC) as well as the state share of future projected capital requirements at this facility.

## Fund 30020: Infrastructure Replacement and Upgrades

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### Third Quarter Adjustments

**\$15,500,000**

As part of the *FY 2024 Third Quarter Review*, the Board of Supervisors approved an increase of \$15,500,000 to support infrastructure replacement and upgrades and emergency repairs at County facilities. An amount of \$12,500,000 will support identified Category F projects which are defined as urgent/safety related, or endangering life and/or property. This funding, in addition to the funding of \$2,500,000 included in the FY 2025 Adopted Budget Plan will address the FY 2025 project requirements. Funding of one-time capital improvements as part of a quarterly review is consistent with actions taken by the Board of Supervisors in previous years. In addition, \$3,000,000 was required for the emergency systems failures project for unforeseen emergency repairs at County facilities.

A Fund Statement and a Summary of Capital Projects are provided on the following pages. The Summary of Capital Projects may include some projects without a Total Project Estimate amount. These projects are considered "continuing" projects or projects for which funding is necessary on an ongoing basis (e.g., a contingency or planning project).

# Fund 30020: Infrastructure Replacement and Upgrades

## FUND STATEMENT

Category	FY 2023 Actual	FY 2024 Adopted Budget Plan	FY 2024 Revised Budget Plan	FY 2025 Advertised Budget Plan	FY 2025 Adopted Budget Plan
<b>Beginning Balance</b>	<b>\$60,635,837</b>	<b>\$0</b>	<b>\$74,502,247</b>	<b>\$0</b>	<b>\$0</b>
<b>Revenue:</b>					
MPSTOC Reimbursement <sup>1</sup>	\$333,722	\$0	\$0	\$0	\$0
<b>Total Revenue</b>	<b>\$333,722</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Transfers In:</b>					
General Fund (10001)	\$31,415,961	\$1,500,000	\$39,876,145	\$2,500,000	\$2,500,000
<b>Total Transfers In</b>	<b>\$31,415,961</b>	<b>\$1,500,000</b>	<b>\$39,876,145</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>
<b>Total Available</b>	<b>\$92,385,520</b>	<b>\$1,500,000</b>	<b>\$114,378,392</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>
<b>Total Expenditures</b>	<b>\$17,883,273</b>	<b>\$1,500,000</b>	<b>\$114,378,392</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>
<b>Total Disbursements</b>	<b>\$17,883,273</b>	<b>\$1,500,000</b>	<b>\$114,378,392</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>
<b>Ending Balance<sup>2</sup></b>	<b>\$74,502,247</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

<sup>1</sup> A total of \$333,722 represents revenue received from the Virginia Department of Transportation (VDOT) and Virginia State Police associated with the state share of operating costs at the McConnell Public Safety and Transportation Operations Center (MPSTOC). These funding reimbursements will be held in projects for future infrastructure replacement and upgrade requirements. State reimbursement is based on actual operational expenditures, eliminating the need to reconcile estimates and actuals each year.

<sup>2</sup> Capital projects are budgeted based on the total project costs. Most projects span multiple years, from design to construction completion. Therefore, funding for capital projects is carried forward each fiscal year, and ending balances fluctuate, reflecting the carryover of these funds.

## Fund 30020: Infrastructure Replacement and Upgrades

### SUMMARY OF CAPITAL PROJECTS

Project	Total Project Estimate	FY 2023 Actual Expenditures	FY 2024 Revised Budget	FY 2025 Advertised Budget Plan	FY 2025 Adopted Budget Plan
Capital Sinking Fund for Facilities (GF-000029)	\$84,020,366	\$8,225,956.84	\$51,930,869.89	\$0	\$0
Electrical System Upgrades and Replacements (GF-000017)		0.00	1,521,658.13	900,000	900,000
Elevator/Escalator Renewal (GF-000013)		2,416,549.28	527,257.53	250,000	250,000
Emergency Generator Replacement (GF-000012)		48,166.00	2,046,900.60	0	0
Emergency Systems Failures (2G08-005-000)		3,680,350.05	19,181,928.52	0	0
HVAC and Plumbing System Upgrades and Replacement (GF-000011)		1,819,569.14	13,010,807.16	850,000	850,000
Life Safety System Replacements (GF-000009)		240,963.75	6,577,602.31	250,000	250,000
Miscellaneous Building Repairs (GF-000008)		648,236.23	10,980,007.12	250,000	250,000
MPSTOC County Support For Renewal (2G08-008-000)		121,292.00	2,560,372.30	0	0
MPSTOC State Support For Renewal (2G08-007-000)		0.00	994,869.00	0	0
Parking Lot and Parking Garage Improvements (GF-000041)		168,103.50	821,408.81	0	0
Roof and Envelope Repairs and Waterproofing (GF-000010)		514,086.08	4,224,711.12	0	0
<b>Total</b>	<b>\$84,020,366</b>	<b>\$17,883,272.87</b>	<b>\$114,378,392.49</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>