

# Fund 317

## Capital Renewal Construction

---

### Focus

This fund 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. Capital renewal is the planned replacement of building subsystems such as roofs, electrical systems, HVAC, plumbing systems, carpet replacement, parking lot resurfacing, fire alarm replacement and emergency generator replacement 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 2011 facility inventory of over 8.9 million square feet of space throughout the County (excluding schools, parks, housing and human services residential facilities). This inventory is expanding both with the addition of newly constructed facilities and with the acquisition of additional property. With such a large inventory, and the acquisition of additional facilities, it is critical that a planned program of repairs and restorations be maintained. In addition, the age of a major 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Many County facilities have outdated HVAC and electrical systems that are susceptible to failure or are highly inefficient energy users. Sites are identified and each individual project involves a two-step process to complete both design and construction. Roof repairs and waterproofing are conducted in priority order after a detailed evaluation of all roofs at County facilities. Based upon the results of that evaluation, critical requirements are prioritized and a five-year plan is established. Repairs and replacement of facility roofs are considered critical to avoid the serious structural deterioration that occurs from roof leaks. By addressing this problem in a comprehensive manner, a major backlog of roof problems can be avoided. Carpet replacement and parking lot resurfacing are evaluated annually and prioritized based on the most critical requirements for high traffic areas. In addition, emergency generators and fire alarm systems are replaced based on equipment age, coupled with maintenance and performance history. Emergency minor repairs and renovations, usually generated by customer requests, 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 the expected service life of building subsystems used to project capital renewal requirements, coupled with actual condition of the subsystem component:

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

<b><u>Electrical</u></b>		<b><u>Plumbing</u></b>	
Lighting	20 years	Pumps	15 years
Generators	25 years	Pipes and fittings	30 years
Service/Power	25 years	Fixtures	30 years
Fire Alarms	15 years		
<b><u>HVAC</u></b>		<b><u>Finishes</u></b>	
Equipment	20 years	Broadloom Carpet	7 years
Boilers	15 to 30 years	Carpet Tiles	15 years
Building Control Systems	10 years	Systems Furniture	20 to 25 years
<b><u>Conveying Systems</u></b>		<b><u>Site</u></b>	
Elevator	25 years	Paving	15 years
Escalator	25 years		
		<b><u>Roofs</u></b>	
		Replacement	20 years

## Fund 317

# Capital Renewal Construction

---

Each year, the Facilities Management Department (FMD) prioritizes and classifies capital renewal 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.

Staff has been reviewing funding options to address both the current capital renewal project backlog and a sustainable and reasonable level of capital renewal project activity annually. For several years staff has identified an estimated requirement of \$22 to \$26 million in capital renewal investment annually for the current building inventory. This estimate was based on two factors:

- In 2004, a comprehensive facilities condition assessment was conducted on 92 selected Fairfax County facilities (approximately 4.2 million square feet of space), representative of older facilities anticipated to have the most immediate capital renewal requirements. The assessment included a complete visual inspection of roofs and all mechanical and electrical components for each facility. Maintenance and repair deficiencies were identified and funding requirements estimated. Results from the survey indicated that approximately \$13 million per year would be required to repair and meet expected equipment replacement needs for these 92 facilities. The number of facilities evaluated represents approximately 50 percent of the current inventory, indicating a total current level of approximately \$25 million annually.
- The industry standard for capital renewal investment is currently 2 percent of replacement value. Based on average replacement values of \$150 per square foot, 2 percent equates to capital renewal requirements of \$3.00 per square foot. Budgeted renewal funds in the County have not reached this level. This may be due to the fact that much of the square footage added in the early 1990s was in the form of new facilities and thus has not yet required major capital renewal and subsystem replacement. However, this infrastructure is now aging and appropriate action must be taken to avoid system failures leading to potential disruptions in County services. Applying a \$3.00 per square foot industry standard to the 8,803,823 of square feet currently maintained would result in approximately \$26 million required annually for capital renewal expenses.

Capital Renewal funding has never reached these projected required levels in the County. Additionally, with current staffing levels, FMD is only able to complete approximately \$13 million per year in capital renewal projects. Even assuming an annually renewal funding level of \$13 million per year, FMD continues to face a significant backlog of category F and D projects. This backlog continues to grow as only the most critical emergency items are funded annually. It is estimated that approximately \$35 million in capital renewal projects are currently backlogged. In order to address this backlog and to plan for a more sustainable and reasonable annual funding level, staff has proposed a 3-year plan of short-term borrowing. Borrowing is expected to be accomplished through establishing a variable rate line of credit or a commercial paper program to take advantage of very low short-term interest rates. Principal is expected to be amortized over no more than a 5-year period. The repayment of principal and interest will be subject to annual appropriation by the Board of Supervisors. The plan includes the borrowing of \$5,000,000 in FY 2011 and \$15,000,000 in both FY 2012 and FY 2013. Eliminating the \$35 million backlog will allow for a more preventative and proactive maintenance program and increase the life cycle of all County buildings.

In FY 2011, short-term borrowing of \$5,000,000, combined with a General Fund transfer of \$3,000,000 will provide a total of \$8,000,000 in new capital renewal project funding. In addition, FMD staff will continue to work through approximately \$10 million in capital renewal projects which were previously funded, but unable to be completed with current staffing levels. Therefore, the total level of funding that FMD staff will work to complete during FY 2011 is \$18 million. This level of funding will maximize the life of the facilities, retard their obsolescence and provide for a planned program of building subsystem replacements to continue to fulfill organizational needs.

## Fund 317

### Capital Renewal Construction

This level of renewal funding will require 2/2.0 SYE additional Project Manager positions which will enable FMD to accomplish \$16 to \$18 million in renewal projects annually over a 3 year period. In order to begin project requirements immediately and prepare for increased annual funding levels, the County Executive approved 2 Project Manager positions as an out of cycle position pool realignment. At the end of the 3 year period, staff is projecting that the \$35 million backlog will be eliminated and an annual requirement of approximately \$10 million will be necessary to sustain the renewal program and avoid future backlogs. At the end of the 3 year period, the additional staff can be returned to the position pool through regular attrition.

The payback of both principle and interest on the short-term debt will be provided by the General Fund in the County's debt service fund. Staff will maintain an even level of General Fund support by increasing debt service funding and decreasing General Fund transfers to Fund 317 during the next 10 years. Short term borrowing for capital renewal is included in the debt capacity estimates in the Capital Improvement Program and can be accommodated within established debt limits for General Fund supported debt.

In addition, staff continues to supplement the General Fund supported capital renewal program by increasing bond referendum amounts associated with specific purposes. For example, the voters approved \$5 million in the fall 2004 bond referendum for library and human service facility capital renewal requirements and another \$5 million in the fall 2006 bond referendum associated with public safety facility capital renewal requirements. This practice is expected to continue where appropriate.

The current level of requirements for FY 2011 by category is outlined below:

Category	Amount
Category F Projects	\$13,698,400
Category D Projects	9,610,000
Category C Projects	8,475,000
Category B Projects	3,350,000
Emergency Systems Failure	500,000
<b>Total</b>	<b>\$35,633,400</b>

This identified level of funding does not include significant estimated requirements at several County facilities which are under review for replacement, including the Massey Building and the Pine Ridge facility. In addition, this does not include any green building initiatives such as green roofs, enhanced lighting software, or energy audit work.

FY 2011 funding, as detailed below, will provide for most of the category F (urgent/safety related, or endangering life and/or property) projects. Funding is not included for the remaining Category F projects in the amount of \$5,698,400; any Category D projects in the amount of \$9,610,000; Category C projects in the amount of \$8,475,000; Category B projects totaling \$3,350,000, or additional funding for emergency systems failures in the amount of \$500,000. These projects will be funded through the short term borrowing strategy in FY 2012 and FY 2013. Specific funding levels in FY 2011 include:

#### HVAC/Electrical Systems

This project provides for HVAC replacement at prioritized County facilities, based on the severity of problems including overloaded systems, fire hazards, and costly repairs. FY 2011 funding of \$2,450,000 will provide for HVAC replacement and electrical repairs at a variety of County facilities. Funding includes: (\$200,000) to replace the fire pump, controls and wiring at the 19 year old Clifton Fire Station; (\$150,000) for the replacement of the electrical subpanels at the 40 year old Adult Detention Center which are aged, obsolete and unstable creating a safety hazard; (\$200,000) to replace the electrical distribution system at the 50 year old Penn Daw Fire Station; (\$500,000) to replace the now corroded electrical conduit, wiring and lighting in the 18 year old Pennino/Herrity garage; (\$340,000) to replace HVAC system components at the Burke Station Road main building which is over 50 years old; (\$335,000) to replace the rusting air handlers at the 18 year old Franconia Government Center; \$150,000 to replace the sprinkler heads at the 42 year old Springfield

## Fund 317

### Capital Renewal Construction

---

Warehouse which are well beyond their useful life and creating a potential safety hazard; (\$350,000) to replace the sprinkler system on parking level 2 in the 19 year old Government Center garage which has corroded and is showing signs of imminent failure; and (\$225,000) to provide better access to the 28 year old Jennings Building cooling towers, generators and air handlers which currently do not meet code requirements and are unsafe. All of these repairs have been classified as safety risks in need of imminent repairs, or critical systems beyond their useful life in risk of failure, or life-cycle repairs/replacements where repairs are no longer cost effective. In general, the useful life of HVAC/Electrical systems is 20 years.

#### Emergency Generator Replacement

This project provides for the replacement of emergency generators at County facilities that have outlived their useful life of 25 years. FY 2011 funding of \$260,000 is included to replace the generators and obsolete parts for the 26 year old system at the Police Heliport Office Building (\$80,000), the 25 year old system at the North County Government Center in Reston (\$80,000), and the 20 year old system at the Old Courthouse (\$100,000).

#### Elevator Replacement

This project provides for emergency elevator replacement and upgrades. This program was established to address the replacement of elevators that have outlived their useful life and are experiencing frequent breakdowns. FY 2011 funding of \$250,000 is included to replace obsolete elevator components and upgrade electrical systems for code compliance at County facilities.

#### Fire Alarm Systems

This project provides for the replacement of fire alarm systems throughout the County. Fire alarm systems are replaced based on age and difficulty in obtaining replacement parts and service. FY 2011 funding in the amount of \$501,600 is included for the replacement of the obsolete and aged fire alarm systems at various County facilities based on age and equipment functionality.

#### Roof Repair and Replacement

This project provides for maintenance and repairs of facility roofs and waterproofing systems in County buildings. The maintenance and repairs are required to stop rapid deterioration and damage due to water penetration. In FY 2011, funding in the amount of \$1,000,000 is included to repair "over hangs" and re-caulk the entire Government Center building roof. In 2007, funding of approximately \$1.5 million was provided to support critical roof repairs to the main roof area only which was experiencing significant deterioration and multiple roof leaks, was at the end of its useful life, and was no longer under warranty. FY 2011 funding will provide for repairs to the overhang areas. The 19 year old Government Center is a 674,943 square foot building and roof expansion joints throughout the building are separating, causing drainage and leaking. During rain storms, water is entering the building and causing damage, which if not corrected, will weaken the structural integrity of the building.

#### Parking Lot and Garage Repairs

This project provides for the repair and maintenance of facility parking lots and garages throughout the County. In FY 2011, funding of \$2,628,400 is included for re-caulking and repairs to the parking lots at the South County Government Center (\$700,000), sidewalks surrounding the parking lot at the Kings Park Library (\$90,000), the Reston Library lot (\$103,400), and the Gunston Fire Station lot (\$60,000). Parking garage repairs including sealant, caulking and repairs to expansion joints and are required at the 15 year old Pennino and Herryty Garage (\$500,000); the 11 year old Massey Parking Garage "A" (\$600,000); the 28 year old Jennings Judicial Center parking garage (\$500,000). Wear and tear on parking garages is significant due to structural exposure to the sand and salting chemicals used in winter months which can lead to deterioration of expansion joints. In addition, it is extremely difficult and costly to provide the proper preventative maintenance to garage structures; therefore, these kinds of repairs and sealant activity are typically required every 5 to 7 years. In addition, funding of \$75,000 is included to repave the parking lot at the United Christian Ministries (UCM) building. This building is leased by the County; however, as part of the lease agreement, Fairfax County is required to maintain the building and surrounding parking lot.

# Fund 317

## Capital Renewal Construction

---

### Window Replacement

FY 2011 funding of \$350,000 is included to re-caulk windows and expansion joints at the 28 year old portion of the Jennings Building. Much of the original caulking has failed and water continues to leak into the building creating mold and presenting an imminent safety hazard. Leaking and caulking repairs were not required and therefore not identified as a problem when the Jennings building renovation project began in 2002.

### Emergency Building Repairs

This project provides for emergency repairs, minor renovations, and critical upgrading at various buildings and facilities throughout the County. Projects include emergency repairs to buildings and building equipment, plumbing repairs, minor renovations to electrical and mechanical systems, structural repairs, vandalism abatement, and other non-recurring construction and repair projects. FY 2011 funding in the amount of \$560,000 is included for critical repairs to the 19 year old Government Center restrooms. The Government Center building includes over 20 large bathrooms which are used daily by employees and the public. Floor tiles are cracking and pulling away and the sink counter tops are damaged and deteriorating beyond repair. In addition, the restroom sinks are no longer draining properly and water leaks are creating mold problems and health hazards. FY 2011 funding will provide for a complete restoration of all restrooms in the building to prevent further deterioration and leakage.

## **Changes to FY 2010 Adopted Budget Plan**

*The following funding adjustments reflect all approved changes in the FY 2010 Revised Budget Plan since passage of the FY 2010 Adopted Budget Plan. Included are all adjustments made as part of the FY 2009 Carryover Review, and all other approved changes through December 31, 2009:*

- ◆ As part of the FY 2009 Carryover Review, the Board of Supervisors approved an increase of \$31,238,468 due to the carryover of unexpended project balances in the amount of \$25,751,952 and an adjustment of \$5,486,516. The General Fund transfer to Fund 317, Capital Renewal, is increased by \$5,000,000 for emergency system failures that occur at aging County facilities throughout the year, as well as capital renewal projects categorized as "F", urgent/safety related, or endangering life and/or property. Funding will provide for emergency repairs at County facilities in the event of a major systems failure such as a large HVAC system, or other unforeseen event. This increase will provide a source funding for these types of unforeseen emergency repairs and will allow FMD to address category F projects not funded in FY 2010 for which repairs are becoming more imminent. In addition, an amount of \$486,516 is associated with the appropriation of revenues received in FY 2009 for 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 Transportation and Operations Center (MPSTOC) as well as the state share of future projected capital renewal requirements. The MPSTOC is a new high-security, state-of-the-art facility which houses the County's 911 Center and Emergency Operations Center as well as VDOT's Smart Traffic and Signal Centers and the State Police Communications Center. The new multi-use facility allows for the cost-effective provision of services through the sharing of land, buildings and technology resources at various levels of state and local government. The County pays for all operational requirements such as security, custodial, landscaping, maintenance, parking lot repairs and snow removal and the state reimburses the County for their share of these costs. In addition, the state has begun providing annual funding for future repair and renewal costs to avoid large budget increases for required capital renewal costs in the future.

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 317

## Capital Renewal Construction

### FUND STATEMENT

Fund Type G30, Capital Project Funds

Fund 317, Capital Renewal Construction

	FY 2009 Actual	FY 2010 Adopted Budget Plan	FY 2010 Revised Budget Plan	FY 2011 Advertised Budget Plan
<b>Beginning Balance</b>	<b>\$21,750,951</b>	<b>\$4,325,000</b>	<b>\$21,563,468</b>	<b>\$0</b>
Revenue:				
Sale of Bonds <sup>1</sup>	\$0	\$0	\$9,000,000	\$0
Short Term Borrowing <sup>2</sup>	0	0	0	5,000,000
MPSTOC Reimbursement <sup>3</sup>	486,516	0	0	0
<b>Total Revenue</b>	<b>\$486,516</b>	<b>\$0</b>	<b>\$9,000,000</b>	<b>\$5,000,000</b>
Transfer In:				
General Fund (001)	\$6,924,321	\$2,470,000	\$7,470,000	\$3,000,000
<b>Total Transfers In</b>	<b>\$6,924,321</b>	<b>\$2,470,000</b>	<b>\$7,470,000</b>	<b>\$3,000,000</b>
<b>Total Available</b>	<b>\$29,161,788</b>	<b>\$6,795,000</b>	<b>\$38,033,468</b>	<b>\$8,000,000</b>
<b>Total Expenditures</b>	<b>\$5,098,320</b>	<b>\$6,795,000</b>	<b>\$38,033,468</b>	<b>\$8,000,000</b>
Transfers Out:				
Public Safety Construction (312) <sup>4</sup>	2,500,000	0	0	0
<b>Total Transfers Out</b>	<b>\$2,500,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Disbursements</b>	<b>\$7,598,320</b>	<b>\$6,795,000</b>	<b>\$38,033,468</b>	<b>\$8,000,000</b>
<b>Ending Balance<sup>5</sup></b>	<b>\$21,563,468</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

<sup>1</sup> The sale of bonds is presented here for planning purposes only. Actual bond sales are based on cash needs in accordance with Board policy. On November 7, 2006, the voters approved a \$125 million Public Safety Bond Referendum, of which \$14 million was designated for capital renewal purposes. Including prior sales, an amount of \$9.0 million remains in authorized but unissued bonds from the November 7, 2006 bond referendum.

<sup>2</sup> Funding of \$5,000,000 will be provided using the County's short-term borrowing tools in order to reduce existing capital renewal backlogs.

<sup>3</sup> A total of \$486,516 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 Transportation and Operations Center (MPSTOC). These funding reimbursements will be held in capital renewal projects for future replacement requirements.

<sup>4</sup> Represents Transfers Out to Fund 312, Public Safety Construction of \$2,500,000 to support higher than anticipated expenses associated with asbestos removal within Project 009209, Judicial Center Renovation.

<sup>5</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 317

## Capital Renewal Construction

### FY 2011 Summary of Capital Projects

**Fund: 317 Capital Renewal Construction**

Project #	Description	Total Project Estimate	FY 2009 Actual Expenditures	FY 2010 Revised Budget	FY 2011 Advertised Budget Plan
003099	Emergency Building Repairs		\$178,652.07	\$647,516.03	\$560,000
003100	Fire Alarm Systems		854,617.17	2,012,914.38	501,600
009132	Roof Repairs and Waterproofing		263,430.01	0.00	1,000,000
009133	Carpet Replacement		121,173.88	84,690.82	0
009136	Parking Lot and Garage Repairs		50,157.48	0.00	2,628,400
009145	Emergency Systems Failures		0.00	6,723,329.67	0
009146	Transferred School Site Stabilization		242,298.46	0.00	0
009151	HVAC/Electrical Systems		2,145,347.40	9,155,159.94	2,450,000
009431	Emergency Generator Replacement		172,004.58	2,043,680.87	260,000
009481	Juvenile/Human Services Capital Renewal		0.00	14,812.07	0
009600	Elevator Replacement		40,907.14	7,244,413.86	250,000
009601	Public Safety Capital Renewal		1,029,731.66	9,620,434.70	0
009602	Window Replacement		0.00	0.00	350,000
009703	State Support for MPSTOC Renewal		0.00	53,282.00	0
009704	County Support for MPSTOC Renewal		0.00	433,234.00	0
<b>Total</b>			<b>\$5,098,319.85</b>	<b>\$38,033,468.34</b>	<b>\$8,000,000</b>