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## **Capital Improvement Program Introduction**

County government provides needed and desired services to the public. In order to provide these services, the County must furnish and maintain capital facilities and equipment, such as roads, parks and schools. The Capital Improvement Program (CIP) is a proposed schedule for the expenditure of funds to acquire or construct needed improvements over the next ten-year period.

The Capital Improvement Program is an important component of the County's long-range planning process and serves as a planning and implementation tool for the acquisition, development, construction, maintenance, and renovation of public facilities, infrastructure and capital equipment. The first year of the CIP becomes the capital budget and the remaining years provide an estimated, but unfunded, cost of the proposed projects and their anticipated funding sources. The CIP is reviewed annually and the priorities re-evaluated based on conditions and requirements of the community. This forecasting also allows the County to anticipate and plan for future spending requirements, and provides a positive influence on private investment decisions.

In developing the Capital Improvement Program, the County adheres to a set of financial and debt management policies established by the Board of Supervisors. The development of the CIP is guided by the following adopted Policies:

- Strategic Plan
- Comprehensive Plan
- Principles of Financial Management
- CIP Development Policy
- New School Planning Policy

These policies help preserve the County's credit rating and establish the framework for the County's overall fiscal planning and management. Projects are carefully evaluated and prioritized to optimize the use of limited capital funds to meet operational and community needs.

## **Development of the Capital Improvement Program**

The CIP is a collaborative process among a number of departments within the County and Schools. The Department of Budget and Management provides information concerning the County's past, present and future financial resources. The department prepares and distributes the package utilized by departments and agencies to submit project requests. The planning phase begins with a detailed review of the ten-year needs and as the program develops, Department of Budget and Management assists in the review and evaluation of project submissions. The CIP process takes approximately ten months each planning cycle.

Each year, representatives of County departments, offices and agencies and the Stafford County Public Schools are asked to submit a Capital Improvements Project (CIP) request form. The completed forms provide a detailed project description, justification, cost projections, and a statement of impact on the County's and School's operating budgets.

Projected costs are determined using historical or current costs for similar projects based on engineering or architectural estimates when available. An average annual escalation assumption is included for all projects.

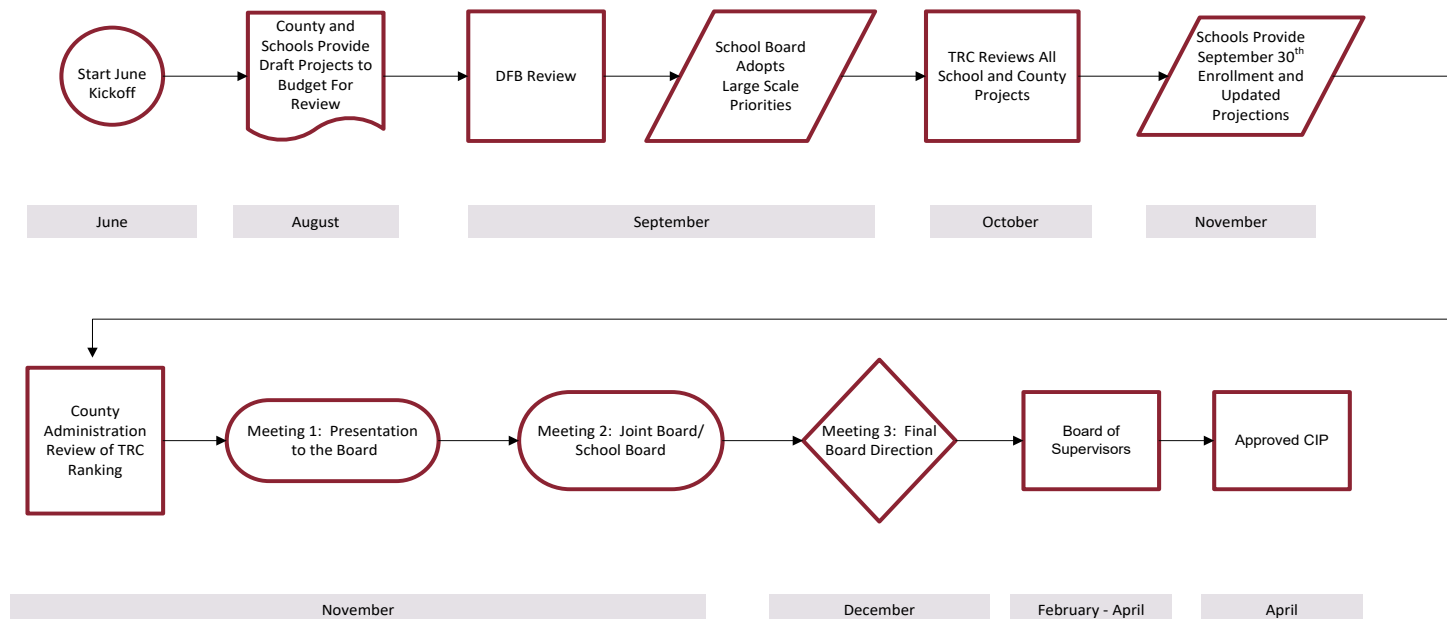
Budget and Management Department staff compiles the submitted project requests and verifies the accuracy of the anticipated project costs and operating impacts. The requests are extensively reviewed by the County Public Works Department (PW) and Department of Parks, Recreation and Community Facilities (PRCF) to verify the accuracy, adequacy and completeness of project descriptions, project cost, and funding requests. The Capital Improvement Program review schedule provides for a four week review period for any project in the CIP requiring construction.

The Technical Review Committee (TRC) ranks the projects based on established criteria. The ranking process allows projects to be added in a systematic, objective manner. Available revenues, the Board's Guiding Principles and Priorities, and financial policies guide project inclusion in the Capital Improvement Program. The TRC reports its recommendations to the Board of Supervisors.

The Capital Program TRC will assist the County in the Capital Program process by assuring that the technical aspects and costs of each of the requested projects have been well researched and documented. The team will also review, evaluate and document the need for each project and make recommendations for priority funding based on the established Capital Project Evaluation Criteria and then report their recommendations to the County Administrator and the Board of Supervisors.

### CIP Development Flowchart

CIP Capital Improvement Program  
TRC Technical Review Committee  
DFB Department of Finance and Budget



# CAPITAL IMPROVEMENT PROGRAM

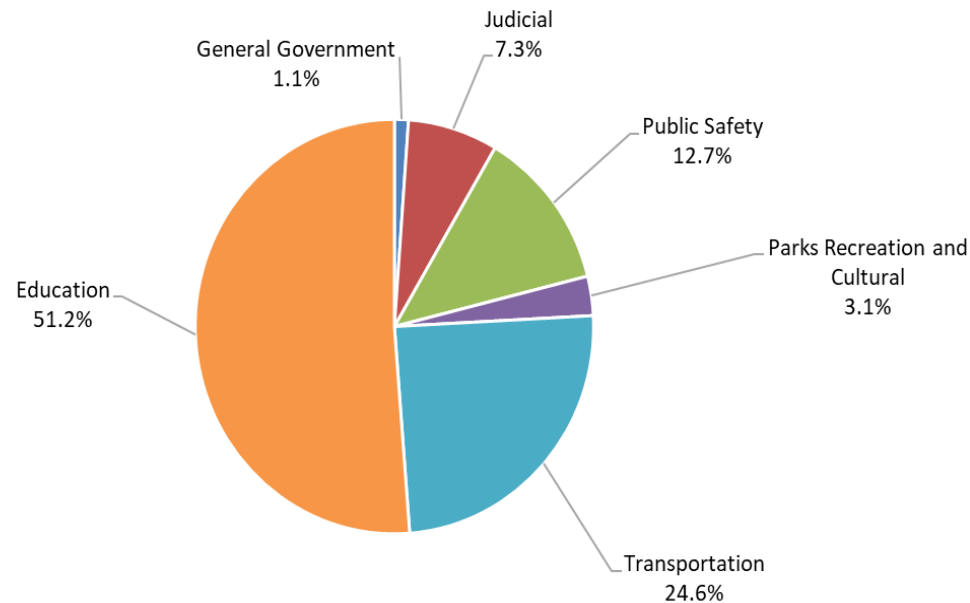
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## Summary

The capital budget is appropriated on an annual basis by contract and is included in the adopted budget. The FY22-31 capital projected expenditures for the County are \$702.4M. See below a summary of expenditures and revenues.

FY22-31 Total Projected Expenditures by Functional Area											
	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY22-31
General Government	\$1,118,000	\$1,335,073	\$1,100,000	\$281,443	\$1,400,000	\$620,493	\$929,000	\$66,000	\$68,000	\$1,032,000	\$7,950,009
Judicial	0	0	0	0	0	0	0	6,309,000	0	45,009,398	51,318,398
Public Safety	19,178,819	8,688,150	15,432,014	3,624,037	4,330,000	6,768,000	5,451,860	7,405,877	13,221,624	4,768,562	88,868,943
Parks Recreation and Cultural	1,291,510	1,282,999	952,000	4,324,009	599,000	992,000	1,967,786	3,092,927	2,826,247	4,206,843	21,535,321
Transportation	9,983,274	11,240,546	4,409,500	23,459,619	21,706,520	36,282,735	30,952,929	28,135,136	5,800,000	1,000,000	172,970,259
Education	13,184,135	46,951,000	57,242,000	32,319,000	8,073,000	10,209,000	67,791,591	67,334,690	33,672,710	23,016,959	359,794,085
Total	\$44,755,738	\$69,497,768	\$79,135,514	\$64,008,108	\$36,108,520	\$54,872,228	\$107,093,166	\$112,343,630	\$55,588,581	\$79,033,762	\$702,437,015

FY22-31 Total Projected Expenditures by Functional Area



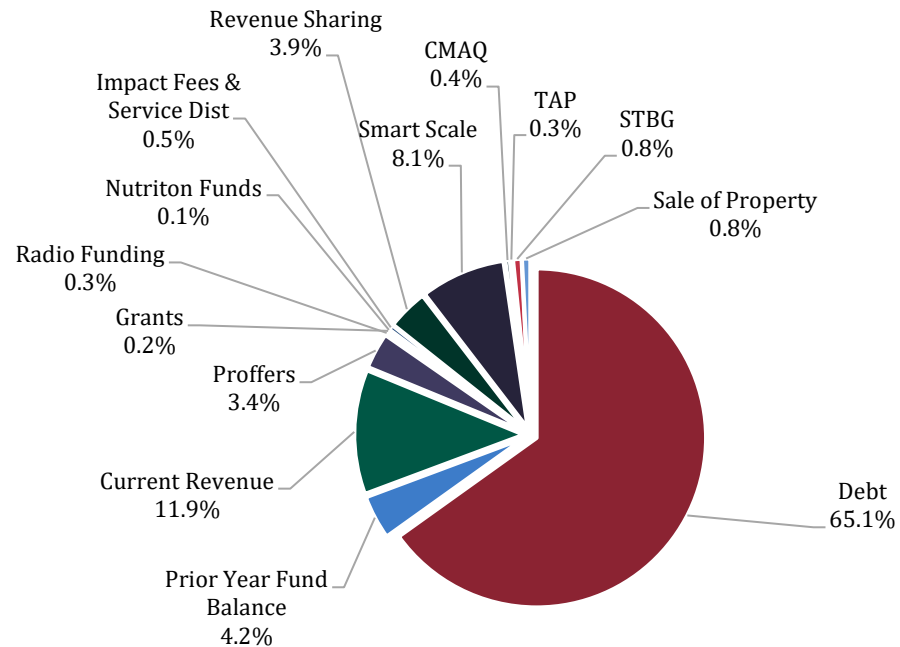
# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

FY22-31 Total Projected Revenues

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY22-31
Debt	\$11,304,595	\$47,519,716	\$67,321,581	\$35,067,789	\$23,218,054	\$24,695,218	\$74,354,308	\$74,147,246	\$33,121,271	\$66,662,866	\$457,412,644
Prior Year Fund Balance	14,523,873	8,372,511	337,500	2,937,500	0	0	0	0	1,907,617	1,400,000	29,479,001
Current Revenue	13,043,732	7,603,257	7,711,933	7,816,845	7,610,530	7,721,032	7,856,891	7,994,819	7,925,112	8,283,047	83,567,198
Proffers	246,422	1,832,988	866,000	6,739,509	100,000	0	296,860	6,479,967	4,957,967	2,687,849	24,207,562
Radio Funding	0	273,000	0	0	345,000	355,000	366,000	377,000	388,000	0	2,104,000
Grants	871,000	0	0	0	0	0	0	0	200,000	0	1,071,000
Nutriton Funds	131,000	135,000	139,000	143,000	0	0	0	0	0	0	548,000
Impact Fees & Service Dist	828,408	892,800	886,900	838,200	0	0	0	0	0	0	3,446,308
Revenue Sharing	1,216,125	0	0	431,000	432,000	11,189,326	5,000,000	7,626,361	1,488,614	0	27,383,426
Smart Scale	1,190,189	1,434,024	1,167,339	5,640,117	1,717,143	10,911,652	19,219,107	15,718,237	0	0	56,997,808
CMAQ	0	787,339	0	1,453,082	898,760	0	0	0	0	0	3,139,181
TAP	313,632	571,200	547,600	352,800	0	0	0	0	0	0	1,785,232
STBG	1,086,762	75,933	157,661	2,588,266	1,787,033	0	0	0	0	0	5,695,655
Sale of Property	0	0	0	0	0	0	0	0	5,600,000	0	5,600,000
Total	\$44,755,738	\$69,497,768	\$79,135,514	\$64,008,108	\$36,108,520	\$54,872,228	\$107,093,166	\$112,343,630	\$55,588,581	\$79,033,762	\$702,437,015

FY22-31 Total Projected Revenues



## Proffers

The state monitors the County's use of proffers. The County is required to provide an annual report to the state on its activities regarding proffers. The County reports to the Virginia Commission on Local Government 1) the aggregate amount of cash proffer payments collected, 2) estimated dollar amount of proffered pledged to the County, and 3) the amount of proffer payments expended. The expended funds report must be broken out by type of public facility. Funds are not expended by the County until the Board of Supervisors has appropriated them to the Capital Budget for an eligible project.

In accordance with Section 15.2-2303.2 (B) of the Code of Virginia, localities are required to include in their capital improvement program a copy of the Survey of Cash Proffers accepted by local governments during the most recent fiscal year.

The table below provides details regarding proffer allocations for FY2020.

	Available Proffer Balance FY2019	Proffers Received in FY2020	Proffers Budgeted and Appropriated in FY2020	Available Proffer Ending Balance FY2020
Schools	\$4,455,900	\$1,637,556	\$1,078,924	\$5,014,532
Roads	4,999,120	589,476	3,571,300	2,017,296
Parks and Recreation	1,622,235	534,819	0	2,157,054
Libraries	581,008	75,085	0	656,093
General Government	211,815	0	0	211,815
Fire and Rescue	1,213,372	278,088	296,462	1,194,998
Government Center	11,895	0	0	11,895
Landfill	813	0	0	813
Other	2,840,871	65,040	0	2,905,911
<b>Total</b>	<b>\$15,937,029</b>	<b>\$3,180,064</b>	<b>\$4,946,686</b>	<b>\$14,170,407</b>

## Proffers Included in the CIP

In the FY2022 CIP the County is projecting to use an estimated \$246K in proffers for the following projects:

- Aquia Station Rebuild
- Space needs in the government center

## Coordinating Capital Budget with Operating Budget

Operating impacts associated with CIP projects are estimated at the time the project is initially submitted for review. Impacts are broken down into personnel and operating expenses. These impacts are reviewed and updated annually. In the year the project is scheduled to be completed or implemented, costs are moved into the department's operating budget. See below for summary of all operating budget impacts:

Operating Impacts Summary	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Personnel	0	0	0	418,000	5,652,000	5,832,000	6,069,000	6,191,000	7,172,000	11,978,000
Operating	115,000	120,000	378,000	1,449,000	2,281,000	1,521,000	1,577,000	1,640,000	3,846,000	4,062,000
<b>Total Personnel and Operating</b>	<b>\$115,000</b>	<b>\$120,000</b>	<b>\$378,000</b>	<b>\$1,867,000</b>	<b>\$7,933,000</b>	<b>\$7,353,000</b>	<b>\$7,646,000</b>	<b>\$7,831,000</b>	<b>\$11,018,000</b>	<b>\$16,040,000</b>

- Operating impacts of \$115K in FY22 and are associated with the Sheriff's 3R In-Car Camera project and assumes there will be additional licensing, maintenance and warranty costs related to this project that will impact the FY2022 budget.

## Debt Capacity

The financial policies define the County's maximum debt. As part of the efforts to improve the County's bond rating, the Board amended its financial policies in June 2019. Debt limitations are as follows:

- General obligation debt shall not exceed 2.75% of the assessed valuation of taxable real property.
- General fund debt service expenditures (County and Schools) shall not exceed 10% of the general government and schools operating budgets.
- The County intends to maintain a 10-year pay-out ratio at or above 60%. To the extent possible, future debt for County facilities will be issued with level principal payments.

Although the adopted CIP will add an additional \$457,412,644 in bond funded debt over the ten-year period, the additional debt to be incurred for these projects would still be below the County's guidelines.

Debt Capacity Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	All Years
Total Borrow	11,304,595	47,519,716	67,321,581	35,067,789	23,218,054	24,695,218	74,354,308	74,147,246	33,121,271	66,662,866	457,412,644
<b>Debt Capacity</b>	<b>129,279,000</b>	<b>39,090,000</b>	<b>32,740,000</b>	<b>16,004,000</b>	<b>26,849,000</b>	<b>20,248,000</b>	<b>34,810,000</b>	<b>65,016,000</b>	<b>45,690,000</b>	<b>50,687,000</b>	<b>460,413,000</b>
Cumulative (Deficit)/Surplus	117,974,405	109,544,689	74,963,108	55,899,319	59,530,265	55,083,047	15,538,739	6,407,493	18,976,222	3,000,356	3,000,356

## Total Debt Service

The following chart illustrates the year to year adjustment in the County's total debt.

Debt Service Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Existing Debt Service for Governmental Funds	42,478,753	40,044,642	37,865,966	36,289,946	35,795,215	34,809,963	34,437,901	32,839,167	28,836,893	26,255,346
Debt Service Approved Not Borrowed	190,000	190,000	190,000	190,000	190,000	190,000	190,000	190,000	190,000	190,000
New Debt Service	0	1,046,000	4,623,000	10,124,000	12,452,000	13,126,000	14,215,662	19,868,662	25,712,566	28,169,738
<b>Total Debt Service</b>	<b>42,668,753</b>	<b>41,280,642</b>	<b>42,678,966</b>	<b>46,603,946</b>	<b>48,437,215</b>	<b>48,125,963</b>	<b>48,843,563</b>	<b>52,897,829</b>	<b>54,739,459</b>	<b>54,615,084</b>

\*\$190,000 Approved not Borrowed is for Fire and Rescue Apparatus ordered but not received.



# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Summary of all Funding Sources

The following tables show projected FY22-31 revenues and expenditures by functional area for the County totaling \$702.4M.

## Revenues by Sources

Projected Sources	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years Funding	Total Projected Sources (Includes Prior Year and Future Year Funding)
<b>Debt Funding Sources</b>														
County Bond Proceeds	0	3,295,595	0	10,688,446	0	0	0	0	6,155,784	2,004,126	46,059,398	68,203,349	42,755,059	110,958,408
School Bond Proceeds	4,422,659	6,151,000	42,370,135	55,657,135	26,753,457	6,627,135	8,763,135	66,345,726	60,767,951	27,805,759	20,171,094	321,412,527	15,548,000	341,383,186
Transportation Funding	0	0	801,581	0	7,309,332	15,871,584	13,181,757	5,733,822	3,790,538	3,311,386	0	50,000,000		50,000,000
Master Lease	0	1,858,000	4,348,000	976,000	1,005,000	719,335	2,750,326	2,274,760	3,432,973	0	432,374	17,796,768		17,796,768
<b>Total Debt Funding Sources</b>	<b>\$4,422,659</b>	<b>\$11,304,595</b>	<b>\$47,519,716</b>	<b>\$67,321,581</b>	<b>\$35,067,789</b>	<b>\$23,218,054</b>	<b>\$24,695,218</b>	<b>\$74,354,308</b>	<b>\$74,147,246</b>	<b>\$33,121,271</b>	<b>\$66,662,866</b>	<b>457,412,644</b>	<b>58,303,059</b>	<b>\$520,138,362</b>
<b>County Sources</b>														
Current Revenue	0	40,000	347,623	364,290	375,290	385,623	398,290	434,290	470,290	509,290	548,290	3,873,276	0	3,873,276
3R - Current Revenue	0	4,206,810	4,290,946	4,376,765	4,464,301	4,553,587	4,644,658	4,737,551	4,832,303	4,716,205	5,027,528	45,850,654	0	45,850,654
Use of Prior Year Fund Balance General Fund	167,000	10,023,738	651,878	0	0	0	0	0	0	1,907,617	0	12,583,233	0	12,750,233
Proffers	176,000	246,422	1,188,452	866,000	2,166,009	100,000	0	296,860	1,359,093	536,881	2,687,849	9,447,566	0	9,623,566
State Grants	0	871,000	0	0	0	0	0	0	0	200,000	0	1,071,000	0	1,071,000
Net Sale from Boat Property	0	0	0	0	0	0	0	0	0	5,600,000	0	5,600,000	0	5,600,000
Debt Service Savings	0	846,450	0	0	0	0	0	0	0	0	0	846,450		846,450
Radio Funding	0	0	273,000	0	0	345,000	355,000	366,000	377,000	388,000	0	2,104,000	0	2,104,000
Dedicated Real Estate Tax Revenue	0	200,314	206,323	212,513	218,889	225,455	232,219	239,185	246,361	253,752	261,364	2,296,375	0	2,296,375
<b>Total County Sources</b>	<b>\$343,000</b>	<b>\$16,434,734</b>	<b>\$6,958,222</b>	<b>\$5,819,568</b>	<b>\$7,224,489</b>	<b>\$5,609,665</b>	<b>\$5,630,167</b>	<b>\$6,073,886</b>	<b>\$7,285,047</b>	<b>\$14,111,745</b>	<b>\$8,525,031</b>	<b>\$83,672,554</b>	<b>\$0</b>	<b>\$84,015,554</b>
<b>Transportation Sources</b>														
Reimbursement - Impact Fees	0	636,762	521,363	750,000	750,000	0	0	0	0	0	0	2,658,125		2,658,125
Use of Prior Year Fund Balance General Fund	5,000,000	0	0	0	0	0	0	0	0	0	0	0		5,000,000
General Fund Transfer - Personal Property Tax	0	4,247,797	1,312,500	1,312,500	1,312,500	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	14,185,297		14,185,297
Use of Prior Year Fund Balance Transportation	2,775,483	0	4,720,633	337,500	2,937,500	0	0	0	0	0	0	7,995,633		10,771,116
Proffers	3,242,981	0	644,536	0	596,822	0	0	0	0	0	0	1,241,358		4,484,339
Service District	130,000	78,408	142,800	136,900	88,200	0	0	0	0	0	0	446,308		576,308
TAP - Transportation Alternative Program	520,000	313,632	571,200	547,600	352,800	0	0	0	0	0	0	1,785,232		2,305,232
CMAQ - Congestion Mitigation and Air Quality	0	0	787,339	0	1,453,082	898,760	0	0	0	0	0	3,139,181		3,139,181
STBG - Surface Transportation Block Grant	0	1,086,762	75,933	157,661	2,588,266	1,787,033	0	0	0	0	0	5,695,655		5,695,655
Smart Scale - Assumed	0	0	0	0	0	0	8,860,883	0	15,718,237	0	0	24,579,120		24,579,120
Smart Scale - Awarded	10,980,911	1,190,189	1,434,024	1,167,339	5,640,117	1,717,143	2,050,769	19,219,107	0	0	0	32,418,688		43,399,599
Fuel Tax	715,000	1,100,361	0	0	0	0	0	0	0	0	0	1,100,361		1,815,361
Revenue Sharing - Assumed	0	0	0	0	0	0	5,800,000	5,000,000	7,626,361	1,488,614	0	19,914,975		19,914,975
Revenue Sharing - Awarded	5,820,825	1,216,125	0	0	431,000	432,000	5,389,326	0	0	0	0	7,468,451		13,289,276
Impact Fees	0	113,238	228,637	0	0	0	0	0	0	0	0	341,875		341,875
												0		0
	<b>\$29,185,200</b>	<b>\$9,983,274</b>	<b>\$10,438,965</b>	<b>\$4,409,500</b>	<b>\$16,150,287</b>	<b>\$5,834,936</b>	<b>\$23,100,978</b>	<b>\$25,219,107</b>	<b>\$24,344,598</b>	<b>\$2,488,614</b>	<b>\$1,000,000</b>	<b>\$122,970,259</b>	<b>\$0</b>	<b>\$152,155,459</b>
<b>School Sources</b>														
Current Revenue & County Designated 3R	0	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	14,458,650	0	14,458,650
Use of Prior Year Fund Balance General Fund	877,341	4,500,135	3,000,000	0	0	0	0	0	0	0	1,400,000	8,900,135	0	9,777,476
Proffers	0	0	0	0	3,976,678	0	0	0	5,120,874	4,421,086	0	13,518,638	0	13,518,638
Nutrition Capital Funding	0	131,000	135,000	139,000	143,000	0	0	0	0	0	0	548,000	0	548,000
Debt Service Savings to Support High School #6	0	956,135	0	0	0	0	0	0	0	0	0	956,135	0	956,135
<b>Total School Sources</b>	<b>\$877,341</b>	<b>\$7,033,135</b>	<b>\$4,580,865</b>	<b>\$1,584,865</b>	<b>\$5,565,543</b>	<b>\$1,445,865</b>	<b>\$1,445,865</b>	<b>\$1,445,865</b>	<b>\$6,566,739</b>	<b>\$5,866,951</b>	<b>\$2,845,865</b>	<b>\$38,381,558</b>	<b>\$0</b>	<b>\$39,258,899</b>
<b>Total Projected Sources</b>	<b>\$34,828,200</b>	<b>\$44,755,738</b>	<b>\$69,497,768</b>	<b>\$79,135,514</b>	<b>\$64,008,108</b>	<b>\$36,108,520</b>	<b>\$54,872,228</b>	<b>\$107,093,166</b>	<b>\$112,343,630</b>	<b>\$55,588,581</b>	<b>\$79,033,762</b>	<b>\$702,437,015</b>	<b>\$58,303,059</b>	<b>\$795,568,274</b>

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Expenditures by Functional Area

Projects by Functional Area	Completion Date	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years Funding	Total Projected Sources (Includes Prior Year and Future Year Funding)
<b>Information Technology</b>															
3R Information Technology		0	1,118,000	1,335,073	1,100,000	281,443	1,400,000	620,493	929,000	66,000	68,000	1,032,000	7,950,009	0	7,950,009
<b>Judicial</b>															
Courthouse	FY2033	0	0	0	0	0	0	0	0	6,309,000	0	45,009,398	51,318,398	8,899,059	60,217,457
<b>Public Safety</b>															
Fire Rescue															
Aquia Station Rebuild	FY2024	0	13,105,770	1,840,330	0	0	0	0	0	0	0	0	14,946,100	0	14,946,100
Apparatus Replacement		0	1,858,000	948,000	976,000	1,005,000	2,627,000	1,066,000	3,447,000	1,131,000	1,165,000	1,832,000	16,055,000	0	16,055,000
3R Ambulance Replacement		0	999,000	1,044,000	1,092,000	1,125,000	1,158,000	1,194,000	1,230,000	1,266,000	1,305,000	1,344,000	11,757,000	0	11,757,000
3R Station Repairs and Maintenance		0	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,000,000	0	2,000,000
Rockhill Station Rebuild	FY2026	0	0	0	10,688,446	0	0	0	0	0	0	0	10,688,446	0	10,688,446
Equipment Replacement		0	0	0	0	0	0	3,953,000	0	3,226,000	0	0	7,179,000	0	7,179,000
Public Safety Joint Training Center	FY2033	0	0	0	0	0	0	0	208,860	1,205,877	10,163,624	0	11,578,361	0	11,578,361
White Oak Station Rebuild	FY2034	0	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	11,119,000	12,119,000
<b>Sheriff</b>															
3R Sheriff		0	1,377,049	4,655,820	2,475,568	1,294,037	345,000	355,000	366,000	377,000	388,000	392,562	12,026,036	0	12,026,036
<b>Stormwater</b>															
Brooks Park Stream Restoration		167,000	1,639,000	0	0	0	0	0	0	0	0	0	1,639,000	0	1,806,000
<b>Parks Recreation and Cultural</b>															
Patawomeck Park		88,000	0	0	75,000	1,073,260	0	0	0	0	0	0	1,148,260	0	1,236,260
Musselman Park		88,000	0	0	85,000	1,092,749	0	0	0	0	0	0	1,177,749	0	1,265,749
Carl Lewis		0	0	0	591,000	0	0	0	0	0	0	0	591,000	0	591,000
Duff Park		0	0	0	0	0	100,000	0	0	0	0	0	100,000	0	100,000
Mountain View Park		0	0	0	0	0	-	0	88,000	0	85,000	2,687,849	2,860,849	0	2,860,849
Library #4		0	0	0	0	0	0	0	0	0	0	50,000	50,000	22,737,000	22,787,000
3R Parks Recreation		0	568,000	290,999	115,000	1,692,000	180,000	126,000	67,000	825,000	1,086,000	1,087,000	6,036,999	0	6,036,999
3R Community Facilities		0	723,510	992,000	86,000	466,000	319,000	866,000	1,812,786	2,267,927	1,655,247	381,994	9,570,464	0	9,570,464
<b>Transportation</b>															
Courthouse Road and Route 1 Intersection Improvement		18,720,200	1,216,125	0	0	0	0	0	0	0	0	0	1,216,125	0	19,936,325
Route 1 & Telegraph Rd/Woodstock Ln Improvements		8,800,000	1,190,189	0	0	0	0	0	0	0	0	0	1,190,189	0	9,990,189
Stefaniga Road and Mountain View Road Intersection Improvements		0	0	600,000	900,000	2,200,000	0	0	0	0	0	0	3,700,000	0	3,700,000
US-17 Business STARS Improvements		0	0	0	0	1,089,019	1,717,143	1,717,144	5,239,247	0	0	0	9,762,553	0	9,762,553
Roadway Safety/Widening Improvements		715,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	10,000,000	0	10,715,000
US-1 & Coal Landing Road Improvements		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Butler Road STARS Study		0	200,000	0	0	0	0	0	0	0	0	0	200,000	0	200,000
Emergency Access Drive (Windermere-Crestwood)		300,000	1,241,362	0	0	0	0	0	0	0	0	0	1,241,362	0	1,541,362
Brooke Road Reconstruction		0	1,500,000	1,000,000	1,000,000	4,000,000	0	0	0	0	0	0	7,500,000	0	7,500,000
Enon Road and Route 1 Improvements		0	1,200,000	2,475,000	825,000	6,100,000	0	0	0	0	0	0	10,600,000	0	10,600,000
Shelton Shop Road Improvements		0	2,043,558	0	0	4,601,764	4,601,764	4,601,764	13,979,860	0	0	0	29,828,710	0	29,828,710
Route 1 & Layhill Road Intersection Improvements		0	0	1,119,992	0	911,043	911,043	5,457,818	0	0	0	0	8,399,896	0	8,399,896

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Expenditures by Functional Area

Projects by Functional Area	Completion Date	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years Funding	Total Projected Sources (Includes Prior Year and Future Year Funding)
Onville Road Widening		0	0	827,966	0	2,685,793	2,685,793	4,666,177	0	0	0	0	10,865,729	0	10,865,729
Leeland Road Widening		0	0	694,000	0	431,000	432,000	6,506,010	0	0	0	0	8,063,010	0	8,063,010
Morton Road Safety Improvements & Wedge Widening		0	0	0	0	0	0	1,600,000	0	0	0	0	1,600,000	0	1,600,000
Mountain View Road Safety/Widening (Choptank Rd to Stefaniga Rd)		0	0	0	0	0	769,000	1,144,045	1,144,045	6,319,933	0	0	9,377,023	0	9,377,023
Mountain View Road Safety/Widening (Stefaniga Rd to Kellogg Mill Rd)		0	0	0	0	0	0	0	0	0	4,800,000	0	4,800,000	0	4,800,000
Garrisonville Road Widening (Eustance Rd to Shelton Shop Rd)		0	0	2,809,588	0	0	9,589,777	9,589,777	9,589,777	20,815,203	0	0	52,394,122	0	52,394,122
Flatford Road Sidewalk		650,000	202,040	0	0	0	0	0	0	0	0	0	202,040	0	852,040
Salisbury Drive Sidewalk		0	0	214,000	297,000	441,000	0	0	0	0	0	0	952,000	0	952,000
Staffordboro Boulevard Sidewalk		0	190,000	500,000	387,500	0	0	0	0	0	0	0	1,077,500	0	1,077,500
<b>Education</b>															
Schools 3R Bonds		0	6,151,000	6,170,135	5,886,135	5,986,135	5,502,135	5,003,135	5,079,135	6,533,135	6,371,135	4,965,295	57,647,375	0	57,647,375
Schools 3R Cash		0	1,446,000	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	2,845,865	15,858,785	0	15,858,785
Schools 3R Nutrition Fund		0	131,000	135,000	139,000	143,000	0	0	0	0	0	0	548,000	0	548,000
High School #6	FY2026	5,300,000	5,456,135	39,200,000	49,771,000	24,744,000	1,125,000	0	0	0	0	0	120,296,135	0	125,596,135
Elementary #18	FY2031	0	0	0	0	0	0	1,700,000	23,933,671	21,108,820	4,604,000	1,125,509	52,472,000	0	52,472,000
Additional Middle School Capacity	FY2031	0	0	0	0	0	0	2,060,000	35,549,420	31,963,370	8,783,710	971,290	79,327,790	0	79,327,790
North Stafford High School Fine Arts Wing	FY2030	0	0	0	0	0	0	0	1,783,500	4,883,500	346,000	0	7,013,000	0	7,013,000
High School #7		0	0	0	0	0	-	0	0	900,000	0	0	900,000	0	900,000
Drew MS Renovation	FY2032	0	0	0	0	0	0	0	0	500,000	12,122,000	11,109,000	23,731,000	6,560,000	30,291,000
Elementary #19		0	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	0	1,000,000
ECSE Addition, Phase I	FY2033	0	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	8,988,000	9,988,000
<b>Total Schools Projects</b>		<b>\$5,300,000</b>	<b>\$13,184,135</b>	<b>\$46,951,000</b>	<b>\$57,242,000</b>	<b>\$32,319,000</b>	<b>\$8,073,000</b>	<b>\$10,209,000</b>	<b>\$67,791,591</b>	<b>\$67,334,690</b>	<b>\$33,672,710</b>	<b>\$23,016,959</b>	<b>\$359,794,085</b>	<b>\$15,548,000</b>	<b>\$380,642,085</b>
<b>Total All Projects</b>		<b>\$34,828,200</b>	<b>\$44,755,738</b>	<b>\$69,497,768</b>	<b>\$79,135,514</b>	<b>\$64,008,108</b>	<b>\$36,108,520</b>	<b>\$54,872,228</b>	<b>\$107,093,166</b>	<b>\$112,343,630</b>	<b>\$55,588,581</b>	<b>\$79,033,762</b>	<b>\$702,437,015</b>	<b>\$58,303,059</b>	<b>\$795,568,274</b>

## Enrollment Projections

Stafford County's New School Planning Policy for the Development of the Capital Improvement Program states When the aggregate school enrollment projections for a school level—i.e. elementary, middle, or high—is at 90% of the aggregate design capacity, staff is directed to begin planning for adding a school to the CIP. The timeline listed in this policy will direct staff's planning process.

Below are the enrollment projections used in the development of the FY2022-2031 CIP.

ES Design Capacity and Projections	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
ES Capacity	14,609	14,609	14,609	14,609	14,609	14,609	14,609	14,609	14,609	15,559
ES projected Students	13,201	13,310	13,495	13,695	13,892	14,004	14,192	14,378	14,527	14,701
Available Seats	1,408	1,299	1,114	914	717	605	417	231	82	858
90% Guideline	90.4%	91.1%	92.4%	93.7%	95.1%	95.9%	97.1%	98.4%	99.4%	94.5%

MS Design Capacity and Projections	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
MS Capacity	8,170	8,170	8,170	8,170	8,170	8,170	8,170	8,170	8,170	9,270
MS projected Students	7,276	7,346	7,456	7,560	7,702	7,900	8,018	8,088	8,133	8,253
Available Seats	894	824	714	610	468	270	152	82	37	1,017
90% Guideline	89.1%	89.9%	91.3%	92.5%	94.3%	96.7%	98.1%	99.0%	99.5%	89.0%

HS Design Capacity and Projections	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
HS Capacity	10,650	10,650	10,650	10,650	12,800	12,800	12,800	12,800	12,800	12,800
HS Projection	10,234	10,579	10,779	10,930	11,064	11,190	11,352	11,527	11,728	11,907
Available Seats	416	71	(129)	(280)	1,736	1,610	1,448	1,273	1,072	893
90% Guideline	96.1%	99.3%	101.2%	102.6%	86.4%	87.4%	88.7%	90.1%	91.6%	93.0%

**FY2022 Adopted Budget**

Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Plan	Total Project Cost (Includes Prior Year Funding and Future Years Funding)
3R - Information Technology	\$0	\$1,118,000	\$626,000	\$56,000	\$58,000	\$915,000	\$254,000	\$929,000	\$66,000	\$68,000	\$1,032,000	\$5,122,000	\$0	\$5,122,000
3R - Fiber	0	0	709,073	1,044,000	223,443	485,000	366,493	0	0	0	0	2,828,009	0	2,828,009
<b>Total Expenditures</b>	<b>\$0</b>	<b>\$1,118,000</b>	<b>\$1,335,073</b>	<b>\$1,100,000</b>	<b>\$281,443</b>	<b>\$1,400,000</b>	<b>\$620,493</b>	<b>\$929,000</b>	<b>\$66,000</b>	<b>\$68,000</b>	<b>\$1,032,000</b>	<b>\$7,950,009</b>	<b>\$0</b>	<b>\$7,950,009</b>

Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Plan	Total Project Cost (Includes Prior Year Funding and Future Years Funding)
Current Revenue - 3R	0	1,118,000	1,335,073	1,100,000	281,443	1,400,000	620,493	929,000	66,000	68,000	1,032,000	7,950,009	0	7,950,009
<b>Total Revenues</b>	<b>\$0</b>	<b>\$1,118,000</b>	<b>\$1,335,073</b>	<b>\$1,100,000</b>	<b>\$281,443</b>	<b>\$1,400,000</b>	<b>\$620,493</b>	<b>\$929,000</b>	<b>\$66,000</b>	<b>\$68,000</b>	<b>\$1,032,000</b>	<b>\$7,950,009</b>	<b>\$0</b>	<b>\$7,950,009</b>

[illegible]

## Information Technology: 3R Projects

Project Code	See Project Description Below for Project Code	Square Footage/Acreage	N/A
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Information Technology	Student Capacity	
Estimated Project Cost	\$1,118,000	Est. Opening Date	
Current Year Cost	\$1,070,000	Funding Source	Current Revenue
Debt Service	No debt service associated with this project		
Full Year Operating Impact	No additional operating		

### Project Description:

- **Storage Area Network (SAN): Project Code #IT2202**  
Increase storage area network (SAN) capacity. With the ever-growing network storage demands for On Base (document imaging), GIS, public safety, public works and utilities (fiber optic video imagery), the demands are going to grow at a rate necessitating expansion of the County's storage capacity every two years to keep up. The County deploys redundant storage with automatic failover between County Administration and the Public Safety Building (PSB). Each storage addition involves installing a new "shelf" to each of the two SAN arrays.
- **Rubrik Backup System Upgrade – Project Code #IT2201**  
is an appliance-based backup system that backs up to the two appliances and this would increase the capacity of the two appliances. The appliances replicate to the Amazon Web Services (AWS) cloud. The County will need to increase AWS capacity on an annual basis and can do so through the operating budget.
- **Replace Cisco Switches & Firewalls: Project Code #IT2203**  
Serving fire stations, rescue stations, utilities facilities, and parks are using 12+ year old technology and the equipment is past end of life and end of support with Cisco. This eliminates patches, security updates, and other critical support necessary for the network and could directly affect public safety.
- **Server Replacement: Project Code #IT2204**  
As part of a five-year replacement cycle, County servers will need to be replaced.

## Information Technology: 3R Projects

### Operating Impact Summary:

All of these capital expenditures will be replacing existing equipment already covered under maintenance contracts, which should result in little or no changes to maintenance costs.

### Location:

- County Administration and PSB
- All Remote Locations – fire stations, rescue stations, public works and utilities, and parks

### Relationship to Approved County Policy or Plan:

- IT Strategic Plan.
- Board of Supervisor's priorities under "organizational excellence."

### Analysis of Need:

- **Increase SAN Capacity (SAN):** With the ever-growing network storage demands for OnBase (document imaging), GIS, public safety, public works and utilities (fiber optic video imagery), the demands are going to grow at rate necessitating expansion of the County's storage capacity every two years to keep up.
- **Rubrik Backup System Upgrade:** With the increase in storage capacity, the County's data backup capacity will also need to increase. Rubrik is an appliance-based backup system that backs up to the two appliances and this would increase the capacity of the two appliances. The appliances replicate to the Amazon Web Services (AWS) cloud. The County will need to increase AWS capacity on an annual basis and can do so through the operating budget.
- **Cisco Switches and Firewalls:** All 38 remote switches have reached end of life and end of support with Cisco. These switches are at fire stations, rescue stations and parks and are using 12 year old technology and put service to all these facilities at risk. In FY2022 – 2031, the County will need to replace various Cisco routers and switches that reach end of life and end of Cisco support. Cisco announces equipment every year that impacts the County's network infrastructure and requires replacement.
- **Server Replacement:** In FY2022, and each successive year through 2031, County servers will need to be replaced as part of a five-year replacement cycle. Server costs have decreased significantly over the past five years as the County has virtualized more than half of all servers.

## Information Technology: 3R Projects

## Project Summary:

Project	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pure - Increase SAN Capacity	0	435,000	0	0	0	0	0	0	0	0	0
Rubrik - Increase Data Backup Capacity	0	281,000	0	0	0	0	0	0	0	0	0
Replace Cisco Call Managers	0	0	572,000	0	0	0	0	0	0	0	0
Cisco Switches & Firewalls	0	350,000	0	0	0	0	0	0	0	0	0
Server Replacements	0	52,000	0	0	0	0	0	0	0	0	0
Server Replacements	0	0	54,000	0	0	0	0	0	0	0	0
Server Replacements	0	0	0	56,000	0	0	0	0	0	0	0
Server Replacements	0	0	0	0	58,000	0	0	0	0	0	0
Server Replacements	0	0	0	0	0	60,000	0	0	0	0	0
Pure - Increase SAN Capacity	0	0	0	0	0	515,000	0	0	0	0	0
Rubrik - Increase Data Backup Capacity	0	0	0	0	0	340,000	0	0	0	0	0
Server Replacements	0	0	0	0	0	0	62,000	0	0	0	0
Infor Hansen Portal Upgrade & Eplans Replacement	0	0	0	0	0	0	192,000	0	0	0	0
Replace Cisco Call Managers	0	0	0	0	0	0	0	673,000	0	0	0
Server Replacements	0	0	0	0	0	0	0	64,000	0	0	0
Mobile Device Management	0	0	0	0	0	0	0	192,000	0	0	0
Server Replacements	0	0	0	0	0	0	0	0	66,000	0	0
Server Replacements	0	0	0	0	0	0	0	0	0	68,000	0
Server Replacements	0	0	0	0	0	0	0	0	0	0	70,000
Pure - Increase SAN Capacity	0	0	0	0	0	0	0	0	0	0	585,000
Rubrik - Increase Data Backup Capacity	0	0	0	0	0	0	0	0	0	0	377,000
<b>Total Project Cost</b>	<b>\$0</b>	<b>\$1,118,000</b>	<b>\$626,000</b>	<b>\$56,000</b>	<b>\$58,000</b>	<b>\$915,000</b>	<b>\$254,000</b>	<b>\$929,000</b>	<b>\$66,000</b>	<b>\$68,000</b>	<b>\$1,032,000</b>



**FY2022 Adopted Budget**

	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Current Revenue - 3R	0	1,118,000	626,000	56,000	58,000	915,000	254,000	929,000	66,000	68,000	1,032,000
Total	\$0	\$1,118,000	\$626,000	\$56,000	\$58,000	\$915,000	\$254,000	\$929,000	\$66,000	\$68,000	\$1,032,000

[illegible]

**Information Technology: Fiber Network**

Project Code		Square Footage/Acreage	
Project Type		Construction Cost per Sq. Ft.	
Project Status	Construction	Operating Cost per Sq. Ft.	
Functional Area	Information Technology	Student Capacity	
Estimated Project Cost	\$0	Est. Opening Date	
Current Year Cost	\$0	Cost per Linear Ft.	\$27.50
Debt Service	No Debt Service Associated with this Project	Funding source	Current Revenue
Full Year Operating Impact	No Additional Operating Costs		

**Project Description:**

FY2023: Extend Fiber to Mountain View F&R and Widewater Fire Station

FY2024: Extend Fiber to County Administration (NCR Net)

FY2025: Extend Fiber to Chichester and Duff McDuff Parks

FY2026: Extend Fiber to Curtis Park

FY2027: Extend Fiber to St. Clair Brooks Park

**Operating Impact Summary:**

The cost to deploy fiber includes the construction and termination of the fiber to each of the facilities and the necessary equipment to light the fiber.

**Relationship to Approved County Policy or Plan:**

- Supports the Board's strategic priorities
- IT strategic plan

## Information Technology: Fiber Network

### Analysis of Need:

These projects are critical to ensuring reliable access to the County's network, CAD system, and critical business and public safety systems. This is part of the Board's ongoing interest in seeing all facilities with a priority towards public safety facilities, connected to the County's network with a reliable high speed connection. The current cable modem connections are slow and unreliable to these locations. Storms and power outages routinely bring down the cable modem service resulting in lost connectivity to the County's CAD system, email and other applications used by the Fire Department. Parks are also a priority after fire and rescue station fiber construction projects are complete. The County's network, recreation registration and point of sales system, email and other critical applications used by the Parks and Recreation Department are impacted by unreliable cable modem connections.

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Mountain View F&R	0	0	465,988	0	0	0	0	0	0	0	0
Widewater Fire Station	0	0	243,085	0	0	0	0	0	0	0	0
Curtis Park	0	0	0	0	0	485,000	0	0	0	0	0
St. Clair Brooks Park	0	0	0	0	0	0	366,493	0	0	0	0
County Admin (NCR)	0	0	0	1,044,000	0	0	0	0	0	0	0
Duff McDuff Park	0	0	0	0	93,070	0	0	0	0	0	0
Chichester Park	0	0	0	0	130,373	0	0	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$709,073</b>	<b>\$1,044,000</b>	<b>\$223,443</b>	<b>\$485,000</b>	<b>\$366,493</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Current Revenue - 3R	0	0	709,073	1,044,000	223,443	485,000	366,493	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$709,073</b>	<b>\$1,044,000</b>	<b>\$223,443</b>	<b>\$485,000</b>	<b>\$366,493</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Judicial

Expenditures	Prior Year	FY2022	FY2023	FY2024	2025	2026	2027	2028	2029	2030	2031	Ten Year Planning Period	Future Years	Total Project Cost (Includes Prior Year and Future Years)
Courthouse	0	0	0	0	0	0	0	0	6,309,000	0	45,009,398	51,318,398	8,899,059	60,217,457
<b>Total Expenditures</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,309,000</b>	<b>\$0</b>	<b>\$45,009,398</b>	<b>\$51,318,398</b>	<b>\$8,899,059</b>	<b>\$60,217,457</b>

Revenues	Prior Year	FY2022	FY2023	FY2024	2025	2026	2027	2028	2029	2030	2031	Ten Year Planning Period	Future Years	Total Project Cost (Includes Prior Year and Future Years)
Bond Proceeds	0	0	0	0	0	0	0	0	6,155,784	0	45,009,398	51,165,182	8,899,059	60,064,241
Proffers	0	0	0	0	0	0	0	0	153,216	0	0	153,216	0	153,216
<b>Total Revenues</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,309,000</b>	<b>\$0</b>	<b>\$45,009,398</b>	<b>\$51,318,398</b>	<b>\$8,899,059</b>	<b>\$60,217,457</b>

Operating Impacts	FY2022	FY2023	FY2024	2025	2026	2027	2028	2029	2030	2031
Debt Service	0	0	0	0	0	0	0	0	494,000	494,000
<b>Total Operating Impact</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$494,000</b>	<b>\$494,000</b>

**Judicial: New Circuit Court and Renovation/Expansion of Existing Facility**

<b>Project Code</b>	CRTHSE	<b>Square Footage/Acreage</b>	80,000 ft <sup>2</sup> New Construction 61,798 Finished/ 18,202 ft <sup>2</sup> Shell 64,900 ft <sup>2</sup> Renovation 400 ft <sup>2</sup> Expansion
<b>Project Type</b>	Building Construction	<b>Construction Cost per Sq. Ft.</b>	New Finished: \$349 New Shell: \$180 Renovation: \$100 Expansion: \$0
<b>Project Status</b>	Design/Engineering	<b>Operating Cost per Sq. Ft.</b>	\$3.84
<b>Functional Area</b>	Circuit Court	<b>Student Capacity</b>	
<b>Estimated Project Cost</b>	\$60.2-million	<b>Est. Opening Date</b>	FY2033
<b>Current Year Cost</b>	\$40.6-million	<b>Funding Source</b>	Virginia Resource Authority (VRA)
<b>Total Debt Service</b>	\$4,832,000	<b>Tax Rate Equivalent</b>	\$0.024
<b>Full Year Operating Impact</b>	No Additional Operating Cost in the Ten-year Plan		

**Project Description:**

The proposed project includes the construction of a new 80,000 ft<sup>2</sup> Circuit Court building. 61,798 ft<sup>2</sup> of that will be finished and include four circuit courtrooms and spaces for judges' chambers, Circuit Court Clerk, security, and other associated court functions. 18,202 ft<sup>2</sup> will be shelled for the eventual finishing for two additional circuit courtrooms and associated spaces. The existing Courthouse will be renovated to meet the needs of the Juvenile and Domestic Relations and General District Courts. The project also includes renovations within the existing facility and Chichester House, which will begin in the coming year, to provide needed space due to the delayed timing of the new Courthouse.

**Operating Impact Summary:**

Below are the estimated operating impacts that will be needed when the new Circuit Court building opens in FY2033. All operating impacts are outside of the ten-year planning period:

## **Judicial: New Circuit Court and Renovation/Expansion of Existing Facility**

For building security: a total of seven additional deputies would be required to operate a safe and efficient courthouse. The additional deputies would be needed one year earlier than the opening date.

- (2) For front security / magnetometer and X-Ray machine.
- (1) For Control Room: Deputy will monitor all cameras, control cell doors, and certain courtroom doors.
- (2) For security of inmates: Escorting inmates to and from the jail vans to the court holding cells, serving various papers, escorts through the building, high risk inmates, emergency situations and the like.
- (2) Deputies for the fourth circuit court

The total number to support the building is 13 which includes six existing positions at the current courthouse.

For maintenance and custodial:

- (2) Building Maintenance Mechanics.
- (2) Custodians.
- Start-up Costs include equipment and supplies.
- On-going operating costs include additional costs for utilities, contracts, and maintenance.

### **Location:**

1300 Courthouse Road.

### **Relationship to Approved County Policy or Plan:**

Public Safety has been identified by the Board of Supervisors as a major Board priority. Providing the necessary court facilities to handle the growing caseload and ensuring all court facilities meet or exceed the safety standards is essential to our overall public safety mission. The proposed circuit court building and renovation of the existing facility will ensure that these needs are met for the next 10-15 years.

### **Analysis of Need:**

Moseley Architects conducted a detailed court needs analysis in 2016. The result of this analysis was a proposed new court building that would provide for all court needs for the next 20 years at an estimated cost of \$74 million. The proposal would abandon the current facility for future administration use. At the request of the Board, staff reengaged Moseley to reevaluate the proposal utilizing the existing building and keeping all new construction on the current Government Center site with additional parking across Courthouse Road. Utilizing the needs analysis completed in 2016 and updating the data to reflect the most recent years, Moseley presented the proposed circuit court building and the renovated existing facility as the preferred option that was later approved by the Board of Supervisors with the adoption of the FY19 CIP.

## Judicial: New Circuit Court and Renovation/Expansion of Existing Facility

### Change or Reasons for Revisions:

**FY2007** - New project in CIP \$20.6M

**FY2008** - Updated construction costs \$33.8M

**FY2009** - No change

**FY2010** - No change

**FY2011** - Consolidate a renovation of the current courthouse project and reduce existing project to an addition due to current conditions in the economy. Project to begin in FY13. \$21.7M

**FY2012** - Changed the scope of the project. Added a Courthouse annex project. Due to shortage in affordability, project to begin planning and design in FY17. \$22.9M

**FY2013** - Due to conditions in the economy and changes in affordability project will begin planning and design work in FY19. No other changes have been made. \$22.2M

**FY2014** - Scope of the project changed to include parking improvements and significant ADA upgrades. \$26.8M

**FY2015** - No change

**FY2016** - Project cost update. No change in scope of project. \$29M

**FY2017** - No change

**FY2018** - Change in the scope of project. Project is a new construction for all three courts. New proposed cost is \$71M

**FY2019** - As provided above, the proposed project replaces the previously recommended \$71 million project in order to utilize existing facilities to the maximum extent possible and reduce project costs while still providing for all necessary safety improvements and court space needs. New estimated cost is \$42.5M which includes approximately \$1M in proposed design efficiency reductions as directed by the Board and an additional \$1.8M for a parking lot.

**FY2020** – Change in ramp-up philosophy. Project now presented as two separate projects, Courthouse construction and a temporary parking lot.

**FY2021** - Delayed project seven years.

**FY2022** – Delayed project one year.

### Alternative:

The previously approved CIP court project for new court complex across Courthouse Road.

## Judicial: New Circuit Court and Renovation/Expansion of Existing Facility

## Project Summary:

Expenditures	Prior Year	FY2022	FY2023	FY2024	2025	2026	2027	2028	2029	2030	2031
Courthouse	0	0	0	0	0	0	0	0	6,309,000	0	45,009,398
<b>Total Expenditures</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,309,000</b>	<b>\$0</b>	<b>\$45,009,398</b>

Revenues	Prior Year	FY2022	FY2023	FY2024	2025	2026	2027	2028	2029	2030	2031
Bond Proceeds	0	0	0	0	0	0	0	0	6,155,784	0	45,009,398
Proffers	0	0	0	0	0	0	0	0	153,216	0	0
<b>Total Revenues</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,309,000</b>	<b>\$0</b>	<b>\$45,009,398</b>

Operating Impacts	FY2022	FY2023	FY2024	2025	2026	2027	2028	2029	2030	2031
Debt Service	0	0	0	0	0	0	0	0	494,000	494,000
<b>Total Operating Impact</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$494,000</b>	<b>\$494,000</b>



## CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Public Safety: Fire and Rescue

Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years	Total Project Costs (Includes Prior Year and Future Years)
Aquia Station 9 Rebuild	0	13,105,770	1,840,330	0	0	0	0	0	0	0	0	14,946,100	0	14,946,100
Apparatus Replacement	0	1,858,000	948,000	976,000	1,005,000	2,627,000	1,066,000	3,447,000	1,131,000	1,165,000	1,832,000	16,055,000	0	16,055,000
Ambulance Replacement	0	999,000	1,044,000	1,092,000	1,125,000	1,158,000	1,194,000	1,230,000	1,266,000	1,305,000	1,344,000	11,757,000	0	11,757,000
3R Fire and Rescue	0	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,000,000	0	2,000,000
Rockhill Station 8 Rebuild	0	0	0	10,688,446	0	0	0	0	0	0	0	10,688,446	0	10,688,446
Equipment Replacement	0	0	0	0	0	0	3,953,000	0	3,226,000	0	0	7,179,000	0	7,179,000
Public Safety Joint Training Center	0	0	0	0	0	0	0	208,860	1,205,877	10,163,624	0	11,578,361	0	11,578,361
White Oak Station 7 Rebuild	0	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	11,119,000	12,119,000
<b>Total Expenditures</b>	<b>\$0</b>	<b>\$16,162,770</b>	<b>\$4,032,330</b>	<b>\$12,956,446</b>	<b>\$2,330,000</b>	<b>\$3,985,000</b>	<b>\$6,413,000</b>	<b>\$5,085,860</b>	<b>\$7,028,877</b>	<b>\$12,833,624</b>	<b>\$4,376,000</b>	<b>\$75,203,907</b>	<b>\$11,119,000</b>	<b>\$86,322,907</b>

Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years	Total Project Costs (Includes Prior Year and Future Years)
Bond Proceeds	0	3,295,595	0	10,688,446	0	0	0	0	0	2,004,126	1,000,000	16,988,167	11,119,000	28,107,167
Current Revenue	0	0	347,623	364,290	375,290	385,623	398,290	434,290	470,290	509,290	548,290	3,833,276	0	3,833,276
Current Revenue - 3R	0	664,251	690,054	715,197	730,821	2,654,587	3,032,165	1,928,765	1,673,376	1,906,958	2,133,972	16,130,146	0	16,130,146
Use of Prior Year Fund Balance	0	9,124,738	651,878	0	0	0	0	0	0	1,907,617	0	11,684,233	0	11,684,233
Master Lease Proceeds	0	1,858,000	948,000	976,000	1,005,000	719,335	2,750,326	2,274,760	3,432,973	0	432,374	14,396,768	0	14,396,768
Proffers	0	173,422	1,188,452	0	0	0	0	208,860	1,205,877	451,881	0	3,228,492	0	3,228,492
State Grants - Fire Programs	0	0	0	0	0	0	0	0	0	200,000	0	200,000	0	200,000
Debt Service Savings	0	846,450	0	0	0	0	0	0	0	0	0	846,450	0	846,450
Net Sale from Boat Property	0	0	0	0	0	0	0	0	0	5,600,000	0	5,600,000	0	5,600,000
Dedicated Real Estate Tax Revenue	0	200,314	206,323	212,513	218,889	225,455	232,219	239,185	246,361	253,752	261,364	2,296,375	0	2,296,375
<b>Total Revenues</b>	<b>\$0</b>	<b>\$16,162,770</b>	<b>\$4,032,330</b>	<b>\$12,956,446</b>	<b>\$2,330,000</b>	<b>\$3,985,000</b>	<b>\$6,413,000</b>	<b>\$5,085,860</b>	<b>\$7,028,877</b>	<b>\$12,833,624</b>	<b>\$4,376,000</b>	<b>\$75,203,907</b>	<b>\$11,119,000</b>	<b>\$86,322,907</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Operating	0	0	251,000	175,000	180,000	185,000	191,000	197,000	203,000	252,000
Debt Service	0	264,000	264,000	1,122,000	1,122,000	1,122,000	1,122,000	1,122,000	1,122,000	1,283,000
Master Lease	0	229,000	346,000	466,000	590,000	679,000	1,017,662	1,297,662	1,720,475	1,720,475
<b>Total Operating Impacts</b>	<b>\$0</b>	<b>\$493,000</b>	<b>\$861,000</b>	<b>\$1,763,000</b>	<b>\$1,892,000</b>	<b>\$1,986,000</b>	<b>\$2,330,662</b>	<b>\$2,616,662</b>	<b>\$3,045,475</b>	<b>\$3,255,475</b>

**Fire and Rescue: Aquia Harbour Fire and Rescue Station (FS9) Rebuild**

<b>Project Code</b>	AQHRFR	<b>Square Footage/Acreage</b>	TBD (Site Dependent)
<b>Project Type</b>	Building Construction	<b>Construction Cost per Sq. Ft.</b>	TBD (Site Dependent)
<b>Project Status</b>	Planning	<b>Operating Cost per Sq. Ft.</b>	
<b>Functional Area</b>	Public Safety - Fire & Rescue	<b>Student Capacity</b>	
<b>Estimated Project Cost</b>	\$14,946,100	<b>Est. Opening Date</b>	FY2023
<b>Current Year Cost</b>	\$14,314,375	<b>Funding Source</b>	VRA, Proffers, Prior Year Fund Balance and Debt Service Savings
<b>Debt Service</b>	\$264,000	<b>Years Financed</b>	20
<b>Full Year Operating Impact</b>	FY24 \$175K		

**Project Description:**

The Firefighters and Paramedics assigned to the Stafford County Fire and Rescue Department's Station 9 protect the densely populated areas of Aquia Harbour and Route 610/Garrisonville/Interstate 95 in the northern region of Stafford County. Statistically, this area is one of busiest within the County of Stafford, generating thousands of emergency responses on an annual basis.

The existing facility, constructed in 1991 and located on a 0.42-acre parcel at 1001 Washington Drive (within Aquia Harbour), is home to a single-depth two-bay station which was designed and constructed to house ambulances for the Aquia Harbour Volunteer Rescue Squad. The size and operational capacity of the existing facility/parcel, coupled with the age and condition of the building, necessitate replacement. Business needs of the Stafford County Fire and Rescue Department require high density and high call volume areas to be serviced by facilities which can handle the volume of on-duty personnel and various tactical apparatus required.

The construction of a new facility, approximately 21,500 square feet in size (with appropriate living and working quarters) and housing 4 ½ apparatus bays, is planned. This facility will address the demands of the response area, ensuring the appropriate support for on-duty personnel. Due to the requirements of emergency response, standards of fire protection, and emergency medical services coverage, this new construction will be constructed in close proximity to the existing Aquia Harbour Fire Station.

## Fire and Rescue: Aquia Harbour Fire and Rescue Station (FS9) Rebuild

### Operating Impact Summary:

The existing facility is staffed 24/7/365 by a crew of four career personnel who staff a Paramedic Engine Company. Furthermore, Aquia Harbour Volunteer Rescue Squad members staff emergency medical services Ambulances and Medic Units on average 25%-35% of each month. No new personnel costs are associated with this construction. There will be some additional costs for utilities and maintenance and a one-time start-up cost in FY24 of \$80K.

### Summary of Revenue:

Proffers	FY2022	FY2023
Abberly at Stafford Proffers	-	227,520
Libery KnowlIs West Proffers	106,974	
Shelton Knolls Proffers - repayment of Station 14	17,568	85,644
Reserve at Woodstock Lane	-	784,440
Quantico Village	-	64,800
Town Center at Aquia	48,880	
Hampton Run Commercial	-	26,048
Fund Balance		
Capital Project Fund - Reallocation of Funds	426,411	
Shelton Knolls Proffers	98,122	651,878
Aquia Set Aside	2,487,747	
Reallocation of CARES Act Funding	3,978,023	
Capital Proj Reserve	1,800,000	
Other Sources		
FY2022 County Debt Service Savings	846,450	
Bonds	3,295,595	
<b>Total Available for the Project</b>	<b>\$ 13,105,770</b>	<b>\$ 1,840,330</b>

## **Fire and Rescue: Aquia Harbour Fire and Rescue Station (FS9) Rebuild**

### **Location:**

Site selection and acquisition are to be determined, however centralizing within the Interstate 95/US Route 1/ Route 610 corridor will be essential for service delivery.

### **Relationship to Approved County Policy or Plan:**

- Board of Supervisors Strategic Plan (Public Safety Response)
- County of Stafford Comprehensive Plan (Emergency Response Times)
- Stafford County Fire and Rescue Department Strategic Plan (Infrastructure)
  - Stafford County Fire and Rescue Department Facilities Needs Assessment
- Insurance Standards Organization Public Protection Classification

### **Change or Reasons for Revisions:**

- **FY2021** – New project request completion in FY2022, The board approved a Station placeholder
- **FY2022** – Project cost estimate updated

## Fire and Rescue: Aquia Harbour Fire and Rescue Station (FS9) Rebuild

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	1,058,100	0	0	0	0	0	0	0	0	0
Property Acquisition	0	1,045,000	0	0	0	0	0	0	0	0	0
Construction / Project	0	10,208,670	1,840,330	0	0	0	0	0	0	0	0
Contingency	0	794,000	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$13,105,770</b>	<b>\$1,840,330</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	3,295,595	0	0	0	0	0	0	0	0	0
Use of Prior Year Fund Balance	0	8,790,303	651,878	0	0	0	0	0	0	0	0
Proffers	0	173,422	1,188,452	0	0	0	0	0	0	0	0
Debt Service Savings	0	846,450	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$13,105,770</b>	<b>\$1,840,330</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts		FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Operating		0	0	251,000	175,000	180,000	185,000	191,000	197,000	203,000	209,000
Debt Service		0	264,000	264,000	264,000	264,000	264,000	264,000	264,000	264,000	264,000
<b>Total</b>		<b>\$0</b>	<b>\$264,000</b>	<b>\$515,000</b>	<b>\$439,000</b>	<b>\$444,000</b>	<b>\$449,000</b>	<b>\$455,000</b>	<b>\$461,000</b>	<b>\$467,000</b>	<b>\$473,000</b>

**Fire and Rescue: Replacement Apparatus**

<b>Project Code</b>	FR2201 Ambulance FR2203 – Engine Replacement FR2203 – Tanker Replacement	<b>Square Footage/Acreage</b>	
<b>Project Type</b>	Vehicle/Apparatus/Equipment Replacement	<b>Construction Cost per Sq. Ft.</b>	
<b>Project Status</b>	Property Acquisition	<b>Operating Cost per Sq. Ft.</b>	
<b>Functional Area</b>	Public Safety - Fire & Rescue	<b>Student Capacity</b>	
<b>Estimated Project Cost</b>	\$2,857,000	<b>Est. Opening Date</b>	On-Going
<b>Current Year Cost</b>		<b>Funding Source</b>	Master Lease, Current Revenue
<b>Debt Service</b>	FY22 – \$229,000	<b>Years Financed</b>	10
<b>Full Year Operating Impact</b>	No additional operating costs		

**Project Description:**

Stafford County's Fire and Rescue Department effectively ensures and maintains the viability of the fleet of emergency vehicles with scheduled replacement due to age, mileage and/or engine hour indication. This program provides for the regular replacement of department apparatus based on service life estimates for each vehicle. This includes replacement of ambulances, engines, and specialty apparatus (ladders, heavy rescue apparatus, tankers, light and air incident support vehicles and/or boats). Typical service life is 15 years for boats, tankers and light and air units; 10 years for engines, ladders, heavy rescues, and pumper/tankers; and five years for ambulances. This plan replaces only primary apparatus and supports fleet reduction by not replacing duplicate apparatus. Apparatus assignment is dependent upon Fleet Rotation Policy and therefore difficult to forecast the station at which replacement apparatus will be placed.

## **Fire and Rescue: Replacement Apparatus**

### **Operating Impact Summary:**

There will be no additional operating costs operating for replacement equipment.

### **Location:**

All Fire & Rescue Stations throughout Stafford County.

### **Relationship to Approved County Policy or Plan:**

- The Comprehensive Plan (Standards of Cover/Response Time)
- Stafford County Fire and Rescue Department Fleet Replacement and Rotation Policy
- 2017 Fire and Rescue Department Assessment
- NFPA Standards

### **Analysis of Need:**

The right equipment and apparatus are essential to the success of any rescue whether it be medical, fire, vehicular or any variety of incidents that involve special rescue.

### **Change or Reasons for Revisions:**

**FY2021** – Addition of a Fire Boat - The Fire and Rescue Department has an inadequate and aging fleet of existing boats. This compromises dependability and adds to an ineffective response model. The current stock includes boats which were not designed for what they are being used as (pleasure/fishing boats), volunteer agencies “made it work” over the past decades.

**FY2022** – Addition of \$75,000 (\$25,000 per ambulance) for new power management savings systems. Addition of a ladder truck in FY2026 to address anticipated community growth. Addition of a Light and Air/Incident Support Vehicle in FY2031. Per fleet replacement program policy continuation of the purchase of an engine and three (3) ambulances in FY2031.

## Fire and Rescue: Replacement Apparatus

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Ambulance Replacement	0	999,000	1,044,000	1,092,000	1,125,000	1,158,000	1,194,000	1,230,000	1,266,000	1,305,000	1,344,000
Engine Replacement	0	802,000	838,000	863,000	889,000	916,000	943,000	971,000	1,000,000	1,030,000	1,061,000
Tanker Replacement	0	846,000	0	0	0	0	0	0	0	0	0
Heavy Rescue Replacement	0	0	0	0	0	0	0	1,700,000	0	0	0
Aerial Ladder/Tower Replacement	0	0	0	0	0	1,436,000	0	0	0	0	0
Light & Air/Incident Support Replacement	0	0	0	0	0	0	0	0	0	0	550,000
Fire Boat Replacement	0	0	0	0	0	0	0	431,000	0	0	0
Equipment for Engines	0	105,000	110,000	113,000	116,000	119,000	123,000	127,000	131,000	135,000	139,000
Equipment for Heavy Rescue	0	0	0	0	0	0	0	166,000	0	0	0
Equipment for Aerial Ladder	0	0	0	0	0	156,000		0	0	0	0
Equipment for Tankers	0	105,000	0	0	0	0	0	0	0	0	0
Equipment for Light & Air	0	0	0	0	0	0	0	0	0	0	82,000
Equipment for Fire Boat	0	0	0	0	0	0	0	52,000	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$2,857,000</b>	<b>\$1,992,000</b>	<b>\$2,068,000</b>	<b>\$2,130,000</b>	<b>\$3,785,000</b>	<b>\$2,260,000</b>	<b>\$4,677,000</b>	<b>\$2,397,000</b>	<b>\$2,470,000</b>	<b>\$3,176,000</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Current Revenue	0	0	347,623	364,290	375,290	385,623	398,290	434,290	470,290	509,290	548,290
Current Revenue - 3R	0	464,251	490,054	515,197	530,821	2,454,587	563,491	1,728,765	549,349	1,706,958	1,933,972
Use of Prior Year Fund Balance General Fund	0	334,435	0	0	0	0	0	0	0	0	0
Master Lease Proceeds	0	1,858,000	948,000	976,000	1,005,000	719,335	1,066,000	2,274,760	1,131,000	0	432,374
Dedicated Real Estate Tax Revenue	0	200,314	206,323	212,513	218,889	225,455	232,219	239,185	246,361	253,752	261,364
<b>Total</b>	<b>\$0</b>	<b>\$2,857,000</b>	<b>\$1,992,000</b>	<b>\$2,068,000</b>	<b>\$2,130,000</b>	<b>\$3,785,000</b>	<b>\$2,260,000</b>	<b>\$4,677,000</b>	<b>\$2,397,000</b>	<b>\$2,470,000</b>	<b>\$3,176,000</b>

Operating Impacts		FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Master Lease		0	229,000	346,000	466,000	590,000	679,000	810,000	1,090,000	1,229,000	1,229,000
<b>Total</b>		<b>\$0</b>	<b>\$229,000</b>	<b>\$346,000</b>	<b>\$466,000</b>	<b>\$590,000</b>	<b>\$679,000</b>	<b>\$810,000</b>	<b>\$1,090,000</b>	<b>\$1,229,000</b>	<b>\$1,229,000</b>



**Fire and Rescue: Rockhill Fire and Rescue Station (FS8) Rebuild**

Project Code		Square Footage/Acreage	TBD (Site Dependent)
Project Type	Building Construction	Construction Cost per Sq. Ft.	TBD (Site Dependent)
Project Status	Planning	Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Fire & Rescue	Student Capacity	
Estimated Project Cost	\$8,961,000	Est. Opening Date	FY2023
Current Year Cost	\$8,574,750	Funding Source	
Debt Service	\$	Years Financed	
Full Year Operating Impact			

**Project Description:**

Within the County of Stafford's northwestern area (Rockhill), fire suppression and emergency medical services operations are currently delivered from separate buildings, with the Rockhill Volunteer Fire Department being located at 2133 Garrisonville Road and the Rockhill Volunteer EMS Station located at 1565 Garrisonville Road. The existence of separate facilities highlights redundancies and is organizationally inefficient. The current facilities are not owned by the County of Stafford, this causes issues with the purchasing of building improvements as tax payer funds are used to improve the value of buildings that are operated but not owned by the County of Stafford.

The proposed Rockhill Fire and Rescue Station (FS8) rebuild combines fire and emergency medical services operations into a single planned and appropriately located public safety facility.

**Operating Impact Summary:**

The existing fire station is staffed 24/7/365 by a crew of five career personnel who staff a Paramedic Engine Company and Advanced Life Support Transport Unit. No new personnel costs are associated with this construction.

## **Fire and Rescue: Rockhill Fire and Rescue Station (FS8) Rebuild**

### **Location:**

Site selections and acquisition are to be determined.

### **Relationship to Approved County Policy or Plan:**

- Board of Supervisors Strategic Plan (Public Safety Response)
- County of Stafford Comprehensive Plan (Emergency Response Times)
- Stafford County Fire and Rescue Department Strategic Plan (Infrastructure)
  - Stafford County Fire and Rescue Department Facilities Needs Assessment
- Insurance Standards Organization Public Protection Classification

### **Analysis of Need:**

Ongoing building structural issues and environmental health concerns.

### **Change or Reasons for Revisions:**

- **FY2021** – Requested in the FY21 CIP – not included in the FY21 Adopted CIP
- **FY2022** – New to the CIP

### **Alternative:**

Maintain existing operations and fund facilities rehabilitation requests.

[illegible]

## Fire and Rescue: Equipment Replacement

Project Code		Square Footage/Acreage	
Project Type	Vehicle/Apparatus/Equipment Replacement	Construction Cost per Sq. Ft.	
Project Status	Property Acquisition	Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Fire & Rescue	Student Capacity	
Estimated Project Cost	\$7,179,000	Est. Opening Date	
Current Year Cost	\$0.00	Funding Source	Master Lease
Debt Service	\$491,475	Years Financed	10
Full Year Operating Impact	No Additional Operating Costs		

### Project Description:

Cardiac Equipment: Cardiac monitor/defibrillator equipment is essential to the departments' ALS and emergency medical services program. Replacement of the equipment en masse is necessary in order to maintain consistency, technological standards, and provide optimal care. This acquisition project will spread out the debt service costs associated with the replacement of all of the Fire and Rescue Department's cardiac/monitor/defibrillator and Cardio Pulmonary Resuscitation (CPR) equipment which was obtained in 2009 on a lease purchase program. The lease ended in 2014 and the department purchased the equipment at that time. In FY2021 the purchase of an additional 15 LUCAS systems brought the Department total to (40) forty, with a project cost of \$270,000 and the next equipment purchase of 90 LifePak CR+ (AEDS) is planned for fiscal year 2027.

The following is the LifePak and LUCAS replacement plan:

- FY2027 – 90 LifePak CR+(AEDS)
- FY2029 – (40) LUCAS and 45 LifePak 15

SCBA Equipment: Self-Contained Breathing Apparatus (SCBA) is essential equipment that provides firefighters the ability to breathe, work, and communicate in a potentially toxic environment that would otherwise be perilous to health and safety. The SCBA currently used by the department will near the end of its life cycle and will require replacement in fiscal year 2027.

## **Fire and Rescue: Equipment Replacement**

### **Operating Impact Summary:**

No additional operating costs associated with this project.

### **Location:**

Throughout Stafford County.

### **Relationship to Approved County Policy or Plan:**

- Comprehensive Plan
- Heartsafe Community Designation
- Pulsepoint Connected Community
- VA Office of Emergency Medical Services Licensing Requirements

### **Analysis of Need:**

Cardiac monitor/defibrillator equipment is essential to the department's Advanced Life Support (ALS) and emergency medical services program. Replacement of the equipment en masse is necessary in order to maintain consistency, technological standards and provide optimal care.

SCBA equipment protects firefighters while performing rescue and hazard mitigation activities. These units are critical for the health safety of our personnel.

### **Change or Reasons for Revisions:**

**FY2021** – Addition of 90 Lifepak CR+s and Replacement of SCBA Equipment

**FY2022** – There is no change for FY2022.

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Fire and Rescue: Equipment Replacement

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
LifePak15 Replacement	0	0	0	0	0	0	0	0	2,610,000	0	0
Lucas System Replacement	0	0	0	0	0	0	0	0	1,040,000	0	0
LifePak CR+ and AEDs	0	0	0	0	0	0	180,000	0	0	0	0
Trade in LifePak 15 Monitors		0	0	0	0	0	0	0	(278,000)		0
Trade In Lucas Chest Compression Systems		0	0	0	0	0	0	0	(146,000)		0
SCBA Equipment Replacement	0	0	0	0	0	0	3,773,000	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,953,000</b>	<b>\$0</b>	<b>\$3,226,000</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Current Revenue - 3R	0	0	0	0	0	0	2,268,674	0	924,027	0	0
Master Lease Proceeds	0	0	0	0	0	0	1,684,326	0	2,301,973	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,953,000</b>	<b>\$0</b>	<b>\$3,226,000</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts		FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Master Lease		0	0	0	0	0	0	207,662	207,662	491,475	491,475
<b>Total</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$207,662</b>	<b>\$207,662</b>	<b>\$491,475</b>	<b>\$491,475</b>

## Fire and Rescue: Station Repairs and Maintenance

Project Code	FR2202	Square Footage/Acreage	Site Dependent
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Fire & Rescue	Student Capacity	
Estimated Project Cost	FY22- \$200,000	Est. Opening Date	
Current Year Cost		Funding Source	Current Revenue
Debt Service	No Debt Service Associated with this Project	Years Financed	
Full Year Operating Impact	No Additional Operating Costs		

### Project Description:

Personnel assigned to the Stafford County Fire and Rescue Department respond to requests for service from facilities that are located throughout the jurisdiction. Most of these buildings are aging and require various repairs and replacement of building systems. Maintenance has continued to be deferred due to budget constraints and spending freezes; the effects of the lack of spending is becoming obvious as the conditions of the fire and rescue stations continues to decline. The predicted costs for the required repairs and replacements were gathered from the VFA Facility Assessment performed in June 2018.

The VFA Facility Assessment looked at all aspects of the buildings to determine the cost for a direct “apples to apples” replacement of the building system. Each rehabilitation included the time frame in which that replacement should take place, based on average life of the building system. The fire and rescue system has many older buildings with the average building age being 39 years old. This results in buildings that are becoming more expensive to maintain at an acceptable standard.

### Operating Impact Summary:

Fire and Rescue facilities are required to be operationally ready 24/7/365 to respond to the emergencies of the citizens and visitors of Stafford County. This requirement necessitates the need keep the buildings well maintained. No new personnel costs are associated with these repairs.

## **Fire and Rescue: Station Repairs and Maintenance**

### **Location:**

The fire and rescue stations that these funds would impact are throughout the county.

### **Relationship to Approved County Policy or Plan:**

- Board of Supervisors Strategic Plan (Public Safety Response)
- County of Stafford Comprehensive Plan (Emergency Response Times)
- Stafford County Fire and Rescue Department Strategic Plan (Infrastructure)
  - Stafford County Fire and Rescue Department Facilities Needs Assessment
- Insurance Standards Organization Public Protection Classification

### **Analysis of Need:**

These Fire and Rescue station facilities are in use 24 hours a day, 365 days a year.

### **Change or Reasons for Revisions:**

- **FY2019** – VFA Facilities Assessment defined repair and replacement cost projections.
- **FY2022** – Proposed 3R funding same as FY21

### **Alternative:**

Continued deferred maintenance and non-centralized building repair processes. This has the potential to impact emergency service delivery.



[illegible]

**Fire and Rescue: Public Safety Joint Training Center**

Project Code		Square Footage/Acreage	24,300sq. ft./20+ac.
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$300
Project Status	Planning	Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Fire & Rescue	Student Capacity	
Estimated Project Cost	\$11,578,361	Est. Opening Date	FY2030
Current Year Cost	\$8,731,897	Funding Source	VRA, Proffers, Grants, Revenue
Debt Service	\$161,000	Tax Rate Equivalent	\$0.002
Full Year Operating Impact	One-time start up costs		

**Project Description:**

A new Joint Training Center is needed to accommodate the Fire and Rescue Department's current education and fleet functions; including proper classrooms, securable equipment storage, appropriate housing of training simulators and safe apparatus repair facilities. Currently, the department depends upon a repurposed motorboat sales facility to accomplish these tasks. The land and building within this existing space are for sale and being actively marketed.

The project includes site development, 4,800 square feet of classroom space, 12,000 square feet of working space (materials storage, gear areas, locker rooms, etc.), 7,500 square feet of vehicle bays and exterior training grounds with a live fire burn building.

Education and training space is necessary to provide the means to meet classroom and practical needs for various emergency medical services (Paramedic), fire suppression (Career Firefighter and Volunteer), hazardous materials, and technical rescue course offerings.

Fleet maintenance, repair, and logistics high-bay spaces are needed for the safe upkeep of apparatuses. Additionally, planned shared space will incorporate a forensic bay for use by the Sheriff's Office and Fire Marshal.

The exterior training grounds includes a Class-A live fire burn building, training tower, and educational simulators for use by all Public Safety Personnel.

Operating an appropriately designed and constructed facility will allow for a convenient and centralized location to be used days, nights, and weekends; meeting the demands of our complex combination system.

## **Fire and Rescue: Public Safety Joint Training Center**

### **Operating Impact Summary:**

There will be minor one-time startup costs for the facility to include instructional supplies such as smart boards, a copy machine, fax machine, projectors, and computers. Other startup costs for the facility include kitchen and janitorial supplies. Current staff will transition to the new Central Training and Logistics Complex - no new staffing costs would be incurred.

### **Location:**

Staff, at the direction of the Public Safety Committee, is pursuing available land options. One Option may be through cooperation with the Stafford Regional Airport, an area of 20+ Acres of land has been identified for the construction of the Fire and Rescue Department's Training and Logistics Center. The Airport Authority is amenable to providing the County of Stafford with deeded land ownership of 20+ Acres, in exchange for the relief of debt (at fair market price). The location is in the northeastern portion of the Airport Authority's land ownership, adjacent to Ramoth Church Road and Blaque Trax Lane.

### **Relationship to Approved County Policy or Plan:**

- Relates to the County Board of Supervisor's Top Priorities (Public Safety)
- Comprehensive Plan (Response Time Standards)
- 2017 Fire and EMS Assessment (Education/Training, Safe Workplace, Volunteer Recruitment and Retention, Career Morale)

### **Analysis of Need:**

The existing commercial space (which is being used for Education, Training, and Fleet) is being marketed for sale. An appropriate replacement must be planned and constructed.

## **Fire and Rescue: Public Safety Joint Training Center**

### **Change or Reasons for Revisions:**

**FY2012** - Project new to the CIP. Project cost \$5.5M. Project scheduled for completion in FY17.

**FY2013** - Project moved out three years. Project scheduled for completion in FY20. Reduction in project cost. \$5.3M

**FY2014** - No change

**FY2015** - No change

**FY2016** - Updated project costs \$6.6M

**FY2017** - No Change

**FY2018** – Updated project costs \$6.9M. Timing of project will be determined during the FY2019 process.

**FY2019** – Removed from the CIP based on TRC ranking. Scope and cost of project changed to include the needs of the departments of Fire and Rescue and the Sheriff.

**FY2020** – Requested as a new project. \$11.5M

**FY2021** – No Change to scope of project. Net sale from Boat Property has been applied to project cost resulting in a reduction in bond borrow.

**FY2022** – Moved project out one year. Included the use of prior year fund balance to reduce the County's reliance on debt.

### **Alternative:**

- Removal of marketing efforts and sale of the existing space, with continued use by the Fire and Rescue Department.

**FY2022 Adopted Budget**

## Project Summary:

[illegible]

**Fire and Rescue: White Oak Fire and Rescue Station (FS7) Rebuild**

Project Code		Square Footage/Acreage	TBD (Site Dependent)
Project Type	Building Construction	Construction Cost per Sq. Ft.	TBD (Site Dependent)
Project Status	Planning	Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Fire & Rescue	Student Capacity	
Estimated Project Cost	\$12,119,000	Est. Opening Date	FY2028
Current Year Cost	\$8,510,750	Funding Source	VRA, Proffers
Debt Service	No Debt Service Impacts in the Ten Year Planning Period	Years Financed	
Full Year Operating Impact	No Operating Impacts in the Ten Year Planning Period		

**Project Description:**

Within the County of Stafford's southeastern area (White Oak), fire suppression and emergency medical services operations are currently delivered from separate buildings, with the White Oak Volunteer Fire Department being located at 12 Newton Road and the White Oak Volunteer EMS Station located at 535 White Oak Road. The existence of separate facilities highlights redundancies and is organizationally inefficient. The proposed White Oak Fire and Rescue Station (FS7) rebuild combines fire and emergency medical services operations into a single planned and appropriately located public safety facility.

Following the completion of the Accruent – VFA Facility Assessment in calendar year 2018 both the White Oak Volunteer Fire Department and White Oak Volunteer EMS Station were assessed to be in poor condition. The White Oak Volunteer Fire Department was constructed in 1970 and has a current replacement value of \$1,560,990.08, with ten-year building rehabilitation costs estimated at \$1,402,032.96. The White Oak Volunteer EMS Station was constructed in 1985 and has a current replacement value of \$1,534,940.86, with ten-year building rehabilitation costs estimated at \$1,551,310.47.

**Operating Impact Summary:**

The existing White Oak Volunteer EMS Station is staffed 24/7/365 by a crew of two career personnel who staff a ground transport Ambulance. The Fire and Rescue Department's staffing requests are submitted within the Long-Term Financial Plan, as such no new personnel costs are associated with this construction.

## **Fire and Rescue: White Oak Fire and Rescue Station (FS7) Rebuild**

### **Location:**

Site selection and acquisition are to be determined.

### **Relationship to Approved County Policy or Plan:**

- Board of Supervisors Strategic Plan (Public Safety Response)
- County of Stafford Comprehensive Plan (Emergency Response Times)
- Stafford County Fire and Rescue Department Strategic Plan (Infrastructure)
  - Stafford County Fire and Rescue Department Facilities Needs Assessment
- Insurance Standards Organization Public Protection Classification

### **Analysis of Need:**

The Fire and Rescue Department believes that it is most appropriate to invest in an appropriately planned and newly constructed facility, as opposed to the continued funding of ongoing maintenance and facility repairs.

### **Change or Reasons for Revisions:**

- **FY2021** – Requested in the FY21 CIP for FY2026 completion, Not included in the FY21 Adopted CIP
- **FY2022** – New to the CIP

### **Alternative:**

Maintain existing operations and fund facilities rehabilitation requests.

## Fire and Rescue: White Oak Fire and Rescue Station (FS7) Rebuild

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years
Construction / Project	0	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	11,119,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,000,000</b>	<b>\$1,000,000</b>	<b>\$11,119,000</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years
Bond Proceeds	0	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	11,119,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,000,000</b>	<b>\$1,000,000</b>	<b>\$11,119,000</b>

Operating Impacts		FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>



# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Public Safety: Sheriff

Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years	Total Project Costs (Includes Prior and Future Years Cost)
3R Sheriff Projects	0	1,377,049	4,655,820	2,475,568	1,294,037	345,000	355,000	366,000	377,000	388,000	392,562	12,026,036	0	12,026,036
<b>Total Expenditures</b>	<b>0</b>	<b>\$1,377,049</b>	<b>\$4,655,820</b>	<b>\$2,475,568</b>	<b>\$1,294,037</b>	<b>\$345,000</b>	<b>\$355,000</b>	<b>\$366,000</b>	<b>\$377,000</b>	<b>\$388,000</b>	<b>\$392,562</b>	<b>\$12,026,036</b>	<b>\$0</b>	<b>\$12,026,036</b>

Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years	Total Project Costs (Includes Prior and Future Years Cost)
Current Revenue - 3R	0	854,049	982,820	2,475,568	1,294,037	0	0	0	0	0	392,562	5,999,036	0	5,999,036
Use of Prior Year Fund Balance General Fund	0	523,000	0	0	0	0	0	0	0	0	0	523,000	0	523,000
Master Lease	0	0	3,400,000	0	0	0	0	0	0	0	0	3,400,000	0	3,400,000
Radio Funding	0	0	273,000	0	0	345,000	355,000	366,000	377,000	388,000	0	2,104,000	0	2,104,000
<b>Total Expenditures</b>	<b>\$0</b>	<b>\$1,377,049</b>	<b>\$4,655,820</b>	<b>\$2,475,568</b>	<b>\$1,294,037</b>	<b>\$345,000</b>	<b>\$355,000</b>	<b>\$366,000</b>	<b>\$377,000</b>	<b>\$388,000</b>	<b>\$392,562</b>	<b>\$12,026,036</b>	<b>\$0</b>	<b>\$12,026,036</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Operating	115,000	120,000	127,000	138,000	152,000	172,000	197,000	231,000	276,000	336,000
Master Lease	0	0	451,070	451,070	451,070	451,070	451,070	451,070	451,070	451,070
<b>Total All Projects</b>	<b>\$115,000</b>	<b>\$120,000</b>	<b>\$578,070</b>	<b>\$589,070</b>	<b>\$603,070</b>	<b>\$623,070</b>	<b>\$648,070</b>	<b>\$682,070</b>	<b>\$727,070</b>	<b>\$787,070</b>

**Sheriff: 3R Projects**

Project Code	See Below in Project Description		
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Sheriff	Student Capacity	
Estimated Project Cost	\$4,597,411	Est. Opening Date	On-going
Current Year Cost		Funding Source	Current Revenue/Master Lease/Radio Funding
Debt Service	No Debt Service is Associated with this project		
Full Year Operating Impact			

**Project Description:****FY2022 In-Car Camera Replacement: Project Code # SH2202**

The Sheriff's Office received half of the requested funding for this project in FY2021. We are requesting the remaining half for FY2022 to fully implement the replacement of the in-car cameras. We were notified that many of our cameras would not be fully supported after August 1, 2019. This means that the manufacturer will not assist in repairs, replacement of parts, and maintenance or troubleshooting. These cameras are an essential component of our Police Vehicle Fleet and are heavily relied upon for the evidentiary value.

**FY2022 New Radio Frequency Channels: Project Code # SH2203**

Stafford County Emergency Radio System serves the radio needs of Stafford County and the City of Fredericksburg. Stafford County holds the FCC license for the frequencies used to operate the trunked radio system. Two of those licensed frequencies have not been installed in the system equipment. Those two frequencies need to be installed into the system to be functional. The current system consists of 10 channels partially TDMA with 12 talk paths. The installation would provide two additional talk paths to the current system. As the County increases, radio needs through School Transportation and additional staff, the need to increase talk paths also increases. Stafford County currently holds the FCC license for these two frequencies, however it is held on a growth license that will not be renewed if the frequencies are not utilized.

## Sheriff: 3R Projects

### **FY2022 Computer Aided Dispatch (CAD) Study: Project Code # SH2204**

Essential to the core of the processing of emergency calls is a Computer Aided Dispatch (CAD) system. The CAD system is a hardware and software infrastructure that processes calls and dispatches public safety providers. The current CAD system is technology outdated and diminishes its operational capabilities and makes technical support difficult and expensive. Stafford County does not currently have the resources to properly study CAD needs and alternatives. The CAD is in need of server replacement as well as the ongoing issues with lower performance. An outside resource is needed to study the future needs of Stafford County with CAD and the viability of a Cloud Based CAD product. A Cloud Based CAD could allow implementation without a purchase price and little implementation cost. It could eliminate the need for CAD servers and be done at a similar yearly maintenance cost.

### **FY2022 MPLS Routers: Project Code # SH2205**

Future upgrades to our radio system require MPLS Routers which have ethernet connections and not the current T1 connections.

T1 site links are a legacy technology and ASTRO 2020 will be the last ASTRO system release to support T1 site links. This means all ASTRO 25 customers (Stafford County) will need to convert existing T1 site links to Ethernet if they plan to upgrade beyond ASTRO 2020. Stafford County plans on continuing upgrades through our Software Upgrade Agreement (SUA2) with Motorola.

The following Stafford site link types will be impacted by the conversion: • Master Site (Core) to Dispatch Sites • Core to Prime Site • Prime Site to RF Sub-sites  
Motorola Solutions recommends the ASTRO radio system backhaul network be designed as a Layer 3 routed network for the following reasons.

Advantages of Layer 3 (L3) operation: • Packet forwarding decisions are made based on information in the IP header. • L3 routing breaks up bridge domains. • IP packets have a time-to-live (TTL) to prevent infinite routing loops. • Layer 2 broadcast traffic is contained and not able to pass the router interface. • Link utilization becomes more deterministic. Policy based routing or Interior Gateway Protocol (IGP) cost metrics can be used.

Drawbacks of Layer 2 (L2) operation: • Broadcast, multicast, or unknown unicast (BMU) frames are flooded across the entire backhaul network. • If a loop were to form, a BMU frame will continue to be flooded repeatedly at the highest frame rate the devices involved in the loop can support. • The result is a “broadcast storm” as all devices within the bridge domain are flooded with so much broadcast traffic, they cannot “see” the desired traffic. • Unlike an IP packet, a L2 frame header does not have a time to live (TTL) value. It lives forever. • Loop avoidance protocols (Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Ethernet Automatic Protection Switching (EAPS) were designed to avoid this condition, but they are not fool proof.

Separating our M Radio Core into two locations for georedundancy requires the MPLS Routers and this is a plan for hardening our radio network. The addition of a secondary prime site also requires MPLS Routers and this is another future plan for radio hardening. The change to MPLS routers is required for the Radio System to be updated past 2020 and remain fully operational. It will also increase the systems ability allowing for larger data transfers across the radio network and future radio hardening goals.

**Sheriff: 3R Projects****Operating Impact Summary:**

- Operating impacts are associated with the in-car camera project and include on-going annual warranty and video license and maintenance.

**Relationship to Approved County Policy or Plan:**

- Dedicated and Responsive Public Safety

**Project Summary:**

Project	Project Description	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
In-Car Cameras replacement	Replacement of in-car cameras due to end of life - second half to fully implement	173,049	0	0	0	0	0	0	0	0	0
New Radio Frequency Channels	New radio frequency channels installed at all tower sites to meet the demands of	627,000	0	0	0	0	0	0	0	0	0
Computer Aided Dispatch (CAD)	Study to explore the purchase of our CAD	54,000	0	0	0	0	0	0	0	0	0
MPLS Routers	Upgrade required for Public Safety Radio Communications System	523,000	0	0	0	0	0	0	0	0	0
Security Study Implementation	Results of study funded in FY19 - Phase 1	0	982,820	0	0	0	0	0	0	0	0
Radio link path study implementation	Radio link path study implementation	0	273,000	0	0	0	0	0	0	0	0
Portable Radio Replacement	Replacement for 10 year old public safety radios	0	3,400,000	0	0	0	0	0	0	0	0
Replacement of 12 yr old console furniture in the	Replacement of 12 yr old console furniture in the ECC Center. This furniture is used	0	0	526,968	0	0	0	0	0	0	0
Command Bus	Command Bus	0	0	938,600	0	0	0	0	0	0	0
Security Study Implementation	Security Study Implementation	0	0	1,010,000	0	0	0	0	0	0	0
Firing Range Facility	Building with classroom space - put in CIP	0	0	0	307,000	0	0	0	0	0	0
Firearm Replacement	Replacement cycle for sworn personnel firearms	0	0	0	364,492	0	0	0	0	0	0
Security Study Implementation	Security Study Implementation	0	0	0	622,545	0	0	0	0	0	0

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Sheriff: 3R Projects

Project	Project Description	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Radio Channel Upgrade to TDMA	Radio Channel Upgrade to TDMA	0	0	0	0	345,000	0	0	0	0	0
Radio Channel Upgrade to TDMA	Upgrade an existing radio channel to TDMA	0	0	0	0	0	355,000	0	0	0	0
Radio Channel Upgrade to TDMA	Radio Channel Upgrade to TDMA	0	0	0	0	0	0	366,000	0	0	0
Radio Channel Upgrade to TDMA	Radio Channel Upgrade to TDMA	0	0	0	0	0	0	0	377,000	0	0
Radio Channel Upgrade to TDMA	Radio Channel Upgrade to TDMA	0	0	0	0	0	0	0	0	388,000	0
Firearm Replacement	Replacement cycle for sworn personnel firearms	0	0	0	0	0	0	0	0	0	392,562
Total		\$1,377,049	\$4,655,820	\$2,475,568	\$1,294,037	\$345,000	\$355,000	\$366,000	\$377,000	\$388,000	\$392,562

Project Revenues	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Current Revenue - 3R	854,049	982,820	2,475,568	1,294,037	0	0	0	0	0	392,562
Use of Prior Year Fund Balance General Fund	523,000	0	0	0	0	0	0	0	0	0
Master Lease	0	3,400,000	0	0	0	0	0	0	0	0
Radio Funding	0	273,000	0	0	345,000	355,000	366,000	377,000	388,000	0
One-Time Funding	0	0	0	0	0	0	0	0	0	0
Total	\$1,377,049	\$4,655,820	\$2,475,568	\$1,294,037	\$345,000	\$355,000	\$366,000	\$377,000	\$388,000	\$392,562

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Operating	115,000	120,000	127,000	138,000	152,000	172,000	197,000	231,000	276,000	336,000
Master Lease	0	0	451,070	451,070	451,070	451,070	451,070	451,070	451,070	451,070
Total	\$0	\$120,000	\$578,070	\$589,070	\$603,070	\$623,070	\$648,070	\$682,070	\$727,070	\$787,070

**FY2022 Adopted Budget**

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Yr Planning Period		Total Project Cost (Includes Prior Year and Future Years Funding)
												Future Plan		
Brooks Park Steam Restoration	\$167,000	\$1,639,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,639,000	\$0	\$1,806,000
<b>Total Expenditures</b>	<b>\$167,000</b>	<b>\$1,639,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,639,000</b>	<b>\$0</b>	<b>\$1,806,000</b>

[illegible]

**Storm Water: Brooks Park Stream Restoration**

<b>Project Code</b>	CCMS4	<b>Square Footage/Acreage</b>	
<b>Project Type</b>	3-R	<b>Construction Cost per Sq. Ft.</b>	
<b>Project Status</b>	Design/Engineering	<b>Est. Opening Date</b>	
<b>Total Project Cost</b>	\$1,806,000	<b>Student Capacity</b>	
<b>Functional Area</b>	Public Works Stormwater	<b>Funding Sources</b>	Current Revenue, Prior Year Fund Balance, Grant
<b>Total Debt Service</b>	No Debt Service Associated with this Project		
<b>Full Year Operating Impact</b>	No Additional Operating Impacts Associated with this Project		

**Project Description:**

This Project will restore approximately 1,400 linear feet of an unnamed tributary to the Rappahannock River. The stream segment receives water from 175 acres of urbanized area. The project improvements will restore geomorphic stability, enhance removal of pollutants, and improve water quality of the Rappahannock River Watershed through adjustment of the dimension, pattern, and profile of the stream.

Stafford County has a Multiple Separate Storm Sewer System (MS4) permit [VAR040056] from Virginia's Department of Environmental Quality. One aspect of the MS4 permit is compliance with the U.S. Environmental Protection Agency's (EPA)/Virginia Department of Environmental Quality (VDEQ) Chesapeake Bay Total Maximum Daily Load (TMDL) 'pollution diet' plan. The TMDL establishes a "pollution diet" for the entire Chesapeake Bay watershed to address pollution (i.e. nutrients/sediment). A state-wide Watershed Implementation Plan (WIP) was developed with pollutant removal goals assigned.

The County has identified and completed final site design for the St. Clair Brooks Park Stream Restoration project to assist with meeting the Pollutant of Concerns (POC) load reduction requirements for total nitrogen, total phosphorus, and sediment as identified in the County's Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan developed in accordance with the Multiple Separate Storm Sewer System (MS4) permit [VAR040056] from Virginia's Department of Environmental Quality.

## Storm Water: Brooks Park Stream Restoration

### Location:

St. Clair Brooks Memorial Park.

### Relationship to Approved County Policy or Plan:

- The stream restoration project located in St. Clair Brooks Memorial Park is related to the EPA-issued TMDL for the Chesapeake Bay, which is coordinated by the VDEQ. Per Stafford County's storm water permit (issued July 1, 2013), we are required to meet 100% of the pollution reductions associated with the TMDL by June 30, 2028. A draft Phase II Chesapeake Bay TMDL Action Plan was required for the MS4 permit renewal (June 2018); within that document, the stream restoration was recognized as the manner to accommodate the pollutant reductions.

### Analysis of Need:

Federal and state regulations have signified the need for Stafford County to identify, design, and construct certain storm water retrofit projects that would satisfy the County's TMDL requirement. It is imperative that Stafford County meet this requirement to avoid non-compliance, consent orders, violations and/or fines associated with federal and state regulations. Currently, Stafford County has met the June 30, 2018 deadline for the 5% TMDL reduction goal. However, the County is required to meet the 40% reduction goal by June 30, 2023 and the 100% reduction goal by June 30, 2028.

### Change or Reasons for Revisions:

**FY2020** – The stream restoration project located in St. Clair Brooks Memorial Park will satisfy the 100% MS4 TMDL reduction goal required for June 30, 2028. Due to the extent of the design and construction, it is safe to assume that the estimated schedule for completion would be 18-24 months.

**FY2021** – The project construction costs are now estimated to be \$1,639,000.00 for FY2022.

- Project requested \$304,323 of 3R funding in FY2022. Normally a minimum 3% of general government expenditures is allocated to 3R projects. During the final development of the FY2021 Adopted Budget, and the projected revenue shortfalls due to the COVID-19 Pandemic, the Board reduced the Financial Policy requirements of 3% of general fund recurring revenue to 2% and staff was directed to review all projects. Department leaders from all departments with projects that were proposed, along with the Chief Financial Officer, the Budget Director and the Sr. Budget Analyst met to review all projects. Each department provided support for to determine if a project was essential or supported projects being pushed out into future years. These departments included: Parks, Recreation and Community Facilities; Fire and Rescue; Sheriff's Department; and Information Technology. This group did not prioritize projects beyond FY2021, as the CIP process will begin again in August for FY2022-31 CIP.
- Staff have reviewed the past information provided relative to the referenced project and introduce additional considerations relative to design/construction costs, operating costs, and maintenance costs. The initial \$1.5M projected costs were attributed to an accumulation of funds at \$300K for 5 consecutive years; this put the estimated construction around 2024. The looming compliance dates of 2023 and 2028 to achieve the



## **Storm Water: Brooks Park Stream Restoration**

respective 40% and 100% pollutant reduction goals have promoted staff to reassess completing the project sooner to minimize construction delays that could adversely influence compliance with the County's MS4 permit (Municipal Separate Storm Sewer System). Staff presumes to proceed through project process following incorporation in the budget; continued protraction of the project may result in greater costs.

- Operating costs occurring during construction include oversight by a County project manager / administration at an estimated \$50,000 for the duration of the project. The project's permit to impact wetlands (Army Corps of Engineers) calls for a 5-year monitoring period assumed to cost \$5,000 annually for a cumulative \$25,000.
- Approximately \$167,000 has been spent [since Feb 2017] on design costs; a 2018 SLAF grant (Stormwater Local Assistance Fund) was awarded for \$99,999; staff has determined to apply for 2019 SLAF grant of \$987,000 to replace the 2018 award.

The project has been determined to be the most cost-effective for collective phosphorus (P), nitrogen (N), and sediment (S) reductions. The complete P obligation will be addressed by the project; there will be residual N and S loads to be addressed at marginal costs. These numbers will be better understood/addressed following the stream restoration project.

**FY2022** – Friends of the Rappahannock have provided a donation of \$40,000 to the project

### **Alternative:**

Additional storm water retrofit projects have been identified in the Rappahannock River watershed to help meet the TMDL requirement. However, the stream restoration project in St. Clair Brooks Memorial Park was selected based on numerous factors that favor Stafford County.

## Storm Water: Brooks Park Stream Restoration

### Project Summary:

Stormwater Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	\$167,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction / Project	0	1,639,000	0	0	0	0	0	0	0	0	0
<b>Total Expenditures</b>	<b>\$167,000</b>	<b>\$1,639,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Current Revenue	0	40,000	0	0	0	0	0	0	0	0	0
3R County Funding	0	352,000	0	0	0	0	0	0	0	0	0
Use of Prior Year Fund Balance General Fund	167,000	376,000	0	0	0	0	0	0	0	0	0
State Grants	0	871,000	0	0	0	0	0	0	0	0	0
<b>Total Revenues</b>	<b>\$167,000</b>	<b>\$1,639,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total Operating Impacts</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Parks, Recreation, and Cultural

Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Costs	Total Project Costs (Includes Prior Year and Future Years Costs)
Patawomeck Park	88,000	0	0	75,000	1,073,260	0	0	0	0	0	0	1,148,260	0	1,236,260
Musselman Park	88,000	0	0	85,000	1,092,749	0	0	0	0	0	0	1,177,749	0	1,265,749
Carl Lewis	0	0	0	591,000	0	0	0	0	0	0	0	591,000	0	591,000
Duff Park	0	0	0	0	0	100,000	0	0	0	0	0	100,000	0	100,000
Mountain View Park	0	0	0	0	0	0	0	88,000	0	85,000	2,687,849	2,860,849	0	2,860,849
Parks Recreation 3R	0	568,000	290,999	115,000	1,692,000	180,000	126,000	67,000	825,000	1,086,000	1,087,000	6,036,999	0	6,036,999
Community Facilities and Asset Management 3R	0	723,510	992,000	86,000	466,000	319,000	866,000	1,812,786	2,267,927	1,655,247	381,994	9,570,464	0	9,570,464
Library #4		0	0	0	0	0	0	0	0	0	50,000	50,000	22,737,000	22,787,000
<b>Total Expenditures</b>	<b>\$176,000</b>	<b>\$1,291,510</b>	<b>\$1,282,999</b>	<b>\$952,000</b>	<b>\$4,324,009</b>	<b>\$599,000</b>	<b>\$992,000</b>	<b>\$1,967,786</b>	<b>\$3,092,927</b>	<b>\$2,826,247</b>	<b>\$4,206,843</b>	<b>\$21,535,321</b>	<b>\$22,737,000</b>	<b>\$44,448,321</b>

Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Costs	Total Project Costs (Includes Prior Year and Future Years Costs)
Bond Proceeds	0	0	0	0	0	0	0	0	0	0	50,000	50,000	22,737,000	22,787,000
Current Revenue 3R	0	1,218,510	1,282,999	86,000	2,158,000	499,000	992,000	1,879,786	3,092,927	2,741,247	1,468,994	15,419,463	0	15,419,463
Proffers	176,000	73,000	0	866,000	2,166,009	100,000	0	88,000	0	85,000	2,687,849	6,065,858	0	6,241,858
<b>Total Revenues</b>	<b>\$176,000</b>	<b>\$1,291,510</b>	<b>\$1,282,999</b>	<b>\$952,000</b>	<b>\$4,324,009</b>	<b>\$599,000</b>	<b>\$992,000</b>	<b>\$1,967,786</b>	<b>\$3,092,927</b>	<b>\$2,826,247</b>	<b>\$4,206,843</b>	<b>\$21,535,321</b>	<b>\$22,737,000</b>	<b>\$44,448,321</b>

## Patawomeck Park

Project Code		Square Footage/Acreage	
Project Type	Building Construction	Construction Cost per Sq. Ft.	
Project Status	Construction	Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	\$1,236,260	Est. Opening Date	FY2026
Current Year Cost		Funding Source	Proffer
Debt Service	No Debt Service Associated with this Project	Years Financed	
Full Year Operating Impact	No Operating Costs Associated with this Project	Tax Rate Equivalent	

### Project Description:

Master Plan Patawomeck Park Phase #2. Possible location of a dog park, community center, and multi-sport venue with rectangle and diamond fields that could increase sports tourism and increase current sports events held throughout the county. Available proffer funds will be used to design and construct recommended amenities consistent with plan as Phase 2A. Complete build out of the park will be through bond funding as Phase 2B. The Master Plan will identify park amenities and facilities. With this information PRCF will be able to give an improved project construction cost.

### Operating Impact Summary:

No operating costs associated with this project at this time.

### Location:

Patawomeck Park

## **Parks, Recreation, and Cultural: Patawomeck Park**

### **Relationship to Approved County Policy or Plan:**

Park Utilization Study - Phase I – Athletic Fields

- North Central, North West, and South West and South East parts of the County are identified areas with low levels of service for rectangle fields

Park Utilization Study – Phase II

- Add amenities to maintain the current level of service with future growth

Stafford County 2040 Strategic Plan – Parks and Recreation Master Plan

- Heartbeat of Recreation, History and Culture
  - #3.4 Evaluate/Update the Parks and Recreation Master Plan to focus on providing a wider range of recreational opportunities

### **Analysis of Need:**

Utilization Studies identified the need for sport fields in the North area of the County and provide for future population growth. Without Master Plan estimating operating cost is problematic. Type of amenities and their annual cost vary. Park has established entrance, well, irrigation and other utilizes constructed that could minimize some impacts.

### **Change or Reasons for Revisions:**

**FY2009 - FY2019** –submitted as Bond project only

**FY2020** – postponed

**FY2021** – New to the CIP. Funded with Proffers

**FY2022** – No Change

### **Alternative:**

Delay Master Planning of Patawomeck Park until bond is acquired to build out park without phasing.

## Project Summary:

[illegible]

## Musselman Property

Project Code		Square Footage/Acreage	\$150,000/acre
Project Type	Building Construction	Construction Cost per Sq. Ft.	
Project Status	Construction	Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	\$1,265,749	Est. Opening Date	FY2026
Current Year Cost		Funding Source	Proffer
Debt Service	No Debt Service Associated with this Project	Years Financed	
Full Year Operating Impact	No Additional Operating Costs Associated with this Project	Tax Rate Equivalent	

### Project Description:

Master Plan Musselman property. Possible location of passive activities such as trails, picnic areas, with sports similar to Bocce ball and Pickle ball. Upon completion of the Master Plan available proffer funds will be used to design and construct recommended amenities consistent with plan as Phase 1. The Master Plan will identify park amenities and facilities. With this information PRCF will be able to give an improved project construction cost. Complete build out of the park will be through additional proffers as available or future bond funding as Phase 2.

### Operating Impact Summary:

Operating Costs in this Planning Period is for the full build out which would include phase 1 and phase 2.

### Location:

Musselman Property

## **Musselman Property**

### **Relationship to Approved County Policy or Plan:**

Park Utilization Study - Phase I – Athletic Fields

- North Central and South Eastern parts of the County are identified areas with low levels of service for Diamond fields
- North Central, North East, and South West and South East parts of the County are identified areas with low levels of service for rectangle fields

Park Utilization Study – Phase II

- Add amenities to maintain the current level of service with future growth
- Stafford County 2040 Strategic Plan – Parks and Recreation Master Plan
- Heartbeat of Recreation, History and Culture

#3.4 Evaluate/Update the Parks and Recreation Master Plan to focus on providing a wider range of recreational opportunities

### **Analysis of Need:**

Outdoor recreational activities needed to meet the growth in population.

### **Change or Reasons for Revisions:**

**FY2018 - FY2019** –submitted as Bond project only

**FY2020** – postponed

**FY2021** – Master Planning and phase 1 will be funded with proffers

**FY2022** – No Change

### **Alternative:**

Delay Master Planning of park until bond is acquired to build out park without phasing.



# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Musselman Property

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	88,000	0	0	85,000	0	0	0	0	0	0	0
Construction / Project	0	0	0	0	922,749	0	0	0	0	0	0
Contingency	0	0	0	0	170,000	0	0	0	0	0	0
<b>Total</b>	<b>\$88,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$85,000</b>	<b>\$1,092,749</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Proffers	88,000	0	0	85,000	1,092,749	0	0	0	0	0	0
<b>Total</b>	<b>\$88,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$85,000</b>	<b>\$1,092,749</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Personnel	0	0	0	0	0	67,000	189,000	193,000	197,000	201,000
Operating	0	0	0	0	242,000	15,000	16,000	16,000	16,000	16,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$242,000</b>	<b>\$82,000</b>	<b>\$205,000</b>	<b>\$209,000</b>	<b>\$213,000</b>	<b>\$217,000</b>

## Carl Lewis Community Center

FY2022 Adopted Budget

Project Code		Square Footage/Acreage	1180/sq. ft. structure
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$500
Project Status	Construction	Operating Cost per Sq. Ft.	\$45 per year
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	\$591,000	Est. Opening Date	FY2025
Current Year Cost		Funding Source	Proffers
Debt Service	No Debt Service Associated with this Project	Years Financed	
Full Year Operating Impact	\$5,000 with an est. \$5,000 in revenue	Tax Rate Equivalent	

**Project Description:**

The Carl Lewis Community Center is frequently rented by the citizens of Stafford. The facility is also a meeting place for Boy Scouts. Proffer funds can be used to increase capacity by adding on another hall with a commercial kitchen, additional paved ADA parking and ADA accessible restrooms. Proffer funds are available to cover the cost of this expansion. Startup cost includes items for the kitchen and additional tables with chairs.

**Operating Impact Summary:**

Minimal operation cost with the expansion of utilities, cleaning, trash and parking lot maintenance.

**Location:**

Carl Lewis Community Center

**Relationship to Approved County Policy or Plan:**

Park utilization Study - Phase II

- Upgrade outdated amenities at existing parks
- Increase indoor recreation facilities

## Carl Lewis Community Center

## Duff Green Park

Project Code		Square-Footage/Acreage	126/acres
Project Type	Building Construction	Construction Cost per Sq. Ft.	
Project Status	Planning	Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	\$100,000	Est. Opening Date	
Current Year Cost		Funding Source	Proffers
Debt Service	No Additional Debt Service Associated with this Project	Years Financed	
Full Year Operating Impact	No Operating Costs Associated with this Project	Tax Rate Equivalent	

### Project Description:

Create a Master Plan Duff Park to include the approximately 126 acres donated by Mr. Green. Possible multi-sport venue with rectangle and diamond fields that could increase sports tourism and increase current sports events held throughout the county. Upon completion, the Master Plan could be used to allocate proffer funds to construct amenities consistent with the Park Master Plan and the Patowomeck Indian Museum. Master Plan will provide details to build a better representative cost estimates of amenities. Build out of park would be a draw to the Patowomeck Indian Museum.

### Operating Impact Summary:

No operating costs associated with this project at this time

### Location:

Duff Green Park

### Relationship to Approved County Policy or Plan:

Park Utilization Study - Phase I – Athletic Fields

- Improve conditions and access to rectangle and diamond fields, general field improvements on facilities that will maximize usage and user experience
- Improve parking and traffic flow
- North central and Southeast parts of the County are identified areas with low levels of service for Diamond fields

## **Duff Green Park**

- North central, Northwest, and Southwest and Southeast parts of the County are identified areas with low levels of service for rectangle fields

### Park Utilization Study – Phase II

- Add amenities to maintain the current level of service with future growth
- Stafford County 2040 Strategic Plan – Parks and Recreation Master Plan
- Heartbeat of Recreation, History and Culture
  - #3.4 Evaluate/Update the Parks and Recreation Master Plan to focus on providing a wider range of recreational opportunities

### **Analysis of Need:**

Utilization Studies identified the need for sport fields in the South East area of the County and provide for future population growth.

### **Change or Reasons for Revisions:**

**FY2019** – proposed as a future bond project

**FY2020** – not submitted

**FY2021** – resubmit as a Master Plan project

**FY2022** – No Change

### **Alternative:**

Keep farming land to maintain property

### Project Summary:

[illegible]

## Mountain View Property

Project Code		Square Footage/Acreage	~ \$220,000/Acre
Project Type	Building Construction	Construction Cost per Sq. Ft.	
Project Status	Construction	Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	\$2,860,849	Est. Opening Date	FY2032
Current Year Cost		Funding Source	Proffers
Debt Service	No Debt Service Associated with this Project	Years Financed	
Full Year Operating Impact	No Additional Operating Costs Associated with this Project	Tax Rate Equivalent	

### Project Description:

Master Plan Mountain View property. Possible location of a dog park and sports venue with rectangle or diamond fields that could increase sports tourism and increase current sports events held throughout the county. The Park Utilization Field Study – Phase I identified area as limited services available for rectangle and diamond fields. Upon completion of the Master Plan for the park, design and construct the recommended amenities consistent with the Park Master Plan. Master Plan will better project construction cost. Phase 1 will utilize proffer funds to start project and completion (phase 2) will be through additional proffers as available or future bond funding. Approximately 28 acres south of Margaret Brent Elementary and 11 acres in front of Mountain View High School. Anticipating savings on parking lot construction by sharing overflow parking spaces (tournament) with High School.

### Operating Impact Summary:

Staffing park with one part-time employee estimated at \$35,000 a year. Operating estimates based on amenities that proffers could construct and support.

### Location:

Mountain View Property

## **Mountain View Property**

### **Relationship to Approved County Policy or Plan:**

#### Park Utilization Study - Phase I – Athletic Fields

- Improve conditions and access to rectangle and diamond fields, general field improvements on facilities that will maximize usage and user experience
- Improve parking and traffic flow
- North central and Southeast parts of the County are identified areas with low levels of service for Diamond fields
- North central, Northwest, and Southwest and Southeast parts of the County are identified areas with low levels of service for rectangle fields

#### Park Utilization Study – Phase II

- Add amenities to maintain the current level of service with future growth

#### Stafford County 2040 Strategic Plan – Parks and Recreation Master Plan

- Heartbeat of Recreation, History and Culture
  - #3.4 Evaluate/Update the Parks and Recreation Master Plan to focus on providing a wider range of recreational opportunities

### **Analysis of Need:**

Utilization Studies identified the need for sport fields in the North Central area of the County and provide for future population growth.

### **Change or Reasons for Revisions:**

FY2021 – utilizing proffer funds to Master Plan and start construction of amenities

FY2022 – No Change

### **Alternative:**

Postpone Master Planning of Mountain View property until bond is acquired to build out park without phasing



**FY2022 Adopted Budget**

## Project Summary:

[illegible]

## Parks, Recreation, and Cultural: 3R Projects

Project Code	See Below	Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	FY22 - \$568,000	Est. Opening Date	On-going
Current Year Cost		Funding Source	Current Revenue
Debt Service	No Debt Associated with this project		
Full Year Operating Impact	No New Operating Costs		

### Project Description:

Parks and Recreation 3R projects for FY2022:

- Brooks Park, Rebuild Skate park - **Project Code # PRF111**
- Curtis Park, Paint water tank and improvements to meet VDH requirements – **Project Code # PRF112**

### Operating Impact Summary:

There will be no additional operating impacts associated with this project.

### Location:

Varies Parks

### Relationship to Approved County Policy or Plan:

Park Utilization Study – Phase II

- Upgrade outdoor amenities at existing Parks

## Parks, Recreation, and Cultural: 3R Projects

### Analysis of Need:

Maintain outdoor amenities to a standard of safe use and condition. Projects are based on condition and facility usage by patrons. Project will enhance experiences by protecting, preserving and extending the life of these amenities.

### Alternative:

Close or restrict use of amenities as they fail and or become unsafe for patrons use. Restricting field use, closing pools and picnic shelters will have a negative impact on PRCF revenue.

### Project Summary:

Location	Description	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Brooks Park	Skate Park	0	470,000	0	0	0	0	0	0	0	0	0
Curtis Park	Water supply tank rehab	0	98,000	0	0	0	0	0	0	0	0	0
Pratt Park	Paving loop	0	0	0	0	49,000	0	0	0	0	0	0
Embrey Mill	Sidewalk trail	0	0	0	0	18,000	0	0	0	0	0	0
Parks	Playgrounds	0	0	290,999	0	0	0	0	0	0	0	0
Chichester Park	Chichester maintenance shop	0	0	0	0	382,000	0	0	0	0	0	0
Parks	Directional signage	0	0	0	0	188,000	0	0	0	0	0	0
Courthouse Community Center	Replace gym floor	0	0	0	0	118,000	0	0	0	0	0	0
Curtis Park	Zero depth entry Lenzi Pool	0	0	0	0	471,000	0	0	0	0	0	0
Woodlands Pool	Pool renovation	0	0	0	0	243,000	0	0	0	0	0	0
County Historic Sites	Renovate and protect	0	0	0	0	47,000	0	0	0	0	0	0
Curtis Park	Lenzi Pool restrooms	0	0	0	0	176,000	0	0	0	0	0	0
Brooks Park	Fountain rehab	0	0	0	0	0	30,000	0	0	0	0	0
Varies parks	Floors	0	0	0	0	0	58,000	0	0	0	0	0
Duff Park	Little Falls Boat Ramp	0	0	0	0	0	92,000	0	0	0	0	0
Lake Mooney Park	Pavilion Lake Mooney	0	0	0	115,000	0	0	0	0	0	0	0

## FY2022 Adopted Budget

[illegible]

## Parks, Recreation, and Cultural: 3R Community Facilities

Project Code	See Project Description Below	Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	FY22 - \$723,510	Est. Opening Date	On-going
Current Year Cost		Funding Source	Current Revenue
Debt Service	No Debt Associated With this Project	Years Financed	
Full Year Operating Impact	No Operating Costs	Tax Rate Equivalent	

### Project Description:

Parks, Recreation and Community Facilities 3R projects for FY2022:

Courthouse Complex, Space needs study implementation, **Project Code #PRF113**

PSB, HVAC Replacement HVAC roof units #2, 3 & 4, **Project Code #PRF114**

Community Facilities Large Equipment Replacement, **Project Code #PRF115**

Courthouse Roof section 8-11 and 13, **Project Code #PRF116**

Courthouse HVAC Courthouse HVAC Replacement Roof top units 12 & 13, **Project Code #PRF117**

### Operating Impact Summary:

There will be no additional operating impacts associated with this project.

### Location:

County Government Facilities and Park Buildings

### Relationship to Approved County Policy or Plan:

Repair and replace building system components to preserve and extend the life of County structures.

## Parks, Recreation, and Cultural: 3R Community Facilities

### Analysis of Need:

Maintain County Facilities to a standard of safe use and condition. Repair and replace building system components to preserve and extend the life of County structures. Provide better ADA access to facilities. County building systems fail or become unreliable with age and usage. The asset management system takes the industry standard for the life of these systems and projects life cycle replacements.

### Alternative:

Without a system to replace building systems the County could pay higher cost for systems with a as need emergency practice of replacements. As building become deteriorated repairs can be costly due to extended damage or work performed as an emergency.

### Project Summary:

Location	Description	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Courthouse Complex	Space needs study implementation	0	73,000	0	0	0	0	0	0	0	0	0
PSB	HVAC roof units #2,3&4	0	209,000	0	0	0	0	0	0	0	0	0
Community Facilities	Large Equipment	0	94,510	82,000	86,000	0	92,000	95,000	98,000	101,000	104,000	107,000
Courthouse	Courthouse Roof section 8-11 and 13	0	222,000	0	0	0	0	0	0	0	0	0
County Facilities	ADA Transition Plan to identify ADA requirements and make recommendations	0	0	164,000	0	0	0	0	0	0	0	0
Courthouse HVAC	Roof top units 12 & 13	0	125,000	0	0	0	0	0	0	0	0	0
Gym Rec Center	Convert to heat pump and remove gas heat	0	0	93,000	0	0	0	0	0	0	0	0

**FY2022 Adopted Budget**[illegible]

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Parks, Recreation, and Cultural: 3R Community Facilities

Location	Description	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Porter Library	Building systems based on life-cycle analysis; Preventive Maintenance	0	0	0	0	0	0	0	0	0	0	0
Courthouse Community Center	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	314,194	0	0	0
Rowser Building	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	296,170	0	0	0
Rowser Annex	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	305,422	0	0	0
Howell Library	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	317,000	0	0
Porter Library	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	296,987	0	0
Public Safety Building	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	148,359	0	0
Berea Station #12	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	40,902	0	0
Potomac Hills Station #10	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	269,679	0	0
Stafford Station #2	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	0	45,646	0
Woodlands Pool	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	0	424,913	0
Duff Green	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	0	25,970	0
John Lee Pratt	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	0	0	86,625
St. Clair Brooks	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	0	0	28,365
Patawomeck	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	0	0	157,318
Smith Lake	Building systems based on life-cycle analysis; Preventive Maintenance: Roofing, Plumbing, Electrical Distribution, Flooring, Mechanical	0	0	0	0	0	0	0	0	0	0	2,686
Total		\$0	\$723,510	\$992,000	\$86,000	\$466,000	\$319,000	\$866,000	\$1,812,786	\$2,267,927	\$1,655,247	\$381,994



**FY2022 Adopted Budget**

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Current Revenue - 3R	0	650,510	992,000	86,000	466,000	319,000	866,000	1,812,786	2,267,927	1,655,247	381,994
Proffers	0	73,000	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$723,510</b>	<b>\$992,000</b>	<b>\$86,000</b>	<b>\$466,000</b>	<b>\$319,000</b>	<b>\$866,000</b>	<b>\$1,812,786</b>	<b>\$2,267,927</b>	<b>\$1,655,247</b>	<b>\$381,994</b>

[illegible]

**Parks, Recreation, and Cultural: Library #4**

FY2022 Adopted Budget

Project Code		Square Footage/Acreage	25,000
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$911
Project Status	Construction	Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	\$22,787,000	Est. Opening Date	FY2033
Current Year Cost	\$16,276,000	Funding Source	Bond
Debt Service	No new Debt Service in the Ten-Year Planning Period	Years Financed	20
Full Year Operating Impact	No New Operating Costs in the Ten-Year Planning Period	Tax Rate Equivalent	

**Project Description:**

The Central Rappahannock Regional Library (CRRL) Board of Trustees is recommending the opening of a new branch library in the County to meet current unmet demands and to accommodate projected new population growth. High demand for books, programming, meeting rooms, computers and other library services at the Porter and Howell libraries will be relieved by a forth library facility in the developing residential/commercial Courthouse area. The facility will be needed to keep pace with population growth and the development of core infrastructure by Stafford County to provide comprehensive education and quality of life opportunities for all County residents. Three options for a new facility could include a traditional branch which would be similar to Porter and England Run libraries, or a store front facility which could be located at a retail venue in the downtown courthouse complex.

**Operating Impact Summary:**

There are no operating impacts associated with this project at this time.

**Location:**

Recommended to be included in the proposed new Downtown Stafford project

## **Parks, Recreation, and Cultural: Library #4**

### **Relationship to Approved County Policy or Plan:**

Stafford County 2040 Strategic Plan

### **Analysis of Need:**

A new branch library in the County is needed to meet current and projected population growth.

### **Change or Reasons for Revisions:**

FY2013 - New to the CIP, project to begin in FY2022

FY2014 - Project moved to the right one year, reduced funding based on affordability

FY2015 - No Change

FY2016 - Project moved to last year of the CIP (2025) - \$1M for planning and design

FY2017 - Project moving forward - based on affordability

FY2018 - Project moved to last year of CIP (2027) based on affordability

FY2019 - Change in funding amount for planning and design. Change in revenue source.

FY2020 – Project remains in last year of CIP.

FY2021 – Project remains in last year of CIP.

FY2022 – Project remains in last year of CIP.

## Parks, Recreation, and Cultural: Library #4

FY2022 Adopted Budget

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years	Total Project Cost (Includes Prior Year and Future Year Costs)
Planning/Design	0	0	0	0	0	0	0	0	0	0	50,000	50,000	1,635,000	1,685,000
Construction / Project	0	0	0	0	0	0	0	0	0	0	0	0	19,733,000	19,733,000
Contingency	0	0	0	0	0	0	0	0	0	0	0	0	1,369,000	1,369,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$22,737,000</b>	<b>\$22,787,000</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years	Total Project Cost (Includes Prior Year and Future Year Costs)
Bond Proceeds	0	0	0	0	0	0	0	0	0	0	50,000	50,000	22,737,000	22,787,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$22,737,000</b>	<b>\$22,787,000</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Transportation

Projects	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Planning Period	Future Years	Total Projected Uses (Includes PY Funding)
Courthouse Road and Route 1 Intersection Improvement	18,720,200	1,216,125	0	0	0	0	0	0	0	0	0	1,216,125	0	19,936,325
Route 1 & Telegraph Rd/Woodstock Ln Improvements	8,800,000	1,190,189	0	0	0	0	0	0	0	0	0	1,190,189	0	9,990,189
Stefaniga Road and Mountain View Road Intersection Improvements	0	0	600,000	900,000	2,200,000	0	0	0	0	0	0	3,700,000	0	3,700,000
US-17 Business STARS Improvements	0	0	0	0	1,089,019	1,717,143	1,717,144	5,239,247	0	0	0	9,762,553	0	9,762,553
Roadway Safety/Widening Improvements	715,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	10,000,000	0	10,715,000
Butler Road STARS Study	0	200,000	0	0	0	0	0	0	0	0	0	200,000	0	200,000
Emergency Access Drive (Windermere-Crestwood)	300,000	1,241,362	0	0	0	0	0	0	0	0	0	1,241,362	0	1,541,362
Brooke Road Reconstruction	0	1,500,000	1,000,000	1,000,000	4,000,000	0	0	0	0	0	0	7,500,000	0	7,500,000
<b><u>Road Bond Projects</u></b>														
Enon Road and Route 1 Improvements	0	1,200,000	2,475,000	825,000	6,100,000	0	0	0	0	0	0	10,600,000	0	10,600,000
Shelton Shop Road Improvements	0	2,043,558	0	0	4,601,764	4,601,764	4,601,764	13,979,860	0	0	0	29,828,710	0	29,828,710
Route 1 & Layhill Road Intersection Improvements	0	0	1,119,992	0	911,043	911,043	5,457,818	0	0	0	0	8,399,896	0	8,399,896
Onville Road Widening	0	0	827,966	0	2,685,793	2,685,793	4,666,177	0	0	0	0	10,865,729	0	10,865,729
Leeland Road Widening	0	0	694,000	0	431,000	432,000	6,506,010	0	0	0	0	8,063,010	0	8,063,010
Morton Road Safety Improvements & Wedge Widening	0	0	0	0	0	0	1,600,000	0	0	0	0	1,600,000	0	1,600,000
Mountain View Road Safety/Widening (Choptank Rd to Stefaniga Rd)	0	0	0	0	0	769,000	1,144,045	1,144,045	6,319,933	0	0	9,377,023	0	9,377,023
Mountain View Road Safety/Widening (Stefaniga Rd to Kellogg Mill Rd)	0	0	0	0	0	0	0	0	0	4,800,000	0	4,800,000	0	4,800,000
Garrisonville Road Widening (Eustance Rd to Shelton Shop Rd)	0	0	2,809,588	0	0	9,589,777	9,589,777	9,589,777	20,815,203	0	0	52,394,122	0	52,394,122
<b><u>Service Districts</u></b>														
Flatford Road Sidewalk	650,000	202,040	0	0	0	0	0	0	0	0	0	202,040	0	852,040
Salisbury Drive Sidewalk	0	0	214,000	297,000	441,000	0	0	0	0	0	0	952,000	0	952,000
Staffordboro Boulevard Sidewalk	0	190,000	500,000	387,500	0	0	0	0	0	0	0	1,077,500	0	1,077,500
<b>Total Expenditures</b>	<b>\$29,185,200</b>	<b>\$9,983,274</b>	<b>\$11,240,546</b>	<b>\$4,409,500</b>	<b>\$23,459,619</b>	<b>\$21,706,520</b>	<b>\$36,282,735</b>	<b>\$30,952,929</b>	<b>\$28,135,136</b>	<b>\$5,800,000</b>	<b>\$1,000,000</b>	<b>\$172,970,259</b>	<b>\$0</b>	<b>\$202,155,459</b>

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

Projected Sources	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Planning Period	Future Years	Total Projected Sources (Includes PY Funding)
Bond Proceeds	0	0	801,581	0	7,309,332	15,871,584	13,181,757	5,733,822	3,790,538	3,311,386	0	50,000,000	0	50,000,000
Reimbursement - Impact Fees	0	636,762	521,363	750,000	750,000	0	0	0	0	0	0	2,658,125	0	2,658,125
Use of Prior Year Fund Balance General Fund	5,000,000	0	0	0	0	0	0	0	0	0	0	0	0	5,000,000
General Fund Transfer - Personal Property Tax	0	4,247,797	1,312,500	1,312,500	1,312,500	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	14,185,297	0	14,185,297
Use of Prior Year Fund Balance Transportation	2,775,483	0	4,720,633	337,500	2,937,500	0	0	0	0	0	0	7,995,633	0	10,771,116
Proffers	3,242,981	0	644,536	0	596,822	0	0	0	0	0	0	1,241,358	0	4,484,339
Service District	130,000	78,408	142,800	136,900	88,200	0	0	0	0	0	0	446,308	0	576,308
TA - Transportation Alternative Program	520,000	313,632	571,200	547,600	352,800	0	0	0	0	0	0	1,785,232	0	2,305,232
CMAQ - Congestion Mitigation and Air Quality	0	0	787,339	0	1,453,082	898,760	0	0	0	0	0	3,139,181	0	3,139,181
STBG - Surface Transpotation Block Grant	0	1,086,762	75,933	157,661	2,588,266	1,787,033	0	0	0	0	0	5,695,655	0	5,695,655
Smart Scale - Assumed	0	0	0	0	0	0	8,860,883	0	15,718,237	0	0	24,579,120	0	24,579,120
Smart Scale - Awarded	10,980,911	1,190,189	1,434,024	1,167,339	5,640,117	1,717,143	2,050,769	19,219,107	0	0	0	32,418,688	0	43,399,599
Fuel Tax	715,000	1,100,361	0	0	0	0	0	0	0	0	0	1,100,361	0	1,815,361
Revenue Sharing - Assumed	0	0	0	0	0	0	5,800,000	5,000,000	7,626,361	1,488,614	0	19,914,975	0	19,914,975
Revenue Sharing - Awarded	5,820,825	1,216,125	0	0	431,000	432,000	5,389,326	0	0	0	0	7,468,451	0	13,289,276
Impact Fees	0	113,238	228,637	0	0	0	0	0	0	0	0	341,875	0	341,875
<b>Total Revenues</b>	<b>\$29,185,200</b>	<b>\$9,983,274</b>	<b>\$11,240,546</b>	<b>\$4,409,500</b>	<b>\$23,459,619</b>	<b>\$21,706,520</b>	<b>\$36,282,735</b>	<b>\$30,952,929</b>	<b>\$28,135,136</b>	<b>\$5,800,000</b>	<b>\$1,000,000</b>	<b>\$172,970,259</b>	<b>\$0</b>	<b>\$202,155,459</b>

Actual timing of bonds will de determined based on the cash flow needs in the Transportation Fund.

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Planning Period	Total Projected Uses (Includes PY Funding)
Debt Service	0	0	67,000	67,000	678,000	1,941,000	2,948,000	3,332,000	3,513,000	3,790,000	16,336,000	16,336,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$67,000</b>	<b>\$67,000</b>	<b>\$678,000</b>	<b>\$1,941,000</b>	<b>\$2,948,000</b>	<b>\$3,332,000</b>	<b>\$3,513,000</b>	<b>\$3,790,000</b>	<b>\$16,336,000</b>	<b>\$16,336,000</b>

## Transportation: Courthouse Road and Route 1 Intersection Improvement

Project Code		Project Length	0.65 miles
Project Type	Road Improvements	Cost per Mile	\$30.671 million
Project Status	Property Acquisition	Est. Opening Date	June 1, 2024
Total Project Cost	\$19,936,400	Avg. Annual Daily Traffic	18,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The Jefferson Davis Highway (US 1) and Courthouse Road (RT 630) Intersection Improvement Project will widen approximately 0.65 miles of US-1 to provide dedicated left-turn lanes onto Courthouse Road and Bells Hill (RT 631)/Hope Road (RT 687). US-1 will be improved to a 4-lane, divided roadway with a concrete median separating northbound and southbound traffic. Dedicated left-turn lanes will be added to US-1 at Courthouse Road and the Bells Hill/Hope Road intersection to improve traffic signal function and reduce intersection delays. Eastbound Courthouse Road will be widened to provide a dedicated left-turn, right-turn, and through lane. Westbound Courthouse Road will be re-stripped to provide a dedicated left-turn, right-turn, and through lane. An 8-foot sidewalk will also be installed along both sides of US-1.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned at the intersection of Courthouse Road and RT 1.

### Relationship to Approved County Policy or Plan:

- On September 15, 2015, the Board of Supervisors (BOS) supported the submission of an application to compete for VDOT's Smart Scale funding program. Project was subsequently awarded \$4.646M in Smart Scale funds.
- Supports the BOS Strategic Priority – Responsive Transportation System.

## **Transportation: Courthouse Road and Route 1 Intersection Improvement**

### **Analysis of Need:**

The intersection of Courthouse Road and RT 1 has a “Level of Service” of "F" during peak morning and afternoon traffic periods. Furthermore, RT 1 serves as the primary alternate route for when backups occur on I-95.

### **Change or Reasons for Revisions:**

- **FY2020** – Project cost has increased due to increase in Right-of-Way acquisition costs (settlements/condemnation) and increase in construction costs associated with inflation. This cost increase has been offset through the addition of proffer funds and additional Revenue Sharing funds.
- **FY2021** – Project cost has increased to \$18,720,200 from \$14,884,567 due to increases in Right-of-Way acquisition costs (settlements/condemnation) and increase in construction costs associated with inflation. This cost increase has been offset through additional Revenue Sharing funds.
- **FY2022** – Project cost has increased further to \$19,936,400 due to increases in Right-of-Way acquisition costs (settlements/condemnation) and increase in construction costs associated with inflation. Cost increase will be offset through cost savings on recently completed projects (Brooke, Juggins, etc.)

### **Alternative:**

Roadway stays in current condition.



**FY2022 Adopted Budget**

## Project Summary:

[illegible]

## Transportation: Route 1 & Telegraph Road/Woodstock Lane Safety Improvements

Project Code	KCD097	Project Length	0.57 miles
Project Type	Road Improvements	Cost per Mile	\$17.527 million
Project Status	Design/Engineering	Est. Opening Date	December 1, 2022
Total Project Cost	\$9,990,189	Avg. Annual Daily Traffic	28,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

This project will consist of intersection improvements on Jefferson Davis Highway (US-1) at the intersections of Telegraph Road (RT 637) and Woodstock Lane (RT 639). At the intersection with Telegraph Road, Telegraph Road will be re-aligned and a new traffic signal will be installed. US-1 will be widened at the intersection with Woodstock Lane to allow for the installation of a concrete median which will restrict turning movements at this intersection. Following construction of the project, southbound US-1 traffic will be able to make a left onto Woodstock Lane but due to the median, traffic exiting Woodstock Lane will only be allowed to turn right onto US-1 northbound.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned at the intersections of Telegraph Road & Woodstock Lane and RT 1.

### Relationship to Approved County Policy or Plan:

- On September 15, 2015, the Board of Supervisors (BOS) supported the submission of an application to compete for VDOT's Smart Scale funding program. The project subsequently received \$7.5M in Smart Scale funding
- Supports the BOS Strategic Priority – Responsive Transportation System.

[illegible]

## Transportation: Stefaniga Road and Mountain View Road Intersection Improvements

Project Code		Project Length	0.5 miles
Project Type	Road Improvements	Cost per Mile	\$7.400 million
Project Status	Planning	Est. Opening Date	December 1, 2026
Total Project Cost	\$3,700,000	Avg. Annual Daily Traffic	7,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The project will realign Stefaniga Road (RT 648) at the intersection with Mountain View Road (RT 627). This will shift the existing intersection north to line up with the intersection at Lightfoot Drive (RT 2055) and convert the intersection into a roundabout. Project will follow FHWA project development and construction procedures due to Federal funds.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are at two intersections of Mountain View Road, Stefaniga Road, and Lightfoot Drive.

### Relationship to Approved County Policy or Plan:

- The County's Comprehensive Plan calls for safety improvements along Mountain View Road.
- On March 20, 2018, the Board of Supervisors (BOS) supported the submission of an application to compete for VDOT's Smart Scale funding program. Project was subsequently awarded \$2,700,000 in Smart Scale funding.
- Supports the BOS Strategic Priority – Responsive Transportation System.

## **Transportation: Stefaniga Road and Mountain View Road Intersection Improvements**

### **Analysis of Need:**

There is a lack of proper sight distance at the intersection of Stefaniga Road and Mountain View Road due to an existing vertical curve on Mountain View Road that makes it difficult to see oncoming traffic. There have been several accidents at this intersection due to this lack of sight distance. This project seeks to improve the safety of this intersection by realigning the Stefaniga Road and Mountain View intersection so that the roadway is directly across from the Lightfoot Drive and Mountain View intersection which is approximately 200' to the north. The realigned intersection will be converted into a roundabout to improve the safety and sight distance, as well as reduce the delays associated with a stop-controlled intersection. A sidewalk around the roundabout and corresponding curb ramps will be constructed and connected to the existing sidewalk along Lightfoot Drive.

### **Change or Reasons for Review:**

- **FY2020** – New Smart Scale Project added to CIP.
- **FY2021** – No Changes
- **FY2022** – Changed title description from “Intersection Improvements” to “Roundabout” to better reflect project scope.

### **Alternative:**

- Roadway stays in current condition.

### Project Summary:

[illegible]

## Transportation: US-17 Business Roadway Improvements

Project Code		Project Length	0.30 miles
Project Type	Road Improvements	Cost per Linear Foot	\$32.542 per mile
Project Status	Planning	Estimated Opening Date	November 1, 2030
Total Project Cost	\$9,762,547		
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The project consists of minor widening of US-17 Business (Warrenton Road) to replace the existing two-way left turn lane with a raised concrete median to separate opposing lanes of traffic. The project would also eliminate the traffic signal at Short Street (RT 1034) and extend the merge lane that will be constructed as part of the ongoing work to reconstruct the I-95/Rt. 17 interchange. Project will have 5' concrete sidewalk along US-17 from Short Street to 600-feet east of Olde Forge Drive and will include the installation of a new covered bus shelter at the existing FRED transit stop at Olde Forge Drive.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned from the intersection with Short Street to approximately 600' east of the intersection with Olde Forge Drive.

### Relationship to Approved County Policy or Plan:

- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.

### Analysis of Need:

To provide needed roadway safety improvements and access management controls from Short Street to Olde Forge Drive. The project includes wider travel lanes, a raised concrete median for access management and pedestrian accommodation with concrete sidewalks on both sides of Route 17 Business.

[illegible]



## Transportation: Roadway Safety/Widening Improvements

Project Code		Project Length	Variable
Project Type	Road Improvements	Cost per Mile	Variable
Project Status	Planning	Est. Opening Date	Variable
Total Project Cost	\$10,715,000	Avg. Annual Daily Traffic	Variable
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

Roadway Safety/Widening Improvement Projects will focus on improving the safety of secondary roads of Stafford County. Improvements will vary based on location and needs identified and may consist of: trimming of roadside brush and trees to provide increased sight distance, the widening/hardening of roadway shoulders with asphalt pavement, additional signage/markers, asphalt pavement resurfacing, etc.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned, in no particular order, along various routes listed in the 2019 Transportation Bond Referendum and as follows:  
 Woodstock Lane (Rt. 639); Falls Run Drive (Rt. 618); Brooke Road (Rt. 608 – New Hope Church Road to Eskimo Hill Road); Kellogg Mill Road (Rt. 651); Tacketts Mill Road (Rt. 612 – Heflin Road to Aquia Road); Heflin Road (Rt. 612); Brent Point Road (Rt. 658 – Arkendale Road to End); McWhirt Loop (Rt. 700); Stefaniga Road (Rt. 648); Truslow Road (Rt. 652 – Cambridge Street to Berea Church Road); Hartwood Road (Rt. 612); Spotted Tavern Road (Rt. 614); Decatur Road (Rt. 635); Little Whim Road (Rt. 669); Potomac Run Road (Rt. 626); Rock Hill Church Road (Rt. 644); Cropp Road (Rt. 615); Brooke Road (Rt. 608 - Eskimo Hill Road to End); Tacketts Mill Road (Rt. 646 – Poplar Road to Heflin Road); Ramoth Church Road (Rt. 628); Andrew Chapel Road (Rt. 629); Poplar Road (Rt. 616 – US 17 to Stefaniga Road); Winding Creek Road (Rt. 628 – Embrey Mill Road to Shelton Shop Road); Telegraph Road (Rt. 637); Joshua Road (Rt. 643); Garrisonville Road (Rt. 610 – Joshua Road to Arrowhead Drive); Enon Road (Rt. 753 – Beauregard Drive to Truslow Road); Courthouse Road (Rt. 630 – Winding Creek Road to Shelton Shop Road); Ferry Road (Rt. 606); Winding Creek Road (Rt. 628 – Courthouse Road to Embrey Mill Road); Barrett Heights Road (Rt. 642); Mountain View Road (Rt. 627 – Centreport Parkway to Kellogg Mill Road); Hope Road (Rt. 687); Garrisonville Road (Rt. 610 – Arrowhead Drive to Faquier CL); Poplar Road (Rt. 616 – Stefaniga Road to Hartwood Road)

[illegible]

**Transportation: Butler Road STARS Study**

Project Code		Project Length	1.40 miles
Project Type	Road Improvements	Cost per Mile	\$142.857 thousand
Project Status	Planning	Est. Opening Date	June 30, 2023
Total Project Cost	\$200,000	Avg. Annual Daily Traffic	23,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

The project will conduct a study to assess potential safety and operational improvements along Butler Road (RT 218) between the intersections with US-1 and Deacon Road (RT 607) for an approximate length of 1.40 miles. Study will develop comprehensive and innovative transportation solutions to relieve congestion and solve critical traffic and safety challenges. Results from the study will be used to develop future transportation improvement projects along Butler Road.

**Operating Impact Summary:**

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

**Location:**

Proposed improvements are planned along Butler Road (RT 218) between the intersection with Cambridge Street (US-1) and the intersection with Deacon Road (RT 607).

**Relationship to Approved County Policy or Plan:**

- Supports the BOS Strategic Priority – Responsive Transportation System.
- Project was identified and included in the approved 2019 Transportation Bond Referendum.

[illegible]

**Transportation: Emergency Access Drive (Windermere-Crestwood)**

Project Code		Project Length	0.15 miles
Project Type	Road Improvements	Cost per Mile	\$10.276 million
Project Status	Planning	Est. Opening Date	June 30, 2023
Total Project Cost	\$1,541,362	Avg. Annual Daily Traffic	1,500 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

The project will construct a gravel surfaced emergency access drive, connecting Windermere Drive (Private) with Crestwood Lane (RT 2100) in order to provide temporary public-access, only in times of emergencies, such as the closure of Brooke Road (RT 608) due to flooding. In addition to the construction of the emergency access drive, this project also includes the conversion of Windermere Drive from a private road to a public road to be maintained by VDOT.

**Operating Impact Summary:**

All roadway improvements are done within County-owned right-of-way and therefore the maintenance of this roadway would be the County's responsibility.

**Location:**

Proposed improvements are planned between the cul-de-sacs at the current terminus of Windermere Drive (Private) and Crestwood Lane (RT 2100).

**Relationship to Approved County Policy or Plan:**

- Supports the BOS Strategic Priority – Responsive Transportation System.

[illegible]

## Transportation: Brooke Road Reconstruction

Project Code		Project Length	0.45 miles
Project Type	Road Improvements	Cost per Mile	\$16.667 million
Project Status	Planning	Est. Opening Date	June 30, 2023
Total Project Cost	\$7,500,000	Avg. Annual Daily Traffic	2,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The project would elevate and re-align the portion of Brooke Road (RT 608) that is currently most prone to flooding and closure. Brooke Road would be reconstructed between the intersection with Raven Road (RT 609) and Maplewood Drive (RT 2107) for a distance of approximately 0.45 miles.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway would be VDOT's responsibility.

### Location:

Proposed improvements are planned along Brooke Road between the intersections with Raven Road (RT 609) and Maplewood Drive (RT 2107).

### Relationship to Approved County Policy or Plan:

- Supports the BOS Strategic Priority – Responsive Transportation System.

[illegible]



## Transportation: Enon Road and Route 1 Improvements

Project Code		Project Length	0.63 miles
Project Type	Road Improvements	Cost per Mile	\$16.825 million
Project Status	Planning	Est. Opening Date	November 1, 2026
Total Project Cost	\$10,600,000	Avg. Annual Daily Traffic	6,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

Project will widen approximately 0.63 miles of Enon Road (RT 753) from 0.02 miles west of the intersection with Beauregard Drive to the intersection with Jefferson Davis Highway (US-1). The project will provide a continuous two-way left turn lane from the intersection with Beauregard Drive to Stafford Indians Lane and dedicated left-turn and right-turn lanes at the intersection with Stafford Indians Lane. The intersection with Porter Lane will also be improved to a 90 degree connection to provide sight distance to current standards. An additional left-turn lane will be added to US-1 northbound, and an additional receiving lane will be added to Enon Road to accommodate the dual left turns from Route 1. The project will also add dedicated left, through, and right-turn lanes for traffic exiting Enon Road onto US-1. A 5' concrete sidewalk will also be provided along Enon Road.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned along Enon Road, from the intersection with Route 1 to Beauregard Drive, and on Route 1 at the intersection with Enon Road.

### Relationship to Approved County Policy or Plan:

- The County's Comprehensive Plan calls for Enon Road to be improved to a 2-lane upgrade as well as safety improvements along it.
- On March 20, 2018, the Board of Supervisors (BOS) supported the submission of an application to compete for VDOT's Smart Scale funding program. Project subsequently received \$4.442M in Smart Scale funds.
- Supports the BOS Strategic Priority – Responsive Transportation System.

## **Transportation: Enon Road and Route 1 Improvements**

### **Analysis of Need:**

A traffic study was conducted by staff that highlights the current volumes (approximately 11,000 vehicles per day; multiple peak hours exceeding 900 vehicles per hour) traveling on Enon Road between Route 1 and Stafford Indians Lane (main entrance into Stafford High School). Enon Road is currently a two-lane roadway facility which is not designed to handle this high traffic volume.

### **Change or Reasons for Revisions:**

- **FY2020** – Applied for Smart Scale funding and initially did not receive any funding. Due to some internal program changes, the project was eventually awarded a combination of Smart Scale and CMAQ/RSTP funding.
- **FY2021** – Funding timeline has changed based on late award of Smart Scale funding.
- **FY2022** – Received an additional \$1M in RSTP funding across FY21 & FY22.

### **Alternative:**

- Roadway stays in current condition.

**FY2022 Adopted Budget**

### Project Summary:

[illegible]

## Transportation: Shelton Shop Road Improvements

Project Code		Project Length	1.99 miles
Project Type	Road Improvements	Cost per Mile	\$14.989 million
Project Status	Planning	Est. Opening Date	June 28, 2030
Total Project Cost	\$29,828,710	Avg. Annual Daily Traffic	10,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The Shelton Shop Road (RT 648) Improvement Project will widen and re-align approximately 1.99 miles of RT 648 to bring horizontal and vertical curves into compliance with current VDOT GS-7 geometric standards and provide 11-foot travel lanes with 6-foot shoulders. The intersections with Winding Creek Road (RT 628), Courthouse Road (RT 630), and Mountain View Road (RT 627) will also be converted to roundabouts to improve safety and traffic flow. Bicycles and pedestrians will be accommodated through the construction of a shared-use path.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned along Shelton Shop Road (RT 648) between the intersection of Garrisonville Road (RT 610) and Mountain View Road (RT 627).

### Relationship to Approved County Policy or Plan:

- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the BOS Strategic Priority – Responsive Transportation System.
- Project was identified and included in the approved 2019 Transportation Bond Referendum.

## Transportation: Shelton Shop Road Improvements

### Analysis of Need:

Improvements to Shelton Shop Road were identified in the County's Comprehensive Road Evaluation Final Report dated April 2018. The number and frequency of traffic accidents coupled with the existing traffic on the road prioritized this roadway for improvements.

### Change or Reasons for Revisions:

- **FY2021** – Project was included in Stafford County's 2019 \$50 Million Road Improvement Bond Referendum as a priority road project for safety & congestion improvements.
- **FY2022** – Project scope was reduced to eliminate a two-way left turn lane along the length of Shelton Shop Road in order to reduce project cost increases and reduce impacts to private property. Further cost estimation and inflation factors provided by VDOT resulted in a significant project cost increase from \$22.7M to approximately \$29.9M. Received \$3,489,776 of FY21/22 VDOT Revenue Sharing funding. Project has tentatively been selected to receive \$14,313,485 in FY25/25 SMART SCALE funding. *The project funding assumes \$14,313,485 of SMART SCALE funding as a source of revenue. If the funds are not approved by VDOT, other funding sources will need to be identified in order for the project to move forward as presented in the CIP.*

### Alternative:

Roadway stays in current condition.

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

## Transportation: Shelton Shop Road Improvements

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	2,043,558	0	0	0	0	0	0	0	0	0
Property Acquisition	0	0	0	0	4,601,764	4,601,764	4,601,764	0	0	0	0
Construction / Project	0	0	0	0	0	0	0	13,979,860	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$2,043,558</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,601,764</b>	<b>\$4,601,764</b>	<b>\$4,601,764</b>	<b>\$13,979,860</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	4,601,764	4,601,764	778,363	0	0	0	0
Reimbursement - Impact Fees	0	636,762	0	0	0	0	0	0	0	0	0
Use of Prior Year Fund Balance Transportation	0	306,435	0	0	0	0	0	0	0	0	0
Smart Scale - Awarded	0	0	0	0	0	0	333,625	13,979,860	0	0	0
Fuel Tax	0	1,100,361	0	0	0	0	0	0	0	0	0
Revenue Sharing - Awarded	0	0	0	0	0	0	3,489,776	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$2,043,558</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,601,764</b>	<b>\$4,601,764</b>	<b>\$4,601,764</b>	<b>\$13,979,860</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	0	0	0	0	385,000	770,000	835,000	835,000	835,000	835,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$385,000</b>	<b>\$770,000</b>	<b>\$835,000</b>	<b>\$835,000</b>	<b>\$835,000</b>	<b>\$835,000</b>

## Transportation: Route 1 & Layhill Road Intersection Improvements

Project Code		Project Length	0.25 miles
Project Type	Road Improvements	Cost per Mile	\$33.600 million
Project Status	Planning	Est. Opening Date	June 30, 2028
Total Project Cost	\$8,399,896	Avg. Annual Daily Traffic	5,100 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The project will perform minor widening of US-1 for turn lane and access management improvements and Layhill Road (RT 624) and Heritage Commons Drive (Private). Layhill Road will be widened for an additional right turn lane at US-1 and a new left turn lane into the gas station/bank on the corner of US-1 & Layhill. New turn lanes will be provided at the intersection with Forbes Street (RT 760). New pedestrian sidewalks along US-1 and along the north side of Layhill Road to Forbes Street.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned along US-1 between Layhill Road (RT 627) and Heritage Commons Drive (Private) and on Layhill Road between the intersection with Jefferson Davis Highway (US-1) and the intersection with Forbes Street (RT 627).

### Relationship to Approved County Policy or Plan:

- Supports the BOS Strategic Priority – Responsive Transportation System.
- Project was identified and included in the approved 2019 Transportation Bond Referendum.

## Transportation: Route 1 & Layhill Road Intersection Improvements

### Analysis of Need:

Improvements to US-1 and Layhill Road were identified in the County's Comprehensive Road Evaluation Final Report dated April 2018. The number and frequency of traffic accidents coupled with the existing traffic congestion on the road prioritized this roadway for improvements.

### Change or Reasons for Revisions:

- **FY2021** – Project was included in Stafford County's 2019 \$50 Million Road Improvement Bond Referendum as a priority road project for safety & congestion improvements.
- **FY2022** - Changed title description from "Road Improvements" to "Intersection Improvements" to better reflect project scope. Project cost estimate updates in connection with the Round 4 SMART SCALE application process resulted in a minor cost decrease from \$8.5M to approximately \$8.4M. *The project funding assumes \$2.5M of future SMART SCALE funding and \$2.9M of future Revenue Sharing as a source of revenue. If the funds are not approved by VDOT, other funding sources will need to be identified in order for the project to move forward as presented in the CIP.*

### Alternative:

Roadway stays in current condition.



## Transportation: Route 1 & Layhill Road Intersection Improvements

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	1,119,992	0	0	0	0	0	0	0	0
Property Acquisition	0	0	0	0	911,043	911,043	0	0	0	0	0
Construction / Project	0	0	0	0	0	0	5,457,818	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,119,992</b>	<b>\$0</b>	<b>\$911,043</b>	<b>\$911,043</b>	<b>\$5,457,818</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	314,221	911,043	0	0	0	0	0
Use of Prior Year Fund Balance Transportation	0	0	475,456	0	0	0	0	0	0	0	0
Proffers	0	0	644,536	0	596,822	0	0	0	0	0	0
Smart Scale - Assumed	0	0	0	0	0	0	2,519,968	0	0	0	0
Revenue Sharing - Assumed	0	0	0	0	0	0	2,937,850	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,119,992</b>	<b>\$0</b>	<b>\$911,043</b>	<b>\$911,043</b>	<b>\$5,457,818</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	0	0	0	0	26,000	102,000	102,000	102,000	102,000	102,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$26,000</b>	<b>\$102,000</b>	<b>\$102,000</b>	<b>\$102,000</b>	<b>\$102,000</b>	<b>\$102,000</b>

## Transportation: Onville Road Widening Project

Project Code		Project Length	0.45 miles
Project Type	Road Improvements	Cost per Mile	\$24.146 million
Project Status	Planning	Est. Opening Date	December 15, 2028
Total Project Cost	\$10,865,729	Avg. Annual Daily Traffic	9,700 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The Onville Road (RT 641) Widening Project will widen and re-align approximately 0.45 miles of Onville Road to provide 12-foot travel lanes with curb & gutter, a two-way left-turn lane (TWLTL) down the center of the roadway, dedicated turn lanes at the intersection with Barrett Heights Road (RT 642)/Garrison Woods Drive (RT 1877) intersection, and 5-foot sidewalks along both sides of the roadway.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned along Onville Road (RT 641) from the intersection with Worth Avenue (Private Road) to the intersection with Hurley Drive.

### Relationship to Approved County Policy or Plan:

- Supports the BOS Strategic Priority – Responsive Transportation System.
- Project was identified and included in the approved 2019 Transportation Bond Referendum.

## Transportation: Onville Road Widening Project

### Analysis of Need:

Improvements to Onville Road were identified in the County's Comprehensive Road Evaluation Final Report dated April 2018. The number and frequency of traffic accidents coupled with the existing and future traffic congestion on the road prioritized this roadway for improvements.

### Change or Reasons for Revisions:

- **FY2021** - Project was included in Stafford County's 2019 \$50 Million Road Improvement Bond Referendum as a priority road project for safety & congestion improvements.
- **FY2022** – Project scope was increased to include pedestrian sidewalks that were formerly part of a separate Onville Road Sidewalk project. Further cost estimation and inflation factors provided by VDOT as part of the SMART SCALE application process resulted in a cost increase from \$15.7M to approximately \$17.1M. After failing to receive any FY25/26 SMART SCALE funding, project was re-scoped to a \$10.9M project with improvements terminating at Barrett Heights/Garrison Woods intersection. Project was awarded \$3,029,173 in CMAQ/RSTP funding from FAMPO in July 2020. *The project funding assumes \$3.3M of future SMART SCALE funding and \$2.0M of future Revenue Sharing as a source of revenue. If the funds are not approved by VDOT, other funding sources will need to be identified in order for the project to move forward as presented in the CIP.*

### Alternative:

Roadway stays in current condition.

**CAPITAL IMPROVEMENT PROGRAM**

FY2022 Adopted Budget

**Transportation: Onville Road Widening Project****Project Summary:**

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	827,966	0	0	0	0	0	0	0	0
Property Acquisition	0	0	0	0	2,685,793	2,685,793	0	0	0	0	0
Construction / Project	0	0	0	0	0	0	4,666,177	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$827,966</b>	<b>\$0</b>	<b>\$2,685,793</b>	<b>\$2,685,793</b>	<b>\$4,666,177</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	2,393,347	0	863,172	0	0	0	0
Use of Prior Year Fund Balance Transportation	0	0	777,033	0	0	0	0	0	0	0	0
CMAQ - Congestion Mitigation and Air Quality	0	0	0	0	90,440	898,760	0	0	0	0	0
STBG - Surface Transportation Block Grant	0	0	50,933	0	202,006	1,787,033	0	0	0	0	0
Smart Scale - Assumed	0	0	0	0	0	0	3,803,005	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$827,966</b>	<b>\$0</b>	<b>\$2,685,793</b>	<b>\$2,685,793</b>	<b>\$4,666,177</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	0	0	0	0	200,000	200,000	272,000	272,000	272,000	272,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$272,000</b>	<b>\$272,000</b>	<b>\$272,000</b>	<b>\$272,000</b>

## Transportation: Leeland Road Widening

Project Code		Project Length	0.40 miles
Project Type	Road Improvements	Cost per Mile	\$19.608 million
Project Status	Planning	Est. Opening Date	December 1, 2027
Total Project Cost	\$8,063,010	Avg. Annual Daily Traffic	9,800 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

This project will widen Leeland Road (RT 626) between the intersections with Julian Drive (RT 694) and Portland Drive (RT 1950) to construct a two-way left-turn lane (TWLTL) in the center of the roadway. The TWLTL would provide a refuge area for vehicles turning left onto side streets or private entrances, removing stopped vehicles from the through lane, improving safety and efficiency. This project was originally intended to be combined with VDOT's Highway Safety Improvement Project (HSIP), UPC# 109477, which will construct a shared-use path along Leeland Road connecting the intersection with Deacon Road (RT 607) to the VRE Station. However, the County's project was delayed as Revenue Sharing funds awarded as part of the FY21/22 application were delayed until FY25/26 and the VDOT project moves forward to construction in FY23.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned along Leeland Road (RT 626) from the intersection with Julian Drive (RT 694) to the intersection with Portland Drive (RT 1950).

### Relationship to Approved County Policy or Plan:

- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.

## Transportation: Leeland Road Widening

- Supports the BOS Strategic Priority – Responsive Transportation System.
- Project was identified and included in the approved 2019 Transportation Bond Referendum.

### Analysis of Need:

Improvements to Leeland Road were identified in the County's Comprehensive Road Evaluation Final Report dated April 2018. The number and frequency of traffic accidents coupled with the existing traffic on the road prioritized this roadway for improvements.

### Change or Reasons for Revisions:

- **FY2021** – Project was included in Stafford County's 2019 \$50 Million Road Improvement Bond Referendum as a priority road project for safety & congestion improvements. Timing of project shifted one year.
- **FY2022** – Project received \$2,762,550 of the \$3,503,500 in FY21/22 Revenue Sharing funding that was applied for in FY20. However, these reimbursement funds were delayed by VDOT until FY25/26. Project start was delayed by 1 year until October 2022. Project cost increased approximately \$836K due to inflation. Will seek FY23/24 Revenue Sharing funding in FY22. *The project funding assumes \$1,158,950 of future VDOT Revenue Sharing funding as a source of revenue. If the funds are not approved by VDOT, other funding sources will need to be identified in order for the project to move forward as presented in the CIP.*

### Alternative:

Roadway stays in current condition.

**CAPITAL IMPROVEMENT PROGRAM**

FY2022 Adopted Budget

**Transportation: Leeland Road Widening****Project Summary:**

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	694,000	0	0	0	0	0	0	0	0
Property Acquisition	0	0	0	0	431,000	432,000	0	0	0	0	0
Construction / Project	0	0	0	0	0	0	6,506,010	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$694,000</b>	<b>\$0</b>	<b>\$431,000</b>	<b>\$432,000</b>	<b>\$6,506,010</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	0	0	2,068,550	0	0	0	0
Use of Prior Year Fund Balance Transportation	0	0	694,000	0	0	0	0	0	0	0	0
Smart Scale - Assumed	0	0	0	0	0	0	2,537,910	0	0	0	0
Revenue Sharing - Awarded	0	0	0	0	431,000	432,000	1,899,550	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$694,000</b>	<b>\$0</b>	<b>\$431,000</b>	<b>\$432,000</b>	<b>\$6,506,010</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	0	0	0	0	0	0	173,000	173,000	173,000	173,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$173,000</b>	<b>\$173,000</b>	<b>\$173,000</b>	<b>\$173,000</b>

## Transportation: Morton Road Safety Improvements & Wedge Widening

Project Code		Project Length	0.8 miles
Project Type	Road Improvements	Cost per Mile	\$2.000 million
Project Status	Planning	Est. Opening Date	June 30, 2027
Total Project Cost	\$1,600,000	Avg. Annual Daily Traffic	9,400 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The Morton Road / Route 624 Safety Improvement project will wedge-widen approximately 0.8 miles of Route 624 between the intersection with Forbes Street (RT 760) and the intersection with Primmer House Road (RT 624)/Morton Road (RT 1970) to provide wider travel lanes and a 1-foot paved shoulder. Additional safety improvements such as additional signage and trimming/removing vegetation to increase clear zone and sight distance will also be implemented.

### Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are planned along Morton Road (RT 624) between the intersection with Forbes Street (RT 627) and the intersection with Primmer House Road (RT 624)/Morton Road (RT 1970).

### Relationship to Approved County Policy or Plan:

- Supports the BOS Strategic Priority – Responsive Transportation System.



## Transportation: Morton Road Safety Improvements & Wedge Widening

### Analysis of Need:

Improvements to Route 624 were identified in the County's Comprehensive Road Evaluation Final Report dated April 2018. The number and frequency of traffic accidents coupled with the existing traffic congestion on the road prioritized this roadway for improvements.

### Change or Reasons for Revisions:

- **FY2021** – Project was included in Stafford County's 2019 \$50 Million Road Improvement Bond Referendum as a priority road project for safety & congestion improvements.
- **FY2022** – Project initially sought to widen and improve a portion of Morton Road (RT 1970) between Leeland Road and Cherry Laurel Drive. Upon receipt of updated traffic and crash data from VDOT, it was determined that no major safety or congestion issues exist on the portion of Morton Road (RT 1970) and focusing improvements on other sections of Route 624 could provide a reduction in vehicle crashes and congestion. Project was re-scoped to widening the section of Route 624 (Forbes Street/Morton Road) between the intersection with Forbes Street (RT 760) and the intersection with Primmer House Road (RT 624)/Morton Road (RT 1970). *The project funding assumes \$800,000 of VDOT Revenue Sharing funding as a source of revenue. If the funds are not approved by VDOT, other funding sources will need to be identified in order for the project to move forward as presented in the CIP.*

### Alternative:

Roadway stays in current condition.

**CAPITAL IMPROVEMENT PROGRAM**

FY2022 Adopted Budget

**Transportation: Morton Road Safety Improvements & Wedge Widening****Project Summary:**

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Construction / Project	0	0	0	0	0	0	1,600,000	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$1,600,000	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	0	0	800,000	0	0	0	0
Revenue Sharing - Assumed	0	0	0	0	0	0	800,000	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$1,600,000	\$0	\$0	\$0	\$0

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	0	0	0	0	0	0	67,000	67,000	67,000	67,000
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$67,000	\$67,000	\$67,000	\$67,000

**Transportation: Mountain View Road Safety/Widening (Choptank Rd to Stefaniga Rd)**

Project Code		Project Length	1.21 miles
Project Type	Road Improvements	Cost per Mile	\$7.750 million
Project Status	Planning	Est. Opening Date	December 10, 2029
Total Project Cost	\$9,377,023	Avg. Annual Daily Traffic	4,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

This Project will wedge-widen approximately 1.21 miles of Mountain View Road (RT 627) from the intersection with Choptank Road (RT 1209) to the intersection with Stefaniga Road (RT 648) to provide up to 2-feet of additional paved shoulder width. Additional safety improvements such as signage and trimming/removing vegetation to increase clear zone and sight distance will also be implemented. A shared-use path between Choptank Road and Shelton Shop Road (RT 648) would be constructed to tie-in with the proposed shared-use path to be constructed as part of improvements to Shelton Shop Road. Project will tie-in with the Stefaniga Road & Mountain View Road Roundabout project to be constructed in 2025.

**Operating Impact Summary:**

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

**Location:**

Proposed improvements are planned along Mountain View Road (RT 627) from the intersection with Choptank Road (RT 1209) to the intersection with Stefaniga Road (RT 648).

**Relationship to Approved County Policy or Plan:**

- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the BOS Strategic Priority – Responsive Transportation System.
- Project was identified and included in the approved 2019 Transportation Bond Referendum.

## Transportation: Mountain View Road Safety/Widening (Choptank Rd to Stefaniga Rd)

### Analysis of Need:

Improvements to Mountain View Road were identified in the County's Comprehensive Road Evaluation Final Report dated April 2018. The number and frequency of traffic accidents coupled with the substandard roadway geometry prioritized this roadway for improvements.

### Change or Reasons for Revisions:

- **FY2021** – Project was included in Stafford County's 2019 \$50 Million Road Improvement Bond Referendum as a priority road project for safety & congestion improvements.
- **FY2022** – Initial project between Choptank Road and Kellogg Mill Road was split into two separate projects to tie-in with the planned roundabout at intersection with Stefaniga to be constructed in 2025. Further cost estimation and inflation factors provided by VDOT as part of the Round 4 SMART SCALE application process resulted in a significant cost increase from approximately \$10.2M to approximately \$24.2M. After failing to receive any FY25/26 SMART SCALE funding, project was re-scoped to a \$9.3M wedge-widening, safety improvements and shared-use path project. *The \$9.3M project assumes \$4.8M in future Revenue Sharing funding as a source of revenue. If the funds are not approved by VDOT, other funding sources will need to be identified in order for the project to move forward as presented in the CIP.*

### Alternative:

Roadway stays in current condition.

**CAPITAL IMPROVEMENT PROGRAM**

FY2022 Adopted Budget

**Transportation: Mountain View Road Safety/Widening (Choptank Rd to Stefaniga Rd)****Project Summary:**

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	769,000	0	0	0	0	0
Property Acquisition	0	0	0	0	0	0	1,144,045	1,144,045	0	0	0
Construction / Project	0	0	0	0	0	0	0	0	6,319,933	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$769,000</b>	<b>\$1,144,045</b>	<b>\$1,144,045</b>	<b>\$6,319,933</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	0	769,000	1,144,045	1,144,045	1,631,422	0	0
Revenue Sharing - Assumed	0	0	0	0	0	0	0	0	4,688,511	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$769,000</b>	<b>\$1,144,045</b>	<b>\$1,144,045</b>	<b>\$6,319,933</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	0	0	0	0	0	64,000	160,000	256,000	393,000	393,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$64,000</b>	<b>\$160,000</b>	<b>\$256,000</b>	<b>\$393,000</b>	<b>\$393,000</b>

**Transportation: Mountain View Road Safety/Widening (Stefaniga Rd to Kellogg Mill Rd)**

Project Code		Project Length	1.92 miles
Project Type	Road Improvements	Cost per Mile	\$2.500 million
Project Status	Planning	Est. Opening Date	December 30, 2028
Total Project Cost	\$4,800,000	Avg. Annual Daily Traffic	7,200 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

This Project will wedge-widen approximately 1.92 miles of Mountain View Road (RT 627) from the intersection with Stefaniga Road (RT 648) to the intersection with Kellogg Mill Road (RT 651) to provide up to 2-feet of additional paved shoulder width. Additional safety improvements such as signage and trimming/removing vegetation to increase clear zone and sight distance will also be implemented. Project will also tie-in with the Stefaniga & Mountain View Road Roundabout project to be constructed in 2025.

**Operating Impact Summary:**

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

**Location:**

Proposed improvements are planned along Mountain View Road (RT 627) from the intersection with Stefaniga Road (RT 648) to the intersection with Kellogg Mill Road (RT 651).

## Transportation: Mountain View Road Safety/Widening (Stefaniga Rd to Kellogg Mill Rd)

### Relationship to Approved County Policy or Plan:

- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the BOS Strategic Priority – Responsive Transportation System.
- Project was identified and included in the approved 2019 Transportation Bond Referendum.

### Analysis of Need:

Improvements to Mountain View Road were identified in the County's Comprehensive Road Evaluation Final Report dated April 2018. The number and frequency of traffic accidents coupled with the substandard roadway geometry prioritized this roadway for improvements.

### Change or Reasons for Revisions:

- **FY2021** – Project was included in Stafford County's 2019 \$50 Million Road Improvement Bond Referendum as a priority road project for safety & congestion improvements.
- **FY2022** – Initial project between Choptank Road and Kellogg Mill Road was split into two separate projects to tie-in with the planned roundabout at intersection with Stefaniga to be constructed in 2025. Further cost estimation and inflation factors provided by VDOT as part of the Round 4 SMART SCALE application process resulted in a significant cost increase from approximately \$16.1M to approximately \$39.2M. After failing to receive any FY25/26 SMART SCALE funding, project was re-scoped to a \$4.8M wedge-widening and safety improvements project. *The \$4.8M project assumes \$2.4M in future Revenue Sharing funding as a source of revenue. If the funds are not approved by VDOT, other funding sources will need to be identified in order for the project to move forward as presented in the CIP.*

### Alternative:

Roadway stays in current condition.

**FY2022 Adopted Budget**

### Project Summary:

[illegible]



**Transportation: Garrisonville Road Widening Project (Eustace Rd to Shelton Shop Rd)**

Project Code		Project Length	1.40 miles
Project Type	Road Improvements	Cost per Mile	\$37.424 million
Project Status	Planning	Est. Opening Date	December 10, 2030
Total Project Cost	\$52,394,122	Avg. Annual Daily Traffic	34,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

The Garrisonville Road (RT 610) Widening Project will widen approximately 1.40 miles of Garrisonville Road, between the intersections with Eustace Road (RT 751) and Shelton Shop Road (RT 648), to a six-lane divided roadway with raised concrete median, curb & gutter and 5' sidewalks for pedestrians.

**Operating Impact Summary:**

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

**Location:**

Proposed improvements are planned along Garrisonville Road (RT 610) between the intersection of Eustace Road (RT 751) and Shelton Shop Road (RT 648).

**Relationship to Approved County Policy or Plan:**

- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the BOS Strategic Priority – Responsive Transportation System.
- Project was identified and included in the approved 2019 Transportation Bond Referendum.

## **Transportation: Garrisonville Road Widening Project (Eustace to Shelton Shop)**

### **Analysis of Need:**

Improvements to Garrisonville Road were identified in the County's Comprehensive Road Evaluation Final Report dated April 2018. The number and frequency of traffic accidents coupled with the existing and future traffic congestion on the road prioritized this roadway for improvements.

### **Change or Reasons for Revisions:**

- **FY2021** – Project was included in Stafford County's 2019 \$50 Million Road Improvement Bond Referendum as a priority road project for safety & congestion improvements.
- **FY2022** –Further cost estimation and inflation factors provided by VDOT as part of the Round 4 SMART SCALE application process resulted in a significant cost increase from \$29.5M to approximately \$52.4M. *The project funding assumes \$8.6M in future Revenue Sharing funding , \$17.6M in future SMART SCALE funding, and \$2.3M in future STBG funding as a source of revenue. If the funds are not approved by VDOT and/or FAMPO, other funding sources will need to be identified in order for the project to move forward as presented in the CIP.*

### **Alternative:**

Roadway stays in current condition.

**CAPITAL IMPROVEMENT PROGRAM**

FY2022 Adopted Budget

**Transportation: Garrisonville Road Widening Project (Eustace to Shelton Shop)****Project Summary:**

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	2,809,588	0	0	0	0	0	0	0	0
Property Acquisition	0	0	0	0	0	9,589,777	9,589,777	9,589,777	0	0	0
Construction / Project	0	0	0	0	0	0	0	0	20,815,203	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,809,588</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,589,777</b>	<b>\$9,589,777</b>	<b>\$9,589,777</b>	<b>\$20,815,203</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	801,581	0	0	9,589,777	7,527,627	4,589,777	2,159,116	0	0
Use of Prior Year Fund Balance Transportation	0	0	2,008,007	0	0	0	0	0	0	0	0
Smart Scale - Assumed	0	0	0	0	0	0	0	0	15,718,237	0	0
Revenue Sharing - Assumed	0	0	0	0	0	0	2,062,150	5,000,000	2,937,850	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,809,588</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,589,777</b>	<b>\$9,589,777</b>	<b>\$9,589,777</b>	<b>\$20,815,203</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	0	0	67,000	67,000	67,000	869,000	1,499,000	1,883,000	2,064,000	2,064,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$67,000</b>	<b>\$67,000</b>	<b>\$67,000</b>	<b>\$869,000</b>	<b>\$1,499,000</b>	<b>\$1,883,000</b>	<b>\$2,064,000</b>	<b>\$2,064,000</b>

## Transportation: Flatford Road Sidewalk

Project Code		Project Length	1,200 feet
Project Type	Trails and Sidewalks	Cost per Linear Foot	\$710 per foot
Project Status	Planning	Est. Opening Date	June 1, 2022
Total Project Cost	\$852,040		
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The Project will consist of a five-foot wide sidewalk on the east side of Flatford Road, with a crosswalk to be installed just north of the entrance to Horizons Church to help safely connect pedestrians to the west side of Flatford Road. The proposed sidewalk will then extend to Walpole Street, with another crosswalk installed on Winding Creek Road to connect with the existing sidewalk.

### Operating Impact Summary:

All sidewalk improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are from the terminus of Parkway Boulevard to the terminus of Walpole Street.

### Relationship to Approved County Policy or Plan:

- The adopted 2016-2036 Comprehensive Plan supports this project.
- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.

[illegible]

## Transportation: Salisbury Drive Sidewalk

Project Code		Project Length	900 feet
Project Type	Trails and Sidewalks	Cost per Linear Foot	\$998 per foot
Project Status	Design/Engineering	Est. Opening Date	November 1, 2026
Total Project Cost	\$952,000		
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The project proposed to construct a five-foot wide concrete sidewalk along Salisbury Drive. The sidewalk will connect with existing sidewalk at the intersection with Garrisonville Road (RT 610) and extend approximately 900 linear feet to the VDOT Park & Ride Lot off Mine Road.

### Operating Impact Summary:

All sidewalk improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are from the intersection with Garrisonville Road to the VDOT Park & Ride Lot off Mine Road.

### Relationship to Approved County Policy or Plan:

- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.

[illegible]

## Transportation: Staffordboro Boulevard Sidewalk

Project Code		Project Length	1,200 feet
Project Type	Trails and Sidewalks	Cost per Linear Foot	\$898 per foot
Project Status	Design/Engineering	Est. Opening Date	November 1, 2025
Total Project Cost	\$1,077,500		
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

The project proposed to construct a five-foot wide concrete sidewalk along Staffordboro Boulevard. The sidewalk will connect with existing sidewalk at the VDOT Park & Ride Lot and extend approximately 1,200 linear feet to the intersection with Pike Place.

### Operating Impact Summary:

All sidewalk improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

### Location:

Proposed improvements are from the VDOT Park & Ride Lot on Staffordboro Boulevard to the intersection with Pike Place.

### Relationship to Approved County Policy or Plan:

- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.



## Transportation: Staffordboro Boulevard Sidewalk

### Analysis of Need:

Constructing this "missing link" from the VDOT Park & Ride Lot to Pike Place will provide for safer pedestrian movement along a busy roadway that is frequently used by pedestrians traveling between their homes and nearby commercial areas along Garrisonville Road.

### Change or Reasons for Revisions:

- **FY2021** – Applied for Transportation Alternatives funding to begin design work on project. Timing of project shifted two years.
- **FY2022** – Received \$862,000 in Transportation Alternatives funding, allowing design work to begin in FY22 instead of FY23, moving up the completion date to 2025.

### Alternative:

No sidewalk will exist at this location.

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	190,000	0	0	0	0	0	0	0	0	0
Property Acquisition	0	0	500,000	0	0	0	0	0	0	0	0
Construction / Project	0	0	0	387,500	0	0	0	0	0	0	0
<b>Total Project Cost</b>	<b>\$0</b>	<b>\$190,000</b>	<b>\$500,000</b>	<b>\$387,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Service District	0	38,000	100,000	77,500	0	0	0	0	0	0	0
TA - Transportation Alternative Program	0	152,000	400,000	310,000	0	0	0	0	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$190,000</b>	<b>\$500,000</b>	<b>\$387,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**CAPITAL IMPROVEMENT PROGRAM  
FY2022 Adopted Budget**

**Education**

Education	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years	Total Project Costs (includes Prior Year and Future Years)
3R Funded	0	7,728,000	7,751,000	7,471,000	7,575,000	6,948,000	6,449,000	6,525,000	7,979,000	7,817,000	7,811,160	74,054,160	0	74,054,160
High School #6	5,300,000	5,456,135	39,200,000	49,771,000	24,744,000	1,125,000	0	0	0	0	0	120,296,135	0	125,596,135
Elementary School #18	0	0	0	0	0	0	1,700,000	23,933,671	21,108,820	4,604,000	1,125,509	52,472,000	0	52,472,000
Additional Middle School Capacity	0	0	0	0	0	0	2,060,000	35,549,420	31,963,370	8,783,710	971,290	79,327,790	0	79,327,790
North Stafford High School Fine Arts Wing Renovation/Addition	0	0	0	0	0	0	0	1,783,500	4,883,500	346,000	0	7,013,000		7,013,000
High School #7	0	0	0	0	0	0	0	0	900,000	0	0	900,000	0	900,000
Drew Middle School Renovation	0	0	0	0	0	0	0	0	500,000	12,122,000	11,109,000	23,731,000	6,560,000	30,291,000
Elementary School #19	0	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	0	1,000,000
Early Childhood Special Education Additional Capacity, Phase I	0	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	8,988,000	9,988,000
<b>Total</b>	<b>\$5,300,000</b>	<b>\$13,184,135</b>	<b>\$46,951,000</b>	<b>\$57,242,000</b>	<b>\$32,319,000</b>	<b>\$8,073,000</b>	<b>\$10,209,000</b>	<b>\$67,791,591</b>	<b>\$67,334,690</b>	<b>\$33,672,710</b>	<b>\$23,016,959</b>	<b>\$359,794,085</b>	<b>\$15,548,000</b>	<b>\$380,642,085</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Ten Year Planning Period	Future Years	Total Project Costs (includes Prior Year and Future Years)
Bond Proceeds	4,422,659	6,151,000	42,370,135	55,657,135	26,753,457	6,627,135	8,763,135	66,345,726	60,767,951	27,805,759	20,171,094	321,412,527	15,548,000	341,383,186
County Designated 3R Set-Aside	0	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	14,458,650		14,458,650
Use of Prior Year Fund Balance General Fund	877,341	4,500,135	3,000,000	0	0	0	0	0	0	0	1,400,000	8,900,135		9,777,476
Proffers	0	0	0	0	3,976,678	0	0	0	5,120,874	4,421,086	0	13,518,638		13,518,638
Nutrition Capital Funding	0	131,000	135,000	139,000	143,000							548,000		548,000
Debt Service Savings		956,135	0	0	0	0	0	0	0	0	0	956,135		956,135
<b>Total</b>	<b>\$5,300,000</b>	<b>\$13,184,135</b>	<b>\$46,951,000</b>	<b>\$57,242,000</b>	<b>\$32,319,000</b>	<b>\$8,073,000</b>	<b>\$10,209,000</b>	<b>\$67,791,591</b>	<b>\$67,334,690</b>	<b>\$33,672,710</b>	<b>\$23,016,959</b>	<b>\$359,794,085</b>	<b>\$15,548,000</b>	<b>\$380,642,085</b>

Operating Impacts		FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Personnel		0	0	0	418,000	5,652,000	5,765,000	5,880,000	5,998,000	6,975,000	11,777,000
Operating		0	0	0	1,136,000	1,702,000	1,144,000	1,168,000	1,191,000	3,346,000	3,293,000
Debt Service		0	553,000	4,013,000	8,536,000	10,740,000	11,325,000	12,076,000	17,449,000	22,376,092	24,672,263
<b>Total</b>		<b>\$0</b>	<b>\$553,000</b>	<b>\$4,013,000</b>	<b>\$10,090,000</b>	<b>\$18,094,000</b>	<b>\$18,234,000</b>	<b>\$19,124,000</b>	<b>\$24,638,000</b>	<b>\$32,697,092</b>	<b>\$39,742,263</b>

**Capital Maintenance: Schools Infrastructure**

Project Code	SCTR22	Square Footage/Acreage	
Project Type	3R Projects	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Education	Student Capacity	
Estimated Project Cost	FY22 - \$7,728,000	Est. Opening Date	
Current Year Cost		Funding Source	Bonds/Current Revenue/Nutrition
Debt Service	Debt Service on FY22 borrow estimated at \$553K	Years Financed	Bonds 15 years
Full Year Operating Impact		Tax Rate Equivalent	

**Project Description:**

Improvements and upgrades to various schools, buildings, equipment, and grounds to improve deficiencies related to facilities safety and maintenance. Work will include Repair, Replacement and Renovation of school facilities.

**Operating Impact Summary:**

These improvement and upgrade projects are needed to continue to supply the students in Stafford County with learning environments that are conducive to learning, poising students for educational success.

**Location:**

Various Stafford County Public Schools' facilities across the county.

**Relationship to Approved County Policy or Plan:**

Stafford County School Board's Strategic Plan:

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

Stafford County Comprehensive Plan:

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

Stafford County Board of Supervisors' Priorities (Education, Infrastructure)

**Analysis of Need:**

Ongoing improvements and upgrades are a necessary component of preparing buildings, equipment, and grounds to maintain adequate educational facilities.

## Stafford County School's 3R Infrastructure

Project	Location	Funding Source	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Repair Mechanical Systems & Finishes	NSHS	Bond Proceeds	3,651,000	0	0	0	0	0	0	0	0	0
Upgrade Mechanical, Roof and Finishes	FFES	Bond Proceeds	2,500,000	0	0	0	0	0	0	0	0	0
Replace Roof (SS-All areas)	RTMS	3R Set-Aside	1,446,000	0	0	0	0	0	0	0	0	0
Replace Walk-In Freezer & Refrigerators	HES	Nutrition Capital Funding	131,000	0	0	0	0	0	0	0	0	0
Air Quality Improvements	Multiple Locations	Unfunded	3,135,000	0	0	0	0	0	0	0	0	0
Replace Roof	MVHS	Unfunded	1,187,000	0	0	0	0	0	0	0	0	0
Replace HVAC (8-RTU's)	NORTH STAR	Unfunded	770,000	0	0	0	0	0	0	0	0	0
Replace Roof (Area A SS)	RES	Unfunded	388,000	0	0	0	0	0	0	0	0	0
Repair Roof (SS)	HES	Unfunded	330,000	0	0	0	0	0	0	0	0	0
Repair Mechanical Systems - Phase I	BPMS	Bond Proceeds	0	2,233,000	0	0	0	0	0	0	0	0
Repair Mechanical Systems (VAV-AHU-BAS)	PRES	Bond Proceeds	0	2,162,000	0	0	0	0	0	0	0	0
Repair Mechanical Systems & Finishes	NSHS	Bond Proceeds & 3R Set-Aside	0	1,846,000	0	0	0	0	0	0	0	0
Interior Upgrades	BPMS	3R Set-Aside	0	417,000	0	0	0	0	0	0	0	0
Replace Roof (Area E & Outbuildings SS)	SES	3R Set-Aside	0	370,000	0	0	0	0	0	0	0	0
Replace Chillers	GMS	3R Set-Aside	0	294,000	0	0	0	0	0	0	0	0
Replace Chillers	RTMS	3R Set-Aside	0	294,000	0	0	0	0	0	0	0	0
Replace Walk-In Freezer & Refrigerators	FFES	Nutrition Capital Funding	0	135,000	0	0	0	0	0	0	0	0
Repair Mechanical Systems & Finishes	GMC	Unfunded	0	985,000	0	0	0	0	0	0	0	0
Repair Roof (Standing seam & Outbuildings; Ext painting)	BPMS	Unfunded	0	812,000	0	0	0	0	0	0	0	0
Replace Chillers	KWBES	Unfunded	0	589,000	0	0	0	0	0	0	0	0
Repair Erosion & Drainage - Phases 4, 7 - 9	DSMS	Unfunded	0	471,000	0	0	0	0	0	0	0	0
Replace Generator	DMS	Unfunded	0	464,000	0	0	0	0	0	0	0	0
Replace Roof (Addition SS & Library Overhang)	GVES	Unfunded	0	405,000	0	0	0	0	0	0	0	0
Replace Roof (SS)	FES	Unfunded	0	370,000	0	0	0	0	0	0	0	0
Replace Fire Alarm System	RRES	Unfunded	0	348,000	0	0	0	0	0	0	0	0
Replace Fire Alarm System	MBES	Unfunded	0	348,000	0	0	0	0	0	0	0	0
Construct Snow Removal Storage (Salt)	Support Services	Unfunded	0	235,000	0	0	0	0	0	0	0	0
Replace HVAC Dampers	AYBAC	Unfunded	0	139,000	0	0	0	0	0	0	0	0
Install Additional Security Lighting - ES Playgrounds	All 17 ES	Unfunded	0	110,000	0	0	0	0	0	0	0	0
Repair Playground & Play Area	GES	Unfunded	0	94,000	0	0	0	0	0	0	0	0
Repair Interior Finishes - Phase II	NSHS	Bond Proceeds	0	0	2,507,000	0	0	0	0	0	0	0
Repair Mechanical Systems - Phase II	BPMS	Bond Proceeds	0	0	2,029,000	0	0	0	0	0	0	0
Repair Interior Finishes	PRES	Bond Proceeds & 3R Set-Aside	0	0	1,412,000	0	0	0	0	0	0	0
Repair Interior Finishes	RES	3R Set-Aside	0	0	1,384,000	0	0	0	0	0	0	0
Replace Walk-In Freezer & Refrigerators	WES	Nutrition Capital Funding	0	0	139,000	0	0	0	0	0	0	0
Repair Roof	AYBAC	Unfunded	0	0	1,062,000	0	0	0	0	0	0	0
Replace HVAC (AHUs)	HOES	Unfunded	0	0	968,000	0	0	0	0	0	0	0
Replace Chillers	MBES	Unfunded	0	0	607,000	0	0	0	0	0	0	0
Replace Generator	WES	Unfunded	0	0	478,000	0	0	0	0	0	0	0
Replace Generator	SMS	Unfunded	0	0	478,000	0	0	0	0	0	0	0
Renovate Aimee Building	SHS	Unfunded	0	0	298,000	0	0	0	0	0	0	0
Repair Exterior Envelope (Windows) and Board Room Overhang	AYBAC	Unfunded	0	0	262,000	0	0	0	0	0	0	0
Repair Playground & Play Area	RES	Unfunded	0	0	191,000	0	0	0	0	0	0	0
Repair Bathroom Floor	ABES	Unfunded	0	0	180,000	0	0	0	0	0	0	0
Replace Hallway Lockers	SMS	Unfunded	0	0	138,000	0	0	0	0	0	0	0
Repair Playground & Play Area	GMC	Unfunded	0	0	97,000	0	0	0	0	0	0	0
Replace Roof	AGWMS/GES	Bond Proceeds	0	0	0	3,110,000	0	0	0	0	0	0
Repair Interior Finishes - Phase III	NSHS	Bond Proceeds	0	0	0	1,845,000	0	0	0	0	0	0
Repair Mechanical Systems	AYBAC	Bond Proceeds & 3R Set-Aside	0	0	0	1,075,000	0	0	0	0	0	0
Repair Mechanical Systems - Phase I	SMS	3R Set-Aside	0	0	0	1,105,000	0	0	0	0	0	0
Install Playground & Play Area	WCES	3R Set-Aside	0	0	0	197,000	0	0	0	0	0	0
Repair Playground & Play Area	PRES	3R Set-Aside	0	0	0	100,000	0	0	0	0	0	0
Replace Walk-In Freezer & Refrigerators	WCES	Nutrition Capital Funding	0	0	0	143,000	0	0	0	0	0	0
Replace/Repair Track Projects	RRES;WCES;PRES;AGWMS;RES;KWBES	Unfunded	0	0	0	744,000	0	0	0	0	0	0

**FY2022 Adopted Budget**

Project	Location	Funding Source	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Replace HVAC	HHPMS	Unfunded	0	0	0	935,000	0	0	0	0	0	0
Replace Track	MVHS	Unfunded	0	0	0	935,000	0	0	0	0	0	0
Replace Chillers	CES	Unfunded	0	0	0	625,000	0	0	0	0	0	0
Repair Exterior Envelope	AGWMS/GES	Unfunded	0	0	0	615,000	0	0	0	0	0	0
Replace Fire Alarm System	WCES	Unfunded	0	0	0	369,000	0	0	0	0	0	0
Replace Roof	WCES	Bond Proceeds	0	0	0	0	2,534,000	0	0	0	0	0
Repair Mechanical Systems - Phase II	SMS	Bond Proceeds	0	0	0	0	2,470,000	0	0	0	0	0
Repair Exterior Envelope	WES	Bond Proceeds & 3R Set-Aside	0	0	0	0	633,000	0	0	0	0	0
Repair Exterior Envelope	HHPMS	3R Set-Aside	0	0	0	0	1,203,000	0	0	0	0	0
Repair Playground & Play Area	KWBES	3R Set-Aside	0	0	0	0	108,000	0	0	0	0	0
Construct Turf Fields	CFHS;NSHS	Unfunded	0	0	0	0	2,246,000	0	0	0	0	0
Repair Electrical System (Complex)	GMC	Unfunded	0	0	0	0	981,000	0	0	0	0	0
Replace Chillers	ABES	Unfunded	0	0	0	0	644,000	0	0	0	0	0
Replace Chillers	DSMS	Unfunded	0	0	0	0	321,000	0	0	0	0	0
Replace (Partial) Roof	DMS	Unfunded	0	0	0	0	256,000	0	0	0	0	0
Repair Playground & Play Area	RRES	Unfunded	0	0	0	0	108,000	0	0	0	0	0
Repair Mechanical Systems	WCES	Bond Proceeds	0	0	0	0	0	2,610,000	0	0	0	0
Repair Interior Finishes	WCES	Bond Proceeds	0	0	0	0	0	1,760,000	0	0	0	0
Repair Exterior Envelope (Doors & Windows)	GMC	Bond Proceeds & 3R Set-Aside	0	0	0	0	0	652,000	0	0	0	0
Replace Chiller	WES	3R Set-Aside	0	0	0	0	0	663,000	0	0	0	0
Repair Exterior Envelope	RES	3R Set-Aside	0	0	0	0	0	652,000	0	0	0	0
Repair Playground & Play Area	HES	3R Set-Aside	0	0	0	0	0	112,000	0	0	0	0
Repair Athletic Fields	CFHS;MVHS;BPHS;SHS;NSHS;TB GMS;HHPMS;RTMS;SMS	Unfunded	0	0	0	0	0	3,908,000	0	0	0	0
Miscellaneous Athletic Field Projects	NSHS;DSMS;SHS;RTMS	Unfunded	0	0	0	0	0	1,461,000	0	0	0	0
Renovate Front Office Suite	NSHS	Unfunded	0	0	0	0	0	196,000	0	0	0	0
Repair Playground & Play Area	MBES	Unfunded	0	0	0	0	0	111,000	0	0	0	0
Repair Mechanical Systems (AHU, Chiller, Fans)	RRES	Bond Proceeds	0	0	0	0	0	0	2,285,000	0	0	0
Repair Exterior Envelope	HOES	Bond Proceeds	0	0	0	0	0	0	672,000	0	0	0
Replace Media Retrieval & PA Systems	KWBES;RRES;NSHS;TBGMS;PRES ;CFHS;FFES;HES;SMS	Bond Proceeds & 3R Set-Aside	0	0	0	0	0	0	2,546,000	0	0	0
Upgrade Libraries	KWBES;RRES;PRES;AGWMS;CES; HHPMS;ABES;RTMS;DSMS	3R Set-Aside	0	0	0	0	0	0	612,000	0	0	0
Construct Snow Removal Storage (Salt)	Coal Landing	3R Set-Aside	0	0	0	0	0	0	410,000	0	0	0
Repair Stormwater Management System	SHS	Unfunded	0	0	0	0	0	0	2,046,000	0	0	0
Storage Building Projects	CFHS;HOES;RES;RRES;DSMS;FFE S;TBGMW;HES;ABES;AYBAC;GV ES;WCES	Unfunded	0	0	0	0	0	0	1,228,000	0	0	0
Construct Snow Removal Storage (Salt)	Coal Landing	3R Set-Aside	0	0	0	0	0	0	410,000	0	0	0
Repair Playground & Play Area	CES	Unfunded	0	0	0	0	0	0	114,000	0	0	0
Replace HVAC	CFHS	Bond Proceeds	0	0	0	0	0	0	0	2,807,000	0	0
Repair Mechanical Systems - Phase I	RTMS	Bond Proceeds	0	0	0	0	0	0	0	1,591,000	0	0
Repair Pavement	PRES	Bond Proceeds	0	0	0	0	0	0	0	1,123,000	0	0
Repair Pavement	SMS	Bond Proceeds	0	0	0	0	0	0	0	703,000	0	0
Repair Pavement	AYBAC	Bond Proceeds & 3R Set-Aside	0	0	0	0	0	0	0	913,000	0	0
Repair Pavement	RES	3R Set-Aside	0	0	0	0	0	0	0	842,000	0	0
CTE Lab Projects	NSHS;SMS;HHPMS;DMS;CFHS	Unfunded	0	0	0	0	0	0	0	1,801,000	0	0
Repair Playground & Play Area	ABES	Unfunded	0	0	0	0	0	0	0	117,000	0	0
Repair Mechanical Systems - Phase II	RTMS	Bond Proceeds	0	0	0	0	0	0	0	0	2,852,000	0
Repair Interior Finishes - Phase I	SMS	Bond Proceeds	0	0	0	0	0	0	0	0	1,780,000	0
Repair Pavement	HES	Bond Proceeds	0	0	0	0	0	0	0	0	867,000	0
Repair Pavement - (Student Lot)	NSHS	Bond Proceeds	0	0	0	0	0	0	0	0	867,000	C
Improvements to Auditorium Systems	MVHS;NSHS;BPHS;GVES;HES	Bond Proceeds & 3R Set-Aside	0	0	0	0	0	0	0	0	1,451,000	C
Improvements to Auditorium Systems	CFHS	Unfunded									435,000	
Repair Pavement	CFHS	Unfunded	0	0	0	0	0	0	0	0	1,881,000	0
Repair Pavement	DMS	Unfunded	0	0	0	0	0	0	0	0	1,012,000	0
Install Messaging Marquees (Manual)	AGWMS/GES/RES	Unfunded	0	0	0	0	0	0	0	0	93,000	0
Install Messaging Marquees (Manual)	RTMS	Unfunded	0	0	0	0	0	0	0	0	93,000	

# CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

Project	Location	Funding Source	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Repair Interior Finishes - Phase II	SMS	Bond Proceeds	0	0	0	0	0	0	0	0	0	1,833,000
Repair Interior Finishes	AYBAC	Bond Proceeds	0	0	0	0	0	0	0	0	0	1,760,000
Construct Bus Parking - Phase II	TBD	Bond Proceeds	0	0	0	0	0	0	0	0	0	1,042,000
Repair Pavement	MBES	Bond Proceeds	0	0	0	0	0	0	0	0	0	968,000
Construct Bus Parking - Phase I	TBD	Bond Proceeds	0	0	0	0	0	0	0	0	0	668,000
Repair Pavement	MVHS	Bond Proceeds & 3R Set-Aside	0	0	0	0	0	0	0	0	0	1,937,000
Construct Outdoor Classroom	GVES & RRES	Unfunded	0	0	0	0	0	0	0	0	0	893,000
Repair Pavement	KWBES	Unfunded	0	0	0	0	0	0	0	0	0	746,000
Construct Outdoor Classroom	SHS	Unfunded	0	0	0	0	0	0	0	0	0	150,000
		<b>FUNDED</b>	7,728,000	7,751,000	7,471,000	7,575,000	6,948,000	6,449,000	6,115,000	7,979,000	7,817,000	8,208,000
		<b>UNFUNDED</b>	5,810,000	5,370,000	4,759,000	4,223,000	4,556,000	5,676,000	3,798,000	1,918,000	3,079,000	1,789,000
		<b>Total Yearly Project Cost</b>	\$13,538,000	\$13,121,000	\$12,230,000	\$11,798,000	\$11,504,000	\$12,125,000	\$9,913,000	\$9,897,000	\$10,896,000	\$9,997,000

Project Revenues			FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds			6,151,000	6,170,135	5,886,135	5,986,135	5,502,135	5,003,135	5,079,135	6,533,135	6,371,135	6,762,136
Recommended Bond Reduction												(1,796,841)
3R Set-Aside			1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865
Use of Prior Year Fund Balance General Fund			135	0	0	0	0	0	0	0	0	1,400,000
Nutrition Capital Funding			131,000	135,000	139,000	143,000	0	0	0	0	0	0
		<b>Total</b>	\$7,728,000	\$7,751,000	\$7,471,000	\$7,575,000	\$6,948,000	\$6,449,000	\$6,525,000	\$7,979,000	\$7,817,000	\$7,811,160

Operating Impacts			FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service			0	553,000	1,108,000	1,637,000	2,175,000	2,670,000	3,120,000	3,577,000	4,165,000	4,738,000
		<b>Total</b>	\$0	\$553,000	\$1,108,000	\$1,637,000	\$2,175,000	\$2,670,000	\$3,120,000	\$3,577,000	\$4,165,000	\$4,738,000

## High School 6

Project Code	SCTR22	Square Footage/Acreage	290,000/65
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$266/sf + site work
Project Status	Planning	School Board Priority Number	1
Functional Area	Education	Student Capacity	2,150
Estimated Project Cost	\$125,596,135	Est. Opening Date	August 2025 (FY2026)
Current Year Cost	\$124,703,000	Funding Source	VPSA, General Fund, Proffers
Debt Service		Years Financed	20
Full Year Operating Impact		Tax Rate Equivalent	

### Project Description:

High School 6 (HS#6) is planned to house 2,150 students and serve grades ninth through twelfth. HS#6 will be designed and constructed utilizing the most current Stafford County Public Schools high school education specifications and in accordance with the Stafford County Public Schools Facility Design Standards. This project includes the construction of the school building, all outbuildings, site development, all on-site road improvements, any necessary off-site road improvements, parking lots, stormwater management requirements, utilities, and athletic fields to include bleachers, stadium, and track. Planning and design requirements are included in the project cost, as are furniture, fixtures, equipment, technology infrastructure, and project management.

A land acquisition team made up of County and SCPS staff is considering various possible sites for this project.

SCPS high school education specifications will be updated prior to the start of design, however, staff estimates the total square footage requirement to be at, or near, 290,000 square feet. The Division hired a cost-estimating consultant to provide an accurate cost per square footage for the building, as well as costs associated with the site. These experts have concluded that a rough order magnitude programming level cost estimate of \$266 per square foot in current dollars should be used for building only. We have used VDOE cost data to compare our estimated cost per square foot. Off-site sitework expenses are estimated at \$12,067,000 and are not included in the Estimated Project Cost above.

HS#6 is planned to be able to achieve a LEED Silver rating and will be designed to achieve an Energy Star rating of 80 or better, as well as an Energy Utilization Index rating of less than 24.



## **High School 6**

### **Operating Impact Summary:**

The principal, librarian, office manager, and an accounting assistant II will be funded and hired one year prior to HS#6 opening. When the school opens, there will be 68 positions funded, excluding grade-level teachers, to support the new facility. The instructional startup costs one year prior to HS#6 opening include the purchasing of textbooks, library books, and other instructional startup requirements. After the school has been open for one year, expect a noteworthy drop in operational funds to be observed as the result of all one-time startup items being purchased. HS#6 will be a LEED Silver, energy efficient building.

### **Location:**

The current location for HS 6 is to be determined.

### **Relationship to Approved County Policy or Plan:**

#### **Stafford County School Board's Strategic Plan:**

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

#### **Stafford County Comprehensive Plan:**

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

#### **Stafford County Board of Supervisors' Priorities (Education, Infrastructure)**

### **Analysis of Need:**

As Stafford county continues to grow in population, building this new high school will decrease overcrowding and also significantly improve quality of life and community development opportunities. The guidance to begin planning for a new high school in the CIP is when the aggregate high school enrollment projections are 90% of the aggregate high school design capacity. In Fall 2019, actual high school enrollment was 91.3% of the aggregate high school design capacity, which triggered the land acquisition phase for the planning of a new HS#6. The guidance on the opening year for a new high school in the CIP is when the aggregate high school enrollment projections are at 100% of the aggregate high school design capacity. Projections suggest that high school enrollment will exceed 100% of aggregate high school design capacity in Fall 2023. Temporary capacity solutions will be deployed to accommodate high school crowding until Fall 2025, when HS#6 is slated to open.

## High School 6

### Change or Reasons for Revisions:

**FY2016** – New project in CIP, open in FY2026; \$106.3M.

**FY2017** – Project moved from FY2026 to FY2028, updated construction cost; \$120.3M.

**FY2018** – No change

**FY2019** – Project moved from FY2028 to FY2026, project cost lowered at request of BOS; \$121.3M.

**FY2020** – No Change.

**FY2021** – Include cost for land of \$3.3M. Removed projected proffers of \$2.3M and revenue from the sale of Moncure Elementary School of \$6.3M. Added use of prior year fund balance of \$877,341.

**FY2022** – Updated Consultant Estimate applied to estimate. Included additional funding sources to reduce reliance on debt.

### Alternative:

The alternative to this project is overcrowding at the high school level as the student population increases with no additional capacity added.

## High School 6

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	2,000,000	5,456,135	200,000	621,000	450,000	0	0	0	0	0	0
Property Acquisition	3,300,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	0	37,600,000	46,800,000	23,384,000	1,000,000	0	0	0	0	0
Contingency	0	0	1,400,000	2,350,000	910,000	125,000	0	0	0	0	0
<b>Total Project Cost</b>	<b>\$5,300,000</b>	<b>\$5,456,135</b>	<b>\$39,200,000</b>	<b>\$49,771,000</b>	<b>\$24,744,000</b>	<b>\$1,125,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	4,422,659	0	36,200,000	49,771,000	20,767,322	1,125,000	0	0	0	0	0
Use of Prior Year Fund Balance General Fund	877,341	4,500,000	3,000,000	0	0	0	0	0	0	0	0
Proffers	0	0	0	0	3,976,678	0	0	0	0	0	0
Debt Service Savings		956,135									
<b>Total</b>	<b>\$5,300,000</b>	<b>\$5,456,135</b>	<b>\$39,200,000</b>	<b>\$49,771,000</b>	<b>\$24,744,000</b>	<b>\$1,125,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Personnel	0	0	0	418,000	5,652,000	5,765,000	5,880,000	5,998,000	6,118,000	6,240,000
Operating	0	0	0	1,136,000	1,681,000	1,123,000	1,146,000	1,169,000	1,192,000	1,216,000
Debt Service			2,905,000	6,899,000	8,565,000	8,655,000	8,655,000	8,655,000	8,655,000	8,655,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,905,000</b>	<b>\$8,453,000</b>	<b>\$15,898,000</b>	<b>\$15,543,000</b>	<b>\$15,681,000</b>	<b>\$15,822,000</b>	<b>\$15,965,000</b>	<b>\$16,111,000</b>

## Elementary School 18

Project Code		Square Footage/Acreage	107,500/20
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$220/sf + site work
Project Status	Planning	School Board Priority Number	2
Functional Area	Education	Student Capacity	964
Estimated Project Cost	\$52,472,000	Est. Opening Date	August 2026 (FY2027)
Current Year Cost	\$39,102,000	Funding Source	VPSA, Proffers
Debt Service (Ten year Period)		Years Financed	20
Full Year Operating Impact		Tax Rate Equivalent	

### Project Description:

Elementary School 18 (ES#18) is planned to house 964 students and serve grades kindergarten through fifth. ES#18 will be designed and constructed utilizing the most current Stafford County Public Schools elementary school education specifications and in accordance with the Stafford County Public Schools Facility Design Standards. This project includes the construction of the school building, all outbuildings, site development, all on-site road improvements, any necessary off-site road improvements, parking lots, stormwater management requirements and utilities. Planning and design requirements are included in the project cost, as are furniture, fixtures, equipment, technology infrastructure, and project management. Estimates do not include cost of land or acquisition thereof. Land acquisition team will need to advise on costs. Elementary School #18 will allow for transition space for ECSE prior to the completion of permanent ECSE space.

SCPS elementary school education specifications will be updated prior to the start of design, however, staff estimates the total square footage requirement to be at, or near, 107,500 square feet. We have used VDOE cost data to establish the cost estimate for the new school. The statewide average square footage costs over the past few years has been approximately \$219 a square foot for the building only. Site costs have been estimated at \$5,500,000 - which is the current VDOE state average.

### Operating Impact Summary:

The principal, librarian, office manager and accounting assistant I will be funded and hired one year prior to ES#18 opening. When the school opens, there will be 25 positions funded, excluding grade-level teachers, to support the new facility. The instructional startup costs one year prior to ES#18 opening include the purchasing of textbooks, library books, and other instructional startup requirements. After the school has been open for one year, expect a noteworthy drop in operational funds to be observed as the result of all one-time startup items being purchased. Estimated utilities are included in the operating costs.

## Elementary School 18

### Location:

The current location for additional elementary school capacity is to be determined.

### Relationship to Approved County Policy or Plan:

#### Stafford County School Board's Strategic Plan:

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

#### Stafford County Comprehensive Plan:

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

#### Stafford County Board of Supervisors' Priorities (Education, Infrastructure)

### Analysis of Need:

As Stafford county continues to grow in population, building this new elementary school will decrease overcrowding and also improve quality of life and community development opportunities. The guidance to begin planning for a new elementary school in the CIP is when the aggregate elementary school enrollment projections is at 90% of the aggregate elementary school design capacity. In Fall 2021, elementary school enrollment is projected to be above 90% of the aggregate elementary school design capacity. This milestone triggers the two year land acquisition and preliminary planning phases for a new ES#18, which should be completed in 2023. The typical construction period for a new elementary school is three years, which suggests ES#18 opening in August 2026. Projections also suggest that elementary school enrollment will exceed 100% of aggregate elementary school *program* capacity in Fall 2026.

### Change or Reasons for Revisions:

**FY2013** – New project in CIP, included Head Start, open FY2022; \$36.9M.

**FY2014** – Project moved from FY2022 to FY2023; \$37.9M.

**FY2015** – Change in scope, finalized site location; \$39.8M.

**FY2016** – Change in scope, Head Start removed, project moved from FY2023 to FY2028; \$32.3M.

**FY2017** – Change in scope, new elementary educational specification, \$38M.

**FY2018** – No change.

**FY2019** – Project cost updated, cost per square foot and escalation rate adjusted; \$50.9M.

**FY2020** – Removed from CIP.

**FY2021** – New Elementary School #18 added to CIP. Proposed to open when design capacity is at 100% in FY2024.

## Elementary School 18

**FY2022** –Project moved from FY2024 to FY2027; \$46.6M.

### Alternative:

The alternative to this project is overcrowding at the elementary school level as the student population increases with no additional capacity added.

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	0	1,700,000	900,000	900,000	591,000	0
Construction / Project	0	0	0	0	0	0	0	22,033,671	19,162,820	4,013,000	1,125,509
Contingency	0	0	0	0	0	0	0	1,000,000	1,046,000	0	0
<b>Total Project Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,700,000</b>	<b>\$23,933,671</b>	<b>\$21,108,820</b>	<b>\$4,604,000</b>	<b>\$1,125,509</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	0	0	1,700,000	23,933,671	17,137,946	802,726	1,125,509
Proffers	0	0	0	0	0	0	0	0	3,970,874	3,801,274	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,700,000</b>	<b>\$23,933,671</b>	<b>\$21,108,820</b>	<b>\$4,604,000</b>	<b>\$1,125,509</b>

The projected use of Proffers will depend on the final site location. Use of proffers displayed above are associated with Embrey Mill site.

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Personnel	0	0	0	0	0	0	0	0	410,000	2,112,000
Operating	0	0	0	0	0	0	0	0	1,003,000	968,000
Debt Service	0	0	0	0	0	0	136,000	2,056,000	3,490,092	3,557,263
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$136,000</b>	<b>\$2,056,000</b>	<b>\$4,903,092</b>	<b>\$6,637,263</b>

## Additional Middle School Capacity

Project Code		Square Footage/Acreage	148,000/50
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$230/sf + site work
Project Status	Planning	School Board Priority Number	5
Functional Area	Education	Student Capacity	1,100
Estimated Project Cost	\$79,327,790	Est. Opening Date	August 2029 (FY2030)
Current Year Cost	\$58,634,000	Funding Source	VP SA
Debt Service		Years Financed	20
Full Year Operating Impact		Tax Rate Equivalent	

### Project Description:

Additional middle school capacity is planned to house up to 1,100 students and serve grades sixth through eighth. Middle school capacity will be designed and constructed utilizing the most current Stafford County Public Schools middle school education specifications and in accordance with the Stafford County Public Schools Facility Design Standards. Facilities staff are reviewing the possibilities of either *constructing a new middle school* or *constructing additions at three existing middle school sites*.

The option for the new school project include the construction of the school building,, all outbuildings, site development, all on-site road improvements, any necessary off-site road improvements, parking lots, stormwater management requirements and utilities. Planning and design requirements are included in the project cost, as are furniture, fixtures, equipment, technology infrastructure, and project management. Estimates do not include cost of land or acquisition thereof.

SCPS middle school education specifications will be updated prior to the start of design, however, staff estimates the total square footage requirement to be at, or near, 147,000 square feet for the option of a new school building. Staff used VDOE school construction cost data to establish the cost estimate for a new school. The statewide average square footage costs over the past few years has been approximately \$228 a square foot for the building only. Site costs have been estimated at \$10,000,000.

A feasibility study will be performed to explore options for the classroom additions that allows for future revitalization to the existing facility that fulfills the educational requirements of students and staff, while also providing a cost effective, energy efficient, and safe facility to meet the future needs of the school.

## **Additional Middle School Capacity**

### **Operating Impact Summary:**

The principal, librarian, office manager, and an accounting assistant I will be funded and hired one year prior to MS#9 opening. When the school opens, there will be 34 positions funded, excluding grade-level teachers, to support the new facility. The instructional startup costs one year prior to MS#9 opening include the purchasing of textbooks, library books, and other instructional startup requirements. After the school has been open for one year, expect a noteworthy drop in operational funds to be observed as the result of all one-time startup items being purchased.

### **Location:**

The current location for Additional Middle School capacity is to be determined.

### **Relationship to Approved County Policy or Plan:**

#### **Stafford County School Board's Strategic Plan:**

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

#### **Stafford County Comprehensive Plan:**

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

#### **Stafford County Board of Supervisors' Priorities (Education, Infrastructure)**

### **Analysis of Need:**

Long-term projections for the 2029-30 school year predict there will be 8,133 middle school students enrolled, which is an increase of 947 more students (13.2%) over the next ten years. These projections also suggest that 62.5% of SCPS middle schools will have seat deficits. Heim, Poole, Stafford, Drew and Gayle middle schools are slated to have seat deficits.

### **Change or Reasons for Revisions:**

**FY2022** – New project in CIP, open in FY2029.



## Additional Middle School Capacity

### Alternative:

An alternative to constructing a new middle school is constructing classroom additions to existing middle school buildings (possibly at Heim, Poole, Stafford). Additions to existing middle school buildings provide an opportunity to avoid land costs for a new school site, avoid large scale boundary changes, and strategically place middle school seats exactly where they're needed.

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	0	2,060,000	3,000,000	1,500,000	75,000	0
Construction / Project	0	0	0	0	0	0	0	30,549,420	28,963,370	8,708,710	971,290
Contingency	0	0	0	0	0	0	0	2,000,000	1,500,000	0	0
<b>Total Project Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,060,000</b>	<b>\$35,549,420</b>	<b>\$31,963,370</b>	<b>\$8,783,710</b>	<b>\$971,290</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	0	0	2,060,000	35,549,420	31,963,370	8,783,710	971,290
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,060,000</b>	<b>\$35,549,420</b>	<b>\$31,963,370</b>	<b>\$8,783,710</b>	<b>\$971,290</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Personnel	0	0	0	0	0	0	0	0	447,000	3,425,000
Operating	0	0	0	0	0	0	0	0	1,129,000	1,086,000
Debt Service	0	0	0	0	0	0	165,000	3,018,000	5,583,000	6,288,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$165,000</b>	<b>\$3,018,000</b>	<b>\$7,159,000</b>	<b>\$10,799,000</b>

## North Stafford HS Fine Arts Wing

Project Code		Square Footage/Acreage	4,429 reno, 7,900 add.
Project Type	Building Additions	Construction Cost per Sq. Ft.	\$190/\$300
Project Status	Planning	School Board Priority Number	6
Functional Area	Education	Student Capacity	
Estimated Project Cost	\$7,013,000	Est. Opening Date	August 2029 (FY2030)
Current Year Cost	\$5,395,000	Funding Source	VPSA, Proffers
Debt Service	\$	Years Financed	20
Full Year Operating Impact	N/A	Tax Rate Equivalent	\$

### Project Description:

Renovate/Addition North Stafford HS, Fine Arts Wing will result in additional space to serve the fine arts community within this high school. The project addresses identified square footage and configuration deficiencies, allowing for more classrooms to better serve the student population attending North Stafford HS. These programs have instruments and various other storage needs, some of which are currently lacking in size or non-existent at North Stafford HS, and will be addressed by the renovation and addition.

The Fine Arts Wing at North Stafford High School (HS) is lacking in areas when compared to the county's other high schools. Currently, there are no spaces dedicated for use by Orchestra and there is only one drama classroom. This shortage is addressed by this project via constructing an addition sized at approximately 7,900 square feet to allow for the creation of an orchestra suite, drama classrooms, and other music and drama support spaces. Also part of this project is the renovation of the existing music suite, totaling 4,429 square feet. The renovation effort will increase parity between North Stafford and other Stafford County high schools by adding Wenger SoundLok practice rooms and reconfiguring the existing space in an orientation that better serves the various fine arts programs and their students. The existing drama and music support spaces may be rearranged for use as choral and band rooms, ADA-compliant restrooms, and various other rooms to meet the storage requirements of these programs. The auditorium would be impacted in this renovation effort by means of improving the control room, addressing the lack of piano storage, and reconfiguring the dressing rooms.

## **North Stafford HS Fine Arts Wing**

### **Operating Impact Summary:**

No additional operating impacts associated with this project.

### **Location:**

North Stafford High School is located at 839 Garrisonville Road, Stafford, VA 22554.

### **Relationship to Approved County Policy or Plan:**

#### **Stafford County School Board's Strategic Plan:**

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

#### **Stafford County Comprehensive Plan:**

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

#### **Stafford County Board of Supervisors' Priorities (Education, Infrastructure)**

### **Analysis of Need:**

Stafford County Public Schools (SCPS) staff initiated a study in 2017 to assess North Stafford High School's Fine Arts wing. This analysis examined band, chorus, drama, and orchestra spaces within the school and compared those spaces to the respective areas that exist at Stafford High School. Additionally, support spaces for practice and storage were studied and any shortages noted. North Stafford HS's auditorium and its supporting spaces, such as control rooms, dressing rooms, and storage rooms, were additionally compared to Stafford HS's spaces with deficits identified. This analysis yielded a deficiency of approximately 7,900 square feet that exists within North Stafford High School's Fine Arts Wing.

### **Change or Reasons for Revisions:**

**FY2021** – New project proposed in CIP.

**FY2021** – No change

**FY2022** – Included in the FY22-31 CIP

## North Stafford HS Fine Arts Wing

### Alternative:

The alternative to this project is the North Stafford High School Fine Arts Wing continues to lack square footage and features when compared to other Stafford County high schools.

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	0	0	150,000	250,000	134,000	0
Construction / Project	0	0	0	0	0	0	0	1,500,000	4,500,000	212,000	0
Contingency	0	0	0	0	0	0	0	133,500	133,500	0	0
<b>Total Project Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,783,500</b>	<b>\$4,883,500</b>	<b>\$346,000</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	0	0	0	1,783,500	4,233,500	346,000	0
Proffers	0	0	0	0	0	0	0	0	650,000	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,783,500</b>	<b>\$4,883,500</b>	<b>\$346,000</b>	<b>\$0</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	0	0	0	0	0	0	0	143,000	483,000	511,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$143,000</b>	<b>\$483,000</b>	<b>\$511,000</b>

## Drew Middle School Renovation/Addition

Project Code		Square Footage/Acreage	102,900/0
Project Type	Building Renovation	Construction Cost per Sq. Ft.	\$151/\$571 + site work
Project Status	Planning	School Board Priority Number	3
Functional Area	Education	Student Capacity	63/143
Estimated Project Cost	\$30,291,000	Est. Opening Date	August 2026 (FY2027)
Current Year Cost	\$22,306,000	Funding Source	VPSA, Proffers
Debt Service (Ten Year Period)		Years Financed	20
Full Year Operating Impact	N/A	Tax Rate Equivalent	

### Project Description:

This project is the renovation of Edward E. Drew, Jr. Middle School (MS). Drew MS, originally constructed in 1951, is located on a 15.3-acre site. There have been additions built onto the original building. The project scope includes renovating the entire building, 98,900 square feet. This project is currently planned to include the upgrading and modernization of the following systems: ADA accessibility, electrical, fire alarm, fire suppression sprinklers, HVAC, life safety, and plumbing. The renovation will thus improve regulatory code compliance and safety for students and faculty. Additionally, architectural items such as floors, finishes (ceiling & painting) are included in the scope. A 4,000 square foot addition is planned for this project to address space deficiencies at the school. The school will continue to operate a package wastewater and water treatment plant.

Drew MS renovation and additions will be designed and constructed in accordance with the most current middle school education specifications and in conjunction with the Stafford County Public Schools Facility Design Standards. Planning, design, equipment, project management, and technology infrastructure, are included in the project cost. A professional cost estimator has been used to estimate this project.

Possible scenarios to add capacity at Drew MS include relocating the Day School Program (from Drew) to another location, which would add 4 more classrooms or 84 more seats to the capacity of Drew MS. Additional capacity is included in the proposed project. When the music addition is constructed, it will free up 3 classrooms for core instructional use, which adds 63 more seats to the capacity at Drew MS.

### Operating Impact Summary:

Some facilities infrastructure costs (such as repair costs and energy usage costs) will be reduced as a result of system modernizations. This project will result in the entire school building being more energy efficient than the current facility. Space within the school will better align with educational specifications, and ADA

## **Drew Middle School Renovation/Addition**

accessibility entering and traversing within the school facility will be improved. No additional personnel and operating costs will be associated with this renovation and addition project.

### **Location:**

Drew Middle School is located at 501 Cambridge Street, Fredericksburg, VA 22405.

### **Relationship to Approved County Policy or Plan:**

#### **Stafford County School Board's Strategic Plan:**

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

#### **Stafford County Comprehensive Plan:**

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

#### **Stafford County Board of Supervisors' Priorities (Education, Infrastructure)**

### **Analysis of Need:**

Modernizing the Drew MS outdated infrastructure will improve safety and overall quality of life for the school community. A facility condition assessment for Drew MS was complete in May 2008 and was updated in 2017. This assessment of the school's condition showed a significant level of investment needed by FY2028 (\$15M in today's cost). This level of investment, when escalated, exceeds the industry standard of 75% replacement value and therefore merits consideration of a rebuild. However, the school division currently does not plan to relocate the school to another site and feels the current site is too small to rebuild on the existing campus with the school open. Rebuilding a school on the same site while the existing school remains used consumes an exorbitant amount of space because two schools essentially have to be created on the same piece of property. In this case, it does not seem feasible for this to occur at Drew MS. In addition to the condition of this school, program deficiencies exist at this facility.

[illegible]

## Early Childhood Special Education Addition

Project Code		Square Footage/Acreage	15,258/0
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$275 + site work
Project Status	Planning	School Board Priority Number	4
Functional Area	Education	Student Capacity	80
Estimated Project Cost	\$9,988,000	Est. Opening Date	August 2026 (FY2027)
Current Year Cost	\$7,032,000	Funding Source	VPSA
Debt Service	\$	Years Financed	20
Full Year Operating Impact	N/A	Tax Rate Equivalent	\$

### Project Description:

Early childhood students are housed at two centers within Stafford County that are primarily focused on accommodating early childhood special education and head start students. The northern campus is North Star Early Education Center (formerly known as Fredericksburg Christian School, Stafford Campus) in Stafford, while the southern campus is located at the Gari Melchers Complex in Fredericksburg. The project consists of new construction to house ten classrooms, with restrooms, specifically designed for early childhood special education, supporting space, site work, project management, furniture, fixtures, equipment, and technology infrastructure.

### Operating Impact Summary:

This new facility will be subjected to SCPS' standard maintenance and operation costs, to include custodial support, internal and external preventative maintenance, and utility costs.

### Location:

The current location for the additional early childhood special education capacity is to be determined.



## **Early Childhood Special Education Addition, Phase I**

### **Operating Impact Summary:**

This new facility will be subjected to SCPS' standard maintenance and operation costs, to include custodial support, internal and external preventative maintenance and utility costs.

### **Location:**

The current location for the additional early childhood special education capacity is to be determined.

### **Relationship to Approved County Policy or Plan:**

#### **Stafford County School Board's Strategic Plan:**

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

#### **Stafford County Comprehensive Plan:**

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

#### **Stafford County Board of Supervisors' Priorities (Education, Infrastructure)**

### **Analysis of Need:**

The early childhood special education (ECSE) student population is expected to grow at a rate of 5% annually, which equates to approximately two additional ECSE classrooms per year. The basis of this projected growth rate is the concatenation of multiple data sources, including the Virginia Department of Education (3.8-4.7%), the Department of Behavioral Health and Development Services (5%), and the Parent Education-Infant Development (PE-ID) Region 3 staff (5%). These projects are in line with growth experienced within SCPS since 2013.

With North Star Early Childhood Education Center opening near full capacity, this project plans to address the expected continuous ECSE growth by providing additional classrooms outside of elementary schools. When ECSE programs are placed within elementary schools, the program(s) occupy classrooms that would otherwise be available to serve the elementary population. This reduces the capacity at elementary schools where ECSE programs are housed.

### **Change or Reasons for Revisions:**

**FY2020** – New project proposed in CIP.

**FY2021** – Added to CIP based on School Boards requested opening date.

**FY2022** – No change.

## Early Childhood Special Education Addition, Phase I

### Alternative:

One alternative to this project is ECSE program placement within the available classroom space at another existing elementary school. A second alternative is to add ECSE seats to ES#18 project, which could reduce the total combined cost for both large capital projects. A combination of both alternatives could also be used as a cost effective way to gain more ECSE seating capacity.

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	0	0	0	0	0	1,000,000
Construction / Project	0	0	0	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,000,000</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	0	0	0	0	0	0	1,000,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,000,000</b>

Operating Impacts	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Operating	0	0	0	0	21,000	21,000	22,000	22,000	22,000	23,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$21,000</b>	<b>\$21,000</b>	<b>\$22,000</b>	<b>\$22,000</b>	<b>\$22,000</b>	<b>\$23,000</b>

**Utilities**

Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
Water	8,146,405	9,430,000	13,115,000	12,738,000	10,080,000	10,696,200	10,005,800	6,500,000	10,750,000	7,070,000	6,410,000	56,059,200	40,735,800	104,941,405
Waste Water	12,192,500	21,574,700	27,729,700	6,441,300	6,005,000	2,751,000	10,436,000	10,062,000	10,800,000	8,600,000	2,600,000	64,501,700	42,498,000	119,192,200
Other	1,820,000	1,426,000	1,597,260	1,036,465	1,015,750	1,032,260	1,718,690	1,254,600	1,400,000	1,156,000	6,985,000	6,107,735	12,514,290	20,442,025
<b>Total Expenditures</b>	<b>\$22,158,905</b>	<b>\$32,430,700</b>	<b>\$42,441,960</b>	<b>\$20,215,765</b>	<b>\$17,100,750</b>	<b>\$14,479,460</b>	<b>\$22,160,490</b>	<b>\$17,816,600</b>	<b>\$22,950,000</b>	<b>\$16,826,000</b>	<b>\$15,995,000</b>	<b>\$126,668,635</b>	<b>\$95,748,090</b>	<b>\$244,575,630</b>

Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
Bond Proceeds	4,300,000	0	25,955,000	5,390,000	0	0	4,500,000	4,500,000	6,000,000	6,000,000	0	31,345,000	21,000,000	56,645,000
Use of Prior Year Fund Balance - Utilities Fund	0	15,700,000	0	0	0	0	0	0	0	0	0	15,700,000	0	15,700,000
Regional Contributions	0	0	0	0	0	0	0	0	3,100,000	0	0	0	3,100,000	3,100,000
Cash Funding	17,858,905	16,730,700	16,486,960	14,825,765	17,100,750	14,479,460	17,660,490	13,316,600	13,850,000	10,826,000	15,995,000	79,623,635	71,648,090	169,130,630
<b>Total Revenues</b>	<b>\$22,158,905</b>	<b>\$32,430,700</b>	<b>\$42,441,960</b>	<b>\$20,215,765</b>	<b>\$17,100,750</b>	<b>\$14,479,460</b>	<b>\$22,160,490</b>	<b>\$17,816,600</b>	<b>\$22,950,000</b>	<b>\$16,826,000</b>	<b>\$15,995,000</b>	<b>\$126,668,635</b>	<b>\$95,748,090</b>	<b>\$244,575,630</b>

## CAPITAL IMPROVEMENT PROGRAM

## FY2022 Adopted Budget

## Utilities

Water Project Expenditures:	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
310-10 Construct 24" main from I-95 to 12" main along Jefferson Davis Highway near Sunnyside Drive	0	0	0	0	0	251,000	1,199,000	0	0	0	0	251,000	1,199,000	1,450,000
342-01 24" Main from Olde Forge Drive to Cambridge Street	0	0	610,000	5,390,000	0	0	0	0	0	0	0	6,000,000	0	6,000,000
342-02 24" Main from Cambridge Street to Cool Springs Road	0	0	0	420,000	4,580,000	0	0	0	0	0	0	5,000,000	0	5,000,000
342-05.5 24" Water Transmission Main Kelley Road to Beagle Lane	0	150,000	0	1,100,000	0	0	0	0	0	0	0	1,250,000	0	1,250,000
342-06 - 24" Main from Truslow Road/I-95 to Enon Road Water Tank	4,300,000	2,000,000	0	0	0	0	0	0	0	0	0	2,000,000	0	6,300,000
342-15 24" Main from Enon Road Tank to Centreport Parkway	100,000	375,000	4,455,000	0	0	0	0	0	0	0	0	4,830,000	0	4,930,000
433-05 16" Main along Courthouse Road from PS at 433/370 Zone to Rollinswood Lane	0	0	0	0	0	0	0	0	0	970,000	0	0	970,000	970,000
472-100 - Construct 0.5 Million Gallon Storage Tank along Garrisonville Road near Ripley Road	0	0	0	0	0	145,200	1,306,800	0	0	0	0	145,200	1,306,800	1,452,000
472-200 Construct 0.9 MGD pumping station along Mountain View Road near Lightfoot Road	0	0	0	0	0	0	0	0	0	0	310,000	0	310,000	310,000
480-01 Construct 16" main from the existing 16" main at Celebrate VA Tank to the existing 12" main at Jewett Lane and Celebrate Virginia Parkway	0	0	0	418,000	0	0	0	0	0	0	0	418,000	0	418,000
480-02 Construct 16" main to connect existing 12" main at CVA Parkway under US 17 to existing 12" main at Warrenton Road and International Parkway	0	0	0	535,000	0	0	0	0	0	0	0	535,000	0	535,000
Hydrant Valves Replacement Program	100,000	140,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	1,340,000	1,500,000	2,940,000
I-95 Fred Ex 16-inch American Legion Road Water Main	0	1,125,000	0	0	0	0	0	0	0	0	0	1,125,000	0	1,125,000
Lake Mooney Additional Modules for Interconnection	0	0	250,000	275,000	0	0	0	0	0	0	0	525,000	0	525,000
LMWTP-007 - Lake Mooney WTP Replace membrane cassettes	0	0	0	0	0	0	1,500,000	0	0	0	0	0	1,500,000	1,500,000
Redundant Gate Replacement for Abel Lake and Smith Lake	160,000	140,000	0	0	0	0	0	0	0	0	0	140,000	0	300,000
Regional Water Interconnection	0	0	0	0	0	0	0	450,000	4,650,000	0	0	0	5,100,000	5,100,000
SLWTP-001 Smith Lake WTP - Filter Repairs	0	0	0	0	300,000	4,350,000	0	0	0	0	0	4,650,000	0	4,650,000

# CAPITAL IMPROVEMENT PROGRAM

## FY2022 Adopted Budget

Water Project Expenditures:	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
SLWTP-002 Smith Lake WTP - Facility Upgrades	0	400,000	2,700,000	0	0	0	0	0	0	0	0	3,100,000	0	3,100,000
Tank Removal	0	100,000	0	0	0	0	0	0	0	0	0	100,000	0	100,000
Water Distribution Rehab - Neighborhood Systems	1,686,405	2,500,000	2,500,000	1,950,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	11,950,000	12,500,000	26,136,405
Water Distribution Rehab - Small Water Projects	300,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000	550,000	550,000	1,550,000	2,600,000	4,450,000
Water Distribution Rehab - Transmission Lines Replacement	1,500,000	1,000,000	1,300,000	1,300,000	1,300,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	6,900,000	10,000,000	18,400,000
Water Storage Tank Maintenance and Painting Program	0	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	2,500,000	2,500,000	5,000,000
Water System Supervisory Control and Data Acquisition	0	0	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	1,000,000	1,250,000	2,250,000
West Lake Water 12-Inch Parallel Water Main	0	750,000	0	0	0	0	0	0	0	0	0	750,000	0	750,000
<b>Total</b>	<b>\$8,146,405</b>	<b>\$9,430,000</b>	<b>\$13,115,000</b>	<b>\$12,738,000</b>	<b>\$10,080,000</b>	<b>\$10,696,200</b>	<b>\$10,005,800</b>	<b>\$6,500,000</b>	<b>\$10,750,000</b>	<b>\$7,070,000</b>	<b>\$6,410,000</b>	<b>\$56,059,200</b>	<b>\$40,735,800</b>	<b>\$104,941,405</b>

## Utilities: Water Main Installation: 310-10 Construct 24" main from I-95 to 12" main along Jefferson Davis Highway near Sunnyside Drive

Project Code	BHC029		
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07-2025 to 06-2027
Total Project Cost	\$1,450,000		
Functional Area	Utilities	Length of Pipeline	2,120
Debt Service (Ten Year Period)	\$0	Construction Cost per LF.	\$683
Full Year Operating Impact	No Additional Operating Costs		

### Project Description:

This project (310-10) includes design and construction of a 24" water main from I-95 to the 12" water main along Jefferson Davis Highway (RT 1) near Sunnyside Drive (2,120 feet).

### Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

### Location:

From I-95 to the 12-inch main along Jefferson Davis Highway near Sunnyside Drive (2,120 feet)

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: Water Main Installation: 310-10 Construct 24" main from I-95 to 12" main along Jefferson Davis Highway near Sunnyside Drive

### Analysis of Need:

The purpose of this project is to increase redundant transmission capacity from Smith Lake WTP to the 12-inch mains along Jefferson Davis Highway to improve flows to customers along the Jefferson Davis Highway corridor.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: No changes

FY2022: Changed project timing. Design changed from FY 2022 to FY2026. Construction changed from FY 2023 to FY 2027. Design cost changed from \$235,000 to \$251,000. Construction cost changed from \$917,000 to \$1,199,000.

### Alternative:

If the project is not constructed there will be insufficient water transmission capability.

### Project Cost Estimate:

500 feet of 36-inch casing pipe across I-95	at \$900/ft	\$ 450,000
100 feet of stream crossing	at \$650/ft	\$ 65,000
1,520 feet of 24-inch pipe	at \$450/ft	<u>\$ 684,000</u>
Total Construction		\$1,199,000
Design and Contingency		<u>\$ 251,000</u>
Total Project		\$1,450,000

## Project Summary:

[illegible]



**Utilities: Water Main Installation: 342-01 24" Main from Olde Forge Drive to Cambridge Street**

Project Code	BHC030		
Project Type	Utilities, Water		
Project Status	Planning	Est. Opening Date	07-2022 to 06-2024
Total Project Cost	\$6,000,000		
Functional Area	Utilities	Length of Pipeline	8,200'
Debt Service (Ten Year Period)	\$3,157,000	Construction Cost per LF.	\$730
Full Year Operating Impact	No Additional Operating Costs	Pro Rata Water Zone	342 – Falmouth (100%)

**Project Description:**

This project (342-01) involves design and construction of a 24" water main from Olde Forge Drive to Cambridge Street.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed from Old Forge Drive through undeveloped property passing near Belmont; then connecting with existing water distribution mains near Cambridge Street.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: Water Main Installation: 342-01 24" Main from Olde Forge Drive to Cambridge Street

### Analysis of Need:

This transmission main is necessary to convey water to the southeastern portion of the 342 Pressure Zone as water demands increase through the planning period.

### Change or Reasons for Revisions:

FY 2020: This project has been reconfigured to better reflect the intent and content of the Adopted 2018 Water and Sewer Master Plan.

FY 2021: No changes

FY 2022: Changed project timing. Design changed from FY22 to FY23. Construction changed from FY22 to FY24

### Alternative:

If the project is not constructed there will be insufficient water transmission capability.

### Project Cost Estimate:

1,500 feet of 36-inch casing pipe	at \$900/ft	\$1,350,000
400 feet of stream crossing	at \$650/ft	\$ 260,000
6,300 feet of 24-inch pipe	at \$600/ft	<u>\$3,780,000</u>
Total Construction		\$5,390,000
Design and Contingency		<u>\$ 610,000</u>
Total Project		\$6,000,000

## Utilities: Water Main Installation: 342-01 24" Main from Olde Forge Drive to Cambridge Street

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	610,000	0	0	0	0	0	0	0	0
Construction / Project	0	0	0	5,390,000	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$610,000	\$5,390,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	5,390,000	0	0	0	0	0	0	0
Pro Rata	0	0	610,000	0	0	0	0	0	0	0	0
<b>Total</b>	\$0	\$0	\$610,000	\$5,390,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	0	0	0	0	451,000	451,000	451,000	451,000	451,000	451,000	451,000
<b>Total</b>	\$0	\$0	\$0	\$0	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000

Project expenditures are eligible for 100% pro rata reimbursements.

**Utilities: 342-02 24" Main from Cambridge Street to Cool Springs Road**

Project Code	BHC031	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07-2023 to 06-2025
Total Project Cost	\$5,000,000		
Functional Area	Utilities	Length of Pipeline	7,100'
Debt Service (Ten Year Period)	\$0	Construction Cost per LF.	\$700
Full Year Operating Impact	No Additional Operating Costs	Pro Rata Water Zone	342 – Aquia (100%)

**Project Description:**

This project (342-02) involves design and construction of a 24" water main from Cambridge Street to Cool Springs Road.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed from Cambridge Street along the Rappahannock River, through Saint Claire Brooks Park to Cool Springs Road.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

**Analysis of Need:**

This transmission main is necessary to convey water to the southeastern portion of the 342 Pressure Zone as water demands increase through the planning period.

**Utilities: 342-02 24" Main from Cambridge Street to Cool Springs Road****Change or Reasons for Revisions:**

FY2020: This project has been reconfigured to better reflect the intent and content of the Adopted 2018 Water and Sewer Master Plan.

FY2021: No changes

FY2022: Changed project timing. Design changed from FY23 to FY24. Construction changed from FY23 to FY25.

**Alternative:**

If the project is not constructed there will be insufficient water transmission capability.

**Project Cost Estimate:**

1,000 feet of 36-inch casing pipe	at \$900/ft	\$ 900,000
400 feet of stream crossing	at \$650/ft	\$ 260,000
5,700 feet of 24-inch pipe	at \$600/ft	<u>\$3,420,000</u>
Total Construction		\$4,580,000
Design and Contingency		<u>\$ 420,000</u>
Total Project		\$5,000,000

## Utilities: 342-02 24" Main from Cambridge Street to Cool Springs Road

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	420,000	0	0	0	0	0	0	0
Construction / Project	0	0	0	0	4,580,000	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$0	\$420,000	\$4,580,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pro Rata	0	0	0	420,000	4,580,000	0	0	0	0	0	0
<b>Total</b>	\$0	\$0	\$0	\$420,000	\$4,580,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements.

**Utilities: 342-05.5 24" Water Transmission Main Kelley Road to Beagle Road**

Project Code	BHC072	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 06/2024
Total Project Cost	\$1,250,000		
Functional Area	Utilities	Length of Pipeline, feet	2,500
Debt Service (Ten Year Period)	\$0	Construction Cost per LF.	\$500
Full Year Operating Impact			

**Project Description:**

This project consists of the installation of 2,500 feet of 24-inch water main to connect two segment of the 342-05 project to make a contiguous water main from Route 17, north to Truslow Road. The main in this project would run from Kelley Road to Beagle Road.

**Operating Impact Summary:**

This project has minimal operating costs such as electricity, periodic maintenance, and chemicals. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed from Kelley Road to Beagle Road to connect two segments of water main constructed in the 342-05 project.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted General Water and Sewer Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

**Utilities: 342-05.5 24" Water Transmission Main Kelley Road to Beagle Road****Analysis of Need:**

This pipeline will be needed when infrastructure along the north-south transmission corridor between Lake Mooney and Smith Lake Water Treatment Plants is more completely in service. The pipe will be part of the network assuring that water can be conveyed between the north and south service areas as conditions may require.

**Change or Reasons for Revisions:**

FY2022: New project needed to connect a prior project and to increase transmission capacity. Added \$1,250,000 in the FY22 to FY24 time frame

**Alternative:**

The water treatment plant service areas will have limited capacity to transmit flow between the north and south areas of water service. An outage of service at one plant may cause water shortages.

**Project Cost Estimate:**

200 feet of 36-inch casing pipe	at \$900/ft	\$ 180,000
2,300 feet of 24-inch pipe	at \$400/ft	<u>\$ 920,000</u>
Total Construction		\$1,100,000
Design and Contingency		<u>\$ 150,000</u>
Total Project		\$1,250,000



**FY2022 Adopted Budget**

## Project Summary:

[illegible]

**Utilities: 342-06 24" Main from Truslow Road/I-95 to Enon Road Water Tank**

Project Code	BHC026	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2019 to 06/2022
Total Project Cost	\$6,300,000		
Functional Area	Utilities	Length of Pipeline	8,400'
Debt Service (Ten Year Period)	\$2,880,000	Construction Cost per LF.	\$690
Full Year Operating Impact	No Additional Operating Costs	Pro Rata Water Zone	342 – Falmouth (100%)

**Project Description:**

This project (342-06) involves design and construction of a 24" main from Truslow Road /I-95 to the Enon Road Water Storage Tank.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed from the northern end of the 342-05 project (Truslow Road at I-95), across I-95 and through undeveloped land to the Enon Road Water Storage Tank (342-101).

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: 342-06 24" Main from Truslow Road/I-95 to Enon Road Water Tank

### Analysis of Need:

The purpose of the project is to convey flows from the 30" main connecting Lake Mooney WTP to the northern section of the 342 Pressure Zone. This project is in conjunction with the Enon Road Elevated Water Storage Tank (342-101) and will serve the 342 Pressure Zone and the expected/desired growth in the Centreport/Airport Area.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: Revised cost estimate.

FY2022: Extended construction of project timing and increased budget by \$2,000,000 in consideration of engineer's design phase estimates. Cost increases are a product of final design details, inflation and the requirements for crossing I-95.

### Alternative:

If the project is not constructed there will be insufficient water transmission capability.

### Project Cost Estimate:

1,500 feet of 36-inch casing pipe	at \$900/ft	\$1,350,000
6,900 feet of 24-inch pipe	at \$600/ft	<u>\$4,140,000</u>
Total Construction		\$5,490,000
Design and Contingency		<u>\$ 810,000</u>
Total Project		\$6,300,000

## Utilities: 342-06 24" Main from Truslow Road/I-95 to Enon Road Water Tank

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	300,000	510,000	0	0	0	0	0	0	0	0	0
Construction / Project	4,000,000	1,490,000	0	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	<b>\$4,300,000</b>	<b>\$2,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	4,300,000	0	0	0	0	0	0	0	0	0	0
Pro Rata	0	2,000,000	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>\$4,300,000</b>	<b>\$2,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service	\$0	0	0	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$360,000</b>	<b>\$360,000</b>	<b>\$360,000</b>	<b>\$360,000</b>	<b>\$360,000</b>	<b>\$360,000</b>	<b>\$360,000</b>	<b>\$360,000</b>

Project expenditures are eligible for 100% pro rata reimbursements.

**Utilities: 342-15 24" Main from Enon Road Tank to Centreport Parkway**

Project Code	BHC027		
Project Type	Utilities, Water		
Project Status	Planning	Est. Opening Date	06/2024
Total Project Cost	\$4,930,000		
Functional Area	Utilities	Length of Pipeline	8,800'
Debt Service (Ten Year Period)	\$2,984,000	Construction Cost per LF.	\$553
Full Year Operating Impact	No Additional Operating Costs	Pro Rata Water Zone	342 – Falmouth (100%)

**Project Description:**

This project (342-15) involves design and construction of a 24 inch main from the Enon Road Water Storage Tank to Centreport Parkway.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed from the Enon Road Elevated Water Storage Tank, along Hulls Chapel Road, then along Morewood Lane, through Lake Estates to Mountain View Road/Centreport Parkway.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: 342-15 24" Main from Enon Road Tank to Centreport Parkway

### Analysis of Need:

This transmission main is necessary to convey water to the northern portion of the 342 Pressure Zone as water demands increase through the planning period. This transmission main will serve the pressure zone as well as convey emergency water needed in the northern part of the County in the event of water system failures. This transmission main is also critical for the expected and desired growth in the Centreport/Airport Area.

### Change or Reasons for Revisions:

FY2020: This project was changed from 342-15, 16 to 342-15 as the Adopted Water and Sewer Master Plan combined them into one project to be called 342-15.

FY2021: Fund timing changed. \$100,000 used in FY2020, \$100,000 moved from FY2020 to FY2021 (design), \$3,900,000 moved from FY2020 to FY2022 (construction).

FY2022: Added \$275,000 in FY22 for design. Added \$630,000 in FY23 for construction.

### Alternative:

If the project is not constructed there will be insufficient water transmission capability.

### Project Cost Estimate:

200 feet of 36-inch casing pipe	at \$900/ft	\$ 180,000
500 feet of stream crossing	at \$650/ft	\$ 325,000
8,100 feet of 24-inch pipe	at \$500/ft	<u>\$4,050,000</u>
Total Construction (includes \$100,000 spent prior years)		\$4,555,000
Design and Contingency		<u>\$ 375,000</u>
Total Project		\$4,930,000

## Utilities: 342-15 24" Main from Enon Road Tank to Centreport Parkway

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	100,000	375,000	0	0	0	0	0	0	0	0	0
Construction / Project	0	0	4,455,000	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$100,000	\$375,000	\$4,455,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	4,455,000	0	0	0	0	0	0	0	0
Pro Rata	100,000	375,000	0	0	0	0	0	0	0	0	0
<b>Total</b>	\$100,000	\$375,000	\$4,455,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Debt Service		0	0	373,000	373,000	373,000	373,000	373,000	373,000	373,000	373,000
<b>Total</b>	\$0	\$0	\$0	\$373,000	\$373,000	\$373,000	\$373,000	\$373,000	\$373,000	\$373,000	\$373,000

Project expenditures are eligible for 100% pro rata reimbursements.

## Utilities: 433-05 16" Main Construction along Courthouse Road from PS at 433/370 Zone to Rollinswood Lane

Project Code	BHC033	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2029 to 06/2030
Total Project Cost	\$970,000		
Functional Area	Utilities	Length of Pipeline	2,720'
Debt Service (Ten Year Period)	\$0	Construction Cost per LF.	\$342
Full Year Operating Impact	No Additional Operating Costs	Pro Rata Water Zone	433 – Garrisonville (100%)

### Project Description:

This project (433-05) includes design and construction of a 16 inch water main along Courthouse Road from the pump station located at the 433/370N Zone boundary to Rollinswood Lane.

### Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

### Location:

The project will be constructed along Courthouse Road from the pump station located at the 433/370 Pressure Zone Boundary and connecting to an existing 12 inch water main at Rollinswood Lane.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.



## Utilities: 433-05 16" Main Construction along Courthouse Road from PS at 433/370 Zone to Rollinswood Lane

### Analysis of Need:

The purpose of the project is to provide flow from the pumping station to the 12 inch mains on Courthouse Road, Danielle Way, and Ramoth Church Road. This pumping station will provide a second source of supply to the 433 Zone and utilize the transmission system in the southern portion of the 433 Zone to deliver flow to the customers in the southern portion of the 433 Zone and to the 472 Zone.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: No changes

FY2022: Moved project from FY28 to FY30 and increased budget from \$793,000 to \$970,000.

### Alternative:

If the project is not constructed there will be insufficient water transmission capability.

### Project Cost Estimate:

200 feet of 30-inch casing pipe	at \$750/ft	\$150,000
400 feet of stream crossing	at \$400/ft	\$160,000
2,120 feet of 16-inch pipe	at \$250/ft	<u>\$530,000</u>
Total Construction		\$840,000
Design and Contingency		<u>\$130,000</u>
Total Project		\$970,000

## CAPITAL IMPROVEMENT PROGRAM

FY2022 Adopted Budget

### Utilities: 433-05 16" Main Construction along Courthouse Road from PS at 433/370 Zone to Rollinswood Lane

#### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	0	0	0	0	130,000	0
Construction / Project	0	0	0	0	0	0	0	0	0	840,000	0
<b>Total Project Cost</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$970,000	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pro Rata	0	0	0	0	0	0	0	0	0	970,000	0
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$970,000	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements.

## Utilities: 472-100 - Construct 0.5 Million Gallon Storage Tank along Garrisonville Road near Ripley Road

Project Code	BHC036	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	01/2026 to 12/ 2027
Total Project Cost	\$1,452,000		
Functional Area	Utilities	Volume of Tank	500,000 Gal
Debt Service (Ten Year Period)	\$0	Construction Cost per Gallon	\$2.90
Full Year Operating Impact		Pro Rata Water Zone	472 – Garrisonville (100%)

### Project Description:

This project (472-100) includes design and construction of a 500,000 gallon elevated water storage tank.

### Operating Impact Summary:

This project has minimal operating costs such as electricity and fuel for the emergency generator. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

### Location:

The project will be constructed along Garrisonville Road in the area of Ripley Lane.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan

### Analysis of Need:

This tank will provide water storage to the northern portion of the 472 Pressure Zone.

**Utilities: 472-100 - Construct 0.5 Million Gallon Storage Tank along Garrisonville Road near Ripley Road****Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: Changed project timing. Design changed from FY24 to FY26. Construction changed from FY25 to FY27.

**Alternative:**

If the project is not constructed there will be insufficient water transmission capability.

**Project Cost Estimate:**

0.5 MG Tank	at \$2.00/gallon	\$1,000,000
Site Work	LS	<u>\$ 306,800</u>
Total Construction		\$1,306,800
Design and Contingency		<u>\$ 145,200</u>
Total Project		\$1,452,000

## Utilities: 472-100 - Construct 0.5 Million Gallon Storage Tank along Garrisonville Road near Ripley Road

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	145,200	0	0	0	0	0
Construction / Project	0	0	0	0	0	0	1,306,800	0	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$0	\$0	\$0	\$145,200	\$1,306,800	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pro Rata	0	0	0	0	0	145,200	1,306,800	0	0	0	0
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$145,200	\$1,306,800	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements.

**Utilities: 472-200 Construct 0.9 MGD Pumping Station along Mountain View Road near Lightfoot Road**

Project Code	BHC037	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2030 to 12/2031
Total Project Cost	\$310,000		
Functional Area	Utilities	Volume of Pumping Station	0.9 MGD
Debt Service (Ten Year Period)	\$0	Construction Cost per MGD	\$345,000
Full Year Operating Impact		Pro Rata Water Zone	472 – Garrisonville (100%)

**Project Description:**

This project (472-200) includes the design and construction of a 0.9 million gallons a day (MGD) water booster pump station.

**Operating Impact Summary:**

This project has minimal operating costs such as electricity and fuel for the emergency generator. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed along Mountain View Road in the area of Lightfoot Road.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## **Utilities: 472-200 Construct 0.9 MGD Pumping Station along Mountain View Road near Lightfoot Road**

### **Analysis of Need:**

This booster pump station will provide water into elevated storage areas in the northern portion of the 472 Pressure Zone. This is needed as demand rises in the pressure zone.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: Changed project timing from FY27 to FY31. Budget increased from \$292,000 to \$310,000.

### **Alternative:**

If the project is not constructed there will be insufficient water transmission capability.

### **Project Cost Estimate:**

There is no Formal Project Cost Estimate

**Utilities: 472-200 Construct 0.9 MGD Pumping Station along Mountain View Road near Lightfoot Road****Project Summary:**

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	0	0	0	0	0	30,000
Construction / Project	0	0	0	0	0	0	0	0	0	0	280,000
<b>Total Project Cost</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$310,000

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pro Rata	0	0	0	0	0	0	0	0	0	0	310,000
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$310,000

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements.



## Utilities: 480-01 Construct 16" main from the existing 16" main at Celebrate VA Tank to the existing 12" main at Jewett Lane and Celebrate Virginia Parkway

Project Code	BHC034	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2023 to 06/2024
Total Project Cost	\$418,000		
Functional Area	Utilities	Length of Pipeline	600'
Total Debt Service		Construction Cost per LF.	\$697
Full Year Operating Impact			

### Project Description:

This project (480-01) includes the design and construction of 600 feet of a 16 inch water main.

### Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

### Location:

The project will be constructed from an existing 16 inch water main at Celebrate Virginia Water Storage Tank along Jewett Lane to an existing 12 inch water main at Celebrate Virginia Parkway.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: 480-01 Construct 16" main from the existing 16" main at Celebrate VA Tank to the existing 12" main at Jewett Lane and Celebrate Virginia Parkway

### Analysis of Need:

This water line will provide additional flow and pressure as demands along Warrenton Road increases.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: No changes

FY2022: Changed project timing from FY23 to the FY24 calendar.

### Alternative:

If the project is not constructed there will be insufficient water transmission capability.

### Project Cost Estimate:

100 feet of 30-inch casing	at \$850/ft	\$ 85,000
100 feet of stream crossing	at \$600/ft	\$ 60,000
400 feet of 16-inch pipe	at \$560/ft	<u>\$224,000</u>
Total Construction		\$369,000
Design and Contingency		<u>\$ 49,000</u>
Total Project		\$418,000

**FY2022 Adopted Budget**

## Project Summary:

[illegible]

## Utilities: 480-02 Construct 16" main to connect existing 12" main at CVA Parkway under US 17 to existing 12" main at Warrenton Road and International Parkway

Project Code	BHC035	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2023 to 12/2024
Total Project Cost	\$535,000		
Functional Area	Utilities	Length of Pipeline	500'
Total Debt Service		Construction Cost per LF.	\$1,070
Full Year Operating Impact			

### Project Description:

This project (480-02) includes the design and construction of 500 feet of a 16 inch water main.

### Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

### Location:

The project will be constructed from an existing 12 inch main at Celebrate Virginia Parkway and Warrenton Road, under Warrenton Road, and connect to an existing 12 inch main at International Parkway.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: 480-02 Construct 16" main to connect existing 12" main at CVA Parkway under US 17 to existing 12" main at Warrenton Road and International Parkway

### Analysis of Need:

This water main will provide additional flow and pressure as demands along Warrenton Road increase.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: No changes

FY2022: No changes

### Alternative:

If the project is not constructed there will be insufficient water transmission capability.

### Project Cost Estimate:

400 feet of 30-inch casing pipe across Route 17	at \$750/ft	\$300,000
VDOT coordination		\$ 50,000
Interconnects		\$ 50,000
100 feet of 16-inch pipe	at \$450/ft	<u>\$ 45,000</u>
Total Construction		\$445,000
Design and Contingency		<u>\$ 90,000</u>
Total Project		\$535,000

## CAPITAL IMPROVEMENT PROGRAM

**FY2022 Adopted Budget**

**Utilities: 480-02 Construct 16" main to connect existing 12" main at CVA Parkway under US 17 to existing 12" main at Warrenton Road and International Parkway**

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	90,000	0	0	0	0	0	0	0
Construction / Project	0	0	0	445,000	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$0	\$535,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
User Fees	0	0	0	535,000	0	0	0	0	0	0	0
<b>Total</b>	\$0	\$0	\$0	\$535,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

[illegible]

## Utilities: Fire Hydrant and Valve Replacement Program

Project Code	H&V022	Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$2,940,000		
Functional Area	Utilities	Number of FH's/Valves	Varies
Total Debt Service		Construction Cost per Unit	Varies
Full Year Operating Impact		3-R	Yes

### Project Description:

This project includes the programmatic replacement of defective, obsolete, and failing fire hydrants and in-line valves in the general distribution system.

### Operating Impact Summary:

The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

### Location:

The project focuses on fire hydrants and in-line valves in the general water distribution system.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisors proposed Healthy Growth priority.

## **Utilities: Fire Hydrant and Valve Replacement Program**

### **Analysis of Need:**

This annual program is dedicated to identifying and replacing defective, obsolete, and failing fire hydrants and in-line valves. These items are critical in the overall operation of the system and are used often for a variety of operational needs. When these items are needed and have unknowingly failed, it burdens the Field Crews during emergencies to resort to alternative plans on very short notice. Fire hydrants are critical for fire suppression and valves are most critical for isolating sections of pipe to be replaced in the event of a break. This work is intended to be performed by the Utilities Division Field Crews.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: No changes

### **Project List FY2022:**

Approximately 40 fire hydrants, determined to be extremely old or unreliable, have been earmarked for replacement.

Approximately 20 non-operable valves have been identified for scheduled replacement.

### **Alternative:**

Non-functioning valves and fire hydrants will remain a part of the system.



## Project Summary:

[illegible]

**Utilities: I-95 Fred Ex 16-inch American Legion Road Water Main**

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 06/2022
Total Project Cost	\$1,125,000	Length of Pipeline, feet	1,500
Functional Area	Utilities	Construction Cost per LF.	\$750
Total Debt Service		3-R	Yes
Full Year Operating Impact			

**Project Description:**

This project consists of the installation of 1,500 feet of 16-inch water main on American Legion Road during the construction of the Fred Ex I-95 project. In addition, 500 feet of the pipe will be encased across I-95. The project will enable better flow of water between the south water system (Lake Mooney) and the north water system (Smith Lake).

**Operating Impact Summary:**

This project has minimal operating costs such as electricity, periodic maintenance, and chemicals. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed from Centreport Parkway to US Route 1 along American Legion Road during the construction of the Fred Ex I-95 transportation project.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted General Water and Sewer Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

## Utilities: I-95 Fred Ex 16-inch American Legion Road Water Main

### Analysis of Need:

The ability of the south water system to feed the north water system, and vice versa, is compromised by infrastructure that is too small. Enlarging the existing 8-inch water main to 16-inches in diameter, will provide significantly greater ability to transmit flow between the zones.

### Change or Reasons for Revisions:

FY2022: New project needed to increase the ability of water transfer between north and south water zones. Some of the project cost will be as betterment to the road construction project.

### Alternative:

High maintenance of the Berea Church Road water main would continue.

### Project Cost Estimate:

500 feet of 16-inch cased pipe	at \$900/ft	\$ 450,000
1,000 feet of 16-inch pipe in road corridor	at \$500/ft	<u>\$ 500,000</u>
Total Construction		\$ 950,000
Design and Contingency		<u>\$ 175,000</u>
Total Project		\$1,125,000

**FY2022 Adopted Budget**

## Project Summary:

[illegible]

**Utilities: Lake Mooney: Additional Modules for Interconnection**

Project Code	BHC038	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2023 to 07/2025
Total Project Cost	\$525,000		
Functional Area	Utilities	Number of Modules	5 MGD
Total Debt Service		Construction Cost per MGD	\$189,000
Full Year Operating Impact			

**Project Description:**

This project includes purchase and installation of five million gallons per day (MGD) of additional water treatment modules at the Lake Mooney Water Treatment Facility.

**Operating Impact Summary:**

These modules have minimal operating costs. The modules have a useful life of approximately ten years. The replacement costs will be factored into the appropriate yearly budget cycle or will be included in future Capital Improvement Programs.

**Location:**

Lake Mooney Water Treatment Facility.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted General Water and Sewer Improvement Program.

## **Utilities: Lake Mooney: Additional Modules for Interconnection**

### **Analysis of Need:**

These modules will provide water treatment capacity at the Lake Mooney Water Treatment Facility as part of the Regional Water Interconnection between Stafford County, Spotsylvania County, and the City of Fredericksburg. The capacity may also be used to supplement water supply to the northern areas of the County (Smith Lake).

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: Costs were revised downward to \$525,000 from \$945,000 based on a revised quote from the vendor. The purchases will be made in FY 2023 and FY 2024. In prior years the modules were in FY 2024.

### **Alternative:**

There will continue to be no regional interconnection and limited ability to shape water supply between the South County and North County service zones.

### **Project Cost Estimate:**

No Formal Estimate Available

## CAPITAL IMPROVEMENT PROGRAM

**FY2022 Adopted Budget**

## Utilities: Lake Mooney: Additional Modules for Interconnection

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Construction / Project	0	0	250,000	275,000	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$250,000	\$275,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Availabilities	0	0	250,000	275,000	0	0	0	0	0	0	0
Total	\$0	\$0	\$250,000	\$275,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

[illegible]

**Utilities: LMWTP-007 - Lake Mooney WTP Replace Membrane Cassettes**

Project Code	BHC043	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2024 to 12/2025
Total Project Cost	\$1,500,000	3-R	Yes
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

This project (LMWTP-007) consists of replacing the membrane cartridges at 10 years of operation.

**Operating Impact Summary:**

This project has periodic (approximately 10 years) replacement costs.

**Location:**

This work is located at the Lake Mooney Water Treatment Plant.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted General Water and Sewer Improvement Program and is part of the Board Of Supervisor's proposed "Healthy Growth" priority.

**Analysis of Need:**

Lake Mooney Water Treatment Plant went into operation in December 2014. The membrane cartridges which are a key part of the filtration process have an expected useful life of about 10 years. The Utilities Division has therefore programmed the replacement of the existing membrane cassettes when they reach 10 years of operation.



[illegible]

**Utilities: Abel and Smith Lakes: Gate Replacements and Installations**

Project Code	BHC045	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2020 to 12/2021
Total Project Cost	\$300,000	Number of Gates	4
Functional Area	Utilities	Construction Cost per Gate	\$75,000
Total Debt Service		3-R	Yes
Full Year Operating Impact			

**Project Description:**

This project includes the design and construction of two replacement spillway sluice gates and two additional redundant sluice gates on the emergency spillways at Abel and Smith Lakes.

**Operating Impact Summary:**

These gates are exercised periodically, but have no direct operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

**Location:**

These gates will be installed on the emergency spillways at Abel and Smith Lakes.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted General Water and Sewer Improvement Plan.

## Utilities: Abel and Smith Lakes: Gate Replacements and Installations

### Analysis of Need:

The original existing sluice gates, one at each of the emergency spillways have reached their useful lives. Both gates have been submerged in the water for more than 40 years and 30 years. Based on past operations, they are not dependable for lowering the lake level for dam repairs or preemptive flood control. In addition to replacing the existing gates, a redundant gate will be installed at both emergency spillways in the event the primary gates are actuated and will not close.

### Change or Reasons for Revisions:

FY2020: In the FY19 Capital Improvement Program, only the redundant gates were planned. After additional inspections and risk evaluation, redundant gates will be installed for reliability. The cost increase is primarily attributed to the cost of replacing the existing gates, which are both in 70' of water and require specialty underwater construction crews for installation.

FY2021: Changed opening date

FY2022: Changed opening date and added \$140,000 to budget for FY2022

### Alternative:

The spillway at Abel Lake will continue to have a non-functioning primary release gate and Smith Lake will continue to have a tenuous release gate system.

### Project Cost Estimate:

Construction of four gates	at \$65,000/ea	\$260,000
Engineering		<u>\$ 40,000</u>
Total Project		\$300,000

## Project Summary:

[illegible]

## Utilities: Regional Water Interconnection

Project Code	BHC046	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2023 to 12/2025
Total Project Cost	\$5,100,000		
Functional Area	Utilities	Length of Pipeline	7,500'
Total Debt Service		Construction Cost per LF.	\$593
Full Year Operating Impact			

### Project Description:

This project is a construction of a 24" water transmission pipeline between Stafford County and Spotsylvania County (provides water to City of Fredericksburg).

### Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

### Location:

This project will be constructed between the end of Greenbank Road in Stafford County and near the Motts Run Water Treatment Facility in Spotsylvania County.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program. This interconnection embodies the Board of Supervisors proposed Healthy Growth priority as it pertains to public safety. Water is important to the public health of the citizens both for drinking and fire protection. The funding of this project in the Capital Improvement Program is based on a Study Agreement with Spotsylvania County and City of Fredericksburg and is shared 40/40/20. This project will need a formal agreement prior to moving forward.

## Utilities: Regional Water Interconnection

### Analysis of Need:

These regional partners have long worked to create an interconnection for water transmission. This project is proposed to address that need.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: No changes

FY2022: Changed construction cost from \$4,000,000 to \$4,650,000

### Alternative:

There will continue to be no regional water interconnection.

### Project Cost Estimate:

500 feet of 36-inch casing pipe	at \$900/ft	\$ 450,000
7,000 feet of 24-inch pipe	at \$600/ft	<u>\$4,200,000</u>
Total Construction		\$4,650,000
Design and Contingency		<u>\$ 450,000</u>
Total Project		\$5,100,000

## Project Summary:

[illegible]

**Utilities: SLWTP-001 Smith Lake Water Treatment Plant - Filter Repairs**

Project Code	JLS017	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2026
Total Project Cost	\$4,650,000	3-R	Yes
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

This project (SLWTP-001) consists of replacing the existing eight filters.

**Operating Impact Summary:**

This project will replace existing filters and will not add any operational costs.

**Location:**

This work is located at the Smith Lake Water Treatment Plant.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted General Water and Sewer Improvement Program and is part of the Board of Supervisor's proposed "Healthy Growth" priority.

**Analysis of Need:**

Smith Lake Water Treatment Plant has experienced failures in the existing filter underdrains. The failures have been investigated and it has been determined that the filters must be repaired in order to maintain rated plant capacity and to achieve water quality objectives.



[illegible]

**Utilities: SLWTP-002 Smith Lake Water Treatment Plant - Facility Upgrades**

Project Code	BHC044	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 12/2023
Total Project Cost	\$3,100,000	3-R	Yes
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

This project (SLWTP-002) may consist of upgrading or replacing electrical motor controls, instrumentation, clarification, structural facilities, and the finished water pumps.

**Operating Impact Summary:**

This project will not increase operational costs. These replacements will be in-kind and likely create a more efficient operation, with lower operational costs.

**Location:**

This work is located at the Smith Lake Water Treatment Plant.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted General Water and Sewer Improvement Program and is part of the Board of Supervisor's proposed "Healthy Growth" priority.

## **Utilities: SLWTP-002 Smith Lake Water Treatment Plant - Facility Upgrades**

### **Analysis of Need:**

In addition to planning for more treatment capacity and excellent water quality, the Utilities Division is also committed to meeting its customer's expectations for a high level of reliability. With aging assets, Smith Lake Water Treatment Plant is now approaching 30 years of reliable operations. Most mechanical and electrical components have useful lifetimes of 15 to 30 years. The Utilities Division expects the need for reinvestment into critical equipment at Smith Lake Water Treatment Plant to increase in the future. A detailed condition assessment is being performed to define and schedule renovations. Until that assessment is completed, this project assumes the need to upgrade or replacement of several systems.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: Project title change

FY2022: No changes

### **Alternative:**

If any part of the required repair/replacement/rehabilitation is not performed, the water treatment plant may fail to meet demand.

### **Project Cost Estimate:**

No Formal Project Cost Estimate Available

**FY2022 Adopted Budget**

## Project Summary:

[illegible]

## Utilities: Water Storage Tank Removal

Project Code	BHC061	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 12/2022
Total Project Cost	\$100,000	3-R	Yes
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

This project includes the removal of the Cranes Corner and Bandy elevated water storage tanks along with the abandoned Courthouse Tank. The two elevated tanks are multi-legged 500,000 gallon tanks. The other is a standpipe style tank. These tanks will require more than \$100,000 to remove. However, the cost of removal is offset by the value of the steel that the contractor will recover for salvage.

### Operating Impact Summary:

This project has no operating costs and reduces the cost of overall maintenance for the system.

### Location:

The Cranes Corner tank is located just east of Stafford High School, near the football field. The Bandy tank is located on Warrenton Road, across from Old Forge Drive. The Courthouse Tank is located south of Courthouse Road and west of US Route 1.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan and the Adopted General Water and Sewer Improvement Program.

## **Utilities: Water Storage Tank Removal**

### **Analysis of Need:**

The removal of these tanks will provide more efficiency in the water supply and storage system as they are being replaced with the new Enon Road two million gallon Elevated Water Storage Tank (342-101). These tanks require constant maintenance and more costly maintenance based the tank type.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: Courthouse tank removal has been added to this work.

### **Alternative:**

The tanks will continue to stand and require extensive maintenance.

### **Project Cost Estimate:**

No Formal Project Cost Estimate Available

## CAPITAL IMPROVEMENT PROGRAM

**FY2022 Adopted Budget**

## Utilities: Water Storage Tank Removal

## Project Summary:

[illegible][illegible][illegible]

## Utilities: Water Distribution System Rehabilitation: Neighborhood Systems

Project Code	NEI022	Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$26,136,405	Funding per Year	\$2,500,000
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact		3-R	Yes

### Project Description:

This project includes rehabilitation of various water distribution mains throughout neighborhoods in the County. The primary focus for FY2022 will be the Ferry Farm Sub-division.

### Operating Impact Summary:

The rehabilitation of existing aged infrastructure is expected to have a positive impact on system operations by lowering the incidence of water line breaks and service disruptions for customers. Operating costs are considered and evaluated during each budget cycle.

### Location:

These replacement projects are located on distribution mains throughout neighborhoods in the County.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.



## **Utilities: Water Distribution System Rehabilitation: Neighborhood Systems**

### **Analysis of Need:**

These projects are typically located in older neighborhoods that consist of pipes made from cast iron, galvanized steel, clay, asbestos concrete, or thin-walled PVC. The goal and intent of this replacement work is to eventually replace all of these types of pipes where they exist in any neighborhood. This work is intended to be performed by the Utilities Division Field Crews and On-Call Construction contractors.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: Yearly cost increased to \$2,500,000 per year from \$500,000 to \$850,000 per year as the County increases the 3R focus and addresses a backlog of needs. The water system criticality analysis conducted by the Stafford County Public Works Department identified multiple neighborhood projects that need to be completed over a 10-year period. Many of these pipes are 50-70 years old.

### **Project List FY2022:**

Ferry Farms Water Main Replacement – To be conducted in several phases phase per year through the foreseeable future.

### **Alternative:**

Not funding will significantly slow down the replacement of the neighborhood systems. Many of the systems are 50 – 70 years and are starting to experience numerous failures impacting crews and the utility customers. This causes numerous service disruptions as well as requiring a substantial dedication of resources. A systematic replacement of the pipes is more cost effective than addressing infrastructure on an emergency basis when it deteriorates to the point of failure.

## CAPITAL IMPROVEMENT PROGRAM

**FY2022 Adopted Budget**

## Project Summary:

[illegible][illegible][illegible]

## Utilities: Water Distribution System Rehabilitation: Small Water Projects

Project Code	SMW022	Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$4,450,000	Funding per Year (initial)	\$250,000
Functional Area	Utilities	3-R	100%
Total Debt Service			
Full Year Operating Impact			

### Project Description:

This includes small rehabilitation projects for various distribution lines throughout the County to solve operational issues such as looping, pipe size increases, conflict resolution, and elimination of deteriorated pipe. These projects are of short distance and isolated.

### Operating Impact Summary:

This project does not have any stand-alone operating costs.

### Location:

The locations of these replacement projects are located on distribution lines throughout the entire distribution system in the County.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program that embodies the Board of Supervisors proposed Healthy Growth priority.

## **Utilities: Water Distribution System Rehabilitation: Small Water Projects**

### **Analysis of Need:**

These projects are typically located on older pipelines that consist of cast iron, galvanized steel, clay, asbestos concrete, or thin-walled PVC. Additionally, these projects exist in areas of infill development and are a result of the creation of dead-end lines or conflicts resulting from the cumulative expansion of the system. The goal and intent of this replacement work is to eventually address all of these types of situations to enable the system to operate more efficiently. The proposed FY20-24 Capital Improvement Program shows periodic increases of funding in addition to the yearly escalation factor as feasible. This work is intended to be performed by the Utilities Division Field Crews.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: Changed annual funding from \$300,000 to \$250,000

### **Project List FY2022:**

Projects to be assigned as System Deficiencies are Identified

### **Alternative:**

There will be no dedicated replacement program for these pipelines. They will continue to merely be repaired when broken, causing substantial dedication of resources.

### Project Summary:

[illegible]

## Utilities: Water Distribution System Rehabilitation: Transmission Lines Replacement

Project Code	TRN022	Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$18,400,000	Funding per Year (initial)	\$1,000,000
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

This includes rehabilitation and replacement projects for various transmission lines throughout the County to solve operational issues such as looping, pipe size increases, conflict resolution, and elimination of deteriorated pipe. These projects are of short distance and isolated.

### Operating Impact Summary:

This project does not have any stand-alone operating costs.

### Location:

The locations of these replacement projects are located on transmission lines throughout the entire distribution system in the County.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

## **Utilities: Water Distribution System Rehabilitation: Transmission Lines Replacement**

### **Analysis of Need:**

These projects are typically located on sections of transmission lines that have problem areas due to break repairs, head loss due to directional changes, deterioration, exposure to, or other impacts from nature. The goal and intent of this replacement work is to eventually address all of these types of situations which will enable the system to operate more efficiently. The proposed FY20-24 Capital Improvement Program shows periodic increases of funding in addition to the yearly escalation factor as feasible. This work is intended to be performed by the Utilities Division Field Crews.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: Yearly cost increased to \$1,000,000 per year as the County increases the 3R focus and addresses a backlog of needs. The water system criticality analysis conducted by the Stafford County Public Works Department identified transmission line projects that need to be completed over a 10-year period. Many of these pipes are 40-60 years old.

### **Project List FY2022:**

VDOT betterment has been identified on the Route 1. Analysis of transmission mains continues and will result in some new design and construction projects.

### **Alternative:**

Not funding will significantly slow down the replacement of water system transmission lines. Many of the lines are 40 – 60 years and are starting to experience numerous failures impacting crews and the utility customers. This causes numerous service disruptions as well as requiring a substantial dedication of resources. A systematic replacement of the transmission lines is more cost effective than addressing infrastructure on an emergency basis when it deteriorates to the point of failure.

## Project Summary:

[illegible]



## Utilities: Water Storage Tank Rehabilitation and Repair

Project Code		Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$5,000,000		
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact		3R	100%

### Project Description:

This work consists of the ongoing repair and rehabilitation of the Public Works Department's 16 water storage tanks. The Public Works Department will have a complete interior and exterior evaluation completed prioritizing necessary projects and work

### Operating Impact Summary:

These projects have minimal operating costs such as electricity and fuel for the emergency generator. These projects will not increase the power or generator size and the current operating costs remain the same. These operating costs are considered and evaluated during each budget cycle.

### Location:

These projects are located at water storage tank sites throughout the water distribution system.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

## **Utilities: Water Storage Tank Rehabilitation and Repair**

### **Analysis of Need:**

These projects are located at the water storage tanks throughout the water distribution system. The goal and intent of this rehabilitation work is to keep the water storage tanks functional and in good working order. This work is not part of the overall operational budget for maintenance. This work is intended to be performed by the Utilities Division Field Crews.

### **Change or Reasons for Revisions:**

FY2022: In prior years, this program was included in the operating budgets. Beginning in FY 2022, the costs will be included in the capital budget as a 3R expense.

### **FY2022 Projects:**

The AmyClae tank is the first tank slated for rehabilitation. This tank will be briefly tanking out of service where the coating would be removed, all structural defects would be corrected and a new coating system would be applied to the tanks.

### **Alternative:**

There is no alternative to performing this work.

### **Project Cost Estimate:**

There is no detailed project cost estimate available.

## Project Summary:

[illegible]

## Utilities: Water System Supervisory Control and Data Acquisition (SCADA)

Project Code	BHC070	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 06/2023
Total Project Cost	\$750,000	Number of Connected Sites	50
Functional Area	Utilities	Construction Cost per Site	\$15,000
Total Debt Service		3-R	Yes
Full Year Operating Impact			

### Project Description:

This project consists of the replacement of the existing water system SCADA system with updated version to improve data collection and operational competence for the water system.

### Operating Impact Summary:

This project has minimal operating costs such as electricity, periodic maintenance, and chemicals. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

### Location:

The project will include installation of control centers at central operating locations and data equipment at pump stations, water storage tanks and other key water system locations.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

## Utilities: Water System Supervisory Control and Data Acquisition (SCADA)

### Analysis of Need:

The existing system for collection of operational data and control in the water system is outdated. An upgrade of the existing SCADA system can provide additional detailed information at key sites and improve the operational efficiency for the water system.

### Change or Reasons for Revisions:

FY2022: New Project

### Alternative:

The water system will continue to operate with the existing SCADA system, and will eventually need to deal with obsolescence.

### Project Cost Estimate:

SCADA system and equipment	<u>\$650,000</u>
Total Construction	\$650,000
Design and Contingency	<u>\$100,000</u>
Total Project	\$750,000

## Project Summary:

[illegible]

**Utilities: West Lake 12-inch Parallel Water Main**

Project Code	BHC075	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 06/2022
Total Project Cost	\$750,000		
Functional Area	Utilities	Length of Pipeline, feet	2,000
Total Debt Service		Construction Cost per Lf	\$375
Full Year Operating Impact			

**Project Description:**

This project consists of the extension of 12-inch water main parallel to the West Lake Pump Station 16-inch suction water main. The 16-inch water main is to be operative in the 480 pressure zone. The 12-inch water main will work in the 520 pressure zone to extend higher pressure to an area of the system that has experienced low pressures while on the 480 pressure zone. The project will be coordinated in timing with the West Lake Village development project, currently in planning.

**Operating Impact Summary:**

This project has minimal operating costs such as electricity, periodic maintenance, and chemicals. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The 12-inch water main will be routed along Warrenton Road in the area of Holly Corner Road (site of future Westlake Pump Station).

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted General Water and Sewer Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

## Utilities: West Lake 12-inch Parallel Water Main

### Analysis of Need:

The area served by this project is currently within the water system's 480 pressure zone. There have been complaints of occasional low water pressure (confirmed by County testing), and the area would benefit greatly by having access to the system's 520 pressure zone. The West Lake developer will be installing a pump station and tank specifically designed for elevating 480 zone water to 520. An extension of water main from the pump station to the low pressure area will resolve the low pressure events under virtually all conditions.

### Change or Reasons for Revisions:

FY2022: New project. Provide a resolution to low pressure concerns for an area of existing users, using the West Lake Water Booster Pump Station which is in planning and will be provided by a developer in the next couple of years. We have added \$750,000 in FY22.

### Alternative:

Users currently experiencing low pressure in the 480 zone, may continue to experience occasional low-pressure service. Alternately, a dedicated pump station for the low pressure area would be required.

### Project Cost Estimate:

2,000 feet of 12-inch pipe	at \$250/ft	\$500,000
300 feet of 24-inch casing pipe and valves	at \$500/ft	<u>\$150,000</u>
Total Construction		\$650,000
Design and Contingency		<u>\$100,000</u>
Total Project		\$750,000



## CAPITAL IMPROVEMENT PROGRAM

**FY2022 Adopted Budget**

## Utilities: West Lake 12-inch Parallel Water Main

### Project Summary:

[illegible][illegible][illegible]

**CAPITAL IMPROVEMENT PROGRAM**  
**FY2022 Adopted Budget**

**Utilities**

Wastewater Expenditures:	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
A-18 - Replace 24" with 36" Gravity Line, Whitsons Run to Austin Run Pump Station	0	190,000	1,710,000	0	0	0	0	0	0	0	0	1,900,000	-	1,900,000
A-115 Force Main Replacement: Aquia Creek (Crucifix) and Aquia Bridge	1,200,000	0	0	0	0	0	2,000,000	0	0	0	0	-	2,000,000	3,200,000
A-205 - Expand Upper Accokeek Pump Station	0	0	0	0	0	0	170,000	1,456,000	0	0	0	-	1,626,000	1,626,000
A-37 - Construct 8" Gravity Line from Marshall to Heritage Oaks II Pump Station	0	0	80,700	474,300	0	0	0	0	0	0	0	555,000	-	555,000
Aquia WWTF - Plant Upgrades	1,576,000	600,000	0	0	3,000,000	0	4,500,000	4,500,000	0	0	0	3,600,000	9,000,000	14,176,000
Gravity Lines & Interceptor Maintenance	500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000	7,500,000	15,500,000
Infiltration & Inflow Maintenance	250,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	500,000	500,000	1,250,000
LFR-3 - Falls Run Interceptor, Phase 2	762,000	6,700,000	0	0	0	0	0	0	0	0	0	6,700,000	-	7,462,000
LFR-15 - Replace 18", 15" and 12" with 24" Line along Claiborne Run from Morton Road to Kings Hill Road	206,300	1,856,700	0	0	0	0	0	0	0	0	0	1,856,700	-	2,063,000
LFR-30 - Construct 12" Gravity Line in England Run Pump Station to Days Inn Pump Station	0	0	0	0	0	151,000	1,030,000	0	0	0	0	151,000	1,030,000	1,181,000
LFR-31 Replace 15" with 21" gravity main along Falls Run from Pennsbury Court to vicinity of Averil Court	0	0	0	0	0	0	0	263,000	2,200,000	0	0	-	2,463,000	2,463,000
LFR-58 - Replace 8" with 15" Line along Cambridge Street from Enon Road to Michael Street	0	135,000	0	0	0	0	0	0	0	0	0	135,000	-	135,000
LFR-59 - Replace 8" with 10" from Nelms Circle to Auction Drive	0	0	0	0	0	0	136,000	1,243,000	0	0	0	-	1,379,000	1,379,000
LFR-120: Construct a 24-inch force main from Falls Run PS to Claiborne Run Parallel FM	250,000	4,943,000	0	0	0	0	0	0	0	0	0	4,943,000	-	5,193,000
LFR-129 - Replace 8" with 16" Force Main from Potomac Creek Pump Station	264,000	0	0	2,376,000	0	0	0	0	0	0	0	2,376,000	-	2,640,000
LFR-204 - Expand future Celebrate Virginia Pump Station	0	0	0	45,000	405,000	0	0	0	0	0	0	450,000	-	450,000
LFR-209 - Replace Falls Run Pump Station	1,184,200	0	1,500,000	0	0	0	0	0	6,000,000	6,000,000	0	1,500,000	12,000,000	14,684,200
LFR-214 Claiborne Run Pump Station Upgrade	1,000,000	3,800,000	0	0	0	0	0	0	0	0	0	3,800,000	-	4,800,000
LFR-217 - Expand Stratford Place Pump Station	0	0	0	80,000	0	0	0	0	0	0	0	80,000	-	80,000
LFR-226 Expand Potomac Creek Pump Station	0	0	125,000	866,000	0	0	0	0	0	0	0	991,000	-	991,000
LFR-228 - Expand Ingleside Pump Station	0	0	214,000	0	0	0	0	0	0	0	0	214,000	-	214,000

CAPITAL IMPROVEMENT PROGRAM  
FY2022 Adopted Budget

Wastewater Expenditures:	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
LWWTF-002 - Little Falls Run WWTF Plant Upgrades	4,500,000	0	21,500,000	0	0	0	0	0	0	0	0	21,500,000	-	26,000,000
Pump Stations Rehabilitation and Replacement	500,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000	10,500,000
Sewer System Supervisory Control and Data Acquisition	0	750,000	0	0	0	0	0	0	0	0	0	750,000	-	750,000
Total	\$12,192,500	\$21,574,700	\$27,729,700	\$6,441,300	\$6,005,000	\$2,751,000	\$10,436,000	\$10,062,000	\$10,800,000	\$8,600,000	\$2,600,000	\$64,501,700	\$42,498,000	\$119,192,200

**Utilities: A-18 - Replace 24" with 36" Gravity Line, Whitsons Run to Austin Run Pump Station**

Project Code	BHC047	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 12/2023
Total Project Cost	\$1,900,000	Length of Pipe	2,400
Functional Area	Utilities	Construction Cost per LF.	\$792
Total Debt Service		Sewer Shed	Austin Run
Full Year Operating Impact		3-R	100%

**Project Description:**

This project (A-18) includes the replacement of an existing 24 inch gravity sewer with a 36 inch gravity sewer.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed along Austin Run from Whitson's Run to the Austin Run Pump Station.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: A-18 - Replace 24" with 36" Gravity Line, Whitsons Run to Austin Run Pump Station

### Analysis of Need:

This project is one of four interceptors (large gravity main) that serves the northern part of the County. This interceptor is currently adequate for buildout conditions for its use for County properties. However, it also serves Quantico Marine Corps Base and is a major source of flow impacting the timing for the replacement this existing interceptor. Delays in the quantity of flow from Quantico Marine Corps Base could delay the construction of this project. Public Works staff continues to work with Base staff regarding the timing of any necessary improvements to this interceptor. The cost estimate and timing is a placeholder in the event the project is necessary.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: Change in project title

FY2022: Change budget and division of costs by fiscal year. Change design from \$139,300 to \$190,000. Change construction from \$1,253,700 to \$1,710,000.

### Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes. In addition, if the Base increases its flows through its Camp Barrett Pump Station, it would impact Base operations.

### Project Cost Estimate:

300 feet of 48-inch casing pipe	at \$1,300/ft	\$ 390,000
300 feet of stream crossing	at \$800/ft	\$ 240,000
1,800 feet of 36-inch pipe and manholes	at \$600/ft	<u>\$1,080,000</u>
Total Construction		\$1,710,000
Design and Contingency		<u>\$ 190,000</u>
Total Project		\$1,900,000

## Utilities: A-18 - Replace 24" with 36" Gravity Line, Whitsons Run to Austin Run Pump Station

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	190,000	0	0	0	0	0	0	0	0	0
Construction / Project	0	0	1,710,000	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$190,000	\$1,710,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pro Rata	0	95,000	855,000	0	0	0	0	0	0	0	0
User Fees	0	95,000	855,000	0	0	0	0	0	0	0	0
<b>Total</b>	\$0	\$190,000	\$1,710,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project is eligible for 50% pro rata funding.

## Utilities: Force Main Replacement: A-115 Aquia Creek (Crucifix) and Aquia Bridge

Project Code	FDB010	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Design/Engineering	Est. Opening Date	07/2019 to 12/2026
Total Project Cost	\$3,200,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	7,000
Total Debt Service		Construction Cost per LF.	\$460
Full Year Operating Impact		3-R	50%

### Project Description:

This project (A-115) includes the replacement of various sections of force main with an 18 inch force main between Aquia Creek (Crucifix) Pump Station and the Aquia Wastewater Treatment Facility. The purpose of the project is to increase the capacity of the force mains from Aquia Creek (Crucifix) Pump Station and Aquia Bridge Pump Station. The timing for construction of this project is dependent on the timing of increased flows in this area.

### Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

### Location:

This project replaces a force main that conveys flow from the Aquia Creek (Crucifix) Pump Station, through Aquia Harbor, to the Aquia Wastewater Treatment Facility. The project will allow the existing force main to be used by the Aquia Bridge Pump Station. The purpose of the project is to increase the capacity of the force mains from both pump stations.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: Force Main Replacement: A-115 Aquia Creek (Crucifix) and Aquia Bridge

### Analysis of Need:

The purpose of the project is to increase the capacity of two force mains.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: Change in project title and concept to incorporate increased capacity into the Aquia Bridge Force Main.

FY2022: Separated the project into two time periods and increased budgets. \$2,000,000 included in the FY27 funding for completion of the force main construction.

### Alternative:

The pump stations will not be able to convey flows to the wastewater treatment facility.

### Project Cost Estimate:

8,000 ft of 18-inch pipe	\$300/ft	\$2,400,000
500 ft of 30-inch casing pipe	\$800/ft	\$ 400,000
400 ft of stream crossings	\$500/ft	<u>\$ 200,000</u>
Total Construction		\$3,000,000
Design and Contingency		<u>\$ 200,000</u>
Total Project		\$3,200,000



## CAPITAL IMPROVEMENT PROGRAM

**FY2022 Adopted Budget**

## Utilities: Force Main Replacement: A-115 Aquia Creek (Crucifix) and Aquia Bridge

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	1,200,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	0	0	0	0	0	2,000,000	0	0	0	0
Total Project Cost	\$1,200,000	\$0	\$0	\$0	\$0	\$0	\$2,000,000	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
User Fees	1,200,000	0	0	0	0	0	2,000,000	0	0	0	0
Total	\$1,200,000	\$0	\$0	\$0	\$0	\$0	\$2,000,000	\$0	\$0	\$0	\$0

[illegible]

## Utilities: A-205 - Expand Upper Accokeek Pump Station

Project Code	BHC056	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2026 to 12/2027
Total Project Cost	\$1,626,000		
Functional Area	Utilities	Volume of Upgrade MGD	1.15
Total Debt Service		Construction Cost per MGD	\$1,414,000
Full Year Operating Impact		Pro Rata Sewer Shed	Upper Accokeek

### Project Description:

This project (A-205) includes the expansion of the Upper Accokeek Pump Station by 1.15 million gallons a day (mgd).

### Operating Impact Summary:

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

### Location:

This project will occur at the Upper Accokeek Wastewater Pump Station off of Ramoth Church Road.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: A-205 - Expand Upper Accokeek Pump Station

### Analysis of Need:

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: Change in construction cost per MGD

FY2022: No changes

### Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

### Project Cost Estimate:

No formal project cost estimate available.

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	0	170,000	1,456,000	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$170,000	\$1,456,000	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
User Fees	0	0	0	0	0	0	170,000	1,456,000	0	0	0
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$170,000	\$1,456,000	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.

**Utilities: A-37 Construct 8” Gravity Line from Marshall to Heritage Oaks II Pump Station**

Project Code	BHC048	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2022 to 12/2024
Total Project Cost	\$555,000		
Functional Area	Utilities	Length of Pipe	2,635
Total Debt Service		Construction Cost per LF.	\$211
Full Year Operating Impact		3-R	100%

**Project Description:**

This project (A-37) includes the design and construction of an 8 inch gravity sewer.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. However, this project will eliminate an existing pump station and the associated maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed along Austin Run from Heritage Oaks Pump Station II to an existing gravity main near the intersection of Winding Creek Road and Walpole Street.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: A-37 Construct 8” Gravity Line from Marshall to Heritage Oaks II Pump Station

### Analysis of Need:

The Utilities Division of Public Works accepts pump stations as part of approved development projects on a frequent basis. On certain occasions when land development infills certain areas, it is possible to eliminate the need for existing pump stations.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: No changes

FY2020: Budget changes. Design budget increased from \$55,500 to \$80,700. Construction budget decreased from \$499,500 to \$474,300.

### Alternative:

The pump station will continue to be operational and continue to require regular maintenance and operating costs.

### Project Cost Estimate:

2,635 feet of 8-inch pipe	\$180/ft	<u>\$474,300</u>
Total Construction		\$474,300
Design and Contingency		<u>\$ 80,700</u>
Total Project		\$555,000

**FY2022 Adopted Budget**

### Project Summary:

[illegible]

## Utilities: Aquia Wastewater Treatment Facility – Plant Upgrades

Project Code	BHC028	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2025
Total Project Cost	\$14,176,000	3-R	100%
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

These Aquia Wastewater Treatment Facility Plant Upgrades include improvements to the electrical facilities, headworks, solids storage capacity and ultraviolet disinfection system. In prior CIPs, process improvements were segmented and distributed across several fiscal years. With the completion of the plant facilities plan, it is considered better to combine these projects into a single larger effort.

### Operating Impact Summary:

This project will not increase operational costs. These replacements will be in-kind and likely create a more efficient operation.

### Location:

The project will be constructed at the Aquia Wastewater Treatment Facility.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program as a part of the Board's proposed Healthy Growth priority. The specific areas of work have been defined through a Wastewater Treatment Facilities Plan.

## Utilities: Aquia Wastewater Treatment Facility – Plant Upgrades

### Analysis of Need:

In addition to planning for more treatment capacity and excellent water quality, the Utilities Division is also committed to meeting its customer's expectations for a high level of reliability. With aging assets, the Aquia Wastewater Treatment Facility is now approaching 30 years of reliable operations. Most mechanical and electrical components have useful lifetimes of 15 to 30 years. The Utilities Division expects the need for reinvestment into critical equipment at Aquia Wastewater Treatment Facility to increase in the future. A detailed condition assessment has been performed to define and schedule renovations. These specific areas of work have been defined through a Wastewater Treatment Facilities Plan completed in 2019.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: Change in project title and scope of work

FY2022: Projects AWWTF-002, AWWTF-003 and AWWTF-005 have been combined into a single project in the CIP. Design phase is scheduled for FY2022. Construction phase is scheduled for FY2025.

### Alternative:

If any part of the required repair/replacement/rehabilitation is not performed, the wastewater treatment may fail to meet quality standards for the discharge of treated wastewater.

### Project Cost Estimate:

AWWTF-002 Electrical Headworks and Ancillary Work	\$ 4,504,000
AWWTF-003 Solids Storage Expansion	\$ 5,589,000
AWWTF-005 UV System	<u>\$ 1,881,000</u>
Prior Year Concrete Repair	<u>\$ 626,000</u>
Total Construction	<u>\$12,600,000</u>
Design and Contingency	<u>\$ 1,576,000</u>
Total Project	\$14,176,000



## Utilities: Aquia Wastewater Treatment Facility – Plant Upgrades

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	1,576,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	600,000	0	0	3,000,000	0	4,500,000	4,500,000	0	0	0
<b>Total Project Cost</b>	<b>\$1,576,000</b>	<b>\$600,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,000,000</b>	<b>\$0</b>	<b>\$4,500,000</b>	<b>\$4,500,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	0	0	4,500,000	4,500,000	0	0	0
User Fees	1,576,000	600,000	0	0	3,000,000	0	0	0	0	0	0
<b>Total</b>	<b>\$1,576,000</b>	<b>\$600,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,000,000</b>	<b>\$0</b>	<b>\$4,500,000</b>	<b>\$4,500,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$377,000</b>	<b>\$754,000</b>	<b>\$754,000</b>	<b>\$754,000</b>

## Utilities: 3R Gravity Sewers and Interceptor Maintenance

Project Code	SEW022	Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$15,500,000	3-R	100%
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

This work consists of the replacement and/or lining of significant lengths of aging and deteriorated large and small diameter wastewater gravity interceptors throughout the County. Replacement of sewers to increase capacity are identified in other CIP line items. The 3R gravity interceptors under this line item are considered adequate in capacity, but require replacement or rehabilitation to restore reliable serve.

### Operating Impact Summary:

This project does not have any stand-alone operating costs. However, these sections of preemptive replacements avoid future expensive emergency repairs.

### Location:

These projects are located on older interceptors throughout the wastewater collection system.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisors proposed Healthy Growth priority.

## **Utilities: 3R Gravity Sewers and Interceptor Maintenance**

### **Analysis of Need:**

These projects are located on older interceptors throughout the wastewater collection system that consists of pipes made from asbestos cement, thin-walled PVC, Armco construction, or have some other existing problem. The goal and intent of this replacement work is to eventually replace all of these types of pipes where they exist in the sewer system. This work is intended to be performed by the Utilities Division Field Crews and vendors providing sewer lining services.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: Change in project title and scope of work

FY2022: No changes

### **FY2021 Project List:**

This line item includes, sewer lining for over 100 individual sewer segments of sewer ranging from 8-inch to 24-inch in diameter, replacement of non-functioning air release valves on existing sewer force mains and manhole repair and rehabilitation in 20 locations.

### **Alternative:**

There would likely need to be expensive emergency repairs to these known areas.

### **Project Cost Estimate:**

There is no detailed project cost estimate available.

## Project Summary:

[illegible]

## Utilities: Infiltration and Inflow Removal

Project Code	I&I022	Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$1,250,000	3-R	100%
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

This project includes the continual inspection, assessment, and correction of infiltration and inflow into the sewer collection system.

### Operating Impact Summary:

This project is designed to correct as much infiltration and inflow as possible in order to reduce operational costs.

### Location:

This project will be performed at various locations throughout the sewer collection system.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed with periodic increases for each fiscal year. It is part of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

### Analysis of Need:

Over time, pipes and manholes crack, pipe joints fail and ground water begins to seep into non-pressurized pipelines. This causes an undue treatment burden on the wastewater treatment process.

## **Utilities: Infiltration and Inflow Removal**

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: Change in project title

FY2022: No changes

### **FY2021 Project List:**

This work includes approximately 50,000 linear feet of pipe analysis using Focused Electrode Leak Location (FELL) technology to identify sewer leak locations in the gravity sewer collection system. Initially, the vast majority of testing will be in the Aquia Harbour collection system, in asbestos cement pipe. Sewer segments identified as candidates for repair and/or lining will be referred to 3R Gravity Sewers and Interceptor Maintenance and scheduled for work in later fiscal years.

### **Alternative:**

Infiltration and inflow will continue to burden the wastewater conveyance and treatment processes.

### **Project Cost Estimate:**

There is no formal project cost estimate available.

**FY2022 Adopted Budget**

## Project Summary:

[illegible]

**Utilities: LFR-3 – Falls Run Interceptor, Phase 2**

Project Code	CPC001	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 06/2023
Total Project Cost	\$7,462,000	Length of Pipe	12,400
Functional Area	Utilities	Construction Cost per LF.	\$570
Total Debt Service		Pro Rata Sewer Shed	Falls Run
Full Year Operating Impact		3-R	50%

**Project Description:**

This project (LFR-3) includes replacement of existing 15” gravity sewer with a 24” gravity sewer. The project includes a crossing of I-95.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed along Falls Run from the England Run neighborhood, near Stanstead Road to the east side of I-95 in the area of completion of the Phase 1 project.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

**Analysis of Need:**

The purpose of the project is to increase the conveyance capacity of gravity sewer. Sewer modeling has been performed to confirm the required increase in sewer capacity at this location.



## Utilities: LFR-3 – Falls Run Interceptor, Phase 2

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: Change in project title

FY2022: Budget has been increased by \$3,000,000 to reflect increased construction costs shown in the engineer's estimate and the segment of the pipe that crosses I-95.

### Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

### Project Cost Estimate:

Prior Year		\$ 762,000
1,000 feet of 36-inch casing pipe bored into place	\$900	\$ 900,000
600 feet of 24-inch stream crossing	\$750	\$ 50,000
10,800 feet of 24-inch sewer	\$475	<u>\$5,130,000</u>
Total Construction		\$6,842,000
Design and Contingency		<u>\$ 620,000</u>
Total Project		\$7,462,000

## Utilities: LFR-3 – Falls Run Interceptor, Phase 2

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	762,000	220,000	0	0	0	0	0	0	0	0	0
Construction / Project	0	6,480,000	0	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$762,000	\$6,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Use of Prior Year Fund Balance Utilities Fund	0	6,700,000	0	0	0	0	0	0	0	0	0
Pro Rata	762,000	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	\$762,000	\$6,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset bond proceeds as shown on the CIP summary sheet.

## Utilities: LFR-15 - Replace 18", 15" and 12" with 24" Line along Claiborne Run from Morton Road to Kings Hill Road

Project Code	BHC049	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2019 to 06/2022
Total Project Cost	\$2,063,000	Length of Pipe	6,200
Functional Area	Utilities	Construction Cost per LF.	\$332
Total Debt Service		Pro Rata Sewer Shed	Claiborne Run
Full Year Operating Impact		3-R	50%

### Project Description:

This project (LFR-15) includes replacement of existing 12 inch, 15 inch, and 18 inch gravity sewers with a 24 inch gravity sewer.

### Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

### Location:

The project will be constructed along Claiborne Run, near Morton Road to Kings Hill Road.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## **Utilities: LFR-15 - Replace 18", 15" and 12" with 24" Line along Claiborne Run from Morton Road to Kings Hill Road**

### **Analysis of Need:**

The purpose of the project is to increase the conveyance capacity of gravity main. Prior to replacing the existing gravity sewer, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity sewer.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: Change in project title

### **Alternative:**

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

### **Project Cost Estimate:**

There is no project cost estimate available.

## Utilities: LFR-15 - Replace 18", 15" and 12" with 24" Line along Claiborne Run from Morton Road to Kings Hill Road

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	206,300	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	1,856,700	0	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$206,300	\$1,856,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pro Rata	206,300	1,856,700	0	0	0	0	0	0	0	0	0
<b>Total</b>	\$206,300	\$1,856,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.

**Utilities: LFR-30 - Construct 12" Gravity Line in England Run Pump Station to Days Inn Pump Station**

Project Code	BHC050	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2025 to 12/2026
Total Project Cost	\$1,181,000	Length of Pipe	4,500
Functional Area	Utilities	Construction Cost per LF.	\$263
Total Debt Service		3-R	100%
Full Year Operating Impact			

**Project Description:**

This project (LFR-30) includes the design and construction of a 12 inch gravity sewer.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. However, this project will eliminate an existing pump station and the associated maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be constructed along a tributary of England Run from the England Run Pump Station to the Days Inn Pump Station.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

**Analysis of Need:**

The Utilities Division of Public Works accepts pump stations as part of approved development projects on a frequent basis. On certain occasions, when land development infills certain areas, it is possible to eliminate the need for existing pump stations.

**Utilities: LFR-30 - Construct 12" Gravity Line in England Run Pump Station to Days Inn Pump Station****Change or Reasons for Revisions:**

FY2020: No changes

FY2021: Change in project title

FY2022: No changes

**Alternative:**

The pump station would continue to be operational and continue to require regular maintenance and operating costs.

**Project Cost Estimate:**

500 feet of 24-inch casing pipe	\$500/ft	\$ 250,000
500 feet of stream crossing pipe	\$300/ft	\$ 150,000
3,500 feet of 12-inch pipe	\$180/ft	<u>\$ 630,000</u>
Total Construction		\$1,030,000
Design and Contingency		<u>\$ 151,000</u>
Total Project		\$1,181,000

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	151,000	0	0	0	0	0
Construction / Project	0	0	0	0	0	0	1,030,000	0	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$0	\$0	\$0	\$151,000	\$1,030,000	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
User Fees	0	0	0	0	0	151,000	1,030,000	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$151,000	\$1,030,000	\$0	\$0	\$0	\$0

[illegible]



## Utilities: LFR-31 Replace 15" with 21" gravity main along Falls Run from Pennsbury Court to vicinity of Averil Court

Project Code	BHC051	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2027 to 12/2029
Total Project Cost	\$2,463,000	Length of Pipe	5,987
Functional Area	Utilities	Construction Cost per LF.	\$411
Total Debt Service		3-R	50%
Full Year Operating Impact			

### Project Description:

This project (LFR-31) includes the replacement of an existing 15 inch gravity sewer with a 21 inch gravity sewer.

### Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

### Location:

The project will be constructed along Falls Run from Pennsbury Court to the vicinity of Averil Court.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: LFR-31 Replace 15” with 21” gravity main along Falls Run from Pennsbury Court to vicinity of Averil Court

### Analysis of Need:

The purpose of the project is to increase the conveyance capacity of the gravity sewer. Prior to replacing the existing gravity sewer, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity sewer.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: Change in project title

FY2022: Changed project timeframe from FY2022 & 2023 to FY2028 & 2029. Design budget changed from \$217,000 to \$263,000. Construction budget changed from \$2,246,000 to \$2,200,000.

### Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

### Project Cost Estimate

500 feet of 30-inch casing pipe	\$800/ft	\$ 400,000
500 feet of stream crossings	\$600/ft	\$ 300,000
5,000 feet of 21-inch pipe	\$300/ft	<u>\$1,500,000</u>
Total Construction		\$2,200,000
Design and Contingency		<u>\$ 263,000</u>
Total Project		\$2,463,000

## CAPITAL IMPROVEMENT PROGRAM

**FY2022 Adopted Budget**

**Utilities: LFR-31 Replace 15" with 21" gravity main along Falls Run from Pennsbury Court to vicinity of Averil Court**

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	0	0	263,000	0	0	0
Construction / Project	0	0	0	0	0	0	0	0	2,200,000	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$263,000	\$2,200,000	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
User Fees	0	0	0	0	0	0	0	263,000	2,200,000	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$263,000	\$2,200,000	\$0	\$0

[illegible]

**Utilities: LFR-58 - Replace 8" with 15" Line along Cambridge Street from Force Mail to Michael Street**

Project Code	BHC053	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 06/2022
Total Project Cost	\$135,000	Length of Pipe	480
Functional Area	Utilities	Construction Cost per LF.	\$282
Total Debt Service		Pro Rata Sewer Shed	Claiborne Run
Full Year Operating Impact		3-R	50%

**Project Description:**

This project (LFR-58) includes the replacement of the an existing 8 inch sewer with a 15 inch gravity sewer along Cambridge Street.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be replacing a section of an existing gravity sewer along Cambridge Street between Michael Street and Enon Road.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

**Analysis of Need:**

The purpose of the project is to increase the conveyance capacity of gravity sewer. Prior to replacing the existing gravity sewer, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity sewer.

## Utilities: LFR-58 - Replace 8" with 15" Line along Cambridge Street from Force Mail to Michael Street

### Change or Reasons for Revisions:

FY2020: This project has changed from the previous CIP. The entire cost of the project was moved into FY 2021.

FY2021: The entire cost of the project was moved into FY 2022.

FY2022: No changes.

### Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

### Project Cost Estimate

480 feet of 15-inch pipe	\$250/ft	<u>\$120,000</u>
Total Construction		\$120,000
Design and Contingency		<u>\$ 15,000</u>
Total Project		\$135,000

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	15,000	0	0	0	0	0	0	0	0	0
Construction / Project	0	120,000	0	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$135,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pro Rata	0	135,000	0	0	0	0	0	0	0	0	0
<b>Total</b>	\$0	\$135,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.

**Utilities: LFR-59 - Replace 8" with 10" from Nelms Circle to Auction Drive**

Project Code	BHC054	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2024 to 12/2026
Total Project Cost	\$1,379,000	Length of Pipe	5,650
Functional Area	Utilities	Construction Cost per LF.	\$245
Total Debt Service		Pro Rata Sewer Shed	Falls Run
Full Year Operating Impact		3-R	50%

**Project Description:**

This project (LFR-59) includes the replacement of an existing 8 inch gravity sewer with a 10 inch gravity sewer.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be from Nelms Circle, through Carter's Crossing Shopping Center to Auction Drive.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: LFR-59 - Replace 8" with 10" from Nelms Circle to Auction Drive

### Analysis of Need:

The purpose of the project is to increase the conveyance capacity of gravity sewer. Prior to replacing the existing gravity sewer, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity sewer.

### Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

### Project Cost Estimate:

5,650 feet of 10-inch pipe	\$220/ft	<u>\$1,243,000</u>
Total Construction		\$1,243,000
Design and Contingency		<u>\$ 136,000</u>
Total Project		\$1,379,000

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	0	0	0	136,000	0	0	0	0
Construction / Project	0	0	0	0	0	0	0	1,243,000	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$136,000	\$1,243,000	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pro Rata	0	0	0	0	0	0	136,000	1,243,000	0	0	0
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$136,000	\$1,243,000	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.

**Utilities: LFR-120: Construct a 24-inch Force Main from Falls Run PS to Claiborne Run Parallel FM**

Project Code	BHC003	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2021
Total Project Cost	\$5,193,000	Length of Pipe	13,500
Functional Area	Utilities	Construction Cost per LF.	\$385
Total Debt Service		Pro Rata Sewer Shed	Falls Run
Full Year Operating Impact		3-R	50%

**Project Description:**

This project (LFR-120) includes the design and construction for replacement of an existing 16 inch force main with a 24 inch force main. The replacement will be in a new alignment.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

The project will be replacing an existing 16 inch force that currently transmits flows from the Falls Run Pump Station in Falmouth to the Claiborne Run Interceptor near the intersection of Butler Road and Chatham Heights Road. The new 24 inch force main will transmit flows from the Falls Run Pump Station through Falmouth, along River Road, around the National Park Service lands, under Kings Highway, along Naomi Drive to a tie-in point with the new Parallel Claiborne Run 24 inch Force Main project.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.



## Utilities: LFR-120: Construct a 24-inch Force Main from Falls Run PS to Claiborne Run Parallel FM

### Analysis of Need:

The purpose of the project is to increase the conveyance capacity of Falls Run Pump Station. The current operation of the Falls Run Pump Station and the Claiborne Run Pump Station is one of “piggybacking.” The Falls Run Pump Station pumps to an interceptor that flows into the Claiborne Run Pump Station. The previous Master Plan (2007) indicated that both pump stations need an increase to their capacity during the 2015 to 2018 time frame. After careful analysis, the most logical way to address several operational issues between these two pump stations is to convey their flows separately and directly to the Little Falls Run Wastewater Treatment Facility. This new operational scenario would take advantage of the parallel line being added to the Claiborne Run Force Main and dedicate it to the Falls Run Force Main with the addition of the new force main as described in the “Location” section above. This reconfiguration saved between \$6M and possibly as much as \$10M.

### Change or Reasons for Revisions:

FY2020: There is no change to this project from the FY19 Capital Improvement Program (CIP); however, it is important to describe the proposed reconfiguration for the record as part of the FY20 CIP.

FY2021: Fund timing change.

FY2022: Increase budget due to potential re-routing needed to take pipe around National Park Service lands

### Alternative:

There will be substantial and unnecessary costs associated with upgrading both the Falls Run Pump Station and the Claiborne Run Pump Station or significant wastewater overflows would occur. This project is one of two projects that eliminate this need and allows the pump stations to operate well within their current capacity and save substantial costs for construction.

### Project Cost Estimate:

600 feet of 36-inch cased force main	\$900/ft	\$ 540,000
24-inch valves – 3 each	\$30,000/ea	\$ 90,000
12,900 feet of 24-inch force main	\$320/ft	<u>\$4,128,000</u>
Total Construction		\$4,758,000
Design and Contingency		<u>\$ 435,000</u>
Total Project		\$5,193,000

**Utilities: LFR-120: Construct a 24-inch Force Main from Falls Run PS to Claiborne Run Parallel FM****Project Summary:**

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	250,000	185,000	0	0	0	0	0	0	0	0	0
Construction / Project	0	4,758,000	0	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$250,000	\$4,943,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Use of Prior Year Fund Balance UTILITIES Fund	0	4,943,000	0	0	0	0	0	0	0	0	0
Pro Rata	250,000	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	\$250,000	\$4,943,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees in as shown on the CIP summary sheet.

**Utilities: LFR-129 - Replace 8" with 16" Force Main from Potomac Creek Pump Station**

Project Code	BHC055	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2020 to 12/2023
Total Project Cost	\$2,640,000	Length of Pipe	9,100
Functional Area	Utilities	Construction Cost per LF.	\$290
Total Debt Service		Pro Rata Sewer Shed	Potomac Creek
Full Year Operating Impact		3-R	50%

**Project Description:**

This project (LFR-129) includes the design and construction for replacement of the existing 8 inch force main with a 16 inch force main from Potomac Creek Pump Station.

**Operating Impact Summary:**

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

**Location:**

This project will be constructed from the Potomac Creek Pump Station southeasterly to near the intersection of Jefferson Davis Highway and Enon Road.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## Utilities: LFR-129 - Replace 8" with 16" Force Main from Potomac Creek Pump Station

### Analysis of Need:

The purpose of the project is to increase the capacity of the force main and pump station. The timing for construction of this project is dependent on the timing of increased flows in this area.

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: Change in project title

FY2022: No changes

### Alternative:

The pump station and force main will not be able to convey flows to the wastewater treatment facility.

### Project Cost Estimate:

200 feet of 30-inch casing pipe	\$750/ft	\$ 150,000
8,900 feet of 16-inch pipe	\$250/ft	<u>\$2,225,000</u>
Total Construction		\$2,375,000
Design and Contingency		<u>\$ 265,000</u>
Total Project		\$2,640,000

## Utilities: LFR-129 - Replace 8" with 16" Force Main from Potomac Creek Pump Station

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	264,000	0	0	1,000	0	0	0	0	0	0	0
Construction / Project	0	0	0	2,375,000	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$264,000	\$0	\$0	\$2,376,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
User Fees	264,000	0	0	2,376,000	0	0	0	0	0	0	0
<b>Total</b>	\$264,000	\$0	\$0	\$2,376,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.

**Utilities: LFR-204 - Expand Future Celebrate Virginia Pump Station**

Project Code	BHC057	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2023 to 12/2025
Total Project Cost	\$450,000	Volume of Upgrade MGD	1.53
Functional Area	Utilities	Construction Cost per MGD	\$295,000
Total Debt Service		Pro Rata Sewer Shed	Rocky Pen Run
Full Year Operating Impact		3-R	50%

**Project Description:**

This project (LFR-204) includes the design and construction of the expansion of the Celebrate Virginia Pump Station by 1.53 million gallons a day (mgd).

**Operating Impact Summary:**

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

**Location:**

This project will occur at the Celebrate Virginia Pump Station just to the east of Del Webb along England Run.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

**Analysis of Need:**

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area.

## Utilities: LFR-204 - Expand Future Celebrate Virginia Pump Station

### Change or Reasons for Revisions:

FY2020: No changes

FY2021: No changes

FY2022: No changes

### Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

### Project Cost Estimate:

There is no detailed project cost estimate available.

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	0	45,000	0	0	0	0	0	0	0
Construction / Project	0	0	0	0	405,000	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$0	\$45,000	\$405,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Availabilities	0	0	0	45,000	405,000	0	0	0	0	0	0
<b>Total</b>	\$0	\$0	\$0	\$45,000	\$405,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.

**Utilities: LFR-209 - Replace Falls Run Pump Station**

Project Code	BHC021	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2024 to 06/2026
Total Project Cost	\$14,684,200	Volume of Upgrade MGD	17.6
Functional Area	Utilities	Construction Cost per MGD	\$795,000
Total Debt Service		Pro Rata Sewer Shed	Falls Run
Full Year Operating Impact		3-R	50%

**Project Description:**

This project (LFR-209) includes the design and construction of the expansion of the Falls Run Pump Station by 17.6 million gallons a day (MGD).

**Operating Impact Summary:**

This project will have significantly more operating costs such as electricity, chemical treatment, and fuel for the emergency generator as the project almost doubles its current capacity. This increase will be realized over time. These operating costs are considered and evaluated during each budget cycle.

**Location:**

This project relates to the Falls Run Pump Station on Washington Street in Falmouth. The project will begin with a Preliminary Engineering Report that will assess the needs and any constraints. There will be a significant analysis to determine if the station would be better located at another part of Falls Run. Relocation is highly likely and could benefit the station from an operational standpoint as well as benefiting the local residents of Falmouth Bottom.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.



## **Utilities: LFR-209 - Replace Falls Run Pump Station**

### **Analysis of Need:**

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area. Projects of this nature are continuously modelled as this is a significant investment and a critical station. This project is currently shown near the end of the initial five years in the cycle of the current Capital Improvement Program (CIP).

### **Change or Reasons for Revisions:**

FY2020: This project shows a change to the estimated cost from last year's CIP. The estimated cost for this project was increased from \$5,388,000 to \$6,842,400 due to complexities in estimating the required capacity increase associated with the replacement.

FY2021: No changes

FY2022: The project location is likely to change. The budget has been substantially increased, and divided into design and construction phases. Money is available for preliminary engineering from past fiscal years (\$1,184,200). Design has been moved to FY2025 and is set at \$1,315,800. Construction is set for FY2026 at a cost of \$11,500,000.

### **Alternative:**

The pump station will not be able to convey flows to the wastewater treatment facility.

### **Project Cost Estimate:**

Until an engineer is on board for the project, there is no detailed project cost estimate.

## Utilities: LFR-209 - Replace Falls Run Pump Station

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	1,184,200	0	1,500,000	0	0	0	0	0	6,000,000	6,000,000	0
Construction / Project	0	0	0	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	<b>\$1,184,200</b>	<b>\$0</b>	<b>\$1,500,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,000,000</b>	<b>\$6,000,000</b>	<b>\$0</b>

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	0	0	0	0	0	0	6,000,000	6,000,000	0
Pro Rata	592,100	0	750,000	0	0	0	0	0	0	0	0
User Fees	592,100	0	750,000	0	0	0	0	0	0	0	0
<b>Total</b>	<b>\$1,184,200</b>	<b>\$0</b>	<b>\$1,500,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,000,000</b>	<b>\$6,000,000</b>	<b>\$0</b>

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$502,000</b>	<b>\$1,004,000</b>

Project expenditures are eligible for 50% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.

**Utilities: LFR-214 - Claiborne Run Pump Station Upgrade**

Project Code	FDB011	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2020 to 06/2025
Total Project Cost	\$4,800,000	Volume of Upgrade MGD	15
Functional Area	Utilities	Construction Cost per MGD	\$320,000
Total Debt Service		Pro Rata Sewer Shed	Claiborne Run
Full Year Operating Impact		3-R	100%

**Project Description:**

This project (LFR-214) includes the design and construction of the upgrade of the Claiborne Run Pump Station to increase capacity from 10 to 15 million gallons a day (MGD).

**Operating Impact Summary:**

This project will have significantly more operating costs such as electricity, chemical treatment, and fuel for the emergency generator as the project increases its current capacity. This increase will be realized over time. These operating costs are considered and evaluated during each budget cycle.

**Location:**

This project relates to the Claiborne Run Pump Station on Cool Springs Road in the George Washington District. The project has begun with a Preliminary Engineering Report that assessed the needs and project constraints. The analysis has determined that occasional sanitary sewer overflows can be prevented and maintenance can be simplified with installation of a wet well and submersible pumps.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## **Utilities: LFR-214 - Claiborne Run Pump Station Upgrade**

### **Analysis of Need:**

The purpose of the project is to increase the capacity of the pump station and to simplify maintenance which has been difficult due to the confines of the existing building. The construction of this project is needed in the near term to prevent future sanitary sewer overflows.

### **Change or Reasons for Revisions:**

FY2022: This project is changed in scope from prior CIP plans. Where prior plans called for the total replacement of the pump station, with a large increase in capacity, the installation of the Falls Run Force Main and parallel Claiborne Run Force Main, reduces the ultimate expansion requirements of the station. The budget has been divided into design and construction phases. Money is available for engineering from past fiscal years (\$1,000,000). Construction has been scheduled from FY2023 and is set at \$3,800,000.

### **Alternative:**

The pump station will not be able to convey flows to the wastewater treatment facility.

### **Project Cost Estimate:**

Until an engineer completes the design for the project, there is no detailed project cost estimate.

## Utilities: LFR-214 - Claiborne Run Pump Station Upgrade

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Construction / Project	1,000,000	3,800,000	0	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$1,000,000	\$3,800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Use of Prior Year Fund Balance UTILITIES Fund	0	3,800,000	0	0	0	0	0	0	0	0	0
Pro Rata	500,000	0	0	0	0	0	0	0	0	0	0
User Fees	500,000	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	\$1,000,000	\$3,800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.

**Utilities: LFR-217 - Expand Stratford Place Pump Station**

Project Code	BHC058	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2023 to 12/2024
Total Project Cost	\$80,000	Pro Rata Sewer Shed	Claiborne Run
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

This project (LFR-217) includes the design and construction of the expansion of the Stratford Place Pump Station by 0.165 million gallons a day (MGD). This is an electrical upgrade with Dominion Power and does not include any equipment upgrades.

**Operating Impact Summary:**

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

**Location:**

This project will occur at the Stratford Place Pump Station on Little Whim Road near Landsberry Park Drive.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

## **Utilities: LFR-217 - Expand Stratford Place Pump Station**

### **Analysis of Need:**

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area.

### **Change or Reasons for Revisions:**

FY2020: The previous Capital Improvement Program (CIP) indicated the project would be performed over a two year period. Additionally, with the completion of the 2018 Master Plan, the estimated construction costs for this project increased from \$45,000 to \$80,000. Also, the FY 2020 CIP includes all the costs for this project in a single year.

FY2021: No changes

FY2022: No changes

### **Alternative:**

The pump station will not be able to convey flows to the wastewater treatment facility.

### **Project Cost Estimates:**

There is no detailed project cost estimate available.

## Utilities: LFR-217 - Expand Stratford Place Pump Station

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Construction / Project	0	0	0	80,000	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$0	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
User Fees	0	0	0	80,000	0	0	0	0	0	0	0
<b>Total</b>	\$0	\$0	\$0	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.



**Utilities: LFR-226 Expand Potomac Creek Pump Station**

Project Code	BHC059	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2022 to 12/2024
Total Project Cost	\$991,000		
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

This project (LFR-226) includes the expansion of the Potomac Creek Pump Station by 2.04 million gallons a day (MGD).

**Operating Impact Summary:**

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

**Location:**

This project is located at the Potomac Creek Pump Station.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

[illegible]

**Utilities: LFR-228 - Expand Ingleside Pump Station**

Project Code	BHC060	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2022 to 12/2023
Total Project Cost	\$214,000	Volume of Upgrade MGD	0.311 MGD
Functional Area	Utilities	Construction Cost per MGD	\$688,100
Total Debt Service		Pro Rata Sewer Shed	Falls Run
Full Year Operating Impact		3-R	50%

**Project Description:**

This project (LFR-228) includes the design and construction of the expansion of the Ingleside Pump Station by 0.311 million gallons a day (MGD).

**Operating Impact Summary:**

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

**Location:**

This project will occur at the Ingleside Drive Pump Station on Ingleside Drive near Belmont.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted 2018 Water and Sewer Master Plan.

**Analysis of Need:**

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area.

## Utilities: LFR-228 - Expand Ingleside Pump Station

### Change or Reasons for Revisions:

FY2020: The previous Capital Improvement Program (CIP) indicated the project would be performed over a two year period. Also, the FY 2020 CIP includes all the costs for this project is a single year.

FY2021: No changes

FY2022: No changes

### Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

### Project Cost Estimate:

There is no detailed project cost estimate available.

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	0	21,400	0	0	0	0	0	0	0	0
Construction / Project	0	0	192,600	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$0	\$214,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Pro Rata	0	0	214,000	0	0	0	0	0	0	0	0
<b>Total</b>	\$0	\$0	\$214,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project expenditures are eligible for 100% pro rata reimbursements. Estimated pro rata revenue will offset user fees as shown on the CIP summary sheet.

**Utilities: LWWTF-002 - Little Falls Run WWTF Plant Upgrades**

Project Code	BHC065	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2020 to 06/2025
Total Project Cost	\$26,000,000	3-R	100%
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

**Project Description:**

These upgrades (LWWTF-Headworks and Effluent Filter) include on-going concrete repair to process units, potential headworks upgrade, effluent filter updates, sludge storage system improvements, biological treatment and chemical systems improvements.

**Operating Impact Summary:**

This project will not increase operational costs. These replacements will be in-kind and likely create a more efficient operation.

**Location:**

The project will be constructed at the Little Falls Run Wastewater Treatment Facility.

**Relationship to Approved County Policy or Plan:**

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisor's proposed "Healthy Growth" priority. The specific areas of work have been defined in a Wastewater Treatment Plant Facilities Plan, completed in 2019.

## **Utilities: LWWTF-002 - Little Falls Run WWTF Plant Upgrades**

### **Analysis of Need:**

In addition to planning for more treatment capacity and excellent water quality, the Utilities Division is also committed to meeting its customer's expectations for a high level of reliability. With aging assets, the Little Falls Run Wastewater Treatment Facility is now approaching 30 years of reliable operations. Most mechanical and electrical components have useful lifetimes of 15 to 30 years. The Utilities Division expects the need for reinvestment into critical equipment at Little Falls Run Wastewater Treatment Facility to increase in the future. This specific area of work has been defined in the Wastewater Treatment Plant Facilities Plan, completed in 2019, and the draft preliminary Engineering Report completed in October 2020.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: Change in project title and scope of work

FY2022: Consolidated three phases of treatment plant work into a single phase. Adjusted the budgets so that all \$26,000,000 of project cost would be available by the end of FY2022.

### **Alternative:**

If any part of the required repair/replacement/rehabilitation is not performed, the wastewater treatment may fail to meet effluent water quality requirements.

### **Project Cost Estimate:**

The Engineer has provided an updated project cost estimate in the Fall of 2020.

## CAPITAL IMPROVEMENT PROGRAM

**FY2022 Adopted Budget**

## Utilities: LWWTF-002 - Little Falls Run WWTF Plant Upgrades

## Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	1,800,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	2,700,000	0	21,500,000	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$4,500,000	\$0	\$21,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Bond Proceeds	0	0	21,500,000	0	0	0	0	0	0	0	0
Availabilities	1,125,000	0	0	0	0	0	0	0	0	0	0
User Fees	3,375,000	0	0	0	0	0	0	0	0	0	0
Total	\$4,500,000	\$0	\$21,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

[illegible]

## Utilities: Pump Station Rehabilitation and Replacement

Project Code	WPS021	Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$10,500,000	3-R	100%
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

### Project Description:

This work consists of the replacement of entire small wastewater pump stations or portions of larger wastewater pump stations throughout the collection system. The Master Plan identifies which pump stations require capacity upgrades or replacement, but not rehabilitation or replacement due to age or condition.

### Operating Impact Summary:

These projects have minimal operating costs such as electricity and fuel for the emergency generator in the event the station is enlarged. If the project does not increase the power or generator size, the current operating costs remain. These operating costs are considered and evaluated during each budget cycle.

### Location:

These projects are located at pump stations throughout the wastewater collection system.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.



## **Utilities: Pump Station Rehabilitation and Replacement**

### **Analysis of Need:**

These projects are located at pump stations throughout the wastewater collection system. They exhibit a serious need for total replacement or equipment rehabilitation. This work is not part of the overall operational budget for maintenance. The goal and intent of this replacement work is to eventually keep the wastewater pump stations fully functional and efficient. This work is intended to be performed by the Utilities Division Field Crews.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: No changes

### **FY2022 Projects:**

Potomac Creek Pump Station – Flood Protection

630 at I-95 Pump Station – Full Replacement of the Pump Station

Heritage Oaks Pump Station – Construction of Sewer Interconnect to allow abandonment of this Pump Station

Autumn Ridge Pump Station – Construction of Sewer Interconnect and Relocation of this Pump Station on an adjacent parcel

### **Alternative:**

There would likely need to be expensive emergency repairs to these known pump stations.

### **Project Cost Estimate:**

There is no detailed project cost estimate available.

### Project Summary:

[illegible]

## Utilities: Wastewater System Supervisory Control and Data Acquisition (SCADA)

Project Code	BHC071	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	07/2021 to 06/2023
Total Project Cost	\$750,000	Number of Connected Sites	100
Functional Area	Utilities	Construction Cost per Site	\$7,500
Total Debt Service		3-R	100%
Full Year Operating Impact			

### Project Description:

This project consists of the replacement of the existing wastewater system SCADA system with updated version to improve data collection and operational competence for the sewer system.

### Operating Impact Summary:

This project has minimal operating costs such as electricity, periodic maintenance, and chemicals. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

### Location:

The project will include installation of control centers at central operating locations and data equipment at pump stations and other key sewer system locations.

### Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

## Utilities: Wastewater System Supervisory Control and Data Acquisition (SCADA)

### Analysis of Need:

The existing system for collection of operational data and control in the sewer system is outdated. An upgrade of the existing SCADA system can provide additional detailed information at key sites and improve the operational efficiency for the sewer system.

### Change or Reasons for Revisions:

FY2022: New Project

### Alternative:

The wastewater system will continue to operate with the existing SCADA system, and will eventually need to deal with obsolescence.

### Project Cost Estimate:

SCADA system and equipment	<u>\$650,000</u>
Total Construction	\$650,000
Design and Contingency	<u>\$100,000</u>
Total Project	\$750,000

## Utilities: Wastewater System Supervisory Control and Data Acquisition (SCADA)

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Planning/Design	0	100,000	0	0	0	0	0	0	0	0	0
Construction / Project	0	650,000	0	0	0	0	0	0	0	0	0
<b>Total Project Cost</b>	\$0	\$750,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
User Fees	0	750,000	0	0	0	0	0	0	0	0	0
<b>Total</b>	\$0	\$750,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**CAPITAL IMPROVEMENT PROGRAM**  
**FY2022 Adopted Budget**

**Utilities**

Other Expenditures:	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
Public Works - Utilities Division Complex	0	0	0	0	0	0	423,000	0	0	0	6,077,000	0	6,500,000	6,500,000
Vehicle and Equipment Replacement	443,000	426,000	662,000	383,000	458,000	400,000	400,000	400,000	400,000	400,000	485,000	2,329,000	2,085,000	4,857,000
Contingency Allowance	1,377,000	1,000,000	935,260	653,465	557,750	632,260	895,690	854,600	1,000,000	756,000	423,000	3,778,735	3,929,290	9,085,025
<b>Total</b>	<b>\$1,820,000</b>	<b>\$1,426,000</b>	<b>\$1,597,260</b>	<b>\$1,036,465</b>	<b>\$1,015,750</b>	<b>\$1,032,260</b>	<b>\$1,718,690</b>	<b>\$1,254,600</b>	<b>\$1,400,000</b>	<b>\$1,156,000</b>	<b>\$6,985,000</b>	<b>\$6,107,735</b>	<b>\$12,514,290</b>	<b>\$20,442,025</b>

## Utilities: Division Complex

Project Code		Square Footage/Acreage	20 acres/18,000 sf
Project Type	Utilities, Other	Construction Cost per Sq. Ft	\$360 incl. site
Project Status	Planning	Est. Opening Date	2031
Total Project Cost	\$6,500,000	Student Capacity	
Functional Area	Utilities		
Debt Service (Ten Year Period)	\$0		
Full Year Operating Impact	N/A		

### Project Description:

This project includes the design and construction for a Utilities Division Administration and Maintenance Facility (Complex) to enable the Utilities Division to operate its Customer Service Center, Capital Construction, and Field Operations & Maintenance functions.

### Operating Impact Summary:

There will be operational costs associated with this new facility. It will be the intent of the design that all additional operating costs will be less than the current operations costs at current facilities.

### Location:

This project would be located on land owned by the County near the Regional Jail for use by Fire & Rescue, Parks and Recreation and the Department of Public Works (Utilities Division).

### Relationship to Approved County Policy or Plan:

This project will support the Board of Supervisor's "Healthy Growth" priority.

## **Utilities: Division Complex**

### **Analysis of Need:**

Currently the Customer Service Center is located in the Government Center. For the long term, this may be the best location for this feature. However, it has been envisioned being at a Utilities Division Complex. The Capital Construction offices currently operate from leased space and the Utilities Division Field Operations and Maintenance sections currently operate in space near the Aquia Wastewater Treatment Facility (AWWTF). The space used at the AWWTF has been outgrown and there is no longer expansion area. This operations area has been filled with a variety of multipurpose buildings over the years and has become inefficient. This proposed project would create office and land space for these operations with additional area for future growth. Additionally, in the next decade or so, the AWWTF will need this current field operations area for expansion of its wastewater treatment capacity.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: No changes

### **Alternative:**

The Utilities Division Field Operations & Maintenance and Capital Construction functions will remain in their current locations.

### **Project Cost Estimate:**

There is no detailed project cost estimate for this project.



## CAPITAL IMPROVEMENT PROGRAM

**FY2022 Adopted Budget**

## Utilities: Division Complex

### Project Summary:

Project Expenditures	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Construction / Project	0	0	0	0	0	0	423,000	0	0	0	6,077,000
<b>Total Project Cost</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$423,000	\$0	\$0	\$0	\$6,077,000

Project Revenues	Prior Year	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
User Fees	0	0	0	0	0	0	423,000	0	0	0	6,077,000
<b>Total</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$423,000	\$0	\$0	\$0	\$6,077,000

[illegible]

## Utilities: Replacement: Vehicles and Equipment

Project Code		Est. Opening Date	Yearly
Project Type	Utilities, Other	3R	100%
Project Status	Planning		
Total Project Cost	\$4,372,000		
Functional Area	Utilities		
Debt Service (Ten Year Period)	\$0		
Full Year Operating Impact	No Additional Operating Costs		

### Project Description:

These proposed expenditures include the replacement of vehicles and major pieces of equipment due to high mileage, excess repair and maintenance cost, or condition issues.

### Operating Impact Summary:

As many of the existing vehicles age and require increasing operational costs, this program is designed to minimize any additional operating costs from new vehicles through greater efficiency. The addition of vehicles will require an increase in operational costs based on individual vehicle operational costs.

### Location:

This expenditure applies to the fleet of vehicles and major equipment for the Department Public Works, Utilities Division.

### Relationship to Approved County Policy or Plan:

It is part of the Board of Supervisor's proposed "Healthy Growth" priority.

## **Utilities: Replacement: Vehicles and Equipment**

### **Analysis of Need:**

The vehicles currently operated by the Utilities Division experience significant use and often require replacement prior to vehicles used under normal circumstances. The Utilities Division has a task force to evaluate the use and operational costs of each vehicle, each year. The intent of the task force is to replace only the vehicles and equipment that need replacement and that all vehicles and equipment are used correctly and efficiently.

### **Change or Reasons for Revisions:**

FY2020: No changes

FY2021: No changes

FY2022: No changes

### **Alternative:**

With no vehicle replacement program, all vehicles and equipment would be used and repaired as necessary. These repair costs would far exceed the value of the vehicle or equipment. The ability of staff to perform assigned duties would diminish.

### **Project Cost Estimate:**

There is no detailed project cost estimate for this budget line item.

## Project Summary:

[illegible]

## Utilities: Contingency Allowance

Project Code		Est. Opening Date	Yearly
Project Type	Utilities, Other		
Project Status	Planning		
Total Project Cost	\$8,662,205		
Functional Area	Utilities		
Debt Service (Ten Year Period)	\$0		
Full Year Operating Impact	No Additional Operating Costs		

### Project Description:

This expenditure is a contingency item for the budget year for all capital projects. For the initial budget year the amount is 8% of proposed expenditures.

### Operating Impact Summary:

There are no operating costs for this potential expenditure.

### Location:

N/A

### Relationship to Approved County Policy or Plan:

N/A

### Analysis of Need:

As with any contingency, this expenditure is planned in the event that capital spending exceeds the projected revenue need. The Capital Construction section will work diligently to operate within the planned budget and appropriations. However, in the event additional funds are required to meet the projects' intent, these funds are available in the Fund Balance.

[illegible]

## **Debt Management Policy Statement:**

The Government Finance Officers Association's Committee on Governmental Debt and Fiscal Policy issued a statement regarding Recommended Practice on Debt Policy Management in 1995, and revised it in 2003. The following comments were made in the introduction to the statement:

"Debt management policies are written guidelines and restrictions that affect the amount and type of debt issued by a state or local government, the issuance process, and the management of a debt portfolio. A debt management policy improves the quality of decisions, provides justification for the structure of debt issuance, identifies policy goals, and demonstrates a commitment to long-term financial planning, including a multi-year capital plan. Adherence to a debt management policy signals to rating agencies and the capital markets that a government is well managed and should meet its obligations in a timely manner. Debt levels and their related annual costs are important long-term obligations that must be managed within available resources. An effective debt management policy provides guidelines for a government to manage its debt program in line with those resources."

Accordingly, Stafford County examined its debt program and the Board of Supervisors adopted debt policy limits to ensure that no undue burden is placed on the County and its citizens. The County's debt policies are included in the Board's Principles of High Performance Financial Management. The Policy was updated June 4, 2019, by Resolution R19-182. The debt limitations are as follows:

- General obligation debt shall not exceed 2.75% of the assessed valuation of taxable real property.
- General fund debt service expenditures (County and Schools) shall not exceed 10% of the general government and schools operating budgets.
- The County intends to maintain a 10-year pay-out ratio at or above 60%. To the extent possible, future debt for County facilities will be issued with level principal payments.
- When the County finances capital improvements or other projects through bonds or capital leases, it will repay the debt within a period not to exceed the expected useful life of the projects.
- Debt ratios do not include debt to be repaid from identified revenue sources outside the General Fund. In the case of special service districts, the Board of Supervisors intends to set tax rates to cover any debt to be funded with the revenue.
- Capital lease debt service shall not exceed 1% of the general government budget. Capital lease debt may only be used if all the following four criteria are met:
  1. Capital lease purchase is eligible under state law for such financing;
  2. Useful life of the purchase equals or exceeds the term of the debt;
  3. Total purchase exceeds \$100,000; and
  4. Sufficient funds are available to service the capital lease debt.

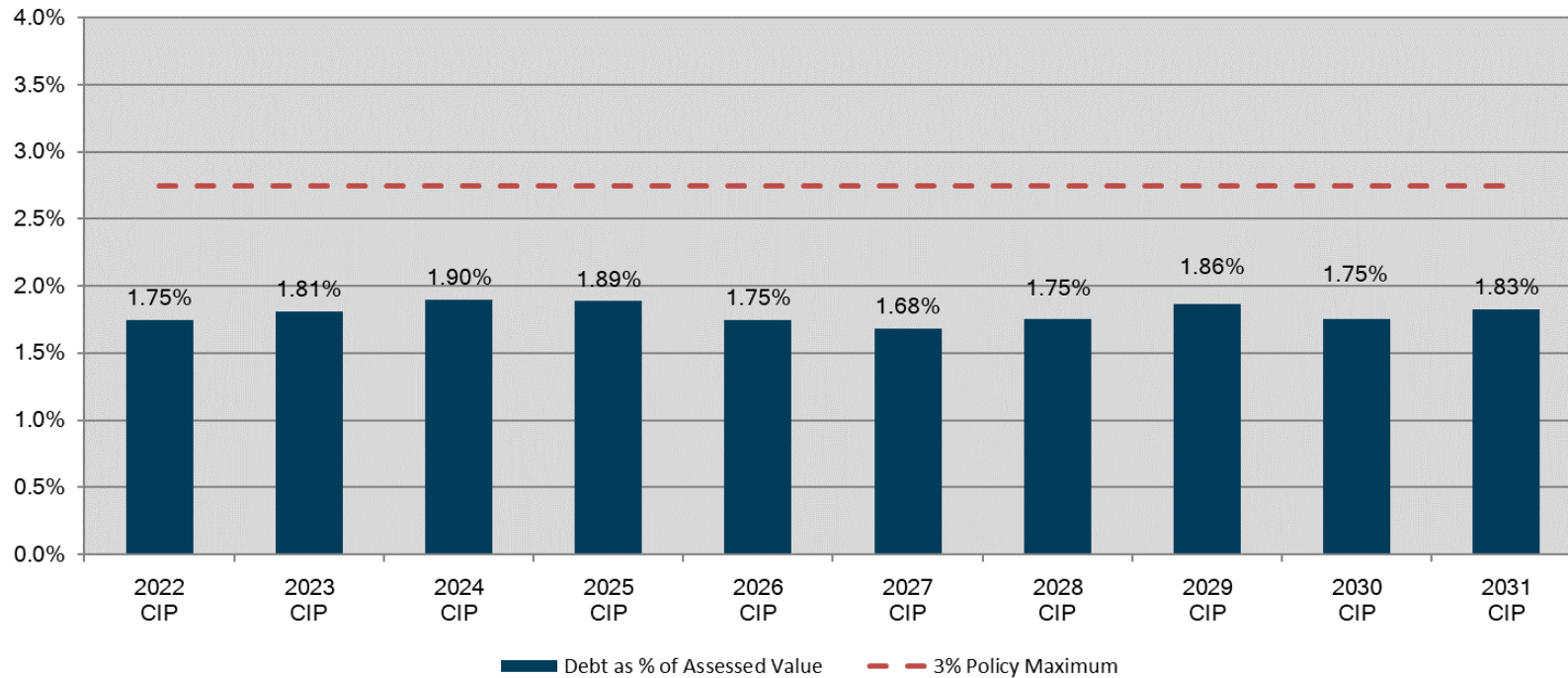
The adopted CIP fully complies with the financial policies.

## Financial Analysis:

The following graphs indicate that the FY2022-2031 Adopted CIP is in compliance with the Board's fiscal policy guidelines.

### Debt as a Percentage of Assessed Value:

The County's financial policy "Principles of High Performance Financial Management" state that general obligation debt shall not exceed 2.75% of the assessed valuation of taxable real property. Below is a graph illustrating the County's compliance with the policy.



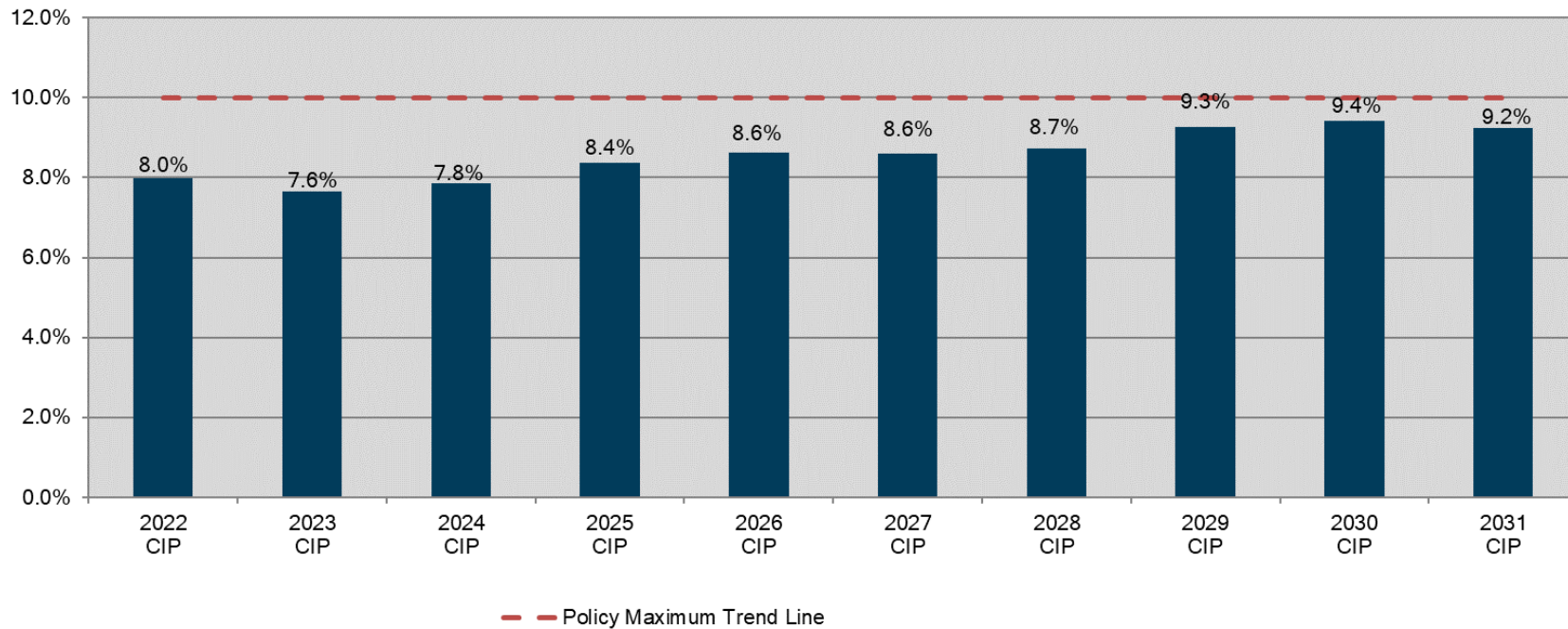


## Financial Analysis:

### Debt Service as a Percentage of General Government Budget:

The County's Financial Policy states general fund debt service expenditures (County and Schools) shall not exceed 10% of the general government and schools operating budgets and shall not exceed 10%. Below is a graph presenting the County's compliance with the policy.

**Debt Service to General Fund Expenditures Ratio (Not to Exceed 10%)**



## Payout Ratio:

The payout ratio is an assessment of the speed at which the County repays its debt. At the beginning of FY2021 the total County debt is estimated at \$377 million. At the end of FY2030 (ten fiscal years beyond FY2021) the County will have repaid \$272 million or 67.7% of that outstanding debt.

10 Year Payout Ratio (Must be 60% or greater)	
Fiscal Year	Payout Ratio
FY2022	74.20%
FY2023	77.60%
FY2024	76.60%
FY2025	73.10%
FY2026	72.50%

## Bond Rating:

The County's bond ratings are shown below:

	Moody's	Standard & Poor's	Fitch
General Obligation	Aaa	AAA	AAA

In November, 2018 Stafford County joined 47 counties and 33 cities across the nation in acquiring its third AAA bond rating — the highest credit rating available. Moody's Investors Service announced the bond rating upgrade this week, citing Stafford's current healthy financial position as well as its emphasis on strategically planning for the future. Stafford previously received AAA bond ratings from Fitch Ratings in October 2016 and Standard & Poor's in July 2015.

"Gaining three AAA bond ratings is the result of a lot of hard work by both current and former members of the Board of Supervisors as well as a host of County staff," said Board of Supervisors Meg Bohmke, Falmouth District.

Moody's Investors Service reviewed Stafford's credit strengths and challenges, debts and obligations. Key indicators include the County's diverse, growing economy along with its proximity to the expanding, stabilizing presence of Quantico and the more than 25,000 direct jobs it provides. Moody's praised Stafford County on being "positioned favorably to maintain its strong financial position with sound reserve levels, strong financial management and ample financial flexibility."

“This report from Moody’s confirms the culmination of many years of work and preparation by current and former Board of Supervisors as well as exceptional staff including the leadership and effort from our Chief Financial Officer, Maria Perrotte. This achievement does not happen overnight; financial planning has become a year-round process for us,” said Stafford County Administrator Tom Foley. “In the end, gaining three AAA bond ratings is tangible proof that we are good stewards of taxpayer funds.”

An AAA bond rating indicates a high level of confidence that a locality can meet its obligations today and in the future. More importantly, this rating allows localities to borrow money for essential public facilities at a lower interest rate, saving taxpayers money.

The Board will continue its work to retain the County’s bond rating.

### **DEPARTMENTAL GOALS/OBJECTIVES:**

- Further enhancing the County’s General Obligation Bond rating to promote financial integrity
- Work with the Board to provide a plan to re-establish cash capital at 3% of the operating budget
- Ensure fiscal integrity by achieving and maintaining our goal of a 10% debt service to general fund expenditures
- Maintain and/or update our well-diversified management planning tools and policies
- Maintain our revenue stabilization, capital projects and opportunity fund reserves

The above goals support the Principles of High Performance Financial Management and the Board of Supervisors Priorities for the community.

### **SERVICE LEVELS:**

	<b>FY2020 Actual</b>	<b>FY2021 Budget</b>	<b>FY2022 Plan</b>
Outcomes			
Debt Service	\$44,353,559	\$44,144,730	42,668,753
Debt Service per Capita	\$300	\$282	\$267
Standard & Poor’s	AAA	AAA	AAA
Moody’s	Aaa	Aaa	Aaa
Fitch	AAA	AAA	AAA

**DEPARTMENTAL ACCOMPLISHMENTS:**

- November 2018 Moody's upgraded the County's bond rating to Aaa.
- May 2017 Fitch upgraded the County's bond rating from AA+ to AAA.
- July 2015 Standard & Poor's upgraded the County's bond rating to AAA.
- In FY2022 the County reinstated 1% of the operating budget for Repairs, Replacements and Rehabilitations which brings the County back in line with the Financial Policy requirement of 3%.
  - The goal to budget 3% of the operating budget for Repairs, Replacements and Rehabilitations was not accomplished in the FY21 adopted budget.
  - Due to the COVID-19 Pandemic, the Board reduced the Financial Policy requirements of 3% of general fund recurring revenue to 2%. Staff was directed to look at all projects and determine if they are essential or non-essential. Department leaders from all departments with projects that were proposed, along with the Chief Financial Officer, the Budget Director and the Sr. Budget Analyst met to review all projects. Each department provided support to determine if a project was essential or supported projects being pushed out into future years. This group did not prioritize projects beyond FY2021, as the CIP process will begin again in August for FY2022-31 CIP.

## Analysis of Outstanding Debt

## General Obligation Bonds

School Bond - VPSA			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	252,207,031	19,030,176	233,176,855
2023	233,176,855	18,845,183	214,331,672
2024	214,331,672	19,496,672	194,835,000
2025	194,835,000	19,740,000	175,095,000
2026	175,095,000	20,645,000	154,450,000

Literary Fund Loans			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	216,143	216,143	0

Bonds for County Projects			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	34,105,001	2,800,000	31,305,001
2023	31,305,001	2,325,000	28,980,001
2024	28,980,001	2,325,000	26,655,001
2025	26,655,001	2,325,000	24,330,001
2026	24,330,001	2,325,000	22,005,001

Total General Obligation Bonds			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	286,528,175	22,046,319	264,481,856
2023	264,481,856	21,170,183	243,311,673
2024	243,311,673	21,821,672	221,490,001
2025	221,490,001	22,065,000	199,425,001
2026	199,425,001	22,970,000	176,455,001

## Revenue Bonds

Lease Revenue Bonds			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	9,444,024	1,565,359	7,878,666
2023	7,878,666	1,605,792	6,272,874
2024	6,272,874	1,647,313	4,625,561
2025	4,625,561	1,272,036	3,353,526
2026	3,353,526	999,145	2,354,381

General Government - Financing Lease - Crow's Nest			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	3,890,745	518,424	3,372,321
2023	3,372,320	530,416	2,841,904
2024	2,841,904	542,686	2,299,218
2025	2,299,218	555,240	1,743,978
2026	1,743,978	568,084	1,175,894

Financing Lease - VRA General Government			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	62,235,000	4,896,523	57,338,477
2023	57,338,477	4,994,530	52,343,947
2024	52,343,947	3,462,261	48,881,686
2025	48,881,686	3,549,707	45,331,979
2026	45,331,979	3,646,863	41,685,116

Other Debt Other- Landfill			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	780,000	245,000	535,000
2023	535,000	260,000	275,000
2024	275,000	275,000	0

## Analysis of Outstanding Debt

## Utilities Fund

Revenue Bonds			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	76,349,769	7,225,306	69,124,464
2023	69,124,464	7,390,738	61,733,726
2024	61,733,726	5,927,260	55,806,466
2025	55,806,466	5,376,983	50,429,484
2026	50,429,484	5,214,092	45,215,392

Total Utilities Debt			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	85,748,114	3,985,878	81,762,236
2023	81,762,236	4,115,454	77,646,782
2024	77,646,782	4,255,496	73,391,286
2025	73,391,286	4,416,018	68,975,268
2026	68,975,268	4,572,028	64,403,240

## All Funds

Total All Funds Debt			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2022	448,626,058	28,360,980	358,030,079
2023	415,368,555	27,681,845	330,348,233
2024	382,692,180	28,542,167	301,806,066
2025	350,687,752	28,308,294	273,497,773
2026	318,829,752	29,109,257	244,388,516

## General Fund Bond Debt

Virginia Resource Authority, Crows Nest Series 2008				
Fiscal Year	Principal	Interest	Total	Balance
2008				\$9,500,001
2009	352,741	269,707	622,448	9,147,260
2010	363,402	271,713	635,115	8,783,858
2011	374,386	260,729	635,115	8,409,472
2012	385,702	249,413	635,115	8,023,770
2013	397,360	237,755	635,115	7,626,410
2014	420,460	184,487	604,947	7,205,950
2015	441,736	163,211	604,947	6,764,214
2016	451,954	152,993	604,947	6,312,260
2017	462,409	142,538	604,947	5,849,851
2018	473,106	131,841	604,947	5,376,745
2019	484,050	120,897	604,947	4,892,695
2020	495,247	109,700	604,947	4,397,448
2021	506,703	98,244	604,947	3,890,745
2022	518,424	86,523	604,947	3,372,321
2023	530,416	74,530	604,946	2,841,905
2024	542,686	62,261	604,947	2,299,219
2025	555,240	49,707	604,947	1,743,979
2026	568,084	36,863	604,947	1,175,895
2027	581,225	23,722	604,947	594,670
2028	594,670	10,277	604,947	0
	<b>\$9,500,001</b>	<b>\$2,737,111</b>	<b>\$12,237,112</b>	

General Government General Obligation Bonds, Parks, Recreation and Transportation Series 2013				
Fiscal Year	Principal	Interest	Total	Balance
2014				\$18,785,000
2015	935,000	436,923	1,371,923	17,850,000
2016	935,000	840,825	1,775,825	16,915,000
2017	940,000	808,100	1,748,100	15,975,000
2018	940,000	765,900	1,705,900	15,035,000
2019	940,000	718,900	1,658,900	14,095,000
2020	940,000	671,900	1,611,900	13,155,000
2021	940,000	624,900	1,564,900	12,215,000
2022	940,000	577,900	1,517,900	11,275,000
2023	940,000	530,900	1,470,900	10,335,000
2024	940,000	483,900	1,423,900	9,395,000
2025	940,000	436,900	1,376,900	8,455,000
2026	940,000	389,900	1,329,900	7,515,000
2027	940,000	342,900	1,282,900	6,575,000
2028	940,000	295,900	1,235,900	5,635,000
2029	940,000	248,900	1,188,900	4,695,000
2030	940,000	206,600	1,146,600	3,755,000
2031	940,000	169,000	1,109,000	2,815,000
2032	940,000	131,400	1,071,400	1,875,000
2033	940,000	93,800	1,033,800	935,000
2034	935,000	56,200	991,200	0
	<b>\$18,785,000</b>	<b>\$8,831,648</b>	<b>\$27,616,648</b>	

## General Fund Bond Debt

General Government General Obligation Bonds, Refunding Series 2012				
Fiscal Year	Principal	Interest	Total	Balance
2012				\$4,810,000
2013	0	191,595	191,595	4,810,000
2014	700,000	205,325	905,325	4,110,000
2015	695,000	177,578	872,578	3,415,000
2016	505,000	148,878	653,878	2,910,000
2017	500,000	125,375	625,375	2,410,000
2018	490,000	102,256	592,256	1,920,000
2019	485,000	79,447	564,447	1,435,000
2020	480,000	56,894	536,894	955,000
2021	480,000	32,294	512,294	475,000
2022	475,000	9,997	484,997	0
	<b>\$4,810,000</b>	<b>\$1,129,639</b>	<b>\$5,939,639</b>	

Transportation Service District General Obligation Bonds, Garrisonville District Series 2013				
Fiscal Year	Principal	Interest	Total	Balance
2014		\$123,076	\$123,076	\$5,290,000
2015	260,000	236,900	496,900	5,030,000
2016	260,000	227,800	487,800	4,770,000
2017	265,000	215,975	480,975	4,505,000
2018	265,000	202,725	467,725	4,240,000
2019	265,000	189,475	454,475	3,975,000
2020	265,000	176,225	441,225	3,710,000
2021	265,000	162,975	427,975	3,445,000
2022	265,000	149,725	414,725	3,180,000
2023	265,000	136,475	401,475	2,915,000
2024	265,000	123,225	388,225	2,650,000
2025	265,000	109,975	374,975	2,385,000
2026	265,000	96,725	361,725	2,120,000
2027	265,000	83,475	348,475	1,855,000
2028	265,000	70,225	335,225	1,590,000
2029	265,000	58,300	323,300	1,325,000
2030	265,000	47,700	312,700	1,060,000
2031	265,000	37,100	302,100	795,000
2032	265,000	26,500	291,500	530,000
2033	265,000	15,900	280,900	265,000
2034	265,000	5,300	270,300	0
	<b>\$5,290,000</b>	<b>\$2,495,776</b>	<b>\$7,785,776</b>	



## General Fund Bond Debt

General Government General Obligation Bonds - Series 2015, Parks, Recreation				
Fiscal Year	Principal	Interest	Total	Balance
2016	\$0	\$113,557	\$113,557	\$5,947,629
2017	299,832	235,977	535,809	5,647,797
2018	299,832	226,982	526,814	5,347,965
2019	299,832	214,989	514,821	5,048,133
2020	296,949	200,069	497,018	4,751,184
2021	296,949	185,222	482,171	4,454,235
2022	296,949	170,374	467,323	4,157,286
2023	296,949	155,527	452,476	3,860,337
2024	296,949	140,680	437,629	3,563,388
2025	296,949	125,832	422,781	3,266,439
2026	296,949	110,985	407,934	2,969,490
2027	296,949	96,137	393,086	2,672,541
2028	296,949	81,290	378,239	2,375,592
2029	296,949	69,412	366,361	2,078,643
2030	296,949	60,503	357,452	1,781,694
2031	296,949	51,595	348,544	1,484,745
2032	296,949	42,686	339,635	1,187,796
2033	296,949	33,592	330,541	890,847
2034	296,949	24,313	321,262	593,898
2035	296,949	14,847	311,796	296,949
2036	296,949	5,011	301,960	0
	<b>\$5,947,629</b>	<b>\$2,359,582</b>	<b>\$8,307,211</b>	

General Government General Obligation Bonds - Series 2017, Parks, Recreation				
Fiscal Year	Principal	Interest	Total	Balance
2017				\$2,653,200
2018	0	67,439	67,439	2,653,200
2019	133,100	107,531	240,631	2,520,100
2020	133,100	100,876	233,976	2,387,000
2021	133,100	94,221	227,321	2,253,900
2022	133,100	87,566	220,666	2,120,800
2023	133,100	80,911	214,011	1,987,700
2024	133,100	74,256	207,356	1,854,600
2025	133,100	67,604	200,704	1,721,500
2026	133,100	60,946	194,046	1,588,400
2027	133,100	54,291	187,391	1,455,300
2028	133,100	47,636	180,736	1,322,200
2029	133,100	41,646	174,746	1,189,100
2030	133,100	36,322	169,422	1,056,000
2031	132,000	31,020	163,020	924,000
2032	132,000	26,400	158,400	792,000
2033	132,000	22,440	154,440	660,000
2034	132,000	18,480	150,480	528,000
2035	132,000	14,520	146,520	396,000
2036	132,000	10,478	142,478	264,000
2037	132,000	6,353	138,353	132,000
2038	132,000	2,145	134,145	0
	<b>\$2,653,200</b>	<b>\$1,053,081</b>	<b>\$3,706,281</b>	

## General Fund Bond Debt

General Government General Obligation Bonds - Series 2015, Transportation				
Fiscal Year	Principal	Interest	Total	Balance
2016		\$83,386	\$83,386	\$4,367,371
2017	220,168	173,279	393,447	4,147,203
2018	220,168	166,674	386,842	3,927,035
2019	220,168	157,867	378,035	3,706,867
2020	218,051	146,912	364,963	3,488,816
2021	218,051	136,009	354,060	3,270,765
2022	218,051	125,107	343,158	3,052,714
2023	218,051	114,204	332,255	2,834,663
2024	218,051	103,302	321,353	2,616,612
2025	218,051	92,399	310,450	2,398,561
2026	218,051	81,497	299,548	2,180,510
2027	218,051	70,594	288,645	1,962,459
2028	218,051	59,691	277,742	1,744,408
2029	218,051	50,969	269,020	1,526,357
2030	218,051	44,428	262,479	1,308,306
2031	218,051	37,886	255,937	1,090,255
2032	218,051	31,345	249,396	872,204
2033	218,051	24,667	242,718	654,153
2034	218,051	17,853	235,904	436,102
2035	218,051	10,903	228,954	218,051
2036	218,051	3,680	221,731	0
	<b>\$4,367,371</b>	<b>\$1,732,652</b>	<b>\$6,100,023</b>	

General Government General Obligation Bonds Series 2017, Transportation				
Fiscal Year	Principal	Interest	Total	Balance
2017				\$9,406,800
2018	0	239,101	239,101	9,406,800
2019	471,900	381,245	853,145	8,934,900
2020	471,900	357,650	829,550	8,463,000
2021	471,900	334,055	805,955	7,991,100
2022	471,900	310,460	782,360	7,519,200
2023	471,900	286,865	758,765	7,047,300
2024	471,900	263,270	735,170	6,575,400
2025	471,900	239,675	711,575	6,103,500
2026	471,900	216,080	687,980	5,631,600
2027	471,900	192,485	664,385	5,159,700
2028	471,900	168,890	640,790	4,687,800
2029	471,900	147,654	619,554	4,215,900
2030	471,900	128,778	600,678	3,744,000
2031	468,000	109,980	577,980	3,276,000
2032	468,000	93,600	561,600	2,808,000
2033	468,000	79,560	547,560	2,340,000
2034	468,000	65,520	533,520	1,872,000
2035	468,000	51,480	519,480	1,404,000
2036	468,000	37,148	505,148	936,000
2037	468,000	22,523	490,523	468,000
2038	468,000	7,605	475,605	0
	<b>\$9,406,800</b>	<b>\$3,733,618</b>	<b>\$13,140,418</b>	

## General Fund Bond Debt

Virginia Resource Authority 2017, Animal Shelter				
Fiscal Year	Principal	Interest	Total	Balance
2017				\$5,430,000
2018	190,000	199,187	389,187	5,240,000
2019	180,000	206,769	386,769	5,060,000
2020	190,000	200,563	390,563	4,870,000
2021	195,000	192,722	387,722	4,675,000
2022	205,000	182,472	387,472	4,470,000
2023	215,000	171,709	386,709	4,255,000
2024	230,000	160,306	390,306	4,025,000
2025	240,000	148,263	388,263	3,785,000
2026	250,000	135,706	385,706	3,535,000
2027	265,000	122,509	387,509	3,270,000
2028	275,000	110,572	385,572	2,995,000
2029	285,000	100,972	385,972	2,710,000
2030	295,000	91,909	386,909	2,415,000
2031	310,000	80,306	390,306	2,105,000
2032	320,000	66,063	386,063	1,785,000
2033	335,000	53,578	388,578	1,450,000
2034	345,000	42,738	387,738	1,105,000
2035	355,000	31,294	386,294	750,000
2036	370,000	19,213	389,213	380,000
2037	380,000	6,484	386,484	0
	<b>\$5,430,000</b>	<b>\$2,323,334</b>	<b>\$7,753,334</b>	

Virginia Resource Authority 2017C, 2008 Refunding				
Fiscal Year	Principal	Interest	Total	Balance
2017				\$4,085,000
2018		68,178		4,085,000
2019	2,485,000	112,753	2,597,753	1,600,000
2020		77,650	77,650	1,600,000
2021	0	77,650	77,650	1,600,000
2022	0	77,650	77,650	1,600,000
2023	0	77,650	77,650	1,600,000
2024	0	77,650	77,650	1,600,000
2025	0	77,650	77,650	1,600,000
2026	0	77,650	77,650	1,600,000
2027	0	77,650	77,650	1,600,000
2028	0	77,650	77,650	1,600,000
2029	0	77,650	77,650	1,600,000
2030	0	77,650	77,650	1,600,000
2031	0	77,650	77,650	1,600,000
2032	805,000	58,122	863,122	795,000
2033	795,000	19,297	814,297	0
	<b>\$4,085,000</b>	<b>\$1,190,150</b>	<b>\$5,206,972</b>	

## General Fund Bond Debt

Virginia Resource Authority 2017C, Station 14				
Fiscal Year	Principal	Interest	Total	Balance
2018				\$5,890,000
2019	290,000	118,820	408,820	5,600,000
2020	295,000	253,575	548,575	5,305,000
2021	295,000	243,184	538,184	5,010,000
2022	295,000	231,391	526,391	4,715,000
2023	295,000	218,322	513,322	4,420,000
2024	295,000	204,228	499,228	4,125,000
2025	295,000	190,134	485,134	3,830,000
2026	295,000	175,016	470,016	3,535,000
2027	295,000	159,897	454,897	3,240,000
2028	295,000	144,778	439,778	2,945,000
2029	295,000	129,659	424,659	2,650,000
2030	295,000	114,966	409,966	2,355,000
2031	295,000	100,697	395,697	2,060,000
2032	295,000	86,428	381,428	1,765,000
2033	295,000	72,159	367,159	1,470,000
2034	295,000	57,891	352,891	1,175,000
2035	295,000	45,097	340,097	880,000
2036	295,000	33,778	328,778	585,000
2037	295,000	23,509	318,509	290,000
2038	290,000	14,163	304,163	0
	<b>\$5,890,000</b>	<b>\$2,622,404</b>	<b>\$8,507,692</b>	

Virginia Resource Authority 2014B, Refunding of Series 2006 and 2008, Embrey Mill Park Improvements and Indoor Recreation Center				
Fiscal Year	Principal	Interest	Total	Balance
2015	\$0	\$2,034,800	\$2,034,800	\$64,335,000
2016	1,300,000	2,826,863	4,126,863	63,035,000
2017	1,340,000	2,788,831	4,128,831	61,695,000
2018	1,395,000	2,729,547	4,124,547	60,300,000
2019	1,460,000	2,660,663	4,120,663	58,840,000
2020	4,095,000	2,526,641	6,621,641	54,745,000
2021	4,175,000	2,327,122	6,502,122	50,570,000
2022	4,265,000	2,117,097	6,382,097	46,305,000
2023	4,365,000	1,895,953	6,260,953	41,940,000
2024	2,830,000	1,711,581	4,541,581	39,110,000
2025	2,920,000	1,568,763	4,488,763	36,190,000
2026	3,020,000	1,422,975	4,442,975	33,170,000
2027	3,115,000	1,276,966	4,391,966	30,055,000
2028	3,215,000	1,133,659	4,348,659	26,840,000
2029	3,315,000	985,878	4,300,878	23,525,000
2030	3,420,000	833,494	4,253,494	20,105,000
2031	3,515,000	691,959	4,206,959	16,590,000
2032	2,685,000	578,791	3,263,791	13,905,000
2033	2,790,000	477,813	3,267,813	11,115,000
2034	2,885,000	372,109	3,257,109	8,230,000
2035	2,995,000	262,572	3,257,572	5,235,000
2037	2,675,000	52,828	2,727,828	0
	<b>\$64,335,000</b>	<b>\$33,433,122</b>	<b>\$97,768,122</b>	

## General Fund Bond Debt

Virginia Resource Authority 2016C, Hidden Lake				
Fiscal Year	Principal	Interest	Total	Balance
				460,000
2020	40,000	22,175	62,175	420,000
2021	40,000	20,350	60,350	380,000
2022	45,000	18,322	63,322	335,000
2023	45,000	16,016	61,016	290,000
2024	45,000	13,709	58,709	245,000
2025	45,000	11,403	56,403	200,000
2026	45,000	9,097	54,097	155,000
2027	50,000	6,663	56,663	105,000
2028	50,000	4,100	54,100	55,000
2029	55,000	1,409	56,409	0
	<b>\$460,000</b>	<b>\$123,243</b>	<b>\$583,243</b>	

Virginia Resource Authority 2015D, LandFill				
Fiscal Year	Principal	Interest	Total	Balance
				1,855,000
2016		39,830		1,855,000
2017	195,000	84,922	234,830	1,660,000
2018	205,000	76,622	289,922	1,455,000
2019	215,000	65,859	291,622	1,240,000
2020	225,000	54,584	290,859	1,015,000
2021	235,000	44,397	289,584	780,000
2022	245,000	33,697	289,397	535,000
2023	260,000	20,756	293,697	275,000
2024	275,000	7,047	295,756	0
	<b>\$1,855,000</b>	<b>\$427,714</b>	<b>\$2,275,667</b>	

## General Fund Lease Debt

Fire Rescue Heavy Rescue				
Fiscal Year	Principal	Interest	Total	Balance
2016				\$3,028,339
2017	276,506	58,209	334,715	2,751,833
2018	282,049	52,665	334,715	2,469,784
2019	287,704	47,011	334,715	2,182,080
2020	293,472	41,242	334,715	1,888,607
2021	299,356	35,359	334,715	1,589,251
2022	305,358	29,357	334,715	1,283,893
2023	311,480	23,235	334,715	972,413
2024	317,725	16,990	334,715	654,688
2025	324,095	10,620	334,715	330,593
2026	330,593	4,122	334,715	0
	<b>\$3,028,339</b>	<b>\$318,810</b>	<b>\$3,347,149</b>	

Fire Rescue Self-Contained Breathing Apparatus (SCBA), Fire Rescue Heavy Rescue, Public Safety Computer Aided Dispatch				
Fiscal Year	Principal	Interest	Total	Balance
2014				\$5,980,906
2015	776,915	129,278	906,193	5,203,991
2016	792,808	113,386	906,193	4,411,183
2017	809,044	97,149	906,193	3,602,139
2018	825,634	80,560	906,193	2,776,506
2019	842,583	63,610	906,193	1,933,923
2020	366,915	48,281	415,196	1,567,008
2021	376,591	38,605	415,196	1,190,416
2022	386,523	28,674	415,196	803,894
2023	396,716	18,480	415,196	407,178
2024	407,178	8,018	415,196	0
	<b>\$5,980,906</b>	<b>\$626,042</b>	<b>\$6,606,948</b>	

Ladder Truck				
Fiscal Year	Principal	Interest	Total	Balance
2020				\$1,096,297
2021	101,401	32,006	133,407	994,896
2022	104,453	28,953	133,406	890,443
2023	107,598	25,809	133,406	782,845
2024	110,837	22,570	133,406	672,008
2025	114,173	19,233	133,406	557,835
2026	117,610	15,796	133,406	440,224
2027	121,151	12,256	133,406	319,073
2028	124,798	8,609	133,406	194,276
2029	128,555	4,852	133,406	65,721
2030	65,721	982		(0)
	<b>\$1,096,297</b>	<b>\$171,064</b>	<b>\$1,200,658</b>	

## General Fund Lease Debt

2 Fire Trucks				
Fiscal Year	Principal	Interest	Total	Balance
				\$2,194,073
2019	\$92,314	\$39,010	131,325	2,101,759
2020	189,582	73,067	262,649	1,912,177
2021	196,383	66,266	262,649	1,715,793
2022	203,429	59,220	262,649	1,512,364
2023	210,727	51,922	262,649	1,301,638
2024	218,287	44,362	262,649	1,083,351
2025	226,118	36,531	262,649	857,232
2026	234,230	28,419	262,649	623,002
2027	242,633	20,016	262,649	380,369
2028	251,338	11,311	262,649	129,031
2029	129,031	2,294	131,325	0
	<b>\$2,194,073</b>	<b>\$432,419</b>	<b>\$2,626,492</b>	

Ladder Truck				
Fiscal Year	Principal	Interest	Total	Balance
				\$1,145,881
2020	\$49,584	17,119.46	66,703	1,096,297
2021	101,401	32,005.51	133,406	994,896
2022	104,453	28,953.02	133,406	890,443
2023	107,598	25,808.64	133,406	782,845
2024	110,837	22,569.61	133,406	672,008
2025	114,173	19,233.06	133,406	557,835
2026	117,610	15,796.08	133,406	440,225
2027	121,151	12,255.63	133,406	319,074
2028	124,798	8,608.60	133,406	194,276
2029	128,555	4,851.78	133,406	65,721
2030	65,721	981.88	66,703	(0)
	<b>\$1,145,881</b>	<b>\$188,183</b>	<b>\$1,334,064</b>	

Cardiac Equipment				
Fiscal Year	Principal	Interest	Total	Balance
				\$1,439,020
2021	276,297	27,816.99	304,114	1,162,723
2022	281,934	22,179.69	304,114	880,789
2023	287,687	16,427.38	304,114	593,102
2024	293,556	10,557.70	304,114	299,546
2025	299,546	4,568.26	304,114	(0)
	<b>\$1,439,020</b>	<b>\$81,550</b>	<b>\$1,520,570</b>	

3 2019 Spartan Fire Trucks				
Fiscal Year	Principal	Interest	Total	Balance
				\$1,970,602
2021	\$174,554	17,119.46	51,053	1,796,048
2022	179,208	32,005.51	46,398	1,616,840
2023	183,987	28,953.02	41,620	1,432,854
2024	188,893	25,808.64	36,714	1,243,961
2025	193,930	22,569.61	31,677	1,050,031
2026	199,101	19,233.06	26,505	850,930
2027	204,410	15,796.08	21,196	646,520
2028	209,861	12,255.63	15,746	436,659
2029	215,457	8,608.60	10,150	221,202
2030	221,202	4,851.78	4,404	0
	<b>\$1,970,602</b>	<b>\$187,201</b>	<b>\$285,463</b>	

## Utilities Fund Bond Debt

Virginia Resource Authority - Little Falls Run				
Fiscal Year	Principal	Interest	Total	Balance
				\$9,326,573
2012	179,131	640,886	820,017	9,147,442
2013	365,351	321,513	686,864	8,782,091
2014	378,429	308,435	686,864	8,403,662
2015	393,034	260,813	653,847	8,010,628
2016	405,681	215,150	620,831	7,604,947
2017	416,791	204,039	620,830	7,188,156
2018	428,204	192,626	620,830	6,759,952
2019	439,931	180,899	620,830	6,320,021
2020	451,978	168,852	620,830	5,868,043
2021	464,356	156,474	620,830	5,403,687
2022	477,072	143,758	620,830	4,926,615
2023	490,137	130,694	620,831	4,436,478
2024	503,559	117,271	620,830	3,932,919
2025	517,349	103,482	620,831	3,415,570
2026	531,516	89,314	620,830	2,884,054
2027	546,072	74,758	620,830	2,337,982
2028	561,027	59,804	620,831	1,776,955
2029	576,390	44,440	620,830	1,200,565
2030	592,174	28,655	620,829	608,391
2031	608,391	12,439	620,830	0
	<b>\$9,326,573</b>	<b>\$3,454,302</b>	<b>\$12,780,875</b>	

Virginia Resources Authority - 2014 Various water distribution projects and infrastructure improvements.				
Fiscal Year	Principal	Interest	Total	Balance
2015		\$597,721		\$16,010,000
2016	525,000	624,678	2,314,858	15,485,000
2017	545,000	605,234	1,150,234	14,940,000
2018	570,000	580,237	1,150,237	14,370,000
2019	600,000	552,006	1,152,006	13,770,000
2020	625,000	529,041	1,154,041	13,145,000
2021	645,000	507,247	1,152,247	12,500,000
2022	670,000	482,450	1,152,450	11,830,000
2023	700,000	454,069	1,154,069	11,130,000
2024	730,000	422,125	1,152,125	10,400,000
2025	765,000	388,616	1,153,616	9,635,000
2026	800,000	350,863	1,150,863	8,835,000
2027	840,000	311,288	1,151,288	7,995,000
2028	880,000	271,063	1,151,063	7,115,000
2029	915,000	236,816	1,151,816	6,200,000
2030	945,000	207,578	1,152,578	5,255,000
2031	975,000	176,184	1,151,184	4,280,000
2032	1,010,000	141,800	1,151,800	3,270,000
2033	1,050,000	104,116	1,154,116	2,220,000
2034	1,090,000	63,656	1,153,656	1,130,000
2035	1,130,000	21,475	1,151,475	0
	<b>\$16,010,000</b>	<b>\$7,628,263</b>	<b>\$24,205,722</b>	



## Utilities Fund Bond Debt

Virginia Resources Authority - Aquia				
Fiscal Year	Principal	Interest	Total	Balance
				\$23,386,038
2012	536,481	475,248	1,011,729	22,849,557
2013	1,064,593	353,935	1,418,528	21,784,964
2014	1,074,248	344,280	1,418,528	20,710,716
2015	1,091,505	327,023	1,418,528	19,619,211
2016	1,124,655	247,521	1,372,176	18,494,556
2017	1,152,860	172,967	1,325,827	17,341,696
2018	1,163,838	161,989	1,325,827	16,177,858
2019	1,174,920	150,906	1,325,826	15,002,938
2020	1,186,109	139,717	1,325,826	13,816,829
2021	1,197,404	128,423	1,325,827	12,619,425
2023	1,220,317	105,509	1,325,826	10,190,303
2024	1,231,937	93,889	1,325,826	8,958,366
2025	1,243,668	82,158	1,325,826	7,714,698
2026	1,255,511	70,315	1,325,826	6,459,187
2027	1,267,467	58,359	1,325,826	5,191,720
2028	1,279,537	46,290	1,325,827	3,912,183
2029	1,291,721	34,105	1,325,826	2,620,462
2030	1,304,022	21,804	1,325,826	1,316,440
2031	1,316,440	9,388	1,325,828	0
	<b>\$23,386,038</b>	<b>\$3,140,846</b>	<b>\$26,526,884</b>	

Virginia Resources Authority - 2015				
Fiscal Year	Principal	Interest	Total	Balance
				\$8,620,000
2016		168,467		8,620,000
2017	270,000	367,856	637,856	8,350,000
2018	280,000	356,463	636,463	8,070,000
2019	295,000	341,728	636,728	7,775,000
2020	310,000	326,225	636,225	7,465,000
2021	325,000	312,153	637,153	7,140,000
2022	340,000	297,313	637,313	6,800,000
2023	355,000	279,503	634,503	6,445,000
2024	375,000	260,797	635,797	6,070,000
2025	395,000	241,066	636,066	5,675,000
2027	435,000	202,678	637,678	4,825,000
2028	455,000	182,672	637,672	4,370,000
2029	475,000	161,791	636,791	3,895,000
2030	495,000	143,384	638,384	3,400,000
2031	510,000	127,681	637,681	2,890,000
2032	530,000	107,831	637,831	2,360,000
2033	555,000	83,416	638,416	1,805,000
2034	580,000	59,613	639,613	1,225,000
2035	600,000	36,563	636,563	625,000
2036	625,000	12,391	637,391	0
	<b>\$8,620,000</b>	<b>\$4,291,299</b>	<b>\$12,742,831</b>	

## Utilities Fund Bond Debt

## DEBT MANAGEMENT

FY2022 Adopted Budget

Virginia Resources Authority - 2012 Rocky Pen Run Dam and Reservoir, Rocky Pen Run Water Treatment Facility, Various water distribution projects and infrastructure improvements.				
Fiscal Year	Principal	Interest	Total	Balance
				\$15,000,000
2013	0	2,314,858	0	15,000,000
2014	810,000	2,606,713	3,416,713	14,190,000
2015	845,000	2,573,679	3,418,679	13,345,000
2016	885,000	2,531,847	3,416,847	12,460,000
2017	930,000	1,506,616	2,436,616	11,530,000
2018	975,000	479,078	1,454,078	10,555,000
2019	1,020,000	432,531	1,452,531	9,535,000
2020	1,070,000	383,550	1,453,550	8,465,000
2021	1,125,000	327,303	1,452,303	7,340,000
2022	1,180,000	273,487	1,453,487	6,160,000
2023	1,235,000	218,703	1,453,703	4,925,000
2024	0	188,906	188,906	4,925,000
2025	0	188,906	188,906	4,925,000
2026	0	188,906	188,906	4,925,000
2027	455,000	181,797	636,797	4,470,000
2028	475,000	167,266	642,266	3,995,000
2029	495,000	152,109	647,109	3,500,000
2030	0	144,375	144,375	3,500,000
2031	0	144,375	144,375	3,500,000
2032	0	144,375	144,375	3,500,000
2033	0	144,375	144,375	3,500,000
2034	640,000	131,175	771,175	2,860,000
2035	0	117,975	117,975	2,860,000
2036	0	117,975	117,975	2,860,000
2037	0	117,975	117,975	2,860,000
2038	0	117,975	117,975	2,860,000
2039	0	117,975	117,975	2,860,000
2040	0	117,975	117,975	2,860,000
2041	905,000	99,309	1,004,309	1,955,000
2042	950,000	61,050	1,011,050	1,005,000
2043	1,005,000	20,728	1,025,728	0
	<b>\$15,000,000</b>	<b>\$16,313,867</b>	<b>\$28,999,009</b>	

Virginia Resources Authority - 2016				
Fiscal Year	Principal	Interest	Total	Balance
				\$41,140,000
2017		826,134		41,140,000
2018	95,000	1,801,466	2,314,858	41,045,000
2019	95,000	1,798,322	1,893,322	40,950,000
2020	100,000	1,793,775	1,893,775	40,850,000
2021	105,000	1,789,022	1,894,022	40,745,000
2022	110,000	1,783,863	1,893,863	40,635,000
2023	115,000	1,778,097	1,893,097	40,520,000
2024	1,415,000	1,738,891	3,153,891	39,105,000
2025	1,495,000	1,664,322	3,159,322	37,610,000
2026	1,570,000	1,585,781	3,155,781	36,040,000
2027	1,195,000	1,514,928	2,709,928	34,845,000
2028	1,255,000	1,452,147	2,707,147	33,590,000
2029	1,310,000	1,386,419	2,696,419	32,280,000
2030	1,895,000	1,305,941	3,200,941	30,385,000
2031	1,995,000	1,207,909	3,202,909	28,390,000
2032	2,100,000	1,103,225	3,203,225	26,290,000
2033	2,195,000	1,004,391	3,199,391	24,095,000
2034	1,650,000	925,088	2,575,088	22,445,000
2035	2,385,000	841,866	3,226,866	20,060,000
2036	2,490,000	741,319	3,231,319	17,570,000
2037	2,590,000	636,544	3,226,544	14,980,000
2038	2,695,000	530,859	3,225,859	12,285,000
2039	2,800,000	431,344	3,231,344	9,485,000
2040	2,900,000	327,863	3,227,863	6,585,000
2041	2,115,000	228,009	2,343,009	4,470,000
2042	2,195,000	139,116	2,334,116	2,275,000
2043	2,275,000	46,922	2,321,922	0
	<b>\$41,140,000</b>	<b>\$30,383,559</b>	<b>\$71,115,817</b>	