

December 11, 2018

The Honorable Mayor Richard West and Members of City Council  
City of Chesapeake, Virginia

Dear Mayor West and Members of City Council:

I am pleased to present the recommended Chesapeake’s Capital Improvement Program (CIP) for the next five years (FY 2020-2024). I have worked with staff throughout the city to identify and address the most urgent facility and infrastructure needs. While no municipality can address all its capital demands in a five-year period, I believe this plan accomplishes as much as our existing resources permit. More importantly, the proposed CIP insures Chesapeake will be prepared to successfully meet future opportunities and challenges.

Over the next five years we propose capital spending of \$556 million (nearly \$34 million more than our current five-year plan). Most new capital spending supports significant enhancements to the recreational facilities and to the transportation network (streets and bridges). Major new projects include:

- Modernization of school facilities \$ 40.0 million
- Heritage Park improvements 1.5 million
- Heron Landing Park improvements (off Indian River Road) 0.9 million
- South Central Water Transmission Loop – Phase 1 17.6 million
- Drainage and outfall improvements – Nina Dr., Liberty St., Greenbrier 3.4 million
- Chesapeake Expressway – paving 2.9 million
- Edwin Drive – improvements in traffic pattern 1.8 million
- Johnstown Road – ditch and shoulder improvements 20.3 million

While ambitious, the plan is well within the affordability guidelines adopted by City Council. Funding for the capital plan is largely provided by available cash and borrowing capacity within the two capital lockboxes, a judicious use of city fund balances, stormwater fees, cash and borrowing capacity of the utility fund, and transportation grants administered by the Virginia Department of Transportation.

Funding for the Capital Improvement Plan is split between cash funding and the issuance of debt over five years. Approximately 53% of the capital program is financed through either city cash sources or intergovernmental grants. Cash funding is provided from current operations, the accumulation of fund balances (surpluses) from past years, and from federal and state grants. A summary of the proposed capital funding plan follows.

**Cash from:**

City and school capital lockboxes	\$ 83.1 million	
Virginia Department of Transportation reimbursements	61.3 million	
Stormwater Fund	24.6 million	
Water and sewer fund	64.6 million	
Other city funds	63.8 million	
<b>Total cash available for capital program</b>	<b>\$ 297.4 million</b>	<b>53%</b>

**Debt to be issued for:**

City projects – general government	\$ 92.2 million	
School projects	106.1 million	
Water and sewer projects	60.7 million	
<b>Total debt required to fund capital program</b>	<b>\$ 259.0 million</b>	<b>47%</b>

The proposed CIP meets all the city’s affordability policy targets based on the five-year revenue forecast and projected borrowings over the next decade. Targets are recommended for debt levels on borrowing for general government projects. These exclude debt and associated operations for the three enterprise funds: Water and Sewer, Stormwater, and Chesapeake Transportation System (toll roads). While the proposed CIP requires the issuance of additional debt, all affordability measures are met:

<b>Metric</b>	<b>Policy</b>	<b>CIP Proposal</b>
Net government debt compared to assessed value of taxable real estate in the city	Less than 3.5%	1.6% to 1.7%
Per capita general government debt	Less than \$3,000	Up to \$1,787
Annual debt service compared to general government revenue	Less than 10%	7.2% to 8.7%

While our capital assessment was comprehensive, the new CIP does not address all capital demands citizens have requested or that the city’s engineers and planners have identified. Several projects are either beyond the city’s financial capacity or the projects are at very preliminary stages and were not fully vetted. While not exhausting all available resources, the proposed CIP addresses all high priority capital projects either through borrowing or using available cash. Projects that were considered but are not immediately recommended include:

- Community and regional recreational facilities,
- Extension of the Dismal Swamp Canal Trail,
- Acquiring property for a new business park,
- Renovations to some school facilities identified in last year’s school capital plan, and
- Flood control improvements that might feasibly address severe rain events.

The school superintendent is scheduled to have presented his capital recommendations to the School Board on December 10, 2018. While we cannot predict the superintendent’s recommendations, this proposed CIP includes \$43.5 million for future modernization efforts by Chesapeake Schools starting July 2023. That is the maximum amount we estimate is available for school capital under existing revenue sharing practices.

Immediately following this transmittal letter are summaries of existing and proposed capital projects for the upcoming five years.

The proposed \$556 million Capital Improvement Plan represents the city's commitment of resources to protect, maintain, and upgrade critical infrastructure throughout the city. The CIP requires the issuance of \$198 million of general obligation bonds (including short-term financing) and \$61 million of public utility revenue bonds over the next five years. The city has capacity through a combination of locked revenue and tax increment financing to fund debt service on all required GO bonds. Similarly, the Public Utilities Fund has adequate capacity to fund debt service required on its revenue bonds. The proposed CIP requires savings realized from the retirement of old debt issues be reinvested into the capital plan (via school and city capital lockboxes).

While the objective of a Capital Improvement Program is to identify facility and infrastructure needs, several projects that might start before 2024 are not included in this plan. These include projects that are either currently or will soon be under evaluation and the outcome of the evaluation cannot be predicted. Projects that could require funding in the next five years include:

- Specific recreational projects that have been recommended or suggested by individual Council Members that have not been fully defined or approved by the full Council. Examples include a community swimming pool and a field house.
- Public Improvements along Dominion Boulevard – a study recommending appropriate land uses of the area south of Cedar Road was completed last year. In order to develop a thriving mixed-use community, public investments are probably necessary. With the exception of an extension of water to the Chesapeake Airport, such investments require financing that are outside the scope of current capital planning.

These and other issues are likely to emerge that will require attention in future capital programs. However, the availability of resources may require prioritization and deferral of some very worthy capital projects.

**Looking Beyond FY 2024** – Given the continuation of current economic conditions, the city is well positioned to fund the capital program beyond the five year planning period covered by the CIP. We project the city lockbox will have \$5.5 million of cash at the end of FY 2024. We have also included provisions for additional debt-financed funding for several projects beyond what is included in the CIP as noted here:

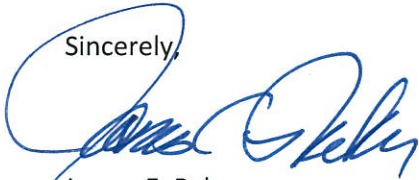
- Citywide ERP System – a study is underway that will recommend future investments in the city's electronic business applications. The city lockbox includes a provision for a future debt issue of \$5.0 million to address recommendations of the study.
- Fire Station 4 – the CIP includes land and design funding for a replacement of the North Battlefield Fire Station with construction occurring after 2024. We have included a provision in the city lockbox for a FY 2025 borrowing to finance the replacement station.
- Fire Station 16 – the CIP includes design funding for a new fire station in the Grassfield area that also would be constructed after 2024. A provision is included in the city lockbox for a FY 2027 borrowing to finance the proposed station.
- Renovation of Public Safety Building – a study is also funded to determine the feasibility of renovating the public safety building and training facilities. Actual construction is assumed to occur after FY 2024 and the city lockbox includes provisions for a FY 2027 bond issue to finance the project.

The Capital Improvement Program is a five-year planning document that is reevaluated annually. In the spring when City Council considers the operating budget, it will also appropriate funds for the first year of the CIP so that city staff can implement the FY 2020 portion of the new capital plan starting July 1, 2019. The proposed Capital Budget for FY 2020 is \$133 million and is financed as follows:

Cash from operating and capital funds	\$ 55,616,930
Cash from intergovernmental grants	6,152,000
General obligation debt	63,373,465
<u>Revenue bonds (utility fund)</u>	<u>7,854,000</u>
Total financing plan for FY 2020	\$ 132,996,395

In summary, the Proposed Capital Improvement Program for the next five years reflects our focus on maintaining existing infrastructure, ensuring economic vitality, and addressing the capital needs of core city services. The CIP proposal addresses critical requirements while maintaining or improving metrics that impact the city’s financial strength. I look forward to working with you in the coming weeks as you review and finalize the City’s Capital Improvement Plan.

Sincerely,



James E. Baker  
City Manager

## DISCUSSION OF EXISTING CAPITAL PROJECTS

### Community Facilities

- High Priority Community Facility Renewal and Replacements – we recommend continuing the existing efforts to address deferred maintenance of city facilities. Over the next five years we propose investing \$11.35 million to renew existing facilities and building components (including roofs and HVAC systems). This investment will ensure serviceability of city facilities for current and future generations. For the general facility program, we propose spending \$1.78 million during FY 2020 to:
  - Overhaul jail elevators,
  - Test and clean major electrical panels throughout city,
  - Replace cooling tower and skylights at Juvenile and Domestic Relations Courthouse,
  - Replace entrance doors at Western Branch and Deep Creek Community Centers, and
  - Renovate restrooms at main courthouse.

Similar types of work are planned throughout the next five years.

- Municipal Parking Lots and Sidewalks – the proposed CIP continues annual funding to repair and maintain municipal parking lots and sidewalks, and to insure greater accessibility to municipal facilities for disabled persons.
- Public Works and Public Utilities Operations Facilities – the current CIP includes planned funding of \$22.5 million in FY 2021 to relocate and/or rebuild the operations facilities used by the two departments. Previously, Council included \$13.7 million for the first phase of the project bringing the estimated cost of the project to \$36.2 million. With the 2020-24 CIP, we propose deferring \$4.0 million of the Public Utility share of the program to FY 2024 and 2025. While conditions of the facilities continue to deteriorate, it is unlikely we will start the final stage of the project before July 2024. Deferring the Public Utility contribution to the project will not cause delays.
- Juvenile Services Building Repairs – the proposed CIP adds \$1.2 million to the existing project in order to ensure the facility remains operational until a permanent replacement can be constructed (8-10 years in the future). The additional funding brings the project to \$3.2 million (approximately \$1.0 million has already been committed).

**Economic Development** – the current CIP includes \$1.5 million towards site development of a new 76,000 square foot sciences building on the Chesapeake Campus of Tidewater Community College. Since the expansion has not been approved by the General Assembly, we now estimate the city's contribution to the project will occur in FY 2022 rather than FY 2020, as stated in the current CIP.

Several TIF funded projects that were funded in earlier years remain underway, including:

- The strategic acquisition of real property in South Norfolk for redevelopment,
- The local share of improvements to Chesapeake Airport (exclusive of federal and state aviation grants),
- Open Space and Agricultural Preservation – the CIP includes annual provisions of \$610,000 to purchase property and/or development rights,
- Municipal Building in South Norfolk – the FY 2019 capital budget includes funding to design a building to house existing services in a new building,

- Several projects that improve the flow of vehicular, pedestrian, and bicycle traffic and improved signage in the Greenbrier District, and
- Improvements in support of Dollar Tree expansion.

Since the design of the South Norfolk Municipal Building is in very early stages, we have not included construction costs in the CIP. Once design estimates are available, an amendment to CIP will be required if the project is to proceed during the next five years. We anticipate that future construction costs will be funded with debt supported by the South Norfolk TIF.

**Education** – the current CIP includes:

- |   |                 |
|---|-----------------|
| • Modernization and expansion of Chittum Elementary School          | \$ 27.2 million |
| • Facility additions required by full-day kindergarten              | \$ 11.3 million |
| • School bus and technology replacement projects                    | \$ 10.0 million |
| • Non-routine renewals and replacements (primarily HVAC and roofs)  | \$ 55.0 million |
| • Modernization for existing facilities – campuses to be determined | \$ 45.0 million |
| • School stadium renovations (Great Bridge and Deep Creek)          | \$ 6.5 million  |

The school bus, technology, and non-routine renewal projects are also underway and we recommend continuation of the existing plan with new funding during FY 2024 at existing levels.

Last year, the superintendent’s capital planning document identified thirteen (13) schools that require either expansion or modernization in the next five years. The following schools are either under construction or included in the current CIP:

- Great Bridge Primary School – replacement under construction
- Hickory Middle School – addition under construction
- Full day kindergarten – additions to Greenbrier Primary, Grassfield Elementary, and Western Branch Primary schools is scheduled for FY 2020

The following schools identified in last year’s school capital plan are not funded:

- Indian River Middle School – modernization and addition
- Crestwood Middle School – modernization
- Carver Intermediate School – modernization
- Western Branch Middle School – modernization
- Deep Creek Central Elementary – modernization
- Deep Creek High School – modernization

CPS estimates it would cost over \$270 million to address the above modernizations. The proposed 2020-24 CIP includes \$43.5 million that could be used to address one or more of the above projects.

**Information Technology** – the current CIP includes \$8.1 million of funding for existing projects over the next four years. Technology projects that are currently underway include:

- The migration of legacy systems from the main-frame (fully funded),
- City fiber optic broadband network project to connect city facilities,
- Citizen engagement and website redesign,
- Enterprise upgrades for Kronos (time and attendance), PeopleSoft (Financials), Laserfiche (document imaging and storage), and Library Operations,
- Replacement of city telephone systems with voice over internet protocol (VOIP) based system,
- Replacement of identity management systems,
- Replacement of network equipment,
- Replacement of library technology equipment, and
- Replacement of the Fire Station Alerting System.

All existing projects are recommended for continued funding as outlined in the existing plan, with the following changes:

- Add installation of new release/upgrades for Laserfiche (\$100,000) during FY 2024,
- Add installation of new release/upgrades for PeopleSoft (\$400,000) also during FY 2024, and
- Add website redesign during FY 2020 (\$150,000),
- Reduce Network Equipment Replacement from \$708,400 to \$600,000 per year (2020-22) and add \$600,000 to each of FY's 2023 and 2024.

**Parks, Recreation, and Tourism** – The CIP includes a continuation of projects first identified in FY 2015:

- Recreational center improvements – annual allocation of \$300,000 through FY 2029 (15 years).
- Park program improvements – also approved at \$300,000 through FY 2029.
- Athletic field improvements and expansions – annual allocation of \$380,000 through FY 2026 (12 years).
- Modifications to improve access for disabled patrons are recommended at \$75,000/year through FY 2024 (10 years).
- Parking lot improvements are recommended at \$90,000/year through FY 2024.
- Security improvements are recommended at \$40,000/year through FY 2024.

Other Parks, Recreation, and Tourism (PRT) projects:

- Conference Center renovations to replace ceilings, doors, and HVAC units and to resurface the parking area are included in the existing CIP (through FY 2021). The plan also includes an addition for storage and painting the building exterior.
- Projects funded with Open Space and Recreation Fund – we recommend continuing the program and adding \$500,000 to eighth year (FY 2024). That increases total project funding to \$7.7 million. Funding is provided from developer payments made in lieu of installing neighborhood recreational facilities.
- Bridge replacements at the Chesapeake Arboretum during FY 2020 as planned in the current CIP.

As discussed later in the New Projects section, we have reduced funding of the project for future park improvements and expansions to add two new projects for Heritage and Heron Landing Parks. No other changes are recommended for existing PRT projects.

**Public Safety** – major public safety projects now underway include:

- Saint Brides Fire Station and Police Precinct – the project is fully funded and under design, no further funding is anticipated.
- Bowers Hill Fire Station replacement – design is complete and construction should start in coming months.
- Construction of replacement fire stations at Deep Creek and Dock Landing Road are planned. The FY 2018 Capital Budget included construction for the Deep Creek station. The design of the Dock Landing replacement is planned for FY 2021 with construction occurring the following year.
- Design of two fire stations – the current plan includes designing a replacement for the Battlefield Fire Station (#4) and a new fire station in the Grassfield area during FY 2022. We recommend moving the design of both stations to FY 2024 with construction occurring beyond the five year planning period. We also recommend adding \$900,000 to the Battlefield Station during FY 2020 to address a relocation of the facility (the current site is too small).
- Replacement of fire vehicles – recommend continuing annual allocation of \$1.5 million (2024).
- Renewal and replacement of building components are planned for the Jail and Sheriff’s Office. We recommend several changes to this project: (a) continuing the project for a seventh year with an additional \$577,000 during FY 2024, (b) reduce FY 2021-2023 plans by \$266,000 to cap future allocations at 3% annually, and (c) the replacement of jail boilers (\$600,000 that was previously included with Community Facilities).

**Public Utilities** – The department continues to upgrade pump stations and replace/repair sewer lines as prescribed by the Sanitary Sewer Evaluation Studies and mandated by Department of Environmental Quality (DEQ). The department operates under a regional consent order from the DEQ that requires it to follow best management practices, control sewer overflows and limit the infiltration of stormwater into the sewer system. Public Utilities works with the Hampton Roads Sanitation District (HRSD), the regional authority that treats waste water, to ensure compliance with DEQ and federal regulations. The department is also executing long term planning and maintenance on its water treatment, storage, pumping, distribution, and sales systems.

The current CIP includes the following for the next four years:

- Water projects \$ 40.92 million
- Sewer projects \$ 38.05 million
- Other projects (customer service and billing) \$ 12.00 million

Included in the New Project Section (later in report) is the first phase of the South Central Loop, a project that will form a water transmission loop from the Northwest River plant along existing water lines along Battlefield Boulevard and Cedar Road to a new line heading south in the Dominion Boulevard corridor and back east to Northwest WTP. The first phase of the loop starts at the existing line on Cedar Road and goes south to the West Road area (near the airport). In order to finance this line, several other projects will be delayed as follows:



- Northwest River Miscellaneous Modifications – reduce funding in FY 2021 by \$500,000,
- Sewer Pump Stations Renewal/Replacements – reduce funding in FY 2022 and 2023 by \$3.0 million (total),
- Sewer Renewals – Consent Order – delay \$5.65 million of funding from FY’s 2020 through 2023 to FY 2024,
- Waterline Upgrade and Renewals – reduce funding in FY 2022 by \$1.0 million,
- Water System Planning and Upgrades – reduce funding in FY 2020 by \$250,000, and
- Chesapeake Connector – delay funding of \$2.0 million from FY 2021 to FY 2022.

Other revisions to existing water and sewer projects are as follows:

- Automated meter reading system – the project is currently funded for \$1.4 million with an additional \$12.0 million planned from FY 2021 through 2023. Another \$2.0 million is needed in FY 2024 to complete the project. Total project funding through FY 2024 is \$15.4 million.
- Centerville Turnpike Loop – this project improves reliability by creating a redundant loop between the existing water lines on Centerville to the City’s Greenbrier area. The project is currently funded for \$4.1 million with an additional \$5.2 million planned in FY 2020. New estimates reduce the FY 2020 requirements to \$3.85 million. Total project funding through FY 2024 is \$7.9 million.
- Lake Gaston Pipeline (Capital Cost Sharing) – this project provides for the City’s share of renewal efforts on this regional facility. The project was first funded in FY 2019 with \$205,000 with future funding of \$1.26 million through FY 2023. Revised estimates increase funding requirements for FY’s 2020-2023 by \$120,000 and add \$350,000 for FY 2024. These changes increase the project from \$1.5 million (5 years) to \$1.9 million over six years.
- Lake Gaston Water Treatment Plant – (a) delay \$2.2 million membrane replacement from FY 2022 to FY 2024 based on improved operating conditions and (b) delay \$2.7 million for miscellaneous modifications to FY 2024. Total funding plans for both projects remains unchanged.
- Replace Lead Service Lines – this project will replace lead service lines located between water mains and water meters. Some of the oldest service lines used lead pipes; further, neighborhoods developed before 1980 may contain trace amounts of lead leaching from solder connections. Funding plans for this project provide \$600,000 through FY 2023. We recommend adding another \$500,000 in FY 2024 bringing project to \$1.1 million.
- Northwest Water Treatment Plant – Miscellaneous Modifications – the project is currently funded for \$8.67 million with an additional \$4.2 million planned from FY 2020 through 2023. Corrosion of plant components require an additional \$250,000 in FY 2021 and \$2.0 million in FY 2024. The proposed changes would revise the project budget from \$12.87 million to \$15.68 million.
- Raw Water Transmission Main – the project is currently funded for \$22.6 million. New engineering estimates indicate \$2.7 million of additional funding is needed in FY 2021 bringing the project cost to \$25.3 million. The increased funding addresses price inflation above estimates from the 1990s.
- Sewer pump station replacement and rehabilitation – this project addresses the need to replace equipment and other components in the 273 pump stations spread across the city. The initial funding of \$2.7 million in FY 2022 was for pump stations in the Indian River area (#60 and 61). Plans for FY 2023 include \$3.0 million for improvements at seven stations during FY 2023. For FY 2024, we recommend an additional \$3.0 million for another seven stations. This level of funding will continue indefinitely as station components age and fail.

- Sewer pump station safety improvements – the project provides for the replacement of structural components that pose a safety risk to department personnel. The project is currently funded for \$1.5 million with plans to add \$500,000 annually from FY 2021 through 2023. We recommend continuing the program into FY 2024 with another installment of \$500,000.
- Sewer renewals required by DEQ regional consent order – the department maintains an evolving list of priority sewer replacement and rehabilitation projects. To date, we have allocated \$11.36 million to this project and planned to add another \$26.15 million through FY 2023 for a total of \$37.51 million. We now propose to delay project plans in order to fund the South Central Loop discussed earlier. Under this proposal, improvements planned for FY’s 2020-2023 would extend into FY 2024 and project funding over the five years would increase by \$350,000 bringing the total funding to \$37.86 million. With these revisions, funding for the five years grows from \$2.0 million in FY 2020 to \$8.0 million in FY 2023 and then drops to \$6.0 million in FY 2024. We anticipate continued funding is necessary beyond FY 2024. Sewer rehabilitation will likely continue at a level of approximately \$9 to 10 million per year (with appropriate adjustments for inflation) to maintain the 1,100 mile sewer network. Future funding will likely fluctuate based on competing priorities.
- Unserved Areas Cost Participation – this project provides for the installation of water and sewer services in areas that were developed before the city services were available and rely on private wells and septic systems. The current project plans includes \$250,000 already allocated plus \$1.40 million planned for FY 2020. The revised plan increases the FY 2020 allocation to \$1.63 million. We anticipate new projects along Peek Trail and South Willow Lakes.
- Water renewals/water line upgrades – this project focuses on replacing water mains and upgrading the existing water system and appurtenances in order to maintain acceptable water pressures and fire protection. The current water network includes approximately 900 miles of water mains, many exceeding their 40-50-year design life. The department recommends delaying previous plans for FY 2022 (related to South Central Water Loop discussed above) and adding \$1.0 million for FY 2024 (total funding for FY 2024 is \$2.0 million). Beyond FY 2024, we anticipate funding requirements of at least \$5.0 million annually. Many of the water line projects are executed concurrently with sewer pipeline projects in order to reduce customer inconvenience and overall project cost.

In 2014, the State Water Control Board issued a new Consent Order to fourteen localities served by HRSD. This consent order identifies specific responsibilities for HRSD and the localities based on a Memorandum of Agreement (MOA) executed by each locality earlier in the year. HRSD is responsible for capacity improvements in the locality’s sanitary sewer system that contribute to sanitary sewer overflows, while the localities are responsible for operations, maintenance, and renewal improvements. The Consent Order and MOA require coordination between each locality and HRSD with respect to capital improvements. While HRSD will not address all sewer improvements in the city, we anticipate work performed by HRSD will have a positive impact on the city’s capital plans. Under terms of the MOA, we will need to undertake improvements that are not included in HRSD’s Regional Wet Weather Management Plan. For that reason, we envision the need for Council to occasionally consider changes to the City’s Capital Improvement Plan as we coordinate activities with HRSD and systematically renew our sanitary sewer facilities. Ultimately, we believe coordination will reduce costs by limiting duplicated efforts.

**Stormwater** – The proposed CIP continues outfall upgrades and on-going neighborhood drainage improvements that address localized flooding. The plan is consistent with the City’s permit under the Virginia Pollutant Discharge Elimination System (VPDES) that regulates the quality of water being discharged through pipes, ditches, and other conveyances.

Summary of significant changes to Stormwater Capital Plans:

- Liberty Street Drainage System – the project includes plans to upgrade and/or replace the existing drainage system during FY 2021 with \$800,000 from the Stormwater Fund. For the proposed CIP, cost estimates are revised to \$850,000 and the project is moved to FY 2020 with funding from the South Norfolk TIF.
- Citywide Outfall Regrading and Restoration – the project restores outfalls by removing silt from ditches and outfalls; it is currently funded for \$1.7 million with plans for new funding of \$3.7 million spread over the next four years (2020-2023). We recommend an additional \$800,000 during FY 2024 bringing the total project plan to \$6.17 million.
- Citywide System Rehabilitation – the project is currently funded for \$2.9 million with plans for new funding of \$500,000 in FY 2020 and \$300,000 in FY 2021. We recommend an additional \$700,000 during FY 2024 bringing the total project plan to \$4.4 million.
- Elmwood Landing Area Drainage Improvements – the project provides for regrading and replacement of pipes in Elmwood Landing. The project is planned during FY 2020 based on a grant from the Virginia Department of Environmental Quality. We were not successful in obtaining funds from the grant and now recommend funding from the Stormwater Fund.
- Neighborhood Drainage Improvements – the project is currently funded for \$3.2 million with plans for new funding of \$1.4 million spread over the next four years. We recommend an additional \$500,000 during FY 2024 bringing the total project plan to \$5.1 million.
- Resiliency and Reliability Program – the project provides for improvements to the city’s inter-connected lake systems and downstream culverts. It is currently funded for \$600,000 with plans for new funding of \$4.5 million spread over the next four years. We recommend an additional \$600,000 during FY 2024 bringing the total project plan to \$5.7 million.

**Transportation** – major public safety projects now underway include:

- AIW Deep Creek Bridge – this is a project of the U.S. Army Corps of Engineers with \$20 million of funding passing through the City from the Commonwealth. Approximately \$28 million of federal spending is not included in the city’s CIP. The project is managed by the Corps and scheduled to start September 2019 with completion three years later. (Once the project is completed, the city will assume responsibility for its operation.)
- Expressway Interchange at Mt. Pleasant Road – repairs to the interchange were required because of damage by Hurricane Matthew. Construction began in September 2018; completion is scheduled for December 2018.
- 22nd Street Bridge – design is complete and construction of the 18-month project is scheduled to start in the coming weeks.
- Centerville Bridge Rehabilitation – construction is projected to start in February 2019 with completion in Spring 2020.
- Mount Pleasant Road Widening – Public Works is negotiating with a design/engineering consultant; we anticipate construction to commence in summer 2018 (10 month duration).

- Sunray Bridge Rehabilitation – construction is expected to start in coming weeks with completion in Fall 2019.
- Triple Decker Bridge Rehabilitation – design will start in 2019 with construction expected during FY 2020.
- Intersection of Hanbury and Johnstown Roads – construction is anticipated to start in Spring 2019 with completion approximately six months later.
- Public Works is working on a number of smaller projects including the rehab of several bridges and overpasses and improvements to intersections. No substantive changes are planned for those projects.

Proposed changes to existing transportation projects:

- Dominion Boulevard Closed Circuit TV – the current CIP includes \$100,000 for this project during FY 2020. Staff recommends expanding the scope of the original proposal. The expanded project is estimated to cost \$340,000 with funding split between FY's 2020 and 2021.
- Citywide Sidewalk Project – the current CIP includes \$900,000 of funding spread over four years. The initial FY 2019 allocation was \$600,000 followed by three consecutive years of \$100,000. Because of the magnitude of the demand for sidewalks, we now recommend annual funding of \$300,000 through FY 2024. The project will likely continue indefinitely.
- Non-arterial Street Repaving – state funding for repaving is only sufficient to pay for arterial roadways resulting in a very large backlog of non-arterial streets that are not addressed. The current CIP includes annual funding of \$2.0 million to resurface non-arterial roads (mostly residential, but also in commercial areas) through FY 2022. Because of the large backlog, we recommend an additional \$2.0 million in FY 2024. The project will likely continue indefinitely.

## DISCUSSION OF NEW CAPITAL PROJECT PROPOSALS

In developing the proposed capital plan, city staff evaluated the conditions of current facilities and infrastructure along with citizen demands and expectations. Listed below is a brief description of new projects that are proposed in the CIP:

### Community Facilities

- LED Lighting Retrofits – this project will address the replacement of antiquated and worn lighting fixtures with energy efficient fixtures. The CIP includes funding of \$100,000 annually for five years. The estimated cost to replace all building lighting fixtures exceeds \$2.0 million. The project will focus on fixtures that are at end of life and which are expensive to maintain/operate.
- Library Book Lockers – this project will install library lockers in two community locations to serve library patrons who cannot conveniently go to the library. The lockers would be serviced by the library couriers who would leave materials for patrons to retrieve using their library card. That would allow patrons in outlying areas easier access to the library collection. Purchase and installation of the two lockers is estimated to cost \$113,000.
- Public Works Bowers Hill Yard Facility Renovations – project replaces deteriorated office and restroom facilities with a permanent modular or pre-engineered building. Other buildings on site would also be retrofitted/modernized. The project is estimated to cost \$300,000 and is planned during FY 2020.
- Public Works Greenbrier Yard Storage Building – this project will provide for a pre-engineered building for the Public Works Greenbrier Yard to replace the warehouse that was destroyed by fire in 2014. The new facility will also provide interior restrooms, adequate and proper storage areas for tools and equipment, and meeting areas. The project is estimated to cost \$735,000 and construction would begin in FY 2020. Approximately \$235,000 is available from insurance recoveries (a portion of the insurance recovery was spent on temporary storage units).
- Juvenile Service Building Replacement – a new project for replacement of the existing facilities with funding for a conceptual design/feasibility study in FY 2024. We estimate it will cost between \$20 million and \$32 million to construct a facility with a capacity between 50 and 100 residents.
- Security Improvements – this project will provide safety enhancements identified by the City’s Safety Committee. Improvements include camera installations and crossing signs at intersections at City Hall and other municipal facilities.

### Education (Public Schools)

- As was noted in the previous section, we recommend the allocation of funds from a “to-be-determined” project to the modernization of school facilities. \$43.5 million is available during FY 2025 from a combination of cash and new debt issuances (both funded through the school lockbox).

## Economic Development

- Greenbrier Redevelopment Study – project focuses on encouraging commercial growth within the existing confines of the Greenbrier TIF. The study would include repurposing existing structures and better uses of large parking lots. The study is estimated to cost \$200,000 and is funded through the Greenbrier TIF.
- Western Branch Redevelopment Study – this study is similar to the Greenbrier study, but is focused on Western Branch. Funding is provided from the City’s General Fund Balance.
- 2035 Comprehensive Plan – state statute requires the city’s comprehensive plan to be updated every five years. This project requires the services of an outside professional planning and land use consulting team to assist city staff. The project includes integrated public relations and community outreach, master land use visioning and planning, master transportation modeling and planning, market and fiscal analysis, open space-conservation systems, and other elements such as environmental sustainability, strategic infrastructure planning, and technology. The project is estimated to cost \$400,000 and is scheduled to start in FY 2020.

## Technology Projects

- Citizen Experience Study: City Digital Content – this project funds a study to assess the current stakeholder experience interacting with the City via digital tools. It will inventory digital tools, assess user satisfaction and provide benchmarks for measuring success of future initiatives. The second year of the study includes a pilot program. The goal is to create an environment where people can interact with their government at the time and place they choose with the fewest obstacles possible. The two year study is estimated to cost \$400,000 and would start in FY 2020.
- Data Center Equipment Replacement – this project replaces equipment in the city’s two data centers along with hardware at various critical, remote locations to ensure that City’s computing and storage requirements are met. The equipment will be replaced with new hardware when the existing older hardware becomes out-of-date or reaches end-of-life. The typical equipment cycle is three-to-five years. The CIP includes annual funding of \$1.5 million for three years (\$4.5 million for FY’s 2020-2022).
- Fire/EMS - Mobile Data Terminals – project will replace 60 mobile routers, 10 rugged mobile data terminals, and communications hardware/software. Rapid changes in cellular communication requires more frequent replacement of communication devices. We also anticipate an upgrade in mobile communications (from 4G to 5G) in the next 3 years. We plan to replace rugged mobile units with iPads that offer a much lower cost of ownership while still providing access to critical applications. The project is estimated to cost \$200,000 and is scheduled for FY 2022.
- Citywide Security Assessment and Upgrade – the project assesses all cameras, camera systems, video storage, and access control systems with a goal of standardization. Currently the city has a variety of systems that function inefficiently. The project also replaces outmoded cameras and door controllers in both the Juvenile & Domestic Relations (JDR) and General District Courts. The project is estimated to cost \$800,000 and is scheduled to start in FY 2020.

## **Parks, Recreation and Tourism**

- Heritage Park – project implements the second phase of the Heritage Park Master Plan. The first phase will provide minimal access to the park. Phase II will install running water, sewer, and electricity as well as parking areas, a small ranger station, and a multi-use trail system. The project is estimated to cost \$1.5 million and is scheduled to start in FY 2024.
- Heron Landing Park (off Indian River Road) – project provides access to the historic Indian River while showcasing the beauty of restored tidal wetlands and riparian forests. Improvements include habitat restoration for marine birds and animals, improved air and water quality, a looped trail through marshes and maritime forests, and access for kayaking and fishing. This project will remove a broken bulkhead and replace it with naturally sloped living shoreline. The project also includes a boardwalk, kayak launch, small picnic shelter, portable restrooms, and parking areas. The project is estimated to cost \$906,000 over four years starting in FY 2020.
- Oak Grove Lake Park Phase II – project includes a finger pier and a kayak/paddle boat rental shack to allow public access to the 65 acre lake. An additional 50-car parking lot also includes along with paving the 1.6 mile trail to ensure access to disabled persons and strollers. The project is estimated to cost \$320,000 and is scheduled to begin in FY 2023.

## **Public Safety**

- Virtual Firearm Training/Safety Awareness System – this project implements a virtual simulation system to better train police officers and sheriff deputies in arms manipulation. Training includes a variety of shooter scenarios. The system is portable and includes a public education component. The project is estimated to cost \$340,000; implementation is scheduled to begin in FY 2020.
- Hazardous Materials Monitoring and Detection Systems – this project replaces and upgrades the Fire Department's hazardous materials monitoring and detection systems capabilities that are nearing end of life. The equipment is deployed and used on a regular basis to remotely monitor hazardous conditions. Implementation of the replacement system is estimated to cost \$227,000 and is scheduled to start in FY 2024.
- Multipurpose Tow/Rescue Vehicle – this project replaces the existing vehicle for the Fire Department's structural collapse apparatus. Replacement of the 15-year old apparatus ensures continuity of specialized rescue services. The vehicle will have the ability to function as a "ladder tender" so ladder companies can maintain capabilities when ladder apparatus is out of service. Replacement of the vehicle is estimated to cost \$500,000 and is scheduled for FY 2024.
- Structural/Trench Shoring System Replacement – this project replaces pneumatic structural and trench shoring equipment which is outdated and no longer serviceable. This specialized rescue equipment is used to stabilize heavy concrete structures that have suffered structural collapse. It is also used to stabilize trench walls in order to rescue trapped victims in a below grade construction accident. The new equipment includes better safety features and support faster patient extrication. The new equipment also ensures continued delivery of specialized rescue services. The new equipment is estimated to cost \$150,000 and is scheduled for purchase in FY 2024.
- Fire Station Exhaust Removal Systems – this project replaces vehicle exhaust filtering systems in twelve fire stations. The current systems were installed in 2006 and are reaching end of service life. Staff recommend installing the same filter systems that will be installed in three new fire

stations (nearing construction phase). These systems protect fire personnel from dangerous carcinogens present in vehicle exhaust. The new equipment is estimated to cost \$300,000 for twelve fire stations; installation is scheduled during FY 2020.

- Jail Booking Area Facility Renovation – this project includes a redesign of the booking area made necessary by growth in number of bookings and the recently installed body scanners. The office handles 900 offenders each month, significantly more than when the facility was opened in 1997. The cost is estimated at \$150,000 with credits for utilization of inmate labor. The project is scheduled for FY 2020.

## **Public Utilities**

- Supervisory Controls and Data Acquisition (SCADA) – this project will upgrade the telemetry system that monitors operational conditions of 275 Pump Stations throughout the city. SCADA allows maintenance personnel to troubleshoot malfunctions remotely. The existing system is aging and lacks new functionality. Upgrading the SCADA is estimated to cost \$4.5 million over three years starting in FY 2022.
- South Central Water Transmission Main and Loop – this first phase extends water and sewer lines from Dominion Blvd. south along West Road to the Chesapeake Airport. Eventually the transmission main will continue eastward to the existing distribution system along Battlefield Blvd. near the Northwest River Water Treatment Plant. The loop will improve system hydraulics, reliability and fire protection. Design and construction of the first phase is estimated to cost \$17.6 million; design would occur in FY 2020 with construction following in FY 2021.

## **Stormwater Systems**

- Drum Creek Farms Drainage Improvements – this is the second phase of plans to address flooding caused by an undersized outfall ditch. The project funds the design and construction of a new conveyance system. The second phase is estimated to cost \$1.4 million and is scheduled during FY 2024.
- John Street Outfall Improvements – project provides drainage improvements in Pughsville section near Suffolk. The existing system lacks sufficient capacity to handle water flowing from hundreds of acres in neighboring Suffolk and is prone to failure in extreme storm events. The project is estimated to cost \$800,000 and is scheduled in FY 2023. Funding is provided by the Stormwater Fund (\$500,000) and the Drainage Pro Rata program (\$300,000).
- Greenbrier Outfall Improvements – this project provides drainage improvements to reduce flooding in extreme weather events. It includes the acquisition of easements, replacement of pipes, re-grading of ditches, and associated activities to improve the stormwater system and inter-connected lake systems. The project is estimated to cost \$1.1 million with funding from the Greenbrier TIF. Design and construction is scheduled for FY 2020.
- Nina Drive Area Outfall Improvements – this project improves drainage to the Lisa Cove outfall portion of the area. Improvements are planned from the Lisa Cove outfall to San Salvador Drive and Colombo Avenue south to Nina Drive. Several pipes will be upgraded with this project. The project is estimated to cost \$1.5 million and is scheduled in FY 2020.



## Transportation Systems

- CTS - Chesapeake Expressway Repaving – this project will repave a 2.4 mile section of roadway from Hanbury Road to the Hillcrest Parkway Interchange. This proposed renewal project addresses repaving identified in the Engineer's Annual Inspection Report.
- Edwin Drive Improvements (adjacent to Route 168 Bypass exit) – this project will change Edwin Drive from 1-way operation to 2-way operation from Hillcrest Parkway to Edinburgh Lane. The current configuration frequently confuses drivers resulting in vehicles going in the wrong direction.
- Johnstown Road Ditch and Shoulder Project – the project is approximately 3.5 miles starting south of Benefit Road and continuing north beyond Elaine Street. The project widens existing lanes to 12 feet and provides 12-foot paved shoulders with relocated ditches. The project also requires utility relocations and street lighting. The project was part of the City's 1994 road bond referendum; project design and right-of-way acquisition were completed in 1999, but the construction was never funded. Increased traffic volume necessitates the proposed improvements.