CITY OF FRAMINGHAM

OFFICE OF THE CHIEF FINANCIAL OFFICER/
DIRECTOR OF ADMINISTRATION AND FINANCE

Louise L.E. Miller, J.D.
Chief Financial Officer/Director of Administration and Finance

office phone (508) 532-5425
email address lmiller@framinghamma.gov
www.framingham.gov

MEMORIAL BUILDING
150 Concord Street, Room 123
Framingham, MA 01702

Memorandum

To: Charles J. Sisitsky, Mayor
Michael A. Tusino III, COO
From: Louise L.E. Miller, CFO/Director of Finance and Administration
Date: November 29, 2022
Re: FY24 Project Recommendations – FY24-28 CIP

FY24 Project Recommendations of Chief Financial Officer/Director of Administration and Finance for DRAFT CIP FY24-28

Assessing

Electric Vehicle for Field Inspections – not recommended for FY24
The Assessing Department request for fleet electrification is postponed for one more year. Purchase of electrical vehicles needs to be coordinated with the Capital Projects and Facilities Management Department. This project depends on locating and installing electrical vehicle fueling stations, which are still being evaluated.

Patriot Properties AP5 Upgrade – placeholder pending additional information and price
This project to upgrade of the existing CAMA (computer assisted mass appraisal) system to a more efficient system in providing valuation for the City was not recommended in FY23. The project was first considered in Fiscal Year 2019. However, turnover in staff leadership in the Assessing Department resulted in some delays in implementation. The current Chief Assessor has reported issues with the upgrade which slowed implementation from FY23 to FY24. The current recommendation is to include a placeholder in the CIP pending additional information re Patriot Properties software evaluation.
Upgrade of the existing CAMA system to a more efficient system in providing property valuation for the City.

Capital Projects and Facilities Management

The Capital Projects and Facilities Management Department has been asked to develop a comprehensive list and plan of City building systems for use in developing the CIP beginning in FY24 for the FY25 capital plan. The Department is currently short-staffed with a long existing

vacancy in the Assistant Director position and turnover in the Financial Analyst position. Nevertheless, the Department has been asked and has provided a plan that focuses on HVAC and roofs for all City buildings. The Department is also responsible for the City's energy and climate sustainability program.

With respect to timing of projects, for projects that require a design is recommended in one fiscal year with construction in the following fiscal year. This allows for the project to properly be planned and for a more accurate cost estimate to be developed. The City is currently issuing contracts for the design of the projects that will take place in the next three fiscal years. This will allow for coordination of systems across the City's multiple buildings, efficiency in design where a single designer can be responsible for the design of similar systems in multiple buildings. Accordingly, some designs are recommended to be funded in the next fiscal year with construction phased over multiple years. The City will select multiple designers based upon the areas of expertise needed over the next three fiscal years.

HVAC Projects

Building Electrification - Fire Station #7 (Water Street) – design

The proposed project would involve the design and implementation of an air-source heat pump system for Fire Station #7 to provide efficient heating and cooling for building occupants. Cooling is currently provided by window units which are not able to serve all spaces in the facility. The proposed improvement would result in more efficient cooling as well as reduce reliable on the buildings natural gas boiler. The project will mitigate space conditioning issues over the course of the year. It is anticipated to result in energy cost and emissions savings. Preliminary design is recommended in FY25 to assess the electrical capacity of the building with final design and construction in FY26 to allow for an accurate cost estimate for the project. The project was requested for FY24 with construction funding recommended in FY26. There is no delay to the construction by recommending the preliminary design in FY25.

Heat Pump System Upgrade & Expansion Memorial Hall – design

Heat pump equipment that provides heating and cooling for the majority of office spaces in the Memorial Building was originally installed in 2012. Commensurate with the anticipated useful life of this equipment, this project would involve the replacement of existing air-source heat pump equipment with an equal or more efficient heat pump system. Given the benefits of reduced energy consumption and emissions, the Facilities Department seeks to extend the heat pump system to serve remaining office spaces not currently covered by the existing equipment as well as larger open spaces such as Nevin's Hall – resulting in enhanced savings as well as less reliance on the building's aging steam heating system. Replacement of end-of-life equipment will ensure that the Facilities Department can continue to provide suitable space conditioning for building occupants. Additionally, the upgrade and expansion of the system will enhance energy savings and reduce municipal reliance on fossil fuels. The project will also help support greater energy resiliency by allowing the conversion of more HVAC operations to electricity and support by local backup generation such as generators and potential energy storage through a resiliency project. Design is requested in FY24 and construction in FY27.

System Enhancements: DPW Headquarters – design
The project was initially planned as the implementation of variable frequency drives (VFDs) for the existing rooftop units serving the DPW Headquarters with the purpose of achieving efficiency gains. In reviewing the project, it became apparent that the project needs to be redefined. Given the age and worsening condition of the existing R22 rooftop units, a recent assessment of the units identified that more cost effective operational and efficiency improvements could be made from replacing the equipment altogether. The proposed project will result in the replacement of aging rooftop units at the DPW Headquarters with new, highly efficient HVAC equipment. The project is divided into two phases beginning with a project design for the rooftop. Design is recommended for FY24 with construction in FY26 to allow for an accurate cost estimate for the project.

System Renovation: Police Department Headquarters – design
This project will result in the replacement of fan coil units (FCUs) and variable air volume (VAV) boxes across the Police Department Headquarters. These HVAC units collectively provide fresh air and space conditioning to the 24/7 facility. Units planned to be replaced through this project are all nearing or past the end of their useful life. Additionally, aging FCUs and VAVs continue to experience corrosion that places the facility's chilled water system and related major equipment such as the building chiller at risk which necessitates the replacement of this equipment. Ensuring the proper function of HVAC equipment at this building is critical given its 24/7 role in facilitating emergency services. Replacement of these units with high-efficiency equipment (including high-efficiency EC motors) will improve air quality and system reliability as well as reduce energy consumption. Design is recommended for FY24 with construction in FY25.

Roofs
Main Library Roof Replacement – design
The roofing system (main level) at the Main Library was replaced in 1996, with a cold processed multi ply roof system. The roof system is over its life span. A new roof system will allow the City to re-insulate the main roof and provide more energy efficiency. This project will also include reinforcements at the perimeter flashing and every penetration flashing. The project is recommended for design funding in FY24 and construction in FY25. The cost of the project has been increased since the FY23 CIP based on current construction inflation.

Design for Repairs & Replacements DPW Headquarters – design
During the FY23 CIP process, the replacement of the roof at 110 Western Avenue was bid. However, the bids were significantly higher than anticipated. In the context of reviewing all City building roofs, it was determined that the roof at 100 Western Avenue should be evaluated, designed and repaired as well. The FY24 design will provide the information necessary to determine what repairs may be needed as well as when replacement of each roof is needed. The funding for construction in FY25 is a placeholder. If further funds are required, the project will continue into FY26.

Roof Replacement - Fire Station #7 (Water Street) - design

The EPDM roofing system at Fire Station #7 is 29 years old and at the end of its useful service life. Station #7 roof is challenged with drainage/slope problems on both the upper and lower roof and are accelerating the problems with these roof areas. The roof replacement and drainage improvements should be considered a priority before larger scale masonry problems develop in various areas. Re-roofing will also provide the City the ability to upgrade the insulation on the roof deck to lower energy consumption. The roof replacement will be designed in FY24 with construction in FY25. The cost estimate in FY25 may need to be adjusted.

Sustainability Projects:

Citywide Solar Alternative Energy and Resiliency Procurement – pursuing grant funding

This project involves the procurement of alternative energy and resiliency systems across municipal facilities and school buildings. More specifically, this funding will support a technical consultant that will help the City to develop a portfolio of municipal facilities for renewable energy and battery storage integration and develop a solicitation to receive and evaluate competitive proposals from clean energy system developers. The project directly continues the City's efforts to advance local renewable energy projects at municipal facilities, helping to reduce the City' carbon footprint, reduce energy costs, and improve local resiliency. This project will result in future alternative energy and resiliency projects. The project is recommended for FY24 if grant funding is obtained. If grant funding is not obtained, then the project will be considered in FY25.

Clean Energy Resiliency Development - recommended for grant match of 25%

The requested funding will assist in the implementation of clean energy resiliency assets to improve local resilience, increase the amount of renewables powering municipal facilities, reduce energy costs, and reduce Framingham's carbon footprint. To inform this work, the City has completed energy resiliency/microgrid studies in partnership with the Massachusetts Clean Energy Center (MassCEC) as well as the Municipal Vulnerability Preparedness (MVP) Program that encompass critical municipal and community facilities. The proposed project is intended to be further shaped by the Citywide Solar Alternative Energy and Resiliency Procurement and provide the City with an opportunity to pursue federal and state grant funding that may require a funding match (ex. FEMA's Building Resilient Infrastructure and Communities (BRIC) Grant). The project will directly support the implementation of measures identified through the MassCEC CLEAR program studies completed for the municipal facilities in neighborhoods surrounding Winch Park and Concord Street/Normandy Road. In addition to advancing municipal energy resiliency (as identified as a priority in the City's 2019 Community Resiliency Building (CRB) Workshop Report through the Municipal Vulnerability Preparedness (MVP) Program, the project would support the development and deployment of local clean energy resources that will directly advance priorities of the Climate Emergency declared by the Framingham City Council. The City is pursuing grant funding. In order to help the City with its grant funding effort and to provide initial design funding, $100,000 is recommended at this time. If grant funding is not obtained, then the project will be considered again in FY25 with more information regarding specific projects.

Climate Action Plan - grant funding received for completion of project
This project entails the development of a comprehensive and holistic blueprint that establishes clear actions that Framingham can take to reduce its emissions and improve local resiliency built on detailed best practices research, analysis and integration of existing plans in Framingham, and strong community engagement with a focus on members of our community most impacted by climate change. The project estimate is $138, 075. The project was partially funded in the General Fund at $70,000 in FY23. Grant funding has been received to complete funding for the project.

Green Communities - recommended for grant match of 25%
The requested funding will support the City's application for the next Green Communities Competitive Grant round in the second half of calendar year 2023 and assist the City in accelerating its implementation of cost-effective energy efficiency and clean energy measures. Recent changes to the Green Communities Competitive Grant Program include a new type of measure, Building Decarbonization Projects, that can provide communities with significantly increased grant funding for more comprehensive energy conservation measures up to $500,000, but requires a 25% municipal funding match.

Vehicle Electrification Initiative - partial funding recommended with grant funding for balance of funding
This project will result in the adoption of electric vehicles (EVs) within the municipal fleet to replace internal combustion engine vehicles as well as the deployment of associated electric vehicle charging infrastructure to facilitate fleet and public EV charging. Building upon the City's implementation of the Municipal Fleet Efficiency Policy which prioritizes the adoption of electric and alternative fuel vehicles, this initial phase of fleet electrification will directly contribute to reductions in municipal energy consumption, greenhouse gas emissions, and maintenance costs. The City will pursue grant funding and incentive programs to support the project, such as through the prospective second round of the Eversource EV Make Ready Program as well as MassEVIP incentive programs. $250,000 of funding is currently recommended to allow for grant sharing opportunities and to provide seed funding for this initiative. If the City is not successful in obtaining grant funding, then the City will evaluate further funding through the General Fund and Enterprise Fund as part of the vehicle replacement capital expenditures.

Fire

The Fire Department has developed a complete plan for replacement of vehicles and equipment necessary for the departmental operations. The funding recommendation for FY24 follows the Department's replacement plan.

Fire Chief SUV Car 1 - recommended for Hybrid SUV replacement

The Fire Chief responds to large-scale incidents during and after administrative hours to perform incident command functions required by national fire service standards. The Chief also serves as an incident commander when Framingham Fire respond to Fire District 14 mutual aid activations. The response SUV used for these purposes is currently a 2015 Ford Expedition, and is equipped to be used as the Command Post and on-site communications hub at incidents. This Project would replace the current Fire Chief SUV and repurpose the current SUV within the Fire Department fleet to replace a fleet vehicle with the highest mileage/hours and poor fuel economy. The cost of this project also includes the cost of a new radio and installation of emergency lighting/siren. For the expected remaining useful life of the current vehicle, annual operating costs are expected to reduce by $500 due to fuel savings and $1,500 due to savings on maintenance costs.

Rescue 1 Fire Truck Asset Replacement
Rescue 1 is a 2009 truck built by Spartan and is a primary response truck. This replacement project addresses two issues. First, the Department is planning to streamline the fleet so that fire trucks are standardized to the same manufacturer and specifications. This reduces the costs of maintaining the fleet because there would be common maintenance supplies, tools and mechanic familiarity. Second, this project would address the need to get primary response fire trucks on a standardized replacement cycle. The Department finds that firefighter safety risks and maintenance costs accelerate when the apparatus have reached 10-12 years of service. The plan is to surplus and auction Rescue 1. The Fire Department does not maintain spare rescue trucks.

Library

Branch Library Parking Lot Expansion - recommend engineering study
The Library has requested $195,000 for a number of years for expansion of the parking at the McAuliffe Branch Library. The request has been postponed year after year because of uncertainty about the viability of additional parking and the parking lot expansion. A study to review the limitations of the site for expansion, including environmental, traffic on the street and from the nearby elementary school is recommended to provide direction on the viability and potential for a parking lot expansion.

Literacy Unlimited Area (Main Library Space Plan Phase 3) - recommend funding
This project will relocate Literacy Unlimited, which serves 200 student/tutor pairs, conducts 14 weekly conversation classes, and offers Citizenship Classes, basic literacy learning, and other programs for adults, to a new space on the third floor of the Main Library. This space will be designed with intention to better accommodate the Literacy Unlimited staff, students, and their activities, and it will integrate the program into the larger Library space, where books and resources and professional library staff are close by. Literacy Unlimited is currently located far from the library collection and staff, making it difficult to find, particularly for students with limited or no English language skills. This is phase 3 in the Main Library Space Redesign Plan. Phase 2 was funded for work in FY2023.

Parks, Recreation, and Cultural Affairs

Arlington Street Park - construction

Design for the Arlington Street Park playground update and park redesign, including ADA accessibility was funded in FY2023. The project will be ready for bidding in early spring 2023. The playground update is anticipated to cost $500,000 with the park upgrade also estimated at $500,000. An application for funding for the playground upgrade has been submitted to Community Preservation Committee for Community Preservation Act funding. An investment in Arlington Street Park that will promote neighborhood use, bring the site and its amenities up to the current building and accessibility codes, increase public health and safety for park users, and better serve the overall community recreation needs. Arlington Street Park is located on the south side of Framingham in an environmental justice neighborhood. The surrounding residential neighborhoods are some of Framingham's most densely populated areas, consisting primarily of multi-family homes and multi-unit apartment buildings. Currently, the park includes a basketball court, playground structures, and a grass field area enclosed by an old chain link fence. The City has begun the design process with our first public engagement meeting on October 6, 2022, to hear ideas from neighborhood residents, community leaders, and other stakeholders about features they would like to see in the new park. Based on the public feedback, Parks and Recreation requests a completely redesigned park that includes new playground equipment, rubber safety surfacing, shade structures, water play features, security cameras, site lighting, benches, picnic tables, fencing, multi-use sports court, improved greenspace, landscape plantings and accessible pathways connecting all of the new amenities. Funding for $500,000 is recommended in FY24. If the CPC funds the playground, the $500,000 would be used to fund the remainder of the park enhancements. If the CPC does not fund the playground, then the $500,000 will be used to fund the playground, with the remainder of the park construction in a later year.

Chris Walsh Memorial Trail: funding to be determined

Chris Walsh was a strong advocate of historic and open space preservation. Parks and Recreation is requesting an appropriation to begin constructing the Chris Walsh Memorial Trail. This project is the result of a cooperative effort and funding at the federal, state, and local levels. The proposed project will develop an accessible trail centered around Farm Pond and the Sudbury Aqueduct, including scenic overlooks, site furnishings, and other amenities. The City is presently undertaking design with Weston & Sampson Engineering to identify implementation and/or phasing strategies, provide construction cost estimates, progress with permitting and create construction documents. Construction of the initial improvements will develop the trail around the Sudbury Aqueduct gatehouse. From the gatehouse, the trail would continue along the Sudbury Aqueduct between Farm Pond/Little Farm Pond and connect to Farm Pond Park, which runs parallel to Dudley Rd. The design scope includes studying the feasibility of pathways around the entire circumference of Farm Pond, creating connectivity to an expanding regional trail system, as well as potential connectivity to Cushing Memorial Park. The Initial phasing strategy and concept plans are included in the project documentation and will be further refined as the design progresses. This capital funding request supports the construction of improvements within the identified areas.

Equipment and Vehicle Replacement: fund equipment based on useful life and annual review
Subject to review by the Chief Operating Officer, the items for replacement in FY24 are: 1. John Deere Tractor – 5090E. The new tractor will replace a 23-year-old 1999 John Deere Tractor with 7,270 hours. The tractor is an essential piece of equipment in our daily operations during all seasons of the year. Primary responsibilities include material handling, vehicle loading, operating a wide variety of turf maintenance attachments, and assisting with snow and ice operations at a number of Parks facilities. This piece of equipment may not pass MA DOT inspection. Due to the degraded metal components, we've experienced an increase in overall maintenance and upkeep, including hydraulic leaks, hose fitting failure, electrical switches, relays, gauges, etc. 2. Case 570 Loader. The new loader will replace a 17-year-old 2005 Case 570 with 7000+ hours. The loader is an essential piece of equipment in our daily operations during all seasons of the year. Primary responsibilities include material handling, loading/unloading trucks, moving equipment, operating maintenance attachments, field renovations, and plowing snow throughout the city. This piece of equipment may not pass MA DOT inspection. This piece of equipment. In addition to increases in minor maintenance needs like replacement of rotted hoses, fittings, and electrical components, in recent years we are also experiencing increased maintenance and upkeep expenses for major repairs, including: 2021 - installation of a new engine, $15,000 and 2019 - front axle rebuild, $6,000.

Loring Arena Cooling Tower Replacement
This capital request will fund the replacement of the Loring Arena Cooling Tower, a critical component of the arena refrigeration system. The current cooling tower was installed in 2008. Refrigeration professionals who service the arena have recommended this unit be replaced as it nears the useful life expectancy of 15-20 years. Currently identified delivery and installation time is 18+ weeks. Failure of this component during the arena operating season will result in arena closure, loss of ice surface, serious service interruption, and significant loss of general fund revenue. Loring Arena runs on a sealed ammonia-based cooling system. In this system, ammonia is used to cool a refrigerant to below-freezing temperatures. The refrigerant remains a liquid at sub-freezing temperatures and is pumped through a series of pipes under the ice surface. When the Zamboni applies water to the surface, the water freezes, and the ice-skating surface is formed. Within this system, the cooling tower functions as an evaporator/condenser. The cooling tower contains a large fan, water pumps, multiple spray nozzles, and a series of small tubes. Compressed ammonia gas that has absorbed heat as it travels through the cooling system is pumped through the tubes inside the cooling tower. Ambient air circulates over the tubes while cool water is also sprayed onto the tubes containing the ammonia gas, cooling the gas to a liquid. The cooled ammonia liquid is then returned to the cooling system, and the cycle is repeated.

Mary Dennison Park- Remediation, Utility Upgrades, and Park Construction: amount tbd
The City anticipates that remediation, utility, and park design and construction may be bid as early as late winter (January or February 2023). In 2014, state regulations required that Mary Dennison Park undergo environmental testing. Between 2014 and 2021, Avery Dennison and the City have conducted testing required by the state and come to an agreement with MassDEP

as to the environmental remediation needed to address contaminated soil at the park. Once implemented, the City will be able to maintain the public health, safety, and public welfare requirements of the state regulations. Additional capital funds over and above those that were appropriated in December 2019 may be needed to meet the final MassDEP remediation requirements and the terms of an agreement between Avery Dennison and the City on cost-sharing. In addition, the City is working on updated capital costs for the renovation work at the park (to be completed in conjunction with the remediation work).

Cushing Memorial Park Land Acquisition: appraisal and due diligence
The City has contacted the owners of the property at Cushing Memorial Park to determine whether they are interested in selling. The funding requested for FY24 is to hire appropriate consultants to determine the fair value and perform preliminary due diligence for the property that is not currently owned by the Town ("LOT C" off of Dr. Harvey Cushing Way).

Temple Street Park Design and Construction: CPA funding application
Temple Street Park is a neighborhood park, primarily serving the neighborhoods along Temple Street, including neighborhoods near Temple Street intersections with Salem End Road, Route 9, and Pleasant Street. Currently, Temple Street Park consists of a grass field area, a small dirt parking lot with no accessible parking, and outdated playground equipment that no longer meets code requirements for safety and accessibility. In addition, the current location of the equipment is adjacent to Temple Street, with no site fencing to separate park users from vehicle traffic. Through this redesign and construction project, we aim to address the overall accessibility of the site and its amenities, including new and relocated play equipment, poured-in-place safety surfacing, ADA-accessible walkways, site furnishings, perimeter fencing, shade structure, and landscape features. We anticipate the cost of the new playground with poured-in-place safety surfacing to be approximately $500,000. A complete redesign of the park would be closer to $750,000 to $1 million. The City has applied for CPA funding totaling $500,000 for the playground.

Waushakum Beach Park Improvements: design
Waushakum Beach Park was built several decades ago. The equipment, amenities, and layout are out of date and no longer meet code standards for building, accessibility, and safety. In addition, community recreational needs and facility use patterns have changed. The facility currently includes: a bathhouse with restrooms, changing spaces, and showers; a sandy beach with swimming area; some small pieces of play equipment and swings; an old 8-foot high chain link fence; and a grass picnic area. Through this redesign and construction project, the City will review the current structures and how to better utilize space at the site to serve current recreational needs. This will include overall accessibility of the site and its amenities, ADA-accessible walkways, play structures and safety surfacing, site furnishings, bathroom structures, perimeter fencing, shade structure, and landscape features. Once a plan and design are completed, an accurate cost estimate for the Waushakum Beach Park improvements can be determined and funding will be requested in future years.

Department of Public Works

The DPW is charged with maintaining and improving the City's public works infrastructure, ranging from roads and sidewalks, to stormwater and sanitation. The maintenance and improvement work is coordinated with private and public utility work. The DPW has a large number of projects that were funded in prior years but not begun or not closed out. The DPW was charged with reviewing all outstanding capital projects currently funded and determining which projects to postpone and which projects to close out. The 5-year capital plan reflects a realistic schedule of project design and construction that maintains and improves the City's infrastructure and complies with regulatory requirements.

ADA Compliance – design and construction (annual appropriation)
The DPW has reviewed the need for ADA compliance projects that are not part of a road or sidewalk project. An annual appropriation will provide funding for projects that are brought to the DPW's attention by residents and the City's Disability Commission.

Cedar Street Area Roadway - construction
This appropriation will fund roadway, sidewalk and drainage improvements on Avon Street, Cedar Street, Charles Street, Claflin Street, Hayes Street, Highland Street and Pine Street. This work follows recently completed gas utility work and the Cedar Street water infrastructure improvements funded in FY23.

Edgell Rd/Central St Intersection - construction oversight and nonparticipating costs
The proposed work will construct safety and traffic improvements for the intersection of Edgell Road and Central Street, including intersection geometric improvements, sidewalks, and installation of a traffic signal via State TIP funding. The project will reduce traffic congestion and improve pedestrian mobility and safety by providing an exclusive pedestrian phase in the traffic signal, as well as provide crosswalks and ADA/AAB compliant sidewalks along both sides of both roadways. The construction, estimated to total $2.6 million will be paid by the State funds, but specific items like underground City communication conduits are not eligible for the State funding and must be paid by the City.

Fountain St/Dudley Rd Intersection – construction
This is for the final design, permitting, and easement acquisition portion of the project, prior to construction. This well-traveled intersection is in need of upgrades to improve efficiency and vehicular and pedestrian safety. The traffic signals were intended to only be temporary but have been in place for many years and do not meet current standards. This project will add a right-turn lane onto Dudley Road, improved intersection geometry, increased lengths of existing turning lanes, new pedestrian crossings, new traffic signals, and modifications to drainage to the outfall at Farm Pond. Farm Pond is classified as an Impaired Water Body, and improvements to the drainage system will enhance water quality. This project will complete the upgrades for Fountain Street and Dudley Road, which have included new water and sewer mains, drainage and roadway improvements, new Fountain Street and Winter Street bridges, upgrades to Loring Arena, the dog park, the skate park, and the new Dudley Road multi-use path.

Hartford Street Culvert - design and construction
This is for conceptual design and permitting. This culvert is considered the most at-risk culvert in the City and was rated "Critical" with a risk score of 83 in the recent December 2020 city-wide Culvert Assessment and Prioritization Report. It was originally a 36” by 34” stone box culvert that was extended with two 24” concrete pipes. It crosses Hartford Street, a busy arterial roadway, and the contributing drainage area is substantial in size. Part of the stone portion of the culvert has collapsed, and there are critical blockages and deformations. In addition, the headwall has loose stones and is unstable and existing guardrail is substandard and in disrepair. Because of the complexity of the culvert and the need to keep Hartford Street in operation during construction, the project requires a full design and cannot be upgraded by going directly to construction, as is the case with some of the other culverts in the City.

Herbert Street, Badger Road, and Parmenter Road Culvert - design and construction
Culverts perform a crucial role in drainage throughout the City. As part of the city-wide inventory and assessment of drainage culverts, the Badger Road, Herbert Street and Parmenter Road culverts were determined to be in critical condition and in need of attention to prevent failure. A culvert failure can have serious consequences, with the potential to cause upstream flooding to residents and businesses; overtop roads, causing unsafe conditions for travel; and damage other city owned infrastructure, including roads and utilities.

Priority Drainage Headwall Replacements
This project will fund the repair and rehabilitation of drainage headwalls. This is anticipated to be a multi-year project and this funding request is for the first phase of work which focuses on the damaged headwalls with the highest consequences of failure. The DPW plans to repair or replace 6 to 9 headwalls per year, prioritized by highest risk of structural failure and largest need for improved water quality. The headwalls that are intended to be included in this project are: in the vicinity of the Framingham High School, Simpson Dr, and Fenway Dr which directly discharge to the Sudbury River; in the vicinity of Edgewater Dr which directly discharge to Framingham Reservoir #1; near Hollis St which directly discharges to Lake Waushakum; and in the vicinity of Maple Lane which directly discharges to Baiting Brook. Repairing and replacing failing headwalls will improve public safety, since the damaged infrastructure can result in drainage problems that can cause localized flooding and property damage. Additionally, erosion around failing headwalls can also cause property damage and is a source of water pollution. Over 16 headwalls were identified by recent field investigation as currently failing and over a dozen more need significant repair.

Simpson Park Improvements
The project will include engineering review and design of pedestrian crossing of Central Street at Fenwick Street, parking, and improvements to interior of the park.

Drainage System & Surface Water Quality Projects
This is an annual appropriation for DPW capital repairs to the stormwater conveyance system (pipes, culverts, and open channels). Improvements include removal of debris and

sedimentation restoration of open channel bottoms, repairs to side walls, banks and channel formed channel bases. Improvements will restore system capacity and mitigate flooding.

Roadway Improvements, Sidewalks, and ADA Compliance
This funding provides ongoing roadway, curb, sidewalk and related infrastructure rehabilitation and improvements necessary to retain an overall state of good repair citywide, as well as safety and accessibility improvements. The majority of this work provides roadway resurfacing such as mill and overlay, stress absorbing membrane interlayer, bonded wearing course, rubber chip seal, mill and fill and crack sealing. Without substantial and appropriate ongoing roadway work, this infrastructure deteriorates rapidly, costs more to raise back up to a state of good repair, and increases the annual needs and costs for roadway maintenance, including emergency and other corrective repairs.

Walnut Street Neighborhood Flood Mitigation Projects – construction
This flood mitigation and climate resiliency project includes three parts: 1) Replace earthen berm between Walnut Street and Stonybrook Rd (aka the "School Path" between Fuller Middle School and Bowditch Field) with an elevated boardwalk. ($1.4M); 2) Stream channel and streambank restorations to reduce flooding and enhance conveyance capacity in the Walnut Street/Sucker Brook Drainage Area. ($1.2M); 3) Main Street culvert replacement, from under Main Street to outlet at Sudbury River, including portion under the parking lot that required emergency repairs in March 2022. ($850k). Co-funded by a FY20/21 Municipal Vulnerability Program Action Grant and a FEMA Flood Mitigation Assistance grant, the City completed the Walnut Street Area Flood Mitigation Study in June 2021. In FY22, the City was awarded an MVP Action Grant to complete design of preferred alternatives. This project builds upon the previous grants to take the project from design to implementation. The project will be funded with a $2.4 million MVP grant and $800,000 matching funds from the City.

School St Bridge Replacement - design
The School Street Bridge over Cochituate Brook is a reinforced concrete slab bridge that is almost 100 years old and at the end of its reliable life. Located just east of the signalized intersection of Concord and School Streets and the northern terminus of the Cochituate Rail Trail, the bridge is a key link in the City's transportation network. The existing structure is narrow, allowing for only two travel lanes, with no shoulders and one sidewalk. The proposed new bridge will enhance its structural integrity and avoid the potential for future weight restrictions for vehicles. The project will also provide shoulders and sidewalks on both sides connecting to the Cochituate Rail Trail, as well as 5-foot wide shoulders for bicycle accommodation along School Street and replace outdated (1920s) utilities in the area. The project will improve pedestrian mobility and safety by providing ADA/AAB compliant sidewalks along both sides of the street.

<u>School Department</u>

Similar to the Capital Projects and Facilities Management Department, the School Department has been asked to develop a comprehensive list and plan of school building systems for use in

developing the CIP beginning in FY24 for the FY25 capital plan. The School Department is currently focusing on exterior envelope repairs at all its buildings, roof replacements, and pavement repairs with stormwater improvements. While some of these projects could be eligible for MSBA funding, many are not eligible due to the age of the systems being replaced or the scope of the project. With respect to timing of projects, for projects that require a design is recommended in one fiscal year with construction in the following fiscal year. This allows for the project to properly be planned and for a more accurate cost estimate to be developed. The City is using the same strategy with respect to selecting designers for school projects for operations and cost efficiency.

ADA Upgrades for Compliance
This annual project request is for the continued improvements focused on providing access to all school district facilities.

Asbestos Abatement - Floor Tile, Ceiling Tile, Pipe Insulation - District Wide
This annual project request is for the continued abatement of asbestos in school buildings district wide.

Exterior Envelope - King Elementary School and Framingham High School - design
This request is for the design of exterior envelope repairs to the King Elementary and Framingham High Schools. These two facilities fall within the long-range exterior envelope repair program and have experienced a number of deficiencies and damage throughout the years. This design will investigate the major areas of concerns, moisture infiltration, extent of damage to the infrastructure, and begin developing a plan for repairs. Once this effort is completed, the Department will have a phased approach and bidding documents to begin the repair process. Issues at King and the High School include failing window perimeter sealant systems, deteriorating expansion joints, deteriorating fascia, deteriorated mortar, foundation cracks and failure, spalling concrete, and associated components. King was constructed in 1957 and has undergone numerous improvements throughout the years. However, there have been minimal repairs to the building's exterior envelope, which has resulted in the deteriorating conditions. Framingham High School was constructed in 1961 and underwent expansion and renovations from 2001 through 2007. While this building has undergone numerous renovations and repairs, the exterior envelope has not been the focus of repairs or renovations for a number of years.

MSBA Hemenway Feasibility - Additional Request - feasibility
This request is for supplemental funding that will allow the District to undertake a full feasibility study for the potential Hemenway Elementary School Project. Originally, a capital appropriation was approved for $600,000 for this study during the FY21 process. This appropriation coincided with the District’s first application submission to the MSBA Core Program for Hemenway. This funding amount was sufficient at that time. During a meeting with representatives from the MSBA and their consultants, it was pointed out that Districts are now allocating and expending between $800,000 - $1,200,000 for these types of studies once invited into the Core Program. It

was then recommended that we incorporate an additional $400,000 recommendation into our funding strategy for this study, which will bring the total appropriated amount to $1,000,000.

Fire Alarm Systems Upgrades
This annual project request is for the continued upgrades to fire alarm systems throughout the district. FY24 funding will cover the fire system upgrades at the Cameron Elementary School.

King Front Entrance Replacement
This request is for the full replacement of the front entrance to King Elementary School. During the spring of 2022, the Department contracted for repairs to the top slab of the entranceway in an effort to maintain accessibility. During excavation, it was discovered that the structural support of the entranceway had deteriorated beyond what was expected and required further investigation. The contractor made minor repairs and sealed up the slab, ensuring it was safe for usage. The School Department is currently working on conceptual designs for a remodeled front entrance that will eliminate any structural concerns while maintaining accessibility.

Paving Replacement/Storm Water - Walsh Middle School and McCarthy Elementary School – construction
This request is for the continued upgrades of existing parking areas, driveways, and stormwater management systems at District Schools. Additionally, this project also continues the District's efforts to comply with National Pollutant Discharge Elimination System (NPDES) regulations, which require all City and School buildings stormwater run-off, including from roofs, be pretreated prior to allowing stormwater to run into streams, brooks, ponds, etc. This project will focus on improvements at Walsh Middle and McCarthy Elementary Schools. Walsh Middle School Improvements will include milling and overlay; new ADA compliant sidewalk and pedestrian ramps; parking and driveway restriping; stormwater management system upgrades; project design and administration. McCarthy Elementary School Pavement Improvements will include milling and overlay; new HMA parking area expansion; new ADA compliant sidewalk and pedestrian ramps; parking and driveway restriping; stormwater management system upgrades; project design and administration.

Roof Replacement - Potter Road and Brophy Elementary Schools – design
This request is for the design of roof replacements at Potter Road and Brophy Elementary Schools. These roofs are in poor condition and rapidly deteriorating. Additionally, the warranty for Brophy expired on September 6, 2022; and Potter Road is set to expire in August of 2023. Both of these warranties were extended for an additional 5 years through Tremco, our roof warranty contractor. Currently, both of these roofs are experiencing moisture infiltration and deterioration that is requiring full replacement in order to ensure the continued usage of the school. The School Department has submitted a statement of interest to the MSBA for the accelerated repair program for the Potter Road roof replacement, which was denied. Funding for construction of these roofs will be requested through the FY2025 capital process.

Roof Replacement – Phase I McCarthy and Dunning Elementary Schools – construction

This request is for the construction of new roofs at Dunning and McCarthy Elementary (Phase I) Schools. These roofs are in poor condition and rapidly deteriorating. Additionally, the warranty for both phases at McCarthy Elementary have expired while the warranty for Dunning Elementary is set to expire in 2023. Both of these roofs are experiencing moisture infiltration and deterioration that is requiring full replacement in order to ensure the continued usage of the school. The School Department has submitted a statement of interest to the MSBA for the accelerated repair program for both roofs, but has been denied. The design for this project was funded through the FY 2023 Capital Improvement Plan and is slated to be completed during fall/winter of 2022/2023. We currently utilize $10,000 per building annually for repairs for roofs that are off warranty. By replacing these roofs, we will save approximately $20,000 per year in the School Department operating budget.

Technology Services

The FY24 CIP request for Technology Services supports the Department's goal of providing secure and seamless access to information resources through a reliable and robust infrastructure.

Continue Fiber Rollout
Continue municipal fiber network ring to include: Fire Dispatch, Brophy Elementary School, Worcester Road Sewer Station and New York Avenue Water Station. This fiber ring makes the City network connectivity more reliable and self-sufficient in the event of an emergency or a fiber break of the existing fiber network.

Sewer Enterprise

Consolidated Vehicle/Equipment – Equipment and Vehicle Replacement: fund equipment based on useful life and annual review
Vehicle and equipment per Public Work's vehicle management and replacement schedule. The procurement and upkeep of equipment is a significant factor in providing cost-effective and reliable service for systems operation, maintenance, repair, rehabilitation and replacements. All vehicles and equipment are managed through the DPW Fleet Department and included within a replacement schedule according to specific criteria, such as age, mileage, and major repairs needed for continued reliable service. Industry and Framingham DPW experience indicates that above those thresholds maintenance increases substantially to assure service reliability, as do major repairs. In addition to daily service for the Sewer Enterprise, nearly all vehicles and equipment are used for the DPW's snow and ice management program which is particularly destructive to vehicles.

Edgell Road Force Main Abandonment and Sewer Replacement - design and construction
Eliminating the last 560 feet of the Woodland Drive Sewer Pump Station's asbestos-cement force main installed in 1955 will improve sewer operations and eliminate dependency on old

and vulnerable infrastructure. This appropriation will fund completion of the final section between two previous projects that realigned and replaced the force main for the Woodland Drive Pump Station. The 2019 Woodland Force Main Replacement Project (the "northern project") rerouted the force main that was buried beneath I-90 to a more accessible location along Edgell Road, connecting to the original force main just south of I-90. The 2020 Edgell Road – Central Street Utility Improvement Project ("southern project") upgraded water and sewer infrastructure from the Edgell-Central intersection north to within 560 feet of the end of the northern project. The northern project replaced the force main with new pipe. The southern portion eliminated the force main by moving its terminus north and upsizing the gravity sewer along the way to accommodate the added flow from the force main. This project will complete the work between the two previous projects by moving the force main terminus north to the point where the northern project ended and will upgrade and upsize the gravity sewer, shorten the force main, and eliminate 560 feet of the original asbestos-cement force main. Shortening a force main's length reduces the potential for formation of hydrogen sulfide, a source of corrosion that causes damage to downstream sewers.

Flanagan Sewer Pump Station Replacement – construction

The Flanagan Drive Sewer Pump Station Replacement project will replace the existing pump station that is undersized and relies on outdated technology to serve a large residential community. The station is one of the highest priority pump station projects, based on population served, maintenance risks, sewer infrastructure needs, and benefits to the community upon installation and start-up of the replacement systems. The new facilities can be accommodated within the footprint of City-owned property near a walking path just off Flanagan Drive. The existing station uses a compressed air system to discharge collected wastewater to the downstream sewer. This technology is not only outdated but also a significant maintenance risk. Access to valves, piping, and compressors is very challenging. The air compressor frequently fails. The discharge check valves are prone to sticking and need to be maintained frequently. This type of station is so difficult to access that there may be other plugging or deterioration in areas that cannot be found without completely dismantling the buried station. There is no way to clean or vactor the station. Maintenance is difficult and a safety concern. The technology is entirely outdated, but even when it was originally installed, this type of station was for a much smaller service area. That service area has since grown substantially, forcing the system to be pumping almost constantly. The air-compressor pumping uses much more power than a conventional pump system. Some sections of the sewers feeding the station need to be replaced or relined, because they run through wetlands and are prone to infiltration of clean water through leaky pipe joints, increasing demands on the station. The force main that discharges to a manhole on Belknap Road has experienced multiple breaks in recent years and must be replaced as part of this project.

Victor Rd Sewer Pump Station Replacement - design and construction

This request is for the construction of the replacement pump station and force main at Victor Rd. Victor Rd. Sewer Pump Station is one of the remaining small pump stations in need of upgrading to improve reliability and maintainability. The existing station is an outdated facility, and maintenance is very challenging and requires confined-space entry.

Walnut St Sewer Force Main and Sewer Gravity to EFSIP (Grant St) - design
The study and design of new force main from the Worcester Road Sewer Pump Station will lead to a cost-effective means of rerouting the discharge away from the western Farm Pond Interceptor to the eastern EFSIP interceptor while also reducing the risk of failure of the existing main. The current route has two major disadvantages: it takes up capacity in the Farm Pond Interceptor, and its location near its terminus on Mt. Wayte Avenue is dangerously close to the newly constructed Buckley Apartment buildings. Having added capacity in the Farm Pond Interceptor will help minimize limitations to growth for the Tech Park area and vicinity. Upgrading the pipe and relocating it to a route that is away from buildings will substantially reduce risk to the City, its residents, and businesses. As demonstrated by the pipe break in the spring of 2022 at a location about 200 feet south of the pump station, the main is indeed vulnerable to failure.

Second Street Sewer Improvements
The sewer mains on Taralli Terrace and Second Street are 8" vitrified clay pipe (1916 and 1941). They are sufficiently sized for the flows received, but the sewer is beyond its useful life due to its age and condition. The Taralli Terrace and Second Street Sewer mains have a history of requiring preventative maintenance as well as emergency response due to sewer blockages, at least one caused by sewer collapse. Funding from this appropriation will be used to clean and line the existing 8" vitrified clay sewer mains, extending the useful live of the Taralli Terrace and Second Street sewers. The work of the project will include repairs and sealing of structures and replacement of sewer castings as needed. The proposed upgrade to the sewers is proposed in advance of the planned roadway improvements in the area. Sewer main lining will minimize the likelihood of sewer breaks and blockage and should be done before paving upgrades. This work will be performed at the same time as the area's water main improvements.

Bethany Rd Sewer Pump Station and Sewer Mains- concept design
Properties on Bethany Road, Barbieri Road, and Daisley Place abut Waushakum Pond, and are currently not serviced by the City's public sewers, instead rely on onsite wastewater disposal systems (septic systems) for disposal of sewage. Septic systems located in close proximity to the pond increase nutrient loads entering the pond and contribute to reduced water quality, particularly in the warm months. In an effort to improve water quality in Waushakum Pond and reduce beach closures. This appropriation would fund the design of extending new sewers onto Bethany Road from Winthrop Street to the City limit, on Barbieri Road and on Daisley Place. This appropriation would also fund the design of a new sewer pump station to collect wastewater from this service area, pumping it to the upstream gravity sewer, and provide a design for improvements to the receiving sewer, as necessary. This project would have the potential to provide new sewer service to at least 30 unserved properties, one of which is the future potential location of the new Bethany School. The new Bethany Road Area sewers would be designed with capacity to serve the new school building and facilities.

Water Enterprise

Consolidated Vehicle/Equipment – Equipment and Vehicle Replacement: fund equipment based on useful life and annual review

Vehicle and equipment per Public Work's vehicle management and replacement schedule. The procurement and upkeep of equipment is a significant factor in providing cost-effective and reliable service for systems operation, maintenance, repair, rehabilitation and replacements. All vehicles and equipment are managed through the DPW Fleet Department and included within a replacement schedule according to specific criteria, such as age, mileage, and major repairs needed for continued reliable service. Industry and Framingham DPW experience indicates that above those thresholds maintenance increases substantially to assure service reliability, as do major repairs. In addition to daily service for the Sewer Enterprise, nearly all vehicles and equipment are used for the DPW's snow and ice management program which is particularly destructive to vehicles.

Edgell Road Water Main Improvements - South of Belknap – construction

The water main between the Sudbury River Tennis Club and the I-90 overpass is over 100 years old (1917 installation) and in need of improvement and, with larger diameter, increased capacity. This work would be done at the same time as the installation of the replacement gravity sewer and abandonment of the sewer force main, since the work would be in the same part of the Edgell Road Corridor. Replacement of this old water main at the same time as the installation of the new gravity sewer and abandonment of the force main provides an opportunity to minimize costs.

Merriam Hill Water Tank Rehabilitation

Repair of the Merriam Hill Tank is necessary to maintain the structural integrity and promote and maintain drinking water quality. The tank, constructed in 1962, is a welded steel structure and has the capacity to store 3.5 million gallons of potable water. The proposed work identified through an inspection in 2020 will rehabilitate the Merriam Hill Tank and extend its service life. This includes taking the tank out of service, cleaning, welding repairs, installing mixing system, replacement of the interior and exterior coatings, and disinfection. The existing coating is lead based and will require full containment for sand blasting and removal.

Lead Service Inventory

US EPA requires that utilities complete a lead-service inventory by October 16, 2024. The purpose is to provide as complete an assessment as possible of all service connections and either identify the presence of a lead service or confirm that the service is not lead.

Mt. Wayte Avenue Water Mains - construction

The water mains on Mt. Wayte Avenue, Dunning Ave, Sherwin Terrace, and Chautauqua Avenue have been identified through the City's unidirectional flushing program as producing water pressure and flow less than the minimum standard for fire protection. In the interest of public safety, elimination of significant pressure and flow restrictions in the water distribution system is needed to ensure that the Fire Department can provide adequate fire protection. Elimination of insufficiently performing water mains will also improve domestic water service to ratepayers. Funding from this appropriation will replace approximately 2,800 linear feet of 6-inch and 8-inch cast iron water mains installed in 1926 and 1930, respectively on Mt. Wayte

Avenue, Chautauqua Avenue, Dunning Avenue, Oriole Avenue, Sherwin Terrace, and Newton Park Rd west of the intersection of Mt. Wayte Avenue and Dudley Street and approximately 850 linear feet of 8-inch cast iron water main installed in 1930 on Mt. Wayte Avenue between Union Avenue and Franklin Street. These water mains are undersized and have exceeded their design life. Additionally, included as part of the work of this project, a redundant 8-inch cast iron water main installed in 1930, located off of Mt. Wayte Avenue on private property will be abandoned and properties served off of the 8-inch main will be connected to the existing 12-inch ductile iron main located within the roadway on Mt. Wayte Avenue. This will improve the reliability of service to the Kidney Dialysis center on Mt. Wayte Avenue currently fed off of the 1930 cast iron water main and only fed from one direction. It will be tied into the 1980's ductile iron water main and be fed from two directions.

Second Street Water Main Improvements

The water main on Second Street is 6" Cast Iron Pipe from 1952. It is undersized by today's standards and has been discovered to have insufficient fire flow. The valves located on this water main are aged and cannot be fully closed. These non-functioning valves prevent the Water Department from being able to isolate sections of this water main for maintenance or repairs, which in turn expands water main shutdowns to a wider area to achieve isolation, impacting more residents. There is a history of water main breaks on the Second Street water main as well as water service line leaks to various properties. The water main on Taralli Terrace is 8" Cast Iron Pipe from 1963. Unlined cast iron pipe presents drawbacks to water quality, and in general, cast iron pipe of that era is prone to breaks and leaks. The water main and services on Taralli Terrace have a history of leaks. Funding from this appropriation would be used to upgrade the existing 6" Cast Iron main on Second Street and 8" Cast Iron main on Taralli Terrace to new 8" Ductile Iron Pipe. The proposed upgrade to the Second Street and Taralli Terrace water mains is proposed in advance of the Second Street and Taralli Terrace roadway improvements project to be performed by the Highway Department. Performing water main replacements on Second Street and Taralli Terrace will serve to minimize the likelihood of water main and service breaks and leaks after final paving is complete, which would require excavating newly paved roadways. This work would be performed in conjunction with the proposed Second Street Sewer Improvements, which includes lining the existing Second Street sewer so both the water and sewer utilities will be new or have the expected useful life extended, prior to the roadway construction.

<u>Potential ARPA Funded Projects</u>

Henry Street Drainage

Stormwater improvements were installed on Union Avenue between 2015 and 2020, and are continuing in 2022 with the MassDOT TIP project. The downstream drainage system on Henry Street must be replaced to accommodate the upstream capacity of the system. The Henry Street Drainage Improvements includes the installation of approximately 750 LF of 30" drainage pipe on Henry Street, connecting to the existing culvert located on the railyard property owned and operated by CSX, Inc. before discharging to Farm Pond. Additionally, an off-line Water

Quality Unit will be installed to capture roadway contaminants, improving the water quality of Farm Pond (an impaired water body).

Indian Head Heights Cross Country Drainage
The purpose of this project is to line approximately 900 linear feet of 30-inch corrugated metal pipe (CMP). The existing Indian Head Road cross country drainage system includes twin pipes which start at a concrete headwall on the south side of Indian Head Road east of #97 Indian Head Road. The pipes are both 30-inch diameter, one being reinforced concrete pipe (RCP) and other corrugated metal pipe (CMP). These pipes extend northerly under Indian Head Road, then continue perpendicular to the road and across private property all the way to Central Street and daylight at an existing concrete headwall adjacent to the Sudbury River. Routine maintenance and inspection shows areas of deterioration and potential structural deficiency. The CMP is over 80 years old. Pipe of this age and material consistently experiences corrosion and section loss. Lining will reestablish structural integrity and restore the hydraulic capacity.

Lake Cochituate Infrastructure and Water Quality Improvements
The design and construction of drainage retrofits within the Lake Cochituate watershed will improve water quality and reduce impacts from severe storms. This project focuses on replacement and/or repair of connected or contributing drainage infrastructure, installation of a water quality unit and green infrastructure on City owned park property. There is a potential for retrofits at the beach parking lot.

Lake Waushakum Infrastructure and Water Quality Improvements
The design and construction of drainage retrofits within the Lake Waushakum watershed will improve water quality and reduce impacts from severe storms. This project focuses on replacement and/or repair of connected or contributing drainage infrastructure, installation of a water quality unit and green infrastructure on City owned park property. Emphasis for retrofit and demonstration projects to provide system efficiencies and meet EPA MS4 permit requirements.

St Tarciscius Wetland Restoration (Lake Waushakum)
Outfall 2012000 discharges to a wetland tributary to Lake Waushakum. This project will perform a condition assessment of the wetland and perform wetland restoration to improve water quality in Lake Waushakum.

Learned Pond Infrastructure and Water Quality Improvements
This project will include inspection, and repair or replacement of drainage infrastructure to outfalls, and repair of headwalls as necessary to Learned Pond. It will also include installation of water quality unit or other stormwater Best Management Practices to improve water quality discharging to Learned Pond.