



Capital Improvement Plan
FY2024-FY2028

The Following is the Capital Improvement Plan (CIP) for the Town of Tewksbury which covers the next five (5) Fiscal Years, 2024-2028. The plan outlines the project requests from each Department and the year in which the project is proposed for funding. The funding sources are either Raise and Appropriate (R & A), transfer from the Stabilization fund, transfer from the Free Cash (FC), transfer from the Enterprise Fund Retained Earnings, Chapter 90, Grants, Gifts or borrowing.

Part I: Glossary of Financial Terms

Part II: Five (5) year CIP

The first page is a summary of the requests by Department, potential funding sources, and the amount requested each of the next five (5) Fiscal Years.

Second page is a summary of the projects that will be funded by either Raise and Appropriate (R & A), transfer from the Stabilization fund, transfer from the Free Cash (FC), transfer from the Enterprise Retained Earning.

Third page is a summary of the projects that will be funded by Chapter 90 funds.

Fourth page is a summary of the General Fund projects that will be funded by borrowing. The summary outlines the annual debt service costs.

Fifth page is a summary of the Enterprise Fund projects, specifically Water Enterprise Fund Projects that will be funded by borrowing. The summary outlines the annual debt service costs.

Part III: Project Narratives

List of all of specific request Project and Narratives submitted by the Departments with proposed funding for each year.

Glossary of Financial Terms

Part I

Glossary of Financial Terms

Appropriation – An authorization granted by a town meeting, city council or other legislative body to expend money and incur obligations for specific public purposes. An appropriation is usually limited in amount and as to the time period within which it may be expended.

Bond – A means to raise money through the issuance of debt. A bond issuer/borrower promises in writing to repay a specified sum of money, alternately referred to as face value, par value or bond principal, to the buyer of the bond on a specified future date (maturity date), together with periodic interest at a specified rate. The term of a bond is always greater than one year.

Bond Authorization – The action of town meeting or a city council authorizing the executive branch to raise money through the sale of bonds in a specific amount and for a specific purpose. Once authorized, issuance is by the treasurer upon the signature of the mayor, or selectmen.

Bond Issue – The actual sale of the entire, or a portion of, the bond amount authorized by a town meeting or city council.

Bond Rating (Municipal) – A credit rating assigned to a municipality to help investors assess the future ability, legal obligation, and willingness of the municipality (bond issuer) to make timely debt service payments. Stated otherwise, a rating helps prospective investors determine the level of risk associated with a given fixed-income investment. Rating agencies, such as Moody's and Standard and Poor's, use rating systems, which designate a letter or a combination of letters and numerals where AAA is the highest rating and C1 is a very low rating.

Bonds Authorized and Unissued – Balance of a bond authorization not yet sold. Upon completion or abandonment of a project, any remaining balance of authorized and unissued bonds may not be used for other purposes, but must be rescinded by town meeting or the city council to be removed from community's books.

Cable Television Franchise Fee - is an annual fee charged by a local government to a private cable television company as compensation for using public property it owns as right-of-way for its cable.

Capital Improvements Program – A blueprint for planning a community's capital expenditures that comprises an annual capital budget and a five-year capital program. It coordinates community planning, fiscal capacity and physical development. While all of the community's needs should be identified in the program, there is a set of criteria that prioritizes the expenditures.

Capital Outlay – The exchange of one asset (cash) for another (capital asset), with no ultimate effect on net assets. Also known as "pay as you go," it is the appropriation and use of available cash to fund a capital improvement, as opposed to incurring debt to cover the cost.

Chapter 90 Highway Funds – State funds derived from periodic transportation bond authorizations and apportioned to communities for highway projects based on a formula under the provisions of MGL Ch. 90 §34. The Chapter 90 formula comprises three variables: local road mileage (58.33 percent) as certified by the Massachusetts Highway Department (MHD), local employment level (20.83 percent) derived the Department of Employment and Training (DET), and population estimates (20.83 percent) from the US Census Bureau. Local highway projects are approved in advance. Later, on the submission of certified expenditure reports to MHD, communities receive cost reimbursements to the limit of the grant.

Community Preservation Fund – A special revenue fund established pursuant to MGL Ch. 44B to receive all monies collected to support a community preservation program, including but not limited to, tax surcharge receipts, proceeds from borrowings, funds received from the Commonwealth, and proceeds from the sale of certain real estate.

Debt Authorization – Formal approval by a two thirds vote of town meeting or city council to incur debt, in accordance with procedures stated in MGL Ch. 44 §§1, 2, 3, 4a, 6-15.

Debt Exclusion – An action taken by a community through a referendum vote to raise the funds necessary to pay debt service costs for a particular project from the property tax levy, but outside the limits under Proposition 2½. By approving a debt exclusion, a community calculates its annual levy limit under Proposition 2½, then adds the excluded debt service cost. The amount is added to the levy limit for the life of the debt only and may increase the levy above the levy ceiling.

Debt Service – The repayment cost, usually stated in annual terms and based on an amortization schedule, of the principal and interest on any particular bond issue.

Enterprise Fund – An enterprise fund, authorized by MGL Ch. 44 §53F½, is a separate accounting and financial reporting mechanism for municipal services for which a fee is charged in exchange for goods or services. It allows a community to demonstrate to the public the portion of total costs of a service that is recovered through user charges and the portion that is subsidized by the tax levy, if any. With an enterprise fund, all costs of service delivery--direct, indirect, and capital costs—are identified. This allows the community to recover total service costs through user fees if it chooses. Enterprise accounting also enables communities to reserve the "surplus" or net assets unrestricted generated by the operation of the enterprise rather than closing it out to the general fund at year-end. Services that may be treated as enterprises include, but are not limited to, water, sewer, hospital, and airport services.

Free Cash (Also Budgetary Fund Balance) – Remaining, unrestricted funds from operations of the previous fiscal year including unexpended free cash from the previous year, actual receipts in excess of revenue estimates shown on the tax recapitulation sheet, and unspent amounts in budget line-items. Unpaid property taxes and certain deficits reduce the amount that can be certified as free cash. The calculation of free cash is based on the balance sheet as of June 30, which is submitted by the community's auditor, accountant, or comptroller. Important: free cash is not available for appropriation until certified by the Director of Accounts.

Levy – The amount a community raises through the property tax. The levy can be any amount up to the levy limit, which is re-established every year in accordance with Proposition 2½ provisions.

Local Appropriating Authority – In a town, the town meeting has the power to appropriate funds, including the authorization of debt. In a city, the city council has the power upon the recommendation of the mayor.

Long-Term Debt – Community borrowing, or outstanding balance at any given time, involving loans with a maturity date of 12 months or more.

Net Assets Unrestricted (formerly Retained Earnings) – An equity account reflecting the accumulated earnings of an enterprise fund that may be used to fund capital improvements, to reimburse the general fund for prior year subsidies, to reduce user charges and to provide for enterprise revenue deficits (operating loss).

Overlay (Overlay Reserve or Allowance for Abatements and Exemptions) – An account established annually to fund anticipated property tax abatements, exemptions and uncollected taxes in that year. The overlay reserve need not be funded by the normal appropriation process, but rather is raised on the tax rate recapitulation sheet.

Overlay Surplus – Any balance in the overlay account of a given year in excess of the amount remaining to be collected or abated can be transferred into this account. Within ten days of a written request by the chief executive officer of a city or town, the assessors must provide a certification of the excess amount of overlay available to transfer, if any. Overlay surplus may be appropriated for any lawful purpose. At the end of each fiscal year, unused overlay surplus is "closed" to surplus revenue; in other words, it becomes a part of free cash.

Short-Term Debt – Outstanding balance, at any given time, on amounts borrowed with a maturity date of 12 months or less.

Stabilization Fund – A fund designed to accumulate amounts for capital and other future spending purposes, although it may be appropriated for any lawful purpose (MGL Ch. 40 §5B). Communities may establish one or more stabilization funds for different purposes and may appropriate into them in any year an amount not to exceed ten percent of the prior year's tax levy. The total of all stabilization fund balances shall not exceed ten percent of the community's equalized value, and any interest shall be added to and become a part of the funds. A two-thirds vote of town meeting or city council is required to establish, amend the purpose of, or appropriate money into or from the stabilization fund.

Capital Improvement Plan
Five (5) Year Plan FY2024-FY2028
Part II

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2024-2028
SUMMARY**

DEPARTMENT	PROJECT/PROGRAM	FUNDING SOURCE	FY2024	FY2025	FY2026	FY2027	FY2028	Total
	Police Station	R&A/Stab. Fund/CPA Funds/Free Cash	130,865	-	-	-	-	130,865
	Library	R&A/Stab. Fund/CPA Funds/Free Cash	-	-	-	-	500,000	500,000
	Town Hall and Town Hall Annex	R&A/Stab. Fund/CPA Funds/Free Cash	-	-	-	-	-	-
	Senior Center	R&A/Stab. Fund/CPA Funds/Free Cash	-	-	-	-	-	-
	Facilities and Grounds Vehicles and Equipment	R&A/Stab. Fund/CPA Funds/Free Cash	-	-	-	-	-	-
	Recreation Fields and Facilities Improvements	R&A/Stab. Fund/CPA Funds/Free Cash	484,000	150,000	150,000	150,000	-	934,000
Total Facilities and Grounds			614,865	150,000	150,000	150,000	500,000	1,564,865
Fire Department								
	New Ambulance and Equipment	R&A/Stab. Fund/Free Cash	375,000	400,000	-	400,000	-	1,175,000
	North Fire Station Renovation	R&A/Stab. Fund/Free Cash	-	-	1,500,000	-	-	1,500,000
	New Training Vehicle	R&A/Stab. Fund/Free Cash	-	65,000	-	-	-	65,000
	New Fire Engine and Equipment	R&A/Stab. Fund/Free Cash	897,000	-	-	-	975,000	1,872,000
	Turnout Gear	R&A/Stab. Fund/Free Cash	-	-	50,000	50,000	-	100,000
Total Fire Department			1,272,000	465,000	1,550,000	450,000	975,000	4,712,000
Public Works Department								
Transportation								
Public Works (General Fund)	Pavement Management Preventative Maintenance	R&A/Stab. Fund/FC/Borrowing/CH90	200,000	200,000	200,000	200,000	200,000	1,000,000
Public Works (General Fund)	Pavement Management Reconstruction/Resurfacing	R&A/Stab. Fund/FC/Borrowing/CH90	445,000	445,000	445,000	445,000	445,000	2,225,000
Public Works (General Fund)	Sidewalks	R&A/Stab. Fund/FC/Borrowing/CH90	250,000	250,000	250,000	650,000	250,000	1,650,000
Public Works (General Fund)	Improvement Projects	R&A/Stab. Fund/FC/Borrowing/CH90	130,000	65,000	65,000	200,000	65,000	525,000
Public Works (General Fund)	Project Development	R&A/Stab. Fund/FC/Borrowing/CH90	100,000	100,000	100,000	100,000	100,000	500,000
Total Transportation			1,125,000	1,060,000	1,060,000	1,595,000	1,060,000	5,900,000
Public Works Department								
Fleet and Equipment								
Public Works (General Fund)	Vehicles and Equipment	R&A/Stab. Fund/Free Cash	475,000	345,000	850,000	335,000	750,000	2,755,000
Total Fleet and Equipment			475,000	345,000	850,000	335,000	750,000	2,755,000
Grand Total DPW			1,600,000	1,405,000	1,910,000	1,930,000	1,810,000	8,655,000
Grand Total General Fund			3,486,865	2,020,000	3,610,000	2,530,000	3,285,000	14,931,865

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2024-2028
SUMMARY**

DEPARTMENT	PROJECT/PROGRAM	FUNDING SOURCE	FY2024	FY2025	FY2026	FY2027	FY2028	Total
Public Works Department								
Sewer Enterprise Fund								
Public Works (Sewer)	Inflow and Infiltration I/I Control	Borrowing/R&A/Retained Earnings	50,000	350,000	350,000	350,000	350,000	1,450,000
Public Works (Sewer)	Sewer Pump Station Improvements	Borrowing/R&A/Retained Earnings	250,000	400,000	250,000	250,000	250,000	1,400,000
Public Works (Sewer)	Collections System Upgrades	Borrowing/R&A/Retained Earnings	-	-	-	-	-	-
Public Works (Sewer)	Fleet and Equipment Replacement Program	R&A/Ent. Fund	195,000	191,000	45,000	275,000	90,000	796,000
Total Sewer Enterprise Fund			495,000	941,000	645,000	875,000	690,000	3,646,000
Public Works Department								
Water Enterprise Fund								
Public Works (Water)	Hydrant Replacement Program	R&A Ent. Fund/Retained Earnings	125,000	150,000	150,000	150,000	150,000	725,000
Public Works (Water)	Water Distribution System Improvements	Borrowing/R&A/Retained Earnings	2,100,000	5,400,000	5,400,000	5,400,000	5,400,000	23,700,000
Public Works (Water)	Water Treatment Plant and Tank Maint./Upgrades	Borrowing/R&A/Retained Earnings	2,100,000	400,000	400,000	-	-	2,900,000
Public Works (Water)	Fleet and Equipment Replacement Program	R&A Ent. Fund/Retained Earnings	195,000	191,000	45,000	275,000	90,000	796,000
Total Water Enterprise Fund			4,520,000	6,141,000	5,995,000	5,825,000	5,640,000	28,121,000
Public Works Department								
Stormwater Enterprise Fund								
Public Works (Stormwater)	Drains	R&A Ent. Fund/Retained Earnings	450,000	250,000	650,000	400,000	400,000	2,150,000
Public Works (Stormwater)	Stormwater Compliance	R&A Ent. Fund/Retained Earnings	-	-	-	-	-	-
Public Works (Stormwater)	Project Development	R&A Ent. Fund/Retained Earnings	55,000	195,000	55,000	55,000	55,000	415,000
Total Stormwater Enterprise Fund			505,000	445,000	705,000	455,000	455,000	2,565,000
Telemedia Department								
Telemedia Enterprise Fund								
Telemedia Department	TMHS Studio Upgrade	R&A Ent. Fund/Retained Earnings	200,000	-	-	-	-	200,000
Telemedia Department	MAM Ssystem	R&A Ent. Fund/Retained Earnings	30,000	-	-	-	-	30,000
Total Telemedia Enterprise Fund			230,000	-	-	-	-	230,000
Grand Total All Capital Projects Per Year			9,236,865	9,547,000	10,955,000	9,685,000	10,070,000	
Grand Total All Projects All Years								49,493,865

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2024-2028**

GENERAL FUND PROJECTS THAT WILL BE FUNDED BY RAISE AND APPROPRIATE, TRANSFER FROM STABILIZATION FUND, CPA FUNDS OR FREE CASH

DEPARTMENT	PROJECT/PROGRAM	FY2024	FY2025	FY2026	FY2027	FY2028	Total
Facilities and Grounds							
	Police Station	130,865	-	-	-	-	130,865
	Library	-	-	-	-	500,000	500,000
	Town Hall and Town Hall Annex	-	-	-	-	-	-
	Senior Center	-	-	-	-	-	-
	Facilities and Grounds Vehicles and Equipment	-	-	-	-	-	-
	Recreation Fields and Facilities Improvements	484,000	150,000	150,000	150,000	-	934,000
Total Facilities and Grounds		614,865	150,000	150,000	150,000	500,000	1,564,865
Fire Department							
	New Ambulance and Equipment	375,000	400,000	-	400,000	-	1,175,000
	North Fire Station Renovation	-	-	1,500,000	-	-	1,500,000
	New Training Vehicle	-	65,000	-	-	-	-
	New Fire Engine and Equipment	897,000	-	-	-	975,000	1,872,000
	Turnout Gear	-	-	50,000	50,000	-	100,000
Total Fire Department		1,272,000	465,000	1,550,000	450,000	975,000	4,712,000
Public Works Department							
Transportation							
Public Works (General Fund)	Pavement Management Preventative Maintenance	-	-	-	-	-	-
Public Works (General Fund)	Pavement Management Reconstruction/Resurfacing	-	-	-	-	-	-
Public Works (General Fund)	Sidewalks	250,000	250,000	250,000	250,000	250,000	1,250,000
Public Works (General Fund)	Improvement Projects	-	-	-	-	-	-
Public Works (General Fund)	Project Development	-	-	-	-	-	-
Total Transportation		250,000	250,000	250,000	250,000	250,000	1,250,000
Public Works Department							
Fleet and Equipment							
Public Works (General Fund)	Vehicles and Equipment	475,000	345,000	850,000	335,000	750,000	2,755,000
Total Fleet and Equipment		475,000	345,000	850,000	335,000	750,000	2,755,000
Total DPW		725,000	595,000	1,100,000	585,000	1,000,000	4,005,000
Grand Total General Fund		2,611,865	1,210,000	2,800,000	1,185,000	2,475,000	10,281,865

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2024-2028**

PROJECTS FUNDED BY CHAPTER 90, OTHER MA HIGHWAY PROGRAMS AND VARIOUS STATE AND PRIVATE GRANTS

DEPARTMENT	PROJECT/PROGRAM	FY2024	FY2025	FY2026	FY2027	FY2028	Total
Public Works Department							
Transportation							
Public Works (General Fund)	Pavement Management Preventative Maintenance	200,000	200,000	200,000	200,000	200,000	1,000,000
Public Works (General Fund)	Pavement Management Reconstruction/Resurfacing	445,000	445,000	445,000	445,000	445,000	2,225,000
Public Works (General Fund)	Sidewalks		-	-	400,000	-	400,000
Public Works (General Fund)	Improvement Projects	130,000	65,000	65,000	200,000	65,000	525,000
Public Works (General Fund)	Project Development	100,000	100,000	100,000	100,000	100,000	500,000
Total Transportation		875,000	810,000	810,000	1,345,000	810,000	4,650,000

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2024-2028**

ENTERPRISE FUND PROJECTS THAT WILL BE FUNDED BY RAISE AND APPROPRIATE, RETAINED EARNINGS OR ENTERPRISE STABILIZATION FUND

DEPARTMENT	PROJECT/PROGRAM	FY2024	FY2025	FY2026	FY2027	FY2028	Total
Public Works Department							
Sewer Enterprise Fund							
Public Works (Sewer)	Inflow and Infiltration I/I Control	50,000	350,000	350,000	350,000	350,000	1,450,000
Public Works (Sewer)	Sewer Pump Station Improvements	250,000	400,000	250,000	250,000	250,000	1,400,000
Public Works (Sewer)	Collections System Upgrades	-	-	-	-	-	-
Public Works (Sewer)	Fleet and Equipment Replacement Program	195,000	191,000	45,000	275,000	90,000	796,000
Total Sewer Enterprise Fund		495,000	941,000	645,000	875,000	690,000	3,646,000

Public Works Department							
Water Enterprise Fund							
Public Works (Water)	Hydrant Replacement Program	125,000	150,000	150,000	150,000	150,000	725,000
Public Works (Water)	Water Distribution System Improvements	-	-	-	-	-	-
Public Works (Water)	Water Treatment Plant and Tank Maint./Upgrades	2,100,000	400,000	400,000	-	-	2,900,000
Public Works (Water)	Fleet and Equipment Replacement Program	195,000	191,000	45,000	275,000	90,000	796,000
Total Water Enterprise Fund		2,420,000	741,000	595,000	425,000	240,000	4,421,000

Public Works Department							
Stormwater Enterprise Fund							
Public Works (Stormwater)	Drains	450,000	250,000	650,000	400,000	400,000	2,150,000
Public Works (Stormwater)	Stormwater Compliance	-	-	-	-	-	-
Public Works (Stormwater)	Project Development	55,000	195,000	55,000	55,000	55,000	415,000
Total Stormwater and Drainage		505,000	445,000	705,000	455,000	455,000	2,565,000

Telemedia Department							
Telemedia Enterprise Fund		-	-	-	-	-	-
Telemedia Department	TMHS Studio Upgrade	200,000	-	-	-	-	200,000
Telemedia Department	MAM Ssystem	30,000	-	-	-	-	30,000
Total Telemedia Enterprise Fund		230,000	-	-	-	-	230,000

Grand Total Per Year		3,650,000	2,127,000	1,945,000	1,755,000	1,385,000	
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Grand Total All Projects All Years							10,862,000
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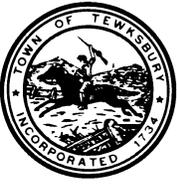
Water Enterprise Budget Projections FY2024-2028									
P&I COMBINED ON WATER DEBT					FY2024	FY2025	FY2026	FY2027	FY2028
			Existing Debt P&I		2,136,275	1,926,025	1,694,630	1,612,730	1,141,731
PROPOSED DEBT	Projects	Projected Cost	Amount to be Borrowed	Debt Service					
Fiscal Year 2022									
Water Distribution Upgrades	Water Distribution System Improvements	1,500,000	1,500,000	187,500	217,500	210,000	202,500	195,000	
Fiscal Year 2023									
Water Tank Upgrades	Water Tanks Improvements	3,600,000	Auth 1.8M						
DPW/School Maintenance Facility	Water share of 26,500,000		26,500,000	-	146,877	146,877	146,877	146,877	
Fiscal Year 2024									
Water Distribution Upgrades	Water Distribution System Improvements	2,100,000	2,100,000	262,500	304,500	294,000	283,500	273,000	
Fiscal Year 2025									
Water Distribution Upgrades	Water Distribution System Improvements	5,400,000	5,400,000		675,000	783,000	756,000	729,000	
Fiscal Year 2026									
Water Distribution Upgrades	Water Distribution System Improvements	5,400,000	5,400,000			675,000	783,000	756,000	
Fiscal Year 2027									
Water Distribution Upgrades	Water Distribution System Improvements	5,400,000	5,400,000				675,000	783,000	
Fiscal Year 2028									
Water Distribution Upgrades	Water Distribution System Improvements	5,400,000	5,400,000					675,000	

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2024-2028
SUMMARY**

Capital Plan Summary	FY2024	FY2025	FY2026	FY2027	FY2028	Total
General Fund	3,486,865	2,020,000	3,610,000	2,530,000	3,285,000	14,931,865
Sewer Enterprise Fund	495,000	941,000	645,000	875,000	690,000	3,646,000
Water Enterprise Fund	4,520,000	6,141,000	5,995,000	5,825,000	5,640,000	28,121,000
Stormwater Enterprise Fund	505,000	445,000	705,000	455,000	455,000	2,565,000
Telemedia Enterprise Fund	230,000	-	-	-	-	230,000
Total Capital Plan Funded	9,236,865	9,547,000	10,955,000	9,685,000	10,070,000	49,493,865
Annual Capital Improvement Plan Cost						
R&A or Transfer from Stabilization Fund or Free Cash	2,611,865	1,210,000	2,800,000	1,185,000	2,475,000	10,281,865
Chapter 90, Other MA Highway Programs and Grants	875,000	810,000	810,000	1,345,000	810,000	4,650,000
General Fund Debt Service	-	-	-	-	-	-
R&A or Transfer from Sewer Enterprise Fund	495,000	941,000	645,000	875,000	690,000	3,646,000
R&A or Transfer from Water Enterprise Fund	2,420,000	741,000	595,000	425,000	240,000	4,421,000
R&A or Transfer from Stormwater Enterprise Fund	505,000	445,000	705,000	455,000	455,000	2,565,000
R&A or Transfer from Telemedia Enterprise Fund	230,000	-	-	-	-	230,000
Water Enterprise Funds Debt Service	450,000	1,343,877	2,108,877	2,846,877	3,557,877	10,307,508
Sewer Enterprise Funds Debt Service (Share of DPW/School Facility)	-	146,877	146,877	146,877	146,877	587,508
Total Fiscal Year Cost	7,586,865	5,637,754	7,810,754	7,278,754	8,374,754	36,101,373

Capital Improvement Plan
Project Narratives
Part III

Fire Department



TOWN OF TEWKSBURY

FIRE DEPARTMENT

984 Main Street
TEWKSBURY, MASSACHUSETTS 01876
Joseph W. Kearns, Chief of Department
(978) 640-4410

Date: January 27, 2023
To: Richard Montuori, Town Manager, Finance Committee
From: Joseph W. Kearns, Fire Chief
Cc: Paul Guttadauro Deputy Fire Chief
RE: Capital Budget

I would like to thank you for the opportunity to present to you my five-year capital plan. You will see in FY24 I am requesting funding for a new ambulance and a new fire engine. As I explained in the request form, part of the reason for this request is the lead time we are facing for these vehicles, as of right now it is almost 30 months or more for a new fire engine pumper. For an ambulance it is 20-24 months, there is hope that these times will lessen but we have not seen it yet. The request for the ambulance is to replace a 2018 E450 which has now close to 100,000 miles and by the time a new one comes in will have closer to 165,000 miles. We are transitioning to a heavy duty pickup truck chassis as it is a stronger frame, and the hope is that we will get longer service life out of them. The need for another new engine is to replace one of the 2008 Engines that we bought used, due to the dire need we had for immediate replacement engines in 2014. While these engines helped us through a challenging time, the maintenance cost on them is costly due to the EPA standards and diesel engine regeneration requirements. This will also allow us to move our 2010 engine pumper into a reserve status as it will be over 15 years old.

I would be more than glad to supply any further information that you may be interested in.



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: _New Fire Engine Pumper and equipment

Date: 12-30-22

Submitted By: Chief Joseph W. Kearns

Department: Fire

First Year Submission: FY23

Priority: High

Description of Project: Replace the Department’s 2008 Pierce Velocity Protector fire engine with a new fire engine. New vehicle specification will also include a water supply, centrifugal fire pump, and supply and fire attack hose for independent firefighting capabilities. The new fire Engine will be placed at a station to be the primary response truck in that district. The new fire engine will be NFPA 1901 Standard compliant for automotive fire apparatus and will be outfitted with new hose and firefighting equipment

Justification/Benefit: The lead time on this engine is a minimum of 24 months, Engine 2 will be eighteen years old in 2026. Engine 2 was purchased from a town in Texas to address an immediate need in 2013. This pump was an in-service piece when we bought it. Two Tewksbury E-One Hush fire engines were unexpectedly taken out of service in 2013 due to corrosion and frame rail issues. A third 1994 E-One Hush was taken out of service in 2014 due to mechanical issues that were beyond feasible repair. So the decision to buy this used piece of apparatus was made. It is a generally accepted fact that fire apparatus, like all types of mechanical devices, have a finite life. How long that is depends on many factors including cost of maintenance, operational function, availability of parts, downtime, and quality of the manufacturer to name a few. Engine 2 will be a backup engine; however, it is put in service as a frontline engine during fires and other emergencies where off duty members are called back for apparatus and station coverage. It must also be placed in service to cover apparatus being taken out of service for testing, preventative maintenance, or repairs. On rare occasions apparatus can be out for repair for over one month. On average, our backup engine is placed in frontline service about 25% of the time. A key element in assessing apparatus life span is fire fighter safety; older apparatus do not meet the same safety standards that newer apparatus must meet. This pump was one of the first to be required to meet emissions standards with regeneration of the diesel engine. With this being first generation, we have incurred numerous repair costs to address these requirements.

Impact if not completed: The Department will continue to operate and maintain this high maintenance apparatus to the best of our ability. Due to its age, this vehicle needs continued maintenance which results in high costs, both to repair and to locate and install parts which are not always readily accessible. And again, with the lead time and cost increase on any new apparatus not appearing to shorten or lessen if this purchase is put off it will be more expensive and the cost to maintain the current engine will continue to rise.

Timeframe: Fy24

Replace. Freq:

20 Years

Operating Budget Impact: Reduced maintenance cost and reduction in likelihood of constant repairs for an apparatus that will continue to increase.

Funding Source: Stabilization Fund or Free Cash

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0	\$0	\$0	\$0	\$0	\$0
Design/Engineer	\$0	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$897,000	\$0	\$0	\$0	\$975,000	\$1,872,000
Contingency	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$897,000	\$0	\$0	\$0	\$975,000	\$1,872,000

Basis of Cost Projection:



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: New Ambulance and equipment

Date: 12-30-22

Submitted By: _Chief Joseph Kearns _ Department: Fire

First Year Submission: 2022 Priority: High

Description of Project: Replace 2018 Ford E-450 Horton Ambulance with an ambulance that will continue to meet the needs of the Department and community. The last E-450 Ford Horton ambulance had a new chassis installed. The new ambulance requested for FY2024 will be of new construction and heavy-duty design that will allow for an extended year of front-line service.

Justification/Benefit: The ambulance is the most frequently used emergency resources in the Department. They are driven by a variety of people under extreme conditions on a daily basis. Ambulances are prone to mechanical failure and require extensive maintenance as they age. Recent ambulances have reached approximately 75,000 to 80,000 miles in their first 2 years of use as the Town’s primary response ambulance. The new ambulance design will extend the front-line service life of the vehicle by one year. New ambulance regulations will be met through appropriate planning and design specification. The lead time to take delivery on an ambulance is also a concerning factor. Currently, it is taking up to 24 months or more to take delivery.

Impact if not completed: Costly repairs and the potential of break downs during critical emergency responses as these vehicles age. The backup ambulance, the oldest in the fleet, is only placed in service during mass casualty incidents or when one of the primary ambulances require maintenance or repair.

Timeframe: FY24 FY 25 FY27

Replace. Freq:

3 Years

Operating Budget Impact: Due to the lead time (24+months) in delivery of the Ambulance purchased in the Fy22 budget, the maintenance costs for the existing fleet are going to continue to rise as the older models continue as front-line pieces.

Funding Source:

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Equipment	\$ 375,000	\$ 400,000	\$ -	\$ 450,000	\$ -	\$ 1,225,000
Contingency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Totals	\$ 375,000	\$ 400,000	\$ -	\$ 450,000	\$ -	\$ 1,225,000

Basis of Cost Projection: Based upon estimates at this time, with hopes that the costs continue to level out.



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: New Training vehicle and equipment

Date: 12-30-22

Submitted By: Chief Joseph W. Kearns

Department: Fire Dept.

First Year Submission: FY24

Priority: Medium

Description of Project: Replace 2011 Ford expedition for the Training Officer with a Ford Ranger pickup truck or similar type vehicle and equipment. This vehicle will be smaller and more economical than a full-size pick-up truck.

Justification/Benefit: This vehicle will allow the Training Officer to transport training props, and equipment to and from locations where he conducts training exercises. This will also allow him to not have to put contaminated equipment in the passenger compartment. The current vehicle used by the Training Officer is beginning to have issues with rust and rot. This new vehicle will also be used to transport personal and equipment during and after an emergency.

Impact if not completed: We will continue to keep the current vehicle in service for as long as possible and for as long as it can be safely on the road. During State inspection this year it was pointed out that frame rot/rust may not allow this current vehicle to pass inspection in the near future.

Timeframe: FY25

Replace. Freq:

15 Years

Operating Budget Impact:

Funding Source:

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$65,000.00	\$0.00	\$0.00	\$0.00	\$65,000.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$0.00	\$65,000.00	\$0.00	\$0.00	\$0.00	\$65,000.00

Basis of Cost Projection:



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: _Renovation North Fire Station

Date: 12-30-22

Submitted By: Chief Joseph W. Kearns

Department: Fire Dept.

First Year Submission: 2017

Priority: Medium

Description of Project: A renovation of the first floor of the North Fire Station and the addition of a second floor above the living quarters. The apparatus bays and footprint of the building will not change. The second-floor addition will provide for safer and more functional use of the station by the firefighters assigned there.

Justification/Benefit: The North Fire Station was put into service in 1976 and is currently 47 years old. It meets the current needs of the Fire Department from a size and location point of view; however, it does not meet many of the current building and fire codes nor does it comply with NFPA standards for firefighter health and safety. A renovation and addition will provide the Department with a facility that meets current building, life safety, and occupational health codes. The facility lacks adequate storage which reduces the functionality and use of the apparatus bays. A facility that provides adequate training, living, community accessibility, and equipment and storage space supports our firefighting personnel and assists the Department in the delivery of excellent services to our community. A renovation of the station utilizes existing Town owned property and will provide for ADA compliance, a public restroom, male and female firefighter showers and accommodations. It will be designed to meet current NFPA Standards for firefighter health and safety and will provide modern life safety features.

Impact if not completed: The Fire Department will continue to operate in a building that does not meet safety and building codes. The Town will have to invest in a new roof and heating system in the next several years. The firefighters will continue to operate in the limited space the station provides.

Timeframe: FY26

Replace. Freq:
50 Years

Operating Budget Impact: Reduced maintenance costs, improved flexibility in Departmental function between stations.

Funding Source:

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0	\$0	\$0	\$0	\$0	\$0
Design/Engineer	\$0	\$0	\$200,000	\$0	\$0	\$200,000
Construction	\$0	\$0	\$1,300,000	\$0	\$0	\$1,300,000
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Contingency	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$0	\$0	\$1,500,000	\$0	\$0	\$1,500,000

Basis of Cost Projection:



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: New Turn out gear (PPE)

Date: 12-30-22

Submitted By: Chief Joseph W. Kearns

Department: Fire

First Year Submission: FY24

Priority: Medium

Description of Project: Purchase new turn out gear to replace those that are reaching the end of the use life, per NFPA 1851, the standard that establishes requirements for the selection, care, and maintenance of structural firefighting protective clothing and equipment, dictates gear that is 10 years past its manufacture date should be retired. We would like to start this process in replacing 10 sets of gear in FY26 and 10 sets of gear in FY27.

Justification/Benefit: To protect the Firefighters with the most up to date protective gear, and to continue to meet the NFPA standards. The life span of our gear is 10 years, after that time it is considered to reach the end of its use life.

Impact if not completed: We will not be in compliance with NFPA, which is the organization that delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy; and by partnering with others who share an interest in furthering our mission.

Timeframe: FY26 Fy27

Replace. Freq:
10 Years

Operating Budget Impact:

Funding Source:

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$50,000.00	\$50,000.00	\$0.00	\$100,000.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$0.00	\$0.00	\$50,000.00	\$50,000.00	\$0.00	\$100,000.00

Basis of Cost Projection:

Facilities and Grounds



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: Prisoner Cell Cameras _____ Date: 11-15-23
 Submitted By: Chief Columbus Department: Police
 First Year Submission: Yes Priority: High

Description of Project:

New cell cameras are needed to replace the old, out of date analog cameras. The current cameras do not allow for someone to speak with the person on the camera (for example, calling for help) and speaking back with the prisoner. This is an accreditation standard and would significantly reduce liability. Also, install push button safety feature.

Justification/Benefit:

Reduce liability/increase prisoner and officer safety.
 Attain an accreditation standard as best practice.

Impact if not completed:

Older cameras that are not functional and pose as a safety issue as outlined by the Mass Accreditation Commission.

Timeframe:

As soon as funding allows.

Replace. Freq:

10 Years

Operating Budget Impact:

Will reduce individual camera replacement and maintenance out of operating budget.

Funding Source:

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$25,309.26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection:

Quote from Valley Communications.



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: Elevator Replacement **Date:** 11-15-22

Submitted By: Chief Columbus **Department:** Police

First Year Submission: Yes **Priority:** High

Description of Project:

Replace the elevator that is 26 years old. Parts to repair the elevator are not available any longer.

Justification/Benefit:

Elevator is needed in a public building under the ADA.

Impact if not completed:

Will not meet ADA requirement.

Timeframe:

Replace as soon as funds are available.

Replace. Freq:

Approx. 25 years

Operating Budget Impact:

One time expenditure, will help reduce funds in repairs and maintenance account.

Funding Source:

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$99,897.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection:

Quote obtained and received by Vinny Bomal.



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: Roll Call Flooring **Date:** 11-15-22

Submitted By: Chief Columbus **Department:** Police

First Year Submission: Yes **Priority:** low

Description of Project:

We have updated our Roll call room entirely except for the flooring. The floor is the buildings original, from 1996. Looking to replace the flooring.

Justification/Benefit:

Floor is from 1996 and is old and out of date.

Impact if not completed:

Timeframe:

As soon as funding allows.

Replace. Freq:

5-10 Years

Operating Budget Impact:

One time expense

Funding Source:

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Totals	\$5,659.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection:

Quote from Valley Communications.



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: Facility Upgrades and Improvements -Recreation Facilities and Vehicles and Equipment

Date: 1-6-23

Submitted By: Vincent Bomal, Facilities and Grounds Manager

Department: Facilities and Grounds

First Year Submission: FY2021

Description of Project: Fiscal Year 2024: \$455,000 to install lights for Obdens Field and \$29,383 for new home side bleachers at the football field at Saunders Recreation Complex; Fiscal Year 2025: \$150,000 to upgrade and improve Parking Lot at State Field at Livingston Recreation Complex; Fiscal Year 2026: \$150,000 to upgrade and improve parking lot near Funway Playground at Livingston Recreation Complex; Fiscal Year 2027: \$150,000 upgrade and improve parking lot at the Recreation Center at Livingston Recreation Complex; Fiscal Year 2028: \$150,000 remodel and expand Facilities and Grounds garage/building to include new bay, restrooms, breakroom and office.

Justification/Benefit:

Addressing needed improvements and upgrades soon will be more cost effective in the long run and ensure the longer life expectancy for the facilities and insure they are safe. The current lighting is outdated and inefficient. The current drainage is not sufficient and causes the area to flood.

Impact if not completed:

Delaying improvements will be more costly and the longer the fields and facilities go without proper maintenance there will be a better chance of larger more costly problems occurring.

Timeframe: 6 months

Replace Freq: 20 Years

Stakeholders: Facilities and Grounds employees and residents who utilize the Recreation fields and facilities.

Operating Budget Impact: Less funding will be needed in the Department’s operating budgets for ongoing maintenance.

Funding Source: Skate Park and Benches and Bleachers- CPA Funds, Vehicle and Town Hall Annex Stabilization Fund or Free Cash

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
New Vehicles	\$0	\$0	\$0	\$0	\$0	\$0
Recreation Buildings	\$0	\$0	\$0	\$0	\$0	\$0
Football Field Bleachers	\$29,383	\$0	\$0	\$0	\$0	\$29,383
Parking Lots	\$0	\$150,000	\$150,000	\$150,000	\$150,000	\$600,000
Obden Field Lights	\$455,000	\$0	\$0	\$0	\$0	\$455,000
Project Contingency	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$484,383	\$150,000	\$150,000	\$150,000	\$150,000	\$1,084,383

Basis of Cost Projection: Based Upon Estimates from Director of Facilities and Ground



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: Facility Upgrades and Improvements -Library

Date: 1-6-23

Submitted By: Vincent Bomal, Facilities and Grounds Manager

Department: Facilities and Grounds

First Year Submission: FY2020

Description of Project: Fiscal Year 2028 new roof which will be 25 years old and in need of replacement.

Justification/Benefit:

Addressing needed improvements and upgrades in the near future will be more cost effective in the long run and insure the longer life expectancy for the building.

Impact if not completed:

Delaying improvements will be more costly and the longer the buildings go without proper maintenance there will be a better chance of larger more costly problems occurring.

Timeframe: 6 months

Replace Freq: 20 Years

Stakeholders: Library employees and residents who utilize the building.

Operating Budget Impact: Less funding will be needed in the Department’s operating budget for ongoing maintenance. There would be risk of costly emergency repairs if the roof replacement is delayed

Funding Source: Tax Levy, Free Cash or Stabilization Fund

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0	\$0	\$0	\$0	\$0	\$0
Design/Engineer	\$0	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$500,000	\$500,000
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Contingency	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$0	\$0	\$0	\$0	\$500,000	\$500,000

Basis of Cost Projection: Based Upon Estimates from Director of Facilities and Ground

Telemedia Enterprise



TELEMEDIA DEPARTMENT

TOWN OF TEWKSBURY

TOWN HALL

1009 MAIN ST

TEWKSBURY, MASSACHUSETTS 01876

BRIAN DORRINGTON
DIRECTOR

PHONE (978) 771-0819
FAX (978) 640-4302

From: Brian Dorrington
Director, Telemedia Department

To: Richard Montuori
Town Manager

Re: Telemedia Department FY 24, Operations Manager Equipment Report

Please see the following report submitted by Operations Manager, Jason Marshall:

“Field Cameras:

Currently, the Telemedia Department has 6 Field Cameras for production; 2 Sony NXCAM 4K, 1 Sony XDCAM 4k, 1 JVC Streaming Camcorder (Wi-Fi enabled), Panasonic Streaming Camera (our primary live streaming camera for sports and town events). Due to its heavy use, it shows the most signs of wear and tear.

Production Cameras:

The Department also uses two high-end cameras for productions with other town departments, organizations, and events held throughout the town. This includes a Sony Alpha AR III DSLR Camera and a Sony FX6. Both are in excellent condition.

LIVE Production Equipment:

For various live productions (TMHS Sports programs, School Committee Meetings, TMHS events), the department uses various streaming devices. For Town Meeting, School Committee, and events at TMHS where more than one camera is needed, a mobile production cart with a Sony Anycast is used.

For other remote productions a Pearl 2 and Pearl Nano are used. Previously, a Livestream device was being used and now serves as a backup, however the device is beyond its useful life span and can no longer be updated. Another Livestream Solo device was retired after it was going to be too costly to repair and maintain. In addition, it was cumbersome in its ability to connect to our networks.

An AJA Helo is also used when multiple events are happening at the same time (school events and municipal meetings; or two municipal meetings). This can be seen as a bit of a workaround and not an ideal workflow. We are exploring ways to improve this workflow.

Headend Infrastructure:

For content playback, management, and streaming, a Telvue Broadcast server, Telecast Streaming device and Cablecast Carousel information system are used. The Carousel was existing equipment before the Telemedia department was established, but has recently failed and a repair was needed (this runs the bulletin board information system on the cable channels). It is something to keep in mind that it could fail again (old hardware and software) and a solution that comes from our existing broadcast vendor (Telvue Infovue) may be an option to consider.

There is also a Synology Backup system for archiving video including town meetings, as well as backups for staff computers. It is our goal to upgrade our existing network switch to a 10-gigabyte data transfer model in order to

stay compatible with school network infrastructure, as well as reduce or eliminate traffic that can interfere with streaming broadcasts.

Computers:

The department also uses several Apple Macs in its day-to-day operations. Currently staff uses 2 iMacs, 2 Mac Minis (this was in a response to provide a virtual component to staff, applicants, board members, and residents during the Covid 19 pandemic), 2 Macbook Pros (for remote productions and work from home scenarios), and a recently purchased Mac Studio.

With the quality of media increasing in both fidelity and size, it is recommended to consider replacing outdated systems, especially as the department moves to recording 4K content which is why we acquired the Mac Studio.

Misc. Items:

Other items that the Telemedia Department has in its inventory include cables, adapters, tripods, various audio gear, and equipment that does not fall into the previous categories. This includes a recently purchased Bigfoot loudspeaker system, which has dramatically improved the sound when a PA system is needed.

Meeting Rooms:

At the time of this writing, we are in the process of upgrading both meeting rooms to address various audio and video issues, but due to the ongoing supply chain issues caused by the Covid 19 pandemic, we are still waiting the arrival of a large amount of equipment before the work can start.

The “small meeting room” is in working (but not ideal) condition with existing gear; however, the large meeting room has had a recent failure of one camera and our main video switcher requiring the department to have the town boards to move to the “small meeting room.”

We would continue to recommend using the “small meeting room” if at all possible, for the time being, until the upgrade process can be completed. For nights when there are two meetings happening, we have the ability to repurpose a field device to assist in the live broadcast; but this is only a workaround and not the typical workflow.

Library Meeting Room:

In late 2021, the Telemedia Department made significant upgrades to the library meeting room equipment including new microphones, a production cart with a live streaming device connected, and a projector that interfaces directly with the production cart, and is connected to the library network.

This allows us to live stream various types of events. This has led to a dramatic difference in quality for events originating from the library meeting room. We also recently worked with the Town and Library IT staff to create us a VLAN drop near the rear of the building that will simplify the setup process for events happening in the field, including the summer concert series.

Considerations for FY24:

Equipment to consider for the upcoming year would include wireless transmitters (to broadcast video signals when logistically cable runs would be unrealistic or not an option). Additional field cameras may be necessary to purchase due the age and usage of some of these cameras. The proposed line-item amount will be sufficient to cover these expenses. Overall, our equipment is in excellent working condition and our inventory is satisfactory at the moment.”

Sincerely,

Brian Dorrington
Director, Telemedia Department



Town of Tewksbury FY2022 - FY2026 Capital Improvements Projects/Equipment

Project Name: MAM System Date: 11/18/2022

Project ID Number: _____

Revision Date: 11/18/2022

Submitted By: Brian Dorrington Department: Telemedia

First Year Submission: FY24 Priority: FY24, Priority #2

Description of Project:

Purchase and install Media Asset Management (MAM) system.

Justification/Benefit:

Install a MAM system would allow us to edit and store media remotely without relying on external hard drives. This would allow Telemedia Department staff to share, store, and edit media more efficiently. In addition, it allows for remote media management access.

Impact if not completed:

Less efficient, and less collaborative editing workflow. Outdated reliance on external hard drives.

Timeframe:

Summer, 2023

Replace. Freq:

Approx. 6-8 Years

Stakeholders:

Tewksbury Telemedia Department

Operating Budget Impact:

Potential yearly subscriptions and/or warranties.

Funding Source:

Telemedia Department Capital Budget, Cable Enterprise Fund

Capital Funding Request

Fiscal Year	2023	2024	2025	2026	2027	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$2,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$0.00	\$2,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$20,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$6,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$0.00	\$30,000.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection:

Departmental research and consultant quotes.



Town of Tewksbury FY2022 - FY2026 Capital Improvements Projects/Equipment

Project Name: TMHS Studio Upgrade Date: 11/18/2022

Project ID Number: _____

Revision Date: 11/15/2022

Submitted By: Brian Dorrington Department: Telemedia

First Year Submission: FY24 Priority: FY24, Priority #1

Description of Project:

Upgrade and replace TMHS studio cameras, switcher, lighting, and audio equipment. This will be a jointly funded project with the School Department.

Justification/Benefit:

Much of the equipment in the High School Production Studio is obsolete, broken, or past its useful life. We have already had to invest funds to repair the switcher and lighting grid. This equipment is primarily used by students however, the Telemedia Department has access to the studio as well. Completion of this project will allow students to learn on state of the art video equipment.

Impact if not completed:

Strong likelihood of equipment failure resulting in the inability to properly teach students video production or produce Telemedia Department productions.

Timeframe:

Summer/Fall, 2023

Replace. Freq:

Approx. 6-10 Years

Stakeholders:

Tewksbury Public Schools and Tewksbury Telemedia Department

Operating Budget Impact:

Potential yearly subscriptions and/or warranties.

Funding Source:

Telemedia Department Capital Budget, Cable Enterprise Fund

Capital Funding Request

Fiscal Year	2023	2024	2025	2026	2027	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$0.00	\$30,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$150,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$0.00	\$200,000.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection:

Departmental research and consultant estimate.

DPW General Fund



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects

Project Name: Transportation: Pavement Management and Sidewalks

Date: 02/8/2023

Submitted By: Kevin Hardiman, Director DPW

Department: Public Works Dept. Priority:

First Year Submission: Phone #: 978-640-4440

Email: khardiman@tewksbury-ma.gov

Description of Project:

This request proposes the funding of an annual Transportation/Street Improvement Program including preventative maintenance, resurfacing, reconstruction, and sidewalks. As part of this program the Town has established a Complete Streets Policy, which has been evaluated and approved by the Massachusetts Department of Transportation (MassDOT). Acceptance of the policy by MassDOT enables the Town to be eligible for additional State aid under its Complete Streets program. The Town has established a prioritization plan outlining the roadway improvements projects that will provide safe and accessible options for all modes of travel including walking, biking, transit, and vehicles. Whipple Road from Pleasant Street to Chandler Street is identified in the Complete Streets Project Prioritization Plan and Pedestrian Mobility Master Plan. This project includes construction of the first phase of that sidewalk segment, which was designed in FY23.

In FY24 the Town proposes the following roadway treatments: crack-seal of approximately four miles of roads, micro-surfacing approximately one mile of road, and resurfacing of approximately four miles various roads based on the Pavement Management Plan developed in FY23. Resurfacing projects will include expenses for permitting, catch basin/manhole repair, drain repair, installation of new drains and shoulder/driveway berm installation. Funding for sidewalk repair and installation is also included in this request. Locations and specifications have been established as part of a sidewalk plan, funded in FY18. In FY24 various streets will be resurfaced using Chapter 90 funds and the General Fund based on our five-year paving schedule.

Justification/Benefit:

The lack of additional Town funding for a regular street improvement program over many years has resulted in the deterioration of Tewksbury's roads. In the calendar years 2004-2010, the sewer installation project injected approximately \$10,560,000 to improve many of the Town roads. However, there remained numerous miles of roads in disrepair and those in need of preventative maintenance. At this time roads treated during the sewer project are showing signs of distress. The large number of roads currently in need of preventative maintenance will begin to degrade into poor condition if regular investment and preventative maintenance practices are withheld. Roads more recently treated should be maintained through crack-sealing techniques to gain the greatest return on investment while avoiding higher costs for repair. Continued funding through State programs and Town accounts will increase the quality and safety of Tewksbury's roads as well as provide accommodations for various modes of transportation. Preventative measures will prolong road life cycles while elevating the quality of roads without having to rehabilitate at higher unit costs.

Sidewalks keep pedestrians safe from vehicle traffic. The Town has developed a Pedestrian Mobility Master Plan, which identifies thirteen (13) arterial roadways where sidewalk construction will improve pedestrian safety. Whipple Road is included in this Master Plan.

Impact if not completed:

The life cycle of roads will be reduced, road surface quality will diminish, operating and resurfacing costs increase, safety is diminished, while damage to private property escalates. A save sidewalk network will not be provided for pedestrians.

Timeframe:

Projects are included on the attached spreadsheet FY24-FY28.

Replacement Freq.: 5-25 Years

Stakeholders:

Taxpayers, pedestrians, the motoring public, residents near the area that utilize these roads the most, and Highway/Forestry Division

Operating Budget Impact:

Engineering Division, Highway/Forestry Division and Water & Sewer Division personnel time will be required to support the projects to be completed. Increased cost for sidewalk maintenance.

Cost Analysis:

Funding Source: Levy CPA Revolving State Aid Water Sewer Recreation Private Other

Capital Funding Request

	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$895,000.00	\$895,000.00	\$895,000.00	\$1,295,000.00	\$895,000.00	\$4,875,000.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$895,000.00	\$895,000.00	\$895,000.00	\$1,295,000.00	\$895,000.00	\$4,875,000.00

Basis of Cost Projection: Cost project based on current bid pricing.



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects

Project Name: Transportation: Traffic Improvements

Date: 2/10/2023

Project ID Number: _____

Revision Date: _____

Submitted By: Kevin Hardiman, Director of Public Works Department: Public Works Priority: _____

First Year Submission: Phone #: 978-640-4440 Email: khardiman@tewksbury-ma.gov

Description of Project:

Projects under this category are one-time projects intended to improve aspects of design and/or function of roadway infrastructure or enhancements that will improve traffic safety and preservation of public and private property. The project scheduled for FY24 is upgrades of the traffic signal equipment at the intersection of North Street and Andover Street.

Justification/Benefit:

There has been significant development in the last few years near the North Street and Andover Street intersection and as a result, the intersection is experiencing an increase in vehicle traffic. Additionally, the Fiske Road and Andover Street sidewalk project is in close proximity to this intersection and will be constructed in CY2023. Signal upgrades will complement the pedestrian and bicycle improvements from that project.

Impact if not completed:

The North Street and Andover Street signal equipment will continue to underserve the safety needs of that intersection, which continues to see additional traffic volumes due to residential and commercial development in that area.

Timeframe:

The North Street and Andover Street Signal Improvements are planned for FY24.

Replacement Freq.: 25 - 50 Years

Stakeholders:

All motorists, pedestrian, cyclists and adjacent residents.

Operating Budget Impact:

The signal improvements at the North Street and Andover Street intersection will increase energy costs.

Cost Analysis:

Funding Source: Levy CPA Revolving State Aid Water Sewer Recreation Private Other

Capital Funding Request

	2022	2023	2024	2025	2026	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$65,000.00	\$65,000.00	\$65,000.00	\$200,000.00	\$65,000.00	\$460,000.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$65,000.00	\$65,000.00	\$65,000.00	\$200,000.00	\$65,000.00	\$460,000.00

Basis of Cost Projection: Engineer's estimate



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects

Project Name: Transportation: Project Development and Design

Date: 2/7/2023

Project ID Number: _____

Revision Date: _____

Submitted By: Kevin Hardiman, Director DPW Department: Public Works Dept. Priority: _____

First Year Submission: Phone #: 978-640-4440 Email: khardiman@tewksbury-ma.gov

Description of Project:

This project will consist of developing design plans and specifications for sidewalk installation along Chandler Street from Whipple Road to Indian Hill Road and developing design plans and specifications for improvements to the intersection of Whipple Road and Chandler Street. The project construction schedule will be dependent on available funding.

Justification/Benefit:

The Town must provide engineering design specifications for certain construction projects to ensure engineering and construction standards are met. In addition, various metrics are applied to ensure a plan will work as designed given site criteria. The Town has developed a Pedestrian Mobility Master Plan, which identifies thirteen (13) arterial roadways where sidewalk construction will improve pedestrian safety. The Whipple Road and Chandler Street intersection is a five-leg intersection with poor geometry that leads to driver indecision and confusion. Improvements to the geometry will improve safety at this intersection. Upon completion of the designs, the Town will commit funds from the Tax Levy and Chapter 90 for the construction efforts.

Impact if not completed:

Not promoting safe accessible multi-modal transportation options, including walking, biking, transit and vehicular, for all ages and abilities. Lack of sidewalks may put pedestrians at risk. Poor geometry can result in increase traffic accidents at the intersection.

Timeframe:

Generally, project development will be completed in the year preceding project construction.

Replacement Freq.: 25 Years

Stakeholders:

All traveling public and adjacent residents along the corridors.

Operating Budget Impact:

Increased cost for intersection and sidewalk maintenance.

Cost Analysis:

Funding Source: Levy CPA Revolving State Aid Water Sewer Recreation Private Other

Capital Funding Request

	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$165,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$565,000.00
Construction	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$165,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$565,000.00

Basis of Cost Projection: Engineering proposals

**Transportation
5-Year Capital Cost**

Budget Cost Elements	FY24	FY25	FY26	FY27	FY28	TOTAL
Site Acquisition	\$0	\$0	\$0	\$0	\$0	\$0
Design/Eng.	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
Construction	\$1,025,000	\$960,000	\$960,000	\$1,495,000	\$960,000	\$5,400,000
Contingency	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL	\$1,125,000	\$1,060,000	\$1,060,000	\$1,595,000	\$1,060,000	\$5,900,000

Fiscal Year
Program

Location

Cost

Fund

FY24 Cal 2023-2024

Road Preventative Maintenance

Crack sealing	Various locations based on Pavement Management Plan	\$50,000	Chapter 90	Chapter 90
Micro Surfacing	Various locations based on Pavement Management Plan	\$150,000	Chapter 90	Grants Gen Fund
		\$200,000		

Reconstruction/Resurfacing

Grind and Overlay	Various locations based on Pavement Management Plan	\$175,000	Chapter 90	
Full-Depth Reconstruction	Various locations based on Pavement Management Plan	\$270,000	Chapter 90	
		\$445,000		

Sidewalks/Complete Streets

Sidewalk Construction	Whipple Road Phase I	\$250,000		STM Fall 2023
		\$250,000		

Improvement Projects

Intersection Improvements	Whipple Road and Chandler Street Intersection Design	\$65,000	Chapter 90	
Signal Improvements	North Street at Andover Street Intersection	\$65,000	Chapter 90	
		\$130,000		

Project Development

Sidewalk Design	Lower Chandler Street: Whipple Road to Indian Hill Road	\$100,000	Chapter 90	
		\$100,000		

Total Cost FY24

\$1,125,000

Fiscal Year	Program	Location	Cost	Fund	
FY25	Cal 2024-2025				
Road Preventative Maintenance					
	Crack sealing	Various locations based on Pavement Management Plan		\$50,000	Chapter 90
	Nova Chip	Various locations based on Pavement Management Plan		\$150,000	Chapter 90
				\$200,000	
Reconstruction/Resurfacing					
	Grind and Overlay	Various locations based on Pavement Management Plan		\$175,000	Chapter 90
	Full-Depth Reconstruction	Various locations based on Pavement Management Plan		\$270,000	Chapter 90
				\$445,000	
Sidewalks/Complete Streets					
	Sidewalk Construction	Whipple Road Phase II		\$250,000	
				\$250,000	
Improvement Projects					
	Signal Improvements	Andover Street at Ames Pond Drive		\$65,000	Chapter 90
				\$65,000	
Project Development					
	Sidewalk Design	Upper North Street and Colonial Drive		\$100,000	Chapter 90
				\$100,000	
			Total Cost FY25	\$1,060,000	
FY26	Cal 2025-2026				
Road Preventative Maintenance					
	Crack sealing	Various locations based on Pavement Management Plan		\$50,000	Chapter 90
	Nova Chip	Various locations based on Pavement Management Plan		\$150,000	Chapter 90
				\$200,000	
Reconstruction/Resurfacing					
	Grind and Overlay	Various locations based on Pavement Management Plan		\$175,000	Chapter 90
	Full-Depth Reconstruction	Various locations based on Pavement Management Plan		\$270,000	Chapter 90
				\$445,000	
Sidewalks/Complete Streets					
	Sidewalk Construction	Lower Chandler Street - Indian Ridge to Whipple Road		\$250,000	
				\$250,000	
Improvement Projects					
	Signal Improvements	Locations TBD		\$65,000	Chapter 90
				\$65,000	
Project Development					
	Sidewalk Design	Livingston Street: East Street to Pond View Lane - Phase I & II		\$100,000	Chapter 90
				\$100,000	
			Total Cost FY26	\$1,060,000	

Fiscal Year	Program	Location	Cost	Fund	
FY27	Cal 2026-2027				
Road Preventative Maintenance					
Crack sealing		Various locations based on Pavement Management Plan		\$50,000	Chapter 90
Nova Chip		Various locations based on Pavement Management Plan		\$150,000	Chapter 90
				\$200,000	
Reconstruction/Resurfacing					
Grind and Overlay		Various locations based on Pavement Management Plan		\$175,000	Chapter 90
Full-Depth Reconstruction		Various locations based on Pavement Management Plan		\$270,000	Chapter 90
				\$445,000	
Sidewalks/Complete Streets					
Sidewalk Construction		Livingston Street - East Street to Pond View Lane - Phase I		\$250,000	General Fund
Complete Streets Construction		Upper North Street and Colonial Drive	Dependent on MADOT grant award	\$400,000	Complete Streets Grant
				\$650,000	
Improvement Projects					
Intersection Improvements		Main Street at Pleasant Street and East Street - Non-Participating Agreement		\$200,000	Chapter 90
				\$200,000	
Project Development					
Sidewalk Design		North Street: Frasca Field to I-495		\$100,000	Chapter 90
				\$100,000	
			Total Cost FY27	\$1,595,000	
FY28	Cal 2027-2028				
Road Preventative Maintenance					
Crack sealing		Various locations based on Pavement Management Plan		\$50,000	Chapter 90
Nova Chip		Various locations based on Pavement Management Plan		\$150,000	Chapter 90
				\$200,000	
Reconstruction/Resurfacing					
Grind and Overlay		Various locations based on Pavement Management Plan		\$175,000	Chapter 90
Full-Depth Reconstruction		Various locations based on Pavement Management Plan		\$270,000	Chapter 90
				\$445,000	
Sidewalks/Complete Streets					
Sidewalk Construction		Livingston Street - East Street to Pond View Lane - Phase II		\$250,000	
				\$250,000	
Improvement Projects					
Signal Improvements		Locations TBD		\$65,000	Chapter 90
				\$65,000	
Project Development					
Sidewalk Design		East Street - Livingston Street to Leston Street		\$100,000	Chapter 90
				\$100,000	
			Total Cost FY28	\$1,060,000	



Town of Tewksbury FY2022 - FY2026 Capital Improvements Projects

Project Name: Equipment Replacement Program

Date: 2/9/2023

Project ID Number: _____

Revision Date: _____

Submitted By: Kevin Hardiman, Director of Public Works Department: Public Works Dept Priority: _____

First Year Submission: Phone #: _____ Email: _____

Description of Project:

The Department of Public Works has an inventory of (110) pieces of DPW/Utility equipment, not inclusive of all smaller motorized equipment and attachments. The current replacement value of all rolling stock and specialized equipment is approximately \$5 million+. Each piece of equipment is inventoried with replacement intervals vary from 5-25 years which are based on recommendations by the American Public Works Association member organizations.

The selection process of vehicles to be replaced begins with the proposed replacement date. Then each vehicle is assessed as to its remaining useful life, mechanical condition and work requirements. Lastly, each piece of equipment is prioritized for replacement and/or modification.

In FY24 the DPW requests General Fund replacements of the following: replacement of Vehicle #3 (2010 Ford Expedition); replacement of Truck #6 (2006 Ford F-350) and forestry replacement of Woodchipper #901 (1996 Brush Bandit). Also Water and Sewer enterprises, the DPW requests the replacement of Truck #88 (2000 Ford F-550). Shared funding of Message Boards #615 & 616 (2004 VMS Boards); replacement of equipment #608 (2002 Asphalt Curb Machine) and replacement of equipment #64 (2016 John Deere Backhoe) with an upgraded rubber tire wheeled excavator with brush cutter.

Justification/Benefit:

The DPW's systematic replacement program defines what equipment is expected to be replaced during the next five years, with the intent of preventing any unexpected emergency purchases, lockout-tagout conditions due to safety concerns or loss of service. Annual updates are conducted by the Road Machinery Division and reviewed by the Division's Superintendent and Department's Director.

Impact if not completed:

The lack of an on-going replacement program and schedule will result in a jumbled inventory and the haphazard replacement of machinery. This could lead to a fleet ineffective in meeting the needs of the work program; budgetary problems if a piece of machinery had to be replaced in an emergency; and personnel safety issues if the machinery was operated beyond its reasonable life. Repair costs will rise due to the extent and scope of repairs for older equipment. Staff time to repair other stakeholder department's vehicles will see delays and increased costs for out-sourcing. Tasks/programs may go unaddressed if equipment fails to operate such as Street-sweeping, drain repair, sidewalk plowing etc.

Timeframe:

This is an on-going capital request

Replace. Freq:

5-25 Years

Stakeholders:

DPW operations staff and mechanics; Police, Fire, Park and Recreation Departments; Residents, businesses and Town government agencies dependent on DPW for snow removal, while some of the same Departments rely on DPW mechanics for repairs.

Operating Budget Impact:

Replacement of older vehicles will reduce repair costs within the operating budget. In addition, costs due to downtime, i.e. during snow plowing events will result in a reduction in overall storm event cost. Departments that depend on DPW mechanics to repair their vehicles will see delays in equipment being serviced and increased costs due to the postponement of those repairs. Outsourcing repair of all vehicles will increase costs across departments.

Cost Analysis:

Funding Source: Levy CPA Revolving State Aid Water Sewer Recreation Private Other

Capital Funding Request

	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$865,000.00	\$727,000.00	\$940,000.00	\$885,000.00	\$930,000.00	\$4,347,000.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$865,000.00	\$727,000.00	\$940,000.00	\$885,000.00	\$930,000.00	\$4,347,000.00

Basis of Cost Projection: Vendor Estimates

**Fleet/Equipment
5-year Project Cost Estimates**

Budget Cost Elements	2024	2025	2026	2027	2028	TOTAL
Site Acquisition						
Design/Eng.						
Construction						
Equipment	\$865,000.00	\$727,000.00	\$940,000.00	\$885,000.00	\$930,000.00	\$4,347,000.00

<u>Fiscal Year</u>		Veh #	Year	Description Of Purchase	Department	Cost GenFund	Cost Enterprise	Comments
FY2024								
				Rubber Wheeled Excavator w/ Brush Cutter	Highway/Forestry/ W&S	\$180,000.00	\$250,000.00	Shared Excavator / Highway Trade In for back-hoe
		615	2004	Variable Message Board	Highway / W&S	\$11,000.00	\$11,000.00	Replace w/Same
		616	2004	Variable Message Board	Highway / W&S	\$11,000.00	\$11,000.00	Replace w/Same
		608	2002	Asphalt Curb Machine	Highway / W&S	\$8,000.00	\$8,000.00	Replace w/Same
		3	2010	Replace Expedition	Engineering	\$45,000.00		Old Vehicle to Building Department
		6	2006	Replace F-350 w/plow package	Highway	\$120,000.00		Replace w/Multi functional model
						\$375,000.00		
		901	1996	Brush Bandit Chipper	Forestry	\$100,000.00		Replace w/Same (Better / Safer Improvements)
						\$100,000.00		
						Sub-total DPW: \$475,000.00		
		88	2000	F-550 Flat Bed Patch Truck	Water/Sewer		\$110,000.00	Replace w/Dump Body & Plow Package
							Sub-total Water/Sewer: \$390,000.00	
						Total FY24	\$865,000.00	

<u>Fiscal Year</u>	<u>Veh #</u>	<u>Year</u>	<u>Description Of Purchase</u>	<u>Department</u>	<u>Cost GenFund</u>	<u>Cost Enterprise</u>	<u>Comments</u>
FY2025							
	817	2004	Variable Message Board	Highway / W&S	\$12,500.00	\$12,500.00	Replace w/Same
	818	2004	Variable Message Board	Highway / W&S	\$12,500.00	\$12,500.00	Replace w/Same
	60	2006	F-550 Dump w/plow package	Highway	\$110,000.00		Replace w/Same
	56	1997	6-Wheel Dump w/plow package	Highway/Snow	\$200,000.00		Replace w/Same
			6-8 Yard sander (slide-in)	Snow	\$10,000.00		Replace w/Same
				Sub-total DPW:	\$345,000.00		
	605	1999	Asphalt Roller	Water/Sewer		\$12,000.00	Replace w/Same
	801	1999	Compressor	Water/Sewer		\$20,000.00	Replace w/Same
	89	2010	10-Wheel Dump w/plow package	Water/Sewer		\$325,000.00	Replace w/Same
				Sub-total Water/Sewer:		\$382,000.00	
				Total FY25		\$727,000.00	
FY2026							
	22	2008	F-550 Dump w/plow package	Highway	\$120,000.00		Replace w/Same
	53	2005	6-Wheel Dump w/plow package	Highway	\$210,000.00		Replace w/Same
		1995	6-8 Yard sander (slide-in)	Snow	\$20,000.00		Replace w/Same
					\$350,000.00		
	96	2005	Log Truck	Forestry	\$300,000.00		Replace w/Same
	7	2005	Aerial Lift - Small Cherry Bucket Truck	Forestry	\$200,000.00		Replace w/Same
					\$500,000.00		
				Sub-total DPW:	\$850,000.00		
	82	2011	Ford Ranger	Water/Sewer		\$75,000.00	Replace w/Same (Vehicle Totaled in Accident)
	803	2006	Light Tower	Water/Sewer		\$15,000.00	Replace w/Same
				Sub-total Water/Sewer:		\$90,000.00	
				Total FY26	\$940,000.00		

<u>Fiscal Year</u>	<u>Veh #</u>	<u>Year</u>	<u>Description Of Purchase</u>	<u>Department</u>	<u>Cost GenFund</u>	<u>Cost Enterprise</u>	<u>Comments</u>
FY2027							
	2	2017	Replace F-350 w/plow package	Highway	\$110,000.00		Replace w/Same
	61	2007	Replace F-550 Rack Truck w/plow package	Highway	\$110,000.00		Replace w/Same
					\$220,000.00		
	902	2006	Brush Bandit Chipper	Forestry	\$115,000.00		Replace w/Same (Better / Safer Improvements)
					\$115,000.00		
					Sub-total DPW: \$335,000.00		
	81	2003	Sterling Vac Truck	Water/Sewer		\$550,000.00	Replace w/Same
						Sub-total Water/Sewer	
						\$550,000.00	
					Total FY27		
					\$885,000.00		
FY2028							
	65	2013	Pelican Street Sweeper	Highway	\$250,000.00		Replace w/Same
	51	2007	6-Wheel Dump w/plow package	Highway	\$300,000.00		
	70	2007	Liquid Tank Truck	Highway	\$200,000.00		Replace w/Same
					\$750,000.00		Replace w/Same
					Sub-total DPW: \$750,000.00		
	16	2013	Water Ford F-150	Water/Sewer		\$80,000.00	Replace w/Same
	14	2008	Bobcat	Water/Sewer		\$100,000.00	Replace w/Same
						Sub-total Water/Sewer:	
						\$180,000.00	
					Total FY28		
					\$930,000.00		

DPW Water Enterprise



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: Hydrant Replacement Program Date: 2/9/23

Project ID Number: _____ Revision Date: _____

Submitted By: Kevin Hardiman, Director of Public Works Department: Public Works

First Year Submission: _____ Priority: _____

Description of Project:

This annual program is intended to replace aging, malfunctioning, and/or out-of-service fire hydrants and to implement the standardization of hydrants throughout Town. The project began in 2006 and was reinstated in 2010 to address a large number of out-of-service hydrants. Since 2010 over 350 hydrants have been replaced.

In 2006, it had been estimated that 600 of the approximate 1,600 hydrants needed replacement. Funding has been approved at various Town Meetings at differing amounts beginning in FY2006. This year's request and continuing appropriations include water main extensions and installation of hydrants at the end of dead-end water mains to facilitate the full flushing/cleaning of the water main, to improve water quality at these locations.

Justification/Benefit:

A number of hydrants within the system have out-lived their useful life cycle and show signs of fatigue or, in some instances, may be difficult to operate. Upgrading existing hydrants that are inoperable and/or do not meet the Town-wide hydrant standard is important to fire protection efforts and ISO ratings. In addition, there are 11 different types of hydrants within the system, reducing operation consistency: some hydrants open by turning the valve to the left while others open to the right; parts are not interchangeable, requiring procurement of a variety of parts and distributors for repairs, which tie up a large amount of the operating budget in inventory.

A number of older developments have distribution mains without the inclusion of a hydrant at the end of the water main, which prevents the complete flushing of the water main. These sections of pipe need a hydrant installed so they can be periodically flushed to improve water quality.

Impact if not completed:

Malfunctioning or out-of-service hydrants delay firefighting operations. Leaking hydrants waste water, increasing the system's Unaccounted for Water (UAW); the inability to flush water mains via a hydrant leads to diminished water quality in some neighborhoods; stocking of parts for multiple hydrant types ties up capital and decreases operational efficiencies.

Timeframe:

Approximately 25 hydrants will be replaced or newly installed in FY2024

Replace. Freq.:

25 Years

Stakeholders:

Fire Department personnel, Tewksbury residents/businesses, and Department of Public Works Water Division staff

Operating Budget Impact:

Engineering Division and Water Division personnel time will be required to support the project.

Funding Source:

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$125,000.00	\$150,000.00	\$150,000.00	\$150,000.00	\$150,000.00	\$725,000.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$125,000.00	\$150,000.00	\$150,000.00	\$150,000.00	\$150,000.00	\$725,000.00

Basis of Cost Projection:

Cost Projection based on similar contract bid by the Town of Tewksbury in FY23.



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects

Project Name: Water Distribution System Improvements

Date: 2/7/2022

Project ID Number: _____

Revision Date: _____

Submitted By: Kevin Hardiman, Director DPW Department: Department of Public Works Priority: _____

First Year Submission: Phone #: 978-640-4440

Email: khardiman@tewksbury-ma.gov

Description of Project:

The Department Public Works has developed a Water Distribution System Master Plan to guide an on-going effort to remove and replace old pipe varying in size and made from cast-iron, wrought iron, and asbestos cement. Proposed replacements will seek to maximize fire flow capacity, reduce residency time in the pipe, while looping system reaches for redundancy, reducing the frequency of main breaks, and improving water quality.

This request seeks to fund the construction of water main replacements on Victor Drive and the Beech Street neighborhood. In addition, the engineering and design for pipe replacement for Phase III of the South Tewksbury water main replacement is to be completed in FY24.

Justification/Benefit:

The installation and replacement of existing water mains throughout the project work limits will enhance fire protection capabilities and improve water flows/pressures in these areas. In addition, replacement will remove a portion of the Town's deteriorating AC pipe and cast-iron pipe. Most importantly the replacement of deteriorating pipe will minimize the risk of water-breaks.

Impact if not completed:

The existing water pipe material is prone to breaking, requiring the roadway to be excavated and patched. Unexpected service outages will result from continued water main breaks. Poor water pressure and quality will continue as a result of the undersized two-inch wrought iron pipes.

Timeframe:

Replacement Freq.: 50-100 Years

Construction will begin in FY24. Design and construction funding anticipates replacement of a total of 2.7 miles of new pipe.

Stakeholders:

Water customers (Town residents, commercial establishments, institutions, etc.), Tewksbury Fire Dept., Department of Public Works Water Division

Operating Budget Impact:

Replacement of asbestos cement (AC) and cast iron (CI) pipe with newer ductile iron (DI) pipe will result in fewer water main breaks for that section, and will reduce the associated costs with repairs and wasted water.

Cost Analysis:

Funding Source: Levy CPA Revolving State Aid Water Sewer Recreation Private Other

Capital Funding Request

	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineering	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$2,100,000.00	\$5,550,000.00	\$5,550,000.00	\$5,550,000.00	\$5,550,000.00	\$24,300,000.00
Equipment	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$1,000,000.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection:

Construction costs for the water distribution improvements are based on Engineer's cost estimates and construction project costs from previous years.



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects

Project Name: Water Treatment Plant Improvements

Date: 2/9/2022

Project ID Number: _____

Revision Date: _____

Submitted By: Kevin Hardiman, Director DPW Department: Department of Public Works Priority: _____

First Year Submission: Phone #: 978-640-4440

Email: khardiman@tewksbury-ma.gov

Description of Project:

This project includes reconstruction of two of the four filter beds and replacement of the residual handling system at the Water Treatment Plant on Merrimack Drive. Filter bed #4 needs several of the filter tiles replaced and the backwash bridge on filter bed #3 is in need of repair. The other two filter beds are operational.

Justification/Benefit:

The treatment plant typically functions using one to two filter beds. Repair of the backwash bridge and filter tiles will provide redundancy in the treatment system.

The handling of the treatment process residuals (sludge) is a cumbersome process that involves bulking the sludge through the use of diatomaceous earth before hauling the material to the DPW and mixing it with compost then getting it hauled away for disposal/reuse by a third-party operator. The DPW is investigating alternative methods of sludge handling that is less labor intensive.

Impact if not completed:

The filtration system will not have redundancy and therefore water production/output will be hindered. The sludge handling process will continue to require diatomaceous earth and additional staff time for mixing and handling.

Timeframe:

The repair of the filter beds will begin in FY24. Evaluation of the sludge handling operation is ongoing and construction of an alternative system will begin in FY24.

Replacement Freq.: 50-100 Years

Stakeholders:

Water customers (Town residents, commercial establishments, institutions, etc.), Tewksbury Fire Dept., Department of Public Works Water Division

Operating Budget Impact:

Reduction in cost due to eliminating the needs for diatomaceous earth and transportation/disposal of the sludge/compost mixtures.

Cost Analysis:

Funding Source: Levy CPA Revolving State Aid Water Sewer Recreation Private Other

Capital Funding Request

	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineering	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$2,100,000.00	\$400,000.00	\$400,000.00	\$0.00	\$0.00	\$2,900,000.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection:

Construction costs for the water distribution improvements are based on Engineer's cost estimates and construction project costs from previous years.

**Water
5-Year Capital Cost**

Budget Cost Elements	FY24	FY25	FY26	FY27	FY28	TOTAL
Site Acquisition	\$0	\$0	\$0	\$0	\$0	\$0
Design/Eng.	\$0	\$0	\$0	\$0	\$0	\$0
Construction	\$4,325,000	\$5,950,000	\$5,950,000	\$5,550,000	\$5,550,000	\$27,325,000
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL	\$4,325,000	\$5,950,000	\$5,950,000	\$5,550,000	\$5,550,000	\$27,325,000

Fiscal Year Program	Project Name	Work Description	Comments/Location	Cost
FY24	Cal 2023-2024			
Water Distribution Improvements				
	Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey		\$125,000 Enterprise
	Water Distribution Upgrades	Design - South Tewksbury Phase III Construction - Victor Drive Construction - Beech Street neighborhood		\$2,100,000 Enterprise
Water Plant Improvement				
	Water Treatment Plant Upgrades	Residuals Handling and Disposal System		\$1,500,000 Enterprise
	Water Treatment Plant Upgrades	Rebuild Filter Beds #3 & #4		\$600,000 Enterprise
Total Cost FY24				\$4,325,000
FY25	Cal 2024-2025			
Water Distribution Improvements				
	Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey		\$150,000 Enterprise
	Water Distribution Upgrades	Design - Shawsheen St., Beech St., Foster Rd., Patten Rd., Hill St. Design - Hill Street Design - Main Street Tie-Over Construction - South Tewksbury Phase III Construction - Fiske Street Construction - Hill Street		\$5,400,000 Enterprise
Water Plant Improvement				
	Water Treatment Plant Upgrades	Replace Raw and Finished Water Pumps including VFDs - Set 1 of 4		\$400,000 Enterprise
Total Cost FY25				\$5,950,000
FY26	Cal 2025-2026			
Water Distribution Improvements				
	Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey		\$150,000 Enterprise
	Water Distribution Upgrades	Design - William G Drive neighborhood Design - Cardigan Road neighborhood Construction - Shawsheen St., Beech St., Foster Rd., Patten Rd. Construction - Pringle Street Construction - Main Street Tie-Over		\$5,400,000 Enterprise
Water Plant Improvement				
	Water Treatment Plant Upgrades	Replace Raw and Finished Water Pumps including VFDs - Set 2 of 4		\$400,000 Enterprise
Total Cost FY26				\$5,950,000
FY27	Cal 2026-2027			
Water Distribution Improvements				
	Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey		\$150,000 Enterprise

Water Distribution Upgrades	Design - South Tewksbury Phase IV Construction - Based on Water Main Replacement Plan	\$5,400,000 Enterprise
Water Plant Improvement		
		Total Cost FY27
		\$5,550,000

FY28	Cal 2027-2028	
Water Distribution Improvements		
Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey	\$150,000 Enterprise
Water Distribution Upgrades	Design - Based on Water Main Replacement Plan Construction - Based on Water Main Replacement Plan Construction - South Tewksbury Phase IV	\$5,400,000 Enterprise
Water Plant Improvement		
		Total Cost FY28
		\$5,550,000

DPW Sewer Enterprise



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects

Project Name: Sewer Pump Station Improvements

Date: 02/4/2023

Project ID Number: _____

Revision Date: _____

Submitted By: Kevin Hardiman, Director DPW Department: Public Works Dept. Priority: _____

First Year Submission: Phone #: 978-640-4440 Email: khardiman@tewksbury-ma.gov

Description of Project:

This request is comprised of various projects to ensure reliable on-going operation of sewer pump stations. The town-wide sewer collection system utilizes forty-eight (48) sewer pump stations. These stations were constructed anywhere from 1981-2009. The Sewer Pump Station Assessment was performed to understand what repairs, improvements, and upgrades are needed at each of the pump stations. Types of projects in the category include upgrade to control panels and sensors, replacement of pumps, and installation of new equipment to improve the performance of individual stations.

Justification/Benefit:

These repairs, improvements, and upgrades will be implemented to ensure the reliability of the pump stations.

Impact if not completed:

Alarms at these stations will continue to require the need for emergency response, many of which occurs after regular hours. Pump failures will reduce the expected life cycle of the pumps, which then would need to be replaced. Pump Station back-ups could occur if emergency response lags or during periods of high flow pumps are disabled.

Replacement Freq.: 25 Years

Timeframe:

Pump station improvements shall be completed during the FY24 budget year.

Stakeholders:

All sewer customers connected to the sewer collection system, residents in the vicinity of the East Street pump station, DPW Water & Sewer Division

Operating Budget Impact:

Water & Sewer Division overtime should be reduced and cost for electrical power to operate the upgraded equipment.

Cost Analysis:

Funding Source: Levy CPA Revolving State Aid Water Sewer Recreation Private Other

Capital Funding Request

	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$250,000.00	\$400,000.00	\$250,000.00	\$250,000.00	\$250,000.00	\$1,400,000.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$250,000.00	\$400,000.00	\$250,000.00	\$250,000.00	\$250,000.00	\$1,400,000.00

Basis of Cost Projection:

Engineer's estimate.



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects

Project Name: Sewer Inflow and Infiltration

Date: 02/4/2023

Project ID Number: _____

Revision Date: _____

Submitted By: Kevin Hardiman, Director DPW Department: Public Works Dept. Priority: _____

First Year Submission: Phone #: 978-640-4440 Email: khardiman@tewksbury-ma.gov

Description of Project:

This project is an on-going annual request for the rehabilitation of sewer manholes, pipe segments, and service connections that have been found to be sources of Inflow and Infiltration (I/I). Investigative tasks and projects are required by the DEP, who has mandated the submittal of a five-year I/I reduction plan and annual reporting for all cities and towns permitted for discharge from a treatment facility. The Town submitted a 5-year plan (2018) which has been reviewed and approved by DEP. Initial investigations were conducted as early as 2012 and repairs made as late as 2017. Continued investigations of (14) primary sub-basins are required to specifically identify locations of structural failures, and target repairs.

Operating funds will be used for on-going investigations in preparation of subsequent capital funding requests for infrastructure repairs. These repairs are scheduled for the FY2024-2028 budgets; it is anticipated that older system pipe will have been identified for replacement/repair and more extensive repairs to manholes will be undertaken.

Justification/Benefit:

Infiltration and Inflow (I/I) is extraneous water entering the wastewater collection system. Infiltration refers to groundwater that enters the collection system through physical defects such as cracks in the pipes and manholes, or deteriorated joints. Inflow refers to extraneous flow entering the system through point sources, such as roof drains and sump pumps. The extraneous flow produced from I/I sources restricts the potential for new growth by reducing the available capacity in the system and increases the cost of wastewater treatment operations. More importantly, the reduction in pipe capacity has the potential to cause Sanitary Sewer Overflows (SSOs) during periods of the year with seasonal high groundwater and rain events. By removing I/I sources, the system's total capacity is increased, helping to minimize the potential for SSOs, and allowing for additional development. Flows originating from the East Street, Burnham Road, and Andover Street sub-basins have been estimated to operate with peak infiltration at 15%, 68%, 31% respectively, during the high groundwater season. I/I removal is also a requirement of the new discharge permit issued by EPA in September 2019.

Impact if not completed:

Tewksbury's sewer enterprise operates under regulations promulgated by the Massachusetts Department of Environmental Protection (MassDEP). Each year, Tewksbury is required to investigate its system and make repairs. The investigation for I/I sources also allow staff to review the structural condition of the infrastructure to prioritize repairs. Although this is a requirement of the Town's discharge permit, it is a beneficial program designed to ensure a long-range return on the investment made in the sewer network. By finding and eliminating extraneous flow, the increased capacity of the system is maintained over a greater number of years. Also, peak flows may surcharge sewer collection pipe capacity and contribute to residential sewer system backups, causing damage and cost to the Town.

Timeframe:

Manhole and pipe repairs will be contracted out for FY2024. Capital appropriations currently exist for FY24 pipe repairs.

Replacement Freq.: 5-25 Years

Stakeholders:

All sewer customers, DPW Water & Sewer Division, MassDEP, EPA, Lowell Regional Wastewater Utility (LRWWU)

Operating Budget Impact:

Engineering Division and Sewer Division personnel time will be required to support the projects to be completed.

Cost Analysis:

Funding Source: Levy CPA Revolving State Aid Water Sewer Recreation Private Other

Capital Funding Request

	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$50,000.00	\$350,000.00	\$350,000.00	\$350,000.00	\$350,000.00	\$1,450,000.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$50,000.00	\$350,000.00	\$350,000.00	\$350,000.00	\$350,000.00	\$1,450,000.00

Basis of Cost Projection: Engineer's Estimate

**Sewer
5-Year Capital Cost**

Budget Cost Elements	FY24	FY24	FY26	FY27	FY28	TOTAL
Site Acquisition	\$0	\$0	\$0	\$0	\$0	\$0
Design/Eng.	\$0	\$0	\$0	\$0	\$0	\$0
Construction	\$300,000	\$750,000	\$600,000	\$600,000	\$600,000	\$2,850,000
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Contingency	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL	\$300,000	\$750,000	\$600,000	\$600,000	\$600,000	\$2,850,000

Fiscal Year	Program	Project Name	Work Description	Comments/Location	Cost
		Cal yr. 2023-2024			
Infiltration and Inflow (I/I) Control					
		Pipe Repair and Replace	Dig and Replace/Slip Lining Based on FY22-23 Camera/Investigation		\$0
		Manhole Repair/ adjustment	Adjust sewer manholes based on inventory of locations winter 2022		\$50,000
Pump Station Improvements					
		Design and Construction	Implement improvements to Pumps Stations based on FY23 Facility Assessment		\$250,000
Total Cost FY24					\$300,000
		Cal yr. 2024-2025			
Infiltration and Inflow (I/I) Control					
		Pipe Repair and Replace	Dig and Replace/Slip Lining Based on FY23-24 Camera/Investigation		\$300,000
		Manhole Repair/ adjustment	Adjust sewer manholes based on inventory of locations winter 2023		\$50,000
Pump Station Improvements					
		Design and Construction	Implement improvements to Pumps Stations based on FY23 Facility Assessment Construction - Odor Mitigation at East Street Pump Station		\$250,000 \$150,000
Total Cost FY25					\$750,000
		Cal yr. 2025-2026			
Infiltration and Inflow (I/I) Control					
		Pipe Repair and Replace	Dig and Replace/Slip Lining Based on FY23-24 Camera/Investigation		\$300,000
		Manhole Repair/ adjustment	Adjust sewer manholes based on inventory of locations winter 2024		\$50,000
Pump Station Improvements					
		Design and Construction	Implement improvements to Pumps Stations based on FY23 Facility Assessment		\$250,000
Total Cost FY26					\$600,000

FY27		Cal yr. 2026-2027	
Infiltration and Inflow (I/I) Control			
Pipe Repair and Replace	Dig and Replace/Slip Lining Based on FY23-24 Camera/Investigation		\$300,000
Manhole Repair/ adjustment	Adjust sewer manholes based on inventory of locations winter 2025		\$50,000
Pump Station Improvements			
Design and Construction	Implement improvements to Pumps Stations based on FY23 Facility Assessment		\$250,000
Total Cost FY27			\$600,000

FY28		Cal yr. 2027-2028	
Infiltration and Inflow (I/I) Control			
Pipe Repair and Replace	Dig and Replace/Slip Lining Based on FY23-24 Camera/Investigation		\$300,000
Manhole Repair/ adjustment	Adjust sewer manholes based on inventory of locations winter 2026		\$50,000
Pump Station Improvements			
Design and Construction	Implement improvements to Pumps Stations based on FY23 Facility Assessment		\$250,000
Total Cost FY28			\$600,000

DPW Stormwater Enterprise



Town of Tewksbury FY2024 - FY2028 Capital Improvements Projects/Equipment

Project Name: Drain/Stormwater System Management Date: 2/10/2023
 Project ID Number: _____ Revision Date: _____
 Submitted By: Kevin Hardiman, Director DPW Department: Public Works Department
 First Year Submission: _____ Priority: _____

Description of Project:

This program is an annual request to improve the Town’s drainage system by repairing failed drainage structures and culverts, and the installation of new drainage facilities where existing drainage problems endanger public safety and/or private property. Staff plan, coordinate, and perform drainage improvements in conjunction with the Transportation Improvement Program to minimize disruptions and inconveniences and to reduce overall program expenditures. Additional drain repairs for incidental/minor upkeep have been included in the Town’s operational budget.

The capital construction projects identified for this program in Fiscal Year (FY24) include replacement of the culvert on Pringle Street, improvements to the drainage system in the Woburn Street neighborhood, and design of improvements in the Van Buren Road neighborhood.

Justification/Benefit:

Improving failed drainage infrastructure throughout Town eliminates a potential public health and safety hazard while efficiently and effectively managing the stormwater runoff for these areas in Town. In addition, the cost to maintain and repair infrastructure elements is substantially less compared to a complete rebuilding of a failed structure. These improvements help to maintain compliance with EPA’s MS4 NPDES Phase 2 Stormwater permit to the maximum extent possible with the budget available. Flooded roadways also impact private property and pose potential safety risks.

Impact if not completed:

Potential fines and penalties from the EPA for failing to comply with the MS4 NPDES Phase 2 Stormwater permit, loss in function of the drain systems with increase difficulty to minimize and/or eliminate flooding and damage to public and private property, danger to public travel, increased mosquito breeding causing nuisance as well as health hazards, increased exposure for infiltration into sewer collection systems, deterioration of the roadway surface accelerated by the effect of poorly drained roadways and, in some cases, culverts that are in poor condition have a high rate for failure which would cause the roadway to collapse and result in full road closure, delayed travel times and unsafe conditions for all vehicle travel.

Timeframe:

Projects are included on the attached spreadsheet inclusive of Fiscal Year’s 2024-2028.

Replace. Freq.:

25 Years

Stakeholders:

The Town, as a MS4 official for the NPDES Phase 2 Stormwater permit, and residents that live near the roadways and water bodies prone to stormwater flooding; taxpayers, the motoring public, and Highway/Forestry Division

Operating Budget Impact:

Engineering Division and Highway/Forestry Division personnel time will be required to support the projects to be completed. Repairs will eliminate the cost for expensive emergency repairs, formation of potholes, scouring of the roadway edge, all of which result in the loss of production efficiency and increased supply costs.

Funding Source: Stormwater Enterprise

Capital Funding Request

Fiscal Year	2024	2025	2026	2027	2028	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$55,000.00	\$195,000.00	\$55,000.00	\$55,000.00	\$55,000.00	\$415,000.00
Construction	\$450,000.00	\$250,000.00	\$650,000.00	\$400,000.00	\$400,000.00	\$2,150,000.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$505,000.00	\$445,000.00	\$705,000.00	\$455,000.00	\$455,000.00	\$2,565,000.00

Basis of Cost Projection:

Cost project based on engineer’s estimate; does not include cost for MS4 Stormwater permit projects

**Drain-Stormwater
5-Year Project Cost Estimates**

Budget Cost Elements	FY24	FY25	FY26	FY27	FY28	TOTAL
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Eng.	\$55,000.00	\$195,000.00	\$55,000.00	\$55,000.00	\$55,000.00	\$415,000.00
Construction	\$450,000.00	\$250,000.00	\$650,000.00	\$400,000.00	\$400,000.00	\$2,150,000.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL	\$505,000.00	\$445,000.00	\$705,000.00	\$455,000.00	\$455,000.00	\$2,565,000.00

Fiscal Year	Program	Location	Cost	Fund
FY24	Cal 2023-2024			
Drains				
	Culvert Replacement	Pringle Street Culvert	Construction	\$250,000.00 SW Enterprise
	Drainage System Improvement	Woburn Street and Felker Street neighborhood	Construction	\$200,000.00 SW Enterprise
				\$450,000.00
Stormwater Compliance				
				\$0.00
Project Development and Permitting				
	Drainage System Improvement Design	Van Buren Road drainage system	Engineering Services	\$55,000.00 SW Enterprise
				\$55,000.00
			Total Cost FY24	\$505,000.00
FY25	Cal 2024-2025			
Drains				
	Drainage System Improvement	Van Buren Road drainage system	Construction	\$250,000.00 SW Enterprise
				\$250,000.00
Stormwater Compliance				
				\$0.00
Project Development and Permitting				
	Headwall and Culvert Repair Design	Upper Pinnacle Street headwall at Dunvegan Road	Engineering Services	\$80,000.00 SW Enterprise
	Drainage System Improvement Design	Tewmack Terrace - Wolcott Street to Arkansas Road	Engineering Services	\$50,000.00 SW Enterprise
	Headwall and Culvert Repair Design	Andover Street at Hood Road	Engineering Services	\$65,000.00 SW Enterprise
				\$195,000.00
			Total Cost FY25	\$445,000.00

Fiscal Year Program	Location		Cost	Fund
FY26	Cal 2025-2026			
Drains				
Drainage System Improvement	Tewmack Terrace - Wolcott Street to Arkansas Road	Construction	\$300,000.00	SW Enterprise
Headwall and Culvert Repair	Upper Pinnacle Street headwall at Dunvegan Road	Construction	\$350,000.00	
			\$650,000.00	
Stormwater Compliance				
				\$0.00
Project Development and Permitting				
Drainage System Improvement Design	Location based on Stormwater Assessment and Resident concerns	Engineering Services	\$55,000.00	SW Enterprise
			\$55,000.00	
		Total Cost FY26	\$705,000.00	
FY27	Cal 2026-2027			
Drains				
Headwall and Culvert Repair	Andover Street at Hood Road	Construction	\$200,000.00	SW Enterprise
Drainage System Improvement	Location based on Stormwater Assessment and Resident concerns	Construction	\$200,000.00	SW Enterprise
			\$400,000.00	
Stormwater Compliance				
				\$0.00
Project Development and Permitting				
Drainage System Improvement Design	Location based on Stormwater Assessment and Resident concerns	Engineering Services	\$55,000.00	SW Enterprise
			\$55,000.00	
		Total Cost FY27	\$455,000.00	
FY28	Cal 2027-2028			
Drains				
Headwall and Culvert Repair	Location based on Stormwater Assessment and Resident concerns	Construction	\$200,000.00	SW Enterprise
Drainage System Improvement	Location based on Stormwater Assessment and Resident concerns	Construction	\$200,000.00	SW Enterprise
			\$400,000.00	
Stormwater Compliance				
				\$0.00
Project Development and Permitting				
Drainage System Improvement Design	Location based on Stormwater Assessment and Resident concerns	Engineering Services	\$55,000.00	SW Enterprise
			\$55,000.00	
		Total Cost FY27	\$455,000.00	