



Capital Improvement Plan

FY2021-FY2025

The Following is the Capital Improvement Plan (CIP) for the Town of Tewksbury which covers the next five (5) Fiscal Years, 2020-2024. 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 FY2021-FY2025
Part II

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2021-2025
SUMMARY**

DEPARTMENT	PROJECT/PROGRAM	FUNDING SOURCE	FY2021	FY2022	FY2023	FY2024	FY2025	Total
Facilities and Grounds								
	Police Station	R&A/Stab. Fund/CPA Funds/Free Cash	-	-	-	-	-	-
	Library	R&A/Stab. Fund/CPA Funds/Free Cash	150,000	150,000	-	25,000	400,000	725,000
	Town Hall and Town Hall Annex	R&A/Stab. Fund/CPA Funds/Free Cash	25,000	25,000	-	-	-	50,000
	Senior Center	R&A/Stab. Fund/CPA Funds/Free Cash	55,000	25,000	70,000	50,000	-	200,000
	Facilities and Grounds Vehicles and Equipment	R&A/Stab. Fund/CPA Funds/Free Cash	22,705	-	-	-	-	22,705
	Recreation Fields and Facilities Improvements	R&A/Stab. Fund/CPA Funds/Free Cash	55,000	150,000	150,000	150,000	-	505,000
Total Facilities and Grounds			307,705	350,000	220,000	225,000	400,000	1,502,705
Fire Department								
	New Ambulance and Equipment	R&A/Stab. Fund/Free Cash	-	240,000	-	240,000	-	480,000
	New Rescue Truck	R&A/Stab. Fund/Free Cash	185,000	-	-	-	-	185,000
	North Fire Station Renovation	R&A/Stab. Fund/Free Cash	-	1,250,000	-	-	-	1,250,000
	South Fire Station Renovations	R&A/Stab. Fund/Free Cash	50,000	-	-	-	-	50,000
	Refurbish 2010 Seagrave Fire Engine	R&A/Stab. Fund/Free Cash	-	-	75,000	-	-	75,000
	Response/Administrative Vehicle (Car 2)	R&A/Stab. Fund/Free Cash	45,000	-	-	-	-	45,000
Total Fire Department			280,000	1,490,000	75,000	240,000	-	2,085,000
Public Works Department								
Transportation								
Public Works (General Fund)	Pavement Management Preventative Maintenance	R&A/Stab. Fund/FC/Borrowing/CH90	200,000	200,000	350,000	350,000	350,000	1,450,000
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	650,000	650,000	250,000	250,000	2,050,000
Public Works (General Fund)	Improvement Projects	R&A/Stab. Fund/FC/Borrowing/CH90	200,000	200,000	80,000	65,000	65,000	610,000
Public Works (General Fund)	Project Development	R&A/Stab. Fund/FC/Borrowing/CH90	115,000	100,000	100,000	50,000	50,000	415,000
Total Transportation			1,210,000	1,595,000	1,625,000	1,160,000	1,160,000	6,750,000
DPW Facilities/Misc.								
Public Works (General Fund)	DPW/School Maintenance Facility	R&A/Stab. Fund/FC/Borrowing	25,000,000	-	-	-	-	25,000,000
Total DPW Facilities/Misc.			25,000,000	-	-	-	-	25,000,000
Public Works Department								
Fleet and Equipment								
Public Works (General Fund)	Vehicles and Equipment	R&A/Stab. Fund/Free Cash	399,750	532,000	372,000	350,000	385,000	2,038,750
Total Fleet and Equipment			399,750	532,000	372,000	350,000	385,000	2,038,750
Grand Total DPW			26,609,750	3,967,000	2,292,000	1,975,000	1,945,000	37,376,455
DEPARTMENT	PROJECT/PROGRAM	FUNDING SOURCE	FY2021	FY2022	FY2023	FY2024	FY2025	Total
Grand Total General Fund			27,197,455	5,807,000	2,587,000	2,440,000	2,345,000	40,964,160

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2021-2025
SUMMARY**

DEPARTMENT	PROJECT/PROGRAM	FUNDING SOURCE	FY2021	FY2022	FY2023	FY2024	FY2025	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	395,000	200,000	225,000	250,000	250,000	1,320,000
Public Works (Sewer)	Collections System Upgrades	Borrowing/R&A/Retained Earnings	-	-	-	-	-	-
Public Works (Sewer)	Fleet and Equipment Replacement Program	R&A/Ent. Fund	127,500	165,000	25,000	110,000	45,000	472,500
Total Sewer Enterprise Fund			572,500	715,000	600,000	710,000	645,000	3,242,500
Public Works Department								
Water Enterprise Fund								
Public Works (Water)	Hydrant Replacement Program	R&A Ent. Fund/Retained Earnings	125,000	125,000	125,000	125,000	125,000	625,000
Public Works (Water)	Water Distribution System Improvements	Borrowing/R&A/Retained Earnings	1,600,000	2,100,000	2,100,000	2,100,000	2,100,000	10,000,000
Public Works (Water)	Water Treatment Plant and Tank Maint./Upgrades	Borrowing/R&A/Retained Earnings	100,000	1,000,000	-	-	-	1,100,000
Public Works (Water)	Fleet and Equipment Replacement Program	R&A Ent. Fund/Retained Earnings	167,250	165,000	25,000	110,000	45,000	512,250
Total Water Enterprise Fund			1,992,250	3,390,000	2,250,000	2,335,000	2,270,000	12,237,250
Public Works Department								
Stormwater Enterprise Fund								
Public Works (Stormwater)	Drains	R&A Ent. Fund/Retained Earnings	150,000	585,000	480,000	300,000	500,000	2,015,000
Public Works (Stormwater)	Stormwater Compliance	R&A Ent. Fund/Retained Earnings	125,000	-	-	-	-	125,000
Public Works (Stormwater)	Project Development	R&A Ent. Fund/Retained Earnings	225,000	35,000	35,000	190,000	55,000	540,000
Total Stormwater Enterprise Fund			500,000	620,000	515,000	490,000	555,000	2,680,000
Telemedia Department								
Telemedia Enterprise Fund								
Telemedia Department	Upgrade Telemedia Community Bulletin Board	R&A Ent. Fund/Retained Earnings	16,052	-	-	-	-	16,052
Telemedia Department	Utility Van/Transport Vehicle	R&A Ent. Fund/Retained Earnings	33,599	-	-	-	-	33,599
Telemedia Department	Town Hall meeting room cameras and switcher	R&A Ent. Fund/Retained Earnings	-	66,700	-	-	-	66,700
Telemedia Department	Town Hall Video Upgrade, Phase 1	R&A Ent. Fund/Retained Earnings	-	66,700	-	-	-	66,700
Telemedia Department	Town Hall Video Upgrade, Phase 2	R&A Ent. Fund/Retained Earnings	-	-	79,500	-	-	79,500
Telemedia Department	Portable production system	R&A Ent. Fund/Retained Earnings	-	-	-	83,500	-	83,500
Telemedia Department	Broadcast server	R&A Ent. Fund/Retained Earnings	-	-	-	-	58,000	58,000
Total Telemedia Enterprise Fund			49,651	133,400	79,500	83,500	58,000	404,051
Grand Total All Capital Projects Per Year			30,262,205	10,532,000	5,952,000	5,975,000	5,815,000	
Grand Total All Projects All Years								58,536,205

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2021-2025**

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

DEPARTMENT	PROJECT/PROGRAM	FY2021	FY2022	FY2023	FY2024	FY2025	Total
Facilities and Grounds							
	Police Station	-	-	-	-	-	-
	Library	150,000	150,000	-	25,000	400,000	725,000
	Town Hall and Town Hall Annex	25,000	25,000	-	-	-	50,000
	Senior Center	55,000	25,000	70,000	50,000	-	200,000
	Facilities and Grounds Vehicles and Equipment	22,705	-	-	-	-	22,705
	Recreation Fields and Facilities Improvements	55,000	150,000	150,000	150,000	-	505,000
Total Facilities and Grounds		307,705	350,000	220,000	225,000	400,000	1,502,705
Fire Department							
	New Ambulance and Equipment	-	240,000	-	240,000	-	480,000
	New Rescue Truck	185,000	-	-	-	-	185,000
	North Fire Station Renovation	-	1,250,000	-	-	-	1,250,000
	South Fire Station Renovations	50,000	-	-	-	-	50,000
	Refurbish 2010 Seagrave Fire Engine	-	-	75,000	-	-	75,000
	Response/Administrative Vehicle (Car 2)	45,000	-	-	-	-	45,000
Total Fire Department		280,000	1,490,000	75,000	240,000	-	2,085,000
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
DPW Facilities/Misc.							
Public Works (General Fund)	DPW/School Maintenance Facility	5,000,000	-	-	-	-	5,000,000
Total DPW Facilities/Misc.		5,000,000	-	-	-	-	5,000,000
Public Works Department							
Fleet and Equipment							
Public Works (General Fund)	Vehicles and Equipment	399,750	532,000	372,000	350,000	385,000	2,038,750
Total Fleet and Equipment		399,750	532,000	372,000	350,000	385,000	2,038,750
Total DPW		6,149,750	1,402,000	1,137,000	1,090,000	1,190,000	10,968,750
Grand Total General Fund		6,737,455	3,242,000	1,432,000	1,555,000	1,590,000	14,556,455

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2021-2025**

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

DEPARTMENT	PROJECT/PROGRAM	FY2021	FY2022	FY2023	FY2024	FY2025	Total
Public Works Department							
Transportation							
Public Works (General Fund)	Pavement Management Preventative Maintenance	200,000	200,000	350,000	350,000	350,000	1,450,000
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	-	-	800,000
Public Works (General Fund)	Improvement Projects	200,000	200,000	80,000	65,000	65,000	610,000
Public Works (General Fund)	Project Development	115,000	100,000	100,000	50,000	50,000	415,000
Total Transportation		960,000	1,345,000	1,375,000	910,000	910,000	5,500,000

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2021-2025**

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

DEPARTMENT	PROJECT/PROGRAM	FY2021	FY2022	FY2023	FY2024	FY2025	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	395,000	200,000	225,000	250,000	250,000	1,320,000
Public Works (Sewer)	Collections System Upgrades	-	-	-	-	-	-
Public Works (Sewer)	Fleet and Equipment Replacement Program	127,500	165,000	25,000	110,000	45,000	472,500
Total Sewer Enterprise Fund		572,500	715,000	600,000	710,000	645,000	3,242,500

Public Works Department							
Water Enterprise Fund							
Public Works (Water)	Hydrant Replacement Program	125,000	125,000	125,000	125,000	125,000	625,000
Public Works (Water)	Water Distribution System Improvements	100,000	100,000	100,000	100,000	100,000	500,000
Public Works (Water)	Water Treatment Plant and Tank Maint./Upgrades	100,000	1,000,000	-	-	-	1,100,000
Public Works (Water)	Fleet and Equipment Replacement Program	167,250	165,000	25,000	110,000	45,000	512,250
Total Water Enterprise Fund		492,250	1,390,000	250,000	335,000	270,000	2,737,250

Public Works Department							
Stormwater Enterprise Fund							
Public Works (Stormwater)	Drains	150,000	585,000	480,000	300,000	500,000	2,015,000
Public Works (Stormwater)	Stormwater Compliance	125,000	-	-	-	-	125,000
Public Works (Stormwater)	Project Development	225,000	35,000	35,000	190,000	55,000	540,000
Total Stormwater and Drainage		500,000	620,000	515,000	490,000	555,000	2,680,000

Telemedia Department							
Telemedia Enterprise Fund							
Telemedia Department	Upgrade Telemedia Community Bulletin Board	16,052	-	-	-	-	16,052
Telemedia Department	Utility Van/Transport Vehicle	33,599	-	-	-	-	33,599
Telemedia Department	Town Hall meeting room cameras and switcher	-	66,700	-	-	-	66,700
Telemedia Department	Town Hall Video Upgrade, Phase 1	-	66,700	-	-	-	66,700
Telemedia Department	Town Hall Video Upgrade, Phase 2	-	-	79,500	-	-	79,500
Telemedia Department	Portable production system	-	-	-	83,500	-	83,500
Telemedia Department	Broadcast server	-	-	-	-	58,000	58,000
Total Telemedia Enterprise Fund		49,651	133,400	79,500	83,500	58,000	404,051

Grand Total Per Year		1,614,401	2,858,400	1,444,500	1,618,500	1,528,000	
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Grand Total All Projects All Years							9,063,801
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GENERAL FUND DEBT

GENERAL FUND CAPITAL PROJECTS TO BE APPROPRIATED THROUGH BORROWING

FISCAL YEARS 2021-2025									
	Amount	Debt Term	Interest Rate	FY2021	FY2022	FY2023	FY2024	FY2025	
FISCAL YEAR 2021 CAPITAL PROJECTS									
DPW/School Maintenance Facility	20,000,000	20	3.75%	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	
TOTAL FY21 Debt				1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000
FISCAL YEAR 2022 CAPITAL PROJECTS									
TOTAL FY22 Debt	-			-	-	-	-	-	-
FISCAL YEAR 2023 CAPITAL PROJECTS									
TOTAL FY23 Debt	-			-	-	-	-	-	-
FISCAL YEAR 2024 CAPITAL PROJECTS									
TOTAL FY24 Debt	-			-	-	-	-	-	-
FISCAL YEAR 2025 CAPITAL PROJECTS									
TOTAL FY25 Debt	-			-	-	-	-	-	-
Total New Exempt Debt				-	-	-	-	-	-
Total Existing Exempt Debt		FY2020	13,013,933	12,599,162	12,269,022	11,748,969	11,531,769	11,261,956	
Total All Exempt Debt				12,599,162	12,269,022	11,748,969	11,531,769	11,261,956	
Increase Over Previous Fiscal Year Debt Service				(414,772)	(330,140)	(520,053)	(217,200)	(269,813)	
Total New Non-Exempt Debt				1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	
Total Existing Non Exempt Debt		FY2020	355,935	317,131	308,731	288,281	278,031	267,781	
Total All Non-Exempt Debt				1,617,131	1,608,731	1,588,281	1,578,031	1,567,781	
Increase Over Previous Fiscal Year Debt Service				1,261,197	(8,400)	(20,450)	(10,250)	(10,250)	
Total New CPA Existing Debt				-	-	-	-	-	
Total CPA Existing Debt				349,600	340,400	328,900	317,400	305,900	
Total All CPA Debt		FY2020	361,100	349,600	340,400	328,900	317,400	305,900	
Increase Over Previous Fiscal Year Debt Service				(11,500)	(9,200)	(11,500)	(11,500)	(11,500)	
Grand Total All Debt		FY2020	13,730,968	14,565,893	14,218,153	13,666,150	13,427,200	13,135,638	
Increase Over Previous Fiscal Year Debt Service				834,925	(347,740)	(552,003)	(238,950)	(291,563)	

WATER DEBT

CAPITAL PROJECT WATER ENTERPRISE FUNDS TO BE APPROPRIATED THROUGH BORROWING FY20-FY24										
FISCAL YEARS 2021-2025										
			Amount	Debt Term	Interest Rate		FY2021	FY2022	FY2023	FY2024
FISCAL YEAR 2021 CAPITAL PROJECTS										
Water Distribution Upgrades	Water Distribution System Improvements		1,500,000	10	3.75%		176,104	197,250	192,000	186,750
DPW/School Maintenance Facility	DPW/School Maintenance Facility						53,194	182,500	165,000	147,500
TOTAL FY21 Debt			1,500,000				229,299	379,750	357,000	334,250
FISCAL YEAR 2022 CAPITAL PROJECTS										
Water Distribution Upgrades	Water Distribution System Improvements		2,000,000	10	3.75%			234,806	263,000	256,000
TOTAL FY22 Debt			2,000,000				-	234,806	263,000	256,000
FISCAL YEAR 2023 CAPITAL PROJECTS										
Water Distribution Upgrades	Water Distribution System Improvements		2,000,000	10	3.75%		-		234,806	263,000
TOTAL FY23 Debt			2,000,000				-	-	234,806	263,000
FISCAL YEAR 2024 CAPITAL PROJECTS										
Water Distribution Upgrades	Water Distribution System Improvements		2,000,000	10	3.75%					234,806
TOTAL FY24 Debt			2,000,000				-	-	-	234,806
FISCAL YEAR 2025 CAPITAL PROJECTS										
Water Distribution Upgrades	Water Distribution System Improvements		2,000,000	10	3.75%					-
TOTAL FY25 Debt			2,000,000				-	-	-	-

TOTAL ALL NEW DEBT		9,500,000					229,299	614,556	854,806	1,088,056
TOTAL EXISTING DEBT WATER				FY20	2,491,254		2,347,696	2,180,107	2,013,275	1,965,025
GRAND TOTAL EXISTING AND NEW DEBT SERVICE							2,576,995	2,794,663	2,868,081	3,053,081
INCREASE OVER PREVIOUS FISCAL YEAR'S DEBT SERVICE							85,741	217,668	73,418	185,000

**TOWN OF TEWKSBURY
CAPITAL PLANNING PROGRAM
FISCAL YEARS 2021-2025
SUMMARY**

Capital Plan Summary	FY2021	FY2022	FY2023	FY2024	FY2025	Total
General Fund	27,197,455	5,807,000	2,587,000	2,440,000	2,345,000	40,376,455
Sewer Enterprise Fund	572,500	715,000	600,000	710,000	645,000	3,242,500
Water Enterprise Fund	1,992,250	3,390,000	2,250,000	2,335,000	2,270,000	12,237,250
Stormwater Enterprise Fund	500,000	620,000	515,000	490,000	555,000	2,680,000
Total Capital Plan Funded	29,762,205	9,912,000	5,437,000	5,485,000	5,260,000	58,536,205
Annual Capital Improvement Plan Cost						
R&A or Transfer from Stabilization Fund or Free Cash	1,614,401	2,858,400	1,444,500	1,618,500	1,528,000	9,063,801
Chapter 90, Other MA Highway Programs and Grants	960,000	1,345,000	1,375,000	910,000	910,000	5,500,000
General Fund Debt Service	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	6,500,000
R&A or Transfer from Sewer Enterprise Fund	572,500	715,000	600,000	710,000	645,000	3,242,500
R&A or Transfer from Water Enterprise Fund	492,250	1,390,000	250,000	335,000	270,000	2,737,250
R&A or Transfer from Stormwater Enterprise Fund	500,000	620,000	515,000	490,000	555,000	2,680,000
Water Enterprise Funds Debt Service	229,299	614,556	854,806	1,088,056	1,314,306	4,101,021
Total Fiscal Year Cost	5,668,450	8,842,956	6,339,306	6,451,556	6,522,306	33,824,572

Capital Improvement Plan
Project Narratives
Part III

Facilities and Grounds



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Facility Upgrades and Improvements -Library

Date: 2-6-19

Submitted By: Vincent Bomal, Facilities and Grounds Manager

Department: Facilities and Grounds

First Year Submission: FY2019

Description of Project: The Library was built in 1998 and over the next few years will need some interior renovations and upgrades. Fiscal Year 2022 installation of new carpet throughout the first floor including entries and offices. The current carpet is 20 years old; Fiscal Year 2023 new carpet throughout the entire second floor. The current carpet is 20 years old; Fiscal Year 2024 installation of new entry in the Children’s area to provide access to the rear of the building for Children’s Events; Fiscal Year 2025 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	2021	2022	2023	2022	2025	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	\$150,000	\$150,000	\$0	\$25,000	\$400,000	\$725,000
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	\$150,000	\$150,000	\$0	\$25,000	\$400,000	\$725,000

Basis of Cost Projection:

Budget number only, no estimates



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Facility Upgrades and Improvements - Town Hall Annex

Date: 2-6-20

Submitted By: Vincent Bomal, Facilities and Grounds Manager

Department: Facilities and Grounds

First Year Submission: FY2019

Description of Project: The Town Hall Annex was built in 1967 and over the next few years and will need some interior upgrades. In Fiscal Year 2022 new flooring in the corridors and kitchen area and in Fiscal Year 2023 upgrades to the Restrooms to include upgrade to plumbing, new fixtures, petitions, painting and new title floor.

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: Town Hall Annex employees and residents who utilize the building.

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

Funding Source: Tax Levy, Free Cash or Stabilization Fund

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	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	\$25,000.00	\$25,000.00	\$0.00	\$0.00	\$0.00	\$50,000
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	\$25,000.00	\$25,000.00	\$0.00	\$0.00	\$0.00	\$50,000

Basis of Cost Projection:

Budget number only, no estimates



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Facility Upgrades and Improvements -Senior Center

Date: 2-6-20

Submitted By: Vincent Bomal, Facilities and Grounds Manager

Department: Facilities and Grounds

First Year Submission: FY2019

Description of Project: The original portion of the Senior Center was built in 1919 and the larger new addition was built in 2009. Over the next few years will need some interior renovations and upgrades. In Fiscal Year 2021 installation of new carpet in office and main areas and repair roof; Fiscal Year 2022 Atrium Lights. Fiscal Year 2023 renovation of restrooms to include plumbing upgrades, new fixtures, petitions, painting and title floor; Fiscal Year 2024 renovation and upgrade of kitchen area to include plumbing upgrades, new equipment, painting and title floor.

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: Senior Center employees and residents who utilize the building.

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

Funding Source: Tax Levy, Free Cash or Stabilization Fund

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	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	\$55,000.00	\$25,000.00	\$70,000.00	\$50,000.00	\$0.00	\$200,000
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	\$55,000.00	\$25,000.00	\$70,000.00	\$50,000.00	\$0.00	\$200,000

Basis of Cost Projection:

Budget number only, no estimates



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

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

Date: 2-6-20

Submitted By: Vincent Bomal, Facilities and Grounds Manager

Department: Facilities and Grounds

First Year Submission: FY2019

Description of Project: The Livingston Street Recreation Complex and Frasca Fields are heavily used by youth sports and for Town events. Over the next few years improvements will be needed to insure the facilities are maintained properly and safe. Fiscal Year 2021 purchase and enclosed trailer and a leaf box trailer, replace infield at Antonelli Baseball field, resurface Basketball and Tennis Courts. Fiscal Year 2023 remodel and expand Facilities and Grounds garage/building to include new bay, restrooms, breakroom and office; Fiscal Year 2023 pave and/or improve parking lots access and parking lots for recreation facilities and Fiscal Year 2024 pave and/or improve parking lots access and parking lots for recreation facilities.

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 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: Tax Levy, CPA Funds, Free Cash or Stabilization Fund

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	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	\$55,000.00	\$150,000.00	\$150,000.00	\$150,000.00	\$0.00	\$505,000.00
Equipment	\$22,705.00	\$0.00	\$0.00	\$0.00	\$0.00	\$22,705.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$77,705.00	\$150,000.00	\$150,000.00	\$150,000.00	\$0.00	\$527,705.00

Basis of Cost Projection:

Budget number only, no estimates

Fire Department



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: New Ambulance and Equipment

Date: December 10, 2019

Project ID Number: _____

Revision Date: _____

Submitted By: Michael Hazel, Fire Chief

Department: Fire

First Year Submission: 2019

Priority: Medium

Description of Project: Replace 2013 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 having a new chassis installed is being done now. The new ambulance requested for FY2021 will be of new construction and heavy duty design that will allow for an extended year of front line service. Currently we are restricted by the physical dimensions of the current fire station bays. With the recent approval of a new Center Fire Station, we are now able to plan for and design an ambulance that will better meet the operational needs of the Department and the community.

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.

Impact if not completed: Costly repairs and the potential of break downs during critical emergency responses as these vehicles age. Most service work is covered under factory warranty at no cost the Department when the primary and secondary ambulances are in service. 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: FY 2022 FY 2024

Replace. Freq:
3 Years

Stakeholders: Town Residents / Firefighters / Ambulance Patients

Operating Budget Impact: Reduced maintenance and increased vehicle reliability in a vehicle critical to the Department.

Funding Source:

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	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	\$240,000.00	\$0.00	\$240,000.00	\$0.00	\$480,000.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$0.00	\$240,000.00	\$0.00	\$240,000.00	\$0.00	\$480,000.00

Basis of Cost Projection: Current State, Plymouth County, and Metropolitan Area Planning Council bid process.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Rescue Truck

Date: December 10, 2019

Project ID Number:

Revision Date:

Submitted By: Michael Hazel, Fire Chief

Department: Fire

First Year Submission: 2017

Priority: Medium

Description of Project: Replace the 2000 International 4900 Rescue Truck with a smaller, more versatile vehicle to better serve the needs of the Department and the community. The new rescue truck will be reduced in size and will be designed to safely store and transport rescue equipment the Department currently utilizes.

Justification/Benefit: The current vehicle has an outdated hydraulic rescue tool system that is not capable of being cost effectively upgraded. The vehicle was built to carry a portable breathing air cascade system. This system has been removed from service due to regulation changes in the mobile filling of high pressure cylinders and the availability of a regional mobile filling station resource provided by the Tyngsboro Fire Department. The light tower on the rescue truck is not functional due to mechanical issues and the lack of availability of replacement parts. The towing receiver is currently not usable due to corrosion. The new rescue truck design will provide compartment and storage space for current and future hazardous material and rescue related equipment.

Impact if not completed: The Fire Department will continue to operate our current rescue truck. We will continue to maintain and stock the truck with the tools and equipment it is capable of carrying. Current sub-frame corrosion will continue to be monitored and will be addressed as needed for continued safe operation.

Timeframe: FY 2021

Replace. Freq: 20 Years

Stakeholders: Town Residents / Firefighters / Hotels / State Hospital Complex / Condominiums & Apartment Complexes

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

Funding Source:

Capital Funding Request

Table with 7 columns: Fiscal Year, 2021, 2022, 2023, 2024, 2025, Totals. Rows include Site Acquisition, Design/Engineer, Construction, Equipment, Contingency, and Totals.

Basis of Cost Projection: Estimate based on current State, Plymouth County, and Metropolitan Area Planning Council bid process.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: North Fire Station Renovation

Date: December 10, 2019

Project ID Number: _____

Revision Date: _____

Submitted By: Michael Hazel, Fire Chief

Department: Fire

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 41 years old. It meets the current needs of the Fire Department from a size and location point of view; however, it does not meet 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 all 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: FY 2022

Replace. Freq:
50 Years

Stakeholders: Town Residents / Firefighters / Hotels / State Hospital Complex / Condominiums & Apartment Complexes

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

Funding Source:

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$150,000.00	\$0.00	\$0.00	\$0.00	\$150,000.00
Construction	\$0.00	\$1,100,000.00	\$0.00	\$0.00	\$0.00	\$1,100,000.00
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	\$0.00	\$1,250,000.00	\$0.00	\$0.00	\$0.00	\$1,250,000.00

Basis of Cost Projection: Estimate only. No feasibility study funded or conducted to date.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: South Fire Station Kitchen Renovation

Date: December 10, 2019

Project ID Number: _____

Revision Date: _____

Submitted By: Michael Hazel, Fire Chief

Department: Fire

First Year Submission: 2017

Priority: Medium

Description of Project: A renovation of the kitchen cabinets and appliances is needed the South Fire Station. The physical area and structure of the building will not change.

Justification/Benefit: The South Fire Station was put into service in 2001 and is currently 16 years old. It meets the current needs of the Fire Department from a size and location point of view and is overall good condition. At the time of construction, several cost saving measures were taken to stay within the allotted budget for the project. One of those cost saving measures was the kitchen cabinetry, fixtures, and appliances. The plumbing fixtures have been replaced as needed; however, the cabinet doors and base structures are showing severe wear with the 24hour use of the building. The appliances were contractor grade purchases and are currently functional. Although the building’s fire alarm panel may need modification or upgrade within the next few years, this project will not require upgrades of the fire protection provided it stays within the scope of the proposed work.

Impact if not completed: The firefighters will continue to use the cabinets and appliances that are in place. The Department will continue to make repairs as needed to maximize life of these original building components.

Timeframe: FY 2022

Replace. Freq:
25 Years

Stakeholders: Town Residents / Firefighters / Hotels / State Hospital Complex / Condominiums & Apartment Complexes

Operating Budget Impact: Reduced maintenance costs, improved functionality.

Funding Source:

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,000.00
Construction	\$40,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40,000.00
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	\$0.00	\$0.00	\$0.00	\$0.00	\$50,000.00

Basis of Cost Projection: Town’s Facility Director evaluated need along with firefighters versed in construction projects.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: 2010 Seagrave Fire Engine Refurbishment

Date: January 10, 2019

Project ID Number: _____

Revision Date: _____

Submitted By: Michael Hazel, Fire Chief

Department: Fire

First Year Submission: 2017

Priority: Medium

Description of Project: The 2010 Seagrave Marauder II Fire Engine is at its half-life of front line service to the community. The truck is in very good condition and will remain in front-line service for another seven years. The truck is showing signs of corrosion and is stocked to near its National Fire Protection Association (NFPA 1911) live load weight calculation. Competitive bid specifications for its refurbishment will be drafted to comply with the current edition of NFPA 1901, Standard for Automotive Fire Apparatus. Inspections will be required to verify working components of the body and cab, electrical systems, fire pump, frame and chassis before any components are removed to ensure the refurbishment option is cost effective vs. replacement of the apparatus.

Justification/Benefit: The apparatus has a stainless steel body and is of heavy duty construction. The apparatus manufacturer continues to be leader in the fire service industry and parts remain readily available. The community will receive the full anticipated useful life out of this apparatus; fifteen years of front line use and five years of reserve/backup use. The engine will be rejuvenated for continued safe use by our firefighters.

Impact if not completed: The Fire Department will continue to maintain and operate the Seagrave engine. Repair costs will likely escalate if core equipment is not verified service worthy and repaired or replaced as needed. The vehicle may not reach its full service life. We will continue to maintain and stock the truck with the tools and equipment it is capable of carrying. Current corrosion and live load weight load will continue to be monitored and will be addressed as needed for continued safe operation.

Timeframe: FY 2023

Replace. Freq:
20 Years

Stakeholders: Town Residents / Firefighters / Hotels / State Hospital Complex / Condominiums & Apartment Complexes.

Operating Budget Impact: Reduced maintenance costs, improved reliability of emergency response vehicle.

Funding Source: Available Town Funds

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	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	\$75,000.00	\$0.00	\$0.00	\$75,000.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$0.00	\$0.00	\$75,000.00	\$0.00	\$0.00	\$75,000.00

Basis of Cost Projection: Estimate based on current industry costs for refurbishment and the condition of this piece of apparatus.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Response/Administrative Vehicle (Car 2)

Date: December 10, 2019

Project ID Number: _____

Revision Date: _____

Submitted By: Michael Hazel, Fire Chief

Department: Fire

First Year Submission: 2019

Priority: Medium

Description of Project: Replace Deputy Fire Chief’s response and administrative vehicle (Car 2). The Department would purchase a Ford AWD or equivalent vehicle through the State, Plymouth County Cooperative, or Metropolitan Area Planning Council bid process. Purchase would include new emergency and safety lighting, two-way radios, and related fire officer operational equipment. The vehicle will be used by the Chief of Department to support his job functions and 24-hour response to emergencies.

Justification/Benefit: The current vehicle used by the Deputy Chief is a 2013 Ford Interceptor sedan and is in good condition. Being an all-wheel drive vehicle, it has proven efficient and capable for both administrative and emergency response. The vehicle will be turned over to the Fire Investigator for the same use. The Fire Investigator is currently assigned a 2006 Ford Explorer that is in poor condition. The vehicle was previously used by the Fire Chief and Deputy Chief. Sections of the car were repainted several years back to extend its use. In October of 2019 the vehicle failed its State safety inspection to wheel well and undercarriage corrosion. This vehicle will be removed from service as soon as a replacement vehicle is purchased and put into service.

Impact if not completed: The Fire Investigator’s vehicle is currently undergoing temporary repairs to keep it in service over the next several months. The vehicle is mechanically unreliable needs to be replaced. The fire radios are obsolete and will be replaced as part of this project. Administrative/Response vehicles are rotated to meet the operational needs of the Department.

Timeframe: FY 2021

Replace. Freq:
10 Years

Stakeholders: Town Residents / Firefighters

Operating Budget Impact: Increased vehicle reliability. Reduced maintenance costs.

Funding Source:

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	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	\$45,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45,000.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$45,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45,000.00

Basis of Cost Projection: Current State, Plymouth County, and Metropolitan Area Planning Council bid process.

DPW General Fund

Transportation
5-Year Project Cost Estimates

Transportation

Budget Cost Elements	FY21	FY22	FY23	FY24	FY25	TOTAL
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Eng.	\$115,000.00	\$100,000.00	\$100,000.00	\$50,000.00	\$50,000.00	\$365,000.00
Construction	\$1,095,000.00	\$1,495,000.00	\$1,525,000.00	\$1,110,000.00	\$1,110,000.00	\$5,225,000.00
Contingency						
TOTAL	\$1,210,000.00	\$1,595,000.00	\$1,625,000.00	\$1,160,000.00	\$1,160,000.00	\$5,590,000.00

Fiscal Year

Project Category	Location	Schedule	Treatment	Cost	Fund
FY21	Cal 2020- 2021				

Road Preventative Maintenance

Cracksealing	Various locations based on PCI Report		Cracksealing	\$50,000.00	Chapter90
Nova Chip vs. Microseal	Heath Brk School neighborhoods off Shawsheen: Phase 1		Mirco Surface	\$150,000.00	Chapter90
				\$200,000.00	

Reconstruction/Resurfacing

Grind and Overlay	Various locations based on PCI Report: attachment "Streets to be Paved"			\$175,000.00	Chapter90
Full-Depth Reconstruction	Various locations based on PCI Report: attachment "Streets to be Paved"			\$270,000.00	Chapter90
				\$445,000.00	

Sidewalks/Complete Streets

Sidewalk Construction	Construction: Shawsheen St Phase 2			\$250,000.00	General Fund
				\$250,000.00	

Improvement Projects

Andover/River Rd Intersection Improvmt	MADOT non-participating (designed by other: Dependant on MADOT grant award			\$200,000.00	Chapter90
				\$200,000.00	

Project Development

Complete Streets Project Design	Colonial Drive and upper North Street Sidewalk			\$50,000.00	Chapter 90
Sidewalk Design	Whipple Rd: Pleasant St to Chandler St			\$65,000.00	Chapter 90
				\$115,000.00	

Total Cost FY21 \$1,210,000.00

FY22

FY22	Cal 2021- 2022				
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Road Preventative Maintenance

Cracksealing	Various locations based on PCI Report		Cracksealing	\$50,000.00	Chapter90
Nova Chip vs. Microseal	Heath Brk School neighborhoods off Shawsheen: Phase 2		Mirco Surface	\$150,000.00	Chapter90
				\$200,000.00	

Reconstruction/Resurfacing

Grind and Overlay	Various locations based on PCI Report: attachment "Streets to be Paved"			\$175,000.00	Chapter90
Full-Depth Reconstruction	Various locations based on PCI Report: attachment "Streets to be Paved"			\$270,000.00	Chapter90
				\$445,000.00	

Sidewalks/Complete Streets

Complete Streets Construction	Colonial and Upper North St Sidewalk Installation		Dependant on MADOT grant award	\$400,000.00	Complete Streets Gran
Sidewalk Construction	Whipple Rd Phase 1			\$250,000.00	General Fund
				\$650,000.00	

Improvement Projects

Intersection Improvements	Shawsheen X Foster: Non-participating	Dependant on MADOT grant award		\$200,000.00	Chapter 90
				\$200,000.00	

Project Development

Complete Streets Project Design	Fiske Street Sidewalk			\$50,000.00	Chapter90
Sidewalk St Design	Livingston St: East to Pond View Ln			\$50,000.00	Chapter90
				\$100,000.00	

Total Cost FY22 \$1,595,000.00

Fiscal Year	Project Category	Location	Schedule	Treatment	Cost	Fund
FY23 Cal 2022- 2023						
Road Preventative Maintenance						
Cracksealing		Various locations based on PCI Report		Cracksealing	\$50,000.00	Chapter90
Nova Chip		Various locations based on PCI Report: attachment "Streets to be Paved"		Mirco Surface	\$300,000.00	Chapter90
					\$350,000.00	
Reconstruction/Resurfacing						
Grind and Overlay		Various locations based on PCI Report: attachment "Streets to be Paved"			\$175,000.00	Chapter90
Full-Depth Reconstruction		Various locations based on PCI Report: attachment "Streets to be Paved"			\$270,000.00	Chapter90
					\$445,000.00	
Sidewalks/Complete Streets						
Complete Streets Construction		Fiske St Sidewalk	Dependant on MADOT grant award		\$400,000.00	Complete Streets Gran
Sidewalk Construction		Whipple Rd Phase 2			\$250,000.00	General Fund
					\$650,000.00	
Improvement Projects						
Signal Improvements		North St at Andover St			\$80,000.00	Chapter90
					\$80,000.00	
Project Development						
Complete Streets Project Design		Based on (5) year prioritization plan			\$50,000.00	Chapter90
Sidewalk St Design		Whipple Rd and lower Chandler			\$50,000.00	Chapter90
					\$100,000.00	
					Total Cost FY23	\$1,625,000.00
FY24 Cal 2023-2024						
Road Preventative Maintenance						
Cracksealing		Various locations based Annual		Cracksealing	\$50,000.00	Chapter90
Nova Chip		Various locations based on PCI Report: attachment "Streets to be Paved"		Mirco Surface	\$300,000.00	Chapter90
					\$350,000.00	
Reconstruction/Resurfacing						
Grind and Overlay		Various locations based on PCI Report: attachment "Streets to be Paved"			\$175,000.00	Chapter90
Full-Depth Reconstruction		Various locations based on PCI Report: attachment "Streets to be Paved"			\$270,000.00	Chapter90
					\$445,000.00	
Sidewalks/Complete Streets						
Sidewalk Construction		Livingston St: East to Pond View Ln			\$250,000.00	General Fund
					\$250,000.00	
Improvement Projects						
Signal Improvements		Andover St at Ames Pond			\$65,000.00	Chapter90
					\$65,000.00	
Project Development						
Sidewalk St Design		Main Street - Colonial Drive to Victor Drive			\$50,000.00	Chapter90
					\$50,000.00	
					Total Cost FY24	\$1,160,000.00
FY25 Cal 2024-2025						
Road Preventative Maintenance						
Cracksealing		Various locations based Annual		Cracksealing	\$50,000.00	Chapter90
Nova Chip		Various locations based on PCI Report: attachment "Streets to be Paved"		Mirco Surface	\$300,000.00	Chapter90
					\$350,000.00	
Reconstruction/Resurfacing						
Grind and Overlay		Various locations based on PCI Report: attachment "Streets to be Paved"			\$175,000.00	Chapter90
Full-Depth Reconstruction		Various locations based on PCI Report: attachment "Streets to be Paved"			\$270,000.00	Chapter90
					\$445,000.00	
Sidewalks/Complete Streets						
Sidewalk Construction		Whipple Rd and lower Chandler			\$250,000.00	General Fund
					\$250,000.00	
Improvement Projects						
Signal Improvements		Locations TBD			\$65,000.00	Chapter90
					\$65,000.00	
Project Development						
Sidewalk St Design		North Street - Frasca Field to Westland Drive			\$50,000.00	Chapter90
					\$50,000.00	
					Total Cost FY24	\$1,160,000.00



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: Transportation: Pavement Management Date: 02/12/2020

Project ID Number: _____ Revision Date: _____

Submitted By: Brian Gilbert, Director DPW Department: Public Works Dept. Priority: _____

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

Description of Project:

This request proposes the funding of an annual Transportation/Street Improvement Program including: preventative maintenance, resurfacing and 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 (MADOT). Acceptance of the policy by MADOT 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. Complete Streets project funding has been included in this request, as funding allows.

In FY21 the Town proposes the following roadway treatments: crack-seal of approximately 5.0 miles of roadway and resurfacing of various roads based on priorities from the pavement management inventory. Resurfacing projects will include expenses for permitting, catch basin/manhole repair, drain flushing and repair, installation of new drains and shoulder/driveway berm installation. Funding for sidewalk installations is also included in this request. Locations and specifications have been established as part of a sidewalk plan, funded in FY18. In FY21 Beech Street, Old Main Street, Tanglewood Avenue, Royal Crest Circle, Hinckley Road, Pillsbury Avenue, Ronald Drive, and South Street (from McLaren Road to Brown Street) will be reconstructed using Chapter 90 funds. Sidewalk construction is scheduled for Shawsheen Street.

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.

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.

Timeframe:

Projects are included on the attached spreadsheet FY21-FY25.

Replacement Freq.: 5-25 Years

Stakeholders:

Taxpayers, 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.

Cost Analysis:

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

Capital Funding Request

	2021	2022	2023	2024	2025	Totals
						Total
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	\$1,295,000.00	\$1,445,000.00	\$1,045,000.00	\$1,045,000.00	\$5,725,000.00
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	\$895,000.00	\$1,295,000.00	\$1,445,000.00	\$1,045,000.00	\$1,045,000.00	\$5,725,000.00

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



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: Transportation: Project Development and Design

Date: 02/12/2020

Project ID Number: _____

Revision Date: _____

Submitted By: Brian Gilbert, Director DPW Department: Public Works Dept. Priority: _____

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

Description of Project:

This project will consist of developing design plans and specifications for sidewalk installation and a Complete Streets project. In most instances project construction will be scheduled for the following fiscal year. Plans for Complete Streets projects must be developed by the Town; construction funding is awarded through MADOT’s grant program.

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 prioritization list of fifteen (15) projects that meet the funding criteria of the Complete Streets program. The Town intends to apply for construction funding in FY21 through the Complete Streets grant process for sidewalk installation on Colonial Drive and upper North St at International Place. Upon notice of award the Town will commit the Chapter 90 funds for the design efforts. In addition sidewalk design along Whipple Road from Pleasant Street to Chandler Street will be completed.

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.

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 sidewalk maintenance.

Cost Analysis:

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

Capital Funding Request

	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$115,000.00	\$100,000.00	\$100,000.00	\$50,000.00	\$50,000.00	\$415,000.00
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	\$115,000.00	\$100,000.00	\$100,000.00	\$50,000.00	\$50,000.00	\$415,000.00

Basis of Cost Projection: Engineering proposals



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: Transportation: Traffic Improvements

Date: 02/12/2020

Project ID Number: _____

Revision Date: _____

Submitted By: Brian Gilbert, Director of Public Works Department: Public Works Priority: _____

First Year Submission: Phone #: 978-640-4440 Email: bgilbert@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 projects scheduled for FY21 include non-participating funding associated with the MassDOT TIP project for intersection improvements at Andover Street and River Road.

Justification/Benefit:

The Andover Street and River Road intersection improvement project will improve traffic safety and add pedestrian and bicycle facilities at a major intersection on the Tewksbury/Lowell border. The funding for construction is being provided by the State through the Transportation Improvement Program (TIP). Through the TIP process, the Town must pay for any non-participating construction costs.

Impact if not completed:

MassDOT will not fund the construction if an agreement is not in place in which the Town agrees to pay for non-participating costs.

Timeframe:

Replacement Freq.: 25 - 50 Years

Construction of the Andover Street and River Road intersection improvements are scheduled for 2020.

Stakeholders:

The immediate stakeholders include the staff at DPW responsible for sign replacement and installation, drivers, pedestrians, and cyclists.

Operating Budget Impact:

Installation of a traffic signal at Andover Street and River Road intersection will increase energy costs.

Cost Analysis:

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

Capital Funding Request

	2021	2022	2023	2024	2025	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	\$200,000.00	\$200,000.00	\$80,000.00	\$65,000.00	\$65,000.00	\$610,000.00
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	\$200,000.00	\$200,000.00	\$80,000.00	\$65,000.00	\$65,000.00	\$610,000.00

Basis of Cost Projection: Engineer's estimate



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: _____ Department of Public Works Building Renovation _____ Date: 2/27/2020

Project ID Number: _____ Revision Date: _____

Submitted By: Brian Gilbert, Supt DPW Department: Public Works Dept Priority: _____

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

Description of Project:

This project seeks to build a new combined DPW and School Maintenance Facility at the current site of the DPW on Whipple Road. The original DPW facility was built in 1962 and was 8,400 square feet. An addition was added in 1980 increasing the footprint to 25,900 total square feet. These structures are still being utilized by the DPW Highway, Forestry, Water, Sewer, Fleet Maintenance, Engineering and Administration Divisions for operations, equipment and vehicle storage, office and storage space. The plan is to demolish the existing facility and build a new 49,500 square foot facility on the current site that will house DPW and School staff.

Justification/Benefit:

The DPW facility is (50) years old. An addition was constructed (35) years ago to address the growing needs of the Department for space and storage. However, the facility does not meet the current space needs and functioning of the Department today, resulting in concerns for employee safety and health, care and damage to vehicles and equipment, work efficiencies, storage of tools and supplies and security of the facility. The construction of a new facility will allow for proper storage of equipment, vehicles and materials, improved office space and employee work areas, locker rooms, meeting areas, state of the art Fleet Maintenance garage, fueling area and a vehicle wash bay for all Town department. A new facility also addresses the need for School Maintenance staff to have shops and storage space from which to operate.

Impact if not completed:

The building doesn't serve the space, safety and efficiency needs of the DPW's operations, while the physical structure will continue to be susceptible to deterioration, water infiltration and the funding of sunken costs. The School Facility Maintenance operation has had to recently vacate its operational space to make way for the elementary school development on the Ryan School campus without a permanent solution to house their operation. Safety of the staff will continue to be an issue as space is limited and environmental systems need updating. Higher building costs due to the lack of current building system technologies will continue wasteful spending on energy and repairs. Inefficient work processes and procedures will continue, which limit the work schedules of an under-sized staff resource.

Timeframe:

Replace. Freq: 50 Years

Funding for the new building will be assessed as the facility's program and design are developed. A cost per square estimate from other newly constructed DPW facilities (Weston and Sampson) had been used as an initial project budget.. Engineering and Design for the new construction is scheduled through the fall of 2020; with construction beginning spring of 2021.

Stakeholders:

Town staff working in the current facility, School Maintenance staff; visitors doing business; Police, Fire and Park departments

Operating Budget Impact:

Potential cost savings in possible energy reduction; reduced incidence of equipment damage and repair; operational building repair, costs associated with employee injury.

Cost Analysis:

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

Capital Funding Request

	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$750,000.00	\$0.00	\$0.00	\$0.00	\$750,000.00
Construction	\$0.00	\$5,500,000.00	\$0.00	\$0.00	\$0.00	\$5,500,000.00
Equipment	\$0.00	\$220,000.00	\$0.00	\$0.00	\$0.00	\$220,000.00
Contingency	\$0.00	\$572,000.00	\$0.00	\$0.00	\$0.00	\$572,000.00
Totals	\$0.00	\$7,042,000.00	\$0.00	\$0.00	\$0.00	\$7,042,000.00

Basis of Cost Projection: Consultant's Cost Estimate(s)

Fleet/Equipment
5-year Project Cost Estimates

Budget Cost Elements	2021	2022	2023	2024	2025	TOTAL
Site Acquisition						
Design/Eng.						
Construction						
Equipment	\$694,500.00	\$862,000.00	\$422,000.00	\$570,000.00	\$475,000.00	\$3,023,500.00

Fiscal Year				Cost	Cost	
Veh #	Year	Description Of Purchase	Department	GenFund	Enterprise	Comments
FY2021						
	New	Rubber tire Excavator	Water/Highway	\$100,000.00		with mower attachment
901	1996	Brush Bandit Chipper	Forestry	\$80,000.00		Replace w/Same
95	1989	Aerial Lift Bucket Forestry Package	Forestry	\$200,000.00		Replace with Same
	New	Enclosed Trailer	Highway	\$10,000.00		Stock supplies/equipment for line painting operations
		Flat bed trailer	Water/Highway	\$9,750.00		transport of large road plates and paving equipment
		Sub-total DPW		\$399,750.00		\$2,360 used from past Capital Article
87	2007	Replace F-550 dump w/plow package	Water/Sewer		\$110,000.00	
	New	Rubber tire Excavator	Water		\$30,000.00	
84	2011	Backhoe	Water/Sewer		\$145,000.00	
		Flatbed trailer	Water/Highway		\$9,750.00	
		Sub-total Water/Sewer			\$294,750.00	
		Total FY21		\$694,500.00		
FY2022						
56	1997	10-Wheel Dump w/Plow package and wing	Highway	\$225,000.00		Replaces 1997 6-wheel Perm Sander w/dump
	1998	12-Yard sander (slide-in)	Snow	\$25,000.00		Replace Torwell w/Slide-in sander for #56
	New	6-wheel dump w/wing plow and snow pack		\$210,000.00		
	New	6-8 yrd sander		\$20,000.00		
6/22	2006	F-550 Dump w/snow Pkg and wing-plow	Highway	\$120,000.00		Replaces F-350 Ford Utility
	New	4-yrad sander	Snow	\$12,000.00		
		Sub-total DPW		\$362,000.00		
	New	SnowBlower attachment for Loader	Snow	\$130,000.00		To be used at Ryan School
	New	Snow pusher blade plow	Snow	\$40,000.00		To be used at Ryan School
		Sub-total DPW		\$170,000.00		
		Sub-total DPW		\$532,000.00		
50	2000	6-wheel Dump w/snow package	Water/Sewer		\$210,000.00	
88	2000	F-550 Dump w/snow Package	Water/Sewer		\$120,000.00	Replace inkind
		Sub-total Water/Sewer			\$330,000.00	
		Sub-total			\$330,000.00	
		Total FY22		\$862,000.00		
FY2023						
55	1999	6-Wheel Dump w/wing and snow package	Highway	\$220,000.00		Replace Perm Sander w/Dump
	2000	6-8 Yard sander (slide-in)	Snow	\$20,000.00		Replace Torwell w/Slide-in sander for #55
6/22	2008	F-550 Dump w/snow Pkg and wing-plow	Highway	\$120,000.00		Replaces F-350 Ford Utility
	New	4-yrad sander	Snow	\$12,000.00		
		Sub-total DPW		\$372,000.00		
82	2011	Ford Ranger 2-wheel drive	Water/Sewer		\$50,000.00	Replace inkind
		Sub-total Water/Sewer			\$50,000.00	
		Total FY23		\$422,000.00		
FY2024						
65	2013	Pelican Sweeper	Highway	\$125,000.00		Replace inkind
61	2006	F-550 Rack w/lift gate/snow pkg	Highway/Snow	\$90,000.00		Replace inkind
26	2006	F-550 Utility w/snow pkg, pneumatic and boom	Highway/snow	\$135,000.00		Sign Truck
		Sub-total DPW		\$350,000.00		
89	2010	10-Wheel Dump w/Plow package	Water/Sewer		\$220,000.00	
		Sub-total Water/Sewer			\$220,000.00	
		Total FY24		\$570,000.00		
FY2025						
53	2005	6-wheel Dump w/snow package	Highway	\$225,000.00		Replace w/Dump body and slide-in sander
	New	6-Yard sander (slide-in)	Snow	\$25,000.00		Slide-in Sander Truck #53
25	2006	F-550 Utility w/snow pkg, pneumatic and boom	Highway/snow	\$135,000.00		Replace inkind
		Sub-total DPW		\$385,000.00		
80	2014	F-550 Maintainer Utility w/crane	Water/Sewer		\$90,000.00	Refurbish existing Body
		Sub-total Water/Sewer			\$90,000.00	
		Total FY25		\$475,000.00		
New		Salt brine maker/tanks and blending machine	Snow	\$150,000.00		Added to DPW bldg Project



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: Equipment Replacement Program

Date: 1/21/2020

Project ID Number: _____

Revision Date: _____

Submitted By: Brian Gilbert, 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 FY21 the DPW requests General Fund replacements of the following: replacement of Truck #95 (1989 Forestry Bucket Truck); replacement of vehicle #901 (1996 Forestry wood chipper); and the purchase of a new enclosed trailer and a flatbed trailer. A request to purchase new a Rubber Tired excavator w/mowing attachment will be evaluated and brought forth for Fall Special Town Meeting. Also split between the water and sewer enterprises, the DPW requests the replacement of Truck #87 (2007 F-550 Dump with plow package); Replacement of vehicle #84 (2011 Backhoe). As proposed the cost of the excavator and flatbed trailer will be shared between the water enterprise and general fund.

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

	2021	2022	2023	2024	2025	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	\$694,500.00	\$862,000.00	\$422,000.00	\$570,000.00	\$475,000.00	\$3,023,500.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$694,500.00	\$862,000.00	\$422,000.00	\$570,000.00	\$475,000.00	\$3,023,500.00

Basis of Cost Projection: Vendor Estimates

DPW Sewer Enterprise

Sewer
5-Year Project Cost Estimates

Budget Cost Elements	2021	2022	2023	2024	2025	TOTAL
Site Acquisition						
Design/Eng.	\$155,000.00	\$0.00	\$75,000.00	\$0.00	\$0.00	\$230,000.00
Construction	\$290,000.00	\$500,000.00	\$500,000.00	\$600,000.00	\$600,000.00	\$2,490,000.00
Equipment		\$50,000.00				\$50,000.00
Contingency						\$0.00
TOTAL	\$445,000.00	\$550,000.00	\$575,000.00	\$600,000.00	\$600,000.00	\$2,770,000.00

SEWER Fiscal Year	Program	Work Description	Location	Funding Source	Cost
FY2021	Cal yr. 2020-2021				
	Infiltration and Inflow (I/I) Control				
	Manhole Repair	Adjust sewer manholes based on inventory of locations winter 2020			\$50,000.00
	Pump Station Improv'm'ts				
	Install In-line Grinder at Heather Row Pump Station				\$240,000.00
	Design In-line grinders for Devonshire and Riverdale Pump Stations				\$50,000.00
	East Street Odor Mitigation Design				\$60,000.00
	Lowell Discharge Permit Compliance				\$45,000.00
				Total Cost FY21	\$445,000.00
FY2022	Cal yr. 2021-2022				
	Infiltration and Inflow (I/I) Control				
	Pipe Repair and Replace	Clean and Camera; Repair/line pipe based on Camera result			\$300,000.00
		Chemical Grout Manholes Fiske, Sawyer Ln and Ames Pond sub-catchments sub-catchment			
	Manhole Repair/ adjustment	Adjust sewer manholes based on inventory of locations winter 2021			\$50,000.00
	Pump Station Improv'm'ts				
	Install in-line grinders at Devonshire and Riverdale Pump Stations				\$150,000.00
	Purchase New Pump for East St Pump Station Rebuild existing				\$50,000.00
				Total Cost FY22	\$550,000.00
FY2023	Cal yr. 2022-2023				
	Infiltration and Inflow (I/I) Control				
	Pipe Repair and Replace	Dig and Replace/Slip Lining Based on FY21-22 Camera/Investigation			\$300,000.00
	Manhole Repair/ adjustment	Adjust sewer manholes based on inventory of locations winter 2022			\$50,000.00
	Pump Station Improv'm'ts				
	Install in-line grinders at Devonshire Pump Station				\$150,000.00
	Facility Assessment of equipment and controls to ensure performance				\$75,000.00
				Total Cost FY23	\$575,000.00
FY2024	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			\$300,000.00
	Manhole Repair/ adjustment	Adjust sewer manholes based on inventory of locations winter 2023			\$50,000.00
	Pump Station Improv'm'ts				
	Implement improvements to Pumps Stations based on FY23 Facility Assessment				\$250,000.00
	Design and Construction				
				Total Cost FY24	\$600,000.00
FY2025	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			\$300,000.00
	Manhole Repair/ adjustment	Adjust sewer manholes based on inventory of locations winter 2024			\$50,000.00
	Pump Station Improv'm'ts				
	Implement improvements to Pumps Stations based on FY23 Facility Assessment				\$250,000.00
	Design and Construction				
				Total Cost FY24	\$600,000.00



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: Sewer Inflow and Infiltration

Date: 01/25/2020

Project ID Number: _____

Revision Date: _____

Submitted By: Brian Gilbert, Director DPW Department: Public Works Dept. Priority: _____

First Year Submission: Phone #: 978-640-4440 Email: bgilbert@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 recently 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 investigation of (14) primary sub-basins is 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 FY2021-2025 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 high groundwater recharge 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 new sewer network. By finding and eliminating extraneous flow, the increased capacity of the new 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:

Replacement Freq.: 5-25 Years

Manhole repairs will be contracted out for FY2021. Capital appropriations currently exist for incidental pipe repairs.

Stakeholders:

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

Operating Budget Impact:

Engineering Division and Water & 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

	2021	2022	2023	2024	2025	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



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: Sewer Pump Station Improvements

Date: 02/12/2020

Project ID Number: _____ Revision Date: _____

Submitted By: Brian Gilbert, Director DPW Department: Public Works Dept. Priority: _____

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

Description of Project:

This request is comprised of various projects to ensure the on-going operation of sewer 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. The FY21 project list includes the installation of an in-line mechanical grinder to breakdown solid materials in the waste stream before entering the pump station wet-well at Heather Row PS. The installation was designed as part of the FY20 budget. The grinder installation project aims to reduce pump station malfunction due to material clogging the pumps and the necessity for emergency response operations to free clogged pumps. Design of inline grinders are also included in the request for the pump station Devonshire Rd and Riverdale Ave; as well as development of a solution to alleviate odors from the East St pump station. Lastly, as part of the Lowell's NPDES permit, issued by the EPA, and as copermittee with Lowell, the Town must develop an Operations and Maintenance (O&M) plan for Tewksbury's sewer system.

Justification/Benefit:

The town-wide sewer collection system utilizes forty six (46) sewer pump stations. Of these, the larger stations in the system have been equipped with grinders. However a number of smaller stations have continued problems with pump obstructions. The Heather Row PS experiences a high number of pump malfunction alarms which disable the pumps. The installation of the grinder will reduce emergency response, extend the life of the station pump(s) and reduce the risk of sewer overflows. Development of a Operations and Maintenance plan is a requirement of the EPA, which includes annual reporting. The plan will help document much of what the Town is currently doing and will focus efforts in areas needing more attention.

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. The EPA Operations and Management plan is a require that could expose the Town to fines.

Replacement Freq.: 25 Years

Timeframe:

Installation of the Heather Row PS shall be completed during the FY21 budget year; Design for the other two stations should be complete so that construction can be completed in FY22; the EPA O&M needs to be completed and file with the EPA by 9/2021

Stakeholders:

All sewer customers connected to the Heather Row Pump Station, DPW Water & Sewer Division, MA Department of Environmental Protection and EPA

Operating Budget Impact:

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

Cost Analysis:

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

Capital Funding Request

	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$155,000.00	\$0.00	\$75,000.00	\$0.00	\$0.00	\$230,000.00
Construction	\$240,000.00	\$200,000.00	\$150,000.00	\$250,000.00	\$250,000.00	\$1,090,000.00
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	\$395,000.00	\$200,000.00	\$225,000.00	\$250,000.00	\$250,000.00	\$1,320,000.00

Basis of Cost Projection:

Engineer's estimate.

DPW Water Enterprise

Water
5-Year Capital Cost

Budget Cost Elements	2021	2022	2023	2024	2025	TOTAL
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Eng.	\$200,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$600,000.00
Construction	\$2,125,000.00	\$3,125,000.00	\$2,125,000.00	\$2,125,000.00	\$2,125,000.00	\$11,625,000.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL	\$2,325,000.00	\$3,225,000.00	\$2,225,000.00	\$2,225,000.00	\$2,225,000.00	\$12,225,000.00

Fiscal Year	Program	Project Name	Work Description	Comments/Location	Cost
FY2021					
Water Distribution Improvements					
		Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey		\$125,000.00
		Water Distribution Upgrades	Engineer/Design Distribution Main upgrades FY2024: Whipple Rd (Lowell to Pleasant Street), and Pringle Street neighborhood	6" inch AC Water Main	\$100,000.00
		Water Distribution Upgrades	Construct Distribution Main upgrades based on FY2020 design Baystate Road Neighborhood		\$2,000,000.00
Water Plant Improvement					
			Risk and Resiliency Assessment and Emergency Response Plan		\$100,000.00
Total Cost FY21					\$2,325,000.00
FY2022					
Water Distribution Improvements					
		Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey		\$125,000.00
		Water Distribution Upgrades	Engineer/Design Distribution Main upgrades FY2023: Beech Street neighborhood	2" and 6" inch Water Main	\$100,000.00
		Water Distribution Upgrades	Construct Distribution Main upgrades based on Fy2021 Design Whipple (Phase 1), Astle, Miles	2" and 6" inch Water Main	\$2,000,000.00
Water Plant Improvement					
		Astle Street Tank Renovations	Construction: Catwalk repair/Carrier reorganization and painting Fall Town Meeting (Doesn't include Bonding for Carrier costs)		\$1,000,000.00
Total Cost FY22					\$3,225,000.00
FY2023					
Water Distribution Improvements					
		Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey		\$125,000.00
		Water Distribution Upgrades	Engineer/Design Distribution Main upgrades FY2024: Cardigan/William G	2" and 6" inch Water Main	\$100,000.00
		Water Distribution Upgrades	Construct Distribution Main upgrades based on Fy2022 Design Whipple Rd (Phase 2) and Pringle St neighborhood		\$2,000,000.00
Water Plant Improvement					
Total Cost FY23					\$2,225,000.00
FY2024					
Water Distribution Improvements					
		Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey		\$125,000.00
		Water Distribution Upgrades	Engineer/Design Distribution Main upgrades FY2025: Lower Shawshen Street neighborhood at Foster Rd	2" and 6" inch Water Main	\$100,000.00
		Water Distribution Upgrades	Construct Distribution Main upgrades based on Fy2023 Design Beech Street neighborhood		\$2,000,000.00
Water Plant Improvement					
Total Cost FY24					\$2,225,000.00
FY2025					
Water Distribution Improvements					
		Hydrant Replacement/Install	Replace older and terminal hydrants at various locations based on survey		\$125,000.00
		Water Distribution Upgrades	Engineer/Design Distribution Main upgrades FY2026: Locations TBD		\$100,000.00
		Water Distribution Upgrades	Construct Distribution Main upgrades based on Fy2023 Design Cardigan/William G		\$2,000,000.00
Water Plant Improvement					
Total Cost FY25					\$2,225,000.00



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: Hydrant Replacement Program

Date: 02/12/2020

Project ID Number: _____

Revision Date: _____

Submitted By: Brian Gilbert, Director DPW Department: Public Works Dept. Priority: _____

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

Email: bgilbert@tewksbury-ma.gov

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 open left, some open 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 to ensure 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 FY2021.

Replacement 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.

Cost Analysis:

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

Capital Funding Request

	2021	2022	2023	2024	2025	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	\$125,000.00	\$125,000.00	\$125,000.00	\$125,000.00	\$625,000.00
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	\$125,000.00	\$125,000.00	\$125,000.00	\$125,000.00	\$625,000.00

Basis of Cost Projection:

Cost Projection based on similar contract bid by the Town of Tewksbury in FY17.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: Water Distribution System Improvements

Date: 02/12/2020

Project ID Number: _____

Revision Date: _____

Submitted By: Brian Gilbert, Director DPW Department: Department of Public Works Priority: _____

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

Email: bgilbert@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 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 upgrade of the Town’s water distribution system in South Tewksbury. The locations for water upgrades include Arnold Road, Bay State Road, Bond Street, Downing Road, Dudley Road, Green Street, Lake Street, Lakeview Avenue, Lawrence Street, Mystic Avenue, Parker Avenue, Saint Mary’s Road, Temple Street, Vernon Street, Warren Avenue, Water Street, Wightman Road and Willow Street. In addition, the engineering and design for pipe replacement of the Whipple Road water main is to be completed in FY21.

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 two-inch cast-iron pipe. Most importantly the replacement of deteriorating pipe will minimize the risk of water-breaks.

Impact if not completed:

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 cast iron pipes.

Timeframe:

Replacement Freq.: 50 Years

Construction will begin in FY21. Design and construction funding anticipates replacement of a total of 2.3 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

	2021	2022	2023	2024	2025	Totals
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$500,000.00
	\$1,500,000.00	\$2,000,000.00	\$2,000,000.00	\$2,000,000.00	\$2,000,000.00	\$9,500,000.00
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$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.

DPW Stormwater Enterprise

Drain-Stormwater
5-Year Project Cost Estimates

Drainage/Stormwater

Budget Cost Elements	FY21	FY22	FY23	FY24	FY25	TOTAL
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Eng.	\$225,000.00	\$35,000.00	\$35,000.00	\$190,000.00	\$55,000.00	\$540,000.00
Construction	\$275,000.00	\$585,000.00	\$480,000.00	\$300,000.00	\$500,000.00	\$2,140,000.00
Contingency						
TOTAL	\$500,000.00	\$620,000.00	\$515,000.00	\$490,000.00	\$555,000.00	\$2,680,000.00

Fiscal Year	Project Category	Location	Schedule	Cost	Fund
FY21	Cal 2020-2021				
Drains					
	Vernon at Water St Drain Installation	Vernon St	Construction	\$150,000.00	SW Enterprise
				\$150,000.00	
Stormwater Compliance					
	Requirements of MS4 Permit	Design and Installation of BMP at Municipal Property	Construction	\$125,000.00	SW Enterprise
				\$125,000.00	
Project Development and Permitting					
	Cayuga St Drain design	Cayuga St	Engineering Services	\$20,000.00	SW Enterprise
	Engineer Culvert Repair	Andover St at Hood Rd Culvert repair	Engineering Services	\$50,000.00	SW Enterprise
	Design Pringle St Culvert Replacement	Pringle St	Engineering Services	\$80,000.00	SW Enterprise
	Design Bayberry Ln Culvert	Bayberry Ln	Engineering Services	\$75,000.00	SW Enterprise
				\$225,000.00	
			Total Cost FY21	\$500,000.00	
FY22	Cal 2021- 2022				
Drains					
	Replace Culvert Bayberry Ln	Bayberry Ln	Construction	\$350,000.00	SW Enterprise
	CB Install	Old Boston Rd connection to Main St	Construction	\$35,000.00	MADOT
	Pipe and structure repair	Cayuga St	Construction	\$200,000.00	SW Enterprise
				\$585,000.00	
Stormwater Compliance					
				\$0.00	
Project Development and Permitting					
	Drain Improvement Design	Woburn St and Felker St neighborhood	Engineering Services	\$35,000.00	SW Enterprise
				\$35,000.00	
			Total Cost FY22	\$620,000.00	
FY23	Cal 2022 - 2023				
Drains					
	Headwall and Culvert Repair	Andover St @ Hood Rd	Construction	\$200,000.00	SW Enterprise
	Pringle St Culvert Replacement	Pringle St	Construction	\$280,000.00	SW Enterprise
				\$480,000.00	
Stormwater Compliance					
				\$0.00	
Project Development and Permitting					
	Tewmack Terr Drain Design	Wolcott St to Arkansas	Engineering Services	\$35,000.00	SW Enterprise
				\$35,000.00	
			Total Cost FY23	\$515,000.00	
FY24	Cal 2023-2024				
Drains					
	Install/Rebuild drain system	Woburn St x Felker St neighborhood	Construction	\$300,000.00	SW Enterprise
				\$300,000.00	
Stormwater Compliance					
				\$0.00	
Project Development and Permitting					
	Drain Improvement Design	Van Buren Road drainage system	Engineering Services	\$35,000.00	SW Enterprise
	Upper Pinnacle St Culvert Headwall	Pinnacle at Dunvegan	Engineering Services	\$80,000.00	
	Culvert Condition Assessment	Town wide	Engineering Services	\$75,000.00	
				\$190,000.00	
			Total Cost FY24	\$490,000.00	
FY25	Cal 2024-2025				
Drains					
	Tewmack Terr Drain Installation	Wolcott St to Arkansas	Construction	\$150,000.00	SW Enterprise
	Upper Pinnacle St Culvert Headwall	Pinnacle at Dunvegan	Construction	\$350,000.00	
				\$500,000.00	
Stormwater Compliance					
				\$0.00	
Project Development and Permitting					
	Drain Improvement Design	Location based on Stormwater Assessment and Resident concerns	Engineering Services	\$55,000.00	SW Enterprise
				\$55,000.00	
			Total Cost FY25	\$555,000.00	
	Van Buren Road	Van Buren Road drainage system	Construction	\$150,000.00	



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects

Project Name: Drain/Stormwater System Management Date: 02/12/2020

Project ID Number: _____ Revision Date: _____

Submitted By: Brian Gilbert, Director DPW Department: Public Works Dept. Priority: _____

First Year Submission: Phone #: 978-640-4440 Email: bgilbert@teewksbury-ma.gov

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 (FY21) include: design a replacement culvert on Bayberry Lane; plans and specification development for the replacement of a culvert on Pringle Street; design of a drainage system on Cayuga Road; engineering of repairs to the culvert under Andover Street at the intersection of Hood Road. Installation of drainage on Vernon Street and construction of a structural Best Management Practice at a Town-owned facility are planned.

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 2021-2025.

Replacement Freq.: 25 Years

Stakeholders:

The Town, as a MS4 official for the NPDES Phase 2 Stormwater permit, and residents that live near the 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.

Cost Analysis:

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

Capital Funding Request

	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$225,000.00	\$35,000.00	\$35,000.00	\$190,000.00	\$55,000.00	\$540,000.00
Construction	\$275,000.00	\$585,000.00	\$480,000.00	\$300,000.00	\$500,000.00	\$2,140,000.00
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	\$500,000.00	\$620,000.00	\$515,000.00	\$490,000.00	\$555,000.00	\$2,680,000.00

Basis of Cost Projection:

Cost project based on current bid pricing; Does not include cost for MS4 Stormwater permit projects

Telemedia Enterprise



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Telemedia Department CBB **Date:** 11/13/2019

Project ID Number: _____ **Revision Date:** _____

Submitted By: Brian Dorrington **Department:** Telemedia

First Year Submission: FY21 **Priority:** FY21, Priority #2

Description of Project:

Purchase and install InfoVue digital signage hardware and backup NAS drive.

Justification/Benefit:

Between programming, and at night, we run a virtual bulletin board which includes slides and music. These slides contain meeting schedules, town department information, news updates and more. Our current system will reach its maximum life expectancy in 2020 and is no longer covered under warranty. A new InfoVue will offer more features than we currently have and is made by the same manufacturer as our current server brand. A back up NAS storage drive will also be integrated with our server to help store and archive programming.

Impact if not completed:

Strong likelihood of current system failure. Limited ability to store large amounts of footage for a long period of time.

Timeframe:

Summer, 2020

Replace. Freq:

Approx. 5 Years

Stakeholders:

Tewksbury Telemedia Department

Operating Budget Impact:

None

Funding Source:

Telemedia Department Capital Budget, Cable Enterprise Fund

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$1,350.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$14,701.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$16,051.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection: Quote from manufacturer.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Telemedia Department Transport Vehicle Date: 11/13/2019

Project ID Number: _____ Revision Date: _____

Submitted By: Brian Dorrington Department: Telemedia

First Year Submission: FY21 Priority: FY21, Priority #1

Description of Project:

Acquisition of a utility van for moving equipment from location to location. The van will be custom painted in order to be clearly identified as belonging to the Telemedia Department.

Justification/Benefit:

With a large percentage of our productions being field productions we need a safe, reliable and effective way to transport our equipment. Currently our staff uses their personal vehicles to transport heavy, expensive and fragile equipment. This is neither ideal for the vehicle or for the equipment. We require a larger sized vehicle to safely and effectively haul our equipment from one location to another. This would help protect the town's investment in Telemedia Department equipment.

Impact if not completed:

It's very possible that Telemedia Department equipment and/or employees vehicles could be damaged or destroyed.

Timeframe:

Summer/Early Fall, 2020

Replace. Freq:

Approx. 7-12 Years

Stakeholders:

Tewksbury Telemedia Department.

Operating Budget Impact:

Travel expenses, maintenance, insurance, inspections, registration, possible repairs and all other vehicle related expenses.

Funding Source:

Telemedia Department Capital Budget, Cable Enterprise Fund

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$2,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$29,598.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contingency	\$2,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$33,598.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection: Departmental research and estimated future market pricing.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Town Hall Video Upgrade, Phase 1 **Date:** 11/13/2019

Project ID Number: _____ **Revision Date:** _____

Submitted By: Brian Dorrington **Department:** Telemedia

First Year Submission: FY21 **Priority:** FY22, Priority #1

Description of Project:

Upgrade and replace Town Hall meeting room cameras and switcher.

Justification/Benefit:

Government meeting coverage makes up a large portion of our programming and it is vital to continue to deliver high quality video and audio. We have already needed to replace and fix important production equipment. We would like to upgrade and improve the Town Hall meeting coverage over the course of two fiscal years. Starting with the cameras and the switcher which will allow us to continue to provide high quality video coverage.

Impact if not completed:

Strong likelihood of current system failure and inability to properly film government meetings and other events.

Timeframe:

Summer, 2021

Replace. Freq:

Approx. 5 Years

Stakeholders:

Tewksbury Telemedia Department

Operating Budget Impact:

None

Funding Source:

Telemedia Department Capital Budget, Cable Enterprise Fund

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	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	\$12,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$42,700.00	\$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	\$66,700.00	\$0.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection:

Departmental research.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Town Hall Video Upgrade, Phase 2 Date: 11/13/2019

Project ID Number: _____ Revision Date: _____

Submitted By: Brian Dorrington Department: Telemedia

First Year Submission: FY21 Priority: FY23, Priority #1

Description of Project:

Upgrade and replace Town Hall meeting room projectors, enterprise room system and audio equipment.

Justification/Benefit:

Government meeting coverage makes up a large portion of our programming and it is vital to continue to deliver high quality video and audio. We have already needed to replace and fix important production equipment. We would like to upgrade and improve the Town Hall meeting coverage over the course of two fiscal years. This is phase two of the project where we will replace and upgrade the audio system, room speakers, projectors and enterprise room system.

Impact if not completed:

Strong likelihood of current system failure and inability to properly film government meetings and other events.

Timeframe:

Summer, 2022

Replace. Freq:

Approx. 5 Years

Stakeholders:

Tewksbury Telemedia Department

Operating Budget Impact:

None

Funding Source:

Telemedia Department Capital Budget, Cable Enterprise Fund

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$4,000.00	\$0.00	\$0.00	\$0.00
Construction	\$0.00	\$0.00	\$15,500.00	\$0.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$50,000.00	\$0.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$10,000.00	\$0.00	\$0.00	\$0.00
Totals	\$0.00	\$0.00	\$79,500.00	\$0.00	\$0.00	\$0.00

Basis of Cost Projection:

Departmental research.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Custom Broadcast Flypack **Date:** 11/13/2019

Project ID Number: _____ **Revision Date:** _____

Submitted By: Brian Dorrington **Department:** Telemedia

First Year Submission: FY21 **Priority:** FY24, Priority #1

Description of Project:

Design and build custom mobile flypack.

Justification/Benefit:

A flypack is a custom made portable production system that can be outfitted with a switcher, audio mixer, camera controls, monitors and various other broadcast equipment. This compact, yet powerful system, can make filming professional remote multicamera productions easy and effective. A flypack would greatly improve the quality and workflow for producing remote multicamera productions.

Impact if not completed:

Lower quality multicamera productions with less efficient workflow.

Timeframe:

Summer, 2023

Replace. Freq:

Approx. 5 Years

Stakeholders:

Tewksbury Telemedia Department

Operating Budget Impact:

None

Funding Source:

Telemedia Department Capital Budget, Cable Enterprise Fund

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	Totals
Site Acquisition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Design/Engineer	\$0.00	\$0.00	\$0.00	\$2,000.00	\$0.00	\$0.00
Construction	\$0.00	\$0.00	\$0.00	\$8,500.00	\$0.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00	\$63,000.00	\$0.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$10,000.00	\$0.00	\$0.00
Totals	\$0.00	\$0.00	\$0.00	\$83,500.00	\$0.00	\$0.00

Basis of Cost Projection:

Departmental research.



Town of Tewksbury FY2021 - FY2025 Capital Improvements Projects/Equipment

Project Name: Broadcast Server Replacement Date: 11/13/2019

Project ID Number: _____ Revision Date: _____

Submitted By: Brian Dorrington Department: Telemedia

First Year Submission: FY21 Priority: FY25, Priority #1

Description of Project:

Upgrade and replace current broadcast server.

Justification/Benefit:

Our broadcast server is the most important piece of equipment we own and operate. It stores, plays and records all of our programs. It is recommended to replace a broadcast server every 5 years. This is to ensure that hardware works efficiently and that current technology is up to date.

Impact if not completed:

Possibility of system failure which would severely impact all Telemedia Department operations.

Timeframe:

Summer, 2024

Replace. Freq:

Approx. 5 Years

Stakeholders:

Tewksbury Telemedia Department

Operating Budget Impact:

None

Funding Source:

Telemedia Department Capital Budget, Cable Enterprise Fund

Capital Funding Request

Fiscal Year	2021	2022	2023	2024	2025	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	\$4,500.00	\$0.00
Construction	\$0.00	\$0.00	\$0.00	\$0.00	\$6,500.00	\$0.00
Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$42,000.00	\$0.00
Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$5,000.00	\$0.00
Totals	\$0.00	\$0.00	\$0.00	\$0.00	\$58,000.00	\$0.00

Basis of Cost Projection:

Departmental research and previous quotes by manufacturer.