CAPITAL IMPROVEMENTS PROGRAM

Capital planning and budgeting is a critical undertaking for any government and is "central to economic development, transportation, communication, delivery of other essential services, and environmental management and quality of life", as stated in ICMA's *Capital Budgeting: A Guide for Local Governments*. In fact, without a sound plan for long-term investment in infrastructure, facilities, and equipment, a local government's ability to accomplish its goals is greatly hindered. Developing a financing plan for capital investments that fits within the overall financial framework of a community is of equal importance, as poor decisions regarding the use of debt can negatively impact a community's financial condition for many years.

In Massachusetts, the preparation of the annual Capital Improvements Program (CIP) is mandated by State statute. Massachusetts General Law Chapter 41 provides that the Planning Board shall annually prepare and submit a CIP. In Brookline's case, Chapter 270 of the Acts of 1985, special legislation known as the "Town Administrator Act", directs the Town Administrator to prepare and recommend an annual financial plan that includes a CIP. The Deputy Town Administrator and the Director of Planning and Community Development co-chair a working group of department heads that reviews and evaluates all project requests. A number of these requests arise from public input received by boards and commissions. A more detailed description of the CIP process can be found starting on page VII-3.

The Town has a set of formal CIP policies that define what a capital improvement project is, how projects are evaluated and prioritized, and how the CIP is financed. The complete text of these policies can be found in the Appendix of this Financial Plan. The table on the following page presents the indicators that are to be monitored per the Debt Management Policies portion of the CIP Financing Polices, along with other standard debt measurement variables.

INTRODUCTION

The financial underpinning of the Town's CIP is the policy that states an amount equivalent to 6% of the prior year's net revenue shall be dedicated to the CIP. This key policy places both a floor and a ceiling on the amount of debt supported by the tax levy that can be authorized, thereby limiting the impact on the Operating Budget. The goal is to have the 6% consist of both a debt-financed component and a revenue (or "pay-as-you-go") component, with 4.5% for debt-financed CIP and 1.5% for pay-as-you-go CIP.

In addition to the 6% policy, there is a Free Cash Policy, also included in the Appendix of this Financial Plan, that dedicates an amount of this revenue source to the CIP so that total CIP funding reaches 7.5% of prior year net revenue. In summary, the policy prioritizes the use of Free Cash so that (1) an annual Operating Budget Reserve is supported, (2) overall Fund Balance levels are maintained, (3) the Catastrophe and Liability Fund is maintained at recommended funding levels, and (4) the CIP reaches the 7.5% level*. This important funding source allows for the expansion of the pay-as-you-go component of the CIP. Without Free Cash, the Town would be unable to fund many of the projects being recommended. Lastly, from time to time, one-time revenues will be used to augment the CIP, such as the re-appropriation of surpluses from prior year CIP appropriations.

* The Free Cash policy also calls for a.) supporting the Affordable Housing Trust Fund under certain circumstances and b.) supporting other trust funds related to fringe benefits and unfunded liabilities related to employee benefits, if available.

MEASUREMENT OF CIP FINANCING POLICIES & OTHER COMMON DEBT INDICATORS

	VARIABLE	FY17	FY18	FY19	FY20	FY21	FY22	FY23
	Legal Limit for Outstanding Debt = 5% of Equalized Valuation (EQV)							
	EQV for 1/1/16 = $20.945 billion. Assume 2.5% annual growth. (In billions)	$20.945	$21.468	$22.005	$22.555	$23.119	$23.697	$24.289
	Outstanding Debt as a % of EQV	0.5%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%
	General Fund Outstanding Debt as a % of EQV	0.5%	0.7%	0.7%	0.6%	0.6%	0.5%	0.6%
	Net General Fund Outstanding Debt as a % of EQV	0.5%	0.7%	0.7%	0.6%	0.6%	0.5%	0.6%
	Total Outstanding Debt (in millions)	$112.1	$156.5	$158.4	$150.9	$146.3	$135.0	$157.7
	General Fund Outstanding Debt (in millions)	$103.5	$148.2	$150.5	$143.1	$138.7	$128.5	$152.2
	Net General Fund Outstanding Debt (in millions)	$102.1	$147.0	$149.6	$142.5	$138.4	$128.5	$152.2
	Total Debt Service (in millions)	$12.6	$14.3	$18.4	$19.0	$17.3	$17.8	$20.2
	General Fund Debt Service (in millions)	$10.2	$12.3	$16.6	$17.1	$15.8	$16.3	$18.9
	Net General Fund Debt Service (in millions)	$9.7	$11.7	$16.0	$16.7	$15.4	$15.9	$18.9
	Total Debt Service Per Capita	$215	$244	$314	$324	$295	$302	$343
	General Fund Debt Service Per Capita	$174	$209	$282	$292	$269	$278	$321
	Net General Fund Debt Service Per Capita	$165	$199	$273	$284	$261	$271	$321
	Total Debt Service as a % of Revenue	4.3%	4.7%	5.9%	5.9%	5.2%	5.1%	5.7%
	General Fund Debt Service as a % of General Fund Revenue	3.9%	4.5%	5.7%	5.3%	4.5%	4.3%	3.9%
	Net General Fund Debt Service as a % of General Fund Revenue	3.7%	4.3%	5.5%	5.2%	4.5%	4.3%	3.9%
A.	Total Outstanding Debt Per Capita as a % of Per Capita Income	2.9%	4.0%	3.9%	3.7%	3.5%	3.1%	3.5%
	General Fund Outstanding Debt Per Capita as a % of Per Capita Income	2.7%	3.8%	3.7%	3.5%	3.3%	3.0%	3.4%
	Net General Fund Outstanding Debt Per Capita as a % of Per Capita Income	2.4%	3.3%	3.2%	2.9%	2.7%	2.4%	2.7%
B.	Total Outstanding Debt Per Capita	$1,908	$2,664	$2,696	$2,570	$2,491	$2,298	$2,684
	General Fund Outstanding Debt Per Capita	$1,762	$2,524	$2,562	$2,437	$2,361	$2,187	$2,591
	Net General Fund Outstanding Debt Per Capita	$1,562	$2,196	$2,179	$2,026	$1,919	$1,738	$2,008
C.	Total Outstanding Debt as a % of Assessed Value (AV)	0.5%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%
	General Fund Outstanding Debt as a % of Assessed Value (AV)	0.5%	0.7%	0.7%	0.6%	0.6%	0.5%	0.6%
	Net General Fund Outstanding Debt as a % of Assessed Value (AV)	0.6%	0.7%	0.7%	0.6%	0.6%	0.5%	0.6%
D.	Total Net Direct Debt Maturing Within 10 Years	69%	70%	73%	75%	73%	71%	72%
E.	CIP Financing as a % of Prior Year's Net Revenue	6.00%	6.00%	6.00%	6.01%	6.00%	6.00%	6.00%
	Debt-Financed CIP as a % of Prior Year's Net Revenue	4.10%	4.57%	4.74%	4.79%	4.49%	4.52%	5.25%
	Revenue-Financed CIP as a % of Prior Year's Net Revenue	1.90%	1.43%	1.26%	1.22%	1.51%	1.48%	0.75%

Town Policies

A. Total Outstanding Debt Per Capita = shall not exceed 6% of Per Capita Income.
B. Total Outstanding Debt Per Capita = shall not exceed $2,554 (for FY17).
C. Total Outstanding Debt = shall not exceed 2.5% of Assessed Value (AV).
D. Bond Maturities = 60% of Net Direct General Fund principal shall mature within 10 years.
E. CIP Financing = 6% of Prior Year's Net Revenue, with a goal of 4.5% from Debt-Financed and 1.5% from Revenue-Financed.

Another key CIP financing policy is that both the Water and Sewer Enterprise Fund and the Golf Course Enterprise Fund cover 100% of their debt service. When additional capital work to the water and sewer infrastructure or to the golf course is requested, the impact debt service has on those enterprise funds is taken into consideration. Since they are both 100% cost recovery funds, any growth in debt service may well necessitate increases in fees. Therefore, the decision to authorize additional debt is made carefully.

The table below details how much funding is made available for the CIP, exclusive of enterprise fund-supported debt and projects funded from non-Town sources (e.g., grants):

	2018	2019	2020	2021	2022	2023
Total General Fund Revenue	272,527,996	281,771,949	290,776,328	300,697,442	310,137,297	318,731,420
LESS:						
Non Appropriations	8,370,109	8,567,763	8,770,359	8,978,019	9,190,871	9,409,044
Debt Exclusions	1,020,800	4,505,739	4,469,139	3,517,539	3,517,539	3,517,539
Free Cash	8,354,017	4,400,000	4,500,000	4,650,000	4,775,000	4,925,000
Capital Project Surplus	147,900	0	0	0	0	0
Net Revenue	254,635,171	264,298,446	273,036,830	283,551,884	292,653,887	300,879,837
Prior Year Net Revenue	246,001,077	254,635,171	264,298,446	273,036,830	283,551,884	292,653,887
6% CIP FUNDING POLICY						
Net Debt Financed [1]	11,241,628	12,062,725	12,659,219	12,267,307	12,825,559	15,364,220
Net Debt Financed as a % of Prior Yr Net Rev	4.57%	4.74%	4.79%	4.49%	4.52%	5.25%
Revenue Financed	3,518,436	3,215,385	3,215,408	4,114,903	4,187,554	2,195,013
Revenue Financed as a % of Prior Yr Net Rev	1.43%	1.26%	1.22%	1.51%	1.48%	0.75%
SUB-TOTAL 6% Dedicated to CIP	**14,760,065**	**15,278,110**	**15,874,627**	**16,382,210**	**17,013,113**	**17,559,233**
Free Cash for CIP	6,058,567	3,327,292	3,260,408	3,236,336	3,114,216	2,891,494
Capital Project Surplus -- Re-approp. of Funds	0	0	0	0	0	0
Other Funds (Sale of Town-owned land)	0	0	0	0	0	0
FUNDS AVAILABLE FOR CIP THROUGH GEN. FUND WITHIN TAX LEVY	**20,818,632**	**18,605,402**	**19,135,035**	**19,618,546**	**20,127,329**	**20,450,727**
As % of Prior Yr Net Rev	**8.5%**	**7.3%**	**7.2%**	**7.2%**	**7.1%**	**7.0%**
Debt Exclusions	1,020,800	4,505,739	4,469,139	3,517,539	3,517,539	3,517,539
TOTAL FUNDS AVAILABLE FOR CIP THROUGH GEN. FUND	**21,839,432**	**23,111,141**	**23,604,174**	**23,136,085**	**23,644,868**	**23,968,266**
As % of Prior Yr Net Rev	**8.8%**	**9.0%**	**8.8%**	**8.3%**	**8.2%**	**8.1%**

[1] As defined in the CIP Policies, "Net Debt" is total debt service exclusive of debt service related to a Debt Exclusion and debt service funded by enterprise fund revenues.

BROOKLINE'S CIP PROCESS

The preparation of the annual CIP is mandated by statute: MGL Chapter 41 provides that the Planning Board shall prepare and submit a CIP. In Brookline's case, Chapter 270 of the Acts of 1985, special legislation known as the "Town Administrator Act", directs the Town Administrator to prepare and recommend an annual financial plan that includes a CIP. The annual process for Brookline begins with the submission of project requests by departments, which in many cases are the result of various board/commission (Park and Recreation Commission, Library Trustees, etc.) public hearings.

The requests are then reviewed by a working group that is co-chaired by the Deputy Town Administrator and the Director of the Department of Planning and Community Development and is comprised of all department heads that have requested projects. After reviewing all project requests, a Preliminary CIP is recommended to the Town Administrator, who then presents it to the Board of Selectmen as part of a public hearing on the Town's Operating and Capital budgets, normally held in December. The Town Administrator's Preliminary CIP is then reviewed by both the Planning Board and the Capital Sub-Committee of the Advisory Committee. To the extent necessary, any modifications to the Preliminary CIP are reflected in the formal CIP publication that is published by the Planning Board. Similarly, any changes to the first year of the CIP are factored into the budget that is presented to Town Meeting by the Advisory Committee.

PROPOSED FY2018 – FY2023 CIP

The recommended FY2018 – FY2023 CIP calls for an investment of $115.8 million, for an average of approximately $19.3 million per year, and complies with the Town's CIP and Free Cash policies. This continues the Town's commitment to prevent the decline of its infrastructure, upgrade its facilities, improve its physical appearance, and invest in opportunities that positively impact the Operating Budget. Over the last 10 years (FY08 - FY17), the Town has authorized expenditures of $337 million, for an average of nearly $31 million per year. These efforts, which have been supported by the Board of Selectmen, the Advisory Committee, Town Meeting, and, ultimately, the taxpayers of Brookline, have helped address a backlog of capital projects. This has allowed for the creation of additional classroom spaces necessitated by the surge in enrollment, dramatically improved the Town's physical assets, and have helped yield savings in the Operating Budget through investments in technology and energy efficiency.

As presented, this proposed $115.8M six-year CIP continues to provide funding for a portion of a High School Project ($35M) no capacity exists beyond the schematic design phase for the 9th School at Baldwin project. The Soule Athletic Field renovation is also included as part of this project. Therefore, a Debt Exclusion Override is assumed for the remainder of what would be required at the High School and 9th School at Baldwin Project.

It was a challenge to develop a balanced CIP that continues to reflect the various priorities of the Town, while simultaneously addressing the overcrowding issue in the schools. The overcrowding issue in the schools continues to be the most urgent CIP need, consuming more of the CIP and necessitating additional Debt Exclusion Overrides. Our K-12 student population has grown by 28.6% since FY 2006 from 5,766 students to 7,412. While the increase in size of Brookline's kindergarten enrollment has driven the growth, these larger elementary grades will soon begin to enter the high school. Brookline High School has grown 4.1% in the last ten years, with a five-year growth of 12.7%. Currently, grades Kindergarten through 4th average 651 students this year, while grades 8-12 are still averaging only 490 students. The School Department projects that there will be more than 2,400 students attending Brookline High School in grades 9-12 by the school year 2020-2021.

As a result the Town is in the midst of two feasibility studies for the High School renovation and expansion project as well as the 9th School at the Baldwin site. This CIP is only able to provide minimal funding for additional classroom capacity in the interim years prior to the High School and K-8 projects coming online. This CIP also alters the plan for the High School due to an accelerated timetable proposed by the School Committee combined with the decision to proceed with the project without partnering with the Massachusetts School Building Authority (MSBA). The debt plan for this project now assumes that debt exclusion funding source will be accessed prior to using CIP capacity. We will seek authorization for the entire amount in FY2019 once a project has been defined by the schematic design process.

Overcrowding in the schools is an issue that we must continue to address. Since the plans to address the issue are expensive, it places great pressure on the CIP. The commencement of debt service for the Devotion School in FY2018, and the plans for the High School in FY2019, limits the ability for this CIP to address projected classroom needs over the next several years. The Classroom Capacity item in FY2018 covers the leases at the temples, 62 Harvard, 24 Webster Place and the Baker modules ($992K) with very limited funding to modify smaller spaces in existing buildings.

$4.4M is included for the Driscoll School. While the overall renovation of this building has been postponed until the space issues throughout the system have been addressed, there are critical repairs that can no longer be deferred and are addressed within this recommended CIP. The funding will provide a new HVAC system (equipment, piping, ductwork and controls) and conversion of the boilers from steam to a forced hot water system. The work would be done over two years (primarily in the summer months) with phasing to allow the building to remain occupied.

This CIP adjusts for the projected timetables for the High School and 9th School at Baldwin Projects and reflects the decision to proceed without MSBA partnership. The current plan calls for Feasibility to conclude sometime this spring with funding for Schematic Design Planned for FY2018. For the High School this is estimated at $1.5M which is planned for bond financing while the $1.5M for the 9th School at Baldwin will be funded with cash.

Even with the pressure placed on the CIP by the overcrowding issue, this recommended CIP continues the Town's commitment to **public works projects**, including upgrading its parks/playgrounds, streets/sidewalks, water/sewer infrastructure, and other areas. There is $25.6M of specific park projects included, as shown in the table below:

CC		Total	Prior Year	FY2018		FY2019		FY2020		FY2021		FY2022		FY2023		Future Years	
			(FY17)	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC
	Parks and Playgrounds																
3	Brookline Reservoir Park	2,340,000	140,000	2,200,000	B												
3	Corey Hill Park	700,000	700,000														
3	Cypress Playground/Athl. Field	2,640,000				240,000	A	2,400,000	B								
3	Emerson Garden Playground	770,000	770,000														
3	Harry Downes Field & Playground	1,070,000	80,000			990,000	B										
3	Heath School Playground Accessibility	1,050,000														1,050,000	A
3	Kraft Family Athl. Field Turf Repl.	1,078,000						98,000	A	980,000	A						
3	Larz Anderson Park	9,000,000				2,700,000	B	600,000	A	2,200,000	B					3,500,000	B
3	Murphy Playground	890,000		70,000	A	820,000	B										
3	Riverway Park	625,000														625,000	A
3	Robinson Playground	1,190,000						100,000	A	1,090,000	B						
3	Schick Playground	1,060,000								90,000	A	970,000	B				
3	Boylston St. Playground	1,180,000														1,180,000	A
3	Griggs Park	970,000														970,000	A
3	Soule Athletic Fields	1,110,000				90,000	K	1,020,000	K								

It should be noted that the projected timeframe for both the 9th School at Baldwin and the High School have necessitated an accelerated schedule for both *Cypress Playground/Athletic Field Renovations* and the *Soule Athletic Field Renovation*. In order to meet that timetable within the constraints of the CIP it is recommended that the funding for the Soule project be part of what will be requested as part of the Debt Exclusion for the 9th School at Baldwin Project.

There is also funding allocated in FY2018 for a *Traffic Calming/Safety Improvement* project that calls for a Pedestrian Crossing LED Warning System at various locations. Flashing warning lights will be installed at either end of the existing cross walks. Lights will be activated by pushing a pedestrian button. These lights are similar to the flashing stop lights at High Street and Allerton Road. There is also funding for improvements to the *Carlton Street / Monmouth Street Traffic Signal*. The *Fire Alarm Call box System* project is currently in "future years". This was a project that had previously been in the CIP, but subsequently removed. The DPW commissioned a study in partnership with the Fire Department. The recommendations of the study need to be prioritized under the current CIP constraints and a larger conversation on reinvestment in this system needs to be had considering that a project this large would likely result in the deferment of several significant projects.

This CIP makes some changes to the Town's apparatus replacement program. The Town has an excellent fire apparatus rehab/replacement schedule that calls for rehabbing engines every 10 years and ladders every 12 years and for replacing front line engines every 17 years and front line ladder trucks every 20 years. While it was thought that Ladder #12 could be rehabbed for approximately $200,000 attempting a rehab is not recommended based on extensive rust and corrosion that currently exists and would only be worse in two years from now. This condition combined with the need to replace Tower 1 during FY2017 left the Town in a less than desirable position while waiting for the arrival of a new ladder truck (expected around January, 2018) and necessitated the purchase of a lightly used ladder truck funded via a reserve fund transfer. We will be working with the Department to reassess the replacement and refurbishment schedule based on this experience. The Department has also requested the acceleration of the *Engine 6 Replacement* by one fiscal year so a minimal rehab can be performed on the engine it is replacing to be a quality reserve.

A few years ago, a study was made of the conditions of the fire stations and what was needed to maintain the integrity of the floors and building in regard to the newer, larger fire equipment. The work outlined in the report included flooring, shoring, beams, columns, and structural work. The report also included recommendations for the HVAC systems, generators, lighting, life safety, and mechanical, electrical, plumbing (MEP), along with other peripheral systems. In FY2012, $650K was appropriated to undertake the Structural component. The next phase for implementation was the Life Safety component, which was funded between FY2013 – FY2015 ($890K). Given the work planned for Station 6 the funding schedule for Station 6 MEP work was moved from FY2021 to FY2017 in order to allow efficiencies with bids and project schedules. MEP work for the remaining stations is as follows:

Sta 5 (Babcock St)	$220,000 (FY18)
Sta 4 (Rt. 9/Reservoir Rd)	$445,000 ($60K FY18, $385K FY19)
Sta 1 (Brookline Village)	$450,000 (FY21)
Sta 7 (Washington Sq)	$620,000 ($350K FY21, $270K FY23)

Work at Station 7 also includes a second means of egress and work on the second floor living area.

The *Gateway East/Village Square Circulation Improvements Project* involves reconfiguration of the existing circulation system in Brookline Village at Washington Street, Route 9, Walnut Street, High Street, and Pearl Street. Funding for the project is assumed to come from multiple sources:

Funding for project construction is assumed to come from multiple sources:

- Transportation Improvement Program (TIP) – Gateway East is programmed in the Boston MPO's TIP for $4,818,000 in Federal Fiscal Year 2018 toward a $5,818,000 construction project. Recent project cost estimates based on the Town's August, 2016 project resubmission that includes enhanced bicycle accommodation has increased the construction budget to $7,933,000. It is estimated that the TIP will cover $6,933,000 in Federal Fiscal Year 2018 toward a $7,933,000 revised construction project.

- The Town's Gateway East construction match of $1,000,000 will be filled by:

  - A portion of Children's Hospital's 1% Off-Site Improvements--2 Brookline Place) $327,000 and
  - $673,000 in SAFETEALU earmark

Funding for Right-of-Way Acquisition is assumed to come from multiple sources:

- The Town is responsible for acquisition costs for all Temporary and Permanent easements needed for the Gateway East project. The estimated cost is $1,300,000. It should be noted that the Town previously sought and received Town Meeting authorization to utilize a Section 108 loan, which is a tool that can be used to undertake CDBG-eligible activities when a lump sum is needed to move a project forward. The Town may once again seek authorization from Town Meeting to secure a Section 108 loan as a funding source to pay for the acquisition of needed permanent and temporary right-of-way to accommodate the Gateway East project. Under a Section 108 loan, a community borrows against its future CDBG funds. Like a conventional loan, the Section 108 loan would have an amortization term, but instead of making payments, the Town's loan is paid back once per year off the top of its CDBG entitlement. The loan must be backed by the Town's full faith and credit.

- The Town's Right-of-Way costs of $1,300,000 will be filled by:
  - A portion of Children's Hospital's 1% Off-Site Improvements--2 Brookline Place) $422,000
  - $378,000 in prior year CDBG funds
  - $500,000 from a Section 108 Loan

Please note that the right-of-way acquisition costs are preliminary estimates. Under State statute, the Town may not discuss acquisition costs with property owners until the state has approved 25% the Town's design.

The current CIP includes funding for windows, carpeting and an elevator/HP lift at the *Coolidge Corner Library*. This funding had been postponed pending the outcome of a feasibility study for the Coolidge Corner Library. The lack of capacity in the CIP combined with concerns over the preferred option for that site has caused the Library Trustees to reassess the plans for this Library. The Library Trustees requested that the renovation project commence as soon as possible. This work will also be timed with roof and masonry work allocated under the Town's roof and masonry programs.

A request for renovations to the *Putterham Library Bathrooms* has also been funded in FY2022. With the exception of one recently installed ADA compliant bathroom, all five bathrooms at the Putterham library are original to the construction of the building in 1961.

In addition to the 6% financing policy, Free Cash, CDBG, and State/Federal grants are the other key components of the overall financing strategy of the CIP. The Town's certified Free Cash for the fiscal year ending June 30, 2016 was $10.8 million. The proposed allocation of Free Cash used throughout this Financial Plan follows the Town's formal Free Cash policy, which results in the following use of these funds:

Certification	$10,854,017
1. Operating Budget Reserve	$615,003
2. Unreserved Fund Balance/Stabilization Fund	$2,500,000
3. Liability Reserve	$203,644
4. Capital Improvements	$3,690,016
5. Affordable Housing Trust Fund	$576,803
Sub-Total	$7,585,466
Amt available for Special Use (#6)	$3,268,551
6. Special Use:	
Additional CIP	$2,368,551
OPEB's	$600,000
Pension Fund	$300,000
Amount Appropriated	$8,354,017

By following these policies, $3,690,016 of Free Cash is used to get from 6% of prior year net revenue to 7.5%. Then an additional $2,368,551 is allocated to the CIP to help balance it. In total, $6,058,567 of Free Cash goes toward the CIP, as recommended.

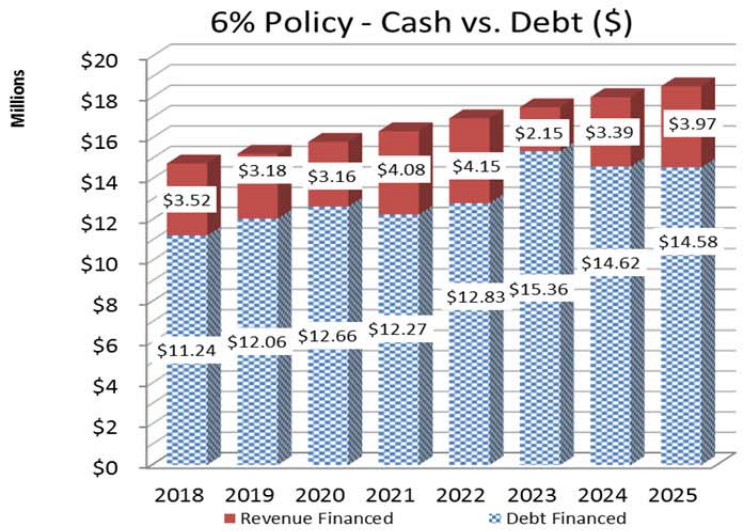
Some of the major projects proposed in the CIP include:

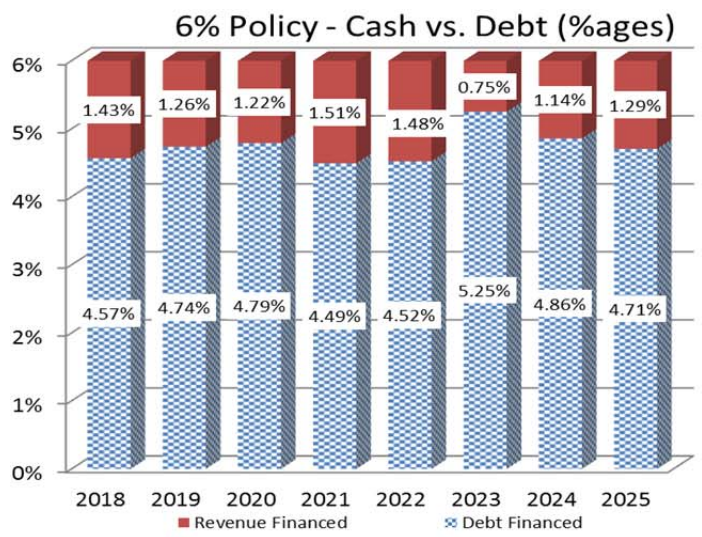
- Parking Meter Technology Upgrade - $805,200 (FY17-21)
- BHS - $36.5 million of Town funding (FY18, FY23)
- 9th School at Baldwin - $1.5 million (FY18, schematic design)
- Classroom Capacity - $6.37 million (FY17-22)
- Village Square - $7.1 million (FY17) - - all outside funding
- Coolidge Corner Improvements - $647K (FY18)
- Larz Anderson - $4.9 million (FY19, FY21)
- Fire Sta. Renovations - $2.4 million (FY18-22)
- Brookline Reservoir Park - $2.3 million (FY17-18)
- Robinson Playground - $1.2 million (FY20-FY21)
- Larz Anderson Park - $9.0 million (FY19-21)
- Cypress Playground - $2.6 million (FY19-20)

Continued major investments include:

- Street and Sidewalk Rehab - $21.3 million
- Town/School Bldg Envelope/Fenestration Repairs - $3.2 million
- Water & Sewer Infrastructure - $5.8 million -- enterprise fund
- Information Technology - $1.1 million
- Parks and Open Space - $19.8 million
- Town/School Roofs - $3.1 million
- Town/School Energy Mgmt/Conservation - $1.8 million
- Tree Replacement - $1.4 million

Prior Financial Plans spoke to the "tightness" of the CIP, resulting primarily from the costs associated with addressing the increasing school enrollment and the cost estimate for the Devotion School project. Graphs showed the split between revenue-financed and debt-financed CIP being relatively consistent from FY14 – FY17, then becoming more heavily weighted toward debt because of the Devotion School debt coming on-line. Over the six-year period of this Preliminary CIP, 47.9% of funding ($58.37 million) is financed through the issuance of municipal debt. The cash-financed portion is reduced even further in FY23 when the High School project is permanently financed. The funding plan for the High School was altered to reflect a project that is not partially funded by the MSBA. This means that the CIP funding for Schematic Design changed from an estimate $1,137,500 to an estimate of $1.5M. The project was also escalated to FY2018. That cost escalation combined with the accelerated timeframe proposed by the School Committee would cause too much disruption to the current schedule of projects. Therefore the new schedule assumes that the debt exclusion would be used first until permanent financing of $35M is available in the CIP in CY2022 (debt service commencing in FY2023).



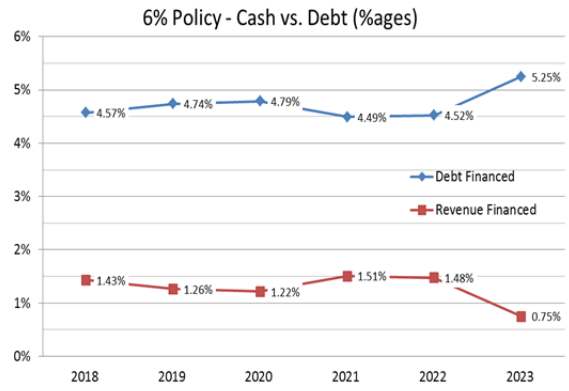


The table below details the funding sources for each year of the Proposed CIP.

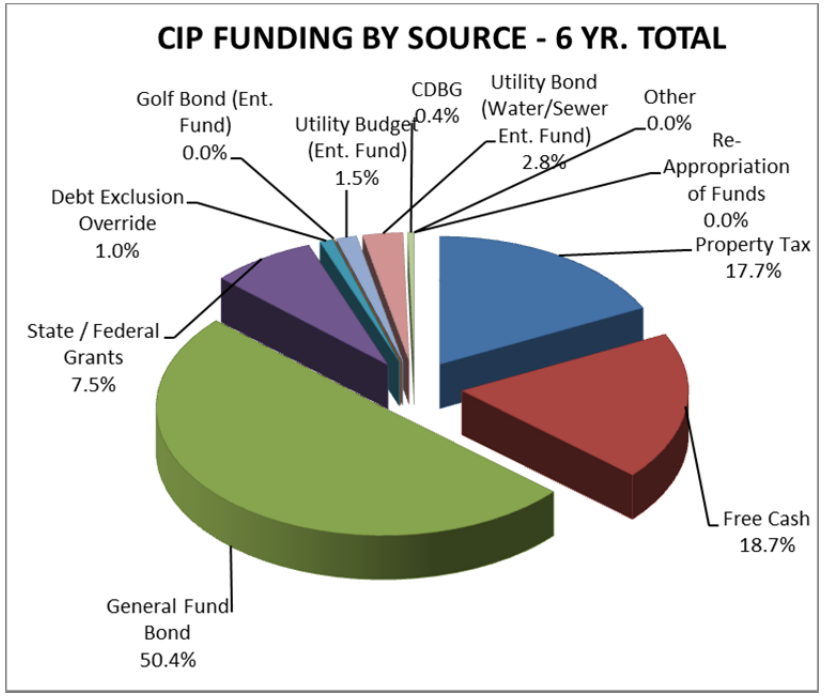
GRAND TOTAL BY SOURCE (in millions)

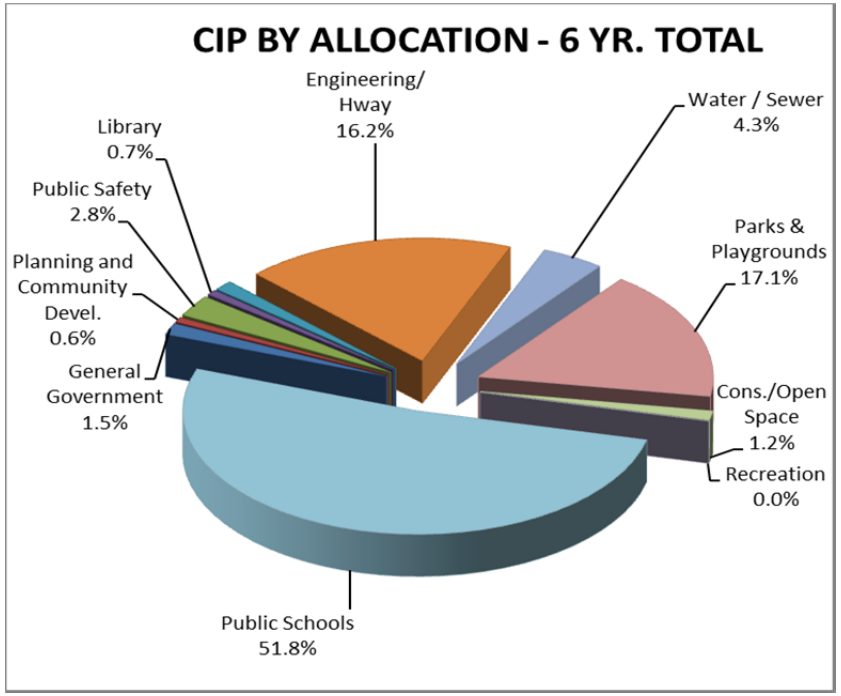
	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL	% OF TOTAL
Property Tax	$3.66	$3.21	$3.19	$4.10	$4.17	$2.19	**$20.52**	**17.7%**
Free Cash	$6.06	$3.29	$3.22	$3.20	$3.06	$2.84	**$21.67**	**18.7%**
General Fund Bond	$3.70	$43.51	$6.10	$3.29	$0.97	$0.80	**$58.37**	**50.4%**
State / Federal Grants	$1.44	$1.44	$1.44	$1.44	$1.44	$1.44	**$8.64**	**7.5%**
Debt Exclusion Override	$0.00	$0.09	$1.02	$0.00	$0.00	$0.00	**$1.11**	**1.0%**
Golf Bond (Ent. Fund)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**	**0.0%**
Utility Budget (Ent. Fund)	$0.30	$0.79	$0.30	$0.30	$0.00	$0.00	**$1.69**	**1.5%**
Utility Bond (Water/Sewer Ent. Fund)	$0.30	$3.00	$0.00	$0.00	$0.00	$0.00	**$3.30**	**2.8%**
CDBG	$0.50	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.50**	**0.4%**
Other	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**	**0.0%**
Re-Appropriation of Funds	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**	**0.0%**
TOTAL	**$15.96**	**$55.33**	**$15.27**	**$12.33**	**$9.65**	**$7.27**	**$115.80**	**100%**

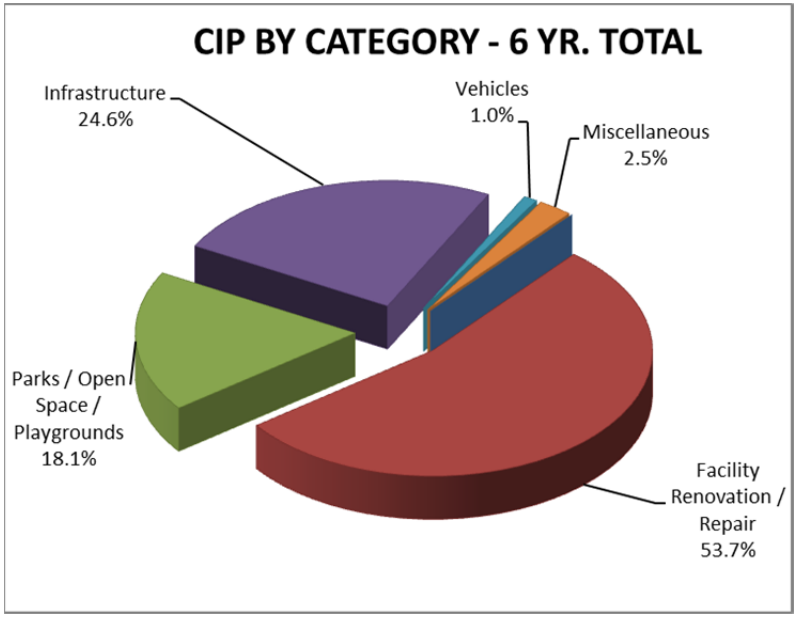
Given the reliance on more than $58.37 million of bonds supported by the General Fund within the tax levy there is an impact on the Town's operating budget. However, because the CIP complies with the Town's CIP Financing Policies, the impact on the debt service budget is offset by a decrease in the tax-financed component. As the portion of the 6% that is utilized for borrowing increases or decreases, the portion supported by the tax-financed monies moves in the opposite direction. The graph to the right shows how the 6% is apportioned between debt-financed and pay-as-you-go for each of the six years of the Proposed CIP.



The graphs below and on the following page summarize the FY18 – FY23 CIP by revenue source, by category, and by allocation group. As shown in the graph on the left side, 50.5% of the six-year CIP is funded from General Fund-supported bonds, 18.9% is funded by free cash, and 17.4% is funded via property tax. The graph on the right breaks out the six-year CIP by allocation group and shows that 52% is for Schools, 17.2% is for Parks / Playgrounds, and 16% is for Engineering / Highway. The final graph (on the following page) breaks out the CIP by category: 54% of the CIP goes toward facility renovations / repairs, 25% for infrastructure repairs (streets, sidewalks, water and sewer system), and 18% for Parks / Open Space / Playgrounds.







It is important to note that the recommendations contained in this CIP are based upon current best estimates of future revenues, future project costs, and future outside funding assistance. The amount of Free Cash available for the CIP can fluctuate dramatically from year to year. Also, budget reductions at the Federal and State levels could require cutbacks in the recommended program for future years. The CIP recommendations would have to be revisited should the actual amount of available funding be less than anticipated and / or the project costs are greater than anticipated.

DEBT & DEBT SERVICE

This portion of Section VII is dedicated to the role debt plays in the CIP and its relationship to the Operating Budget. For all entities, both public and private, debt financing is a primary method of financing large capital projects, as it enables projects to be undertaken now with the costs spread out over a period of years. However, if used in an imprudent and / or poorly constructed manner, debt can have a disastrous impact on the Operating Budget and negatively impact the level and quality of services a municipality can deliver. This is why the Town's CIP Financing Policies are a vital component of the Town's overall Financial Planning guidelines. A well planned and properly devised debt management plan is critical to maintaining the Town's positive financial condition and to maintaining the Town's much-valued Aaa bond rating.

The bond authorization process is laid out in Massachusetts General Laws (MGL), specifically Chapter 44, Sections 7 and 8. General Obligation (GO) Bonds are secured by a pledge of revenues through property taxes and are authorized by Town Meeting via a 2/3's vote. Bond Anticipation Notes (BANs) can be utilized prior to the permanent issuance of bonds and are included as part of the Town's 6% funding policy. The Town's credit was most recently reviewed on March 27, 2015 by Moody's and the Town maintained its Aaa rating. Among the reasons stated by Moody's for the Aaa rating were "the town's history of structurally balanced operations, adequate reserve levels, and strong fiscal policies", and "[m]anageable liabilities for debt, pensions and OPEB."

Chapter 44, Section 10 limits the authorized indebtedness to 5% of the Town's equalized valuation (EQV). The Town's most recent EQV, approved by

the State as of 1/1/2014, is $20.945 billion. Therefore, the Town's debt limit is $1.047 billion. Obviously, the Town has no plans to come near this limit. In fact, the Town's CIP Financing Policies would not allow outstanding debt to reach that level, as a number of measurement variables would not be met.

Debt can be broken into "exempt debt" and "non-exempt debt". Exempt debt is paid for outside of the property tax levy limit of Proposition 2 1/2. Stated another way, it is paid for with taxes raised outside of the property tax limit. In order to have exempt debt, a Debt Exclusion Override is required, and that can only be approved by the local electorate. Non-Exempt debt, or "within-levy debt", must be raised and paid for within the property tax levy. In Brookline, one project is funded with exempt debt: the High School Renovation ($43.8 million). The last debt service payment for that project is in FY20. Debt Service for a portion of the Devotion Debt Exclusion is expected to commence in FY19.

Debt is issued on behalf of the Water and Sewer Enterprise Fund and the Golf Course Enterprise Fund. The tax levy does not fund any enterprise fund debt. As previously mentioned, they are 100% cost recovery funds, so they pay for their debt service through their own revenue streams. The table below breaks out outstanding debt by fund, with exempt and non-exempt debt of the General Fund separated, for each of the past six years. Looking at FY16, this shows that the Town's total outstanding debt was $76.09 million, of which $10.7 million (15.2%) was owed by either the State ($1.76 million) or enterprise funds ($8.9 million), leaving $65.4 million of outstanding debt.

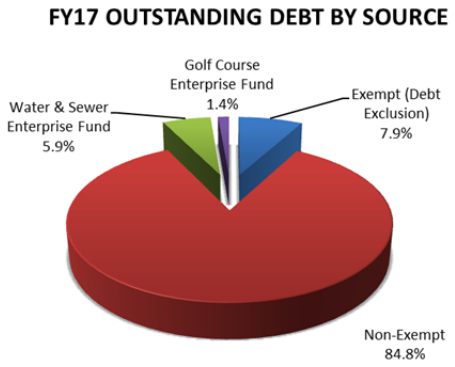
OUTSTANDING DEBT

DESCRIPTION	FY11	FY12	FY13	FY14	FY15	FY16
Total General Fund Outstanding Debt	**62,629,298**	**66,094,309**	**64,145,426**	**63,539,088**	**60,077,544**	**67,179,500**
a.) Exempt (Debt Exclusion) [1]	9,286,963	7,831,500	6,430,000	5,510,000	4,590,000	3,670,000
b.) Non-Exempt	53,342,335	58,262,809	57,715,426	58,029,088	55,487,544	63,509,500
Minus State (SBA) Reimbursed Debt [2]	4,423,697	3,554,470	2,849,005	2,452,505	2,056,310	1,756,800
Net General Fund Outstanding Debt	58,205,600	62,539,839	61,296,421	61,086,583	58,021,234	65,422,700
Water & Sewer Enterprise Fund Outstanding Debt	12,245,702	11,521,791	10,028,654	10,382,110	9,050,072	7,920,156
Golf Course Enterprise Fund Outstanding Debt	1,080,000	929,000	899,000	1,099,000	1,149,000	995,000
Enterprise Fund Outstanding Debt	**13,325,702**	**12,450,791**	**10,927,654**	**11,481,110**	**10,199,072**	**8,915,156**
TOTAL Outstanding Debt	**75,955,000**	**78,545,100**	**75,073,080**	**75,020,198**	**70,276,616**	**76,094,656**

[1] The Lincoln School and High School projects were financed via a Debt Exclusion.

[2] The following school projects were reimbursed by the State: High School (through FY09), Lincoln (through FY12), Baker, and Heath.

The graph on the following page depicts the FY17 figures. As it shows, 84.8% of the Town's debt is covered within the levy while 7.9% is covered outside the levy via Debt Exclusion Overrides. The remaining 7.3% is covered by enterprise fund revenues. The projected level of outstanding debt based upon the Proposed CIP is shown in the table on the following page. The increase in FY17 is due to the Devotion School project. Also, there is a graph on page VII-27 that shows both a history and a projection of outstanding debt.



Once debt is incurred, an amount must be set aside annually to fund the principal and interest payments, known as Debt Service. As previously noted, if debt is used in an imprudent and / or poorly constructed manner, it can have a negative impact on the Operating Budget. This is because of debt service: debt service takes away funding that would otherwise be available for other areas of the Operating Budget. If decision makers are not made aware of the

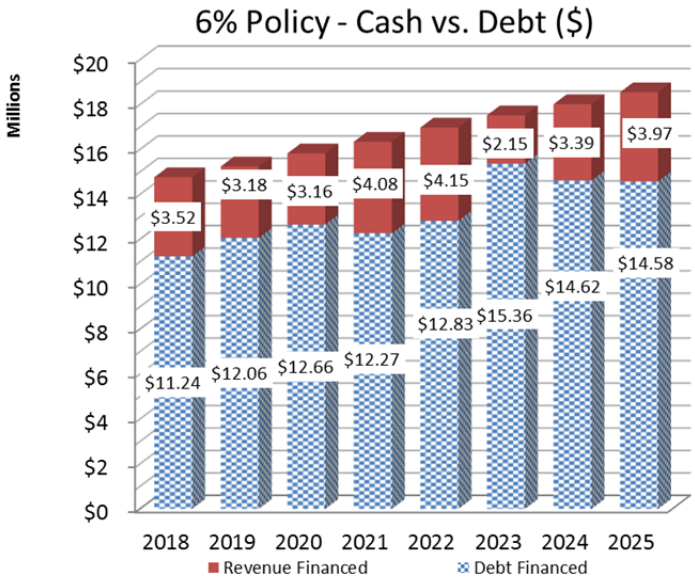
OUTSTANDING DEBT (PROJECTED)							
DESCRIPTION	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**
Total General Fund Outstanding Debt	**103,514,416**	**148,210,676**	**150,456,877**	**143,124,153**	**138,669,757**	**128,467,741**	**152,178,864**
a.) Exempt (Debt Exclusion) [1, 2]	2,750,000	1,830,000	50,323,498	48,369,759	47,279,083	46,133,873	44,931,403
b.) Non-Exempt	100,764,416	146,380,676	100,133,379	94,754,394	91,390,674	82,333,868	107,247,461
Minus State (SBA) Reimbursed Debt [3]	1,457,900	1,162,050	866,200	576,450	286,700	0	0
Net General Fund Outstanding Debt	102,056,516	147,048,626	149,590,677	142,547,703	138,383,057	128,467,741	152,178,864
Water & Sewer Enterprise Fund Outstanding Debt	6,961,446	6,522,256	6,286,128	6,050,000	5,977,375	4,975,900	4,075,700
Golf Course Enterprise Fund Outstanding Debt	1,610,000	1,741,750	1,626,000	1,760,250	1,642,000	1,518,750	1,395,500
Enterprise Fund Outstanding Debt	**8,571,446**	**8,264,006**	**7,912,128**	**7,810,250**	**7,619,375**	**6,494,650**	**5,471,200**
TOTAL Outstanding Debt	**112,085,862**	**156,474,682**	**158,369,005**	**150,934,403**	**146,289,132**	**134,962,391**	**157,650,064**

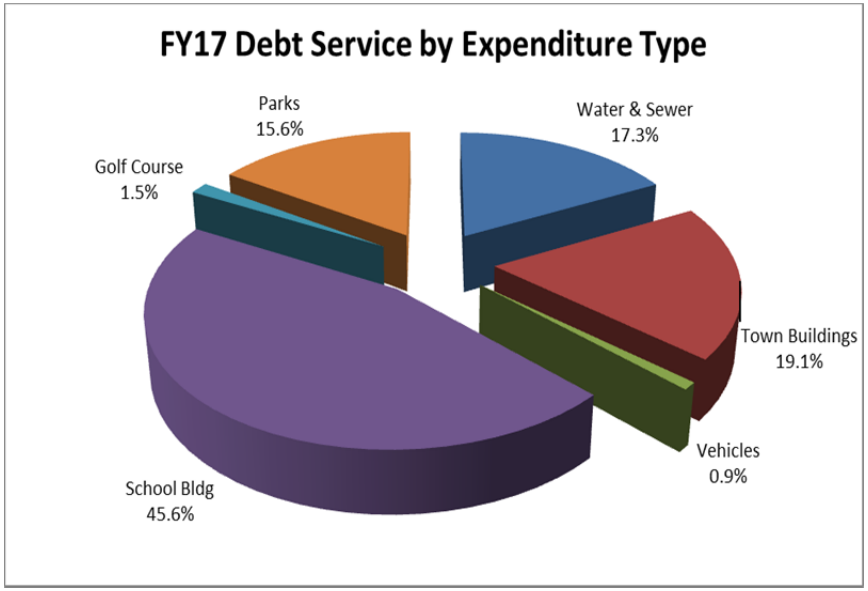
[1] The High School project was financed via a Debt Exclusion. Current funding plans for the Devotion School project assumes a portion of that project is funded via a Debt Exclusion.
[2] Estimates for the 9th School at Baldwin and High School Debt projects amounts are unknown.
[3] The Baker (through FY22) and Heath (through FY19) school projects are being reimbursed by the State.

impact debt service has on the Operating Budget (via long-range forecasting), then the authorization of debt is being made in a vacuum. Governmental bodies can cripple their finances if bonds are authorized and issued without a full understanding of the impact they have on the overall finances of the entity.

In Brookline, both the Long Range Financial Plan and the planning process for the CIP clearly show decision makers the impact debt service has on the Operating Budget. Since the Town's CIP Financing Policies set a limit on the overall amount of debt that can be issued -- basically the 6% policy plus the other debt management variables that are to be measured -- the impact on the Operating Budget is both known and within an expected range.

The graph to the right illustrates how the Town's 6% policy works. In each year, the amount available for the CIP is 6% of the prior year's net revenue. This amount represents the total impact on the Operating Budget. For FY16, $13.2 million is dedicated to the CIP ($8.3 million for net debt service and $4.9 million for pay-as-you-go), and, therefore, unavailable for the operating budget. The graph also shows the balance between pay-as-you-go-CIP and debt-financed CIP: as debt service increases, pay-as-you go capacity decreases, and vice versa. This is clearly shown in FY23, when the large increase in debt service (resulting from the BHS project coming on-line) reduces the pay-as-you-go portion of the CIP.





The graph to the left breaks out existing (FY17) debt service by expenditure type. As it shows, the largest component of debt service is for school buildings, followed by town buildings and the water and sewer system.

As was previously mentioned, debt is issued on behalf of the Water and Sewer Enterprise Fund and the Golf Course Enterprise Fund. Those debt service costs are budgeted for within both enterprise funds and are covered by enterprise fund revenues. As a result, the tax levy does not fund any enterprise fund debt service. The table on the following page breaks out debt service by fund, with exempt and non-exempt debt of the General Fund separated, for each of the past six years. Looking at FY17, it shows that the Town's total debt service was $12.6 million, of which $2.9 million (24.7%) was reimbursed by either the State ($556,757) or Enterprise funds ($2.36 million), leaving $9.68 million of debt service.

DEBT SERVICE

DESCRIPTION	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Total General Fund Supported Debt Service	9,440,762	10,098,259	9,804,995	9,297,870	9,389,799	9,270,546	10,240,902
a.) Exempt (Debt Exclusion) [1]	1,899,453	1,730,917	1,630,808	1,112,800	1,094,400	1,076,000	1,048,400
b.) Non-Exempt	7,541,309	8,367,342	8,174,187	8,185,070	8,295,399	8,194,546	9,192,502
Minus State (SBA) Reimbursed Debt [2]	1,227,634	1,227,634	587,125	556,757	556,757	556,757	556,757
Net General Fund Debt Service	8,213,128	8,870,625	9,217,870	8,741,113	8,833,042	8,713,789	9,684,145
Water & Sewer Enterprise Fund Supported Debt Svc.	2,495,199	2,321,242	2,375,403	2,365,461	2,133,405	2,377,747	2,180,990
Golf Course Enterprise Fund Supported Debt Svc.	189,130	185,679	191,499	179,374	186,476	191,355	183,475
Enterprise Fund Debt Service	**2,684,329**	**2,506,921**	**2,566,902**	**2,544,835**	**2,319,881**	**2,569,102**	**2,364,465**
TOTAL Debt Service	**12,125,091**	**12,605,180**	**12,371,897**	**11,842,705**	**11,709,680**	**11,839,648**	**12,605,366**

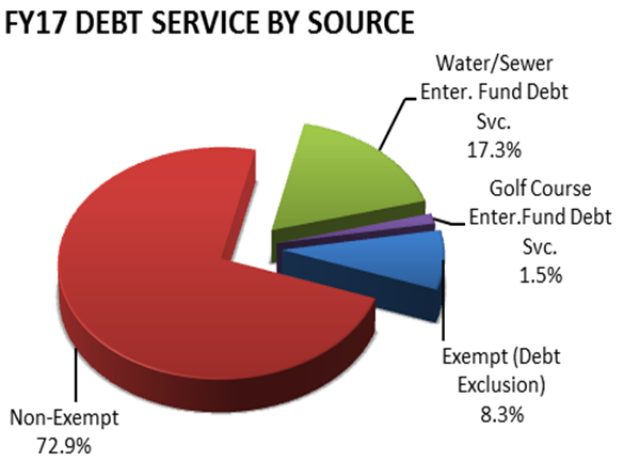
[1] The Lincoln School and High School projects were financed via a Debt Exclusion.

[2] The following school projects were reimbursed by the State: High School (through FY09), Lincoln (through FY12), Baker, and Heath.

The graph to the right depicts FY17 debt service by source. As it shows, 72.9% of the Town's debt service is covered within the levy while 8.3% is covered outside the levy via Debt Exclusion Overrides. The remaining 18.8% is covered by enterprise fund revenues.

The projected level of debt service based upon the Proposed CIP is shown in the table on the following page. Also, there is a graph on page VII-27 that shows both a history and a projection of debt service.

Great care has gone into the crafting of the Debt Management Plan for the FY18 – FY23 CIP and is detailed on the following pages. As mentioned at the beginning of this Section VII, this debt management plan results in the Town complying with all of its CIP Financing Policies. The table shows the amount of authorization, the amount to be borrowed, and the number of years planned for paying off the principal (term). The Town hopes to not have to borrow for the $1.245 million for the Carlton St. Footbridge. The Town is working toward a grant for the project and if it is received, the Town will not have to issue a bond for the project. Town Meeting would then be asked to rescind the bond authorization.



DEBT SERVICE (PROJECTED)

DESCRIPTION	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Total General Fund Supported Debt Service	12,262,428	16,568,464	17,128,358	15,784,846	16,343,098	18,881,759	18,135,248
a.) Exempt (Debt Exclusion) [1]	1,020,800	4,505,739	4,469,139	3,517,539	3,517,539	3,517,539	3,517,539
b.) Non-Exempt	11,241,628	12,062,725	12,659,219	12,267,307	12,825,559	15,364,220	14,617,709
Minus State (SBA) Reimbursed Debt [2]	556,757	556,757	434,662	434,662	434,662	0	0
Net General Fund Debt Service	11,705,671	16,011,707	16,693,696	15,350,184	15,908,436	18,881,759	18,135,248
Water & Sewer Enterprise Fund Supported Debt Svc.	1,878,930	1,682,960	1,693,072	1,361,525	1,221,575	1,084,225	1,001,375
Golf Course Enterprise Fund Supported Debt Svc.	180,093	184,303	179,819	188,985	189,189	184,143	179,421
Enterprise Fund Debt Service	**2,059,023**	**1,867,262**	**1,872,891**	**1,550,510**	**1,410,764**	**1,268,368**	**1,180,796**
TOTAL Debt Service	**14,321,451**	**18,435,726**	**19,001,249**	**17,335,356**	**17,753,862**	**20,150,127**	**19,316,044**

[1] The High School project was financed via a Debt Exclusion. Current funding plans for the Devotion School project assumes $49.5M of that project is funded by the a Debt Exclusion.

[2] Estimates for the 9th School at Baldwin and High School Debt projects amounts are unknown.

[3] The Baker (through FY22) and Heath (through FY19) school projects are being reimbursed by the State.

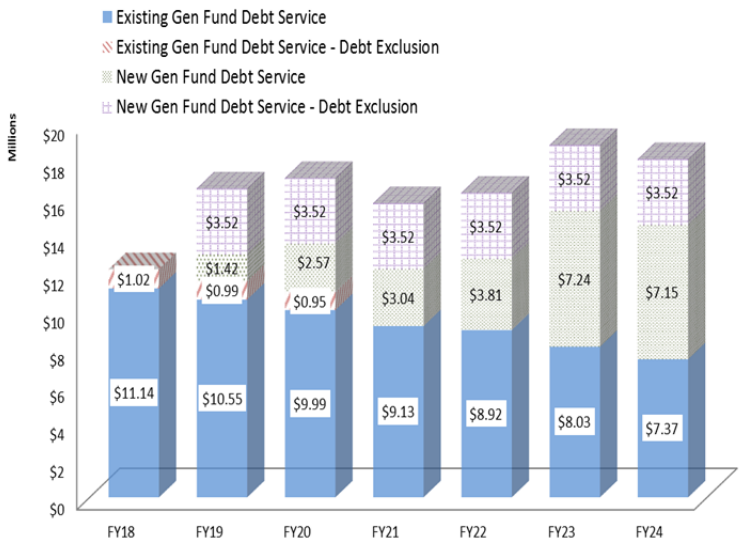
DEBT MANAGEMENT PLAN

PROJECT	BOND AUTH.	BOND AMT.	TERM	2018	2019	2020	2021	2022	2023	2024	2025	2026
Funded Within 6% CIP Policy												
Envelope/Fenestration Repairs (previously authorized)	$2.100	$0.380	5	$0.090	$0.087	$0.085	$0.082	$0.079				
Carlton St. Footbridge (previously authorized)	$1.40	$0.25	5	$0.058	$0.056	$0.055	$0.053	$0.051				
Corey Hill (previously authorized)	$0.70	$0.70	10	$0.096	$0.094	$0.091	$0.088	$0.086	$0.083	$0.081	$0.078	$0.075
Tower #1 Replacement (previously authorized)	$0.80	$0.80	10	$0.110	$0.107	$0.104	$0.101	$0.098	$0.095	$0.092	$0.089	$0.086
Devotion School (previously authorized)	$118.40	$33.00	25	$2.225	$2.225	$2.225	$2.225	$2.225	$2.225	$2.225	$2.225	$2.225
Envelope/Fenestration Repairs (previously authorized)	$2.10	$1.72	10		$0.245	$0.238	$0.230	$0.223	$0.216	$0.209	$0.201	$0.194
Carlton St. Footbridge (previously authorized)	$1.40	$1.00	10		$0.14	$0.14	$0.13	$0.13	$0.13	$0.12	$0.12	$0.11
High School Addition - Schem. Des. (future authorization)	$1.50	$1.50	10		$0.214	$0.207	$0.201	$0.195	$0.188	$0.182	$0.176	$0.169
Brookline Reservoir Park (future authorization)	$2.20	$2.20	10		$0.314	$0.304	$0.295	$0.285	$0.276	$0.267	$0.257	$0.248
Fire Maintenance/Training Facility (previously authorized)	$4.50	$4.50	15		$0.503	$0.489	$0.476	$0.462	$0.449	$0.435	$0.422	$0.408
Muddy River (previously authorized)	$0.75	$0.75	10			$0.106	$0.103	$0.100	$0.097	$0.093	$0.090	$0.087

TOWN OF BROOKLINE FY2018 PROGRAM BUDGET				CAPITAL IMPROVEMENTS PROGRAM								
PROJECT	BOND AUTH.	BOND AMT.	TERM	2018	2019	2020	2021	2022	2023	2024	2025	2026
Harry Downes (future authorization)	$0.99	$0.99	10			$0.141	$0.137	$0.133	$0.128	$0.124	$0.120	$0.116
Larz Anderson Park (future authorization)	$2.70	$2.70	10			$0.385	$0.373	$0.362	$0.350	$0.339	$0.327	$0.316
Murphy Playground (future authorization)	$0.82	$0.82	10			$0.117	$0.113	$0.110	$0.106	$0.103	$0.099	$0.096
Driscoll School (future authorization	$4.00	$4.00	15			$0.447	$0.435	$0.423	$0.411	$0.399	$0.387	$0.375
Envelope/Fenestration Repairs (future authorization)	$1.40	$1.40	10				$0.200	$0.194	$0.188	$0.182	$0.176	$0.170
Cypress Playground / Athl Field (future authorization)	$2.40	$2.40	10				$0.342	$0.332	$0.322	$0.311	$0.301	$0.291
Roof Repairs/Replacements (previously authorized)	$1.20	$1.20	15	Combined with new authorization below for $3.5M bond over 15 years								
Roof Repairs/Replacements (future authorization)	$2.30	$2.30	15					$0.391	$0.380	$0.370	$0.359	$0.349
Robinson Playground (future authorization)	$1.09	$1.09	10					$0.155	$0.151	$0.146	$0.141	$0.137
Larz Anderson Park (future authorization)	$2.20	$2.20	10					$0.314	$0.304	$0.295	$0.285	$0.276
Schick Park (future authorization)	$0.97	$0.97	10						$0.138	$0.134	$0.130	$0.126
High School Addition (future authorization)	$35.00	$35.00	25						$3.150	$3.080	$3.010	$2.940
Envelope/Fenestration Repairs (future authorization)	$1.80	$1.80	10						$0.257	$0.249	$0.241	$0.234
Roof Repairs/Replacements (future authorization)	$0.80	$0.80	10						$0.000	$0.114	$0.111	$0.107
Larz Anderson Park (future authorization)	$2.50	$2.50	10						$0.000	$0.000	$0.356	$0.346
Envelope/Fenestration Repairs (future authorization)	$2.40	$2.40	10						$0.000	$0.000	$0.342	$0.332
Larz Anderson Park - Auth for FY25/ CY25 Issue	$1.00	$1.00	10						$0.000	$0.000	$0.000	$0.143
Roof Repairs/Replacements (future authorization)	$1.80	$1.80	10						$0.000	$0.000	$0.000	$0.257
NEW GEN FUND DEBT SERVICE (cumulative)				$2.580	$3.987	$5.132	$5.588	$6.346	$9.639	$9.550	$10.042	$10.214

PROJECT	BOND AUTH.	BOND AMT.	TERM	2018	2019	2020	2021	2022	2023	2024	2025	2026
Debt Exclusions												
Devotion School - Design/Constr. (future authorization)	$49.58	$49.58	25		$3.518	$3.518	$3.518	$3.518	$3.518	$3.518	$3.518	$3.518
NEW DEBT EXCLUSION DEBT SERVICE (cumulative)					$3.518	$3.518	$3.518	$3.518	$3.518	$3.518	$3.518	$3.518
Enterprise Funds												
Wastewater (future authorization)	$3.00	$1.00	10	$0.14	$0.13	$0.13	$0.13	$0.12	$0.12	$0.12	$0.11	$0.11
Singletree Tank & Gatehouse MWRA Interest Free Loan	$0.66	$0.66	10	$0.07	$0.07	$0.07	$0.07	$0.07	$0.07	$0.07	$0.07	$0.07
Stormwater (future authorization)	$0.30	$0.30	10		$0.04	$0.04	$0.04	$0.04	$0.04	$0.04	$0.04	$0.03
Wastewater (future authorization)	$3.00	$1.00	10		$0.14	$0.14	$0.13	$0.13	$0.13	$0.12	$0.12	$0.11
Stormwater (future authorization)	$0.30	$0.30	10			$0.04	$0.04	$0.04	$0.04	$0.04	$0.04	$0.04
Wastewater (future authorization)	$3.00	$1.00	10			$0.14	$0.14	$0.13	$0.13	$0.13	$0.12	$0.12
Stormwater (future authorization)	$0.30	$0.30	10				$0.04	$0.04	$0.04	$0.04	$0.04	$0.04
Stormwater (future authorization)	$0.30	$0.30	10				$0.04	$0.04	$0.04	$0.04	$0.04	$0.04
Wastewater (future authorization)	$3.00	$1.00	10				$0.14	$0.14	$0.13	$0.13	$0.13	$0.12
Wastewater (future authorization)	$3.00	$1.00	10					$0.14	$0.14	$0.13	$0.13	$0.13
Golf Course (previously authorized)	$2.84	$0.27	20	$0.03	$0.02	$0.02	$0.02	$0.02	$0.02	$0.02	$0.02	$0.02
Golf Course (future authorization)	$1.00	$0.21	20	$0.02	$0.02	$0.02	$0.02	$0.02	$0.02	$0.02	$0.02	$0.02
Golf Course (future authorization)	$1.00	$0.25	20		$0.02	$0.02	$0.02	$0.02	$0.02	$0.02	$0.02	$0.02
Golf Course (future authorization)	$1.00	$0.25	20				$0.02	$0.02	$0.02	$0.02	$0.02	$0.02
NEW ENTERPRISE FUND DEBT SERVICE (cumulative)				$0.248	$0.452	$0.627	$0.862	$0.981	$0.953	$0.925	$0.897	$0.869

When Moody's last reviewed the Town's bond rating in March, 2016, they referenced the above average amortization rate. That is an important factor in being able to take on additional debt: as old debt runs off, new debt can be taken on. The graph to the right shows the amortization of existing debt and the proposed new debt for the General Fund.



A common indicator used to measure debt service levels is comparing it to revenue, since it is those revenues that are needed to pay the principal and interest payments. For general funds, ratings agencies tend to consider ratios of between 5% - 10% as being prudent. The table below shows debt service as a percent of revenue for the General Fund, Water and Sewer Enterprise Fund, and the Golf Course Enterprise Fund. As it shows, total debt service is projected at 4.3% in FY17 but will increase to 5.9% in FY19 when the majority of debt service associated with the Devotion School project kicks in. When looking solely General Fund-supported debt, the figure drops to 3.9% in FY17, reaching a high of 5.9% in FY19.

DEBT SERVICE AS A PERCENTAGE OF REVENUE

DESCRIPTION	FY14 (Act.)	FY15 (Act.)	FY16 (Act)	FY17 (Proj.)	FY18 (Proj.)	FY19 (Proj.)	FY20 (Proj.)	FY21 (Proj.)	FY22 (Proj.)	FY23 (Proj.)	FY24 (Proj.)
Total General Fund Supported Debt Service	9,297,870	9,389,799	9,270,546	10,240,902	12,262,428	16,568,464	17,128,358	15,784,846	16,343,098	18,135,248	18,095,157
a.) Exempt (Debt Exclusion) [1]	1,112,800	1,094,400	1,076,000	1,048,400	1,020,800	4,505,739	4,469,139	3,517,539	3,517,539	3,517,539	3,517,539
b.) Non-Exempt	8,185,070	8,295,399	8,194,546	9,192,502	11,241,628	12,062,725	12,659,219	12,267,307	12,825,559	14,617,709	14,577,618
Minus SBA Reimbursements	556,757	556,757	556,757	556,757	556,757	556,757	434,662	434,662	434,662	0	0
Net General Fund Debt Service	8,741,113	8,833,042	8,713,789	9,684,145	11,705,671	16,011,707	16,693,696	15,350,184	15,908,436	18,135,248	18,095,157
Water & Sewer Enterprise Fund Supported Debt Svc.	2,365,461	2,133,405	2,377,747	2,180,990	1,878,930	1,682,960	1,693,072	1,361,525	1,221,575	1,084,225	1,001,375
Golf Course Enterprise Fund Supported Debt Svc.	179,374	186,476	191,355	183,475	180,093	184,303	179,819	188,985	189,189	184,143	179,421
TOTAL Debt Service	**11,842,705**	**11,709,680**	**11,839,648**	**12,605,366**	**14,321,451**	**18,435,726**	**19,001,249**	**17,335,356**	**17,753,862**	**19,403,616**	**19,275,953**
General Fund Revenue	231,533,855	235,632,057	250,398,058	260,709,753	272,527,996	281,771,949	290,776,328	300,697,442	310,137,297	318,731,420	328,004,632
General Fund Revenue Without SBA Reimbursement	230,977,098	235,075,300	249,841,301	260,152,996	271,971,239	281,215,192	290,341,666	300,262,780	309,702,635	318,731,420	328,004,632
Water & Sewer Enterprise Fund Revenue	26,529,207	26,617,217	27,828,675	28,495,260	28,961,073	30,269,574	31,122,057	32,046,976	33,307,939	34,645,008	36,100,466
Golf Course Enterprise Fund Revenue	1,273,214	1,298,830	1,390,926	1,522,831	1,647,098	1,674,693	1,702,413	1,620,261	1,636,987	1,653,937	1,671,114
TOTAL Revenue of Funds Supporting Debt Svc.	**259,336,276**	**263,548,104**	**279,617,659**	**290,727,844**	**303,136,167**	**313,716,215**	**323,600,798**	**334,364,680**	**345,082,223**	**355,030,366**	**365,776,212**
General Fund Debt Service as a % of General Fund Revenue	4.0%	4.0%	3.7%	3.9%	4.5%	5.9%	5.9%	5.2%	5.3%	5.7%	5.5%
Net General Fund Debt Service as a % of General Fund Revenue [2]	3.8%	3.8%	3.5%	3.7%	4.3%	5.7%	5.7%	5.1%	5.1%	5.7%	5.5%
Water & Sewer Enterprise Fund Debt Service as a % of Revenue	8.9%	8.0%	8.5%	7.7%	6.5%	5.6%	5.4%	4.2%	3.7%	3.1%	2.8%
Golf Course Enterprise Fund Debt Service as a% of Revenue	14.1%	14.4%	13.8%	12.0%	10.9%	11.0%	10.6%	11.7%	11.6%	11.1%	10.7%
TOTAL Debt Service as a % of Total Rev. Supporting Debt Svc.	**4.6%**	**4.4%**	**4.2%**	**4.3%**	**4.7%**	**5.9%**	**5.9%**	**5.2%**	**5.1%**	**5.5%**	**5.3%**

[1] The Lincoln School and High School projects were financed via a Debt Exclusion. Current funding plans for the Devotion School project assumes a Debt Exclusion.

[2] Excludes both the debt service (expense) reimbursed by the State for school projects and the reimbursement from the State (revenue).

IMPACT ON OPERATING BUDGET

The "Debt and Debt Service" section discussed the impact of debt service on the Operating Budget. Another potential impact of a CIP on a community's Operating Budget is an increase or decrease in operating expenses. For example, adding another facility in the community will add costs for utilities and building operation / maintenance. Conversely, undertaking energy conservation projects will help reduce costs in the Operating Budget. The proposed CIP contains a number of projects that will impact the Operating Budget, both positively and negatively. They are listed below:

- Technology Applications – projects undertaken by the Information Technology Department (ITD) are focused on improving efficiencies in numerous departments. While it is difficult to put a dollar figure on savings, past applications have proven to yield savings in the Operating Budget, including a reduction in headcount. On the other hand, new technologies often come with increased maintenance contracts.
- Fire Apparatus Rehab/Replacement – rehabilitating fire apparatus extends the life of the vehicles and also helps reduce repair and maintenance costs. Also, once replaced with a new vehicle, repair and maintenance costs are reduced.
- Coolidge Corner Library Rear Windows – these nine large panels of glass windows in the rear of the building date from the original construction in 1970. The glass is not insulated and is loose in a number of areas. New windows are certain to help reduce energy consumption.
- LED Streetlights – the conversion of the Town's 3,600 streetlights from high-pressure sodium lamps to LED's is projected to reduce the electricity budget for streetlights by more than 50% ($180,000 / yr) once fully-implemented.
- Wastewater System Improvements - these projects will help prevent costly system failures, lower MWRA wholesale costs by reducing extraneous flows, and make more efficient use of annual operating funds.
- Playground Projects - as playgrounds are renovated and new or improved water play features are included as part of the project, water/sewer costs will increase.
- Golf Course – the proposed improvements to the course and facilities will help improve its playability and make it a more sought-after course, thereby increasing revenue.
- 9th School at Baldwin / High School projects – these projects are certain to increase the size of the facilities, so additional utility costs are to be expected. However, increases will be minimized to the greatest extent possible by including energy efficient systems and "green" components.
- Town / School Energy Management Systems and Energy Conservation - these on-going items are meant to yield savings in the operating budget. With large increases in utility prices over the past few years, it is imperative that monies be invested to decrease energy consumption in buildings. Programs would include, but are not limited to, lighting retrofit and controls, energy efficient motors, insulation, and temperature equipment. This program would augment existing gas and electric utility conservation programs. Monies would also go toward more efficient heating and cooling equipment.
- Town / School Emergency Generator Replacement, Elevator Replacement, Roof Replacement, Masonry Repairs, and Fenestrian - these items represent an approach to systematically replace various core facility needs that only become more expensive to maintain if not replaced in a timely manner. They also help eliminate the need for larger expenditures that might arise if allowed to deteriorate.

RECOMMENDED PROJECTS

The following pages contain the FY18 – FY23 CIP as proposed by project. Commencing on page VII-29 is a project description for each project.

TOWN OF BROOKLINE CAPITAL IMPROVEMENT PROGRAM: FY2018 - FY2023

CATEGORY CODES (CC):

1 = New Facility Construction
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CC		Total	Prior Year (FY17)	FY2018 Amount	RC	FY2019 Amount	RC	FY2020 Amount	RC	FY2021 Amount	RC	FY2022 Amount	RC	FY2023 Amount	RC	Future Years Amount	RC
	GENERAL GOVERNMENT																
2	Larz Anderson Garage	125,000								125,000	A						
2	Parking Garage (Town Hall/Pierce Phase 4)	300,000	300,000														
6	Town Building Furniture	125,000	25,000	**50,000**	**A**									25,000	A	25,000	A
2	Town Rehab/Upgrade	350,000		**50,000**	**A**	50,000	A	50,000	A	50,000	A	50,000	A	50,000	A	50,000	A
2	Town Hall Data Room Improvements	120,000		**120,000**	**A**												
6	Technology Applications	1,605,000	275,000	**175,000**	**A**	180,000	A	185,000	A	190,000	A	195,000	A	200,000	A	205,000	A
	General Government Total	2,625,000	600,000	**395,000**		230,000		235,000		365,000		245,000		275,000		280,000	
	PLANNING & COMMUNITY DEVELOPMENT																
4	Gateway East/Village Sq. Circulation Improv. - CD	378,000	378,000														
4	Gateway East/Village Sq. Circulation Improv. - CD	500,000		**500,000**	**H**												
4	Gateway East/Village Sq. Circulation Improv. - Other	1,422,000	1,422,000														
4	Gateway East/Village Sq. Circulation Improv. - State	6,933,000	6,933,000														
4	Commercial Area Improvements	150,000														150,000	A
6	Major Parcel Study	100,000	100,000														
6	Zoning By-Law Reorganization	250,000				250,000	A										
	Planning & Community Development Total	9,733,000	8,833,000	**500,000**		250,000		-		-		-		-		150,000	
	PUBLIC SAFETY																
5	Fire Apparatus Rehab	1,550,000		**50,000**	**A**			500,000	A							1,000,000	A/B
5	Engine #6 Replacement	625,000		**625,000**	**A**												
5	Tower #1 Replacement	800,000	800,000														
6	CAD System Upgrade	270,000				270,000	A										
2	Fire Station Renovations	2,405,000	670,000	**280,000**	**A**	385,000	A			800,000	A	270,000	A				
1	Training & Maintenance Facility	4,500,000	4,500,000														
6	PPE Washers and Dryers	71,000		**71,000**	**A**												
	Public Safety Total	10,221,000	5,970,000	**1,026,000**		655,000		500,000		800,000		270,000		-		1,000,000	

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CC		Total	Prior Year (FY17)	FY2018 Amount	RC	FY2019 Amount	RC	FY2020 Amount	RC	FY2021 Amount	RC	FY2022 Amount	RC	FY2023 Amount	RC	Future Years Amount	RC
	LIBRARY																
2	Coolidge Corner - Elev./Rear Windows /Carpet	646,500		**646,500**	**A**												
6	Library Furnishings	110,000	110,000														
2	Library Interior Painting / Facelift	110,000	110,000														
2	Putterham Library Bathroom Renovations	150,000										150,000	A				
	Library Total	1,016,500	220,000	**646,500**		-		-		-		150,000		-		-	
	PUBLIC WORKS:																
	Transportation																
4	Traffic Calming / Safety Improvements	358,659		**58,659**	**A**	50,000	A	50,000	A	50,000	A	50,000	A	50,000	A	50,000	A
4	Bicycle Access Improvements	245,775	36,000	**33,000**	**A**	176,775	A										
4	Parking Meter Technology Upgrade	805,200	161,040	**161,040**	**A**	50,000	A	111,040	A	322,080	A						
4	Fire Alarm Call box system	2,380,000														2,380,000	A
4	Dean / Chestnut Hill Ave Signal	260,000	260,000														
4	Carlton St /Monmouth Traffic Signal	333,663		**333,663**	**A**												
	Public Works - Transportation Sub-Total	4,383,297	457,040	**586,362**		276,775		161,040		372,080		50,000		50,000		2,430,000	
	Engineering/Highway																
4	Street Rehab - Town	14,190,000	1,630,000	**1,670,000**	**A**	1,710,000	A	1,750,000	A	1,790,000	A	1,830,000	A	1,880,000	A	1,930,000	A
4	Street Rehab - State	11,522,344	1,440,293	**1,440,293**	**C**	1,440,293	C	1,440,293	C	1,440,293	C	1,440,293	C	1,440,293	C	1,440,293	C
4	Sidewalk Repair	2,659,000	304,000	**312,000**	**A**	320,000	A	328,000	A	336,000	A	344,000	A	353,000	A	362,000	A
4	Parking Lot Rehab.	205,000														205,000	A
4	Winthrop Path Rehab.	65,000	65,000														
2	Municipal Service Center Site Improvements			**240,000**	**A**												
4	Davis Path Footbridge			**40,000**	**A**												
	Public Works - Engineering/Highway Sub-Total	28,921,344	3,439,293	**3,702,293**		3,470,293		3,518,293		3,566,293		3,614,293		3,673,293		3,937,293	
	Water / Sewer																
4	Singletree Hill Tank Improvements	830,000	340,000			490,000	F										
4	Stormwater Improvements	1,500,000	300,000	**300,000**	**F**	300,000	F	300,000	F	300,000	F						
4	Water System Improvements	300,000		**300,000**	**G**												
4	Wastewater System Improvements	3,000,000				3,000,000	G										
2	Netherlands Road Improvements	190,000	190,000														
2	Singletree Hill Gatehouse	320,000	320,000														
	Public Works - Water / Sewer Sub-Total	6,140,000	1,150,000	**600,000**		3,790,000		300,000		300,000		-		-		-	

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CC		Total	Prior Year (FY17)	FY2018 Amount	RC	FY2019 Amount	RC	FY2020 Amount	RC	FY2021 Amount	RC	FY2022 Amount	RC	FY2023 Amount	RC	Future Years Amount	RC
	Parks and Playgrounds																
3	Brookline Reservoir Park	2,340,000	140,000	**2,200,000**	**B**												
3	Corey Hill Park	700,000	700,000														
3	Cypress Playground/Athl. Field	2,640,000				240,000	A	2,400,000	B								
3	Emerson Garden Playground	770,000	770,000														
3	Harry Downes Field & Playground	1,070,000	80,000			990,000	B										
3	Heath School Playground Accessibility	1,050,000														1,050,000	A
3	Kraft Family Athl. Field Turf Repl.	1,078,000						98,000	A	980,000	A						
3	Larz Anderson Park	9,000,000				2,700,000	B	600,000	A	2,200,000	B					3,500,000	B
3	Murphy Playground	890,000		**70,000**	**A**	820,000	B										
3	Riverway Park	625,000														625,000	A
3	Robinson Playground	1,190,000						100,000	A	1,090,000	B						
3	Schick Playground	1,060,000								90,000	A	970,000	B				
3	Boylston St. Playground	1,180,000														1,180,000	A
3	Griggs Park	970,000														970,000	A
3	Soule Athletic Fields	1,110,000				90,000	K	1,020,000	K								
3	Parks/Playgrounds Rehab/Upgrade	2,380,000	300,000	**305,000**	**A**	305,000	A	310,000	A	210,000	A	315,000	A	315,000	A	320,000	A
3	Town/School Ground Rehab.	1,175,000	90,000	**150,000**	**A**	155,000	A	160,000	A	165,000	A	170,000	A	175,000	A	110,000	A
3	Tennis Courts / Basketball Courts	300,000				200,000	A									100,000	A
2	Comfort Stations	340,000	40,000							250,000	A					50,000	A
	Public Works - Parks and Playground Sub-Total	29,868,000	2,120,000	**2,725,000**		5,500,000		4,688,000		4,985,000		1,455,000		490,000		7,905,000	
	Conservation/Open Space																
3	Tree Removal&Repl/Urban Forestry Mgmt	1,880,000	225,000	**230,000**	**A**	230,000	A	235,000	A	235,000	A	240,000	A	240,000	A	245,000	A
3	Old Burial Ground	250,000														250,000	A
3	Walnut Hills Cemetery	770,000														770,000	I
	Public Works - Conser /Open Space Sub-Total	2,900,000	225,000	**230,000**		230,000		235,000		235,000		240,000		240,000		1,265,000	
	Public Works Total	72,212,641	7,391,333	**7,843,655**		13,267,068		8,902,333		9,458,373		5,359,293		4,453,293		15,537,293	
	RECREATION																
2	Eliot Rec Improvements	775,000														775,000	A
	Recreation Total	775,000	-	**-**		-		-		-		-		-		775,000	

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H = CDBG
I = Other
J = Re-Appropriation of Funds
K = Debt Exclusion Override

CC		Total	Prior Year (FY17)	FY2018 Amount	RC	FY2019 Amount	RC	FY2020 Amount	RC	FY2021 Amount	RC	FY2022 Amount	RC	FY2023 Amount	RC	Future Years Amount	RC
	SCHOOL																
6	Furniture Upgrades	920,000	80,000	**90,000**	A	100,000	A	110,000	A	120,000	A	130,000	A	140,000	A	150,000	A
2	Town/School ADA Renovations	640,000	70,000	**75,000**	A	75,000	A	80,000	A	80,000	A	85,000	A	85,000	A	90,000	A
2	Town/School Elevator Renov. Program	750,000	275,000	**475,000**	A												
2	Town/School Energy Conservation Projects	1,400,000	170,000	**75,000**	A	180,000	A	185,000	A	190,000	A	195,000	A	200,000	A	205,000	A
2	Town/School Energy Management System	1,185,000	175,000	**125,000**	A	125,000	A	125,000	A	125,000	A	130,000	A	130,000	A	250,000	A
2	Town/School Bldg Envelope/Fenestration Rep	17,000,000	2,100,000					1,400,000	B			1,800,000	A		A	11,700,000	A/B
2	Town/School Roof Repair/Repl. Program	17,300,000						2,300,000	B					800,000	B	14,200,000	A/B
2	Town/School Bldg Security / Life Safety Sys	1,305,000	175,000	**215,000**	A	130,000	A	160,000	A	160,000	A	170,000	A	170,000	A	125,000	A
2	Town/School Compactor Replacements	200,000	50,000			100,000	A									50,000	A
2	School Rehab/Upgrade	600,000		**100,000**	A	50,000	A	50,000	A			200,000	A	100,000	A	100,000	A
2	High School Addition - Town Share (non-Debt Excl)	36,500,000		**1,500,000**	B	35,000,000	B										
2	High School Addition (Debt Excl)	-				TBD	K										
2	9th School at Baldwin	1,500,000		**1,500,000**	A	TBD	K										
2	School Studies (9th and HS)	800,000	800,000														
2	Driscoll School Rehabilitation	4,400,000		**400,000**	A	4,000,000	B										
2	Old Lincoln School Modifications	350,000	350,000														
2	Classroom Capacity	7,280,000	1,038,000	**995,000**	A	1,165,000	A	1,223,000	A	1,032,000	A	912,000	A	915,000	A		
	School Total	92,130,000	5,283,000	**5,550,000**		40,925,000		5,633,000		1,707,000		3,622,000		2,540,000		26,870,000	

TOWN OF BROOKLINE CAPITAL IMPROVEMENT PROGRAM: FY2018 - FY2023

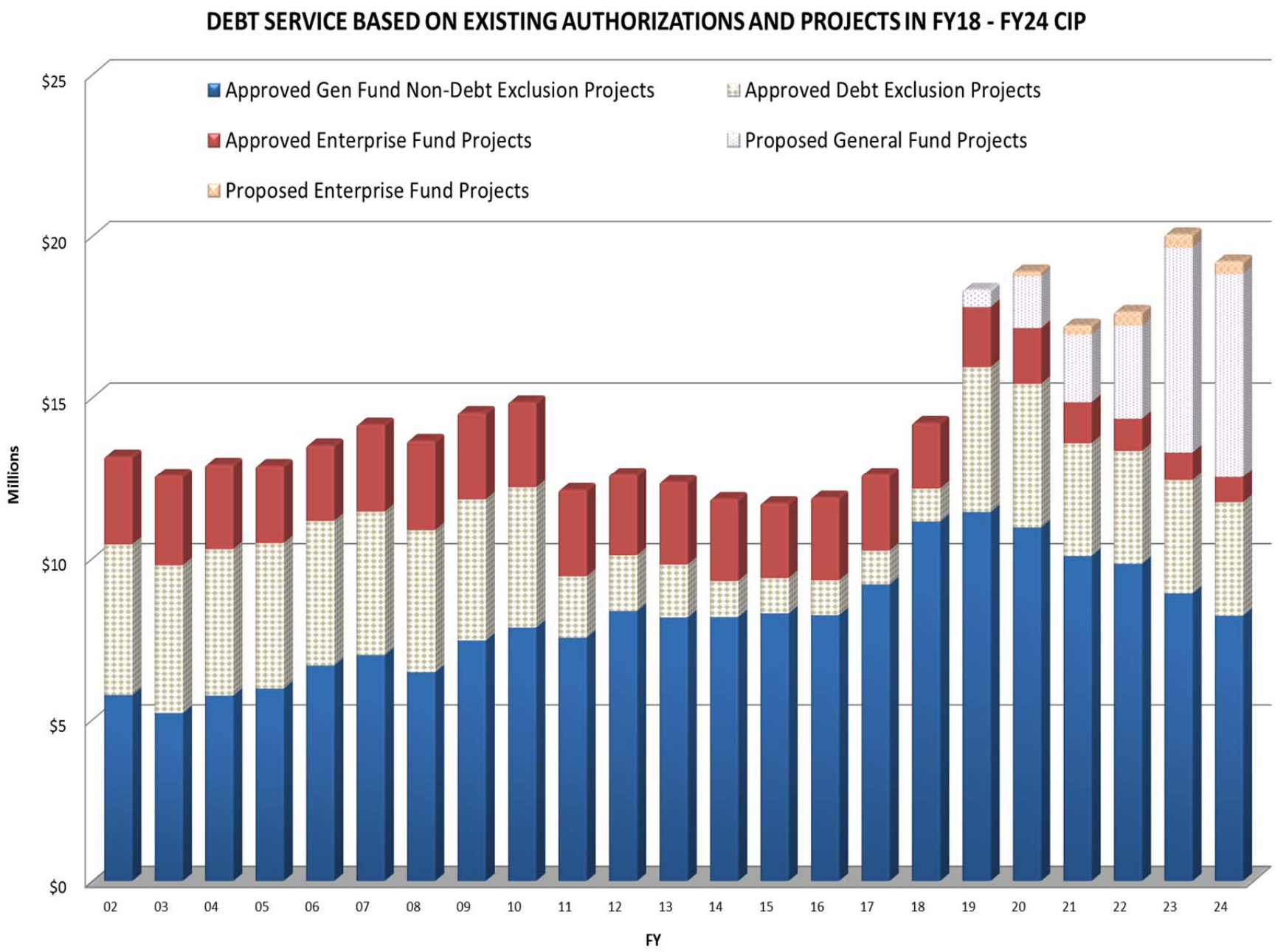
CATEGORY CODES (CC):

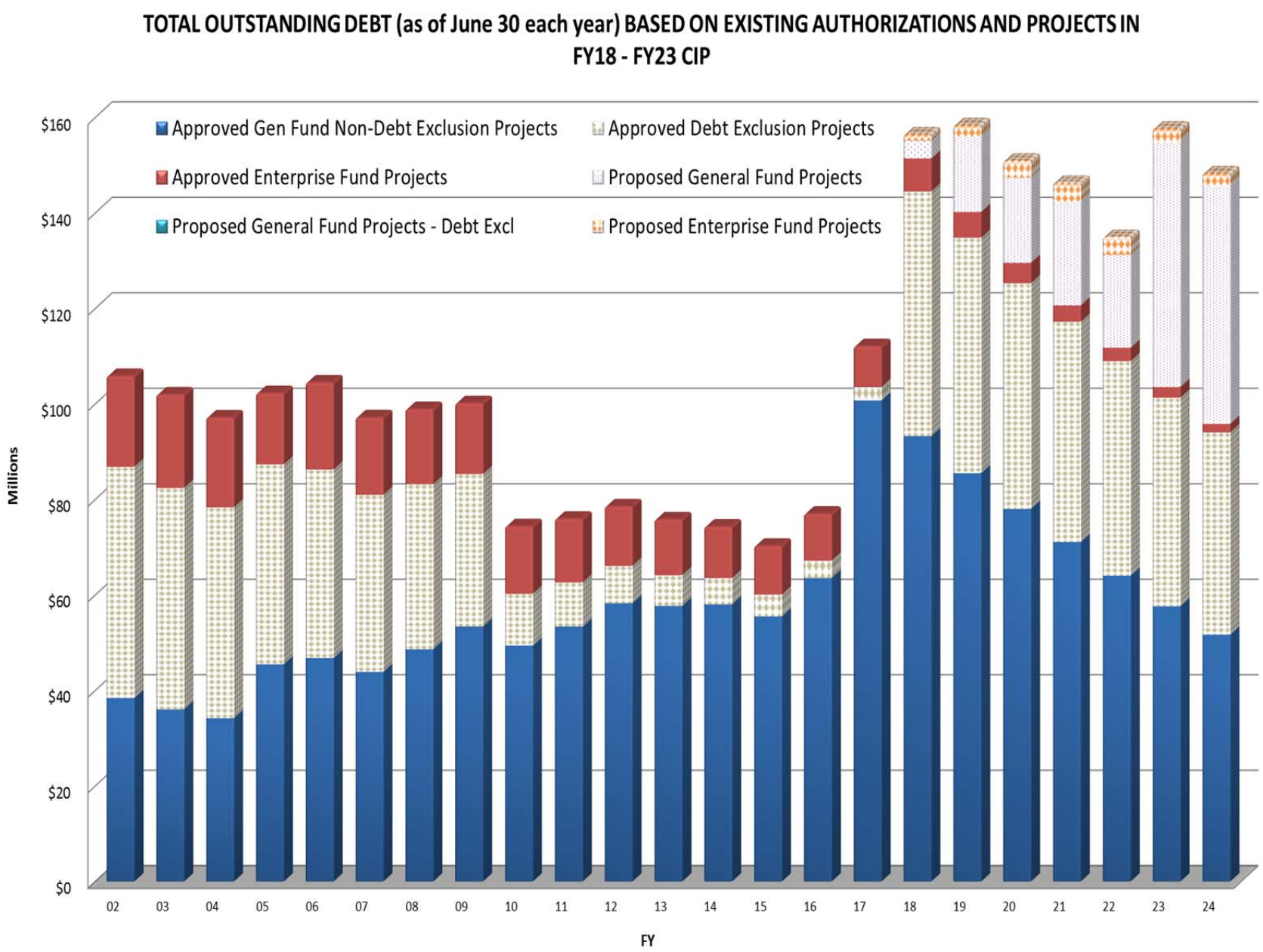
1 = New Facility Construction
2 = Facility Renovation / Repair
3 = Parks/Open Space/Playgrounds
4 = Infrastructure
5 = Vehicles
6 = Miscellaneous

REVENUE CODES (RC):

A = Property Tax/Free Cash/Overlay Surplus
B = General Fund Bond
C = State / Federal Aid
D = Golf Budget
E = Golf Bond
F = Utility Budget
G = Utility Bond
H = CDBG
I = Other
J = Re-Appropriation of Funds
K = Debt Exclusion Override

CC		Total	Prior Year (FY17)	FY2018 Amount	RC	FY2019 Amount	RC	FY2020 Amount	RC	FY2021 Amount	RC	FY2022 Amount	RC	FY2023 Amount	RC	Future Years Amount	RC
	GRAND TOTAL	**188,713,141**	**28,297,333**	**15,961,155**		**55,327,068**		**15,270,333**		12,330,373		**9,646,293**		**7,268,293**		**44,612,293**	
	GRAND TOTAL BY SOURCE																
	A = Property Tax / Free Cash / Overlay Surplus	71,167,797	8,874,040	**9,720,862**	**A**	6,496,775	A	6,410,040	A	7,300,080	A	7,236,000	A	5,028,000	A	20,102,000	A
	B = General Fund Bond	88,770,000	8,100,000	**3,700,000**	**23%**	43,510,000	79%	6,100,000	40%	3,290,000	27%	970,000	10%	800,000	11%	22,300,000	50%
	C = State / Federal Grants	19,877,344	9,795,293	**1,440,293**	**9%**	1,440,293	3%	1,440,293	9%	1,440,293	12%	1,440,293	15%	1,440,293	20%	1,440,293	3%
	D = Golf Budget	-	-	**-**	**0%**	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
	E = Golf Bond	-		**-**	**0%**	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
	F = Utility Budget	2,180,000	490,000	**300,000**	**2%**	790,000	1%	300,000	2%	300,000	2%	-	0%	-	0%	-	0%
	G = Utility Bond	3,960,000	660,000	**300,000**	**2%**	3,000,000	5%	-	0%	-	0%	-	0%	-	0%	-	0%
	H = CDBG	878,000	378,000	**500,000**	**3%**	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
	I = Other	770,000			**0%**	-	0%	-	0%	-	0%	-	0%	-	0%	770,000	2%
	J = Re-Approp. of Existing Funds	-		**-**	**0%**	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
	K = Debt Exclusion Override	1,110,000			**0%**	90,000	0%	1,020,000	7%	-	0%	-	0%	-	0%	-	0%
	Grand Total	**188,713,141**	**28,297,333**	**15,961,155**		**55,327,068**		**15,270,333**		12,330,373		**9,646,293**		**7,268,293**		**44,612,293**	
	GRAND TOTAL BY ALLOCATION																
	General Government	2,625,000	600,000	**395,000**	**2%**	230,000	0%	235,000	2%	365,000	3%	245,000	3%	275,000	4%	280,000	1%
	Planning and Community Development	9,733,000	8,833,000	**500,000**	**3%**	250,000	0%	-	0%	-	0%	-	0%	-	0%	150,000	0%
	Public Safety	10,221,000	5,970,000	**1,026,000**	**6%**	655,000	1%	500,000	3%	800,000	6%	270,000	3%	-	0%	1,000,000	2%
	Library	1,016,500	220,000	**646,500**	**4%**	-	0%	-	0%	-	0%	150,000	2%	-	0%	-	0%
	DPW - Transportation	4,383,297	457,040	**586,362**	**4%**	276,775	1%	161,040	1%	372,080	3%	50,000	1%	50,000	1%	2,430,000	5%
	Engineering/Highway	28,921,344	3,439,293	**3,702,293**	**23%**	3,470,293	6%	3,518,293	23%	3,566,293	29%	3,614,293	37%	3,673,293	51%	3,937,293	9%
	Water / Sewer	6,140,000	1,150,000	**600,000**	**4%**	3,790,000	7%	300,000	2%	300,000	2%	-	0%	-	0%	-	0%
	Parks & Playgrounds	29,868,000	2,120,000	**2,725,000**	**17%**	5,500,000	10%	4,688,000	31%	4,985,000	40%	1,455,000	15%	490,000	7%	7,905,000	18%
	Conservation/Open Space	2,900,000	225,000	**230,000**	**1%**	230,000	0%	235,000	2%	235,000	2%	240,000	2%	240,000	3%	1,265,000	3%
	Recreation	775,000	-	**-**	**0%**	-	0%	-	0%	-	0%	-	0%	-	0%	775,000	2%
	Public Schools	92,130,000	5,283,000	**5,550,000**	**35%**	40,925,000	74%	5,633,000	37%	1,707,000	14%	3,622,000	38%	2,540,000	35%	26,870,000	60%
	Grand Total	**188,713,141**	**28,297,333**	**15,961,155**		**55,327,068**		**15,270,333**		12,330,373		**9,646,293**		**7,268,293**		**44,612,293**	
	GRAND TOTAL BY CATEGORY																
1	New Facility Construction	5,300,000	5,300,000	**-**	**0%**	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
2	Facility Renovation / Repair	95,771,500	6,033,000	**6,386,500**	**40%**	41,210,000	74%	5,523,000	36%	2,762,000	22%	3,912,000	41%	2,400,000	33%	27,545,000	62%
3	Parks / Open Space / Playgrounds	32,428,000	2,305,000	**2,955,000**	**19%**	5,730,000	10%	4,923,000	32%	4,970,000	40%	1,695,000	18%	730,000	10%	9,120,000	20%
4	Infrastructure	48,317,641	13,269,333	**5,388,655**	**34%**	7,537,068	14%	3,979,333	26%	4,238,373	34%	3,664,293	38%	3,723,293	51%	6,517,293	15%
5	Vehicles	2,975,000	800,000	**675,000**	**4%**	-	0%	500,000	3%	-	0%	-	0%	-	0%	1,000,000	2%
6	Miscellaneous	3,921,000	590,000	**556,000**	**3%**	850,000	2%	345,000	2%	360,000	3%	375,000	4%	415,000	6%	430,000	1%
	Grand Total	**188,713,141**	**28,297,333**	**15,961,155**		**55,327,068**		**15,270,333**		12,330,373		**9,646,293**		**7,268,293**		**44,612,293**	
	6-Year Total	**115,803,515**															


DEBT SERVICE BASED ON EXISTING AUTHORIZATIONS AND PROJECTS IN FY18 - FY24 CIP
Approved Gen Fund Non-Debt Exclusion Projects
Approved Debt Exclusion Projects
Approved Enterprise Fund Projects
Proposed General Fund Projects
Proposed Enterprise Fund Projects
$25
$20
$15
$10
$5
$0
Millions
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
FY


TOTAL OUTSTANDING DEBT (as of June 30 each year) BASED ON EXISTING AUTHORIZATIONS AND PROJECTS IN FY18 - FY23 CIP
Approved Gen Fund Non-Debt Exclusion Projects
Approved Debt Exclusion Projects
Approved Enterprise Fund Projects
Proposed General Fund Projects
Proposed General Fund Projects - Debt Excl
Proposed Enterprise Fund Projects
Millions
$0
$20
$40
$60
$80
$100
$120
$140
$160
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
FY

FY 2018-2023 CIP PROJECT DESCRIPTIONS

NOTE: The figures included in this report are based on the best available cost estimates at the time of the development of the CIP and are subject to change due to revised estimates and bids.

GENERAL GOVERNMENT

1. GARAGES AT LARZ ANDERSON

The fuel tank located on site is not used anymore and should be removed, along with the gas pumps, in order to avoid a possible leak in the future.

Estimated Cost: $125,000

Time Schedule: FY 2021 -- $125,000 Property Tax / Free Cash

2. GARAGE REPAIRS / TOWN HALL/PIERCE SCHOOL PHASE 4

With Phases 1-3 now complete, a few remaining miscellaneous items are left to repair. These include a leak in the Pierce Garage from the area outside the Main Office of Pierce, the overhang/balcony area above the Pierce Driveway which is leaking and needs masonry work, the Town Hall lower garage needs to have the drain pipes that go through it from above re-piped to area that have drains, a main drain in the Town Hall Garage that comes from the Pierce above needs to be re-piped as it is broken and there is a drainage issue behind the Main Library that goes into the driveway and ultimately water drain into the Town Hall Garage.

Estimated Cost: $300,000

Time Schedule: Prior Year-- $300,000 Property Tax / Free Cash

3. TOWN BUILDING FURNITURE

This item allows for the replacement of aging furniture at Town Hall and other non-school buildings.

Estimated Cost: $125,000

Time Schedule:

Prior Year -- $25,000	Property Tax / Free Cash
FY 2018 -- $50,000	Property Tax / Free Cash
Future Years -- $25,000	Property Tax / Free Cash

4. TOWN REHAB/UPGRADES

This is an on-going town-wide program for the repair and upgrade of Town facilities in between major renovation projects. Items funded under this program include large scale painting programs, new flooring, ceilings, window treatments and toilet upgrades. This program avoids more expensive rehabilitation that would be necessary if these items were left to deteriorate.

Estimated Cost: $350,000

Time Schedule:

FY 2018 -- $50,000	Property Tax / Free Cash
FY 2019 -- $50,000	Property Tax / Free Cash
FY 2020 -- $50,000	Property Tax / Free Cash
FY 2021 -- $50,000	Property Tax / Free Cash
FY 2022 -- $50,000	Property Tax / Free Cash
FY 2023 -- $50,000	Property Tax / Free Cash
Future Years -- $50,000	Property Tax / Free Cash

5. TOWN HALL DATA ROOM IMPROVEMENTS

As the Town continues to invest in technology that enables critical and anytime access to information and communication, the infrastructure needed to maintain information availability and access plays an equally essential role. Having completed a recent study by an outside consultant to determine the optimal operating environment for the Town Data Center, this project seeks the necessary monies to invest in power and cooling upgrades. This request of $120,000 is jointly made the Building and IT Departments in order to address the continued reliance on the enterprise computing environment for 7 day per week/24 hours per day availability. The breakout is as follows: $70k for HVAC upgrades, $30k for electrical upgrades and $20k for as-built documentation.

Estimated Cost: $120,000

Time Schedule: FY 2018 -- $120,000 Property Tax / Free Cash

6. TECHNOLOGY APPLICATIONS

This annual appropriation is for funding the projects included in the Information Technology Department's Long-Term Strategic Plan, which serves as the framework for the selection and management of technology expenditures and is updated periodically by the Chief Information Officer (CIO). Moreover, additional projects that meet the short-term objectives set by the CIO and appropriate committees provide the guidance for the Town's approach to technology management. Primary focus areas for IT investments include Infrastructure lifecycle replacement, Enterprise Applications/Better Government initiatives, School Technology, and Public Safety enhancements. Special consideration is given to projects that reduce operating expenses and / or create efficiencies.

Estimated Cost: $1,605,000

Time Schedule:	Prior Year -- $275,000	Property Tax / Free Cash
	FY 2018 -- $175,000	Property Tax / Free Cash
	FY 2019 -- $180,000	Property Tax / Free Cash
	FY 2020 -- $185,000	Property Tax / Free Cash
	FY 2021 -- $190,000	Property Tax / Free Cash
	FY 2022 -- $195,000	Property Tax / Free Cash
	FY 2023 -- $200,000	Property Tax / Free Cash
	Future Years -- $205,000	Property Tax / Free Cash

PLANNING & COMMUNITY DEVELOPMENT

7. GATEWAY EAST / VILLAGE SQUARE CIRCULATION IMPROVEMENTS

This significant public works project involves reconfiguration of the existing circulation system in Brookline Village at Washington Street, Route 9, Walnut Street, High Street, and Pearl Street. The existing jughandle, currently used to provide access to Washington Street from Route 9 eastbound, will be removed and replaced with a new four-way intersection at Pearl Street. Signals will be relocated and upgraded and a new ADA-compliant surface-level pedestrian crosswalk with walk signal will cross Route 9 just west of Pearl Street as part of a new four-way intersection, replacing the demolished pedestrian bridge that had once provided a protected crossing on Route 9. In addition, the project will include enhanced bicycle accommodation via protected bicycle lanes, and lighting and landscaping improvements. The project will improve the overall safety and aesthetics of this portion of Route 9 and Brookline Village.

Funding for project construction is assumed to come from multiple sources:

1. Transportation Improvement Program (TIP) – Gateway East is programmed in the Boston MPO's TIP for $4,818,000 in Federal Fiscal Year 2018 toward a $5,818,000 construction project. Recent project cost estimates based on the Town's August, 2016 project resubmission that includes enhanced bicycle accommodation has increased the construction budget to $7,933,000. It is estimated that the TIP will cover $6,933,000 in Federal Fiscal Year 2018 toward a $7,933,000 revised construction project.

2. The Town's Gateway East construction match of $1,000,000 will be filled by:

    - A portion of Children's Hospital's 1% Off-Site Improvements--2 Brookline Place) $327,000 and
    - $673,000 in SAFETEALU earmark

Funding for Right-of-Way Acquisition is assumed to come from multiple sources:

1. The Town is responsible for acquisition costs for all Temporary and Permanent easements needed for the Gateway East project. The estimated cost is $1,300,000. It should be noted that the Town previously sought and received Town Meeting authorization to utilize a Section 108 loan, which is a tool that can be used to undertake CDBG-eligible activities when a lump sum is needed to move a project forward. The Town may once again seek authorization from Town Meeting to secure a Section 108 loan as a funding source to pay for the acquisition of needed permanent and temporary right-of-way to accommodate the Gateway East project. Under a Section 108 loan, a community borrows against its future CDBG funds. Like a conventional loan, the Section 108 loan would have an amortization term, but instead of making payments, the Town's loan is paid back once per year off the top of its CDBG entitlement. The loan must be backed by the Town's full faith and credit.

2. The Town's Right-of-Way costs of $1,300,000 will be filled by:
    - A portion of Children's Hospital's 1% Off-Site Improvements--2 Brookline Place) $422,000
    - $378,000 in prior year CDBG funds
    - $500,000 from a Section 108 Loan

    Please note that the right-of-way acquisition costs are preliminary estimates. Under State statute, the Town may not discuss acquisition costs with property owners until the state has approved 25% the Town's design.

Estimated Cost: $9,233,000

Time Schedule:	Prior Year -- $1,422,000	Other (1% Off-Site Improvements--2 Brookline Place)
	Prior Year -- $6,933,000	Federal Grant (via State TIP)
	Prior Year -- $378,000	Federal Grant (CDBG)
	FY2018 -- $500,000	Federal Grant (CDBG) Section 108 Loan

8. COMMERCIAL AREAS IMPROVEMENTS

This appropriation is intended to fund projects detailed in the Economic Development Division's Strategic Plan, which serves as the framework for the selection and management of Commercial Area Improvements and is updated periodically by the Economic Development Advisory Board (EDAB). Maintaining healthy, local commercial areas affects the quality of life and adds much needed support to the Town's tax base. Investment toward easy to use and attractive streets, pedestrian amenities, and other civic spaces makes our commercial areas more enjoyable to live, shop, dine, and work.

Estimated Cost: $150,000

Time Schedule:

Future Years -- $150,000 Property Tax / Free Cash

9. MAJOR PARCEL STUDY

The town is essentially – but certainly not completely – built-up. Simultaneously, as a highly desirable community in which to live and invest, Brookline is subject to intense residential development pressure. The Town needs to be concerned that major privately-owned parcels, most of which are currently in institutional and/or non-profit use, may eventually succumb to that pressure and be developed. Most of these parcels are zoned for one-acre single-family housing essentially as-of-right or under Definitive or Approval Not Required Subdivision. Development of these parcels could dramatically reduce the amount of green space as well as potentially have significant effects on our facilities, thereby generating major fiscal impacts. Single-family homes on one acre lots may or may not be the best use for the property. Starting with the vision articulated in our Comprehensive Plan, combined with long-term needs identified in our Strategic Asset Plan, we, as a town, need to think about what we want to see on those privately-owned parcels. While the preponderance of the study will focus on privately-held property, it will also address any municipally- owned property that the Strategic Asset Plan may have identified as underutilized or unneeded.

There should not be any preconceived notions about the best reuse options for any of the sites, be it housing in any number of configurations (single-family, senior housing, affordable housing, multi-family, etc.), green space, mixed use or commercial use. Consulting services are necessary to take a comprehensive approach to identifying the optimum use for each of these properties and how

best to encourage those uses. This requires extensive work with both the property owners and the public to determine what is both desirable and achievable and then to balance those needs.

Estimated Cost: $100,000

Time Schedule:

Prior Year-- $100,000 Property Tax / Free Cash

10. ZONING BY-LAW REORGANIZATION

The Town of Brookline Zoning By-Law was first adopted by Annual Town Meeting in May 1962. Since its adoption, the Zoning By-Law has been amended more than 70 times. These amendments were recommended to address various concerns within the Town for residential and commercial land use and development. In addition, there have been a number of amendments adopted to promote redevelopment in specific areas in Town.

The proposed revisions to the Zoning By-Law over the years were recommended to resolve neighborhood issues regarding setbacks, density or other concerns. There have also been many revisions to promote good development and redevelopment within a specific zoning district in Town. The Zoning By-Law, in its current version, is the culmination of numerous amendments reacting to onetime events or concerns resulting in a reactionary document. This approach has been done for years without examining the impact of other provisions of the by-law creating unintended consequences. The current version of the by-law is not user friendly, difficult for the public to comprehend and creates a strain on economic development in the areas where economic development should be promoted. The end result would be a document that is clearer, more understandable, and easier for the public to follow and use.

This funding would be used to engage the services of a consultant, or consultants for the purpose of the performing a comprehensive review of the Zoning By-Law. The Zoning By-Law will be reviewed/rewritten to correct contradictions and inconsistencies that inadvertently resulted from the adoption of such amendments and otherwise; to address specific issues that have come before the Planning Board and Zoning Board of Appeals; to account for changed circumstances in land use patterns and other conditions in the Town; to recognize recent judicial decisions and statutory amendments; and to clarify language and improve organization.

A consistent and well-written Zoning By-Law will provide a solid foundation for regulatory decisions and a clearer set of rules for applicants. It will also provide consistency with the laws of the Commonwealth of Massachusetts. The product of their work is anticipated to provide a better land use guide that reflects the policies and procedures of the Town and the Commonwealth.

Estimated Cost: $250,000

Time Schedule: FY2019-- $250,000 Property Tax / Free Cash

PUBLIC SAFETY

11. FIRE APPARATUS REHAB

The Town's policy is to replace front-line fire engines every 17 years and front-line ladder trucks every 20 years. While this replacement schedule serves the Town very well, funding needs to be appropriated every 10 years to rehab engines and every 12 years to rehab ladder trucks. The breakout of the proposed funding is as follows:

Engine #6 = $50,000(FY18) Quint #4 = $500,000 (FY20)

Unfortunately, Engine #6 was excluded from the refurbishment schedule while it would have been rehabbed in 2012.

Quint 4 was purchased in 2010. In keeping with the Town's policy of refurbishing fire engines at 10 years the quint will need to be refurbished in 2020. While the Quint has an aerial ladder on it, we typically operate it as an engine company and therefor fall under the 10 year guideline. However, the refurbishment costs will be higher than a traditional fire engine due to its dual design.

Ladder #12 (formerly Ladder #2), which serves as the Department's spare ladder, is a 1995 Pierce that was rehabbed in 2007 - 2008. In FY21, the Department's front-line ladder trucks should be in excellent condition is the current replacement plan is adhered to. However, Ladder #12 will be quite old and in need of replacement or rehab. While it was thought that Ladder #12 could be rehabbed for approximately $200,000, on the recommendation from our Master Mechanic, attempting a rehab is not recommended based on extensive rust and corrosion that currently exist and would only be worse in two years from now.

Estimated Cost:	$1,550,000	
Time Schedule:	FY 2018 -- $50,000	Property Tax / Free Cash
	FY 2020 -- $500,000	Property Tax / Free Cash
	Future Years -- $1,000,000	Property Tax / Free Cash

12. ENGINE #6 REPLACEMENT

Keeping with the current policy of engine replacement at 17 years, Engine #6 would of needed to be replaced in FY19. The estimated cost for replacement would be $660,000. Unfortunately, Engine #6 was not rehabbed when it was was scheduled in 2012. While we rely upon

these replacement engines becoming spare apparatus, which is frequently put into front line status, we are requesting to purchase this engine in FY18 so a minimal rehab can be performed on the engine it is replacing to be a quality reserve. The replacement cost is estimated to be $625,000 in FY18.

Estimated Cost: $625,000

Time Schedule:

FY 2018 -- $625,000	Property Tax / Free Cash
FY2018 -- $300,000	Property Tax / Free Cash

13. TOWER #1 REPLACEMENT

Tower 1 was purchased in 2006 and would have been 12 years old in 2018, the point at which the Town policy requires refurbishment of Ladder trucks. Refurbishment is estimated at $500,000.00. However, Tower 1 has not served us well both operationally and mechanically. The Department has had to repair this vehicle several times and it has not been a reliable piece of equipment. Its size makes operating in the Coolidge Corner area difficult and its unusual design and complicated operation are problematic. The Fire Chief was able to trade in the current truck on a future replacement purchase which will reduce the replacement cost to $800,000.

Our goal is to purchase a more traditionally designed Ladder truck. In fact, the current plan is to order a basic twin to the recently built Ladder 2 bringing consistency to the apparatus, their use, operation and maintenance. History has shown us a traditional Ladder truck will serve us for 20 years.

Estimated Cost: $800,000

Time Schedule:

Prior Year -- $800,000	General Fund Bond

14. CAD SYSTEM UPGRADE

The Police Department is looking to update our (Larimore) Public Safety programs, to the new programming language in C# (C-Sharp Programming Language). The Town's current CAD (Computer Aided Dispatch) system has been dispatching Police/Fire/EMS calls for over 10 years.

The new system will have the ability and functionality to support multi-jurisdictional multi-agency dispatching for Police, Fire, and EMS. This flexible system will allow dispatchers to be assigned geographical areas, individual agencies, or both. Unit recommendations based on call location via unit's AVL (Automated Vehicle Locators), and the ability to dispatch resources to any location by premise name. Premise information will have previous call history, hazardous material information, SOP's (Standard Operating Procedures) and patrol file information; all will be available by location as the call is being managed.

The system will have a CAD alert feature allowing time sensitive information to be entered as an alert, stored as a call transaction, and given to dispatchers as a visual notification of crucial information. The system will have Embedded Map on the dispatch and call taking screen, which allows dispatchers to assign units directly from the mapping component, as well as the call list. The new CAD system will have built-in interfaces for mapping, E-911, mobile data and tablet based systems, State NCIC, D-CJIS , and external digitizer fire alarm systems. The CAD system will interface with the Records Management and Scheduling System .The system will have the ability to interface into the department's camera network(s) by a direct address link to a camera, if a camera is in the location of a E-911 call the camera will PTZ (Pan-Tilt-Zoom) into the area of the call, giving the dispatcher the ability to view that camera.

The upgraded CAD system will be fully compatible with Phase 2 wireless E-911 providers. The system will have a certified interface to Pro/QA Medical application and will be set up for Next Generation 911 which is an IP based system that allows and captures digital information, such as, voice, photos, videos and text messaging from the 911 network to the CAD system.

The State has stated Brookline can expect to cut over on the Next Gen 911 System, sometime this upcoming spring (2017), which makes the upgraded CAD system a top priority in order to accept the new Next Gen 911 standards and data flow. Within the next 3 to 6 months Brookline will be receiving wireless 911 calls to our dispatch center, currently these wireless calls are routed to the Mass State Police, with Brookline accepting these calls directly, the CAD system needs to be upgraded to accept the new wireless information, such as latitude, longitude and height to pinpoint the exact location of the call. It is imperative that we have a upgraded CAD system in place, to be able to interface to the new State wireless 911 calls and most importantly for the Next Generation 911 system.

Other applications that have to be upgraded (re-written) to the new C# environment are:

Scheduling System \ Training System \ Records Management System \ Intelligence System \ Detective Case Management \ Arrest-Booking System \National Incident Based Reporting Systems (NIBRS) \ False Burglar Alarm Tracking and Billing System \ Detail Assignment and Billing System \ Total Overtime tracking System \ Evidence Tracking System \ Field Interview System \ Situation Tracking and Analysis System \ Parking Ticket System and RMV Data Exchange Systems \ Towed Vehicle System \Internal Affairs System \ Liquor Law and Lodging House Tracking System \ Department Property Tracking System, Vehicle Inspection-Equipment System, and Hackney System . Over the last few years we have updated the foundation of the operating system to C# (C-Sharp) and new applications such as Traffic Case Management System and Crisis Intervention System have been written in the C# environment.

The new Larimore System also has developed Apps for smart phones and tablets, both for IOS and Android operating systems. These modules will connect to the CAD system and the Records Management system and will be part of the new installation. The Total cost is estimated at $485,000.00. Because of the need to upgrade the CAD portion during this fiscal year, funds in the amount of approximately $65,000.00 have been appropriated and the upgrade of the CAD will proceed during the current fiscal year. Therefore, we are seeking funding in the amount of $270,000.00 to complete the entire project.

Estimated Cost: $270,000

Time Schedule:

FY 2019 -- $270,000 Property Tax / Free Cash

15. FIRE STATION RENOVATIONS

A study was made of the conditions of the fire stations and what was needed to maintain the integrity of the floors and building in regard to the newer, larger fire equipment. The work outlined in the report includes flooring, shoring, beams, columns, and structural work. The report also includes recommendations for the HVAC systems, generators, lighting, life safety, and mechanical, electrical, plumbing (MEP), along with other peripheral systems.

The report broke the work into three categories: (1) structural, (2) life safety systems, and (3) MEP. The recommended approach was to fund all required structural work in the first year ($625,000 was approved in FY12), then fund life safety systems by stations as prioritized by the Fire Chief (FY13 – FY15), and then undertake the MEP work (starting in FY17). Given the work planned for Station 6 the funding schedule for Station 6 MEP work was moved from FY2021 to FY2017 in order to allow efficiencies with bids and project schedules. Additional structural work needed at this site is also included.

The estimates for remaining work at each station are as follows:

Sta 6 (Hammond St.)	$670,000 (FY17)
Sta 5 (Babcock St)	$220,000 (FY18)
Sta 4 (Rt. 9/Reservoir Rd)	$445,000 ($60K FY18, $385K FY19)
Sta 1 (Brookline Village)	$450,000 (FY21)
Sta 7 (Washington Sq)	$620,000 ($350K FY21, $270K FY23)
TOTAL	$2,405,000

Estimated Cost: $2,405,000

Time Schedule:

Prior Year -- $670,000	Property Tax / Free Cash
FY 2018 -- $280,000	Property Tax / Free Cash
FY 2019 -- $385,000	Property Tax / Free Cash
FY 2021 -- $800,000	Property Tax / Free Cash
FY 2022 -- $270,000	Property Tax / Free Cash

16. FIRE DEPARTMENT FLEET MAINTENANCE AND TRAINING BUILDING

The current maintenance facility is located in Station #1. The service area (shop) is on the first floor with storage and office space located in the basement. At this time the service elevator, used to transport supplies to the basement for storage, has been condemned. Because of that, there are tires weighing several hundred pounds virtually inaccessible in the basement. The actual shop area is above the basement area. Currently, the shop floor requires replacement and/or reinforcement if work in the area is to continue. Additionally, the shop is not large enough to allow access to many of the Department's vehicles, leaving the mechanics no choice but to do repairs out in the street, the drill yard, or, on occasion, inside another fire station. This is obviously unsafe when on the street and inefficient when working in locations away from the shop and all its tools and equipment. The limited size of the shop and its inability to house the apparatus leaves the Department looking to costly outside repair vendors more often than would be necessary if the Department had an adequate facility.

The Department's training facility is located at Station #6. A modernized training facility would have a classroom with the technology necessary for the delivery of essential training. The Station would also be upgraded with a new Self Contained Breathing Apparatus (SCAB) filling station, to be utilized not only for the filling of air depleted while training, but also for air used during the course of regular firefighting activities. This would eliminate the need for Engine #6 to travel outside their first due response area in order to fill cylinders. The Training Division would acquire appropriate and sufficient equipment to aid in the administration of hands-on training programs without depleting the equipment from front-line companies. This will leave companies fully complimented and better able to return to service and respond to emergencies while at the Training Facility. Lastly, a new drill yard would contain a modern, fully NFPA-compliant, live-fire training building. The existing tower, which is in poor condition, will be removed.

The ideal conclusion of this project would be twofold: (1) the creation of an apparatus maintenance facility that meets the needs of the Brookline Fire Department and provides a safe working environment for the employees and (2) the revamping of the current training site

into a safe, modern, and up-to-date facility. The $40,000 in FY15 funded a feasibility study. In FY17, $4.5 million is included for design and construction.

Estimated Cost: $4,500,000

Time Schedule:

Prior Year -- $4,500,000 General Fund Bond

17. WASHERS AND DRYERS FOR PERSONAL PROTECTIVE EQUIPMENT (PPE)

The National Fire Protection Agency (NFPA) standard 1851 details the care of Personal Protective Equipment (AKA Turnout Gear) including the cleaning or "decontaminating" of such equipment. In summary, the standard recommends routine cleaning as well as immediate cleaning after being soiled due exposure in fires or other medical emergencies.

In recent years, it has been identified that:

- Turnout gear worn on previous fire-related calls, without cleanings in between, diminishes in ability to protect the wearer.
- Over the long term, turnout gear that is always dirty doesn't last as long.
- Turnout gear worn on previous calls presents other kinds of hazards. While on the job, firefighters come in contact with carcinogenic materials, toxins and communicable disease found in blood or other body fluids. These hazards can then be carried away to potentially cause harm later by ingestion, inhalation or absorption from touch. The firefighter, or anyone else who has contact with the turnout gear, is then at risk.

For these reasons, the Fire Department is seeking $71,000 in funding to purchase three extractors (washers) and five dryers so every fire station in town is equipped to properly handle cleaning of their Personal Protective Equipment.

Estimated Cost: $71,000

Time Schedule:

FY 2018 -- $71,000 Property Tax / Free Cash

LIBRARY

18. COOLIDGE CORNER LIBRARY - ELEVATOR (ADA)/ REAR WINDOWS/CARPETING

The Coolidge Corner Library is presently only fully accessible at the front main entrance. On the lower level in the rear is a meeting room and toilets, and this room is not handicap accessible from the upper level; the only access is through a rear door. In order to make the library fully accessible, an elevator is proposed for installation at the rear of the library, which would allow access directly below. The proposed plan is to build a structure to house a permanent lift outside, which is estimated to cost $285,500. By installing the lift on the exterior of the existing building, the library can remain open during the construction and the library will avoid having to discard a significant number of books due to the loss of space caused by the new equipment and resulting ADA code restrictions.

There are nine large panels of glass windows in the rear of the building dating from the original construction in 1970. The glass is not insulated and is loose in a number of areas. All the glass would be replaced with operable windows that can be locked for security purposes. $180,500 is included for plans and specs ($17,500) and the windows ($163,000).

The majority of the carpet was installed in 1997 and is now more than 15 years old. This project will replace approx. 15,000 sq. feet of carpet at an estimated cost of $163,000. Included in the estimate is $17,500 for soft costs associated with the potential relocation renting or moving of space and materials that would be needed for this project.

Estimated Cost: $646,500

Time Schedule:

FY 2018 -- $646,500 Property Tax / Free Cash

19. LIBRARY FURNISHINGS

This request of $110,000 will be used to replace furnishings and equipment at all three libraries. The furnishings at the Main Library will be 15 years old in 2018. While the tables are expected to last 25 years or more, most of the wood and all of the upholstered chairs will have to be replaced.

Estimated Cost: $110,000

Time Schedule:

Prior Year -- $110,000 Property Tax / Free Cash

20. LIBRARY INTERIOR FACELIFT/PAINTING AND REPAIRS

This project will allow for repairs to the heavy traffic areas of all three libraries. It will provide for the painting of the interior of the libraries every 6-7 years; the replacement of flooring and ceiling tiles, as needed; and the ability to make minor electrical repairs and lighting upgrades. Each library would be done in sections to avoid having to close each facility.

Estimated Cost: $110,000

Time Schedule:

Prior Year -- $110,000 Property Tax / Free Cash

21. PUTTERHAM LIBRARY BATHROOM RENOVATIONS

With the exception of one recently installed ADA compliant bathroom, all 5 bathrooms at the Putterham library are original to the construction of the building in 1961. They are cramped, unattractive, frequent victims of plumbing problems, and are non-compliant with ADA laws.

Replacement of the two bathrooms outside the program room with one ADA accessible, unisex bathroom, replacement of the two bathrooms at the front of the library near the circulation desk with one ADA accessible, unisex bathroom, and replacement of the staff bathroom in the basement with an ADA accessible, unisex bathroom. ($150,000).

Estimated Cost: $150,000

Time Schedule:

FY2022 -- $150,000 Property Tax / Free Cash

TRANSPORTATION

22. TRAFFIC CALMING / SAFETY IMPROVEMENTS

This funding will be used to implement approved traffic calming measures, which are those that have been reviewed, analyzed, and designed by the Transportation Division using the Traffic Calming Policy as a guide.

Plans for FY2018 are for a Pedestrian Crossing LED Warning System. Pedestrian LED flashing sign system will be installed at the following pedestrian crossing locations: Chestnut Hill Avenue at Hyslop Road Chestnut Hill Avenue at Ackers Avenue Warren Street at Dudley Street. Flashing warning lights will be installed at either end of the existing cross walks. Lights will be activated by pushing a pedestrian button. These lights are similar to the flashing stop lights at High Street and Allerton Road.

Estimated Cost: $358,659

Time Schedule:	FY 2018 -- $58,659	Property Tax / Free Cash
	FY 2019 -- $50,000	Property Tax / Free Cash
	FY 2020 -- $50,000	Property Tax / Free Cash
	FY 2021 -- $50,000	Property Tax / Free Cash
	FY 2022 -- $50,000	Property Tax / Free Cash
	FY 2023 -- $50,000	Property Tax / Free Cash
	Future Years -- $50,000	Property Tax / Free Cash

23. BICYCLE ACCESS IMPROVEMENTS

The $33,000 requested for FY2018 is for the installation of pavement markings on Centre Street from Beacon Street to Fuller Street. This request would need to be reviewed and approved by the Transportation Board.

The $176,775 requested for FY2019 would fund the following:

- Construct a separate bicycle lane on the west side of Essex Street starting at Commonwealth Avenue and ending at Dummer Street.
- Construct a raised intersection at Essex Street and Dummer Street
- Repave Essex Street from Commonwealth Avenue to Dummer Street.

Estimated Cost: $245,775

Time Schedule:	Prior Year -- $36,000	Property Tax / Free Cash
	FY2018 --$33,000	Property Tax / Free Cash
	FY2019 -- $176,775	Property Tax / Free Cash

24. PARKING METER TECHNOLOGY UPGRADE

As parking meter rates increase and less people carry coins users of our parking meter system have continuously requested that the Town implement new parking meter technologies to offer alternative forms of payment. In 2013, the Town of Brookline upgraded our metered public parking supply to provide improved customer convenience, ensure a regular turnover of spaces in our high demand areas, and improve municipal maintenance and collection operations. This deployment included the installation of Digital Luke multi-space parking meters in public parking lots and over 500 IPS single space credit card acceptance parking meters on-street in our high use districts along portions of Beacon Street, Harvard Street, Kent Street, and Brookline Avenue. Use of these single space parking meters have been widely accepted and supported by general users, merchants, and others. As parking meter rates increase and less people carry coins, the Brookline Chamber of Commerce and other business and civic leaders have requested that the Town replace the remaining 1,320 POM coin only single head parking meter mechanisms with IPS credit card accepting parking meters over a 5 year period. The per unit price of $610 per mechanism includes meter mechanism, installation and commissioning, and extended 12 month warranty.

The impact on the operating budget for data storage and credit card service charges is quite significant, so while Capital funding is provided in FY2017 for the mechanisms, the recommendation is for implementation over a longer period. This will give the Town time to evaluate the impact of an anticipated pay-by-cell program and whether or not full implementation is needed given the convenience pay-by-cell technology provides.

Estimated Cost: $805,200

Time Schedule:	Prior Year -- $161,040	Property Tax / Free Cash
	FY 2018 -- $161,040	Property Tax / Free Cash
	FY 2019 -- $50,000	Property Tax / Free Cash
	FY 2020-- $111,040	Property Tax / Free Cash
	FY 2021 -- $322,080	Property Tax / Free Cash

25. FIRE ALARM CALL BOX SYSTEM

The Department of Public Works operates and maintains the Town's Fire Alarm Call Box System that consists of 297 street call boxes along the public way, 203 master station call boxes within buildings (of which 42 are publicly owned), and a network of underground conduit and cable and overhead cable providing both power to the boxes and communication to central dispatch at the Public Safety Building. The system provides notification to Dispatch for deployment of fire resources and emergency medical response. The DPW's ability to maintain this aging system has been hampered by inaccurate mapping of conduit and cable locations as well as out-of-date equipment. In 2015, the DPW and the Fire Department engaged the services of Environmental Partners Group, Inc. to update the entire system inventory, perform a condition study and recommend options for the upgrade or replacement of the system. Information gathered from central dispatch has also revealed that only 239 pulls were recorded over a 10 year period from 130 street boxes and that 167 street boxes had no activity over the same 10 year period. The following options were provided by EPG to upgrade or replace the system:

1. Repair the existing hard-wired system ($3,800,000)

2. Replace 162 of the 297 street boxes and all 42 public master boxes with solar powered wireless boxes and abandon the hard-wired network ($2,380,000)

3. Replace all 297 street boxes and all 42 public master boxes with solar powered wireless boxes and abandon the hard-wired network ($4,100,000)

Both the Public Works and Fire Department recommend the implementation of option (2) at a cost of $2,380,000 to be funded over a 2 year period.

Estimated Cost: $2,380,000

Time Schedule: Future Years -- $2,380,000 Property Tax / Free Cash

26. DEAN ROAD/CHESTNUT HILL AVE TRAFFIC SIGNAL UPGRADE

The traffic signal at the intersection of Dean Road and Chestnut Hill Avenue is the last of the older electronic traffic signals that needs to be upgraded. $35,000 is for design while the $225,000 is for the signal upgrades.

Estimated Cost: $260,000

Time Schedule: Prior Year -- $260,000 Property Tax / Free Cash

27. CARLTON ST./MONMOUTH ST. TRAFFIC SIGNALS

The Engineering/Transportation Division has received many complaints about the traffic signals at the intersection of Carlton Street and Monmouth Street particularly about the lack of appropriate pedestrian signals. The major compliant is that pedestrians don't feel safe crossing at this intersection. This funding will be used to evaluate the existing condition of the traffic signals and propose upgrades to meet current standards. The construction will involve upgrading the traffic signal equipment, replacing sidewalks, repaving the intersection and installing pavement markings.

Estimated Cost: $333,663

Time Schedule: FY2018 -- $333,663 Property Tax / Free Cash

ENGINEERING/HIGHWAY

28. STREET REHABILITATION - TOWN

In 1992, the Department of Public Works (DPW) undertook a comprehensive study of its roads and implemented a pavement management system. The system was designed to bring Town-owned streets to a sufficient level of repair such that the roads could be maintained without undertaking costly full reconstruction. From 1992 to 1997, the Town made some progress in this regard, but funding was inconsistent. Starting in 1997, the Town began allocating $1 million per year to streets, in addition to Chapter 90 funding from the State.

Based on the recommendations of the 2007/2008 Override Study Committee (OSC), the 2008 Override approved by the voters included $750,000 for streets and sidewalks, to be increased annually by 2.5%. In FY17, the appropriation is recommended at $1.63 million (the original $1 million base plus the $300,000 added in FY09 increased annually by 2.5%).

Estimated Cost: $14,190,000

Time Schedule: Prior Year -- $1,630,000
FY 2018 -- $1,670,000 Property Tax / Free Cash
FY 2019 -- $1,710,000 Property Tax / Free Cash

FY 2020 -- $1,750,000	Property Tax / Free Cash
FY 2021 -- $1,790,000	Property Tax / Free Cash
FY 2022 -- $1,830,000	Property Tax / Free Cash
FY 2023 -- $1880,000	Property Tax / Free Cash
Future Years -- $1,930,000	Property Tax / Free Cash

29. STREET REHABILITATION - STATE

The State provides monies under its Chapter 90 program for improvements to certain streets. About 1/3 of Brookline's streets are eligible for 100% State reimbursement. This money supplements the funding appropriated from Town funds for street rehabilitation. An annual $300 million statewide Chapter 90 program is assumed.

Estimated Cost: $11,522,344

Time Schedule:

Prior Year -- $1,440,293	
FY 2018 -- $1,440,293	State Grant
FY 2019 -- $1,440,293	State Grant
FY 2020 -- $1,440,293	State Grant
FY 2021 -- $1,440,293	State Grant
FY 2022 -- $1,440,293	State Grant
FY 2023 -- $1,440,293	State Grant
Future Years -- $1,440,293	State Grant

30. SIDEWALK REPAIR

The Department of Public Works developed a sidewalk management program. Some sidewalks are reconstructed as part of the street reconstruction program; those that are not are funded under this program. Based on the recommendations of the 2007/2008 Override Study Committee (OSC), the 2008 Override approved by the voters included $750,000 for streets and sidewalks, to be increased annually by 2.5%. Of the FY09 override amount, $50,000 was appropriated for sidewalks. In FY17, the appropriation is recommended at $304,000 (the original $200,000 base plus the $50,000 added in FY09 increased annually by 2.5%).

Estimated Cost: $2,659,000

Time Schedule:	Prior Year -- $304,000	
	FY 2018 -- $312,000	Property Tax / Free Cash
	FY 2019 -- $320,000	Property Tax / Free Cash
	FY 2020 -- $328,000	Property Tax / Free Cash
	FY 2021 -- $336,000	Property Tax / Free Cash
	FY 2022 -- $344,000	Property Tax / Free Cash
	FY 2023-- $353,000	Property Tax / Free Cash
	Future Years -- $362,000	Property Tax / Free Cash

31. PARKING LOT REHABILITATION

Since its construction in 1965, the Centre Street parking lot has not had any substantial maintenance work done. Repairs have been more reactive and of the "band-aid" type and significant renovations in terms of curbing, pavement, and associated improvements are necessary. The Centre St. East Parking Lot / Harvard St. Study calls for the expenditure of $100,000 to hire a consultant to further develop conceptual plans prepared as part of a preliminary Reconfiguration Study conducted in 2014. There is a great opportunity for the Town to identify and then integrate other needs confronting Coolidge Corner into planning for the parking lot, thereby promoting an efficient use of the publicly owned parcel. Once this study is complete, there will be a better understanding of the opportunities and costs. The $205,000 shown in Future Years is the estimate for the more traditional repaving and resetting of curbing.

Estimated Cost: $205,000

Time Schedule: Future Years -- $205,000 Property Tax / Free Cash

32. WINTHROP PATH REHABILITATION

Winthrop Path is a 380 ft. pedestrian foot path that runs from Washington Street to Winthrop Road. The path was constructed in 1933 and had major reconstruction in 1965. In the 50 years since then the path has received only minor maintenance. There are many steps which have deteriorated to the point where they are not safe to travel. The Highway Division has done the best they can in trying to keep the steps passable. DPW will try to keep the path open but may have to close path if the temporary/preventive maintenance falls behind.

Estimated Cost: $65,000

Time Schedule: Prior Year -- $65,000 Property Tax / Free Cash

33. MUNICIPAL SERVICE CENTER SITE IMPROVEMENTS

The 10' high cedar fence which borders the 2nd fairway of Putterham Meadows Golf Course is over twenty years old and is falling over. The posts have deteriorated to a point that temporary steel posts had to be installed to keep the fence upright. The cedar slats have split and many are missing leaving gaps in the fence. Approximately 830' of fencing is in need of removal and replacement.

In order to increase the much needed parking and storage areas opposite the mechanic's bay and the salt shed a 3.5' high concrete retaining wall is proposed along the 2nd fairway at the golf course. With the retaining wall the pavement will be increased by +/- 10'. Approximately 300' of new retaining wall will be installed.

Estimated Cost: $240,000

Time Schedule: FY 2018 -- $240,000 Property Tax / Free Cash

34. DAVIS PATH FOOTBRIDGE

Davis Path footbridge is a cement concrete footbridge which spans the MBTA D line at Boylston Playground. The footbridge has only seen cosmetic maintenance work for the last several years. Currently the surface is delaminating and treads have started to separate from the risers. The bridge is clearly in need of a structural evaluation. With the completion of the new hotel on Boylston Street the bridge is sure to see more activity. This funding will be used to do a structural analysis of the bridge which will include a recommendation on future steps.

Estimated Cost: $40,000

Time Schedule: FY 2018 -- $40,000 Property Tax / Free Cash

WATER/SEWER

35. SINGLETREE HILL TANK IMPROVEMENTS

The Singletree Hill water storage tank provides the water distribution system with storage and operating reserves. Scheduled maintenance requires that the interior and exterior of the tank be reconditioned every 10 to 15 years. The interior was completely renovated in 2008 while the exterior was last completed in 2003. These funds will provide for the complete restoration of the exterior surface in FY17 and the interior surface in FY19.

Estimated Cost: $830,000

Time Schedule:	Prior Year -- $340,000	Water & Sewer Enterprise Fund Bond
	FY 2019 -- $490,000	Water & Sewer Enterprise Fund Bond

36. STORMWATER IMPROVEMENTS & PERMIT COMPLIANCE

The EPA's Stormwater Phase II Rule establishes an MS4 stormwater management program that is intended to improve the Town's waterways by reducing the quantity of pollutants that stormwater picks up and carries into storm sewer systems during storm events. This project includes consulting services required for compliance with EPA's Phase II MS4 Permit and installation of structural lining in existing drain crossings along the MBTA C Line and D Line.

Estimated Cost: $1,500,000

Time Schedule:	Prior Year -- $300,000	Water & Sewer Enterprise Fund Budget
	FY 2018 -- $300,000	Water & Sewer Enterprise Fund Budget
	FY 2019 -- $300,000	Water & Sewer Enterprise Fund Budget
	FY 2020 -- $300,000	Water & Sewer Enterprise Fund Budget
	FY 2021 -- $300,000	Water & Sewer Enterprise Fund Budget

37. WATER SYSTEM IMPROVEMENTS

Purchase of hardware, software and professional services to implement a Water System Asset Management Program that will improve the water department's efficiency in operating and maintaining the distribution system and provide valuable information for future capital improvement planning. The program will promote water system reliability, resilience and sustainability.

Estimated Cost: $300,000

Time Schedule: FY2018 -- $300,000 Water & Sewer Enterprise Fund Budget

38. WASTEWATER SYSTEM IMPROVEMENTS

This on-going project provides funding for the rehabilitation of the wastewater collection system (sanitary sewer). Rehabilitation was based on the recommendations of the Wastewater Master Plan completed in 1999. Previously construction projects to correct sewer system deficiencies targeted: 1) structural improvements, 2) sewer and storm drain separation and 3) hydraulic capacity restoration. Moving forward the primary focus will be on the removal of inflow and infiltration sources with the overall goals of eliminating sewerage backups into homes and businesses and lowering MWRA wholesale costs by reducing extraneous flows. Funding for this project should ultimately enhance the efficiency of the wastewater collection system and help to lower MWRA wholesale costs.

Estimated Cost: $3,000,000

Time Schedule: FY 2019 -- $3,000,000 Water & Sewer Enterprise Fund Bond

39. 44 NETHERLANDS ROAD - IMPROVEMENTS

Project includes replacement of existing skylights, which are leaking; repair of existing concrete floor, which is de-laminating and replacement of two fuel pumps/dispensers, which are currently corroded.

Estimated Cost: $190,000

Time Schedule: Prior Year -- $190,000 Water & Sewer Enterprise Fund Budget

40. SINGLETREE STORAGE TANK GATEHOUSE

The Singletree Gate House, which houses the instrumentation and utilities for the Singletree Storage Tank is in desperate need of upgrades. Plastic is covering internal components due to a leaking roof, the electrical panel contains “screw in” type fuses and instrumentation must be upgraded, among other necessary improvements.

Tighe & Bond, a local full service engineering firm, from Westwood, Ma, preformed an evaluation of the Singletree Storage Tank Gatehouse to determine structural, architectural, electrical, HVAC and SCADA (instrumentation) improvement needs.

Estimated Cost: $320,000

Time Schedule: Prior Year -- $320,000 Water & Sewer Enterprise Fund Bond

PARKS/PLAYGROUNDS

41. BROOKLINE RESERVOIR PARK

Brookline Reservoir Park is a multi-generational community park and water body located along Route 9 between Lee and Warren Streets in the middle of town. Both the reservoir and the gatehouse are listed as a National Landmark. It is a man-made body of water approximately one mile in circumference with a walking/jogging stone dust track that circles the reservoir. The active walking/jogging path also serves as a dam regulated under the Commonwealth of Massachusetts Dam Safety Program. The dam is inspected on a regular basis and in order to be compliant with state regulations and to sustain the structural integrity of the dam must have significant trees and vegetation removed from the berm. The interior basin of the Reservoir is a stone riprap wall and is in need of repointing, regrouting and stabilization. The stone dust path is in need of reconstruction, for both accessibility and safety. In addition to repairing the stone basin, dam/embankment stabilization and invasive aquatic vegetation, the design review process and restoration project will include consideration of plantings, park furniture, screening from Route 9, comfort station, and pathway/access/entry/overlook points.

Funding for the project is estimated to total $2.34 million, with $140,000 in FY17 for design and $2.2 million in FY18 for construction.

Estimated Cost: $2,340,000

Time Schedule: Prior Year -- $140,000 Property Tax / Free Cash (Design)
FY 2018 -- $2,200,000 General Fund Bond (Construction)

42. COREY HILL PARK

Corey Hill Park is located at the crest of Summit Avenue. The southern parcel contains an active play equipment area and lawn and the northern parcel contains an attractive overlook of Boston, lawn area, sundial, and seating. The playground, last renovated in 1989, is in need of complete replacement including site regrading and accessibility improvements. This project will replace all play structures at the

site and review the layout and design of the active playground portion of the park. Site masonry work, benches, walkways, planting, and other site amenities will be included with this renovation. Funding for the project is estimated to total $740,000, with $40,000 in FY16 for design and $700,000 in FY17 for construction.

Estimated Cost: $700,000

Time Schedule: Prior Year -- $700,000 General Fund Bond (Construction)

43. CYPRESS PLAYGROUND & THOMAS P. HENNESSEY ATHLETIC FIELDS

Cypress Playground is a 5.22 acre park located in the heart of Brookline, adjacent to the High School, Tappan Gym and Kirrane Aquatic Center. The park has two softball fields that are shared with a rectangular natural turf field that serve high school sports, adult leagues and year round recreational programming and summer camps. A large seating area and full basketball court are located at the far side of the athletic playing fields. The park has a spray pool, picnic area, play equipment for tots and children and a sledding hill.

This renovation includes new play equipment for 2-5 and 5-12 year-old children, repair of a perimeter retaining wall, new curbing, new water play, pathways, drainage improvements, new basketball court, updated picnic area and seating, plantings, new irrigation, athletic field light improvements/replacement and installation of a full competitive sport level synthetic turf field. The $2.4 million is comprised of $240,000 for design development and construction oversight and $2,400,000 for construction.

Estimated Cost: $2,640,000

Time Schedule: FY 2019 -- $240,000 Property Tax / Free Cash (Design)
FY 2020 -- $2,400,000 General Fund Bond (Construction)

44. EMERSON GARDEN PLAYGROUND

Emerson Garden is a park located along Davis Avenue and Emerson Street with a perimeter walking path, seating, waterplay, picnic area, playground and lawn area. The play equipment for tots and older children, last renovated in 1995, is in need of total replacement, new perimeter fencing is required, and accessibility improvements are needed. The playground review will include consideration of picnic/passive areas, review of spray pool utilities, park furniture, and rehabilitation of the landscaped areas. The design review process will revisit layout, grading, accessibility, safety, and functionality of the park. Funding for the project is estimated to total $830,000, with $60,000 in FY16 for design and $770,000 in FY17 for construction.

Estimated Cost: $770,000

Time Schedule: Prior Year -- $770,000 Property Tax / Free Cash (Construction)

45. HARRY DOWNES FIELD & PLAYGROUND

While the oval and track at Harry Downes Field, located at Pond Avenue and Jamaica Road, were renovated in 2006, the play area, picnic area and softball field are in need of renovation. The playground area was last renovated in 1993. This budget item is intended to replace the play equipment and park furniture, install a water play/spray pool amenity, and renovate the athletic/softball field (also used for lacrosse, soccer youth baseball and football)and install exercise equipment. Funding for the project is estimated to total $990,000, with $80,000 in FY17 for design and $910,000 in FY19 for construction.

Estimated Cost: $1,070,000

Time Schedule:

Prior Year -- $80,000 Property Tax / Free Cash (Design)
FY 2019 -- $990,000 General Fund Bond (Construction)

46. HEATH SCHOOL PLAYGROUND & ACCESSIBILITY ACCOMODATION

The Heath School Playground has two play areas; one on the side of the school for younger children (early education program and kindergarten generally ages 2-5) and one at the front of the school for older children (5-12 years old). The play areas are actively and continuously used by the Brookline public school system during the day, extended day program until 6 pm and by the community after school hours, on the weekends, summers and holidays. The tot play area was last renovated in 1996 and is in need of complete replacement, including major grade changes and expansion to make necessary accessibility accommodations. In addition, while a portion of the older children's play area was upgraded in 2005, it is in need of refurbishment, expansion, accessibility improvements and all new safety surfacing.

This request is addressing a current need identified at the school. The request is for $80,000 for design/construction bid documents and $970,000 for construction.

Estimated Cost: $1,050,000

Time Schedule: Future Years -- $1,050,000 Property Tax / Free Cash

47. KRAFT FAMILY ATHLETIC FIELD SYNTHETIC TURF REPLACEMENT

The Kraft Family Athletic Facility, synthetic turf field and track, was installed in 2006. The synthetic turf carpet has a warranty of 8 years and an anticipated life cycle of 12 years. In FY21 the field will be 15 years old. The carpet has suffered several tears requiring repair, the turf fibers are wearing down and matting and the drainage layer is in need of regrading. The project involves removing the existing carpet, laser grading the sub base, replacing the synthetic turf and installing new infill. In addition, the track is in need of crack sealing the base and installation of a new rubberized surface and lines. In FY20, $90,000 is included for design while $980,000 is in FY21 for construction.

Estimated Cost:	$1,078,000	
Time Schedule:	FY 2020 -- $98,000	Property Tax / Free Cash (Design)
	FY 2021 -- $980,000	Property Tax / Free Cash (Construction)

48. LARZ ANDERSON PARK

With over 65 acres, Larz Anderson Park is the largest park in Brookline, is listed on the National and State Registers of Historic Places and is the flagship park of the Town with many architecturally significant buildings, structures and fences, athletic fields, play equipment, picnic areas, walking paths, an ice rink, significant trees, a water body, sweeping slopes and magnificent views of the City of Boston.

The FY19 request ($2.7 million) is for restoration in and around the lagoon area including: stabilization of the banks, dredging excessive organic material that has accumulated in the pond leading to constant algae blooms, installation of new fountain and aeration units, repair to the drainage structures, safety repair/replacement of the deteriorating Tempietto, terrace, stairs and fountain, repair of the railings and bridge structures, invasive removal and new plantings.

The FY20 request ($600,000) is for completion of full depth reclamation/reconstruction of the roadway, associated handicapped accessible paths, parking and safety improvements, overall pathway improvements and restoration of the stairs that are currently in deteriorating condition.

The $2.2 million budget in FY21 is for the Italianate Garden and the Maintenance Yard. Larz Anderson Park shows many traces of the three major cultural influences on the Anderson's aesthetics and lifestyle: Italy, Japan and England. The Andersons had a vision for their Brookline home that would take them nearly 20 years to realize. They hired the landscape architect and artist Charles A. Platt to design a sunken Italian garden at the top of the hill that would embody their love of Italy. The Italian Garden infrastructure that remains is in poor and unstable condition. The request for improvements is to make structural repairs to the walks, stairs and walls, restore the gazebo on

the east side of the garden (to match the restoration of the west side that was completed several years ago), removal of invasive vegetation and replacement with appropriate planting.

Just below the Italian Garden was the Agricultural and Horticultural area for the Anderson Estate. Isabel and Larz had greenhouses, a hen house, a rose garden, garden shed, and maintained extensive agricultural operations to support themselves and their staff. These operations, later to be replaced by the Parks and Open Space Maintenance Garages, were surrounded by significant concrete/stucco walls. The massive walls have shifted significantly and are cracking and deteriorating. The walls and access gate/door are in need of complete replacement (similar to the replacement of the perimeter wall on Goddard Avenue that was completed several years ago).

Estimated Cost:	$9,000,000	
Time Schedule:	FY 2019 -- $2,700,000	General Fund Bond
	FY 2020 -- $600,000	Property Tax / Free Cash
	FY 2021 -- $2,200,000	General Fund Bond
	Future Years -- $3,500,000	General Fund Bond

49. MURPHY PLAYGROUND

Murphy Playground, located between Kent, Bowker and Brook Streets, is a bowl shaped park with a noticeable grade change, retaining walls on three sides, play areas and a sloped open grass area. The park was last renovated in 1992 and is in need of renovation, including new play equipment for tots and older children, new perimeter fencing, improved accessibility, restoration of the field, rehabilitation of pathways, landscape improvements, review of picnic/passive areas, and review of spray pool utilities. The design review process will revisit layout, grading, accessibility, safety, and functionality of the park. Funding for the project is estimated to cost $890,000, with $70,000 for design in FY18 and $820,000 for construction in FY19.

Estimated Cost:	$890,000	
Time Schedule:	FY 2018 -- $70,000	Property Tax / Free Cash
	FY 2019 -- $820,000	General Fund Bond

50. RIVERWAY PARK

This is a continuing project of the Olmsted Park/Riverway Improvements program. This appropriation is for the reconstruction of the riverbanks that have eroded in some places by as much as 10 feet, replacement of failing or hazard trees, edge planting, lawn restoration,

rebuilding the path system, and re-grading to prevent future erosion. The project was originally anticipated to be implemented in FY2003; however, with the Brookline/Boston/Commonwealth of Massachusetts/US Army Corps of Engineers joint restoration of the Muddy River, this phase of restoration will be coordinated with the overall flood mitigation, environmental quality, and historic preservation work that is currently being designed and permitted.

Estimated Cost: $625,000

Time Schedule: Future Years -- $625,000 Property Tax / Free Cash

51. ROBINSON PLAYGROUND

Robinson Playground is a 2.38 acre park located between Cypress, High and Franklin Streets in a dense neighborhood. The playground facilities include a youth baseball/softball field, paved basketball court, multi-use court play area, playground equipment, picnic area, and water play.

The renovation includes new playground equipment for older and younger children; water play, new irrigation and field renovation; basketball and multi-use court improvements; pathway and drainage improvements; and fence replacement. The $100,000 in FY20 is for design while the $1.090 million in FY21 is for construction.

Estimated Cost: $1,190,000

Time Schedule: FY 2020 -- $100,000 Property Tax / Free Cash (Design)
FY 2021 -- $1,090,000 General Fund Bond (Construction)

52. SCHICK PLAYGROUND

Schick Park, located on Addington Road, is in need of a full site renovation to meet new safety and accessibility requirements. Renovations will include new play equipment for older and younger children, repointing the stone walls, repair/replacement of the wooden picnic shelter, field renovation, fence improvements, paving and site furniture. The estimated project cost is $90,000 for design/construction bid documents and $970,000 for construction.

Estimated Cost: $1,060,000

Time Schedule: FY 2021 -- $90,000 Property Tax / Free Cash (Design)
FY 2022 -- $970,000 General Fund Bond

53. BOYLSTON STREET PLAYGROUND

Boylston Street Playground is located on Route 9 in Brookline across from the Old Lincoln School. It has a basketball court, play equipment, water play, picnic and seating areas and a small athletic field most suitable for youth soccer, softball and baseball practices. In addition to a neighborhood playground, the playground serves as a site for recess and gym classes when the Old Lincoln School is occupied as a temporary school during school renovation projects. The field is also used by school sports for practices as necessary due to its proximity to the high school. The playground, basketball court and field are in need of full replacement/refurbishment along with accessibility improvements into and through the site and social seating/gathering places to best serve community and school use.

Estimated Cost: $1,180,000

Time Schedule: Future Years --$1,180,000 Property Tax / Free Cash

54. GRIGGS PARK RENOVATION

Griggs Park is located on a former wetland, in an enclave surrounded by houses and apartment buildings between Washington and Beacon Streets. The pathway is circular, rounding a collection of trees and vegetation, an open lawn area, seating and picnic areas, basketball and a playground. The playground was renovated in 1997. The project is estimated to cost $80,000 for survey, design review, development and construction bid documents and $890,000 for replacement of the play structures and safety surfacing for the 2-5 year olds and the school aged children. The pathway will be resurfaced, drainage improvements made, basketball and multi-generational/adult exercise area improved/added, lawn and plantings improved and furnishings replaced.

Estimated Cost: $970,000

Time Schedule: Future Years --$970,000 Property Tax / Free Cash

55. SOULE ATHLETIC FIELDS & SITE RENOVATION

The Soule Early Education Center is located on Hammond Street. The athletic fields on site serve Town-run child care programs, multi-age athletic leagues, camps, and residents of all ages and abilities. The circulation and stormwater management of the site are in need of redesign and renovation. Funds will provide for design and construction for increased capacity and improvements to parking areas, safe and accessible pedestrian circulation, storm drainage improvements, safety improvements, picnic/seating areas and improvement to Robson Athletic Field (Upper Soule). The estimated project cost is $1,110,000, with $90,000 for design and $1,020,000 for construction.

Given the site selection for the 9th Elementary School it is anticipated that this project would be incorporated into the overall plans for the School site and that this project would be included in what is requested for a debt exclusion.

Estimated Cost:	$1,100,000	
Time Schedule:	FY 2019 -- $90,000	General Fund Bond – Debt Exclusion (Design)
	FY 2020 -- $1,020,000	General Fund Bond – Debt Exclusion (Construction)

56. PARKS AND PLAYGROUNDS REHABILITATION & UPGRADE

This is an on-going town-wide program for the repair and replacement of unsafe and deteriorating playground, fence, and field facilities or components. Items funded under this program include fences, backstops, retaining walls, picnic furniture, turf restoration, bench replacements, play structures, safety surfacing, and drainage improvements. This program avoids more expensive rehabilitation that would be necessary if these items were left to deteriorate.

Estimated Cost:	$2,380,000	
Time Schedule:	Prior Year -- $300,000	Property Tax / Free Cash
	FY 2018 -- $305,000	Property Tax / Free Cash
	FY 2019 -- $305,000	Property Tax / Free Cash
	FY 2020 -- $310,000	Property Tax / Free Cash
	FY 2021 -- $210,000	Property Tax / Free Cash
	FY 2022 -- $315,000	Property Tax / Free Cash
	FY 2023 -- $315,000	Property Tax / Free Cash
	Future Years -- $320,000	Property Tax / Free Cash

57. TOWN/SCHOOL GROUNDS REHAB

Town and School grounds require on-going structural improvements and repair. These funds will be applied to create attractive and functional landscapes and hardscape improvements including plant installations, regrading, reseeding, tree work, repair to concrete or asphalt walkways through the site, trash receptacles, bike racks, drainage improvements, retaining walls, and repairs to stairs, treads, railings, benches, or other exterior structures. This funding does not include capital replacement of areas over building structures or directly connected to the buildings, such as entrance stairways and ramps into the building that are under the Building Department's jurisdiction. This program avoids more expensive rehabilitation that would be necessary if these items were left to deteriorate.

Estimated Cost: $1,175,000

Time Schedule:	Prior Year -- $90,000	Property Tax / Free Cash
	FY 2018 -- $150,000	Property Tax / Free Cash
	FY 2019 -- $155,000	Property Tax / Free Cash
	FY 2020 -- $160,000	Property Tax / Free Cash
	FY 2021 -- $165,000	Property Tax / Free Cash
	FY 2022 -- $170,000	Property Tax / Free Cash
	FY 2023 -- $175,000	Property Tax / Free Cash
	Future Years -- $110,000	Property Tax / Free Cash

58. TENNIS COURTS/BASKETBALL COURTS

The Town has over 19 basketball courts and 36 hard-surface tennis courts. Over time, the court surfaces begin to deteriorate, crack, and weather. In order to maintain the integrity, safety, and playability of the courts, the Town needs to plan for the phased reconstruction/renovation/resurfacing of the courts, lighting and drainage improvements.

Estimated Cost: $300,000

Time Schedule:	FY 2019 -- $200,000	Property Tax / Free Cash
	Future Years -- $100,000	Property Tax / Free Cash

59. COMFORT STATIONS

The Larz Anderson Comfort Station and service area are in need of accessibility, structural and ventilation improvements. The facility has public restroom facilities that are in need of structural upgrades, new doors, landings and facilities to better accommodate all ages and abilities. The project includes ventilation and flooring improvements, doors, fixtures and lighting. This project will also upgrade the service doors and area for the maintenance and office areas of the building as well as the fasçade. The office area will be upgraded to better serve staff and park visitors. Future year funding includes fixture, drainage, ventilation and access improvements to the comfort stations system wide.

Estimated Cost: $340,000

Time Schedule:	Prior Year -- $40,000	Property Tax / Free Cash

FY 2021 -- $250,000	Property Tax / Free Cash
Future Years -- $50,000	Property Tax / Free Cash

CONSERVATION/OTHER OPEN SPACE

60. TREE REMOVAL AND REPLACEMENT / URBAN FORESTRY MANAGEMENT

The tree removal and replacement program represents the Town's effort to balance street tree removals with plantings. As trees mature or are impacted by storm damage or disease, it is critical to remove these before they become public safety hazards. New tree plantings are also critical, as they directly impact the tree-lined character of the community, improve stormwater quality, provide oxygen, reduce heat impact in the summer, and improve the overall quality of life in Brookline. In addition, funding is included for on-going management work in the four conservation properties (Hall's Pond Sanctuary, Amory Woods Sanctuary, D. Blakely Hoar Sanctuary, and the Lost Pond Sanctuary) and parks. Storm damage, disease, and old age continue to reduce tree canopies. The funds will be utilized to remove hazard trees and provide structural, health, and safety pruning to prolong the life and viability of our significant trees. New trees will be planted in anticipation of the ultimate loss of existing mature trees.

Included in the requested annual amount is funding for Urban Forest Management to address a range of significant improvements needed, such as: tree removals, crown thinning, soil amendments, woodland canopy gap management, invasives removal, pest management, health and structural pruning, and planting throughout the Town's parks and open spaces. This program will help with resiliency to disease, pests and rapid decline attributed with trees unmanaged in an urban environment. The first phase of work will be performed in collaboration with the Olmsted Tree Society of the Emerald Necklace Conservancy who has worked with the Town of Brookline, City of Boston and Commonwealth of Massachusetts on an Urban Forestry Management Plan for the Emerald Necklace. The work outlined in this plan will be supported with public, private and grant funding. The protocol outlined in the plan shall be used to plan for and address urban forestry management priorities throughout Town.

Estimated Cost: $1,875,000

Time Schedule:	Prior Year -- $225,000	
	FY 2018 -- $230,000	Property Tax / Free Cash
	FY 2019 -- $230,000	Property Tax / Free Cash
	FY 2020 -- $235,000	Property Tax / Free Cash
	FY 2021 -- $235,000	Property Tax / Free Cash
	FY 2022 -- $240,000	Property Tax / Free Cash

FY 2023 -- $240,000 Property Tax / Free Cash
Future Years -- $245,000 Property Tax / Free Cash

61. OLD BURIAL GROUND

The Old Burying Ground, located on Walnut Street, is Brookline's first cemetery. Although the cemetery dates back to 1717, its appearance today reflects the ideals of the 19th century rural cemetery movement. The cemetery is listed as part of the Town Green National Register Historic District. It has been featured in a publication by the Massachusetts Department of Environmental Management (now Department of Conservation and Recreation) entitled "Preservation Guidelines for Historic Burial Grounds and Cemeteries". Research completed by both landscape architects and specialists in monument conservation indicates that the Town has much work to do in restoring the perimeter walls, markers and footstones, tombs, and monuments, as well as landscape improvements.

Estimated Cost: $250,000

Time Schedule: Future Years -- $250,000 Property Tax / Free Cash

62. WALNUT HILLS CEMETERY

The Walnut Hills Cemetery was established by the Town in 1875. Designed to preserve the natural features and effects for the landscape, the Cemetery provides visitors with a place of solace, natural beauty and quiet charm. The Walnut Hills Cemetery was listed in the National and State Registers of Historic Places in 1985.

In 2004, the Town completed a master plan for the Cemetery in order to set the parameters necessary to meet town cemetery needs of the future while maintaining the visual, service, quality and other features that make the Cemetery such a valuable historic cultural resource for the Town.

Current plans for the $770,000 in Future Years, intended for lot expansion, is to use a combination of Town Tax dollars, cemetery perpetual care fund(SW01) and an expendable cemetery trust fund (TW23). A bond authorization with debt service funded from these accounts is also a possibility. Meetings with the Trustees will continue, and they will include discussions regarding potential changes to how revenues received for the sale of lots is currently split.

Estimated Cost: $770,000

Time Schedule: Future Years -- $770,000 Other (Cemetery Funds)

RECREATION

63. ELIOT RECREATION CENTER IMPROVEMENTS

The Eliot Recreation Center is home to many of Brookline Recreation's Administrative staff and houses many community programs and services. The center is in need of renovations including an updated HVAC system, as well as utility and network infrastructure upgrades. The project includes an additional 1000 sq ft space build out over the current boiler room to accommodate a badly needed conference room as well as upgrades to the perimeter drains around the building. Historically, there have been drainage issues that have impacted the first floor during significant weather events. The project would also include renovation of the public bathrooms on the first floor.

Estimated Cost: $775,000

Time Schedule: Future Years -- $775,000 Property Tax / Free Cash

SCHOOL

64. SCHOOL FURNITURE

This is a continuous program to upgrade furniture in all schools, which absorbs significant wear and tear annually. This program will replace the most outdated and worn items.

Estimated Cost: $920,000

Time Schedule:	Prior Year -- $80,000	Property Tax / Free Cash
	FY 2018 -- $90,000	Property Tax / Free Cash
	FY 2019 -- $100,000	Property Tax / Free Cash
	FY 2020 -- $110,000	Property Tax / Free Cash
	FY 2021 -- $120,000	Property Tax / Free Cash
	FY 2022 -- $130,000	Property Tax / Free Cash
	FY 2023 -- $140,000	Property Tax / Free Cash
	Future Years -- $150,000	Property Tax / Free Cash

65. TOWN/SCHOOL BUILDING - ADA RENOVATIONS

This annual program of improvements is requested in order to bring Town and School buildings into compliance with the Americans with Disabilities Act (ADA), which requires that the Town make public buildings accessible to all.

Estimated Cost: $640,000

Time Schedule:	Prior Year -- $70,000	Property Tax / Free Cash
	FY 2018 -- $75,000	Property Tax / Free Cash
	FY 2019 -- $75,000	Property Tax / Free Cash
	FY 2020 -- $80,000	Property Tax / Free Cash
	FY 2021 -- $80,000	Property Tax / Free Cash
	FY 2022 -- $85,000	Property Tax / Free Cash
	FY 2022 -- $85,000	Property Tax / Free Cash
	Future Years -- $90,000	Property Tax / Free Cash

66. TOWN/SCHOOL BUILDING - ELEVATOR RENOVATIONS

When a building is renovated, most elevators are upgraded (new controls, motors, cables, refurbishment of the car, etc.). Some elevators are also partially upgraded to meet the requirements of the existing building codes. The buildings that have not been renovated have elevators that are close to 40 years old. Maintenance is an issue and parts are increasingly difficult to find. This project would upgrade those cars and lifts with new equipment.

The New Lincoln Elevator cylinder/piston has shown signs of failure. The situation is being monitored closely. The elevator however, is 24 years old. The controller and peripheral equipment should be modernized and upgraded at this time. An estimated $200K of the FY2018 appropriation would be used to replace the jack/controls over the summer of 2017.

Estimated Cost: $750,000

Time Schedule:	Prior Year -- $275,000	Property Tax / Free Cash
	FY 2018 -- $475,000	Property Tax / Free Cash

67. TOWN/SCHOOL BUILDING - ENERGY CONSERVATION

It is imperative that monies be invested to decrease energy consumption in Town and School buildings. Programs include, but are not limited to, lighting retrofit and controls, energy efficient motors, insulation, and heating and cooling equipment. In addition, water conservation efforts are explored. This program augments existing gas and electric utility conservation programs. A continued area of focus is building commissioning. Many years ago, a building's HVAC system was set up by multiple contractors and then signed off by the design engineer. Sometimes there would be control issues, leading to complaints or high energy usage. The Building Department, for all new projects, hires a Commissioning Agent. Recommissioning of certain buildings is suggested in order to confirm that the equipment was designed, installed and set up properly.

Estimated Cost: $1,400,000

Time Schedule:	Prior Year -- $170,000	Property Tax / Free Cash
	FY 2018 -- $75,000	Property Tax / Free Cash
	FY 2019 -- $180,000	Property Tax / Free Cash
	FY 2020 -- $185,000	Property Tax / Free Cash
	FY 2021 -- $190,000	Property Tax / Free Cash
	FY 2022 -- $195,000	Property Tax / Free Cash
	FY 2023 -- $200,000	Property Tax / Free Cash
	Future Years -- $205,000	Property Tax / Free Cash

68. TOWN/SCHOOL BUILDING - ENERGY MANAGEMENT SYSTEM

This project is to upgrade the energy management systems in Town and School buildings. A few of the larger buildings have older (30 years) energy management systems that have exceeded their life expectancy and replacement parts are no longer available. These systems would be replaced and upgraded with new web-based systems integrated into the Town's existing computer network. Other systems would be upgraded with newer software or firmware. The Building Department will continue to work with the Information Technology Department on these projects. Software upgrades are needed at the High School, Lawrence, Pierce and Baker Schools in the next few years.

Estimated Cost: $1,185,000

Time Schedule:	Prior Year -- $175,000	Property Tax / Free Cash
	FY 2018 -- $125000	Property Tax / Free Cash
	FY 2019 -- $125,000	Property Tax / Free Cash

FY 2020 -- $125,000	Property Tax / Free Cash
FY 2021 -- $125,000	Property Tax / Free Cash
FY 2022 -- $130,000	Property Tax / Free Cash
FY 2023 -- $130,000	Property Tax / Free Cash
Future Years -- $250,000	Property Tax / Free Cash

69. TOWN/SCHOOL BUILDING - ENVELOPE /FENESTRATION REPAIRS

In FY12, $250,000 was appropriated for costs associated with repairs to the outside envelope of all Town and School buildings, including a visual inspection of the exterior of all buildings that will help prioritize these repairs. The outside envelope of facilities includes masonry, bricks and mortar, flashing, dental work, coping stones, metal shelves, and tower work. Some of these structures are over 100 years old and have never had exterior work done to them. A number of buildings have windows, door entrances, and other wall openings (fenestration) that are in need of repair/replacement. This causes water to penetrate into buildings behind walls and ceilings, causing security and safety problems. Also included in this program is any required chimney inspection and repairs, if appropriate, or the installation of new metal liners to connect to the gas burning equipment in the building.

A master plan was prepared by a consultant and includes a priority list and schedule and that calls for $27.45 million over a 30-year period. The schedule has been reassessed by the Building Department and accounts for prior year savings with $5.3 million required within the six-year period of this FY18 – FY23 CIP. Facilities addressed within this time frame include the following:

2017	55 Newton, Fire Station 1	2018	Coolidge Corner Library
2019	Fire Station 7	2020	Baker, Lawrence, Main Library, Public Safety, Soule Rec
2021	No work scheduled	2022	Fire Station 4, Larz Anderson Toilets, Lincoln
2023	Driscoll, Old Lincoln, Heath		

Estimated Cost: $17,000,000

Time Schedule:	Prior Year -- $2,100,000	General Fund Bond
	FY 2020 -- $1,400,000	General Fund Bond
	FY 2022 -- $1,800,000	General Fund Bond
	Future Years -- $11,700,000	General Fund Bond+ Property Tax / Free Cash

70. TOWN/SCHOOL BUILDING - ROOF REPAIR/REPLACEMENT PROGRAM

A master plan for repair and replacement of roofs on all Town and School buildings was prepared by a consultant. The plan includes a priority list and schedule and calls for $29.3 million over a 20-year period. The schedule has been reassessed by the Building Department and accounts for prior year savings with $3.1 million required within the six-year period of this FY18 – FY23 CIP. Facilities addressed within this time frame include the following:

2017	55 Newton, Fire Station 1	2018	Coolidge Corner Library
2019	Fire Station 7	2020	No work scheduled
2021	Golf Course, Heath, Lawrence, Larz Skate Rink, Lincoln, Pierce Primary	2022	No work scheduled
2023	Driscoll		

Estimated Cost: $17,300,000

Time Schedule:	FY 2020 -- $2,300,000	General Fund Bond
	FY 2023 -- $800,000	General Fund Bond
	Future Years -- $14,200,000	General Fund Bond + Property Tax / Free Cash

71. TOWN/SCHOOL BUILDING - SECURITY/LIFE SAFETY SYSTEMS

Over the last number of years, several large capital projects have been undertaken that included security improvements in Town and School buildings. This program will extend the effort and improve areas where security may be lacking. In general, the plan calls for making all doors around the perimeter of a building more secure by replacing the doors, frames, door handles, and locks with electronic locks that may only be opened with a keypad and/or on a specific schedule. Only the front main entrance of the building would allow for general access. At the front door, a speaker and doorbell will be added to connect to the building's existing intercom or phone system for use by visitors. The lighting around each building will be improved and placed on a timer. A small camera system connected to a computer will be added at the main entrance to monitor access to the building.

School buildings will be a priority. Most schools are reasonably secure, but based on an assessment by the Police Department, security can and should be improved. These funds would also be used to continue the on-going process of replacement and installation of new and upgraded burglar alarms, fire alarm systems, sprinkler systems, emergency lighting, and egress signs.

Estimated Cost: $1,305,000

Time Schedule:	Prior Year -- $175,000	Property Tax / Free Cash
	FY 2018 -- $215,000	Property Tax / Free Cash
	FY 2019 -- $130,000	Property Tax / Free Cash
	FY 2020 -- $160,000	Property Tax / Free Cash
	FY 2021 -- $160,000	Property Tax / Free Cash
	FY 2022 -- $170,000	Property Tax / Free Cash
	FY 2023 -- $170,000	Property Tax / Free Cash
	Future Years -- $125,000	Property Tax / Free Cash

72. TOWN/SCHOOL TRASH COMPACTOR REPLACEMENTS

Trash compactors need to be replaced at the following facilities:

Baldwin Baker Driscoll Heath High School UAB Lawrence New Lincoln Pierce Health

Estimated Cost: $200,000

Time Schedule:	Prior Year -- $50,000	Property Tax / Free Cash
	FY 2019 -- $100,000	Property Tax / Free Cash
	Future Years -- $50,000	Property Tax / Free Cash

73. SCHOOL REHAB/UPGRADES

This is an on-going school-wide program for the repair and upgrade of school facilities in between major renovation projects. Items funded under this program include large scale painting programs, new flooring, ceilings, window treatments and toilet upgrades. This program avoids more expensive rehabilitation that would be necessary if these items were left to deteriorate.

Estimated Cost: $600,000

Time Schedule:	FY 2018 -- $100,000	Property Tax / Free Cash
	FY 2019 -- $50,000	Property Tax / Free Cash
	FY 2020 -- $50,000	Property Tax / Free Cash
	FY 2022 -- $200,000	Property Tax / Free Cash
	FY 2023 -- $100,000	Property Tax / Free Cash

Future Years -- $100,000 Property Tax / Free Cash

74. HIGH SCHOOL ADDITION

Due to Brookline's extraordinary K-12 enrollment increases there now exists a need to expand at the K-8 and 9-12 levels. It is anticipated that both projects will occur during an FY17 – FY20/21 timeframe. BHS enrollment is expected to grow from approximately rom 2000 student in 2016 students to 2,600 -2,800 students by 2022 -- a growth of more than 600 students in six years. This enrollment level presents a capacity challenge because the High School was renovated to accommodate 2,100 – 2,200 students and enrollment will reach approximately 2,200 by 2017/2018 and approximately 2,600 by 2021/2022. In FY13, $50,000 was authorized for expenditure from "Classroom Capacity" funding for a concept study to review all possible options for addressing the capacity needs of BHS. Those monies were spent to hire an architect to assist the B-Space Committee with the BHS issue. In addition, $100,000 was authorized in FY14 for expenditure from "Classroom Capacity" funding to further study options for the expansion of capacity at the High School.

The study, conducted by Symmes, Maini & McKee Associates (SMMA), came on the heels of the recommendations for school expansion contained in the B-Space report to address continued enrollment growth, to align with the Public Schools of Brookline Strategic Plan and Vision, and to preserve Brookline's commitment to excellence and equity. Last Winter/Spring 2016, the Brookline High School Expansion Working Group restarted the work to advance the process to expand and renovate BHS. The working group was made up of BHS teachers, staff, coordinators, district administrators, and school committee members. The working group process led by the Superintendent and Headmaster, took into account, but not limited to, the options presented in the HMFH Architects, Inc. High School Concept Study, the B-Space Committee Report, and the SMMA study. In total, since 2011, there have been three studies, 15 options reviewed, two visioning sessions to understand and contribute to the BHS further study process with District administrators, BHS administrators, BHS teachers, BSH students, BHS parents, school committee, selectmen, planning board, building commission, and members of the business community. The charge included beginning a process of analyzing the pedagogical and administrative implications of optimally serving up to 2,600-2,800 high school students in Brookline. The working group produced an updated Brookline High School Education Plan for its use as part of the Feasibility Study phase.

In March, 2016, the School Committee, the Board of Selectmen, and the Advisory Committee all voted unanimously to proceed with the process for the 9th Elementary School and Brookline High School renovation and expansion without submitting a Statement of Interest to the Massachusetts School Building Authority to allow for more flexibility in the design processes and the timelines for the projects. In FY17, $500,000 of the School Studies appropriation (item 75 listed below) was included for the Feasibility phase of the project. An additional $1.5 million is available in FY18 for schematic design. In FY19, $35 million of authorization will combined with a Debt Exclusion Override request. The $35.1 million figure represents the amount that can be afforded within the Town's 6% CIP Financing Policy. The current debt management plan calls for this funding to be accessed during the last phase of borrowing for this project in calendar year 2022. Any change to the timing of this authorization would require significant modifications to the projects contained within this CIP.

HMFH was selected to be the architect for the Feasibility Phase. HMFH will be working with the BHS School Building Committee, the School Committee as the user agency, the Building Department, and numerous town commissions and departments including Parks and

Open Space, the Building Commission, the Recreation Department, and the Transportation Board to more deeply analyze the site specific considerations of this site. During the Feasibility Study phase HMFH will create design options for the size, configuration and location of the school on the High School site. There may be a need to analyze additional site locations abutting the high school complex. The outcome of this phase will be the BHS School Building Committee's recommendation of a preferred design concept that will then move the project forward into the Schematic Design phase.

Estimated Cost:	$36,500,000	
Time Schedule:	FY 2018 -- $1,500,000	General Fund Bond (Schematic Design)
	FY 2019 – TBD	General Fund Bond – Debt Exclusion (Design/Construction)
	FY 2019 -- $35,000,000	General Fund Bond (Design Completion / Construction)

75. 9th SCHOOL AT BALDWIN

Due to Brookline's extraordinary K-12 enrollment increases there now exists a need to expand at the K-8 and 9-12 levels. It is anticipated that both projects will occur during an FY17 – FY20/21 timeframe. Since the Town will not pursue partnership with the MSBA school construction program, the project team can accelerate a timeline toward construction for the high school to be completed by 2021.

On October 13, 2016, after a process that began more than four years ago, more than 20 public meetings over the past year, and input from hundreds of community members, the Board of Selectmen and the Brookline School Committee voted to select the Baldwin School site as the location for the town's new elementary school.

With the final selection of the Baldwin School site as the location of Brookline's 9th elementary school, the project moved to Feasibility Study phase. During this phase, Jonathan Levi Architects (JLA) will be working with the 9th School Building Committee, the School Committee as the user agency, the Building Department, and numerous town commissions and departments including Parks and Open Space, the Building Commission, the Recreation Department, and the Transportation Board to more deeply analyze the site specific considerations of this site. During the Feasibility Study phase JLA will create design options for the size, configuration and location of the school on the Baldwin site. The outcome of this phase will be the 9th Elementary School Building Committee's recommendation of a preferred design concept that will then move the project forward into the Schematic Design phase.

In FY17, $500,000 of the School Studies appropriation (item 76 listed below) was included for the Feasibility phase of the project. An additional $1.5 million is available in FY18 for schematic design. The remainder of the project is assumed to be covered via a Debt Exclusion Override request.

Estimated Cost: $1,500,000

Time Schedule:	FY 2018 -- $1,500,000	Property Tax / Free Cash (Schematic Design)
	FY 2019 – TBD	General Fund Bond – Debt Exclusion (Design/Construction)

76. SCHOOL STUDIES

In October, 2014, a study was commissioned by the Selectmen and School Committee to focus on identifying and evaluating sites throughout Brookline that may be able to accommodate a new or expanded school in order to address the rapidly escalating school population. In December, 2014 a contract was awarded to a vendor, CivicMoxie, in the context of their understanding of both the school capacity issue and the dearth of available and appropriately sited land in Brookline. The Board of Selectmen and School Committee reviewed the Ninth Elementary School Site Identification Study and discussed the need for a new school. The Board of Selectmen and School Committee identified six sites from the Civic Moxie study. The outcome of a joint board meeting was a decision to move ahead with a study of three sites to be funded out of the "Classroom Capacity" CIP appropriation. It is anticipated that a final site will be identified in the fall of 2016. This funding for School Studies would include a feasibility study for the High School and the 9th School site, as identified by both Boards this fall. It is projected that approximately $500,000 will support the High School feasibility study and $300,000 will be needed for the 9th School feasibility study. Included in the funding request is project management support for both projects.

Estimated Cost: $800,000

Time Schedule:	Prior Year -- $800,000	Property Tax / Free Cash

77. DRISCOLL SCHOOL REHABILITATION

The Driscoll School is in need of a new HVAC system with temperature controls.

The building presently uses steam to heat the building. The steam HVAC system dates back to 1910 in the main section, 1928 and 1953 with the additions.

It is extremely difficult to find parts to maintain the systems. The system as it is now is hard to maintain, sometimes overheats or under heats parts of the building and there is a concern of proper ventilation and cooling air. The boilers were replaced in 1995. They are fully functional and operate well. The plan would be to convert them from a steam to a forced hot water system. This would allow better heating control plus save energy.

A new HVAC system (equipment, piping, ductwork and controls) would be installed to replace the existing equipment. The work would be done over two years (primarily in the summer months). Phasing would allow the building to remain occupied.

Estimated Cost: $4,400,000

Time Schedule: FY 2018 -- $400,000 Property Tax / Free Cash
FY 2019 -- $4,000,000 General Fund Bond

78. OLD LINCOLN IMPROVEMENTS/MODIFICATIONS

In FY14, $3 million was appropriated to update some of the building equipment and make the Old Lincoln School usable as school space for the next few years. The bids for the project came in over the appropriation, so some items were removed from the project. In FY16 $1 million funded unit ventilators for heating, flooring and the required furnishings, fixtures, and equipment (FF&E), including cafeteria equipment, library shelving, shades/blinds, and white boards.

During recent renovations, inadequate wiring was discovered. Old Lincoln School is in need of an electrical distribution upgrade. These monies would be used to replace branch circuit wiring plus combine the two services into one. Also, these monies would be used to upgrade the plumbing system.

Estimated Cost: $350,000

Time Schedule: Prior Year -- $350,000 Property Tax / Free Cash

79. CLASSROOM CAPACITY

The Public Schools of Brookline PreK-12 student population has grown by 29% since FY 2006 from 6,014 students to 7,777 in FY 2017. In FY17 (October 1), there are now 5,445 PreK-8 students compared with less than 4,095 in FY05, an increase of 33%.

While the increase in size of Brookline's kindergarten enrollment has driven the majority of the growth, these larger elementary grades have moved up, consistent with the district's decades-long pattern of near 100% cohort retention. They have already started arriving at the high school which has grown by 200 students since FY14 (1,802) to FY17 (2,001). Brookline High School has grown 4.1% in the last ten years, with a five-year growth of 12.7%. In the past five years, student enrollment at the high school has increased from 1,726 students to 2,001. The maximum capacity of the existing high school is between 2,000 and 2,200 without expansion. Our current 1st through 4th Grades total 2,621 students and that cohort will be attending Brookline High School in grades 9-12 during the 2024-2025 school year. Our current 8th grade enrollment of 531 students is the lowest enrollment of the current K-8 grades, and will be replacing a 2017 graduating class of 481 students.

In order to create the classroom space necessary to accommodate this PreK-8 enrollment increase, a long series of well-planned larger-scale renovation projects and smaller-scale space conversion projects have been completed over the past decade. A total of 55 PreK-8 Classrooms were added through the use of an "Expand-in-Place" strategy since 2008 including but not limited to:

- 6 classrooms built at Heath;
- 4 classrooms built at Lawrence;
- 2 modular classrooms added at Baker;
- 11 BEEP classes moved out of K-8 buildings into leased commercial space;
- 4 classrooms in leased commercial space for Pierce;
- 1 brand new school will be built at Devotion to add 12 classrooms; and
- Expanded use of the buffer zones to maintain class size at desired levels.
- FY18 we will bring online 4 classroom conversions from existing spaces. These are likely the last K-8 classroom spaces available in the district for conversion and reclaiming
    - Driscoll is projected to need a fourth section of Grade 3.
    - Lawrence is projected to need a fourth section of Grade 6.
    - Pierce is projected to need a fifth section of Grade 4.
    - Devotion is projected to also need a fifth section of Grade 6.

The work of adapting the High School to accommodate the growing enrollment is underway with building or reclaiming a total of 9 classrooms. To accomplish this, more than forty staff members from Brookline Early Education Program (BEEP), Office of Student Affairs, METCO, ELL, Operations (Custodians, Transportation, & Food Service), Brookline Adult and Community Education (BACE), Office of Strategy and Performance, and Steps to Success Inc., were all moved in FY16 to 24 Webster Place (leased). In FY 17, the Help Desk was moved to the Health Building to join the Town IT Department. Educational Technology is also slated to move to the Sperber Center at Pierce Elementary in FY17 or FY 18. The movement of these departments from the High School, Pierce (Sperber Center), and Town Hall has allowed the district to reclaim classroom and small group instructional spaces at the high school to be used by new teachers and support staff needed due to increased enrollment.

The Classroom Capacity item in FY2017 covers the leases at the temples, 62 Harvard, 24 Webster Place and the Baker modules with very limited funding to modify smaller spaces in existing buildings. The FY2018 – 2022 budgets assume continuation of those lease arrangements.

Estimated Cost: $7,280,000

Time Schedule: Prior Year -- $1,038,000 Property Tax / Free Cash

FY 2018 -- $995,000	Property Tax / Free Cash
FY 2019 -- $1,165,000	Property Tax / Free Cash
FY 2020 -- $1,223,000	Property Tax / Free Cash
FY 2021 -- $1,032,000	Property Tax / Free Cash
FY 2022 -- $912,000	Property Tax / Free Cash
FY 2023 -- $915,000	Property Tax / Free Cash