

**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 Policies, 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	FY18	FY19	FY20	FY21	FY22	FY23	FY24
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)	\$21.468	\$22.005	\$22.555	\$23.119	\$23.697	\$24.289	\$24.897
Outstanding Debt as a % of EQV	0.8%	1.0%	0.9%	0.8%	0.8%	0.7%	0.7%
General Fund Outstanding Debt as a % of EQV	0.8%	0.9%	0.9%	0.8%	0.8%	0.7%	0.7%
Net General Fund Outstanding Debt as a % of EQV	0.3%	0.5%	0.4%	0.4%	0.3%	0.3%	0.3%
Total Outstanding Debt (in millions)	\$174.5	\$209.3	\$200.9	\$194.2	\$183.8	\$175.0	\$166.5
General Fund Outstanding Debt (in millions)	\$166.5	\$201.7	\$193.2	\$186.2	\$177.9	\$170.0	\$162.4
Net General Fund Outstanding Debt (in millions)	\$65.2	\$100.3	\$93.8	\$88.3	\$81.5	\$76.6	\$72.1
Total Debt Service (in millions)	\$14.7	\$18.6	\$20.3	\$18.3	\$18.6	\$21.0	\$20.3
General Fund Debt Service (in millions)	\$12.6	\$16.9	\$18.5	\$16.8	\$17.4	\$19.8	\$19.2
Net General Fund Debt Service (in millions)	\$12.1	\$16.4	\$18.1	\$16.4	\$16.9	\$19.8	\$19.2
Total Debt Service Per Capita	\$251	\$317	\$345	\$311	\$317	\$357	\$346
General Fund Debt Service Per Capita	\$215	\$288	\$316	\$287	\$295	\$337	\$328
Net General Fund Debt Service Per Capita	\$205	\$279	\$308	\$279	\$288	\$337	\$328
Total Debt Service as a % of Revenue	4.8%	5.9%	6.3%	5.5%	5.4%	5.9%	5.5%
General Fund Debt Service as a % of General Fund Revenue	4.6%	5.9%	6.4%	5.6%	5.6%	6.2%	5.9%
Net General Fund Debt Service as a % of General Fund Revenue	4.4%	5.8%	6.2%	5.5%	5.5%	6.2%	5.9%
A. Total Outstanding Debt Per Capita as a % of Per Capita Income	4.4%	5.2%	4.9%	4.6%	4.2%	3.9%	3.7%
General Fund Outstanding Debt Per Capita as a % of Per Capita Income	4.2%	5.0%	4.7%	4.4%	4.1%	3.8%	3.6%
Net General Fund Outstanding Debt Per Capita as a % of Per Capita Income	1.7%	2.5%	2.3%	2.1%	1.9%	1.7%	1.6%
B. Total Outstanding Debt Per Capita	\$2,971	\$3,564	\$3,421	\$3,306	\$3,130	\$2,979	\$2,836
General Fund Outstanding Debt Per Capita	\$2,836	\$3,434	\$3,290	\$3,171	\$3,029	\$2,894	\$2,765
Net General Fund Outstanding Debt Per Capita	\$1,111	\$1,708	\$1,597	\$1,504	\$1,388	\$1,304	\$1,228
C. Total Outstanding Debt as a % of Assessed Value (AV)	0.8%	0.9%	0.9%	0.8%	0.8%	0.7%	0.7%
General Fund Outstanding Debt as a % of Assessed Value (AV)	0.8%	0.9%	0.8%	0.8%	0.7%	0.7%	0.7%
Net General Fund Outstanding Debt as a % of Assessed Value (AV)	0.3%	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%
D. Total Net Direct Debt Maturing Within 10 Years	75%	76%	78%	69%	73%	74%	86%
E. CIP Financing as a % of Prior Year's Net Revenue	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Debt-Financed CIP as a % of Prior Year's Net Revenue	4.57%	4.80%	4.99%	4.54%	4.55%	5.25%	4.92%
Revenue-Financed CIP as a % of Prior Year's Net Revenue	1.43%	1.20%	1.01%	1.46%	1.45%	0.75%	1.08%

**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 \$2,601 (for FY18).
- 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.

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

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):

	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Total General Fund Revenue	284,676,212	291,115,063	301,246,613	310,661,861	319,230,759	328,478,112
<b>LESS:</b>						
Non Appropriations	8,508,413	8,709,917	8,916,459	9,128,164	9,345,161	9,567,584
Debt Exclusions	4,833,739	5,518,935	4,567,335	4,567,335	4,567,335	4,567,335
Free Cash	8,551,363	3,941,740	4,085,793	4,246,692	4,382,870	4,505,899
Capital Project Surplus	0	0	0	0	0	0
<b>Net Revenue</b>	<b>262,782,697</b>	<b>272,944,470</b>	<b>283,677,026</b>	<b>292,719,670</b>	<b>300,935,393</b>	<b>309,837,294</b>
Prior Year Net Revenue	254,887,032	262,782,697	272,944,470	283,677,026	292,719,670	300,935,393
<b>6% CIP FUNDING POLICY</b>						
Net Debt Financed <sup>1</sup>	12,443,000	13,106,653	12,365,333	12,876,561	15,321,810	14,763,332
Net Debt Financed as a % of Prior Yr Net Rev	4.88%	4.99%	4.53%	4.54%	5.23%	4.91%
Revenue Financed	3,067,354	2,660,309	3,977,840	4,110,208	2,209,672	3,260,264
Revenue Financed as a % of Prior Yr Net Rev	1.20%	1.01%	1.46%	1.45%	0.75%	1.08%
<b>SUB-TOTAL 6% Dedicated to CIP</b>	<b>15,510,354</b>	<b>15,766,962</b>	<b>16,343,173</b>	<b>16,986,769</b>	<b>17,531,482</b>	<b>18,023,596</b>
Free Cash for CIP	6,012,271	3,357,272	3,338,117	3,144,318	3,085,994	3,039,455
Capital Project Surplus -- Re-approp. of Funds	500,000	0	0	0	0	0
Other Funds (Bond Premium)	0	2,400,000	0	0	221,735	0
<b>FUNDS AVAILABLE FOR CIP THROUGH GEN. FUND WITHIN TAX LEVY</b>	<b>22,022,625</b>	<b>21,524,234</b>	<b>19,681,290</b>	<b>20,131,087</b>	<b>20,839,210</b>	<b>21,063,051</b>
<b>As % of Prior Yr Net Rev</b>	<b>8.6%</b>	<b>8.2%</b>	<b>7.2%</b>	<b>7.1%</b>	<b>7.1%</b>	<b>7.0%</b>
Debt Exclusions	4,833,739	5,518,935	4,567,335	4,567,335	4,567,335	4,567,335
<b>TOTAL FUNDS AVAILABLE FOR CIP THROUGH GEN. FUND</b>	<b>26,856,364</b>	<b>27,043,169</b>	<b>24,248,625</b>	<b>24,698,422</b>	<b>25,406,546</b>	<b>25,630,386</b>
<b>As % of Prior Yr Net Rev</b>	<b>10.5%</b>	<b>10.1%</b>	<b>8.7%</b>	<b>8.6%</b>	<b>8.5%</b>	<b>8.4%</b>

<sup>1</sup> 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 Select Board 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 the the Capital Sub-Committee of the Advisory Committee. 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 FY2019 – FY2024 CIP**

The recommended FY2019 – FY2024 CIP calls for an investment of \$126.9 million, for an average of approximately \$21.2 million per year, and follows 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 (FY09 - FY18), the Town has authorized expenditures of \$314 million, for an average of \$31 million per year. These efforts, which have been supported by the Select Board, 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 \$126.9M six-year CIP continues to provide funding for a portion of a High School Project (\$35M) and no capacity exists beyond the schematic design phase for the 9th School project. The Soule Athletic Field renovation has been moved to future years due to the uncertainty of the site selection for the 9<sup>th</sup> School project. A Debt Exclusion Override is assumed for the remainder of what would be required at the High School and 9<sup>th</sup> School 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. Since 2005, K-8 enrollment in Brookline has increased from 3,896 students to 6,193 students, a 40% increase in enrollment. 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 is currently experiencing the initial wave of rapid enrollment growth that will increase the student body from 1,800 students in 2015, to at least 2,600 or more students by 2023.

As a result the Town is in the midst of schematic design for the High School renovation and expansion project as well as a study for a K-8 solution. 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. 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 FY2019 continues to cover the leases at the temples, 62 Harvard, and 24 Webster Place (\$1,165,000) with very limited funding to modify smaller spaces in existing buildings.

A new appropriation for HVAC equipment has been funded in this CIP. This appropriation would replace the larger, more expensive parts up to and including the entire unit for air conditioners, HVAC equipment and boilers. Funding has also been included for Underground Oil tank removal. There are 26 tanks at various school and town sites, which are nearing the end of their warranty. The plan is to remove the tanks and replace with smaller units that could potentially fit inside the building. Public Building Fire Alarm Upgrades have also been added based on a study conducted by the Building

Department this fiscal year.

The School Department has requested a new Climate Control item to deal with a variety of requests for cooling in some of their buildings. Some requests stem from a documented medical need, and others stem from maintaining an environment that is conducive to teaching and learning. Given the change in use since these buildings have been renovated it is necessary to gauge the desirability of the community to accommodate these requests. Should the request be unfavorable I would recommend that this funding be converted to the School Rehab / Upgrade appropriation.

In November 2017, the ongoing process to build a 9th elementary school in Brookline restarted the site selection process. On November 14, Town Meeting voted in favor of Special Town Meeting Warrant Article 1 to spend \$300,000 on further site evaluation at Baldwin/Pine Manor, Baker School, Pierce School, and other possible sites identified by the town or offered by landowners. The approved warrant allows for additional expenditures for further feasibility study should a single site or multi-site solution be chosen. The extended site evaluation study will be completed within 90 to 120 days, after which time feasibility study will commence. \$1.5 million is available in FY19 for schematic design at the chosen site, some of which is re-appropriated from remaining balance in the FY2018 9th School CIP item voted last year.

The BHS Expansion Project entered the Schematic Design Phase during FY2018. During this phase, the architectural firm William Rawn Associates is working with the School Building Committee to develop designs for the exterior facade of the new buildings, the layout of the building's technical systems such as electrical and plumbing, and provide more detailed cost estimates. The cost estimates for the expansion of BHS developed during this phase will be the basis for the funding request that goes to Town Meeting in 2018 and the anticipated debt exclusion override to fund construction. The project budget recommendation of the School Building Committee was not available when this document went to print, but will be voted on by the School Building Committee and ultimately placed on the ballot this spring. The current debt-financing plan for the High School includes previously authorized funding for the acquisition of 111 Cypress Street only. The remaining project costs would commence in FY20. Preliminary budget numbers indicate a total budget of approximately \$200 million with approximately \$170 million funded via the debt exclusion and an average tax impact (using the FY2018 tax rate and median values for single-family and condo owners) of approximately 5.4%.

It should be noted that the projected timeframe for both the 9th School and the High School have necessitated changes for both Cypress Playground/Athletic Field Renovations and the Soule Athletic Field Renovation. A portion of the funding for the Cypress Field Project is included in the General Fund (as shown above); any additional scope not included in the \$2.64M budget is assumed to be covered via the High School Debt exclusion. Given the uncertainty around the site for the 9th School the Soule Athletic Field project has been moved to future years.

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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:

	Total	Prior Year (FY18)	FY2019		2020		FY2021		FY2022		FY2023		FY2024		Future Years	
			Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC
<b>Parks and Playgrounds</b>																
Amory tennis courts, Parking and Halls	1,650,000														1,650,000	
Brookline Reservoir Park	2,200,000	2,200,000														
Cypress Playground/Athl. Field	2,640,000		240,000	A	2,400,000	A										
Fisher Hill Gatehouse Safety and Struct	175,000											175,000	A			
Harry Downes Field & Playground/Kra	2,450,000		2,450,000	B												
Heath School Playground Accessibility	1,110,000														1,110,000	
Larz Anderson Park	8,400,000		2,700,000	B			2,200,000	B				2,500,000	B	1,000,000		
Larz Anderson Park cash	600,000		425,000	A	175,000	A										
Murphy Playground	965,000	70,000							895,000	B						
Riverway Park	625,000														625,000	
Robinson Playground	1,250,000				100,000	A	1,150,000	B								
Schick Playground	1,060,000						90,000	A	970,000	B						
Boylston St. Playground	1,350,000								110,000	A	1,240,000	B				
Griggs Park	1,060,000												90,000	A	970,000	
Soule Athletic Fields	1,450,000														1,450,000	
Skyline Park Turf replacement and Par	1,980,000											180,000	A	1,800,000		

There is also funding allocated in FY2019 for a Traffic Calming/Safety Improvement project that calls will address improvements to the Walnut--Chestnut-Kennard Intersection.

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. Fire Station Renovation 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.

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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. Engine #1 is scheduled for replacement in FY2023 and Quint #4 is scheduled for Rehabilitation in FY2020.

With over 50,000 patrons visiting the The Evelyn Kirrane Aquatics Center annually, the facility is one of the most frequented public spaces in Brookline. The facility is now in need of new systems for filtering water for the three pools. The current systems are over 30 years old and have recently been failing, allowing sand back into the pool. A new system would be more energy efficient, filter water more quickly and effectively, saving the department in time, labor, and materials.

The request for renovations to the Putterham Library Bathrooms has been able to move up in the schedule and be funded in FY2019. 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.

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 October 20, 2017 75% design submittal to MassDOT has increased the construction budget to \$8,107,000. It is estimated that the TIP will cover \$7,107,000 in Federal Fiscal Year 2018 toward a \$8,107,000 construction project.
- The Town’s Gateway East construction match of \$1,000,000 will be filled by:
  - Children’s Hospital mitigation (1% Off-Site Improvements--2 Brookline Place) \$750,000 and
  - \$250,000 in CDBG (or combination of Ch. 90 and/or other Town sources)

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:
  - \$280,000 in prior year CDBG funds earmarked for acquisition (FY17 CDBG allocation)
  - \$1,020,000 from a Section 108 Loan combination of Ch. 90 and/or other Town sources

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Right-of-way acquisition costs presented are preliminary estimates. Under State statute, the Town may not discuss easement acquisition with property owners until MassDOT's Environmental and Community Compliance divisions give clearance for the Town to move forward.

Additional funding has been allocated to *Town Building Furniture* due to the demands placed on the appropriation over the past few years. The *Town Rehab/Upgrade* program continues at \$50,000 to help the Building Department respond to minor rehab/repair requests that fall outside of a major renovation schedule. The *Public Safety HVAC Modifications* project addresses equipment upgrades to support the communication and data system rooms in the Public Safety building.

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, 2017 was \$11.2 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:

<b>Free Cash Certification</b>	<b>\$11,151,363</b>
1. Operating Budget Reserve	\$637,218
2. Unreserved Fund Balance/Stabilization Fund	\$2,600,000
3. Liability Reserve (to get fund to 1% of Prior Yr Net Revenue)	\$456,762
4. Capital Improvements (to get to 7.5% of Prior Yr Net Revenue)	\$3,823,305
5. Affordable Housing Trust Fund (since Fund Balance below \$5M)	\$545,112
<b>Sub-Total</b>	<b>\$8,062,397</b>
<b>Amt available for Special Use (#6)</b>	<b>\$3,088,966</b>
<b>6. Special Use:</b>	
Additional CIP	\$2,188,966
Pension Fund	\$300,000
OPEB's	\$600,000
<b>Amount Appropriated</b>	<b>\$8,551,363</b>

By following these policies, \$3,823,305 of Free Cash is used to get from 6% of prior year net revenue to 7.5%. Then an additional \$2,188,966 is allocated to the CIP to help balance it. In total, \$6,012,271 of Free Cash goes toward the CIP, as recommended.

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

Some of the major projects proposed in the CIP include:

- High School - \$35M of Town funding + debt exclusion (FY19)
- 9th School - \$1.5M for Schematic Design
- Larz Anderson - \$9M (FY19-24, Future Years)
- Classroom Capacity - \$8.1M (FY19-FY24)
- Driscoll School HVAC - \$4.4M (FY18-FY19)
- Harry Downes Field & Playground/Kraft Family Athl. Field Turf Repl. - \$2.5M (FY19)
- Fire Station Renovations - \$1.7M (FY18-22)
- Public Building Fire Alarm upgrades - \$1.7M (FY19-24)
- HVAC equipment - \$1.3M (FY19-24)
- Fire Department's Engine #1 Replacement - \$725K (FY23)
- 

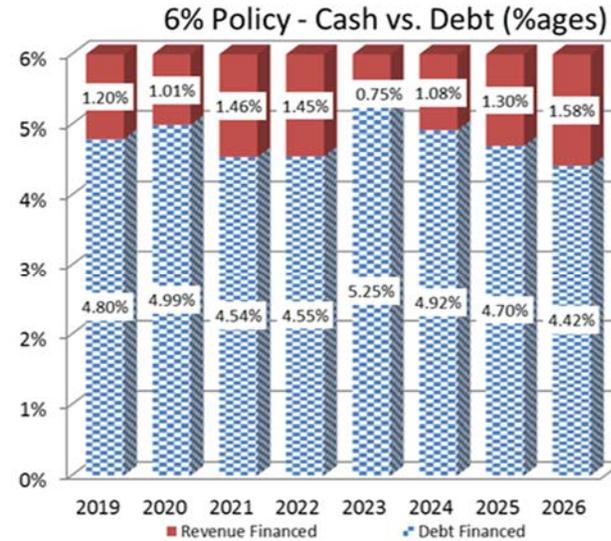
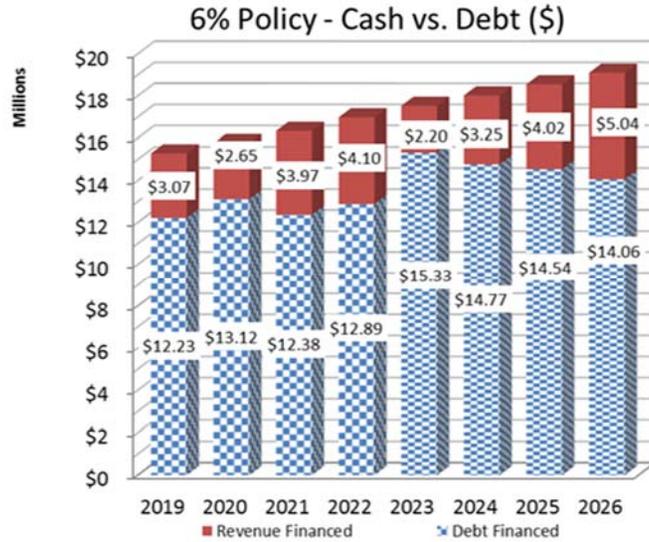
Continued major investments include:

- Street and Sidewalk Rehab - \$25 million
- Town/School Bldg Envelope/Fenestration Repairs - \$6.4 million
- Water & Sewer Infrastructure - \$8.2 million -- enterprise fund
- Information Technology - \$1.1 million
- Parks and Open Space - \$21.4 million
- Town/School Roofs - \$1.6 million
- Town/School Energy Mgmt/Conservation - \$1.4 million
- Tree Replacement - \$1.9 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 debt service for the Devotion School and High School projects. This CIP also adjusts the plan for the High School to reflect the recent Town Meeting action authorizing the Board to acquire 111 Cypress Street, a parcel of land near the High School, by eminent domain. The debt plan for this project assumes that debt exclusion funding source will provide funding for the acquisition of this property given the tightness within the existing 6% policy. The graphs below show the split between revenue-financed and debt-financed CIP based on the plan outlined above. As the graphs show, the split between cash and debt becomes tight when debt service for the High School sets in during FY2023. This will continue to be a challenge as we address the School overcrowding issue within the CIP, and it potentially places some of the regular programs funded in the CIP at risk.

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**



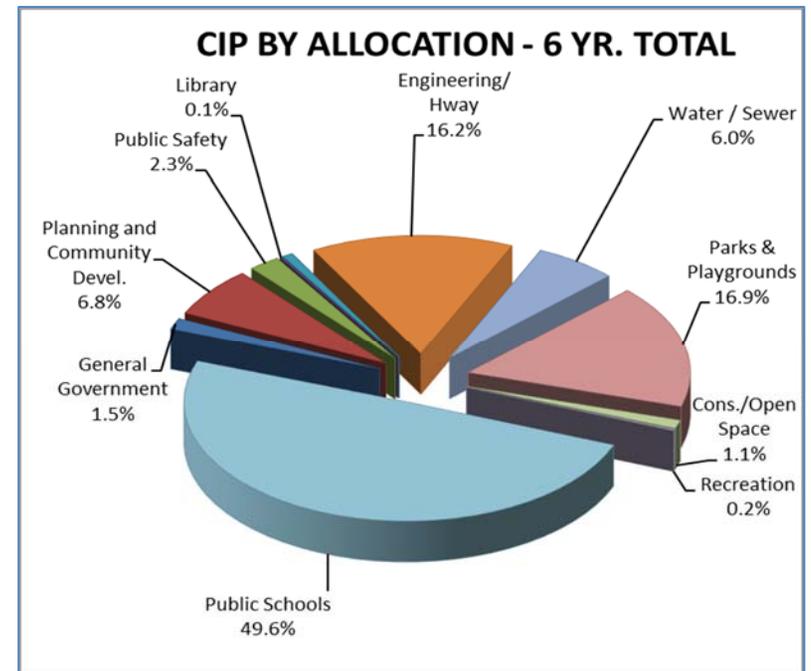
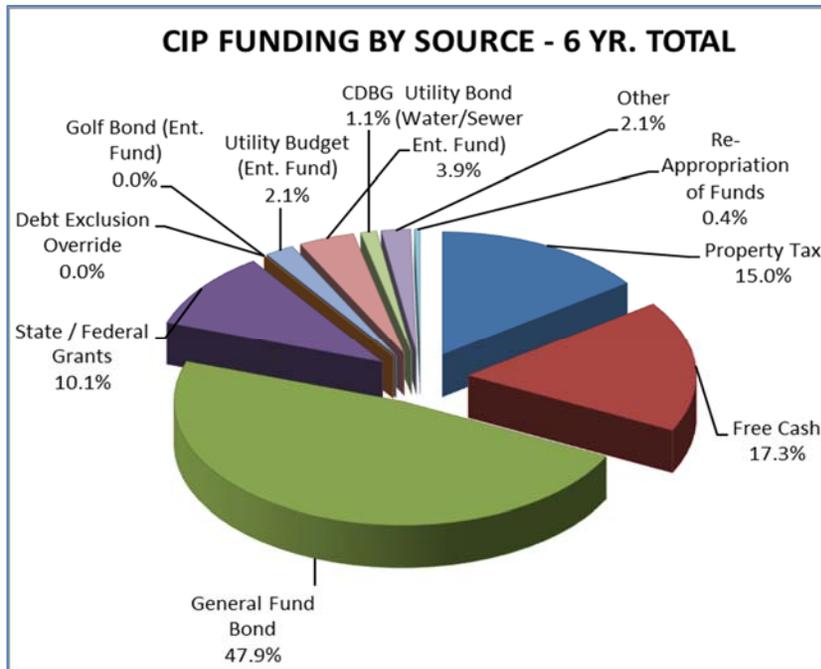
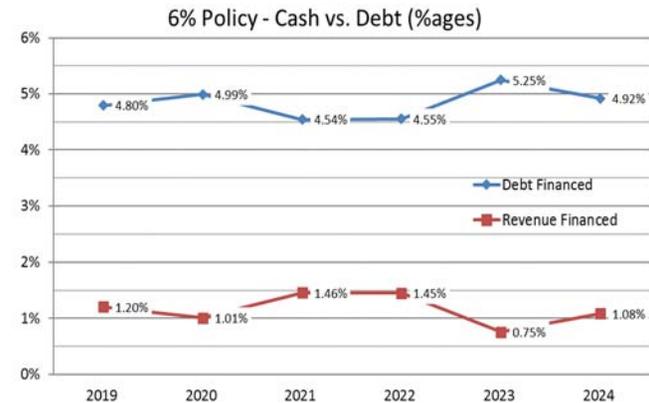
The table below details the funding sources for each year of the Proposed CIP.

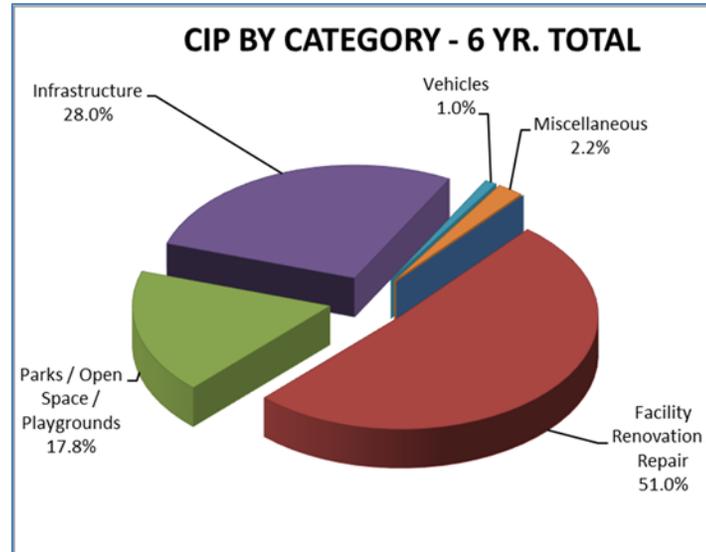
**GRAND TOTAL BY SOURCE (in millions)**

	FY19	FY20	FY21	FY22	FY23	FY24	TOTAL	% OF TOTAL
Property Tax	\$3.05	\$2.64	\$3.96	\$4.00	\$2.20	\$3.24	\$19.09	15.0%
Free Cash	\$6.01	\$3.36	\$3.34	\$3.14	\$3.09	\$3.04	\$21.98	17.3%
General Fund Bond	\$44.15	\$1.50	\$6.45	\$2.62	\$2.77	\$3.30	\$60.78	47.9%
State / Federal Grants	\$8.07	\$0.96	\$0.96	\$0.96	\$0.96	\$0.96	\$12.87	10.1%
Debt Exclusion Override	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.0%
Golf Bond (Ent. Fund)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.0%
Utility Budget (Ent. Fund)	\$0.42	\$1.06	\$0.58	\$0.58	\$0.00	\$0.00	\$2.63	2.1%
Utility Bond (Water/Sewer Ent. Fund)	\$3.00	\$2.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5.00	3.9%
CDBG	\$1.27	\$0.16	\$0.00	\$0.00	\$0.00	\$0.00	\$1.43	1.1%
Other	\$0.00	\$2.40	\$0.00	\$0.00	\$0.22	\$0.00	\$2.62	2.1%
Re-Appropriation of Funds	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.50	0.4%
<b>TOTAL</b>	<b>\$66.46</b>	<b>\$14.08</b>	<b>\$15.29</b>	<b>\$11.30</b>	<b>\$9.23</b>	<b>\$10.54</b>	<b>\$126.90</b>	<b>100%</b>

Given the reliance on more than \$60.78 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 FY19 – FY24 CIP by revenue source, by category, and by allocation group. As shown in the graph on the left side, 47.9% of the six-year CIP is funded from General Fund-supported bonds, 17.3% is funded by free cash, and 15% is funded via property tax. The graph on the right breaks out the six-year CIP by allocation group and shows that 49.6% is for Schools, 16.9% is for Parks / Playgrounds, and 16.2% is for Engineering / Highway. The final graph (on the following page) breaks out the CIP by category: 51% of the CIP goes toward facility renovations / repairs, 28% for infrastructure repairs (streets, sidewalks, water and sewer system), and 17.8% 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 10, 2017 by Moody's and the Town maintained its Aaa rating. Among the reasons stated by Moody's for the Aaa rating were "the history of balanced operations, maintenance of adequate reserve levels, and commitment to addressing capital needs and long-term liabilities."

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

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

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 Service for the acquisition of 111 Cypress is also expected to commence in FY19 pending a successful debt exclusion vote.

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 FY17, this shows that the Town's total outstanding debt was \$106.2 million, of which \$9.7 million (9.2%) was owed by either the State (\$1.46 million) or enterprise funds (\$8.3 million), leaving \$96.5 million of outstanding debt.

***OUTSTANDING DEBT***

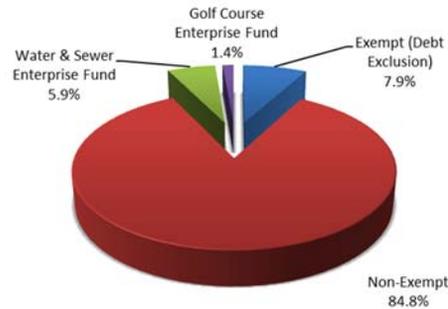
<b>DESCRIPTION</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>
<b>Total General Fund Outstanding Debt</b>	<b>66,094,309</b>	<b>64,145,426</b>	<b>63,539,088</b>	<b>60,077,544</b>	<b>67,179,500</b>	<b>97,935,250</b>
a.) Exempt (Debt Exclusion) <sup>1</sup>	7,831,500	6,430,000	5,510,000	4,590,000	3,670,000	2,750,000
b.) Non-Exempt	58,262,809	57,715,426	58,029,088	55,487,544	63,509,500	95,185,250
Minus State (SBA) Reimbursed Debt <sup>2</sup>	3,554,470	2,849,005	2,452,505	2,056,310	1,756,800	1,457,900
<b>Net General Fund Outstanding Debt</b>	<b>62,539,839</b>	<b>61,296,421</b>	<b>61,086,583</b>	<b>58,021,234</b>	<b>65,422,700</b>	<b>96,477,350</b>
Water & Sewer Enterprise Fund Outstanding Debt	11,521,791	10,028,654	10,382,110	9,050,072	7,920,156	6,961,446
Golf Course Enterprise Fund Outstanding Debt	929,000	899,000	1,099,000	1,149,000	995,000	1,325,000
<b>Enterprise Fund Outstanding Debt</b>	<b>12,450,791</b>	<b>10,927,654</b>	<b>11,481,110</b>	<b>10,199,072</b>	<b>8,915,156</b>	<b>8,286,446</b>
<b>TOTAL Outstanding Debt</b>	<b>78,545,100</b>	<b>75,073,080</b>	<b>75,020,198</b>	<b>70,276,616</b>	<b>76,094,656</b>	<b>106,221,696</b>

<sup>1</sup> The Lincoln School and High School projects were financed via a Debt Exclusion.

<sup>2</sup> 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.

**FY17 OUTSTANDING DEBT BY SOURCE**



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

<b>OUTSTANDING DEBT (PROJECTED)</b>							
<b>DESCRIPTION</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>
<b>Total General Fund Outstanding Debt</b>	<b>166,545,941</b>	<b>201,666,452</b>	<b>193,205,256</b>	<b>186,242,918</b>	<b>177,895,123</b>	<b>169,983,471</b>	<b>162,407,724</b>
a.) Exempt (Debt Exclusion) <sup>1,2</sup>	1,830,000	66,352,441	64,398,702	62,934,922	61,400,752	59,792,790	58,107,471
b.) Non-Exempt	164,715,941	135,314,011	128,806,554	123,307,996	116,494,372	110,190,681	104,300,252
Minus State (SBA) Reimbursed Debt <sup>3</sup>	1,162,050	866,200	576,450	286,700	0	0	0
<b>Net General Fund Outstanding Debt</b>	<b>165,383,891</b>	<b>200,800,252</b>	<b>192,628,806</b>	<b>185,956,218</b>	<b>177,895,123</b>	<b>169,983,471</b>	<b>162,407,724</b>
Water & Sewer Enterprise Fund Outstanding Debt	6,222,256	6,016,128	5,940,000	6,270,000	4,410,000	3,620,000	2,880,000
Golf Course Enterprise Fund Outstanding Debt	1,730,000	1,635,000	1,764,250	1,641,000	1,512,750	1,384,500	1,256,250
<b>Enterprise Fund Outstanding Debt</b>	<b>7,952,256</b>	<b>7,651,128</b>	<b>7,704,250</b>	<b>7,911,000</b>	<b>5,922,750</b>	<b>5,004,500</b>	<b>4,136,250</b>
<b>TOTAL Outstanding Debt</b>	<b>174,498,197</b>	<b>209,317,580</b>	<b>200,909,506</b>	<b>194,153,918</b>	<b>183,817,873</b>	<b>174,987,971</b>	<b>166,543,974</b>

<sup>1</sup> 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.

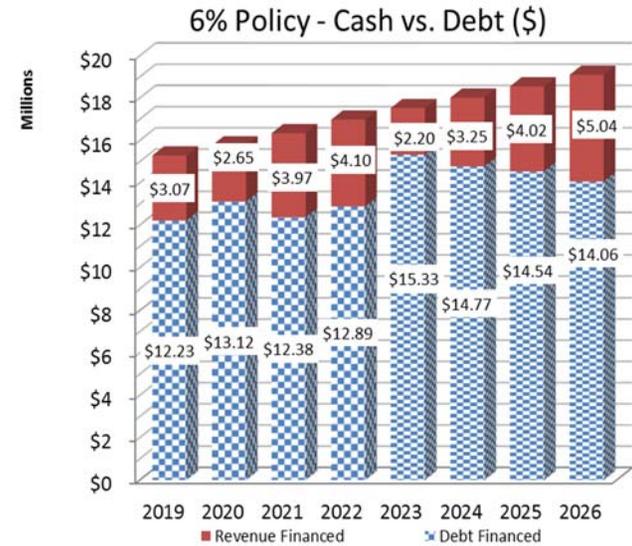
<sup>2</sup> 111 Cypress acquisition included in projection, but remaining HS project and 9th School estimates unknown.

<sup>3</sup> 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.

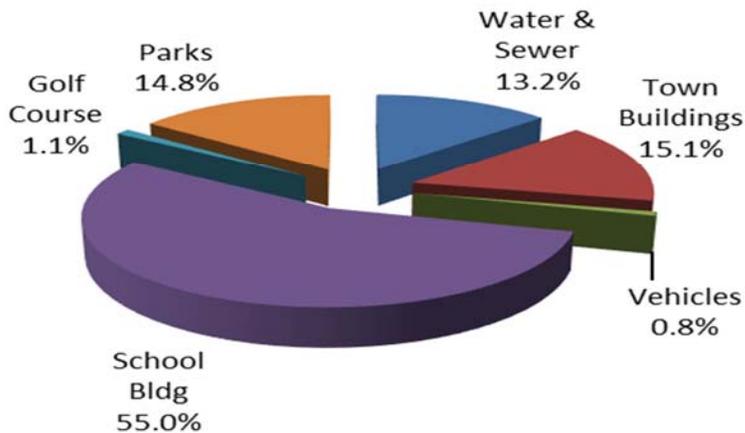
The graph to the right illustrates how the Town's 6% policy works. In each year, the amount available for the CIP is 6% of the prior year's net revenue. This amount represents the total impact on the Operating Budget. For FY19, \$15.3 million is dedicated to the CIP (\$12.2 million for net debt service and \$3.1 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 (FY18) debt service by expenditure type. As it shows, the largest component of debt service is for school buildings, followed by town buildings and parks.

**FY18 Debt Service by Expenditure Type**



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 FY18, it shows that the Town's total debt service was \$14.7 million, of which \$2.7 million (18.1%) was reimbursed by either the State (\$556,757) or Enterprise funds (\$2.11 million), leaving \$12.1 million of debt service.

**DEBT SERVICE**

DESCRIPTION	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Total General Fund Supported Debt Service	10,098,259	9,804,995	9,297,870	9,389,799	9,270,546	10,240,902	12,621,350
a.) Exempt (Debt Exclusion) <sup>1</sup>	1,730,917	1,630,808	1,112,800	1,094,400	1,076,000	1,048,400	1,020,800
b.) Non-Exempt	8,367,342	8,174,187	8,185,070	8,295,399	8,194,546	9,192,502	11,600,550
Minus State (SBA) Reimbursed Debt <sup>2</sup>	1,227,634	587,125	556,757	556,757	556,757	556,757	556,757
Net General Fund Debt Service	8,870,625	9,217,870	8,741,113	8,833,042	8,713,789	9,684,145	12,064,593
Water & Sewer Enterprise Fund Supported Debt Svc.	2,321,242	2,375,403	2,365,461	2,133,405	2,377,747	2,180,990	1,951,733
Golf Course Enterprise Fund Supported Debt Svc.	185,679	191,499	179,374	186,476	191,355	183,475	159,422
<b>Enterprise Fund Debt Service</b>	<b>2,506,921</b>	<b>2,566,902</b>	<b>2,544,835</b>	<b>2,319,881</b>	<b>2,569,102</b>	<b>2,364,465</b>	<b>2,111,155</b>
<b>TOTAL Debt Service</b>	<b>12,605,180</b>	<b>12,371,897</b>	<b>11,842,705</b>	<b>11,709,680</b>	<b>11,839,648</b>	<b>12,605,366</b>	<b>14,732,505</b>

<sup>1</sup> The Lincoln School and High School projects were financed via a Debt Exclusion.

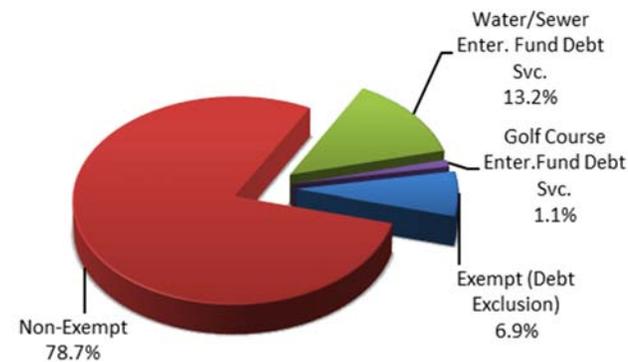
<sup>2</sup> The following school projects were reimbursed by the State: High School (through FY09), Lincoln (through FY12), Baker, and Heath.

The graph to the right depicts FY18 debt service by source. As it shows, 78.7% of the Town's debt service is covered within the levy while 6.9% is covered outside the levy via Debt Exclusion Overrides. The remaining 14.3% 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 FY19 – FY24 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.

**FY18 DEBT SERVICE BY SOURCE**



**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

***DEBT SERVICE (PROJECTED)***

<b>DESCRIPTION</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>
Total General Fund Supported Debt Service	16,922,364	18,537,150	16,843,768	17,354,534	19,799,320	19,240,380	19,005,946
a.) Exempt (Debt Exclusion) <sup>1</sup>	4,833,739	5,518,935	4,567,335	4,567,335	4,567,335	4,567,335	4,567,335
b.) Non-Exempt	12,088,625	13,018,215	12,276,433	12,787,198	15,231,985	14,673,045	14,438,611
Minus State (SBA) Reimbursed Debt <sup>2</sup>	556,757	434,662	434,662	434,662	0	0	0
Net General Fund Debt Service	16,365,607	18,102,488	16,409,106	16,919,872	19,799,320	19,240,380	19,005,946
Water & Sewer Enterprise Fund Supported Debt Svc.	1,544,710	1,559,072	1,231,775	1,096,075	962,975	884,375	757,775
Golf Course Enterprise Fund Supported Debt Svc.	140,888	186,113	195,804	195,633	190,211	185,115	179,994
<b>Enterprise Fund Debt Service</b>	<b>1,685,597</b>	<b>1,745,185</b>	<b>1,427,579</b>	<b>1,291,708</b>	<b>1,153,186</b>	<b>1,069,490</b>	<b>937,769</b>
<b>TOTAL Debt Service</b>	<b>18,607,961</b>	<b>20,282,335</b>	<b>18,271,347</b>	<b>18,646,241</b>	<b>20,952,506</b>	<b>20,309,870</b>	<b>19,943,715</b>

<sup>1</sup> 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.

<sup>2</sup> Estimates for the 9th School at Baldwin and High School Debt projects amounts are unknown.

<sup>3</sup> The Baker (through FY22) and Heath (through FY19) school projects are being reimbursed by the State.

**DEBT MANAGEMENT PLAN**

<b>PROJECT</b>	<b>BOND</b>		<b>TERM</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	
	<b>AUTH.</b>	<b>AMT</b>										
<u>Funded Within 6% CIP Policy</u>												
Envelope/Fenestration Repairs (previously authorized)	\$2.100	\$0.950	10	\$0.131	\$0.127	\$0.124	\$0.120	\$0.116	\$0.113	\$0.109	\$0.106	
Roof Repairs/Replacements (previously authorized)	\$1.200	\$0.850	10	\$0.117	\$0.114	\$0.111	\$0.107	\$0.104	\$0.101	\$0.098	\$0.095	
High School Addition - Feas./Schem. Des. BAN (previously authorized)	\$1.850	\$1.850	1	\$0.037	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	
Brookline Reservoir Park (previously authorized)	\$2.200	\$2.200	10	\$0.303	\$0.294	\$0.286	\$0.278	\$0.270	\$0.261	\$0.253	\$0.245	
Fire Maintenance/Training Facility (previously authorized)	\$4.500	\$4.200	15	\$0.448	\$0.437	\$0.426	\$0.414	\$0.403	\$0.392	\$0.381	\$0.370	
Pierce Playground (previously authorized)	\$0.980	\$0.060	5	\$0.014	\$0.014	\$0.013	\$0.013	\$0.012	\$0.000	\$0.000	\$0.000	
Muddy River (previously authorized)	\$0.745	\$0.745	10	\$0.102	\$0.100	\$0.097	\$0.094	\$0.091	\$0.088	\$0.086	\$0.083	
High School Addition - Feas./Schem. Des. (previously authorized)	\$1.850	\$1.850	10		\$0.259	\$0.252	\$0.244	\$0.237	\$0.229	\$0.222	\$0.215	

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

<b>PROJECT</b>	<b>BOND AUTH.</b>	<b>BOND AMT</b>	<b>TERM</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
Carlton St. Footbridge (previously authorized)	\$1.400	\$1.000	10	\$0.143	\$0.138	\$0.134	\$0.130	\$0.126	\$0.121	\$0.117	
Harry Downes/Kraft Athletic Facility (future authorization)	\$2.450	\$2.450	10	\$0.349	\$0.339	\$0.328	\$0.318	\$0.307	\$0.297	\$0.287	
Larz Anderson Park (future authorization)	\$2.700	\$2.700	10	\$0.385	\$0.373	\$0.362	\$0.350	\$0.339	\$0.327	\$0.316	
Driscoll School (future authorization)	\$4.000	\$4.000	15	\$0.447	\$0.435	\$0.423	\$0.411	\$0.399	\$0.387	\$0.375	
Envelope/Fenestration Repairs (future authorization)	\$1.500	\$1.500	10		\$0.214	\$0.207	\$0.201	\$0.195	\$0.188	\$0.182	
Roof Repairs/Replacements (previously authorized)	\$1.200	\$0.350	10			\$0.050	\$0.048	\$0.047	\$0.045	\$0.044	
Roof Repairs/Replacements (future authorization)	\$3.100	\$3.100	15			\$0.346	\$0.337	\$0.328	\$0.318	\$0.309	
Robinson Playground (future authorization)	\$1.150	\$1.150	10			\$0.164	\$0.159	\$0.154	\$0.149	\$0.144	
Larz Anderson Park (future authorization)	\$2.200	\$2.200	10			\$0.314	\$0.304	\$0.295	\$0.285	\$0.276	
Schick Park (future authorization)	\$0.970	\$0.970	10				\$0.138	\$0.134	\$0.130	\$0.126	
Murphy Playground (future authorization)	\$0.895	\$0.895	10				\$0.128	\$0.124	\$0.120	\$0.116	
High School Addition (future authorization)	\$35.000	\$35.000	25				\$3.150	\$3.080	\$3.010	\$2.940	
Envelope/Fenestration Repairs (future authorization)	\$0.750	\$0.750	10				\$0.107	\$0.104	\$0.101	\$0.097	
Roof Repairs/Replacements (future authorization)	\$0.650	\$0.650	10					\$0.093	\$0.090	\$0.087	
Engine #1 Replacement (future authorization)	\$0.725	\$0.725	10					\$0.103	\$0.100	\$0.097	
Boylston St Playground (future authorization)	\$1.240	\$1.240	10					\$0.177	\$0.171	\$0.166	
Larz Anderson Park (future authorization)	\$2.500	\$2.500	10						\$0.356	\$0.346	
Envelope/Fenestration Repairs (future authorization)	\$1.500	\$1.500	10						\$0.214	\$0.207	
Larz Anderson Park (future authorization)	\$1.000	\$1.000	10							\$0.143	

**NEW GEN FUND DEBT SERVICE (cumulative)**

**\$1.152 \$2.667 \$2.806 \$3.598 \$7.014 \$7.188 \$7.559 \$7.487**

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

Debt Exclusions

Devotion School - Design/Constr. (future authorization)	\$49,576	\$49,576	0	\$3,518	\$3,518	\$3,518	\$3,518	\$3,518	\$3,518	\$3,518	\$3,518
High School - 111 Cypress Acquisition BAN (previously authorized)	\$16,400	\$16,400	0	\$0,328	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000
High School - 111 Cypress Acquisition (previously authorized)	\$16,400	\$16,400	0		\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050

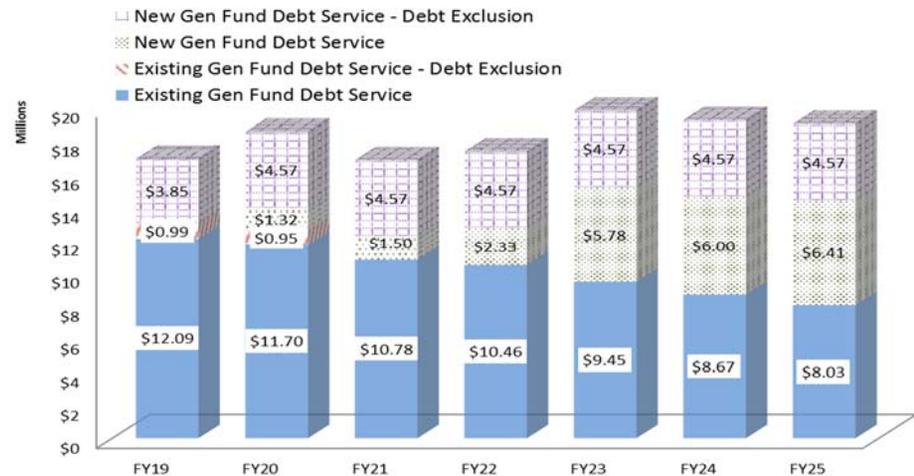
**NEW DEBT EXCLUSION DEBT SERVICE (cumulative) \$3.846 \$4.567 \$4.567 \$4.567 \$4.567 \$4.567 \$4.567**

Enterprise Funds

Singletree Tank & Gatehouse MWRA Interest Free Loan	0.66	0.66	10	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066
Stormwater (previously authorized)	\$0.300	\$0.300	10		\$0.043	\$0.041	\$0.040	\$0.039	\$0.038	\$0.036	\$0.035
Wastewater (previously authorized)	\$3.000	\$1.000	10		\$0.143	\$0.138	\$0.134	\$0.130	\$0.126	\$0.121	\$0.117
Stormwater (previously authorized)	\$0.300	\$0.300	10			\$0.043	\$0.041	\$0.040	\$0.039	\$0.038	\$0.000
Stormwater (previously authorized)	\$0.300	\$0.300	10			\$0.043	\$0.041	\$0.040	\$0.039	\$0.038	\$0.000
Wastewater (future authorization)	\$3.000	\$1.000	10			\$0.143	\$0.138	\$0.134	\$0.130	\$0.126	\$0.000
Wastewater (future authorization)	\$3.000	\$1.000	10				\$0.143	\$0.138	\$0.134	\$0.130	\$0.000
Golf Course (future authorization)	\$1.000	\$0.265	20		\$0.025	\$0.025	\$0.024	\$0.023	\$0.023	\$0.022	\$0.022
Golf Course (future authorization)	\$1.000	\$0.250	20		\$0.024	\$0.023	\$0.023	\$0.022	\$0.022	\$0.021	\$0.020
Golf Course (future authorization)	\$1.000	\$0.250	20		\$0.000	\$0.024	\$0.023	\$0.023	\$0.022	\$0.022	\$0.000

**NEW ENTERPRISE FUND DEBT SERVICE (cumulative) \$0.066 \$0.300 \$0.545 \$0.674 \$0.655 \$0.637 \$0.619 \$0.260**

When Moody's last reviewed the Town's bond rating in March, 2017, 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.



**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

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 4.8% in FY18 but will increase to 6.3% in FY20 when the majority of debt service associated with the Devotion School project commences. When looking solely General Fund-supported debt, the figure drops to 4.6% in FY18, reaching a high of 6.4% in FY20.

**DEBT SERVICE AS A PERCENTAGE OF REVENUE**

DESCRIPTION	FY16 (Act)	FY17 (Act)	FY18 (Proj.)	FY19 (Proj.)	FY20 (Proj.)	FY21 (Proj.)	FY22 (Proj.)	FY23 (Proj.)	FY24 (Proj.)	FY25 (Proj.)
Total General Fund Supported Debt Service	9,270,546	10,240,902	12,621,350	16,922,364	18,537,150	16,843,768	17,354,534	19,799,320	19,240,380	19,005,946
a.) Exempt (Debt Exclusion) <sup>1</sup>	1,076,000	1,048,400	1,020,800	4,833,739	5,518,935	4,567,335	4,567,335	4,567,335	3,517,539	3,517,540
b.) Non-Exempt	8,194,546	9,192,502	11,600,550	12,088,625	13,018,215	12,276,433	12,787,198	15,231,985	15,722,841	15,488,406
Minus SBA Reimbursements	556,757	556,757	556,758	556,757	434,662	434,662	434,662	0	0	0
Net General Fund Debt Service	8,713,789	9,684,145	12,064,592	16,365,607	18,102,488	16,409,106	16,919,872	19,799,320	19,240,380	19,005,946
Water & Sewer Enterprise Fund Supported Debt Svc.	2,377,747	2,180,990	1,951,733	1,544,710	1,559,072	1,231,775	1,096,075	962,975	884,375	757,775
Golf Course Enterprise Fund Supported Debt Svc.	191,355	183,475	159,422	140,888	186,113	195,804	195,633	190,211	185,115	179,994
<b>TOTAL Debt Service</b>	<b>11,839,648</b>	<b>12,605,366</b>	<b>14,732,505</b>	<b>18,607,961</b>	<b>20,282,335</b>	<b>18,271,347</b>	<b>18,646,241</b>	<b>20,952,506</b>	<b>20,309,870</b>	<b>19,943,715</b>
General Fund Revenue	250,398,058	260,709,753	273,045,997	284,676,212	291,115,063	301,246,613	310,661,861	319,230,759	328,478,112	338,247,750
General Fund Revenue Without SBA Reimbursement	249,841,301	260,152,996	272,489,239	284,119,455	290,680,401	300,811,951	310,227,199	319,230,759	328,478,112	338,247,750
Water & Sewer Enterprise Fund Revenue	27,734,888	28,985,259	29,271,308	30,269,574	31,122,057	32,046,976	33,307,939	34,645,008	36,100,466	37,268,801
Golf Course Enterprise Fund Revenue	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	1,683,509
<b>TOTAL Revenue of Funds Supporting Debt Svc.</b>	<b>279,523,872</b>	<b>291,217,843</b>	<b>303,964,403</b>	<b>316,620,479</b>	<b>323,939,533</b>	<b>334,913,850</b>	<b>345,606,787</b>	<b>355,529,705</b>	<b>366,249,692</b>	<b>377,200,060</b>
General Fund Debt Service as a % of General Fund Revenue	3.7%	3.9%	4.6%	5.9%	6.4%	5.6%	5.6%	6.2%	5.9%	5.6%
Net General Fund Debt Service as a % of General Fund Revenue <sup>2</sup>	3.5%	3.7%	4.4%	5.8%	6.2%	5.5%	5.5%	6.2%	5.9%	5.6%
Water & Sewer Enterprise Fund Debt Service as a % of Revenue	8.6%	7.5%	6.7%	5.1%	5.0%	3.8%	3.3%	2.8%	2.4%	2.0%
Golf Course Enterprise Fund Debt Service as a % of Revenue	13.8%	12.0%	9.7%	8.4%	10.9%	12.1%	12.0%	11.5%	11.1%	10.7%
<b>TOTAL Debt Service as a % of Total Rev. Supporting Debt Svc.</b>	<b>4.2%</b>	<b>4.3%</b>	<b>4.8%</b>	<b>5.9%</b>	<b>6.3%</b>	<b>5.5%</b>	<b>5.4%</b>	<b>5.9%</b>	<b>5.5%</b>	<b>5.3%</b>

<sup>1</sup> 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.

<sup>2</sup> 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.
- Climate Control – The Director of Public Buildings provided an estimate of \$19,200 for the operating impact of this CIP project. This amount has been included in the Building Department budget.
- 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.
- 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.
- 9<sup>th</sup> School / 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 FY19 – FY24 CIP as proposed by project. Commencing on page VII-29 is a project description for each project.

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

**TOWN OF BROOKLINE CAPITAL IMPROVEMENT PROGRAM: FY2019 - FY2024**

<u>CATEGORY CODES (CC):</u>				<u>REVENUE CODES (RC):</u>													
1 = New Facility Construction		4 = Infrastructure		A = Property Tax/Free Cash/Overlay Surplus				D = Golf Budget		G = Utility Bond		J = Re-Appropriation of Funds					
2 = Facility Renovation / Repair		5 = Vehicles		B = General Fund Bond				E = Golf Bond		H = CDBG		K = Debt Exclusion Override					
3 = Parks/Open Space/Playgrounds		6 = Miscellaneous		C = State / Federal Aid				F = Utility Budget		I = Other							
CC		Total	Prior Year (FY18)	FY2019		FY2020		FY2021		FY2022		FY2023		FY2024		Future Years	
				Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC
<b>GENERAL GOVERNMENT</b>																	
2	Larz Anderson Garage	125,000						125,000	A								
6	Town Building Furniture	175,000	50,000	50,000	A					25,000	A			25,000	A	25,000	A
2	Garage Floor Sealants	600,000						150,000	A	150,000	A	150,000	A			150,000	A
2	Public Safety HVAC Modifications	125,000		125,000	A												
2	Town Rehab/Upgrade	490,000	50,000	50,000	A	50,000	A	50,000	A	50,000	A	75,000	A	80,000	A	85,000	A
2	Town Hall Data Room Improvements	120,000	120,000														
6	Technology Applications	1,075,000	175,000			150,000	A	150,000	A	150,000	A	150,000	A	150,000	A	150,000	A
General Government Total		2,710,000	395,000	225,000		200,000		475,000		375,000		375,000		255,000		410,000	
<b>PLANNING &amp; COMMUNITY DEVELOPMENT</b>																	
4	Gateway East/Village Sq. Construction - CD	250,000		250,000	C												
4	Gateway East/Village Sq. Site Aquisition - CD	1,020,000		1,020,000	C												
4	Gateway East/Village Sq. Construction - Other	750,000	750,000														
4	Gateway East/Village Sq. Construction - State	7,107,000		7,107,000	C												
4	Gateway East/Village Sq. Site Aquisition - State	-															
4	Gateway East/Village Sq. Circulation Improv. - Town	-															
6	Zoning By-Law Reorganization	200,000		200,000	A												
Planning & Community Development Total		9,327,000	750,000	8,577,000		-		-		-		-		-		-	
<b>PUBLIC SAFETY</b>																	
5	Fire Apparatus Rehab	1,550,000	50,000			500,000	A									1,000,000	A/B
5	Engine #1 Replacement	725,000										725,000	B				
5	Engine #6 Replacement	625,000	625,000														
6	CAD System Upgrade	200,000		200,000	A												
2	Fire Station Renovations	1,735,000	280,000	385,000	A			800,000	A	270,000	A						
6	PPE Washers and Dryers	71,000	71,000														
Public Safety Total		4,906,000	1,026,000	585,000		500,000		800,000		270,000		725,000		-		1,000,000	

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

**TOWN OF BROOKLINE CAPITAL IMPROVEMENT PROGRAM: FY2019 - FY2024**

CATEGORY CODES (CC):				REVENUE CODES (RC):													
1 = New Facility Construction		4 = Infrastructure		A = Property Tax/Free Cash/Overlay Surplus			D = Golf Budget		G = Utility Bond		J = Re-Appropriation of Funds						
2 = Facility Renovation / Repair		5 = Vehicles		B = General Fund Bond			E = Golf Bond		H = CDBG		K = Debt Exclusion Override						
3 = Parks/Open Space/Playgrounds		6 = Miscellaneous		C = State / Federal Aid			F = Utility Budget		I = Other								
CC	Description	Total	Prior Year (FY18)	FY2019		FY2020		FY2021		FY2022		FY2023		FY2024		Future Years	
				Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC
<b>LIBRARY</b>																	
2	Coolidge Corner - Elev./Rear Windows /Carpet	646,500	646,500														
2	Putterham Library Bathroom Renovations	150,000		150,000	A												
	Library Total	796,500	646,500	150,000		-		-		-		-		-		-	
<b>PUBLIC WORKS:</b>																	
<b>Transportation</b>																	
4	Traffic Calming / Safety Improvements	443,659	58,659	85,000	A	50,000	A	50,000	A	50,000	A	50,000	A	50,000	A	50,000	A
4	Bicycle Access Improvements	209,775	33,000	176,775	A												
4	Parking Meter Technology Upgrade	644,160	161,040			161,040	A	322,080	A								
4	Carlton St /Monmouth Traffic Signal	333,663	333,663														
	Public Works - Transportation Sub-Total	1,631,257	586,362	261,775		211,040		372,080		50,000		50,000		50,000		50,000	
<b>Engineering/Highway</b>																	
4	Street Rehab - Town	14,540,000	1,670,000	1,710,000	A	1,750,000	A	1,790,000	A	1,830,000	A	1,880,000	A	1,930,000	A	1,980,000	A
4	Street Rehab - State	7,684,840	960,605	960,605	C	960,605	C	960,605	C	960,605	C	960,605	C	960,605	C	960,605	C
4	Sidewalk Repair	2,726,000	312,000	320,000	A	328,000	A	336,000	A	344,000	A	353,000	A	362,000	A	371,000	A
4	Parking Lot Rehab.	205,000														205,000	A
2	Municipal Service Center Site Improvements	240,000	240,000														
4	Fire Alarm Call box system	2,380,000														2,380,000	B
4	Davis Path Footbridge	40,000	40,000														
	Public Works - Engineering/Highway Sub-Total	27,815,840	3,222,605	2,990,605		3,038,605		3,086,605		3,134,605		3,193,605		3,252,605		5,896,605	
<b>Water / Sewer</b>																	
4	Singletree Hill Tank Improvements	490,000				490,000	F										
4	Stormwater Improvements	1,200,000	300,000			300,000	F	300,000	F	300,000	F						
4	Water System Improvements	2,300,000	300,000			2,000,000	G										
6	Water Meter MTU Replacement	1,090,000		265,000	F	265,000	F	280,000	F	280,000	F						
4	Wastewater System Improvements	3,000,000		3,000,000	G												
4	Netherlands Road Improvements	150,000		150,000	F												
	Public Works - Water / Sewer Sub-Total	8,230,000	600,000	3,415,000		3,055,000		580,000		580,000		-		-		-	

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

**TOWN OF BROOKLINE CAPITAL IMPROVEMENT PROGRAM: FY2019 - FY2024**

CATEGORY CODES (CC):				REVENUE CODES (RC):													
1 = New Facility Construction		4 = Infrastructure		A = Property Tax/Free Cash/Overlay Surplus				D = Golf Budget		G = Utility Bond		J = Re-Appropriation of Funds					
2 = Facility Renovation / Repair		5 = Vehicles		B = General Fund Bond				E = Golf Bond		H = CDBG		K = Debt Exclusion Override					
3 = Parks/Open Space/Playgrounds		6 = Miscellaneous		C = State / Federal Aid				F = Utility Budget		I = Other							
CC	Description	Total	Prior Year (FY18)	FY2019		FY2020		FY2021		FY2022		FY2023		FY2024		Future Years	
				Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC
<b>Parks and Playgrounds</b>																	
3	Amory tennis courts, Parking and Halls Pond	1,650,000														1,650,000	A/B
3	Brookline Reservoir Park	2,200,000	2,200,000														
3	Cypress Playground/Athl. Field	2,640,000		240,000	A	2,400,000	A										
3	Fisher Hill Gatehouse Safety and Structural Improvemen	175,000											175,000	A			
3	Harry Downes Field & Playground/Kraft Family Athl.	2,450,000		2,450,000	B												
3	Heath School Playground Accessibility	1,110,000														1,110,000	A
3	Larz Anderson Park	8,400,000		2,700,000	B			2,200,000	B					2,500,000	B	1,000,000	B
3	Larz Anderson Park cash	600,000		425,000	A	175,000	A										
3	Murphy Playground	965,000	70,000							895,000	B						
3	Riverway Park	625,000														625,000	A
3	Robinson Playground	1,250,000				100,000	A	1,150,000	B								
3	Schick Playground	1,060,000						90,000	A	970,000	B						
3	Boylston St. Playground	1,350,000								110,000	A	1,240,000	B				
3	Griggs Park	1,060,000												90,000	A	970,000	A
3	Soule Athletic Fields	1,450,000														1,450,000	B
3	Skyline Park Turf replacement and Park Improvemen	1,980,000												180,000	A	1,800,000	A/B
3	Parks/Playgrounds Rehab/Upgrade	2,500,000	305,000	305,000	A	310,000	A	310,000	A	315,000	A	315,000	A	320,000	A	320,000	A
3	Town/School Ground Rehab.	1,340,000	150,000	155,000	A	160,000	I	165,000	A	170,000	A	175,000	A	180,000	A	185,000	A
3	Tennis Courts / Basketball Courts	300,000				200,000	A									100,000	A
2	Comfort Stations	300,000						250,000	A							50,000	A
Public Works - Parks and Playground Sub-Total		33,405,000	2,725,000	6,275,000		3,345,000		4,165,000		2,460,000		1,730,000		3,445,000		9,260,000	
<b>Conservation/Open Space</b>																	
3	Tree Removal&Repl/Urban Forestry Mgmt	1,900,000	230,000	230,000	A	235,000	A	235,000	A	240,000	A	240,000	A	245,000	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		2,920,000	230,000	230,000		235,000		235,000		240,000		240,000		245,000		1,265,000	
Public Works Total		74,002,097	7,363,967	13,172,380		9,884,645		8,438,685		6,464,605		5,213,605		6,992,605		16,471,605	
<b>RECREATION</b>																	
2	Aquatics Center Pool Filter Replacement	225,000		225,000	A												
2	Eliot Rec Improvements	775,000														775,000	A
Recreation Total		1,000,000	-	225,000		-		-		-		-		-		775,000	

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

**TOWN OF BROOKLINE CAPITAL IMPROVEMENT PROGRAM: FY2019 - FY2024**

**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 (FY18)	FY2019		FY2020		FY2021		FY2022		FY2023		FY2024		Future Years		
			Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	
<b>SCHOOL</b>																	
6	Furniture Upgrades	1,000,000	90,000	100,000	A	110,000	A	120,000	A	130,000	A	140,000	A	150,000	A	160,000	A
2	HVAC Equipment	1,250,000		150,000	A			300,000	A	200,000	A			200,000	A	400,000	A
2	Classroom Climate Control	225,000		225,000	A												
2	Underground tank removal	350,000						100,000	A	100,000	A			100,000	A	50,000	A
2	Town/School ADA Renovations	660,000	75,000	75,000	A	80,000	A	80,000	A	85,000	A	85,000	A	90,000	A	90,000	A
2	Town/School Elevator Renov. Program	1,175,000	475,000	300,000	A			100,000	A	100,000	A			100,000	A	100,000	A
2	Town/School Energy Conservation Projects	1,430,000	75,000	180,000	A	185,000	A	190,000	A	195,000	A	200,000	A	200,000	A	205,000	A
2	Town/School Energy Management System	1,140,000	125,000	125,000	A	125,000	A	125,000	A	130,000	A	130,000	A	130,000	A	250,000	A
2	Town/School Bldg Envelope/Fenestration Rep	17,050,000				1,500,000	B	3,100,000	B	750,000	B					11,700,000	A/B
3	Town/School Bldg Envelope/Fenestration Rep cash	1,000,000								1,000,000	A						
2	Town/School Roof Repair/Repl. Program	15,800,000										800,000	B	800,000	B	14,200,000	A/B
2	Public Building Fire Alarm upgrades	1,650,000		250,000	A			150,000	A	300,000	A	300,000	A	300,000	A	350,000	A
2	Town/School Bldg Security / Life Safety Sys	1,365,000	215,000	130,000	A	160,000	A	160,000	A	170,000	A	170,000	A	180,000	A	180,000	A
2	Town/School Compactor Replacements	200,000		100,000	A							50,000	A			50,000	A
2	School Rehab/Upgrade	1,065,000	100,000	230,000	A	110,000	A	115,000	A	120,000	A	125,000	A	130,000	A	135,000	A
2	High School Addition - Town Share (non-Debt Excl)	36,850,000	1,850,000	35,000,000	B												
2	High School Addition (Debt Excl)	-		TBD	K												
2	9th School Schematic Design	1,500,000		1,500,000	A												
2	9th School Construction	-				TBD	K										
2	9th School at Baldwin	1,500,000	1,500,000														
2	Driscoll School Rehabilitation	4,400,000	400,000	4,000,000	B												
2	Classroom Capacity	8,075,000	995,000	1,165,000	A	1,223,000	A	1,032,000	A	915,000	A	915,000	A	915,000	A	915,000	A
	<b>School Total</b>	<b>97,685,000</b>	<b>5,900,000</b>	<b>43,530,000</b>		<b>3,493,000</b>		<b>5,572,000</b>		<b>4,195,000</b>		<b>2,915,000</b>		<b>3,295,000</b>		<b>28,785,000</b>	

**TOWN OF BROOKLINE  
FY2019 PROGRAM BUDGET**

**CAPITAL IMPROVEMENTS PROGRAM**

**TOWN OF BROOKLINE CAPITAL IMPROVEMENT PROGRAM: FY2019 - FY2024**

**CATEGORY CODES (CC):**

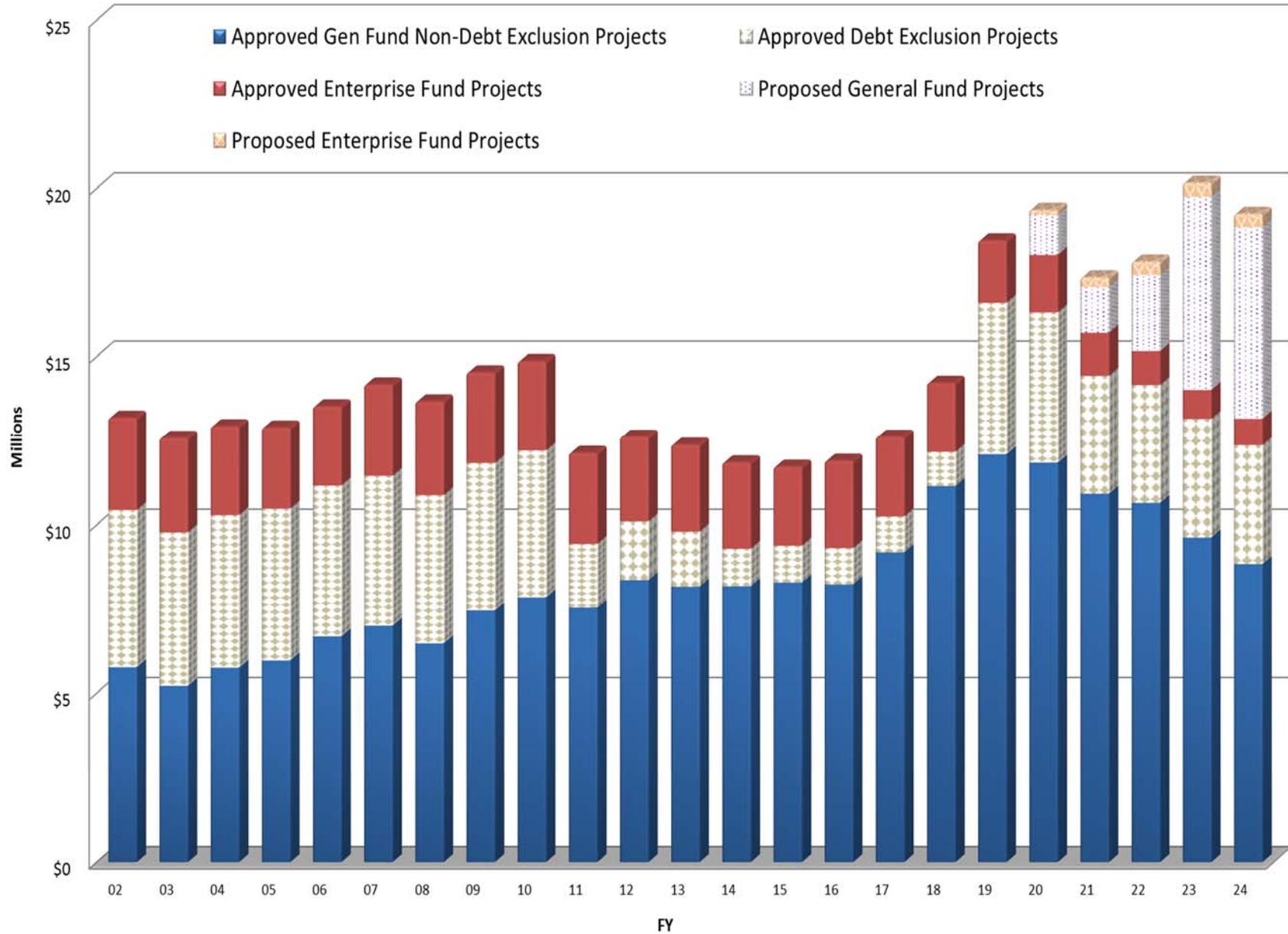
1 = New Facility Construction  
2 = Facility Renovation / Repair  
3 = Parks/Open Space/Playgrounds  
4 = Infrastructure  
5 = Vehicles  
6 = Miscellaneous

**REVENUE CODES (RC):**

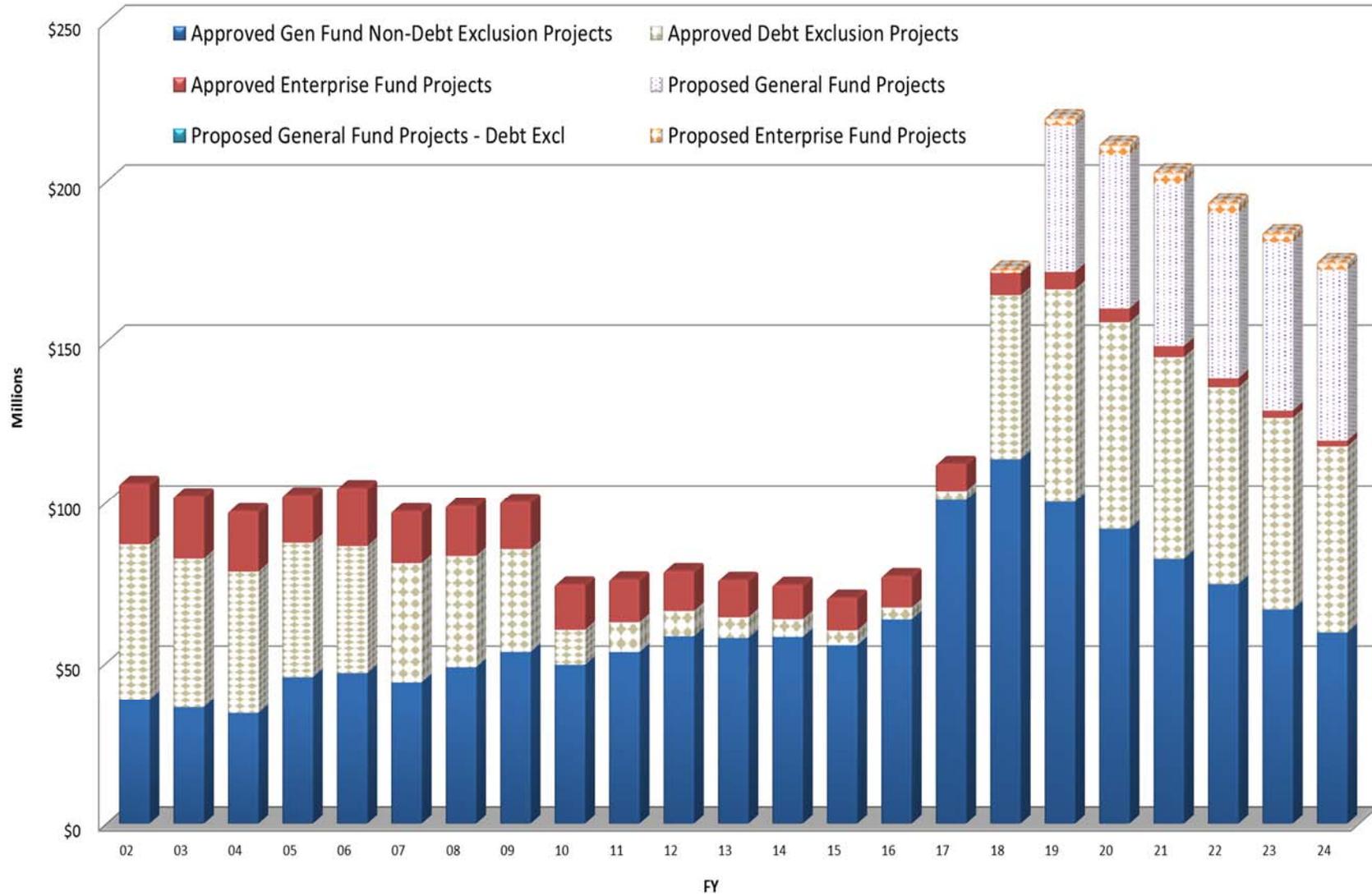
A = Property Tax/Free Cash/Overlay Surplus  
B = General Fund Bond  
C = State / Federal Aid  
D = Golf Budget  
E = Golf Bond  
F = Utility Budget  
G = Utility Bond  
H = CDBG  
I = Other  
J = Re-Appropriation of Funds  
K = Debt Exclusion Override

CC	Total	Prior Year (FY18)	FY2019		FY2020		FY2021		FY2022		FY2023		FY2024		Future Years	
			Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC	Amount	RC
<b>GRAND TOTAL</b>	<b>190,426,597</b>	<b>16,081,467</b>	<b>66,464,380</b>		<b>14,077,645</b>		<b>15,285,685</b>		<b>11,304,605</b>		<b>9,228,605</b>		<b>10,542,605</b>		<b>47,441,605</b>	
<b>GRAND TOTAL BY SOURCE</b>																
A = Property Tax / Free Cash / Overlay Surplus	63,943,717	9,720,862	9,061,775	14%	8,401,000	60%	7,295,080	48%	7,149,000	63%	5,503,000	60%	6,282,000	60%	10,531,000	A
B = General Fund Bond	100,010,000	4,050,000	44,150,000	66%	1,500,000	11%	6,450,000	42%	2,615,000	23%	2,765,000	30%	3,300,000	31%	35,180,000	74%
C = State / Federal Grants	15,541,840	1,710,605	8,067,605	12%	960,605	7%	960,605	6%	960,605	8%	960,605	10%	960,605	9%	960,605	2%
D = Golf Budget	-	-	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
E = Golf Bond	-	-	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
F = Utility Budget	2,930,000	300,000	415,000	1%	1,055,000	7%	580,000	4%	580,000	5%	-	0%	-	0%	-	0%
G = Utility Bond	5,300,000	300,000	3,000,000	5%	2,000,000	14%	-	0%	-	0%	-	0%	-	0%	-	0%
H = CDBG	1,270,000	-	1,270,000	2%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
I = Other	931,040	-	-	0%	161,040	1%	-	0%	-	0%	-	0%	-	0%	770,000	2%
J = Re-Approp. of Existing Funds	500,000	-	500,000	1%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
K = Debt Exclusion Override	-	-	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
<b>Grand Total</b>	<b>190,426,597</b>	<b>16,081,467</b>	<b>66,464,380</b>		<b>14,077,645</b>		<b>15,285,685</b>		<b>11,304,605</b>		<b>9,228,605</b>		<b>10,542,605</b>		<b>47,441,605</b>	
<b>GRAND TOTAL BY ALLOCATION</b>																
General Government	2,710,000	395,000	225,000	0%	200,000	1%	475,000	3%	375,000	3%	375,000	4%	255,000	2%	410,000	1%
Planning and Community Development	9,327,000	750,000	8,577,000	13%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
Public Safety	4,906,000	1,026,000	585,000	1%	500,000	4%	800,000	5%	270,000	2%	725,000	8%	-	0%	1,000,000	2%
Library	796,500	646,500	150,000	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
DPW - Transportation	1,631,257	586,362	261,775	0%	211,040	1%	372,080	2%	50,000	0%	50,000	1%	50,000	0%	50,000	0%
Engineering/Highway	27,815,840	3,222,605	2,990,605	4%	3,038,605	22%	3,086,605	20%	3,134,605	28%	3,193,605	35%	3,252,605	31%	5,896,605	12%
Water / Sewer	8,230,000	600,000	3,415,000	5%	3,055,000	22%	580,000	4%	580,000	5%	-	0%	-	0%	-	0%
Parks & Playgrounds	33,405,000	2,725,000	6,275,000	9%	3,345,000	24%	4,165,000	27%	2,460,000	22%	1,730,000	19%	3,445,000	33%	9,260,000	20%
Conservation/Open Space	2,920,000	230,000	230,000	0%	235,000	2%	235,000	2%	240,000	2%	240,000	3%	245,000	2%	1,265,000	3%
Recreation	1,000,000	-	225,000	0%	-	0%	-	0%	-	0%	-	0%	-	0%	775,000	2%
Public Schools	97,685,000	5,900,000	43,530,000	65%	3,493,000	25%	5,572,000	36%	4,195,000	37%	2,915,000	32%	3,295,000	31%	28,785,000	61%
<b>Grand Total</b>	<b>190,426,597</b>	<b>16,081,467</b>	<b>66,464,380</b>		<b>14,077,645</b>		<b>15,285,685</b>		<b>11,304,605</b>		<b>9,228,605</b>		<b>10,542,605</b>		<b>47,441,605</b>	
<b>GRAND TOTAL BY CATEGORY</b>																
1 New Facility Construction	-	-	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
2 Facility Renovation / Repair	100,516,500	6,736,500	44,515,000	67%	3,383,000	24%	6,627,000	43%	4,335,000	38%	2,775,000	30%	3,145,000	30%	29,000,000	61%
3 Parks / Open Space / Playgrounds	36,025,000	2,955,000	6,505,000	10%	3,580,000	25%	4,150,000	27%	2,700,000	24%	1,970,000	21%	3,690,000	35%	10,475,000	22%
4 Infrastructure	46,654,097	5,158,967	14,894,380	22%	6,304,645	45%	4,038,685	26%	3,764,605	33%	3,243,605	35%	3,302,605	31%	5,946,605	13%
5 Vehicles	2,900,000	675,000	-	0%	500,000	4%	-	0%	-	0%	725,000	8%	-	0%	1,000,000	2%
6 Miscellaneous	4,331,000	556,000	550,000	1%	310,000	2%	470,000	3%	505,000	4%	515,000	6%	405,000	4%	1,020,000	2%
<b>Grand Total</b>	<b>190,426,597</b>	<b>16,081,467</b>	<b>66,464,380</b>		<b>14,077,645</b>		<b>15,285,685</b>		<b>11,304,605</b>		<b>9,228,605</b>		<b>10,542,605</b>		<b>47,441,605</b>	
<b>6-Year Total</b>	<b>126,903,525</b>															

**DEBT SERVICE BASED ON EXISTING AUTHORIZATIONS AND PROJECTS IN FY19 - FY24 CIP**



**TOTAL OUTSTANDING DEBT (as of June 30 each year) BASED ON EXISTING AUTHORIZATIONS AND PROJECTS IN  
FY19 - FY24 CIP**





### FY 2019-2024 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. 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 -- \$50,000	Property Tax / Free Cash
	FY 2022 -- \$25,000	Property Tax / Free Cash
	FY 2024 -- \$25,000	Property Tax / Free Cash

**3. GARAGE FLOOR SEALANTS**

Sealants are required for concrete suspended floors every 7 years. If the floor is not properly sealed to prevent corrosion of the concrete and rebar, the floor will deteriorate rapidly. This will lead to premature failure and costly involved repairs including new concrete and possibly structural repairs.

Those floors include:

Municipal Garage	Fire Station No 4
Main Library	Fire Station No 6
Fire Station No 1	Fire Station No 7

Estimated Cost: \$600,000

Time Schedule:	FY 2021 -- \$150,000	Property Tax / Free Cash
	FY 2022 -- \$150,000	Property Tax / Free Cash
	FY 2023 -- \$150,000	Property Tax / Free Cash
	Future Years -- \$150,000	Property Tax / Free Cash

**4. PUBLIC SAFETY HVAC MODIFICATIONS**

The Public Safety Department continues to invest and expands its communications (E911/radios) and data information systems. There are two rooms at Public Safety that house this equipment. The spaces are sized adequately but the infrastructure needs to be expanded to meet the needs of the equipment loads. This would be for power and cooling. These spaces presently have HVAC systems, with back up capacity that is presently undersized and needs to be increased. In addition, the equipment has exceeded its useful life. Power is limited in these spaces and was originally sized for the equipment that was installed when the building was renovated many years ago. Also the layout of the equipment with new, different racks stifles air flow and cooling capabilities. A study was conducted that reviewed the MDF spaces at the High School, Town Hall and Public Safety buildings. This study recommended a number of improvements for these critical areas at Public Safety. As part of a 24/7 operation the equipment is extremely important and essential for the operation of the department and safety of the community. The support systems including e911 must be reliable and dependable. The request of \$125,000 is broken out as follows: \$12,000 for design services, \$18,000 for electrical upgrades and modifications to the emergency generator circuits and \$95,000 for the HVAC upgrades and modifications.

Estimated Cost: \$125,000

Time Schedule:        FY 2019 -- \$125,000                    Property Tax / Free Cash

**5.        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:        \$490,000

Time Schedule:	Prior Year -- \$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 -- \$75,000	Property Tax / Free Cash
	FY 2024 -- \$80,000	Property Tax / Free Cash
	Future Years -- \$85,000	Property Tax / Free Cash

**6.        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 by 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:        Prior Year -- \$120,000                    Property Tax / Free Cash

**7. 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: \$1,075,000

Time Schedule:	Prior Year -- \$175,000	Property Tax / Free Cash
	FY 2020 -- \$150,000	Property Tax / Free Cash
	FY 2021 -- \$150,000	Property Tax / Free Cash
	FY 2022 -- \$150,000	Property Tax / Free Cash
	FY 2023 -- \$150,000	Property Tax / Free Cash
	FY 2024 -- \$150,000	Property Tax / Free Cash
	Future Years -- \$150,000	Property Tax / Free Cash

**PLANNING & COMMUNITY DEVELOPMENT**

**8. 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 October 20, 2017 75% design submittal to MassDOT has increased the construction budget to \$8,107,000. It is estimated that the TIP will cover \$7,107,000 in Federal Fiscal Year 2018 toward a \$8,107,000 construction project.
2. The Town’s Gateway East construction match of \$1,000,000 will be filled by:
  - Children’s Hospital mitigation (1% Off-Site Improvements--2 Brookline Place) \$750,000 and
  - \$250,000 in CDBG (or combination of Ch. 90 and/other Town sources)

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 large scale 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 allocation of 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 allocation. The loan must be backed by the Town’s full faith and credit.
2. The Town’s right-of-way acquisition costs of \$1,300,000 will be filled by:
  - \$280,000 in prior year CDBG funds earmarked for acquisition (FY17 CDBG allocation)
  - \$1,020,000 from a Section 108 Loan
  - combination of Ch. 90 and/or other Town sources

Right-of-way acquisition costs presented are preliminary estimates. Under State statute, the Town may not discuss easement acquisition with property owners until MassDOT’s Environmental and Community Compliance divisions give clearance for the Town to move forward.

Estimated Cost: \$9,127,000

Time Schedule:	Prior Year -- \$750,000 FY2019 -- \$7,107,000 FY2019-- \$250,000 FY2018 -- \$1,020,000	ther (1% Off-Site Improvements--2 Brookline Place) Federal Grant (via State TIP) Federal Grant (CDBG) Federal Grant (CDBG) Section 108 Loan
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**9. 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 including inherent inconsistencies. The current version of the by-law is not user friendly, difficult for the public to comprehend, difficult for the Town to interpret and enforce, and creates a strain on economic development in the areas where economic development should be considered. 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 identify and then 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, Town staff, and regulatory agencies. 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**

**10. 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 if 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:	Prior Year -- \$50,000	Property Tax / Free Cash
	FY 2020 -- \$500,000	Property Tax / Free Cash
	Future Years -- \$1,000,000	Property Tax / Free Cash / General Fund Bond

**11. ENGINE #1 REPLACEMENT**

Using the Town’s replacement schedule, Engine No. 1 will be due for replacement in FY 2023. Considering the Town just bought a pump for \$625,000 (Item 12 – Engine 6) and using the 3% inflation estimate per year, the projected cost is estimated at \$725,000

Estimated Cost:            \$725,000

Time Schedule:           FY2023 -- \$725,000                   General Fund Bond

**12.   ENGINE #6 REPLACEMENT**

Keeping with the current policy of engine replacement at 17 years, Engine #6 would need to be replaced in FY19. Unfortunately, Engine #6 was not rehabbed when it was scheduled in 2012. While we rely upon these replacement engines becoming spare apparatus, which are 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:           Prior Year -- \$625,000                   Property Tax / Free Cash

**13.   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. Grants funds have been used to cover a portion of the project costs and a remaining \$200,000 is needed to complete the entire project.

Estimated Cost: \$200,000

Time Schedule: FY 2019 -- \$200,000 Property Tax / Free Cash

**14. 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.

In addition to the \$350,000 in FY21 for Station #7, there is \$120,000 included for modifications of egress (the creation of a second means of egress), and for alterations and repairs to the locker room, and \$110,000 for improvements to the second floor living area. Including new walls/doors/frames in rooms and paint/flooring.

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: \$1,735,000

Time Schedule:	Prior Year -- \$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

**15. 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: Prior Year -- \$71,000 Property Tax / Free Cash

**LIBRARY**

**16. 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, estimated to cost \$285,500.

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. \$155,000 is included for plans and specs (\$15,000) and the windows (\$140,000).

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 \$100,000.

Estimated Cost: \$646,500

Time Schedule: Prior Year -- \$646,500 Property Tax / Free Cash

**17. 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: FY2019 -- \$150,000 Property Tax / Free Cash

**TRANSPORTATION**

**18. TRAFFIC CALMING / SAFETY IMPROVEMENTS**

A total of \$443,659 has been allocated for various Traffic improvement projects. In FY2019, \$85,000 is proposed for a Traffic Signal Safety Improvement project located at Walnut St at Kennard Rd and Chestnut Street. The goal is to increase the safety of the intersection following a request by neighborhood residents and the school department following a student being struck at the intersection while crossing Walnut Street. The current pedestrian actuated signal operates with Walnut Street flashing yellow and Kennard and Chestnut flashing red. When a pedestrian actuates the signal via a push button all approaches turn red and the pedestrian is allowed to cross.

However feedback on the operations of the signal during the staff investigation and Transportation Board meeting was that drivers are used to the flashing yellow and often run the red because they do not expect it to change, especially during rush hour when the volumes of both pedestrians and motorists are high.

Based on a the engineers report, including a traffic signal warrant analysis, the Transportation Board approved the upgrade in November 2016 to a full traffic signal with green, yellow, red operations. The cost of the project includes:

- Modifying the traffic signal controller to accommodate the proposed timing and phasing.
- Replacing the traffic signal head sections.
- Upgrading the traffic signal back plates with black back plates with yellow reflective strip.
- Upgrade the pedestrian signal heads with 16” LED pedestrian displays with countdown displays.
- Upgrade the pedestrian push buttons with audible & vibro tactile pedestrian push buttons with field adjustable arrow.
- Install a vehicle actuation detection system.
- Install emergency pre-emption capabilities such that they are compatible with the existing pre-emption systems used by Town of Brookline emergency services.

Estimated Cost: \$443,659

Time Schedule:	Prior Year -- \$58,659	Property Tax / Free Cash
	FY 2019 -- \$85,000	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

**19. BICYCLE ACCESS IMPROVEMENTS**

The Essex Street Separated Bicycle Lane project, part of the Transportation Board’s Green Routes Master Network Plan, is a sidewalk level, raised cycle track on Essex Street from the Town border to Dummer Street and a raised intersection connecting to the existing Essex Street contra-flow bike lane. The project is meant to create a safe regional connection for the bicycle route which links the BU Bridge, Muddy River Path, City of Cambridge, and the new cycle tracks on Commonwealth Avenue to the north with Beacon Street and the

Longwood Medical Area to the south via the Cottage Farm bicycle route on Essex, Ivy, and Carlton Streets. This is consistently one of the highest used regional bicycle routes in the Town of Brookline with the number of cyclists using the route increasing over 250% between 2008 and 2016 and is a priority project which was approved by the Transportation Board. The project includes all construction, pavement marking, and signage necessary to construct the project and restore the roadway.

Estimated Cost: \$209,775

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

**20. 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.

Estimated Cost: \$644,160

Time Schedule:	Prior Year -- \$161,040	Property Tax / Free Cash
	FY 2020 -- \$161,040	Property Tax / Free Cash
	FY 2021 -- \$322,080	Property Tax / Free Cash

**21. 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 complaint 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: Prior Year -- \$333,663 Property Tax / Free Cash

**ENGINEERING/HIGHWAY**

**22. 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 FY19, the appropriation is recommended at \$1.71 million (the original \$1 million base plus the \$300,000 added in FY09 increased annually by 2.5%).

Estimated Cost: \$14,540,000

Time Schedule:	Prior Year -- \$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 -- \$1,880,000	Property Tax / Free Cash
	FY 2024 -- \$1,930,000	Property Tax / Free Cash
	Future Years -- \$1,980,000	Property Tax / Free Cash

**23. 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: \$7,684,840

Time Schedule:	Prior Year -- \$960,605	State Grant
	FY 2019 -- \$960,605	State Grant
	FY 2020 -- \$960,605	State Grant
	FY 2021 -- \$960,605	State Grant
	FY 2022 -- \$960,605	State Grant
	FY 2023 -- \$960,605	State Grant
	FY 2024 -- \$960,605	State Grant
	Future Years -- \$960,605	State Grant

**24. 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 FY19, the appropriation is recommended at \$320,000 (the original \$200,000 base plus the \$50,000 added in FY09 increased annually by 2.5%).

Estimated Cost: \$2,726,000

Time Schedule:	Prior Year -- \$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
	FY 2024 -- \$362,000	Property Tax / Free Cash

**25.    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 Center 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

**26.    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:            Prior Years -- \$240,000      Property Tax / Free Cash

**27.    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

**28. 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: Prior Year -- \$40,000 Property Tax / Free Cash

**WATER/SEWER**

**29. 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 interior surface in FY20.

Estimated Cost: \$490,000

Time Schedule: FY 2020 -- \$490,000 Water & Sewer Enterprise Fund Budget

**30. 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: \$1,200,000

Time Schedule: Prior Year -- \$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  
FY 2022 -- \$300,000 Water & Sewer Enterprise Fund Budget

**31. WATER SYSTEM IMPROVEMENTS**

Design and construction of proposed water system improvements.

Estimated Cost: \$2,300,000

Time Schedule: Prior Year -- \$300,000 Water & Sewer Enterprise Fund Bond  
FY 2020 -- \$2,000,000 Water & Sewer Enterprise Fund Bond

**32. WATER METER MOBILE TRANSMISSION UNIT (MTU) REPLACEMENT**

The Town's water meters and infrastructure were installed in 2006. The batteries of the MTU's (mobile transmission units), which transfer meter consumption to the collectors for billing are nearing the end of their useful life. This program will propose to replace all 10,000+/- MYU's over a four year period.

Estimated Cost: \$1,090,000

Time Schedule:	FY 2019 -- \$265,000	Water & Sewer Enterprise Fund Budget
	FY 2020 -- \$265,000	Water & Sewer Enterprise Fund Budget
	FY 2021 -- \$280,000	Water & Sewer Enterprise Fund Budget
	FY 2022 -- \$280,000	Water & Sewer Enterprise Fund Budget

**33. 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

**34. 44 NETHERLANDS ROAD - IMPROVEMENTS**

Project includes replacement of crushed floor drain system and concrete floor.

Estimated Cost: \$150,000

Time Schedule: FY2019 -- \$150,000 Water & Sewer Enterprise Fund Budget

**PARKS/PLAYGROUNDS**

**35. AMORY TENNIS COURTS, PARKING AND HALLS POND RENOVATION**

This item includes the reconstruction of the drainage, subgrade, irrigation and clay tennis courts and associated infrastructure at Amory Park. It also allows for improvement to drainage and reconstruction of the parking lot and entrance to the park, picnic areas and includes rehabilitation of the existing boardwalk structure and pathways at the Halls Pond Conservation Sanctuary. The current board walk

structure was installed in 2002 as a component of the overall restoration of the entire Conservation Sanctuary. Heavy use of the area is causing the decking and railings of the boardwalk to degrade, and the frequency of repairs is increasing. This project will remove the existing decking and railings, leave the piers and substructure in place, and install new pressure treated decking and handrails to ensure visitors will have a safe, and accessible, boardwalk system. This project will impact approximately 600 linear feet of boardwalk with a low bump rail, 140 linear feet with full handrails on both sides, and two overlook platforms.

Estimated Cost: \$1,650,000

Time Schedule: FY 2024 -- \$150,000 Property Tax / Free Cash  
Future Years -- \$1,500,000 Property Tax / Free Cash / General Fund Bond

**36. 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 -- \$2,200,000 General Fund Bond

**37. 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 Park and Recreation held three public scoping sessions to discuss the elements of the project and to develop a project budget. The public provided a great deal of input regarding the merits and disadvantages of both synthetic and natural turf. The Commission decided to establish a budget of \$6.65 million, however decided to hold the final decision on the material for the athletic field for the detailed design review process that will commence in 2-3 years. This allows the public and commission time to evaluate the success of the new synthetic turf field at the Devotion School that will have a natural infill material (geofill made with coconut fiber) and the replacement synthetic turf system at Downes Field that will also have an alternative infill system. The Commission felt that it would be beneficial for the community to try these two systems, evaluate new technologies and make the decision regarding the construction specifications for the athletic fields with the latest and most relevant information at the time. \$240,000 in FY2019 will be applied to design services and preparation of the engineering survey. Of the \$6.65 million construction budget, \$2.4 million is part of the Town’s property tax / free cash CIP and \$4.25 million is intended to be included in the High School Expansion and Renovation debt exclusion.

Estimated Cost: \$2,640,000

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

**38. FISHER HILL GATEHOUSE SAFETY AND STRUCTURAL IMPROVEMENTS**

Built in 1887, the Fisher Hill Reservoir Gatehouse was designed by Arthur H. Vinal, City Architect of Boston from 1884-1887. He is best known for his Richardsonian Romanesque High Service Building at the Chestnut Hill Reservoir, also built in 1887. The Gatehouse regulated the flow of water in and out of the reservoir basin and is emblematic of the immense civic pride in public waterworks at the turn of the last century.

The Fisher Hill Gatehouse is in need of interior structural and safety improvements. This project provides for a below grade utility room, floor inserts in the open chambers to make the space safe and accessible, lighting, interior window treatment, painting and repointing.

Estimated Cost: \$175,000

Time Schedule: FY 2024 -- \$175,000 Property Tax / Free Cash (Construction)

**39. HARRY DOWNES FIELD, PLAYGROUND & SYNTHETIC TURF REPLACEMENT**

Harry Downes playground was last renovated in 1993. The playground equipment, picnic area, access and egress points, accessible pathways, park furniture, safety lighting and athletic fields are in need of complete renovation/replacement. At the request of the community this budget item includes a water play/spray amenity for the hot summer months. The athletic fields are used to program lacrosse, soccer, rugby, softball and football, in addition to track and field practice and meets. The natural grass field will be renovated and the synthetic turf surface will be replaced.

The 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 10-12 years and, depending upon use, may need to be replaced more frequently. In FY19, the field will be 13 years old. The carpet has suffered several tears requiring repair and the field is in need of regrading. The project involves removing the existing carpet and infill material, laser grading the sub base, replacing the synthetic turf, safety pad and installing new infill. The comfort station will be fully rehabilitated to comply with ADA and provide improved storage and maintenance facilities. Funding for construction of the total project is estimated to cost \$2,450,000 in FY19.

Estimated Cost: \$2,450,000

Time Schedule: FY 2019 -- \$2,450,000 General Fund Bond (Construction)

**40. 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 \$95,000 for design/construction bid documents and \$1,015,000 for construction.

Estimated Cost: \$1,110,000

Time Schedule: Future Years -- \$1,110,000 Property Tax / Free Cash

#### **41. 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 (\$3.125 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, repair to the drainage structures, safety repair/replacement of the deteriorating Tempietto, terrace, stairs and fountain, repair of the railings and bridge structures, pathway improvements, invasive removal and new plantings. Funding includes completion of full depth reclamation/reconstruction of the roadway, associated handicapped accessible paths, restoration of the stairs that are in deteriorating condition, parking and safety improvements. Other structural repairs as required.

In addition, the Larz Anderson Ice Rink will be repaired with new supports, headers and piping from the compressor room to the main ice and little children's ice slab. This steel infrastructure has corroded to the point that it is sagging and has caused some of the pipes underneath the ice slab to kink or collapse causing blockages and leading to poor ice conditions.

The FY20 request (\$175,000) is for continuation of much needed pathway and stair improvements and installation of upgraded lighting.

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 2019 -- \$425,000	Property Tax/Free Cash
	FY 2020 -- \$175,000	Property Tax/Free Cash
	FY 2021 -- \$2,200,000	General Fund Bond
	FY 2024 -- \$2,500,000	General Fund Bond
	Future Years -- \$1,000,000	General Fund Bond

**42. 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, new hard court/basketball area, landscape improvements, review of picnic/passive areas, and new water play/spray pool with associated utilities. The design review process will revisit layout, grading, accessibility, safety, and functionality of the park. Construction for the project is estimated to cost \$895,000.

Estimated Cost:	\$965,000	
Time Schedule:	Prior Year -- \$70,000	Property Tax / Free Cash
	FY 2022 -- \$895,000	General Fund Bond

**43. 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	
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Time Schedule: Future Years -- \$625,000 Property Tax / Free Cash

**44. 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 \$1.15 million in FY21 is for construction.

Estimated Cost: \$1,250,000

Time Schedule: FY 2020 -- \$100,000 Property Tax / Free Cash (Design)  
FY 2021 -- \$1,150,000 General Fund Bond (Construction)

**45. 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 of the wooden picnic shelter, field renovation, fencing, paving and site furniture. The estimated project cost is \$90,000 in FY21 for design/construction bid documents and \$970,000 in FY22 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

**46. 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 site during school renovation projects. The field is also used by the upper grades for athletic practices as necessary due to its proximity to the high school. The playground, basketball court, water play and athletic field are in need of full

replacement/refurbishment along with associated utility upgrades. The renovation will include accessibility improvements into and through the site, fencing replacement, perimeter wall repointing, lighting to support evening use of the basketball court and social seating/gathering places to best serve community and school use.

Estimated Cost: \$1,350,000

Time Schedule: FY 2022 --\$110,000 Property Tax / Free Cash  
FY 2023 --\$1,240,000 General Fund Bond

**47. 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 \$90,000 for survey, design review, development and construction bid documents and \$970,000 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: \$1,060,000

Time Schedule: FY 2024 --\$90,000 Property Tax / Free Cash  
Future Years --\$970,000 Property Tax / Free Cash

**48. SOULE ATHLETIC FIELDS & SITE RENOVATION**

The Soule Early Education Center is located on Hammond Street. The athletic fields on site serve Town-run daycare 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, pathway connections, storm drainage improvements, picnic areas, and improvement to Robson Athletic Field (Upper Soule). The estimated project cost is \$90,000 for design development and construction oversight with \$1,360,000 in construction costs.

Estimated Cost: \$1,450,000

Time Schedule: Future Years -- \$1,450,000 General Fund Bond

**49. SKYLINE PARK SYNTHETIC TURF REPLACEMENT AND PARK IMPROVEMENTS**

The synthetic turf carpet at Skyline Field is in need of replacement approximately every 10-12 years and potentially sooner depending upon use. The field was installed and opened to the public in June 2008. The existing carpet and infill will be removed and disposed of, the drainage layer/subbase will be laser graded, new carpet and new infill installed. This project also calls for some improvements to the site furnishings, plantings, pathways, improved connection to Lost Pond Sanctuary, renovate/construct comfort station and storage area and site amenities.

Estimated Cost: \$1,980,000

Time Schedule: Future Years -- \$1,980,000 General Fund Bond

**50. 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: \$2,500,000

Time Schedule:	Prior Year -- \$305,000	Property Tax / Free Cash
	FY 2019 -- \$305,000	Property Tax / Free Cash
	FY 2020 -- \$310,000	Property Tax / Free Cash
	FY 2021 -- \$310,000	Property Tax / Free Cash
	FY 2022 -- \$315,000	Property Tax / Free Cash
	FY 2023 -- \$315,000	Property Tax / Free Cash
	FY 2024 -- \$320,000	Property Tax / Free Cash
	Future Years -- \$320,000	Property Tax / Free Cash

**51. 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: \$1,340,000

Time Schedule:	Prior Year -- \$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
	FY 2024 -- \$180,000	Property Tax / Free Cash
	Future Years -- \$185,000	Property Tax / Free Cash

**52. 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 2020 -- \$200,000	Property Tax / Free Cash
	Future Years -- \$100,000	Property Tax / Free Cash

**53. 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 facade. 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: \$300,000

Time Schedule:	FY 2021 -- \$250,000	Property Tax / Free Cash
	Future Years -- \$50,000	Property Tax / Free Cash

**CONSERVATION/OTHER OPEN SPACE**

**54. 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, invasive 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: \$1,900,000

Time Schedule:	Prior Year -- \$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

FY 2024 -- \$245,000	Property Tax / Free Cash
Future Years -- \$245,000	Property Tax / Free Cash

**55. 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

**56. 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**

**57. AQUATICS CENTER POOL FILTER REPLACEMENT**

With over 50,000 patrons visiting the Evelyn Kirrane Aquatics Center annually, the facility is one of the most frequented public spaces in Brookline. The facility is now in need of new systems for filtering water for the three pools. The current systems are over 30 years old and have recently been failing, allowing sand back into the pool. A new system would be more energy efficient, filter water more quickly and effectively, saving the department in time, labor, and materials.

Estimated Cost: \$225,000

Time Schedule: FY 2019 -- \$225,000 Property Tax / Free Cash

**58. 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**

**59. 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: \$1,000,000

Time Schedule:	Prior Year -- \$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
	FY 2018 -- \$150,000	Property Tax / Free Cash
	Future Years -- \$160,000	Property Tax / Free Cash

**60. HVAC EQUIPMENT**

These funds would be used to primarily replace the larger, more expensive parts up to and including the entire unit for air conditioners, HVAC equipment and boilers. A majority of the money would be used for ac compressor replacements. There are presently 199 permanent air conditioning systems in both Town and School buildings. Their sizes range from 2 tons to over 100 tons. The equipment age goes from 1975 up to 2017, with 112 units 10 years or older. Typically, air conditioning compressors last only 5 - 10 years. Depending on the size, costs can range from \$3,500 to \$150,000. Instead of being proactive, there is presently a reactive response when there is a failure, usually in very hot weather. The cost to repair is born out of the operations and maintenance budget (O&M). However, with the large increase in installations of AC equipment over the years, the O&M would not be able to handle a large cost such as this. The plan would be to replace compressors and do upgrades in the off season, based on age and conditions. The same applies for boilers and burners. Typically, a cast iron boiler will last 50-100 years. However, the Town has not been installing these types of boilers, installing efficient condensing boilers instead, which have a much shorter life span - 20-25 years. These monies would replace the boilers before there is a catastrophic failure (in the winter) during the summer months.

Estimated Cost: \$1,250,000

Time Schedule:	FY 2019 -- \$150,000	Property Tax / Free Cash
	FY 2021 -- \$300,000	Property Tax / Free Cash
	FY 2022 -- \$200,000	Property Tax / Free Cash
	FY 2024 -- \$200,000	Property Tax / Free Cash
	Future Years -- \$400,000	Property Tax / Free Cash

**61. CLASSROOM CLIMATE CONTROL**

Through FY17 to the present, requests have come to the School Director of Operations to add air conditioning and improve climate control in various buildings and for a variety of spaces. Requests have come from parents, staff and PTO members. Some requests stem from a documented medical need the school department must accommodate, and others stem from maintaining an environment that is conducive to teaching and learning. The buildings are designed and built to hold the heat in, and bring in fresh air per code. The heat rises and then gets contained, even with windows being opened. On days where the outside temperature is in the 80s or 90s top floors that also receive direct sunlight in the afternoons can often have room temperatures in excess of the outside temperatures and that distracts teaching and learning. The request for Lawrence, New Lincoln, Heath and possibly BHS identify existing spaces significantly impacted by the heat retention described above. The \$225,000 estimate will not cover all requests to improve building climate and temperature, but will allow the Building Department to begin addressing the most pressing needs.

Estimated Cost: \$225,000

Time Schedule: FY 2019 -- \$225,000 Property Tax / Free Cash

**62. UNDERGROUND OIL TANK REMOVAL**

These funds would be used to remove underground fuel oil tanks, some almost 25 years old. The tanks came with a 30 warranty. There are 26 tanks at various school and town sites. New tanks would be installed inside of the buildings (1000 gallon or less) to replace larger (5000-15000 gallon) tanks. Also small 275 (typically) gallon tanks would be replaced with new tanks of the same size. The boilers are set up for dual fuel. There is no reason to remove and replace the boilers or burners as they function well. By installing a small, above ground tank, inside, we can have the backup function of using oil to heat the buildings in case of an emergency or gas shortage.

Some funding may come from the UST state fund. It is estimated that 50% of the costs would be reimbursed for the tank removals. Typical costs for tank removals would be in the \$50,000 range. If the tank leaks, the costs could be up to 10 times this amount.

Estimated Cost: \$350,000

Time Schedule: FY 2021 -- \$100,000 Property Tax / Free Cash  
FY 2022 -- \$100,000 Property Tax / Free Cash  
FY 2024 -- \$100,000 Property Tax / Free Cash  
Future Years -- \$50,000 Property Tax / Free Cash

**63. 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: \$660,000

Time Schedule:	Prior Year -- \$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 2023 -- \$85,000	Property Tax / Free Cash
	FY 2024 -- \$90,000	Property Tax / Free Cash
	Future Years -- \$90,000	Property Tax / Free Cash

**64. 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: \$1,175,000

Time Schedule:	Prior Year -- \$475,000	Property Tax / Free Cash
	FY 2019 -- \$300,000	Property Tax / Free Cash
	FY 2021 -- \$100,000	Property Tax / Free Cash
	FY 2022 -- \$100,000	Property Tax / Free Cash
	FY 2024 -- \$100,000	Property Tax / Free Cash
	Future Years -- \$100,000	Property Tax / Free Cash

**65. 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: \$1,430,000

Time Schedule:	Prior Year -- \$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
	FY 2024 -- \$200,000	Property Tax / Free Cash
	Future Years -- \$205,000	Property Tax / Free Cash

**66. 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: \$1,140,000

Time Schedule:	Prior Year -- \$125,000	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
FY 2024 -- \$130,000	Property Tax / Free Cash
Future Years -- \$250,000	Property Tax / Free Cash

**67. 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. Facilities addressed within this time frame include the following:

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
2024	Fire Station 1, Health Ctr., Lynch Rec Ctr., Pierce, Town Hall		

Estimated Cost: \$17,050,000

Time Schedule:	FY 2020 -- \$1,500,000	General Fund Bond
	FY 2021 -- \$3,100,000	General Fund Bond
	FY 2022 -- \$750,000	General Fund Bond
	FY 2022 -- \$1,000,000	Property Tax / Free Cash
	Future Years -- \$11,700,000	General Fund Bond+ Property Tax / Free Cash

**68. 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. Facilities addressed within this time frame include the following:

2018	Coolidge Corner Library	2019	Fire Station 7
2020	No work scheduled	2021	Golf Course, Heath, Lawrence, Larz Skate Rink, Lincoln,
2022	No work scheduled	2023	Driscoll
2024	No work scheduled		

Pierce Primary

Estimated Cost: \$15,800,000

Time Schedule:	FY 2023 -- \$800,000	General Fund Bond
	FY 2024 -- \$800,000	General Fund Bond
	Future Years -- \$14,200,000	General Fund Bond + Property Tax / Free Cash

**69. PUBLIC BUILDING FIRE ALARM UPGRADES**

The Town engaged with Garcia, Galuska & Desousa to conduct a study to assess the existing fire alarm and fire protection systems. The funding below will allow the Building Department to address the recommendations in the study to properly maintain and upgrade these systems.

Estimated Cost: \$1,650,000

Time Schedule:	FY 2019 -- \$250,000	Property Tax / Free Cash
	FY 2021 -- \$150,000	Property Tax / Free Cash
	FY 2022 -- \$300,000	Property Tax / Free Cash
	FY 2023 -- \$300,000	Property Tax / Free Cash
	FY 2024 -- \$300,000	Property Tax / Free Cash
	Future Years -- \$350,000	Property Tax / Free Cash

**70. 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: \$1,365,000

Time Schedule:	Prior Year -- \$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
	FY 2024 -- \$180,000	Property Tax / Free Cash
	Future Years -- \$180,000	Property Tax / Free Cash

**71. 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:	FY 2019 -- \$100,000	Property Tax / Free Cash
	FY 2023 -- \$50,000	Property Tax / Free Cash

Future Years -- \$50,000

Property Tax / Free Cash

**72. 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: \$940,000

Time Schedule:	Prior Year -- \$100,000	Property Tax / Free Cash
	FY 2019 -- \$230,000	Property Tax / Free Cash
	FY 2020 -- \$110,000	Property Tax / Free Cash
	FY 2021 -- \$115,000	Property Tax / Free Cash
	FY 2022 -- \$120,000	Property Tax / Free Cash
	FY 2023 -- \$125,000	Property Tax / Free Cash
	FY 2024 -- \$130,000	Property Tax / Free Cash
	Future Years -- \$135,000	Property Tax / Free Cash

**73. 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 2000 student in 2016 students to 2,460 -2,800 students by 2022 -- a growth of more than 400 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 2,460 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, BHS students, BHS parents, School Committee, Select Board, 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 2,500-2,800 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 Select Board, 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: \$36,850,000

Time Schedule:	Prior Year -- \$1,850,000	General Fund Bond (Schematic Design)
	FY 2019 -- \$35,000,000	General Fund Bond (Design Completion / Construction)

**74. 9th SCHOOL SCHEMATIC DESIGN**

In November 2017, the ongoing process to build a 9th elementary school in Brookline restarted the site selection process. On November 14, Town Meeting voted in favor of Special Town Meeting Warrant Article 1 to spend \$300,000 on further site evaluation at Baldwin/Pine Manor, Baker School, Pierce School, and other possible sites identified by the town or offered by landowners. The approved warrant allows for additional expenditures for further feasibility study should a single site or multi-site solution be chosen. The extended site

evaluation study will be completed within 90 to 120 days, after which time a feasibility study will commence. \$1.5 million is available in FY19 for schematic design at the chosen site, some of which is re-appropriated from FY2018 9<sup>th</sup> School CIP item voted last year.

Estimated Cost: \$1,500,000

Time Schedule: FY 2019 -- \$1,500,000 Property Tax / Free Cash (Schematic Design)

**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 FY19 – FY21/22 timeframe. \$1.5 million was appropriated in FY18 for schematic design at the Baldwin site. On November 14, Town Meeting voted in favor of Special Town Meeting Warrant Article 1 which repurposed \$1,000,000 of these funds to restart the site selection process. It is anticipated that the \$500K balance will be used to support the new Schematic Design appropriation described above.

Estimated Cost: \$1,500,000

Time Schedule: Prior Year -- \$1,500,000 Property Tax / Free Cash (Schematic Design)

**76. 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:	Prior Year -- \$400,000	Property Tax / Free Cash
	FY 2019 -- \$4,000,000	General Fund Bond

## 77. 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;
- Gym and Fitness Room Rental 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 added a fourth section of Grade 3.
  - Lawrence added a fourth section of Grade 6.
  - Pierce added a fifth section of Grade 4.
  - Devotion added 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 fifty 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 moved to the Sperber Center at Pierce Elementary in FY17 . The movement of these departments from the High School, Pierce (Sperber Center), and Town Hall Annex/leased space 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 FY2018 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 FY2019 – 2023 budgets assume continuation of those lease arrangements.

Estimated Cost:           \$8,075,000

Time Schedule:	Prior Year -- \$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 -- \$915,000	Property Tax / Free Cash
	FY 2023 -- \$915,000	Property Tax / Free Cash
	FY 2024 -- \$915,000	Property Tax / Free Cash
	Future Years -- \$915,000	Property Tax / Free Cash