City of Lawrence
Capital Improvement Plan (CIP)
(FY2017-FY2021)

March 2016

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INTRODUCTION

The City of Lawrence's $92.2 million all funds five-year capital improvement plan (CIP) for FY2017-FY2021 will make major inroads into addressing significant infrastructure needs that exist in Lawrence today and will start the City on a path of making a regular and sizeable investments in the maintenance and improvement of its capital assets. Across the city, residents and businesses will begin to feel the positive impact of the CIP through high visibility projects such as: install air conditioning in the Main Library and make Improvements to Gagnon and Bourgoin Parks. Less visibly – but also with great impact – projects such as regularly replacing police cruisers, replacing personal protective gear for firefighters, and purchasing two new street sweepers will protect the heathy and safety of community members and City workers alike.

By looking out across multiple years, City officials will able to carefully schedule projects to so that they capture declines in existing debt service and use those same dollars to fund new investments. At the same time, department directors will be able plan in advance for upgrades of equipment and infrastructure so as to reduce emergency repairs and purchases which inevitably drive up costs. Departments will also be able to plan for multi-year projects such as the design and construction of a major roadway project or a new building, while knowing that their efforts will be tracked as part of regular updates to the CIP.

In this rolling five-year plan, funding for first year will be included the City's FY2017 budget, while years two to five will provide a plan for the future that takes into account the best information currently available. During the FY2017 fiscal year, another plan — building upon this one— will be developed for the subsequent five years e.g., FY2018-FY2022. Should more funding become available than is currently anticipated, projects could be moved forward in time and/or additional projects could be added. Should finances be more constrained than currently anticipated, projects could be moved back in time or taken off the list. Further, other projects not yet conceived of can be added if they advance the City's goals better than those included in the current version of the plan.

What is a capital budget? What is a capital project?

A capital budget is distinct from an operating budget in that the items included in a capital budget are typically large or infrequent expenses, such as construction of a new building or acquisition of a new dump truck, whereas an operating budget includes expenses that occur each year or are modest, such as salaries and vehicle maintenance. A capital budget identifies the array of resources to be used to fund a series of capital projects. In many instances, municipalities establish minimum dollar thresholds for projects to be included in a CIP. In the case of Lawrence, $20,000 was established as the minimum project amount for inclusion in the CIP.

The Massachusetts Association of Town Finance Committees defines capital projects as "major, non-recurring expenditures, for one of the following purposes:

- acquisition of land for a public purpose;
- construction of a new facility or external expansion or major rehabilitation of an existing one. Examples of such town facilities include public buildings, water and sewer lines, roads and playing fields;
- purchase of vehicles or major equipment items;
- any planning, feasibility, engineering or design study related to a capital project or to a capital improvement program consisting of individual projects.

- equipment for public improvements when they are first constructed such as furniture, office equipment, or playground equipment;
- major equipment which is expensive and has a relatively long life such as a fire apparatus, garbage trucks, and construction equipment."

The group goes on to indicate that, "typically capital projects do not include:

- equipment such as furniture or police or public works vehicles which are replaced annually in approximately the same quantity;
- equipment with a useful life of five years or less."

What is a capital plan?

According to the Massachusetts Department of Revenue (DOR), a capital plan is a blueprint for planning a community's capital expenditure and "one of most important responsibilities of local government officials." Putting together multiple years of capital spending into a plan, instead of looking at each year in isolation, has multiple benefits including:

- impacts on the operating budget can be minimized through thoughtful debt management;
- high-cost repairs and emergency acquisitions can be reduced by implementing regular vehicle and equipment replacement schedules, and by undertaking major facilities improvements, such as replacing roofs, before a problem becomes chronic and damage occurs;
- large scale, ambitious public improvements can be phased over multiple years;
- critical parcels of land can be purchased before costs increase;
- costly mistakes created by lack of coordination - such as paving a street one year and then cutting into it the next year to install a sewer line – can be avoided; and,
- methodical progress can be made toward meeting community goals.

CIP Overview

In the FY2017-FY2021 Capital Improvement Plan, the City of Lawrence will expend approximately $92.2 million in funds for 50 capital projects ranging in size from $20,000 to replace the flooring at the senior center and $20,000 for an upgrade of the electrical systems at the Branch Library to $45.2 million for construction of a new elementary school (upwards of 60% of which will likely be funded by the Commonwealth through the Massachusetts School Building Authority (MSBA) new construction program).

Funding for the entire CIP will be provided from an array of sources, including, but not limited to:

- just over $31 million in general fund debt;
- just over $3.45 million in Pay as You Go projects funded by the general fund; and,
- nearly $800,000 from the Airport Enterprise Fund to be used as a match to Federal and State grant awards.

The City also anticipates receiving more than $21.8 million in grant funds for capital projects. This includes the annual Chapter 90 roadway allocation, which is projected to total nearly $6.5 million over the course of the next five years, and $15.1 million from the Federal Aviation Administration (FAA) and MassDOT for five projects to improve and enhance the Lawrence Municipal Airport. While the figures known today are substantial, grant funding will certainly increase in upcoming years as new grant opportunities are identified and secured.

ABOUT THE CITY OF LAWRENCE

Lawrence was first incorporated as a town in 1846 and then as a city in 1853. From its early years, it was envisioned as a textile manufacturing center. Starting in 1844, the Essex Company began to design and construct extensive infrastructure systems geared toward creating an efficient, planned community to support the construction of a series of textile mills. Infrastructure systems built by the company included the Great Stone Dam and the North and South canals on the Merrimack River that would produce low cost energy, the city's first roadways and drainage systems to move workers and goods and reduce flooding, and Prospect Hill reservoir and water lines to support residents and businesses alike. The 17 ½ acre Common (now known as Campagnone Common) was donated to the people of Lawrence by the Essex Company in 1848, in addition to Bodwell Park, Stockton Park, Storrow Park, and Union Park.[1]

Today, the City of Lawrence has responsibility to maintain these longstanding infrastructure systems and more, including city and school facilities, information technology (IT) systems, parks and open space, roadways and sidewalks, the sewer system, storm drainage system, and the water system. In addition, the many vehicles and pieces of equipment used by City and School staff to perform their duties must also be maintained and replaced over time. City officials face a significant challenge as they strive to keep these systems and equipment in good working condition while using the public resources available to them wisely and with the greatest impact.

Infrastructure components for which the City of Lawrence is responsible include:

City Facilities

Today, the City of Lawrence occupies and manages a series of buildings and building complexes that serve a multitude of purposes from City Hall to the Main Library to the DPW yard. Each of these facilities must be maintained on a regular basis to ensure the safety and comfort of workers and the general public. All told, at the end of FY2015, city and school buildings had an estimated value of over $271 million.[2]

The history of public buildings in Lawrence is extensive and unique, and many buildings that remain today are legacy to the earliest years of the Town/City of Lawrence. Among the most historic facilities are:

- City Hall – according to Maurice Dorgan, in the spring of 1848, Lawrence town meeting members voted to construct a "Town House" to include a town hall and offices at 200 Common Street on property purchased from the Essex Company. The construction was contracted at a cost of "$27,568, and out of this amount were reserved $1,000 for a clock and bell, $700 for heating, and $100 for ventilating equipment."[3] The large (9 feet, 6 inches high) eagle on the top of the bell tower was carved by one of the members of the Board of Selectmen.[4] The building was enlarged in 1923. Among its many uses,

[1] Dorgan, Maurice, Lawrence Yesterday and Today (1845-1918), May 22, 1941, retrieved from https://archive.org/stream/lawrenceyesterda00dorg/lawrenceyesterda00dorg_djvu.txt, March 6, 2016. pp. 21-27.
[2] City of Lawrence, Lawrence Basic Financial Statements, p. 39.
[3] Dorgan, p. 78.
[4] Ibid, p. 80.

City Hall previously housed the county courthouse and, during the Pemberton Mill Disaster in 1860, the hall served as a morgue for victims.

- Bellevue Cemetery – the cemetery was established in 1847 and the 96 acre property is predominantly within the borders of Lawrence, but a small portion of the property is located in Methuen. It is known for its park-like design and terraced hillside location. In 2003, the cemetery was added to the National Register of Historic Places.

LAWRENCE CITY FACILITIES (Partial List)	
Name	**Address**
Bellevue Cemetery	170 May Street
Bellevue Cemetery office and storage	100 Reservoir Road
Buckley Parking Garage	99 Amesbury Street
City Hall	200 Common Street
Council on Aging/ Senior Center	155 Haverhill Street
Department of Public Works Yard	1 Auburn Street
Downtown Parking Garage	1 Hampshire Street
Fire Alarm Building	60 Bodwell Street
Fire Dept. Bailey Street Station	161/2 Bailey Street
Fire Dept. Engine 5, Ladder 5, Rescue 1	65 Lowell Street
Fire Dept. Engine 6	480 Howard Street
Fire Dept. Engine 7	290 Park Street
Fire Dept. Engine 8 (Closed)	298 Ames Street
Fire Dept. Engine 9, Ladder 4	71 S. Broadway
General Donovan School Building	50 Cross Street
Main Library	51 Lawrence Street
Museum Square Parking Garage	3 Museum Square
Police Department	90 Lowell Street
South Branch Library	135 Parker Street
Water Department	400 Water Street

Lawrence Municipal Airport

The Lawrence Municipal Airport (LWM) was established in 1934 – only 31 years after the Wright Brothers managed their first flight with a powered, controlled aircraft at Kitty Hawk, NC in 1903. The airport is located at 492 Sutton Street in North Andover, but is owned by the City of Lawrence and managed by a nine-member commission appointed by the Mayor.

Runway 5/23 is 5,001 feet long and 150 feet wide, while Runway 14/32 is 3,900 feet long and 100 feet wide. There are five connecting taxiways, and all runways and taxiways are paved and lighted. As of February 2016, there were a reported 211 aircraft based at the airport, including 169 single engine planes, 23 multi-engine planes, 8 jet airplanes, and 11 helicopters. Data from September 2014 show an average of 181 aircraft operations per day, of which 53% are locally-based flights, 45% transient or from other airports, 2% from air taxis, and less than 1% from military operations.[5]

[5] Airnav.com, retrieved from https://www.airnav.com/airport/KLWM, March 3, 2016.

Information Technology

Lawrence's core information technology (IT) infrastructure includes physical and virtualized servers, network area storage, switches, firewalls, VPNs, routers, internet connections, UPS, environmental controls, surveillance, voice and radio communication, wireless radios, and access points. The City's data center is located in the Main Library with failover equipment located in City Hall.

LAWRENCE SOFTWARE APPLICATONS (partial list)	
Department	**Software**
All Users	Microsoft Office;
Financial Applications	Tyler Technologies - MUNIS
Public Safety	Firehouse; Vernon, QED, DHQ, CJIS, Filemaker, IAPro
Assessor	Vision Appraisal
City Yard	Snow management software, GasBoy
Water Filtration	Tokay Navigator

Parks and Open Space

Several parks in Lawrence date from the early years when the community was first being developed including the Campagnone Common, Bodwell Park, Stockton Park, Storrow Park, and Union Park City. To these more have been added, and today residents and visitors have access to nearly 300 acres of parks, fields, and trails owned and managed by the City, the State, and other entities. The City owns and manages 37 parks which total just over 253 acres of land. In addition, the State (Massachusetts DCR and Mass Highway) own and manage another six (6) parks on over 22 acres of land.

Open space in Lawrence ranges from the petite Durant Square Park, an island within the intersection of Berkeley Street at East Haverhill Street, to the 120 acre Den Rock Park which is jointly owned by the City of Lawrence, the Town of Andover, and the Merrimack River Watershed Council (82 acres are located within Lawrence proper).

OPEN SPACE FACILITIES OWNED/MANAGED BY CITY OF LAWRENCE[6]		
Name	**Size (acres)**	**Location**
Bourgoin Square	2.7	West St b/t Wendell and Acton Streets
Bruce School Park	1.7	Providence Street and Shawmut Street
Campagnone Common	17.5	Common Street across from City Hall
Costello Park	6.9	Crawford Street and Abbott Street
Coyne Park	5.2	B/t Shawsheen Road and the river
Cronin Park	1.0	Alder St b/t Juniper and Poplar Street
Den Rock Park	81.8	Winthrop Ave close to River Pointe Way
Donovan Park	3.4	Andover Street near Beacon Street
Dr. Nina Scarito Park	2.78	Brook Street
Durant Square Park		Berkeley Street and E Haverhill Street
Frost School Rec Complex	2.0	33 Hamlet Street
Gagnon Park	1.2	Providence Street near Shawmut Street
Guilmette School	1.5	80 Bodwell Street
Hayden Schofield Playstead	3.1	Lawrence Street and Myrtle Street

[6] Groundwork Lawrence, City of Lawrence 2009 Open Space and Recreation Plan, pp. 26-31.

OPEN SPACE FACILITIES OWNED/MANAGED BY CITY OF LAWRENCE[6]		
Name	**Size (acres)**	**Location**
Highland Park	0.2	Park Street, near Broadway
Howard Playstead	4.6	Lawrence Street and Hampshire Street
Immigrant Place	1.6	Chestnut Street and Short Street
Kennedy Community Park	1.3	Holly Street and Daisy Street
Lindquist Playstead	2.0	Emmett Street near Kingston Street
Manchester Street Park	5.0	77 Manchester Street
McDermott Park	0.5	28 Bailey Street
Misserville Park	1.6	Allen Street and Summer Street
Mount Vernon Park	12.0	Mount Vernon St near Crestshire Drive
O'Connell South Common	11.0	South Union Street and Market Street
O'Neill Park	6.9	Lawrence Street near Oak Street
Oxford Street Park	0.2	Oxford Street and Lowell Street
Parthum School	1.5	255 E Haverhill Street
Plainsman Park	0.7	White Street and Chestnut Street
Reservoir and Water Tower	20.8	349 - 353 Ames Street
Reviviendo Playground	0.25	Newbury Street and Summer Street
Rowell Park	0.8	Hampshire Street near Auburn Street
Shawsheen Park	9.0	Crawford Street
South Lawrence East School	5.0	Crawford Street
Stockton Park	0.4	S. Union St, Winthrop Av, Dorchester St
Storrow Park	9.8	High Street near Pleasant Street
Sullivan Park	4.0	N Parish Road and Winthrop Avenue
Van Doorne Park	0.4	School St, Floral St, and Oregon Av
Veterans Memorial Stadium	23.0	70-71 North Parish Street
TOTAL	**253.3**	

All of the City's parks and open space must be routinely maintained, including mowing the lawn and trimming bushes and trees, removing trash and debris, and making sure the parks and associated play equipment are safe for all users.

In addition to the City-owned parks, residents and visitors can enjoy the below-listed facilities managed by the Commonwealth.

OPEN SPACE FACILITIES OWNED/MANAGED BY THE COMMONWEALTH OF MASSACHUSETTS[7]			
Name	**Size (acres)**	**Location**	**Agency**
Marston Street Park	7.0		Mass Hwy
Geisler Pool		50 High Street	Mass. DCR
Higgins Pool		180 Crawford Street	Mass. DCR
Lawrence Heritage State Park	0.5	1 Jackson Street	Mass. DCR
Pemberton Park	3.0	Canal St near Central Bridge	Mass. DCR
Riverfront State Park	12.0	Eaton and Everett Streets	Mass. DCR
TOTAL	**22.5+**		

[7] Ibid.

Roadways and Sidewalks

Prior to construction of the Andover Bridge in 1793, the only way to cross the Merrimack River was via two ferries – Bodwell's ferry and Marston's ferry. Marston's ferry "was established, primarily, to enable settlers to pursue northern Indian bands, who often appeared on the north bank…"[8] In March of 1793, the General Court of Massachusetts incorporated the "Proprietors of Andover Bridge" who were charged with constructing a bridge over the Merrimack at Bodwell's falls (near the current location of the Broadway bridge). Tolls were charged to those who chose to cross the 110 foot long bridge. The bridge was frequently damaged by ice and logs during heavy weather conditions and relocation did not resolve the frequent damage of the bridge piers. In 1846, the bridge was taken over by the Essex Company as they expanded Lawrence streets and roadways to accommodate the textile industry. In fact, the Essex Company designed and built most of the roadways and alleyways in Lawrence.

Today, a network of approximately 126 miles of roadways crosses Lawrence. This includes nearly 121 miles of accepted local streets, 9.4 miles of private unaccepted streets, and 6.2 miles of State roadway maintained by the Massachusetts Department of Transportation (MassDOT). Numbered State roads include:

- Interstate-93;
- Interstate-495;
- Route 28 (Broadway/South Broadway);
- Route 110 (Haverhill Street); and,
- Route 114 (Salem Turnpike).

Lawrence has primarily urbanized streets. In the downtown, streets tend to have curb, gutter, and sidewalk.

Lawrence's three rivers are crossed by multiple bridges maintained by the City and MassDOT. These include:

BRIDGES IN LAWRENCE	
<u>Merrimack River Bridges</u> O'Leary Bridge (Broadway Bridge) Casey Bridge (Central Bridge) O'Reilly Bridge (I-495 Bridge) Sirois Bridge (I-93 Bridge) Union Street Bridge (Duck Bridge) <u>Spicket River Bridges</u> Jimenez Bridge (at Canal Street) Bunting Bridge (Lawrence Street)	<u>North Canal Bridges</u> Gilbert Bridge (Broadway) <u>South Canal Bridges</u> Kershaw Bridge (Broadway) <u>Railroad Bridges</u> Nyhan Bridge (Salem Street)[9]

School Facilities

At the first Town Meeting held in April 1847, participants voted to build two school houses and by January 1849, the high school was opened.

During the 2014-2015 school year, the Lawrence Public School System educated roughly 13,900 students in 32 different schools located at 26 different addresses across the city. The grade makeup of the schools varies,

[8] Dorgan, p. 17.

[9] Queen City Massachusetts, retrieved from https://queencityma.wordpress.com/2014/07/01/bridges-lawrence-ma/, March 7, 2016.

with 8 elementary schools, 2 elementary/middle schools, 7 middle schools, 8 high school academies, and 6 pre-kindergarten programs. The School administrative offices are temporarily located at 233 Haverhill Street. Several of the schools are located on shared school campuses including the:

- Frost Elementary and Frost Middle Schools;
- Guilmette Elementary and Guilmette Middle Schools;
- Parthum Elementary and Parthum Middle Schools;
- South Lawrence East Elementary and the Spark Academy; and,
- School For Exceptional Studies and the UP Academy Oliver.

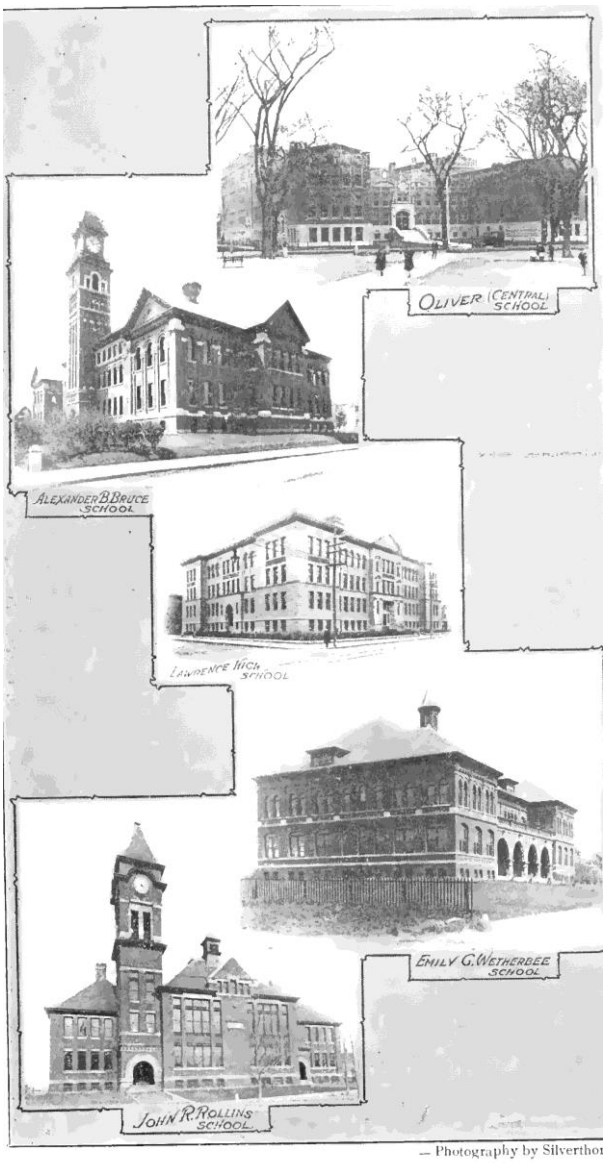
LAWRENCE PUBLIC SCHOOL FACILITIES				
Facility	**Grades**	**Location**	**Year Built**	**Sq. Ft.** [10]
Adult Learning Center	Adult	147 Haverhill Street		
Arlington Middle School	5 – 8	150 Arlington Street	1989	76,840
Breen School	Pre-K, K	114 Osgood Street	1910	38,510
Bruce School	3 - 8	135 Butler Street	1954	52,897
Arlington Elem School - Community Day (CDAES)	K – 4	150 Arlington Street	1987	77,160
Frost Elementary School	K – 4	33 Hamlet Street	1985	81,326
Frost Middle School	5 - 8	33 Hamlet Street	1985	65,674
Guilmette Elementary School	1 – 4	80 Bodwell Street	2001	94,355
Guilmette Middle School	5 - 8	80 Bodwell Street	2001	89,645
Hennessey School	Pre-K, K	122 Hancock Street	1969	43,569
High School Learning Center		58 Lawrence Street		
HiSet Test Center	Adult	60 Island Street		
Lawlor School	K	41 Lexington Street	1931	19,000
Lawrence Early Achievement Partnership (LEAP) - Greater Lawrence Community Action Council	Pre-K	96 East Haverhill Street		
Lawrence Early Achievement Partnership (LEAP) - The Community Group	Pre-K	404 Haverhill Street		
Lawrence Family Public Academy		526 Lowell Street		
Lawrence High School	9 – 12	70-71 N Parish Road	2007	346,500
Leahy School	K – 5	100 Erving Avenue	1921	45,158
Oliver Partnership School	1 – 5	183 Haverhill Street		191,244
Parthum Elementary School	K – 4	255 E Haverhill Street	2002	96,742
Parthum Middle School	5 - 8	255 E Haverhill Street	2002	90,258
Phoenix Academy Lawrence		15 Union Street		
Rollins School	Pre-K, K	451 Howard Street	1892	33,534
School for Exceptional Studies	1 – 12	233 Haverhill Street	1982	71,896
SES at the Annex	1 - 9	483 Lowell Street		
South Lawrence East (SLE) Elementary School	1 – 4	165 Crawford Street	1995	93,073
Spark Academy	6 – 8	165 Crawford Street	2012	
Tarbox School	1 - 5	59 Alder Street	1888	51,160
UP Academy Leonard	6 – 8	60 Allen Street	1926	35,120
UP Academy Oliver	6 - 8	233 Haverhill Street		
Wetherbee School	K - 8t	75 Newton Street	1895	138,776

[10] Massachusetts School Building Authority, retrieved from http://cms.massschoolbuildings.org/node/40149, March 3, 2016

The oldest school facility, housing the Tarbox School, dates back to 1888. This is followed by the Rollins School (1892) and the Weatherbee School (1895), with the Spark Academy (2012) being the youngest facility of all. Lawrence High School, built in 2007 is the single largest facility with 346,500 square feet in area. Data from the Massachusetts School Building Authority indicate that, in addition to construction of the high school and the Spark Academy, major renovations have occurred in seven schools in the past 30 years. These include:

LAWRENCE SCHOOL RENOVATIONS[11]	
School	**Renovation Year**
Leahy School	1985
Wetherbee School	2003
Guilmette Elementary School	2004
Guilmette Middle School	2004
Rollins School	2006
School for Exceptional Studies	2007
Bruce School	2008

According to the Massachusetts Department of Education, aside from the high school which has approximately 2,500 students, total school enrollment varies from approximately 700 students (South Lawrence East Elementary School and Wetherbee School) to 114 at the Phoenix Academy Lawrence, a partnership charter school that is in the process of adding grades and growing enrollment[12]. When comparing the size of the school with the total enrollment, it becomes apparent that the most crowded schools are the Leahy School (80.6 sf per student) and the Bruce School (85.3 sf per student), with the Wetherbee School offering the most space at 213.5 sf per student.



Schools in Lawrence (Dorgan, 1941, p. 97)

In November 2011, the Lawrence Public Schools was placed into state receivership by the Massachusetts Board of Elementary & Secondary Education. Under receivership, the Commissioner of Elementary & Secondary Education appoints a receiver, who is vested with the powers of the school district superintendent and the local school committee. In addition to consolidated governing authority, the receiver also has the power to amend or suspend aspects of collective bargaining agreements in the district. No end date has been specified for receivership, though the Commissioner has stated that he expects the turnaround will take at least five years.

[11] Ibid.

[12] Massachusetts Department of Education, *Lawrence Public School District Profile*. retrieved fromhttp://profiles.doe.mass.edu/profiles/student.aspx?orgcode=01490000&orgtypecode=5&, March 3, 2016

The makeup of the Lawrence Public School's student body is 91.3% Hispanic and 70% of the student body's first language is not English. In addition, 91.3% of students are classified as low income and receive either a free or reduced-priced lunch.[13]

Sewer System

Lawrence is home to "the world's first trial station for drinking water purification and sewage treatment".[14] Called the Lawrence Experiment Station, it was established in 1887 by the Massachusetts State Board of Health. In 1886, the Massachusetts State Legislature directed the Board of Health to adopt water pollution standards and the Lawrence Experiment Station was constructed to develop practical methods for treating wastewater. The City of Lawrence was an early beneficiary of the State's efforts, "in 1893 when a typhoid epidemic (Salmonella typhi) arose along the Merrimack River, the City of Lawrence began filtration of river water using Mills' slow sand filters, thus becoming the first American city to filter its water for disease prevention. This filtering led to marked reductions in typhoid fever rate and overall death rate in the city."[15] The Massachusetts Department of Environmental Protection (DEP) continues to operate the facility at its historic location in Lawrence.

The City of Lawrence's sewer system is comprised of 130 miles of pipes to process wastewater, of which 60% is combined with storm water; four wastewater pumping stations; and 2,900 manholes. Sewers range from 4-inch pipelines to 8-foot arches. Historically, the sewers were generally constructed of vitrified clay, brick, and concrete which over time start to crack and allow groundwater to enter the wastewater system. Newer sewer construction materials typically consist of PVC and reinforced concrete. Wastewater in Lawrence is transported to interceptors along the Merrimack River, from which the water is sent to the Greater Lawrence Sanitary District (GLSD), located in North Andover, for treatment.

One of the challenges facing Lawrence's sewer system is the incursion of storm water into the wastewater system (also called inflow and infiltration or "I/I") causing the system to overload and wastewater to flow to the surface – either on city streets or into waterways. According a February 2016 presentation by Woodward and Curran consultants, Lawrence has experienced 22 reportable sanitary sewer overflows where a total of 14,000 gallons of wastewater was released. In addition, Lawrence's sewer infrastructure is aging and Woodward and Curran found many instances where tree roots had broken into sewer pipes or where pipes were cracked or deformed. Lawrence is not alone in working to address an aging sewer system. In fact, the Massachusetts Water Infrastructure Financing Committee (WIFC) estimated in 2012 that approximately $18 billion in investment in wastewater infrastructure may be needed across the State through 2032.[16]

Water System

It is well know that harnessing the power of the Merrimack River via the Great Stone Dam was instrumental in the Essex Company's efforts to establish a booming textile industry in Lawrence. However, the legacy of the Essex Company also can be seen in Lawrence's potable water system. In fact, "perhaps most significantly, the

[13] Lawrence Public Schools, retrieved from http://www.lawrence.k12.ma.us/about-lps/key-facts, March 7, 2016/

[14] Wikipedia, "Lawrence Experiment Station", retrieved from https://en.wikipedia.org/wiki/Lawrence_Experiment_Station, March 7, 2016.

[15] Ibid.

[16] Massachusetts Water Infrastructure Financing Committee (WIFC), Massachusetts Water Infrastructure: Toward Financial Sustainability, February 7, 2012, p. 4.

Boston Associates, with the creation of Lawrence, felt that they could not take a chance with the supply of water**,** and therefore created a company jointly owned by the Essex Company and Lowell's Proprietors of Locks and Canals to purchase all necessary land and water rights for the Merrimack up to and including Lake Winnipesaukee and the other large lakes of New Hampshire."[17] In 1851, a one million-gallon reservoir was built on Prospect Hill by the Essex Company and Bay State Mills and was fed by pumping water from the Merrimack River to provide water for drinking and fire protection. In 1874, the City-owned and operated Lawrence Water Works began supplying water from a reservoir on Bodwell's Hill (now referred to as Tower Hill) that was supplied by pumping millions of gallons of water from the Merrimack River a distance of nearly one mile. [18]

High Service Water Tower

Today, the Merrimack River is still the source of potable water in Lawrence. River water is treated at the Lawrence Water Treatment Facility, located at 410 Water Street. Placed online in 2006 and replacing a nearly 70 year-old facility, this modern facility produces an average of six million gallons of drinking water each day, and has a maximum capacity of 16 million gallons per day. The treatment processes "include: coagulation, flocculation, sedimentation, filtration, fluoridation, Ultraviolet (UV) disinfection, as well as chlorine disinfection. Finished water is pumped to the Ames Street Reservoir, the High Service Water Tower (Tower Hill Tank), the Mount Vernon Tanks, and the Prospect Hill Tank."[19] The water treatment facility operates 24 hours per day, 7 days a week. In the event of an emergency or a needed shutdown of the treatment facility, Lawrence has access to water via existing connections with water systems in Andover, Methuen, and North Andover. The City of Lawrence is one of 120 Massachusetts communities that use surface water sources, such as rivers or reservoirs to provide potable water (as opposed to sub-surface water which is retrieved via wells).

Water is pumped through the Lawrence Main Pumping Station at 400 Water Street. The water, in turn, moves throughout the city via approximately 154 miles of pipes which range in size from six to 30 inches in diameter. Water pressure and storage capacity are maintained by elevated storage tanks and pumping stations located across Lawrence. The pumping stations lift water to higher elevations in order to fill storage tanks and/or pressurize separate high-pressure zones. In addition to maintaining the subsurface infrastructure, the Water and Sewer Department is responsible for maintaining a series of treatment facilities (listed below), 4,400 water valves, and 1,300 fire hydrants.

LAWRENCE WATER FACILITIES[20]	
Facility	**Location**
Pump Station & Garage	404-406 Water Street
Low Lift Pump House	R404 Water Street
Chemical-Filter Bldg. (vacant)	391 Water Street
Gate/Pump House	345-351 Ames Street

[17] Lawrence History Center, "Background and Early Development, retrieved from http://www.lawrencehistory.org/node/214.

[18] New England Waterworks Association (NEWA), "Water System Profile Lawrence Waterworks, City of Lawrence, Massachusetts", September 2014, p. 242-247.

[19] City of Lawrence Water & Sewer Department, retrieved from http://www.cityoflawrence.com/water-treatment.aspx, March 7, 2016.

[20] City of Lawrence, Statement of Values Renewal 2016

LAWRENCE WATER FACILITIES[20]	
Facility	**Location**
Pump House	40 South Street
Pump Station	567 Andover Street

In recent years, the City has built approximately 36,500 square feet of solar panels to address a portion of the power needs of the water treatment facility, replaced inefficient water pumps, and installed 12,000 high accuracy water meters that transmit data electronically.[21]

[21] NEWA, p. 247.

POSSIBLE FUNDING SOURCES

There are a number of ways to finance municipal capital improvement projects. Some of the most common methods are:

Local Resources

- **Municipal Indebtedness**: The most commonly used method of financing large capital projects is general obligation bonds (aka, "GO Bonds"). They are issued for a period of time ranging from 5 to 30 years, during which time principal and interest payments are made. Making payments over time has the advantage of allowing the capital expenditures to be amortized over the life of the project. Funding sources used to pay back the debt can include:

    - **Bonds funded within the tax limits of Proposition 2 ½**: Debt service for these bonds must be paid within the tax levy limitations of proposition 2 ½. Funds used for this debt must be carefully planned in order to not impact the annual operating budget.
    - **Bonds funded outside the tax limits of Proposition 2 ½** : Debt service for these bonds is paid by increasing local property taxes in an amount needed to pay the annual debt service. Known as a Debt Exclusion or Exempt Debt, this type of funding requires approval by 2/3 vote of the local appropriating authority (e.g., city council or town meeting) and approval of the majority of voters participating in a ballot vote. Prior to the vote, the impact on the tax rate must be determined so voters can understand the financial implications.[22]
    - **Bonds funded with Enterprise Funds**: Debt service for these bonds is typically paid by user fees, such as water and sewer revenue. Depending upon the type of project, interest costs may be subsidized by the Commonwealth and at times partial grant funds may be available (see below). Enterprise funds do not affect the general operating budget unless general funds are needed to subsidize revenues from the enterprise. Prior to the issuance of debt, the projects must be analyzed for their impact on rates.

- **Capital Outlay / Pay As You Go:** Pay as You Go capital projects are funded with current revenues and the entire cost is paid off within one year so no borrowing takes place. Projects funded with current revenues are customarily lower in cost than those funded by general obligation bonds because there are no interest costs. However, funds to be used for this purpose must be carefully planned in order to not impact the annual operating budget. For this reason, Pay as You Go capital projects are typically lower in value than projects funded by borrowing.

- **Capital Outlay / Expenditure Exclusion**: Expenditure Exclusion projects are similar to Pay as You Go, above, except taxes are raised outside the limits of Proposition 2 ½ and are added to the tax levy only during the year in which the project is being funded. As with a Debt Exclusion, Expenditure Exclusion funding requires approval by 2/3 vote of the local appropriating authority (e.g., city council or town meeting) and approval of the majority of voters participating in a ballot vote. Prior to the vote, the impact on the tax rate must be determined so voters can understand the financial implications. Capital outlay

[22] A debt exclusion is different from a property tax override in that a debt exclusion is only in place until the incurred debt has been paid off. An override becomes a permanent part of the levy limit base.

expenditures may be authorized for any municipal purpose for which the city or town would be authorized to borrow money.

- **Capital Stabilization Fund:** Local officials can set aside money in a stabilization fund – outside of the general fund - to pay for all or a portion of future capital projects. A 2/3 vote of city council is required to appropriate money into and out of this fund. Lawrence has a State Mandated Capital Reserve Fund which requires the annual investment of 1.5% of the amount of property taxes committed for the preceding fiscal year. These funds can be used by the School Department for purposes for which the City could borrow for 10 years or longer under chapter 44 of the Massachusetts General Laws.

- **Sale of Surplus Real Property**: Pursuant to Massachusetts General Laws, when real estate is sold, the proceeds must first be used to pay any debt incurred in the purchase of the property. If no debt is outstanding, the funds "may be used for any purpose or purposes for which the city, town or district is authorized to incur debt for a period of five years or more…except that the proceeds of a sale in excess of five hundred dollars of any park land by a city, town, or district shall be used only by said city, town, or district for acquisition of land for park purposes or for capital improvements to park land" (MGL Chapter 44, Sec. 63).

- **Enterprise Retained Earnings / Stabilization Fund**: Enterprise operations, such as water and sewer, are able to maintain an operating surplus that can be utilized for future enterprise fund costs. These funds can be used to stabilize the user rates, apply to annual budget needs, and/or invest in capital replacement and expansion. Lawrence presently manages three such enterprise funds including the Water/Sewer Fund, the Airport Fund, and the Parking Garage and Lots Fund.

- **Free Cash:** Free Cash is the difference between annual revenues and expenditures and is certified by the Commonwealth each year. After certification, free cash is available for appropriation for any municipal purpose, including capital projects.

- **Special Purpose Funds**: Communities also have established numerous "Special Purpose Accounts" for which the use is restricted for a specific purpose, such as investment in department facilities and equipment. There are numerous state statutes that govern the establishment and use of these separate accounts. Examples include the sale of cemetery lots and off-street parking fees accounts.

Federal, State, and Private Grants and Loans

Special revenue sources include grants or loans from federal, state, or private sources. Examples include:

- **Federal Community Development Block Grant (CDBG)**: The U.S. Department of Housing & Urban Development (HUD) "provides communities with resources to address a wide range of unique community development needs."[23] Funds are granted directly to "entitlement" communities which are cities with a population of at least 50,000 or counties with a population of at least 200,000. To secure entitle funds, each city must prepare a Consolidated Plan every five years outlining the city's goals for use of the funds, and an annual plan must be prepared each year. Funding for smaller communities flow through State administered CDBG programs. As it relates to capital projects, HUD funds can be used for: acquisition of

[23] U.S. Department of Housing and Urban Development (HUD), "Community Development Block Grant (CDBG) Program", retrieved December 3, 2015 from http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs.

real property; relocation and demolition of housing; rehabilitation of residential and non-residential structures; construction of public facilities and improvements, such as water and sewer facilities, streets, neighborhood centers, and the conversion of school buildings for eligible purposes; activities relating to energy conservation and renewable energy resources.

- **Massachusetts Chapter 90 Roadway Funds**: Each year, the Massachusetts Department of Transportation (MassDOT) allocates funds to cities and towns for roadway construction, maintenance, or improvement. Funds may also be used for other work incidental to roadway work, such as the construction of a garage to house related vehicles, or the purchase of related vehicles, equipment, and tools. Chapter 90 is a 100% reimbursable program. Funding is accomplished through the issuance of transportation bonds and apportioned to municipalities based on three factors: 1) accepted road miles, 2) population, and 3) total employment within the municipal borders. Road miles is the most heavily weighted factor at 58.33%; the others are each weighted at 20.83%. A total of $200 million is available in FY2016.

- **Massachusetts Department of Environmental Protection's Dam and Seawall Repair and Removal Program:** This program was created in 2013 to provide funding to municipalities to repair and remove dams, levees, seawalls, and other forms of flood control. The Dam and Seawall program offers loans at 2% interest on up to $1 million per project, with a minimum 25% match to be provided by the municipality.

- **Massachusetts Department of Environmental Protection's State Revolving Loan Funds (SRF)**: The Clean Water State Revolving Loan Fund (CWSRF) provides financing for sewer and drainage projects intended to reduce sewer overflows and the Drinking Water State Revolving Loan Fund (DWSRF) provides financing to improve the quality of the drinking water system. The CWSRF and DWSRF programs typically offer a mix of low interest (2%) loans and grant funds. Repayment does not begin until two years after the monies have been borrowed.

- **Massachusetts School Building Authority (MSBA)** – The MSBA provides funding for school repair and construction via a series of programs. In the School Building Program, projects must be accepted into the process in response to the submission of a Statement of Interest which identifies a facility problem to be solved. Subsequently, the community must appropriate funding for schematic design and later for construction before the MSBA will commit to its share of the project. If accepted, the MSBA determines the amount of reimbursement it will offer based upon community need, with a minimum base rate of 31%. The percent of reimbursement can then be increased based upon three factors: community income factor, community property wealth factor, and community poverty factor. Through the Accelerated Repair Program, the MSBA will fund roof, window, and boiler projects with an expected 18-month completion date. Funding can be provided for multiple projects in a single district in a year. The Major Repair Program includes roofs, windows, and boilers, but can also include other significant building renovations. Districts are limited to one project per year under the Major Repair Program, but work can be more substantial than the Accelerated Repair Program.

Many state departments also offer annual grant opportunities that are available to municipalities typically through a competitive application process. State grant programs including, but not limited to: Green Community grants (project to improve sustainability), Parkland Acquisitions and Renovations for Communities grants (PARC), and the MassWorks Infrastructure Program.

For additional definitions, please refer to the Glossary in the appendices.

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LAWRENCE CAPITAL PLANNING PROCESS (FY2017-FY2021)

The City of Lawrence hired the Edward J. Collins, Jr. Center for Public Management at the University of Massachusetts Boston to facilitate preparation of the City's five-year Capital Improvement Plan (CIP) for FY2017 to FY2021. The project team met with leadership of all City departments to explain the process to be followed and discuss the types of projects that would be eligible for funding in the capital plan. Departments were provided with a Capital Improvement Project Request Form asking them to describe their proposed project(s), the justification for why each project was needed, the priority placed on the project by the department, and the fiscal year or years in which the funds were needed. In addition, departments were asked to indicate if outside funds might be available to support the project and to anticipate the impact of the project on the City's operating budget. In particular, departments were asked if any savings could be realized, for example, if the purchase of new equipment could reduce the cost of annual repairs. Department directors were encouraged to contemplate needs over multiple years and to be ambitious with their proposals. Particular attention was paid to equipment needs with a goal of developing a regular replacement schedule that would reduce, if not eliminate, emergency replacement and costly repairs.

The project team also met with the Finance Director and contacted the City's financial advisor and bond counsel to gain an understanding of the City's current debt service profile and the revenues available that could be used for capital projects. Information gathered included official financial statements, bond rating agency reports, the debt schedule for existing debt, and present and proposed borrowings, among other sources. Utilizing the City's new five year financial forecast, various capital funding alternatives were explored until one was selected, as will be discussed under the "Resources Available" section below.

Project Requests

Altogether, 239 project requests were submitted, totaling nearly $232.9 million across all five years of the plan and across all funds. Among the most significant requests were:

- design and construction of one new elementary school for 500 students (estimated at $45.1 million);
- design of a second new elementary school ($8.8 million);
- improvements to the water distribution system ($26.7 million); and,
- the estimated true cost of maintaining city streets and sidewalks ($24 million).

The greatest dollar amount of requests and the largest volume of requests were for the Lawrence Public Schools. In addition to the two new schools, significant requests were submitted for work on school boilers (approximately $1.5 million), roof replacement (approximately $6 million), new windows (approximately $3 million), and improvements to electrical and heating/cooling systems (approximately $4 million combined).The Department of Public Works (DPW) had the second greatest volume of requests addressing an array of city facility improvements, equipment, and roadway improvements. The cost of the requests for the Police Department are rather high due to the inclusion of the cost of a new police station; if the station is removed, the remaining department requests total $3 million. Requested improvements to the water and sewer systems total over $49 million.

CIP REQUESTS BY DEPARTMENT AND YEAR (ALL FUNDS)							
	FY 2017	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**Total Project Cost**	**% of total**
Airport	10,600,000	300,000	870,000	3,900,000	275,000	15,945,000	6.8%
Bellevue Cemetery	169,500	152,500	92,500	850,000	24,000	1,288,500	0.55%
City Clerk	182,950					182,950	0.08%
Council on Aging	120,000					120,000	0.05%
DPW	9,070,335	7,609,800	7,849,300	6,056,300	5,848,300	36,434,035	15.65%
Fire Department	2,545,560	973,560	973,560	973,560	1,973,560	7,439,800	3.19%
Inspectional Services	255,000					255,000	0.11%
IT	316,036	350,533	171,399			837,968	0.36%
Library	220,000					220,000	0.09%
Lawrence Public Sch	5,885,000	14,825,000	6,710,000	40,428,000	9,380,000	77,228,000	33.17%
Office of Pln & Devt	1,333,475	1,255,975	505,975	2,400		3,097,825	1.33%
Police Department	1,451,665	2,889,665	15,436,665	16,249,665	4,499,665	40,527,325	17.40%
Treasurer/Collector	7,260					7,260	0.00%
Veterans' Services	20,000	15,000				35,000	0.02%
Water and Sewer	2,050,000	14,817,000	14,698,000	13,000,000	4,675,563	49,240,563	21.15%
Grand Total	**34,226,781**	**43,189,033**	**47,307,399**	**81,459,925**	**26,676,088**	**232,859,226**	

When analyzing project requests by fund, it is clear that significant resources can be made available through funding sources other than the general fund. These sources include the water and sewer enterprise fund, the parking enterprise fund, and the City's annual allocation of roadway funds from the State (e.g., Chapter 90). In addition, a number of requests appear to be eligible for partial reimbursement from the MSBA (after to a competitive application process), and City staff have secured over $16.6 million in grants for the airport, police department, and some parks improvements to date.

CIP REQUESTS BY DEPARTMENT BY FUND (ALL YEARS)								
	Gen Fund (debt)	**GF (Pay as You Go)**	**Water / Sewer Enterprise**	**Airport Enterprise**	**Chapter 90**	**MSBA-eligible**	**State / Federal Program**	**Total all funding source**
Airport				797,250			15,147,750	15,945,000
Bellevue Cemetery	1,120,000	123,500	45,000					1,288,500
City Clerk	182,950							182,950
Council on Aging	100,000	20,000						120,000
DPW	28,864,390	868,000	236,000		6,465,645			36,434,035
Fire Department	7,073,560	366,240						7,439,800
Inspectional Services	225,000	30,000						255,000
Info Technology	530,480	273,012	34,476					837,968
Library	220,000							220,000
Lawrence Public Sch	34,293,122	1,175,000				41,759,878		77,228,000
Office of Pln & Devt	1,773,250	20,325					1,304,250	3,097,825
Police Department	39,332,065	1,008,260					187,000	40,527,325
Treasurer/Collector		7,260						7,260
Veterans' Services		35,000						35,000
Water and Sewer			49,240,563					49,240,563
Grand Total	113,714,817	3,926,597	49,556,039	797,250	6,465,645	41,759,878	16,639,000	232,859,226
% of total	48.8%	1.7%	21.3%	0.3%	2.8%	17.9%	7.1%	

Resources Available

The funding available to the City of Lawrence has been broken down into four broad categories, each of which will be discussed below:

- General fund debt and pay-as-you-go
- Water/sewer debt and pay-as-you go
- Other Enterprise Funds

General Fund Debt and Pay-as-You-Go

The City of Lawrence's new Five Year Financial Forecast was used to determine the total amount of funding available for capital investment from FY2017 to FY2021. For each of the five years of the plan, the forecast projects revenues and expenditure, including revenue sources such as the property tax levy and new growth, and expenses such as general government, the school department, and debt service. The forecast revealed two important findings that relate to the capital budget:

1. The existing general fund debt service for projects previously approved by the City Council will decline consistently and significantly, beginning in FY2018. Maintaining the ratio of debt service to prior year revenues (approximately 6% as of FY2016)will provide funds that can be re-invested in new capital projects to meet current needs.
2. Revenues have increased by over $1.6 million per year in FY2015 and FY2016 as a result of "new growth" (e.g., increases in the property tax levy in excess of Prop 2 1/2 resulting from the investment in new construction or renovation of private property in Lawrence). Building permit records and other sources indicate that budgeting for approximately $1.3 million in growth is reasonable for the life of the financial forecast.

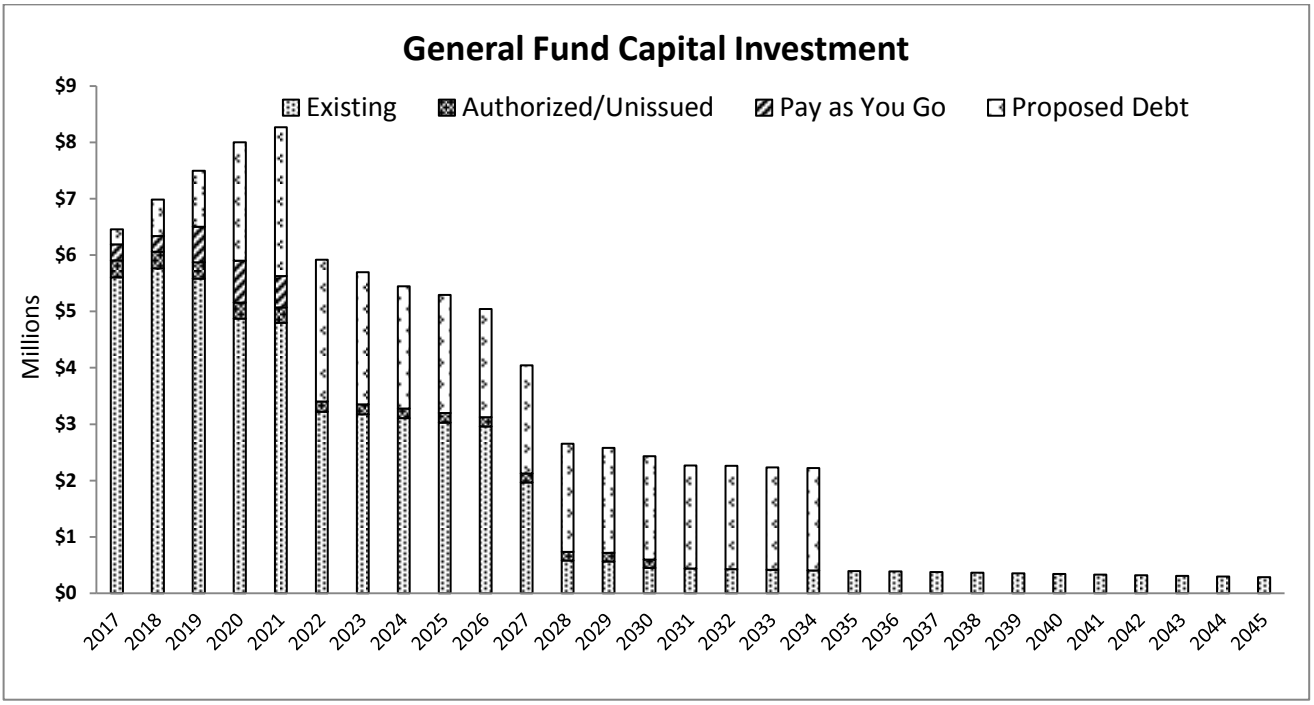
This combination of declining debt service and increasing revenues provide a timely opportunity for the City to stabilize its capital budget and make a regular investment in capital improvements, without adversely impacting to the operating budget. As such, the Mayor has promulgated a policy to increase the City's annual capital spending until the total capital investment reaches 7.5% of prior year net operating revenues. Under the current plan, the 7.5% threshold will be reached in FY2020. Funding for this increase will be generated by: a) ensuring that the ratio of debt service to prior year revenues remains consistent even as actual debt service is declining; and b) dedicating an additional $300,000 annually from the "new growth" to the CIP.

As can be seen from the table below, the 7.5% capital investment policy will make $9.14 million in funding available over the next five years for capital improvements. Given the low interest rates still available today, the FY2017-FY2021 CIP will use this to support just over $31 million in debt-funded capital projects and approximately $2.5 million in pay-as-you capital projects; this is against $117.6 million in general fund project requests.

ANNUAL CAPITAL INVESTMENT (FY2017-FY2021)		
Level Debt	**New Growth**	**Total**
250,250	300,000	550,250
325,750	600,000	925,750
725,954	900,000	1,625,954
1,663,090	1,180,000	2,843,090
1,972,248	1,220,000	3,192,248
	TOTAL	**9,137,292**

The overall capital investment in the current CIP will reach a peak of $8.26 million in FY2021, a year after the City will have reached its 7.5% capital investment policy threshold. (see Appendix A for a detailed schedule.)

As can be seen from the graphic below, not only does existing debt service decline between FY2017 and FY2021, another dramatic decrease of $1.58 million will take place between FY2021 and FY2022, providing significant resources to be captured that year, a year which is outside of the current planning cycle.



Water and Sewer Debt and Pay-as-You-Go

The City of Lawrence is currently working with the consulting firm of Woodard & Curran to analyze the capital needs of the water and sewer systems. The effort also looks into with project phasing and funding. A presentation to the City Council was made on February 24, 2016 providing information on the state of the sewer system, potential funding for improvements, such as the State Revolving Fund (low interest loans and grants for water and sewer system improvements), and the impacts on the City's water and sewer rates. As the separate effort on water and sewer infrastructure is well underway, yet not yet complete, this CIP (FY2017-

FY2021) will not formally include any water or sewer-funded projects. However, after the water and sewer project schedule and funding has been confirmed, it can become part of the next CIP for FY2018-FY2022. For information on submitted water and sewer project requests, see Appendix 6..

Capital Planning Evaluation Criteria

After reviewing each project request to determine if it was complete and CIP-eligible, the project team then evaluated the proposed projects based upon a series of criteria. The categories included:

- Preserve or enhance City assets – Does the proposed project maintain or improve an existing facility? What is the anticipated useful life of the investment? Does the proposed project replace a piece of equipment needed to provide public services? Is the vehicle beyond its reasonable life? Is the acquisition part of a scheduled replacement plan that will keep vehicles operational and preclude major repair costs?
- Increase efficiency and effectiveness of government – Does the project reduce operating costs (e.g., eliminate costly repairs) or increase the effectiveness of government? Does the project reduce potential legal liability (e.g. repair of a broken sidewalk) or threats to operations (e.g., replacement of a needed street sweeper before it breaks down completely)? Does it improve customer service or provide a new, needed service?
- Be a good steward of public resources – Does the project increase revenues? Are outside grant funds available to cover a portion or all of the cost?
- Specific impacts on operating budget – What types of ongoing savings might be realized from the project? Does the project increase operating costs?

In addition, each project was evaluated to see how it would influence a series of key policy areas. These included:

- Aesthetics / Historic Preservation
- Cultural and Recreational Opportunities
- Economic Growth
- Education
- Environmental Sustainability
- Public Health
- Public Safety

While these criteria were used to differentiate between the merits of the 239 project requests, it should be noted that they were not used rigidly in developing the FY2017-FY2021 CIP. At times, projects that received modest scores, predominantly because they did not contribute to the policy areas, but were critically needed – such as purchasing repaving equipment - were elevated for consideration in the plan based upon need and resource availability.

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CIP PROJECT LISTING (FY2017-FY2021)

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LAWRENCE CAPITAL IMPROVEMENT PLAN (FY2017 - FY2021) PROJECT LISTING

GENERAL FUND DEBT-FUNDED PROJECTS

03/10/2016

Project #	Project Title	Asset Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Total Project Cost	Gen Fund (debt)	GF (Pay as You Go)	Airport Enterprise	Chapter 90	MSBA Eligible	State / Federal Program	Total funding source
DPW15	Replace the roof on the Building and Facilities maintenance building	City facility	80,000					80,000	80,000						80,000
DPW45	Install air conditioning system in main library	City facility	450,000					450,000	450,000						450,000
DPW65	Replace lighting units in city parking lots	City facility	51,300	0	51,300	51,300	51,300	205,200	205,200						205,200
DPW66	Replace guardrails in city owned parking lots (*)	City facility	120,000					120,000	120,000						120,000
DPW7	Improve elevators in the Buckley Garage (*)	City facility				180,000		180,000	180,000						180,000
		City facility Total	701,300	0	51,300	231,300	51,300	1,035,200	1,035,200	0	0	0	0	0	1,035,200
IT8	Refresh the City Hall Network	IT		214,444				214,444	214,444						214,444
		IT Total	0	214,444	0	0	0	214,444	214,444	-	0	0	0	0	214,444
DPW69	Make improvements to City parks	Parks/OS	0	0	300,000	300,000	300,000	900,000	900,000						900,000
PI3	Make improvements to the Gagnon and Bourgoin Parks	Parks/OS	577,500					577,500	173,250					404,250	577,500
PI4	Make improvements to the O'Connell South Common Park	Parks/OS		0	500,000	500,000		1,000,000	300,000					700,000	1,000,000
		Parks/OS Total	577,500	0	800,000	800,000	300,000	2,477,500	1,373,250	0	0	0	0	1,104,250	2,477,500
LPS95	Replace boilers at Lawrence schools	School Facility	500,000	0	320,000	300,000	350,000	1,470,000	1,470,000						1,470,000
LPS96	Replace/repair roofs at Lawrence schools	School Facility		0	320,000	400,000	600,000	1,320,000	1,320,000						1,320,000
LPS97	Replace/repair windows at Lawrence schools	School Facility		0	250,000	300,000	350,000	900,000	900,000						900,000
LPS98	Perform electrical upgrades at Lawrence schools	School Facility					150,000	150,000	150,000						150,000
LPS99	Improve HVAC systems + components (other than boilers) at Lawrence schools	School Facility					100,000	100,000	100,000						100,000
LPS100	Perform bathroom and plumbing upgrades at LPS	School Facility					100,000	100,000	100,000						100,000
LPS101	Make ADA improvements at Lawrence schools	School Facility					50,000	50,000	50,000						50,000
LPS57	Replace boilers at the N Common Ed Complex	School Facility	1,500,000					1,500,000	600,000				900,000		1,500,000
		School Facility Total	2,000,000	0	890,000	1,000,000	1,700,000	5,590,000	4,690,000	0	0	0	900,000	0	5,590,000
LPS93	New Elementary School (#1) (500 students)	School Facility25		8,755,000		36,428,000		45,183,000	16,672,527				28,510,473		45,183,000
LPS94	New Elementary School (#2)	School Facility25					8,755,000	8,755,000	3,230,595				5,524,405		8,755,000
		School Facility25 Total	0	8,755,000	0	36,428,000	8,755,000	53,938,000	19,903,122	0	0	0	34,034,878	0	53,938,000
DPW55	Purchase ~~6~~ 3 F-550 Dumptrucks	Vehicle/Equip	100,000		50,000			150,000	150,000						150,000
DPW57	Purchase ~~2~~ 1 International Trucks	Vehicle/Equip	0	0		80,000		80,000	80,000						80,000
DPW63	Purchase a backhoe	Vehicle/Equip			150,000			150,000	150,000						150,000
DPW64	Purchase 2 new street sweepers	Vehicle/Equip	0	0		200,000	200,000	400,000	400,000						400,000
F1	Replace Self Contained Breathing Apparatus (SCBA)	Vehicle/Equip	0	150,000	150,000			300,000	300,000						300,000
F3	Replace two Class 1 fire engine pumpers	Vehicle/Equip	450,000	0	0	0	600,000	1,050,000	1,050,000						1,050,000
PD4	Replace Police Radio System Infrastructure, Portable Radios and Mobile Radios	Vehicle/Equip	0	421,000	476,000	55,000		952,000	952,000						952,000
		Vehicle/Equip Total	550,000	571,000	826,000	335,000	800,000	3,082,000	3,082,000	0	0	0	0	0	3,082,000
DPW54	Purchase 3 4WD Mack Snow Fighters	Vehicle/Equip10	0	0	500,000	250,000		750,000	750,000						750,000
		Vehicle/Equip10 Total	0	0	500,000	250,000	0	750,000	750,000	0	0	0	0	0	750,000
		SUBTOTAL	3,828,800	9,540,444	3,067,300	39,044,300	11,606,300	67,087,144	31,048,016	0	0	0	34,934,878	1,104,250	67,087,144

(*) A portion of costs (TBD) can be potentially covered by Parking Garage and Parking Lots Enterprise Fund.

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LAWRENCE CAPITAL IMPROVEMENT PLAN (FY2017 - FY2021) PROJECT LISTING

GENERAL FUND PAY AS YOU GO FUNDED PROJECTS

Project #	Project Title	Asset Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Total Project Cost	Gen Fund (debt)	GF (Pay as You Go)	Airport Enterprise	Chapter 90	MSBA Eligible	State / Federal Program	Total funding source
Cem3	Repair of May Street and Spruce Avenue Cemetery Retaining Walls	City facility		0	0	30,000		30,000		30,000					30,000
COA1	Replace Hardwood Floors in Senior Center	City facility	20,000					20,000		20,000					20,000
DPW2	Replace the roof in the Branch Library	City facility		0	20,000			20,000		20,000					20,000
DPW18	Make improvements to meet ADA in the Museum Square parking garage	City facility	0	0	85,000			85,000		85,000					85,000
DPW38	Upgrade electrical in Ladder 4 fire house	City facility				0	50,000	50,000		50,000					50,000
DPW5	Ugrade electrical system in the Branch Library	City facility	30,000	0	0	15,000		45,000		45,000					45,000
DPW67	Repaving of city owned parking lots	City facility	0	0	0	75,000	125,000	200,000		200,000					200,000
		City facility Total	50,000	0	105,000	120,000	175,000	450,000	0	450,000	0	0	0	0	450,000
IT10	IT Improvements (citywide)	IT	65,000	0	146,800	119,300	67,300	398,400		398,400					398,400
		IT Total	65,000	0	146,800	119,300	67,300	398,400	0	398,400	0	0	0	0	398,400
DPW74	Replace and repair lighting units	Roads/Sidewalks	27,000	0	27,000	54,000		108,000		108,000					108,000
		Roads/Sidewalks Total	27,000	0	27,000	54,000	0	108,000	0	108,000	0	0	0	0	108,000
DPW70	Purchase a new tractor mower	Vehicle/Equip			40,000			40,000		40,000					40,000
DPW72	Replace Hotbox paving equipment	Vehicle/Equip				65,000		65,000		65,000					65,000
DPW73	Replace repaving equipment	Vehicle/Equip		0	0	40,000		40,000		40,000					40,000
PD3	Regularly replace police vehicles	Vehicle/Equip	68,600	205,800	240,100	240,100	240,100	994,700		994,700					994,700
F6	Replace turnout gear	Vehicle/Equip	73,600	73,600	73,600	73,600	73,600	368,000		368,000					368,000
F4	Replace Fire Prevention vehicle	Vehicle/Equip	0			32,000		32,000		32,000					32,000
		Vehicle/Equip Total	142,200	279,400	353,700	450,700	313,700	1,539,700	0	1,539,700	0	0	0	0	1,539,700
		Grand Total	284,200	279,400	632,500	744,000	556,000	2,496,100	0	2,496,100	0	0	0	0	2,496,100

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LAWRENCE CAPITAL IMPROVEMENT PLAN (FY2017 - FY2021) PROJECT LISTING

ENTERPRISE FUND AND GRANT-FUNDED PROJECTS

Project #	Project Title	Asset Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Total Project Cost	Gen Fund (debt)	GF (Pay as You Go)	Airport Enterprise	Chapter 90	MSBA Eligible	State / Federal Program	Total funding source
A1	Rehabilitate Runway 5-23 and Construct Runway 5-23 End Runway Safety Area's	City facility	10,600,000					10,600,000	0		530,000			10,070,000	10,600,000
A2	Conduct Vegetation Management Plan Update with Permits and Construction	City facility		300,000				300,000			15,000			285,000	300,000
A3	Design, Permit, and Construct Wildlife/Security Fencing	City facility			870,000			870,000			43,500			826,500	870,000
A4	Renovation of Airport Administration Building	City facility				3,900,000		3,900,000	0		195,000			3,705,000	3,900,000
A5	Update Airport Master Plan	City facility					275,000	275,000			13,750			261,250	275,000
DPW71	Repair and improve roadways	Roads/Sidewalks	1,293,129	1,293,129	1,293,129	1,293,129	1,293,129	6,465,645				6,465,645			6,465,645
PD5	Build a new 911 Call Center Back-up Location	City facility			187,000			187,000						187,000	187,000
		SUB TOTAL	**11,893,129**	**1,593,129**	**2,350,129**	**5,193,129**	**1,568,129**	**22,597,645**	**0**	**0**	**797,250**	**6,465,645**	**0**	**15,334,750**	**22,597,645**
		GRAND TOTAL	**16,006,129**	**11,412,973**	**6,049,929**	**44,981,429**	**13,730,429**	**92,180,889**	**31,048,016**	**2,496,100**	**797,250**	**6,465,645**	**34,934,878**	**16,439,000**	**92,180,889**

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CAPITAL PROJECT DESCRIPTIONS BY DEPARTMENT

Project #	Project Title	Project Description	Gen Fund (debt)	GF (Pay as You Go)	Airport Enterprise	Chapter 90	MSBA Eligible	State / Federal Program	Total funding source
AIRPORT									
A1	Rehabilitate Runway 5-23 and Construct Runway 5-23 End Runway Safety Area's	Repave runway 5-23 to current FAA design standards and provide for conforming runway safety areas. Runway 5-23 has an average Pavement Condition Index of 60 out of 100 and does not have conforming runway safety areas. Not completing the work will impact operational safety and could subject the Airport to Federal Grant Assurance violations.	0		530,000			10,070,000	10,600,000
A2	Conduct Vegetation Management Plan Update with Permits and Construction	Update the Airport's Vegetation Management Plan and obtain the environmental permits to allow for the removal of vegetation that penetrates/obstructs Airport airspace. The Airport is required to maintain its airspace free of obstructions that may impact the safe operation of an aircraft. Any obstruction in a wetland requires a permit before it can be removed. Not completing the work will impact operational safety and could subject the Airport to Federal Grant Assurance violations.			15,000			285,000	300,000
A3	Design, Permit, and Construct Wildlife/Security Fencing	A perimeter fence line will be designed, permitted and installed to prevent wildlife /people from entering the airport environment. The Airport is required to maintain its environment free of hazards that may impact the safe operation of an aircraft. The airport has undertaken a Wildlife Hazard Study, where it was determined that there is a need to close the perimeter fence line to prevent animals from entering the airport environment. Not completing the work will impact operational safety and could subject the Airport to Federal Grant Assurance violations.			43,500			826,500	870,000
A4	Renovation of Airport Administration Building	This project involves the complete renovation of the Airport Administration Building including the construction of additional space to house a restaurant. The Airport's Administration building was built in 1958 and is not MAAB compliant. It is inefficient to heat and costly to maintain. In its effort to promote aviation throughout the Commonwealth, the MassDOT Aeronautics Division identified a need to significantly improve administration buildings at public use Airports across the Commonwealth. Our building is one of the buildings at the Lawrence Airport was identified in the MassDOT study. If the work is not completed, the Airport will need to pay for significant upgrades to the building itself in order to make it MAAB compliant and the Airport will also not be as competitive in attracting customers as other airports that have participated in the building program.	0		195,000			3,705,000	3,900,000
A5	Update Airport Master Plan.	The Airport's Master Plan will be updated to provide guidelines for future airport development. The Airport's last Master Plan update was conducted in 2004. The Master Plan needs to be updated to reflect development and changes that have occurred since that time. Not completing the work could impact future infrastructure development on the Airport and also could subject the Airport to Federal Grant Assurance violations.			13,750			261,250	275,000
CEMETERY									
Cem3	Repair of May Street and Spruce Avenue Cemetery Retaining Walls	This project will repoint, reset, and apply new mortar to the cemetery's retaining walls. The existing concrete is crumbling and non-existent in areas which is causing large gaps and the large retaining wall stones to shift. If left unrepaired, both structures will collapse and cause displacement of earth and the bodies contained within.		30,000					30,000
COUNCIL ON AGING									
COA1	Replace Hardwood Floors in Senior Center	Replace the hardwood floor where Dance & Exercise Classes take place every day. The 85 year old floor has buckled in many areas and has created lifts that are dangerous and has become a fall hazard for many of our elders. The hardwood floor is centrally located and everyone who comes to the Center walks over it. The Center receives approximately 1,500- 2,500 visitors a week, not including rentals and community events.		20,000					20,000
DEPARTMENT OF PUBLIC WORKS									
DPW15	Replace the roof on the Building and Facilities maintenance building	The Building and Facilities Maintenance building provides space for a fabrication shop, the plumbing and carpentry operations, an office, and storage. This project will replace the current pitch tar and gravel roof. Part of the building has already been condemned and failing to replace the roof will result in continued leakage. This could result in structural and cosmetic water damage, and could potentially damage equipment and pose a safety hazard to employees.	80,000						80,000
DPW18	Make improvements to meet ADA in the Museum Square parking garage	This project will make necessary improvements to the Museum Square garage in order to comply with the Americans with Disabilites Act. Much of the garage infrastructure does not currently meet ADA standards. Without making necessary repairs and updates, this could result in injury and/or potential legal actions against the City.		85,000					85,000
DPW2	Replace the roof in the Branch Library	This project will replace the asphalt, tar, and gravel roof at the Branch Library. The current roof leaks into the building causing structural and cosmetic water damage.		20,000					20,000
DPW38	Upgrade electrical in Ladder 4 fire house	This project will repair and replace failing electrical components at the Ladder 4 Fire House including fuse boxes, wiring, and outlets. The current electrical system is old and outdated, causing power failures and safety concerns. The current system needs to be updated to mitigate power failures and fire hazards.		50,000					50,000
DPW45	Install air conditioning system in main library	This project is to install a new airconditioning system in the Main Library. The airconditioning in the library has been inoperable since spring of 2015, and, since the windows do not open, natural venting cannot provide relief from high temperatures in the warmer months. Temperatures inside the building have reached 90 degrees, causing potential heath issues for community members and staff who frequent the building. At times, staff members have been sent home due to the heat and the library no longer serves a place of respite for community members wanting to cool off in the summer months.	450,000						450,000

CAPITAL PROJECT DESCRIPTIONS BY DEPARTMENT

Project #	Project Title	Project Description	Gen Fund (debt)	GF (Pay as You Go)	Airport Enterprise	Chapter 90	MSBA Eligible	State / Federal Program	Total funding source
DPW5	Ugrade electrical system in the Branch Library	This project will repair and replace failing electrical components in the Branch Library, including fuse boxes, wiring, and outlets, etc. The current electrical system is old and outdated, causing power failures and safety concerns. It needs to be updated to mitigate power failures and fire hazards, and to provide adequate power to meet the technology needs of patrons of the library.		45,000					45,000
DPW54	Purchase 3 4WD Mack Snow Fighters	DPW currently relies on 3 Mack Snowfighter trucks, each of which was manufactured in 1973. These trucks represent a first line of defense against snow and ice on the city roads. These trucks are old, outdated and require frequent costly repairs and maintenance. This project will replace the 3 trucks with modern versions. Failing to replace these trucks will leave the city vulnerable during winter emergencies and could put the public at risk. If the trucks are not in working condition, the city will have to turn increasingly to contractors at a cost of approximately $180/hr. In addiiton, failing to replace the trucks will result in continued costly repair and maintenance costs.	750,000						750,000
DPW55	Purchase 3 F-550 Dumptrucks	The F-550 is Lawrence's main workhorse vehicle and serves a wide range of year-round functions. The current fleet of vehicles is approximately 10 years old and due to their constant use, have deteriorated heavily. This project will replace three trucks within this fleet. Failure to replace the fleet of F-550s over time will result in continued costly repairs and vehicle maintenance, and will threaten the ability of the DPW to perform necessary tasks, including snow removal.	150,000						150,000
DPW57	Purchase 1 International Truck	The International is a vital piece of equipment for the DPW, serving as an everyday work and transport vehicle for workers, equipment, etc. The 2 current vehicles are old, outdated and constantly in need of repair and maintenance to keep them on the road. This project will replace the one of the two vehicles with modern version. Failure to replace the vehicle will result in continued costs for maintenance and repair.	80,000						80,000
DPW63	Purchase a backhoe	This project will purchase a 430 F2IT backhoe. This equipment is used for snow removal, tree planting, land removal, trash pickup, sidewalk repair, etc. The City does not currently have this equipment and relies on contractors or less equipped machinery to perform these tasks.	150,000						150,000
DPW64	Purchase 2 new street sweepers	Street sweepers are used for street cleaning. This project will replace two outdated (purchased in 1999) and non-functional sweepers. The existing street sweepers are old and outdated, non-functional, and require extensive repairs or replacement. Failure to replace will force the City to suspend street cleaning or contract out for the services.	400,000						400,000
DPW65	Replace lighting units in city parking lots	This project will replace 57 lighting units across six City-owned parking lots. The parking lots are currently poorly lit or not lit at all. This project will increase safety in the lots, thereby attracting new customers and increasing City revenues.	205,200						205,200
DPW66	Replace guardrails in city owned parking lots (*)	This project will replace the guardrails in City-owned parking lots. There is 3,572 feet of guardrails in the City-owned parking lots. The guardrails are currently in disrepair or simply do not exist. This project will increase safety in the lots, thereby attracting new customers and increasing City revenues.	120,000						120,000
DPW67	Repaving of city owned parking lots	This project will repave City-owned parking lots over the course of two years. The pavement in the lots is currently cracked with many potholes and other driving hazards. This project will increase safety in the lots, thereby attracting new customers and increasing City revenues.		200,000					200,000
DPW69	Make improvements to City parks	The City is responsible for 37 parks and public spaces totalling 253 acres across Lawrence (excluding school playlots and fields). This project will make repairs and improvements to public parks including but not limited to: fencing, landscaping, lighting, seating, safety improvements, equipment upgrades, etc. Failure to modernize parks will result in the loss of use and the potential for crime in public spaces. As many parks are used for recreation and by the City's children, these are especially important spaces to maintain. These funds can be used to leverage outside funding sources such as the State's PARC grant program.	900,000						900,000
DPW7	Improve elevators in the Buckley Garage (*)	The Buckley garage is Lawrence's main garage, containing 600 spaces that serve many users including commercial business patrons, residents, and MVRTA. The garage fills on daily basis. This project will ensure the Buckley Garage has a modern, working elevator. The current elevator is outdated and frequently out of service and requires a contractor to come and repair. Without improvements, the City will continue to endure the costs of regular maintenance on an outdated system. The public will also suffer when the elevator is out of service, especially those who face mobility challenges.	180,000						180,000
DPW70	Purchase a new tractor mower	This project will purchase a new tractor mover that can be used for a wide variety of landscaping purposes. A tractor mower will be an efficient tool to clean and manicure many of the City's parks and other public spaces.		40,000					40,000
DPW71	Repair and improve roadways	This project will fund an annual roadway improvement program that will repair and enhance the City's public roadways. Specific roadway will be identified each year. Roadway improvements are necessary each year in order to ensure that roadways are in the safest condition possible.				6,465,645			6,465,645

CAPITAL PROJECT DESCRIPTIONS BY DEPARTMENT

Project #	Project Title	Project Description	Gen Fund (debt)	GF (Pay as You Go)	Airport Enterprise	Chapter 90	MSBA Eligible	State / Federal Program	Total funding source
DPW72	Replace Hotbox paving equipment	This project will replace the City's 10 year old hotbox paving machine, which is used to transport hot asphalt to sites where roadway work is being done and/or potholes are being repaired. The body of the existing truck has already been replaced once and purchasing new equipment will reduce ongoing repair and maintenance costs.		65,000					65,000
DPW73	Replace repaving equipment	This project will replace paving equipment necessary to make road improvements, fill potholes, and fill trenches. Equipment to be purchased includes a compressor, commactor, road saw, roller and jackhammers. Replacing this equipment will allow City staff to quickly respond to needed repairs.		40,000					40,000
DPW74	Replace and repair lighting units	This project will repair and replace the "acorn" lighting units in City parks and along several streets. Many of these units are either non-functional or in need of significant repair. This project may include replacing the bulbs or the entire units.		108,000					108,000
FIRE DEPARTMENT									
F1	Replace Self Contained Breathing Apparatus (SCBA)	This project will replace all of the Fire Department's SCBA, which provide needed oxygen to firefighters in event of a fire or other emergency. The department's existing equipment is 12 years old and is out-of-date and costly to maintain. At present, SCBA is not available for chief officers or inspector vehicles, thereby placing them at risk of entering an Immediately Dangerous to Life and Health (IDLH) atmosphere without proper protection..	300,000						300,000
F3	Replace two Class 1 fire engine pumpers	This project will replace two of the Department's Class 1 fire engine pumpers that are currently between 10 and 23 years old. These vehicles provide fire suppression and lifesaving services to the entire city. The typical single alarm house fire requires a minimum of 3 pumpers to respond. These apparatus not only respond to multiple single company emergencies such as car, trash, and brush fires, but also handle thousands of medical emergencies each year. Class B foam capability is also necessary due to the responses to the Lawrence Municipal airport for aircraft emergencies.	1,050,000						1,050,000
F4	Replace Fire Prevention vehicle	The Department has 7 members in administration and 7 vehicles, the oldest of which dates from 2001 (15yrs old). The cost of maintenance per year is increasing and rust is becoming an issue on the body and frame. Without a vehicle available to perform fire prevention inspections, complaints and investigations would be delayed due to lack of transportation.		32,000					32,000
F6	Replace turnout gear	Turnout gear is the protective ensemble that a firefighter wears to protect them from the products of fire such as heat and smoke. This protective gear suffers high wear and tear use as well as having a life span of 10 years before the material loses its protective ability. This project will provide an annual allocation of funds to replace turnout gear so that the Department's equipment does not exceed its usable lifetime.		368,000					368,000
INFORMATION TECHNOLOGY									
IT8	Refresh the City Hall Network	This project will fund a refresh of the information technology network at City Hall.	214,444						214,444
IT10	IT Improvements (citywide)	In addition to the City Hall network improvements and the water-sewer funded network improvements, many additional City buildings require upgrades to the IT network systems to ensure that the systems remain up-to-date and are working as efficiently and effectively as they can. Over a multi-year period, this project will provide funding for IT capital projects at City buildings. The specific projects will be identified each year.		398,400					398,400
LAWRENCE PUBLIC SCHOOLS									
LPS95	Replace boilers at Lawrence schools	The boilers at Lawrence school facilities are heavily used providing heat to the school buildings during the coldest months of the year. Many of the boilers are in need of replacement because they are old (some up to 40+ years old), in disrepair, or have been scavenged for parts to keep other boilers in operation. Some schools only have one operational boiler and if it needs to be shut down for repairs or if it breaks down, heat cannot be maintained at the school. This project will fund the replacement of boilers and associated distribution equipment. Funding from this project could be used to secure grant funds from the MSBA that could offset a portion of the City's cost, thereby allowing more projects to be completed.	1,470,000						1,470,000
LPS96	Replace/repair roofs at Lawrence schools	Aging and leaking roofs at Lawrence schools not only negatively affect the learning environment, they can cause safety and health issues as water enters the school building. Delays in roof replacements or major repairs often leads to increased costs as water damage takes place. This project will provide funding for the replacement or major repairs of roofs in Lawrence schools. Funding from this project could be used to secure grant funds from the MSBA that could offset a portion of the City's cost, thereby allowing more projects to be completed.	1,320,000						1,320,000
LPS97	Replace/repair windows at Lawrence schools	Many Lawrence schools face issues with their windows. These can be temperature control issues caused by aged or problematic windows that are not well sealed, health and comfort issues caused by windows that leak water, or safety issues generated by windows that do not open or close properly or have sashes that do stay open and can fall closed on a child's or teacher's fingers, among other issues. This project will provide funding for the replacement or major repairs of windows in Lawrence schools. Funding from this project could be used to secure grant funds from the MSBA that could offset a portion of the City's cost, thereby allowing more projects to be completed.	900,000						900,000

CAPITAL PROJECT DESCRIPTIONS BY DEPARTMENT

Project #	Project Title	Project Description	Gen Fund (debt)	GF (Pay as You Go)	Airport Enterprise	Chapter 90	MSBA Eligible	State / Federal Program	Total funding source
LPS98	Perform electrical upgrades at Lawrence schools	Not only are the electrical systems in many schools old and outdated, increasing demands are being placed upon them as schools increase their use of technology. In some locations, the existing electrical system cannot support load required. In addition, loose or exposed wires can be found, in addition to missing electrical covers. In some locations, abandoned wiring has not been removed in violation of the electrical code. This project will be used to fund major electrical upgrades in Lawrence schools.	150,000						150,000
LPS99	Improve HVAC systems and components (other than boilers) at Lawrence schools	In some schools, components of the heating, ventilation, and air conditioning (HVAC) systems (other than boilers) are in need of replacement or substantial repair. Components can include pipes or ducts, airconditioning units, ventilators, etc., which are not part of the MSBA Accelerated Repair Program. Funding from this project can be used to make improvements to HVAC system components (other than boilers) at Lawrence schools.	100,000						100,000
LPS100	Perform bathroom and plumbing upgrades at LPS	Significant improvements to bathrooms, plumbing systems, hot water heaters, etc. are needed at some Lawrence schools to meet the needs of students and staff. Failure to keep bathrooms and plumbing systems in functional and code-compliant condition can result in the need to close school facilties until emergency work is performed. This project will fund major improvements to bathroom and plumbing systems, including hot water heaters, at Lawrence schools.	100,000						100,000
LPS101	Make ADA Improvements at Lawrence schools	This project will fund ADA improvements at Lawrence schools.	50,000						50,000
LPS57	Replace boilers at the N Common Ed Complex	This project will replace the boilers, controls, and piping, etc. at the North Common Educational Complex. At present, there are five Cleaver Brooks boilers at the complex, three of which are 40 years old. Due to an array of issues, effectively there is one functional steam and one functional hot water boiler at the complex, both of which have maintenance issues and could leave large portions of the building without heat. An application for MSBA funding has been submitted for this project.	600,000				900,000		1,500,000
LPS93	New Elementary School (#1) (500 students)	Out of an inventory of 32 schools, only six were built after the millenium. These include: Spark Academy (2012), Lawrence High School (2007), the Parthum Elementary and Middle Schools (2002).Guilmette Elementary and Middle Schools (2001). However, three schools are still in use from the 1800's including the Wetherbee Elementary (1895), Tarbox School (1888), and the Rollins School (1892). Schools built in the 1900's range from 21 years to 104 years of age today. Coupled with the number of significantly older schools is the dramatic increases in school enrollment that have taken place in the past 10+ years. Between FY2005 and FY2015, the number of students enrolled in Lawrence schools increased by 1,394 students (11.4%). Overlaying both trends are the changes in technology and instruction in the schools, where students are expected to utilize computer technology in earlier grades and in more aspects of school life. All of these factors point to the need for construction of new schools in Lawrence and the major renovation of others. This project provides for the construction of a new elementary school for 500 students. Funding will be provided for design work beginning in one fiscal year and construction two years later. A conservative MSBA reimbursement factor has been applied, although potential exists for greater reimbursement as Lawrence moves through the competitive MSBA process.	16,672,527				28,510,473		45,183,000
LPS94	New Elementary School (#2)	This project provides for design of a second elementary school for five hundred students during the five year CIP. Construction of the school will take place outside of the five years of the plan.	3,230,595				5,524,405		8,755,000
POLICE DEPARTMENT									
PD3	Purchase of new police vehicles	It is recommended that Police Departments purchase/replace approximately 25% of their fleet of vehicles on a yearly basis. This ensures that the vehicles are maintained in good working order and are replaced at the end of their useful life at a rate of few vehicles per year. If the Department allows all of its vehicles to age at the same rate without updating the Fleet, this could result in the vehicles requiring costly out of warranty repairs and will eventually result in the need to purchase a large number of vehicles at the same time. This project will allow for the replacement of up to seven vehicles per year, increasing from 2 vehicles in FY2017 to 6 vehicles in FY2018, and then to 7 vehicles in FY2019 and thereforward.		994,700					994,700

CAPITAL PROJECT DESCRIPTIONS BY DEPARTMENT

Project #	Project Title	Project Description	Gen Fund (debt)	GF (Pay as You Go)	Airport Enterprise	Chapter 90	MSBA Eligible	State / Federal Program	Total funding source
PD4	Replace Police Radio System Infrastructure, Portable Radios and Mobile Radios	This project will replace the Police Department's aging radio system infrastructure, and portable and mobile radios over the course of three years. The Police Department's portable radios and infrastructure are over fifteen (15) years old and largely outdated. The Federal Communications Commission mandated that all public safety mobile radio systems migrate to using 12.5 kHz efficiency technology (narrowbanding) by January 1, 2013. However, the Department's current radio system is not capable of meeting the FCC requirements. The system also does not have an automatic back-up in the event that the main radio system fails. As the system continues to age, it becomes increasingly less reliable and prone to outages. This poses a great risk to officer and public safety because when the Department's radio system is not working, officers on the street are not able to communicate with each other or with the police station to request backup, provide location information, call for other forms of assistance from the Fire Department, EMS, etc. Another consequence of the system's age is that many of the Department's portable two-way radios are not replaceable because the firmware used to program them is no longer available. The technology being utilized in these radios is so outdated that when they do break, it makes them costly and difficult to repair. Finally, the leased copper circuits that the system runs on will no longer be supported by the phone company as of January 1, 2016.	952,000						952,000
PD5	Build a new 911 Call Center Back-up Location	Create a secondary 911 call center at a location separate from the Police Station to be used in the event that the primary 911 call center equipment fails and is inoperable for a period of time. The Police Department is the primary Public Safety Answering Point (PSAP) agency for the City of Lawrence. All emergency calls come in to the Police Department and if they require Fire or EMS services, the calls are transferred to the Fire Department or to Lawrence General Hospital. The Department's 911 emergency call center is currently housed within the police station and no back-up location exists within the City to receive and dispatch emergency calls. Currently, if the call center experiences and outage, emergency calls are rerouted to the City of Lowell to be handled. This project will proceed pursuant to receipt of a State 911 PSAP Support and Incentives Grant.						187,000	187,000
OFFICE OF PLANNING AND DEVELOPMENT									
PI3	Make improvements to the Gagnon and Bourgoin Parks	This project will provide funding for new playground equipment at Gagnon Park and Bourgoin Park. These two parks are in two "sub neighborhoods" of the larger Tower Hill Neighborhood area. Both have high percentages of low income populations and dense development, making each of these playgrounds the only outdoor recreation amenity for neighborhood children. In two recent surveys of park use and conditions, one sponsored by Tufts University, the other conducted by Groundwork Lawrence, these two playgrounds led in need for improvement. The equipment is deteriorated to the point of being a safety risk for any who attempt to use it. Failure to replace this equipment will leave families without the opportunity to provide safe outdoor exercise for their children.	173,250					404,250	577,500
PI4	Make improvements to the O'Connell South Common Park	This project will fund improvements to 11.5 acre O'Connell South Common Park including, but not limited to landscaping, lighting improvements, additional seating, and an expanded playground with new equipment. The O'Connell South Common Park is the 5th largest park in Lawrence, a highly visible park that is within close walking distance to densely populated neighborhoods with a high concentration of youth under the age of 18. It has great potential to become one of the city's most important parks operating at both neighborhood and citywide scales. Over the years the park's activity base has increased to include a street hockey rink, a small but active playground, and more recently some competitive volleyball. The City is currently renovating the park's two baseball diamonds. The large gazebo is unsafe and closed, the street hockey rink has deteriorated below safety standards and is little used, and the playground needs updating (including handicapped accessiblity) and expansion. South Common is presently it is an underutilized resource in a densely populated city much in need of health-supporting recreation and exercise opportunities.	300,000					700,000	1,000,000

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APPENDICES

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DLS At A Glance Report for Lawrence

Socioeconomic	
County	ESSEX
School Structure	K-12
Form of Government	COUNCIL AND ALDERMAN
2013 Population	77,657
2015 Labor Force	35,468
2015 Unemployment Rate	8.80
2012 DOR Income Per Capita	12,484
2009 Housing Units per Sq Mile	3678.30
2013 Road Miles	136.39
EQV Per Capita (2014 EQV/2013 Population)	39,958
Number of Registered Vehicles (2012)	40,495
2012 Number of Registered Voters	40,493

Bond Ratings	
Moody's Bond Ratings as of December 2015*	A3
Standard and Poor's Bond Ratings as of December 2015*	A-

*Blank indicates the community has not been rated by the bond agency

Fiscal Year 2016 Esimated Cherry Sheet Aid	
Education Aid	180,284,348
General Government	19,062,666
Total Receipts	199,347,014
Total Assessments	21,261,458
Net State Aid	178,085,556

Fiscal Year 2016 Tax Classification			
Tax Classfication	**Assessed Values**	**Tax Levy**	**Tax Rate**
Residential	2,492,054,181	38,651,760	15.51
Open Space	0	0	0
Commerical	312,789,439	10,556,644	33.75
Industrial	216,927,700	7,321,310	33.75
Personal Property	170,163,010	5,743,002	33.75
Total	**3,191,934,330**	**62,272,716**	

Fiscal Year 2016 Revenue by Source		
Revenue Source	**Amount**	**% of Total**
Tax Levy	62,272,715	20.34
State Aid	204,869,101	66.93
Local Receipts	32,370,372	10.58
Other Available	6,576,243	2.15
Total	**306,088,431**	

Fiscal Year 2016 Proposition 2 1/2 Levy Capacity	
New Growth	1,642,632
Override	
Debt Exclusion	
Levy Limit	63,711,774
Excess Capacity	1,439,058
Ceiling	79,798,358
Override Capacity	16,086,584

Other Available Funds		
2016 Free Cash	FY2014 Stabilization Fund	FY2016 Overlay Reserve
7,482,819	0	622,499

Fiscal Year 2016 Average Single Family Tax Bill**	
Number of Single Family Parcels	4,258
Assessed Value of Single Family	180,044
Average Single Family Tax Bill	2,792

State Average Family Tax Bill	
Fiscal Year 2013	4,846
Fiscal Year 2014	5,020
Fiscal Year 2015	5,214

Lawrence issues tax bills on a Quarterly basis

**For the communities granting the residential exemptions, DLS does not collect enough information to calculate an average single family tax bill. In FY15, those communities are Barnstable, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Nantucket, Somerville, Somerset, Tisbury, Waltham and Watertown. Therefore, the average single family tax bill information in this report will be blank.

Fiscal Year 2014 Schedule A - Actual Revenues and Expenditures						
	General Fund	Special Revenue	Capital Projects	Enterprise Funds	Trust Revenue	Total All Funds
Revenues	259,255,577	51,447,642	1,158,537	19,435,797	413,173	331,710,726
Expenditures	257,009,642	46,933,116	17,489,255	17,344,006	168,954	338,944,973
Police	11,479,935	0	0	0	0	11,479,935
Fire	11,415,057	0	0	0	0	11,415,057
Education	160,541,317	32,494,277	2,144,907	0	0	195,180,501
Public Works	8,176,510	-435	11,794,598	16,124,901	0	36,095,574
Debt Service	13,623,992					13,623,992
Health Ins	13,226,974				0	13,226,974
Pension	7,970,336				0	7,970,336
All Other	30,575,521	14,439,274	3,549,750	1,219,105	168,954	49,952,604

Total Revenues and Expenditures per Capita						
	General Fund	Special Revenue	Capital Projects	Enterprise Funds	Trust Revenue	Total All Funds
Revenues	3,338.5	662.5	14.9	250.3	5.3	4,271.5
Expenditures	3,309.5	604.4	225.2	223.3	2.2	4,364.6

This data only represents the revenues and expenditures occuring in these funds and does not reflect and transfers to or from other funds. Therefore, this data should not be used to calculate an ending fund balance.

If you have questions regarding the data contained in this report, please contact the Municipal Databank/Local Aid Section at (617) 626-2384 or databank@dor.state.ma.us

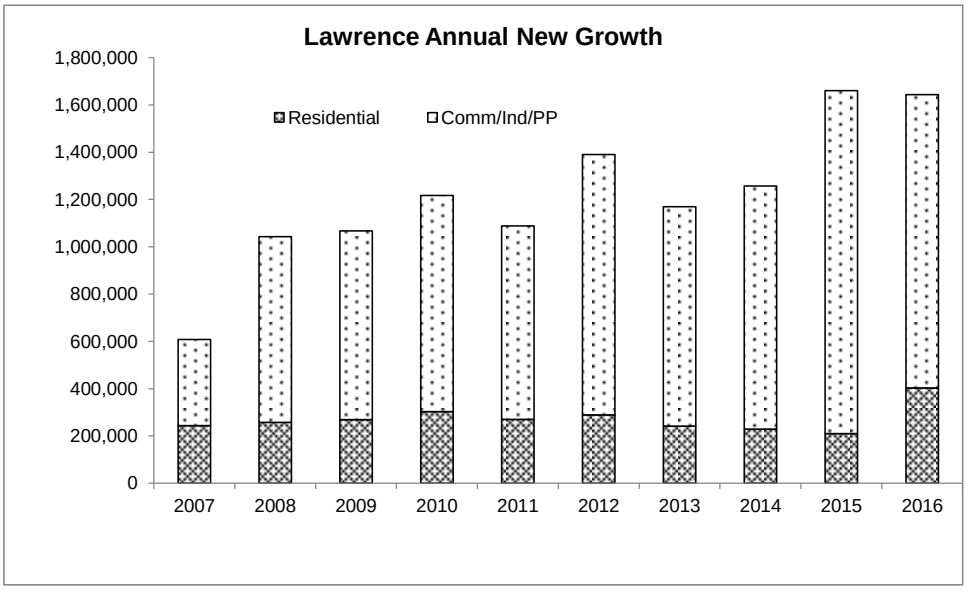
Click here to see if the Division of Local Services' Technical Assistance Section has conducted a financial management review or other analysis for Lawrence

Policy to Fund Annual New Growth Capital Investment

This policy recognizes the need for the City to begin a program to fund its municipal annual CIP for maintenance and capital replacement. The City will set aside $300,000 of its new growth in addition to the amounts set aside in each previous year to stabilize a prudent annual investment in the City's infrastructure - to be established at 7.5% of the prior year's net operating revenue. The use of new growth taxes is appropriately justified because of the demands new growth constructiion places on the infrastructure as well as the operating budget. New growth has averaged over $1.2 million over last 10 years.

Year	Allocation of New Growth Current Year	Growth added to Levy Limit from Prior Year	Total Available for Capital Budget
2017	300,000	0	300,000
2018	300,000	300,000	600,000
2019	300,000	600,000	900,000
2020	300,000	900,000	1,200,000
2021	300,000	1,200,000	1,500,000

Year	Residential New Growth	Comm Ind Per Prop New Growth	Total New Growth Applied to the Levy Limit
2007	243,365	363,764	607,129
2008	257,005	785,581	1,042,586
2009	268,605	797,977	1,066,582
2010	303,000	913,095	1,216,095
2011	269,301	818,155	1,087,456
2012	289,171	1,100,021	1,389,192
2013	241,076	927,470	1,168,546
2014	228,230	1,028,055	1,256,285
2015	209,439	1,449,821	1,659,260
2016	403,264	1,239,366	1,642,630
Average	**271,246**	**942,331**	**1,213,576**



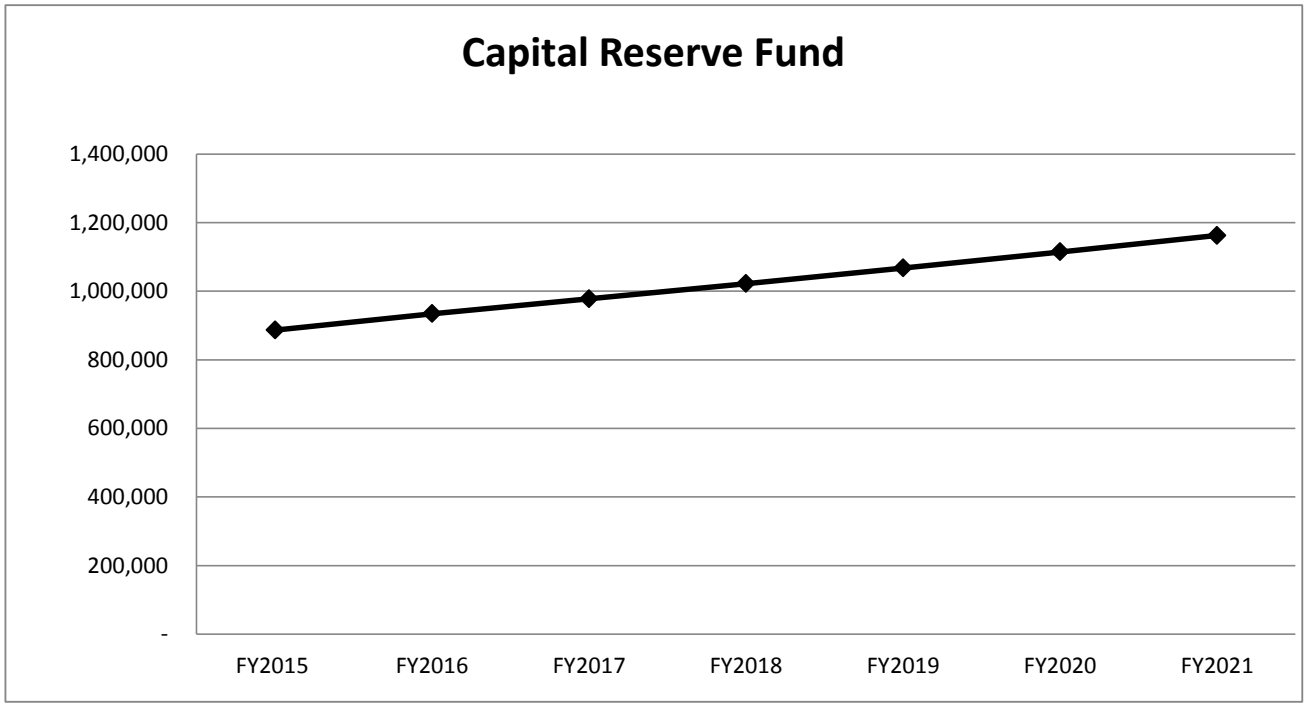
Lawrence State-Mandated Capital Reserve Fund

Section 9 of Acts of 2010 requires 1.5% of the tax levy be dedicated to a Capital Reserve Fund as follows:

SECTION 9. The city shall establish a capital reserve fund into which the city shall appropriate in each fiscal year beginning in fiscal year 2012 at least 1.5 per cent of the amount of property taxes committed for the preceding year. The fund may be appropriated only for purposes for which the city could borrow for 10 years or longer under Chapter 44 of the Massachusetts General Laws.

Fiscal Year	Est Tax Levy	Capital Reserve Fund
FY2015	59,082,877	886,243
FY2016	62,272,715	934,091
FY2017	65,165,509	977,483
FY2018	68,130,623	1,021,959
FY2019	71,169,865	1,067,548
FY2020	74,285,088	1,114,276
FY2021	77,478,192	1,162,173

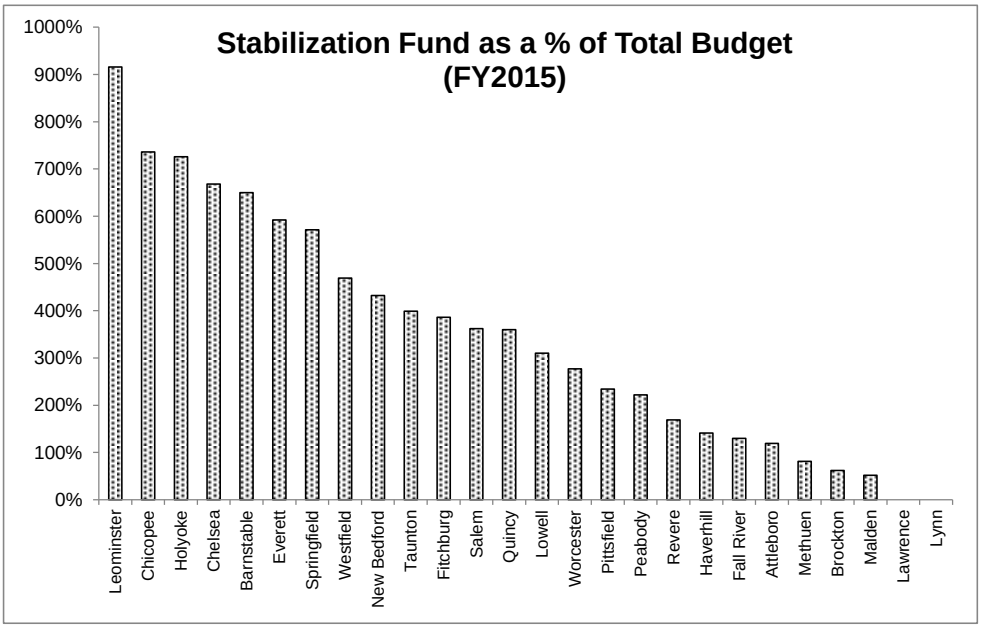
Asumes annual Prop 2 1/2 % increase plus 1.3 million in new growth



Gateway Communities Comparison
Stabiliatation Fund(s) as % of Budget

	Stabilization Amount as a % of Total Budget					
GATEWAY COMMUNITY	**FY2010**	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Leominster	5.3	9.3	8.9	9.8	9.5	9.2
Chicopee	6.3	5.7	5.3	5.9	5.4	7.4
Holyoke	6.4	7.0	7.4	7.5	7.4	7.3
Chelsea	3.9	3.5	8.2	7.9	7.2	6.7
Barnstable	8.3	7.0	4.2	4.0	6.9	6.5
Everett	6.1	6.0	5.9	5.3	6.1	5.9
Springfield	14.4	14.3	7.7	7.2	6.3	5.7
Westfield	2.8	4.8	5.4	5.0	4.3	4.7
New Bedford	2.2	1.7	2.8	3.5	4.1	4.3
Taunton	4.5	2.6	0.7	0.2	0.8	4.0
Fitchburg	0.9	1.7	2.6	2.8	3.6	3.9
Salem	1.2	1.5	2.1	2.5	2.4	3.6
Quincy	2.0	1.2	2.1	2.4	3.4	3.6
Lowell	1.5	1.5	1.9	2.4	4.1	3.1
Worcester	0.8	0.7	1.7	1.9	2.6	2.8
Pittsfield	2.7	2.6	2.5	2.4	2.4	2.3
Peabody	2.3	2.3	2.3	2.3	2.3	2.2
Revere	1.6	1.5	0.9	1.7	3.3	1.7
Haverhill	0.8	0.5	0.4	0.4	0.6	1.4
Fall River	0.2	0.2	0.3	0.3	0.2	1.3
Attleboro	1.1	2.0	1.9	5.4	1.8	1.2
Methuen	0.4	1.5	0.1	0.3	0.5	0.8
Brockton	0.7	1.3	1.1	2.1	1.5	0.6
Malden	0.0	1.3	0.0	0.5	0.6	0.5
Lawrence	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Lynn	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGE	**2.9**	**3.1**	**2.9**	**3.2**	**3.4**	**3.5**

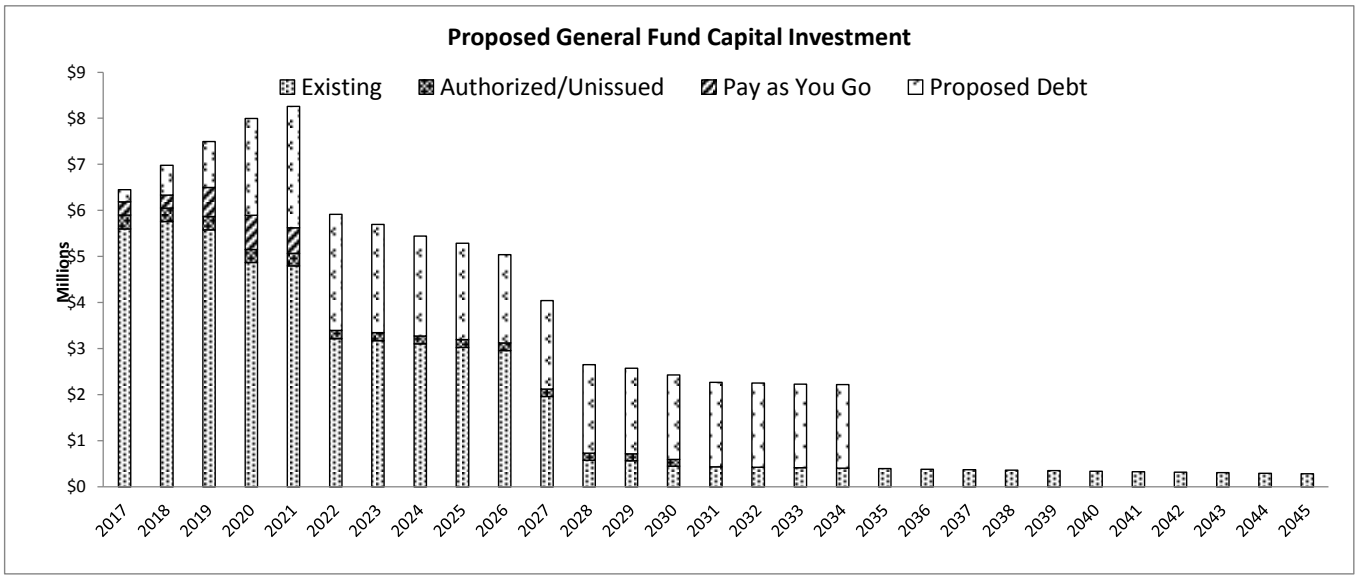
Source: Massachusetts Division of Local Services- Data Bank



The below chart shows a summary of the City's existing debt service excluding water and sewer.
The City has adopted an enterprise fund for its water and sewer operations.
Source: First Southwest

LAWRENCE GENERAL FUND DEBT SERVICE and PAY AS YOU GO

FISCAL YEAR	Existing Debt Service as of 7/1/2016	School MSBA State Aid	Existing Net Debt Service	Authorized/Unissued Debt Service Estimated	FY2017-2021 CIP Proposed Pay as You Go	FY2017-2021 CIP Proposed Debt (estimated)	GRAND TOTAL
2017	11,124,201	(5,522,087)	5,602,114	301,000	284,200	265,918	6,453,232
2018	11,282,013	(5,522,087)	5,759,926	295,000	279,400	646,348	6,980,674
2019	11,104,363	(5,522,087)	5,582,276	288,000	632,500	992,955	7,495,731
2020	10,395,688	(5,522,087)	4,873,601	282,000	744,000	2,098,160	7,997,761
2021	10,319,738	(5,522,087)	4,797,651	274,000	556,000	2,635,694	8,263,345
2022	3,217,413		3,217,413	182,000	-	2,516,344	5,915,757
2023	3,172,963		3,172,963	177,000	-	2,345,902	5,695,865
2024	3,104,462		3,104,462	173,000	-	2,166,660	5,444,122
2025	3,028,437		3,028,437	168,000	-	2,093,965	5,290,402
2026	2,959,712		2,959,712	164,000	-	1,920,365	5,044,077
2027	1,962,313		1,962,313	160,000	-	1,920,365	4,042,678
2028	578,813		578,813	155,000	-	1,920,365	2,654,178
2029	565,113		565,113	151,000	-	1,860,865	2,576,978
2030	451,012		451,012	146,000	-	1,831,115	2,428,127
2031	436,562		436,562		-	1,831,115	2,267,677
2032	426,250		426,250		-	1,831,115	2,257,365
2033	415,937		415,937		-	1,816,043	2,231,980
2034	405,625		405,625		-	1,816,043	2,221,668
2035	395,313		395,313		-		395,313
2036	385,000		385,000		-		385,000
2037	374,000		374,000		-		374,000
2038	363,000		363,000		-		363,000
2039	352,000		352,000				352,000
2040	341,000		341,000				341,000
2041	330,000		330,000				330,000
2042	319,000		319,000				319,000
2043	308,000		308,000		-		308,000
2044	297,000		297,000				297,000
2045	286,000		286,000		-		286,000
TOTAL	**78,700,928**	**(27,610,435)**	**51,090,493**	**2,916,000**	**2,496,100**	**32,509,337**	**89,011,930**



Project #	Project Title		Asset Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Total Project Cost
Cem9	Replace antiquated outdoor water system	The antiquated outdoor water system that supplies water to lot owners and for general landscaping via 95 spigot heads throughout the 112 acre cemetery is in need of complete replacement. The existing system has multiple leaks that waste a significant amount of water and unnecessarily increase the water bills beyond what the budget can accommodate. Projected savings can be as great as $20,000 in one year.	Water	45,000					45,000
DPW13	Replace the roof in the Sewer Garage	The Sewer Garage holds all sewer vehicles and contains the workshop necessary to maintain the sewer system. This project will replace the Sewer Garage's leaking asphalt and tar roof. Leakage will continue if the roof is not replaced, resulting in structural and cosmetic water damage, potentially damaging costly equipment, and posing a safety hazard to employees.	Sewer	100,000	100,000				200,000
IT11	Refresh the DPW Yard Network	This project will fund a refresh of the information technology network at the DPW Yard.	Water and Sewer			0		29,164	29,164
IT17	Refresh the Water Filtration Plant Network	This project will fund a refresh of the information technology network at the Water Filtration Plant	Water			19,894			19,894
WS1	Make necessary water infrastructure improvements	Project work will update electrical, HVAC, safety/security, and treatment process equipment that has passed its useful life at the WTP. Major upgrades will include the replacement of raw water and finish water pumps, the replacement of the Finish Water Pump Room sump pump system, the updating of plant and water storage facility exterior security systems, and the construction of a new pump station at Marston Street. If this project is not implemented, ultimately the City will be unable to treat its drinking water.	Water		3,000,000	2,198,000			5,198,000
WS2	Make improvements to the water distribution system	Project work will replace approximately 70,000 linear feet of aged and tuberculated water main with new 6-, 8-, and 12-inch mains. Major replacements will be performed on Ferry Street, Marston Street, Allston Street, Haverhill Street, Olive Street, Bailey Street, Andover Street, and Jefferson Street. Project work also includes the replacement of main on about 40 other streets. This work is needed to improve flow and pressure, as well as water quality. The consequences for not completed include a reduced ability to fight fires, poor water quality, and taste/odor/rust issues.	Water		6,000,000	8,000,000	8,000,000	4,675,563	26,675,563
WS3	Exercise water valves throughout the city	It is estimated that there are 3,550 valves that need to be exercised throughout the City. Completion of the work is estimated to take between 2 and 4 months. This work is needed to ensure the operability of all valves in system. The consequence of not completing includes inability to easily shut down portion of water main affected during a main break.	Water		267,000				267,000
WS4	Implement sewer and drainage improvements on Jackson Street	This project is currently in planning process. Project work will likely consist of Jackson Street sewer/drainage improvements for additional hydraulic capacity and flood mitigation and other needs areas identified in the 2015 and 2016 Sanitary Sewer Evaluation Survey. This project is needed to address areas of ongoing flooding. The consequence for not completing includes continued flooding of streets and basements during heavy rainfall events.	Sewer		3,000,000	4,000,000	5,767,000		12,767,000
WS5	Design of sewer and drainage improvement project on Jackson Street	This project is for the design work needed for the Jackson Street sewer and drainage improvement project. The consequence for not completing includes continued flooding of streets and basements during heavy rainfall events.	Sewer	1,000,000	1,000,000	1,000,000			3,000,000
WS6	Administration of the sewer and drainage improvement project on Jackson Street	This project will provide funding for contracted oversight of the planned water and sewer improvements. The oversight will be geared toward ensuring that quality construction is performed, and that projects remain on time and on budget.	Sewer		500,000	500,000	500,000		1,500,000
WS7	Provide planning and evaluation support for compliance reporting	This project will fund ongoing sanitary sewer evaluations, Capacity, Management, Operation, & Maintenance (CMOM) support, Geographic Information System (GIS) support and compliance reporting for 2016 and 2017.	Sewer	1,350,000	1,350,000				2,700,000
			SUB TOTAL	**2,495,000**	**15,217,000**	**15,717,894**	**14,267,000**	**4,704,727**	**52,401,621**

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SELECTED GLOSSARY OF TERMS ---------- CAPITAL IMPROVEMENT PROGRAM

Available Funds –Balances in the various fund types that represent non-recurring revenue sources. As a matter of sound practice, they are frequently appropriated to meet unforeseen expenses, for capital expenditures or other onetime costs. Examples of available funds include free cash, stabilization funds, overlay surplus, water surplus, and enterprise net assets unrestricted (formerly retained earnings).

Betterments (Special Assessments) – Whenever part of a community benefits from a public improvement, or betterment (*e.g.*, water, sewer, sidewalks, etc.), special property taxes may be assessed to the property owners of that area to reimburse the governmental entity for all, or part, of the costs it incurred in completing the project. Each property parcel receiving the benefit is assessed a proportionate share of the cost which may be paid in full, or apportioned over a period of up to 20 years. In this case, one year's apportionment along with one year's committed interest computed from October 1 to October 1 is added to the tax bill until the betterment has been paid.

Block Grant – A Block Grant is a Federal grant of money awarded by formula under very general guidelines that allow grantees broad latitude in spending activities. Recipients are normally state or local governments.

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

Bond and Interest Schedule Record (Bond Register) – The permanent and complete record maintained by a treasurer for each bond issue. It shows the amount of interest and principal coming due each date and all other pertinent information concerning the bond issue.

Bond Anticipation Note (BAN) – Short-term debt instrument used to generate cash for initial project costs and with the expectation that the debt will be replaced later by permanent bonding. Typically issued for a term of less than one year, BANs may be re-issued for up to five years, provided principal repayment begins after two years (MGL Ch. 44 §17). Principal payments on school related BANs may be deferred up to seven years (increased in 2002 from five years) if the community has an approved project on the Massachusetts School Building Authority (MSBA) priority list. BANs are full faith and credit obligations.

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

Bond Buyer – A daily trade paper containing current and historical information of interest to the municipal bond business.

Bond Counsel – An attorney or law firm engaged to review and submit an opinion on the legal aspects of a municipal bond or note issue.

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

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

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

Capital Assets – All tangible property used in the operation of government, which is not easily converted into cash, and has an initial useful live extending beyond a single financial reporting period. Capital assets include land and land improvements; infrastructure such as roads, bridges, water and sewer lines; easements; buildings and building improvements; vehicles, machinery and equipment. Communities typically define capital assets in terms of a minimum useful life and a minimum initial cost. (See Fixed Asset)

Capital Budget – An appropriation or spending plan that uses borrowing or direct outlay for capital or fixed asset improvements. Among other information, a capital budget should identify the method of financing each recommended expenditure, i.e., tax levy or rates, and identify those items that were not recommended. (See Capital Asset, Fixed Asset)

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

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

Capital Outlay Expenditure Exclusion – A temporary increase in the tax levy to fund a capital project or make a capital acquisition. Exclusions require two-thirds vote of the selectmen or city council (sometimes with the mayor's approval) and a majority vote in a community-wide referendum. The exclusion is added to the tax levy only during the year in which the project is being funded and may increase the tax levy above the levy ceiling

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

Contingent Appropriation – An appropriation that authorizes spending for a particular purpose only if subsequently approved in a voter referendum. Under MGL Ch. 59 §21C (m), towns may make appropriations from the tax levy, available funds or borrowing, contingent upon the subsequent passage of a Proposition 2½ override or exclusion question for the same purpose. If initially approved at an annual town meeting, voter approval of the contingent appropriation must occur by September 15. Otherwise, the referendum vote must occur within 90 days after the town meeting dissolves. The question may be placed before the voters at more than one election, but if not approved by the applicable deadline, the appropriation is null and void. If contingent appropriations are funded through property taxes, DOR cannot approve the tax rate until the related override or exclusion question is resolved or the deadline passes, whichever occurs first.

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

Debt Burden – The amount of debt carried by an issuer usually expressed as a measure of value (i.e., debt as a percentage of assessed value, debt per capita, etc.). Sometimes debt burden refers to debt service costs as a percentage of the total annual budget.

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

Debt Limit – The maximum amount of debt that a municipality may authorize for qualified purposes under state law. Under MGL Ch. 44 §10, debt limits are set at 5 percent of EQV. By petition to the Municipal Finance Oversight Board, cities and towns can receive approval to increase their debt limit to 10 percent of EQV.

Debt Policy – Part of an overall capital financing policy that provides evidence of a commitment to meet infrastructure needs through a planned program of future financing. Debt policies should be submitted to elected officials for consideration and approval.

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

Enterprise Fund – An enterprise fund, authorized by MGL Ch. 44 §53F½, is a separate accounting and financial reporting mechanism for municipal services for which a fee is charged in exchange for goods or services. It allows a community to demonstrate to the public the portion of total costs of a service that is recovered through user charges and the portion that is subsidized by the tax levy, if any. With an enterprise fund, all costs of service delivery--direct, indirect, and capital costs--are identified. This allows the community to recover total service costs through user fees if it chooses. Enterprise accounting also enables communities to reserve the "surplus" or net assets unrestricted generated by the operation of the enterprise rather than closing it out to the general fund at year-end. Services that may be treated as enterprises include, but are not limited to, water, sewer, hospital, and airport services. See DOR IGR 08-101

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

General Obligation Bonds – Bonds issued by a municipality for purposes allowed by statute that are backed by the full faith and credit of its taxing authority.

Levy Limit – A levy limit is one of two types of levy (tax) restrictions imposed by MGL Ch. 59 §21C (Proposition 2½). It states that the real and personal property taxes imposed by a city or town may only grow each year by 2½ percent of the prior year's levy limit, plus new growth and any overrides or

exclusions. The levy limit can exceed the levy ceiling only if the community passes a capital expenditure exclusion, debt exclusion, or special exclusion. (See Levy Ceiling)

Massachusetts School Building Authority (MSBA) – Administers the state program that reimburses cities, towns, and regional school districts varying percentages of their school construction costs depending on the wealth of the community or district and the category of reimbursement. Projects that received their first reimbursement payment prior to July 26, 2004 will continue to get annual state payments to offset the related annual debt service. Thereafter, cities, towns, and regional school districts will receive a lump sum amount representing the state's share of the eligible project costs.. (See DOR IGR 06-101)

New Growth – The additional tax revenue generated by new construction, renovations and other increases in the property tax base during a calendar year. It does not include value increases caused by normal market forces or by revaluations. New growth is calculated by multiplying the assessed value associated with new construction, renovations and other increases by the prior year tax rate. The additional tax revenue is then incorporated into the calculation of the next year's levy limit. For example, new growth for FY07 is based on new construction, etc. that occurred between January and December 2005 (or July 2005 and June 2006 for accelerated new growth communities). In the fall of 2006, when new growth is being determined to set the FY07 levy limit, the FY06 tax rate is used in the calculation.

Non-Recurring Revenue Source – A one-time source of money available to a city or town. By its nature, a non-recurring revenue source cannot be relied upon in future years. Therefore, such funds should not be used for operating or other expenses that continue from year-to-year. (See Recurring Revenue Source)

Principal – The face amount of a bond, exclusive of accrued interest.

Receipts Reserved for Appropriation – Proceeds that are earmarked by law and placed in separate accounts for appropriation for particular purposes. For example, parking meter proceeds may be appropriated to offset certain expenses for parking meters and the regulation of parking and other traffic activities.

Sale of Cemetery Lots Fund – A fund established to account for proceeds of the sale of cemetery lots. The proceeds may only be appropriated to pay for the cost of the land, its care and improvement or the enlargement of the cemetery under provisions of MGL Ch. 114 §15.

Sale of Real Estate Fund – A fund established to account for the proceeds of the sale of municipal real estate other than proceeds acquired through tax title foreclosure. MGL Ch. 44 §63 states that such proceeds shall be applied first to the retirement of debt on the property sold. In the absence of such debt, funds may generally be used for purposes for which the city or town is authorized to borrow for a period of five years or more

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

Special Exclusion – For a few limited capital purposes, a community may exceed its levy limit or levy ceiling without voter approval. Presently, there are two special expenditure exclusions: 1) water and sewer project debt service costs which reduce the water and sewer rates by the same amount; and 2) a program to assist homeowners to repair or replace faulty septic systems, remove underground fuel storage tanks, or remove dangerous levels of lead paint to meet public health and safety code requirements. In the second special exclusion, homeowners repay the municipality for the cost plus interest apportioned over a period of time, not to exceed 20 years

Special Revenue Fund – Funds, established by statute only, containing revenues that are earmarked for and restricted to expenditures for specific purposes. Special revenue funds include receipts reserved for appropriation, revolving funds, grants from governmental entities, and gifts from private individuals or organizations.

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

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