



Capital Improvement Plan

FY2020 - 2024

Mayor Ruthanne Fuller

October 15, 2018

Capital Improvement Plan

FY2020-FY2024

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City of Newton

Mayor Ruthanne Fuller

Overarching External Goals

Improving streets, sidewalks, mobility and public buildings & infrastructure

Ensuring academic excellence and educational equity

Making Newton more “All Age” friendly

Addressing climate change & sustaining our environment

Protecting woods & open spaces and caring for our parks & recreation spaces

Providing excellent city services efficiently and taking care of what we have

Assuring the City’s financial health and spending wisely



Preserving neighborhoods, increasing affordable housing & diversifying housing options

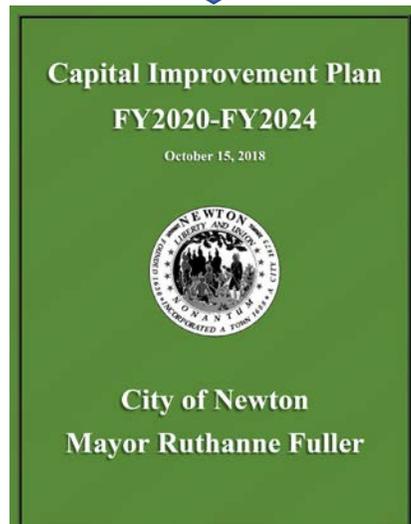
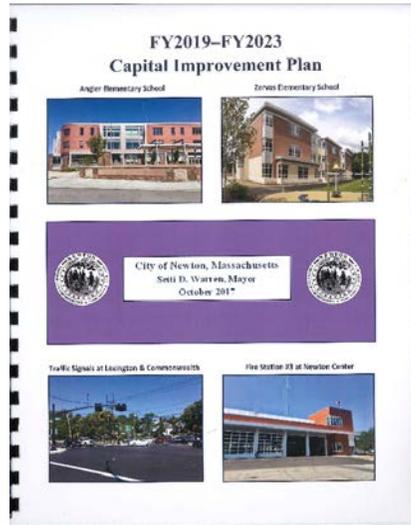
Promoting vibrant, walkable, financially robust village centers and commercial corridors

Fostering arts, culture & community life

Keeping Newton Safe

Facilitating a healthy, accessible & supportive Newton

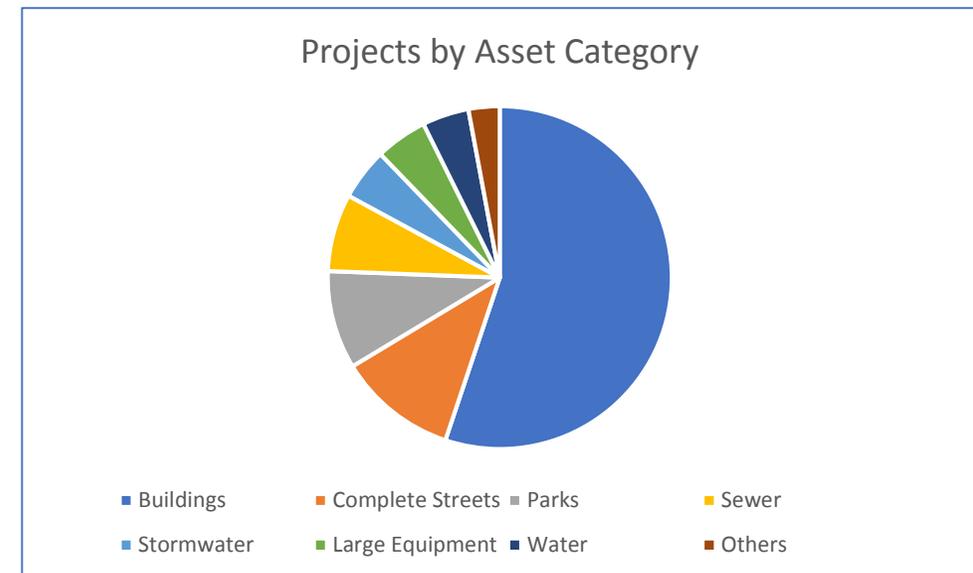
Changes to CIP Document and Methodology



- **Added Two New Sections:**
 - **Accessibility**
 - **Public Buildings**
- **Changed Prioritization System to both Mission and Risk Based**
- **Added Two Factors**
 - **Impact on Equity and Accessibility**
 - **Impact on Economic Health and Vibrancy**

Overview of FY2020 – FY2024 CIP

- **205 Total Projects**
- **96 with projected spending during FY2019 – FY2024 Period**
- **51 project deletions and 29 project additions from FY2019 CIP**
- **100+ changes in project descriptions, funding sources, schedules and priorities**
- **\$245 Million in projected spending during FY2020-FY2024, from all sources**
- **Project Breakdown by Asset Category**
 - **113 Building projects**
 - **23 Complete Streets projects**
 - **19 Parks & Open Space projects**
 - **15 Sewer Projects**
 - **10 Stormwater Projects**
 - **10 Large Equipment projects**
 - **9 Water Projects**



Major Projects in FY2020 – FY2024 Period

- **Cabot Elementary School – Summer 2019 Completion**
- **Lincoln-Eliot / Newton Early Childhood Program – Feasibility/Siting/Design Stage**
- **Newton Center for Active Living (NewCAL) – Feasibility/Siting/Design Stage**
- **Accelerated Roads Program (FY20 is Year 3 of 10)**
- **Multiple Traffic Signalization and Village Center Improvement Projects**
 - **(West Newton, Newtonville, Dedham@Nahanton, Oak@Christina, Wells@Nahanton, Cherry@Webster+Derby, Beacon@Walnut, Newton Corner, Beacon@Chestnut, Centre@Walnut, Auburn@Grove, Comm@Chestnut)**
- **Water Pipeline Replacement Program (FY20 is Year 4 of 20)**
- **Sewer Inflow & Infiltration Program (FY20 is Year 6 of 10)**
- **Stormwater Infrastructure Improvement Plan**
- **Municipal Vehicles Replacement Program**
- **Building Improvements (Police HQ, Elliott and Crafts Yards, Library, Fire St. #1 + #2)**

Cabot School Construction – Late August Aerial Photo

**\$49
Million***



Site: Cabot School, Newton, MA
Date: 8-23-18 Image# 7351-10
Aerial by lesvants.com

Cabot School Construction – October Progress Report Photos

Project on Schedule
and Budget

Sept. 2019 School Start
\$49 million



Lincoln-Eliot School and NECP Project

150 Jackson Road Site

\$33
Million

150 Jackson Road / Newton, MA



ARROWSTREET

LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA

SCHOOL BUILDING COMMITTEE / 11 October 2018

Lincoln-Eliot School and NECP Project

150 Jackson Road Site



Lincoln-Eliot School and NECP Project

Horace Mann School Site



Lincoln-Eliot School and NECP Project

Horace Mann School Site

Horace Mann School
Site for NECP (swing
and possible long-term)

- Challenges
- Opportunities



Newton Public Schools Projects

Major School Renovations

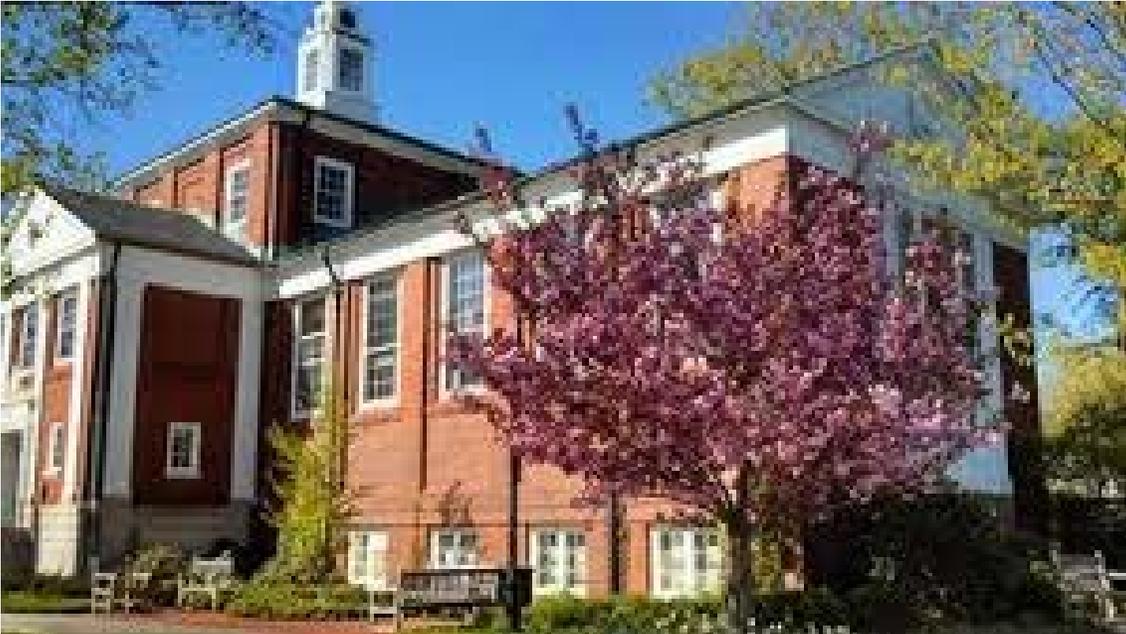
- Cabot School
- 150 Jackson (new Lincoln-Eliot)
- Horace Mann Renovations for NECP (Swing Space or possible long-term location)
- Countryside Renovations and Addition (*subject to funding*)
- Franklin and Ward School renovations and/or replacements
- (*subject to funding*)

Maintenance School Projects

- Carr Air Conditioning
- Boilers at Day and Bigelow (MSBA)
- Newton North Pool Air Handling
- Ed Center Access Stairs
- Horace Mann Elevator
- Newton South Library HVAC System
- Mem-Spaulling Roof/Mechanicals
- Underwood Roof Replacement
- Franklin School Drainage and interior improvements TBD
- Ward School improvements TBD

**\$16.5
Million**

Newton Center for Active Living (NewCAL)



NewCAL Project Organization Chart



NewCAL Listening Sessions

NEWCAL 9/14/18 Listening Session

- 1) PICKLE BALL COURT: 44' x 20' 30-35/hrs
12' clearance allowed
- 2) Scheduling Intergenerational programs.
- 3) ARTS- GALLERY SPACE. (Hanging System)
- 4) MORE UNPROGRAMMED SPACE (EXPANSION).
- 5) EXPAND SENIOR SERVICES.
- 6) FUNDING
- 7) BOTTLI COURT.
- 8) PUTTING GREEN.
- 9) MEETING SPACE'S
- 10)

- EXTENDED HRS. + WKENDS.
- LIGHTING - GLARE
PROPER SCENE CONTROL
- MEETING RMS - UP TO 10 PEOPLE
- IMPROMPTU SPACES
- EASILY MOVED PARTITIONS FOR MULTI-PURPOSE ROOMS
- COORD. WITH OTHER COA & CITY SENIOR SERVICES
- Community Gardening - Greenhouse?
- Rooftop Gardening
- Raised Beds
- HOUSING - SC. + APTS Above
CONDOS - 4-5 stories
PURCHASE COST → → Senior Center
- SENIORS WANT TO STAY IN THE COMMUNITY
- HOUSING OPTIONS IMPORTANT
- smaller - down sized units
- Community Center integrated w/ housing
- HOUSING Options → COA
NOT VISIT - why have you not visited

Why MANSIONIZATION impacting seniors

- ART
- ROOMS FOR CHILDREN
- COMMON SPACE
- RICH VARIETY OF C
- FLEXIBLE SPACE
- FEELS ALIVE
- MAGNET FOR COMM

Questions and Comments Here

If there were spaces what classes/activities would you like to have at a Senior Center? (other than the therapeutic classes/activities currently offered)

More public computers
More and less expensive art classes
More supplies in access as have more open studio space!

THIS IS A GREAT IDEAL PUBLIC FACILITY!! THANKS

More space for exercise classes - 2 rms. wooden floor

Dedicated lunch space - cafe setting

Microwave for use) Self-food service refrigerator

Next to a parking lot City owns

Intergenerational -

Dedicated space for seniors

seniors should have access to gyms at schools

Dedicated gym space with equipment for seniors

1000 seniors

Need space for seniors

- NEWCAL 9/21/18
- LOCATION / SITE / Accessible
- Bingo etc.
- Fitness Equip.
- Movies / THEATRE.
- THERAPY POOL.
- EXTENDED OPENINGS!
- FINANCIAL DIFFERENTIAL Between programs
- LIFETIME LEARNING!
- White Boards!
- Pushing Program out Remotely via WEB
- STREAMING EXTERIOR program INTO CENTER
- programming to get SENIORS INVOLVED in TECHNOLOGY.
- MORE STAFF / SOCIAL WORKER.

- A teaching kitchen
- nutrition
- Computer lab - teaching I phone, I pads, etc
- Building large enough for a Senior Wing + Community wing
- Building open for longer hours



Data Comparison – Intergenerational Center site visits Randolph / Natick / Lexington* (10/5/18)



Newton Council on Aging – The Senior Center
345 Walnut Street, Newton, MA

Randolph Intergenerational Comm. Center, 10/2017
128 Pleasant St, Randolph, MA

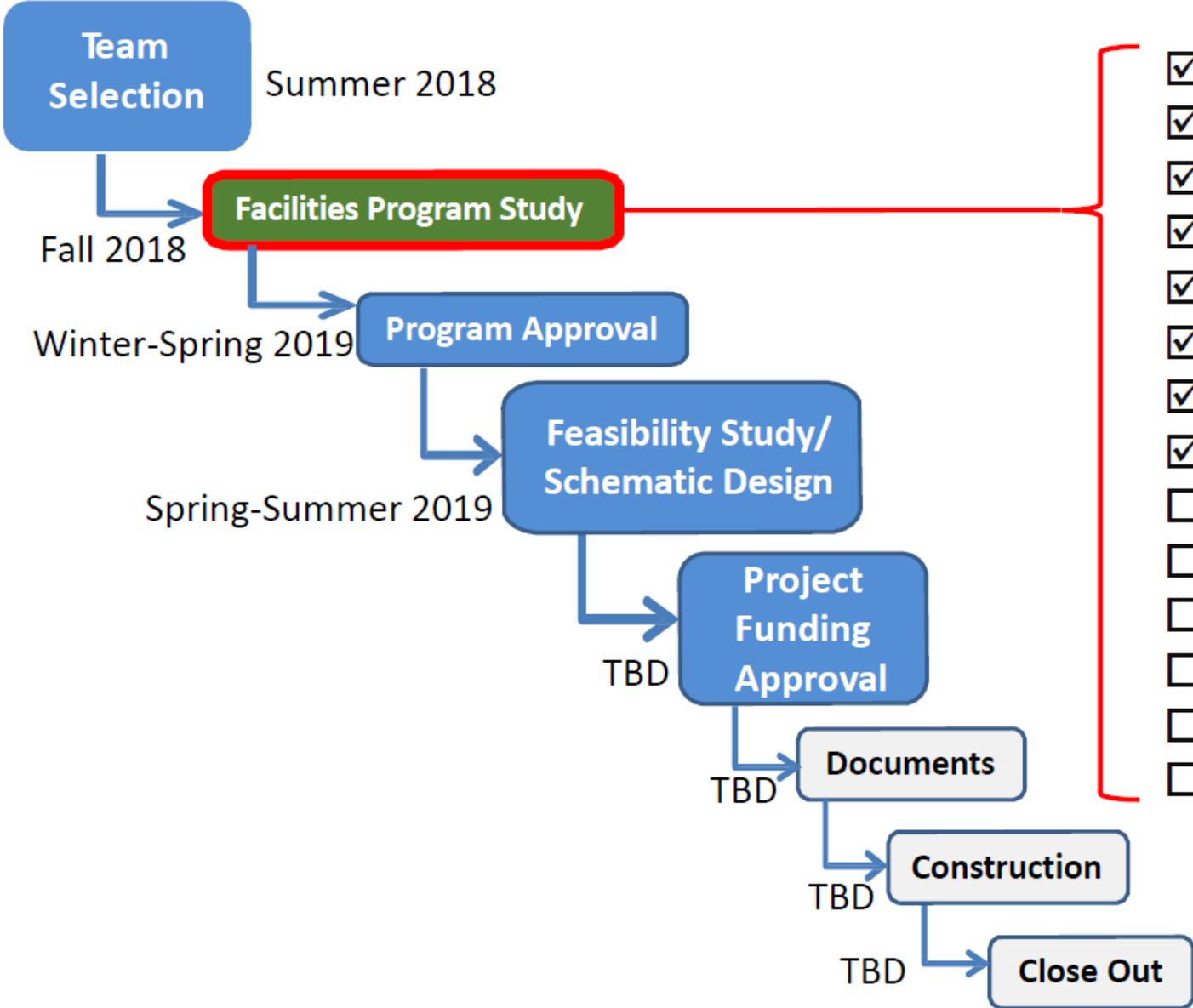
Natick Community-Senior Center
Year Built: 2012
117 East Central St. Natick, MA

Lexington Community Center
Year Built: 2015
30 Marrett Rd., Lexington, MA

**previous visit*

- **~ 9,850 GSF** (2 1/2 flrs.)
- **Current Population 2010**
Census: 85,146 (87,018^{**})
- **Age 60+ population 2010**
Census: 18,636 (19,230^{**})
21.8% of Total Population
(22.1%^{**})
- **SF per Senior over 60 = 0.6**
(2010 Census) (.58^{**})
- **Projected Pop. Change over 65 years old from 2010 to 2030:**
61% to 63% *
- **~ 36,000 GSF**, est. (Two Floors)
\$14.2 m total proj.
- **Current Population 2010** Census: 32,112
- **Age 60+ population 2010**
Census: 5,055
16% of Total Population
- **SF per Senior over 60 = 7.1**
(2010 Census)
- **SF per Resident = 1.12**
- **Projected Pop. Change over 65 years old from 2010 to 2030:** 65% to 67% *
- **26,000 GSF** Total, est.(Two Floors)
\$10 M Cost
- **Current Population 2010** Census: 33,006 (35,385, curr. Est.)
- **Age 60+ population 2010**
Census: 6,556 (7,465)
19.7% (21% of Total Population)
- **SF per Senior over 60 = 4.0**
(2010 Census)
- **SF per Resident = 0.79**
- **Projected Pop. Change over 65 years old from 2010 to 2030:** 66% to 69% *
- **~34,000 GSF** Total, (Three Floors)
\$7M Cost
- **Current Population 2010** Census: 31,394
- **Age 60+ population 2010**
Census: 7,898
25% of Total Population
- **SF per Senior over 60 = 4.3**
(2010 Census)
- **SF per Resident = 1.08**
- **Projected Pop. Change over 65 years old from 2010 to 2030:** 53% to 55% *

NewCAL Project Process



- Facility Tours
- Data Collection – Survey & Questionnaires
- Data Analysis
- Present to EBC/ABC
- Additional Facility Tours
- Refine Data & Feedback
- Summarize Data and Feedback
- Present to EBC/ABC
- Preliminary Program Analysis
- Present to EBC/ABC
- City Council Update
- Refine Options
- Present final Draft Program – EBC/ABC
- City Council – Final Report & Recommendations

**\$2.0
Million**

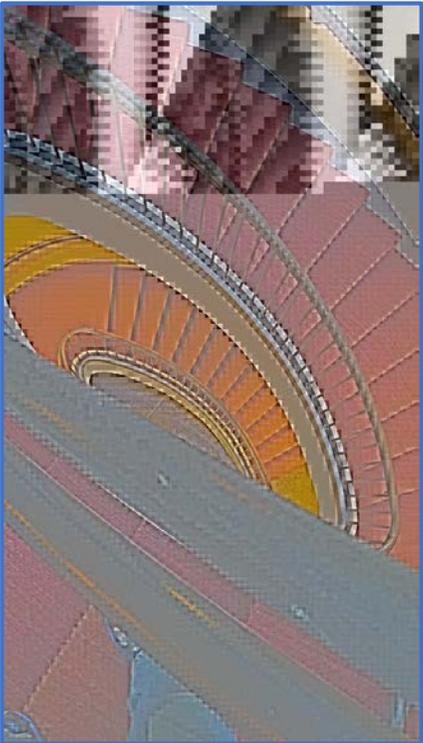
Library Renovations

FY19 Renovations + FY21 Children's Room Expansion



Newton Free Library

FY19 Renovations to High-Traffic Areas (Carpet + Paint)



Expansion of Children's Library



Newton Children's Room



Newton's Story Room (405 s.f.)



Two librarians lead high-energy sing-alongs at the Cambridge (MA) Public Library. The event routinely fills to the venue's 130- person capacity.

Photo by Luke Kirkland/Cambridge Public Library

Cambridge's Story Room

NEWTON FREE LIBRARY

RENOVATIONS - PHASED PLAN

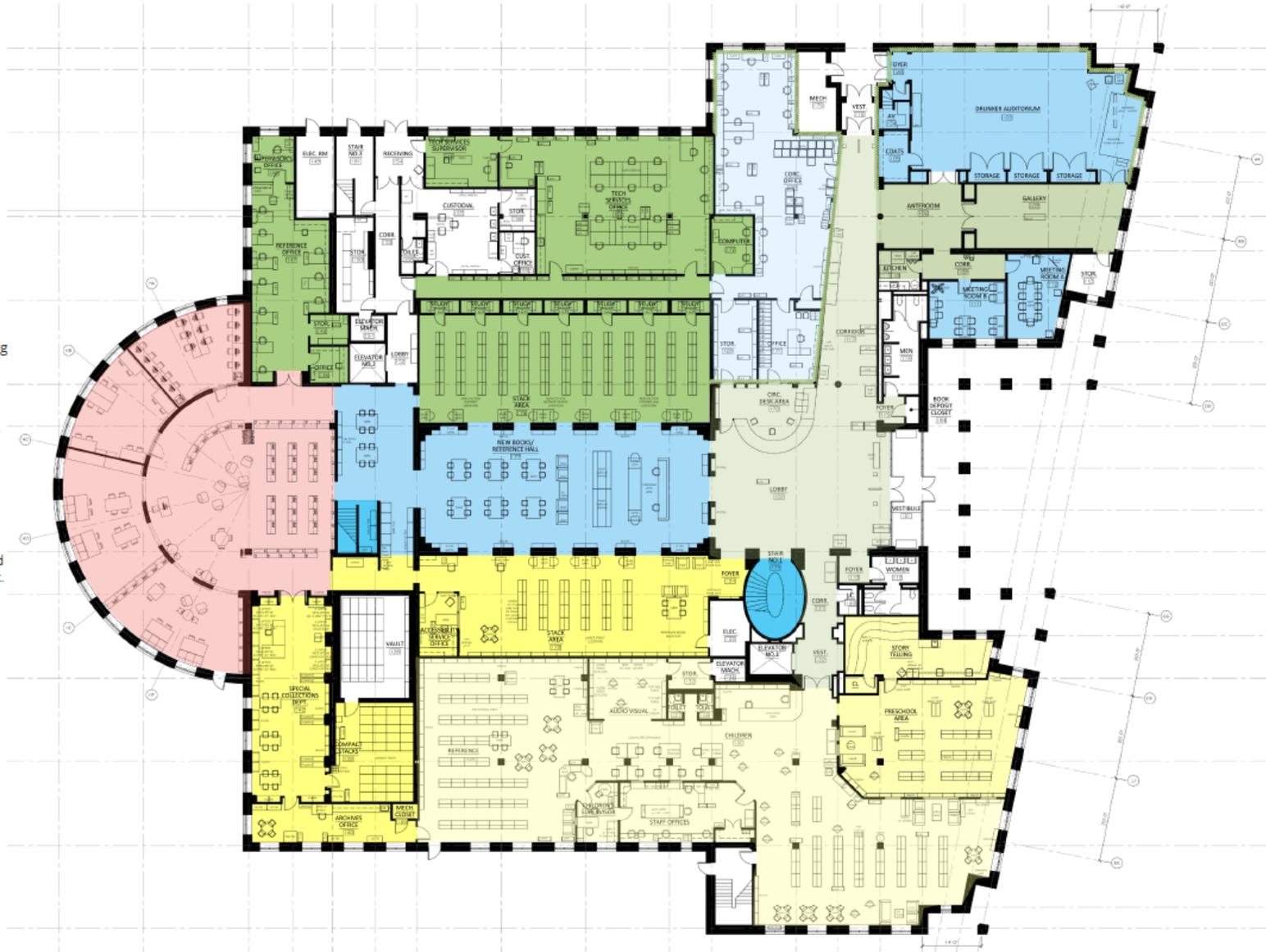
GROUND FLOOR

PHASE 1

- PRIORITY 1**
- Renovate new teen space (COMPLETED)

PHASE 2

- PRIORITY 1**
- Refinish stairs
- Paint Trustees Room
- PRIORITY 2**
- New carpet in atrium, meeting room A, meeting room B, and portions of second floor
- Remove Reference desk in atrium
- Druker Auditorium to receive new acoustic wall treatment, new paint and carpet
- PRIORITY 3**
- Circulation office, new carpet and paint
- Second floor study rooms and administrative suite new carpet.



PHASE 3

- PRIORITY 1**
- Expand children's room into existing large print & special collections areas
- Local history moved to third floor
- PRIORITY 2**
- ADA compliant restrooms
- Story room expanded
- PRIORITY 3**
- Refurnish children's room

PHASE 4

- PRIORITY 1**
- Staff offices relocated to the third floor
- Cafe / open study space to replace offices on east wing of first floor
- PRIORITY 2**
- Enlarge footprint of Druker Auditorium
- PRIORITY 3**
- Refurnish first floor
- Paint first and third floor

PHASE 5

- PRIORITY 1**
- New Carpet in remaining second floor areas
- Repaint second level
- Mechanical upgrades to cooling tower 2, Generator, Chiller, new roof membrane and code issues
- PRIORITY 2**
- Add study rooms & study bank
- Refurnish study seating & lounge seating

Transportation – Complete Streets Program

CIP Projects

Accelerated Roads Program

- \$95 Million, 10-Year Plan
- Data-driven prioritization with 8 treatments

Village Enhancements

- Undertake safety and streetscape improvements in Village Centers
- Needham Street, West Newton Square, Walnut Street in Newtonville, Wash. St. Vision

Traffic Signalization

- Prioritized plan for 100 signalized intersections based on crash, age, condition, traffic, ADA, projects
- 8 completed, 4 in design/construction, 9 future

Non-CIP Projects

Bike Facilities

- Adding and upgrading bike facilities on roadways
- Growing network of Protected, On-Street and Shared Lane improvements
- Bike rack installations (40 in FY19)

Transit

- Increase private and public shared transit opportunities in City
- Encourage MBTA to advance accessibility

Smart Parking Management

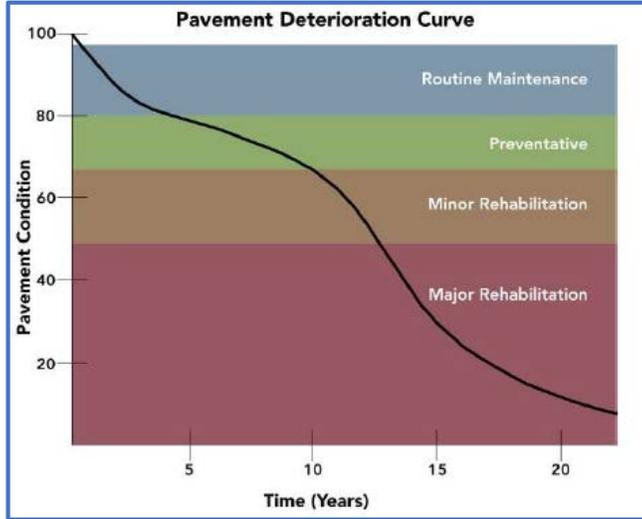
- Implement holistic village center parking plans to free-up front door spaces
- Initiate Shared Parking Pilot Program

Traffic Calming

- Continue data-driven prioritization plan
- Implement improvements on 10 highest priority per year

Accelerated Roads Program

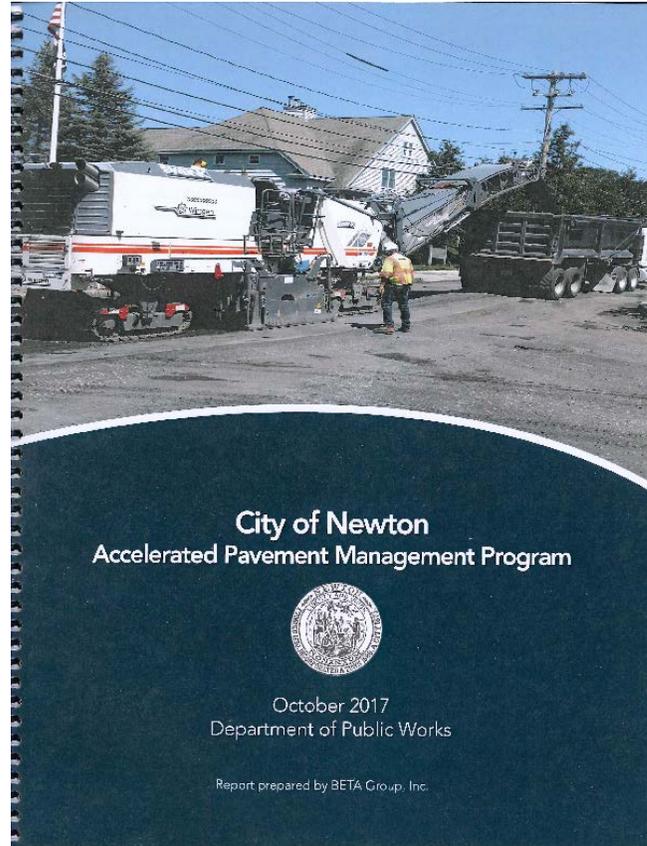
*FY2020 is Year 3 of 10 Year,
\$95 Million Program*



New PCI Data this Fall

Treatment Operations

- Bonded Wearing Course
- Cape Seal
- Crack Seal
- Fog Seal
- Microsurfacing
- Mill & Overlay
- Reclamation
- Safety Repair



Accelerated Roads Program



**Future Highway Engineer
or Equipment Operator**



Adams Street - 2018

Village Center Improvements

- Project Components**
- Upgrade traffic signal equipment
 - Improve multimodal safety and operations
 - Enhance streetscapes
 - Improve signal coordination



West Newton Square



Walnut Street - Newtonville

Newton Centre and Newton Highlands in future

Traffic Signalization Projects

In Design or Construction (Yellow)

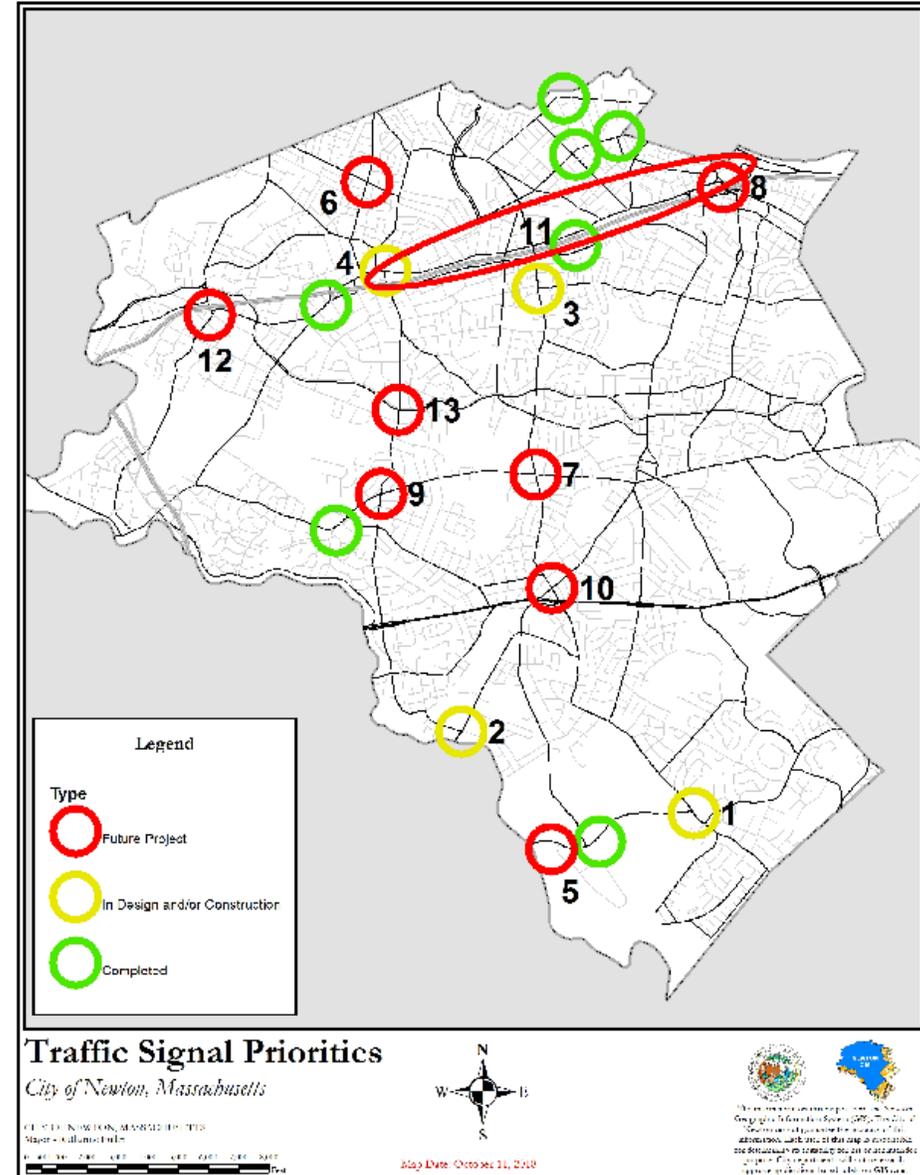
- Dedham @ Nahanton & Brookline
- Oak @ Christina
- Walnut Street – Newtonville Village Project
- West Newton Square Village Project

Future Projects (in Red)

- Wells @ Nahanton
- Cherry @ Webster & Derby
- Beacon @ Walnut (4 Corners)
- Newton Corner & Pike Off-Ramp
- Beacon @ Chestnut
- Centre @ Walnut (Newton Centre Project)
- Washington Street (West Newton to Newton Corner)
- Auburn @ Grove
- Comm Ave @ Chestnut

Completed Projects (in Green)

- Beacon @ Waban, Nahanton @ Winchester
- Watertown @ Adams, Watertown @ Pearl
- California @ Bridge, Washington @ Auburn
- Auburndale Square, Washington @ Harvard



Transportation – Complete Streets Program

Sidewalk and Accessible Ramp Projects



Newton Corner
2018



Newton Centre 2018

Equipment and Vehicle Replacement Program

Fire Apparatus

- Ladder #2 (Arriving in early 2019)
- Engine #2 in FY20
- Emergency Response Unit in FY21
- Engine #7 in FY22

Municipal Vehicles/Equipment

- \$2.5 Million/Year prioritized program for construction and other city operations
- Mayor commits to all electric fleet of passenger vehicles
- EV Car charging stations installed

Police Vehicles

- Incident Command Vehicle in early 2019
- Patrol Car replacements on regular basis



Parks & Recreation, Open Spaces Projects

Playground Improvements



FY20: Horace Mann (above) and Bowen (below) Playgrounds
Accessibility improvements with rubber mats, surfacing and fibar.



Ballfield Renovations



FY20: Lincoln Warren Baseball (above) and Davis Softball (below)
Two field renovations per year



Categories:
Playgrounds, Ballfields,
Tennis Courts,
Soccer/Lacrosse Fields,
Open Space and
Conservation Lands,
Street Tree Program

Parks & Recreation, Open Spaces Projects

Street Tree Program



Plant 800+ trees in FY20, High Risk tree removals, pruning and stump grinding



Webster Woods Protection



CPA funding for 12 acre woods acquisition



Parks & Recreation, Open Spaces Projects FY19 Completions

Farlow Park Project



Newton Highlands Fields/Park



Accessibility

**\$14.4
Million***

New section of CIP

Plan Components

- Public Buildings and Schools
- Parks and Playgrounds
- Traffic Signals
- Curb Ramps and Sidewalks
- Public Parking Lot Improvements



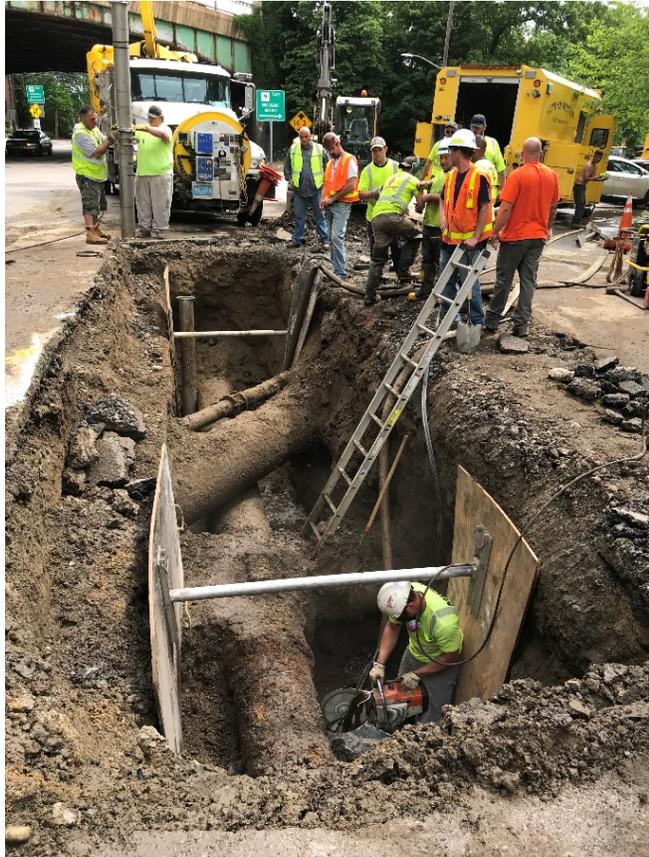
New 3 Year Plan to
Install Pushbutton
APS at 50 Remaining
Signalized Intersections
(\$150k/year)



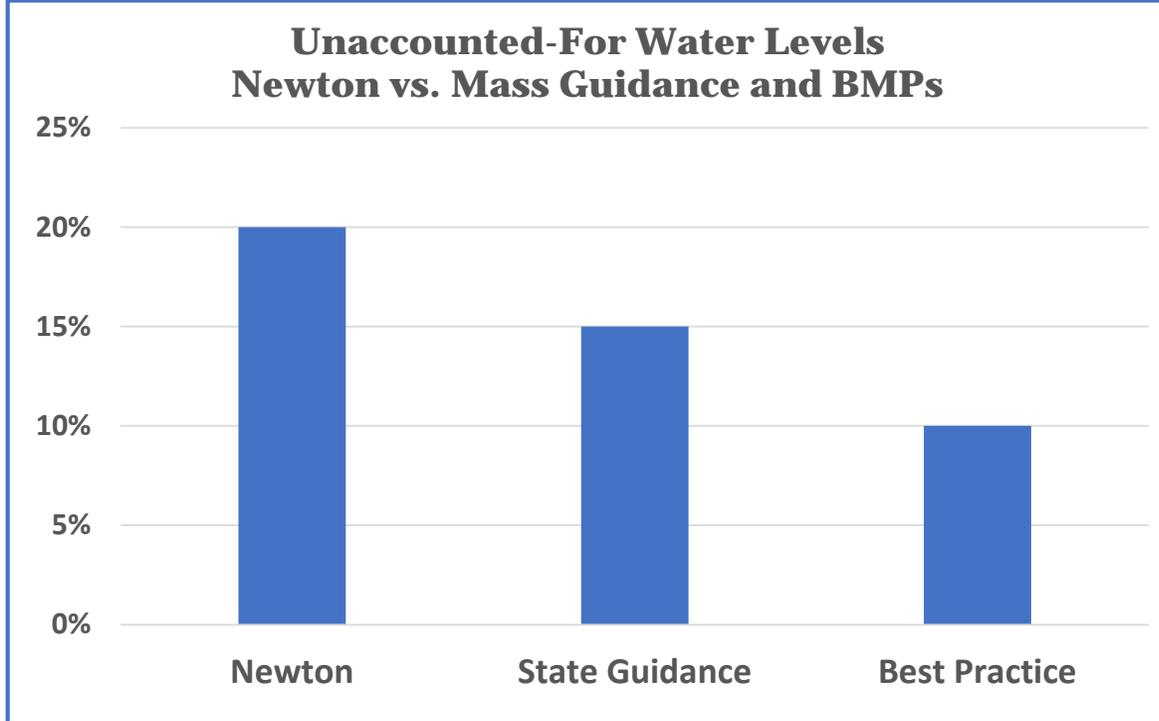
Water Pipeline Replacement Program

*Funded by Water fees
FY2020 is Year 4 of 20 Year Program*

**Winchester Street Break,
June 1, 2018**



Program Focus on Replacing Leak-Prone Pipes

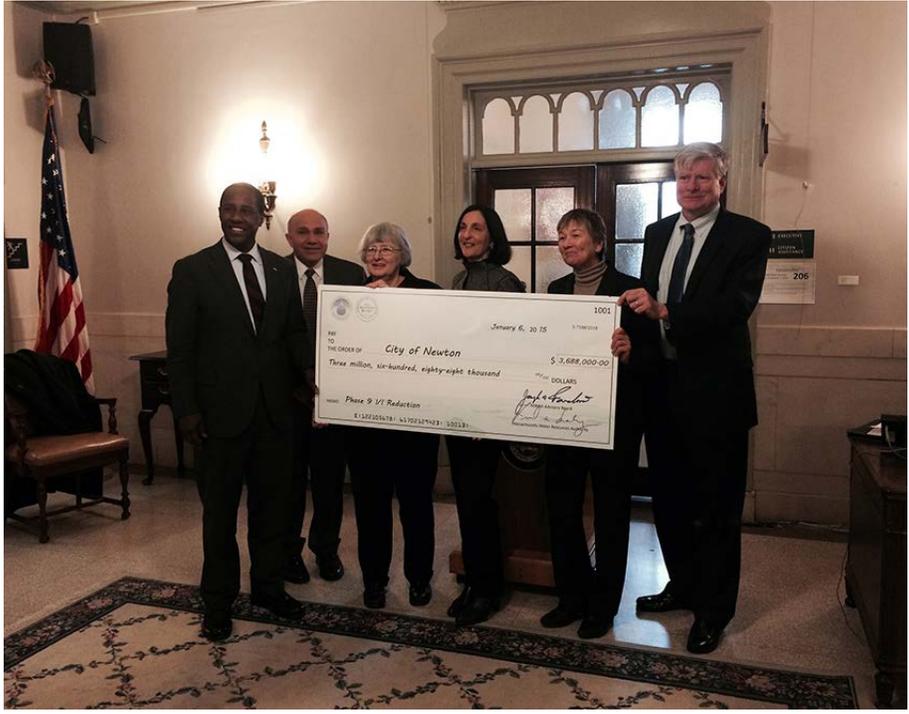


**\$18
Million**

Sewer System Infiltration & Inflow Reduction

*Funded by Sewer fees
FY2020 is Year 6 of 10 Year Program*

**MWRA Funding
(2015 Photo of \$3.7M Grant/Loan)**



Private Inflow from sumps



Inflow



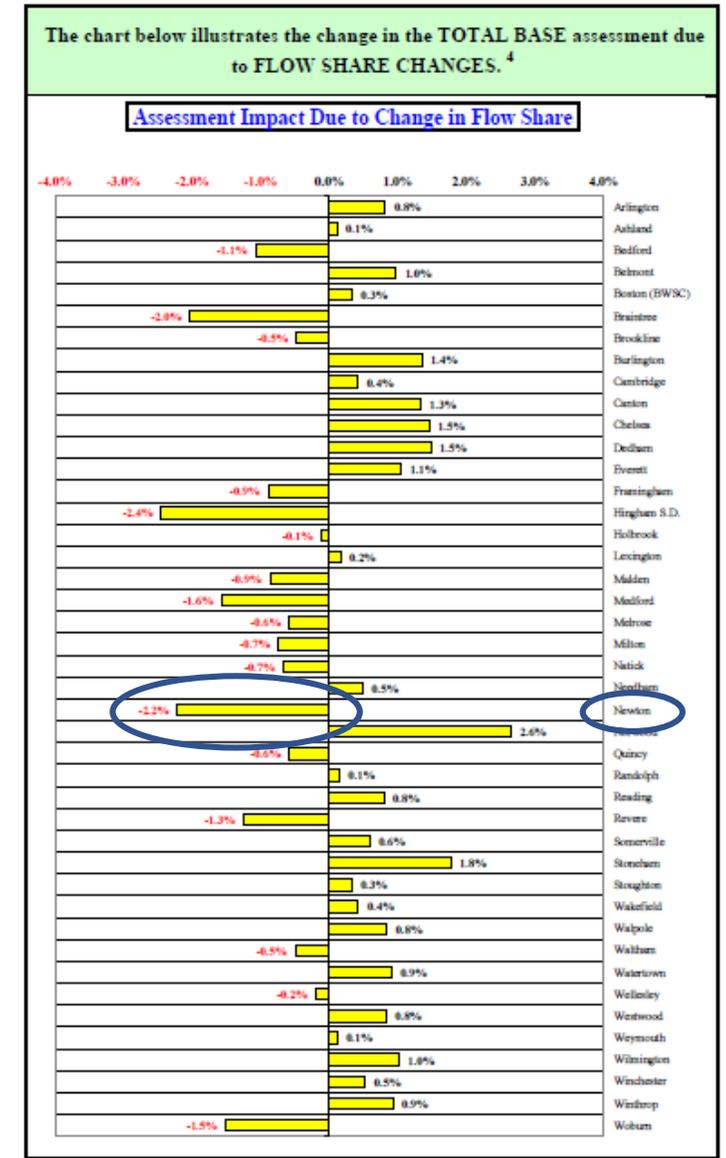
Infiltration



Sewer System Infiltration & Inflow Reduction

I&I Work Goal:
Win the MWRA Flow Share Race

Newton's Sewer Flows
Reduced Well Below Other MWRA Systems



Stormwater Infrastructure Improvement Plan Projects

Funded by Stormwater fees

City of Newton



Stormwater
Infrastructure
Improvement Plan

2015 Plan

- 20 Year Plan of improvements and new program changes for permit compliance
- 320 Miles of drainage infrastructure
- New Federal MS4 Permit requirements
- Protection & improvement of local water quality
- Reduce local flooding and property damage
- Maintenance, street sweeping, basin cleaning
- Development review and inspections

Bullough's Pond Dam Rehabilitation



Stormwater Projects

Cheesecake Brook Culvert & Headwall Improvements



Comm Ave. to Washington Street
Behind Warren School Fields



At Cheesecake Brook Culvert Behind #70 Oldham Road Looking Downstream

Municipal Buildings Projects



Police HQ interior space and roof improvements



Fire Stations #1, 2 Safety Improvements

Other Near-Term Funded Projects

- DPW/Parks Project – Elliott Street Yard work to accommodate Parks staff from Crescent Street
- Newton Comm Golf Course Maintenance Bldg. (funded by golf account)
- City Hall restroom upgrades