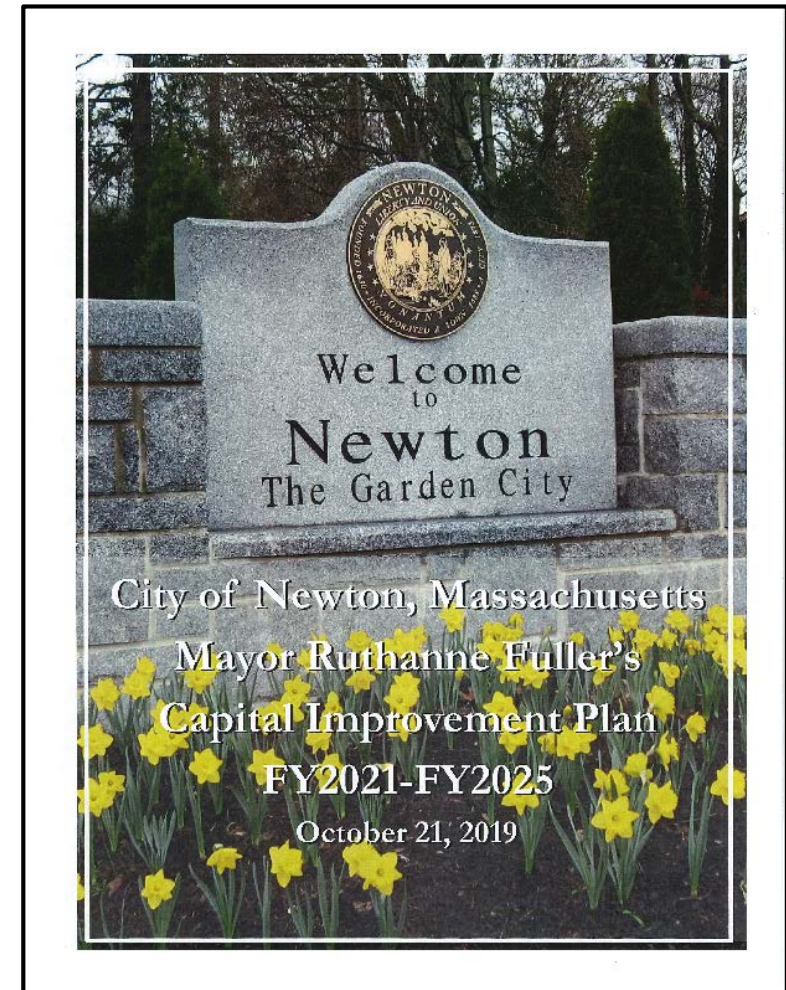




# City of Newton Capital Improvement Plan

FY2021 - FY2025

Mayor Ruthanne Fuller  
October 21, 2019



# 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**

**Preserving neighborhoods, increasing affordable housing & diversifying housing options**

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



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

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

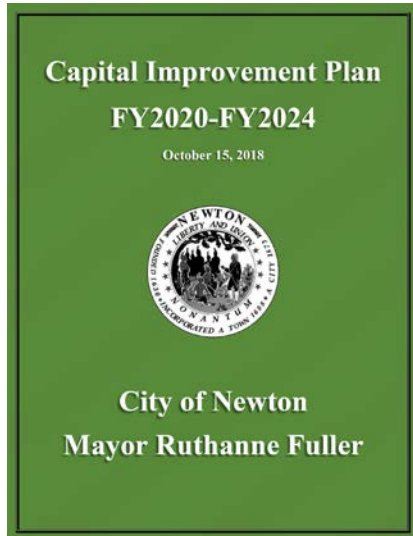
**Fostering arts, culture & community life**

**Assuring the City's financial health and spending wisely**

**Keeping Newton Safe**

**Facilitating a healthy, accessible & supportive Newton**

# Changes to CIP Document



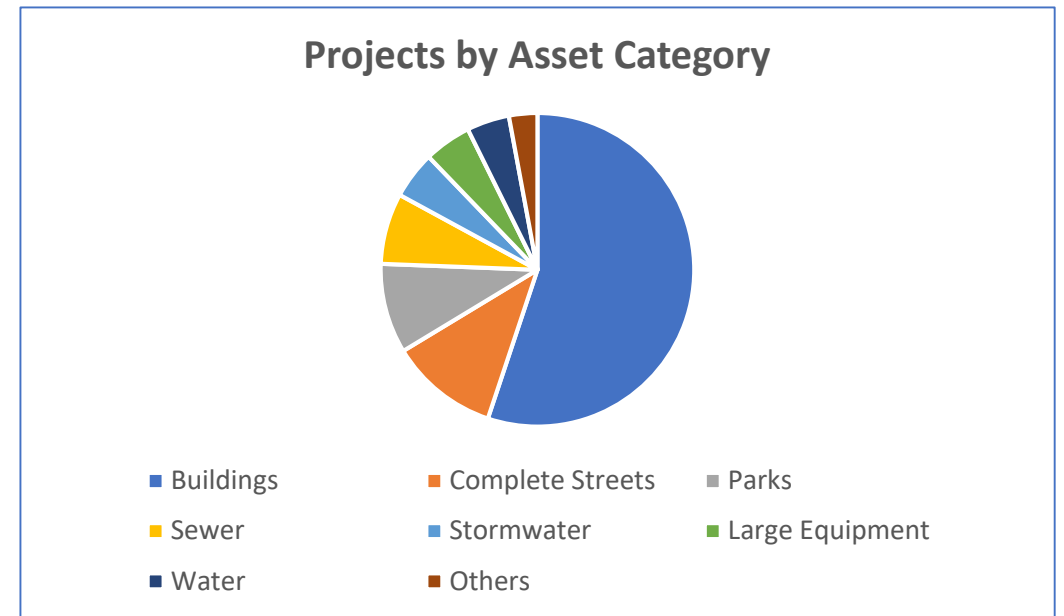
- **Added One New Section: Climate Action**
- **Kept Prioritization System Changes Made in Last CIP to both Mission and Risk Based**
- **Kept Two Factors Added in Last CIP**
  - **Impact on Equity and Accessibility**
  - **Impact on Economic Health and Vibrancy**

# Overview of FY2021 – FY2025 CIP

- 217 Total Projects
- 106 with projected spending during FY2020 – FY2025 Period (6 Years)
- 14 project deletions, 26 project additions from FY2020 CIP + many changes
- \$287 million in projected spending during FY2021-FY2025, from all funding sources
- \$63 million in projected spending remaining to be docketed in Fy2020

## Project Breakdown by Asset Category

- 125 Building projects
- 22 Complete Streets projects
- 22 Parks & Open Space projects
- 10 Sewer projects
- 15 Stormwater projects
- 9 Large Equipment projects
- 11 Water projects
- 2 Software projects
- 1 Climate Action project



# **Major Projects in FY2021 – FY2025 Period**

## **Projects with Near-Term Spending**

---

- Lincoln-Eliot / Newton Early Childhood Program + Horace Mann Improvements
- Oak Hill 3 Classroom Permanent Addition + 1 Interior
- Accelerated Roads Program + Fleet Upgrades
- Complete Streets Projects (West Newton, Newtonville, Washington Street)
- Water/Sewer/Stormwater
- Parking Meter Upgrades + EV Charger Installations in Parking Lots
- Building Improvements (Police HQ, Library Children's Room, Fire St. #1 + #2)
- Webster Woods Acquisition (CPA Funded)
- New Citywide Permitting System Software

# **Major Projects in FY2021 – FY2025 Period**

## **Projects with Out-Year Spending**

---

- Newton Center for Active Living (NewCAL)
- Countryside/Franklin/Ward Elementary School Renovations
- Accelerated Roads Program + Fleet Upgrades
- Complete Streets Projects (including Wells/Nahanton + Washington Street project)
- Water/Sewer/Stormwater
- Fire Apparatus Replacements

*Cabot Elementary School, September 2019*

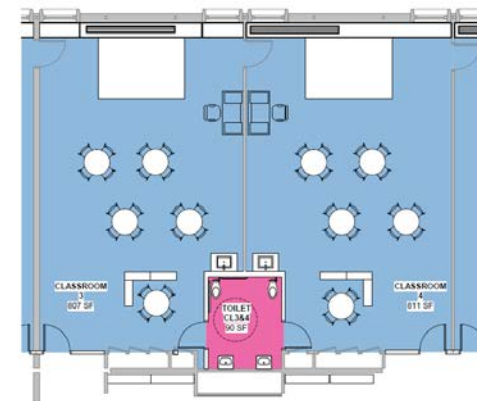


# Newton Early Childhood Program at 687 Watertown Street

- 17 Classrooms (allows current program to expand)
- Site Plan Approval in July 2019
- Fall 2021 Move-In
- All Electric Systems (no fossil fuels)
- Drop Off and Pick Up designed for Program
- New Main Entrance
- Designed for mobility and sensory needs of population
- Modularity removed
- Designed for 305 Students and 85-105 Staff
- \$13 million



GROUP AREAS WITH FURNITURE  
LEVEL 2





# Newton Early Childhood Program at 687 Watertown Street



**Front Entrance Shifts to Improved Albemarle Road Entrance**

# Lincoln-Eliot Elementary School at 150 Jackson Road

150 Jackson Road / Newton, MA



**ARROWSTREET**

LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA

SCHOOL BUILDING COMMITTEE / 11 October 2018



# Newton Public Schools – Capital Projects

Existing Lincoln-Eliot School Window and Door Replacement,  
School building to become swing space in 2023

## LINCOLN-ELIOT ELEMENTARY SCHOOL

WINDOW AND DOOR REPLACEMENT PROJECT

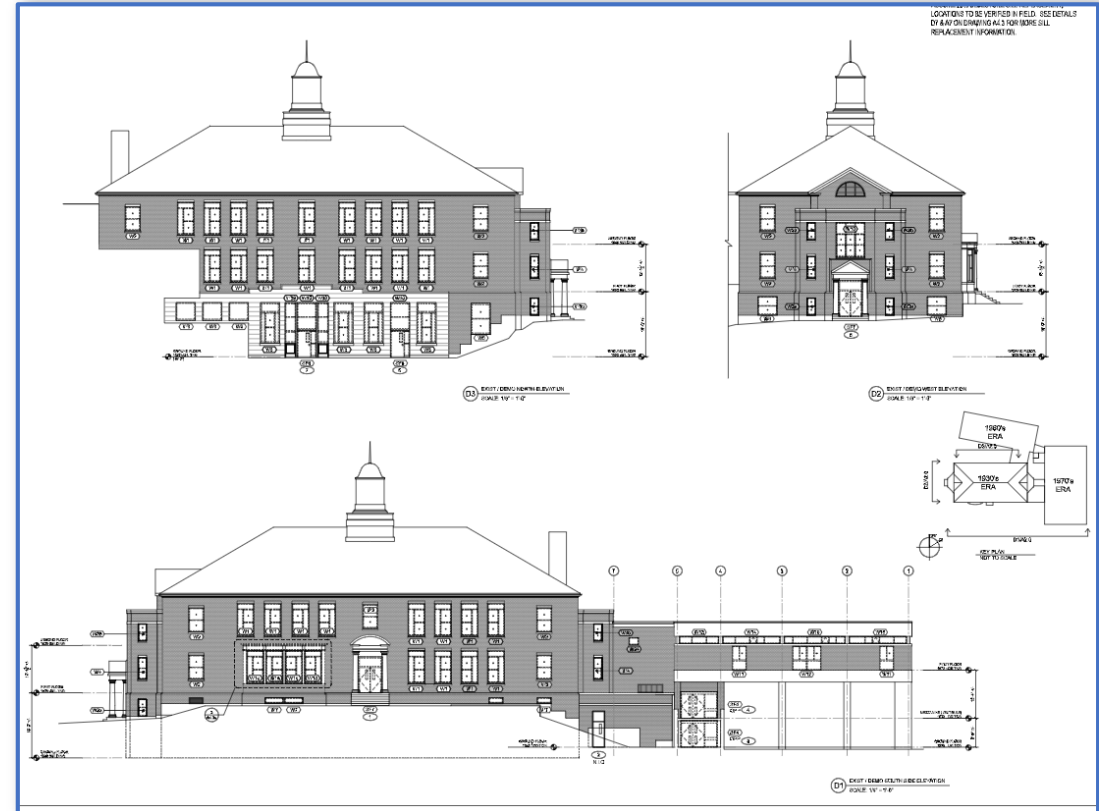
191 PEARL STREET, NEWTON, MASSACHUSETTS 02485

BID DOCUMENTS  
MAY 8, 2019



LOCATION PLAN

NO SCALE

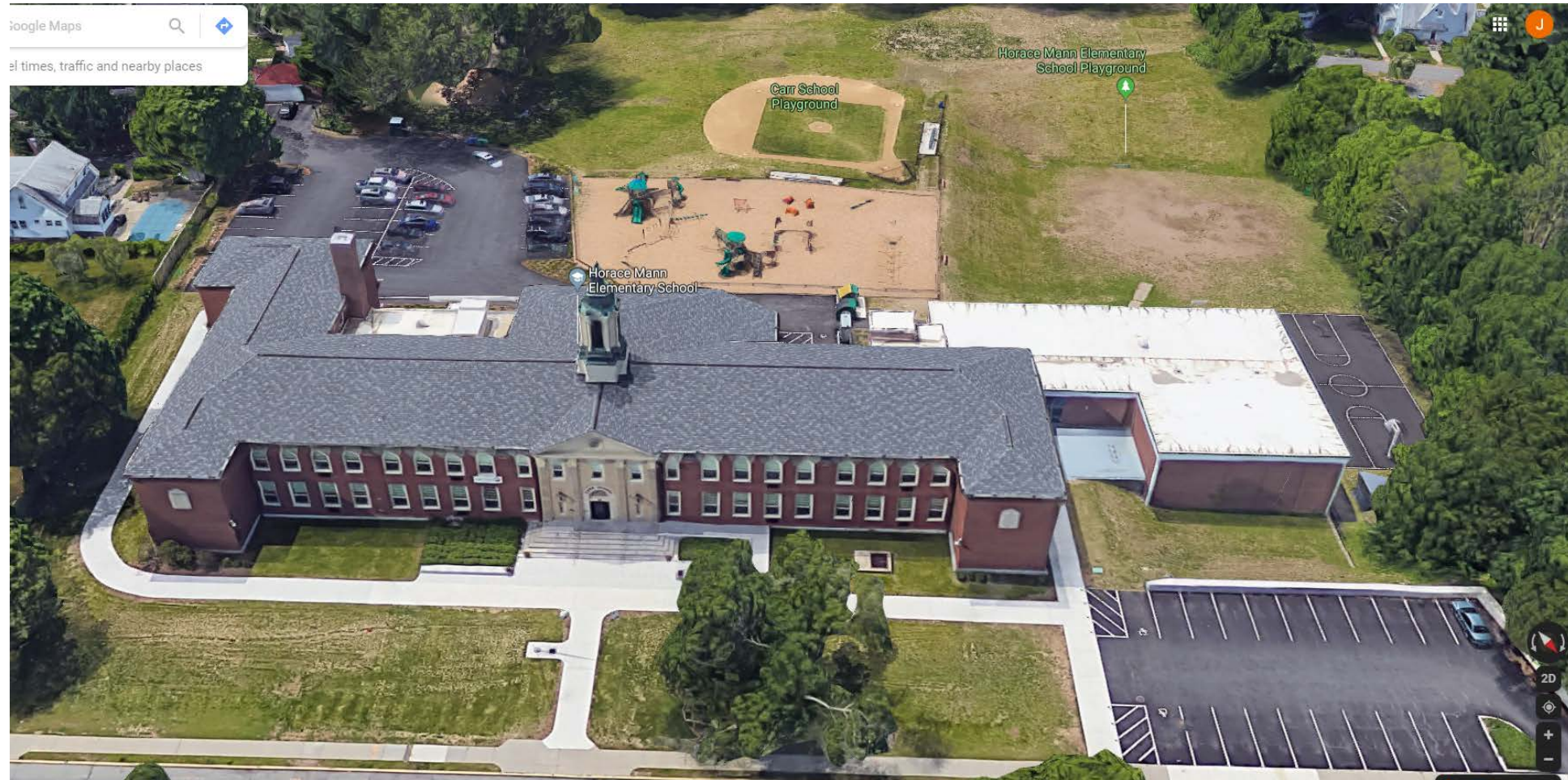


RAYMOND DESIGN ASSOCIATES, INC • ARCHITECT

60 LEDGEWOOD PLACE, ROCKLAND, MA 02370

# Horace Mann

- \$20m investment made in 2014+2019 but...
- \$500k planned for 2<sup>nd</sup> floor classroom sinks and playground improvements
- School Department commitment for classroom furnishings
- Additional work under consideration
- Ideas of parents and educators



# Oak Hill Middle School Space Solution

3-Classroom Permanent Addition + 1 Interior Classroom

- \$3 million with NPS paying \$500k design
- Attempt to get Site Plan Approval, design and construction done in two years
- 3-classroom addition likely in front of gym on NPS land (not impacting fields)
- Detailed NPS memo documenting need [here](#).



Best Site



# Newton Public Schools – Future Major Capital Projects

Highest Priority Schools: Countryside, Franklin & Ward



## Countryside School

- ½ school is old modulares
- School built in wetlands, leading to frequent, serious flooding and chronic dampness
- Many support spaces do not exist, or not large enough
- Building systems need replacement



## Franklin School

- Use of basement spaces for educational purposes not good
- Poorly design additions and use of basement creates disconnection
- Building systems beyond useful life and need replacement



## Ward School

- Significant accessibility problems
- 1928 facility and layout is not conducive to today's teaching & learning systems
- Building systems are well beyond useful life and need replacement

The current financial capacity of the City does not allow these important projects to move forward. Mayor will be seeking input in the coming months on the feasibility, timing, cost and funding mechanisms for these projects.

# 2019 Status of Newton Pre-K and Elementary School Building Improvements

With known or projected completion dates



Recent New or Largely Renovated Schools

Angier: 2016  
Zervas: 2017  
Cabot: 2019



Major School Renovations Underway

NECP: 2021  
Future Lincoln-Eliot: 2023  
Horace Mann: 2014/19-TBD



Major School Renovations/ Modifications Planned

Countryside: 2025+  
Franklin: 2025+  
Ward: TBD



Swing School Renovations Underway

Current Lincoln-Eliot: 2020



Strategic Capital Investments

Bowen Memorial-Spaulding  
Burr Peirce  
Mason-Rice Underwood  
Williams

# Newton Center for Active Living (NewCAL)

## Progress

- Vision Statement created
- Guiding Principles created
- Program Spaces detailed
- Site Selection Matrix
- 145 Sites Examined
- Continue extensive public interaction in all stages of project
- Two City-Owned Sites (Albemarle and NC Triangle Parking Lot) are finalists under review



N | V 5

bh+a



TYPES OF SPACES in NewCAL



WHY THE GYM?



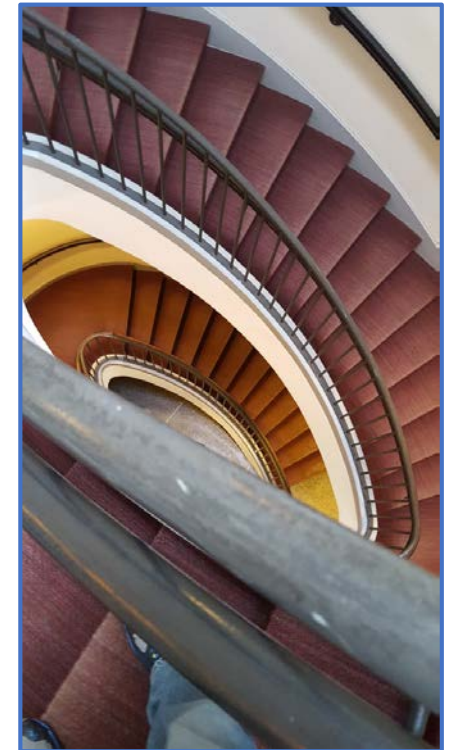
# Newton Free Library Renovations

FY19 Renovations + FY21 Children's Room Expansion



**Newton** Free Library

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



# Newton Free Library Improvements

FY2019 Work (\$500k)

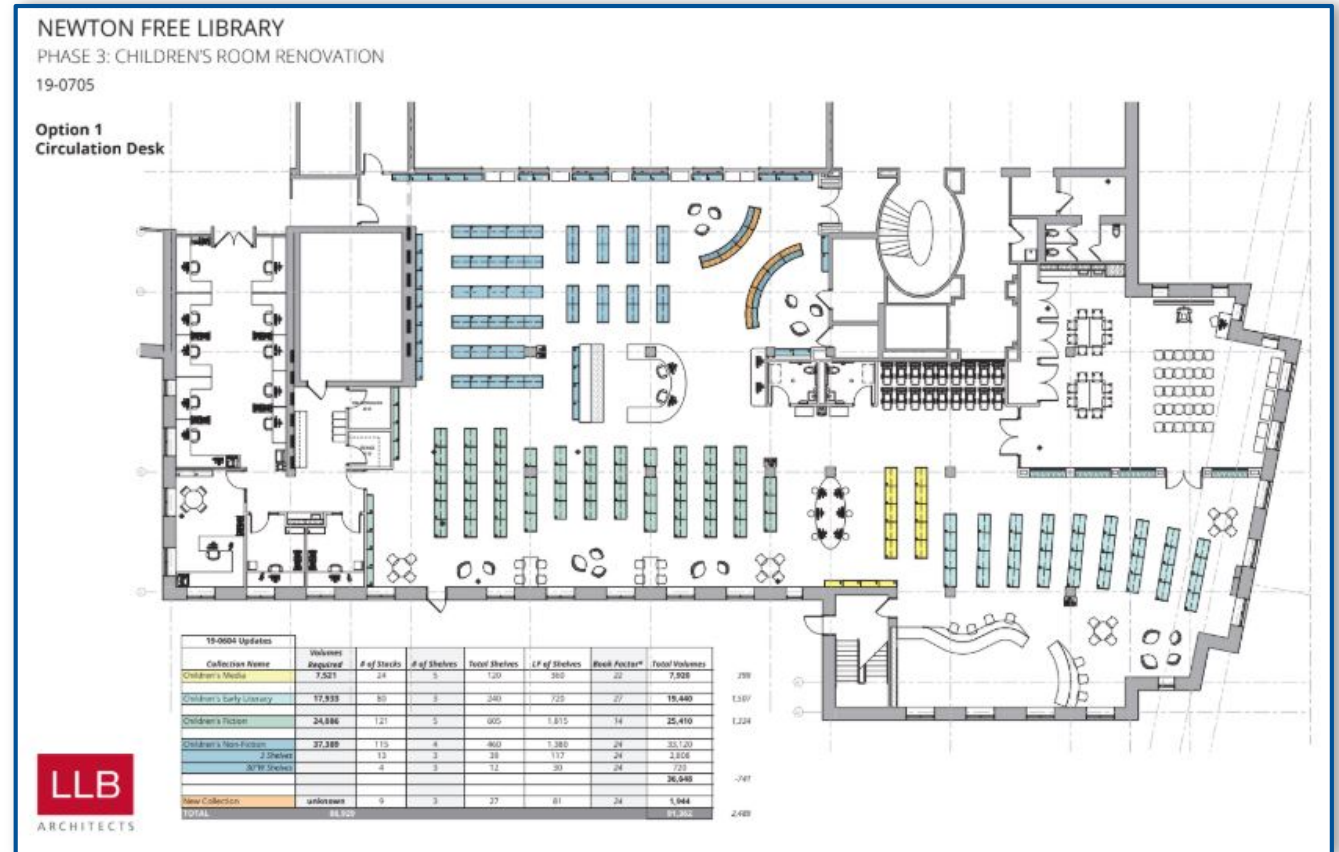


## Atrium Reading Room Transformation



*Thank you!*

## Children's Room Expansion Project in Design



# 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

# Climate Action Plan Implementation

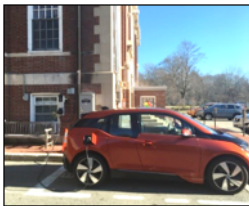
**"Use Less and Green the Rest"**

## The City of Newton's Five-Year Climate Action Plan

A Living Plan for 2020 – 2024



Green Buildings:  
Zeus Elementary School



Clean vehicles:  
City Hall EV charging station



Renewable Energy:  
Solar array at Rumford Avenue

Newton  
**POWERCHOICE**

- 60% Baseline
- 7% Opting Up to 100%



## Installation of 100 EV Chargers

- 11 Village Centers
- 5 Municipal Lots
- 23 School Lots
- \$400k over 3 Years



## Greenspot Car Share EV Chargers

- 3 municipal lots
- Extra public charger for EV Cars

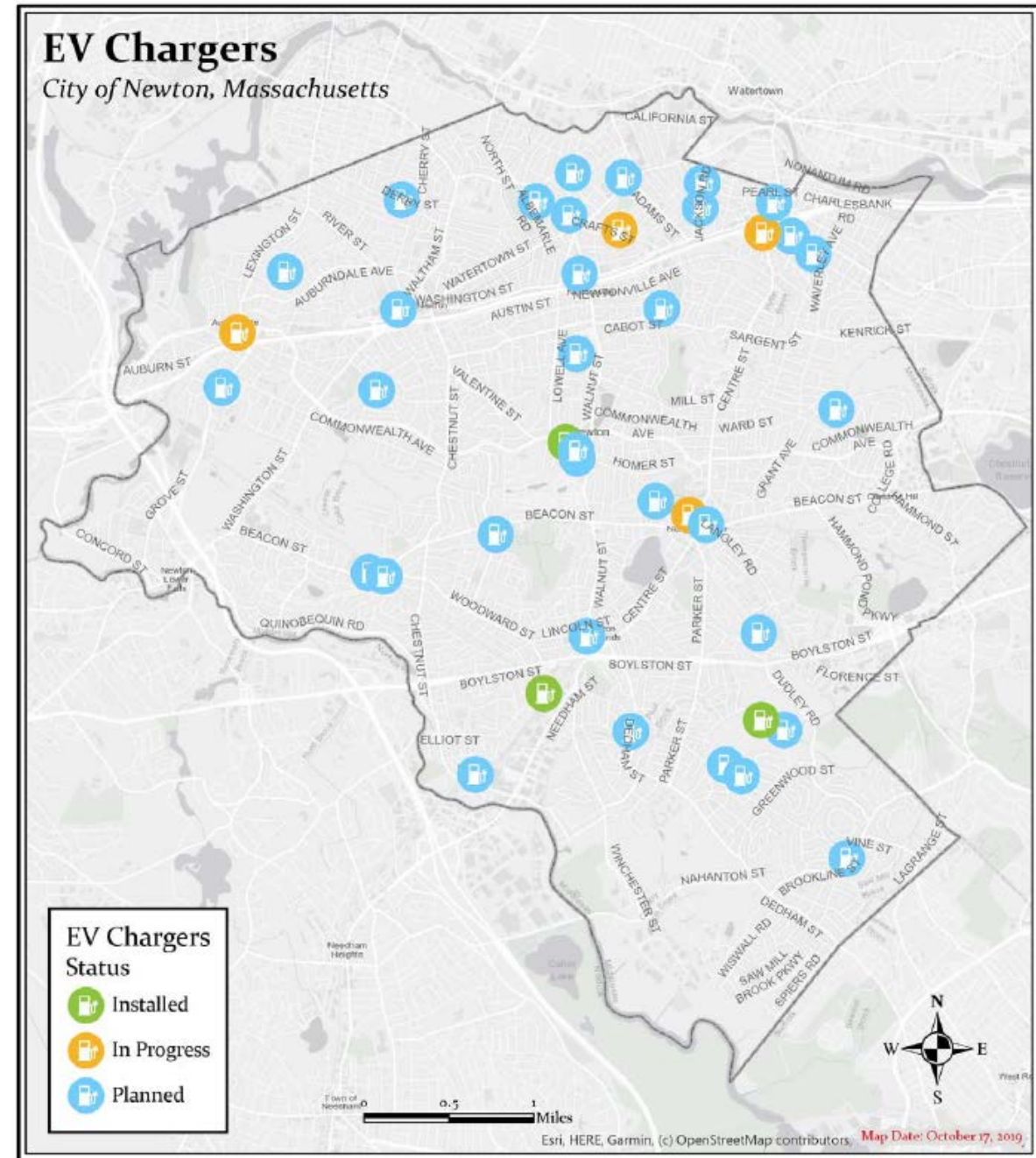
Newton Climate Action Plan  
A Living Plan for 2020-2024

# Climate Action Plan Implementation

## Electric Vehicle (EV) Charger Program

### 100 EV Chargers

- 11 Village Centers
- 5 Municipal Lots
- 23 School Lots
- \$400k over 3 Years
- Eversource Make-Ready Program to fund electrical work
- City will apply for grants for chargers to supplement City \$



# Climate Action Plan Implementation

Municipal Facilities: energy efficiency, reducing fossil fuel use, increased solar production



Green Communities Program Grant for LED Lights At Newton South High Fieldhouse and Tennis Courts



NECP to be fossil fuel-free



Solar Canopies and Rooftop Units



# Accessibility Improvements

## Plan Components

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

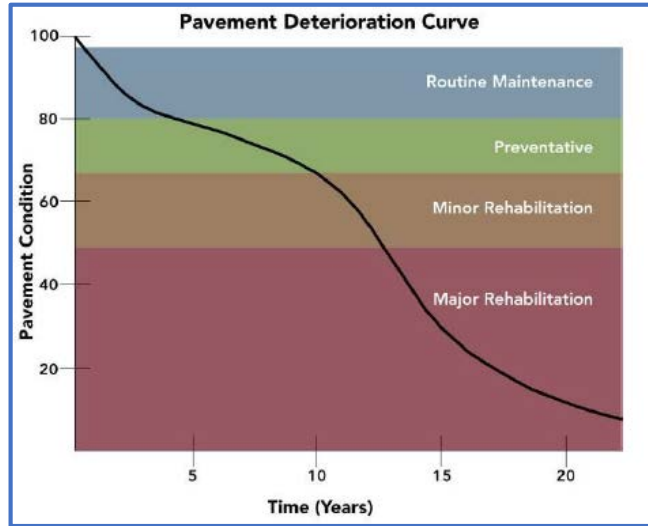


3 Year Plan to Install  
Pushbutton APS at 50  
Remaining Signalized  
Intersections  
(\$150k/year)



# Accelerated Roads Program

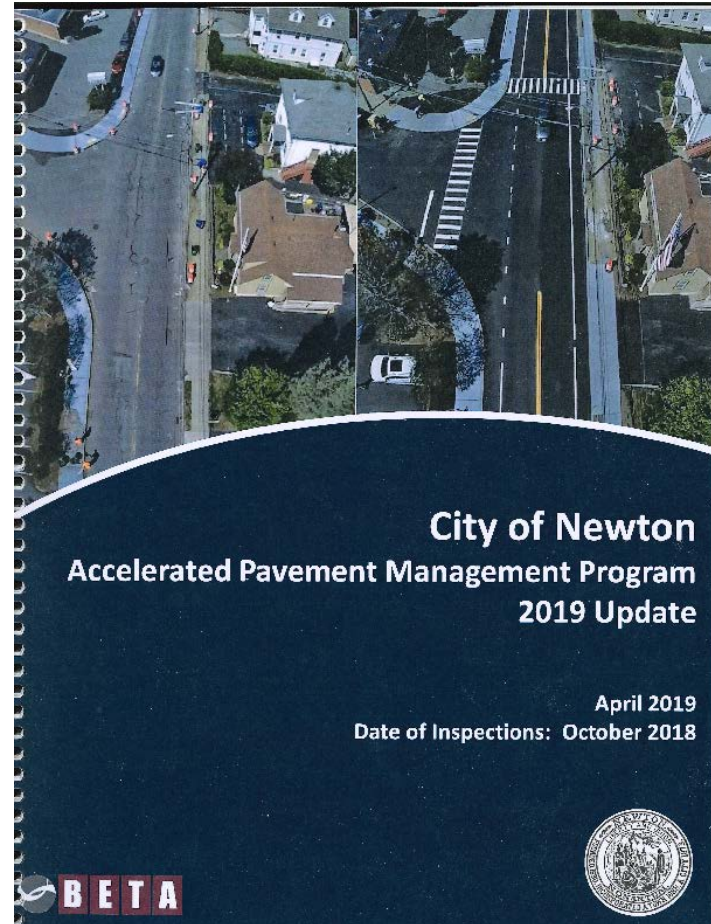
*FY2021 is Year 4 of 10 Year,  
\$95 Million Program*



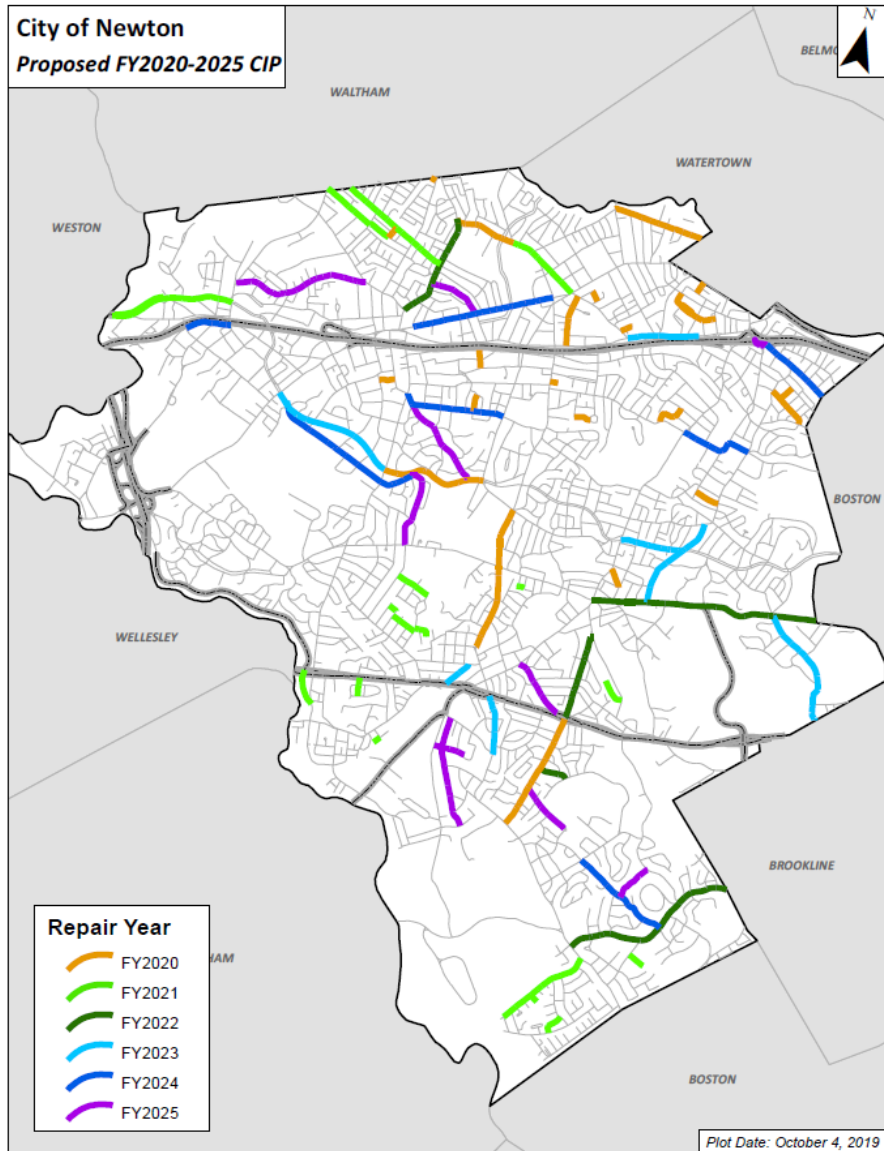
*New PCI Data Fall 2018*

## Treatment Operations

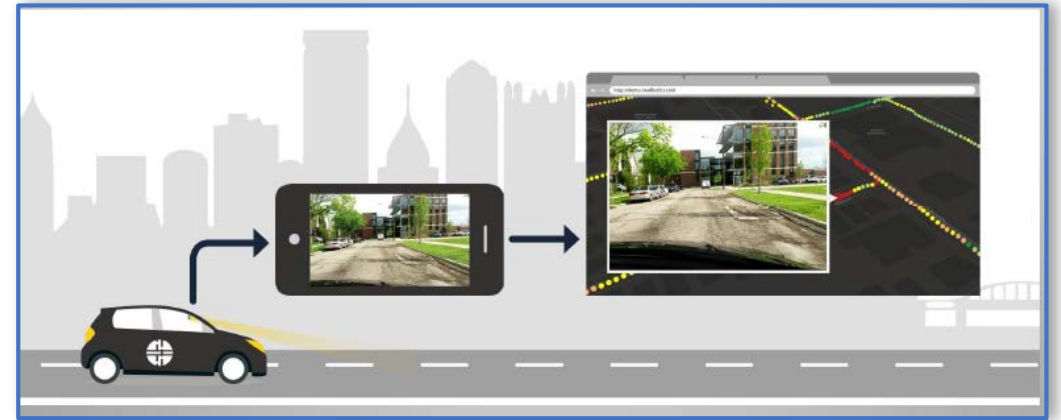
- Bonded Wearing Course
- Cape Seal
- Crack Seal
- Fog Seal
- Micro-surfacing
- Mill & Overlay
- Reclamation
- Safety Repair



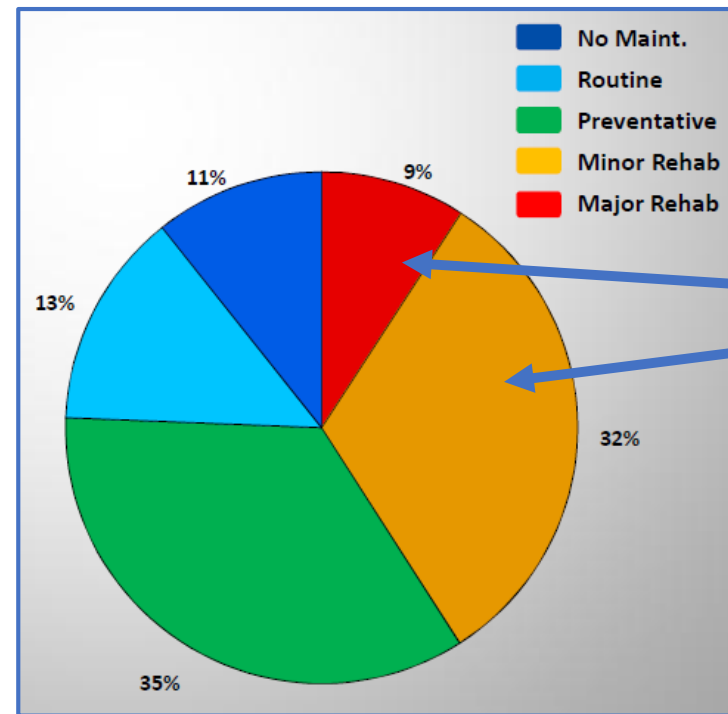
# Accelerated Roads Program



FY2020 – FY2025 Repair Map (not including maintenance overlays FY22-25)



RoadBotics Machine-Learning Technology



41% need Major or Minor Rehabilitation

# Accelerated Roads Program

**Fall 2019**

**freshly paved roads  
across the City!**

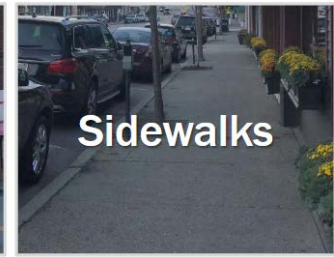


Cabot Street, Newtonville, Sept. 2019

# Complete Streets – 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*

# Bicycle Facility Improvements

- Projects developed by inter-departmental Complete Streets Team
- FY2021-FY2025 projects include Beacon, Comm Ave Carriageway, Crafts, Parker, Needham, Walnut, Watertown, Washington (N. Corner) + more
- Bike Share Program



**New Bicycle Lanes on Waltham Street  
(from Crafts to Waltham border)**



**New Covered Bicycle Racks at both  
Newton North and South High**

# DPW – Citywide Parking Meter System Upgrade



## Broken Meters

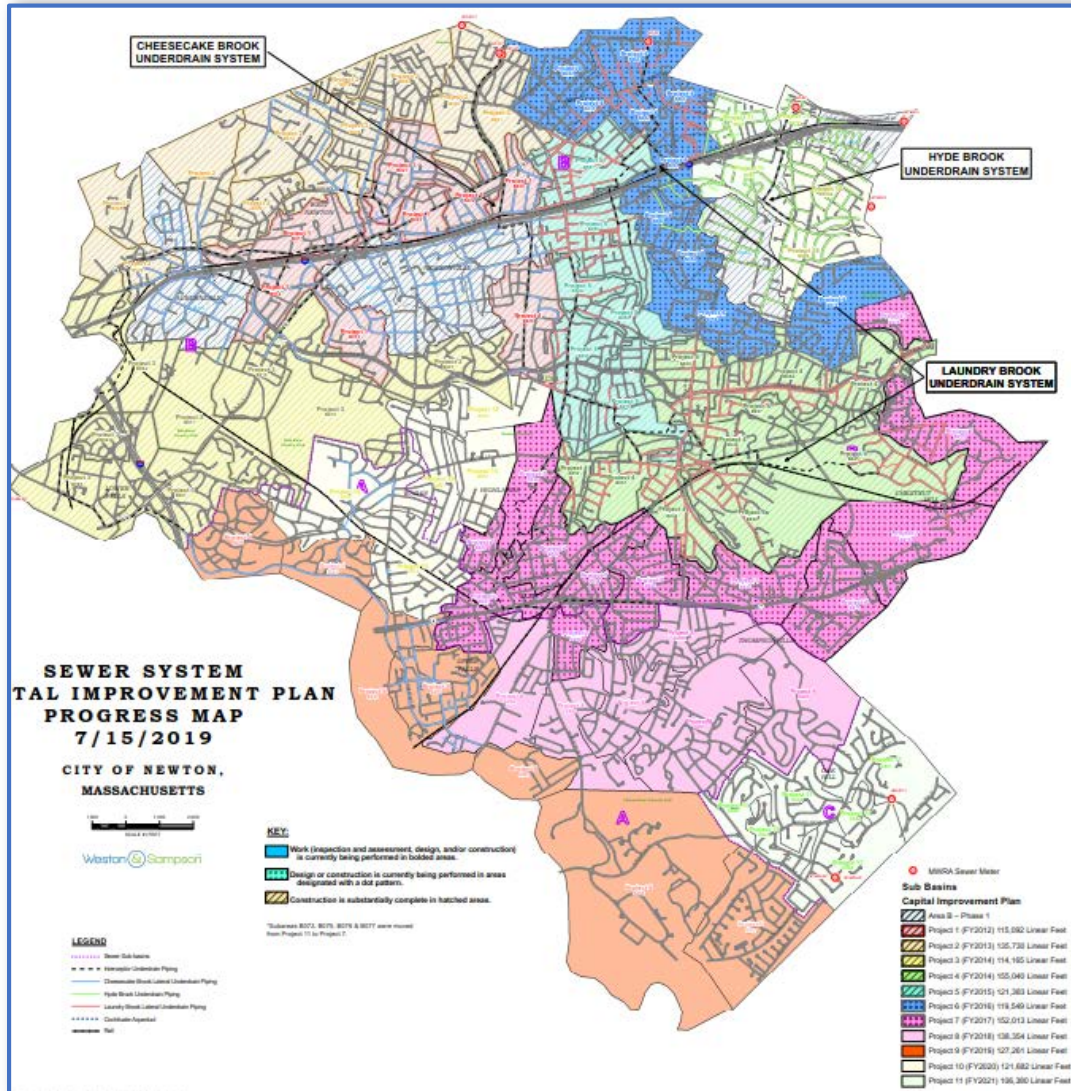
**339 of 1,100** have documented issues, including the following:

- 36 total missing meters
- 65 total damaged domes
- 120 total damaged chutes
- 53 total damaged displays/mechs
- 17 damaged vaults
- 13 broken flags
- 27 loose meter casings
- 8 damaged poles



+ Adding Kiosks and continued use of Passport App system

# Sewer System Capital Improvement Program



Quinobequin Rd  
Sewer Pump  
Station – pump  
replacement,  
FY2021



Pump Station Assessment Upgrades Project

2019 CIP Progress Map (PF Comm, Oct '19)



# Sewer System Capital Improvement Program

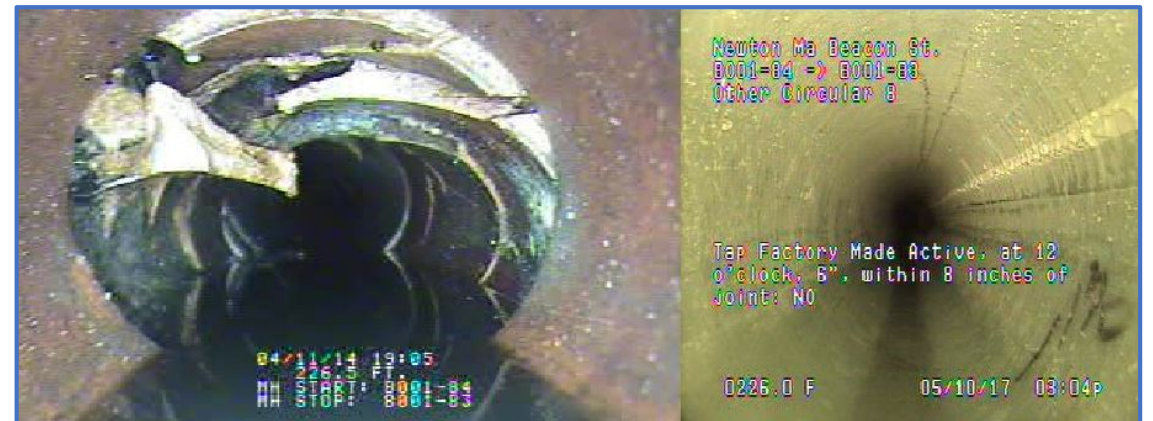
## Infiltration & Inflow Reduction Program

### Inspection and Assessment Status

- CIP Project 1 to 8 Complete
  - 1,240,000 linear feet (235 miles) sewer inspected
  - 7,500 manholes inspected
- CIP Project 9; Ongoing
- CIP Project 10; Spring 2020
- CIP Project 11; Spring 2021

### Rehabilitation Status

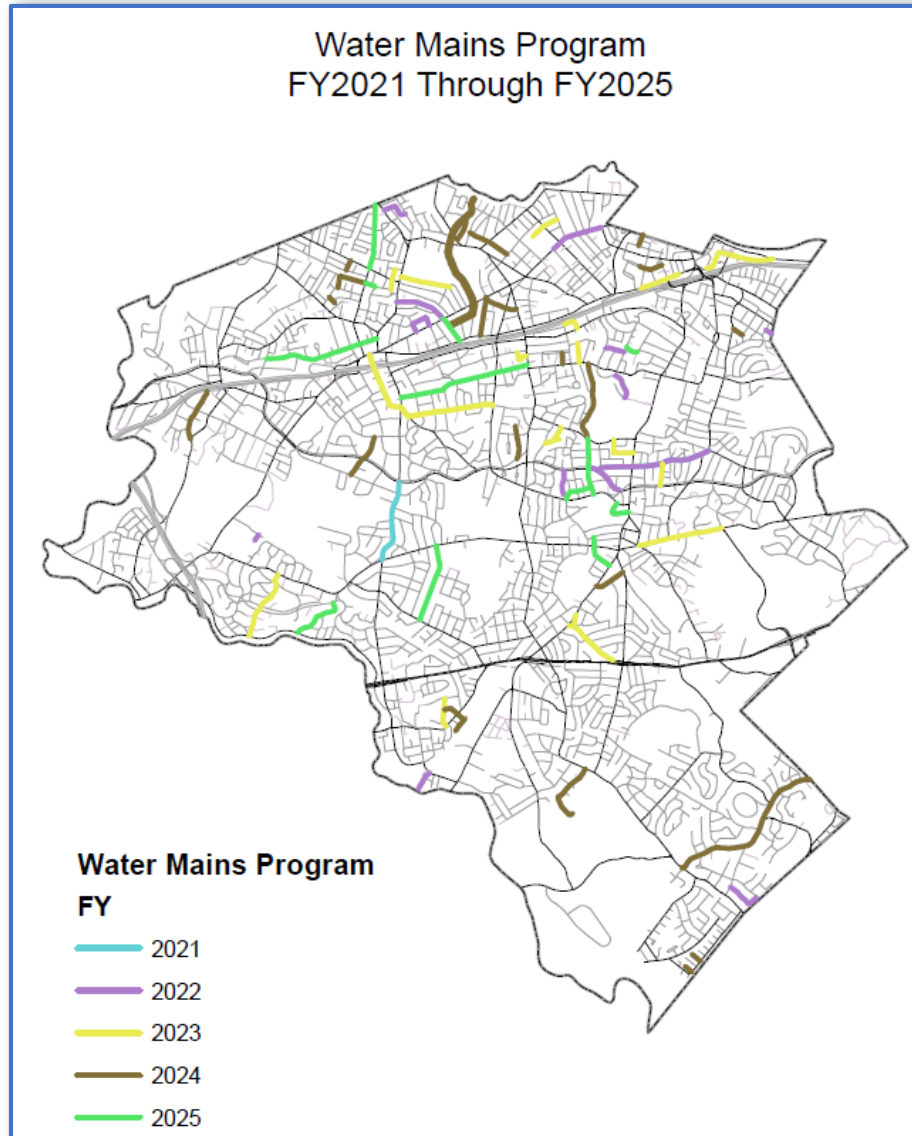
- CIP Projects 1, 2, 3, 4, and 5 Complete
  - 390,000 linear feet (74 miles) sewer rehabilitated
  - 2,900 manholes lined
  - 800 underdrain access points sealed
- CIP Project 6; Ongoing
- CIP Project 7; Start Winter 2019
- CIP Construction to be complete 2025



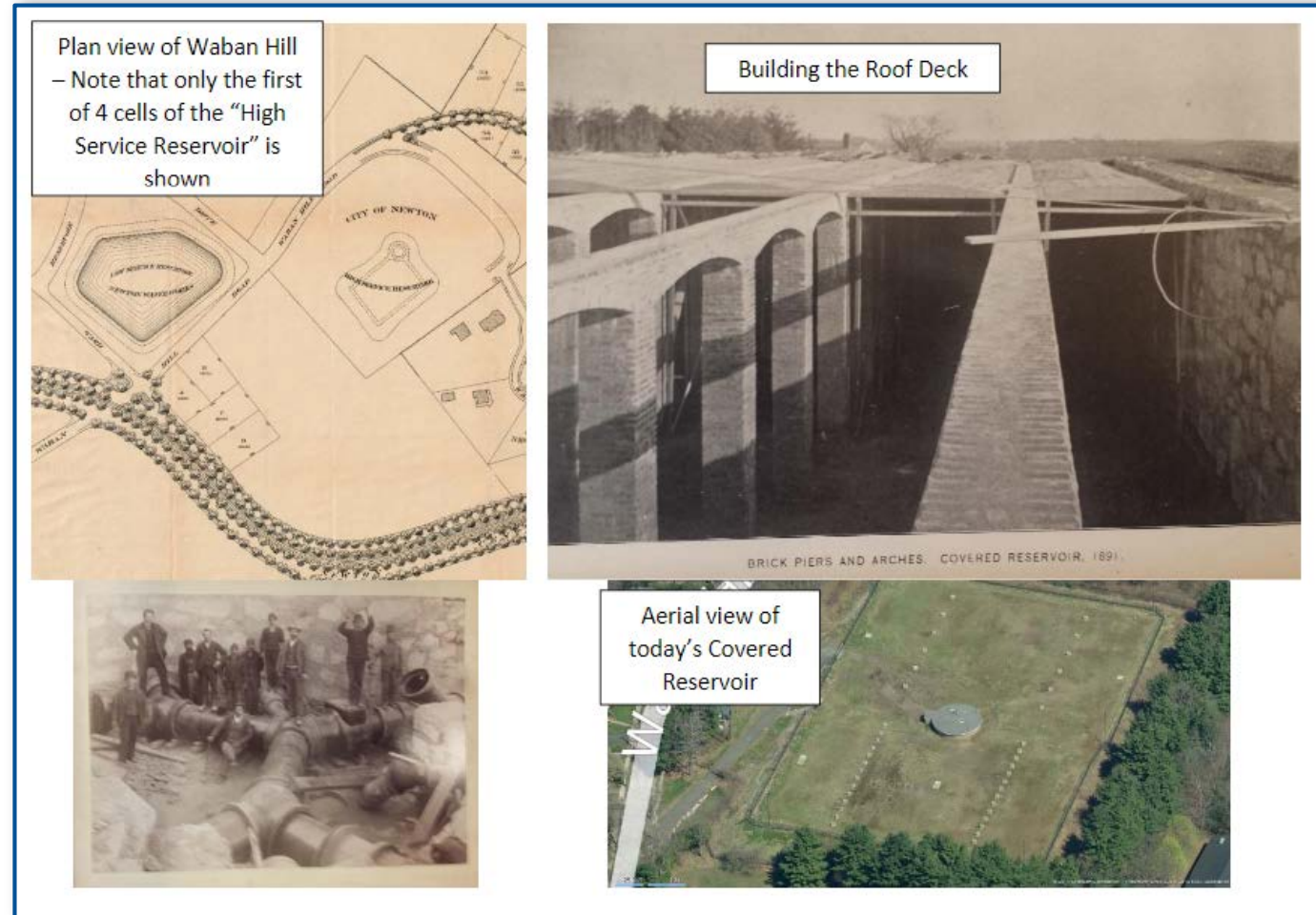
Before & After

# Water System Capital Improvement Program

Water Main Replacement, \$4.5m-\$5m/Yr



Waban Hill Covered Reservoir Improvements (FY21) –  
1891 Facility is Newton’s primary in-city storage





Needham Street Water Line Break, July 17, 2019

# Water Main Replacement – Linwood & Nevada, July 2019



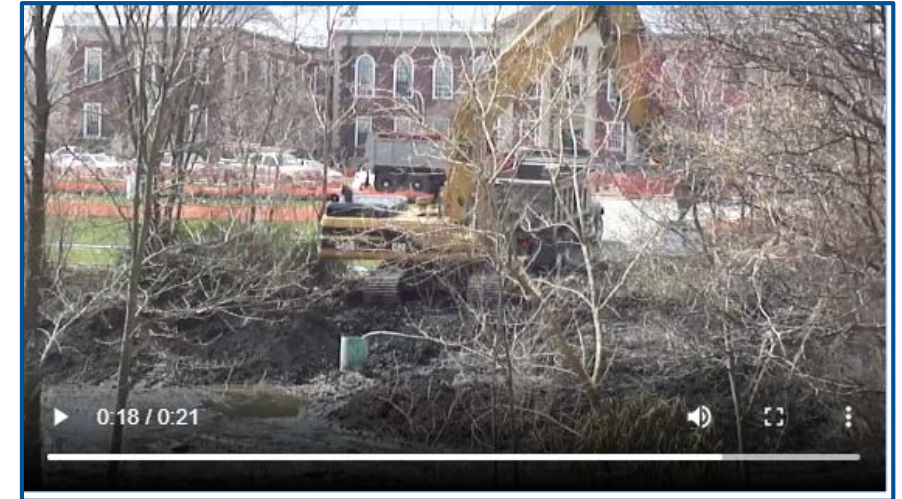
# Stormwater Infrastructure Improvement Plan Projects

*Funded by Stormwater fees*



86 Outfalls to Charles River

City Hall  
Ponds  
Dredging  
FY21,  
\$500k



Cheesecake Brook  
Improvements  
FY2021-2024,  
\$2.8 million



# Stormwater Projects: Bulloughs Pond Dam Repairs



## BULLOUGH'S POND DAM FOLLOW-UP INSPECTION / EVALUATION REPORT



Dam Name: **Bulloughs Pond Dam**

State Dam ID#: **N/A**

NID ID#: **MA 03414**

Owner: **City of Newton**

Owner Type: **Public**

Town: **Newton**

Consultant: **GZA GeoEnvironmental, Inc.**

Date of Inspection: **July 19, 2019**



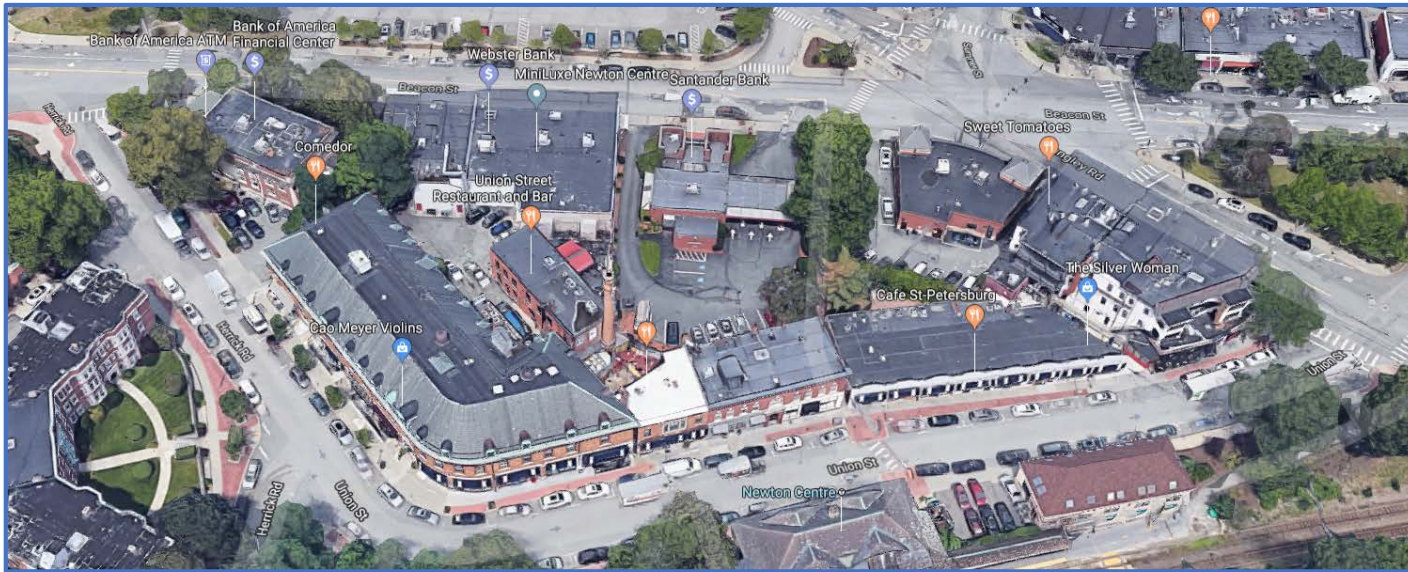
Cost: \$890,000  
Funds: Storm  
Timeline: 2020



# Stormwater Projects: Union Street Area Drainage



- New Project
- Area does not have stormwater drainage, creating flooding problems
- Cost estimate is \$625,000



Newton Centre T Station



Union Street in the rain

## Large Vehicle/Equipment - Vacuum-Assisted Street Sweepers

- \$315,000
- Higher Efficiency
- Cleaner Streets
- MS4 Permit Points
- Two Planned for Fleet



Elgin  
“Whirlwind” is  
possible model



# Large Vehicle/Equipment - Fire Department Major Apparatus Replacements



← Engine 2:  
Replacement  
Later 2020



→ Engine 7:  
Replacement  
In FY2023  
\$700k



← ERU:  
Replacement  
in FY2022  
\$300k



→ Ladder 3:  
Replacement  
In FY2025  
\$1.2 million

# Parks & Recreation, Open Spaces Projects

## Playground Improvements



**FY21: Richardson-Waban (above) and Burr School (below)**



## Ballfield Renovations



**FY21: West Newton Common (above) and Forte Park (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 850+ trees in FY20, High Risk tree removals, pruning and stump grinding



## Webster Woods Protection



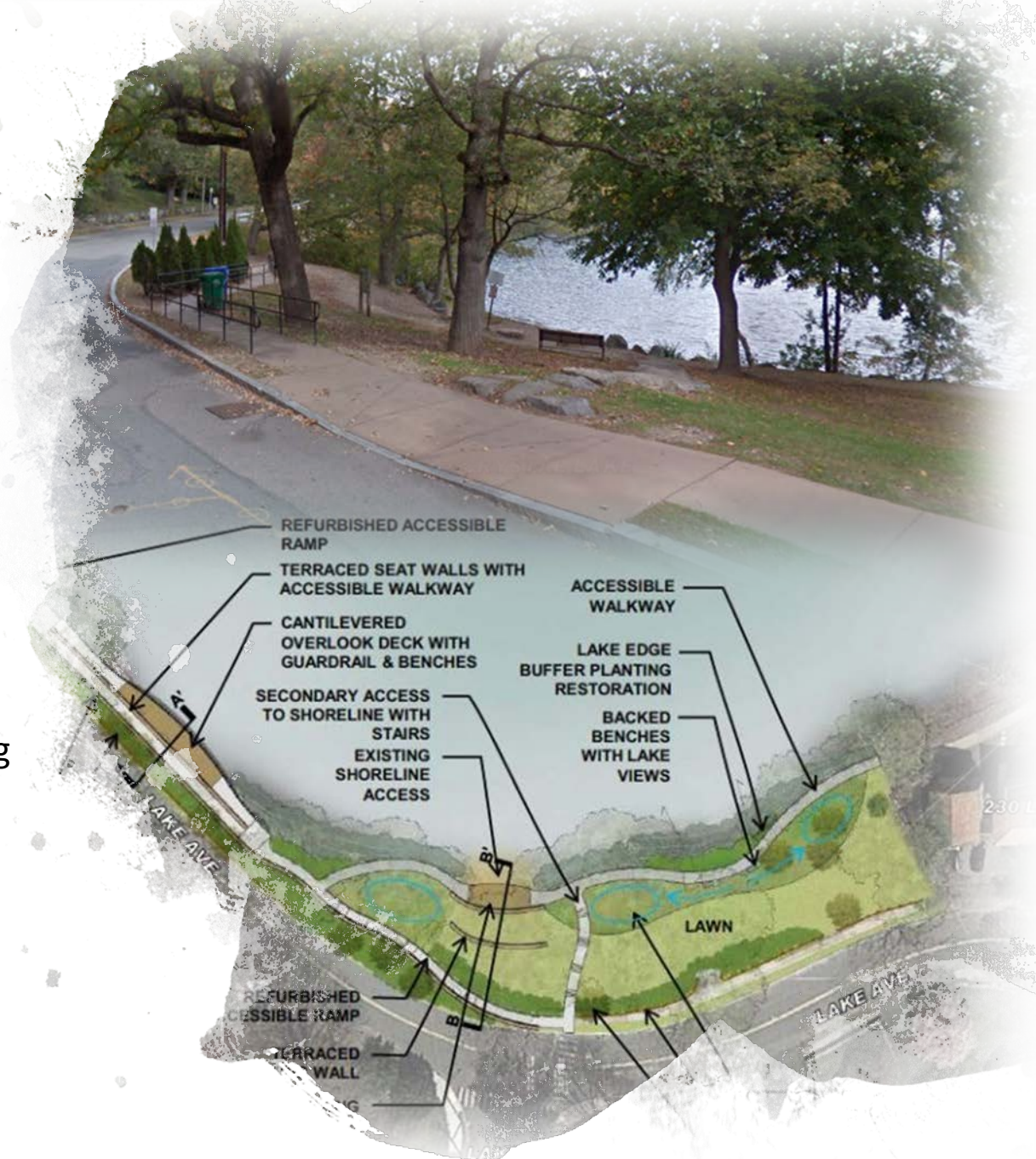
CPA funding for 17.4 acre woods acquisition



# Parks & Recreation, Open Spaces Projects

## Levingston Cove, Crystal Lake Restoration & Improvements


- Shoreline stabilization
- Accessibility improvements
- Plantings
- Enhance and protect views
- Improve water quality
- Preserve and enhance opportunities for passive recreation + fishing
- Parks & Rec Commission approved May 2019




# Parks & Recreation, Open Spaces Projects

## Waban Hill Reservoir (Heartbreak Hill Park) Improvements

- Former City and MWRA Reservoir
- CPA funded project
- Provide accessible access to reservoir edge areas



**CITY OF NEWTON**  
**WABAN HILL RESERVOIR**  
**PHASE 1 IMPROVEMENTS**  
NEWTON (CHESTNUT HILL), MA 02467  
PROJECT #20-06



**JULY 25, 2019**  
Prepared By  
**Weston & Sampson**

VOIR  
16 Davenport St., 3rd Floor, Boston, MA 02110  
(617) 451-4400 (617) 451-4400  
www.westonandsampson.com  
Contact: Cassie Gatheny



# Public Buildings Improvements – Police Department Headquarters Complex

## Headquarters Improvements:

- HVAC in FY21, \$1m
- Roof in FY23, \$227k
- Plumbing in FY24, \$200k
- Interior in FY25, \$500k
- Emergency generator



## Police Garage

- Roof
- Mechanical
- Windows/Doors

## Site Security, Parking Lot and Accessibility

- FY2022, \$720k

+ Police Annex: Emergency generator, mechanical upgrades, roof, accessibility

## New Projects

- EV Chargers at Municipal-School Parking Lots
- Horace Mann School Improvements
- Complete Streets – Centre Street (Rte. 9 to Walnut St., Highlands)
- Newton North Turf Field Replacement
- Newton South Turf Field Replacement
- Several Police Headquarters Improvement Projects
- Library Parking Space Expansion, Repaving and Drainage Improvements (formerly in Parking Lots Project)
- Jackson Homestead – Basement Space Improvements
- Nahanton Park – Nature Center Accessibility
- Auditorium Renovation at 150 Jackson Road

### Water/Sewer/Stormwater

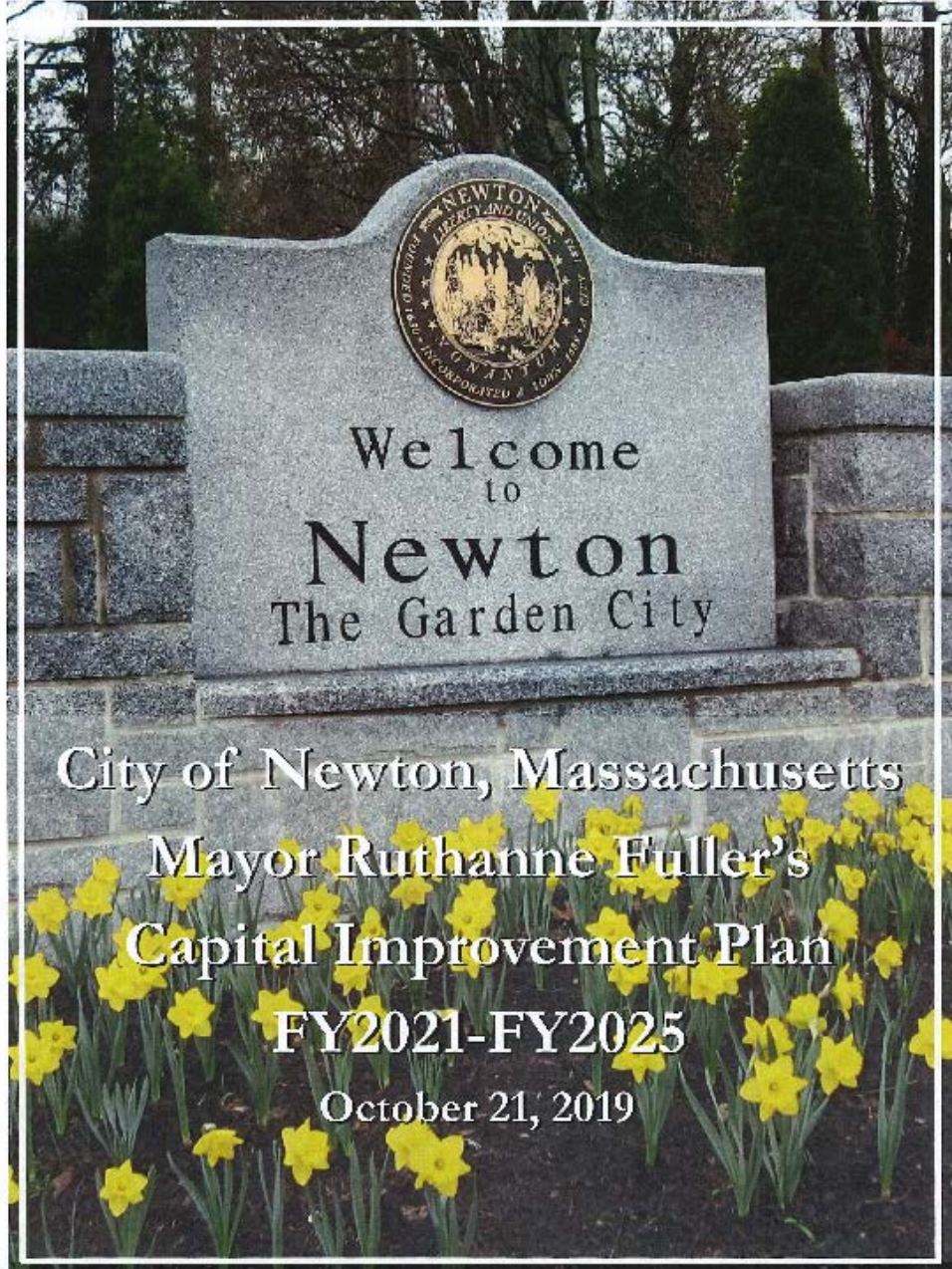
- Union Street Drainage Improvements (Stormwater)
- Pump Station Assessment Upgrades (Water/Sewer)
- Reduce Impervious Cover (Stormwater)
- Large Water Meter Changeout Program (Water)

## And So Much More

- IT Projects
- Citywide Permitting System Software
- Historic Newton
- Clerk's Office
- Other Public Buildings Projects
- Operating Budget Funded Projects (e.g., Police Cruisers, Vehicles, Traffic Calming)







City of Newton, Massachusetts

Mayor Ruthanne Fuller's  
Capital Improvement Plan

**FY2021-FY2025**

October 21, 2019