

Melrose Department of Public Works Annual Report - Fiscal Year 2020



Mission Statement

The Melrose Department of Public Works provides quality services to the community in the areas of drinking water, wastewater, solid waste, recycling, parks, forestry, fleet, highway, cemetery, facilities, engineering, and administration, while promoting health, safety, sustainability, and fiscal responsibility through the teamwork and commitment of an honest and dependable workforce.

Elena Proakis Ellis, P.E.
Director of Public Works

Administration

Director of Public Works: *John Scenna (through 9/2019),
Rick Stinson (Interim: 9/2019 – 3/2020),
Elena Proakis Ellis (3/2020 – present)*

Assistant Director of Public Works – Administration & Finance: *Ann Waitt (through 2/2020)
James Troup (4/2020 – present)*

Operations Manager: *Peter Pietrantonio*

Facilities Manager: *Jay McNeil (5/2020 – present)*

Resident Service Representative: *Lynda Garron*

Senior Account Clerk: *Tina Bright*

Senior Account Clerk: *Marisa Kelly*

Solid Waste & Recycling Coordinator: *Samantha Flanagan (12/2019 – present)*



Engineering/Water and Sewer Billing Division

City Engineer: *Elena Proakis Ellis, P.E., BCEE*

Water and Sewer Billing Administrator: *Lisa Patterson*

Enterprise Fund Manager: *Donna Cardillo*

Deputy City Engineer: *Jay Coy, P.E. (2/2020 – present)*

Staff Engineer: *Rick Cantone*

Project Engineer: *Scott Dixon*

Administrative Clerk: *Diane Ardizzoni*

Engineering Intern: *Will Pzegeo (7/2019 – 8/2019)*

Operations - Highway Division

Operations Foreman: *Derek Lanphere*

HMEO Driver: *Charles Thomas*

HMEO Operator: *John Bartlebaugh*

Laborer: *Jack Sasso*

Operations - Water and Sewer Division

Division Foreman, Primary Operator: *John Belliveau*

Water Foreman/HMEO, Secondary Operator: *Tom Bagarella*

Sewer Foreman: *Robert DiVola*

Water/Sewer Meter Foreman: *Brendan Cahill*

Operator HMEO: *Joe Brancato*

Operator HMEO: *Eric Arria*

HMEO: *Kris Vozzella*

Driver MEO: *Doug Hanlon/Ryan Wheelock*

Skilled Laborer: *Dennis Cashman*

Skilled Laborer: *Bob Mackenzie*

Laborer: *Paul Gould*



Operations - Sanitation

Working Foreman: *Nicholas Heller*

Laborer: *Shaun Foss*



Operations - Park & Forestry Division

Superintendent of Mount Hood and Public Open Space: *Joan Bell*

Park Commission Clerk: *Cindy Brickley*

Tree Foreman/HMEO: *Carmen Sorrentino*

Parks Foreman/MEO: *Michael Sasso*

MEO: *Alejandro Guerra*

Laborer: *Nick DaCova*

Laborer: *Mike Nee*

Laborer: *Brian West*

Laborer: *Nick Vrooman*

Laborer: *John Doherty, Jr.*

Operations - Cemetery

Cemetery Administrator: *Angela Pisacreta*

Division Foreman: *Jack Rossi*

Laborer: *Scott Rush*

HMEO Operator: *Ray McGrath*



Fleet Division

Mechanic/Welder – Foreman: *Mike Kuleszka*

Mechanic/Welder: *Paul Pastos*

Jr. Mechanic/Welder: *Mark Moloney/Reed Williamson*



Facilities Division

Facilities Manager: *Ann Waitt (through 2/2020), Jay McNeil (5/2020 – present)*

Division Foreman: *Scott Enos*

Plumber: *Ryan Means*

Tradesman: *Joe Dello Russo*

Tradesman: *David Filipiak*

Tradesman: *Peter Hickey*

Custodian MVMMS: *Kevin Cronin*

Custodian MVMMS 2nd shift: *Nick White*

Custodian High School: *Rich Curran*
Custodian High School 2nd Shift: *Angelo Dacova*
Custodian High School 2nd shift: *Nick Shelton*
Custodian Lincoln School: *Trevor Rudolph*
Custodian Hoover School: *Mike Mackey*
Custodian Winthrop School: *Paul Thomas*
Custodian Roosevelt School: *Ed Mrozowski*
Custodian Horace Mann School: *Lenny MacLean*
Custodian Franklin Early Childhood Center: *Tommy Murphy*
Custodian City Hall and Milano Senior Center: *Will Altidor*
Custodian Library and Police Station: *Dan Guevin*
Custodian Library and Police Station: *Louis Peck*



THANK YOU to John Scenna and Ann Waitt for their many years of dedicated service to the Melrose Department of Public Works!

Fiscal Year 2020 (FY2020) was an unprecedented year for the City of Melrose Department of Public Works (DPW), as it was throughout the country and the world. Beginning in March, the COVID-19 pandemic dominated many of the department's actions and activities for the remainder of the fiscal year. Throughout April 2020, during the first peak of the pandemic, the DPW reduced in-person staffing to ensure essential services were met while protecting the health of our employees. Beginning in June, we brought employees back in more regularly, with altered work shifts and safety protocols. During these final months of the fiscal year, we saw decreased traffic, increased water and sewer use, increased trash, recycling, and yard waste, and decreased use of schools, parks, and other facilities as residents and businesses adjusted their routines to meet the safety needs brought on by the pandemic. The DPW has worked tirelessly to meet the needs of the community while protecting our employees' safety and wellbeing, to allow us to continue to perform our essential jobs.

Administration

The Melrose DPW Administration Division handles issues and requests from the residents of Melrose concerning Public Works responsibilities with the assistance of E-Gov, a web based work order management software package. The Administration Division provides necessary budget management, payroll, and clerical support services for the Department of Public Works. The employees in this division track finances and complete administrative and clerical tasks requested by members of the City's largest department.

Curbside Collection

Melrose DPW provides curbside solid waste, recycling, and yard waste pickup to all residents living in buildings with 6 or fewer units in the city - totaling 8,905 households. Trash and recycling service is provided weekly to residents, schools and municipal buildings by JRM via a contract with the City. Yard waste and trash from public parks, the downtown district, and the schools are collected by the Public Works Department.

The City of Melrose pays a tipping fee of \$65/ton. This fee is set to rise annually through the end of the current contract (through 2021). In FY20, Melrose generated 7,359.88 tons of municipal trash and 2,469.5 tons of recycling.

DPW collected curbside yard waste 11 weeks in FY20 and Christmas trees for two weeks. Residents can set out up to 10 bags or labeled barrels of yard waste per week during collection weeks. In 2020, the first curbside collection week in April was skipped due to peak COVID-19 pandemic conditions.

Residents with curbside trash and recycling service can also purchase stickers for curbside pickup of metal items at the DPW Operations Facility or City Hall during weekday hours of operation. DPW carries out metal goods pickups every Tuesday of the year.



DPW Recycling Facilities

In addition to curbside trash, recycling and yard waste pickup service, Melrose DPW offers access to paper, cardboard, and commingled (plastic, glass and aluminum containers) recycling to all members of the public – including businesses – during all hours of operation at the DPW Operations Facility and Recycling Center at 72 Tremont Street. By doing so, DPW endeavors to make recycling easily available to all Melrose residents and businesses, regardless of their living situation or access to recycling pickup services at their home or business. Residents of Melrose may also

bring their yard waste (leaves and brush) to the DPW Operations Facility during all hours of operation, which include seasonal Saturdays from the beginning of April until mid-December. This yard waste is hauled by DPW to the City's land on Rt. 99 where it is composted and brought back to the DPW Operations Facility for free distribution to the residents.

Additional items that are collected from residents at the DPW Operations Facility and Recycling Center during weekday hours of operation include rechargeable and button cell batteries, books, CFL bulbs and fluorescent tubes, electronics, eyeglasses, dried latex paint, mercury items, propane tanks, textiles and tires. In order to cover costs of proper disposal, fees do apply to some of these items, while others are free.

The City Yard and Recycling Center was open Saturdays for drop off from April through mid-December, aside from a handful of days when the Yard was closed due to the pandemic. DPW also held seven special Saturday recycling events and two Household Hazardous Waste (HHW) days. These special events included recycling of dehumidifiers, plastic bags, dried latex paint, and Styrofoam. This year, due to the pandemic, only one special event included the collection of motor oil, gas and antifreeze, as opposed to the usual two. The collection of this hazardous liquid on an additional day helped reduce the number of cars at the HHW collection days. Again this year, Melrose partnered with Stoneham and each City/Town hosted a Saturday HHW day in which residents from both Melrose and Stoneham could drop off household hazardous waste.

DPW Day

Due to the COVID-19 pandemic, DPW Day was cancelled. The DPW was aware many weeks prior to the usual timeframe of DPW Day that the pandemic would pose challenges to holding the event, so fortunately the decision was made at that time to cancel it, prior to the scheduling or payment of vendors. This decision was based largely on the anticipated need to limit gathering sizes; we did not predict that students would not even be in school at the time when the event normally takes place. By early May, Massachusetts residents were aware that school would not return to in-person learning for the remainder of the 2019-2020 school year, and students had shifted to full remote learning.

Social Media

The DPW keeps the lines of communication open with Melrose residents through many avenues. Residents can make a request or report an issue by calling, emailing, or submitting a work order through the E-Gov system or See Click Fix. Event information can be obtained from the City of Melrose website, Twitter, Facebook and the Melrose Recycles Blog. Currently the [Twitter account](#) has 1060 followers, increasing by over 8% since last year. Our [Facebook page](#) has 1,138 people who "like" (or follow) it. In the past year the page has increased followers by approximately 26%.

DPW utilizes the E-Gov work order system to keep track of requests for all its divisions. This system is available 24/7 from any computer or mobile device with internet access. City staff can search and sort work orders by date, address, category, status, reporter, and more. The work order system has proven to be a useful tool for City employees and residents. Schools and City departments use the online work order system to report and track requests. Work orders are updated as work progresses and eventually closed out, and viewers can see up-to-date information.

Another 24/7 tool that residents can use to report issues such as potholes, graffiti, and trash and recycling problems is See Click Fix. See Click Fix is a digital communication system. Residents can use this mobile app to report nonemergency issues in their neighborhood. With the See Click Fix app, residents

can take pictures of an issue and attach it to their requests. The picture helps the DPW staff find and correct the issue quickly and easily.

DPW continuously works to improve our technology options and ways for residents to communicate with Public Works.

In addition to these technological tools, the DPW also still relies on hand-delivered notices and in-person communication through neighborhood meetings and other public forums when projects or programs warrant more direct communication with impacted residents and property owners. We strive to keep the community informed of our larger projects and welcome input from community members.

Engineering Division

The mission of the Melrose Engineering Division is to provide all engineering functions and support for the City's infrastructure, including roadways, sidewalks, traffic signals, street lights, drainage, water distribution, wastewater collection and conveyance, and public buildings, while also supporting DPW Operations and Facilities Divisions as needed and providing support to the general public. Public interaction includes permitting and oversight of work within or impacting the City's right-of-way and/or utilities connected to the City's infrastructure, assistance with walk-in needs related to DPW functions (e.g., collecting billing discount forms, arranging metal goods pickups, etc.), and answering questions and concerns regarding the City's construction projects. Each year, the Engineering Division procures and oversees improvements to all types of City-owned infrastructure, as described herein.

Project Reviews and Permitting

In FY20, the Engineering Division issued 199 permits for work within the right-of-way. This included 27 permits for water utility upgrades or replacement, 26 permits for sewer upgrades or replacement, 5 new service/cut and cap water and sewer permits, 112 permits for National Grid gas work (services and/or mains), 5 permits for curb cuts or other right-of-way modifications, 14 occupancy permits such as placement of Dumpsters within the right-of-way, and 10 miscellaneous permits that fell into other categories.

In addition to reviewing, issuing, and overseeing permits for small private projects, the Division also performed detailed reviews of cases submitted to the Planning Board and the Zoning Board of Appeals (ZBA). In FY20, reviews were provided for 30 ZBA cases, as well as proposed private development projects undergoing Planning Board review at 12-16 Essex Street, 138 Main Street, 360 Main Street, 99 Washington Street, and Patrick's Place off of Hillside Avenue. Also, the Engineering Division provided comments on two grant of location requests to the City Council. Lastly the Engineering Division continued to monitor construction of the Regan's Way subdivision, the Blueberry Hill Lane townhouse development, and redevelopment of buildings at 844 Main Street, 24-28 Hurd Street, 524-530 Main Street, 419-429 Main Street, 87 Essex Street, and 8 Greenleaf Place.

Regulatory Compliance and Funding Reporting

The Engineering Division ensures that the City remains in compliance with many regulations applicable to DPW functions. Additionally, the City uses state and federal funding for projects that require periodic reporting. Some of these programs are noted below:

- An Annual Statistical Report is submitted to MassDEP each spring pertaining to the City's water distribution system, detailing system performance with regard to water quality, leak detection, unaccounted-for water, cross-connection control, and staffing.
- An annual Consumer Confidence Report is mailed to all water system customers via the MWRA, including community-specific information prepared by the Engineering Division in conjunction with the Director of Public Works.
- Lead and Copper Rule sampling is conducted one or two times per year, depending upon the results of past sampling events, as dictated by both state and federal regulations. In FY20, one sampling round was conducted in September 2019, based on the prior year's compliance. While the FY20 results were also fully in compliance with state and federal drinking water regulations, the City continued removing lead service lines in the public way as opportunities arose and continued to encourage private lead service line replacement.
- The Massachusetts Lead and Copper Control Act contains guidelines for lead sampling and follow-up actions in school facilities. Over the course of FY20, the City continued to monitor lead and copper levels at select school facilities based on FY18 results, with the assistance of the Massachusetts Water Resources Authority (MWRA), and to address issues where identified. The City also coordinated with the MWRA to conduct optional sampling in daycare facilities in Melrose in 2019.
- An annual Municipal Discharge Permit Application is submitted to the MWRA to allow the City to discharge its wastewater to the MWRA sewer system. This application was submitted in November 2019 and the permit was issued shortly thereafter. The City has consistently maintained compliance with the provisions of this permit.
- An annual report is required to be submitted each year in accordance with the City's National Pollutant Discharge Elimination System "Phase II" stormwater permit. On July 1, 2018, a new permit from the US EPA took effect, which required a new Notice of Intent to be submitted within 90 days. This document was submitted in September 2018 and detailed a long list of measures the City is taking to improve stormwater quality such as street sweeping and catch basin cleaning. Also required by the new permit, the City completed a new Stormwater Management Program (SWMP) and posted it to the City website.
- The City utilizes the MWRA's Grant and Loan Assistance Programs for water and sewer infrastructure upgrades. These programs require periodic reporting to continue to secure funding eligibility. These reports have been submitted to the MWRA throughout FY20 as needed.
- The state provides roadway improvement funding through the Chapter 90 program. This program also entails frequent reporting to ensure proper funding disbursement. Such reports were submitted in FY20 to receive reimbursement for all Chapter 90 roadway improvements.
- The City had applied for and received a Complete Streets grant in the amount of \$377,211 from the Massachusetts Department of Transportation in FY18. During FY20, the City completed construction of the subject projects. The three projects are described further in a subsequent section of this report. The City then applied for the next round of funding, at \$400,000.
- The City received a \$100,000 Community Mitigation Fund grant from the Massachusetts Gaming Commission in association with the Encore casino project in Everett, Massachusetts, since

Melrose is a neighboring community. The first \$26,000 of this funding was used for a corridor study for Washington Street, Pleasant Street, and West Wyoming Avenue for improvements to pedestrian and bicycle access to the Oak Grove MBTA station. The remainder of the funding is anticipated to be used next year to implement the recommendations of this study.

Annual Contracts

The Engineering Division procures a number of annual contracts for services and supply, to allow for continuous operation of the DPW Operations and Facilities Divisions. In FY20, the following contracts were either bid and awarded or renewed:

Service Contracts Bid or Awarded in FY2020:

- Tree Supply and Planting
- On-Call Masonry
- Pump Station and Ell Pond Floodgate Routine Maintenance
- Street Sweeping
- Traffic Line Painting
- Supplying Bituminous Materials
- Supplying Catch Basin and Manhole Frames and Covers
- Supplying Fire Hydrants and Gate Valves
- Supplying Water System Stops and Wastes
- Utility System Repairs (Water/Sewer/Drain)

Service Contracts Renewed in FY2020:

- On-call Electrical
- Roadway and Sidewalk Reconstruction
- Tree and Brush Grinding and Disposal
- Tree Removal
- Furnishing and Installing Trees
- Supplying Signage
- Athletic Field Turf Maintenance
- Cleaning Services
- Irrigation System Maintenance & Repairs
- Plumbing Services and Repairs
- Traffic Signal and Street Light Maintenance
- Catch Basin Cleaning
- Elevator Repair and Maintenance
- Masonry Services
- Supplying Liquid Calcium
- Supplying Rock Salt

Infrastructure

The infrastructure of the city requires continual maintenance and evaluation for adequacy. To do this efficiently, the Department of Public Works (DPW) continues to use data-driven tools to evaluate infrastructure priorities in Melrose, allowing the City to make the best use of its limited funding. The DPW relies on accurate and current data and has increasingly made greater use of geographic information

systems (GIS) to map and prioritize needs. In FY20, the City has continued the use of the following information sources in order to prioritize and execute capital work:

- 1) The City's water system Capital Efficiency Plan (Tata & Howard, February 2017) continues to be used to guide decisions regarding streets that require water main replacement or rehabilitation.
- 2) A new 2020 roadway condition assessment was performed early in 2020, to evaluate which roadways are in need of repaving or reconstruction. This analysis was a repeat of the 2016 assessment and considered thirteen different parameters for each segment of roadway (from cross street to cross street), then calculated a respective roadway ranking based on a formula to process the individual parameter ratings. This analysis resulted in four categories of roadway conditions: poorest, poor, fair, and good/excellent. This effort was accomplished using a customized tablet application while traveling down every public roadway in Melrose. In FY20, the City has continued to prioritize the paving of 'poorest' and 'poor' condition roadways, with some new roadways having entered these categories since the 2016 assessment.
- 3) The City submitted its Complete Streets Prioritization Plan with assistance from engineers from the BETA Group in August 2017 and received approval from MassDOT in September 2017. This plan guides the expenditure of Complete Streets grant funds and also dovetails with other roadway and utility projects to ensure Complete Streets goals are being met.
- 4) Working with Weston and Sampson Engineers, the City continues to identify locations with infiltration and inflow into sewer pipes and coordinates the subsequent redirection work with other roadway and utility work where feasible.
- 5) The City receives annual GIS data updates from National Grid which show the material of gas mains throughout Melrose, to identify mains that require replacement as part of National Grid's program to replace all leak-prone pipe within its network.

The DPW and its Divisions continue to invest in upgrading data for each infrastructure system, so that objective prioritization analyses can be completed using GIS tools to guide infrastructure replacement plans. In spring 2020, the Engineering Division presented the fourth year of the City's multi-year roadway and utility improvement program, aimed at holistically addressing infrastructure repair needs in select areas that present the greatest level of need based on the GIS analyses performed using these data sets.

Additionally, to ensure that private developments adhere to the same high standards applied to public works projects, the Engineering Division is continuing to work on the development of written policies, standards, and details for the installation of water, sewer, and drainage lines, as well as roadways and sidewalks. Having written policies that are adopted by the City carries more weight when working with private developers. In FY20, the demolition checklist continued to be used and the Division's permitting continued to be tracked using GIS.

The combination of these efforts addresses previous issues faced by the DPW when maintenance was reactionary rather than proactive. Having robust, up-to-date data ensures that DPW and its Divisions know what the status and condition of the City's infrastructure is and can effectively prioritize projects to make the best use of funding. Melrose's infrastructure systems fall into four main categories: water distribution, wastewater collection and conveyance, storm water management, and right-of-way/traffic management. Each of these systems is discussed herein. In addition, while the City does not own the

natural gas distribution system, it plays a significant role in the City's right-of-way and is thus included in the discussion below. Finally, work began in FY20 on Eversource's electrical transmission mains that traverse Melrose and serve the region's power needs. This infrastructure is discussed below as well.

FY2020 Projects

Each year, a large focus of the Engineering Division is the planning, design, bidding, and construction oversight of capital projects. These projects span the range of City-owned infrastructure and are oftentimes interrelated, such as neighborhoods that receive utility upgrades followed by roadway reconstruction. The major projects performed in FY20 are described below by infrastructure type.

Water Distribution System

2019 -2020 Water Main Replacement Project

Water main work in FY20 included the completion of the replacement of water mains that branch off of south Main Street to five side streets, in order to minimize future disruption to Main Street following paving in the near future, and mobilization in June 2020 to begin the 2020 water main project on Echo Street, Damon Ave., First Street between Ashcroft and Waverly, Wyoming Heights, and portions of Brown Street and Mount Vernon Street. The former project was constructed by GTA Co., Inc., and the latter by CJP Corporation.



In addition to this construction work, during summer 2019, final as-built plans were developed and archived for past water main projects on Crescent Place, Crescent Court, First Street from Sixth to Ashcroft, Sherman Road, Hunt's Terrace, and Owego Park, as well as for the 2017 through 2019 water main capital projects and the intersections on south Main Street noted above. This work brought the Engineering Division up-to-date with water system as-built plans for all capital projects completed since 2015.

Water Service Replacements

All water services that were any material other than copper were replaced on the following roadways prior to paving, where full replacement of water mains and services was not deemed necessary:

- South Main Street
- Larchmont Road
- Goss Ave.
- Staples Street
- Felton Place
- Upham Street between Lebanon and Felton

During the service replacement work on Felton Place, the water main was observed to be in very poor condition, including a substantially cracked water main pipe, and this roadway was added to the water main replacement program list for FY21.

Water Service Line Tie Card Inventory

In FY20, the City continued its work to develop an inventory of all water service lines serving the City's over 8,000 water customers. Paper cards presently catalog water service information such as location, material, size, and date of installation. In FY20, the Engineering Division continued to update and scan all of these service cards, linking each scan to an address. Ultimately, the scanned cards and associated data captured from the cards will be linked to the City's GIS locational data. This inventory, once completed, will allow City personnel or the public to easily retrieve water service material information and to query the data to determine the number of lead service lines connecting the water mains to customers in Melrose. At the end of FY20, the scanning was completed for all streets beginning with the letters A through M. Unfortunately, the COVID-19 pandemic prevented senior citizen volunteers, who begin working in the winter each calendar year, from continuing to work on this project after early March 2020; therefore, progress was minimal compared to prior fiscal years.

Sewer Collection System

Sewer Infiltration and Inflow (I/I) Investigations and Rehabilitation

The City of Melrose's sewer collection system is among the oldest in the country, with many pipelines dating back over 100 years. In an effort to reduce infiltration and inflow (I/I), which contribute clean groundwater and rainwater into the City's sewer system, the City has undertaken a comprehensive program to reduce I/I where feasible and cost effective. Following up on the spring 2016 flow metering performed throughout the City's sewer system, the City performed follow-up investigations to identify the pipe segments contributing the highest volumes of extraneous flows to the sewer system. These investigations, called a Sewer System Evaluation Survey (SSES), focused on Subareas 3, 3A, 7, 7A, 15, 18, and 20A, and included closed circuit television inspections of over 90,000 linear feet of sewer pipelines, measurement of nighttime flows in each pipe segment between manholes, and manhole interior inspections. This work was performed in FY2017 by Weston and Sampson Engineers, working with a subconsultant, Inland Waters, Inc. The final piece of this work, completed in FY2018 (fall 2017), was smoke testing of sewers in those subareas to look for interconnections with drainage infrastructure.

The data resulting from these investigations were then analyzed to develop a targeted construction program to reduce I/I. The first construction project was designed, bid, and largely constructed in FY2018. As part of this project, approximately 33,500 linear feet of sewers were lined by a contractor, Rapid Flow, using cast-in-place lining technology. A portion of this work extended into FY2019, including the lining of pipes in a difficult-to-access easement between Windsor Street and Carlida Road. In areas where deficiencies were identified during the SSES program that could not be lined, Weston and Sampson designed an "open cut"



sewer repair contract, which was bid and partially constructed in FY19 and continued into FY20 (through August 2019). This work was completed by Unified Contracting. A substantial change to this work was the need to perform pipe bursting on Howard Street in order to install the new sewer main between Hesselatine Avenue and Nelson Road, due to the presence of a large, high voltage duct bank directly over the sewer main.

With the repairs in the first phase of subareas well underway, investigations were performed in the second phase of subareas in spring and summer 2019. This phase included approximately 62,000 linear feet of sewer mains in Subareas 12, 13, 19, and 23. The same investigatory techniques were used, including CCTV inspections and nighttime flow isolation, performed by the same contractor used in Phase 1 (Inland Waters), and smoke testing and manhole inspections performed by Weston and Sampson Engineers. In addition, further flow metering in Subarea 15 spanned from late in FY19 through early FY20. Subarea 15 was a part of Phase 1 that was identified as having the highest levels of rainfall-induced inflow. This work requires follow-up metering to further hone in on the high inflow locations.

Finally, in April 2020, similar investigatory SSES work began in the Phase 3 subareas. These included Subareas 2, 2A, 5, 5A, 9, 20B, 21B, and 22, totaling approximately 78,000 linear feet of gravity sewers and 440 manholes. At the conclusion of the Phase 3 SSES investigations, approximately 60% of the City's sewer system will have been inspected for extraneous flows and defects.

In March through April 2020, sewer lining was completed on Penney Road. This area, originally part of the Phase 1 lining contract, was put on hold due to complications that resulted in the need for pipe bursting, completed in a prior fiscal year. The final phase of this work was lining of the remaining pipe reaches, to significantly reduce groundwater infiltration in this very wet area. This was completed in FY20.

Beginning in June 2020, the City distributed an informational brochure about sewer system I/I to all bill-paying customers, as part of a campaign to reduce private inflow (e.g., discharges from basement sump pumps) into the City's sanitary sewer system. Such connections are not legal, yet homeowners are oftentimes unaware of this fact. The brochure was designed to educate the public and encourage redirection of illegal connections.



Infiltration and Inflow Mitigation Fund

After an ordinance was passed in June 2016, the City developed policies and procedures in FY17 to formalize the methodology for assessing and collecting the I/I Mitigation Fees specified in the ordinance. The Engineering Division reviews all projects for which a building permit is sought which may require assessment of the I/I fee. Fees are collected prior to the issuance of a building permit, deposited in a dedicated I/I Mitigation Fund, and tracked for future reference. In FY20 the Engineering Division collected \$45,095.05 in I/I fees.

Other Sewer System Rehabilitation and Repairs

At the end of FY19, a sewer backup on Brazil Street caused damage to four residential homes, and investigations began into the causes and necessary rehabilitation to improve sewer flow and pipeline

conditions in this neighborhood. This investigatory work continued into FY20, culminating in an alternatives analysis report issued in April 2020 that would guide future recommended improvements to the sewers in this area.

Finally, in August 2019, a major sewer system repair was performed on Main Street by GTA Co, Inc., near the intersection of Lynde Avenue. Similarly, GTA performed sewer repairs on Garfield Road in October 2019 and on Lebanon Street at Forest Street in March 2020.

Asset Management Grant

In August 2019, the City applied for an Asset Management Grant through the Massachusetts Clean Water State Revolving Fund. The City was notified that we successfully received the grant funding of \$60,000, to be combined with \$20,000 in City capital outlay and \$20,000 of in-kind services for a total project cost of \$100,000. These funds will be expended on an initiative to improve the tracking of sewer system maintenance and repairs using the City's sewer GIS along with new field applications and hardware. This work is scheduled to take place in FY21.

Drainage

The City's drainage system consists of approximately 1,644 catch basins, 1,162 drainage manholes, and drainage pipes ranging in diameter from 4 to 48 inches. Several drainage projects were undertaken in FY20, as described below.

NPDES MS 4 Permit Requirements

As noted previously, the City completed a new Stormwater Management Program at the end of FY19, which guides the City's efforts related to the current National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit. This document can be viewed publicly on the City's website and is a working document, with updates provided as various compliance requirements are met and new information becomes available. It was updated further during summer 2019 and again in 2020 at the end of the NPDES permit year, which goes from July 1 to June 30 annually.

In addition, City staff began the effort to GPS each of the City's stormwater outfalls (discharge locations from the municipal stormwater system). In FY20, the City also solicited the assistance of an engineering consultant to help in meeting the City's NPDES permit annual requirements. Weston and Sampson Engineers won this work through a competitive Request for Qualifications process and continues to serve as the City's MS4 consultant.

The first annual report documenting compliance with the new NPDES permit requirements was submitted in September 2019 and is required to be submitted annually thereafter.

Natural Hazards Mitigation Plan Update and Municipal Vulnerability Preparedness Program

In October 2017, the City signed an agreement with CDM Smith to update the outdated 2004 Natural Hazards Mitigation Plan (HMP). With this plan updated, the City now qualifies for FEMA grant funding for projects identified within the plan. Tied to this initiative was participation in the state's Municipal Vulnerability Preparedness (MVP) program, for which the City held two workshops in spring 2018 to discuss vulnerabilities and mitigation strategies to respond to climate change-related hazards. The MVP planning program was funded through a \$19,000 state grant and was completed with a final report submitted in June 2018. This initiative was spearheaded through combined efforts of the Engineering

Division and the Office of Planning and Community Development. The development of the new HMP was completed in FY19 and the document received FEMA approval effective 6/28/2019. The Board of Aldermen formally voted to approve the plan and its implementation.

After having not received funding under the MVP grant program in 2018 and the Hazard Mitigation Grant Program and Pre-disaster Mitigation Program in 2019 for a backup power generator for City Hall, the City applied for an MVP grant for drainage improvements and green infrastructure for the City Hall parking lot in FY20. This project received design funding from the MVP program but to date has not received construction grant funding despite a subsequent MVP grant application. The Lebanon and Sylvan Street Drainage Improvements project is still in the running for Hazard Mitigation Grant Program funding from FEMA, with applications having been filed in April and July 2019 and a Request for Information from FEMA having been addressed in May 2020. The process of trying to secure the construction funding for this project is ongoing.

Garfield Road Drainage Improvements

During water main work on Garfield Road, deficiencies were identified within the roadway's drainage system components, requiring replacement. In October 2019, the water main contractor, GTA Co., Inc., replaced deteriorating drainage pipes in several locations on Garfield Road, in advance of paving.

Roadway/Sidewalks

Several major right-of-way projects were either completed or started in FY20, as described below. Many of the project components follow a "Complete Streets" design aesthetic. All of the construction projects described below were performed using the City's on-call contractors, including D&R General Contracting (paving, curbing, and sidewalks), HiWay Safety Systems (line painting), and Permaline (sign materials).



Melrose Complete Streets Program

Melrose's Complete Streets program strives to safely connect people to where they want to go. The City's goal is to enhance the transportation network for all modes by connecting home, work, school, shopping, dining, recreation and more. In June 2016, the City adopted a Complete Streets Policy which was subsequently approved by the state. In order to qualify for state grant funding to assist in the implementation of our Complete Streets goals, the City completed a Prioritization Plan, identifying the top ranked projects recommended for construction. These projects were discussed by the City's Complete Streets Working Group, and a Prioritization Plan was submitted to MassDOT for approval in August 2017. Funding for technical assistance for the Prioritization Plan, which was performed by the BETA Group, was provided by a "Tier 2" Complete Streets grant from MassDOT for approximately \$37,000.

After receiving approval for the Prioritization Plan, the City submitted a Tier 3 construction grant application in September 2017 for the following projects:

- High School/Middle School Pedestrian and Bicycle Improvements
- North-South Bike Route (Wakefield line to Wyoming Avenue)
- Howard Street Improvements (Green Street to Nelson Road/Ruggles Street)

The City was informed in spring 2018 that a Tier 3 Complete Streets grant of \$377,211 was awarded to Melrose to implement these three projects. Following the grant award, the City began design of each project, which was funded through both operating funds and a FY19 Road Bond, approved in spring 2018 for \$1,685,000 (encompassing a wide range of design and construction projects). Design input for the High School/Middle School project was supplemented via free technical assistance through the Mass in Motion program.

The first project was completed in summer 2018 and included pedestrian and bicycle safety improvements on both Melrose Street and Crystal Street near the High School and Middle School campus. The North-South Bike Routes were started in FY2019 and completed in FY2020 (September 2019). This project includes both a commuter route on Main Street and a lower stress neighborhood route that parallels Main Street but avoids the most congested areas for safer and more comfortable travel by bike, and extends from the Melrose/Wakefield city limit to West Wyoming Avenue. This project includes areas of bike lanes, sharrows, shared bike/bus accommodations, and bike route signage. The entire project was accomplished without any changes to parking regulations along either route.

The third project, on Howard Street, began with the reconfiguration of the intersection at Clifford and Elm Streets to improve vehicular and pedestrian safety, along with the installation of a rectangular rapid flashing beacon (RRFB) pushbutton crosswalk signal at the intersection of Howard, Nelson, and Ruggles Streets. The final component of that project was the reconfiguration of the intersection of Howard and Green Streets into a roundabout. This project was started in spring 2019, and the completed in FY2020. The roundabout project has resulted in substantial safety improvements at the intersection of Howard and Green Streets, including slowing vehicular speeds while simultaneously reducing vehicle wait times, providing multiple well-marked crosswalks for pedestrians, and providing a clear indication of which drivers have the right-of-way.



Following the completion of the first round of Complete Streets construction projects in Melrose, the City applied for its next construction funding grant through this program. In September 2019, the City applied for a \$400,000 grant toward the addition of sidewalks in the neighborhood of the Hoover School, including Echo Street, Glendower Road, and portions of Whitman Avenue



and Park Street. This project was proposed to provide significant safety improvements in the elementary school neighborhood, as well as provide better pedestrian connections to the MBTA bus routes in the area. While this grant application was not successful, MassDOT provided feedback to the City regarding improvements that could be made to the proposed project, and the application was resubmitted in June 2020 for consideration in the next round of Complete Streets funding.

Florence Street (Wyoming to Foster), Sanford Street (Florence Street – Cleveland St), Hurd Street (Florence Street – Trenton Street)

The City completed water main construction and National Grid completed gas main construction in the neighborhood of Florence Street and portions of Hurd and Sanford Streets. In fall 2018, these streets were paved to binder course, and in April and May 2019, new sidewalks were installed along all of Florence Street, and sidewalk repairs were performed on the adjoining streets. The project allowed for a consistent grass strip to be installed between the sidewalk and the granite curbing, which provided a location for subsequent tree planting. Final paving of this neighborhood was completed early in FY20, specifically in September 2019, wrapping up several years of construction in this neighborhood.

Ashmont Street/Ashmont Park

Following completion in prior years of water main and gas main replacements on Ashmont Street and Ashmont Park, as well as sewer main replacement on Ashmont Park, the City performed paving of the binder course on these streets in November 2019. Final paving is scheduled for FY21.

Garfield Road, East Emerson (Stratford to Lincoln)

Garfield Road and East Emerson Street from Lincoln to Stratford were also included in the 2019 water main program. Gas main and service replacements had been previously completed on Garfield Road as well, along with repairs in select areas of the drainage and sewer systems on Garfield Road with known deterioration. In FY19, the City reclaimed and repaved these roadways, with binder in November 2019 and top course in June 2020.

Larchmont Road (Country Club Lane to Lynn Fells Parkway)

Larchmont Road between Country Club Lane and the Lynn Fells Parkway was a roadway in need of repaving which also had homes with substandard gas service. Following National Grid gas replacement in

FY19, the City reclaimed and repaved this section of roadway, at the same time as the above-noted roads, with binder in November 2019 and top course in June 2020.

National Grid Paving (Forest, Hunts (mill/overlay), Goss, Staples, Portions of Swains and Beech, Granite, Wheeler

As part of their restoration work required by the City following National Grid's gas main replacements, National Grid's contractor, Mathias, paved all of the above-referenced roadways. On Forest Street, the Blueberry Hill Lane development had also resulted in water main replacement, thus the developer and National Grid both contributed to the final paving of Forest Street from Lebanon Street to the City limit.

South Main Street Sidewalk Repairs

The City had planned to pave Main Street between Mount Vernon Street and Sylvan Street as part of the Multi-year Roadway and Utility program; however, private utility work caused paving to be delayed to a future year. In the meantime, the City had received a \$50,000 state earmark to perform Complete Streets upgrades as part of the South Main Street project. Since the money was required to be spent by the end of FY20, the City got a jump on the sidewalk block replacements that were planned as part of the future paving project, to increase accessibility and decrease tripping hazards along the route. This sidewalk work was completed in June 2020 and tackled the sidewalk blocks with the greatest deficiencies along this stretch of Main Street.

New Crosswalks

Each year, the City tries to improve our network of crosswalks and accessible curb ramps in high need areas where pedestrians travel frequently and safety improvements are necessary. In FY20, the DPW along with our contractor, D&R, installed new curb ramps along Upham Street, to create a continuous corridor for those walking from the Saugus line to downtown, and on Foster Street at Cottage Street. The latter crosswalk replaced a nearby crosswalk that had serious visibility challenges for oncoming vehicles. By moving the crosswalk to the corner of Cottage Street, pedestrians waiting to cross are not blocked by parked cars and are much more visible to drivers. This is an especially important location as it connects a wealth of residential housing to the Milano Senior Center across the street.

Traffic Commission

In addition to the roadway work described above, the Engineering Division participated in four meetings of the Melrose Traffic Commission, with the City Engineer (and later DPW Director) serving as the Chair and another Division employee serving as the Committee's Clerk. The Traffic Commission continues to address requests from the public or City personnel for regulatory changes to the City's Traffic Code. In FY20, the Engineering Division continued to work on final updates to the City's Traffic Code, which had not received a formal update since 2009. The GIS layer showing all items in the Code continued to be used to compare the code to the votes that had been taken since 2009.

The FY20 meetings included three quarterly meetings (September and December 2019, and June 2020), as well as one special meeting in October 2019; the March 2020 meeting was cancelled due to uncertainties surrounding the COVID-19 virus, early on in the pandemic. The October 2019 special meeting focused on the topic of whether to remove the overnight parking ban that has been in effect in Melrose since 1976. This topic was requested to be heard by a resident and was determined to fall within the jurisdiction of the Traffic Commission. The Commission voted unanimously to deny the request to remove the ban.

National Grid Work

The Engineering Division supervised the following National Grid gas system replacement work in FY20, most of which was performed by National Grid's contractor RJ Deveraux Corporation:

- Damon Avenue – started in June 2019, completed in July 2019
- Felton Place/Upham Street – started in June 2019, completed in August 2019
- Portions of Beech Avenue and Granite, Wheeler Avenue – performed in March 2020
- Winter Street Extension– started in July 2019, completed August 2019
- First Street (Ashcroft to Waverly) – started in July 2019, completed in September 2019
- Garfield Road – started August 2019, completed October 2019
- Poplar Street - started October 2019, completed November 2019
- Echo Street – started November 2019, completed January 2020
- Bow Street, Sycamore, Burnett and Hunnewell – started January 2020, completed March 2020
- Sherman Road – started January 2020, completed February 2020
- Fairfield Avenue – started October 2019, completed November 2019

Non-emergency work was put on hold in spring 2019 at the beginning of the pandemic, as it was not considered essential work and the City requested all non-essential work to cease until more was understood about COVID-19 and its transmission.

Throughout FY20, including during the pandemic months at the end of the fiscal year, National Grid performed work on a major electrical upgrade project that included the replacement of approximately 240 utility poles in a series of phases covering much of the city. This work, performed by Asplundh working as a contractor for National Grid, involved substantial work for DPW staff including utility markouts, coordination, and resident assistance.

Eversource Work

In December 2019, Eversource, working with their contractor, Bond Brothers, began a major electrical transmission line upgrade that spanned from Golden Hills in Saugus to Everett, including a route through Melrose beginning on Howard Street at the Saugus line, continuing down Green Street to Main Street, then traversing Main Street from the intersection at Green all the way to the Malden city limit. Eversource has two parallel electrical transmission mains along this corridor that serve the region's power supply needs. Each of the transmission mains needed to be brought out of service and removed, followed by conduit testing, installation of new cables, and restoration to service. Each transmission main needed to be replaced over one winter to spring period, with both lines in full service for the peak usage season beginning in June. Thus work that began on the first of the two transmission mains in December 2019 needed to be complete by May 2020 to ensure adequate power supply to the region for the summer months. As such, the FY20 work was the first of two phases of this critical project. Given the nature of the work, the project continued throughout the pandemic with no interruptions. While the City was not managing this project, the coordination with DPW and other City staff (e.g., the Police Department) was significant due to the many required traffic detours and frequent tasks requiring 24-7 work by Bond Brothers.

Facilities Assistance

The Engineering Division also provided assistance as needed with projects related to City facilities in FY2020, including the Central Fire Station floor shoring project and the City Hall generator project.

Operations Division

The City of Melrose's DPW Operations group is broken down into the following divisions: Water, Sewer, Highway, Fleet, Parks, Forestry, Cemetery, and Sanitation. Each division is described herein, supplemented by some information at the beginning of this report that crosses over between Administration and Sanitation (special collection days, etc.).

Water and Sewer Division

The objective of Melrose's water distribution system is to distribute clean, safe water effectively throughout the City for residential and commercial use, and to provide water for fire emergencies. The City obtains water from the Massachusetts Water Resources Authority (MWRA). Water is distributed via natural (gravitational) flow throughout most of the City. The exception is at high elevation areas in which the water is distributed through two pumping stations, as described below.

There are approximately 82 miles of water mains in the Melrose water distribution system ranging in size from 2 to 16 inches in diameter. These pipes receive water from several large MWRA transmission mains in Melrose and are the responsibility of the City to operate and maintain. Pipe materials include cement lined ductile iron (CLDI), unlined and cement lined cast iron, and copper. Most water mains installed after approximately 1975 (representing 30 percent of all mains in the City) are CLDI pipe, which is the current industry standard. The remaining piping network is mostly comprised of unlined cast iron, with some copper pipes typically of smaller diameters.

The purpose of Melrose's wastewater collection and conveyance system is to remove wastewater coming from residential and commercial properties and convey it to the MWRA's wastewater interceptor pipes. The MWRA treats Melrose's wastewater at the Deer Island Wastewater Treatment Facility and charges the City by metering the volume both entering and leaving Melrose and calculating the difference. There are roughly 76 miles of sewer mains in the City, ranging in size from 4 to 24 inches, approximately 2,286 sewer manholes, and 5 City-owned sewer pump stations. The current standard pipe for wastewater conveyance is polyvinyl chloride (PVC) pipe. However, many of Melrose's older sewer pipes are made of clay.

Water and Sewer Pump Stations

The City owns and maintains two water booster stations to provide additional pressure and volume to customers in areas of the City located at high elevations. These are in the northwest (Botolph Street and surrounding areas) and southeast (Park Street and surrounding areas) corners of the City, and the booster stations are located on Greenwood Street and Glendower Road, respectively. The high-pressure service systems are small, representing only about 10 percent of the total system demand. Both pumping stations were replaced by new facilities in the summer of 2003 and are operating as intended. Water Division personnel inspect the stations weekly, and an outside contractor (Weston & Sampson) provides detailed monthly inspections.

The City also owns and maintains five sewer pump stations. These stations convey wastewater from low lying areas via force mains up to the gravity sewer system. All sewer flows in Melrose ultimately flow to the MWRA collection system and to the Deer Island Wastewater Treatment Facility. Similar to the water booster stations, City personnel inspect the sewer stations weekly, and Weston & Sampson inspects them monthly.

City inspections follow written protocols established by the Engineering Division and include confirmation of normal operation of facility equipment and a lack of alarm conditions. Consultant inspections include more detailed preventative maintenance of equipment and equipment replacement when needed.

Major pump station repair items undertaken in FY2020 included the following:

- Replacement of pressure relief valves at both the Greenwood and Glendower water booster stations in December 2019
- Replacement of the programmable logic controller (PLC) at the Greenwood water booster station in May 2020
- Rebuilding of the Upham Street sewer pump station Pump #2 in January 2020
- Major repair of the Upham Street sewer pump station's check valve, spool, and one pump motor in February 2020

In addition, the City owns and maintains the Ell Pond Flood Gate, which controls the elevation within the pond, allowing for the pond level to be adjusted as needed to minimize flooding within the City. City personnel check the elevation of the pond weekly and make adjustments prior to predicted heavy rain storms. Weston and Sampson also inspects the flood gate monthly along with their pump station inspections.

Preventative Maintenance and Repairs

City personnel respond year-round to address water and sewer system preventative maintenance needs and respond to system emergencies. Through the City's work order system, activities are tracked and brought to closure. In FY20, the following items were addressed:

- 9 water leak repairs
- 25 sewer main blockages (as well as 27 other blockages that were responded to but were determined to be on private property)
- 13 water service replacements or resolutions and one in-house water main replacement
- Weekly bacteria sampling of the City's drinking water in nine locations
- One round of lead and copper drinking water sampling at 15 residential locations and two schools; results from this round were below the EPA Action Levels for both lead and copper
- Testing of all backflow devices two times annually through a private contractor (Water Safety Services, Inc.)
- Monthly inspections of known locations of sewer main issues (43 locations) and drainage pipe and catch basin issues (26 locations)
- Monthly inspections of major drainage system outfalls (6 locations)
- Catch basin cleaning covering approximately one half of the City's total catch basins annually

Each year, the City brings in a private contractor to perform a comprehensive leak detection survey throughout the City. This survey was performed in January 2020, and the issues identified in the subsequent report were then addressed by the Water Division.

Unidirectional water main flushing is performed every two years and was completed most recently in August through September 2019. This work includes flushing all water mains in the City to improve water quality, as well as exercising many valves and hydrants, allowing an opportunity to identify any deficiencies requiring repairs. Hydrant caps are also lubricated at this time.

Water and Sewer Billing

The Water and Sewer Billing office manages the water, sewer and trash billing programs for the City. This includes reviewing monthly meter reads, processing and inputting billing data, and processing adjustments and discounts. Personnel are frequently called on to respond promptly, sensitively and constructively to citizen inquiries, requests and complaints. The Water and Sewer Billing personnel schedule water meter readings, shutoffs, installations, final reads, and utility mark-outs. They also analyze high consumption accounts to determine customers who appear to have leaks and proactively notify those customers to help manage their high usage.



In FY20, the Water and Sewer Billing Division performed the following special projects:

- Participated in the annual Senior Citizen Discount Fair; there are currently have 638 seniors receiving the water and sewer discount and 284 receiving the trash discount
- Continued the Citywide meter replacement project, focusing on commercial accounts, problem accounts, and second meters.
- Worked on getting the new mobile drive-by reading equipment up and running
- Continued the implementation of opt-in monthly billing, which increased from 712 to 804 accounts, up 112 since FY19.

In FY20, the water rate/water base fee did not change. The FY20 volumetric sewer rate did not change, but the sewer base fee increased from \$19.95 to \$24.90 per quarter for a typical residential property.

Highway and Sanitation Divisions

The City has approximately 83.5 miles of streets and 170 miles of sidewalks. The roadway layouts consist of concrete, asphalt and grass. The Highway Division is also responsible for street signs, potholes, fences, line painting, street sweeping, snow plow damage, traffic signals, street lights, curbside yard waste collection, and trash pickup at all parks, street receptacles, and schools.

Street sweeping has a fall cleaning schedule done by ward and main drags. This program is performed by an outside contractor for the months of November and December. The City sweeps in-house every Friday for the months of April to October and also performs citywide spring sweeping.

The list below describes the majority of work orders performed by these Divisions in FY20:

- Preparation for and staffing all city events: Victorian Fair, Summer Stroll, Four Corners Concert, Memorial Day celebrations, Fourth of July Parade, Trick or Treat Downtown, Home for the Holidays, Porchfest, etc. Note that in FY20, the Memorial Day celebrations were reduced due to COVID.
- 79 signs installed
- 60 traffic signs made in-house
- 361 potholes filled
- 20 Regulatory/Advisory traffic signs posted
- 15 sinkholes addressed

- 15 line painting work orders completed
- 5 curb repairs
- 20 street light outages fixed
- 229 sidewalk repairs/assessments
- 23 snow damage repairs
- 2 Victorian poles replaced
- 4 fence repairs in parks and schools
- 796 curbside metal goods pickups
- 52 block party setups/take-downs
- 240 crosswalks painted
- Blocking of streets for 52 events
- 11 weeks of curbside yard waste pickup (one missed in April 2020 due to the pandemic)
- Ove 100 bicycle symbols and sharrows painted



Fleet Division

The Public Works Fleet Division is responsible for maintenance, repairs, specifications and disposal of all DPW equipment. There are approximately 140 vehicles in our fleet consisting of front end loaders, dump trucks, garbage compactors, recycling trucks, leaf vacuums, tractors, street sweeper, wood chipper, pickup trucks, vans and automobiles. We are also responsible for small equipment such as chainsaws, lawnmowers, weed whackers, etc. In addition, we maintain sixteen vehicles for the Melrose Police Department. Mechanics are involved with the equipment repair and maintenance process. The Fleet Division is also responsible for the seasonal change-over of equipment for snow and ice control, leaf collection, street cleaning and other projects completed by DPW. The Fleet Division also has a preventive maintenance program and tracking system to record parts and labor expended on each piece of equipment, identify mechanical issues, and determine when equipment should be replaced. The Fleet Division is in the implementation phase for a computerized asset management system that will improve record keeping and inventory for fleet activities. Our average age for our fleet is approximately 10 years old.

The Fleet Division is also responsible for preparing specifications for the purchase of new and replacement equipment each year when there is money available. After new equipment is received, it is verified that it meets all bid specifications.

The DPW was able to purchase equipment, parts, and repairs in FY20, including the purchase of the following new equipment:

- One F350 Truck (#7)
- One F550 Truck (#27)
- 2 Radios/Lettering
- One message board

Parks and Forestry Divisions

There are 81 sites that the Parks Division maintains from parks and street islands, to public buildings. The Forestry Division maintains over 6,000 street trees that are on public property. They take down trees, trim, plant and have a pruning program in place.

The Forestry Division, as well as outside contractors working for the City, planted new trees throughout the city, including 89 new trees planted by the City's contractor in fall 2019. Despite the pandemic, the Friends of Ell Pond and other community groups held dispersed clean-up days with which DPW assisted by way of removing trash and recycling following the cleanup events around the City. Seven road races were organized with the help of DPW and the Melrose Police Department.

Below is a list of work orders and routine activities completed in FY20 by these divisions:

- Cut grass daily
- Irrigation installations and repairs
- Seeded fields and islands
- Fertilized fields and islands
- Installed spring flowers in 11 locations
- Installed fall flowers in 11 locations
- Repaired and/or installed playground equipment
- 264 tree assessments
- 143 tree removals
- 195 tree trims
- 89 trees planted
- 118 stumps ground
- Watered the city hanging plants in spring and summer
- Decorated downtown for the holidays
- Replaced Main Street banner 16 times
- Lined fields and painted for high school and youth in the spring and fall
- Dropped and spread mulch at the beginning of the school year and the beginning of spring



Notable projects completed in parks and playgrounds in FY20 included the following:

Fred Green Field

- Purchased a Sweep Right Pro & Tow to help with maintenance of the turf field
- Added top filling infill to turf field to comply with concussion and safety protocols

Mary Livermore Park

- Playground renovation performed including installation of new 5-12-year-old structures
- New swings and dedication of a molded inclusive seat to Charlotte Bellem, a generous donation by her parents Chris and Sarah

Lewis Monk Field

- Replaced the netting with new batting cages

Rotary Skate Park

- Painted the skate board park equipment with epoxy skate paint

Dog Park

- 3 new dog bag dispensers installed
- New bench installed

Common

- Michael Mahon Granite Memorial Bench installed

Finally, a Request for Qualifications was put out for a consultant to provide services to initiate a feasibility study for upgrades to the facilities at Ell Pond Park. The landscape architects with Weston and Sampson Engineers were selected to perform this project.

Cemetery Division

The Wyoming Cemetery Administration Building was closed for a short period of time due to the coronavirus pandemic. All telephone messages and email communications were retrieved in a timely fashion, providing no interruption in services.

The cemetery grounds crew adjusted protocol as directed by state and local authorities. All graveside services were held in accordance with Massachusetts COVID-19 guidelines. The guidelines included limiting the number of attendees, face covering requirements and social distancing practices.

The health and safety of the families in attendance and our employees was our top priority.

Fiscal year 2020 saw a limited number of improvements to the Wyoming Cemetery grounds and facilities due to the COVID-19 pandemic.

In the field, we saw the following:

- A certified land surveyor continued the process of laying out and pinning the proposed new expansion area on Vesper Avenue.
- The repointing and structural repair of the cemetery perimeter wall was completed.

An administrative accomplishment of the Cemetery Department was as follows:

The cemetery software plan that was initiated continued in FY 2020. The next phase to be realized would be linking the scanned data to the maps. DPW staff have been working with Claus Goerges of CGIS Mapping, LLC to link the scanned cards to the cemetery plots in the GIS system.

During the fiscal year 2020 the Wyoming Cemetery had a total of one hundred seventy-eight (178) burials, the breakdown being as follows:

Casket Burials - 115

Cremation Burials - 63

The Cemetery Division of the Department of Public Works maintains the cemetery on a daily basis. In addition to burials, the cemetery crew is responsible for the cutting and watering of the grass at reasonable intervals, the raking and cleaning of the grounds, the planting of seasonal displays of flowers, the pruning of shrubs and trees, the placement of foundations, the installation of flat markers, and veterans' government issued headstones.

Memorial Day Activities

Due to the COVID-19 pandemic, the City of Melrose was not able to have its traditional Memorial Day parade and cemeteries this year. The Wyoming Cemetery also had to postpone the flag retirement ceremony until a later date so we could eventually include our Boy Scouts and Girl Scouts in the event. On Saturday, May 23, 2020, Karen Burke, Director of Veteran's Services along with the VSAB members, did decorate the veteran's graves at the Wyoming Cemetery.

Flower Program

The usual seasonal displays of flowers enhanced the cemetery grounds, in particular, the wonderful summer flowering displays of large canna, impatiens, begonias, petunias, etc.

The beds were edged and mulched, and the lawn in front of the building was loamed and seeded. An irrigation system provides water to that area.

The beds at the Lebanon Street entrance of the cemetery were also landscaped.

Perpetual Care Flower Fund Program

Twice-yearly, seasonal tributes are placed on designated graves of those who subscribed to the Perpetual Care Flower Fund. Baskets of mixed plants are placed on graves in time for Memorial Day, in addition to a winter basket of holiday greens in mid-December. This year the cemetery staff placed sixty (60) baskets of each.

Memorial Bench Program

The Cemetery Commission determined that the cost for family members wishing to participate in the Memorial Bench Program would be \$1,100.00. This would include an epitaph on the bench seat. The cemetery will choose a location as close as possible to the family's desired location.

This year the cemetery placed two (2) memorial benches in memory of the Adinolfi and Polley Families.



Memorial Tree Program

The cost for family members wishing to participate in Memorial Tree Planting Program is \$600.00. This includes a granite marker that is placed at the base of each tree that is planted. No trees were planted this season.

The mission of the Wyoming Cemetery is to serve the citizens of Melrose by meeting their final needs with compassion and dignity. In these unprecedented times, the Wyoming Cemetery Commission and staff continued their commitment, as always, to continue serving the needs of the Melrose community.

Facilities Division

The Facilities Division consists of both custodial staff and tradespeople and went through a management change halfway through the fiscal year. The Facilities Division completed approximately 1000 work orders while maintaining 20 municipal and school buildings covering over 1.5 million square feet. The Division

continued to increase the number and types of projects completed in-house. In-house projects included: roof repairs, thermal imaging and reporting, masonry repairs, larger paint projects, fence building, and doors and frames installation. Work orders ranged from window repairs to adjusting faucets, to name a few. Below is a summary of some of the work completed at each building.

Noteworthy in FY20 was the closing of all school buildings in March 2020 due to the COVID-19 pandemic. The custodial staff continued to keep buildings clean and maintained during the remainder of the fiscal year, accommodating the clean-outs of classrooms for year-end and the maintenance of safe and clean conditions in municipal buildings such as City Hall and the City Yard that required continued operations despite temporary closures to the public. The maintenance of our City facilities required continued attention as the pandemic began at the end of FY2020.

At the Horace Mann Elementary School, the shed was reroofed and the fire escape had the 5-year safety and maintenance inspection completed.

At the Roosevelt Elementary School, the Facilities Division performed various painting projects. The building was retrofitted with LED light fixtures and bulbs in most areas. Grease traps and exhaust hoods in the kitchen were cleaned out.

At the Franklin Early Childhood Center, four new air conditioners were installed in four second floor classrooms allowing for year round use. Window and roofing repairs were also performed. Inside stairs received safety tape applied to the treads.

At the Winthrop Elementary School, several bathrooms were painted as well as some spot, hardwood floor refinishing. The Facilities Division assisted the IT Department with the installation of two dozen Smartboards.

At the Hoover Elementary School, some railings, bathrooms, and radiators were painted as needed. Several emergency lights were upgraded.

At the Lincoln Elementary School, a sound proof wall was built to separate the music area and library. Two bathrooms were converted to gender-neutral restrooms.

At Melrose Veterans Memorial Middle School, four new ovens were installed in the kitchen. The Facilities Division worked with the IT Department for FOB access upgrades.

At Melrose High School, several bathrooms were painted. Three new ovens were installed in the kitchen. The auto garage was cleaned out and reorganized to prepare for the large volumes of COVID-related supplies that will be needed.

At Memorial Hall, the Facilities Division assisted with the several projects including refinishing the hardwood floors and repainting the egress lines with luminescent paint, lighting upgrades, plumbing upgrades, and plaster repairs.

At City Hall, painting projects were completed.

At the library, the failing elevator had the power and controller units replaced.

At the Milano Center and Beebe Estate, some plumbing fixtures were upgraded.

At the police and fire stations, the Facilities Division performed a variety of tasks including various roof repairs, re-lamping old light fixtures with LED bulbs, and various door and window repairs. The Central Fire Station also had some shoring completed in the basement to support the main bay floor, and the 1st floor restroom was converted to a unisex shower room.

The Facilities Division staff also assisted with building upgrades at Memorial Hall at the end of FY2020 in conjunction with a state-funded earmark requiring funds to be spent by June 30, 2020, even with the ongoing pandemic. Work completed as part of that project included refinishing of floors including repainting the high visibility egress lines in the seating areas; replacing old bulbs in the chandeliers with LED bulbs; replacing most plumbing fixtures with touchless faucets and flushometers; replacing approximately 20 exterior globe lenses on the front light fixtures; and detailed cleaning following all of the above-mentioned work.

Depending on the work order requested and building the work is being performed in, facilities employees work staggered shifts in order to make repairs without disruption to the occupant's regular schedule. The Division's staff starts as early as 6:00 AM and ends as late as 10:30 PM. The early shift gives us the opportunity to solve issues before buildings open, and the later shift allows work to be performed in buildings after the regular day has ended.

During the summer, regular preventative maintenance and annual testing and inspections occurred and included: generators, grease traps, genie lifts, kitchen hood, bleachers and stands, rigging, boilers, fire extinguishers, fire alarms and sprinklers, science lab fume hoods, lab waste treatment system, pest control, and emergency shower and eyewash stations. Crews and vendors cleaned carpets and rugs, moved furniture, painted classrooms, halls, and gyms, and cleaned and sanitized buildings. City staff provided support for several City events, both municipal and school related over the course of the year.

The City continued load shedding at the Middle School and High School. Load shedding is a concept where buildings make an effort to consume less energy on days when energy usage normally peaks to save money. Since the power company has to account for the maximum capacity of power usage, lowering the peak consumption helps reduce rates for the entire year. The Division's HVAC supervisor utilizes an energy management system to manage load shedding and minimize the effects on people's comfort. The City saves thousands of dollars yearly by load shedding at our public buildings.

Training continued to be a top priority for staff. The Facilities Division continued to work on procedures and methods to keep buildings as clean, safe and running as smoothly as possible. Several employees participated in an OSHA required aerial lift safety training.

The Facilities Division continues to provide essential services, through both routine cleaning and preventative maintenance, and as-needed repairs, to all of our City buildings, including City Hall, Police and Fire Stations, the Library, the Milano Center, the Beebe Estate, the City Yard, Memorial Hall, and all of our City-owned school buildings. The work of this division ensures that the City's facilities are maintained for continued operation, to meet the many needs of the community.

The DPW looks forward to continuing our important work into FY2021, to maintain the beautiful, clean, and vibrant community we all have come to expect. The Department of Public Works' dedicated professionals take pride in our work and strive for excellence in all that we do.