

City of
Fitchburg



Department of
Public Works

**301 Broad Street
Fitchburg, MA 01420
Phone: 978-829-1900**

DPW Weekly Update September 1 - September 8, 2019

Dear Mayor, Councilors, and Colleagues:

DPW receives several inquiries every week regarding our pavement program. The city has approximately 181 miles of public streets and 45 miles of private streets. The city receives approximately \$1.2 Million every year from MassDOT to pave public streets. Typical costs, coverage and life spans for pavement preservation and rehabilitation methods are as follows:

METHODOLOGY	COST/SY	BUDGET	AREA COVERED	MILES	LIFE
Crack sealing	\$ 0.5/sy	\$200,000	400,000 sy	26.6 miles	3-5 years
Micro surfacing	\$ 5.5/sy	\$ 200,000	36,364 sy	2.4 miles	5-7 years
Pavement overlay	\$ 10/sy	\$ 200,000	20,000 sy	1.3 miles	7-9 years
Mill & Fill (2 inches)	\$ 15/sy	\$ 200,000	13,333 sy	0.9 miles	10 years
Full Depth Reconstruction	\$ 35/sy	\$ 200,000	5,714 sy	0.4 miles	15 years

A \$200k investment can be used to preserve about 26.6 miles of roadways for 3-5 years with cracksealing. The same \$200k can be invested to microsurface about 2.4 miles of roadway and preserve the pavement for another 5-7 years. Once the roadway pavement starts to deteriorate, the same \$200k can only rehabilitate between 0.9 and 0.4 miles. Investing in pavement preservation helps maintain our roadways in good condition and DPW currently budgets about 25% for preservation (crack sealing/microsurfacing) and 75% for rehabilitation (mill & fill/full depth reconstruction).

As always please feel to contact us with any comments, questions, concerns or suggestions regarding the enclosed report.

Sincerely,

Nicolas H. Bosonetto, PE
Commissioner of Public Works/City Engineer

CONSTITUENT SERVICES

DPW continued to respond to service requests in a timely manner through the [SeeClickFix](#) program. The overall number of outstanding requests are up 7% from previous 2-week period, while new requests increased by 12%.

	<u>This period</u> <u>8/26/19 -</u> <u>9/08/19</u>	<u>Previous Period</u> <u>8/19/19 -</u> <u>9/01/19</u>	<u>Change</u>
Total Request Backlog	361	338	+23 (+7%)
New Requests	73	65	+8 (+12%)
- Completed	11	11	0 (0%)
- Open	62	54	+8 (+15%)
- Acknowledged	50	57	-7 (-12%)

The current request backlog is shown below:

Pothole	138
Storm Drains	79
Tree Pruning & Brush Trimming.....	43
Traffic, Signals, Signs and Striping.....	11
Berm Repair	10
All other Categories	80

ROADWAYS

DPW staff continued to improve and maintain the city’s roadways and sidewalks through various on-going activities and projects.

Traffic

No parking signs were installed along Beech Street per existing ordinances. The old signs had been posted on utility poles that were eventually removed by UNITIL.

Continued to paint crosswalks around schools.

Micro-Surfacing

Microsurfacing was completed this week. Line striping is being scheduled for Rindge Road and Upham Street. Broad Street, MacIntosh, and Cortland will not be striped due to low volume of traffic.



Figure 1- Microsurfacing MacIntosh Lane

Crack Sealing

No crack-sealing occurred last week. Our contractor has completed approximately 65% of the work so far and will continue to work throughout the city in the coming weeks.

Preventative Maintenance			
Crack Sealing			
Contractor: Superior Sealcoating, Inc			
	<u>Cost</u>	<u>Material</u> <u>(gallons)</u>	
Budget	\$75,000	8,000	
This week	\$0	0	
Total To Date	\$45,000	5,200	
Percent Complete	60%	65%	

Berms and Aprons

Asphalt berms were installed at the following locations:

- Pearl Hill Road
- 270 Fifth Mass Pike
- Cathy Street

Tree and Brush Trimming

Brush was cut at the following locations:

- Electric Avenue
- Rollstone Road
- Mt Elam Road
- Pearl Hill Road

Corrective Maintenance

Pothole patching efforts continued this week with approximately 480 potholes¹ filled at various locations, including the following:

- Oxford Street,
- High Street,
- Crescent Street,
- Pearl Hill Road,
- Lionel Ave,
- High Rock Road,
- 11 Winter Street Sidewalk,
- Beech Street

STORM WATER

McTaggart's Pond Dam

Tighe & Bond has been contracted to perform an alternatives analysis to identify the best path forward for the City. The field survey and field structural analysis are complete. Draft report due October 11th.

Catch Basins

Rebuilt one catch basin on Arlington Street.

Stickney Road Culvert

Mobilized equipment and 80 feet of 36" Reinforced Concrete Pipe to Stickney Road for culvert replacement. The existing 30" culvert is being replaced with dual barrel 36" culverts to prevent upstream flooding issues. Installed erosion controls, sawcut pavement, cleared brush, began excavating at upstream and downstream ends, removed two sections of existing pipe. Plated over for the weekend and site barricaded with sawhorses, barrels, cones, and caution tape. Project should be completed this week.

¹ Based on average pothole size of 3.5 inches depth and 1.5 foot wide by 1.5 foot long (volume of 0.66 cubic feet or 0.02 cubic yards)



Figure 2 - Stickney Road Culvert

PARKS & RECREATION

DPW crews worked along with FFD to remove bushes next to the firefighter’s memorial as part of the firefighter’s memorial project on the north common.

DPW crews completed the installation of new LED lights for Riverfront Park.

The railings at Cogshall Park Stone House have been repaired.

Drained the swimming pool and preparing parks for winterization.

Finished installing the granite around the Rollstone Trail monument next to the Boulder.

CEMETERIES

The cemetery crews continued to maintain the grounds by mowing, trimming, cleaning graves and monuments, picking up litter and painting. In addition to routine maintenance and administration tasks, the following were completed:

Interments	4
Up righted monuments.....	0
Uncovered/cleaned flat monuments	0
Foundation marking for monuments.....	0
Catch basin repair	0
Trimmed Trees	2
Trimmed shrubs.....	3
Meeting with Families.....	5
Payments - invoiced/processed.....	10



The Cemeteries Division was featured in the Health Department's newsletter this month for their participation in the overdose awareness campaign. The FPD provided purple ribbons to City employees to wear in support of overdose awareness.

WATER SUPPLY

Water Treatment

Reservoir Levels as of 8-29-19			
Northern Reservoirs	Elevation below spillway		Southern Reservoirs
Fitchburg/Ashby	-1.30 feet	-0.44 feet	Meetinghouse
Scott	Full	-2.40 feet	Mare Meadow
Lovell	-2.49 feet	Full	Bickford
Water Filtration Plant Flows/Production for 8/30-9/5/19			
	Falulah Plant	Regional Plant	Totals
Raw Water Inlet (Gal)	8,492,000	27,573,000	36,065,000
Backwash to waste (Gal)	994,000	3,659,000	4,653,000
Finish Water - Treated & Distributed (Gal)	7,498,000	23,914,000	31,412,000
Efficiency	88%	87%	87%

Operations personnel have increased Falulah Plant to 88% efficiency by extending filter cycles to 60 hours and clarifiers to 12 hours.

One beaver was trapped and removed from Falulah Brook. Reservoirs were patrolled and maintained.

Fire Hydrants

Total Hydrants	Out of Operation	Hydrants Replaced	Hydrants Repaired	Painted	Flushed
1,632	2	0	0	9	14

- All fire hydrants except for two are operational in the city. The hydrant at Cushing Street by River Front Park is shut off because the water main is damaged.
- Continued flushing/greasing hydrants on the High System this week in the Franklin Road, Theresa Street and Ashburnham Hill Road areas.

Water Distribution

- Investigated a discolored water complaint at 68 Huron Street. Water had cleared by the time we arrived, no leaks were detected. Could have been caused by hydrant flushing.
- Coordinated with contractor at City Hall about new water main tie in on Main Street - nothing is scheduled yet.
- INDUS staged at 1200 Rindge Road during the micro sealing project, everything went well.
- Contacted the city's insurance company to have the new 2019 John Deere 410 backhoe loader added to the policy and have the RMV-1 form signed. The backhoe is now registered.
- Investigated a leak on the Burma Road easement, a water sample was taken and it did test positive for city water. Leak appears to be on the water service to 723 Franklin Road which is tapped on the 20" water main in the Burma Road easement. The water division will repair this next week.
- Interviewed candidate for the Water Distribution LMEO position.
- Replaced 135 feet of 2" main on Vernon Court. Trench was backfilled, compacted and paved.
- Personnel assisted with filling, pressure testing and chlorinating a new section of 8" water main at Woodland Estates.



Figure 3 - Vernon Court line replacement

In addition to routine maintenance and administrative tasks, the following services were completed:

Water Permits and Inspections	
<u>Type</u>	<u>Number</u>
Emergency DigSafe Markouts	1
DigSafe Markouts	9
Inspections	1
Record Plan Updates	12
Curb Stops Services	2
Located/cleaned gate/curb boxes	2
Final Readings	10
Real Estate Closings	13
Meter Installs	9
Backflow Preventers Tested	15
Residential Appointments Made	9
Totals	83

ENGINEERING

Beech Street Project

A site visit was performed on Tuesday September 3 with members of DPW, FFD, FPD, Building and Health Departments. The Mayor and Councilor Beauchemin were also in attendance. The site walk confirmed various encroachments onto the ROW, the need for a sidewalk, and focused on on-street parking needs and impacts. A neighborhood public informational meeting will be scheduled after confirmation of construction dates from the contractor.

Main Street Infrastructure

DPW Engineering and Waste Water Divisions met with UNITIL to discuss and coordinate the planned gas line replacement and sewer/stormwater separation projects for Main Street. Data, maps, and schedules were discussed and cooperation will continue.

Planning Board

Reviewed the following projects and submitted comments for the September 10 Planning Board meeting:

- 16 Prospect Street
- 132 Pleasant Street
- 310 Broad Street
- 346 River Street
- BF Brown redevelopment

Arbor Way Retaining Wall

The Arbor Way culvert and retaining wall was built approximately 20 years ago as part of a project to develop the industrial park. The first wall failure was discovered circa 2013, probably caused by erosion of the material behind the wall. At that time Weston & Sampson was hired to perform an assessment of the failure, but there were no funds available to design or construct repairs.

Weston & Sampson was again hired in 2019 to design repairs with funding coming from an appropriation from free cash by the Mayor. During the design work, consultants discovered additional sliding wall failures on both sides of the wall. This will significantly increase the scope of repairs and limits options to either mechanically repairing the wall or installing an earthen embankment on both sides to support the roadway. Weston & Sampson will investigate further, and will perform cost estimates for the two repair options.



Figure 4 - Wall Failure

Asset Management

StreetScan will start collecting sidewalk data in the coming weeks. The contractor will be using a push-buggy version of their data collection system as pictured below. The raw data collected from the pavement part of the project is currently being analyzed and going through QA/QC.



Figure 5 - Sidewalk scanner

Engineering Services			
	<u>Type</u>	<u>Number</u>	<u>Fees</u>
PERMITS	Dumpster Permits		
	Trench Permits	3	\$225.00
	Excavation Permits	1	\$350.00
	Driveway Permits		
	Sign Permits		
	Sewer Permits		
INSPECTIONS	Driveway Inspections		n/a
	Trench Inspections	6	n/a
	Site Inspections	1	n/a
	Dig-Safe requests	3	n/a
	Sewer/Drain Inspections	6	n/a
	Parcel Updates		
	New Address Assignments		n/a
	Planning Reviews	5	n/a
	Totals	25	\$575.00

ADMINISTRATION

A total of 200 invoices totaling \$423,434 were processed this week. A total of \$55,580 from septage haulers was collected and deposited.

Invoicing, Warrants, and Payrolls						
	Invoices		Deposits		Billings	Payroll
<u>Division</u>	<u>Number</u>	<u>Total \$</u>	<u>Number</u>	<u>Total \$</u>		
Streets/Admin/Engineering	106	\$ 177,655	*Note 1			
Cemeteries	13	\$ 1,260				
Parks						
Recreation	2	\$ 1,500				
Water Supply	20	\$ 14,276				
Waste Water	59	\$ 228,743	*Note 2	\$55,580		
Total	200	\$ 423,434	-	\$55,580	\$ -	\$ -
*1 - Engineering Permits						
*2 - Septage at East Plant (Gallons)		653,882				

- Reviewed responses to request for quotes for rental sand screening plant. Generated PO for low bidder.
- All DPW divisions calculated their respective Local 39 stipends for FY20 to be paid 9/13/19.
- Reviewed vendor invoices and statements for payment. Processed several warrants. Backlog of invoices for Streets/ Admin/Engineering is now complete and invoices on hand are current invoices. Backlog of invoices for wastewater should be caught up next week.
- Started to audit septage receipts and deposits for FY19 and FY20.