

# Report for the City Manager

## Community Services: Engineering

Date: August 11, 2023

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The purpose of this document is to summarize the work the City of Dover Engineering Department through July 31, 2023.



**Engineering**

Community Services | Dover, NH

The Engineering Division is comprised of a dedicated team of individuals who work collectively to, as the Division's statement reads, "provide the City of Dover with professional engineering services that ensure long-range comprehensive planning, sound project design, and quality construction management, and to provide technical engineering assistance to other Departments of the City."

Ken Mavrogeorge, PE – City Engineer  
Bill Boulanger – Special Projects Advisor  
Amelia DeGrace – Assistant City Engineer (Utilities)  
Jillian Semprini, PE – Assistant City Engineer (Transportation)  
Eric Sanderson – Facilities Project Manager  
Gretchen Young, PE – Environmental Projects Manager  
Jamie Stevens – Waterfront Construction Manager  
Jordan Chambers – Engineering Technician  
Molly Grace – Engineering Intern

### **Staff Workload:**

The Engineering Staff is currently managing or involved with over 150 City projects ranging from annual projects such as the General Streets Improvements - Annual Paving Program to projects in the Capital Improvements Program such as the reconstruction of various neighborhoods. Included in that total are projects for other departments including but not limited to Planning (Downtown Pedestrian and Vehicular Improvements Project), Recreation (Jenny Thompson Pool Evaluation and New Skate Park), and Library Renovation.

In addition to their daily project management responsibilities, the City's Engineering staff also participate in the following Commissions, Committees, and Boards as either active members or staff liaisons.

Dover Utilities Commission (Amelia DeGrace): The Dover Utilities Commission held a joint meeting with the Ordinance Committee on July 10<sup>th</sup> to review progress on the development of a Stormwater Utility. Gretchen Young and Amelia DeGrace were in attendance.

Transportation Advisory Committee (TAC) (Jillian Semprini): A TAC meeting was held on July 24<sup>th</sup>. The next TAC meeting is scheduled for September 25<sup>th</sup>.

Planning Board (Ken Mavrogeorge): Planning Board met once in June and recommended the Vision Chapter of the Master Plan be approved by City Council.

Municipal Alliance for Adaptive Management (MAAM) (Gretchen Young): MAAM held a special meeting on July 13<sup>th</sup> to open up a collaborative and informal conversation with all communities in the Great Bay watershed, discussing the recent Conservation Law Foundation (CLF) petition to the EPA for Residual Designation Authority (RDA). In attendance were folks from CLF and EPA as well as the MAAM all discussing the purpose, goals, and potential next steps for the RDA.

**Customer Service:**

The Table below shows the total calls year to date and over the past month. There has been an increase in calls this year over past years due to the change in how Admin receives calls to the department. This has shown to result in a quicker response to callers many of whom provide an email address for a quicker response from Engineering staff.

Time Period	Logged Service Calls	Resolved Service Calls
Year to Date (2023)	258	235
Last Month (Month)	29	18

One of the most common questions received by the Engineering Department includes:

**Question: Can you install a speed bump on my road?**

*Answer: Historically the City has not been a proponent of speed tables unless they are coupled with other specific measures such as a raised crosswalk (like on Bellamy Road near Dover High School). We at the Community Services Department have generally been opposed to them because they pose other problems with effective snow maintenance, impeding water runoff, and impeding emergency vehicles in the event of an emergency. We also know that the noise from cars that navigate them too fast tends to be unpopular over time with residents who live adjacent to them. The City's Transportation Advisory Committee (TAC) has fielded many requests for speed tables on numerous other City streets, but to date has not endorsed them except in certain specific situations. If you would like to bring this up to TAC, you can submit a formal request to be added to their next meeting agenda (September 25th) by calling Community Services at 603-516-6450.*

## Projects

As noted above, the Engineering staff is actively supporting a large number of projects across the City. The following are some highlights on just some of the active projects.

### Hough Street Emergency Culvert Repair:

The precast concrete box culvert was delivered on July 26<sup>th</sup>, and the City's contractor started construction the following day. By the end of July, the contractor had installed the majority of the structure. Engineering staff has been coordinating with the contractor to

address any questions and performing regular site visits to monitor progress, verify erosion control measures are in place, and maintain open lines of communication with abutters. It is anticipated that this section of the road will be opened prior to the end of August. This section of Hough Street has been closed to through traffic since the early spring.



*Figure 1: Installation of new precast concrete box culvert below Hough Street.*



*Figure 2: Interior fit up at the new Pudding Hill Water Treatment Plant.*

### Pudding Hill Water Treatment Plant:

Contractors continued to work on internal piping, electrical, chemical storage areas, and telecommunications. Work continues to be on track for operation in the spring of 2024.

Street Reconstructions: The Engineering staff continues to advance the designs of multiple street reconstruction projects including the following: Fifth and Grove St; Court and Union St.; Henry Law and River St. It is anticipated that these projects will be ready for bid this summer and released for bid in the late summer/fall. Work for these projects are anticipated to occur in spring 2024 and

continue through mid-2025. Street Reconstruction projects are Capital Improvement Plan projects that include comprehensive upgrades to water, sewer, drainage, lighting, road surfaces, and sidewalks within neighborhoods. The second neighborhood meeting for the Fifth and Grove St project was held on July 10<sup>th</sup>. It is anticipated that additional public meetings for the other projects will be occurring in August of 2023 prior to going out to bid.

### Stormwater and Flood

Resiliency Utility: The Dover Utilities Commission (DUC) and Ordinance Committee held a joint meeting on July 10<sup>th</sup>. The presentation provided an overview a stormwater financial analysis, an impervious area analysis, utility fee structure and credit system recommendations, and how the utility would be administered. Based on feedback and questions from the joint meeting, City staff, and the consultant will provide another update to a DUC and Ordinance Committee joint meeting scheduled for Monday, Aug. 21. Public outreach on the proposed utility will continue into the fall and winter with the City Council poised to hold a first reading for an ordinance to create the utility in November, followed by a public hearing and possible vote in December. If enacted as currently envisioned, the utility would begin at the start of the 2025 fiscal year on July 1, 2024.



Figure 3: Presentation materials for the Stormwater Utility

Stormwater Management Plan: The 2017 MS4 permit has been extended for an additional year as EPA finalizes the draft for the next 5-year permit. It is anticipated a draft of the next permit will be available for review in the fall. Staff continue to work under the existing permit, focusing on illicit discharge detection and elimination.

### Court Street Emergency Sewer Repair:

Community Services Engineering and Operations staff are working together to support the emergency repair of a collapsed sewer main within Court St. The existing 24-inch pipe failure was discovered last year during the data collection phase of the Court Street Reconstruction Project. Upon discovery of the failure, the consultant for the reconstruction project shifted gears to design and permit the emergency repair that is currently being installed. Modifications to the design have been necessary to avoid existing infrastructure within Court St. but the work is expected to be completed by September.



Figure 4: Court Street Emergency Sewer Repair.

River Street Pump Station Upgrade: Waterline Industries Corporation was the low bidder for the River Street Pump Station Improvements Project. The project was awarded in July and a preconstruction meeting with the Contractor is scheduled for the end of August. Improvements to the pump station are expected to take 18 months to complete and coincide with the Waterfront Infrastructure Improvements project.

Cocheco St Outfall Replacement: Engineering continues to meet with staff from Eversource to review a preliminary cost estimate, schedule, and logistics for the construction of the replacement for the existing stormwater outfall. It is anticipated that construction will start in November 2024 and run through March 2025.

Smith Well Road Elevated Tank: Construction of the tank pedestal continues to move forward. Construction and installation of sewer, drainage and watermain on Smith Well Rd are scheduled for August and September 2023. The new 1-million-gallon tank is being constructed to allow the City to take the Garrison Hill tank offline in 2024 for rehabilitation. The new tank is currently on track for final completion in early 2024.



*Figure 5: New elevated tank pedestal continues to rise.*

Waterfront Redevelopment: The City's contractor, Northeast Earth, mobilized equipment at the Waterfront project in July following the City's 400<sup>th</sup> Anniversary events. Material stockpiled from the bluff removal projects is in the process of being relocated to facilitate the installation of utilities within the new roads as well as environmental remediation. The City's portion of the Waterfront Development project is scheduled to last between 2 and 3 years. The private portion of the project is likely to start in early 2024 once the developer secures the necessary permits for their development from the state. Engineering staff will provide full time oversight of the public improvements and part time observation of the private work.

Street Paving Program: Engineering staff has been coordinating with the Streets and Drains Department to select roads for routine maintenance (crack sealing). A request for bids (RFB) for crack sealing is anticipated to be released in August 2023.

Sidewalk Improvements: Engineering staff is developing a Request for Proposals (RFP) for the assessment of the City's sidewalks to help inform future sidewalk reconstruction projects. The RFP is anticipated to be released in early August and be used as the

#### Traffic Signal Management

The City's traffic engineering consultant, Sebago Technics, held a monthly meeting to review signal concerns received from calls to Community Services or other City Departments. Community Services is working with the consultant to develop a plan for traffic signal management including annual improvements, timing adjustments, and upgrades to include for capital improvement projects.

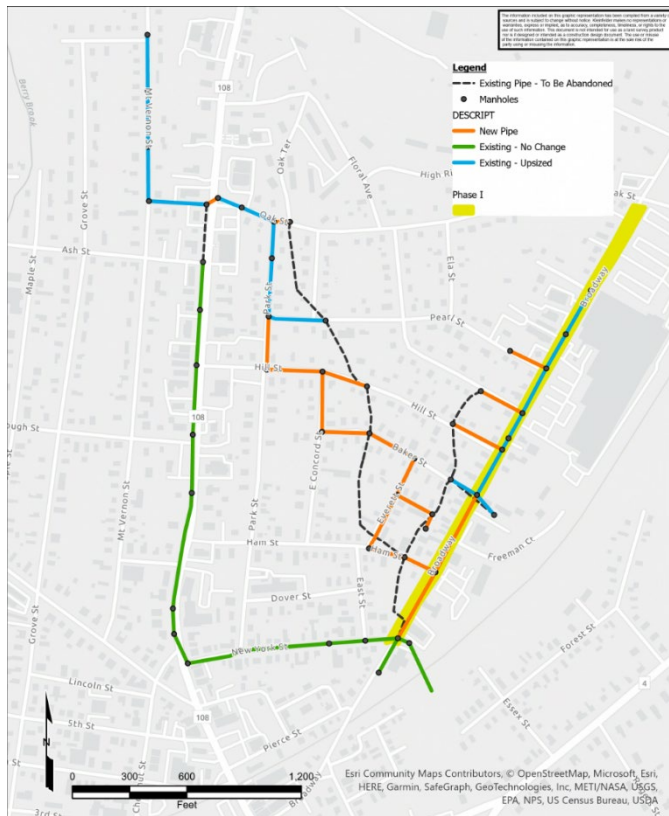


Figure 6: Cocheco Masterplan Study Drainage Alternative.

**Cocheco Stormwater Master Plan:** Engineering staff met with the NHDES and the City’s consultant Kleinfelder on July 31<sup>st</sup> as part of a monthly check in for the Alternative drainage alignments in the Oak/Ham/Ela neighborhoods. This area consists of over 200 acres that drains to the recently installed Broadway culvert that contributes to the Cocheco St. outfall. The City’s consultant is in the process of developing opinions of probable cost for the total reconstruction of the neighborhood to aid City staff in the development of Capital Improvement Projects as part of the 2023 CIP update. A preferred alternative will be recommended by the consultant and selected by City staff by the end of 2023. The preferred alternative and will serve as the basis of design for the Oak, Ham, and Ela Neighborhood reconstruction (+/- 100 acres). It is anticipated that the design for the neighborhood reconstruction will begin in early 2024.

**Facilities Projects:**

**Fish Ladder Park:** Engineering staff is working with Operations staff to coordinate the installation of new light poles along fish ladder park in advance of landscaping improvements. The majority of work will occur in late summer 2023. Park improvements include new brick walkways, park bench pads, trash receptacles pads, and landscaping.

**Skate Park:** Artisan Skateparks started placing concrete for the new skate park in July and will continue to work through the end of the summer. Additional sitework to follow the park’s construction includes a new stormwater management basin and sidewalks around the park. Site work finishes are scheduled to be completed in early fall. Once the new skate park is completed, the existing skate park will be demolished.

**Inspection Services:** Two bidders were selected to submit formal proposals for the expansion of the 271 Mast Road facility to house staff from Inspection Services. A contractor is expected to be awarded the project late summer with the design and construction to commence once permitting through Planning Board is completed. The project aims to address the needs identified in a space needs Assessment conducted by the Deputy City Manager in 2022. The goal is for Inspection Services to be moved into the expansion in the fall of 2024.

**Permits:**

**Permit Summary for July 2023:**

Driveway Permits:	9
Utility Licenses:	2
Paving Licenses:	4
Excavation Permits:	24
Certificate of Occupancy Inspections:	4
Construction:	3
Obstruction Permits:	5

**Site Review/Project Oversight Support:**

**Technical Review Committee:** Four projects came to TRC in July that required Engineering review:

- Site Plan Modification to the Court House Residential Redevelopment Project
- Proposed Residential Development at 36 Olive Meadow Lane
- Redevelopment of an existing office building at 100 Education Way
- A residential subdivision off of Tolend Rd.

**Wastewater Permit Review Summary for July 2023:**

Sewer Connection Permit: 1

Septic Design Reviews: 1

**Construction Oversight:** Engineering Technician, Jordan Chambers, continues to conduct oversight of over 60 private construction projects approved by the Planning Board. Projects that are underway or have been completed include:

- Bluebird Self Storage (Littleworth Rd.)
- Rutland Street Residential Development (Abbey Ln.)
- Copley Commons Subdivision (Leathers Ln.)
- Tiny Home Development (Back River Rd.)
- Porchlight Dr. Subdivision (Cataract Ave.)
- Copper Drive Subdivision (New Rochester Rd.)
- Sophie Drive Subdivision (Bellamy Rd.)

In July, one (1) preconstruction meeting was held for the former Asia building on Third St.

**Other Staff News:**

Gretchen Young, PE Dover’s Environmental Projects Manager along with Dale Hood, the Wastewater Treatment Plant Maintenance Technician, and CS Director John Storer, gave a tour of Dover’s recently constructed Catch Basin and Street Sweeping processing facility. Attendees included the Deputy Mayor Shanahan, consultants from Verdantas, and the Town Administrator and Chief Operator from Peterborough, NH. The facility is currently operating for piloting as staff and the NHDES work to secure necessary Solid Waste permitting.



Figure 9: Touring the new Catch Basin Screening Facility.