

Report for the City Manager

Community Services: Engineering

Date: February 12, 2024



Engineering

Community Services | Dover, NH

The purpose of this document is to summarize the work the City of Dover Engineering Department from January 1st through January 31, 2023.

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
Jamie Stevens – Waterfront Construction Manager
Jordan Chambers – Engineering Technician
Courtney Mitchell – Environmental Project Manager

Staff Update:

Courtney Mitchell joined the City of Dover as the City's new Environmental Project Manager at the end of January. Courtney comes to Dover after serving as the Alton, NH Water Works Superintendent and Assistant Director of Public Works. She also previously had served as the Superintendent for Meredith, NH's Water and Sewer Department. As the Environmental Project Manager, Courtney will be responsible for overseeing city projects related to solid waste, landfills, hazardous waste, stormwater, municipal drinking water (per the Safe Drinking Water Act), and municipal sanitary sewer (related to the Clean Water Act). Please join the Engineering Staff in welcoming Courtney to the City of Dover.

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 Improvements/Waterfront), Recreation (Adventure Park Upgrades, Jenny Thompson Pool Upgrades), Inspection Services (New Office Space) and Library (Renovation/Expansion).

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

Dover Utilities Commission (Amelia DeGrace): The Dover Utilities Commission (DUC) met on January 22, 2024 to review abatement requests and review finance and utilities reports. The next meeting will be held in February 19, 2024.

Also, in January 2024, notification was sent out to Dover water customers of the ability to sign up for the EyeOnWater® software. This software access is being offered to provide direct and secure access to your household's water usage data at no additional cost to customers. The Dover EyeOnWater® suite includes a secure smartphone app and online portal to review and analyze your usage patterns.



Water

Community Services | Dover, NH

With these tools, customers can view their daily, weekly, monthly and yearly usage activity and gain greater understanding of the amount of water you use to conserve water and save on bills. The software provides easy to understand graphs and the ability to establish alerts, including identifying potential leaks.

Customers can sign up today at <https://eyeonwater.com/signup>

Enter the following information to register your account: Zip Code • Service ID/Account Number • E-mail

Transportation Advisory Committee (TAC) (Jillian Semprini): TAC's January meeting was postponed. The next meeting is scheduled for February 26th.

Planning Board (Ken Mavrogeorge): Planning Board met on January 9th at the McConnell Center for the 2024 Land Use Board Meet and Greet. Updates from representatives for each of the City's Boards, Commissions, and Committees were presented along with a light dinner. Following the meet and greet a regular Planning Board meeting was held to discuss the FY 25 CDBG Annual Action Plan and potential modifications to Land Use Code for 2024. City Engineer Ken Mavrogeorge spoke about the need for revisiting stormwater regulations in the new year to address the issue of stormwater from all properties not just non-single family residential developments.

Municipal Alliance for Adaptive Management (MAAM) (Courtney Mitchell): The next meeting for MAAM will be held on February 8th. This meeting will be Courtney's first meeting with MAAM.

Seacoast Stormwater Coalition (SSC) (Courtney Mitchell):

Jillian Semprini, John Storer, and Ken Mavrogeorge attended the January 17th Seacoast Stormwater Coalition meeting where an overview of the Soak up the Rain program was presented. The NHDES Soak up the Rain program provides useful information for the public on how to manage stormwater runoff on their properties. Pamphlets are available on the NHDES website with information on how to construct stormwater best management practices or BMPs. Courtney Mitchell will be serving as Dover's representative for future SSC meetings.

TIF Advisory/Cochecho Waterfront Development Committee (CWDAC)/Park Subcommittee (Jamie Stevens): The CWDAC met on January 16, 2024 to get an update on the proposed pavilion building in the new waterfront park and discuss potential names for the new street network.

Customer Service:

In addition to supporting other City Departments and working on Capital Projects, Engineering staff takes Service Calls from the public and responds to them as quickly as they can. The team meets regularly to review open Service Calls and discuss how to respond. The Table below shows the total calls year to date and over the past month.

Time Period	Logged Service Calls	Resolved Service Calls
Year to Date (2024)	6	19
January 2024	6	19

Public Outreach:

General Public Outreach:

Public Outreach has and always will be crucial to the Engineering Division's operations and to that end the Engineering Team tries to engage with the public, Dover Staff, and City Council on a regular basis to keep them informed on critical project updates, budget issues, and things that concern long term capital planning.

The Engineering Team routinely provides updates to Media Services for the various projects that are shared in advance of public meetings, major milestones, or in the event of a service shutdown or temporary road closure. Anyone can sign up for project specific updates using the QR code below.

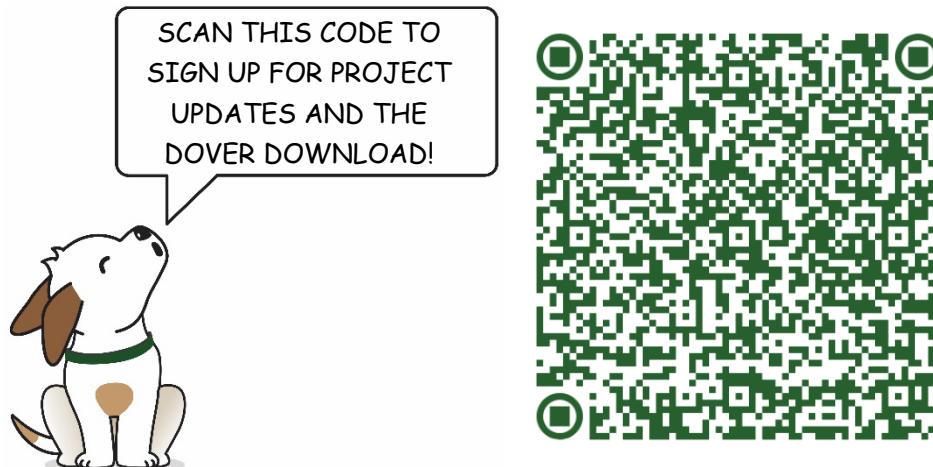


Figure 1: Rover the Community Services Dog and a QR Code to sign up for project specific updates and the Dover Download.

Service Line Inventory:

The United States Environmental Protection Agency's (EPA's) revised Lead and Copper Rule requires all community water systems to prepare a service line inventory by October 16, 2024. This revision is in response to the Flint, MI water crisis; inventories will be readily available to the public and will be used to identify service lines with potential lead contamination.

The inventory will be prepared by City Engineering Staff, led by Assistant City Engineer Amelia DeGrace. This is truly a team effort in conjunction with the Office of Information Technology (OIT) (IT Asset Management preparation), Community Services Utilities (gathering information in the course of their normal work), and Engineering (populating the Service Line Inventory). NHDES awarded the City a \$75k grant to prepare the inventory.

An online survey has been developed and is currently live through the City's website and by scanning the QR code in Figure 2. A mailer will be included in the next utility bill with information on how to access the survey and submit information on their own water service lines to determine what material it is made of.



Figure 2: Scan this QR code for access to the Water Service Line inventory.

Engineering Projects:

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

Project Highlight: Portland Avenue Retaining Wall:

The Portland Avenue retaining wall runs along Portland Avenue from about Cochecho Street to Chapel Street. The existing retaining wall was constructed to support the high traffic volume seen on Portland Avenue but has experienced significant deterioration over the last several years and is in need of repair or replacement. The City of Dover is moving forward with plans to replace the retaining wall and extend the sidewalk on Portland Avenue about 200 feet from Cochecho Street's intersection towards Chapel Street along with other sidewalk improvements.



Figure 3: Existing Portland Ave Retaining Wall

The City of Dover solicited requests for qualifications for consulting design services for the project, in 2021 and awarded the project to Wright Pierce. In 2022, Wright Pierce finalized a design for the wall's replacement and put it out to bid for construction. Unfortunately, only one bid was received in the fall of 2022 that exceeded the City's anticipated CIP budget. In response, the City asked Wright Pierce to value engineer the design of the wall to reduce costs while maintaining the functionality of the structure. In December of 2023, the redesigned wall was put out to bid and three bids were received in January 2024. The redesign achieved its intended goal of reducing the project's cost to within the City's CIP allocation and in mid-February the City Council will vote on approving a contract with the apparent low bidder. Construction is anticipated to begin in spring 2024 and last approximately 10 months. Traffic along Portland Ave and Cochecho Street may be impacted during construction. Preconstruction meetings are expected to occur once the contractor is under agreement.

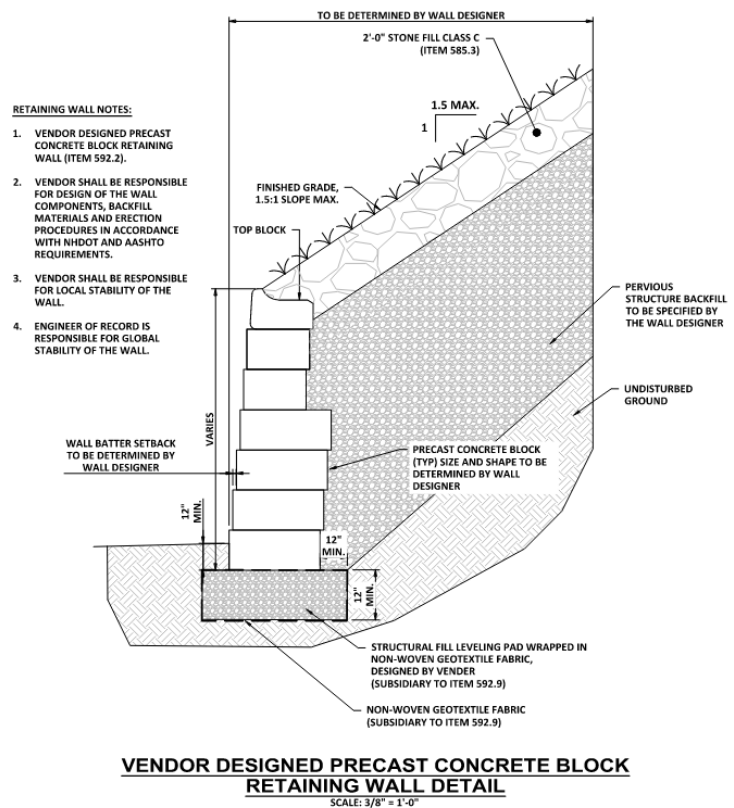


Figure 4: Proposed Portland Ave Block Retaining Wall

Other Engineering Projects:

Puttering Hill Water Treatment Plant:

The City's consultant and contractor have begun to plan for the plant's startup which is expected to begin in early 2024. Work continues to be on track for substantial completion in early 2024 and final completion by summer 2024. Once online, the plant could provide an additional 1 million gallons of drinkable water per day to City residents, boosting its current capacity back to levels prior to when the aquifer was taken offline.

Waterfront Redevelopment:

The City's contractor, Northeast Earth, continues to advance the installation of stormwater, water and sewer utility infrastructure around the project site as well as the removal of buried infrastructure from prior facilities on the property. Blasting of the remaining bluff area will commence in early 2024 as work on the shoreline



Figure 5: Granite Wall Construction along the waterfront.

progresses. Approximately 25,000 cubic yards of material have recently been excavated from the bluff in preparation of blasting operations. Orange fabric will be placed in February on areas to be capped as part of the site's Remedial Action Plan or RAP. Construction of the private infrastructure is expected to begin in the spring of 2024. The development is expected to be under construction until at least 2026.

Smith Well Road Elevated Tank:

Work continues on the water line and the electric duct bank to serve the new tank. Interior fit up of the new elevated tank is ongoing. The new 1-million-gallon tank is being constructed to allow the City to take the Garrison Hill tank offline in 2024/2025 for rehabilitation. The new tank is currently on track for final completion in early 2024.

Garrison Hill Water Tank Rehabilitation:

The City's consultant, Underwood Engineers, continues to advance the plans for the Garrison Hill Water Tank. Ninety percent drawings were submitted to the City for review and comment. It is anticipated that the tank rehabilitation will be ready for bid in late 2024 and under construction by spring 2025 once the City's new 1 million gallon elevated storage tank is brought online.

Mill Street Pump Station Upgrade:

The City has engaged the engineering firm Woodard & Curran to conduct an assessment on the Mill St Sewer Pump Station to determine what upgrades to the station would look like as the station is reconstructed in 2025. The evaluation builds off a City wide assessment of the sewer pump stations completed in 2023 by Wright Pierce and will look at consolidating pump stations to reduce the City's operating costs. The evaluation is underway and expected in March 2024.

Fifth and Grove Reconstruction:

The reconstruction of Fifth Street (Central Ave to Fourth Street) and Grove St (Sixth to Fourth) was put out to bid in January with bids due back in early March. The reconstruction includes water main replacement,

new street lighting, sidewalks, and stormwater system upgrades. The project is anticipated to last approximately 18 months. Once a contractor is selected a preconstruction meeting will be held to review a more detailed construction schedule with residents within the construction zone. This project also includes the reconstruction of a pedestrian median in Central Avenue.

Sidewalk Improvements:

Engineering staff is overseeing the assessment of all the City's sidewalks to help inform future sidewalk reconstruction projects. Green International Affiliates, Inc., the firm selected to complete the assessment is wrapping up their assessment all of the City's public sidewalks and curb ramps in preparation for the development of a summary of their findings and make recommendations for which sidewalks need repairs. This summary of findings will also include a 5-year sidewalk improvements program that the City can execute to improve sidewalks across the City with a focus on priority routes including those close to schools and businesses and those in need of ADA accessibility improvements. The summary of findings will be completed in the spring and a presentation to the City Council is anticipated to outline a plan to improve City sidewalks.

Traffic Signal Management:

The City's staff and traffic engineering consultant, Sebago Technics, held a monthly meeting to review signal concerns received from calls to Community Services or other City Departments. The focus of the January 2024 meeting was on the traffic signals at Back River Rd and Durham Rd. Community Services staff requested the consultant analyze alternative timing measures to improve traffic flow during various peak times.

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. The consultant is preparing to summarize the issues addressed over the previous 12 months and identify projects that the City can implement in the annual CIP program such as annual maintenance recommendations. The findings may be presented to the Council once completed in preparation for future project planning purposes.

Climate Change Vulnerability Assessment Program:

City Engineer Ken Mavrogeorge attended a meeting in Pembroke with Deputy Director Dave Fredrickson to hear a presentation from the NHDES on an ongoing Climate Change Vulnerability Assessment. The assessment is looking at water and sewer systems across multiple municipalities and determining how prepared they are to handle the impacts of Climate Change. The state's consultants will be reviewing Dover's infrastructure at the end of February and early March. Results will be presented when the final report is developed in mid-2024.

Facilities Projects:

Inspection Services Expansion:

City Engineering staff have been working with the City's design build contractor and architect to finalize the design of a new Inspection Services building for the Community Services parcel on Mast Road. Survey work was completed in November and the City Engineering Department prepared and presented plans to the Technical Review Committee. The City is saving on design engineering costs by taking on the site civil components of the project themselves and securing competitive bidding for the survey of the site. The City also anticipates completing some of the site work including utilities for the new building to further save on construction costs.



Figure 6: Inspection Services Building Elevations.

Library Renovation/Expansion:

The selected architectural firm, SMP, will retain and consult with a construction estimating firm to complete final bid drawings, planned to be completed April/May 2024. Replacement of the sprinkler system has now been included in the interior renovation scope of work and Alliance Mechanical will complete work to replace the existing cast iron boiler. Work on the boiler is planned to be completed March/April 2024 as weather becomes milder.

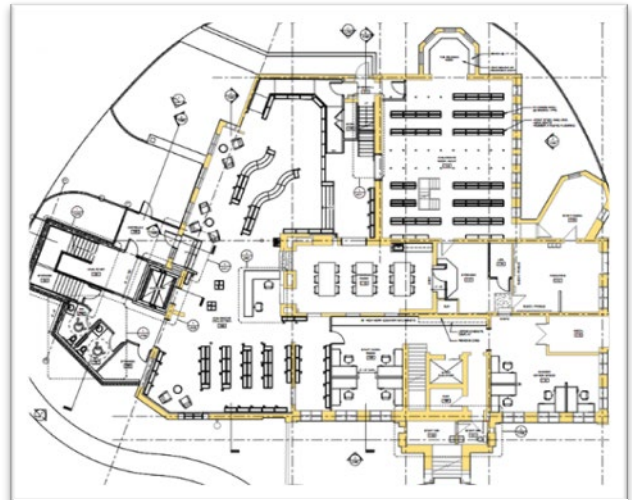


Figure 7: Library Expansion Floor Plan.

Permits and Licenses:

Contractor Paving Contractor and Utility Contractor Licenses are required to ensure contractors are properly qualified, suitably insured, and have provided the City with an emergency contact information. Licenses must be obtained prior to commencing work within the City of Dover. Licenses in Dover expire on December 31 each calendar year, regardless of when the license was obtained. The fee for the license is not prorated based on when the license is obtained.

Contractor Paving Contractor and Utility Contractor Licenses may be submitted online through the City's online permitting portal, EnerGov. The site can be reached by going to the following website:

https://permits.dover.nh.gov/energov_prod/selfservice#/home

Licenses:

Paving Contractor License

A Paving Contractor License application and fee must be submitted to, and approved by, the Community Services Department prior to paving on the City's roads and within the City's rights-of-way.

Utility Contractor License

A Utility Contractor License application and fee must be submitted to, and approved by, the Community Services Department prior to working on water, sewer, or storm drainage systems owned or controlled by the City of Dover, including system connections located on private property that connect to the public system.



Figure 8: Zeland Dr Residential Subdivision.

Permit and License Summary for November and December 2023:

Driveway Permits:	0
Utility Licenses:	6
Paving Licenses:	0
Excavation Permits:	2
Certificate of Occupancy Inspections:	12
Construction:	1
Obstruction Permits:	7

Site Review/Project Oversight Support:

Technical Review Committee:

Two (2) projects came to TRC in January that required Engineering review:

- 42 Long Hill Rd: 34 Lot Subdivision next to the Long Hill Park
- Eversource Utility Upgrades: Upgrades to Large Transmission Towers across the City

In addition to performing technical reviews, Engineering Staff routinely meets with developers, engineers and contractors to review conceptual designs prior to them starting work.

Wastewater Permit Review Summary for January 2024:

Sewer Connection Permit: 0
Septic Design Reviews: 4

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:

- Copley Commons Subdivision (Leathers Ln.)
- Tiny Home Development (Back River Rd.)
- Copper Drive Subdivision (New Rochester Rd.)
- Sophie/Banner Dr Subdivision (Bellamy Rd.)
- Goosetail Dr (757 Central Ave)
- 725 Central Ave Development (Central Ave and Brick Rd)
- Medical Office Building (Durham Rd)
- Northeast Credit Union (Education Way)



Figure 9: 7 West Durham Road Medical Office.

There was one (1) preconstruction kickoff meetings in January for the recently approved expansion of Cielo Drive Residential Development.