

Report for the City Manager

Community Services: Engineering

Date: July 10, 2024

The purpose of this document is to summarize the work the City of Dover Engineering Department from June 1st through June 30, 2024.



Engineering
Community Services | Dover, NH

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
Vacant – Environmental Project Manager
Brenna Weston – Engineering Intern
Griff Bates – Engineering Intern

Staffing Update:

Environmental Project Manager Courtney Mitchell left the City of Dover Engineering staff in June after roughly four months of working here. Courtney is returning to the Town of Alton where she worked prior to coming to Dover. The Engineering team wishes Courtney the best in her return to a more operationally focused side of Public Works.

With Courtney's departure, the Engineering Department is seeking a new Environmental Project Manager and posted the position in June. Applications are being accepted and those interested are encouraged to contact the City of Dover for information on how to be considered for the position or submit an application through the City's online job portal here:

<https://cityofdover.applytojob.com/apply/ujGMVJ9hbE/25002-Environmental-Projects-Manager-FullTime>

Staff Workload:

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) did not meet in June.

Transportation Advisory Committee (TAC) (Jillian Semprini): TAC did not meet in June. The next meeting is scheduled for July.

Planning Board (Ken Mavrogeorge): Planning Board met on June 11th and 25th to discuss various applications for residential developments on Locust St., Tolend Rd, and various Conditional Use Permits.

Municipal Alliance for Adaptive Management (MAAM) (Courtney Mitchell): There was a meeting held in Rochester, NH on June 6th to review:

- Project take-aways from Brown and Caldwell (MAAM Consultant) on the Eelgrass Resiliency Project.
- An update on the Eelgrass Resiliency Project next steps and monitoring progress will be provided by PREP.
- Catch Basin Crediting Literature Review provided by UNHSC
- PTAP updates by NHDES/UNHSC
- GB2030 Regional Street Sweeper Project- City of Dover, Jamie Houle

Seacoast Stormwater Coalition (SSC) (Director John Storer): The SSC met on June 26th in a virtual setting. Topics of the meeting included an update on the Municipal Green SnowPro Program, PTAP workshop series discussions, and a rundown of future meetings. There was also discussion about the role of HOAs with regards to Stormwater BMPs. The next meeting of the SSC is scheduled for July 17th.

TIF Advisory/Cochecho Waterfront Development Committee (CWDAC)/Park Subcommittee (Jamie Stevens): The CWDAC Park Sub-committees met on June 18th to review samples of the block retaining walls to be installed in Nebi Park and to choose decking materials for the bridges in the nature pathways. The next meeting of the park sub-committee will be held in July to look at pavers for the park and make color selections.

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
2024 YTD	84	90
June 2024	23	15

Public Outreach:

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.

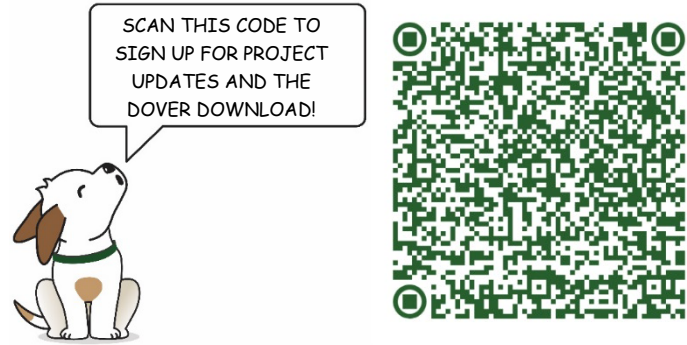


Figure 1: Rover the Community Services Dog and a QR Code to sign up for project specific updates and the Dover Download.



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

Water Service Line Inventory:

The United States Environmental Protection Agency's (EPA's) revised Lead and Copper Rule (LCRR) 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 available to the public and will be used to identify service lines with potential lead contamination.

Led by Assistant City Engineer, Amelia DeGrace, preparation of the inventory has been a true team effort, with the Office of Information Technology (OIT), Community Services Utilities, Water & Sewer Billing, Media Services, and Engineering all pitching in. NHDES awarded the City a \$75k grant to prepare the inventory.

The inventory work to date includes identifying approximately 10,000 service line locations, which the team will need to identify the service materials for. In order to determine the materials of service lines, staff must comb through record drawings, water tie cards, and other City documents. To help staff identify materials for services lines, an online survey has been developed and is currently live through the City's website for the public to submit information on their water service. The survey can be accessed by scanning the QR code in Figure 2. As of July 10, 2024 there have been 557 responses to the survey with almost 30 received in the last month.

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 Spotlight: Community Services Takes the Lead on Recreation Projects: Public Input Needed!

With the recent retirement of Director Gary Bannon, the City of Dover's Community Services Department is stepping up to oversee capital projects in coordination with the Recreation Department. This exciting transition coincides with what is anticipated to be a busy couple of years to the City's recreation areas.

To ensure these projects best serve our community, the City's Engineering, Facilities, and Recreation Staff will be hosting a Recreation Public Meeting this summer in the Council Chambers. The meeting will be recorded for those who cannot attend in person and posted online for viewing along with materials presented at the meeting. The date and time of the meeting will be determined after a meeting with the NHDES to discuss the plans for moving material.

Why a Public Meeting?

City of Dover staff are firm believers that projects are successful when the public is informed about the work and their input is taken into consideration. This meeting is the public's chance to learn about upcoming recreation projects impacting our schools and neighborhoods, and share your feedback.

Projects on the Horizon:

In 2020, the City's Department of Planning and Community Development, in coordination with the Strafford Regional Planning Commission and the Recreation Department, updated the Culture and Recreation Chapter of the City's Master Plan. The full document can be read or downloaded from this link or by scanning the QR code on this page: https://www.dover.nh.gov/Assets/government/city-operations/2document/planning/master-plan/Recreation/Final_CultureandRecreation_Chapter_052620.pdf

The master plan chapter established goals that are consistent to those that were developed as part of the prior two master plans from 2000 and 2009. The goals are intended to ensure that Dover:

- Provides a broad range of recreational facilities and programming opportunities for the citizens of Dover now and in the future.
- Guarantees that recreational facilities and programming opportunities are appropriately designed to include people of all ages and abilities regardless of their economic status.
- Develops creative solutions to integrate public art, in various forms, throughout the community.
- Thinks creatively in its approach to each obstacle facing recreation, not only to meet public expectations but to exceed them.
- Maintains all existing parks, athletic fields, and facilities in an efficient and timely manner.
- Enhances its parks, facilities, and programming in a way that meets current needs and anticipates changes in demand and preference.
- Promotes its recreational assets, programs, plans, and achievements through innovative methods.



Figure 3: Scan this code to read the City's Culture and Recreation Master Plan (2020).

Some of the projects to be discussed at the meeting include the following:

Horne Street Park Improvements: This project focuses on creating a more natural buffer with adjoining neighborhoods while improving the ballfield and greenspace. Expect temporary closures while work is completed.

Jenny Thompson Pool Rehabilitation: Get ready for a revitalized pool experience! This project includes a complete reconstruction of the pool structure, along with improved accessibility features and updated mechanical systems.

Adventure Park: Enhancements are underway! The removal of the old rope climbing equipment is complete and the City is planning to install a new climbing structure as funding becomes available. In the meantime, plans are underway for the installation of granite curbing around the swing and sandbox areas to replace the wooden posts installed during the park's original construction. Upgrades to the water/sand play area are also being planned. Temporary closures to the park are anticipated in September to ensure safety during construction. The park will reopen before Apple Harvest Day in early October.

Garrison School Park Fields: Upgrades are planned for the park areas surrounding Garrison School. Improvements are aimed at improving drainage, leveling playing surfaces, and improved accessibility. City staff recently met to review upgrades needed to address overgrown vegetation, pickleball court renovations, and noise attenuation.

Woodman Park Reconstruction: This project tackles overdue upgrades to the park's tennis courts, basketball courts, and grass field. Expect improvements in accessibility, drainage, and overall functionality.

Maglaras Park: The City staff is in the early stages of planning for comprehensive upgrades to the parks at Maglaras Park. The old fencing and dugouts will be removed in 2024 in anticipation of field improvements in late 2024 after permitting through the NHDES is completed. NHDES permit applications are under development by the City's consultant Verdantas.

Funding and Your Voice Matter!

The above-mentioned chapter of the Master Plan notes not only the projects that the City would like to pursue but the importance for the City to designate realistic budgets for the construction and continued maintenance of new or replacement amenities. Setting realistic maintenance budgets amount as time goes ensures that the recreation areas are kept in good, safe, and working order.

The public meeting will discuss available funding for these projects in terms of the Capital Improvement Program and explore how the community can contribute to further improvements through fundraising efforts. Staff will also be taking down questions and ensuring they are addressed in writing on the City's website.

The final project scope of projects and schedule will be determined based on the City Council-approved Recreation Master Plan and Capital Improvement Program.

Join the Conversation!

The exact date and time will be announced soon. Staff is looking forward to hearing your thoughts and working together to create even better recreational opportunities for all!

Waterfront Redevelopment:

The City of Dover's waterfront project made significant strides with major advancements achieved in June 2024. Sanitary sewer and storm drainage systems in the loop road (River Street) are nearly complete. Inspections and testing is ongoing for the sewer lines and catch basins installed for drainage. Electrical and telecommunication systems are also nearing completion in this stretch of the project. Duct banks have been installed along key roads and connections established under the Makem Bridge, paving the way for the removal of aerial utilities across the waterfront site. Additionally, groundwork preparations for future buildings are underway by the private developer's foundations contractors. Installation and testing has begun for the installation of nearly 950 aggregate piers, which will serve as the foundation for future buildings, allowing vertical construction to commence in the near future.

The City's contractor, Northeast Earth Mechanics mobilized their paving contractors to establish the final gravel grades for the roadways, allowing for the final stages of preparation before laying the pavement base course which was installed at the end of June.



Figure 4: Base course pavement has been installed at the waterfront redevelopment site.

Traffic Signal Management:

The City's consultant Sebago Technics wrapped up a yearlong study of the traffic signals and provided a technical memorandum with recommendations for capital projects to improve signal operations and resiliency. Some key takeaways from the report include:

- The estimated replacement value of all 26 City-maintained signals is approximately \$6.5 million (avg. \$250,000 per intersection)
- Current industry standards assume a design life of approximately 20 years for traffic signal structures and a design life of approximately 10 years for traffic signal equipment.
- It is recommended that the City budget for the replacement of the structures at roughly one intersection per year and the replacement of equipment at roughly two (2) intersections per year.

- For a 20-year asset replacement plan the consultants recommend the following budgets for the replacement and maintenance of signal assets
 - o \$425k for years 1-5
 - o \$550k for years 6-10
 - o \$700k for years 11-15
 - o \$785k for years 16-20.

Note: Currently the City allocates only about \$90k per year for signal maintenance and traffic calming as part of the operating budget.

- A comprehensive evaluation of the existing mast arm and foundations was also recommended for all the intersections within the City. The evaluation should include non-destructive testing of the thickness of mast arm uprights, mast arm height, mast arm length, mast arm material, the angle relative to the ground of the mast arm uprights, and a general assessment of the condition of the structure and foundation to aid in the prioritization of intersections is strongly recommended.

Note: Engineering is finalizing an RFP for a non-destructive assessment of the City's traffic signal per the recommendation.

Fifth and Grove Reconstruction:

N. Granese and Sons finished the installation of the temporary water main and began installation of the new water main and storm drainage in Fifth St. and Grove St. The Fifth and Grove project includes new utilities, accessible sidewalks, signage, and the complete reconstruction of the roadway. Traffic disruptions within the project area are expected intermittently for the rest of 2024 as the project progresses. Drivers are encouraged to sign up for project updates to keep up with proposed closures, detours, and shifts in traffic patterns to minimize delays. Alternative routes are available around the project site. Patrons to local businesses are encouraged to sign up for notices too as parking restrictions on Fifth and Grove will continue through 2024 in select areas as construction progresses.

Annual Street Paving Program:

In June, the City's Operations staff oversaw the reclaiming and paving of Barry St., Tanglewood Dr., and Berkshire Ln. as part of the annual paving program. These streets will also receive a bituminous curbing installed to help control stormwater. This work is intended to provide additional life to a road until a more comprehensive street reconstruction project can be added to the annual Capital Improvement Program.

Weather and other conditions permitting, Brox Industries, Inc., the city's paving contractor, is scheduled to begin paving operations in July on Saint John St., Durrell St., and Winter St. The work includes milling the current pavement, raising castings, and paving. The work is anticipated to take multiple weeks to complete.

Portland Ave Retaining Wall:

The contractor for the project, GW Brooks, mobilized in June with temporary traffic signals for one way alternating traffic. Wall construction was started and the demolition of a former natural gas station along Portland Ave was completed. It is anticipated that work will last until the end of 2024.



Figure 5: Portland Avenue Retaining Wall is rising.

Court and Union St/Lower Central Ave Reconstruction Projects:

Engineering Staff have reviewed 95% specifications (specs) so that bid documents can be prepared later in 2024 for construction in 2025. These projects include upgrades to utilities, drainage, and street pavement reconstruction. Construction specifications, also known as specs, are detailed instructions that outline exactly how a construction project needs to be completed. They are essentially a rulebook that ensures everyone involved in the project is on the same page about the materials, methods, and quality of work expected by the Owner which for capital projects is the City of Dover. These specs are typically created by architects, engineers, or professional specification writers before a project begins.

This project is anticipated to go to bid at the end of summer for a fall 2024 construction start at the earliest. The City would like to have the project underway no later than spring of 2025. It is anticipated that the project will take two years to complete.

Crosby Road Drainage Evaluation:

A Request for Proposals (RFPs) has been released for a drainage evaluation for the Crosby Road Industrial Park. Flooding concerns in the area have been raised by property owners and the City will be looking for a consultant to assess the various culverts, bridges, and drainage swales for capacity limitations and provide recommendations for improvements.

Facilities Projects:

Jenny Thompson Outdoor Pool Renovation:

The Jenny Thompson Outdoor Pool renovation project is gaining momentum. Weston & Sampson, the engineering firm responsible for the project, has submitted their preliminary design plans. This is a key milestone, bringing the renovation closer to fruition. City staff are reviewing the plans to ensure the plans meet the goals set by the City. Once the review is complete, they expect to release a Request for Proposal (RFP) by fall 2024. This RFP will invite qualified contractors to compete for the project. The progress signifies a significant step forward for the much-needed refurbishment of the pool. We can all expect to hear more updates as the project moves through the bidding and construction phases.

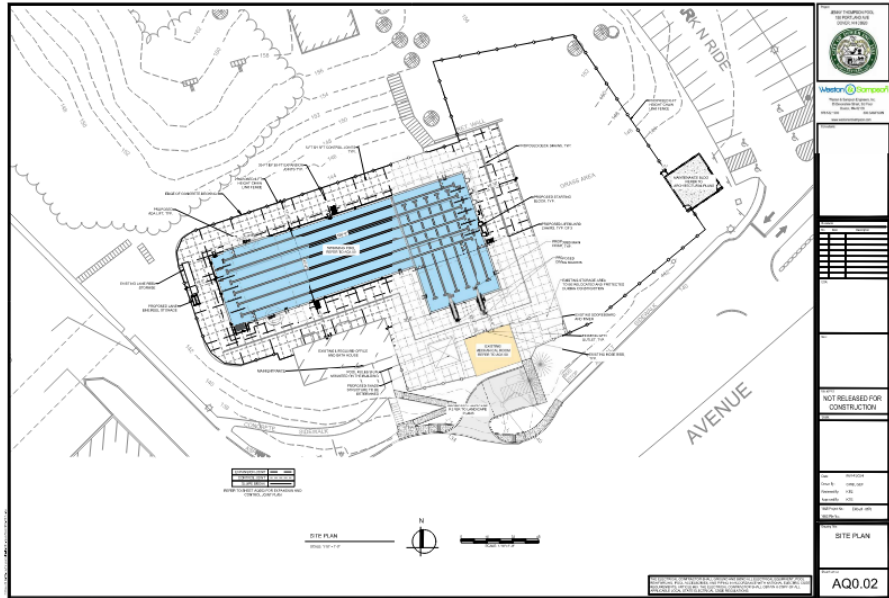


Figure 6: Preliminary Plans for the Jenny Thompson Pool Rehabilitation.

Ice Arena Glycol Tank Replacement:

The ice arena recently underwent a major upgrade to its glycol tank system. Davis Mechanical successfully installed a new, one-piece aluminum tank, replacing previous iterations and incorporating updated piping as part of the project. This enhanced design boasts a sturdier, single-piece construction, which is anticipated to significantly extend the tank's operational lifespan.

To ensure a seamless transition for the upcoming 2024-25 season, a collaborative effort was undertaken on June 19th. Staff members from the ice arena, Davis Mechanical, Siemens, and Carrier were present on-site to oversee the system activation. Their combined expertise resulted in a successful launch, with the Holt rink currently operational and ice production underway. Fosters rink is expected to follow suit in October.

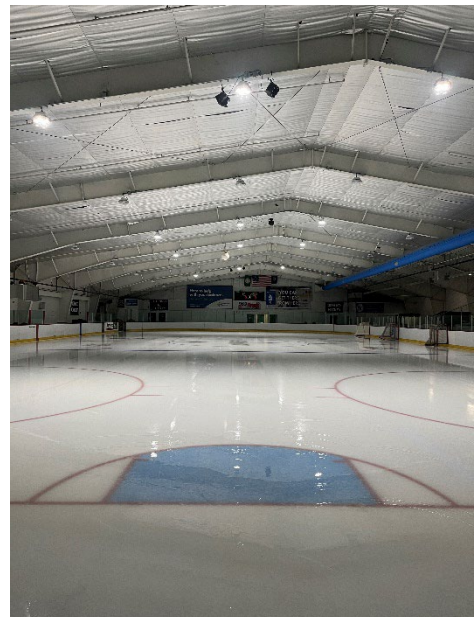


Figure 7: Dover Ice Arena ice production is underway.

Permits and Licenses:

Permit and License Summary for June 2024:

Driveway Permits:	10
Utility Licenses:	2
Paving Licenses:	5
Excavation Permits:	13
Certificate of Occupancy Inspections:	16
Construction:	0
Obstruction Permits:	3

Wastewater Permit Review Summary for June 2024:

Sewer Connection Permit:	0
Septic Design Reviews:	2



Figure 8: Community Recreation Building at Karolina Way.

Site Review/Project Oversight Support:

Technical Review Committee:

The City's Engineering staff typically takes between 1 to 4 hours for each review as part of the Technical Review Committee. The review focuses on engineering related design elements such as utilities (water and sewer), stormwater, parking lot layout and pedestrian pathways. To ensure that projects efficiently move through the TRC process, City Engineering staff is available for preapplication meetings with applicants. To schedule a meeting with staff, call 603-516-6450.



Figure 9: Medical Office Building off Exit 7.

One (1) project came to TRC in June that required Engineering review:

- 566 Sixth Street Multifamily development

Construction Oversight:

Engineering Technician, Jordan Chambers, continues to conduct oversight of over 65 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.)
- 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)
- Emerson Ridge (Old Oak St.)
- Ember Dr (New Rochester Rd.)
- New Community Recreation Building (Karolina Way)
- Mixed Use Residential – The Station (2 Grove St)



Figure 10: The Station development at 2 Grove St.

Preconstruction Kickoff Meetings: There were no preconstruction meetings in June.