Narrative

1.1 Project Background & Site Description

The Towns of Pelham and Amherst were awarded a joint Housing Works and Infrastructure grant to extend sewer and replace water mains within the Village Center area of Pelham. The project area consists of South Valley Road from Amherst Road to Jones Road, and all of Jones Road and Cadwell Street, see Figure 1 below. New sewer main will be installed throughout the site area, along with new sewer manholes, and service connection stubs. Water mains on South Valley Road and portions of Jones Road will be replaced along with service lines and hydrants. Photographs of the site are provided in the wetland delineation report in Attachment A.

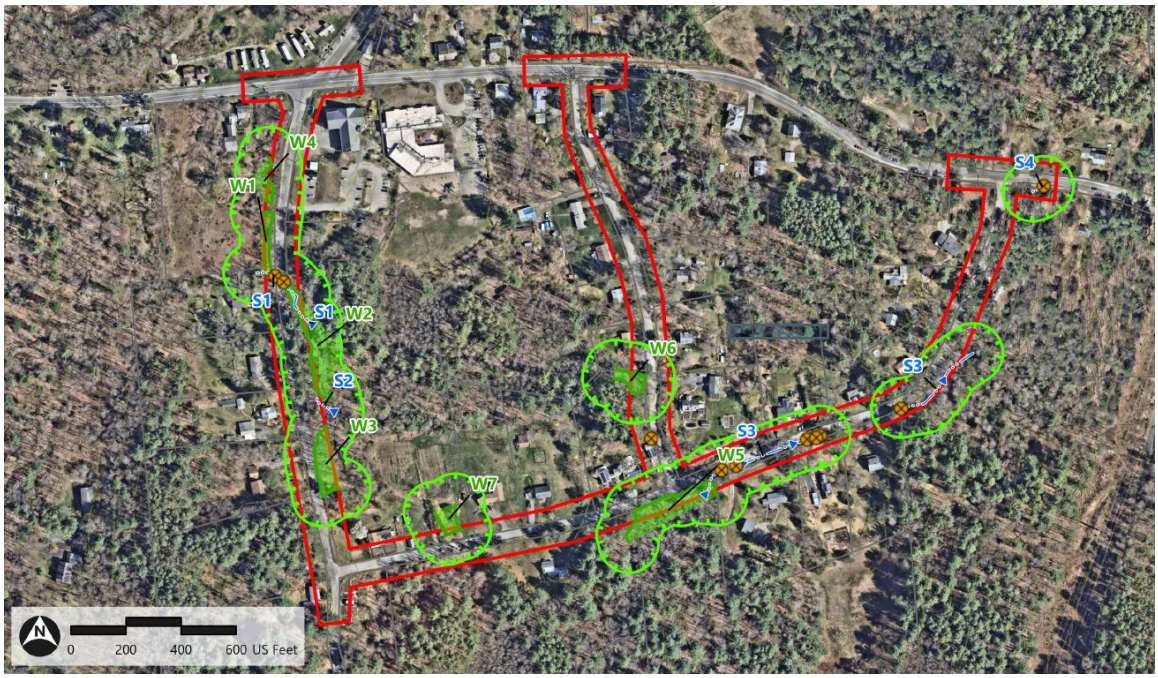

Figure 1: Site Area and Wetland Delineation

1.2 Resource Area Delineation

The resource areas at the site were demarcated by Vanasse Hangen Brustlin (VHB), Inc., environmental consultant, on March 13 and April 16, 2024. They identified and delineated resource areas within 50 feet off of both sides of South Valley Road, Cadwell Street, and Jones Road within the site area. Resource areas identified include:

- Bank
- Land Under Waterbodies & Waterways (LUWW)
- Bordering Vegetated Wetlands (BVW)

A total of seven (7) BVWs and four (4) intermittent streams were delineated within the site area, see Figure 1 above. One of the streams flows through a culvert under South Valley Road. A detailed description of the wetland areas and associated delineation forms are provided in the VHB wetland report in Attachment A. The delineation was marked on site with consecutive flagging. The resource area delineation points are shown on Plan Sheets 8-12 (water main) and 13-17 (sewer main) of the project plan set in Attachment B.

The project site is not located within a 100-year Flood Zone, or an area mapped by the Natural Heritage and Endangered Species Program (NHESP) for rare and endangered species, or an Area of Critical Concern (ACEC), and does not include any Certified Vernal Pools (CVPs), Potential Vernal Pools, or Isolated Wetlands.

1.3 Work Description & Resource Area Protection

1.3.1 Water Main

This project involves replacing approximately 3130 linear feet of water main, and will include installing water service line connections and stubs, and hydrants. Water main will be replaced along South Valley Road from Amherst Road to the intersection with Jones Road, and along Jones Road from South Valley Road to the intersection with Cadwell Street, and for approximately 830 linear feet before the intersection with Amherst Road. The water main on Cadwell Street will not be replaced. The water main will be installed prior to the sewer main.

Trenching for the water main will be approximately seven (7) feet deep for the main and five (5) deep for the services, and approximately three (3) feet wide. The trench will be backfilled as we go, sand or pea stone will be used around the pipe which will be covered with the excavated native soil. The trench will be repaved/patched after the project is complete. Groundwater is shallow at the site, three to five (3-5) feet deep in some places, therefore the trenches will need to be dewatered. A requirement of the contractor agreement will be to provide a dewatering plan which will be provided to the Pelham Conservation Commission for approval. See Attachment B for soil boring logs.

1.3.2 Sewer Main

This project will include installing approximately 3800 linear feet of new sewer main, along with sewer manholes, and new sewer service line stubs. New sewer main will be installed along South Valley Road to the intersection with Jones Road, and for the entire length of Jones Road and Cadwell Street.

The trench for the sewer main will be approximately six (6) feet deep and three (3) feet wide. Once the new water main is installed and we can disconnect the old sections of water main we hope to use the trench for the old water main for the new sewer main. Excavation for the sewer man holes will be approximately eight to ten (8-10) feet deep. It is expected all excavated areas will need to be dewatered.

1.3.3 Construction

Construction will follow project plans submitted with this NOI application titled *Town of Pelham Village Center Water and Sewer Improvements* by Town of Amherst DPW Engineering Division including all general notes and construction details, see Attachment B.

Construction will include the following general activities, for more detail see attached plan set:

1. Install erosion control and define/stabilize construction staging areas. Close streets to traffic as needed.
2. Trench to install replacement water main. Utilize dewatering set up to keep trench open. Backfill trench as work proceeds.
3. Install water service lines and hydrants
4. Trench to install sewer main. Utilize dewatering set up to keep trench open. Back fill trench as work proceeds.
5. Install sewer manholes as proceed.
6. Install sewer service line stubs.
7. Re-pave/patch trench within the roadway.
8. All excavated areas outside the roadway (service lines, hydrants) will be seeded and mulched with straw.

Installation of the utilities and associated service lines will not result in any temporary or permanent resource area impacts. Work will be within the buffer zone to resource areas, with the closest work to a resource area occurring at the culvert pipe for Stream 1 (S1). The culvert pipe will not be touched, minor digging will occur around the culvert pipe to place the water and sewer mains below the pipe.

All work will be located within the road right of way (ROW), and does not propose any new impervious surface or changes to the drainage patterns of the roads. Erosion control consisting of straw wattle or filter tube will be placed between the work area and resource areas. Silt sacks will be used in all existing catch basins.

This project is a limited project under provision 10.53(3)(d) – *the construction, reconstruction, operation and maintenance of underground and overhead public utilities, such as electrical distribution or transmission lines, or communication, sewer, water and natural gas lines, may be permitted…...* Therefore, performance standards may be waived and the project permitted at the discretion of the Conservation Commission.

Significant care will be taken to minimize impacts to the buffer zone, as discussed below in Avoidance, Minimization, and Mitigation Measures.

1.4 Avoidance, Minimization, & Mitigation Measures

The proposed project has been designed with the priorities of avoidance, minimization, and mitigation. The project intends to minimize the amount of disturbance associated with construction using the following measures.

Avoidance

In order to avoid resource area impacts we moved water and sewer service lines and hydrants out of all resource areas. We're also only replacing the portions of the water main that are undersized which saves buffer zone impact. Refueling of all construction equipment will be on paved areas. Prior to commencing work, the contractor will be required to provide a detailed work plan, dewatering plan, and associated procedures for review.

Minimization

Erosion controls consisting of straw wattles or filter tubes will be installed between the work area and the resource areas, along with silt sacks in catch basins to mitigate the migration of sediment, as shown on Plan Sheets 8-17 of the project plan set. Erosion controls will be maintained, repaired and/or replaced if damaged, for the duration of the project. All erosion control measures will be removed and properly disposed of at the completion of construction, following approval by the Conservation Commission. All sediment piles stored on site will be covered with tarps and surrounded by erosion control.

Mitigation

The temporary impacts to the buffer zone from trenching and excavating the new manholes will be mitigated by the benefit of having sewer available to this part of Pelham. Failing septic systems can have detrimental effects on wetlands, it is beneficial to have a choice of connecting to a public sewer system.

1.5 Alternatives Analysis

Currently, this area of Pelham has no sewer service, and portions of it are served by an undersized water main. In order to allow this area of town to grow and develop the infrastructure to meet those demands must exist. The project has been designed based on using avoidance, minimization, and mitigation resulting in a project with the best benefit for the environment.

1.5.1 Alternative 1 – Only Install Sewer

Only installing sewer and not replacing the existing water main would result in less temporary impact to the buffer zone. However, the current water main on South Valley Road and portions of Jones Road is only two (2) inches in diameter limiting its capacity and development opportunities for the area. The Towns of Pelham and Amherst decided

it was a good opportunity to upgrade the water main when the streets were already being dug up for the new sewer main.

1.5.2 Alternative 2 – No Action

The remaining alternative option to the sewer and water main project is no action, which would result in continued poor water service and no sewer service to this area of Town. As mentioned, Pelham would like this area of town to grow and become a village center which is difficult to do without infrastructure. This is not a long term, viable solution to the problem. The proposed project is the most effective and practical alternative for the Village Center.