

Notice of Intent

Prepared for: Town of Franklin Department of Public Works

Prepared by: Derek Adams

30 September 2025

Project Description

This is a retroactive filing for emergency work that was completed at the Nicholas Drive/Prospect Street culvert.

On April 29, 2025 resident D. Civetti of Nicholas Drive contacted DPW front office staff to request an inspection of the town-owned culvert that abuts her property. She stated a condition existed which she had never encountered before - water breaching the level of the manicured turf grass in her backyard. I inspected the area the following day, and contacted Civetti to discuss the situation. I advised her that her property abuts a large drainage/Stormwater storage area, and while I respect her insight into the changing conditions; the area in question was currently “underwater” - so we would attempt to unclog the (likely) clogged culvert. Actionable items would be to slowly unclog the pipe, as to not send high velocity water downstream, potentially causing adverse effects.

The Stormwater Crew inspected and partially unclogged one of the pipes on April 30th, 2025. We further unclogged the pipe on May 1st, 2025. Civetti was extremely unsettled by what she perceived to be a massive and catastrophic blockage of the pipes. She and I had additional lengthy discussions on May 2nd, 2025 and May 6th, 2025. I stated to her that we could not currently take significant action, as there were periodic rain events at the time, and it was not uncommon or unexpected that the rain totals would contribute to the existing conditions. On May 9th 2025, Civetti contacted the Franklin Police Department, stating there was a clogged pipe. I dispatched a stormwater employee immediately, yet conditions were not dire - the pipe(s) were discharging greater than 50% of pipe volume on the downstream side.

On May 12, the water had subsided enough to inspect the top ~50% of the pipes. As you will see in the attached photo, one pipe is visible; yet the other was experiencing impeded flow due to debris and fallen stones. The stones that impeded the pipe originated from the dry-laid-stone headwall, which is estimated to have been constructed nearly 100 years ago. At this time, a few stones were carefully removed (by hand) from their obstructive position in order to enhance flow. Subsequent rain events proved that a negative feedback loop was occurring. As the height of the water level ebbed and flowed with additional rain events - additional soil would wash away and undermine additional stones.

It was my professional opinion that remediation needed to be conducted immediately, in order to prevent a catastrophic event which could and would undermine the structural integrity of Prospect Street. The hazard was significant, and the ramifications even more so: should the road be undermined, and subsequently ‘closed’ at the culvert - it would not only instigate a costly and lengthy repair, but it would also impact emergency service response times and school bus routes. Prospect Street is a bit unique in that it is an older road in town, and also does not have ‘outlets’ other than Lake Street which directs traffic to Bellingham.

On July 15 2025, the Stormwater crew re-established/stabilized the headwall along the southern bank of the roadway. A mini-excavator was mobilized to carefully remove the remainder of the existing headwall. The excavator entered the work zone by travelling within 1

foot of the existing guardrail; entering on the side of Nicholas Drive. Two police details provided traffic control on the narrow stretch of roadway. Three crew members of the Stormwater Division provided the labor.

The dimensions of the existing 'headwall' consisted of 15 linear feet by 5 linear feet of stone/small boulders that were less than 1 foot in diameter. The bucket of the excavator removed the stone and placed it in a 1 ton vehicle, which was parked on the roadway. The stones were transported to the Department of Public Works storage yard. Four-to-eight inch trap rock replaced the former headwall stones. This work remained within the footprint of the previously removed stone along the bank of the roadway. Due the nature of the previous conditions which lead to the emergency repair, a portion of the bank had eroded in front of the pipes. Three ½ yard buckets of sediment from the bank erosion were removed from in front of the pipes. Also, due to the poor condition of the existing two 18" clay pipes, a 4 foot section of 18" corrugated plastic pipe was sleeved into each of the existing pipes, in order to provide additional strength for the existing "chipped" and "cracked" pipes. While mats were used to minimize excavator tracks along its travel, a steel rake was used to smooth out ridges that had formed. The area was then over-seeded with a native-conservation-mix.

Later, a section of asphalt was paved/extended from the edge of the existing roadway, to beyond the crest of the trap rock - in order to ensure the roadway stormwater did not infiltrate and undermine the newly installed trap rock. Sediment/erosion control was reviewed for effectiveness approximately every 48 hours for the first week. The area was also monitored after rain events. No adverse events regarding sediment/erosion were observed.

Functions and Characteristics

1) Public Water Supplies: The nearest well which supplies Public Drinking Water is 4,967 feet; or 0.94 miles.

2) Private Water Supplies: It is approximately 400' to the nearest Private Well (69 Prospect Street).

3) Groundwater Depth: Estimated to be 6 feet. This project did not involve 'digging' or 'blasting.' The existing rocks were removed, and were subsequently replaced. There was no use of water on-site. One and a half cubic yards of erosion were removed from in front of the existing pipes.

4) Flood Control: The repair work was confined to the existing slope of the bank, and did not reduce flood storage.

5) Erosion and Sedimentation: Erosion and Sediment Control: Silt socks were used along the bank/water interface, in order to prevent potential discharge of additional erosion into the waterway - as well as a protective measure in the occurrence of a fuel or hydraulic fluid leak during construction.

6) Storm Damage Prevention: The goal of this project was to strengthen the headwall, therefore significantly reducing the adverse effects regarding impacts of large-scale storm events.

7) Water Quality: The water resource area is not listed as an impaired water body within the Town of Franklin.

8) Water Pollution Control: Water Quality - Construction: Silt socks were placed along the bank/water interface. They were installed by using 2' wooden stakes to maintain their desired position.

Water Quality – Post Construction: The area was observed approximately every 48 hours to ensure stability. No adverse events or indications were observed. Silt socks were removed once the Conservation Mix had rooted; and after several rain events did not provide evidence of washout/erosion.

9) Fisheries: The relatively minimal impact of the repair will stabilize the bank and reduce/eliminate sediment from impeding the life cycle of aquatic life.

10) Shellfish – Not applicable in Franklin.

11) Wildlife Habitat: Reconstruction of the headwall and the restoration of the extended area with native grasses were conducted as to not impact the wildlife area.

12) Rare Species Habitat: The area is absent of habitats for rare wildlife as conveyed through National Heritage and Endangered Species Program mapping.

13) Agriculture: Upstream - The town-owned property at 209 Prospect Street bales hay. Improvements to the headwall are anticipated to have zero effect, other than continued successful drainage of water/stormwater through the Prospect Street culvert. There is no anticipated affect on the hay bale operation or apiary boxes located downstream at 398 Prospect Street.

14) Aquaculture: To date there are no aquaculture operations in Franklin.

15) Recreation: The upstream town-owned property located at 209 Prospect Street (“Schmidt’s Farm”) will remain unaffected by the restoration of the headwall.

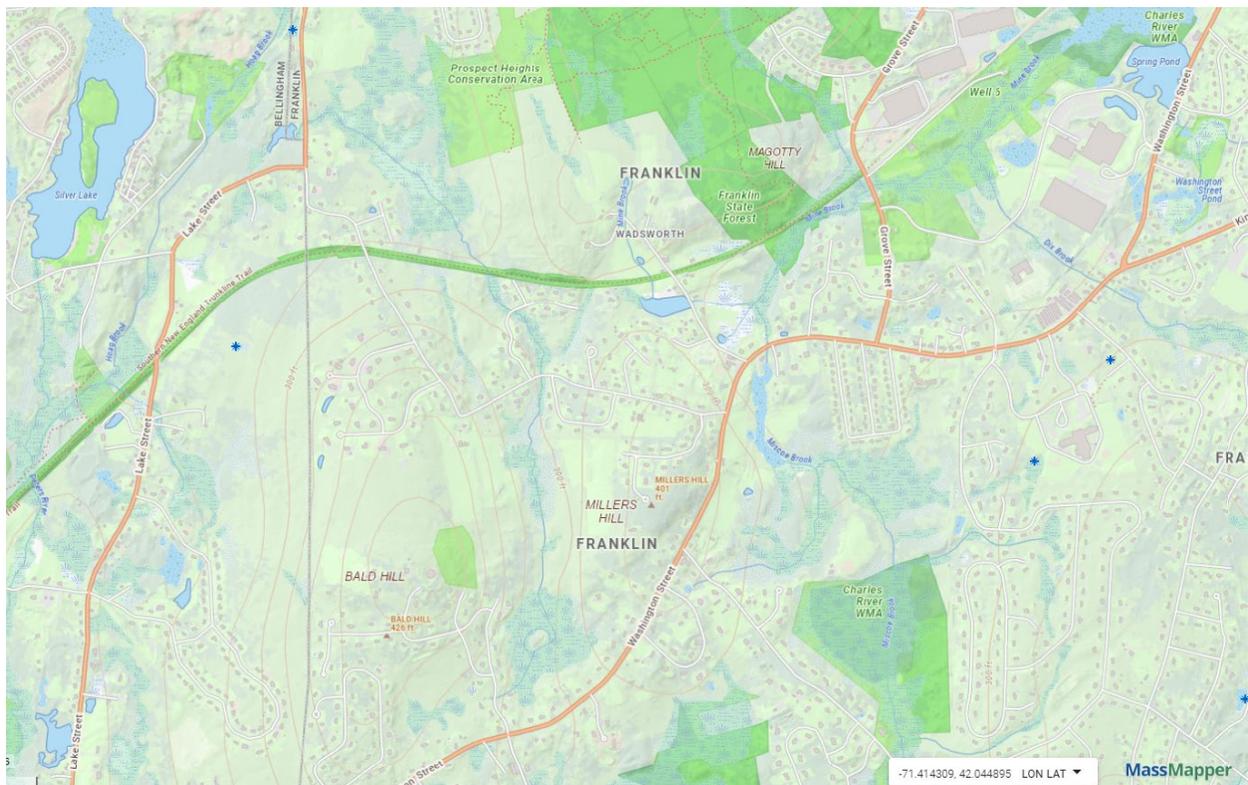
Vernal Pool Statement

Mass Mapper indicates the nearest vernal pool is located in Bellingham, Massachusetts – 3,936 feet from the scope of work. The closest vernal pool in Franklin is located 6,446 feet away at 628 Washington Street.

Maps



Topographical Map



Mass Mapper – Vernal Pool

Erosion and Sediment Control Narrative

Silt socks were installed at the bank/water interface in order to protect and mitigate sediment/erosion from entering the waterway. These were secured in place with 2 foot wooden stakes. There were no adverse impacts observed of sediment/erosion breaching or accumulating at the silt socks. There were no fuel releases or hydraulic leaks during the construction process.

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Mitigation Narrative

The purpose of this project was to enhance and strengthen the headwall of the Prospect Street/Nicholas Drive culvert; attempting to replicate conditions of the former headwall as closely as possible. Most work was done from the roadway. In order to clear the sediment that had accumulated in front of the existing pipes from the former failing headwall, the mini-excavator did briefly work from the “shoulder” of the road. Mats were used in order to reduce impact to the existing soil along the shoulder of the road. Massachusetts Conservation Mix was overseeded along the shoulder of the road. Erosion control was implemented to reduce/mitigate the possibility of washout entering the waterway.

Plans

See attached.

Photos



Figure 1: May 12th, 2025. One pipe flowing at 50% capacity, impeded by fallen stones. The second pipe is not visible due to fallen stones originating from a failing headwall.



Figure 2: Completed project.