Stormwater Management Report

Littleton Electric Light and Water Department
242 King Street
Littleton, MA

October 2025

Prepared for:
Littleton Electric Light and Water Department
39 Ayer Road, P.O. Box 2406
Littleton, MA 01460

Prepared by:
Goldsmith, Prest & Ringwall, Inc.
39 Main Street, Suite 301
Ayer, MA 01432

GPR Engineering Solutions for Land & Structures

DescriptionDescriptionProject No. 241114
Stormwater word Doc (25 10 7)

Contents

Attachments

1. Description

The Project includes a stormwater management system designed to mitigate peak runoff rates, enhance water quality, and provide groundwater recharge in compliance with the 2008 Massachusetts Department of Environmental Protection Stormwater Handbook (2008 Handbook).

2. Existing Conditions

The project site is an existing residential duplex located within the R zoning district and designated at Parcel Map ID U36-7-0 under the Town of Littleton assessor's department. The lot consists of 8.98 acres of land. The property is developed with a single-family residence 8-bedroom dwelling with an existing in-ground swimming pool and a Water Resource Recovery Facility (WRRF). The site focus is on the area of the single-family residence 8-bedroom dwelling and in-ground swimming pool area. This focus area has been divided into a 64,904 SF area (1.49 AC) of the property.

2.1. Regional Watershed

The site is located within the Merrimack River Watershed, which is subject to the statewide Pathogen TMDL. It is not expected to increase pathogen loading within the watershed as the proposed work will connect the existing dwelling to the regional wastewater treatment plant.

2.2. Critical Areas

Critical Areas require enhanced stormwater treatment and the application of specific Stormwater Control Measures (SCMs), as outlined in Standard 6 of the Massachusetts Stormwater Handbook. This includes, but is not limited to, providing water quality treatment for the first inch (1.0") of runoff, implementing adequate pre-treatment for discharges to structural SCMs, and incorporating source control and pollution prevention practices to minimize pollutant loads.

The subject site is located within a **Zone II** – the primary recharge area to a public water supply well under the influence of pumping. As such, it is classified as a **Critical Area** under the Massachusetts Stormwater Standards. Due to the site's location within a Zone II, stormwater design must ensure that discharges do not contribute contaminants that could compromise groundwater quality. This includes prohibiting infiltration of runoff from land uses with higher potential pollutant loads (LUHPPLs) without proper treatment, and requiring greater emphasis on pollutant removal and long-term maintenance of SCMs.

The proposed stormwater management system has been designed to comply with these requirements, ensuring the protection of groundwater resources and public water supplies.

2.3. Soils

Available NRCS soils mapping for the project appears to divide the site into two Hydrologic Soil Groups. Majority of the focus project area shows that the underlying soil material is Hinckley loamy sand, which has a Hydrologic Soil Group (HSG) designation as HGS A. For the remaining portion of the project site which lies east and north of the project area, the underlying soil material is Scarboro mucky fine sandy loam, which has a Hydrologic Soil Group (HSG) designation of A/D. Onsite soil evaluations were conducted, and the logs reveal that subsurface soil material is primarily loamy sand, which would designate the onsite Hydrologic Soil Group (HSG) as HSG A, therefore onsite stormwater management system shall be designed as such, while maintaining the HSG designation for the groundcover of the two divided areas on site.

3. Proposed Conditions

The project proposed to raze the existing driveway, walkway, pool, and shed following in the construction of a driveway and walkway. Runoff will be directed in a manner that maintains the site's natural hydrologic connectivity with the surrounding wetland system, supporting long-term ecological function and hydrologic balance. The project will result in a reduction of impervious area by approximately 2,336± square feet, reducing peak runoff rates. A small infiltrative ponding area is proposed to treat and recharge runoff generated from the proposed driveway and walkway. This ponding area allows stormwater to collect and settle, promoting sedimentation and pollutant removal prior to infiltration or discharge. The basin is graded with a shallow slope and features a vegetated bottom to enhance filtration. The design provides adequate volume to capture and store the required water quality volume, in accordance with the Massachusetts Stormwater Standards.

4. Compliance with the 2008 Handbook Standards

The stormwater management system complies with the ten (10) Standards outlined in the 2008 Handbook, as summarized below:

STANDARD 1: No New Untreated Discharges or Erosions to Wetlands

Untreated stormwater will not be discharged directly into nearby wetlands or waters of the Commonwealth. Runoff from new impervious surfaces will be treated by the small ponding area for groundwater recharge, and water quality treatment prior to being released to the adjacent wetlands.

STANDARD 2: Peak Runoff Rate Attenuation

The project is decreasing impervious area by 2,336± sf ensuring that peak runoff rates are not increased. A small water quality basin has been provided to treat runoff from the proposed driveway, which will further reduce peak runoff rates. The basin is sized to capture the 1” storm event times the tributary impervious area, which based on precipitation data from NOAA Atlas 14 - 80% of storms events in Massachusetts are less than 1”.

STANDARD 3: Groundwater Recharge

The stormwater management system includes a ponding area on-site. Refer to Attachment 5 for SCM groundwater recharge calculations.

STANDARD 4: Water Quality

The project will comply with Standard 4 water quality requirements through on-site treatment trains achieving 80% TSS removal and 50% total Phosphorus removal from the total post-construction impervious surface area on the site. See Attachment 6 for TSS removal

worksheets. SCMs are designed to capture and treat the first 1.0 inch of runoff from proposed impervious surfaces. All SCMs will be operated and maintained to ensure ongoing water quality treatment.

The proposed infiltration basin is designed to receive runoff exclusively from a residential driveway, which is a low-pollutant-load surface. Pretreatment measures such as forebays or sediment traps are intended to remove coarse sediments and oils from higher pollutant load sources such as roadways, parking areas, or commercial/industrial surfaces. Driveway runoff from a residential lot typically consists of low traffic volumes, limited vehicle turnover, and no exposure to significant sources of sediments or hazardous materials. As a result: The runoff's pollutant load is minimal and does not warrant sedimentation pretreatment. The infiltration basin itself provides adequate settling through its permanent pool/storage volume before infiltration. Eliminating unnecessary pretreatment structures reduces construction footprint and avoids introducing redundant features that provide no measurable water quality benefit for this source type.

A Long-Term Pollution Prevention Plan has been developed to outline source control and pollution prevention measures. This plan is integrated with the Operation and Maintenance Plan (Standard 9), which specifies maintenance requirements for the SCMs.

STANDARD 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)

This standard does not apply since the project does not involve any LUHPPLs.

STANDARD 6: Critical Areas

The SMCs align with the 2008 Handbook requirements for a Zone II critical area. The ponding area is designed to capture and treat the first 1.0 inch of runoff.

STANDARD 7: Redevelopment

This project is considered redevelopment.

STANDARD 8: Construction Period Pollution Prevention

Sedimentation control barriers will be installed prior to construction as depicted on the Site Plan and will be maintained in working order throughout the duration of the Project.

STANDARD 9: A Long-Term Operation and Maintenance (O&M) Plan

An Operation and Maintenance Plan has been developed which specifies maintenance requirements for the SCMs in conjunction with the Long-Term Pollution Prevention Plan which outlines source control and pollution prevention measures.

STANDARD 10: Prohibition of Illicit Discharges

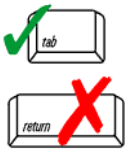
There will be no illicit discharges to the proposed stormwater management system associated with the proposed project.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

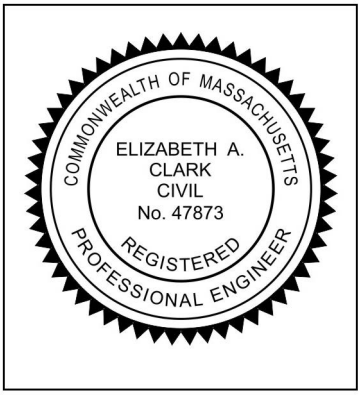
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



10-9-25

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☐ New development

☐ Redevelopment

☒ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☐ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☒ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☐ Use of "country drainage" versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☒ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☒ Soil Analysis provided.

☒ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☒ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☒ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☒ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☒ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☒ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☐ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☒ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☒ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☐ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☒ The BMP is sized (and calculations provided) based on:

- ☒ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☒ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☒ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☒ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☐ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☒ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☐ An Illicit Discharge Compliance Statement is attached;

☒ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

PLANNING BOARD

P.O. Box 1305
Littleton, Massachusetts 01460

STORMWATER PERMIT APPLICATION

1. Property Information

Street Address 242 King Street, Littleton, MA

Assessor's Map U36 Parcel 7

Deed Reference (Registry Book and Page or Land Court Certificate of Title No.):

Book:1577 Pg:104

2. Project Title or Brief Description: Construction of parking driveway and walkway.

Removal of existing driveway and walkway.

3. Property Owners: List all property owners and their mailing addresses; for any owner that is an entity (e.g. LLC or corporation), provide the name and title of the individual authorized to sign for the entity.

Littleton Electric Light and Water Department - 39 Ayer Road, P.O. Box 2406, Littleton, MA

4. Applicant Information (Individual or Entity to Whom Permit Will Be Issued)

Name: Littleton Electric Light and Water Department

Company (if applicable): --

Mailing Address: 39 Ayer Road, P.O. Box 2406, Littleton, MA 01460

Tel: 978-540-2254 Fax: -- E-Mail: dketchen@lelwd.com

5. Applicant's Authorized Representative to Planning Board (if any):

Name: Bruce Ringwall

Company (if applicable): Goldsmith, Prest & Ringwall, inc.

Mailing Address: 39 Main Street, Suite 301, Ayer, MA 01432

Tel: 978-772-1590 Fax: -- E-Mail: BRingwall@gpr-inc.com

MToohill@littletonma.org

PLANNING BOARD
P.O. Box 1305
Littleton, Massachusetts 01460

6. Other Planning Board Permits or Approvals Required for This Project:

NOI

7. Applicant's Certification:

I hereby certify that the information contained in this application (including all required documents submitted herewith) is correct to the best of my knowledge. If I have identified an Authorized Representative above, I authorize that person to serve as my representative to the Planning Board.

Signature of Applicant: [signature] (as agent of owner) Date: 10/9/25

Printed Name: Kalya Iek

8. Property Owner's Authorization:

I am the owner of the parcel identified as Littleton Assessor's Map U36, Parcel 7, or the authorized signatory for the entity that is the owner of that parcel. I hereby attest that I have knowledge of, and give my consent to, this application. I authorize the Littleton Planning Board and its authorized agents to enter the aforementioned parcel to verify the information contained in this application and associated documents and, if a permit is granted, to inspect for compliance with permit conditions.

Signature of Owner: [signature] (As agent of owner) Date: 10/9/25

Printed Name: Kalya Iek

Signature of Owner: _____ Date: _____

Printed Name: _____

9. Checklist of Materials to Be Submitted with Application:

X Erosion and Sediment Control Plan

X Stormwater Management Plan

X Operation and Maintenance Plan

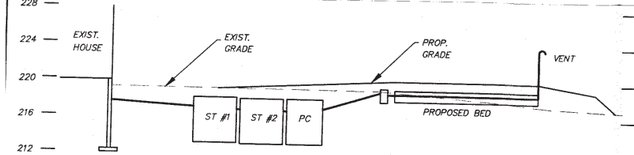
X Certified List of Abutters

___ Permit Application Fee

****Communications from the Planning Department will be sent to the e-mail addresses provided for the Applicant and the Applicant's Authorized Representative.****

MToohill@littletonma.org

Attachment 1: Soil Information



SYSTEM PROFILE
SCALE: 1"=20' HORIZ.
1"=8' VERT.

NOTE

THE EXISTING LEACH AREA IS TO BE PUMPED OUT AND BACKFILLED WITH CLEAN GRAVEL FILL.

THE EXISTING INVERT OUT OF THE BUILDING IS TO BE VERIFIED PRIOR TO THE PLACEMENT OF THE TANKS.

SURVEY PLAN BY DAVID E. ROSS ASSOCIATES, INC. PLAN NO. L-2030, JULY 1993.

VARIANCE REQUIRED
LITTLETON BOARD OF HEALTH

MINIMUM OFFSET FROM GROUNDWATER IS 5 FEET, 4 FEET IS PROPOSED.

VARIANCE IS REQUIRED TO ALLOW GROUNDWATER TESTING PERFORMED OUT OF SEASON.

A RESERVE AREA MUST BE PROVIDED, NO RESERVE AREA IS PROVIDED.

A VARIANCE FROM THE LITTLETON PUMP REGULATIONS IS REQUIRED TO ALLOW A PUMP WITH A STAINLESS STEEL CHAIN IN LIEU OF A RAIL SYSTEM.

LEGEND

- 300 — EXISTING CONTOUR
- 300 — PROPOSED CONTOUR
- PERCOLATION TEST HOLE
- OBSERVATION TEST HOLE
- S — SEWER LINE
- W — WATER LINE
- EDGE OF WETLANDS

OBSERVATION TEST HOLE DATA
BY SETH LAJOIE SOIL EVALUATOR 5/27/99
WITNESSED BY IRA GROSSMAN
05/31/01

501-1: ELEV. = 218.3'
FILL 0"-37"
Bw 37"- 46" FINE SANDY LOAM
C 46"- 114" LOAMY SAND
MOTTLING AT 60"
NO GROUNDWATER OBS.
NO REFUSAL
E.S.H.W.T. AT 60" (213.3')

501-2: ELEV. = 216.9'
FILL 0" - 16"
Ap 16"- 22" FINE SANDY LOAM
Bw 22"- 32" FINE SANDY LOAM
C 32"- 112" LOAMY SAND
MOTTLING AT 60"
GROUNDWATER AT 100"
NO REFUSAL
E.S.H.W.T. AT 60" (211.9')

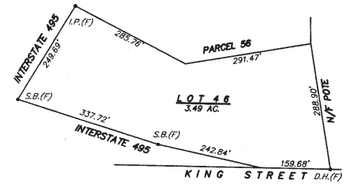
LITTLETON BOARD OF HEALTH PUMP REGULATIONS

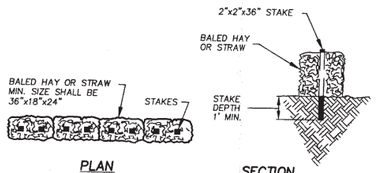
A. ALL FORCE MAIN SEWER LINES USED FOR EFFLUENT PUMP AND GRINDER PUMP SYSTEMS SHALL BE 160 LBS. FLEX OR EQUAL. THE FORCE MAIN MUST BE BEDDED IN A MINIMUM OF 6 INCHES OF SAND.

E. WIRING SHALL BE CONTINUOUS TO THE BUILDING WITHOUT THE USE OF A JUNCTION BOX IN THE PUMP CHAMBER. THIS INCLUDES THE WIRING FOR THE PUMP AND THE FLOATS.

F. FOR EFFLUENT PUMP SYSTEMS, THERE SHALL BE A DRAIN HOLE TO ALLOW EFFLUENT TO DRAIN BACK FROM THE FORCE MAIN. THE DRAIN HOLE SHALL BE INSTALLED AFTER THE CHECK VALVE.

G. THE MAINTENANCE OF ALL PUMP SYSTEMS, SOLID OR EFFLUENT SHALL BE EXPLAINED TO THE HOMEOWNER BY THE INSTALLER AND/OR BUILDER PRIOR TO OCCUPANCY.





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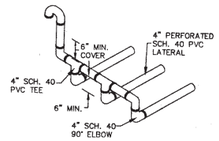

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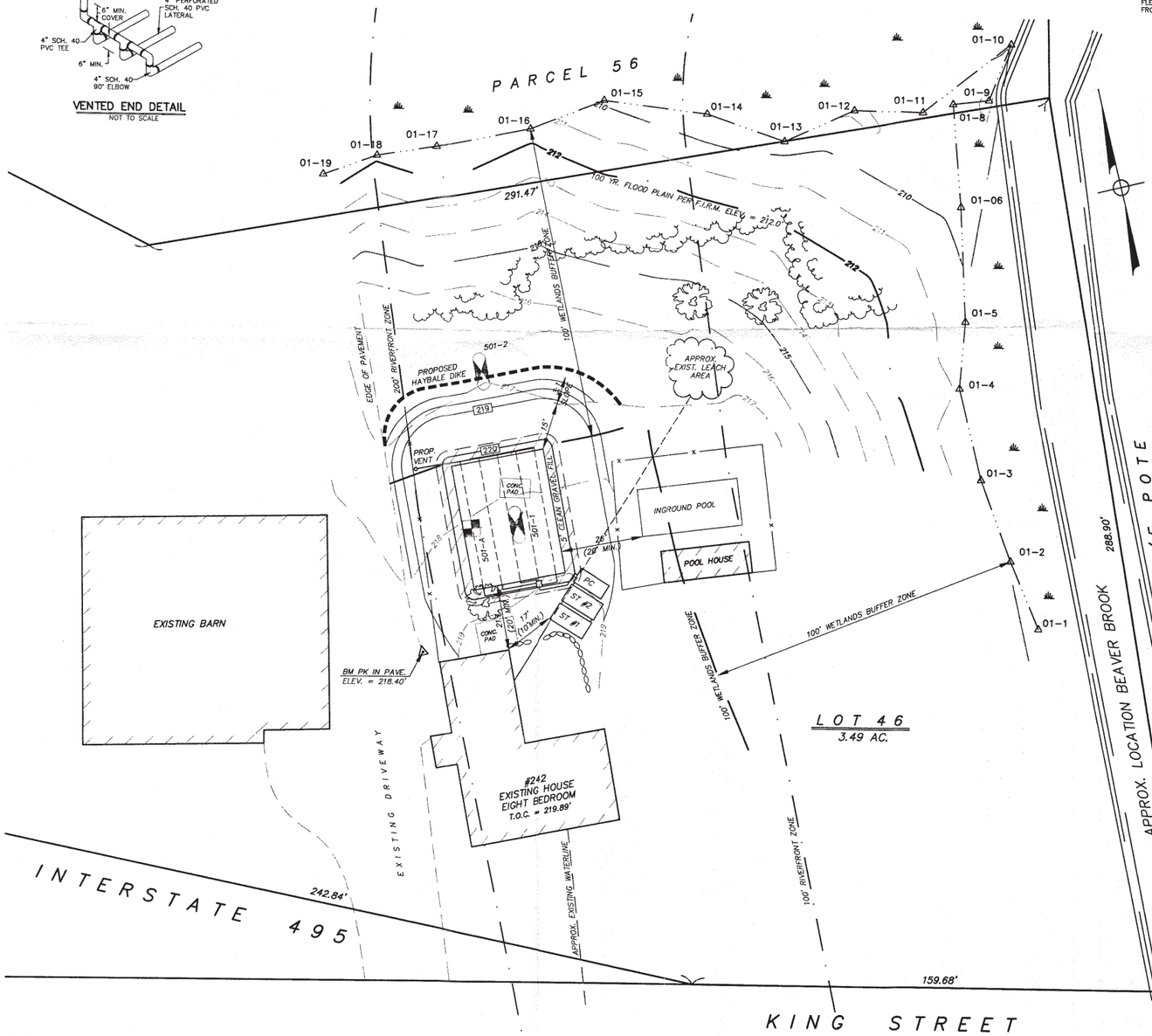
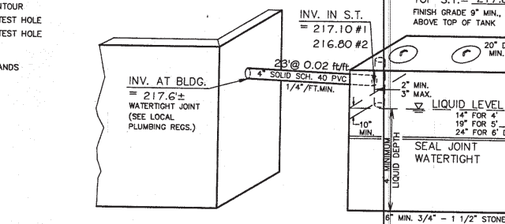
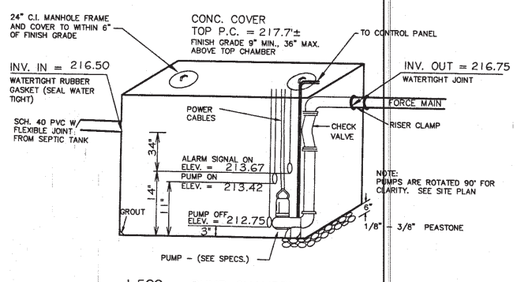




FOUNDATION — 1500 GALLON SEPTIC TANK — DISTRIBUTION BOX — LEACHING FIELD 40' X 30' = 1200 S.F.



1,500 PUMP CHAMBER (DOSE 4 TIME(S) PER DAY)
WATERTIGHT — CONSTRUCTION MATERIALS AND DIMENSIONS TO CONFORM TO TITLE 5 AND AASHTO HS 10 LOADING REQUIREMENTS PLACED ON A STABLE MECHANICALLY COMPACTED LEVEL BASE.

PUMP NOTES

GENERAL
ALL WORKMANSHIP, MATERIALS AND CONSTRUCTION SHALL CONFORM TO FEDERAL, STATE AND LOCAL CODES, WHETHER SPECIFIED HEREIN OR NOT. ALL PIPING, CONTROLS AND PUMP ARE SUBJECT TO APPROVAL BY THE DESIGN ENGINEER.

CHAMBER
THE CHAMBER SHALL BE A PRECAST, REINFORCED CONCRETE SEPTIC TANK MADE WATERTIGHT. TANK MANHOLE SHALL EXTEND TO WITHIN 6" OF FINISHED GRADE, AND BE WATERTIGHT. COVER TO BE METAL AND WEIGH 60 LB. (MINIMUM) AND HAVE AN INSIDE DIMENSION 1-1/2 TIMES MAXIMUM PUMP DIMENSION AND BE A 24" INSIDE DIAMETER MINIMUM. CHAMBER TO BE VENTED VIA BUILDING PLUMBING SYSTEM TO ROOF. IF THE CHAMBER IS TO BE UNDER PAVED SURFACES OR SUBJECT TO VEHICULAR LOADING, THE CHAMBER, ALL MANHOLES AND EXTENSIONS SHALL BE RATED TO WITHSTAND AASHTO HS-20 DIRECT LOADING (HEAVY DUTY).

PUMPS
PUMP SHALL BE A NON-CLOG SUBMERSIBLE SEWAGE PUMP CAPABLE OF PASSING A 1-1/4" DIAMETER SOLID AND STRINGY MATERIAL. PUMPS SHALL HAVE A 0.4 H.P. (MINIMUM) MOTOR AND BE CAPABLE OF PUMPING 56 GALLONS PER MINUTE (GPM) AGAINST A TOTAL DYNAMIC HEAD (TDH) OF 10.5 FEET.

CONTROLS
PUMP AND ALARM SHALL BE ACTIVATED BY MERCURY FLOAT SWITCHES AS SHOWN. FLOAT SWITCHES SHALL BE OF THE MERCURY TUBE TYPE SEALED IN POLYURETHANE. 3 FLOATS ARE REQUIRED. FLOATS AND PUMP POWER CABLES ARE TO BE SUSPENDED FROM AND TIED TO A 1/2" DIAMETER, STEEL REBAR WITH HOSE CLAMPS. THE REBAR SHALL BE SECURELY AND PERMANENTLY ANCHORED TO THE SIDES AND/OR WALL OF THE CHAMBER. THERE SHALL BE NO WIRE SPLICES WITHIN THE PUMP CHAMBER, UNLESS SEALED IN A WATER AND GAS-TIGHT (NEMA-4X) JUNCTION BOX.

THE DIMENSIONAL SETTINGS OF THE FLOATS (SEE PUMP CHAMBER DETAIL ON THIS SHEET) ARE THE ELEVATIONS AT WHICH THE FLOATS ARE TO ACTIVATE/INACTIVATE THE PUMP AND/OR ALARM. THE FLOAT LEVEL CONTROLS SHALL BE SET TO OPERATE AT THE ELEVATIONS INDICATED, THESE ELEVATIONS SHALL BE ADJUSTED BY THE INSTALLER TO ENSURE FUNCTION ACCORDING TO THESE SPECIFIC ELEVATIONS.

THE CONTROL PANEL SHALL BE HOUSED IN A NEMA-1 CONTROL BOX SUITABLE FOR USE WITH ALL OF THE COMPONENTS MANUFACTURER'S STANDARDS FOR THE EQUIPMENT USED AND SHALL HAVE AN AUDIO AND VISUAL ALARM WITH MANUAL SILENCER. THE CONTROL PANEL SHALL BE INSTALLED IN A SUITABLE LOCATION INSIDE OF THE BUILDING. ALARM TO BE ON A SEPARATE CIRCUIT FROM THE PUMP. ALL ELECTRICAL WORK SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL BUILDING CODE.

PIPING
PIPING FROM PUMPS TO 3' OUTSIDE TANK SHALL BE 2" SCHEDULE 40 (SDR-21) SOLVENT WELDED PVC OR ABS. CHECK VALVE SHALL BE 2" BALL-TYPE WITH 2 HOSE CLAMP CONNECTIONS AT EACH SIDE OF THE JOINT. RISER CLAMPS WITH PVC INSERTS ARE REQUIRED AT PUMP CHAMBER. ALL PIPING SHALL BE SHIELDED FROM ANY ABRASION (INCLUDING FORCE MAIN).

FORCE MAIN
FORCE MAIN TO HAVE 4' MINIMUM COVER, EXCEPT WITHIN 5' OF THE CHAMBER AND D-BOX WHICH HALL BE INSULATED WITH 2" RIGID PRE MOLDED POLYSTYRENE INSULATION. PIPE SHALL BE 80 PSI, 2" DIAMETER PVC, ABS OR HDPE. JOINTS SHALL BE INSERT FITTINGS WITH DOUBLE HOSE CLAMPS EACH SIDE OF JOINT. TRANSITION BETWEEN PUMP STATION PIPING AND FORCE MAIN SHALL BE MADE WITH A FITTING MADE FOR THAT PURPOSE AND BE CONTAINED WITHIN THE PUMP CHAMBER. PIPES TO BE SET IN SAND AND BE "SNAKED" TO ALLOW FOR CONTRACTION AND LAID TO PROVIDE A DOWNWARD GRADIENT FROM THE D-BOX TO THE CHAMBER. THE D-BOX INLET SHALL HAVE A SECURED TEE WITH BOTTOM EDGE CUT OFF 1" ABOVE OUTLET INVERTS. D-BOX SHALL BE VENTED, SEE PLAN. FORCE MAIN AND ALL JUNCTIONS SHALL BE WATER AND PRESSURE TIGHT WITH NO LEAKAGE ALLOWED.

A PORTION OR ALL OF THE FORCE MAIN MAY BE PROPOSED TO BE INSTALLED ABOVE THE FROST LINE. IN ACCORDANCE WITH 310 CMR 15.221(6)-TITLE 5, IT SHALL BE INSULATED ADEQUATELY OR BE MADE SELF DRAINING.

SEPTIC TANK

SEPTIC TANK SHALL BE A PRECAST, REINFORCED CONCRETE TANK MADE WATERTIGHT. CONSTRUCTION MATERIALS AND DIMENSIONS SHALL CONFORM TO TITLE 5 AND AASHTO HS 10 REQUIREMENTS AND PLACED ON A STABLE MECHANICALLY COMPACTED LEVEL BASE.

TANK/ SYSTEM TO BE VENTED THROUGH THE BUILDING PLUMBING SYSTEM AS REQUIRED BY BUILDING CODE.

TANK SHOULD BE INSPECTED, MAINTAINED AND BE PUMPED OUT WHEN SLUDGE DEPTH IN THE BOTTOM EXCEEDS ONE FOURTH OF THE TOTAL LIQUID DEPTH.

AT LEAST THREE 20" MANHOLES SHALL BE PROVIDED. AT LEAST ONE OF THE MANHOLES SHALL HAVE AN ACCESS PORT ACCESSIBLE TO WITHIN 6" OF FINISH GRADE.

"D" BOX

"D" BOX TO BE MADE WATERTIGHT. CONSTRUCTION MATERIALS AND DIMENSIONS SHALL CONFORM TO TITLE 5 AND AASHTO HS 10 REQUIREMENTS AND PLACED ON A STABLE MECHANICALLY COMPACTED LEVEL BASE.

"D" BOX OUTLETS SHALL BE INSTALLED LEVEL ("BUILT UP" INVERTS, NOT PERMITTED.

FIRST 2' (MIN.) OF OUTLETS SHALL BE INSTALLED LEVEL TO EQUALIZE FLOW.

THE MINIMUM INSIDE DIMENSIONS OF THE "D" BOX TO BE 12" AND THE MINIMUM WALL THICKNESS TO BE 2".

WHEN INLET PIPE SLOPE EXCEEDS 8%-PVC INLET TEE REQUIRED. CUT LOW END 1" ABOVE OUTLET INVERT.

"D" BOX COVER TO BE SEALED WITH BITUMEN.

LEACH AREA

ALL LOAM, LARGE BOULDERS OR FOREIGN MATERIAL ENCOUNTERED DURING EXCAVATION ARE TO BE REMOVED FROM THE LEACHING AREA.

ALL SOIL INTERFACES SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF STONE.

ALL STONE IN PLACE SHALL BE DURABLE, FREE FROM IRON, FINES AND DUST AND DOUBLE WASHED.

WHEN GRAVEL FILL IS REQUIRED, ALL LOAM AND ORGANIC MATERIAL SHALL BE REMOVED FROM AREA TO BE FILLED. FILL SHALL BE COMPACTED TO MINIMIZE SETTLEMENT AND SHALL BE CLEAN GRANULAR MATERIAL, FREE FROM FINES AND ORGANIC MATERIALS, AND SHALL BE IN ACCORDANCE WITH 310 CMR 15.255(3).

ALL DISTURBED AREAS ARE TO BE LOAMED, SEEDED AND MAINTAINED TO PREVENT EROSION.

AREAS ABOVE THE SOIL ABSORPTION SYSTEM SHALL REMAIN PERVIOUS UNLESS UNAVOIDABLE. IN SUCH CASES THE SYSTEM SHALL BE VENTED.

GENERAL NOTES

SYSTEM IS DESIGNED TO ACCOMMODATE SANITARY SEWAGE ASSOCIATED WITH NORMAL DOMESTIC USE AND CONSISTING OF WATER CARRIED PUTRESIBLE WASTE ONLY.

ALL COMPONENTS OF THE SEWAGE DISPOSAL SYSTEM SHALL BE COVERED BY A MAXIMUM OF 36" OF CLEAN BACKFILL MATERIAL, FREE OF STONES AND BOULDERS GREATER THAN 6" IN SIZE.

OWNER SHALL VERIFY EFFECTIVE ZONING REGULATIONS PRIOR TO CONSTRUCTION.

PLAN SHOWS ONLY THOSE FEATURES THAT WERE VISUALLY APPARENT ON DATE OF TOPOGRAPHY, AND THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. IS NOT INTENDED OR IMPLIED.

ALL PIPING SHALL BE LAID TRUE TO LINE, GRADE AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

THERE ARE NO EXISTING WELLS WITHIN 150' OF THE PROPOSED SEWAGE DISPOSAL SYSTEM. (50' OF THE SEPTIC TANK.)
THERE ARE NO EXISTING SEWAGE DISPOSAL SYSTEMS WITHIN N/A OF THE PROPOSED WELL. EXISTING TOWN WATER

ALL KNOWN WELLS WITHIN 200' OF THE PROPOSED PRIMARY AND EXPANSION LEACH AREAS ARE SHOWN.

THE DESIGN ENGINEER SHALL BE NOTIFIED PROMPTLY OF ANY PLAN DEFICIENCES FOUND DUE TO UNFORESEEN SUBSURFACE CONDITIONS OR OTHER REASONS THAT MIGHT AFFECT THE FUNCTION OF THIS DESIGNED SYSTEM.

DEVIATIONS IN DESIGN OR CONSTRUCTION FROM THIS PLAN OR ANY OF THE CONDITIONS RELATING TO THE USE OR MAINTENANCE OF THE PROPOSED SYSTEM SHALL BE DEEMED TO VOID ANY CERTIFICATION OR REPRESENTATION MADE RELATIVE TO THIS SUBSURFACE SEWAGE DISPOSAL SYSTEM.

CONTRACTOR SHALL NOTIFY "DIG SAFE" PRIOR TO ANY EXCAVATION. 1-888-DIG-SAFE (344-7233)

PRIOR TO ANY CONSTRUCTION A BENCHMARK SHALL BE SET WITHIN 50-75' OF THE PROPOSED SEWAGE DISPOSAL SYSTEM.

SCHEDULE OF ELEVATIONS	PROPOSED	AS-BUILT
TOP CONCRETE FOUNDATION	219.89	
INVERT AT FOUNDATION	217.6±	
INVERT TANK INLET #1	217.10	
INVERT TANK OUTLET #1	216.85	
TOP SEPTIC TANK #1	218.1'±	
INVERT TANK INLET #2	216.80	
INVERT TANK OUTLET #2	216.55	
TOP SEPTIC TANK #2	217.8'±	
INVERT PUMP CHAMBER INLET	216.50	
INVERT PUMP CHAMBER OUTLET	216.75	
TOP PUMP CHAMBER	217.7'±	
INV. "D" BOX INLET	218.90	
INV. "D" BOX OUTLET	218.73	
TOP OF STONE	219.20	
INVERT HIGH END	218.70	
INVERT LOW END	218.50	
BOTTOM OF STONE	218.00	
GROUNDWATER OFFSET REQUIRED	5'	
GROUNDWATER OFFSET UTILIZED	4'	

GARBAGE GRINDERS - NOT PERMITTED

PERC. TESTS: PERFORMED BY SETH LAJOIE
WITNESSED BY IRA GROSSMAN

PERC. #	RATE (M/I)	ELEVATION	DEPTH	DATE
501-A	4	218.1'	80"	05/31/01

FLOWS: 8 BEDROOMS AT 110 GPD = 880 GPD (330 GPD MIN.)

SEPTIC TANK REQUIRED: (1500 GAL. MIN.)
880 GPD X 2.0 = 1760 GAL. TANK

LEACHING AREA PROVIDED:
A. BASIS 4 MIN./IN. PERCOLATION RATE
B. APPLICATION RATE ALLOWED 0.74 S.F.
C. BOTTOM AREA PROVIDED = 1200 S.F.
D. TOTAL G.P.D. PROVIDED 886

SYSTEM IN FILL ☒ REQUIRED ☐ NOT REQUIRED

IF ANY PORTION OF THE PROPOSED LEACHING AREA IS LOCATED ABOVE EXISTING GRADE OR WITHIN TOPSOIL, SUBSOIL, PEAT OR OTHER UNSUITABLE OR IMPERVIOUS SOIL LAYER, THEN THE PLACEMENT OF FILL IS REQUIRED. PRIOR TO THE PLACEMENT OF FILL, ALL UNSUITABLE OR IMPERMEABLE SOILS SHALL BE EXCAVATED TO A MINIMUM OF FIVE FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE SOIL ABSORPTION SYSTEM TO THE DEPTH OF NATURALLY OCCURRING PERVIOUS MATERIAL. FILL MATERIAL SHALL BE SELECT, ON-SITE OR IMPORTED SOIL, CONSISTING OF CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES. MIXTURES AND LAYERS OF DIFFERENT SOIL CLASSES SHALL NOT BE USED. THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN 2 INCHES. A SIEVE ANALYSIS USING A #4 SIEVE, SHALL BE PERFORMED ON A REPRESENTATIVE SAMPLE OF THE FILL. UP TO 45% BY WEIGHT OF THE FILL SAMPLE MAY BE RETAINED IN THE #4 SIEVE. SIEVE ANALYSES SHALL ALSO BE PERFORMED ON THE FRACTION OF FILL SAMPLE PASSING THE #4 SIEVE. SUCH ANALYSES MUST DEMONSTRATE THAT THE MATERIAL MEETS EACH OF THE FOLLOWING SPECIFICATIONS:

SIEVE SIZE	EFFECTIVE PARTICLE SIZE	% THAT MUST PASS SIEVE
# 4	4.75 MM	100%
# 50	0.30 MM	10%-100%
#100	0.15 MM	0%-20%
#200	0.075 MM	0%-5%

WETLAND PROTECTION ACT (C131 S40)

PRIOR TO INITIATING ANY ALTERATIONS (REMOVAL OF VEGETATION, EXCAVATIONS, GRADING, ETC.) WITHIN 100' OF WETLANDS (PONDS, BROOKS, SWAMPS, ETC.) OR WITHIN 200' OF AN AREA SUBJECT TO THE RIVER'S ACT (PERENNIALLY FLOWING RIVER, BROOK OR STREAM), A REQUEST FOR DETERMINATION OF APPLICABILITY OR A NOTICE OF INTENT UNDER THE WETLANDS PROTECTION ACT (310 CMR 10.00) SHOULD BE FILED WITH THE TOWN'S CONSERVATION COMMISSION. LOCAL BYLAWS MAY ALSO APPLY.

COMMONWEALTH OF MASSACHUSETTS
DANIEL B. WOLFE
CIVIL
No. 39523
REGISTERED PROFESSIONAL ENGINEER
10-24-01

REVISIONS
7/30/01 ORIGINAL ENDORSEMENT
10/24/01 MONUMENTS ADDED

SEWAGE DISPOSAL SYSTEM
FOR: LOT -- STREET #242 KING STREET
ASSESSOR'S MAP U-36 PARCEL 7
TOWN: LITTLETON, MASSACHUSETTS
DESIGNED FOR
MARK J. MONTANARI
SCALE: 1" = 20' JULY, 2001

DAVID E. ROSS ASSOCIATES, INC.
CIVIL ENGINEERS, LAND SURVEYORS, ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS
111 FITCHBURG ROAD P.O. BOX 368 AYER, MASS. 01432-0368
978-772-6232 368-1065 448-3916 FAX 978-772-6258

JOB NO. 1549

NB:380-B-62

Attachment 2: TSS, Water Quality Volume, and Draw Down Calculations

Stormwater Management Standard 3: Groundwater Recharge

Calculated By: KI
Date: 9/15/2025

Checked By:
Date:

Project Name
Job 241114

1. Required Recharge Volume: Rv = F x Impervious Area

Where: Rv = Required Recharge Volume [Ac-ft]
F = Target Depth Factor associated with each Hydrologic Soil Group [in]

Hydrologic Soil Group	F [in]	Impervious Area [Acres]	Required Recharge Volume [Ac-ft]
HSG A	0.6	0.066	0.003
HSG B	0.35	0.000	0.000
HSG C	0.25	0.000	0.000
HSG D	0.1	0.000	0.000

Total Required Recharge Volume (Rv_1) = 0.003 Ac-ft

2. Provided Groundwater Recharge

Stormwater Control Measure	Tributary Impervious Area [Acres]	Provided Recharge Volume [Ac-ft]
Infiltration Basin X	0.06598	0.1
Infiltration System X	0	0
Dry Well X	0	0

Total Provided Recharge Volume (Rv_2) = 0.005 Ac-ft

3. Capture Area Adjustment

1. When only a portion of a Site's impervious area drains to infiltrative SCMS a Capture Area Adjustment Calculation is required to ensure sufficient runoff is recharged.

2. When less than 65% of impervious surfaces on a site are directed to infiltration SCM(s), the system(s) cannot capture sufficient runoff to infiltrate the Required Recharge Volume.

Total Tributary Area to Infiltrative SCMs (I_{trib}) =	0.07	Ac
Total Site Impervious Area (I_{total}) =	0.07	Ac
% Imp. Area Tributary to Infiltrative SCMs =	100.0%	✓
Capture Area Adjustment = I_{total}/ I_{trib} =	1.0	

Adjusted Req'd Recharge Volume = Rv x Capture Area Adjustment = 0.0 Ac-ft

Total Provide Recharge Vol. ≥ Adjusted Required Recharge Vol.
Design is Compliant

Stormwater Management Standard 3: Infiltration SCM Draw Down

Calculated By: KI
Date: 15-Sep

Checked By:
Date:

Project Name
Job 241114

$$\text{Drawdown Time} = \frac{Rv}{K \times \text{Bottom Area of Recharge System}} \leq 72 \text{ Hours}$$

Where: Rv = Volume Below Outlet [Ac-Ft]
K = Infiltration Rate [in/hr]

Ponding Area

Rv:	0.0048	Ac-Ft
K:	2.41	in/hr
Bottom Area of Recharge System:	0.0012	Acres

Drawdown Time:	**20.63**	**Hrs.**

Stormwater Management Standard 4: Water Quality Volume

Calculated By: KI
Date: 9/15/2025

Checked By: _____
Date: _____

Project Name
Job 241114

$$V_{WQ} = \frac{D_{WQ}}{12\ in/ft} \ x \ \frac{A_{imp}}{43{,}560\ sf/acre}$$

Where: V_{WQ} = Required Water Quality Volume [cf]

D_{WQ} = Water Quality Depth [in] = **1.0** Inches

1-in for discharges within a Zone II or Interim Wellhead Protection Area, to or near another critical area, runoff from a LUHPPL, or exfiltration to soils with infiltration rate greater than 2.41 in/hr or greater; 0.5-in for other discharges.

A_{IMP} = Proposed Impervious Area (may exclude roof areas) [Ac]

1. Required Water Quality Volume:

Drainage Area/ Treatment Train	A_{IMP} [Ac]	D_{WQ} [in]	V_{WQ} [cf]
SC-1	0.01	1.0	28.50
SC-2	0.00	1.0	0
SC-3	0.05	1.0	176

Total Required Water Quality Volume: 205 cf

2. Provided Water Quality Volume:

Drainage Area/ Treatment Train	Stormwater Control Measure	Water Quality Volume Provided [CF]
SC-1	Ponding Area	209
SC-2	x	0
SC-3	x	0

Total Provided Water Quality Volume: 209 cf

Provided Water Quality Vol. ≥ Req'd Water Quality Vol. Design is Compliant

Stormwater Management Standard 4: TSS Removal

Location: 242 King Street, Littleton, MA

TSS Removal Calculation Worksheet

A SCM	B TSS Removal Rate	C Starting TSS Load	D Amount Removed (B*C)	E Remaining Load (C-D)
Ponding Area	0.80	1.00	0.80	0.20
		-	-	-
		-	-	-
		-	-	-

Total TSS Removal = **80%**

Phosphorus Removal

Calculated By: KI
Date: 8/12/2025

Checked By:
Date:

Project Name
Job 241114

Estimated Unmitigated Phosphorus Loading

Land Use	Area [ac]	Phosphorus Loading Rate [lbs/ac/yr]	Estimated Annual Phosphorus Load [lbs/yr]
Commercial and Industrial	**0.00**	1.78	-
Multi Family Residential	**0.12**	2.32	0.2784
Medium -Density Residential	**0.00**	1.96	-
Low Density Residential	**0.00**	1.52	-
Highway	**0.00**	1.34	-
Forest Pervious	**0.00**	0.13	-
Agriculture Pervious	**0.00**	0.45	-
Developed Land Pervious HSG A	**1.37**	0.03	0.0411
Developed Land Pervious HSG B	**0.00**	0.12	-
Developed Land Pervious HSG C	**0.00**	0.21	-
Developed Land Pervious HSG D	**0.00**	0.37	-

Estimated Unmitigated Phosphorus Loading (TP_1): **0.3195** **lbs/yr**

Required TP Reduction: 50%
Required TP Loading Reduction: **0.16** **lbs/yr**

GPR

Phosphorus Removal

Phosphorus Loading Rate Reduction

Stormwater Control Measure	Tributary Area [ac]		Total Tributary Phosphorus Loading Rate [lbs/ac/yr]	TP Removal Rate Per Appendix F Attachment 3 of MS4 Permit	Estimated Annual TP Load Reduction [lbs/yr]
	Pervious HSG A	Impervious Multi Family Residential			
Ponding	**1.20**	**0.09**	0.24	98%	0.24
Infiltration System-02	**0.00**	**0.00**	0.00	90%	0.00
Infiltration System-03	**0.00**	**0.00**	0.00	90%	0.00
Infiltration System-04	**0.00**	**0.00**	0.00	90%	0.00
Infiltration System-05	**0.00**	**0.00**	0.00	90%	0.00
Infiltration System-06	**0.00**	**0.00**	0.00	90%	0.00

Total Estimated Annual TP Load Reduction = TP_{Red}: 0.24

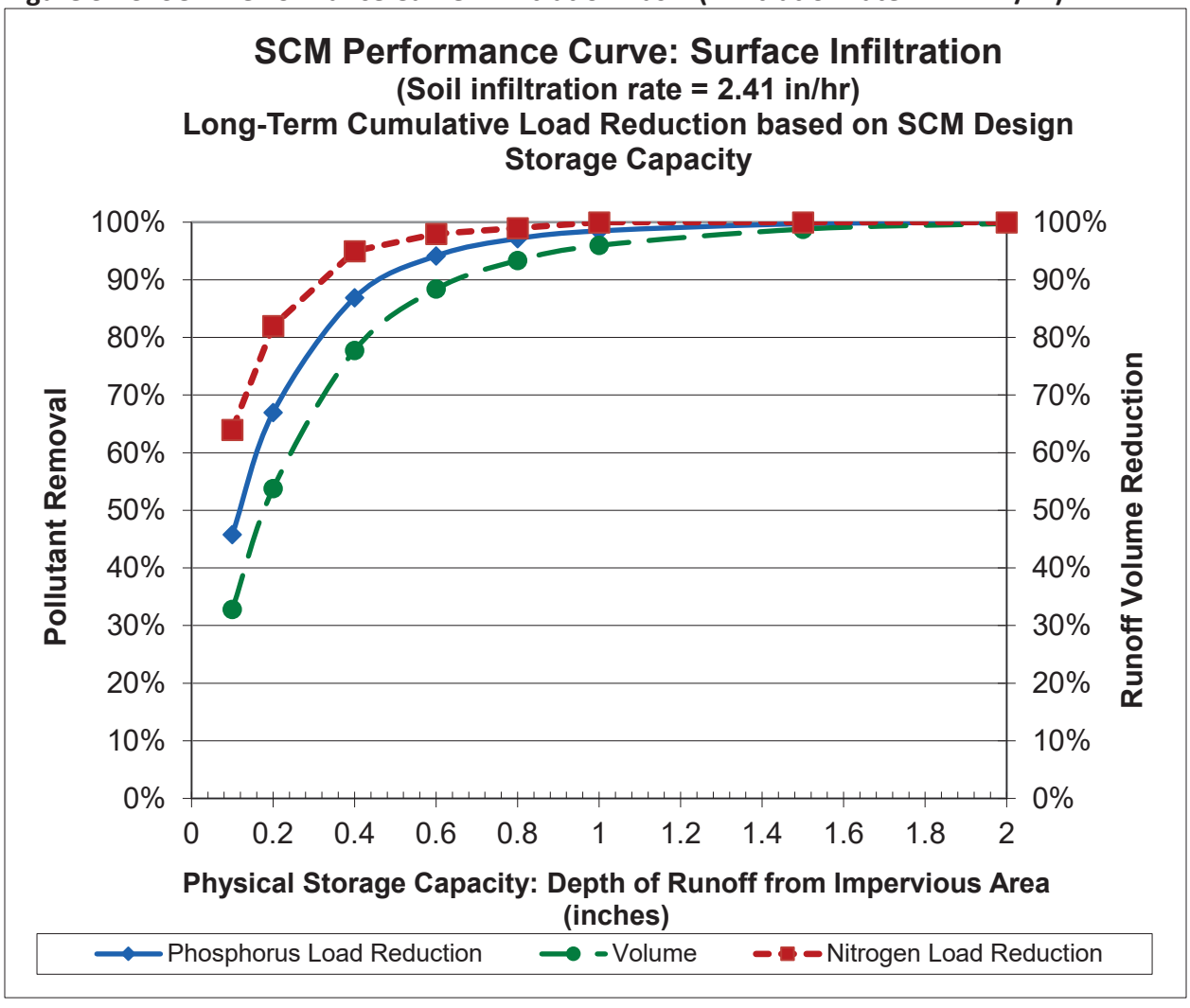
Estimated Annual TP Load = TP_1 - TP_{Red}: 0.08

Provided Reduction: 74.4%

Table 3- 18: Surface Infiltration (2.41 in/hr) SCM Performance Table

Surface Infiltration (2.41 in/hr) SCM Performance Table: Long-Term Phosphorus & Nitrogen Load Reduction								
SCM Capacity: Depth of Runoff from Impervious Area (inches)	0.1	0.2	0.4	0.6	0.8	1.0	1.5	2.0
Runoff Volume Reduction	32.8%	53.8%	77.8%	88.4%	93.4%	96.0%	98.8%	99.8%
Cumulative Phosphorus Load Reduction	46%	67%	87%	94%	97%	98%	100%	100%
Cumulative Nitrogen Load Reduction	64%	82%	95%	98%	99%	100%	100%	100%

Figure 3-13: SCM Performance Curve: Infiltration Basin (infiltration rate = 2.41 in/hr)



NOAA Atlas 14, Volume 10, Version 3
Location name: Littleton, Massachusetts, USA*
Latitude: 42.5398°, Longitude: -71.4904°
Elevation: 218 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.323** (0.254-0.407)	**0.385** (0.302-0.485)	**0.485** (0.379-0.613)	**0.568** (0.442-0.721)	**0.682** (0.514-0.903)	**0.768** (0.566-1.04)	**0.859** (0.615-1.20)	**0.964** (0.651-1.37)	**1.12** (0.726-1.64)	**1.25** (0.789-1.86)
10-min	**0.458** (0.360-0.577)	**0.545** (0.428-0.686)	**0.687** (0.537-0.868)	**0.805** (0.626-1.02)	**0.967** (0.728-1.28)	**1.09** (0.802-1.47)	**1.22** (0.871-1.70)	**1.37** (0.922-1.94)	**1.58** (1.03-2.32)	**1.77** (1.12-2.64)
15-min	**0.539** (0.424-0.678)	**0.641** (0.503-0.808)	**0.808** (0.632-1.02)	**0.946** (0.735-1.20)	**1.14** (0.856-1.50)	**1.28** (0.944-1.73)	**1.43** (1.02-2.00)	**1.61** (1.08-2.28)	**1.86** (1.21-2.73)	**2.08** (1.32-3.10)
30-min	**0.733** (0.576-0.923)	**0.873** (0.685-1.10)	**1.10** (0.862-1.39)	**1.29** (1.00-1.64)	**1.55** (1.17-2.05)	**1.75** (1.29-2.36)	**1.96** (1.40-2.73)	**2.20** (1.48-3.12)	**2.55** (1.65-3.73)	**2.84** (1.80-4.24)
60-min	**0.927** (0.729-1.17)	**1.10** (0.867-1.39)	**1.40** (1.09-1.76)	**1.64** (1.27-2.08)	**1.97** (1.48-2.60)	**2.22** (1.63-2.99)	**2.48** (1.78-3.47)	**2.78** (1.88-3.95)	**3.23** (2.10-4.74)	**3.60** (2.28-5.38)
2-hr	**1.17** (0.928-1.46)	**1.42** (1.12-1.77)	**1.82** (1.43-2.28)	**2.15** (1.68-2.70)	**2.60** (1.98-3.43)	**2.94** (2.19-3.96)	**3.31** (2.40-4.62)	**3.75** (2.54-5.29)	**4.42** (2.88-6.43)	**5.00** (3.17-7.40)
3-hr	**1.34** (1.07-1.67)	**1.64** (1.30-2.03)	**2.11** (1.67-2.63)	**2.50** (1.97-3.14)	**3.05** (2.32-4.00)	**3.45** (2.58-4.62)	**3.88** (2.83-5.42)	**4.42** (3.00-6.20)	**5.24** (3.41-7.58)	**5.95** (3.78-8.76)
6-hr	**1.72** (1.38-2.11)	**2.09** (1.68-2.58)	**2.71** (2.16-3.35)	**3.22** (2.55-4.00)	**3.92** (3.01-5.11)	**4.44** (3.34-5.91)	**5.01** (3.67-6.94)	**5.70** (3.89-7.94)	**6.78** (4.44-9.74)	**7.72** (4.92-11.3)
12-hr	**2.17** (1.76-2.66)	**2.64** (2.14-3.24)	**3.41** (2.75-4.19)	**4.05** (3.24-5.00)	**4.93** (3.82-6.36)	**5.58** (4.23-7.36)	**6.29** (4.63-8.62)	**7.15** (4.90-9.87)	**8.47** (5.56-12.1)	**9.61** (6.15-13.9)
24-hr	**2.60** (2.12-3.16)	**3.18** (2.59-3.86)	**4.13** (3.35-5.02)	**4.91** (3.96-6.01)	**5.99** (4.66-7.66)	**6.78** (5.17-8.87)	**7.65** (5.66-10.4)	**8.71** (5.99-11.9)	**10.3** (6.81-14.6)	**11.7** (7.53-16.8)
2-day	**2.96** (2.43-3.56)	**3.65** (3.00-4.39)	**4.78** (3.90-5.76)	**5.71** (4.64-6.93)	**7.00** (5.49-8.89)	**7.94** (6.10-10.3)	**8.98** (6.70-12.1)	**10.3** (7.09-13.9)	**12.3** (8.10-17.1)	**14.0** (9.00-19.9)
3-day	**3.23** (2.67-3.87)	**3.97** (3.28-4.76)	**5.18** (4.26-6.22)	**6.18** (5.05-7.46)	**7.56** (5.96-9.56)	**8.58** (6.61-11.1)	**9.69** (7.25-13.0)	**11.1** (7.66-14.9)	**13.2** (8.73-18.3)	**15.0** (9.68-21.3)
4-day	**3.49** (2.90-4.16)	**4.26** (3.52-5.08)	**5.51** (4.54-6.59)	**6.54** (5.36-7.87)	**7.97** (6.30-10.0)	**9.03** (6.97-11.6)	**10.2** (7.62-13.6)	**11.6** (8.04-15.6)	**13.8** (9.13-19.1)	**15.6** (10.1-22.0)
7-day	**4.21** (3.51-4.98)	**5.01** (4.18-5.94)	**6.33** (5.25-7.52)	**7.42** (6.11-8.86)	**8.92** (7.08-11.1)	**10.0** (7.77-12.8)	**11.2** (8.42-14.8)	**12.7** (8.84-16.9)	**14.8** (9.88-20.4)	**16.7** (10.8-23.4)
10-day	**4.89** (4.10-5.76)	**5.71** (4.78-6.74)	**7.07** (5.89-8.36)	**8.19** (6.78-9.74)	**9.73** (7.75-12.0)	**10.9** (8.45-13.7)	**12.1** (9.07-15.8)	**13.5** (9.48-18.0)	**15.7** (10.5-21.4)	**17.4** (11.3-24.3)
20-day	**6.88** (5.82-8.04)	**7.78** (6.56-9.10)	**9.23** (7.76-10.8)	**10.4** (8.72-12.3)	**12.1** (9.69-14.8)	**13.4** (10.4-16.6)	**14.7** (11.0-18.8)	**16.0** (11.3-21.1)	**17.9** (12.0-24.3)	**19.4** (12.6-26.8)
30-day	**8.54** (7.26-9.93)	**9.49** (8.05-11.0)	**11.0** (9.32-12.9)	**12.3** (10.3-14.4)	**14.1** (11.3-17.0)	**15.4** (12.0-19.0)	**16.8** (12.5-21.2)	**18.1** (12.8-23.7)	**19.9** (13.4-26.8)	**21.2** (13.8-29.1)
45-day	**10.6** (9.06-12.3)	**11.6** (9.91-13.5)	**13.3** (11.3-15.4)	**14.6** (12.3-17.1)	**16.5** (13.3-19.8)	**18.0** (14.1-22.0)	**19.4** (14.5-24.3)	**20.7** (14.7-26.9)	**22.4** (15.1-30.0)	**23.5** (15.3-32.1)
60-day	**12.4** (10.6-14.2)	**13.4** (11.5-15.5)	**15.2** (12.9-17.5)	**16.6** (14.0-19.3)	**18.6** (15.0-22.2)	**20.2** (15.8-24.5)	**21.7** (16.2-26.9)	**23.0** (16.4-29.7)	**24.5** (16.6-32.7)	**25.6** (16.7-34.8)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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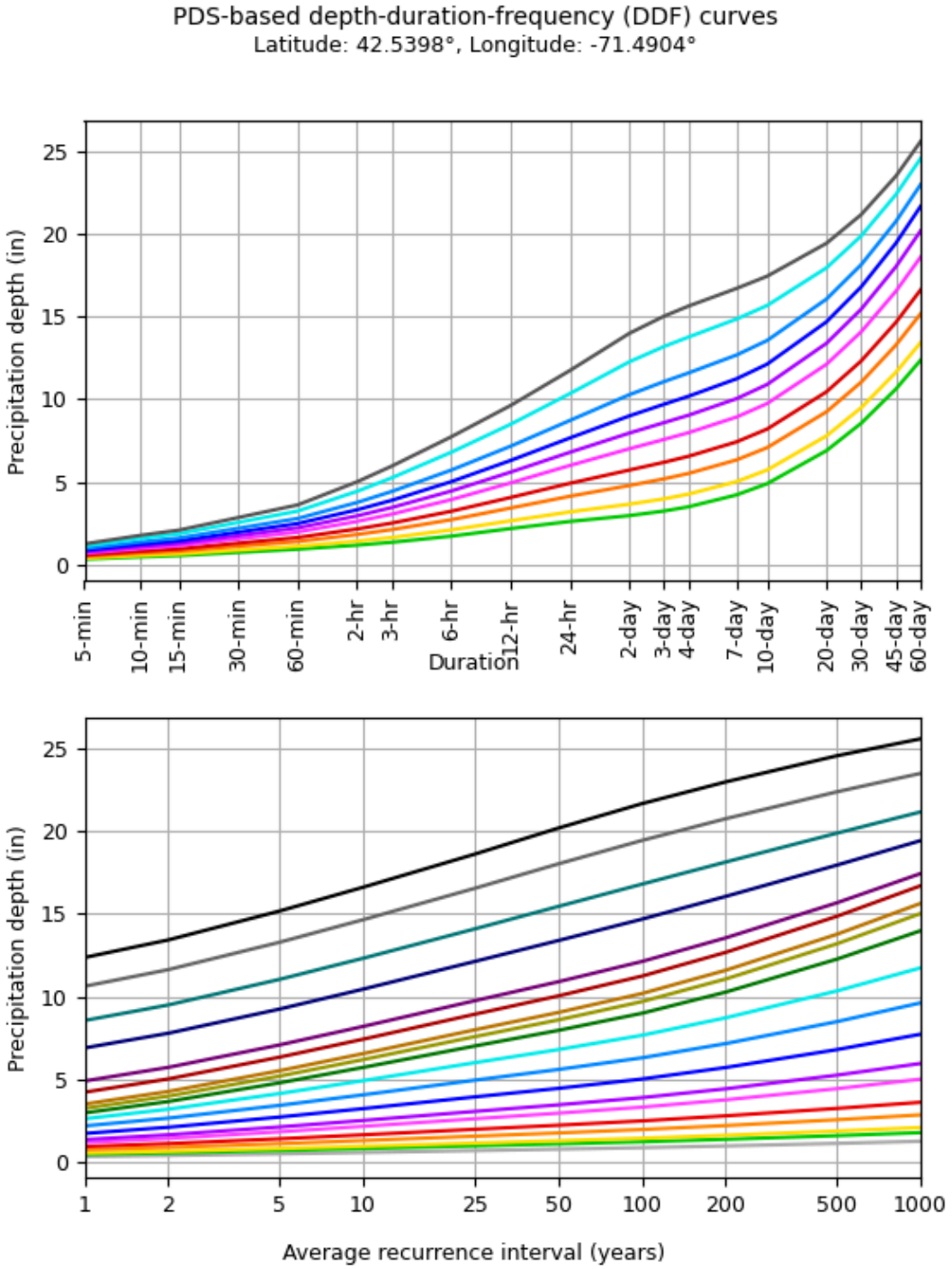
PF graphical



NOAA Atlas 14, Volume 10, Version 3

Created (GMT): Wed Aug 13 17:20:07 2025

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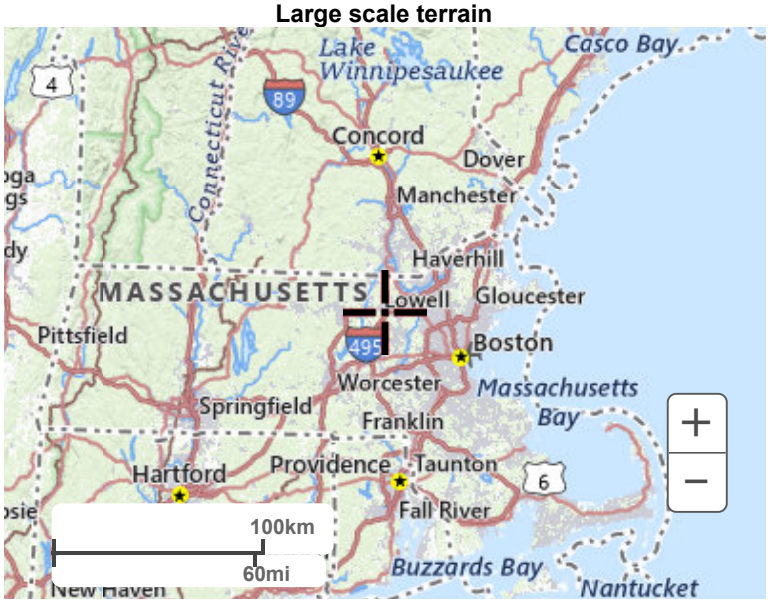
Maps & aerials

Small scale terrain

Large scale terrain



Large scale map

Large scale aerial

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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Attachment 3: Long Term Pollution Prevention Plan and Operation and Maintenance Manual

Long Term Pollution Prevention & Stormwater System Operation and Maintenance Plan

Littleton Electric Light and Water Department
242 King Street
Littleton, MA

October 2025

Prepared for:
Littleton Electric Light and Water Department
39 Ayer Road, P.O. Box 2406
Littleton, MA 01460

Prepared by:
Goldsmith, Prest & Ringwall, Inc.
39 Main Street, Suite 301
Ayer, MA 01432

GPR Engineering Solutions for Land & Structures

Project No. 241114
Operation & Maintenance Plan

Contents

Attachments

1. Preface

This Long-Term Pollution Prevention and Stormwater System Operation and Maintenance Plan (O+M Plan) adheres to the 2008 Massachusetts DEP Stormwater Handbook, addressing Standard 4 (Long-Term Pollution Prevention Plan) and Standard 9 (Long-Term Operation and Maintenance Plan). The plan promotes source control awareness, outlines pollution prevention measures, and provides detailed guidance for operating and maintaining stormwater management practices. The effectiveness of Stormwater Control Measures (SCMs) relies on consistent maintenance and proper operation.

The Project's stormwater management system includes the following SCMs:

- Ponding Area

1.1. Operation and Maintenance Responsibilities

- **Ownership and Responsibility:** The owner or their designated representative shall be responsible for funding, operating, and maintaining the SCMs. At a minimum, the owner shall adhere to the guidelines outlined in this O+M Plan.
- **Maintenance and Training:** Each SCM has specific maintenance requirements to ensure long-term functionality. The O+M Plan will be reviewed with maintenance staff, and training shall include instructions for routine maintenance and emergency response procedures. A qualified professional will conduct regular inspections, operations, and maintenance to ensure all SCMs remain in good working order.
- **Recordkeeping and Reporting:** An Operation and Maintenance log must be maintained for the last three years, noting inspections, repairs, replacements, and disposals for each SCM. For disposals, the log must specify the type of material and disposal location. This rolling log will be submitted annually to the Acton engineering department and made available to MassDEP and/or the Acton Conservation Commission upon request.

1.2. Estimated Annual Maintenance Costs

Regular maintenance is essential to ensure the long-term functionality of SCMs. For planning purposes, the following is an estimated annual SMC maintenance budget.

SCM	Number of SCMs	O+M Estimate per SCM	Total O+M Estimate
Ponding Area	1	$400±	$400±
Total			**$400±**

2. Site Information

2.1. Site Location

242 King Street
(Map U36 Parcel 7)
Littleton, MA

2.2. Owner/ Site Supervisor

The OWNER of the SCMs is defined as the individual, trust, corporation, or entity holding title to the land where the SCMs are located. Upon transfer of the property, the new owner assumes all responsibilities outlined in this document. The Town of Littleton Planning Department must be notified of any property transfer within 30 days.

242 King Street,
Littleton, MA 01460

2.3. Site Contact

Name:	Littleton Electric Light and Water Department
Phone:	978-540-2254
Email:	dketchen@lelwd.com

3. Source Control

Source control aims to reduce pollutant generation at its origin, minimizing the entry of contaminants into stormwater systems and supporting water quality preservation.

Material and Waste Storage and Management: The site shall be kept free of trash and debris. No hazardous materials, salt, sand, deicing chemicals, herbicides or pesticides shall be stored in outdoor locations.

Vehicle Washing: No commercial vehicle washing shall occur on-site.

Spill Prevention and Response Plan: In the event of a spill or release of petroleum products or hazardous materials, implement the following:

a. Initial Notification: Immediately inform the facility supervisor or construction manager. The supervisor shall contact the Fire Department. Additional public officials such as the Police Department, Board of Health, and/ or Conservation Commission may also require notification.

Name:	Littleton Electric Light and Water Department
Phone:	978-540-2254

b. Emergency Response for Large Spills: For significant spills, immediately contact MassDEP's Emergency Response at 1-888-304-1133.

c. Spill Management: All spills or leaks shall be managed according to the material type, spill volume, and location. Mitigation efforts should include:
   - Preventing further spillage,
   - Containing the spilled material in the smallest practical area,
   - Safely removing spilled material in an environmentally responsible manner,
   - Remediating any environmental damage caused by the spill.

d. It is recommended to keep the following spill response equipment on-site in a secure yet accessible location to enable quick response to any spills:
   - Safety goggles,
   - Chemically resistant gloves and overshoe boots,
   - Water and chemical fire extinguishers,
   - Sand and shovels,

- Suitable absorbent materials, such as Sorbent Pillows, Pads or Socks,
- Storage containers, and
- First aid supplies (e.g., Indian Valley Industries, Inc. 55-gallon Spill Containment Kit or equivalent).

Maintenance of Lawns, Gardens and other Landscaped Areas: Lawn and other landscaped areas shall be maintained regularly by the site owner and kept free from trash and debris. Areas of erosion will be stabilized with loam and seed or other acceptable measures as needed.

Application and Storage of Fertilizer, Herbicides and Pesticides: Fertilizer application shall be in accordance with 330 CMR 31.00 Ban of Fertilizers containing Phosphorus.

To the extent practicable avoid the application of fertilizers, herbicides and/ or pesticides. Only apply when necessary and in accordance with manufacturer recommendations and federal, state and local requirements. If deemed necessary, apply slow-release fertilizers during anticipated dry weather conditions.

Store fertilizers, herbicides, and pesticides in accordance with manufacturer recommendations and local, state, and federal regulations. Store materials indoors and under cover so that they will not be subject to precipitation.

Pet Waste: Pet owners shall dispose of pet waste in the trash.

Snow Disposal and Deicing Practices: Snow shall not be dumped into any waterbody, pond, or wetland resource area. Plowed snow must be placed, ensuring it remains outside stormwater control measures. Debris and accumulated sediments should be cleared from the site and properly disposed of by the end of the snow season, no later than May 15.

Deicing Chemical Storage: In compliance with Massachusetts General Laws, Chapter 85, Section 7A, salt and other deicing chemicals must be stored indoors and handled according to Massachusetts regulations.

Prohibition of On-Site Storage: Sand piles or salt storage piles are not permitted on-site.

Nutrient Management Plan: A nutrient management plan is required if a Total Maximum Daily Load (TMDL) has been developed that indicates that use of fertilizers containing nutrients or other specific pollutants must be reduced. The proposed project is located within the Assabet River TMDL for Phosphorus, which has a draft TMDL issued for pathogen indicators (i.e. fecal coliform, E. coli, and enterococcus bacteria), organic enrichment/Low DO, and nutrients. Through implementing stormwater treatment BMPs, and source control measures and pollution

prevention measures outlined in this manual the Project will not have any further impact.

4. Operation & Maintenance of SCMs

For most SCMs, the maintenance requirements include visual inspections (e.g., inspection of sediment forebays) and physical upkeep (e.g., removing and disposing of sediment, and mowing water quality swales). This section identifies the proposed stormwater control measures for the project and details the associated inspection and maintenance requirements.

Sediment Disposal

Various SCMs require removal of sediment and debris. All sediments, debris or polluted water removed from SCMs shall be properly disposed of in accordance with local, state and federal requirements. Any sediment and debris deemed to be contaminated must be evaluated in accordance with the Hazardous Waste Regulations, 310 CMR 30.000, and handled as hazardous waste.

Ponding Areas

Function	Ponding Areas are shallow depressions filled with sandy soil topped with a thick layer of mulch and planted with dense native vegetation. Stormwater runoff is directed into the cell via piped or sheet flow. The runoff percolates through the soil media that acts as a filter.
Inspection	• Inspect and remove trash monthly • Inspect regularly for sediment build-up, structural damage, and standing water. • Inspect soil and repair eroded areas monthly.
Maintenance	• Remove litter and debris monthly or more frequently as needed. • If applicable, mow 2-12 times per year. • Careful plant maintenance is critical. Maintain vegetation as needed to ensure healthy plantings. Remove dead vegetation and prune vegetation twice per year (spring and fall). Replace dead vegetation as needed. Remove invasive species as needed. Treat diseased vegetation as needed. • Replace mulch every two years, in the early spring. As needed re-mulch void areas. • Fertilize in accordance with Section 3.0 of this manual and no more frequently than annually. • Remove sediment from the toe of slope or level spreader and reseed bare spots as necessary. • Periodically, remove sediment that accumulates near the top of the strip to maintain the appropriate slope and prevent formation of a “berm” that could impede the distribution of runoff as sheet flow. • Upon failure, excavate bioretention area, scarify bottom and sides, replace filter

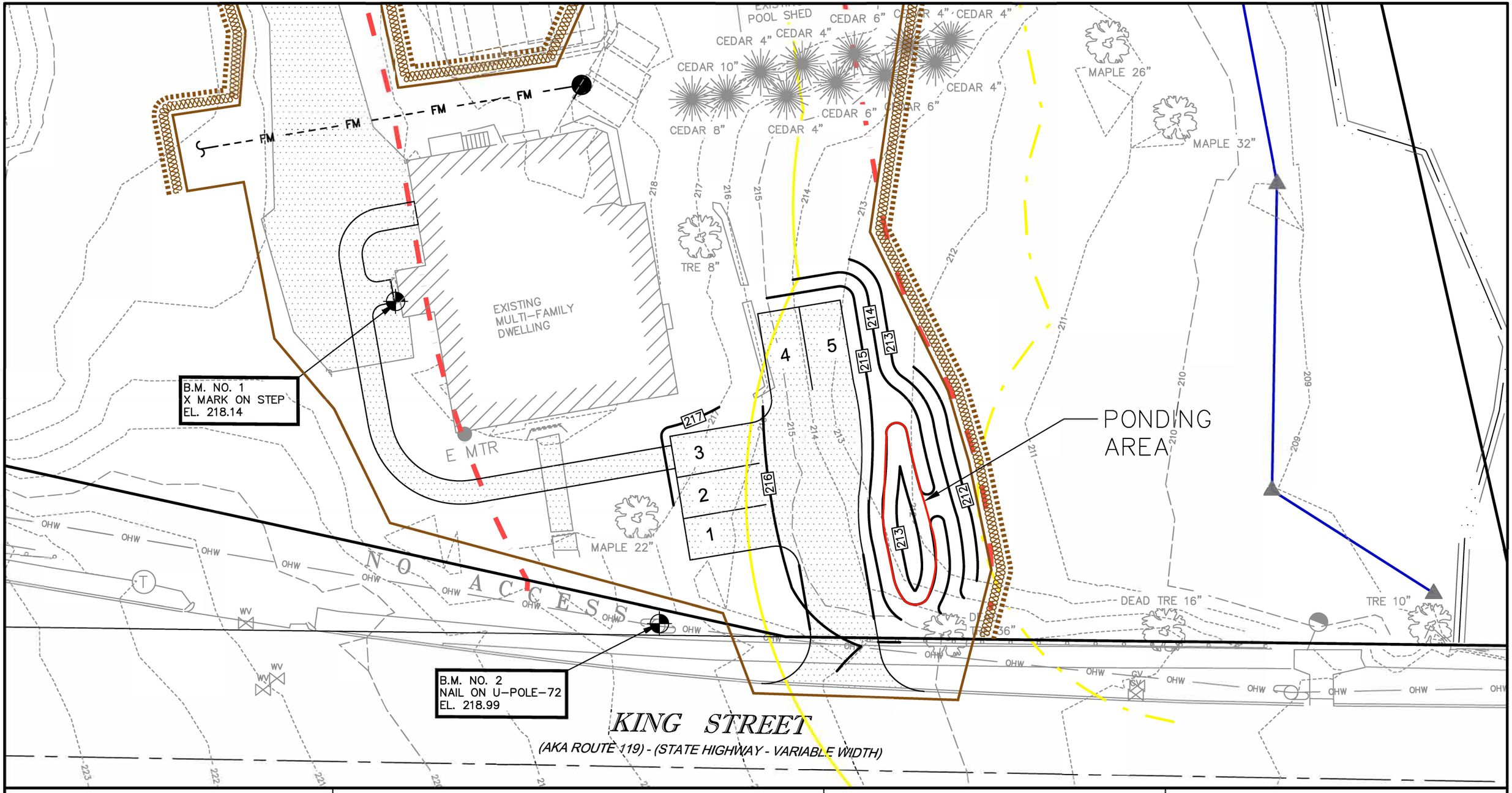
	fabric and soil, replant, and mulch.

5. Emergency Contacts

Oil spills and leaks, the release of hazardous materials, the contamination of drinking water or other threats to the public are Environmental Emergencies and must be reported immediately.

1. **IMMEDIATELY** Call your local fire department: **911**
2. Call MassDEP's Emergency Response at: **1-888-304-1133**
3. Contact Site Owner

Attachment 1: SCM Locus Plan



GRAPHIC SCALE

60 0 30 60 120

(IN FEET)

1 INCH = 60 FEET

GPR

Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN ST., SUITE 301, AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
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LITTLETON ELECTRIC LIGHT
AND WATER DEPARTMENT
39 AYER ROAD, P.O. BOX 2406
LITTLETON, MA 01460

STORMWATER CONTROL MEASURES LOCUS MAP

242 KING STREET,
LITTLETON, MA

DES'D BY: KI	CHK'D BY: EAC
DATE: SEPTEMBER 2025	PROJECT: 241114

P:\24---\241114\C3DWG\PERMIT\242 KING ST - NOI SITE PLAN.DWG 08-13-25 3:19:36 PM - LAYOUT SCM

Attachment 2: Operation and Maintenance Log

The following template is designed to assist in meeting the operation and maintenance log requirements outlined in the 2008 DEP Stormwater Management Handbook. An operation and maintenance log should be completed for all inspections and maintenance and kept on file for at least three years.

Operation and Maintenance Log

Name of Inspector:

Date/ Time of Inspection: Weather Conditions:

Notes on Recent Precipitation Events:

SCM	Inspection Notes	Actions Req'd or Performed

Attachment 3: Deed and Record Plan

Southern Middlesex - 20/20 Perfect Vision i2 Document Detail Report

Current datetime: 9/19/2024 6:54:03 AM

Doc#	Document Type	Town	Book/Page	File Date	Consideration
1890290	DEED		01577/104	08/11/2021	1500000.00

Property-Street Address and/or Description

242 KING ST LOT 49

Grantors

242 KING STREET TRUST, MONTANARI MARK J, MONTANARI HENRY J

Grantees

LITTLETON TOWN

References-Book/Pg Description Recorded Year

Registered Land Certificate(s)-Cert# Book/Pg

277085 01577/104, 226564 01263/14

2021 01890290
Bk: 1577 Pg: 104 Cert#: 277085
Doc: DEED 08/11/2021 01:20 PM

Exempt

QUITCLAIM DEED

We, **MARK J. MONTANARI** and **HENRY J. MONTANARI**, **Trustees** of the **242 KING STREET TRUST**, under Declaration of Trust dated September 17, 1987, a Certificate of which is recorded herewith, of Littleton, Middlesex County, Massachusetts,

for consideration paid and in full consideration of **ONE MILLION FIVE HUNDRED THOUSAND AND 00/100 ($1,500,000.00) DOLLARS**

grant to **TOWN OF LITTLETON, a Mass. Municipal Corporation, acting by and through its Board of Water Commissioners for the benefit of its Water Dept.**, of 39 Ayer Road, Littleton, Middlesex County, Massachusetts 01460,

with Quitclaim Covenants

Property Address: 242 King Street, Littleton, Massachusetts 01460

Parcel I:

A certain parcel of land situated in Littleton, Middlesex County, Commonwealth of Massachusetts, described as follows:

SOUTHERLY	by State Highway, one hundred fifty-nine and 68/100 feet;
SOUTHWESTERLY	by parcel 3-31-A as shown on plan hereinafter mentioned, five hundred eighty and 56/100 feet;
NORTHWESTERLY	by said parcel 3-31-A, two hundred forty-nine and 69/100 feet;
NORTHEASTERLY and **NORTHERLY**	by land now or formerly of Walter P. Sheridan et al, five hundred seventy-seven and 23/100 feet; and
EASTERLY	by lot 16 on said plan, being a line in Beaver Brook as shown on said plan, two hundred eighty-eight and 90/100 feet.

Said parcel is shown as Lot 49 on said plan (Plan No. 7271M, Book 660, Page 69).

All of said boundaries are determined by the Court to be located as shown on a subdivision plan, as approved by the Court, filed in the Land Registration Office, a copy of which is filed in the Registry of Deeds for the South Registry District of Middlesex County in Registration Book 1190, Page 51, Certificate 212001.

226564

Parcel II:

A certain parcel of land in Littleton, Middlesex County, Massachusetts, bounded and described as follows:

EASTERLY	by land now or formerly of Pote shown on Land Court Plan 7271G, by two courses, 153.41 feet and 420.66 feet;
NORTHERLY	by land now or formerly of Sheridan et al, 208.91 feet;
NORTHWESTERLY	by the line of Interstate 495 as shown on said Plan, 636.30 feet;
SOUTHWESTERLY	by Lot 49 on Land Court Plan 7271M, 285.76 feet;
SOUTHERLY	by said Lot 49, 291.47 feet.

Said Parcel is shown as Lot 56 on said plan (Plan No. 7271S, Book 1132, Page 44).

Subject to and with the benefit of easements, restrictions and covenants of record, if any there be, insofar as the same are now in force and applicable.

This conveyance is subject to a Utility Easement as shown on Plan 7271S.

All of said boundaries are determined by the Land Court to be located as shown on Subdivision Plan 7271-S, as approved by the Court, filed in the Land Registration Office, a copy of a portion of which is filed with Certificate of Title.

For Title of Certificate of Title Number 200394 recorded in Book 1132, Page 44.

Ignore cert cf. TR NOT Herewith

By execution of this Deed, the Trustees hereby declare that the **242 KING STREET TRUST** is still in force and effect, all of the beneficiaries are competent and not minors or corporations and all of the beneficiaries have consented to the transfer of 242 King Street, Littleton, Massachusetts to the Grantee herein, for the amount of $1,500,000.00 and they have authorized **MARK J. MONTANARI** and **HENRY J. MONTANARI** as Trustees to execute any and all documents necessary to effectuate said transaction.

The undersigned hereby releases any and all Rights of Homestead which have been declared in the property or have been granted as a matter of law and further states under the pains and penalties of perjury that there are no other persons entitled to protection under the Homestead Act.

Being the same premises conveyed to Grantor by Deed dated December 30, 2002 and recorded with the Middlesex South County Registry of Deeds, Land Registration Office as Document No. 1247556 in Book 1263, Page 14 and Certificate No. 226564.

Executed as a sealed instrument this 3rd day of August, 2021.

242 KING STREET TRUST

MARK J. MONTANARI, TR

MARK J. MONTANARI, TRUSTEE

HENRY J. MONTANARI, TRA

HENRY J. MONTANARI, TRUSTEE

COMMONWEALTH OF MASSACHUSETTS

MIDDLESEX, ss. August 3, 2021

On this day, before me, the undersigned Notary Public, personally appeared the above-named **MARK J. MONTANARI** and **HENRY J. MONTANARI**, Trustees as aforesaid, who proved to me through satisfactory evidence of identification, which was the presentation of a driver's license, to be the persons whose names are signed on the preceding document, and acknowledged to me that they signed it voluntarily for its stated purpose and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of their knowledge and belief.

Notary Public:
My Commission Expires:

SHERRILL R. GOULD
MY COMMISSION EXPIRES ON
05-13-2027
COMMONWEALTH OF MASSACHUSETTS
NOTARY PUBLIC

1890290

DOCUMENT 01890290

Southern Middlesex LAND COURT

REGISTRY DISTRICT

RECEIVED FOR REGISTRATION

On: Aug 11,2021 at 01:20P

Document Fee: 155.00
Receipt Total: $260.00

NEW: CERT 277085 BK 01577 PG 104

OLD: Cert 226564-1263-14