

# **Long Term Stormwater Operation & Maintenance Plan For**

**Mattakeesett Village  
7 & 15 Mattakeesett St.  
Pembroke, MA 02359**

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**Prepared for:  
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# OPERATION AND MAINTENANCE BMP MAP

October 30, 2023

Mattakeesett Village

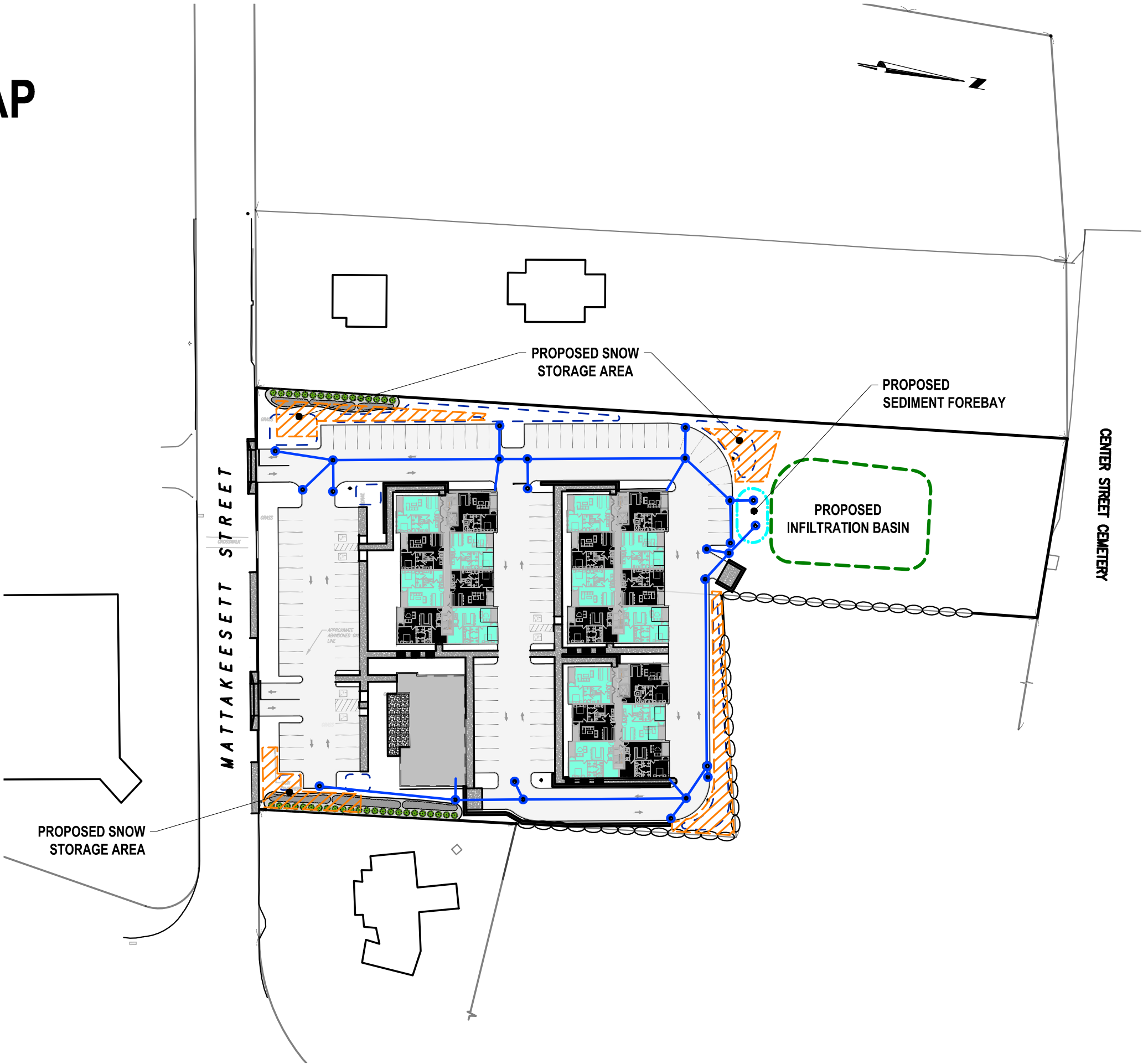
7 & 15 MATTAKEESETT ST.  
PEMBROKE, MASSACHUSETTS 02359



- INFILTRATION BASIN
- SEDIMENT FOREBAY
- DRAINAGE SYSTEM
- SNOW STORAGE

SNOW STORAGE:

- 1. DRIVE AISLE TO BE PLOWED TO EACH EDGE OF PAVEMENT MAINTAINING MIN 20' WIDE ACCESS AT ALL TIMES.
- 2. SNOW STORAGE SHALL NOT OCCUR OVER CATCH BASINS.



# LONG-TERM STORMWATER OPERATION & MAINTENANCE PLAN

**Mattakeesett Village**  
7 & 15 Mattakeesett Street  
Pembroke, MA 02359

## PROJECT OVERVIEW:

The proposed project is three (3) multi-family buildings consisting of 66-units and a Tavern on Mattakeesett St. in Pembroke, Massachusetts. The project includes the construction of the site and garage parking. Stormwater management consists of a series of deep sump catch basins which collect stormwater from throughout the site and pipe it to a sediment forebay and combination infiltration/detention basin. The project has been designed to comply with the Massachusetts Stormwater Management Regulations.

Appended to this document is a sample maintenance form and a chart describing the anticipated frequency of tasks.

## OWNER AND RESPONSIBLE PARTY:

### ***Current Land Owners:***

1317 Washington Re Holdings, LLC.  
190 Old Derby Street, Suite 311  
Hingham, MA 02043

### ***Proposed Site Contractor:***

To Be Determined

### ***Proposed Owner (Once project is approved):***

1317 Washington Re Holdings, LLC.  
190 Old Derby Street, Suite 311  
Hingham, MA 02043

## CONSTRUCTION MANAGEMENT:

A construction manager with adequate knowledge and experience on projects of similar size and scope shall be employed to oversee all site work related construction. The contractor shall incorporate the appropriate techniques to control sediment and erosion pollution during construction in accordance with the *Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas* and any conditions of approval from the Planning Board.

Care should be taken when constructing stormwater control structures. Light earth-moving equipment shall be used to excavate in the vicinity of the infiltration areas. Use of heavy-equipment causes excessive compaction of the soils beneath the basin resulting in reduced infiltration capacity. At no time shall temporary infiltration areas or settling basins be constructed in the vicinity of the proposed infiltration basins in order to prevent the soils from becoming clogged with sediment.

#### **ON-GOING MAINTENANCE CONTRACT**

The non-structural and structural approaches recommended below, as well as the required BMP maintenance, will be completed by the selected contractor. In Adequate personnel with appropriate training and access to proper equipment will be available to complete the tasks. Future responsible parties must be notified of their responsibility to operate and maintain the system in perpetuity.

#### **MAINTENANCE LOG**

The Responsible Party shall develop and maintain a log of inspections, maintenance, repairs, and disposal (including location of disposal) during the life of the project. Records will be maintained for at least 3 years and be made available to the Massachusetts Department of Environmental Protection or the Town of Hingham in accordance with the provisions of the Massachusetts Stormwater Handbook. A sample of such a maintenance log is provided.

#### **STORMWATER BMP MAINTENANCE**

The proposed stormwater management system has been designed with appropriate BMPs aimed at reducing the pollutants discharge based upon the intended use of the property. All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements; others are more involved. The Responsible Party must have all BMPs regularly inspected to ensure they are operating properly on an as needed basis, including during runoff events exceeding 0.5 inches of rainfall.

A description of the non-structural and structural approaches to be incorporated is indicated below. The following best management practices are proposed to be incorporated into the stormwater management design to reduce source runoff and improve stormwater runoff discharge quality. The Responsible Party will regularly inspect all BMPs to ensure they are operating properly. If any deficiencies are identified during these inspections, action to resolve it will be initiated and documented on the maintenance log.

## **STRUCTURAL BMPs**

### Deep Sump Hooded Catch Basins and Area/Yard Drains

On a regular basis the inlet pipe and outlet pipe shall be checked for debris and removed as necessary to ensure unobstructed flow of water. Inspections shall occur at least four times per year, and at the end of the foliage and snow removal seasons. Inspections shall verify the tees are secure and free flowing. Sediments must also be removed four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the basin. Because these catch basins will be discharging near a critical area, more frequent cleaning may be necessary. Basins shall be cleaned using a vacuum pump. All liquid shall be pumped from the sump of each basin at least once per year. All sediments and hydrocarbons should be properly handled and disposed of in accordance with local, state and federal guidelines and regulations.

### Sediment Forebay

Frequently remove accumulated sediment. At a minimum, inspect forebay monthly and clean them out at least four times a year. Stabilize the floor and sidewalls of the forebay before making it operational. Grass height shall be no higher than 6-inches, and no lower than 3-inches. Check for signs of riling and gullyng and repair as needed.

### Infiltration Basin

Accumulated debris and sediment shall be removed on an annual basis unless or more frequently if deemed necessary. Sediment shall be transported off site and disposed of in accordance with applicable local, state, and federal guidelines and regulations. Vegetated surfaces shall be repaired to ensure stable surfaces exist. Any debris or landscape growth extending within the identified maintenance access paths shall be trimmed/removed accordingly to maintain a clear and open pathway. Inspection should occur twice annually, once in the fall and then in the spring after the snow melts. Cleaning will take place at the completion of construction and as deemed necessary based on the inspections and manufacturer's requirements.

## **NON-STRUCTURAL BMPs**

### Pavement Sweeping

As street sweeping is a BMP under DEP guidelines, this non-structural BMP is an effective removal of Total Suspended Solids (TSS) in a comprehensive stormwater management program. Litter and debris is to be regularly picked up and removed from the pavement and porous pavers. Paved areas are to be swept a minimum of quarterly per year.

### Pervious Areas and Slopes

Runoff from pervious areas and slopes shall be directed over vegetated areas to promote settlement of suspended solids before entering a wetland or resource area. Steep pervious slopes will be permanently vegetated to dissipate energy and reduce potential erosion. No constructed vegetated slopes should exceed 2H:1V. Slopes exceeding 2:1 shall be stabilized with rip-rap, jute netting or other similar measures to minimize the potential for future erosion.

### Drainage Control Structures, Flared End Sections, Trash Racks, Riprap Pads, Swales, and Level Spreader Splash Pads

Basin control structures, flared end sections, trash racks, riprap pads and level spreader splash pads shall be inspected and any debris or growth surrounding or within these structures shall be removed. Any/all debris or vegetation encroaching on the control structures or outfall components shall be removed or appropriately trimmed back to maintain the designed control elevation and flow patterns/cross section without impediment. Inspection should occur twice annually, once in the fall and then in the spring after the snow melts. Cleaning will take place at the completion of construction and as deemed necessary based on the inspections and manufacturer's requirements.

### Pest and Insect Control

- As a first-line defense against pests/insects and weeds (the "First-Line Defense"), the party responsible for maintenance shall avoid the use of non-organic pesticides, herbicides, fungicides and insecticides unless spot treatment is required for a specific control application. The owner shall not be required to undertake extraordinary measures or incur unreasonable cost to locate, purchase or apply non-organic products.
- If the First-Line Defense fails, as determined by the owner or party responsible for maintenance, in its sole but reasonable discretion, non-organic approaches to pest/insect control may be used, the same to be applied by a professional licensed in the Commonwealth of Massachusetts, where required.

### Waste Management

Solid waste and recycling will be contained in dumpsters for routine and regular trash pickup.

### Snow Removal

Snow that is plowed from the paved driveway surfaces shall be plowed to the edges of the pavement. When capacity of these areas is exceeded, accumulated snow shall be removed. Refer to the enclosed O&M Map which identifies location of BMPs and provides additional Snow Removal information.

### Hazardous Waste and Spill Control Containment

In the event of a discharge or spill of oil or another hazardous material, outlets to stormwater management facilities immediately downstream of the spill shall be plugged so that hazardous materials do not enter the system. In the event of a discharge of oil or other hazardous material, responsible facility personnel shall notify the appropriate state agencies, the Town of Hingham DPW and the EPA National Response Center 1-800-424-8802 shall be notified. All hazardous waste materials will be disposed of in a manner specified by local, state and/or federal regulations and by the manufacturer of such products.

## Stormwater BMP Inspection and Maintenance Log

Facility Name
Address
Begin Date <span style="float: right;">End Date</span>

Date	BMP ID#	BMP Description	Inspected by:	Cause for Inspection	Exceptions Noted	Comments and Actions Taken

**Instructions:** Record all inspections and maintenance for all treatment BMPs on this form. Use additional log sheets and/or attach extended comments or documentation as necessary. Submit a copy of the completed log with the annual independent inspectors' report to the municipality and start a new log at that time.

BMP ID# — Always use ID# from the Operation and Maintenance Manual.

Inspected by — Note all inspections and maintenance on this form, including the required independent annual inspection.

Cause for inspection — Note if the inspection is routine, pre-rainy-season, post-storm, annual, or in response to a noted problem or complaint.

Exceptions noted — Note any condition that requires correction or indicates a need for maintenance.

Comments and actions taken — Describe any maintenance done and need for follow-up.



## Stormwater BMP Inspection Matrix

Conventional & LID Best Management Practices	Inspection & Maint. Frequency	Erosion& Scour	Obstructions	Trash & Debris	Sediment Build-Up Removal	Vegetation Cover	Remove/Reset Filter Fabric & Stone As Required	Vac Truck Sediment & Contaminants	Remove/Reset Riprap as Required
Catch Basins/Area & Yard Drains	Twice-Annually (Spring and Fall)								
Pavement Sweeping	Four times per year								
Sediment Forebay	Twice-Annually (Spring and Fall)								
Infiltration Basin	Twice-Annually (Spring and Fall)								
Outlets (FES, Rip Rap Pad, Level Spreaders)	Twice-Annually (Spring and Fall)								