PARE PROJECT NO. 17044.03

STORMWATER OPERATION AND MAINTENANCE PLAN
LONG TERM POLLUTION PREVENTION PLAN

PUBLIC SAFETY COMPLEX
ASHLAND, MASSACHUSETTS

Prepared for:

Town of Ashland
101 Main Street
Ashland, MA 01721

Prepared by:

Pare Corporation
10 Lincoln Road
Foxboro, MA 02035

August 2020
Revised November 2020

STORMWATER OPERATION AND MAINTENANCE PLAN
LONG TERM POLLUTION PREVENTION PLAN
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PREAMBLE

Name of Site: **Ashland Public Safety Complex**

Location: **Town of Ashland, MA**

Owner's Name: **Town of Ashland**

PREAMBLE: This Operation and Maintenance Plan (O&M) and Long Term Pollution Prevention Plan were prepared for the Owner of the Metropolis Rink, in cooperation with local authorities and personnel within the Town of Ashland, to establish a basis for continuing maintenance, inspection, and pollution prevention for the Ashland Public Safety Complex. The Operation and Maintenance Manual and Long-Term Pollution Prevention Plan stresses the importance of maintenance of the drainage system and best management practices.

The Owner of the site has a direct influence on the operation of the site and holds financial responsibility. As such, the Owner should play a direct role in the development of a continuing maintenance program, which includes important elements such as inspecting, monitoring and maintaining the site. It is recommended that as personnel change, a comprehensive briefing be conducted for new workers/personnel to familiarize them with the site structures and the components of the Operation and Maintenance Manual, Long Term Pollution Prevention Plan, and other documents specific to the site. If ownership and/or financial responsibility of the stormwater management system changes, the owner shall notify the Ashland Conservation Commission per the Ashland Stormwater Management By-Law.

RESPONSIBLE PARTIES

Owner: Town of Ashland

Operator: Town of Ashland

Contacts: ASHLAND TOWN HALL
101 MAIN STREET
ASHLAND MA, 01721
PHONE: (508) 881-0100

I, the undersigned, understand the Operation and Maintenance procedures outlined in this manual and will be the responsible party for the Operation and Maintenance set forth in this manual (Sign, Print Name, and Date)

Signature:_____
Name (Printed):_____
Date:_____

STORMWATER OPERATION AND MAINTENANCE PLAN

General Operation and Maintenance Notes

Following construction, the completion of the inspection and maintenance requirements below shall be the responsibility of the Property Owner.

Maintenance inspections should be performed by qualified Town of Ashland personnel who are familiar with the site, its operation, and have been educated on the procedures for observing, identifying, and documenting deficiencies. The operations and maintenance log shall be completed during each maintenance inspection. A sample O&M log is included in Appendix A.

1. Monitoring shall be routinely conducted to observe operation and assess performance. Site personnel conducting monitoring shall be educated on the intent of the design and operation of each system to continue effectiveness of the inspections.

2. Special inspections shall be made immediately following major events such as floods, earthquakes, vandalism, and major storm events (greater than 3.10").

3. Maintenance inspections shall be performed on all structural practices to assess operational capability and structural stability. If at any time there is a question of structural or hydraulic integrity that may affect public safety, inspection shall be done by a professional engineer.

4. Trash, litter, sediment and other debris shall be removed from any stormwater management system facility (including but not limited to catch basins, manholes, inlets, outlet structures, and stormwater best management practices (BMPs)) at least twice a year, once in the spring and once in the fall, at the cost of the Owner.

5. The parking lot, entry drives, and sidewalks shall be swept by the Owner as early as possible every spring and once in the fall to remove sediments.

6. A maintenance schedule for mulching, edging, mowing, pruning, weeding, and aeration shall be developed by the Owner to maintain landscape areas.

7. All sediments removed shall be disposed of at an approved and permitted location.

8. All observations made during scheduled inspections (notes, photographs, etc.) shall be recorded in an inspection form. Inspections and Observations shall include the location, extent of the area (length, width, depth, height), and descriptive detail including: sediment buildup, color/quantity of sediment, condition of concrete/structures, extent of moist wet, or saturated areas, adequacy of surface drainage, and changes in condition. All maintenance required shall be recorded in these forms. All maintenance and repair records shall be retained for a minimum of five years. Example inspection forms have been included in Appendix A for use.

9. All cleaning and maintenance of drainage system BMP's shall be the responsibility of the Property Owner. See OM-1 in Appendix A for the location of each stormwater system. Additional inspection, maintenance, and repair notes for the stormwater system are as follows:

Catch Basins, Manholes, and Area Drain Inspection, Maintenance, and Repair Notes

1. Inspect catch basins, drain manholes, yard drains, and trench drains quarterly for sediment build up and for continuous flow through. Any debris shall be cleared that could potentially block the flow of stormwater.

2. Deep sump catch basin units should be inspected and cleaned 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.

3. Clean outlets of all drainage structures when observed to be clogged.

Hydrodynamic Separator Inspection, Maintenance, and Repair Notes

1. Inspections, maintenance, and repairs shall be in accordance with manufacturers recommendations.

2. Hydrodynamic Separators shall be inspected twice a year to monitor accumulated sediment.

3. The structure should be cleaned when the sediment has accumulated to a depth of two feet in the treatment chamber. This determination can be made by taking two measurements with a stadia rod or similar measuring device; one measurement from the manhole opening to the top of the sediment pile and the other from the manhole opening to the water surface.

Underground Infiltration/Detention System Inspection, Maintenance, and Repair Notes

1. The system shall be maintained as recommended by the manufacturer.

2. Following storm events with rainfall exceeding 3.1"
    - Inspect infiltration/detention system for trash, debris, sediment, erosion, standing water, and overall performance. Defects shall be repaired by the Owner.

3. Bi-annually
    - Inspections shall be performed a minimum of two times per year on the inspection ports and drainage structures of the underground infiltration/detention system to ensure proper operation of the system.

4. Jetvac maintenance is recommended if sediment has been collected to a depth of 3" in the pretreatment row. More frequent maintenance may be required to maintain minimum flow rates through the pretreatment row. The jetvac process shall only be performed on the pretreatment row.

Tree Box Filter Inspection, Maintenance, and Repair Notes

1. Following first 6 months after construction
    - Inspect tree filter after first two rainfall events of 1" or more.

2. Tree box filter shall be inspected after every storm of 3.1" inch or greater for trash, debris, sediment, erosion, standing water, and overall performance. Defects shall be repaired by the owner.

3. Annually
    - Remove accumulated sediment from the tree filter area annually in the spring or if sediment exceeds 1" in the filter area.
    - Owner Shall re-mulch tree box filter in spring every year
    - Mulch shall be raked twice per year.
    - Check the tree annually.

4. Quarterly
    - Remove accumulated sediment from the sediment forebay quarterly or if sediment reaches half the design depth or more.

5. The expected life expectance of the tree is 5 – 10 years. Media shall be replaced when the tree is replaced.

6. If ponding exceeds 48 hours on the surface of the tree filter remove and replace discolored surface material.

7. If runoff takes more than 36 hours to flow from the sediment forebay to the tree filter, the spillway shall be replaced.

8. All sediments removed shall be disposed of at an approved and permitted location.

Grass and Lawn Maintenance

1. Grass shall be mown or cut back if it impedes water movement or grass health.

2. Inspect eroded areas of landscape and re-seed or re-mulch, as necessary.

3. Inspect area drain grates within landscaped areas monthly and clean of debris, as necessary.

LONG TERM POLLUTION PREVENTION PLAN

Pollution Prevention and Source Controls

In addition, the following site-specific controls and performance procedures shall be followed to prevent potential sources of pollution.

1. **General Inspection and Monitoring Requirements**
   The inspection and maintenance schedule should follow the above Operations and Maintenance Plan.

2. **Removal of Debris**
   Trash, litter, sediment and other debris shall be removed from any stormwater facility (including catch basins, manholes, inlets, diversion and outlet structures) per the above Operations and Maintenance Plan.

3. **Sweeping**
   The parking lot, entry drives, and sidewalks shall be swept by the Owner twice a year per the above Operations and Maintenance Plan.

4. **Snow Removal**
   Snow removal shall be performed to protect public safety and the environment. Snow shall not be dumped and/or stored in critical areas or in areas where infiltration is proposed, including, but not limited to the adjacent wetland, wetland resource area, or footprint of the bioretention area. Snow storage areas shall be surrounded by silt fence and have the maximum practicable buffer. Avoid long-term pileup of snow on grass paved surfaces to minimize possible damage from snow mold and other related diseases. Debris shall be cleared from each snow storage areas prior to disposing snow in each area. Recommended snow stockpile locations are shown on OM-1 provided in Appendix A.

5. **Proper Storage of Deicing Materials**
   Deicing Materials shall be stored under a roof or secure enclosure to protect groundwater and surface water sources for public water supplies.

6. **Grass, Tree, and Shrub Fertilization**
   All fertilizer types and amounts shall be in accordance with Town of Ashland maintenance practices. Fertilizer use shall be minimized to the maximum extent practicable. If used, fertilizer should not be installed more than twice a year (once in spring and once in fall).
   The following techniques shall be implemented to prevent pollution from fertilizer:
   a. Fertilizer shall be stored under a roof or secure enclosure.
   b. Partially used bags shall be transferred to a sealable bag or a bin to avoid spills.
   c. Don't fertilize before a rain storm.
   d. Consider using organic fertilizers. They release nutrients more slowly.
   e. Have your soil tested before applying fertilizers to your lawn and gardens. A standard soil test costs $9.00. You may not need to add any fertilizer. (Call the UMass Extension Soil Testing Lab at 413-545-2311 or download a soil test order form at http://www.umass.edu/soiltest/.)

7. **Insect, Disease, and Chemical Weed Control**

Low-impact pest management strategies shall be implemented whenever damage is detected or harmful organisms are present. Periodic inspection of all plants by trained personnel is necessary to detect problems during early stages of insect or disease infestation. Application of all chemicals including insecticides and fungicides shall be carried out in accordance with manufacturer's guidelines and State laws and only by individuals with current State Pesticide Applicators License. Store insecticides, fungicides, and herbicides in original containers that are closed and labeled, in a secure area out of reach of children and pets and away from food.

8. **Lime Application**
   Lime as required to maintain a proper pH based on soil samples throughout the landscape area(s) and an analysis of the existing nutrients (N-P-K) and pH.

9. **Proper Storage, Use, and Disposal of Household Hazardous Chemicals and Solid Waste**
   Hazardous chemicals should be stored in accordance with MSDS specifications. Stormwater shall be prevented from entering areas with hazardous materials to the maximum extent feasible. Any hazardous materials anticipated to be stored on site shall be stored in adequate indoor storage areas to prevent potential contact with stormwater. Spill containment shall be provided in areas where a spill might occur. Solid waste shall be placed in secure receptacles that are covered and in a location so that a licensed solid waste management company in Massachusetts can remove them from the site.

10. **Spill Response**
    Ensure the cleanup of liquid/solid spills occurs immediately, if a significant spill occurs. Retain and maintain an appropriate oil spill cleanup kit on-site for rapid cleanup of material spills. Ensure that an employee trained in spill containment and cleanup is present during loading/unloading activities. Notify MassDEP as required: http://mass.gov/dep/cleanup/dealin01.htm

Telephone List
Updated: August 2020

1. OPERATOR: Town of Ashland
   CONTACT: Ashland Town Hall, Town Manager
   PHONE: 508-881-0100

2. DEPARTMENT OF PUBLIC SAFETY
   CONTACT: Department of Public Works Director
   PHONE: 508-881-0120

APPENDIX A

Example Inspection Forms
Sample Operations and Maintenance Log
OM – 1 Operation and Maintenance Plan (11” x 17”)

Area Drain (AD) INSPECTION FORM

Ashland Public Safety Complex
12-16 Union Street Ashland, Massachusetts

Owner: _____

Property Manager: _____

Inspected by: _____

Date of Inspection: _____

Area Drain/Yard Drain Inspected #_____

Acceptable ☐ Needs Work ☐

NOTES:

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Date of cleaning: _____ By Whom: _____

Date of repair: _____ By Whom: _____

Note any discrepancies and suggested corrective actions

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TREE BOX FILTER (TBF) INSPECTION FORM

Ashland Public Safety Complex
12-16 Union Street Ashland, Massachusetts

Owner: _____

Property Manager: _____

Inspected by: _____

Date of Inspection: _____

Bioretention Area Inspected #_____

Acceptable ☐ Needs Work ☐

NOTES:

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Date of cleaning: _____ By Whom: _____

Date of repair: _____ By Whom: _____

Note any discrepancies and suggested corrective actions

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CATCH BASIN (CB) INSPECTION FORM

Ashland Public Safety Complex
12-16 Union Street Ashland, Massachusetts

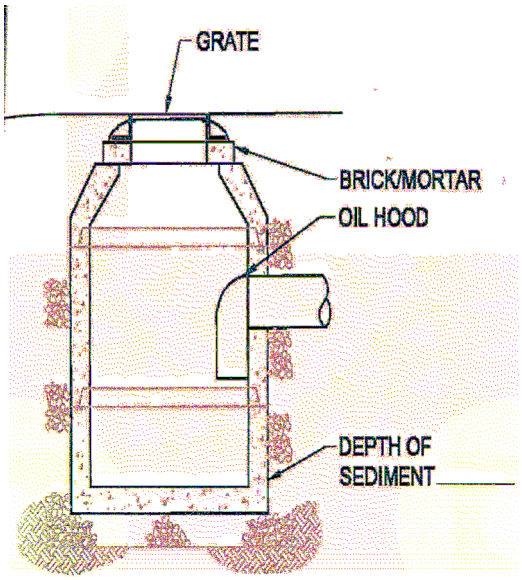
Owner: _____

Property Manager: _____

Inspected by: _____

Date of Inspection: _____

Catch Basin Inspected #_____



Acceptable ☐ Needs Work ☐

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Date of cleaning: _____ By Whom: _____

Date of repair: _____ By Whom: _____

Note any discrepancies and suggested corrective actions

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Manhole (MH) INSPECTION FORM

Ashland Public Safety Complex
12-16 Union Street Ashland, Massachusetts

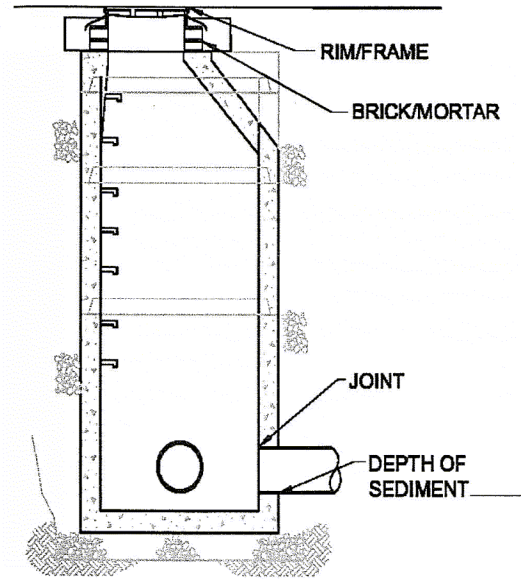
Owner: _____

Property Manager: _____

Inspected by: _____

Date of Inspection: _____

Manhole Inspected #_____



Acceptable ☐ Needs Work ☐

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Date of cleaning: _____ By Whom: _____

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Note any discrepancies and suggested corrective actions

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UNDERGROUND DETENTION SYSTEM (UGDS) INSPECTION FORM

Ashland Public Safety Complex
12-16 Union Street Ashland, Massachusetts

Owner: _____

Property Manager: _____

Inspected by: _____

Date of Inspection: _____

Bioretention Area Inspected #_____

Acceptable ☐ Needs Work ☐

NOTES:

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Date of cleaning: _____ By Whom: _____

Date of repair: _____ By Whom: _____

Note any discrepancies and suggested corrective actions

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UNDERGROUND INFILTRATION SYSTEM (UGIS) INSPECTION FORM

Ashland Public Safety Complex
12-16 Union Street Ashland, Massachusetts

Owner: _____

Property Manager: _____

Inspected by: _____

Date of Inspection: _____

Bioretention Area Inspected #_____

Acceptable ☐ Needs Work ☐

NOTES:

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Date of cleaning: _____ By Whom: _____

Date of repair: _____ By Whom: _____

Note any discrepancies and suggested corrective actions

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HYDRODYNAMIC SEPARATOR INSPECTION FORM

Ashland Public Safety Complex
12-16 Union Street Ashland, Massachusetts

Owner: _____

Property Manager: _____

Inspected by: _____

Date of Inspection: _____

Bioretention Area Inspected #_____

Acceptable ☐ Needs Work ☐

NOTES:

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Date of cleaning: _____ By Whom: _____

Date of repair: _____ By Whom: _____

Note any discrepancies and suggested corrective actions

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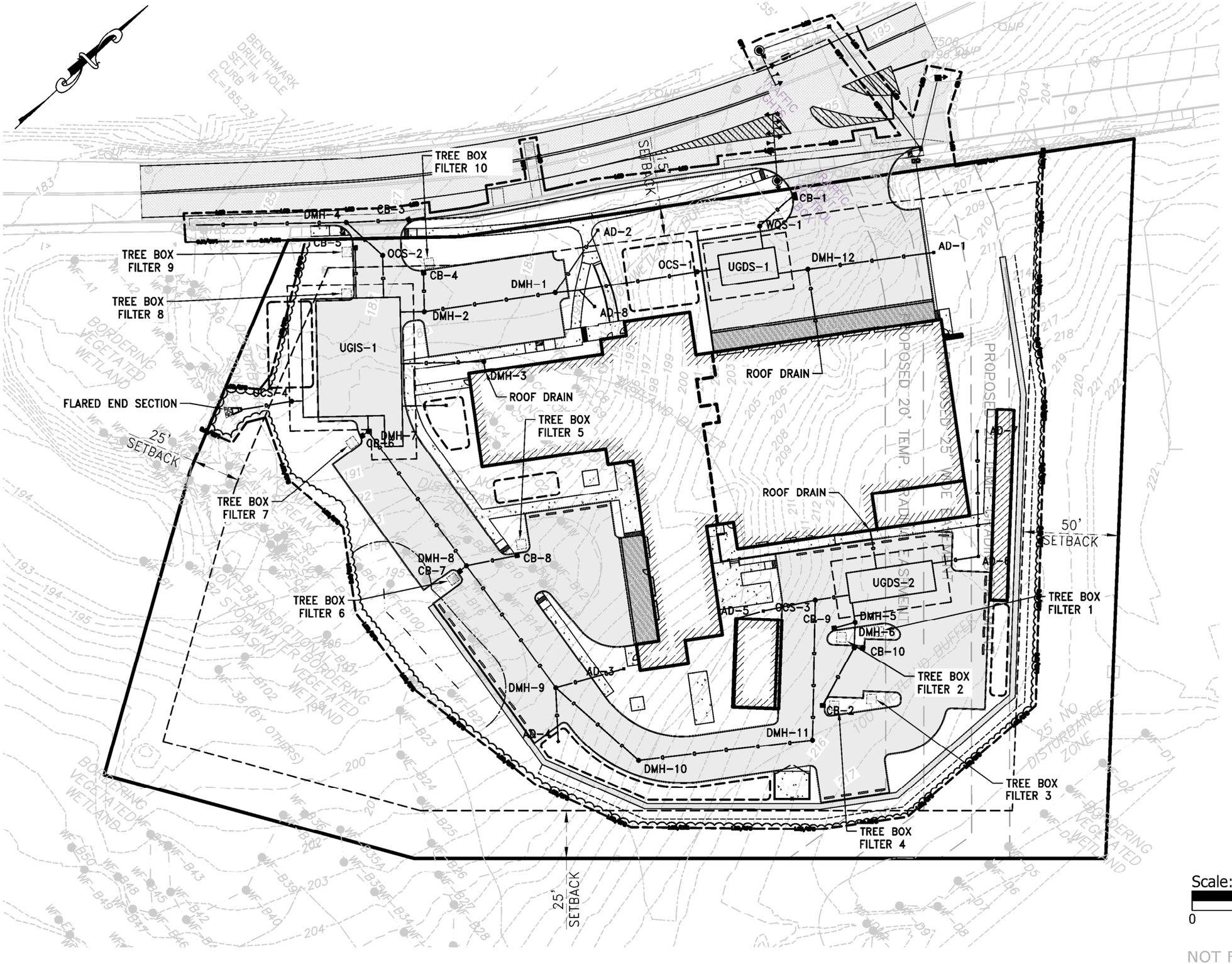
Sample Operation and Maintenance Log

Site Maintenance Supervisor: _____ Date: _____

☐ Routine ☐ Response to Rainfall Event _____ in ☐ Other _____

BMP	Frequency	Date Performed	Comments
Yard Drain/Trench Drain Catch Basins/ Manholes	Quarterly Inspections		
	Maintenance as necessary		
Drywell	Inspected after major storm event		
	Maintenance as necessary		
Bioretention Area	Inspect after major storm event		
	Maintenance as necessary – at least twice a year		
Vegetated Areas	Maintenance as necessary		
Spring Clean Up	Between April and May		
Sweeping	Biannually		
Grass Fertilization	First Application		
	Second Application		
Tree and Shrub Fertilization	Annual Application		
Grass Mowing	As required		
Mulching	AS required; At least biennially for the Bioretention Area		
Edging	As required		
Weed Control	As required		
Pruning	As required		
Aeration	As required		
Lime Application	As required		
Fall Clean up	Between October and December		
Drainage Piping	Annual Inspection		
	Maintenance as necessary		


TREE BOX FILTER 10
DMH-4
CB-3
CB-5
TREE BOX FILTER 9
OCS-2
CB-4
DMH-1
AD-2
CB-1
WQS-1
OCS-1
UGDS-1
DMH-12
AD-1
TREE BOX FILTER 8
DMH-2
AD-8
UGIS-1
DMH-3
ROOF DRAIN
FLARED END SECTION
OCS-4
TREE BOX FILTER 5
DMH-7
CB-6
25' SETBACK
TREE BOX FILTER 7
DMH-8
CB-7
CB-8
TREE BOX FILTER 6
UGDS-2
AD-5
OCS-3
CB-9
DMH-5
DMH-6
CB-10
TREE BOX FILTER 1
TREE BOX FILTER 2
AD-3
DMH-9
AD-4
CB-2
DMH-11
DMH-10
TREE BOX FILTER 3
TREE BOX FILTER 4
50' SETBACK
25' SETBACK
BENCHMARK DRILL HOLE SET IN CURB EL=185.23'
BORDERING VEGETATED WETLAND
WETLAND BUFFER
PROPOSED 20' TEMP. ROADWAY
PROPOSED 25' WIDE ACCESS ROAD
25' NO DISTURBANCE ZONE
WF-A1
WF-A2
WF-A3
WF-A4
WF-B1
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WF-B3
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WF-B34
WF-B35
WF-B35A
WF-B36
WF-B37
WF-B38 (BY OTHERS)
WF-B39
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