STORMWATER MANAGEMENT SYSTEM-
LONG TERM MAINTENANCE AND
OPERATION MANUAL
for
PROPOSED COMMERCIAL
CONTRACTOR UNITS
PLAT MAP 10 LOT 42
ZONING DISTRICT GB1
GENERAL BUSINESS
1 ACRE DISTRICT
71 HARKNEY HILL ROAD
COVENTRY, RI

MARCH 2025

Prepared by: Crossman Engineering
Engineers & Surveyors
100 Jefferson Blvd
Warwick, RI 02888

Stormwater Management System
Long Term Maintenance and Operation Manual

Plat Map 10 Lot 42
Zoning District Gb1
Coventry, RI

Owner:
Andrew Barber
P.O. Box 7090
Warwick, Ri 02886

In order to minimize the stormwater management system deterioration, the owner shall adhere to the following Operation and Maintenance Plan as well as any additional requirements pertaining to inspection and maintenance measures for this site provided in Appendices E and G of the Rhode Island Stormwater Design and Installation Standards Manual. Upon project completion, the site owner shall adhere to the following maintenance recommendations.

1. Catch Basins, Manholes and Drain Lines:

Inspection shall occur on a bi-annual basis by qualified personnel to ensure proper operation. The inspection should, as a minimum, concentrate on the following:

-Damage to Grate/Cover
-Evidence of Standing Water
-Debris Removal
-Structural Alignment/Integrity

Catch basin inlets and outlet pipes to be inspected quarterly ascertain correct operation of the system and to clean materials trapped on grates protecting catch basin and inlet area.

Any deficiency noted during the inspection will be immediately repaired or replaced. Following construction, sediment removal from the roadway drainage shall be conducted as deemed necessary by the system inspections. Removed sediment is to be disposed of in accordance with Appendix-A of the R.I.D.E.M. Solid Waste Regulations and R.I.P.D.E.S. Catch Basin cleaning guidance.

2. Sediment Forebay:

Following construction, the basins are to be cleaned of accumulated sediment when the sediment volume has accumulated to a depth greater than one-half the design depth. If necessary, the basins are to be dewatered prior to sediment removal, and all dewatering flow must be adequately filtered prior to flowing into the infiltration basin. The resulting basin condition after sediment is to be tested to determine design conditions. Accumulated sediments shall be removed when they exceed a depth of 9

inches on the upstream side of the concrete curb check dam. Removed sediment to be disposed of in accordance with Appendix-A of the R.I.D.E.M. Solid Waste Regulations and

R.I.P.D.E.S. Catch Basin cleaning guidance. After removing the sediment, replace/repair any damaged vegetation by either re-seeding or sodding.

Mow the grass within and around the perimeter of the basin or filter at least 4 times annually. Vegetation height shall not exceed 18" or be less than 3" in height. Vegetation along the maintenance access roads should be mowed annually. Prune all dead or dying vegetation to the extents of the basin, remove all herbaceous vegetation root stock when overcrowding the maintenance access to the facility, remove any vegetation that has a negative impact on stormwater flowage through the facility, and trim any overgrown vegetation within the basin. Any invasive vegetation encroaching upon the perimeter of the facility shall be pruned or removed if it is prohibiting access to the facility, compromising sight visibility and/or compromising original design vegetation. Replace any/all original vegetation that has died off or has not fully established, as determined at the time of the inspection. Basin vegetation shall be reinforced to its original design standards if less than 50% of the original vegetation is established after two years.

The Sediment Forebay shall be inspected annually and after storm events greater than or equal to the 1-year, 24-hour Type III precipitation event. All oil, sludge, sediment, solids, trash, debris and floatable material should be removed from the forebay. Materials deposited on the surface of the forebay (e.g., trash and litter) should be removed manually. Oil and sludge removal should be accomplished via catch vac or vactor truck and the sediment forebay bottom shall be restored to its original design criteria. After cleaning, all resulting waste including oil, sludge, sediment, and water should be disposed of in accordance with all applicable federal and local regulations. Vegetation in the forebay should not exceed 18 inches in height. A fixed vertical sediment depth marker should be installed in each sediment forebay to measure sediment deposits and indicate when maintenance is required. Sediment removal and maintenance is required when sediment accumulates to half the design depth.

3. <u>Infiltration Basin:</u>

a. General Inspection

The Infiltration basin shall be inspected twice per year and after every major storm event to ensure that design infiltration rates are being met. If sediment or organic debris build-up has limited the infiltration capabilities (infiltration basins) to below the design rate, the top 6 inches should be removed and the surface roto-tilled to a depth of 12 inches. The basin bottom should be restored according to original design specifications. Any oil or

grease found at the time of the inspection should be cleaned with oil absorption pads and disposed of in an approved location.

The inspection must check for:

- Signs of differential settlement
- Soil Cracking
- Erosion
- Leakage in the embankments
- Tree growth in the embankment
- Condition of rip-rap
- Sediment accumulation
- Health of the turf
- Condition of inlets and outlets

Inspect facility for signs of wetness or damage to structures and note any eroded areas. If dead or dying grass on the bottom is observed, check to ensure that water percolates 2-3 days following storms. Mow and remove litter and debris. Stabilize eroded banks and repair undercut and eroded areas at inflow and outflow structures.

Mow the grass within and around the perimeter of the basin at least 4 times annually. Vegetation height shall not exceed 12" or be less than 3" in height. Grass clippings shall be collected and removed from the basin. Prune all dead or dying vegetation to the extents of the basin, remove all herbaceous vegetation root stock when overcrowding the maintenance access to the facility, remove any vegetation that has a negative impact on stormwater flowage through the facility, and trim any overgrown vegetation within the basin. Any invasive vegetation encroaching upon the perimeter of the facility shall be pruned or removed if it is prohibiting access to the facility, compromising sight visibility and/or compromising original design vegetation. Replace any/all original vegetation that has died off or has not fully established, as determined at the time of the inspection. Basin vegetation shall be reinforced to its original design standards if less than 50% of the original vegetation is established after two years.

The slopes of the basin shall be inspected for erosion and gullying. Any areas within the extents of the stormwater facility that are subject to erosion or gullying shall be replenished
with the original design material and re-vegetated according to design drawings. Slope protection material, such as rip-rap, shall be placed in areas prone to erosion. Embankment stability should be inspected for seepage and burrowing animals. Reinforce with riprap if erosion persists. All structural components, which include, but are not limited to, trash racks, access gates, valves, pipes, weir walls, orifice structures, outlet pipes and spillway structures, shall be inspected quarterly and any deficiencies should be reported. This includes a visual inspection of all stormwater control structures for damage and/or accumulation of sediment. All material, including any trash and/or debris from all

areas within the extents of the basin area including trash rack and flow control structures, shall be disposed of in accordance with all federal and local regulations.

Prune all dead or dying vegetation to the extents of the basin, remove all herbaceous vegetation root stock when overcrowding the maintenance access to the facility, remove any vegetation that has a negative impact on stormwater flowage through the facility, and trim any overgrown vegetation within the basin. Any invasive vegetation encroaching upon the perimeter of the facility shall be pruned or removed if it is prohibiting access to the facility, compromising sight visibility and/or compromising original design vegetation. Replace any/all original vegetation that has died off or has not fully established, as determined at the time of the inspection. Basin vegetation shall be reinforced to its original design standards if less than 50% of the original vegetation is established after two years. Grass vegetation height should not exceed 12" or be shorter than 3".

b. Sediment Removal

Following construction, the infiltratioin basin shall be cleaned of accumulated silt/sediment when the depth of silt/sediment exceeds one inch. If necessary, the basins are to be dewatered prior to sediment removal, and all dewatering flow must be adequately filtered prior to flowing into wetlands or perimeter wetlands. The resulting basin condition after sediment is to be tested to determine design conditions. Removed sediment to be disposed of in accordance with Appendix-A of the R.I.D.E.M. Solid Waste Regulations and R.I.P.D.E.S. Catch Basin cleaning guidance.

c. Infiltration Capacity

When the filtering capacity of the filter diminishes substantially (i.e., when water ponds on the surface of the filter bed for more than 48 hours), the top few inches of discolored material shall be removed and shall be replaced with fresh material. The design infiltration rate is 8.27 inches/hour. Removed sediment to be disposed of in accordance with Appendix-A of the R.I.D.E.M. Solid Waste Regulations and R.I.P.D.E.S. Catch Basin cleaning guidance.

4. Parking Lot Sweeping

Street sweeping helps to remove sediment and debris from paved surfaces, reducing potential pollutant transport to waterbodies. Street and parking lot sweeping may also reduce the need for maintenance of pretreatment devices, such as catch basins. Debris collected from some streets and parking lots may be regulated as a hazardous waste. For these cases, debris must be disposed of in accordance with appropriate practice and applicable regulatory standards.

5. Deicing and Salt Storage

Deicing and sanding operations are often necessary for safety during winter storms; however, the materials used create water quality problems. Use deicing chemicals and sand judiciously. Consider the information in Table G-1 when selecting a deicer.

Table G-1 Comparison of Environmental Effects of Common Roadway Deicers

Media	Sodium Chloride (NaCl)	Calcium Chloride ($CaCl_2$)	Calcium magnesium acetate (CMA) ($CaMgC_2H_3O_2$)	Sand (SiO_2)
Soils	Cl complexes release heavy metals; Na can breakdown soil structure and reduce permeability	Ca can exchange with heavy metals, increase soil aeration and permeability.	Ca and Mg can exchange with heavy metals.	Gradually will accumulate on soil.
Vegetation	Salt spray/splash can cause leaf scorch and browning or dieback of new plant growth up to 50 feet from road; osmotic stress can result from salt uptake; grass is more tolerant than trees and woody plants.		Little effect.	Accumulates on and around low vegetation.
Groundwater	Mobile Na and Cl ions readily reach groundwater, and concentration levels can temporarily increase in areas of low flow during spring thaws. Ca and Mg can release heavy metals from soil.			No known effect.
Surface Water	Can cause density stratification in small lakes having closed basins, potentially leading to anoxia in lake bottoms; often contain nitrogen, phosphorus, and trace metals as impurities, often in concentrations greater than 5 ppm.		Depletes dissolved oxygen in small lakes and streams when degrading.	Accumulated sand alters stream geometry and habitat
Aquatic Biota	Little effect in large or flowing bodies at current road salting amounts; small streams that are end points for runoff can receive harmful concentrations of Cl; Cl from NaCl generally not toxic until it reaches levels of 1,000-36,000 ppm.		Can cause oxygen depletion.	Accumulation of particles to stream bottoms degrades habitat, clogs gills.

Source: Adapted from Ohrel, 2000

Sand and deicing chemicals should be stored under cover so as to prevent their exposure to stormwater. Table G-2 provides recommendations appropriate for storage and use of deicers. Storage of these materials may be regulated as an industrial activity.

Table G-2 Recommendations to Reduce Deicer Impacts

Activity	Recommendation
Storage	• Salt storage piles should be completely covered, ideally by a roof, and at a minimum, by a weighted tarp, and stored on impervious surfaces. The DEM Groundwater Quality Rules require that deicer materials be covered in areas where the groundwater is classified GAA or GA. • Runoff should be contained in appropriate areas. • Spills should be cleaned up after loading operations. The material may be directed to a sand pile or returned to salt piles. • Avoid storage in drinking water supply areas, water supply aquifer recharge areas, and public wellhead protection areas.
Application	• Application rate of deicing materials should be tailored to road conditions (i.e., high versus low volume roads). • Trucks should be equipped with sensors that automatically control the deicer spread rate. • Drivers and handlers of salt and other deicers should receive training to improve efficiency, reduce losses, and raise awareness of environmental impacts.
Other	• Identify ecosystems such as wetlands that may be sensitive to salt. • Use calcium chloride and CMA in sensitive ecosystem areas. • To avoid over-application and excessive expense, choose deicing agents that perform most efficiently according to pavement temperature. • Monitor the deicer market for new products and technology.

Source: Adapted from Ohrel, 2000.

6. Snow Disposal

Improper snow disposal can be a threat to public health and the environment. Disposal shall consider site selection, site preparation and maintenance, and emergency snow disposal locations and procedures. Refer to DEM's Snow Disposal Policy for more details on these topics. Snow storage in the stormwater basin areas is not allowed.

7. Site Selection

The key to selecting effective snow disposal sites is to locate them adjacent to or on pervious surfaces in upland areas away from water resources and wells. At these locations, snow meltwater can filter in to the soil, leaving behind sand and debris, which can be removed in the springtime. When selecting a site for snow disposal, adhere to the following guidelines:

- Avoid dumping snow into any waterbody, including rivers, reservoirs, ponds, lakes, wetlands, bays, or the ocean. In addition to water quality impacts and flooding, snow disposed of in open water can cause navigational hazards when it freezes.
- Do not dump snow within a Wellhead Protection Area (WHPA) of a public water supply well, or within 200 feet of a private well, where road salt may contaminate water supplies.
- Avoid dumping snow in sanitary landfills and gravel pits. Snow meltwater will create more contaminated leachate in landfills posing a greater risk to groundwater. In gravel pits, there is little opportunity for pollutants to be filtered out of the meltwater because groundwater is close to the land surface.
- Avoid disposing of snow on top of storm drain catch basins or in stormwater drainage swales or ditches. Snow combined with sand and debris may block a storm drainage system, causing localized flooding. In addition, a high volume of sand, sediment, and litter released from melting snow may be quickly transported through the drainage system into surface water.

8. Driveway and Parking Lot Sealants

Driveway and parking lot sealants are a major source of polycyclic aromatic hydrocarbons (PAHs) in our environment. There are two types of sealant: asphalt based and coal-tar based. Both types of sealant contain PAHs, but the coal-tar based sealants have a far higher concentration of PAHs (as much as 70 times higher than asphalt based). As the sealants wear down, small particles of sealant are washed off by stormwater into surface waters. PAHs have been found to be toxic to aquatic life, with bottom dwelling organisms most at risk since PAHs tend to attach to sediment rather than dissolve in water. Also, in recognition of the human health effects of PAHs, DEM has adopted the US EPA water column human health criteria for PAHs in the DEM Water Quality Regulations. Because of the high concentrations of PAHs in coal-tar based sealants, it is recommended that coal-tar based sealants <u>not</u> be used. For more information, see: US Geological Survey Fact Sheet 2005-3147, "Parking Lot Sealcoat: A Major Source of Polycyclic Aromatic Hydrocarbons (PAHs) in Urban and Suburban Environments."

9. Lawn, Garden, and Landscape Management

Lawns are a significant feature of urban landscapes. Estimates of turf and lawn coverage in the United States are as high as 30 million acres, which, if lawns were classified as a crop, would rank as the fifth largest in the country after corn, soybeans, wheat, and hay (Swann and Schueler, 2000). This large area of managed landscape has the potential to contribute to urban runoff pollution due to overfertilization, overwatering, overapplication of pesticides, and direct disposal of lawn clippings, leaves, and trimmings. Also, erosion from bare patches of poorly managed lawns contribute sediment to watercourses, and disposal of lawn clippings in landfills can reduce the capacity of these facilities to handle other types of waste.

The following standards for grounds management shall be incorporated into stormwater management plans:

Lawn conversion – Grasses require more water and attention than alternative groundcovers, flowers, shrubs, or trees. Alternatives to turf are especially recommended for problem areas such as lawn edges, frost pockets, shady spots, steep slopes, and soggy areas. Vegetation that is best suited to the local conditions should be selected.

Soil building – Grounds operation and maintenance should incorporate soil evaluation every 1 to 3 years to determine suitability for supporting a lawn, and to determine how to optimize growing conditions. Consider testing soil characteristics such as pH, fertility, compaction, texture, and earthworm content.

Grass selection – Grass seed is available in a wide range of cultivated varieties, so homeowners, landscapers, and grounds managers are able to choose the grass type that grows well in their particular climate, matches site conditions, and is consistent with the property owner's desired level of maintenance. When choosing ground cover,

consideration should be given to seasonal variations in rainfall and temperature. Table G-3 lists turfgrass types and their level of tolerance to drought:

Table G-3 Drought Tolerance of Turfgrass Types

Turfgrass Type	Drought Tolerance
Fine-leaved Fescues Tall Fescue Kentucky Bluegrass Perennial Ryegrass Bentgrasses	High ↓ Low

Mowing and thatch management – To prevent insects and weed problems, property owners should mow high, mow frequently, and keep mower blades sharp. Lawns should not be cut shorter than 2 to 3 inches, because weeds can grow more easily in short grasses.

Grass can be cut lower in the spring and fall to stimulate root growth, but not shorter than 1 ½ inches.

Fertilization – If fertilizing is desired, consider the following points:

- Most lawns require little or no fertilizer to remain healthy. Fertilize no more than twice a year – once in May-June, and once in September- October;
- Fertilizers are rated on their labeling by three numbers (e.g., 10-0-10) , which refer to their Nitrogen (N) – Phosphorus (P) – Potassium (K) concentrations. Fertilize at a rate of no more than ½ pound of nitrogen per 1000 square feet, which can be determined by dividing 50 by the percentage of nitrogen in the fertilizer;
- The use of Phosphorous containing fertilizers on lawns and non-agricultural turf is not permitted in the State of Massachusetts, except under specific conditions listed in Massachusetts General Laws Part 1, Title XIX, Chapter 128, Section 65A. The use of Phosphorous containing fertilizer on this site is not recommended under any circumstances because of its close proximity to the Ten Mile River.
- Apply fertilizer carefully to avoid spreading on impervious surfaces such as paved walkways, patios, driveways, etc., where the nutrient can be easily washed into storm drains or directly into surface waters;
- To encourage more complete uptake, use slow-release fertilizers that is those that contain 50 percent or more water-insoluble nitrogen (WIN);
- Grass blades retain 30-40 percent of nutrients applied in fertilizers. Reduce fertilizer applications by 30 percent, or eliminate the spring application of fertilizer and leave clippings on the lawn where they will degrade and release stored nutrients back to the soil; and
- Fertilizer should not be applied when rain is expected. Not only does the rain decrease fertilizer effectiveness, it also increases the risk of surface and ground water contamination.

Weed management – A property owner must decide how many weeds can be tolerated before action is taken to eradicate them. To the extent practicable, weeds should be dug or pulled out. If patches of weeds are present, they can be covered for a few days with a black plastic sheet; a technique called solarization. Solarization kills the weeds while leaving the grass intact. If weeds blanket a large enough area, the patch can be covered with clear plastic for several weeks, effectively "cooking" the weeds and their seeds. The bare area left behind after weeding should be reseeded to prevent weeds from

growing back. As a last resort, homeowners can use chemical herbicides to spot- treat weeds.

Pest management – Effective pest management begins with maintenance of a healthy, vigorous lawn that is naturally disease resistant. Property owners should monitor plants for obvious damage and check for the presence of pest organisms. Learn to distinguish beneficial insects and arachnids, such as green lacewings, ladybugs, and most spiders, from ones that will damage plants. When damage is detected or when harmful organisms are present, property owners should determine the level of damage the plant is able to tolerate. No action should be taken if the plant can maintain growth and fertility. If controls are needed, there are a variety of low-impact pest management controls and practices to choose from, including the following:

- Visible insects can be removed by hand (with gloves or tweezers) and placed in soapy water or vegetable oil. Alternatively, insects can be sprayed off a plant with water, or in some cases vacuumed off of larger plants;
- Store-bought traps, such as species-specific, pheromone-based traps or colored sticky cards, can be used;
- Sprinkling the ground surface with abrasive diatomaceous earth can prevent infestations by soft-bodied insects and slugs. Slugs can also be trapped by falling or crawling into small cups set in the ground flush with the surface and filled with beer;
- In cases where microscopic parasites, such as bacteria and fungi, are causing damage to plants, the affected plant material can be removed and disposed of. (Pruning equipment should be disinfected with bleach to prevent spreading the disease organism);
- Small mammals and birds can be excluded using fences, netting, tree trunk guards, and, as a last resort, trapping. (In some areas trapping is illegal. Property owners should check local codes if this type of action is desired); and
- Property owners can encourage/attract beneficial organisms, such as bats, birds, green lacewings, ladybugs, praying mantis, ground beetles, parasitic nematodes, trichogramma wasps, seedhead weevils, and spiders that prey on detrimental pest species. These desirable organisms can be introduced directly or can be attracted to the area by providing food and/or habitat.

If chemical pesticides are used, property owners should try to select the least toxic, water soluble, and volatile pesticides possible. All selected pesticides should be screened for their potential to harm water resources. Although organophosphate pesticides, such as diazinon and chlorpyrifos, are popular because they target a broad range of pests and are less expensive than newer, less toxic pesticides, they rank among the worst killers of wildlife, and often pose the greatest health risk. Synthetic pyrethroids are more selective, and typically much less toxic than organophosphates, yet they can harm beneficial insects. When possible, pesticides that pose the least risk to human health and the environment should be chosen. A list of popular pesticides, along with their uses, their toxicity to humans and wildlife, EPA's toxicity rating, and

alternatives to the listed chemicals, is available from *The Audubon Guide to Home Pesticides*, (http://www.audubon.org/bird/pesticides/).

Sensible irrigation – Most New England lawns will survive without irrigation. Grasses will normally go dormant in warm, dry periods (June-September) and resume growth when moister is more plentiful. However, if watering is desired, consider the following:

Established lawns need no more than one inch of water per week (including precipitation) to prevent dormancy in dry periods. Watering at this rate should wet soil to approximately 4-6 inches and will encourage analogous root growth. If possible, use timers to water before 9:00 a.m., preferably in the early morning to avoid evaporative loss. Use drought-resistant grasses (see "grass selection" above) and cut grass at 2-3 inches to encourage deeper rooting and heartier lawns.

Attached is a recommended Inspection and Maintenance Log to be completed during the required inspections. Inspection Reports and Maintenance Logs shall be maintained on-site.

Appendix

A. Stormwater Management Systems Inspection and Maintenance Log

B. Infiltration System Operation, Maintenance, and Management Inspection Checklist

C. BMP Location Plan

D. Stormwater Facility Maintenance Agreement

Appendix A

Stormwater Management Systems Inspection and Maintenance Log

Stormwater Management Systems
Recommended Inspection and Maintenance Log

Site: Proposed Commercial Contractor Units
Site Address: 71 Harkney Hill Road, Coventry RI
Date:
Inspector:

Item			Inspection OK	Service Required	Service Performed	Supervisor Notified
1.0	Catch Basins - Inspect 4 times per Year					
	1.1	Sediment and debris accumulation is greater than or equal to one-half the depth from the bottom of the invert of the lowest pipe in the basin - Service Required	☐	☐	☐	☐
	1.2	Frame and Grate in Good Condition	☐	☐	☐	☐
	1.3	Inlet and Outlet Pipes Free of Debris	☐	☐	☐	☐
	1.4	Integrity of Catch basin Structure	☐	☐	☐	☐
	1.5	Describe Service Provided:				
2.0	Manholes – Inspect Quarterly					
	2.1	Invert free of sediment and debris	☐	☐	☐	☐
	2.2	Sediment and debris accumulation within 6” of Outlet Service Required	☐	☐	☐	☐
	2.3	Frame and Cover in Good Condition	☐	☐	☐	☐
	2.4	Inlet and Outlet Pipes free of debris	☐	☐	☐	☐

	2.5	Integrity of Manhole/WQC Structure	☐	☐	☐	☐
	2.6	Describe Service Provided:				
3.0	Sediment Forebay– Inspect Monthly					
	3.1	Erosion and/or Subsidence of side slopes and/or embankments	☐	☐	☐	☐
	3.2	Inlet and Outlet structures free of obstructions and/or sediment	☐	☐	☐	☐
	3.3	Clean out four times per year or more frequently if sediment and debris accumulation exceeds 2.5" of total depth below the outlet weir	☐	☐	☐	☐
	3.4	Describe Service Provided:				
4.0	Infiltration Basin– Inspect Twice per Year and After Every Major Storm Event					
	4.1	Grassed areas are mowed and free of **Wild** woody growth	☐	☐	☐	☐
	4.2	Basin is free from woody growth and weeds	☐	☐	☐	☐
	4.3	No standing water after precedent 72 hour dry period	☐	☐	☐	☐
	4.4	Erosion and/or Subsidence of side slopes and/or embankments	☐	☐	☐	☐
	4.5	Inlet and Outlet structures free of obstructions and/or sediment	☐	☐	☐	☐
	4.6	Sediment and debris accumulation is 10% of total storage volume below outlet	☐	☐	☐	☐

	4.7	Describe Service Provided:				
5.0	Miscellaneous					
	6.1	Parking Lot Sweeping – Quarterly per Year	☐	☐	☐	☐
	6.2	Erosion of site slopes	☐	☐	☐	☐
	6.3	Evidence of erosion within landscape areas or on embankments.	☐	☐	☐	☐
	6.4	Describe Service Provided:				
7.0	General Comments:					

Appendix B

Infiltration System Operation, Maintenance, and Management Inspection Checklist

Infiltration System Operation, Maintenance, and Management Inspection Checklist

Project: Proposed Commercial Contractor Units

Location: 71 Harkney Hill Road, Coventry RI

Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Annual)		
Trench/chamber or basin surface clear of debris		
Inflow pipes clear of debris		
Overflow spillway clear of debris		
Inlet area clear of debris		
2. Sediment Traps or Forebays (Annual)		
Obviously trapping sediment		
Greater than 50% of storage volume remaining		
3. Dewatering (Annual)		

Trench/chamber or basin dewaters between storms		
4. Sediment Cleanout of Trench/Chamber or Basin (Annual)		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
No evidence of sedimentation in trench/chamber or basin		
Sediment accumulation doesn't yet require cleanout		
5. Inlets (Annual)		
Good condition		
No evidence of erosion		
6. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repair		
No evidence of erosion		
7. Aggregate Repairs (Annual)		
Surface of aggregate clean		
Top layer of stone does not need replacement		
Trench/Chamber or basin does not need rehabilitation		

Comments:

Actions to be Taken:

Appendix C

BMP Location Plan

Appendix D

Stormwater Facility Maintenance Agreement

Stormwater Facility Maintenance Agreement

THIS AGREEMENT, made and entered into this ____ day of _____, 2025, between Andrew Barber called the "Operator", and the Rhode Island Department of Environmental Management, hereinafter called "RIDEM". WITNESSETH, that WHEREAS, the Operator of certain property described as Proposed Pet Lodge, hereinafter called the "Property". WHEREAS, the Operator is proceeding to build on and develop the property; and WHEREAS, the Site Plan known as Proposed Commercial Contractor Units, Plat Map 10 Lot 42, hereinafter called the "Plan", which is expressly made a part hereof, as approved or to be approved by RIDEM, provides for water quality, recharge of stormwater and peak flow attenuation within the confines of the property; and WHEREAS, RIDEM and the operator, its successors and assigns, agree that the health, safety, and welfare of the residents of Coventry require that on-site stormwater management facilities be constructed and maintained on the Property; and WHEREAS, RIDEM requires that on-site stormwater management facilities as shown on the Plan be constructed and adequately maintained by the Operator, its successors and assigns. NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management facilities shall be constructed by the Operator, its successors and assigns, in accordance with the plans and specifications identified in the Plan.

2. The Operator, its successors and assigns shall adequately maintain the stormwater management facilities in accordance with the required Operation and Maintenance Plan. This includes vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance is herein defined as good working condition so that these facilities are performing their design functions. The Stormwater Best Management Practices Operation, Maintenance and Management Checklists are to be used to establish what good working condition is acceptable to RIDEM.

3. The Operator, its successors and assigns, shall inspect the stormwater management facility and retain on file an annual inspection report. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, catch basins, outlet structure, system areas, etc. Deficiencies shall be noted in the inspection report.

4. The Operator, its successors and assigns, hereby grant permission to RIDEM, its authorized agents and employees, to enter upon the Property and to inspect the stormwater management facilities whenever RIDEM deems necessary. The purpose of inspection is to follow-up on reported deficiencies and/or to respond to citizen complaints. RIDEM shall provide the Landowner,

its successors and assigns, copies of the inspection findings and a directive to commence with the repairs if necessary.

5. In the event the Operator, its successors and assigns, fails to maintain the stormwater management facilities in good working condition acceptable to RIDEM, RIDEM may enter upon the Property and take whatever steps necessary to correct deficiencies identified in the inspection report and to charge the costs of such repairs to the Operator, its successors and assigns. This provision shall not be construed to allow RIDEM to erect any structure of permanent nature on the land of the Operator outside of the easement for the stormwater management facilities. It is expressly understood and agreed that RIDEM is under no obligation to routinely maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on RIDEM.

6. The Operator, its successors and assigns, will perform the work necessary to keep these facilities in good working order as appropriate. In the event a maintenance schedule for the stormwater management facilities (including sediment removal) is outlined on the approved plans, the schedule will be followed.

7. In the event RIDEM pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Operator, its successors and assigns, shall reimburse the RIDEM upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by RIDEM hereunder.

8. This Agreement imposes no liability of any kind whatsoever on RIDEM and the Operator agrees to hold the RIDEM harmless from any liability in the event the stormwater management facilities fail to operate properly.

9. This Agreement shall be recorded among the land records of Warwick and shall constitute a covenant running with the land, and shall be binding on the Operator, its administrators, executors, assigns, heirs and any other successors in interests.

WITNESS the following signatures and seals:

_____
Company/Corporation/Partnership Name (Seal)

By: _____
(Type Name and Title)

The foregoing Agreement was acknowledged before me this ____ day of _____, 20___, by

_____

_____

My Commission Expires: _____

By: _____

_____

(Type Name and Title)

The foregoing Agreement was acknowledged before me this ____ day of _____, 20___, by

_____

_____

NOTARY PUBLIC

My Commission Expires: _____

Approved as to Form:

_____

Attorney Date