



Stormwater Management Maintenance Manual

Windsor Pointe

Block 3, Lots 3 and 3.02
Township of East Windsor, Mercer County, New Jersey

October 2019

Prepared For

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Livingston, NJ 07039

Prepared By

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MC Project No. 18001982A



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STORMWATER MANAGEMENT MAINTENANCE PLAN

OTR East Windsor Investors, LLC. will be in charge of operation and maintenance of the stormwater management system. Maintenance procedures for stormwater management facilities should follow the operation and maintenance procedures outlined below from the New Jersey Stormwater Best Management Practices Manual. This manual was provided to the owner and will be kept on file on the subject property. The owner is:

OTR East Windsor Investors, LLC.
50 East Mount Pleasant Avenue
Livingston, NJ 07039

Contact
Steven Katz
973-535-1888

INSTRUCTIONS FOR RESPONSIBLE PARTY

The party responsible for the maintenance of the stormwater management collection system shall follow through and abide by the following instructions in accordance with the NJDEP Stormwater Management Rules:

1. If there is a change in ownership, copies of this maintenance plan shall be provided to the future owner and operator of the stormwater management collection system.
2. The responsible party shall provide the local and county mosquito control or extermination commission a copy of this maintenance manual upon request.
3. The title and date of this maintenance plan and the name, address, and telephone number of the party responsible for the maintenance of the stormwater management collection system must be recorded on the deed of the property on which the facilities are located. Any change in this information due, for example, to a change in property ownership, must also be recorded on the deed.



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4. The party responsible for the maintenance of the stormwater management collection system must evaluate this maintenance plan for effectiveness at least annually and revise as necessary.
 5. A detailed written log of all preventative and corrective maintenance performed at the stormwater management collection system must be kept, including a record of all inspections and copies of maintenance-related work orders.
 6. The person responsible for the maintenance of the stormwater management collection system should retain and, upon request, make available this maintenance plan and associated logs and other records for review by a public entity with administrative, health, environmental, or safety authority over the site.

DESCRIPTION OF SYSTEM

The stormwater management system consists of two bioretention bottom basins and a stormwater collection system. A stormwater collection system conveys the runoff from the site to the basins. There is one point of discharge to off-site wetlands.

BIORETENTION BOTTOM DETENTION BASINS

A. GENERAL MAINTENANCE

All basin components (basin bottom, riprap and the discharge points) must be inspected for clogging and excessive debris and sediment accumulation at least four times annually as well as after every storm exceeding 1 inch of rainfall. Sediment removal should take place when the basin is thoroughly dry. Disposal of debris, trash, sediment and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state and federal waste regulations.



B. VEGETATED AREAS

Mowing and/or trimming of vegetation must be performed on a regular schedule based on specific site conditions. Grass outside of the bioretention system should be mowed at least once a month during the growing season. Grasses within the bioretention system must be carefully maintained so as not to compact the soil, and through hand-held equipment, such as a hand held line trimmer. Vegetated areas must also be inspected at least annually for erosion and scour. Vegetated areas should also be inspected at least annually for unwanted growth, which should be removed with minimum disruption to the planting soil bed and remaining vegetation. When establishing or restoring vegetation, biweekly inspections of vegetation health should be performed during the first growing season or until the vegetation is established. Once established, inspections of vegetation health, density, and diversity should be performed at least twice annually during both the growing and non-growing seasons. The vegetative cover should be maintained at 85 percent. If vegetation has greater than 50 percent damage, the area should be reestablished in accordance with the original specifications and the inspection requirements presented above. All use of fertilizers, mechanical treatments, pesticides and other means to assure optimum vegetation health should not compromise the intended purpose of the bioretention system. All vegetation deficiencies should be addressed without the use of fertilizers and pesticides whenever possible.

C. STRUCTURAL COMPONENTS

All structural components must be inspected for cracking, subsidence, spalling, erosion and deterioration at least annually.

D. OTHER MAINTENANCE CRITERIA

Only Basin A is underdrained. Basin B is designed to infiltrate the water quality storm into the ground for recharge purposes. Basin A is underdrained and will not rely on infiltration for draining. Basin B has been designed to fully drain the maximum design storm runoff volume within approximately 38 hours. This normal drain time should be used to evaluate the system's actual performance. If significant increases or decreases in the normal drain time



are observed or if the 72 hour maximum is exceeded, the system's planting soil bed and both groundwater and tailwater levels must be evaluated and appropriate measures taken to comply with the maximum drain time requirements and maintain the proper functioning of the system. The planting soil bed at the bottom of the system should be inspected at least twice annually. The permeability rate of the soil bed material may also be retested. If the water fails to infiltrate 72 hours after the end of the storm, corrective measures must be taken.

It is the responsibility of Township of East Windsor to enforce the maintenance program on the responsible party. If the required maintenance is not performed, the Township has the right to contract the work to be done, in which case, the responsible party will be back-charged or tax levied to recuperate the associated fees.

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APPENDIX A

MAINTENANCE AND INSPECTION CHECKLISTS



APPENDIX B
COST ESTIMATE

PROJECTED COSTS OVER 20 YEAR PERIOD*

<u>YEAR</u>	<u>COST</u>
1	\$19,500.00
2	\$19,792.50
3	\$20,089.39
4	\$20,390.73
5	\$20,696.59
6	\$21,007.04
7	\$21,322.14
8	\$21,641.98
9	\$21,966.61
10	\$22,296.10
11	\$22,630.55
12	\$22,970.00
13	\$23,314.55
14	\$23,664.27
15	\$24,019.24
16	\$24,379.53
17	\$24,745.22
18	\$25,116.40
19	\$25,493.14
20	\$25,875.54

*YEARLY COST INCREASED BASED ON 1.5% INFLATION RATE

STORMWATER MAINTENANCE PLAN

ANNUAL COST ESTIMATE

Windsor Pointe

MC FILE NO. 18001982A

BLOCK 3, Lots 3 and 3.02

TOWNSHIP OF EAST WINDSOR, MERCER COUNTY, NEW JERSEY

30-Oct-19

<u>NOTES</u>	<u>DESCRIPTION</u>	<u>TIMES PER YEAR</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
	INSPECT BASIN A BY PROFESSIONAL ENGINEER (ONCE EVERY FOUR YEARS)	0.25	\$2,000.00	\$500.00
	INSPECT BASIN B AND SPILLWAYS INCL. VEGETATED AREAS FOR SCOUR AND EROSION	4.0	\$1,000.00	\$4,000.00
	TRIMMING OF VEGETATION AT 2 BASINS	4.0	\$1,000.00	\$4,000.00
	GRASS CUTTING - ONCE EVERY TWO WEEKS FROM APRIL 15 TO NOVEMBER 15	14.0	\$500.00	\$7,000.00
	INSPECTION FOR UNWANTED TREE GROWTH, CHECK FOR HEALTHY DENSITY AND DIVERSITY OF VEGETATION	4.0	\$500.00	\$2,000.00
	APPLY FERTILIZER, LIME, AND WEED KILLER	1.0	\$2,000.00	\$2,000.00
				\$19,500.00