Micro-Bioretention #6

Project Name: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building			MDE No. 15-SF-0279
As-Built Data for M-6 Micro-Bioretention #6:			
*To be completed by certifying engineer			
Type of Facility: Micro-scale Practice			ESD ID: M-6
	Feature	Design	As-built
Filter Bed	Area	832 sf	
	Max. Dimensions	45' X 46'	
	Surface Elevation	28.5	
Overflow Device	Size/Type	48" DRAIN BASIN	
	Grate Type	24" DOME	
	Elevation	29.00	
	Ponding Depth	0.50	
	Coordinates	N: 686913.37	
		E: 1576078.28	
Ponding Volume Provided		459 cf	
Embankment/Weir	Top Elevation	31	
Mulch	Thickness	3 in (0.25 ft)	
	Bottom Elevation	28.25	
SHA BSM Media	Thickness	24 in (2.00 ft)	
	Bottom Elevation	26.25	
Course Sand	Thickness	4 in (0.33 ft)	
	Bottom Elevation	25.92	
Pea Gravel	Thickness	4 in (0.33 ft)	
	Bottom Elevation	25.58	
Underdrain Stone	Thickness above pipe	3 in (0.25 ft)	
	Bottom Elevation	25.33	
	Type	#57 Stone	
Underdrain Pipe	Size/Type	4" Perf. PVC SDR-35	
	Slope	0%	
	Invert Elevation	25.00	
Recharge Stone	Thickness below pipe	3 in (0.25 ft)	
	Type	#57 Stone	
	Bottom Elevation	24.75	
Inlet Pipe	Size/Type	15" RCCP	
	Invert Elevation	25	
Outlet Pipe	Size/Type	15" RCCP	
	Invert Elevation	24.90	
Observation Well	Cap Top Elevation	28.75	
Geotextile (sides only)		Class PE Type I Non-Woven	
Plantings	See Landscape Plan		

AS–BUILT CERTIFICATION

I hereby certify that the stormwater management facilities (both BMPs and ESD practices) shown on the plans have been constructed in accordance with the plans approved by the Maryland Department of the Environment, except as noted in red on the "AS BUILT" drawings.

Name (Printed) ______ Signature ______

Maryland Registration Number (PE or LS) ______ Date ______

15–SF–0279

Facilities being certified (list each individually using facility ID number and/or description):

MICRO–BIORETENTION FACILITY #6

"Certify" means to state or declare a professional opinion based on sufficient and appropriate onsite inspections and material tests conducted during construction. At a minimum, regular inspections shall be made and documented with photographs and/or construction logs at the following specified stages of construction:

1. during excavation to subgrade,
2. during placement and backfill of underdrain system,
3. during placement of geotextile and all filter media,
4. during construction of appurtenant conveyance systems such as diversion structures, pre–filters, filters, outlets, and flow distribution structures, and
5. upon completion of final grading and establishment of permanent stabilization.

Micro-Bioretention #7

Project Name: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building			MDE No. 15-SF-0279
As-Built Data for M-6 Micro-Bioretention #7:			
*To be completed by certifying engineer			
Type of Facility: Micro-scale Practice			ESD ID: M-6
	Feature	Design	As-built
Filter Bed	Area	750 sf	
	Max. Dimensions	76' X 28'	
	Surface Elevation	31.20	
Overflow Device	Size/Type	48" DRAIN BASIN	
	Grate Type	24" DOME	
	Elevation	31.70	
	Ponding Depth	0.50	
	Coordinates	N: 686891.18	
		E: 1576180.39	
Ponding Volume Provided		428 cf	
Embankment/Weir	Top Elevation	33	
Mulch	Thickness	3 in (0.25 ft)	
	Bottom Elevation	30.95	
SHA BSM Media	Thickness	24 in (2.00 ft)	
	Bottom Elevation	28.95	
Course Sand	Thickness	4 in (0.33 ft)	
	Bottom Elevation	28.62	
Pea Gravel	Thickness	4 in (0.33 ft)	
	Bottom Elevation	28.28	
Underdrain Stone	Thickness above pipe	3 in (0.25 ft)	
	Bottom Elevation	28.03	
	Type	#57 Stone	
Underdrain Pipe	Size/Type	4" Perf. PVC SDR-35	
	Slope	0%	
	Invert Elevation	27.70	
Recharge Stone	Thickness below pipe	3 in (0.25 ft)	
	Type	#57 Stone	
	Bottom Elevation	27.45	
Inlet Pipe	Size/Type	4" PVC	
	Invert Elevation	27.7	
Outlet Pipe	Size/Type	15" RCCP	
	Invert Elevation	26.15	
Observation Well	Cap Top Elevation	31.45	
Geotextile (sides only)		Class PE Type I Non-Woven	
Plantings	See Landscape Plan		

AS–BUILT CERTIFICATION

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Name (Printed) ______ Signature ______

Maryland Registration Number (PE or LS) ______ Date ______

15–SF–0279

Facilities being certified (list each individually using facility ID number and/or description):

MICRO–BIORETENTION FACILITY #7

"Certify" means to state or declare a professional opinion based on sufficient and appropriate onsite inspections and material tests conducted during construction. At a minimum, regular inspections shall be made and documented with photographs and/or construction logs at the following specified stages of construction:

1. during excavation to subgrade,
2. during placement and backfill of underdrain system,
3. during placement of geotextile and all filter media,
4. during construction of appurtenant conveyance systems such as diversion structures, pre–filters, filters, outlets, and flow distribution structures, and
5. upon completion of final grading and establishment of permanent stabilization.

Micro-Bioretention #8

Project Name: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building			MDE No. 15-SF-0279
As-Built Data for M-6 Micro-Bioretention #8:			
*To be completed by certifying engineer			
Type of Facility: Micro-scale Practice			ESD ID: M-6
	Feature	Design	As-built
Filter Bed	Area	883 sf	
	Max. Dimensions	99' X 44'	
	Surface Elevation	27.50	
Overflow Device	Size/Type	48" DRAIN BASIN	
	Grate Type	24" DOME	
	Elevation	28.00	
	Ponding Depth	0.50	
	Coordinates	N: 686704.47	
		E: 1576006.50	
Ponding Volume Provided		499 cf	
Embankment/Weir	Top Elevation	29	
Mulch	Thickness	3 in (0.25 ft)	
	Bottom Elevation	27.25	
SHA BSM Media	Thickness	24 in (2.00 ft)	
	Bottom Elevation	25.25	
Course Sand	Thickness	4 in (0.33 ft)	
	Bottom Elevation	24.92	
Pea Gravel	Thickness	4 in (0.33 ft)	
	Bottom Elevation	24.58	
Underdrain Stone	Thickness above pipe	3 in (0.25 ft)	
	Bottom Elevation	24.33	
	Type	#57 Stone	
Underdrain Pipe	Size/Type	4" Perf. PVC SDR-35	
	Slope	0%	
	Invert Elevation	24.00	
Recharge Stone	Thickness below pipe	3 in (0.25 ft)	
	Type	#57 Stone	
	Bottom Elevation	23.75	
Inlet Pipe	Size/Type	15" RCCP	
	Invert Elevation	23.78	
Outlet Pipe	Size/Type	15" RCCP	
	Invert Elevation	23.58	
Observation Well	Cap Top Elevation	27.75	
Geotextile (sides only)		Class PE Type I Non-Woven	
Plantings	See Landscape Plan		

AS–BUILT CERTIFICATION

I hereby certify that the stormwater management facilities (both BMPs and ESD practices) shown on the plans have been constructed in accordance with the plans approved by the Maryland Department of the Environment, except as noted in red on the "AS BUILT" drawings.

Name (Printed) ______ Signature ______

Maryland Registration Number (PE or LS) ______ Date ______

15–SF–0279

Facilities being certified (list each individually using facility ID number and/or description):

MICRO–BIORETENTION FACILITY #8

"Certify" means to state or declare a professional opinion based on sufficient and appropriate onsite inspections and material tests conducted during construction. At a minimum, regular inspections shall be made and documented with photographs and/or construction logs at the following specified stages of construction:

1. during excavation to subgrade,
2. during placement and backfill of underdrain system,
3. during placement of geotextile and all filter media,
4. during construction of appurtenant conveyance systems such as diversion structures, pre–filters, filters, outlets, and flow distribution structures, and
5. upon completion of final grading and establishment of permanent stabilization.

Micro-Bioretention #9

Project Name: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building			MDE No. 15-SF-0279
As-Built Data for M-6 Micro-Bioretention #9:			
*To be completed by certifying engineer			
Type of Facility: Micro-scale Practice			ESD ID: M-6
	Feature	Design	As-built
Filter Bed	Area	1147 sf	
	Max. Dimensions	71' X 26'	
	Surface Elevation	27.80	
Overflow Device	Size/Type	48" DRAIN BASIN	
	Grate Type	24" DOME	
	Elevation	28.80	
	Ponding Depth	1.00	
	Coordinates	N: 686755.23	
		E: 1575993.62	
Ponding Volume Provided		1265 cf	
Embankment/Weir	Top Elevation	30	
Mulch	Thickness	3 in (0.25 ft)	
	Bottom Elevation	27.55	
SHA BSM Media	Thickness	24 in (2.00 ft)	
	Bottom Elevation	25.55	
Course Sand	Thickness	4 in (0.33 ft)	
	Bottom Elevation	25.22	
Pea Gravel	Thickness	4 in (0.33 ft)	
	Bottom Elevation	24.88	
Underdrain Stone	Thickness above pipe	3 in (0.25 ft)	
	Bottom Elevation	24.63	
	Type	#57 Stone	
Underdrain Pipe	Size/Type	4" Perf. PVC SDR-35	
	Slope	0%	
	Invert Elevation	24.30	
Recharge Stone	Thickness below pipe	3 in (0.25 ft)	
	Type	#57 Stone	
	Bottom Elevation	24.05	
Inlet Pipe	Size/Type	4" PVC	
	Invert Elevation	24.30	
Outlet Pipe	Size/Type	15" RCCP	
	Invert Elevation	24.30	
Observation Well	Cap Top Elevation	28.05	
Geotextile (sides only)		Class PE Type I Non-Woven	
Plantings	See Landscape Plan		

AS–BUILT CERTIFICATION

I hereby certify that the stormwater management facilities (both BMPs and ESD practices) shown on the plans have been constructed in accordance with the plans approved by the Maryland Department of the Environment, except as noted in red on the "AS BUILT" drawings.

Name (Printed) ______ Signature ______

Maryland Registration Number (PE or LS) ______ Date ______

15–SF–0279

Facilities being certified (list each individually using facility ID number and/or description):

MICRO–BIORETENTION FACILITY #9

"Certify" means to state or declare a professional opinion based on sufficient and appropriate onsite inspections and material tests conducted during construction. At a minimum, regular inspections shall be made and documented with photographs and/or construction logs at the following specified stages of construction:

1. during excavation to subgrade,
2. during placement and backfill of underdrain system,
3. during placement of geotextile and all filter media,
4. during construction of appurtenant conveyance systems such as diversion structures, pre–filters, filters, outlets, and flow distribution structures, and
5. upon completion of final grading and establishment of permanent stabilization.

NOTE:

IT IS THE CONTRACTOR'S RESPONSIBILITY, ON BEHALF OF THE OWNER, TO ENGAGE A LICENSED PROFESSIONAL ENGINEER TO CERTIFY THE STORMWATER MANAGEMENT FACILITY AND TO PREPARE AND SUBMIT AS–BUILT DRAWINGS. "CERTIFY" MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED ON SUFFICIENT AND APPROPRIATE ONSITE OBSERVATIONS AND/OR INSPECTIONS AT CRUCIAL MILESTONES DURING CONSTRUCTION OF THE FACILITY, MATERIAL TESTS CONDUCTED DURING CONSTRUCTION, AND POST–CONSTRUCTION SURVEYING AND VERIFICATION.

CRUCIAL MILESTONES INCLUDE, AT A MINIMUM, REGULAR INSPECTIONS MADE AND DOCUMENTED AT THE FOLLOWING STAGES OF CONSTRUCTION: 1) DURING EXCAVATION TO SUBGRADE, 2) DURING PLACEMENT AND BACKFILL OF UNDERDRAIN SYSTEM, 3) DURING PLACEMENT OF GEOTEXTILES AND ALL FILTER MEDIA, 4) DURING CONSTRUCTION OF APPURTENANT CONVEYANCE SYSTEMS SUCH AS OVERFLOW INLETS, OUTLETS, ETC, AND 5) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

APPROVED
NOV 2 0 2015
SEDIMENT & STORMWATER PLAN REVIEW DIVISION

MDE # 15-SF-0279

#	Revision	Date

CONSULTANTS: HOPE FURRER Associates, Inc. · SITE RESOURCES Comprehensive Land Planning & Site Design Services (410) 683-3388 · leeandassociatesinc

SEAL

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AE Works Project Number: 12028

Drawing Title: Stormwater Management Plan Notes 2

Approved: Project Director

Project Title: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building

Location: Perry Point VA Medical Center, Perry Point, MD 21902

Date: 06-11-15 | Checked: JLH/MAS | Drawn: RSW PGP

Project Number: 512-531

Building Number:

Drawing Number: SWM 2.03

Office of Construction and Facilities Management
Department of Veterans Affairs

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