



PATRICK COUNTY VSMP

STORMWATER MANAGEMENT BMP BOND ESTIMATE CALCULATION SHEET

Revision: 07/06/22

Project: _____
Permit #: _____

Disturbed Acreage: _____
Date: _____

BMP PRACTICE	DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
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1	Rooftop Disconnection				
	Down Spout	LF	\$6.00		\$0.00
	Roof Drain	LF	\$22.00		\$0.00
	Turf Reinforcement (EC-2)	SY	\$3.50		\$0.00
	Turf Reinforcement (EC-3)	SY	\$9.00		\$0.00
				SUBTOTAL	\$0.00

2	Sheetflow to Vegetated Filter and Conserved Open Space	UNIT	UNIT COST	QUANTITY	TOTAL COST
	Flow Bypass Structure	EA	\$2,500.00		\$0.00
	#57 Stone	TN	\$60.00		\$0.00
	#3 Stone	TN	\$60.00		\$0.00
	Level Spreader	LF	\$30.00		\$0.00
	Underdrain (for level spreader)	LF	\$25.00		\$0.00
	Concrete Footer (for level spreader)	CY	\$500.00		\$0.00
	Treated Timbers (6"x6")	LF	\$15.00		\$0.00
	Jute / Excelsior mesh	SY	\$2.50		\$0.00
	Gravel	CY	\$125.00		\$0.00
	Filter Fabric	SY	\$3.00		\$0.00
	Seeding	SY	\$2.10		\$0.00
	Plants / Shrubs	SF	\$3.00		\$0.00
	Trees	EA	\$1,200.00		\$0.00
	PB - Excavated Soil (for permeable berm)	CY	\$15.00		\$0.00
	Sand	TN	\$55.00		\$0.00
	#8 Pea Gravel	TON	\$50.00		\$0.00
	Geotextile	SY	\$3.50		\$0.00
				SUBTOTAL	\$0.00

3		UNIT	UNIT COST	QUANTITY	TOTAL COST
	Grass Channel				
	Seeding	SY	\$2.10		\$0.00
	Check Dam	EA	\$400.00		\$0.00
	Excavation & Embankment	CY	\$10.00		\$0.00
	Lining (for gravel flow spreader)	SY	\$3.50		\$0.00
	E&SC Netting / Mats (E&SC spec 3.36)	SY	\$5.00		\$0.00
				SUBTOTAL	\$0.00

4		UNIT	UNIT COST	QUANTITY	TOTAL COST
	Soil Amendments				
	Compost	CY	\$115.00		\$0.00
	Seeding	SY	\$2.10		\$0.00
	Undercut	CY	\$15.00		\$0.00
				SUBTOTAL	\$0.00

			<u>UNIT</u>	<u>UNIT COST</u>	<u>QUANTITY</u>	<u>TOTAL COST</u>
5	Vegetated Roof					
	Extensive Green Roof (installed)		SF	\$20.00		\$0.00
	Intensive Green Roof (installed)		SF	\$50.00		\$0.00
					SUBTOTAL	\$0.00
6	Rainwater Harvesting					
	Storage Tank		GAL	\$5.00		\$0.00
	Excavation		CY	\$10.00		\$0.00
	Pump		EA	\$5,000.00		\$0.00
	Booster Pump		EA	\$3,000.00		\$0.00
	Concrete Base		CY	\$500.00		\$0.00
	Valves, Backflow Preventers, Piping		LS	\$4,500.00		\$0.00
					SUBTOTAL	\$0.00
7	Permeable Pavement					
	Excavation/Embankment (Subgrade Prep)		CY	\$10.00		\$0.00
	Pervious Concrete		SF	\$12.00		\$0.00
	Porous Asphalt		TN	\$150.00		\$0.00
	Stone Layer/Bedding Material		TN	\$60.00		\$0.00
	Interlocking Concrete Pavers		SY	\$55.00		\$0.00
	Filter Fabric (polypropylene)		SY	\$3.00		\$0.00
	Underdrain (perforated)		LF	\$25.00		\$0.00
	Drop Inlet		EA	\$4,500.00		\$0.00
	Observation well (PVC pipe)		LF	\$25.00		\$0.00
	Impermeable Liner (30 mil, PVC, geomembrane)		SY	\$7.50		\$0.00
					SUBTOTAL	\$0.00
8	Infiltration					
	Flow Splitter		EA	\$3,500.00		\$0.00
	Topsoil		CY	\$50.00		\$0.00
	Sand Layer		CY	\$50.00		\$0.00
	Sod		SF	\$2.50		\$0.00
	Aggregate		TN	\$60.00		\$0.00
	Filter Fabric (polypropylene geotextile)		LF	\$25.00		\$0.00
	4" PVC Cleanout		LF	\$25.00		\$0.00
					SUBTOTAL	\$0.00
9	Bio-Retention					
	Filter Media		CY	\$80.00		\$0.00
	Excavation		CY	\$10.00		\$0.00
	Stone		TN	\$60.00		\$0.00
	Mulch		SY	\$6.00		\$0.00
	Plantings		SF	\$1.75		\$0.00
	Underdrain		LF	\$25.00		\$0.00
	Outlet Structure		EA	\$3,500.00		\$0.00
	Outlet Pipe		LF	\$80.00		\$0.00
					SUBTOTAL	\$0.00

			UNIT	UNIT COST	QUANTITY	TOTAL COST
10	Dry Swale					
	Filter Media		CY	\$100.00		\$0.00
	Riprap		SY	\$90.00		\$0.00
	Excavation		CY	\$10.00		\$0.00
	6" Underdrain (schedule 40 PVC with cleanouts)		LF	\$25.00		\$0.00
	Check Dam		EA	\$400.00		\$0.00
	Turf		SF	\$2.50		\$0.00
	Plants/Shrubs		SF	\$3.50		\$0.00
	Hardwood Mulch (shredded, aged bark)		SY	\$6.00		\$0.00
	Impermeable Liner (30 mil, PVC, geomembrane)		SY	\$7.50		\$0.00
	Outlet Structure		EA	\$6,000.00		\$0.00
					SUBTOTAL	\$0.00

			UNIT	UNIT COST	QUANTITY	TOTAL COST
11	Wet Swale					
	Excavation		CY	\$10.00		\$0.00
	Riprap		SY	\$90.00		\$0.00
	Plants/Shrubs		SF	\$3.50		\$0.00
	Turf		SF	\$2.50		\$0.00
	Check Dam		EA	\$400.00		\$0.00
					SUBTOTAL	\$0.00

			UNIT	UNIT COST	QUANTITY	TOTAL COST
12	Filtering Practice					
	Filter Media		CY	\$100.00		\$0.00
	Excavation		CY	\$10.00		\$0.00
	Stone Layer		TN	\$60.00		\$0.00
	6" Underdrain (schedule 40 PVC with cleanouts)		LF	\$25.00		\$0.00
	Turf		SF	\$2.50		\$0.00
	Medium Aggregate Concrete Sand		TN	\$55.00		\$0.00
	Underdrain/Cleanouts		LF	\$25.00		\$0.00
	Outlet Pipe		LF	\$80.00		\$0.00
	Outlet Structure		EA	\$6,500.00		\$0.00
					SUBTOTAL	\$0.00

			UNIT	UNIT COST	QUANTITY	TOTAL COST
13	Constructed Wetland					
	Outfall/Outlet Structure		EA	\$6,000.00		\$0.00
	Riprap		SY	\$90.00		\$0.00
	Outlet Pipe		LF	\$80.00		\$0.00
	Excavation & Embankment		CY	\$10.00		\$0.00
	Plants/Shrubs		SF	\$3.50		\$0.00
	Low Flow Pipe		LF	\$75.00		\$0.00
					SUBTOTAL	\$0.00

			UNIT	UNIT COST	QUANTITY	TOTAL COST
14	Wet Pond					
	Riser (w/ anti-flotation, anti-vortex, and trash rack device)		EA	\$10,500.00		\$0.00
	Riprap		SY	\$90.00		\$0.00
	Pond Aeration		EA	\$6,000.00		\$0.00
	Plants/Shrubs		SF	\$3.50		\$0.00
	Outlet Pipe		LF	\$100.00		\$0.00
	Outlet Protection (riprap over filter fabric)		EA	\$1,000.00		\$0.00
	Low Flow Pipe		LF	\$100.00		\$0.00
	Concrete Weir		CY	\$650.00		\$0.00
	Liner		SY	\$7.50		\$0.00
					SUBTOTAL	\$0.00

			UNIT	UNIT COST	QUANTITY	TOTAL COST
15	Extended Detention Pond					
	Excavation & Embankment		CY	\$10.00		\$0.00
	Riprap		SY	\$90.00		\$0.00
	Pond Aeration		EA	\$6,000.00		\$0.00
	Plants/Shrubs		SF	\$3.50		\$0.00
	Outlet Pipe		LF	\$100.00		\$0.00
	Outlet Protection (riprap over filter fabric)		EA	\$1,000.00		\$0.00
	Outlet Structure		EA	\$8,500.00		\$0.00
					SUBTOTAL	\$0.00

SUBTOTAL	\$0.00
25% ADMIN	\$0.00
TOTAL BOND	\$0.00