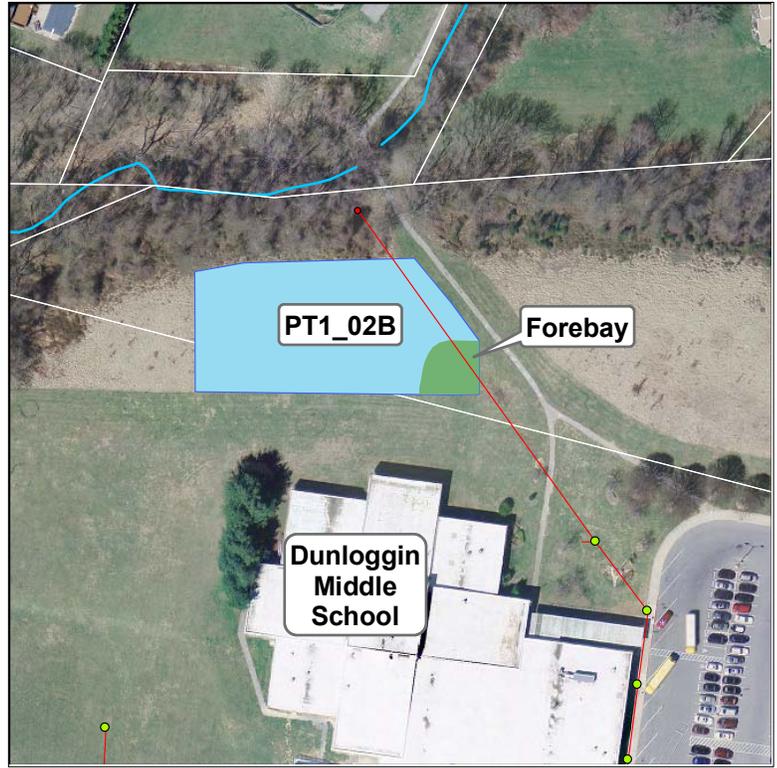


Proposed Project

Project Number: PT1_02B
Subwatershed: Plumtree Branch 1

Project Type: Shallow Marsh
Drainage Area: 4.28 acres/2.31 acres impervious

Project Location: Off of Northfield Road at Dunloggin Middle and Northfield Elementary Schools.



Project Description: This project is a shallow marsh designed to improve the quality of the discharge from the parking areas and roadways. Currently, the runoff from the pavement drains into the stormdrain system and outfalls directly into the nearby stream. This project would intercept the stormdrain system before it outfalls into the stream and direct it into a shallow marsh area. This would allow time for pollutants and sediment to be removed from the water before it is released into the stream.

The soils at this site are a mix of urban hydrologic type D soils with a low ability to infiltrate water and more permeable B and C type soils. A percolation test to determine the soils ability to infiltrate water would need to be completed to determine whether it is possible to incorporate groundwater recharge into this project. The exact depth of the stormdrain pipe at this location is estimated, so the bottom of the proposed facility may need to be changed, thus changing the amount of excavation necessary.

Project Benefits:

- Water Quality Water quality would be improved from filtration, settlement, and nutrient uptake.
- Education The project's proximity to two schools would provide educational benefits.

Project Constraints:

- Environmental No environmental constraints or permitting issues are anticipated.
- Property Ownership The location of the project lies within the boundaries of Dunloggin Park (a Howard County park) and Howard County public school properties.
- Facility Access Access to the site requires disturbing grassy areas off of Northfield Road. Sidewalk removal may also be necessary
- Design / Construction The depth of the stormdrain pipe at the intercept point is not known. This may alter the overall depth of the shallow marsh and the excavation necessary.

Proposed Project

Upper Little Patuxent

Project Number: PT1_02B
Subwatershed: Plumtree Branch 1

Project Type: Shallow Marsh
Drainage Area: 4.28 acres/2.31 acres impervious

Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL
Site Work				
Clear and Grub	0.7	AC	\$5,000.00	\$3,350
Pavement / Sidewalk Removal		SY	\$7.50	\$0
Curb-Gutter Removal		LF	\$10.00	\$0
Remove Pilot Channels		LF	\$6.00	\$0
Remove Barrel Pipe		LF	\$77.00	\$0
Pond Construction				
Grading and Excavation (Class I)	3,000	CY	\$30.00	\$90,000
Hauling and Disposal	3,000	CY	\$20.00	\$60,000
Embankment	667	CY	\$60.00	\$40,020
Forebay	202	CY	\$45.00	\$9,090
Safety Bench		CY	\$30.00	\$0
Riser	1	LS	\$10,000.00	\$10,000
Outflow Pipe	50	LF	\$80.00	\$4,000
Outlet Protection	1	LS	\$8,000.00	\$8,000
Rip Rap Stabilization		LF	\$50.00	\$0
SWM Landscaping	1,778	SY	\$10.00	\$17,780
Direct Construction Subtotal				\$242,240
Indirect Costs				
E/SC, MOT, MOS (20% of Directs, maximum of \$50,000)	1	LS	\$48,448.00	\$48,448
Construction Stakeout (\$1,000/Day)	4	Day	\$4,000.00	\$4,000
Base Construction Cost				\$300,378
Mobilization (10% of Directs or \$1,000)				\$24,224
Subtotal				\$324,602
Contingency (30%)				\$97,380
Construction Subtotal				\$421,982
Env'tl Studies / Permitting (5% of Construction or \$5,000)				\$21,099
Engineering and Surveys (25 %of Construction or \$40,000)				\$105,496
Total Capital Cost				\$548,577
Operations and Maintenance Costs				
Annual Maintenance	6	Percent	\$14,534	
Discount Rate	5	Percent		
Expected Life	20	Years		
Net Present Value of O&M Costs				\$181,131
Life Cycle Cost				\$729,800