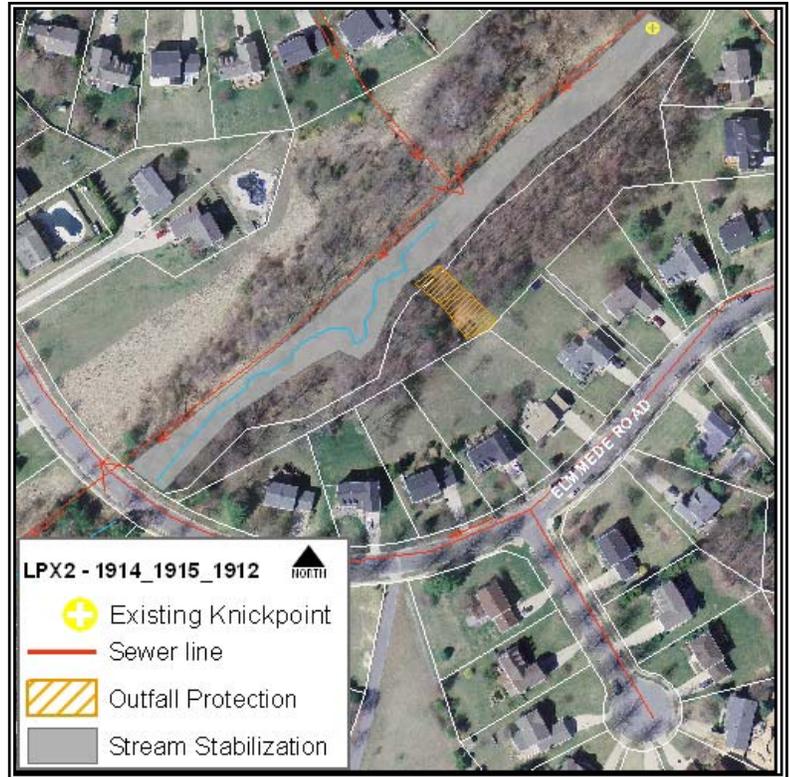


Proposed Project

Project Number: 1914_1915_1912
Subwatershed: Little Patuxent 2

Project Type: Stream Restoration
Project Size: Approx. 950 linear feet

Project Location: Adjacent to Kings Court and Elmede Road.



Project Description: This project contains an incised channel with actively eroding banks from a knick point at the upstream project limits, downstream to the culvert at Elmede Road. Immediately downstream of the knick point, there is an approximately 3 foot drop in elevation of the stream bed. This project will entail realigning the channel to allow it to reconnect with the floodplain. This will be done by excavating the channel on a new alignment in the stream valley. The excavated material can then be used to partially fill the existing channel, which can then serve as a storm flow accessory channel. Additionally, the outfall adjacent to 3269 Elmede Road is actively eroding and contains a severe headcut that will need to be stabilized to prevent further erosion.

Project Benefits:

- Stabilization** The stream banks and channel bed will be stabilized to reduce scour. The eroding outfall draining to the stream channel will be stabilized.
- Water Quality** Implementation of this project will provide a reduction in sediment supply and the associated water quality benefits.
- Education** The project could provide educational benefits due to the proximity of the project to adjacent residential areas.

Project Constraints:

- Environmental** Stream/wetland permitting will be necessary and stream closure periods may affect timing of work. This project will cause impacts to the existing riparian buffer.
- Property Ownership** This project is located on the Enchanted Forest Estates natural resource open space region and may impact the forest conservation easement located on this property.
- Facility Access** Access to this site is obtained through adjacent residential properties.
- Design / Construction** No major design or construction constraints are present.

Proposed Project

Upper Little Patuxent

Project Number: 1914_1915_1912
Subwatershed: Little Patuxent 2

Project Type: Stream Restoration/Outfall Repair

Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL
Stream Restoration				
Stream restoration/stabilization ¹	1,000	LF	\$504.00	\$504,000
Buffer enhancement		LF	\$30.00	\$0
Outfall stabilization/protection ²		SF	\$100.00	\$0
			Direct Construction Subtotal	\$504,000
Indirect Costs				
E/SC, MOT, MOS (included above)				\$0
Construction Stakeout (2%)	1	LS	\$10,080.00	\$10,080
			Base Construction Cost	\$514,080
			Mobilization (10% of Directs or \$1,000)	\$50,400
			Subtotal	\$564,480
			Contingency (30%)	\$169,344
			Construction Subtotal	\$733,824
			Env't'l Studies / Permitting (5% of Construction or \$5,000)	\$36,691
			Engineering and Surveys	\$176,000
			Post-Construction Monitoring (\$40 / LF or \$4,000)	\$40,000
			Total Capital Cost	\$986,515
Operations and Maintenance Costs				
Annual Maintenance	5	Percent	\$25,200	
Discount Rate	5	Percent		
Expected Life	5	Years		
			Net Present Value of Annual Costs	\$109,103
			Life Cycle Cost	\$1,095,700

¹Cost per linear foot is based on linear regression of previous stream restoration/stabilization jobs ranging from 35 to 2215 linear feet.

²Outfall protection costs are included in the linear foot measurement of stream restoration/stabilization, measuring 100 linear feet.