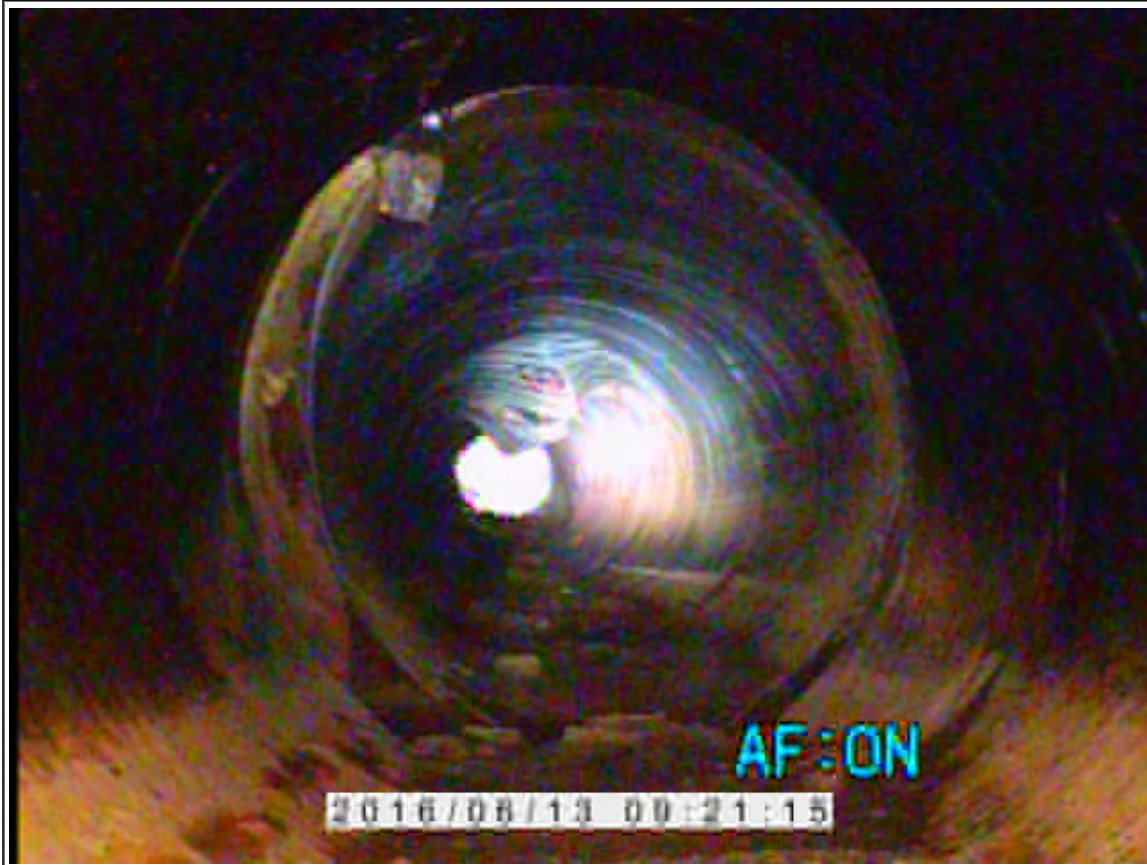


General Information		Map	
<b>Project ID</b>			
<b>Street Name</b>	<b>Brandon Mill Cir - South</b>		
<b>Site Visit Date</b>	5/22/13		
<b>Road Classification</b>	Minor road		
<b>Project Notes</b>			
Neighborhood drainage system evaluation and replacement. Urban typical section with valley gutter,			
<b>Field Notes</b>			
<b>Design (Existing Site Features)</b>			
<b>Existing Road Laneage</b>	2-10'		
<b>Existing Shld Width (paved and grass) (feet)</b>	4'		
<b>Existing Side Slopes</b>	flat		
<b>Existing Guardrail</b>	none		
<b>Depth fm Pavement to Top of Culvert (ft):</b>	4		
<b>Pipe Type and Size</b>	72" CMP		
<b>Pipe Condition (1-5) (1 is new)</b>	5 (Installation)		
Condition Notes: no headwall upstream or down; bends restrict capacity; signs of flooding; pipe condition due to installation			
<b>Pavement Type/Condition</b>	Asphalt/Good		
<b>Environmental Features</b>		<b>Stage Construction Options</b>	
<b>Wetlands</b>	None	<b>Close Location to Traffic</b>	X
<b>Ditches</b>	None	<b>Maintain One Lane - No Temp Pavement</b>	
		<b>Maintain One Lane - Temp Pavement</b>	
		Stage Construction Notes: Close roadway;	
		driveway over pipe; replacement impacts property to the right	
<b>Utilities (Visual Inspection)</b>			
<b>Electric</b>	Buried		
<b>Cable</b>	Buried		
<b>Phone</b>	Buried		
<b>Gas</b>			
<b>Water</b>	Buried		
<b>Sewer</b>			
<b>Other</b>			
<b>Proposed Design</b>			
<b>Roadway Section</b>	Typical. Private driveway removal/replacement costed as 9' x 20' section of 4" sidewalk		
<b>Culvert Size &amp; Material</b>	8' x 4' box, concrete, 200' length		
<b>Utility Relocations</b>	Electric, cable, phone, water		
<b>Guardrail Replacement</b>			
<b>Miscellaneous Features</b>	Assumed hydraulic analysis of existing system		
<b>Planning Cost Estimate</b>			
<b>Type</b>	<b>Notes</b>	<b>Total</b>	
<b>System Evaluation</b>		\$25,000	
<b>Design</b>	Includes 10% Construction Cost and surveying needs	\$42,841	
<b>Right of Way Cost</b>	Assuming project extends 7,500 sf beyond ROW	\$30,000	
<b>Utility Relocation Cost</b>	Buried utilities	\$26,400	
<b>Construction Cost</b>	Assuming 1/10 acre clearing and grubbing	\$303,407	
<b>Environmental Permits</b>	Assuming minimal environmental permitting required	\$10,000	
<b>Total Planning Estimate</b>		<b>\$437,648</b>	



**Photo 1:**



**Photo 2:**

Brandon Mill Cir - South

**Photo Date:**

6/13/2016

**Taken By:**

Tony Hicks

**Page:**

**1**

## Roadway Construction, Utility Relocation and ROW Quantity Calculations

Roadway Construction	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Pavement (SF)	\$ 0.73	\$ 4.87	200.00	\$ 1,121.07
Curb and Gutter (LF)	\$ 28.56	\$ 30.60	20.00	\$ 1,183.20
Drain Inlet (EA)		\$ 3,000.00	0.00	\$ -
4" Sidewalk (SY)	13.56	\$ 36.90	20.00	\$ 1,009.20
Guardrail (LF)	4.884	\$ 49.09	0.00	\$ -
End Anchorage (EA)		\$ 1,380.00	0.00	\$ -
Subtotal				\$ 3,313.47

Grading Complete (5% of Rwy Items & Drng Total \$) \$ 12,502.20

**Roadway Total \$ 15,815.67**

Drainage	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
Trench Excavation (CY)		\$ 10.38	814.81	\$ 8,457.78
72" CMP (LF)	\$ 54.00		200.00	\$ 32,400.00
72" RCP		\$ 390.00	0.00	\$ -
Class A Conc (CY)		\$ 892.19	183.68	\$ 163,877.09
Steel (lb)		\$ 1.42	21835.00	\$ 30,918.36
Pipe Bedding (CY)		\$ 48.60	74.80	\$ 3,635.28
Trench Backfill (CY)		\$ 2.99	921.50	\$ 2,753.43
Trench Compaction (CY)		\$ 6.36	737.20	\$ 4,688.57

**Drainage Total \$ 246,730.51**

Signing and Marking	Installation Unit Cost	Amount	Total Cost
Permanent Striping (LF)	\$ 0.71	0	\$ -

**Signing and Marking Total \$ -**

Staging	Installation Unit Cost	Amount	Total Cost
Clearing and Grubbing (Acre)	\$ 10,260.00	0.10	\$ 1,026.00
Temporary Pavement			0
Temporary Drainage (Stream Diversion)	\$ 4,428.00	1.00	\$ 4,428.00

**Staging Total \$ 5,454.00**

Erosion Control	Installation Unit Cost	Amount	Total Cost
Fine Grading and Seeding (SY)	\$ 4.39	200.00	\$ 878.40
Temporary Grassing (AC)	\$ 855.60	0.00	\$ -
Type C Silt Fence (LF)	\$ 4.24	800.00	\$ 3,388.80
Check Dam Type C Silt Fence (LF)	\$ 6.79	800.00	\$ 5,433.60
Erosion Control Mats (SY)	\$ 1.87	266.67	\$ 499.20
Landscape Mulch (SY)	\$ 3.58	266.67	\$ 953.60
Perm Grassing (AC)	\$ 1,402.20	0.00	\$ -
Rip Rap Type 3 12" (SY)	\$ 60.98	26.67	\$ 1,626.24
Plastic Filter Fabric (SY)	\$ 5.72	26.67	\$ 152.64
4" Ditch Paving (SY)	\$ 54.65	0.00	\$ -

**Erosion Control Total \$ 12,932.48**

**Construction Cost Total \$ 280,932.66**

**Traffic Control (8% of Construction Total \$) \$ 22,474.61**

**Construction Cost Grand Total \$ 303,407.27**

Utility Relocation	Removal Unit Cost	Installation Unit Cost	Amount	Total Cost
<b>Electric</b>				
Aerial	\$ 11.00	\$ 55.00	\$ -	
Buried	\$ 16.50	\$ 82.50	75	\$ 7,425.00
Wooden Pole	\$ 82.50	\$ 605.00		\$ -
<b>Phone</b>				
Aerial	\$ 11.00	\$ 27.50	\$ -	
Buried	\$ 16.50	\$ 55.00	75	\$ 5,362.50
Wooden Pole	\$ 82.50	\$ 605.00		\$ -
<b>Cable</b>				
Aerial	\$ 11.00	\$ 27.50	\$ -	
Buried	\$ 16.50	\$ 55.00	75	\$ 5,362.50
Wooden Pole	\$ 82.50	\$ 605.00		\$ -
<b>Gas</b>				
4" main	\$ 16.50	\$ 66.00	\$ -	
<b>Water</b>				
8" main	\$ 16.50	\$ 93.50	75	\$ 8,250.00
Relocate Fire Hydrant (EA)		\$ 2,609.22		\$ -
<b>Sewer</b>				
12" main	\$ 16.50	\$ 82.50	0.00	\$ -
<b>Utility Relocation Total</b>				<b>\$ 26,400.00</b>

Right of Way (Sq Ft)	Cost/ Sq Ft	Sq Ft	Total Cost
Permanent Easement	\$ 4.00	7500	\$ 30,000.00
<b>ROW Total</b>			<b>\$ 30,000.00</b>