



# PROJECT INFORMATION SUMMARY

## CITY OF TOWN AND COUNTRY

### 2011 STORMWATER PROGRAM

9/12/2011

Project Name: Essex Point Subdivision / Sellenriek Road Retention - Middle Watershed

Project ID Number: 2011-4C

Number of Properties Impacted: 7  
 Number of Easements Required: 4  
 Number of Properties Benefited: 7  
 Opinion of Probable  
 Construction Cost (OPC): \$107,014.63

Project Source:  
 Citizen Complaint  
 Municipality  
 Maintenance  
 Government Agency

Location Benefit Identification (LBI)  
 Project Points: 16.0  
 Cost to Benefit Ratio: 6,688

Category of Problem: Description  
 A: Frequent structural flooding from creeks or rivers (floodplain)  
 B: Frequent structural flooding from overland flow (non-floodplain)  
 C: Frequent roadway flooding  
 D: Infrequent structural flooding from creeks or rivers (floodplain)  
 E: Infrequent structural flooding from overland flow (non-floodplain)  
 F: Infrequent roadway flooding  
 G: High risk structural erosion  
 H: High risk roadway erosion  
 I: Yard erosion  
 J: Moderate risk structural erosion  
 K: Moderate risk roadway erosion  
 L: Erosion or flooding of common ground or unmaintained area  
 M: Yard flooding  
 N: Flooding from inadequate sinkhole  
 O: Flooding from inadequate roadway drainage  
 P: Maintenance of stormwater system facilities  
 Q: Other \_\_\_\_\_

Coordination Required:  
 MSD  
 Corps of Engineers  
 MO DNR  
 MODOT  
 County Highways  
 City Streets  
 City Parks  
 County Parks  
 Municipality: City of Town & Country  
 Railroad: \_\_\_\_\_  
 Other: Local Utility Service Providers

Attached Supplemental Information:  
 Project Scope of Work  
 Conceptual Plan Drawing  
 Itemized Opinion of Probable Construction Cost (OPC)  
 Location Benefit Identification (LBI) Forms  
 Existing Condition Photos

Other Notes: \_\_\_\_\_  
 \_\_\_\_\_

MSD/MO American Water Base Map Number(s): 20P1  
 Laclede Gas Map Number(s): 165-67  
 FEMA FIR Map Number(s): 29189CO164H  
 USGS Quadrangle Map Number(s): 38090-F4-TF-024





## PROJECT SCOPE OF WORK CITY OF TOWN AND COUNTRY 2011 STORMWATER PROGRAM

8/12/2011

**Project Name:** Essex Point Subdivision / Sellenriek Road – Middle Watershed

**Project ID Number:** 2011-4C

**Problem:** The watershed above the Essex Point Subdivision is approximately 172 acres. It includes portions of the Village of Country Life Acres, several subdivisions, and the undeveloped property owned by the McDonnell Family. Regulations administered by the Metropolitan St. Louis Sewer District at the time of development did not address the water generated upstream of and then flowing through the subdivision and its stormwater facilities. The peak water flows generated by these areas during and following large rain events are causing erosion and potential flooding in the area of Sellenriek Road and Delvin Drive. In addition, the Essex Point Subdivision retention basin experiences debris and sediment issues from upstream.

**Proposed Solution:** Due to the size of the watershed and the limited undeveloped land available to provide regional detention or Best Management Practices (BMPs), four projects were identified to reduce peak flows from individual sub-watersheds. This project includes a new inline storage area to provide reduce peak flows, provide water quality benefits, and collect debris. Although not included as part of this project, implementing a rain garden/rain barrel program would reduce runoff throughout the watershed. MSD has public outreach/education programs in place that could be utilized.

**Description of Proposed Alignment:** Build up a berm along the east side of Sellenriek Road to provide additional inline storage volume. Install a new outlet structure with a debris-collecting trash rack. Clear some of the underbrush and unwanted vegetation from this area. The area appears to be a natural wetland and the intention of this concept is to leave it that way, but provide additional storage volume during high flow rain events.

**Required Easements:** 12746 Spruce Pond Drive (Temporary Construction Easement)  
12764 Spruce Pond Drive (Temporary Construction Easement)  
12764 Spruce Pond Drive (Permanent Easement)  
12766 Spruce Pond Drive (Temporary Construction Easement)

**Commentary:** Depending on MSD, additional detention storage may be required in some locations. In general, the intention of these projects is to reduce peak discharges in the watershed and provide water quality benefits. Some of the locations identified may be able to provide flood protection volume storage, while other projects may be able to provide channel protection volume or water quality volume storage. Further evaluation during design will dictate the most effective improvements.

In addition, Project 2010-17 is downstream of this project, thus benefiting from any reduction in flows that are provided by this project.





**OPINION OF PROBABLE CONSTRUCTION COST  
CITY OF TOWN AND COUNTRY  
2011 STORMWATER PROGRAM**

9/12/2011

**Project Name:** Essex Point Subdivision / Sellenriek Road Retention - Middle Watershed

**Project ID Number:** 2011-4C

ITEM NUMBER	PAY ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	EXTENDED PRICE
1	Mobilization	1	Lump Sum	\$1,461.23	\$1,461.23
2	Additional Fill	400	Cubic yards	\$20.29	\$8,117.55
3	Compacted Fill (RCP)	10	Cubic Yards	\$32.91	\$329.09
4	Compaction of Fill	400	Cubic Yards	\$39.49	\$15,796.31
5	Excavation Class "C"	114	Cubic Yards	\$16.45	\$1,875.81
6	Reinforced Concrete Pipe Sewer 24 Inch Class III	35	Linear Feet	\$76.79	\$2,687.57
7	Control Structure	1	Place	\$5,704.22	\$5,704.22
8	Clear Underbrush	1,667	Square Yards	\$2.19	\$3,657.28
9	Sodding - Bluegrass	600	Square Yards	\$8.23	\$4,936.35
10	Protection and Restoration of Site	1	Lump Sum	\$5,603.54	\$5,603.54
SUB-TOTAL - CONSTRUCTION:					\$50,168.94
Estimated Engineering Fee:					\$12,000.00
Estimated Geotechnical Engineering Fee:					\$5,000.00
Estimated Property Survey/Strip Map Preparation Fee:					\$750.00
Estimated Property Title/Easement Search Report Fee:					\$1,600.00
Estimated Topographic Survey Fee:					\$5,500.00
Estimated Property Rights Acquisition Document Preparation Fee:					\$0.00
Estimated Cost of Permanent Easements:					\$0.00
Temporary Construction Easement Preparation Fee:					\$1,800.00
Legal Costs Associated with Property Rights of Sellenriek Road:					\$5,000.00
Estimated Construction Survey Fee:					\$500.00
SUB-TOTAL:					\$82,318.94
30% Contingency:					\$24,695.68
<b>TOTAL:</b>					<b>\$107,014.63</b>



## City of Town & Country Location Benefit Identification

Project Name:	Essex Point Subdivision / Sellenriek Road Retention - Middle Watershed
Project Id Number:	2011-4C
Location Address / Description:	12746 Spruce Pond Drive
Total Calculated Benefit Points:	1.4

Evaluation Category	Problem Type	Benefit Points		
		High	Medium	Low
<b>Erosion</b>	Public Structure			
	Residential Structure			
	Retaining Wall (Public)			
	Street ROW			
	Improved Channel			
	Retaining Wall (Private)			
	Drainage Structure		6	
	Yard		3	
	Unimproved Channel			1
	Other			
	<b>Erosion Subtotal</b>		<b>10</b>	
<b>Flooding</b>	Public Structure			
	Residential Structure			
	Impassable Traffic			
	Passable Traffic			
	Accessory Structure			
	Yard			1
	Other			
		<b>Flooding Subtotal</b>		<b>1</b>
<b>Maintenance</b>	Drainage Structure			
	Improved Channel			
	Unimproved Channel		3	
	Street Gutter			
	Swale / Berm			
	Other			
	<b>Maintenance Subtotal</b>		<b>3</b>	
<b>Drainage</b>	Street			
	Yard			
	Other			
		<b>Drainage Subtotal</b>		<b>0</b>
<b>Frequency Rating</b>		<b>Degree of Risk</b>		
>1 / year	1	Life / Limb		
1 / year		Health		
1 / 5 years		Property Value		0.1
1 / 10 years				
<b>Frequency Rating Multiplier</b>	<b>1</b>	<b>Degree of Risk Multiplier</b>		<b>0.1</b>

## City of Town & Country Location Benefit Identification

<b>Project Name:</b>	Essex Point Subdivision / Sellenriek Road Retention - Middle Watershed
<b>Project Id Number:</b>	2011-4C
<b>Location Address / Description:</b>	12764 Spruce Pond Drive
<b>Total Calculated Benefit Points:</b>	1.4

Evaluation Category	Problem Type	Benefit Points		
		High	Medium	Low
<b>Erosion</b>	Public Structure			
	Residential Structure			
	Retaining Wall (Public)			
	Street ROW			
	Improved Channel			
	Retaining Wall (Private)			
	Drainage Structure		6	
	Yard		3	
	Unimproved Channel			1
	Other			
	<b>Erosion Subtotal</b>		<b>10</b>	
<b>Flooding</b>	Public Structure			
	Residential Structure			
	Impassable Traffic			
	Passable Traffic			
	Accessory Structure			
	Yard			1
	Other			
		<b>Flooding Subtotal</b>		<b>1</b>
<b>Maintenance</b>	Drainage Structure			
	Improved Channel			
	Unimproved Channel		3	
	Street Gutter			
	Swale / Berm			
	Other			
	<b>Maintenance Subtotal</b>		<b>3</b>	
<b>Drainage</b>	Street			
	Yard			
	Other			
		<b>Drainage Subtotal</b>		<b>0</b>
<b>Frequency Rating</b>		<b>Degree of Risk</b>		
>1 / year	1	Life / Limb		
1 / year		Health		
1 / 5 years		Property Value		0.1
1 / 10 years				
<b>Frequency Rating Multiplier</b>	<b>1</b>	<b>Degree of Risk Multiplier</b>		<b>0.1</b>

## City of Town & Country Location Benefit Identification

Project Name:	Essex Point Subdivision / Sellenriek Road Retention - Middle Watershed
Project Id Number:	2011-4C
Location Address / Description:	12766 Spruce Pond Drive
Total Calculated Benefit Points:	1.4

Evaluation Category	Problem Type	Benefit Points		
		High	Medium	Low
<b>Erosion</b>	Public Structure			
	Residential Structure			
	Retaining Wall (Public)			
	Street ROW			
	Improved Channel			
	Retaining Wall (Private)			
	Drainage Structure		6	
	Yard		3	
	Unimproved Channel			1
	Other			
	<b>Erosion Subtotal</b>		<b>10</b>	
<b>Flooding</b>	Public Structure			
	Residential Structure			
	Impassable Traffic			
	Passable Traffic			
	Accessory Structure			
	Yard			1
	Other			
		<b>Flooding Subtotal</b>		<b>1</b>
<b>Maintenance</b>	Drainage Structure			
	Improved Channel			
	Unimproved Channel		3	
	Street Gutter			
	Swale / Berm			
	Other			
	<b>Maintenance Subtotal</b>		<b>3</b>	
<b>Drainage</b>	Street			
	Yard			
	Other			
		<b>Drainage Subtotal</b>		<b>0</b>
<b>Frequency Rating</b>		<b>Degree of Risk</b>		
>1 / year	1	Life / Limb		
1 / year		Health		
1 / 5 years		Property Value		0.1
1 / 10 years				
<b>Frequency Rating Multiplier</b>	<b>1</b>	<b>Degree of Risk Multiplier</b>		<b>0.1</b>

## City of Town & Country Location Benefit Identification

<b>Project Name:</b>	Essex Point Subdivision / Sellenriek Road Retention - Middle Watershed
<b>Project Id Number:</b>	2011-4C
<b>Location Address / Description:</b>	Sellenriek Road
<b>Total Calculated Benefit Points:</b>	3.1

Evaluation Category	Problem Type	Benefit Points		
		High	Medium	Low
<b>Erosion</b>	Public Structure			
	Residential Structure			4
	Retaining Wall (Public)			
	Street ROW			3
	Improved Channel			
	Retaining Wall (Private)			
	Drainage Structure		6	
	Yard			1
	Unimproved Channel			1
	Other			
	<b>Erosion Subtotal</b>		<b>15</b>	
<b>Flooding</b>	Public Structure			
	Residential Structure			4
	Impassable Traffic			
	Passable Traffic		6	
	Accessory Structure			
	Yard			1
	Other			
	<b>Flooding Subtotal</b>		<b>11</b>	
<b>Maintenance</b>	Drainage Structure			
	Improved Channel			
	Unimproved Channel		3	
	Street Gutter			1
	Swale / Berm			1
	Other			
	<b>Maintenance Subtotal</b>		<b>5</b>	
<b>Drainage</b>	Street			
	Yard			
	Other			
	<b>Drainage Subtotal</b>			<b>0</b>
<b>Frequency Rating</b>		<b>Degree of Risk</b>		
>1 / year	1	Life / Limb		
1 / year		Health		
1 / 5 years		Property Value		0.1
1 / 10 years				
<b>Frequency Rating Multiplier</b>	<b>1</b>	<b>Degree of Risk Multiplier</b>		<b>0.1</b>

## City of Town & Country Location Benefit Identification

Project Name:	Essex Point Subdivision / Sellenriek Road Retention - Middle Watershed
Project Id Number:	2011-4C
Location Address / Description:	930 Delvin Drive
Total Calculated Benefit Points:	4.9

Evaluation Category	Problem Type	Benefit Points		
		High	Medium	Low
<b>Erosion</b>	Public Structure			
	Residential Structure			
	Retaining Wall (Public)			
	Street ROW			
	Improved Channel			
	Retaining Wall (Private)	18		
	Drainage Structure		6	
	Yard		3	
	Unimproved Channel			1
	Other			
	<b>Erosion Subtotal</b>		<b>28</b>	
<b>Flooding</b>	Public Structure			
	Residential Structure		12	
	Impassable Traffic			
	Passable Traffic			
	Accessory Structure			
	Yard			1
	Other			
	<b>Flooding Subtotal</b>		<b>13</b>	
<b>Maintenance</b>	Drainage Structure		6	
	Improved Channel			
	Unimproved Channel			1
	Street Gutter			
	Swale / Berm			
	Other			
	<b>Maintenance Subtotal</b>		<b>7</b>	
<b>Drainage</b>	Street			
	Yard			1
	Other			
	<b>Drainage Subtotal</b>		<b>1</b>	
<b>Frequency Rating</b>		<b>Degree of Risk</b>		
>1 / year	1	Life / Limb		
1 / year		Health		
1 / 5 years		Property Value		0.1
1 / 10 years				
<b>Frequency Rating Multiplier</b>	<b>1</b>	<b>Degree of Risk Multiplier</b>		<b>0.1</b>



## City of Town & Country Location Benefit Identification

Project Name:	Essex Point Subdivision / Sellenriek Road Retention - Middle Watershed
Project Id Number:	2011-4C
Location Address / Description:	Essex Point Subdivision Retention Basin
Total Calculated Benefit Points:	1.3

Evaluation Category	Problem Type	Benefit Points		
		High	Medium	Low
<b>Erosion</b>	Public Structure			
	Residential Structure			
	Retaining Wall (Public)			
	Street ROW			
	Improved Channel			
	Retaining Wall (Private)			
	Drainage Structure			
	Yard			
	Unimproved Channel			
	Other			
	<b>Erosion Subtotal</b>		<b>0</b>	
<b>Flooding</b>	Public Structure			
	Residential Structure			4
	Impassable Traffic			
	Passable Traffic			
	Accessory Structure			
	Yard			1
	Other			
	<b>Flooding Subtotal</b>		<b>5</b>	
<b>Maintenance</b>	Drainage Structure			
	Improved Channel			
	Unimproved Channel			1
	Street Gutter			
	Swale / Berm			
	Other (Retention Basin)		6	
	<b>Maintenance Subtotal</b>		<b>7</b>	
<b>Drainage</b>	Street			
	Yard			1
	Other			
	<b>Drainage Subtotal</b>		<b>1</b>	
<b>Frequency Rating</b>		<b>Degree of Risk</b>		
>1 / year	1	Life / Limb		
1 / year		Health		
1 / 5 years		Property Value		0.1
1 / 10 years				
<b>Frequency Rating Multiplier</b>	<b>1</b>	<b>Degree of Risk Multiplier</b>		<b>0.1</b>

## City of Town & Country Location Benefit Identification

Project Name:	Essex Point Subdivision / Sellenriek Road Retention - Middle Watershed
Project Id Number:	2011-4C
Location Address / Description:	Project 2010-17
Total Calculated Benefit Points:	2.5

Evaluation Category	Problem Type	Benefit Points		
		High	Medium	Low
<b>Erosion</b>	Public Structure			
	Residential Structure			
	Retaining Wall (Public)			
	Street ROW			
	Improved Channel		9	
	Retaining Wall (Private)			
	Drainage Structure			
	Yard		3	
	Unimproved Channel			1
	Other (Fence)		6	
	<b>Erosion Subtotal</b>		<b>19</b>	
<b>Flooding</b>	Public Structure			
	Residential Structure			4
	Impassable Traffic			
	Passable Traffic			
	Accessory Structure			
	Yard			1
	Other			
	<b>Flooding Subtotal</b>		<b>5</b>	
<b>Maintenance</b>	Drainage Structure			
	Improved Channel			
	Unimproved Channel			1
	Street Gutter			
	Swale / Berm			
	Other			
	<b>Maintenance Subtotal</b>		<b>1</b>	
<b>Drainage</b>	Street			
	Yard			
	Other			
	<b>Drainage Subtotal</b>		<b>0</b>	
<b>Frequency Rating</b>		<b>Degree of Risk</b>		
>1 / year	1	Life / Limb		
1 / year		Health		
1 / 5 years		Property Value		0.1
1 / 10 years				
<b>Frequency Rating Multiplier</b>	<b>1</b>	<b>Degree of Risk Multiplier</b>		<b>0.1</b>



**Looking east at the potential detention area east of Sellenriek Road**



**Looking west at the existing culvert crossing from the potential detention area east of Sellenriek Road**