

MEMORANDUM

To: Mayor and City Council

From: David Elliott

Date: July 10, 2017

Subject: **2542 Bentbrook Drive funding approval for Stormwater Repairs.**

ITEM DESCRIPTION

Approval of Funding for Stormwater Pipe Repairs at 2542 Bentbrook Drive. Estimate for the stormwater repairs is \$220,682.28 which includes a 10% contingency.

BACKGROUND

Unit Four of the Wildwood Subdivision was constructed in the early 1970s. At this time, Bentbrook Drive was built with a drainage alignment that flows northeast through two stone flumes. These flumes were constructed on a steep slope (approximately 2.5:1) and the water flowing from Bentbrook Drive and through these flumes has been the source of several complaints from a resident on the adjoining property. The resident has reported damages to their home from these flumes. Staff observations and a completed hydrology study does not support that stormwater damages were caused by drainage from Bentbrook Drive or the City's drainage infrastructure. However, staff does agree that this drainage system was not properly constructed in the 1970s and that the construction of an alternate alignment is warranted.

The new alignment will divert stormflows to an existing system located 260' to the southwest. A hydrology study has been completed, and the realignment will involve a 4% increase in the flows to the existing system and outfall. This additional flow will be managed by the existing infrastructure and downstream channel.

The primary aspects of this project include the following:

1. Installing 259' of new 15" reinforced concrete pipe
2. Installing 85' of new 18" reinforced concrete pipe
3. Installation of 2 new catch basins

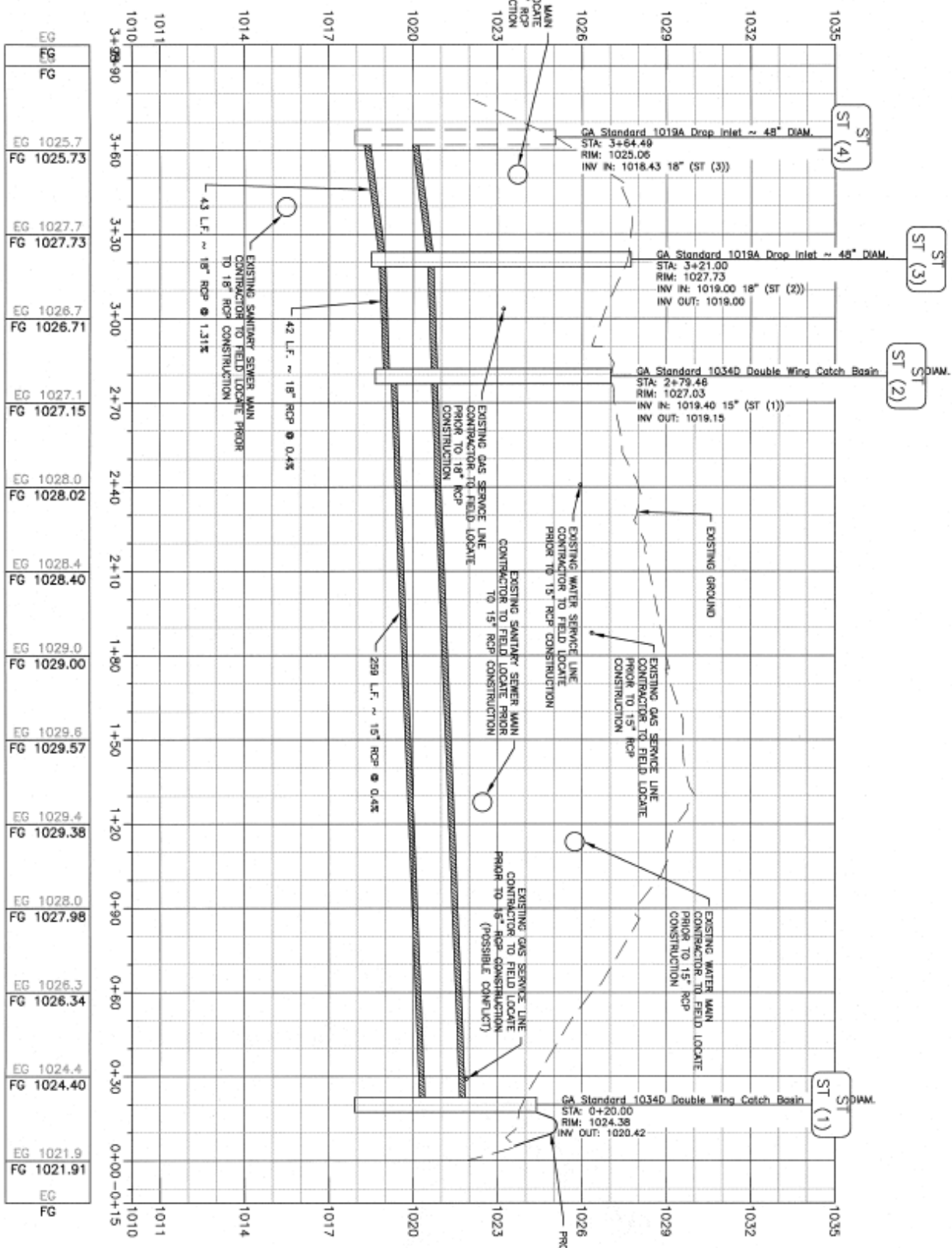
4. Abandoning 33' of 18" corrugated metal pipe
5. Rehabilitating 55' of 18" corrugated metal pipe with cured in place pipe
6. Rehabilitating 62' of 21" corrugated metal pipe with cured in place pipe
7. Rehabilitating 125' of 24" corrugated metal pipe with cured in place pipe
8. Filling all roadway trenches required for pipe installation with Graded Aggregate base
9. Curbing and Asphalt replacement required by project
10. Grassing and landscape repairs.

This project will be funded with the 2017 Stormwater Maintenance Budget.

RECOMMENDED ACTION

Staff recommends approving \$220,682.28 in funding for Stormwater Culvert Repairs at 2542 Bentbrook Drive.

BENTBROOK DRIVE



VEI



Flume leading from Bentbrook Drive to be abandoned

Estimate Template for CITY OF DUNWOODY 2017					
SOUTHERN PREMIER CONTRACTORS, INC.					
Project Location:			2542 Bentbrook Drive, Dunwoody		
Prepared By:			Michael Massey		
Date Estimate Prepared:			05/11/2017		
Total Estimate			\$	200,620.25	
10% Contingency			\$	20,062.03	
Grand Total of Estimate			\$	220,682.28	
SCOPE OF WORK:					
PRE:					
Cleaning of Pipes for Lining					
Internal Point Repairs as Needed					
Install New 15" RCP					
Install New 18" RCP					
Install New CB's 1033/1034					
Install New Drop Inlet					
Install Rip Rap @ HW					
Flowable Fill (abandon pipe 18"-33lf)					
Relocate Existing Mailboxes					
LINING:					
CIPP Lining Existing Pipes @ 18"-55lf, 21"-62lf, 24"-125lf					
POST:					
Landscape Disturbed Areas					
Install Inverts					
Grout CIPP Ends to Structure					
Grout All Joint/Cracks & Holes in All Structures					
Asphalt Repair/Replacement					
Item #	Item	Quantity	Unit	Unit Price	Total Cost
General Conditions					
1D	Mobilization	1	EA	\$ 1,500.00	\$ 1,500.00
2D	Out of Scope Work, Foreman	40	HR	\$ 55.00	\$ 2,200.00
3D	Out of Scope Work, Laborer	80	HR	\$ 45.00	\$ 3,600.00
Traffic Control					
4D	Traffic Control Major (Detours etc. for road closure complete)		Per Day	\$ 1,500.00	\$ -
5D	Traffic Control Minor (Two flagman etc.)	3	Per Day	\$ 1,000.00	\$ 3,000.00
6D	Mobile Electronic Detour Signs	3	Per Day	\$ 125.00	\$ 375.00
TV Inspection and Jet-Vac Cleaning					
7D	TV Storm Lines (includes DVD & Report)		LF	\$ 2.00	\$ -
8D	Visual Inspection (Pictures), per Project (During Construction)		EA	\$ 150.00	\$ -
9D	Hydro-Excavation (Complete)	4	Per Hour	\$ 349.00	\$ 1,396.00
Storm Line Cleaning (less than 25% full)					
10D	12" PIPE - Cleaning less than 25% full		LF	\$ 4.00	\$ -
11D	15" PIPE - Cleaning less than 25% full		LF	\$ 4.25	\$ -
12D	18" PIPE - Cleaning less than 25% full	55	LF	\$ 4.50	\$ 247.50
13D	21" PIPE - Cleaning less than 25% full	62	LF	\$ 4.75	\$ 294.50
14D	24" PIPE - Cleaning less than 25% full	125	LF	\$ 5.00	\$ 625.00
15D	30" PIPE - Cleaning less than 25% full		LF	\$ 5.75	\$ -
16D	36" PIPE - Cleaning less than 25% full		LF	\$ 6.50	\$ -
17D	42" PIPE - Cleaning less than 25% full		LF	\$ 7.00	\$ -

18D	48" PIPE - Cleaning less than 25% full		LF	\$ 7.50	\$ -
19D	54" PIPE - Cleaning less than 25% full		LF	\$ 8.50	\$ -
20D	60" PIPE - Cleaning less than 25% full		LF	\$ 10.50	\$ -
21D	66" PIPE - Cleaning less than 25% full		LF	\$ 12.00	\$ -
22D	72" PIPE - Cleaning less than 25% full		LF	\$ 15.50	\$ -
23D	78" PIPE - Cleaning less than 25% full		LF	\$ 16.25	\$ -
24D	84" PIPE - Cleaning less than 25% full		LF	\$ 18.50	\$ -
25D	90" PIPE - Cleaning less than 25% full		LF	\$ 19.50	\$ -
26D	96" PIPE - Cleaning less than 25% full		LF	\$ 21.50	\$ -
	Storm Line Cleaning (25% full or greater)				
27D	12" PIPE - Cleaning 25% full or greater		LF	\$ 4.25	\$ -
28D	15" PIPE - Cleaning 25% full or greater		LF	\$ 4.50	\$ -
29D	18" PIPE - Cleaning 25% full or greater		LF	\$ 4.75	\$ -
30D	21" PIPE - Cleaning 25% full or greater		LF	\$ 5.00	\$ -
31D	24" PIPE - Cleaning 25% full or greater		LF	\$ 5.25	\$ -
32D	30" PIPE - Cleaning 25% full or greater		LF	\$ 6.50	\$ -
33D	36" PIPE - Cleaning 25% full or greater		LF	\$ 9.50	\$ -
34D	42" PIPE - Cleaning 25% full or greater		LF	\$ 11.50	\$ -
35D	48" PIPE - Cleaning 25% full or greater		LF	\$ 12.50	\$ -
36D	54" PIPE - Cleaning 25% full or greater		LF	\$ 15.50	\$ -
37D	60" PIPE - Cleaning 25% full or greater		LF	\$ 18.50	\$ -
38D	66" PIPE - Cleaning 25% full or greater		LF	\$ 20.50	\$ -
39D	72" PIPE - Cleaning 25% full or greater		LF	\$ 20.50	\$ -
40D	78" PIPE - Cleaning 25% full or greater		LF	\$ 22.50	\$ -
41D	84" PIPE - Cleaning 25% full or greater		LF	\$ 29.50	\$ -
42D	90" PIPE - Cleaning 25% full or greater		LF	\$ 29.50	\$ -
43D	96" PIPE - Cleaning 25% full or greater		LF	\$ 29.50	\$ -
	Specialty Storm Line Cleaning,				
	Applicable to heavy roots, Large diameter rocks, large debris, etc.				
44D	12" to 36" PIPE		LF	\$ 15.00	\$ -
45D	42" to 96" PIPE		LF	\$ 30.00	\$ -
	Spiral Rib Corr. Steel Pipe (14 ga. Tp. 2 Alum)				
	Includes excavation, backfill, & compaction				
46D	15" SRCMP		LF	\$ 26.41	\$ -
47D	18" SRCMP		LF	\$ 28.58	\$ -
48D	24" SRCMP		LF	\$ 33.01	\$ -
49D	30" SRCMP		LF	\$ 37.44	\$ -
50D	36" SRCMP		LF	\$ 46.85	\$ -
51D	42" SRCMP		LF	\$ 51.22	\$ -
52D	48" SRCMP		LF	\$ 55.62	\$ -
53D	54" SRCMP		LF	\$ 60.47	\$ -
54D	60" SRCMP		LF	\$ 72.38	\$ -
55D	72" SRCMP		LF	\$ 98.20	\$ -
56D	84" SRCMP		LF	\$ 122.00	\$ -
57D	96" SRCMP		LF	\$ 133.00	\$ -
	Reinforced Concrete Pipe (RCP) Tp 3				
	Includes excavation, backfill, & compaction				
58DD	15" RCP	259	LF	\$ 32.45	\$ 8,404.55
58D	18" RCP	85	LF	\$ 32.95	\$ 2,800.75
59D	24" RCP		LF	\$ 40.25	\$ -
60D	30" RCP		LF	\$ 52.75	\$ -
61D	36" RCP		LF	\$ 64.95	\$ -
62D	42" RCP		LF	\$ 93.50	\$ -
63D	48" RCP		LF	\$ 125.00	\$ -
64D	54" RCP		LF	\$ 135.00	\$ -
65D	60" RCP		LF	\$ 150.00	\$ -
66D	72" RCP		LF	\$ 175.00	\$ -
	High Density Polyethylene Pipe (HDPE)				
	Includes excavation, backfill, & compaction				
67D	15" HDPE		LF	\$ 21.09	\$ -
68D	18" HDPE		LF	\$ 22.64	\$ -
69D	24" HDPE		LF	\$ 28.30	\$ -
70D	30" HDPE		LF	\$ 33.95	\$ -
71D	36" HDPE		LF	\$ 45.54	\$ -

72D	42" HDPE		LF	\$ 53.35	\$ -
73D	48" HDPE		LF	\$ 63.14	\$ -
74D	54" HDPE		LF	\$ -	
75D	60" HDPE		LF	\$ 110.00	\$ -
76D	72" HDPE		LF	\$ -	
Additional Depth for Pipes					
Includes excavation, backfill, & compaction					
77D	Invert >8.1' to 12'		LF	\$ 50.00	
78D	Invert >12'		LF	\$ 90.00	
Metal Flared End Sections: (GADOT STD 1120)					
79D	18" MFES 16 Gauge In Place		EA	\$ 182.10	\$ -
80D	24" MFES 14 Gauge In Place		EA	\$ 290.05	\$ -
81D	30" MFES 14 Gauge In Place		EA	\$ 392.73	\$ -
82D	36" MFES 14 Gauge In Place		EA	\$ 596.35	\$ -
83D	42" MFES 14 Gauge In Place		EA	\$ 1,123.07	\$ -
Metal Safety End Sections: 4:1 Slope GADOT Special Detail					
84D	18" SFES 16 Gauge In Place		EA	\$ 421.19	\$ -
85D	24" SFES 16 Gauge In Place		EA	\$ 549.59	\$ -
86D	30" SFES 12 Gauge In Place		EA	\$ 733.15	\$ -
87D	36" SFES 12 Gauge In Place		EA	\$ 1,317.96	\$ -
88D	42" SFES 12 Gauge In Place		EA	\$ 1,680.78	\$ -
89D	48" SFES 12 Gauge In Place		EA	\$ 2,053.27	\$ -
Precast Concrete Flared End Section					
90D	18" CFES In Place		EA	\$ 445.00	\$ -
91D	24" CFES In Place		EA	\$ 525.00	\$ -
92D	30" CFES In Place		EA	\$ 590.00	\$ -
93D	36" CFES In Place		EA	\$ 1,150.00	\$ -
94D	42" CFES In Place		EA	\$ 1,450.00	\$ -
Precast Headwalls					
95D	Precast Headwall for 18" Pipe		EA	\$ 475.00	\$ -
96D	Precast Headwall for 24" Pipe		EA	\$ 525.00	\$ -
97D	Precast Headwall for 30" Pipe		EA	\$ 825.00	\$ -
98D	Precast Headwall for 36" Pipe		EA	\$ 1,125.00	\$ -
99D	Precast Headwall for 42" Pipe		EA	\$ 1,314.00	\$ -
100D	Precast Headwall for 48" Pipe		EA	\$ 1,404.00	\$ -
101D	Precast Headwall for 18" Pipe w/ Velocity Dissipater		EA	\$ 523.00	\$ -
102D	Precast Headwall for 24" Pipe w/ Velocity Dissipater		EA	\$ 571.00	\$ -
103D	Precast Headwall for 30" Pipe w/ Velocity Dissipater		EA	\$ 908.00	\$ -
104D	Precast Headwall for 36" Pipe w/ Velocity Dissipater		EA	\$ 1,205.00	\$ -
105D	Precast Headwall for 42" Pipe w/ Velocity Dilator		EA	\$ 1,394.00	\$ -
106D	Precast Headwall for 48" Pipe w/ Velocity Dissipater		EA	\$ 1,484.00	\$ -
Cast-in-Place Concrete Headwall					
107D	Cast-in-Place Concrete Headwall- DeKalb Std. Detail		CY	\$ 695.00	\$ -
108D	Cast-in-Place Concrete Headwall- GDOT Std. Det 1125		CY	\$ 695.00	\$ -
Brick-in-Place Headwall					
109D	Brick Headwall for 18" Pipe		EA	\$ 525.00	\$ -
110D	Brick Headwall for 24" Pipe		EA	\$ 725.00	\$ -
111D	Brick Headwall for 30" Pipe		EA	\$ 925.00	\$ -
112D	Brick Headwall for 36" Pipe		EA	\$ 1,300.00	\$ -
113D	Brick Headwall for 42" Pipe		EA	\$ 1,500.00	\$ -
114D	Brick Headwall for 48" Pipe		EA	\$ 1,900.00	\$ -
115D	Brick Headwall for 54" Pipe		EA	\$ 2,400.00	\$ -
116D	Brick Headwall for 60" Pipe		EA	\$ 3,350.00	\$ -
117D	Brick Headwall for 72" Pipe		EA	\$ 4,500.00	\$ -
Rubble Masonry Headwalls (per DeKalb Co. or Gwinnett Co, Standards)					
118D	Rubble Headwall for 18" Pipe		EA	\$ 1,500.00	\$ -
119D	Rubble Headwall for 24" Pipe		EA	\$ 1,700.00	\$ -
120D	Rubble Headwall for 30" Pipe		EA	\$ 1,800.00	\$ -
121D	Rubble Headwall for 36" Pipe		EA	\$ 2,400.00	\$ -
Flowable Paved Pipe Invert					
122D	18" Diameter		LF	\$ 25.00	\$ -
123D	24" Diameter		LF	\$ 30.00	\$ -
124D	30" Diameter		LF	\$ 35.00	\$ -

125D	36" Diameter		LF	\$ 40.00	\$ -
126D	42" Diameter		LF	\$ 45.00	\$ -
127D	48" Diameter		LF	\$ 55.00	\$ -
128D	60" Diameter		LF	\$ 70.00	\$ -
129D	72" Diameter		LF	\$ 85.00	\$ -
130D	96" Diameter		LF	\$ 95.00	\$ -
130DD	Flowable Fill	33	LF	\$ 99.75	\$ 3,291.75
Internal Pipe Point Repairs (Including cutting, trimming, jacking, etc.)					
131D	18" Diameter	5	LF	\$ 350.00	\$ 1,750.00
132D	24" Diameter	7	LF	\$ 250.00	\$ 1,750.00
133D	30" Diameter		LF	\$ 199.00	\$ -
134D	36" Diameter		LF	\$ 150.00	\$ -
135D	42" Diameter		LF	\$ 150.00	\$ -
136D	48" Diameter		LF	\$ 150.00	\$ -
137D	60" Diameter		LF	\$ 150.00	\$ -
138D	72" Diameter		LF	\$ 150.00	\$ -
139D	96" Diameter		LF	\$ 150.00	\$ -
Storm Drain Catch Basins					
New Std. Catch Basins shall be GDOT 1033/1034 or DeKalb Studs.					
140D	4'-Dia. Brick Catch Basin GADOT 1033/1034		VF	\$ 649.00	\$ -
141D	5'-Dia. Brick Catch Basin GADOT 1033/1034		VF	\$ 749.00	\$ -
142D	6'-Dia. Brick Catch Basin GADOT 1033/1034		VF	\$ 849.00	\$ -
143D	4'-Dia. Precast Catch Basin GADOT 1033/1034	12	VF	\$ 399.00	\$ 4,788.00
144D	5'-Dia. Precast Catch Basin GADOT 1033/1034		VF	\$ 375.00	\$ -
145D	6'-Dia. Precast Catch Basin GADOT 1033/1034		VF	\$ 599.00	\$ -
Storm Drain Inlets & Manholes					
New Std. Inlet shall be GDOT 1019/1011 or DeKalb Stds.					
Brick Square Inlets					
146D	4' Square Brick Inlet w/ Flush Gate Only		VF	\$ 550.00	\$ -
147D	5' Square Brick Inlet w/ Flush Gate Only		VF	\$ 650.00	\$ -
148D	6' Square Brick Inlet w/ Flush Gate Only		VF	\$ 750.00	\$ -
149D	4' Square Brick Inlet w/ Curb Hood & Grate		VF	\$ 550.00	\$ -
150D	5' Square Brick Inlet w/ Curb Hood & Grate		VF	\$ 650.00	\$ -
151D	6' Square Brick Inlet w/ Curb Hood & Grate		VF	\$ 750.00	\$ -
152D	4' Square Brick Inlet w/ Pedestal Top & Grate		VF	\$ 550.00	\$ -
153D	5' Square Brick Inlet w/ Pedestal Top & Grate		VF	\$ 650.00	\$ -
154D	6' Square Brick Inlet w/ Pedestal Top & Grate		VF	\$ 750.00	\$ -
Brick Round Inlets					
155D	4' Round Brick Inlet w/ Flush Gate Only		VF	\$ 450.00	\$ -
156D	5' Round Brick Inlet w/ Flush Gate Only		VF	\$ 550.00	\$ -
157D	6' Round Brick Inlet w/ Flush Gate Only		VF	\$ 650.00	\$ -
158D	4' Round Brick Inlet w/ Curb Hood & Grate		VF	\$ 460.00	\$ -
159D	5' Round Brick Inlet w/ Curb Hood & Grate		VF	\$ 560.00	\$ -
160D	6' Round Brick Inlet w/ Curb Hood & Grate		VF	\$ 660.00	\$ -
161D	4' Round Brick Inlet w/ Pedestal Top & Grate or MH Ring & Cover		VF	\$ 450.00	\$ -
162D	5' Round Brick Inlet w/ Pedestal Top & Grate or MH Ring & Cover		VF	\$ 550.00	\$ -
163D	6' Round Brick Inlet w/ Pedestal Top & Grate or MH Ring & Cover		VF	\$ 650.00	\$ -
Precast Square Inlets					
164D	4' Square Precast Inlet w/ Flush Gate Only		VF	\$ 475.00	\$ -
165D	5' Square Precast Inlet w/ Flush Gate Only		VF	\$ 525.00	\$ -
166D	6' Square Precast Inlet w/ Flush Gate Only		VF	\$ 600.00	\$ -
167D	4' Square Precast Inlet w/ Curb Hood & Grate		VF	\$ 475.00	\$ -
168D	5' Square Precast Inlet w/ Curb Hood & Grate		VF	\$ 525.00	\$ -
169D	6' Square Precast Inlet w/ Curb Hood & Grate		VF	\$ 600.00	\$ -
170D	4' Square Precast Inlet w/ Pedestal Top & Grate		VF	\$ 475.00	\$ -
171D	5' Square Precast Inlet w/ Pedestal Top & Grate		VF	\$ 525.00	\$ -
172D	6' Square Precast Inlet w/ Pedestal Top & Grate		VF	\$ 600.00	\$ -

	Precast Round Inlets					
173D	4' Round Precast Inlet w/ Flush Grate Only		VF	\$ 325.00	\$ -	
174D	5' Round Precast Inlet w/ Flush Grate Only		VF	\$ 400.00	\$ -	
175D	6' Round Precast Inlet w/ Flush Grate Only		VF	\$ 475.00	\$ -	
176D	4' Round Precast Inlet w/ Curb Hood & Grate	9	VF	\$ 325.00	\$ 2,925.00	
177D	5' Round Precast Inlet w/ Curb Hood & Grate		VF	\$ 400.00	\$ -	
178D	6' Round Precast Inlet w/ Curb Hood & Grate		VF	\$ 475.00	\$ -	
179D	4' Round Precast Inlet w/ Pedestal Top & Grate or MH Ring & Cover		VF	\$ 325.00	\$ -	
180D	5' Round Precast Inlet w/ Pedestal Top & Grate or MH Ring & Cover		VF	\$ 400.00	\$ -	
181D	6' Round Precast Inlet w/ Pedestal Top & Grate or MH Ring & Cover		VF	\$ 475.00	\$ -	
	Square Brick Manholes					
182D	4' Square Brick Manhole w/ Manhole Ring & Cover		VF	\$ 450.00	\$ -	
183D	5' Square Brick Manhole w/ Manhole Ring & Cover		VF	\$ 550.00	\$ -	
184D	6' Square Brick Manhole w/ Manhole Ring & Cover		VF	\$ 650.00	\$ -	
	Round Brick Manholes					
185D	4' Round Brick Manhole w/ Manhole Ring & Cover		VF	\$ 450.00	\$ -	
186D	5' Round Brick Manhole w/ Manhole Ring & Cover		VF	\$ 550.00	\$ -	
187D	6' Round Brick Manhole w/ Manhole Ring & Cover		VF	\$ 650.00	\$ -	
	Square Precast Manholes					
188D	4' Square Precast Manhole w/ Manhole Ring & Cover		VF	\$ 400.00	\$ -	
189D	5' Square Precast Manhole w/ Manhole Ring & Cover		VF	\$ 450.00	\$ -	
190D	6' Square Precast Manhole w/ Manhole Ring & Cover		VF	\$ 525.00	\$ -	
	Round Precast Manholes					
191D	4' Round Precast Manhole w/ Manhole Ring & Cover		VF	\$ 275.00	\$ -	
192D	5' Round Precast Manhole w/ Manhole Ring & Cover		VF	\$ 300.00	\$ -	
193D	6' Round Precast Manhole w/ Manhole Ring & Cover		VF	\$ 375.00	\$ -	
	Miscellaneous & Special Structures/Components					
194D	4' Dia. Pedestal Top with Inlet Frame and Grate		EA	\$ 950.00	\$ -	
195D	5' Dia. Pedestal Top with Inlet Frame and Grate		EA	\$ 1,050.00	\$ -	
196D	6' Dia. Pedestal Top with Inlet Frame and Grate		EA	\$ 1,175.00	\$ -	
197D	4' Dia. Pedestal Top with MH Ring & Cover		EA	\$ 750.00	\$ -	
198D	5' Dia. Pedestal Top with MH Ring & Cover		EA	\$ 1,000.00	\$ -	
199D	6' Dia. Pedestal Top with MH Ring & Cover		EA	\$ 1,350.00	\$ -	
200D	4' Dia Round to Square		EA	\$ 300.00	\$ -	
201D	5' Dia Round to Square		EA	\$ 400.00	\$ -	
202D	6' Dia Round to Square		EA	\$ 525.00	\$ -	
203D	Precast Replacement Top Only for Single Wing, w/ Ring & Cover, not including throat		EA	\$ 950.00	\$ -	
204D	Precast Replacement Top Only for Double Wing w/Ring & Cover, not including throat		EA	\$ 1,050.00	\$ -	
205D	4'x4' Precast Top w/ MH Ring and Cover		EA	\$ 500.00	\$ -	
206D	5'x5' Precast Top w/ MH Ring and Cover		EA	\$ 675.00	\$ -	
207D	Cast-in-Place Top Only w/Ring & Cover		CY	\$ 1,150.00	\$ -	
208D	Cast-in-Place Throat Only		CY	\$ 750.00	\$ -	
209D	Invert Installation, 4' Diameter	7	EA	\$ 250.00	\$ 1,750.00	
210D	Invert Installation, 5' Diameter		EA	\$ 300.00	\$ -	
211D	Invert Installation, 6' Diameter		EA	\$ 350.00	\$ -	
212D	Invert Installation, other configurations		SF	\$ 12.50	\$ -	
213D	Uncover Buried Junction Box (<4')		EA	\$ 250.00	\$ -	
214D	Uncover Buried Junction Box (4'-7.9')		EA	\$ 500.00	\$ -	
215D	Uncover Buried Junction Box (8'-11.9')		EA	\$ 750.00	\$ -	
216D	Uncover Buried Junction Box (>12')		EA	\$ 1,000.00	\$ -	
	Grout Connection To Structure					
217D	12" Grout Each End to Structure		EA	\$ 125.00	\$ -	
218D	15" Grout Each End to Structure	2	EA	\$ 150.00	\$ 300.00	
219D	18" Grout Each End to Structure	6	EA	\$ 150.00	\$ 900.00	
220D	21" Grout Each End to Structure	2	EA	\$ 175.00	\$ 350.00	
221D	24" Grout Each End to Structure	2	EA	\$ 200.00	\$ 400.00	
222D	27" Grout Each End to Structure		EA	\$ 200.00	\$ -	

223D	30" Grout Each End to Structure		EA	\$ 200.00	\$ -
224D	36" Grout Each End to Structure		EA	\$ 225.00	\$ -
225D	42" Grout Each End to Structure		EA	\$ 250.00	\$ -
226D	48" Grout Each End to Structure		EA	\$ 275.00	\$ -
227D	54" Grout Each End to Structure		EA	\$ 350.00	\$ -
228D	60" Grout Each End to Structure		EA	\$ 375.00	\$ -
229D	66" Grout Each End to Structure		EA	\$ 400.00	\$ -
230D	72" Grout Each End to Structure		EA	\$ 400.00	\$ -
231D	Grout all joint, cracks & holes, in structures, complete	4	EA	\$ 500.00	\$ 2,000.00
LINING REQUIREMENTS					
Cured In Place Pipe Liner (CIPP) - (12' or less in depth)					
Includes Pre and Post Television Inspections during lining					
232D	12" PIPE - 7.5mm (.2953")		LF	\$ 65.00	\$ -
233D	15" PIPE - 7.5mm (.2953")		LF	\$ 65.00	\$ -
234D	18" PIPE - 8.0mm (.315")	55	LF	\$ 63.00	\$ 3,465.00
235D	21" PIPE - 10.0mm (.3937")	62	LF	\$ 92.00	\$ 5,704.00
236D	24" PIPE - 10.0mm (.3937")	125	LF	\$ 95.00	\$ 11,875.00
237D	30" PIPE - 12.5mm (.4921")		LF	\$ 131.00	\$ -
238D	36" PIPE - 16.0mm (.6299")		LF	\$ 147.00	\$ -
239D	42" PIPE - 18.0mm (.7087")		LF	\$ 240.00	\$ -
240D	48" PIPE - 21.0mm (.8268")		LF	\$ 250.00	\$ -
241D	54" PIPE - 24.0mm (.9449")		LF	\$ 370.00	\$ -
242D	60" PIPE - 28.5mm (1.122")		LF	\$ 452.00	\$ -
243D	66" PIPE - 30.0mm (1.1811")		LF	\$ 550.00	\$ -
244D	72" PIPE - 32.5mm (1.2795")		LF	\$ 603.00	\$ -
245D	78" PIPE - 33.0mm (1.2992")		LF	\$ 675.00	\$ -
246D	84" PIPE - 35.5mm (1.3976")		LF	\$ 776.00	\$ -
247D	90" PIPE - 38.0mm (1.4961")		LF	\$ 850.00	\$ -
248D	96" PIPE - 40.5mm (1.5945")		LF	\$ 990.00	\$ -
249D	Additional Cost Per 1.5mm (.0591") Thickness - 12" PIPE		LF	\$ 2.00	\$ -
250D	Additional Cost Per 1.5mm (.0591") Thickness - 15" PIPE		LF	\$ 2.00	\$ -
251D	Additional Cost Per 1.5mm (.0591") Thickness - 18" PIPE	110	LF	\$ 3.50	\$ 385.00
252D	Additional Cost Per 1.5mm (.0591") Thickness - 21" PIPE	189	LF	\$ 3.50	\$ 661.50
253D	Additional Cost Per 1.5mm (.0591") Thickness - 24" PIPE	250	LF	\$ 3.75	\$ 937.50
254D	Additional Cost Per 1.5mm (.0591") Thickness - 30" PIPE		LF	\$ 5.25	\$ -
255D	Additional Cost Per 1.5mm (.0591") Thickness - 36" PIPE		LF	\$ 5.50	\$ -
256D	Additional Cost Per 1.5mm (.0591") Thickness - 42" PIPE		LF	\$ 7.25	\$ -
257D	Additional Cost Per 1.5mm (.0591") Thickness - 48" PIPE		LF	\$ 8.25	\$ -
258D	Additional Cost Per 1.5mm (.0591") Thickness - 54" PIPE		LF	\$ 10.00	\$ -
259D	Additional Cost Per 1.5mm (.0591") Thickness - 60" PIPE		LF	\$ 10.50	\$ -
260D	Additional Cost Per 1.5mm (.0591") Thickness - 66" PIPE		LF	\$ 10.50	\$ -
261D	Additional Cost Per 1.5mm (.0591") Thickness - 72" PIPE		LF	\$ 16.00	\$ -
262D	Additional Cost Per 1.5mm (.0591") Thickness - 78" PIPE		LF	\$ 15.00	\$ -
263D	Additional Cost Per 1.5mm (.0591") Thickness - 84" PIPE		LF	\$ 25.50	\$ -
264D	Additional Cost Per 1.5mm (.0591") Thickness - 90" PIPE		LF	\$ 25.50	\$ -
265D	Additional Cost Per 1.5mm (.0591") Thickness - 96" PIPE		LF	\$ 26.00	\$ -
Inversion Setup					
266D	Inversion Setup Charge 15"- 36" CIPP	3	EACH	\$ 800.00	\$ 2,400.00
267D	Inversion Setup Charge 42"- 60" CIPP		EACH	\$ 2,500.00	\$ -
268D	Inversion Setup Charge 66"- 96" CIPP		EACH	\$ 6,000.00	\$ -
Spin Cast Lining					
269D	30" Cent. Spin Cast Lining - 1.5 in Thickness		LF	\$ 227.00	\$ -
270D	36" Cent. Spin Cast Lining - 1.5 in Thickness		LF	\$ 227.00	\$ -
271D	42" Cent. Spin Cast Lining - 1.5 in Thickness		LF	\$ 278.00	\$ -
272D	48" Cent. Spin Cast Lining - 1.5 in Thickness		LF	\$ 305.00	\$ -
273D	54" Cent. Spin Cast Lining - 1.5 in Thickness		LF	\$ 346.00	\$ -
274D	60" Cent. Spin Cast Lining - 1.5 in Thickness		LF	\$ 418.00	\$ -
275D	66" Cent. Spin Cast Lining - 1.5 in Thickness		LF	\$ 475.00	\$ -
276D	72" Cent. Spin Cast Lining - 1.5 in Thickness		LF	\$ 510.00	\$ -
277D	Additional Cost Per 0.5 in Thickness - 30" PIPE		LF	\$ 41.00	\$ -
278D	Additional Cost Per 0.5 in Thickness - 36" PIPE		LF	\$ 41.00	\$ -
279D	Additional Cost Per 0.5 in Thickness - 42" PIPE		LF	\$ 41.00	\$ -
280D	Additional Cost Per 0.5 in Thickness - 48" PIPE		LF	\$ 41.00	\$ -
281D	Additional Cost Per 0.5 in Thickness - 54" PIPE		LF	\$ 41.00	\$ -

282D	Additional Cost Per 0.5 in Thickness - 60" PIPE		LF	\$ 55.00	\$ -
283D	Additional Cost Per 0.5 in Thickness - 66" PIPE		LF	\$ 70.00	\$ -
284D	Additional Cost Per 0.5 in Thickness - 72" PIPE		LF	\$ 75.00	\$ -
	Slip Lining w/HDPE, Includes Grouting				
285D	15" Slip Lining		LF	\$ 69.00	\$ -
286D	18" Slip Lining		LF	\$ 100.00	\$ -
287D	24" Slip Lining		LF	\$ 105.00	\$ -
288D	30" Slip Lining		LF	\$ 125.00	\$ -
289D	36" Slip Lining		LF	\$ 160.00	\$ -
290D	42" Slip Lining		LF	\$ 200.00	\$ -
291D	48" Slip Lining		LF	\$ 230.00	\$ -
292D	54" Slip Lining		LF	\$ 380.00	\$ -
293D	60" Slip Lining		LF	\$ 500.00	\$ -
	Slip Lining with Snap-Tite HDPE (AASHTO M326), Include Grouting				
294D	12.75" OD		LF	\$ 620.00	\$ -
295D	14" OD		LF	\$ 625.00	\$ -
296D	18" OD		LF	\$ 650.00	\$ -
297D	20" OD		LF	\$ 660.00	\$ -
298D	24" OD		LF	\$ 670.00	\$ -
299D	32" OD		LF	\$ 700.00	\$ -
300D	36" OD		LF	\$ 725.00	\$ -
301D	42" OD		LF	\$ 750.00	\$ -
302D	48" OD		LF	\$ 795.00	\$ -
303D	54" OD		LF	\$ 850.00	\$ -
304D	63" OD		LF	\$ 950.00	\$ -
	Styrene Free - Cured In Place Pipe Liner (12' or Less in Depth)				
305D	Styrene Free 12" PIPE - 7.5mm		LF	\$ 85.00	\$ -
306D	Styrene Free 15" PIPE - 7.5mm		LF	\$ 85.00	\$ -
307D	Styrene Free 18" PIPE - 8.0mm		LF	\$ 96.00	\$ -
308D	Styrene Free 21" PIPE - 10.0mm		LF	\$ 125.00	\$ -
309D	Styrene Free 24" PIPE - 10.0mm		LF	\$ 147.00	\$ -
310D	Styrene Free 30" PIPE - 12.5mm		LF	\$ 201.00	\$ -
311D	Styrene Free 36" PIPE - 16.0mm		LF	\$ 256.00	\$ -
312D	Styrene Free 42" PIPE - 18.0mm		LF	\$ 403.00	\$ -
313D	Styrene Free 48" PIPE - 21.0mm		LF	\$ 446.00	\$ -
314D	Styrene Free 54" PIPE - 24.0mm		LF	\$ 685.00	\$ -
315D	Styrene Free 60" PIPE - 28.5mm		LF	\$ 778.00	\$ -
316D	Styrene Free 66" PIPE - 30.0mm		LF	\$ 950.00	\$ -
317D	Styrene Free 72" PIPE - 32.5mm		LF	\$ 1,155.00	\$ -
318D	Styrene Free 78" PIPE - 33.0mm		LF	\$ 1,250.00	\$ -
319D	Styrene Free 84" PIPE - 35.5mm		LF	\$ 1,628.00	\$ -
320D	Styrene Free 90" PIPE - 38.0mm		LF	\$ 1,850.00	\$ -
321D	Styrene Free 96" PIPE - 40.5mm		LF	\$ 1,993.00	\$ -
322D	Additional Cost Per 1.5mm Thickness Styrene Free - 12" PIPE		LF	\$ 6.00	\$ -
323D	Additional Cost Per 1.5mm Thickness Styrene Free - 15" PIPE		LF	\$ 6.00	\$ -
324D	Additional Cost Per 1.5mm Thickness Styrene Free - 18" PIPE		LF	\$ 8.50	\$ -
325D	Additional Cost Per 1.5mm Thickness Styrene Free - 21" PIPE		LF	\$ 10.00	\$ -
326D	Additional Cost Per 1.5mm Thickness Styrene Free - 24" PIPE		LF	\$ 11.50	\$ -
327D	Additional Cost Per 1.5mm Thickness Styrene Free - 30" PIPE		LF	\$ 12.50	\$ -
328D	Additional Cost Per 1.5mm Thickness Styrene Free - 36" PIPE		LF	\$ 15.50	\$ -
329D	Additional Cost Per 1.5mm Thickness Styrene Free - 42" PIPE		LF	\$ 25.00	\$ -
330D	Additional Cost Per 1.5mm Thickness Styrene Free - 48" PIPE		LF	\$ 25.50	\$ -
331D	Additional Cost Per 1.5mm Thickness Styrene Free - 54" PIPE		LF	\$ 25.50	\$ -
332D	Additional Cost Per 1.5mm Thickness Styrene Free - 60" PIPE		LF	\$ 35.50	\$ -
333D	Additional Cost Per 1.5mm Thickness Styrene Free - 66" PIPE		LF	\$ 35.50	\$ -
334D	Additional Cost Per 1.5mm Thickness Styrene Free - 72" PIPE		LF	\$ 51.00	\$ -
335D	Additional Cost Per 1.5mm Thickness Styrene Free - 78" PIPE		LF	\$ 51.00	\$ -
336D	Additional Cost Per 1.5mm Thickness Styrene Free - 84" PIPE		LF	\$ 51.00	\$ -
337D	Additional Cost Per 1.5mm Thickness Styrene Free - 90" PIPE		LF	\$ 55.00	\$ -
338D	Additional Cost Per 1.5mm Thickness Styrene Free - 96" PIPE		LF	\$ 61.00	\$ -
	Cast in Place Concrete				
339D	Paved Ditch/Swale (4" Thick)		SY	\$ 35.90	\$ -
340D	Driveway 4" Concrete (Residential w/4" of GAB included)	27	SY	\$ 49.90	\$ 1,347.30
341D	Driveway 6" Concrete (Commercial w/6" of GAB included)		SY	\$ 59.90	\$ -

342D	Driveway 8" Concrete (Commercial w/6" of GAB included)			SY	\$	74.90	\$	-
343D	Regular Duty Sidewalk (4" Thick, 3000 psi) <5' length			SY	\$	63.00	\$	-
344D	Regular Duty Sidewalk (4" Thick, 3000 psi) 5'-10' length			SY	\$	63.00	\$	-
345D	Regular Duty Sidewalk (4" Thick, 3000 psi) 11'-20'			SY	\$	53.00	\$	-
346D	Medium Duty Sidewalk (5" Thick, Fiber Reinf. 3000 psi) <5' length			SY	\$	73.00	\$	-
347D	Medium Duty Sidewalk (5" Thick, Fiber Reinf. 3000 psi) 5'-10' length			SY	\$	73.00	\$	-
348D	Medium Duty Sidewalk (5" Thick, Fiber Reinf. 3000 psi)b 11'-20' length			SY	\$	63.00	\$	-
349D	Heavy Duty Sidewalk (6" w/Wire Mesh, & 3500 psi) <5' length			SY	\$	78.00	\$	-
350D	Heavy Duty Sidewalk (6" w/Wire Mesh, & 3500 psi) 5'-10' length			SY	\$	78.00	\$	-
351D	Heavy Duty Sidewalk (6" w/Wire Mesh, & 3500 psi)11'-20' length			SY	\$	68.00	\$	-
352D	Curb & Gutter 6"x24"x12" High Back	300		LF	\$	31.90	\$	9,570.00
353D	Curb & Gutter 6"x30"x12" High Back			LF	\$	34.90	\$	-
354D	Curb and Gutter 6"x24"x10" Roll Back	26		LF	\$	31.90	\$	829.40
355D	Straight Header Curb	16		LF	\$	19.90	\$	318.40
356D	Concrete Drainage Structures Poured In Place w/ Steel			CY	\$	695.00	\$	-
357D	High Early Strength (5000 psi)			CY	\$	150.00	\$	-
	Road Restoration							
358D	Graded Aggregate Base	684		Ton	\$	75.00	\$	51,300.00
359D	Crusher Run Stone			Ton	\$	35.00	\$	-
360D	Asphaltic Concrete Binder Course	54		Ton	\$	125.00	\$	6,750.00
361D	Asphaltic Concrete Surface Course	27		Ton	\$	135.00	\$	3,645.00
362D	Tack Coat	50		Gal	\$	15.00	\$	750.00
363D	2" Asph. Con. Hot Mix for Trench Cap			Ton	\$	135.00	\$	-
364D	8" Thick 3000 psi- Concrete Trench Cap			CY	\$	295.00	\$	-
	Earthwork & Grading							
365D	Tree Removal 6"-12"			EA	\$	490.00	\$	-
366D	Tree Removal 13"-23"			EA	\$	790.00	\$	-
367D	Tree Removal >23"			EA	\$	1,490.00	\$	-
368D	Clear & Grubbing	134		SY	\$	8.90	\$	1,192.60
369D	Channel Excavation			CY	\$	8.00	\$	-
370D	Additional Excavation			CY	\$	8.00	\$	-
371D	Haul-In Structural Fill Material			CY	\$	30.00	\$	-
372D	Haul-Off Soil Material	552		CY	\$	25.00	\$	13,800.00
373D	Finish Grading	890		SY	\$	3.00	\$	2,670.00
374D	Trench Rock Excavation			CY	\$	135.00	\$	-
375D	Debris Removal			CY	\$	40.00	\$	-
	Erosion Control							
376D	Stone Rip Rap Type I In Place			SY	\$	59.00	\$	-
377D	Stone Rip Rap Type III In Place	11		SY	\$	49.00	\$	539.00
378D	Stone Grouted Rip Rap 12" Installed			SY	\$	79.00	\$	-
379D	Install & Remove Type A Silt Fence	300		LF	\$	3.50	\$	1,050.00
380D	Install & Remove Type C Silt Fence			LF	\$	5.90	\$	-
381D	Install & Remove Type C Silt Fence - Alternative			LF	\$	5.90	\$	-
382D	Inlet Sediment Traps - Silt Fence Sd2			EA	\$	99.00	\$	-
383D	Rock Bags for curb inlet/CB sediment Protection	22		EA	\$	100.00	\$	2,200.00
384D	Install & Remove Orange Tree Save Fence	600		LF	\$	2.90	\$	1,740.00
385D	Gabion Structures (GDOT Section 626 & 809)			CY	\$	249.00	\$	-
386D	Permanent Soil Reinf Mat Installed			SY	\$	6.90	\$	-
387D	Organic Material Fiber Blanket Installed			SY	\$	2.90	\$	-
388D	Seed & Straw (Permanent Grassing)			SY	\$	1.90	\$	-
389D	Seed & Straw (Temporary Grassing)	890		SY	\$	0.90	\$	801.00
390D	Sodding Complete-Fescue	228		SY	\$	5.75	\$	1,311.00
391D	Sodding Complete-Bermuda	342		SY	\$	5.50	\$	1,881.00
392D	Sodding Complete-Zoyzia	285		SY	\$	8.00	\$	2,280.00
393D	Sodding Complete-Centipede			SY	\$	6.50	\$	-
394D	Topsoil Compete	15		CY	\$	29.00	\$	435.00
395D	Pine Straw	280		SY	\$	1.90	\$	532.00
396D	Straw Mulch	445		SY	\$	0.90	\$	400.50
397D	Tree Replacement 2-1/2" Hardwood, Installed			EA	\$	249.00	\$	-
398D	Tree Replacement 2-1/2" Pine, Installed			EA	\$	249.00	\$	-
399D	Shrub Replacemnt: 1 gallon, installed			EA	\$	69.00	\$	-
400D	Shrub Replacemnt: 3 gallon, installed			EA	\$	89.00	\$	-
401D	Shrub Replacemnt: 5 gallon, installed			EA	\$	129.00	\$	-
402D	Shrub Replacemnt: 7 gallon, installed			EA	\$	149.00	\$	-

403D	Bedding Flower per flat of 18, installed			SY	\$ 79.00	\$ -
Miscellaneous Items						
404D	Connect to Existing Structures	1		EA	\$ 750.00	\$ 750.00
405D	Debris Removal, Tandem Dump Truck	10		Per Load	\$ 750.00	\$ 7,500.00
406D	Removal of Existing Non Drainage Structure	1		EA	\$ 790.00	\$ 790.00
407D	Removal of Existing Drainage Structure	5		EA	\$ 790.00	\$ 3,950.00
408D	Remove Existing Pipe all Types and Sizes			LF	\$ 59.00	\$ -
409D	Saw Cut Existing Pavements	850		LF	\$ 3.00	\$ 2,550.00
410D	Stone #57	144		TON	\$ 38.00	\$ 5,472.00
411D	Surge Stone			TON	\$ 38.00	\$ -
412D	No. 3's and 4's Stone			TON	\$ 38.00	\$ -
413D	Roll-Off Dumpster			Per Day	\$ 600.00	\$ -
414D	Relocate Existing Residential Water Meter, Including Box	1		EA	\$ 190.00	\$ 190.00
415D	Install Thermal Barrier to protect water service line or other utilities			SF	\$ 10.90	\$ -
416D	Bypass pumping setup-equipment and hose placement			EA	\$ 700.00	\$ -
417D	4" Pumping Operation Time			HR	\$ 50.00	\$ -
418D	6" Pumping Operation Time			HR	\$ 60.00	\$ -
419D	8" Pumping Operation Time			HR	\$ 79.00	\$ -
420D	10" Pumping Operation Time			HR	\$ 230.00	\$ -
421D	12" Pumping Operation Time			HR	\$ 275.00	\$ -
422D	Temporary 4' Chain Link Fence			LF	\$ 12.50	\$ -
423D	Remove and Replace Existing 4' Galvanized Standard Chain Link Fence Residential			LF	\$ 19.90	\$ -
424D	Remove and Replace Existing 5' Galvanized Standard Chain Link Fence Residential			LF	\$ 19.90	\$ -
425D	Remove and Replace Existing 4' Black Vinyl Standard Chain Link Fence Residential			LF	\$ 24.90	\$ -
426D	Remove and Replace Existing 5' Black Vinyl Standard Chain Link Fence Residential			LF	\$ 24.90	\$ -
427D	Steel Plates (Typ. 5'x8' Size)	40		EA/Day	\$ 100.00	\$ 4,000.00
428D	Reset Existing Headwall			EA	\$ 149.00	\$ -
Total Estimate						\$ 200,620.25
10% Contingency						\$ 20,062.03
Grand Total of Estimate						\$ 220,682.28