

Appendix D

Details of Project Cost Estimation

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2010-2015)
Parallel Gravity
Preliminary Cost Estimate

Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
1	Crabtree Creek A				
	42-Inch DIP Gravity Sewer	2976	LF	\$ 393	\$ 1,169,568
	48-Inch DIP Gravity Sewer	8237	LF	\$ 452	\$ 3,723,124
	Manhole (0 - 5 ft deep)	6	Ea	\$ 3,500	\$ 21,000
	Manhole (5 - 10 ft deep)	13	Ea	\$ 4,500	\$ 58,500
	Manhole (10 - 20 ft deep)	23	Ea	\$ 5,500	\$ 126,500
	Manhole (>20 deep)	5	Ea	\$ 6,500	\$ 32,500
	Permanent Easement (10 feet wide)	2.57	Ac	\$ 35,000	\$ 90,095
	Clearing and Grubbing (10 feet wide)	2.57	Ac	\$ 5,000	\$ 12,871
	Seeding and Landscaping (10 feet wide)	2.57	Ac	\$ 3,000	\$ 7,722
	Soil and Erosion Control	11213	LF	\$ 5	\$ 56,065
	Construction Cost				\$ 5,297,945
	Contingency (25%)				\$ 1,324,486
	Legal/Engineering /Administration (10%)				\$ 662,243
	Total				\$ 7,285,000
2	Crabtree Creek B				
	42-Inch DIP Gravity Sewer	3393	LF	\$ 393	\$ 1,333,449
	36-Inch DIP Gravity Sewer	3776	LF	\$ 338	\$ 1,276,288
	Manhole (0 - 5 ft deep)	2	Ea	\$ 3,500	\$ 7,000
	Manhole (5 - 10 ft deep)	23	Ea	\$ 4,500	\$ 103,500
	Manhole (10 - 20 ft deep)	2	Ea	\$ 5,500	\$ 11,000
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (10 feet wide)	0.78	Ac	\$ 35,000	\$ 27,262
	Clearing and Grubbing (10 feet wide)	0.78	Ac	\$ 5,000	\$ 3,895
	Seeding and Landscaping (10 feet wide)	0.78	Ac	\$ 3,000	\$ 2,337
	Soil and Erosion Control	3393	LF	\$ 5	\$ 16,965
	Construction Cost				\$ 2,781,696
	Contingency (25%)				\$ 695,424
	Legal/Engineering /Administration (10%)				\$ 347,712
	Total				\$ 3,825,000
3	Long Branch				
	10-Inch DIP Gravity Sewer	9559	LF	\$ 120	\$ 1,147,080
	Manhole (0 - 5 ft deep)	16	Ea	\$ 3,500	\$ 56,000
	Manhole (5 - 10 ft deep)	19	Ea	\$ 4,500	\$ 85,500
	Manhole (10 - 20 ft deep)	10	Ea	\$ 5,500	\$ 55,000
	Manhole (>20 deep)	4	Ea	\$ 6,500	\$ 26,000
	Permanent Easement (10 feet wide)	2.19	Ac	\$ 35,000	\$ 76,806
	Clearing and Grubbing (10 feet wide)	2.19	Ac	\$ 5,000	\$ 10,972
	Seeding and Landscaping (10 feet wide)	2.19	Ac	\$ 3,000	\$ 6,583
	Soil and Erosion Control	9559	LF	\$ 5	\$ 47,795
	Construction Cost				\$ 1,511,736
	Contingency (25%)				\$ 377,934
	Legal/Engineering /Administration (10%)				\$ 188,967
	Total				\$ 2,079,000

Town of Cary
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Capital Improvement Plan (2010-2015)
Parallel Gravity
Preliminary Cost Estimate

Item	Description of Work	Unit Price		Extended Total
		Quantity	Unit total	
4	Lynns Branch			
	24-Inch DIP Gravity Sewer	8614	LF \$ 213	\$ 1,834,782
	Manhole (0 - 5 ft deep)	4	Ea \$ 3,500	\$ 14,000
	Manhole (5 - 10 ft deep)	11	Ea \$ 4,500	\$ 49,500
	Manhole (10 - 20 ft deep)	16	Ea \$ 5,500	\$ 88,000
	Manhole (>20 deep)	8	Ea \$ 6,500	\$ 52,000
	Permanent Easement (10 feet wide)	1.98	Ac \$ 35,000	\$ 69,213
	Clearing and Grubbing (10 feet wide)	1.98	Ac \$ 5,000	\$ 9,888
	Seeding and Landscaping (10 feet wide)	1.98	Ac \$ 3,000	\$ 5,933
	Soil and Erosion Control	8614	LF \$ 5	\$ 43,070
	Construction Cost			\$ 2,166,385
	Contigency (25%)			\$ 541,596
	Legal/Engineering /Administration (10%)			\$ 270,798
	Total			\$ 2,979,000
5	Nancy Branch			
	16-Inch DIP Gravity Sewer	5429	LF \$ 152	\$ 825,208
	Manhole (0 - 5 ft deep)	15	Ea \$ 3,500	\$ 52,500
	Manhole (5 - 10 ft deep)	7	Ea \$ 4,500	\$ 31,500
	Manhole (10 - 20 ft deep)	5	Ea \$ 5,500	\$ 27,500
	Manhole (>20 deep)	0	Ea \$ 6,500	\$ -
	Permanent Easement (10 feet wide)	1.25	Ac \$ 35,000	\$ 43,621
	Clearing and Grubbing (10 feet wide)	1.25	Ac \$ 5,000	\$ 6,232
	Seeding and Landscaping (10 feet wide)	1.25	Ac \$ 3,000	\$ 3,739
	Soil and Erosion Control	5429	LF \$ 5	\$ 27,145
	Construction Cost			\$ 1,017,445
	Contigency (25%)			\$ 254,361
	Legal/Engineering /Administration (10%)			\$ 127,181
	Total			\$ 1,399,000
6	Speight Branch			
	16-Inch DIP Gravity Sewer	3217	LF \$ 152	\$ 488,984
	Manhole (0 - 5 ft deep)	6	Ea \$ 3,500	\$ 21,000
	Manhole (5 - 10 ft deep)	8	Ea \$ 4,500	\$ 36,000
	Manhole (10 - 20 ft deep)	1	Ea \$ 5,500	\$ 5,500
	Manhole (>20 deep)	0	Ea \$ 6,500	\$ -
	Permanent Easement (10 feet wide)	0.74	Ac \$ 35,000	\$ 25,848
	Clearing and Grubbing (10 feet wide)	0.74	Ac \$ 5,000	\$ 3,693
	Seeding and Landscaping (10 feet wide)	0.74	Ac \$ 3,000	\$ 2,216
	Soil and Erosion Control	3217	LF \$ 5	\$ 16,085
	Construction Cost			\$ 599,325
	Contigency (25%)			\$ 149,831
	Legal/Engineering /Administration (10%)			\$ 74,916
	Total			\$ 824,000
7	Upper Crabtree Creek			

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Parallel Gravity
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Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
	16-Inch DIP Gravity Sewer	1954	LF	\$ 152	\$ 297,008
	12-Inch DIP Gravity Sewer	1485	LF	\$ 130	\$ 193,050
	Manhole (0 - 5 ft deep)	9	Ea	\$ 3,500	\$ 31,500
	Manhole (5 - 10 ft deep)	7	Ea	\$ 4,500	\$ 31,500
	Manhole (10 - 20 ft deep)	4	Ea	\$ 5,500	\$ 22,000
	Manhole (>20 deep)	1	Ea	\$ 6,500	\$ 6,500
	Permanent Easement (10 feet wide)	0.45	Ac	\$ 35,000	\$ 15,700
	Clearing and Grubbing (10 feet wide)	0.45	Ac	\$ 5,000	\$ 2,243
	Seeding and Landscaping (10 feet wide)	0.45	Ac	\$ 3,000	\$ 1,346
	Soil and Erosion Control	1954	LF	\$ 5	\$ 9,770
	Construction Cost				\$ 610,617
	Contigency (25%)				\$ 152,654
	Legal/Engineering /Administration (10%)				\$ 76,327
	Total				\$ 840,000
8	York Interceptor				
	18-Inch DIP Gravity Sewer	5982	LF	\$ 169	\$ 1,010,958
	15-Inch DIP Gravity Sewer	1083	LF	\$ 152	\$ 164,616
	Manhole (0 - 5 ft deep)	3	Ea	\$ 3,500	\$ 10,500
	Manhole (5 - 10 ft deep)	6	Ea	\$ 4,500	\$ 27,000
	Manhole (10 - 20 ft deep)	14	Ea	\$ 5,500	\$ 77,000
	Manhole (>20 deep)	2	Ea	\$ 6,500	\$ 13,000
	Permanent Easement (10 feet wide)	1.62	Ac	\$ 35,000	\$ 56,767
	Clearing and Grubbing (10 feet wide)	1.62	Ac	\$ 5,000	\$ 8,110
	Seeding and Landscaping (10 feet wide)	1.62	Ac	\$ 3,000	\$ 4,866
	Soil and Erosion Control	7065	LF	\$ 5	\$ 35,325
	Construction Cost				\$ 1,408,141
	Contigency (25%)				\$ 352,035
	Legal/Engineering /Administration (10%)				\$ 176,018
	Total				\$ 1,936,000
9	Harrison Oaks				
	18-Inch DIP Gravity Sewer	6257	LF	\$ 169	\$ 1,057,433
	Manhole (0 - 5 ft deep)	2	Ea	\$ 3,500	\$ 7,000
	Manhole (5 - 10 ft deep)	5	Ea	\$ 4,500	\$ 22,500
	Manhole (10 - 20 ft deep)	12	Ea	\$ 5,500	\$ 66,000
	Manhole (>20 deep)	11	Ea	\$ 6,500	\$ 71,500
	Permanent Easement (10 feet wide)	1.44	Ac	\$ 35,000	\$ 50,274
	Clearing and Grubbing (10 feet wide)	1.44	Ac	\$ 5,000	\$ 7,182
	Seeding and Landscaping (10 feet wide)	1.44	Ac	\$ 3,000	\$ 4,309
	Soil and Erosion Control	6257	LF	\$ 5	\$ 31,285
	Construction Cost				\$ 1,317,484
	Contigency (25%)				\$ 329,371
	Legal/Engineering /Administration (10%)				\$ 164,685
	Total				\$ 1,812,000

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New Gravity
Preliminary Cost Estimate

Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
1	Dutchman's Branch				
	12-Inch DIP Gravity Sewer	7263	LF	\$ 130	\$ 944,190
	Manhole (0 - 5 ft deep)	29	Ea	\$ 3,500	\$ 101,500
	Manhole (5 - 10 ft deep)	1	Ea	\$ 4,500	\$ 4,500
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	5.00	Ac	\$ 35,000	\$ 175,072
	Clearing and Grubbing (30 feet wide)	5.00	Ac	\$ 5,000	\$ 25,010
	Seeding and Landscaping (30 feet wide)	5.00	Ac	\$ 3,000	\$ 15,006
	Soil and Erosion Control	7263	LF	\$ 5	\$ 36,315
	Construction Cost				\$ 1,301,594
	Contigency (25%)				\$ 325,398
	Legal/Engineering /Administration (10%)				\$ 162,699
	Total				\$ 1,790,000
2	Glenmitt Stone				
	8-Inch DIP Gravity Sewer	2558	LF	\$ 112	\$ 286,496
	Manhole (0 - 5 ft deep)	9	Ea	\$ 3,500	\$ 31,500
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	1.76	Ac	\$ 35,000	\$ 61,660
	Clearing and Grubbing (30 feet wide)	1.76	Ac	\$ 5,000	\$ 8,809
	Seeding and Landscaping (30 feet wide)	1.76	Ac	\$ 3,000	\$ 5,285
	Soil and Erosion Control	2558	LF	\$ 5	\$ 12,790
	Construction Cost				\$ 406,539
	Contigency (25%)				\$ 101,635
	Legal/Engineering /Administration (10%)				\$ 50,817
	Total				\$ 559,000
3	Green Level B				
	48-Inch DIP Gravity Sewer	11000	LF	\$ 435	\$ 4,785,000
	Manhole (0 - 5 ft deep)	33	Ea	\$ 3,500	\$ 115,500
	Manhole (5 - 10 ft deep)	1	Ea	\$ 4,500	\$ 4,500
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	7.58	Ac	\$ 35,000	\$ 265,152
	Clearing and Grubbing (30 feet wide)	7.58	Ac	\$ 5,000	\$ 37,879
	Seeding and Landscaping (30 feet wide)	7.58	Ac	\$ 3,000	\$ 22,727
	Soil and Erosion Control	11000	LF	\$ 5	\$ 55,000
	Construction Cost				\$ 5,285,758
	Contigency (25%)				\$ 1,321,439
	Legal/Engineering /Administration (10%)				\$ 660,720
	Total				\$ 7,268,000
4	Holly Brook Branch				
	8-Inch DIP Gravity Sewer	2107	LF	\$ 112	\$ 235,984

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		Quantity	Unit	total	
	Manhole (0 - 5 ft deep)	8	Ea	\$ 3,500	\$ 28,000
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	1.45	Ac	\$ 35,000	\$ 50,789
	Clearing and Grubbing (30 feet wide)	1.45	Ac	\$ 5,000	\$ 7,256
	Seeding and Landscaping (30 feet wide)	1.45	Ac	\$ 3,000	\$ 4,353
	Soil and Erosion Control	2107	LF	\$ 5	\$ 10,535
	Construction Cost				\$ 336,916
	Contingency (25%)				\$ 84,229
	Legal/Engineering /Administration (10%)				\$ 42,115
	Total				\$ 463,000
5	Reedy Creek A				
	15-Inch DIP Gravity Sewer	2789	LF	\$ 152	\$ 423,928
	Manhole (0 - 5 ft deep)	10	Ea	\$ 3,500	\$ 35,000
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	1.92	Ac	\$ 35,000	\$ 67,228
	Clearing and Grubbing (30 feet wide)	1.92	Ac	\$ 5,000	\$ 9,604
	Seeding and Landscaping (30 feet wide)	1.92	Ac	\$ 3,000	\$ 5,762
	Soil and Erosion Control	2789	LF	\$ 5	\$ 13,945
	Construction Cost				\$ 555,467
	Contingency (25%)				\$ 138,867
	Legal/Engineering /Administration (10%)				\$ 69,433
	Total				\$ 764,000
6	Reedy Creek B				
	15-Inch DIP Gravity Sewer	2847	LF	\$ 152	\$ 432,744
	Manhole (0 - 5 ft deep)	11	Ea	\$ 3,500	\$ 38,500
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	1.96	Ac	\$ 35,000	\$ 68,626
	Clearing and Grubbing (30 feet wide)	1.96	Ac	\$ 5,000	\$ 9,804
	Seeding and Landscaping (30 feet wide)	1.96	Ac	\$ 3,000	\$ 5,882
	Soil and Erosion Control	2847	LF	\$ 5	\$ 14,235
	Construction Cost				\$ 569,791
	Contingency (25%)				\$ 142,448
	Legal/Engineering /Administration (10%)				\$ 71,224
	Total				\$ 783,000
7	Reedy Creek C				
	18-Inch DIP Gravity Sewer	2257	LF	\$ 169	\$ 381,433
	Manhole (0 - 5 ft deep)	10	Ea	\$ 3,500	\$ 35,000
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -

Town of Cary
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Capital Improvement Plan (2010-2015)
New Gravity
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Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	1.55	Ac	\$ 35,000	\$ 54,404
	Clearing and Grubbing (30 feet wide)	1.55	Ac	\$ 5,000	\$ 7,772
	Seeding and Landscaping (30 feet wide)	1.55	Ac	\$ 3,000	\$ 4,663
	Soil and Erosion Control	2257	LF	\$ 5	\$ 11,285
	Construction Cost				\$ 494,558
	Contigency (25%)				\$ 123,639
	Legal/Engineering /Administration (10%)				\$ 61,820
	Total				\$ 680,000
8	<u>Reedy Creek Extension</u>				
	8-Inch DIP Gravity Sewer	1892	LF	\$ 112	\$ 211,904
	Manhole (0 - 5 ft deep)	10	Ea	\$ 3,500	\$ 35,000
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	1.30	Ac	\$ 35,000	\$ 45,606
	Clearing and Grubbing (30 feet wide)	1.30	Ac	\$ 5,000	\$ 6,515
	Seeding and Landscaping (30 feet wide)	1.30	Ac	\$ 3,000	\$ 3,909
	Soil and Erosion Control	1892	LF	\$ 5	\$ 9,460
	Construction Cost				\$ 312,394
	Contigency (25%)				\$ 78,099
	Legal/Engineering /Administration (10%)				\$ 39,049
	Total				\$ 430,000
9	<u>Rocky Branch</u>				
	8-Inch DIP Gravity Sewer	3540	LF	\$ 112	\$ 396,480
	Manhole (0 - 5 ft deep)	13	Ea	\$ 3,500	\$ 45,500
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	2.44	Ac	\$ 35,000	\$ 85,331
	Clearing and Grubbing (30 feet wide)	2.44	Ac	\$ 5,000	\$ 12,190
	Seeding and Landscaping (30 feet wide)	2.44	Ac	\$ 3,000	\$ 7,314
	Soil and Erosion Control	3540	LF	\$ 5	\$ 17,700
	Construction Cost				\$ 564,515
	Contigency (25%)				\$ 141,129
	Legal/Engineering /Administration (10%)				\$ 70,564
	Total				\$ 776,000
10	<u>Thrasher Court Extension A</u>				
	8-Inch DIP Gravity Sewer	2387	LF	\$ 112	\$ 267,344
	Manhole (0 - 5 ft deep)	9	Ea	\$ 3,500	\$ 31,500
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -

Town of Cary
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New Gravity
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Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
	Permanent Easement (30 feet wide)	1.64	Ac	\$ 35,000	\$ 57,538
	Clearing and Grubbing (30 feet wide)	1.64	Ac	\$ 5,000	\$ 8,220
	Seeding and Landscaping (30 feet wide)	1.64	Ac	\$ 3,000	\$ 4,932
	Soil and Erosion Control	2387	LF	\$ 5	\$ 11,935
	Construction Cost				\$ 381,468
	Contigency (25%)				\$ 95,367
	Legal/Engineering /Administration (10%)				\$ 47,684
	Total				\$ 525,000
11	<u>Thrasher Court Extension B</u>				
	12-Inch DIP Gravity Sewer	1223	LF	\$ 130	\$ 158,990
	Manhole (0 - 5 ft deep)	5	Ea	\$ 3,500	\$ 17,500
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	0.84	Ac	\$ 35,000	\$ 29,480
	Clearing and Grubbing (30 feet wide)	0.84	Ac	\$ 5,000	\$ 4,211
	Seeding and Landscaping (30 feet wide)	0.84	Ac	\$ 3,000	\$ 2,527
	Soil and Erosion Control	1223	LF	\$ 5	\$ 6,115
	Construction Cost				\$ 218,823
	Contigency (25%)				\$ 54,706
	Legal/Engineering /Administration (10%)				\$ 27,353
	Total				\$ 301,000
12	<u>Paramount Gravity Sewer</u>				
	12-Inch DIP Gravity Sewer	3000	LF	\$ 130	\$ 390,000
	Manhole (0 - 5 ft deep)	5	Ea	\$ 3,500	\$ 17,500
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (30 feet wide)	2.07	Ac	\$ 35,000	\$ 72,314
	Clearing and Grubbing (30 feet wide)	2.07	Ac	\$ 5,000	\$ 10,331
	Seeding and Landscaping (30 feet wide)	2.07	Ac	\$ 3,000	\$ 6,198
	Soil and Erosion Control	3000	LF	\$ 5	\$ 15,000
	Construction Cost				\$ 511,343
	Contigency (25%)				\$ 127,836
	Legal/Engineering /Administration (10%)				\$ 63,918
	Total				\$ 703,000

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2010-2015)
Force Main
Preliminary Cost Estimate

Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
1	Green Level Force Main				
	30-Inch DIP Force Main	3438	LF	\$ 275	\$ 945,450
	Permanent Easement (30 feet wide)	2.37	Ac	\$ 35,000	\$ 82,872
	Clearing and Grubbing (30 feet wide)	2.37	Ac	\$ 5,000	\$ 11,839
	Seeding and Landscaping (30 feet wide)	2.37	Ac	\$ 3,000	\$ 7,103
	Soil and Erosion Control	3438	LF	\$ 5	\$ 17,190
	Construction Cost				\$ 1,064,454
	Contingency (25%)				\$ 266,114
	Legal/Engineering /Administration (10%)				\$ 133,057
	Total				\$ 1,464,000
2	Alston Force Main				
	20-Inch DIP Force Main	4000	LF	\$ 182	\$ 728,000
	Permanent Easement (30 feet wide)	2.75	Ac	\$ 35,000	\$ 96,419
	Clearing and Grubbing (30 feet wide)	2.75	Ac	\$ 5,000	\$ 13,774
	Seeding and Landscaping (30 feet wide)	2.75	Ac	\$ 3,000	\$ 8,264
	Soil and Erosion Control	4000	LF	\$ 5	\$ 20,000
	Construction Cost				\$ 866,457
	Contingency (25%)				\$ 216,614
	Legal/Engineering /Administration (10%)				\$ 108,307
	Total				\$ 1,191,000
3	Holly Brook Force Main				
	8-Inch DIP Force Main	2154	LF	\$ 112	\$ 241,248
	Permanent Easement (30 feet wide)	1.48	Ac	\$ 35,000	\$ 51,921
	Clearing and Grubbing (30 feet wide)	1.48	Ac	\$ 5,000	\$ 7,417
	Seeding and Landscaping (30 feet wide)	1.48	Ac	\$ 3,000	\$ 4,450
	Soil and Erosion Control	2154	LF	\$ 5	\$ 10,770
	Construction Cost				\$ 315,807
	Contingency (25%)				\$ 78,952
	Legal/Engineering /Administration (10%)				\$ 39,476
	Total				\$ 434,000
4	Rocky Branch Force Main				
	8-Inch DIP Force Main	3704	LF	\$ 112	\$ 414,848
	Permanent Easement (30 feet wide)	2.55	Ac	\$ 35,000	\$ 89,284
	Clearing and Grubbing (30 feet wide)	2.55	Ac	\$ 5,000	\$ 12,755
	Seeding and Landscaping (30 feet wide)	2.55	Ac	\$ 3,000	\$ 7,653
	Soil and Erosion Control	3704	LF	\$ 5	\$ 18,520
	Construction Cost				\$ 543,059
	Contingency (25%)				\$ 135,765
	Legal/Engineering /Administration (10%)				\$ 67,882
	Total				\$ 747,000
5	Reedy Creek Regionl PS Force Main				
	12-Inch DIP Force Main	3717	LF	\$ 130	\$ 483,210
	Permanent Easement (30 feet wide)	2.56	Ac	\$ 35,000	\$ 89,597

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		Quantity	Unit	total	
	Clearing and Grubbing (30 feet wide)	2.56	Ac	\$ 5,000	\$ 12,800
	Seeding and Landscaping (30 feet wide)	2.56	Ac	\$ 3,000	\$ 7,680
	Soil and Erosion Control	3717	LF	\$ 5	\$ 18,585
	Construction Cost				\$ 611,871
	Contingency (25%)				\$ 152,968
	Legal/Engineering /Administration (10%)				\$ 76,484
	Total				\$ 841,000
6	<u>Dutchman's Branch Force Main</u>				
	6-Inch DIP Force Main	500	LF	\$ 112	\$ 56,000
	Permanent Easement (30 feet wide)	0.34	Ac	\$ 35,000	\$ 12,052
	Clearing and Grubbing (30 feet wide)	0.34	Ac	\$ 5,000	\$ 1,722
	Seeding and Landscaping (30 feet wide)	0.34	Ac	\$ 3,000	\$ 1,033
	Soil and Erosion Control	500	LF	\$ 5	\$ 2,500
	Construction Cost				\$ 73,307
	Contingency (25%)				\$ 18,327
	Legal/Engineering /Administration (10%)				\$ 9,163
	Total				\$ 101,000

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2010-2015)
Pump Station
Preliminary Cost Estimate

Item	Description of Work	Unit Price		Extended Total
		Quantity	Unit total	
1	<u>Kit Creek Pump Station Expansion</u>			
	Construction Cost			\$ 2,567,000
	Contingency (25%)			\$ 641,750
	Legal/Engineering /Administration (10%)			\$ 320,875
	Total			<u>\$ 3,530,000</u>
2	<u>Medfield Pump Station Abandonment</u>			
	Construction Cost			\$ 100,000
	Contingency (25%)			\$ 25,000
	Legal/Engineering /Administration (10%)			\$ 12,500
	Total			<u>\$ 138,000</u>
3	<u>Morris Branch Pump Station Expansion</u>			
	Construction Cost			\$ 1,269,000
	Contingency (25%)			\$ 317,250
	Legal/Engineering /Administration (10%)			\$ 158,625
	Total			<u>\$ 1,745,000</u>
4	<u>Paramount Pump Station Abandonment</u>			
	Construction Cost			\$ 370,000
	Contingency (25%)			\$ 92,500
	Legal/Engineering /Administration (10%)			\$ 46,250
	Total			<u>\$ 509,000</u>
5	<u>New rocky Branch Pump Station (1 MGD)</u>			
	Construction Cost			\$ 800,000
	Contingency (25%)			\$ 200,000
	Legal/Engineering /Administration (10%)			\$ 100,000
	Total			<u>\$ 1,100,000</u>
6	<u>I-40 Pump Station Expansion to Reedy Creek Regional Pump Station (to 5.6 MGD)</u>			
	Construction Cost			\$ 3,000,000
	Contingency (25%)			\$ 750,000
	Legal/Engineering /Administration (10%)			\$ 375,000
	Total			<u>\$ 4,125,000</u>
7	<u>Walnut Creek Pump Station Expansion (to 5.5 MGD)</u>			
	Construction Cost			\$ 1,200,000
	Contingency (25%)			\$ 300,000
	Legal/Engineering /Administration (10%)			\$ 150,000
	Total			<u>\$ 1,650,000</u>
8	<u>Glenridge Pump Station Abandonment</u>			
	Construction Cost			\$ 100,000
	Contingency (25%)			\$ 25,000
	Legal/Engineering /Administration (10%)			\$ 12,500

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2010-2015)
Pump Station
Preliminary Cost Estimate

Item	Description of Work	Unit Price		Extended Total
		Quantity	Unit total	
	Total			\$ 138,000
9	<u>Glenmitt Stone Pump Station Abandonment</u>			
	Construction Cost			\$ 100,000
	Contingency (25%)			\$ 25,000
	Legal/Engineering /Administration (10%)			\$ 12,500
	Total			<u>\$ 138,000</u>
10	<u>Thresher Pump Station Abandonment</u>			
	Construction Cost			\$ 100,000
	Contingency (25%)			\$ 25,000
	Legal/Engineering /Administration (10%)			\$ 12,500
	Total			<u>\$ 138,000</u>
11	<u>Holly Brook Station Expansion (to 0.80 MGD)</u>			
	Construction Cost			\$ 800,000
	Contingency (25%)			\$ 200,000
	Legal/Engineering /Administration (10%)			\$ 100,000
	Total			<u>\$ 1,100,000</u>
12	<u>New Dutchman's Branch Pump Station (0.6 MGD)</u>			
	Construction Cost			\$ 800,000
	Contingency (25%)			\$ 200,000
	Legal/Engineering /Administration (10%)			\$ 100,000
	Total			<u>\$ 1,100,000</u>
13	<u>Aviation Parkway Pump Station Expansion</u>			
	Construction Cost			\$ 2,000,000
	Contingency (25%)			\$ 500,000
	Legal/Engineering /Administration (10%)			\$ 250,000
	Total			<u>\$ 2,750,000</u>
14	<u>Blanche Pump Station Expansion (0.75 MGD)</u>			
	Construction Cost			\$ 850,000
	Contingency (25%)			\$ 212,500
	Legal/Engineering /Administration (10%)			\$ 106,250
	Total			<u>\$ 1,169,000</u>
15	<u>Cross Road Pump Station Expansion (0.45 MGD)</u>			
	Construction Cost			\$ 850,000
	Contingency (25%)			\$ 212,500
	Legal/Engineering /Administration (10%)			\$ 106,250
	Total			<u>\$ 1,169,000</u>
16	<u>Westwood One Pump Station Abandonment</u>			
	Construction Cost			\$ 500,000

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2010-2015)
Pump Station
Preliminary Cost Estimate

Item	Description of Work	Unit Price		Extended Total
		Quantity	Unit total	
	Contingency (25%)			\$ 125,000
	Legal/Engineering /Administration (10%)			\$ 62,500
	Total			<u>\$ 688,000</u>

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2015-2025)
Parallel Gravity
Preliminary Cost Estimate

Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
1	Swift Creek A				
	24-Inch DIP Gravity Sewer	4716	LF	\$ 213	\$ 1,004,508
	Manhole (0 - 5 ft deep)	0	Ea	\$ 3,500	\$ -
	Manhole (5 - 10 ft deep)	4	Ea	\$ 4,500	\$ 18,000
	Manhole (10 - 20 ft deep)	20	Ea	\$ 5,500	\$ 110,000
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (10 feet wide)	1.08	Ac	\$ 35,000	\$ 37,893
	Clearing and Grubbing (10 feet wide)	1.08	Ac	\$ 5,000	\$ 5,413
	Seeding and Landscaping (10 feet wide)	1.08	Ac	\$ 3,000	\$ 3,248
	Soil and Erosion Control	4716	LF	\$ 5	\$ 23,580
	Construction Cost				\$ 1,202,642
	Contingency (25%)				\$ 300,660
	Legal/Engineering /Administration (10%)				\$ 150,330
	Total				\$ 1,654,000
2	Swift Creek B				
	24-Inch DIP Gravity Sewer	3982	LF	\$ 213	\$ 848,166
	Manhole (0 - 5 ft deep)	0	Ea	\$ 3,500	\$ -
	Manhole (5 - 10 ft deep)	6	Ea	\$ 4,500	\$ 27,000
	Manhole (10 - 20 ft deep)	12	Ea	\$ 5,500	\$ 66,000
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (10 feet wide)	0.91	Ac	\$ 35,000	\$ 31,995
	Clearing and Grubbing (10 feet wide)	0.91	Ac	\$ 5,000	\$ 4,571
	Seeding and Landscaping (10 feet wide)	0.91	Ac	\$ 3,000	\$ 2,742
	Soil and Erosion Control	3982	LF	\$ 5	\$ 19,910
	Construction Cost				\$ 1,000,384
	Contingency (25%)				\$ 250,096
	Legal/Engineering /Administration (10%)				\$ 125,048
	Total				\$ 1,376,000
3	Swift Creek C				
	30-Inch DIP Gravity Sewer	2194	LF	\$ 275	\$ 603,350
	Manhole (0 - 5 ft deep)	0	Ea	\$ 3,500	\$ -
	Manhole (5 - 10 ft deep)	1	Ea	\$ 4,500	\$ 4,500
	Manhole (10 - 20 ft deep)	8	Ea	\$ 5,500	\$ 44,000
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (10 feet wide)	0.50	Ac	\$ 35,000	\$ 17,629
	Clearing and Grubbing (10 feet wide)	0.50	Ac	\$ 5,000	\$ 2,518
	Seeding and Landscaping (10 feet wide)	0.50	Ac	\$ 3,000	\$ 1,511
	Soil and Erosion Control	2194	LF	\$ 5	\$ 10,970
	Construction Cost				\$ 684,478
	Contingency (25%)				\$ 171,119
	Legal/Engineering /Administration (10%)				\$ 85,560
	Total				\$ 941,000
4	Swift Creek D				
	30-Inch DIP Gravity Sewer	1304	LF	\$ 275	\$ 358,600

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2015-2025)
Parallel Gravity
Preliminary Cost Estimate

Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
	Manhole (0 - 5 ft deep)	0	Ea	\$ 3,500	\$ -
	Manhole (5 - 10 ft deep)	0	Ea	\$ 4,500	\$ -
	Manhole (10 - 20 ft deep)	3	Ea	\$ 5,500	\$ 16,500
	Manhole (>20 deep)	3	Ea	\$ 6,500	\$ 19,500
	Permanent Easement (10 feet wide)	0.30	Ac	\$ 35,000	\$ 10,478
	Clearing and Grubbing (10 feet wide)	0.30	Ac	\$ 5,000	\$ 1,497
	Seeding and Landscaping (10 feet wide)	0.30	Ac	\$ 3,000	\$ 898
	Soil and Erosion Control	1304	LF	\$ 5	\$ 6,520
	Construction Cost				\$ 413,992
	Contingency (25%)				\$ 103,498
	Legal/Engineering /Administration (10%)				\$ 51,749
	Total				\$ 569,000
5	Upper Kit Creek				
	10-Inch DIP Gravity Sewer	1592	LF	\$ 120	\$ 191,040
	Manhole (0 - 5 ft deep)	7	Ea	\$ 3,500	\$ 24,500
	Manhole (5 - 10 ft deep)	1	Ea	\$ 4,500	\$ 4,500
	Manhole (10 - 20 ft deep)	0	Ea	\$ 5,500	\$ -
	Manhole (>20 deep)	0	Ea	\$ 6,500	\$ -
	Permanent Easement (10 feet wide)	0.37	Ac	\$ 35,000	\$ 12,792
	Clearing and Grubbing (10 feet wide)	0.37	Ac	\$ 5,000	\$ 1,827
	Seeding and Landscaping (10 feet wide)	0.37	Ac	\$ 3,000	\$ 1,096
	Soil and Erosion Control	1592	LF	\$ 5	\$ 7,960
	Construction Cost				\$ 243,715
	Contingency (25%)				\$ 60,929
	Legal/Engineering /Administration (10%)				\$ 30,464
	Total				\$ 335,000

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2015-2025)
Pump Station
Preliminary Cost Estimate

Item	Description of Work	Unit Price		Extended Total
		Quantity	Unit total	
1	<u>Circadian Court Pump Station Expansion to 0.30 MGD</u>			
	Construction Cost			\$ 700,000
	Contigency (25%)			\$ 175,000
	Legal/Engineering /Administration (10%)			\$ 87,500
	Total			<u>\$ 963,000</u>

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2015-2025)
Force Main
Preliminary Cost Estimate

Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
1	Green Level A Force Main				
	24-Inch DIP Force Main	5424	LF	\$ 202	\$ 1,095,648
	Permanent Easement (30 feet wide)	3.74	Ac	\$ 35,000	\$ 130,744
	Clearing and Grubbing (30 feet wide)	3.74	Ac	\$ 5,000	\$ 18,678
	Seeding and Landscaping (30 feet wide)	3.74	Ac	\$ 3,000	\$ 11,207
	Soil and Erosion Control	5424	LF	\$ 5	\$ 27,120
	Construction Cost				<u>\$ 1,283,396</u>
	Contingency (25%)				\$ 320,849
	Legal/Engineering /Administration (10%)				<u>\$ 160,425</u>
	Total				<u>\$ 1,765,000</u>

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2025-BO)
Parallel Gravity
Preliminary Cost Estimate

Item	Description of Work	Unit Price		Extended Total
		Quantity	Unit total	
1	Campbell Branch			
	8-Inch DIP Gravity Sewer	3165	LF \$ 112	\$ 354,480
	Manhole (0 - 5 ft deep)	9	Ea \$ 3,500	\$ 31,500
	Manhole (5 - 10 ft deep)	7	Ea \$ 4,500	\$ 31,500
	Manhole (10 - 20 ft deep)	2	Ea \$ 5,500	\$ 11,000
	Manhole (>20 deep)	0	Ea \$ 6,500	\$ -
	Permanent Easement (10 feet wide)	0.73	Ac \$ 35,000	\$ 25,430
	Clearing and Grubbing (10 feet wide)	0.73	Ac \$ 5,000	\$ 3,633
	Seeding and Landscaping (10 feet wide)	0.73	Ac \$ 3,000	\$ 2,180
	Soil and Erosion Control	3165	LF \$ 5	\$ 15,825
	Construction Cost			\$ 475,548
	Contingency (25%)			\$ 118,887
	Legal/Engineering /Administration (10%)			\$ 59,444
	Total			\$ 654,000
2	The Reserve			
	8-Inch DIP Gravity Sewer	3579	LF \$ 112	\$ 400,848
	Manhole (0 - 5 ft deep)	6	Ea \$ 3,500	\$ 21,000
	Manhole (5 - 10 ft deep)	3	Ea \$ 4,500	\$ 13,500
	Manhole (10 - 20 ft deep)	7	Ea \$ 5,500	\$ 38,500
	Manhole (>20 deep)	2	Ea \$ 6,500	\$ 13,000
	Permanent Easement (10 feet wide)	0.82	Ac \$ 35,000	\$ 28,757
	Clearing and Grubbing (10 feet wide)	0.82	Ac \$ 5,000	\$ 4,108
	Seeding and Landscaping (10 feet wide)	0.82	Ac \$ 3,000	\$ 2,465
	Soil and Erosion Control	3579	LF \$ 5	\$ 17,895
	Construction Cost			\$ 540,073
	Contingency (25%)			\$ 135,018
	Legal/Engineering /Administration (10%)			\$ 67,509
	Total			\$ 743,000
3	Upper Swift Creek			
	24-Inch DIP Gravity Sewer	1242	LF \$ 213	\$ 264,546
	Manhole (0 - 5 ft deep)	1	Ea \$ 3,500	\$ 3,500
	Manhole (5 - 10 ft deep)	4	Ea \$ 4,500	\$ 18,000
	Manhole (10 - 20 ft deep)	2	Ea \$ 5,500	\$ 11,000
	Manhole (>20 deep)	0	Ea \$ 6,500	\$ -
	Permanent Easement (10 feet wide)	0.29	Ac \$ 35,000	\$ 9,979
	Clearing and Grubbing (10 feet wide)	0.29	Ac \$ 5,000	\$ 1,426
	Seeding and Landscaping (10 feet wide)	0.29	Ac \$ 3,000	\$ 855
	Soil and Erosion Control	1242	LF \$ 5	\$ 6,210
	Construction Cost			\$ 315,516
	Contingency (25%)			\$ 78,879
	Legal/Engineering /Administration (10%)			\$ 39,440
	Total			\$ 434,000

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2025-BO)
Force Main
Preliminary Cost Estimate

Item	Description of Work	Unit Price			Extended Total
		Quantity	Unit	total	
1	<u>New Pump Station 01 Force Main</u>				
	6-Inch DIP Force Main	3215	LF	\$ 112	\$ 360,080
	Permanent Easement (30 feet wide)	2.21	Ac	\$ 35,000	\$ 77,497
	Clearing and Grubbing (30 feet wide)	2.21	Ac	\$ 5,000	\$ 11,071
	Seeding and Landscaping (30 feet wide)	2.21	Ac	\$ 3,000	\$ 6,643
	Soil and Erosion Control	3215	LF	\$ 5	\$ 16,075
	Construction Cost				\$ 471,365
	Contingency (25%)				\$ 117,841
	Legal/Engineering /Administration (10%)				\$ 58,921
	Total				\$ 648,000
2	<u>New Pump Station 02 Force Main</u>				
	6-Inch DIP Force Main	7095	LF	\$ 112	\$ 794,640
	Permanent Easement (30 feet wide)	4.89	Ac	\$ 35,000	\$ 171,023
	Clearing and Grubbing (30 feet wide)	4.89	Ac	\$ 5,000	\$ 24,432
	Seeding and Landscaping (30 feet wide)	4.89	Ac	\$ 3,000	\$ 14,659
	Soil and Erosion Control	7095	LF	\$ 5	\$ 35,475
	Construction Cost				\$ 1,040,229
	Contingency (25%)				\$ 260,057
	Legal/Engineering /Administration (10%)				\$ 130,029
	Total				\$ 1,430,000
3	<u>New Pump Station 03 Force Main</u>				
	6-Inch DIP Force Main	5032	LF	\$ 112	\$ 563,584
	Permanent Easement (30 feet wide)	3.47	Ac	\$ 35,000	\$ 121,295
	Clearing and Grubbing (30 feet wide)	3.47	Ac	\$ 5,000	\$ 17,328
	Seeding and Landscaping (30 feet wide)	3.47	Ac	\$ 3,000	\$ 10,397
	Soil and Erosion Control	5032	LF	\$ 5	\$ 25,160
	Construction Cost				\$ 737,763
	Contingency (25%)				\$ 184,441
	Legal/Engineering /Administration (10%)				\$ 92,220
	Total				\$ 1,014,000
4	<u>Upper Crabtree Pump Station Force Main</u>				
	20-Inch DIP Force Main	46406	LF	\$ 182	\$ 8,445,892
	Permanent Easement (30 feet wide)	31.96	Ac	\$ 35,000	\$ 1,118,602
	Clearing and Grubbing (30 feet wide)	31.96	Ac	\$ 5,000	\$ 159,800
	Seeding and Landscaping (30 feet wide)	31.96	Ac	\$ 3,000	\$ 95,880
	Soil and Erosion Control	46406	LF	\$ 5	\$ 232,030
	Construction Cost				\$ 10,052,204
	Contingency (25%)				\$ 2,513,051
	Legal/Engineering /Administration (10%)				\$ 1,256,526
	Total				\$ 13,822,000

Town of Cary
Wastewater Collection System Master Plan
Capital Improvement Plan (2025-BO)
Pump Station
Preliminary Cost Estimate

Item	Description of Work	Unit Price		Extended Total
		Quantity	Unit total	
1	<u>Terrington Pump Station Expansion to 0.80 MGD</u>			
	Construction Cost			\$ 950,000
	Contingency (25%)			\$ 237,500
	Legal/Engineering /Administration (10%)			\$ 118,750
	Total			\$ 1,306,000
2	<u>New Upper Crabtree Pump Station (6.6 MGD)</u>			
	Construction Cost			\$ 5,500,000
	Contingency (25%)			\$ 1,375,000
	Legal/Engineering /Administration (10%)			\$ 687,500
	Total			\$ 7,563,000
4	<u>Kit Creek Pump Station Expansion</u>			
	Construction Cost			\$ 163,000
	Contingency (25%)			\$ 40,750
	Legal/Engineering /Administration (10%)			\$ 20,375
	Total			\$ 224,000
5	<u>Morris Branch Pump Station Expansion</u>			
	Construction Cost			\$ 237,000
	Contingency (25%)			\$ 59,250
	Legal/Engineering /Administration (10%)			\$ 29,625
	Total			\$ 326,000
6	<u>New Pump Station 01</u>			
	Construction Cost			\$ 1,000,000
	Contingency (25%)			\$ 250,000
	Legal/Engineering /Administration (10%)			\$ 125,000
	Total			\$ 1,375,000
7	<u>New Pump Station 02</u>			
	Construction Cost			\$ 1,000,000
	Contingency (25%)			\$ 250,000
	Legal/Engineering /Administration (10%)			\$ 125,000
	Total			\$ 1,375,000
8	<u>New Pump Station 03</u>			
	Construction Cost			\$ 1,000,000
	Contingency (25%)			\$ 250,000
	Legal/Engineering /Administration (10%)			\$ 125,000
	Total			\$ 1,375,000