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## Appendix E: Cost Estimates



Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	2785 LF of Existing Pipe	2785	-	-	LF	\$ 10.00	\$ 27,850.00
Excavate Ditch	180 LF of Ditch	180	-	-	LF	\$ 50.00	\$ 9,000.00
Install 18" RCP	1120 LF of 18" RCP	1120	-	-	LF	\$ 100.00	\$ 112,000.00
Install 24" RCP	3,850 LF of 24" RCP	3850	-	-	LF	\$ 135.00	\$ 519,750.00
Install 30" RCP	799 LF of 30" RCP	799	-	-	LF	\$ 150.00	\$ 119,850.00
Install 36" RCP	43 LF of 36" RCP	43	-	-	LF	\$ 175.00	\$ 7,525.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	61	-	EA	\$ 8,000.00	\$ 488,000.00
Install Inlet	Junction Box (Small)	-	46	-	EA	\$ 5,000.00	\$ 230,000.00
Install 18" Tide Gate	18" Tide Gate	-	1	-	EA	\$ 6,500.00	\$ 6,500.00
Install 24" Tide Gate	24" Tide Gate	-	1	-	EA	\$ 7,800.00	\$ 7,800.00
Install 18" RCP Laterals to Inlets	572 LF of 18" RCP	598	-	-	LF	\$ 100.00	\$ 59,800.00
Excavate Outfall Channel Ditch	425 LF of Excavation	425	-	-	LF	\$ 500.00	\$ 212,500.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	92660	-	SF	\$ 8.00	\$ 741,280.00
Construct and Install Wet Well	Rectangular Wet Well (15'x15' box, 15' depth)	-	-	1	EA	\$ 500,000.00	\$ 500,000.00
High-Flow Pump	47HP Submersible Pump (Sulzer AFLX0601)	-	-	2	EA	\$ 150,000.00	\$ 300,000.00
Jockey Pump	7.5HP Submersible Pump (230V/1 Phase)	-	-	1	EA	\$ 25,000.00	\$ 25,000.00
Outfall Structure for Force Main	Outfall Structure	-	-	1	EA	\$ 15,000.00	\$ 15,000.00
Diesel Generator w/ Integrated Fuel Tank	Diesel Generator w/ Integrated Fuel Tank	-	1	-	EA	\$ 150,000.00	\$ 150,000.00
Electrical Service Connection	400V Electrical Service Connection	-	-	1	EA	\$ 80,000.00	\$ 80,000.00
Elevated Structure for Controls/Instrumentation & Generator	Construct Elevated Structure	-	-	1	EA	\$ 50,000.00	\$ 50,000.00
Raise Road	Raise Existing Road Surface	2200	-	-	LF	\$ 500.00	\$ 1,100,000.00
Sub-Total							\$ 4,761,855.00
Allowance - Incidental (15%)							\$ 714,278.25
Allowance - Water/Sewer (50%)							\$ 2,380,927.50
General Construction (15%)							\$ 714,278.25
Contingency (20%)							\$ 952,371.00
<b>Total Estimated Construction Cost</b>							<b>\$ 9,523,710.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 142,855.65
Engineering and Design Services (5% of Construction Cost)							\$ 476,185.50
Construction Administration (5% of Construction Cost)							\$ 476,185.50
Sub-Total							\$ 1,095,226.65
Contingency (15%)							\$ 164,284.00
<b>Total Estimated Professional Services Cost</b>							<b>\$ 1,259,510.65</b>
<b>Total Estimated Project Cost</b>							<b>\$ 10,783,220.65</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 14,430,381.68</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 19,311,105.86</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	2580 LF of Existing Pipe	2580	-	-	LF	\$ 10.00	\$ 25,800.00
Install 18" RCP	813 LF of 18" RCP	813	-	-	LF	\$ 100.00	\$ 81,300.00
Install 24" RCP	324 LF of 24" RCP	324	-	-	LF	\$ 135.00	\$ 43,740.00
Install 30" RCP	427 LF of 30" RCP	427	-	-	LF	\$ 150.00	\$ 64,050.00
Install 36" RCP	431 LF of 36" RCP	431	-	-	LF	\$ 175.00	\$ 75,425.00
Install 42" RCP	315 LF of 42" RCP	315	-	-	LF	\$ 200.00	\$ 63,000.00
Install 48" RCP	54 LF of 48" RCP	54	-	-	LF	\$ 265.00	\$ 14,310.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	28	-	EA	\$ 8,000.00	\$ 224,000.00
Install Inlet	Junction Box (Small)	-	21	-	EA	\$ 5,000.00	\$ 105,000.00
Install 48" Tide Gate	48" Tide Gate	-	1	-	EA	\$ 38,300.00	\$ 38,300.00
Install 18" RCP Laterals to Inlets	260 LF of 18" RCP	273	-	-	LF	\$ 100.00	\$ 27,300.00
Excavate Outfall Channel Ditch	80 LF of excavation	80	-	-	LF	\$ 500.00	\$ 40,000.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	42560	-	SF	\$ 8.00	\$ 340,480.00
Sub-Total							\$ 1,142,705.00
Allowance - Incidental (15%)							\$ 171,405.75
Allowance - Water/Sewer (50%)							\$ 571,352.50
General Construction (15%)							\$ 171,405.75
Contingency (20%)							\$ 228,541.00
<b>Total Estimated Construction Cost</b>							<b>\$ 2,285,410.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 34,281.15
Engineering and Design Services (5% of Construction Cost)							\$ 114,270.50
Construction Administration (5% of Construction Cost)							\$ 114,270.50
Sub-Total							\$ 262,822.15
Contingency (15%)							\$ 39,423.32
<b>Total Estimated Professional Services Cost</b>							<b>\$ 302,245.47</b>
<b>Total Estimated Project Cost</b>							<b>\$ 2,587,655.47</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 3,462,866.74</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 4,634,096.84</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	1064 LF of Existing Pipe	1064	-	-	LF	\$ 10.00	\$ 10,640.00
Install 12" RCP	25 LF of 12" RCP	25	-	-	LF	\$ 80.00	\$ 2,000.00
Install 18" RCP	930 LF of 18" RCP	930	-	-	LF	\$ 100.00	\$ 93,000.00
Install 24" RCP	1048 LF of 24" RCP	1048	-	-	LF	\$ 135.00	\$ 141,480.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	20	-	EA	\$ 8,000.00	\$ 160,000.00
Install Inlet	Junction Box (Small)	-	15	-	EA	\$ 5,000.00	\$ 75,000.00
Install 18" RCP Laterals to Inlets	195 LF of 18" RCP	195	-	-	LF	\$ 100.00	\$ 19,500.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	29040	-	SF	\$ 8.00	\$ 232,320.00
Sub-Total							\$ 733,940.00
Allowance - Incidental (15%)							\$ 110,091.00
Allowance - Water/Sewer (50%)							\$ 366,970.00
General Construction (15%)							\$ 110,091.00
Contingency (20%)							\$ 146,788.00
<b>Total Estimated Construction Cost</b>							<b>\$ 1,467,880.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 22,018.20
Engineering and Design Services (5% of Construction Cost)							\$ 73,394.00
Construction Administration (5% of Construction Cost)							\$ 73,394.00
Sub-Total							\$ 168,806.20
Contingency (15%)							\$ 25,320.93
<b>Total Estimated Professional Services Cost</b>							<b>\$ 194,127.13</b>
<b>Total Estimated Project Cost</b>							<b>\$ 1,662,007.13</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 2,224,140.45</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 2,976,401.64</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	551 LF of Existing Pipe	551	-	-	LF	\$ 10.00	\$ 5,510.00
Install 15" RCP	648 LF of 15" RCP	648	-	-	LF	\$ 95.00	\$ 61,560.00
Install 18" RCP	213 LF of 18" RCP	213	-	-	LF	\$ 100.00	\$ 21,300.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	12	-	EA	\$ 8,000.00	\$ 96,000.00
Install Inlet	Junction Box (Small)	-	9	-	EA	\$ 5,000.00	\$ 45,000.00
Install 18" RCP Laterals to Inlets	117 LF of 18" RCP	117	-	-	LF	\$ 100.00	\$ 11,700.00
Install 15" Tide Gate	15" Tide Gate	-	1	-	EA	\$ 5,000.00	\$ 5,000.00
Raise Road	Raise Existing Road Surface	1300	-	-	LF	\$ 500.00	\$ 650,000.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	16980	-	SF	\$ 8.00	\$ 135,840.00
Sub-Total							\$ 1,031,910.00
Allowance - Incidental (15%)							\$ 154,786.50
Allowance - Water/Sewer (50%)							\$ 515,955.00
General Construction (15%)							\$ 154,786.50
Contingency (20%)							\$ 206,382.00
<b>Total Estimated Construction Cost</b>							<b>\$ 2,063,820.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 30,957.30
Engineering and Design Services (5% of Construction Cost)							\$ 103,191.00
Construction Administration (5% of Construction Cost)							\$ 103,191.00
Sub-Total							\$ 237,339.30
Contingency (15%)							\$ 35,600.90
<b>Total Estimated Professional Services Cost</b>							<b>\$ 272,940.20</b>
<b>Total Estimated Project Cost</b>							<b>\$ 2,336,760.20</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 3,127,112.26</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 4,184,781.61</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	2775 LF of Existing Pipe	2775	-	-	LF	\$ 10.00	\$ 27,750.00
Install 15" RCP	69 LF of 15" RCP	69	-	-	LF	\$ 95.00	\$ 6,555.00
Install 18" RCP	1200 LF of 18" RCP	1200	-	-	LF	\$ 100.00	\$ 120,000.00
Install 24" RCP	538 LF of 24" RCP	538	-	-	LF	\$ 135.00	\$ 72,630.00
Install 36" RCP	926 LF of 30" RCP	926	-	-	LF	\$ 175.00	\$ 162,050.00
Install 42" RCP	112 LF of 36" RCP	112	-	-	LF	\$ 200.00	\$ 22,400.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	35	-	EA	\$ 8,000.00	\$ 280,000.00
Install Inlet	Junction Box (Small)	-	27	-	EA	\$ 5,000.00	\$ 135,000.00
Install 18" RCP Laterals to Inlets	351 LF of 18" RCP	351	-	-	LF	\$ 100.00	\$ 35,100.00
Install 42" Tide Gate	42" Tide Gate	-	1	-	EA	\$ 25,300.00	\$ 25,300.00
Raise Road	Raise Existing Road Surface	1000	-	-	LF	\$ 500.00	\$ 500,000.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	52680	-	SF	\$ 8.00	\$ 421,440.00
Sub-Total							\$ 1,808,225.00
Allowance - Incidental (15%)							\$ 271,233.75
Allowance - Water/Sewer (50%)							\$ 904,112.50
General Construction (15%)							\$ 271,233.75
Contingency (20%)							\$ 361,645.00
<b>Total Estimated Construction Cost</b>							<b>\$ 3,616,450.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 54,246.75
Engineering and Design Services (5% of Construction Cost)							\$ 180,822.50
Construction Administration (5% of Construction Cost)							\$ 180,822.50
Sub-Total							\$ 415,891.75
Contingency (15%)							\$ 62,383.76
<b>Total Estimated Professional Services Cost</b>							<b>\$ 478,275.51</b>
<b>Total Estimated Project Cost</b>							<b>\$ 4,094,725.51</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 5,479,666.41</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 7,333,029.75</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	907 LF of Existing Pipe	907	-	-	LF	\$ 10.00	\$ 9,070.00
Install 18" RCP	26 LF of 18" RCP	26	-	-	LF	\$ 100.00	\$ 2,600.00
Install 24" RCP	716 LF of 24" RCP	716	-	-	LF	\$ 135.00	\$ 96,660.00
Install 30" RCP	87 LF of 30" RCP	87	-	-	LF	\$ 150.00	\$ 13,050.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	17	-	EA	\$ 8,000.00	\$ 136,000.00
Install Inlet	Junction Box (Small)	-	8	-	EA	\$ 5,000.00	\$ 40,000.00
Install 18" RCP Laterals to Inlets	104 LF of 18" RCP	104	-	-	LF	\$ 100.00	\$ 10,400.00
Install 30" Tide Gate	30" Tide Gate	-	1	-	EA	\$ 15,200.00	\$ 15,200.00
Raise Road	Raise Existing Road Surface	330	-	-	LF	\$ 500.00	\$ 165,000.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	14920	-	SF	\$ 8.00	\$ 119,360.00
Excavate Outfall Channel Ditch	205 LF of excavation	205	-	-	LF	\$ 500.00	\$ 102,500.00
Sub-Total							\$ 709,840.00
Allowance - Incidental (15%)							\$ 106,476.00
Allowance - Water/Sewer (50%)							\$ 354,920.00
General Construction (15%)							\$ 106,476.00
Contingency (20%)							\$ 141,968.00
<b>Total Estimated Construction Cost</b>							<b>\$ 1,419,680.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 21,295.20
Engineering and Design Services (5% of Construction Cost)							\$ 70,984.00
Construction Administration (5% of Construction Cost)							\$ 70,984.00
Sub-Total							\$ 163,263.20
Contingency (15%)							\$ 24,489.48
<b>Total Estimated Professional Services Cost</b>							<b>\$ 187,752.68</b>
<b>Total Estimated Project Cost</b>							<b>\$ 1,607,432.68</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 2,151,107.53</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 2,878,667.11</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	3421 LF of Existing Pipe	3421	-	-	LF	\$ 10.00	\$ 34,210.00
Install 18" RCP	540 LF of 18" RCP	540	-	-	LF	\$ 100.00	\$ 54,000.00
Install 24" RCP	396 LF of 24" RCP	396	-	-	LF	\$ 135.00	\$ 53,460.00
Install 30" RCP	1173 LF of 30" RCP	1173	-	-	LF	\$ 150.00	\$ 175,950.00
Install 36" RCP	426 LF of 36" RCP	426	-	-	LF	\$ 175.00	\$ 74,550.00
Install 42" RCP	849 LF of 42" RCP	849	-	-	LF	\$ 200.00	\$ 169,800.00
Install 48" RCP	86 LF of 48" RCP	86	-	-	LF	\$ 265.00	\$ 22,790.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	42	-	EA	\$ 8,000.00	\$ 336,000.00
Install Inlet	Junction Box (Small)	-	32	-	EA	\$ 5,000.00	\$ 160,000.00
Install 48" Tide Gate	48" Tide Gate	-	1	-	EA	\$ 38,300.00	\$ 38,300.00
Install 18" RCP Laterals to Inlets	416 LF of 18" RCP	416	-	-	LF	\$ 100.00	\$ 41,600.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	62420	-	SF	\$ 8.00	\$ 499,360.00
Excavate Outfall Channel Ditch	136 LF of excavation	136	-	-	LF	\$ 500.00	\$ 68,000.00
Sub-Total							\$ 1,728,020.00
Allowance - Incidental (15%)							\$ 259,203.00
Allowance - Water/Sewer (50%)							\$ 864,010.00
General Construction (15%)							\$ 259,203.00
Contingency (20%)							\$ 345,604.00
<b>Total Estimated Construction Cost</b>							<b>\$ 3,456,040.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 51,840.60
Engineering and Design Services (5% of Construction Cost)							\$ 172,802.00
Construction Administration (5% of Construction Cost)							\$ 172,802.00
Sub-Total							\$ 397,444.60
Contingency (15%)							\$ 59,616.69
<b>Total Estimated Professional Services Cost</b>							<b>\$ 457,061.29</b>
<b>Total Estimated Project Cost</b>							<b>\$ 3,913,101.29</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 5,236,612.23</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 7,007,768.43</b>



Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	2046 LF of Existing Pipe	2046	-	-	LF	\$ 10.00	\$ 20,460.00
Install 18" RCP	2043 LF of 18" RCP	2043	-	-	LF	\$ 100.00	\$ 204,300.00
Install 24" RCP	1038 LF of 24" RCP	1038	-	-	LF	\$ 135.00	\$ 140,130.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	41	-	EA	\$ 8,000.00	\$ 328,000.00
Install Inlet	Junction Box (Small)	-	31	-	EA	\$ 5,000.00	\$ 155,000.00
Install 18" RCP Laterals to Inlets	403 LF of 18" RCP	403	-	-	LF	\$ 100.00	\$ 40,300.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	61240	-	SF	\$ 8.00	\$ 489,920.00
Sub-Total							\$ 1,378,110.00
Allowance - Incidental (15%)							\$ 206,716.50
Allowance - Water/Sewer (50%)							\$ 689,055.00
General Construction (15%)							\$ 206,716.50
Contingency (20%)							\$ 275,622.00
<b>Total Estimated Construction Cost</b>							<b>\$ 2,756,220.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 41,343.30
Engineering and Design Services (5% of Construction Cost)							\$ 137,811.00
Construction Administration (5% of Construction Cost)							\$ 137,811.00
Sub-Total							\$ 316,965.30
Contingency (15%)							\$ 47,544.80
<b>Total Estimated Professional Services Cost</b>							<b>\$ 364,510.10</b>
<b>Total Estimated Project Cost</b>							<b>\$ 3,120,730.10</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 4,176,240.83</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 5,588,752.30</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	2042 LF of Existing Pipe	2042	-	-	LF	\$ 10.00	\$ 20,420.00
Install 18" RCP	736 LF of 18" RCP	736	-	-	LF	\$ 100.00	\$ 73,600.00
Install 24" RCP	480 LF of 24" RCP	480	-	-	LF	\$ 135.00	\$ 64,800.00
Install 30" RCP	457 LF of 30" RCP	457	-	-	LF	\$ 150.00	\$ 68,550.00
Install 36" RCP	71 LF of 36" RCP	71	-	-	LF	\$ 175.00	\$ 12,425.00
Install 42" RCP	1037 LF of 42" RCP	1037	-	-	LF	\$ 200.00	\$ 207,400.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	33	-	EA	\$ 8,000.00	\$ 264,000.00
Install Inlet	Junction Box (Small)	-	25	-	EA	\$ 5,000.00	\$ 125,000.00
Install 42" Tide Gate	42" Tide Gate	-	1	-	EA	\$ 25,300.00	\$ 25,300.00
Install 18" RCP Laterals to Inlets	325 LF of 18" RCP	325	-	-	LF	\$ 100.00	\$ 32,500.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	49380	-	SF	\$ 8.00	\$ 395,040.00
Excavate Outfall Channel Ditch	625 LF of Excavation	625	-	-	LF	\$ 500.00	\$ 312,500.00
Sub-Total							\$ 1,601,535.00
Allowance - Incidental (15%)							\$ 240,230.25
Allowance - Water/Sewer (50%)							\$ 800,767.50
General Construction (15%)							\$ 240,230.25
Contingency (20%)							\$ 320,307.00
<b>Total Estimated Construction Cost</b>							<b>\$ 3,203,070.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 48,046.05
Engineering and Design Services (5% of Construction Cost)							\$ 160,153.50
Construction Administration (5% of Construction Cost)							\$ 160,153.50
Sub-Total							\$ 368,353.05
Contingency (15%)							\$ 55,252.96
<b>Total Estimated Professional Services Cost</b>							<b>\$ 423,606.01</b>
<b>Total Estimated Project Cost</b>							<b>\$ 3,626,676.01</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 4,853,310.59</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 6,494,824.37</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Install 18" RCP	428 LF of 18" RCP	428	-	-	LF	\$ 100.00	\$ 42,800.00
Install 24" RCP	1255 LF of 24" RCP	1255	-	-	LF	\$ 135.00	\$ 169,425.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	24	-	EA	\$ 8,000.00	\$ 192,000.00
Install Inlet	Junction Box (Small)	-	18	-	EA	\$ 5,000.00	\$ 90,000.00
Install 42" Tide Gate	42" Tide Gate	-	1	-	EA	\$ 25,300.00	\$ 25,300.00
Install 18" RCP Laterals to Inlets	325 LF of 18" RCP	234	-	-	LF	\$ 100.00	\$ 23,400.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	35720	-	SF	\$ 8.00	\$ 285,760.00
Sub-Total							\$ 828,685.00
Allowance - Incidental (15%)							\$ 124,302.75
Allowance - Water/Sewer (50%)							\$ 414,342.50
General Construction (15%)							\$ 124,302.75
Contingency (20%)							\$ 165,737.00
<b>Total Estimated Construction Cost</b>							<b>\$ 1,657,370.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 24,860.55
Engineering and Design Services (5% of Construction Cost)							\$ 82,868.50
Construction Administration (5% of Construction Cost)							\$ 82,868.50
Sub-Total							\$ 190,597.55
Contingency (15%)							\$ 28,589.63
<b>Total Estimated Professional Services Cost</b>							<b>\$ 219,187.18</b>
<b>Total Estimated Project Cost</b>							<b>\$ 1,876,557.18</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 2,511,256.82</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 3,360,628.11</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	55 LF of Existing Pipe	55	-	-	LF	\$ 10.00	\$ 550.00
Install 18" RCP	68 LF of 18" RCP	68	-	-	LF	\$ 100.00	\$ 6,800.00
Install 24" RCP	1505 LF of 24" RCP	1505	-	-	LF	\$ 135.00	\$ 203,175.00
Install 30" RCP	1029 LF of 30" RCP	1029	-	-	LF	\$ 150.00	\$ 154,350.00
Install 36" RCP	20 LF of 36" RCP	20	-	-	LF	\$ 175.00	\$ 3,500.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	35	-	EA	\$ 8,000.00	\$ 280,000.00
Install Inlet	Junction Box (Small)	-	26	-	EA	\$ 5,000.00	\$ 130,000.00
Install 36" Tide Gate	36" Tide Gate	-	1	-	EA	\$ 20,250.00	\$ 20,250.00
Install 18" RCP Laterals to Inlets	338 LF of 18" RCP	338	-	-	LF	\$ 100.00	\$ 33,800.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	52600	-	SF	\$ 8.00	\$ 420,800.00
Excavate Outfall Channel Ditch	278 LF of Excavation	278	-	-	LF	\$ 500.00	\$ 139,000.00
Sub-Total							\$ 1,392,225.00
Allowance - Incidental (15%)							\$ 208,833.75
Allowance - Water/Sewer (50%)							\$ 696,112.50
General Construction (15%)							\$ 208,833.75
Contingency (20%)							\$ 278,445.00
<b>Total Estimated Construction Cost</b>							<b>\$ 2,784,450.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 41,766.75
Engineering and Design Services (5% of Construction Cost)							\$ 139,222.50
Construction Administration (5% of Construction Cost)							\$ 139,222.50
Sub-Total							\$ 320,211.75
Contingency (15%)							\$ 48,031.76
<b>Total Estimated Professional Services Cost</b>							<b>\$ 368,243.51</b>
<b>Total Estimated Project Cost</b>							<b>\$ 3,152,693.51</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 4,219,015.10</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 5,645,993.91</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	1388 LF of Existing Pipe	1388	-	-	LF	\$ 10.00	\$ 13,880.00
Install 18" RCP	136 LF of 18" RCP	136	-	-	LF	\$ 100.00	\$ 13,600.00
Install 24" RCP	418 LF of 24" RCP	418	-	-	LF	\$ 135.00	\$ 56,430.00
Install 30" RCP	299 LF of 30" RCP	299	-	-	LF	\$ 150.00	\$ 44,850.00
Install 36" RCP	718 LF of 36" RCP	718	-	-	LF	\$ 175.00	\$ 125,650.00
Install 48" RCP	102 LF of 48" RCP	102	-	-	LF	\$ 265.00	\$ 27,030.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	17	-	EA	\$ 8,000.00	\$ 136,000.00
Install Inlet	Junction Box (Small)	-	13	-	EA	\$ 5,000.00	\$ 65,000.00
Install 48" Tide Gate	48" Tide Gate	-	1	-	EA	\$ 38,300.00	\$ 38,300.00
Install 18" RCP Laterals to Inlets	169 LF of 18" RCP	169	-	-	LF	\$ 100.00	\$ 16,900.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	25780	-	SF	\$ 8.00	\$ 206,240.00
Excavate Outfall Channel Ditch	470 LF of Excavation	470	-	-	LF	\$ 500.00	\$ 235,000.00
Raise Road	Raise Existing Road Surface	1400	-	-	LF	\$ 500.00	\$ 700,000.00
Sub-Total							\$ 1,678,880.00
Allowance - Incidental (15%)							\$ 251,832.00
Allowance - Water/Sewer (50%)							\$ 839,440.00
General Construction (15%)							\$ 251,832.00
Contingency (20%)							\$ 335,776.00
<b>Total Estimated Construction Cost</b>							<b>\$ 3,357,760.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 50,366.40
Engineering and Design Services (5% of Construction Cost)							\$ 167,888.00
Construction Administration (5% of Construction Cost)							\$ 167,888.00
Sub-Total							\$ 386,142.40
Contingency (15%)							\$ 57,921.36
<b>Total Estimated Professional Services Cost</b>							<b>\$ 444,063.76</b>
<b>Total Estimated Project Cost</b>							<b>\$ 3,801,823.76</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 5,087,697.80</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 6,808,487.32</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	309 LF of Existing Pipe	390	-	-	LF	\$ 10.00	\$ 3,900.00
Install 18" RCP	219 LF of 18" RCP	219	-	-	LF	\$ 100.00	\$ 21,900.00
Install 24" RCP	1210 LF of 24" RCP	1210	-	-	LF	\$ 135.00	\$ 163,350.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	18	-	EA	\$ 8,000.00	\$ 144,000.00
Install Inlet	Junction Box (Small)	-	14	-	EA	\$ 5,000.00	\$ 70,000.00
Install 18" RCP Laterals to Inlets	182 LF of 18" RCP	182	-	-	LF	\$ 100.00	\$ 18,200.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	28000	-	SF	\$ 8.00	\$ 224,000.00
Sub-Total							\$ 645,350.00
Allowance - Incidental (15%)							\$ 96,802.50
Allowance - Water/Sewer (50%)							\$ 322,675.00
General Construction (15%)							\$ 96,802.50
Contingency (20%)							\$ 129,070.00
<b>Total Estimated Construction Cost</b>							<b>\$ 1,290,700.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 19,360.50
Engineering and Design Services (5% of Construction Cost)							\$ 64,535.00
Construction Administration (5% of Construction Cost)							\$ 64,535.00
Sub-Total							\$ 148,430.50
Contingency (15%)							\$ 22,264.58
<b>Total Estimated Professional Services Cost</b>							<b>\$ 170,695.08</b>
<b>Total Estimated Project Cost</b>							<b>\$ 1,461,395.08</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 1,955,676.27</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 2,617,136.00</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	3180 LF of Existing Pipe	3180	-	-	LF	\$ 10.00	\$ 31,800.00
Install 12" RCP	102 LF of 12" RCP	102	-	-	LF	\$ 80.00	\$ 8,160.00
Install 18" RCP	649 LF of 18" RCP	649	-	-	LF	\$ 100.00	\$ 64,900.00
Install 24" RCP	2377 LF of 24" RCP	2377	-	-	LF	\$ 135.00	\$ 320,895.00
Install 30" RCP	294 LF of 30" RCP	294	-	-	LF	\$ 150.00	\$ 44,100.00
Install 36" RCP	463 LF of 36" RCP	463	-	-	LF	\$ 175.00	\$ 81,025.00
Install 42" RCP	641 LF of 42" RCP	641	-	-	LF	\$ 200.00	\$ 128,200.00
Install 54" RCP	229 LF of 54" RCP	229	-	-	LF	\$ 310.00	\$ 70,990.00
Install 60" RCP	512 LF of 60" RCP	512	-	-	LF	\$ 350.00	\$ 179,200.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	59	-	EA	\$ 8,000.00	\$ 472,000.00
Install Inlet	Junction Box (Small)	-	45	-	EA	\$ 5,000.00	\$ 225,000.00
Install 60" Tide Gate	60" Tide Gate	-	1	-	EA	\$ 84,800.00	\$ 84,800.00
Install 18" RCP Laterals to Inlets	585 LF of 18" RCP	585	-	-	LF	\$ 100.00	\$ 58,500.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	89720	-	SF	\$ 8.00	\$ 717,760.00
Excavate Outfall Channel Ditch	600 LF of Excavation	600	-	-	LF	\$ 500.00	\$ 300,000.00
Sub-Total							\$ 2,787,330.00
Allowance - Incidental (15%)							\$ 418,099.50
Allowance - Water/Sewer (50%)							\$ 1,393,665.00
General Construction (15%)							\$ 418,099.50
Contingency (20%)							\$ 557,466.00
<b>Total Estimated Construction Cost</b>							<b>\$ 5,574,660.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 83,619.90
Engineering and Design Services (5% of Construction Cost)							\$ 278,733.00
Construction Administration (5% of Construction Cost)							\$ 278,733.00
Sub-Total							\$ 641,085.90
Contingency (15%)							\$ 96,162.89
<b>Total Estimated Professional Services Cost</b>							<b>\$ 737,248.79</b>
<b>Total Estimated Project Cost</b>							<b>\$ 6,311,908.79</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 8,446,757.78</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 11,303,667.31</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	7721 LF of Existing Pipe	7721	-	-	LF	\$ 10.00	\$ 77,210.00
Install 12" RCP	95 LF of 12" RCP	95	-	-	LF	\$ 80.00	\$ 7,600.00
Install 18" RCP	649 LF of 18" RCP	2715	-	-	LF	\$ 100.00	\$ 271,500.00
Install 24" RCP	2377 LF of 24" RCP	4086	-	-	LF	\$ 135.00	\$ 551,610.00
Install 30" RCP	294 LF of 30" RCP	739	-	-	LF	\$ 150.00	\$ 110,850.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	84	-	EA	\$ 8,000.00	\$ 672,000.00
Install Inlet	Junction Box (Small)	-	64	-	EA	\$ 5,000.00	\$ 320,000.00
Install 18" RCP Laterals to Inlets	832 LF of 18" RCP	832	-	-	LF	\$ 100.00	\$ 83,200.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	127600	-	SF	\$ 8.00	\$ 1,020,800.00
Sub-Total							\$ 3,114,770.00
Allowance - Incidental (15%)							\$ 467,215.50
Allowance - Water/Sewer (50%)							\$ 1,557,385.00
General Construction (15%)							\$ 467,215.50
Contingency (20%)							\$ 622,954.00
<b>Total Estimated Construction Cost</b>							<b>\$ 6,229,540.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 93,443.10
Engineering and Design Services (5% of Construction Cost)							\$ 311,477.00
Construction Administration (5% of Construction Cost)							\$ 311,477.00
Sub-Total							\$ 716,397.10
Contingency (15%)							\$ 107,459.57
<b>Total Estimated Professional Services Cost</b>							<b>\$ 823,856.67</b>
<b>Total Estimated Project Cost</b>							<b>\$ 7,053,396.67</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 9,439,035.83</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 12,631,559.17</b>



Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	4600 LF of Existing Pipe	4600	-	-	LF	\$ 10.00	\$ 46,000.00
Install 18" RCP	2456 LF of 18" RCP	2456	-	-	LF	\$ 100.00	\$ 245,600.00
Install 24" RCP	2304 LF of 24" RCP	2304	-	-	LF	\$ 135.00	\$ 311,040.00
Install 30" RCP	1787 LF of 30" RCP	1787	-	-	LF	\$ 150.00	\$ 268,050.00
Excavate Ditch	364 LF of Ditch	364	-	-	LF	\$ 50.00	\$ 18,200.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	82	-	EA	\$ 8,000.00	\$ 656,000.00
Install Inlet	Junction Box (Small)	-	63	-	EA	\$ 5,000.00	\$ 315,000.00
Install 18" RCP Laterals to Inlets	819 LF of 18" RCP	819	-	-	LF	\$ 100.00	\$ 81,900.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	124460	-	SF	\$ 8.00	\$ 995,680.00
Sub-Total							\$ 2,937,470.00
Allowance - Incidental (15%)							\$ 440,620.50
Allowance - Water/Sewer (50%)							\$ 1,468,735.00
General Construction (15%)							\$ 440,620.50
Contingency (20%)							\$ 587,494.00
<b>Total Estimated Construction Cost</b>							<b>\$ 5,874,940.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 88,124.10
Engineering and Design Services (5% of Construction Cost)							\$ 293,747.00
Construction Administration (5% of Construction Cost)							\$ 293,747.00
Sub-Total							\$ 675,618.10
Contingency (15%)							\$ 101,342.72
<b>Total Estimated Professional Services Cost</b>							<b>\$ 776,960.82</b>
<b>Total Estimated Project Cost</b>							<b>\$ 6,651,900.82</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 8,901,743.81</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 11,912,541.25</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Demolition of Existing Drainage Infrastructure	1813 LF of Existing Pipe	1813	-	-	LF	\$ 10.00	\$ 18,130.00
Install 18" RCP	1057 LF of 18" RCP	1057	-	-	LF	\$ 100.00	\$ 105,700.00
Install 24" RCP	1969 LF of 24" RCP	1969	-	-	LF	\$ 135.00	\$ 265,815.00
Install 30" RCP	575 LF of 30" RCP	575	-	-	LF	\$ 150.00	\$ 86,250.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	39	-	EA	\$ 8,000.00	\$ 312,000.00
Install Inlet	Junction Box (Small)	-	30	-	EA	\$ 5,000.00	\$ 150,000.00
Install 18" RCP Laterals to Inlets	390 LF of 18" RCP	390	-	-	LF	\$ 100.00	\$ 39,000.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	58520		SF	\$ 8.00	\$ 468,160.00
Sub-Total							\$ 1,445,055.00
Allowance - Incidental (15%)							\$ 216,758.25
Allowance - Water/Sewer (50%)							\$ 722,527.50
General Construction (15%)							\$ 216,758.25
Contingency (20%)							\$ 289,011.00
<b>Total Estimated Construction Cost</b>							<b>\$ 2,890,110.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 43,351.65
Engineering and Design Services (5% of Construction Cost)							\$ 144,505.50
Construction Administration (5% of Construction Cost)							\$ 144,505.50
Sub-Total							\$ 332,362.65
Contingency (15%)							\$ 49,854.40
<b>Total Estimated Professional Services Cost</b>							<b>\$ 382,217.05</b>
<b>Total Estimated Project Cost</b>							<b>\$ 3,272,327.05</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 4,379,111.75</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 5,860,239.36</b>

Description	Proposed Improvement	Length	Quantity	Count	Units	Unit Cost	Improvement Cost
Install 24" RCP	214 LF of 24" RCP	214	-	-	LF	\$ 135.00	\$ 28,890.00
Install 30" RCP	1229 LF of 30" RCP	1229	-	-	LF	\$ 150.00	\$ 184,350.00
Install Junction Box (Inlet, Manhole, or CFB)	Junction Box (Medium)	-	20	-	EA	\$ 8,000.00	\$ 160,000.00
Install Inlet	Junction Box (Small)	-	15	-	EA	\$ 5,000.00	\$ 75,000.00
Install 18" RCP Laterals to Inlets	195 LF of 18" RCP	195	-	-	LF	\$ 100.00	\$ 19,500.00
Road Paving and Milling	Refinishing Road Surface Post Construction	-	29980	-	SF	\$ 8.00	\$ 239,840.00
Sub-Total							\$ 707,580.00
Allowance - Incidental (15%)							\$ 106,137.00
Allowance - Water/Sewer (50%)							\$ 353,790.00
General Construction (15%)							\$ 106,137.00
Contingency (20%)							\$ 141,516.00
<b>Total Estimated Construction Cost</b>							<b>\$ 1,415,160.00</b>
Permitting Services (1.5% of Construction Cost)							\$ 21,227.40
Engineering and Design Services (5% of Construction Cost)							\$ 70,758.00
Construction Administration (5% of Construction Cost)							\$ 70,758.00
Sub-Total							\$ 162,743.40
Contingency (15%)							\$ 24,411.51
<b>Total Estimated Professional Services Cost</b>							<b>\$ 187,154.91</b>
<b>Total Estimated Project Cost</b>							<b>\$ 1,602,314.91</b>
<b>Total Estimated Project Cost (5-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 2,144,258.80</b>
<b>Total Estimated Project Cost (10-Year Cost Escalation Assuming 6% per Year)</b>							<b>\$ 2,869,501.97</b>