

# **Bridge Lift Station** **Modification Project**

**Appendix I**



**Odom**  
 & Associates  
 Engineering, Inc.

152 EAST MAIN STREET  
 FOREST CITY, N.C. 28043  
 828-247-4495

CLIFFSIDE SANITARY DISTRICT  
 BRIDGE LIFT STATION  
 MODIFICATION

SCALE: 1"=200'

APPENDIX I



Odom  
& Associates  
Engineering, Inc.

152 East Main Street  
Forest City NC 28043  
828-247-4495 • 828-247-4498 Fax

CLIFFSIDE SANITARY DISTRICT  
BRIDGE LIFT STATION MODIFICATION PROJECT  
RUTHERFORD COUNTY, NORTH CAROLINA  
JUNE 2010

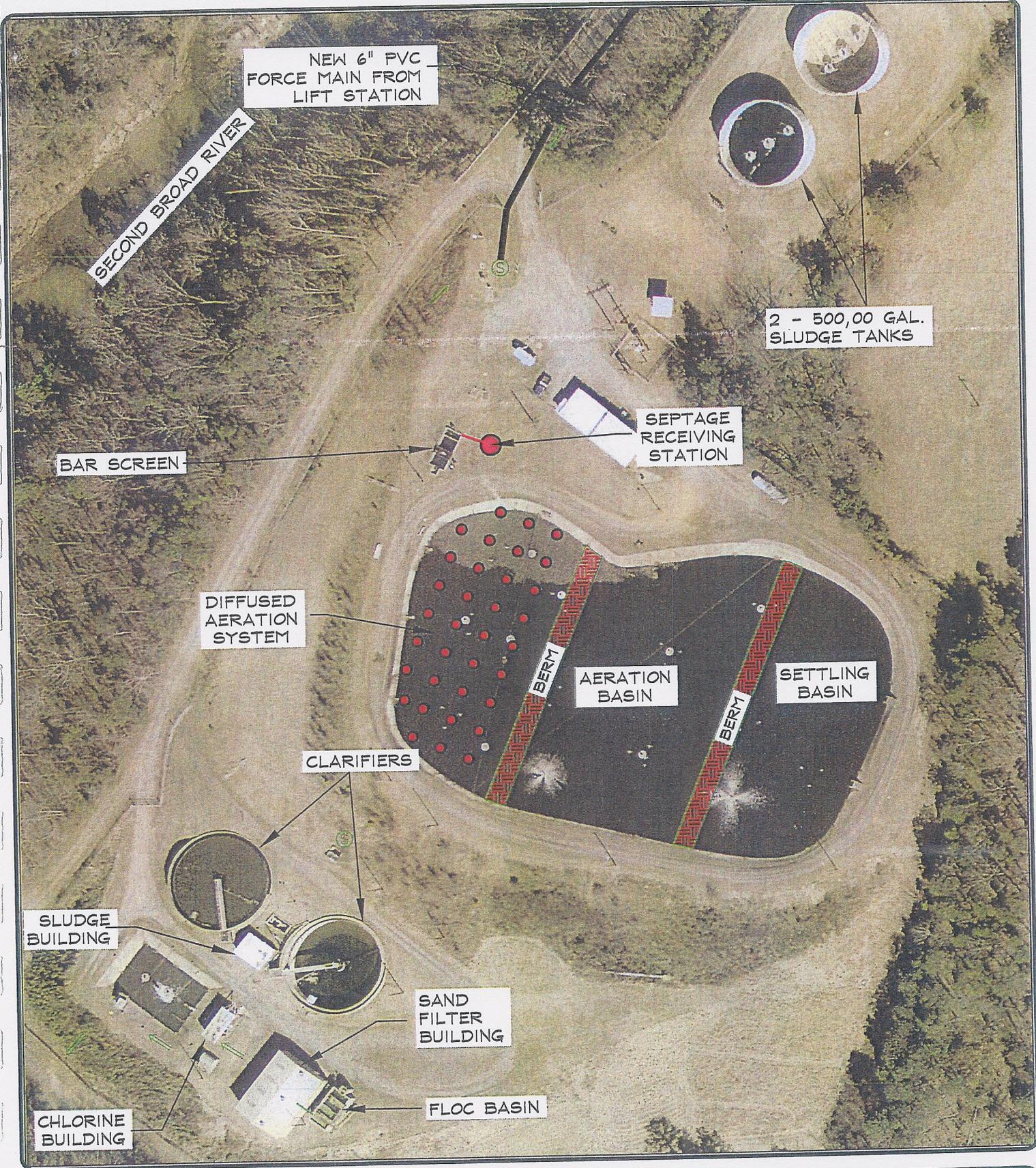
Item Description                      Quantity    Unit    Unit Price                      Cost

1	Mobilization	1	LS	\$10,000.00	\$10,000.00
2	New Lift Station Pump(Submersible 300 gpm)	1	LS	\$50,000.00	\$50,000.00
3	New 6" PVC Force Main	2,300	LF	\$20.00	\$46,000.00
4	12" Bore	100	LF	\$120.00	\$12,000.00
5	Pavement Repair/Resurfacing	1	LS	\$15,000.00	\$15,000.00
6	Building Repairs	1	LS	\$20,000.00	\$20,000.00
7	Wetwell Corrosion Inhibitor	1	LS	\$10,000.00	\$10,000.00
8	Bar Screen Replacement	1	LS	\$10,000.00	\$10,000.00
				<b>CONSTRUCTION SUBTOTAL</b>	<b>\$173,000.00</b>
9	Construction Contingencies (10%)				\$17,300.00
				<b>CONSTRUCTION TOTAL</b>	<b>\$190,300.00</b>
10	Design Engineering (7%)				\$13,321.00
11	Construction Administration/Inspection (5%)				\$9,515.00
				<b>PROJECT SUBTOTAL</b>	<b>\$213,136.00</b>
				<b>USE AS PROJECT ESTIMATE</b>	<b>\$215,000.00</b>

Appendix I

**WWTP**  
**Modification/Replacement**  
**Options**

**Appendix J**




**Odom & Associates**  
 Engineering, Inc.  
 152 EAST MAIN STREET  
 FOREST CITY, N.C. 28043  
 828-247-4495

CLIFFSIDE SANITARY DISTRICT  
 WASTEWATER  
 TREATMENT PLANT  
 MODIFICATION

SCALE: N.T.S.

APPENDIX J



**Odom**  
 & Associates  
 Engineering, Inc.

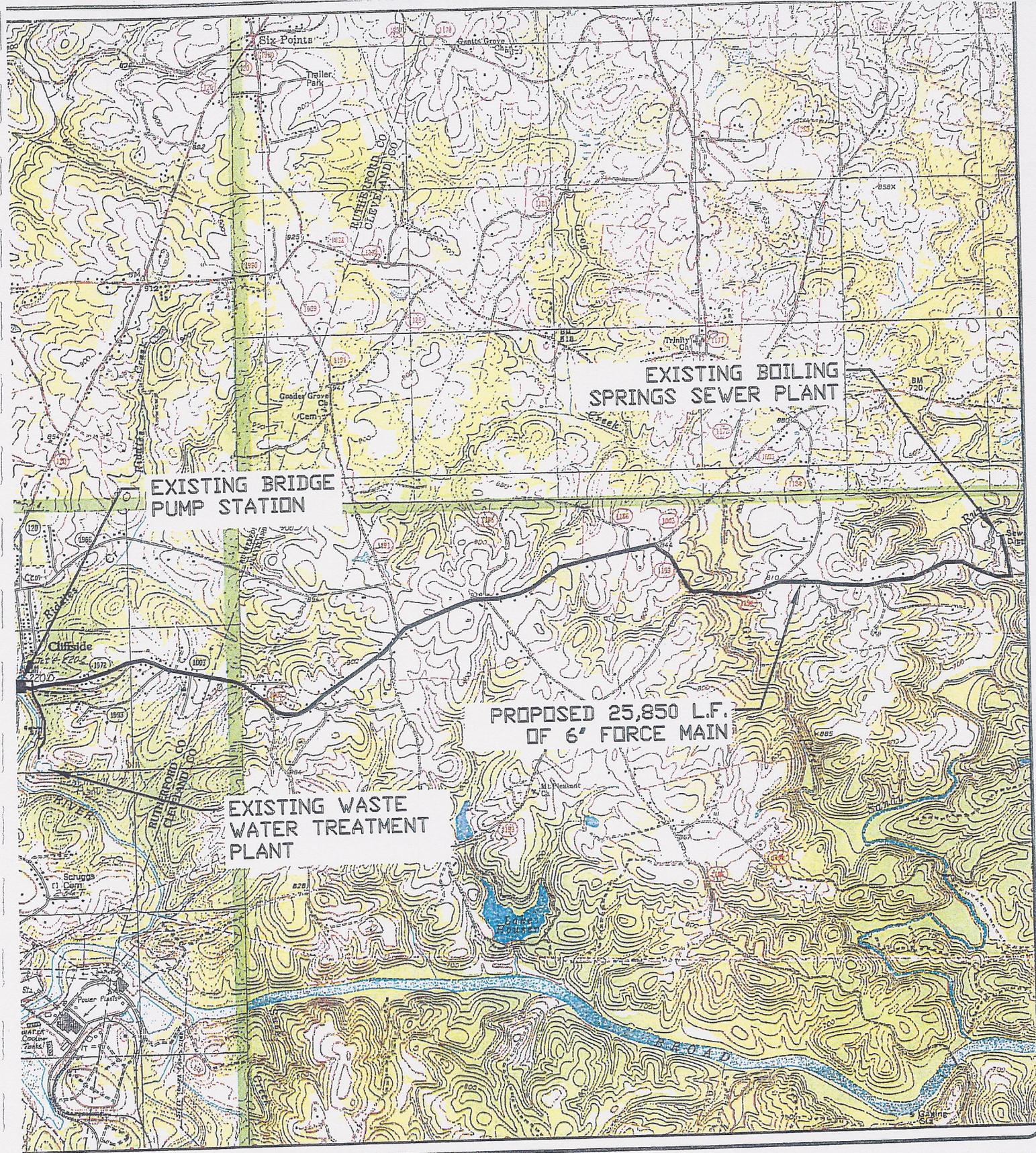
152 EAST MAIN STREET  
 FOREST CITY, N.C. 28043  
 828-247-4495

CLIFFSIDE SANITARY  
 DISTRICT  
 OPTION #3

FORCE MAIN TO FOREST  
 CITY

JUNE 1, 2010

Appendix J



**Odom**  
 & Associates  
 Engineering, Inc.

152 EAST MAIN STREET  
 FOREST CITY, N.C. 28043  
 828-247-4495

CLIFFSIDE SANITARY  
 DISTRICT  
 OPTION #4

FORCE MAIN TO BOILING  
 SPRINGS

JUNE 1, 2010

Appendix J



**Odom  
& Associates**  
Engineering, Inc.

152 East Main Street  
Forest City NC 28043  
828-247-4496 • 828-247-4498 Fax

**CLIFFSIDE SANITARY DISTRICT  
WASTEWATER TREATMENT PLANT MODIFICATIONS-OPTION 1  
RUTHERFORD COUNTY, NORTH CAROLINA  
JUNE 2010**

	<b>Item Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Cost</b>
1	Mobilization	1	LS	\$20,000.00	\$20,000.00
2	Remove Existing Sludge	1	LS	\$100,000.00	\$100,000.00
3	Berm Construction	2	EA	\$50,000.00	\$100,000.00
4	Diffused Aeration System	3	LS	\$25,000.00	\$75,000.00
5	Chlorine Feed Modifications	1	LS	\$15,000.00	\$15,000.00
6	Repair and Repave Access Road	1	LS	\$150,000.00	\$150,000.00
7	Septage Receiving Station	1	LS	\$40,000.00	\$40,000.00
				<b>CONSTRUCTION SUBTOTAL</b>	<b>\$500,000.00</b>
8	Construction Contingencies (10%)				\$50,000.00
				<b>CONSTRUCTION TOTAL</b>	<b>\$550,000.00</b>
9	Design Engineering (7%)				\$35,000.00
10	Construction Administration/Inspection (5%)				\$25,000.00
				<b>PROJECT SUBTOTAL</b>	<b>\$610,000.00</b>
				<b>USE AS PROJECT ESTIMATE</b>	<b>\$610,000.00</b>

**Appendix I - 1**



**Odom  
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Engineering, Inc.

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**CLIFFSIDE SANITARY DISTRICT  
PACKAGE TREATMENT PLANT-OPTION 2  
RUTHERFORD COUNTY, NORTH CAROLINA  
JUNE 2010**

**Item Description                      Quantity    Unit            Unit Price                      Cost**

1	Mobilization	1	LS	\$30,000.00	\$30,000.00
2	Package Treatment Plant (0.08 MGD)	1	LS	\$480,000.00	\$480,000.00
3	Existing Piping Modification	1	LS	\$70,000.00	\$70,000.00
<b>CONSTRUCTION SUBTOTAL</b>					<b>\$580,000.00</b>
9	Construction Contingencies (10%)				\$58,000.00
<b>CONSTRUCTION TOTAL</b>					<b>\$638,000.00</b>
10	Design Engineering (7%)				\$44,660.00
11	Construction Administration/Inspection (5%)				\$31,900.00
<b>PROJECT SUBTOTAL</b>					<b>\$714,560.00</b>
USE AS PROJECT ESTIMATE					<b>\$714,560.00</b>

**Appendix I - 2**



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CLIFFSIDE SANITARY DISTRICT  
PROPOSED FORCE MAIN TO FOREST CITY-OPTION 3  
RUTHERFORD COUNTY, NORTH CAROLINA  
JUNE 2010

Item Description	Quantity	Unit	Unit Price	Cost
1 Mobilization (5%)	1	LS	\$30,000.00	\$30,000.00
2 New Lift Station	1	LS	\$250,000.00	\$250,000.00
3 Connect to Exist. Sewer	1	EA	\$2,000.00	\$2,000.00
4 6" Force Main	46,500	LF	\$20.00	\$930,000.00
5 12" Bore	400	LF	\$120.00	\$48,000.00
6 Creek Crossing	500	EA	\$15,000.00	\$75,000.00
<b>CONSTRUCTION SUBTOTAL</b>				<b>\$1,335,000.00</b>
9 Construction Contingencies (10%)				\$133,500.00
<b>CONSTRUCTION TOTAL</b>				<b>\$1,468,500.00</b>
10 Design Engineering (7%)				\$102,795.00
11 Construction Administration/Inspection (5%)				\$73,425.00
<b>PROJECT SUBTOTAL</b>				<b>\$1,644,720.00</b>
USE AS PROJECT ESTIMATE				<b>\$1,644,720.00</b>



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**CLIFFSIDE SANITARY DISTRICT  
PROPOSED FORCE MAIN TO BOILING SPRINGS- OPTION 4  
RUTHERFORD COUNTY, NORTH CAROLINA  
JUNE 2010**

**Item Description                      Quantity    Unit            Unit Price                      Cost**

1	Mobilization (5%)	1	LS	\$30,000.00	\$30,000.00
2	New Lift Station	1	LS	\$250,000.00	\$250,000.00
3	Connect to Exist. Sewer	1	EA	\$2,000.00	\$2,000.00
4	6" Force Main	25,850	LF	\$20.00	\$517,000.00
5	12" Bore	200	LF	\$120.00	\$24,000.00
6	Creek Crossing	3	EA	\$15,000.00	\$45,000.00
				<b>CONSTRUCTION SUBTOTAL</b>	<b>\$868,000.00</b>
9	Construction Contingencies (10%)				\$86,800.00
				<b>CONSTRUCTION TOTAL</b>	<b>\$954,800.00</b>
10	Design Engineering (7%)				\$66,836.00
11	Construction Administration/Inspection (5%)				\$47,740.00
				<b>PROJECT SUBTOTAL</b>	<b>\$1,069,376.00</b>
				<b>USE AS PROJECT ESTIMATE</b>	<b>\$1,069,376.00</b>