

# Appendix F



**BERNARDIN · LOCHMUELLER & ASSOCIATES, INC.**

---

3502 Woodview Trace · Suite 150 · Indianapolis, IN 46268  
PHONE 317.222.3880 · TOLL FREE 888.830.6977 · FAX 317.222.3881

**North Vernon LTCP (WWTP Improvements)**  
**VORTEX CLARIFIER OPTION**

<b>Item</b>	<b>Description</b>	<b>Cost</b>
	Conveyance Piping	\$ 420,000
	Vortex Clarifier Unit	\$ 2,259,500
	Chemical Feed (HypoChlorite) Building/Chlor. System Upgrade	\$ 305,000
	Surge Basin (Convert Existing Clarifier)	\$ 110,000
	Site Electrical/Instrumentation/SCADA	\$ 490,000
	Diversion Structure/Headworks Improvements	\$ 154,000
	Mobilization/Demobilization	\$ 180,000
	Construction Sub-Total	\$ 3,918,500
	Contingency (10%)	\$ 391,850
	<b>Total Construction Cost</b>	<b>\$ 4,310,350</b>

**DESCRIPTION:** Chemical Feed (HypoChlorite) Building, Misc. related work

<b>SPEC SECTION</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT COST</b>		<b>TOTAL</b>
DIVISION 2	SITWORK					
	Structure Excavation	148	CY	\$	9.00	\$ 1,332.00
	Structural Backfill	148	TON	\$	28.00	\$ 4,144.00
DIVISION 3	CONCRETE					
	Slab Foundation, Spread Footer & Grade Beams	120	CY	\$	700.00	\$ 84,000.00
DIVISION 4	MASONRY					
	8" Masonry Block	2000	SF	\$	18.00	\$ 36,000.00
	Masonry Sealer	2000	SF	\$	2.00	\$ 4,000.00
DIVISION 5	METALS					
	Structural Steel	1250	LBS	\$	4.00	\$ 5,000.00
	Roof Decking	200	SY	\$	60.00	\$ 12,000.00
	Miscellaneous	1	LS	\$	1,274.00	\$ 1,274.00
DIVISION 6	WOOD AND PLASTIC					
DIVISION 7	THERMAL AND MOISTURE CONTROL					
	Perimeter Insulation	200	SF	\$	2.00	\$ 400.00
	Deck Insulation	200	SF	\$	2.00	\$ 400.00
	Foamed-in-Place Insulation	1250	SF	\$	5.00	\$ 6,250.00
	Membrane Waterproofing	200	SF	\$	20.00	\$ 4,000.00
DIVISION 8	DOORS AND WINDOWS					
	Single Door	1	EA	\$	2,500.00	\$ 2,500.00
	Double Door	0	EA	\$	5,000.00	\$ -
	Overhead Doors	182	SF	\$	50.00	\$ 9,100.00
	Window	0	SF	\$	100.00	\$ -



**DESCRIPTION:** Vortex Clarifier

<b>SPEC SECTION</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT COST</b>	<b>TOTAL</b>
DIVISION 2	SITWORK				
	Structure Excavation (Rock)	1,900	CY	\$ 40.00	\$ 76,000.00
	Rock Removal	1,900	CY	\$ 15.00	\$ 28,500.00
	Structural Backfill	540	TON	\$ 28.00	\$ 15,120.00
	8" Force Main	900	LF	\$ 40.00	\$ 36,000.00
DIVISION 3	CONCRETE				
	Base Slab	256	CY	\$ 500.00	\$ 128,000.00
	Walls	210	CY	\$ 800.00	\$ 168,000.00
	Outlet Chamber Slab	27	CY	\$ 500.00	\$ 13,500.00
	Outlet Chamber Walls	34	CY	\$ 800.00	\$ 27,200.00
	SK Diversion Structure	80	CY	\$ 700.00	\$ 56,000.00
DIVISION 4	MASONRY				
DIVISION 5	METALS				
	Railing, Stairs, etc.	1	LS	\$ 20,400.00	\$ 20,400.00
DIVISION 6	WOOD AND PLASTIC				
DIVISION 7	THERMAL AND MOISTURE CONTROL				
DIVISION 8	DOORS AND WINDOWS				
DIVISION 9	FINISHES				
DIVISION 10	SPECIALTIES				
DIVISION 11	EQUIPMENT				

	Vortex Clarifier Unit	1	EA	\$1,246,250.00	\$ 1,246,250.00
	Mech. Cleaned bar screen (35 mgd)	1	EA	\$ 250,000.00	\$ 250,000.00
	Grit Pump package	1	EA	\$ 20,000.00	\$ 20,000.00
	Side Stream Treatment (Classifier, etc)	1	LS	\$ 110,000.00	\$ 110,000.00
	Motorized Slide Gates (SK Div. Str.)	2	EA	\$ 25,000.00	\$ 50,000.00
DIVISION 12	FURNISHINGS				
DIVISION 13	SPECIAL CONSTRUCTION				
	Control Station	1	EA	\$ 469.00	\$ 469.00
DIVISION 14	CONVEYING SYSTEMS				
DIVISION 15	MECHANICAL-HVAC				
	PLUMBING	1	LS	\$ 14,000.00	\$ 14,000.00
DIVISION 16	ELECTRICAL:				
	Site Electrical (see "Total")				
<hr/>					
SUBTOTAL					\$ 2,259,500.00

**DESCRIPTION:** Diversion Structure/Headworks Improvements

<b>SPEC SECTION</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT COST</b>	<b>TOTAL</b>
DIVISION 2	SITWORK				
	Structure Excavation	50	CY	\$ 20.00	\$ 1,000.00
	Structural Backfill	50	TON	\$ 28.00	\$ 1,400.00
	Existing Concrete Demolition	1	LS	\$ 10,000.00	\$ 10,000.00
DIVISION 3	CONCRETE				
	Baffle Wall	6	CY	\$ 1,100.00	\$ 6,600.00
	Base	20	CY	\$ 1,100.00	\$ 22,000.00
	Walls	45	CY	\$ 1,100.00	\$ 49,500.00
DIVISION 4	MASONRY				
DIVISION 5	METALS				
	Aluminum Grating	1	LS	\$ 6,200.00	\$ 6,200.00
DIVISION 6	WOOD AND PLASTIC				
DIVISION 7	THERMAL AND MOISTURE CONTROL				
DIVISION 8	DOORS AND WINDOWS				
DIVISION 9	FINISHES				
DIVISION 10	SPECIALTIES				
DIVISION 11	EQUIPMENT				
	GNA Flow Control Gate	1	EA	\$ 50,000.00	\$ 50,000.00

DIVISION 12 FURNISHINGS

DIVISION 13 SPECIAL CONSTRUCTION

DIVISION 14 CONVEYING SYSTEMS

DIVISION 15 MECHANICAL-HVAC

DIVISION 16 ELECTRICAL:

CONDUIT/RACEWAY	1	LS	\$	4,414.00	\$	4,414.00
POWER WIRING	1	LS	\$	2,819.00	\$	2,819.00

---

---

SUBTOTAL \$ 154,000.00



**DESCRIPTION:** Conveyance Piping

<b>SPEC SECTION</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT COST</b>	<b>TOTAL</b>
DIVISION 2	SITWORK Pipe Work (see below)				\$ 419,949.78
DIVISION 3	CONCRETE				
DIVISION 4	MASONRY				
DIVISION 5	METALS				
DIVISION 6	WOOD AND PLASTIC				
DIVISION 7	THERMAL AND MOISTURE CONTROL				
DIVISION 8	DOORS AND WINDOWS				
DIVISION 9	FINISHES				
DIVISION 10	SPECIALTIES				
DIVISION 11	EQUIPMENT				
DIVISION 12	FURNISHINGS				
DIVISION 13	SPECIAL CONSTRUCTION				
DIVISION 14	CONVEYING SYSTEMS				
DIVISION 15	MECHANICAL-HVAC				

DIVISION 16

ELECTRICAL:

---



---

SUBTOTAL \$ 420,000.00

<u>Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit price</u>	<u>Material</u>	<u>Unit price</u>	<u>Labor</u>
Mobilization/Demobili	1	LS	-	5,700.00	-	2,000.00
Engineering Layout	1	LS	-	400.00	-	1,000.00
Excavator	1	Mos	6,500.00	3,250.00	-	-
Loader	1	Mos	5,800.00	2,900.00	-	-
Backhoe	1	Mos	12,000.00	6,000.00	-	-
Fuel	1	LS	-	6,500.00	-	-
Saw Cut	1,000	LF	1.50	1,500.00	-	-
Connect to Existing M	1	LS	-	700.00	-	500.00
Traffic Control	1	LS	-	3,500.00	-	-
Excavate	1,481	CY	-	-	-	12,000.00
Rock Excavation	2,222	CY	45.00	100,000.00	-	-
36" RCP (Pressure Joi	1,000	LF	80.00	80,000.00	-	-
36" RCP Bend	4	EA	1,200.00	4,800.00	-	-
Sand Bedding	370	CY	18.00	6,666.67	-	-
Sand backfill	1,111	SY	18.00	20,000.00	-	-
Remove Surplus Dirt	3,704	CY	10.00	37,037.04	-	-
Manhole (72" dia.)	3	EA	1,500.00	4,500.00	750.00	2,250.00
#53 Stone	139	CY	16.00	2,222.22	30.00	4,166.67
Asphalt	278	Tons	150.00	41,666.67	-	-
Seed & Mulch	667	SY	2.00	1,333.33	-	-
				<u>\$ 328,675.93</u>		<u>\$ 21,916.67</u>
					Add 18%:	<u>3,945.00</u>
						<u>\$ 25,861.67</u>

	\$	328,675.93
		<u>25,861.67</u>
	\$	354,537.59
15% P/O:		<u>53,180.64</u>
	\$	407,718.23
3% Bond:		<u>12,231.55</u>
	\$	<u><u>419,949.78</u></u>

**DESCRIPTION:** Existing Clarifier to Surge Basin Conversion

<b>SPEC SECTION</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT COST</b>		<b>TOTAL</b>
DIVISION 2	SITWORK					
	Piping	1	LS	\$ 12,000.00	\$	12,000.00
	Demolish existing equipment	1	LS	\$ 16,000.00	\$	16,000.00
DIVISION 3	CONCRETE					
	Walls (Inside of structure)	120	CY	\$ 500.00	\$	60,000.00
DIVISION 4	MASONRY					
DIVISION 5	METALS					
	Railing	200	LF	\$ 35.00	\$	7,000.00
	Platform	1	LS	\$ 15,000.00	\$	15,000.00
DIVISION 6	WOOD AND PLASTIC					
DIVISION 7	THERMAL AND MOISTURE CONTROL					
DIVISION 8	DOORS AND WINDOWS					
DIVISION 9	FINISHES					
DIVISION 10	SPECIALTIES					
DIVISION 11	EQUIPMENT					
DIVISION 12	FURNISHINGS					

