



ONE COMPANY  
Many Solutions<sup>SM</sup>

# SUMMARY

RECONSTRUCTION AND IMPROVEMENTS  
ROXBURY FISH CULTURE STATION  
100% SUBMITTAL

Date : March 11, 2013

HDR#186734

## OPINIONS OF PROBABLE COST

**TOTAL CONSTRUCTION BASE BID BUDGET**

**\$4,033,000**

### BASE BID

A. GENERAL SITEWORK		\$1,183,865	
Civil	Subtotal:	\$425,599	
Structural and Architectural	Subtotal:	\$0	
Plumbing	Subtotal:	\$523,513	
Heat & Vent	Subtotal:	\$17,886	
Electrical	Subtotal:	\$216,868	
B. INFLUENT TREATMENT BUILDING		\$349,013	
Civil	Subtotal:	\$0	
Structural and Architectural	Subtotal:	\$80,953	
Plumbing	Subtotal:	\$204,523	
Heat & Vent	Subtotal:	\$13,919	
Electrical	Subtotal:	\$49,618	
C. UPPER & LOWER TANK PAVILIONS		\$1,223,512	
Civil	Subtotal:	\$0	
Structural and Architectural	Subtotal:	\$769,637	
Plumbing	Subtotal:	\$403,072	
Heat & Vent	Subtotal:	\$0	
Electrical	Subtotal:	\$50,803	
D. EFFLUENT TREATMENT		\$888,878	
Civil	Subtotal:	\$16,052	
Structural and Architectural	Subtotal:	\$438,879	
Plumbing	Subtotal:	\$375,201	
Heat & Vent	Subtotal:	\$13,415	
Electrical	Subtotal:	\$45,331	
E. ADA COMPLIANCE		\$176,829	
Civil	Subtotal:	\$140,359	
Structural and Architectural	Subtotal:	\$36,470	
Plumbing	Subtotal:	\$0	
Heat & Vent	Subtotal:	\$0	
Electrical	Subtotal:	\$0	
Base Bid Subtotal			\$3,822,096
Estimating Contingency, 2% (Unforeseen Rock)			\$76,442
Mobilization, 1.5%			\$57,331
Insurance & Bonds, 2%			\$76,442
Construction Base Bid Total			\$4,032,312
Bidding & Construction Contingency, 10%			\$403,231
Total Base Project Budget			\$4,435,543



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RECONSTRUCTION AND IMPROVEMENT  
ROXBURY FISH CULTURE STATION  
100% SUBMITTAL  
Date : March 11, 2013

**BASE BID CIVIL SUMMARY**

**\$441,651**

**A**

Item	Number	Units	Cost/Unit	Subtotal
<b>GENERAL SITEWORK</b>				
<b>Civil</b>			<b>Subtotal</b>	<b>\$425,599</b>
<b>Demolition</b>				
Demolition	1	LS	\$48,000.00	\$48,000
Site Cleanup/Clearing	1	LS	\$16,000.00	\$16,000
<b>Misc</b>				
Contractor Staking	1	LS	\$4,000.00	\$4,000
Trailer, Utility, etc.	1	LS	\$7,500.00	\$7,500
Secure Storage and Staging Area	1	LS	\$5,000.00	\$5,000
Dewatering	1	LS	\$20,000.00	\$20,000
Reinstall Fence	120	LF	\$10.00	\$1,200
Stabilized Entrance	2	EA	\$1,500.00	\$3,000
<b>Erosion Control</b>				
Silt Fencing	1,530	LF	\$2.50	\$3,825
Aggregate Ditch Checks	11	EA	\$1,100.00	\$12,100
Geoweb Material	984	SF	\$3.26	\$3,208
Geoweb Rock	18	CY	\$35.65	\$639
Recharge Dam	8	EA	\$500.00	\$4,000
<b>Site Drainage</b>				
24" Concrete Pipe	56	LF	\$56.00	\$3,136
Flared End Sections	11	EA	\$250.00	\$2,750
36" Concrete Pipe	122	LF	\$85.50	\$10,431
Rip Rap	127	CY	\$52.00	\$6,578
18" Concrete Pipe	78	LF	\$50.00	\$3,900
30" HDPE D17/D21	38	LF	\$55.00	\$2,090
6" Detention Pond Drainline	50	LF	\$9.00	\$450
Pond Drainline Valve	1	EA	\$750.00	\$750
<b>Site Clearing and Earthwork - Entire Site</b>				
Earth Excavation and Removal	8,011	CY	\$10.00	\$80,110
Fill - Onsite	1,875	CY	\$10.00	\$18,750
Fill - Borrow	5,000	CY	\$14.00	\$70,000
Final Grading	14,000	SY	\$2.50	\$35,000
Seeding	2.5	AC	\$2,750.00	\$6,875
Rock Excavation	200	CY	\$55.00	\$11,000
Potential Rock Excavation, Unverified	300	CY	\$55.00	\$16,500

Item	Number	Units	Cost/Unit	Subtotal
<b>Gravel Access Road</b>				
Access and Site Road - 18" Base Course and Geotextile	989	CY	\$40.00	\$39,540
Surface Course - 3"	165	CY	\$35.00	\$5,766

\* Potential Rock Excavation for Detention Pond (Not Included in Subtotal)

**B**

<b>INFLUENT TREATMENT BUILDING</b>				
<b>Civil</b>			<b>Subtotal</b>	<b>\$0</b>
None				

**C**

<b>UPPER &amp; LOWER TANK PAVILIONS</b>				
<b>Civil</b>			<b>Subtotal</b>	<b>\$0</b>
None				

**D**

<b>EFFLUENT TREATMENT</b>				
<b>Civil</b>			<b>Subtotal</b>	<b>\$16,052</b>
<b>Chemical Detention Pond</b>				
Membrane Liner, 45 Mill PP, Reinforced	3,600	SF	\$0.85	\$3,060
Underdrains, 6" Multiflow	124	FT	\$3.00	\$372
Connection Pipe	40	LF	\$3.00	\$120
Water Control Structure and Plumbing	1	LS	\$12,500.00	\$12,500
Earthwork - See Sitework				

**E**

<b>ADA COMPLIANCE</b>				
<b>Civil</b>			<b>Subtotal</b>	<b>\$140,359</b>
<b>Unisex Restroom - Package</b>				
Package Unit, Toilet, Sink, Ventilation, Structural, Freight	1	LS	\$40,000.00	\$40,000
Installation of Unit	1	LS	\$5,000.00	\$5,000
Plumbing Connections	1	LS	\$4,000.00	\$4,000
Foundation, 5' Structural Fill	28	CY	\$29.16	\$810
<b>ADA Access</b>				
Bituminous Surface (3")	1,456	SY	\$30.00	\$43,680
Structural Fill Under Road and Geotextile, 27"	698	CY	\$40.00	\$27,900
Concrete Sidewalk	1,566	SF	\$6.50	\$10,179
Handicapped Parking Signage and Striping	1	LS	\$1,000.00	\$1,000
Bumper Blocks	5	EA	\$125.00	\$625
ADA Access Striping, Sidewalk	240	LF	\$0.50	\$120

Item	Number	Units	Cost/Unit	Subtotal
<b>Pond No. 2 Renovation</b>				
Grading	1	LS	\$1,250.00	\$1,250
Rock Fill in Bottom	30	CY	\$30.00	\$900
Seeding	0.50	AC	\$2,750.00	\$1,375
Railing	110	LF	\$32.00	\$3,520



**BASE BID ARCHITECTURAL/STRUCTURAL SUMMARY**

**\$1,289,469**

Item	Number	Units	Cost/Unit	Subtotal
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**A**

**GENERAL SITEWORK**

<b>Structural and Architectural</b>			<b>Subtotal</b>	<b>\$0</b>
None				

**B**

**INFLUENT TREATMENT BUILDING**

<b>Structural and Architectural</b>			<b>Subtotal</b>	<b>\$80,953</b>
6" Reinforced Concrete Slab	9	CY	\$350.00	\$3,010
Housekeeping Pads	3	CY	\$375.00	\$1,125
10" Reinforced Concrete Foundation Walls	15	CY	\$550.00	\$8,085
1'x2', Concrete Footings, Reinforced	8	CY	\$450.00	\$3,555
2" Expanded Polystyrene Insulation Board - Foundation	480	SF	\$1.75	\$840
Concrete Stoop	5	CY	\$450.00	\$2,250
Structural Fill	110	CY	\$29.16	\$3,208
8" CMU Walls, Reinforcing w/ Grout	1,200	SF	\$12.75	\$15,300
Cont. Bond Beam	285	LF	\$12.85	\$3,662
1 1/2", 18 Ga. Galv. Metal Hat Channels	1,200	SF	\$1.75	\$2,100
2" Foam Filled Metal Wall Panels	1,200	SF	\$13.50	\$16,200
12k1 bar joists @ 4'-0" o.c.	153	LF	\$9.75	\$1,492
1 1/2", 22 Ga. Galvanized Metal Roof Deck	720	SF	\$2.25	\$1,620
Standing Seam Roof, 26 Ga. Galv.	720	SF	\$7.50	\$5,400
2" Polyisocyanurate Roof INSulation	720	SF	\$1.75	\$1,260
Prefinished Galvanized Metal Flashings	50	LF	\$10.00	\$500
2x10 Treated Wood Fascia Board	120	LF	\$5.00	\$600
2x4 Treated Wood Fascia Board	41	LF	\$3.75	\$154
Galv. Steel Bent Plate	120	LF	\$4.00	\$480
4"x4"x1/4" Galv. Steel Angle	38	LF	\$4.50	\$171
26 Gauge Galv. Metal Fascia Flasing, Baked Enamel Finish	120	SF	\$9.50	\$1,140
26 Gauge Galv. Roof Edge w/ Drip, Baked Enamel Finish	120	SF	\$10.00	\$1,200
Soffit Panels and Trim	120	SF	\$11.00	\$1,320
Fiberglass Doors / Frame, w/ S.S. Hardware	2	EA	\$1,550.00	\$3,100
Painting	1,145	SF	\$1.25	\$1,431
Fire Extinguisher and Wall Bracket	1	EA	\$250.00	\$250
Paint Structural Steel	1	LS	\$1,500.00	\$1,500

**C**

**UPPER & LOWER TANK PAVILIONS**

<b>Structural and Architectural</b>			<b>Subtotal</b>	<b>\$769,637</b>
Reinforced Concrete Footings	68.18	CY	\$425.00	\$28,977

Item	Number	Units	Cost/Unit	Subtotal
Reinforced Concrete Piers	7.2	CY	\$550.00	\$3,960
8" Concrete Grade Beam Walls	80	CY	\$425.00	\$33,788
Structural Fill	6,108	CY	\$29.16	\$178,109
Tank Floors	4,562	SF	\$6.50	\$29,653
Aluminum Tank Screens and Frames	12	EA	\$575.00	\$6,900
Concrete Stoops (4'x6' and 4'x14')	8	CY	\$425.00	\$3,400
M.B.M. Frame (Primary & Secondary Steel), Galvanized	10,610	SF	\$20.75	\$220,158
Standing Seam Metal Roof System	12,594	SF	\$14.50	\$182,613
M.B.M. Standard Metal Wall Panels	4,830	SF	\$4.90	\$23,667
12" Overhang, with Soffit	636	LF	\$24.75	\$15,741
3'-0"x7'-0" Fiberglass Doors, including hardware	4	EA	\$1,550.00	\$6,200
Prefinished Galvanized Metal Flashings	800	LF	\$10.50	\$8,400
Wire Mesh Window Panels	1,110	SF	\$9.75	\$10,823
Overhead Door, with Electric Operator	4	EA	\$4,250.00	\$17,000
10Lb Fire Extinguisher, Wall Hung	2	EA	\$125.00	\$250

D

EFFLUENT TREATMENT				
<b>Structural and Architectural</b>			<b>Subtotal</b>	<b>\$438,879</b>
<b>Effluent Treatment Building</b>				
12" Reinforced Concrete Sump Slab	22	CY	\$400.00	\$8,880
4" Reinforced Concrete Slab	235	SF	\$4.50	\$1,058
10" Reinforced Concrete Foundation Walls	27	CY	\$550.00	\$14,850
1'x2', Concrete Footings, Reinforced	5	CY	\$450.00	\$2,250
2" Expanded Polystyrene Insulation Board - Foundation	770	SF	\$1.75	\$1,348
Concrete Stoop	3	CY	\$450.00	\$1,350
Structural Fill	452	CY	\$29.16	\$13,180
8" CMU Walls, Reinforcing w/ Grout	1,450	SF	\$12.75	\$18,488
Cont. Bond Beam	350	LF	\$12.85	\$4,498
1 1/2", 18 Ga. Galv. Metal Hat Channels, 24" O.C.	1,450	SF	\$1.75	\$2,538
2" Foam Filled Metal Wall Panels	1,450	SF	\$12.50	\$18,125
12k1 bar joists @ 4'-0" o.c.	208	LF	\$9.75	\$2,028
1 1/2", 22 Ga. Galvanized Metal Roof Deck	965	SF	\$2.25	\$2,171
Standing Seam Roof, 26 Ga. Galv.	965	SF	\$7.50	\$7,238
2" Polyisocyanurate Roof INSulation	965	SF	\$1.75	\$1,689
Prefinished Galvanized Metal Flashings	130	LF	\$10.00	\$1,300
2x10 Treated Wood Fascia Board	130	LF	\$5.00	\$650
2x4 Treated Wood Fascia Board	37	LF	\$3.75	\$139
Galv. Steel Bent Plate	75	LF	\$4.00	\$300
4"x4"x1/4" Galv. Steel Angle	38	LF	\$4.50	\$171
26 Gauge Galv. Metal Fascia Flasing, Baked Enamel Finish	130	SF	\$9.50	\$1,235
26 Gauge Galv. Roof Edge w/ Drip, Baked Enamel Finish	130	LF	\$10.00	\$1,300
Soffit Panels and Trim	130	SF	\$11.00	\$1,430
Fiberglass Doors / Frame, w/ S.S. Hardware	3	EA	\$1,550.00	\$4,650
Painting	1,480	SF	\$1.25	\$1,850
Fire Extinguisher and Wall Bracket	1	EA	\$250.00	\$250
Galvanized Steel Stairs and Grating	1	LS	\$9,350.00	\$9,350
Painting Structural Steel	1	LS	\$2,000.00	\$2,000

Item	Number	Units	Cost/Unit	Subtotal
<b>Clarifier</b>				
Earth Excavation	180	CY	\$12.00	\$2,160
Rock Excavation	548	CY	\$55.00	\$30,140
Structural Fill	668	CY	\$29.16	\$19,479
Concrete Base Slab - 22.67' Dia. x 12" Thick	13	CY	\$450.00	\$5,850
Clarifier Walls - 10" Thick x 8'-2" Tall	16	CY	\$525.00	\$8,400
Concrete Trough	5.00	CY	\$725.00	\$3,625
Grout Bed for Floor Slope	284.00	SF	\$38.00	\$10,792
4" PVC Waterstop	63.00	LF	\$5.85	\$369
Flap Valves	2.00	EA	\$250.00	\$500
Perimeter Handrail	63.00	LF	\$32.00	\$2,016
Clarifier tank cover	1.00	EA	\$50,000.00	\$50,000
Clarifier Scraper Arm, Bridge/Column & Internals	1	EA	\$80,000.00	\$80,000
<b>Sludge Storage</b>				
Earth Excavation	175	CY	\$12.00	\$2,100
Rock Excavation	172	CY	\$55.00	\$9,460
Structural Fill	668	CY	\$29.16	\$19,479
Concrete Base Slab - 24'8" Dia. x 12" Thick	18	CY	\$450.00	\$8,100
Concrete Walls - 8" Thick x 9'-0" Tall	18	CY	\$525.00	\$9,450
Depressed Center	3	CY	\$550.00	\$1,650
4" PVC Waterstop	114.00	LF	\$5.85	\$667
Manhole Steps	15	EA	\$22.00	\$330
Aluminum Dome Cover	1	EA	\$50,000.00	\$50,000

E

<b>ADA COMPLIANCE</b>				
<b>Structural and Architectural</b>			<b>Subtotal</b>	<b>\$36,470</b>
<b>Concrete Floor in Pavilions</b>				
4" Concrete Slab	4,406	SF	\$5.25	\$23,132
8" Concrete Slab	1,976	SF	\$6.75	\$13,338



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RECONSTRUCTION AND IMPROVEMENT  
ROXBURY FISH CULTURE STATION  
100% SUBMITTAL  
Date : March 11, 2013

**BASE BID PLUMBING SUMMARY**

**\$1,506,309**

**A**

Item	Number	Units	Cost/Unit	Subtotal
<b>GENERAL SITEWORK</b>				
<b>Plumbing</b>			<b>Subtotal</b>	<b>\$523,513</b>
<b>Brook Supply Water to Influent Treatment</b>				
8" & 10" Iron Transition Coupling of old iron to PVC Pipe	2	EA	\$785.00	\$1,570
8" & 10" Buried Gate Valve with Box with Concrete Collar	2	EA	\$1,980.00	\$3,960
10" Iron MJ Wye	1	EA	\$1,980.00	\$1,980
10" Iron MJ Elbow	3	EA	\$1,235.00	\$3,705
10" AWWA C900 DR 25 PVC Pipe	400	LF	\$18.00	\$7,200
Trench, Backf., Comp. 3' x 6' Deep, 1/2:1 walls, common earth	400	LF	\$20.00	\$8,000
Bed for 8" & 10" Pipe	400	LF	\$8.00	\$3,200
Detectable Tape	4	100 LF	\$6.00	\$24
Pipe Testing up to 10" Dia. up to 500 LF	1	LS	\$1,875.00	\$1,875
<b>Pipe from Seeps &amp; Spring to Show Pond</b>				
6" & 8" SDR 35 PVC Pipe	190	LF	\$14.00	\$2,660
Trench, Backf., Comp. 3' x 4' deep, 1/2:1 wall, common earth	190	LF	\$12.00	\$2,280
Bed for 6" & 8" Pipe	190	LF	\$7.00	\$1,330
Detectable Tape	2	100 LF	\$6.00	\$12
Test 6" & 8" Pipe 500 LF	1	LS	\$2,250.00	\$2,250
4' dia. x 4' Manhole	1	EA	\$2,810.00	\$2,810
8" Wye	1	EA	\$250.00	\$250
<b>Intercept of Old Hatchery Building Effluent</b>				
4' dia. x 7' Manhole	1	EA	\$4,335.00	\$4,335
Manhole Boot Seal for 6" Pipe (\$20/Inch Dia. installed)	6	EA	\$120.00	\$720
6" buried Plug Valve w/Extended Bonnet	4	EA	\$2,115.00	\$8,460
6" Metal Transition Coupling	2	EA	\$105.00	\$210
6" SCH 40 PVC Wye	2	EA	\$240.00	\$480
<b>Drain from Old Hatchery to Chemical Detention Pond</b>				
6" SDR 35 PVC Pipe	640	LF	\$9.00	\$5,760
Trench, Backf., Comp. 3' x 6' deep, 1/2:1 wall, common earth	640	LF	\$20.00	\$12,800
Bed for 6" Pipe	640	LF	\$5.00	\$3,200
Detectable Tape	7	100 LF	\$6.00	\$42
Test Pipe larger up to 10" Dia. up to 1000 LF	1	LS	\$3,160.00	\$3,160
Misc. Plumbing (liner boot, cleanout collars, etc.)	1	LS	\$5,000.00	\$5,000
6" SDR 35 PVC Elbows & Wyes	8	EA	\$110.00	\$880
6" Yard Cleanout	2	EA	\$660.00	\$1,320
Splash Pad & Pond Liner Pipe Boot	1	LS	\$750.00	\$750



Item	Number	Units	Cost/Unit	Subtotal
<b>Pumped Reuse Water from Old Hatchery Building to Influent</b>				
Submersible Sump Pump, 90 gpm, 2 HP	2	EA	\$3,000.00	\$6,000
Precast Concrete Pump Sump 4' Dia. x 8'	1	EA	\$5,005.00	\$5,005
Precast Concrete Valve Vault 4' Dia. x 5'	1	EA	\$3,240.00	\$3,240
Auto Air Release Valve for Wastewater	1	EA	\$400.00	\$400
4" Pipe-to-Structure Adapter (\$20 / inch Dia. installed)	1	EA	\$80.00	\$80
3" Pipe-to-Structure Adapter	4	EA	\$60.00	\$240
3" Check Valve	2	EA	\$635.00	\$1,270
3" Eccentric Plug	2	EA	\$1,285.00	\$2,570
3" SCH 80 PVC Flange	4	EA	\$70.00	\$280
4" x 3 x 3 Flanged Iron Tee	1	EA	\$1,980.00	\$1,980
4" Flanged Iron El	7	EA	\$1,235.00	\$8,645
4" AWWA C900 DR 25 PVC Pipe	290	LF	\$6.00	\$1,740
Trench, Backf., Comp. 2' x 6' Deep, 1/2:1 walls, common earth	290	LF	\$16.00	\$4,640
Bed for 4" Pipe	290	LF	\$4.00	\$1,160
Detectable Tape	3	100 LF	\$6.00	\$18
Pipe Testing up to 6" Dia. up to 500 LF	1	LS	\$965.00	\$965
Misc. Plumbing (2 x 3, 3" els, air isolation tap & valve, etc.)	1	LS	\$2,500.00	\$2,500
4" Water Meter	1	LS	\$3,000.00	\$3,000
4" Epoxy Coated Iron Flange Adapter w/Stainless Steel Bolts	3	EA	\$260.00	\$780
<b>Pipe from Influent Treatment to Upper Pavilion LHO</b>				
12" SDR 35 PVC Pipe	350	LF	\$23.00	\$8,050
Trench, Backf., Comp. 3' x 6' deep, 1/2:1 wall, common earth	350	LF	\$20.00	\$7,000
Bed for 12" Pipe	350	LF	\$9.00	\$3,150
Detectable Tape	4	100 LF	\$6.00	\$24
Test 12" Pipe up to 500 LF	1	LS	\$2,250.00	\$2,250
Misc. Plumbing (floor penetration, pipe trench insul, etc.)	1	LS	\$2,500.00	\$2,500
12" Sch 40 DWV PVC Elbow	4	EA	\$490.00	\$1,960
Manhole Boot Seal for 12" Pipe (\$20/Inch Dia. installed)	1	EA	\$240.00	\$240
<b>Drain &amp; Overflow from Influent to Receiving Stream</b>				
8" & 12" SDR 35 PVC Pipe	990	LF	\$21.00	\$20,790
Trench, Backf., Comp. 3' x 6' deep, 1/2:1 wall, common earth	990	LF	\$18.00	\$17,820
Rock Excavation for last 100' of drain	190	CY	\$52.00	\$9,880
Bed for 8" & 12" Pipe	900	LF	\$8.00	\$7,200
Detectable Tape	9	100 LF	\$6.00	\$54
Test Up to 12" Pipe up to 1000 LF	1	LS	\$3,790.00	\$3,790
8" & 12" SDR 35 PVC Elbows and End Section & Wye	6	EA	\$300.00	\$1,800
4' dia. x 7' Manhole (Excluding Meter)	7	EA	\$4,335.00	\$30,345
Manhole Boot Seal for 12" Pipe (\$20/Inch Dia. installed)	9	EA	\$240.00	\$2,160
Manhole Boot Seal for 8" Pipe (\$20/Inch Dia. installed)	12	EA	\$160.00	\$1,920
<b>Oxygen System</b>				
1000 Gal LOX Tank, Leased	1	LS	\$0.00	\$0
Fence and Concrete	1	LS	\$17,500.00	\$17,500
Brazed Copper Pipe, Buried 3' deep excluding pavilions & LHOs	410	LF	\$25.00	\$10,250
<b>Low Head Oxygenators</b>				
Low Head Oxygenators (LHO's) for 300 gpm (matl., ship, startup)	2	EA	\$4,000.00	\$8,000

Item	Number	Units	Cost/Unit	Subtotal
Subcontractor LHO install labor & O&P (0.3 x matl., ship & start)	2	EA	\$1,200.00	\$2,400
4' Wide x 8 x 12 Precast Manhole for LHO (cost equals two 5' dia.)	2	EA	\$20,330.00	\$40,660
Manhole Boot Seal for 8" & 12" Pipe (\$20/Inch Dia. installed)	8	EA	\$200.00	\$1,600
Boards and Aluminum Angle to cover LHO box, installed	2	LS	\$750.00	\$1,500
Oxygen Meters	2	EA	\$150.00	\$300
3/4" CU Piping, Oxy Clean, Brazed	15	LF	\$20.00	\$300
Valves, Elbows, and Tees, cleaned and packaged for O2 service	12	EA	\$45.00	\$540
<b>Buried Well Water to all Buildings</b>				
2" DR11 HDPE Pipe	620	LF	\$2.00	\$1,240
Trench, BF, Comp. 1/2:1, 2'wx6'd	770	LF	\$7.00	\$5,390
Test Piping up to 4" dia. up to 1000 ft	1	LS	\$1,100.00	\$1,100
3/4" & 1-1/2" DR11 HDPE Pipe	20	LF	\$1.00	\$20
Detectable Tape	8	100 LF	\$3.00	\$24
<b>Buried Pond No. 2 Water to Upper Pumps</b>				
Core & Seal 2" Pipe thru Wall	1	LS	\$200.00	\$200
2" Buried Plug Valve w/ Extended Bonnet	1	EA	\$840.00	\$840
2" Class 200 PVC Pipe	250	LF	\$3.00	\$750
Trench, BF, Comp. 1/2:1, 2'wx6'd	250	LF	\$7.00	\$1,750
Test Piping up to 4" dia. up to 250 ft	1	LS	\$520.00	\$520
<b>Spring Bypass of Old Hatchery Building</b>				
4" Manhole Seal	1	EA	\$80.00	\$80
4 x 4 Tapping Tee	1	EA	\$875.00	\$875
4" Buried Valve w/ Extended Bonnet	1	EA	\$1,850.00	\$1,850
4" DR 25 AWWA C900 PVC Pipe	160	LF	\$8.00	\$1,280
Trench, BF, Comp. 1/2:1, 2'wx6'd	160	LF	\$7.00	\$1,120
Bed for 4" Pipe	160	LF	\$3.00	\$480
Test Piping up to 4" dia. up to 250 ft	1	LS	\$520.00	\$520
<b>Pipe from Upper LHO's to Upper Pavilion</b>				
12" SDR 35 PVC Pipe (Overflow)	25	LF	\$23.00	\$575
Trench, Backf., Comp. 3' x 6' deep, 1/2:1 wall, common earth	25	LF	\$20.00	\$500
Bed for 12" Pipe	25	LF	\$9.00	\$225
Detectable Tape	1	100 LF	\$6.00	\$6
8" AWWA C900 DR25 PVC Elbow	2	EA	\$830.00	\$1,660
8" AWWA C900 DR25 PVC Pipe (Mixed Supply)	75	LF	\$15.00	\$1,125
Trench, Backf., Comp. 3' x 6' Deep, 1/2:1 walls, common earth	75	LF	\$20.00	\$1,500
Bed for 8" Pipe	75	LF	\$5.00	\$375
Detectable Tape	1	100 LF	\$6.00	\$6
Misc. Plumbing	1	LS	\$1,000.00	\$1,000
<b>Pipe From Upper Pavilion to Lower LHO's</b>				
12" SDR 35 PVC Pipe (Overflow)	100	LF	\$23.00	\$2,300
Trench, Backf., Comp. 3' x 6' deep, 1/2:1 wall, common earth	100	LF	\$20.00	\$2,000
Bed for 12" Pipe	100	LF	\$9.00	\$900
Detectable Tape	1	100 LF	\$6.00	\$6
Misc. Plumbing	1	LS	\$5,000.00	\$5,000

Item	Number	Units	Cost/Unit	Subtotal
<b>Pipe from Lower LHO's to Lower Pavilion</b>				
12" SDR 35 PVC Pipe (Overflow)	25	LF	\$23.00	\$575
Trench, Backf., Comp. 3' x 6' deep, 1/2:1 wall, common earth	25	LF	\$20.00	\$500
Bed for 12" Pipe	25	LF	\$9.00	\$225
Detectable Tape	1	100 LF	\$6.00	\$6
8" AWWA C900 DR25 PVC Elbow	2	EA	\$830.00	\$1,660
8" AWWA C900 DR25 PVC Pipe (Mixed Supply)	75	LF	\$15.00	\$1,125
Trench, Backf., Comp. 3' x 6' Deep, 1/2:1 walls, common earth	75	LF	\$20.00	\$1,500
Bed for 8" Pipe	75	LF	\$5.00	\$375
Detectable Tape	1	100 LF	\$6.00	\$6
Misc. Plumbing	1	LS	\$1,000.00	\$1,000
<b>Pumped Reuse Water from Effluent to Influent</b>				
Submersible Sump Pump, 255 gpm, 7.5 HP	2	EA	\$5,500.00	\$11,000
Precast Concrete Pump Sump 5' Dia. x 8'	1	EA	\$6,530.00	\$6,530
Precast Concrete Valve Vault 4' Dia. x 5'	1	EA	\$3,240.00	\$3,240
Auto Air Release Valve for reclaim water	1	EA	\$400.00	\$400
6" Pipe-to-Structure Adapter (\$20 / inch Dia. installed)	1	EA	\$120.00	\$120
4" Pipe-to-Structure Adapter	4	EA	\$80.00	\$320
4" Check Valve	2	EA	\$980.00	\$1,960
4" Eccentric Plug Valve	2	EA	\$1,850.00	\$3,700
4" SCH 80 PVC Flange	2	EA	\$1,980.00	\$3,960
6" Iron Wye, Flanged Reducing	1	EA	\$1,285.00	\$1,285
6" Iron MJ Elbow	7	EA	\$1,235.00	\$8,645
6" AWWA C900 DR 25 PVC Pipe	1,000	LF	\$10.00	\$10,000
Trench, Backf., Comp. 3' x 6' Deep, 1/2:1 walls, common earth	1,000	LF	\$20.00	\$20,000
Bed for 6" Pipe	1,000	LF	\$5.00	\$5,000
Detectable Tape	10	100 LF	\$6.00	\$60
Pipe Testing up to 10" Dia. up to 500 LF	1	LS	\$1,875.00	\$1,875
Misc. Plumbing	1	LS	\$5,000.00	\$5,000
6" Water Meter	1	LS	\$4,500.00	\$4,500
6" Epoxy Coated Iron Flange Adapter w/SS Bolts	2	EA	\$345.00	\$690
<b>Existing Hatchery Building Plumbing</b>				
Jet Pump	1	EA	\$935.00	\$935
Hydro-Tank	1	EA	\$2,675.00	\$2,675
Demolish existing pump and tank	1	LS	\$345.00	\$345
New concrete pad	1	LS	\$590.00	\$590
Well Water Piping	1	LS	\$1,358.00	\$1,358
Electric Work	1	LS	\$825.00	\$825
<b>General Contractor Markup (10%)</b>				
	0.1		\$475,921.00	\$47,592

**B**

<b>INFLUENT TREATMENT BUILDING</b>				
<b>Plumbing</b>			<b>Subtotal</b>	<b>\$204,523</b>
530 gpm 40 um Drumfilter w/rinse, 25 ppm TSS, 1.5 safety, mtrl.	1	LS	\$44,800.00	\$44,800
Drumfilter factory startup (2 shared trips for 1 of 2 drums)	1	LS	\$4,200.00	\$4,200

Item	Number	Units	Cost/Unit	Subtotal
Drumfilter installation labor (25% of material)	1	LS	\$11,200.00	\$11,200
Contractor Drumfilter O&P (15% of material, startup & labor)	1	LS	\$9,030.00	\$9,030
660 gpm UV Disinfection System, material & factory startup	1	LS	\$55,000.00	\$55,000
UV Disinfection System installation Labor (25% of material)	1	LS	\$16,500.00	\$16,500
Subcontractor UV Disinfection System O&P (15% x matl. & labor)	1	LS	\$12,375.00	\$12,375
10" Brook water supply butterfly valve	1	EA	\$3,480.00	\$3,480
12" & 10" Floor Penetrations	2	EA	\$240.00	\$480
8" Inside Width Trench Drain	30	LF	\$200.00	\$6,000
Miscellaneous Plumbing	1	LS	\$3,500.00	\$3,500
10 x 12" Expansion Joint	2	EA	\$1,125.00	\$2,250
10" Sch 80 PVC El	3	EA	\$1,315.00	\$3,945
12" Sch 80 PVC Wye	1	EA	\$2,840.00	\$2,840
12" Sch 80 PVC Flange	2	EA	\$440.00	\$880
10" Sch 80 PVC Wye	1	EA	\$1,875.00	\$1,875
10" Sch 80 PVC Flange	5	EA	\$370.00	\$1,850
12" Flange Iron Bend	1	EA	\$4,095.00	\$4,095
10" Butterfly Valve	1	EA	\$1,630.00	\$1,630
General Contractor Markup (10%)	0.1		\$185,930.00	\$18,593

C

UPPER & LOWER TANK PAVILIONS				
<b>Plumbing</b>			<b>Subtotal</b>	<b>\$403,072</b>
<b>UPPER TANK PAVILION</b>				
<b>Non-Buried Piping</b>				
4" Pre-Molded Trench Drain	70	LF	\$125.00	\$8,750
20 ft. dia. Fish Tanks	6	EA	\$12,500.00	\$75,000
4 ft. dia. Valve Basins, 5' Deep	6	EA	\$2,985.00	\$17,910
Thorp Oxygen Meters Installed on Brackets w/Hose	6	EA	\$150.00	\$900
Ceramic Oxygen Diffusers	6	EA	\$300.00	\$1,800
4" x 1" Saddle Tap	6	EA	\$175.00	\$1,050
Valve Basin Standpipes, 2"	6	EA	\$75.00	\$450
2" Butterfly Valve w/Extension	6	EA	\$245.00	\$1,470
4" BFV w/ Infinite Position Lever or Gear & Extension	6	EA	\$795.00	\$4,770
1" Curbstop Valve	6	EA	\$110.00	\$660
4" Tank Mixed Water Supply - Sch 40 PVC	6	EA	\$635.00	\$3,810
Pipe Marker, Adhesive, for 4" pipe	6	EA	\$20.00	\$120
2" Sch. 80 PVC Tee, Flange, Seal, & El	6	Sets	\$235.00	\$1,410
<b>Buried Oxygen Piping</b>				
1" CU Piping Oxy Clean, Brazed, Buried 3' Deep	90	LF	\$25.00	\$2,250
1/2" CU Piping, Oxy Clean, Brazed	60	LF	\$7.00	\$420
Valves, Elbow and Tees, cleaned & packed for O2 service	24	EA	\$45.00	\$1,080
Pipe Testing	1	LS	\$1,000.00	\$1,000
<b>Buried Overflow and Mixed Supply Water Piping</b>				
8" AWWA C900 DR25 PVC Elbow	2	EA	\$240.00	\$480

Item	Number	Units	Cost/Unit	Subtotal
8" AWWA C900 DR25 PVC Pipe (Mixed Supply)	270	LF	\$15.00	\$4,050
Trench, Backf., Comp. 3' x 6' Deep, 1/2:1 walls, common earth	270	LF	\$20.00	\$5,400
Bed for 8" Pipe	270	LF	\$5.00	\$1,350
Detectable Tape	3	100 LF	\$6.00	\$18
Pipe Testing up to 10" Dia. up to 250 LF	2	LS	\$1,260.00	\$2,520
8" x 4" AWWA C900 DR25 PVC Tee	6	EA	\$275.00	\$1,650
4" SCH 40 PVC Bed, Bury 6' Deep	120	LF	\$26.00	\$3,120
4 Linkage Seal System	6	EA	\$330.00	\$1,980
12" OW - PVC Bed, Bury 5' Deep, Sch 40 DWV	100	LF	\$63.00	\$6,300
12" x 4" PVC Wye Fitting, Sch 40 DWV	6	EA	\$875.00	\$5,250
4" Overflow - PVC Pipe, Bed, Bury 5' Deep, Sch 40 DWV	70	LF	\$29.00	\$2,030
4" Sch 40 DWV PVC EI	12	EA	\$110.00	\$1,320
4" PVC Tank Adapter	6	EA	\$215.00	\$1,290
Test 12" Overflow Main	1	EA	\$1,510.00	\$1,510
Miscellaneous Piping	1	LS	\$5,000.00	\$5,000
<b>Buried Drains</b>				
4" SCH 40 DWV PVC Pipe, Main	70	LF	\$9.00	\$630
Trench, Backf., Comp. 2' x 6' Deep, 1/2:1 walls, common earth	70	LF	\$16.00	\$1,120
Bed for 4" Pipe	70	LF	\$4.00	\$280
Detectable Tape	1	100 LF	\$6.00	\$6
Pipe Testing up to 4" Dia. up to 250 LF	1	LS	\$965.00	\$965
3" Seal	6	EA	\$60.00	\$360
3" SCH 40 DWV Pipe, Bury 5' Deep (branches)	60	LF	\$23.00	\$1,380
4" x 3" Wye	6	EA	\$170.00	\$1,020
Miscellaneous Piping	1	LS	\$7,500.00	\$7,500
<b>LOWER TANK PAVILION</b>				
<b>Non-Buried Piping</b>				
4" Pre-Molded Trench Drain	70	LF	\$125.00	\$8,750
20 ft. dia. Fish Tanks	6	EA	\$12,000.00	\$72,000
4 ft. dia. Valve Basins, 5' Deep	6	EA	\$2,985.00	\$17,910
Thorp Oxygen Meters Installed on Brackets w/Hose	6	EA	\$150.00	\$900
Ceramic Oxygen Diffusers	6	EA	\$300.00	\$1,800
4" x 1" Saddle Tap	6	EA	\$175.00	\$1,050
Valve Basin Standpipes, 4"	6	EA	\$150.00	\$900
4" Butterfly Valves w/Extensions	6	EA	\$490.00	\$2,940
4" BFV w/ Infinite Position Lever or Gear	6	EA	\$795.00	\$4,770
1" Curbstop Valve	6	EA	\$110.00	\$660
4" Tank Mixed Water Supply - Sch 40 PVC	6	EA	\$635.00	\$3,810
Pipe Marker, Adhesive, for 4" pipe	6	EA	\$20.00	\$120
4" Sch 40 Tee, Flange, Seal, & EI	6	Sets	\$455.00	\$2,730
				\$0
<b>Buried Oxygen Piping</b>				\$0
1" CU Piping Oxy Clean, Brazed, Buried 3' Deep	90	LF	\$25.00	\$2,250
1/2" CU Piping, Oxy Clean, Brazed	60	LF	\$7.00	\$420
Valves, Elbow and Tees, cleaned & packed for O2 service	24	EA	\$45.00	\$1,080
Pipe Testing	1	LS	\$1,000.00	\$1,000

Item	Number	Units	Cost/Unit	Subtotal
<b>Buried Overflow and Mixed Supply Water Piping</b>				
8" AWWA C900 DR25 PVC Elbow	3	EA	\$240.00	\$720
8" AWWA C900 DR25 Pipe (Mixed Supply)	260	LF	\$15.00	\$3,900
Trench, Backf., Comp. 3' x 6' Deep, 1/2:1 walls, common earth	260	LF	\$20.00	\$5,200
Bed for 8" Pipe	260	LF	\$5.00	\$1,300
Detectable Tape	3	100 LF	\$6.00	\$18
Pipe Testing up to 10" Dia. up to 500 LF	2	LS	\$1,260.00	\$2,520
8" x 4" AWWA C900 DR25 PVC Tee	6	EA	\$275.00	\$1,650
4" AWWA C900 DR25 PVC Bed, Bury 6' Deep	120	LF	\$26.00	\$3,120
4 Linkage Seal System	6	EA	\$330.00	\$1,980
Miscellaneous Piping	1	LS	\$5,000.00	\$5,000
<b>Buried Combination Drain/Overflow</b>				
12" Sch 40 DWV PVC	120	LF	\$35.00	\$4,200
3' x 6' Deep, Trench, Backf., Comp. 1/2:1	120	LF	\$20.00	\$2,400
Bed for 12" Pipe	120	LF	\$8.00	\$960
Detectable Tape	2	100 LF	\$6.00	\$12
Test 12" Pipe, up to 250 LF	1	LS	\$1,510.00	\$1,510
6" Seal, Boot	6	EA	\$120.00	\$720
6" SCH 40 DWV Pipe, Bury 5' Deep	600	LF	\$35.00	\$21,000
12 x 6 Wye, Sch 40 DWV PVC	6	EA	\$875.00	\$5,250
Miscellaneous Piping	1	LS	\$2,500.00	\$2,500
General Contractor Markup (10%)	0.1		\$366,429.00	\$36,643

D

<b>EFFLUENT TREATMENT</b>				
<b>Plumbing</b>			<b>Subtotal</b>	<b>\$375,201</b>
<b>Effluent Drumfilter</b>				
660 gpm 40 um Drumfilter w/rinse, 15 ppm TSS, 1.5 safety, mtrl.	2	EA	\$44,800.00	\$89,600
Drumfilter factory startup (2 shared trips for 1 of 2 drumfilters)	2	EA	\$4,200.00	\$8,400
Drumfilter installation Labor (25% of material)	2	EA	\$11,200.00	\$22,400
Subcontractor Drumfilter O&P (15% of material, startup & labor)	2	EA	\$9,030.00	\$18,060
Backwash Lift Station	1	LS	\$20,000.00	\$20,000
Coagulant Metering Pump	1	EA	\$950.00	\$950
Two Barrel Spill Platform	1	EA	\$300.00	\$300
Spill Platform Ramp	1	EA	\$300.00	\$300
12" Flanged Iron True Wye	1	EA	\$5,805.00	\$5,805
12" Expansion Joint	3	EA	\$1,125.00	\$3,375
12" Butterfly Valve	4	EA	\$1,955.00	\$7,820
12" PVC Flange	8	EA	\$440.00	\$3,520
12" Boot Seal	3	EA	\$240.00	\$720
12" Iron Cross	1	EA	\$8,670.00	\$8,670
12" Flanged Iron Bend	2	EA	\$4,095.00	\$8,190
Sump Pump and Sump, 1/3rd HP	1	LS	\$750.00	\$750
Miscellaneous Piping (Pipe Stubs, 4" backwash, pad, etc.)	1	LS	\$5,000.00	\$5,000
<b>Sludge Storage Outside Building</b>				

Item	Number	Units	Cost/Unit	Subtotal
3", 4" & 6" Sch 80 PVC Pipe	225	LF	\$10.00	\$2,250
Trench, Backf, Comp. 1/2:1, 2' x 6' Deep	225	LF	\$7.00	\$1,575
Bed 3". 4" & 6" Pipe	225	LF	\$3.00	\$675
Rock Removal	50	CY	\$52.00	\$2,600
Telescoping Valves	3	EA	\$950.00	\$2,850
Misc. Piping, Fittings, & Testing	1	LS	\$7,500.00	\$7,500
<b>Sludge Storage Tank Nozzle System</b>				
Sludge Storage Tank Swivel Nozzle Mix & Transfer System Mtrl.	1	LS	\$27,800.00	\$27,800
Sludge Mix & Transfer System Install (20% of Materials)	1	LS	\$5,560.00	\$5,560
Mix & Transfer System Subcontractor Markup (15% Mtrl & Labor)	1	LS	\$5,004.00	\$5,004
<b>Effluent Treatment Building</b>				
Freeze Resistant Wall Hydrant	1	EA	\$270.00	\$270
7.5 hp Sludge Mixing & Transfer Pump	1	EA	\$7,705.00	\$7,705
2 hp Clarifier Hopper & Vacuum Pumps	2	EA	\$6,360.00	\$12,720
3", 4" & 6" Plug Valve, Eccentric	9	EA	\$2,490.00	\$22,410
Automatic Air Release Valve	3	EA	\$320.00	\$960
3" & 4" Swing Check	3	EA	\$1,250.00	\$3,750
4" Flanged Iron Cross	1	EA	\$935.00	\$935
Floor Sink	1	EA	\$435.00	\$435
Cleanout	1	EA	\$230.00	\$230
Expansion Joint, 3", 4" & 6"	6	EA	\$420.00	\$2,520
Paint & Label Piping	1	LS	\$750.00	\$750
Emergency Shower/Eye Wash Water Heater	1	LS	\$3,876.00	\$3,876
Storage Tank	1	EA	\$475.00	\$475
Hose Bibbs	1	LS	\$432.00	\$432
Well Piping in Building	1	LS	\$1,120.00	\$1,120
Emergency Shower/Eye Wash	1	LS	\$1,015.00	\$1,015
<b>Sampler and Flow Measurement</b>				
Radar Water Flow Meter for Manhole	1	EA	\$13,000.00	\$13,000
Automatic Composite Sampler	1	EA	\$2,500.00	\$2,500
4' dia. x 7' Manhole	1	EA	\$4,335.00	\$4,335
Manhole Boot Seal for 12" Pipe (\$20/Inch Dia. installed)	2	EA	\$240.00	\$480
Hinged Aluminum Lid & FRP Shelf for Sampler Manhole	1	LS	\$1,500.00	\$1,500
General Contractor Markup (10%)	0.1		\$341,092.00	\$34,109

E

<b>ADA COMPLIANCE</b>				
<b>Plumbing</b>			<b>Subtotal</b>	<b>\$0</b>
<b>None</b>				



**BASE BID HVAC SUMMARY**

**\$45,220**

**A**

GENERAL SITEWORK				
Heat & Vent			Subtotal	\$17,886
LP Gas Piping & Secondary Regulators	3	LS	\$3,500.00	\$10,500
Propane Tank	0	EA	\$3,850.00	\$0
Propane	1,800	Gal.	\$2.50	\$4,500
Primary Regulator	2	EA	\$630.00	\$1,260
General Contractor Markup (10%)	0.1		\$16,260.00	\$1,626

**B**

INFLUENT TREATMENT BUILDING				
Heat & Vent			Subtotal	\$13,919
Unit Heater	2	EA	\$800.00	\$1,600
Exhaust Fan (1/2 H.P. sidewall with disconnect)	1	EA	\$1,475.00	\$1,475
Intake Louver (52" x 26" with MOD, Sleeve)	9.4	SF	\$192.50	\$1,810
Control Damper (52" x 26", insulated)	9.4	SF	\$97.25	\$914
Exhaust Louver (30" x 30" with MOD, Sleeve)	6.3	SF	\$192.50	\$1,213
Control Damper (30" x 30", insulated)	6.3	SF	\$97.25	\$613
Temperature Controls	1	LS	\$3,480.00	\$3,480
Test and Balance	1	LS	\$1,550.00	\$1,550
General Contractor Markup (10%)	0.1		\$12,654.08	\$1,265

**C**

UPPER & LOWER TANK PAVILIONS				
Heat & Vent			Subtotal	\$0
None				

**D**

EFFLUENT TREATMENT				
Heat & Vent			Subtotal	\$13,415
Interior Ventilation Work (Effluent Treatment Bldg)				
Exhaust Fan, Large	1	EA	\$3,090.00	\$3,090
Exhaust Fan, Small	1	EA	\$300.00	\$300
Weather Louver (14 sf)	1	EA	\$700.00	\$700
Control Dampers & Motors	2	EA	\$2,345.00	\$4,690



Item	Number	Units	Cost/Unit	Subtotal
Industrial Thermostat	2	EA	\$205.00	\$410
<b>Interior Heating Work (Effluent Treatment Bldg)</b>				
Unit Heater	2	EA	\$800.00	\$1,600
Industrial Thermostat	1	EA	\$205.00	\$205
Test and Balance	1	LS	\$1,200.00	\$1,200
General Contractor Markup (10%)	0.1		\$12,195.00	\$1,220

E

ADA COMPLIANCE				
Heat & Vent			Subtotal	\$0
None				



**BASE BID ELECTRICAL SUMMARY**

**\$362,619**

Item	Number	Units	Cost/Unit	Subtotal
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**A**

<b>GENERAL SITEWORK</b>				
<b>Electrical</b>			<b>Subtotal</b>	<b>\$216,868</b>
<b>General Site Electrical</b>				
Utility Company Additional Facilities Charges	1	LS	\$2,600.00	\$2,600
Service Entrance Feeders, Utility				
3" RGS	70	FT	\$43.50	\$3,045
#300 KCMIL	3.4	CFt	\$980.00	\$3,293
#4	0.5	CFt	\$207.00	\$104
Meter	1	LS	\$400.00	\$400
400 A NF Disconnect, NEMA 3R	1	EA	\$3,225.00	\$3,225
Trenching	1,650	FT	\$15.00	\$24,750
3/4"C, PVC-80, Typ.	60	FT	\$6.00	\$360
1" C	830	FT	\$8.00	\$6,640
1-1/4" C	635	FT	\$9.00	\$5,715
1-1/2" C	300	FT	\$10.00	\$3,000
2" C	2,320	FT	\$12.00	\$27,840
#10	29.0	CFt	\$82.00	\$2,378
#8	35.2	CFt	\$110.00	\$3,872
#6	12.0	CFt	\$152.00	\$1,824
#4	27.5	CFt	\$207.00	\$5,693
#2	7.2	CFt	\$282.00	\$2,030
#1	3.6	CFt	\$340.00	\$1,224
#1/0	33.6	CFt	\$420.00	\$14,112
#14	192.2	CFt	\$56.00	\$10,763
2 Pair Cat 3 Phone	3.0	CFt	\$80.00	\$240
Handholes	5	EA	\$500.00	\$2,500
Connect Existing Hatchery Building	1	LS	\$600.00	\$600
Connect Freezer, Garage and Well	1	LS	\$800.00	\$800
Generator Pad	1	LS	\$1,200.00	\$1,200
125 KW Diesel Generator	1	EA	\$41,300.00	\$41,300
Base Mounted Fuel Tank	1	EA	\$2,400.00	\$2,400
Weatherproof Housing	1	EA	\$3,200.00	\$3,200
Electrical Conduit and Wire	1	LS	\$600.00	\$600
Domestic Pump Comb Starter, NEMA Size 0, NEMA 12	1	LS	\$1,250.00	\$1,250
Upper Reuse Pump Control				
VFD	2	EA	\$2,200.00	\$4,400
LR	2	EA	\$250.00	\$500
CPT	1	EA	\$150.00	\$150
Relays and Timmers	11	EA	\$150.00	\$1,650
Controller, Leak and Temp	2	EA	\$460.00	\$920
Cooling Fan & T-Stat	1	EA	\$300.00	\$300

Item	Number	Units	Cost/Unit	Subtotal
Enclosure with Disconnect	1	EA	\$350.00	\$350
MCP's	2	EA	\$200.00	\$400
Push Buttons and Indicator Lights	13	EA	\$125.00	\$1,625
Speed Pot	2	EA	\$250.00	\$500
Start-Up and Testing	1	LS	\$2,400.00	\$2,400
Shop Drawings	1	EA	\$800.00	\$800
Misc	1	EA	\$1,200.00	\$1,200
Outdoor Terminal Junction Box	1	EA	\$600.00	\$600
Float Switches	4	EA	\$250.00	\$1,000
Load Side Conduit and Wire	1	LS	\$3,000.00	\$3,000
Oxygen Pad Junction Box	1	LS	\$400.00	\$400
General Contractor Markup (10%)	0.1		\$197,152	\$19,715

**B**

INFLUENT TREATMENT BUILDING				
Electrical			Subtotal	\$49,618
Main Switchboard	1	LS	\$4,500.00	\$4,500
400A MLO I-Line, 480V	1	LS	\$2,950.00	\$2,950
30A, 3-P	1	EA	\$510.00	\$510
250A, 3-P	1	EA	\$3,100.00	\$3,100
Surge Arrester	1	LS	\$1,800.00	\$1,800
ATS, 260A, 4-Pole	1	LS	\$6,100.00	\$6,100
Panel DP1, 400A, MLO, 480V WYE, 30 ckt, Subfeed Brkr	1	EA	\$4,225.00	\$4,225
Branch Breakers	14	EA	\$95.00	\$1,330
75 KVA Dry type Transformer	1	EA	\$6,125.00	\$6,125
Panel LDP, 250A MB, 208V WYE, 42 ckt	1	EA	\$2,650.00	\$2,650
Bolt In Branch Breakers	36	EA	\$72.00	\$2,592
Combination Starter, Well, Size 1, NEMA 12	1	EA	\$1,250.00	\$1,250
Auto Dialer	1	EA	\$3,800.00	\$3,800
Alarm Terminal Junction Box	1	LS	\$950.00	\$950
Exhaust Fan Connections	1	LS	\$150.00	\$150
Flow Meter Connections	2	EA	\$110.00	\$220
Drum Filter	1	LS	\$250.00	\$250
UV	1	LS	\$250.00	\$250
Grounding	1	LS	\$500.00	\$500
Light Fixtures, F3	4	EA	\$145.00	\$580
Light Fixtures, F2	1	EA	\$480.00	\$480
Receptacles	4	EA	\$180.00	\$720
Switch	1	EA	\$75.00	\$75
General Contractor Markup (10%)	0.1		\$45,107	\$4,511

Item	Number	Units	Cost/Unit	Subtotal
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C

<b>UPPER &amp; LOWER TANK PAVILIONS</b>				
<b>Electrical</b>			<b>Subtotal</b>	<b>\$50,803</b>
<b>Upper Tank Pavilion</b>				
Light Fixtures, F1	16	EA	\$325.00	\$5,200
Light Fixtures, F2	2	LS	\$480.00	\$960
Panel LC2	1	LS	\$1,950.00	\$1,950
Branch Breakers	10	EA	\$50.00	\$500
HRF and Controls	3	LS	\$400.00	\$1,200
Receptacles	8	EA	\$75.00	\$600
Door Operators	2	EA	\$150.00	\$300
Manual Motor Starters	2	EA	\$560.00	\$1,120
Ground Rod and Ufer Ground	1	LS	\$350.00	\$350
Ground Building Steel	1	LS	\$150.00	\$150
3/4" PVC-80 Conduit	260	FT	\$6.00	\$1,560
3/4" RGS Conduit	640	FT	\$10.40	\$6,656
#12	20.5	CFt	\$67.00	\$1,374
#10	14.3	CFt	\$82.00	\$1,173
<b>Lower Tank Pavilion</b>				
Light Fixtures, F1	16	EA	\$325.00	\$5,200
Light Fixtures, F2	2	LS	\$480.00	\$960
Panel LC2	1	LS	\$1,950.00	\$1,950
Branch Breakers	10	EA	\$50.00	\$500
HRF and Controls	3	LS	\$400.00	\$1,200
Receptacles	8	EA	\$75.00	\$600
Door Operators	2	EA	\$150.00	\$300
Manual Motor Starters	2	EA	\$560.00	\$1,120
Ground Rod and Ufer Ground	1	LS	\$350.00	\$350
Ground Building Steel	1	LS	\$150.00	\$150
3/4" PVC-80 Conduit	260	FT	\$6.00	\$1,560
3/4" RGS Conduit	640	FT	\$10.40	\$6,656
#12	20.5	CFt	\$67.00	\$1,374
#10	14.3	CFt	\$82.00	\$1,173
General Contractor Markup (10%)	0.1		\$46,184.20	\$4,618

D

<b>EFFLUENT TREATMENT</b>				
<b>Electrical</b>			<b>Subtotal</b>	<b>\$45,331</b>
Light Fixtures, F3	8	EA	\$240.00	\$1,920
Light Fixtures, F2	1	EA	\$480.00	\$480
Receptacles	3	EA	\$180.00	\$540
Switch	1	EA	\$75.00	\$75
Alarm Junction Box	1	EA	\$400.00	\$400
Surge Arrester	1	LS	\$1,200.00	\$1,200
Panel DP4, 100A, MLO, 480V WYE, 42 ckt,	1	EA	\$4,900.00	\$4,900

Item	Number	Units	Cost/Unit	Subtotal
Branch Breakers	10	EA	\$450.00	\$4,500
Panel LC4	1	LS	\$2,250.00	\$2,250
Branch Breakers	10	EA	\$50.00	\$500
SMP-1 Comb Starter, Size 1, NEMA 12	1	EA	\$1,350.00	\$1,350
Time Switch	1	EA	\$250.00	\$250
Clarifier Control Panel, Connect Only	1	EA	\$200.00	\$200
Backwash Pumpstation CP, Install Only	1	EA	\$100.00	\$100
Upper Reuse Pump Control				
VFD	2	EA	\$2,400.00	\$4,800
LR	2	EA	\$250.00	\$500
CPT	1	EA	\$150.00	\$150
Relays and Timers	11	EA	\$150.00	\$1,650
Controller, Leak and Temp	2	EA	\$460.00	\$920
Cooling Fan & T-Stat	1	EA	\$300.00	\$300
Enclosure with Disconnect	1	EA	\$350.00	\$350
MCP's	2	EA	\$200.00	\$400
Push Buttons and Indicator Lights	13	EA	\$125.00	\$1,625
Speed Pot	2	EA	\$250.00	\$500
Start-Up and Testing	1	LS	\$2,400.00	\$2,400
Shop Drawings	1	EA	\$800.00	\$800
Misc	1	EA	\$1,200.00	\$1,200
Effluent Meter, Connect Only	1	EA	\$100.00	\$100
Connect 480 volt Motors	3	EA	\$75.00	\$225
WEF-2 Starter	1	EA	\$450.00	\$450
EUH-3 & EUH-4	2	EA	\$375.00	\$750
WEF-2	1	EA	\$250.00	\$250
CEF-1	1	EA	\$75.00	\$75
T-Stat	3	EA	\$50.00	\$150
Drum Filters	2	EA	\$350.00	\$700
Outdoor Junction Box	2	EA	\$600.00	\$1,200
Float Switches, Reuse	4	EA	\$250.00	\$1,000
Float Switches, Backwash	4	EA	\$50.00	\$200
Clarifier Rack Connections	1	EA	\$400.00	\$400
EWB-1 Connect	1	EA	\$550.00	\$550
Effluent Meter Sump Electrical	1	LS	\$900.00	\$900
General Contractor Markup (10%)	0.1		\$41,210.00	\$4,121

E

ADA COMPLIANCE				
Electrical			Subtotal	\$0
None				