

The Dalles WWTP Expansion

City of The Dalles
The Dalles, OR

GMP Estimate

Estimate Date: December 12, 2016

ESTIMATE SUMMARY



TOTAL PROJECT			10.00 - IPS	20.00 - Headworks	40.00 - Primary Filtration	50.00 - Digester	60.00 - Cogen	90.00 - Site Work
UniFormat System Level 2	Total Price		GMP Price	Total Price	Total Price	Total Price	Total Price	Total Price
B1 Superstructure	\$1,754,443		\$38,214	\$ 645,800	\$ 155,819	\$ 897,556	\$ 17,054	\$ -
B2 Exterior Enclosure	\$13,277		\$ -	\$ 13,277	\$ -	\$ -	\$ -	\$ -
B3 Roofing	\$86,997		\$ -	\$ 25,986	\$ 29,139	\$ 28,072	\$ 3,800	\$ -
C1 Interior Construction	\$53,110		\$ 12,300	\$ 19,990	\$ 9,620	\$ 11,200	\$ -	\$ -
C2 Stairs	\$129,375		\$ 13,200	\$ 43,475	\$ 5,500	\$ 67,200	\$ -	\$ -
D2 Mechanical	\$3,051,060		\$ 613,284	\$ 938,018	\$ 283,971	\$ 645,497	\$ 570,290	\$ -
D5 Electrical Systems	\$804,550		\$ 346,050	\$ 294,000	\$ 55,000	\$ 80,500	\$ 29,000	\$ -
D6 SCADA/I&C	\$308,627		\$ 70,213	\$ 64,040	\$ 76,385	\$ 76,385	\$ 21,604	\$ -
F2 Selective Building Demolition	\$152,442		\$ 47,797	\$ 38,432	\$ 45,171	\$ 21,042	\$ -	\$ -
G1 Site Preparation	\$220,981		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 220,981
G2 Site Improvements - Fence Only	\$102,480		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 102,480
G3 Site Paving, Civil / Mechanical Utilities	\$331,335		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 331,335
G4 Site Electrical Utilities	\$67,000		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 67,000
Z1 General Requirements	\$1,132,064		\$ 139,449	\$ 334,293	\$ 85,432	\$ 309,787	\$ 121,330	\$ 141,772
Subtotal Direct Construction Price		\$ 8,207,741	\$ 1,280,507	\$ 2,417,311	\$ 746,037	\$ 2,137,239	\$ 763,078	\$ 863,568
Cost Escalation - Average	0.000%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Design/Build Contingency	5.000%	\$ 410,387	\$ 64,025	\$ 120,866	\$ 37,302	\$ 106,862	\$ 38,154	\$ 43,178
Subtotal		\$ 8,618,128	\$ 1,344,533	\$ 2,538,176	\$ 783,339	\$ 2,244,101	\$ 801,232	\$ 906,747
Design Completion(20%) and Const Admin	8.122%	\$ 700,000	\$ 124,878	\$ 209,041	\$ 62,239	\$ 172,381	\$ 61,774	\$ 69,687
Bldg Permits/Plan Check Fees	by owner 0.000%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Testing/Inspection	by owner 0.000%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal		\$ 9,318,128	\$ 1,469,411	\$ 2,747,217	\$ 845,577	\$ 2,416,482	\$ 863,006	\$ 976,434
Subcontractor Default Insurance	1.300%	\$ 90,276	\$ 13,983	\$ 26,397	\$ 8,794	\$ 23,339	\$ 8,333	\$ 9,430
Contractor's Liability Insurances	0.663%	\$ 65,898	\$ 10,383	\$ 19,414	\$ 5,980	\$ 17,078	\$ 6,099	\$ 6,943
Builder's Risk Insurances	0.089%	\$ 14,857	\$ 1,394	\$ 2,606	\$ 803	\$ 2,293	\$ 819	\$ 6,943
Payment/Performance Bond	0.683%	\$ 67,886	\$ 10,696	\$ 20,000	\$ 6,161	\$ 17,593	\$ 6,283	\$ 7,152
Subtotal		\$ 9,557,044	\$ 1,505,868	\$ 2,815,635	\$ 867,315	\$ 2,476,785	\$ 884,540	\$ 1,006,902
Design/Build Fee	4.000%	\$ 382,282	\$ 60,235	\$ 112,625	\$ 34,693	\$ 99,071	\$ 35,382	\$ 40,276
TOTAL PHASE 2 DESIGN/BUILD GMP		\$ 9,939,326	\$ 1,566,102	\$ 2,928,260	\$ 902,008	\$ 2,575,856	\$ 919,922	\$ 1,047,178
		\$ -						
Phase 1A Precon Agreement - Preliminary Design Solution		\$ 127,274						
Phase 1B Precon Agreement - to 80% Design		\$ 895,000						
TOTAL DESIGN/BUILD GMP		\$ 10,961,600						

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Project Qty: 1 GSF

Description	Quantity	Unit	\$	Total \$'s
10 - 10 - IPS Renovations				
SUPERSTRUCTURE				
Reinforcement Steel				
4 Rebar - Influent Pump Station Pads	0.23	ton	2,116.80	476
5 Reinforcement Steel Total	-	-	-	476
CIP Concrete - Structure				
8 CIP Conc. - Pump Pedastals	2.00	cy	1,617.42	3,235
9 CIP Conc. - IPS Generator Pad (Incls rebar)	18.00	cy	771.12	13,880
10 Grout Wetwell Floor For Pump Intakes - 2 Finishers, 1 Day	12.00	hour	360.34	4,324
11 Misc Read-Mix Charges (Eco Pans, Hot Water, Slick Line, Etc.)	2.00	cy	3.98	8
12 CIP Concrete - Structure Total	-	-	-	21,447
Misc. Metal Fabrications				
15 Grating Access Walkway - Modify/Reinstall	1.00	Isum	12,960.00	12,960
16 Pipe Supports (w/ Mech Piping)	-	-	-	-
17 Misc. Metal Fabrications Total	-	-	-	12,960
Handrails & Railings				
20 3-Line Aluminum Pipe Rail at landings	15.00	lf	105.23	1,578
21 Handrails & Railings Total	-	-	-	1,578
Grating & Floor Plates				
24 Galv. Steel Grated Landings	32.40	sf	54.09	1,753
25 Grating & Floor Plates Total	-	-	-	1,753
27 SUPERSTRUCTURE Total	-	sf	-	38,214
INTERIOR CONSTRUCTION				
Painting				
31 Pipe Coatings	1.00	Isum	12,300.00	12,300
32 Painting Total	-	-	-	12,300
34 INTERIOR CONSTRUCTION Total	-	sf	-	12,300
STAIRS				
Metal Stairs & Ladders				
38 Galv. Steel Ships Ladder & Rail	12.00	rise	1,100.00	13,200
39 Metal Stairs & Ladders Total	-	-	-	13,200
41 STAIRS Total	12.00	rise	1,100.00	13,200
MECHANICAL				
Solid Waste Handling Equipment				
45 CML 15.0 - Labor Reduction (1/5)	1.00	Isum	-16,416.00	-16,416
46 Solid Waste Handling Equipment Total	-	-	-	-16,416
Immersible Screw Centrifugal Pumps				
49 Centrifugal Pumps	3.00	ea	103,548.60	310,646
50 Install Centrifugal Pumps	3.00	ea	6,195.24	18,586
51 Immersible Screw Centrifugal Pumps Total	-	-	-	329,232
Temp Bypass Pumping				

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Description	Quantity	Unit	\$	Total \$'s
54 Temp Bypass Systems For Wetwell Work	1.00 week		67,157.15	67,157
55 Temp Bypass Pumping Total	-		-	67,157
Piping, Valves and Accessories				
58 Pipe Testing - Interior Piping	1.00 lsum		17,350.20	17,350
59 Pipe Material Handling / Consumables	1.00 lsum		8,302.39	8,302
60 Support Engineering	1.00 lsum		6,426.00	6,426
61 RS Piping, Fittings & Valves (24", 16", 12")	1.00 lsum		183,160.28	183,160
62 Relocate existing seal water station	1.00 lsum		5,363.14	5,363
63 Piping, Valves and Accessories Total	-		-	220,602
Exhaust Air Systems				
66 New ventilation at IPS	1.00 lsum		17,850.00	17,850
67 Exhaust Air Systems Total	-		-	17,850
69 MECHANICAL Total	- sf		-	618,425
ELECTRICAL				
Equipment Connections				
73 Electrical Design Services	1.00 lsum		4,500.00	4,500
74 Power Distribution/Connection	1.00 lsum		119,000.00	119,000
75 Inclds assistance w/ existing pump demo	-		-	-
76 Inclds Install of new VFD's in existing panels, pump feeders, wiring/conduit	-		-	-
77 Generator Supply (Inclds 300kw gen. set, mods to MCC-IE, misc. equip at IPS)	1.00 lsum		135,550.00	135,550
78 Generator Install (Inclds (3) feeders at exist. gen set, new ATS, Feeders at new gen. set.)	1.00 lsum		62,000.00	62,000
79 Electrical Contingency (x%)	1.00 lsum		25,000.00	25,000
80 Equipment Connections Total	-		-	346,050
82 ELECTRICAL Total	- sf		-	346,050
LOW VOLTAGE / SPECIAL SYSTEMS				
SCADA Systems and Control				
86 Design Services/Commissioning/Control Integration	1.00 lsum		39,350.00	39,350
87 I&C Distribution/Connection	1.00 lsum		30,863.00	30,863
88 SCADA Systems and Control Total	-		-	70,213
90 LOW VOLTAGE / SPECIAL SYSTEMS Total	- sf		-	70,213
SELECTIVE BUILDING DEMOLITION				
Selective Demolition				
94 Remove/replace Equipment Opening Covers	3.00 ea		123.72	371
95 Remove Existing Pumps	3.00 ea		1,940.65	5,822
96 Demo/Remove Existing Pump Piers	3.00 ea		659.83	1,979
97 Demo Lowest Flight of Stairs/Railings	20.00 rise		371.16	7,423
98 Remove Existing Access Grating	24.00 hour		61.86	1,485
99 Core 34" Hole For New 30" Effluent Line To Headworks	1.00 ea		4,869.36	4,869
100 Core 18" Hole For New 14" Influent Lines From Wetwell	3.00 ea		1,789.68	5,369
101 Demo/Remove Existing Pipe, Fittings & Valves	1.00 lsum		16,172.96	16,173
102 Misc Sawcutting	1.00 lsum		3,213.00	3,213
103 Demo Dumpster	1.00 load		1,092.42	1,092
104 Selective Demolition Total	-		-	47,797
106 SELECTIVE BUILDING DEMOLITION Total	- sf		-	47,797

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Description	Quantity	Unit	Total
\$		\$'s	
108 10 - IPS Renovations Total	- GSF	-	1,146,199
20 - 20 - Headworks			
SUPERSTRUCTURE			
Formwork			
113 Deck Formwork For Grit Classifier Slab (w/CIP Concrete)	- fyi	-	-
114 Formwork Total	-	-	-
Reinforcement Steel			
117 Rebar - Grit Tank/ Classifier Mudslab (Unreinforced)	- fyi	-	-
118 Rebar - Grit Tank Strip Footing Against Existing (80 lbs/cy)	0.11 ton	2,116.80	229
119 Rebar - Grit Classifier/ Grit Tank Foundation (175 lbs/cy)	4.50 ton	2,116.80	9,526
120 Rebar - Strip Footing For Stair Cheek Wall	0.07 ton	2,116.80	158
121 Rebar - Strip Footing In Lieu of Deadman (Unreinforced)	- fyi	2,116.80	-
122 Rebar - Grit Tank Low Wall Below Mat Fdn.	0.12 ton	2,116.80	248
123 Rebar - Grit Tank First Lift of Walls	3.60 ton	2,116.80	7,620
124 Rebar - Grit Tank Lower Radius Wall	0.90 ton	2,116.80	1,905
125 Rebar - Grit Tank Upper Radius Wall	7.53 ton	2,116.80	15,940
126 Rebar - Grit Tank Upper Lift of Walls	1.80 ton	2,116.80	3,810
127 Rebar - Grit Tank Chunk at 99'	0.90 ton	2,116.80	1,905
128 Rebar - Grit Classifier Chunk on Elevated Slab	5.40 ton	2,116.80	11,431
129 Rebar - Stair Cheek Walls	0.10 ton	2,116.80	206
130 Rebar - Grit Classifier First Lift of Walls	6.30 ton	2,116.80	13,336
131 Rebar - Grit Classifier Channel Walls	4.50 ton	2,116.80	9,526
132 Rebar - Grit Tank Elevated Slab	0.19 ton	2,116.80	394
133 Rebar - Grit Classifier Elevated Slab	3.93 ton	2,116.80	8,319
134 Rebar - Grit Classifier Elevated "Chunk slab" - Not Req'd	- fyi	-	-
135 Rebar - SOG At Underside of Grit Tank Walls	0.22 ton	2,116.80	461
136 Rebar - SOG To Seal Top of Grit Tank (Single Mat #5's At 12"ocw)	0.24 ton	2,116.80	498
137 Rebar - Fill Inside Grit Tank Channel	0.13 ton	2,116.80	283
138 Rebar - Fill Inside Grit Tank	0.16 ton	2,116.80	343
139 Rebar - Stairs On Grade	0.09 ton	2,116.80	191
140 Reinforcement Steel Total	-	-	86,327
CIP Concrete - Structure			
143 CIP Conc. - Grit Tank/ Classifier Mudslab (10cy)- On Rock	- sf	-	-
144 CIP Conc. - Grit Tank Strip Footing at Existing	2.00 cy	1,039.08	2,078
145 CIP Conc. -Headworks Mat Foundation	36.00 cy	510.62	18,382
146 CIP Conc. - Pad for Steel Stair	1.00 cy	1,494.69	1,495
147 CIP Conc. - Strip Footing In Lieu of Deadman	8.00 cy	229.41	1,835
148 CIP Conc. - Grit Tank Wall Below Mat Fdn. (2cy)	56.00 sf	53.73	3,009
149 CIP Conc. - Grit Tank First Lift of Walls (16cy)	443.00 sf	39.95	17,696
150 CIP Conc. - Grit Tank Lower Radius Wall (5cy)	751.00 sf	33.92	25,474
151 CIP Conc. - Grit Tank Upper Radius Wall (47 cy)	737.00 sf	84.17	62,030
152 CIP Conc. - Grit Tank Upper Lift Of Walls (8cy)	211.00 sf	95.23	20,094
153 CIP Conc. - Grit Tank Chunk at 99' - Not Req'd	- fyi	-	-
154 CIP Conc. - Grit Classifier Chunk on Elevated Slab (24cy) - Not Req'd	- fyi	-	-
155 CIP Conc. - Grit Classifier First Lift of Walls (22 cy)	690.00 sf	97.37	67,183
156 CIP Conc. - Grit Classifier Channel Walls (18 cy)	479.00 sf	75.81	36,313
157 CIP Conc. - Grit Tank Elevated Slab (1cy)	36.00 sf	152.87	5,503
158 CIP Conc. - Grit Classifier Elevated Slab (28 cy)	506.00 sf	66.25	33,523
159 CIP Conc. - Grit Classifier Elevated "Chunk Slab" (9cy)	48.00 sf	257.55	12,362

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Description	Quantity	Unit	\$	Total \$'s
160 CIP Conc. - SOG At Underside of Large Diameter Walls (12 cy)	315.00	sf	76.92	24,229
161 CIP Conc. - Fill Inside Grit Tank Channel	3.00	cy	312.73	938
162 CIP Conc. - Fill Inside Grit Tank	3.00	cy	1,405.58	4,217
163 CIP Conc. - Elec Equipment Pads	250.00	sf	32.13	8,033
164 Misc Read-Mix Charges (Eco Pans, Hot Water, Slick Line, Etc.)	3.00	cy	3.98	12
165 CIP Concrete - Structure Total	-	-	-	344,406
Structure Water Test				
168 Hydrostatic Test of Primary Filter / Grit Channels & Gates	1.00	lsum	9,639.00	9,639
169 Structure Water Test Total	-	-	-	9,639
Project Hoisting				
172 Hydro Crane, Rough Terrain - 90 Ton Rental, Operated	1.00	mnth	50,000.00	50,000
173 Forklift, Rough Terrain - 10,000# Rental, Unoperated	8.00	mnth	4,900.00	39,200
174 Project Hoisting Total	-	-	-	89,200
Misc. Metal Fabrications				
177 Pipe Supports (w/ Mech Piping)	-	-	-	-
178 Prefabricated Influent/Effluent "Chutes" at Grit Chamber	1.00	lsum	32,120.28	32,120
179 Davit Base	3.00	ea	300.00	900
180 Sharp-Crested Weir Plate - Embedded	3.00	lf	421.20	1,264
181 Sharp-Crested Weir Plate - Face Mounted	4.30	lf	421.20	1,811
182 Misc. Metals Not Shown	1.00	lsum	5,000.00	5,000
183 Misc. Metal Fabrications Total	-	-	-	41,095
Handrails & Railings				
186 3-Line Aluminum Pipe Rail at Perimeter Screens / Grit Channels	128.00	lf	118.23	15,133
187 Handrails & Railings Total	-	-	-	15,133
Painting				
190 Coating at Screening Channels	1,250.00	sf	48.00	60,000
191 Painting Total	-	-	-	60,000
193 SUPERSTRUCTURE Total	-	sf	-	645,800
EXTERIOR ENCLOSURE				
Doors / Frames / Hardware Package				
197 H.M. Door, Frame & Hdwr - Single Exterior Pkg @ Elec. Rm	1.00	set	1,908.85	1,909
198 H.M. Door, Frame & Hdwr - Double Exterior Pkg @ New Grit Rm	1.00	set	2,368.56	2,369
199 Doors / Frames / Hardware Package Total	-	-	-	4,277
Coiling Doors & Grilles				
202 Overhead Coiling Door, Power Insul.	120.00	sf	75.00	9,000
203 Coiling Doors & Grilles Total	-	-	-	9,000
205 EXTERIOR ENCLOSURE Total	120.00	sf	110.65	13,277
ROOFING				
Grating & Floor Plates				
209 Alum. Grate & Frame @ Screen Channels	360.50	sf	48.05	17,320
210 Cantilevered Alum. Walkway	54.00	sf	52.56	2,838
211 Alum. Checker Plate & Frame @ Grit Chamber	104.60	sf	48.05	5,026

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				\$	\$'s
212	Alum. Checker Plate & Frame @ Elec. Rm	16.70	sf	48.05	802
213	Grating & Floor Plates Total	-		-	25,986
215	ROOFING Total	-	sf	-	25,986
INTERIOR CONSTRUCTION					
Unit Masonry					
219	8" CMU - Interior Block at Door Infill	38.00	sf	28.00	1,064
220	Unit Masonry Total	-		-	1,064
Doors / Frames / Hardware Package					
223	H.M. Door, Frame & Hdwr - Single Interior Pkg @ Elec. Rm	1.00	set	1,908.85	1,909
224	Doors / Frames / Hardware Package Total	-		-	1,909
Interior Construction					
227	Interior Improvements @ Elec Rm (Allowance)	363.00	gsf	15.00	5,445
228	Interior Construction Total	-		-	5,445
Gypsum Board Walls					
231	GWBD at New Elec. Rm	336.00	sf	8.25	2,772
232	Gypsum Board Walls Total	-		-	2,772
Painting					
235	Pipe Coatings	1.00	lsum	8,800.00	8,800
236	Painting Total	-		-	8,800
238	INTERIOR CONSTRUCTION Total	-	sf	-	19,990
STAIRS					
Metal Stairs & Ladders					
242	Alum Grating Stair w/ Framed Landing & Rails to Screens (18' high)	31.00	rise	1,175.00	36,425
243	Alum Grating Stair w/ Framed Landing & Rails to Elec. Rm	6.00	rise	1,175.00	7,050
244	Metal Stairs & Ladders Total	-		-	43,475
246	STAIRS Total	37.00	rise	1,175.00	43,475
MECHANICAL					
Misc. Metal Fabrications					
250	Prefabricated Influent/Effluent "Chute" supports at Grit Chamber	1.00	lsum	5,139.72	5,140
251	Misc. Metal Fabrications Total	-		-	5,140
Screening Equipment					
254	Manual Bar Screen	1.00	ea	25,920.00	25,920
255	Screens - Multi rake Huber	2.00	ea	112,860.00	225,720
256	Heat Trace Deadplate of RakeMax	2.00	ea	5,400.00	10,800
257	Screen Washer/compactor	2.00	ea	8,370.00	16,740
258	Common WAP Discharge Chute to Lower Level	1.00	ea	7,560.00	7,560
259	Heat Trace for Wash Press	1.00	ea	23,625.00	23,625
260	Install Screens - Multi rake Huber & Manual Bar Screen	1.00	lsum	29,056.32	29,056
261	Screening Equipment Total	-		-	339,421
Grit Removal Equipment					
264	Grit Vortex - S&L Pista	1.00	ea	126,684.00	126,684
265	Grit Pump - WEMCO	1.00	ea	39,564.72	39,565

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Description	Quantity	Unit	\$	Total \$'s
266 Grit Classifier - Refurbish Existing	1.00 ea	20,520.00		20,520
267 Install Grit Separator Equipment	1.00 lsum	24,408.00		24,408
268 Install Grit Pump & Classifier	1.00 lsum	1,933.20		1,933
269 Grit Classifier Access Paltform - Not Req'd	-	-		-
270 Refuse Container by Owner	-	-		-
271 Unload / Store Equipment	1.00 lsum	3,790.80		3,791
272 Grit Removal Equipment Total	-	-		216,901
Solid Waste Handling Equipment				
275 CML 15.0 - Labor Reduction (1/5)	1.00 lsum	-16,416.00		-16,416
276 Solid Waste Handling Equipment Total	-	-		-16,416
Weir and Slide Gates				
279 Slide Gate GT-2201 (48x60) (Manual Op.)	1.00 ea	8,812.80		8,813
280 Slide Gate GT-2202, 2204 (48x52) (Manual Op.)	2.00 ea	8,812.80		17,626
281 Slide Gate GT-2203 (42x60) (Manual Op.)	1.00 ea	8,812.80		8,813
282 Grout Slide Gates	4.00 ea	496.80		1,987
283 Weir and Slide Gates Total	-	-		37,238
Temp Bypass Pumping				
286 Temp Bypass Systems (Headworks)	1.00 lsum	105,713.15		105,713
287 Temp Bypass Pumping Total	-	-		105,713
Piping, Valves and Accessories				
290 RS Piping, Fittings & Valves - Grit Rm(24", 16")	1.00 lsum	84,877.18		84,877
291 Grit Piping & Fittings - Inclds Ex./Encase./BFill	1.00 lsum	21,028.44		21,028
292 2W Piping, Fittings & Valves (2")	1.00 lsum	5,489.09		5,489
293 Overflow from Grit to Washer	1.00 lsum	4,205.17		4,205
294 Utility Water Piping & Fittings	1.00 lsum	10,512.94		10,513
295 24" dia. Pipe & Fittings - HDWRKS to PFs	1.00 lsum	25,827.38		25,827
296 Mudvalves & Piping at Screen Channels	1.00 lsum	10,081.11		10,081
297 Insulate Water Piping	1.00 lsum	8,996.40		8,996
298 Piping, Valves and Accessories Total	-	-		171,018
Plumbing Systems				
301 Drain Plumbing & Fittings (6", 4") - Inclds Ex./BFill, Encase w/ Conc	1.00 lsum	25,033.13		25,033
302 Trench Drain	1.00 lsum	6,426.00		6,426
303 Plumbing Systems Total	-	-		31,459
Heating / Ventilating / Air-Conditioning Systems (HVAC)				
306 Split System & Boiler at Elec. Rm	1.00 lsum	11,900.00		11,900
307 Louver at Grit Rm	1.00 ea	2,380.00		2,380
308 Heating / Ventilating / Air-Conditioning Systems (HVAC) Total	-	-		14,280
Exhaust Air Systems				
311 FRP Odor Control Ductwork	1.00 lsum	19,784.94		19,785
312 New Odor Control Fan	1.00 lsum	13,479.26		13,479
313 Exhaust Air Systems Total	-	-		33,264
315 MECHANICAL Total	- sf	-		938,018
ELECTRICAL				
Equipment Connections				
319 Electrical Design Services	1.00 lsum	4,500.00		4,500

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Description	Quantity	Unit	\$	Total \$'s
320 Power Distribution/Connection	1.00	Isum	236,500.00	236,500
321 Inclds assistance w/ existing equip demo	-		-	-
322 Inclds Install of New MCC/Transformer/Control Panel (provided by others)	-		-	-
323 Inclds Supply of New MCC and Transformer	-		-	-
324 Inclds conduit/wire/conenctions to new Mech. Equip.	-		-	-
325 Short Circuit Analysis / Arc Flash Study of new MCC	1.00	Isum	10,000.00	10,000
326 Heat Trace Exterior Piping	1.00	Isum	18,000.00	18,000
327 Electrical Contingency (x%)	1.00	Isum	25,000.00	25,000
328 Equipment Connections Total	-		-	294,000
330 ELECTRICAL Total	-	sf	-	294,000
LOW VOLTAGE / SPECIAL SYSTEMS				
SCADA Systems and Control				
334 Design Services/Commissioning/Control Integration	1.00	Isum	39,350.00	39,350
335 I&C Distribution/Connection	1.00	Isum	24,690.00	24,690
336 SCADA Systems and Control Total	-		-	64,040
338 LOW VOLTAGE / SPECIAL SYSTEMS Total	-	sf	-	64,040
SELECTIVE BUILDING DEMOLITION				
Selective Demolition				
342 Demo Dumpster Enclosure & Stair/Platform	1.00	Isum	16,660.00	16,660
343 Sawcut for New Door at Grit Equip Rm.	1.00	ea	880.43	880
344 Demo Existing Grit Sump	1.00	Isum	8,096.76	8,097
345 Demo Dumpster	4.00	load	1,092.42	4,370
346 Selective Demolition Total	-		-	30,007
Mechanical & Electrical Demolition				
349 Demo/Dispose Grit Classifier/Piping/Pedestals	1.00	ea	3,639.96	3,640
350 Remove/Salvage Odor Control Duct & Supports	1.00	ea	4,784.76	4,785
351 Mechanical & Electrical Demolition Total	-		-	8,425
353 SELECTIVE BUILDING DEMOLITION Total	-	sf	-	38,432
355 20 - Headworks Total	-	GSF	-	2,083,018

40 - 40 - Primary Filtration

SUPERSTRUCTURE

Reinforcement Steel

360 Rebar - Primary Filter Area Infill Wall	0.23	ton	2,116.80	476
361 Rebar - Primary Filter Area Extended Headworks Walls	0.45	ton	2,116.80	953
362 Rebar - Primary Filter Area Channel Walls on Existing Slab	4.50	ton	2,116.80	9,526
363 Rebar - Primary Filter Area Columns and Capitals	2.24	ton	2,116.80	4,745
364 Rebar - Primary Filter Area Pipe Supports	0.90	ton	2,116.80	1,905
365 Rebar - Primary Filter Area Topping Over Existing Deck	0.73	ton	2,116.80	1,545
366 Reinforcement Steel Total	-		-	19,150

CIP Concrete - Structure

369 CIP Conc. - Primary Filter Area Extended Headworks Wall (17cy)	206.00	sf	134.98	27,807
370 CIP Conc. - Primary Filter Area Channel Walls on Existing Slab (22cy)	558.00	sf	71.76	40,040
371 CIP Conc. - Primary Filter Area Columns & Capitals (10cy)	58.00	lf	299.76	17,386

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Description	Quantity		Unit \$	Total \$'s
372 CIP Conc. - Primary Filter Area Pipe Supports	12.00	lf	464.81	5,578
373 CIP Conc. - Pirmary Filter Area Topping Over Exising Deck (21cy)	1,063.00	sf	27.63	29,368
374 Misc Read-Mix Charges (Eco Pans, Hot Water, Slick Line, Etc.)	70.00	cy	3.98	279
375 CIP Concrete - Structure Total	-		-	120,458
Misc. Metal Fabrications				
378 Pipe Supports (w/ Mech Piping)	-		-	-
379 Davit Base	1.00	ea	300.00	300
380 Davit Crane	1.00	ea	2,700.00	2,700
381 Sharp-Crested Weir Plate	6.00	lf	378.00	2,268
382 Misc. Metal Fabrications Total	-		-	5,268
Handrails & Railings				
385 3-Line Aluminum Pipe Rail at Perimeter Primary Filters	104.00	lf	105.23	10,944
386 Handrails & Railings Total	-		-	10,944
388 SUPERSTRUCTURE Total	-	sf	-	155,819
ROOFING				
Grating & Floor Plates				
392 Alum. Grate & Frame @ Primary Filter Channels	606.50	sf	48.05	29,139
393 Grating & Floor Plates Total	-		-	29,139
395 ROOFING Total	-	sf	-	29,139
INTERIOR CONSTRUCTION				
Unit Masonry				
399 Drill & Grout Dowels-Sika Anchor Fix 3	80.00	ea	26.50	2,120
400 Unit Masonry Total	-		-	2,120
Painting				
403 Pipe Coatings	1.00	lsum	7,500.00	7,500
404 Painting Total	-		-	7,500
406 INTERIOR CONSTRUCTION Total	-	sf	-	9,620
STAIRS				
Metal Stairs & Ladders				
410 Alum. Ships Ladder & Rail	5.00	rise	1,100.00	5,500
411 Metal Stairs & Ladders Total	-		-	5,500
413 STAIRS Total	5.00	rise	1,100.00	5,500
MECHANICAL				
Solid Waste Handling Equipment				
417 CML 15.0 - Labor Reduction (1/5)	1.00	lsum	-16,416.00	-16,416
418 Solid Waste Handling Equipment Total	-		-	-16,416
Weir and Slide Gates				
421 Slide Gate GT-2211, 2212 (72x66) (Manual Op.)	2.00	ea	9,072.00	18,144
422 Weir Gate GT-2213 (72x12) (Manual Op.)	1.00	ea	8,683.20	8,683
423 Grout Slide Gates	3.00	ea	496.80	1,490
424 Weir and Slide Gates Total	-		-	28,318

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Description	Quantity	Unit	\$	Total \$'s
Primary Filtration Equipment				
427 Primary Filter - Salsnes	1.00	ea	176,364.00	176,364
428 Install Primary Filter - Salsnes	1.00	ea	32,416.20	32,416
429 Primary Filtration Equipment Total	-	-	-	208,780
Piping, Valves and Accessories				
432 Vent Piping & Fittings (8")	1.00	lsum	8,197.01	8,197
433 Hot Water Piping & Fittings (1")	1.00	lsum	2,472.72	2,473
434 PS Piping & Fittings	1.00	lsum	22,625.95	22,626
435 Compressed Air Piping	1.00	lsum	4,693.55	4,694
436 Insulate Water & Air Piping	1.00	lsum	8,996.40	8,996
437 Insulate Solids Piping	1.00	lsum	6,426.00	6,426
438 Piping, Valves and Accessories Total	-	-	-	53,412
Plumbing Systems				
441 Drain Plumbing at Primary Filters	1.00	lsum	6,099.56	6,100
442 Water Heater or Insta Hot	1.00	lsum	3,778.49	3,778
443 Plumbing Systems Total	-	-	-	9,878
445 MECHANICAL Total	-	sf	-	283,971
ELECTRICAL				
Equipment Connections				
449 Electrical Design Services	1.00	lsum	4,500.00	4,500
450 Power Distribution/Connection	1.00	lsum	25,500.00	25,500
451 Electrical Contingency (x%)	1.00	lsum	25,000.00	25,000
452 Equipment Connections Total	-	-	-	55,000
454 ELECTRICAL Total	-	sf	-	55,000
LOW VOLTAGE / SPECIAL SYSTEMS				
SCADA Systems and Control				
458 Design Services/Commissioning/Control Integration	1.00	lsum	39,350.00	39,350
459 I&C Distribution/Connection	1.00	lsum	37,035.00	37,035
460 SCADA Systems and Control Total	-	-	-	76,385
462 LOW VOLTAGE / SPECIAL SYSTEMS Total	-	sf	-	76,385
SELECTIVE BUILDING DEMOLITION				
Selective Demolition				
466 Demo Conc Walls/Rail at Grit Detritor & Effluent Channels	505.00	sf	43.25	21,844
467 Demo Elevated Slab/Grating at Influent Channel	175.00	sf	56.49	9,885
468 Demo Steel Walkway at Grit Detritor	1.00	ea	4,704.12	4,704
469 Selective Demolition Total	-	-	-	36,433
Mechanical & Electrical Demolition				
472 Demo/Dispose Grit Detritor	1.00	ea	8,737.80	8,738
473 Mechanical & Electrical Demolition Total	-	-	-	8,738
475 SELECTIVE BUILDING DEMOLITION Total	-	sf	-	45,171
477 40 - Primary Filtration Total	-	GSF	-	660,605

50 - 50 - Digester

SUPERSTRUCTURE

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Description	Quantity		Unit \$	Total \$'s
Formwork				
482 Shore/Form Flat Deck - Digester Lid	1,430.00	sf	54.00	77,220
483 Shore/Form Flat Deck -PREMIUM Digester Lid (Mid Level for Liner Painting)	1,430.00	sf	21.60	30,888
484 Shore/Form Flat Deck - Digester Overflow Slab - Not Req'd	-	fyt	54.00	-
485 Formwork Total	-	-	-	108,108
Reinforcement Steel				
488 Rebar - Digester Tank Mat Foundation (250 lbs/cy)	15.30	ton	2,116.80	32,387
489 Rebar - Strip Footing In Lieu of Deadmen (Unreinforced)	-	fyt	2,116.80	-
490 Rebar - Digester Tank Pipe Encasement	0.86	ton	2,116.80	1,829
491 Rebar - Digester Tank Mud Slab (Unreinforced)	-	fyt	2,116.80	-
492 Rebar - Digester Tank Walls	18.90	ton	2,116.80	40,008
493 Rebar - Digester Overflow Box Walls - Not Req'd	-	fyt	-	-
494 Rebar - Digester Tank Lid	9.34	ton	2,116.80	19,773
495 Rebar - Digester Tank Upper Lid	0.32	ton	2,116.80	671
496 Rebar - Digester Tank Overflow Box Slab Not Req'd	-	fyt	-	-
497 Rebar - Equipment Pads (Solids Bldg)	0.20	ton	2,116.80	423
498 Rebar - SOG 8" Thick w/ Perimeter Turn Down (Mixing Pump Pad)	0.45	ton	2,116.80	953
499 Rebar - SOG attached to Digester Tank	0.11	ton	2,116.80	238
500 Rebar - Digester Tank Equipment Pad	0.02	ton	2,116.80	48
501 Rebar - Misc. Pads (1.5lbs/sf)	0.65	ton	1,360.80	885
502 Reinforcement Steel Total	-	-	-	97,214
CIP Concrete - Structure				
505 CIP Conc. - Digester Tank Mat Foundation	112.00	cy	413.00	46,256
506 CIP Conc. - Strip Footing In Lieu of Deadmen	11.00	cy	256.69	2,824
507 CIP Conc. - Digester Tank Pipe Encasement (16cy)	16.00	sf	255.03	4,081
508 CIP Conc. - Digester Tank Mud Slab (NA on Rock)	-	sf	-	-
509 CIP Conc. - Digester Tank Walls (179 cy)	3,402.00	sf	71.04	241,665
510 CIP Conc. - Digester Overflow Box Walls (2cy) - Not Req'd	-	fyt	122.71	-
511 CIP Conc. - Digester Tank Lid (72 cy)	1,430.00	sf	33.39	47,754
512 CIP Conc. - Digester Tank Upper Lid (2 cy)	44.00	sf	89.96	3,958
513 CIP Conc. - Digester Tank Overflow Box Slab (1cy) - Not Req'd	-	fyt	203.58	-
514 CIP Conc. - Equipment Pads and Box Drain (2 cy) (Solids Bldg)	80.00	sf	20.05	1,604
515 CIP Conc. - SOG 8" Thick w/ Perimeter Turn Down (6.5 cy) (Mixing Pump Pad)	253.00	sf	20.05	5,072
516 CIP Conc. - SOG attached to Digester Tank (16cy)	282.00	sf	20.41	5,755
517 CIP Conc. - Digester Equipment Pad (1cy)	12.00	sf	63.62	763
518 Liner at Digester Lid and 6' Down Side Walls	2,465.00	sf	30.84	76,032
519 Misc Read-Mix Charges (Eco Pans, Hot Water, Slick Line, Etc.)	412.00	cy	3.98	1,641
520 CIP Concrete - Structure Total	-	-	-	437,406
Structure Water Test				
523 Hydrostatic Test of Digester	1.00	Isum	9,637.71	9,638
524 Crack Mitigation	3,402.00	sf	10.92	37,164
525 Structure Water Test Total	-	-	-	46,802
Project Hoisting				
528 Hydro Crane, Rough Terrain - 90 Ton Rental, Operated	3.00	mnth	50,000.00	150,000
529 Project Hoisting Total	-	-	-	150,000
Structural Metal Framing				
532 Roof at Microturbine	1.00	Isum	4,600.00	4,600

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Description	Quantity		Unit \$	Total \$'s
533 Structural Metal Framing Total	-		-	4,600
Misc. Metal Fabrications				
536 Pipe Supports (w/ Mech Piping)	-		-	-
537 Roof Sampling Ports	2.00	ea	1,620.00	3,240
538 Steel Center Column and Connections	1.00	ea	12,355.20	12,355
539 Roof Access Hatch - Gas Dome - Not Req'd	-		-	-
540 Sidewall Access Hatch - 3' dia. - Install w/ Conc.	1.00	ea	7,435.41	7,435
541 Misc. Metals Not Shown	1.00	Isum	6,799.00	6,799
542 Sidewall Access Hatch - 5'x5'	1.00	Isum	9,688.00	9,688
543 Misc. Metal Fabrications Total	-		-	39,518
Handrails & Railings				
546 3-Line Aluminum Pipe Rail at Digester	166.50	lf	105.23	17,520
547 Handrails & Railings Total	-		-	17,520
549 SUPERSTRUCTURE Total	-	sf	-	901,167
ROOFING				
Sheet Metal Flashing & Trim				
553 Install Geomembrane at Existing Digester 3 Lid	1.00	Isum	28,071.62	28,072
554 Sheet Metal Flashing & Trim Total	-		-	28,072
556 ROOFING Total	-	sf	-	28,072
INTERIOR CONSTRUCTION				
Interior Construction				
560 Interior Improvements @ Solids Rm (Allowance)	240.00	gsf	15.00	3,600
561 Interior Construction Total	-		-	3,600
Painting				
564 Pipe Coatings	1.00	Isum	7,600.00	7,600
565 Painting Total	-		-	7,600
567 INTERIOR CONSTRUCTION Total	-	sf	-	11,200
STAIRS				
Metal Stairs & Ladders				
571 Galv. Grating Stair w/ Framed Landing & Rails to Digester Roof	56.00	rise	1,200.00	67,200
572 Metal Stairs & Ladders Total	-		-	67,200
574 STAIRS Total	56.00	rise	1,200.00	67,200
MECHANICAL				
Solid Waste Handling Equipment				
578 Digester Mixing Pump - Vaughan	1.00	ea	28,987.20	28,987
579 Install Digester Mixing Pump	1.00	ea	1,328.40	1,328
580 Recirculation Pump - Moyno	1.00	ea	35,575.20	35,575
581 Install Recirculation Pump	1.00	ea	1,328.40	1,328
582 Heat Exchanger	1.00	ea	35,445.60	35,446
583 Install Heat Exchanger	1.00	ea	3,110.40	3,110
584 Gas Equipment at Digester	1.00	Isum	13,944.53	13,945
585 Sleeves, Embeds, Etc. at Digester	1.00	Isum	30,426.84	30,427
586 Flare and Gas Equipment	1.00	Isum	49,434.84	49,435
587 Install Gas Equipment at Digester & Flare	1.00	Isum	18,452.88	18,453
588 Reconnect Natural Gas Piping	1.00	Isum	2,008.80	2,009

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Description	Quantity	Unit	\$	Total \$'s
589 Unload / Store Equipment	1.00	Isum	3,790.80	3,791
590 CML 15.0 - Labor Reduction (1/5)	1.00	Isum	-16,416.00	-16,416
591 Solid Waste Handling Equipment Total	-		-	207,418
Fluid Waste Treatment & Disposal Equipment				
594 Solids Transfer Pump - Moyno	1.00	ea	15,530.40	15,530
595 Screw Conveyor - Supply w/ Primary Filter	1.00	ea	4,147.20	4,147
596 Solids Hopper	1.00	ea	15,573.60	15,574
597 Install Solids Transfer Pump - Moyno	1.00	ea	3,132.00	3,132
598 Fluid Waste Treatment & Disposal Equipment Total	-		-	38,383
Piping, Valves and Accessories				
601 Digester Gas Piping & Fittings (2") - Inclds Ex./Encase./BFill	1.00	Isum	71,153.81	71,154
602 Relocate Foam Separator & Assoc. Piping	1.00	Isum	15,332.44	15,332
603 OF Stand Pipe, Fittings & Valves (Inclds Carbon sack) (EOF not req'd)	1.00	Isum	20,131.37	20,131
604 MS Piping & Fitting - Inclds Ex./Encase./BFill	1.00	Isum	126,404.56	126,405
605 MS Motor Operator Valve Actuators - Future	-	fyi	-	-
606 DS Piping, Fittings & Valves (4")	1.00	Isum	4,604.87	4,605
607 DS Piping, Fittings & Valves (buried) (10", 6", 4")	1.00	Isum	22,618.23	22,618
608 Sample Tube Pipe & Fittings (8")	1.00	Isum	4,834.92	4,835
609 Heating Circulation Pipe, Fittings & Valves at Solids Bldg (6", 4", 3")	1.00	Isum	48,633.25	48,633
610 100GPM Recirc. Pump & Piping at Ext. Dig.	1.00	Isum	5,911.92	5,912
611 Insulate Water Piping at Digester	1.00	Isum	10,281.60	10,282
612 Insulate Piping at Solids Bldg	1.00	Isum	15,165.36	15,165
613 Insulate Piping at Digester (Excludes DG)	1.00	Isum	12,852.00	12,852
614 Insulate DG Piping (Buried & Exposed)	1.00	Isum	37,656.36	37,656
615 Piping, Valves and Accessories Total	-		-	395,581
Plumbing Systems				
618 Drain Pipe & Fittings - Inclds Ex./BFill, Encase w/ Conc	1.00	Isum	4,115.21	4,115
619 Plumbing Systems Total	-		-	4,115
621 MECHANICAL Total	-	sf	-	645,497
ELECTRICAL				
Equipment Connections				
625 Electrical Design Services	1.00	Isum	4,500.00	4,500
626 Power Distribution/Connection	1.00	Isum	51,000.00	51,000
627 New conduit/wire/connection to new Mech. Equip inclding site	-		-	-
628 Electrical Contingency (x%)	1.00	Isum	25,000.00	25,000
629 Equipment Connections Total	-		-	80,500
631 ELECTRICAL Total	-	sf	-	80,500
LOW VOLTAGE / SPECIAL SYSTEMS				
SCADA Systems and Control				
635 Design Services/Commissioning/Control Integration	1.00	Isum	39,350.00	39,350
636 I&C Distribution/Connection	1.00	Isum	37,035.00	37,035
637 SCADA Systems and Control Total	-		-	76,385
639 LOW VOLTAGE / SPECIAL SYSTEMS Total	-	sf	-	76,385
SELECTIVE BUILDING DEMOLITION				

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Description	Quantity	Unit	\$	Total \$'s
Selective Demolition				
643 Drain/Clean Existing Digester 3	48.00	hour	182.35	8,753
644 Selective Demolition Total	-		-	8,753
Mechanical & Electrical Demolition				
647 Demo/Dispose Existing Flare and Gas Equipment	1.00	ea	3,537.18	3,537
648 Mechanical & Electrical Demolition Total	-		-	3,537
650 SELECTIVE BUILDING DEMOLITION Total	-	sf	-	12,290
652 50 - Digester Total	-	GSF	-	1,822,311
60 - 60 - Cogen				
SUPERSTRUCTURE				
Reinforcement Steel				
657 Rebar - SOG 8" Thick w/ Perimeter Turn Down (Cogen Pad)	0.26	ton	2,116.80	550
658 Rebar - SOG 8" Thick w/ Perimeter Turn Down (Waste Gas Burner Pad)	0.45	ton	2,116.80	953
659 Reinforcement Steel Total	-		-	1,503
CIP Concrete - Structure				
662 CIP Conc. - Cogen Equip. Pads	250.00	sf	58.82	14,705
663 CIP Conc. - Waste Gas Burner Pad	25.00	sf	33.52	838
664 Misc Read-Mix Charges (Eco Pans, Hot Water, Slick Line, Etc.)	2.00	cy	3.98	8
665 CIP Concrete - Structure Total	-		-	15,551
667 SUPERSTRUCTURE Total	-	sf	-	17,054
INTERIOR CONSTRUCTION				
Painting				
671 Pipe Coatings	1.00	lsum	3,800.00	3,800
672 Painting Total	-		-	3,800
674 INTERIOR CONSTRUCTION Total	-	sf	-	3,800
MECHANICAL				
Solid Waste Handling Equipment				
678 Gas Conditioning Equip for Cogen	1.00	ea	327,056.40	327,056
679 Capstone 65kW Microturbine	1.00	ea	194,856.57	194,857
680 Unload / Store Equipment	1.00	lsum	3,790.80	3,791
681 CML 15.0 - Labor Reduction (1/5)	1.00	lsum	-16,416.00	-16,416
682 Solid Waste Handling Equipment Total	-		-	509,288
Piping, Valves and Accessories				
685 Cogen Pipe, Fittings & Valves (DG & HW)	1.00	lsum	37,868.42	37,868
686 Insulate Gas Conditioning Skid Piping	1.00	lsum	23,133.60	23,134
687 Piping, Valves and Accessories Total	-		-	61,002
Hot Water Heating				
690 Hot Water Boiler - Repair Existing - Not Req'd	-	ea	-	-
691 Hot Water Heating Total	-		-	-
693 MECHANICAL Total	-	sf	-	570,290

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Description	Quantity	Unit	Total
		\$	\$'s
ELECTRICAL			
Equipment Connections			
697 Power Distribution/Connection	1.00	Isum	29,000.00
698 Inclds conduit/wire/connection to new Mech. Equip.	-	-	-
699 Equipment Connections Total	-	-	29,000
701 ELECTRICAL Total	-	sf	29,000
LOW VOLTAGE / SPECIAL SYSTEMS			
SCADA Systems and Control			
705 I&C Distribution/Connection	1.00	Isum	21,604.00
706 SCADA Systems and Control Total	-	-	21,604
708 LOW VOLTAGE / SPECIAL SYSTEMS Total	-	sf	21,604
710 60 - Cogen Total	-	GSF	641,748

90 - 90 - Sitework

SITE PREPARATION			
005 - Construction Services & Misc.			
715 Survey Crew	40.00	hour	115.00
716 005 - Construction Services & Misc. Total	-	-	4,600
Site Demolition & Clearing			
719 Demo existing Bar Screen in Diversion Structure	1.00	Isum	3,700.00
720 Saw Cut Asphalt Pavement	4,500.00	lf	1.00
721 Remove Asphalt Pavement	650.00	sy	4.50
722 Remove Existing CB	2.00	ea	250.00
723 Remove Existing MH	1.00	Isum	1,300.00
724 Plug & Abandon Pipe in Place	1.00	Isum	4,800.00
725 Remove Pipe	200.00	lf	22.00
726 Demo Existing Clarifier Slab (at Digester & Headworks)	4,412.00	sf	6.80
727 Relocate Odor Control System (2 Days Assistance)	1.00	Isum	8,800.00
728 Site Demolition & Clearing Total	-	-	60,927
Dewatering			
731 Dewatering Structure Excavation - not req'd	-	fyt	-
732 Dewatering Total	-	-	-
Underpinning / Excav. Support & Protection			
735 Support Existing Road or Relocate Sludge Loadout Station	1.00	Isum	10,000.00
736 Underpinning / Excav. Support & Protection Total	-	-	10,000
Mass Excavation / Backfill / Compaction			
739 Site/Demo Sub Mobilization/Demob/PM	1.00	Isum	53,000.00
740 Bldg Excavation - Headworks	150.00	cy	25.00
741 Bldg Excavation - Digester	400.00	cy	23.00
742 Bldg Excavation - Digester Pump & Mixing	50.00	cy	25.00
743 Bldg Excavation - Solids Bldg.	50.00	cy	25.00
744 Bldg Excavation - Gas Conditioning & Cogen	80.00	cy	25.00
745 Bldg Excavation - Other Small Pads	30.00	cy	25.00
746 Excavation for new AC Paving	330.00	cy	16.00
747 Structural Fill & Grading - Headworks	175.00	ton	40.00
748 Structural Fill & Grading - Digester	425.00	ton	30.00
749 Structural Fill & Grading - Digester Pump & Mixing	65.00	ton	40.00

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Description	Quantity	Unit	\$	Total \$'s
750 Structural Fill & Grading - Solids Bldg - Not Req'd	- fyi	-	-	-
751 Structural Fill & Grading - Gas Conditioning & Cogen	60.00 ton	45.00		2,700
752 Structural Fill & Grading - Other Small Pads	30.00 ton	45.00		1,350
753 F/G AC Paving	750.00 sy	2.00		1,500
754 Structural Backfill - Headworks	100.00 ton	36.00		3,600
755 Structural Backfill - Digester	325.00 ton	36.00		11,700
756 Structural Backfill - Digester Pump & Mixing	30.00 ton	36.00		1,080
757 Structural Backfill - Solids Bldg - Not Req'd	- fyi	-		-
758 Structural Backfill - Gas Conditioning & Cogen	35.00 ton	36.00		1,260
759 Structural Backfill - Other Small Pads	20.00 ton	36.00		720
760 Bldg Geotextile Fabric	650.00 cy	3.50		2,275
761 Paving - Geotextile Fabric	750.00 sy	2.00		1,500
762 Casual Dewatering (Sump / Pump)	4.00 week	865.43		3,462
763 Traffic Control	1.00 week	2,027.72		2,028
764 Street Cleaning	4.00 week	950.00		3,800
765 Mass Excavation / Backfill / Compaction Total	-	-		135,804
Erosion & Sediment Control				
768 Inlet Protection	5.00 ea	190.00		950
769 Straw Wattel	250.00 lf	6.00		1,500
770 Dust Control	10.00 days	350.00		3,500
771 Sweeping	10.00 days	370.00		3,700
772 Erosion & Sediment Control Total	-	-		9,650
Painting				
775 Pipe Coatings - Inside Utility Vault - W/ Coating	-	-		-
776 Painting Total	-	-		-
778 SITE PREPARATION Total	- sf	-		220,981
SITE IMPROVEMENTS				
Fences & Gates				
782 Custom Screen/Fence (700 LF w/ (2) 16'x30' sections)	1.00 lsum	64,500.00		64,500
783 Custom Screen/Fence - Coordination w/ Railroad	1.00 lsum	30,000.00		30,000
784 Fences & Gates Total	-	-		94,500
Misc. Metal Fabrications				
787 Site Bollards	4.00 ea	1,995.00		7,980
788 Misc. Metal Fabrications Total	-	-		7,980
790 SITE IMPROVEMENTS Total	- sf	-		102,480
SITE CIVIL / MECHANICAL UTILITIES				
Subsurface Investigation				
794 Misc. Site Potholing	1.00 lsum	5,000.00		5,000
795 Subsurface Investigation Total	-	-		5,000
Water Distribution				
798 1" Hot Water - North of Headworks	51.00 lf	50.00		2,550
799 1" W3 - Branch from existing	65.00 lf	67.00		4,355
800 1" W2 - Solids Bldg. to Headworks	140.00 lf	67.00		9,380
801 Tie to Existing Water Line	2.00 ea	1,700.00		3,400
802 Water Distribution Total	-	-		19,685
Sanitary Sewerage System				
805 24" RS Piping - IPS to Headworks	190.00 lf	300.00		57,000

City of The Dalles
The Dalles WWTP Expansion
The Dalles, OR
GMP Estimate



December 12, 2016

Project Qty: 1 GSF

Description	Quantity		Unit \$	Total \$'s
806 24" RS Additional Pipe, Fittings and Install	1.00	Isum	15,000.00	15,000
807 12" EOF Piping - Digester to Drain - Not Required	-	fyt	-	-
808 10" DS Piping - Utility Vault to Solids Bldg	120.00	lf	141.00	16,920
809 6" DS Piping - Digester to Solids Bldg	85.00	lf	122.00	10,370
810 6" SSC/TWAS Piping - Existing to Vault	10.00	lf	175.00	1,750
811 6" WAS Piping - Vault to SS piping	95.00	lf	119.00	11,305
812 4" PS - Headworks to Utility Vault	60.00	lf	124.00	7,440
813 Site Pipe Testing - Incl'd in pipe price	-		-	-
814 6" Plug Valve	3.00	ea	2,500.00	7,500
815 Catch Basin	1.00	ea	2,600.00	2,600
816 48" Manhole	2.00	ea	4,900.00	9,800
817 Valve Cans and Rerouted 6" DS piping	1.00	Isum	4,750.00	4,750
818 6' x 6' Concrete Utility Vault w/ drain	1.00	ea	6,000.00	6,000
819 FRP Stop Logs at Diversion Structure	1.00	Isum	26,000.00	26,000
820 Tie to Existing Pump Station	1.00	Isum	6,700.00	6,700
821 Tie 4" D to Existing SS Main	3.00	ea	1,900.00	5,700
822 Sanitary Sewerage System Total	-		-	188,835
Storm Drainage Systems				
825 12" PD Piping	45.00	lf	150.00	6,750
826 8" PD Piping	80.00	lf	118.00	9,440
827 6" PD Piping	65.00	lf	115.00	7,475
828 4" DR Piping - North of Headworks - Not Req'd	-	fyt	-	-
829 Storm Drainage Systems Total	-		-	23,665
Piped Energy Distribution				
832 2" DG Pipe - Digester to Flare	65.00	lf	72.00	4,680
833 2" DG Pipe - Flare to Cogen	55.00	lf	72.00	3,960
834 3" DG Pipe - Replace Existing	80.00	lf	72.00	5,760
835 Piped Energy Distribution Total	-		-	14,400
Flexible Pavement				
838 Aggregate Base Under Asphalt Paving - New	500.00	ton	31.00	15,500
839 Aggregate Base Under Asphalt Paving - Trench Patching	100.00	ton	55.00	5,500
840 New AC Paving	170.00	ton	115.00	19,550
841 Trench Patching	140.00	sy	280.00	39,200
842 Flexible Pavement Total	-		-	79,750
844 SITE CIVIL / MECHANICAL UTILITIES Total	-	sf	-	331,335
SITE ELECTRICAL UTILITIES				
Equipment Connections				
848 Misc Site Power/Ductbank Distribution	1.00	Isum	65,000.00	65,000
849 Temp Power	1.00	Isum	2,000.00	2,000
850 Equipment Connections Total	-		-	67,000
852 SITE ELECTRICAL UTILITIES Total	-	sf	-	67,000
854 90 - Sitework Total	-		-	721,796
856 ESTIMATE TOTAL	1.00	GSF	7,075,677.11	7,075,677

The Dalles WWTP Expansion Scope of Work Clarifications GMP Estimate

December 12, 2016

DOCUMENTS USED IN PREPARING THE ESTIMATE

80% GMP documents provided by Kennedy Jenks
GeoTechnical Engineering Report dated September 30, 2016 from Shannon & Wilson

PROJECT OVERVIEW

We have provided a design and will construction the project in conformance with the four project requirements as listed below

1. The design and construction of the mechanical and electrical systems at the Influent Pump Station will met the requirements of the Oregon DEQ design criteria for firm capacity at a Peak Instantaneous Flow of 13.2 MGD
2. The design and construction of a new Plant Headworks will met the criteria by screening, removing grit with all units in service and the ability to by-pass
3. Criteria 3 was to convert Digester #2 from biosolids storage to an active digester. The team found that utilizing the existing digesters for gas storage or biosolids storage was more prudent and we are provide a new digester
4. The design and construction will provide aesthetic improvements by creating a visual shield from surrounding area through the use of fencing.

SCHEDULE

We anticipate a 12 month duration for the project work. We have allowed a 2 month period after NTP to finalize the design and obtain the necessary permits and a 10 month construction duration.

GENERAL INFORMATION

General Clarifications:

1. Building, plan check and permit costs are by Owner
2. SAC (sewer access charges) and WAC (water access charges), land costs, Right of Way improvement costs and other development charges are by Owner
3. Soil contamination testing, removal, disposal and replacement are by Owner
4. Hazardous material testing, removal and disposal are excluded. If they are encountered removal will be negotiated with the owner.
5. Independent material testing and special inspection services are included
6. Third party commissioning agent and consultants are not included
7. Special inspection service are not included
8. LEED documentation and administration is not included
9. Deep foundations such as geo-piers or piling is not included. All new structures bear on imported gravel over native soil
10. Repainting of existing exterior building surfaces is not included
11. Reroofing of existing facilities is not included
12. Major dewatering of excavations is not anticipated at this time
13. Concrete crack repair where visible leakage in water bearing structure is present.

The Dalles WWTP Expansion

Scope of Work Clarifications

GMP Estimate

December 12, 2016

Area 10 – Influent Pump Station

1. The current plan for pump replacement is as follows: bypass the plant influent flow for 1 week during which time we will core drill and install the new pump suction lines at the wet well. We will connect to the existing pumps and put the pumps back in service. The grouting of the wetwell floor will also be completed during this time. This will then allow us to replace each pump individually.
2. While the bypass is in place we will make an assessment of the condition of the existing wetwell walls so that the team can make a decision as to any repairs that should be made. If repairs are deemed necessary additional bypass pumping may be required for access to the space.
3. The existing overhead crane will be used for pump removal and installation
4. Ventilation of the structure for compliance with local building codes.
5. No lighting or other system renovations are included

Area 20 - Headworks

1. The general sequencing will be to build the new structure for the grit and screening first, take down the existing grit system for new primary filters, connect the new flow from the IPS to the new screening and put the new process into service. The existing grit system will be taken out of service prior to the new system being put on line so there will be a period of time that the plant will be without grit and screening.
2. There will be a temporary bypass between the existing influent inlet and the existing effluent pipe heading to the aeration basins. This will allow the removal of the existing grit and screening equipment and construction of the new primary filter channels.
3. The gates and weirs are all manually operated
4. The existing odor control system equipment will be left in service but the routing will be modified to account for the new structure layout

Area 50 - Digester

1. We will use a small strip footing following the perimeter of the structure to support the wall forms. This footing will remain in place and be paved over when the structure is complete.

Area 60 - Cogen

1. FOG equipment is not included at this time

Area 90 – Sitework

1. Paving will be removed and replaced as needed for new construction.

Major Equipment

The following are the major pieces of equipment currently included in the estimate. These were selected by the entire team based up on pricing and scope completeness over the last few months.

- Influent Pumps – Hidrostal
- Screens – Huber
- Grit Removal – Smith & Loveless
- Grit Pump – Wemco
- Primary Filters – Salsnes
- Primary Solids Pump – Moyno

**The Dalles WWTP Expansion
Scope of Work Clarifications
GMP Estimate**

December 12, 2016

- Digester Mixing Pump – Vaughan
- Digester Recirculation Pump – Moyno
- Heat Exchanger – Elanco
- Waste Gas Burner / Gas Handling – Groth
- Microturbine / Gas Conditioning – BioSpark

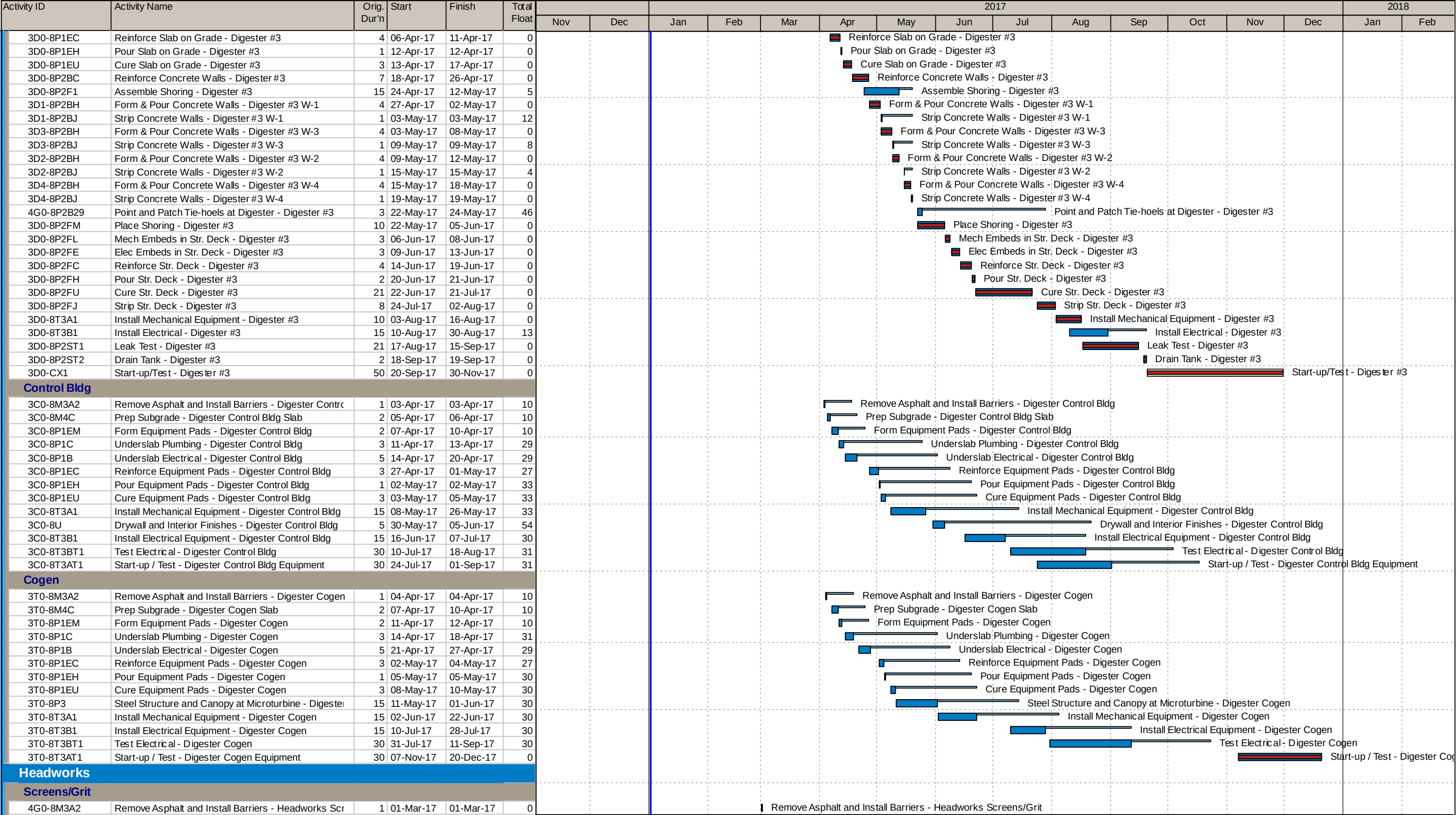
The Dalles WWTP Expansion Project

Activity ID	Activity Name	Orig. Dur'n	Start	Finish	Total Float	2017												2018	
						Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Project																			
000-1A5L2	Notice to Proceed - Project	1	03-Jan-17	03-Jan-17	0	Notice to Proceed - Project													
000-1A5L19	Complete Design to 100%	40	04-Jan-17	28-Feb-17	0	Complete Design to 100%													
3C0-1A5X1	Substantial Completion - Digester Control Bldg	1	01-Sep-17	01-Sep-17	74	Substantial Completion - Digester Control Bldg													
200-1A5X1	Substantial Completion - IPS	1	11-Sep-17	11-Sep-17	14	Substantial Completion - IPS													
3D0-1A5X1	Substantial Completion - Digester #3	1	01-Dec-17	01-Dec-17	13	Substantial Completion - Digester #3													
400-1A5X1	Substantial Completion - Headworks	1	20-Dec-17	20-Dec-17	1	Substantial Completion - Headworks													
3T0-1A5X1	Substantial Completion - Digester Cogen	1	21-Dec-17	21-Dec-17	0	Substantial Completion - Digester Cogen													
000-1A5L9	Final Completion	5	22-Dec-17	29-Dec-17	0	Final Completion													
Site																			
100-8V	Site Improvements - Site	20	30-May-17	26-Jun-17	64	Site Improvements - Site													
100-8V10	36" Force Main	20	11-Aug-17	08-Sep-17	41	36" Force Main													
IPS																			
-5L8GS	Prepare By-Pass Plan Submittal	5	01-May-17	05-May-17	14	Prepare By-Pass Plan Submittal													
-5L8GA	Approve By-Pass Plan Submittal	15	08-May-17	26-May-17	14	Approve By-Pass Plan Submittal													
200-8S1A5	Layout Core Holes for Pump Suction - IPS	1	30-May-17	30-May-17	18	Layout Core Holes for Pump Suction - IPS													
200-6L8G2	Install By-Pass Piping - IPS	4	30-May-17	02-Jun-17	14	Install By-Pass Piping - IPS													
200-6L8G3	Test By-Pass Piping - IPS	1	05-Jun-17	05-Jun-17	14	Test By-Pass Piping - IPS													
200-8S1A6	Mobilize Core Driller & Prepare to Core - IPS	1	06-Jun-17	06-Jun-17	14	Mobilize Core Driller & Prepare to Core - IPS													
200-6L8G15	Start By-Pass Piping - IPS	1	06-Jun-17	06-Jun-17	14	Start By-Pass Piping - IPS													
HAM200-6L8G1	By-Pass Piping - IPS	7	06-Jun-17	14-Jun-17	14	By-Pass Piping - IPS													
200-8S1A9	Washdown Influent Wetwell - IPS	1	07-Jun-17	07-Jun-17	17	Washdown Influent Wetwell - IPS													
210-8S1A7	Core Holes for Pump Suction - IPS Pump 1	2	07-Jun-17	08-Jun-17	14	Core Holes for Pump Suction - IPS Pump 1													
200-8S1A0	Conduct Wetwell Assesment - IPS	1	08-Jun-17	08-Jun-17	17	Conduct Wetwell Assesment - IPS													
220-8S1A7	Core Holes for Pump Suction - IPS Pump 2	1	09-Jun-17	09-Jun-17	14	Core Holes for Pump Suction - IPS Pump 2													
210-8S6B1	Install suction piping - IPS Pump 1	1	09-Jun-17	09-Jun-17	16	Install suction piping - IPS Pump 1													
230-8S1A7	Core Holes for Pump Suction - IPS Pump 3	1	12-Jun-17	12-Jun-17	14	Core Holes for Pump Suction - IPS Pump 3													
220-8S6B1	Install suction piping - IPS Pump 2	1	12-Jun-17	12-Jun-17	15	Install suction piping - IPS Pump 2													
230-8S6B1	Install suction piping - IPS Pump 3	1	13-Jun-17	13-Jun-17	14	Install suction piping - IPS Pump 3													
200-6L8G4	Shutdown and Remove By-Pass Piping - IPS	1	14-Jun-17	14-Jun-17	14	Shutdown and Remove By-Pass Piping - IPS													
200-6L8G5	Return Plant to Normal Operations - IPS	1	14-Jun-17	14-Jun-17	14	Return Plant to Normal Operations - IPS													
200-8T1P6	Elec Work to Influent Pumps/FM - IPS	15	15-Jun-17	06-Jul-17	14	Elec Work to Influent Pumps/FM - IPS													
210-8T1P5	Replace Existing Influent Pump with New - IPS Pump 1	5	07-Jul-17	13-Jul-17	14	Replace Existing Influent Pump with New - IPS Pump 1													
220-8T1P5	Replace Existing Influent Pump with New - IPS Pump 2	5	14-Jul-17	20-Jul-17	19	Replace Existing Influent Pump with New - IPS Pump 2													
210-8T1P4	Startup/Checkout Pumps - IPS Pump 1	10	14-Jul-17	27-Jul-17	14	Startup/Checkout Pumps - IPS Pump 1													
220-8T1P4	Startup/Checkout Pumps - IPS Pump 2	10	21-Jul-17	03-Aug-17	39	Startup/Checkout Pumps - IPS Pump 2													
230-8T1P5	Replace Existing Influent Pump with New - IPS Pump 3	5	28-Jul-17	03-Aug-17	14	Replace Existing Influent Pump with New - IPS Pump 3													
230-8T1P4	Startup/Checkout Pumps - IPS Pump 3	10	04-Aug-17	17-Aug-17	14	Startup/Checkout Pumps - IPS Pump 3													
200-8S6B2	Replace Interior Discharge Piping - IPS	10	18-Aug-17	31-Aug-17	14	Replace Interior Discharge Piping - IPS													
200-8S6B3	Paint Piping and Pumps - IPS	5	01-Sep-17	08-Sep-17	14	Paint Piping and Pumps - IPS													
Digester																			
#3																			
3D0-8M3A2	Remove Asphalt and Install Barriers - Digester #3	2	02-Mar-17	03-Mar-17	0	Remove Asphalt and Install Barriers - Digester #3													
3D0-8M4C8	Excavate to top of Existing Slab - Digester #3	3	06-Mar-17	08-Mar-17	0	Excavate to top of Existing Slab - Digester #3													
3D0-8M4C9	Demo Existing Slab - Digester #3	3	09-Mar-17	13-Mar-17	0	Demo Existing Slab - Digester #3													
3D0-8M5S1	Install Transfer Piping - Digester #3	5	14-Mar-17	20-Mar-17	0	Install Transfer Piping - Digester #3													
3D0-8M5ST1	Test Transfer Piping - Digester #3	2	21-Mar-17	22-Mar-17	0	Test Transfer Piping - Digester #3													
-5P2FP	Procure - Shore Str. Deck	1	22-Mar-17	22-Mar-17	5	Procure - Shore Str. Deck													
3D0-8M5S2	Encase Transfer Piping - Digester #3	3	23-Mar-17	27-Mar-17	0	Encase Transfer Piping - Digester #3													
3D0-8M5S4	Backfill Transfer Pipe Encasement - Digester #3	1	28-Mar-17	28-Mar-17	0	Backfill Transfer Pipe Encasement - Digester #3													
3D0-8M4C2	Place Engineered Soils - Digester #3	3	29-Mar-17	31-Mar-17	0	Place Engineered Soils - Digester #3													
3D0-8P1EM	Form Slab on Grade - Digester #3	3	03-Apr-17	05-Apr-17	0	Form Slab on Grade - Digester #3													

The Dalles WWTP Expansion Project



Building what's next.



The Dalles WWTP Expansion Project



Building what's next.

Activity ID	Activity Name	Orig. Dur'n	Start	Finish	Total Float	2017														2018	
						Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
4G0-8M1D4	Relocate Dumpster - Headworks Screens/Grit	1	02-Mar-17	02-Mar-17	4					🏗️	Relocate Dumpster - Headworks Screens/Grit										
4G0-8S2B1	Install Temp Stair at Elec. Rm - Headworks Screens/Grit	2	02-Mar-17	03-Mar-17	5					🏗️	Install Temp Stair at Elec. Rm - Headworks Screens/Grit										
4G0-8M1D3	Demo Existing Dumpster Enclosure - Headworks Screens/Grit	1	03-Mar-17	03-Mar-17	4					🏗️	Demo Existing Dumpster Enclosure - Headworks Screens/Grit										
4G0-8M1D5	Demo Existing Stair - Headworks Screens/Grit	1	06-Mar-17	06-Mar-17	4					🏗️	Demo Existing Stair - Headworks Screens/Grit										
4G0-8M1D6	Relocate Existing Odor Control System - Headworks Screens/Grit	5	07-Mar-17	13-Mar-17	4					🏗️	Relocate Existing Odor Control System - Headworks Screens/Grit										
4G0-8M1D7	Relocate/Replace Existing Odor Control Duct - Headworks Screens/Grit	3	14-Mar-17	16-Mar-17	4					🏗️	Relocate/Replace Existing Odor Control Duct - Headworks Screens/Grit										
4G0-8M3A3	Establish Clear Land for Traffic Adjacent to Structure	1	17-Mar-17	17-Mar-17	4					🏗️	Establish Clear Land for Traffic Adjacent to Structure - Headworks Screens/Grit										
4G0-8M4C3	Excavate Lower Grit Chamber - Headworks Screens/Grit	2	20-Mar-17	21-Mar-17	4					🏗️	Excavate Lower Grit Chamber - Headworks Screens/Grit										
4G0-8M4F2	Scarify and compact subgrade - Headworks Screens/Grit	1	22-Mar-17	22-Mar-17	4					🏗️	Scarify and compact subgrade - Headworks Screens/Grit										
4G0-8M4C2	Place Engineered Soils - Headworks Screens/Grit	1	23-Mar-17	23-Mar-17	4					🏗️	Place Engineered Soils - Headworks Screens/Grit										
4G0-8P1E4	Underslab Vapor Barrier - Headworks Screens/Grit	1	24-Mar-17	24-Mar-17	4					🏗️	Underslab Vapor Barrier - Headworks Screens/Grit										
4GS1-8P1EM	Form Slab on Grade - Headworks Screens Slab	3	27-Mar-17	29-Mar-17	4					🏗️	Form Slab on Grade - Headworks Screens Slab										
4GS2-8P1EM	Form Slab on Grade - Headworks Grit Chamber Slab	3	30-Mar-17	03-Apr-17	4					🏗️	Form Slab on Grade - Headworks Grit Chamber Slab										
4GS2-8P1C	Underslab Plumbing - Headworks Screens/Grit Slab 2	1	04-Apr-17	04-Apr-17	4					🏗️	Underslab Plumbing - Headworks Screens/Grit Slab 2										
4GS2-8P1B	Underslab Electrical - Headworks Screens/Grit Slab 2	1	05-Apr-17	05-Apr-17	4					🏗️	Underslab Electrical - Headworks Screens/Grit Slab 2										
4GS1-8P1EC	Reinforce Slab on Grade - Headworks Screens Slab	2	06-Apr-17	07-Apr-17	4					🏗️	Reinforce Slab on Grade - Headworks Screens Slab										
4GS1-8P1EH	Pour Slab on Grade - Headworks Screens Slab	1	10-Apr-17	10-Apr-17	4					🏗️	Pour Slab on Grade - Headworks Screens Slab										
4GS2-8P1EC	Reinforce Slab on Grade - Headworks Grit Chamber	2	10-Apr-17	11-Apr-17	8					🏗️	Reinforce Slab on Grade - Headworks Grit Chamber Slab										
4GS1-8P1EU	Cure Slab on Grade - Headworks Screens Slab	3	11-Apr-17	13-Apr-17	4					🏗️	Cure Slab on Grade - Headworks Screens Slab										
4GS2-8P1EH	Pour Slab on Grade - Headworks Grit Chamber Slab	1	12-Apr-17	12-Apr-17	8					🏗️	Pour Slab on Grade - Headworks Grit Chamber Slab										
4GS2-8P1EU	Cure Slab on Grade - Headworks Grit Chamber Slab	3	13-Apr-17	17-Apr-17	8					🏗️	Cure Slab on Grade - Headworks Grit Chamber Slab										
4GW1-8P2BC	Reinforce Concrete Walls - Headworks Screens/Grit Wall 1	1	14-Apr-17	14-Apr-17	4					🏗️	Reinforce Concrete Walls - Headworks Screens/Grit Wall 1										
4GW2-8P2BC	Reinforce Concrete Walls - Headworks Screens/Grit Wall 2	1	17-Apr-17	17-Apr-17	6					🏗️	Reinforce Concrete Walls - Headworks Screens/Grit Wall 2										
4GW1-8P2BH	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 1	3	17-Apr-17	19-Apr-17	4					🏗️	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 1										
4GW2-8P2BH	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 2	3	20-Apr-17	24-Apr-17	4					🏗️	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 2										
4GW3-8P2BC	Reinforce Concrete Walls - Headworks Screens/Grit Wall 3	1	27-Apr-17	27-Apr-17	1					🏗️	Reinforce Concrete Walls - Headworks Screens/Grit Wall 3										
4GW4-8P2BC	Reinforce Concrete Walls - Headworks Screens/Grit Wall 4	1	28-Apr-17	28-Apr-17	3					🏗️	Reinforce Concrete Walls - Headworks Screens/Grit Wall 4										
4GW3-8P2BH	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 3	3	28-Apr-17	02-May-17	1					🏗️	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 3										
4GW5-8P2BC	Reinforce Concrete Walls - Headworks Screens/Grit Wall 5	1	01-May-17	01-May-17	5					🏗️	Reinforce Concrete Walls - Headworks Screens/Grit Wall 5										
4GW6-8P2BC10	Reinforce Outer Grit Removal Tank - Headworks Grit	2	02-May-17	03-May-17	6					🏗️	Reinforce Outer Grit Removal Tank - Headworks Grit										
4GW4-8P2BH	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 4	3	03-May-17	05-May-17	1					🏗️	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 4										
4GW6-8P2BC	Reinforce Concrete Walls - Headworks Screens/Grit Wall 6	1	04-May-17	04-May-17	12					🏗️	Reinforce Concrete Walls - Headworks Screens/Grit Wall 6										
4GW7-8P2BC	Reinforce Concrete Walls - Headworks Screens/Grit Wall 7	1	05-May-17	05-May-17	14					🏗️	Reinforce Concrete Walls - Headworks Screens/Grit Wall 7										
4GW5-8P2BH	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 5	3	08-May-17	10-May-17	1					🏗️	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 5										
4G0-8P2B9	Form & Pour Outer Grit Removal Tank - Headworks Grit	8	11-May-17	22-May-17	1					🏗️	Form & Pour Outer Grit Removal Tank - Headworks Grit										
4GW6-8P2BH	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 6	3	22-May-17	24-May-17	1					🏗️	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 6										
4GW7-8P2BH	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 7	3	25-May-17	30-May-17	1					🏗️	Form & Pour Concrete Walls - Headworks Screens/Grit Wall 7										
4GD1-8P2FQ	Shore Str. Deck - Headworks Screens/Grit Deck 1	5	31-May-17	06-Jun-17	1					🏗️	Shore Str. Deck - Headworks Screens/Grit Deck 1										
4GD1-8P2FL	Mech Embeds in Str. Deck - Headworks Screens/Grit Deck 1	2	07-Jun-17	08-Jun-17	1					🏗️	Mech Embeds in Str. Deck - Headworks Screens/Grit Deck 1										
4GD2-8P2FQ	Shore Str. Deck - Headworks Screens/Grit Deck 2	5	07-Jun-17	13-Jun-17	4					🏗️	Shore Str. Deck - Headworks Screens/Grit Deck 2										
4GD1-8P2FE	Elec Embeds in Str. Deck - Headworks Screens/Grit Deck 1	1	09-Jun-17	09-Jun-17	1					🏗️	Elec Embeds in Str. Deck - Headworks Screens/Grit Deck 1										
4GD1-8P2FC	Reinforce Str. Deck - Headworks Screens/Grit Deck 1	2	12-Jun-17	13-Jun-17	1					🏗️	Reinforce Str. Deck - Headworks Screens/Grit Deck 1										
4GD1-8P2FH	Pour Str. Deck - Headworks Screens/Grit Deck 1	1	14-Jun-17	14-Jun-17	1					🏗️	Pour Str. Deck - Headworks Screens/Grit Deck 1										
4GD2-8P2FL	Mech Embeds in Str. Deck - Headworks Screens/Grit Deck 2	2	14-Jun-17	15-Jun-17	4					🏗️	Mech Embeds in Str. Deck - Headworks Screens/Grit Deck 2										
4GD1-8P2FU	Cure Str. Deck - Headworks Screens/Grit Deck 1	10	15-Jun-17	28-Jun-17	1					🏗️	Cure Str. Deck - Headworks Screens/Grit Deck 1										
4GD2-8P2FE	Elec Embeds in Str. Deck - Headworks Screens/Grit Deck 2	1	16-Jun-17	16-Jun-17	4					🏗️	Elec Embeds in Str. Deck - Headworks Screens/Grit Deck 2										
4GD2-8P2FC	Reinforce Str. Deck - Headworks Screens/Grit Deck 2	2	19-Jun-17	20-Jun-17	4					🏗️	Reinforce Str. Deck - Headworks Screens/Grit Deck 2										
4GD2-8P2FH	Pour Str. Deck - Headworks Screens/Grit Deck 2	1	21-Jun-17	21-Jun-17	4					🏗️	Pour Str. Deck - Headworks Screens/Grit Deck 2										
4GD2-8P2FU	Cure Str. Deck - Headworks Screens/Grit Deck 2	10	22-Jun-17	06-Jul-17	4					🏗️	Cure Str. Deck - Headworks Screens/Grit Deck 2										
4GD1-8P2FJ	Strip Str. Deck - Headworks Screens/Grit Deck 1	3	29-Jun-17	03-Jul-17	1					🏗️	Strip Str. Deck - Headworks Screens/Grit Deck 1										
4GW6-8P2BC20	Reinforce Inner Grit Removal Tank - Headworks Grit	2	05-Jul-17	06-Jul-17	1					🏗️	Reinforce Inner Grit Removal Tank - Headworks Grit										
4GD2-8P2FJ	Strip Str. Deck - Headworks Screens/Grit Deck 2	3	07-Jul-17	11-Jul-17	4					🏗️	Strip Str. Deck - Headworks Screens/Grit Deck 2										
4G0-8P2B19	Form & Pour Inner Grit Removal Tank - Headworks Grit	8	07-Jul-17	18-Jul-17	1					🏗️	Form & Pour Inner Grit Removal Tank - Headworks Grit										
4GW8-8P2BC	Reinforce Concrete Walls - Headworks Screens Wall 8	2	12-Jul-17	13-Jul-17	4					🏗️	Reinforce Concrete Walls - Headworks Screens Wall 8										
4GW9-8P2BC	Reinforce Concrete Walls - Headworks Screens Wall 9	2	14-Jul-17	17-Jul-17	6					🏗️	Reinforce Concrete Walls - Headworks Screens Wall 9										
4GW10-8P2BC	Reinforce Concrete Walls - Headworks Screens Wall 10	2	18-Jul-17	19-Jul-17	8					🏗️	Reinforce Concrete Walls - Headworks Screens Wall 10										
4G0-8P2B7	Point and Patch Tie-holes at Grit Chamber Walls - Headworks Screens/Grit	2	19-Jul-17	20-Jul-17	18					🏗️	Point and Patch Tie-holes at Grit Chamber Walls - Headworks Screens/Grit										
4GW8-8P2BH	Form & Pour Concrete Walls - Headworks Screens Wall 8	4	19-Jul-17	24-Jul-17	1					🏗️	Form & Pour Concrete Walls - Headworks Screens Wall 8										

The Dalles WWTP Expansion Project

Activity ID	Activity Name	Orig. Dur'n	Start	Finish	Total Float	2017												2018			
						Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
4GW11-8P2BC	Reinforce Concrete Walls - Headworks Screens Wal	2	20-Jul-17	21-Jul-17	10																
4G0-8P2S8	Crack Inject at Grit Chamber - Headworks Screens/C	3	21-Jul-17	25-Jul-17	18																
4GW12-8P2BC	Reinforce Concrete Walls - Headworks Screens Cor	2	24-Jul-17	25-Jul-17	12																
4GW9-8P2BH	Form & Pour Concrete Walls - Headworks Screens \	4	25-Jul-17	28-Jul-17	1																
4GW10-8P2BH	Form & Pour Concrete Walls - Headworks Screens \	4	31-Jul-17	03-Aug-17	1																
4GW11-8P2BH	Form & Pour Concrete Walls - Headworks Screens \	4	04-Aug-17	09-Aug-17	1																
4GW12-8P2BH	Form & Pour Concrete Walls - Headworks Screens (	4	10-Aug-17	15-Aug-17	1																
4G0-8P2B8	Point and Patch Tie-hoels at Screen Area - Headwork	2	16-Aug-17	17-Aug-17	1																
4G0-8P2ST8	Hydrostatic Test Grit Chamber - Headworks Screens	5	16-Aug-17	22-Aug-17	3																
4G0-8P2S9	Crack Inject at Screen Area - Headworks Screens/Grit	3	18-Aug-17	22-Aug-17	1																
4G0-8P2ST9	Hydrostatic Test Bar Screen Area - Headworks Scree	5	23-Aug-17	29-Aug-17	1																
4G0-8T3A6	Install Mechanical Equipment - Headworks Grit Pump	15	23-Aug-17	13-Sep-17	3																
4G0-8T3A8	Install Mechanical Equipment - Headworks Bar Scree	3	14-Sep-17	18-Sep-17	3																
4G0-8T3A9	Install Mechanical Equipment - Headworks Bar Scree	3	19-Sep-17	21-Sep-17	3																
4G0-8T3A7	Install Mechanical Equipment - Headworks Manual B	2	22-Sep-17	25-Sep-17	3																
4G0-8T3A10	Install Screenings Sluice Way - Headworks Screens/	2	26-Sep-17	27-Sep-17	3																
4GG1-8T3A11	Install Mechanical - Headworks Screens/Grit Gate 22	1	28-Sep-17	28-Sep-17	3																
4GG2-8T3A11	Install Mechanical - Headworks Screens/Grit Gate 22	1	29-Sep-17	29-Sep-17	3																
4GG3-8T3A11	Install Mechanical - Headworks Screens/Grit Gate 22	1	02-Oct-17	02-Oct-17	3																
4GG4-8T3A11	Install Mechanical - Headworks Screens/Grit Gate 22	1	03-Oct-17	03-Oct-17	3																
4GG5-8T3A11	Install Mechanical - Headworks Screens/Grit Weir Pl	1	04-Oct-17	04-Oct-17	3																
4GG0-8T3AT3	Hydrostatic Test - Headworks Screens/Grit Gate	1	04-Oct-17	04-Oct-17	7																
4G0-8Q3B	H.M. Entrance Doors - Headworks Screens/Grit	1	05-Oct-17	05-Oct-17	9																
4G0-8Q3D	Overhead Doors - Headworks Screens/Grit	3	05-Oct-17	09-Oct-17	7																
4G0-8T3A11	Install Mechanical Equipment - Headworks Grit Sepa	10	05-Oct-17	18-Oct-17	3																
4G0-8U	Drywall and Interior Finishes - Headworks Screens/C	3	10-Oct-17	12-Oct-17	7																
4G0-8S4	HVAC Ductwork - Headworks Screens/Grit	10	10-Oct-17	23-Oct-17	40																
4G0-8S7	Electrical Rough-In - Headworks Screens/Grit	10	19-Oct-17	01-Nov-17	3																
4G0-8T3AT4	Start-up / Test - Grit Equipment - Headworks Screens	30	02-Nov-17	15-Dec-17	3																
4G0-8T3AT5	Start-up / Test - Bar Screens - Headworks Screens/C	30	02-Nov-17	15-Dec-17	3																
Primary Filters																					
4P0-6L8G2	Install By-Pass Piping - Headworks Primary Filters	3	30-Aug-17	01-Sep-17	1																
4P0-8M1D8	Washdown Existing Grit Chamber Area - Headworks	1	05-Sep-17	05-Sep-17	1																
4P0-8M1D12	Demo and Safe Off Electrical - Headworks Primary F	1	06-Sep-17	06-Sep-17	1																
4P0-8M1D9	Demo Existing Equipment - Headworks Primary Filters	3	07-Sep-17	11-Sep-17	1																
4P0-8M1D10	Demo Existing Handrail/Grating - Headworks Primary	1	12-Sep-17	12-Sep-17	1																
4P0-8M1D11	Demo Existing Walls - Headworks Primary Filters	3	13-Sep-17	15-Sep-17	1																
4PW1-8P2BC	Reinforce Concrete Walls - Primary Filters Wall 1	1	18-Sep-17	18-Sep-17	1																
4PW2-8P2BC	Reinforce Concrete Walls - Primary Filters Wall 2	1	19-Sep-17	19-Sep-17	1																
4PW1-8P2BH	Form & Pour Concrete Walls - Primary Filters Wall 1	1	19-Sep-17	19-Sep-17	1																
4PW3-8P2BC	Reinforce Concrete Walls - Primary Filters Wall 3	1	20-Sep-17	20-Sep-17	1																
4PW2-8P2BH	Form & Pour Concrete Walls - Primary Filters Wall 2	1	20-Sep-17	20-Sep-17	1																
4PW4-8P2BC10	Reinforce Concrete Walls - Primary Filters Weir Wall	1	20-Sep-17	20-Sep-17	1																
4PW4-8P2BC	Reinforce Concrete Walls - Primary Filters Wall 4	1	21-Sep-17	21-Sep-17	1																
4PW3-8P2BH	Form & Pour Concrete Walls - Primary Filters Wall 3	1	21-Sep-17	21-Sep-17	1																
4PW4-8P2BH10	Form & Pour Concrete Walls - Primary Filters Weir W	1	21-Sep-17	21-Sep-17	3																
4PW4-8P2BH	Form & Pour Concrete Walls - Primary Filters Wall 4	1	22-Sep-17	22-Sep-17	1																
4PW4-8P2BH50	Form & Pour Concrete Walls - Primary Filters Infil 1	1	22-Sep-17	22-Sep-17	4																
4GD1-8P2FC10	Reinforce Str. Deck - Primary Filters	2	22-Sep-17	25-Sep-17	9																
4P03-8T3A11	Install Mechanical - Primary Filters Weir Gate	1	25-Sep-17	25-Sep-17	4																
4PW4-8P2BC20	Reinforce Concrete Walls - Primary Filters Wall 5	1	25-Sep-17	25-Sep-17	1																
4PW4-8P2BH60	Form & Pour Concrete Walls - Primary Filters Infil 2	1	25-Sep-17	25-Sep-17	2																
4P01-8T3A11	Install Mechanical - Primary Filters Gate 2211	1	26-Sep-17	26-Sep-17	2																
4GD1-8P2FH10	Pour Str. Deck - Headworks Primary Filters	1	26-Sep-17	26-Sep-17	9																
4PW4-8P2BH20	Form & Pour Concrete Walls - Primary Filters Wall 5	1	26-Sep-17	26-Sep-17	3																
4PW4-8P2BC40	Reinforce Concrete Walls - Primary Filters North Wal	1	26-Sep-17	26-Sep-17	1																
4P02-8T3A11	Install Mechanical - Primary Filters Gate 2212	1	27-Sep-17	27-Sep-17	2																
4PW4-8P2BH40	Form & Pour Concrete Walls - Primary Filters North \	1	27-Sep-17	27-Sep-17	2																

The Dalles WWTP Expansion Project

Activity ID	Activity Name	Orig. Dur'n	Start	Finish	Total Float	2017														2018	
						Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
4PW4-8P2BC30	Reinforce Concrete Walls - Primary Filters West Wall	1	27-Sep-17	27-Sep-17	1																
4PW4-8P2BH30	Form & Pour Concrete Walls - Primary Filters West V	1	28-Sep-17	28-Sep-17	1																
4P0-8T3AT3	Hydrostatic Test - Primary Filter Area	3	29-Sep-17	03-Oct-17	1																
4P00-8T3AT3	Hydrostatic Test - Headworks Primary Filter Gates	3	04-Oct-17	06-Oct-17	1																
4P0-8T3A1	Install Mechanical Equipment - Primary Filter	10	09-Oct-17	20-Oct-17	1																
4P0-8U4E	Lighting - Primary Filters	3	10-Oct-17	12-Oct-17	17																
4P0-8U8	Install Grating and Railing - Headworks	5	23-Oct-17	27-Oct-17	6																
4P0-8S7	Electrical Rough-In - Primary Filters	10	23-Oct-17	03-Nov-17	1																
4P0-8T3AT6	Start-up / Test - Primary Filters	30	06-Nov-17	19-Dec-17	1																

The Dalles WWTP Expansion

City of The Dalles
The Dalles, OR

GMP Design Estimate

COST MANAGEMENT LOG

Status Date: November 30, 2016

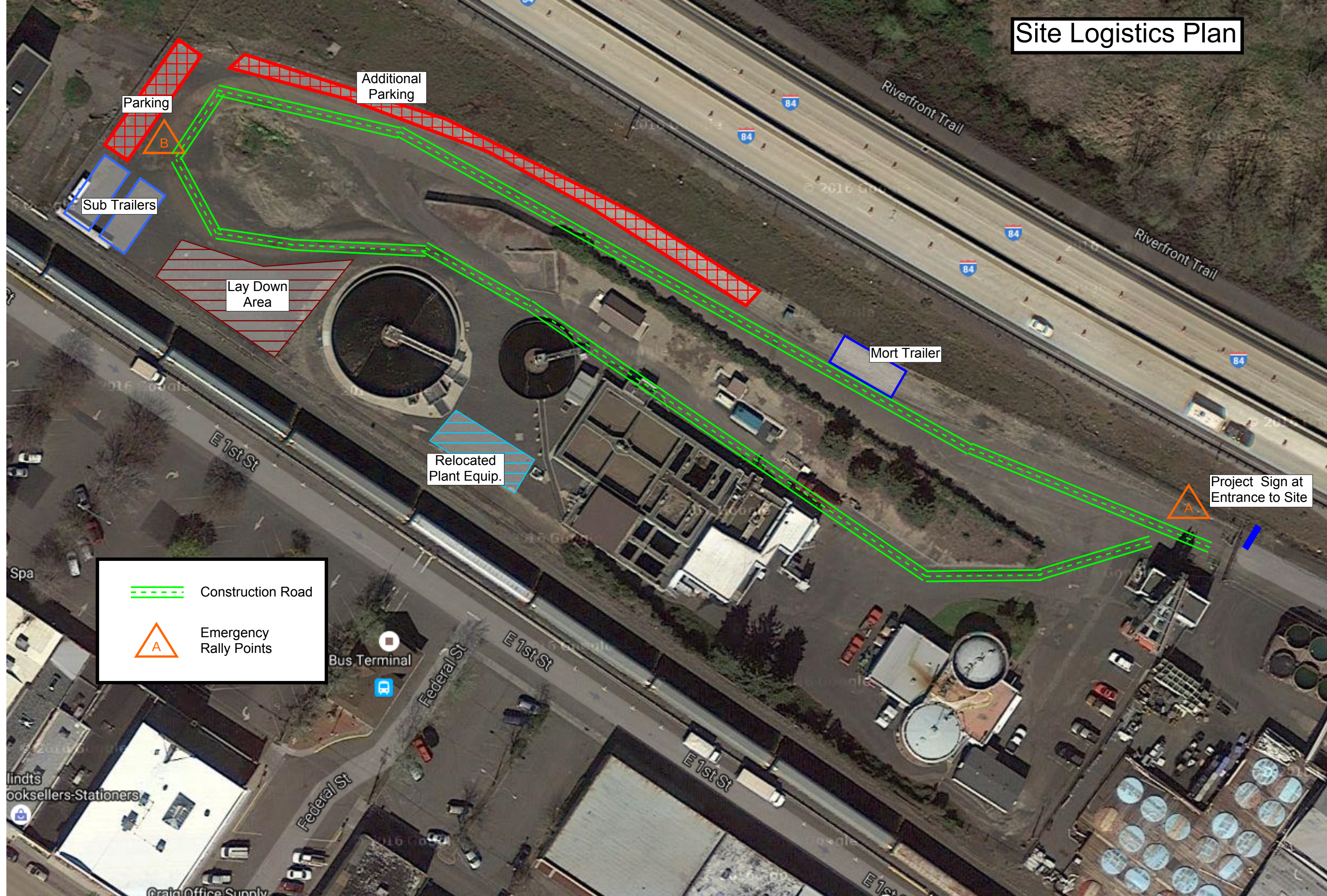


Organizational			Date of Status Change	Description	Issue Date	Action Req'd		Direct Cost	Proj Cost w/ Mark-up	Action Status					Comments or Remarks
Item #	Breakdown	Status (auto)				Who	Date Due			Accept	Reject	Further Review	Design Incorp	Max	
1.0	10	A	16-Nov-16	Add 300kw Generator				\$ 208,400	\$ 253,400	x					
2.0	50	A	16-Nov-16	Delete Motorized Valves at Digester. Install conduit and blanks at MCC for future				\$ (38,500)	\$ (46,800)	x					
3.0	50	A	16-Nov-16	Delete Boiler Allowance - existing determined to be adequately sized and proper condition				\$ (40,000)	\$ (48,600)	x					
4.0	20	A	16-Nov-16	Refurbish existing classifier instead of buying new Wemco Classifier				\$ (71,600)	\$ (87,000)	x					
5.0	10	A	17-Nov-16	Change RS piping from flanged to victaulic				\$ (11,000)	\$ (13,400)	x					
6.0	50	A	17-Nov-16	Change Overflow configuration at Digester and delete EOF.				\$ (30,300)	\$ (36,800)	x					
7.0	50	A	17-Nov-16	Remove walls and slab at Solids Bldg.				\$ (19,200)	\$ (23,300)	x					
8.0	40	A	17-Nov-16	Re-route floor drain at Primary Filter Area.				\$ (16,300)	\$ (19,800)	x					
9.0	60	A	16-Nov-16	Remove second H2S scrubber from scope.				\$ (45,600)	\$ (55,400)	x					
10.0	90	A	16-Nov-16	Relocating Fence to Street side				\$ (55,500)	\$ (67,500)	x					
11.0	50	A	17-Nov-16	Replace vault at digester w/ valve cans and reconfigure piping.				\$ (21,300)	\$ (25,900)	x					
12.0	50	A		Add 100gpm pump and piping at Gas Storage Digester				\$ 4,600	\$ 5,600	x					
13.0	50	A		Add insulation on buried and exposed gas piping				\$ 29,300	\$ 35,600	x					
14.0	60	A		Add insulation on gas conditioning skid piping				\$ 18,000	\$ 21,900	x					
15.0	10, 20, 40, 50, 60	A		Work faster installing Div. 11, 14 & 15				\$ (76,000)	\$ (92,400)	x					
16.0	20	A		Add demolition of entire existing grit sump				\$ 6,300	\$ 7,700	x					
17.0	20	A		Remove portion of Grit Chamber, add manufactured chutes				\$ (35,000)	\$ (42,500)	x					
18.0	90	A		Reduce extents of site paving and change paving detail to single 3" layer w/ 14" rock				\$ (3,500)	\$ (4,300)	x					
19.0	60	A		Change Cogen/Microturbine area to equip. pads instead of large slab				\$ (2,700)	\$ (3,300)	x					
20.0	40	A		Suspend deck in Primary Filter Area				\$ (5,300)	\$ (6,400)	x					
21.0	40	A		Pour concrete without reinforcing at Primary Filter Pump Area				\$ (300)	\$ (400)	x					
22.0	40	A		Change Columns under Primary Filter area to Steel with plates top and bottom				\$ (1,500)	\$ (1,800)	x					
27.0	50	A		Add 5'x5' hatch on digester. Remove (1) 36" dia. Hatch				\$ 2,800	\$ 3,400	x					
28.0	60	A		Add roof at microturbine				\$ 4,600	\$ 5,600	x					

Organizational			Date of Status Change	Description	Issue Date	Action Req'd		Direct Cost	Proj Cost w/ Mark-up	Action Status					Comments or Remarks
Item #	Breakdown	Status (auto)				Who	Date Due			Accept	Reject	Further Review	Design Incorp	Max	
30.0	90	A		Relocate site 6" WAS bypass to run directly under headworks structure (also use for future FOG). No bypass in thickening Bldg				\$ (3,500)	\$ (4,300)	x					
31.0	20	A		Change Electrical Room CMU walls to Metal Stud				\$ (9,000)	\$ (10,900)	x					
33.0	90	A		Delete (2) Southern-most catch basins and associated storm piping				\$ (12,300)	\$ (15,000)	x					
34.0	50	A		Remove allowance for work at Digester 2 floating lid				\$ (24,500)	\$ (29,800)	x					
36.0	20	A		Add drains,w/ mud valves, at each screen channel				\$ 7,700	\$ 9,400	x					
23.0	90	O		Combine yard piping in common trenches where possible				\$ -	\$ -			x			
25.0		O		Change grating and handrail to galv. steel. (All stairs are currently galv.)				\$ -	\$ -			x			
32.0	20	O		Replace Grit Chamber with Prefabricated Chamber				\$ -	\$ -			x			
24.0	90	C		Change force main to HDPE				\$ -	\$ -		x				
26.0	50	C		Replace Digester Stair with Ladder				\$ -	\$ -		x				
29.0	90	C		Remove 6" WAS site bypass and relocate bypass to inside thickening bldg. No future FOG line				\$ (9,900)	\$ (12,000)		x				Item #30 selected instead.

****The costs and savings associated with the above Accepted items are reflected in the GMP and will be incorporated into the final design.**

Site Logistics Plan



 Construction Road

 Emergency Rally Points