

Margate FL SCADA Upgrades Design/Build
Revere Control Systems Job No. AE0000 / Lead No. 50646
Schedule of Values

Item No.	Item Description	SOV Amount
Mobilization & Administrative		
1	Payment & Performance Bond	\$ 52,798.00
2	Insurance - Coverage Required by Contract is Included in Base Company Insurance (Note 9)	\$ -
3	Jobsite Facilities - Storage Conex	\$ 16,000.00
Field Investigation and Design Workshops (Workshops Held Virtually)		
4	Pre-Construction Meeting	\$ 3,756.00
5	Field Investigation of Existing Control System and Site Conditions (Note 1)	\$ 91,616.00
6	Cybersecurity Study	\$ 9,816.00
7	WTP Control Strategy Design Workshop	\$ 1,716.00
8	WTP Control Strategy Review Workshop	\$ 1,716.00
9	WTP Control Strategy Construction Review Workshop	\$ 1,716.00
10	WWTP Control Strategy Design Workshop	\$ 1,716.00
11	WWTP Control Strategy Review Workshop	\$ 1,716.00
12	WWTP Control Strategy Construction Review Workshop	\$ 1,716.00
13	WTP & WWTP PLC Code Review Workshop	\$ 1,716.00
14	WTP SCADA HMI Graphics Design Workshop	\$ 1,716.00
15	WTP SCADA HMI Graphics Review Workshop	\$ 1,716.00
16	WWTP SCADA HMI Graphics Design Workshop	\$ 1,716.00
17	WWTP SCADA HMI Graphics Review Workshop	\$ 1,716.00
18	WTP & WWTP SCADA System Reporting Workshop	\$ 1,716.00
19	Report Review Meetings	\$ 1,716.00
20	Backup and Recovery Software Meeting	\$ 1,716.00
21	Alarm Priority Meetings	\$ 1,716.00
22	Network Monitoring & Threat Detection Meetings	\$ 1,716.00
23	Cybersecurity Workshops	\$ 1,716.00
24	Server Room Modifications Workshop	\$ 1,716.00
25	Network Design Workshop	\$ 1,716.00
Engineering Documentation Packages		
26	Draft PLC Design Standards Reference Manual	\$ 19,154.00
27	Draft SCADA Design Standards Reference Manual	\$ 19,154.00
28	Network Block Diagrams	\$ 16,636.00
29	Piping & Instrumentation Diagrams (P&ID)	\$ 50,388.00
30	Electrical / Site Plans for Fiber Optic Cabling, UPS System Duct Bank & Installation Requirements	\$ 26,324.00
31	Design Specifications for Equipment, Workmanship, Installation and Testing Requirements	\$ 10,816.00
32	Control Panel Hardware and Drawings Submittals	\$ 71,898.00
33	Functional Control Strategies Submittal	\$ 9,556.00
34	PLC Control Logic Submittals	\$ 5,538.00

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35	HMI Graphics Software Submittals	\$ 5,538.00
36	Computer Hardware / Software Submittals	\$ 4,088.00
37	Network Hardware and Fiber Optic Cable Submittal	\$ 7,423.00
38	Central Uninterruptable Power Supply (UPS) Submittal	\$ 5,191.00
39	Spare Parts Submittal	\$ 2,116.00
40	Factory and Field Test Procedures Submittals	\$ 5,538.00
41	Training Plan Submittal	\$ 2,972.00
42	Loop Drawings Submittal	\$ 33,144.00
43	As-Built Construction Drawings	\$ 17,636.00
44	Preliminary O&M Manuals	\$ 12,742.00
45	Final O&M Manuals and Record Drawings	\$ 24,398.00
46	Field Testing Documentation	\$ 6,538.00
47	Final PLC Design Standards Reference Manual	\$ 6,540.00
48	Final SCADA Design Standards Reference Manual	\$ 6,540.00
Control Panel Upgrades - East WTP (Note 2)		
49	CP-1000 Control Panel - New Panel	\$ 104,331.00
50	CP-1010 Switchgear PLC Control Panel - Upgrade (Note 8)	\$ 150,537.00
51	CP-1003 High Service Pump Control Panel - New Panel	\$ 107,809.00
52	CP-1002 Transfer Pump Control Panel - New Panel	\$ 109,820.00
53	CP-1004 Well Head No. 7 Control Panel - Upgrade	\$ 40,590.00
54	CP-1008 Coral Gate Pump Station Control Panel - Upgrade	\$ 45,137.00
55	CP-1009 Filters Control Panel - Upgrade	\$ 92,640.00
56	CP-1011 Blowdown Water No. 1 Control Panel - New Panel	\$ 44,585.00
57	CP-1012 Blowdown Water No. 2 Control Panel - New Panel	\$ 44,585.00
58	CP-1006 Lime Silo No. 1 South Control Panel - Upgrade	\$ 51,055.00
59	CP-1007 Lime Silo No. 2 North Control Panel - Upgrade	\$ 51,055.00
60	CP-1005 Sodium Hypochlorite Control Panel - Upgrade	\$ 56,515.00
61	CP-1001 Electrical Room Control Panel - Upgrade	\$ 61,455.00
Control Panel Upgrades - East WWTP		
62	CP-2009 RAS / WAS Building Control Panel - Upgrade (Optional per City's Discretion)	\$ 78,438.00
Control Panel Upgrades - West WWTP		
63	CP-2001 Headworks Control Panel - New Panel	\$ 80,137.00
64	CP-2008 Generator Building Control Panel - Upgrade	\$ 37,569.00
65	CP-2000 Control Room Main Control Panel - Upgrade	\$ 59,621.00
66	CP-2005 Sanitair and Blowers Control Panel - New Panel	\$ 76,432.00
67	CP-2006 Sludge Dewatering Control Panel - Upgrade	\$ 41,081.00
68	CP-2007A & B Jet Air Control Panel - New Panel (Optional per City's Discretion)	\$ 70,672.00

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Item No.	Item Description	SOV Amount
69	CP-2004 Chlorine Building Control Panel - Upgrade	\$ 110,967.00
70	CP-2003 Clarifiers Control Panel - New Panel	\$ 69,504.00
71	CP-2002 Rotating Biological Contractors Control Panel - No Modifications	\$ -
Fiber Optic Cabling (Note 3)		
72	East WTP Fiber Optic Cable Installation, Termination & Testing	\$ 164,093.00
73	West WWTP Fiber Optic Cable Installation, Termination & Testing	\$ 233,470.00
Central Uninterruptable Power Supply Systems (UPS) (Note 4)		
74	East WTP Central UPS System Installation & Startup	\$ 101,652.00
75	West WWTP Central UPS System Installation & Startup	\$ 101,652.00
Network Backbone - Racks, Servers and Components		
76	East Facility Network Backbone - Racks, Servers and Workstations	\$ 96,720.00
77	West Facility Network Backbone - Racks, Servers and Workstations	\$ 127,872.00
Software Systems		
78	East WTP Software Systems (Note 5)	\$ 177,313.00
79	West WWTP Software Systems (Note 5)	\$ 182,470.00
80	Central SCADA Software Systems (Note 6)	\$ 115,458.00
Installation, Testing, Commissioning and Training		
81	East WTP Installation, Checkout, Testing & Commissioning (Note 7)	\$ 419,026.00
82	East WWTP Installation, Checkout, Testing & Commissioning (Note 7) (Optional per City's Discretion)	\$ 34,136.00
83	West WWTP Installation, Checkout, Testing & Commissioning (Note 7)	\$ 263,088.00
84	East WTP Training by Revere	\$ 6,205.00
85	West WWTP Training by Revere	\$ 7,624.00
86	Manufacturer Training	\$ 11,350.00
Demobilization		
87	Spare Parts	\$ 49,451.00
Allowance Items		
88	Owner Controlled Allowance	\$ 200,000.00
Original Contract Total		\$ 4,452,573.00

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Notes:

1. SOV Item No. 5 - Field Investigation include 688 Hours of Engineering and Field Installation Personnel inspecting existing conditions including Control Panels, Conduit/Wire, Ductbanks for Fiber Optic Cable and Power Wiring Installation, Field Devices for Termination Points, Obtaining PLC Programs, Obtaining HMI Application Files.
2. SOV Items 49 thru 61 - Control Panel Upgrades includes PLC and Control Panel Hardware, Panel Production Labor, PLC Programming, HMI Programming Specific to the Control Panel and Delivery of Panels to Jobsite.
3. SOV Items 72 & 73 - Fiber Optic Cabling includes Fiber Optic Cable, Connectors, Accessories, Innerduct Materials, Installation Labor, Termination and Testing of Fiber Optic Cable.
4. SOV Items 74 & 75 - Central UPS Systems includes Electrical Permits, Installation Materials, Installation Labor and Startup of UPS Systems.
5. SOV Items 78 & 79 - Software Systems (East & West) includes HMI Software, HMI Programming for Overall HMI Application (Not Specific to a Particular Panel), Factory Testing, FAT Travel Expenses for Owner/Engineer, Computer Software, Migration of Existing Wonderware Historical Data to Trihedral VTScada Historian.
6. SOV Item 80 - Software Systems (Central) includes Central HMI Software and Application Programming, Programming Laptop, PLC Programming Software, Backup & Recovery Software, Report Software, and Development of Reports.
7. SOV Items 81 thru 83 - Installation, Checkout, Testing & Commissioning includes Panel Installation, Installation Materials, I/O Checkout, Functional Controls Testing, Network Communications and Site Acceptance Testing with Owner/Engineer.
8. SOV Item 50 - East WTP CP-1010 Switchgear PLC Control Panel Upgrade; During the Negotiations Meetings, it was mutually agreed upon by the City and Revere to remove the requirement for Russelectric to perform the Switchgear PLC Control Panel Upgrade from the RFQ.
9. SOV Item 2 - Insurance; Per the discussion from the Negotiations Meetings, the City's Risk Management Team stated that Builders Risk Insurance was not required for this project due to the scope of work not including building structures underneath or above ground level.