

## TABLE OF CONTENTS

<u>Division</u>	<u>Section</u>	<u>Title</u>	<u>Pages</u>
<b>0</b>		<b><u>PROCUREMENT AND CONTRACTING REQUIREMENTS</u></b>	
	00100	Advertisement for Bids	1-4
	00300	Information Available to Bidders	1-11
	00320	Geotechnical Data	1-1
	00410	Bid Form	1-35
	00510	Notice of Award	1-1
	00520	Agreement (Contract)	1-4
	00550	Notice to Proceed	1-1
	00600	Bonds and Certificates	1-18
	00700	General Conditions	1-62
	00800	Supplementary Conditions	1-15
	00810	Supplemental General Conditions for Clean Water State Revolving Fund, Drinking Water State Revolving Fund	1-54
	00815	AIS Guidance	1-21
	00820	Wage Determination Schedule	1-2
	00890	Permits	1-1
	00910	Addenda	1-1
<b>1</b>		<b><u>GENERAL REQUIREMENTS</u></b>	
	01010	Summary of Work	1-7
	01015	Work Sequence	1-3
	01025	Measurement and Payment	1-9
	01040	Coordination	1-2
	01200	Project Meetings	1-1
	01210	Allowances	1-3
	01300	Submittals	1-6
	01320	Progress Schedules	1-2
	01380	Construction Photos	1-2
	01400	Quality Control	1-2
	01510	Temporary Utilities	1-3
	01515	Field Offices	1-2
	01520	Maintenance of Utilities	1-2
	01530	Protection of Existing Utilities	1-2
	01540	Demolition Removal	1-1
	01550	Site Access and Storage	1-2

01560	Temporary Environmental Controls	1-4
01570	Traffic Regulation	1-2
01580	Project Identification and Sign	1-3
01631	Products and Substitutions	1-5
01731	Cutting and Patching	1-2
01740	Cleaning	1-2
01770	Project Closeout	1-3
01780	Operations and Maintenance Manuals	1-5
01782	Warranties and Bonds	1-2
01785	Project Record Documents	1-2

**2**

**SITE CONSTRUCTION**

02110	Site Clearing	1-2
02200	Earthwork	1-2
02211	Rough Grading	1-2
02221	Rock Removal	1-5
02222	Excavation	1-5
02223	Structural Fill and Embankment	1-9
02225	Excavating, Backfilling, and Compacting For Sewers	1-3
02240	Dewatering	1-1
02260	Excavation Support and Protection	1-2
02273	Turf Reinforcement Mat	1-3
02370	Riprap	1-1
02371	SWPPP	1-11
02372	Erosion and Sediment Control	1-50
02373	Stream Restoration	1-9
02374	ESC Permitting, Inspection, and Permitting Procedures	1-6
02505	Water Piping	1-6
02515	Valves	1-2
02517	Hydrants	1-3
02531	Sewage Force Mains	1-14
02532	Sewage Collection Lines	1-13
02540	Pipe Abandonment	1-2
02608	Manholes	1-7
02620	Storm Utility Piping	1-5
02650	Sewer Line Cleaning	1-3
02651	Television Inspection	1-2
02675	Disinfection of Water Systems	1-7
02700	Asphaltic Concrete Paving	1-2

	02713	Foundation Drainage	1-3
	02740	Cold Mix Bituminous Paving	1-1
	02745	Bituminous Pavement Milling and Texturing	1-1
	02775	Sidewalks	1-2
	02872	Removable Bollards	1-2
	02920	Lawns and Grasses	1-4
<b>3</b>		<b><u>CONCRETE</u></b>	
	03100	Concrete Formwork	1-6
	03200	Reinforcing Steel	1-5
	03250	Concrete Accessories	1-8
	03290	Joints in Concrete	1-3
	03300	Cast-In-Place Concrete	1-21
	03350	Concrete Finishes	1-5
	03370	Concrete Curing	1-4
	03400	Precast Concrete	1-5
	03415	Precast Pre-stressed Concrete Hollow Core Planks	1-3
	03600	Precision Grouting	1-4
<b>4</b>		<b><u>MASONRY</u></b>	
	04200	Unit Masonry	1-10
<b>5</b>		<b><u>METALS</u></b>	
	05010	Metal Materials	1-4
	05120	Structural Steel	1-4
	05140	Structural Aluminum	1-2
	05310	Steel Deck	1-4
	05440	Cold-Formed Metal Trusses	1-5
	05500	Metal Fabrications	1-5
	05511	Fixed Metal Ladders	1-3
	05520	Handrails and Railings	1-6
	05530	Grating	1-3
<b>6</b>		<b><u>WOOD AND PLASTIC</u></b>	
	06100	Rough Carpentry	1-4
	06600	Fiberglass Reinforced Plastic Products and Fabrications	1-8
<b>7</b>		<b><u>THERMAL AND MOISTURE PROTECTION</u></b>	
	07175	Water Repellents	1-2

	07210	Building Insulation	1-4
	07271	Modified Bituminous Sheet Air Barriers	1-4
	07415	Standing Seam Metal Roofing	1-6
	07543	Thermoplastic Polyolefin (TPO) Roofing System	1-7
	07600	Flashing and Sheet Metal	1-2
	07700	Roof Specialties and Accessories	1-3
	07900	Joint Sealers	1-5
<b>8</b>		<b><u>WINDOWS AND DOORS</u></b>	
	08220	Fiberglass Reinforced Plastic Doors and Aluminum Frames	1-6
	08330	Overhead Coiling Doors	1-3
	08370	Access Hatches	1-3
	08452	Insulated Translucent Fiberglass Sandwich Panel Skylight and Wall System	1-6
	08710	Finish Hardware	1-4
<b>9</b>		<b><u>FINISHES</u></b>	
	09250	Gypsum Drywall	1-7
	09510	Acoustical Ceilings	1-4
	09651	Resilient Tile Flooring	1-6
	09653	Resilient Base and Accessories	1-4
	09961	High Performance Paints and Coatings-Wastewater	1-27
<b>10</b>		<b><u>SPECIALTIES</u></b>	
	10210	Metal Wall Louvers	1-3
	10440	Specialty Signs	1-5
	10441	Fire Extinguishers	1-3
	10800	Toilet Accessories	1-4
<b>11</b>		<b><u>EQUIPMENT</u></b>	
	11210	Horizontal End Suction Pumps	1-9
	11215	Booster Pump Station	1-11
	11279	Samplers	1-4
	11285	Slide Gates	1-8
	11290	Interior Process Piping	1-9
	11295	Interior Process Valves	1-12
	11310	Non-Clog Submersible Sewage Pumps	1-15
	11312	Non-Clog Submersible Sump Pumps	1-13

11313	Non-Clog Submersible Recycle Pumps	1-13
11318	Sample Pumps	1-4
11322	Degritting Equipment	1-15
11330	Screening Equipment	1-12

**Division 12 – Not Used**

<b>13</b>	<b><u>SPECIAL CONSTRUCTION</u></b>	
13136	Aluminum Flat Covers	1-6
13200	Pre-stressed Concrete Storage Tank	1-16
13321	Fiber Optic Equipment	1-4
<b>14</b>	<b><u>CONVEYING SYSTEMS</u></b>	
14556	Screw Conveyors	1-12
14600	Cranes and Hoists	1-9
<b>15</b>	<b><u>MECHANICAL</u></b>	
15010	General Mechanical Provisions	1-19
15015	Sleeves and Penetrations	1-3
15022	Lubrication and Packing	1-1
15060	Pipe and Pipe Fittings – General	1-12
15080	Piping Specialties	1-3
15090	Hangers, Supports, and Anchors	1-6
15095	Expansion Compensation and Vibration Elimination	1-4
15100	Valves	1-5
15180	Thermal Insulation	1-8
15193	Above Ground Diesel Storage & Fueling Equipment	1-13
15197	Natural Gas Systems	1-6
15212	Compressed Air Systems	1-10
15410	Plumbing Piping	1-4
15430	Plumbing Specialties	1-8
15440	Plumbing Fixtures	1-4
15450	Plumbing Equipment	1-3
15478	Heat Tracing for Plumbing Piping	1-4
15480	Water Heaters	1-3
15535	Refrigeration Piping and Specialties	1-4
15540	Fuel-Fired Heaters	1-5
15548	Fuel-Fired Make-up Air Heaters	1-10

15620	Direct Heaters	1-5
15732	Rooftop Heating and Cooling Units	1-6
15782	Unitary Air Conditioners and Heat Pumps	1-7
15783	Computer Room Air Conditioner	1-6
15810	Ductwork	1-5
15815	Ductwork Accessories	1-5
15830	Air Outlets and Inlets	1-3
15868	Carbon Based Odor Control System	1-12
15882	Fans	1-5
15910	HVAC Controls and Instrumentation	1-4
15961	Testing, Adjusting and Balancing - Air Systems	1-5

**16**

**ELECTRICAL**

16015	Electrical System Analysis	1-10
16050	Basic Electrical Materials and Methods	1-14
16060	Secondary Grounding	1-2
16070	Supporting Devices	1-2
16075	Electrical Identification	1-1
16120	Conductors and Cables	1-7
16130	Raceways	1-7
16131	Boxes	1-3
16140	Wiring Devices	1-2
16150	Wire Connections and Connecting Devices	1-3
16170	Safety Switches	1-2
16220	Motors	1-6
16270	Medium Voltage Transformers	1-3
16271	General Lighting and Distribution Transformers	1-7
16280	Surge Protection Devices	1-6
16315	Primary Grounding	1-1
16370	Overhead Medium Voltage Power Distribution	1-13
16435	Medium Voltage Switchgear (With Generator Controller)	1-21
16436	Low Voltage Switchgear	1-13
16437	High Resistance Ground and Monitoring	1-6
16438	Power Quality Software	1-10
16440	Motor Control	1-19
16442	Panelboards	1-3
16445	Medium Voltage VFD Specifications	1-19
16446	Variable Frequency Drives	1-7

16460	Small Power and Miscellaneous Transformers	1-2
16495	Switchboard Matting	1-1
16496	Automatic Transfer Switch (Low Voltage)	1-8
16500	Lighting	1-3
16620	Packaged Engine Generator Systems	1-12
16670	Lightning Protection Systems (Air Terminals)	1-2
16710	Communication Systems	1-4
16900	Controls	1-2

**17**

**INSTRUMENTATION**

17311	PLC Hardware and Software	1-14
17350	Hazardous Gas Monitoring System	1-3
17410	Basic Measurement and Control Instrumentation Materials and Methods	1-7
17420	Instruments	1-11
17430	Boxes, Panels and Control Centers	1-4
17431	Operator Interface Terminal	1-8
17480	Instrument Lists and Reports	1-4
17490	Measurement and Control Commissioning	1-4

**18**

**SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA)**

18000	SCADA Integration	1-6
18100	Controls IO Point List	1-21

**APPENDICES**

A	LFUCG Standard Drawings 2008
B	LFUCG Sanitary Sewer & Pumping Station Standard Drawings 2009
C	RMP Standard Details
D	Controls Narrative
E	Allowances: Manufacturer's Proposals