ARDURRA

By QuestCDN

ADDENDUM NO. 2

TO:	Prospective Bidders and Others Concerned
DATE:	October 18, 2024
PROJECT:	5.0 MG Storage Tank
OWNER:	Anderson Regional Joint Water System Anderson, South Carolina
BID DATE:	Thursday, October 24, 2024
PROJECT NO.:	2023-0727-00 (SCIIP Grant # A-23-C006)
SUBJECT:	***Changes to the Contract Documents***

The Contract Documents for this Project are amended as set forth below. Bidders must acknowledge receipt of this Addendum on the Bid Form when bids are submitted.

PERTAINING TO THE FRONT-END DOCUMENTS

ITEM 1. Section C-800 – Supplementary Conditions, Article 5 – ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS, replace SC-5.03.E with the following:

E. In preparation of Drawings and Specifications, ENGINEER relied upon the following Geotechnical Report of exploration and tests of subsurface conditions at the 5.0 MG Ground Storage Tank Site:

1. Report dated March 20, 2024, prepared by Bunnell-Lammons Engineering, Inc. entitled: Report of Geotechnical Exploration, 5 MG Ground Storage Tank, 513 Vanguard Road, Anderson, South Carolina.

The above referenced report is included as Appendix A to the Contract Documents. This report is not included as part of the Contract Documents, but is provided as information only. The data on subsurface conditions are not intended as representations or warranties of the accuracy or continuity between soil borings. It is expressly understood that the Owner will not be responsible for interpretations or conclusions drawn by the Contractor from this data. The Data is made available for the convenience of the Contractor. Additional test borings or other exploratory operations may be made, by the Contractor, at no cost to the Owner.

PERTAINING TO THE TECHNICAL SPECIFICATIONS

ITEM 1. Table of Contents, replace pages ii – iii with the attached.

ITEM 2. Add Specification Section 26 28 16 – Enclosed Switches.

ITEM 3. Specification Section 33 16 32 – Grade Level AWWA D110 Type II Prestressed Concrete Water Storage Tank, replace paragraphs 1.3.A.2.f with the following:

f. Soil Bearing Capacity:

1) Ring Foundation: 3,000 psf
2) Membrane Reinforced Slab: 2,500 psf

ITEM 4. Specification Section 33 16 32 – Grade Level AWWA D110 Type II Prestressed Concrete Water Storage Tank, replace paragraphs 2.10.C with the following:

C. Exterior Ladder:

1. Fabricate of T6061 aluminum
2. Provide an aluminum safety cage, lockable security gate, and a safety climbing device as required to meet applicable OSHA standards.

ITEM 5. Specification Section 33 16 32 – Grade Level AWWA D110 Type II Prestressed Concrete Water Storage Tank, replace paragraphs 2.10.E with the following:

E. Ventilator:

1. Fabricate of fiberglass with minimum 3/16-inch thickness.
2. Locate in the center of the dome.
3. Provide minimum throat diameter of fifty inches.
4. Fasten with stainless steel bolts.
5. Cover openings with fiberglass screen.

ITEM 6. Specification Section 33 16 32 – Grade Level AWWA D110 Type II Prestressed Concrete Water Storage Tank, replace paragraphs 3.1.C with the following:

C. Provide a minimum thickness of 4 inches with 0.6 percent reinforcing steel in each direction per ACI-350 and AWWA D110.

ITEM 7. Specification Section 33 16 32 – Grade Level AWWA D110 Type II Prestressed Concrete Water Storage Tank, replace paragraphs 3.6.K with the following:

K. Provide a minimum initial compression in the core wall of 500 psi for open top tanks and 300 psi for domed tanks.

ITEM 8. Specification Section 33 16 32 – Grade Level AWWA D110 Type II Prestressed Concrete Water Storage Tank, replace paragraphs 3.8.A with the following:

A. Provide all exposed concrete with a three-coat finish per specification Section 09 90 00 – Painting.

PERTAINING TO THE DRAWINGS

ITEM 1. Replace Drawing E1.02 in its entirety with the attached.

PERTAINING TO BIDDER QUESTIONS

ITEM 1. Please confirm that owner is responsible for employing and paying for a material testing firm for this project. Inspections may include, but are not limited to compaction, concrete material, etc.

The owner will contract with a materials testing firm to perform geotechnical testing and concrete testing as required by the technical specifications. The contractor will be responsible for scheduling all testing during construction.

ITEM 2. Are there MWSBE requirements for this project?

This project is not subject to MWSBE requirements.

ITEM 3. Are digital signatures for bid documents acceptable in lieu of wet ink signatures?

Wet ink signatures will be required.

ITEM 4. Confirm that the Qualifications Statement is not due with bid.

Per Section C-200 – Instructions to Bidders for Construction Contract, Article 3 – Instructions to Bidders, Item 3.01 – A, bidders shall submit "written evidence establishing its qualifications such as financial data, previous experience, and present commitments" with the bid.

ITEM 5. What is the thickness of the existing concrete slab that is being extended?

Provide 6" minimum thickness for extension of slab. Place 1/2" preformed joint filler (PJF) to isolate slab for valve actuator from existing slab.

ITEM 6. Will the concrete filled bollards on C1.04 be placed within concrete pavement or soil? D1.01 D4 shows the bollards being attached to concrete pavement.

The bollards will be placed in soil; 2'–6" diameter #4 bars will not be required per Detail D4, Sheet CD1.01.

ITEM 7. Please confirm whether the two valves to the left of the 30" tees on C1.03 are 30" MJ BFV or motorized valve actuators?

For these two valves, a motorized valve actuator should be installed and retrofitted to operate the existing valves in accordance with Detail D7, Sheet CD1.01.

ITEM 8. Will we be permitted to temporarily relocate the fence for the installation of the storage tank? Suppliers will need additional space to install the storage tanks along Vanguard Road on C1.01.

The tank location has been revised in Addendum No. 1 to increase clearance. If additional space is still required, the contractor may temporarily relocate the existing fence at their option. The contractor will be required to provide temporary fencing to secure the site when they are not working. Additionally, the fence must be promptly returned to preconstruction conditions once the tank is constructed.

ITEM 9. Please confirm the voltage of the power lines along Vanguard Road.

The voltage of the power lines along Vanguard Road is 12,470 volts phase to phase.

ITEM 10. The power lines are potentially in the construction zone for the storage tanks, can these power lines be relocated prior to the start of construction?

The tank location was revised in Addendum No. 1 to increase clearance from the existing aerial power lines. The power lines will remain in their current location.

ITEM 11. Cable Schedule on E1.02 states that the wire from SWBD-CBS to PNL-CBS needs to be 3#8/#10G. Per code, a 60A breaker requires a #6 wire. Please clarify which wire to use.

The cable schedule has been revised to 3#6 wires. See revised drawing E1.02.

ITEM 12. Cable schedule on E1.02 states to use 2#12 wires for 480V connections. This should state 3#12 wires. Need clarification on whether or not this is a type error.

The cable schedule has been revised to 3#12 wires. See revised drawing E1.02.

ITEM 13. Please provide specifications for new panels and breakers.

Refer to Specification Section 26 24 16 – Panelboards for information on bus and panelboard materials. Provide breakers compatible with the breaker bus continuous and short circuit ratings shown on the "ARJWS One-Line Diagram" on Sheet E1.02. For the breaker addition in the switchboard, the serial number has been provided in Plan Note No. 1 to obtain pricing from the existing gear vendor.

ITEM 14. Are the disconnects shown as 30A/NF on E1.02 to be purchased by the electrical contractor? If so, please provide specifications for this disconnect.

Contractor is to furnish and install all disconnects shown. Specification Section 26 28 16 – Enclosed Switches has been added for further detail.

ITEM 15. Are decorative coatings required on the exterior and interior of the storage tank and the storage tank dome?

Coatings are required on the tank exterior including, but not limited to, painting the tank white, matching the blue band atop the tank, and matching the ARJWS logo painted on the tank. Refer to Specification Section 09 90 00 – Painting for detail.

ITEM 16. Please clarify which soil bores in the geotechnical report are B-3 and B-4 in the plan set. Two of the soil bores are labelled as B-4 on Sheet C1.01.

Bore labels have been updated on the Civil drawings that were revised per Addendum No. 1.

ITEM 17. What is the current grade elevation of the existing storage tank floor?

According to field data, the top of slab elevation for the existing tank floor is at a grade elevation of 816.55. The contractor will be responsible for field verifying this information and matching the design for the new tank.

ITEM 18. There is a disconnect labelled as 30A/NF on Sheet E1.02. The drawing shows this disconnect connecting to a breaker that is rated at 20A. Should be the amperage of the disconnect be 20A to match the breaker that it feeds into?

Provide 30A disconnects as shown. Refer to "Pertaining to Bidder Questions", Item 14 for further information about the disconnects.

ITEM 19. Can conduit and mechanical boxes be attached to the exterior of the Pump Station Building for electrical equipment?

This is acceptable. Routing of conduit and mechanical boxes should be field coordinated during construction.

ITEM 20. Can the existing walls be core drilled for conduit placement and routing?

Core drilling is acceptable for conduit routing. For conduit installation in an existing wall, grout conduit in place with non-shrink grout and then place sealant around the penetration at each face of the wall.

ITEM 21. Can cables and wires be placed in existing trays in the Clemson Pump Station?

Cables and wiring associated with this project should be ran in specified conduit and supported independently from the existing trays. Refer to Specification Section 26 05 29 – Hangers and Supports for Electrical Systems.

ITEM 22. What is pad thickness for the tank?

In accordance with Specification Section 33 16 32 – 3.1, the pad should have a minimum thickness of 8 inches over all pipe encasements and 4 inches in all other locations. Exact thickness is to be determined by the tank manufacturer.

ITEM 23. What is the depth of the 24" DIP Fill that is being abandoned?

This line was abandoned when the pump station was originally built and is estimated to have approximately 4 feet of cover. The contractor will be responsible for field verifying this information.

ITEM 24. Will additional space be provided for construction trailers?

Space will be provided for construction trailers. A potential location for this is the northeast corner of the site along the fence line, just north of the where the concrete washout area is shown. Site layout will be discussed in further detail with the selected contractor during the Pre-Construction Conference.

ITEM 25. What is the construction budget for this project?

The construction cost estimate for this project is approximately $6,760,000. This estimate does not consider any deductive alternates for the project.

ITEM 26. The Debarment Certification form has a line for a "Participant Number". What number should be put here?

The "Participant Number" should be the Unique Entity ID (UEI) that is assigned with your SAM.gov registration.

ITEM 27. Will duct banks require concrete encasement? If so, will they require reinforcing?

All underground electrical conduits should be concrete encased with reinforcing. Refer to the "Duct Bank Construction Detail" on revised Sheet E1.02.

ITEM 28. Regarding section 26 05 73, please confirm that the contractor is responsible for supplying power system studies for all areas indicated in part 1.1.F. These facilities are not shown in the drawings.

Confirmed; Power system studies shall be provided for the existing facility in order provide arc flash stickers for the new equipment shown on the one-line diagram. A PDF of the original study is attached as an appendix to the power system study specification.

ITEM 29. Can we access the original SKM software report to be able to modify with the addition of the new equipment? Spec Section 26 05 73-2 1.3.B.9.

The original software report is not currently available.

ITEM 30. Please confirm a South Carolina Electrical Contractors license will be adequate for issuance of a building permit. Spec Section 26 00 00 1.5.C.2

Confirmed.

ITEM 31. Specification 33 16 32-7, Sections 2.10 C2 and D2, require a safety climbing device. Drawing Sheet D1.01 requires the exterior aluminum ladder shall include a SAF-T-Climb device. Drawing Sheet D1.02 requires the interior fiberglass ladder shall include a TS safety rail. The existing tank was provided with TS safety rails for both ladders. Please confirm both ladders are required to include the TS safety rail.

Specification Section 33 16 32 has been revised to include safety climbing device for both ladders.

ITEM 32. Specification 33 16 32-7, Section 2.10 E3, requires the ventilator shall provide a minimum throat diameter of twenty-five inches. Drawing Sheet D1.03, Detail C12, Fiberglass Ventilator, provides a 4'-2" (50") throat opening. A fiberglass center vent with a 50" diameter throat opening is standard for this size prestressed concrete tank. Please confirm a 50" diameter fiberglass center vent is required.

Specification Section 33 16 32 has been revised to provide minimum throat diameter of 50 inches.

ITEM 33. Specification 33 16 32-8, Section 3.1C, Floor, "Provide minimum thickness of 4 inches with 0.5 percent reinforcing steel in each direction. Section 3.1D, "Provide additional reinforcing pipe encasements to maintain the 0.5% reinforcement. We suggest requiring a minimum of 0.6% reinforcing steel which is recommended per ACI 350 and AWWA D110. Please confirm that a minimum of 0.6% reinforcing steel is acceptable for the design of the 4" thick membrane floor for the prestressed concrete ground storage tank.

Specification Section 33 16 32 has been revised to provide 0.6 percent reinforcing steel.

ITEM 34. Specification 33 16 32-11, Section 3.6K, "Provide a minimum initial compression in the core wall of 500 psi". This matches the minimum initial compression in the core wall for open-top tanks. Please note the minimum initial compression in the core wall for domed tanks is 300 psi for domed tanks. Please confirm that a minimum initial compression in the core wall of 300 psi for domed tanks is acceptable.

Specification Section 33 16 32 has been revised to include compression for domed tanks.

ITEM 35. Specification 33 16 32-12, Section 3.8A, "Provide all exposed concrete with a three-coat finish consisting of one coat of a cementitious waterproofing product, Thoroseal or equal, and two coats of acrylic masonry paint, Porter 520 or equal". Specification 09 90 00-10, Section 3.6 A1, requires a three-coat system for exterior prestressed and concrete exposed surfaces utilizing Tnemec Series 151 Elasto-Grip followed by two coats Tnemec Series 156 Enviro-Crete. Please confirm the three coat Tnemec coating system is required for the prestressed concrete ground storage tank.

Specification Section 33 16 32 has been revised to reflect specification Section 09 90 00 - Painting as governing criteria for coating.

End of Addendum No. 2

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Appendix A – Report of Geotechnical Exploration

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SECTION 26 28 16

ENCLOSED SWITCHES

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish labor, materials, equipment and incidentals necessary to install disconnects. Electrical work shall be in accordance with Division 26 00 00 – Electrical.

B. Section Includes:

1. Nonfusible switches.

1.2 RELATED WORK

A. Division 26 00 00 – Electrical.

B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 – General Provisions and Division 26 00 00 - Electrical Specification Sections, apply to this Section.

1.3 SUBMITTALS

A. Submit per Division 01 – General Provisions and Section 26 00 00 – Basic Electrical Requirements.

B. Product Data: For each type of enclosed switch, accessory, and component indicated. Include dimensioned elevations, sections, weights, and Manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

1. Enclosure types and details.
2. Current and voltage ratings.
3. Short-circuit current ratings (interrupting and withstand, as appropriate). When the AIC of the switch is not indicated in the project plans, the AIC shall be the same as the AIC of the serving electrical supply connection (Switchboard, panelboard, or MCC).
4. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.
5. Include time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device.

C. Shop Drawings: For enclosed switches. Include plans, elevations, sections, details, and attachments to other work.

1. Wiring Diagrams: For power, signal, and control wiring.

D. Manufacturer's field service report.

E. Operation and Maintenance Data: For enclosed switches to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 1 Section "Operation and Maintenance Data," include the following:

1. Manufacturer's written instructions for testing and adjusting enclosed switches.

1.4 QUALITY ASSURANCE

A. Submit per Division 1 – General Provisions, and Section 26 00 00 – Basic Electrical Requirements.

B. Source Limitations: Obtain enclosed switches, overcurrent protective devices, components, and accessories, within same product category, from single source from single Manufacturer.

C. Product Selection for Restricted Space: Drawings indicate maximum dimensions for enclosed switches, including clearances between enclosures, and adjacent surfaces and other items. Comply with indicated maximum dimensions.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

E. Comply with NFPA 70.

1.5 DEFINITIONS

A. NC: Normally closed.

B. NO: Normally open.

C. SPDT: Single pole, double throw.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Rate equipment for continuous operation under the following conditions unless otherwise indicated:

1. Ambient Temperature: Not less than minus 22 deg F (minus 30 deg C) and not exceeding 104 deg F (40 deg C).
2. Altitude: Not exceeding 6600 feet (2010 m).

B. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Engineer no fewer than seven days in advance of proposed interruption of electric service.
2. Indicate method of providing temporary electric service.

3. Do not proceed with interruption of electric service without Engineer's written permission.
4. Comply with NFPA 70E.

1.7 COORDINATION

A. Coordinate layout and installation of switches and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

1.8 EXTRA MATERIALS (NOT USED)

PART 2 - PRODUCTS

2.1 NONFUSIBLE SWITCHES

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

1. ABB.
2. Square D.
3. Approved Equal.

B. Type GD, General Duty, Single Throw, 600 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept two padlocks, and interlocked with cover in closed position.

C. Type HD, Heavy Duty, Single Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

D. Type HD, Heavy Duty, Six Pole, Single Throw, 600-V ac, 200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

E. Type HD, Heavy Duty, Double Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

F. Accessories:

1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
2. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
3. Isolated Ground Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.

4. Auxiliary Contact Kit: One NO/NC (Form "C") auxiliary contact(s), arranged to activate before switch blades open.
5. Hookstick Handle: Allows use of a hookstick to operate the handle.
6. Lugs: Mechanical type, suitable for number, size, and conductor material.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine elements and surfaces to receive enclosed switches for compliance with installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install individual wall-mounted switches with tops at uniform height unless otherwise indicated.

B. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.

C. Comply with NECA 1.

3.3 IDENTIFICATION

A. Comply with requirements in Division 26 00 00 – Electrical.

1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.

3.4 FIELD QUALITY CONTROL

A. Inspect and test according to NETA ATS.

3.5 ADJUSTING

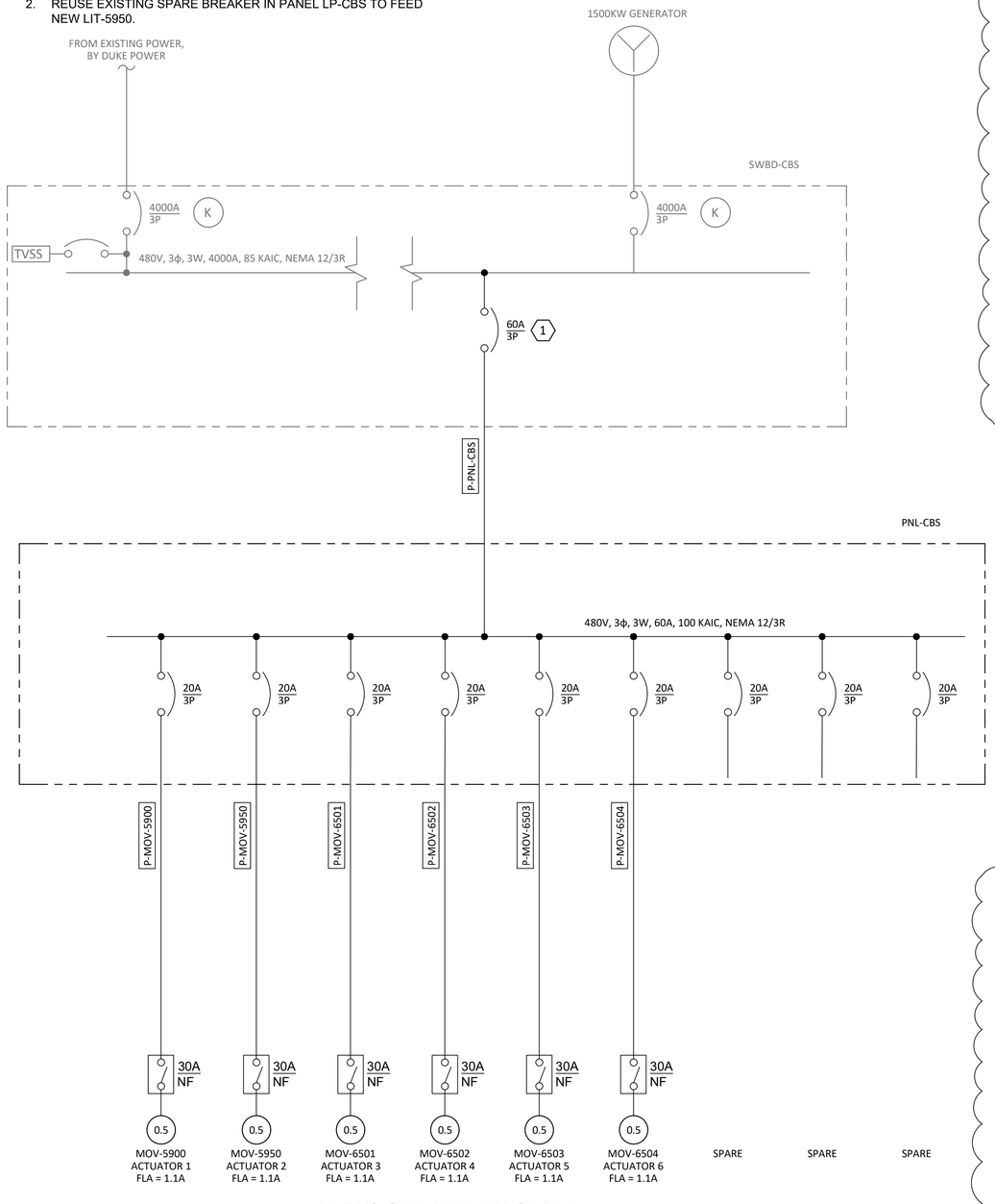
A. Adjust moving parts and operable components to function smoothly and lubricate as recommended by Manufacturer.

END OF SECTION

April 23, 2019 I:\PROJECTS\ARJWS 5.0 MG Storage Tank\8.0 Drawings\ARJWS 5.0 MG Storage Tank.dwg

NOTES BY SYMBOL : ⬡

1. CONTRACTOR SHALL REPLACE EXISTING 40A SPARE IN EXISTING SWITCHBOARD WITH NEW 60A BREAKER TO FEED PROPOSED PANEL. EXISTING SWITCHBOARD IS EATON POW-R-LINE G. O. NO. LCH0009166.
2. REUSE EXISTING SPARE BREAKER IN PANEL LP-CBS TO FEED NEW LIT-5950.



ARJWS ONE-LINE DIAGRAM

PANELBOARD: LP-CBS

MAIN BREAKER (AMPS): 100
BUS RATING (AMPS): 100
L-L VOLTAGE (VOLTS): 208
L-N VOLTAGE (VOLTS): 120
ENCLOSURE UL RATING: 12/3R
MOUNTING: SURFACE
AMPERE INTERRUPT RATING: 22KA

NOTES	COND SIZE	WIRE SIZE	LOAD DESCRIPTION	LOAD (VOLT AMPS) AΦ	BΦ	CΦ	BREAKER AMPS/ POLES	CIRCUIT NO	CIRCUIT NO	BREAKER AMPS/ POLES	LOAD (VOLT AMPS) AΦ	BΦ	CΦ	LOAD DESCRIPTION	WIRE SIZE	COND SIZE	NOTES
			RECEPTACLES	300			20/1	1	2	20/1	400			RECEPTACLES			
			RECEPTACLES		500		20/1	3	4	20/1		400		RECEPTACLES			
			SPARE			500	20/1	5	6	20/1			0	SPARE			
			DAY TANK	200			20/1	7	8	20/1	500			FUEL LEVEL / LEAK DETECTION PANEL			
			LIGHTING-ELECTRIC ROOM		700		20/1	9	10	20/1		0		DUKE METER (GENSET) PRODUCTION			
			LIGHTING-ELECTRIC ROOM			700	20/1	11	12	20/1			0	SPARE			
			LIGHTING-GENERATOR ROOM	100			20/1	13	14	20/2	900			GENERATOR CONTROL PANEL			
			LIGHTING-PUMP ROOM		100		20/1	15	16			700					
			LIGHTING-PUMP ROOM			100	20/1	17	18	20/1			0	SPARE			
			LIGHTING-EXTERIOR	400			20/1	19	20	20/1	200			SPARE			
			LIGHTING-SITE POLE		400		20/1	21	22	20/1		0		SPARE			
			LIGHTING-EXTERIOR			400	20/1	23	24	20/1			500	ATC-2 PANEL			
			ATC-1 VENTILATION PANEL	700			20/1	25	26	20/1	0			PLC-CBS			
			EXISTING LIGHTING PANEL BY STORAGE TANK		0		60/3	27	28	20/1		0		SPARE			
						0		29	30	20/1			0	SPARE			
				0				31	32	20/1	180			LIT-5950			2
			SPARE		0		20/1	33	34	20/1		0		SPARE			
			SPARE			0	20/1	35	36	20/1			0	SPARE			
			SPARE	0			20/1	37	38	20/1	0			SPARE			
			SPARE		0		20/1	39	40	20/1		0		SPARE			
			SPARE			0	20/1	41	42	20/1			0	SPARE			
			TOTAL VA (LEFT SIDE)	1700	1700	1700					2180	1100	500				
			TOTAL CONNECTED VA		8880												
			CONNECTED AMPS	32.333													

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EXISTING LIGHTING PANEL LP-CBS PANEL SCHEDULE

CIRCUIT TAG	MAX CKT VOLTAGE	CONDUIT SIZE (INCHES)	CONDUCTORS	FROM	TO
P-PNL-CBS	480	1	3#6, #10G	EXISITNG SWITCHBOARD SWBD-CBS	NEW ACTUATOR PANEL PNL-CBS
P-MOV-5900	480	1	3#12, #12G	NEW ACTUATOR PANEL PNL-CBS	VALVE ACTUATOR MOV-5900
P-MOV-5950	480	1	3#12, #12G	NEW ACTUATOR PANEL PNL-CBS	VALVE ACTUATOR MOV-5950
P-MOV-6501	480	1	3#12, #12G	NEW ACTUATOR PANEL PNL-CBS	VALVE ACTUATOR MOV-6501
P-MOV-6502	480	1	3#12, #12G	NEW ACTUATOR PANEL PNL-CBS	VALVE ACTUATOR MOV-6502
P-MOV-6503	480	1	3#12, #12G	NEW ACTUATOR PANEL PNL-CBS	VALVE ACTUATOR MOV-6503
P-MOV-6504	480	1	3#12, #12G	NEW ACTUATOR PANEL PNL-CBS	VALVE ACTUATOR MOV-6504
P-LIT-5950	120	1	2#12, #12G	EXISTING LIGHTING PANEL LP-CBS	LIT-5950
C-LIT-5950	24	1	1#16TSP, 1#14G	EXISTING PLC PANEL PLC-CBPS	LIT-5950
C-LE-5950	24	1	MFR SUPPLIED CBL	LIT-5950	LE-5950
C-MOV-5900	24	1	12#14, #14G	EXISTING PLC PANEL PLC-CBPS	VALVE ACTUATOR MOV-5900
C-MOV-5950	24	1	12#14, #14G	EXISTING PLC PANEL PLC-CBPS	VALVE ACTUATOR MOV-5950
C-MOV-6501	24	1	12#14, #14G	EXISTING PLC PANEL PLC-CBPS	VALVE ACTUATOR MOV-6501
C-MOV-6502	24	1	12#14, #14G	EXISTING PLC PANEL PLC-CBPS	VALVE ACTUATOR MOV-6502
C-MOV-6503	24	1	12#14, #14G	EXISTING PLC PANEL PLC-CBPS	VALVE ACTUATOR MOV-6503
C-MOV-6504	24	1	12#14, #14G	EXISTING PLC PANEL PLC-CBPS	VALVE ACTUATOR MOV-6504

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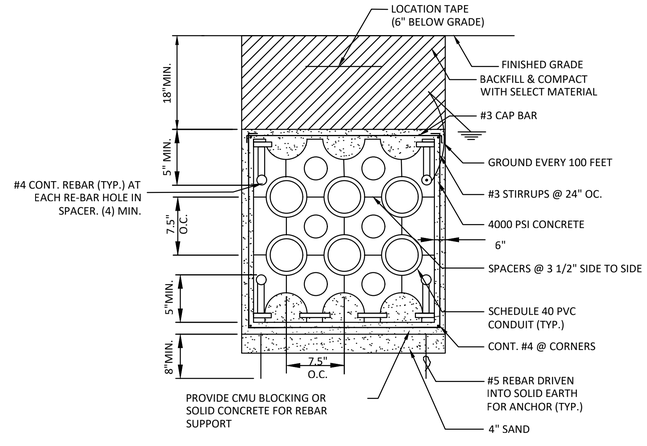
ARJWS CABLE SCHEDULE



DUCT BANK CONSTRUCTION DETAIL

NOTES:

1. CONCRETE ENCASEMENT: ALL CONCRETE TO HAVE COMPRESSIVE STRENGTH OF 4000 PS.I. AT 28 DAYS. NO AGGREGATE LARGER THAN 3/4" PEA GRAVEL. PADDLE IN RED DYE AND EVEN OUT.
2. INSTALL SNAP-N-STACK CARLON COMBO SPACERS APPROVED EQUAL.
3. INSTALL #5 STEEL REINFORCING RODS THROUGH THE INTERNAL VERTICAL CHANNELS AT BOTH OUTER EDGES OF SPACER AND DRIVE REINFORCING RODS INTO EARTH TO ANCHOR ASSEMBLY.
4. INSTALL #5 STEEL REINFORCING RODS ACROSS TOP OF CAP AND IN EACH CORNER OF THE CONCRETE ENCASEMENT. OVERLAP REBAR MINIMUM 24" AT EACH END.
5. TIE HORIZONTAL AND VERTICAL RODS TOGETHER WITH #16 STEEL TIE WIRE.
6. GROUND THE STEEL REINFORCING RODS AT 100 FEET SPANS MAXIMUM. CONNECT TO GROUND CONDUCTOR ON TOP OF DUCT BANK WITH EXOTHERMIC WELD.
7. PROVIDE A SELF SUPPORTING REBAR CAGE. PROVIDE MORE REINFORCING RODS AT BOTTOM THAN TOP, SIMILAR TO A BEAM REINFORCING DESIGN. REBAR CAGE NOT SHOWN FOR CLARITY. COORDINATE CAGE DESIGN WITH OWNER REPRESENTATIVE. APPROVAL OF REBAR STRUCTURE REQUIRED FROM OWNER REPRESENTATIVE BEFORE POURING CONCRETE.

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SOUTH CAROLINA ARDURRA GROUP INC. No. 6082 CERTIFICATE OF AUTHORIZATION

ARDURRA
COLLABORATE. INNOVATE. CREATE.
3 Linwa Boulevard
Anderson, South Carolina 29621
Phone: (864) 226-6111
www.Ardurra.com

ANDERSON REGIONAL JOINT WATER SYSTEM

ANDERSON REGIONAL JOINT WATER SYSTEM

NO.	DATE	REVISION	BY
0	06-26-24	IFC - PENDING AGENCY REVIEW	DJP
1	10-15-24	REVISED PER ADDENDUM NO. 1	DJP
2	10-18-24	REVISED PER ADDENDUM NO. 2	DJP

5.0 MG GROUND STORAGE TANK
ARJWS

ELECTRICAL ONE LINE AND SCHEDULES

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 42220 10-18-24 AGATA A. RISTOW

JOB NO:	2023-0727-00
DATE:	MARCH 2024

E1.02

IFC - PENDING AGENCY REVIEW
06-26-24