



Town of Ridgeland

June 7, 2023

**PROJECT: Town of Ridgeland Water and Sewer Resiliency Improvements
TOR-2023-02**

ADDENDUM: Two (2)

DUE DATE: June 20, 2023 at 2:00 PM

THIS ADDENDUM IS FOR THE PURPOSE OF MAKING THE FOLLOWING CHANGES OR CLARIFICATIONS:

- 1. Project Specifications have been updated as noted below and are reissued with Addendum 2 in their entirety as a separate document.**
 - a. 00010 Notice to Bidders
 - i. Page 1, 1st Paragraph: Bid date updated to June 20, 2023
 - ii. Page 2 Description of Work
 1. Part I – Pump Station Improvements – Pump Station 3 – updated description of work
 2. Part I – Pump Station Improvements – Pump Station 5 – updated description of work
 3. Part I – Pump Station Improvements – Pump Station 6 – updated description of work
 4. Part I – Pump Station Improvements – Pump Station 8 – updated description of work
 5. Part I – Pump Station Improvements – Pump Station 9 updated description of work
 6. Part I – Pump Station Improvements – Pump Station 12 – updated description of work
 - iii. Page 4 Bid Document Questions: last day for questions updated to June 15, 2023.
 - b. 00100 Instructions to Bidders
 - i. 1. Defined Terms: added EJCDC to C-700

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- ii. 13.2 Updated to clarify information to be included with bid submittal.
 - iii. 18. Contract Security – updated to reconcile with project specification
- c. 00300 Bid Proposal Form
 - i. Schedule for Bids starting on page 4 have been updated to include the Measurement & Payment (M&P) reference to Section 01025 to the schedule.
 - ii. Quantities have been updated and additional items for fittings, A-3 fill, and stone bedding have been added to the Schedule for Bids for Part II Gravity Sewer Rehabilitation
 - iii. Notes on Bid Form Item 4, page 12, has been updated for the list of additional documents to be submitted with the bid.
- d. 00502 Wage Determination – General Decision Number SC220001 01/07/2022 has been updated in its entirety to reflect the latest General Decision SC20230001 01/06/2023
- e. 00503 Wage Determination – Service Contract Act Wage Determination No. 2015-5737 Rev 18 has been removed from the project specifications.
- f. 01025 Measurement and Payment - added
- g. 01100 Summary of Work
 - i. Page 1 Description of Work
 - 1. Part I – Pump Station Improvements – Pump Station 3 – updated description of work
 - 2. Part I – Pump Station Improvements – Pump Station 5 – updated description of work
 - 3. Part I – Pump Station Improvements – Pump Station 6 – updated description of work
 - ii. Page 2 Description of Work
 - 1. Part I – Pump Station Improvements – Pump Station 8 – updated description of work
 - 2. Part I – Pump Station Improvements – Pump Station 9 updated description of work
 - 3. Part I – Pump Station Improvements – Pump Station 12 – updated description of work
- h. 01300 Regulatory Requirements
 - i. 1.04 B. updated to note permits being acquired by Town and requirements of contractor.
- i. 01370 Schedule of Values - added
- j. 01381 Construction Video-Audio Recording - added
- k. 01730 Operating and Maintenance Data - added
- l. 01781 Project Record Documents
 - i. 1.03 H modified to include additional requirements 1 through 10
 - ii. 1.04 A Record Drawings modified to include requirements 1 and 2 for record drawings format
 - iii. 1.04 B Record Drawings modified to remove color coding and clarify requirements of item 4
 - iv. 1.04 D Record Drawings – added to require registered surveyor to provide data gathering
- m. 02640 Sewer System Construction
 - i. 1.1 B added wetwells and forcemain

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- ii. 1.4 References – added items X through FF.
- iii. 1.5 B.3. Payment of Manholes – modified to note installation or removal and replacement
- iv. 1.5 B. 5 Payment of Sand Bedding and Backfill – added reference to A-3 soil
- v. 1.5. B.6 – Payment of Service Connection Restoration – modified to note separate payment will be made for service connection restoration to new gravity sewer main.
- vi. 1.5.B 7 – Payment of Metal Detector Tape – added
- vii. 1.5.B 8 – Payment of Tracer Wire – added
- viii. 1.5.B.9 – Payment of Fittings – added
- ix. 1.5.B.10 – Payment of Forcemains – added
- x. 1.5.B.11 – Payment of Plug & Gate Valves – added
- xi. 1.5.B.12 – Payment of Insert Valves – added
- xii. 1.5.B.15 – Payment of Grassing clarified to note no separate pay item
- xiii. 2.3 Wetwells added to title
- xiv. 2.3 B and C – wetwell added after manholes
- xv. 2.3 D 2 – requirements added for wetwell frames and hatches
- xvi. 2.3 F – adds requirement for wetwell to have coating
- xvii. 2.6 A through E Forcemain – added
- xviii. 2.7 A. Metal Detector Tape – added
- xix. 2.8 A through B Tracer Wire – added
- xx. 2.9 A through C Gate Valves – added
- xxi. 2.10 A Plug Valves – added
- xxii. 2.11 A through C Insert Valves – added
- xxiii. 3.5 H – wetwell added after manholes
- xxiv. 3.9 – wetwell added after manhole
- xxv. 3.9 D.4 – wetwell added after manhole
- xxvi. 3.9 E.5 Wetwell Testing – added
- xxvii. 3.13 C. Forcemain pressure testing requirements – added
- xxviii. 3.21 requirement for bypassing operations to be in accordance with Section 02961 added
- n. 02660 Water Distribution System
 - i. 3.3 E Updated for SCDHEC 61-58 requirements for separation of water mains and sewers; added items (a) – (f); removed items 1. a. – d, 2. a. – c, 3 a. – c.
- o. 02662 Water Treatment Chemical System – added
- p. 02955 Sewer Cleaning and CCTV
 - i. 1.5 C – Measurement and Payment of Sewer Line Root Removal – clarification of tap root.
 - ii. 1.7 A. – Sequencing and Scheduling – clarified Pre-Construction CCTV work (if required).
- q. 02961 Temporary Sewer Bypassing Operations - added
- r. 02970 Sanitary Sewer CIPP
 - i. 1.5 B. Measurement and Payment Traffic Control – modified to clarify no separate bid item for traffic control.
- s. 02975 Sanitary Sewer Pipe Bursting

- i. 1.6 C. Measurement and Payment Traffic Control – modified to clarify no separate bid item for traffic control.
 - t. 05500 Miscellaneous Metals
 - i. 1.2 C Reference South Carolina Building Code
 - ii. 1.2 E Reference South Carolina Building Code
 - iii. 1.3 G Reference South Carolina Building Code
 - u. 09900 Protective Coatings - added
 - v. 11305 Submersible Sewage Pumps
 - i. 2.1 B – Piping Materials reconciled with drawings
 - ii. 2.2 A 6.d. mechanical seal material updated to silicone carbide
 - iii. 2.2 A 6.e. Guide rail bracket options modified to include bolt on universal non-proprietary bracket
 - iv. 2.2 A 6.f Number of guide rails modified to allow single guide rail.
 - v. 2.2 A 7. Pump motor insulation modified to Class H
 - vi. 2.2 A 10 – Level Control naming clarified
 - vii. 2.3 B – Protective Grating Panel manufacturer updated
 - viii. 2.3 C – Flow Meter requirements - added
 - ix. Table 11305-A updated and Tables 11305-B through 11305-E added for pump information
 - w. 16000 Electrical General – added
 - x. 16210 Engine Driven Emergency Power Supply System – added
 - y. Appendix B – SCDOT Encroachment Permit for Part II Sewer Rehabilitation - added

2. The following Project Contract Drawings have been updated and are reissued with Addendum 2 as an attachment. Modified drawings have been added with bubble and numbering. Primary modifications include but are not limited to:

- a. Part III: Well Site 2 Improvements
 - i. E10.1 and E10.2: Electrical improvements updates to address chemical treatment system modifications.

3. Responses to Questions

A. Question: The take-off quantities for CIPP on the plans versus the bid tab do not match. Specifically there appears to be 312LF of 8" less, and 282LF more of 10", identified on the Bid Tab amounts than is shown on the plans. Can the engineer please confirm the correct amounts of 8" and 10" CIPP lining to be performed on the project?

Response: Quantities have been reviewed and updated bid form is included in Section 00300.

B. Question: Can the Owner/Engineer please identify/provide a location for the disposal of sand/debris from the pipe cleaning operations?

Response: As long as the material to be disposed of is sand/rock, it can be dumped behind the Town's elevated storage tank behind the high school ballfield. Any other

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debris or material to be disposed of will need to go to the Waste Management construction waste site.

- C. Question: I see in the Summary of Work and on the drawings that the wetwells are receiving a protective lining, and I was wondering if the type of coating for this was the cementitious lining indicated in Section 02960 for the manholes on the project or if you were looking to utilize a different type of coating for the wetwells?

Response: The coating for the wetwells shall be the same as for the manholes. The specification section 02640 Sewer System Construction has been updated to reflect this.

- D. Question: Would you consider FerraTex an approved manufacturer for Cured-In-Place-Pipe (CIPP) per section 02970 part 2.1 for this project?

CIPP Liner: FerraTex has manufactured and shipped over 2 Million LF of liner both dry and resin-impregnated (wet-out) and have been surpassing expectations for 30 years. Our support team has worked in the field, thus possessing a true understanding of the challenges that contractors and installation professionals face. We know how to make your job easier and will do everything in our power to ensure your project is completed smoothly and efficiently. FerraTex achieved ISO 9001:2015 certification in 2017 and in 2019 was acquired by Applied Felts Inc. Our liners can be manufactured to any dimension specified and fabricated to virtually any size and thickness while meeting ASTM F1216 and ASTM F1743-17 standards.

Response: Yes, FerraTex is acceptable as an approved manufacturer for Cured-in-Place-Pipe per section 02970 part 2.1 for this project.

- E. Question: Would you consider Quadex AluminaLiner an acceptable Manhole Protective Coating (cementitious Mortar Lining) per section 02960 part 2.1, C for this project?

AluminaLiner is a factory blended, one component, fiber reinforced, 100% calcium aluminate cement designed to provide excellent corrosion resistance against typical hydrogen sulfide gas (microbiologically induced) corrosion, add structural integrity and stop groundwater infiltration in sewer structures with a pH of 2 or greater. This unique formulation allows for a monolithic one-pass application up to three inches in thickness by low pressure spraying or centrifugally spinning.

Response: Yes, AluminaLiner is acceptable as an approved Manhole Protective Coating (cementitious Mortar Lining) per section 02960 part 2.1, C for this project. It is noted that a 10-year warranty must be provided as required in the noted specification section.

- F. Question: Would you consider GeoKrete Geopolymer an alternative coating system and acceptable product for Manhole Protective Coating per section 02960 part 2.1 for this project?

Geopolymer Liner: GeoKrete is an advanced geopolymer mortar (essentially a synthetic stone) that has exceptional corrosion and abrasion resistance properties and can be used in the structural replacement/rehabilitation of manholes, structures, pipes, culverts, tunnels, and other common storm, sewer, and raw water infrastructure. This product is a fully structural and highly corrosion-resistant liner that creates an impervious barrier completely sealing out infiltration while also bonding/forming a shear interface with the host structure. GeoKrete is a one-step solution that is cost-effective and less labor-intensive when compared to composite or multi-layered systems. To further show GeoKrete's superior corrosion resistance, please refer to the submittal packet attached on page 62 (Table 2) ASTM C 267 – 12 weeks without loss when submerged in a sulfuric acid solution with a pH of 1.0. This is significantly more extreme than one would expect to encounter in a sewer system, so in practice represents a very accelerated long-term performance test.

Response: Yes, GeoKrete Geopolymer is acceptable as an approved alternative coating system for Manhole Protective Coating per section 02960 part 2.1 for this project. It is noted that a 10-year warranty must be provided as required in the noted specification section.

- G. Question: We would appreciate it if you add WinCC RT Professional, Siemens S71200 series PLCs and Cradlepoint in the specification to allow for fair opportunity in bidding the project.

Response: All new equipment for the SCADA system must conform to the specification section 16000 which provides the Town of Ridgeland's new standards. For standardization purposes, the equipment noted in the question will not be added to the specification.

4. Acknowledgement:

The Bidder shall include acknowledgement of the Addendum Two (2) in bid by including this form and also acknowledge Addendum Two (2) in Section 00300 Bid Proposal Form.

Signature: _____

Date: _____

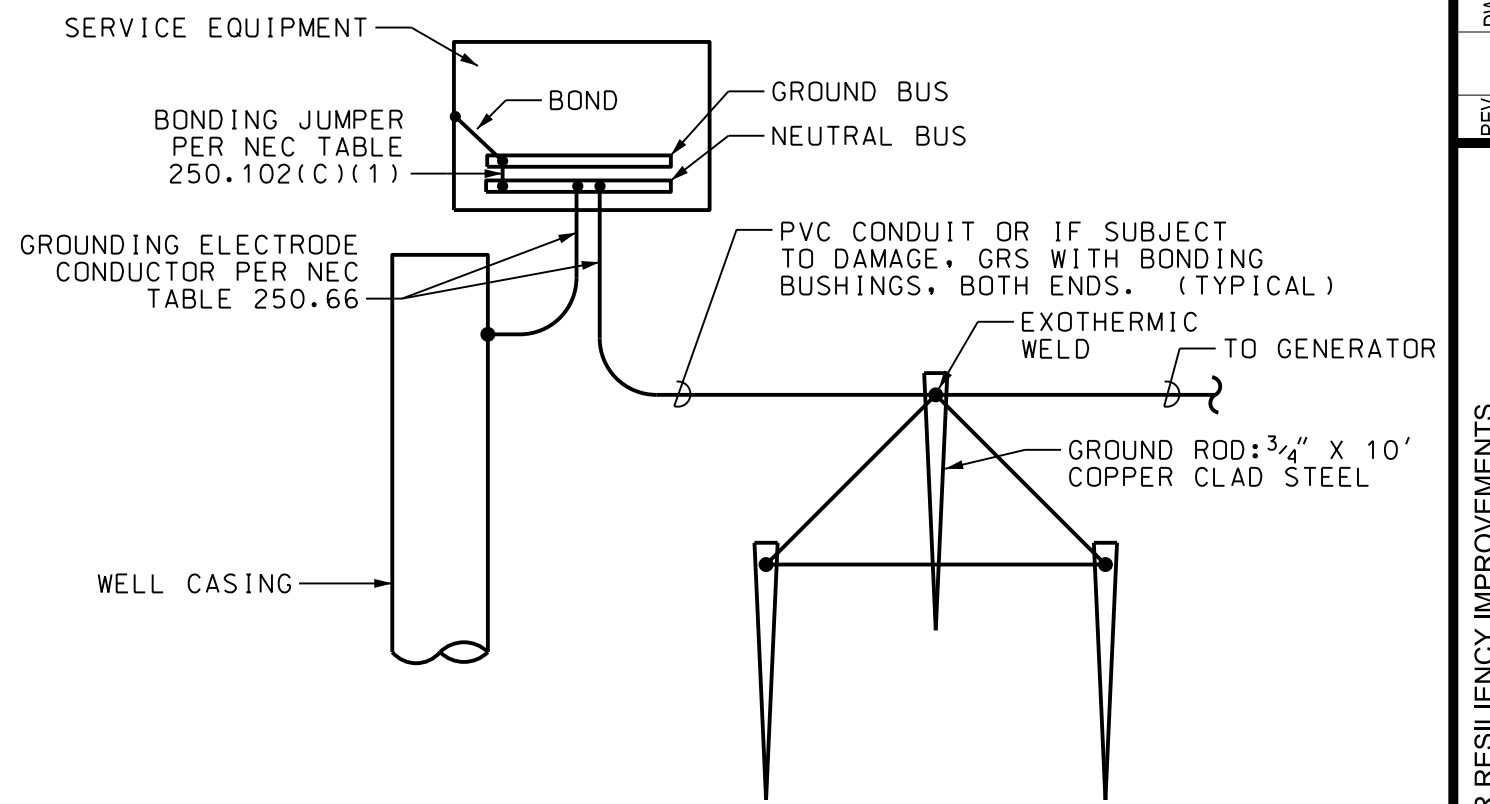
SCHEDULE OF PANEL 'A'										
VOLTAGE: 240 / 120		PHASE: 1			WIRE: 3					
BUS AMPS: 225 A		DEVICE AMPS: 125 A			MCB			NEMA: 4X		
A.I.C RATING: 10,000 A		MOUNTING: SURFACE								
LOCATION DESCRIPTION	LOAD (KVA)	LOAD TYPE	TRIP POLE	#	PH	#	TRIP POLE	LOAD TYPE	LOAD (KVA)	LOCATION DESCRIPTION
LIGHTS	0.6	A	20A/1P	1	A	2	20A/2P	E	1.0	EH-1 2KW
RECEPTACLES	0.6	B	20A/1P	3	B	4	-	E	1.0	240V 1PH
TRI-CHLO SOLENOID VALVE - §	1.0	H	20A/1P	5	A	6	20A/2P	E	1.0	EH-2 2KW
PHOSPHATE PUMP - §	1.0	G	20A/1P	7	B	8	-	E	1.0	240V 1PH
TRI-CHLOR CONTROLS	0.5	H	20A/1P	9	A	10	20A/1P	G	0.5	EF-2 1/15HP 120V 1PH
SPARE			20A/1P	11	B	12	20A/2P	H	1.3	GENERATOR COOLANT HEATER
SPARE			20A/1P	13	A	14	-	H	1.3	2500W 240V 1PH
SPARE			20A/1P	15	B	16	20A/1P	H	1.5	GENERATOR BATTERY CHARGER
SPARE			20A/1P	17	A	18	20A/1P	H	1.0	SCADA
SPARE			20A/1P	19	B	20	20A/1P			SPARE
SPARE			20A/1P	21	A	22	20A/1P			SPARE
SPARE			20A/1P	23	B	24	20A/1P			SPARE
SPARE			20A/1P	25	A	26	20A/1P			SPARE
SURGE PROTECTION			30A/2P	27	B	28	20A/1P			SPARE
-			-	29	A	30	20A/1P			SPARE

PANEL LOAD ANALYSIS									
Load Type	DESCRIPTION	Conn. KVA	Demand KVA	2017 NEC Reference	Load Type	DESCRIPTION	Conn. KVA	Demand KVA	2017 NEC Reference
A	Lighting	0.6	0.8	NEC Article 215.3	E	Heating	4.0	4.0	NEC Article 220.60
B	Receptacles	0.6	0.6	NEC Table 220.44	F	Largest Motor	0.0	0.0	NEC Article 440.7
C	Kitchen Equipment	0.0	0.0	NEC Table 220.56	G	Other Motors	1.5	1.5	NEC Article 440.7
D	Air-Conditioning	0.0	0.0	NEC Article 220.60	H	Other Loads	6.5	6.5	
Phase A Connected Load		6.9 KVA	Notes: § - INTERLOCKED THROUGH WELL STARTER		TOTAL CONNECTED LOAD		13.2 KVA	55.0 AMPS	
Phase B Connected Load		6.4 KVA			TOTAL DEMAND LOAD		13.4 KVA	55.6 AMPS	
					MINIMUM SIZING AMPS		20.9 KVA	86.9 AMPS	

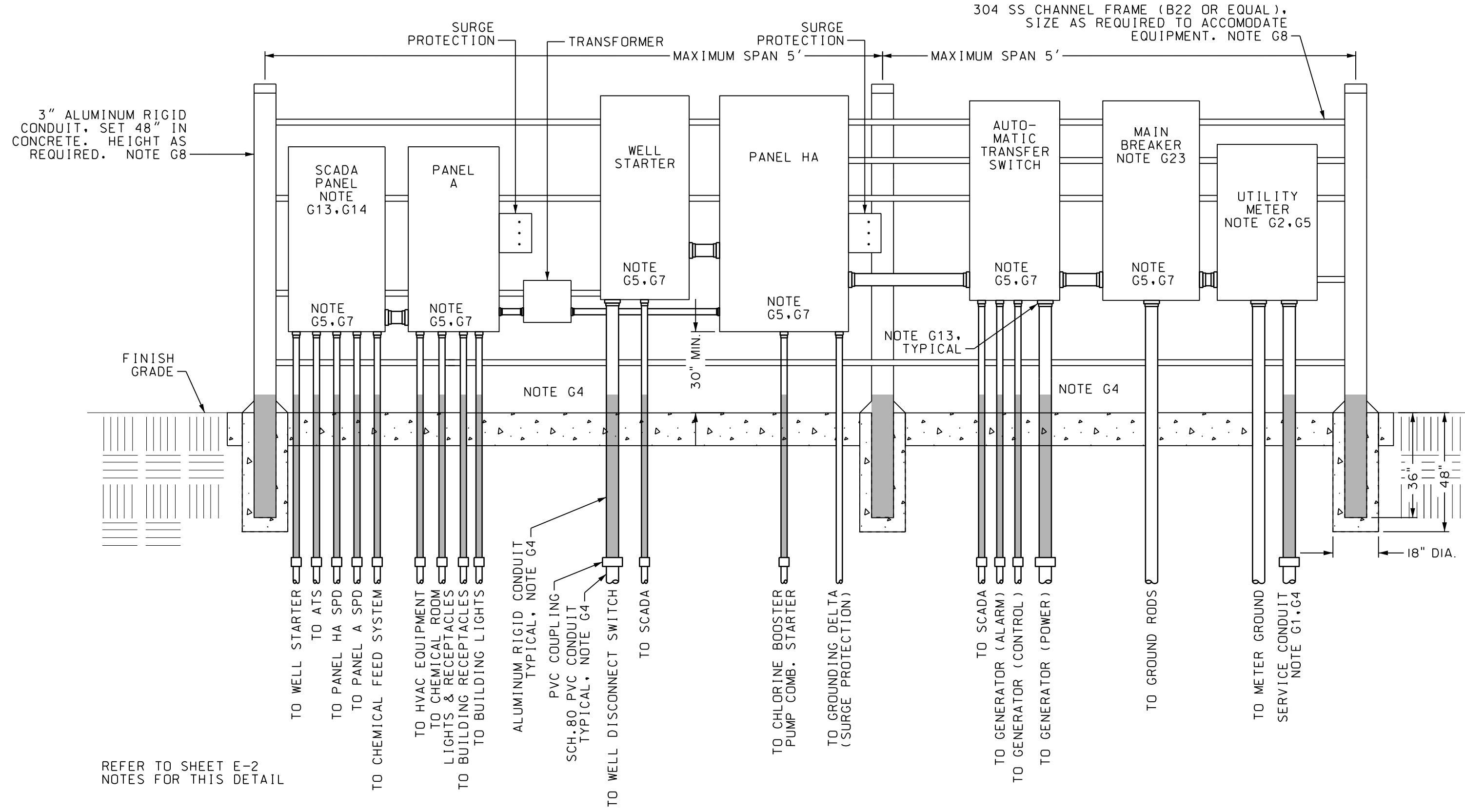
LIGHT FIXTURE SCHEDULE - RIDGELAND WELL #2					
TYPE	DESCRIPTION	VOLTAGE	LAMP	MOUNTING	NOTES
A	LED VAPOR TIGHT LED ENCLOSED & GASKETED LITHONIA LITHONIA CSVT-L48-AL03-MVOLT-SWW3-80CRI CSVT-STSL-LATCH	120V	LED	SURFACE	PROVIDE WITH STAINLESS STEEL LATCHES
B	LED WALL PACK LITHONIA WPX1-LED-P1-40K-MVOLT-DBBX	120V	LED	WALL @ EAVE	MOUNT UNDER EAVE AT TOP OF WALL
C	NON-METALLIC LED HAZARDOUS FIXTURE KILLARK NVL-2-30-X2-G	120V	LED	SURFACE	FURNISH WITH GUARD
D	LED FLOOD LIGHT LITHONIA LITHONIA DXSF2 LED-3-A530/40K-WFL-MOVLIT-IS-PE-DBBX SMAWSB-BS17-DBBX	120V	LED	WOOD POLE	PROVIDE WITH INTEGRAL BUTTON PHOTOCELL PROVIDE WITH WOOD POLE SIDE BULLHORN

LEGEND

- HOME RUN, CIRCUIT AS NOTED. SLASH MARKS INDICATE MORE THAN 2 CONDUCTORS. PROVIDE GROUND CONDUCTOR (NOT SHOWN) IN ALL CONDUITS.
- EXPOSED RACEWAY
- UNDERGROUND RACEWAY
- LED FIXTURE AND OUTLET BOX
- CEILING MTD LED LIGHTING FIXTURE AND OUTLET BOX
- WALL MOUNTED LED FIXTURE & OUTLET BOX
- FLOOD LIGHT MOUNTED TO SERVICE POLE POLE SEE NOTE 9, SHEET E10.2
- SWITCH, 48" AFF
- DOOR SWITCH, SQUARE D CLASS 9007 WITH ROLLER ARM, MTD TO FRAME AT TOP OF DOOR
- MOTOR SWITCH WITH OVERLOAD PROTECTION, 48" AFF
- MOTOR SWITCH WITHOUT OVERLOAD PROTECTION, 48" AFF
- RECEPTACLE, 48" AFF. NUMERICAL NUMBER ADJACENT TO DEVICE INDICATES BRANCH CIRCUIT NUMBER.
- 20 AMP RECEPTACLE, 48" AFF. NUMBER ADJACENT TO DEVICE INDICATES BRANCH CIRCUIT NUMBER.
- MOTOR
- DISCONNECT SWITCH (AMPS)/(POLES)/(NEMA ENCLOSURE)
- COMBINATION STARTER - FVNR WITH SOLID STATE OVERLOAD PROTECTION, NEMA 4X FIBERGLASS ENCLOSURE, SEE SPECIFICATIONS
- GROUND
- AUTOMATIC TRANSFER SWITCH
- BREAKER
- GROUND ROD LOCATION - 3/4" X 10 FT COPPERCLAD
- BREAK-GLASS EMERGENCY STOP SWITCH
- FLEX CONNECTION, 18" MAX
- PANELBOARD
- EQUIPMENT AS NOTED
- JUNCTION BOX
- AUXILIARY RELAY IN PVC BOX
- SURGE PROTECTION DEVICE.
- REDUCED VOLTAGE SOLID STATE MOTOR CONTROLLER
- CFM CUBIC FEET PER MINUTE
- GF GROUND FAULT INTERRUPTING TYPE 'WR' W/ "WHILE-IN-USE" COVER
- WP WEATHER PROOF
- PHOTOCELL TORK MODEL 2107 MOUNT AT TOP OF WALL UNDER EAVE



2 BUILDING SERVICE GROUNDING
E10.1 SCALE: NONE



1 EQUIPMENT ELEVATION
E10.1 SCALE: NONE

DEMOLITION NOTES:
D1. THE EXISTING ELECTRICAL EQUIPMENT SHALL BE DEMOLISHED. COORDINATE WITH DOMINION ENERGY FOR DEMOLITION OF THE EXISTING SERVICE DROP. DISCONNECT AND REMOVE ALL LIGHTS, DEVICES, STARTERS, CONDUITS, WIRING, ETC. NO EXISTING EQUIPMENT SHALL BE REUSED.



REV	DATE	BY	CHK	DESCRIPTION
1	5/23	CC	PM	ADDENDUM NO.1
2	6/23	CC	PM	ADDENDUM NO.2
3				
4				
5				
6				
7				

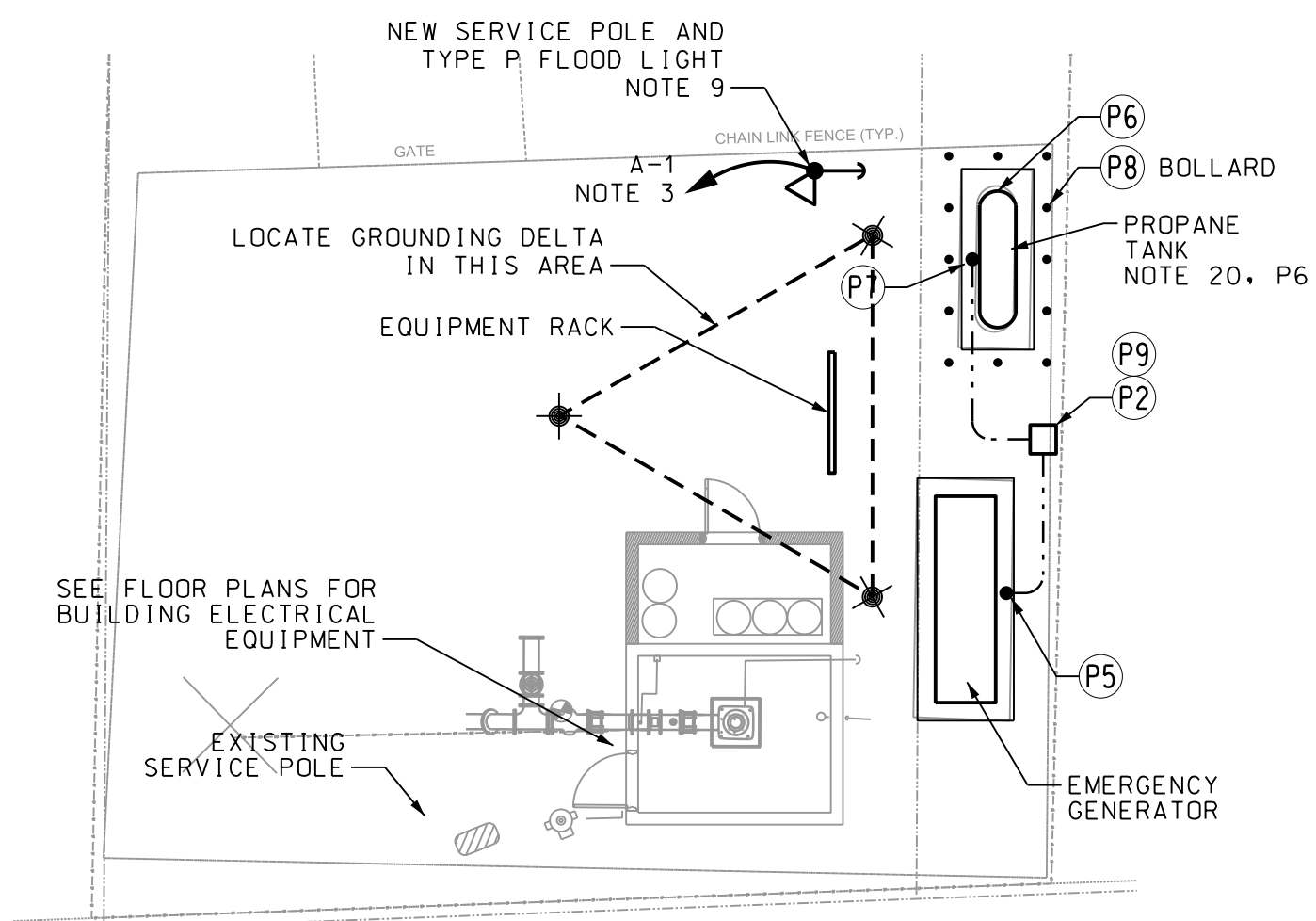
ELECTRICAL DETAILS & GENERAL NOTES
PART 3
WATER AND SEWER RESILIENCY IMPROVEMENTS
WELL #2
TOWN OF RIDGELAND
RIDGELAND, SOUTH CAROLINA

DESIGN	DRAWN	LC	DATE
CC	LC	17-1007	JUN 2023

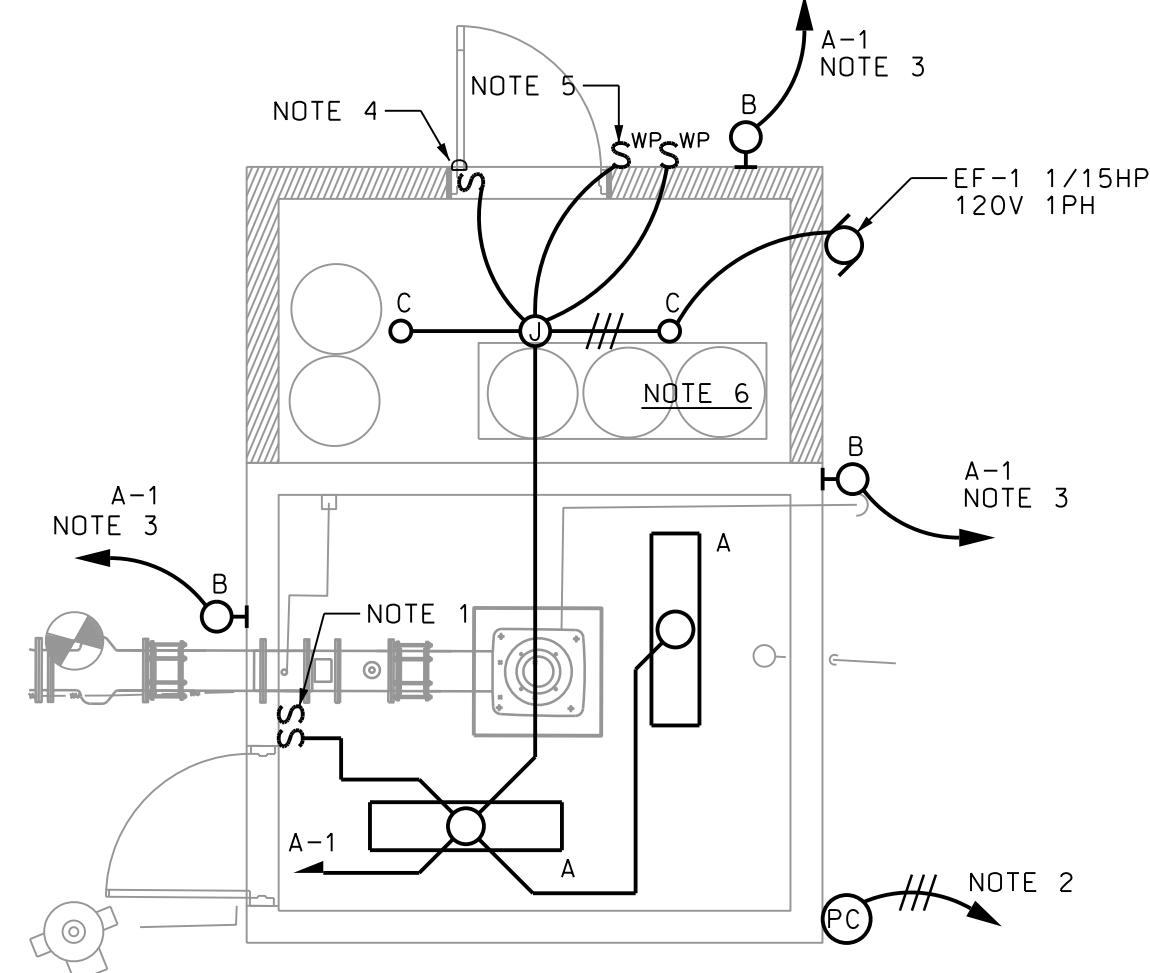
FOUR WATERS ENGINEERING
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
844-414-2400 S.C. COA # 5166 WWW.4WENG.COM

DRAWING NUMBER
E10.1

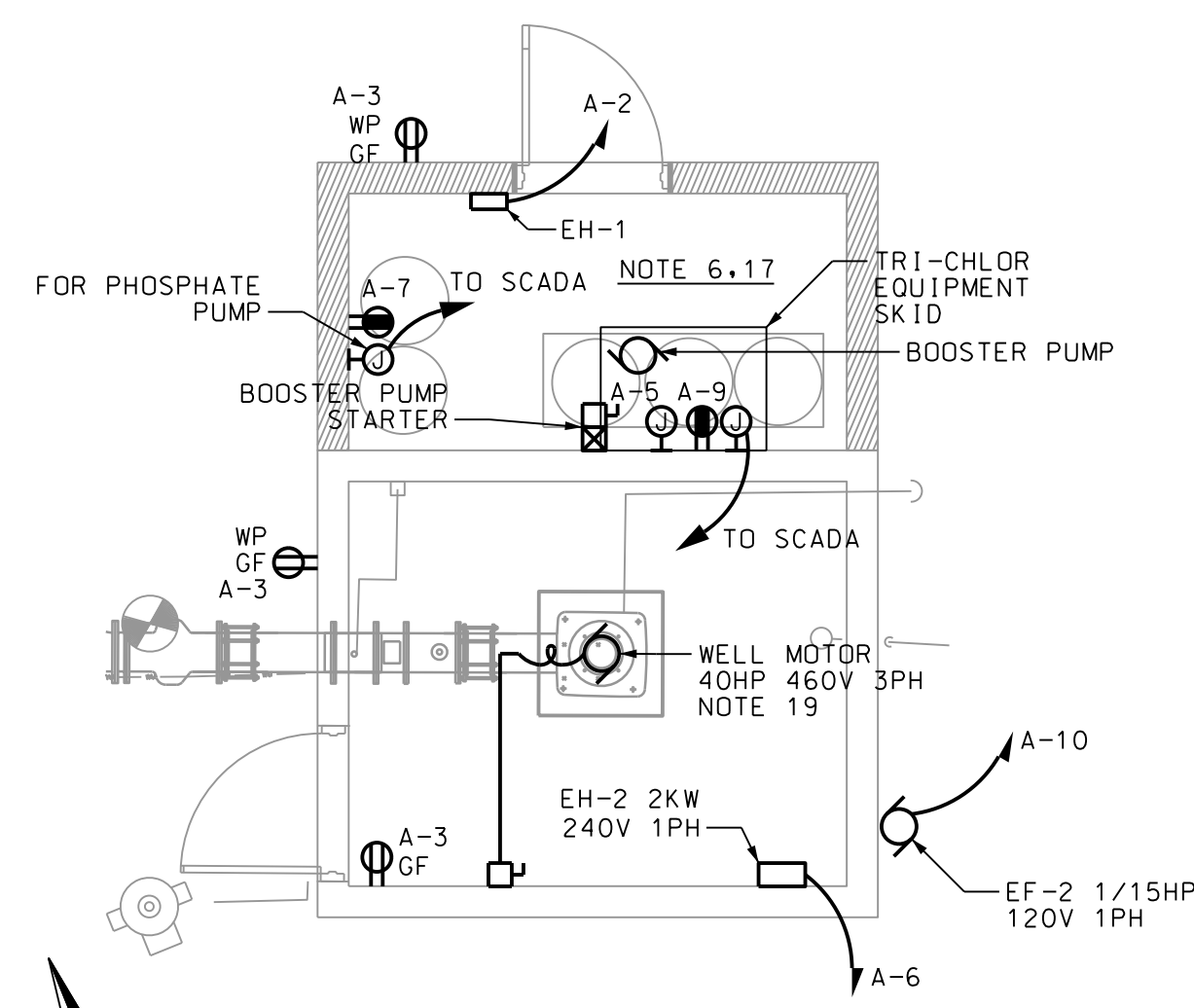
CADD PLOT
06 JUN 2023
12:20
CCOBB



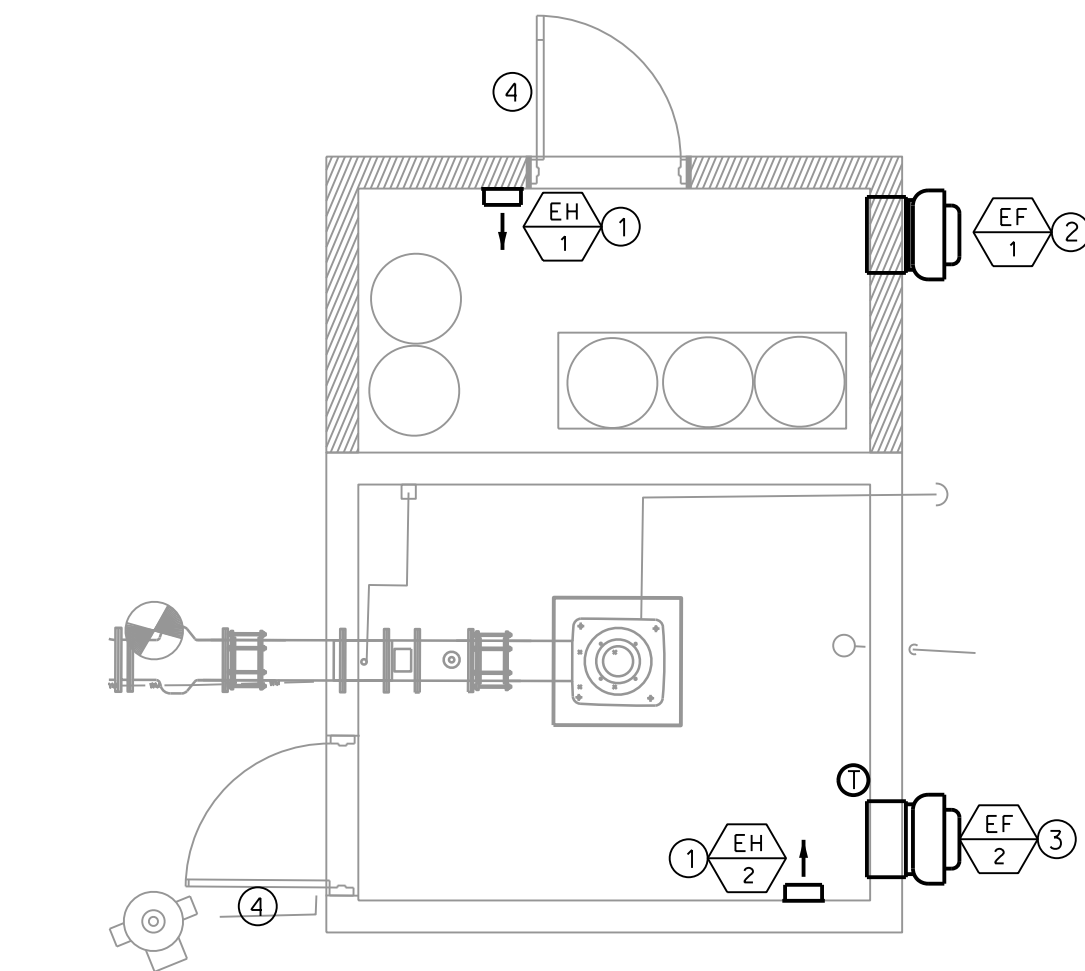
1 SITE PLAN - ELECTRICAL
E10.2 SCALE: 1" = 10' - 0"



2 FLOOR PLAN - LIGHTING
E10.2 SCALE: 1/4" = 1' - 0"



3 FLOOR PLAN - POWER
E10.2 SCALE: 1/4" = 1' - 0"



4 FLOOR PLAN - HVAC
E10.2 SCALE: 1/4" = 1' - 0"

NOTES: (LIGHTING AND POWER PLANS)

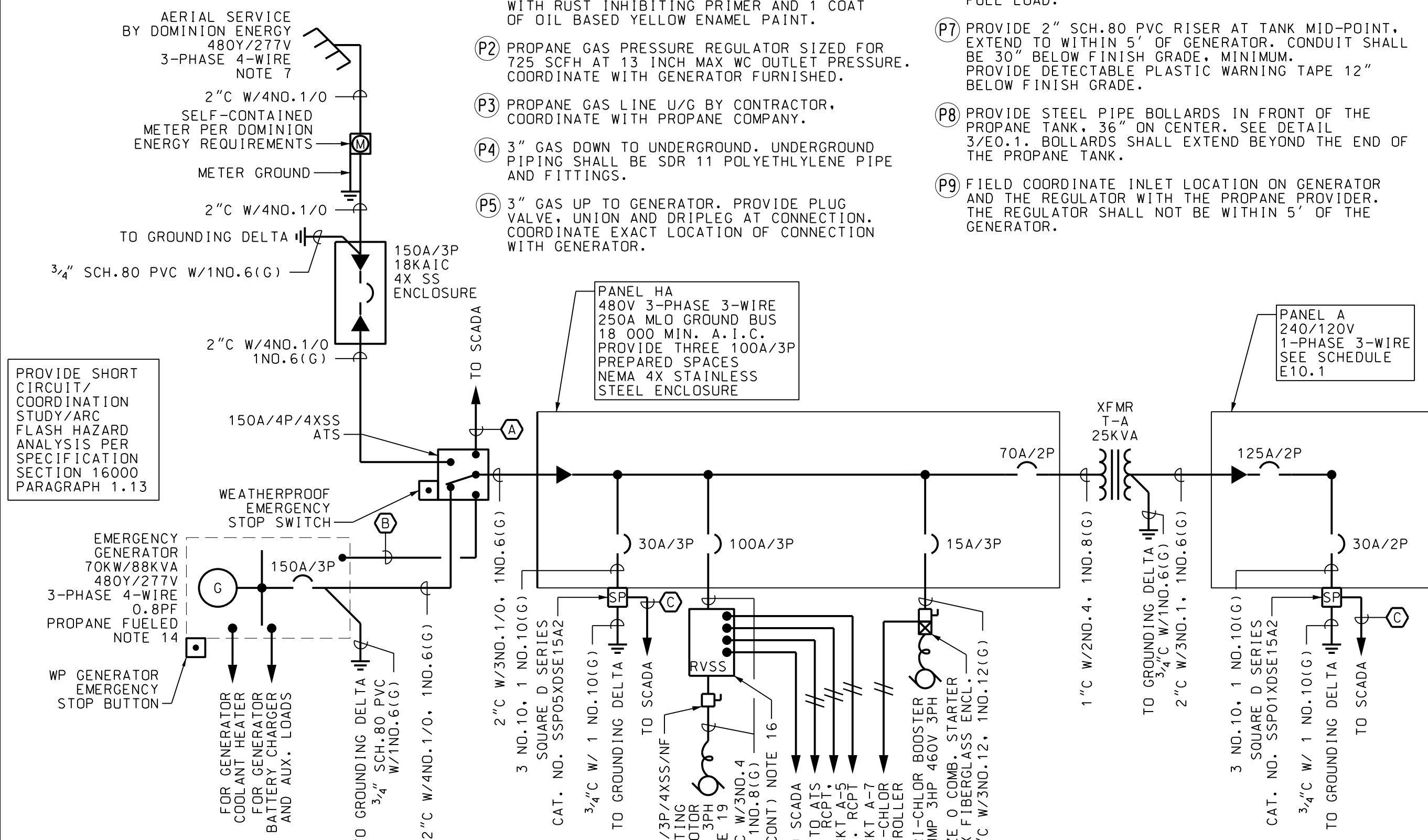
- 3-POSITION SWITCH FOR CONTROL EXTERIOR LIGHTS: UP-PHOTO, CENTER-OFF, DOWN-MANUAL ON. FURNISH HUBBELL CAT. NO. HBL1381.
- PHOTOCELL MOUNTED UNDER EAVE. EXTEND CONTROL THROUGH 3-POSITION SWITCH (NOTE 1). PROVIDE TORK 2107.
- EXTEND CIRCUIT THROUGH 3-POSITION SWITCH IN PUMP ROOM.
- ROLLER SWITCH MOUNTED IN DOOR FRAME. PROVIDE DOUBLE-POLE SINGLE THROW SWITCH. EXTEND CHLORINE ROOM LIGHT AND EXHAUST FAN CONTROL THROUGH SWITCH. INSTALL SUCH THAT BOTH LIGHT AND FAN ENERGIZE WHEN DOOR IS OPENED. PROVIDE SQUARE D CLASS 9007 WITH ROLLER ARM.
- PROVIDE SEPARATE SWITCHES FOR CHLORINE ROOM LIGHTS AND EXHAUST FAN. FURNISH WEATHERPROOF, IN-USE, EXTRA DUTY TYPE COVER. FURNISH HUBBELL WP262E.
- ALL CONDUITS, FITTINGS, BOXES AND OUTLETS IN THE CHLORINE ROOM SHALL BE SCHEDULE 80 PVC. PROVIDE SILICONE CAULK AROUND ALL CONDUIT PENETRATIONS TO THE CHLORINE ROOM. SEAL ALL CONDUITS WITH DUCT SEAL AT EVERY OUTLET BOX, JUNCTION BOX, FIXTURE AND EQUIPMENT ENCLOSURE.
- THE EXACT LOCATION OF SERVICE SHALL BE COORDINATED IN THE FIELD WITH OTHER WORK ON THE PROJECT SITE AND THE ELECTRICAL UTILITY. COORDINATE WITH DOMINION ENERGY.
- THE SERVICE METER SHALL BE PROVIDED IN ACCORDANCE WITH THE ELECTRICAL UTILITY STANDARDS. PROVIDE METER GROUND AND METER BASE AS REQUIRED.
- MOUNT THE FLOOD LIGHT ON THE PRESSURE TREATED SERVICE POLE. THE FLOOD LIGHT SHALL BE LITHONIA D-SERIES SIZE 2 LED FLOOD WITH SLIPFITTER MOUNT, WOOD POLE, AND INTEGRAL PHOTOCELL; REFER TO THE FIXTURE SCHEDULE.
A. PROVIDE A WEATHERPROOF SWITCH ON THE POLE. 48" ABOVE FINISH GRADE.
- THE SCADA SYSTEM SHALL BE PROVIDED BY LORD & COMPANY INDUSTRIAL AUTOMATION, 2100 CAROLINA PLACE DRIVE, FORT MILL, SOUTH CAROLINA 29708, 803-802-0060. CONTACT FOR PRICING ON SCADA SYSTEM. EXTEND CONDUCTORS AS REQUIRED FROM PANEL HA, A. THE ATS/GENERATOR, THE WELL STARTER AND EQUIPMENT FOR COMMUNICATION OF THE ALARMS TO THE OWNER'S SYSTEM.
- SIZE THE EQUIPMENT FRAME TO FIT EQUIPMENT TO BE INSTALLED. CIRCUIT BREAKER AND SWITCH OPERATING HANDLES SHALL BE A MAXIMUM OF 66" ABOVE FINISHED GRADE. PROVIDE STAINLESS STEEL BOLTS, NUTS AND WASHERS. MAXIMUM SPAN BETWEEN VERTICAL SUPPORTS: 60".
- THE SCADA SYSTEM SHALL MONITOR AND TRANSMIT THE FOLLOWING POINTS AND TELEMETRY:
DIGITAL POINTS:
- RTU FAIL - WELL RUNNING - POWER FAILURE
- PHASE FAIL - TRI-CHLOR SYSTEM - PHOSPHATE PUMP
- WELL FAIL - WELL CALL TO RUN - WELL STATUS
- SURGE PROTECTION PANEL A - SURGE PROTECTION PANEL HA
- GENERATOR PRE-ALARM - GENERATOR FAIL
- GENERATOR IN 'AUTO' POSITION - ATS SWITCH POSITION
- REFER TO THE ELECTRICAL SPECIFICATIONS FOR ADDITIONAL ELECTRICAL REQUIREMENTS.
- THE GENERATOR SHALL BE A PROPANE FUELED UNIT.
- SEAL ALL CONDUITS ENTERING THE PANEL AND ENCLOSURE WITH ELECTRICAL DUCT SEAL.
- FURNISH THE REDUCED VOLTAGE SOLID STATE STARTER WITH H-O-A SWITCH, RUN (BLUE) AND FAIL (RED) PILOT LIGHTS, INTEGRAL 100A/3P DISCONNECT BREAKER, ETHERNET CARD/CONNECTION TO SCADA, CONTROL POWER TRANSFORMER AND NEMA 4X STAINLESS STEEL ENCLOSURE PAINTED WHITE. PROVIDE WITH ENGRAVED NAMEPLATE.
- ALL RECEPTACLES IN CHEMICAL TREATMENT ROOM SHALL BE CORROSION RESISTANT TYPE. PROVIDE HUBBELL HBL53CM62. INTERLOCK THROUGH WELL STARTER AS NOTED.
- THE TRI-CHLOR SYSTEM SHALL BE PROVIDED WITH A RECEPTACLE INTERLOCKED THROUGH THE WELL STARTER, A CONSTANTLY ENERGIZED OUTLET/RECEPTACLE, AND A DEDICATED 15A/3P 460V CIRCUIT FOR THE COMBINATION STARTER TO SERVE THE BOOSTER PUMP. FIELD COORDINATE WITH THE SYSTEM MANUFACTURER. PROVIDE I/O TO SCADA AS REQUIRED. COORDINATE WITH THE SCADA VENDOR.
- THE EXISTING WELL MOTOR SHALL BE RECONNECTED FOR USE ON A 480V 3-PHASE 3-WIRE DELTA SYSTEM. THE CURRENT CONFIGURATION IS 230V 3-PHASE 3-WIRE.
- FIELD COORDINATE THE SIZE OF THE PAD WITH THE TANK FURNISHED.

HVAC NOTES:

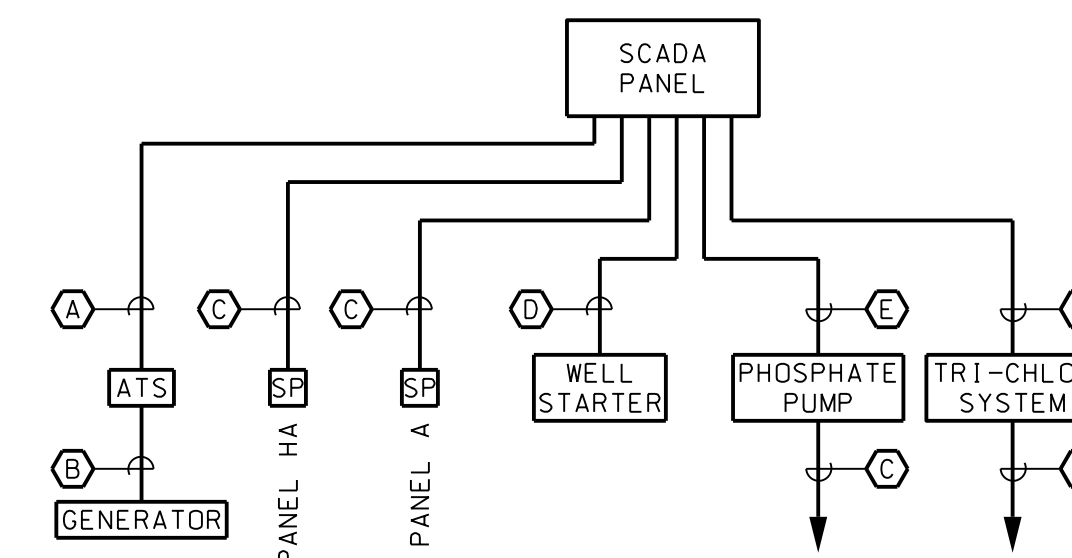
- MOUNT HEATER ON WALL. BOTTOM OF HEATER SHALL BE 12" AFF. HEATER SHALL BE QMARK MODEL CWH OR APPROVED EQUAL. HEATER SIZED FOR 2.0 KW. PROVIDE WITH MOUNTING FRAME AND INTEGRAL THERMOSTAT.
- FAN SHALL BE GREENHECK MODEL: CUE WALL FAN. FAN SHALL BE FABRICATED WITH ALUMINUM HOUSING AND IMPELLER. FAN SHALL HAVE HI-PRO POLYESTER COATING FOR CORROSIVE ATMOSPHERE. FAN SHALL BE PROVIDED WITH WALL GRILLE AND DISCONNECT SWITCH. SEE ELECTRICAL FOR CONTROLS. FAN SHALL BE SIZED FOR 400 CFM AT 0.375" STATIC PRESSURE WITH A 1/15 HP MOTOR. MOUNT BOTTOM OF OPENING FOR FAN 1'-0" AFF.
- FAN SHALL BE GREENHECK MODEL: CUE WALL FAN OR APPROVED EQUAL. FAN SHALL BE SIZED FOR 400 CFM AT 0.375" ESP AND 1/15 HP. FAN SHALL BE PROVIDED WITH WALL GRILLE, WALL MOUNT THERMOSTAT, AND DISCONNECT SWITCH.
- SEE CIVIL PLANS. DOORS PROVIDED WITH LOUVER FOR INTAKE AIR.

PROPANE FUEL NOTES:

- ALL PROPANE GAS PIPING ABOVE GROUND SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH THREADED JOINTS. ALL WORK AND MATERIALS ON THE GAS SYSTEM SHALL COMPLY WITH THE "INTERNATIONAL GAS CODE". PAINT ALL EXPOSED GAS PIPING WITH RUST INHIBITING PRIMER AND 1 COAT OF OIL BASED YELLOW ENAMEL PAINT.
- PROPANE GAS PRESSURE REGULATOR SIZED FOR 725 SCFH AT 13 INCH MAX WC OUTLET PRESSURE. COORDINATE WITH GENERATOR FURNISHED.
- PROPANE GAS LINE U/G BY CONTRACTOR. COORDINATE WITH PROPANE COMPANY.
- 3" GAS DOWN TO UNDERGROUND. UNDERGROUND PIPING SHALL BE SDR 11 POLYETHYLENE PIPE AND FITTINGS.
- 3" GAS UP TO GENERATOR. PROVIDE PLUG VALVE UNION AND DRIPLEG AT CONNECTION. COORDINATE EXACT LOCATION OF CONNECTION WITH GENERATOR.
- PROVIDE A CONCRETE PAD FOR THE PROPANE TANK. 12" THICK, 24" WIDER AND 24" LONGER THAN THE PROPANE TANK. REFER TO GENERATOR FOUNDATION DETAIL FOR CONSTRUCTION REQUIREMENTS. PROVIDE 48HRS OF RUN TIME FUEL FOR THE GENERATOR AT FULL LOAD.
- PROVIDE 2" SCH. 80 PVC RISER AT TANK MID-POINT. EXTEND TO WITHIN 5' OF GENERATOR. CONDUIT SHALL BE 30" BELOW FINISH GRADE, MINIMUM. PROVIDE DETECTABLE PLASTIC WARNING TAPE 12" BELOW FINISH GRADE.
- PROVIDE STEEL PIPE BOLLARDS IN FRONT OF THE PROPANE TANK. 36" ON CENTER. SEE DETAIL 3/E0.1. BOLLARDS SHALL EXTEND BEYOND THE END OF THE PROPANE TANK.
- FIELD COORDINATE INLET LOCATION ON GENERATOR AND THE REGULATOR WITH THE PROPANE PROVIDER. THE REGULATOR SHALL NOT BE WITHIN 5' OF THE GENERATOR.

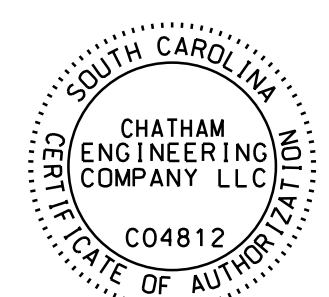


5 ONE-LINE DIAGRAM
E10.2 SCALE: NONE



6 SCADA RISER
E10.2 SCALE: NONE

- A) 3/4" C W/ ONE CAT 6 CABLE
- B) THREE 1" W/ CONDUCTORS AS REQUIRED
- C) 3/4" C W/ 2 NO. 14, 1 NO. 14(G)
- D) 3/4" C W/ ONE CAT 6 CABLE, 8 NO. 14, 1 NO. 14(G)
- E) 3/4" C W/ TWO 16 AWG T.S. PAIR (BELDEN 5240F1) AND 4 NO. 14, 1 NO. 14(G)



REV. NO.	DATE	BY	CHK	DESCRIPTION
1	5/23	CC	PM	ADDENDUM NO. 1
2	6/23	CC	PM	ADDENDUM NO. 2
3				
4				
5				
6				
7				

WATER AND SEWER RESILIENCY IMPROVEMENTS
PART 3
WELL #2 ELECTRICAL BUILDING PLANS,
ONE-LINE DIAGRAM, SCHEDULES & NOTES
 TOWN OF RIDGELAND
 RIDGELAND, SOUTH CAROLINA

DESIGN	CC	LC	17-1007
JUN 2023	JUN 2023	JUN 2023	BID

FOUR WATERS ENGINEERING
 324 6th AVEN. JACKSONVILLE BEACH, FLORIDA 32250
 844-414-2400 S.C. COA # 5166 WWW.FWENG.COM

DRAWING NUMBER
E10.2