



REQUEST FOR PROPOSALS ADDENDUM

RFP-DPW-2025-0006

Cortez Blvd (SR 50) Pump Station Replacement Project

ADDENDUM #3

Date Issued: April 1, 2025

TO: All prospective proposers:

You are hereby notified that this Addendum shall be attached to and made a part of the above-named solicitation and contract documents, as follows:

Electrical Set Plans

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DRAWING SPECIFICATIONS

GENERAL:	SUBMITTALS:																																																																																																																																																																																																																																					
<p>A. REFER TO THE LATEST HERNANDO COUNTY UTILITIES DEPARTMENT (HCUD) WATER, RECLAIMED WATER, AND WASTEWATER CONSTRUCTION SPECIFICATIONS MANUAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS. THE HCUD SPECIFICATIONS SHALL SUPERCEDE THESE DRAWING SPECIFICATIONS UNLESS APPROVED BY HCUD.</p> <p>B. PROVIDE SHALL MEAN FURNISH AND INSTALL.</p> <p>C. THE COMPLETE ELECTRICAL SYSTEM WHICH SHALL BE PROVIDED BY THE CONTRACTOR SHALL INCLUDE ALL WORK, MATERIALS AND APPARATUS SPECIFIED HEREINAFTER AND INDICATED ON THE DRAWINGS. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY AND NO SUBSTANDARD WORK WILL BE ACCEPTED.</p> <p>D. PROVIDE ALL WORK AND ELECTRICAL SYSTEMS COMPONENTS REQUIRED TO SERVE LOADS AS SPECIFIED HEREINAFTER AND INDICATED ON THE DRAWINGS. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL ELECTRICAL SYSTEMS AT THE COMPLETION OF THE WORK AND MAKING ANY CHANGES AND ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEMS.</p> <p>E. MAKE A THOROUGH EXAMINATION OF THE SITE AND THE CONTRACT DOCUMENTS PRIOR TO EXECUTING THE CONTRACT. NO CLAIM FOR ADDITIONAL COMPENSATION WILL BE RECOGNIZED FOR DIFFICULTIES ENCOUNTERED WHICH AN EXAMINATION OF SITE CONDITIONS AND CONTRACT DOCUMENTS WOULD HAVE REVEALED.</p> <p>F. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED ABOVE THE FLOODPLAIN ELEVATION. CONTRACTOR SHALL COORDINATE FLOODPLAIN ELEVATION AND EQUIPMENT REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.</p> <p>G. THE PLANS ARE GENERALLY DIAGRAMMATIC. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED TO AVOID INTERFERENCES BETWEEN TRADES (I.E. PIPING, CONDUITS, EQUIPMENT, ETC).</p> <p>H. REMOVE ALL EXISTING LIGHTING FIXTURES, EQUIPMENT, DEVICES, CONDUCTORS, RACEWAYS, ETC. MADE UNNECESSARY BY THE NEW INSTALLATION. PRIOR TO REMOVAL FROM SITE, COORDINATE WITH OWNER TO DETERMINE IF OWNER WISHES TO RETAIN ANY REMOVED EQUIPMENT.</p>	<p>A. SUBMIT ONE (1) ELECTRONIC PDF COPY. THE ENGINEER WILL RETURN SUBMITTAL REVIEW COMMENTS NO LATER THAN 10 CALENDAR DAYS OF RECEIPT.</p> <p>B. APPROVAL SHALL BE OBTAINED FOR ALL EQUIPMENT AND MATERIAL BEFORE DELIVERY TO THE JOB SITE. DELIVERY, STORAGE OR INSTALLATION OF EQUIPMENT OR MATERIAL WHICH HAS NOT HAD PRIOR APPROVAL, WILL NOT BE PERMITTED AT THE JOB SITE.</p> <p>C. ALL SUBMITTALS SHALL INCLUDE ADEQUATE DESCRIPTIVE LITERATURE, CATALOG CUTS, SHOP DRAWINGS AND OTHER DATA NECESSARY FOR THE ARCHITECT/ENGINEER TO ASCERTAIN THAT THE PROPOSED EQUIPMENT AND MATERIALS COMPLY WITH SPECIFICATION REQUIREMENTS. CATALOG CUTS SUBMITTED FOR APPROVAL SHALL BE LEGIBLE AND CLEARLY IDENTIFY EQUIPMENT BEING SUBMITTED.</p> <p>D. SUBMITTALS FOR INDIVIDUAL SYSTEMS AND EQUIPMENT ASSEMBLIES WHICH CONSIST OF MORE THAN ONE ITEM OR COMPONENT SHALL BE MADE FOR THE SYSTEM OR ASSEMBLY AS A WHOLE. PARTIAL SUBMITTALS WILL NOT BE CONSIDERED FOR APPROVAL.</p> <p>E. SUBMITTAL OF SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES WILL BE ACCEPTED ONLY WHEN SUBMITTED BY THE CONTRACTOR. DATA SUBMITTED FROM SUBCONTRACTORS AND MATERIAL SUPPLIERS DIRECTLY TO THE ENGINEER WILL NOT BE PROCESSED.</p> <p>F. SUBMITTALS SHALL BE MARKED TO SHOW SPECIFICATION REFERENCE INCLUDING THE SECTION AND PARAGRAPH NUMBERS. SUBMIT EACH SECTION SEPARATELY AND INCLUDE THE FOLLOWING:</p> <ol style="list-style-type: none"> INFORMATION THAT CONFIRMS COMPLIANCE WITH CONTRACT REQUIREMENTS. INCLUDE THE MANUFACTURER'S NAME, MODEL OR CATALOG NUMBERS, CATALOG INFORMATION, TECHNICAL DATA SHEETS, SHOP DRAWINGS, PICTURES, NAMEPLATE DATA AND TEST REPORTS AS REQUIRED. PARTS LIST WHICH SHALL INCLUDE THOSE REPLACEMENT PARTS RECOMMENDED BY THE EQUIPMENT MANUFACTURER, QUANTITY OF PARTS, CURRENT PRICE AND AVAILABILITY OF EACH PART. 	<p>C. NO UNDERGROUND SPLICES ALLOWED.</p> <p>D. MULTIPLE CIRCUITS IN SAME CONDUIT SHALL NOT SHARE NEUTRAL CONDUCTORS. FOR EXISTING CIRCUITS.</p> <p>E. INSTALL INSUL-TAP CONNECTORS FOR COPPER CONDUCTOR SPLICES AND TAPS, 6 AWG AND LARGER.</p> <p>F. INSTALL SOLDERLESS PRESSURE CONNECTORS WITH INSULATING COVERS FOR COPPER CONDUCTOR SPLICES AND TAPS, 8 AWG AND SMALLER.</p> <p>G. INSTALL INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR COPPER CONDUCTOR SPLICES AND TAPS, 10 AWG AND SMALLER.</p> <p>H. "PUSH-IN" OR "STAB" TYPE CONNECTORS ARE NOT ACCEPTABLE.</p>																																																																																																																																																																																																																																				
<p>WORK PERFORMANCE:</p> <p>A. JOB SITE SAFETY AND WORKER SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.</p> <p>B. ARRANGE, PHASE AND PERFORM ALL WORK DURING TIME PERIODS SCHEDULED WITH AND ACCEPTABLE TO THE OWNER BEFORE PROCEEDING. NO ADDITIONAL COMPENSATION WILL BE AUTHORIZED FOR WORK NECESSITATED BY ILL-TIMED, DEFECTIVE, OR NON-COMFORMING WORK.</p> <p>C. THE CONTRACTOR SHALL ENSURE THAT ALL SYSTEMS OPERATE AS DESIGNED AND/OR REQUIRED AND SHALL REVIEW THEIR OPERATION WITH THE OWNER UPON COMPLETION OF CONSTRUCTION AND TESTING. COMPLETE COMPLETE AND UPDATED AS-BUILT DRAWINGS/DOCUMENTS AND ISSUE ONE (1) SET TO THE OWNER.</p> <p>D. ELECTRICAL WORK SHALL BE ACCOMPLISHED WITH ALL AFFECTED CIRCUITS OR EQUIPMENT DE-ENERGIZED, WHEN AN ELECTRICAL OUTAGE CANNOT BE ACCOMPLISHED IN THIS MANNER FOR THE REQUIRED WORK, THE FOLLOWING REQUIREMENTS ARE MANDATORY:</p> <ol style="list-style-type: none"> ELECTRICIANS MUST USE AND WEAR FULL PROTECTIVE EQUIPMENT (PPE) (I.E. CERTIFIED AND TESTED INSULATING MATERIAL TO COVER EXPOSED ENERGIZED ELECTRICAL COMPONENTS, CERTIFIED AND TESTED INSULATED TOOLS, ETC.) WHILE WORKING ON ENERGIZED SYSTEMS IN ACCORDANCE WITH NFPA 70E. THE LEVEL OF PPE SHALL BE DETERMINED BY A COMPUTER GENERATED ARC FLASH CALCULATION PROVIDED AND PAID FOR BY THE CONTRACTOR. THE ARC FLASH DATA SHALL BE PRESENTED WITH THE SUBMITTAL BELOW. WORK ON ENERGIZED CIRCUITS OR EQUIPMENT CANNOT BEGIN UNTIL PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE OWNER. <p>E. NEW WORK SHALL BE INSTALLED AND CONNECTED TO EXISTING WORK NEATLY AND CAREFULLY. PROVIDE PROTECTIVE MATS, COVERS, ETC. AS REQUIRED FOR ALL EXISTING WORK SUSCEPTIBLE TO DAMAGE. VERIFY SPECIFIC LOCATIONS AND REQUIREMENTS WITH THE OWNER. DISTURBED OR DAMAGED WORK AS A RESULT OF ELECTRICAL WORK SHALL BE REPLACED OR REPAIRED TO ITS PRIOR CONDITIONS.</p> <p>F. EXISTING SERVICE SHALL NOT BE INTERRUPTED WITHOUT PRIOR CONSENT OF THE OWNER AND MAY BE INTERRUPTED ONLY AT AND FOR THE SPECIFIED TIME DESIGNATED BY THE OWNER. THE CONTRACTOR SHALL BE GUIDED BY THE OWNER AT ALL TIMES IN MATTERS AFFECTING THE EXISTING FACILITIES.</p> <p>G. ELECTRICAL EQUIPMENT SHALL NOT BE STORED OUTDOORS. EQUIPMENT SHALL BE STORED IN AN OWNER/ENGINEER APPROVED MEDIUM AND LOCATION.</p>	<p>MATERIALS AND METHODS:</p> <p>A. MATERIALS AND APPARATUS SHALL COMPLY WITH ALL APPLICABLE TESTS, RATINGS, SPECIFICATIONS, AND REQUIREMENTS OF THE IEEE, NEMA, NFPA AND UL, SHALL BEAR THE UL LABEL OF APPROVAL AND BE LISTED FOR THE PROPOSED APPLICATION.</p> <p>B. FINISHED PRODUCTS SHALL BE FACTORY PRIMED AND FINISH COATED WITH THE MANUFACTURER'S PRIME COAT AND STANDARD FINISH UNLESS OTHERWISE SPECIFIED.</p> <p>C. INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES, AS RECOMMENDED BY THE MANUFACTURER AND AS CLOSE AS PRACTICABLE TO LOCATIONS INDICATED ON DRAWINGS.</p> <p>D. INSTALLATIONS SHALL FACILITATE MAINTENANCE AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. ACCESS, WORKING SPACES AND CLEARANCES SHALL NOT BE LESS THAN SPECIFIED BY THE NEC FOR ALL VOLTAGES SPECIFIED.</p>	<p>GROUNDING:</p> <p>A. THE ELECTRICAL SYSTEMS SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY THE NEC AND AS SPECIFIED HEREINAFTER.</p> <p>B. ALL METALLIC RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY SECURE AT ALL JOINTS AND AT ALL BOXES, CABINETS, FITTINGS, AND EQUIPMENT. METALLIC RACEWAYS SHALL BE CONNECTED TO A DIRECT GROUND AT THE POINT OF ELECTRICAL SERVICE ENTRANCE AND SHALL BE ELECTRICALLY CONTINUOUS THROUGHOUT THE ENTIRE SYSTEM.</p> <p>C. METALLIC LIGHT POLES SHALL BE BONDED TO THE LUMINAIRE EQUIPMENT GROUNDING CONDUCTOR PER NEC 410.30(B)(5).</p> <p>D. ALL GROUND CONDUCTORS SHALL BE INSULATED COPPER UON.</p> <p>E. ALL RACEWAYS WITH NO. 10 OR 12 AWG PHASE CONDUCTORS FOR BRANCH CIRCUITS SHALL BE PROVIDED WITH A PARITY SIZED GREEN EQUIPMENT GROUND CONDUCTOR. GROUND CONDUCTOR SHALL BE INSTALLED IN ENTIRE RACEWAY SYSTEM. EQUIPMENT GROUND CONDUCTOR SIZES FOR CIRCUITS WITH PHASE CONDUCTORS LARGER THAN NO. 12 AWG ARE INDICATED ON DRAWINGS. GROUND CONDUCTORS SHALL BE CONNECTED TO GROUND BUS.</p> <p>F. TERMINATE FEEDER AND BRANCH CIRCUIT INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH GROUNDING LUG, BUS, OR BUSHING. CONDUCTORS LOOPED UNDER SCREW OR BOLT HEADS WILL NOT BE PERMITTED.</p> <p>G. INSTALL CLAMP-ON CONNECTORS ON CLEAN METAL CONTACT SURFACES TO ENSURE ELECTRICAL CONDUCTIVITY AND CIRCUIT INTEGRITY.</p> <p>H. TEST THE GROUNDING SYSTEM TO ASSURE CONTINUITY AND THAT RESISTANCE TO GROUND DOES NOT EXCEED 5 OHMS UNLESS OTHERWISE NOTED. TEST EACH GROUND ROD FOR RESISTANCE TO GROUND BEFORE MAKING ANY CONNECTIONS TO THE ROD; THEN TIE ENTIRE GROUNDING SYSTEM TOGETHER AND TEST FOR RESISTANCE TO GROUND. MAKE RESISTANCE MEASUREMENTS IN NORMALLY DRY WEATHER, NOT LESS THAN 48 HOURS AFTER RAINFALL. MAKE GROUND RESISTANCE MEASUREMENTS WITH A GROUND RESISTANCE TEST METER CALIBRATED WITHIN THE LAST TWELVE MONTHS.</p>																																																																																																																																																																																																																																				
<p>CODES & STANDARDS:</p> <p>A. PERFORM WORK IN COMPLIANCE WITH THE LATEST EDITION OF ALL APPLICABLE, FEDERAL, STATE AND LOCAL CODES, REGULATIONS AND STANDARDS, TO INCLUDE THOSE LISTED BELOW, ADOPTED BY THE AUTHORITY HAVING JURISDICTION. WHERE DIFFERENCES MAY OCCUR THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. IN CASE OF CONFLICT PROVIDE WRITTEN NOTIFICATION AND OBTAIN A DECISION FROM THE ARCHITECT.</p> <ol style="list-style-type: none"> NFPA 70: NATIONAL ELECTRICAL CODE (2020) NFPA 70E: STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE (2024) NFPA 101: LIFE SAFETY CODE (2021) NFPA 110: STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS (2019) NFPA 241: STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS (2022) FBC: FLORIDA BUILDING CODE (2023) OSHA PART 1910: OCCUPATIONAL SAFETY AND HEALTH STANDARDS OSHA PART 1926: SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION 	<p>IDENTIFICATION:</p> <p>A. INSTALL LABEL TAGS ON ALL WIRE AND CABLE IN JUNCTION BOXES, WIREWAYS AND WIRING GUTTERS OF PANELS. TAGS SHALL IDENTIFY WIRE OR CABLE CIRCUIT NUMBER AND/OR EQUIPMENT SERVED AS INDICATED ON DRAWINGS.</p> <p>B. JUNCTION BOXES SHALL BE LABELED IN A PERMANENT MANNER REFLECTING PANELBOARD/CIRCUIT NUMBER OF BRANCH CIRCUIT WIRING CONTAINED WITHIN.</p> <p>C. PANELBOARD DIRECTORIES SHALL BE TYPED/WRITTEN, REFLECTING RECORD CONDITIONS TO INCLUDE CIRCUIT NUMBER, TYPE AND LOCATION OF LOAD.</p> <p>D. INSTALL PLASTIC PLACARDS ON EQUIPMENT REFLECTING, EQUIPMENT NAME, NUMBER AND RATING.</p>	<p>RECEPTACLES:</p> <p>A. RECEPTACLES SHALL BE THE GROUNDING TYPE WITH GROUND CONNECTION MADE THROUGH AN EXTRA POLE WHICH SHALL BE PERMANENTLY CONNECTED TO GROUND CONDUCTOR.</p> <p>B. CONNECT WIRING DEVICES BY WRAPPING SOLID CONDUCTOR AROUND SCREW TERMINAL. WHEN STRANDED CONDUCTORS ARE USED IN LIEU OF SOLID, USE CRIMP ON FORK TERMINALS FOR DEVICE TERMINATIONS. DO NOT PLACE BARE STRANDED CONDUCTORS DIRECTLY UNDER DEVICE SCREWS.</p> <p>C. GFCI RECEPTACLES SHALL MEET CURRENT UL 943 REQUIREMENTS WITH AUTO-MONITORING OR SELF-TEST FUNCTIONALITY; IF THE SELF-TEST FUNCTION DETECTS A PROBLEM, THE UNIT MUST DENY POWER OR PROVIDE VISUAL AND/OR AUDIBLE INDICATION.</p> <p>D. GFCI RECEPTACLES LOCATED IN DAMP, WET OR EXTERIOR LOCATIONS SHALL BE WEATHER-RESISTANT TYPE TO COMPLY WITH NEC 406.9.</p> <p>E. RECEPTACLES FOR 20 AMPERE, 120 VOLT APPLICATION SHALL BE SPECIFICATION GRADE THREE-WIRE, TWO POLE, RATED 20 AMPERES AT 125 VOLTS, PASS & SEYMOUR OR APPROVED EQUAL.</p> <p>F. WEATHERPROOF COVER PLATES SHALL BE NEMA 250 COMPLYING WITH TYPE 3R, WEATHER RESISTANT, DIE-CAST ALUMINUM, WHILE IN USE COVER. COVER SHALL HAVE NOTCH FOR CORD.</p>																																																																																																																																																																																																																																				
<p>WARRANTY:</p> <p>A. CONTRACTOR SHALL WARRANTY ALL WORK FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION. CONTRACTOR SHALL RECTIFY ANY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THEREFROM WITHIN SAID PERIOD. THE OWNER WILL GIVE NOTICE OF DEFECTS WITH REASONABLE PROMPTNESS.</p> <p>B. PROVIDE COMPLETE WARRANTY INFORMATION FOR EACH ITEM TO INCLUDE PRODUCT OR EQUIPMENT; DATE OR BEGINNING OF WARRANTY OR BOND; DURATION OF WARRANTY OR BOND; AND NAMES, ADDRESSES, AND TELEPHONE NUMBERS AND PROCEDURES FOR FILING A CLAIM AND OBTAINING WARRANTY SERVICES.</p>	<p>RACEWAYS:</p> <p>A. RACEWAYS:</p> <ol style="list-style-type: none"> EXTERIOR EXPOSED: SCHEDULE 40 POLYVINYL CHLORIDE CONDUIT (PVC), UON. EXTERIOR CONNECTIONS TO MOTORS, TRANSFORMERS AND VIBRATING EQUIPMENT: LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC). UNDERGROUND: SCHEDULE 40 PVC. PENETRATIONS THROUGH CONCRETE SLABS SHALL BE MADE WITH PVC COATED RIGID GALVANIZED STEEL CONDUIT. <p>B. ALL BENDS IN PVC LARGER THAN 1" NOMINAL TRADE SIZE SHALL BE MADE WITH PVC COATED RIGID METAL CONDUIT.</p> <p>C. ALL CONDUIT SHALL BE PROPERLY ALIGNED, GROUPED AND SUPPORTED. INSTALL EXPOSED CONDUIT PERPENDICULAR AND PARALLEL TO PRINCIPAL STRUCTURAL MEMBERS. PROVIDE SUPPORT A MINIMUM OF 18" FROM BENDS AND OUTLET BOXES AND ON INTERVALS NOT TO EXCEED 6'-0". CONDUIT IS NOT TO SPAN ANY SPACE UNSUPPORTED.</p> <p>D. UNDERGROUND CONDUITS SHALL BE INSTALLED WITH MINIMUM 30" COVER.</p> <p>E. PROVIDE NYLON PULL CORD AND LEAVE IN PLACE IN EACH EMPTY CONDUIT.</p>	<p>KEYED NOTES:</p> <p>REFER TO LIKE-NUMBERED NOTES</p>																																																																																																																																																																																																																																				
	<p>BOXES:</p> <p>A. ALL BOXES SHALL BE RIGIDLY MOUNTED AND SHALL BE EQUIPPED WITH SUITABLE SCREW FASTENED COVERS. OPEN KNOCK-OUTS OR HOLES IN BOXES SHALL BE PLUGGED WITH A SUITABLE BLANKING DEVICE.</p> <p>B. EXTERIOR BRANCH BOXES SHALL BE WEATHERPROOF CAST "FS" BOXES.</p>	<p>ABBREVIATIONS:</p> <table border="0"> <tr> <td>A</td><td>AMPS OR AMPERE</td><td>FC</td><td>FOOTCANDLE</td><td>NEC</td><td>NATIONAL ELECTRICAL CODE</td> </tr> <tr> <td>A/E</td><td>ARCHITECT/ENGINEER</td><td>FLA</td><td>FULL LOAD AMPS</td><td>NEMA</td><td>NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION</td> </tr> <tr> <td>AF</td><td>AMPERE FRAME</td><td>FO</td><td>FIBER OPTIC</td><td>NFPA</td><td>NATIONAL FIRE PROTECTION ASSOCIATION</td> </tr> <tr> <td>AFCI</td><td>ARC-FAULT CIRCUIT INTERRUPTER</td><td>FT</td><td>FOOT (FEET)</td><td>NO</td><td>NORMALLY OPEN</td> </tr> <tr> <td>AFF</td><td>ABOVE FINISHED FLOOR</td><td>GC</td><td>GENERAL CONTRACTOR</td><td>NTS</td><td>NOT TO SCALE</td> </tr> <tr> <td>AFG</td><td>ABOVE FINISHED GRADE</td><td>GEN</td><td>GENERATOR</td><td>OB</td><td>OUTLET BOX</td> </tr> <tr> <td>AHJ</td><td>AUTHORITY HAVING JURISDICTION</td><td>GFCI</td><td>GROUND-FAULT CIRCUIT INTERRUPTER</td><td>P</td><td>POLE</td> </tr> <tr> <td>AIC</td><td>AMPERE INTERRUPTING CAPACITY</td><td>GND</td><td>GROUND</td><td>PA</td><td>PUBLIC ADDRESS</td> </tr> <tr> <td>AL</td><td>ALUMINUM</td><td>HOA</td><td>HAND-OFF-AUTO</td><td>PB</td><td>PULL BOX</td> </tr> <tr> <td>ANSI</td><td>AMERICAN NATIONAL STANDARDS INSTITUTE</td><td>HP</td><td>HORSEPOWER</td><td>PH/φ</td><td>PHASE</td> </tr> <tr> <td>ASD</td><td>ADJUSTABLE SPEED DRIVE AT AMPERE TRIP</td><td>HPS</td><td>HIGH PRESSURE SODIUM HIGH VOLTAGE</td><td>PNL</td><td>PANELBOARD (PANEL)</td> </tr> <tr> <td>ATS</td><td>AUTOMATIC TRANSFER SWITCH</td><td>HZ</td><td>HERTZ</td><td>RCPT</td><td>RECEPTACLE</td> </tr> <tr> <td>AUTO</td><td>AUTOMATIC</td><td>IG</td><td>ISOLATED GROUND</td><td>SCC</td><td>SHORT CIRCUIT CAPACITY</td> </tr> <tr> <td>AWG</td><td>AMERICAN WIRE GAUGE</td><td>IN</td><td>INCH (INCHES)</td><td>SF</td><td>SQUARE FOOT (FEET)</td> </tr> <tr> <td>BLDG</td><td>BUILDING</td><td>JB</td><td>JUNCTION BOX</td><td>SP</td><td>SPECIFICATION</td> </tr> <tr> <td>BFG</td><td>BELOW FINISHED GRADE</td><td>kcmil</td><td>THOUSAND CIRCULAR MIL</td><td>SPD</td><td>SURGE PROTECTIVE DEVICE</td> </tr> <tr> <td>BRKR</td><td>BREAKER</td><td>kV</td><td>KILOVOLT</td><td>SS</td><td>STAINLESS STEEL</td> </tr> <tr> <td>C</td><td>CONDUIT</td><td>kVA</td><td>KILOVOLT AMPERE</td><td>SWBD</td><td>SWITCHBOARD</td> </tr> <tr> <td>CB</td><td>CIRCUIT BREAKER</td><td>kWh</td><td>KILOWATT HOUR</td><td>SWR</td><td>SWITCHGEAR</td> </tr> <tr> <td>CKT</td><td>CIRCUIT</td><td>LED</td><td>LIGHT EMITTING DIODE</td><td>TR</td><td>TAMPER RESISTANT</td> </tr> <tr> <td>COMM</td><td>COMMUNICATIONS</td><td>LPS</td><td>LIGHTNING PROTECTION SYSTEM</td><td>TYP</td><td>TYPICAL</td> </tr> <tr> <td>CT</td><td>CURRENT TRANSFORMER</td><td>LTG</td><td>LIGHTNING</td><td>U</td><td>UNKNOWN CIRCUIT</td> </tr> <tr> <td>CU</td><td>COPPER</td><td>LTNG</td><td>LIGHTNING</td><td>UL</td><td>UNDERWRITERS LABORATORY</td> </tr> <tr> <td>°C</td><td>DEGREES CELSIUS</td><td>LV</td><td>LOW VOLTAGE</td><td>UN</td><td>UNLESS OTHERWISE NOTED</td> </tr> <tr> <td>°F</td><td>DEGREES FAHRENHEIT</td><td>MAX</td><td>MAXIMUM</td><td>UPS</td><td>UNINTERRUPTIBLE POWER SUPPLY</td> </tr> <tr> <td>DISC</td><td>DISCONNECT</td><td>MCA</td><td>MINIMUM CIRCUIT AMPACITY</td><td>UTIL</td><td>UTILITY</td> </tr> <tr> <td>DP</td><td>DISTRIBUTION PANELBOARD</td><td>MCB</td><td>MAIN CIRCUIT BREAKER</td><td>V</td><td>VOLT OR VOLTAGE</td> </tr> <tr> <td>DS</td><td>DISCONNECT SWITCH</td><td>MCC</td><td>MOTOR CONTROL CENTER</td><td>VA</td><td>VOLT AMPERE</td> </tr> <tr> <td>DWG</td><td>DRAWING</td><td>MCP</td><td>MAIN DISTRIBUTION PANELBOARD</td><td>VD</td><td>VOLTAGE DROP</td> </tr> <tr> <td>EC</td><td>ELECTRICAL CONTRACTOR</td><td>MH</td><td>METAL HALIDE</td><td>VFD</td><td>VARIABLE FREQUENCY DRIVE</td> </tr> <tr> <td>EG</td><td>EQUIPMENT GROUND</td><td>MHz</td><td>MEGAHERTZ</td><td>W</td><td>WATT OR WIRE</td> </tr> <tr> <td>ELEC</td><td>ELECTRIC OR ELECTRICAL</td><td>MIN</td><td>MINIMUM</td><td>WP</td><td>WEATHERPROOF</td> </tr> <tr> <td>ELEV</td><td>ELEVATOR</td><td>MLO</td><td>MAIN LUGS ONLY</td><td>WR</td><td>WEATHER RESISTANT</td> </tr> <tr> <td>EMER</td><td>EMERGENCY</td><td>MOCP</td><td>MAXIMUM OVERCURRENT PROTECTION</td><td>WT</td><td>WATER TIGHT</td> </tr> <tr> <td>EPO</td><td>EMERGENCY POWER OFF</td><td>MTS</td><td>MANUAL TRANSFER SWITCH</td><td>XFER</td><td>TRANSFER</td> </tr> <tr> <td>EPS</td><td>EMERGENCY POWER SUPPLY</td><td>N</td><td>NEUTRAL</td><td>XFMR</td><td>TRANSFORMER</td> </tr> <tr> <td>EXIST</td><td>EXISTING</td><td>NA</td><td>NOT APPLICABLE</td><td>XP</td><td>EXPLOSION RATED</td> </tr> <tr> <td>FA</td><td>FIRE ALARM</td><td>NC</td><td>NORMALLY CLOSED</td><td></td><td></td> </tr> </table>	A	AMPS OR AMPERE	FC	FOOTCANDLE	NEC	NATIONAL ELECTRICAL CODE	A/E	ARCHITECT/ENGINEER	FLA	FULL LOAD AMPS	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	AF	AMPERE FRAME	FO	FIBER OPTIC	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	AFCI	ARC-FAULT CIRCUIT INTERRUPTER	FT	FOOT (FEET)	NO	NORMALLY OPEN	AFF	ABOVE FINISHED FLOOR	GC	GENERAL CONTRACTOR	NTS	NOT TO SCALE	AFG	ABOVE FINISHED GRADE	GEN	GENERATOR	OB	OUTLET BOX	AHJ	AUTHORITY HAVING JURISDICTION	GFCI	GROUND-FAULT CIRCUIT INTERRUPTER	P	POLE	AIC	AMPERE INTERRUPTING CAPACITY	GND	GROUND	PA	PUBLIC ADDRESS	AL	ALUMINUM	HOA	HAND-OFF-AUTO	PB	PULL BOX	ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	HP	HORSEPOWER	PH/φ	PHASE	ASD	ADJUSTABLE SPEED DRIVE AT AMPERE TRIP	HPS	HIGH PRESSURE SODIUM HIGH VOLTAGE	PNL	PANELBOARD (PANEL)	ATS	AUTOMATIC TRANSFER SWITCH	HZ	HERTZ	RCPT	RECEPTACLE	AUTO	AUTOMATIC	IG	ISOLATED GROUND	SCC	SHORT CIRCUIT CAPACITY	AWG	AMERICAN WIRE GAUGE	IN	INCH (INCHES)	SF	SQUARE FOOT (FEET)	BLDG	BUILDING	JB	JUNCTION BOX	SP	SPECIFICATION	BFG	BELOW FINISHED GRADE	kcmil	THOUSAND CIRCULAR MIL	SPD	SURGE PROTECTIVE DEVICE	BRKR	BREAKER	kV	KILOVOLT	SS	STAINLESS STEEL	C	CONDUIT	kVA	KILOVOLT AMPERE	SWBD	SWITCHBOARD	CB	CIRCUIT BREAKER	kWh	KILOWATT HOUR	SWR	SWITCHGEAR	CKT	CIRCUIT	LED	LIGHT EMITTING DIODE	TR	TAMPER RESISTANT	COMM	COMMUNICATIONS	LPS	LIGHTNING PROTECTION SYSTEM	TYP	TYPICAL	CT	CURRENT TRANSFORMER	LTG	LIGHTNING	U	UNKNOWN CIRCUIT	CU	COPPER	LTNG	LIGHTNING	UL	UNDERWRITERS LABORATORY	°C	DEGREES CELSIUS	LV	LOW VOLTAGE	UN	UNLESS OTHERWISE NOTED	°F	DEGREES FAHRENHEIT	MAX	MAXIMUM	UPS	UNINTERRUPTIBLE POWER SUPPLY	DISC	DISCONNECT	MCA	MINIMUM CIRCUIT AMPACITY	UTIL	UTILITY	DP	DISTRIBUTION PANELBOARD	MCB	MAIN CIRCUIT BREAKER	V	VOLT OR VOLTAGE	DS	DISCONNECT SWITCH	MCC	MOTOR CONTROL CENTER	VA	VOLT AMPERE	DWG	DRAWING	MCP	MAIN DISTRIBUTION PANELBOARD	VD	VOLTAGE DROP	EC	ELECTRICAL CONTRACTOR	MH	METAL HALIDE	VFD	VARIABLE FREQUENCY DRIVE	EG	EQUIPMENT GROUND	MHz	MEGAHERTZ	W	WATT OR WIRE	ELEC	ELECTRIC OR ELECTRICAL	MIN	MINIMUM	WP	WEATHERPROOF	ELEV	ELEVATOR	MLO	MAIN LUGS ONLY	WR	WEATHER RESISTANT	EMER	EMERGENCY	MOCP	MAXIMUM OVERCURRENT PROTECTION	WT	WATER TIGHT	EPO	EMERGENCY POWER OFF	MTS	MANUAL TRANSFER SWITCH	XFER	TRANSFER	EPS	EMERGENCY POWER SUPPLY	N	NEUTRAL	XFMR	TRANSFORMER	EXIST	EXISTING	NA	NOT APPLICABLE	XP	EXPLOSION RATED	FA	FIRE ALARM	NC	NORMALLY CLOSED		
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LEGEND		
SYMBOL	DESCRIPTION	MOUNTING/REMARKS
	SITE LIGHTING FIXTURE	POLE OR WALL SURFACE
	SITE LIGHTING POLE OR POST	GRADE DIRECT BURIAL OR BASE
	DISCONNECT SWITCH	TOP 78" AFF
	ELECTRICAL EQUIPMENT	AS NOTED
	EQUIPMENT RACK	AS NOTED
	GROUNDING ROD	BELOW GRADE
	ELECTRIC UTILITY METER/CABINET	AS REQUIRED BY UTILITY COMPANY
	SECURITY LIGHTING FIXTURE	WALL SURFACE
	SCONCE LIGHTING FIXTURE	WALL SURFACE
	STRIP LIGHTING FIXTURE	CEILING SURFACE OR SUSPENDED
	JUNCTION/OUTLET BOX: DENOTED BY ANNOTATION	WALL SURFACE
	DUPLEX RECEPTACLE: 20 A, 125 VAC	TOP 20" AFF
	DEVICE AS NOTED	AS NOTED
	CIRCUIT/CONDUIT SPLICE OR CABLE BONDING	WIRES INDICATED AS FOLLOWS:
	CIRCUIT/CONDUIT OR CABLE TURNING DOWN/DROP	TWO WIRES: *
	CIRCUIT HOME RUN TO PANELBOARD INDICATED	NEUTRAL WIRE (TYP)
	CIRCUIT/CONDUIT OR CABLE UNDERGROUND OR UNDER FLOOR	PHASE WIRE (TYP)
		THREE WIRES, ETC.
		EQUIPMENT GROUND WIRE
		*MIN 2 #12 + #12 EG - 1/2" C FOR ALL POWER AND LIGHTING RACEWAYS UON OR SPECIFIED
	KEYED NOTES	REFER TO LIKE-NUMBERED NOTES

A. MOUNTING HEIGHTS INDICATE NOMINAL MOUNTING HEIGHTS UON.

OBJECT STATE LINETYPES:

EXISTING OBJECT OR CONSTRUCTION: _____

EXISTING OBJECT OR CONSTRUCTION TO BE DEMOLISHED: - - - - -

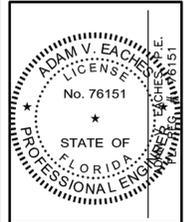
NEW OBJECT OR CONSTRUCTION TO BE PROVIDED: _____

OBJECT STATE SUBSCRIPTS:

D	EXISTING OBJECT TO BE DEMOLISHED	M	EXISTING OBJECT TO BE REMOVED & RELOCATED
E	EXISTING OBJECT TO REMAIN	R	RELOCATED EXISTING OBJECT

ELECTRICAL LEGEND AND SPECIFICATIONS

CORTEZ BOULEVARD PUMP STATION REPLACEMENT PROJECT



Coastal Engineering Associates, Inc.

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EB-0000142

HALL ENGINEERING GROUP

Electrical - Lighting - Mechanical - Renewables

3800 Glen Hwy, Suite 200 | Tampa, FL 33633

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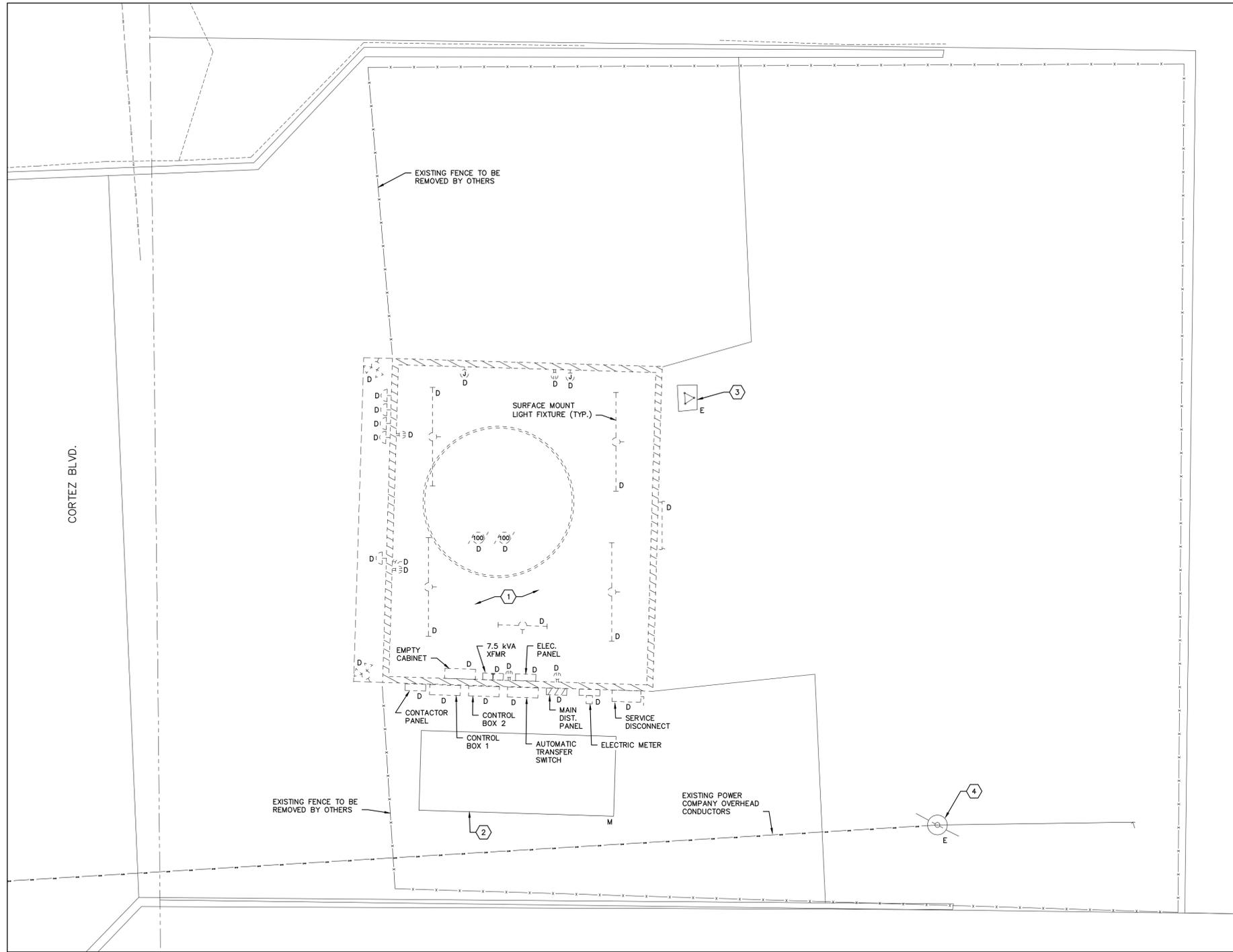
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WHEN PRINTED TO SCALE, DRAWING SIZE SHALL BE 22" X 34"

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01 PUMP STATION ELECTRICAL DEMOLITION PLAN
 SCALE: 1" = 5'-0"
 0 5' 10'

ELECTRICAL GENERAL DEMOLITION NOTES

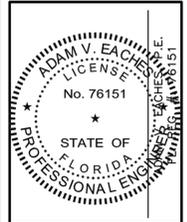
- A. EXISTING PUMP BUILDING TO BE COMPLETELY DEMOLISHED. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT IN THE BUILDING.
- B. NOT ALL THE ELECTRICAL EQUIPMENT SCHEDULED TO BE DEMOLISHED IS SHOWN ON THE ELECTRICAL DEMOLITION PLAN. EC SHALL VISIT THE EXISTING BUILDING PRIOR TO BID. NO CHANGE ORDERS WILL BE ACCEPTED DUE TO DEMOLITION SCOPE OF WORK.
- C. COORDINATE WITH GENERAL CONTRACTOR FOR ANY ADDITIONAL DEMOLITION ELECTRICAL WORK AND PROVIDE ACCORDINGLY.
- D. COORDINATE WITH POWER UTILITY COMPANY FOR SPECIFIC REQUIREMENTS PRIOR TO COMMENCING DEMOLITION WORK.

DRAWING NOTES

- 1. EXISTING PUMP BUILDING TO BE DEMOLISHED. REMOVE ALL EXISTING LIGHTING FIXTURES, EQUIPMENT, DEVICES, CONDUCTORS, RACEWAYS, ETC. COORDINATE WITH POWER COMPANY AND GENERAL CONTRACTOR PRIOR TO COMMENCING WORK. COORDINATE WITH OWNER TO DETERMINE IF OWNER WISHES TO RETAIN ANY REMOVED EQUIPMENT.
- 2. EXISTING TRAILER MOUNTED GENERATOR TO REMAIN. EC SHALL DE-ENERGIZE AND REMOVE ALL ELECTRICAL CONNECTIONS FROM EXISTING EQUIPMENT. PREPARE EQUIPMENT FOR RELOCATION AS INDICATED ON CIVIL PLANS. COORDINATE WITH GENERAL CONTRACTOR FOR SPECIFIC REQUIREMENTS.
- 3. APPROXIMATE LOCATION OF EXISTING TELEMETRY ANTENNA TOWER TO REMAIN. COORDINATE WITH GC FOR DISCONNECTION AND REMOVE EXISTING CONDUCTORS BACK TO SOURCE. PREPARE EQUIPMENT TO RECEIVE NEW CONDUCTORS FROM PROPOSED CONTROL PANEL. COORDINATE WITH OWNER ON SITE FOR ADDITIONAL REQUIREMENTS AND PROVIDE ACCORDINGLY.
- 4. EXISTING LOCATION OF POLE MOUNTED UTILITY TRANSFORMERS. COORDINATE WITH DUKE ENERGY FIELD ENGINEER FOR SHUTDOWN SERVICE SCHEDULE.

ELECTRICAL DEMOLITION PLAN

CORTEZ BOULEVARD PUMP STATION REPLACEMENT PROJECT



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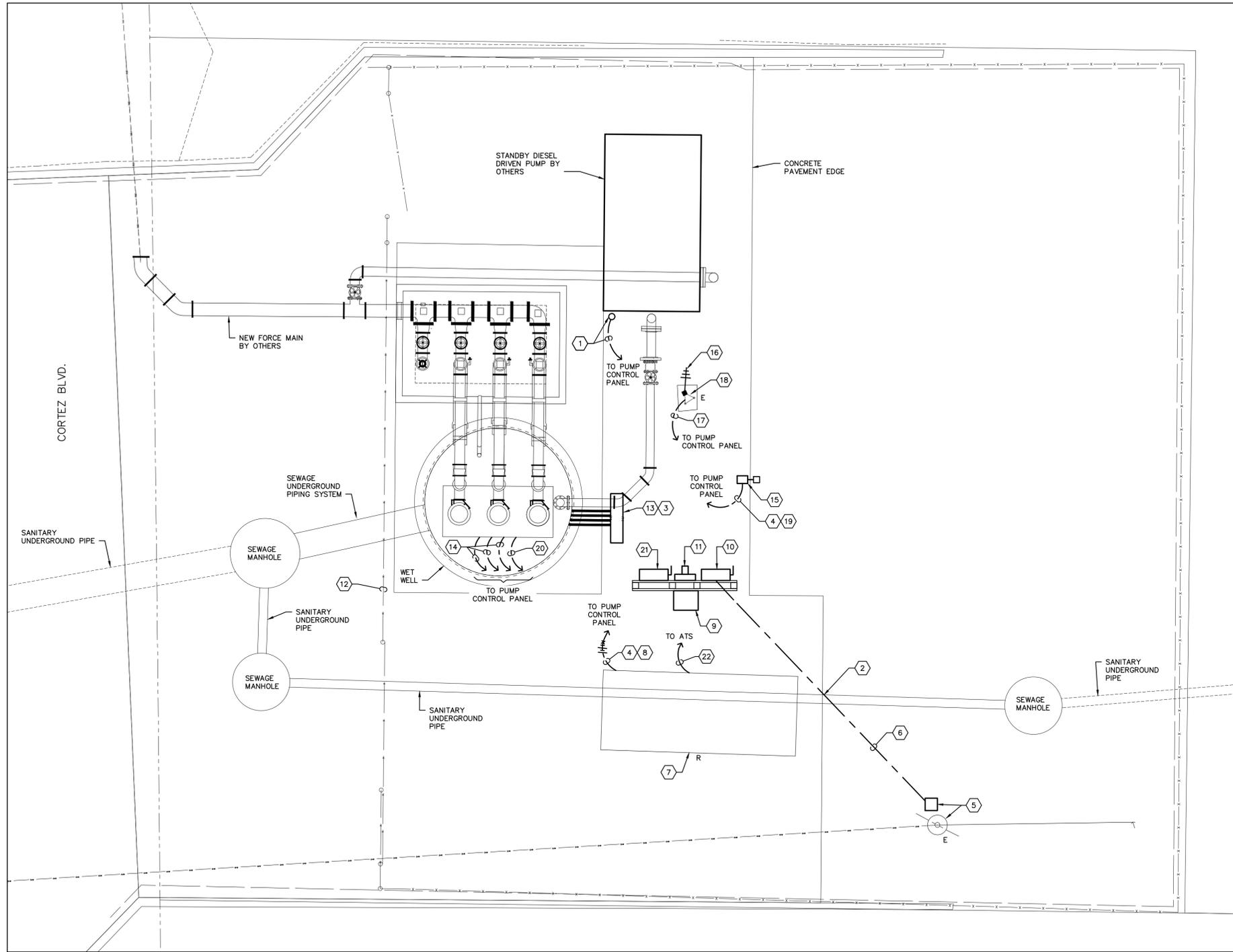
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01 PUMP STATION ELECTRICAL SITE PLAN
SCALE: 1" = 5'-0"

DRAWING GENERAL NOTES

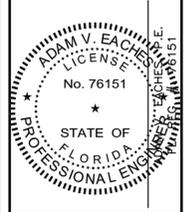
- A. REFER TO HERNANDO COUNTY UTILITIES DEPARTMENT (HCUD) WATER, RECLAIMED WATER, AND WASTEWATER CONSTRUCTION SPECIFICATIONS MANUAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- B. COORDINATE WITH DUKE ENERGY FIELD ENGINEER (DANIEL LEWIS, PH: (352) 610-2900, EMAIL: DANIEL.LEWIS@DUKE-ENERGY.COM) FOR ELECTRICAL SERVICE REQUIREMENTS.
- C. REFER ALSO TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- D. CONTRACTOR SHALL FIELD COORDINATE WITH DUKE ENERGY AND OTHER TRADES TO AVOID OTHER INFRASTRUCTURES AND MEET ALL CLEARANCE REQUIREMENTS.
- E. MAINTAIN MINIMUM 12" SEPARATION BETWEEN ELECTRICAL AND OTHER INFRASTRUCTURE.
- F. REFER TO POWER ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- G. GROUNDING OF WET WELL AND VALVE VAULT PER MANUFACTURER'S RECOMMENDATIONS, HCUD STANDARDS AND NFPA.

DRAWING NOTES

- 1. PROVIDE TWO (2) 2" EMPTY CONDUITS FOR LOW VOLTAGE COMMUNICATIONS. COORDINATE EXACT REQUIREMENTS AND STUB-UP LOCATION OF UNDERGROUND CONDUITS WITH THE EQUIPMENT SUPPLIER/INSTALLER AND THE LOW VOLTAGE CONTRACTOR. CONTROL CABLING SHALL BE PROVIDED BY OTHERS.
- 2. COORDINATE ROUTING OF SERVICE FEEDER WITH EXISTING GRAVITY LINE. MAINTAIN MINIMUM 12" SEPARATION.
- 3. TELEMETRY CONTROL UNIT (TCU) MOUNTED IN CONTROL PANEL (BY OTHERS).
- 4. CIRCUIT(S) SHALL BE FED FROM 120 V SECONDARY OF POWER TRANSFORMER INTEGRAL TO PUMP CONTROL PANEL. REFER TO HCUD SPECIFICATIONS.
- 5. EXISTING POWER COMPANY POLE-MOUNTED TRANSFORMERS AND NEW PEDESTAL INSTALLED AT BASE OF THE POLE PER POWER COMPANY SPECIFICATIONS.
- 6. PROPOSED ROUTING OF NEW UNDERGROUND SERVICE FEEDER.
- 7. EXISTING TRAILER MOUNT GENERATOR SET TO REMAIN AND BE RECONNECTED TO NEW ELECTRICAL SERVICE. REFER TO ONE-LINE RISER DIAGRAM, SHEET E-04.
- 8. REFER TO POWER ONE-LINE DIAGRAM ON SHEET E-04 FOR GENERATOR BLOCK HEATER AND BATTERY CHARGER DETAILS.
- 9. AUTOMATIC TRANSFER SWITCH TO BE FURNISHED AND INSTALLED BY CONTRACTOR PER COUNTY REQUIREMENTS.
- 10. UTILITY METER DISCONNECT SWITCH.
- 11. UTILITY METER.
- 12. GROUND FENCE AND BOND TO GROUNDING ELECTRODE SYSTEM. REFER TO SECURITY FENCE GROUNDING DETAIL, SHEET E-05, AND POWER ONE-LINE DIAGRAM, SHEET E-04; FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- 13. PUMP CONTROL PANEL TO BE FURNISHED AND INSTALLED BY CONTRACTOR PER COUNTY REQUIREMENTS.
- 14. PROVIDE MINIMUM 2" C WITH MANUFACTURER RECOMMENDED CABLING FOR PUMP MOTOR TO PUMP CONTROL PANEL. PROVIDE 600 V, 250/3 CIRCUIT BREAKER; REFER TO CONTROL PANEL DETAIL ON SHEET E-04 FOR ADDITIONAL INFORMATION.
- 15. POLE MOUNTED LED LIGHT FIXTURE WITH INTEGRAL PHOTOCELL; TECHLIGHT, MODEL #LSB1C8T3F1WH-PC7; 4" STEEL, 15' POLE; TECHLIGHT, MODEL #SS2P15411WHT238-PTA4WH-KAB3418G08R. PROVIDE FOR REVIEW AND COMMENT PRODUCT DATA WITH SIGNED AND SEALED, BY FLORIDA PROFESSIONAL STRUCTURAL ENGINEER (PE), DESIGN AND CALCULATIONS FOR SITE LIGHTING FIXTURE AND POLE ASSEMBLY INCLUDING MOUNTING HARDWARE, ANCHOR BOLTS, AND FOUNDATION TO MEET PROJECT WIND LOADING REQUIREMENTS PER FBC. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO COMMENCING WORK. REFER ALSO TO POLE MOUNTED FIXTURE DETAIL, SHEET E-05.
- 16. COPPER CLAD STEEL GROUND ROD. REFER TO ANTENNA TOWER GROUNDING DETAIL, SHEET E-05. BOND TOWER GROUND TO GROUNDING ELECTRODE SYSTEM AND EQUIPMENT RACK. REFER TO POWER ONE-LINE DIAGRAM, SHEET E-04.
- 17. PROVIDE 1" C + (1) SPARE 1" C FOR ANTENNA COAX CABLE AS REQUIRED. COORDINATE CONDUIT ROUTING WITH GENERAL CONTRACTOR PRIOR TO COMMENCING WORK.
- 18. APPROXIMATE LOCATION OF EXISTING TELEMETRY ANTENNA TOWER TO REMAIN.
- 19. 2 #12 + #12 EG - 3/4" C. PROVIDE 600 V, 20/1 CIRCUIT BREAKER WITH MINIMUM 18,000 AMPERES INTERRUPTING RATING AT 600 V IN PUMP CONTROL PANEL.
- 20. PROVIDE MINIMUM 2" C WITH MANUFACTURER RECOMMENDED CABLING FOR FLOAT SENSORS TO PUMP CONTROL PANEL; REFER ALSO TO HCUD SPECIFICATIONS.
- 21. SERVICE ENTRANCE DISCONNECT SWITCH. REFER TO POWER ONE-LINE DIAGRAM ON SHEET E-04 FOR ADDITIONAL INFORMATION.
- 22. AUTO START CIRCUIT TO ATS. REFER TO POWER ONE-LINE FOR DETAILS.

ELECTRICAL SITE PLAN

CORTEZ BOULEVARD PUMP STATION REPLACEMENT PROJECT



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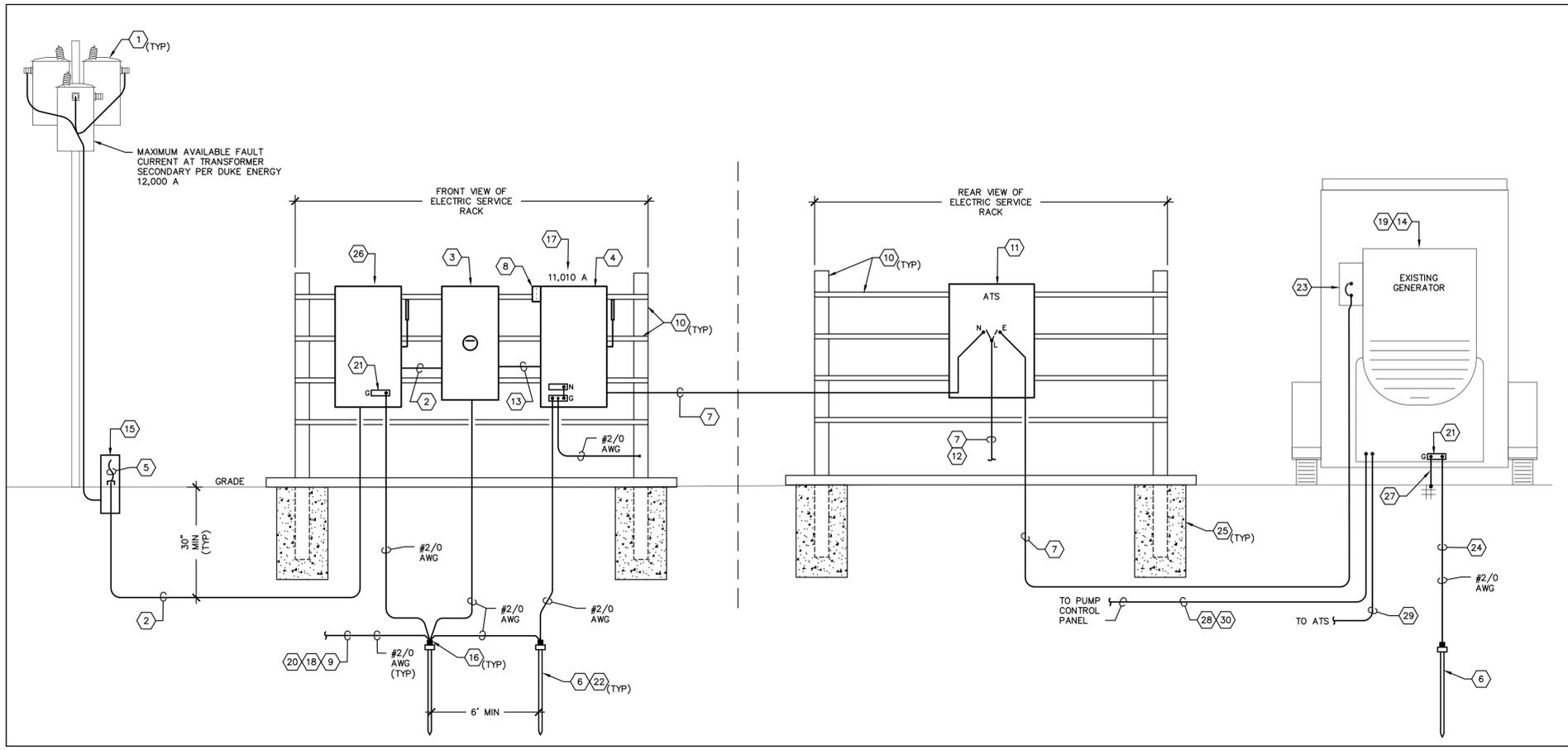
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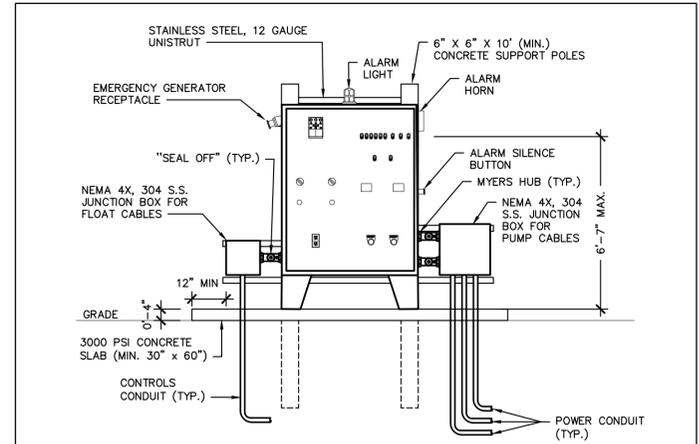
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01 POWER ONE-LINE DIAGRAM
SCALE: NONE



- NOTES:**
1. OUTER DOOR NOT SHOWN FOR CLARITY.
 2. THE OUTER DOOR HAS A 3-POINT LATCHING SYSTEM.
 3. ALL PENETRATIONS MADE INTO THE CONTROL PANEL SHALL BE FROM THE BOTTOM SIDE ONLY.
 4. CONTROL PANEL SHALL HAVE 400 A MAIN CIRCUIT BREAKER (MCB) AND 400 A EMERGENCY CIRCUIT BREAKER (ECB). MCB AND ECB SHALL HAVE MANUAL INTERLOCK. MCB AND ECB SHALL HAVE MINIMUM 25,000 AMPERES INTERRUPTING RATING AT 600 V.
 5. CONTROL PANEL SHALL HAVE 250 A, 3-POLE, 600 V CIRCUIT BREAKER FOR EACH PUMP MOTOR.
 6. CONTROL PANEL SHALL HAVE 20 A, 1-POLE, 600 V CIRCUIT BREAKER WITH MINIMUM 18,000 AMPERES INTERRUPTING RATING AT 600 V FOR SITE LIGHTING.
 7. CONTROL PANEL SHALL HAVE MINIMUM 20 A, 1-POLE, 600 V CIRCUIT BREAKERS WITH MINIMUM 18,000 AMPERES INTERRUPTING RATING AT 600 V FOR BATTERY CHARGER AND BLOCK HEATER EACH. VERIFY CIRCUIT BREAKER REQUIREMENTS WITH KOHLER GENERATOR REPRESENTATIVE PRIOR TO COMMENCING WORK.

02 CONTROL PANEL DETAIL
SCALE: NONE

DRAWING GENERAL NOTES

- REFER TO HERNANDO COUNTY UTILITIES DEPARTMENT (HCUD) WATER, RECLAIMED WATER AND WASTE WATER CONSTRUCTION SPECIFICATIONS MANUAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- COORDINATE WITH DUKE ENERGY FIELD ENGINEER (DANIEL LEWIS, PH: (352) 610-2900, EMAIL: DANIEL.LEWIS@DUKE-ENERGY.COM) FOR ELECTRICAL SERVICE REQUIREMENTS.
- CONTRACTOR SHALL FIELD COORDINATE WITH DUKE ENERGY AND OTHER TRADES TO AVOID OTHER INFRASTRUCTURE AND MEET ALL CLEARANCE REQUIREMENTS.
- MAINTAIN MINIMUM 12" SEPARATION BETWEEN ELECTRICAL AND OTHER INFRASTRUCTURE.
- REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT SHALL BE MOUNTED ABOVE FLOOD ELEVATION.
- CONTACT KOHLER REPRESENTATIVE FOR GENERATOR DETAILS: DAVID ADAMS AT (813) 394-1141; DAVID.ADAMS@PS.US

DRAWING NOTES

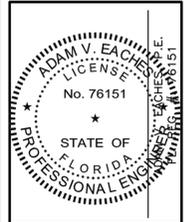
- EXISTING UTILITY POWER COMPANY, POLE-MOUNTED, 480/277 V, 3 ϕ , TRANSFORMERS.
- SECONDARY CONDUITS AND CONDUCTORS. 4 #600 KMIL - 4" C.
- METER SOCKET PER DUKE ENERGY REQUIREMENTS.
- 400 A, 600 V, 3-POLE, 4-W, NEMA 4X, SS TYPE 304, SERVICE ENTRANCE RATED FUSIBLE DISCONNECT SWITCH. FUSE AT 400 A WITH CLASS RK1 FUSES. BOND NEUTRAL-GROUND.
- COORDINATE WITH DUKE ENERGY FOR LENGTH OF SERVICE LOOP. CONNECTIONS WILL BE MADE BY POWER COMPANY.
- 3/4" X 10' COPPER CLAD GROUND ROD.
- 4 #600 KMIL + #3 EG - 4" C.
- SPD PER HCUD SPECIFICATIONS. LEADS SHALL BE AS SHORT AND STRAIGHT AS PRACTICABLE.
- BOND TO WELL, PIPING, ETC. AS RECOMMENDED BY PUMP AND CONTROL PANEL MANUFACTURER.
- CHANNEL-STRUT EQUIPMENT RACK FOR ILLUSTRATION PURPOSES ONLY. REFER TO HCUD SPECIFICATIONS FOR REQUIREMENTS.
- 400 A, 480 V, 3 ϕ , 3-POLE, SOLID NEUTRAL, NEMA 4X, SS TYPE 304 AUTOMATIC TRANSFER SWITCH (ATS). REFER TO HCUD SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- AUTOMATIC TRANSFER SWITCH LOAD SIDE. CONNECT TO PUMP CONTROL PANEL; NOT SHOWN FOR CLARITY. REFER TO DETAIL 02, THIS SHEET.
- 4 #600 KMIL - 4" C.
- EXISTING GENERATOR TO BE CONNECTED TO NEW ATS. REFER TO LOAD SUMMARY SCHEDULE FOR PUMP INFORMATION ABOUT QUANTITY AND HORSE POWER RATING. PUMPS SHALL START SEQUENTIALLY WITH A MINIMUM 3 SECOND DELAY.
- PROVIDE NEW PEDESTAL PER POWER COMPANY SPECIFICATIONS. COORDINATE WITH POWER COMPANY FOR EXACT LOCATION AND REQUIREMENTS PRIOR TO COMMENCING WORK.
- EXOTHERMIC WELD.
- CALCULATED FAULT CURRENT.
- BOND TO ANTENNA TOWER GROUND ROD.
- EXISTING TRAILER MOUNTED, 250 kW, 60 HZ, 480/277 V, 3 ϕ , 4-W GENERATOR SET TO BE RELOCATED AND RECONNECTED TO NEW ELECTRICAL SERVICE. COORDINATE WITH CITY OF BROOKSVILLE TO SECURE AND ANCHOR GENERATOR.
- BOND TO FENCE.
- NO NEUTRAL-GROUND BOUND AT THIS LOCATION.
- RESISTANCE TO GROUND SHALL NOT EXCEED 5 OHMS. PROVIDE ADDITIONAL GROUND RODS AS REQUIRED.
- FIELD VERIFY EXISTING 100% RATED GENERATOR OUTPUT CIRCUIT BREAKER; 400 AF WITH 400 A TRIP PLUG. CONTACT ENGINEER OF RECORD IN CASE OF DISCREPANCIES.
- SUPPLEMENTAL GROUNDING ELECTRODE SYSTEM.
- 3000 PSI MIN. CONCRETE FOOTING. DIMENSIONS SHALL BE PROVIDED BY REGISTERED FL STRUCTURAL ENGINEER.
- 400 A, 600 V, 3-POLE, 4-W, NEMA 4X, SS TYPE 304 UTILITY METER DISCONNECT SWITCH INSTALLED BY ELECTRICAL CONTRACTOR PER UTILITY COMPANY'S SPECIFICATIONS. DISCONNECT SWITCH SHALL HAVE PROVISION FOR UTILITY COMPANY PADLOCK ON OPERATING HANDLE. PROVIDE PLASTIC PLACARD THAT READS: "METER DISCONNECT NOT SERVICE EQUIPMENT". COORDINATE WITH DUKE ENERGY PRIOR TO COMMENCING WORK.
- BOND TO FRAME WITH #2/0 AWG.
- 2 #10 + #10 EG IN 3/4" C FOR BLOCK HEATER. COORDINATE DETAILS WITH KOHLER GENERATOR REPRESENTATIVE PRIOR TO COMMENCING WORK.
- 2 #12 + #12 GND IN 3/4" C FOR AUTO START. COORDINATE DETAILS WITH KOHLER GENERATOR REPRESENTATIVE PRIOR TO COMMENCING WORK.
- 2 #10 + #10 EG IN 3/4" C FOR BATTERY CHARGER. COORDINATE DETAILS WITH KOHLER GENERATOR REPRESENTATIVE PRIOR TO COMMENCING WORK.

LOAD SUMMARY SCHEDULE

LOAD DESCRIPTION	LOAD
EXISTING GENERATOR:	
250 kW KOHLER (@ 80% PF)	312.50 kVA
PROPOSED LOADS:	
LIGHTING	0.09 kVA
PUMP #1 (105 HP)	108.08 kVA
PUMP #2 (105 HP)	108.08 kVA
PUMP #3 (105 HP) (*)	
CONTROLS AND OTHER MISC LOADS	2.80 kVA
RECEPTACLES	0.18 kVA
TOTAL PROPOSED LOAD	
219.2 kVA	
TOTAL AMPERES (@ 480 V, 3 ϕ)	
263.7 AMPS	

- (*) PUMP #3 IS DESIGNED AS A BACK-UP ONLY. ALL THREE PUMPS WILL NOT BE OPERATING SIMULTANEOUSLY.**
- EXISTING GENERATOR NOTES:**
1. THE EXISTING GENERATOR WILL BE ABLE TO ACCOMMODATE TWO (2) 105 HP PUMPS WITH VFD START AS LONG AS THE VFD IS 12-PULSE MINIMUM WITH HARMONIC FILTERING ON THE DRIVES.
 2. EXISTING GENERATOR WITH VFD START WILL NOT BE ABLE TO HANDLE ALL THREE PUMPS RUNNING (SIMULTANEOUSLY).

POWER ONE-LINE DIAGRAM
CORTEZ BOULEVARD PUMP STATION REPLACEMENT PROJECT



Coastal
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 EB-0000142

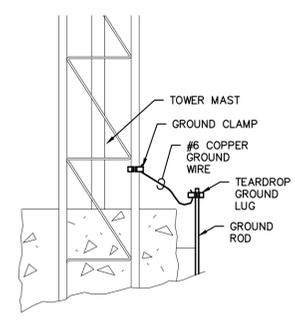


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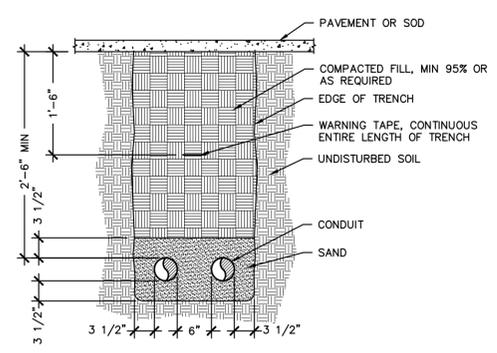
WHEN PRINTED TO SCALE, DRAWING SIZE SHALL BE 22" X 34"

SHEET
E-04
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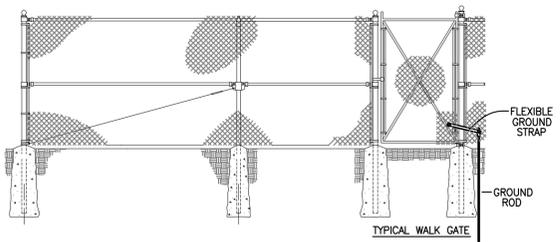
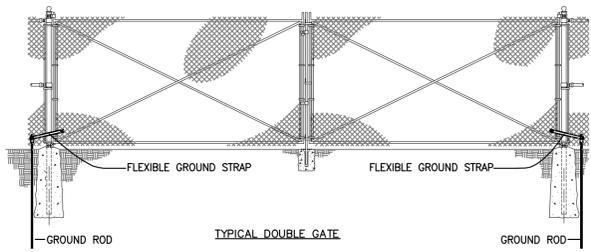
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01 ANTENNA TOWER GROUNDING DETAIL
SCALE: N.T.S.



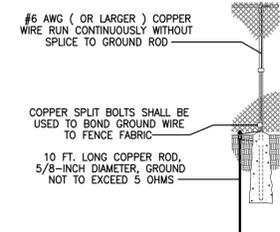
02 CONDUIT TRENCH DETAIL
SCALE: N.T.S.



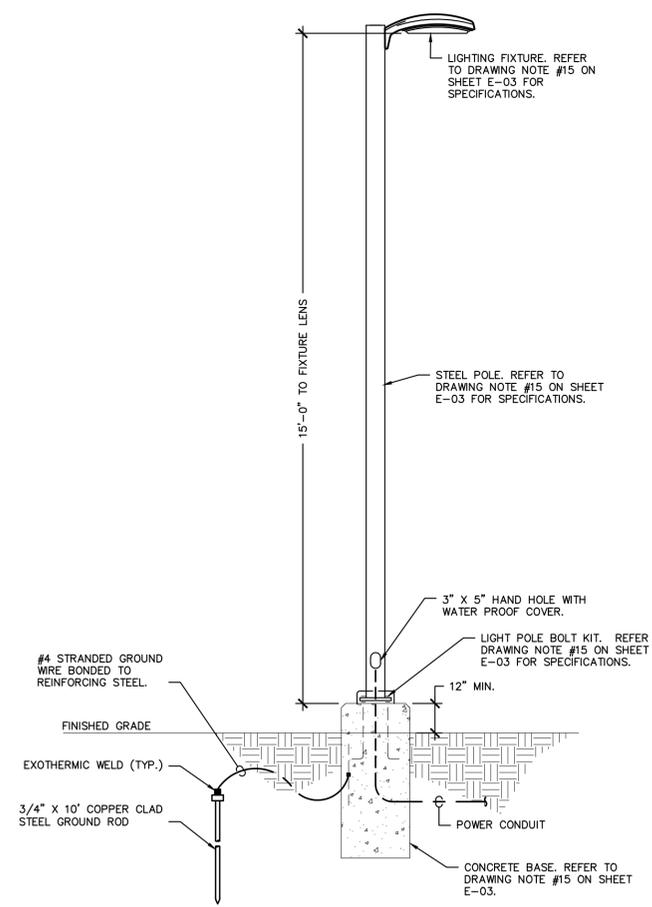
TYPICAL FENCE SECTIONS

NOTES:

- FENCE GROUNDING SHALL BE BONDED BACK TO THE ELECTRIC SERVICE GROUND.
- GATES SHALL BE GROUNDED ON EACH SIDE, TO THE ENCLOSURE FENCE, USING A HEAVY DUTY FLEXIBLE GROUND STRAP TO PERMIT THE OPENING AND CLOSING OF THE GATES.
- FENCE GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.

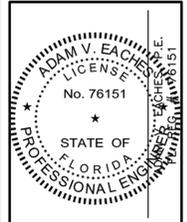


03 SECURITY FENCE GROUNDING DETAIL
SCALE: N.T.S.



04 POLE MOUNTED FIXTURE DETAIL
SCALE: N.T.S.

ELECTRICAL DETAILS
CORTEZ BOULEVARD PUMP
STATION REPLACEMENT PROJECT



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