



ADDENDUM NO. 4
TO THE CONTRACT DOCUMENTS

Date: July 2, 2018
Project No.: 682450

for the construction of

Pump Stations Rehabilitation Phase 1 H, B, And A Generator

City of Key West, Key West, Florida

To All Planholders and/or Prospective Bidders:

The following changes, additions, and/or deletions are hereby made a part of the Contract Documents for the construction of **Pump Stations Rehabilitation Phase 1 H, B, And A Generator** dated May 2018 as fully and completely as if the same were fully set forth therein:

A. TECHNICAL SPECIFICATIONS

1. Section 26 05 01, Electrical

Page 3, paragraph 1.03.10 DELETE in its entirety REPLACE with the following:

“10. Signed and sealed Arc flash study and warning labels.”

Page 4, paragraph 1.06 ADD the following and renumber the subsequent paragraphs.

“A. Arc Flash, short circuit and coordination studies shall be performed by a professional engineer registered in the State of Florida.”

2. Section 26 32 13.13, Diesel Engine Generator Set

Page 7, paragraph 2.05.H.1.g DELETE in its entirety and REPLACE with the following:

“g. Enclosure dimensions shall be such that a minimum of 36 inches along each side of the engine and 48 inches in front of the generator control panel and circuit breaker shall be kept as walking clearance for maintenance and operating personnel. The height of the enclosure shall provide a minimum of 6 foot – 8 inches head room along the

interior access. The enclosure with subbase fuel storage tank shall be placed on an elevated concrete pad and it shall not exceed the dimensions: 278 inches long by 117 inches wide by 127-1/2 inches high as shown on the Drawings.”

Page 7, paragraph 2.05.H.4 DELETE in its entirety and REPLACE with the following:

“4. Provide factory mounted and wired mini power center (MPC) inside enclosure to serve all the auxiliaries of the generator set and enclosure, including but not limited to, jacket water heater, battery chargers, alternator space heater, and engine control panel.”

3. Section 26 36 23, Service Entrance Automatic Transfer Switch

Page 2, paragraph 2.02.H DELETE in its entirety and REPLACE with the following:

“H. Switch Rating: As shown on Drawings, continuous amperes in nonventilated enclosure, and service entrance rated.”

Page 3, ADD the following and renumber the subsequent paragraphs:

“2.04 CIRCUIT BREAKER

A. General:

1. Type: Molded Case with Adjustable LSIG module 100% rated.
2. Trip Rating: 150A to 400A.
3. Voltage: 480V 3 phase.
4. Mounted inside automatic transfer switch enclosure.
5. Service Entrance Rated.
6. Shunt trip option.”

4. Section 26 41 00, Facility Lightning Protection

Page 1, paragraph 1.02.A DELETE in its entirety and REPLACE with the following:

“A Provide lightning protection system design for the following structures: Generator enclosure, pole lights, and equipment on platform.”

B. DRAWINGS

1. Drawing 001-G-001, General Location, Vicinity Maps and Index of Drawings, under Index of Drawings, Sheet 22; DELETE “030-E-201” and INSERT “030-E-202”.
2. Drawing 001-G-006, General Electrical Legend Sheet 1: DELETE the following Drawing and REPLACE with the attached.
3. Drawing 001-G-007, General Electrical Legend Sheet 2: DELETE the following Drawing and REPLACE with the attached.
4. Drawing 010-E-201, Electrical Pump Station B Site Plan: DELETE the following Drawing and REPLACE with the attached.
5. Drawing 010-E-601, Electrical Pump Station B One Line Diagram: DELETE the following Drawing and REPLACE with the attached.
6. Drawing 010-E-602, Electrical Pump Station B Motor Control Center: DELETE the following Drawing and REPLACE with the attached.
7. Drawing 020-S-202, Structural Pump Station H Platform H Plans and Sections: DELETE the following Drawing and REPLACE with the attached.
8. Drawing 020-E-101, Electrical Pump Station H Site Demolition Plan; DELETE the following Drawing and REPLACE with the attached.
9. Drawing 020-E-201, Electrical Pump Station H New Site Plan: DELETE the following Drawing and REPLACE with the attached.
10. Drawing 020-E-601, Electrical Pump Station H One-Line Diagram: DELETE the following Drawing and REPLACE with the attached.
11. Drawing 030-S-201, Structural Pump Station A Platform A Plan And Section: DELETE the following Drawing and REPLACE with the attached.
12. Drawing 030-E-201, Electrical Pump Station A Site Plan: DELETE the following Drawing and REPLACE with the attached.
13. Drawing 030-E-202, Electrical Pump Station A One Line Diagram: DELETE the following Drawing and REPLACE with the attached.
14. Drawing 095-E-501, Electrical Standard Details: DELETE the following Drawing and REPLACE with the attached.
15. Drawing 095-E-503, Electrical Standard Details: DELETE the following Drawing and REPLACE with the attached.

683450A.GN1

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 4 in the Bid Form or by submitting the Addendum with the bid package. Bid Forms submitted without acknowledgment or without this Addendum will be considered in nonconformance.

CH2M HILL

Sean Mc Coy, P.E. _____

Project Manager

Appended hereto and part of Addendum No. 4:

Drawing 001-G-006, General Electrical Legend Sheet 1, attached.

Drawing 001-G-007, General Electrical Legend Sheet 2, attached.

Drawing 010-E-201, Electrical Pump Station B Site Plan, attached.

Drawing 010-E-601, Electrical Pump Station B One Line Diagram, attached.

Drawing 010-E-602, Electrical Pump Station B Motor Control Center, attached.

Drawing 020-S-202, Structural Pump Station H Platform H Plans and Sections, attached.

Drawing 020-E-101, Electrical Pump Station H Site Demolition Plan, attached.

Drawing 020-E-201, Electrical Pump Station H New Site Plan, attached.

Drawing 020-E-601, Electrical Pump Station H One-Line Diagram, attached.

Drawing 030-S-201, Structural Pump Station A Platform A Plan and Section, attached.

Drawing 030-E-201, Electrical Pump Station A Site Plan, attached.

Drawing 030-E-202, Electrical Pump Station A One Line Diagram, attached.

Drawing 095-E-501, Electrical Standard Details, attached.

Drawing 095-E-503, Electrical Standard Details, attached.

END OF ADDENDUM

SYMBOL	DESCRIPTION
ONE LINE DIAGRAMS-1	
	DRAWOUT AIR CIRCUIT BREAKER, LOW VOLTAGE
	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER, STATIC TRIP UNIT, SENSOR AMP TRIP AND FRAME RATINGS SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, TRIP RATING SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER WITH CURRENT LIMITING FUSES, TRIP AND FUSE RATING INDICATED, 3 POLE, UNO
	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE, UNO
	SWITCH, CURRENT RATING INDICATED, 3 POLE, UNO
	FUSE, CURRENT RATING AND QUANTITY INDICATED
	MAGNETIC STARTER WITH OVERLOAD, NEMA SIZE INDICATED, FVNR UNO
	ELECTRONIC STARTER/SPEED CONTROL RVSS = REDUCED VOLTAGE SOFT STARTER AFD = AC ADJUSTABLE FREQUENCY DRIVE DC = DC ADJUSTABLE SPEED DRIVE RVAT = REDUCED VOLTAGE AUTO TRANSFORMER TYPE RVRT = REDUCED VOLTAGE REACTOR TYPE
	CABLE OR BUS CONNECTION POINT
	MECHANICAL INTERLOCK
	SURGE ARRESTER (GAP TYPE)
	CAPACITOR - KVAR INDICATED, 3 PHASE
	MOTOR, SQUIRREL CAGE INDUCTION - HORSEPOWER INDICATED
	GENERATOR, KW/KVA RATING SHOWN
	DELTA CONNECTION
	WYE GROUNDED CONNECTION, SOLID GROUND
	DIGITAL POWER METER (MULTIFUNCTION)
	UTILITY REVENUE METER
	GROUND
	TRANSFORMER, SIZE, VOLTAGE RATINGS, AND PHASE INDICATED
	SHIELDED ISOLATION TRANSFORMER
	POTENTIAL TRANSFORMER, VOLTAGE RATING AND QUANTITY INDICATED
	CURRENT TRANSFORMER, RATIO(100:5) AND QUANTITY INDICATED (3)
	CONNECTION POINT TO EQUIPMENT SPECIFIED IN OTHER DIVISIONS, RACEWAY, CONDUCTOR AND CONNECTION IN THIS DIVISION
	SURGE SUPPRESSION DEVICE

SYMBOL	DESCRIPTION
POWER SYSTEM PLAN-1	
	CONNECTION POINT TO EQUIPMENT SPECIFIED, RACEWAY, CONDUCTOR, TERMINATION AND CONNECTION IN THIS DIVISION.
	MOTOR, SQUIRREL CAGE INDUCTION
	GENERATOR, VOLTAGE AND SIZE AS INDICATED.
	HOME RUN - DESTINATION SHOWN
	EXPOSED CONDUIT AND CONDUCTORS
	CONCEALED CONDUIT AND CONDUCTORS
	CONDUIT DOWN
	CONDUIT UP
	CONDUIT, STUBBED AND CAPPED
	CONCRETE ENCASED CONDUIT
	DIRECT BURIED CONDUIT
	FIBER OPTIC CONDUIT
	TRANSFORMER
	GENERAL CONTROL OR WIRING DEVICE. LETTER SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE
	CONTROL STATION, SEE CONTROL DIAGRAMS FOR CONTROL DEVICE(S) REQUIRED.
	NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE
	FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING) 3 POLE
	COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED
	CONVENIENCE RECEPTACLE - DUPLEX UNLESS SPECIFIED OTHERWISE WP- WEATHERPROOF C- CLOCK HANGER TL- TWIST LOCK CRE- CORROSION RESISTANT GFI = GROUND FAULT INTERRUPTION
	EXIT SIGN; FILLED SECTION INDICATES LIGHTED FACE, FULLY GASKETED REINFORCED POLYESTER HOUSING, WITH STAINLESS STEEL HARDWARE, RED LETTERS, INTEGRAL 90 MINUTES MAINTENANCE FREE SEALED NICKLE CADMIUM EMERGENCY BATTERY BACKUP. SELF TEST DIAGNOSTIC WITH INDICATOR LIGHT, UL LISTED NEMA 4X AND NFPA 101 RATED, LED, HALOPHANE DELEON HD SERIES, MODEL: LHD2E-NC-R-NK-SH OR APPROVED EQUAL.
	ALARM HORN
	ALARM LIGHT
	WALL SWITCH: 2- DOUBLE POLE 3- THREE WAY 4- FOUR WAY WP- WEATHERPROOF
	SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT IN PANELBOARD.
	TYPE A LUMINAIRE: ENCLOSED FLUORESCENT; (2) F32T8 LAMPS, ALUMINUM HOUSING, ELECTRONIC BALLAST, 120V WITH EMERGENCY LIGHTING BATTERY PACK. COLUMBIA LIGHTING MODEL 47A-4-232-E-U-DR12-EL, OR APPROVED EQUAL. LIGHTS TO BE WIRED SO THAT EMERGENCY BATTERY PACK ILLUMINATES FIXTURE ON POWER FAILURE.
	TYPE B LUMINAIRE: CLEAR IMPACT RESISTANT GLASS LENS LED WALL PACK, CAST ALUMINUM HOUSING, FULL CUT-OFF DISTRIBUTION, UL LISTED FOR WET LOCATIONS, NOMINAL 3448 LUMENS OUTPUT, 35.4 WATT INPUT, 120V, 90-MINUTE, EMERGENCY BATTERY BACKUP, EXTERNAL TEST SWITCH, HUBBELL LIGHTING LAREDO SERIES, MODEL: LMC-30LU-SK-3-035-4-BOC, OR APPROVED EQUAL.
	POLE MOUNTED LUMINAIRE

SYMBOL	DESCRIPTION
GROUND SYSTEM PLAN	
	GROUND ROD, REQUIRES TEST WELL IF LOCATED IN PAVED AREA
	GROUNDING CONDUCTOR, SIZE AS INDICATED
	CABLE TO CABLE TEE
	CABLE TO CABLE CROSS
	PLATE ADAPTER
	CABLE TO REINFORCING STEEL
	GROUND ROD TO CABLE
	FLEXIBLE GROUND STRAP
	CABLE TO PIPE (BOLTED CONNECTION)
	CABLE TO FLAT
	CABLE TO STEEL/ALUMINUM SURFACE
	CABLE TO TOP OF GROUND ROD
	PARALLEL SPLICE
	PIGTAIL FOR CONNECTION TO EQUIPMENT CABINET OR FRAME
	EQUIPMENT GROUND BUS
	EQUIPMENT NEUTRAL BUS
	CABLE TO LUG
NOTES: 1. THESE ARE STANDARD LEGEND SHEETS. SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE LEGEND AND NOT ON THE DRAWINGS. 2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (HVAC, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL) SEE OTHER LEGENDS.	
NOTES: 1. FOR CABLE TYPES, SEE SPECIFICATIONS. 2. CONDUIT SIZES ARE BASED ON THE AREA OF THW CONDUCTORS. 3. SIZING OF CONDUCTORS #1AWG AND SMALLER BASED ON AMPACITIES AT 60 DEGREES C, SIZING OF CONDUCTORS #10AWG AND LARGER BASED ON AMPACITIES AT 75 DEGREES C. 4. WHERE CIRCUITS ARE UNDERGROUND, DIRECT BURIED OR CONCRETE ENCASED, MINIMUM CONDUIT SIZE SHALL BE 1". 5. FOR METRIC CONDUIT SIZES USE THE FOLLOWING CONVERSION: 1/2" = 16 mm 1/4" = 35 mm 3/4" = 21 mm 1 1/2" = 41 mm 1" = 27 mm 2" = 53 mm	

POWER CIRCUIT CALLOUTS			
[P1]	[1/2" FLEX, 2#12, #12G]	[P26]	[1" C, 3#8, 5#14, 1#10G]
[P2]	[3/4" C, 2#12, 1#12G]	[P27]	[1" C, 2#6, 1#10G]
[P3]	[3/4" C, 3#12, 1#12G]	[P28]	[1" C, 3#6, 1#8G]
[P4]	[3/4" C, 4#12, 1#12G]	[P28A]	[1" C, 4#6, 1#8G]
[P5]	[3/4" C, 5#12, 1#12G]	[P29]	[1" C, 3#6, 2#14, 1#8G]
[P6]	[3/4" C, 6#12, 1#12G]	[P30]	[1" C, 3#6, 3#14, 1#8G]
[P7]	[3/4" C, 7#12, 1#12G]	[P31]	[1" C, 3#6, 4#14, 1#8G]
[P8]	[3/4" C, 8#12, 1#12G]	[P32]	[1" C, 3#6, 5#14, 1#8G]
[P9]	[3/4" C, 3#12, 2#14, 1#12G]	[P33]	[1" C, 3#4, 1#8G]
[P10]	[3/4" C, 3#12, 3#14, 1#12G]	[P34]	[1 1/4" C, 3#4, 3#14, 1#8G]
[P11]	[3/4" C, 3#12, 4#14, 1#12G]	[P35]	[1 1/4" C, 3#4, 5#14, 1#8G]
[P12]	[3/4" C, 3#12, 5#14, 1#12G]	[P36]	[1 1/4" C, 3#3, 1#6G]
[P13]	[3/4" C, 3#12, 6#14, 1#12G]	[P37]	[1 1/4" C, 3#3, 3#14, 1#6G]
[P14]	[3/4" C, 3#12, 7#14, 1#12G]	[P38]	[1 1/4" C, 3#2, 1#6G]
[P15]	[3/4" C, 2#10, 1#10G]	[P39]	[1 1/4" C, 3#1, 1#6G]
[P16]	[3/4" C, 3#10, 1#10G]	[P39A]	[1 1/2" C, 4#1, 1#6G]
[16A]	[3/4" C, 4#10, 1#10G]	[P40]	[1 1/2" C, 3#1, 3#14, 1#6G]
[P17]	[3/4" C, 3#10, 2#14, 1#10G]	[P41]	[1 1/2" C, 3#2/0, 1#4G]
[P18]	[3/4" C, 3#10, 3#14, 1#10G]	[P42]	[2" C, 3#3/0, 1#4G]
[P19]	[3/4" C, 3#10, 4#14, 1#10G]	[P43]	[2" C, 3#4/0, 1#3G]
[P20]	[3/4" C, 3#10, 5#14, 1#10G]	[P43A]	[2 1/2" C, 4#4/0, 1#4G]
[P21]	[1" C, 2#8, 1#10G]	[P44]	[2" C, 3#3/0, 1#3G]
[P22]	[1" C, 3#8, 1#10G]	[P45]	[2 1/2" C, 4#3/0, 1#3G]
[P22A]	[1" C, 4#8, 1#8G]	[P46]	[1 1/2" C, 3#1/0, 1#6G]
[P23]	[1" C, 3#8, 2#14, 1#10G]	[P47]	[2 1/2" C, 4-250 KCMIL, 1#4G]
[P24]	[1" C, 3#8, 3#14, 1#10G]	[P48]	[3" C, 3-500 KCMIL, 1#3G]
[P25]	[1" C, 3#8, 4#14, 1#10G]		
ANALOG CIRCUIT CALLOUTS		CONTROL CIRCUIT CALLOUTS	
[A1]	[3/4" C, 1 TYPE 3]	[C1]	[3/4" C, MSC]
[A2]	[1" C, 2 TYPE 3]	[C2]	[3/4" C, 2#14, 1#14G]
[A3]	[1" C, 3 TYPE 3]	[C3]	[3/4" C, 3#14, 1#14G]
[A4]	[1" C, 4 TYPE 3]	[C4]	[3/4" C, 4#14, 1#14G]
[A5]	[1 1/4" C, 5 TYPE 3]	[C5]	[3/4" C, 5#14, 1#14G]
[A6]	[1 1/4" C, 6 TYPE 3]	[C6]	[3/4" C, 6#14, 1#14G]
[A7]	[1 1/2" C, 7 TYPE 3]	[C7]	[3/4" C, 7#14, 1#14G]
[A8]	[1 1/2" C, 8 TYPE 3]	[C8]	[3/4" C, 8#14, 1#14G]
[A9]	[1 1/2" C, 9 TYPE 3]	[C9]	[3/4" C, 9#14, 1#14G]
[A10]	[2" C, 10 TYPE 3]	[C10]	[3/4" C, 10#14, 1#14G]
[A11]	[2" C, 11 TYPE 3]	[C11]	[3/4" C, 11#14, 1#14G]
[A12]	[2" C, 12 TYPE 3]	[C12]	[3/4" C, 12#14, 1#14G]
[A13]	[2" C, 13 TYPE 3]	[C13]	[3/4" C, 13#14, 1#14G]
[A14]	[2" C, 14 TYPE 3]	[C14]	[3/4" C, 14#14, 1#14G]
[A15]	[3/4" C, 1 TYPE 4]	[C15]	[3/4" C, 15#14, 1#14G]
[A16]	[3/4" C, 2 TYPE 4]	[C16]	[3/4" C, 16#14, 1#14G]
[A17]	[1" C, 3 TYPE 4]	[C17]	[3/4" C, 17#14, 1#14G]
[A18]	[1 1/4" C, 4 TYPE 4]	[C18]	[3/4" C, 18#14, 1#14G]
[A19]	[1 1/4" C, 5 TYPE 4]	[C19]	[3/4" C, 19#14, 1#14G]
[A20]	[1 1/4" C, 6 TYPE 4]	[C20]	[1" C, 20#14, 1#14G]
[A21]	[1 1/2" C, 7 TYPE 4]	[C21]	[1" C, 21#14, 1#14G]
[A22]	[1 1/2" C, 8 TYPE 4]	[C22]	[1" C, 22#14, 1#14G]
[A23]	[2" C, 9 TYPE 4]	[C23]	[1" C, 23#14, 1#14G]
[A24]	[3/4" C, 1-4 pr. TYPE 5]	[C24]	[1" C, 24#14, 1#14G]
[A25]	[1" C, 2-4 pr. TYPE 5]	[C25]	[1" C, 25#14, 1#14G]
[A26]	[3/4" C, 1 - TYPE 32]		
[A27]	[3/4" C, 1 - TYPE 33]		
[A28]	[3/4" C, 1 - TYPE 34]		
[A29]	[3/4" C, 1 - TYPE 30]		
MULTICONDUCTOR CONTROL CABLE CIRCUIT CALLOUTS			
[CC5]	[3/4" C, 1-5C TYPE 1]		
[CC7]	[3/4" C, 1-7C TYPE 1]		
[CC9]	[1" C, 1-9C TYPE 1]		
[CC12]	[1" C, 1-12C TYPE 1]		
[CC19]	[1 1/2" C, 1-19C TYPE 1]		
[CC25]	[1 1/2" C, 1-25C TYPE 1]		
[CC37]	[2" C, 1-37C TYPE 1]		
[CCC1]	[1-7C #12 TYPE 1]		
[CX]	[2" C, COAX CABLE]		
[MSC]	[MANUFACTURER SUPPLIED CABLE]		

LIGHTING FIXTURE SCHEDULE							
SYMBOL	MARK	VOLTS	LAMP TYPE	FIXTURE QTY	WATTS	MOUNT	DESCRIPTION
	A	120	LED	MFG STD	90	POLE	LED POLE MOUNTED AREA LUMINAIRE LUMINAIRE, TURTLE FRIENDLY, DIE-CAST ALUMINUM HOUSING, AMBER LED, LABELED FOR UL COMPLIANCE AND IP66. NOMINAL 3448 LUMENS MAX OUTPUT, 35.4 WATT INPUT, 120V, 90-MINUTE, EMERGENCY BATTERY BACKUP, EXTERNAL TEST SWITCH, HUBBELL LIGHTING LAREDO SERIES, MODEL: LMC-30LU-SK-3-035-4-BOC, OR APPROVED EQUAL. MOUNTED AT 12' AFF. POLE MOUNTING RATED FOR 200 MPH.
	B	120	LED	MFG STD	35	POLE	LED POLE MOUNTED AREA LUMINAIRE LUMINAIRE, TURTLE FRIENDLY, DIE-CAST ALUMINUM HOUSING, LED, LABELED FOR UL COMPLIANCE AND IP66. NOMINAL 3448 LUMENS MAX OUTPUT, 35.4 WATT INPUT, 120V, 90-MINUTE, EMERGENCY BATTERY BACKUP, EXTERNAL TEST SWITCH, HUBBELL LIGHTING LAREDO SERIES, MODEL: LMC-30LU-SK-3-035-4-BOC, OR APPROVED EQUAL. MOUNTED AT 12' AFF. POLE MOUNTING RATED FOR 200 MPH.

ch2m

GENERAL ELECTRICAL LEGEND SHEET 1

3011 S.W. WILLUSTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 AAC001982	DAVID C. NICHOLSON PE 60201	PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT CITY OF KEY WEST KEY WEST, FLORIDA	REVISION NO. 2 DATE 06/29/18 ADDENDUM No. 4	DR N ADAMS	APVD D NICHOLSON
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1" = X'

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	JULY 2018
PROJ	683450
DWG	001-G-006
SHEET	05 of 30

ELECTRICAL GENERAL NOTES

- 1 CONDUIT, WIRE AND EQUIPMENT SIZES AND LOCATIONS SHOWN ARE FOR BID BASIS ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL WORK WITH APPROVED SHOP DRAWINGS, WITH THE REQUIREMENTS OF EQUIPMENT PROVIDED, WITH EQUIPMENT FURNISHED BY OWNER FOR INSTALLATION BY CONTRACTOR AND WITH REQUIREMENTS OF OTHER DIVISIONS OF THE CONTRACT AS NECESSARY TO PROVIDE COMPLETE AND WORKING SYSTEMS COMPLYING WITH THE CONTRACT DOCUMENTS. ALL PROPOSED DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE SUBMITTED AND APPROVED BEFORE EXECUTION OF THE AFFECTED WORK.
- 2 THE TERMS RACEWAY AND CONDUIT ARE USED IN THESE DOCUMENTS TO DENOTE NOT ONLY THE RACEWAY OR CONDUIT ITSELF BUT ALSO ALL JUNCTION BOXES, PULL BOXES, CONDUITS, FITTINGS, CLAMPS, SUPPORTS AND ALL OTHER ITEMS NECESSARY FOR A COMPLETE AND WORKING SYSTEM COMPLYING WITH THE CONTRACT DOCUMENTS.
- 3 NOTES INDICATED AS "REF", "REFERENCE" OR "REFER TO" ARE PROVIDED TO ASSIST IN LOCATING RELATED CONTRACTUAL REQUIREMENTS BUT ARE NOT CONTRACTUAL INSTRUCTIONS THEMSELVES. MISSING, INCORRECT OR INCOMPLETE REFERENCES SHALL HAVE NO EFFECT ON THE REQUIREMENTS OF THE CONTRACT.
- 4 AT ITEMS MARKED MSC (MANUFACTURER SUPPLIED OR SPECIFIED CABLE) CONTRACTOR SHALL DETERMINE REQUIREMENTS FOR, AND PROVIDE, CONDUIT AND CABLE AS REQUIRED BY MANUFACTURER AND IN COMPLIANCE WITH CONTRACT DOCUMENTS.
- 5 EXCEPT AS NOTED BELOW, ALL WIRE AND CABLE, INCLUDING FIBER OPTIC, SHALL BE INSTALLED IN RACEWAY. EXCEPTIONS ARE EQUIPMENT CABLES PROVIDED BY EQUIPMENT MANUFACTURERS AND UL LISTED FOR INSTALLATION OUTSIDE OF CONDUIT, INCLUDING FLOAT SWITCH AND SUBMERSIBLE PUMP CABLES.
- 6 SPARE RUNS OF CONDUCTORS SHALL BE INSULATED / TERMINATED AND LABELED AT BOTH ENDS. SPARE RUNS OF FIBER OPTIC STRANDS SHALL BE LABELED AND TERMINATED AT BOTH ENDS. ALL CONDUCTORS AND FIBERS SHALL BE TESTED AFTER INSTALLATION AND TEST REPORTS SHALL BE SUBMITTED. REPLACE ALL DEFECTIVE MATERIAL; DO NOT SUBMIT TEST REPORTS SHOWING DEFECTS.
- 7 LOCATIONS AND ELEVATIONS OF ELECTRICAL CONNECTIONS, MOTORS, PANEL BOARDS, SWITCH GEAR, TRANSFORMERS, CONTROL CABINETS AND OTHER ITEMS SHOWN ON DOCUMENTS ARE APPROXIMATE ONLY UNLESS DIMENSIONED. COORDINATE EXACT LOCATIONS AND ELEVATIONS WITH REQUIREMENTS OF OTHER DIVISIONS OF THESE DOCUMENTS. IN AREAS WHERE SPACE AVAILABLE IS LIMITED, PREPARE DIMENSIONED DRAWINGS SHOWING EXACT PROPOSED LOCATIONS OF EQUIPMENT AND VERIFYING THAT EQUIPMENT PROPOSED FOR USE CAN BE INSTALLED AS SHOWN ON PLANS IN COMPLIANCE WITH NEC AND MANUFACTURER'S REQUIREMENTS. BASE THESE DRAWINGS ON DIMENSIONS OF EQUIPMENT TO BE INSTALLED UNDER THIS CONTRACT WHICH ARE KNOWN TO CONTRACTOR TO BE CORRECT AND NOT SUBJECT TO CHANGE. NOTE DEVIATIONS FROM BID BASIS DRAWINGS AND DISCUSS WITH ENGINEER. SUBMIT THESE DRAWINGS AND RECEIVE APPROVAL BEFORE EXECUTING THE WORK. DO NOT SUBMIT SHOP DRAWINGS FOR EQUIPMENT WHICH IS NOT ACCOMPANIED BY DRAWINGS VERIFYING COMPLIANCE WITH CONTRACT REQUIREMENTS.
- 8 CONTROL (LADDER LOGIC) DIAGRAMS DEPICT FUNCTIONS REQUIRED, MAJOR COMPONENTS AND THEIR INTERCONNECTIONS, BUT ARE NOT INTENDED TO BE COMPLETE WIRING DIAGRAMS. CONTRACTOR SHALL COORDINATE WITH MANUFACTURERS OF EQUIPMENT PROVIDED TO ENSURE THAT ALL MATERIALS AND LABOR ARE PROVIDED WHICH ARE NECESSARY TO SECURE COMPLETE AND WORKING SYSTEMS WITH ALL FUNCTIONS AND COMPONENTS SHOWN ON THE CONTRACT DOCUMENTS, INCLUDING THIS DIVISION CONTRACT AND INSTRUMENTATION AND CONTROL DOCUMENTS.

- 9 PROVIDE DISCONNECT SWITCHES WHERE SHOWN, WITH THE SAME NUMBER OF POLES AS THEIR SOURCE CIRCUIT BREAKERS, AND WITH VOLTAGE AND CURRENT RATINGS EQUAL TO OR GREATER THAN THAT OF THE SOURCE CIRCUIT BREAKERS.
- 10 THE REQUIREMENTS FOR DISCONNECT SWITCHES SHOWN MAY BE MET BY DISCONNECT SWITCHES PROVIDED BY EQUIPMENT MANUFACTURERS, WHERE ALL REQUIREMENTS OF THE NEC AND THESE DOCUMENTS ARE MET BY THOSE SWITCHES.
- 11 PROVIDE GROUND ROD INSTEAD OF GROUND RING AT ALL POLE MOUNTED LIGHTING FIXTURES. PROVIDE GROUNDING SYSTEMS DESCRIBED ELSEWHERE IN DOCUMENTS FOR MANHOLE AND HANDHOLE INSTEAD OF GROUND RINGS. THE TERM CAD WELD IS USED TO DENOTE EXOTHERMIC WELDS.
- 12 RAILING, LADDER, STEPS, GRATINGS, FRAMING, ANTENNAS, ENCLOSURES OF ELECTRICAL PROCESS OR CONTROL EQUIPMENT OPERATING ABOVE 150 VOLTS TO GROUND OR OTHER CONDUCTIVE ITEMS INSTALLED, OUTDOORS, WHICH ARE NORMALLY NOT ENERGIZED SHALL BE BONDED TOGETHER TO THE OUTDOOR FACILITY GROUND RING WITH #2/0 MINIMUM TINNED BARE COPPER CONDUCTOR, USING UL LISTED CLAMPS ABOVE GRADE AND CAD WELDS BELOW GRADE. ITEMS SUCH AS STAIRS OR RAILINGS WHICH ARE INSTALLED AS MULTIPLE SECTIONS SHALL BE BONDED TOGETHER WITH TINNED #2/0 COPPER CONDUCTOR OR EQUIVALENT TINNED BRAIDED COPPER STRAP. ALL ITEMS SHALL HAVE TWO GROUND CONNECTIONS WITH DIFFERENT TERMINATION POINTS TO AVOID ISOLATION FROM A GROUND SYSTEM OF ANY ITEM DUE TO DISCONNECTION OF A SINGLE GROUND CONNECTION. CONDUCTIVE ENCLOSURES AND OTHER EXTERIOR METAL COMPONENTS WHICH ARE NOT NORMALLY ENERGIZED, OF INSTRUMENTS AND CONTROLS OPERATING AT OR BELOW 150 VOLTS TO GROUND, SHALL BE CONNECTED TO GROUNDING SYSTEM WITH TWO #6 AWG OR LARGER TINNED COPPER OR GREEN INSULATED GROUNDING CONDUCTORS.
- 13 PROVIDE SURGE SUPPRESSORS ON BOTH ENDS OF ALL LOW VOLTAGE (600 VOLTS OR LESS) BRANCH CIRCUITS, FEEDERS, INSTRUMENTATION AND CONTROL CIRCUITS WHICH ARE NOT ENTIRELY WITHIN A BUILDING PROTECTED BY A LIGHTNING PROTECTION SYSTEM OR ENTIRELY UNDER ITS SLAB.

11 PROVIDE GROUND ROD INSTEAD OF GROUND RING AT ALL POLE MOUNTED LIGHTING FIXTURES. PROVIDE GROUNDING SYSTEMS DESCRIBED ELSEWHERE IN DOCUMENTS FOR MANHOLE AND HANDHOLE INSTEAD OF GROUND RINGS. THE TERM CAD WELD IS USED TO DENOTE EXOTHERMIC WELDS.



- 14 PROVIDE #10 WIRE INSTEAD OF #12 WIRE FOR ALL 20 AMPERE 120 VOLT OR 208 VOLT CIRCUITS EXCEEDING 150 FEET CONDUIT LENGTH.
- 15 WHERE THE NUMBER OR SIZE OF CONDUCTORS SHOWN TO BE CONNECTED ARE IN EXCESS OF THE CAPACITY OF THE STANDARD TERMINALS OF THE CONNECTED EQUIPMENT, PROVIDE ADDITIONAL TERMINALS, ENCLOSURES, JUNCTION BOXES, PULL SECTIONS, WIRES, CONDUITS AND ALL OTHER MATERIALS AND LABOR AS NECESSARY TO MAKE THE CONNECTIONS SHOWN IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 16 ALL MATERIALS AND EQUIPMENT PROPOSED FOR USE SHALL BE NEW, UNUSED, FREE OF DAMAGE OR DETERIORATION, FULLY RATED AS SPECIFIED AND SCHEDULED IN THE CONTRACT DOCUMENTS AT THE PROJECT ALTITUDE AND MAXIMUM AMBIENT TEMPERATURE.
- 17 PROVIDE ARC FLASH WARNING AND OTHER SIGNS ON ALL PANELBOARDS, MOTOR CONTROL CENTERS, MOTOR CONTROLLERS, CONTROL PANELS, SWITCHBOARDS AND OTHER EQUIPMENT REQUIRED BY NEC INCLUDING BUT NOT LIMITED TO PARAGRAPH 110.16 FLASH PROTECTION.
- 18 COORDINATE SIZE AND INSTALLATION OF ALL EQUIPMENT WITH EXISTING CONDITIONS AND WORK IN OTHER DIVISIONS OF CONTRACT TO ENSURE COMPLIANCE WITH THE NEC, INCLUDING BUT NOT LIMITED TO PARAGRAPH 110.26 SPACES ABOUT ELECTRICAL EQUIPMENT.
- 19 STANDARD DETAILS INCLUDED IN THESE DOCUMENTS SHALL BE USED WHERE APPLICABLE WHETHER SPECIFICALLY CALLED OUT ON THE PLANS OR NOT. PRACTICES CUSTOMARY TO THE TRADE MAY BE USED ONLY WHERE NO APPLICABLE STANDARD DETAIL CAN BE FOUND IN THESE DOCUMENTS AND WHERE THE CUSTOMARY PRACTICE WILL RESULT IN A COMPLETE AND WORKING SYSTEM IN COMPLIANCE WITH THESE DOCUMENTS.
- 20 ALL TERMINATIONS OF RIGID CONDUIT IN WALLS OF ENCLOSURES WITHOUT CAST-IN-PLACE THREADED CONDUIT BOSSES, AND WHICH ARE LOCATED OUTDOORS OR IN WET OR DAMP LOCATIONS, SHALL BE MADE USING STAINLESS STEEL MYERS HUBS.
- 21 REFER TO DOCUMENTS OF OTHER DIVISIONS OF CONTRACT, INCLUDING BUT NOT LIMITED TO PROCESS MECHANICAL AND HVAC, FOR LOCATIONS OF PROCESS, INSTRUMENTATION, CONTROL, HVAC AND OTHER EQUIPMENT REQUIRING ELECTRICAL, FIBER OPTIC OR RACEWAY-ONLY CONNECTIONS TO BE PROVIDED UNDER THIS DIVISION OF CONTRACT. ALL EQUIPMENT LOCATIONS SHOWN ON DRAWINGS IN THIS DIVISION ARE APPROXIMATE ONLY UNLESS DIMENSIONED.
- 22 PROVIDE ADDITIONAL RACEWAY, WIRING AND CONNECTIONS AS NECESSARY FOR MOTOR TEMPERATURE PROTECTIVE DEVICES AND OTHER MOTOR AUXILIARIES WHERE RECOMMENDED BY EQUIPMENT MANUFACTURERS, SHOWN IN CONTROL DIAGRAMS OR ON PLANS OR REQUIRED IN SPECIFICATIONS.
- 23 ALL SHEET METAL JUNCTION BOXES, TERMINAL JUNCTION BOXES, CONTROL PANELS AND OTHER SHEET METAL ELECTRICAL ENCLOSURES SHALL BE NEMA 4-X STAINLESS STEEL WHERE SHOWN WITH FAST OPERATING CLAMP ASSEMBLIES. PROVIDE HOFFMAN SUFFIX TYPE SSLP WITH AFC412SS CLAMPS OR APPROVED EQUALS. PROVIDE TERMINAL JUNCTION BOXES AND CONTROL PANELS WITH REMOVABLE INTERIOR STEEL PANELS FACTORY PAINTED WHITE.

- 24 ALL FABRICATED ASSEMBLIES SUPPORTING ELECTRICAL EQUIPMENT PROVIDED UNDER THIS DIVISION OF CONTRACT SHALL BE UL LISTED INDIVIDUALLY, UL LISTED AS PART OF AN ASSEMBLY OR SHALL BE FABRICATED TO A DESIGN PREPARED BY A STRUCTURAL ENGINEER LICENSED TO PRACTICE IN THE STATE OR OTHERWISE PERMITTED TO PRACTICE ENGINEERING IN THE STATE. WHERE DETAILS IN THIS DIVISION OF THE CONTRACT DOCUMENTS CONTAIN SPECIFIC DIMENSIONS, SIZES, WELD INSTRUCTIONS OR SIMILAR INFORMATION RELATED TO THE STRENGTH OF THE ASSEMBLY, THESE SHALL BE INTERPRETED AS BID-BASIS REQUIREMENTS ONLY AND SHALL BE SUPERCEDED BY THE UL OR ENGINEERING DESIGN REQUIREMENTS ABOVE.
- 25 AT ALL LOCATIONS WHERE CONTRACTOR IS DIRECTED TO CUT OFF CONDUITS THROUGH CONCRETE SLAB AND GROUT CLOSED, CONTRACTOR SHALL FIRST DRILL 1-1/2 INCHES DEEP INTO CONCRETE AND USE NON-SHRINK GROUT TO BACKFILL HOLE FLUSH AND SMOOTH WITH EXISTING CONCRETE SURFACE.
- 26 COORDINATE EARTH WORK AND INSTALLATION OF ELECTRICAL ITEMS WITH INTERFERENCES SHOWN ON DOCUMENTS OF ALL DIVISIONS OF CONTRACT, INCLUDING CIVIL AND YARD PIPING. REPORT ALL DAMAGE AT ONCE TO OWNER AND ENGINEER AND REPAIR AS DIRECTED AT NO CHANGE IN CONTRACT.
- 27.
- 28 ALL CONDUCTORS INSTALLED OUTDOORS OR UNDERGROUND, INCLUDING IN DUCT BANK, CONDUIT OR DIRECT BURIED OR IN HANDHOLES OR MANHOLES SHALL BE TRAY RATED CABLE TYPE TC UL LISTED FOR CONTINUOUS SUBMERSION. CABLE SHALL NOT BE SPLICED OR JOINED AND SHALL BE CONTINUOUS BETWEEN SOURCE AND LOAD TERMINATIONS. CONTRACTOR SHALL PROVIDE LARGER CONDUIT IF NECESSARY TO MEET NEC FILL LIMITS FOR CABLE.
- 29 PROVIDE FOUR INCH THICK STEEL-REINFORCED CONCRETE HOUSEKEEPING PAD UNDER ALL FLOOR MOUNTED EQUIPMENT PROVIDED OR INSTALLED UNDER THIS CONTRACT. PAD SHALL HAVE SMOOTH FINISH AND 3/4 INCH BEVEL ON ALL EDGES. COMPLY WITH STRUCTURAL AND CIVIL DIVISIONS OF CONTRACT FOR REINFORCEMENT, CONCRETE AND OTHER ITEMS COVERED BY THESE DIVISIONS.
- 30.
- 31 WHERE UL LISTED AND LABELED MATERIAL OR EQUIPMENT IS REQUIRED BUT IS NOT AVAILABLE FROM A MANUFACTURER NAMED IN THE APPLICABLE SPECIFICATION SECTION OR ON THE DRAWINGS, LISTING AND LABELING BY CSA, ETL OR FM WILL BE ACCEPTABLE UNDER THIS CONTRACT IF ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION (AHJ). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACCEPTANCE BY THE AHJ; MATERIAL AND EQUIPMENT WHICH IS UNACCEPTABLE OR OTHERWISE NOT IN COMPLIANCE WITH THE CONTRACT SHALL BE REPLACED AT NO CHANGE IN CONTRACT.

27.

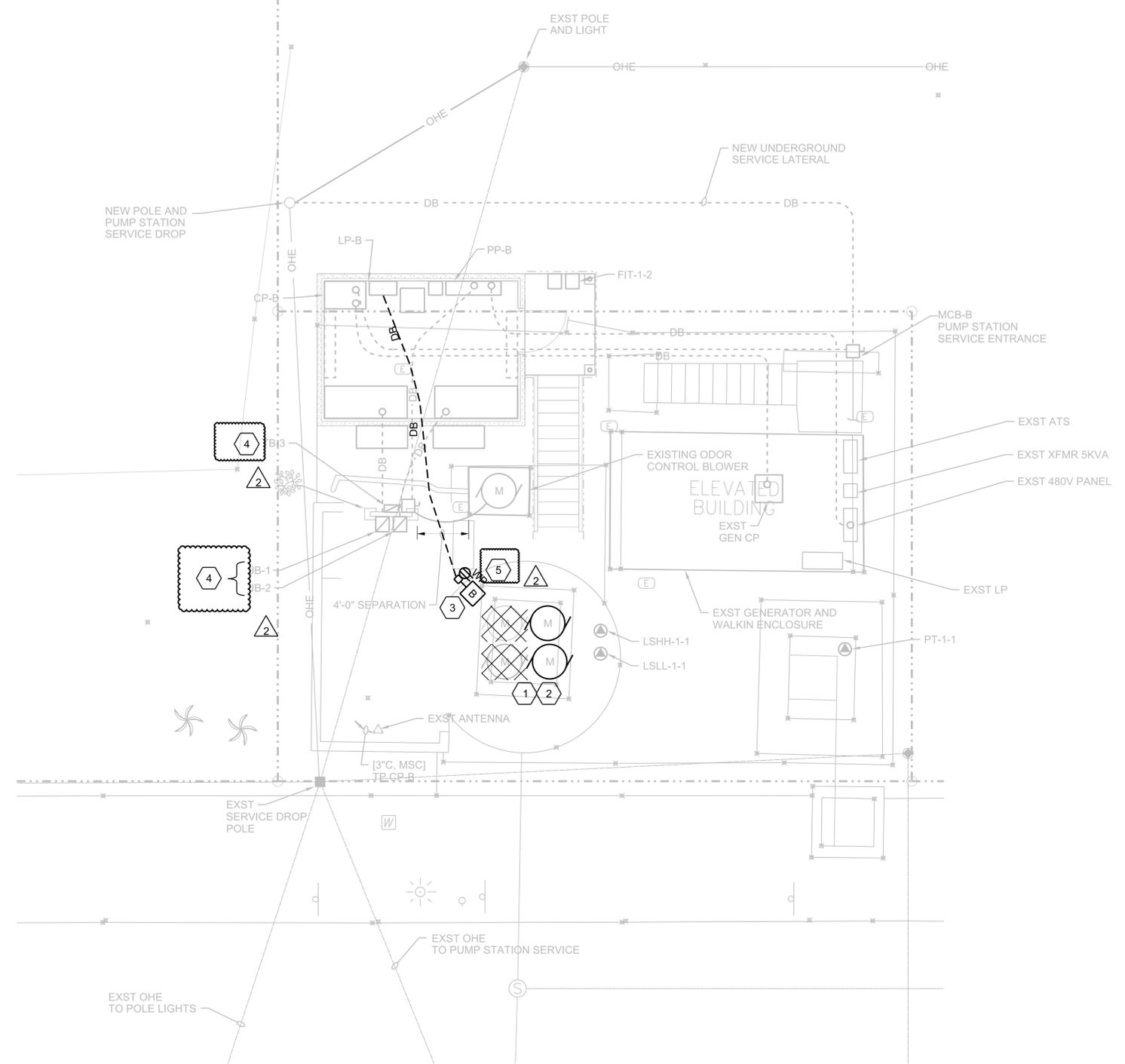


30.



A
B
C
D

	GENERAL ELECTRICAL LEGEND SHEET 2	1" = X' VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.	DATE: JULY 2018 PROJ: 683450 DWG: 001-G-007 SHEET: 06 of 30
3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 AA0001982		DAVID C. NICHOLSON PE 60201 PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT CITY OF KEY WEST KEY WEST, FLORIDA	
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SITE PLAN PUMP STATION B
NTS

GENERAL NOTES

- LEGEND:**
 [Symbol] TO BE REMOVED
- A. DO NOT SCALE ELECTRICAL DRAWING. REFER TO THE CIVIL, ARCHITECTURAL/MECHANICAL, STRUCTURAL DRAWINGS AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACTLY LOCATION OF ALL EQUIPMENT.
 - B. ALL WORK SHALL COMPLY WITH THE NEC AND LOCAL CODES.
 - C. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES, PIPING, CONDUITS, ETC. AND REROUTE NEW ELECTRICAL CONDUITS AS REQUIRED.
 - D. CONDUCTORS SHALL NOT BE SPLICED EXCEPT AS NOTED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS.

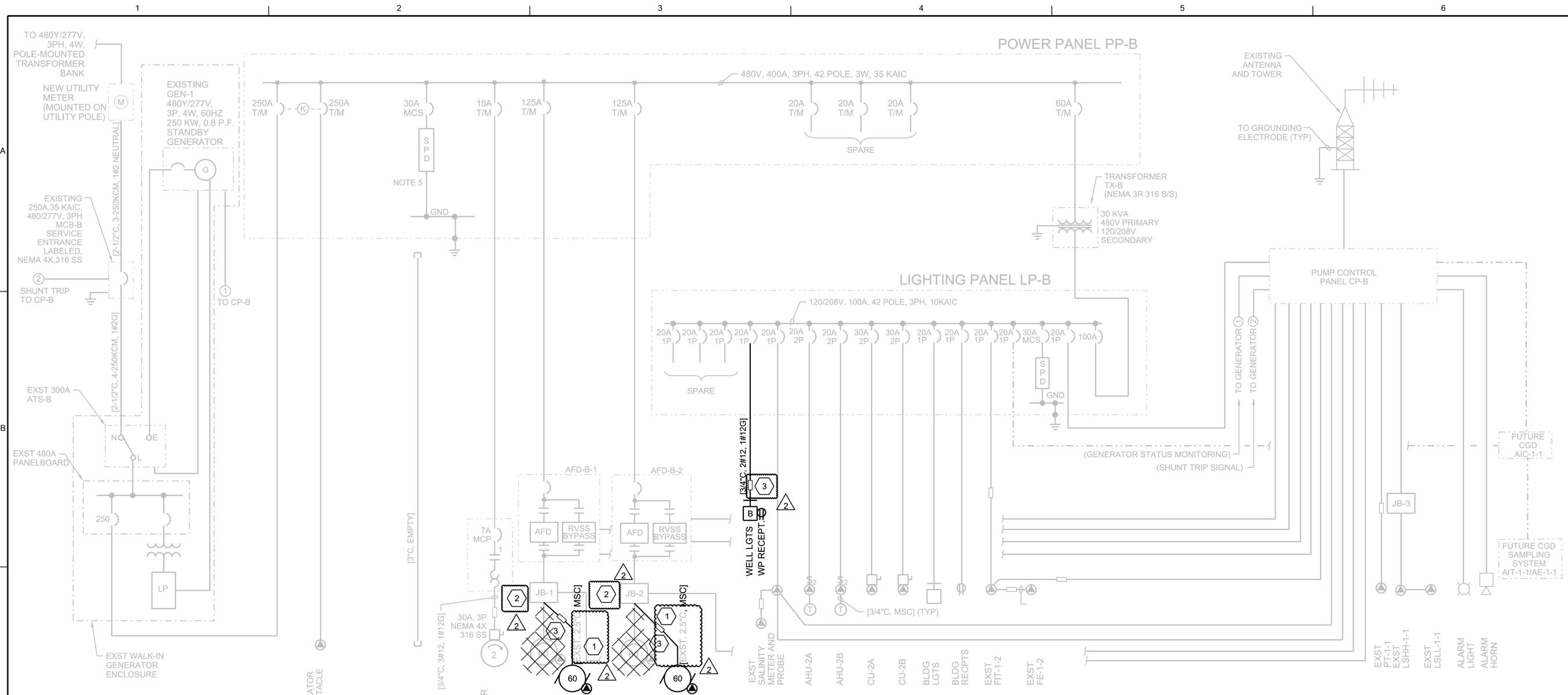
- HAZARDOUS LOCATION NOTES:**
1. PER NFPA 850, TABLE 4.2, ROW 15, LINE a, THE WET WELL IS CLASSIFIED AS A HAZARDOUS LOCATION AS FOLLOWS:
 - a. THE AREA INSIDE THE WETWELL AND WITHIN A 3'-0" RADIUS AROUND VENT OPENING AS CONSIDERED CLASS I, DIV 1, GROUP C AND D LOCATIONS.
 - b. THE AREA WITHIN A 5'-0" RADIUS AROUND VENT OPENING AND AN ENVELOPE 18" ABOVE HATCHES AND EXTENDING 3'-0" FROM THE EDGE OF THE HATCHES ARE CONSIDERED CLASS I, DIV 2, GROUP C AND D LOCATIONS.
 2. PER NFPA 820, TABLE 4.2, ROW 31, LINE a AND ROW 36, LINE a, THE VALVE AND METER VAULTS ARE CLASSIFIED AS HAZARDOUS LOCATIONS AS FOLLOWS:
 - a. THE AREA INSIDE THE VAULT IS CONSIDERED CLASS I, DIV 2, GROUP C AND D LOCATIONS.
 3. PER NFPA 820, TABLE 4.2, ROW 20, LINE b, THE ODOR-CONTROL SYSTEM IS CLASSIFIED AS A HAZARDOUS LOCATION AS FOLLOWS:
 - a. THE AREA WITHIN 3'-0" ENVELOPE AROUND THE ODOR-CONTROL SYSTEM IS CONSIDERED A CLASS I, DIV 2, GROUP C AND D LOCATION.
 4. PROVIDE SUITABLE WIRING METHODS AND MATERIALS FOR THE HAZARDOUS LOCATIONS PER NFPA 70 (NEC).

SHEET KEYNOTES

1. REMOVE EXISTING SUBMERSIBLE PUMPS AND INSTALL NEW SUBMERSIBLE PUMPS. RECONNECT NEW PUMPS' POWER AND CONTROL TO TJB-1 AND TJB-2.
2. SAVE EXISTING CONDUIT TO USE WITH NEW SUBMERSIBLE PUMPS.
3. INSTALL LUMINARE AREA LIGHT 12' AFF. USE [3/4" 2#12, 1#12G] CONDUCTOR.
4. REMOVE EXISTING CLASS 1, DIV 2, CONDUIT SEALS ON CONDUITS BETWEEN TJB AND WET WELL, AND REPLACE WITH NEW CLASS 1, DIV 1 CONDUIT SEALS.
5. RECEPTACLE TO BE MOUNTED A MINIMUM OF 48" AFF.

3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 AAC001982 DAVID C. NICHOLSON PE 60201		N ADAMS A PASTRANA D NICHOLSON
PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT CITY OF KEY WEST KEY WEST, FLORIDA	DR REVISION CHK APVD	D NICHOLSON
ch2m ELECTRICAL PUMP STATION B SITE PLAN		ADDENDUM No. 4 DATE 06/29/18 NO. 2 DSGN
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"		DATE JULY 2018 PROJ 683450 DWG 010-E-201 SHEET 09 of 30

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- LEGEND:**
- BC = BYPASS CONTACTOR
 - CGD = COMBUSTIBLE GAS DETECTOR
 - CPT = CONTROL POWER TRANSFORMER
 - E = STANDBY SOURCE
 - GND = GROUND BUS
 - L = LOAD SIDE OF AUTOMATIC TRANSFER SWITCH
 - LE = LEVEL TRANSDUCER (ULTRASONIC)
 - LSH = LEVEL SWITCH HIGH
 - LSL = LEVEL SWITCH LOW
 - N = NORMAL SOURCE
 - NEU = NEUTRAL BUS
 - MCB = MAIN CIRCUIT BREAKER
 - MCP = MAGNETIC-ONLY CIRCUIT BREAKER
 - MCS = MOLDED CASE SWITCH
 - MSC = MANUFACTURER SUPPLIED CABLE
 - SPD = SURGE PROTECTIVE DEVICE
 - PMR = POWER MONITORING RELAY
 - T/M = THERMAL MAGNETIC CIRCUIT BREAKER
 - (K) = MECHANICAL KEY INTERLOCK

PP-B CONNECTED LOAD SUMMARY

DESCRIPTION	KVA
PUMP NO.1	56.5
PUMP NO.2	56.5
BLOWER	2
MPC	5
LIGHTING PANEL, LP-B	10
SUBTOTAL	147
25% OF LARGEST MOTOR	14.13
SERVICE RATING	161.13

*ALL LOADS ASSUMED NON-CONTINUOUS

RISER DIAGRAM
PUMP STATION B

SHEET KEYNOTES

LEGEND:
 TO BE REMOVED

- ALL RACEWAYS TO BE PVC-COATED RGS, EXCEPT WHERE REQUIRED FOR VIBRATION MITIGATION. REFER TO SPECIFICATION SECTION 26 05 01, ELECTRICAL. MAINTAIN 12" CLEARANCE FROM CONFLICTING UNDERGROUND UTILITIES.
- CONNECT PUMPS TO EXISTING NEMA 4X 316 STAINLESS STEEL JUNCTION BOXES, REUSE NSI POLARIS BLUE SERIES SUBMERSIBLE POWER DISTRIBUTION BLOCKS IF THEY ARE IN GOOD CONDITION. OTHERWISE, REPLACE WITH NEW NSI POLARIS POWER DISTRIBUTION BLOCKS.
- CROUSE-HINDS TYPE EYS SEAL FITTING CLASS 1, DIV 1.

ch2m
ELECTRICAL
**PUMP STATION B
ONE LINE DIAGRAM**

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 AAC001982

DAVID C. NICHOLSON PE 60201

PUMP STATIONS H & B REHABILITATION
AND PUMP STATION GENERATOR REPLACEMENT
CITY OF KEY WEST
KEY WEST, FLORIDA

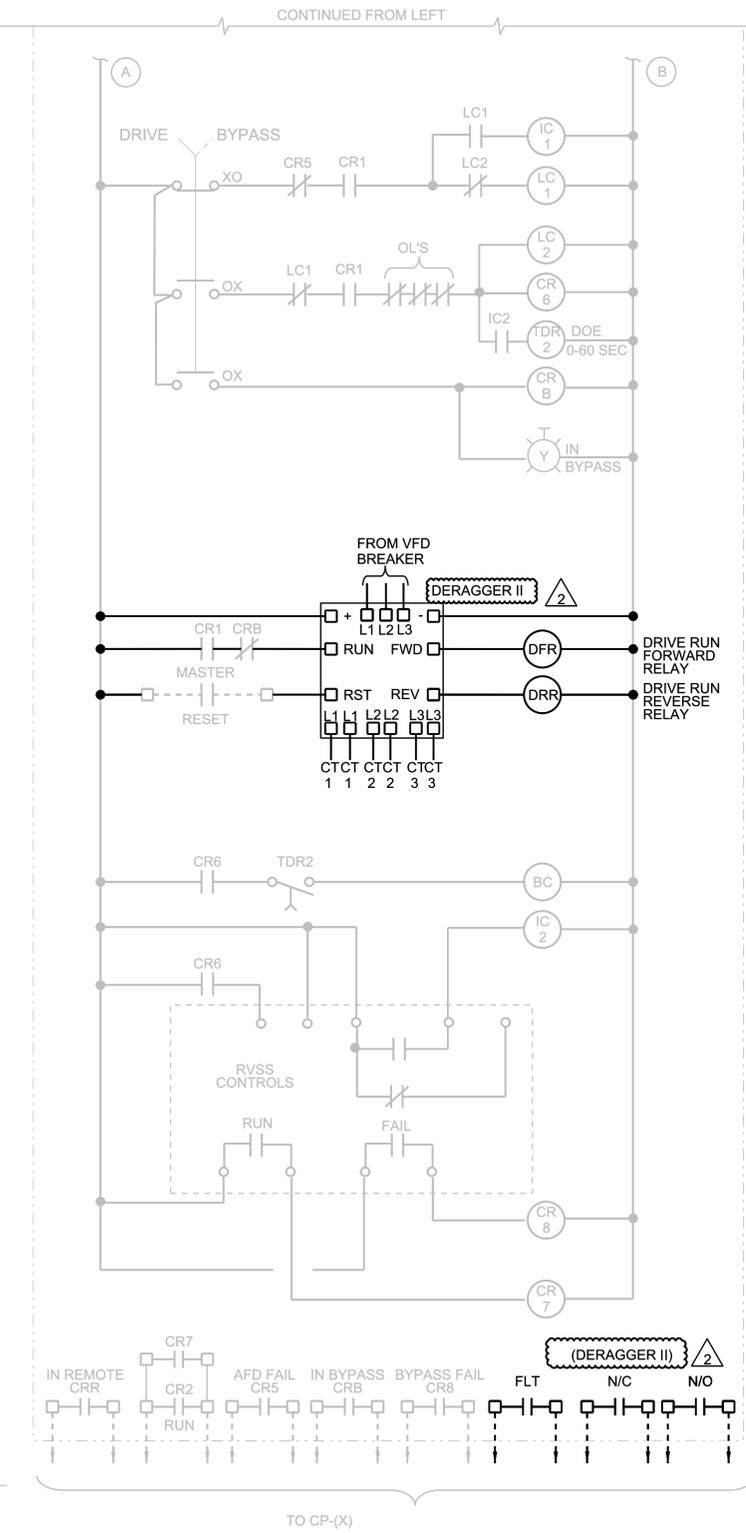
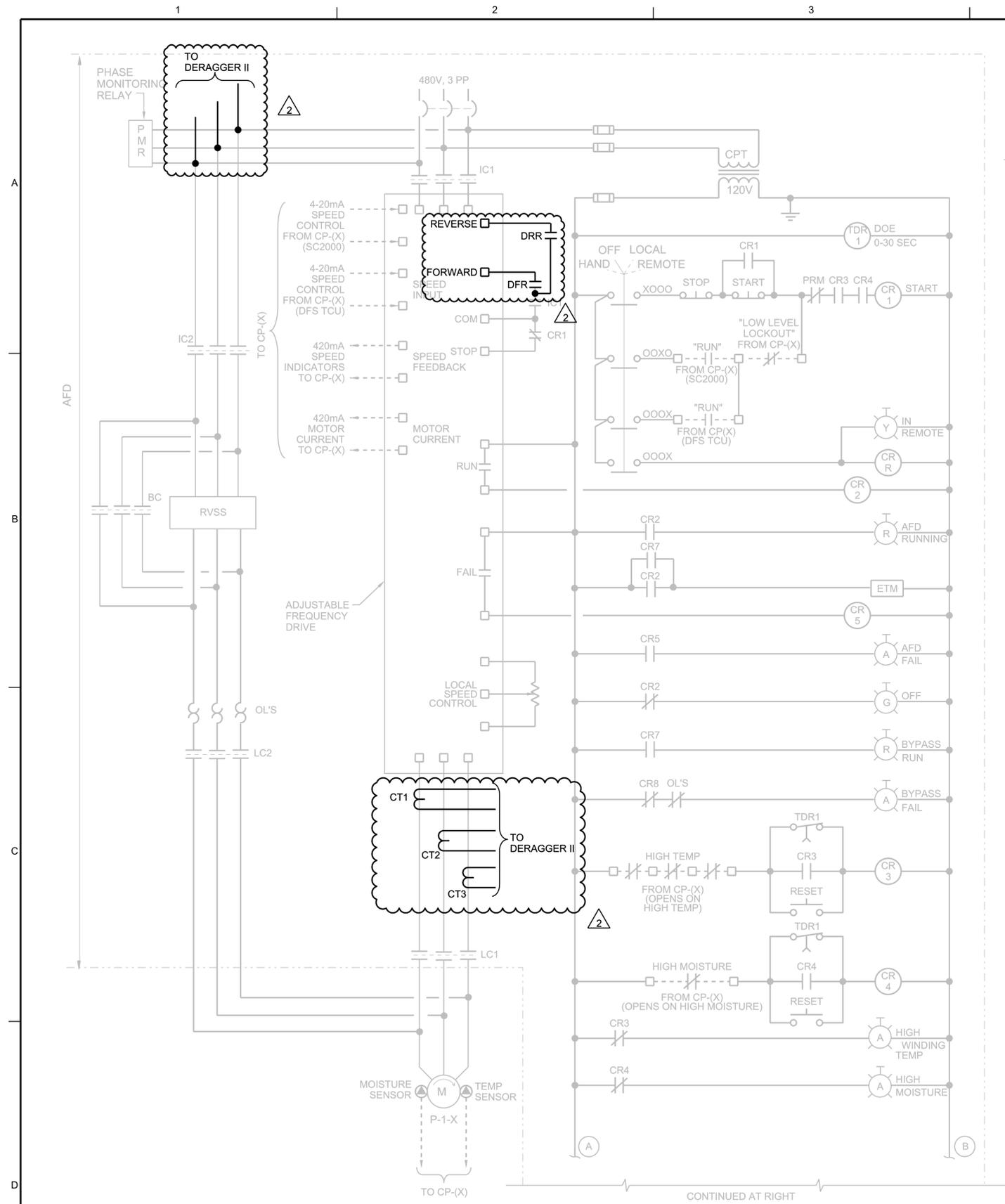
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE JULY 2018
PROJ 683450
DWG 010-E-601
SHEET 10 of 30

REVISION
NO. DATE DSGN DR CHK APVD
2 06/29/18 ADDENDUM No. 4 N ADAMS A PASTRANA D NICHOLSON
BY APVD EC DN

ADDENDUM

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GENERAL NOTES:
 CONTRACTOR TO PROVIDE DERAGGER II WITH THE CONTROL FUNCTIONS AS SHOWN.

PUMP AFD-(X)-(Y)

(X)	PUMP STATION	TYPICAL FOR:
B	PUMP STATION B	AFD-B-1, AFD-B-2

3011 S.W. WILLISTON ROAD
 GAINESVILLE, FLORIDA 32608
 EB0000072 AAC001982

DAVID C. NICHOLSON PE 60201

PUMP STATIONS H & B REHABILITATION
 AND PUMP STATION GENERATOR REPLACEMENT
 CITY OF KEY WEST
 KEY WEST, FLORIDA

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ADDENDUM

NO. 2 DATE 06/29/18

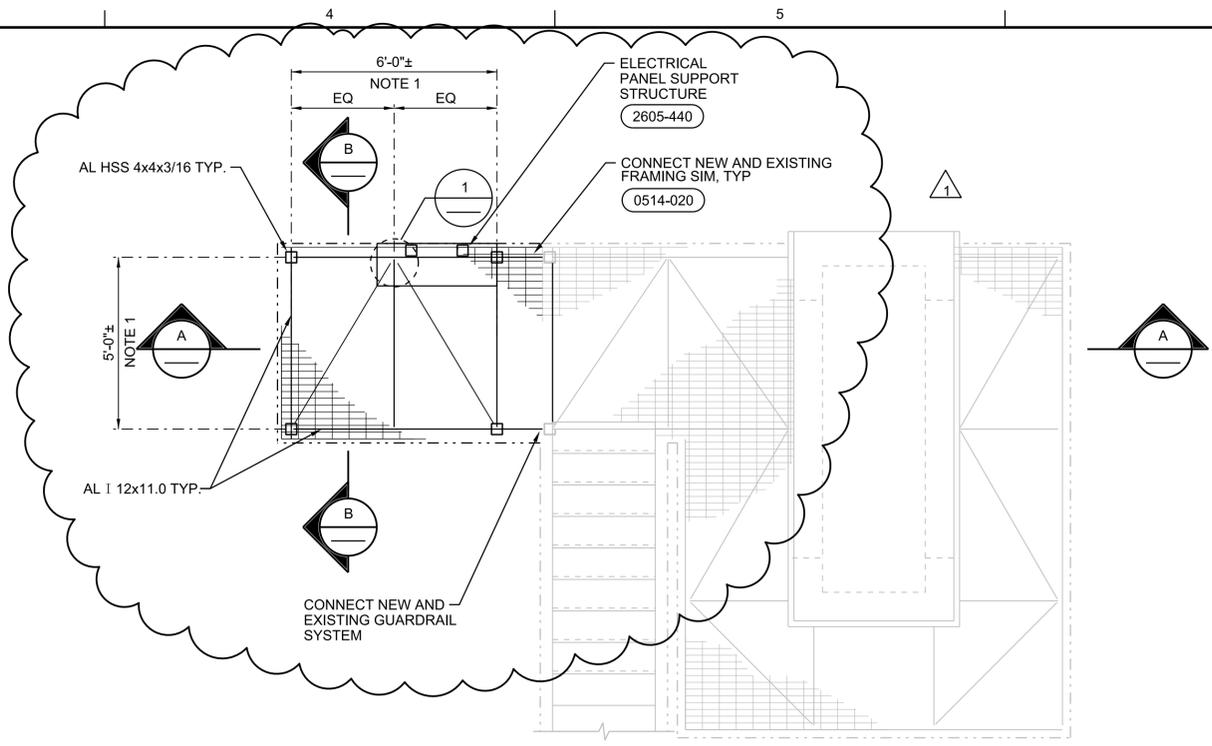
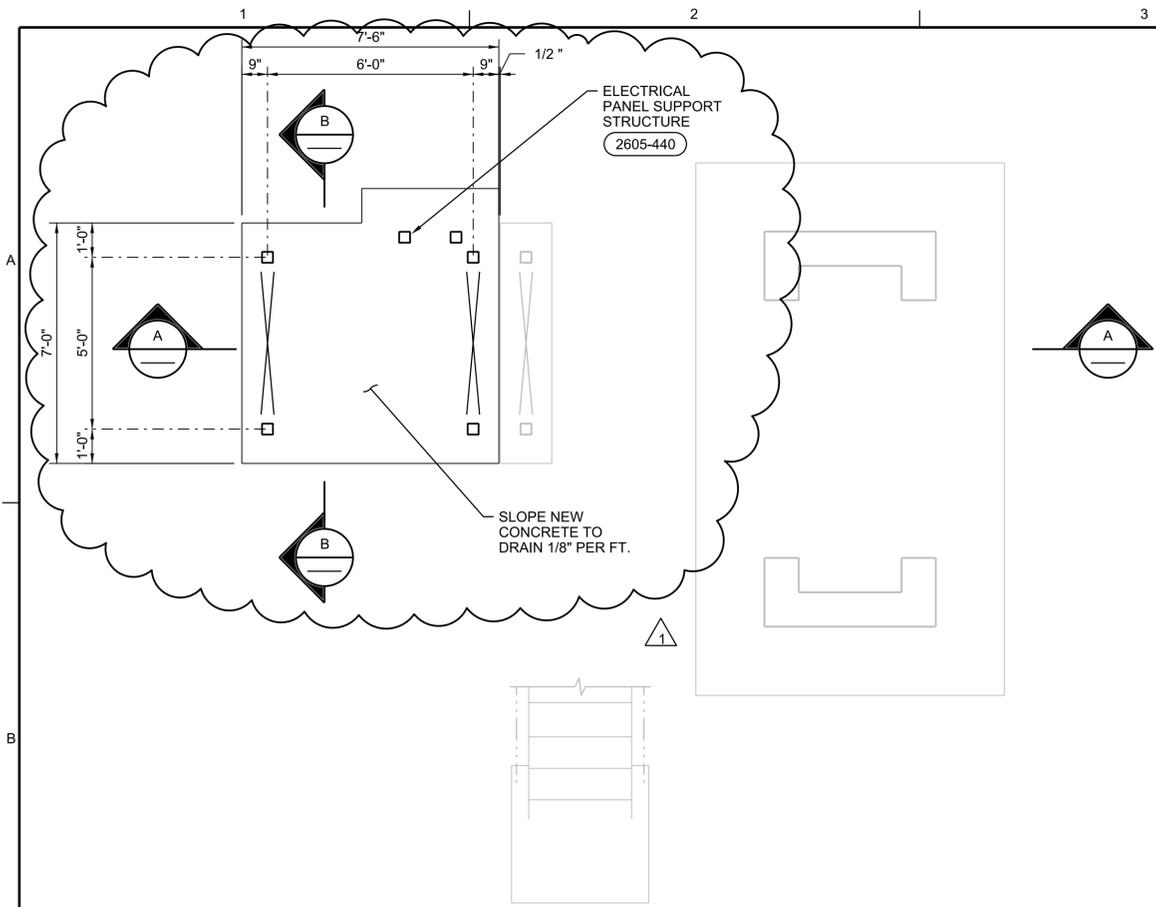
REVISION 2

ADDENDUM No. 4

DR A PASTRANA
 DSGN E CARRASCO
 CHK D NICHOLSON
 APVD D NICHOLSON

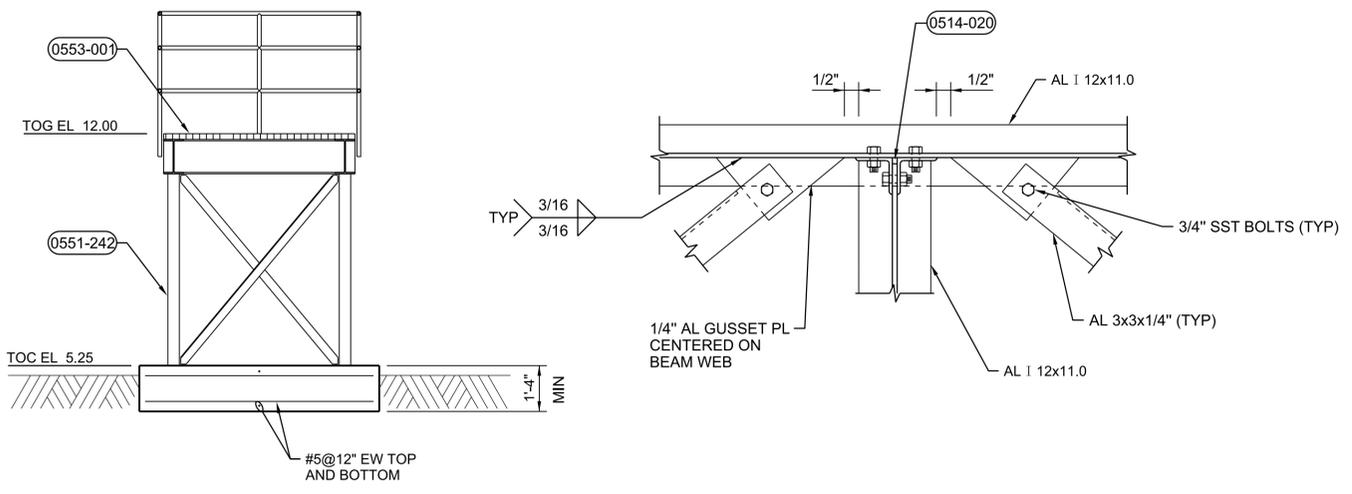
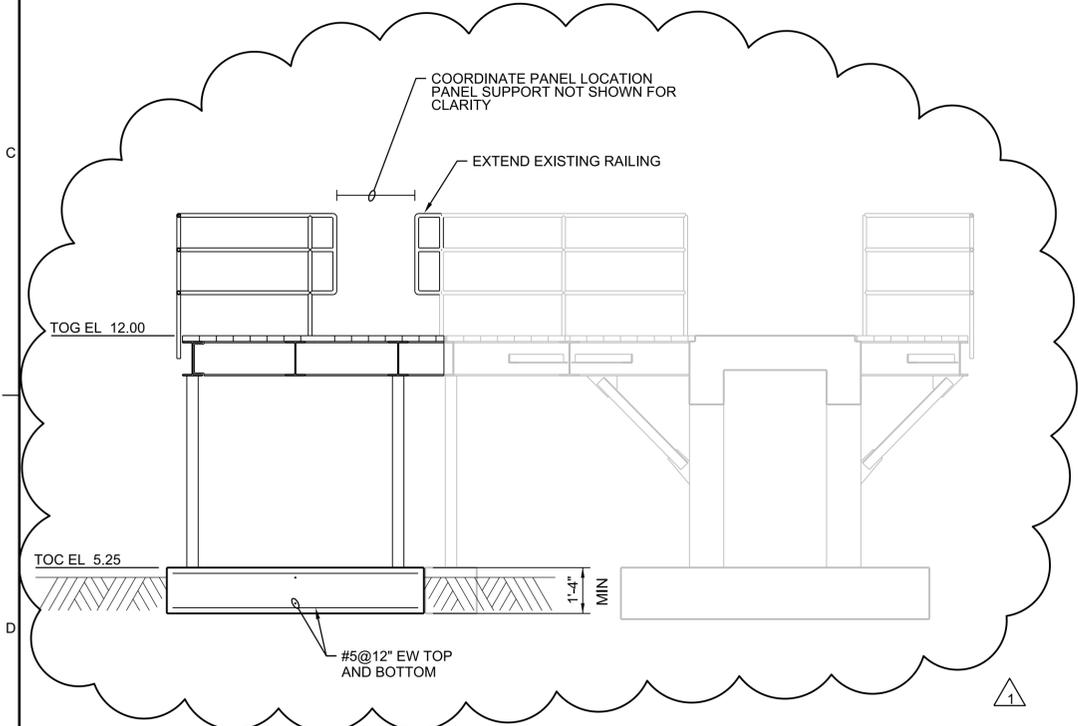
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DATE JULY 2018
 PROJ 683450
 DWG 010-E-602
 SHEET 11 of 30



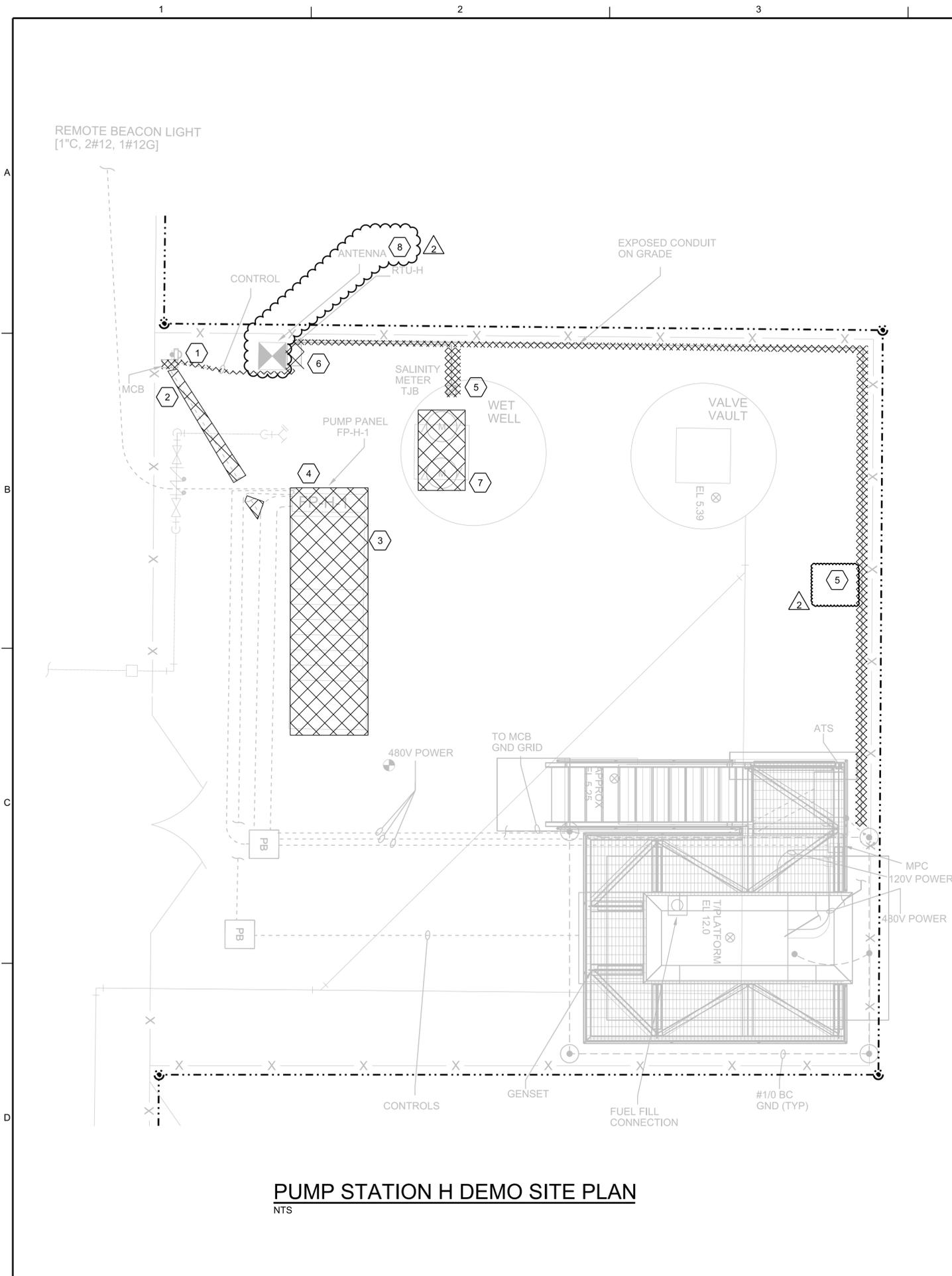
NOTES

1. COORDINATE DIMENSIONS WITH APPROVED EQUIPMENT SUBMITTAL.



PGM	RDK	NO.	DATE	DR	CHK	REVISION	BY	APVD
1			07/02/18	Addendum				
3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 AAC001982			ROCCO DEVILLIERS KOEKEMOER PE 76468			PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT CITY OF KEY WEST KEY WEST, FLORIDA		
ch2m			STRUCTURAL			PUMP STATION H PLATFORM H PLANS AND SECTIONS		
AS NOTED								
VERIFY SCALE								
BAR IS ONE INCH ON ORIGINAL DRAWING.								
DATE	JULY 2018							
PROJ	683450							
DWG	020-S-202							
SHEET	13 of 30							
R KOEKEMOER			P RAYMONT			D LEVERSON		
R KOEKEMOER			R KOEKEMOER			R KOEKEMOER		

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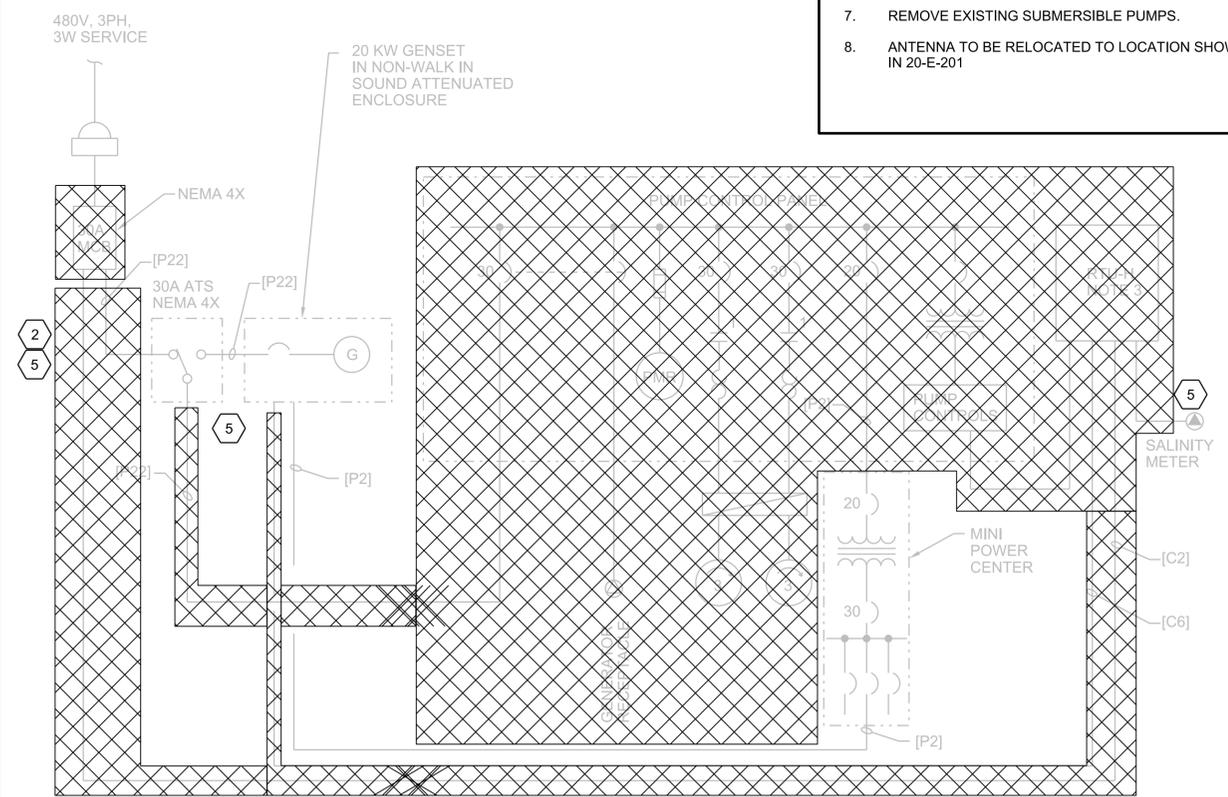
PUMP STATION H DEMO SITE PLAN
NTS



1 PHOTO DETAIL
NTS



2 PHOTO DETAIL
NTS



PUMP STATION H SINGLE LINE
NTS

GENERAL NOTES

1. WIRING DEMOLITION: REMOVE ENTIRE LENGTH OF CONDUCTORS THAT REQUIRE DEMOLITION. EXISTING UNDERGROUND CONDUIT MARKED FOR DEMO MAY BE ABANDONED IN PLACE

LEGEND:
XXXXXX TO BE REMOVED

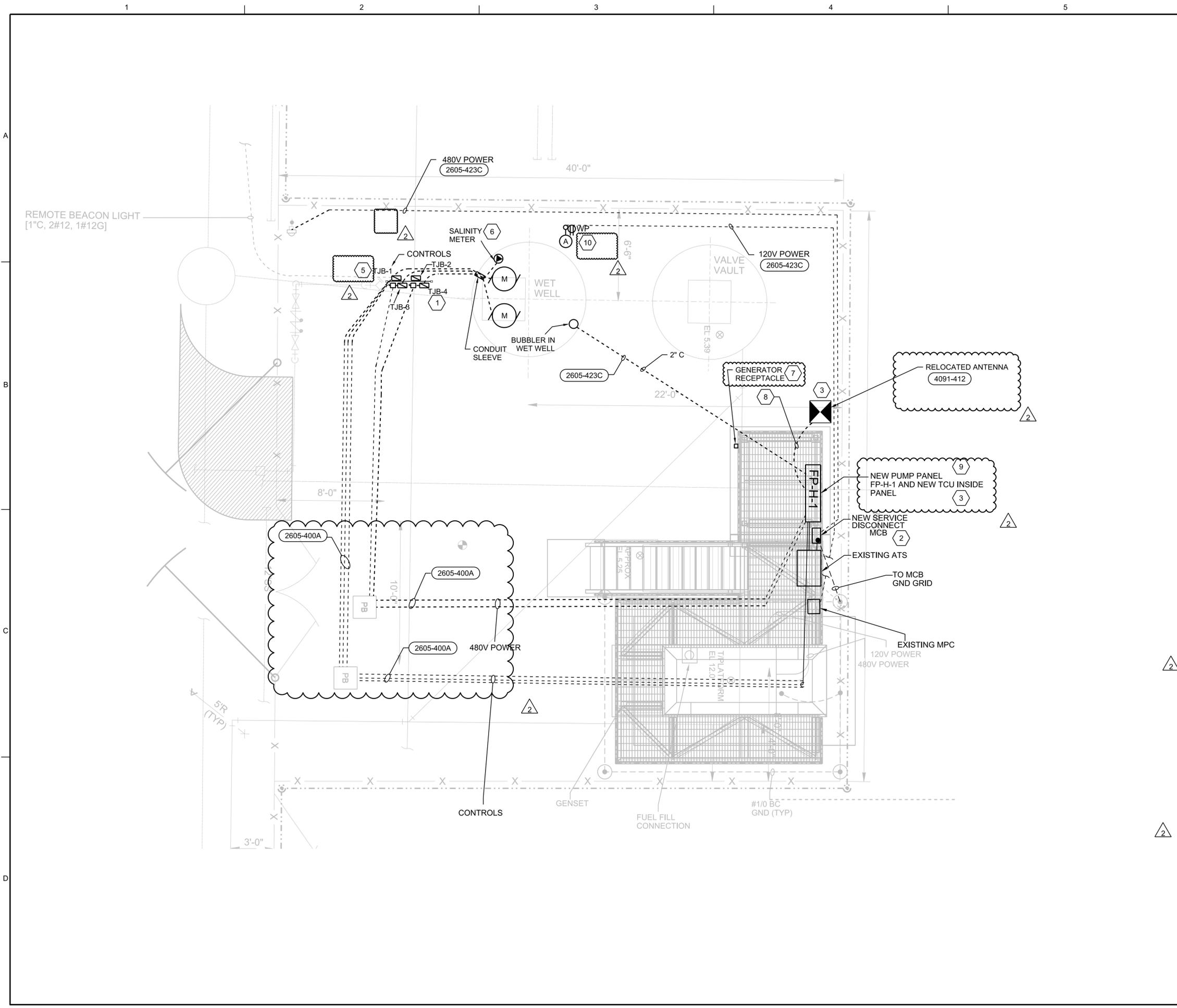
SHEET KEYNOTES

1. EXISTING SERVICE DISCONNECT INCLUDING CONDUCTORS FROM THE UTILITY METER TO THE DISCONNECT SWITCH, FROM THE DISCONNECT SWITCH TO THE ATS, AND FROM THE ATS TO THE PUMP CONTROL PANEL, AND FROM THE DISCONNECT SWITCH TO THE RTU-H TO BE REMOVED.
2. DISCONNECT AND DISCARD ALL CONDUCTORS FROM THE UTILITY METER TO THE DISCONNECT SWITCH FROM THE DISCONNECT SWITCH TO THE PUMP CONTROL PANEL FP-H-1, AND FROM THE DISCONNECT SWITCH TO EXISTING ATS
3. DEMO EXISTING PLATFORM AND STAIRS WHERE FP-H-1 IS LOCATED
4. REMOVE EXISTING PUMP CONTROL PANEL FP-H-1 AND TJBs LOCATED UNDER PUMP CONTROL PANEL.
5. REMOVE EXISTING RTU ASSOCIATED CONDUCTORS AND EXPOSED CONDUITS TERMINATING AT THE SALINITY METER, GENERATOR, DISCONNECT SWITCH, AND GENERATOR.
6. REMOVE SALINITY METER TJB WITHOUT DAMAGING CONDUCTORS AND SALINITY METER. SALINITY METER WILL BE RELOCATED. SEE DRAWINGS 20-E-102
7. REMOVE EXISTING SUBMERSIBLE PUMPS.
8. ANTENNA TO BE RELOCATED TO LOCATION SHOWN IN 20-E-201

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PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT CITY OF KEY WEST KEY WEST, FLORIDA		D NICHOLSON	
ELECTRICAL PUMP STATION H SITE DEMOLITION PLAN		D NICHOLSON	
DATE: JULY 2018		BY: APVD	
PROJ: 683450		CHK: A PASTRANA	
DWG: 020-E-101		DR: N ADAMS	
SHEET: 15 of 30		D NICHOLSON	

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GENERAL SHEET NOTES

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- B. ALL WORK SHALL COMPLY WITH THE NEC AND LOCAL CODES.
- C. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES, PIPING, CONDUITS, ETC. AND REROUTE NEW ELECTRICAL CONDUITS AS REQUIRED.
- D. CONDUCTORS SHALL NOT BE SPLICED EXCEPT AS NOTED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS.

HAZARDOUS LOCATION NOTES:

1. PER NFPA 820, TABLE A.4.2, ROW 16, LINE a, THE WET WELL IS CLASSIFIED AS A HAZARDOUS LOCATION AS FOLLOWS:
 - a. THE AREA INSIDE THE WETWELL AND WITHIN A 3'-0" RADIUS AROUND VENT OPENING AS CONSIDERED CLASS I, DIV 1, GROUP C AND D LOCATIONS.
 - b. THE AREA WITHIN A 5'-0" RADIUS AROUND VENT OPENING AND AN ENVELOPE 18" ABOVE HATCHES AND EXTENDING 3'-0" FROM THE EDGE OF THE HATCHES ARE CONSIDERED CLASS I, DIV 2, GROUP C AND D LOCATIONS.
2. PER NFPA 820, TABLE 4.2, ROW 31, LINE a AND ROW 36, LINE a, THE VALVE AND METER VAULTS ARE CLASSIFIED AS HAZARDOUS LOCATIONS AS FOLLOWS:
 - a. THE AREA INSIDE THE VAULT IS CONSIDERED CLASS I, DIV 2, GROUP C AND D LOCATIONS.
3. PROVIDE SUITABLE WIRING METHODS AND MATERIALS FOR THE HAZARDOUS LOCATIONS PER NFPA 70 (NEC).

SHEET KEYNOTES

1. FURNISH AND INSTALL NEW NEMA 4X TERMINAL JUNCTION BOXES TO INTERCEPT EXISTING CONDUITS FROM WET WELL. LOCATE OUTSIDE OF HAZARDOUS AREA (2605-101)
2. LOCATE NEW MCB ON NEW RAISED PLATFORM. PROVIDE NEW WIRING FROM EXISTING SERVICE POLE UTILITY METER TO MCB. SEE DETAIL (2605-440)
3. CONNECT NEW ENCLOSURES, GROUND BUSES AND EXISTING ANTENNA TO EXISTING GROUNDING ELECTRODE SYSTEM WITH A TIN-PLATED COPPER CONDUCTOR 2/0 AWG MINIMUM
5. CONNECT NAVY REMOTE BECON LIGHT TO PANEL FP-H-1 THROUGH TJB-1
6. LOCATE SALINITY METER OUTSIDE THE HAZARDOUS AREA
7. GENERATOR RECEPTACLE MOUNT AT 7'-0" AFG USING DETAIL (2605-008)
8. USE LONG BENDING RADII ELBOW TO FEED COAX CABLE FROM ANTENNA TO PANEL FP-H-1
9. LOCATE NEW PUMP PANEL FP-H-1 AND TCU ON NEW RAISED PLATFORM. SEE DETAIL (2605-440)
10. RECEPTACLE TO BE MOUNTED AT A MINIMUM OF 48" AFF.

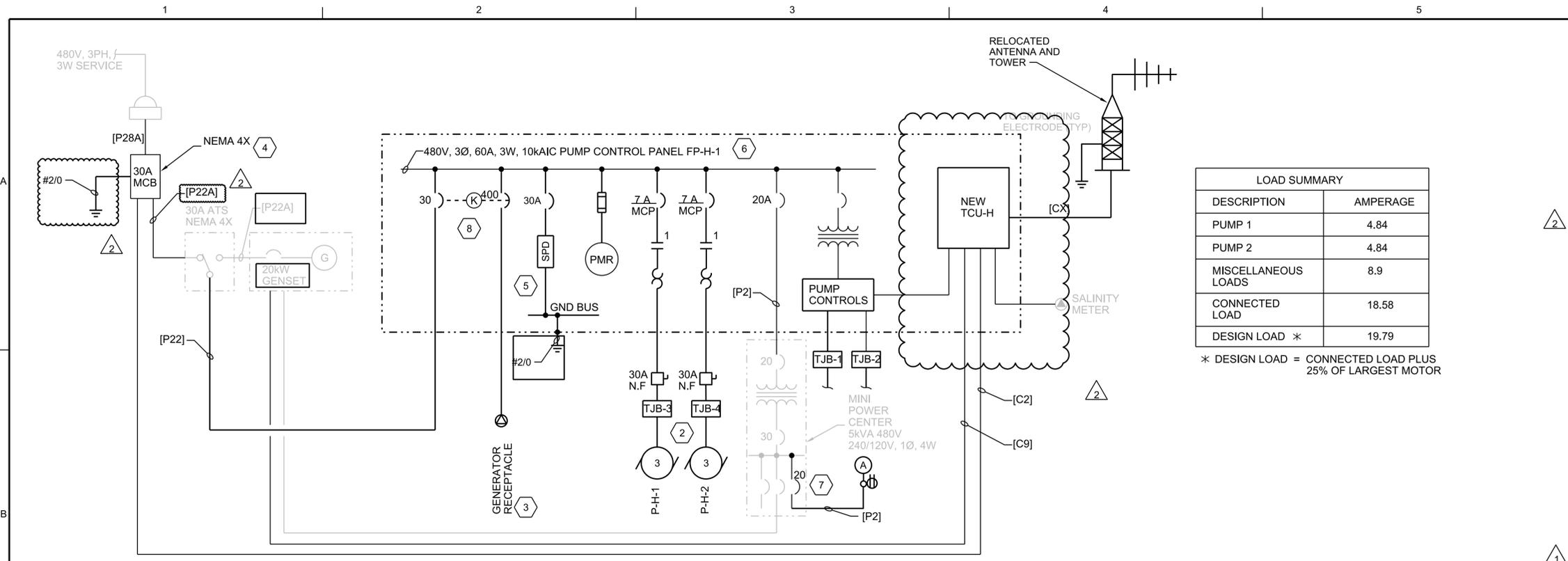
NO.	DATE	REVISION	BY	APVD
2	06/29/18	ADDENDUM No. 4	EC	DN
			BY	APVD
			CHK	APVD
			DR	APVD

DAVID C. NICHOLSON PE 60201
 PUMP STATIONS H & B REHABILITATION
 AND PUMP STATION GENERATOR REPLACEMENT
 CITY OF KEY WEST
 KEY WEST, FLORIDA

ch2m
 ELECTRICAL
**PUMP STATION H
 NEW SITE
 PLAN**

DATE	JULY 2018
PROJ	683450
DWG	020-E-201
SHEET	16 of 30

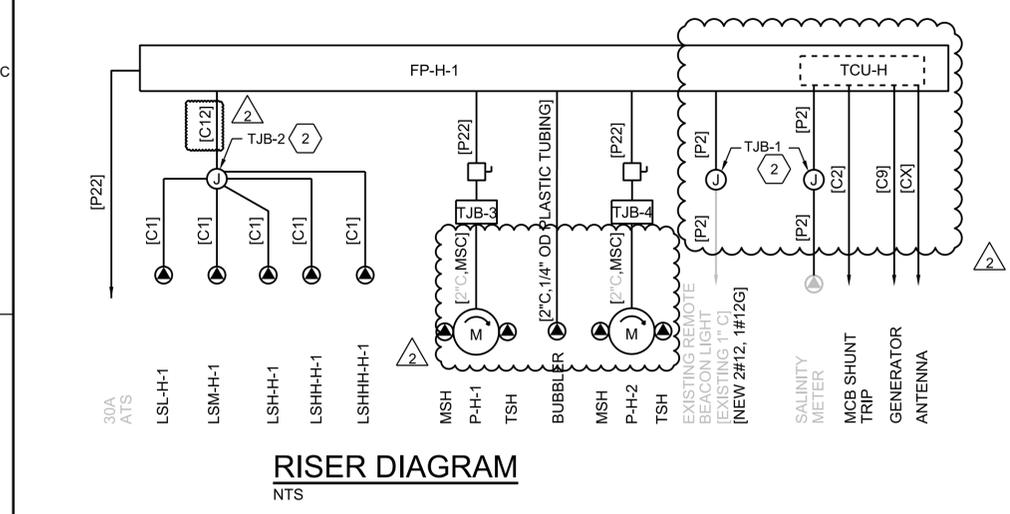
ADDENDUM



- ### SHEET KEYNOTES
- ALL RACEWAYS TO BE PVC-COATED RGS. REFER TO SPECIFICATION SECTION 26 05 01
 - PROVIDE NEMA 4X 316 SST TERMINAL JUNCTION BOXES SIZE PER NEC REQUIREMENTS WITH NSI POLARIS BLUE SERIES SUBMERSIBLE POWER DISTRIBUTION BLOCKS.
 - FURNISH AND INSTALL 400A, 600V GENERATOR RECEPTACLE WITH JUNCTION BOX AND ANGLED ADAPTER TO BE REMOTELY LOCATED. RUSSELL STOLL: DS 4404MRA00, NO SUBSTITUTIONS.
 - NEW SERVICE ENTRANCE RATED MAIN CIRCUIT BREAKER DISCONNECT WITH SHUNT TRIP OPTION. BREAKER SHALL OPEN UPON RECEIPT OF SHUNT TRIP COMMAND FROM TCU.
 - PROVIDE CATEGORY C, 6-MODE, 20kA NOMINAL DISCHARGE CURRENT, SPD WITH SINE WAVE TRACKING. INSTALL IN POWER PANEL AS SHOWN AND ON THE NORMAL / UTILITY SIDE OF THE AUTOMATIC TRANSFER SWITCH.
 - PUMP CONTROL PANEL SHALL BEAR A LABEL FROM A NATIONAL RECOGNIZED TESTING LABORATORY INDICATING ITS LISTING / LABELING IN ACCORDANCE WITH UL-698A, INDUSTRIAL CONTROL PANELS.
 - FURNISH AND INSTALL NEW 20A BREAKER IN THE EXISTING MINI POWER CENTER TO POWER A NEW POLE MOUNTED LIGHT FIXTURE AND A WEATHER PROOF RECEPTACLE. MATCH EXISTING MANUFACTURERS TYPE AND AIC RATING.
 - THE GENERATOR CIRCUIT BREAKER TO BE INTERLOCKED WITH MAIN CIRCUIT BREAKER TO PREVENT BOTH CIRCUIT BREAKERS FROM BEING CLOSED AT THE SAME TIME. PROVIDE A 3" CONDUIT WITH A 4#350KCM AND 1#4 GROUND FROM THE GENERATOR CIRCUIT BREAKER TO THE NEW 400 A GENERATOR RECEPTACLE.
 - FURNISH AND INSTALL CONDUIT SEALS SUITABLE FOR CLASS 1, DIV 1, GROUP C AND D LOCATION. GROUND RINGS, TYPE ETS OR APPROVED EQUAL.

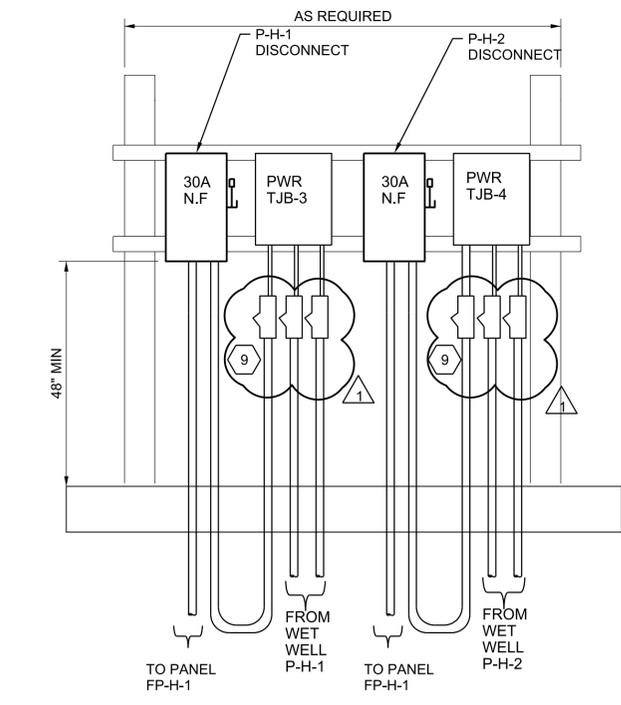
REVISED ONE LINE DIAGRAM

NTS



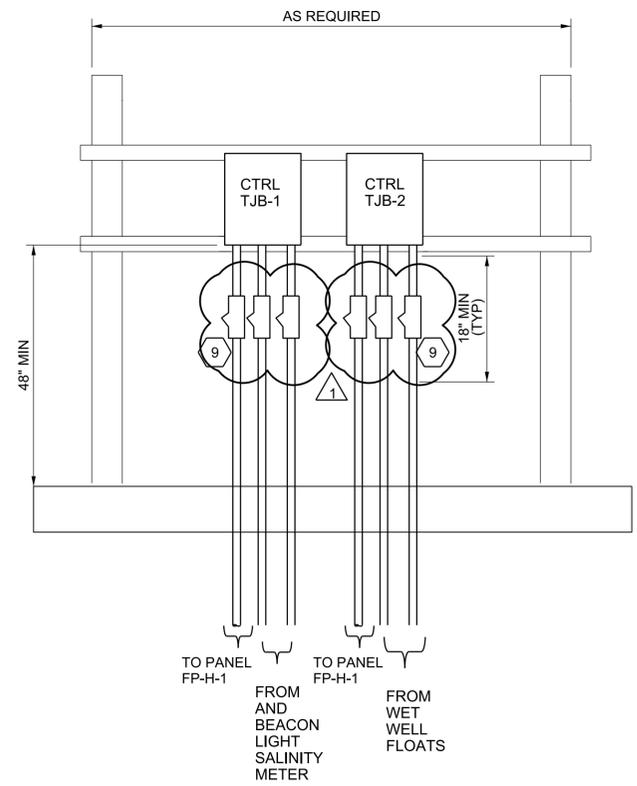
RISER DIAGRAM

NTS



A MOUNTING RACK FRONT LAYOUT

NTS



B MOUNTING RACK BACK LAYOUT

NTS

NO.	DATE	REVISION	BY	APVD
2	06/29/18	ADDENDUM No. 4	EC	EC
1	06/09/18	ADDENDUM No. 1	REVISION	CHK

DAVID C. NICHOLSON PE 60201
 PUMP STATIONS H & B REHABILITATION
 AND PUMP STATION GENERATOR REPLACEMENT
 CITY OF KEY WEST
 KEY WEST, FLORIDA

		ELECTRICAL	
		PUMP STATION H	
PUMP STATION H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT		CITY OF KEY WEST	
KEY WEST, FLORIDA		KEY WEST, FLORIDA	
DATE		JULY 2018	
PROJ		683450	
DWG		020-E-601	
SHEET		17 of 30	

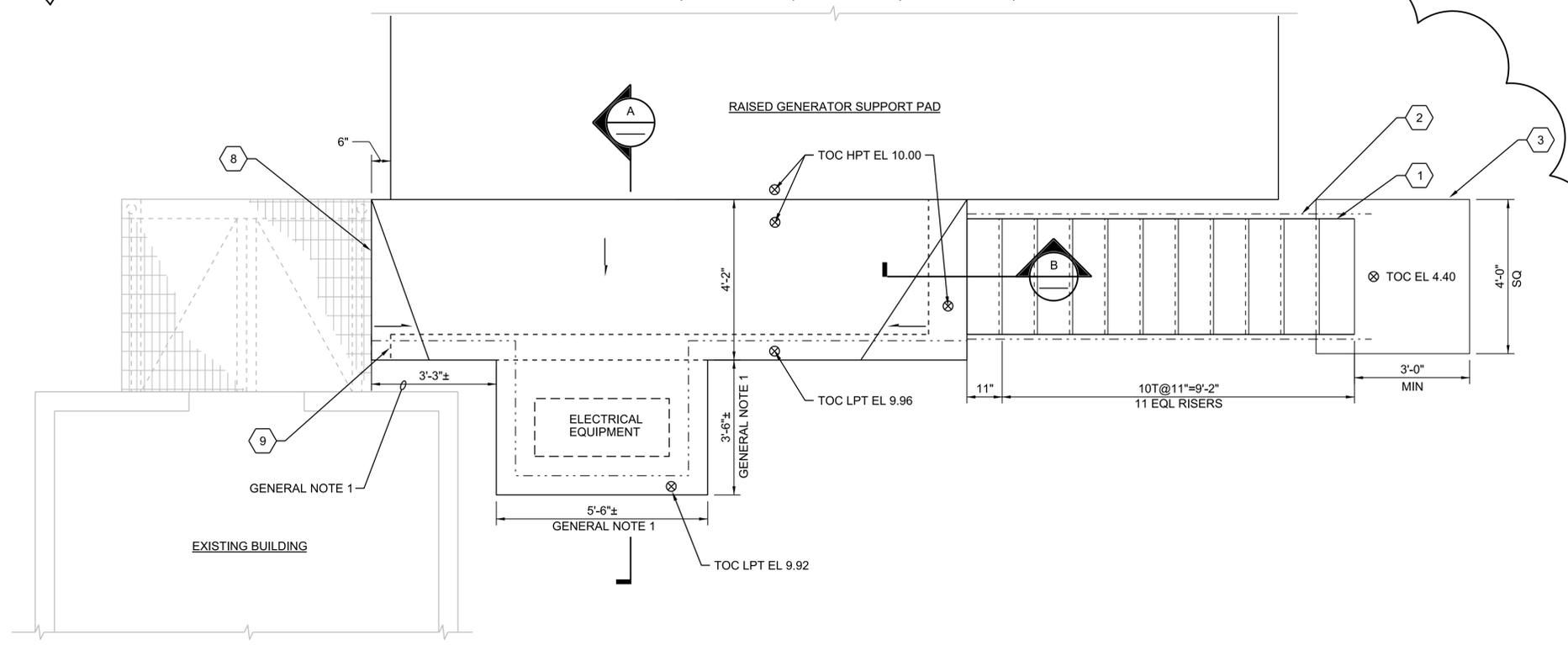
3011 S.W. WILLISTON ROAD, GAINESVILLE, FLORIDA 32608
 EB0000072 AAC001982
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GENERAL SHEET NOTES

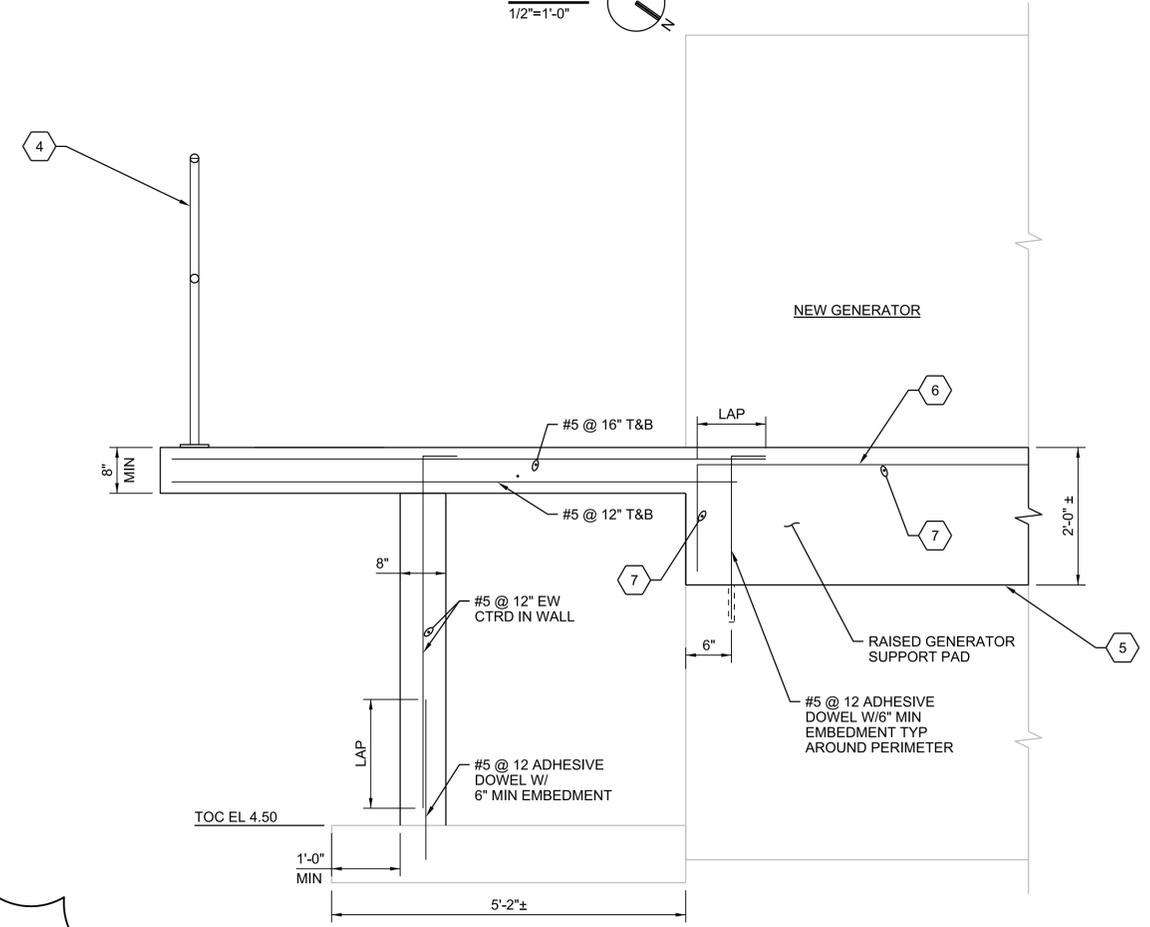
- COORDINATE DIMENSIONS WITH APPROVED EQUIPMENT SUBMITTAL.

SHEET KEYNOTES

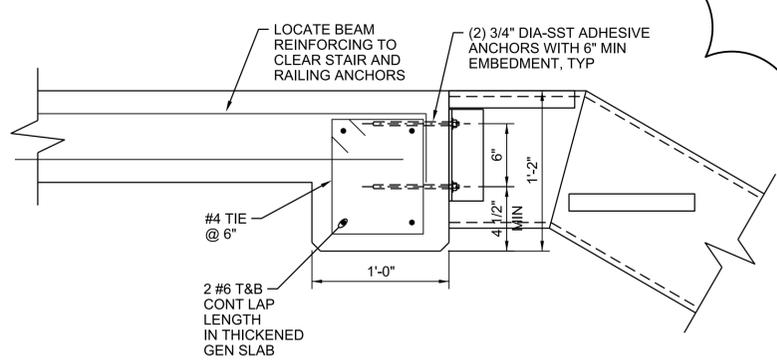
- AL STAIRS. SEE DETAIL 0551-001. 3'-0" CLEARANCE BETWEEN STRINGER.
- AL RAILING WITH BASE ANCHORAGE TYPE 'D'. SEE DETAIL 0552-001.
- CONC LANDING PAD. SEE DETAIL 0330-056 TYPE 'G' SIM.
- AL RAILING WITH BASE ANCHORAGE TYPE 'A'. SEE DETAIL 0552-001.
- PREPARE CONSTRUCTION JOINT WITH HIGH PRESSURE WATER BLASTING. REMOVE FOREIGN MATERIAL AND CONTAMINANTS. APPLY BONDING AGENT PRIOR.
- #5@12"
- #5@6" CONTINUOUS AROUND CORNERS.
- 5/8" MAX GAP BETWEEN EXISTING GRATING AND NEW CONCRETE SLAB. CONCRETE SHALL FINISH FLUSH WITH GRATING.
- EXTEND WALL AND FOUNDATION TO FACE OF EXISTING FOUNDATION.



PLAN
1/2"=1'-0"



A SECTION
3/4"=1'-0"



B SECTION
1 1/2"=1'-0"

NO.	DATE	REVISION	BY	APVD
1	06/11/18	UPDATED PLATFORM	DR	R KOEKEMOER

3011 S.W. WILLISTON ROAD
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EB0000072 AAC001982
ROCCO DEVILLIERS KOEKEMOER PE 76468

PUMP STATIONS H & B REHABILITATION
AND PUMP STATION GENERATOR REPLACEMENT
CITY OF KEY WEST
KEY WEST, FLORIDA

STRUCTURAL	AS NOTED
PUMP STATION A	VERIFY SCALE
PLATFORM A	BAR IS ONE INCH ON ORIGINAL DRAWING.
PLAN AND SECTION	0 1"
DATE	JULY 2018
PROJ	683450
DWG	030-S-201
SHEET	20 of 30

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GENERAL NOTES

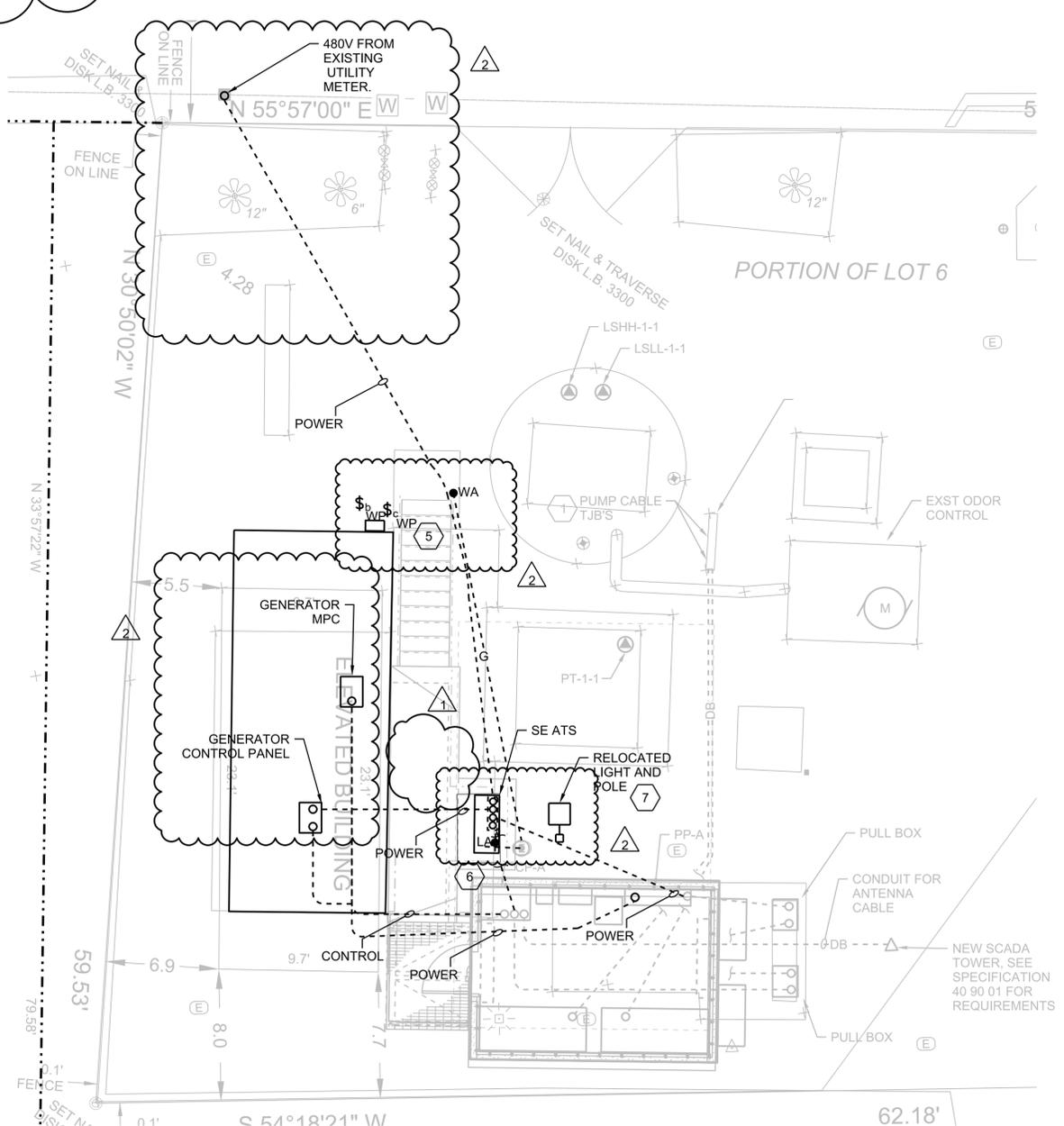
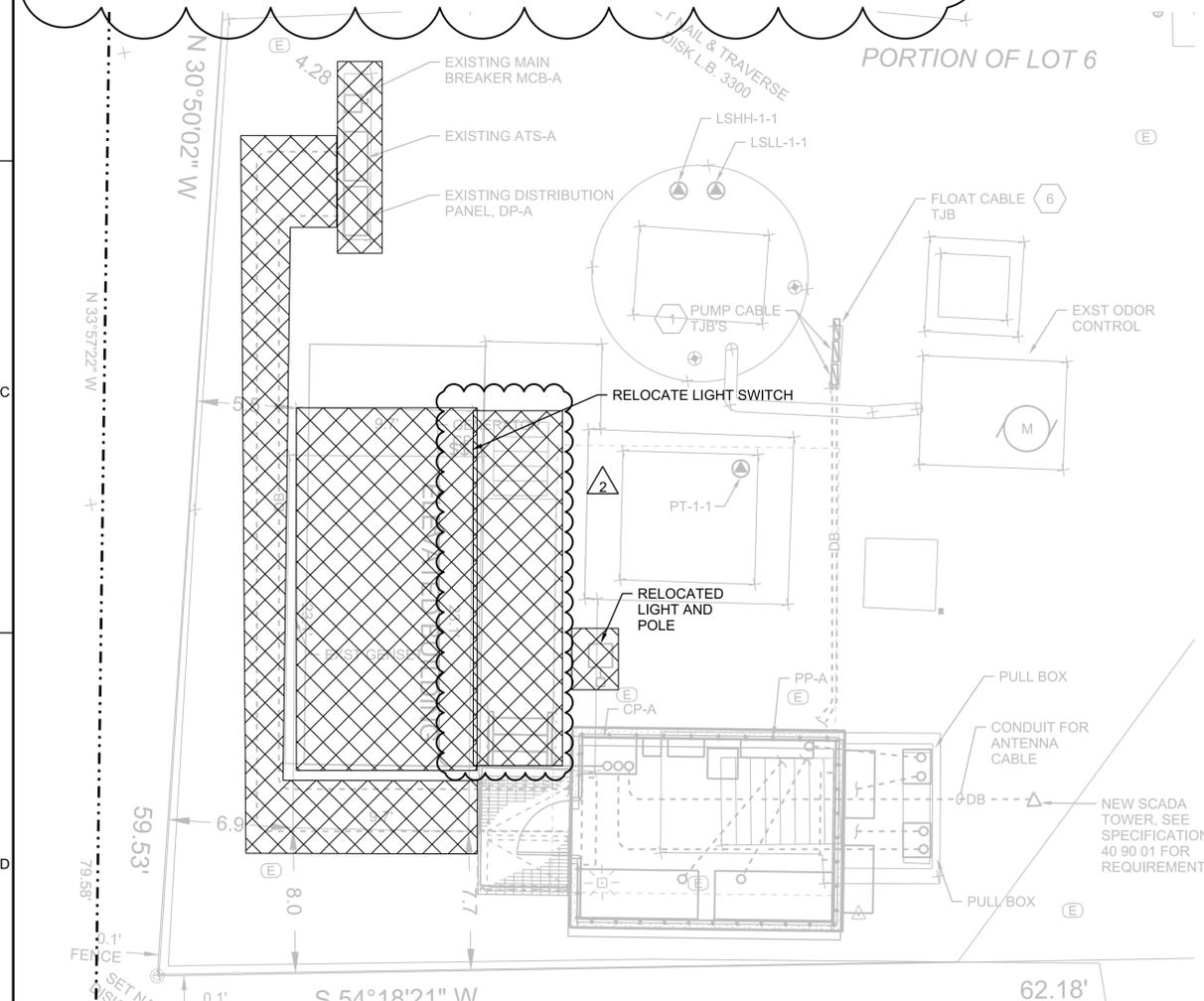
- LEGEND:**
 TO BE REMOVED
- A. DO NOT SCALE ELECTRICAL DRAWING. REFER TO THE CIVIL, ARCHITECTURAL/MECHANICAL, STRUCTURAL DRAWINGS AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACTLY LOCATION OF ALL EQUIPMENT.
 - B. ALL WORK SHALL COMPLY WITH THE NEC AND LOCAL CODES.
 - C. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES, PIPING, CONDUITS, ETC. AND REROUTE NEW ELECTRICAL CONDUITS AS REQUIRED.
 - D. CONDUCTORS SHALL NOT BE SPLICED EXCEPT AS NOTED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS.
 - E. CONNECT NEW CONTROL SIGNALS FROM SERVICE ENTRANCE ATS, AND GENERATOR TO EXISTING CONTROL PANEL CP-A LOCATED INSIDE THE ELECTRICAL ROOM.
- D. THE GENERATOR IS A NON-SEPARATLY DERIVED SOURCE. DO NOT BOND GENERATOR NEUTRAL CONDUCTOR TO THE GROUND GENERATOR FRAME. BRING GENERATOR NEUTRAL CONDUCTOR INTO THE ATS AND CONNECT TO SYSTEM NEUTRAL. GROUND GENERATOR ENCLOSURE / FRAME TO SITE GROUNDING RING.
- F. FURNISH AND INSTALL ASCO 7000 SERIES, J7AUS-A-3-300-N-5-X-V, 18B/18G, 31Z, 72EE., 119BG. OR EQUAL

GENERAL NOTES

- HAZARDOUS LOCATION NOTES:**
1. PER NFPA 850, TABLE 4.2, ROW 15, LINE a, THE WET WELL IS CLASSIFIED AS A HAZARDOUS LOCATION AS FOLLOWS:
 - a. THE AREA INSIDE THE WETWELL AND WITHIN A 3'-0" RADIUS AROUND VENT OPENING AS CONSIDERED CLASS I, DIV 1, GROUP C AND D LOCATIONS.
 - b. THE AREA WITHIN A 5'-0" RADIUS AROUND VENT OPENING AND AN ENVELOPE 18" ABOVE HATCHES AND EXTENDING 3'-0" FROM THE EDGE OF THE HATCHES ARE CONSIDERED CLASS I, DIV 2, GROUP C AND D LOCATIONS.
 2. PER NFPA 820, TABLE 4.2, ROW 31, LINE a AND ROW 36, LINE a, THE VALVE AND METER VAULTS ARE CLASSIFIED AS HAZARDOUS LOCATIONS AS FOLLOWS:
 - a. THE AREA INSIDE THE VAULT IS CONSIDERED CLASS I, DIV 2, GROUP C AND D LOCATIONS.
 3. PER NFPA 820, TABLE 4.2, ROW 20, LINE b, THE ODOR-CONTROL SYSTEM IS CLASSIFIED AS A HAZARDOUS LOCATION AS FOLLOWS:
 - a. THE AREA WITHIN 3'-0" ENVELOPE AROUND THE ODOR-CONTROL SYSTEM IS CONSIDERED A CLASS I, DIV 2, GROUP C AND D LOCATION.
 4. PROVIDE SUITABLE WIRING METHODS AND MATERIALS FOR THE HAZARDOUS LOCATIONS PER NFPA 70 (NEC).

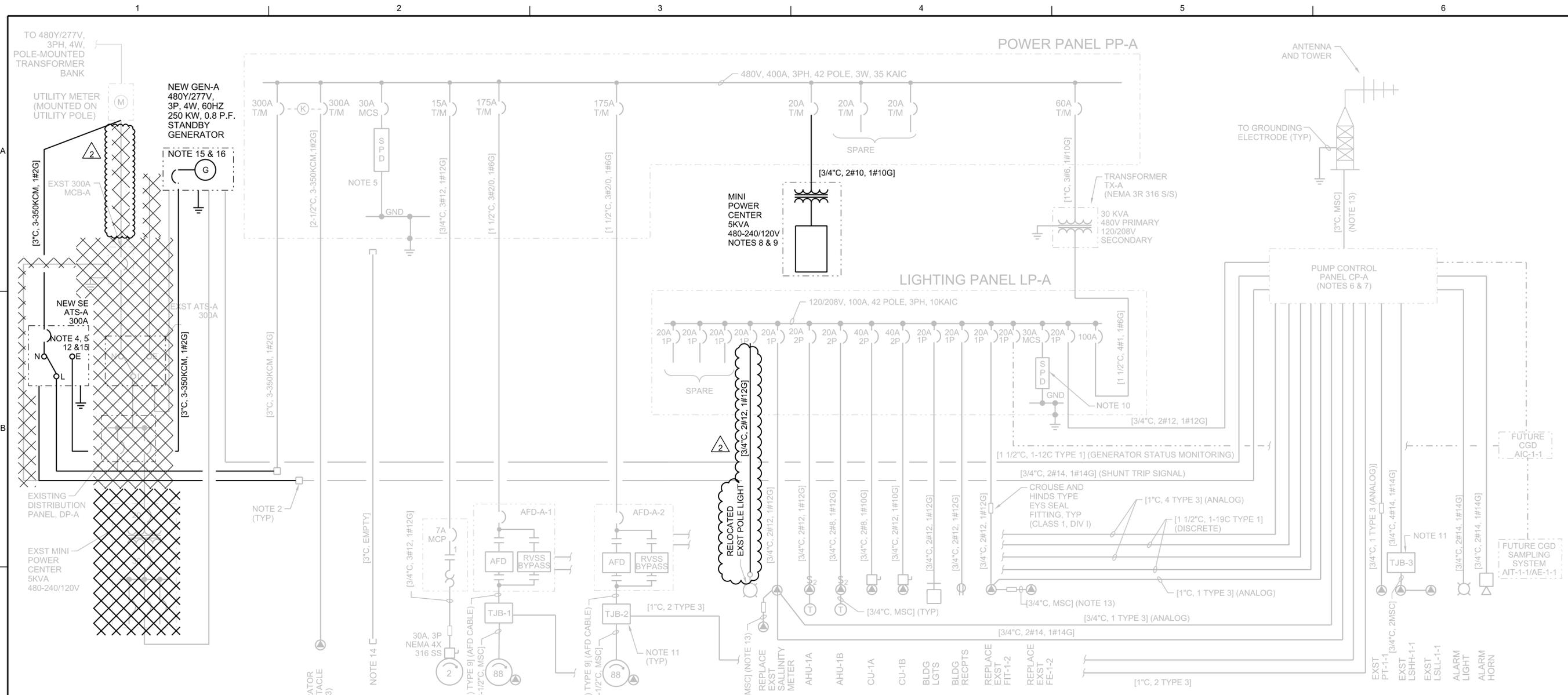
SHEET KEYNOTES

- 1.
- 2.
- 3.
4. RELOCATE WEATHER PROOF LIGHT SWITCHES (2605-011b)
5. REFERENCE STRUCTURAL DETAILS FOR ATS CONCRETE BASE ON DRAWING 030-S-2001
6. RELOCATE LIGHT FIXTURE AND POLE TO MAKE SPACE FOR THE NEW ATS PLATFORM. REUSE LIGHTING POLE AND LUMINAIRE FIXTURE



DEMO SITE PLAN PUMP STATION A

3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 AAC001982		DAVID C. NICHOLSON PE 60201		PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT CITY OF KEY WEST KEY WEST, FLORIDA	
		ELECTRICAL PUMP STATION A SITE PLAN		REVISION NO. DATE BY APVD 2 06/29/18 ADDENDUM No. 4 EC DN 1 06/08/08 ADDENDUM No. 1 EC DN	
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.		DATE JULY 2018 PROJ 683450 DWG 030-E-201 SHEET 21 of 30		DR N ADAMS A PASTRANA CHK D NICHOLSON APVD D NICHOLSON	



LEGEND:
 TO BE REMOVED

- NOTES**
- ALL RACEWAYS TO BE PVC-COATED RGS, EXCEPT WHERE REQUIRED FOR VIBRATION MITIGATION. REFER TO SPECIFICATION SECTION 26 05 01, ELECTRICAL. MAINTAIN 12" CLEARANCE FROM CONFLICTING UNDERGROUND UTILITIES.
 - PROVIDE NEMA 4X 316 SS PULLBOX TO INTERCEPT EXISTING CONDUIT. SIZE PULLBOX PER NEC REQUIREMENTS.
 - PROVIDE 400A, 600V GENERATOR RECEPTACLE WITH JUNCTION BOX AND ANGLE ADAPTER. RUSSELL STOLL: DS 4404MRA00, NO SUBSTITUTIONS.
 - NEW MAIN CIRCUIT BREAKER WITH SHUNT TRIP OPTION. BREAKER SHALL OPEN UPON RECEIPT OF SHUNT TRIP COMMAND FROM RTU.
 - PROVIDE CATEGORY C, 6-MODE, 20 kA NOMINAL DISCHARGE CURRENT, SPD WITH SINE-WAVE TRACKING, INSTALL IN POWER PANEL AS SHOWN AND ON THE NORMAL/ UTILITY LINE SIDE OF THE TRANSFER SWITCH.
 - PUMP CONTROL PANEL SHALL BEAR A LABEL FROM A NATIONALLY RECOGNIZED TESTING LABORATORY INDICATING ITS LISTING/LABELING IN ACCORDANCE WITH UL-698A, INDUSTRIAL CONTROL PANELS.
 - PUMP CONTROL PANEL SHALL BEAR A UNIT SHORT CIRCUIT CURRENT RATING LABEL BY A NATIONALLY RECOGNIZED TESTING LABORATORY INDICATING ITS SUITABILITY FOR USE WITHIN A POWER DISTRIBUTION SYSTEM WITH AN AVAILABLE FAULT CURRENT OF 10KA SYMMETRICAL AT 120V AC.
 - NEW 5kVA, 480-240V, 1-PHASE MINI POWER CENTER.

- NOTES**
- NEW MINI POWER CENTER LOCATED INSIDE GENERATOR ENCLOSURE. MPC POWERS BATTERY CHARGER, ALTERNATOR SPACE HEATER, FUEL LEVEL/LEAK DETECTION SYSTEM, AND JACKET WATER HEATER.
 - PROVIDE CATEGORY B, 10-MODE, 20kA NOMINAL DISCHARGE CURRENT SPD WITH SINE-WAVE TRACKING. INSTALL IN LIGHTING PANEL AS SHOWN.
 - NEMA 4X 316 STAINLESS STEEL TERMINAL JUNCTION BOX SIZE PER NEC REQUIREMENTS, WITH NSI POLARIS BLUE SERIES SUBMERSIBLE POWER DISTRIBUTION BLOCKS.
 - NEW SERVICE ENTRANCE 3-POLE ATMS WITH UTILITY SIDE MAIN CIRCUIT BREAKER AND NEUTRAL BUS. SERVICE NEUTRAL AND GENERATOR NEUTRAL ARE BONDED AT ATS NEUTRAL BUS FOR A NON-SEPARATELY DERIVED SYSTEM. ATS NEUTRAL BUS IS NOT BONDED TO THE ATS GROUND BUS.
 - REFER TO SPECIFICATION 40 90 01 FOR MSC REQUIREMENTS.
 - STUB UP 12" OF CONDUIT NEXT TO PUMP TJB'S INSTALL PULL-STRING AND CAP ON BOTH ENDS.
 - FULLY ADJUSTABLE LSIG MODULE. 100% RATED
 - GROUND GENERATOR AND GENERATOR ENCLOSURE TO EXISTING GROUNDING RING.

RISER DIAGRAM
 PUMP STATION A

- LEGEND:**
- BC = BYPASS CONTACTOR
 - CGD = COMBUSTIBLE GAS DETECTOR
 - CPT = CONTROL POWER TRANSFORMER
 - FS = STANDBY SOURCE
 - GND = GROUND BUS
 - L = LOAD SIDE OF AUTOMATIC TRANSFER SWITCH
 - LE = LEVEL TRANSDUCER (ULTRASONIC)
 - LSH = LEVEL SWITCH HIGH
 - LSL = LEVEL SWITCH LOW
 - N = NEUTRAL SOURCE
 - NEU = NEUTRAL BUS
 - MCB = MAIN CIRCUIT BREAKER
 - MCP = MAGNETIC-ONLY CIRCUIT BREAKER
 - MCS = MOLDED CASE SWITCH
 - MSC = MANUFACTURER SUPPLIED CABLE
 - SPD = SURGE PROTECTIVE DEVICE
 - PMR = POWER MONITORING RELAY
 - T/M = THERMAL MAGNETIC CIRCUIT BREAKER
- (K)-- = MECHANICAL KEY INTERLOCK

PP-A CONNECTED LOAD SUMMARY

DESCRIPTION	KVA
PUMP NO.1	86
PUMP NO.2	86
BLOWER	2
MPC	5
LIGHTING PANEL, LP-A	10
SUBTOTAL	189.0
25% OF LARGEST MOTOR	21.5
SERVICE RATING	210.5

*ALL LOADS ASSUMED NON-CONTINUOUS

LP-A CONNECTED LOAD SUMMARY

DESCRIPTION	VA
AHU-1A	114
AHU-1B	114
CU-1A	3723
CU-1B	3723
BLDG LIGHTS	200
RECEP	360
FIT-1-2	50
CP-1	3000
FP-1	300
AIC	100
SUBTOTAL	8,684
25% OF CONTINUOUS LOADS	1,009
SERVICE RATING	9,693

*ALL LOADS ASSUMED NON-CONTINUOUS

3011 S.W. WILLISTON ROAD
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PUMP STATIONS H & B REHABILITATION
 AND PUMP STATION GENERATOR REPLACEMENT
 CITY OF KEY WEST
 KEY WEST, FLORIDA

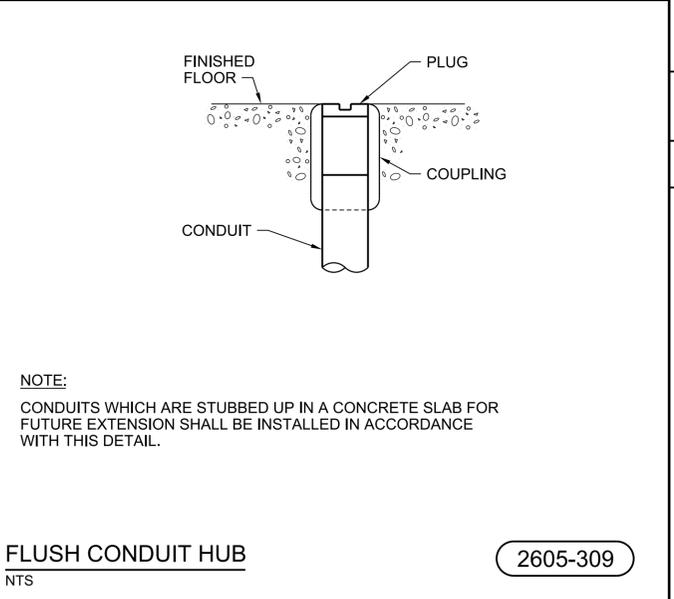
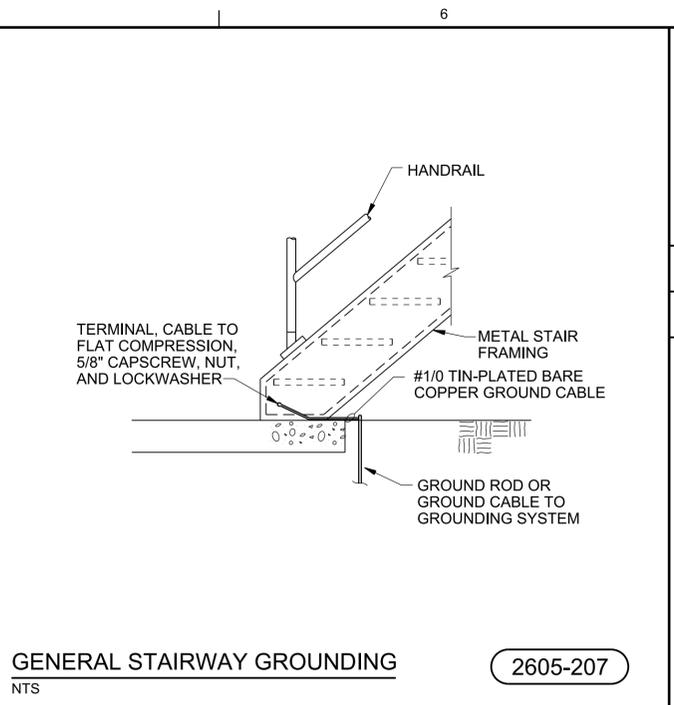
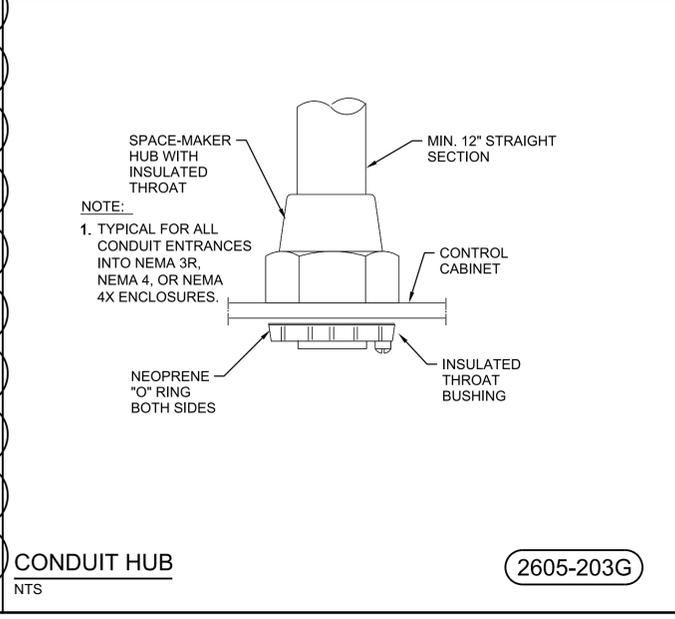
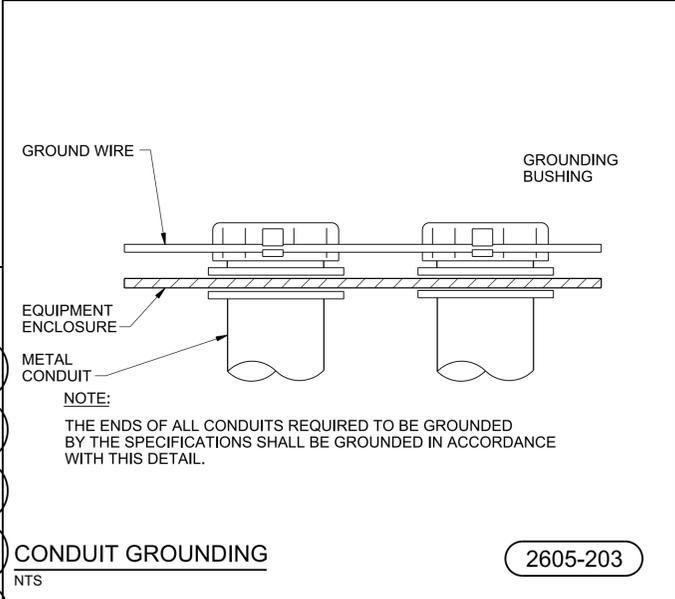
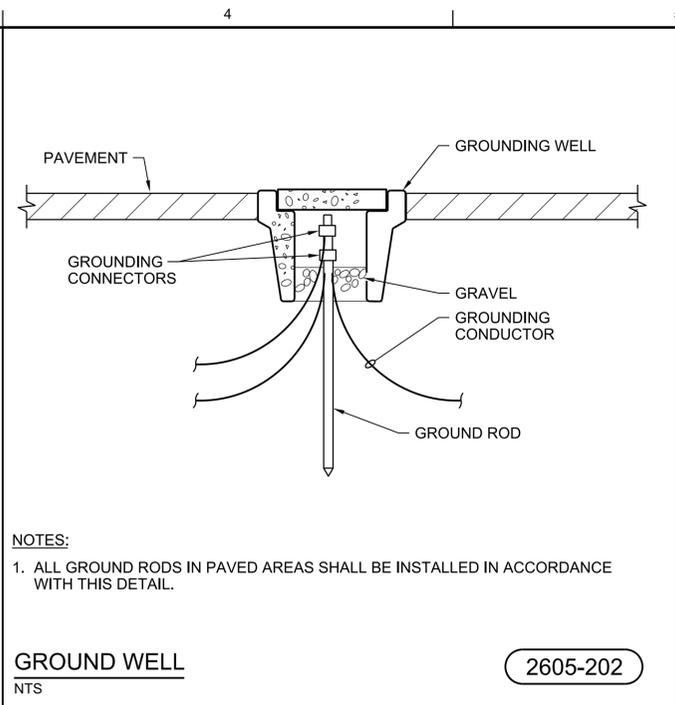
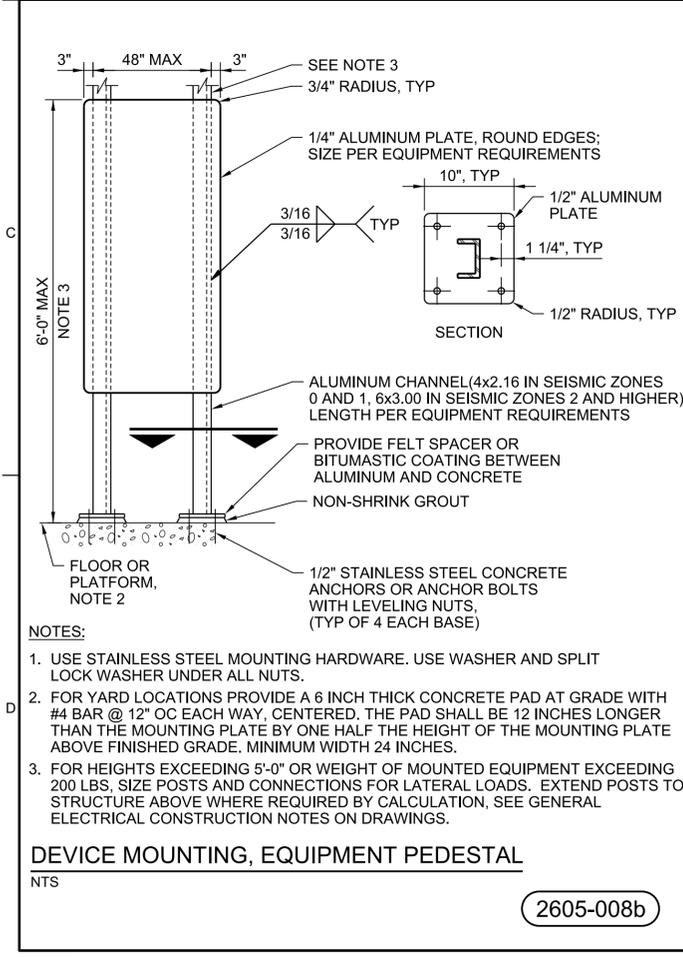
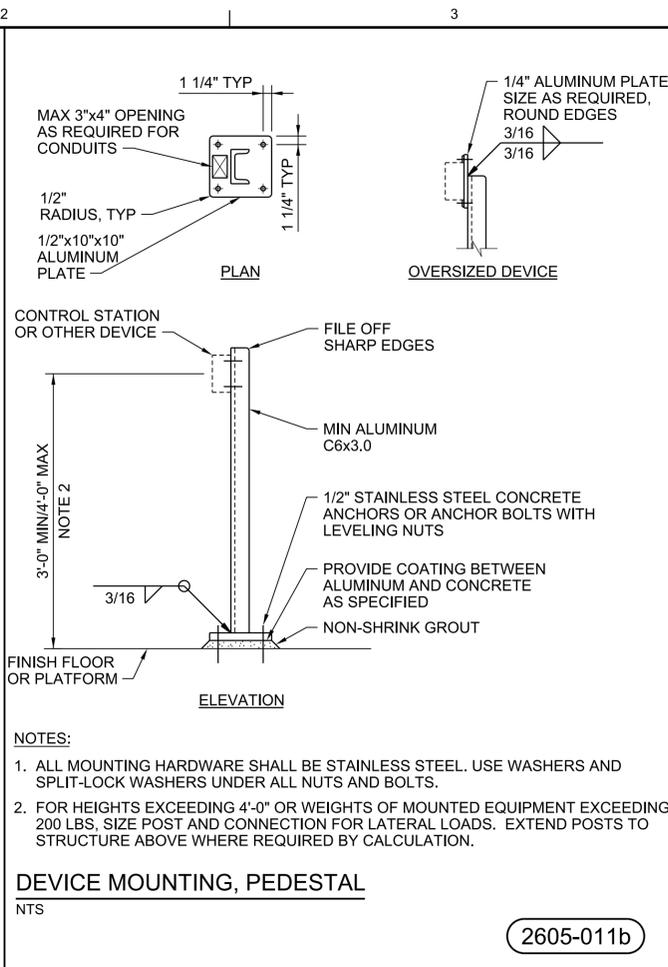
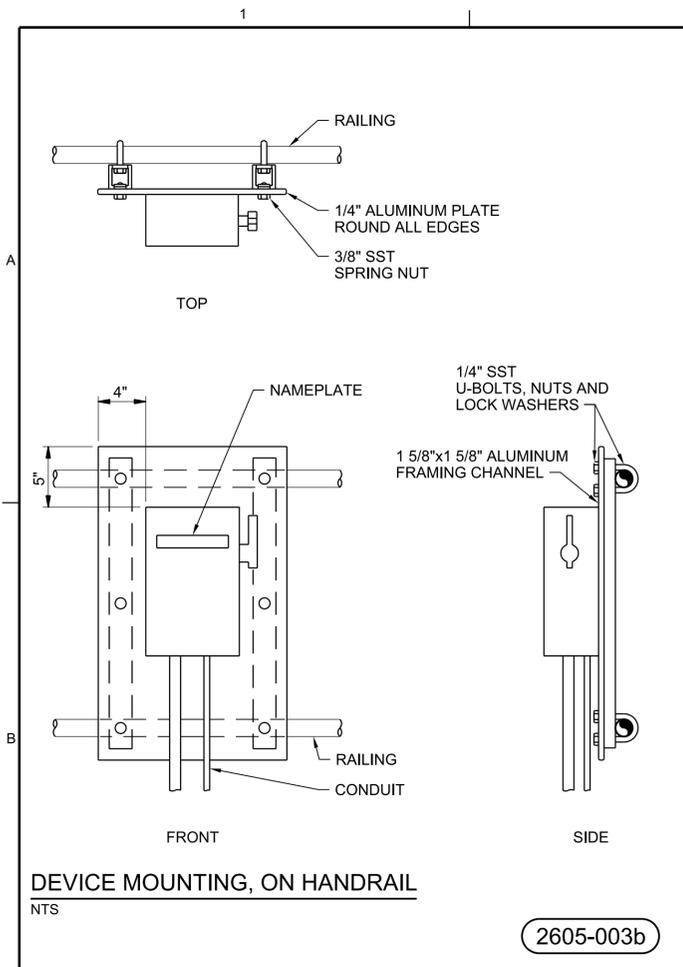
ELECTRICAL
PUMP STATION A
 ONE LINE DIAGRAM

NO.	DATE	REVISION	CHK	APVD
2	06/29/18	ADDENDUM No. 4	N ADAMS	D NICHOLSON

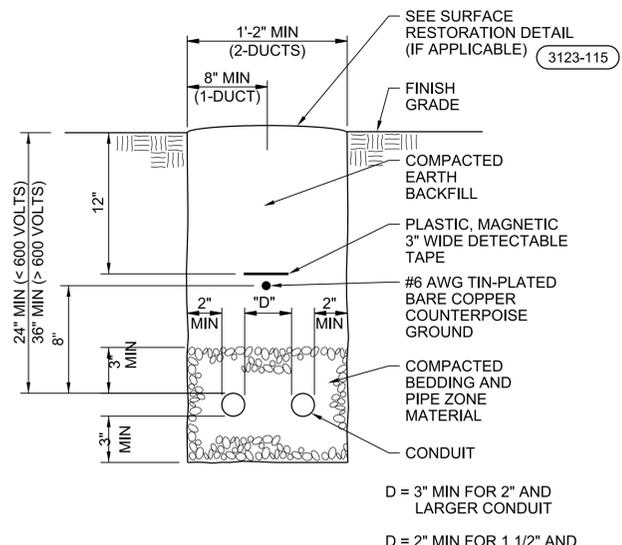
VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 DATE: JULY 2018
 PROJ: 683450
 DWG: 030-E-202
 SHEET: 22 of 30

ADDENDUM

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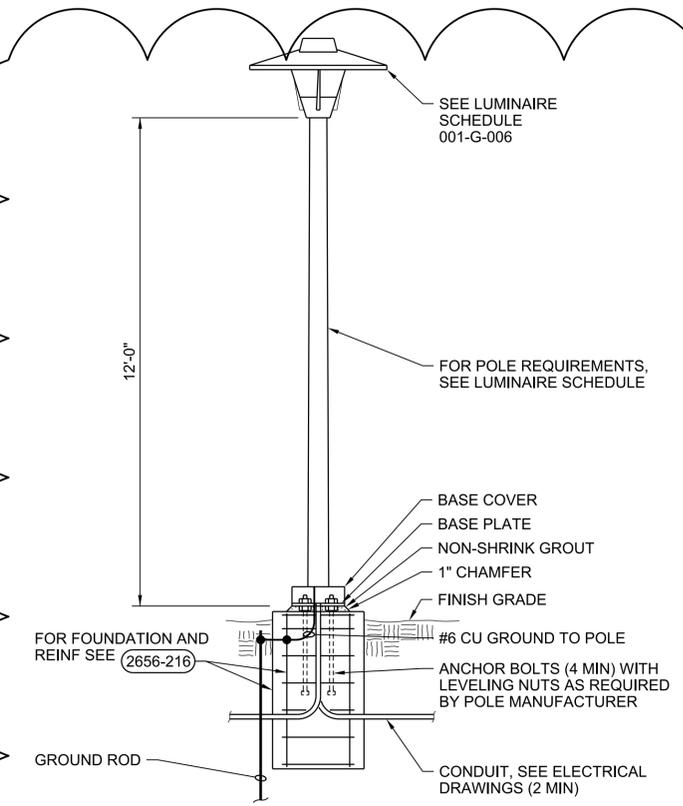


DAVID C. NICHOLSON PE 60201		N ADAMS		DR		A PASTRANA		D NICHOLSON	
PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT		CITY OF KEY WEST		KEY WEST, FLORIDA		REVISION		CHK	
3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 AAC001982		06/29/18		ADDENDUM No. 4		BY		DN	
ELECTRICAL		DATE		NO.		APVD		APVD	
STANDARD DETAILS		2		1		APVD		APVD	
1" = X'		VERIFY SCALE		BAR IS ONE INCH ON ORIGINAL DRAWING.		DATE		JULY 2018	
PROJECT		683450		DWG		095-E-501		SHEET	
28 of 30		PLOT DATE: 7/2/2018		PLOT TIME: 7:57:40 AM		FILENAME: 095-E-5001_683450.dgn		ADDENDUM	



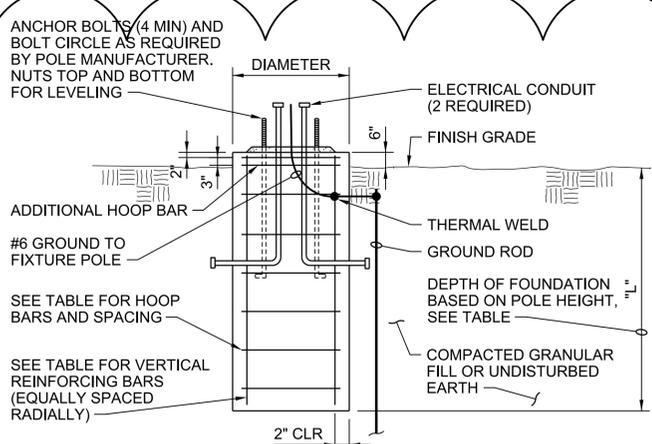
TRENCH AND CONDUIT PLACEMENT
NTS

2605-423c



POST LIGHT FOUNDATION
NTS

2656-200

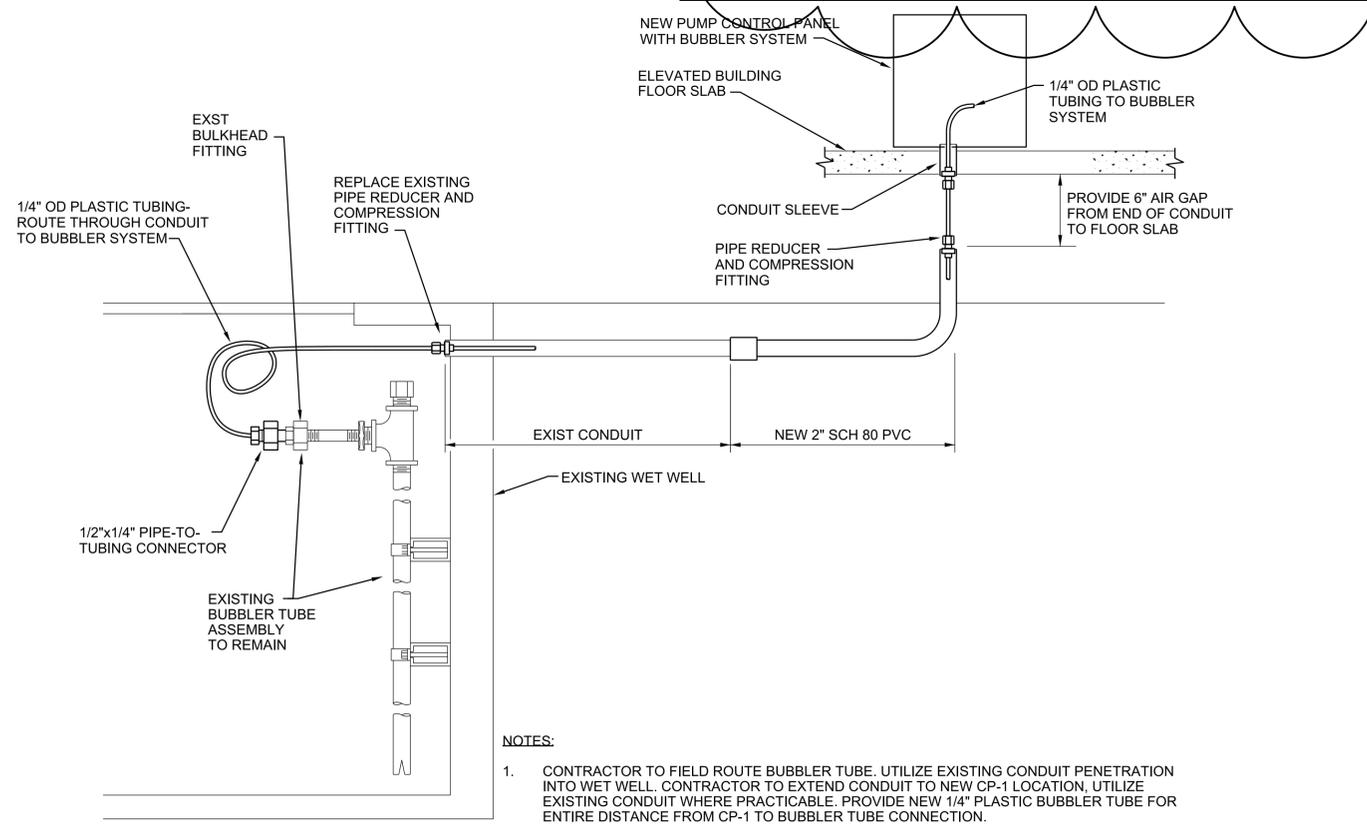


MARK	MAX POLE HEIGHT	DIAMETER	"L"	VERTICAL BARS	HOOP BARS
A	12'-0"	2'-0"	6'-0"	6#8	#4 @ 6"
B	12'-0"	2'-0"	6'-0"	6#8	#4 @ 6"

- NOTES:
- USE STAINLESS STEEL NUTS AND LOCKWASHERS.
 - INSTALL TWO CONDUITS (MINIMUM) PER POLE.
 - INSTALL CENTERLINE OF POLE 3'-0" BEHIND THE FACE OF THE CURB.
 - CONDUITS SHALL BE STUBBED UP TO WITHIN SIX INCHES OF THE POLE HANDHOLE.
 - COORDINATE WITH SITE PLANS FOR PROPER ORIENTATION OF POLE.

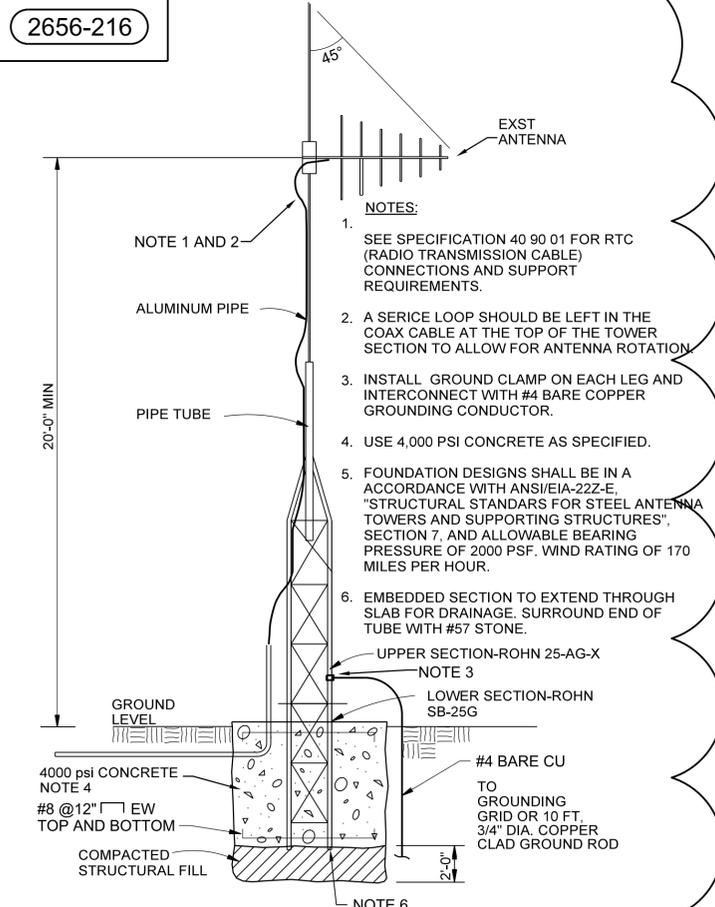
SITE AREA LIGHT POLE FOOTING
NTS

2656-216



BUBBLER INSTALLATION
NTS

4091-241



ANTENNA AND MAST
NTS

4091-412

NO.	DATE	REVISION	CHK	APVD
2	06/28/18	ADDENDUM No. 4	EC	DN

DAVID C. NICHOLSON PE 60201
PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT
CITY OF KEY WEST
KEY WEST, FLORIDA

ELECTRICAL	
STANDARD DETAILS	
1" = X"	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	JULY 2018
PROJ	683450
DWG	095-E-503
SHEET	30 of 30

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