

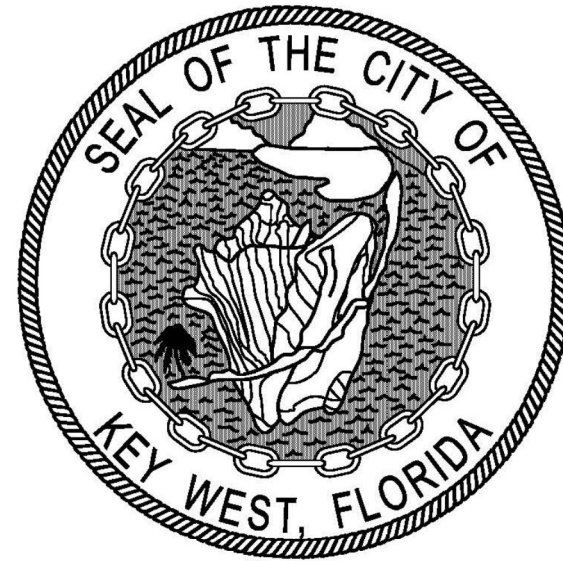
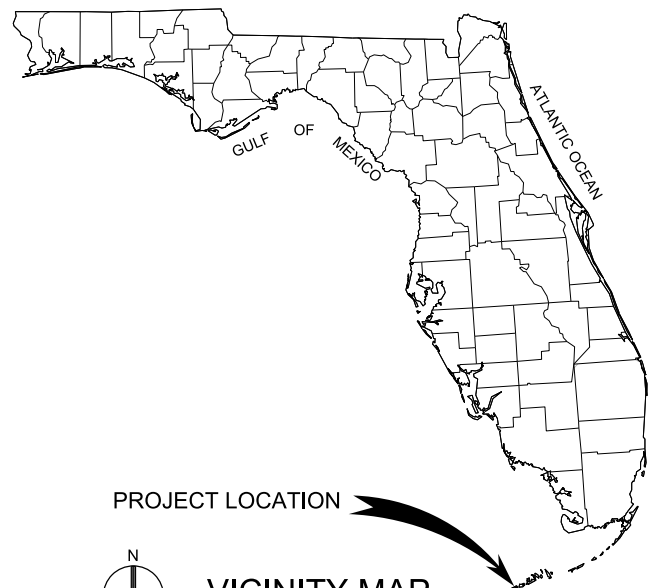
DESIGN DOCUMENTS

FOR THE CONSTRUCTION OF THE

VFD UPGRADES TO WASTEWATER PUMP STATIONS A, B, C, D, AND DA

PREPARED FOR

CITY OF KEY WEST



VOLUME 2 OF 2
DRAWINGS

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CH2M HILL Project No. 476744

APRIL 2015

BID DOCUMENTS

GENERAL SITE NOTES:

- SOURCE OF TOPOGRAPHY SHOWN ON THE CIVIL PLANS ARE BASE MAPS PROVIDED BY AVIROM & ASSOCIATES, INC., AUGUST 2013. EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADJUST WORK PLAN ACCORDINGLY PRIOR TO BEGINNING CONSTRUCTION.
- EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED. NEW FINISH GRADE, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED.
- HORIZONTAL DATUM: NAD 83, STATE PLANE - FLORIDA EAST
- VERTICAL DATUM: NGVD 1929
- ALL UNITS ARE IN US SURVEY FEET.
- MAINTAIN, RELOCATE, OR REPLACE EXISTING SURVEY MONUMENTS, CONTROL POINTS, AND STAKES WHICH ARE DISTURBED OR DESTROYED. PERFORM THE WORK TO PRODUCE THE SAME LEVEL OF ACCURACY AS THE ORIGINAL MONUMENT(S) IN A TIMELY MANNER, AND AT THE CONTRACTOR'S EXPENSE.
- COORDINATE STAGING AREA WITH THE CITY. STAGING AREA SHALL BE FOR CONTRACTOR'S EMPLOYEE PARKING, CONTRACTOR'S EQUIPMENT AND ON-SITE STORAGE OF MATERIALS.
- PROVIDE TEMPORARY FENCING AS NECESSARY TO MAINTAIN SECURITY AT ALL TIMES.
- ELEVATIONS GIVEN ARE TO FINISH GRADE AND PIPE INVERT UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION CONTROL DEVICES DURING CONSTRUCTION.
- CONTRACTOR SHALL TAKE ALL OTHER MEASURES TO POSITIVELY PRECLUDE EROSION MATERIALS FROM LEAVING THE SITE.
- LIMIT CONSTRUCTION OPERATIONS TO WITHIN THE RIGHT-OF-WAY EASEMENTS AND ANY OTHER DESIGNATED WORK AREAS AS INDICATED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DAMAGES AS A RESULT OF CONSTRUCTION ACTIVITIES OUTSIDE OF RIGHT-OF-WAY. EASEMENTS AND ANY OTHER DESIGNATED WORK AREAS SHOWN ON THE DRAWINGS.
- CONTRACTOR SHALL REPLACE ALL PAVEMENTS, PAVEMENT MARKINGS, SIGNS, AND REFLECTIVE MARKERS DISTURBED OR REMOVED DURING CONSTRUCTION.
- TREE AND SHRUB REMOVAL AND/OR TRIMMING MUST BE COMPLETED BY A CITY APPROVED ISA CERTIFIED ARBORIST.
- ALL DISTURBED AREAS NOT PAVED OR COVERED WITH GRAVEL SHALL BE SODDED.

LEGEND

- ANTENNA
- BACK FLOW PREVENTOR VALVE
- BENCHMARK
- BOLLARD (UNLESS NOTED)
- CATCH BASIN
- CONCRETE UTILITY POLE
- DRAINAGE MANHOLE
- ELECTRIC SERVICE BOX
- EXISTING ELEVATION
- METAL LIGHT POLE
- OVERHEAD WIRES
- PARKING METER
- SANITARY MANHOLE
- SEWER VALVE
- SIGN (UNLESS NOTED)
- SPIGOT
- WATER METER
- WATER VALVE
- WOOD UTILITY POLE
- UNDERGROUND DRAINAGE LINE
- UNDERGROUND SEWER LINE
- APPROXIMATE RIGHT-OF-WAY LINE

- BUTTON WOOD (DIAMETER)
- PALM SPECIES (DIAMETER)
- POINCIANA (DIAMETER)
- UNKNOWN SPECIES (DIAMETER)

ABBREVIATIONS

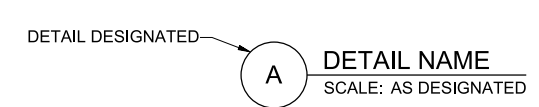
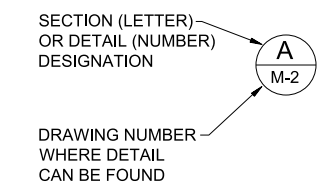
- @ AT
- CLDI CEMENT LINED DUCTILE IRON
- CONC CONCRETE
- DIA DIAMETER
- DR DRIVE OR DIMENSION RATIO
- DFM DRAINAGE FORCE MAIN
- E EAST
- ECC ECCENTRIC
- EL ELEVATION
- EX OR EXST EXISTING
- EW EACH WAY
- HDPE HIGH DENSITY POLYETHYLENE
- HORIZ HORIZONTAL
- INV INVERT
- IP IRON POST
- LT LEFT
- MAX MAXIMUM
- MH MANHOLE
- MIN MINIMUM
- MJ MECHANICAL JOINT
- N NORTH
- NO NUMBER
- NTS NOT TO SCALE
- OC ON CENTER
- OD OUTSIDE DIAMETER
- PL PROPERTY LINE
- PP POWER POLE
- PVC POLYVINYLCHLORIDE
- RCP REINFORCED CONCRETE PIPE
- RD ROAD
- REQD REQUIRED
- RJ RESTRAINED JOINT
- RT RIGHT
- R/W RIGHT OF WAY
- S SOUTH
- SD STORM DRAIN
- SDR STANDARD DIMENSION RATIO
- SPEC'D SPECIFIED
- SS SANITARY SEWER
- SST STAINLESS STEEL
- STA STATION
- T, TEL TELEPHONE
- TYP TYPICAL
- VERT VERTICAL
- W WATER, WEST
- W/ WITH
- WT WEIGHT



LOCATION MAP

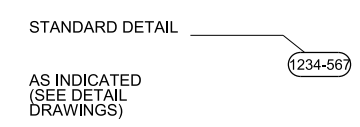
SECTION AND DETAIL IDENTIFICATION

SECTION AND DETAIL DESIGNATORS



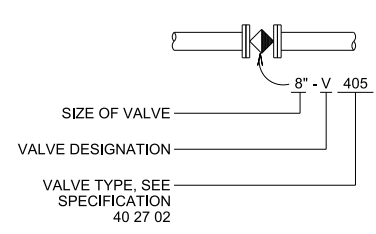
ON DRAWING WHERE DETAIL IS DRAWN:

STANDARD DETAIL DESIGNATION



VALVE DESIGNATIONS

MANUAL VALVES AND CHECK VALVES



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NO.	DATE	DR	CHK	BY	APVD
		R. MORRISON	A. MALONE		R. MORRISON

3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 / AAC001892	KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA
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GENERAL
CIVIL GENERAL NOTES, LEGEND
AND ABBREVIATIONS

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2015
PROJ	476744
DWG	001-G-002
SHEET	of

GENERAL ARCHITECTURAL NOTES

1. UNLESS OTHERWISE INDICATED, PLAN DIMENSIONS ARE INSIDE FACE OF FINISHED WALLS.
2. "FLOOR LINE" REFERS TO TOP OF CONCRETE SLABS. FINISH FLOORING IS INSTALLED ABOVE THE FLOOR LINE. FOR DEPRESSED FLOORS AND CURBS, SEE STRUCTURAL DRAWINGS.
3. REPETITIVE FEATURES ARE NOT DRAWN IN THEIR ENTIRETY AND SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL.
4. WHERE DOOR IS LOCATED NEAR CORNER OF ROOM AND IS NOT LOCATED BY DIMENSION ON PLAN OR DETAILS, DIMENSION SHALL BE 3-INCHES FROM FACE OF STUD (WALL) TO FACE OF ROUGH OPENING. DIMENSION SHALL BE 6" FROM FACE OF WALL TO EDGE OF ROUGH OPENING AT CONCRETE WALLS, 8" AT CMU WALLS.
5. AT SOUND INSULATED WALLS, FULL HEIGHT PARTITIONS SHALL BE SEALED BOTH SIDES WITH ACOUSTIC SEALANT; TOP, BOTTOM, INTERSECTION, DOOR FRAMES, GLAZED OPENING FRAMES, AND OTHER PENETRATIONS.
6. LINE OF EXISTING GRADES, AS SHOWN ON THE BUILDING ELEVATIONS AND SECTIONS ARE APPROXIMATE. THEY ARE AT THE BUILDING FACE, OR ON THE SECTION END EXCEPT AS NOTED.
7. VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT PROVIDED IN THIS CONTRACT, OR BY OTHERS.
8. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER CATEGORIES OR DRAWINGS FOR ADDITIONAL NOTES.
9. VERIFY SIZE AND LOCATION OF, AND PROVIDE: REQUIRED OPENINGS THROUGH FLOORS AND WALLS, ACCESS DOORS, FURRING, CURBS, ANCHORS AND INSERTS .PROVIDE ALL BASES AND BLOCKING REQUIRED FOR ACCESSORIES, MECHANICAL, ELECTRICAL AND OTHER EQUIPMENT.
10. FOR APPLICABLE CODES AND LIFE SAFETY PLAN, SEE PLAN SHEETS.

ARCH/STRUCT MATERIAL SYMBOLS

SYMBOL	LEGEND
	GRATING, SPAN DIRECTION INDICATED
	CHECKERED PLATE
	GROUT
	GRANULAR FILL
	EARTH OR FINISH GRADE
	CONCRETE
	CMU WALL (PLAN)
	CMU WALL (SECTION)
	MASONRY WALL
	METAL STUD WALL (PLAN)
	WOOD STUD WALL (PLAN)
	RIGID INSULATION
	BATT INSULATION
	STEEL
	ALUMINUM
	PLYWOOD
	GYPSUM WALLBOARD
	ACOUSTICAL TILE
	WOOD, ROUGH CONTINUOUS
	WOOD, ROUGH NON-CONTINUOUS
	WOOD, FINISHED

ARCHITECTURAL/STRUCTURAL LEGEND

SYMBOL	LEGEND
	GRID / COLUMN INDICATOR
	ROOM IDENTIFIER
	DOOR IDENTIFIER
	WINDOW IDENTIFIER
	RELIGHT IDENTIFIER
	LOUVER IDENTIFIER
	WALL TYPE INDICATOR
	SIGNAGE IDENTIFIER
	INTERIOR ELEVATION INDICATOR
	SPOT ELEVATION INDICATOR (IN FEET)
	ELEVATION DATUM (IN FEET)
	DIRECTION OF SLOPE DOWN
	HATCH SWING INDICATOR
	INDICATES PAIR OF DOORS (DOOR # ON ACTIVE)
	FIRE EXTINGUISHER "X" = NUMBER IN SPECIFICATIONS
	CONTROL JOINT
	EXPANSION JOINT "X" = DIMENSION
	RAILINGS
	PRECAST PANEL IDENTIFIER
	SLAB INDICATOR
	COLUMN INDICATOR
	WALL INDICATOR
	BEAM INDICATOR

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KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

CH2MHILL®

GENERAL
ARCHITECTURAL
GENERAL NOTES, SYMBOLS
AND LEGEND

B. TRAUTWEIN
DR

P. DENNING
CHK

T. DODGE
APVD

B. TRAUTWEIN
BY

NO. DATE

REVISION

APVD

VERIFY SCALE

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SHEET	XX of XX

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BID DOCUMENTS

DESIGN CRITERIA

1. APPLICABLE CODE: 2009 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE STATE OF FLORIDA (2010 FL BUILDING CODE WITH 2009 AMENDMENTS) AND ALL OTHER APPLICABLE LOCAL AGENCIES.
2. LIVE LOADS:
STAIR AND LANDING LIVE LOAD 100 PSF
FLOOR LIVE LOAD 300 PSF
3. WIND LOAD: (ASCE 7-10)
ULTIMATE WIND SPEED (3-SECOND GUST) = 200 MPH
EXPOSURE = C
RISK CATEGORY = III
4. SOIL DESIGN PARAMETERS:
A. NET ALLOWABLE SOIL BEARING PRESSURES:
2000 PSF

GENERAL INFORMATION

1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 "ABBREVIATIONS AND ACRONYMS: PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.
3. DETAILING AND DIMENSIONS OF EXISTING STRUCTURES SHOWN ARE BASED ON AS-BUILT DESIGN DRAWINGS, AND DO NOT NECESSARILY REPRESENT THE AS-CONSTRUCTED CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND DETAILING OF THE EXISTING STRUCTURES PRIOR TO FABRICATION OF ADJACENT FRAMING OR CONNECTIONS OR SUPPORTS THAT ARE AFFECTED BY THE EXISTING STRUCTURE.
4. STRUCTURAL MEMBERS SHALL NOT BE CUT OR MODIFIED FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
5. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.

FORMWORK, SHORING AND BRACING

1. STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. DESIGN SHOWN DOES NOT INCLUDE NECESSARY COMPONENTS OR EQUIPMENT FOR STABILITY OF THE STRUCTURES DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM THE WORK SHOWN.
2. TEMPORARY SHORING SHALL REMAIN IN PLACE UNTIL ELEVATED CONCRETE FLOOR OR SLABS HAVE REACHED 80 PERCENT OF THE 28 DAY DESIGN STRENGTH AS DETERMINED BY CYLINDER BREAKS.

CONCRETE REINFORCING

1. MINIMUM REINFORCING FOR ALL CONCRETE WALLS AND SLABS SHALL BE AS FOLLOWS:

WALL THICKNESS	REINF EACH WAY	LOCATION
6"	#4@12"	CENTERED
8"	#5@12"	CENTERED
10"	#4@12"	EACH FACE
12"	#5@12"	EACH FACE

PROVIDE LARGER SIZES AND MORE REINFORCING IN SECTIONS OF CONCRETE WHERE REQUIRED BY THE DETAILS ON THE DRAWINGS OR BY THE SPECIFICATIONS.

2. CLEARANCE FOR REINFORCEMENT BARS, UNLESS SHOWN OTHERWISE, SHALL BE:
WHEN PLACED ON GROUND: 3"
ALL OTHER CONCRETE SURFACES: 2"
3. 90 DEGREE BENDS, UNLESS OTHERWISE SHOWN, SHALL BE ACI 318 STANDARD HOOKS.
4. REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

CONCRETE DESIGN STRENGTH = 4,000 PSI **		GRADE 60 REINFORCING STEEL									
BAR SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11	
LAP SPLICE LENGTH											
SPACING<6"	TOP BAR *	1'-4"	2'-0"	3'-0"	4'-0"	5'-10"	6'-8"	7'-7"	8'-6"	9'-5"	
	OTHER BAR	1'-4"	1'-7"	2'-4"	3'-1"	4'-6"	5'-2"	5'-10"	6'-7"	7'-3"	
SPACING≥6"	TOP BAR *	1'-4"	1'-6"	2'-0"	2'-5"	3'-6"	4'-0"	5'-0"	6'-2"	7'-5"	
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"	
EMBEDMENT LENGTH											
SPACING<6"	TOP BAR *	1'-0"	1'-7"	2'-4"	3'-1"	4'-6"	5'-2"	5'-10"	6'-7"	7'-3"	
	OTHER BAR	1'-0"	1'-3"	1'-9"	2'-5"	3'-6"	4'-0"	4'-6"	5'-1"	5'-7"	
SPACING≥6"	TOP BAR *	1'-0"	1'-3"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"	
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-1"	2'-5"	3'-0"	3'-8"	4'-5"	

* TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.

** WHERE 3000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16 PERCENT

CONCRETE

1. 28-DAY CAST-IN-PLACE CONCRETE STRENGTHS:
TYPICAL: 5000 PSI
2. REINFORCING STEEL:
TYPICAL: ASTM A615, GRADE 60
3. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
4. ROUGHEN AND CLEAN CONSTRUCTION JOINTS IN WALLS AND SLABS AS SPECIFIED PRIOR TO PLACING ADJACENT CONCRETE.
5. THE CONTRACTOR SHALL COORDINATE PLACEMENT OF OPENINGS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.
6. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.

WELDING

1. WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS), LATEST EDITION:
2. BUTT JOINT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) UNLESS INDICATED OTHERWISE.

FOUNDATIONS

1. ALL FOUNDATION BEARING SURFACES SHALL BE INSPECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER OR HIS DESIGNEE PRIOR TO PLACEMENT OF FORMWORK OR REINFORCEMENT. THE INSPECTION SHALL VERIFY THAT THE EXPOSED SUBGRADE IS ADEQUATE. SEE SOIL DESIGN PARAMETERS THIS SHEET.

METAL FABRICATIONS

1. ALUMINUM SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:
STRUCTURAL SHAPES B308
PLATES B209
2. ANCHOR BOLTS (AB)
STAINLESS STEEL F593, AISI TYPE 316, CONDITION CW
3. ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE CLEAN AND FREE OF OIL, DIRT AND PAINT.
4. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. NO CUTTING OR BURNING OF STRUCTURAL STEEL IS PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

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GENERAL
STRUCTURAL NOTES

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KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

BID DOCUMENTS

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	0" = 1"
DATE	APRIL 2015
PROJ	476744
DWG	001-G-004
SHEET	of

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
CONTROL DIAGRAMS-1	
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	PUSH BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK
	3 POSITION SELECTOR SWITCH MAINTAINED CONTACT
	SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION WHEN NEEDED FOR CLARITY:
	TOGGLE SWITCH, ON-OFF TYPE
	SELECTOR SWITCH, ON-OFF TYPE
	MUSHROOM HEAD SWITCH
	INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR
	INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN S - STROBE B - BLUE R - RED C - CLEAR W - WHITE
	ELAPSED TIME METER
	MOTOR STARTER CONTACTOR COIL
	CONTROL RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
	TIME DELAY RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
	SOLENOID VALVE, X INDICATES NUMERICAL ORDER IN CIRCUIT
	CONTACT - NORMALLY OPEN
	CONTACT - NORMALLY CLOSED
	REMOTE DEVICE
	TIME DELAY RELAY CONTACT, NORMALLY OPEN, CLOSES WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, NORMALLY CLOSED, OPENS WHEN ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, CLOSES WHEN ENERGIZED, OPENS WHEN DE-ENERGIZED AND TIMED OUT
	TIME DELAY RELAY CONTACT, OPENS WHEN ENERGIZED, CLOSES WHEN DE-ENERGIZED AND TIMED OUT
	MOTOR SPACE HEATER
	TERMINAL BLOCK, REMOTE
	TERMINAL BLOCK, INTERNAL
	FUSED TERMINAL BLOCK
	FUSE, RATING INDICATED
	TRANSFORMER, CONTROL POWER
	THERMOCOUPLE

SYMBOL	DESCRIPTION
CONTROL DIAGRAMS-2	
	CAPACITOR
	BATTERY
	LIMIT SWITCH, NORMALLY OPEN, CLOSES AT END OF TRAVEL
	LIMIT SWITCH, NORMALLY CLOSED, OPENS AT END OF TRAVEL
	TEMPERATURE SWITCH, OPENS ON TEMPERATURE RISE
	TEMPERATURE SWITCH, CLOSES ON TEMPERATURE RISE
	FLOAT SWITCH, NORMALLY OPEN, CLOSES ON DESCENDING LEVEL
	FLOAT SWITCH, NORMALLY OPEN, CLOSES ON RISING LEVEL
	PRESSURE SWITCH, NORMALLY CLOSED, OPENS ON RISING PRESSURE
	PRESSURE SWITCH, NORMALLY OPEN, CLOSES ON RISING PRESSURE
	FLOW SWITCH, CLOSES ON INCREASED FLOW
	FLOW SWITCH, OPENS ON INCREASED FLOW
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.	

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 NICKEL CADMIUM EMERGENCY BATTERY BACKUP. SELF TEST DIAGNOSTIC WITH INDICATOR LIGHT, UL LISTED NEMA 4X AND NFPA 101 RATED, LED, HALOPHANE DELEONE 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-5K-3-035-4-BOC, OR APPROVED EQUAL.
	POLE MOUNTED LUMINAIRE

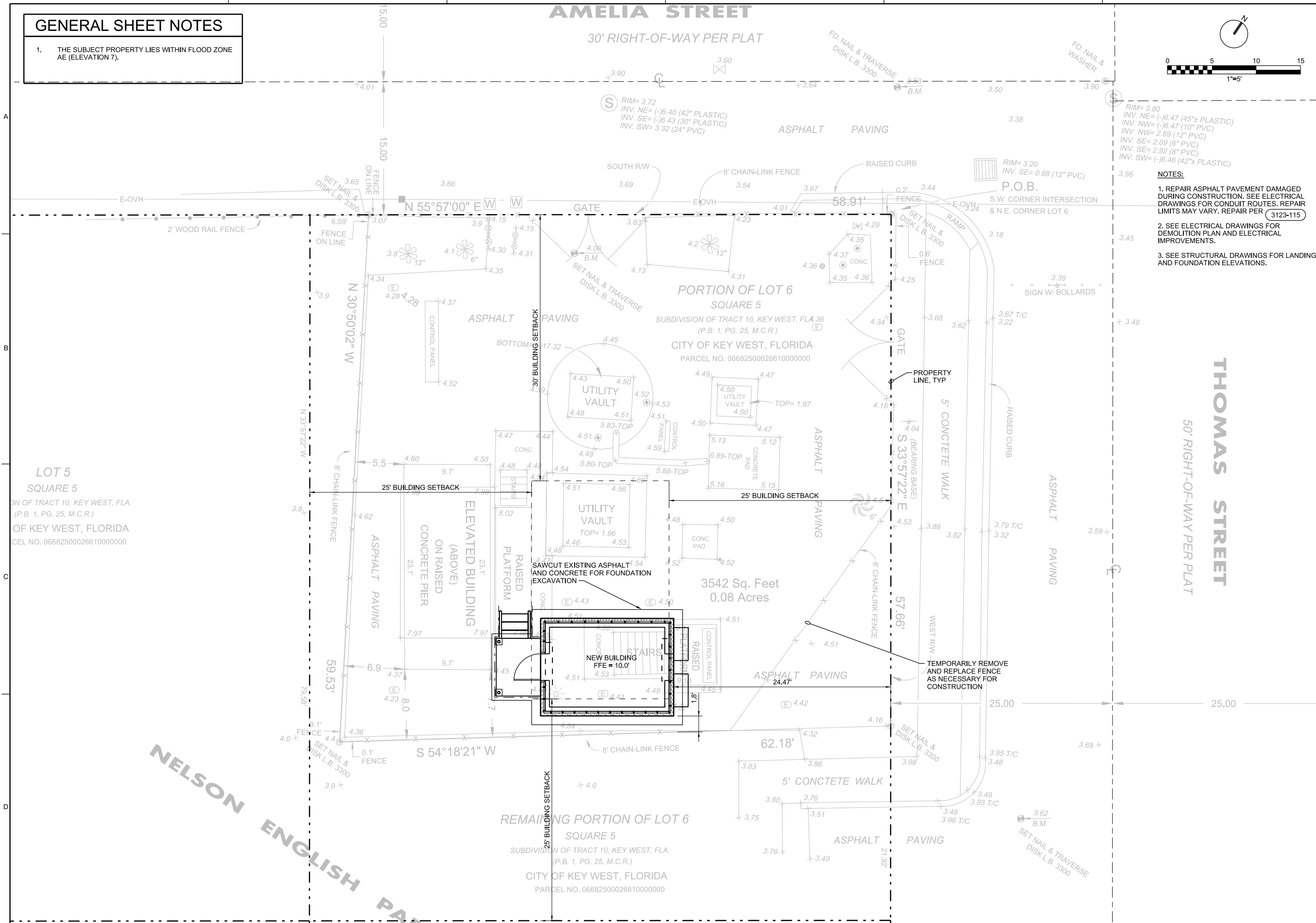
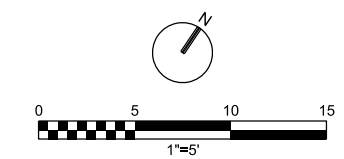
CH2MHILL®	
GENERAL ELECTRICAL LEGEND	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2015
PROJ	476744
DWG	001-G-005
SHEET	XX of XX

GENERAL SHEET NOTES

1. THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE AE (ELEVATION 7).

AMELIA STREET

30' RIGHT-OF-WAY PER PLAT



RIM= 3.80
 INV. NE= (-)6.47 (45"± PLASTIC)
 INV. NW= (-)6.47 (10" PVC)
 INV. SE= 2.69 (6" PVC)
 INV. SW= 2.92 (8" PVC)
 INV. SW= (-)6.46 (42"± PLASTIC)

- NOTES:**
1. REPAIR ASPHALT PAVEMENT DAMAGED DURING CONSTRUCTION. SEE ELECTRICAL DRAWINGS FOR CONDUIT ROUTES. REPAIR LIMITS MAY VARY. REPAIR PER (3123-115)
 2. SEE ELECTRICAL DRAWINGS FOR DEMOLITION PLAN AND ELECTRICAL IMPROVEMENTS.
 3. SEE STRUCTURAL DRAWINGS FOR LANDING AND FOUNDATION ELEVATIONS.

LOT 5
 SQUARE 5
 PORTION OF TRACT 10, KEY WEST, FLA.
 (P.B. 1, PG. 25, M.C.R.)
 CITY OF KEY WEST, FLORIDA
 PARCEL NO. 06682500026610000000

PORTION OF LOT 6
 SQUARE 5
 SUBDIVISION OF TRACT 10, KEY WEST, FLA.36
 (P.B. 1, PG. 25, M.C.R.)
 CITY OF KEY WEST, FLORIDA
 PARCEL NO. 06682500026610000000

REMAINING PORTION OF LOT 6
 SQUARE 5
 SUBDIVISION OF TRACT 10, KEY WEST, FLA.
 (P.B. 1, PG. 25, M.C.R.)
 CITY OF KEY WEST, FLORIDA
 PARCEL NO. 06682500026610000000

NO.	DATE	DR	CHK	REVISION

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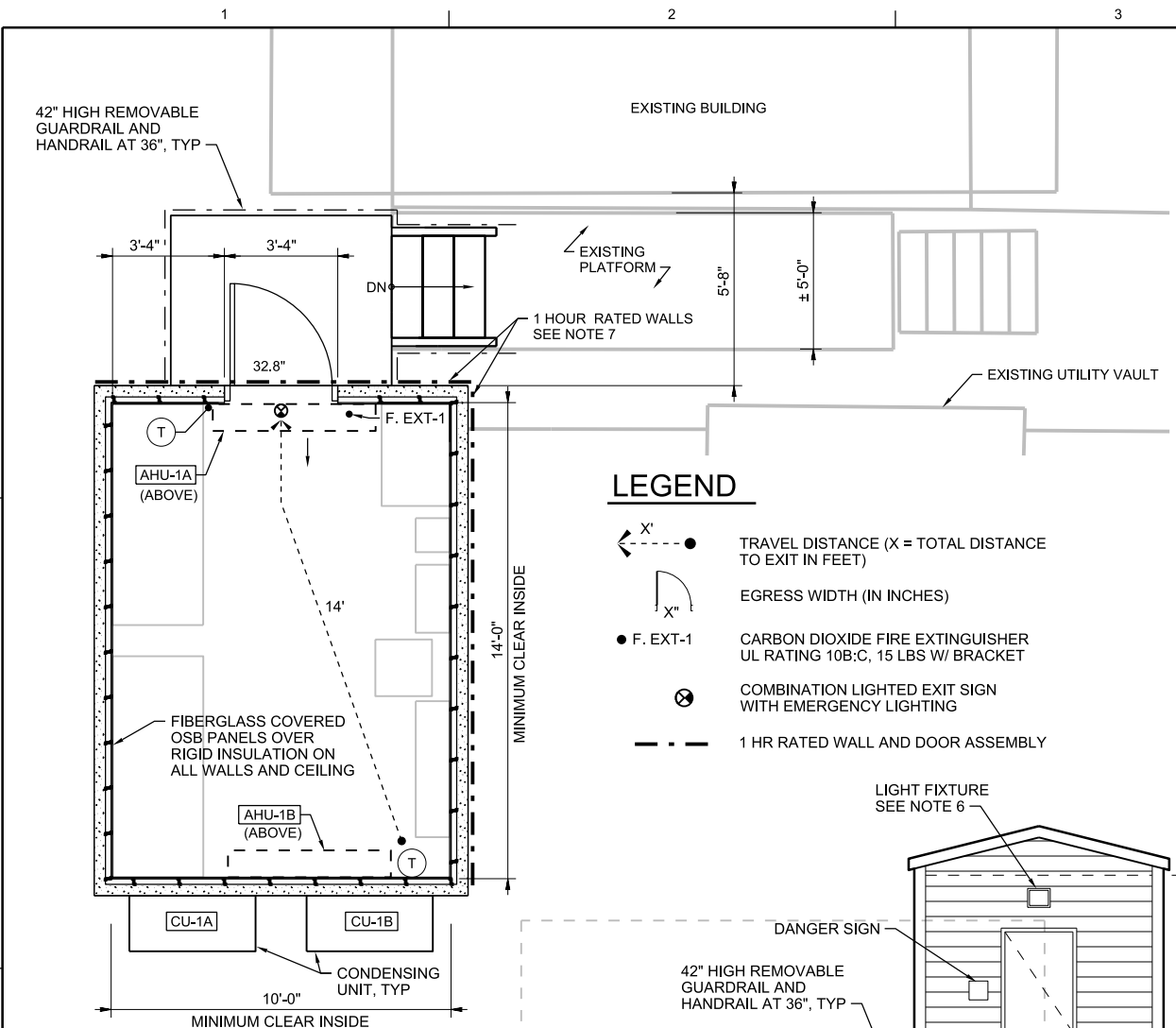
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 KEY WEST, FLORIDA
 CITY OF KEY WEST
 KEY WEST, FLORIDA

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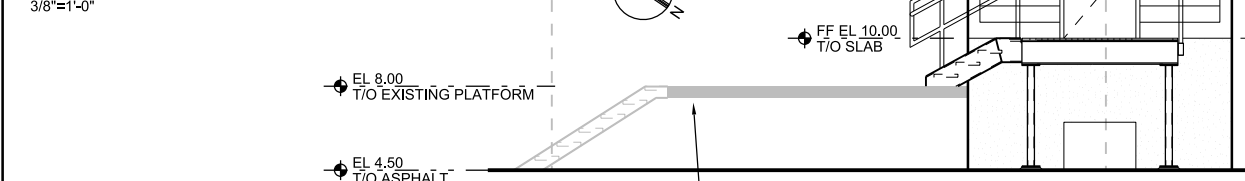
CIVIL
PUMP STATION A
SITE PLAN

VERIFY SCALE	
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DATE	APRIL 2015
PROJ	476744
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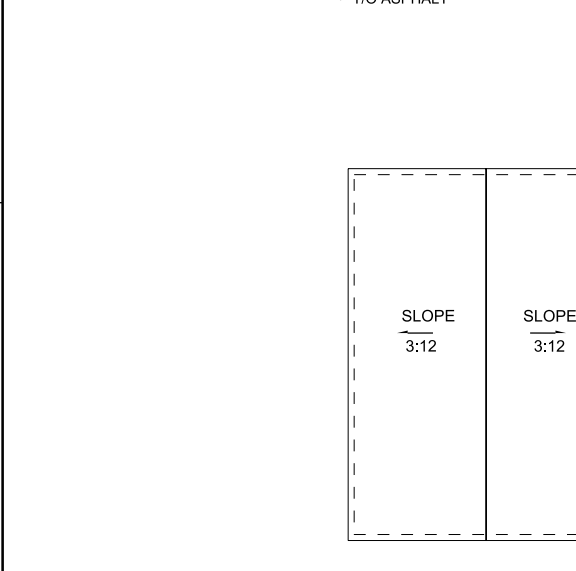
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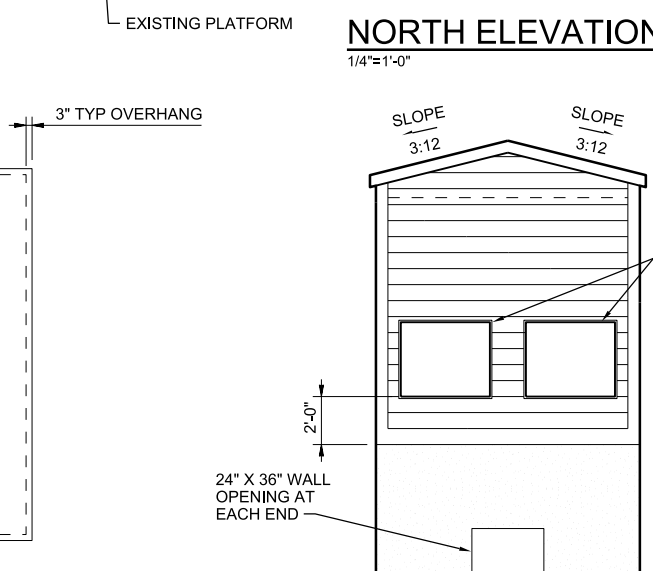
FLOOR PLAN / LIFE SAFETY PLAN
3/8"=1'-0"



NORTH ELEVATION
1/4"=1'-0"



ROOF PLAN
1/4"=1'-0"



SOUTH ELEVATION
1/4"=1'-0"

APPLICABLE CODES:

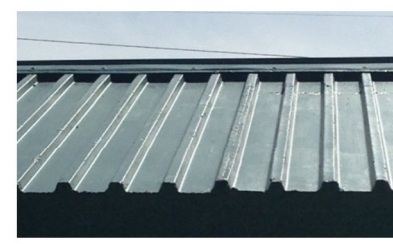
FLORIDA BUILDING CODE, 2010 EDITION
FLORIDA FIRE PREVENTION CODE, 2010 EDITION
NATIONAL ELECTRIC CODE, CURRENT EDITION

GENERAL NOTES:

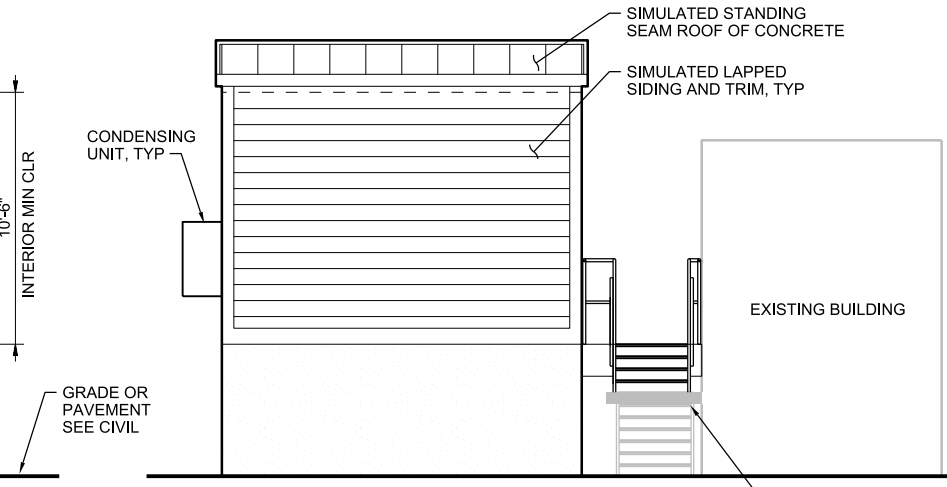
- THIS BUILDING IS A PRE-ENGINEERED CONCRETE BUILDING. SEE SPECIFICATION SECTION 13 34 23
- ALL DOORS, FRAMES, HARDWARE, LOUVERS AND OTHER APPURTENANCES ARE TO COMPLY WITH THE REQUIREMENTS FOR CLADDING COMPONENTS IN THE HIGH VELOCITY WIND ZONE. SEE SPECIFICATION 13 34 23.
- FOR FIRE EXTINGUISHER INFORMATION, SEE LEGEND.
- BUILDING EXTERIOR TEXTURE AND COLORS TO BE SELECTED BY THE ARCHITECT OR OWNER.
- SEE STRUCTURAL DRAWINGS FOR FOUNDATION, WALK-OFF SLAB, PLATFORM AND STAIRS.
- PROVIDE SMOOTH MOUNTING SURFACE FOR EXTERIOR WALL MOUNTED EQUIPMENT.
- 1 HOUR RATED CONCRETE WALL AND DOOR ASSEMBLY ADJACENT TO EXISTING BLDG. MANUFACTURER TO MEET REQUIRED CONCRETE THICKNESS FOR A ONE HOUR RATED EXTERIOR CONCRETE WALL AS DEFINED IN THE FLORIDA BUILDING CODE IN TABLE 720.1(2) UNDER 4-1-1 SOLID CONCRETE WALLS.
- PROVIDE AHU-1A&B WITH CONDENSATE DRAIN LINES FULL SIZE OF UNIT CONNECTION AND ROUTE OUTSIDE THE BUILDING INTO DRYWELL. CONTRACTOR SHALL FIELD VERIFY BEST LOCATION FOR DRYWELL.



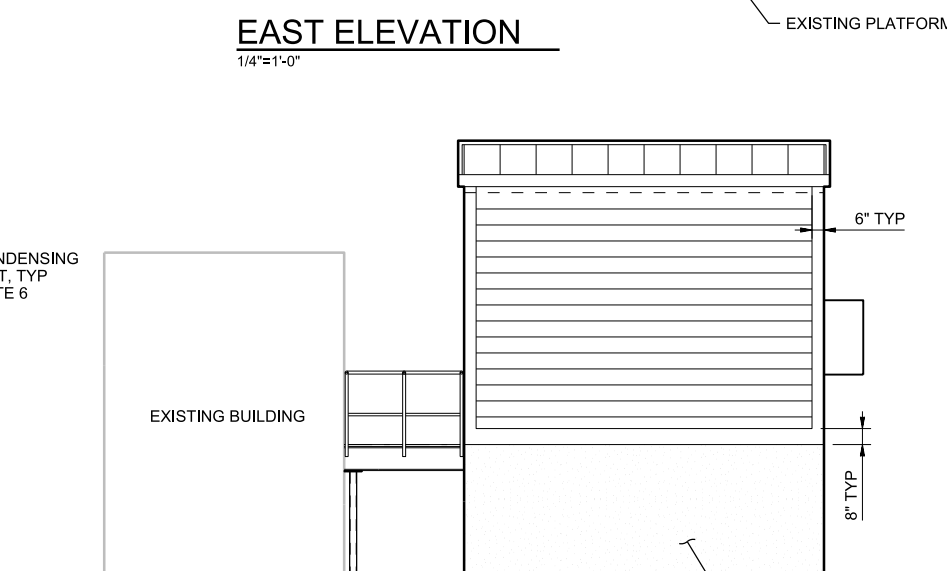
CONCRETE FORMLINER WALL FINISH
NTS



CONCRETE FORMLINER ROOF FINISH
NTS



EAST ELEVATION
1/4"=1'-0"



WEST ELEVATION
1/4"=1'-0"

CODE DATA 2010 FLORIDA BUILDING CODE

BUILDING: PUMP STATION A	
GENERAL INFORMATION	
USE AND OCCUPANCY CLASSIFICATION (CHAPTER 3)	F-2 FACTORY INDUSTRIAL MODERATE HAZARD
CONSTRUCTION CLASSIFICATION (CHAPTER 6)	VB

AREA AND HEIGHT LIMITATIONS	
MAXIMUM ALLOWABLE AREA (TABLE 503)	F-1: 8,500 SF 1 STORY
ACTUAL AREA:	140 SF
ACTUAL PER FLOOR:	BASEMENT NA
	FIRST 140 SF
	SECOND NA
MAXIMUM ALLOWABLE STORIES (TABLE 503)	1 STORY
ACTUAL NUMBER OF STORIES	1 STORY
MAXIMUM ALLOWABLE HEIGHT (TABLE 503)	40 FEET
ACTUAL HEIGHT:	18 FEET

OCCUPANCY / EGRESS INFORMATION	
DESIGN OCCUPANCY (TABLE 1004.1.1)	140SF / 100 SF/PERSON= 2 PERSONS (FOR MAINTENANCE PURPOSES ONLY)
EGRESS WIDTH BASED ON OCCUPANCY	.2 X 4 = .8 32.8" MINIMUM PROVIDED
ALLOWABLE DEAD END LENGTH (TABLE 1017.3)	20 FEET
NUMBER OF EXITS	1
ALLOWABLE COMMON PATH OF TRAVEL (1014.3)	75 FEET
MAX TRAVEL DISTANCE ALLOWED (TABLE 1016.1)	200 FEET (F-1)

REQUIRED FIRE RESISTANT RATINGS	
BUILDING ELEMENTS (TABLE 601)	VB
STRUCTURAL FRAME	0 RATING
EXTERIOR BEARING WALLS	0 HOURS
INTERIOR BEARING WALLS	NA
INTERIOR NON-BEARING WALLS	NA
FLOOR CONSTRUCTION	0 RATING
ROOF CONSTRUCTION	0 RATING
SHAFT ENCLOSURE (707.4)	NA
STAIRWAY ENCLOSURE (1020.1)	NA
CORRIDOR (TABLE 1016.1)	NA
NON-SEPARATED OCCUPANCIES (508.3.2)	NA
ACCESSORY OCCUPANCIES (508.3.1)	NA
REQUIRED FIRE RESISTANCE RATINGS OF EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE (TABLE 602)	1 HOUR RATING

PLUMBING	
PLUMBING:	NONE
FIRE PROTECTION	
SPRINKLERS	NOT PROVIDED
FIRE EXTINGUISHERS	PROVIDED
EXIT LIGHTS	PROVIDED

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 ARCHITECTURAL/MECHANICAL
 PUMP STATION A
 LIFE SAFETY / FLOOR PLAN
 ELEVATIONS AND CODE DATA

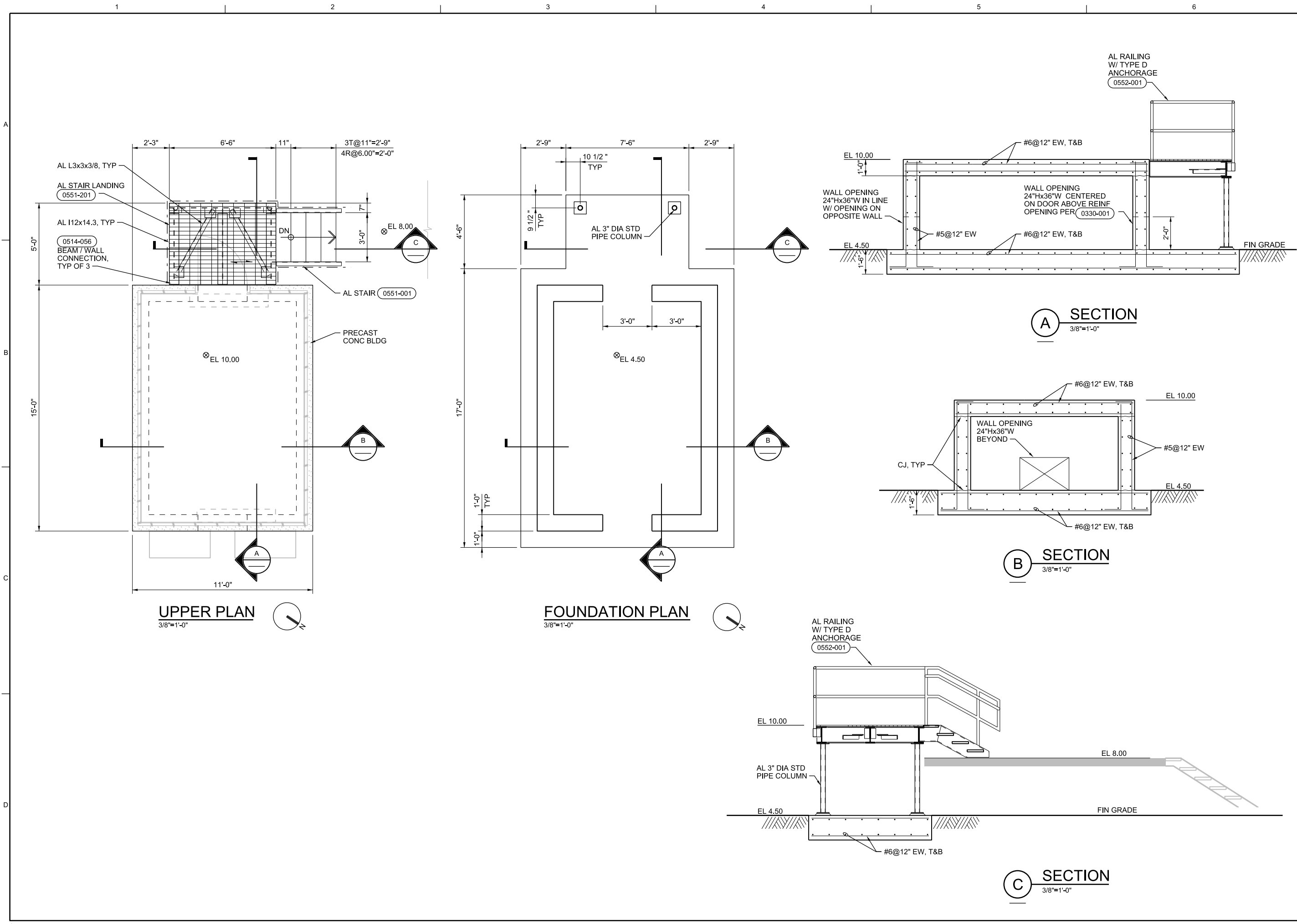
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 Beth Trautwein, AIA, 913388

KEY WEST VFD UPGRADE
 KEY WEST, FLORIDA
 CITY OF KEY WEST
 KEY WEST, FLORIDA

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AS NOTED
 VERIFY SCALE
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 DATE: APRIL 2015
 PROJ: 476744
 DWG: 010-A-201
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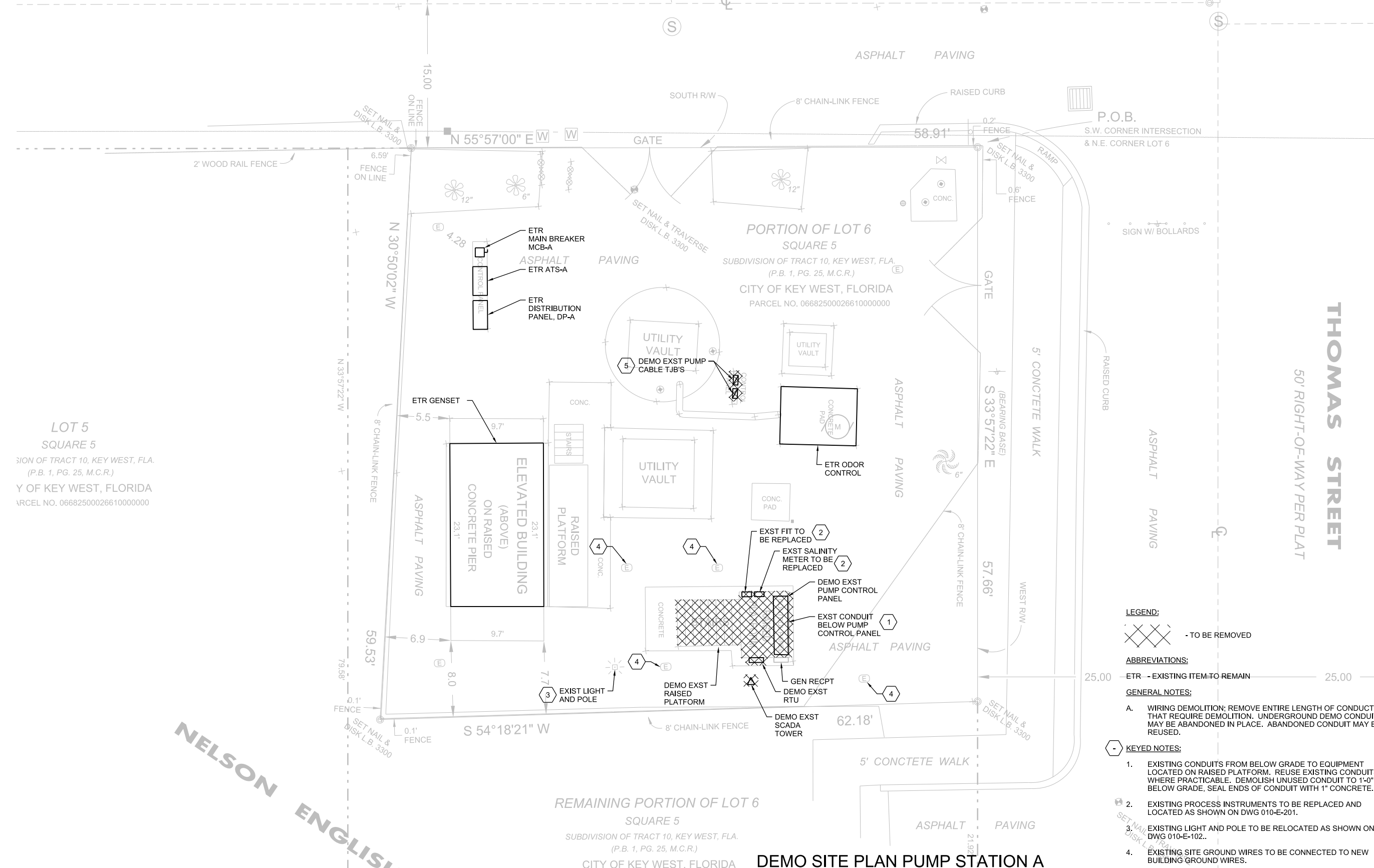
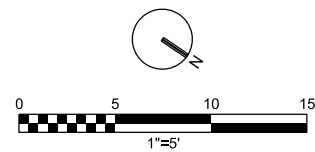
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3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 AAC001892		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA		STRUCTURAL PUMP STATION A PLANS AND SECTIONS	
NO.	DATE	DR	CHK	REVISION	BY
		S TROYAN	R FRIBERG		S TROYAN
			M CHRZANOWSKI		
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AMELIA STREET

30' RIGHT-OF-WAY PER PLAT



LOT 5
SQUARE 5
SUBDIVISION OF TRACT 10, KEY WEST, FLA.
(P.B. 1, PG. 25, M.C.R.)
CITY OF KEY WEST, FLORIDA
PARCEL NO. 0668250002661000000

PORTION OF LOT 6
SQUARE 5
SUBDIVISION OF TRACT 10, KEY WEST, FLA.
(P.B. 1, PG. 25, M.C.R.)
CITY OF KEY WEST, FLORIDA
PARCEL NO. 0668250002661000000

REMAINING PORTION OF LOT 6
SQUARE 5
SUBDIVISION OF TRACT 10, KEY WEST, FLA.
(P.B. 1, PG. 25, M.C.R.)
CITY OF KEY WEST, FLORIDA
PARCEL NO. 0668250002661000000

DEMO SITE PLAN PUMP STATION A

- LEGEND:**
 - TO BE REMOVED
- ABBREVIATIONS:**
 ETR - EXISTING ITEM TO REMAIN
- GENERAL NOTES:**
 A. WIRING DEMOLITION: REMOVE ENTIRE LENGTH OF CONDUCTORS THAT REQUIRE DEMOLITION. UNDERGROUND DEMO CONDUIT MAY BE ABANDONED IN PLACE. ABANDONED CONDUIT MAY BE REUSED.
- KEYED NOTES:**
 1. EXISTING CONDUITS FROM BELOW GRADE TO EQUIPMENT LOCATED ON RAISED PLATFORM. REUSE EXISTING CONDUITS WHERE PRACTICABLE. DEMOLISH UNUSED CONDUIT TO 1'-0" BELOW GRADE, SEAL ENDS OF CONDUIT WITH 1" CONCRETE.
 2. EXISTING PROCESS INSTRUMENTS TO BE REPLACED AND LOCATED AS SHOWN ON DWG 010-E-201.
 3. EXISTING LIGHT AND POLE TO BE RELOCATED AS SHOWN ON DWG 010-E-102..
 4. EXISTING SITE GROUND WIRES TO BE CONNECTED TO NEW BUILDING GROUND WIRES.
 5. REMOVE EXISTING PUMP CABLES TJB. PROTECT CABLES FROM DAMAGE.

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ELECTRICAL
 PUMP STATION A
 SITE DEMOLITION
 PLAN

VERIFY SCALE
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 0 1" 1"

DATE APRIL 2015
 PROJ 476744
 DWG 010-E-101
 SHEET of

NELSON ENGLISH

GENERAL NOTES:

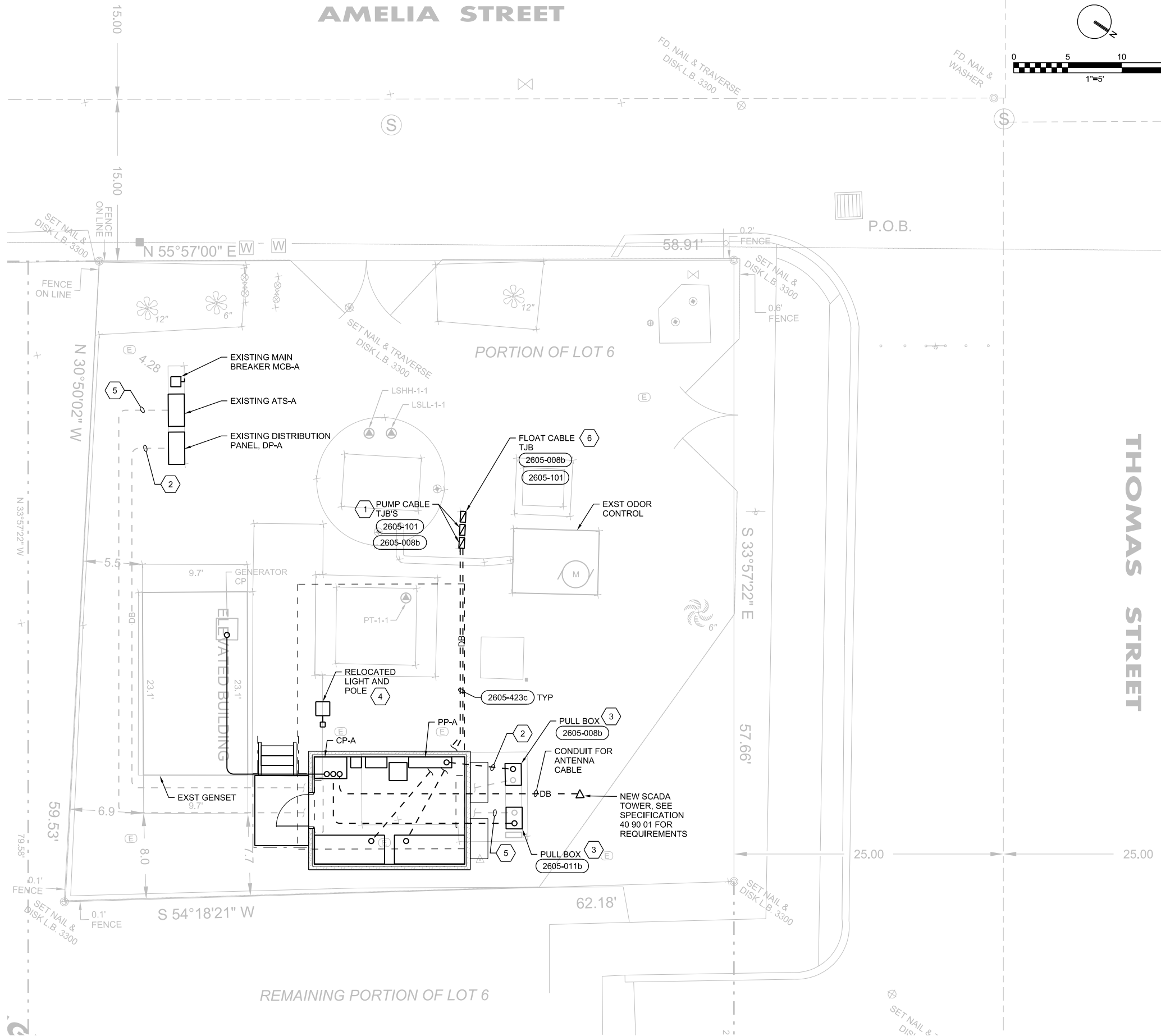
- A. DO NOT SCALE ELECTRICAL DRAWING. REFER TO THE CIVIL, ARCHITECTURAL/MECHANICAL, STRUCTURAL DRAWINGS AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACTLY LOCATION OF ALL EQUIPMENT.
- B. ALL WORK SHALL COMPLY WITH THE NEC AND LOCAL CODES.
- C. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND 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. REFER TO SPECIFICATION SECTION 26 41 00 FOR FACILITY LIGHTNING PROTECTION SYSTEM REQUIREMENTS.
- F. COORDINATE ELECTRICAL UTILITY SERVICE REQUIREMENTS WITH KEYS ENERGY.

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).

KEYED NOTES:

- 1. REPLACE EXST PUMP CABLE JB'S WITH NEW JB'S LOCATED OUTSIDE OF HAZARDOUS AREAS.
- 2. REUSE EXISTING CONDUIT FROM DISTRIBUTION PANEL TO LOCATION OF DEMOED PUMP CONTROL PANEL, EXTEND CONDUIT TO PP-A.
- 3. NEMA 4X 316 STAINLESS STEEL PULLBOX.
- 4. CONTROLLED VIA LIGHT SWITCH 'c', AT THE FOOT OF THE STAIR. SEE DRAWING 010-E-201.
- 5. REUSE EXISTING CONDUIT FROM MAIN BREAKER MCB-A TO LOCATION OF REMOVED RTU PANEL, EXTEND CONDUIT TO PUMP CONTROL PANEL CP-A.
- 6. LOCATED OUTSIDE OF HAZARDOUS AREAS.



SITE PLAN PUMP STATION A
1"=5'-0"

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ELECTRICAL
**PUMP STATION A
SITE PLAN**

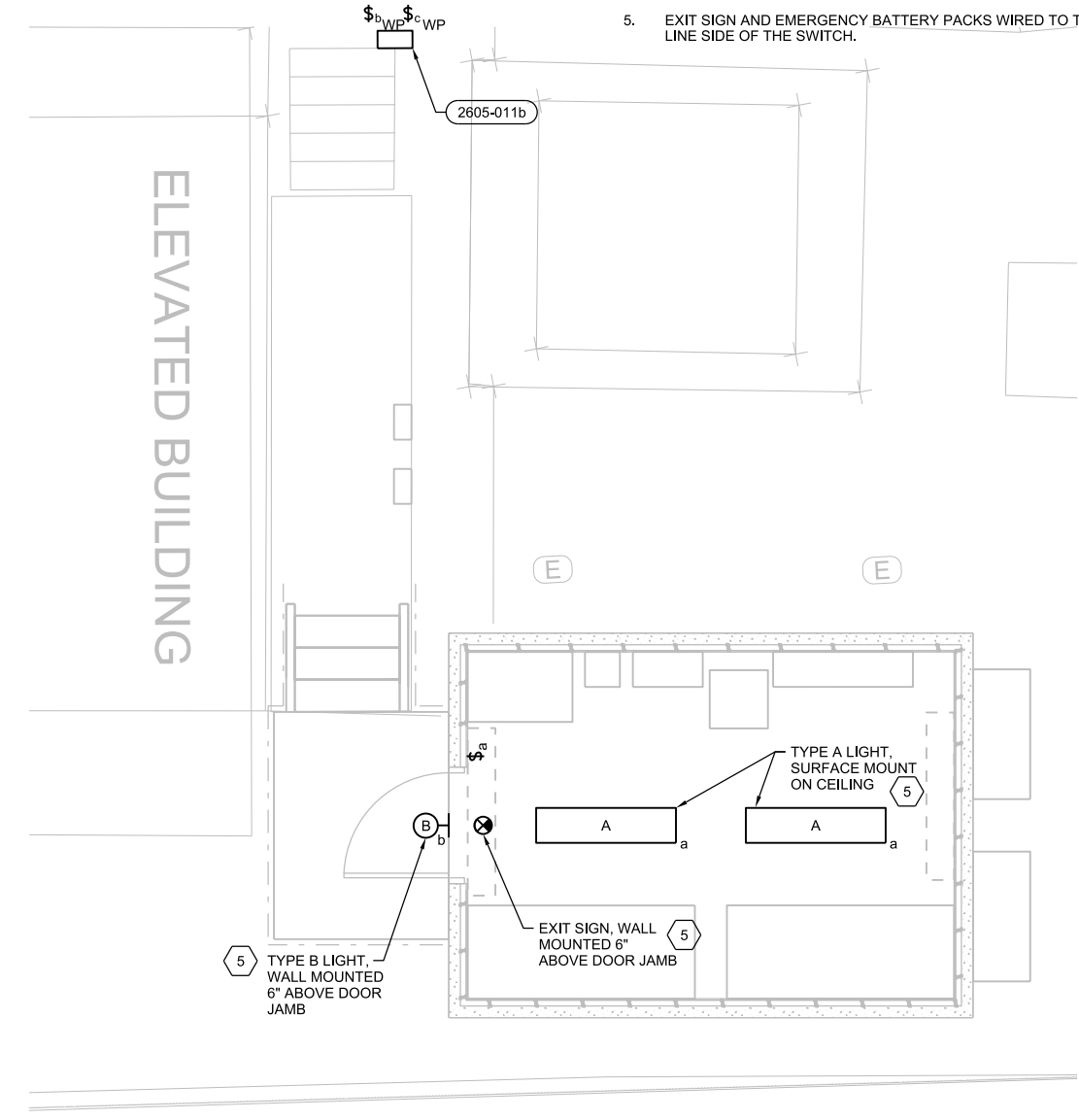
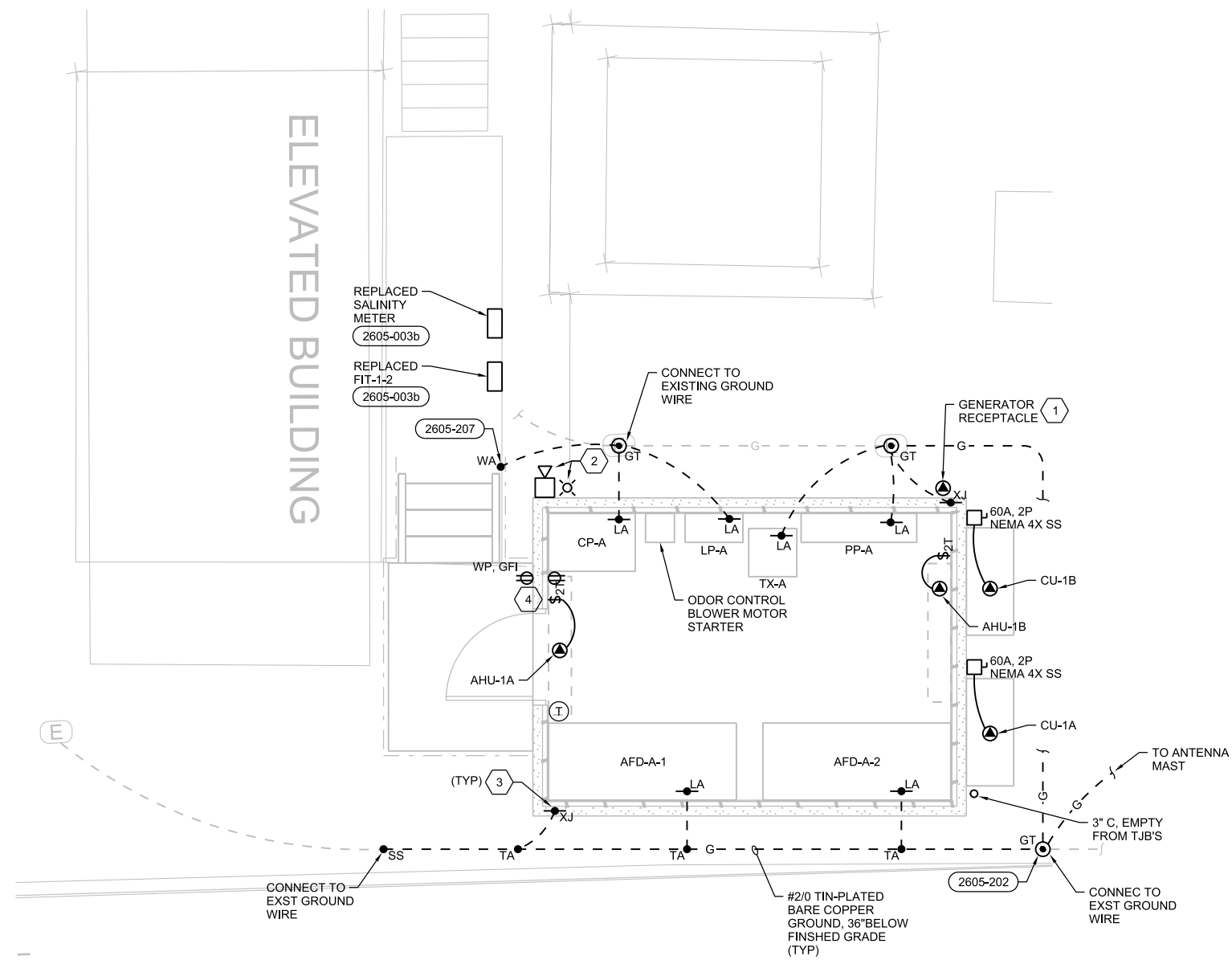
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1"=5'-0"

DATE: APRIL 2015
PROJ: 476744
DWG: 010-E-102
SHEET: of

AL CLOUGH
N ADAMS
DR
CHK
APVD

- GENERAL NOTES:**
- A. CONTRACTOR TO COORDINATE ALL ITEMS MOUNTED TO BUILDING EXTERIOR WITH BUILDING MANUFACTURER.
 - B. CONDUITS ENTERING BUILDING SHALL ENTER THROUGH THE FLOOR SLAB.
 - C. CONDUITS SHALL NOT BE ROUTED EXPOSED ALONG BUILDING EXTERIOR.
 - D. CONDUITS ROUTED INSIDE OF BUILDING SHALL BE EXPOSED.
 - E. REFER TO DWG 001-E-05 FOR LUMINAIRE REQUIREMENTS.

- KEYED NOTES:**
- 1. MOUNT ON BUILDING WALL, BOTTOM OF RECEPTACLE AT EL 11.0', GRADE AT THIS AREA IS EL 4.5'.
 - 2. MOUNT ALARM LIGHT AND ALARM HORN ON BUILDING WALL AT EL 18.0'.
 - 3. EXOTHERMIC WELD GROUND WIRE TO STRUCTURAL REINFORCING STEEL.
 - 4. TOGGLE DISCONNECT SW, MOUNT NEXT TO HVAC UNIT AT 8' ABOVE FINISHED FLOOR.
 - 5. EXIT SIGN AND EMERGENCY BATTERY PACKS WIRED TO THE LINE SIDE OF THE SWITCH.



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KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

ELECTRICAL
PUMP STATION A
PLAN

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		DSGN		APVD

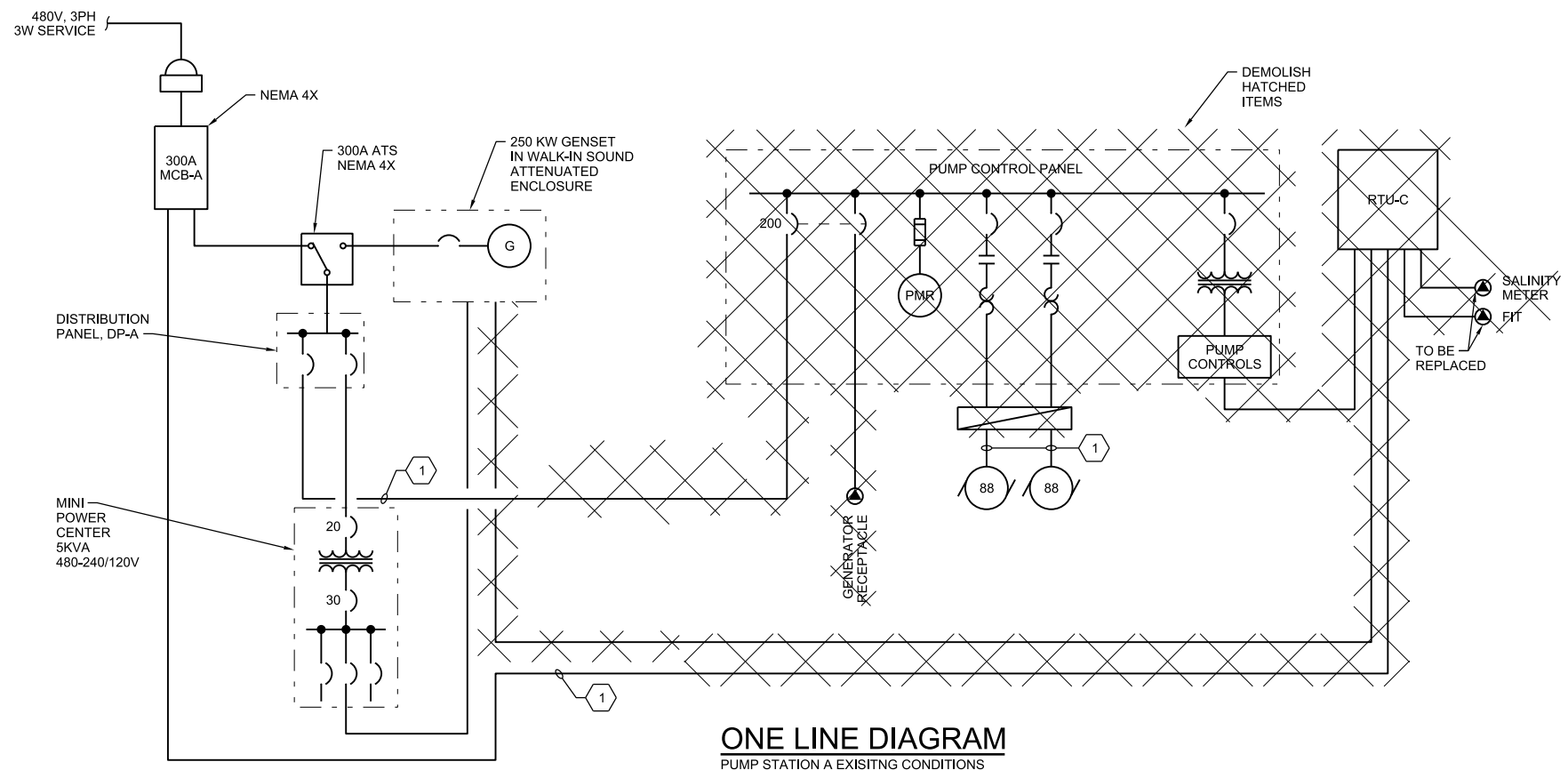
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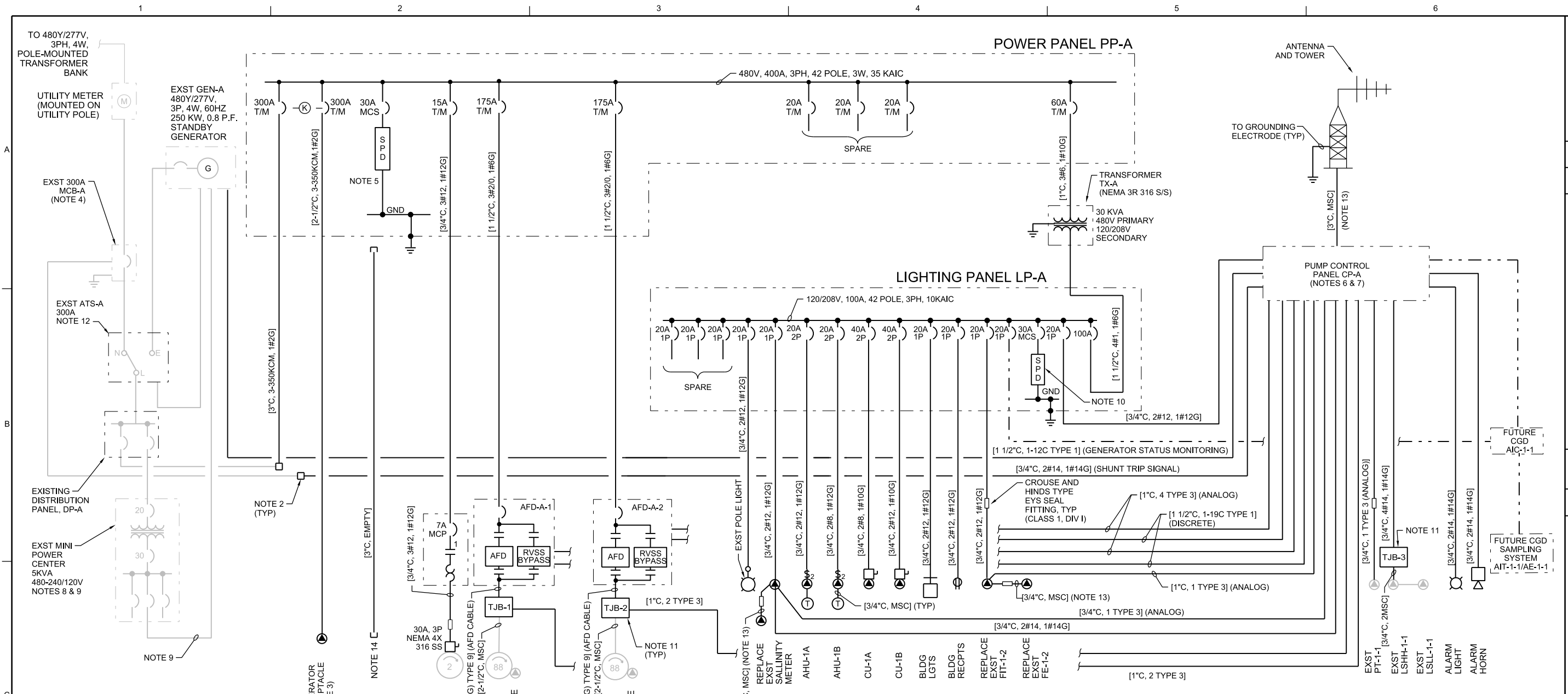
DATE: APRIL 2015
PROJ: 476744
DWG: 010-E-201
SHEET: of



ONE LINE DIAGRAM
PUMP STATION A EXISTING CONDITIONS

LEGEND:
 - TO BE REMOVED
KEYED NOTES:
 1. SAVE BELOW GRADE CONDUITS FOR REUSE.

CH2MHILL® ELECTRICAL PUMP STATION A EXISTING ONE LINE DIAGRAM	3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 / AAC001892		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA		
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VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.		DATE APRIL 2015		PROJ 476744	
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- 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.
 - EXISTING 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.
 - EXISTING 5kVA, 480-240V, 1-PHASE MINI POWER CENTER.

- NOTES**
- EXIST MINI POWER CENTER AND CIRCUITS TO REMAIN. 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.
 - EXISTING 3-POLE ATS WITH 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.

RISER DIAGRAM
PUMP STATION A

- LEGEND:**
- BC = BYPASS CONTACTOR
 - CGD = COMBUSTIBLE GAS DETECTOR
 - CPT = CONTROL POWER TRANSFORMER
 - F = 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 BUS
 - NEU = NEUTRAL SOURCE
 - 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

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

*ALL LOADS ASSUMED NON-CONTINUOUS

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CITY OF KEY WEST
KEY WEST, FLORIDA

NO.

DATE

DR

DGSN

REVISION

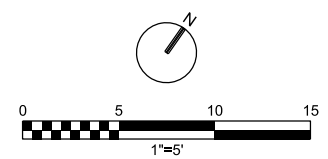
CHK

BY

APVD

ELECTRICAL
PUMP STATION A
ONE LINE DIAGRAM

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0" = 1"
DATE: APRIL 2015
PROJ: 476744
DWG: 010-E-602
SHEET: of

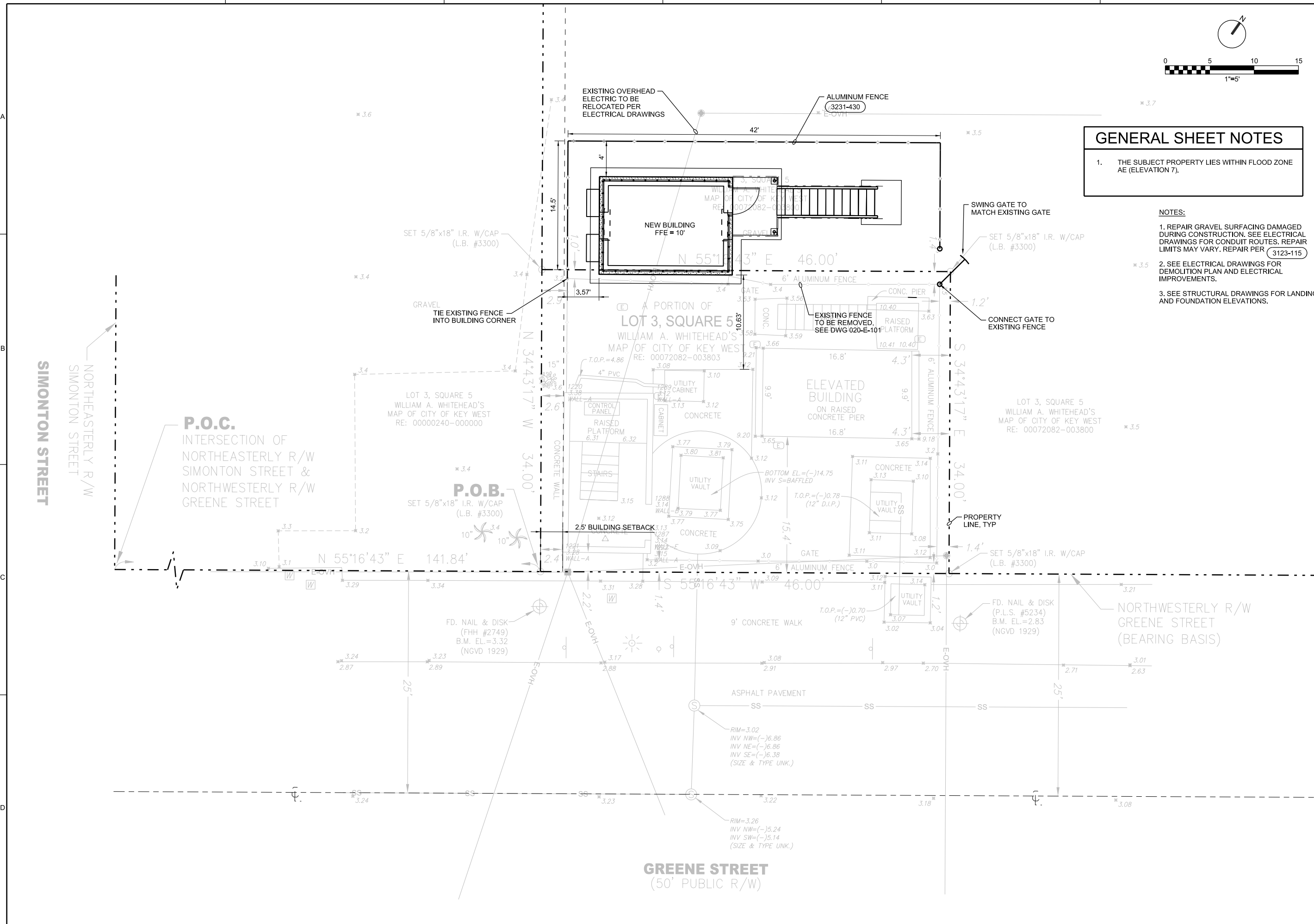


GENERAL SHEET NOTES

- THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE AE (ELEVATION 7).

NOTES:

- REPAIR GRAVEL SURFACING DAMAGED DURING CONSTRUCTION. SEE ELECTRICAL DRAWINGS FOR CONDUIT ROUTES. REPAIR LIMITS MAY VARY. REPAIR PER 3123-115
- SEE ELECTRICAL DRAWINGS FOR DEMOLITION PLAN AND ELECTRICAL IMPROVEMENTS.
- SEE STRUCTURAL DRAWINGS FOR LANDING AND FOUNDATION ELEVATIONS.



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CIVIL
PUMP STATION B
SITE PLAN

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD

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KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

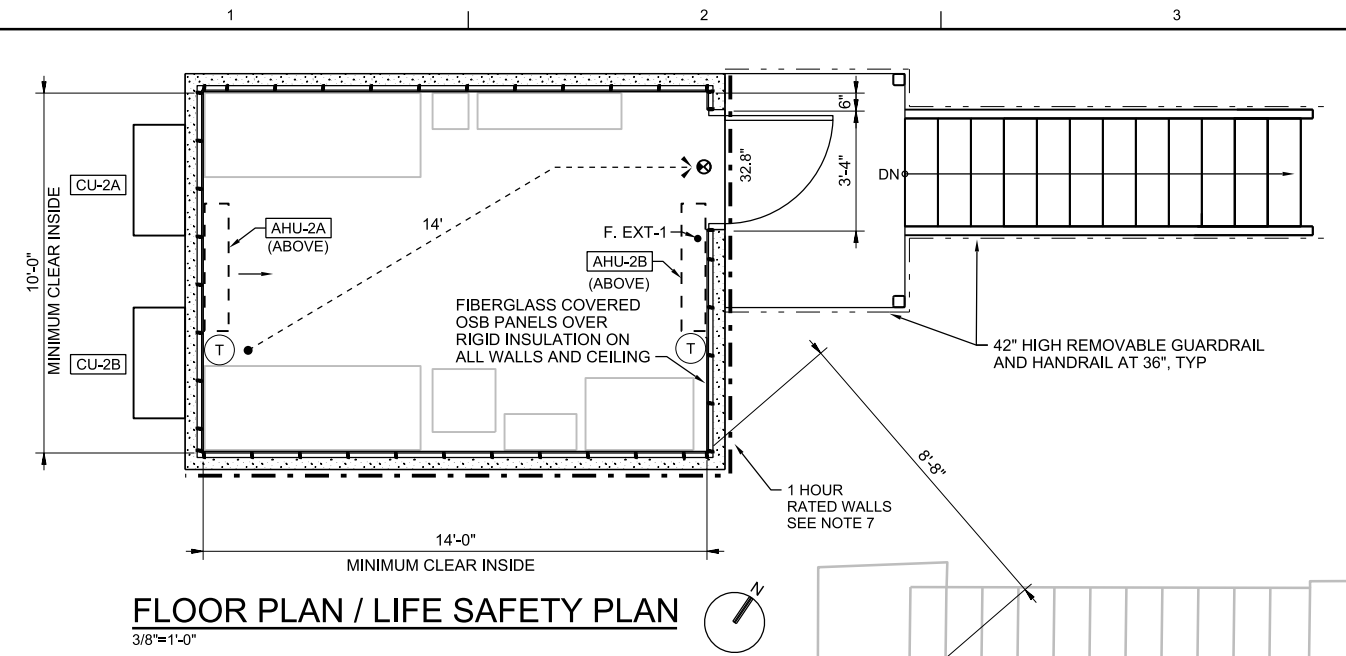
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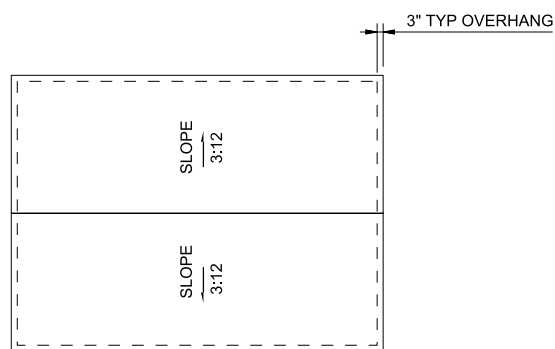
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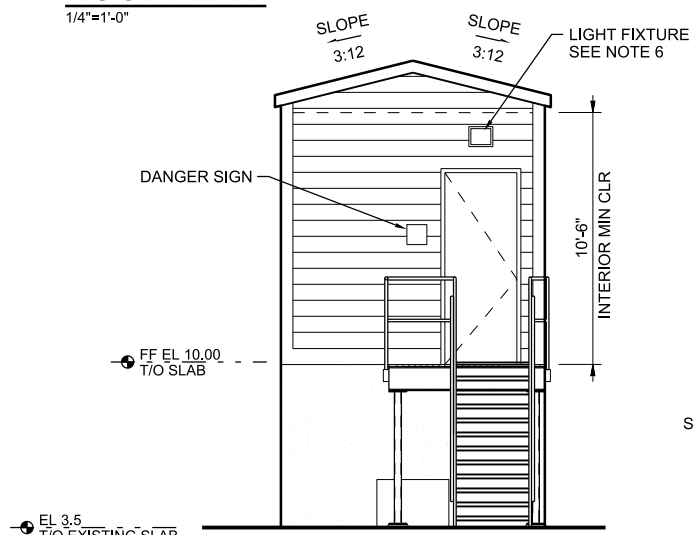
FLOOR PLAN / LIFE SAFETY PLAN
3/8"=1'-0"

LEGEND

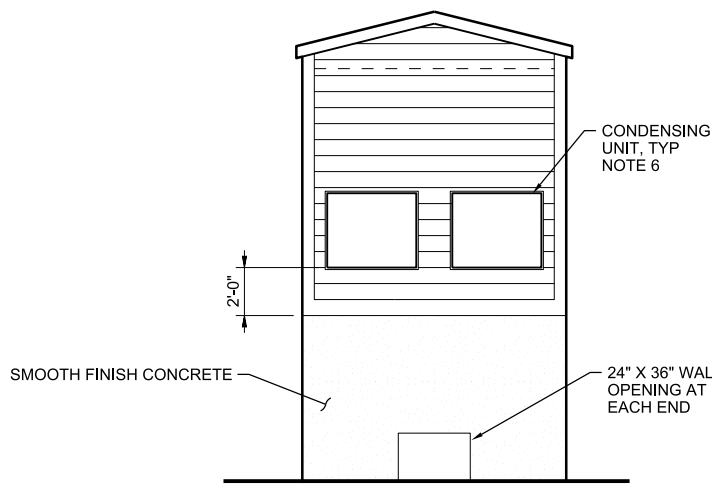
- TRAVEL DISTANCE (X = TOTAL DISTANCE TO EXIT IN FEET)
- EGRESS WIDTH (IN INCHES)
- F. EXT-1 CARBON DIOXIDE FIRE EXTINGUISHER UL RATING 10B:C, 15 LBS W/ BRACKET
- COMBINATION LIGHTED EXIT SIGN WITH EMERGENCY LIGHTING
- 1 HR RATED WALL AND DOOR ASSEMBLY



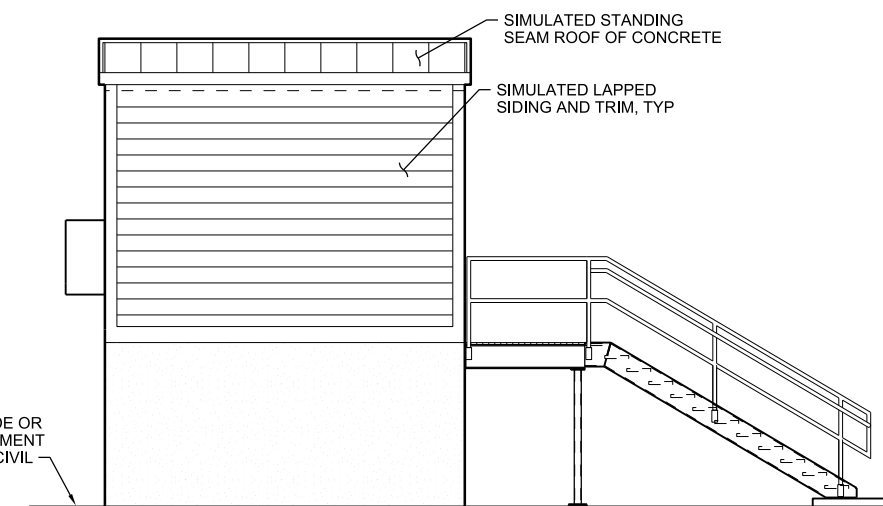
ROOF PLAN
1/4"=1'-0"



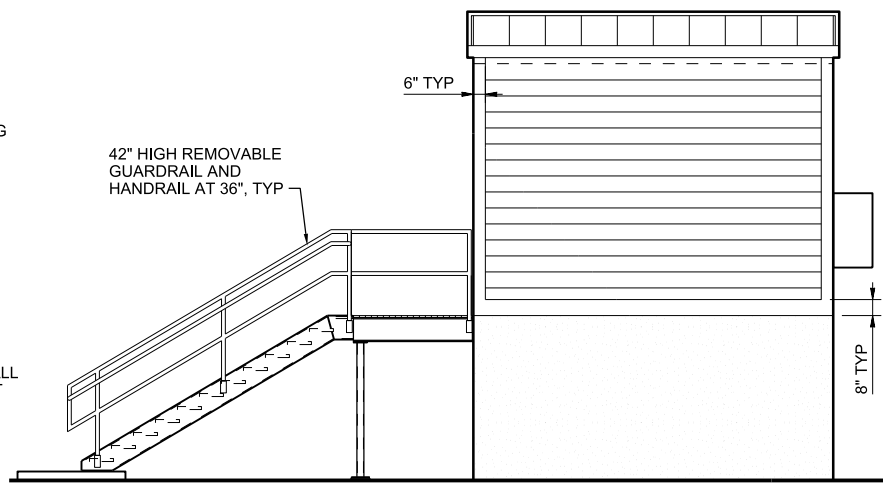
EAST ELEVATION
1/4"=1'-0"



WEST ELEVATION
1/4"=1'-0"



SOUTH ELEVATION
1/4"=1'-0"



NORTH ELEVATION
1/4"=1'-0"

APPLICABLE CODES:

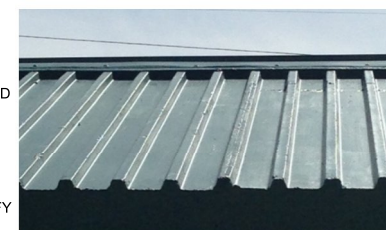
FLORIDA BUILDING CODE, 2010 EDITION
FLORIDA FIRE PREVENTION CODE, 2010 EDITION
NATIONAL ELECTRIC CODE, CURRENT EDITION

GENERAL NOTES:

1. THIS BUILDING IS A PRE-ENGINEERED CONCRETE BUILDING. SEE SPECIFICATION SECTION 13 34 23
2. ALL DOORS, FRAMES, HARDWARE, LOUVERS AND OTHER APPURTENANCES ARE TO COMPLY WITH THE REQUIREMENTS FOR CLADDING COMPONENTS IN THE HIGH VELOCITY WIND ZONE. SEE SPECIFICATION 13 34 23.
3. FOR FIRE EXTINGUISHER INFORMATION, SEE LEGEND.
4. BUILDING EXTERIOR TEXTURE AND COLORS TO BE SELECTED BY THE ARCHITECT OR OWNER.
5. SEE STRUCTURAL DRAWINGS FOR FOUNDATION, WALK-OFF SLAB, PLATFORM AND STAIRS.
6. PROVIDE SMOOTH MOUNTING SURFACE FOR EXTERIOR WALL MOUNTED EQUIPMENT.
7. 1 HOUR RATED CONCRETE WALL AND DOOR ASSEMBLY ADJACENT TO EXISTING BLDG. MANUFACTURER TO MEET REQUIRED CONCRETE THICKNESS FOR A ONE HOUR RATED EXTERIOR CONCRETE WALL AS DEFINED IN THE FLORIDA BUILDING CODE IN TABLE 720.1(2) UNDER 4-1-1 SOLID CONCRETE WALLS.
8. PROVIDE AHU-2A&B WITH CONDENSATE DRAIN LINES FULL SIZE OF UNIT CONNECTION AND ROUTE OUTSIDE THE BUILDING INTO DRYWELL. CONTRACTOR SHALL FIELD VERIFY BEST LOCATION FOR DRYWELL.



CONCRETE FORMLINER WALL FINISH
NTS



CONCRETE FORMLINER ROOF FINISH
NTS

CODE DATA 2010 FLORIDA BUILDING CODE

BUILDING: PUMP STATION B

GENERAL INFORMATION

USE AND OCCUPANCY CLASSIFICATION (CHAPTER 3)	F-2 FACTORY INDUSTRIAL MODERATE HAZARD
CONSTRUCTION CLASSIFICATION (CHAPTER 6)	VB

AREA AND HEIGHT LIMITATIONS

MAXIMUM ALLOWABLE AREA (TABLE 503)	F-1: 8,500 SF 1 STORY
ACTUAL AREA:	140 SF
ACTUAL PER FLOOR:	BASEMENT NA FIRST 140 SF SECOND NA
MAXIMUM ALLOWABLE STORIES (TABLE 503)	1 STORY
ACTUAL NUMBER OF STORIES	1 STORY
MAXIMUM ALLOWABLE HEIGHT (TABLE 503)	40 FEET
ACTUAL HEIGHT:	19 FEET

OCCUPANCY / EGRESS INFORMATION

DESIGN OCCUPANCY (TABLE 1004.1.1)	140SF / 100 SF/PERSON= 2 PERSONS (FOR MAINTENANCE PURPOSES ONLY)
EGRESS WIDTH BASED ON OCCUPANCY (TABLE 1005.1)	2 X 4 = .8 32.8" MINIMUM PROVIDED
ALLOWABLE DEAD END LENGTH (TABLE 1017.3)	20 FEET
NUMBER OF EXITS	1
ALLOWABLE COMMON PATH OF TRAVEL (1014.3)	75 FEET
MAX TRAVEL DISTANCE ALLOWED (TABLE 1016.1)	200 FEET (F-1)

REQUIRED FIRE RESISTANT RATINGS

BUILDING ELEMENTS (TABLE 601)	VB
STRUCTURAL FRAME	0 RATING
EXTERIOR BEARING WALLS	0 HOURS
INTERIOR BEARING WALLS	NA
INTERIOR NON-BEARING WALLS	NA
FLOOR CONSTRUCTION	0 RATING
ROOF CONSTRUCTION	0 RATING
SHAFT ENCLOSURE (707.4)	NA
STAIRWAY ENCLOSURE (1020.1)	NA
CORRIDOR (TABLE 1016.1)	NA

NON-SEPARATED OCCUPANCIES (508.3.2)	NA
ACCESSORY OCCUPANCIES (508.3.1)	NA
REQUIRED FIRE RESISTANCE RATINGS OF EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE (TABLE 602)	1 HOUR RATING

PLUMBING

PLUMBING:	NONE
-----------	------

FIRE PROTECTION

SPRINKLERS	NOT PROVIDED
FIRE EXTINGUISHERS	PROVIDED
EXIT LIGHTS	PROVIDED

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Beth Trautwein, AIA 91388

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CITY OF KEY WEST
KEY WEST, FLORIDA

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**PUMP STATION B
LIFE SAFETY / FLOOR PLAN
ELEVATIONS AND CODE DATA**

VERIFY SCALE

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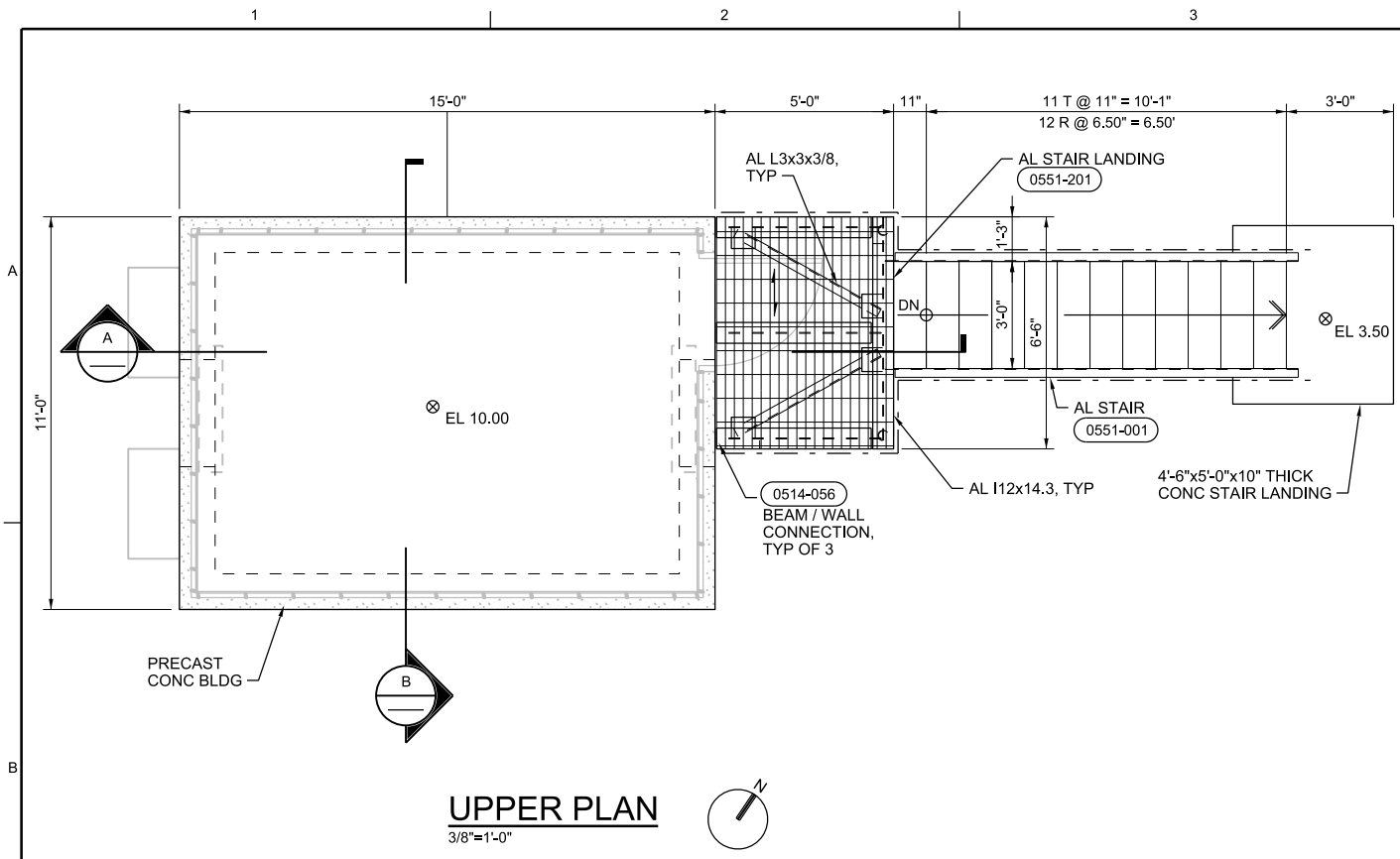
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PROJ: 476744

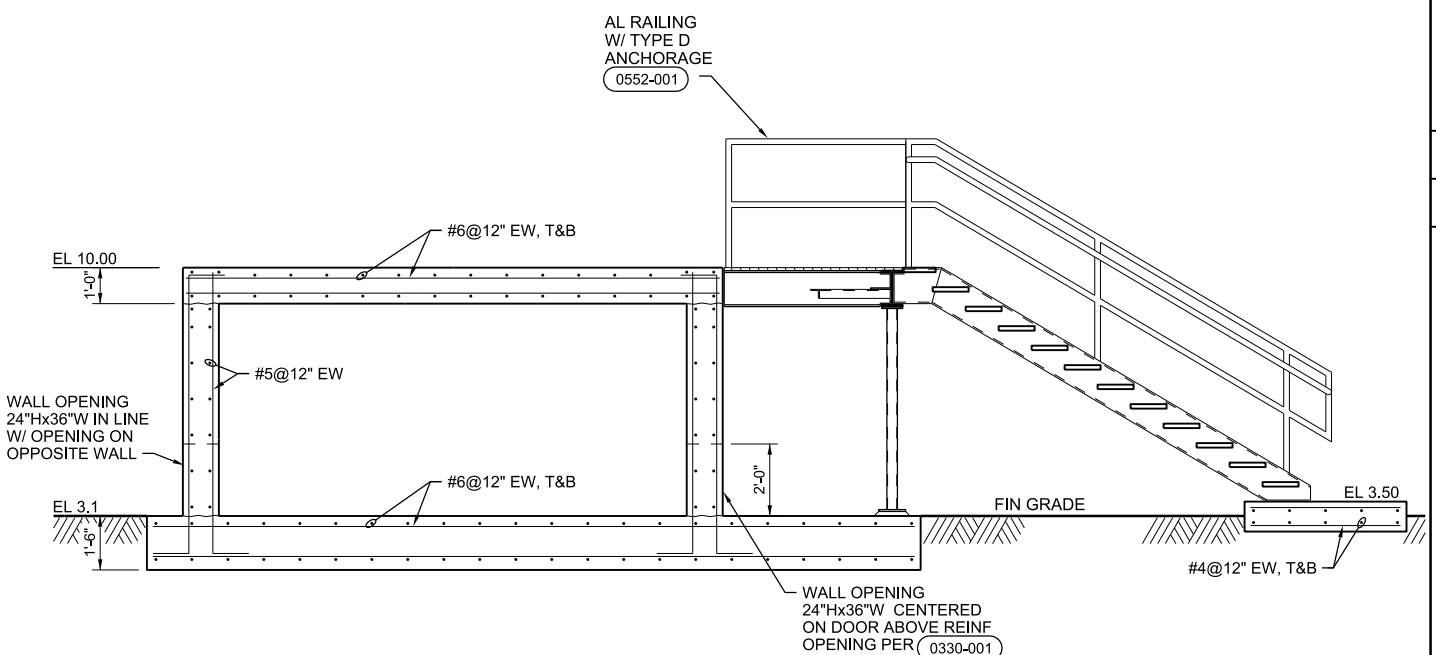
DWG: 020-A-201

SHEET: of

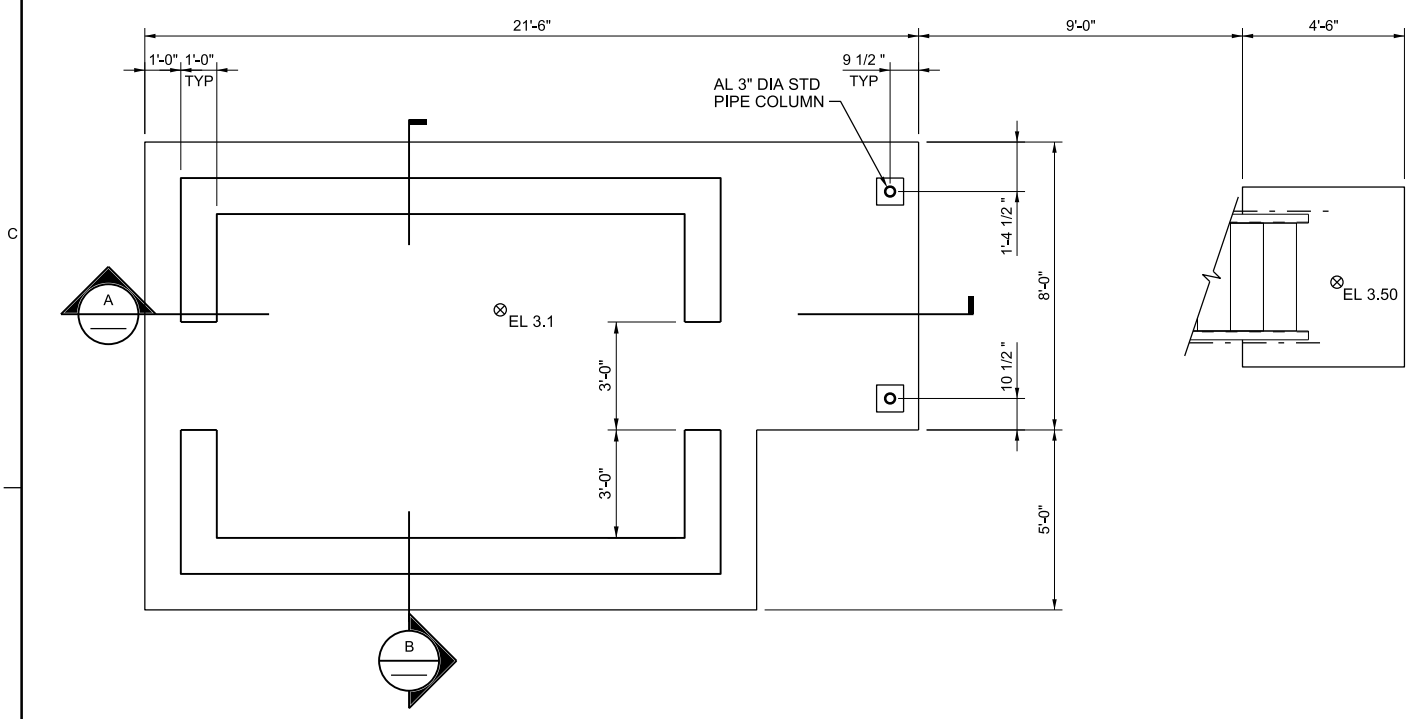
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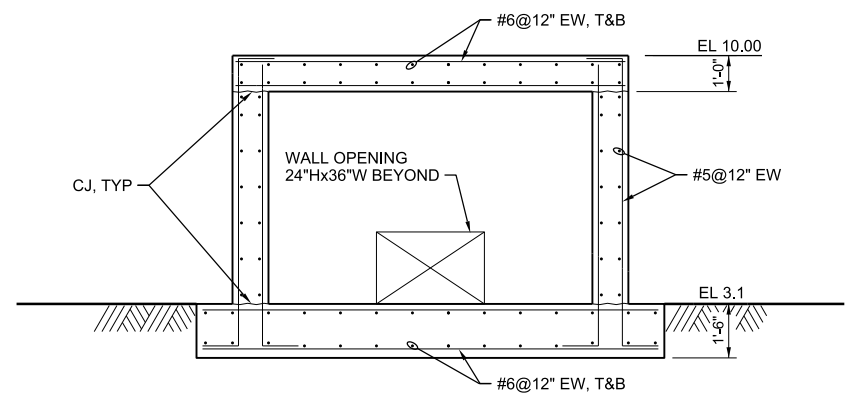
UPPER PLAN
3/8"=1'-0"



A SECTION
3/8"=1'-0"



FOUNDATION PLAN
3/8"=1'-0"



B SECTION
3/8"=1'-0"

NO.	DATE	DR	CHK	APVD	BY	APVD
		S TROYAN	R FRIBERG	M CHRZANOWSKI		S TROYAN

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STRUCTURAL
PUMP STATION B
PLANS AND SECTIONS

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LEGEND:

X - TO BE REMOVED

ABBREVIATIONS:

ETR - EXISTING ITEM TO REMAIN

GENERAL NOTES:

A. WIRING DEMOLITION; REMOVE ENTIRE LENGTH OF CONDUCTORS THAT REQUIRE DEMOLITION. UNDERGROUND DEMO CONDUIT MAY BE ABANDONED IN PLACE. ABANDONED CONDUIT MAY BE REUSED.

KEYED NOTES:

- 1. REMOVE EXISTING PUMP CABLE TJB. PROTECT PUMP CABLES FROM DAMAGE.
2. REMOVE EXISTING RTU AND ASSOCIATED WIRING.
3. SEE 020-E-102 FOR SERVICE MODIFICATION REQUIREMENTS.

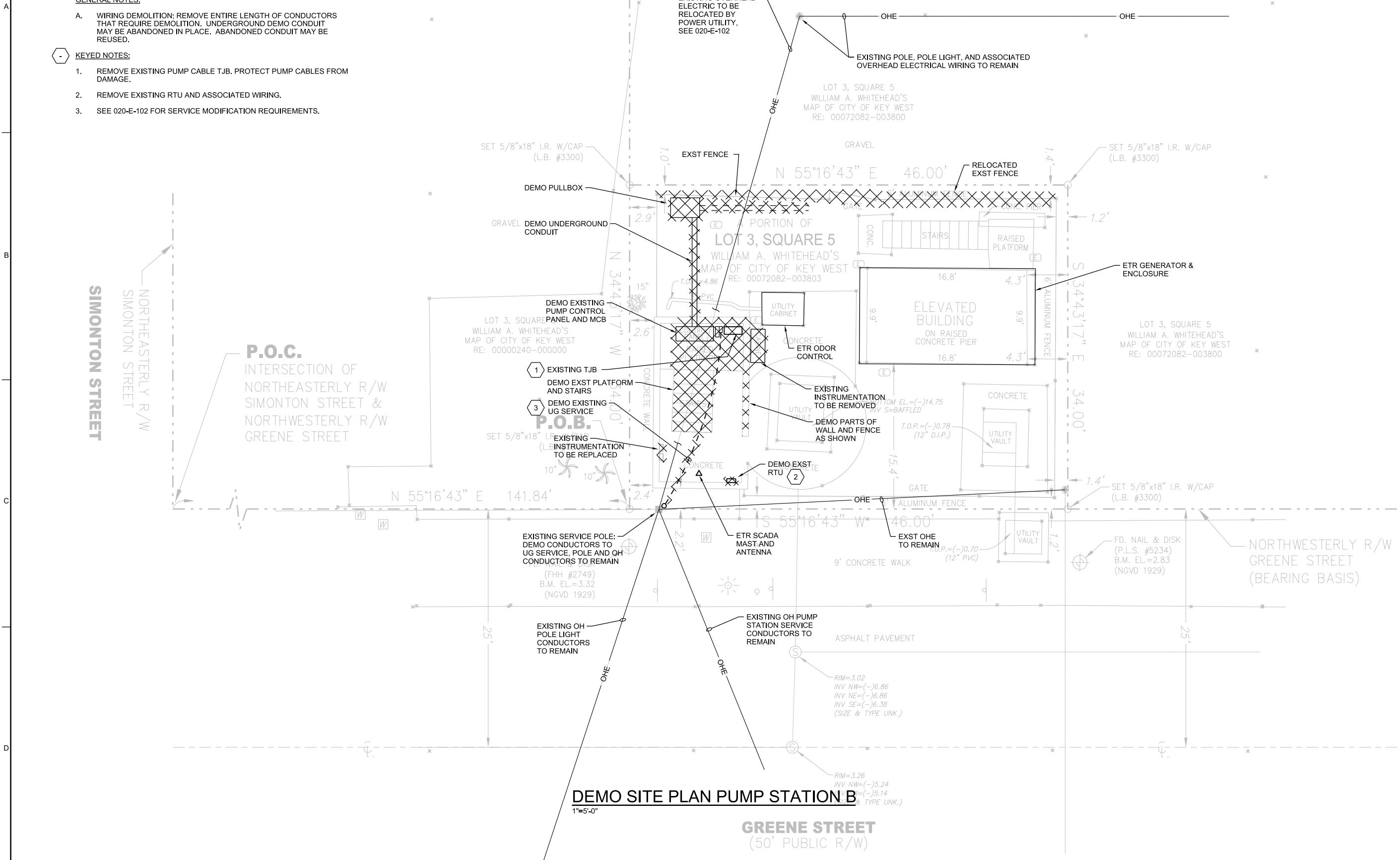
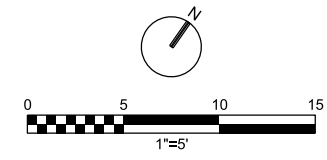


Table with columns for NO., DATE, DSGN, DR, REVISION, CHK, APVD, BY, APVD.

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KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. DATE APRIL 2015 PROJ 476744 DWG 020-E-101 SHEET of

CH2MHILL® ELECTRICAL PUMP STATION B SITE DEMOLITION PLAN BID DOCUMENTS

GENERAL NOTES:

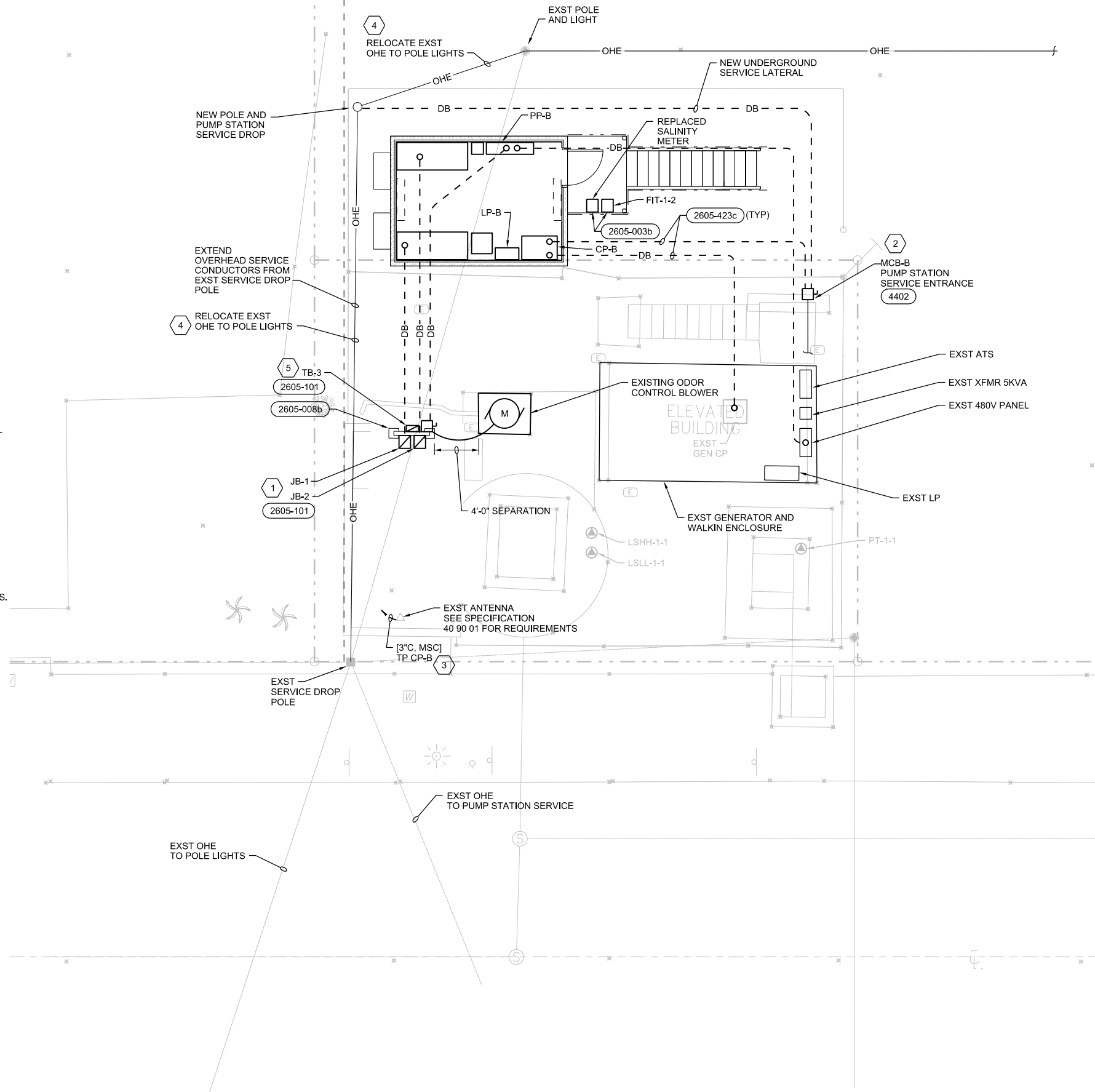
- A. DO NOT SCALE ELECTRICAL DRAWING. REFER TO THE CIVIL, ARCHITECTURAL/MECHANICAL, STRUCTURAL DRAWINGS AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACTLY LOCATION OF ALL EQUIPMENT.
- B. ALL WORK SHALL COMPLY WITH THE NEC AND LOCAL CODES.
- C. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND 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. REFER TO SPECIFICATION SECTION 26 41 00 FOR FACILITY LIGHTNING PROTECTION SYSTEM REQUIREMENTS.
- F. COORDINATE ELECTRICAL UTILITY SERVICE REQUIREMENTS WITH KEYS ENERGY.

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).

KEYED NOTES:

- 1. PROVIDE NEW JB'S FOR TERMINATION OF EXST PUMP MSC'S. LOCATED OUTSIDE OF HAZARDOUS AREA.
- 2. RELOCATED SERVICE WITH NEW MCB-B, LOCATE ON EXISTING RAISED PLATFORM. PROVIDE NEW WIRING FROM NEW SERVICE POLE TO MCB-B.
- 3. ROUTE CONDUIT OUTSIDE OF HAZARDOUS AREAS. SEE SPECIFICATION 40 90 01 FOR ANTENNA AND CABLE REQUIREMENTS.
- 4. CONTRACTOR TO COORDINATE WITH POWER UTILITY TO RELOCATE OVERHEAD ELECTRICAL LINES AND POWER POLE.
- 5. LOCATED OUTSIDE OF HAZARDOUS AREA.



SITE PLAN PUMP STATION B
1"=5'-0"

CH2MHILL®

ELECTRICAL
**PUMP STATION B
SITE PLAN**

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KEY WEST, FLORIDA
CITY OF KEY WEST
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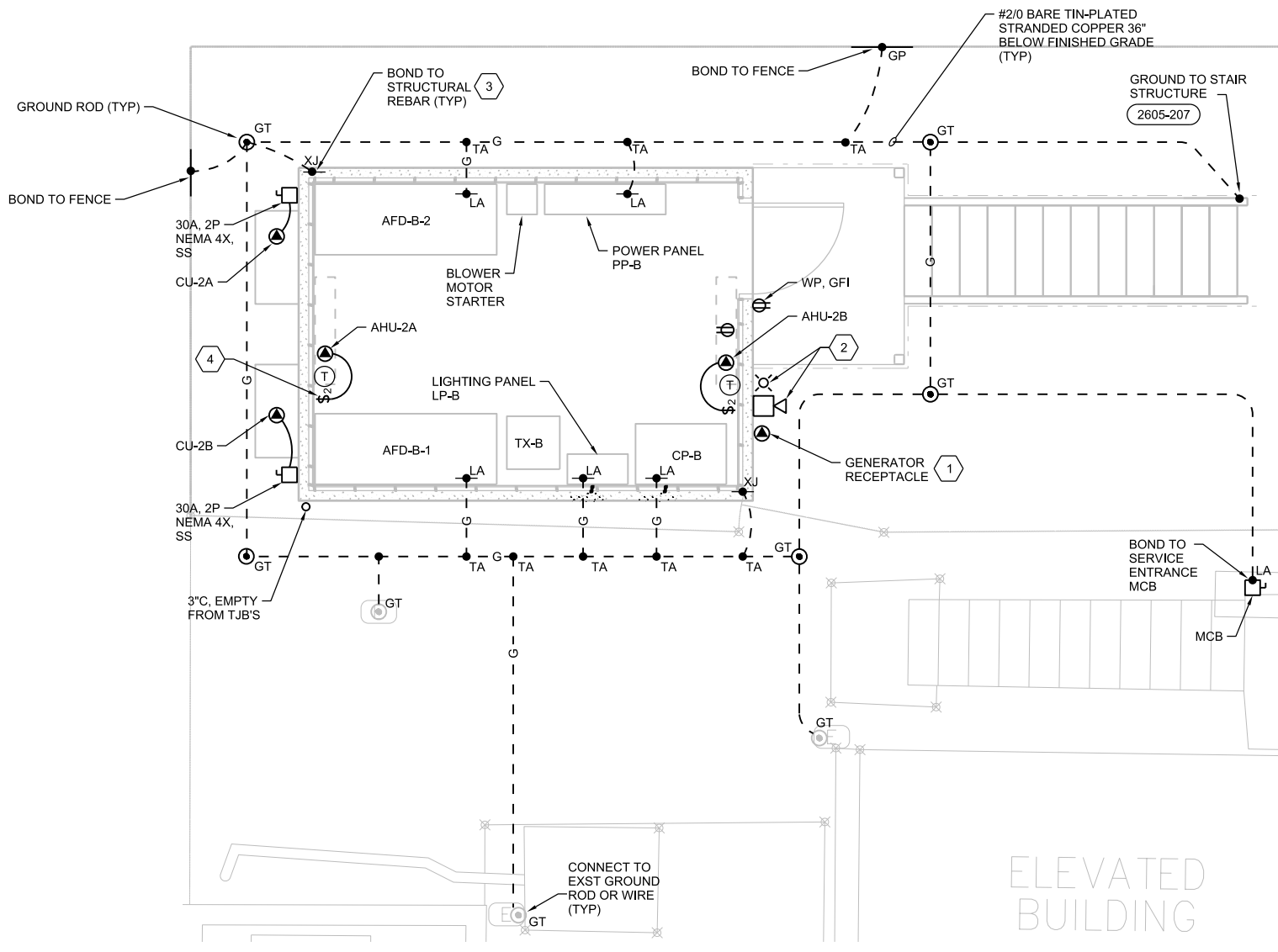
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
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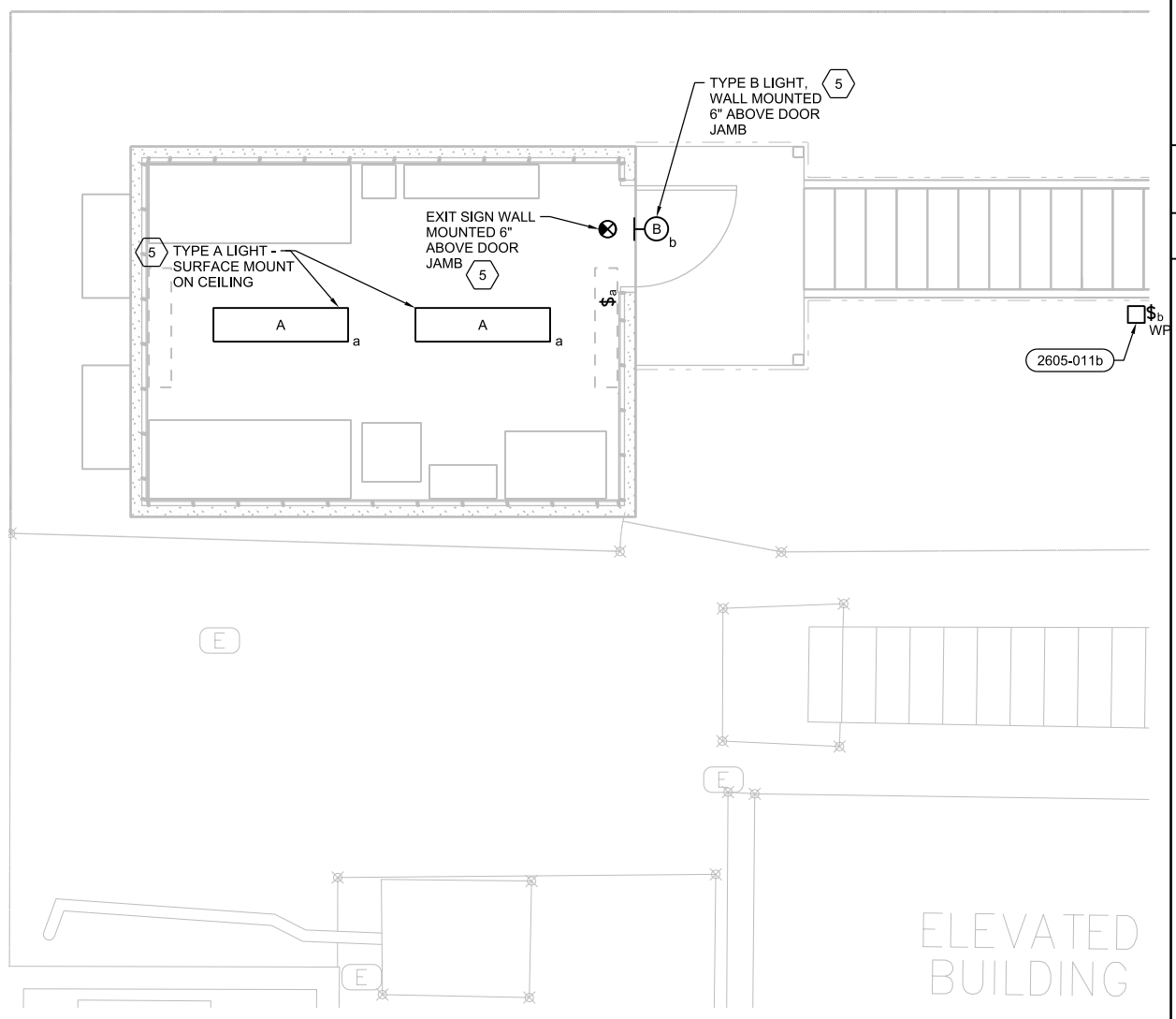
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- GENERAL NOTES:**
- A. CONTRACTOR TO COORDINATE ALL ITEMS MOUNTED TO BUILDING EXTERIOR WITH BUILDING MANUFACTURER.
 - B. CONDUITS ENTERING BUILDING SHALL ENTER THROUGH THE FLOOR SLAB.
 - C. CONDUITS SHALL NOT BE ROUTED ALONG BUILDING EXTERIOR.
 - D. CONDUITS ROUTED INSIDE OF BUILDING SHALL BE EXPOSED.
 - E. REFER TO DWG 001-E-05 FOR LUMINAIRE REQUIREMENTS.
- KEYED NOTES:**
- 1. MOUNT ON BUILDING WALL, BOTTOM OF RECEPTACLE AT EL 10.0'. GRADE AT THIS AREA IS EL 3.1'.
 - 2. MOUNT ALARM LIGHT AND ALARM HORN ON BUILDING WALL AT EL 18.0'.
 - 3. EXOTHERMIC WELD GROUND WIRE TO STRUCTURAL REINFORCING STEEL.
 - 4. TOGGLE DISCONNECT SW, MOUNT NEXT TO HVAC UNIT AT 8' ABOVE FINISHED FLOOR.
 - 5. EXIT SIGN AND EMERGENCY BATTERY PACKS WIRED TO THE LINE SIDE OF THE SWITCH.



POWER PLAN - PUMP STATION B
3/8"=1'-0"

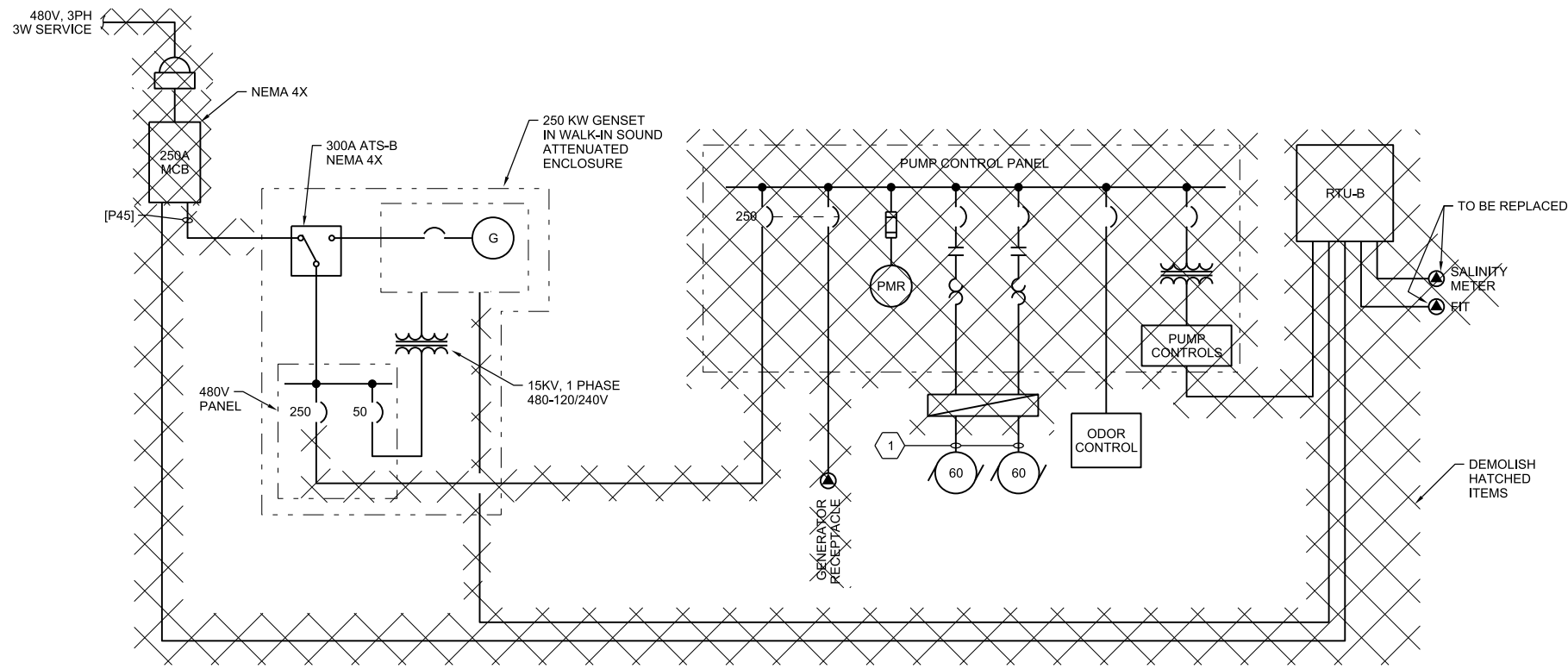


LIGHTING PLAN - PUMP STATION B
3/8"=1'-0"

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CH2MHILL®		ELECTRICAL PUMP STATION B PLAN	
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.			
DATE	APRIL 2015		
PROJ	476744		
DWG	020-E-201		
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N ADAMS DR		AL CLOUGH CHK	
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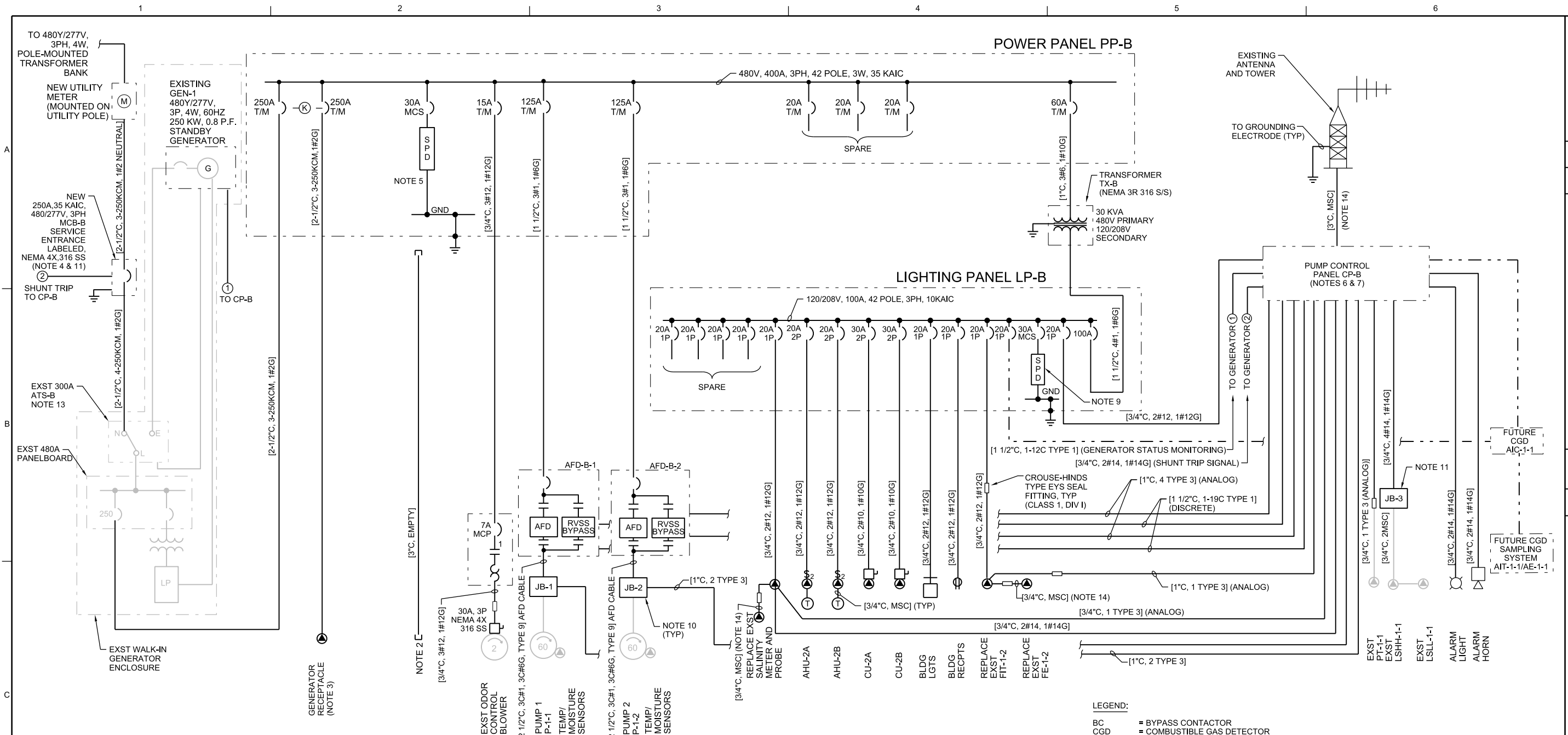


ONE LINE DIAGRAM
EXISTING CONDITIONS PUMP STATION B

LEGEND:
 - TO BE REMOVED
KEYED NOTES:
 1. SAVE BELOW GRADE CONDUITS FOR REUSE.

CH2MHILL® ELECTRICAL PUMP STATION B EXISTING ONE LINE DIAGRAM	3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 / AAC001892		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA	
	NO.	DATE	REVISION	BY
	DSGN		CHK	APVD
			DR	APVD
N ADAMS AL CLOUGH				
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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.
- STUB UP 12" OF CONDUIT NEXT TO PUMP TJB'S. INSTALL PULL-STRING AND CAP ON BOTH ENDS.
- 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, 8-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.
- 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 JUNCTION BOX SIZE PER NEC REQUIREMENTS, WITH NSI POLARIS BLUE SERIES SUBMERSIBLE POWER DISTRIBUTION BLOCKS.
- BOND THE SERVICE NEUTRAL TO THE GROUNDING ELECTRODE CONDUCTOR IN THE MAIN BREAKER ONLY.
- USE EXISTING CONDUIT FOR ENTERING GENERATOR ENCLOSURE.
- EXISTING 3-POLE ATS WITH A NEUTRAL BUS. SERVICE NEUTRAL AND GENERATOR NEUTRAL ARE BONDED AT ATS NEUTRAL BUS FOR A NON-SEPARATELY DERIVED SYSTEM. ATS NEUTRAL BUS SHALL NOT BE BONDED TO THE ATS GROUND BUS.
- REFER TO SPECIFICATION 40 90 01 FOR MSC REQUIREMENTS.

RISER DIAGRAM
PUMP STATION B

LEGEND:

- BC = BYPASS CONTACTOR
- CGD = COMBUSTIBLE GAS DETECTOR
- CPT = CONTROL POWER TRANSFORMER
- F = 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

Ⓚ = MECHANICAL KEY INTERLOCK

PP-B CONNECTED LOAD SUMMARY

DESCRIPTION	KVA
PUMP NO.1	65
PUMP NO.2	65
BLOWER	2
MPC	5
LIGHTING PANEL, LP-B	10
SUBTOTAL	147
25% OF LARGEST MOTOR	16.3
SERVICE RATING	163.3

*ALL LOADS ASSUMED NON-CONTINUOUS

LP-B CONNECTED LOAD SUMMARY

DESCRIPTION	VA
AHU-2A	94
AHU-2B	94
CU-2A	2662
CU-2B	2662
BLDG LIGHTS	200
RECEP	360
FIT-1-2	50
CP-1	2000
FP-1	300
AIC	100
SUBTOTAL	8522
25% OF CONTINUOUS LOADS	1239
SERVICE RATING	9,761

*ALL LOADS ASSUMED NON-CONTINUOUS

NO.	DATE	REVISION	BY	APVD

DESIGN	DR	APVD
N. ADAMS	AL CLOUGH	

3011 S.W. WILLISTON ROAD
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EB0000072 AAC001892

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KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

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ELECTRICAL
PUMP STATION B
ONE LINE DIAGRAM

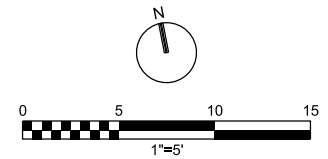
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE: APRIL 2015
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DWG: 020-E-602
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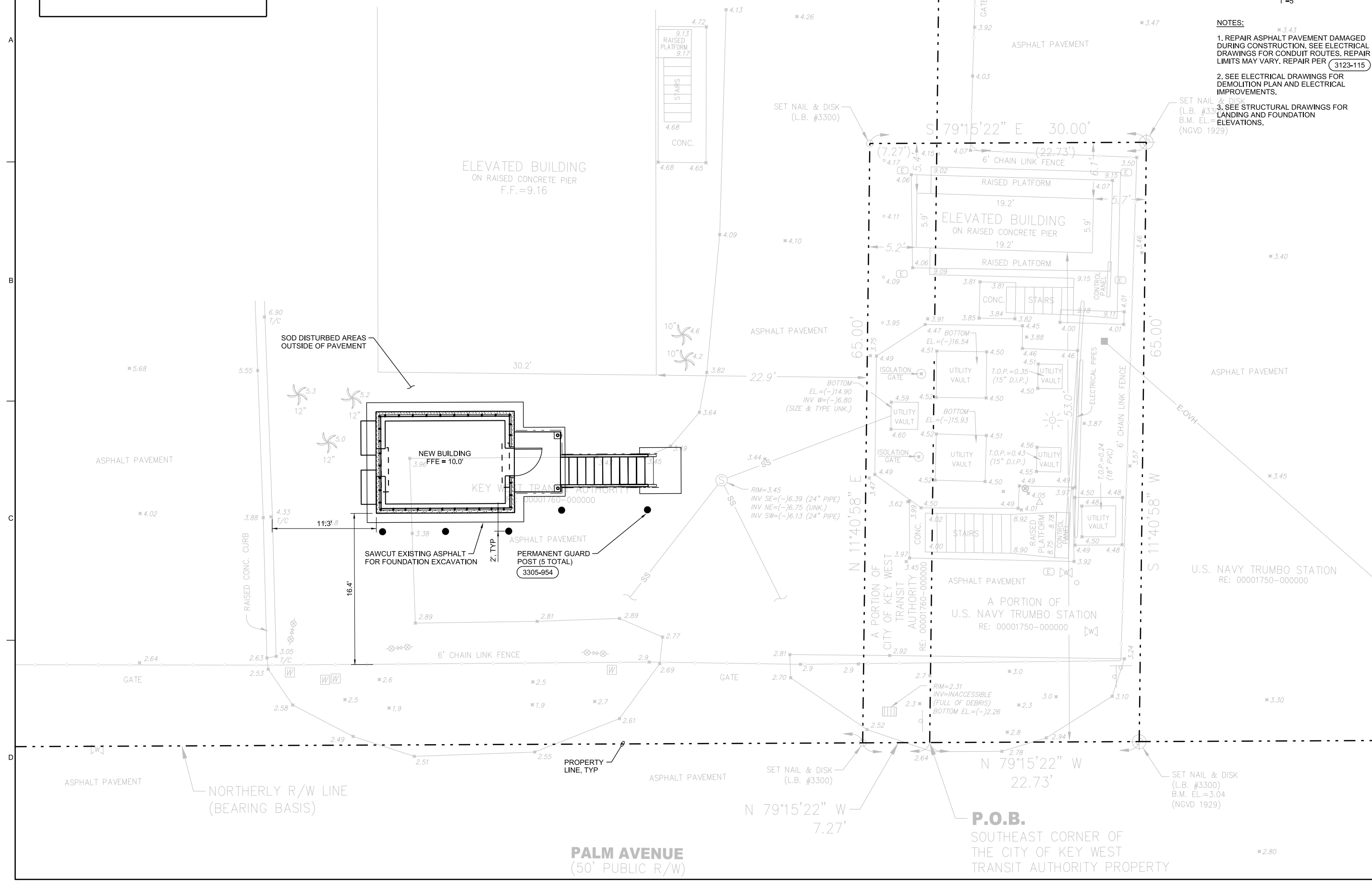
BID DOCUMENTS

GENERAL SHEET NOTES

- THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE AE (ELEVATION 7).



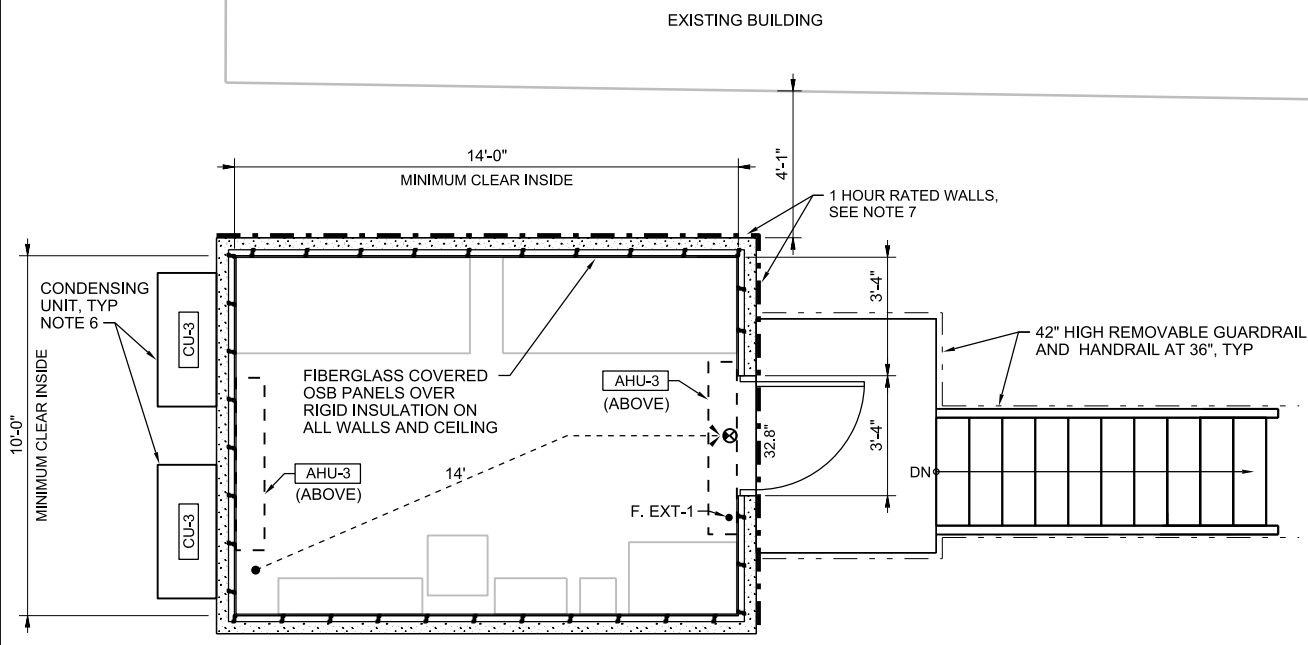
- NOTES:**
- REPAIR ASPHALT PAVEMENT DAMAGED DURING CONSTRUCTION. SEE ELECTRICAL DRAWINGS FOR CONDUIT ROUTES. REPAIR LIMITS MAY VARY. REPAIR PER 3123-115
 - SEE ELECTRICAL DRAWINGS FOR DEMOLITION PLAN AND ELECTRICAL IMPROVEMENTS.
 - SEE STRUCTURAL DRAWINGS FOR LANDING AND FOUNDATION ELEVATIONS.



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NO.	DATE	DR	CHK	APVD
		R. MORRISON	A. MALONE	R. MORRISON

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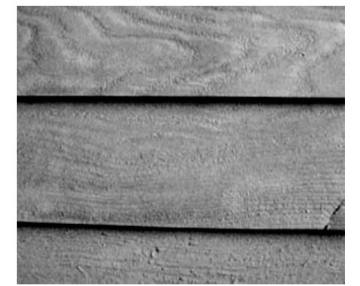
FLOOR PLAN / LIFE SAFETY PLAN
3/8"=1'-0"

APPLICABLE CODES:

FLORIDA BUILDING CODE, 2010 EDITION
FLORIDA FIRE PREVENTION CODE, 2010 EDITION
NATIONAL ELECTRIC CODE, CURRENT EDITION

GENERAL NOTES:

- THIS BUILDING IS A PRE-ENGINEERED CONCRETE BUILDING. SEE SPECIFICATION SECTION 13 34 23
- ALL DOORS, FRAMES, HARDWARE, LOUVERS AND OTHER APPURTENANCES ARE TO COMPLY WITH THE REQUIREMENTS FOR CLADDING COMPONENTS IN THE HIGH VELOCITY WIND ZONE. SEE SPECIFICATION 13 34 23.
- FOR FIRE EXTINGUISHER INFORMATION, SEE LEGEND.
- BUILDING EXTERIOR TEXTURE AND COLORS TO BE SELECTED BY THE ARCHITECT OR OWNER.
- SEE STRUCTURAL DRAWINGS FOR FOUNDATION, WALK-OFF SLAB, PLATFORM AND STAIRS.
- PROVIDE SMOOTH MOUNTING SURFACE FOR EXTERIOR WALL MOUNTED EQUIPMENT.
- 1 HOUR RATED CONCRETE WALL AND DOOR ASSEMBLY ADJACENT TO EXISTING BLDG. MANUFACTURER TO MEET REQUIRED CONCRETE THICKNESS FOR A ONE HOUR RATED EXTERIOR CONCRETE WALL AS DEFINED IN THE FLORIDA BUILDING CODE IN TABLE 720.1(2) UNDER 4-1-1 SOLID CONCRETE WALLS.
- PROVIDE AHU-3A&B WITH CONDENSATE DRAIN LINES FULL SIZE OF UNIT CONNECTION AND ROUTE OUTSIDE THE BUILDING INTO DRYWELL. CONTRACTOR SHALL FIELD VERIFY BEST LOCATION FOR DRYWELL.



CONCRETE FORMLINER WALL FINISH
NTS

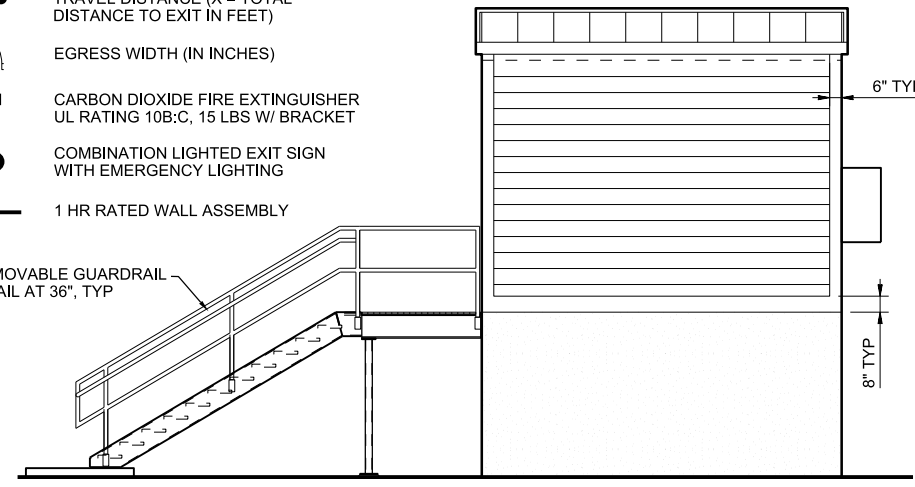


CONCRETE FORMLINER ROOF FINISH
NTS

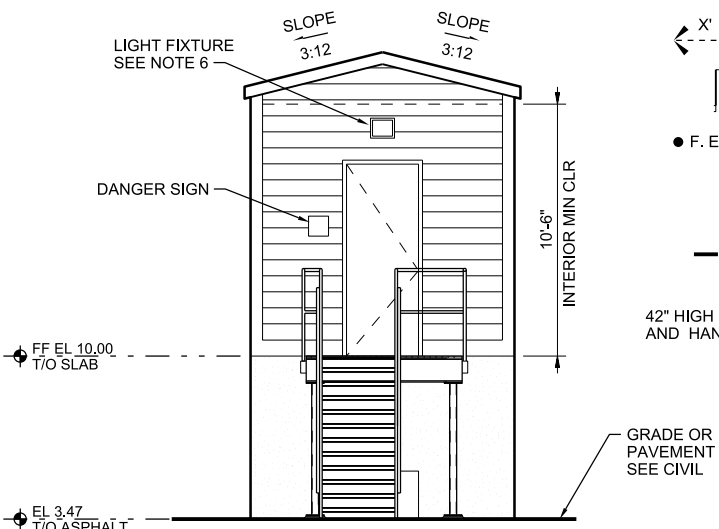
LEGEND

- X' TRAVEL DISTANCE (X = TOTAL DISTANCE TO EXIT IN FEET)
- X" EGRESS WIDTH (IN INCHES)
- F. EXT-1 CARBON DIOXIDE FIRE EXTINGUISHER UL RATING 10B:C, 15 LBS W/ BRACKET
- ⊗ COMBINATION LIGHTED EXIT SIGN WITH EMERGENCY LIGHTING
- - - 1 HR RATED WALL ASSEMBLY

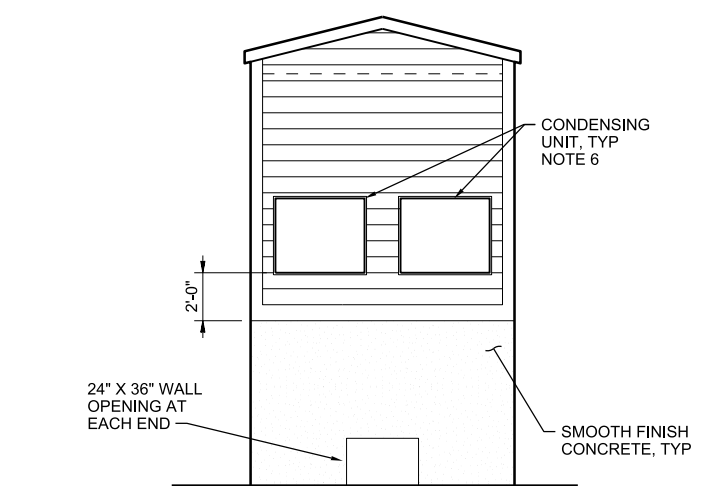
42" HIGH REMOVABLE GUARDRAIL AND HANDRAIL AT 36", TYP



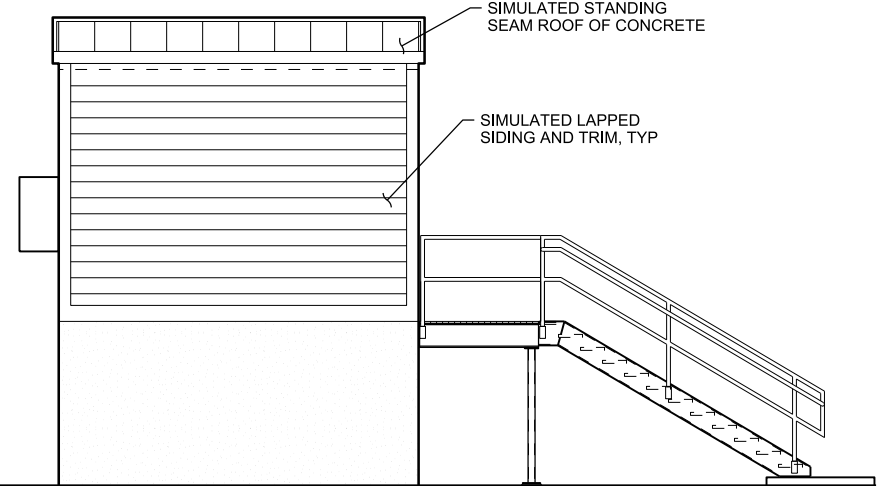
NORTH ELEVATION
1/4"=1'-0"



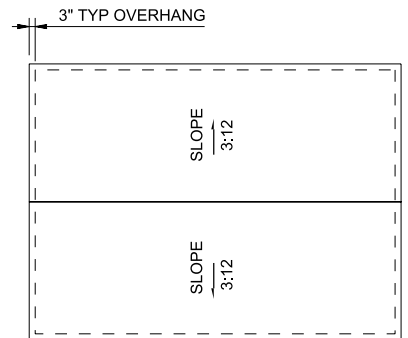
EAST ELEVATION
1/4"=1'-0"



WEST ELEVATION
1/4"=1'-0"



SOUTH ELEVATION
1/4"=1'-0"



ROOF PLAN
1/4"=1'-0"

CODE DATA 2010 FLORIDA BUILDING CODE

BUILDING: PUMP STATION C	
GENERAL INFORMATION	
USE AND OCCUPANCY CLASSIFICATION (CHAPTER 3)	F-2 FACTORY INDUSTRIAL MODERATE HAZARD
CONSTRUCTION CLASSIFICATION (CHAPTER 6)	VB
AREA AND HEIGHT LIMITATIONS	
MAXIMUM ALLOWABLE AREA (TABLE 503)	F-1: 8,500 SF 1 STORY
ACTUAL AREA:	140 SF
ACTUAL PER FLOOR:	BASEMENT NA
	FIRST 140 SF
	SECOND NA
MAXIMUM ALLOWABLE STORIES (TABLE 503)	1 STORY
ACTUAL NUMBER OF STORIES	1 STORY
MAXIMUM ALLOWABLE HEIGHT (TABLE 503)	40 FEET
ACTUAL HEIGHT:	19 FEET
OCCUPANCY / EGRESS INFORMATION	
DESIGN OCCUPANCY (TABLE 1004.1.1)	140SF / 100 SF/PERSON= 2 PERSONS (FOR MAINTENANCE PURPOSES ONLY)
EGRESS WIDTH BASED ON OCCUPANCY (TABLE 1005.1)	2 X 4 = 8 32.8" MINIMUM PROVIDED
ALLOWABLE DEAD END LENGTH (TABLE 1017.3)	20 FEET
NUMBER OF EXITS	1
ALLOWABLE COMMON PATH OF TRAVEL (1014.3)	75 FEET
MAX TRAVEL DISTANCE ALLOWED (TABLE 1016.1)	200 FEET (F-1)

REQUIRED FIRE RESISTANT RATINGS

BUILDING ELEMENTS (TABLE 601)	VB
STRUCTURAL FRAME	0 RATING
EXTERIOR BEARING WALLS	0 HOURS
INTERIOR BEARING WALLS	NA
INTERIOR NON-BEARING WALLS	NA
FLOOR CONSTRUCTION	0 RATING
ROOF CONSTRUCTION	0 RATING
SHAFT ENCLOSURE (707.4)	NA
STAIRWAY ENCLOSURE (1020.1)	NA
CORRIDOR (TABLE 1016.1)	NA
NON-SEPARATED OCCUPANCIES (508.3.2)	NA
ACCESSORY OCCUPANCIES (508.3.1)	NA
REQUIRED FIRE RESISTANCE RATINGS OF EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE (TABLE 602)	1 HOUR RATING

PLUMBING

PLUMBING:	NONE
-----------	------

FIRE PROTECTION

SPRINKLERS	NOT PROVIDED
FIRE EXTINGUISHERS	PROVIDED
EXIT LIGHTS	PROVIDED

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ARCHITECTURAL/MECHANICAL
PUMP STATION C
LIFE SAFETY / FLOOR PLAN
ELEVATIONS AND CODE DATA

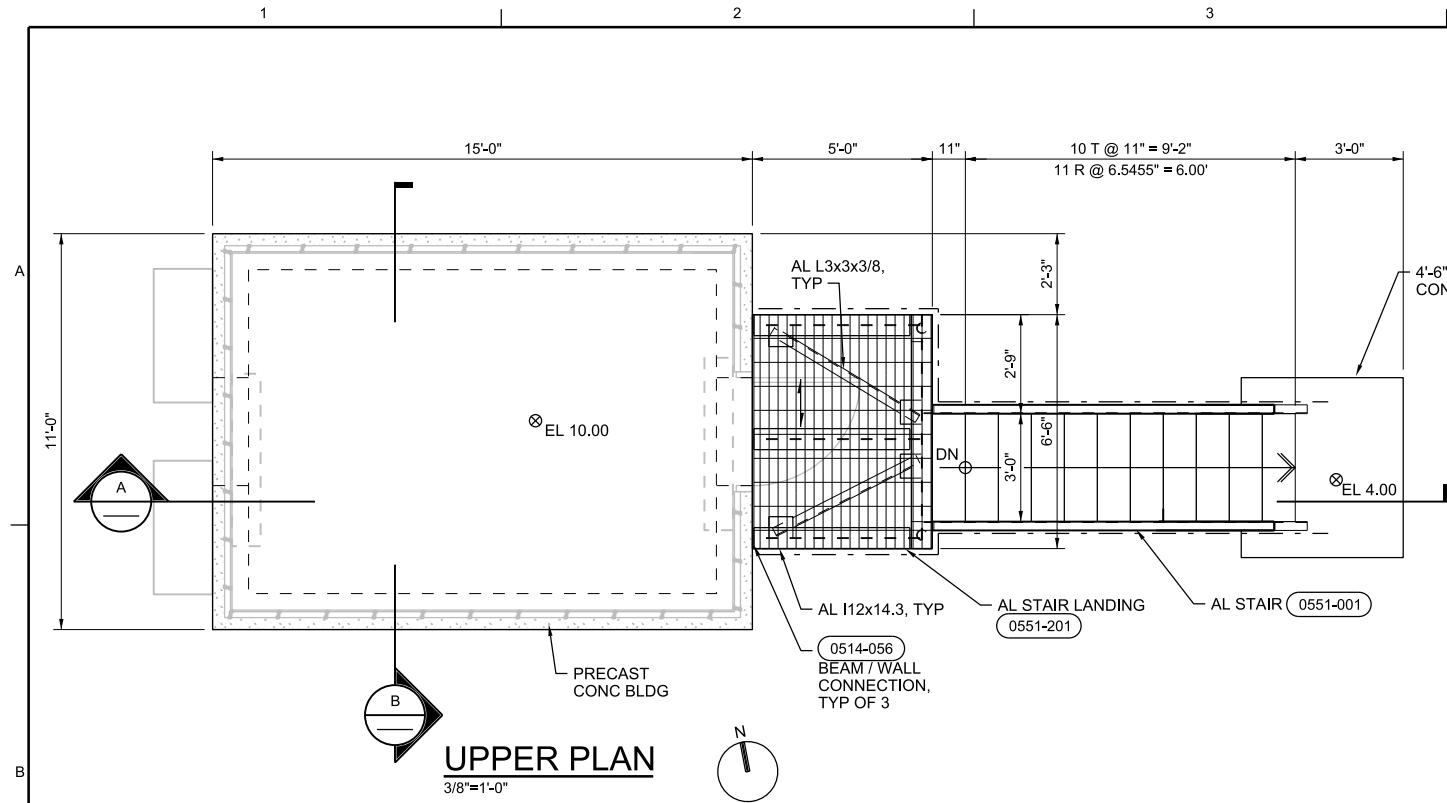
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Beth Trautwein, AF 91388

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CITY OF KEY WEST
KEY WEST, FLORIDA

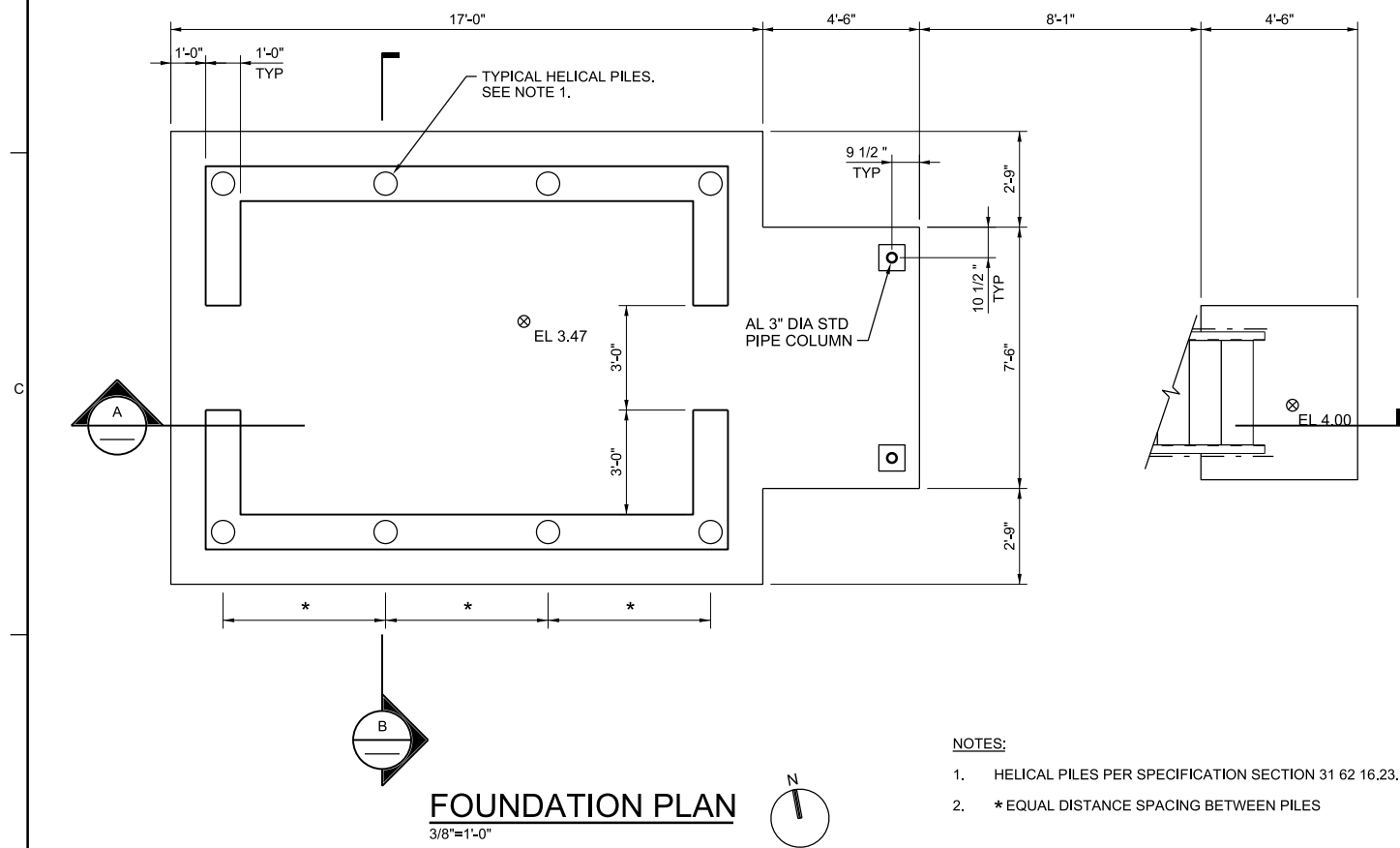
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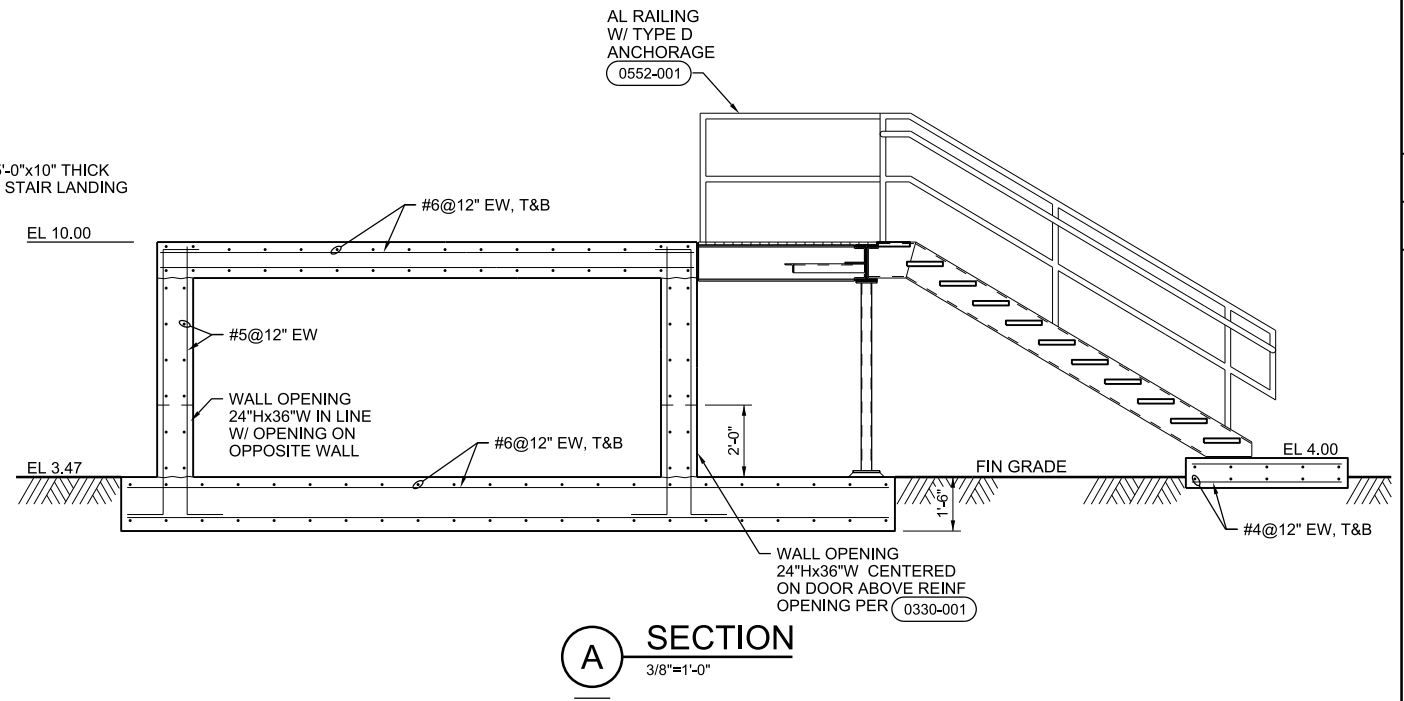
UPPER PLAN
3/8"=1'-0"



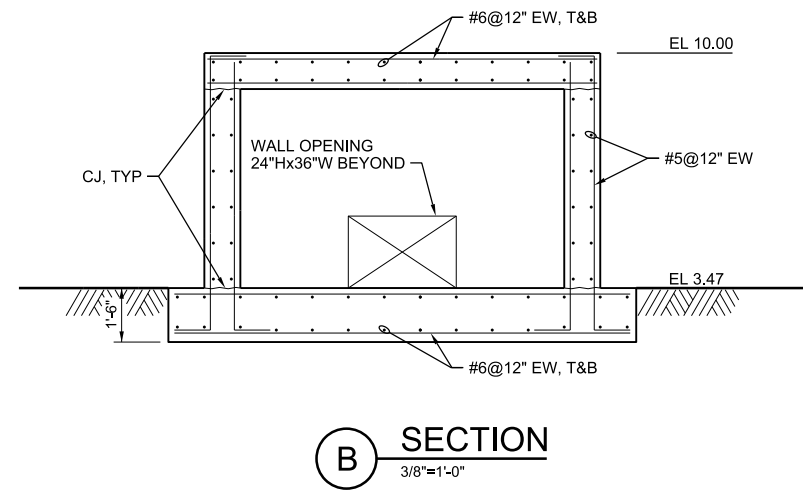
FOUNDATION PLAN
3/8"=1'-0"

NOTES:

1. HELICAL PILES PER SPECIFICATION SECTION 31 62 16.23.
2. * EQUAL DISTANCE SPACING BETWEEN PILES



A SECTION
3/8"=1'-0"



B SECTION
3/8"=1'-0"

CH2MHILL®		STRUCTURAL PUMP STATION C PLANS AND SECTIONS	
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BY		APVD	BY
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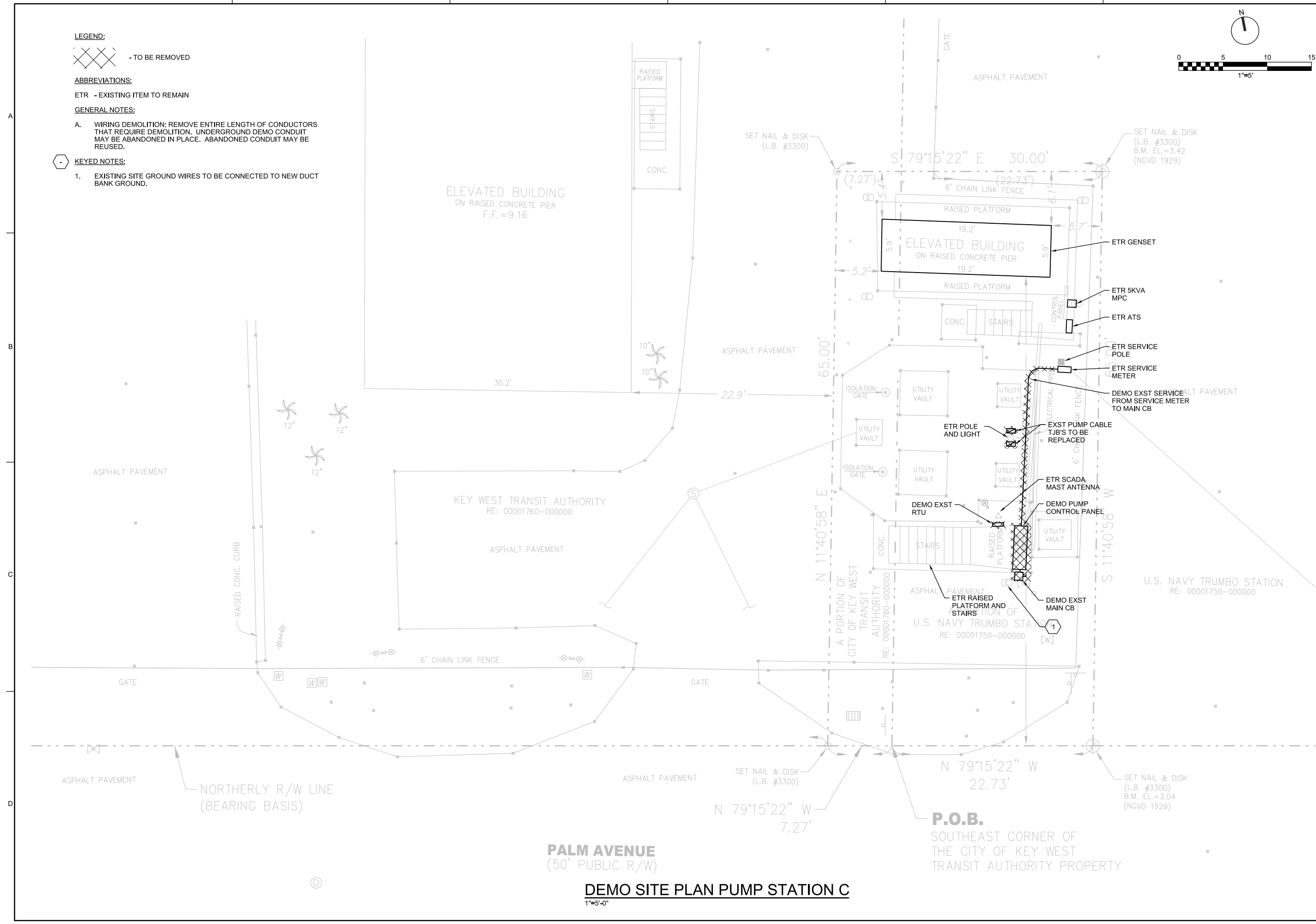
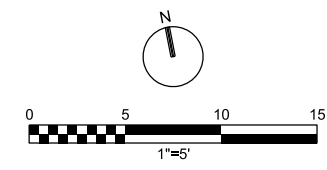
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LEGEND:
 - TO BE REMOVED

ABBREVIATIONS:
 ETR - EXISTING ITEM TO REMAIN

GENERAL NOTES:
 A. WIRING DEMOLITION: REMOVE ENTIRE LENGTH OF CONDUCTORS THAT REQUIRE DEMOLITION. UNDERGROUND DEMO CONDUIT MAY BE ABANDONED IN PLACE. ABANDONED CONDUIT MAY BE REUSED.

KEYED NOTES:
 1. EXISTING SITE GROUND WIRES TO BE CONNECTED TO NEW DUCT BANK GROUND.



DEMO SITE PLAN PUMP STATION C
 1"=5'-0"

CH2MHILL® ELECTRICAL PUMP STATION C SITE DEMOLITION PLAN				3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 / AAC001892	
				KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA	
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GENERAL NOTES:

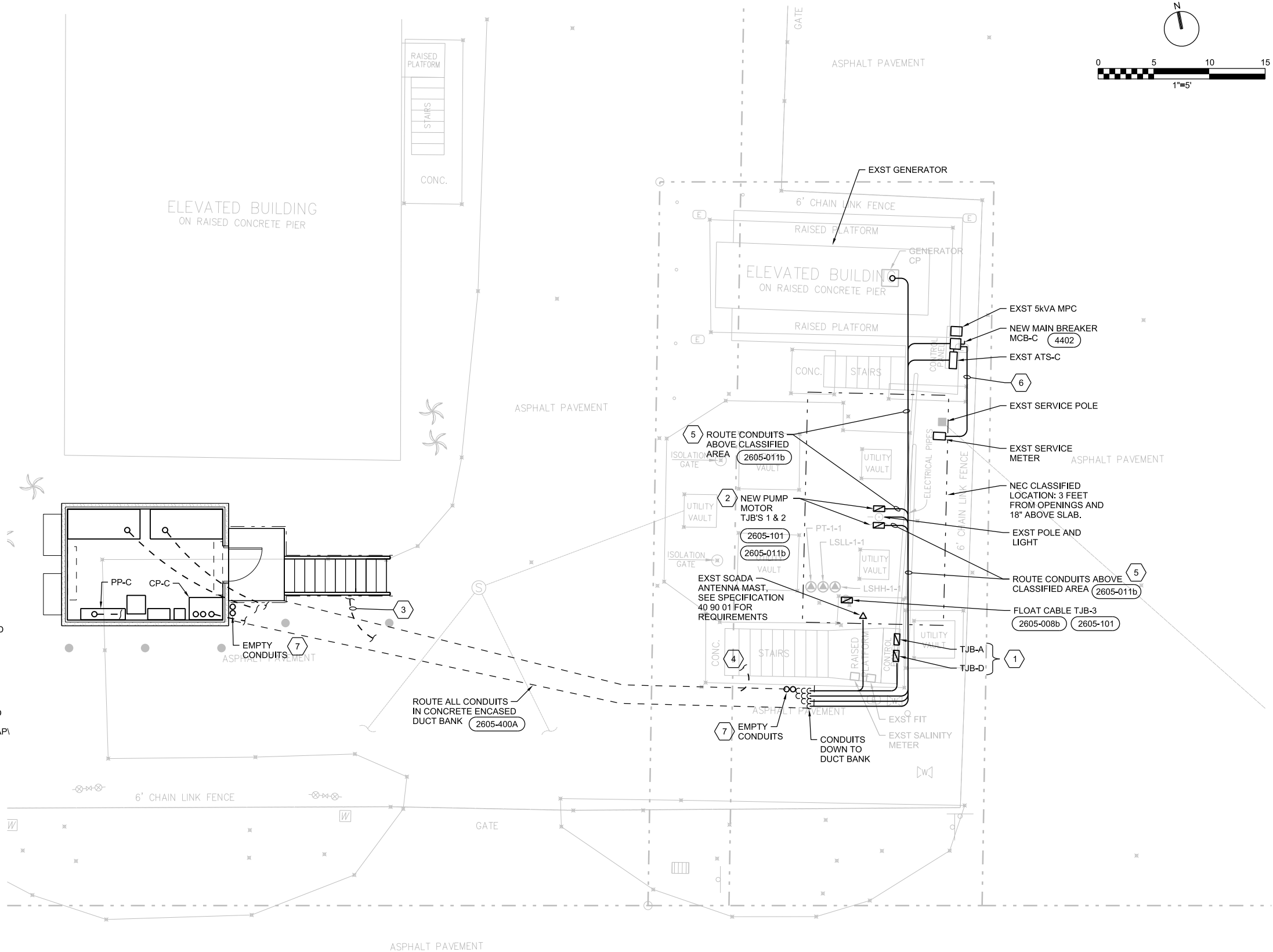
- A. DO NOT SCALE ELECTRICAL DRAWING. REFER TO THE CIVIL ARCHITECTURAL/MECHANICAL, STRUCTURAL DRAWINGS AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACTLY LOCATION OF ALL EQUIPMENT.
- B. ALL WORK SHALL COMPLY WITH THE NEC AND LOCAL CODES.
- C. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND 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. REFER TO SPECIFICATION SECTION 26 41 00 FOR FACILITY LIGHTNING PROTECTION SYSTEM REQUIREMENTS.
- F. COORDINATE ELECTRICAL UTILITY SERVICE REQUIREMENTS WITH KEYS ENERGY.

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).

KEYED NOTES:

- 1. PROVIDE TJB'S MOUNTED IN SPACE VACATED BY REMOVED PUMP CONTROL PANEL. PROVIDE WIRING TO EXTEND CIRCUITS TO NEW PUMP CONTROL PANEL LOCATION.
- 2. REPLACE EXST PUMP CABLE TJB'S WITH NEW TJB'S. LOCATED OUTSIDE OF HAZARDOUS AREAS.
- 3. GROUND WIRE EMBEDDED IN DUCT BANK BOND TO BUILDING GROUND LOOP.
- 4. BOND GROUND WIRE EMBEDDED IN CE DUCT BANK TO EXST GROUND LOOP.
- 5. ROUTE CONDUITS ABOVE CLASSIFIED AREA. PROVIDE STANCHIONS TO SUPPORT CONDUITS ABOVE 18" ABOVE SLAB.
- 6. EXTEND SERVICE FROM EXST SERVICE POLE TO NEW MAIN CIRCUIT BREAKER MCB-C.
- 7. PROVIDE (1) 3"C, EMPTY, AND (1) 2"C, EMPTY FROM NEW BUILDING TO EXISTING STAIRS AND PLATFORM. ROUTE VIA CONCRETE ENCASED DUCT BANK, STUB UP 12" OF CONDUIT, INSTALL PULL-STRING AND CAP IN LOCATION SHOWN.
- 8. LOCATED OUTSIDE HAZARDOUS AREA.



SITE PLAN PUMP STATION C
1"=5'-0"

CH2MHILL®

ELECTRICAL
**PUMP STATION C
SITE PLAN**

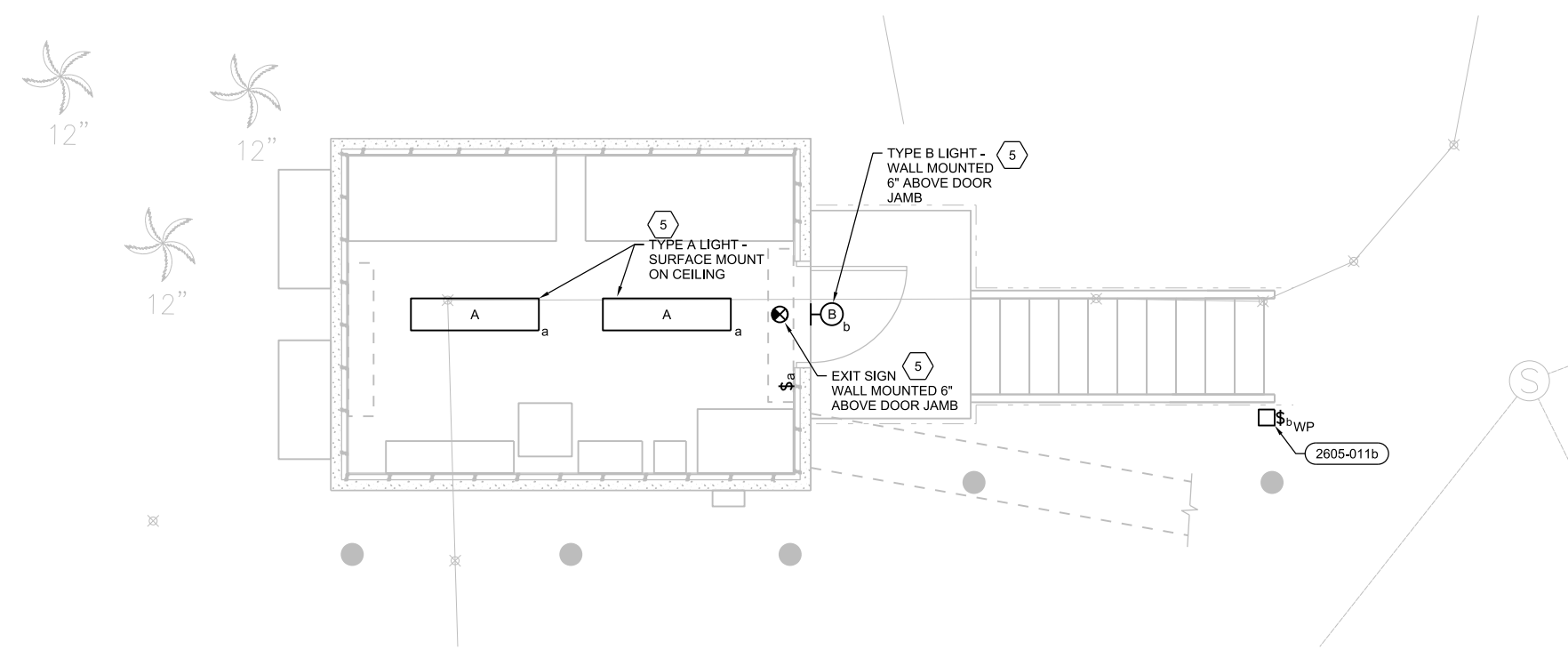
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CITY OF KEY WEST
KEY WEST, FLORIDA

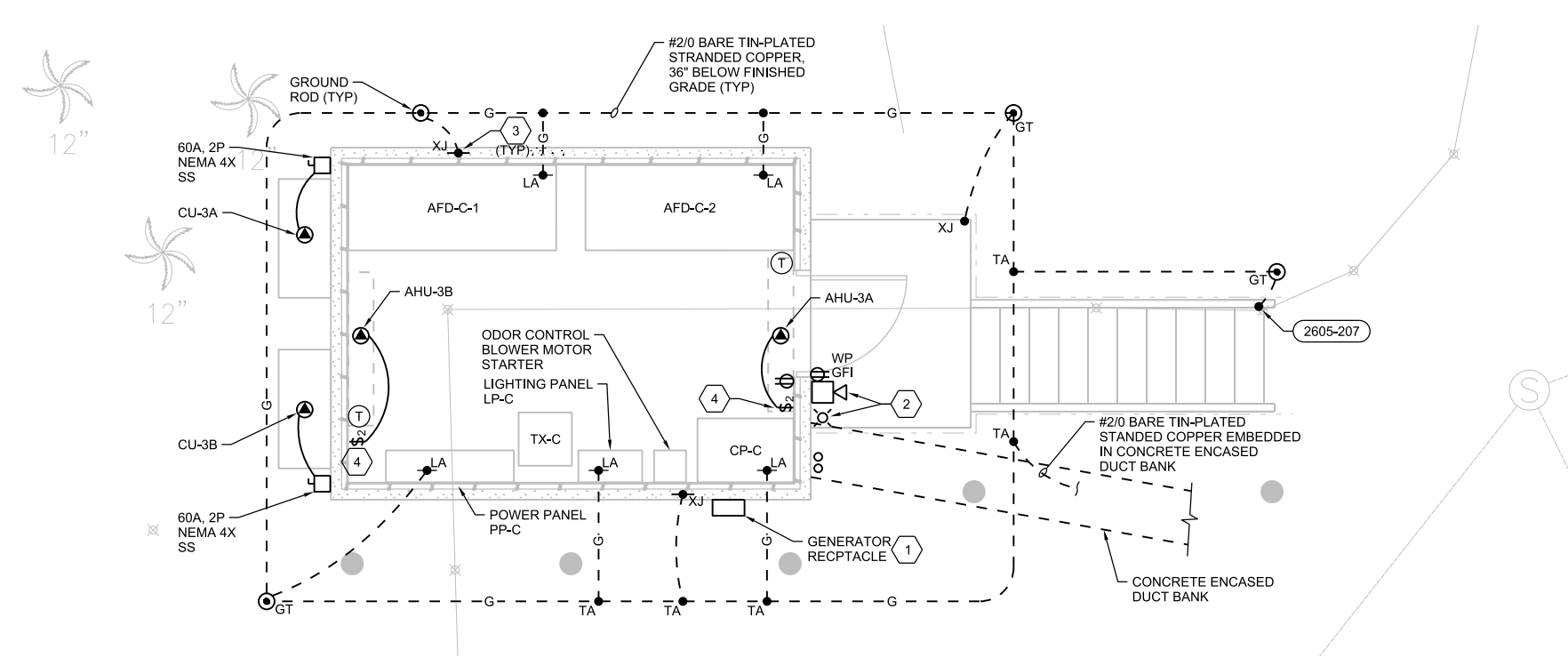
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LIGHTING PLAN - PUMP STATION C
3/8"=1'-0"



POWER PLAN - PUMP STATION C
3/8"=1'-0"

- GENERAL NOTES:**
- A. CONTRACTOR TO COORDINATE ALL ITEMS MOUNTED TO BUILDING EXTERIOR WITH BUILDING MANUFACTURER.
 - B. CONDUITS ENTERING BUILDING SHALL ENTER THROUGH THE FLOOR SLAB.
 - C. CONDUITS SHALL NOT BE ROUTED ALONG BUILDING EXTERIOR.
 - D. CONDUITS ROUTED INSIDE OF BUILDING SHALL BE EXPOSED.
 - E. REFER TO DWG 001-E-05 FOR LUMINAIRE REQUIREMENTS.

- KEYED NOTES:**
- 1. MOUNT ON BUILDING WALL, BOTTOM OF RECEPTACLE AT EL 10.0' AFF. APPROXIMATE GRADE AT THIS AREA IS EL 3.0.
 - 2. MOUNT ALARM LIGHT AND ALARM HORN ON BUILDING WALL AT EL 18.0'.
 - 3. EXOTHERMIC WELD GROUND WIRE TO STRUCTURAL REINFORCING STEEL.
 - 4. TOGGLE DISCONNECT SW, MOUNT NEXT TO HVAC UNIT AT 8' ABOVE FINISHED FLOOR.
 - 5. EXIT SIGN AND EMERGENCY BATTERY PACKS WIRED TO THE LINE SIDE OF THE SWITCH.

NO.	DATE	DR	CHK	APVD	BY	APVD
		N ADAMS	AL CLOUGH			

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KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

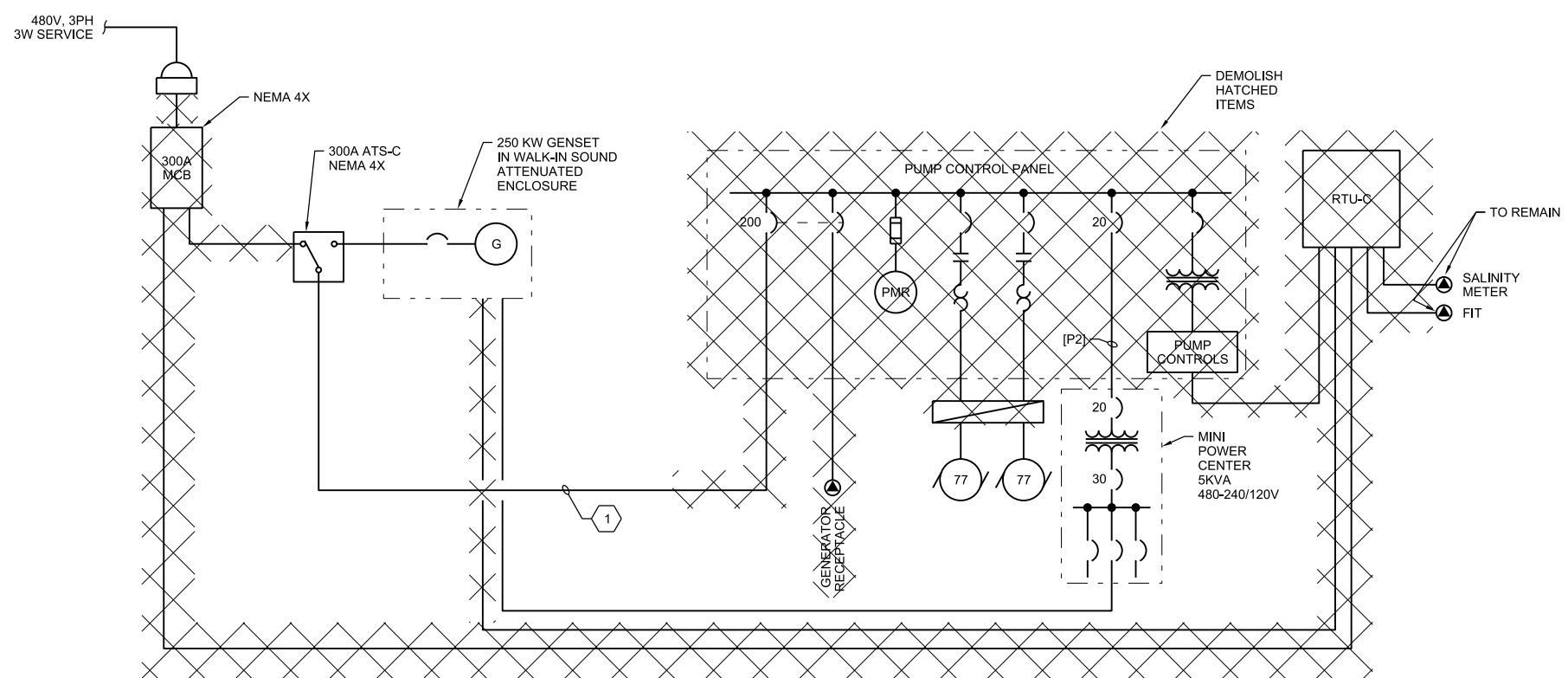
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ELECTRICAL
**PUMP STATION C
PLAN**

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	APRIL 2015
PROJ	476744
DWG	030-E-201
SHEET	of

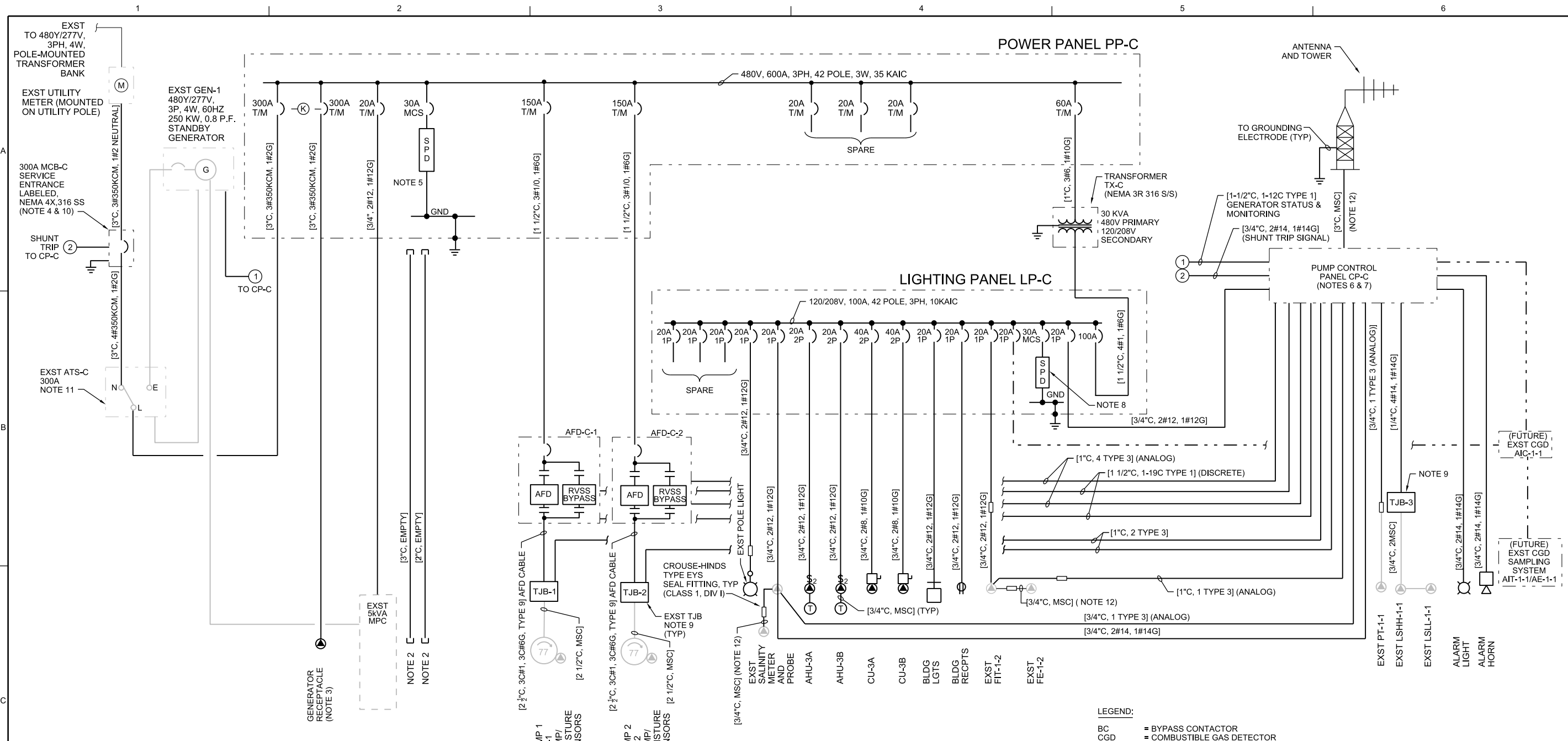
BID DOCUMENTS



ONE LINE DIAGRAM
EXISTING CONDITIONS PUMP STATION C

LEGEND:
 - TO BE REMOVED
KEYED NOTES:
 1. SAVE BELOW GRADE CONDUITS FOR REUSE.

CH2MHILL® ELECTRICAL PUMP STATION C EXISTING ONE LINE DIAGRAM	3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 / AAC001892		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA	
	VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.	DATE: APRIL 2015 PROJ: 476744 DWG: 030-E-601 SHEET: of	NO. DATE DSGN	REVISION CHK
N ADAMS DR		AL CLOUGH APVD		© CH2M HILL 2015. ALL RIGHTS RESERVED.



- 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.
 - STUB UP 12" OF CONDUIT NEXT TO PUMP TJB'S, INSTALL PULL-STRING AND CAP ON BOTH ENDS.
 - PROVIDE 400A, 600V GENERATOR RECEPTACLE WITH JUNCTION BOX AND ANGLE ADAPTER, RUSSELLSTOLL: DS 4404MRA00, NO SUBSTITUTIONS.
 - MAIN CIRCUIT BREAKER WITH SHUNT TRIP OPTION. BREAKER SHALL OPEN UPON RECEIPT OF SHUNT TRIP COMMAND FROM RTU.
 - PROVIDE CATEGORY C, 8-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.
 - 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.
 - THE SERVICE NEUTRAL IS BONDED TO THE GROUNDING ELECTRODE CONDUCTOR IN THE MAIN BREAKER ONLY.
 - EXISTING 3-POLE ATS WITH A NEUTRAL BUS, THE SERVICE NEUTRAL AND THE GENERATOR NEUTRAL ARE TO BE BONDED AT THE ATS NEUTRAL BUS FOR A NON-SEPARATELY DERIVED SYSTEM, THE ATS NEUTRAL BUS SHALL NOT BE BONDED TO THE ATS GROUND BUS.
 - REFER TO SPECIFICATION SECTION 40 90 01 FOR MSC REQUIREMENTS.

RISER DIAGRAM
PUMP STATION C

- LEGEND:**
- BC = BYPASS CONTACTOR
 - CGD = COMBUSTIBLE GAS DETECTOR
 - CPT = CONTROL POWER TRANSFORMER
 - F = 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 BUS
 - NEU = NEUTRAL SOURCE
 - 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-C CONNECTED LOAD SUMMARY

DESCRIPTION	KVA
PUMP NO.1	77
PUMP NO.2	77
BLOWER	2
MPC	5
LIGHTING PANEL, LP-3A	10
SUBTOTAL	156
25% OF LARGEST MOTOR	19.25
SERVICE RATING	185.25

LP-C CONNECTED LOAD SUMMARY

DESCRIPTION	VA
AHU-3A	114
AHU-3B	114
CU-3A	3723
CU-3B	3723
BLDG LIGHTS	200
RECEP	360
FIT-1-2	50
CP-1	3000
FP-1	300
AIC	100
SUBTOTAL	11,684
25% OF CONTINUOUS LOADS	1,009
SERVICE RATING	12,693

*ALL LOADS ASSUMED NON-CONTINUOUS

*ALL LOADS ASSUMED NON-CONTINUOUS

CH2MHILL

ELECTRICAL
PUMP STATION C
ONE LINE DIAGRAM

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 - AAC001892

KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE: APRIL 2015
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DWG: 030-E-602
SHEET: of

NO. DATE DSGN DR APVD BY APVD
N ADAMS AL CLOUGH
REVISION CHECK

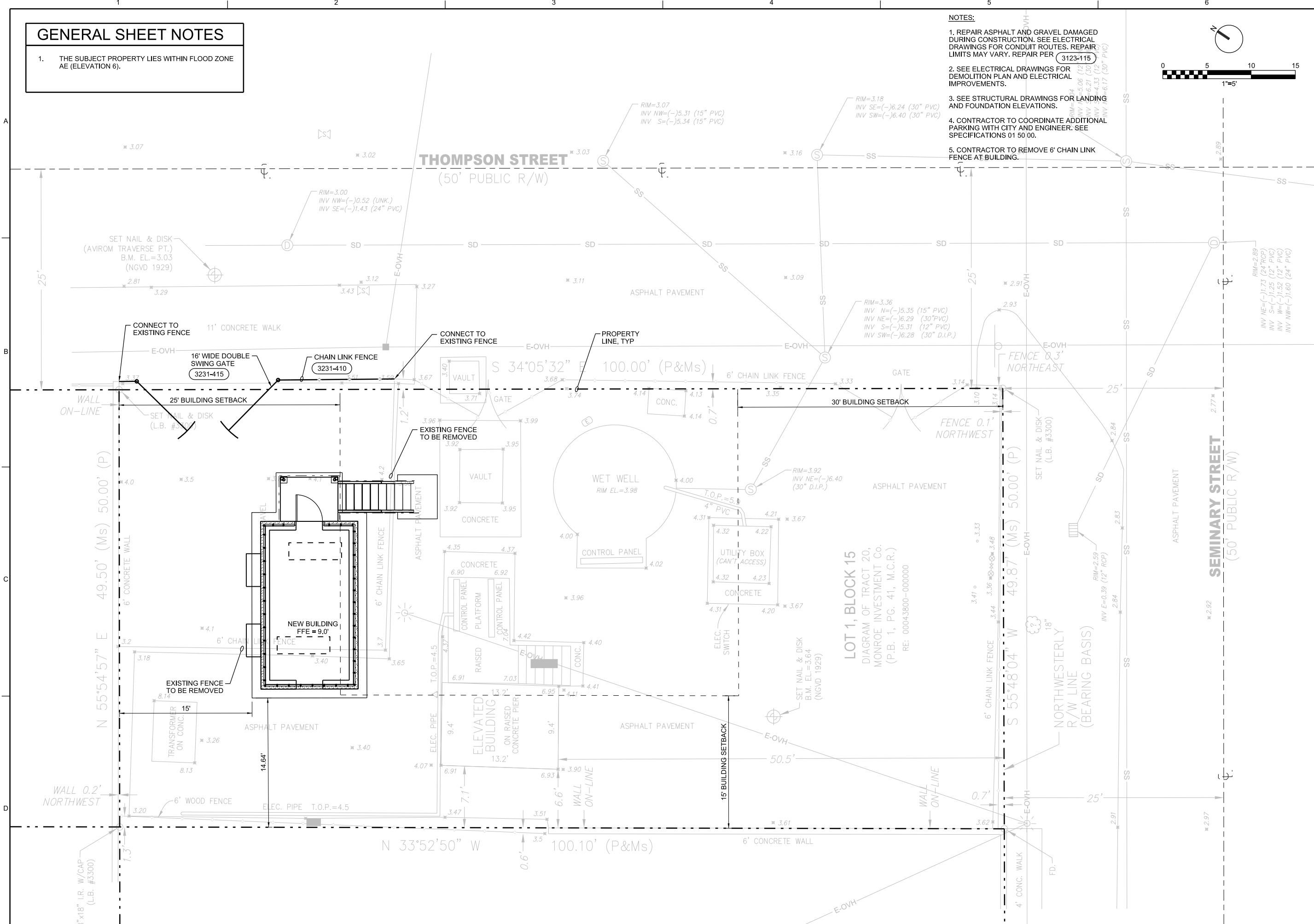
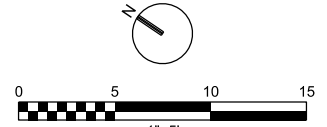
BID DOCUMENTS

GENERAL SHEET NOTES

1. THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE AE (ELEVATION 6).

NOTES:

- REPAIR ASPHALT AND GRAVEL DAMAGED DURING CONSTRUCTION. SEE ELECTRICAL DRAWINGS FOR CONDUIT ROUTES. REPAIR LIMITS MAY VARY. REPAIR PER 3123-115
- SEE ELECTRICAL DRAWINGS FOR DEMOLITION PLAN AND ELECTRICAL IMPROVEMENTS.
- SEE STRUCTURAL DRAWINGS FOR LANDING AND FOUNDATION ELEVATIONS.
- CONTRACTOR TO COORDINATE ADDITIONAL PARKING WITH CITY AND ENGINEER. SEE SPECIFICATIONS 01 50 00.
- CONTRACTOR TO REMOVE 6' CHAIN LINK FENCE AT BUILDING.



LOT 1, BLOCK 15
 DIAGRAM OF TRACT 20,
 MONROE INVESTMENT Co.,
 (P.B. 1, PG. 41, M.C.R.)
 RE: 00043800-000000

CH2MHILL

CIVIL
**PUMP STATION D
 SITE PLAN**

3011 S.W. WILLISTON ROAD
 GAINESVILLE, FLORIDA 32608
 EB0000072 AAC001892

KEY WEST VFD UPGRADE
 KEY WEST, FLORIDA
 CITY OF KEY WEST
 KEY WEST, FLORIDA

NO.	DATE	DR	CHK	APVD
		R. MORRISON	R. MORRISON	A. MALONE
				R. MORRISON

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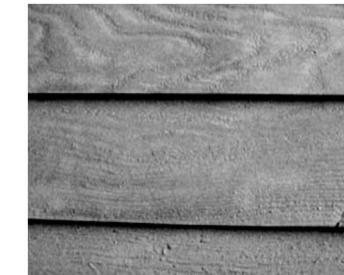
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APPLICABLE CODES:

FLORIDA BUILDING CODE, 2010 EDITION
 FLORIDA FIRE PREVENTION CODE, 2010 EDITION
 NATIONAL ELECTRIC CODE, CURRENT EDITION

GENERAL NOTES:

1. THIS BUILDING IS A PRE-ENGINEERED CONCRETE BUILDING. SEE SPECIFICATION SECTION 13 34 23
2. ALL DOORS, FRAMES, HARDWARE, LOUVERS AND OTHER APPURTENANCES ARE TO COMPLY WITH THE REQUIREMENTS FOR CLADDING COMPONENTS IN THE HIGH VELOCITY WIND ZONE. SEE SPECIFICATION 13 34 23.
3. FOR FIRE EXTINGUISHER INFORMATION, SEE LEGEND.
4. BUILDING EXTERIOR TEXTURE AND COLORS TO BE SELECTED BY THE ARCHITECT OR OWNER.
5. SEE STRUCTURAL DRAWINGS FOR FOUNDATION, WALK-OFF SLAB, PLATFORM AND STAIRS.
6. PROVIDE SMOOTH MOUNTING SURFACE FOR EXTERIOR WALL MOUNTED EQUIPMENT.
7. 1 HOUR RATED CONCRETE WALL AND DOOR ASSEMBLY ADJACENT TO EXISTING BLDG. MANUFACTURER TO MEET REQUIRED CONCRETE THICKNESS FOR A ONE HOUR RATED EXTERIOR CONCRETE WALL AS DEFINED IN THE FLORIDA BUILDING CODE IN TABLE 720.1(2) UNDER 4-1-1 SOLID CONCRETE WALLS.
8. PROVIDE AHU-4A&B WITH CONDENSATE DRAIN LINES FULL SIZE OF UNIT CONNECTION AND ROUTE OUTSIDE THE BUILDING INTO DRYWELL. CONTRACTOR SHALL FIELD VERIFY BEST LOCATION FOR DRYWELL.



CONCRETE FORMLINER WALL FINISH
NTS



CONCRETE FORMLINER ROOF FINISH
NTS

CODE DATA 2010 FLORIDA BUILDING CODE

BUILDING: PUMP STATION D

GENERAL INFORMATION

USE AND OCCUPANCY CLASSIFICATION (CHAPTER 3)	F-2 FACTORY INDUSTRIAL MODERATE HAZARD
CONSTRUCTION CLASSIFICATION (CHAPTER 6)	VB

AREA AND HEIGHT LIMITATIONS

MAXIMUM ALLOWABLE AREA (TABLE 503)	F-1: 8,500 SF 1 STORY
ACTUAL AREA:	180 SF
ACTUAL PER FLOOR:	BASEMENT NA
	FIRST 180 SF
	SECOND NA
MAXIMUM ALLOWABLE STORIES (TABLE 503)	1 STORY
ACTUAL NUMBER OF STORIES	1 STORY
MAXIMUM ALLOWABLE HEIGHT (TABLE 503)	40 FEET
ACTUAL HEIGHT:	18 FEET

OCCUPANCY / EGRESS INFORMATION

DESIGN OCCUPANCY (TABLE 1004.1.1)	140SF / 100 SF/PERSON= 2 PERSONS (FOR MAINTENANCE PURPOSES ONLY)
EGRESS WIDTH BASED ON OCCUPANCY (TABLE 1005.1)	.2 X 4 = .8 32.8" MINIMUM PROVIDED
ALLOWABLE DEAD END LENGTH (TABLE 1017.3)	20 FEET
NUMBER OF EXITS	1
ALLOWABLE COMMON PATH OF TRAVEL (1014.3)	75 FEET
MAX TRAVEL DISTANCE ALLOWED (TABLE 1016.1)	200 FEET (F-1)

REQUIRED FIRE RESISTANT RATINGS

BUILDING ELEMENTS (TABLE 601)	VB
STRUCTURAL FRAME	0 RATING
EXTERIOR BEARING WALLS	0 HOURS
INTERIOR BEARING WALLS	NA
INTERIOR NON-BEARING WALLS	NA
FLOOR CONSTRUCTION	0 RATING
ROOF CONSTRUCTION	0 RATING
SHAFT ENCLOSURE (707.4)	NA
STAIRWAY ENCLOSURE (1020.1)	NA
CORRIDOR (TABLE 1016.1)	NA
NON-SEPARATED OCCUPANCIES (508.3.2)	NA
ACCESSORY OCCUPANCIES (508.3.1)	NA
REQUIRED FIRE RESISTANCE RATINGS OF EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE (TABLE 602)	1 HOUR RATING

PLUMBING	
PLUMBING:	NONE
FIRE PROTECTION	
SPRINKLERS FIRE EXTINGUISHERS EXIT LIGHTS	NOT PROVIDED PROVIDED PROVIDED

CH2MHILL®
 ARCHITECTURAL/MECHANICAL
 PUMP STATION D
 LIFE SAFETY / FLOOR PLAN
 ELEVATIONS AND CODE DATA

3011 S.W. WILSTON ROAD
 GAINESVILLE, FLORIDA 32608
 EB0000072 AAC001892
 Beth Trautwein, AIA 91388

KEY WEST VFD UPGRADE
 KEY WEST, FLORIDA
 CITY OF KEY WEST
 KEY WEST, FLORIDA

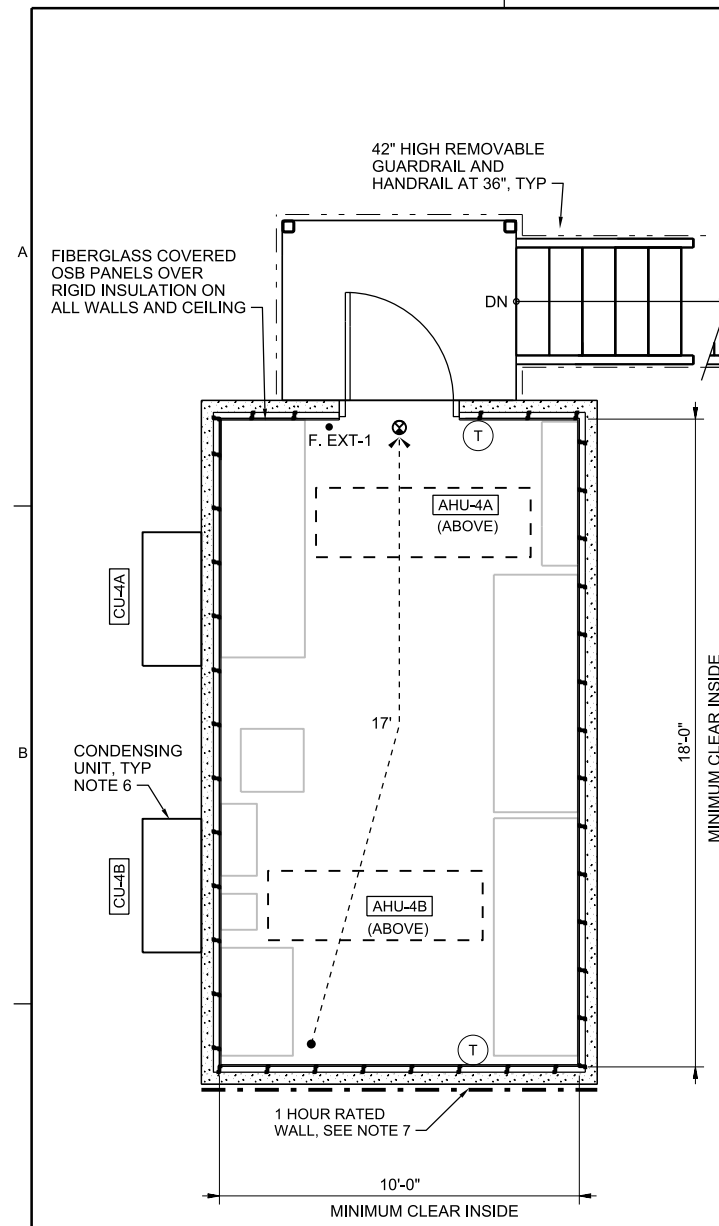
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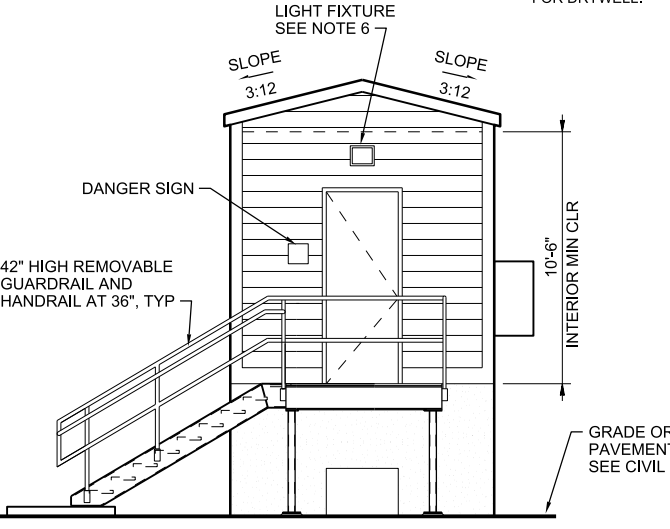
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VERIFY SCALE
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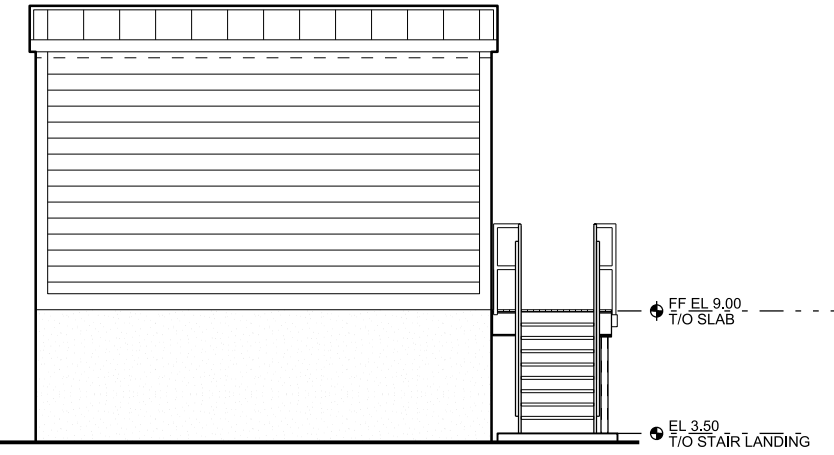
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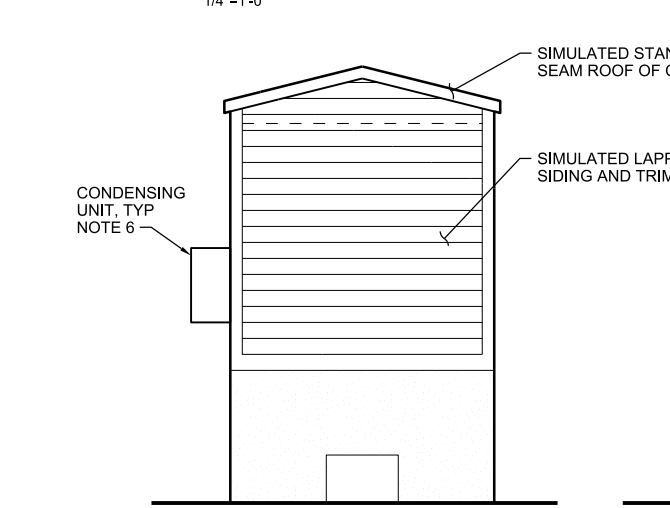
FLOOR PLAN / LIFE SAFETY PLAN
3/8"=1'-0"



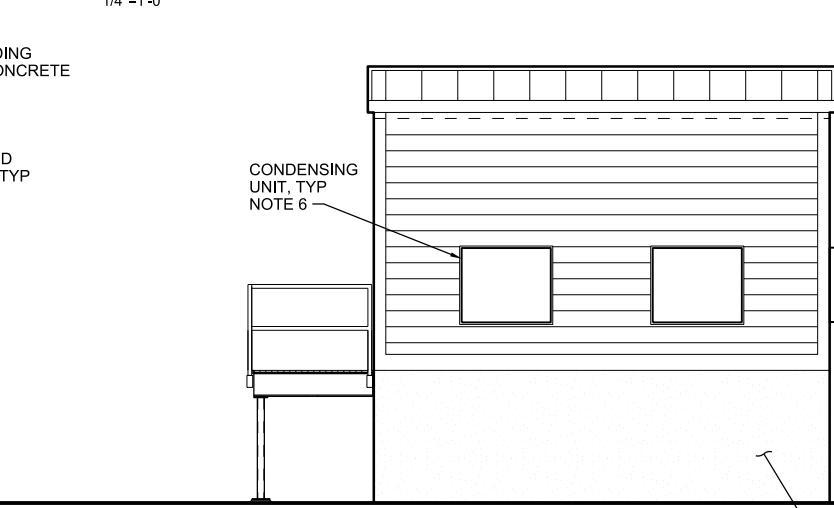
NORTH ELEVATION
1/4"=1'-0"



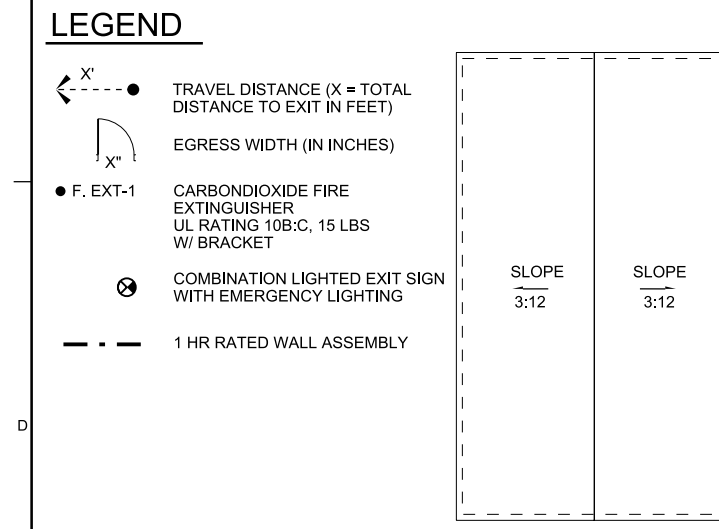
EAST ELEVATION
1/4"=1'-0"



SOUTH ELEVATION
1/4"=1'-0"



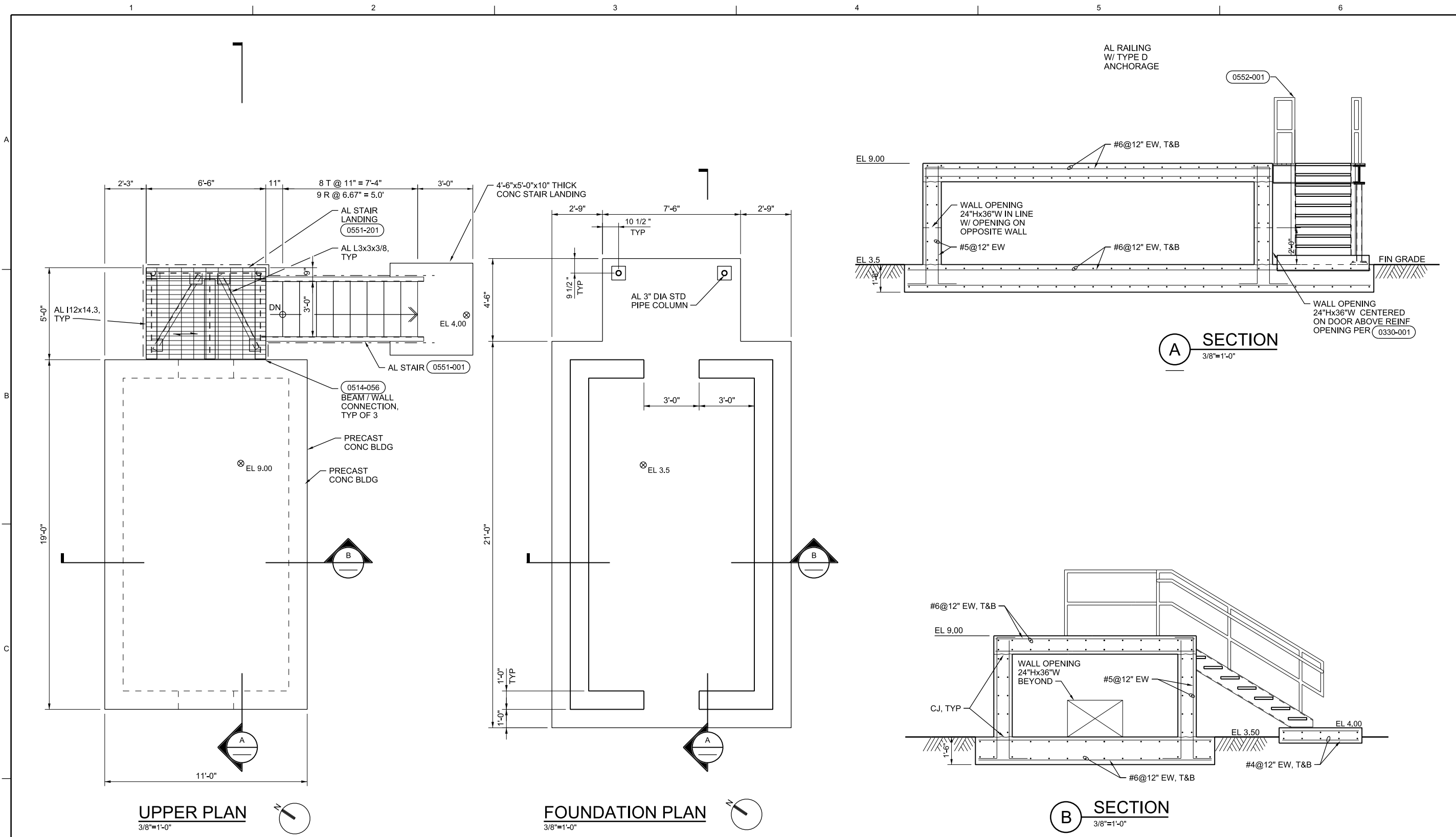
WEST ELEVATION
1/4"=1'-0"



ROOF PLAN
1/4"=1'-0"

LEGEND

- X' --- TRAVEL DISTANCE (X = TOTAL DISTANCE TO EXIT IN FEET)
- ⤴ X" --- EGRESS WIDTH (IN INCHES)
- F. EXT-1 CARBONDIOXIDE FIRE EXTINGUISHER UL RATING 10B:C, 15 LBS W/ BRACKET
- ⊗ COMBINATION LIGHTED EXIT SIGN WITH EMERGENCY LIGHTING
- - - 1 HR RATED WALL ASSEMBLY



UPPER PLAN
3/8"=1'-0"

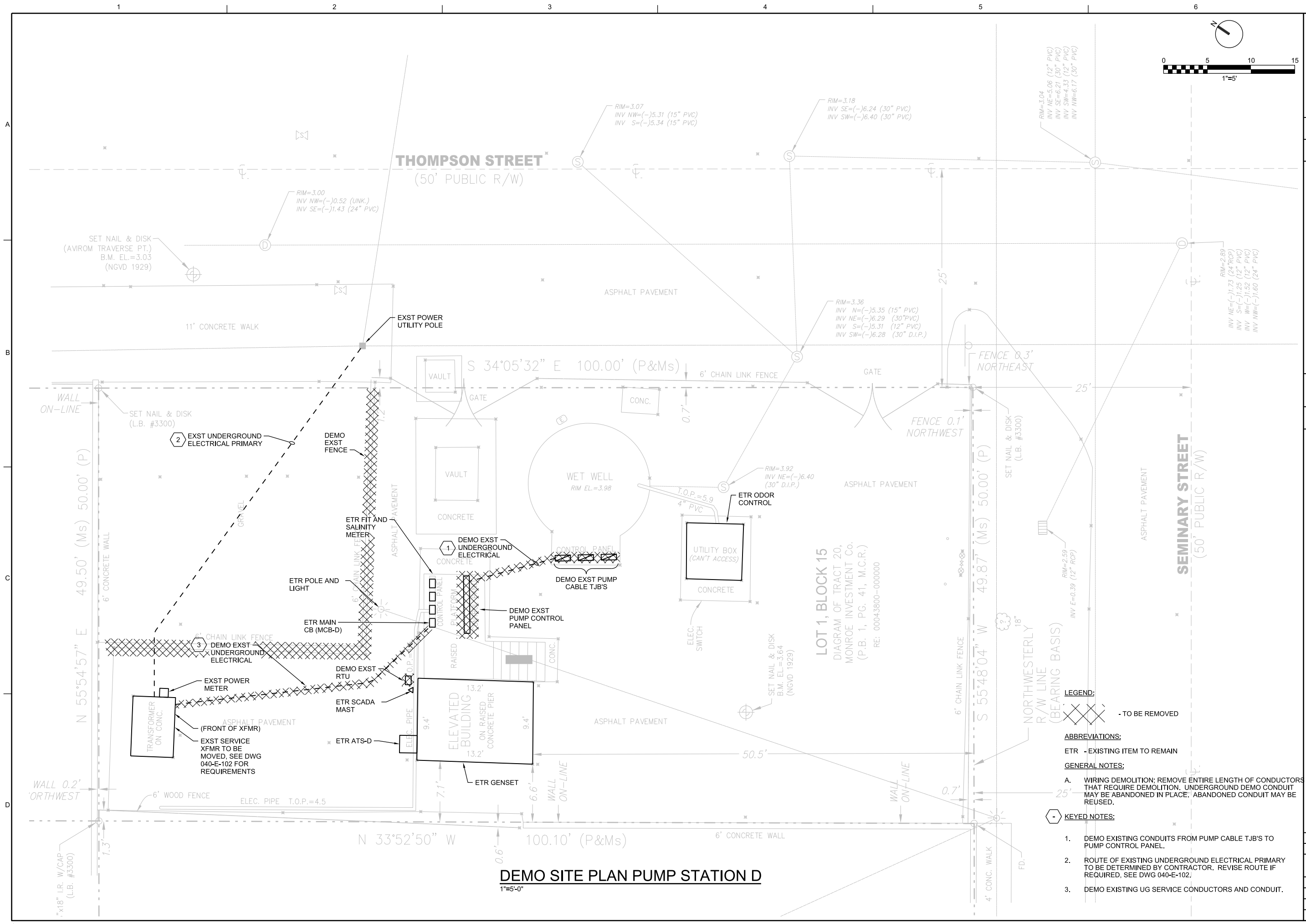
FOUNDATION PLAN
3/8"=1'-0"

A SECTION
3/8"=1'-0"

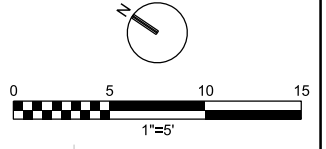
B SECTION
3/8"=1'-0"

3011 S.W. WILKINSON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 / AAC001892		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA	
CH2MHILL STRUCTURAL		PUMP STATION D PLANS AND SECTIONS	
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REVISION		M CHRZANOWSKI	
BY	APVD		S TROYAN
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DEMO SITE PLAN PUMP STATION D
1"=5'-0"



LOT 1, BLOCK 15
DIAGRAM OF TRACT 20,
MONROE INVESTMENT Co.
(P.B. 1, PG. 41, M.C.R.)
RE: 0004-3800-000000

- LEGEND:**
 - TO BE REMOVED
- ABBREVIATIONS:**
 ETR - EXISTING ITEM TO REMAIN
- GENERAL NOTES:**
 A. WIRING DEMOLITION: REMOVE ENTIRE LENGTH OF CONDUCTORS THAT REQUIRE DEMOLITION. UNDERGROUND DEMO CONDUIT MAY BE ABANDONED IN PLACE. ABANDONED CONDUIT MAY BE REUSED.
- KEYED NOTES:**
 1. DEMO EXISTING CONDUITS FROM PUMP CABLE TJB'S TO PUMP CONTROL PANEL.
 2. ROUTE OF EXISTING UNDERGROUND ELECTRICAL PRIMARY TO BE DETERMINED BY CONTRACTOR. REVISE ROUTE IF REQUIRED. SEE DWG 040-E-102.
 3. DEMO EXISTING UG SERVICE CONDUCTORS AND CONDUIT.

NO.	DATE	DR	REVISION	CHK	BY	APVD

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 - AAC001892

KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

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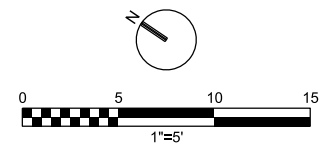
ELECTRICAL
**PUMP STATION D
SITE DEMOLITION
PLAN**

VERIFY SCALE	
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GENERAL NOTES:

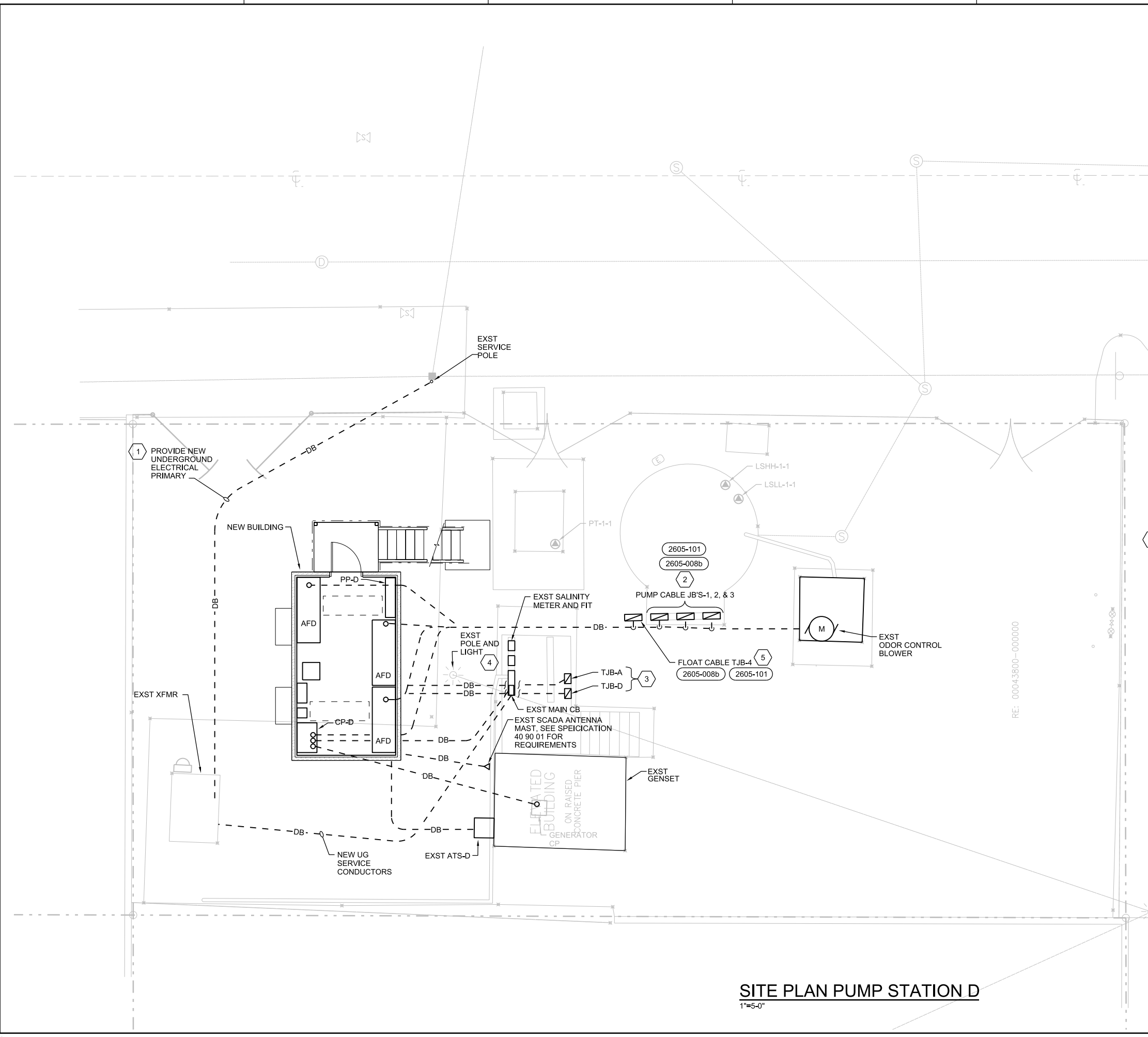
- A. DO NOT SCALE ELECTRICAL DRAWING. REFER TO THE CIVIL, ARCHITECTURAL/MECHANICAL, STRUCTURAL DRAWINGS AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACTLY LOCATION OF ALL EQUIPMENT.
- B. ALL WORK SHALL COMPLY WITH THE NEC AND LOCAL CODES.
- C. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND 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. REFER TO SPECIFICATION SECTION 26 41 00 FOR FACILITY LIGHTNING PROTECTION SYSTEM REQUIREMENTS.
- F. COORDINATE ELECTRICAL UTILITY SERVICE REQUIREMENTS WITH KEYS ENERGY.

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).

KEYED NOTES:

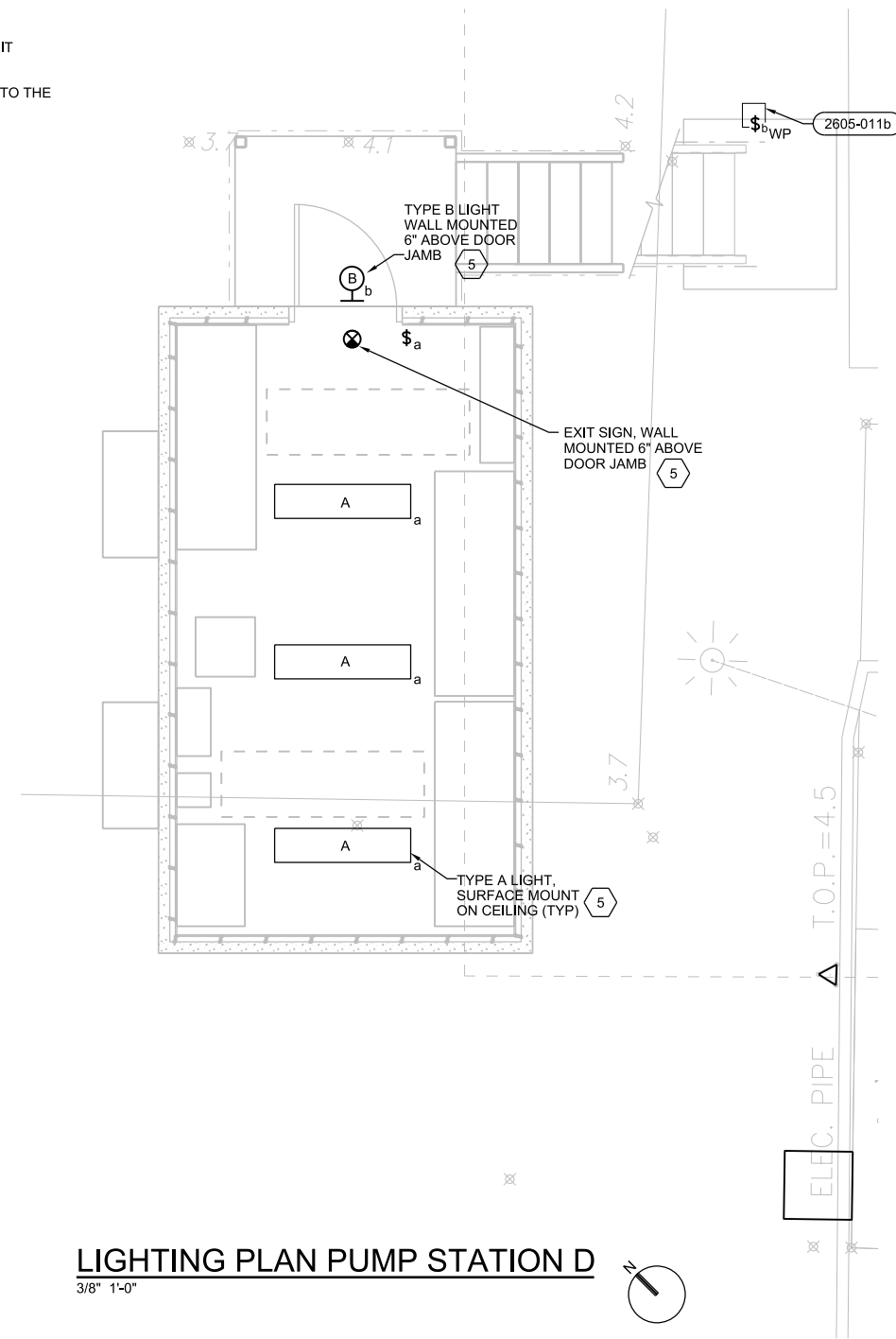
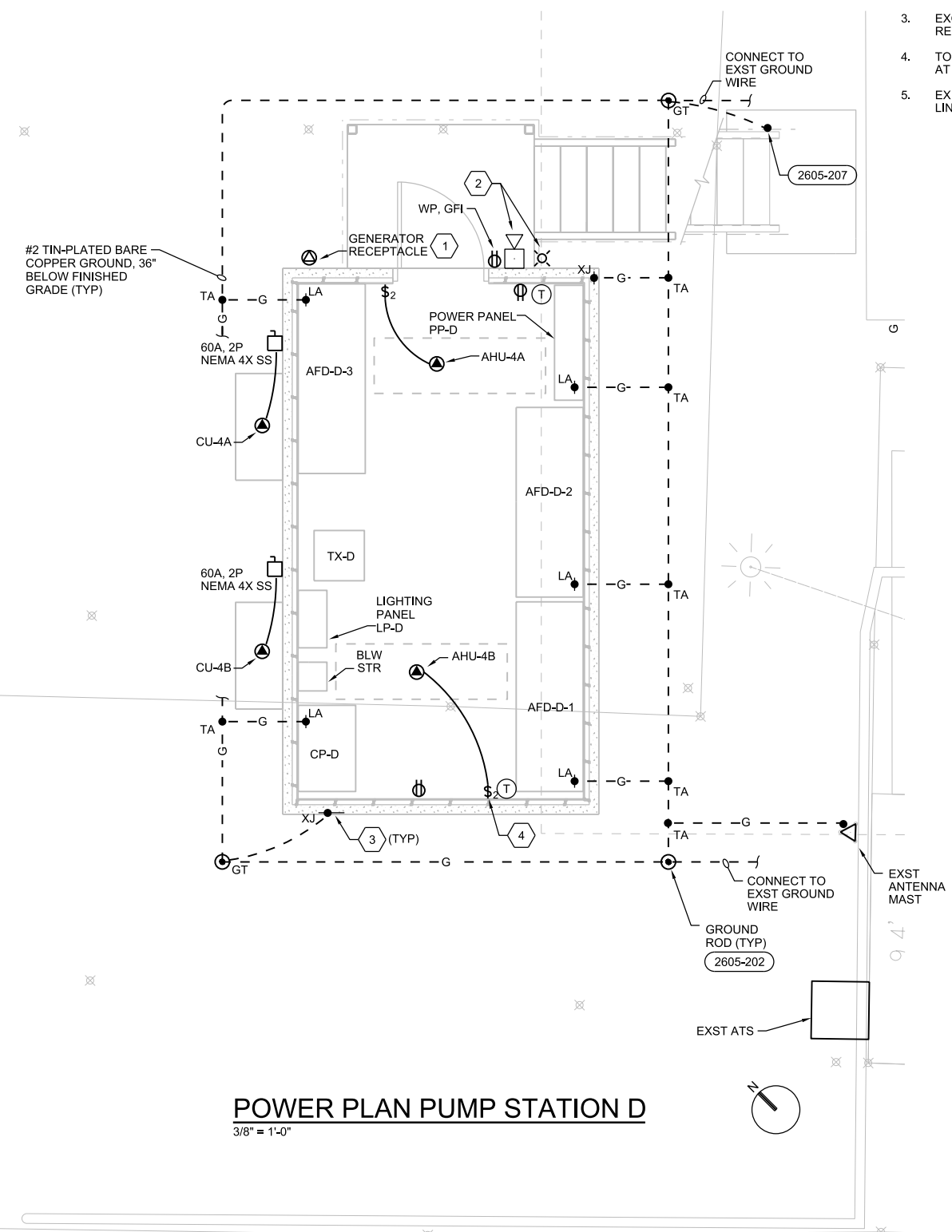
- 1. CONTRACTOR TO COORDINATE WITH THE ELECTRICAL POWER UTILITY TO RELOCATE THE EXISTING UNDERGROUND PRIMARY POWER AS REQUIRED DUE TO CONSTRUCTION OF THE NEW BUILDING.
- 2. REPLACE EXISTING PUMP CABLE JB'S WITH NEW JB'S. LOCATED OUTSIDE HAZARDOUS AREAS.
- 3. PROVIDE TJB'S FOR EXTENSION OF EXST PROCESS INSTRUMENT WIRING TO CP-1. MOUNT TO EXST ELECTRICAL EQUIPMENT RACK.
- 4. REPAIR EXISTING WIRING TO POLE LIGHT IF DAMAGED BY CONSTRUCTION ACTIVITIES.
- 5. LOCATED OUTSIDE HAZARDOUS AREAS.



SITE PLAN PUMP STATION D
1"=5'-0"

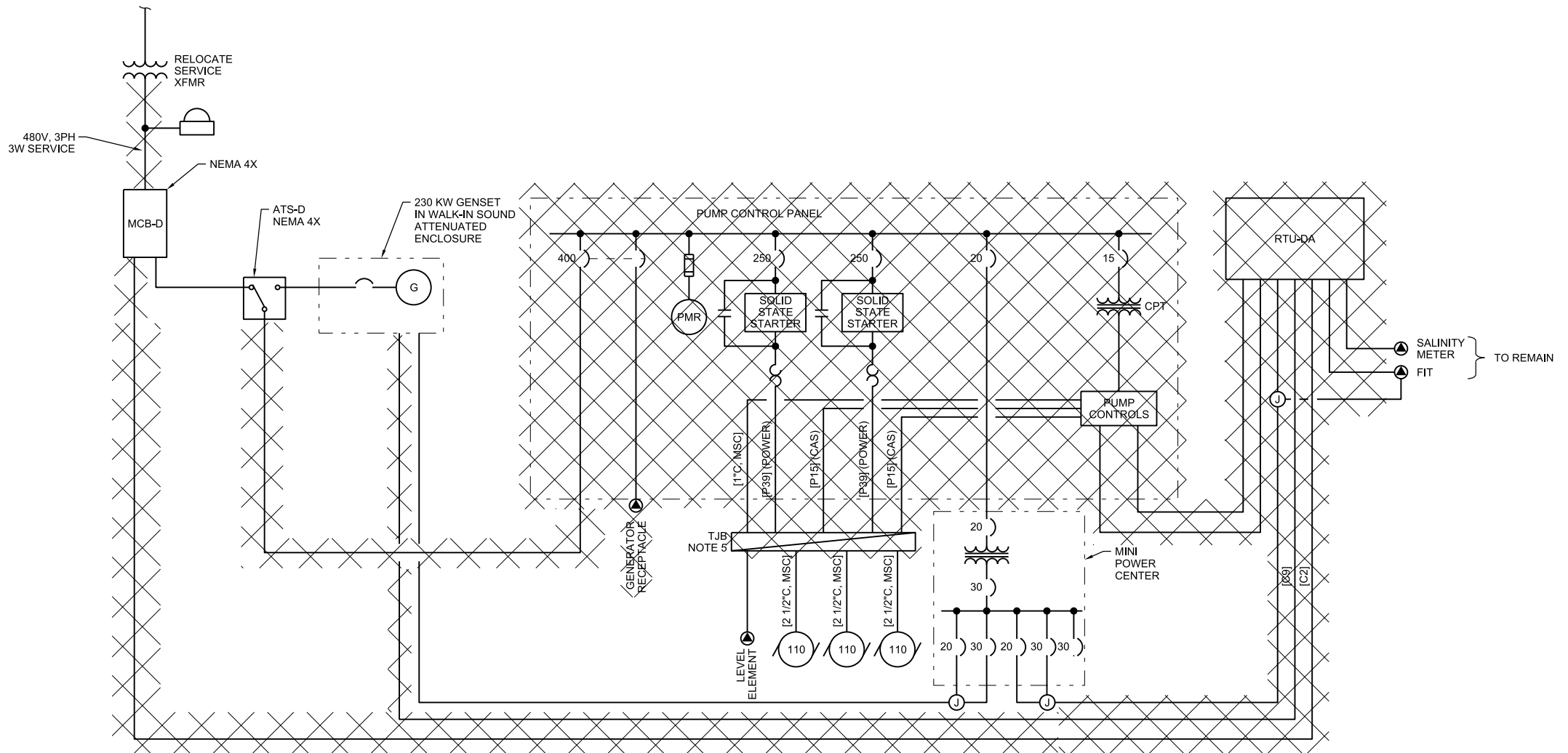
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VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 1"=5'-0"		DATE: APRIL 2015 PROJ: 476744 DWG: 040-E-102 SHEET: of	

- GENERAL NOTES:**
- A. CONTRACTOR TO COORDINATE ALL ITEMS MOUNTED TO BUILDING EXTERIOR WITH BUILDING MANUFACTURER.
 - B. CONDUITS ENTERING BUILDING SHALL ENTER THROUGH THE FLOOR SLAB.
 - C. CONDUITS SHALL NOT BE ROUTED EXPOSED ALONG BUILDING EXTERIOR.
 - D. CONDUITS ROUTED INSIDE OF BUILDING SHALL BE EXPOSED.
 - E. REFER TO DRAWING 001-E-05 OR LUMINAIRE REQUIREMENTS.
- KEYED NOTES:**
- 1. MOUNT ON BUILDING WALL, BOTTOM OF RECEPTACLE AT EL 9.0' AFF. GRADE AT THIS AREA IS 3.7'.
 - 2. MOUNT ALARM LIGHT AND ALARM HORN ON BUILDING WALL AT EL 17.0'.
 - 3. EXOTHERMIC WELD GROUND WIRE TO STRUCTURAL REINFORCING STEEL.
 - 4. TOGGLE DISCONNECT SW, MOUNT NEXT TO HVAC UNIT AT 8' ABOVE FINISHED FLOOR.
 - 5. EXIT SIGN AND EMERGENCY BATTERY PACKS WIRED TO THE LINE SIDE OF SWITCH.



3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 / AAC001892		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA		ELECTRICAL PUMP STATION D PLAN	
CH2MHILL®		N ADAMS		AL CLOUGH	
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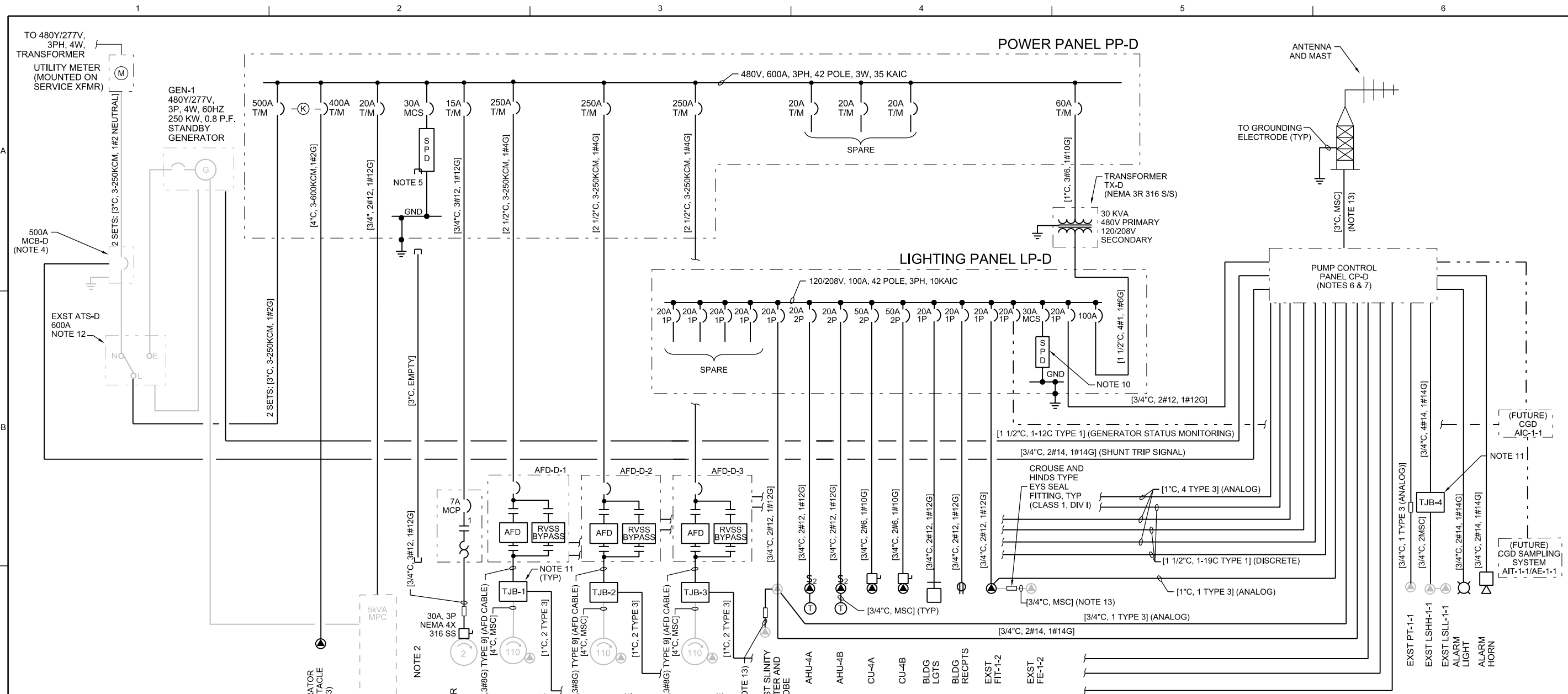


ONE LINE DIAGRAM
EXISTING CONDITIONS PUMP STATION D

LEGEND:
 - TO BE REMOVED

<p>CH2MHILL®</p> <p>ELECTRICAL</p> <p>PUMP STATION D</p> <p>EXISTING</p> <p>ONE LINE DIAGRAM</p>	<p>3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 / AAC001892</p>		<p>KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA</p>	
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	<p>BY</p>		<p>APVD</p>	
<p>VERIFY SCALE</p> <p>BAR IS ONE INCH ON ORIGINAL DRAWING.</p>		<p>DATE</p>		
<p>DATE</p>		<p>PROJ</p>		
<p>DWG</p>		<p>SHEET</p>		
<p>APRIL 2015</p>		<p>040-E-601</p>		
<p>476744</p>		<p>of</p>		
<p>040-E-601</p>		<p>APVD</p>		
<p>of</p>		<p>CHK</p>		
<p>APVD</p>		<p>BY</p>		
<p>APVD</p>		<p>APVD</p>		
<p>APVD</p>		<p>APVD</p>		

BID DOCUMENTS



LEGEND:

- BC = BYPASS CONTACTOR
- CGD = COMBUSTIBLE GAS DETECTOR
- CPT = CONTROL POWER TRANSFORMER
- F = 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

⊖ = MECHANICAL KEY INTERLOCK

- 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.
 - STUB UP 12" OF CONDUIT NEXT TO PUMP TJB'S INSTALL PULL-STRING AND CAP BOTH ENDS.
 - PROVIDE 400A, 600V GENERATOR RECEPTACLE WITH JUNCTION BOX AND ANGLE ADAPTER. RUSSELL STOLL: DS 4404MRA00, NO SUBSTITUTIONS.
 - EXISTING 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.
 - EXISTING 5kVA, 480-240V, 1-PHASE MINI POWER CENTER.
 - USE EXISTING 20A/1P CIRCUIT BREAKER TO POWER THE BATTERY CHARGER, ALTERNATOR SPACE HEATER AND FUEL LEVEL/LEAK DETECTION SYSTEM. PROVIDE A NEW 20A/2P CIRCUIT BREAK TO POWER THE 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 STEEL TERMINAL JUNCTION BOX SIZE PER NEC REQUIREMENTS, WITH NSI POLARIS BLUE SERIES SUBMERSIBLE POWER DISTRIBUTION BLOCKS.
 - EXISTING 3-POLE ATS WITH 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 ATS GROUND BUS.
 - REFER TO SPECIFICATION SECTION 40 90 01 FOR MSC REQUIREMENTS.

RISER DIAGRAM
PUMP STATION D

PP-D CONNECTED LOAD SUMMARY

DESCRIPTION	KVA
PUMP NO.1	109
PUMP NO.2	109
PUMP NO.3	109
BLOWER	2
MPC	5
LIGHTING PANEL	15
SUBTOTAL	349
25% OF LARGEST MOTOR	27.25
SERVICE RATING	376.25

LP-D CONNECTED LOAD SUMMARY

DESCRIPTION	VA
AHU-1	347
AHU-2	347
CU-1	4368
CU-2	4368
BLDG LIGHTS	200
RECEP	360
FIT-1-2	50
CP-1	3000
FP-1	300
AIC	100
SUBTOTAL	13,440
25% OF CONTINUOUS LOADS	1,177
SERVICE RATING	14,619

*ALL LOADS ASSUMED NON-CONTINUOUS

*ALL LOADS ASSUMED NON-CONTINUOUS

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 AAC001892

KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

AL CLOUGH
DR

N ADAMS
DSGN

NO. DATE

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BY APVD

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PROJ 476744

DWG 040-E-602

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ELECTRICAL

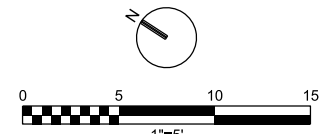
PUMP STATION D

ONE LINE DIAGRAM

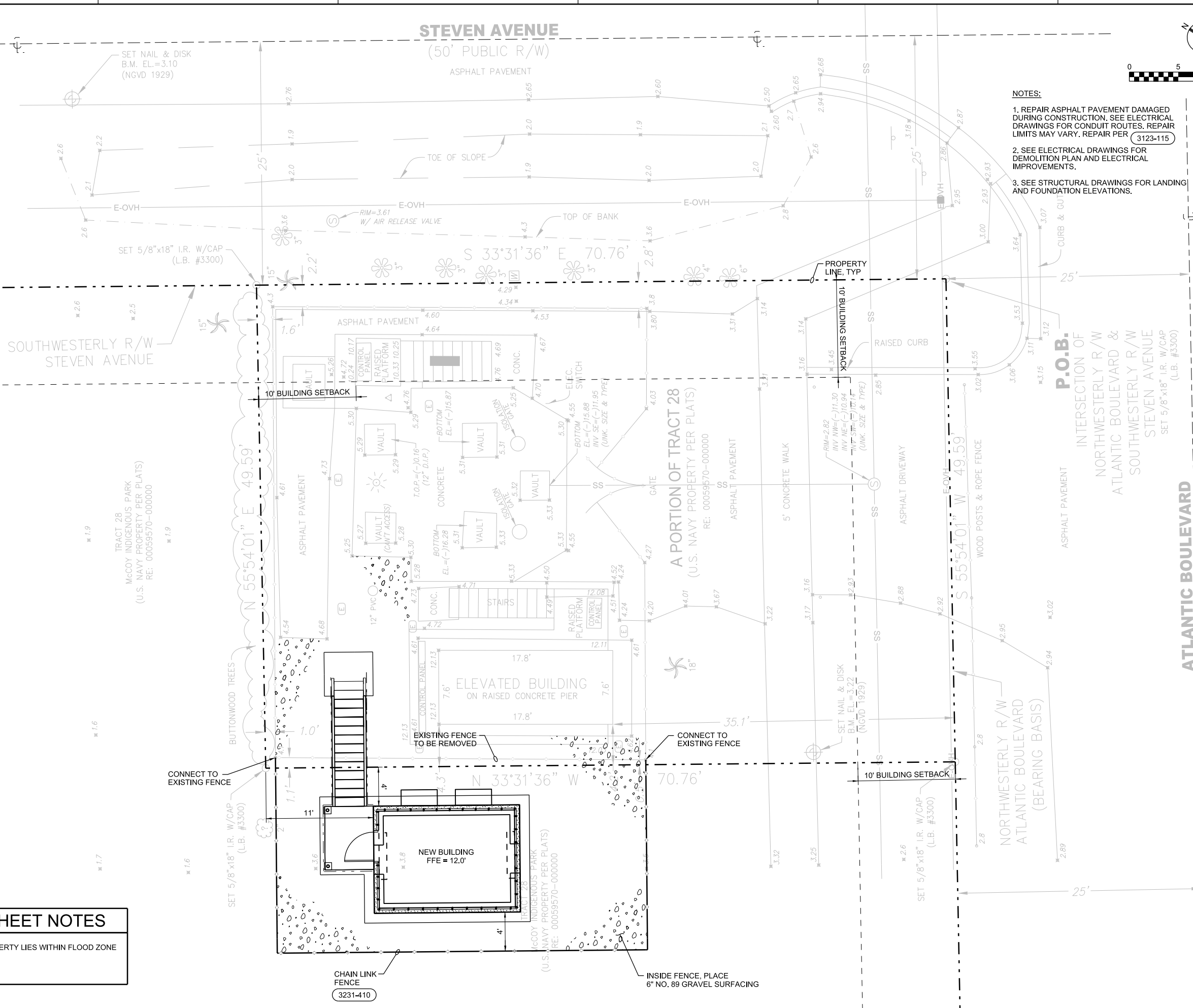
BID DOCUMENTS

STEVEN AVENUE
(50' PUBLIC R/W)

ASPHALT PAVEMENT



- NOTES:**
1. REPAIR ASPHALT PAVEMENT DAMAGED DURING CONSTRUCTION. SEE ELECTRICAL DRAWINGS FOR CONDUIT ROUTES. REPAIR LIMITS MAY VARY. REPAIR PER 3123-115
 2. SEE ELECTRICAL DRAWINGS FOR DEMOLITION PLAN AND ELECTRICAL IMPROVEMENTS.
 3. SEE STRUCTURAL DRAWINGS FOR LANDING AND FOUNDATION ELEVATIONS.



GENERAL SHEET NOTES

1. THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE AE (ELEVATION 9).

NO.	DATE	DR	CHK	REVISION	BY	APVD
		R. MORRISON				R. MORRISON
						A. MALONE

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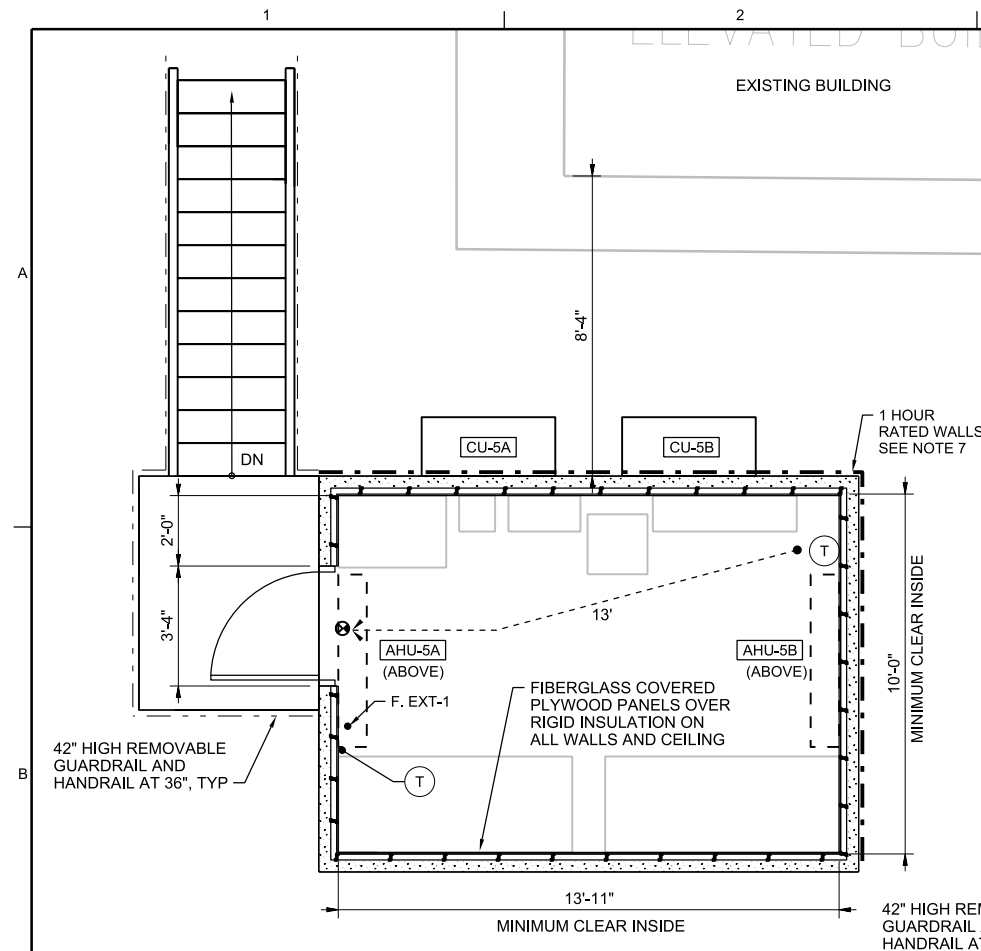
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CIVIL
PUMP STATION DA
SITE PLAN

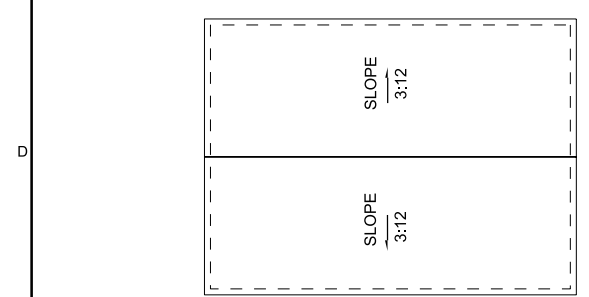
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- LEGEND**
- X' --- ● TRAVEL DISTANCE (X = TOTAL DISTANCE TO EXIT IN FEET)
 - X" --- EGRESS WIDTH (IN INCHES)
 - F. EXT-1 CARBON DIOXIDE FIRE EXTINGUISHER UL RATING 10B:C, 15 LBS W/ BRACKET
 - ⊗ COMBINATION LIGHTED EXIT SIGN WITH EMERGENCY LIGHTING
 - 1 HR RATED WALL ASSEMBLY

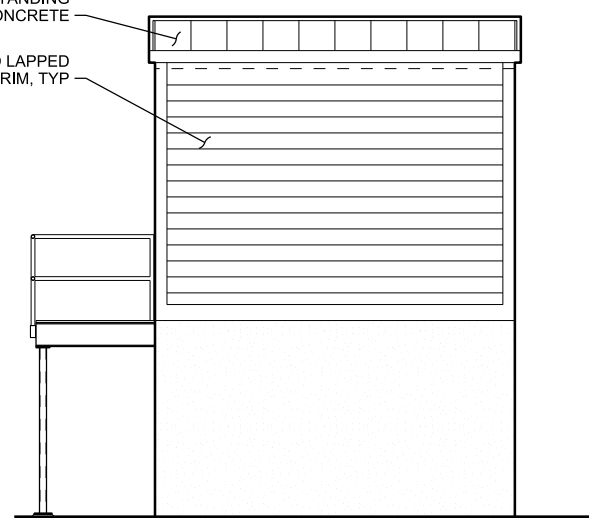
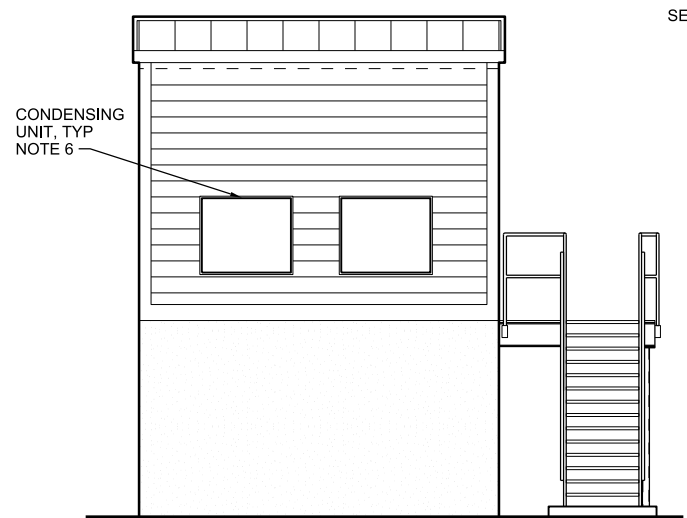
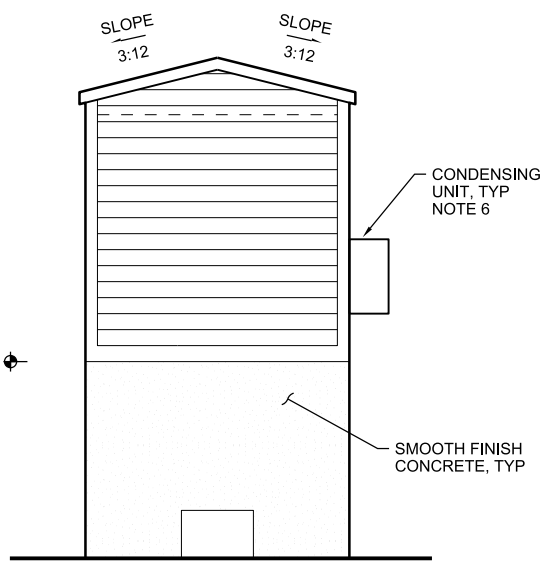
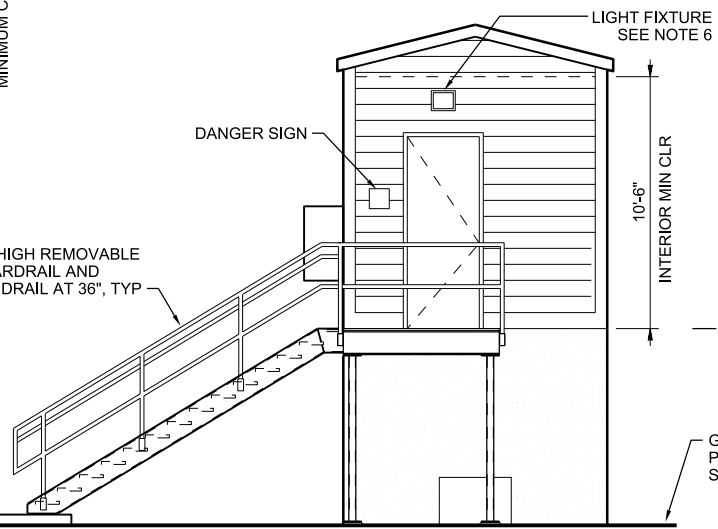
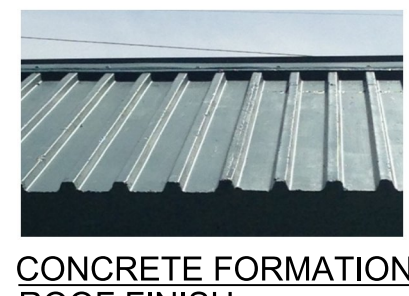


APPLICABLE CODES:

FLORIDA BUILDING CODE, 2010 EDITION
FLORIDA FIRE PREVENTION CODE, 2010 EDITION
NATIONAL ELECTRIC CODE, CURRENT EDITION

GENERAL NOTES:

- THIS BUILDING IS A PRE-ENGINEERED CONCRETE BUILDING. SEE SPECIFICATION SECTION 13 34 23.
- ALL DOORS, FRAMES, HARDWARE, LOUVERS AND OTHER APPURTENANCES ARE TO COMPLY WITH THE REQUIREMENTS FOR CLADDING COMPONENTS IN THE HIGH VELOCITY WIND ZONE. SEE SPECIFICATION 13 34 23.
- FOR FIRE EXTINGUISHER INFORMATION, SEE LEGEND.
- BUILDING EXTERIOR TEXTURE AND COLORS TO BE SELECTED BY THE ARCHITECT OR OWNER.
- SEE STRUCTURAL DRAWINGS FOR FOUNDATION, WALK-OFF SLAB, PLATFORM AND STAIRS.
- PROVIDE SMOOTH MOUNTING SURFACE FOR EXTERIOR WALL MOUNTED EQUIPMENT.
- 1 HOUR RATED CONCRETE WALL AND DOOR ASSEMBLY ADJACENT TO EXISTING BLDG. MANUFACTURER TO MEET REQUIRED CONCRETE THICKNESS FOR A ONE HOUR RATED EXTERIOR CONCRETE WALL AS DEFINED IN THE FLORIDA BUILDING CODE IN TABLE 720.1(2) UNDER 4-1-1 SOLID CONCRETE WALLS.



CODE DATA 2010 FLORIDA BUILDING CODE

BUILDING: PUMP STATION DA

GENERAL INFORMATION

USE AND OCCUPANCY CLASSIFICATION (CHAPTER 3)	F-2 FACTORY INDUSTRIAL MODERATE HAZARD
CONSTRUCTION CLASSIFICATION (CHAPTER 6)	VB

AREA AND HEIGHT LIMITATIONS

MAXIMUM ALLOWABLE AREA (TABLE 503)	F-1: 8,500 SF 1 STORY
ACTUAL AREA:	140 SF
ACTUAL PER FLOOR:	BASEMENT NA
	FIRST 140 SF
	SECOND NA
MAXIMUM ALLOWABLE STORIES (TABLE 503)	1 STORY
ACTUAL NUMBER OF STORIES	1 STORY
MAXIMUM ALLOWABLE HEIGHT (TABLE 503)	40 FEET
ACTUAL HEIGHT:	14 FEET

OCCUPANCY / EGRESS INFORMATION

DESIGN OCCUPANCY (TABLE 1004.1.1)	140SF / 100 SF/PERSON= 2 PERSONS (FOR MAINTENANCE PURPOSES ONLY)
EGRESS WIDTH BASED ON OCCUPANCY (TABLE 1005.1)	2 X 4 = .8 32.8" MINIMUM PROVIDED
ALLOWABLE DEAD END LENGTH (TABLE 1017.3)	20 FEET
NUMBER OF EXITS	1
ALLOWABLE COMMON PATH OF TRAVEL (1014.3)	75 FEET
MAX TRAVEL DISTANCE ALLOWED (TABLE 1016.1)	200 FEET (F-1)

REQUIRED FIRE RESISTANT RATINGS

BUILDING ELEMENTS (TABLE 601)	VB
STRUCTURAL FRAME	0 RATING
EXTERIOR BEARING WALLS	0 HOURS
INTERIOR BEARING WALLS	NA
INTERIOR NON-BEARING WALLS	NA
FLOOR CONSTRUCTION	0 RATING
ROOF CONSTRUCTION	0 RATING
SHAFT ENCLOSURE (707.4)	NA
STAIRWAY ENCLOSURE (1020.1)	NA
CORRIDOR (TABLE 1016.1)	NA
NON-SEPARATED OCCUPANCIES (508.3.2)	NA
ACCESSORY OCCUPANCIES (508.3.1)	NA
REQUIRED FIRE RESISTANCE RATINGS OF EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE (TABLE 602)	1 HOUR RATING

PLUMBING

PLUMBING:	NONE
-----------	------

FIRE PROTECTION

SPRINKLERS	NOT PROVIDED
FIRE EXTINGUISHERS	PROVIDED
EXIT LIGHTS	PROVIDED

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Bldg/Hill/MEch/AR 9/13/88

KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

**PUMP STATION DA
LIFE SAFETY/FLOOR PLAN
ELEVATIONS AND CODE DATA**

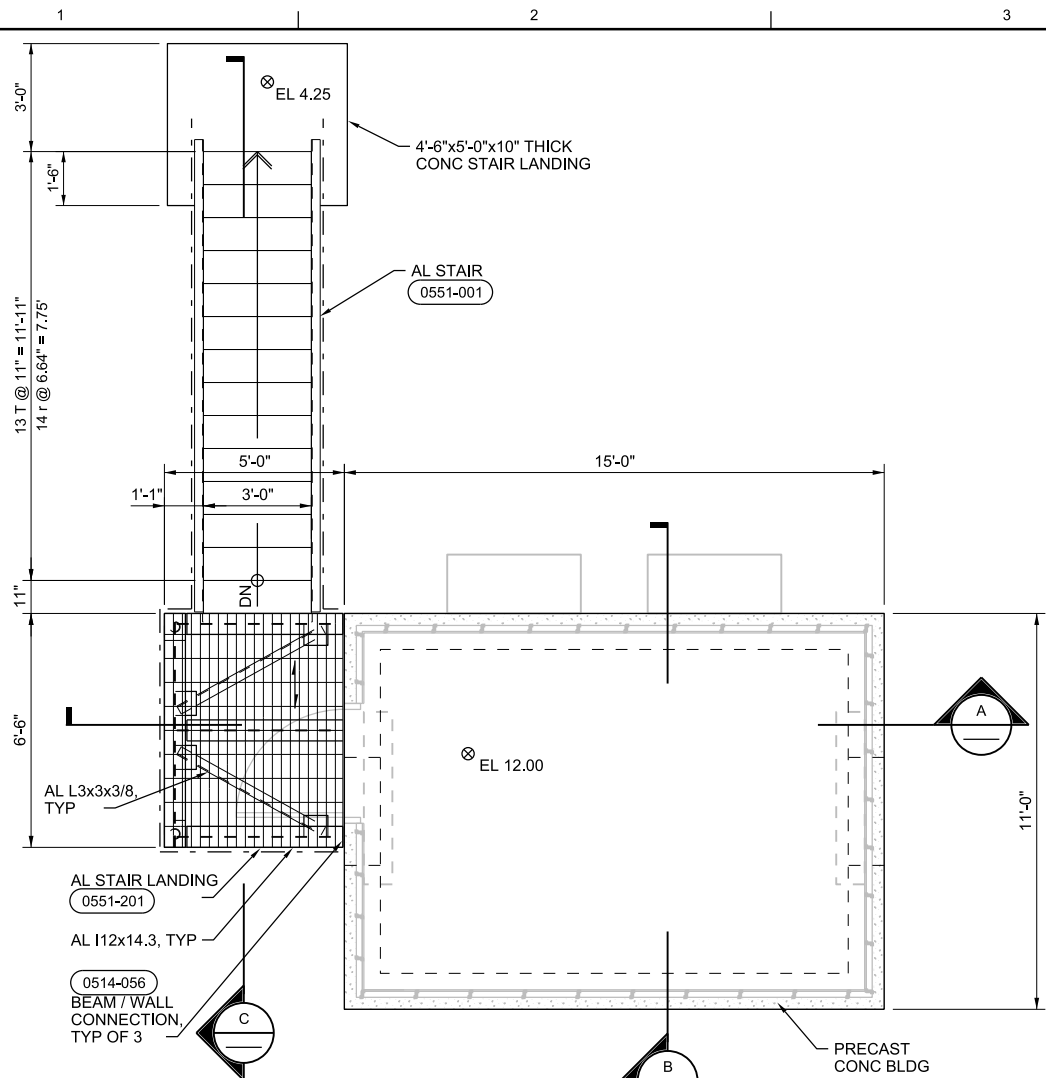
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SHEET X of X

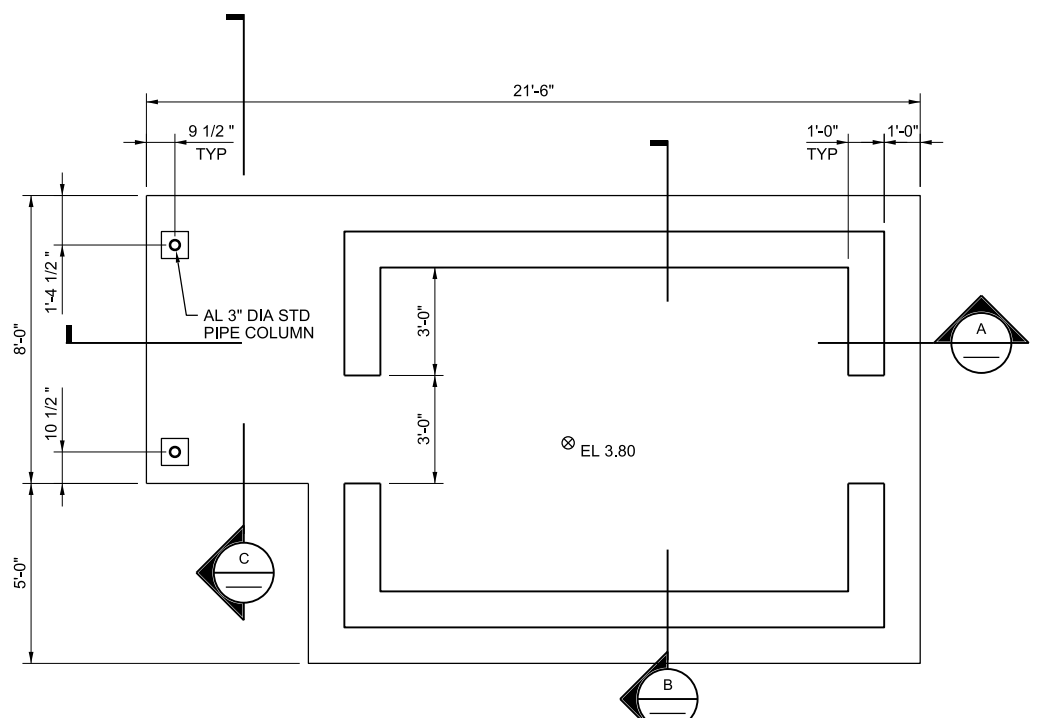
REVISIONS
NO. DATE DSGN DR A. COULLIAS T. DODGE B. TRAUTWEIN
BY APVD

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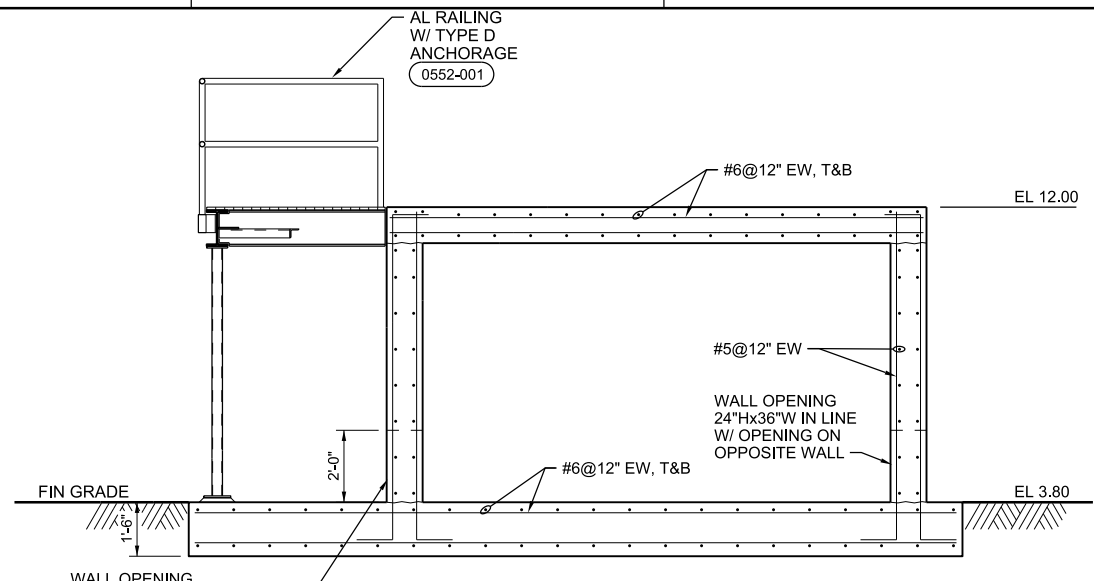
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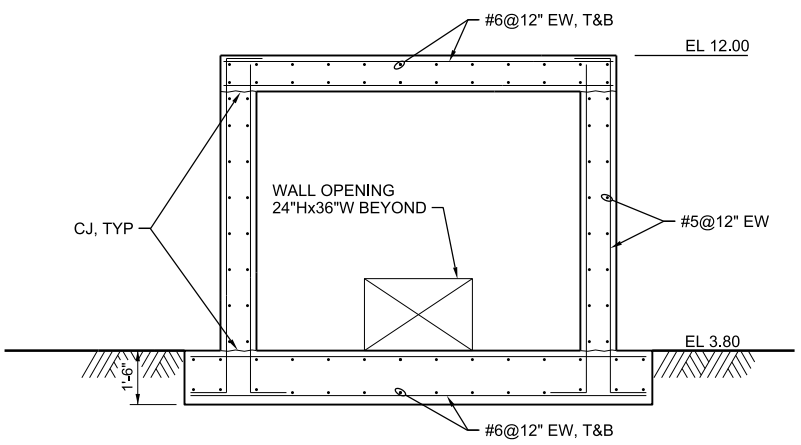
UPPER PLAN
3/8"=1'-0"



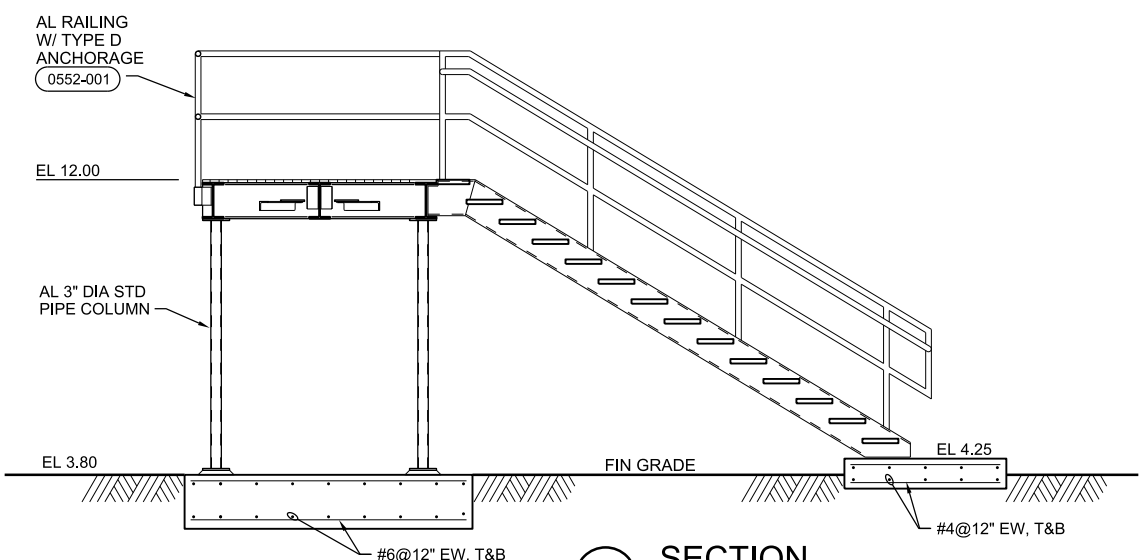
FOUNDATION PLAN
3/8"=1'-0"



A SECTION
3/8"=1'-0"



B SECTION
3/8"=1'-0"



C SECTION
3/8"=1'-0"

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		S TROYAN	R FRIBERG			S TROYAN
			M CHRZANOWSKI			

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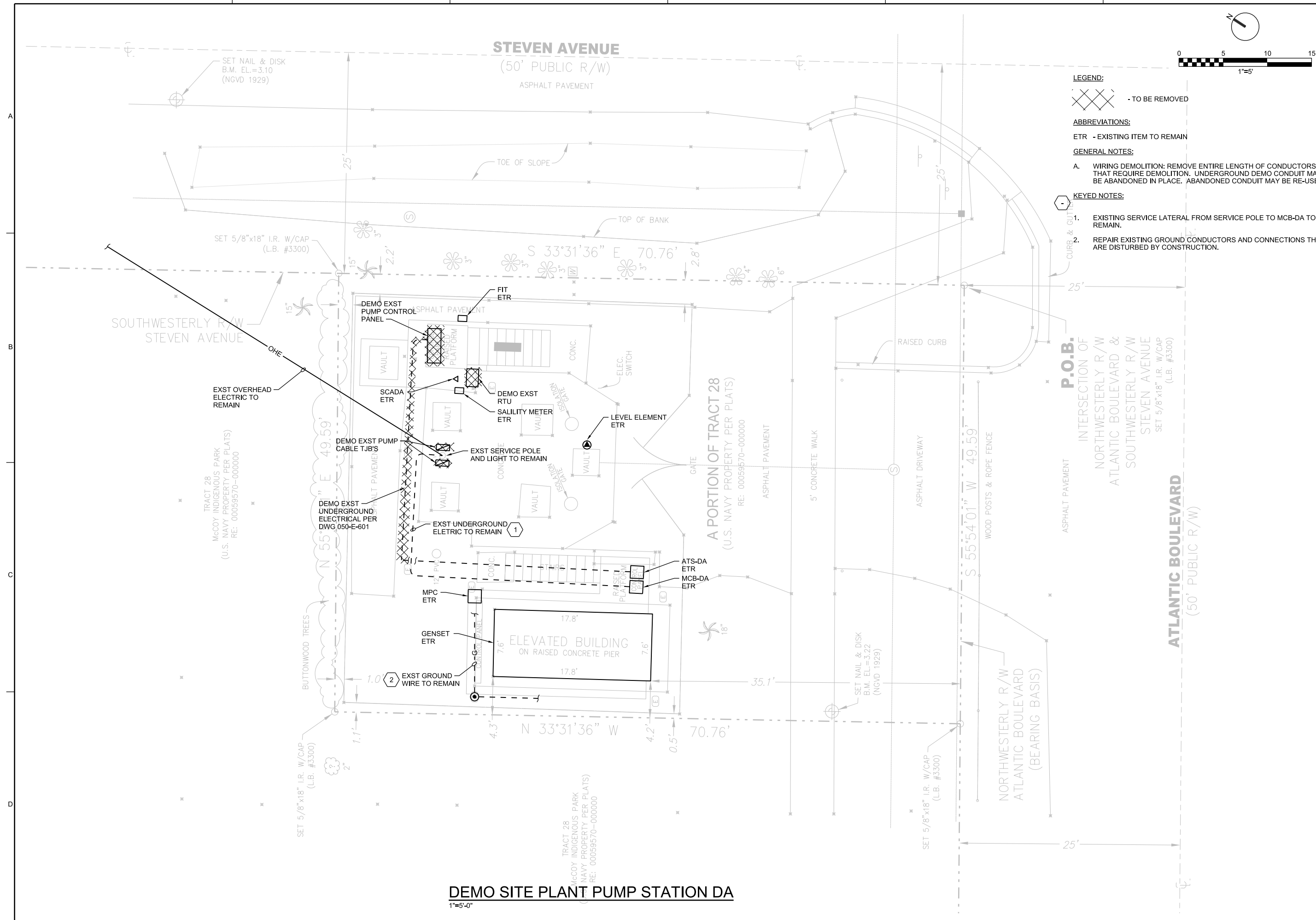
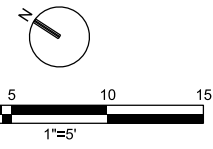
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STRUCTURAL
PUMP STATION DA
PLANS AND SECTIONS

VERIFY SCALE
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- LEGEND:**
 - TO BE REMOVED
- ABBREVIATIONS:**
 ETR - EXISTING ITEM TO REMAIN
- GENERAL NOTES:**
 A. WIRING DEMOLITION: REMOVE ENTIRE LENGTH OF CONDUCTORS THAT REQUIRE DEMOLITION. UNDERGROUND DEMO CONDUIT MAY BE ABANDONED IN PLACE. ABANDONED CONDUIT MAY BE RE-USED.
- KEYED NOTES:**
 1. EXISTING SERVICE LATERAL FROM SERVICE POLE TO MCB-DA TO REMAIN.
 2. REPAIR EXISTING GROUND CONDUCTORS AND CONNECTIONS THAT ARE DISTURBED BY CONSTRUCTION.

DEMO SITE PLANT PUMP STATION DA
 1"=5'-0"

CH2MHILL® 3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 - AAC001892		KEY WEST VFD UPGRADE	
		KEY WEST, FLORIDA	
ELECTRICAL PUMP STATION DA SITE DEMOLITION PLAN		NO.	DATE
		DR	APVD
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DSGN N ADAMS		DR	APVD

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 0 5 10 15
 1"=5'

DATE: APRIL 2015
 PROJ: 476744
 DWG: 050-E-101
 SHEET: of

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GENERAL NOTES:

- 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. REFER TO SPECIFICATION SECTION 26 41 00 FOR FACILITY LIGHTNING PROTECTION SYSTEM REQUIREMENTS.
- F. COORDINATE ELECTRICAL UTILITY SERVICE REQUIREMENTS WITH KEYS ENERGY.

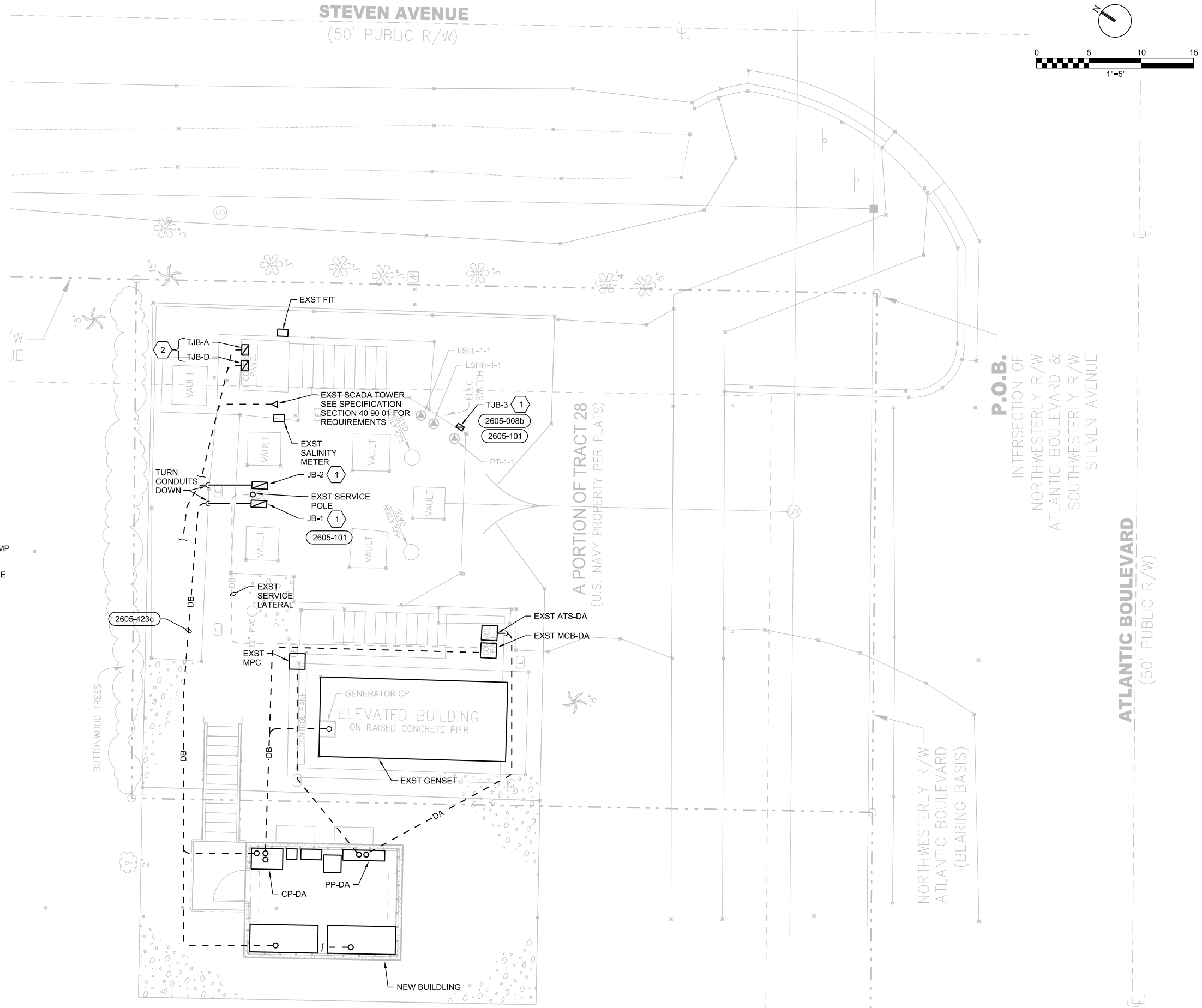
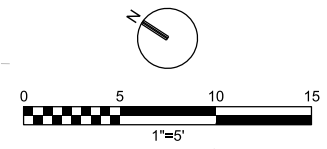
HAZARDOUS LOCATION NOTES:

- 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).

KEYED NOTES:

- 1. PROVIDE TJB'S WITH SUBMERSIBLE TAPS FOR CONNECTIONS TO PUMP MSC CABLES. PROVIDE NEW WIRING FROM TJB'S TO AFD'S ROUTE CONDUIT DIRECT BURIAL LOCATED OUTSIDE HAZARDOUS AREA.
- 2. PROVIDE TJB'S MOUNTED IN SPACE VACATED BY REMOVED OF PUMP CONTROL PANEL. PROVIDE WIRING TO EXTEND PROCESS INSTRUMENTATION CIRCUITS TO NEW PUMP CONTROL PANEL LOCATION. TJB-A SHALL BE FOR ANALOG CIRCUITS, TJB-B SHALL BE FOR DISCRETE CIRCUITS.

STEVEN AVENUE
(50' PUBLIC R/W)



P.O.B.
INTERSECTION OF
NORTHWESTERLY R/W
ATLANTIC BOULEVARD &
SOUTHWESTERLY R/W
STEVEN AVENUE

A PORTION OF TRACT 28
(U.S. NAVY PROPERTY PER PLATS)

ATLANTIC BOULEVARD
(50' PUBLIC R/W)

NORTHWESTERLY R/W
ATLANTIC BOULEVARD
(BEARING BASIS)

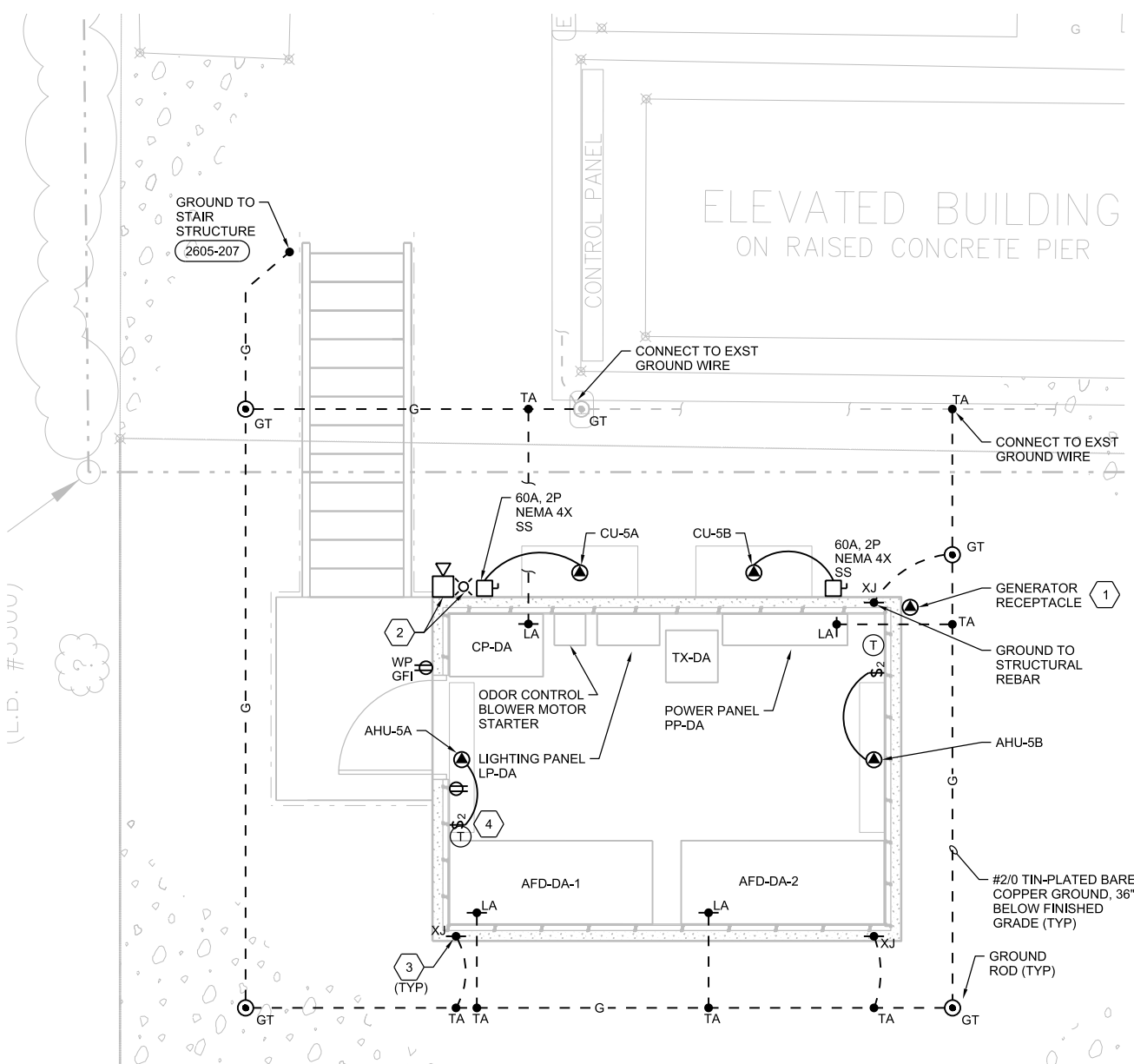
SITE PLAN PUMP STATION DA
1"=5'-0"

		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA	
		ELECTRICAL PUMP STATION DA SITE PLAN	
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.			
DATE	APRIL 2015		
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DWG	050-E-102		
SHEET	of		
REVISION NO. DATE DSGN DR		REVISION BY APVD	
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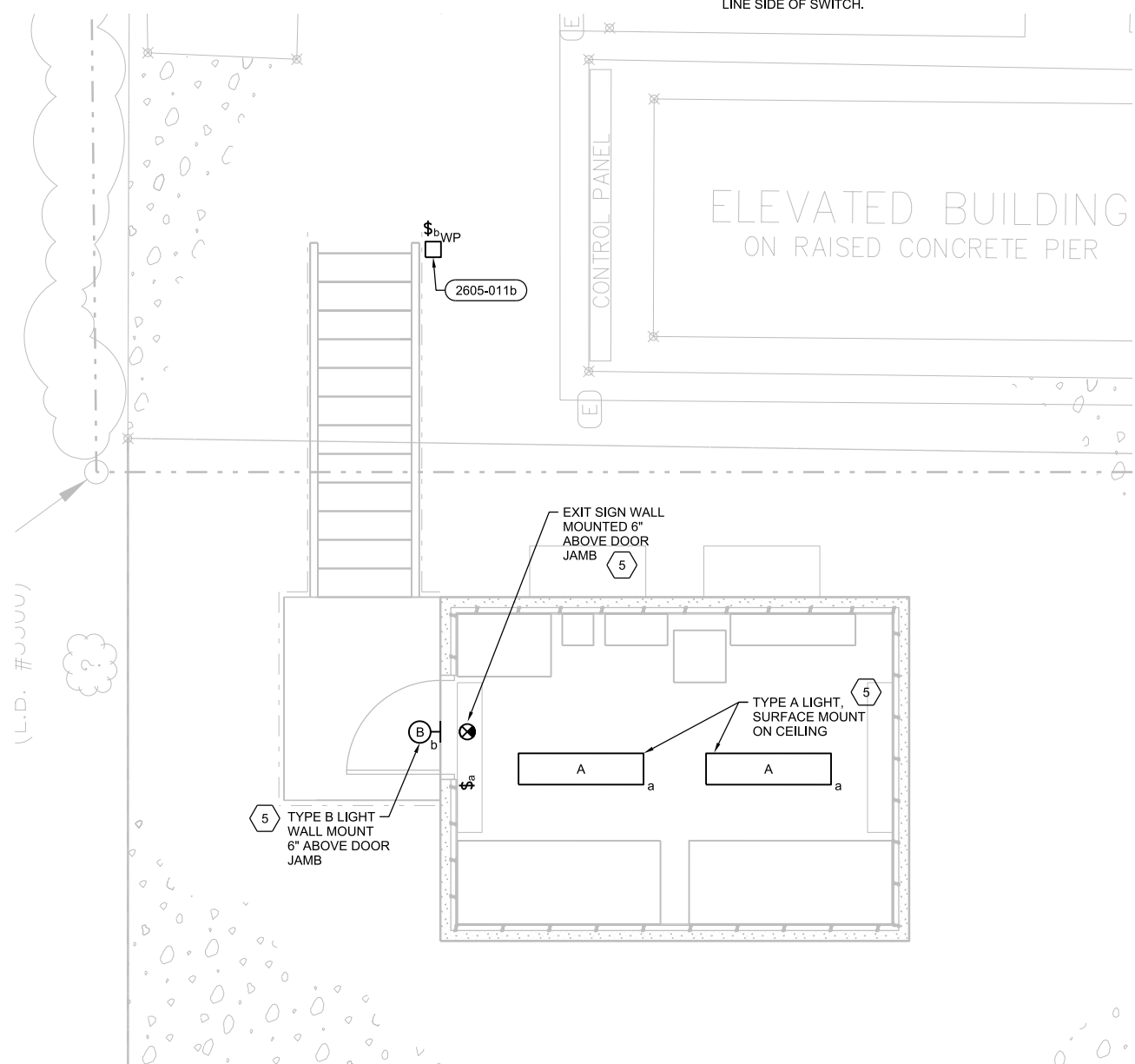
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POWER PLAN - PUMP STATION DA
3/8"=1'-0"



LIGHTING PLAN - PUMP STATION DA
3/8"=1'-0"

- GENERAL NOTES:**
- A. CONTRACTOR TO COORDINATE ALL ITEMS MOUNTED TO BUILDING EXTERIOR WITH BUILDING MANUFACTURER.
 - B. CONDUITS ENTERING BUILDING SHALL ENTER THROUGH THE FLOOR SLAB.
 - C. CONDUITS SHALL NOT BE ROUTED EXPOSED ALONG BUILDING EXTERIOR.
 - D. CONDUITS ROUTED INSIDE OF BUILDING SHALL BE EXPOSED.
 - E. REFER TO DWG 001-E-05 FOR LUMINAIRE REQUIREMENTS.

- KEYED NOTES:**
- 1. MOUNT ON BUILDING COLUMN, BOTTOM OF RECEPTACLE AT EL 8.8'. GRADE ELEVATION IN THIS AREA IS AT EL 3.8'.
 - 2. MOUNT ALARM LIGHT AND ALARM HORN ON BUILDING WALL AT EL 19.0'.
 - 3. EXOTHERMIC WELD GROUND WIRE TO STRUCTURAL REINFORCING STEEL.
 - 4. TOGGLE DISCONNECT SW, MOUNT NEXT TO HVAC UNIT AT 8' ABOVE FINISHED FLOOR.
 - 5. EXIT SIGN AND EMERGENCY BATTERY PACKS WIRED TO THE LINE SIDE OF SWITCH.

NO.	DATE	DR	REVISION	BY	APVD
		N ADAMS			
		DSGN	CHK	APVD	

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 / AAC011892

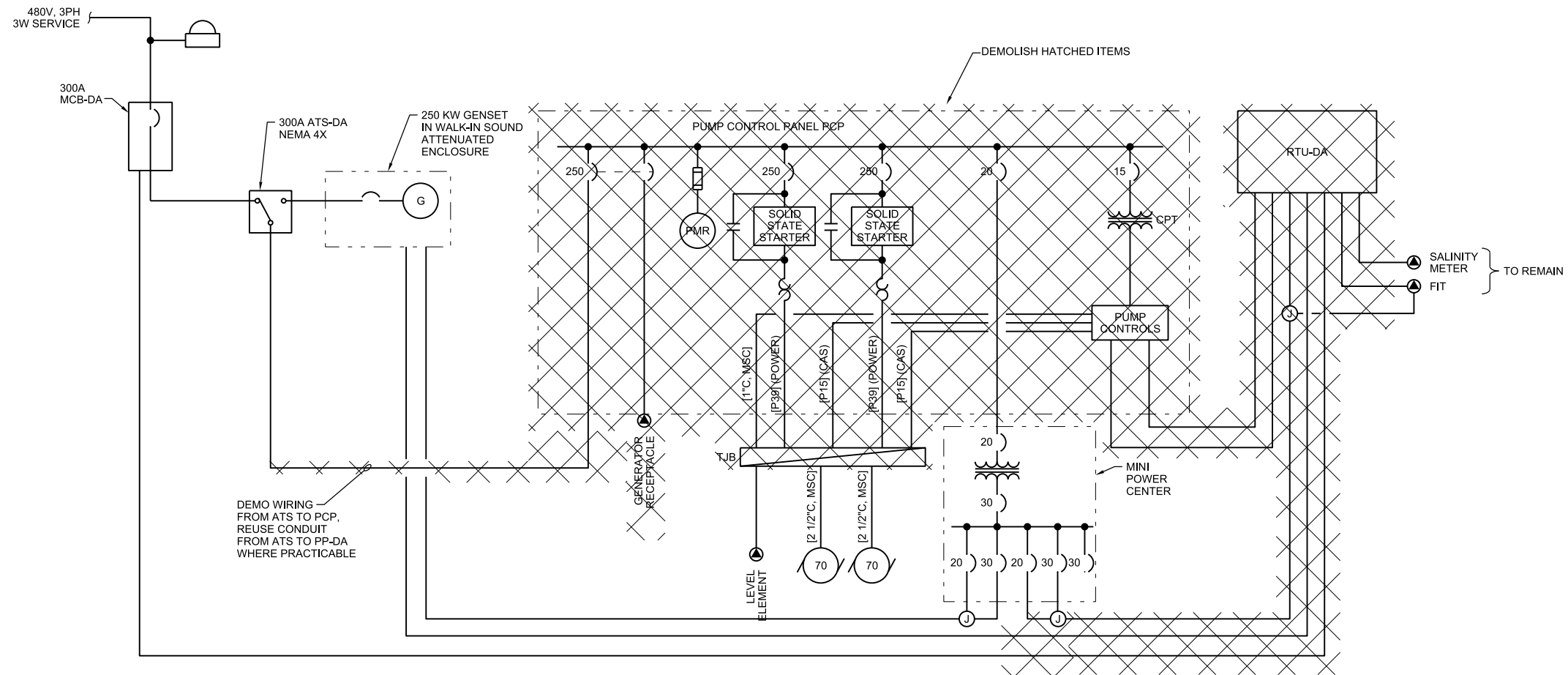
KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

CH2MHILL®


ELECTRICAL
**PUMP STATION DA
PLANS**

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	APRIL 2015
PROJ	476744
DWG	050-E-201
SHEET	of



ONE LINE DIAGRAM
EXISTING CONDITIONS PUMP STATION DA

LEGEND:
 - TO BE REMOVED

NO.	DATE	DR	CHK	BY
				APVD

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 / AAC001892

KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

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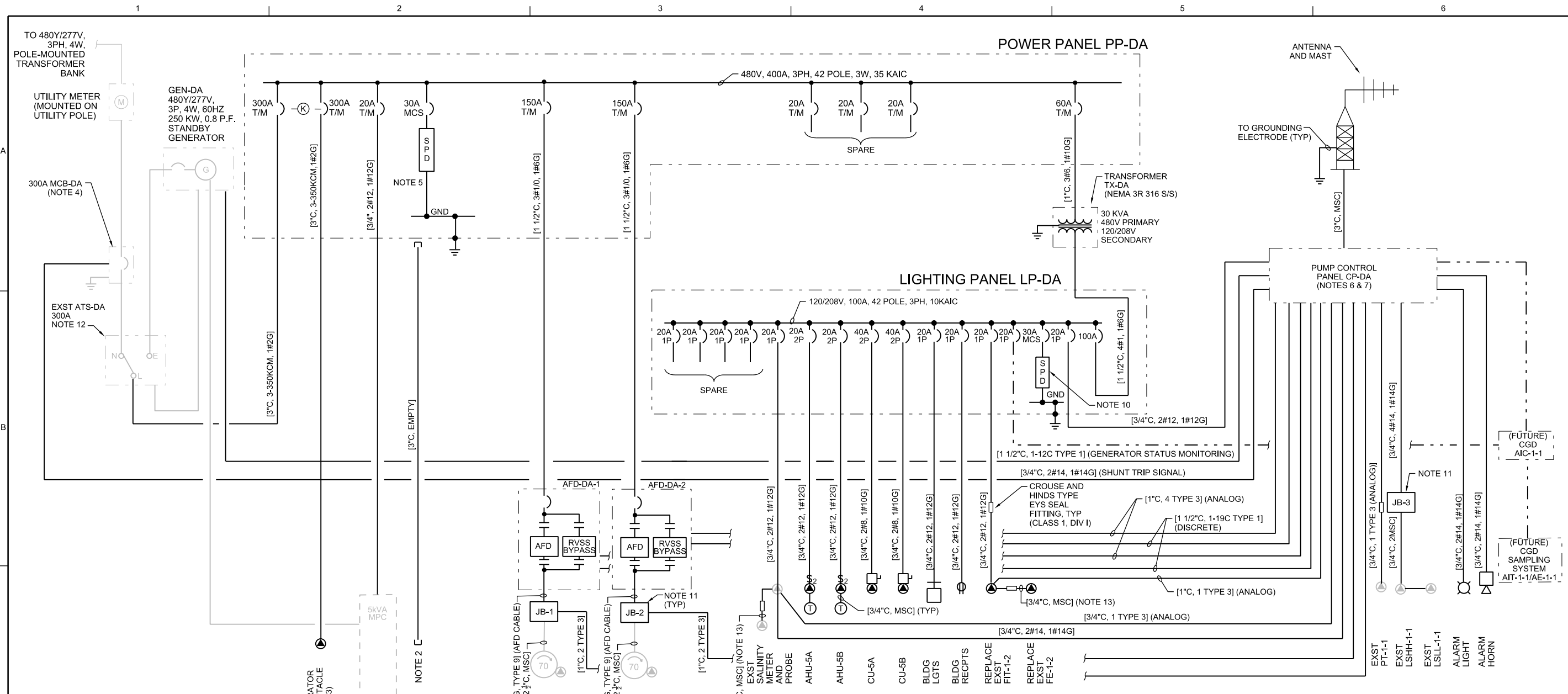
ELECTRICAL
PUMP STATION DA
EXISTING
ONE LINE DIAGRAM

DATE	APRIL 2015
PROJ	476744
DWG	050-E-601
SHEET	of

BID DOCUMENTS

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- 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.
 - STUB UP 12" OF CONDUIT NEXT TO PUMP TJB'S, INSTALL PULL-STRING AND CAP BOTH ENDS.
 - PROVIDE 400A, 600V GENERATOR RECEPTACLE WITH JUNCTION BOX AND ANGLE ADAPTER, RUSSELL STOLL: DS 4404MRA00, NO SUBSTITUTIONS.
 - EXISTING 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.

- EXISTING 5kVA, 480-240V, 1-PHASE MINI POWER CENTER.
- USE EXISTING 20A/1P CIRCUIT BREAKER TO POWER THE BATTERY CHARGER, ALTERNATOR SPACE HEATER AND FUEL LEVEL/LEAK DETECTION SYSTEM.
- PROVIDE CATEGORY B, 10-MODE, 20kA NOMINAL DISCHARGE CURRENT SPD WITH SINE-WAVE TRACKING. INSTALL IN LIGHTING PANEL AS SHOWN.
- NEMA 4X 316 STEEL TERMINAL JUNCTION BOX SIZE PER NEC REQUIREMENTS, WITH NSI POLARIS BLUE SERIES SUBMERSIBLE POWER DISTRIBUTION BLOCKS.
- EXISTING 3-POLE ATS WITH A NEUTRAL BUS. THE SERVICE NEUTRAL AND THE GENERATOR NEUTRAL ARE TO BE BONDED AT THE ATS NEUTRAL BUS FOR A NON-SEPARATELY DERIVED SYSTEM. THE ATS NEUTRAL BUS SHALL NOT BE BONDED TO THE ATS GROUND BUS.
- REFER TO SPECIFICATION SECTION 40 90 01 FOR MSC REQUIREMENTS.

RISER DIAGRAM
PUMP STATION DA

- LEGEND:**
- BC = BYPASS CONTACTOR
 - CGD = COMBUSTIBLE GAS DETECTOR
 - CPT = CONTROL POWER TRANSFORMER
 - F = 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 BUS
 - NEU = NEUTRAL SOURCE
 - 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

PP-DA CONNECTED LOAD SUMMARY

DESCRIPTION	KVA
PUMP NO.1	76
PUMP NO.2	76
BLOWER	2
MPC	5
LIGHTING PANEL, LP-DA	15
SUBTOTAL	176
25% OF LARGEST MOTOR	18.0
SERVICE RATING	195.0

*ALL LOADS ASSUMED NON-CONTINUOUS

LP-DA CONNECTED LOAD SUMMARY

DESCRIPTION	VA
AHU-5A	114
AHU-5B	114
CU-5A	3723
CU-5B	3723
BLDG LIGHTS	200
RECEP	360
FIT-1-2	50
CP-1	3000
FP-1	300
AIC	100
SUBTOTAL	11,684
25% OF CONTINUOUS LOADS	1,022
SERVICE RATING	12,706

*ALL LOADS ASSUMED NON-CONTINUOUS

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 AAC001892

KEY WEST VFD UPGRADE
KEY WEST, FLORIDA
CITY OF KEY WEST
KEY WEST, FLORIDA

NO. DATE DSGN DR APVD BY APVD

REVISION

AL CLOUGH

N ADAMS

CH2MHILL®

ELECTRICAL

PUMP STATION DA

ONE LINE DIAGRAM

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE APRIL 2015

PROJ 476744

DWG 050-E-602

SHEET of

SPWURL

pw://projectwise.ch2m.com;CH2MHILL_WBG/Documents/476744&space;&space;2-13&space;SWR&space;VFD&space;UPGRADES/DRAWINGS/EL/DIV/050-E-602_476744.dgn

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PLOT DATE: 3/31/2015

PLOT TIME: 7:27:21 AM

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SPLIT SYSTEM DX INDOOR UNITS

TAG	LOCATION	FAN DATA			DX COOLING DATA				FAN MOTOR DATA			UNIT ELECTRICAL DATA				UNIT DIMENSIONS			MANUFACTURER	MODEL	APPLICABLE REMARKS		
		SUPPLY AIR CFM	OUTSIDE AIR CFM	EXTERNAL STATIC P IN W.G.	NET CAPACITY BTU/H	EAT DEG. F DB	WB	AMBIENT TEMP. DEG. F	FLA	VOLT	PH	#CONN.	MCA A	MOCF (FUSE)	VOLT	PH	INCHES					MAX. WEIGHT LBS	
AHU-1A&B	ELECTRICAL ROOM A	900	0	0.25	36,000	76	64	89	0.44	208	1	1	0.55	15	208	1	9 1/2	57 1/2	13.4	51	CARRIER	40QNC036	A,B,C,D
AHU-2A&B	ELECTRICAL ROOM B	645	0	0.25	24,000	76	64	89	0.38	208	1	1	0.45	15	208	1	8	42 1/2	11 3/5	31	CARRIER	40QNC024	A,B,C,D
AHU-3A&B	ELECTRICAL ROOM C	900	0	0.25	36,000	76	64	89	0.44	208	1	1	0.55	15	208	1	9 1/2	57 1/2	13.4	51	CARRIER	40QNC036	A,B,C,D
AHU-4A&B	ELECTRICAL ROOM D	1200	0	0.25	48,000	76	64	89	1.6	208	1	1	2	15	208	1	23 1/8	71 9/16	10	149	CARRIER	40QAC048	A,B,C,D,E
AHU-5A&B	ELECTRICAL ROOM DA	900	0	0.25	36,000	76	64	89	0.44	208	1	1	0.55	15	208	1	9 1/2	57 1/2	13.4	51	CARRIER	40QNC036	A,B,C,D

REMARKS:

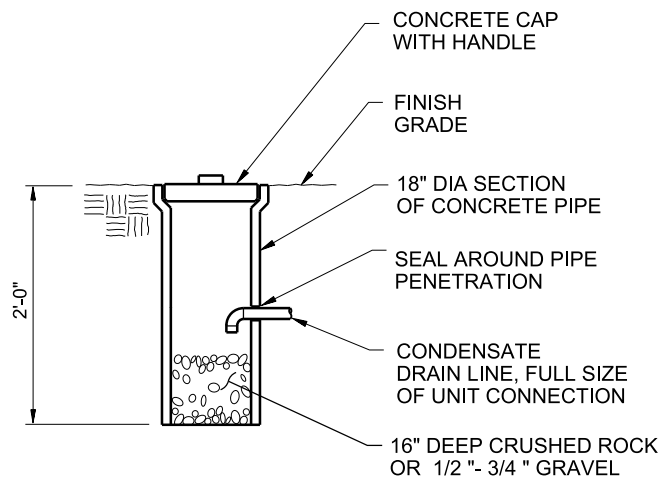
- A: DICONNECT BY UNIT MANUFACTURER
- B: LOW AMBIENT CONTROL
- C: INDOOR MOUNTING BRACKET
- D: WALL MOUNTED WIRED CONTROL WITH LCD DISPLAY
- E: HANGING BRACKET

SPLIT SYSTEM DX OUTDOOR UNITS

TAG	QTY	LOCATION	DX COOLING DATA			OUTDOOR FAN DATA			COMPRESSOR DATA				UNIT ELECTRICAL DATA				UNIT DIMENSIONS			MANUFACTURER	MODEL	APPLICABLE REMARKS					
			CAPACITY BTU/HR	AMBIENT TEMP. DEG. F	SEER	NO.	HP (EA)	VOLT	PH	NO.	STEPS	RLA (EA.)	LRA (EA.)	VOLT	PH	#CONN	MCA	MOCF (FUSE)	VOLT				PH	INCHES			MAX. WEIGHT LBS
CU-1A&B	2	ELECTRICAL BUILDING A	36,000	95	13.0	1	1/4	208	1	1	1	17.9	112.0	208	1	1	23.8	40.0	208	1	19 5/8	44 9/16	37 3/16	250	CARRIER	38HDF036	A,B,C,D,E,F,G,H,I,J
CU-2A&B	2	ELECTRICAL BUILDING B	24,000	95	13.0	1	1/8	208	1	1	1	12.8	58.3	208	1	1	16.8	25.0	208	1	17 3/16	36 15/16	31 1/8	176	CARRIER	38HDF024	A,B,C,D,E,F,G,H,I,J
CU-3A&B	2	ELECTRICAL BUILDING C	36,000	95	13.0	1	1/4	208	1	1	1	17.9	112.0	208	1	1	23.8	40.0	208	1	19 5/8	44 9/16	37 3/16	250	CARRIER	38HDF036	A,B,C,D,E,F,G,H,I,J
CU-4A&B	2	ELECTRICAL BUILDING D	48,000	95	13.0	1	1/4	208	1	1	1	21.8	117.0	208	1	1	28.7	50.0	208	1	19 5/8	44 9/16	43 3/16	284	CARRIER	38HDR048	A,B,C,D,E,F,G,H,I,J
CU-5A&B	2	ELECTRICAL BUILDING DA	36,000	95	13.0	1	1/4	208	1	1	1	17.9	112.0	208	1	1	23.8	40.0	208	1	19 5/8	44 9/16	37 3/16	250	CARRIER	38HDF036	A,B,C,D,E,F,G,H,I,J

REMARKS:

- A: MOTOR CONTACTOR / STARTER PER DIVISION ELECTRICAL
- B: CONDENSER PVC COATED HAIL GUARDS
- C: 5 YEAR COMPRESSOR WARRANTY
- D: CRANKCASE HEATER
- E: BAKED-ENAMEL COATING ON INSIDE AND OUTSIDE
- F: R-410A REFRIGERANT
- G: LOW AMBIENT COOLING KIT
- H: WALL MOUNTED KIT
- I: WIND BAFFLES
- J: PROVIDE FACTORY DIP-APPLIED PROTECTIVE COATING FOR COIL



DRAINAGE DRYWELL

SEQUENCES OF OPERATION (TYPICAL FOR ALL ELECTRICAL ROOMS)

ELECTRICAL ROOMS:

. DX DUCTLESS SPLIT AIR CONDITIONING UNITS

GENERAL:

BOTH UNITS SHALL NOT WORK SIMULTANEOUSLY. ONE UNIT SHALL OPERATE ON DUTY AND ONE SHALL REMAIN STAND-BY ALTERNATING MONTHLY (ADJ). THE UNITS WILL BE CONTROLLED BY WALL MOUNTED THERMOSTATS (ONE PER UNIT).

SETPOINTS:

COOLING F(ADJ)
77

OPERATION:

COOLING MODE :

. WHEN THE TEMPERATURE IN THE ELECTRICAL ROOM IS OVER THE COOLING TEMPERATURE SETPOINT 77 DEGREES F (ADJ), THE ON DUTY UNIT SHALL ENERGIZE AND THE WALL MOUNTED THERMOSTAT SHALL CONTROL COOLING STAGE TO MAINTAIN SETPOINT. AS THE SPACE TEMPERATURE SETPOINT IS SATISFIED, THE UNIT SHALL DE-ENERGIZE.

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Baptist Health of Florida, Inc. AR 91388

CH2MHILL®
ARCHITECTURAL/MECHANICAL
PUMP STATIONS
EQUIPMENT SCHEDULES

1" = X'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE APRIL 2015
PROJ 476744
DWG 060-A-501
SHEET ShtNum of ShtTot

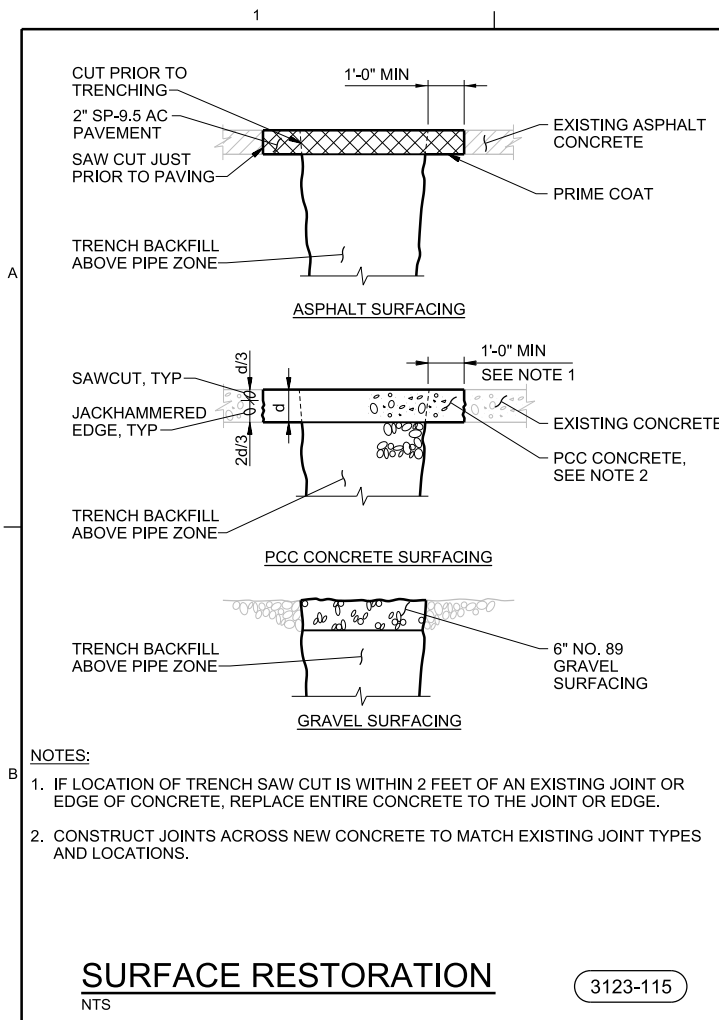
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Y. FITZGERALD
CHECKED-BY
APVD
REVISION
CHK
APVD
DR
A. VALIENTE
NO. DATE
DSGN

SEAL NAME
BY
APVD

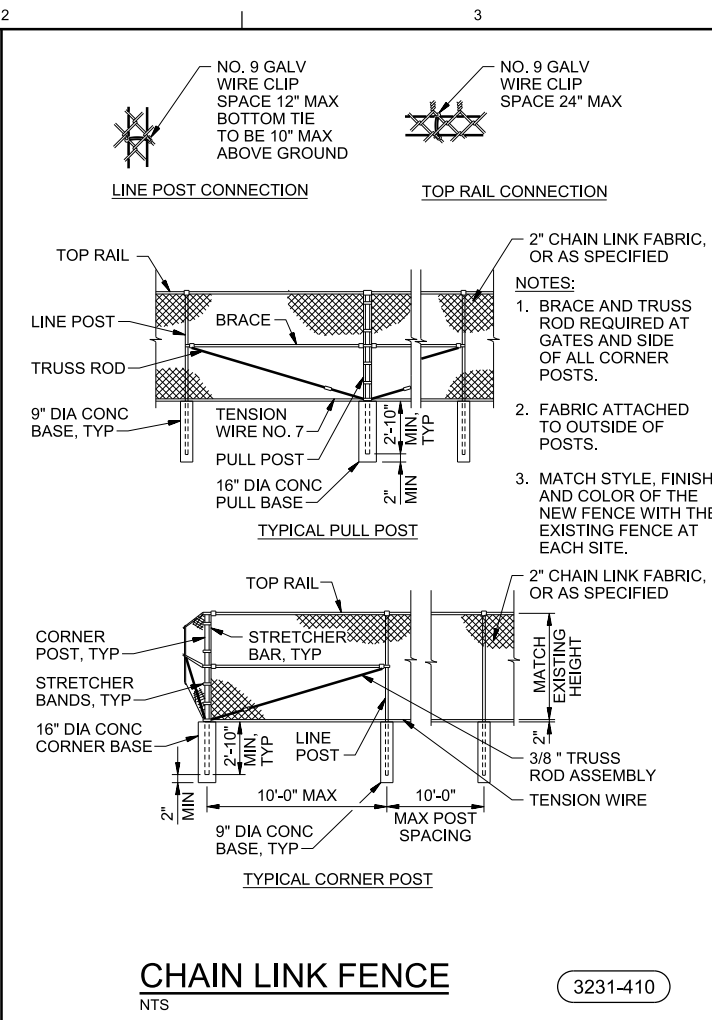
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- NOTES:**
1. IF LOCATION OF TRENCH SAW CUT IS WITHIN 2 FEET OF AN EXISTING JOINT OR EDGE OF CONCRETE, REPLACE ENTIRE CONCRETE TO THE JOINT OR EDGE.
 2. CONSTRUCT JOINTS ACROSS NEW CONCRETE TO MATCH EXISTING JOINT TYPES AND LOCATIONS.

SURFACE RESTORATION
NTS

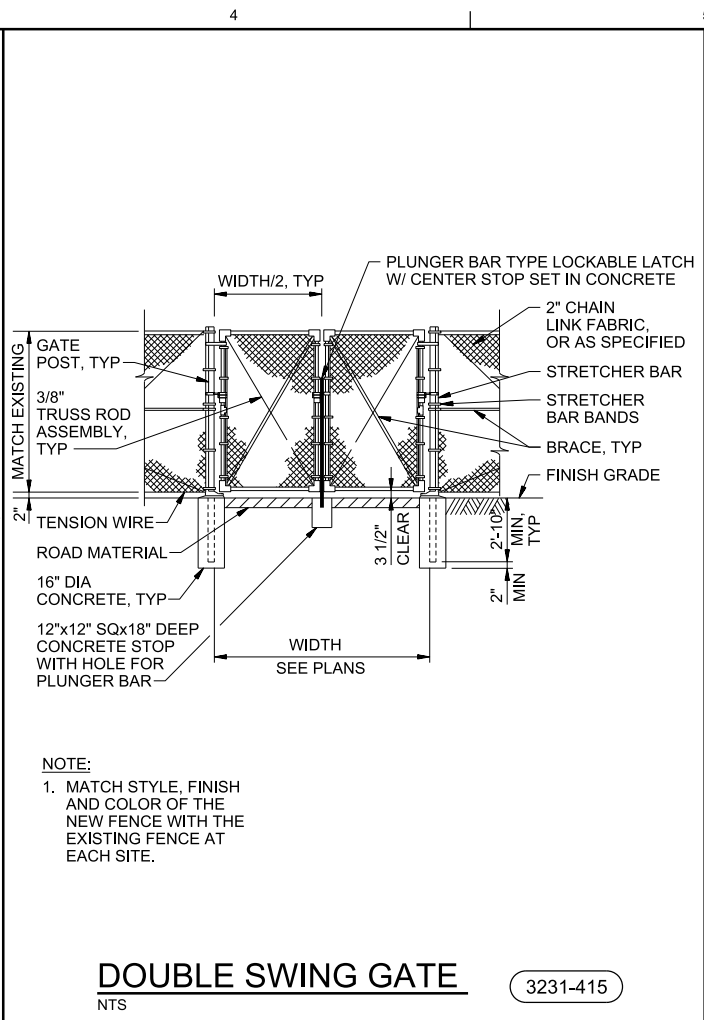
3123-115



- NOTES:**
1. BRACE AND TRUSS ROD REQUIRED AT GATES AND SIDE OF ALL CORNER POSTS.
 2. FABRIC ATTACHED TO OUTSIDE OF POSTS.
 3. MATCH STYLE, FINISH AND COLOR OF THE NEW FENCE WITH THE EXISTING FENCE AT EACH SITE.

CHAIN LINK FENCE
NTS

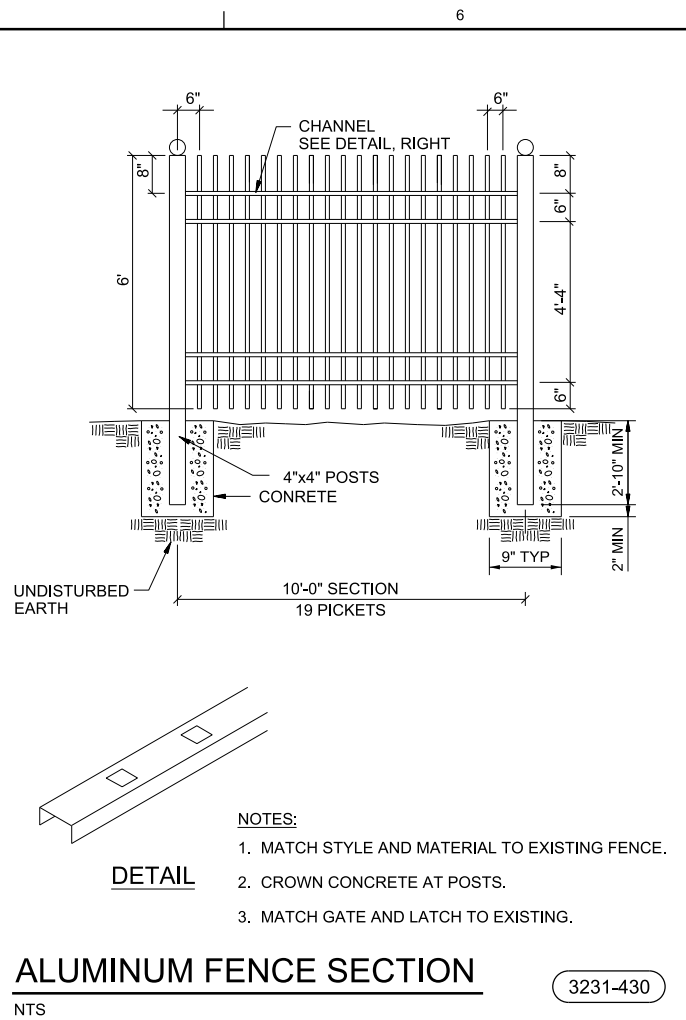
3231-410



- NOTE:**
1. MATCH STYLE, FINISH AND COLOR OF THE NEW FENCE WITH THE EXISTING FENCE AT EACH SITE.

DOUBLE SWING GATE
NTS

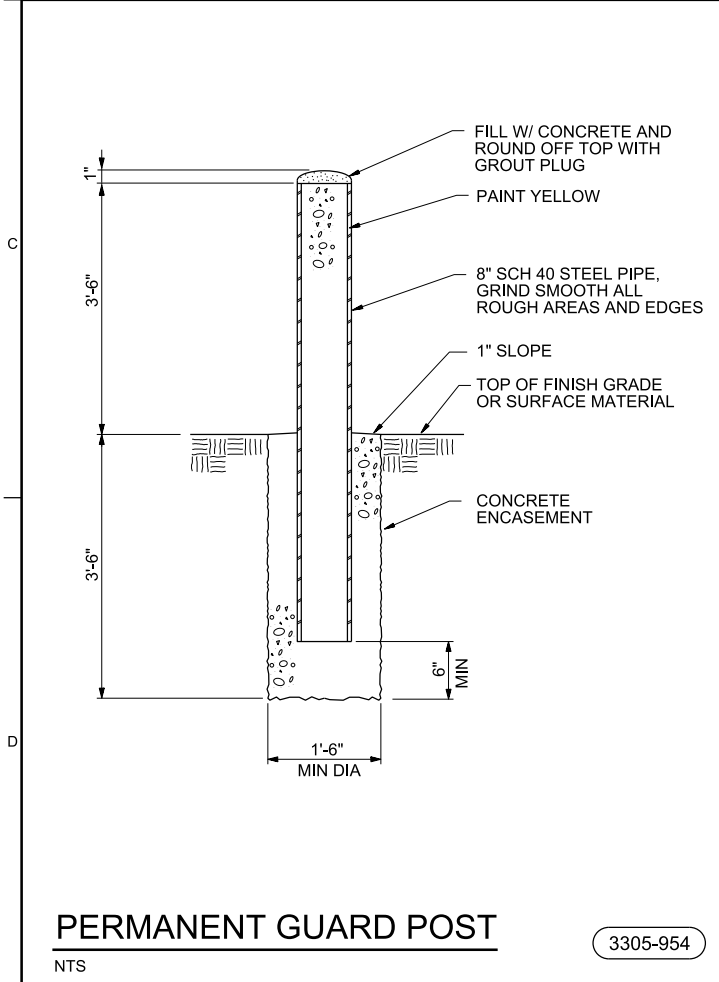
3231-415



- NOTES:**
1. MATCH STYLE AND MATERIAL TO EXISTING FENCE.
 2. CROWN CONCRETE AT POSTS.
 3. MATCH GATE AND LATCH TO EXISTING.

ALUMINUM FENCE SECTION
NTS

3231-430

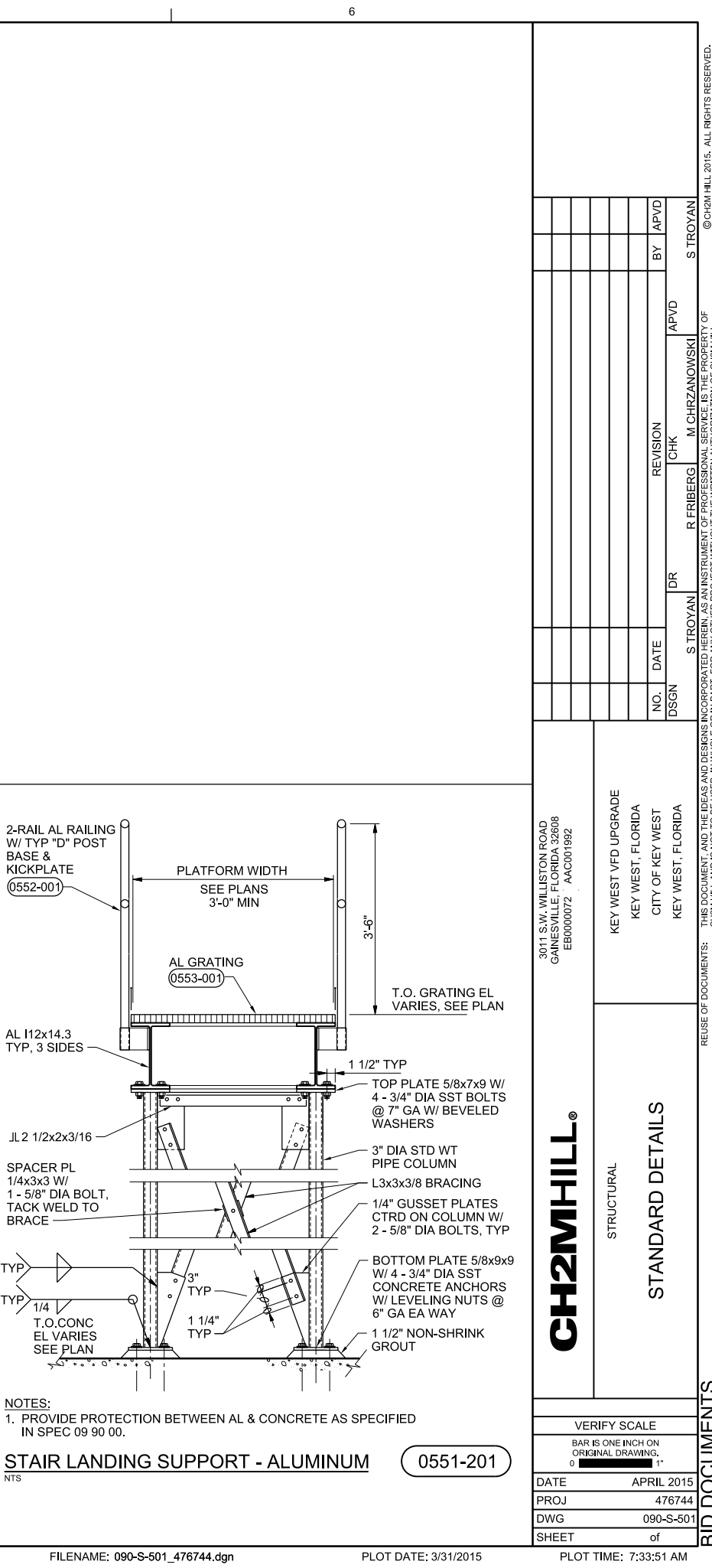
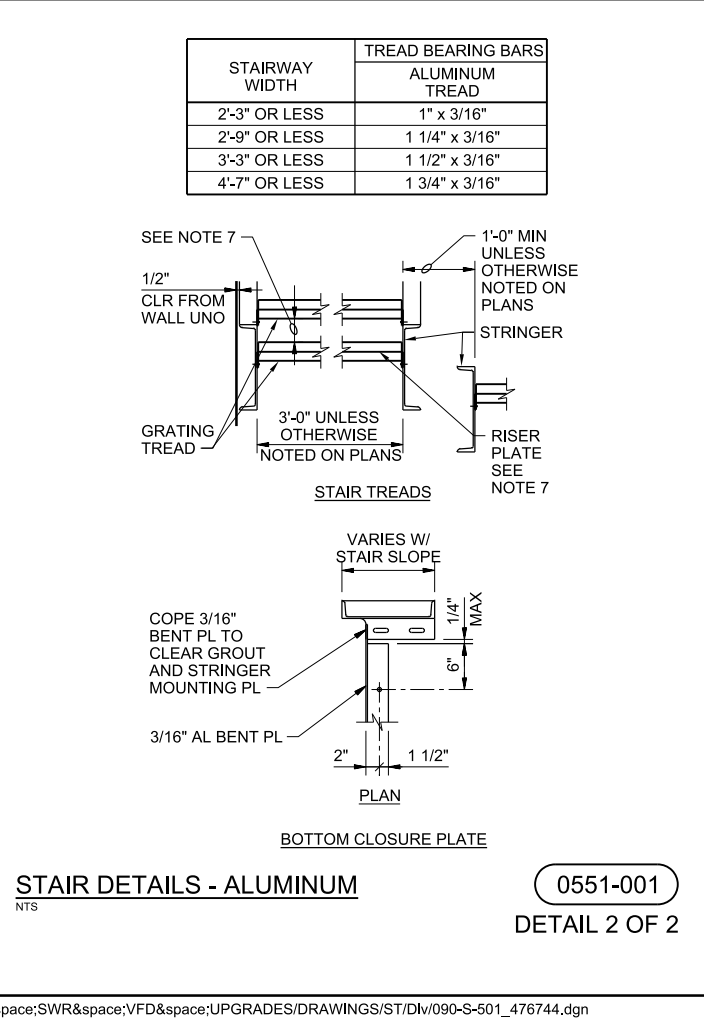
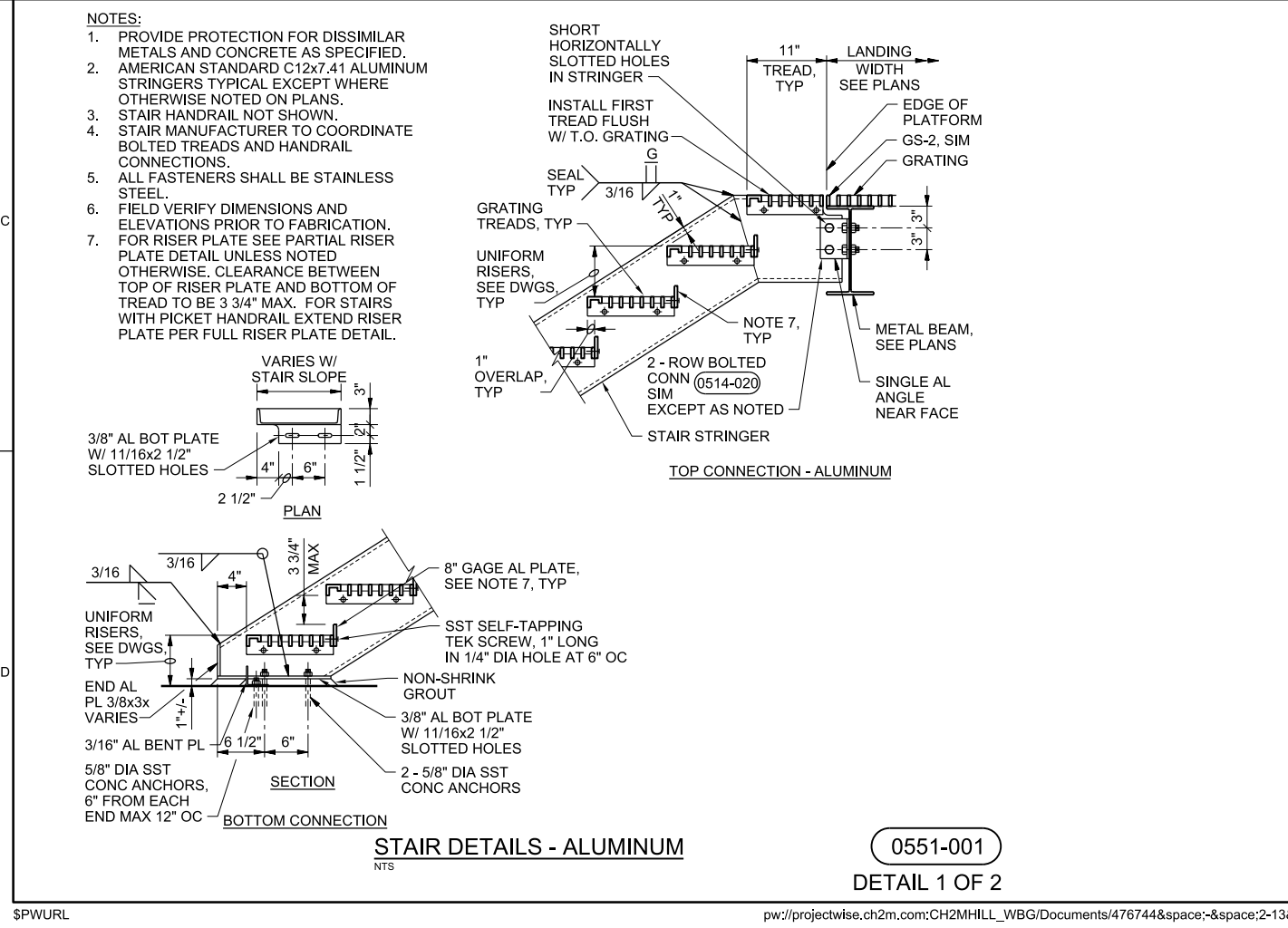
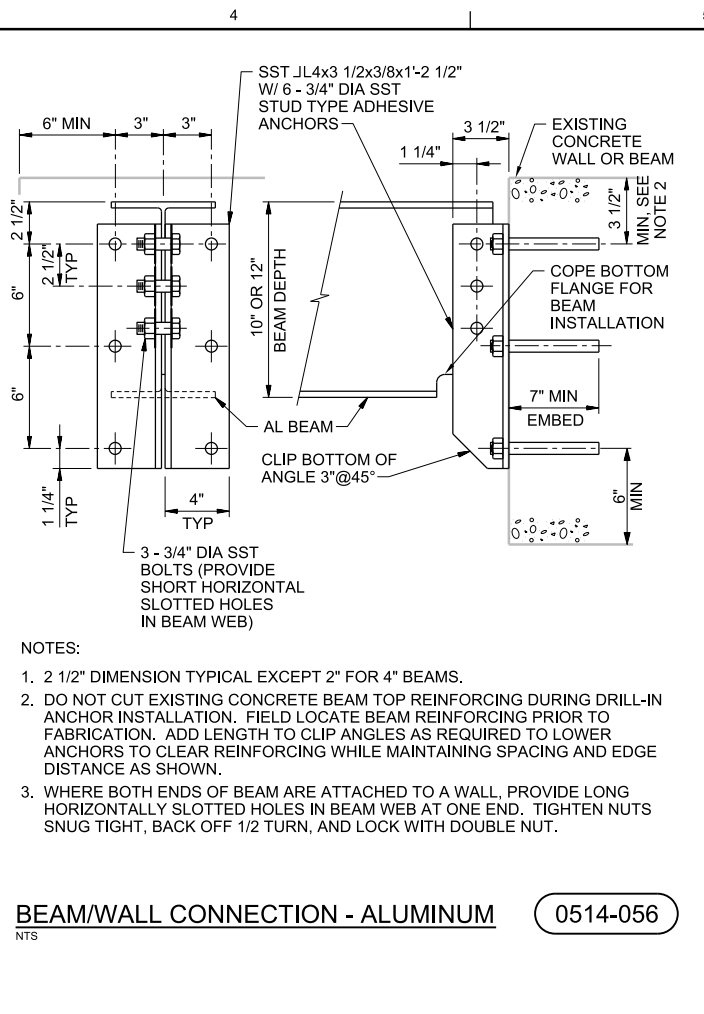
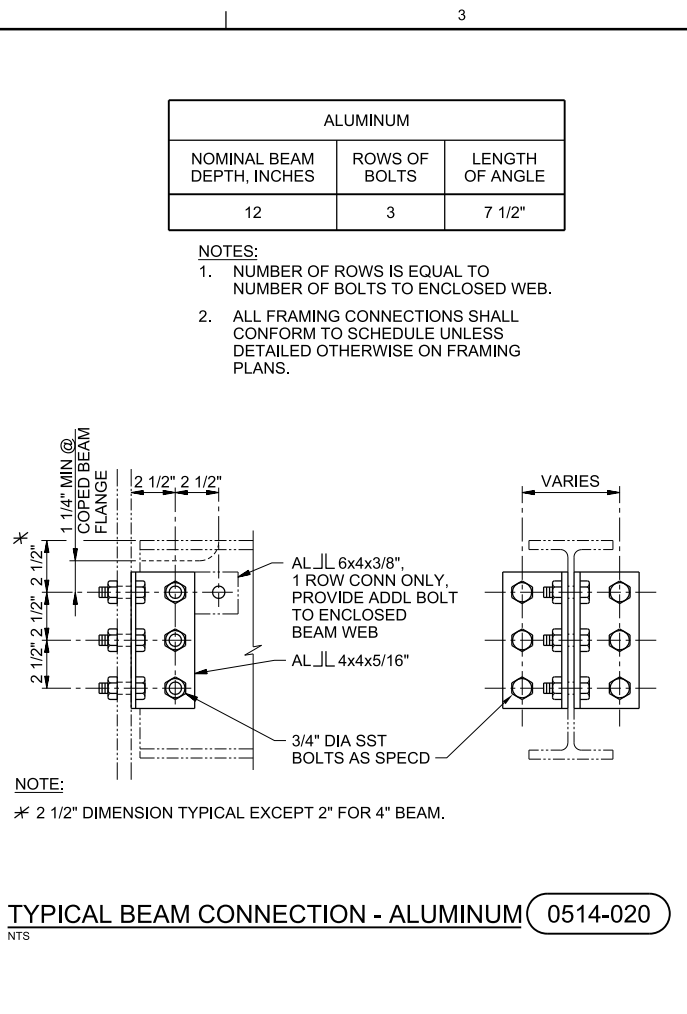
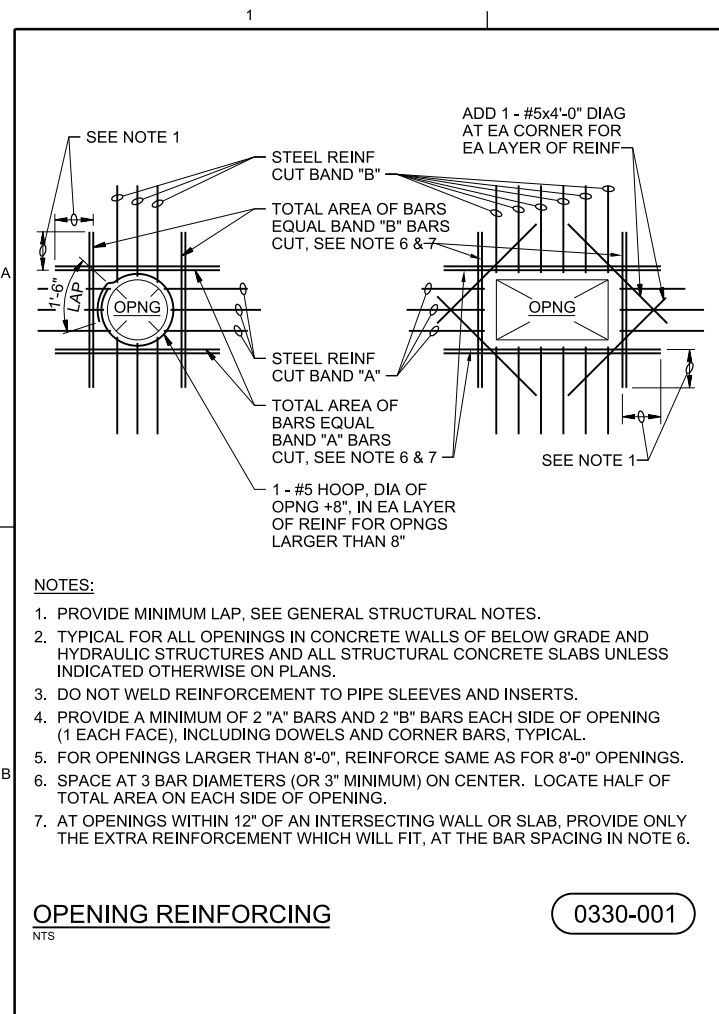


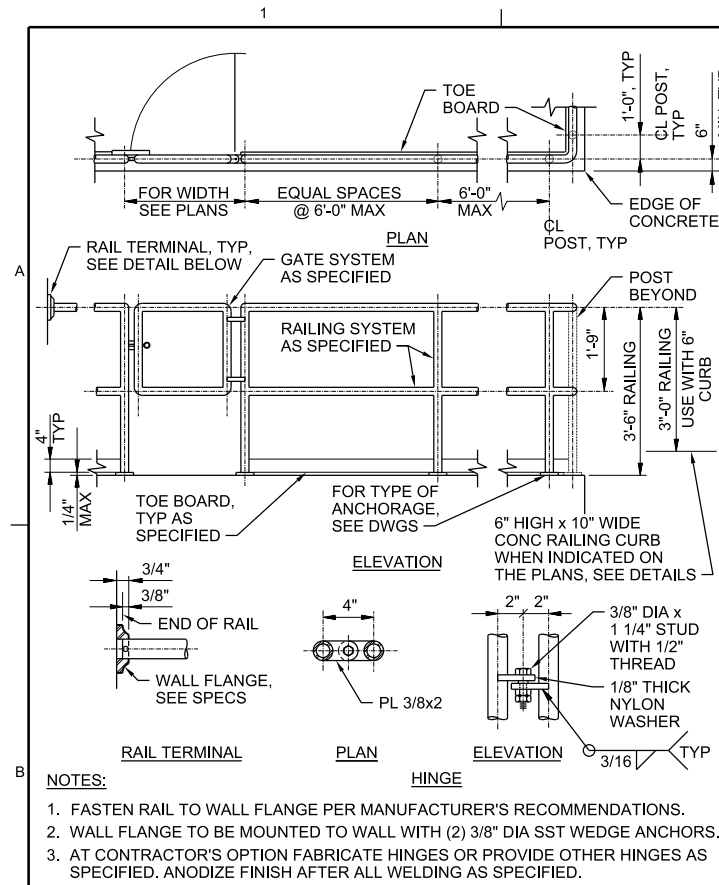
PERMANENT GUARD POST
NTS

3305-954

3011 S.W. WILSTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 / AAC001892		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA	
CH2MHILL® CIVIL		STANDARD DETAILS	
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.			
DATE	APRIL 2015	BY	APVD
PROJ	476744	REVISION	CHK
DWG	090-C-501	DR	APVD
SHEET	of	DSGN	APVD

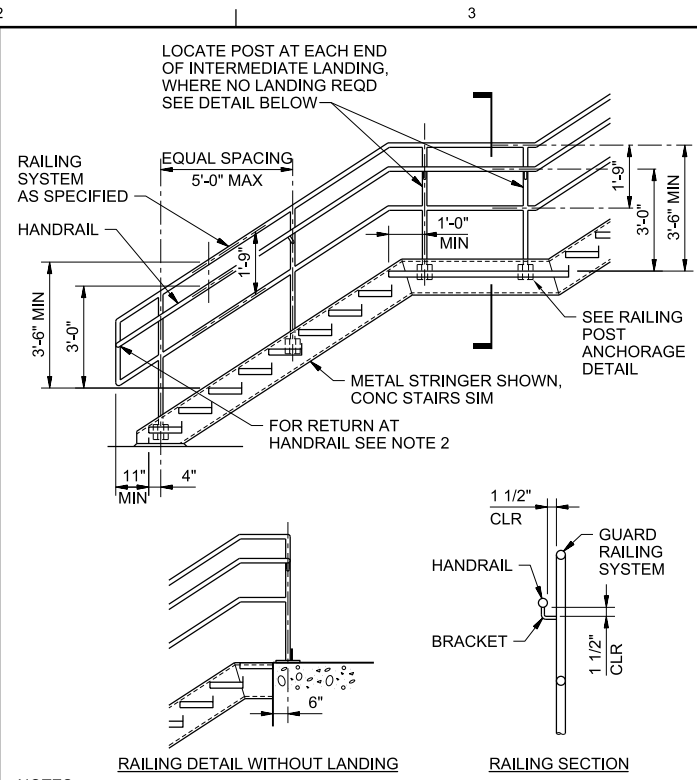
BID DOCUMENTS





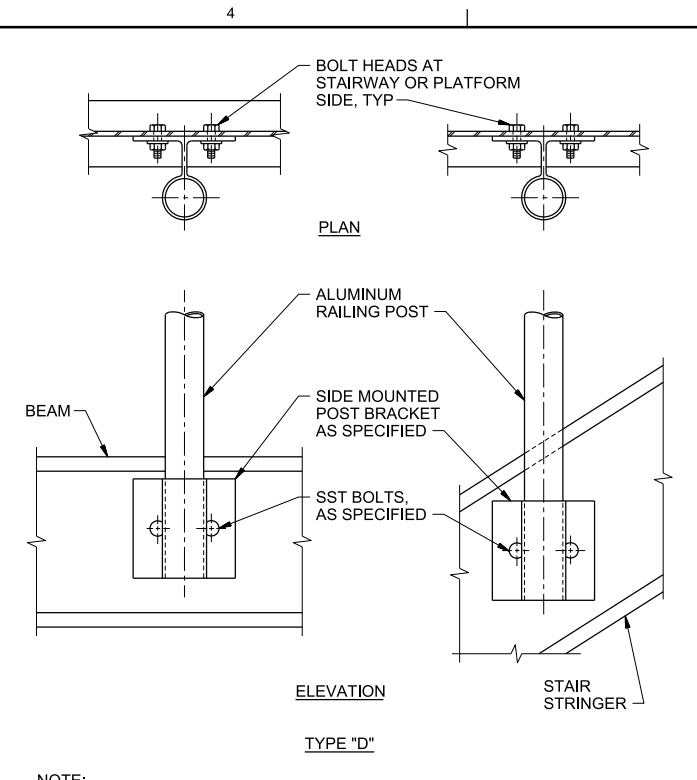
- NOTES:**
1. FASTEN RAIL TO WALL FLANGE PER MANUFACTURER'S RECOMMENDATIONS.
 2. WALL FLANGE TO BE MOUNTED TO WALL WITH (2) 3/8" DIA SST WEDGE ANCHORS.
 3. AT CONTRACTOR'S OPTION FABRICATE HINGES OR PROVIDE OTHER HINGES AS SPECIFIED. ANODIZE FINISH AFTER ALL WELDING AS SPECIFIED.

RAILING - TWO RAIL - ALUMINUM (0552-001)
 NTS
 DETAIL 1 OF 3



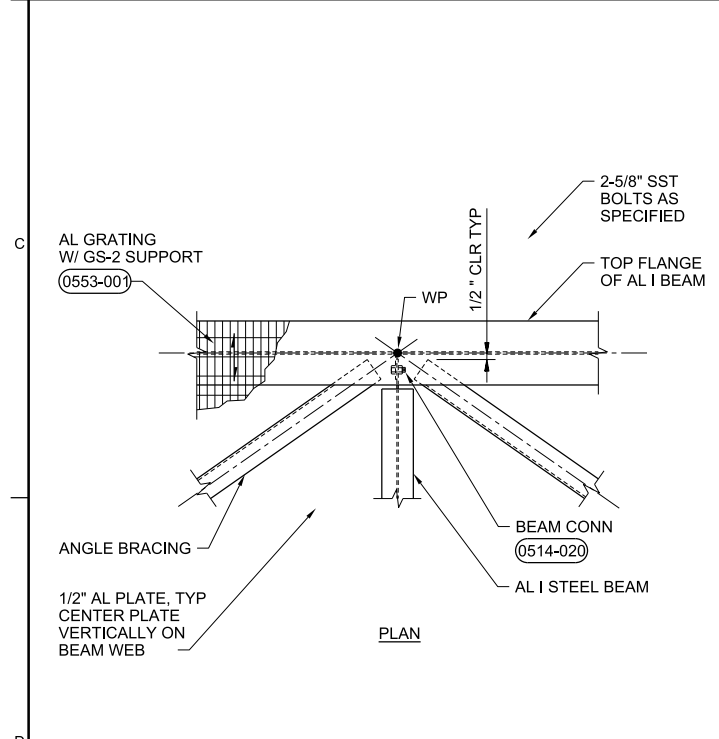
- NOTES:**
1. PROVIDE TOE BOARD AT LANDING WHERE REQUIRED.
 2. RETURN ENDS OF HANDRAIL TO GUARD AT BOTH ENDS.

RAILING - 2 RAIL STAIR - ALUMINUM (IBC) (0552-001)
 NTS
 DETAIL 2 OF 3



- NOTE:**
 PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.

RAILING POST ANCHORAGE
TYPE D - ALUMINUM (0552-001)
 NTS
 DETAIL 3 OF 3



- NOTE:**
 FOR MEMBER SIZES, SEE FRAMING PLAN.

PLATFORM BRACING
CONNECTION - ALUMINUM (0553-020)
 NTS

NO.	DATE	DR	CHK	APVD	BY	APVD
DGN			S TROYAN		M CHRZANOWSKI	
NO.			S TROYAN		R FRIBERG	
DATE			S TROYAN		M CHRZANOWSKI	
DR			S TROYAN		M CHRZANOWSKI	
CHK			S TROYAN		M CHRZANOWSKI	
APVD			S TROYAN		M CHRZANOWSKI	
BY			S TROYAN		M CHRZANOWSKI	
APVD			S TROYAN		M CHRZANOWSKI	

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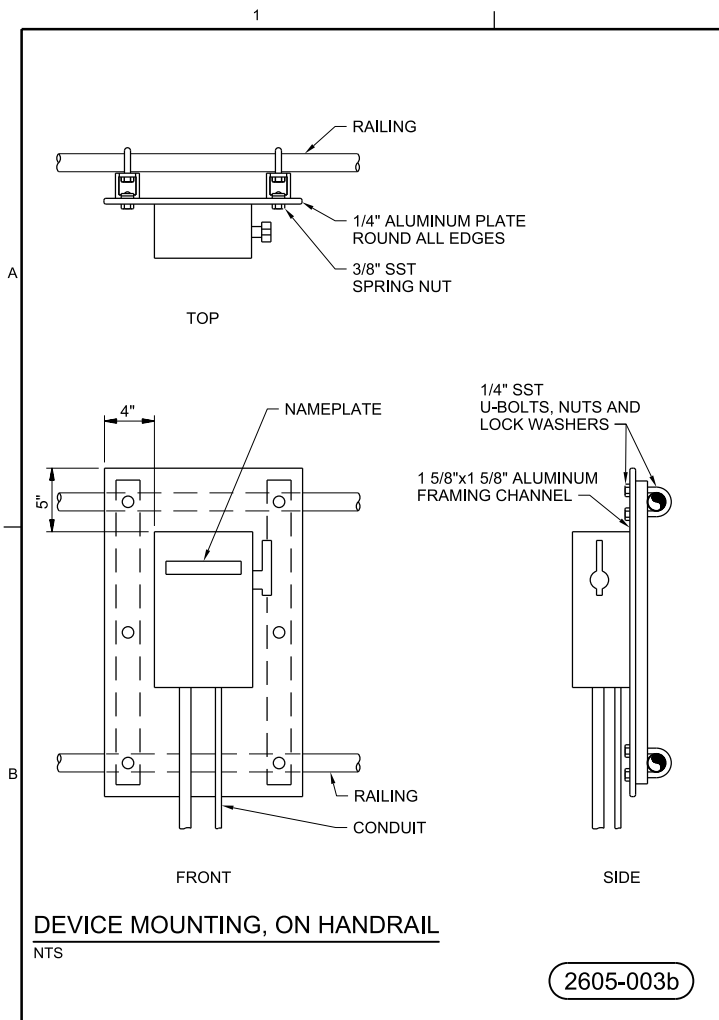
KEY WEST VFD UPGRADE
 KEY WEST, FLORIDA
 CITY OF KEY WEST
 KEY WEST, FLORIDA

STRUCTURAL
 STANDARD DETAILS

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

DATE APRIL 2015
 PROJ 476744
 DWG 090-S-502
 SHEET of

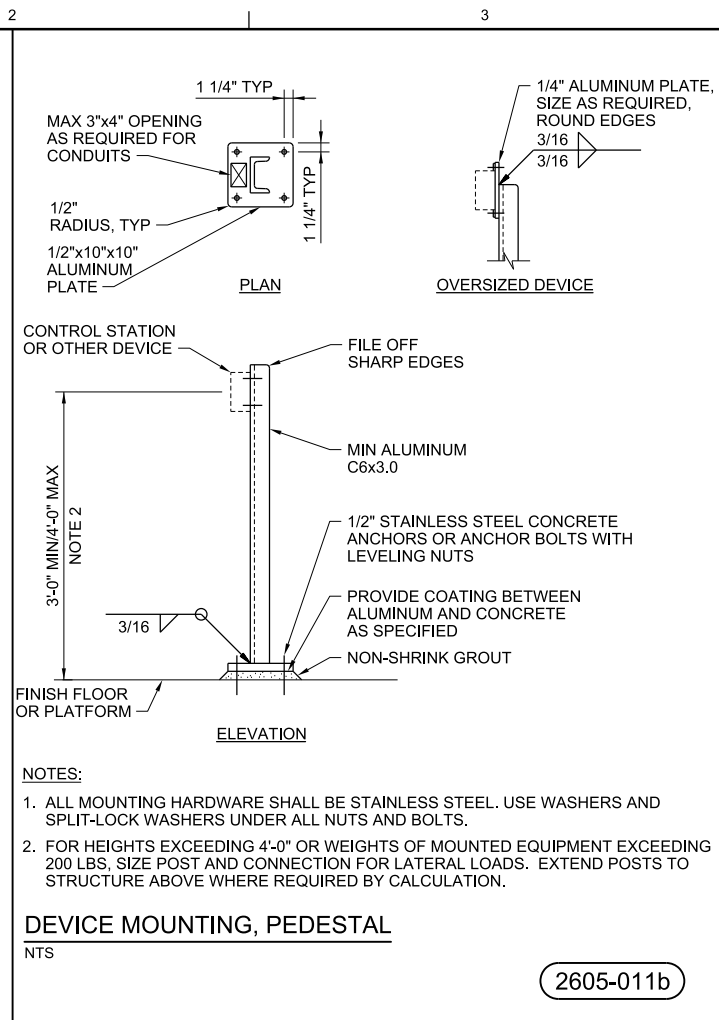
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DEVICE MOUNTING, ON HANDRAIL

NTS

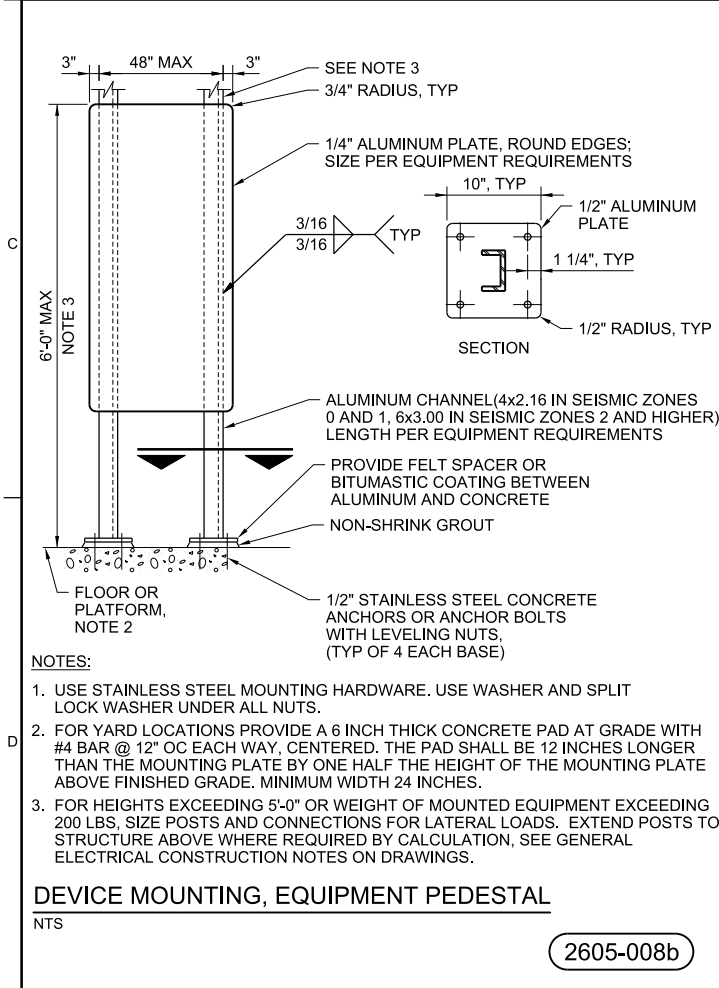
2605-003b



DEVICE MOUNTING, PEDESTAL

NTS

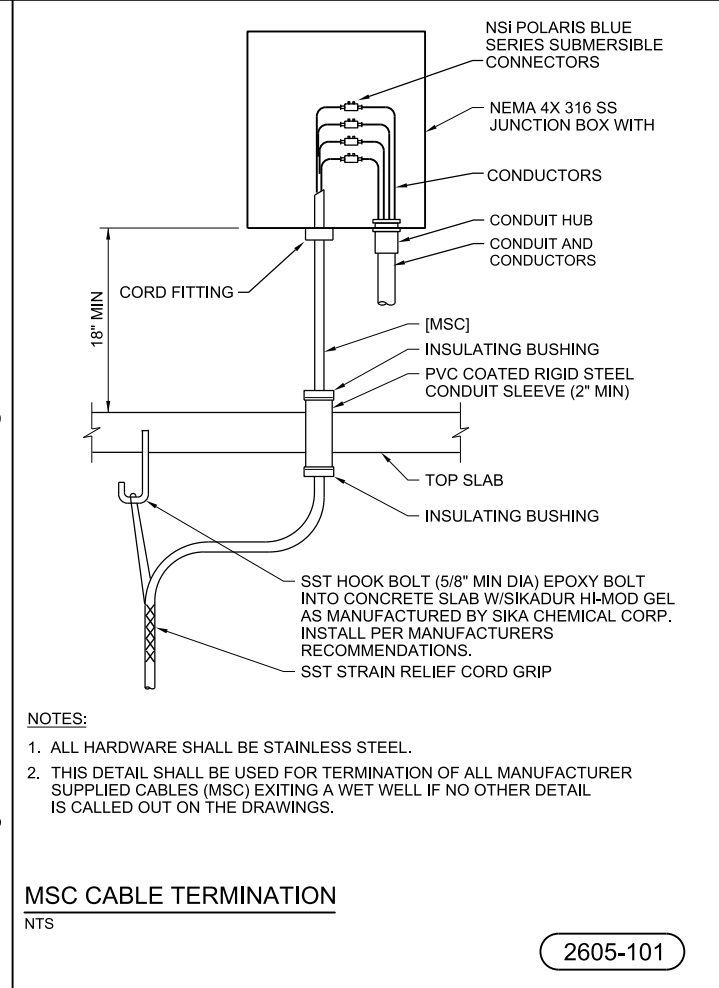
2605-011b



DEVICE MOUNTING, EQUIPMENT PEDESTAL

NTS

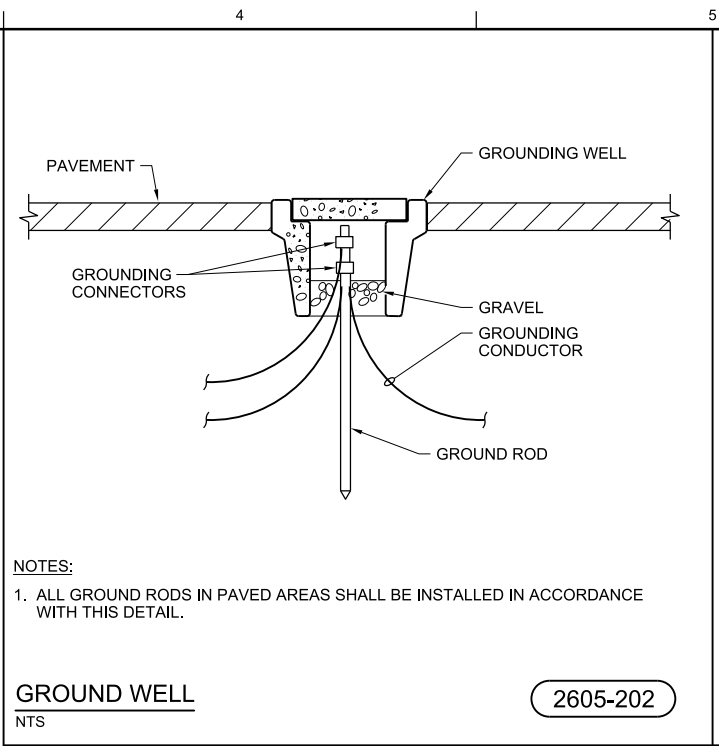
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MSC CABLE TERMINATION

NTS

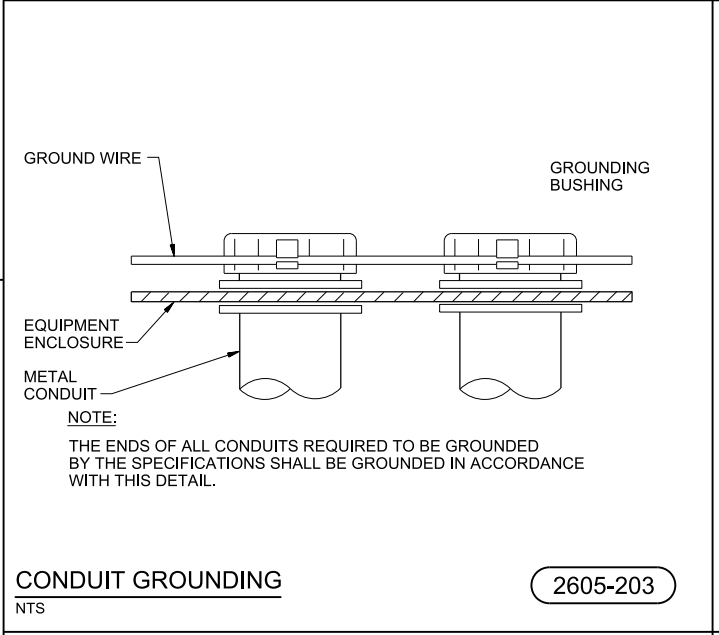
2605-101



GROUND WELL

NTS

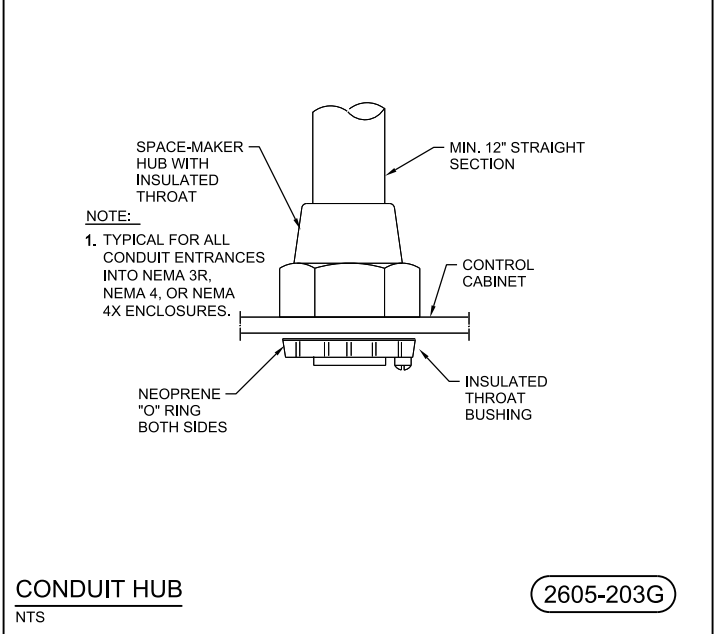
2605-202



CONDUIT GROUNDING

NTS

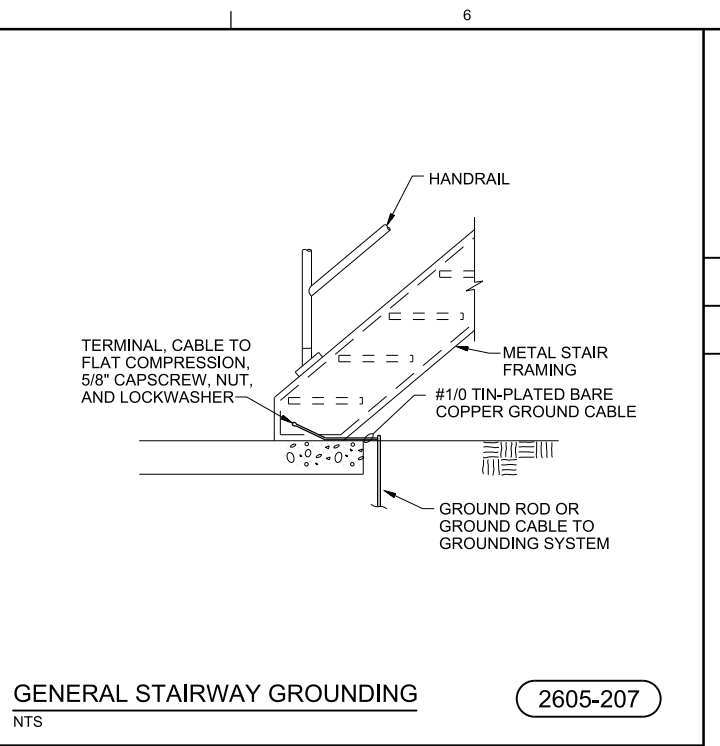
2605-203



CONDUIT HUB

NTS

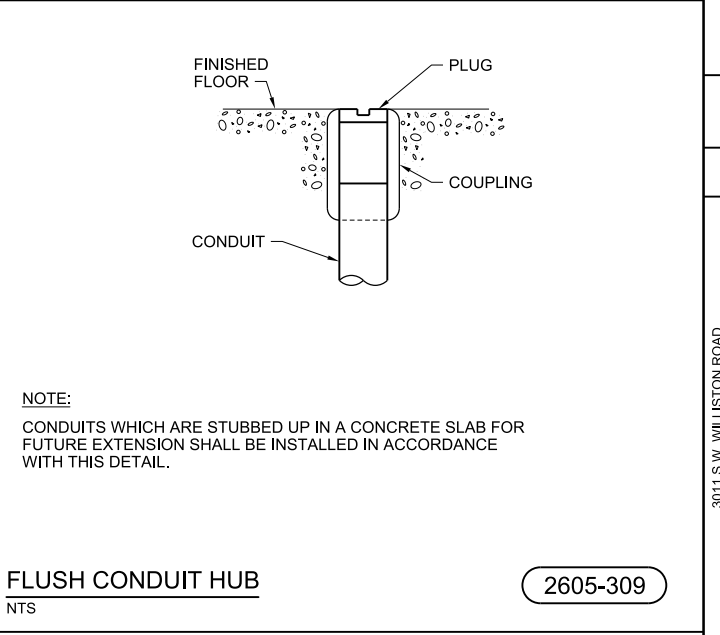
2605-203G



GENERAL STAIRWAY GROUNDING

NTS

2605-207



FLUSH CONDUIT HUB

NTS

2605-309

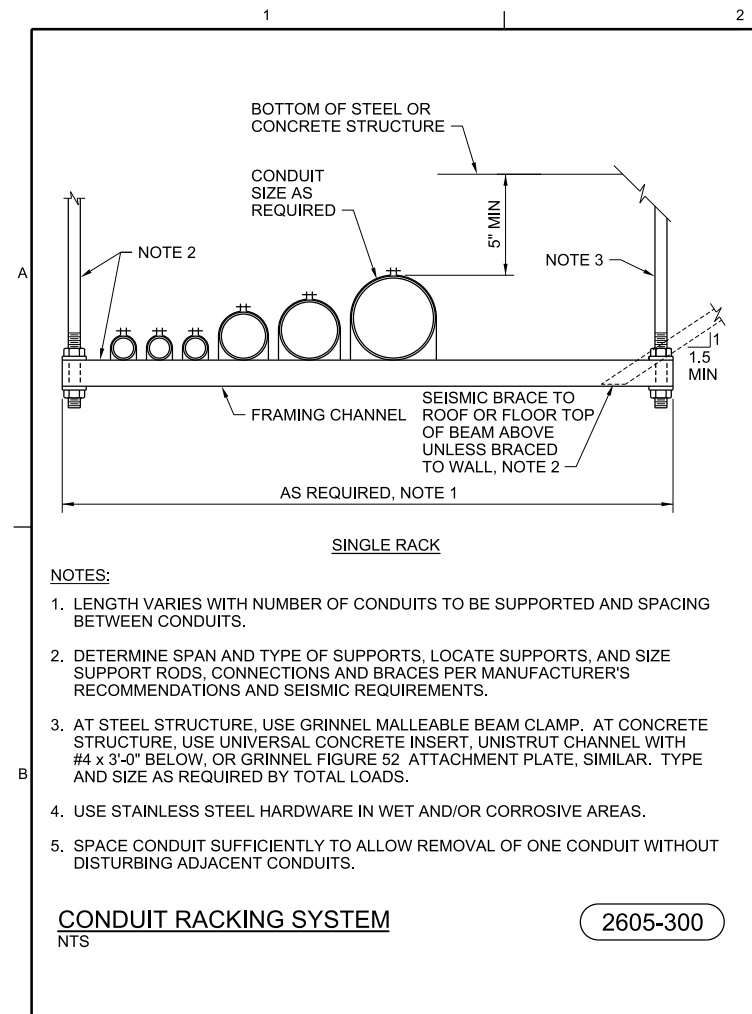
3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 - AAC001892 CUSTOM1		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA	
NO.	DATE	DR	SEAL/NAME
REVISION	CHK	APVD	BY
N ADAMS		AL CLOUGH	AL CLOUGH
N ADAMS		DR	AL CLOUGH
N ADAMS		CHK	AL CLOUGH
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CH2MHILL®

ELECTRICAL
STANDARD DETAILS

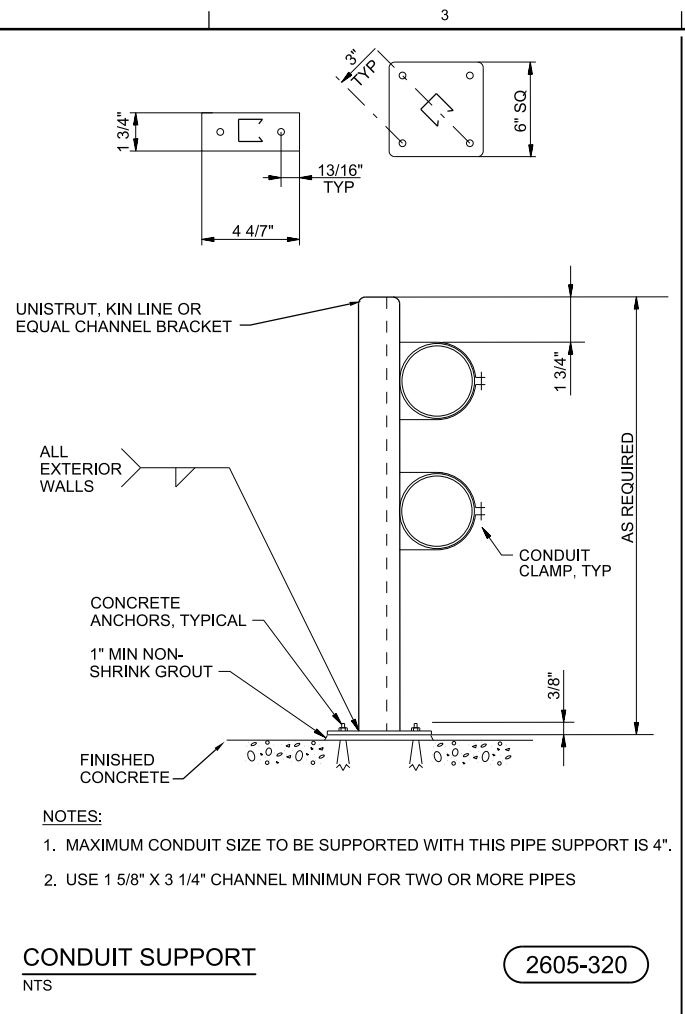
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2015
PROJ	476744
DWG	090-E-501
SHEET	XX of XX

BID DOCUMENTS



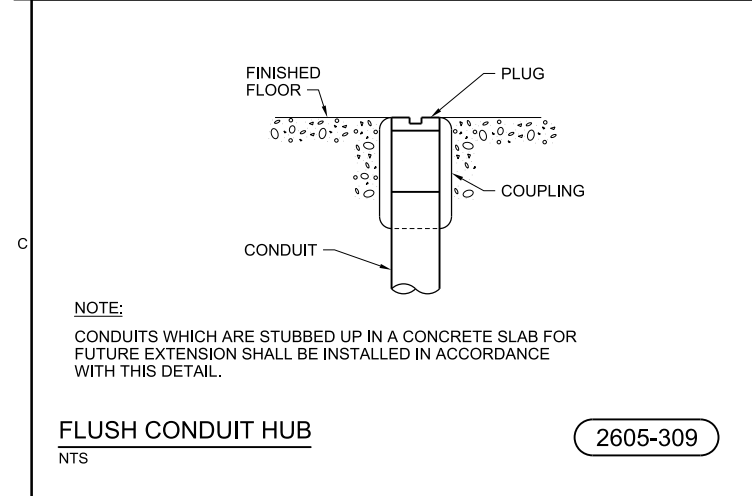
- NOTES:**
1. LENGTH VARIES WITH NUMBER OF CONDUITS TO BE SUPPORTED AND SPACING BETWEEN CONDUITS.
 2. DETERMINE SPAN AND TYPE OF SUPPORTS, LOCATE SUPPORTS, AND SIZE SUPPORT RODS, CONNECTIONS AND BRACES PER MANUFACTURER'S RECOMMENDATIONS AND SEISMIC REQUIREMENTS.
 3. AT STEEL STRUCTURE, USE GRINNEL MALLEABLE BEAM CLAMP. AT CONCRETE STRUCTURE, USE UNIVERSAL CONCRETE INSERT, UNISTRUT CHANNEL WITH #4 x 3'-0" BELOW, OR GRINNEL FIGURE 52 ATTACHMENT PLATE, SIMILAR. TYPE AND SIZE AS REQUIRED BY TOTAL LOADS.
 4. USE STAINLESS STEEL HARDWARE IN WET AND/OR CORROSIVE AREAS.
 5. SPACE CONDUIT SUFFICIENTLY TO ALLOW REMOVAL OF ONE CONDUIT WITHOUT DISTURBING ADJACENT CONDUITS.

CONDUIT RACKING SYSTEM 2605-300



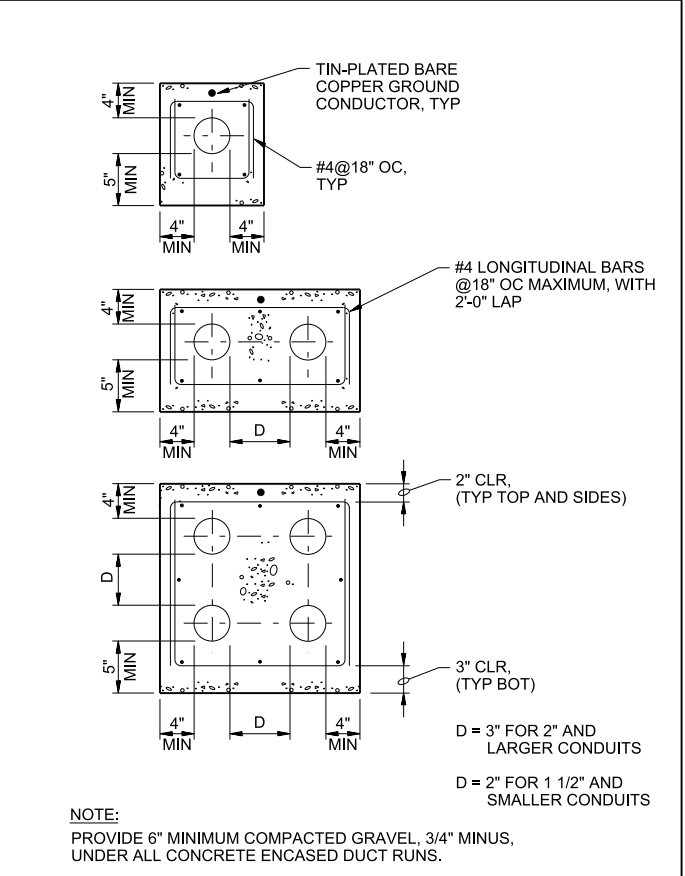
- NOTES:**
1. MAXIMUM CONDUIT SIZE TO BE SUPPORTED WITH THIS PIPE SUPPORT IS 4".
 2. USE 1 5/8" X 3 1/4" CHANNEL MINIMUM FOR TWO OR MORE PIPES

CONDUIT SUPPORT 2605-320



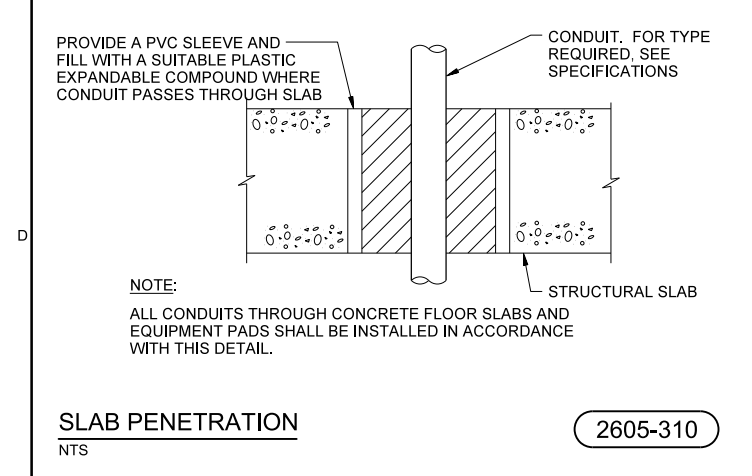
- NOTE:**
CONDUITS WHICH ARE STUBBED UP IN A CONCRETE SLAB FOR FUTURE EXTENSION SHALL BE INSTALLED IN ACCORDANCE WITH THIS DETAIL.

FLUSH CONDUIT HUB 2605-309



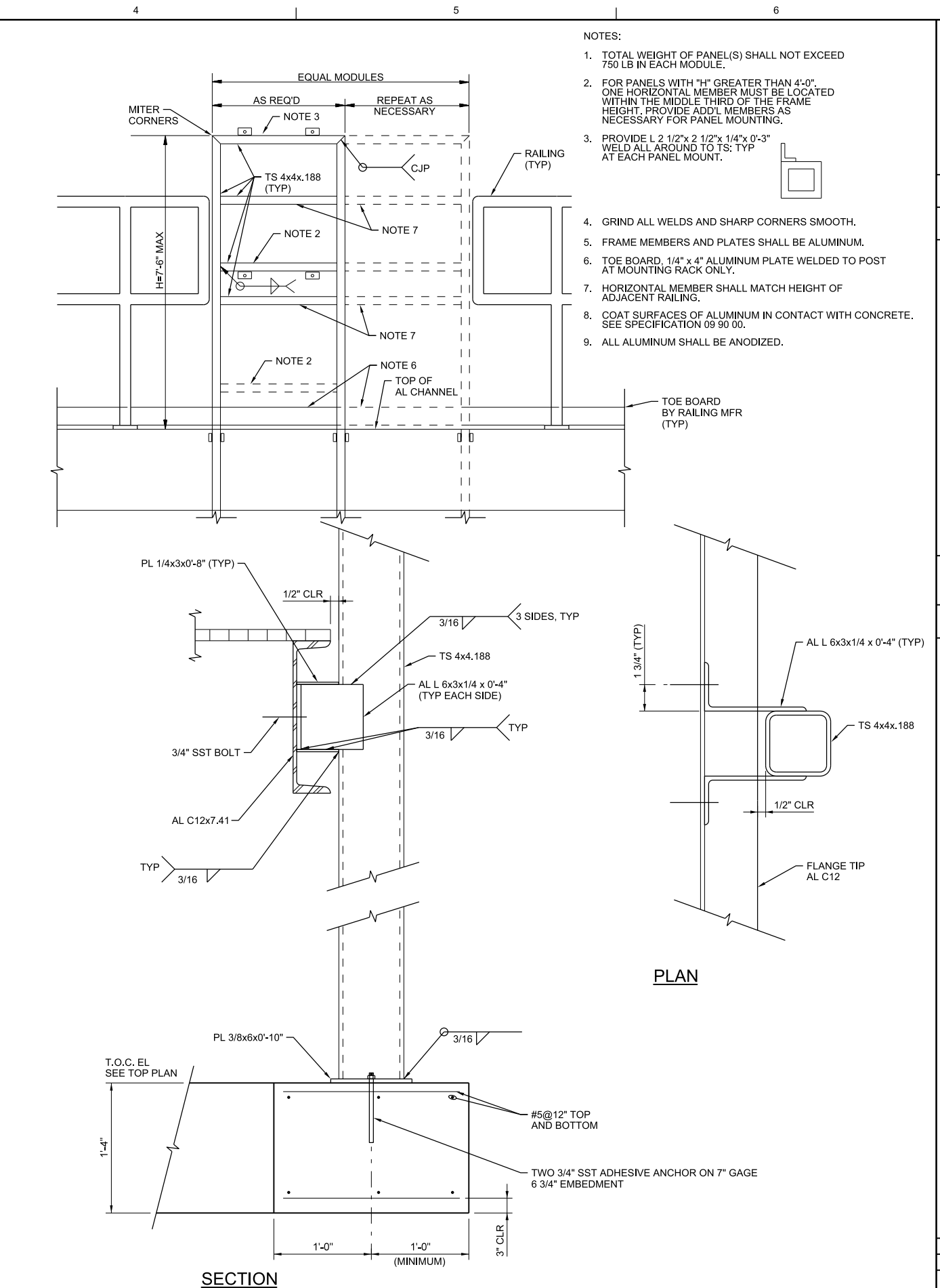
- NOTE:**
PROVIDE 6" MINIMUM COMPACTED GRAVEL, 3/4" MINUS, UNDER ALL CONCRETE ENCASED DUCT RUNS.

DUCT BANK 2605-400A



- NOTE:**
ALL CONDUITS THROUGH CONCRETE FLOOR SLABS AND EQUIPMENT PADS SHALL BE INSTALLED IN ACCORDANCE WITH THIS DETAIL.

SLAB PENETRATION 2605-310

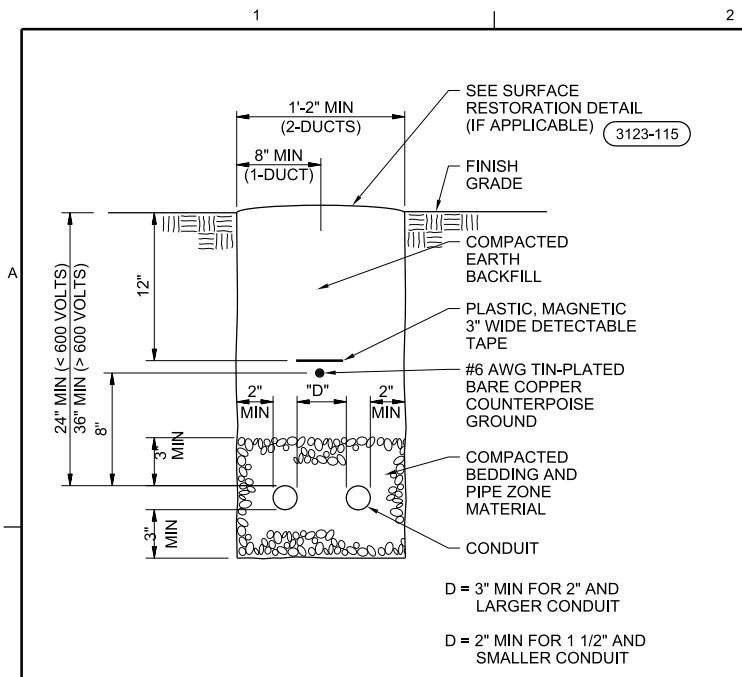


- NOTES:**
1. TOTAL WEIGHT OF PANEL(S) SHALL NOT EXCEED 750 LB IN EACH MODULE.
 2. FOR PANELS WITH "H" GREATER THAN 4'-0", ONE HORIZONTAL MEMBER MUST BE LOCATED WITHIN THE MIDDLE THIRD OF THE FRAME HEIGHT. PROVIDE ADD'L MEMBERS AS NECESSARY FOR PANEL MOUNTING.
 3. PROVIDE L 2 1/2"x 2 1/2"x 1/4"x 0'-3" WELD ALL AROUND TO TS; TYP AT EACH PANEL MOUNT.
 4. GRIND ALL WELDS AND SHARP CORNERS SMOOTH.
 5. FRAME MEMBERS AND PLATES SHALL BE ALUMINUM.
 6. TOE BOARD, 1/4" x 4" ALUMINUM PLATE WELDED TO POST AT MOUNTING RACK ONLY.
 7. HORIZONTAL MEMBER SHALL MATCH HEIGHT OF ADJACENT RAILING.
 8. COAT SURFACES OF ALUMINUM IN CONTACT WITH CONCRETE. SEE SPECIFICATION 09 90 00.
 9. ALL ALUMINUM SHALL BE ANODIZED.

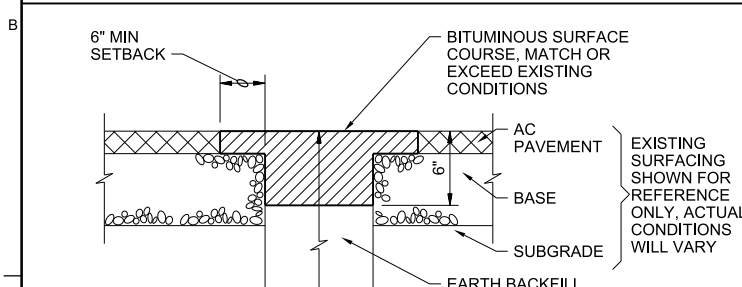
PANEL MOUNTING RACK 4402

3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 AAC001892 CUSTOM1		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA	
CH2MHILL® ELECTRICAL		STANDARD DETAILS	
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.			
DATE	APRIL 2015	PROJ	476744
DWG	090-E-502	SHEET	XX OF XX

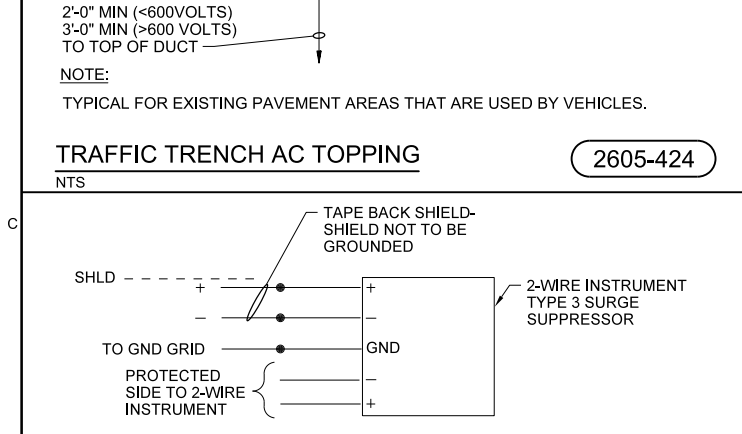
SEAL/NAME: _____
 BY: _____
 APVD: _____
 CHECKER: AL CLOUGH
 REVISION: _____
 DR: N ADAMS
 NO. DATE DSGN
 1 1/15 0001
 2 1/15 0002
 3 1/15 0003
 4 1/15 0004
 5 1/15 0005
 6 1/15 0006
 7 1/15 0007
 8 1/15 0008
 9 1/15 0009
 10 1/15 0010



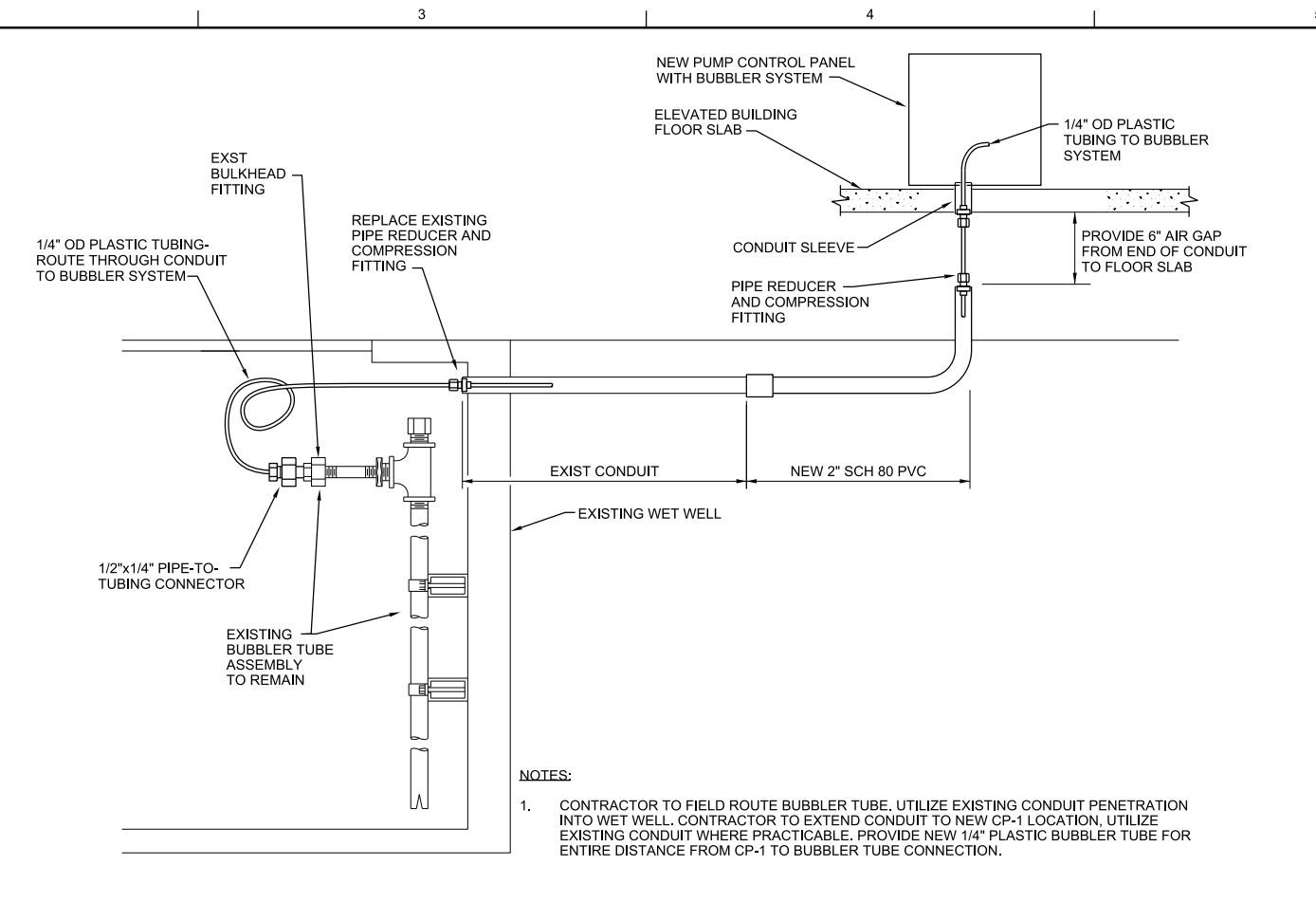
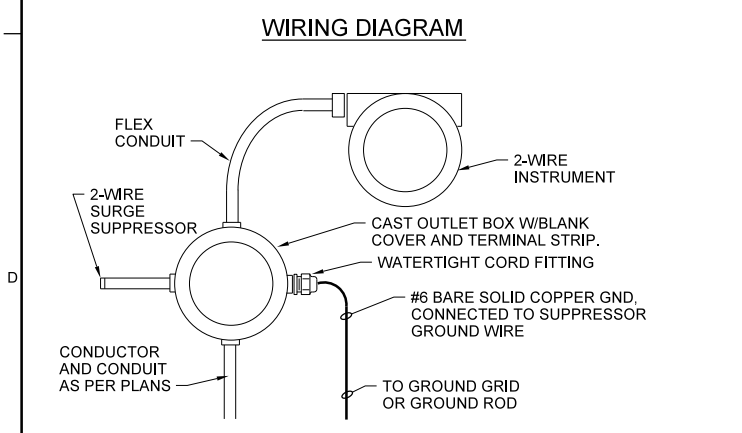
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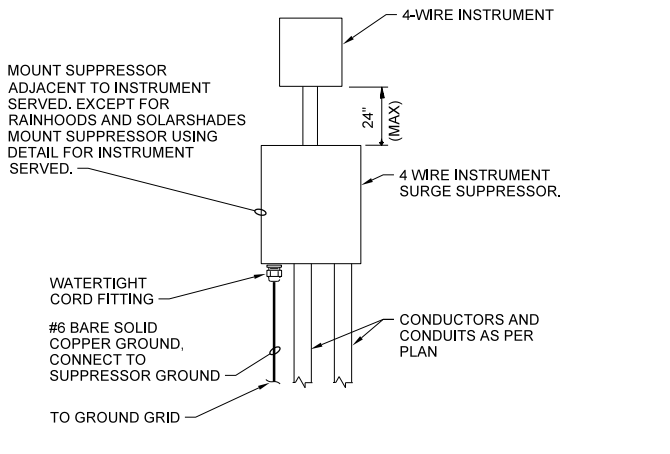
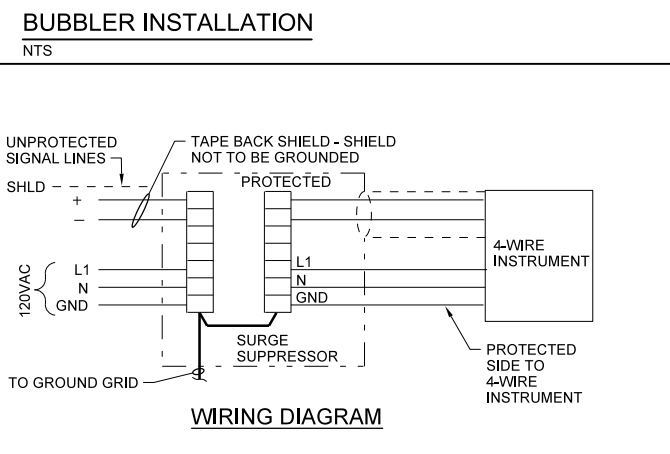
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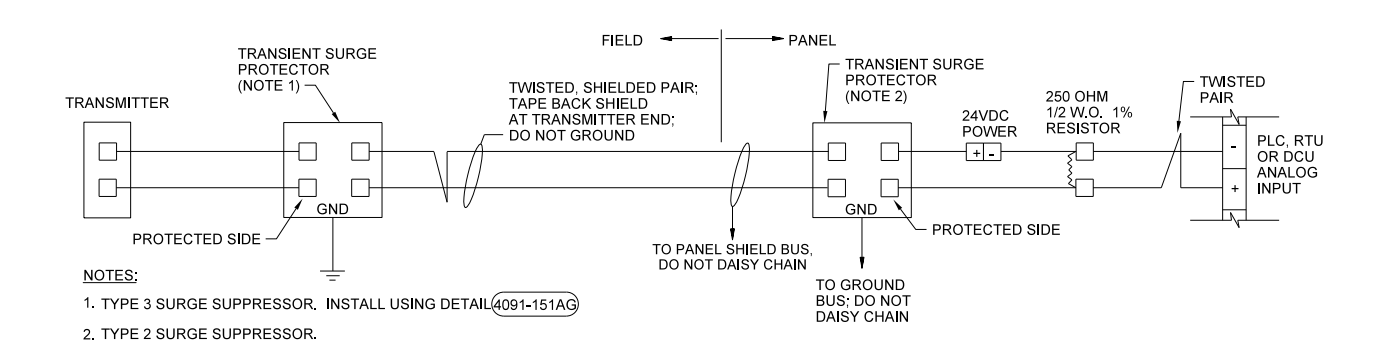
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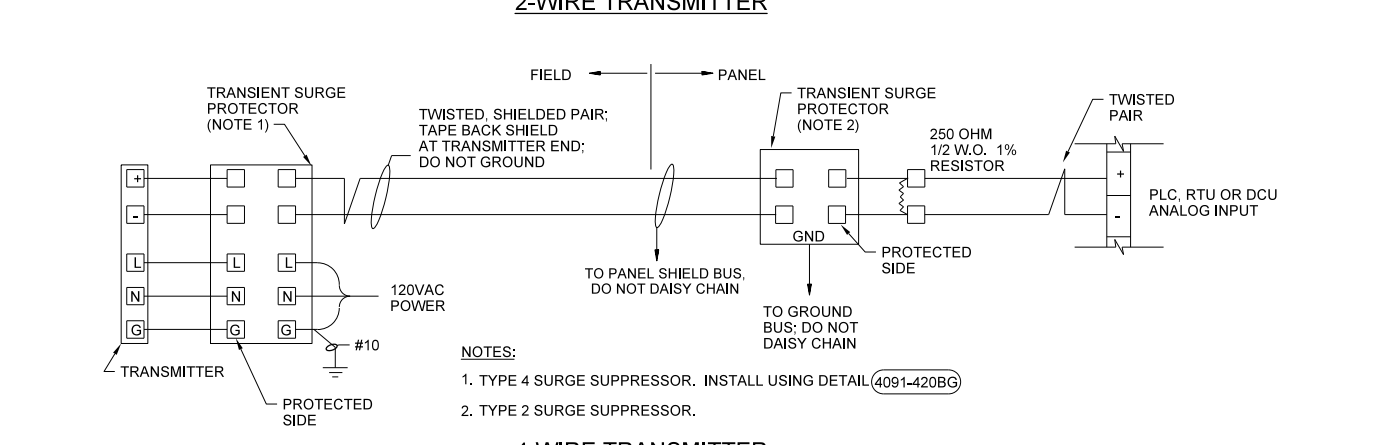
4091-241



4091-420BG



2-WIRE TRANSMITTER



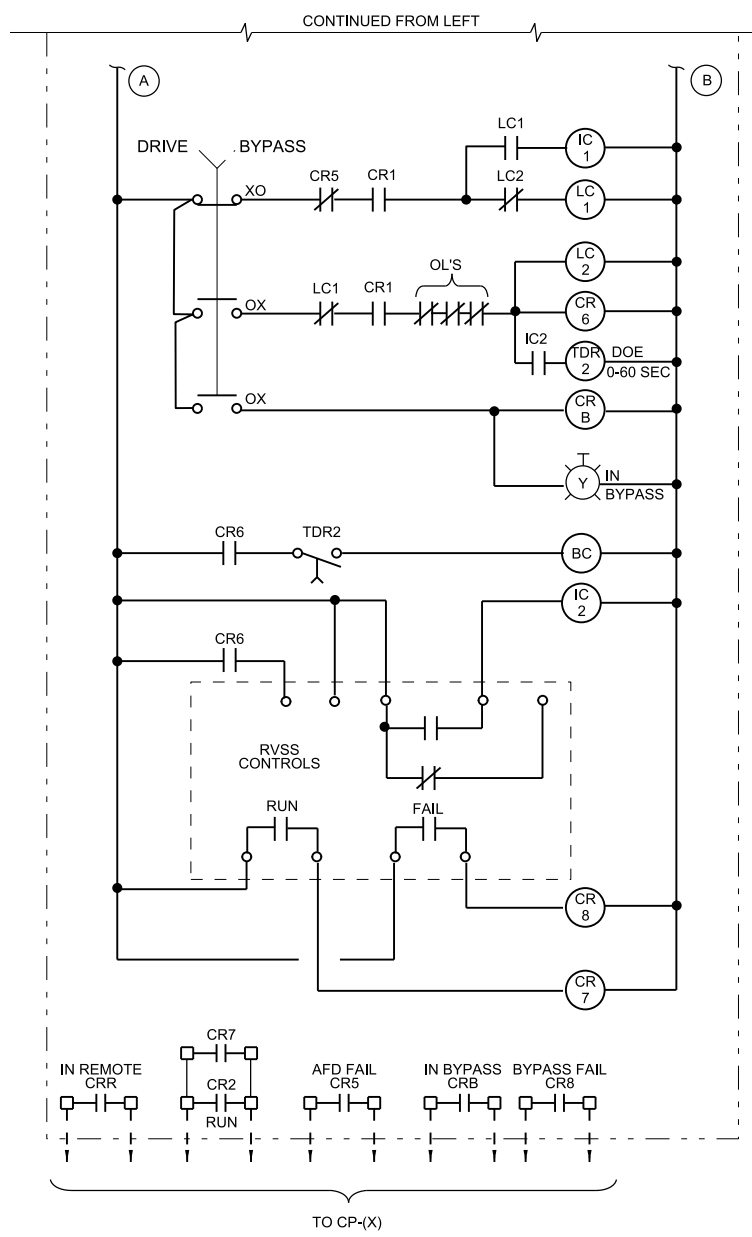
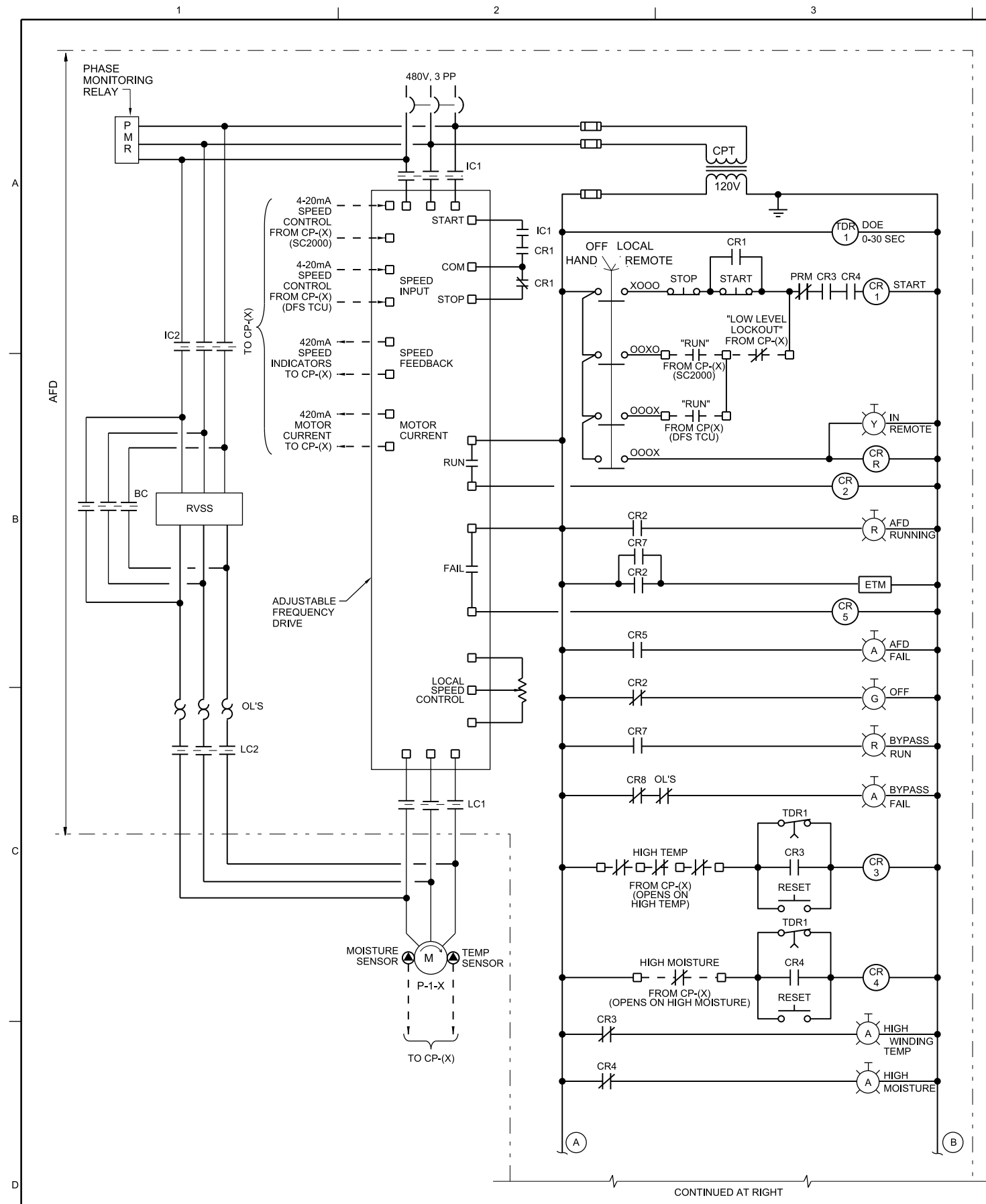
4-WIRE TRANSMITTER

TYPICAL OUTDOOR TRANSMITTERS 4091-405BG

3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 - AAC001892		CUSTOM1		KEY WEST VFD UPGRADE KEY WEST, FLORIDA CITY OF KEY WEST KEY WEST, FLORIDA	
ELECTRICAL		STANDARD DETAILS		CH2MHILL®	
VERIFY SCALE		BAR IS ONE INCH ON ORIGINAL DRAWING.		DATE APRIL 2015	
PROJ 476744		DWG 090-E-503		SHEET XX OF XX	
DATE APRIL 2015		PROJ 476744		DWG 090-E-503	
SHEET XX OF XX		FILENAME: 090-E-503_476744.dgn		PLOT DATE: 3/31/2015	

AL CLOUGH CHECKER
N ADAMS DR
NO. DATE DSGN
REVISION
BY APVD
SEAL/NAME

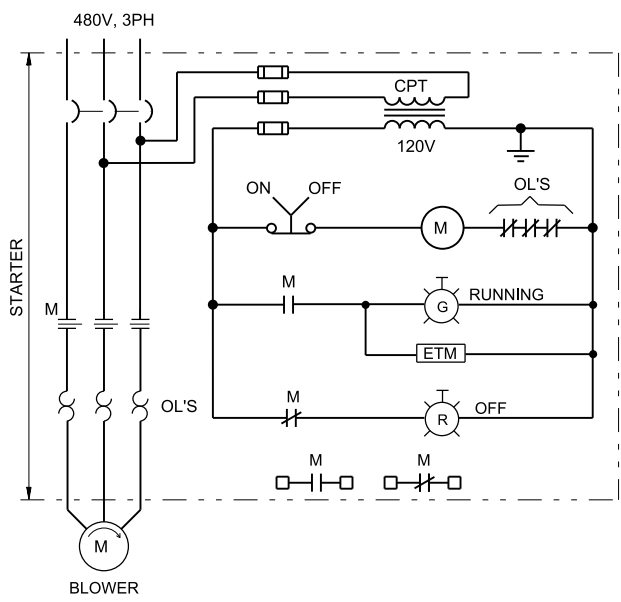
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PUMP AFD-(X)-(Y)

(X)	PUMP STATION	TYPICAL FOR:
A	PUMP STATION A	AFD-A-1, AFD-A-2
B	PUMP STATION B	AFD-B-1, AFD-B-2
C	PUMP STATION C	AFD-C-1, AFD-C-2
D	PUMP STATION D	ADF-D-1, AFD-D-2, AFD-D-3
DA	PUMP STATION DA	AFD-DA-1, AFD-DA-2

GENERAL NOTES:
 CONTRACTOR TO PROVIDE AFD/MOTOR STARTERS WITH THE CONTROL FUNCTIONS AS SHOWN (TYPICAL FOR EACH PUMP STATION).



CH2MHILL®

ELECTRICAL

MOTOR CONTROL DIAGRAMS

3011 S.W. WILLISTON ROAD
 GAINESVILLE, FLORIDA 32608
 EB0000072 AAC001892
 CUSTOM1

KEY WEST VFD UPGRADE
 KEY WEST, FLORIDA
 CITY OF KEY WEST
 KEY WEST, FLORIDA

NO. DATE DSGN DR CHECKER APVD BY APVD SEALNAME

N ADAMS AL CLOUGH N ADAMS AL CLOUGH

REVISION

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE APRIL 2015
 PROJ 476744
 DWG 090-E-601
 SHEET XX of XX

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