

CONTRACT DOCUMENTS

For the construction of the

PUMP STATIONS REHABILITATION PHASE 1 H, B AND A GENERATOR



Prepared for the
CITY OF KEY WEST
KEY WEST, FLORIDA

VOLUME 2 OF 2
DRAWINGS

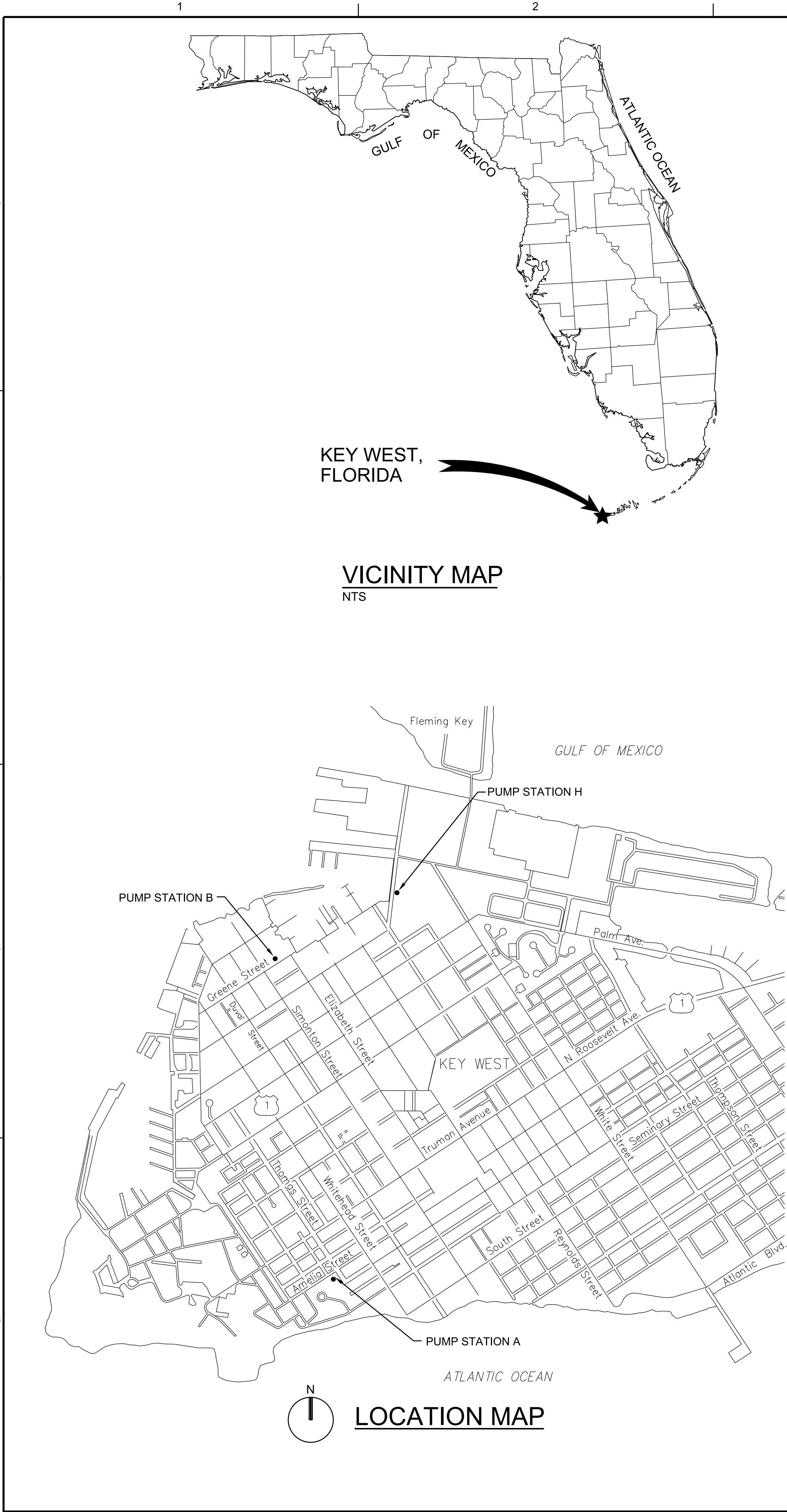
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Project No. 683450
KEY WEST BID # 18-033
MAY 2018
KEY WEST PROJ No. HU1701F01

BID DOCUMENTS



VICINITY MAP
NTS

LOCATION MAP

INDEX OF DRAWINGS

SHEET	DWG #	DISCRIPTION
001 - GENERAL		
01	001-G-001	LOCATION, VICINITY MAPS AND INDEX OF DRAWINGS
02	001-G-002	ABBREVIATIONS
03	001-G-003	CIVIL AND STRUCTURAL GENERAL NOTES, LEGEND, AND ABBREVIATIONS
04	001-G-005	MECHANICAL LEGEND
05	001-G-006	ELECTRICAL LEGEND SHEET 1
06	001-G-007	ELECTRICAL LEGEND SHEET 2
010 - PUMP STATION B		
07	010-C-201	PUMP STATION B SITE PLAN
08	010-D-201	PUMP STATION B PLAN & SECTION
09	010-E-201	PUMP STATION B SITE PLAN
10	010-E-601	PUMP STATION B ONE LINE DIAGRAM
11	010-E-602	PUMP STATION B MOTOR CONTROL DIAGRAM
020 - PUMP STATION H		
12	020-C-201	PUMP STATION H SITE PLAN
13	020-S-202	PUMP STATION H PLATFORM H PLANS AND SETIONS
14	020-D-201	PUMP STATION H PLAN & SECTION
15	020-E-101	PUMP STATION H SITE DEMOLITION PLAN
16	020-E-201	PUMP STATION H NEW SITE PLAN
17	020-E-601	PUMP STATION H ONE-LINE DIAGRAM
030 - PUMP STATION A		
18	030-C-101	PUMP STATION A SITE DEMOLITION PLAN
19	030-C-201	PUMP STATION A SITE PLAN
20	030-S-201	PUMP STATION A PLATFORM A PLAN AND SECTION
21	030-E-201	PUMP STATION A SITE PLAN
22	030-E-201	PUMP STATION A ONE LINE DIAGRAM
095 - STANDARD DETAILS		
23	095-C-501	STANDARD DETAILS
24	095-S-201	STANDARD DETAILS
25	095-S-202	STANDARD DETAILS
26	095-S-203	STANDARD DETAILS
27	095-D-501	STANDARD DETAILS
28	095-E-501	STANDARD DETAILS
29	095-E-502	STANDARD DETAILS
30	095-E-503	STANDARD DETAILS

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 AAC001992
ROCCO DEVILLIERS KOEKEMOER PE 76468

GENERAL
LOCATION, VICINITY MAPS AND
INDEX OF DRAWINGS

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

1" = X'	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 1"	
DATE	MAY 2018
PROJ	683450
DWG	001-G-001
SHEET	01 of 30

BID DOCUMENTS

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1			2			3			4			5			6		
A	AMMETER, AMPERES	CRS	PVC COATED RIGID STEEL	FSHS	FOLDING SHOWER SEAT	LHR	LEFT HAND REVERSE	PP	POWER POLE	STIF	STIFFENER						
AB	ANCHOR BOLT	CS	CUP SINK	FT	FOOT OR FEET	LLH	LONG LEG HORIZONTAL	PPL	POLYPROPYLENE LINED	STIRR	STIRRUP						
ABDN	ABANDON	CSATC	CERAMIC SUSPENDED ACOUSTICAL	FTG	FOOTING	LLV	LONG LEG VERTICAL	PRCST	PRECAST	STL	STEEL						
AC	ALTERNATING CURRENT		TILE CEILING	FU	FIXTURE UNIT	LNTL	LINTEL	PREFAB	PREFABRICATION	ST	STRAIGHT						
AC	ASPHALTIC CEMENT	CT	CERAMIC TILE	FVNR	FULL VOLTAGE NON-REVERSING	LONG	LONGITUDINAL	PRES	PRESSURE	STRL	STRUCTURAL						
ACI	AMERICAN CONCRETE INSTITUTE	CT	CURRENT TRANSFORMER	FVR	FULL VOLTAGE REVERSING	LOS	LOCK-OUT STOP PUSHBUTTON	PRI	PRIMARY	STRUCT	STRUCTURE						
ACST	ACOUSTICAL	CTR	CENTER	FWD	FORWARD	LP	LIGHT POLE	PRM	PERMANENT REFERENCED MARKER	SUSP	SUSPENDED						
ACU	AIR CONDITIONING CONDENSING UNIT	CTR'D	CENTERED			L.P.	LOW POINT	PROJ	PROJECTION	SV	SOLENOID VALVE						
AD	AREA DRAIN	CTSK	COUNTERSUNK			LR	LATCHING RELAY	PROP	PROPERTY	SYMM	SYMMETRICAL						
ADD	ADDITIONAL	CU	CUBIC	G, GND	GROUND	LR	LOCAL-REMOTE	PS	POLYCARBONATE SHEET								
AFD	ADJUSTABLE FREQUENCY DRIVE	CU FT	CUBIC FOOT	GA	GAUGE	LR	LONG RADIUS	PSF	POUNDS PER SQUARE FOOT	T	THERMOSTAT						
AFF	ABOVE FINISHED FLOOR	CU IN	CUBIC INCH	GAL	GALLON	LS	LABORATORY SINK	PSI	POUNDS PER SQUARE INCH	T&B	TOP AND BOTTOM						
AG	ACOUSTICAL GLASS	CU YD	CUBIC YARD	GALV	GALVANIZED	LTG	LIGHTS OR LIGHTING	PSIG	POUNDS PER SQUARE INCH, GAUGE	T&G	TONGUE AND GROOVE						
AGGR	AGGREGATE	CUH	COPPER TUBING, HARD DRAWN	GB	GRAB BAR	LT	LEFT	PT	POINT OF TANGENCY	T/	TOP OF						
AHR	ANCHOR	CV	CHECK VALVE	GC	GROOVED COUPLING	LWL	LOW WATER LEVEL	PT	POTENTIAL TRANSFORMER	TAN	TANGENT						
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	CWR	CABINET DOOR MOUNTED WASTE RECEPTACLE	GFI	GROUND FAULT INTERRUPTER	LYRS	LAYERS	PT	PRESSURE TREATED	TB	TERMINAL BOARD						
				GFR	GOUND FAULT RELAY			PTAC	PACKAGED TERMINAL AIR CONDITIONING	TB	TOWEL BAR						
AL (ALUM)	ALUMINUM			GL	GLASS			PTD	PAPER TOWEL DISPENSER	TBG	TUBING						
ALKY	ALKALINITY	D	DRAIN	GPD	GALLONS PER DAY	M&BH	MOP AND BROOM HOLDER	PV	PLUG VALVE	TC	TIME TO CLOSE/ TENSION CONTROLLED						
ALTN, (ALT)	ALTERNATE	D	PENNY NAIL SIZE	GPH	GALLONS PER HOUR	MA	MANUAL-AUTO	PVC, P.V.C.	POLYVINYL CHLORIDE	TCAE	TIME CLOSE AFTER ENERGIZATION						
AM	AUTO-MANUAL	DAS	DATA ACQUISITION SYSTEM	GPM	GALLONS PER MINUTE	MAS	MASONRY	PVI	POINT OF VERTICAL INTERSECTION	TCL2	TOTAL CHLORINE RESIDUAL						
ANDZ	ANODIZE	DBA	DEFORMED BAR ANCHOR	GRTG	GRATING	MATL	MATERIAL	PVMT	PAVEMENT	TDH	TOTAL DYNAMIC HEAD						
APPROX	APPROXIMATE	DBL	DOUBLE	GR	GRADE	MAX	MAXIMUM	PVT	POINT OF VERTICAL TANGENCY	TDR	TIME DELAY RELAY						
APVD	APPROVED	DC	DIRECT CURRENT	GSP	GALVANIZED STEEL PIPE	MB	MACHINE BOLT	QT	QUARRY TILE	TECH	TECHNICAL						
ARCH	ARCHITECTURAL	DEG	DEGREE	GV	GATE VALVE	MC	MASONARY CLEARANCE	R (RAD)	RADIUS	TEL	TELEPHONE						
AR	ANALOG RELAY	DET	DETAIL	GVL	GRAVEL	MCC	MOTOR CONTROL CENTER	RC	REINFORCED CONCRETE	TEMP	TEMPORARY						
ARV	AIR RELEASE VALVE	DF	DOUGLAS FIR	GWB	GYPSUM WALL BOARD	MECH	MECHANICAL	RCP, R.C.P.	REINFORCED CONCRETE PIPE	TF	TOP FACE						
ASU	AIR SUPPLY UNIT	DFM	DRINKING FOUNTAIN	GYP	GYPSUM	MET	METAL	RCPT	RECEPTACLE	TFG	TEMPERED FLOAT GLASS						
ATS	AUTOMATIC TRANSFER SWITCH	DHEC	DRAINAGE FORCE MAIN			MFD	MANUFACTURED	RD	ROAD	THD	THREAD						
AUTO	AUTOMATIC			H	HORN OR HOWLER	MFR	MANUFACTURER	RD	ROOF DRAIN	THK	THICKNESS						
AUX	AUXILIARY		DEPT OF HEALTH AND ENVIRONMENTAL CONTROL	HAS	HEADED ANCHOR STUD	MGD	MILLION GALLONS PER DAY	RDCR	REDUCER	THRU	THROUGH						
AVG	AVERAGE	DDI	DROPT INLET	HB	HOSE BIB	MH	MANHOLE	RDW	REDWOOD	TJB	TERMINAL JUNCTION BOX						
AVRV	AIR VACUUM RELEASE VALVE	DI	DUCTILE IRON	HC	HOLLOW CORE	MIN	MINIMUM	R.E.	RIM ELEVATION	TL	TEFLON LINE PIPE						
@	AT	DIA, O	DIAMETER	HD	HUB DRAIN	MIR	MIRROR	REF	REFER OR REFERENCE	TO	TIME TO OPEN						
B	BELL	DIAG	DIAGONAL	H.D.P.E.	HIGH DENSITY POLY PIPE	MISC	MISCELLANEOUS	REF	REFRIGERATOR	TOAD							
(B)	BRONZE TINT	DIP, D.I.P.	DUCTILE IRON PIPE	HDR	HEADER	MJ	MECHANICAL JOINT	REFR	REFRIGERATE, REFRIGERANT	TOAE	TIME OPEN AFTER ENERGIZATION						
BAL	BALANCE	DIR	DIRECTION	HDW	HEADWARE	MLO	MAIN LUGS ONLY	REINF	REINFORCED, REINFORCING, REINFORCE	T.O.P.	TOP OF PIPE						
B.C.R.	BROWARD COUNTY RECORDS	DISCH	DISCHARGE	HESR	HYPALON ELASTIC SHEET ROOFING	MMP	MECHANICAL MOUNTING PANEL	REQD	REQUIRED	TP	TURNING POINT						
BD	BUTTERFLY DAMPER	DOL	DIRECT-ON-LINE	HGL	HYDRAULIC GRADE LINE	M.O.	MASONRY OPENING	RG	REFLECTIVE	TRANS	TRANSFORMER						
BF	BLIND FLANGE	DR	DRIVE OR DIMENSION RATIO	HGT	HEIGHT	MP	METAL PANEL	RH	RIGHT HAND	TRANSV	TRANSVERSE						
BFV	BUTTERFLY VALVE	DS	DOWNSPOUT	HH	HANDHOLE	MPU	MULTIPURPOSE UNIT	RH	ROD HOLE	TDR	TREAD						
BH	BUD HEIGHT	DWG	DRAWING	HID	HIGH INTENSITY DISCHARGE	MTD	MOUNTED	RHR	RIGHT HAND REVERSE	TS	TUBE STEEL						
BL	BASELINE	DWN	DOWN	HK	HOOK	MTS	MANUAL TRANSFER SWITCH	RJ	RESTRAINED JOINT	TTD	TOILET TISSURE DISPENSER						
BFP	BACKFLOW PREVENTER	▲	DELTA	HM	HOLLOW METAL	MTS	MILL TYPE STEEL PIPE	RL	RAIN LEADER	TU-X	TREATMENT UNIT NO. X						
BLDG	BUILDING			HOA	HAND-OFF-AUTO	MV	MERCURY VAPOR	RL	RAISE LOWER	TURB	TURBIDITY						
BLK	BLOCK	E	EAST	HOR	HAND-OFF-REMOTE	MWS	MAXIMUM WATER SURFACE	RLS	RUBBER LINED STEEL	TYP	TYPICAL						
BM	BEAM	E	EMPTY	HORIZ	HORIZONTAL			RM	ROOM								
BM	BENCHMARK	EA	EACH	HP	HORSEPOWER	N	NORTH	ROL	RAISE-OFF-LOWER	U ON	UNLESS OTHERWISE NOTED						
B.O.S.	BOTTOM OF STRUCTURE	ECC	ECCENTRIC	H.P.	HIGH POINT	N/A	NOT APPLICABLE	RPM	REVOLUTIONS PER MINUTE	UBC	UNIFORM BUILDING CODE						
BOT, (BOTT), B/	BOTTOM	EE	EMERGENCY EYEWASH	HPS	HIGH PRESSURE SODIUM	N/C	NORMALLY CLOSED	RS	RIGID STEEL	UH	UNIT HEATER						
BRG	BEARING	EF	EACH FACE	HR	HOSE RACK	N/O	NORMALLY OPEN	RST	REINFORCING STEEL	UR	URINAL						
BSP	BLACK STEEL PIPE	EF	EXHAUST FAN	HRDN	HARDENER	N, NEUT	NEUTRAL	RTN	RETURN	UVR	UNDER VOLTAGE RELAY						
BV	BALL VALVE	EFF	EFFLUENT	HSS	HOLLOW STRUCTURAL SECTION	NA	NON-AUTOMATIC	RT	RIGHT								
BVC	BEGINNING OF VERTICAL CIRCUIT	EL, ELEV	ELEVATION	HV	HOSE VALVE	ND	NAPKIN DISPOSAL	RRUB	RADIAL RUBBER	V	VALVE						
		ELB	ELBOW	NGS STA	NATIONAL GEODETIC SURVEY STATION	NGS STA	NATIONAL GEODETIC SURVEY STATION	R/W	RIGHT OF WAY	V	VENT						
C	CONDUIT	EIFS	EXTERIOR INSULATION FINISH SYSTEM	NIC	NOT IN CONTRACT	NIC	NON-PROTECTED	RW	RAW WATER	V	VENT						
°C	DEGREE CELSIUS	ELC	ELECTRICAL LOAD CENTER	NP	NUMBER	NO, #	NUMBER			V	VOLT						
C-C	CENTER TO CENTER	ELEC	ELECTRIC, ELECTRICAL	NT	NON-PROTECTED	NP	NON-PROTECTED	S	I-BEAM	V	VOLT						
CAB	CABINET	ENGR	ENGINEER	NPT	NATIONAL PIPE THREADS	NO, #	NUMBER	S	SLOPE	VB	VAPOR BARRIER						
CAR	CARPET	EOG	EDGE OF GUTTER	NS	NON-SHRINK	NS	NON-SHRINK	S	SOUTH	VC	VERTICAL CURVE						
CATV	CABLE TELEVISION	EOP	EDGE OF PAVEMENT	NST	NATIONAL PIPE THREADS	NTS	NOT TO SCALE	S	SWITCH	VCP	VITRIFIED CLAY PIPE						
CB, C.B.	CATCH BASIN	E.O.W.	EDGE OF WATER	NTS	NOT TO SCALE			SATC	SUSPENDED ACOUSTICAL TILE CEILING	VDR	VERTICLE DRYING RACK						
CB	CIRCUIT BREAKER	EP	EDGE OF PAVING	OA	OVERALL	O TO O	OUT TO OUT	SC	SLIP CRITICAL	VERT	VERTICAL						
CC	CONTROL CABLE	EQ	EQUAL	OC	ON CENTER	OA	OVERALL	SCBA	SELF CONTAINED BREATHING APPARATUS	VIB	VIBRATION						
CCP	CENTRAL CONTROL PANEL	EQ SP	EQUALLY SPACED	OCR	OPEN-CLOSE	OC	ON CENTER	SCC	SOLID CORE	VP	VENEER PLASTER						
CCS	CENTRAL CONTROL SYSTEM	EQPT, (EQUIP)	EQUIPMENT	OCA	OPEN-CLOSE-AUTO	OCA	OPEN-CLOSE-AUTO	SCFM	STANDARD CUBIC FEED PER MINUTE	VPC	POINT OF VERTICAL CURVATURE						
CFM	CUBIC FEET PER MINUTE	ETM	ELAPSED TIME METER	OCR	OPEN-CLOSE-REMOTE	OCR	OPEN-CLOSE-REMOTE	SCH	SCHEDULE	VPI	POINT OF VERTICAL INTERSECTION						
CHAN, C	CHANNEL (BEAM)	EVC	END OF VERTICAL CURVE	OD	OUTSIDE DIAMETER	OD	OUTSIDE DIAMETER	SCR	SHOWER CURTAIN ROD	VPS	VENEER PLASTER SYSTEM						
CHDPE	CORRUGATED HIGH DENSITY POLYETHYLENE PIPE	EW	EACH WAY	OF	OUTSIDE FACE	OF	OUTSIDE FACE	SCU	SPEED CONTROL UNIT	VPT	POINT OF VERTICAL TANGENT						
CHEM	CHEMICAL	EXH	EXHAUST	OHW	OVERHEAD WIRE	OHW	OVERHEAD WIRE	SD	SOAP DISPENSER	VT	VINYL TILE						
CI	CAST IRON	EXP	EXPANSION	SDMH, S.D.M.H.	STORM DRAIN MANHOLE	SD	STORM DRAIN MANHOLE	SDWK	SIDEWALK	VTR	VENT THRU ROOF						
CIP	CAST IRON PIPE	EXP	EXPOSED	SDWK	SIDEWALK	OL	OVERLOAD RELAY	SDR	STANDARD DIMENSION RATIO	W	WATER						
CIPS	CAST IRON SOIL PIPE	EXP AB	EXPANSION ANCHOR BOLT	SEC	SECONDARY	OO	ON-OFF	SECT	SECTION	W	WEST						
CJ	CONSTRUCTION JOINT/CONTROL JOINT	EXP JT	EXPANSION JOINT	SECT	SECTION	OOR	ON-OFF-REMOTE	SED	SEDIMENTATION	W/	WITH						
CKT	CIRCUIT	EX, EXST, (EXIST)	EXISTING	SEW	SEWAGE	OP	OPAQUE PANEL	SED	SEDIMENTATION	WC	WATER CLOSET						
CL	CENTERLINE	EXT	EXTERIOR	SEW	SEWAGE	OPER	OPERATOR	SEW	SEWAGE	WD	WOOD						
CLDI	CEMENT LINED DUCTILE IRON PIPE			SEW	SEWAGE	OPNG	OPENING	SF	SLOWER-FASTER	WG	WIRE GLASS						
C.L.F.	CHAIN LINK FENCE	▲F	DEGREE FAHRENHEIT	SF	SQUARE FEET	O.R.B.	OFFICIAL RECORD BOOKS	SF	SQUARE FEET	WH	WATER HEATER						
CLG	CEILING	F, FU	FUSE	SG	SUSPENDED GYPSUM WALL BOARD	OSC	OPEN-STOP-CLOSE	SG	LAMINATED SAFETY GLASS	WHD	WATTHOUR DEMAND METER						
CLO	CLOSET	FAI	FRESH AIR INLET	SGWB	SHOWER	OSD	OPEN SITE DRAIN	SH	SHOWER	WP	WATERPROOF						
CLR	CLEAR	FC	FLEXIBLE CONDUIT	SH (SHT)	SHEET	OZ	OUNCE	SH (SHT)	SHEET	WP	WEATHERPROOF						
CL2	CHLORINE	FCA	FLANGED COUPLING ADAPTER	SHA	SURFACE HARDENING AGENT			SHA	SURFACE HARDENING AGENT	WR	WASTE RECEPTACLE						
CMP, C.M.P.	CORRUGATED METAL PIPE	FCL2	FREE CHLORINE RESIDUAL	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
CMU	CONCRETE MASONRY UNIT	FCL2	FREE CHLORINE RESIDUAL	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
CO	CLEANOUT	FCO	FLOOR CLEANOUT	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
COL	COLUMN	FCTY	FACTORY	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
CONC	CONCRETE	FD	FLOOR DRAIN	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
CONDTN	CONDITIONED	FDN	FOUNDATION	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
CONN	CONNECTION	FDR	FEEDER	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
CONST	CONNECTION	FEXT	FIRE EXTINGUISHER	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
CONSTR	CONNECTION	FF	FINISHED FLOOR	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
CONT	CONTINUOUS, CONTINUATION	FG	FINISH GRADE	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
CONTR	CONTRACTOR	FHY	FIRE HYDRANT	SHS	SOLIDS HANDLING SYSTEM			SHS	SOLIDS HANDLING SYSTEM	WS	WATER SURFACE						
COORD																	

GENERAL SITE NOTES:

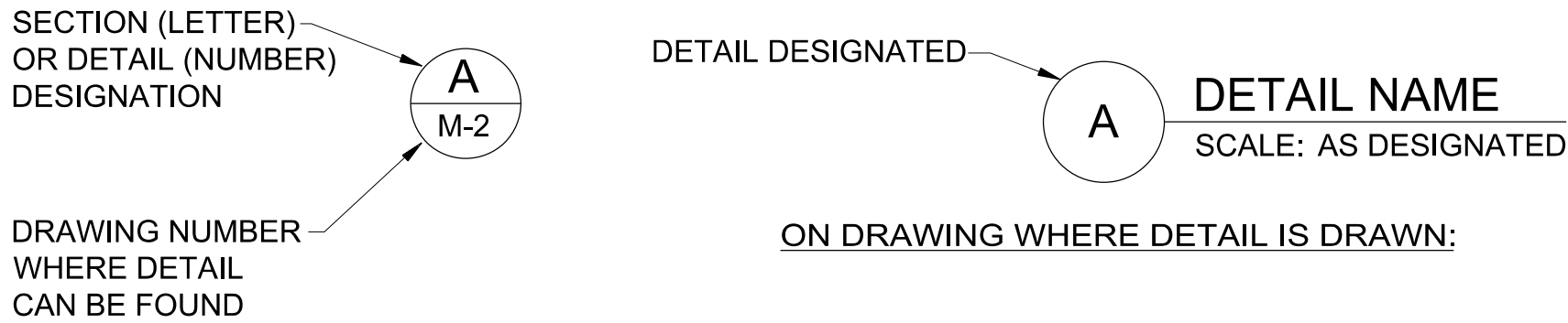
1. SOURCE OF TOPOGRAPHY SHOWN ON THE CIVIL PLANS FOR PUMP STATION B ARE BASE MAPS PROVIDED BY AVIROM & ASSOCIATES, INC., AUGUST 2013 AND RECORD DRAWINGS FROM CH2M. THE BASE MAPS FOR PUMP STATION H ARE FROM RECORD DRAWINGS FROM CH2M. EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADJUST WORK PLAN ACCORDINGLY PRIOR TO BEGINNING CONSTRUCTION.
2. EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED. NEW FINISH GRADE, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED.
3. HORIZONTAL DATUM: FOR PUMP STATION B, NAD 83, STATE PLANE - FLORIDA EAST. FOR PUMP STATION H, UNKNOWN.
4. VERTICAL DATUM: FOR PUMP STATION B, NGVD 1929. FOR PUMP STATION H, UNKNOWN.
5. ALL UNITS ARE IN US SURVEY FEET.
6. 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.
7. COORDINATE STAGING AREA WITH THE CITY. STAGING AREA SHALL BE FOR CONTRACTOR'S EMPLOYEE PARKING, CONTRACTOR'S EQUIPMENT AND ON-SITE STORAGE OF MATERIALS.
8. PROVIDE TEMPORARY FENCING AS NECESSARY TO MAINTAIN SECURITY AT ALL TIMES.
9. ELEVATIONS GIVEN ARE TO FINISH GRADE AND PIPE INVERT UNLESS OTHERWISE SHOWN.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION CONTROL DEVICES DURING CONSTRUCTION.
11. CONTRACTOR SHALL TAKE ALL OTHER MEASURES TO POSITIVELY PRECLUDE EROSION MATERIALS FROM LEAVING THE SITE.
12. 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.
13. CONTRACTOR SHALL REPLACE ALL PAVEMENTS, PAVEMENT MARKINGS, SIGNS, AND REFLECTIVE MARKERS DISTURBED OR REMOVED DURING CONSTRUCTION.
14. TREE AND SHRUB REMOVAL AND/OR TRIMMING MUST BE COMPLETED BY A CITY APPROVED ISA CERTIFIED ARBORIST.
15. ALL DISTURBED AREAS NOT PAVED OR COVERED WITH GRAVEL SHALL BE SODDED.

LEGEND

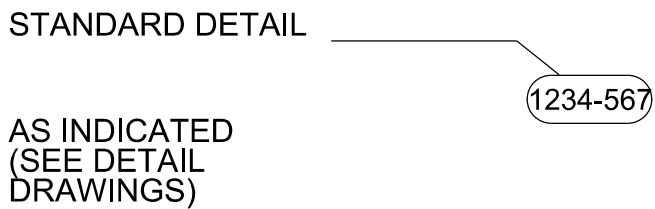
- ANTENNA
- BACK FLOW PREVENTOR VALVE
- BENCHMARK
- BOLLARD (UNLESS NOTED)
- CATCH BASIN
- CONCRETE UTILITY POLE
- DRAINAGE MANHOLE
- ELECTRIC SERVICE BOX
- EXISTING ELEVATION
- METAL LIGHT POLE
- OVERHEAD WIRES
- PARKING METER
- SANITARY MANHOLE
- SEWER VALVE
- SIGN (UNLESS NOTED)
- SPIGOT
- WATER METER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

SECTION AND DETAIL IDENTIFICATION

SECTION AND DETAIL DESIGNATORS



STANDARD DETAIL DESIGNATION



DESIGN CRITERIA

1. APPLICABLE CODE: 2014 FL BUILDING CODE AND ALL OTHER APPLICABLE LOCAL AGENCIES.
2. FLOOR LIVE LOADS:

STAIR AND LANDING LIVE LOAD200 PSF100 PSF
3. WIND LOAD:

(ASCE 7-10)

BASIC WIND SPEED (3-SECOND GUST)EXPOSURERISK CATEGORY

= 200 MPH=C=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"
	OTHER BAR	1'-4"	1'-7"	2'-4"	3'-1"	4'-6"	5'-2"	5'-10"	6'-7"
SPACING≥6"	TOP BAR *	1'-4"	1'-6"	2'-0"	2'-5"	3'-6"	4'-0"	5'-0"	6'-2"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"
EMBEDMENT LENGTH									
SPACING<6"	TOP BAR *	1'-0"	1'-7"	2'-4"	3'-1"	4'-6"	5'-2"	5'-10"	6'-7"
	OTHER BAR	1'-0"	1'-3"	1'-9"	2'-5"	3'-6"	4'-0"	4'-6"	5'-1"
SPACING≥6"	TOP BAR *	1'-0"	1'-3"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-1"	2'-5"	3'-0"	3'-8"

* 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

*** WHERE 5000 PSI CONCRETE IS USED, DECREASE 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: AWS D1.1/D1.1M:2015
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.

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KEY WEST, FLORIDA

GENERAL
CIVIL AND STRUCTURAL
GENERAL NOTES, LEGEND,
AND ABBREVIATIONS

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EB0000072

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

GENERAL
CIVIL AND STRUCTURAL
GENERAL NOTES, LEGEND,
AND ABBREVIATIONS

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GAINESVILLE, FLOR

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6

MANUAL VALVES AND CHECK VALVES

CONTROL VALVES

SIZE OF VALVE

VALVE DESIGNATION

VALVE TYPE, SEE SPECIFICATIONS

8" V500

FLOW DIRECTION

VALVE SYMBOL

BUBBLE WITH XV OR XCV DESIGNATION SHOWN ON P&ID WHERE: X = PROCESS VARIABLE

PIPING DESIGNATION

EXAMPLE:

16" RAS

PIPE USE IDENTIFICATION LEGEND

NOMINAL PIPE DIAMETER

PIPE DESIGNATIONS AND FITTING END PATTERNS

B

S

F

BELL

SPIGOT

FLANGE

PE

GE

MJ

PLAIN END

GROOVED END

MECHANICAL JOINT

EXAMPLE:

MJ

PE

F

MECHANICAL LEGEND AND NOTES

GENERAL PIPING NOTES

1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.

2. SIZE OF FITTINGS SHOWN ON PLANS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED.

3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. FINAL SUPPORT REQUIREMENTS SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. MAXIMUM SPACING SHALL BE AS SPECIFIED.

4. ALL JOINTS SHALL BE WATERTIGHT. STANDARD WALL PIPE DETAIL SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.

5. ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST TIES, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR PRESSURES SPECIFIED.

6. ALL NEW BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST RESTRAINT, AS SPECIFIED AT ALL DIRECTIONAL CHANGES AND DEAD ENDS, UNLESS OTHERWISE NOTED. ALL CONNECTIONS TO EXISITNG PIPE SHALL BE MADE WITH MEGALUGS. ANY EXEPTIONS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION BEFORE PROCEEDING.

7. NUMBER AND LOCATION OF UNIONS SHOWN ON PLANS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.

8. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.

PIPE AND FITTING SYMBOLS

DOUBLE LINE SINGLE LINE

WELDED JOINT

FLANGED JOINT

MECHANICAL JOINT

HUB & SPIGOT JOINT (RUBBER GASKET)

BELL JOINT

FLANGED COUPLING ADAPTER

FLEXIBLE COUPLING

FLEXIBLE COUPLING WITH THRUST TIES

ELASTOMER BELLOWS EXP JOINT

ELBOW UP

ELBOW DOWN

TEE UP

TEE DOWN

CONCENTRIC REDUCER

ECCENTRIC REDUCER

UNION

CAP

ANCHOR

ELBOW, 90 DEGREE

TEE

ELBOW, 45 DEGREE

LATERAL

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

GENERAL
MECHANICAL LEGEND

1" = X'

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE

MAY 2018

PROJ

683450

DWG

001-G-005

SHEET

04 of 30

NO. DATE

REVISION

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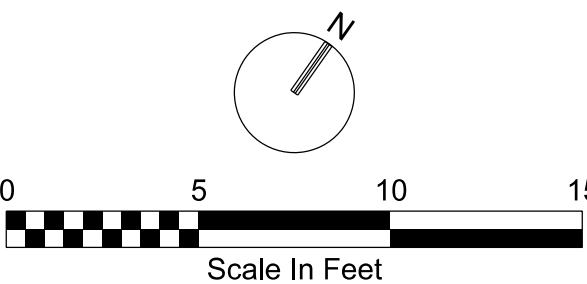
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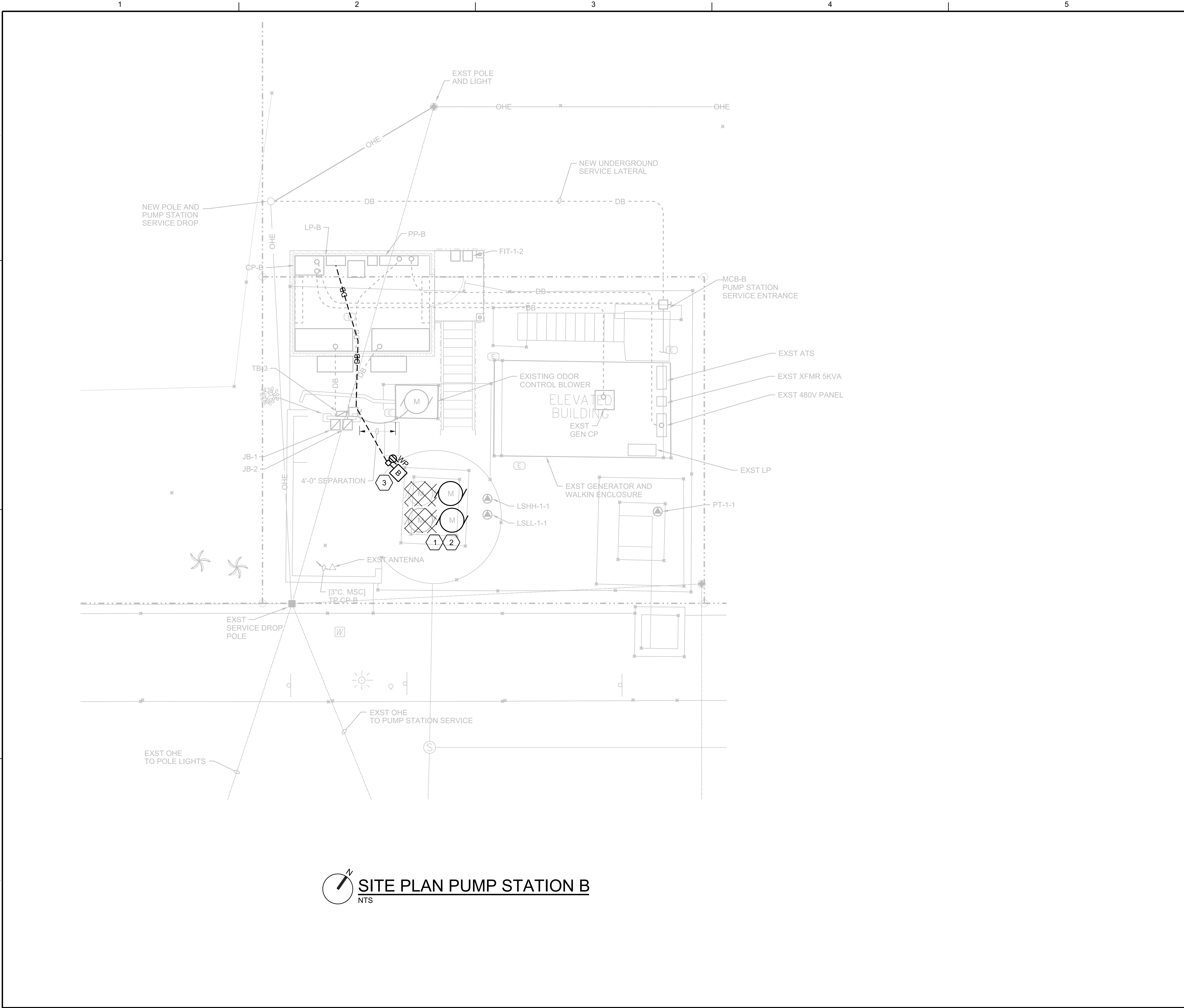
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3011 S.W. WILLUSTON ROAD GAINESVILLE, FLORIDA 32608 EB00000072 AACCI1982	RICHARD THOMAS MORRISON PE 67713 PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT CITY OF KEY WEST KEY WEST, FLORIDA
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CIVIL
PUMP STATION B
SITE PLAN

<p align="center">VERIFY SCALE</p> <p align="center">BAR IS ONE INCH ON ORIGINAL DRAWING.</p> <p align="center">0  1"</p>	
DATE	MAY 2018
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SHEET	07 of 30



 **SITE PLAN PUMP STATION B**
NTS

GENERAL NOTES

LEGEND:
XXXX TO BE REMOVED

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

HAZARDOUS LOCATION NOTES:

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

SHEET KEYNOTES

1. REMOVE EXISTING SUBMERSIBLE PUMPS AND INSTALL NEW SUBMERSIBLE PUMPS. RECONNECT NEW PUMPS' POWER AND CONTROL TO TJB-1 AND TJB-2 PER DETAIL (2605-101)
2. SAVE EXISTING CONDUIT TO USE WITH NEW SUBMERSIBLE PUMPS.
3. INSTALL LUMINARE AREA LIGHT 12" AFF. USE [3/4", 2#12, 1#12G] CONDUCTOR

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

ch2m

ELECTRICAL
**PUMP STATION B
SITE PLAN**

VERIFY SCALE

BAR IS ONE INCH ON
ORIGINAL DRAWING.
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DATE MAY 2018

PROJ 683450

DWG 010-E-201

SHEET 09 of 30

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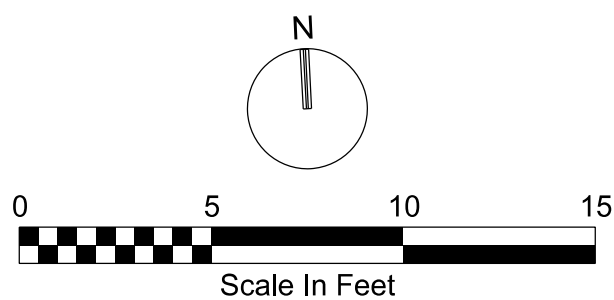
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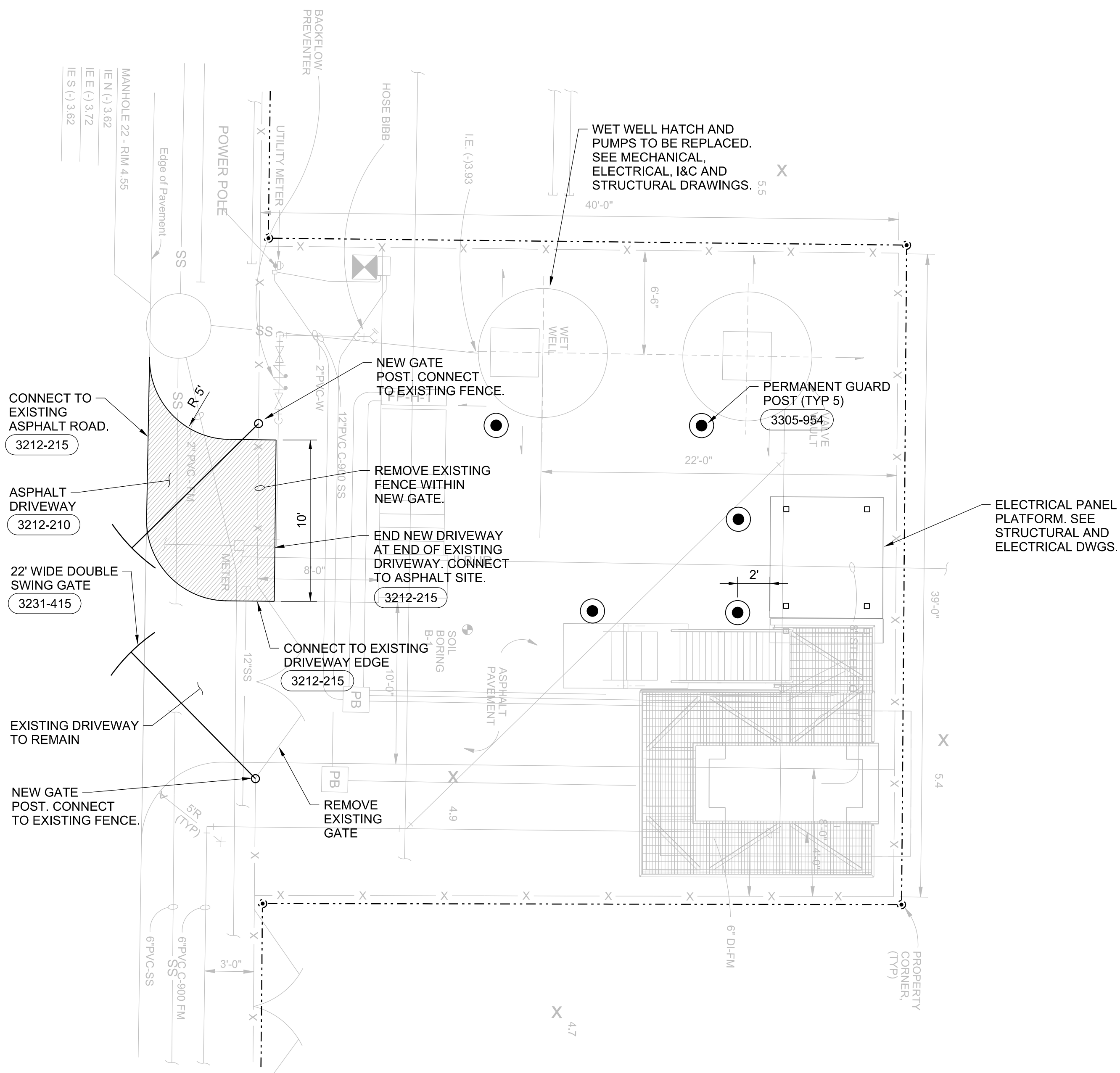
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REVISION



NOTE:

1. CONTRACTOR TO FIELD LOCATE PERMANENT
GUARD POSTS WITH OWNER.



ch2m.^{5M}

CIVIL PUMP STATION H SITE PLAN

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

CITY OF KEY WEST KEY WEST, FLORIDA	NO.	DATE	REVISION	
	DGSN	DR		CHK
	R MORRISON		R MORRISON	T MALONE
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R MORRISON	
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		T MALONE

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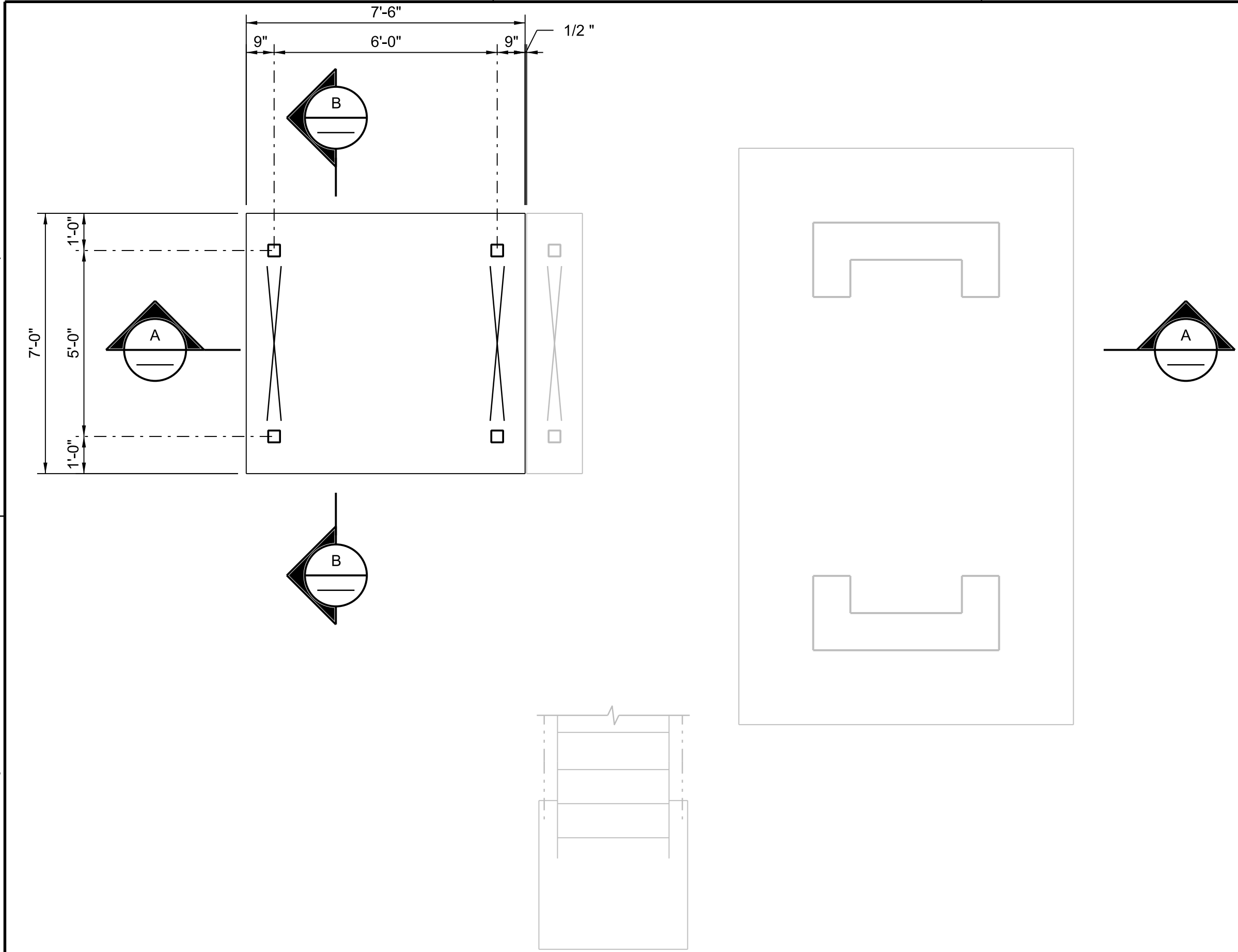
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DATE MAY 2018

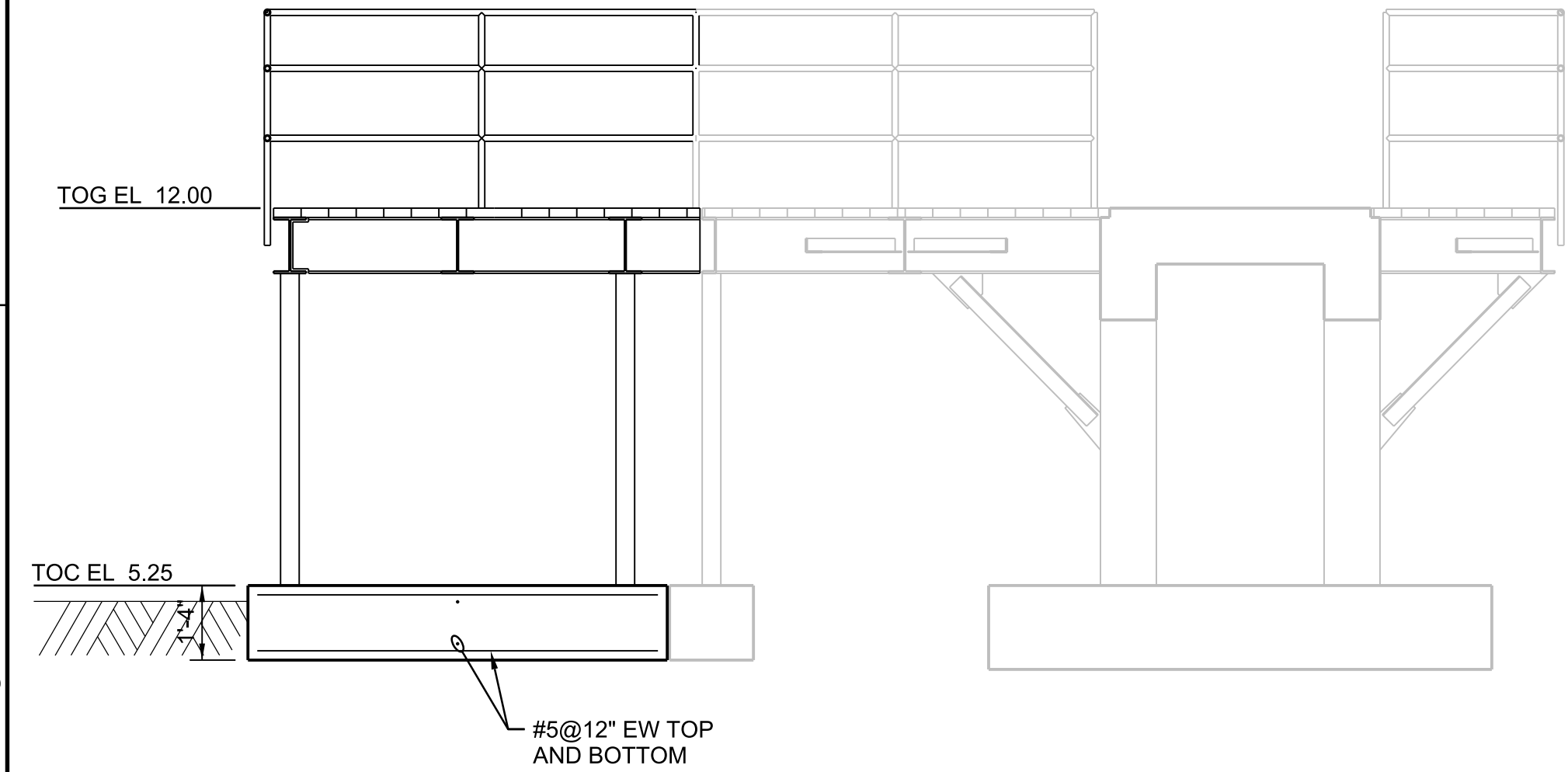
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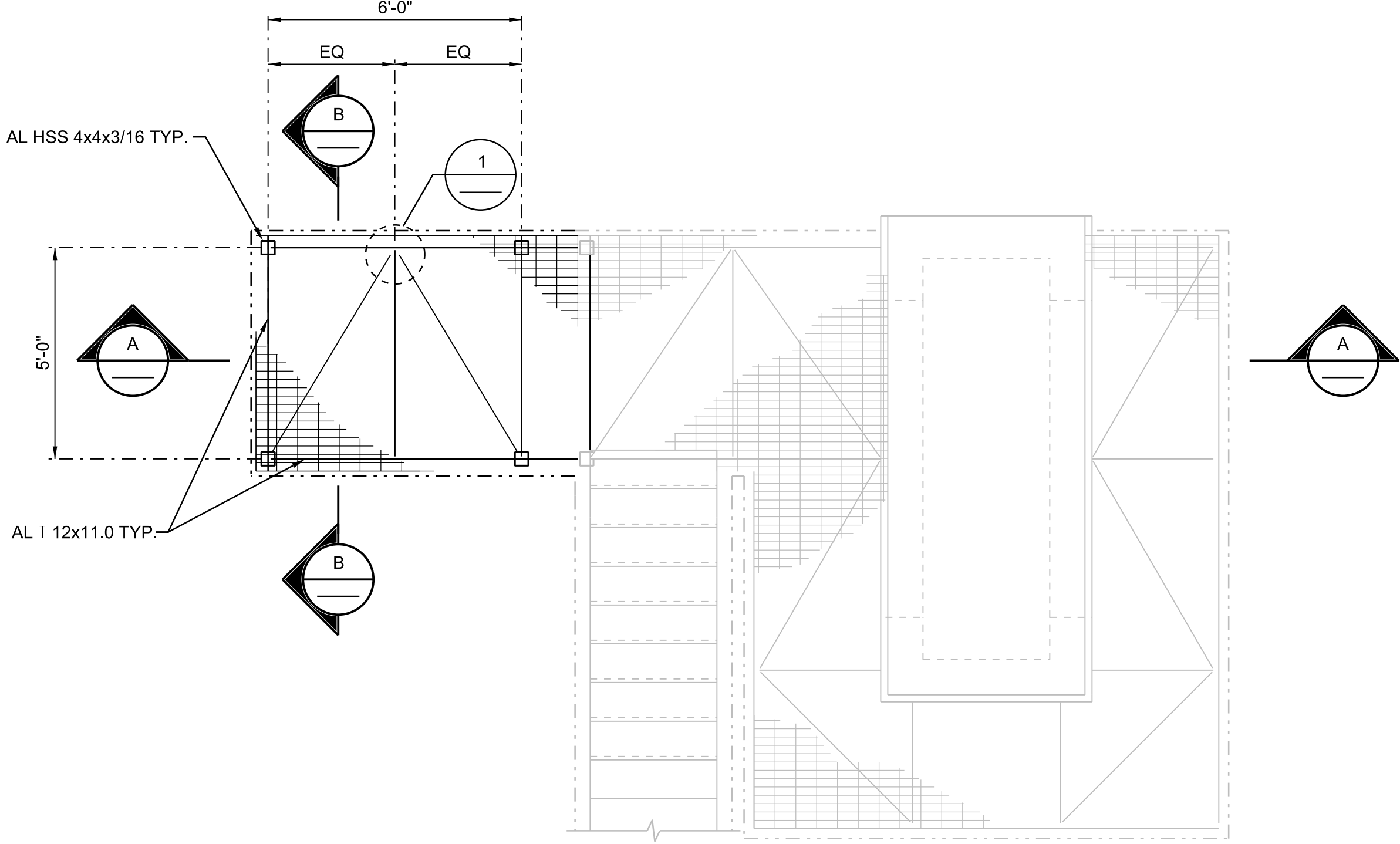
SHEET 12 of 30



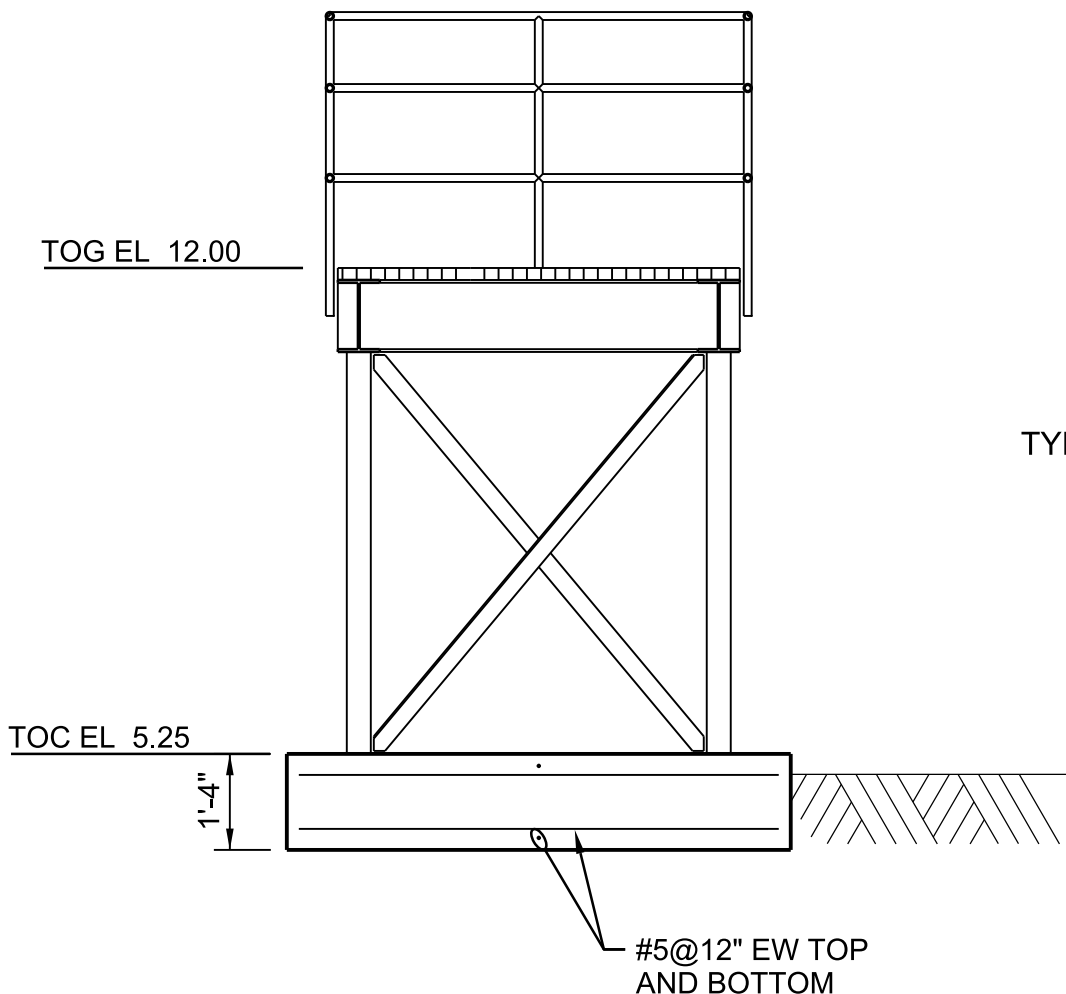
FOUNDATION PLAN
3/8"=1'-0"



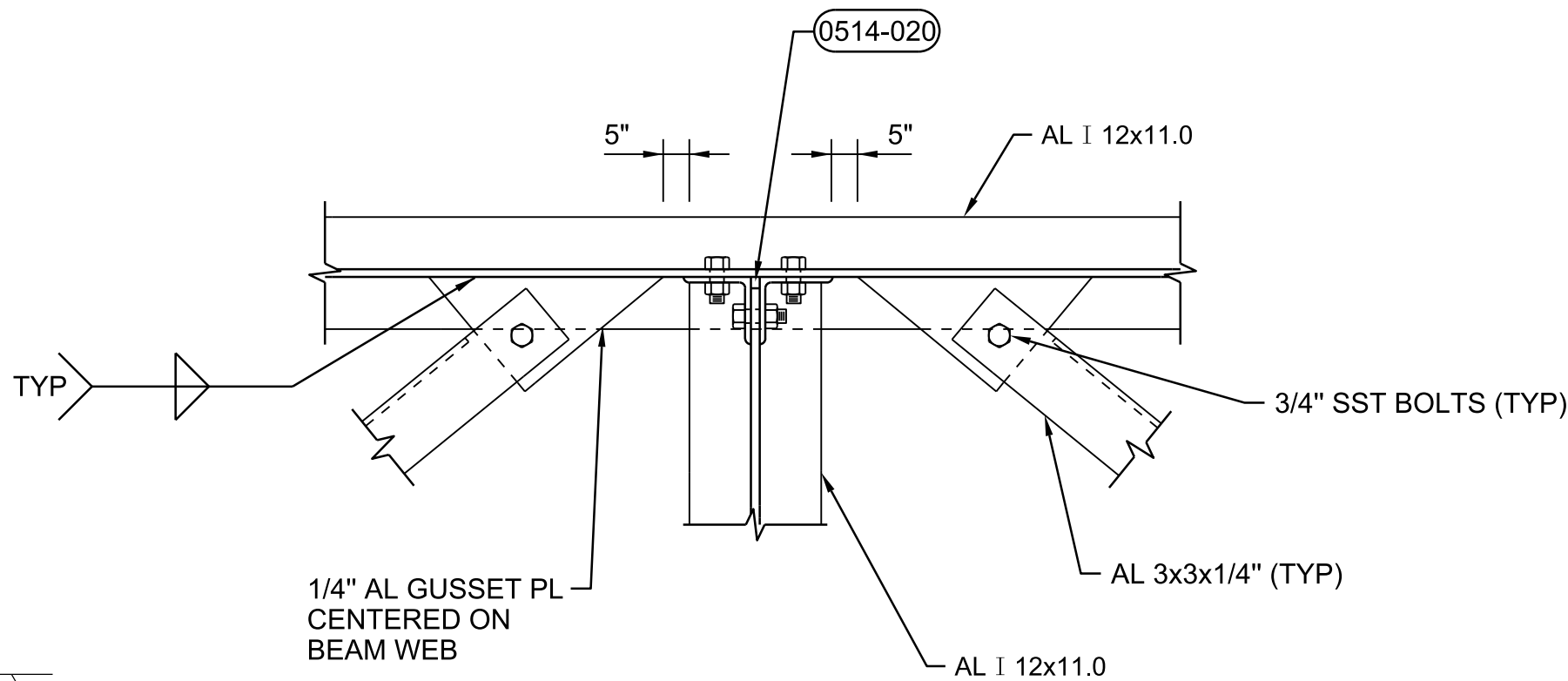
A SECTION
3/8"=1'-0"



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



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



1 DETAIL
NTS

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

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STRUCTURAL
PUMP STATION H
PLATFORM H
PLANS AND SECTIONS

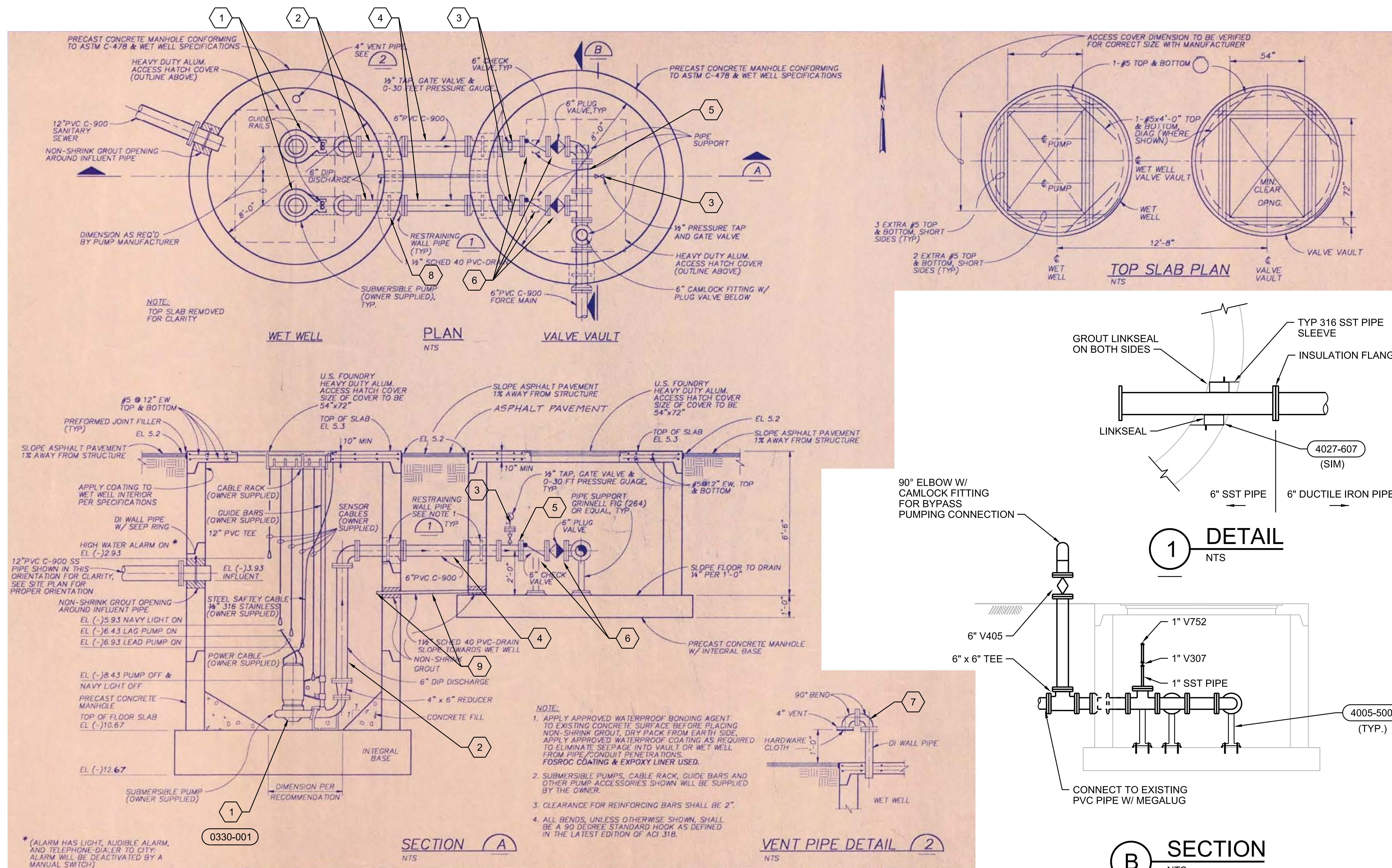
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SHEET KEYNOTES

1. REPLACE TWO PUMPS W/ NEW TWO PUMPS WITH NEW 316 SST ELBOWS AND 316 SST GUIDE RAILS.
2. REPLACE ALL PIPES IN WET WELL W/ TYPE 316 SST PIPES.
3. PROVIDE 1/2" TAP AND 1/2" V307. DO NOT PROVIDE PRESSURE GAUGE.
4. REPLACE ALL PIPES BETWEEN WET WELL AND VALVE VAULT W/ NEW DUCTILE IRON PIPES.
5. REPLACE ALL PIPES & FITTINGS IN VALVE VAULT W/ NEW DUCTILE IRON PIPES & FITTINGS. REPLACE ALL PIPE SUPPORTS W/ NEW ONES.
6. REPLACE 2 CHECK VALVES AND 2 PLUG VALVES W/ NEW 6" V608 AND NEW 6" V405.
7. CLEAN AND PAINT VENT W/ PAINT SYSTEM N0-4.
8. DEMOLISH ALL PIPE PENETRATIONS. INSTALL TYPE 316 SST WALL PIPES AND USE LINKSEAL FOR ALL PENETRATIONS. (TYPE 7) SEE DETAIL 1.
9. INSTALL P-TRAP ON DRAIN PIPE. REPLACE 1 1/2" PVC DRAIN BETWEEN WET WELL & VALVE VAULT.



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

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PROCESS MECHANICAL PUMP STATION H PLAN & SECTION

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$$1'' = X'$$

VERIFY SCALE

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ORIGINAL DRAWING

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SHEET 14 of 30

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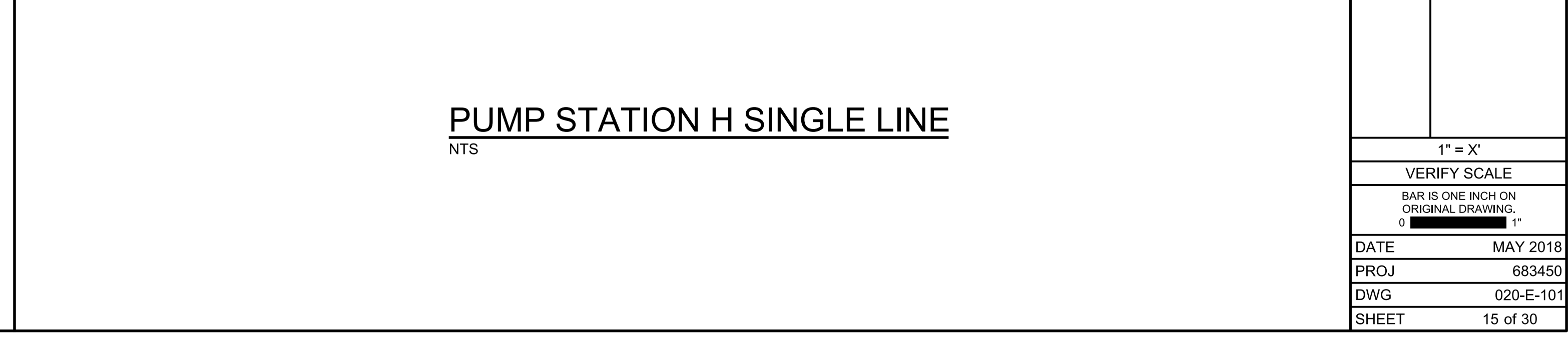
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PUMP STATION H - PLAN

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

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ELECTRICAL
**PUMP STATION H
SITE DEMOLITION
PLAN**

20
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[P2]
MINI POWER CENTER
[C2]
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SALINITY METER
5

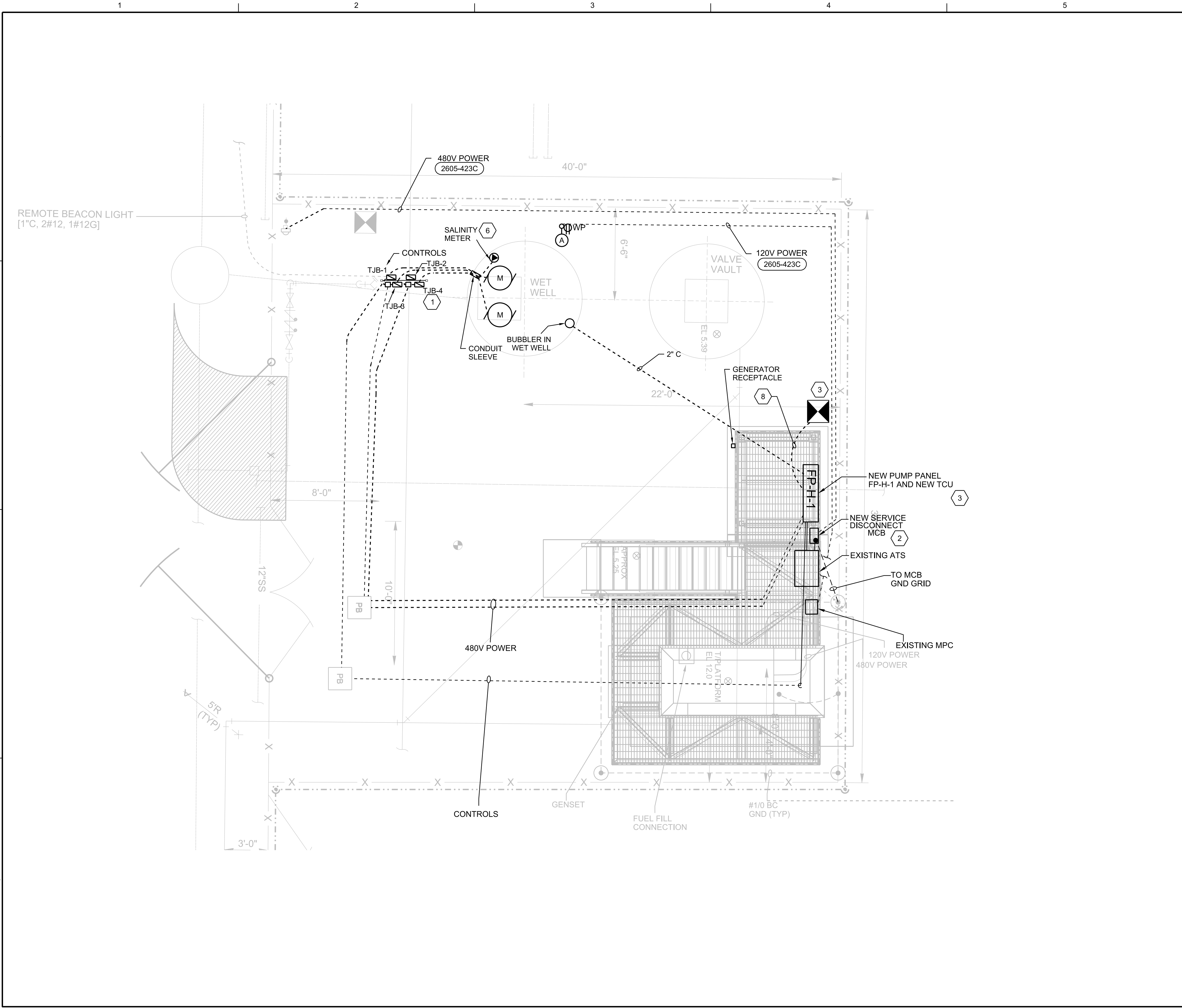
LINE

1" = 1'

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
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SHEET	15 of 30



GENERAL SHEET 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.

HAZARDOUS LOCATION NOTES:

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

SHEET KEYNOTES

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

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AND PUMP STATION GENERATOR REPLACEMENT
CITY OF KEY WEST
KEY WEST, FLORIDA

PUMP STATION H
NEW SITE
PLAN

1" = X'

VERIFY SCALE

BAR IS ONE INCH ON
ORIGINAL DRAWING.
0 1"

DATE MAY 2018

PROJ 683450

DWG 020-E-201

SHEET 16 of 30

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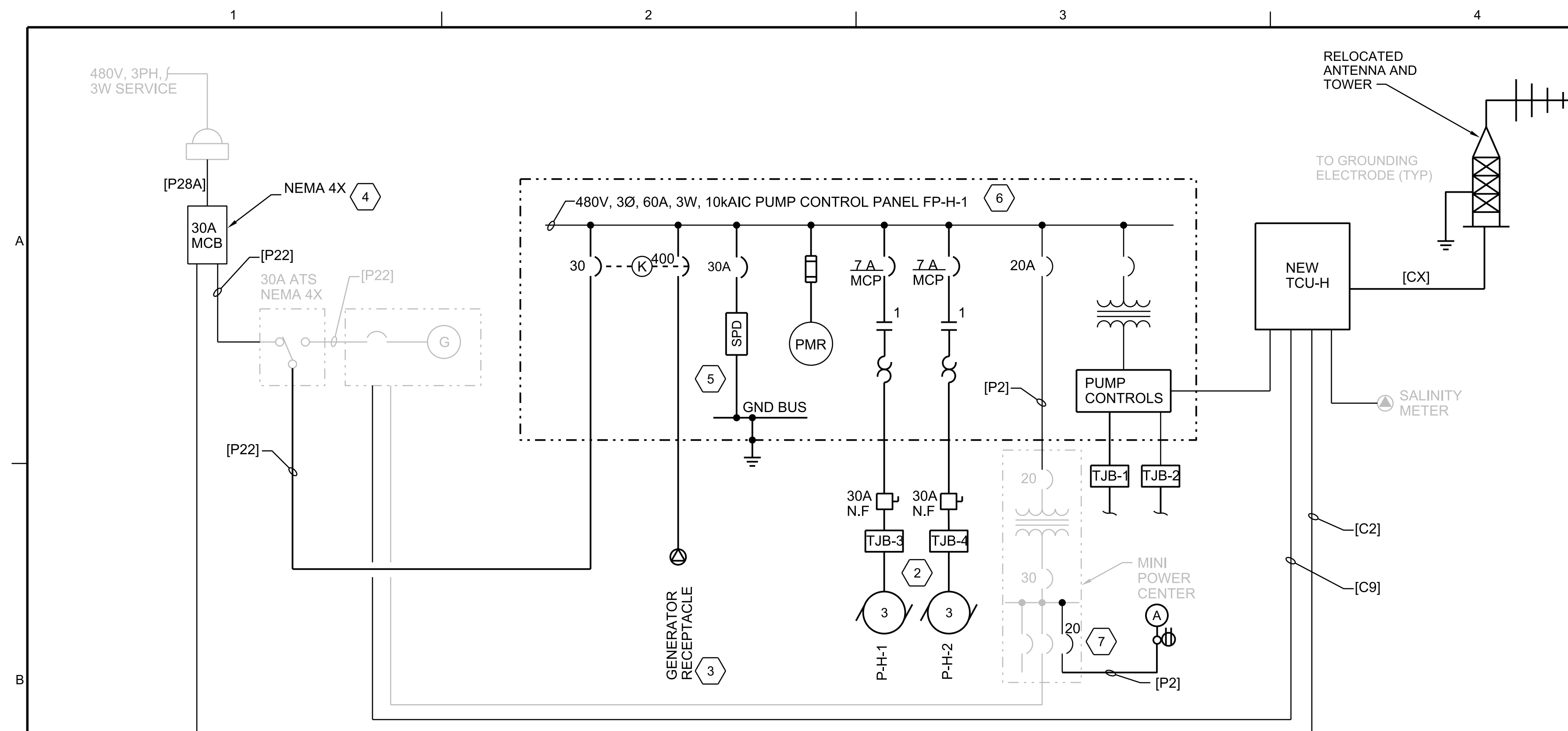
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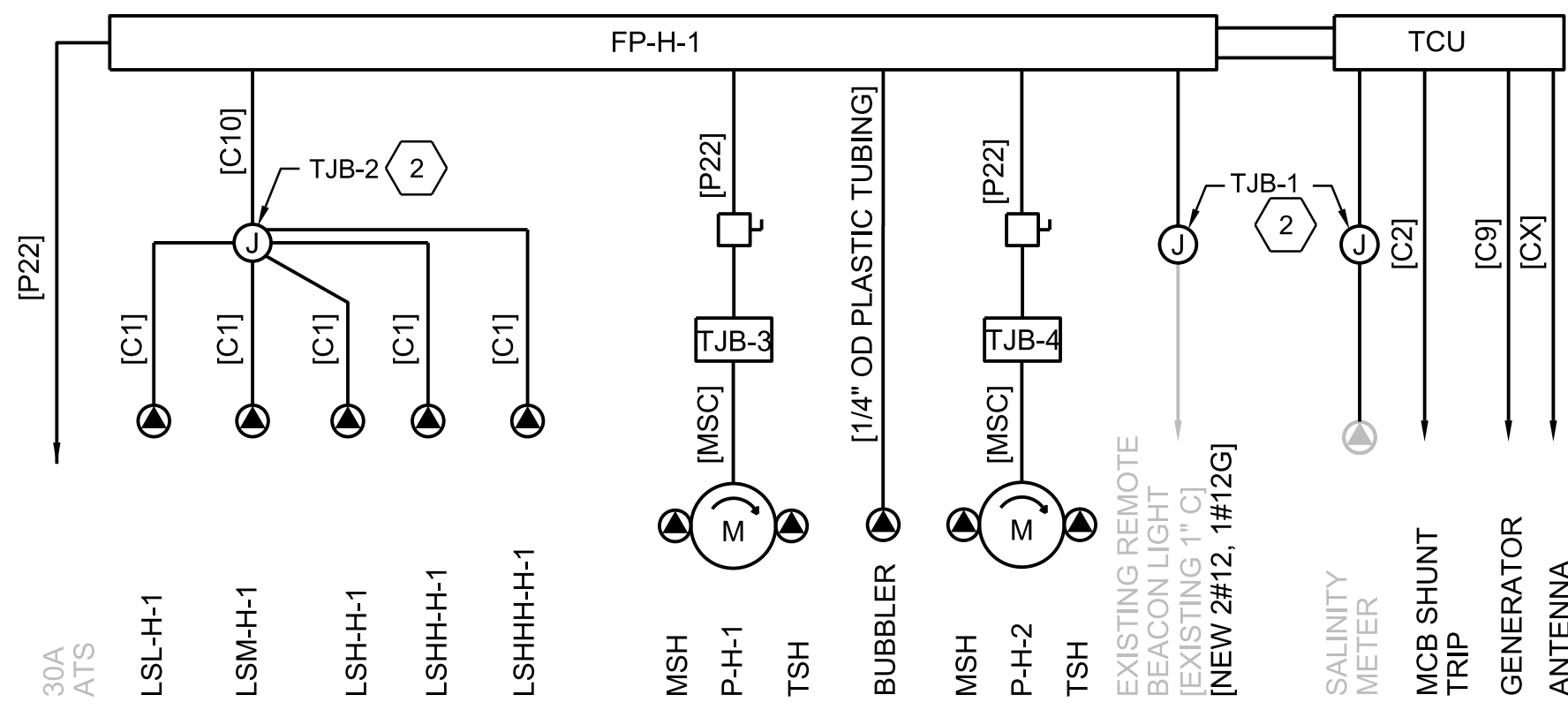
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PUMP 2	4.84
MISCELLANEOUS LOADS	8.9
CONNECTED LOAD	18.58
DESIGN LOAD *	19.79

* DESIGN LOAD = CONNECTED LOAD PLUS
25% OF LARGEST MOTOR

- # SHEET KEYNOTES
1. ALL RACEWAYS TO BE PVC-COATED RGS. REFER TO SPECIFICATION SECTION 26 05 01
 2. PROVIDE NEMA 4X 316 SST TERMINAL JUNCTION BOXES SIZE PER NEC REQUIREMENTS WITH NISI POLARIS BLUE SERIES SUBMERSIBLE POWER DISTRIBUTION BLOCKS.
 3. FURNISH AND INSTALL 400A, 600V GENERATOR RECEPTACLE WITH JUNCTION BOX AND ANGLED ADAPTER TO BE REMOTELY LOCATED. RUSSELL STOLL: DS 4404MRA00, NO SUBSTITUTIONS.
 4. NEW MAIN CIRCUIT BREAKER DISCONNECT WITH SHUNT TRIP OPTION. BREAKER SHALL OPEN UPON RECEIPT OF SHUNT TRIP COMMAND FROM TCU.
 5. PROVIDE CATEGORY C, 6-MODE, 20KA NOMINAL DISCHARGE CURRENT, SPD WITH SINE WAVE TRACKING. INSTALL IN POWER PANEL AS SHOWN AND ON THE NORMAL / UTILITY SIDE OF THE AUTOMATIC TRANSFER SWITCH.
 6. PUMP CONTROL PANEL SHALL BEAR A FROM A NATIONAL RECOGNIZED TESTING LABORATORY INDICATING ITS LISTING / LABELING IN ACCORDANCE WITH UL-698A, INDUSTRIAL CONTROL PANELS.
 7. FURNISH AND INSTALL NEW 20A BREAKER IN THE EXISTING MINI POWER CENTER TO POWER A NEW POLE MOUNTED LIGHT FIXTURE AND A WEATHER PROOF RECEPTACLE.
 8. THE GENERATOR CIRCUIT BREAKER TO BE INTERLOCKED WITH MAIN CIRCUIT BREAKER TO PREVENT BOTH CIRCUIT BREAKERS FROM BEING CLOSED AT THE SAME TIME. PROVIDE A 3" CONDUIT WITH A 4#350KCM AND 1#4 GROUND FROM THE GENERATOR CIRCUIT BREAKER TO THE NEW 400 A GENERATOR RECEPTACLE
 9. BRAIDED STAINLESS STEEL CABLE SLEEVES TO PROTECT CABLES AND CONDUCTORS

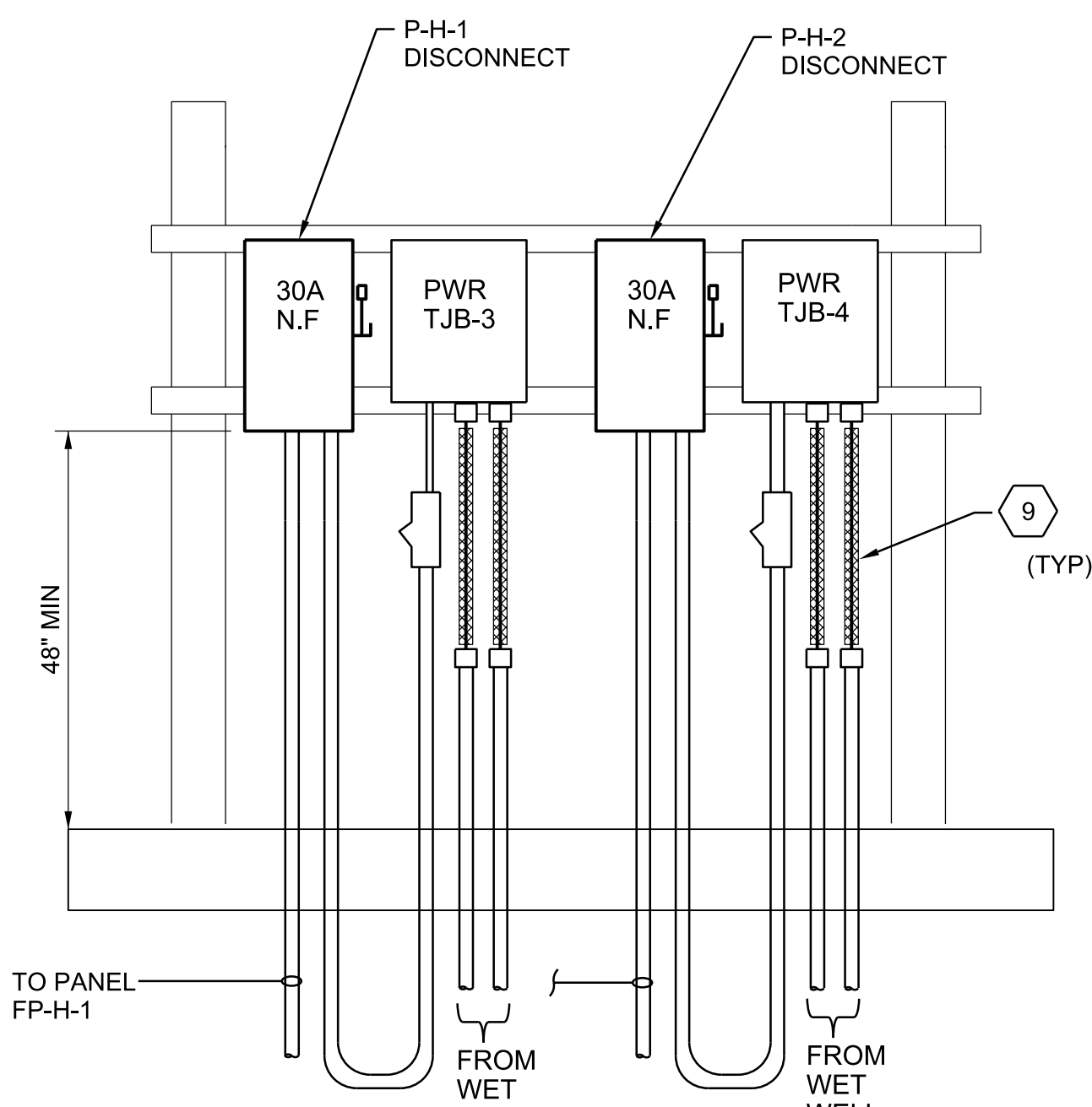
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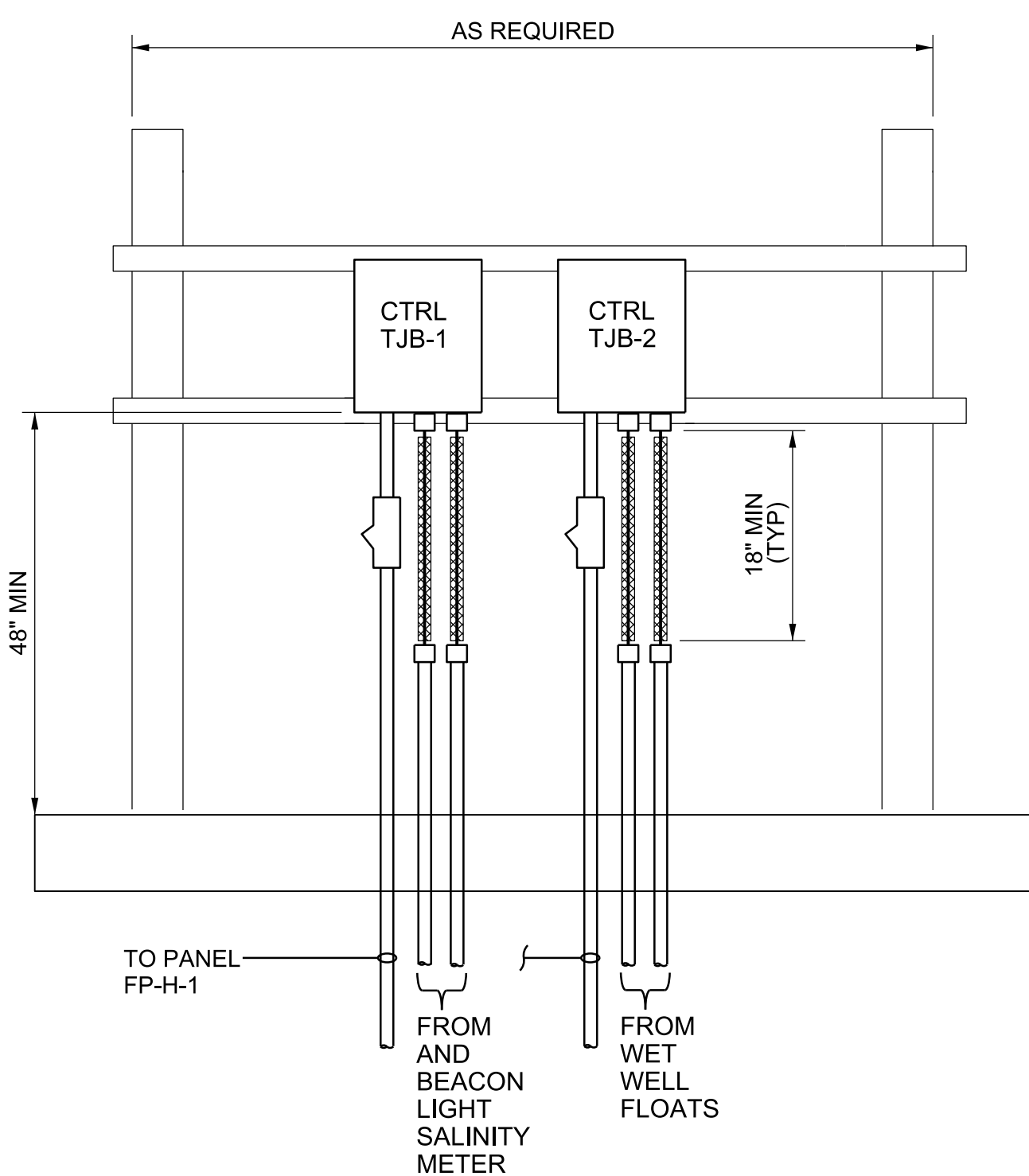
RISER DIAGRAM

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A MOUNTING RACK FRONT LAYOUT

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B MOUNTING RACK BACK LAYOUT

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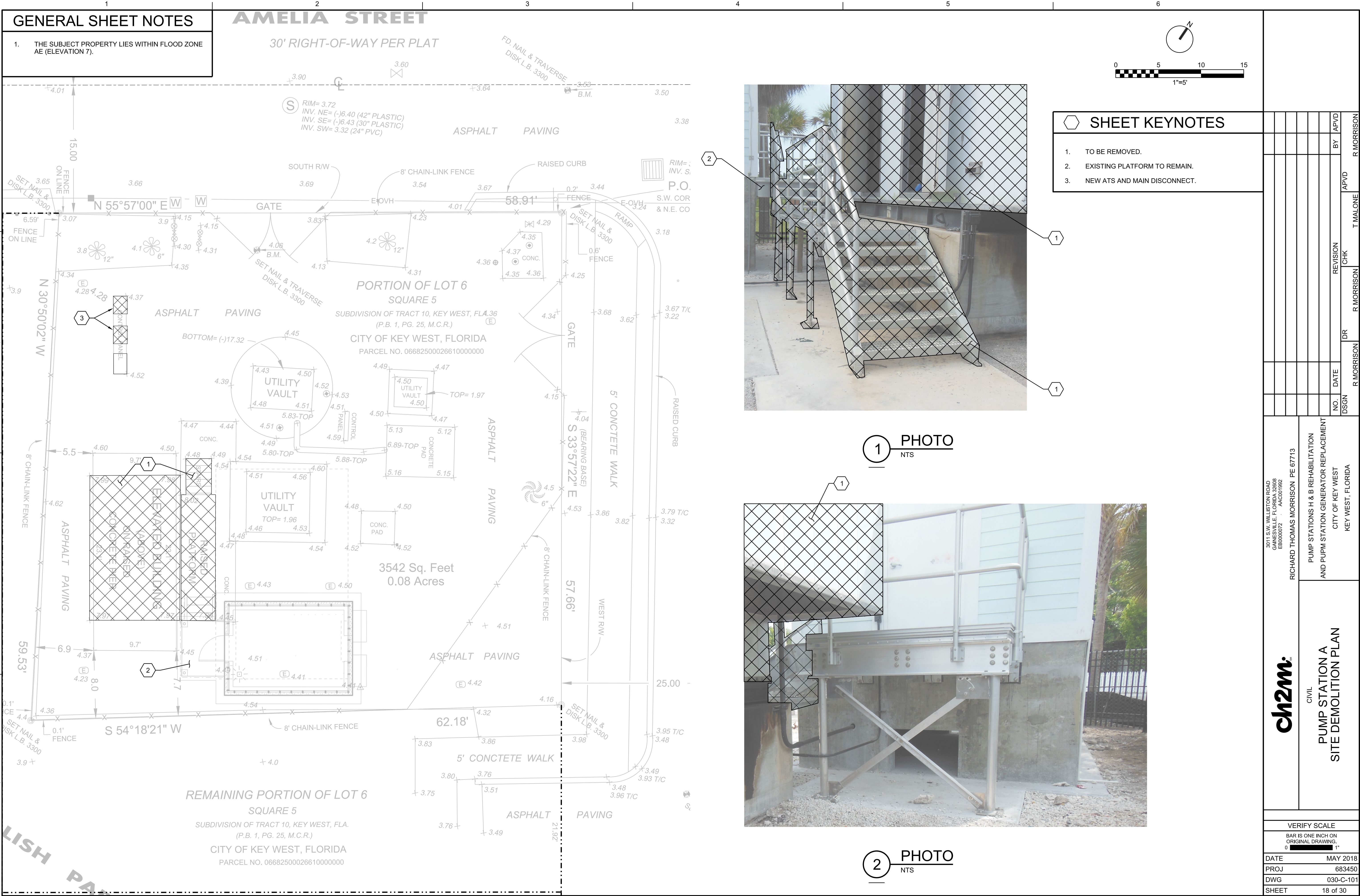
		PUMP STATION H ONE-LINE DIAGRAM		PUMP STATIONS H & B REHABILITATION AND PUMP STATION GENERATOR REPLACEMENT CITY OF KEY WEST KEY WEST, FLORIDA	
3011 S.W. WILLISTON ROAD GAINESVILLE, FLORIDA 32608 EB0000072 AAC001992		DAVID C. NICHOLSON PE 60201			
1" = X'					
VERIFY SCALE					
BAR IS ONE INCH ON ORIGINAL DRAWING.					
0  1"					
DATE		MAY 2018			
PROJ		683450			
DWG		020-E-601			
SHEET		17 of 30			

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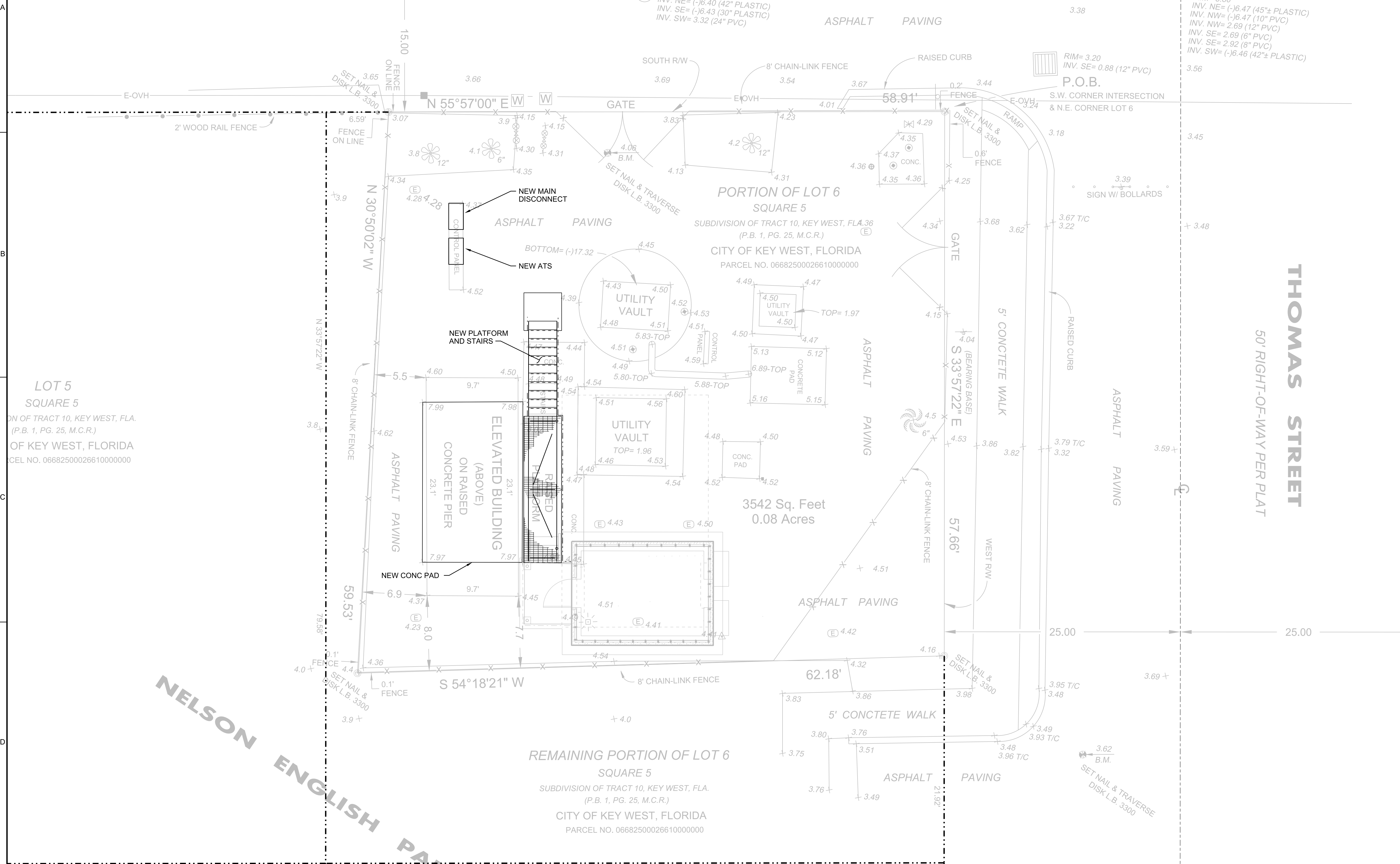
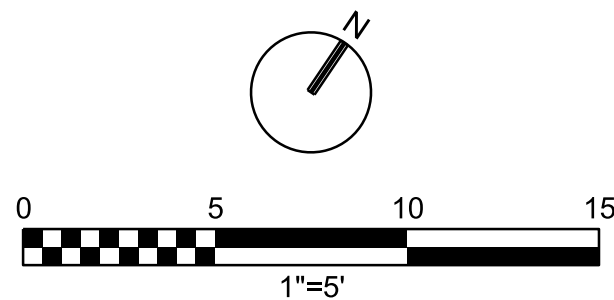
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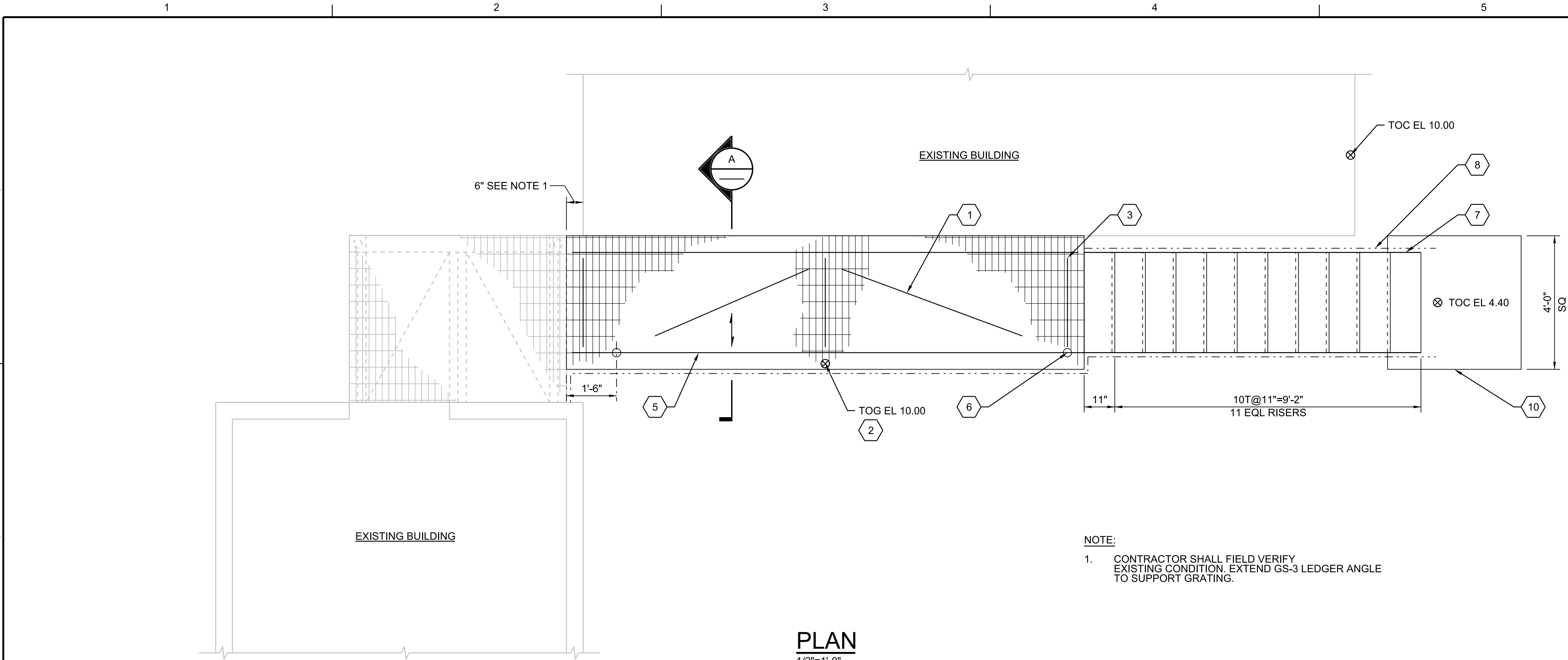
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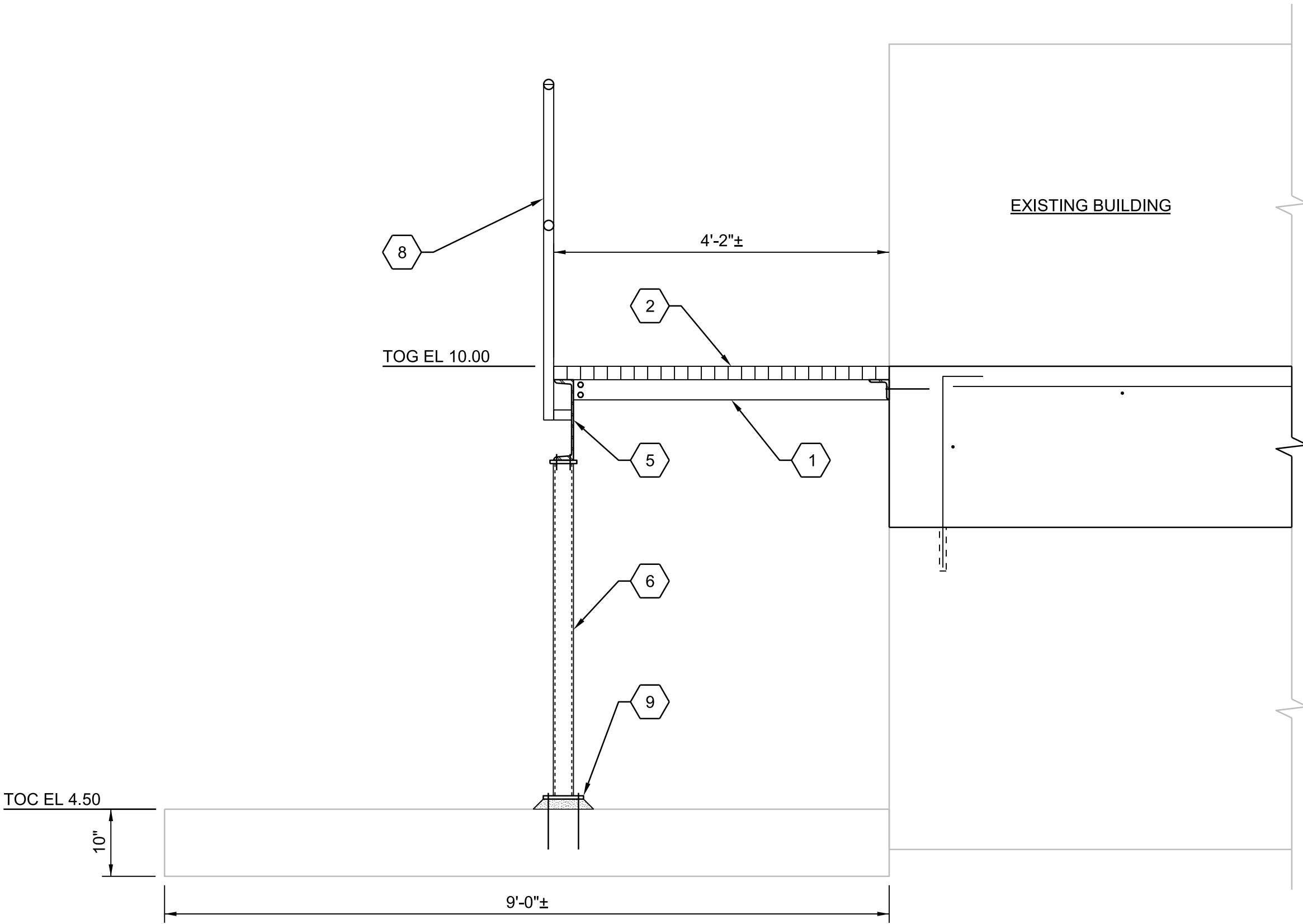
PLOT DATE: 5/17/2018

PLOT TIME: 1:47:11 PM



PLAN
1/2"=1'-0"

NOTE:
1. CONTRACTOR SHALL FIELD VERIFY
EXISTING CONDITION. EXTEND GS-3 LEDGER ANGLE
TO SUPPORT GRATING.



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

GENERAL SHEET NOTES

1. GENERAL SHEET NOTES APPLY ONLY TO THE SHEET ON WHICH THEY APPEAR.

SHEET KEYNOTES

- AL L3x3x3/8", TYP.
- STANDARD GRATING WITH TYPE GS-3 SUPPORT. SEE DETAIL 0553-001.
- AL BEAM/WALL CONNECTION. SEE DETAIL 0514-056.
- TYPICAL FRAMING CONNECTION-AL, TYP. SEE DETAIL 0514-020.
- AL C12x7.41.
- 3" DIA NOMINAL SIZE SCHEDULE 40 AL PIPE, TYP.
- AL STAIRS. SEE DETAIL 0551-001.
- AL RAILING WITH BASE ANCHORAGE TYPE 'D'. SEE DETAIL 0552-001.
- STAIR LANDING SUPPORT. SEE DETAIL 0551-201.
- CONC LANDING PAD. SEE DETAIL 0330-056 TYPE 'C' SIM.

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EB0000072 AAC001992
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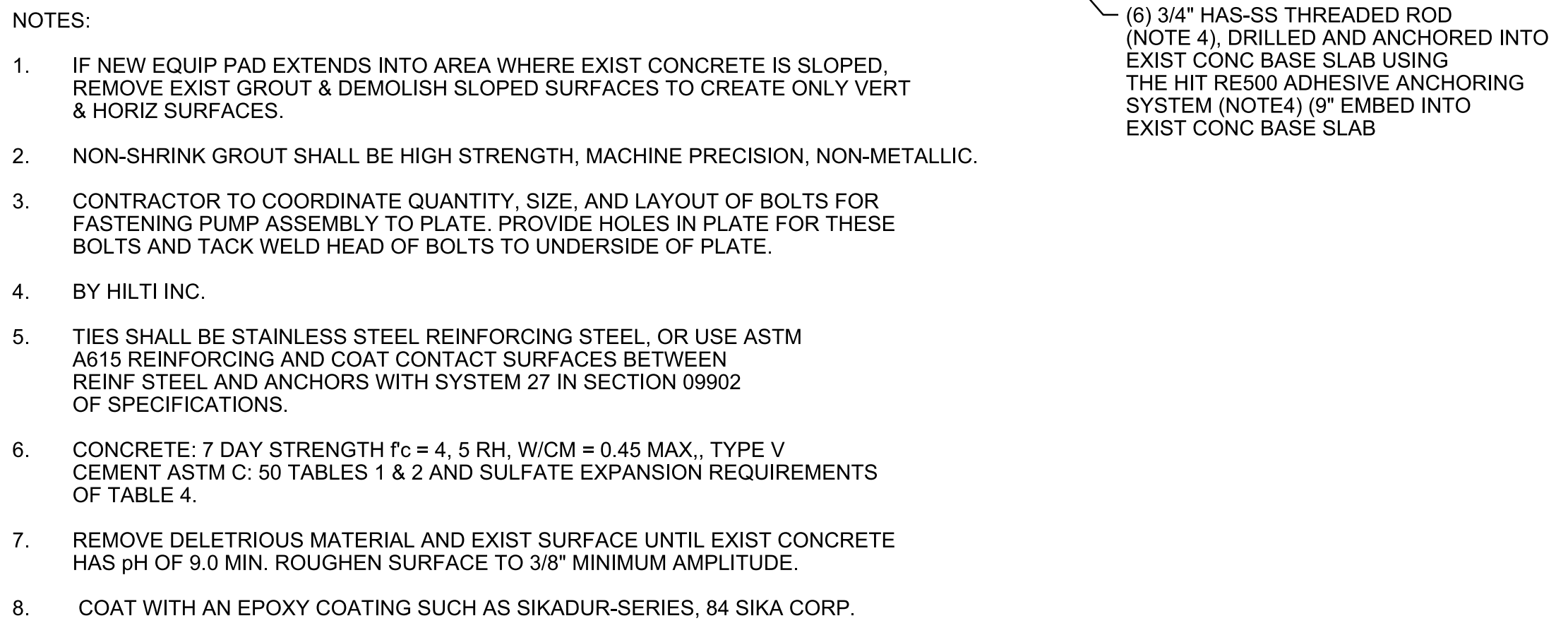
STRUCTURAL
ch2m

PUMP STATIONS H & B REHABILITATION
AND PUPM STATION GENERATOR REPLACEMENT
CITY OF KEY WEST
KEY WEST, FLORIDA
PUMP STATION A
PLATFORM A
PLAN AND SECTION

AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	MAY 2018
PROJ	683450
DWG	030-S-201
SHEET	20 of 30

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0330-001

6" MIN, TYP UNLESS NOTED OTHERWISE ON PLANS

3/4" CHAMFER, TYP

THICKENED EDGE OF SLAB ALL AROUND

#5@12" EW AT 2" CLR FROM TOP SURFACE

EQUIPMENT

CONCRETE ANCHORS, SEE NOTE

FINISH GRADE

6" MIN

1.5

6" MIN

#5 CONT

NOTE:
WHEN ANCHORAGE OF EQUIPMENT TO PAD IS REQUIRED, USE CONCRETE ANCHORS SPECIFIED.

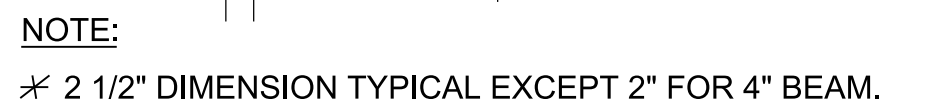
TYPE 'G'

0330-056

0512-002

NOTES:

1. NUMBER OF ROWS IS EQUAL TO NUMBER OF BOLTS TO ENCLOSED WEB.
2. ALL FRAMING CONNECTIONS SHALL CONFORM TO SCHEDULE UNLESS DETAILED OTHERWISE ON FRAMING PLANS.



0514-020

Technical drawing showing the connection of an AL BEAM to an EXISTING CONCRETE WALL OR BEAM. The drawing includes dimensions and labels for the components and installation details.

Labels:

- SST JL4x3 1/2x3/8x1'-2 1/2" W/ (6) 3/4" SST ADHESIVE ANCHORS
- AL BEAM
- COPE BOTTOM FLANGE FOR BEAM INSTALLATION
- CLIP BOTTOM OF ANGLE 3" @ 45°
- EXISTING CONCRETE WALL OR BEAM

Dimensions:

- 6" MIN (Overall width of beam)
- 3" (Spacing between beam flanges)
- 2 1/2" (Height of top flange)
- 6" (Height of main beam section)
- 2 1/2" TYP (Typical height of top flange)
- 1 1/4" TYP (Typical height of bottom flange)
- 4" TYP (Typical width of beam web)
- 10" OR 12" BEAM DEPTH
- 1 1/4" (Dimension from beam centerline to anchor line)
- 3 1/2" (Dimension from beam centerline to anchor line)
- 3 1/2" (Dimension from beam centerline to anchor line)
- 3 1/2" MIN. SEE NOTE 2 (Dimension from beam centerline to anchor line)
- 7" MIN EMBED (Embedment length of anchor)
- 6" MIN (Overall height of connection)

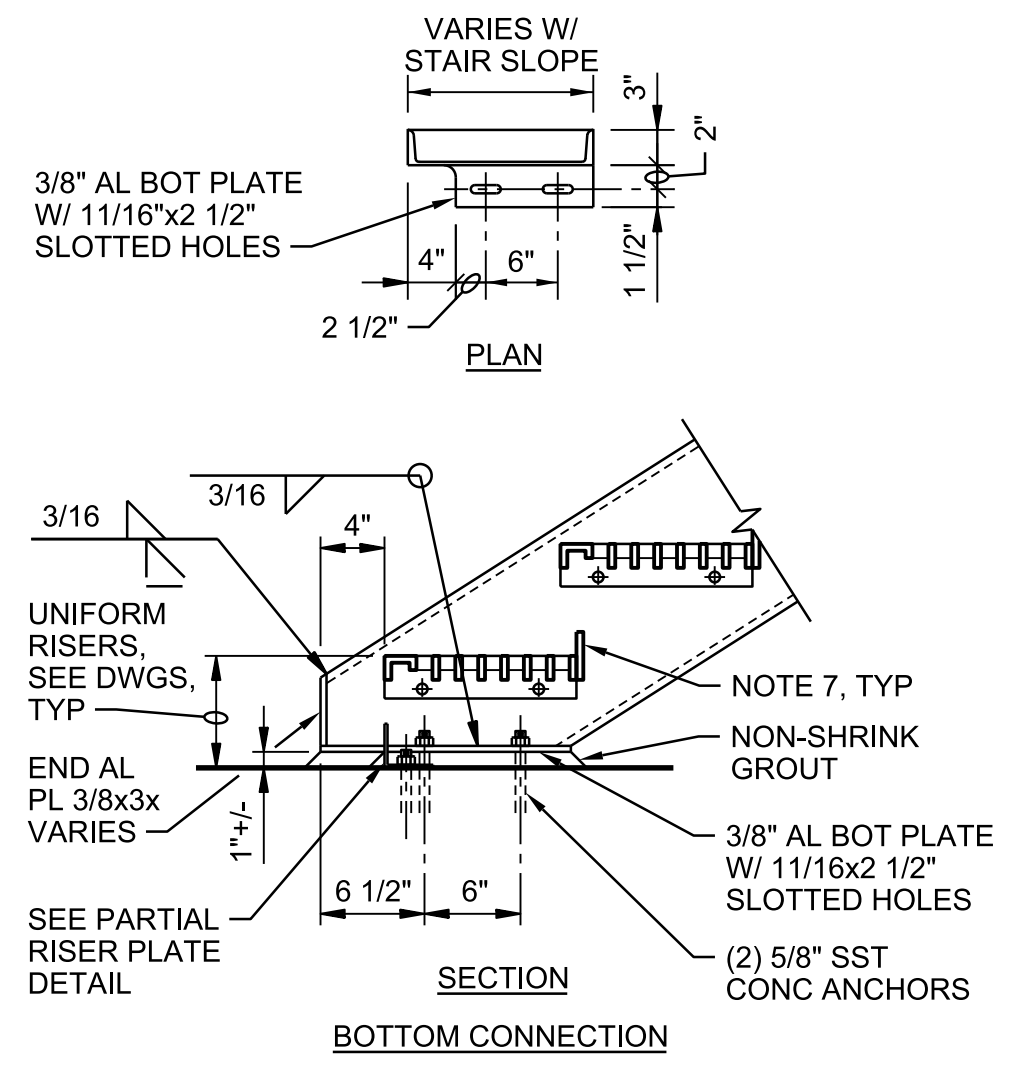
Notes:

- (3) 3/4" SST BOLTS (PROVIDE SHORT HORIZONTAL SLOTTED HOLES IN BEAM WEB)

0514-056

NOTES:

1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND FOR ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATIONS.
2. AMERICAN STANDARD C12x7.41 ALUMINUM STRINGERS TYPICAL EXCEPT WHERE OTHERWISE NOTED ON PLANS.
3. STAIR RAILING NOT SHOWN.
4. STAIR MANUFACTURER TO COORDINATE BOLTED TREADS AND RAILING CONNECTIONS.
5. ALL FASTENERS SHALL BE STAINLESS STEEL.
6. FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION.
7. FOR RISER PLATE SEE PARTIAL RISER PLATE DETAIL UNLESS NOTED OTHERWISE. CLEARANCE BETWEEN TOP OF RISER PLATE AND BOTTOM OF TREAD TO BE 3 3/4" MAXIMUM. FOR STAIRS WITH PICKET RAILING EXTEND RISER PLATE PER FULL RISER PLATE DETAIL.



0551-001

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PUMP STATIONS H & B REHABILITATION
AND BIODIGESTOR GENERATOR REPLACEMENT

ch2m.SM

STRUCTURAL

	AS NOTE
	ATTENTION

VERIFY SC.

BAR IS ONE INC
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PLOT TIME: 15

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2 1/2" THRU 24" PIPE

PRE-ENGINEERED PIPE SUPPORT

SIZE AS REQUIRED BY CALCULATIONS, STANDARD WALL PIPE MINIMUM

STANDARD PIPE FLANGE

MINIMUM 1 1/2" NON-SHRINK GROUT

"A"

CONCRETE ANCHORS, SIZE AND NUMBER AS REQUIRED BY CALCULATIONS

DIMENSION TABLE

PIPE SIZE	"A" MINIMUM NOMINAL PIPE SIZE
2-1/2"	2-1/2"
3"	2-1/2"
4"	3"
6"	3"
8"	3"
10"	3"
12"	3"
14"	4"
16"	4"
20"	6"
24"	6"

NOTE:
SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

PIPE SUPPORT
SADDLE SUPPORT PEDESTAL TYPE - ADJUSTABLE

NTS

4005-500

TYPE 316 SST WALL PIPE

PASSING PIPE

MODULAR MECHANICAL SEAL ASSEMBLY WITH SST BOLTS AND NUTS, AS SPECIFIED

WALL PIPE PENETRATION SEAL

NTS

4027-607

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 AAC001992

TAO FU 'PE 63138

PROCESS MECHANICAL

STANDARD DETAILS

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

1" = X'

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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SHEET27 of 30

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REVISION

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