

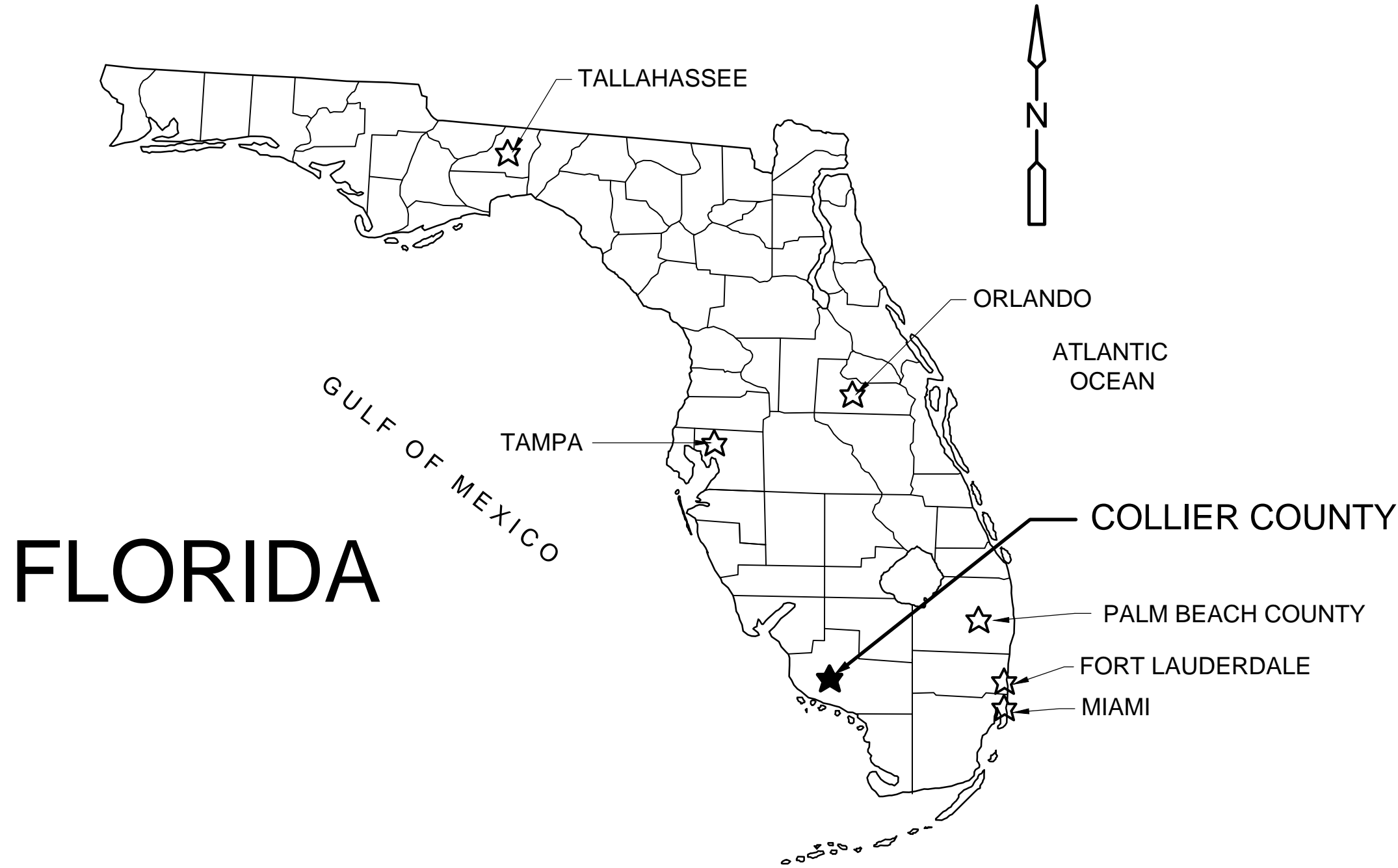
# COLLIER COUNTY, FLORIDA

## FOXFIRE WELLS

COLLIER COUNTY PROJECT NO. 70234.1

PREPARED FOR/ OWNED BY:  
COLLIER COUNTY BOARD OF  
COMMISSIONERS, UTILITIES DIVISION  
3301 TAMiami TRAIL E #H-3  
NAPLES, FL 34112

LEGAL DESCRIPTION
<p>PARCEL A FOR WELLS 1 &amp; 2:</p> <p>TRACT 10, FOXFIRE UNIT 3, ACCORDING TO THE PLAT RECORDED IN PLAT BOOK 13, PAGES 101 THROUGH 103 INCLUSIVE, OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA</p> <p>PARCEL B FOR WELL 3:</p> <p>Lots 147, 148, 149, 150, 151, 152, and 153, The Naples Groves and Truck Company's Little Farms No. 2 as recorded in Plat Book 1, Page 27, of the Public Records of Collier County, Florida, LESS AND EXCEPT the South 75 feet of all of said lots.</p>
REGION
<p>PARCEL A FOR WELLS 1 &amp; 2: SECTION 6, TOWNSHIP 50, RANGE 26 PUD-93-5 93-31; ORD. 93-31</p> <p>PARCEL B FOR WELL 3: SECTION 1, TOWNSHIP 50, RANGE 25 PUD-93-5 93-31; ORD. 93-31</p>
PARCEL INFORMATION
<p>PARCEL A FOR WELLS 1 &amp; 2: 33885720006</p> <p>PARCEL B FOR WELL 3: 61844640005</p>



VICINITY PLAN  
NTS

COLLIER COUNTY COMMISSION:  
DISTRICT 1: RICK LOCASTRO  
DISTRICT 2: CHRIS HALL  
DISTRICT 3: BURT L. SAUNDERS  
DISTRICT 4: DAN KOWAL  
DISTRICT 5: WILLIAM L. MCDANIEL, JR.  
COUNTY MANAGER: AMY PATTERSON

JULY 2024



9160 FORUM CORPORATE PKWY, SUITE 230  
FT. MYERS, FLORIDA 33905  
TEL: 239-938-9600  
FL COA NO. EB-000020

CDM SMITH PROJECT NUMBER: 6295-267302



IMAGE OBTAINED FROM GOOGLE EARTH PRO SEPT 2022

LOCATION MAP  
NTS

ISSUED FOR BID

XREFS: [ ] Images: [Collier Co. Logo, new, Location Map, NEW COUNTY LOGO]  
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# INDEX OF SHEETS

SHEET NO.	TITLE
<b>GENERAL</b>	
G-0	COVER
G-1	SHEET INDEX AND ABBREVIATIONS
G-2	LEGENDS, SYMBOLS, AND GENERAL NOTES
<b>CIVIL</b>	
C-1	FOXFIRE WELL NO. 1 AND NO. 2 GRADING AND SITE PLAN
C-2	FOXFIRE WELL NO. 3 GRADING AND SITE PLAN
CD-1	CIVIL DETAILS I
<b>STRUCTURAL</b>	
S-1	STRUCTURAL GENERAL NOTES AND DETAILS
S-2	WELL SLAB PLAN AND SECTIONS
<b>MECHANICAL</b>	
M-1	FOXFIRE WELL NO. 1 PLAN AND SECTION
M-2	FOXFIRE WELL NO. 2 PLAN AND SECTION
M-3	FOXFIRE WELL NO. 1 AND NO. 2 PIPING MODIFICATIONS AND CONNECTIONS
M-4	FOXFIRE WELL NO. 3 PLAN AND SECTION
MD-1	MISCELLANEOUS DETAILS I
<b>ELECTRICAL</b>	
E-1	ELECTRICAL LEGEND
E-2	GENERAL ELECTRICAL NOTES
E-3	ELECTRICAL SITE PLAN I
E-4	ELECTRICAL SITE PLAN II
E-5	FOXFIRE WELLS NO. 1 AND NO. 2 ONE LINE POWER DIAGRAM
E-6	FOXFIRE WELL NO. 3 ONE LINE POWER DIAGRAM
E-7	ELEMENTARY CONTROL DIAGRAM AND KEY EQUIPMENT SCHEDULE
E-8	RISER DIAGRAMS AND PANELBOARD SCHEDULE
E-9	FOXFIRE WELLS NO. 1 AND NO. 2 ELECTRICAL PLAN
E-10	FOXFIRE WELL NO. 3 ELECTRICAL PLAN
ED-1	ELECTRICAL DETAILS I
ED-2	ELECTRICAL DETAILS II
<b>INSTRUMENTATION</b>	
I-1	INSTRUMENTATION LEGEND I
I-2	INSTRUMENTATION LEGEND II
I-3	SYSTEM ARCHITECTURE
I-4	PROCESS AND INSTRUMENTATION DIAGRAM WELLS NO. 1 AND NO. 2
I-5	PROCESS AND INSTRUMENTATION DIAGRAM WELL NO. 3
I-6	INSTRUMENT INSTALLATION DETAILS

## ABBREVIATIONS

### GENERAL

ADJUSTABLE  
ALUMINUM  
ANGLE  
BARE ROOT  
BELOW  
BELOW LAND SURFACE  
BENCHMARK  
BETWEEN  
CENTER LINE  
CENTER TO CENTER  
CORRUGATED METAL PIPE  
CONCRETE  
CONE PENETRATION TEST  
CENTER (ED)  
COUNTY UTILITY EASEMENT  
DRAIN  
DEMOLITION  
DIAMETER  
DIAGONAL  
DIMENSION  
DISCHARGE  
DRAWING  
EACH  
ELEVATION  
EFFLUENT  
EDGE OF PAVEMENT  
EXISTING  
EXISTING YARD GRADE  
FURNISHED BY OTHERS  
FINISH  
FLOOR  
FINISH PLANT WATER  
FINISH YARD GRADE  
FEET/FOOT  
FINISH WATER  
HIGH  
HIGH POINT  
HEIGHT  
INFLUENT  
ION EXCHANGE EFFLUENT  
IRRIGATION QUALITY WATER  
LONG  
LOW POINT  
MATERIAL  
MANUFACTURING  
MANUFACTURER  
MAXIMUM  
MITERED END SECTION  
MECHANICAL  
METAL  
MINIMUM  
MOUNTED  
MUD VALVE  
NATIONAL ELECTRIC CODE  
NOMINAL  
NOT TO SCALE  
NUMBER  
ON CENTER  
OPTION  
OPPOSITE  
OPENING  
OR EQUAL  
PERFORATED  
PIECE  
POINT  
POUND(S)  
PLATE  
PRECAST  
PRIMARY EFFLUENT  
RADIUS  
REINFORCED CONCRETE PIPE  
REQUIRED  
RECLAIMED WATER  
ROOM  
REVERSE OSMOSIS PERMEATE  
RAW SEWAGE  
RIGHT OF WAY  
RAW WATER - BRACKISH  
RAW WATER - FRESH

### SYMBOLS

ADJ  
AL., ALUM.  
<  
BR  
BEL  
BLS  
BM  
BTWN.  
C  
C.C.  
CMP  
CONC  
CPT  
CTR  
C.U.E.  
D  
DEMO  
DIA., DIAM.  
DIAG.  
DIM.  
DISCH  
DWG.  
EA.  
EL., ELEV.  
EFF.  
EOP  
EXIST., EX.  
EYG  
FBO  
FIN.  
FL  
FPW  
FYG  
FT  
FW  
H  
H.P.  
HT  
INFL.  
IXE  
IQW  
LG.  
L.P.  
MTL.  
MFG.  
MFR.  
MAX.  
MES  
MECH.  
MET.  
MIN.  
MTD.  
MV  
NEC  
NOM.  
N.T.S.  
NO.  
O.C.  
OPT.  
OPP.  
OPNG  
O/E.  
PERF  
PC.  
PT.  
LB(S).  
PL.  
PRCST  
PEFL  
RAD., R.  
RCP  
REQ'D  
REW  
RM.  
ROP  
RS  
R/W  
RWB  
RWF

### GENERAL (CONT.)

SCHEDULE  
SQUARE  
STAINLESS STEEL  
SIDEWALK  
SECTION  
SHEET  
STANDARD  
STEEL  
STORM WATER  
STANDARD PENETRATION TEST  
STANDARD PENETRATION TEST @ WELLSITE  
SYMMETRICAL  
TEMPORARY  
THREADED  
THICK  
TOP OF BANK  
TOP OF SLOPE  
TYPICAL  
UTILITY EASEMENT  
VERTICAL  
WATER  
WATER LEVEL  
WATER MAIN  
WEATHERPROOF  
WELL RESTORATION WATER  
WEST  
WITH  
  
**VALVES, FITTINGS, ETC.**  
  
AIR RELIEF VALVE  
AIR VACUUM VALVE  
BALL CHECK VALVE  
BALL VALVE  
BLIND FLANGE  
BURIED GEAR OPERATOR  
BUTTERFLY VALVE  
COMBINATION AIR VALVE  
CHECK VALVE  
ELECTRIC VALVE ACTUATOR  
ELEVATED GEAR OPERATOR  
EXPANSION JOINT

### SYMBOLS

SCH  
SQ.  
SST  
SDWK.  
SEC.  
SH., SHT.  
ST'D  
STL.  
STW  
SPT  
SPTW  
SYMM.  
TEMP.  
THD.  
THK.  
TOB.  
TOS.  
TYP.  
U.E.  
VERT.  
WTR.  
WL  
WM  
WPF.  
WRW  
W.  
W/  
  
**SYMBOLS**  
  
ARV  
AVV  
BCV  
BAV  
B.F.  
BO  
BFV  
CAV  
CV  
EVA  
EO  
EXJ

### VALVES, FITTINGS, CONT.

FIRE HYDRANT  
FITTINGS  
FLANGED ADAPTER  
FLEXIBLE COUPLING  
FLOOR BOX (BUSHING TYPE)  
FLOOR STAND  
GROOVED END (VICTAULIC) JOINT  
GATE VALVE  
HARNESSED FLANGE ADAPTER COUPLING  
HOSE BIBB  
HYDRAULIC VALVE ACTUATOR  
MECHANICAL JOINT PLUG  
PLASTIC BALL VALVE  
PLASTIC CHECK VALVE  
PLUG VALVE  
PRESSURE CONTROL VALVE  
SILENT CHECK VALVE  
SLANTING DISC CHECK VALVE  
UNION  
VALVE BOX  
VICTAULIC COUPLING (GROOVED ENDS)  
VICTAULIC COUPLING (SHOULDERED ENDS)  
WALL SLEEVE  
WALL PIECE (WITH WATER STOP)  
  
**PIPE**  
  
ASBESTOS CEMENT PIPE  
BLACK STEEL PIPE  
CAST IRON  
CAST IRON PIPE  
CAST IRON SOIL PIPE  
CONCRETE PRESSURE PIPE  
COPPER PIPE  
CORRUGATED METAL PIPE  
DUCTILE IRON PIPE  
DUCTILE IRON  
FIBERGLASS REINFORCED PIPE  
FLANGE  
GALVANIZED STEEL PIPE  
MECHANICAL JOINT  
METAL REINFORCED PLASTIC PIPE  
POLYETHYLENE PIPE  
POLYVINYLCHLORIDE  
REINFORCED CONCRETE PIPE  
RESTRAINED JOINT  
SLIP-ON JOINT  
STEEL PIPE  
STAINLESS STEEL  
TIED JOINT  
VITRIFIED CLAY PIPE

### SYMBOLS

FH  
FTG  
FA  
FC  
FB  
FS  
GRV  
GV  
HFAC  
HB  
HVA  
MJP  
PBV  
PCV  
PV  
PCV  
SCV  
SDCV  
UN  
VB  
VC (G)  
VC (S)  
WS  
WP  
  
ACP  
BSP  
CI  
CIP  
CISP  
CPP  
CU  
CMP  
DIP  
DI  
FRP  
FLG  
GSP  
MJ  
MRPP  
PP  
PVC  
RCP  
RJ  
SJ  
SP  
SST  
TJ  
VCP

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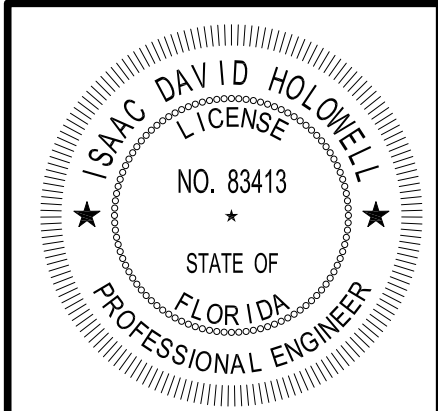
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: <u>I. HOLOWELL</u>
DRAWN BY: <u>A. EDWARDS</u>
SHEET CHK'D BY: <u>I. HOLOWELL</u>
CROSS CHK'D BY: <u>M. SUNYAK</u>
APPROVED BY: <u>I. HOLOWELL</u>
DATE: <u>JULY 2024</u>

9160 FORUM CORPORATE PARKWAY, Suite 230  
Fort Myers, FL 33905  
Tel: (239) 938-9600  
FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA  
**FOXFIRE WELLS**

**SHEET INDEX AND ABBREVIATIONS**



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DATE: **ISAAC D. HOLOWELL**  
 PE NO. **83413**

PROJECT NO. 6295-267302  
 FILE NAME: G001NFDX.DWG  
 SHEET NO.  

## G-1

**GENERAL NOTES**

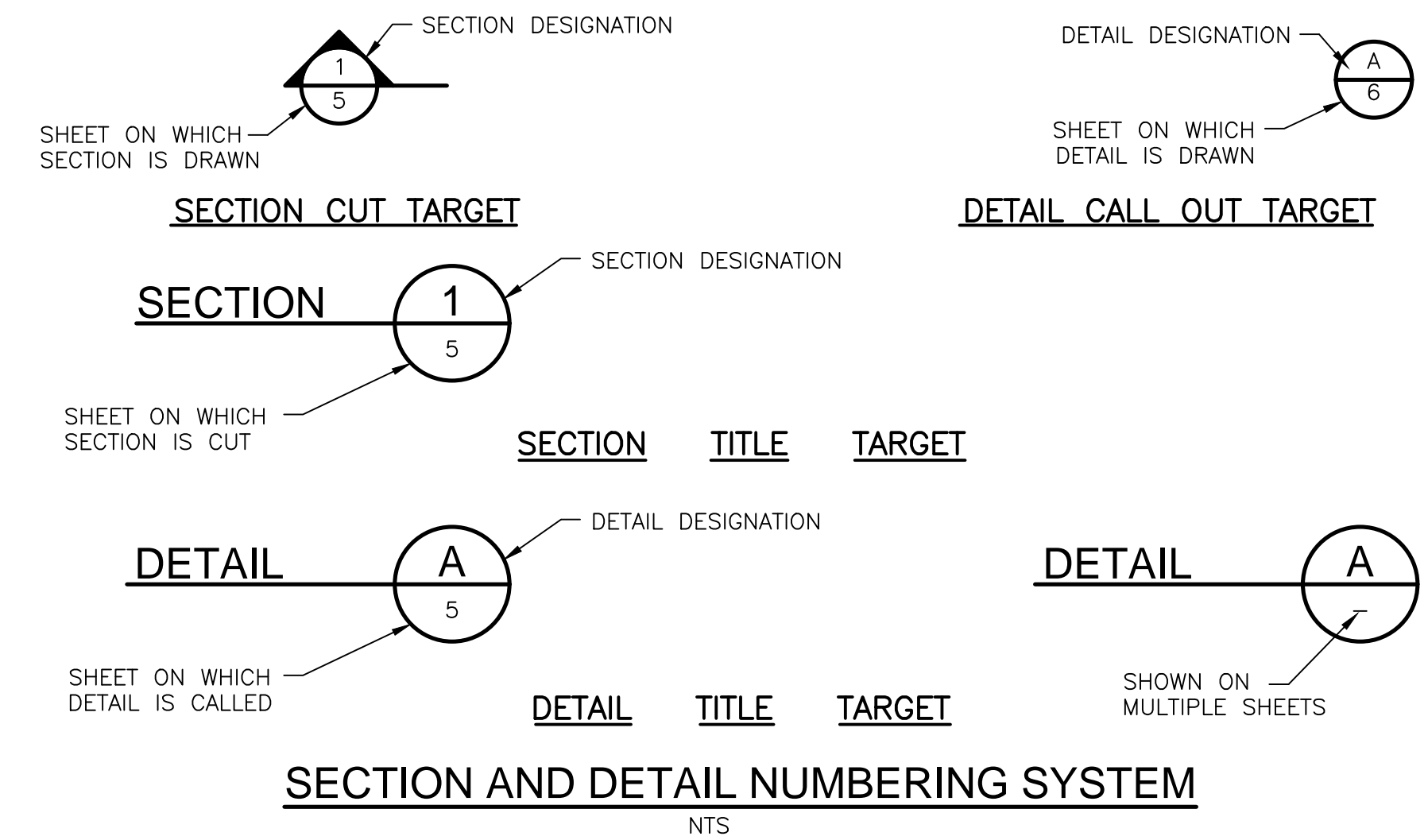
- ALL ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM FROM 1988.
- LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING HIS WORK.
- CONTRACTOR SHALL VERIFY ALL UTILITIES AND NOTIFY THE OWNER 72 HOURS PRIOR TO DIGGING IN ANY PORTION OF THE SITE.
- CONTRACTOR SHALL DISINFECT THE WELL AND DISCHARGE PIPING PER THE SPECIFICATIONS.
- THE CONTRACTOR SHALL CONDUCT PRIMARY AND SECONDARY DRINKING WATER STANDARDS TEST AS REQUIRED IN THE PROJECT SPECIFICATIONS. THIS INCLUDES PULLING SAMPLES AND SUBMITTING TO CERTIFIED LABORATORY FOR TESTING.
- THE CONTRACTOR SHALL REPLACE ALL DRAINAGE CULVERTS, FENCES, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY UPON FINDING ANY CONFLICTS OR UNSUITABLE CONDITIONS DURING CONSTRUCTION ON ANY IMPROVEMENTS SHOWN ON THE DRAWINGS.
- EROSION CONTROL AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO BEGINNING ANY DEMOLITION OR CONSTRUCTION. THEY SHALL BE INSTALLED AS REQUIRED IN THE DRAWINGS AND SPECIFICATIONS AND IN ACCORDANCE WITH ALL REGULATORY AGENCY REQUIREMENTS.
- NO REPRESENTATION IS MADE REGARDING BALANCED EARTHWORK. ANY EXCESS MATERIAL, OR MATERIAL NOT SUITABLE FOR USE AS BACKFILL, SHALL BE PLACED IN PERMANENT STOCKPILE AREA DESIGNATED BY THE OWNER AND STABILIZED IN ACCORDANCE WITH THE SPECIFICATION. NO MATERIAL SHALL BE REMOVED FROM SITE WITHOUT APPROVAL IN WRITING FROM THE OWNER.
- CONTRACTOR IS RESPONSIBLE FOR CALCULATING AND PROVIDING/REMOVING ANY FILL REQUIRED FOR COMPLETION OF PROJECT.
- FINISHED GRADE FOR GROUND ELEVATIONS ON DRAWINGS REFER TO GRADE AFTER SODDING OR OTHER SURFACE TREATMENT.
- DUE TO ITS LOCATION WITH RESPECT TO THE WATER TABLE THE PORTION OF THE UNDEVELOPED SITE WITHIN THE PROJECT LIMITS IS SUBJECT TO SEASONAL STANDING WATER.
- SOD SHALL BE INSTALLED ON ALL SIDESLOPES AND DRAINAGE DITCHES, DISTURBED OR ALTERED DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT.
- ALL PIPING SHALL HAVE 30 INCH MINIMUM COVER UNLESS OTHERWISE NOTED. MAXIMUM DEPTH OF COVER PER COLLIER COUNTY DESIGN CRITERIA IS 48 INCHES BELOW FINISHED GRADE.
- UNLESS OTHERWISE NOTED, ALL ABOVE-GROUND PIPE SHALL BE CEMENT-MORTAR LINED DUCTILE IRON WITH FLANGED JOINTS. WHERE BUTTERFLY VALVES ARE INSTALLED IN CEMENT-MORTAR LINED DUCTILE IRON PIPE, THE VALVE DISC MUST BE CLEAR OF THE CEMENT LINING.
- UNLESS OTHERWISE NOTED, ALL BURIED PIPE SHALL BE AWWA C-900 PVC WITH CEMENT-MORTAR LINED DUCTILE IRON FITTINGS WITH MECHANICAL OR RESTRAINED JOINTS, AS INDICATED ON THE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR EVACUATING THE AIR IN EXISTING AND NEW PIPING PRIOR TO STARTUP AND TESTING.

**LEGEND**

	NEW MAIN THIS PROJECT
	EXISTING WATER MAIN
	EXISTING IRRIGATION QUALITY WATER MAIN
	EXISTING SANITARY SEWER W/ MANHOLE
	EXISTING FORCE MAIN
	EXISTING BURIED TELEPHONE
	EXISTING POWER DUCTS OR CABLES
	OVERHEAD POWER
	EXISTING CABLE TELEVISION
	EXISTING STORM SEWER W/CATCH BASIN
	FIRE HYDRANT
	R/W - RIGHT OF WAY / UTILITY EASEMENT
	℞ - PROPERTY LINE
	NEW MAIN TO BE CONST. UNDER EXISTING UTILITY
	NEW MAIN TO BE CONST. OVER EXISTING UTILITY
	EXISTING POWER POLE
	EXISTING LIGHT POLE
	SOIL BORING
	BENCH MARK
	EXISTING CHAIN LINK FENCE
	NEW CHAIN LINK FENCE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	NEW STRUCTURES
	SURVEY LIMITS
	CONCRETE
	ASPHALT
	GRAVEL ACCESS ROAD
	YARD HYDRANT

**SURVEY LEGEND**

**CALLOUT LEGEND**



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REV. NO.	DATE	DRWN	CHKD	REMARKS

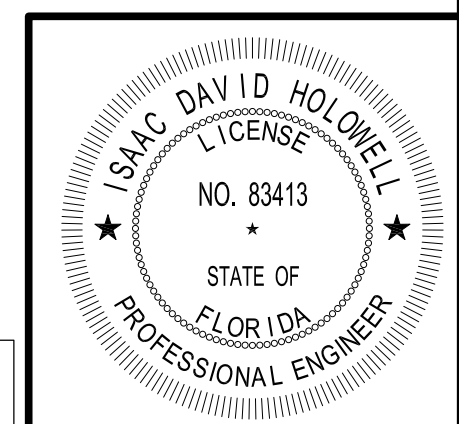
DESIGNED BY: <u>I. HOLOWELL</u>	 9160 FORUM CORPORATE PARKWAY, Suite 230 Fort Myers, FL 33905 Tel: (239) 938-9600 FL COA No. EB-0000020
DRAWN BY: <u>A. EDWARDS</u>	
SHEET CHK'D BY: <u>I. HOLOWELL</u>	
CROSS CHK'D BY: <u>M. SUNYAK</u>	
APPROVED BY: <u>I. HOLOWELL</u>	
DATE: <u>JULY 2024</u>	

COLLIER COUNTY, FLORIDA  
**FOXFIRE WELLS**

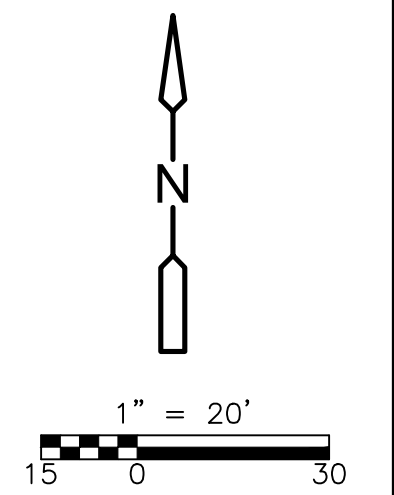
**LEGENDS, SYMBOLS, AND GENERAL NOTES**

PROJECT NO. 6295-267302
FILE NAME: G002NFLD.DWG
SHEET NO. <b>G-2</b>

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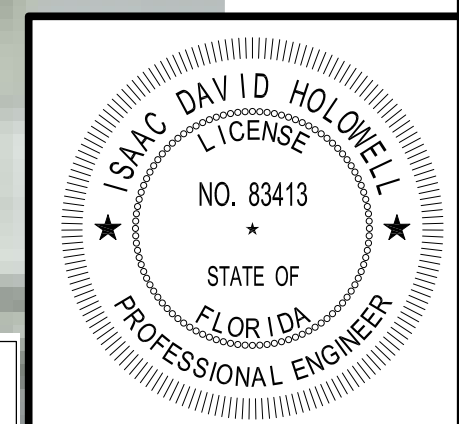
DATE: **ISAAC D. HOLOWELL**  
**PE NO. 83413**



- NOTES:
1. ALL PIPE JOINTS, FITTINGS, AND VALVES SHALL BE RESTRAINED.
  2. REFER TO MECHANICAL SHEETS FOR FINISHED CONCRETE ELEVATIONS.



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DATE: ISAAC D. HOLOWELL  
 PE NO. 83413

PROJECT NO. 6295-267302  
 FILE NAME: C001STPL.DWG  
 SHEET NO.

C-1

ISSUED FOR BID

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: I. HOLOWELL  
 DRAWN BY: J. THORESON  
 SHEET CHK'D BY: J. THORESON  
 CROSS CHK'D BY: M. SUNYAK  
 APPROVED BY: I. HOLOWELL  
 DATE: JULY 2024

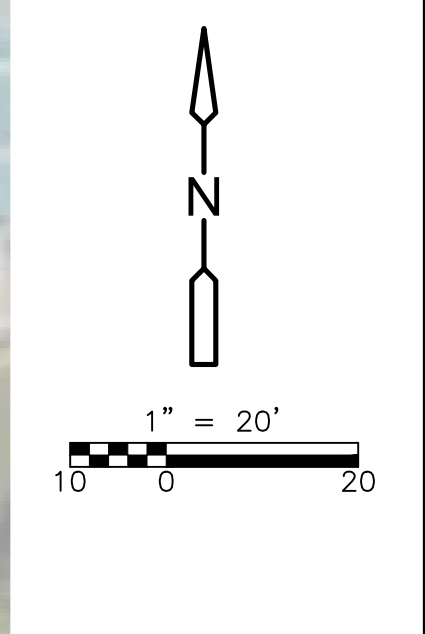


COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

FOXFIRE WELL NO. 1 AND NO. 2  
 GRADING AND SITE PLAN

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- NOTES:
- EXCAVATE DOWN TO EXISTING 45-DEGREE BEND FITTING AND REPLACE BENDS WITH REDUCER AS SHOWN IN DRAWING. REFER TO DETAIL A/CD-1 FOR TRENCH EXCAVATION AND BACKFILLING.
  - REMOVE ALL ABOVE GROUND PIPING, FITTINGS, AND VALVES AND REPLACE WITH BURIED 6-INCH SECTION OF PVC PIPE
  - ALL PIPE JOINTS, FITTINGS, AND VALVES SHALL BE RESTRAINED.
  - CONTRACTOR TO COORDINATE CLOSURE OF THE EXISTING 8-INCH VALVE WITH COLLIER COUNTY PRIOR TO DEMOLITION AND REMOVAL OF THE EXISTING 8-INCH PVC IRRIGATION MAIN. INSTALL 45-BEND THROUGH THE BLOWOFF AS SHOWN ON DETAIL B/CD-1.
  - REFER TO STRUCTURAL SHEETS FOR FINISHED CONCRETE ELEVATIONS.
  - PIPE REMOVAL AND ABANDONMENT ARE TO BE COMPLETED PER TS 330520.



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. SUNYAK  
 DRAWN BY: J. THORESON  
 SHEET CHK'D BY: J. THORESON  
 CROSS CHK'D BY: M. SUNYAK  
 APPROVED BY: I. HOLLOWELL  
 DATE: JULY 2024

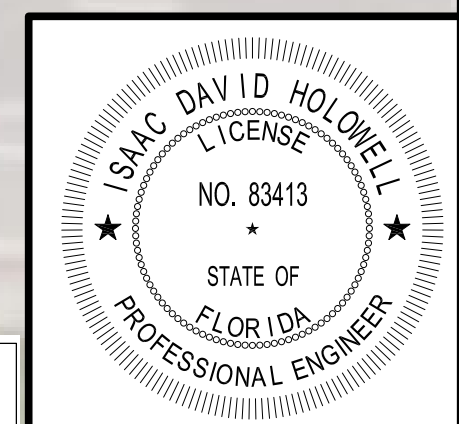
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 9160 FORUM CORPORATE PARKWAY, Suite 230  
 Fort Myers, FL 33905  
 Tel: (239) 938-9600  
 FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA  
**FOXFIRE WELLS**

**FOXFIRE WELL NO. 3**  
**GRADING AND SITE PLAN**

PROJECT NO. 6295-267302  
 FILE NAME: C002STPL.DWG  
 SHEET NO.  
**C-2**

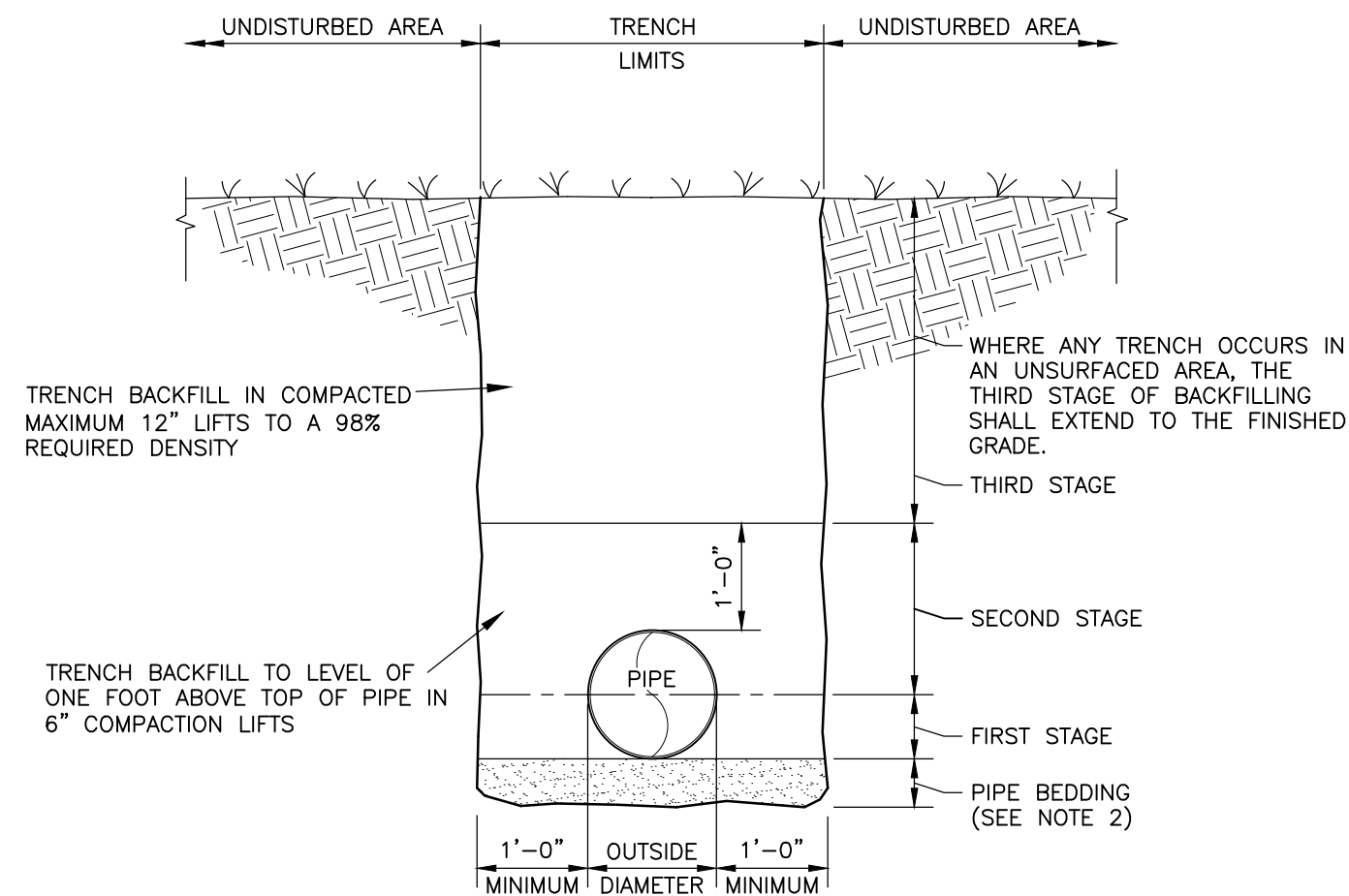
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DATE:  
**ISAAC D. HOLLOWELL**  
 PE NO. 83413



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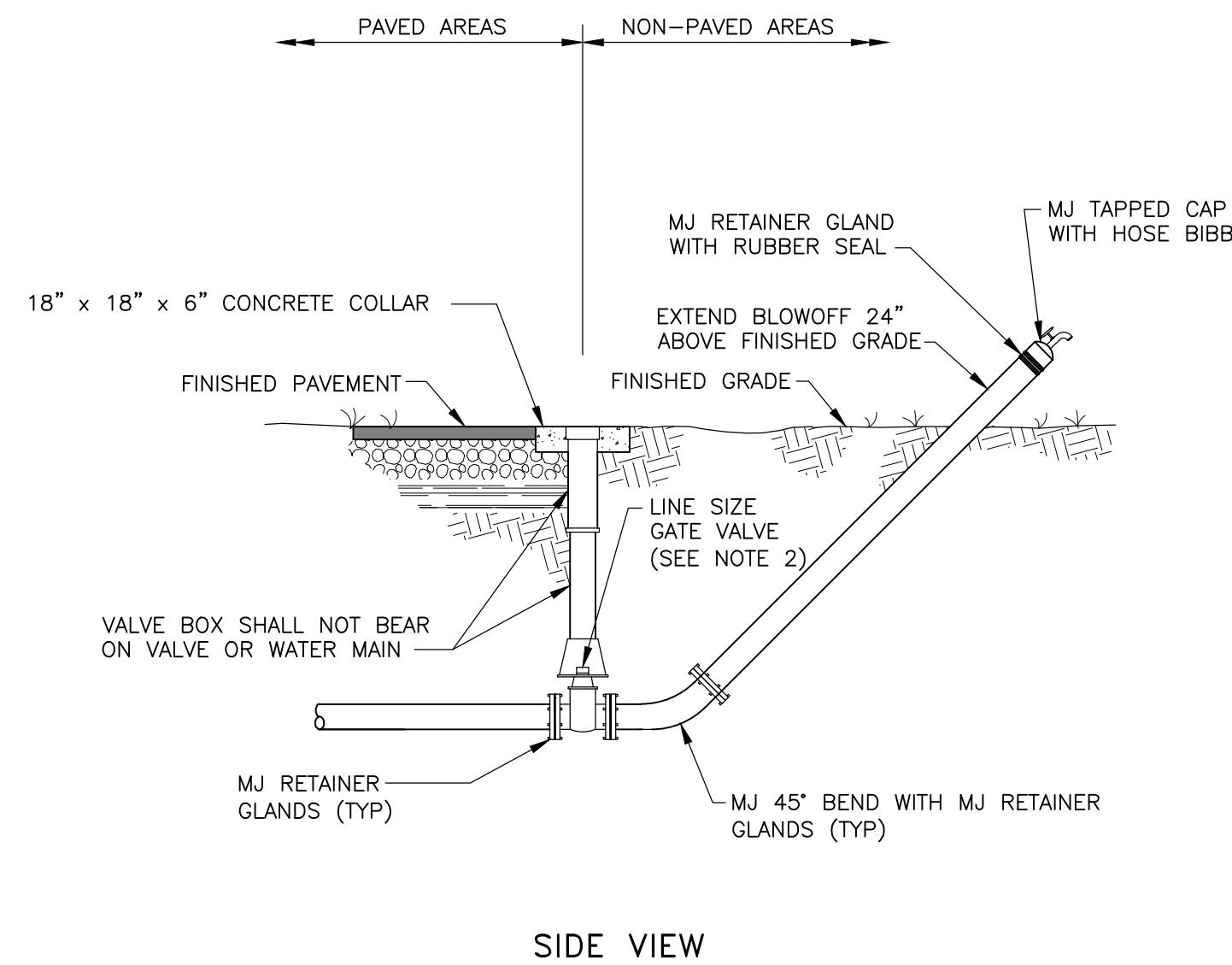
**NOTES:**

- BACKFILL SHALL BE OF SUITABLE MATERIAL REMOVED FROM EXCAVATION EXCEPT WHERE OTHER MATERIAL IS SPECIFIED. BACKFILL MATERIAL SHALL CONSIST OF EARTH, LOAM, SANDY CLAY, GRAVEL, CRUSHED LIMESTONE, OR OTHER APPROVED MATERIAL. REFER TO TECHNICAL SPECIFICATIONS FOR DETAIL REQUIREMENTS.
- IF TRENCH BOTTOM CONTAINS ROCK, THEN A MINIMUM OF A 6" PIPE BEDDING SHALL BE USED.

**UNPAVED AREA TRENCH BACKFILL DETAIL**  
NTS



G-1  
REVISED: APRIL 2006



**NOTES:**

- MJ TAPPED CAP WITH HOSE BIBB IS TO BE REMOVED AFTER INITIAL BACTERIOLOGICAL CLEARANCE AND PRIOR TO WATER MAIN ACCEPTANCE.
- SEE TECHNICAL SPECIFICATIONS SECTION 331200 FOR GATE VALVE AND VALVE BOX REQUIREMENTS.
- ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61.

**TEMPORARY BLOWOFF ASSEMBLY WITH BACTERIAL SAMPLING POINT DETAIL**  
NTS

REVISION DATE:	JANUARY 2014



SHEET NO.  
W-1

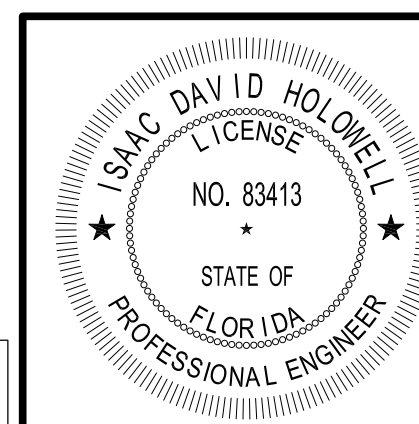
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: I. HOLOWELL  
DRAWN BY: J. THORESON  
SHEET CHK'D BY: M. SUNYAK  
CROSS CHK'D BY: M. SUNYAK  
APPROVED BY: I. HOLOWELL  
DATE: JULY 2024

**CDM Smith**  
9160 FORUM CORPORATE PARKWAY, Suite 230  
Fort Myers, FL 33905  
Tel: (239) 938-9600  
FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA  
FOXFIRE WELLS

CIVIL DETAILS I



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DATE:  
ISAAC D. HOLOWELL  
PE NO. 83413

PROJECT NO. 6295-267302  
FILE NAME: CD01CMDT.DWG

SHEET NO.

CD-1



**GENERAL NOTES**

**DESIGN CRITERIA:**

**CODES:**

- FLORIDA BUILDING CODE EIGHTH EDITION (2023)
- ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"

**DESIGN LOADS:**

**LIVE LOADS:**

- SLABS ON GRADE 200 PSF

**WIND DESIGN DATA:**

ASCE 7-22

- ULTIMATE DESIGN WIND SPEED,  $V_{ULT}$  (3-SECOND GUST): 180 MPH
- TORNADO SPEED,  $V_T$ : 50 MPH
- NOMINAL DESIGN WIND SPEED,  $V_{ASD}$ : 140 MPH
- RISK CATEGORY: III
- EFFECTIVE PLAN AREA,  $A_e$ : 2,000 FT<sup>2</sup>
- WIND EXPOSURE CATEGORY: C
- ENCLOSURE CLASSIFICATION: N/A
- INTERNAL PRESSURE COEFFICIENT: N/A

**FLOOD DESIGN DATA:**

- WELL SLABS NO. 1 AND NO. 2:
  - ACCORDING TO MAP NO. 12021C0413H, PANEL 413 OF 1225, DATED MAY 16, 2012, THIS PROPERTY LIES IN FLOOD ZONE "AH":
  - 1% ANNUAL CHANCE FLOOD BASE FLOOD ELEVATION, BFE: EL 8.5 FEET NAVD 88
- WELL SLAB NO. 3:
  - ACCORDING TO MAP NO. 12021C0394H, PANEL 394 OF 1225, DATED MAY 16, 2012, THIS PROPERTY LIES IN FLOOD ZONE "AH":
  - 1% ANNUAL CHANCE FLOOD BASE FLOOD ELEVATION, BFE: EL 8.0 FEET NAVD 88

**CONCRETE 28-DAY STRENGTH:**

- SLABS, WALLS, FOOTINGS 4000 PSI

**REINFORCING STEEL:**

- ALL BARS ASTM A615, GRADE 60

**FOUNDATIONS:**

- ALLOWABLE BEARING PRESSURE FOR SLAB ON GRADE OVER PREPARED SUBSURFACE: 2,000 PSF

**GENERAL CONDITIONS:**

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, MECHANICAL, ELECTRICAL AND SHOP DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE STRUCTURE. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

FOR ALL ITEMS EMBEDDED IN OR PASSED THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR TYPE, SIZE, LOCATION AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION AND OTHERS.

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURES.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

UNLESS OTHERWISE NOTED, ALL PIPES UNDER SOIL SUPPORTED STRUCTURAL SLABS AND FOOTINGS SHALL BE ENCASED IN REINFORCED CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS. PIPES SHALL BE PRESSURE TESTED BEFORE ENCASEING. NOT ALL PIPING SHOWN ON STRUCTURAL DRAWINGS. REFER TO CIVIL AND MECHANICAL FOR PIPING SIZE AND LOCATIONS.

**CONCRETE:**

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS.
- ALL CONCRETE SHALL BE AIR-ENTRAINED AT 28 DAYS UNLESS OTHERWISE NOTED.
- WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.
- ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CONCRETE FINISHING IS COMPLETED OR FORMS ARE REMOVED.
- ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A MINIMUM CHAMFER OF 3/4" UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATION OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWING.

**REINFORCING STEEL:**

- REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS.
- ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:
  - CONCRETE CAST AGAINST EARTH 3"
  - FORMED SURFACES IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER 2"

LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

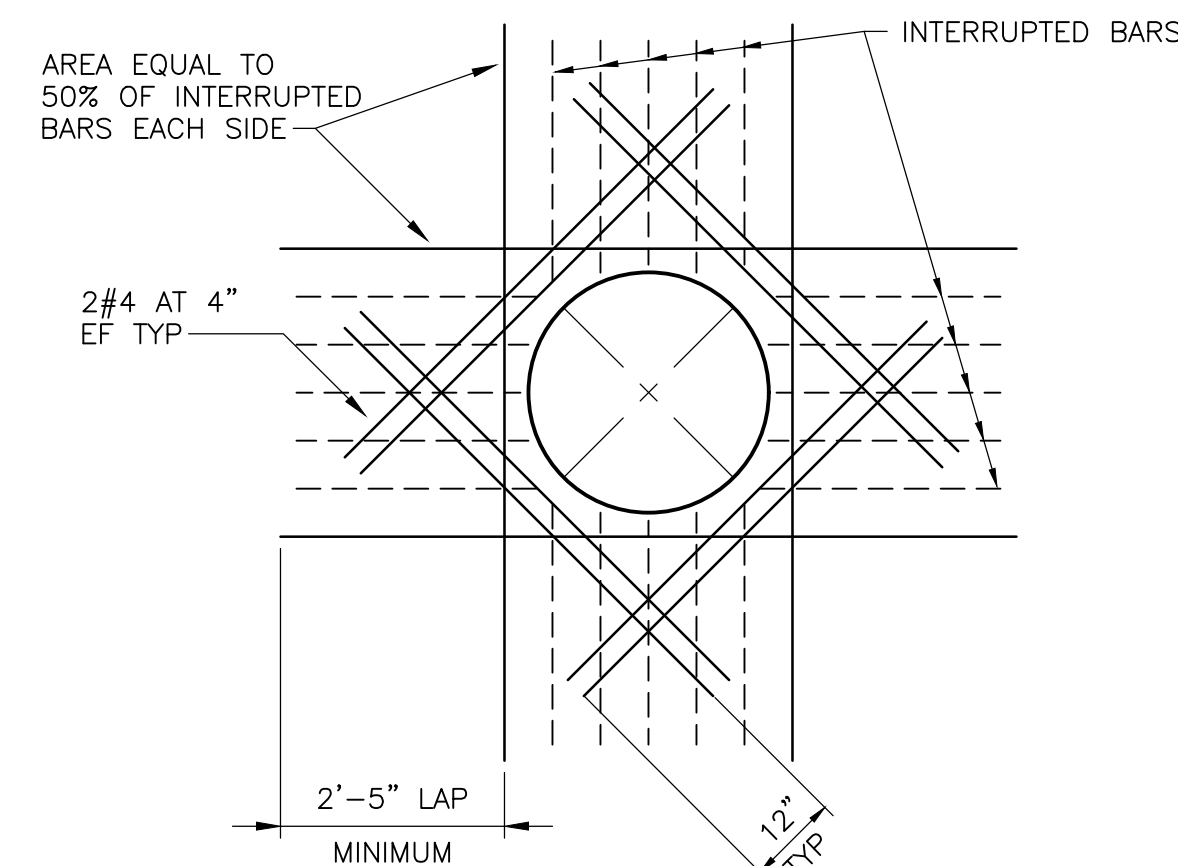
**GEOTECHNICAL REPORTS:**

- WELL SLABS NO. 1 AND NO. 2:
  - GEOTECHNICAL ENGINEERING REPORT ENTITLED "FOXFIRE COMMUNITY 0.5 MGD WATER WELLS, 5500 RADIO ROAD, NAPLES, COLLIER COUNTY, FLORIDA," PREPARED BY YPC CONSULTING GROUP, P.L., DATED JANUARY 18, 2022.
- WELL SLAB NO. 3:
  - GEOTECHNICAL ENGINEERING REPORT ENTITLED "FOXFIRE COMMUNITY METERING ASSEMBLY AND WATER WELL #3, 4591 DAVIS BOULEVARD (WELL), NAPLES, COLLIER COUNTY, FLORIDA," PREPARED BY YPC CONSULTING GROUP, P.L., DATED JUNE 7, 2022.

**ABBREVIATIONS:**

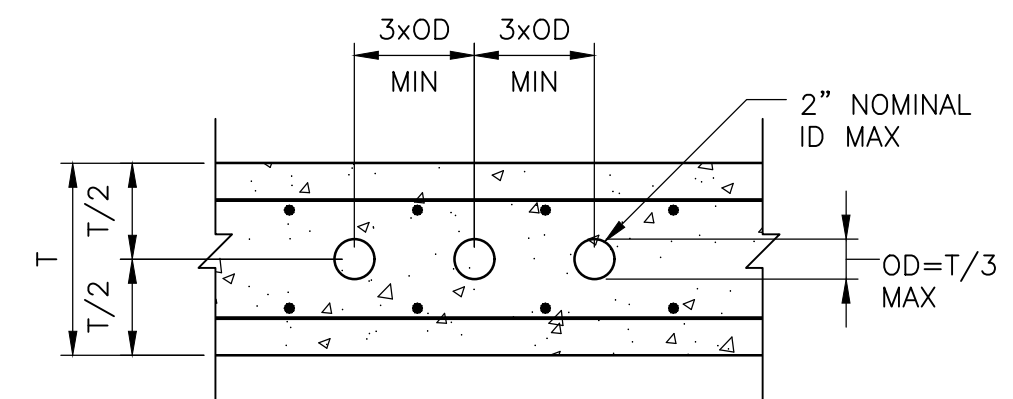
AL	ALUMINUM	OC	ON CENTER
BOT	BOTTOM	PCJ	PARTIAL CONTRACTION JOINT
CONC	CONCRETE	PL	PLATE
CONT	CONTINUOUS	PLF	POUNDS PER LINEAR FOOT PROJECTION
DIA	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DWG	DRAWING	PSI	POUNDS PER SQUARE INCH
EF	EACH FACE	REINF	REINFORCEMENT
EL	ELEVATION	SPECS	SPECIFICATIONS
EW	EACH WAY	SS	STAINLESS STEEL
HORIZ	HORIZONTAL	STD	STANDARD
HP	HIGH POINT	T&B	TOP AND BOTTOM
ID	INSIDE DIAMETER	T/STRUCTURE	TOP OF STRUCTURE
LP	LOW POINT	TYP	TYPICAL
MAT'L	MATERIAL	UDN	UNLESS OTHERWISE NOTED
MAX	MAXIMUM	VERT	VERTICAL
MIN	MINIMUM	VIF	VERIFY IN FIELD
MISC	MISCELLANEOUS		
NTS	NOT TO SCALE		

**NOTE:** THESE ABBREVIATIONS ARE FOR USE ON STRUCTURAL DRAWINGS ONLY.



**REINFORCEMENT AT CIRCULAR OPENINGS GREATER THAN 12"**

**DETAIL A**  
NTS

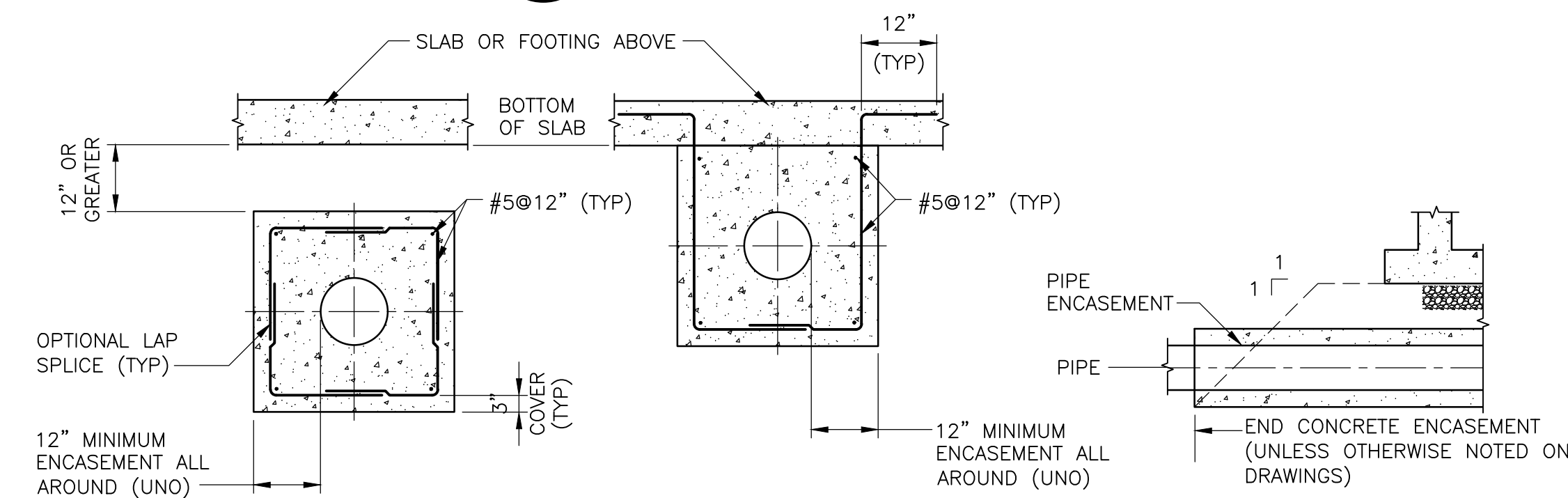


**CONDUIT NOTES:**

- NO CONDUIT SHALL BE EMBEDDED IN STRUCTURAL BEAMS, COLUMNS, WALLS OR SLABS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWING
- CONDUIT SHALL BE PLACED 6" BELOW SLABS
- WHERE CONDUIT MUST PASS THROUGH A SLAB OR WALL, MINIMUM SIZE AND SPACING REQUIREMENT PER THIS DETAIL
- ALUMINUM SHALL NOT BE EMBEDDED IN CONCRETE UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION

**CONDUIT IN SLAB**

**DETAIL B**  
NTS



**CASE A**

**CASE B**

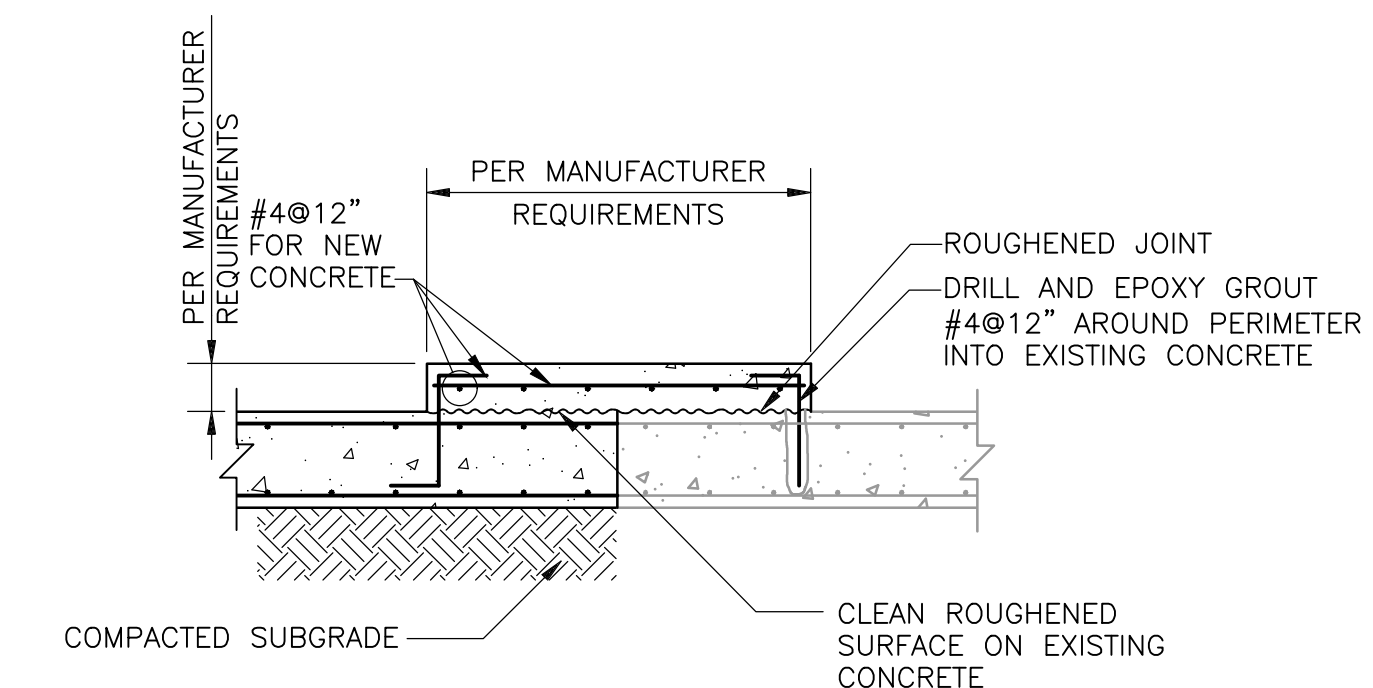
**END OF PIPE ENCASEMENT UNDER STRUCTURES**

**PIPE ENCASEMENT NOTES:**

- MINIMUM ENCASEMENT
  - PIPES LESS THAN 12"Ø - 6"
  - PIPES 12"Ø AND GREATER - 12"
- ALL PIPES SHALL BE PRESSURE TESTED BEFORE CONCRETE PLACEMENT.
- ALL BELOW GRADE PIPES SHALL BE SUPPORTED ON CONCRETE BLOCKS PRIOR TO CASTING OF CONCRETE BEDDING. SIZE AND SPACING OF CONCRETE BLOCK SUPPORTS SHALL BE PER PIPE MANUFACTURER.
- FOR ALL PIPES 12"Ø AND LARGER, ENCASEMENT SHALL BE CAST IN TWO POURS. INITIAL CAST SHALL BE CURED FOR 12 HOURS BEFORE CASTING THE SECOND POUR.
- THE DEPTH OF THE INITIAL POUR SHALL BE SELECTED TO PREVENT FLOATATION OF THE PIPE. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT FLOATATION OF THE PIPE DURING CONCRETING.
- ENCASE ALL PIPES BELOW SLABS AND FOOTINGS. EXTEND ENCASEMENT AS SHOWN IN DETAIL, BEYOND EDGE OF SLAB OR FOOTING.
- MAINTAIN MINIMUM COVER FOR LAPS FOR PIPES SMALLER THAN 6"Ø.
- FOR CASE "A", PROVIDE A PARTIAL CONTRACTION JOINT AT EACH PIPE JOINT. MAXIMUM SPACING BETWEEN PARTIAL CONTRACTION JOINTS 24'-0".
- FOR CASE "B", PROVIDE A JOINT IN THE PIPE AT EACH JOINT IN STRUCTURE. PROVIDE CONSTRUCTION JOINTS IN ENCASEMENT AT LOCATIONS OF CONSTRUCTION JOINTS IN STRUCTURE. PROVIDE PARTIAL CONTRACTION JOINTS IN ENCASEMENT AT LOCATIONS OF CONTROL JOINTS AND EXPANSION JOINTS IN STRUCTURE.

**CONCRETE PIPE ENCASEMENT**

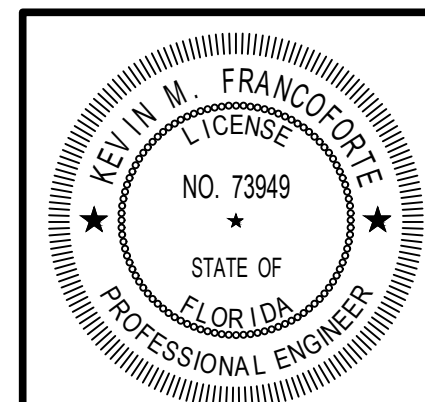
**DETAIL C**  
NTS



**HOUSEKEEPING PAD FOR NEW OR EXISTING SLAB**

**DETAIL D**  
NTS

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DESIGNED BY: K. FRANCOFORTE  
 DRAWN BY: P. SCHIAVO  
 SHEET CHK'D BY: T. VERWEY  
 CROSS CHK'D BY: P. KALARIA  
 APPROVED BY: K. FRANCOFORTE  
 DATE: JULY 2024

**CDM Smith**  
 9160 FORUM CORPORATE PARKWAY, Suite 230  
 Fort Myers, FL 33905  
 Tel: (239) 838-9600  
 FL COA No. EB-0000020

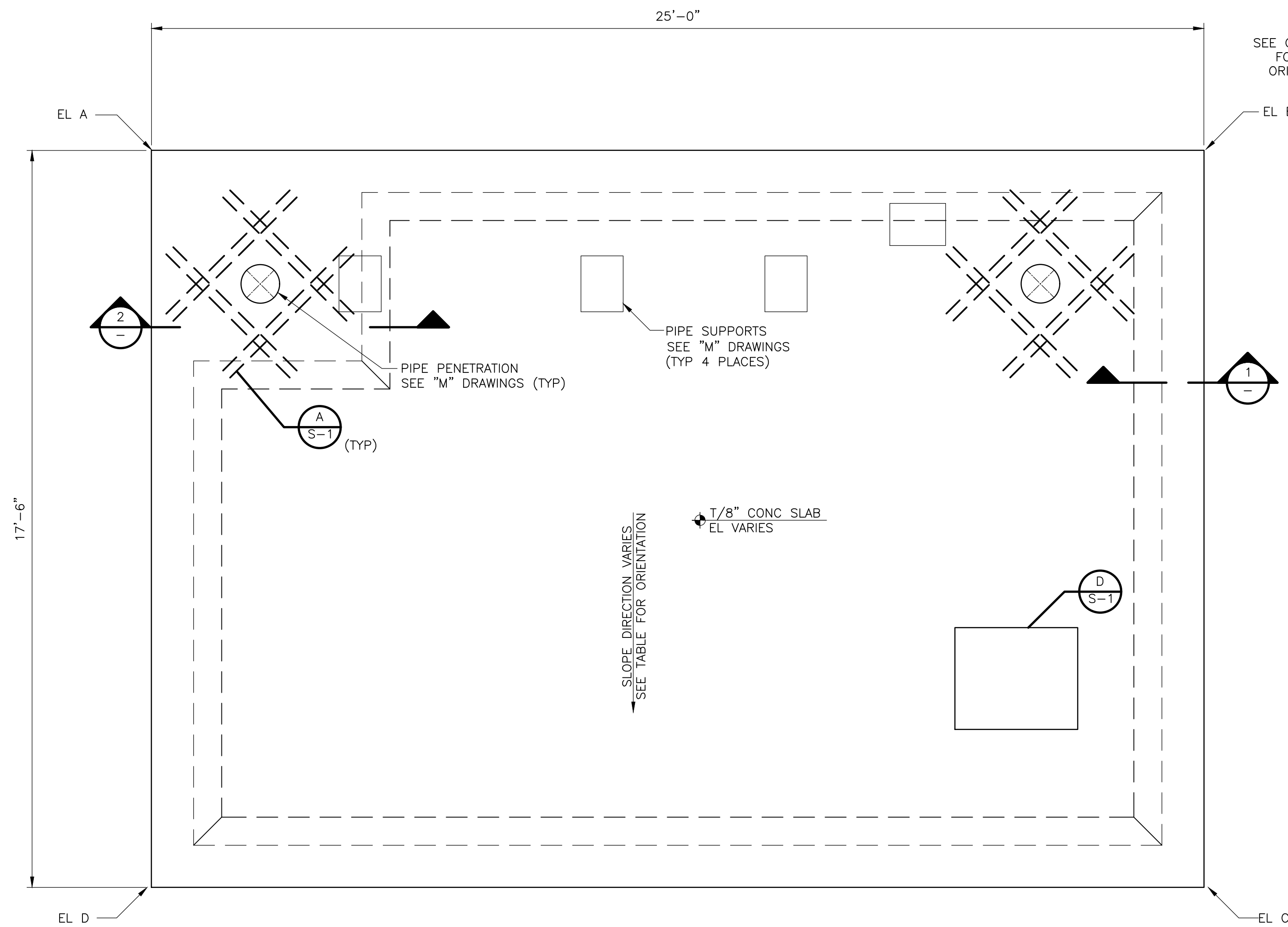
COLLIER COUNTY, FLORIDA  
**FOXFIRE WELLS**

**STRUCTURAL GENERAL NOTES AND DETAILS**

PROJECT NO. 6295-267302  
 FILE NAME: S001STNT.DWG  
 SHEET NO. **S-1**  
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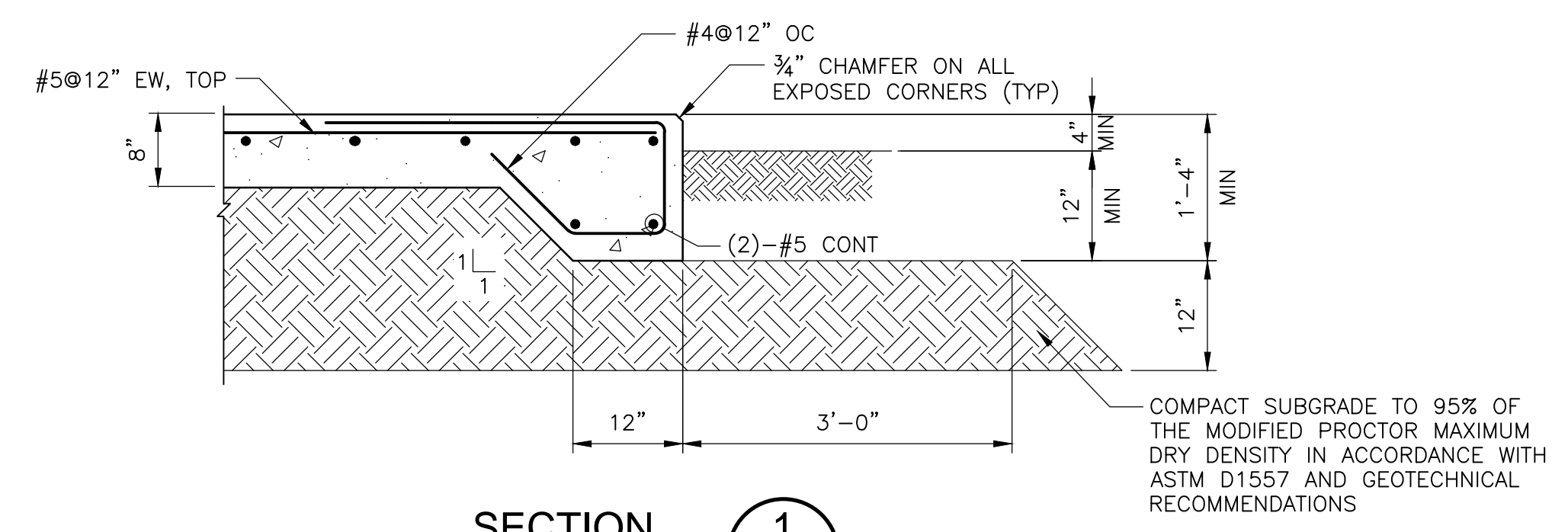
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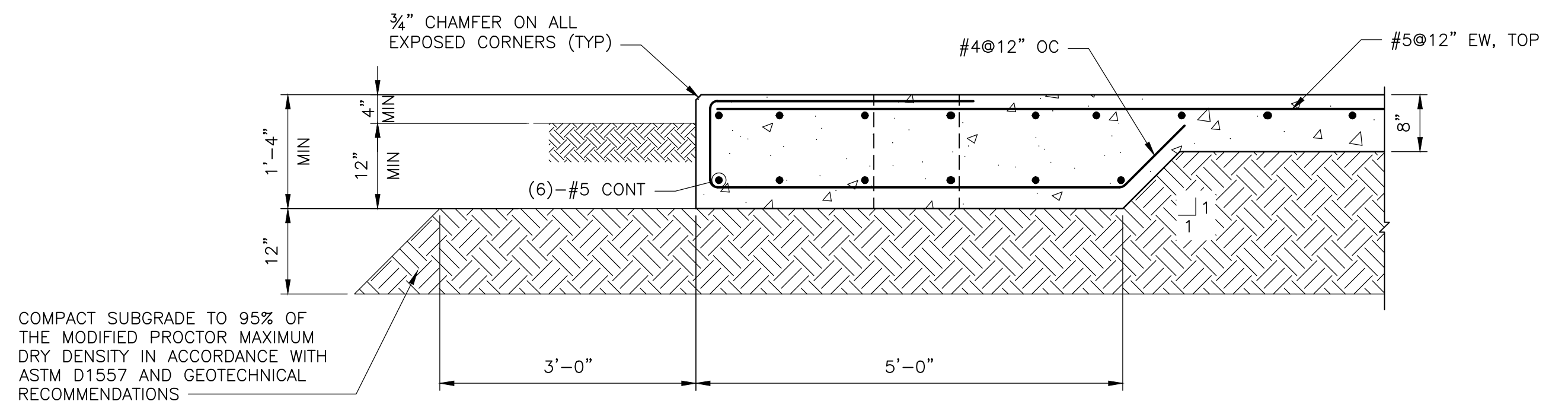
**SLAB PLAN**  
1/2" = 1'-0"

**NOTES:**  
1. SEE CIVIL AND MECHANICAL DRAWINGS FOR WELL SLAB LOCATION AND ORIENTATION.

SLAB ELEVATIONS					
	EL A	EL B	EL C	EL D	SLOPE ORIENTATION
WELL NO. 1	9.70'	9.70'	9.50'	9.50'	NORTH TO SOUTH
WELL NO. 2	9.68'	9.68'	9.84'	9.84'	SOUTH TO NORTH
WELL NO. 3	9.00'	9.30'	9.30'	9.00'	EAST TO WEST

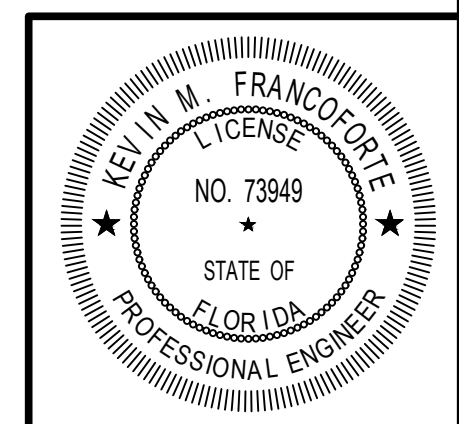


**SECTION 1**  
3/4" = 1'-0"



**SECTION 2**  
3/4" = 1'-0"

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DESIGNED BY: K. FRANCOFORTE  
 DRAWN BY: P. SCHIAVO  
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COLLIER COUNTY, FLORIDA  
**FOX FIRE WELLS**

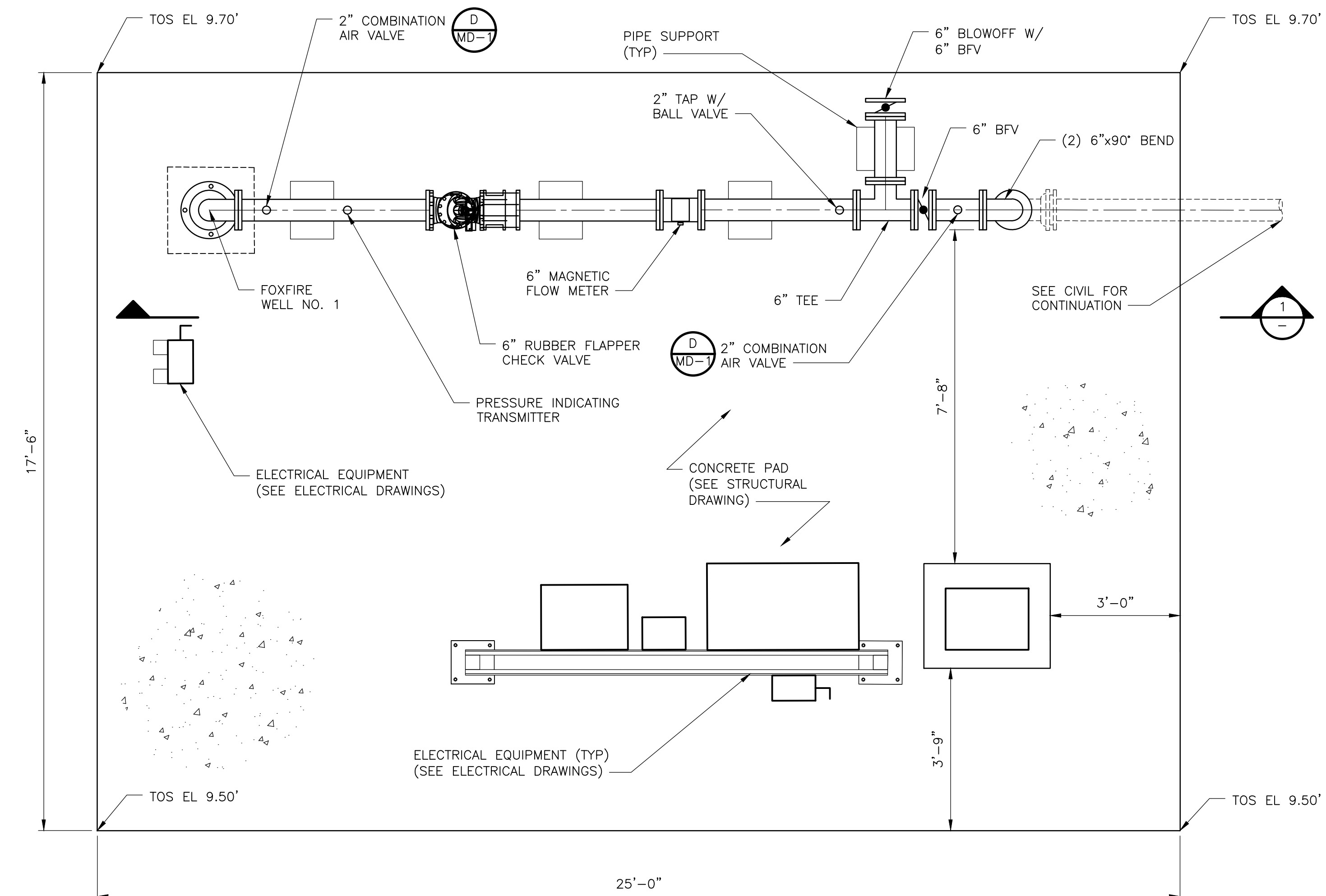
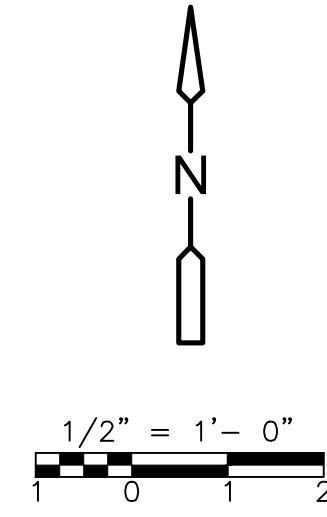
**WELL SLAB PLAN AND SECTIONS**

PROJECT NO. 6295-267302  
 FILE NAME: S002WPPL.DWG  
 SHEET NO.  
**S-2**

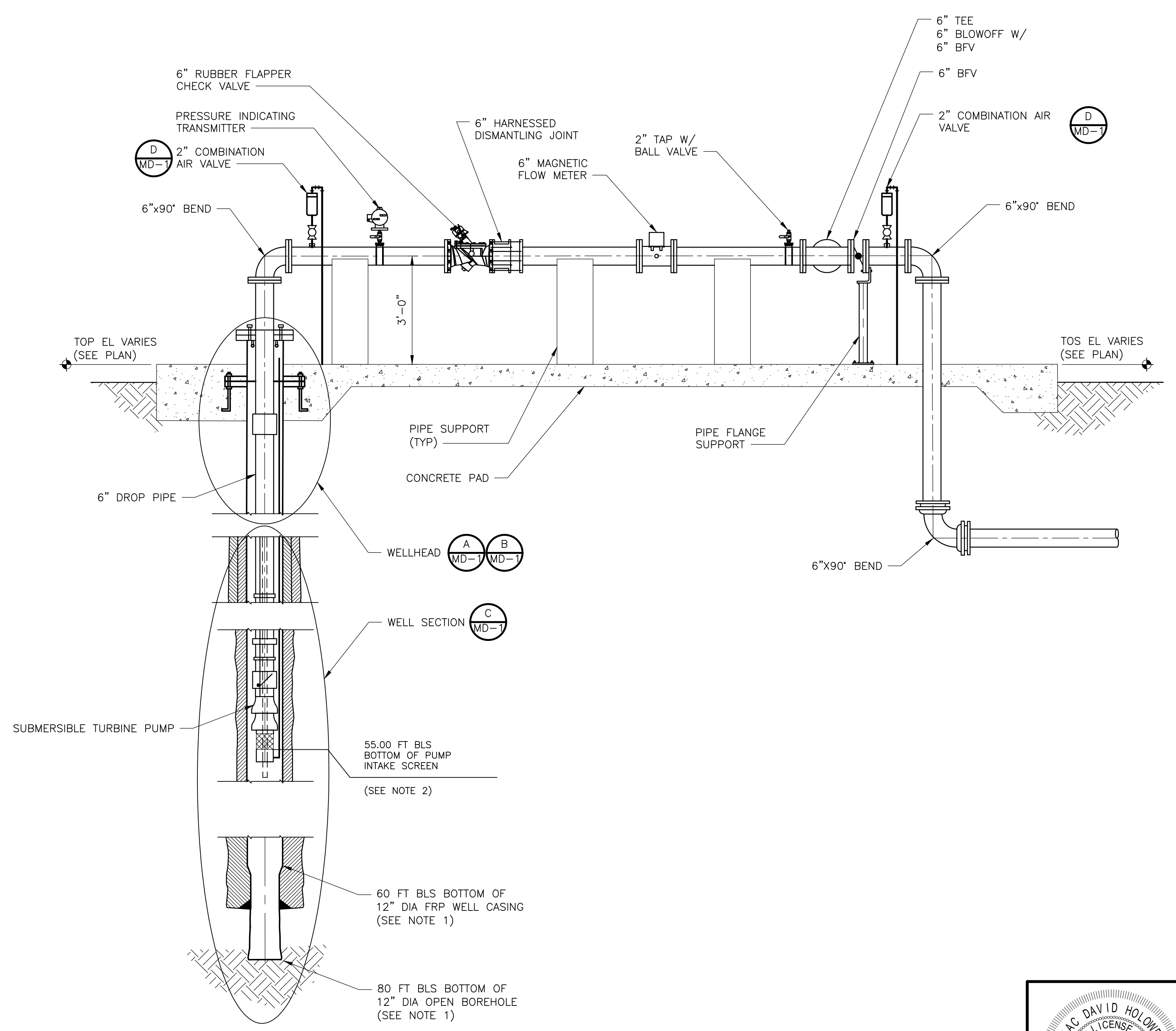


NOTES:

1. WELL CONSTRUCTION SHOWN FOR REFERENCE ONLY. REFER TO SUPPLEMENTARY SPECIFICATIONS FOR FIGURE 2 SHOWING CONSTRUCTION DETAILS FOR THE NEW PRODUCTION WELLS.
2. CONTRACTOR TO INSTALL PUMP AND MOTOR COMBINATION AT THE DEPTH PROVIDED IN THE DRAWINGS AND SPECIFICATIONS. THE BOTTOM OF THE 12-INCH FRP CASING IS TO EXTEND A MINIMUM OF 2 FEET BELOW THE BOTTOM OF THE PUMP AND MOTOR COMBINATION.
3. PUMP SAFETY CABLE SHALL BE INSTALLED WITH LESS SLACK THAN ELECTRICAL CABLE.
4. ALL ABOVE GROUND PIPING, VALVES, AND FITTINGS SHALL HAVE FLANGED JOINTS. ALL PIPE JOINTS, VALVES, AND FITTINGS SHALL BE RESTRAINED.
5. ALL BURIED PIPING, VALVES, AND FITTINGS SHALL HAVE MECHANICAL JOINTS.
6. PIPE SUPPORTS TO BE DELEGATED DESIGN. SEE SPECIFICATION SECTION 400507 FOR REQUIREMENTS.

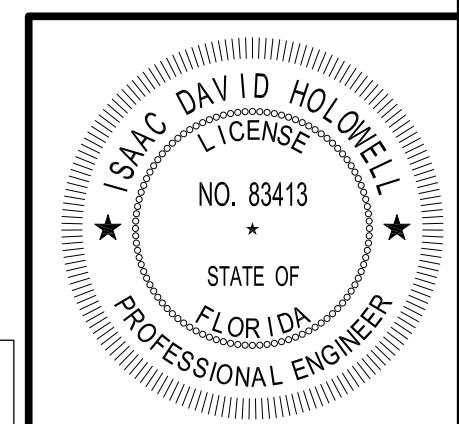


WELL NO. 1  
PLAN  
1/2" = 1'-0"



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

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DRAWN BY: A. EDWARDS
SHEET CHK'D BY: I. HOLOWELL
CROSS CHK'D BY: M. SUNYAK
APPROVED BY: I. HOLOWELL
DATE: JULY 2024

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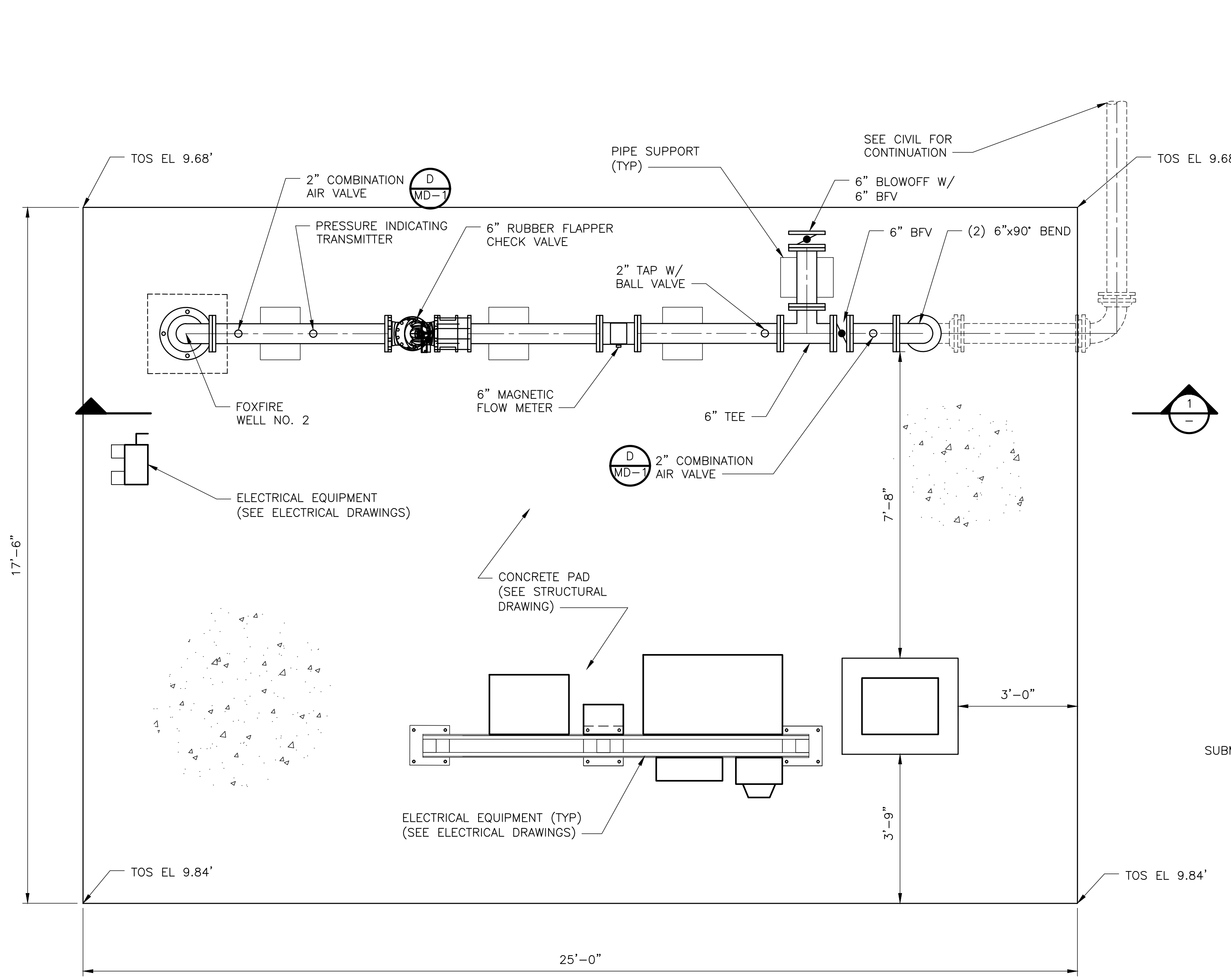
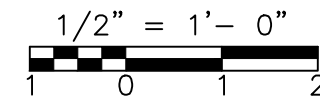
COLLIER COUNTY, FLORIDA  
**FOXFIRE WELLS**  
**FOXFIRE WELL NO. 1  
PLAN AND SECTION**

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FILE NAME: M001WLPL.DWG
SHEET NO. M-1

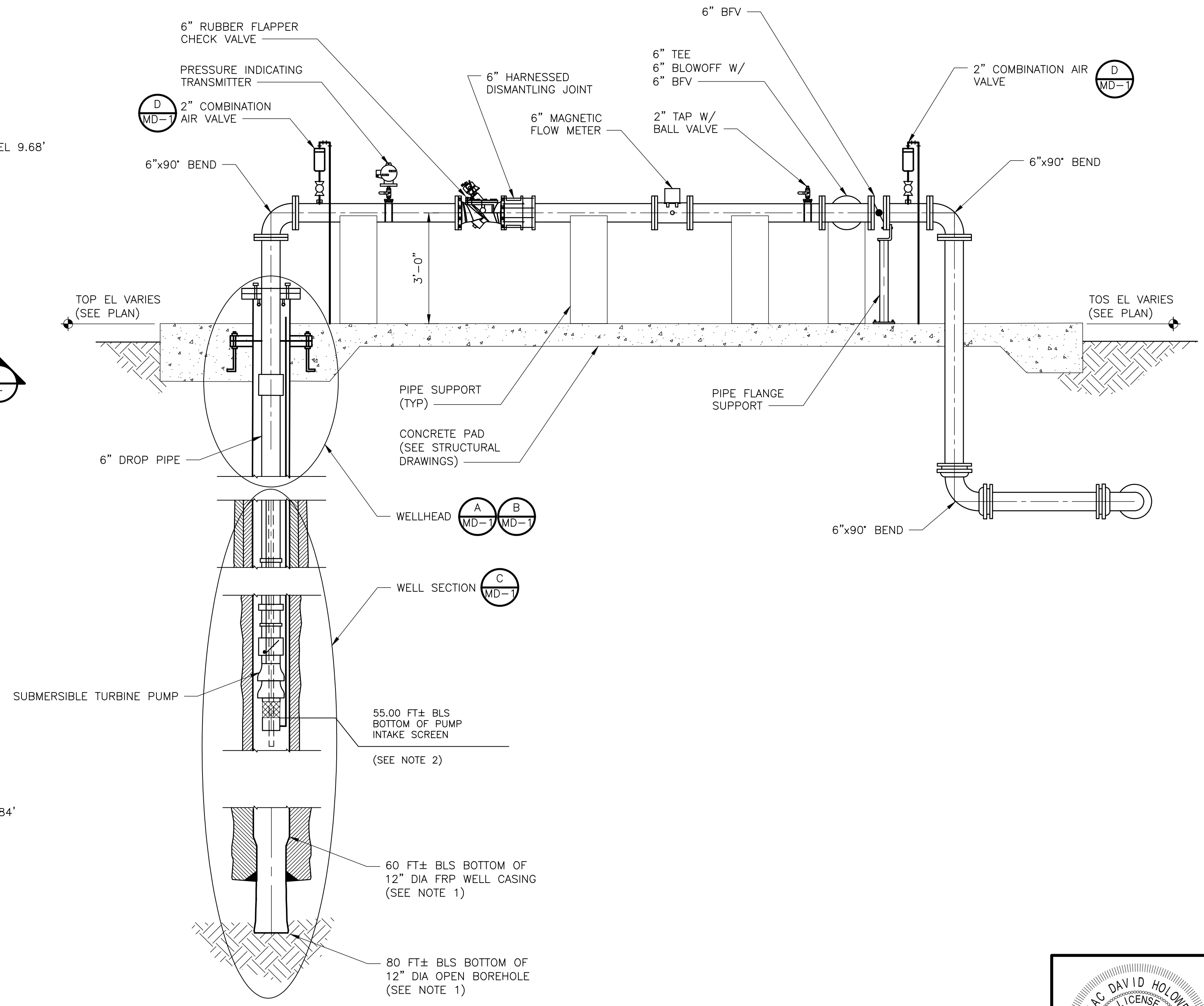


NOTES:

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6. PIPE SUPPORTS TO BE DELEGATED DESIGN. SEE SPECIFICATION SECTION 400507 FOR REQUIREMENTS.

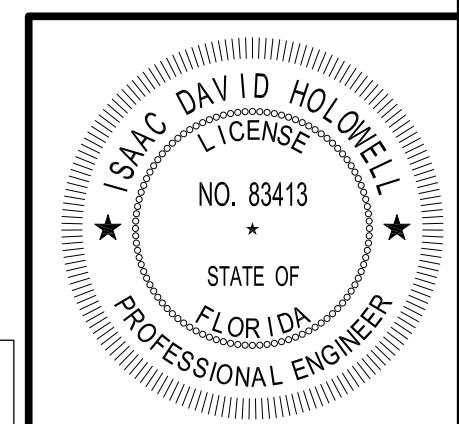


WELL NO. 2  
PLAN  
1/2" = 1'-0"



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

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: I. HOLOWELL	 9160 FORUM CORPORATE PARKWAY, Suite 230 Fort Myers, FL 33905 Tel: (239) 938-9600 FL COA No. EB-0000020
DRAWN BY: A. EDWARDS	
SHEET CHK'D BY: I. HOLOWELL	
CROSS CHK'D BY: M. SUNYAK	
APPROVED BY: I. HOLOWELL	
DATE: JULY 2024	

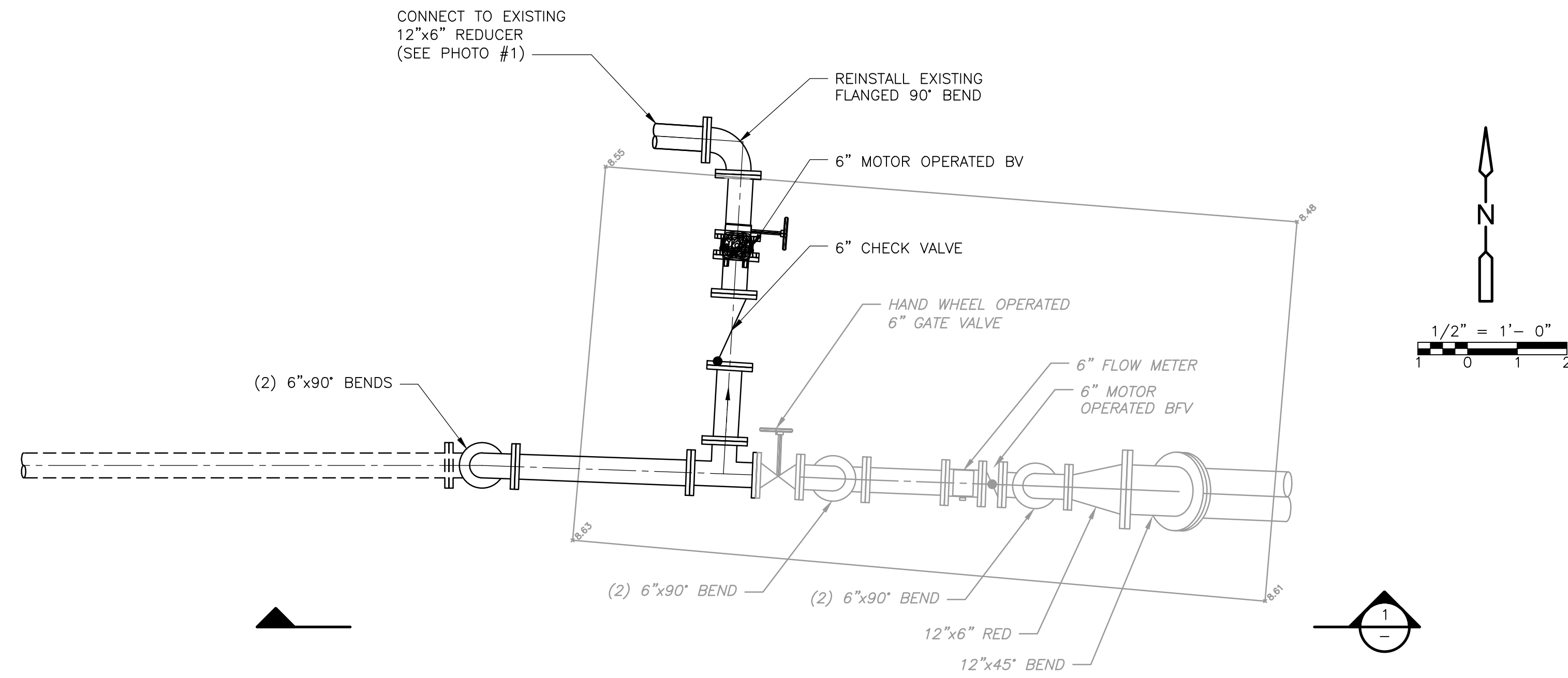
COLLIER COUNTY, FLORIDA  
FOXFIRE WELLS

FOXFIRE WELL NO. 2  
PLAN AND SECTION

PROJECT NO. 6295-267302
FILE NAME: M002WLP.DWG
SHEET NO. M-2

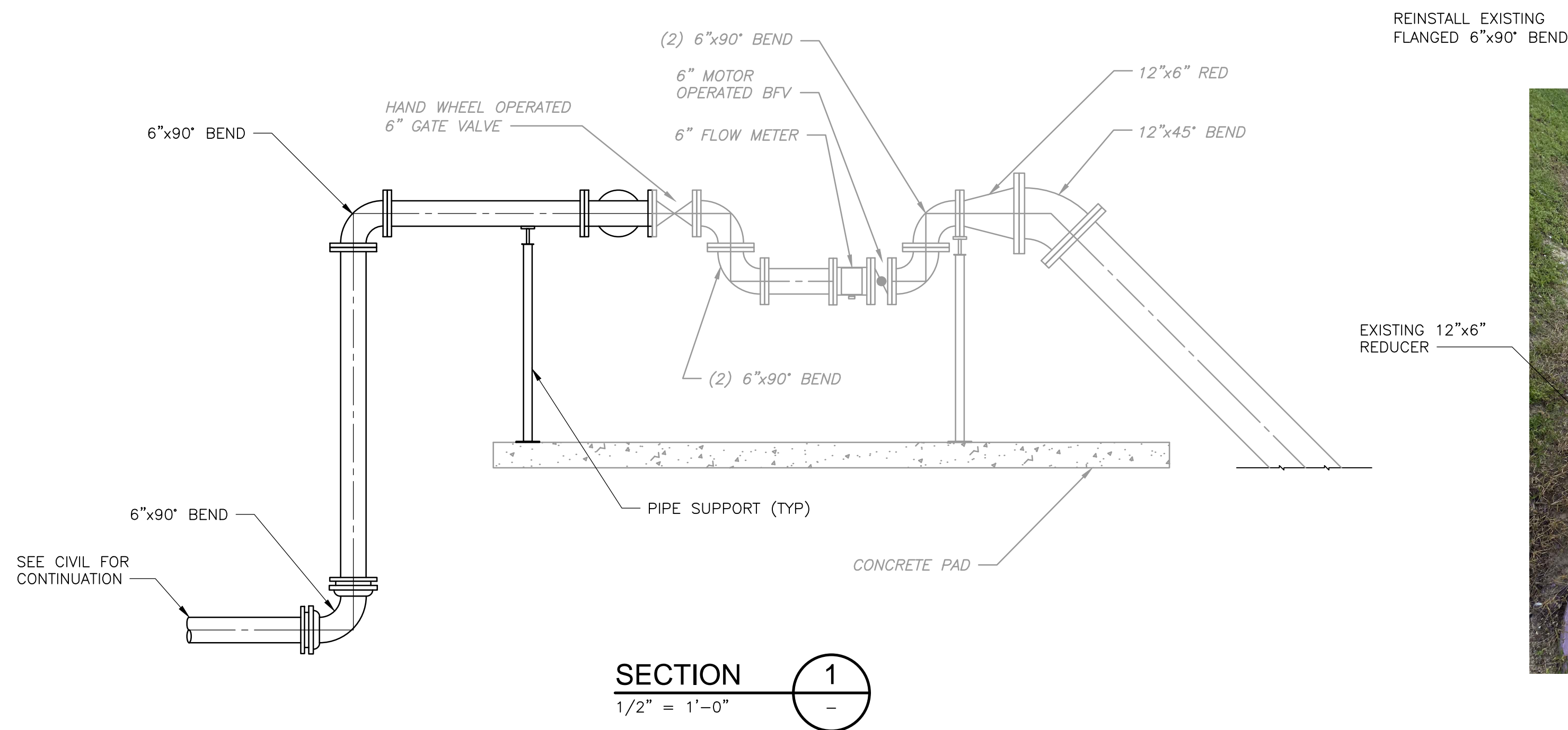


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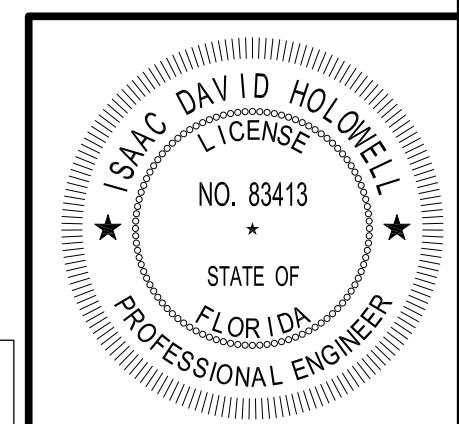
NOTES:

1. CONTRACTOR TO COORDINATE CONNECTIONS TO EXISTING PIPING WITH COLLIER COUNTY STAFF. SHUTDOWN OF PUMP STATION IS ANTICIPATED FOR CONNECTION TO THE FOX FIRE 18 FLOW METER ASSEMBLY.
2. CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS PRIOR TO ORDERING PIPE, FITTINGS, AND VALVES.



DEMOLISH PIPE SPOOLS UTILIZING UNIFLANGES. REPLACE WITH FLANGED DIP SECTIONS (SEE NOTE 2)

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 PE NO. 83413

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: I. HOLOWELL	 9160 FORUM CORPORATE PARKWAY, Suite 230 Fort Myers, FL 33905 Tel: (239) 938-9600 FL COA No. EB-0000020
DRAWN BY: A. EDWARDS	
SHEET CHK'D BY: I. HOLOWELL	
CROSS CHK'D BY: M. SUNYAK	
APPROVED BY: I. HOLOWELL	
DATE: JULY 2024	

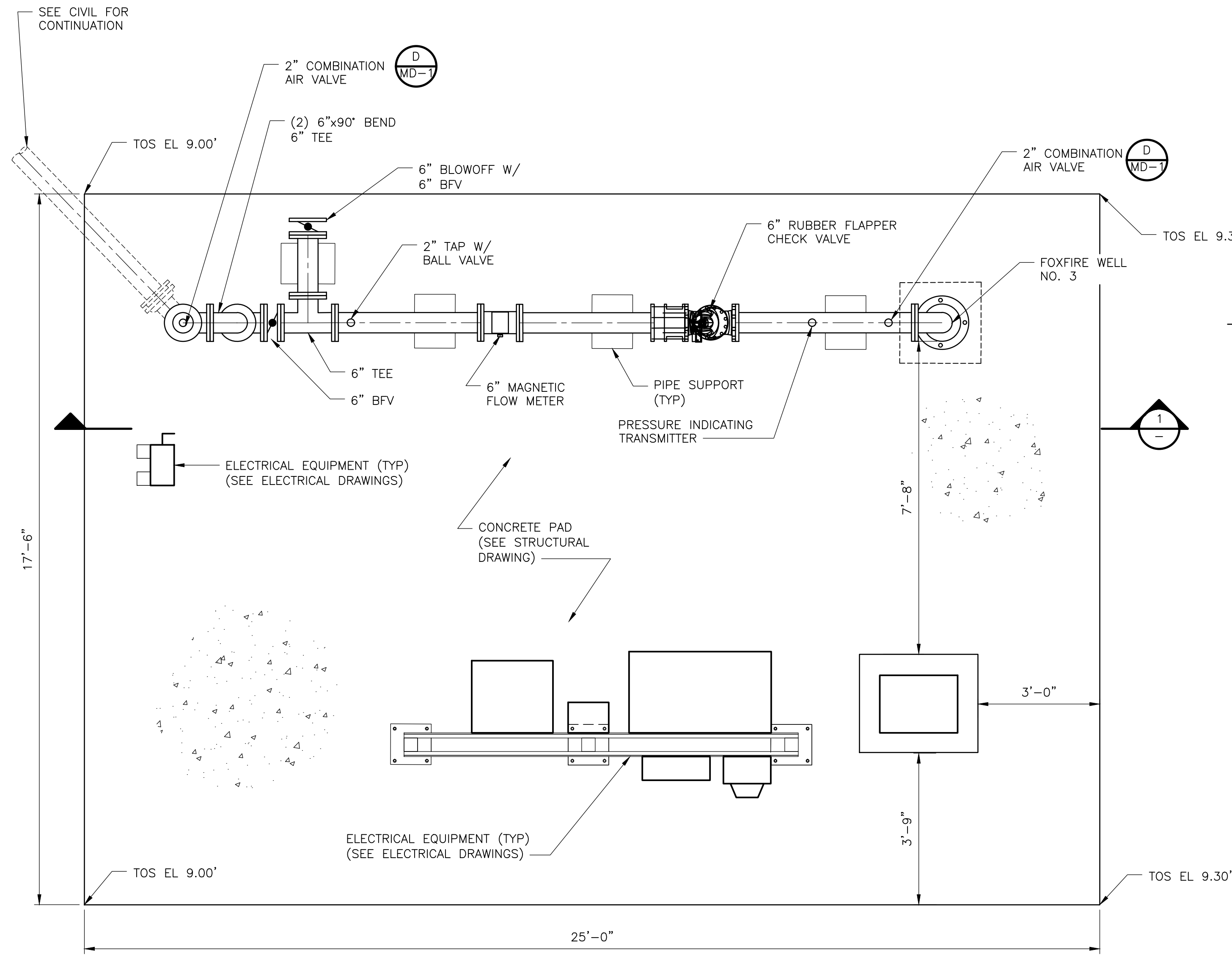
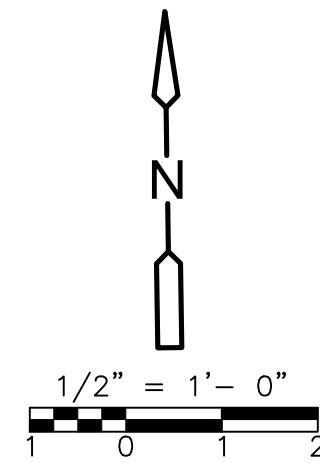
COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

PROJECT NO. 6295-267302  
 FILE NAME: M003WLCN.DWG  
 SHEET NO. M-3

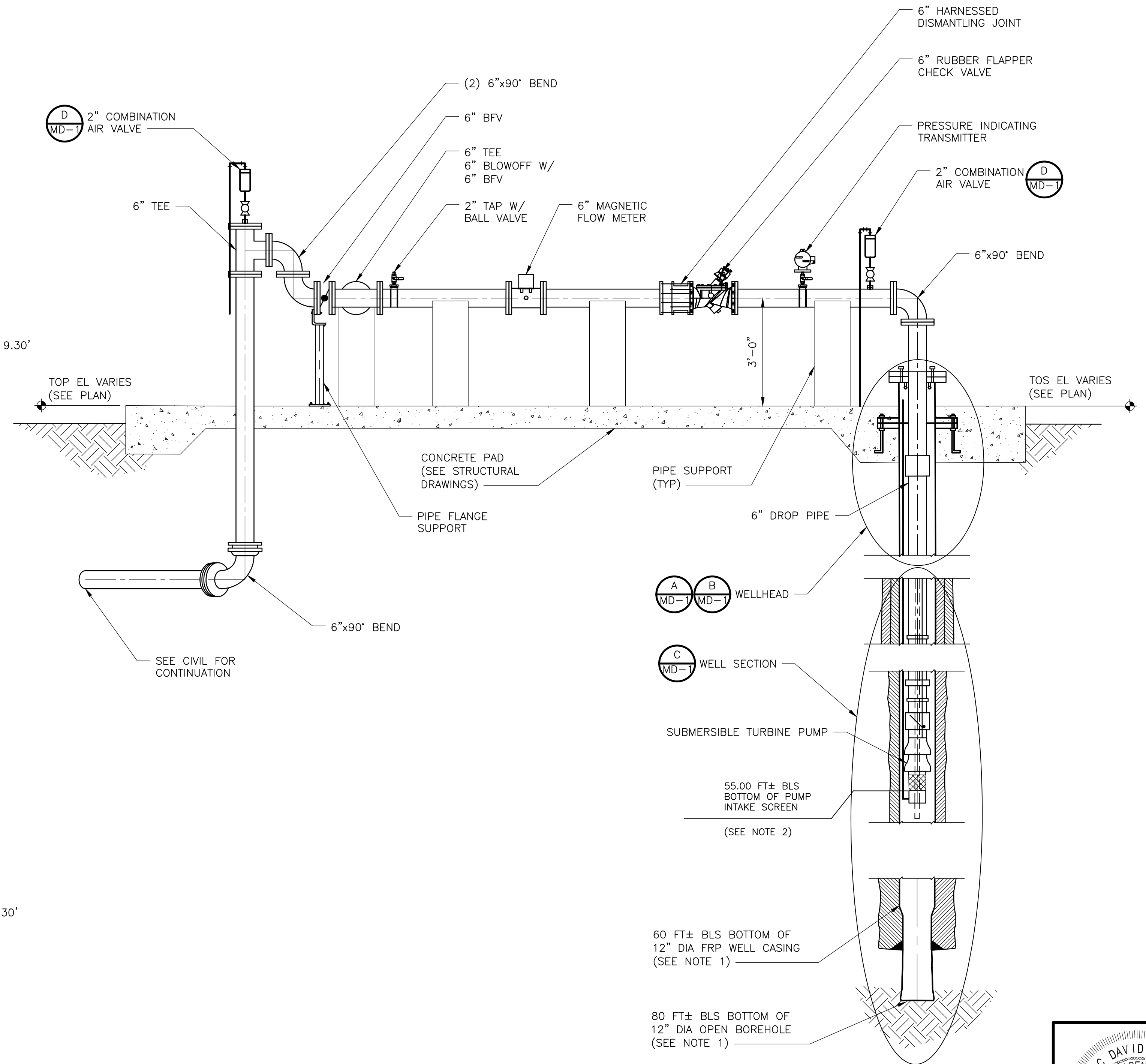
PROJECT NO. 6295-267302  
 FILE NAME: M003WLCN.DWG  
 SHEET NO. M-3

NOTES:

1. WELL CONSTRUCTION SHOWN FOR REFERENCE ONLY. REFER TO SUPPLEMENTARY SPECIFICATIONS FOR FIGURE 2 SHOWING CONSTRUCTION DETAILS FOR THE NEW PRODUCTION WELLS.
2. CONTRACTOR TO INSTALL PUMP AND MOTOR COMBINATION AT THE DEPTH PROVIDED IN THE DRAWINGS AND SPECIFICATIONS. THE BOTTOM OF THE 12-INCH FRP CASING IS TO EXTEND A MINIMUM OF 2 FEET BELOW THE BOTTOM OF THE PUMP AND MOTOR COMBINATION.
3. PUMP SAFETY CABLE SHALL BE INSTALLED WITH LESS SLACK THAN ELECTRICAL CABLE.
4. ALL ABOVE GROUND PIPING, VALVES, AND FITTINGS SHALL HAVE FLANGED JOINTS.
5. ALL BURIED PIPING, VALVES, AND FITTINGS SHALL HAVE MECHANICAL JOINTS. ALL PIPE JOINTS, VALVES, AND FITTINGS SHALL BE RESTRAINED.
6. PIPE SUPPORTS TO BE DELEGATED DESIGN. SEE SPECIFICATION SECTION 400507 FOR REQUIREMENTS.

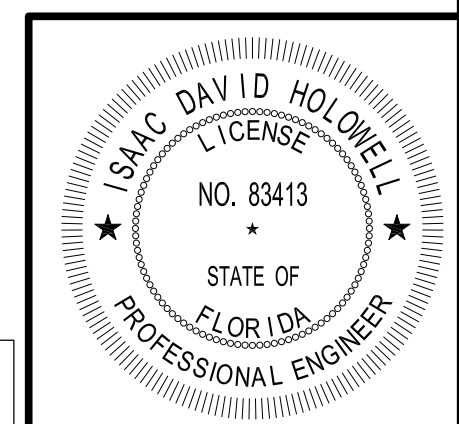


WELL NO. 3  
PLAN  
1/2" = 1'-0"



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

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DRAWN BY: A. EDWARDS
SHEET CHK'D BY: X
CROSS CHK'D BY: M. SUNYAK
APPROVED BY: I. HOLOWELL
DATE: JULY 2024

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 FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

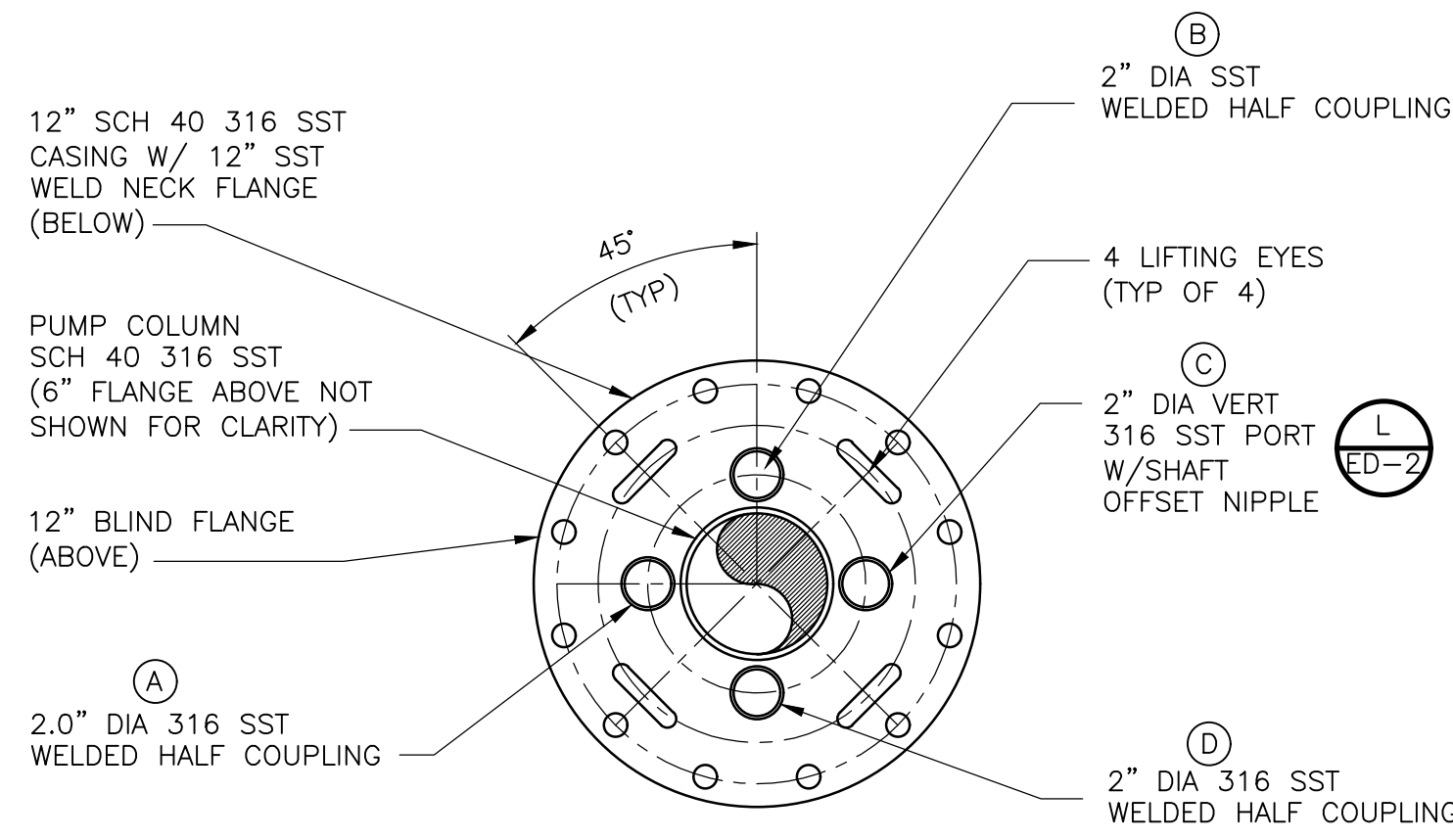
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 SHEET NO. M-4

FOXFIRE WELL NO. 3  
 PLAN AND SECTION

ISSUED FOR BID

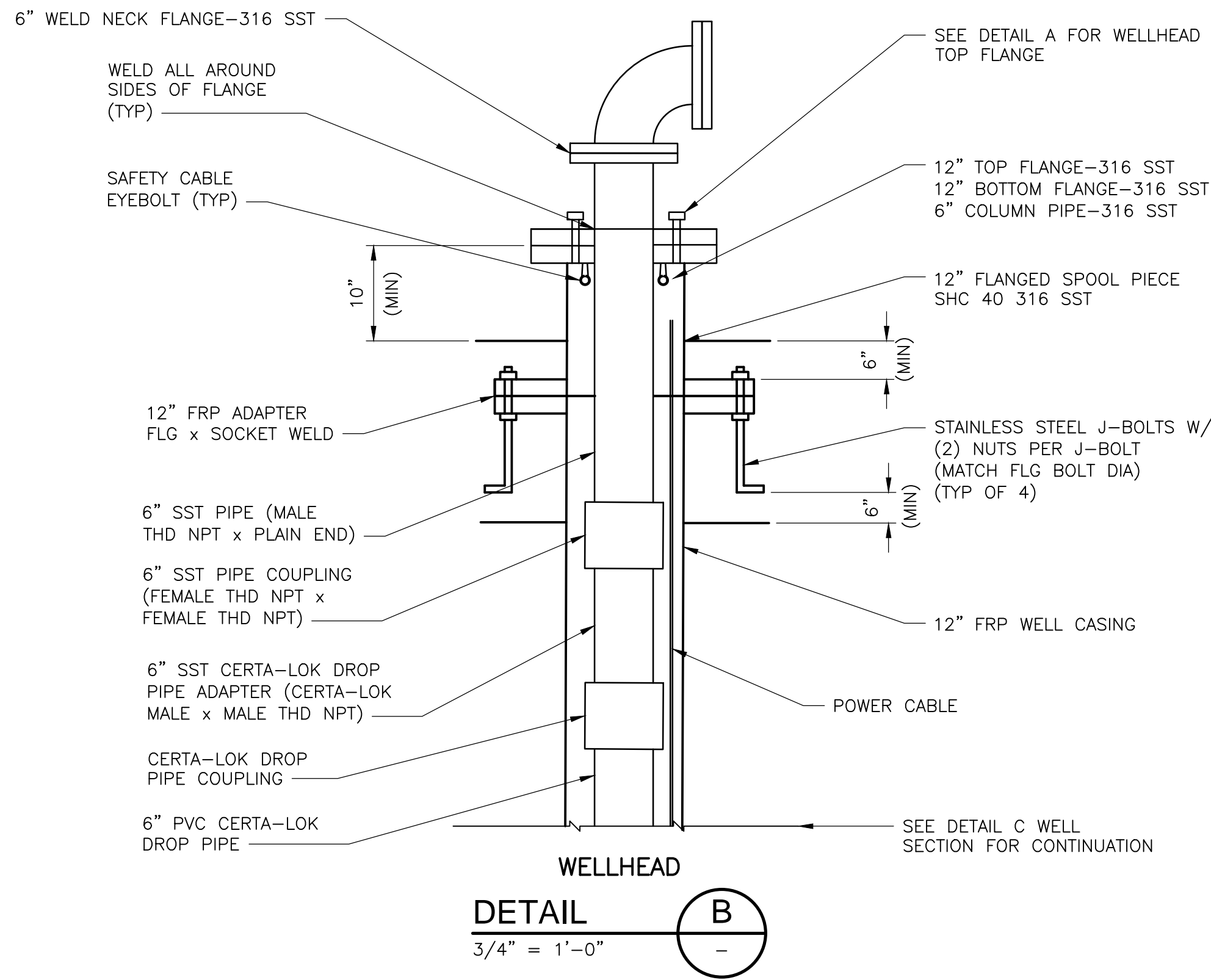


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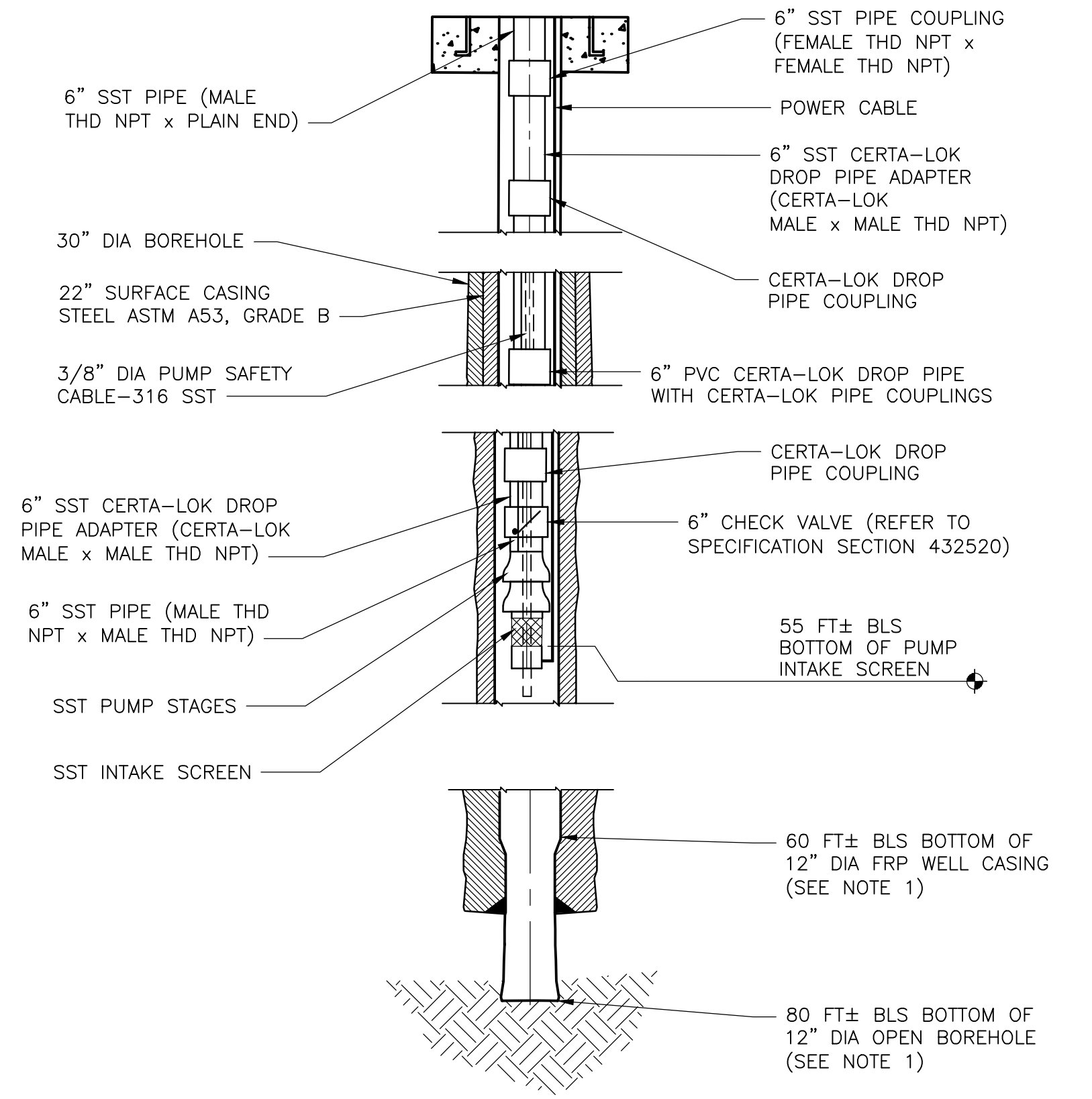


**WELLHEAD TOP FLANGE  
 DETAIL A**  
 NTS

PORT ID	PORT SIZE	PURPOSE
A	2.0"	1" COMBINATION AIR VALVE
B	2.0"	ELECTRICAL CONDUIT
C	2.0"	MANUAL LEVEL MONITORING
D	2.0"	LEVEL TRANSDUCER

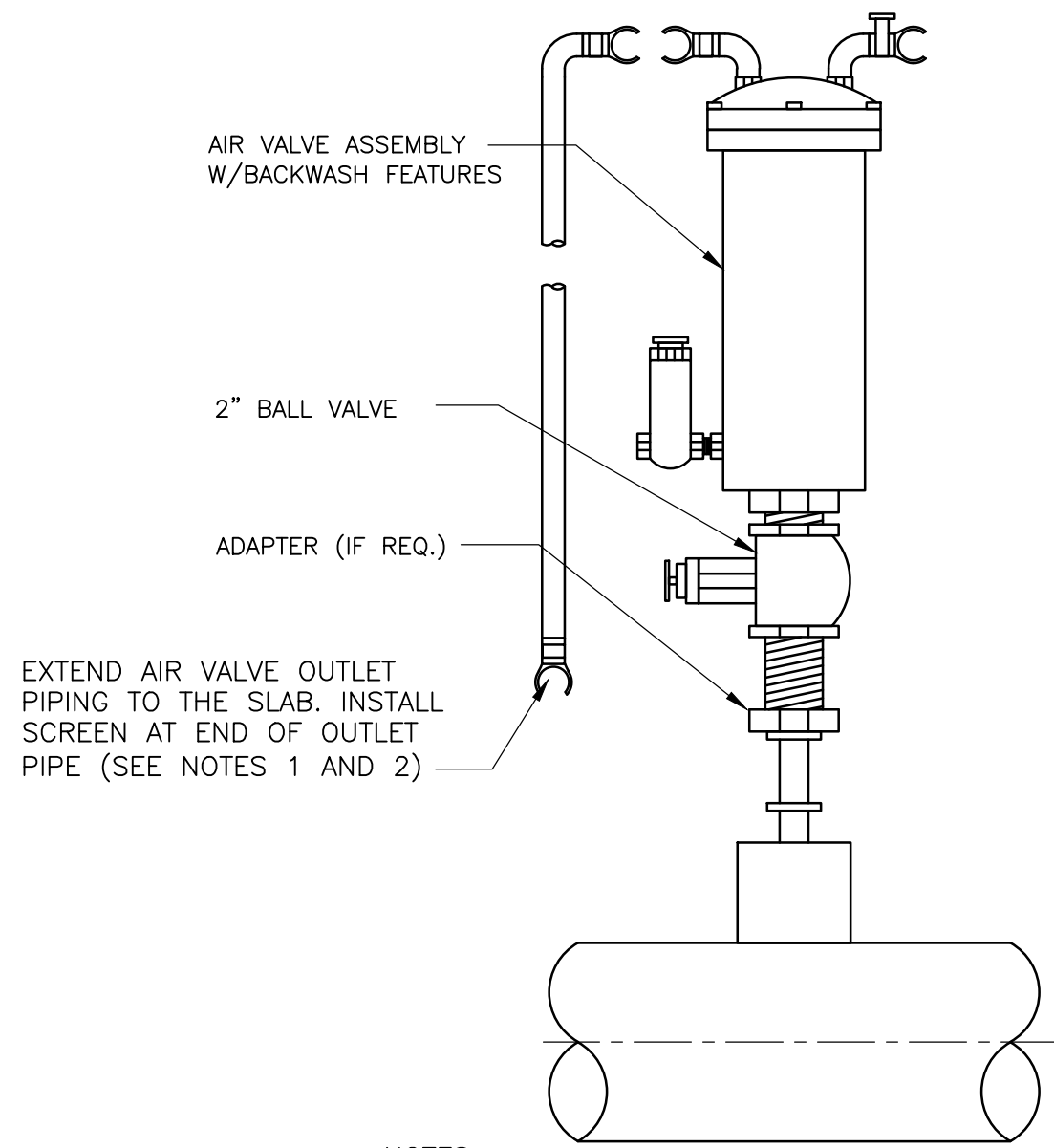


**WELLHEAD  
 DETAIL B**  
 3/4" = 1'-0"



**WELL SECTION  
 DETAIL C**  
 NTS

NOTES:  
 1. WELL CONSTRUCTION SHOWN FOR REFERENCE ONLY. REFER TO SUPPLEMENTARY SPECIFICATIONS FOR FIGURE 2 SHOWING CONSTRUCTION DETAILS FOR THE NEW PRODUCTION WELLS.

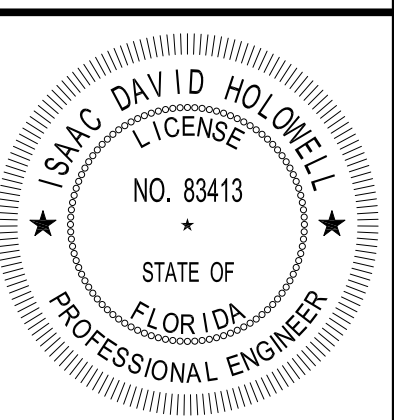


NOTES

- ALL PIPE AND FITTINGS ON AIR RELEASE VALVES SHALL BE 316 SST.
- PIPE DIAMETERS SHALL MATCH THE AIR VALVE INLET AND OUTLET DIAMETERS.

**AIR RELEASE VALVE  
 DETAIL D**  
 NTS

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 PE NO. 83413

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DESIGNED BY: I. HOLOWELL  
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 SHEET CHK'D BY: X  
 CROSS CHK'D BY: M. SUNYAK  
 APPROVED BY: I. HOLOWELL  
 DATE: JULY 2024

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 FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

MISCELLANEOUS DETAILS I

PROJECT NO. 6295-267302
FILE NAME: MD01MMDT.DWG
SHEET NO. MD-1



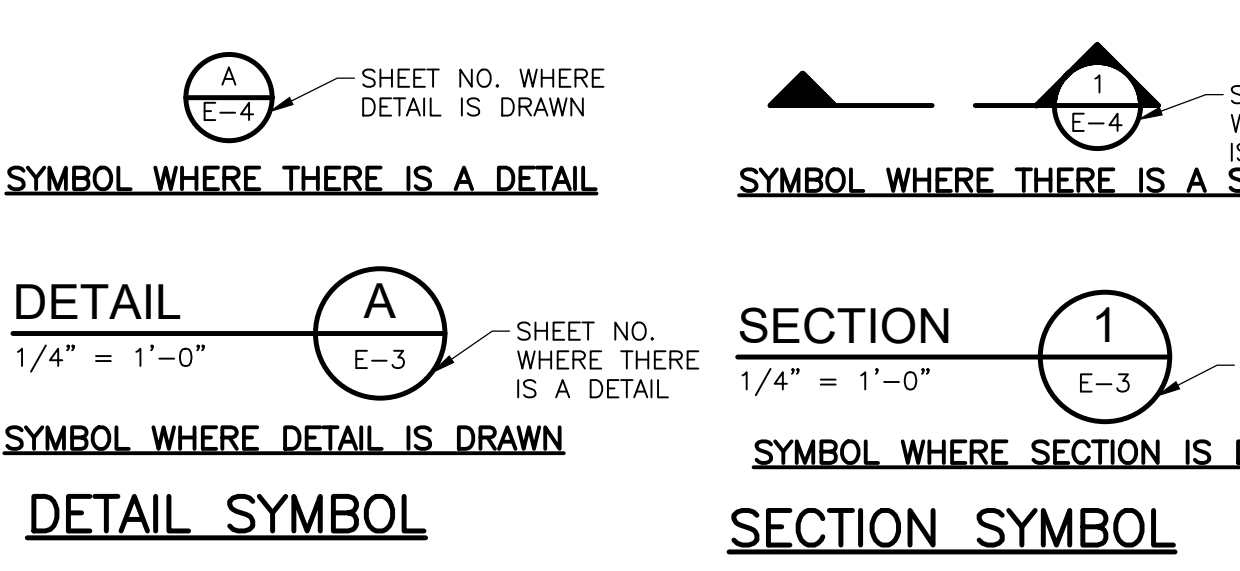
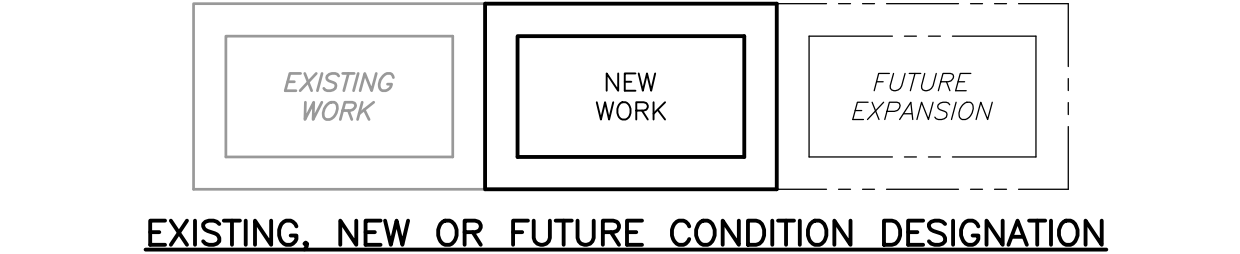
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ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION																
	CB	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED.																
		NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)																
	F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, * AMPERE RATING AND FUSE SIZE AS NOTED * AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)																
	P	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER, 1 POLE UNLESS OTHERWISE NOTED "P" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)																
	T	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED. UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS, ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 4. ISOLATION TRANSFORMERS SHALL HAVE A K=20 RATING																
		CURRENT TRANSFORMER * QUANTITY A = PRIMARY AMPERES																
		POTENTIAL TRANSFORMER * QUANTITY V = PRIMARY VOLTAGE																
	G	GENERATOR, RATINGS AND CONNECTIONS AS NOTED																
		AUTOMATIC OR MANUAL TRANSFER SWITCH NO.1 (ATS-1), (MTS-1) "N" INDICATES NORMAL OR PREFERRED SOURCE "S" INDICATES STANDBY OR ALTERNATE SOURCE 100A INDICATES CONTINUOUS CURRENT RATING																
	*	VARIABLE SPEED DRIVE CONTROLLER * D.C. = D.C. DRIVE CONTROLLER SCR = SILICON CONTROLLED RECTIFIER VFD = VARIABLE FREQUENCY DRIVE																
	M	MOTOR, NUMERAL INDICATES HORSEPOWER																
		PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED																
		PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN																
	ES	EMERGENCY STOP PUSHBUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)																
	PBL	START-STOP PUSHBUTTON CONTROL STATION (MOMENTARY CONTACT) WITH LOCKOUT DEVICE ON STOP																
	PBM	START-STOP PUSHBUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP																
	S/S	OFF/ON SELECTOR SWITCH																
	LR	LOCAL/REMOTE SELECTOR SWITCH																
	*	3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED <table border="1"> <thead> <tr> <th>POSITION</th> <th>TOP CONTACT</th> <th>MIDDLE CONTACT</th> <th>BOTTOM CONTACT</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>X</td> <td>O</td> <td>O</td> </tr> <tr> <td>B</td> <td>O</td> <td>X</td> <td>O</td> </tr> <tr> <td>C</td> <td>O</td> <td>O</td> <td>X</td> </tr> </tbody> </table> NAMEPLATE (A/B/C) HOA - HAND/OFF/AUTO HOR - HAND/OFF/REMOTE LOR - LOCAL/OFF/REMOTE RSL - RAISE/STOP/LOWER TOA - TEST/OFF/AUTO	POSITION	TOP CONTACT	MIDDLE CONTACT	BOTTOM CONTACT	A	X	O	O	B	O	X	O	C	O	O	X
POSITION	TOP CONTACT	MIDDLE CONTACT	BOTTOM CONTACT															
A	X	O	O															
B	O	X	O															
C	O	O	X															

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
		CONTROL RELAY COIL, NUMBER AS INDICATED
		PILOT LIGHT, COLOR AS NOTED * R - RED G - GREEN B - BLUE W - WHITE A - AMBER
		TIME DELAY RELAY RANGE AS NOTED SETPOINT AS NOTED # NUMBER AS INDICATED * TDE - TIME DELAY AFTER ENERGIZATION ON DELAY TDD - TIME DELAY AFTER DE-ENERGIZATION OFF DELAY
		NOTC - NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED
		NCTO - NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED
		NOTO - NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED
		NCTC - NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED
	* - ##	FIELD INSTRUMENT, TAG NO. AS INDICATED * INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS OR P & ID ## INDICATES LOOP NO.
	LS OR ■	LIQUID LEVEL (FLOAT) SWITCH  NORMALLY OPEN, CLOSING ON RISING LEVEL  NORMALLY CLOSED, OPENS ON RISING LEVEL
	PS OR ■	PRESSURE OR VACUUM SWITCH  NORMALLY OPEN, CLOSING ON RISING PRESSURE  NORMALLY OPEN, CLOSING ON DROPPING PRESSURE  NORMALLY CLOSED, OPENS ON RISING PRESSURE  NORMALLY CLOSED, OPENS ON DROPPING PRESSURE
	TS OR T OR ■	TEMPERATURE SWITCH OR THERMOSTAT  NORMALLY OPEN, CLOSING ON RISING TEMPERATURE  NORMALLY OPEN, CLOSING ON DROPPING TEMPERATURE  NORMALLY CLOSED, OPENS ON RISING TEMPERATURE  NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE
	FS OR ■	FLOW SWITCH (AIR, WATER, ETC.)  NORMALLY OPEN, CLOSING ON INCREASED FLOW  NORMALLY CLOSED, OPENS ON INCREASED FLOW
	ZS OR ■	POSITION (LIMIT) SWITCH  NORMALLY OPEN  NORMALLY OPEN - HELD CLOSED  NORMALLY CLOSED  NORMALLY CLOSED - HELD OPEN
	WS OR ■	TORQUE SWITCH  NORMALLY OPEN, CLOSING ON HIGH TORQUE  NORMALLY CLOSED, OPENS ON HIGH TORQUE
	#	UTILIZED IN CONJUNCTION WITH OTHER CONTROL SCHEMATIC SYMBOLS TO DEPICT THE PHYSICAL LOCATION OF THE DEVICE # REPRESENTS LOCATION SEE LOCATION LEGEND ON DRAWING
		CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
		CONDUCTORS ELECTRICALLY CONNECTED
	S	SOLENOID VALVE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	⊙	GROUND OR GROUND ROD
		FUSE, AMPERE RATING AS NOTED
		CONTACT, NORMALLY OPEN (NO)
		CONTACT, NORMALLY CLOSED (NC)
		OVERLOAD RELAY HEATER
	TB	TERMINAL OR TEST BLOCK
	ETM	ELAPSED TIME METER
	M	MOTOR OPERATED VALVE OR GATE
		INDICATES LIMITS OF ELECTRICAL EQUIPMENT OR WIRING ENCLOSURE
SYMBOL	DESCRIPTION	
	LIGHTING FIXTURE "A" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "b" - CONTROLLED BY SWITCH "b" "3" - CIRCUIT NUMBER	
	LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE	
	WALL MOUNTED TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE	
	SHADED AREA INDICATES LIGHTING FIXTURE THAT IS EQUIPPED WITH EMERGENCY BACKUP POWER SOURCE. NOTATIONS SAME AS ABOVE.	
	POLE MOUNTED AREA TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE	
	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS "EM" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" - SUPERVISORY CIRCUIT * - FIXTURE TAG #	
	WALL MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN.	
	HOME RUN TO DESIGNATED EQUIPMENT. BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE NOTED. NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.	
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING.	
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.	
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.	
	"X" INDICATES EXPLOSION PROOF CONDUIT SEAL FITTING.	
	CONCRETE ENCASED DUCTBANK. WIDTH VARIES, SEE DUCTBANK SECTION/DETAILS FOR REQUIREMENTS AND WIDTH	
	CONDUIT STUBBED OUT AND CAPPED	
	DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR.	
	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES, EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.	
	SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.	

SYMBOL	DESCRIPTION
(3) 4" C.	THREE 4-INCH CONDUITS
	FLEXIBLE METAL CONDUIT "WHIP" (3/4" C., 2#12, 1#12G UNLESS OTHERWISE NOTED) FOR LIQUID TIGHT MOTOR CONNECTIONS
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W * GFCI - GROUND FAULT CIRCUIT INTERRUPTER TYPE WP - WEATHERPROOF XP - EXPLOSION PROOF T - TRANSIENT VOLTAGE SURGE SUPPRESSOR IC - ISOLATED GROUND 4 - CIRCUIT NUMBER
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W MOUNTED ABOVE COUNTER-TOP OR 42" AFF * NOTATIONS SAME AS ABOVE
	JUNCTION BOX
	INDICATED EQUIPMENT AND MATERIALS TO BE DEMOLISHED
	GROUND SYSTEM GRID OR LOOP, 36" BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
	EXOTHERMIC WELD CONNECTION
	3/4" x 10'-0" GROUND ROD. UNLESS SPECIFIED OTHERWISE.
	GROUND ROD TEST WELL STATION (SEE DETAIL SHEET FOR REQUIREMENTS)
SECURITY SYSTEMS	
	CLOSED CIRCUIT TV CAMERA

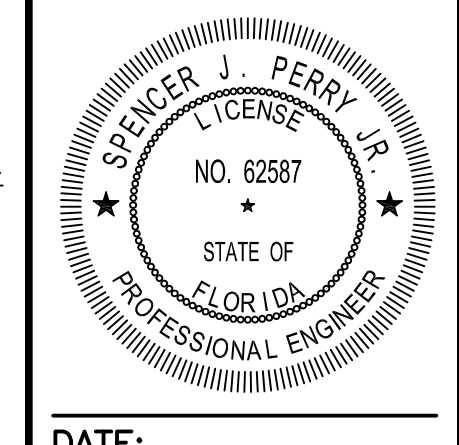


ABBREVIATIONS	
A	AMPS
AC	ALTERNATING CURRENT
AF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
AIC	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CGD	COMBUSTIBLE GAS DETECTOR
CKT	CIRCUIT
CLB	CURRENT LIMITING BREAKER
CLF	CURRENT LIMITING FUSE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH/CONTROL STATION
CT	CURRENT TRANSFORMER
CU	COPPER
CWS	CONDUIT WALL SEAL
DC	DIRECT CURRENT
DIA	DIAMETER
DMU	DIGITAL METERING UNIT
DN	DOWN
EC	EMPTY CONDUIT
ELEC	ELECTRICAL

ABBREVIATIONS (CONTINUED)	
ELEV	ELEVATION
EM EQUIP	EMERGENCY EQUIPMENT
EWC	ELECTRIC WATER COOLER
EW	ELECTRIC WATER HEATER
EX	EXISTING
FO	FIBER OPTIC
FPL	FLORIDA POWER AND LIGHT
GCP	GENERATOR CONTROL PANEL
GEN	GENERATOR
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
HACR	HEATING & AIR CONDITIONING RATED
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HZ	HERTZ
ID	IDENTIFICATION
INSTR	INSTRUMENT
K	KILO (PREFIX)
kcmil	1000 CIRCULAR MILS
KVA	KILOVOLT AMPERES
KW	KILOWATTS
LA	LIGHTNING ARRESTER
LTG	LIGHTING
LP	LIGHTING PANEL
LV	LOW VOLTAGE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOV	MOTOR OPERATED VALVE
MPZ	MINI POWER ZONE
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N	NEUTRAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE
OH	OVERHEAD
OL	OVERLOAD
PB	PULL BOX
PCP	PUMP CONTROL PANEL
PH	PHASE
PMH	POWER MANHOLE
PNL	PANEL OR PANELBOARD
PP	POWER PANEL
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RECP	RECEPTACLE
REQD	REQUIRED
QTY	QUANTITY
SA	SURGE ARRESTER
SEC	SECONDS OR SECONDARY
SH	SHIELDED OR SPACE HEATER
SHH	SIGNAL HANDHOLE
SPD	SURGE PROTECTIVE DEVICE
SS	STAINLESS STEEL
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TIME TO CLOSE OR TRAY CABLE
TEL	TELEPHONE
TO	TIME TO OPEN
TS	TWISTED SHIELDED OR THERMAL SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS, WIDTH, WITH, WIRE
WP	WEATHERPROOF
XP	EXPLOSION PROOF
XFMR	TRANSFORMER

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DATE: SPENCER J. PERRY JR  
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. STELLMACK  
 DRAWN BY: A. CARTER  
 SHEET CHK'D BY: A. HENDELS  
 CROSS CHK'D BY: S. PERRY  
 APPROVED BY: S. PERRY  
 DATE: JULY 2024



COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

ELECTRICAL LEGEND

PROJECT NO. 6295-267302  
 FILE NAME: E001NFLG.DWG  
 SHEET NO. E-1  
 ISSUED FOR BID

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**SCOPE OF WORK:**

1. PROVIDE ELECTRICAL SERVICE FOR TWO NEW WELLS AT THE FOXFIRE GROUND STORAGE TANK (GST) SITE.
2. PROVIDE ELECTRICAL SERVICE FOR ONE NEW WELL AT THE DAVIS BLVD. SITE, AS SHOWN ON THE DRAWINGS.
3. PROVIDE POWER SYSTEM STUDIES IN ACCORDANCE WITH SPECIFICATION 260573.

**GENERAL NOTES:**

1. ELECTRICAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL LAYOUT OF WORK TO BE INSTALLED UNDER THIS CONTRACT WITHOUT ATTEMPTING TO SHOW ALL DETAILS. FURNISH LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DOCUMENTS.
2. COORDINATE WORK WITH OTHER TRADES AND THE OWNER.
3. MAINTAIN EXISTING PROCESS OPERATIONS. POWER INTERRUPTIONS TO ELECTRICAL EQUIPMENT SHALL BE AT OWNER'S CONVENIENCE WITH 72 HOURS MINIMUM NOTICE. EACH INTERRUPTION SHALL HAVE PRIOR WRITTEN APPROVAL.
4. FIELD VERIFY EXISTING UNDERGROUND ELECTRICAL CONDUIT, CONCRETE DUCT BANKS, MANHOLES, PULL BOXES, ETC. AND MECHANICAL PIPING. CONTRACTOR SHALL INCLUDE IN BID COSTS ASSOCIATED WITH RELOCATION OR REMOVAL OF UNDERGROUND EQUIPMENT AS REQUIRED BY THIS CONTRACT. USE DUE CARE IN CONGESTED AREAS TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES.
5. CONTRACTOR'S WORK SHALL INCLUDE COMPLETE TESTING OF EQUIPMENT AND WIRING INCLUDING MAKING MINOR CORRECTIONS, CHANGES, OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT. WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY; SUBSTANDARD WORK WILL BE REJECTED.
6. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO MECHANICAL, STRUCTURAL DRAWINGS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR EXACT LOCATION OF EQUIPMENT. EXCEPT WHERE DIMENSIONS ARE SHOWN, LOCATIONS OF EQUIPMENT, FIXTURES, OUTLETS, AND SIMILAR DEVICES ARE APPROXIMATE.
7. WORK SHALL COMPLY WITH NEC AND LOCAL CODES.
8. DO NOT SPLICE CONDUCTORS EXCEPT AS NOTED.
9. POWER AND CONTROL CONDUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR WIRE SIZED PER TABLE 250.122 OF THE NEC (UON).
10. COORDINATE SEQUENCE OF CONSTRUCTION WITH CIVIL, MECHANICAL, AND STRUCTURAL DISCIPLINES. PROVIDE TEMPORARY POWER AND CONTROL CIRCUITS AS REQUIRED TO MAINTAIN FACILITY OPERATION. VERIFY EXISTING UTILITIES IN AREA OF CONSTRUCTION. REFER TO CIVIL DRAWINGS FOR ADDITIONAL UNDERGROUND INFORMATION.
11. REPAIR, IN ACCORDANCE WITH SPECIFICATIONS, SIDEWALKS, WALLS, ROADWAYS, ETC. DISTURBED BY CONSTRUCTION ACTIVITIES WHETHER OR NOT SHOWN FOR REPAIR/REPAVING ON CIVIL DRAWINGS.
12. CONCEAL CONDUITS TO GREATEST EXTENT PRACTICABLE. CONDUITS RUN AT EXISTING STRUCTURES SHALL BE RUN EXPOSED.
13. WHERE LOCAL DISCONNECTS AND CONTROL PANELS ARE SHOWN ON PLAN VIEWS, LOCATIONS ARE APPROXIMATE. ADJUST LOCATION AS REQUIRED TO COMPLY WITH NEC ARTICLE 110 FOR WORKING CLEARANCES.
14. DO NOT INSTALL MAJOR CONDUIT RUNS THROUGH AREAS DESIGNATED FOR FUTURE STRUCTURES.
15. IN GENERAL CONDUIT ROUTING FOR EQUIPMENT AND DEVICES IS NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING ALL CONDUITS WHICH SHALL INCLUDE CONDUITS SHOWN ON ONE-LINE AND RISER DIAGRAMS AND HOME-RUNS SHOWN ON PLAN DRAWINGS. REFER TO SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
16. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
17. INTERPRETATION OF ELECTRICAL DRAWINGS: CIRCUIT IDENTIFICATION, ROUTING, AND SIZES OF CONDUITS AND WIRES ARE SHOWN ON THE FOLLOWING DRAWINGS:
  - A. ONE LINE POWER DIAGRAMS: POWER, CONTROL AND SIGNAL WIRING REQUIREMENTS FOR ELECTRICAL DISTRIBUTION EQUIPMENT AND UTILIZATION EQUIPMENT POWERED FROM SWITCHGEAR, SWITCHBOARDS, MOTOR CONTROL CENTERS AND MAJOR POWER DISTRIBUTION PANELBOARDS ARE TYPICALLY SHOWN ON THE ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE AND QUANTITY FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT, AND SIZE OF THE GROUNDING ELECTRODE CONDUCTORS.
  - B. INSTRUMENTATION AND CONTROL RISER DIAGRAMS: POWER, CONTROL, SIGNAL AND DATA HIGHWAY WIRING REQUIREMENTS FOR INSTRUMENTS AND CONTROL DEVICES CONTROLLED/MONITORED FROM INSTRUMENTATION AND CONTROL PANELS SUCH AS RTUS, PLCs, TERMINAL CABINETS, AND REMOTE I/O PANELS ARE TYPICALLY SHOWN ON THE INSTRUMENTATION AND CONTROL ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE, QUANTITY AND TYPE FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT.
  - C. FLOOR PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS LOCATED WITHIN STRUCTURES, FLOOR PLANS SHOW THE LOCATION OF ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, UTILIZATION EQUIPMENT, INSTRUMENTS, ANCILLARY EQUIPMENT AND DEVICES AND THE ANTICIPATED PENETRATION LOCATIONS WHERE CONDUITS EXIT/ENTER THE STRUCTURE. HOMERUNS MAY ALSO BE SHOWN FROM MISCELLANEOUS EQUIPMENT NOT SHOWN ON A ONE LINE OR RISER DIAGRAM.
  - D. SITE PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS EXTERIOR TO STRUCTURES AND TO IDENTIFY THE SPECIFIC REQUIREMENTS OF THE UNDERGROUND CONDUITS OR DUCT BANKS, SITE PLANS SHOW THE GENERAL ROUTING OF UNDERGROUND CONDUITS AND DUCT BANKS WITH SECTIONS INDICATING THE CONDUIT SIZE, ARRANGEMENT AND CIRCUIT ROUTING.

**SUBMITTALS:**

1. SUBMIT SHOP DRAWINGS FOR EQUIPMENT, MATERIALS AND OTHER ITEMS FURNISHED UNDER DIVISION 26.
2. SUBMIT CONDUIT SHOP DRAWINGS FOR YARD ELECTRICAL, WITHIN AND UNDER ROADS, BUILDINGS AND STRUCTURES PRIOR TO COMMENCING WORK. DO NOT POUR CONCRETE UNTIL ENGINEER HAS APPROVED THE ASSOCIATED SHOP DRAWING.
3. SUBMIT POWER SYSTEM STUDY IN ACCORDANCE WITH SECTION 26 05 73.
4. SUBMIT OPERATION AND MAINTENANCE MANUALS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
5. SUBMIT STARTUP/COMMISSIONING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
6. SUBMIT TESTING AND SERVICE REPORTS FOR EQUIPMENT AND MATERIALS FURNISHED UNDER DIVISION 26.
7. SUBMIT TRAINING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
8. SUBMIT RECORD DOCUMENTATION TO ACCURATELY SHOW COMPLETED INSTALLATION. INCLUDE MODIFICATIONS TO CONTRACT DOCUMENTS (ONE LINE POWER DIAGRAMS, EQUIPMENT ELEVATIONS, PANEL SCHEDULES, ELEMENTARY CONTROL DIAGRAMS, RISER DIAGRAMS, PLANS, CONDUIT AND DUCTBANK ROUTING, ETC) ALONG WITH ADDITIONAL DRAWINGS OR SKETCHES CREATED TO CONVEY COMPLETED INSTALLATION.

**INTERPRETATION OF CONTRACT DOCUMENTS:**

1. IF DURING PERFORMANCE OF WORK, THERE IS A CONFLICT, ERROR, OR DISCREPANCY BETWEEN OR AMONG CONTRACT DOCUMENTS AND LAWS AND REGULATIONS, PROVIDE THE HIGHER PERFORMANCE STANDARD UNLESS OTHERWISE DIRECTED BY ENGINEER.
2. PRIORITY OF DOCUMENTS: FIGURED DIMENSIONS GOVERN OVER SCALED DIMENSIONS, DETAILED DRAWINGS GOVERN OVER GENERAL DRAWINGS, LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS, CHANGE ORDER DRAWINGS SUPERCEDE ORIGINAL CONTRACT DRAWINGS, AND CONTRACT DRAWINGS GOVERN SHOP DRAWINGS.
3. IN GENERAL, DRAWINGS DO NOT SHOW CONDUIT ROUTING. PLAN AND ROUTE CONDUITS IN COMPLIANCE WITH SPECIFICATIONS AND DRAWING DETAILS. COORDINATE INSTALLATION WITH OTHER TRADES AND ACTUAL SUPPLIED EQUIPMENT.
4. DUCTBANK ROUTING SHOWN ON ELECTRICAL SITE PLANS IS DIAGRAMMATIC IN NATURE AND MAY NOT INCLUDE INTERFERENCES THAT MAY BE PRESENT.
5. SEE ADDITIONAL NOTES ON ELECTRICAL LEGEND SHEET.

**ENCLOSURE TYPES:**

PROVIDE THE FOLLOWING NEMA TYPE ELECTRICAL ENCLOSURES, UNLESS OTHERWISE NOTED:

1. NEMA 1 IN DRY, NON-PROCESS INDOOR LOCATIONS.
2. NEMA 12 IN "DUST" LOCATIONS SHOWN ON THE DRAWINGS.
3. NEMA 4X IN OUTDOOR LOCATIONS, ROOMS BELOW GRADE INCLUDING BASEMENTS AND BURIED VAULTS AND "DAMP" OR "WET" LOCATIONS SHOWN ON THE DRAWINGS.
4. NEMA 4X IN "CORROSIVE" LOCATIONS SHOWN ON THE DRAWINGS.

**MATERIALS AND EQUIPMENT:**

1. PROVIDE NEW MATERIALS AND EQUIPMENT UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE LISTED BY UNDERWRITER'S LABORATORIES, INC., AND SHALL BEAR APPROPRIATE UL LISTING MARK OR CLASSIFICATION MARKING. EQUIPMENT, MATERIALS, ETC. UTILIZED NOT BEARING A UL CERTIFICATION SHALL BE FIELD OR FACTORY UL CERTIFIED PRIOR TO EQUIPMENT ACCEPTANCE AND USE.
3. PROVIDE MAJOR ELECTRICAL EQUIPMENT BY A SINGLE MANUFACTURER: I.E. UNIT SUBSTATIONS, SWITCHGEAR, MOTOR CONTROL CENTERS, DISCONNECT SWITCHES, TRANSFORMERS, PANELBOARDS, ETC.

**EQUIPMENT SIZE, HANDLING AND STORAGE:**

1. COORDINATE WITH EQUIPMENT MANUFACTURER SHIPPING SPLITS TO PERMIT SAFE HANDLING AND PASSAGE OF EQUIPMENT TO FINAL INSTALLATION LOCATION.
2. COMPLY WITH MANUFACTURER'S INSTRUCTIONS FOR UPRIGHT EQUIPMENT ORIENTATION DURING TRANSPORTATION.
3. PROTECT EQUIPMENT FROM MECHANICAL INJURY, OR EXPOSURE TO MOISTURE, CHEMICALS, OR CORROSIVE GASES. DO NOT STORE ELECTRICAL EQUIPMENT OUTDOORS.
4. PROVIDE AND ENERGIZE TEMPORARY SPACE HEATERS IF REQUIRED TO CONTROL MOISTURE DURING STORAGE.

**CUTTING AND PATCHING:**

1. CUT AND PATCH IN A WORKMANLIKE MANNER AS REQUIRED TO INSTALL ELECTRICAL WORK.
2. CUTTING OF STRUCTURAL MEMBERS SUCH AS JOISTS, BEAMS, GIRDERS OR COLUMNS IS PROHIBITED.
3. PATCH SURFACES TO RESTORE TO ORIGINAL INTEGRITY (WATERPROOF OR FIREPROOF AS REQUIRED) AND APPEARANCE.

**SERVICE AND METERING:**

1. ELECTRIC POWER COMPANY SERVING THIS PROJECT IS FLORIDA POWER & LIGHT. POWER COMPANY CONTACT IS TRACY MACFARLANE, TELEPHONE 239-353-6030, EMAIL TRACY.MACFARLANE@FPL.COM. COMPLY WITH POWER COMPANY STANDARDS.
2. PAY FOR FEES AND CHARGES AS REQUIRED FOR TEMPORARY/CONSTRUCTION POWER FOR CONTRACTOR'S USE.
3. PAY FEES AND CHARGES FOR PERMANENT SERVICE VIA BID ALLOWANCE AND SUBMIT POWER COMPANY INVOICES TO OWNER FOR SUBSTANTIATION.
4. POWER COMPANY WORK:
  - PROVIDE PRIMARY SERVICE (OVERHEAD AND UNDERGROUND) TO UTILITY TRANSFORMER(S).
  - PROVIDE UTILITY TRANSFORMER PAD AND GROUNDING FOR PAD MOUNTED UTILITY TRANSFORMER.
  - PROVIDE UTILITY POLE AND GROUNDING FOR POLE MOUNTED UTILITY TRANSFORMER.
  - PROVIDE UTILITY TRANSFORMER(S).
  - TERMINATE UNDERGROUND PRIMARY CABLES AT THE UTILITY TRANSFORMER(S).
  - TERMINATE UNDERGROUND SECONDARY CABLES AT THE UTILITY TRANSFORMER(S).
  - PROVIDE METERING CURRENT TRANSFORMERS (CT'S), METER(S) AND METER WIRING.
5. CONTRACTOR WORK:
  - ARRANGEMENTS WITH POWER COMPANY TO OBTAIN SERVICE, PAY POWER COMPANY FEES, AND PROVIDE LABOR AND MATERIALS REQUIRED FOR ELECTRICAL SERVICE.
  - PROVIDE SECONDARY UNDERGROUND CONDUITS AND CABLE FROM UTILITY TRANSFORMER(S) TO SERVICE ENTRANCE EQUIPMENT.
  - PROVIDE POWER COMPANY APPROVED METERING CURRENT TRANSFORMER (CT) ENCLOSURE.
  - INSTALL METER BASE ENCLOSURE.
  - PROVIDE EMPTY CONDUIT WITH PULL LINE FROM THE METERING CT ENCLOSURE TO THE METER BASE ENCLOSURE.

**CLEANING:**

1. REMOVE ALL RUBBISH AND DEBRIS FROM INSIDE AND AROUND ELECTRICAL EQUIPMENT AND ENCLOSURES.
2. REMOVE DIRT, DUST OR CONCRETE SPATTER FROM INTERIOR AND EXTERIOR OF EQUIPMENT USING BRUSHES, VACUUM CLEANER OR CLEAN LINT-FREE RAGS. DO NOT USE COMPRESSED AIR.

**DELEGATED DESIGN / PROFESSIONAL ENGINEERING SERVICES:**

1. WHEN ENGINEERING SERVICES ARE SPECIFIED TO BE PROVIDED BY CONTRACTOR, CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE SERVICES. ENGINEER SHALL BE LICENSED AT THE TIME SERVICES ARE PERFORMED AND LICENSED IN THE STATE IN WHICH PROJECT IS LOCATED. IF THE STATE ISSUES DISCIPLINE SPECIFIC LICENSES, ENGINEER SHALL BE LICENSED IN THE APPLICABLE DISCIPLINE. ENGINEER SHALL BE EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED.
2. ENGINEERING WORK SHALL BE DONE ACCORDING TO THE APPLICABLE REGULATIONS FOR PROFESSIONAL ENGINEERS TO INCLUDE SIGNING, SEALING AND DATING DOCUMENTS.

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DATE: SPENCER J. PERRY JR  
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. STELLMACK  
 DRAWN BY: A. CARTER  
 SHEET CHK'D BY: A. HENDELS  
 CROSS CHK'D BY: S. PERRY  
 APPROVED BY: S. PERRY  
 DATE: JULY 2024

**CDM Smith**  
 9160 FORUM CORPORATE PARKWAY, Suite 230  
 Fort Myers, FL 33905  
 Tel. (239) 938-9600  
 FL COA No. EB-000020

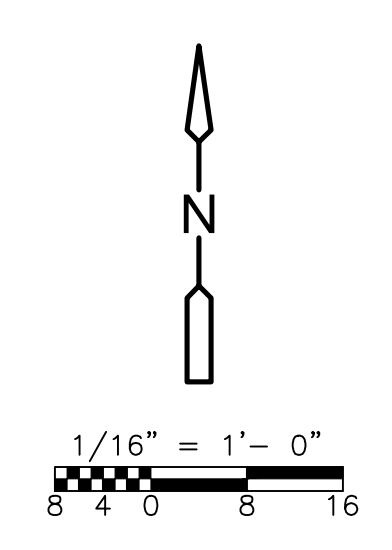
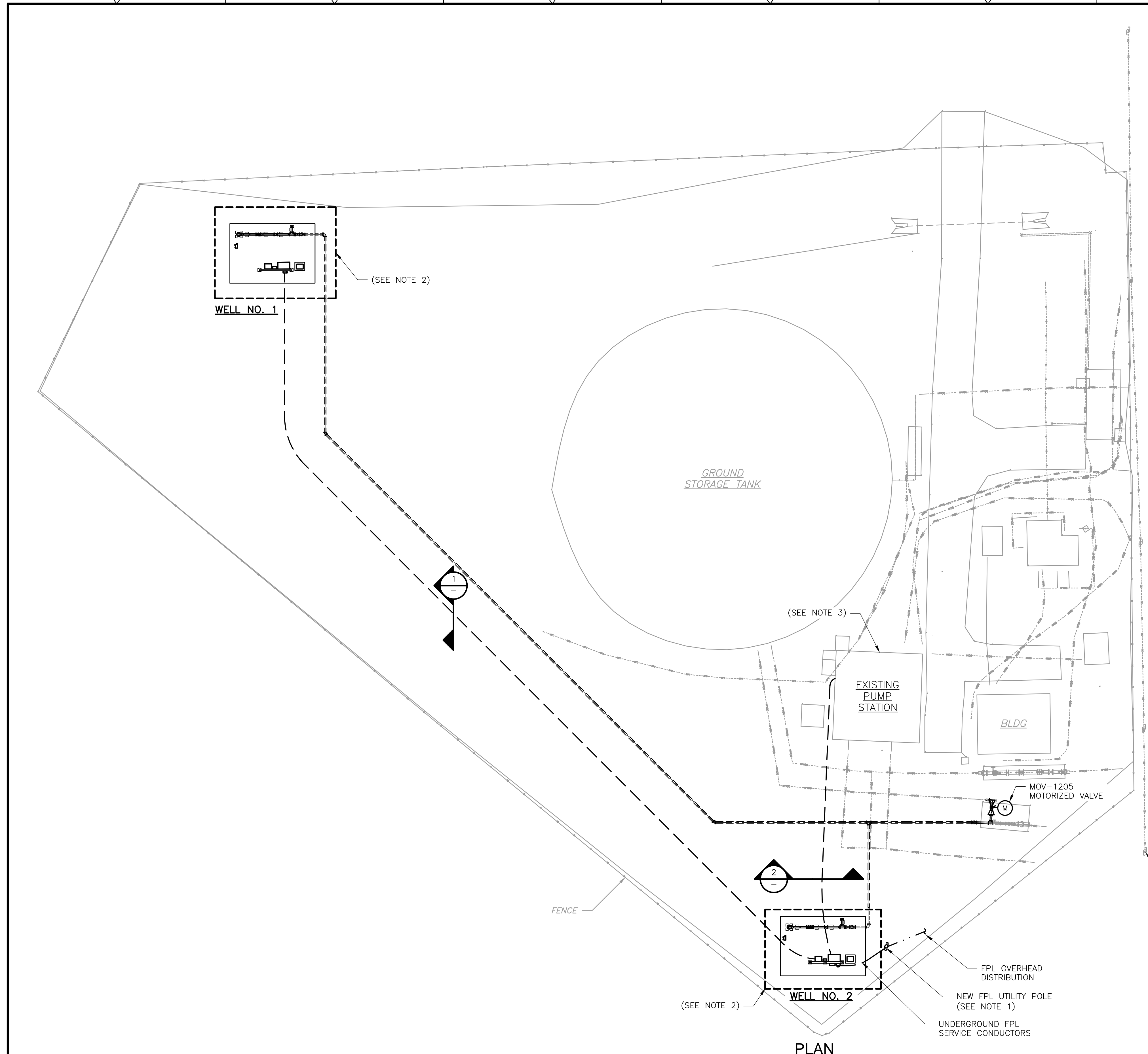
COLLIER COUNTY, FLORIDA  
  
 FOXFIRE WELLS

GENERAL ELECTRICAL NOTES

PROJECT NO. 6295-267302
FILE NAME: E002NFLG.DWG
SHEET NO. E-2

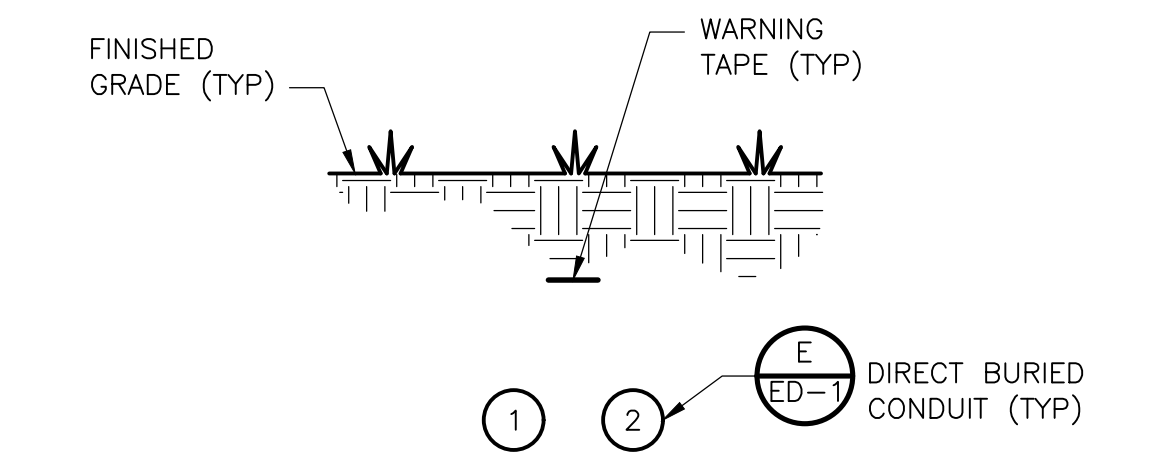


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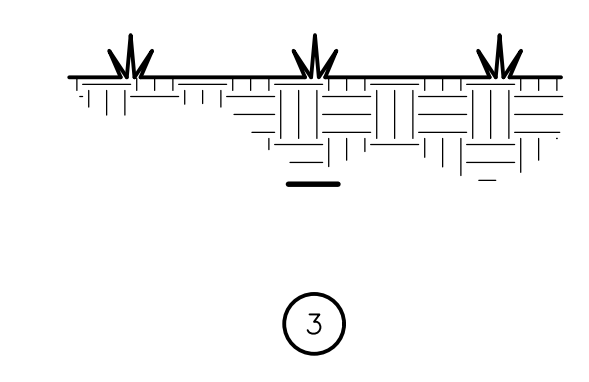


- NOTES:**
- PROVIDE NEW FPL SERVICE FOR NEW FOXFIRE WELLS NO. 1 AND NO. 2. FPL OVERHEAD LINES RUN ALONG EAST SIDE OF SITE. EXTEND FPL DISTRIBUTION OVERHEAD TO WELL NO. 2 AREA FOR NEW SERVICE ENTRANCE RATED 480V PANEL MDP-FOXFIRE-W2. REFER TO ONE LINE POWER DIAGRAM.
  - REFER TO INDIVIDUAL WELL PLANS FOR ADDITIONAL DETAIL.
  - THE EXISTING SCADA SYSTEM PLC CONTROL PANEL IS LOCATED IN THE PUMP STATION ELECTRICAL ROOM.

DIRECT BURIED CONDUIT LEGEND (NUMBERS REFERENCE THIS SHEET ONLY)	
NO.	DESCRIPTION
1	1" C., 480V POWER FROM WELL NO. 2 TO WELL NO. 1
2	2" C., FIBER OPTIC FROM WELL NO. 2 TO WELL NO. 1
3	2" C., FIBER OPTIC FROM WELL NO. 2 TO ELECTRICAL ROOM



ELECTRICAL DIRECT BURIED CONDUIT  
SECTION 1  
NTS



ELECTRICAL DIRECT BURIED CONDUIT  
SECTION 2  
NTS

PLAN

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. STELLMACK  
 DRAWN BY: R. CARTER  
 SHEET CHK'D BY: A. HENDELS  
 CROSS CHK'D BY: S. PERRY  
 APPROVED BY: S. PERRY  
 DATE: JULY 2024



COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

ELECTRICAL SITE PLAN I

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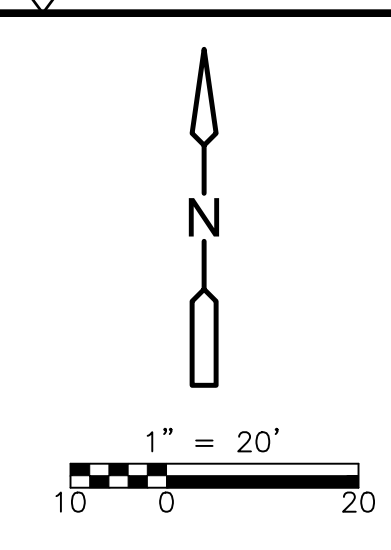
DATE: SPENCER J. PERRY JR  
 PE NO. 62587

PROJECT NO. 6295-267302  
 FILE NAME: E003STPL.DWG  
 SHEET NO. E-3

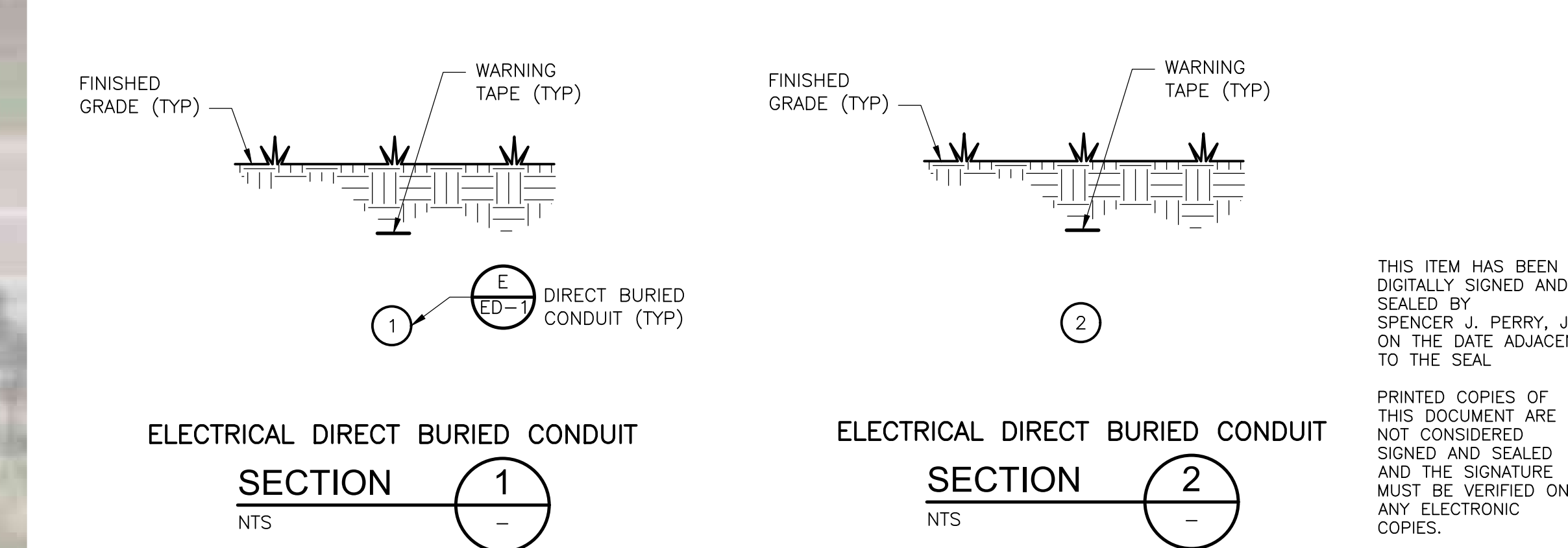
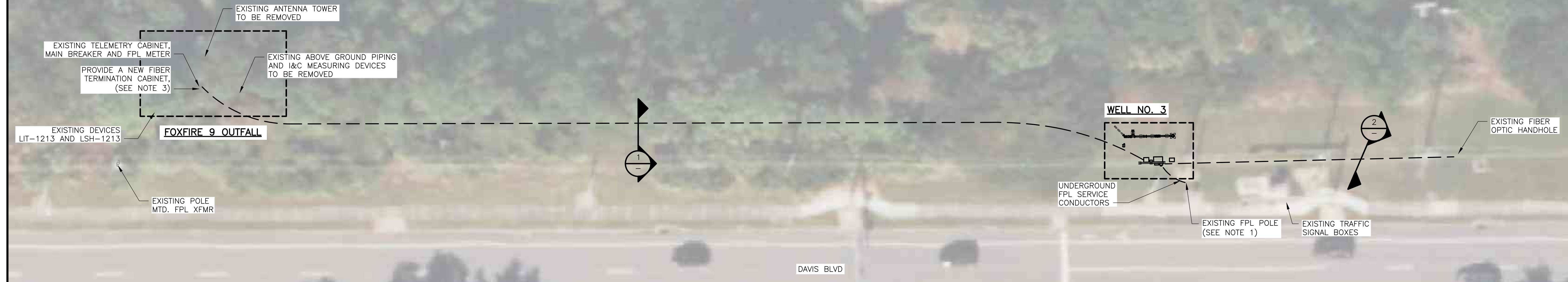
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- NOTES:**
1. PROVIDE NEW FPL SERVICE FOR NEW FOXFIRE WELL NO. 3 FPL OVERHEAD LINES RUN EAST AND WEST ALONG THE NORTH SIDE OF DAVIS BLVD. INSTALL A SERVICE ENTRANCE RATED 480V PANEL MDP-FOXFIRE-W3. REFER TO ONE LINE POWER DIAGRAM.
  2. REFER TO INDIVIDUAL WELL PLANS FOR ADDITIONAL DETAIL.
  3. THE EXISTING TELEMETRY PANEL SHALL BE REMOVED AND REPLACED WITH A NEW FIBER TERMINATION CABINET (FTC-1) AT THIS LOCATION, REFER TO RISER DIAGRAMS AND INSTRUMENTATION DRAWINGS FOR ADDITIONAL REQUIREMENTS.

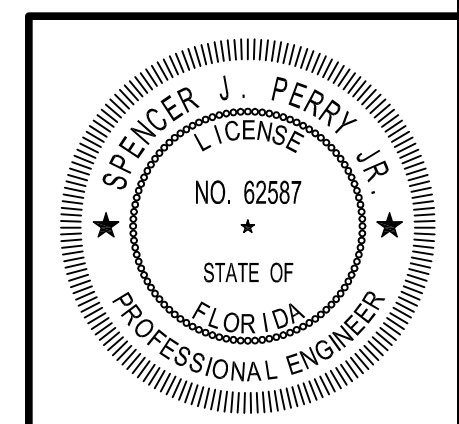


DIRECT BURIED CONDUIT LEGEND (NUMBERS REFERENCE THIS SHEET ONLY)	
NO.	DESCRIPTION
1	2" C., FIBER OPTIC FROM FOXFIRE 9 TO WELL NO. 3
2	2" C., FIBER OPTIC FROM WELL NO. 3 TO EXISTING FIBER HANDHOLE



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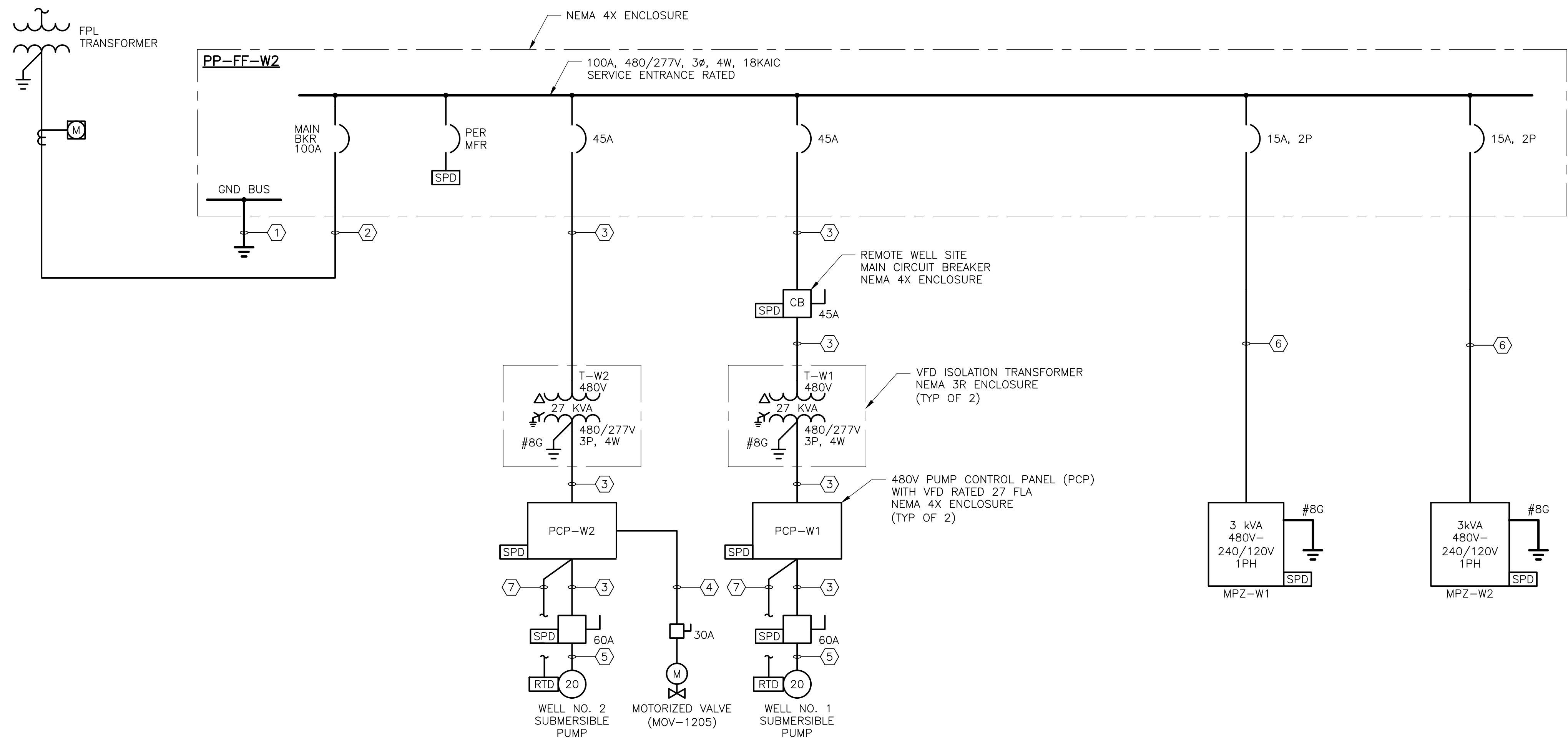


COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

PROJECT NO. 6295-267302  
 FILE NAME: E004STPL.DWG  
 SHEET NO. E-4



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**FOXFIRE WELLS NO. 1 AND NO. 2  
ONE LINE POWER DIAGRAM**

**NOTES:**

1. ALL MDP BREAKERS TO INCLUDE PERMANENTLY MOUNTED PAD LOCKING MECHANISM FOR LOCKOUT / TAGOUT.
2. SEE SHEET E-7 FOR ADDITIONAL PUMP CONTROL PANEL REQUIREMENTS.

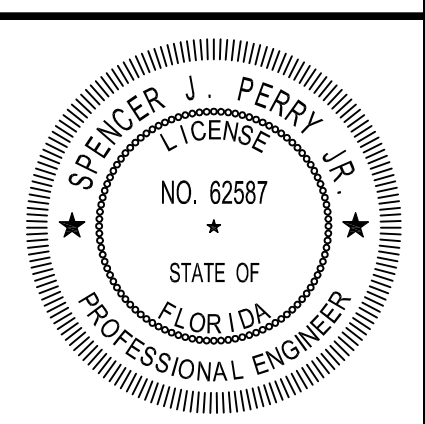
**CONDUIT AND WIRE LEGEND**  
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
①	3/4"C., 1#6G
②	1 1/2"C., 3#1, 1#8N
③	1"C., 3#6, 1#10G
④	3/4"C., 3#12, 1#12G
⑤	1"C., MFR PUMP CABLE
⑥	3/4"C., 2#12, 1#12G
⑦	3/4"C., CABLE PER MFR.

PP-FF-W2	
DESCRIPTION	LOAD (VA)
WELL PUMP NO. 1	27000
WELL PUMP NO. 2	27000
PANEL MPZ-W1	3000
PANEL MPZ-W2	3000
MOTOR OPERATED VALVE (MOV-1205)	1000
<b>TOTAL CONNECTED LOAD (VA) =</b>	<b>61000</b>
<b>TOTAL CONNECTED LOAD (AMPERES @480V, 3-PHASE) =</b>	<b>73.4</b>

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DATE:  
SPENCER J. PERRY JR  
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. STELLMACK  
 DRAWN BY: R. CARTER  
 SHEET CHK'D BY: A. HENDELS  
 CROSS CHK'D BY: S. PERRY  
 APPROVED BY: S. PERRY  
 DATE: JULY 2024

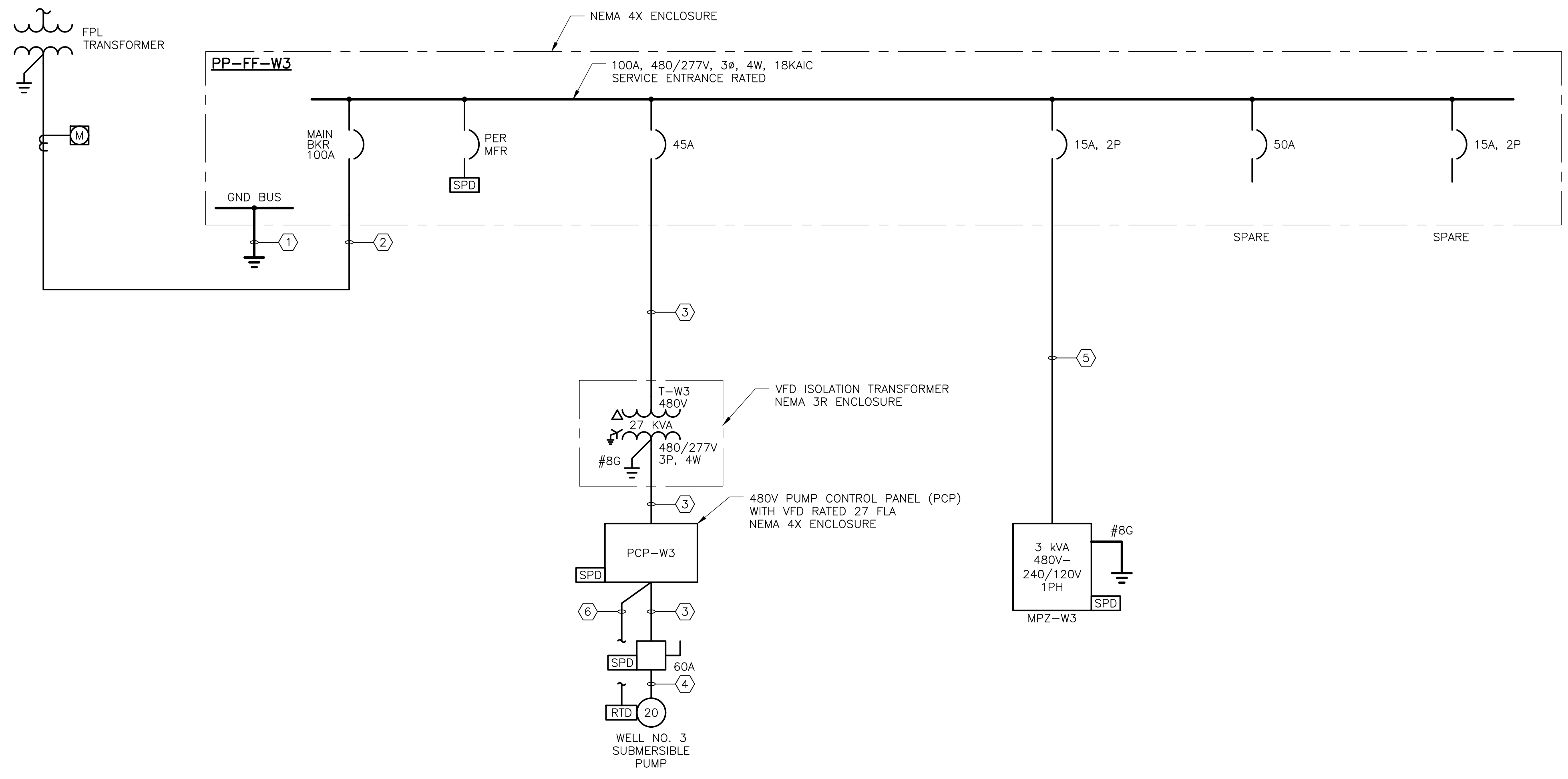


COLLIER COUNTY, FLORIDA  
**FOXFIRE WELLS**

**FOXFIRE WELLS NO. 1 AND NO. 2  
ONE LINE POWER DIAGRAM**

PROJECT NO. 6295-267302  
 FILE NAME: E005NFOL.DWG  
 SHEET NO.  
**E-5**

XREFS: [CDMS\_2234] Images: [ ]  
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**FOXFIRE WELL NO. 3**  
**ONE LINE POWER DIAGRAM**

**NOTES:**

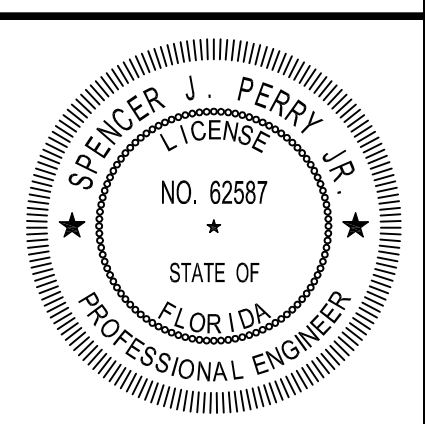
1. ALL MDP BREAKERS TO INCLUDE PERMANENTLY MOUNTED PAD LOCKING MECHANISM FOR LOCKOUT / TAGOUT.
2. SEE SHEET E-7 FOR ADDITIONAL PUMP CONTROL PANEL REQUIREMENTS.

**CONDUIT AND WIRE LEGEND**  
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
①	3/4"C., 1#6G
②	1 1/2"C., 3#1, 1#8N
③	1"C., 3#6, 1#10G
④	1"C., MFR PUMP CABLE
⑤	3/4"C., 2#12, 1#12G
⑥	3/4"C., CABLE PER MFR.

PP-FF-W3	
DESCRIPTION	LOAD (VA)
WELL PUMP NO. 3	27000
PANEL MPZ-W1	3000
<b>TOTAL CONNECTED LOAD (VA) =</b>	<b>30000</b>
<b>TOTAL CONNECTED LOAD (AMPERES @480V, 3-PHASE) =</b>	<b>36.1</b>

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DATE: SPENCER J. PERRY JR  
 PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. STELLMACK  
 DRAWN BY: R. CARTER  
 SHEET CHK'D BY: A. HENDELS  
 CROSS CHK'D BY: S. PERRY  
 APPROVED BY: S. PERRY  
 DATE: JULY 2024



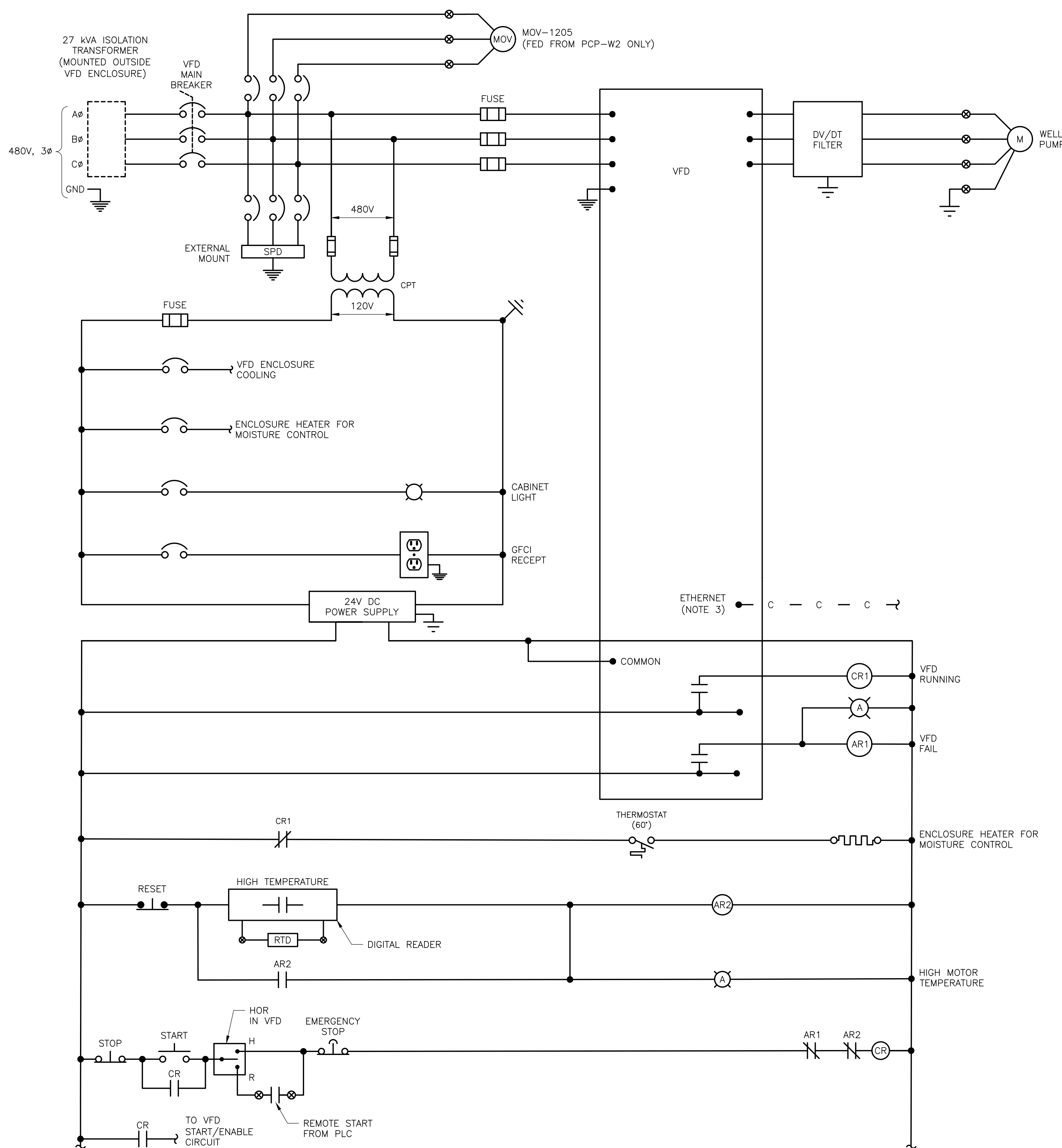
9160 FORUM CORPORATE PARKWAY, Suite 230  
 Fort Myers, FL 33905  
 Tel: (239) 938-9600  
 FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA  
**FOXFIRE WELLS**

**FOXFIRE WELL NO. 3**  
**ONE LINE POWER DIAGRAM**

PROJECT NO. 6295-267302  
 FILE NAME: E006NFOL.DWG  
 SHEET NO.  
**E-6**





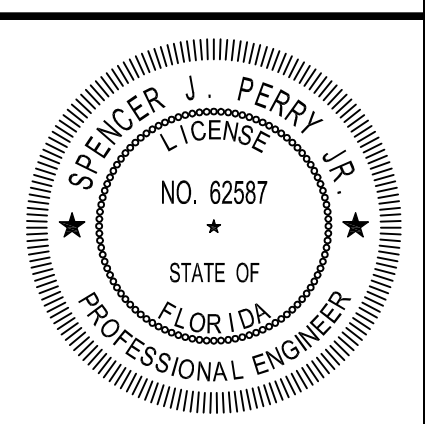
- NOTES:**
- SEE SPECIFICATIONS AND INSTRUMENTATION LOOP DIAGRAMS FOR ADDITIONAL CONTROL REQUIREMENTS.
  - MONITORING AND CONTROL OF VFD IS OVER ETHERNET CABLE.
  - REMOTE CONTROL INCLUDING FIELD DEVICES ARE WIRED DIRECTLY INTO THE ADJACENT PLC.

PUMP CONTROL PANEL KEY EQUIPMENT SCHEDULE			
ITEM	MANUFACTURER	DESCRIPTION	PART NO.
1	HOFFMAN	SINGLE DOOR, TYPE 4X	A724824ASD
2	HOFFMAN	ENCLOSURE LIGHT KIT	LED24V15
3	AB	CIRCUIT BREAKERS	1489-M1 SERIES
4	AB	24 VDC POWER SUPPLY	1606-XLSRED, 480W
5	AB	20 HP VFD, POWER FLEX 753 SERIES	20F11ND034AA0NNNN
6	AB	140G MAIN BREAKER	140G-JOF3
7	AB	3 KVA CONTROL POWER XFMR - 480/120 VAC	PH3000MQMJ
8	AB	PANEL PILOT LIGHTS	800H-QRTH2*
9	AB	E-STOP, TRIGGER ACTION TWIST RELEASE	800HC-TFRXTQH2RA1S
10	HOFFMAN	PANEL HEATER 400W	DAH4001B
11	DIVERSIFIED ELECTRONICS	PHASE MONITOR	SLA440ASA
12	TCI	DV/DT FILTER	TCI, V1K130A00
13	HOFFMAN	TEMPERATURE SWITCH	ATEMNO
14	HOFFMAN	CORROSION INHIBITOR	AHC110E
15	AB	ISOLATION RELAY 24 VDC	700-HK32Z24-4
16	AB	RELAY BASE	700-HN122
17	EDCO	24 VDC SERIES PROTECTOR	HSP-121BT1RU
18	EDCO	SIGNAL SURGE PROTECTOR	EDCO PC642C-036
19	EDCO	EDCO SURGE BASE	EDCO PCB1B
20	AB	EIO MODULE	20-750-1132D-2R
21	AB	AUX PWR SUPPLY	20-75-APS
22	AB	ETHERNET MODULE	20-750-ENETR
23	AB	PUSH-IN TERMINAL	1492-P4-*
24	AB	TERMINAL END BRACKET	1492-EAJ35
25	AB	END BARRIER	1492-EBP4
26	AB	35 MM DIN RAIL	199-DR1
27	AB	CENTER JUMPERS	1492-CJP4-10
28	AB	BREAKER JUMPERS	1489-AMCL 106 SER D
29	SOLA	GROUND BAR KIT 4-14 AWG	PK23GTA
30	AB	MOTOR POWER DISTRIBUTION BLOCK	1492-PDL3111
31	OMEGA	DIGITAL TEMPERATURE READER	CN7500

**PUMP CONTROL PANEL WITH VFD  
ELEMENTARY CONTROL DIAGRAM**

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PE NO. 62587

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. STELLMACK  
 DRAWN BY: R. CARTER  
 SHEET CHK'D BY: A. HENDELS  
 CROSS CHK'D BY: S. PERRY  
 APPROVED BY: S. PERRY  
 DATE: JULY 2024

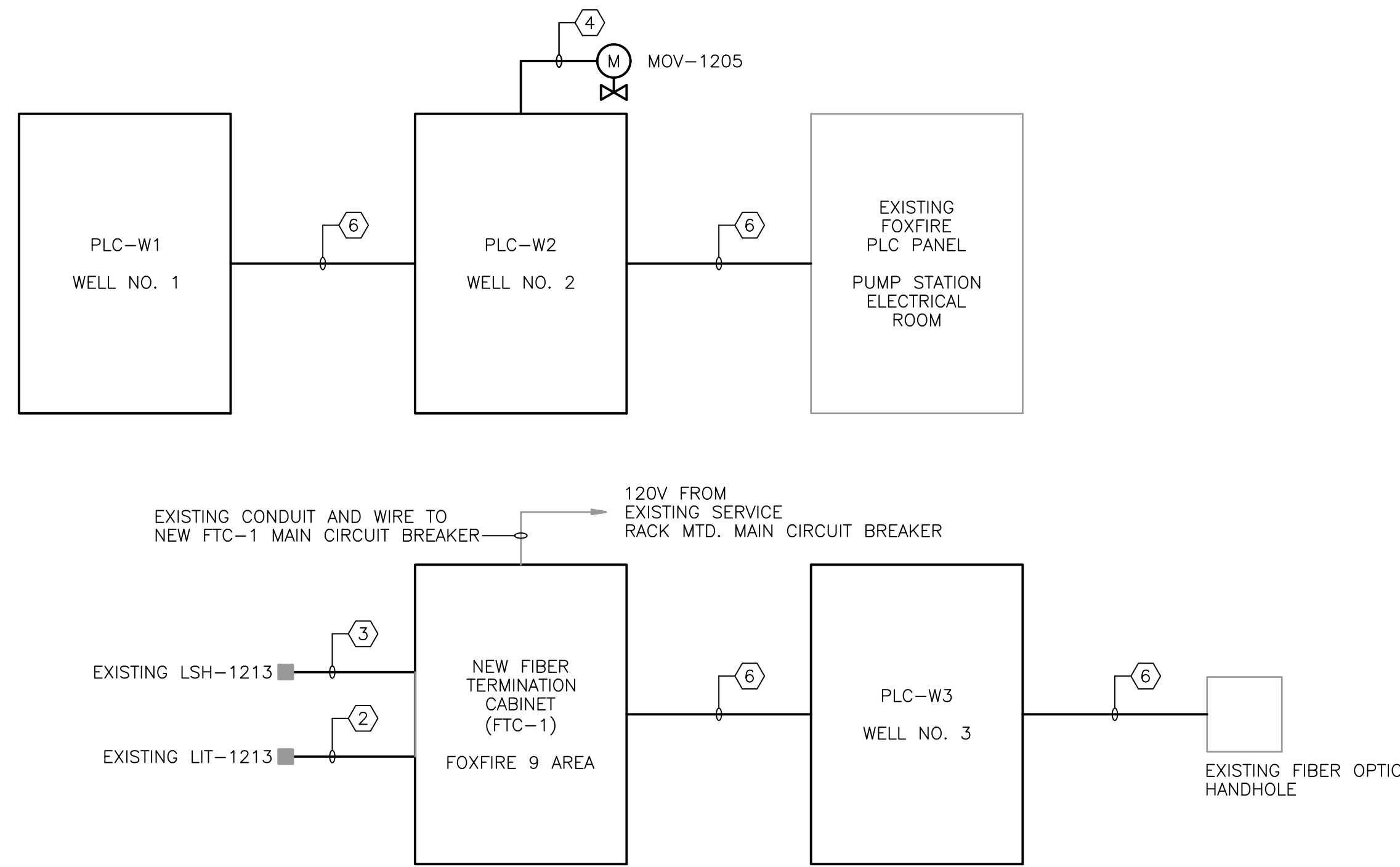
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 Fort Myers, FL 33905  
 Tel: (239) 938-9600  
 FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

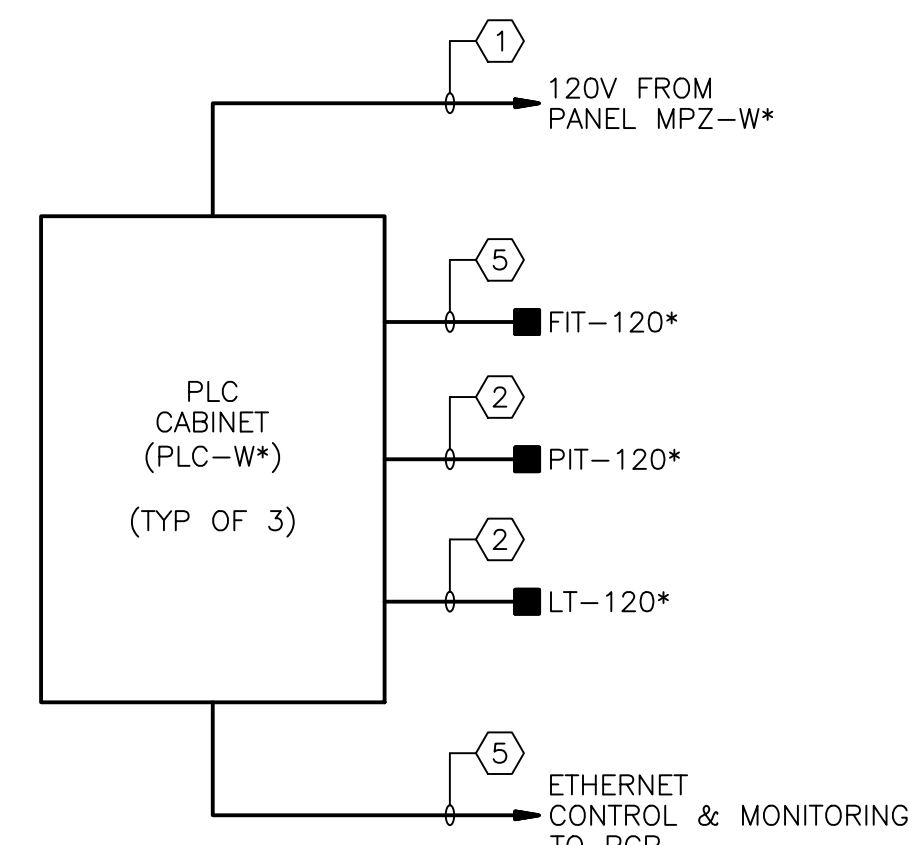
**ELEMENTARY CONTROL DIAGRAM  
AND KEY EQUIPMENT SCHEDULE**

PROJECT NO. 6295-267302  
 FILE NAME: E007NFCD.DWG  
 SHEET NO.  
**E-7**

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SCADA SYSTEM  
RISER DIAGRAM



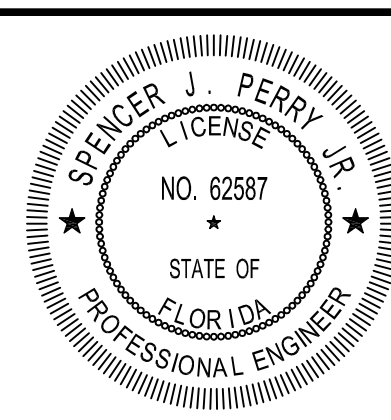
PLC-W\*  
RISER DIAGRAM  
\* = 1, 2, OR 3 FOR WELL NUMBER

CONDUIT AND WIRE LEGEND (NUMBERS REFERENCE THIS SHEET ONLY)	
NO.	DESCRIPTION
①	3/4"C., 2#12, 1#12G
②	3/4"C., 1-2/C #16TS
③	3/4"C., 2#14, 1#14G
④	1"C., 12#14, 1#14G
⑤	3/4"C., CAT5e (600V) ETHERNET CABLE
⑥	2"C., FIBER OPTIC CABLE

TRANSFORMER PANEL ASSEMBLY PANEL MPZ-W*													
3 KVA 1-PHASE TRANSFORMER			480 VOLT PRIMARY			10 AMP 2 POLE PRIMARY MAIN BREAKER			LOCATION: WELL EQUIPMENT RACK				
20 AMP 2 POLE SECONDARY MAIN BREAKER			100 AMP BUS RATING			10 POLES			ENCLOSURE RATING: NEMA 3R SS				
120/240 VOLTS SECONDARY			1 PHASE 3 WIRE			60 Hz.			ELECTRONIC GRADE: NO				
18 KA SHORT CIRCUIT RATING			MOUNTING: RACK MOUNTED										
CIRCUIT NO.	DESCRIPTION	LOAD KVA		BREAKER AMPS/POLES	CIRCUIT NO.	DESCRIPTION	LOAD KVA		BREAKER AMPS/POLES	NOTES			
		LINE A	LINE B				LINE A	LINE B					
1	SPD	0.00		20 /2	1	2	FIT-120*	0.10		20 /1	1		
3			0.00		4	RACK MTD. GFCI RECEPT.		0.18		20 /1	1		
5	PLC CABINET (PLC-W*)	1.00		20 /1	1	6	SPARE	0.00		20 /1			
7	SPARE			20 /1		8	SPARE		0.00	20 /1			
9	SPARE			20 /1		10	SPARE		0.00	20 /1			
TOTAL LINE KVA THIS SIDE		1.00	0.00			TOTAL LINE KVA THIS SIDE		0.10	0.18				
						TOTAL KVA PER LINE		1.10	0.18				
						TOTAL KVA		1.28					
NOTES:						NOTES CONT.:							
1 PROVIDE 3/4"C., 2#12, 1#12G						2 * PANELBOARD SCHEDULE TYPICAL FOR ALL WELL SITES.							

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DATE: SPENCER J. PERRY JR  
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. STELLMACK	 9160 FORUM CORPORATE PARKWAY, Suite 230 Fort Myers, FL 33905 Tel: (239) 938-9600 FL COA No. EB-0000020
DRAWN BY: R. CARTER	
SHEET CHK'D BY: A. HENDELS	
CROSS CHK'D BY: S. PERRY	
APPROVED BY: S. PERRY	
DATE: JULY 2024	

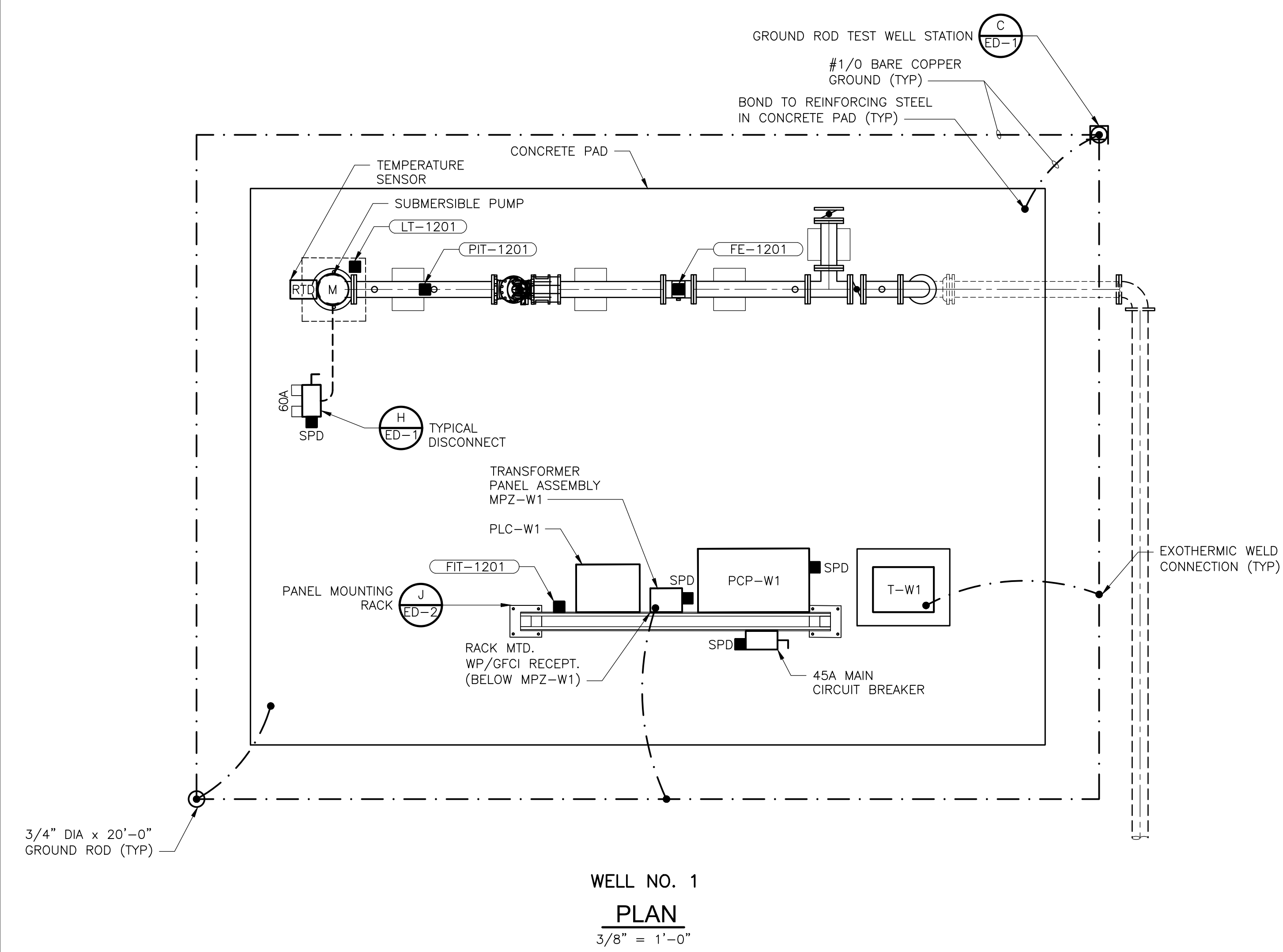
COLLIER COUNTY, FLORIDA  
FOXFIRE WELLS

RISER DIAGRAMS  
AND PANELBOARD SCHEDULE

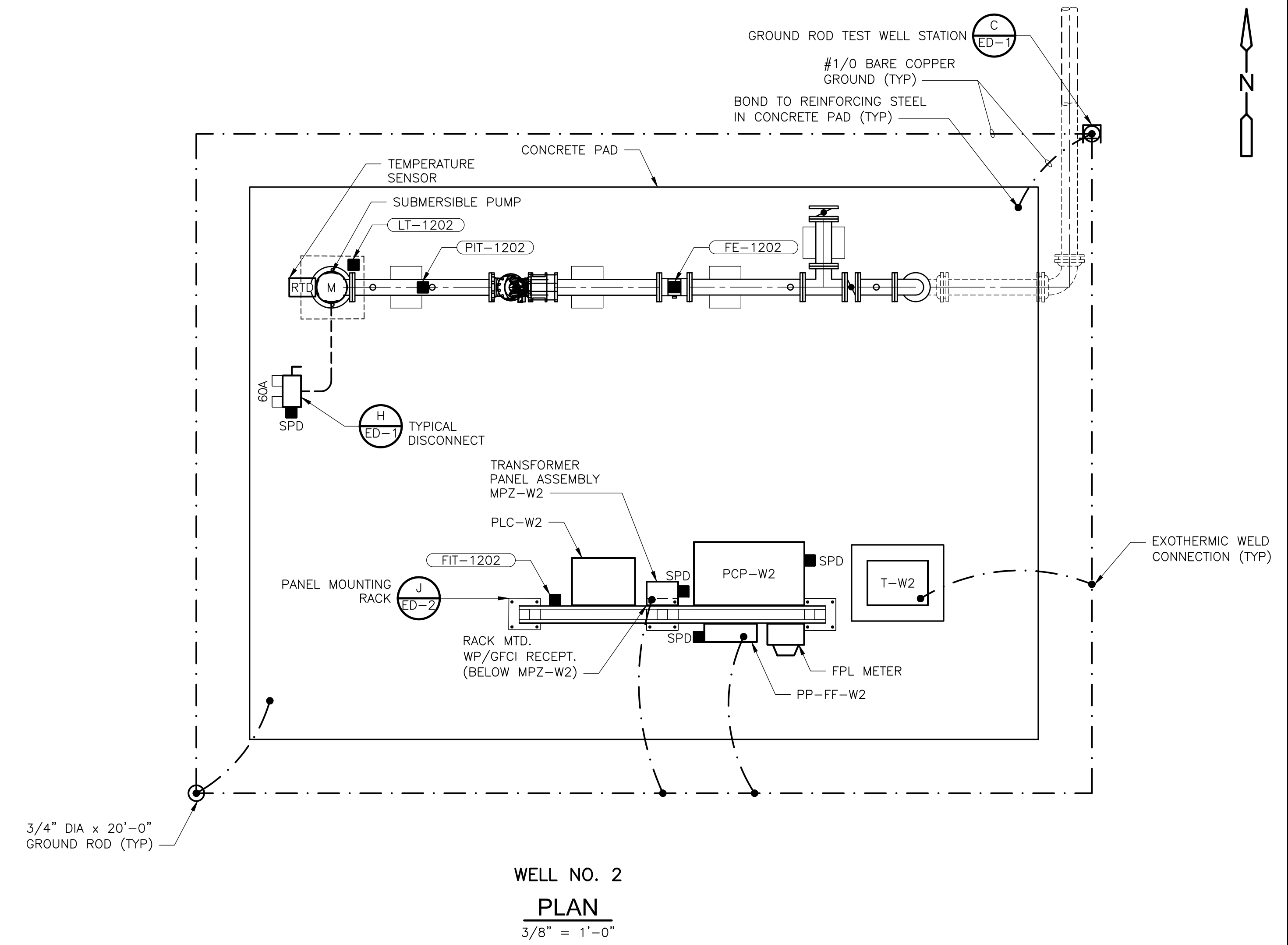
PROJECT NO. 6295-267302
FILE NAME: E008NFRD.DWG
SHEET NO. E-8



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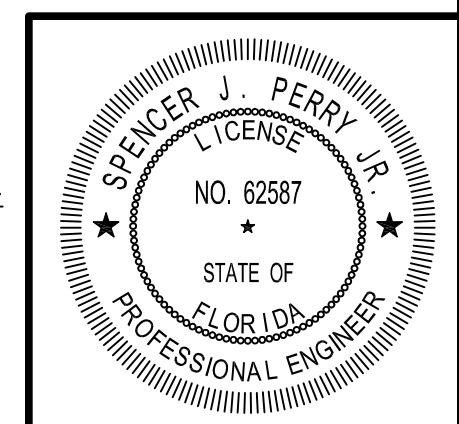
WELL NO. 1  
**PLAN**  
 3/8" = 1'-0"



WELL NO. 2  
**PLAN**  
 3/8" = 1'-0"

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 APPROVED BY: S. PERRY  
 DATE: JULY 2024



COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

FOXFIRE WELLS NO. 1 AND NO. 2  
 ELECTRICAL PLAN

PROJECT NO. 6295-267302  
 FILE NAME: E009STPL.DWG

SHEET NO.  
 E-9



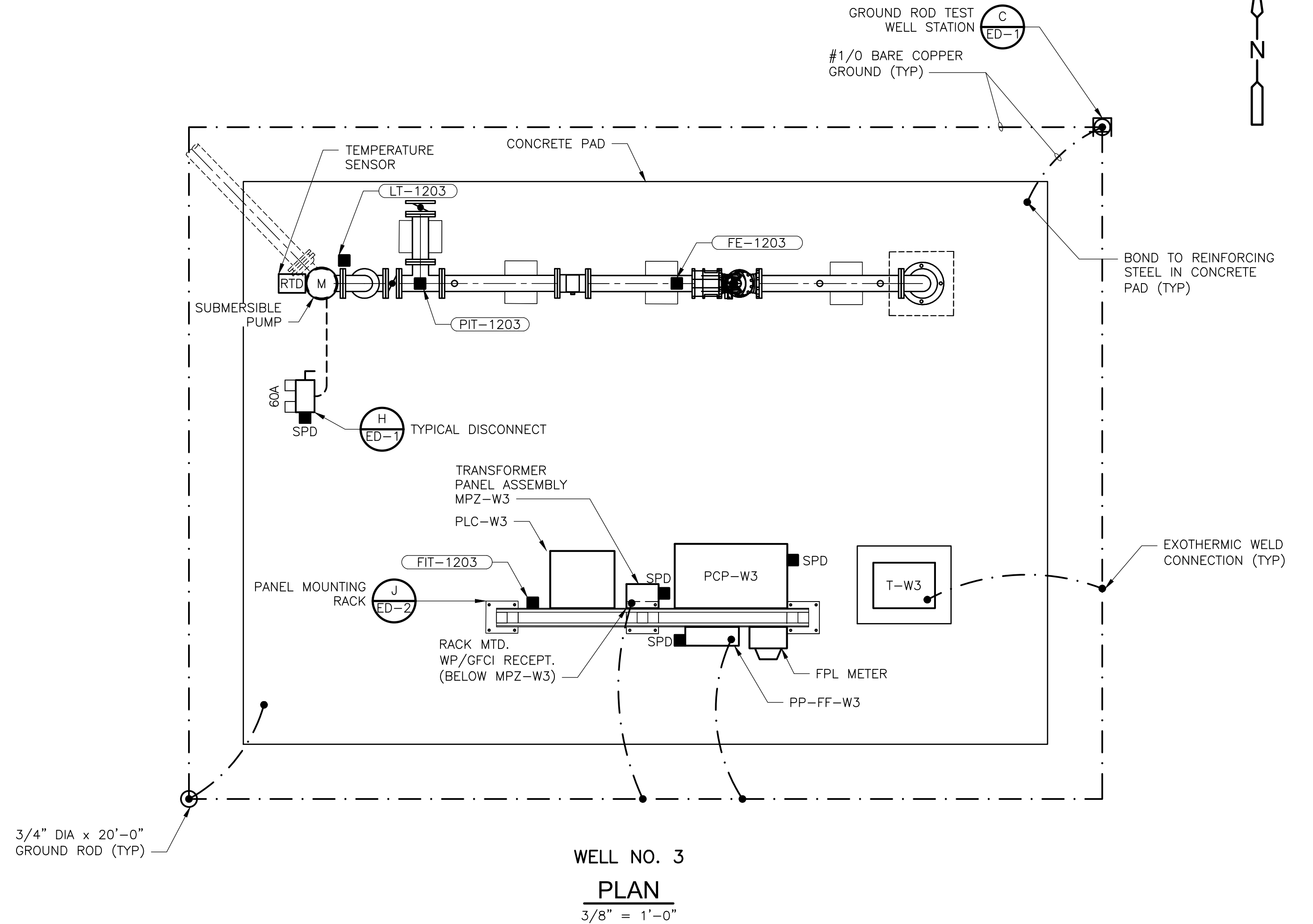
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FOXFIRE 9 OUTFALL  
**PHOTO**  
 NTS

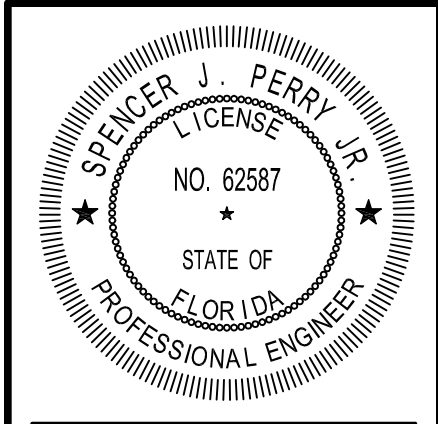
**NOTES:**

- REMOVE EXISTING I&C MEASURING DEVICES, SWITCHES, FLOW METERS, ETC., ASSOCIATED PIPING, ELECTRICAL BOXES, CONDUITS, AND WIRING BACK TO THE CONTROL PANEL.
- REMOVE THE EXISTING TELEMETRY PANEL AND ALL ASSOCIATED COMPONENTS AND RETURN THEM TO THE OWNER.
- INSTALL A NEW FIBER TERMINATION CABINET "FTC-1." INSTALL THE CABINET ON THE EXISTING RACK, SEE RISER DIAGRAMS FOR CONDUIT AND WIRE REQUIREMENTS.
- DEMOLISH THE EXISTING ANTENNA TOWER AND RETURN CONNECTED COMPONENTS TO THE OWNER.



3/4" DIA x 20'-0"  
 GROUND ROD (TYP)  
**WELL NO. 3**  
**PLAN**  
 3/8" = 1'-0"

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 Fort Myers, FL 33905  
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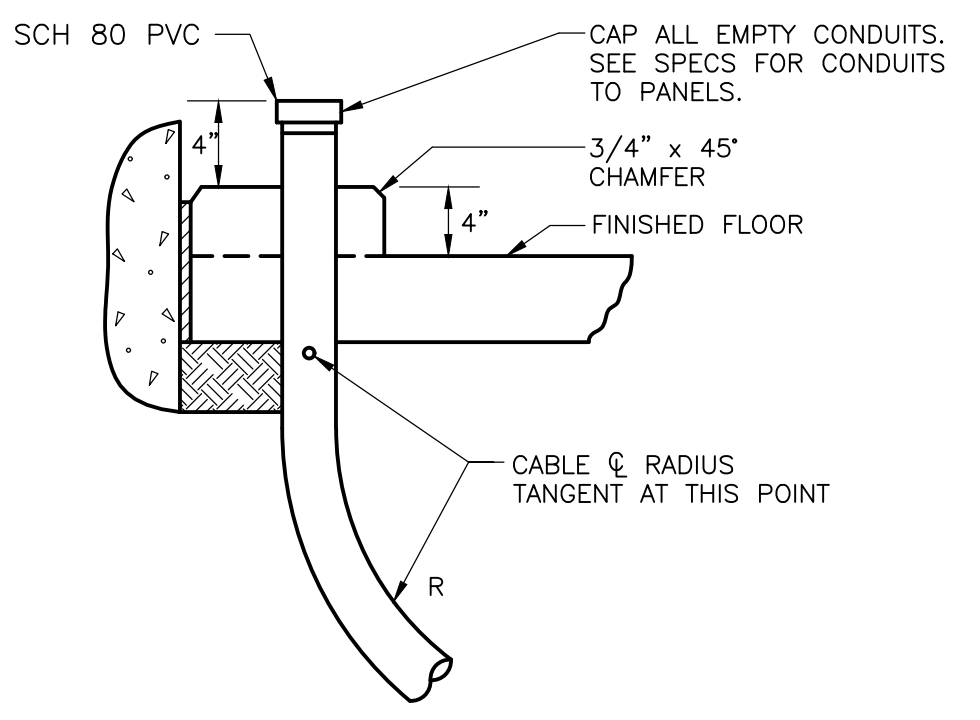
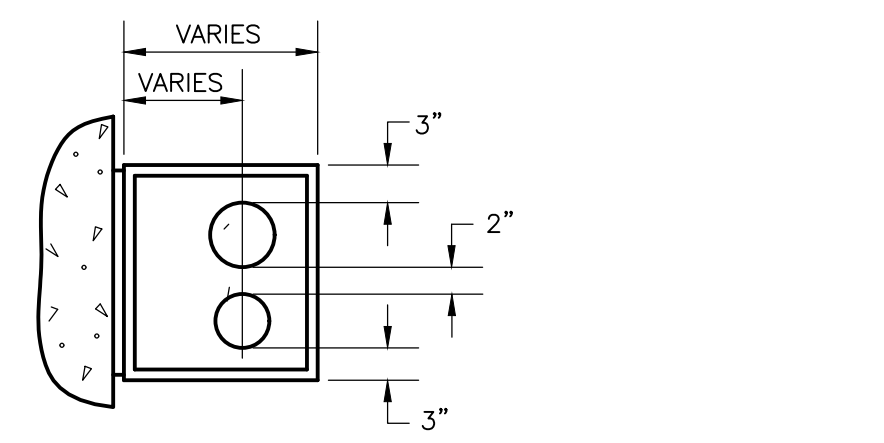
COLLIER COUNTY, FLORIDA  
**FOXFIRE WELLS**

**FOXFIRE 9 OUTFALL  
 AND FOXFIRE WELL NO. 3  
 ELECTRICAL PLAN**

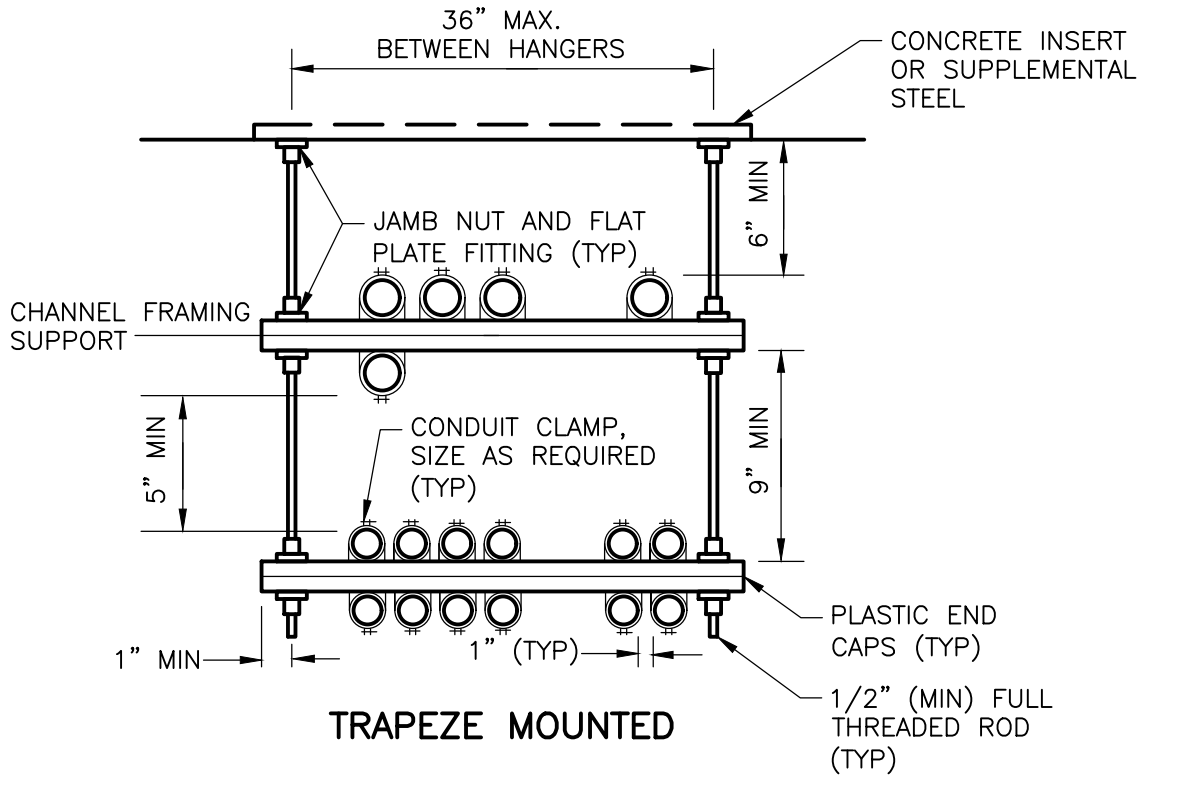
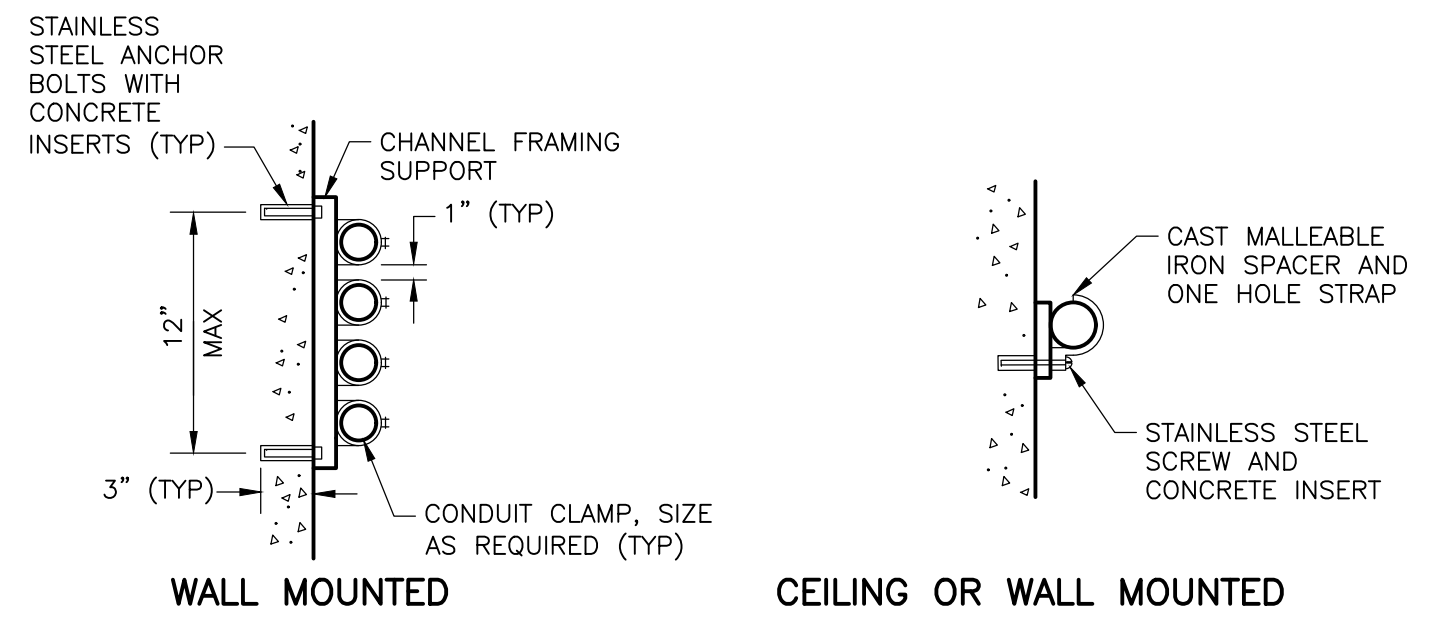
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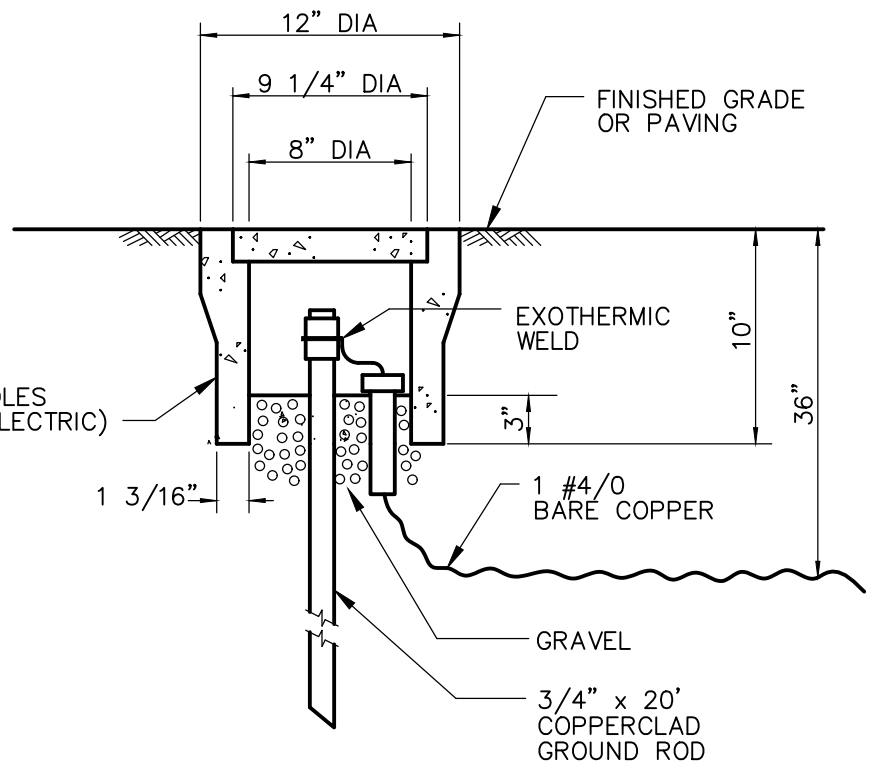
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TYPICAL CONDUIT THROUGH SLAB  
 DETAIL A  
 NTS

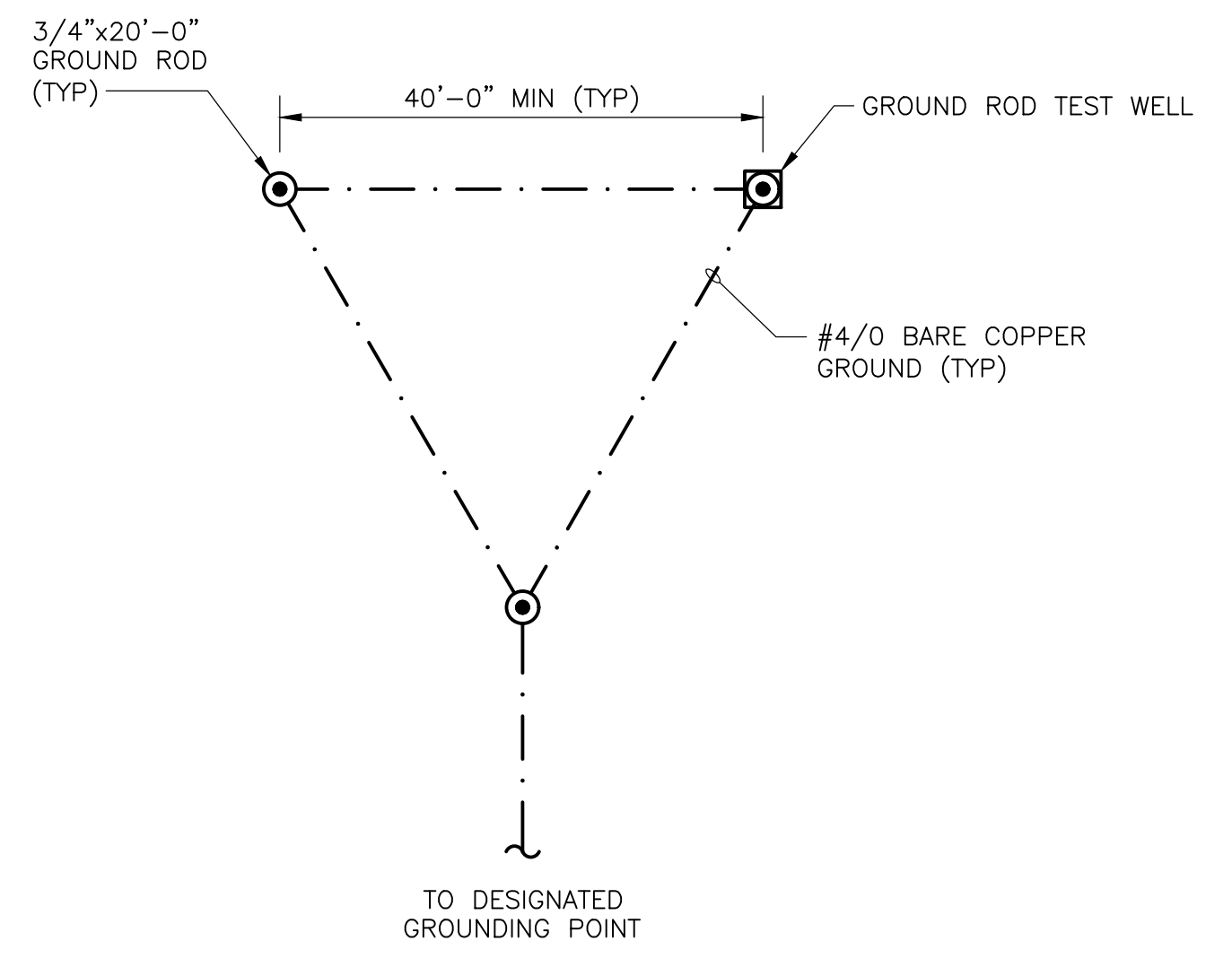


CONDUIT MOUNTING  
 DETAIL B  
 NTS

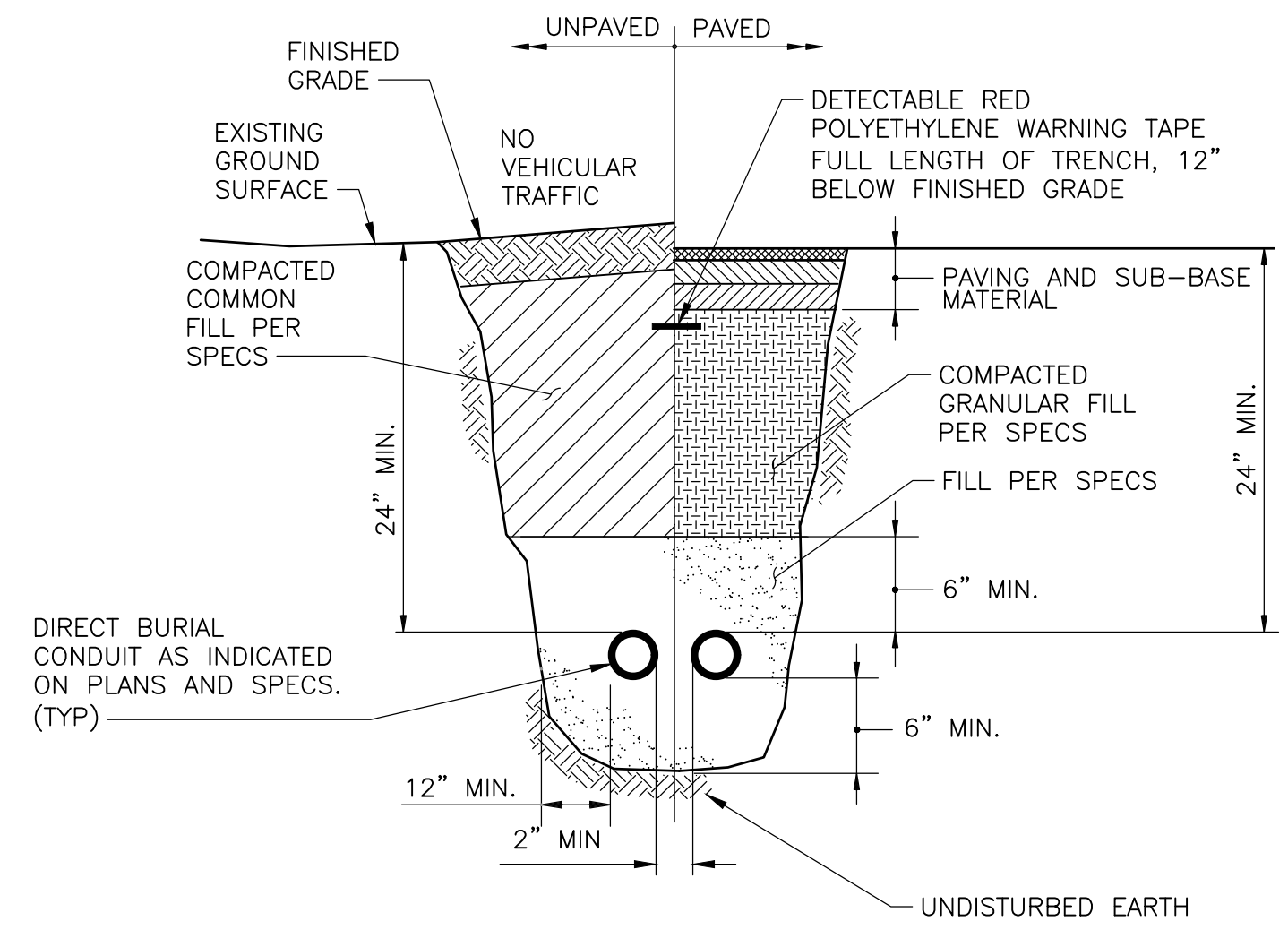


**NOTE:**  
 DIMENSIONS SHOWN ARE  
 MINIMUM REQUIREMENTS

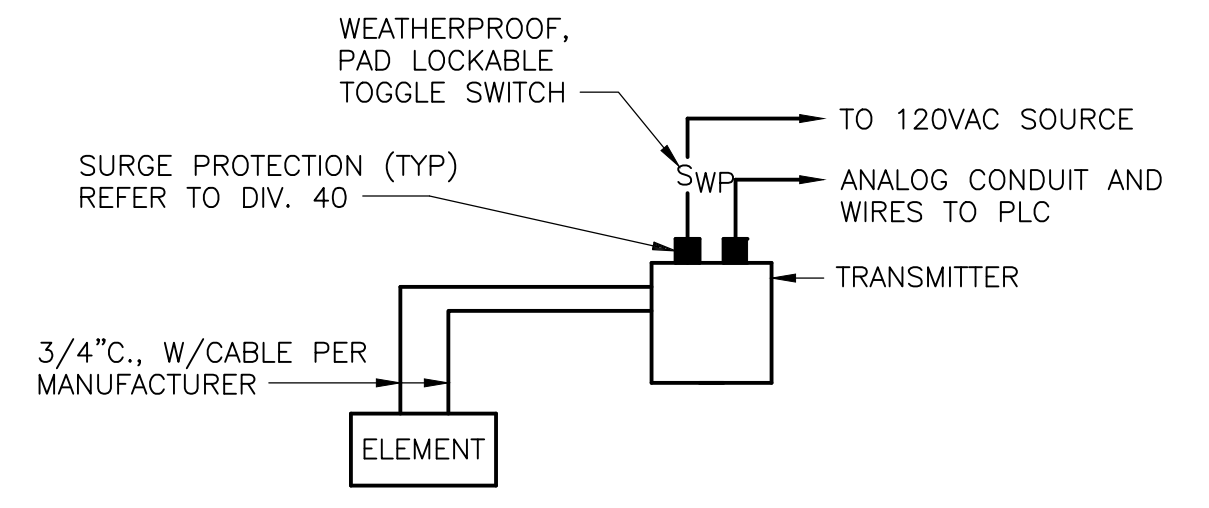
GROUND ROD TEST WELL STATION  
 DETAIL C  
 NTS



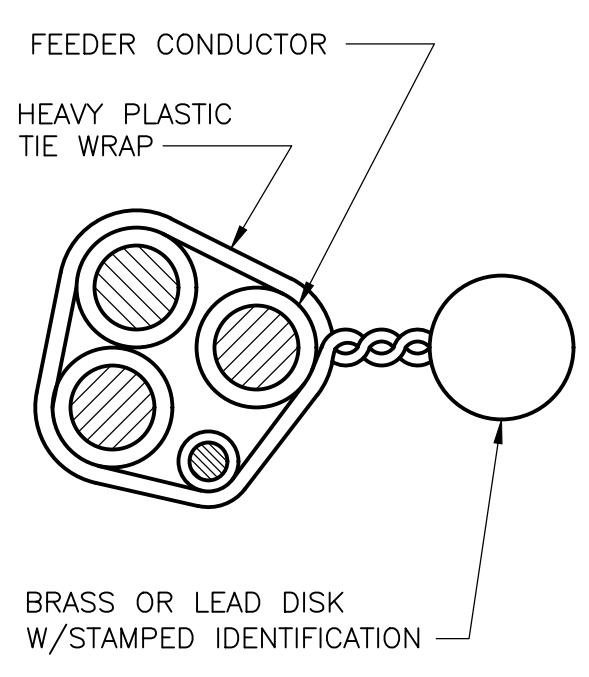
TYPICAL GROUNDING TRIANGLE  
 DETAIL D  
 NTS



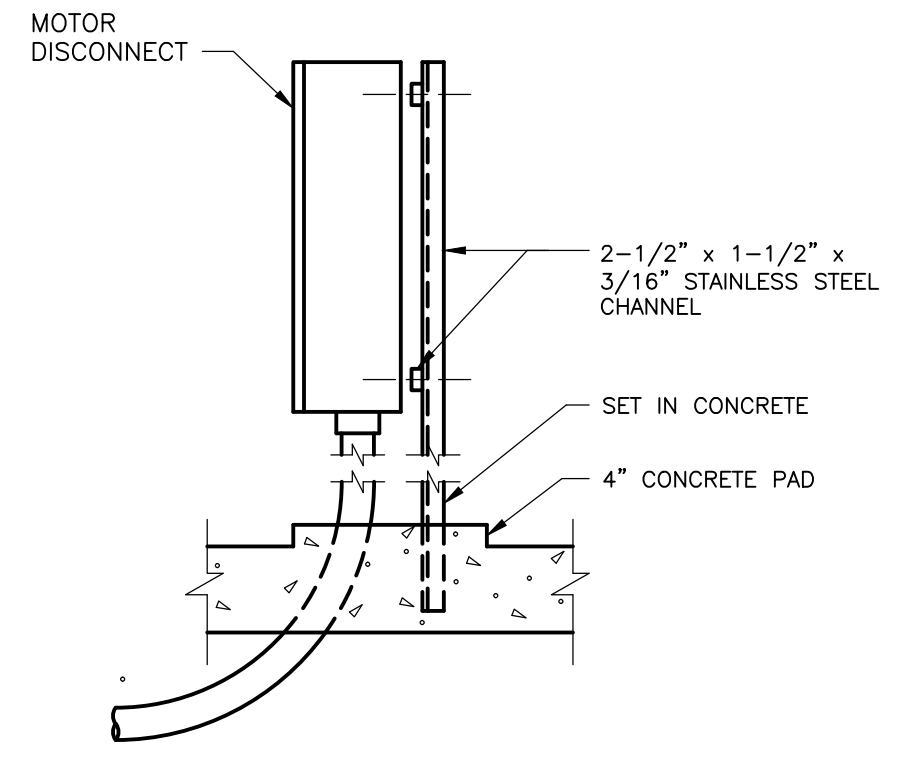
TYPICAL DIRECT BURIED CONDUIT  
 DETAIL E  
 NTS



TYPICAL TRANSMITTER  
 DETAIL F  
 NTS



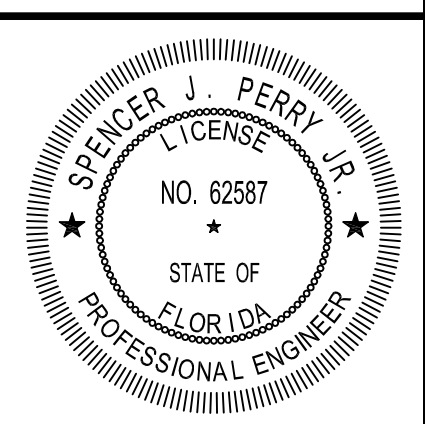
UNDERGROUND CABLE TAG  
 DETAIL G  
 NTS



TYPICAL DISCONNECT  
 DETAIL H  
 NTS

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 Fort Myers, FL 33905  
 Tel: (239) 938-9600  
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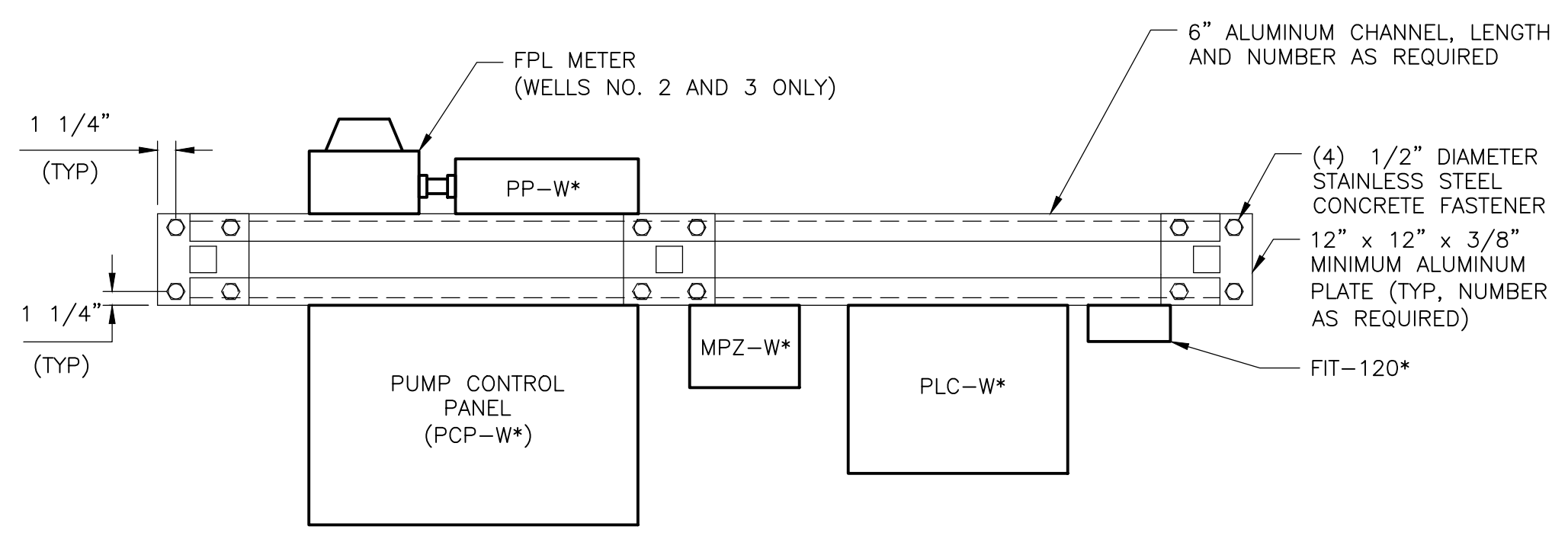
COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

ELECTRICAL DETAILS I

PROJECT NO. 6295-267302  
 FILE NAME: ED01NFD1.DWG

SHEET NO.  
 ED-1

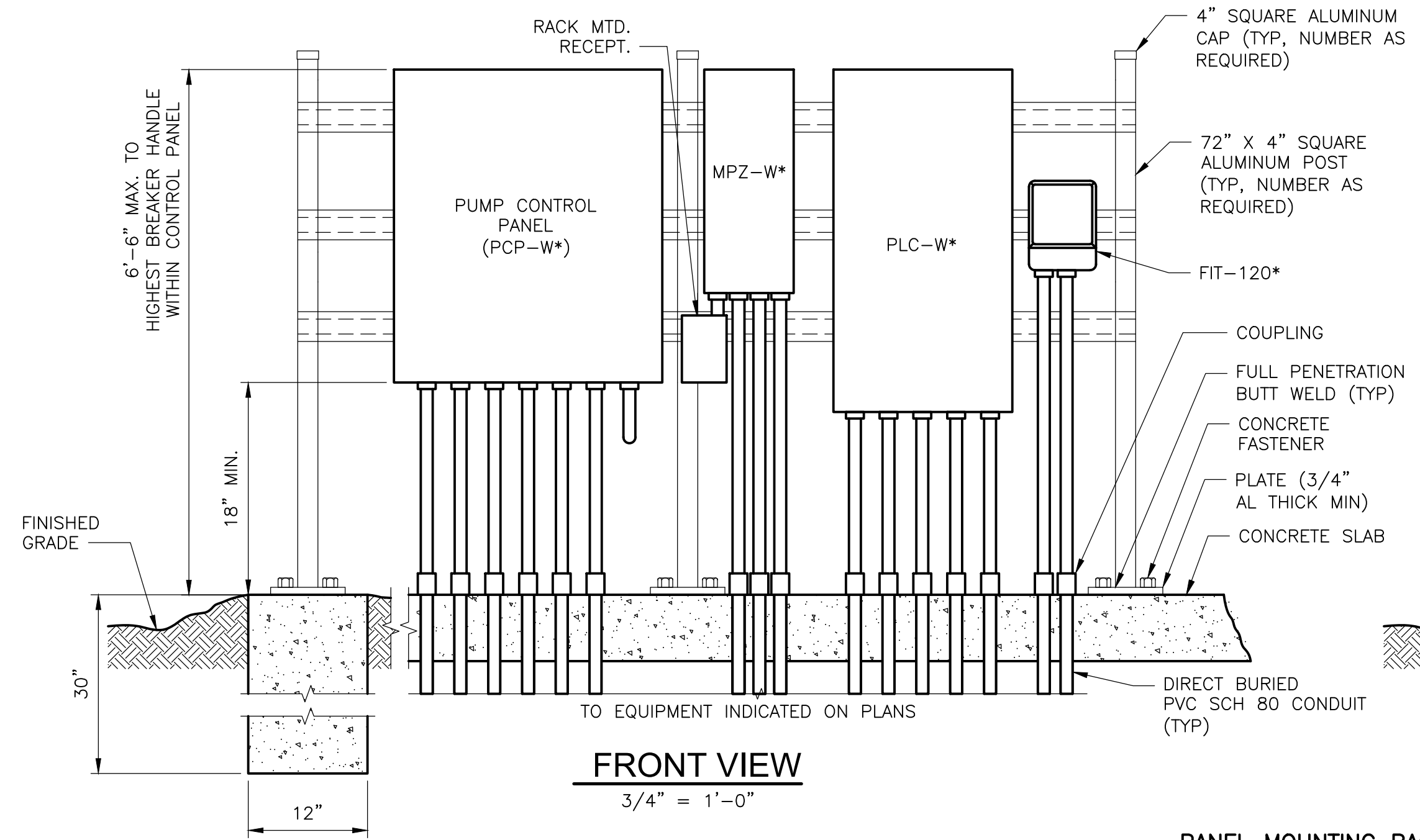
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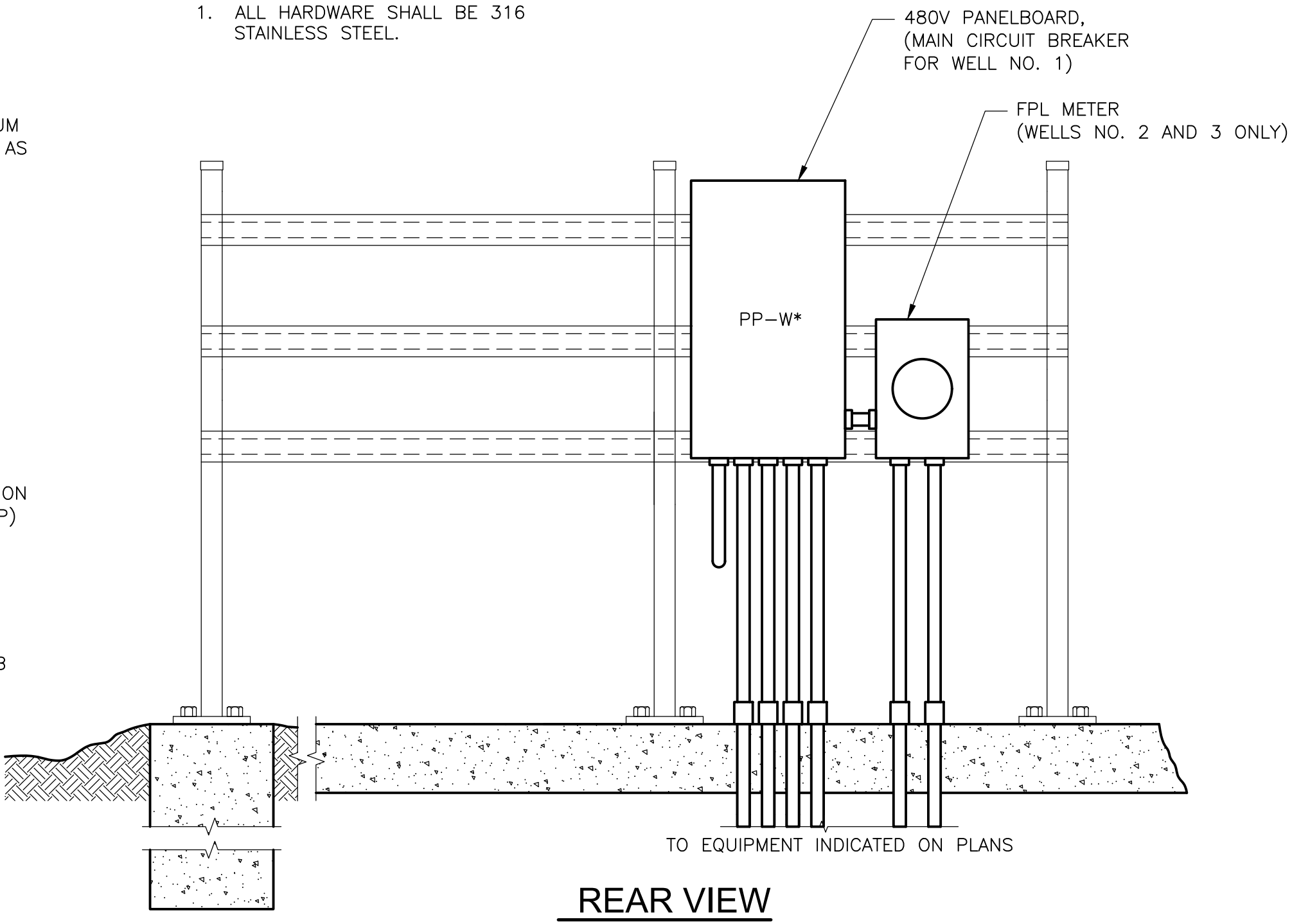
**PLAN VIEW**  
3/4" = 1'-0"

**NOTE:**

1. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.



**FRONT VIEW**  
3/4" = 1'-0"

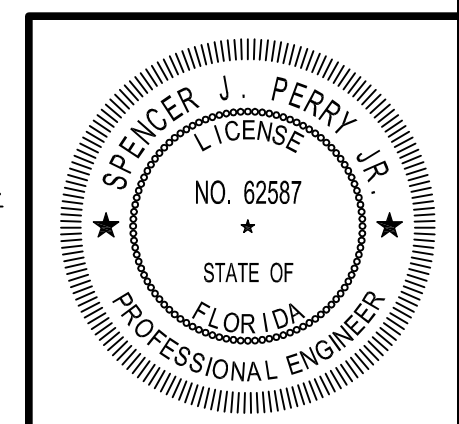


**REAR VIEW**  
3/4" = 1'-0"

**PANEL MOUNTING RACK  
DETAIL J**  
NTS

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DATE:  
SPENCER J. PERRY JR  
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. STELLMACK  
 DRAWN BY: R. RUCK  
 SHEET CHK'D BY: A. HENDELSAB  
 CROSS CHK'D BY: S. PERRY  
 APPROVED BY: S. PERRY  
 DATE: JULY 2024



COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

ELECTRICAL DETAILS II

PROJECT NO. 6295-267302  
 FILE NAME: ED02NFD1.DWG  
 SHEET NO.  
 ED-2



**GENERAL INSTRUMENT OR FUNCTION SYMBOLS**

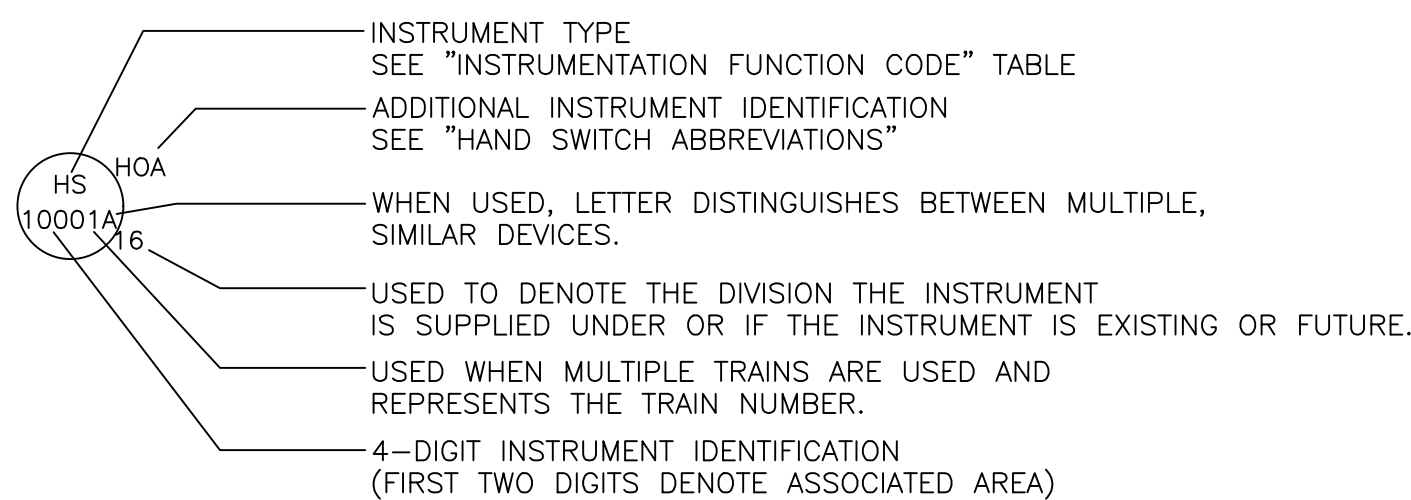
SHARED DISPLAY/SHARED CONTROL					
PRIMARY CHOICE	SECONDARY CHOICE	COMPUTER SOFTWARE	DISCRETE	LOCATION AND ACCESSIBILITY	
				FIELD MOUNTED AND NORMALLY OPERATOR ACCESSIBLE	
				PRIMARY CONTROL PANEL MOUNTED AND NORMALLY OPERATOR ACCESSIBLE	
				PRIMARY CONTROL PANEL MOUNTED AND NOT NORMALLY OPERATOR ACCESSIBLE	
				SECONDARY CONTROL PANEL MOUNTED AND NORMALLY OPERATOR ACCESSIBLE	
				SECONDARY CONTROL PANEL MOUNTED AND NOT NORMALLY OPERATOR ACCESSIBLE	

- INSTRUMENTS SHARING COMMON HOUSING
- PILOT LIGHT

**MISCELLANEOUS SYMBOLS**

- MOTOR
- INDICATES INTERLOCK OR LOGIC IN A MOTOR CONTROL CENTER
- INDICATES GENERAL OR MISCELLANEOUS HARDWIRED INTERLOCK
- MOTOR STARTER
- SILICONE CONTROL RECTIFIER
- VARIABLE FREQUENCY DRIVE
- PURGE OR FLUSHING DEVICE

**TYPICAL TAG NUMBERS & DESIGNATION**



**HAND SWITCH ABBREVIATIONS**

- AO = AUTO/OFF
- AM = AUTO/MANUAL
- CM = COMPUTER/MANUAL
- CL = COMPUTER/LOCAL
- E-STOP = EMERGENCY STOP
- FR = FORWARD/REVERSE
- FOR = FORWARD/OFF/REVERSE
- FS = FAST SLOW
- FOS = FAST/OFF/SLOW
- HOA = HAND/OFF/AUTO
- LLS = LEAD/LAG/STANDBY
- LOC = LOCAL/OFF/COMPUTER
- LOR = LOCAL/OFF/REMOTE
- LOS = LOCKOUT/STOP
- LA = LOCAL/AUTO
- LR = LOCAL/REMOTE
- OC = OPEN/CLOSE
- OCA = OPEN/CLOSE/AUTO
- OO = ON/OFF
- OOA = ON/OFF/AUTO
- OSC = OPEN/STOP/CLOSE
- RSL = RAISE/STOP/LOWER
- SS = START/STOP
- SOR = START/OFF/RESET

**INSTRUMENTATION FUNCTION CODE**

FIRST LETTERS		SUCCEEDING LETTERS		
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
MEASURED/INITIATING VARIABLE	VARIABLE MODIFIER	READOUT/PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM	
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE		CONTROL	USER'S CHOICE
D	USER'S CHOICE	DIFFERENCE, DIFFERENTIAL		CLOSED
E	VOLTAGE		SENSOR, PRIMARY ELEMENT	
F	FLOW, FLOW RATE	RATIO		
G	USER'S CHOICE		GLASS, GAUGE, VIEWING DEVICE	
H	HAND			HIGH
I	CURRENT		INDICATE	
J	POWER		SCAN	
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION
L	LEVEL		LIGHT	LOW
M	MOISTURE			MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION	OPEN
P	PRESSURE		POINT (TEST CONNECTION)	
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE	
R	RADIATION		RECORD	RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH STOP
T	TEMPERATURE		TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	
V	VIBRATION, MECHANICAL, ANALYSIS		VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL, PROBE	
X	UNCLASSIFIED (1)	X-AXIS	ACCESSORY DEVICES, UNCLASSIFIED (1)	UNCLASSIFIED (1)
Y	EVENT, STATE, PRESENCE	Y-AXIS		AUXILIARY DEVICES
Z	POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENT SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED, FINAL CONTROL ELEMENT

TABLE NOTES:  
(1) WHEN USED SYMBOL OR SIGNAL LINE IS ANNOTATED.

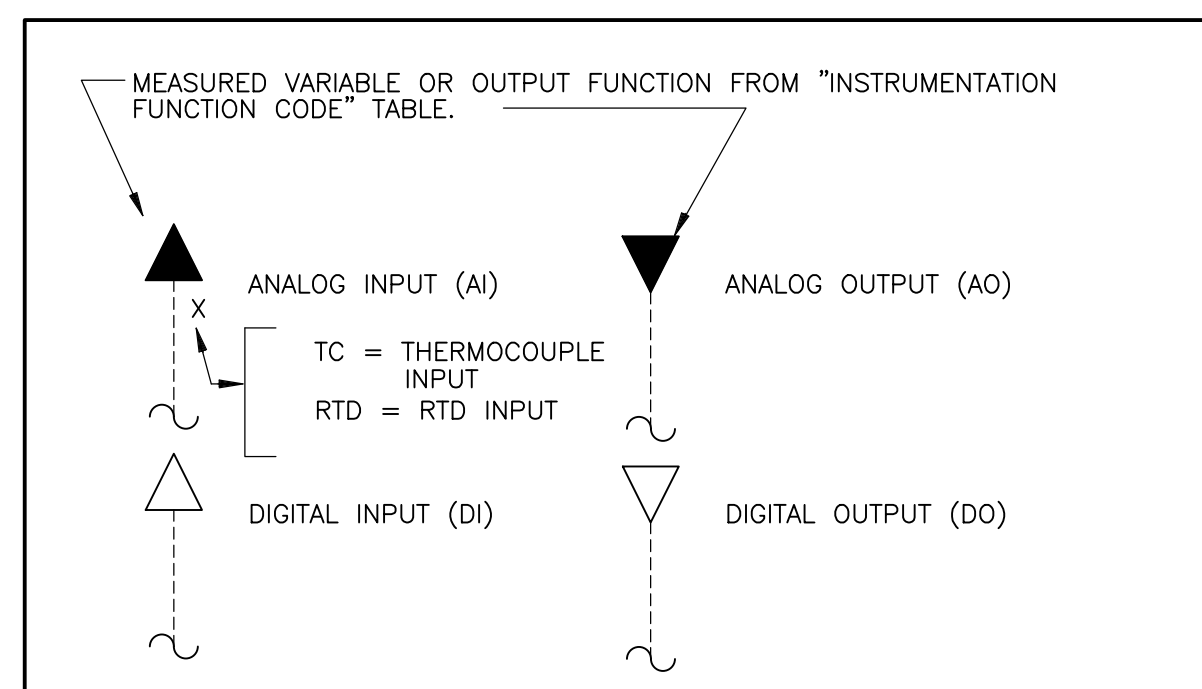
**INSTRUMENT LINE SYMBOLS**

- ELECTRICAL SIGNAL
- TELEPHONE SIGNAL
- ELECTROMAGNETIC OR SONIC SIGNAL (GUIDED)
- ELECTROMAGNETIC OR SONIC SIGNAL (UNGUIDED)
- PNEUMATIC SIGNAL
- CAPILLARY TUBE
- HYDRAULIC SUPPLY
- VENDOR SUPPLIED CABLE
- COMMUNICATION LINK - COPPER (HARDWIRED)
- COMMUNICATION LINK - FIBER OPTICS

**ELECTRICAL / AIR SOURCES**

- UPS --- UPS POWERED ELECTRICAL SOURCE
- ES --- ELECTRICAL SOURCE
- IA --- INSTRUMENT AIR SOURCE

**I/O SIGNALS**



**PRIMARY ELEMENTS**

- MAGNETIC FLOW METER
- TURBINE OR PROPELLER FLOW METER
- AVERAGING PITOT TUBE
- ULTRASONIC FLOW METER
- ROTAMETER
- WEIR
- ORIFICE PLATE
- VENTURI TUBE
- FLUME
- GENERAL INSERTION FLOW METER
- THERMAL MASS FLOW METER
- FLOAT SWITCH
- ULTRASONIC LEVEL SENSOR
- RADAR LEVEL SENSOR
- CAPACITANCE LEVEL SENSOR
- PRESSURE GAUGE
- DIFFERENTIAL PRESSURE GAUGE
- TEMPERATURE GAUGE
- GENERAL ANALYZER

- pH=pH
- DO=DISSOLVED OXYGEN
- H2S=HYDROGEN SULFIDE
- LEL=% LOWER EXPLOSIVE LIMIT
- O2=OXYGEN
- O3=OZONE
- NH3=NITRATE
- TURB=TURBIDITY
- FL=FLUORIDE

**GENERAL NOTES**

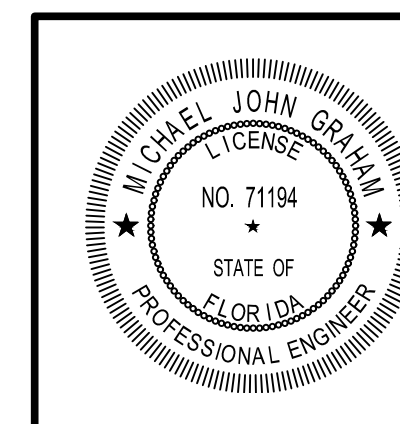
- THIS LEGEND APPLIES TO P&IDS ONLY AND MAY DIFFER FROM LEGENDS FOR OTHER SHEETS.
- IN GENERAL THIS LEGEND SHEET AND THE P&IDS ARE BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARDS AND RECOMMENDED PRACTICES FOR INSTRUMENTATION AND CONTROL. SOME MODIFICATIONS, ADDITIONS AND ALTERATIONS HAVE BEEN MADE AS REQUIRED TO ACCOMMODATE PROJECT REQUIREMENTS.
- SOME PROCESS ITEMS SUCH AS EQUIPMENT ISOLATION VALVES, BYPASS LINES, ETC., WHICH ARE NOT CRITICAL FOR AN UNDERSTANDING OF THE INSTRUMENTATION FUNCTIONS ARE NOT SHOWN ON THE P&IDS.
- SEE ELECTRICAL AND MECHANICAL SHEETS AND SPECIFICATIONS FOR ADDITIONAL CONTROL AND INTERLOCK REQUIREMENTS.
- LIGHTER WEIGHT LINES, SHOWN AS \_\_\_\_\_, INDICATE EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE EXISTING. WEIGHTED LINES, SHOWN AS \_\_\_\_\_ OR HEAVIER \_\_\_\_\_, INDICATE EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE NEW. DASHED WEIGHTED LINES, SHOWN AS \_\_\_\_\_, INDICATED EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE GROUPED AS A PACKAGE.

**GENERAL ABBREVIATIONS**

- AI ANALOG IN
- AO ANALOG OUT
- CPU CENTRAL PROCESSOR UNIT
- DI DIGITAL OR DISCRETE INPUT
- DO DIGITAL OUTPUT
- FC FAIL CLOSED
- FO FAIL OPEN OR FIBER OPTIC
- FTP FIBER TERMINATION PANEL
- HMI HUMAN MACHINE INTERFACE
- MC MEDIA CONVERTER
- MCC MOTOR CONTROL CENTER
- NC NORMALLY CLOSED
- NPW NON-POTABLE WATER
- NO NORMALLY OPEN
- PLC PROGRAMMABLE LOGIC CONTROLLER
- PW PLANT WATER
- RIO REMOTE INPUT/OUTPUT
- UPS UNINTERRUPTIBLE POWER SUPPLY
- VFD VARIABLE FREQUENCY DRIVE

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DATE: MICHAEL J. GRAHAM  
PE NO. 71194

PROJECT NO. 6295-267302  
FILE NAME: 1001SYMB.DWG

SHEET NO.

I-1

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. GRAHAM
DRAWN BY: A. CARTER
SHEET CHK'D BY: M. GRAHAM
CROSS CHK'D BY: F. ALCALA
APPROVED BY: M. GRAHAM
DATE: JULY 2024

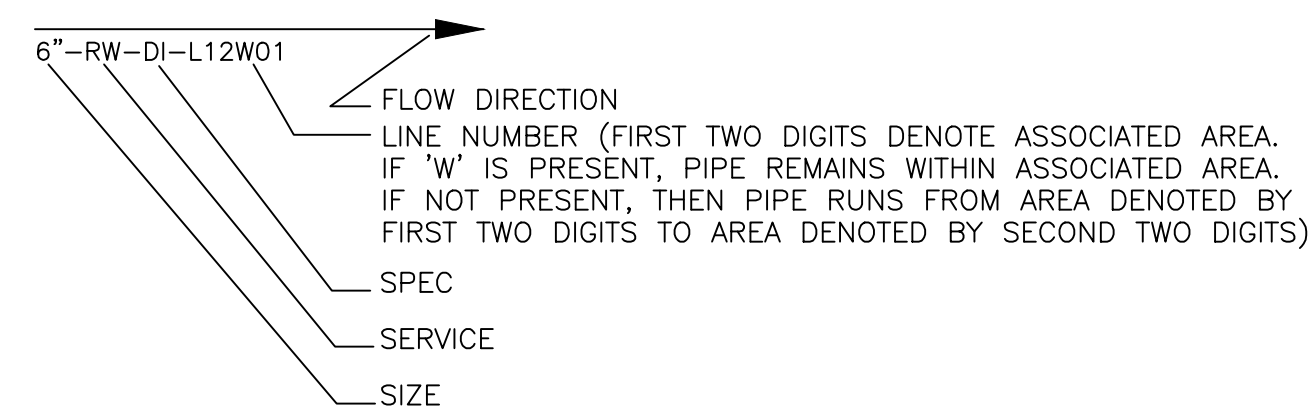
**CDM Smith**  
4210 Metro Parkway, Suite 230  
Fort Myers, FL 33916  
Tel: (239) 838-9600  
FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA

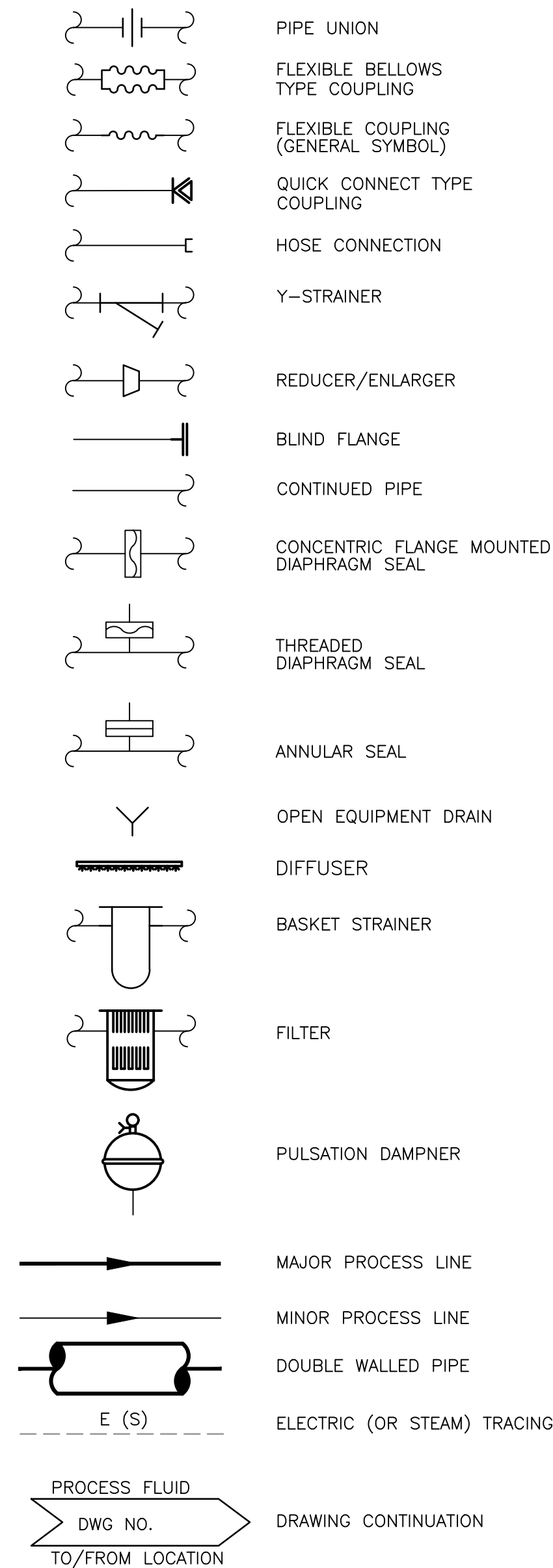
FOXFIRE WELLS

INSTRUMENTATION LEGEND I

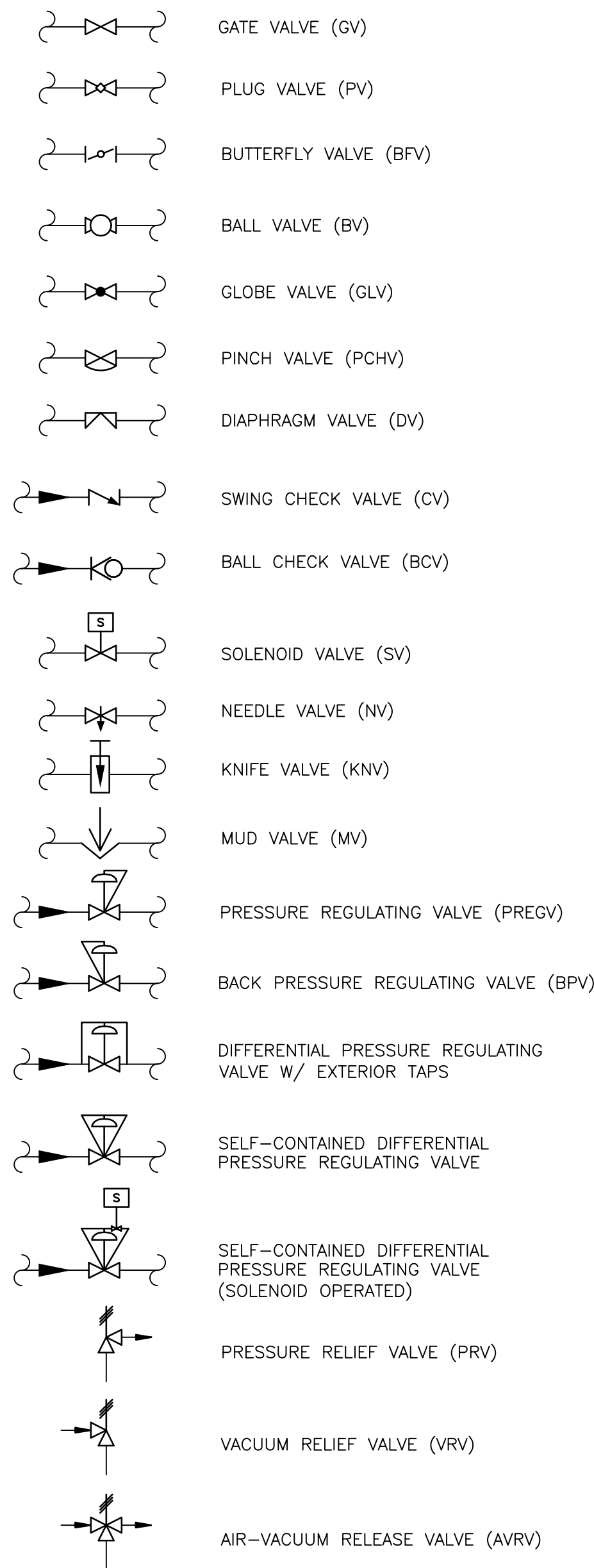
**TYPICAL PIPE TAG NUMBERS & DESIGNATION**



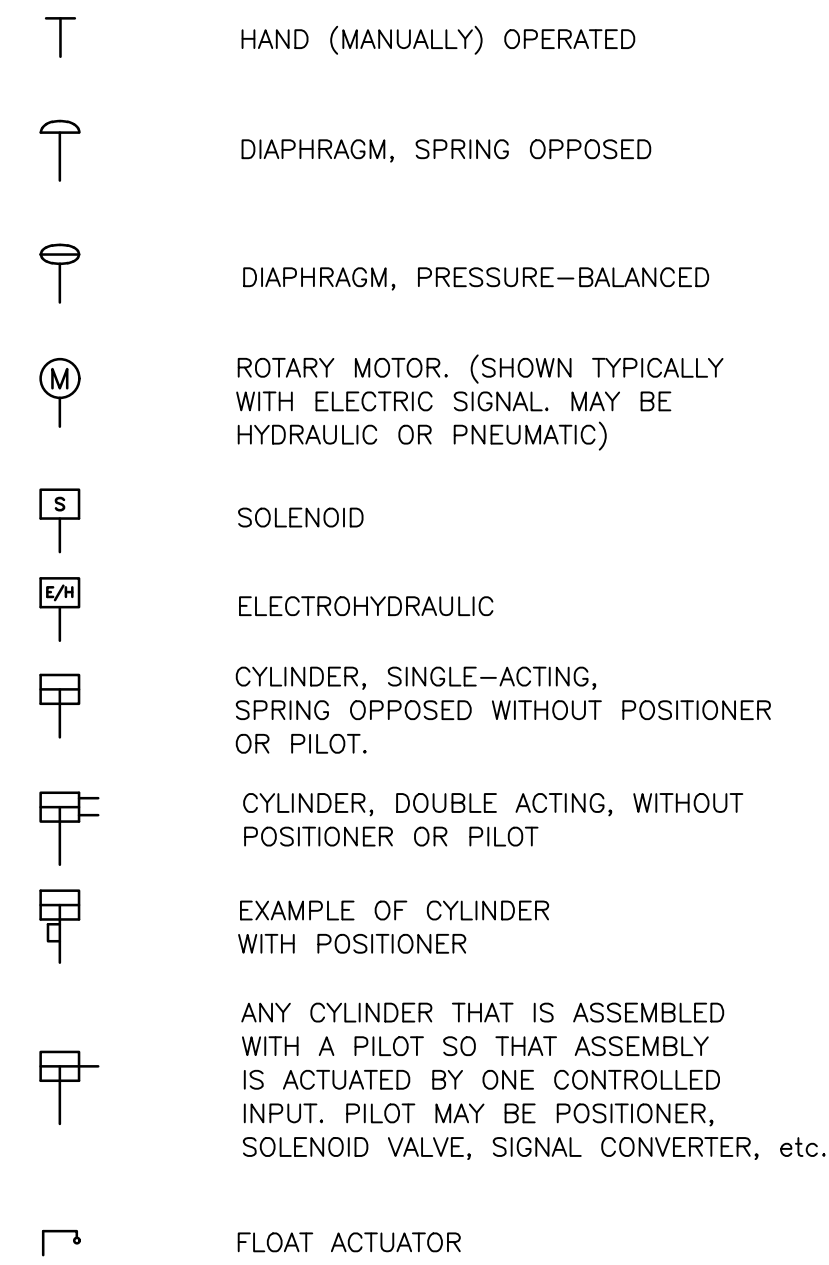
**PIPE LINE SYMBOLS**



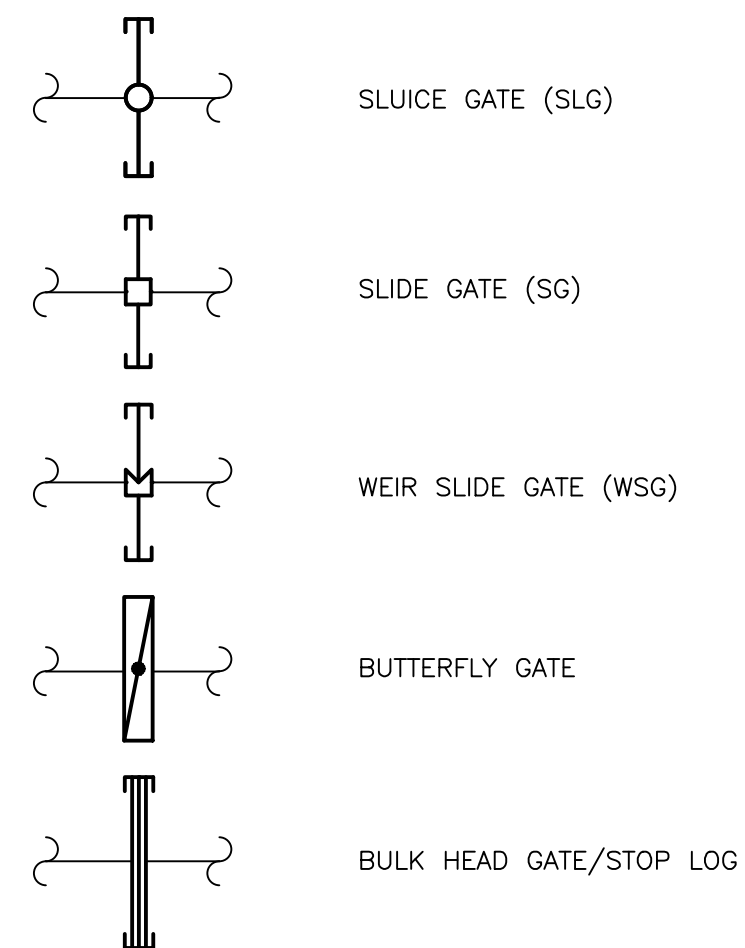
**VALVE SYMBOLS**



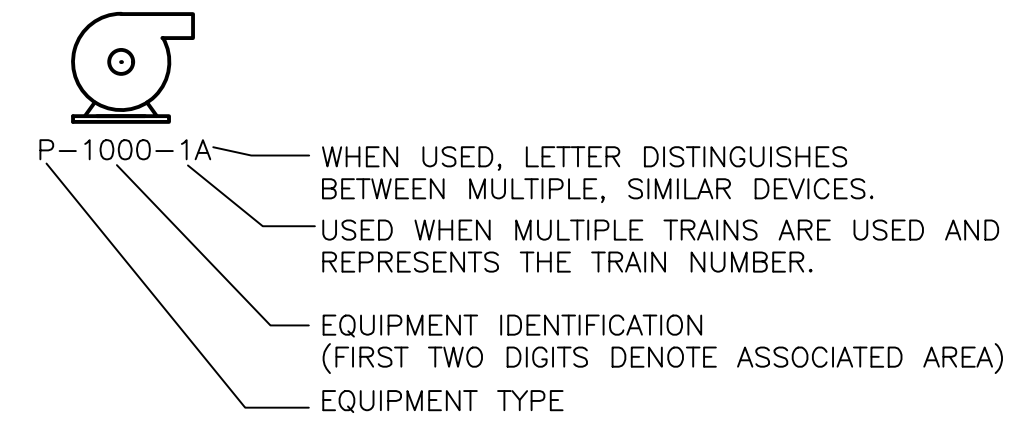
**VALVE ACTUATORS**



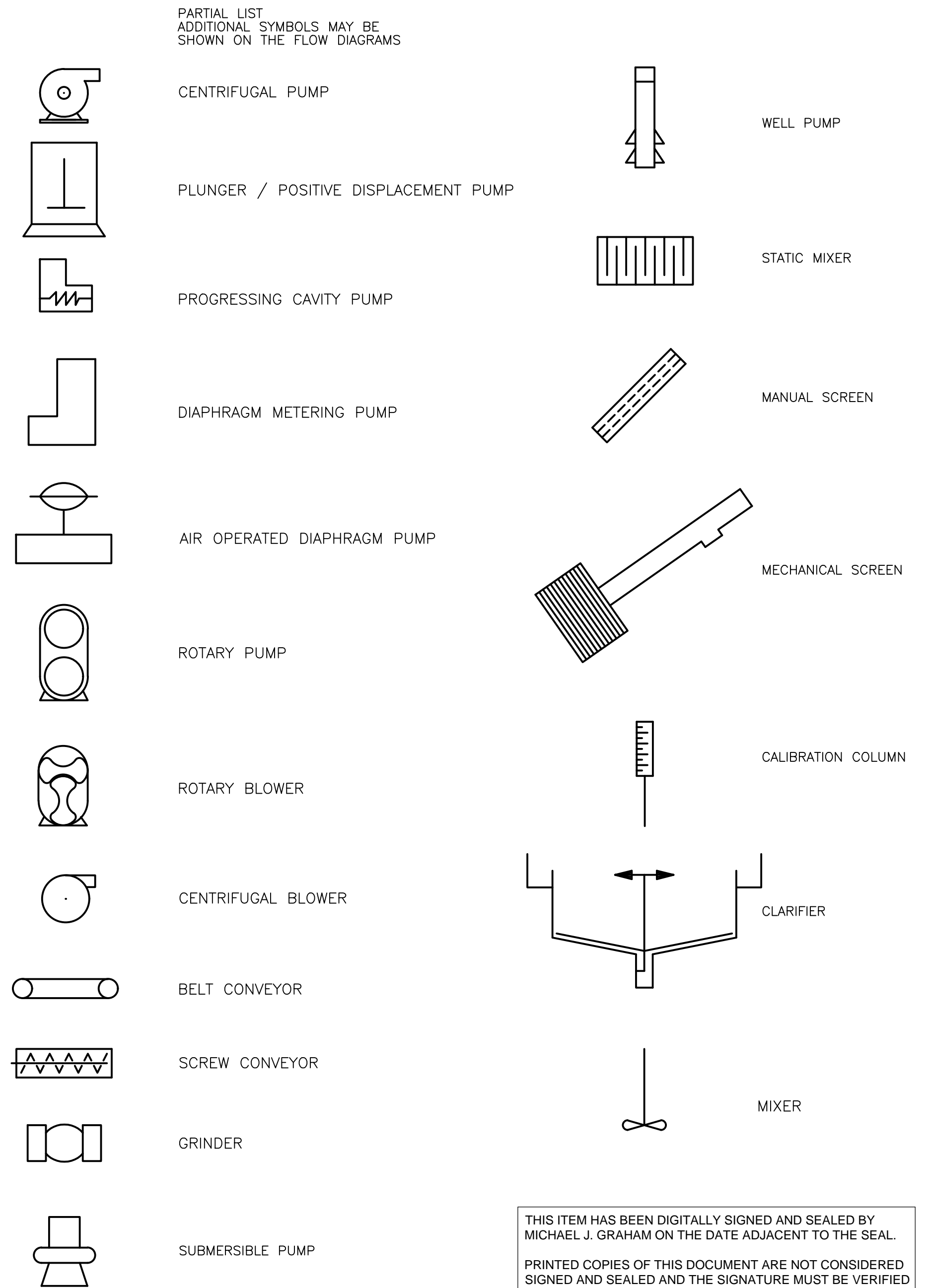
**GATE SYMBOLS**



**TYPICAL EQUIPMENT TAG NUMBERS & DESIGNATION**



**PROCESS EQUIPMENT**

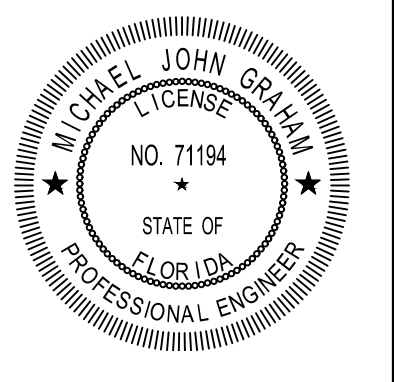


**GENERAL NOTES**

1. REFER TO SHEET I-1 FOR ADDITIONAL NOTES

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DATE: MICHAEL J. GRAHAM  
PE NO. 71194

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. GRAHAM  
 DRAWN BY: A. CARTER  
 SHEET CHK'D BY: M. GRAHAM  
 CROSS CHK'D BY: F. ALCALA  
 APPROVED BY: M. GRAHAM  
 DATE: JULY 2024

4210 Metro Parkway, Suite 230  
 Fort Myers, FL 33916  
 Tel: (239) 838-9600  
 FL COA No. EB-0000020

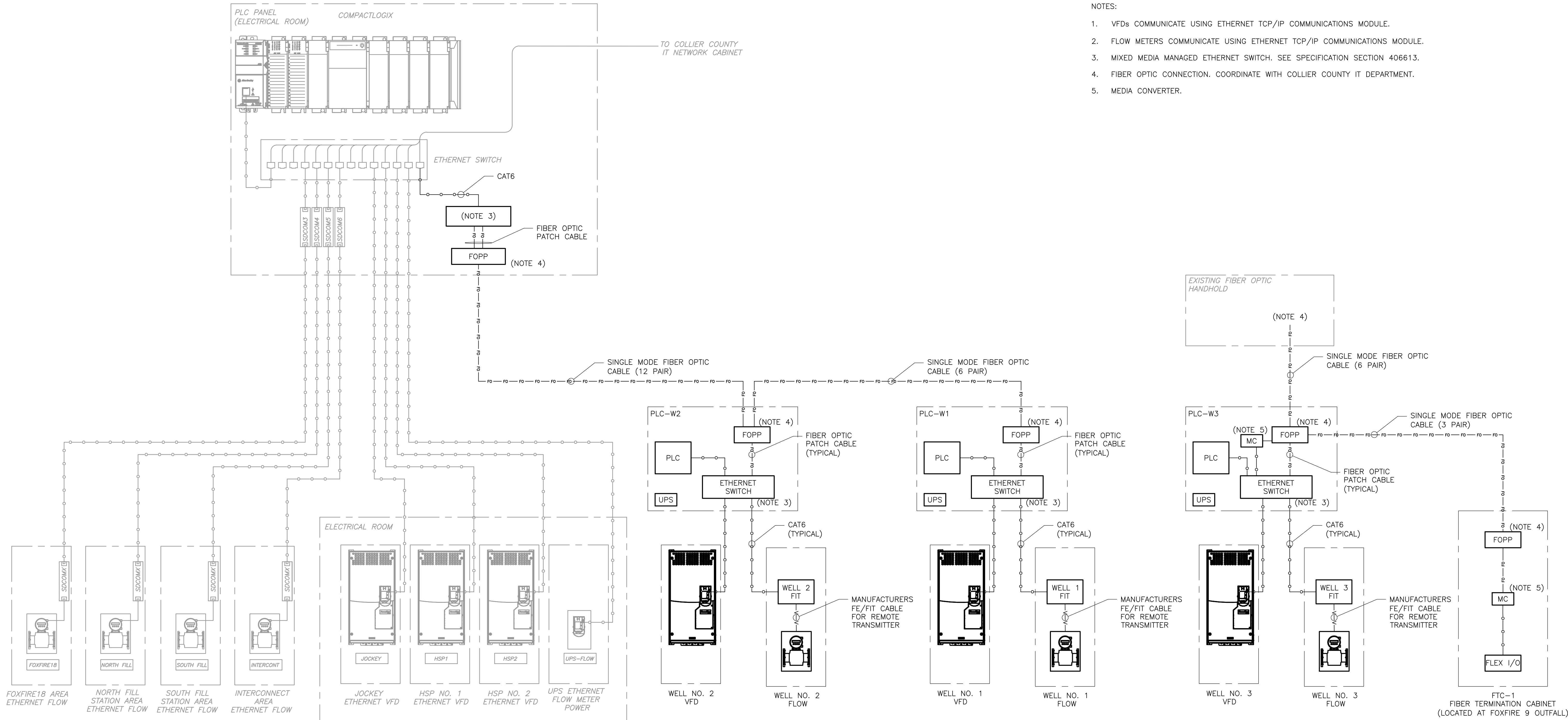
COLLIER COUNTY, FLORIDA  
**FOXFIRE WELLS**

**INSTRUMENTATION LEGEND II**

PROJECT NO.	6295-267302
FILE NAME:	1002SYMB.DWG
SHEET NO.	I-2



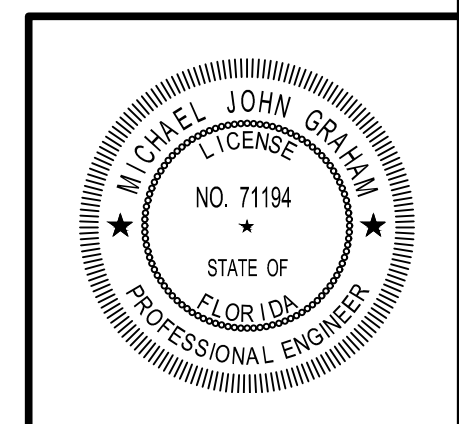
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- NOTES:
- VFDs COMMUNICATE USING ETHERNET TCP/IP COMMUNICATIONS MODULE.
  - FLOW METERS COMMUNICATE USING ETHERNET TCP/IP COMMUNICATIONS MODULE.
  - MIXED MEDIA MANAGED ETHERNET SWITCH. SEE SPECIFICATION SECTION 406613.
  - FIBER OPTIC CONNECTION. COORDINATE WITH COLLIER COUNTY IT DEPARTMENT.
  - MEDIA CONVERTER.

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 MICHAEL J. GRAHAM ON THE DATE ADJACENT TO THE SEAL.

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DATE:  
 MICHAEL J. GRAHAM  
 PE NO. 71194

REV. NO.	DATE	DRWN	CHKD	REMARKS

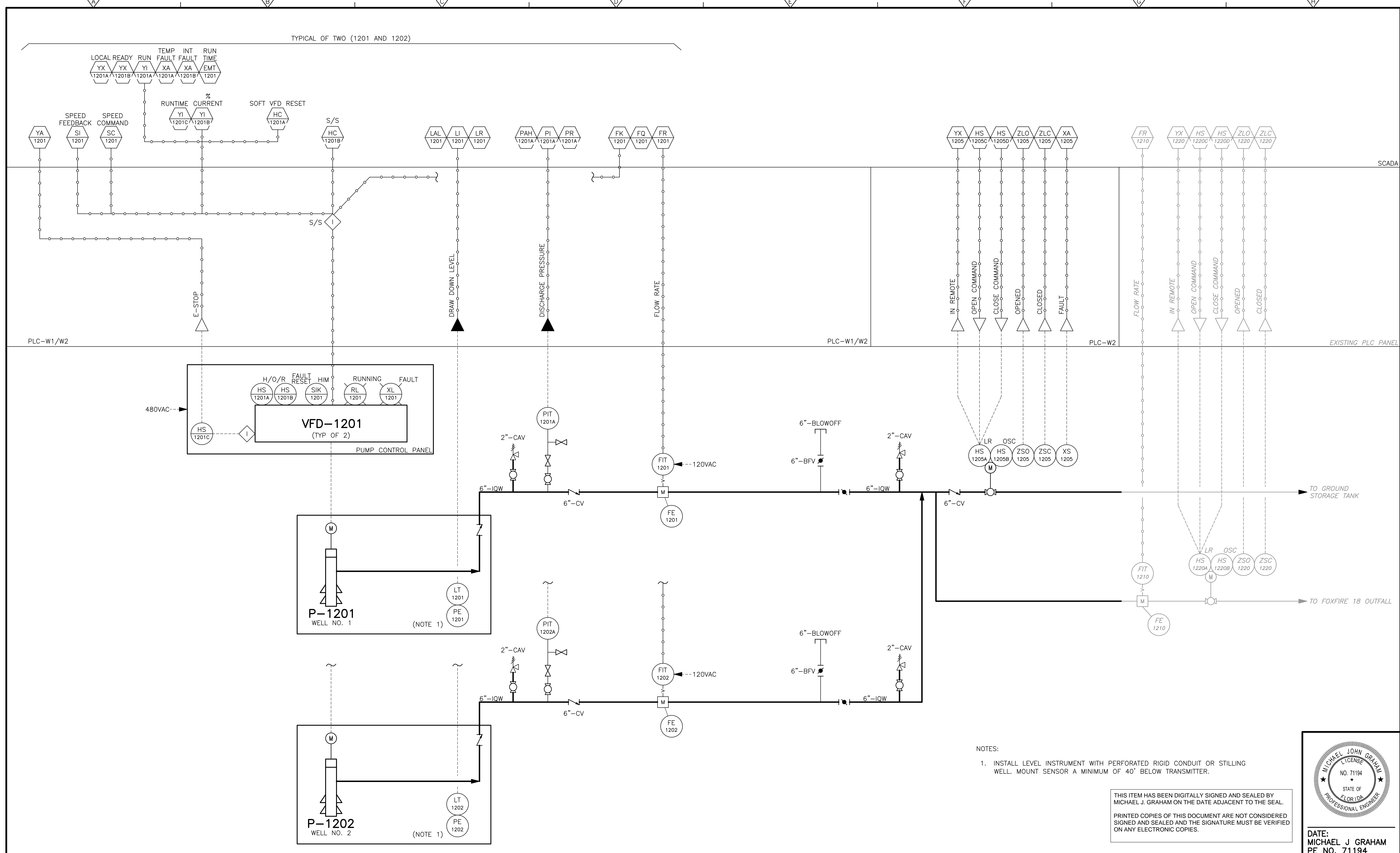
DESIGNED BY: M. GRAHAM  
 DRAWN BY: A. CARTER  
 SHEET CHK'D BY: M. GRAHAM  
 CROSS CHK'D BY: F. ALCALA  
 APPROVED BY: M. GRAHAM  
 DATE: JULY 2024

COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

SYSTEM ARCHITECTURE

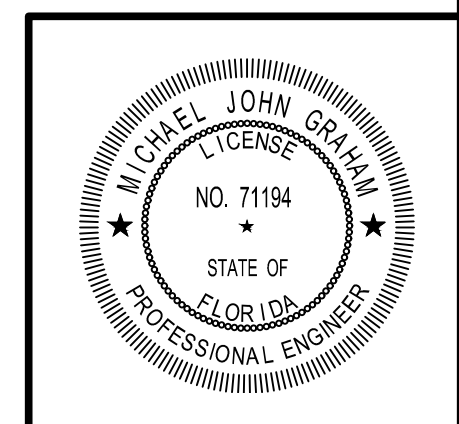
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 SHEET NO.  
 I-3

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NOTES:  
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DATE:  
 MICHAEL J. GRAHAM  
 PE NO. 71194

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. GRAHAM  
 DRAWN BY: A. CARTER  
 SHEET CHK'D BY: M. GRAHAM  
 CROSS CHK'D BY: F. ALCALA  
 APPROVED BY: M. GRAHAM  
 DATE: JULY 2024

**CDM Smith**  
 4210 Metro Parkway, Suite 230  
 Fort Myers, FL 33916  
 Tel: (239) 838-9600  
 FL COA No. EB-0000020

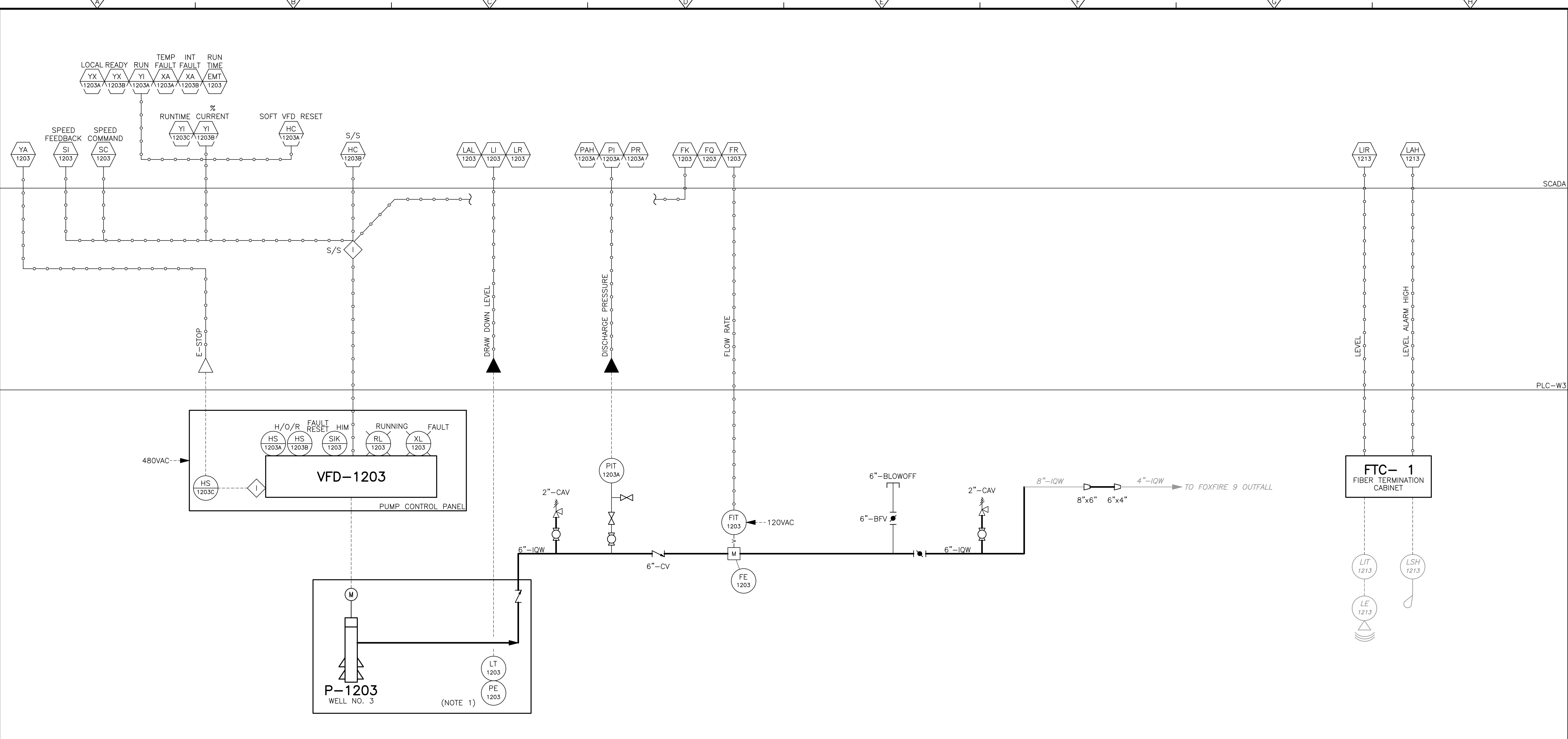
COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

PROCESS & INSTRUMENTATION DIAGRAM  
 WELLS NO. 1 & NO. 2

PROJECT NO. 6295-267302  
 FILE NAME: 1004PID.DWG  
 SHEET NO.  
 I-4

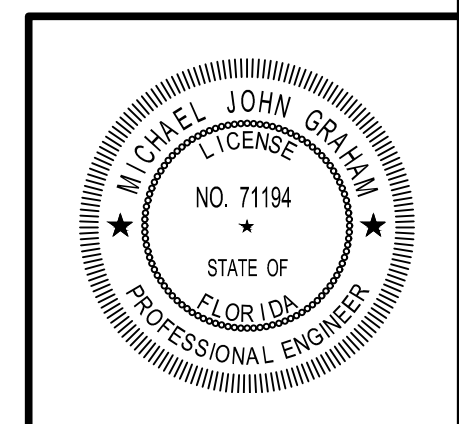


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NOTES:  
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. GRAHAM  
 DRAWN BY: A. CARTER  
 SHEET CHK'D BY: M. GRAHAM  
 CROSS CHK'D BY: F. ALCALA  
 APPROVED BY: M. GRAHAM  
 DATE: JULY 2024

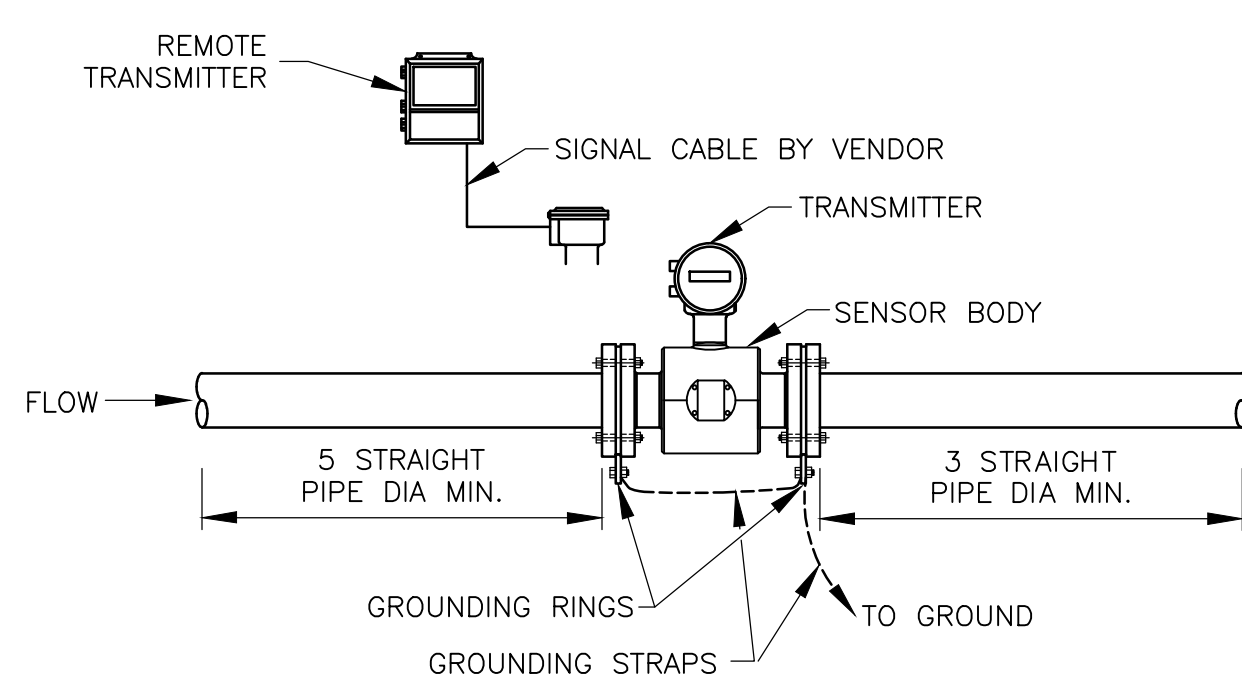


COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

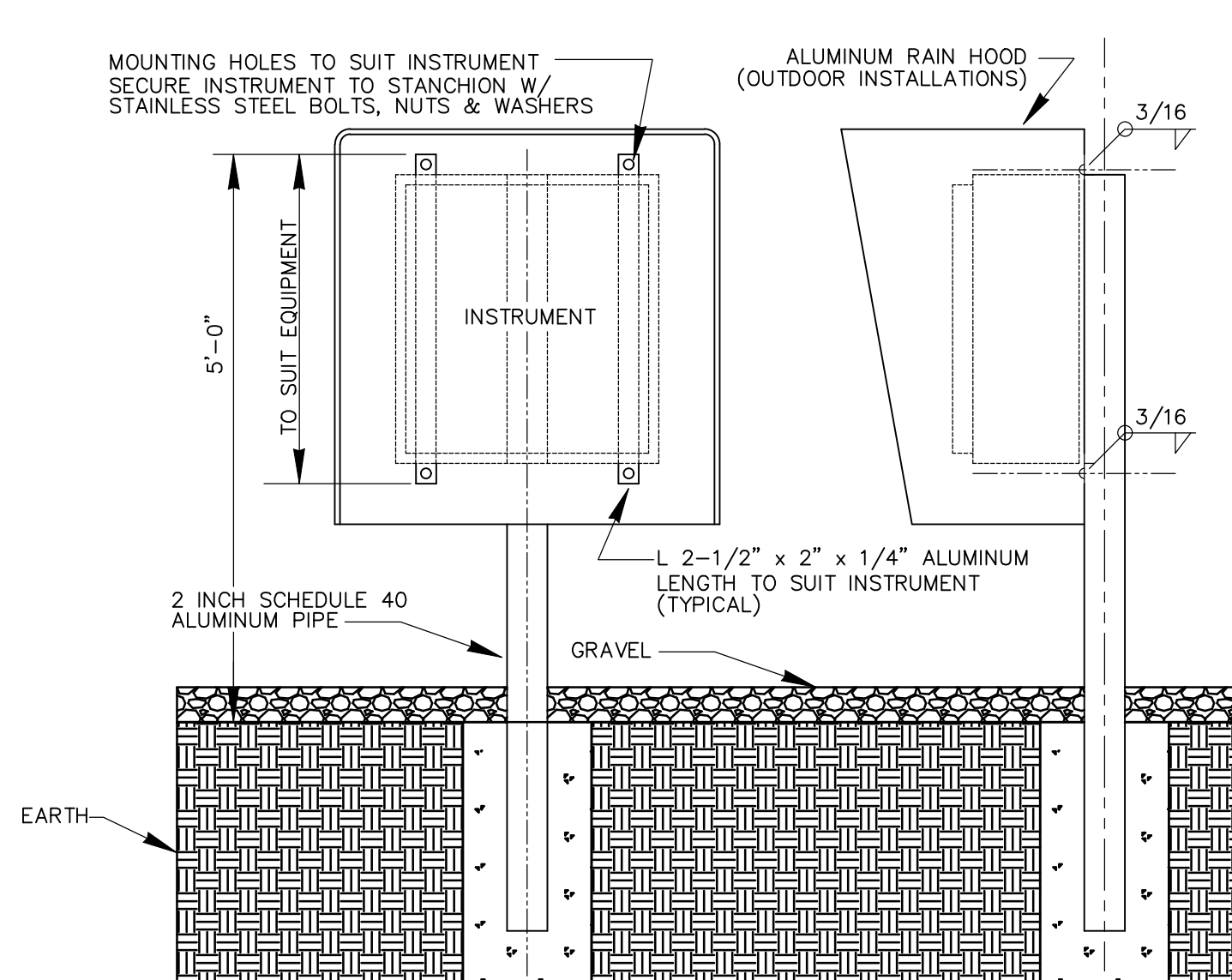
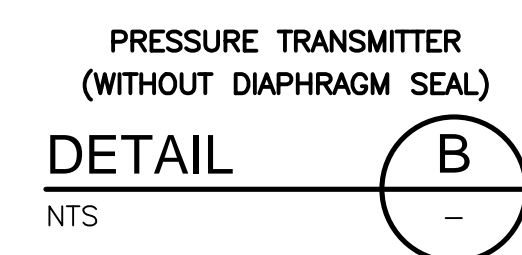
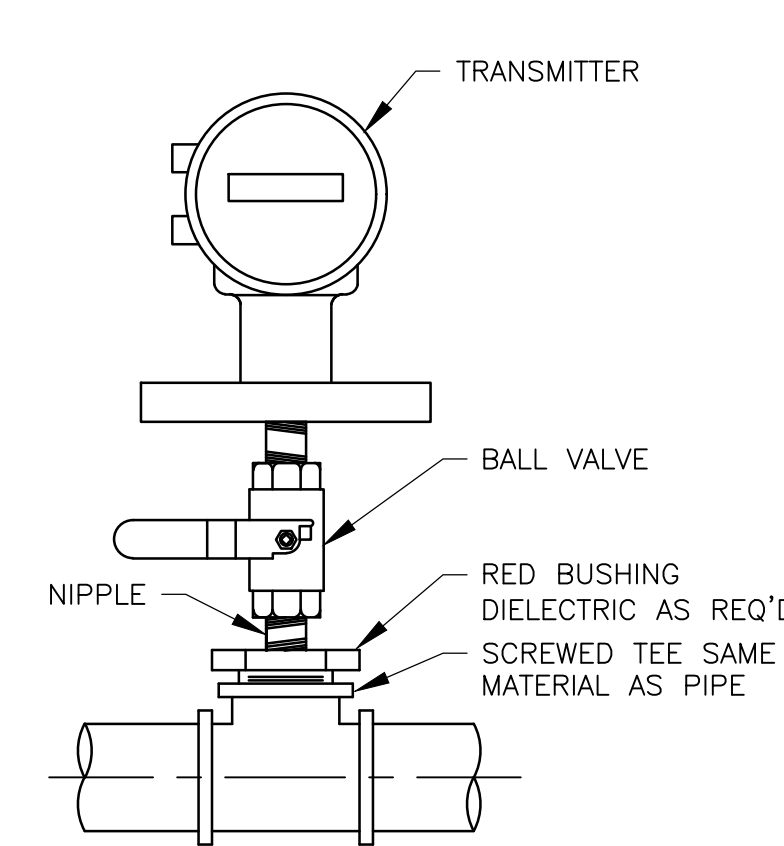
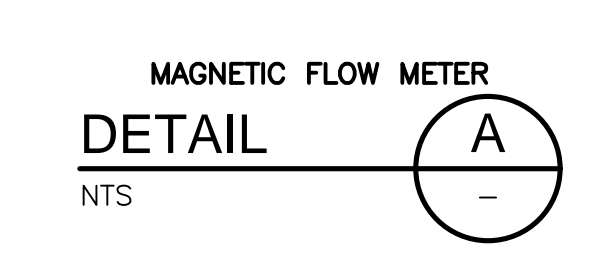
PROCESS & INSTRUMENTATION DIAGRAM  
 WELL NO. 3

PROJECT NO. 6295-267302  
 FILE NAME: 1005PID.DWG  
 SHEET NO.  
 I-5

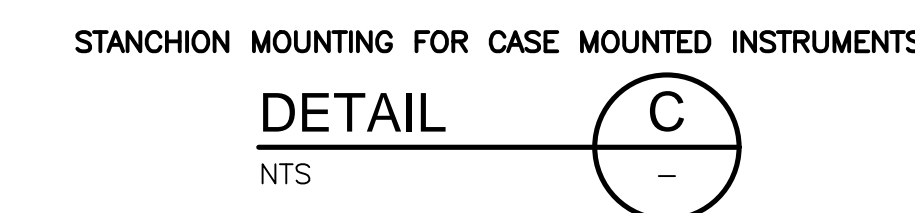
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- NOTES:
1. PROVIDE GROUNDING RING(S) AS RECOMMENDED BY MANUFACTURER.
  2. PROVIDE SENSOR LINING TO PREVENT BUILDUP ON METER.

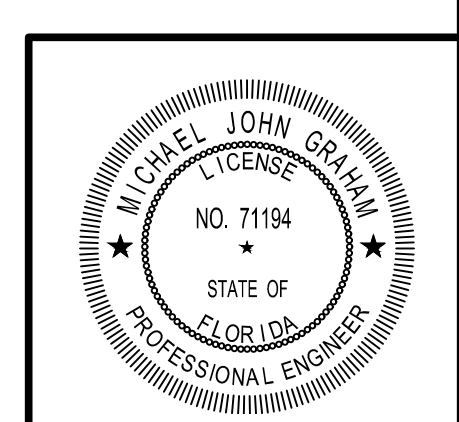


- NOTES:
1. ALL EXPOSED EDGES TO BE GROUND SMOOTH AND BURR FREE.
  2. ACCORDING TO SPECIFICATIONS PAINT ALL ALUMINUM IN CONTACT WITH CONCRETE.



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DATE:  
 MICHAEL J. GRAHAM  
 PE NO. 71194

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. GRAHAM  
 DRAWN BY: A. CARTER  
 SHEET CHK'D BY: M. GRAHAM  
 CROSS CHK'D BY: F. ALCALA  
 APPROVED BY: M. GRAHAM  
 DATE: JULY 2024



COLLIER COUNTY, FLORIDA  
 FOXFIRE WELLS

INSTRUMENT INSTALLATION DETAILS

PROJECT NO. 6295-267302  
 FILE NAME: 1006PIDT.DWG  
 SHEET NO.  
 I-6