



**City of Portales  
Blackwater Well Field  
Well Equipping Phase 2**  
ITB#: 2021-11-14  
WTB 5104-WPF

**ADDENDUM NO. 2**

December 10, 2021

**A. ANSWERS TO QUESTIONS RECEIVED**

The following question was received and an answer is provided below (*answer in italics*).

1. On the SCADA drawings for well B5, we are missing something to replace the cable from the existing pole that has 3 each 120 degree sector antenna and 1 dish to the new site. *Drawings E-3 and E-5 have ben revised to address this issue.*

**B. REVISIONS TO DRAWINGS**

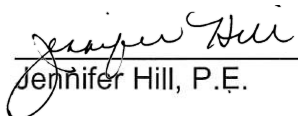
Revised sheets E-3 and E-5 are attached.

**Section**

Attachments:

Attachment A – Revised Drawings

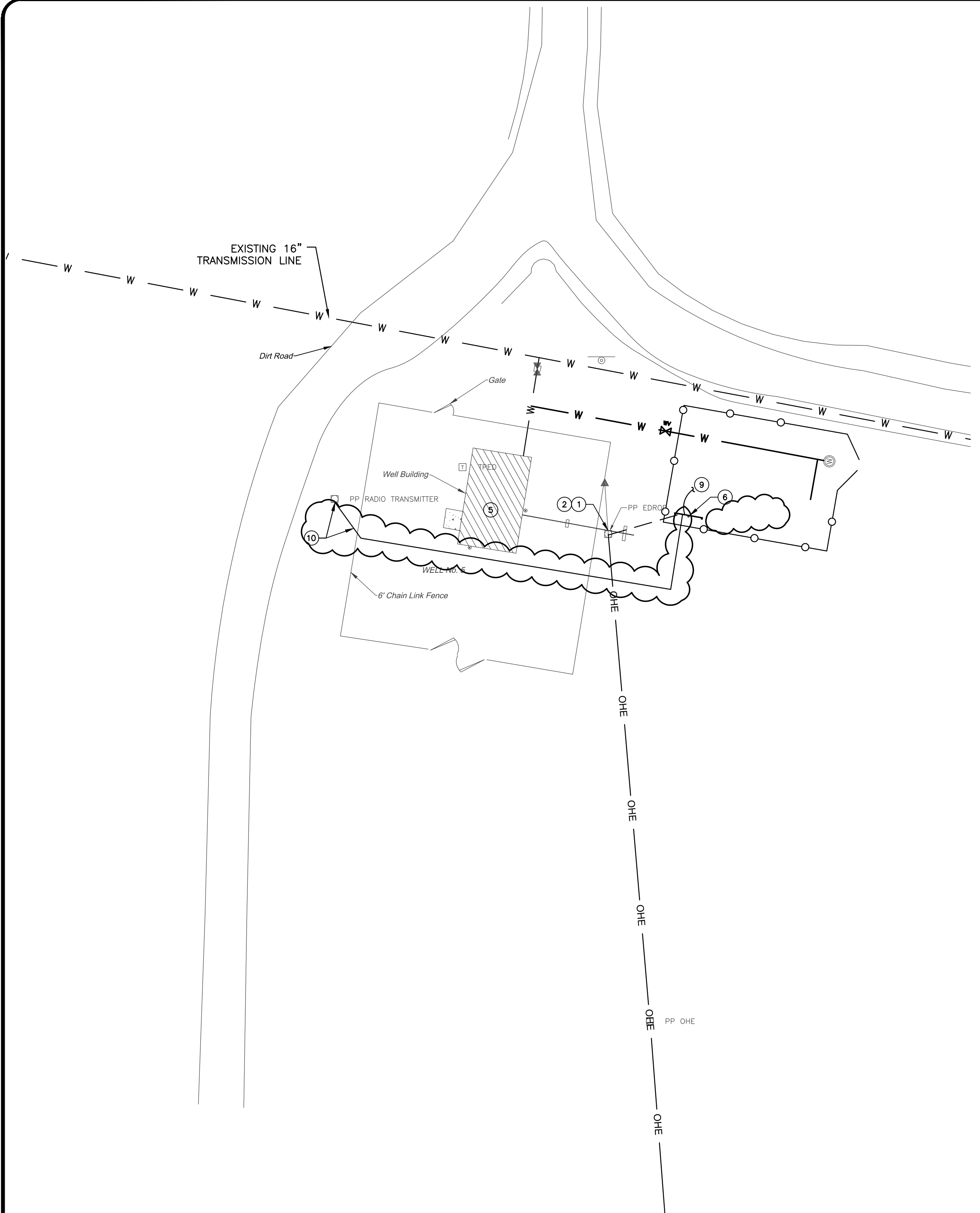
Daniel B. Stephens & Associates, Inc.

  
\_\_\_\_\_  
Jennifer Hill, P.E.

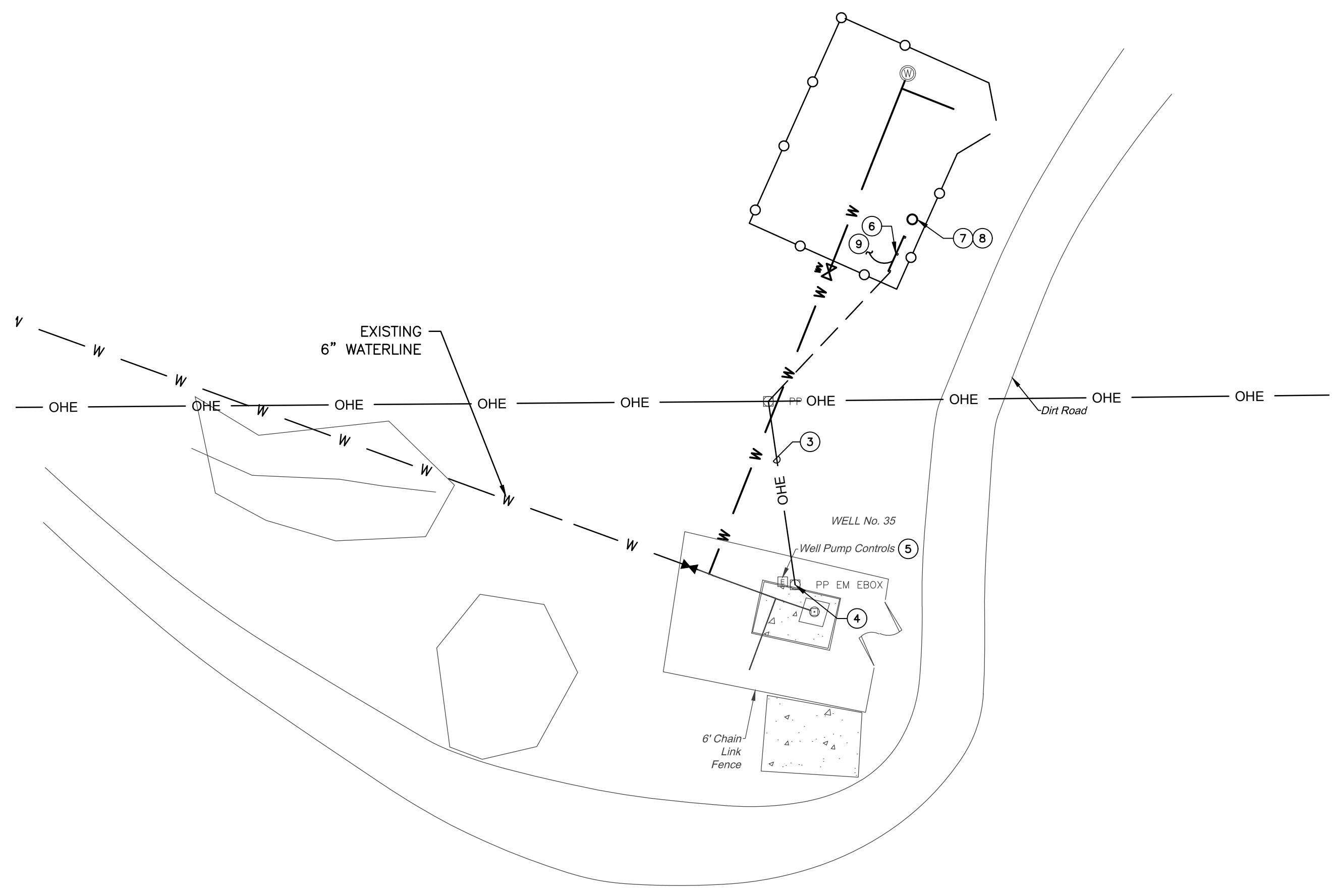
City of Portales

  
\_\_\_\_\_  
Carla Weems, Deputy Clerk/Acting CPO

F:\21079 PORTALES WELLS\21079 CADD\CONSTRUCT\ELECTRICAL\E-3 ELEC SITE PLAN\_WELL 5 AND 35.DWG December 9, 2021 - 2:14 PM BY: TOM RUEHLE



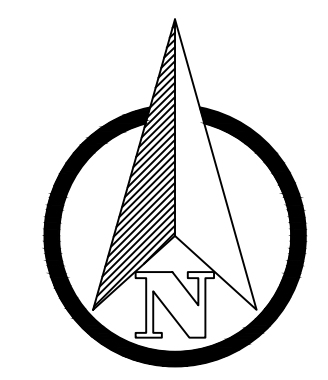
**WELL 5 - SITE PLAN** 1  
SCALE: 1"=15'



**WELL 35 - SITE PLAN** 2  
SCALE: 1"=15'

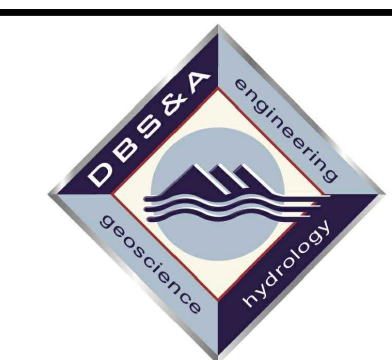
- GENERAL NOTES:**
- EXISTING SERVICE AND ALL ASSOCIATED WIRING AND CONTROLS TO EXISTING WELLS SHALL BE ONLY BE REMOVED AFTER NEW REPLACEMENT WELL IS COMPLETE. COORDINATE WITH CIVIL.
  - ALL CHANGES AND/OR UPGRADES TO PRIMARY WIRING, SECONDARY WIRING, SERVICES, AND METERING SHALL BE COORDINATED WITH LOCAL UTILITY PRIOR TO COMMENCING WORK.
  - REFER TO POWER RISER DIAGRAMS FOR ADDITIONAL INFORMATION.

- KEY NOTES:**
- EXISTING 480Y/277V-3Ø SECONDARY TO BE REMOVED. COORDINATE REMOVAL WITH XCEL ENERGY.
  - EXISTING METERING AND SERVICE TO BE REMOVED. COORDINATE REMOVAL WITH XCEL ENERGY.
  - EXISTING OVERHEAD 480Y/277V-3Ø SECONDARY TO BE REMOVED. COORDINATE REMOVAL WITH ROOSEVELT COUNTY ELECTRIC COOPERATIVE.
  - EXISTING METERING AND SERVICE TO BE REMOVED. COORDINATE REMOVAL WITH ROOSEVELT COUNTY ELECTRIC COOPERATIVE.
  - REMOVE EXISTING ELECTRICAL EQUIPMENT IN ITS ENTIRETY. OWNER SHALL FIRST RIGHT OF REFUSAL.
  - APPROXIMATE LOCATION OF NEW ELECTRICAL EQUIPMENT RACK. COORDINATE FINAL LOCATION AND ORIENTATION IN THE FIELD PRIOR TO INSTALLATION.
  - WOOD POLE FOR RADIO ANTENNA. PROVIDE AND INSTALL A 25' CREOSOTE SOAKED (FULL LENGTH HOT/COLD TREATMENT) WOOD POLE. POLES SHALL BE 24" DIAMETER, 6' FROM BUTT AND 18.8" AT TOP. 5'-0" MINIMUM EMBEDMENT BELOW FINAL GRADE. COORDINATE FINAL LOCATION IN THE FIELD.
  - PROVIDE AND INSTALL POWERBEAM 5AC GEN2 PBE-RAD-400. CONTACT THE CITY FOR ADDITIONAL INFORMATION, AS REQUIRED, REGARDING THE EXISTING SCADA SYSTEM AND INTEGRATION OF THIS PROJECT
  - PROVIDE AND INSTALL 3#10 THWN CU IN 1" CONDUIT AND EXTEND TO 120V HEAT TRACE EQUIPMENT. CONNECT TO A 20A-1P GFPE CIRCUIT BREAKER. REFER TO SUPPLEMENTAL SPECIFICATION SECTION 15403 FOR ADDITIONAL INFORMATION.
  - EXISTING POLE AND ANTENNAE. CONTRACTOR SHALL REMOVE EXISTING UBIQUITI CABLING, CUT EXISTING CONDUIT NEAR POLE BASE, PROVIDE AND INSTALL WEATHERPROOF JUNCTION BOX, AND EXTEND 1-1/4" CONDUIT TO NEW RTU LOCATION. PROVIDE AND INSTALL FIVE(5) OUTDOOR RATED, UBIQUITI ETHERNET CABLES (WITH RJ45 CONNECTORS AND GROUND WIRE). FOUR(4) FOR EXISTING ANTENNAE AND ONE(1) SPARE CABLE FOR FUTURE USE. COORDINATE ROUTING IN THE FIELD. CABLE LENGTH AS REQUIRED.

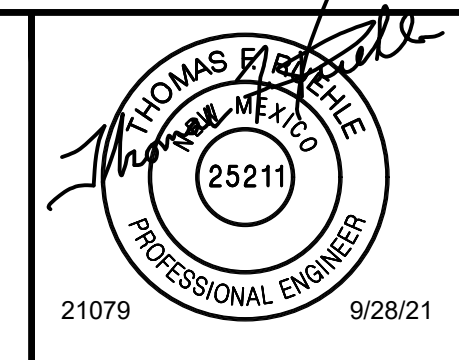


REV. NO.	DATE	DESCRIPTION	APPROVED BY
1	12/1/21	UPDATED SCADA CONTACT INFORMATION	
2	12/09/21	UPDATED ANTENNA CABLING / REMOVED POLE	

DATE OF ISSUE: 9/28/21  
 DESIGNED BY: TFR  
 DRAWN BY: TFR  
 CHECKED BY: DDR  
 APPROVED BY: DDR



**DBS&A**  
Daniel B. Stephens & Associates, Inc.



CITY OF PORTALES  
PORTALES, NM

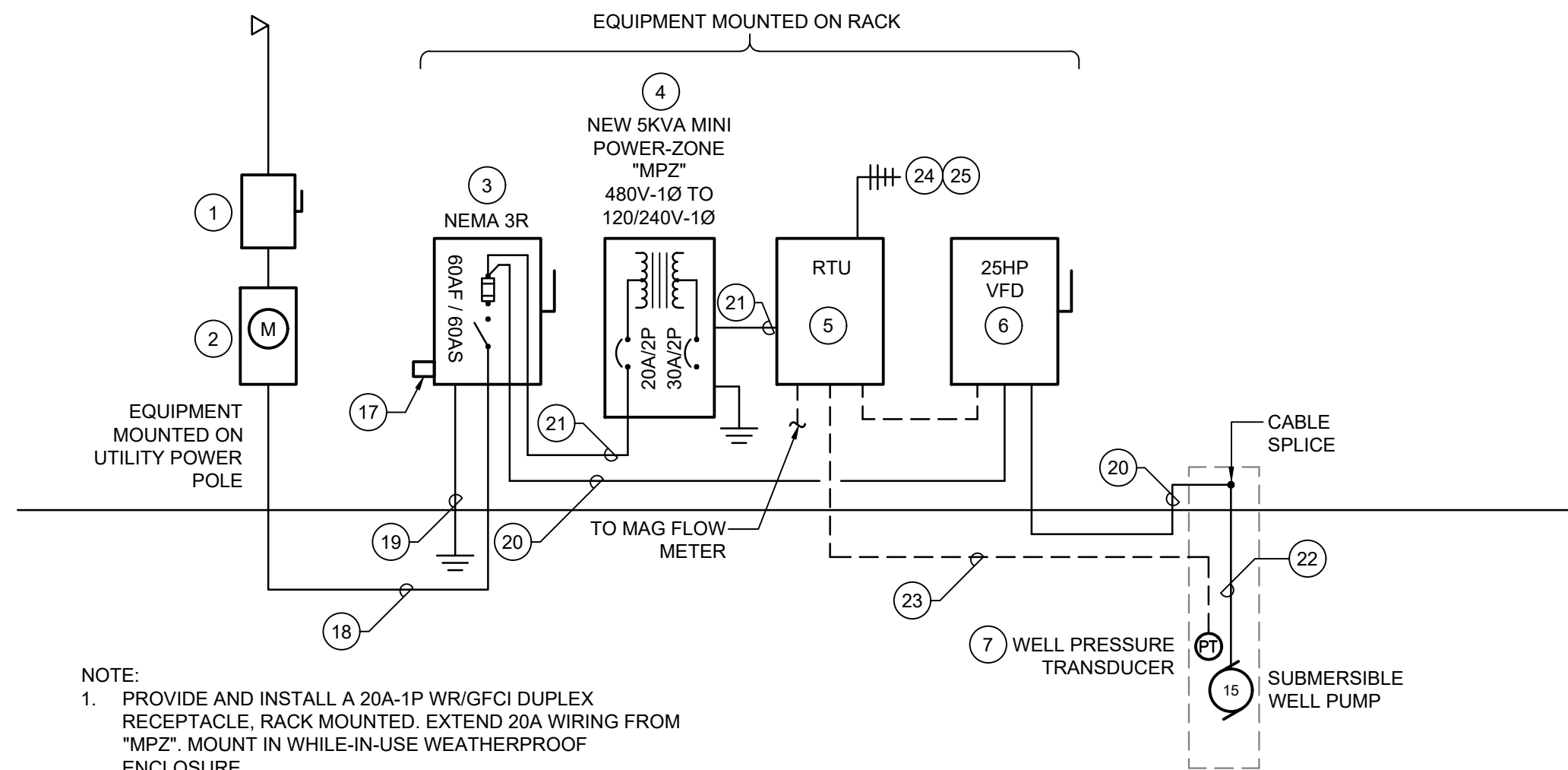
BLACKWATER WELLFIELD  
EQUIPPING PHASE 2  
ROOSEVELT COUNTY, NM

WELL 5 AND 35 - SITE PLANS

SHEET 12 OF 15  
DWG NO. E-3

JOB NO.  
DB18.1281



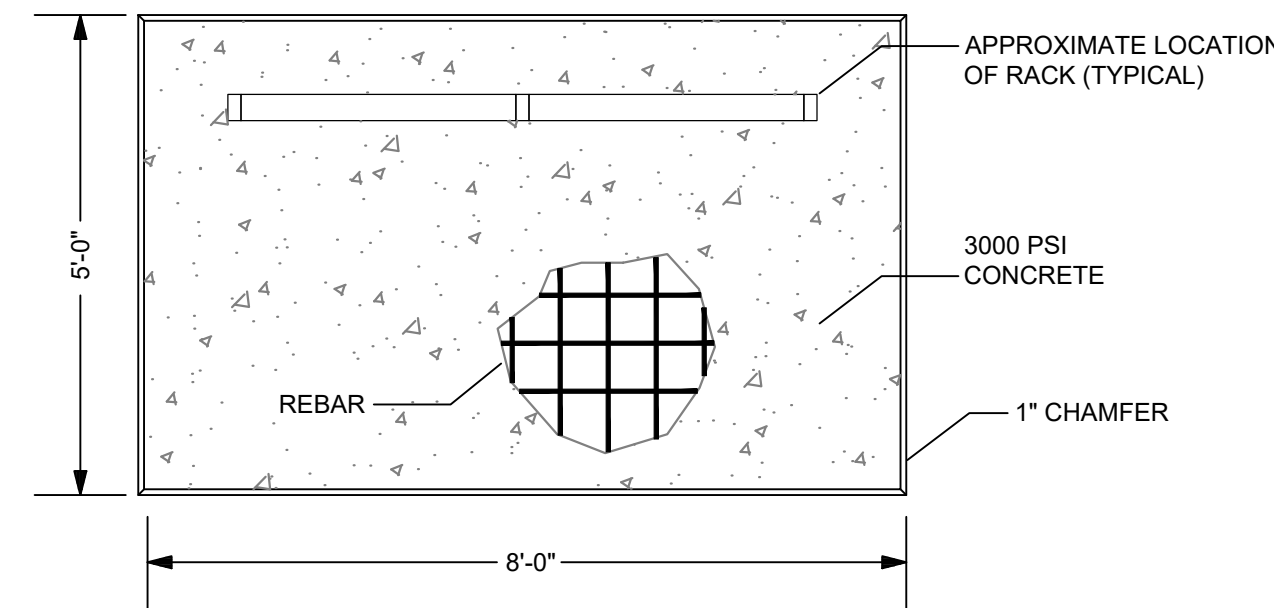


- NOTE:
1. PROVIDE AND INSTALL A 20A-1P WR/GFCI DUPLEX RECEPTACLE, RACK MOUNTED. EXTEND 20A WIRING FROM "MPZ". MOUNT IN WHILE-IN-USE WEATHERPROOF ENCLOSURE.
  2. EXTEND WIRING TO HEAT TRACE EQUIPMENT FROM "MPZ". COORDINATE ROUTING AND LOCATION IN THE FIELD.

TYPICAL POWER RISER DIAGRAM (1)

TYPICAL OF 6 LOCATIONS

SCALE: NONE



PLAN VIEW - RACK DETAIL (15) (16)

SCALE: NOT TO SCALE

PANEL: "MPZ" (TYPICAL)		PRI VOLTAGE: 480V-1Ø		PRI BREAKER: 20A/2P		AIC: 18,000	
SOURCE: .		SEC VOLTAGE: 120/240V-1Ø		SEC BREAKER: 30A/2P		MOUNTING: SURFACE	
DESCRIPTION	BRKR	LOAD (VA)	CCT NO.	LOAD (VA) ØA	CCT NO.	LOAD (VA) ØB	DESCRIPTION
LIGHTING	20A/1P	50	1	350	2	300	HEAT TRACE (GFPE TYPE)
RACK RECEPTACLE	20A/1P	1500	3	1500	4		SPARE
RTU	20A/1P	500	5	500	6		SPARE
SPARE	20A/1P		7		8		SPARE
SPARE	20A/1P		9		10		SPARE
TOTAL LOAD (VA)		850	1500				
TOTAL CONNECTED (KVA):		2.4	ESTIMATED DEMAND (KVA):				
							NEMA 3R GROUND BUS

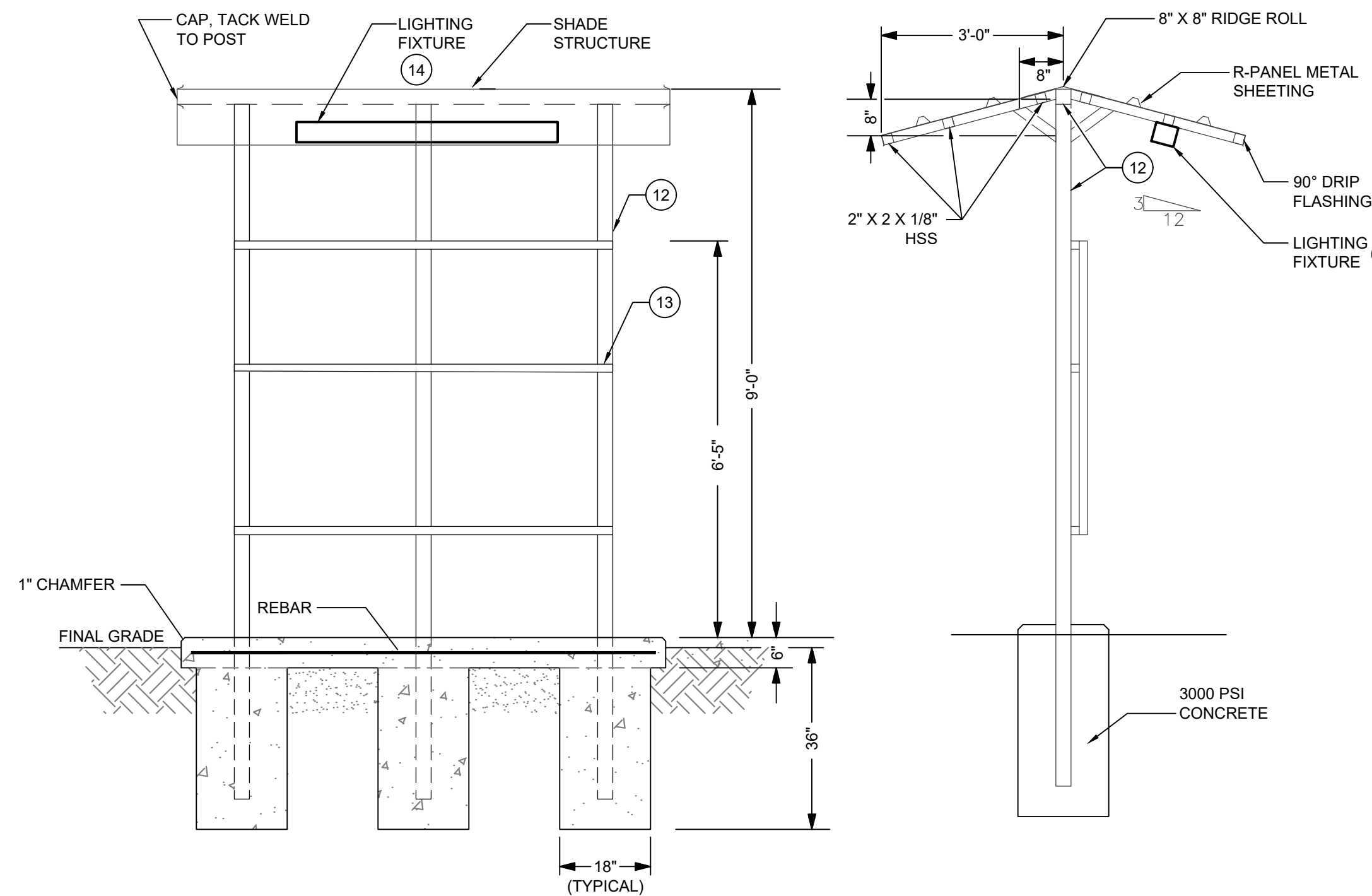
LOAD SUMMARY - SERVICE	
DESCRIPTION	
SERVICE ESTIMATED DEMAND PER NEC 220	
MECHANICAL UNITS (17.5 KVA CONN)	21.8 KVA
LARGEST AT 125% (17.5 KVA)	0.0 KVA
REMAINING AT 100% (0.0 KVA)	0.0 KVA
RECEPTACLES (1.5 KVA CONN)	1.5 KVA
FIRST 10 KVA AT 100%	0.0 KVA
REMAINING AT 50%	0.1 KVA
LIGHTING (0.1 KVA CONN) AT 125% (CONTINUOUS LOAD)	1.1 KVA
EQUIPMENT (1.1 KVA CONN) AT 100%	
<b>TOTAL ESTIMATED LOAD:</b>	<b>24.5 KVA</b>
30 AMPERES AT 480Y/277V-3Ø-4W	
∴ MINIMUM RECOMMENDED SERVICE SIZE =	60 AMPS

GENERAL NOTES:

1. EXISTING SERVICE AND ALL ASSOCIATED WIRING AND CONTROLS TO EXISTING WELLS SHALL BE ONLY BE REMOVED AFTER NEW REPLACEMENT WELL IS COMPLETE. COORDINATE WITH CIVIL.
2. ALL CHANGES AND/OR UPGRADES TO PRIMARY WIRING, SECONDARY WIRING, SERVICES, AND METERING SHALL BE COORDINATED WITH LOCAL UTILITY PRIOR TO COMMENCING WORK.

KEY NOTES:

1. PROVIDE AND INSTALL UTILITY DISCONNECT SWITCH. 600V, 60A, 3P.
2. PROVIDE AND INSTALL 200A UTILITY METER PER LOCAL UTILITY REQUIREMENTS.
3. PROVIDE AND INSTALL A 600V, 60A, 3P, HEAVY-DUTY, FUSIBLE DISCONNECT SWITCH IN A NEMA 3R ENCLOSURE. FUSE AT 60A WITH RK5 FUSES. PROVIDE WITH DUAL LUGS ON LOAD, OR PROVIDE AND INSTALL INSULATED TAPS IN WEATHERPROOF ENCLOSURE AS NECESSARY.
4. PROVIDE AND INSTALL A 5KVA MINI POWER-ZONE UNIT SUBSTATION. NEMA 3R, 18,000 AIC RATING. SQUARE D OR ENGINEER APPROVED EQUAL. LOCATION WITHIN 10'-0" OF MAIN DISCONNECT.
5. PROVIDE AND INSTALL AN CONTROL/COMMUNICATIONS CABINET AND ANTENNA. CABINET, PLC, 900 MHZ RADIO, ANALOG/DIGITAL I/O, POWER SUPPLIES, RELAYS, FUSES, BATTERY BACKUP, SURGE PROTECTION, PROGRAMMING, CABLES, WIRING, AND ANTENNA. CONTACT THE CITY FOR ADDITIONAL INFORMATION, AS REQUIRED, REGARDING THE EXISTING SCADA SYSTEM AND INTEGRATION OF THIS PROJECT.
6. PROVIDE AND INSTALL A 25HP VFD FOR USE WITH 15HP SUBMERSIBLE WELL PUMP. VFD OVERSIZED FOR DERATING. DANFOSS VLT AQUA DRIVE: FC-202-P18K-T4-E3R-H2-X-G-X-1-X-X-SXXX-X-AX-BX-CX-X-XX-DX.
7. DOWN WELL PRESSURE TRANSDUCER. CAMPBELL SCIENTIFIC #CRS451 (0-29 PSI) OR OWNER AND ENGINEER APPROVED EQUAL.
8. PROVIDE AND INSTALL UNISTRUT EQUIPMENT RACK. COORDINATE EXACT DIMENSIONS, HEIGHT, LENGTH, AND LOCATION OF ALL EQUIPMENT AS REQUIRED IN THE FIELD PRIOR TO CONSTRUCTING AND INSTALLING.
9. PROVIDE AND INSTALL ALL REQUIRED HARDWARE, SUPPORTS, ETC. AS REQUIRED FOR A COMPLETE EQUIPMENT RACK.
10. PROVIDE AND INSTALL CONCRETE PAD.
11. PROVIDE AND INSTALL CONCRETE BASES.
12. SQUARE HOLLOW STRUCTURAL STEEL. HSS3X3X1/4 STEEL POST, OR APPROVED EQUAL. (TYPICAL)
13. UNISTRUT P1000 OR EATON B-LINE B22 CHANNEL, OR APPROVED EQUAL. PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES FOR A COMPLETE SYSTEM. (TYPICAL)
14. PROVIDE AND INSTALL A WET LISTED IP67, SURFACE MOUNTED, LINEAR LED LIGHTING FIXTURE; PHOTOCONTROL; AND WEATHERPROOF LIGHTING CONTROL SWITCH. HUBBELL LIGHTING #LXEM4-40W-RFP-EU OR OWNER AND ENGINEER APPROVED EQUAL. FIXTURE SHALL BE WIRED FOR PHOTOCONTROL WITH MANUAL CONTROL SWITCH. CONTROL SWITCH SHALL BE MOUNTED ON EQUIPMENT RACK, +48" AFF. PROVIDE ALL MOUNTING SUPPORTS AS REQUIRED.
15. CONTRACTOR SHALL PROVIDE AND INSTALL CONCRETE ENCASED-ELECTRODE PER NMEC 250.50. COORDINATE CONNECTION TO REBAR IN THE FIELD.
16. CONTRACTOR SHALL PROVIDE AND INSTALL (2)5/8" X 8'-0" CU OR CU-CLAD GROUNDING ELECTRODE ROD. RODS SHALL BE INSTALLED NO LESS THAN 6'-0" APART.
17. PROVIDE AND INSTALL LIGHTNING SURGE ARRESTOR/SUPPRESSOR. DELTA LA-603 OR ENGINEER APPROVED EQUAL. WIRING PER MANUFACTURER RECOMMENDATIONS.
18. 4#6 THWN-2 CU AND 1#8 CU GROUND IN 1" CONDUIT -OR- 4#4 XHHW-2 AL AND 1#6 AL GROUND IN 1" CONDUIT.
19. GROUNDING PER GROUNDING SYSTEM DIAGRAM.
20. 4#6 THWN-2 CU AND 1#10 CU GROUND IN 1" CONDUIT.
21. 2#10 THWN-2 AND 1#10 CU IN 3/4 CONDUIT.
22. FLAT-JACKETED SUBMERSIBLE PUMP CABLE AS RECOMMENDED BY PUMP SUPPLIER. COORDINATE INSTALLATION IN THE FIELD.
23. EXTEND COMMUNICATION WIRING IN CONDUIT FROM SENSOR TO RTU.
24. EXTEND OUTDOOR RATED, ANTENNA UBIQUITI ETHERNET CABLES (WITH RJ45 CONNECTORS AND GROUND WIRE) IN CONDUIT FROM RTU TO POLE MOUNTED ANTENNA. LENGTH AS REQUIRED. PROVIDE AND INSTALL 1" CONDUIT WHERE REQUIRED.
25. PROVIDE AND INSTALL GROUNDING FOR POLE MOUNTED ANTENNA.



EQUIPMENT RACK DETAIL (8) (9) (10) (11)

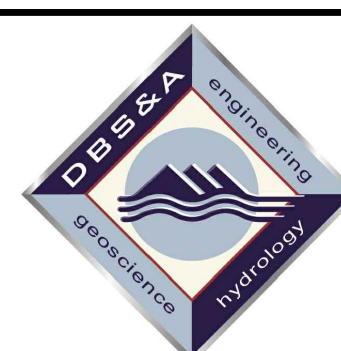
SCALE: NOT TO SCALE

- NOTES:
1. PROVIDE AND INSTALL #4 REBAR 6" ON-CENTER. PROVIDE/MAINTAIN 2" CLEARANCE ALL AROUND. 3" MINIMUM FROM BOTTOM OF PAD.
  2. CONCRETE PAD SHALL BE LEVEL WITHIN ± 1/4" IN 5'-0" AND TROWEL FINISHED TO PROVIDE TRUE PLAN WITHIN 1/16" IN 5'-0" AS DETERMINED BY 5'-0" STRAIGHT EDGE.
  3. EXISTING GRADE AND BACKFILL UNDER CONCRETE PAD SHALL BE COMPACTED TO 95% IN ACCORDANCE TO ASTM D1557.
  4. COORDINATE LOCATION OF ALL STRUCTURE AND CONDUIT PENETRATIONS THROUGH SLAB IN FIELD PRIOR TO INSTALLATION. REFER TO ELECTRICAL EQUIPMENT RACK DETAIL FOR ADDITIONAL INFORMATION.

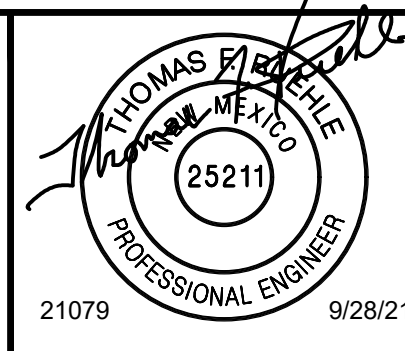
E:\21079 PORTALES WELLS\21079 CADD\CONSTRUCT\ELECTRICAL\E-5 ELECTRICAL DIAGRAMS.DWG December 9, 2021 2:14 PM BY: TOM RUEHLE

REV. NO.	DATE	DESCRIPTION	APPROVED BY
1	12/1/21	UPDATED SCADA CONTACT INFORMATION	
2	12/9/21	UPDATED ANTENNA CABLING	

DATE OF ISSUE: 9/28/21  
 DESIGNED BY: TFR  
 DRAWN BY: TFR  
 CHECKED BY: DDR  
 APPROVED BY: DDR



**DBS&A**  
 Daniel B. Stephens & Associates, Inc.



CITY OF PORTALES  
 PORTALES, NM

BLACKWATER WELLFIELD  
 EQUIPPING PHASE 2  
 ROOSEVELT COUNTY, NM  
 ELECTRICAL DETAILS

SHEET 14 OF 15  
 DWG NO. E-5  
 JOB NO.  
 DB18.1281