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GENERAL NOTES

1. THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND IS NOT LIABLE FOR PROBLEMS THAT MAY ARISE FROM CONTRACTOR'S FAILURE TO FOLLOW THESE DRAWINGS, SPECIFICATIONS, AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS ARISING FROM FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES, OR CONFLICTS.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH THE LOCATION OF ALL UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION. THE GENERAL LOCATION OF KNOWN EXISTING UTILITIES HAS BEEN SHOWN ON THE CONSTRUCTION DRAWINGS TO INDICATE THAT CAUTION MUST BE EXERCISED WHEN WORKING IN THESE AREAS. IN MANY CASES THE EXACT LOCATION OF THE FACILITIES IS NOT KNOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL OVERHEAD AND UNDERGROUND UTILITIES WITHIN THE VICINITY OF THE NEW CONSTRUCTION. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR, WORKING WITH THE RESPECTIVE UTILITY COMPANIES, SHALL ACCURATELY LOCATE AND MARK ALL BURIED FACILITIES, INCLUDING SERVICE LINES. ALL EQUIPMENT LABOR, ETC. NECESSARY TO PROPERLY LOCATE THE EXISTING UTILITIES SHALL BE FURNISHED BY THE CONTRACTOR, THE COST OF WHICH SHALL BE INCIDENTAL TO THE WORK.
3. CONTRACTOR SHALL REPAIR ANY EXISTING STRUCTURE OR UTILITY PIPELINE DAMAGED DURING THE EXECUTION OF THE PROJECT, AT NO ADDITIONAL COSTS TO THE OWNER.
4. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTING THE PROJECT ACCORDING TO CURRENT NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (NMSSPWC) AWWA SPECS AND NAVAJO NATION / NTUA STANDARDS, INCLUDING WHERE PARTICULAR WORK ITEMS ARE NOT SPECIFIED HEREIN.
5. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AS SET FORTH IN THE TECHNICAL SPECIFICATIONS AND CONTRACT DOCUMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE ENGINEER REGARDING ANY QUESTION ARISING FROM ANY ASPECT OF THIS PROJECT NOT SPECIFICALLY COVERED IN THE PLANS AND TECHNICAL SPECIFICATIONS, OR ANY CHANGES OR CORRECTIONS TO THE PLANS AND SPECS.
6. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY, WHICH SHALL REMAIN WHOLLY THE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL (OSHA), STATE, TRIBAL AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING SAFETY AND HEALTH. ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED OUT IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P - EXCAVATIONS.
7. CONTRACTOR SHALL PROVIDE INGRESS AND EGRESS TO ANY LOCAL BUSINESSES AND RESIDENTS AS REQUIRED FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL ADVISE OF AND SCHEDULE ACCESS CLOSURES AT LEAST 24 HOURS IN ADVANCE WITH PROPERTY OWNERS AND THE ENGINEER.
8. THE DRAWINGS CONTAIN SPECIFIC EROSION CONTROL FEATURES DESIGNED BY THE ENGINEER TO PROTECT PROJECT FACILITIES FROM EROSION. THESE FEATURES ARE NOT DESIGNED TO PREVENT POLLUTION OF WATERWAYS DUE TO SEDIMENT. THE CONTRACTOR IS WHOLLY RESPONSIBLE TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND IMPLEMENT THE BEST MANAGEMENT PRACTICES (BMPs) REQUIRED THEREIN, IN ADDITION TO THE FEATURES SHOWN ON THE DRAWINGS. ALL BID ITEMS REFERRING TO SPECIFIC EROSION CONTROL FEATURES, SUCH AS RIPRAP OR ROCK DAMS, ARE APPLICABLE ONLY TO FEATURES DESIGNED BY THE ENGINEER. A SEPARATE BID ITEM(S) IS PROVIDED FOR PREPARATION AND IMPLEMENTATION OF THE CONTRACTOR'S SWPPP.
9. ALL AREAS DISTURBED BY THE CONSTRUCTION ACTIVITIES OF THIS PROJECT SHALL BE RESTORED AND RE-GRADED IN A MANNER ACCEPTABLE TO THE OWNER, ENGINEER, AND LAND OWNER. ALL DISTURBED AREAS SHALL BE RE-SEEDED PER THE CONTRACT DOCUMENTS.
10. ALL PRESSURE RATINGS GIVEN HEREIN FOR PIPES, VALVES, FITTINGS AND OTHER COMPONENTS REFER TO COLD WATER WORKING PRESSURE RATING, UNLESS OTHERWISE NOTED.
11. CLEARANCES AT WATERLINE CROSSINGS ON PLAN AND PROFILE SHEETS CALLED OUT AS "MIN CLR" REFER TO MINIMUM CLEARANCE FROM EXISTING GASLINES AND WATERLINES TO WATERLINE.
12. ALL ELECTRICAL AND SCADA WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR, BE CONSTRUCTED IN ACCORDANCE WITH NAVAJO AREA INDIAN HEALTH SERVICE TECHNICAL PROVISIONS MOTOR CONTROL CENTER AND TANK CONTROL PANEL, MOST RECENT REVISION, REFERENCED WITHIN AS STANDARD SPECIFICATIONS.
13. ALL SCALES ARE BASED ON 11" x 17" SHEET SIZE.

CONTACT INFORMATION:

NAVAJO NATION WATER MANAGEMENT BRANCH (OWNER):

JASON JOHN (928) 729-4004

SOUDER, MILLER & ASSOCIATES (ENGINEER):

TORY TADANO, P.E (OFFICE) (505) 299-0942 (CELL) (505) 215-2807

NAVAJO TRIBAL UTILITY AUTHORITY (NTUA):

HEADQUARTERS (800) 528-5011

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	LAT	LATITUDE
A.C.	ASPHALTIC CONCRETE	L LEN	LENGTH
ACI	AMERICAN CONCRETE INSTITUTE	LF	LINEAR FEET
AC	ACRE	LT	LEFT
AC-FT.	ACRE FEET	LONG	LONGITUDE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	LVC	LENGTH VERTICAL CURVE
ALIGN.	ALIGNMENT	MANUF	MANUFACTURER
ALUM	ALUMINUM	MAX.	MAXIMUM
AMSL	ABOVE MEAN SEA LEVEL	MIL	ONE THOUSANDTHS OF AN INCH
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MIN.	MINIMUM
APPROX.	APPROXIMATE	M.J.	MECHANICAL JOINT
ARV	AIR RELEASE VALVE	MNPT	MALE NATIONAL PIPE THREAD
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	M.S.L.	MEAN SEA LEVEL
AWG	AMERICAN WIRE GAUGE	N	NORTH
AWWA	AMERICAN WATER WORKS ASSOCIATION	N	NORTHING
BFV	BUTTERFLY VALVE	NEC	NATIONAL ELECTRICAL CODE
BIA	BUREAU OF INDIAN AFFAIRS	NG	NATURAL GAS
B.G.S.	BELOW GROUND SURFACE	NM	NEW MEXICO
BLDG	BUILDING	NMDDOT	NEW MEXICO DEPARTMENT OF TRANSPORTATION
BLM	BUREAU OF LAND MANAGEMENT	NMED	NEW MEXICO ENVIRONMENT DEPARTMENT
BV	BALL VALVE	NN	NAVAJO NATION
BVCE	BEGIN VERTICAL CURVE ELEVATION	NO.	NUMBER
BVCS	BEGIN VERTICAL CURVE STATION	NPT	NATIONAL PIPE THREAD
CL	CENTERLINE	NTS	NOT TO SCALE
CFS	CUBIC FEET PER SECOND	OAE	OR APPROVED EQUAL
CI	CAST IRON	O.C.	ON CENTER
CLR.	CLEARANCE	O.C.E.W.	ON CENTER EACH WAY
CMP	CORRUGATED METAL PIPE	O.D.	OUTER DIAMETER
COMM.	COMMUNICATION	OHE	OVERHEAD ELECTRICAL
CONC.	CONCRETE	PE	PLAIN END
CONST.	CONSTRUCTION	P.G.P.	PER GRADING PLAN
CONT.	CONTINUOUS	PI	POINT OF INFLECTION
CONT.	CONTINUED	PRV	PRESSURE REDUCING VALVE
COR.	CORNER	PSF	POUNDS PER SQUARE FOOT
COUP.	COUPLING	PSI	POUNDS PER SQUARE INCH
CP	CONTROL POINT	PVC	POLYVINYL CHLORIDE
CTR	CENTER	PVI	POINT VERTICAL INFLECTION
CU	CUBIC	PVT	PRIVATE
CY	CUBIC YARD	Q	FLOW
DI	DUCTILE IRON	QTY.	QUANTITY
DIA	DIAMETER	R	RADIUS
DIMS	DIMENSIONS	R-	RANGE
DR	DIMENSION RATIO	REF	REFERENCE
DW	DRIVEWAY	RO	ROUGH OPENING
E	EAST	ROW	RIGHT OF WAY
E	EASTING	RT	RIGHT
EA.	EACH	S	SOUTH
ED.	EDITION	SCH	SCHEDULE
EG	EXISTING GRADE	SDR	STANDARD DIMENSION RATIO
ELEC.	ELECTRICAL	SEC.	SECTION
EL., ELEV.	ELEVATION	SF	SAFETY FACTOR
EOP	EDGE OF PAVEMENT	SHT	SHEET
EQ.	EQUAL	SPECS.	SPECIFICATIONS
ESMT.	EASEMENT	SS	STAINLESS STEEL
EVCE	END VERTICAL CURVE ELEVATION	STA	STATION
EVCS	END VERTICAL CURVE STATION	STD.	STANDARD
EX, EXIST.	EXISTING	SW	SIDEWALK
FBE	FUSION BONDED EPOXY	T	TOWNSHIP
FF	FINISHED FLOOR	TBD	TO BE DETERMINED
FFE	FINISHED FLOOR ELEVATION	TDH	TOTAL DYNAMIC HEAD
FG	FINISHED GRADE	TELE.	TELEPHONE
FIG.	FIGURE	TEMP.	TEMPORARY
FL	FLANGE	THK	THICK
FND.	FOUND	TNT	NAVAJO TRIBAL TRUST
FNPT	FEMALE NATIONAL PIPE THREAD	T.O.	TOP OF
FRP	FIBER REINFORCED PLASTIC	TOC	TOP OF CONCRETE
FT.	FEET	TRANS	TRANSFORMER
FV	FLUSH VALVE	TW	TOP OF WALL
GA.	GAUGE	TYP	TYPICAL
GALV.	GALVANIZED	UGE	UNDERGROUND ELECTRIC
GI	GALVANIZED IRON	USGS	UNITED STATES GEOLOGICAL SURVEY
GPM	GALLONS PER MINUTE	V	VOLUME
GV	GATE VALVE	VB	VACUUM BREAKER
HDD	HORIZONTAL DIRECTIONAL DRILLING	VERT.	VERTICAL
HDPE	HIGH DENSITY POLYETHYLENE	VLV	VALVE
HORIZ.	HORIZONTAL	VR	VACUUM RELIEF
HP	HORSEPOWER	W	WATER
HT	HEIGHT	W	WEST
HWY	HIGHWAY	W/	WITH
I.A.	INDIAN ALLOTMENT	WL	WATERLINE
I.D.	INNER DIAMETER	WP	WORKING PRESSURE
I.E.	THAT IS, FOR EXAMPLE	WT	WALL THICKNESS
IN.	INCH	WV	WATER VALVE
INV	INVERT	YDS	YARDS
IPS	IRON PIPE SIZE	Z	ZENITH
KSI	KILO POUNDS PER SQUARE INCH		

LEGEND

	EXISTING WATER VALVE
	PRESSURE REDUCING VALVE
	SANITARY SEWER MANHOLE
	POWER POLE
	GUY ANCHOR
	ELECTRIC METER
	LIGHT POLE
	BOLLARD
	SANITARY SEWER CLEAN OUT
	SURVEY CONTROL
	BUILDING
	ROAD EDGE
	CONTOUR MAJOR
	CONTOUR MINOR
	CULTURALLY SENSITIVE AREA
	FENCE
	FENCE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	OVERHEAD TELEPHONE LINE
	UNDERGROUND TELEPHONE LINE
	WATER LINE
	GAS LINE
	WASH

LEGEND

	WATER LINE
	FENCE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	ACCESS DRIVE
	PIPE CASING
	GATE VALVE
	AIR RELEASE VALVE ASSEMBLY
	GATE
	POWER POLE
	CONTOUR MAJOR
	CONTOUR MINOR
	RIP RAP
	GRAVEL OVER BASE COURSE
	DIRECTION OF FLOW
	EASEMENT
	MATCH LINE

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THE NAVAJO NATION

McKINLEY COUNTY, NEW MEXICO

THOREAU BACA WELL CONNECTION

SECTION 19, T. 14 N., R. 13 W.

GENERAL NOTES AND LEGEND

FINAL DESIGN
FOR REVIEW

THIS DRAWING IS INCOMPLETE
AND NOT TO BE USED FOR
CONSTRUCTION UNLESS IT IS
STAMPED, SIGNED AND DATED

Designed TTT	Drawn AAV	Checked JMG
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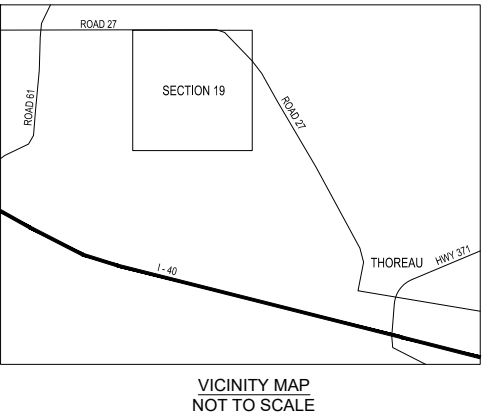
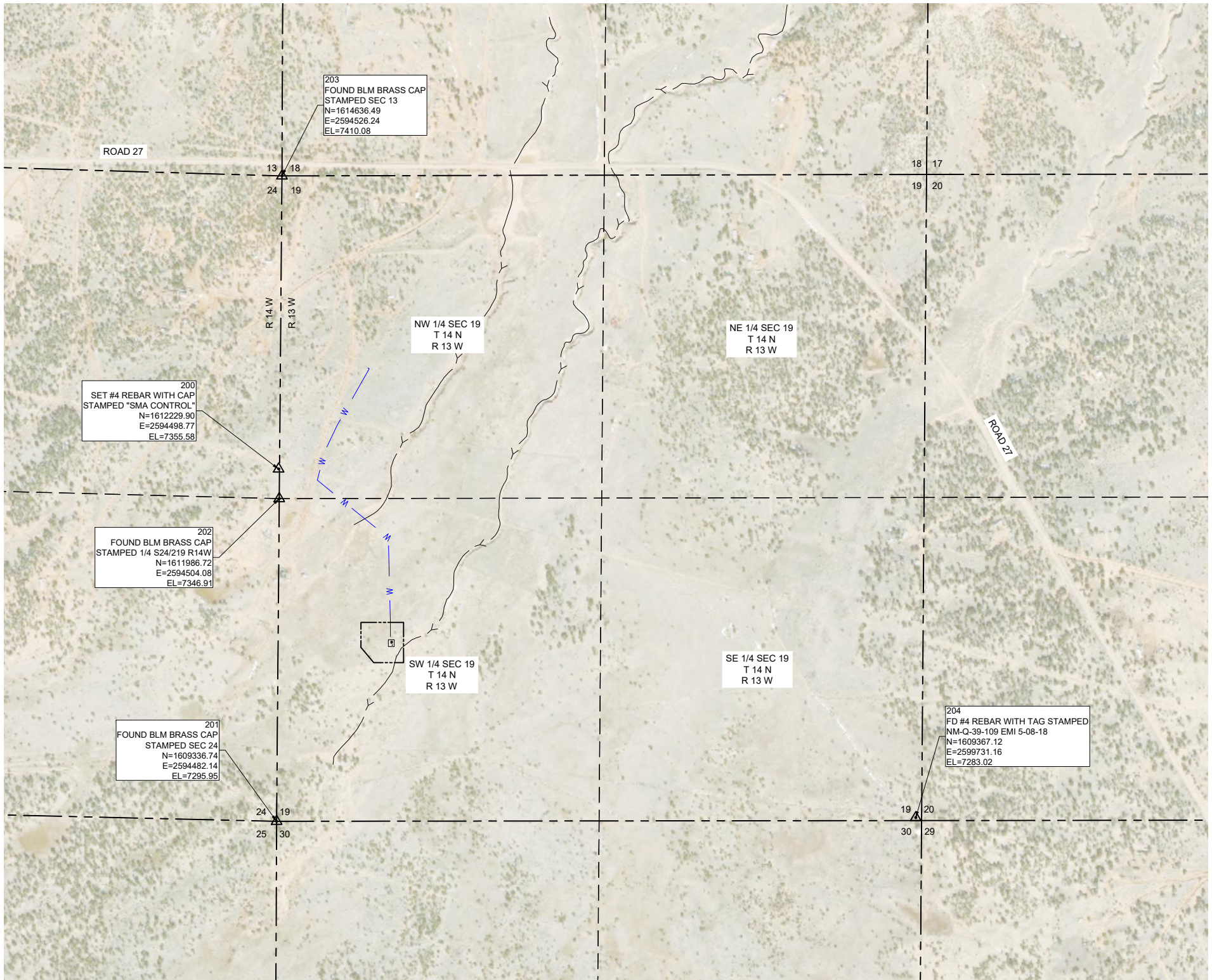
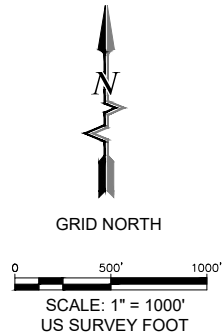
Date: August 2020

Scale: Horiz: N/A
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Project No: 6922883

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G-2

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Point Table				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
200	1612229.90	2594498.77	7355.58	SET #4 REBAR WITH CAP STAMPED "SMA CONTROL"
201	1609336.74	2594482.14	7295.95	FOUND BLM BRASS CAP STAMPED SEC 24
202	1611986.72	2594504.08	7346.91	FOUND BLM BRASS CAP STAMPED 1/4 S24/219 R14W
203	1614636.49	2594526.24	7410.08	FOUND BLM BRASS CAP STAMPED SEC 13
204	1609367.12	2599731.16	7283.02	FD #4 REBAR WITH TAG STAMPED NM-Q-39-109 EMI 5-08-18

PROJECT COORDINATE SYSTEM INFORMATION

COORDINATE SYSTEM
MODIFIED US STATE PLANE 1983
NEW MEXICO WEST ZONE
ALL DISTANCES ARE GROUND DISTANCES, UNITS ARE US SURVEY FEET
ALL COORDINATES ARE GROUND COORDINATES
GRID TO GROUND SCALE FACTOR= 1.0004123810
SCALED FROM: N35°25'49.27483" W108°15'53.98834" (N= 1612229.903 E= 2594498.769)
VERTICAL DATUM
NAVD 1988
GEOID 12B(CONUS) WAS UTILIZED TO ESTABLISH ORTHO HEIGHTS

METHODS
ALL CONTROL ON THIS PROJECT WAS OBSERVED AND SET ON JUNE 21-22, 2018. ALL POINTS WERE OBSERVED USING TRIMBLE R8 GPS RECEIVERS UTILIZING RTK GPS METHODS.

I, JAMES D. COMBS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 23200, DO HEREBY CERTIFY THAT THIS CONTROL SURVEY REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION BASED ON AN ACTUAL SURVEY ON THE GROUND AS DESCRIBED HEREIN; THAT I AM RESPONSIBLE FOR THIS SURVEY; AND THAT THE SURVEY AND REPORT MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

James David Combs
JAMES DAVID COMBS, N.M.P.S. 23200



10/11/18
DATE

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SURVEY CONTROL

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Designed TTT Drawn AAV Checked JDC

Date: August 2020

Scale: Horiz: 1" = 1000'
Vert: N/A

Project No: 6922883

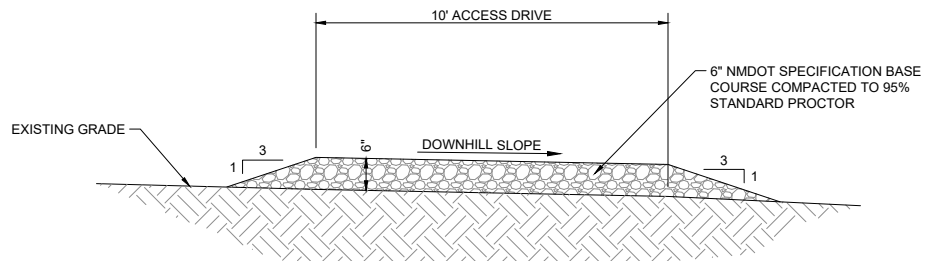
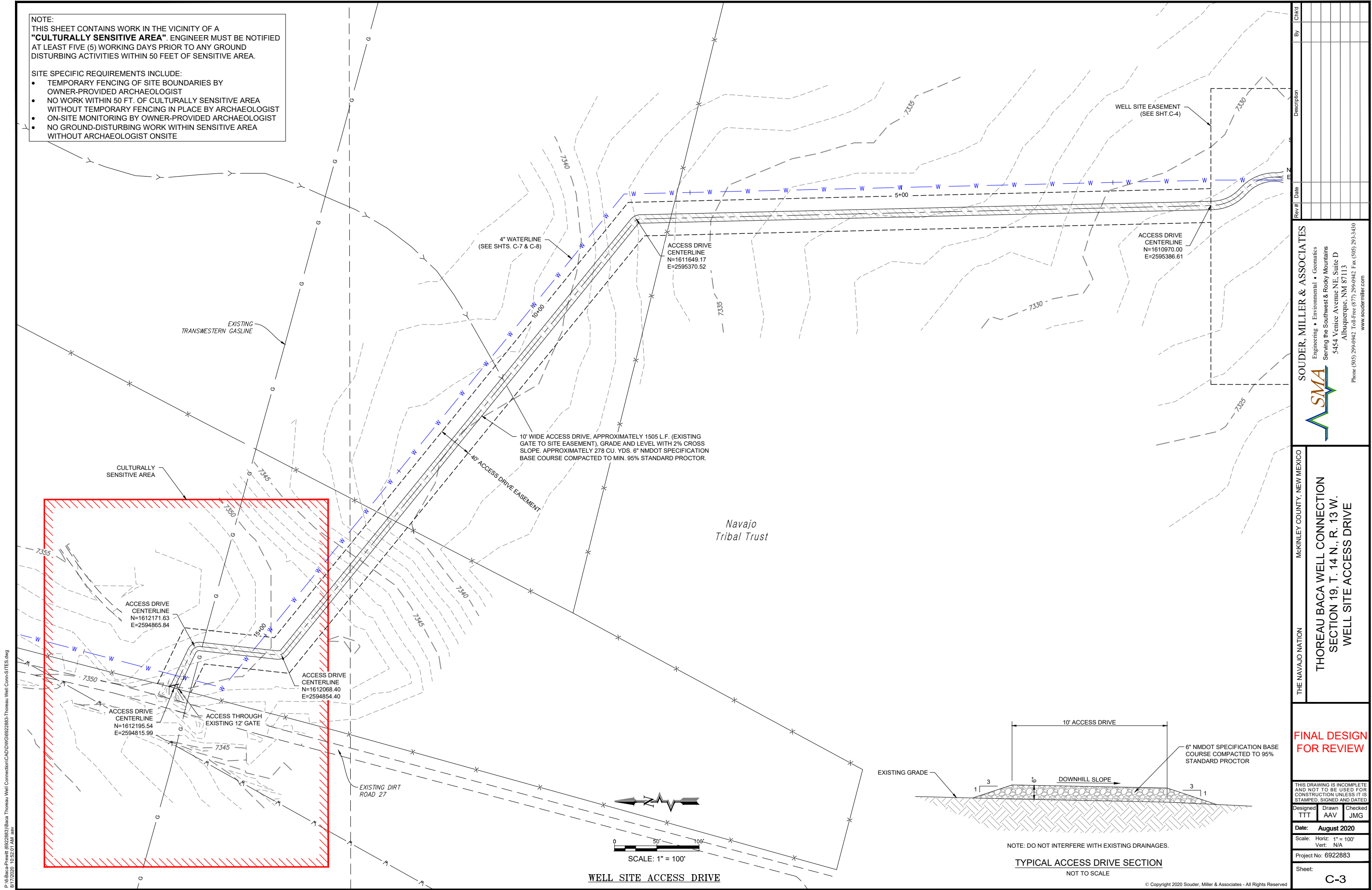
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C-1

NOTE:
THIS SHEET CONTAINS WORK IN THE VICINITY OF A
"CULTURALLY SENSITIVE AREA". ENGINEER MUST BE NOTIFIED
AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY GROUND
DISTURBING ACTIVITIES WITHIN 50 FEET OF SENSITIVE AREA.

SITE SPECIFIC REQUIREMENTS INCLUDE:

- TEMPORARY FENCING OF SITE BOUNDARIES BY OWNER-PROVIDED ARCHAEOLOGIST
- NO WORK WITHIN 50 FT. OF CULTURALLY SENSITIVE AREA WITHOUT TEMPORARY FENCING IN PLACE BY ARCHAEOLOGIST
- ON-SITE MONITORING BY OWNER-PROVIDED ARCHAEOLOGIST
- NO GROUND-DISTURBING WORK WITHIN SENSITIVE AREA WITHOUT ARCHAEOLOGIST ONSITE



NOTE: DO NOT INTERFERE WITH EXISTING DRAINAGES.

SMA
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THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
WELL SITE ACCESS DRIVE

**FINAL DESIGN
FOR REVIEW**

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Designed
TTT
Drawn
AAV
Checked
JMG

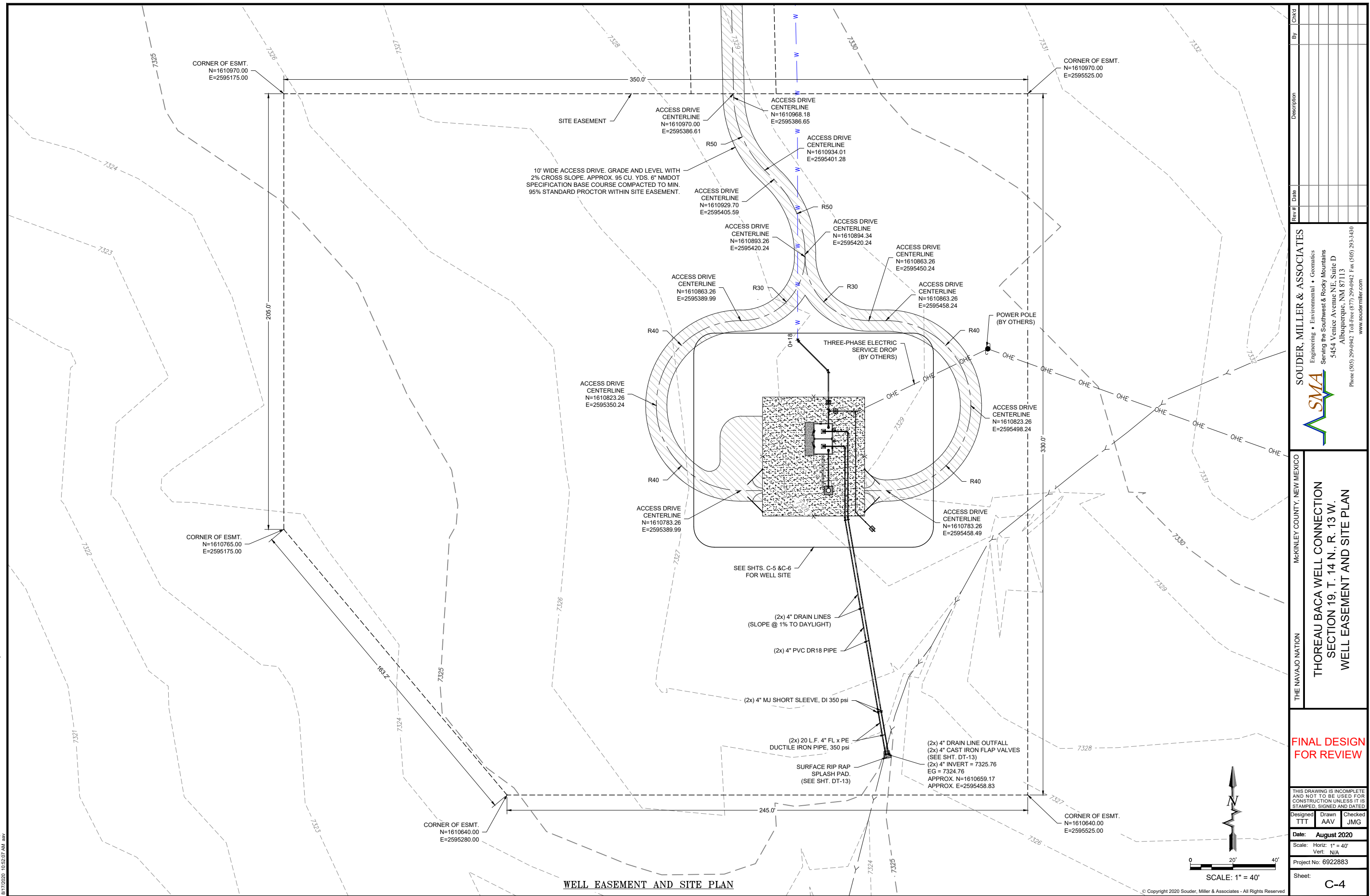
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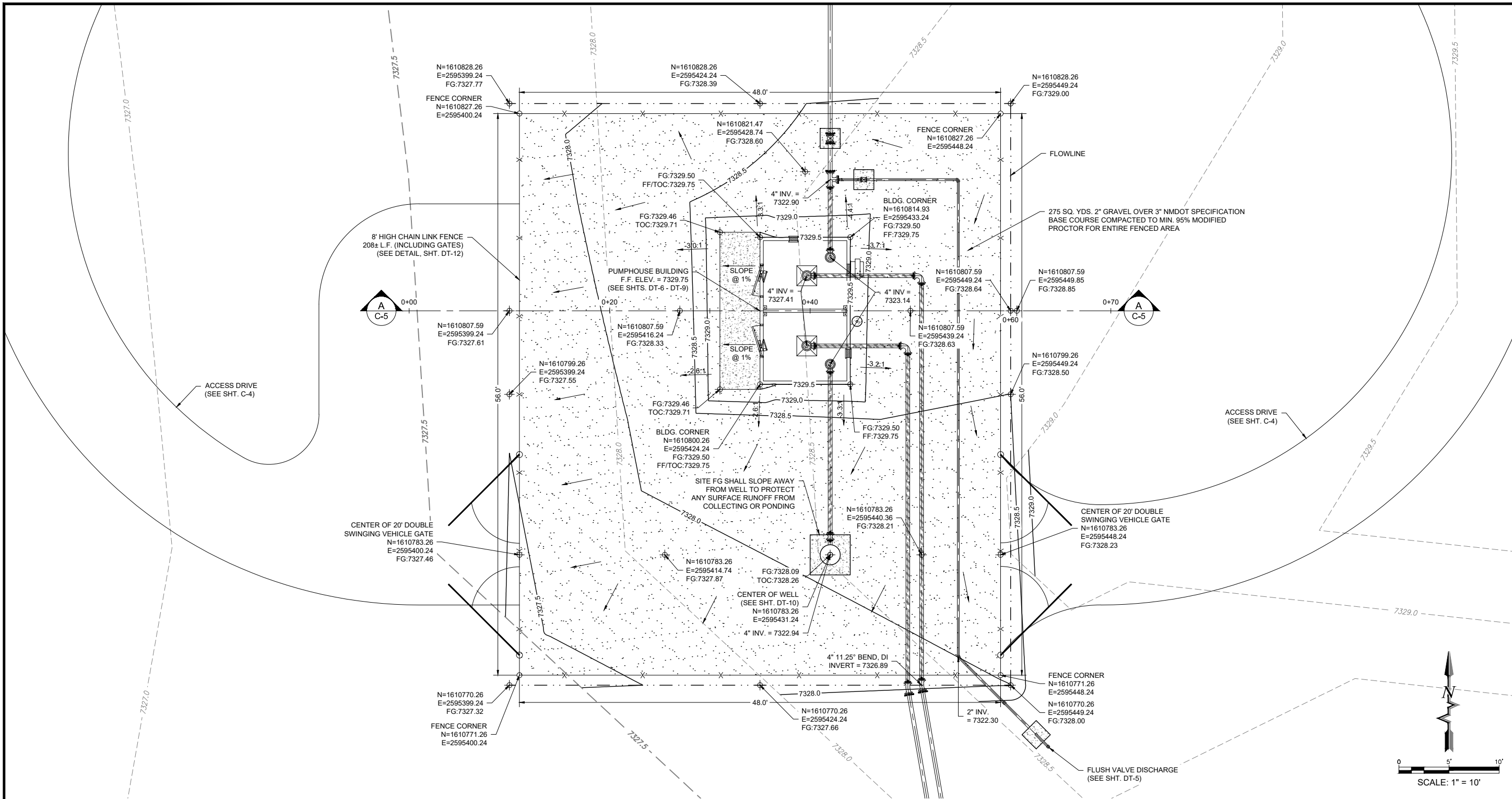
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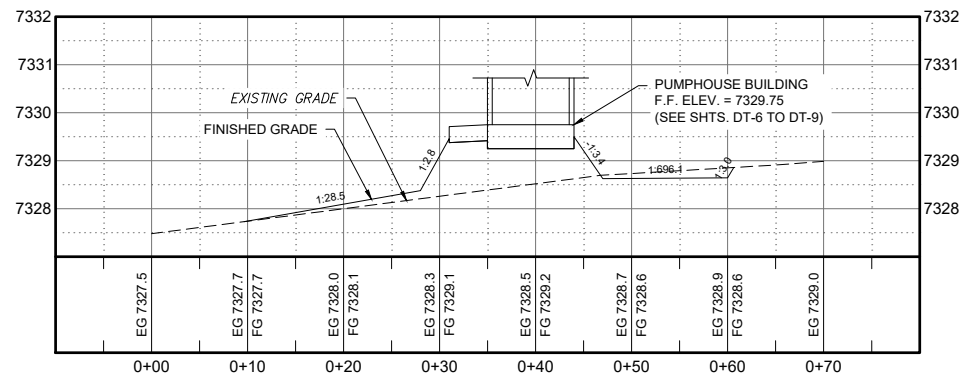
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WELL SITE AND GRADING PLAN



CROSS SECTION A-A
SCALE HORIZ. 1"=20'
SCALE VERT. 1"=4'

NOTE: FG REFERS TO THE TOP OF BASE COURSE FOR THE ENTIRE FENCED AREA.

Volume Summary							
Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
COMP SURFACE	full	1.000	1.200	3062.71	17.94	15.78*	2.16*
Totals							
				2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total				3062.71	17.94	15.78*	2.16*

* Value adjusted by cut or fill factor other than 1.0

NOTE: THESE EARTHWORK QUANTITIES ARE ESTIMATES, PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. BIDDER IS NOT ENTITLED TO BASE HIS/HER BID ON THESE QUANTITIES, NOR TO SUBMIT ANY CLAIM IN THE EVENT THAT ACTUAL EARTHWORK QUANTITIES DIFFER FROM THESE ESTIMATES.

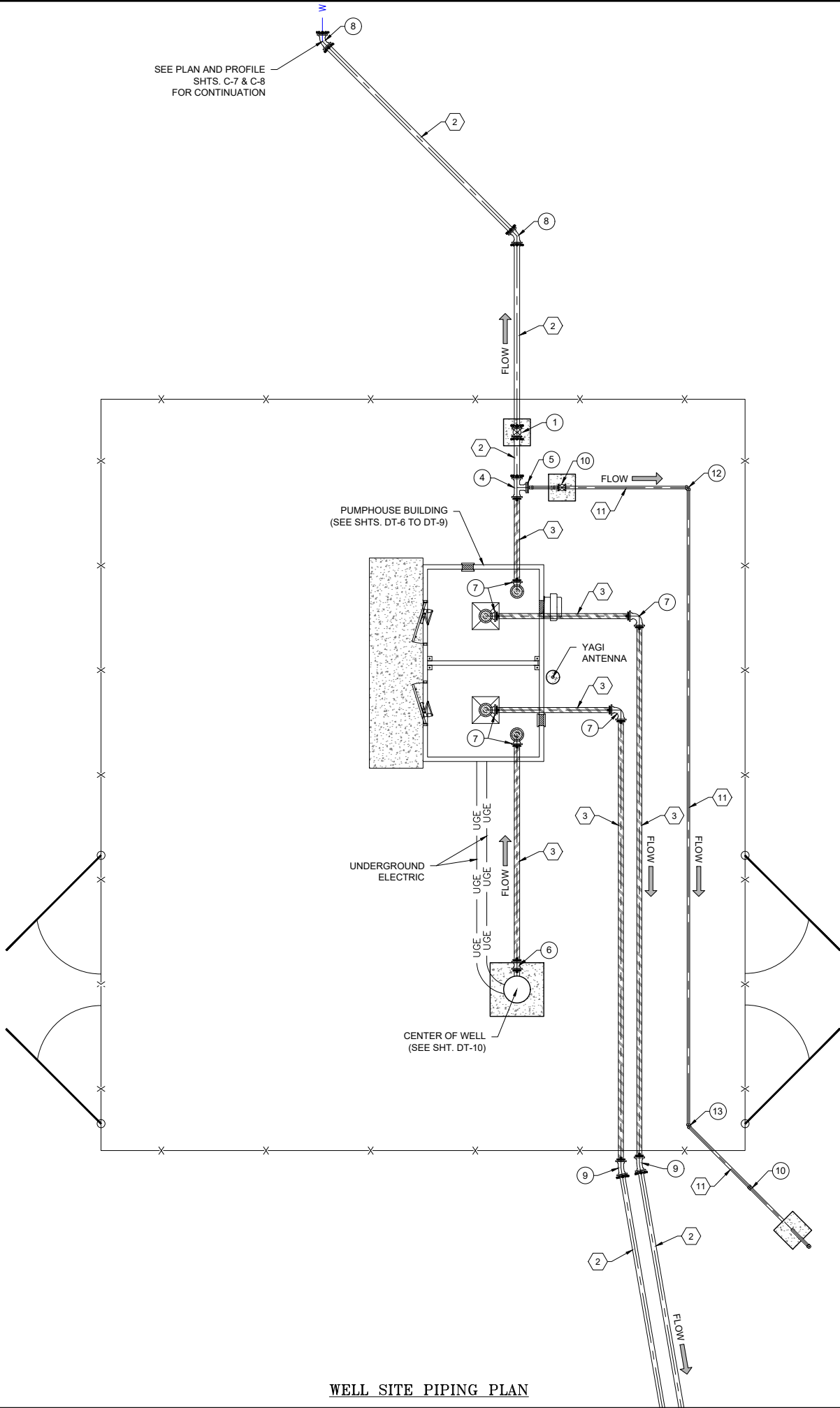
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THOREAU BACA WELL CONNECTION SECTION 19, T. 14 N., R. 13 W. WELL SITE AND GRADING PLAN	
FINAL DESIGN FOR REVIEW	
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Scale: Horiz: AS SHOWN Vert: 1" = 4'	
Project No: 6922883	
Sheet: C-5	

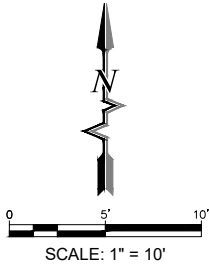
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KEYED NOTES - THOREAU WELL SITE	
Item No.	Description
1	4" MJ x MJ GATE VALVE (SEE DETAIL DT-2) 350 psi
2	4" PVC DR18 C900 PIPE
3	4" DUCTILE IRON PIPE 350 psi
4	4" MJ x MJ TEE, D.I. 350 psi
5	4" MJ x 2" THREADED PLUG, D.I. 350 psi
6	4" MJ x MJ SHORT SLEEVE, D.I. 350 psi
7	4" 90° BEND, D.I. 350 psi
8	4" 45° BEND, D.I. 350 psi
9	4" 11.25° BEND, D.I. 350 psi
10	2" FLUSH VALVE ASSEMBLY (SEE DETAIL DT-5)
11	2" G.I. PIPE, STANDARD WALL, NPT, TAPE COATED BELOW GRADE
12	2" G.I. 90° BEND, NPT, 300 psi
13	2" G.I. 45° BEND, NPT, 300 psi

- NOTES:
1. NO HIGH SPOTS PERMITTED ON SITE PIPING.
 2. ALL MATERIALS, FITTINGS AND APPURTENANCES SHALL BE RATED TO AT LEAST 235 psi, UNLESS OTHERWISE NOTED.
 3. ALL VALVES SHALL BE LOCATED AT LEAST 5' FROM EDGES OF FOUNDATIONS.
 4. ALL BURIED NON-STAINLESS STEEL PIPE AND FITTINGS SHALL BE COLD-APPLIED TAPE-WRAPPED, PER SPECIFICATIONS.
 5. ALL BURIED DUCTILE IRON FITTINGS SHALL BE MJ. ALL BURIED DUCTILE IRON PIPES SHALL BE SOLID PIECES. NO DUCTILE IRON PIPE JOINTS ALLOWED.
 6. ALL PRESSURE BEARING PIPES WITHIN SITE SHALL BE FULLY RESTRAINED. REFER TO DETAIL, SHEET DT-1.
 7. FIELD LOCATE CONDUITS PER REVIEW WITH ELECTRICIAN.



WELL SITE PIPING PLAN



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THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
WELL SITE PIPING PLAN

FINAL DESIGN FOR REVIEW

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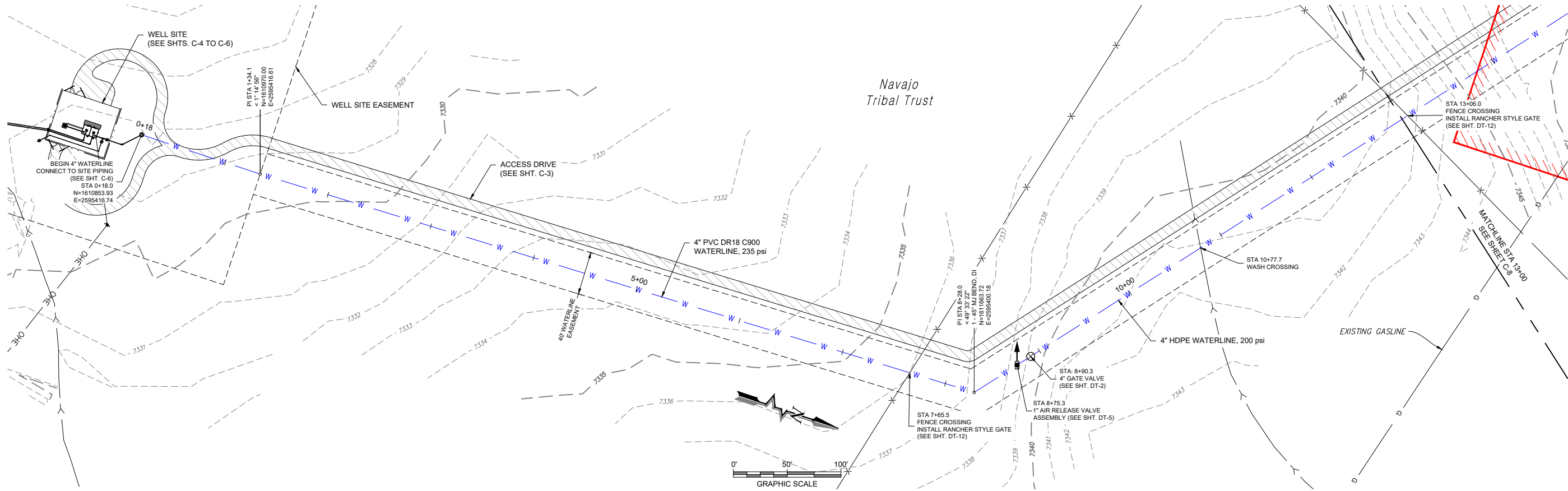
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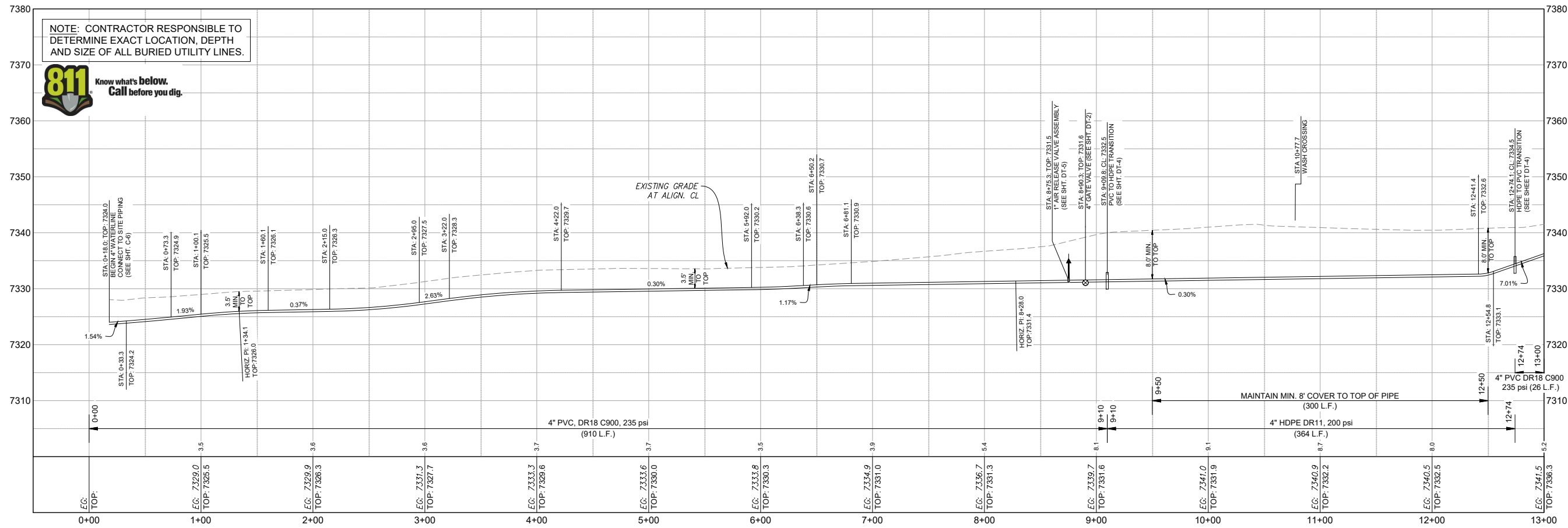
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Sheet: **C-6**

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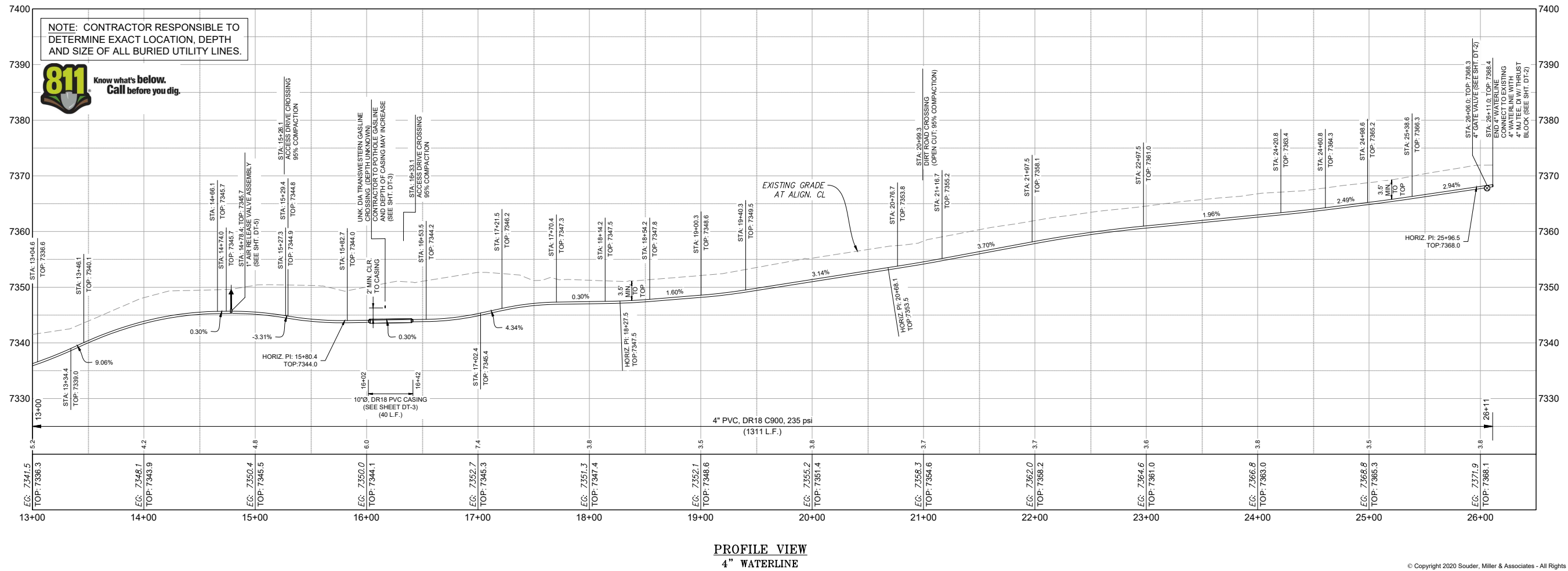
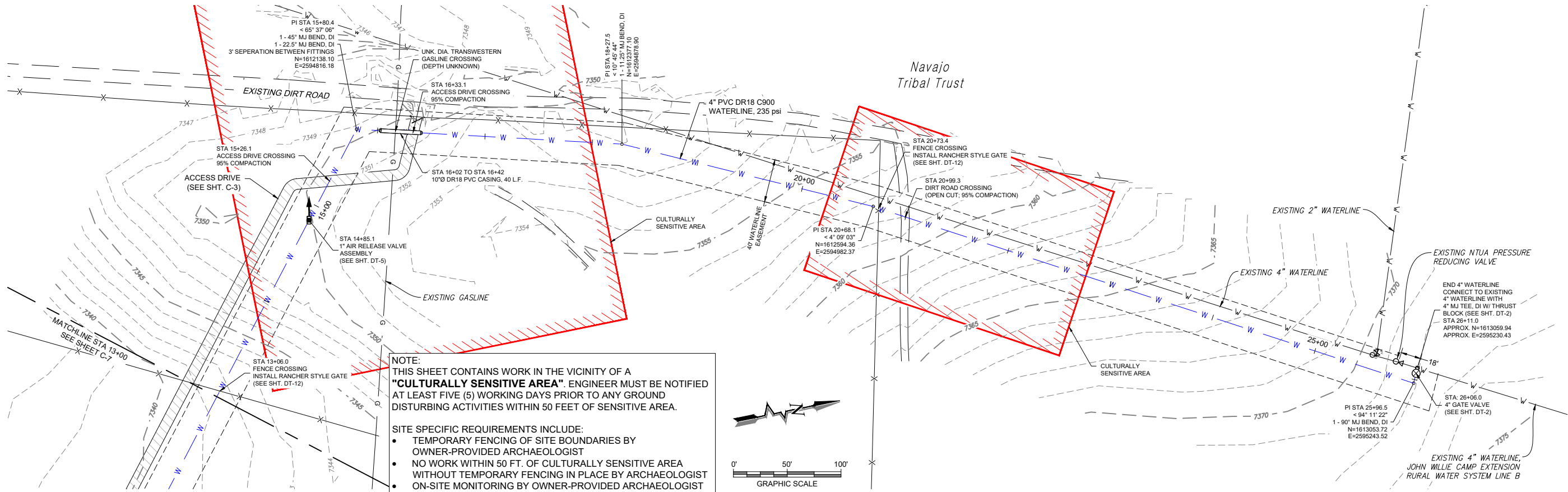


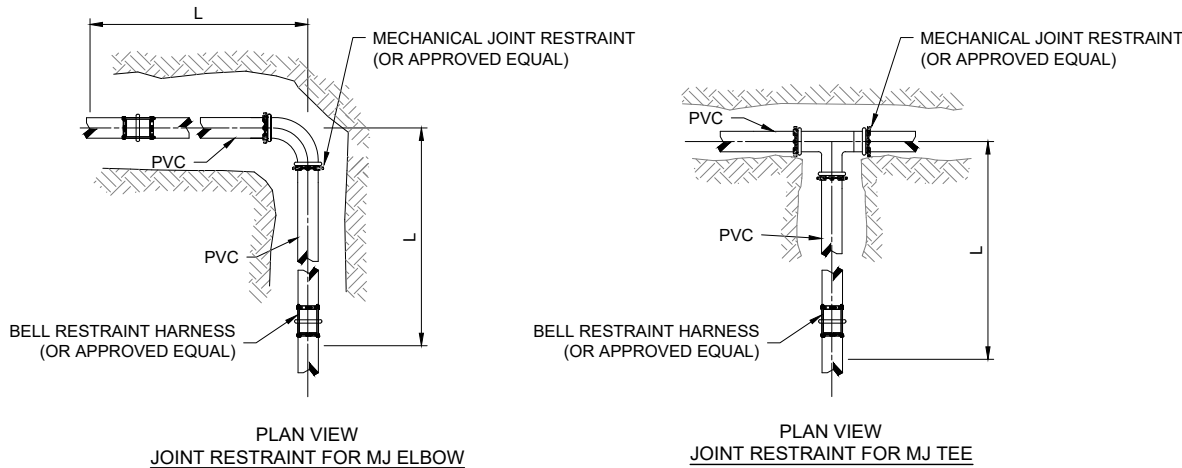
PLAN VIEW
4" WATERLINE



PROFILE VIEW
4" WATERLINE

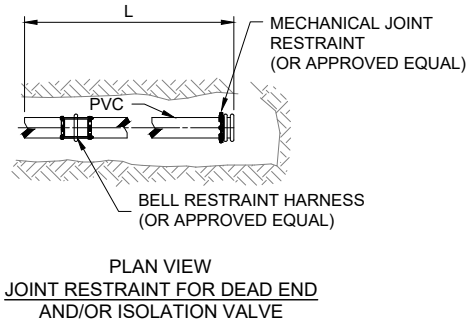
P:\BACA-Prewitt (6922883)\BACA Thoreau Well Connection\CAD\DWG\WFG - Thoreau Well Connection - (1) - (1).dwg
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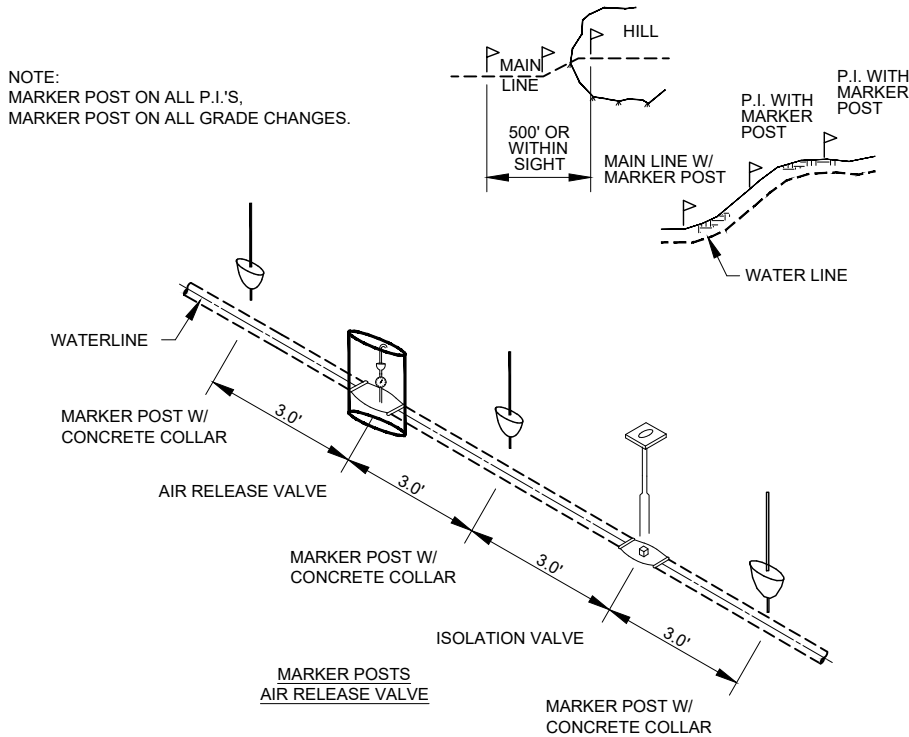
Minimum Required Restraint Lengths (L) for Individual Fittings

Fitting	Pipe Size	Pipe DR	Test Pressure (psi)	Design Restraint Length (ft)
Isolation Valve/ Dead End	4	18	235	65
From End of Casing	4	18	235	30
Horizontal Bend or Sweep				
90°	4	18	235	30
45°	4	18	235	20
22.5°	4	18	235	20
11.25°	4	18	235	20
Vertical Bend or Sweep ¹				
22.5°, upper bend	4	18	235	20
22.5°, lower bend	4	18	235	20
11.25°, upper bend	4	18	235	20
11.25°, lower bend	4	18	235	20

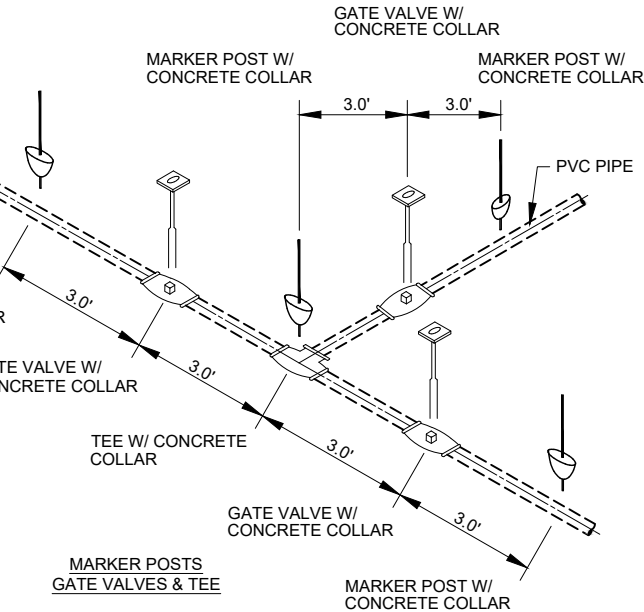


NOTE:
1. INSTALL PER MANUFACTURER'S SPECIFICATIONS
2. SUBMIT JOINT RESTRAINT TABLE BASED ON MANUFACTURER'S SPECIFICATIONS.
(APPROXIMATE LENGTHS PROVIDED BELOW)

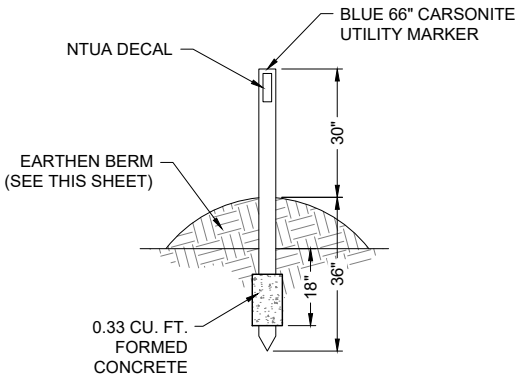
WATERLINE JOINT RESTRAINTS AT
VERTICAL / HORIZONTAL BENDS AND GATE VALVES
NOT TO SCALE



TYPICAL MARKER POSTS
NOT TO SCALE



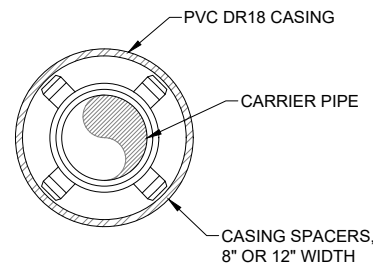
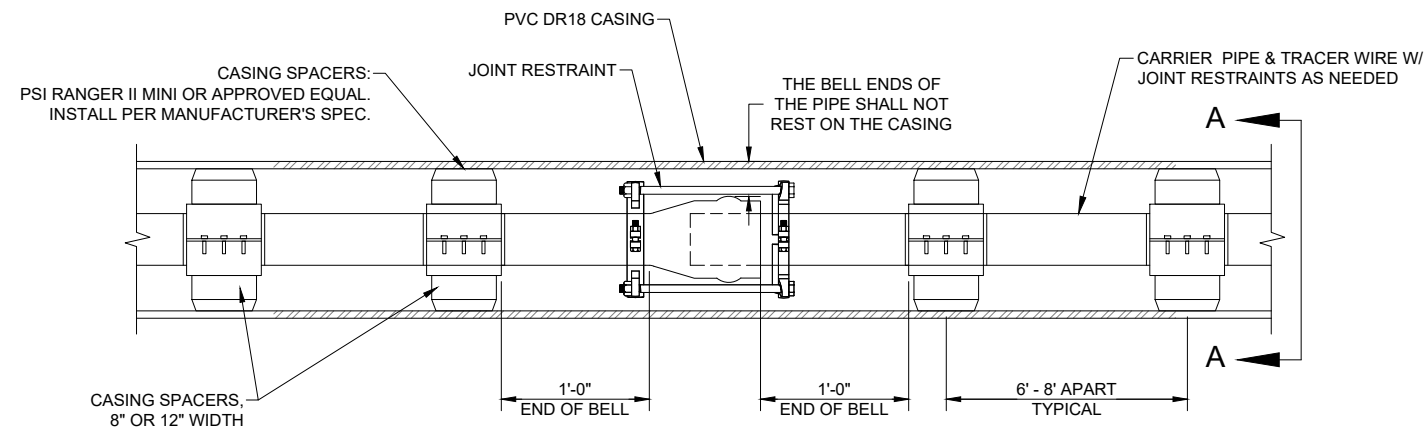
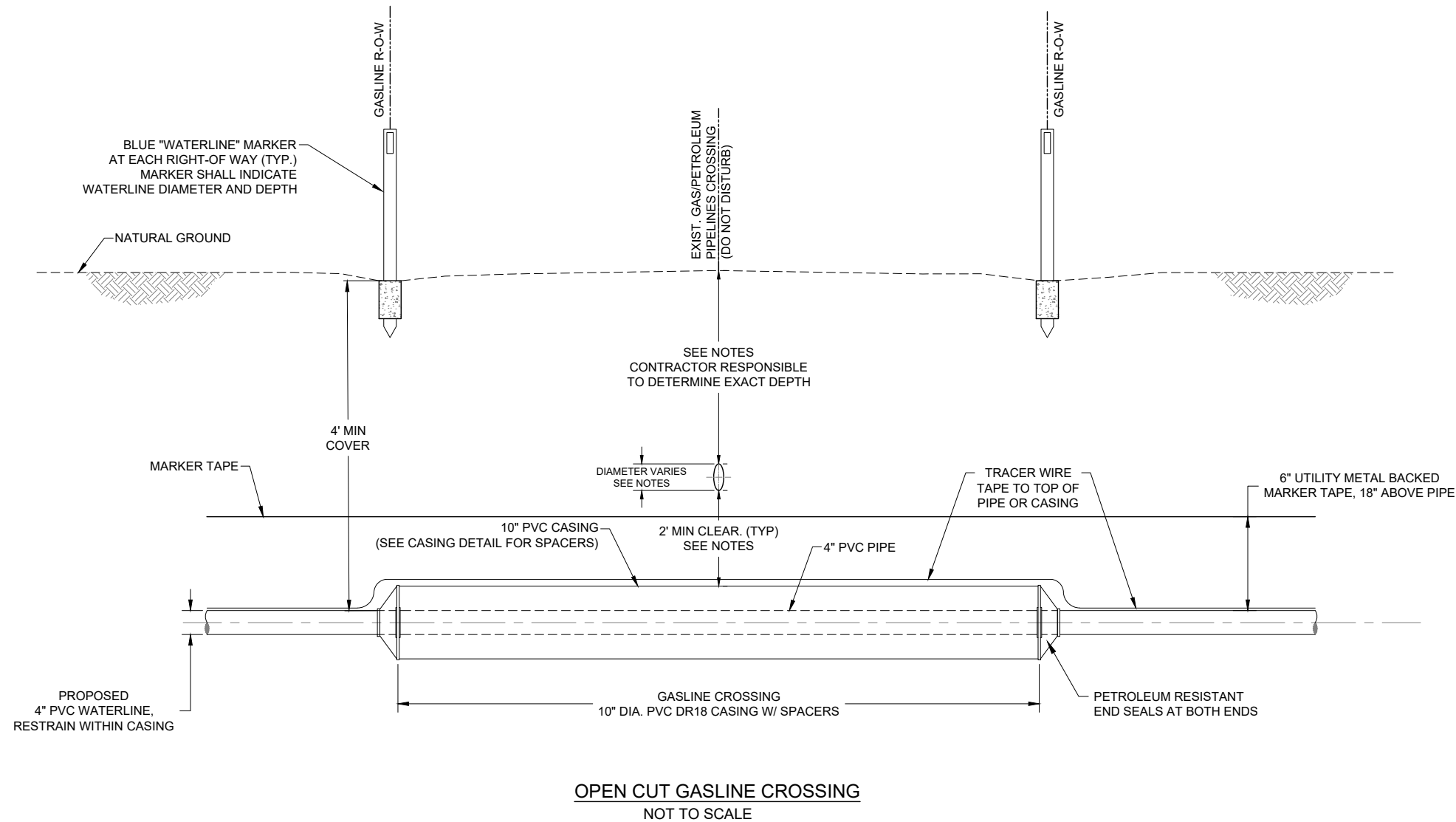
TYPICAL TRENCH DETAIL
NOT TO SCALE



INDIVIDUAL MARKER POST
NOT TO SCALE

P:\BACA-Previtt (6922883)\BACA Thoreau Well Connection\CAD\DWG\6922883-Thoreau Well Conn Details.dwg
8/17/2020 10:53:18 AM aw

P:\BACA-Previtt (6922883)\BACA Thoreau Well Connection\CAD\DWG\6922883-Thoreau Well Conn Details.dwg
8/17/2020 10:53:27 AM aav



NOTES:

1. ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR RESPONSIBLE TO DETERMINE EXACT LOCATION, DEPTH AND SIZE OF ALL BURIED UTILITY LINES AND TO COMPLY WITH ALL REQUIREMENTS SET FORTH IN THE ENCROACHMENT AGREEMENTS PROVIDED BY UTILITY LINE OPERATORS AND IN THE DETAILS AND SPECIAL NOTES OF THESE DRAWINGS. IF GASLINE IS DEEPER THAN SHOWN ON DRAWINGS, MAINLINE AND CASING SHALL BE DEEPER AS WELL.
2. CONTRACTOR SHALL NOT SUSPEND EXISTING GASLINE PIPE MORE THAN 12 FEET WITHOUT SOIL BEDDING OR OTHER SUPPORT APPROVED BY GASLINE COMPANY.
3. NOTIFY GASLINE COMPANIES (LISTED BELOW) 30 WORKING DAYS AND CALL NM ONE-CALL AT LEAST 3 WORKING DAYS PRIOR TO GRADING, CROSSING, MATERIAL STORAGE OR EQUIPMENT MOVING ACROSS GASLINE RIGHT-OF-WAY OR ADJACENT ACCESS ROADS.
4. GASLINE COMPANY REPRESENTATIVE MUST BE PRESENT DURING ALL CONSTRUCTION ACTIVITIES WITHIN GASLINE RIGHT-OF-WAY, INCLUDING GRADING, EXCAVATION AND CLEANUP.
5. CONTRACTOR RESPONSIBLE TO LOCATE AND EXPOSE ALL EXISTING GAS / PETROLEUM LINES, IN ACCORDANCE WITH GAS COMPANY REQUIREMENTS.
6. EXCAVATE BY HAND OR VACUUM DRILL, ETC WITHIN 2 FEET OF GASLINE, OR MORE IF GASLINE COMPANY REQUIRES, WHICHEVER IS STRICTER.
7. CROSS UNDER ALL GASLINES. 2' MIN. CLEARANCE FROM TOP OF CASING TO BOTTOM OF GASLINE.
8. CONTRACTOR SHALL COMPLETE ANY AND ALL ENCROACHMENT AGREEMENTS REQUIRED BY GASLINE COMPANIES. ABIDE BY ALL CONDITIONS STIPULATED BY GASLINE COMPANIES.
9. HEAVY EQUIPMENT MUST CROSS PIPELINE ONLY AT CROSSING LOCATIONS APPROVED BY GASLINE COMPANIES.
10. CARRIER PIPE WITHIN A 200 FT. RADIUS OF GASLINE SHALL BE BELL-AND-SPIGOT PVC WITH PETROLEUM RESISTANT GASKETS.
11. TRACER WIRE CONTINUITY SHALL BE MAINTAINED ACROSS THE GASLINE XING.
12. APPROXIMATE DEPTH CALL OUTS ARE MEASURED FROM THE EXISTING GROUND TO THE TOP OF PIPE.
13. PVC PIPE WITHIN CASING TO BE RESTRAINED WITH BELL RESTRAINT HARNESSSES.
14. WATERLINE SHALL BE INSTALLED BY OPEN CUT UNDER GASLINES WITH CASING FROM ROW TO ROW.
15. PERMANENT CROSSING MARKERS SHALL BE PLACED AT THE ENDS OF THE CASINGS FOR ALL WATERLINE GASLINE CROSSINGS.

UTILITY CONTACT:

TRANSWESTERN
ALLEN CHARLIE - FIELD CONTACT 505-870-9432

NOTES:

1. POSITION CASING SPACERS PER MANUFACTURER'S RECOMMENDATION.
2. SEAL ENDS OF CASING WITH RUBBER END SEAL

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THE NAVAJO NATION
McKINLEY COUNTY, NEW MEXICO
THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
GASLINE CROSSING DETAIL

**FINAL DESIGN
FOR REVIEW**

THIS DRAWING IS INCOMPLETE
AND NOT TO BE USED FOR
CONSTRUCTION UNLESS IT IS
STAMPED, SIGNED AND DATED

Designed TTT	Drawn AAV	Checked JMG
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Date: August 2020

Scale: Horiz: N/A
Vert: N/A

Project No: 6922883

Sheet:
DT-3



3'-6" MIN. COVER (TYP.)

2" CLR. (TOP)

2" CLR. TYP.

#3 HOOP EACH FACE, PROVIDE 18" LAP ALL REINFORCING TO CLEAR FLANGE COLLAR OR OPENING BY 2"

SEE WALL ANCHOR DIMENSION SCHEDULE FOR SIZE, REINFORCEMENT REQUIRED

4 - #6 REBAR EACH WAY, EACH FACE

3" CLR. (BOTTOM)

W

H

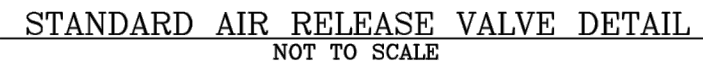
FINISHED GRADE

CONCRETE WALL ANCHOR BLOCK FOR USE
HDPE TRANSITION RESTRAINT
NOT TO SCALE



* NOT ON STANDARD LIST

1	7/99	STANDARDIZED			B.M.
REVISION	DATE	BRIEF			BY
<p>U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION</p>					
<p>NAVAJO NATION, STANDARD DRAWING NO. W-1 2" FLUSH VALVE LIST NO. 006502</p>					
<p>OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA</p>					
DRAWN BY: L.S. DATE: 11/92		CHECKED BY: P.S. DATE: 2/93		APPR. BY: T.M. DATE: 2/93	
				AUTOCAD DRAWING	

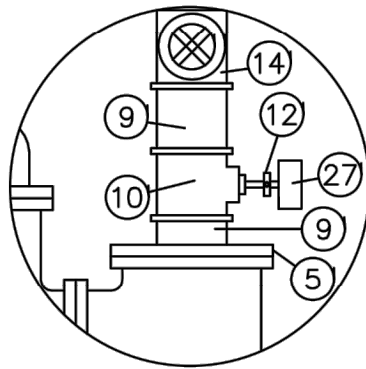


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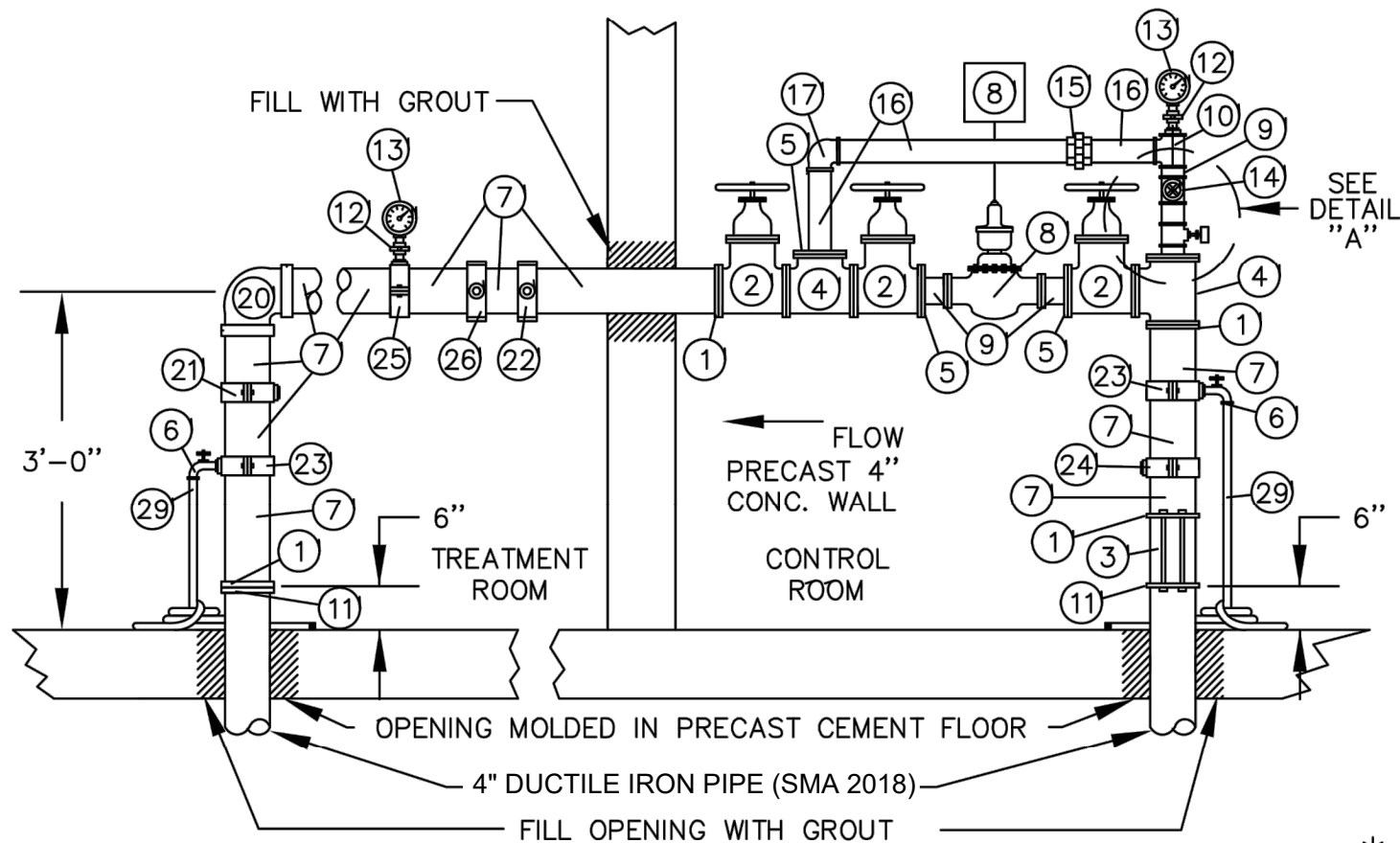
2	8/01	DELETED STATIONARY ROD AND GRAVEL	R.B.M.
1	7/99	STANDARDIZED	B.M.
REVISION	DATE	BRIEF	BY
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION			
NAVAJO NATION, STANDARD DRAWING NO. W-2 AIR RELEASE VALVE LIST NO. 001434			
OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA			
DRAWN BY: L.S. DATE: 11/92	CHECKED BY: P.S. DATE: 2/93	APPR. BY: P.S. DATE: 2/93	AUTOCAD DRAWING

NOTES:

1. PRESSURE GAUGES AND HONEYWELL CONTROL ORDERED SEPARATELY ACCORDING TO WORKING PRESSURE
2. PIPE AND CAST IRON VALVES/FITTINGS PRIMED AND PAINTED BLUE, ORDER PAINT AND PRIMER SEPARATELY
3. HIGH PRESSURE RATED GAUGES AND VALVES ARE REQUIRED FOR PRESSURES > 150 PSI
4. WRAP EXTERIOR D.I. PIPING WITH POLYGEN TAPE



DETAIL "A"
N.T.S.



4" FLANGED PUMPHOUSE PIPING FOR FLOWS OF 50 TO 250* GPM
(125 # FLANGES) HEAD LOSS = 13 FT. @ 250 GPM

* DIFFERENT METER REQUIRED FOR FLOWS IN EXCESS OF 160 GPM OR PRESSURES > 150 PSI

NOTE: PROJECT SPECIFIC MODIFICATIONS WERE MADE TO THIS DETAIL BY SMA FOR THE PUMP HOUSE TO BE CONNECTED TO THE THOREAU WELL DESIGNATED (SMA 2018).

3	1/06	ADDED METER HIGH SPEED PICK UP & ACT-PAK	D.S.
2	1/00	ADDED FIELD FLANGE TO MATERIALS LIST	R.B.M.
REVISION	DATE	BRIEF	BY

ITEM	QUAN.	DESCRIPTION
1	4	COMPANION FLANGE, 4" FIPT X 9" FACE
2	3	GATE VALVE, 4" FLANGED, C.I. W/ WHEEL
3	1	CHECK VALVE, 4" SILENT, WAFER STYLE W/ BOLTS FLANGES
4	2	TEE, 4" FLANGED, C.I.
5	4	REDUCING FLANGE, 2"FIPT X 9"FACE
6	2	HOSE BIBB, 3/4" W/BACKFLOW PREVENTION
7	3	4" DUCTILE IRON PIPE (CUT AS NEEDED) (SMA 2018)
8	1	2" TURBINE WATER METER W/ACT-PAK, (SENSUS W160 DR/HSP) 150 PSI MAX. (W/COMPANION FLANGES)
9	5	NIPPLE, 2"X 3", G.I. (THREADED)
10	2	2"X 2"X 2" TEE W/2"X 3/4" & 3/4"X 1/4" BUSHINGS (FOR PRESSURE GAUGE & HIGH PRESSURE CUTOFF SWITCH)
11	2	FIELD FLANGE
12	3	VALVE, PRESSURE COCK, 1/4"
13	2	PRESSURE GAUGE
14	1	GATE VALVE, 2" BRASS (FEMALE THREADED ENDS)
15	1	UNION, 2" G.I.
16	3	G.I. PIPE, 2" (CUT & THREAD IN FIELD)
17	1	ELBOW, 90°, 2" G.I.
18		
19		
20	1	ELBOW, 90°, 4" G.I.
21	1	SADDLE, 4"X 1" (FOR CHLORINE INTRODUCTION)
22	1	SADDLE, 4"X 1", ROTATED 90° (FOR CHLORINE SUPPLY)
23	2	SADDLE, 4"X 3/4", (FOR HOSE BIBB)
24	1	SADDLE, 4"X 3/4", (FOR SEQUESTERING TREATMENT IF NEEDED)
25	1	SADDLE, 4"X 1", W/ 1"X 1/4" BUSHING (FOR PRESSURE GAUGE)
26	1	SADDLE, 4"X 3/4" ROTATED 90° W/3/4"X 1/2" BUSHING, (FOR FLUORIDE INTRODUCTION)
27	1	HIGH PRESSURE CUT-OFF
28		
29	2	GARDEN HOSE, 10', HOSE BIBB X PLAIN END

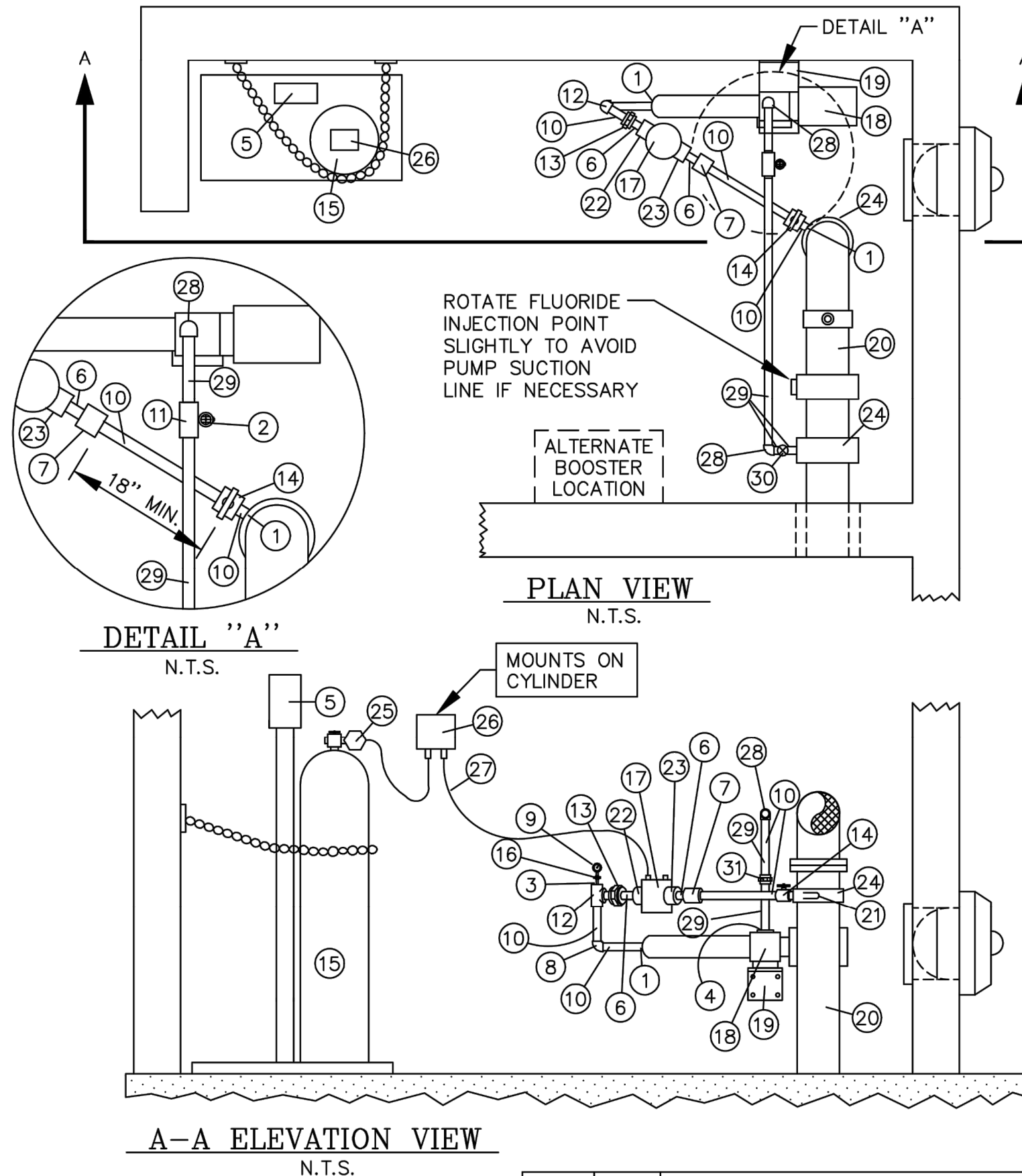
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
INDIAN HEALTH SERVICE
NAVAJO NATION

NAVAJO NATION,
STANDARD DRAWING NO. W-14
4" PUMPHOUSE PIPING
LIST NO. 901550

OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING
NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA

DRAWN BY: L.S. CHECKED BY: P.S. APPR. BY: P.S. AUTOCAD
DATE: 1/93 DATE: 1/93 DATE: 1/93 DRAWING

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8/17/2020 10:35 AM aw



ITEM	QUAN.	DESCRIPTION
1	3	ADAPTER 1" S X MIPT SCH. 80 PVC
2	1	BIBB HOSE, 3/4" MIPT BRASS (W/ BACKFLOW PREVENTOR)
3	1	BUSHING 1" S X 1/4" FIPT SCH. 80 PVC
4	1	BUSHING 1-1/4" X 1" GALV.
*5	1	CHLORINE SCALE
6	2	BUSHING 1" S X 3/4" FIPT SCH. 80 PVC
7	1	COUPLING 1" SLIP SCH. 80 PVC
8	1	ELBOW 90° 1" SLIP SCH. 80 PVC
9	1	GAUGE GLYCER 1/4" 0-350
10	AS NEEDED	PIPE 1" CUT TO FIT SCH. 80 PVC
11	1	STAINER 1" X 1" FIPT GALV.
12	1	TEE 1" SLIP SCH. 80 PVC
13	1	UNION 1" SLIP SCH. 80 PVC
14	1	BALL VALVE 1" SLIP SCH. 80 PVC
*15	1	GAS CHLORINE CYLINDER
16	1	VALVE PRESSURE COCK 1/4" MIPT BRASS
*17	1	EJECTOR UNIT S-10 CHLORINATOR
*18	1	JACUZZI-BOOSTER PUMP (MODEL PER SPEC)
19	1	BOOSTER PUMP-BRACKET
*20	AS NEEDED	PUMP HOUSE PIPING 4" ±
21	1	1/2" PVC-SOLUTION TUBE
22	1	NOZZLE-EJECTOR (MODEL PER SPEC)
23	1	TAILWAY-EJECTOR (MODEL PER SPEC)
24	2	SADDLE 4" X 1" IPT
25	1	PRESSURE REGULATOR
*26	1	CONTROL UNIT, ROTOMETER
27	AS NEEDED	TUBING
28	2	ELBOW 90° 1" FIPT SCH. 40 G.I.
29	AS NEEDED	PIPE 1" CUT AND THREADED TO FIT, G.I.
30	1	GATE VALVE, 1" BRASS, FIPT
31	1	UNION, 1" SCH. 40 G.I.

* NOT ON STANDARD LIST

- NOTE: 1. BOOSTER INLET PIPING TO BE G.I. TO PROVIDE INCREASED SUPPORT.
2. BOOSTER PUMP INSTALLER TO MAKE TAP FOR CHLORINE AND FLUORIDE PUMP.
3. GAS CHLORINATION SHALL BE CONSIDERED FOR ALL FLOWRATES GREATER THAN 50 GPM.

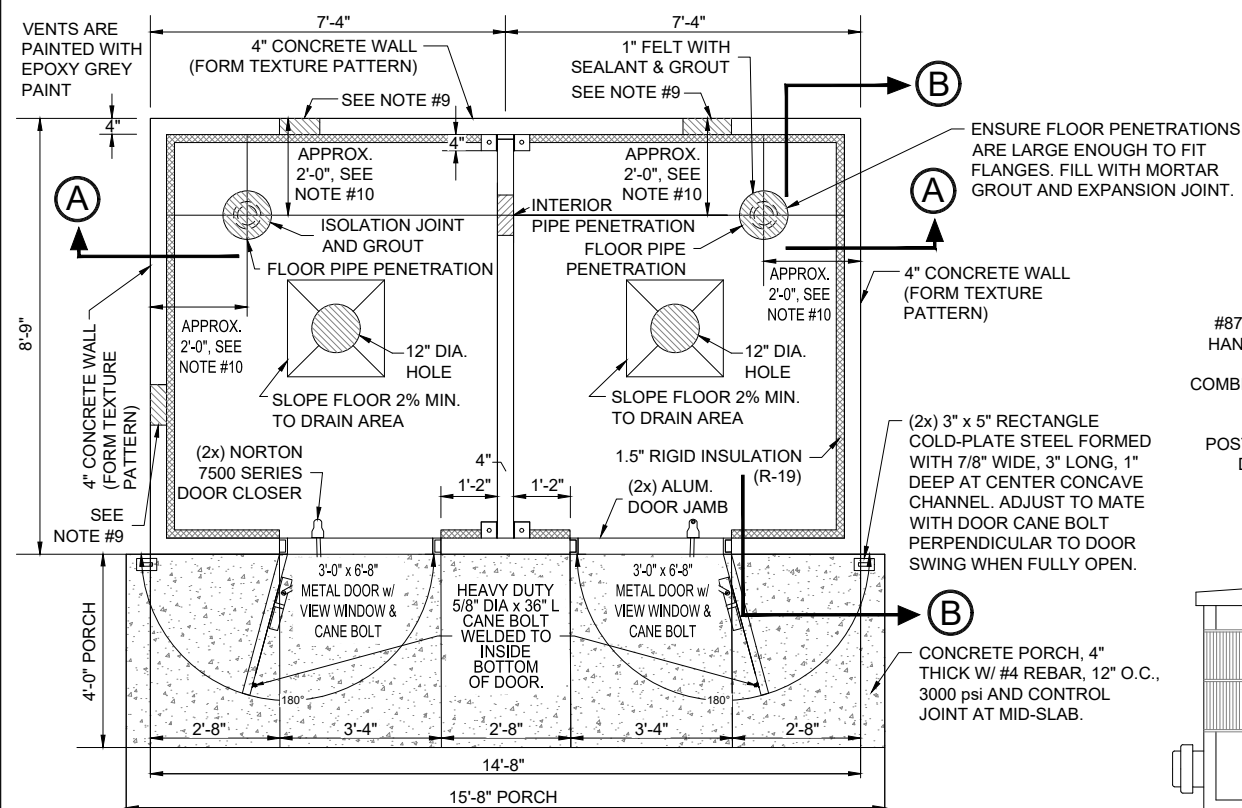
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
INDIAN HEALTH SERVICE
NAVAJO NATION

NAVAJO NATION,
STANDARD DRAWING NO. W-15
GAS CHLORINATION
LIST NO. 902000

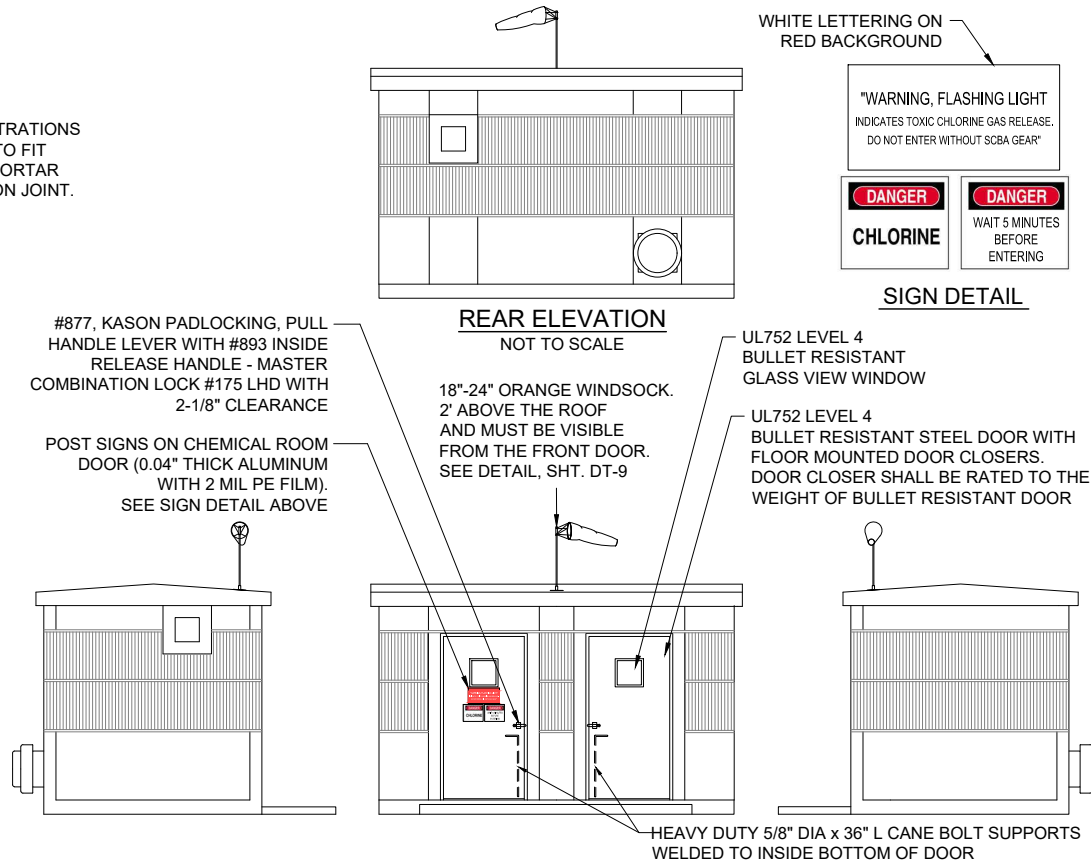
OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING
NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA

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DATE: 1/93	DATE: 1/93	DATE: 1/93	DRAWING

1	7/99	STANDARDIZED	B.M.
REVISION	DATE	BRIEF	BY



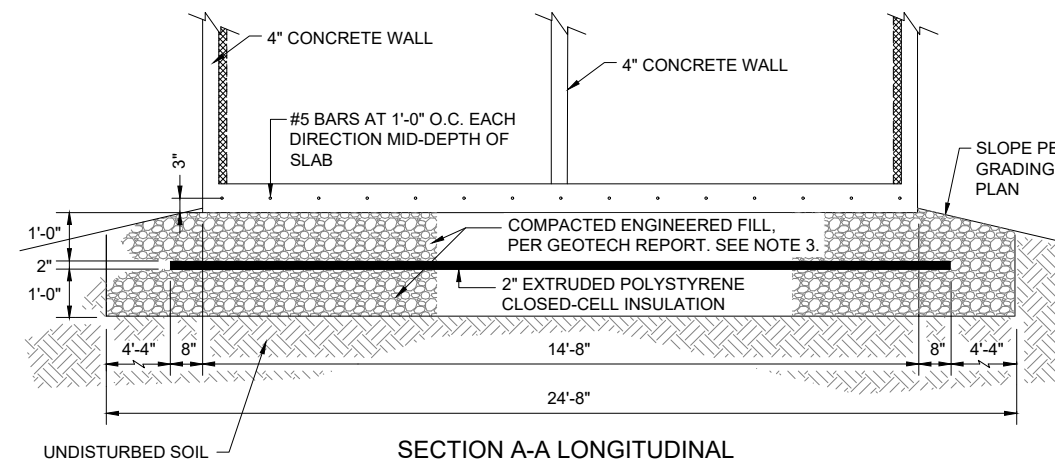
PLAN VIEW OF BUILDING
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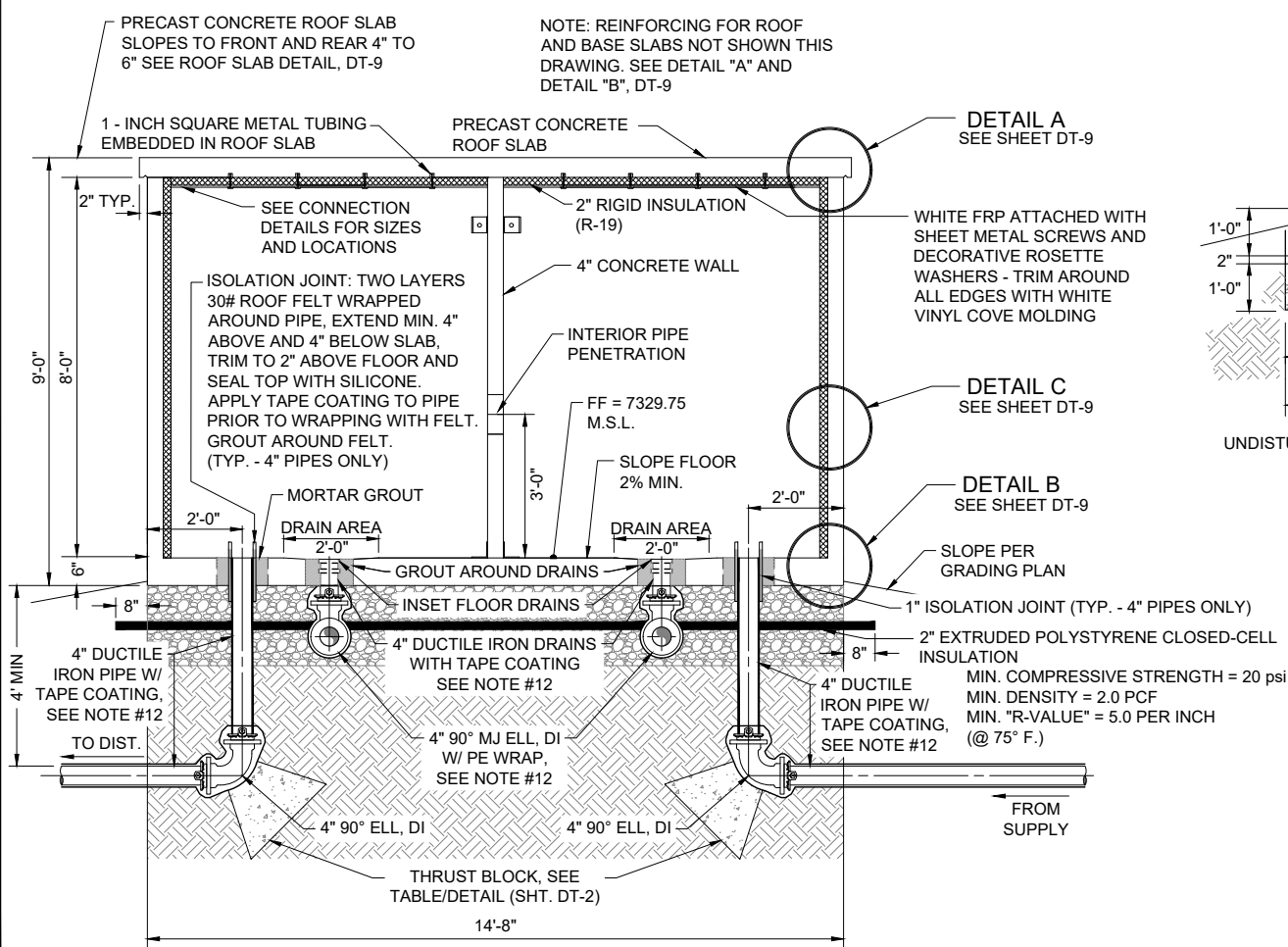
LEFT SIDE ELEVATION
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FRONT ELEVATION
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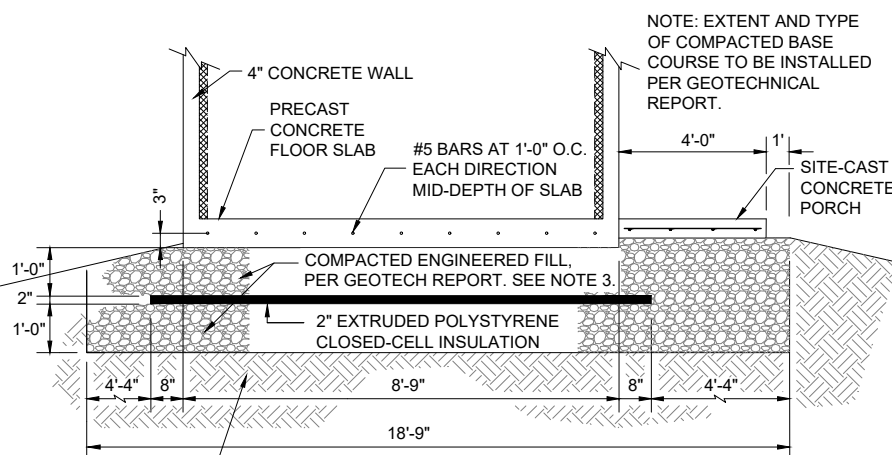
RIGHT SIDE ELEVATION
NOT TO SCALE



SECTION A-A LONGITUDINAL
NOT TO SCALE



ELEVATION VIEW OF BUILDING AND UNDERGROUND PIPING
NOT TO SCALE



SECTION B-B TRANSVERSE
NOT TO SCALE

NOTES

1. THE GOVERNING CODE IS THE INTERNATIONAL BUILDING CODE, MOST RECENT EDITION.
 2. MINIMUM DESIGN LIVE LOADS SHALL BE:
25 PSF - ROOF SNOW LOAD
25 PSF - HORIZONTAL WIND LOAD
35 PCF - EQUIVALENT BACKFILL FLUID PRESSURE
SEISMIC ZONE II REQUIREMENTS
 3. BUILDING FOUNDATION, SUB-FOUNDATION, AND SITE GRADING SHALL BE PROVIDED AS SPECIFIED IN GEOTECHNICAL REPORT, PROVIDED AS APPENDIX TO CONTRACT DOCUMENTS. REFER TO GEOTECHNICAL REPORT FOR FURTHER INFORMATION.
 4. ALL SITE-CAST CONCRETE SHALL BE MADE WITH TYPE II CEMENT AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,000 psi WITHIN 28 DAYS. THE MIX DESIGN SHOULD INCLUDE 5% ($\pm 1\%$) AIR ENTRAINMENT AND SHOULD BE PLACED AND CURED IN ACCORDANCE WITH THE ACI MANUAL OF CONCRETE PRACTICE, VOLUMES 1 THRU 5. SLUMP AT THE TIME OF PLACEMENT SHOULD NOT EXCEED FOUR (4) INCHES, AND MECHANICAL VIBRATION SHOULD BE EMPLOYED FOR CONSOLIDATION TO ELIMINATE VOIDS AND HONEYCOMBING.
 5. PRECAST CONCRETE COMPONENTS SHALL BE CERTIFIED BY THE SUPPLIER TO HAVE ATTAINED A MINIMUM STRENGTH OF 3,000 psi AT TRANSPORT TIME WITH FINAL CONCRETE STRENGTH TO BE AT LEAST 3,500 psi WITHIN 28 DAYS. VERIFICATION OF CONCRETE STRENGTH SHALL BE PROVIDED BY THE SUPPLIER UPON REQUEST AND SHALL BE CONFIRMED THROUGH CYLINDER BREAKS FROM NORMAL PRODUCTION PROCEDURES AND IN-HOUSE QUALITY CONTROL. A SET OF FOUR (4) CYLINDERS SHALL BE TAKEN AT RANDOM IN THE PLANT NOT LESS THAN ONCE DURING EACH WEEK OF PRODUCTION.
 6. CONCRETE REINFORCING STEEL SHALL BE ASTM A-615 BILLET BARS, GRADE 40. BARS SHALL BE LAPPED AT LEAST THIRTY (30) BAR DIAMETERS AT SPLICES AND CORNER BARS SHALL BE PROVIDED TO MATCH HORIZONTAL REINFORCING.
 7. STRUCTURAL STEEL, EMBEDMENT STEEL, AND CONNECTIONS SHALL CONFORM TO ASTM A-36. ALL EXPOSED STEEL PLATES AND CONNECTIONS SHALL BE PAINTED WITH ONE FIELD COAT OF COMPATIBLE PRIMER AND ONE COAT OF EPOXY PAINT.
 8. FIELD WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND SHALL CONFORM TO STANDARDS OF THE AMERICAN WELDING SOCIETY FOR WELDING IN BUILDING CONSTRUCTION.
 9. ALL DOOR FRAMES, FAN AND VENT ASSEMBLIES AND SLAB PENETRATION SHALL BE CAST INTO THEIR RESPECTIVE SLABS.
 10. CONTRACTOR RESPONSIBLE TO DETERMINE SPACE REQUIREMENTS FOR PLUMBING TRAIL, AS WELL AS EXHAUST FAN, VENTS, AND ELECTRICAL CONDUITS, AND SUBMIT SHOP DRAWINGS OF BUILDING, INCLUDING LOCATIONS AND SIZES OF FLOOR, EXTERIOR WALL AND INTERIOR WALL PENETRATIONS, FOR ENGINEER'S APPROVAL PRIOR TO FABRICATING PRE-CAST CONCRETE BUILDING. ADEQUATE WALL CLEARANCE SHALL BE PROVIDED FOR O&M OF ALL FLANGES, VALVES AND OTHER APPURTENANCES.
 11. ALL BURIED PIPE WITHIN 5 FEET OF BUILDING SHALL BE DUCTILE IRON, 350 psi, SOLID PIPE PIECES ONLY. NO DUCTILE IRON PIPE JOINTS ALLOWED.
 12. 4" DUCTILE IRON PIPE, TWO-PART EPOXY-COATED AND MORTAR LINED. COLD APPLIED TAPE-COATED PER SPECIFICATIONS FROM TOP OF FLOOR TO BURIED ELL. DOUBLE WRAP WITH POLYETHYLENE FROM ABOVE ELL TO PVC TRANSITION BEYOND FOUNDATION (TYP.).
 13. 4" DUCTILE IRON DRAIN LINE, TWO-PART EPOXY-COATED AND MORTAR LINED. COLD APPLIED TAPE-COATED PER SPECIFICATIONS FROM INSET DRAIN TO BURIED ELL. DOUBLE WRAP WITH POLYETHYLENE FROM ABOVE ELL TO PVC TRANSITION BEYOND FOUNDATION (TYP.).
 14. CONTRACTOR RESPONSIBLE FOR LOCATING AND DETERMINING ELECTRICAL CONDUIT PENETRATIONS.

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THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
PRECAST 2-ROOM PUMPHOUSE
BUILDING AND PIPING DETAIL

FINAL DESIGN
FOR REVIEW

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED		
Designed TTT	Drawn AAV	Checked JMG

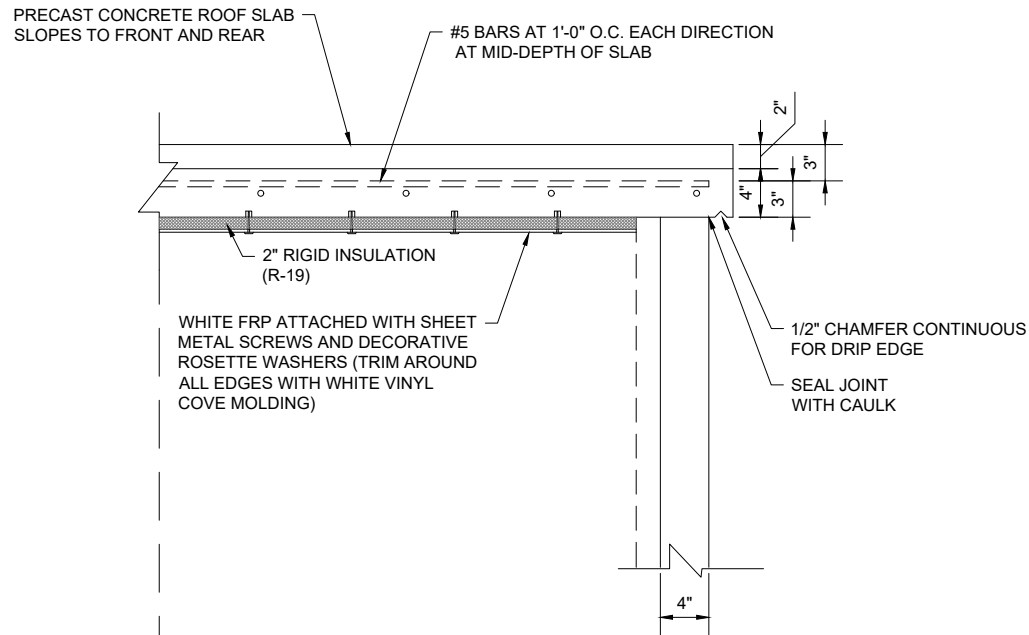
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Vert: N/A

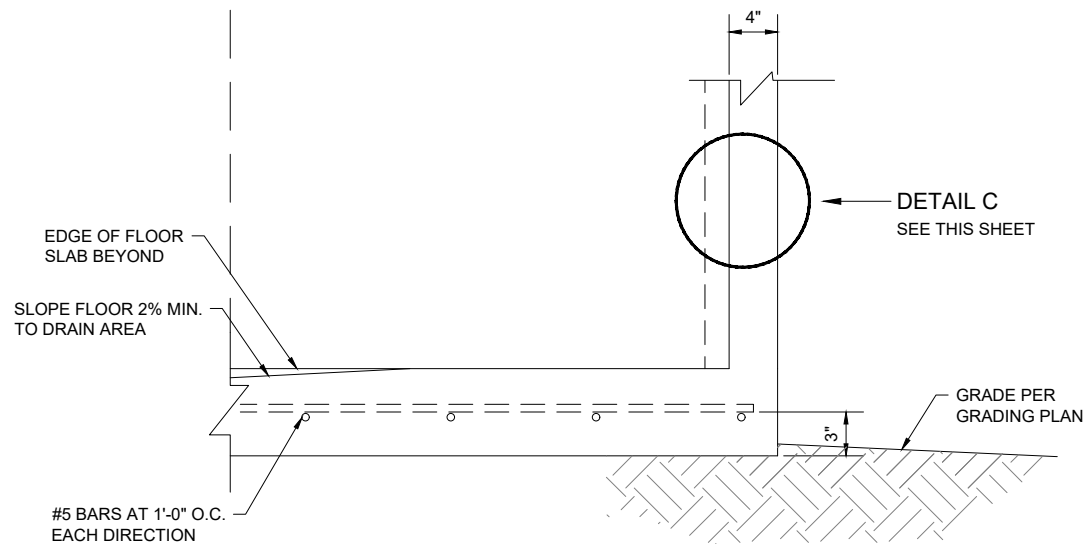
Project No: 6922883

Sheet: DT-8

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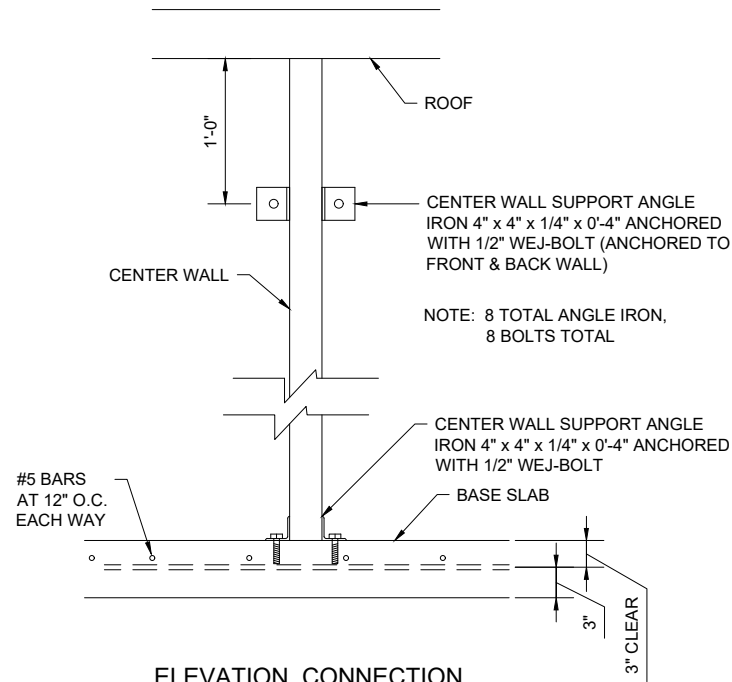
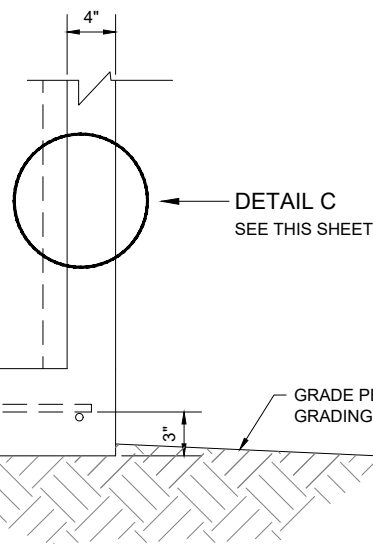


**ROOF CONNECTION
DETAIL A**
NOT TO SCALE

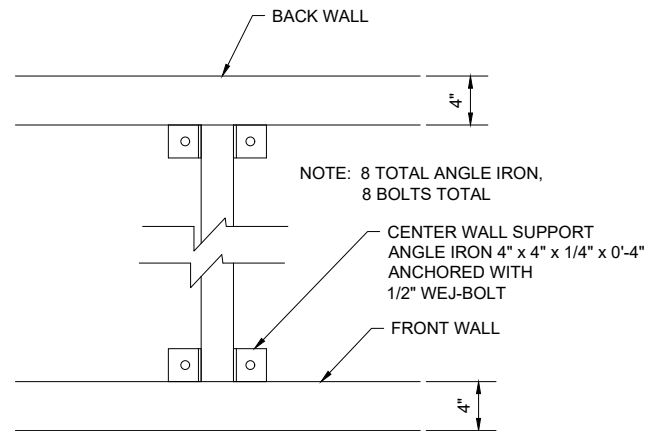


NOTE: REBAR AT LIFT JOINTS ARE #6 REBAR,
12" SEPARATION, CENTERED ON LIFT POINTS.
REBARS ARE CENTERED THE ENTIRE LENGTH
AND WIDTH OF SLAB (BOTH DIRECTIONS OF
EACH LIFT POINT)

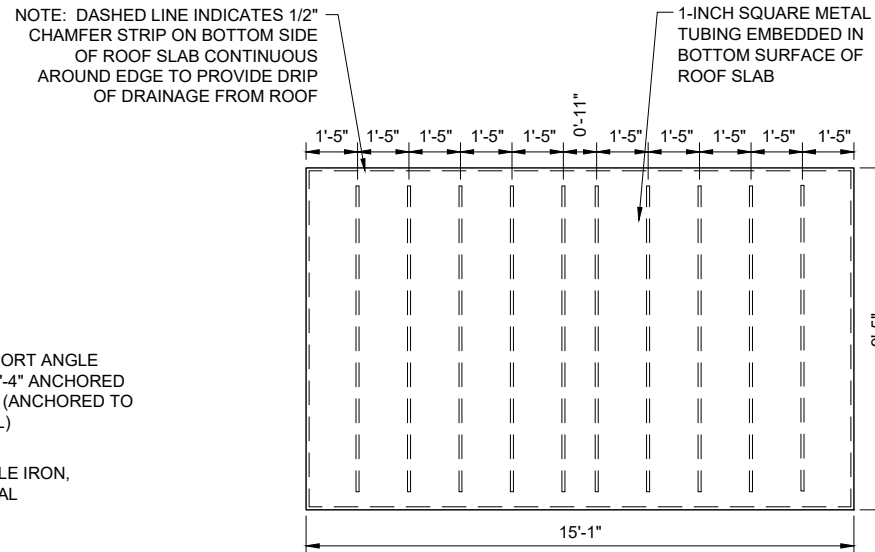
**FLOOR CONNECTION
DETAIL B**
NOT TO SCALE



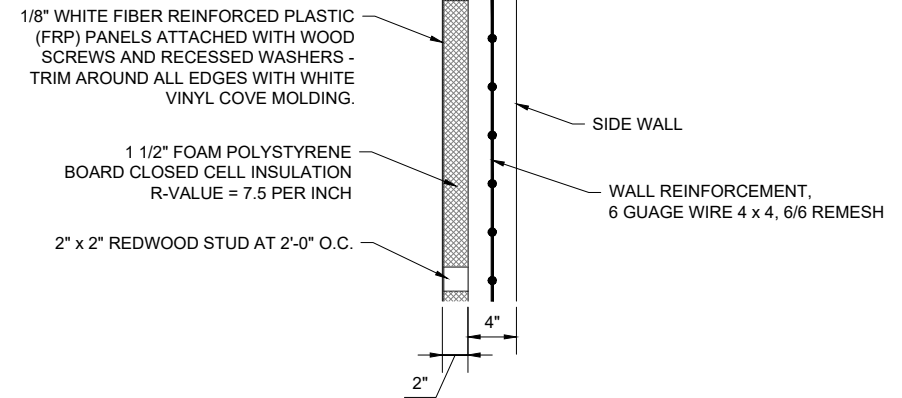
**ELEVATION CONNECTION
ANGLE IRON
AT CENTER WALL**
NOT TO SCALE



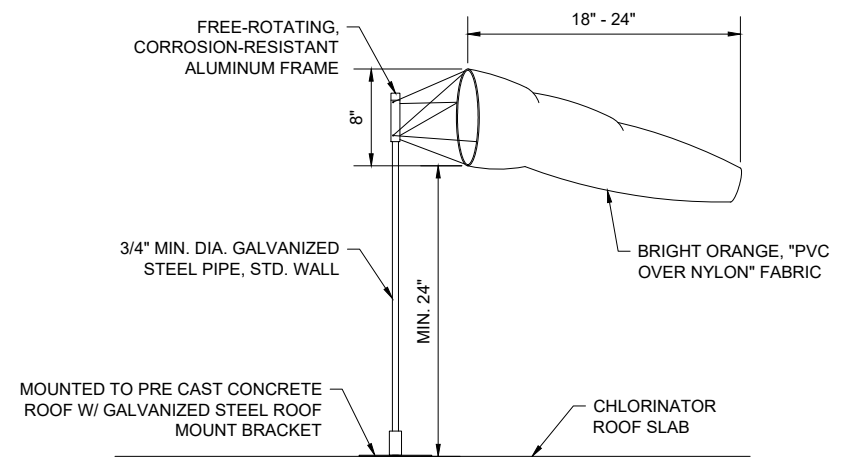
**PLAN CONNECTION
ANGLE IRON
AT CENTER WALL**
NOT TO SCALE



ROOF SLAB
NOT TO SCALE




**WALL SECTION
DETAIL C**
NOT TO SCALE



WIND SOCK DETAIL
NOT TO SCALE

Rev #	Date	Description	By	Chkd

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THE NAVAJO NATION
McKINLEY COUNTY, NEW MEXICO

**THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
PRECAST 2-ROOM PUMPHOUSE
BUILDING DETAILS**

**FINAL DESIGN
FOR REVIEW**

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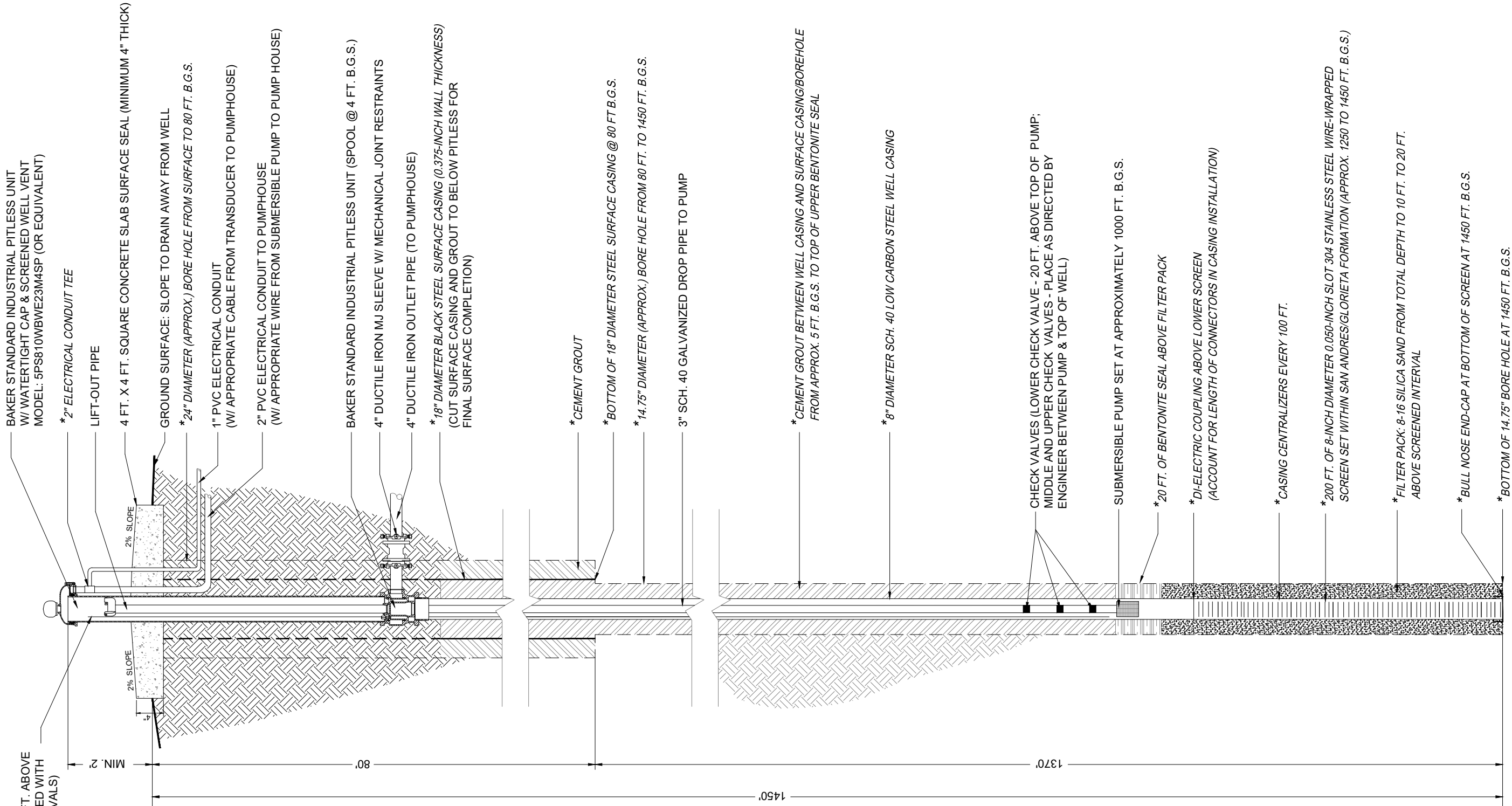
Designed	Drawn	Checked
TTT	AAV	JMG

Date: August 2020

Scale: Horiz: N/A
Vert: N/A

Project No: 6922883

Sheet:
DT-9

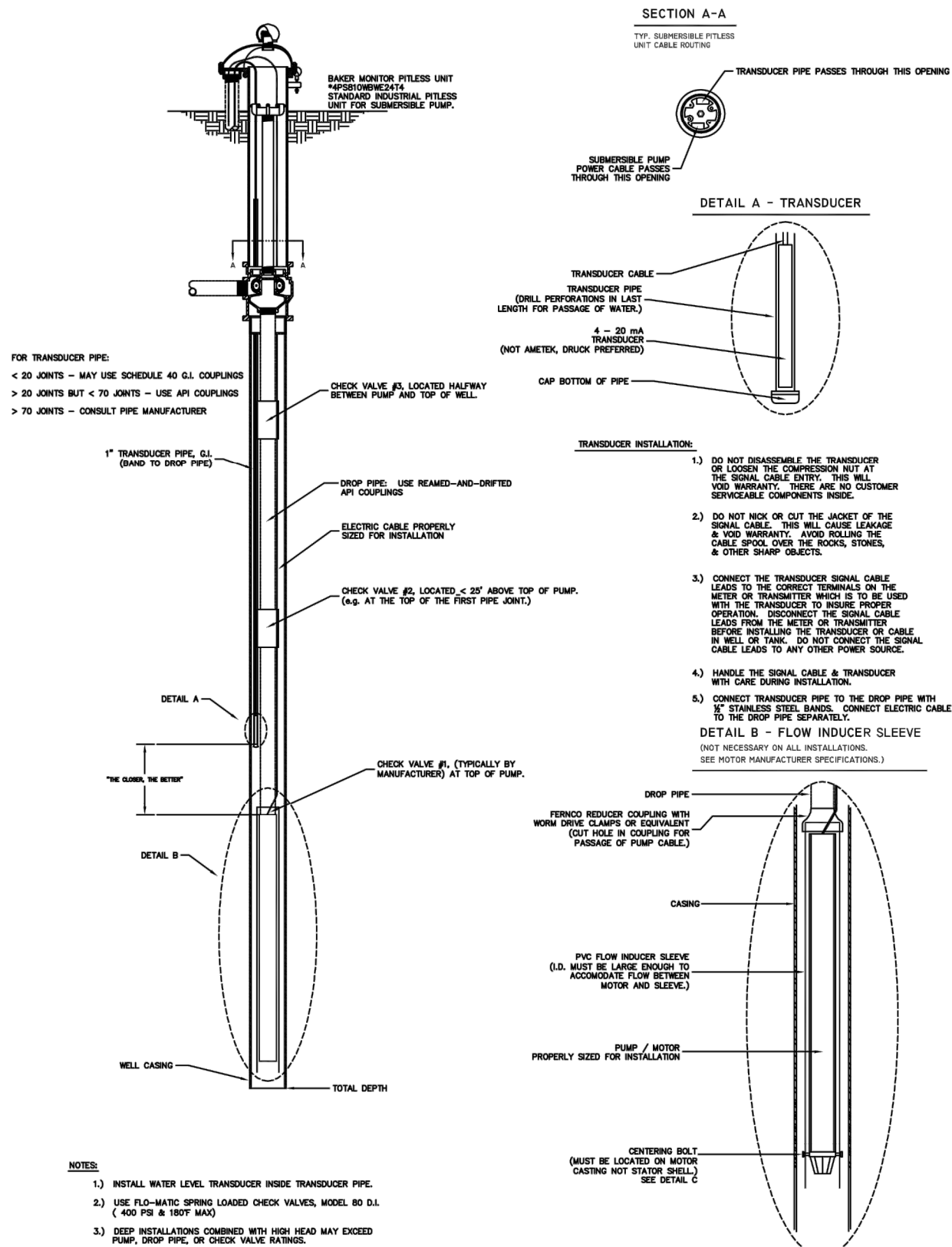


NOTES:

1. DIAGRAM NOT TO SCALE
2. ITEMS MARKED WITH AN ASTERISK * ARE NOT INCLUDED IN THIS PHASE OF THE PROJECT. THESE ITEMS ARE EXISTING.
3. ADDITIONAL REQUIREMENTS FOR INSTALLATION OF PUMP AND OTHER APPURTENANCES, INCLUDING TERMINATION DOWNHOLE AND AT SURFACE, ARE PROVIDED ON SHEET DT-11.

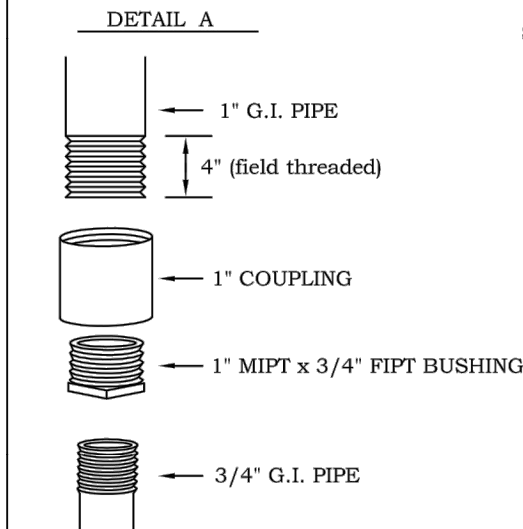
THE NAVAJO NATION		McKINLEY COUNTY, NEW MEXICO		SOUDER, MILLER & ASSOCIATES Engineering • Environmental • Geomatics Serving the Southwest & Rocky Mountains 5454 Venice Avenue NE, Suite D Albuquerque, NM 87113 Phone (505) 299-0942 Toll-Free (877) 299-0942 Fax (505) 293-3400 www.soudermiller.com		Rev #	Date	Description	By	Chkd
THOREAU BACA WELL CONNECTION SECTION 19, T. 14 N., R. 13 W. WELL DESIGN DETAIL										
THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED						Designed TTT	Drawn AAV	Checked JMG		
Date: August 2020										
Scale: Horiz: N/A Vert: N/A										
Project No: 6922883										
Sheet: DT-10										

P:\BACA-PREVITT (6/22/2003)\BACA Thoreau Well Connection\CAD\DWG\6922883-Thoreau Well Conn Pumphouse.dwg
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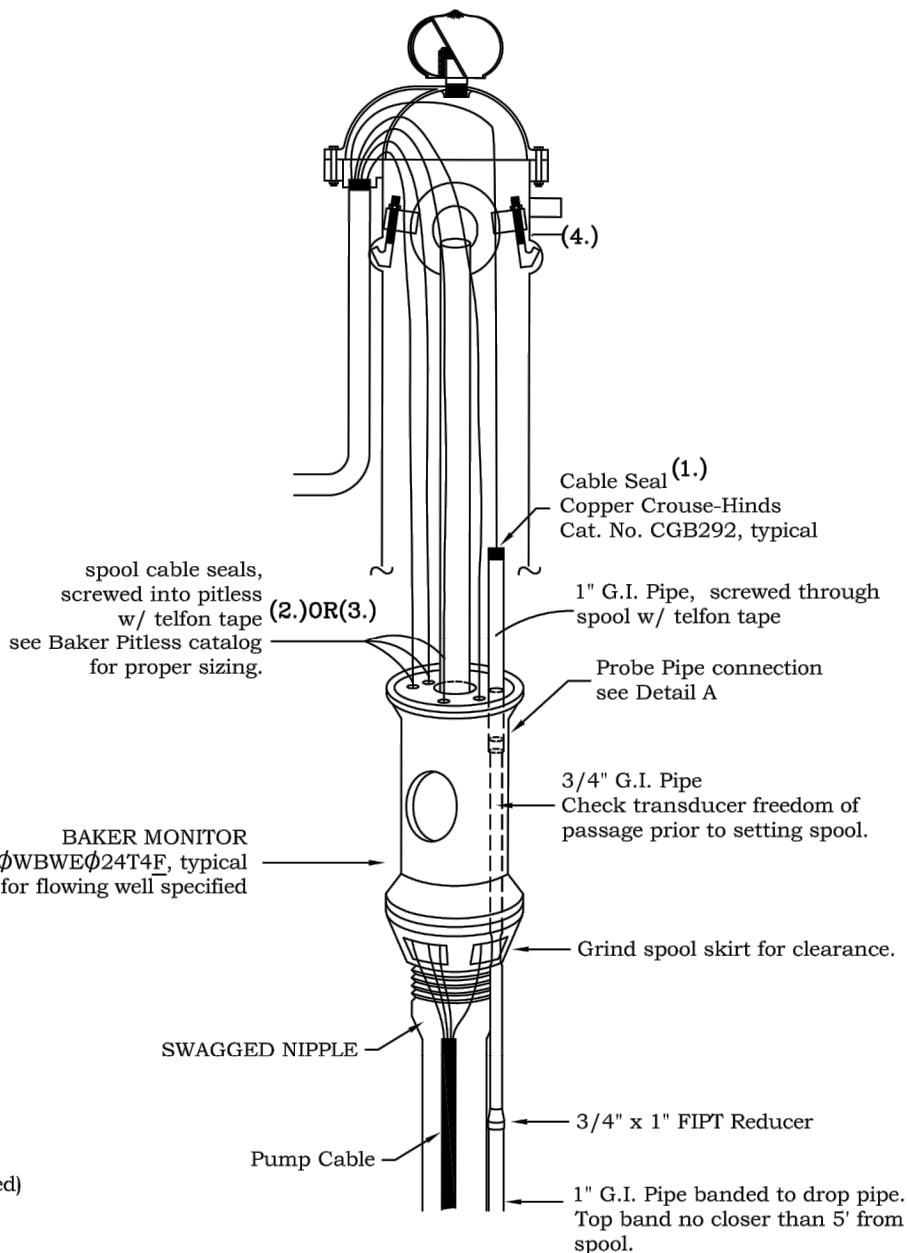
REVISION	DATE	BY	DESCRIPTION
1	06/20/00	TRANSUCER & FLOW INDUCER/DETAIL A	MB/MT
2	08/05/03	REDESIGN	BY

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION	
STANDARD DRAWING NO. W-30 TYPICAL WATER WELL INSTALLATION	
OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA	
DRAWN BY: LDB DATE: 6/05	CHECKED BY: RHM DATE: 6/05
APPR. BY: DATE:	AUTOCAD PVTJRS1.DWG
SHEET OF	



DESCRIPTION	BRAND	RATING
1. CABLE SEAL	COOPER CROUSE-HINDS	40 PSI (FIELD VERIFIED) > 40 PSI (UNVERIFIED)
2. CABLE SEAL	BAKER MONITOR	60-70 PSI
3. CABLE SEAL	PAVE TECHNOLOGY	3,000 PSI
4. LIFT OUT HOOKS	BAKER MONITOR	HOLD WEIGHT = 30,000 LBS
5. SCH 40 GI PIPE		700 PSI
6. SPOOL SEAL	BAKER MONITOR	300 PSI

BAKER MONITOR
5PS810WBWE024T4F, typical
spool w/check valves for flowing well specified



1	2/06	STANDARDIZED	K.M.
REVISION	DATE	BRIEF	BY

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION			
NAVAJO NATION, STANDARD DRAWING W-30A WATER WELL PITLESS CONFIGURATION-FLOWING WELLS			
OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA			
DRAWN BY: D.H. DATE: 8/05	CHECKED BY: A.E. DATE: 8/05	APPR. BY: D.S. DATE: 2/06	AUTOCAD DRAWING

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THE NAVAJO NATION
McKINLEY COUNTY, NEW MEXICO
THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
STANDARD WELL DETAILS

STANDARD
DRAWING

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Designed
TTT

Drawn
AAV

Checked
JMG

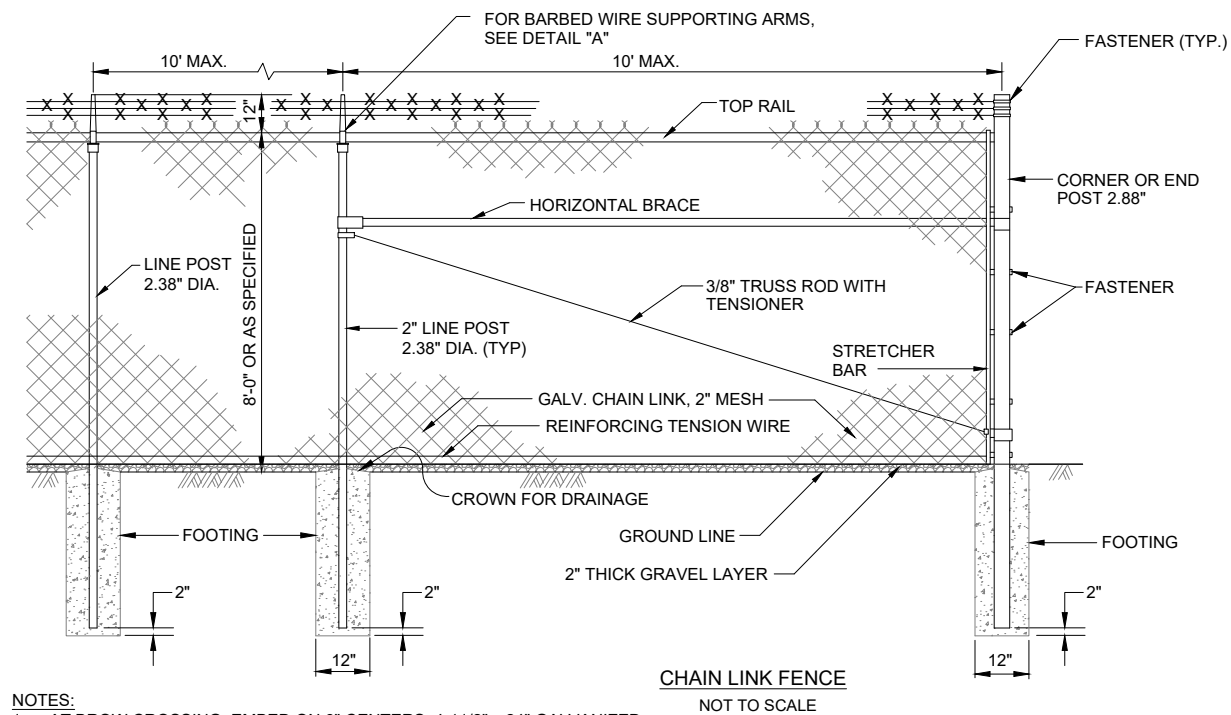
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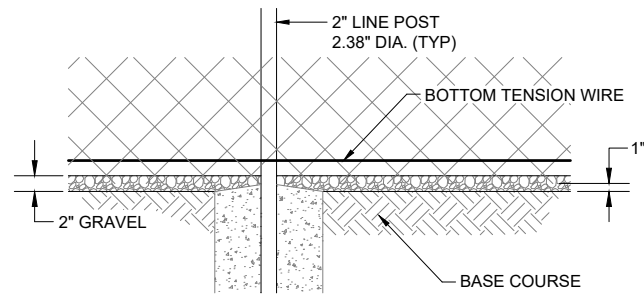
Project No: 6922883

Sheet:
DT-11

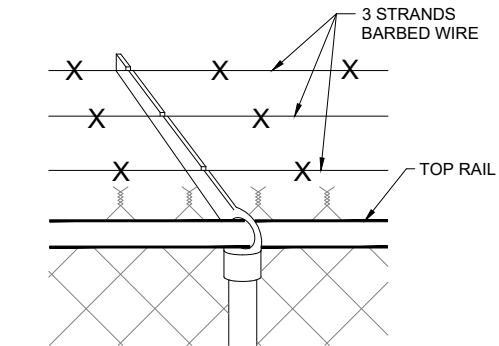
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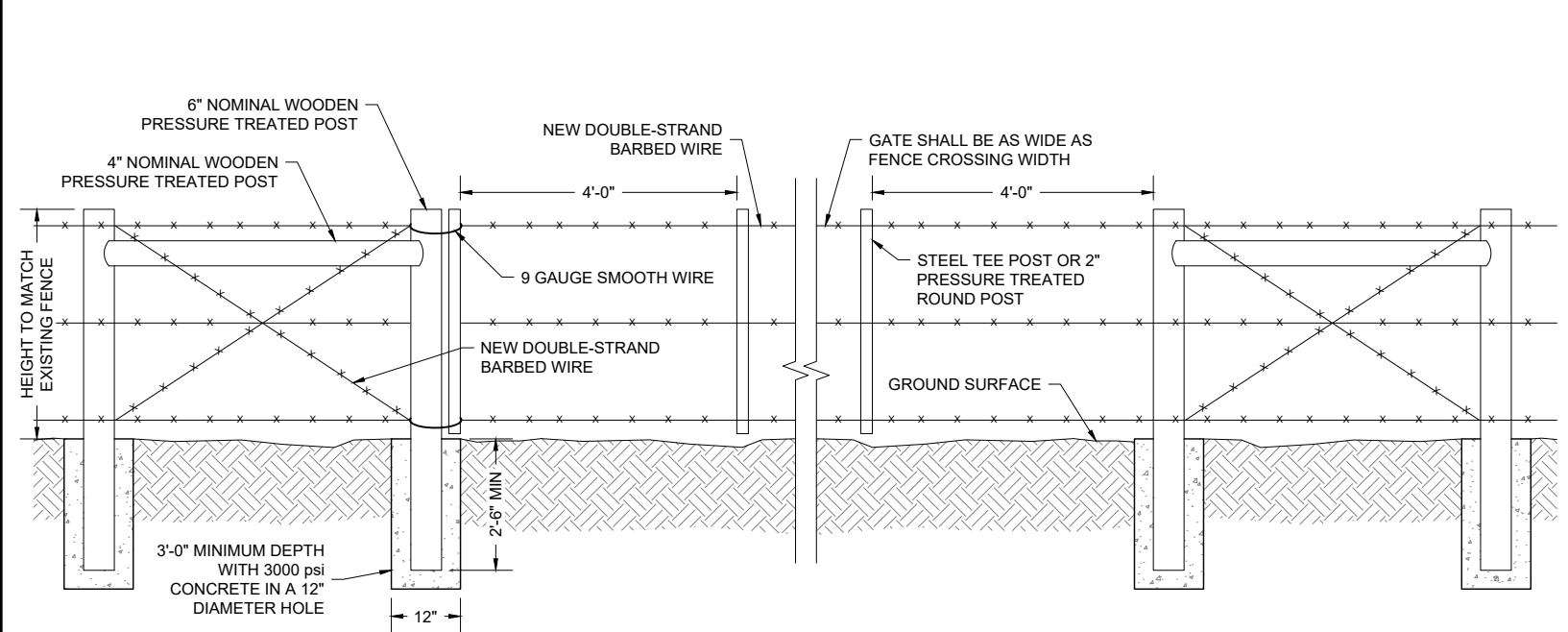
- NOTES:
1. AT BROW CROSSING, EMBED ON 6" CENTERS, 4-11/2" x 24" GALVANIZED RODS WITH 2" HOOKED END INTO BROW DITCH CONCRETE. EXPOSED END OF ROD SHALL BE WOVEN INTO FENCE FABRIC.
 2. IMBED BOTTOM OF FABRIC MIN. 1" INTO THE 2" THICK GRAVEL LAYER.



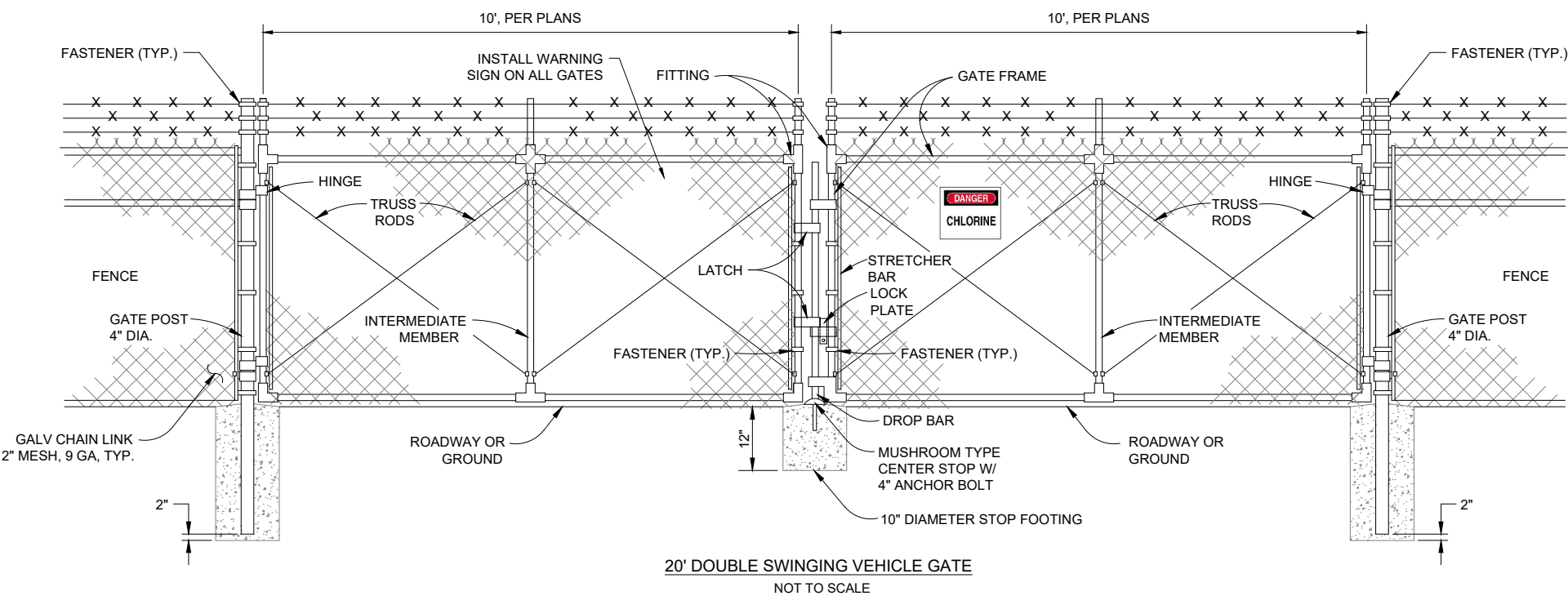
BASE COURSE AND GRAVEL DETAIL
NOT TO SCALE



DETAIL "A" SUPPORTING ARM & BARBED WIRE
NOT TO SCALE



"RANCHER STYLE" GATE WITH H-BRACE
PULL ASSEMBLY AT FENCE CROSSING
NOT TO SCALE



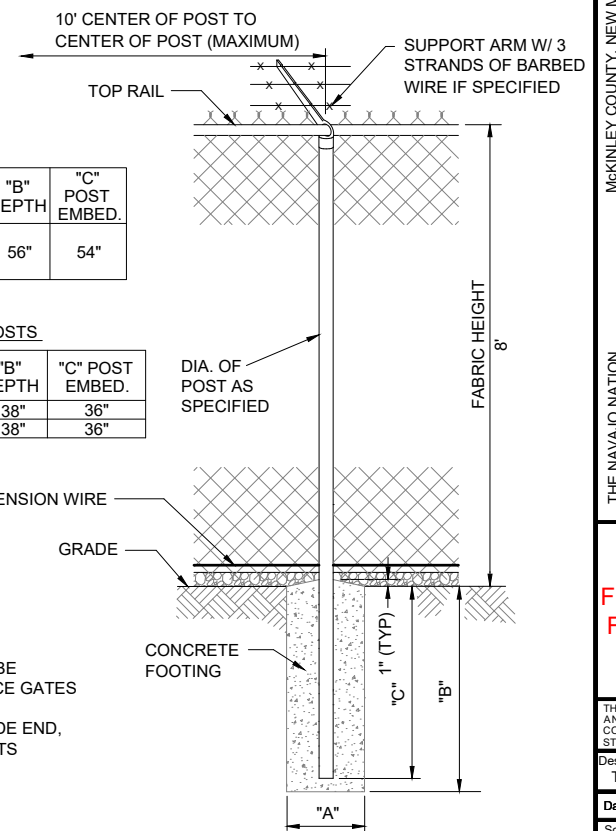
20' DOUBLE SWINGING VEHICLE GATE
NOT TO SCALE

GATE POST					
GATE LEAF WIDTH	GATE POST (OD)	FABRIC HEIGHT	"A" DIAM	"B" DEPTH	"C" POST EMBED.
10'	4"	8'	16"	56"	54"

LINE AND TERMINAL POSTS				
FABRIC HEIGHT	TYPE POST	"A" DIAM	"B" DEPTH	"C" POST EMBED.
8'-0"	LINE	12"	38"	36"
	TERMINAL	12"	38"	36"

NOTES:

1. COMMON LOCKS SHALL BE PROVIDED FOR ALL FENCE GATES
2. TERMINAL POSTS INCLUDE END, CORNER, AND PULL POSTS



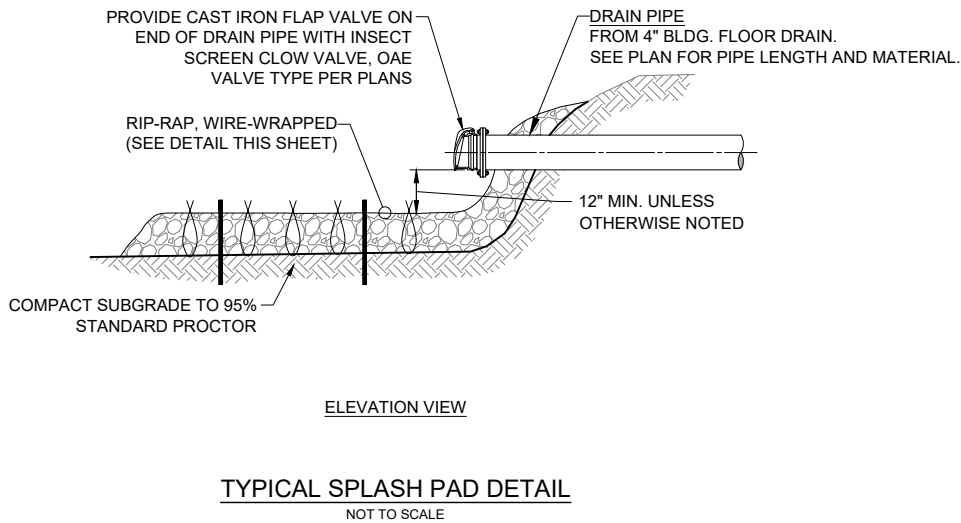
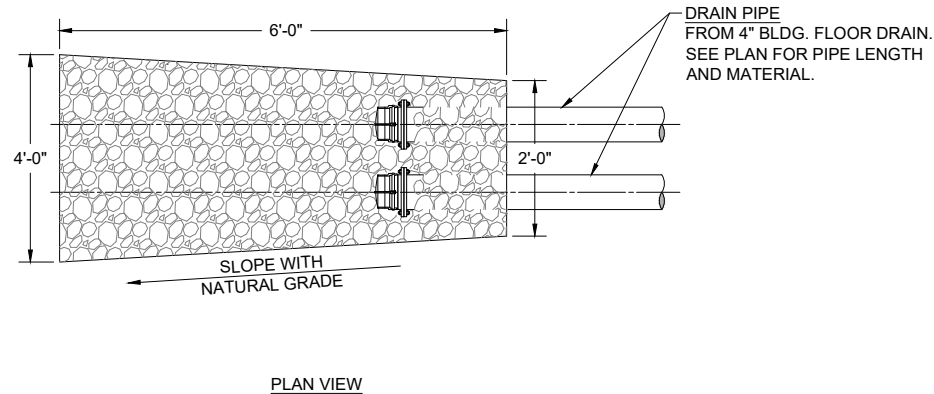
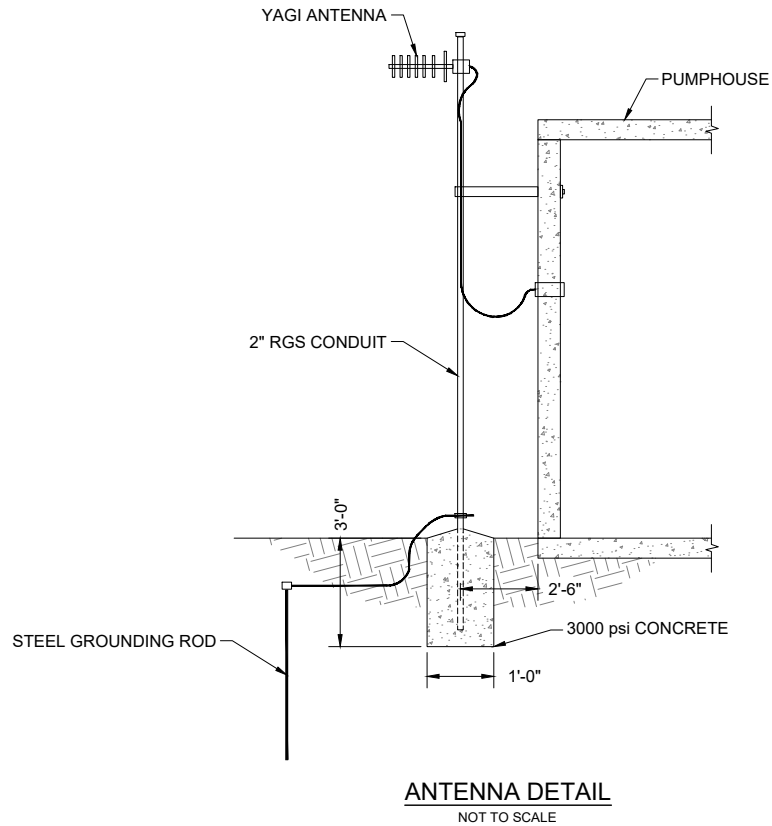
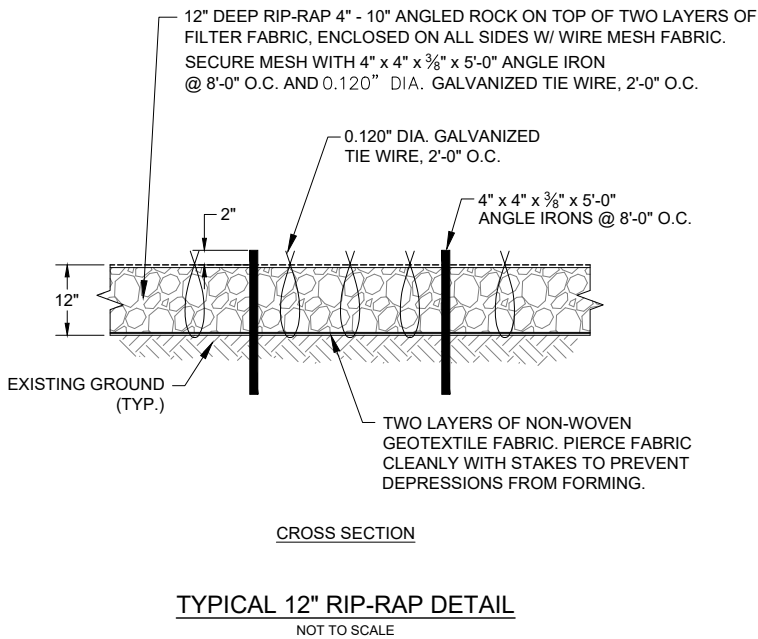
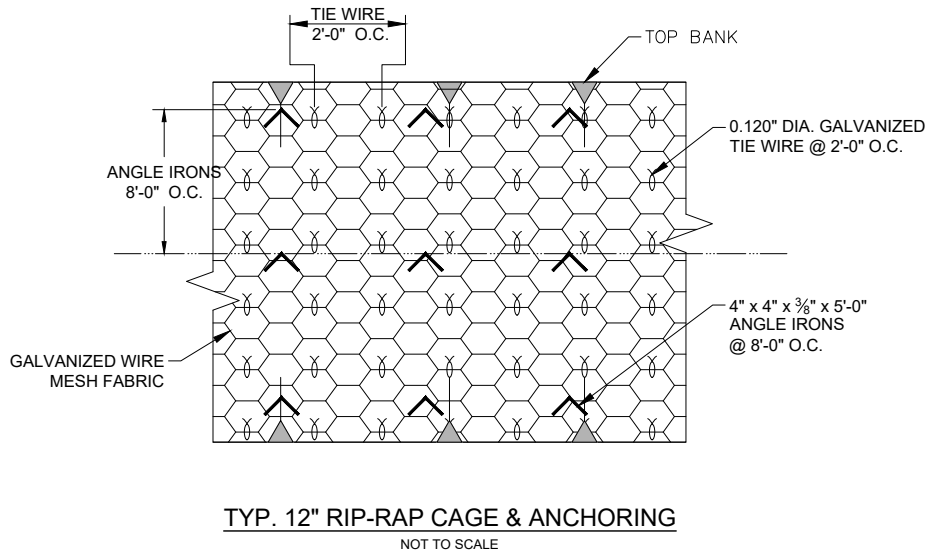
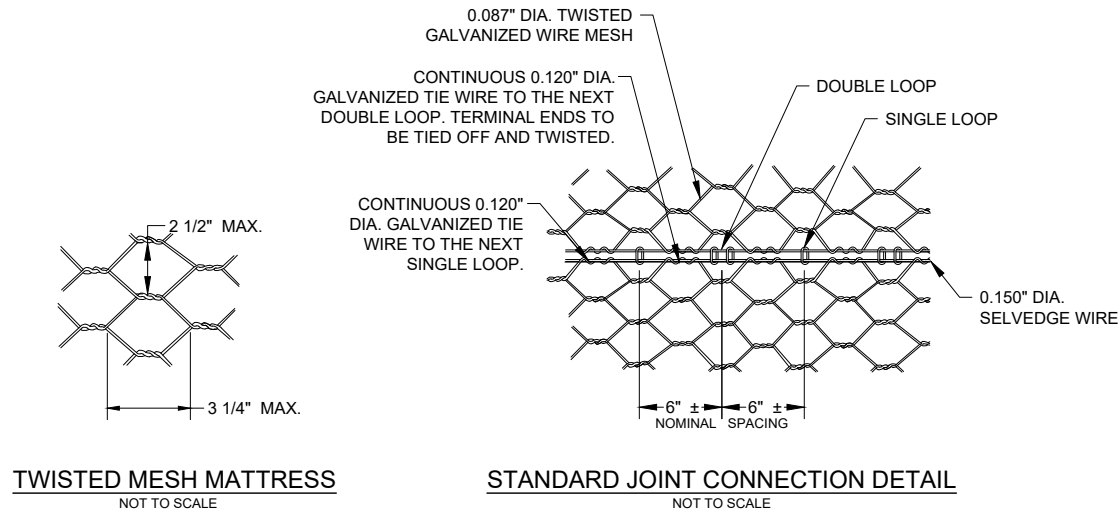
CHAIN LINK FENCE FOUNDATION
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McKINLEY COUNTY, NEW MEXICO
THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
FENCE DETAIL

FINAL DESIGN
FOR REVIEW

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Designed TTT Drawn AAV Checked JMG
Date: August 2020
Scale: Horiz: NONE Vert: N/A
Project No: 6922883
Sheet: DT-12



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THE NAVAJO NATION
McKINLEY COUNTY, NEW MEXICO

THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
EROSION CONTROL AND ANTENNA DETAILS

**FINAL DESIGN
FOR REVIEW**

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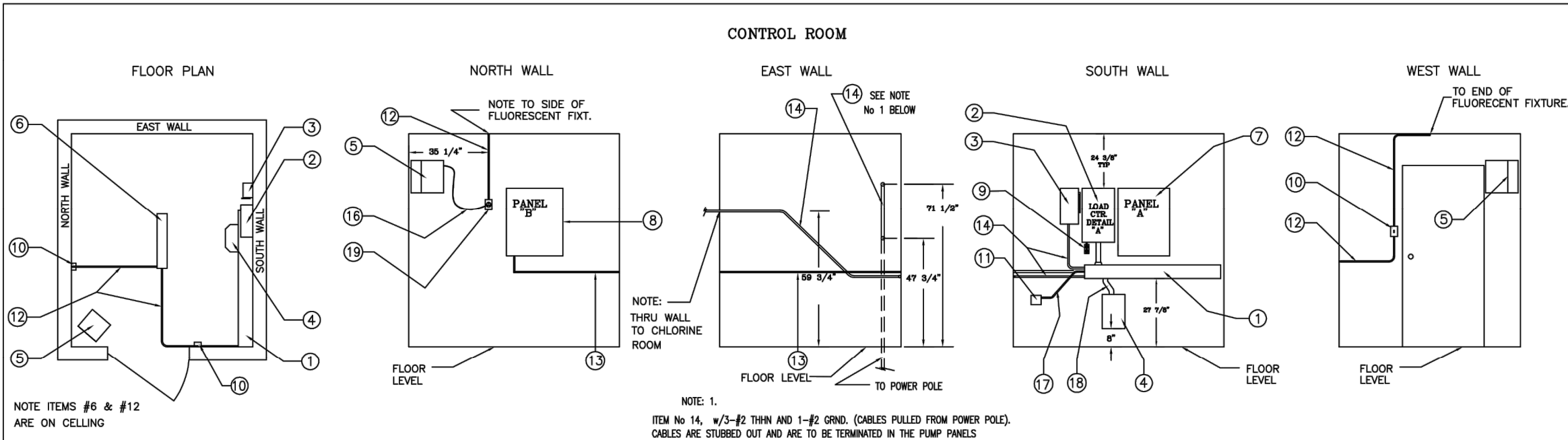
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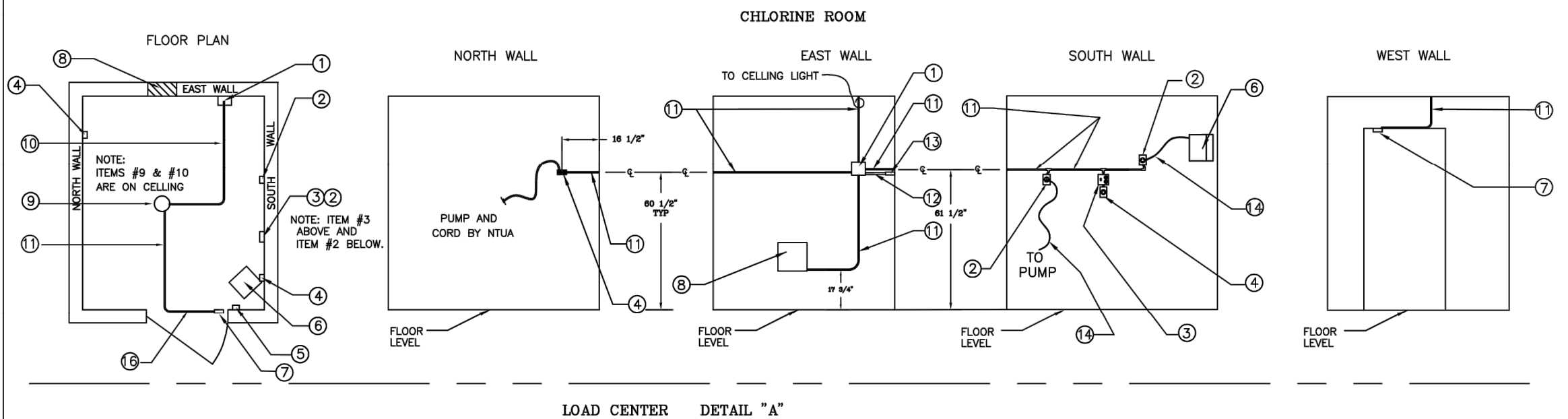
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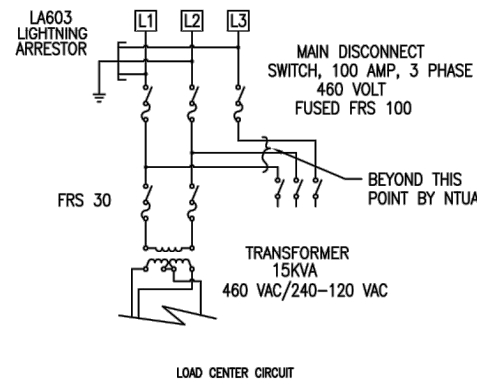
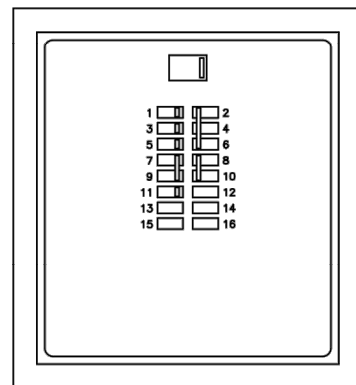


BILL OF MATERIAL CONTROL ROOM			
ITEM	DESCRIPTION	QTY.	BRAND, MODEL, SIZE
1	GUTTER	1	6 x 60" x 6-3/8
2	LOAD CENTER W/100 AMP MAIN BREAKER	1	SQUARE D Q 016M 100 RB 22-1/8 x 14-3/8 x 5-1/4
3	DISC SW W/HANDLE W/FRS-30R FUSES	1	SQUARE D H 361 NRB 15-1/8 x 6-3/8 x 4-1/4
4	TRANSFORMER	1	ACME # T253517-3S 15 x 12 x 12 15KVA, 3PH, 460/240-120 VAC
5	HEATER, 220V, 4000 WATT	1	DAYTON # JUG52 11 x 10-1/2 x 9-3/4
6	FLUORESCENT LIGHT	1	4-1/2 W x 48 LONG
7	PROPOSED PANEL "A"	1	HONEYWELL # L404B-1353
8	PROPOSED PANEL "B"	1	SAGINAW # SCE-362410LP 36H x 24W x 10D NEMA 12
9	DUPLEX RECPT - 120V	1	4-1/2 x 3 x 2
10	LIGHT SWITCH	1	4-1/2 x 3 x 2
11	PRESSURE SWITCH, DPDT	1	HONEYWELL # L404B-1353 4-1/2 x 3 x 2
12	1/2" RIDGID CONDUIT	As Req	X
13	3/4" RIDGID CONDUIT	As Req	X
14	1" RIDGID CONDUIT	As Req	X
15	2" RIDGID CONDUIT	As Req	X
16	# 14/3 SJT CORD	As Req	X
17	1/2" SEALTITE	As Req	X
18	2" SEALTITE	As Req	X
19	SINGLE RECPT - 220V	1	4-1/2 x 3 x 2



BILL OF MATERIAL CHLORINE ROOM			
ITEM	DESCRIPTION	QTY.	BRAND, MODEL, SIZE
1	JCT BOX	1	6 x 6 x 4
2	ONE GANG REC. BOX, 220V	1	4-1/2 x 3 x 2
3	TWO GANG DUP REC W/SP SW	1	4-1/2 x 4-1/2 x 2
4	ONE GANG REC BOX, 120V	1	4-1/2 x 3 x 2
5	ONE GANG SW BOX, S/P	1	4-1/2 x 3 x 2
6	HEATER, 220V	1	DAYTON # JUG52 11 x 10-1/2 x 9-3/4
7	DOOR SWITCH (LIMIT) FOR EXHAUST FAN	1	CUTLER HAMMER # E50 AR/E50 KL25 4 x 1-1/2 x 2
8	EXHAUST FAN, (BY CUSTOMER)	1	12-1/2 x 12-3/4 x THRU WALL
9	VAPOR TITE LIGH FIXT, 100W	1	X
10	1/2" RIDGID CONDUIT	As Req	X
11	3/4" RIDGID CONDUIT	As Req	X
12	1" RIDGID CONDUIT	As Req	X
13	1" SEALOFF (To Ctrl Room)	As Req	X
14	#16/3 S/O CORD	As Req	X
15	# 14/3 SJT CORD	As Req	X
16	1/2" SEALTITE	As Req	X

LOAD CENTER CIRCUITS, BREAKER LOCATION & BKR/CAT No.						
SPACE No.	BREAKER FOR	AMP	POLES	SPACE No.	BREAKER FOR	AMP POLES
1	PUMP CONTRL	00 115	SP	2	BOOSTER	
3	CONTROL RM LIGHTS	00 115	SP	4	CHEMICAL	00 315 3P
5	CHLORINE RM LIGHTS	00 115	SP	6	PUMPS	
7	CONTROL ROOM HEATER	00 215	DP	8	CHLORINE ROOM HEATER	00 215 DP
9				10		
11	RECEPTACLE - 120 V	00 115	SP	12	SPACE	
13	SPACE			14	SPACE	
15	SPACE			16	SPACE	



SMA: LAYOUT IS TYPICAL. COORDINATE ORIENTATION OF SITE AND BUILDING ELECTRICAL IN FIELD. SEE SHEET C-4 FOR PRELIMINARY SITE ELECTRICAL LAYOUT.

REVISION	DATE	DESCRIPTION	BY
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION			
PUMP HOUSE LAYOUT			
PUBLIC LAW 86-121 OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA INDIAN HEALTH SERVICE			
DRAWN BY: P. BACA	CHECKED BY: M. N.	SURVEYED BY:	AUTOCAD
DATE: 9/19/97	DATE: 1/16/98	DATE:	DRAWING
FARMINGTON FIELD OFFICE FARMINGTON, NEW MEXICO	FILENAME: BSS2.dwg UPDATED: 1/16/98	SHEET 1 OF 2 TOTAL SHEETS	

By: []
Description: []
Date: []
Rev #: []

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SMA

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THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
PUMP HOUSE LAYOUT (1 OF 2)

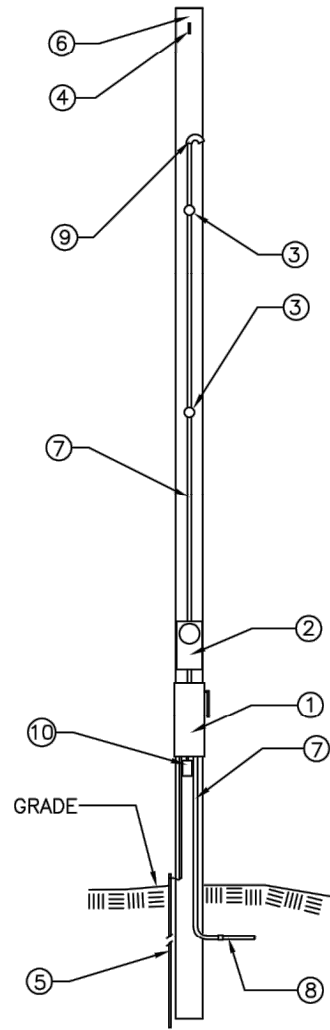
STANDARD DRAWING

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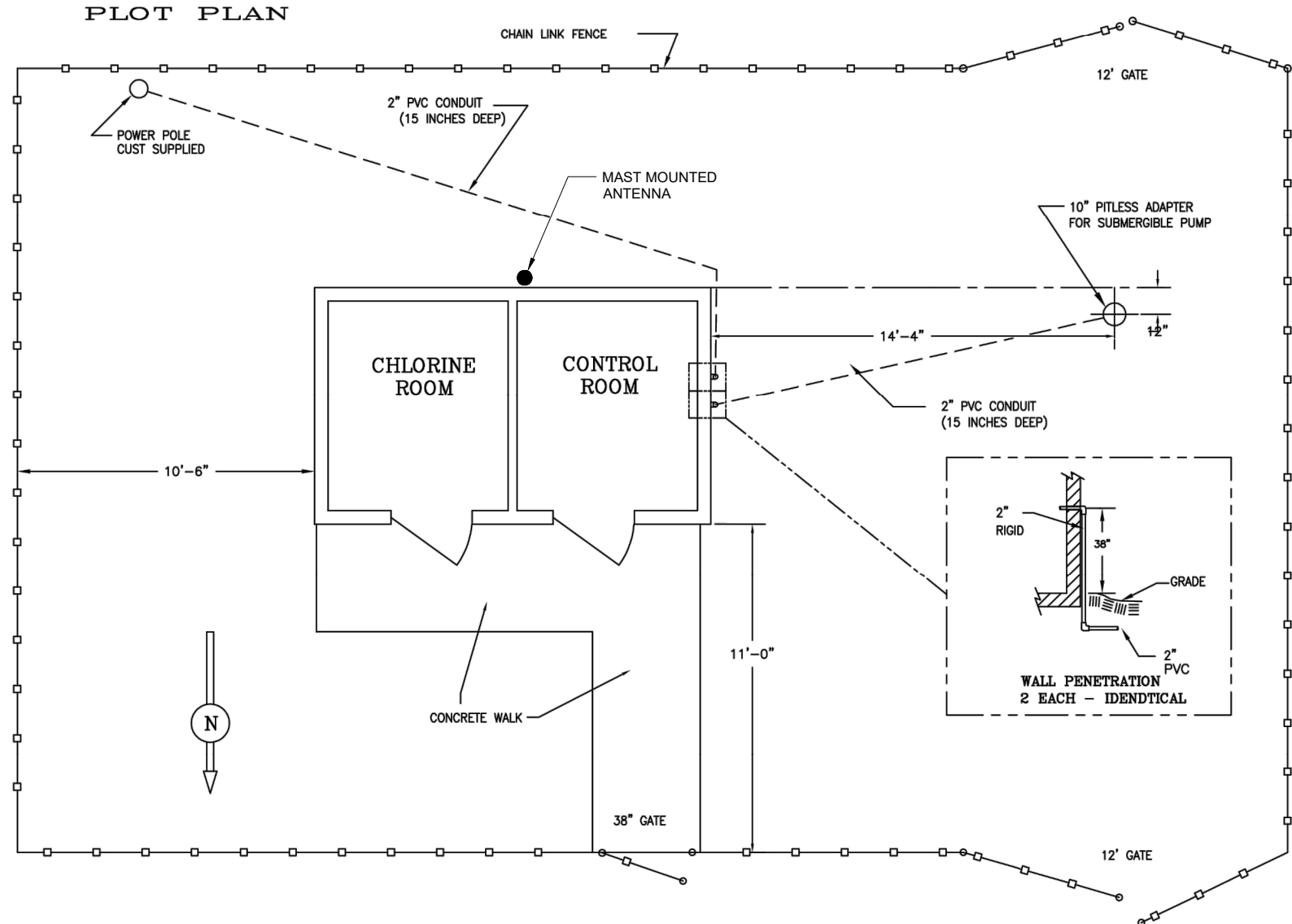
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Drawn: AAV
Checked: JMG

Date: August 2020
Scale: Horiz: N/A
Vert: N/A
Project No: 6922883
Sheet: E-1

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POWER POLE



BILL OF MATERIAL POWER POLE			
ITEM	DESCRIPTION	QTY.	BRAND, MODEL, SIZE
1	R/T DISCONNECT FRS-100R W/FUSES	1	SQUARE D 100 AMP # 361 NRB 15-1/8 x 6-3/8 x 4-1/4
2	METER SOCKET, 7 TERM, 3 PHASE	1	DURHAM # R6821-7N-N 22-1/8 x 14-3/8 x 5-1/4
3	STAND OFFS	1	15-1/8 x 6-3/8 x 4-1/4
4	EYEBOLT	1	15 x 12 x 12
5	GROUND ROD	1	5/8 DIA x 10 FT LG
6	POLE	1	8 in DIA x 25 ft LONG BY CUST
7	2" RIDGID CONDUIT	As Req	
8	2" PVC	As Req	
9	ENTRANCE HEAD	1	
10	LIGHTNING ARRESTOR	1	DELTA LIGHTNING ARRESTOR Co. # LA803

SMA: LAYOUT IS TYPICAL. COORDINATE
ORIENTATION OF SITE AND BUILDING
ELECTRICAL IN FIELD. SEE SHEET C-4 FOR
PRELIMINARY SITE ELECTRICAL LAYOUT.

REVISION	DATE	DESCRIPTION	BY
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION			
PUMP HOUSE LAYOUT			
PUBLIC LAW 86-121 OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA INDIAN HEALTH SERVICE			
DRAWN BY: P. BACA-PREWITT DATE: 9/19/97	CHECKED BY: M. N. DATE: 1/16/98	SURVEYED BY: DATE:	AUTOCAD DRAWING
FARMINGTON FIELD OFFICE FARMINGTON, NEW MEXICO	FILENAME: CARBON PUMP B992.dwg UPDATED: 1/16/98	SHEET 2 OF 2 TOTAL SHEETS	

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THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
PUMP HOUSE LAYOUT (2 OF 2)

STANDARD
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Designed TTT	Drawn AAV	Checked JMG
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Date: August 2020
Scale: Horiz: N/A
Vert: N/A
Project No: 6922883
Sheet:
E-2

NAVAJO TRIBAL UTILITY AUTHORITY

PUMP CONTROL PANEL LAYOUT



SOFT START PUMP PANEL

SCHEDULE OF DRAWINGS			
SHEET	FILENAME	TITLE	NOTES
1	SS_CV	COVERSHEET	SCHEDULE OF DRAWINGS
2	SS_LOG	LOGIC WIRING	WIRING
3	SS_BP_4HP	GEN. ARRANGEMENT	BACKPLANE LAYOUT

NO.	DATE	DESCRIPTION	BY	
NAVAJO TRIBAL UTILITY AUTHORITY				
SOURCE:	NONE	METERING	AFT	DASH
BUILD :	-	-	-	-
WFL :	-	-	-	-
PANEL :	-	-	-	-
CASE #				SGP#
3 PHASE - SOFT START PUMP PANEL COVER SHEET				
				SHEET 1 OF 3

[illegible]

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THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
SOFT START PUMP PANEL (1 OF 3)

STANDARD
DRAWING

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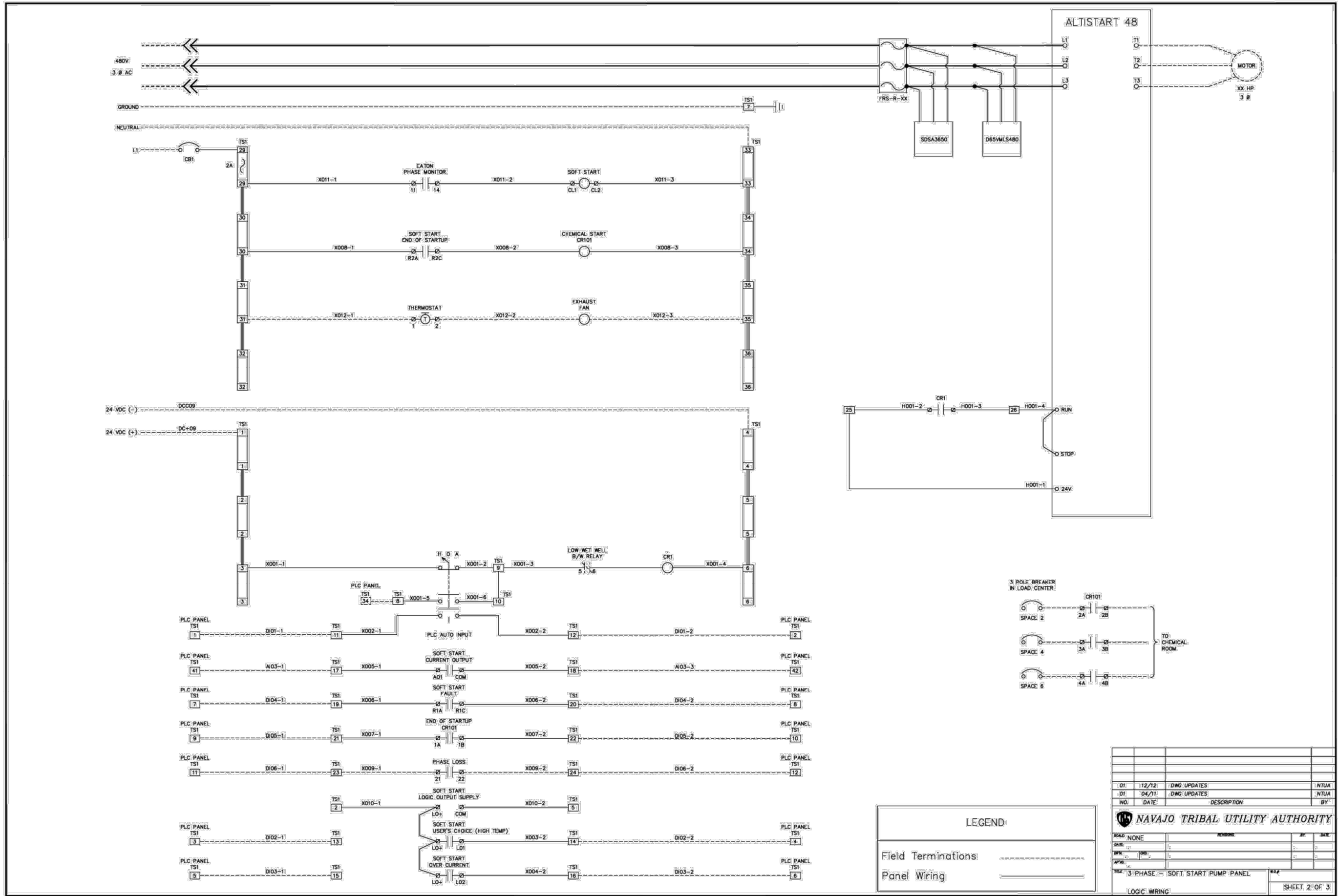
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Vert: N/A

Project No: 6922883

Sheet: **E-3**

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01	11/2/12	DWG UPDATES	NTUA
01	04/11	DWG UPDATES	NTUA
NO.	DATE	DESCRIPTION	BY
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE: NONE	REVISION:	BY:	DATE:
DRAWN: JMG	CHECKED: JMG	DATE:	DATE:
APPROVED:	DATE:	DATE:	DATE:
TITLE: 3 PHASE SOFT START PUMP PANEL			
LOGIC WIRING			SHEET 2 OF 3

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THE NAVAJO NATION
McKINLEY COUNTY, NEW MEXICO
THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
SOFT START PUMP PANEL (2 OF 3)

STANDARD
DRAWING

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Designed	Drawn	Checked
TTT	AAV	JMG

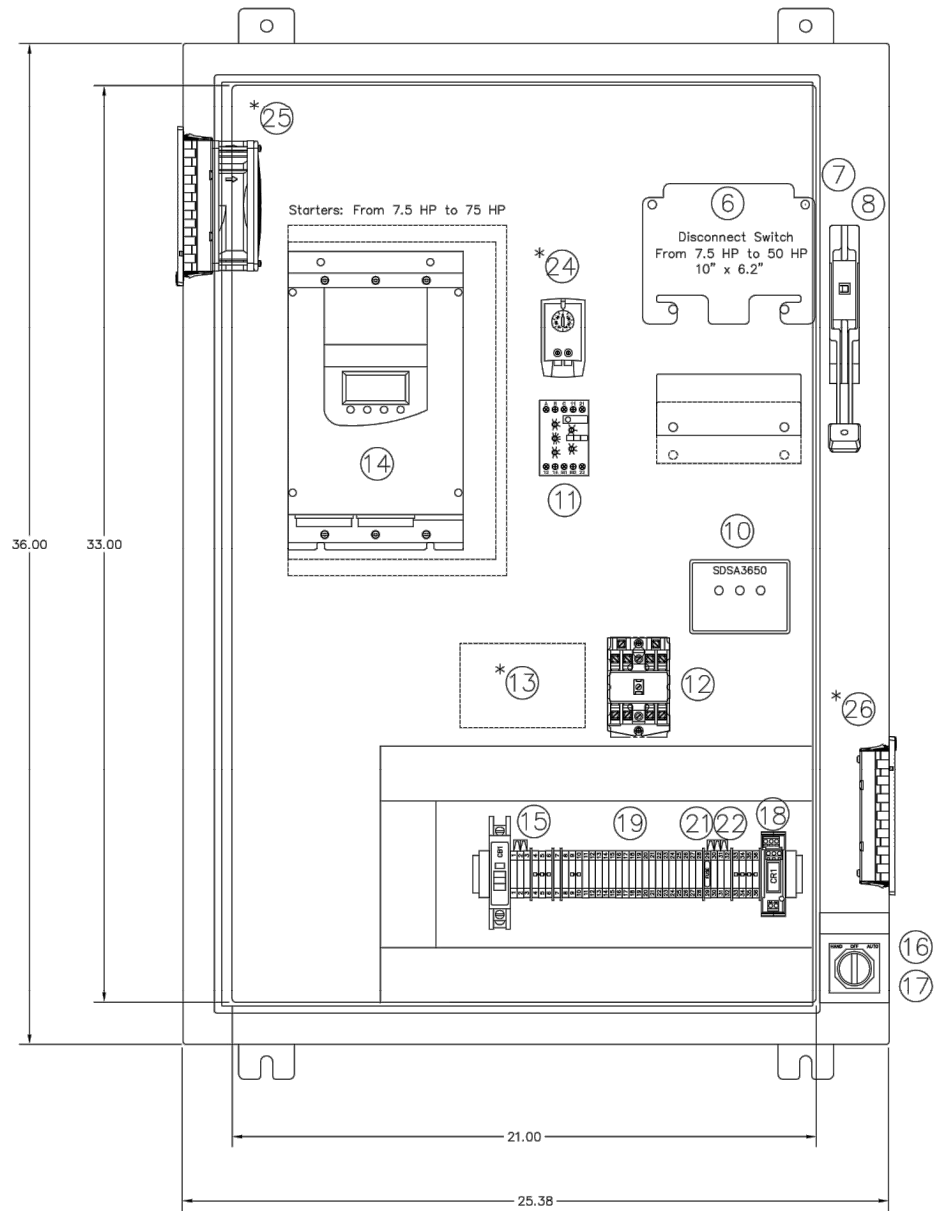
Date: August 2020

Scale: Horiz: N/A
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Project No: 6922883

Sheet: E-4

P:\6-Baca-Previtt (6922883)\Baca Thoreau Well Connection\CAD\DWG\6922883-Thoreau Well Conn Electrical.dwg
8/17/2020 10:55:02 AM aw



BILL OF MATERIALS				
ITEM	QTY	PART NO.	DESCRIPTION	MFG
1	1	A-36SA2610LPPL	SINGLE DOOR TYPE 12 ENCLOSURE BACKPLANE	HOFFMAN
2	1	A-36P24	2X4 WIRING DUCT	PANDUIT
3	1	F2X4LG6	2" DUCT COVER	PANDUIT
4	1	C2LG6	EXTENDED DIN RAIL	ALLEN BRADLEY
5	1	1492DR6	DISCONNECT	SQUARE D
6	1	REFER TO TABLE 1	HANDLE	SQUARE D
7	1	9422A1	DOOR MOUNT	SQUARE D
8	1	9422 TDK-2	480V DISCONNECT FUSE	BUSSMAN
9	3	REFER TO TABLE 1	SECONDARY SURGE ARRESTER	SQUARE D
10	1	SDSA3650	PHASE MONITOR	EATON
11	1	D65VMLS480	8501 TYPE X INDUSTRIAL CONTROL RELAY	SQUARE D
12	1	8501XMO40V02	INDUCTION CONTROL RELAY	B/W CONTROL
13*	1	1500-G-L1-S7	ALTISTART 48	SQUARE D
14	1	REFER TO TABLE 1	15A CIRCUIT BREAKER	SQUARE D
15	1	QOU115	SELECTOR SWITCH	SQUARE D
16	1	9001KS43BH2	HOA LEGEND PLATE	SQUARE D
17	1	9001KN160WP	RELAY MODULE, DPDT	PHOENIX CONTACT
18	1	UMK 22 REL 24	UK5 N TERMINALS	PHOENIX CONTACT
19	32	UK5 N	GROUND TERMINAL	PHOENIX CONTACT
20	1	USLKG5	FUSE TERMINAL BASE	PHOENIX CONTACT
21	1	UK4TG	FUSE PLUG W/FUSE	PHOENIX CONTACT
22	1	ST-SILA250UK4	FIXED BRIDGE	PHOENIX CONTACT
23	1	FB10-6 #0201184	THERMOSTAT	PFANNENBERG
24*	1	FLZ 530	FAN FILTER KIT	PFANNENBERG
25*	1	PF 22000	LOUVER FILTER KIT	PFANNENBERG
26*	1	PFA 20000		

13* - WILL BE USED IF THERE IS NO SUBMERSIBLE TRANSMITTER AVAILABLE.
24*,25*,26* - WILL BE USED ON ALL INDOOR APPLICATIONS..

TABLE 1 - ADDITIONAL PART NUMBERS				
STARTER	APPLICATION	ALTISTART 48	DISCONNECT	DISCONNECT FUSE
10 HP	7.5 HP	ATS48D17Y	TCF331	FRS-R-20
15 HP	10 HP	ATS48D22Y	TCF331	FRS-R-30
20 HP	15 HP	ATS48D32Y	TDF631	FRS-R-40
25 HP	20 HP	ATS48D38Y	TDF631	FRS-R-45
30 HP	25 HP	ATS48D47Y	TDF631	FRS-R-60
40 HP	30 HP	ATS48D62Y	TEF101	FRS-R-70
50 HP	40 HP	ATS48D75Y	TEF101	FRS-R-90
60 HP	50 HP	ATS48D88Y	TEF101	FRS-R-110

02	12/12	MATERIALS LIST & DWG UPDATES	NTUA
01	07/05	MATERIALS LIST & DWG UPDATES	NTUA
NO.	DATE	DESCRIPTION	BY
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE:	NONE	REVISIONS	BY DATE
DATE:			
DWG.	DWG.		
APPROV.			
TITLE		SHEET #	
3 PHASE - SOFT START PUMP PANEL			
7.5 HP TO 50 HP APPLICATIONS			
BACKPLANE		SHEET 3 OF 3	

Rev #

Date

Description

By

Chkd

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THOREAU BACA WELL CONNECTION

SECTION 19, T. 14 N., R. 13 W.

SOFT START PUMP PANEL (3 OF 3)

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Designed TTT Drawn AAV Checked JMG

Date: August 2020

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Project No: 6922883

Sheet: E-5


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NAVAJO TRIBAL UTILITY AUTHORITY
PUMP CONTROL PANEL LAYOUT



PLC CONTROL PANEL

SCHEDULE OF DRAWINGS			
SHEET	FILENAME	TITLE	NOTES
1	PLC_CV	COVERSHEET	SCHEDULE OF DRAWINGS
2	PLC_DIO	DISCRETE I/O	WIRING
3	PLC_AIO	ANALOG I/O	WIRING
4	PLC_PWR	POWER DISTRIBUTION	WIRING
5	PLC_BP	BACKPLANE LAYOUT	BP W/ BOM
5A	PLC_SOP	SWING OUT PANEL	BP W/ BOM
6	PLC_CBL	COMM CABLES PINOUT	

NO.	DATE	DESCRIPTION	BY
 NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE	NONE	REVISION	BY DATE
DATE	12/1/97		
DATE			
APPROVAL			
FILE	PLC CONTROL PANEL		
	COVER SHEET		
			SHEET 1 OF 6



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PLC CONTROL PANEL (1 OF 6)

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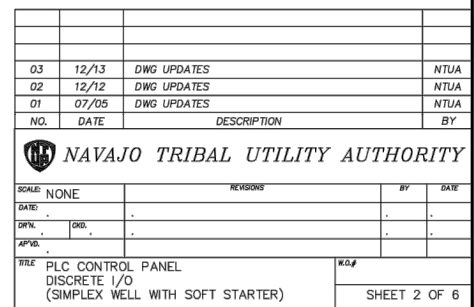
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Date: August 2020

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Vert: N/A

Project No: 6922883

Sheet: **E-6**



Field Terminations	-----
Panel Wiring	_____

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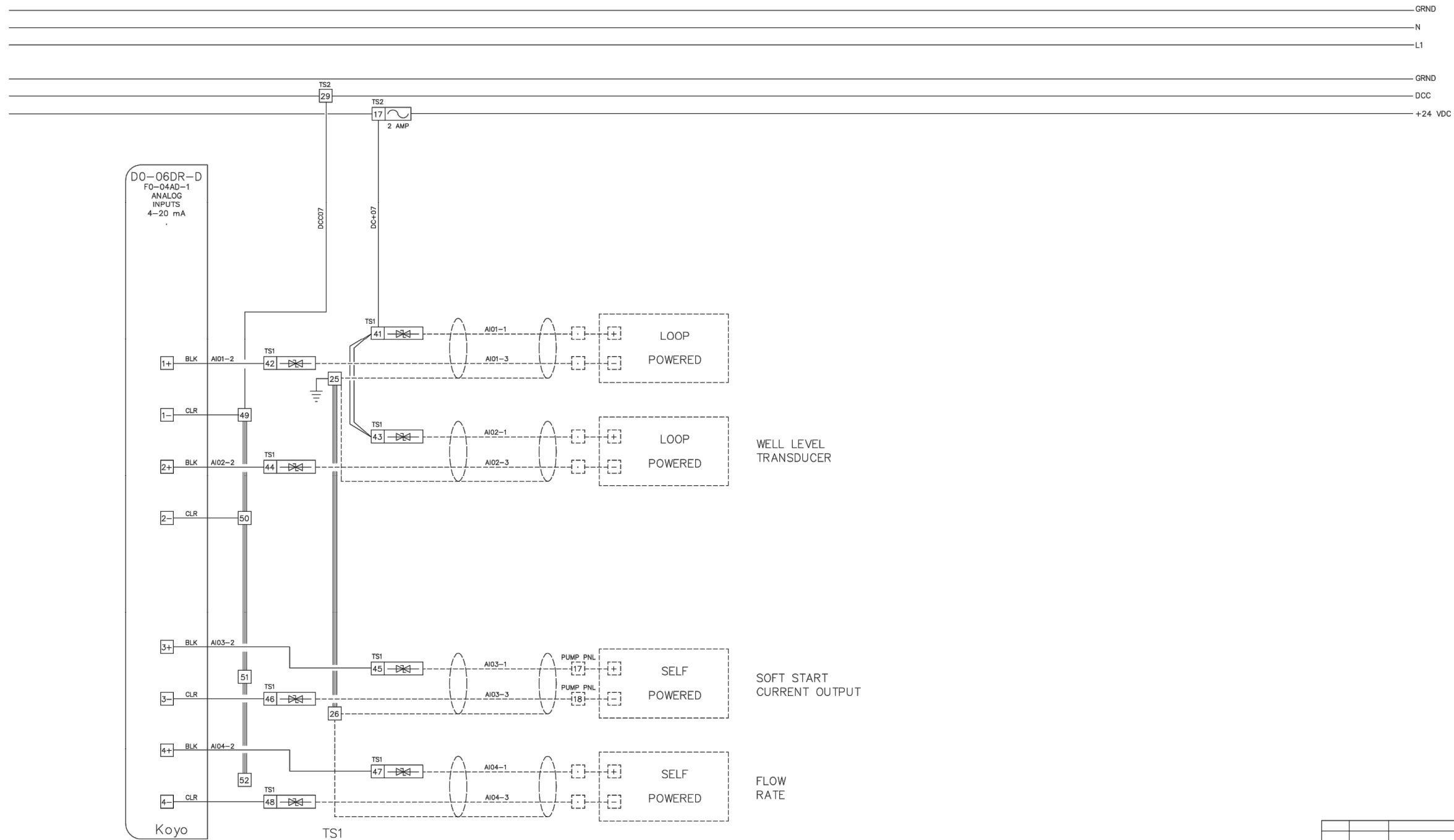
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THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
PLC CONTROL PANEL (2 OF 6)

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Project No: 6922883		
Sheet: E-7		

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POWER DISTRIBUTION THIS PAGE REFLECTS "LOGICAL" SCHEMATIC SEE "DC DISTRIBUTION" DRAWING AND "AC DISTRIBUTION" DRAWING FOR POINT TO POINT TERMINATIONS



LEGEND	
Field Terminations	-----
Panel Wiring	_____

02	12/12	DWG. UPDATES	NTUA
01	04/11	DWG. UPDATES	NTUA
NO.	DATE	DESCRIPTION	BY
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE:	NONE	REVISIONS	BY DATE
DATE:	.	.	.
DRN:	DRG:	.	.
APV:	.	.	.
TITLE		SHEET #	
PLC CONTROL PANEL		SHEET 3 OF 6	
ANALOG I/O			
(SIMPLEX WELL WITH SOFT STARTER)			

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THOREAU BACA WELL CONNECTION
SECTION 19, T. 14 N., R. 13 W.
PLC CONTROL PANEL (3 OF 6)

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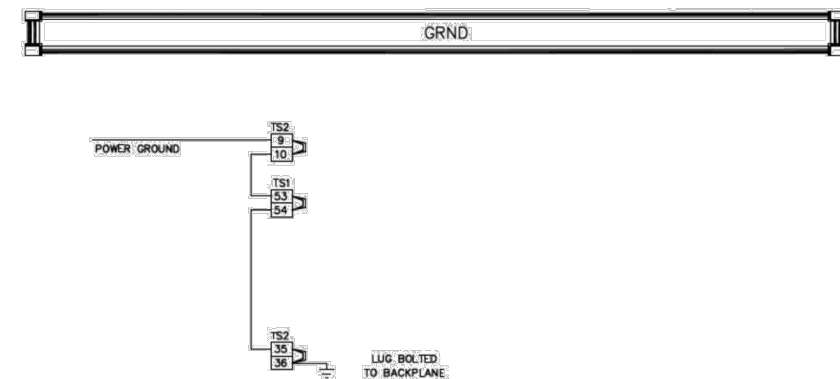
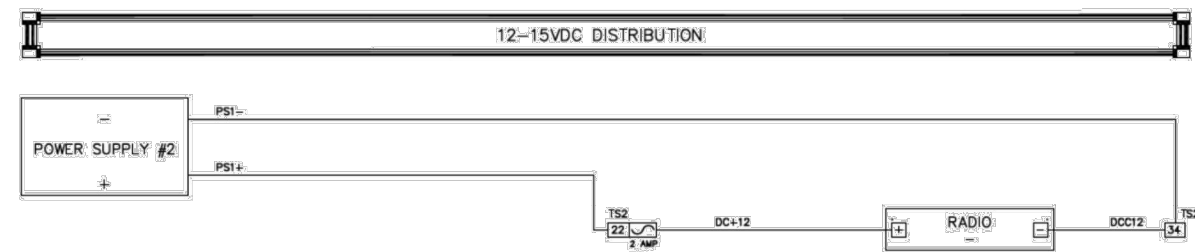
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TTT	AAV	JMG

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Project No: 6922883

Sheet: E-8



Field Terminations:

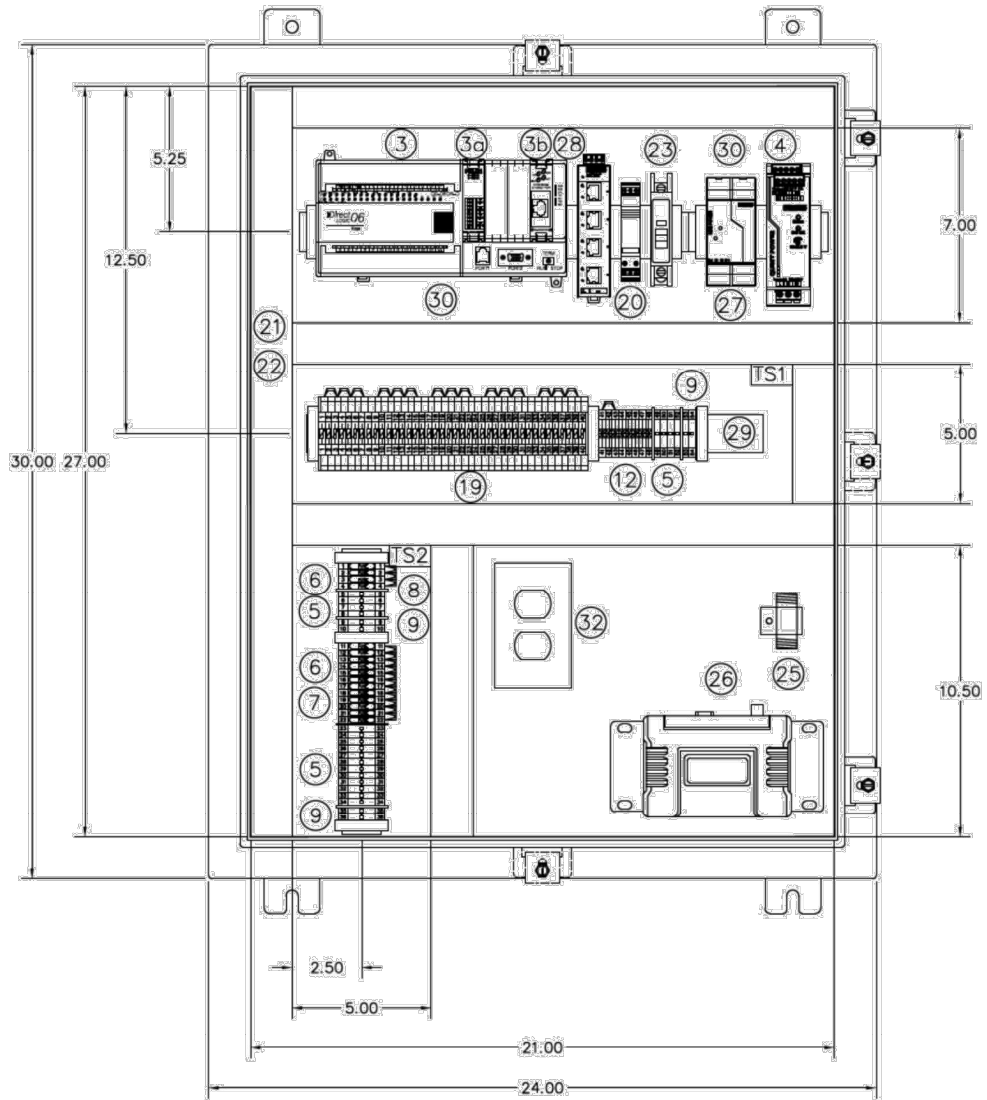
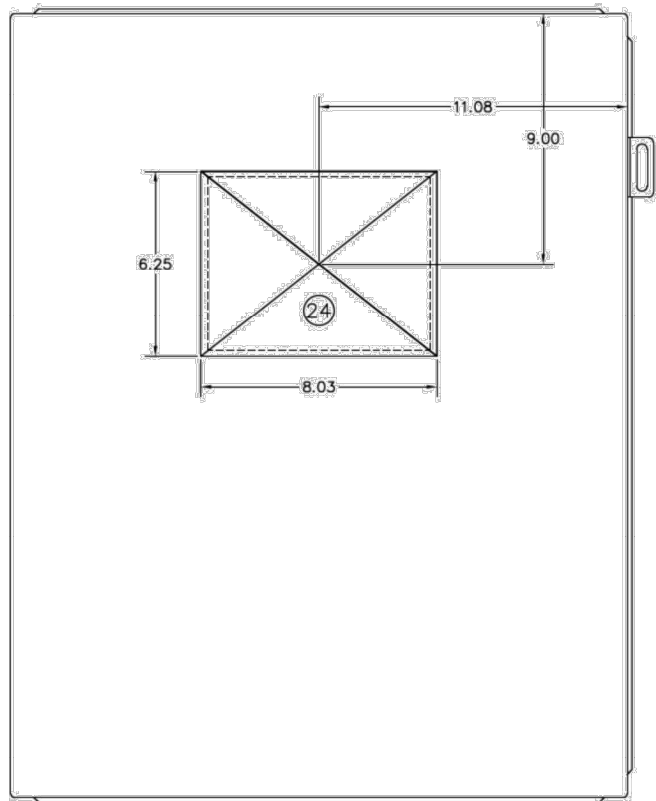
Panel Wiring

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Sheet: E-9

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BILL OF MATERIALS			
ITEM	QTY	PART NO.	DESCRIPTION
1	1	A-302410LP	SINGLE DOOR TYPE 12 ENCLOSURE
2	1	A-30P24	BACKPLANE
3	1	D0-06DR-D	DIRECT LOGIC DL-06 PLC
3a	1	F0-04AD-1	ANALOG INPUT MODULE
3b	1	H0-ECOM100	ETHERNET COMM MODULE
4	1	QUINT-PS/1AC/24DC/5	POWER SUPPLY 22.5-28.5V ADJUSTABLE
5	20	UK5 N	UK5 N TERMINALS
6	16	UK4TG	FUSE TERMINAL BASE
7	12	ST-SILE24UK4	FUSE
8	4	ST-SILA250UK4	FUSE
9	6	USUKG5	GROUNDING TERMINAL
10	12	E/NS35N	END CLAMP
11	10	FB10-6 #0201184	FIXED BRIDGE
12	10	EB10-6 #0201139	INSERTION BRIDGE
13	10	D-UK4/10	END COVER
14	10	ATP-UK	PARTITION PLATES
15	3	DP-UKK3/5BK	SLK5 SPACER PLATE
16	3	D-UKK3/5BK	SLK5 ENDCOVER
17	8	UK-5/24 DC #2794699	TERMITRAB UKS W/SUPPRESSOR DIODE
18			
19	40	SLK5-5/24VDC #2794903	TERMITRAB SLK5 W/VARISTOR 24DC (MOV)
20	1	PT2PE/S120AC	TERMITRAB AC POWER PROTECTION
21	2	E1.5X4LG6	WIRING DUCT
22	2	C1.5LG6	DUCT COVER
23	1	QOU115	CIRCUIT BREAKER
24	1	XBT-GT4330	7.5 GRAPHIC TERMINAL TOUCHSCREEN (MAGELIS)
24a	1	CAT6	ETHERNET PATCH CABLE (4' - BLACK)
25	1	IS-50NX-C2	LIGHTNING ARRESTER
26	1	TransNET	900 MHz RADIO
27	1	SD4	400 MHz RADIO
28	1	MINI-PS-100-240 AC/10-15V ADJUSTABLE	POWER SUPPLY 10-15V ADJUSTABLE
29	1	FL SWITCH SFN-5TX	ETHERNET SWITCH
30	1	1492DR6	EXTENDED DIN RAIL
31	1	1492-DR5	DIN RAIL
32	1	COMM CABLE DRUBGF15	CABLE - PLC TO MODEM (TO LENGTH) DIN RAIL UTILITY BOX

03	11/14	MATERIALS LIST & DWG UPDATES	NTUA
02	12/12	MATERIALS LIST & DWG UPDATES	NTUA
01	01/11	MATERIALS LIST & DWG UPDATES	NTUA
NO.	DATE	DESCRIPTION	BY
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE: NONE	REVISION:	BY:	DATE:
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DATE:			
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TITLE: PLC CONTROL PANEL		SHEET 5 OF 6	

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SECTION 19, T. 14 N., R. 13 W.
PLC CONTROL PANEL (5 OF 6)

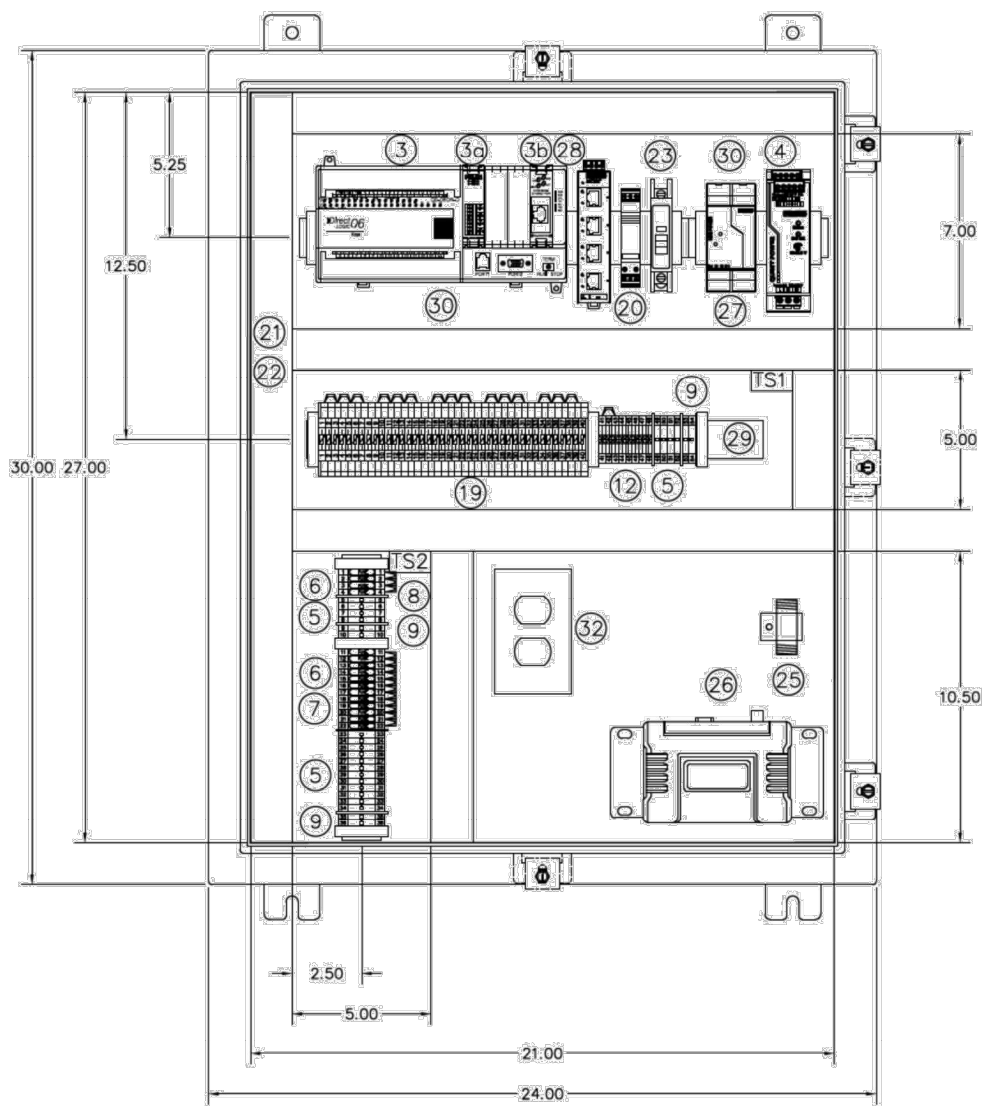
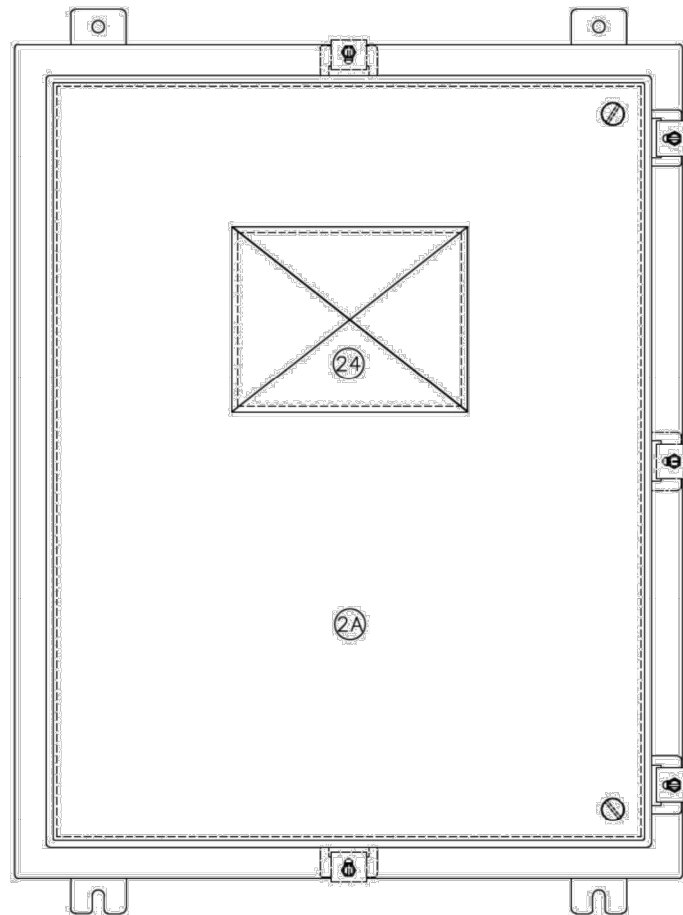
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Project No: 6922883
Sheet: E-10

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BILL OF MATERIALS			
ITEM	QTY	PART NO.	DESCRIPTION
1	1	A-30H24CLP	SINGLE DOOR TYPE 4 ENCLOSURE
2	1	A-30P24	BACKPLANE
2a	1	A-NADFK	SWNG. OUT. PANEL KIT
3	1	DO-06DR-0	DIRECT LOGIC DL-06 PLC
3a	1	FO-04AD-1	ANALOG INPUT MODULE
3b	1	HO-ECOM100	ETHERNET COMM. MODULE
4	1	QUINT-PS-100	POWER SUPPLY 240AC-24DC-5
5	20	UK5-N	UK5-N TERMINALS
6	16	UK4TG	FUSE TERMINAL BASE
7	12	ST-SLED24UK4	FUSE
8	4	ST-SIU250UK4	FUSE
9	6	USLKG5	GROUNDING TERMINAL
10	12	E/NS35N	END CLAMP
11	10	FB10-6	FIXED BRIDGE
12	10	EB10-6	INSERTION BRIDGE
13	10	D-UK4/10	END COVER
14	10	ATP-UK	PARTITION PLATES
15	3	DP-UKK3/5BK	SLKK5 SPACER PLATE
16	3	D-UKK3/5BK	SLKK5 ENDCOVER
17	8	UK 5/24 DC	TERMITRAB UK5
18	1	#2794699	W/SUPPRESSOR DIODE
19	40	SLKK5 5/24VDC	TERMITRAB SLKK5
20	1	P12PE/S120AC	W/VARISTOR 24DC (MOV)
21	2	E1.5X4LG6	TERMITRAB AC POWER PROTECTION
22	2	C1.5LG6	WIRING DUCT
23	1	QOU115	DUCT COVER
24	1	XBT-GT4330	CIRCUIT BREAKER
24a	1	CAT6	7.5 GRAPHIC. TERMINAL TOUCHSCREEN (MAGELUS)
25	1	IS-50NX-C2	ETHERNET PATCH CABLE (4' - BLACK)
26	1	TronNET	LIGHTNING ARRESTER
26a	1	SD4	902 - 1928 MHz RADIO
27	1	MINI-PS-100-240	380 - 512 MHz RADIO
28	1	FL SWITCH SFN 5TX	POWER SUPPLY 10-15V ADJUSTABLE
29	3	1492DR6	ETHERNET SWITCH
30	1	1492-DR5	EXTENDED DIN RAIL
31	1	COMM CABLE DRUBOF115	DIN RAIL
32	1		CABLE - PLC TO MODEM (TO LENGTH)
			DIN RAIL UTILITY BOX

03	11/14	MATERIALS LIST & DWG UPDATES	NTUA
02	12/12	MATERIALS LIST & DWG UPDATES	NTUA
01	07/05	MATERIALS LIST & DWG UPDATES	NTUA
NO.	DATE	DESCRIPTION	BY
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE:	NONE	REVISION:	BY: DATE:
DATE:			
DESIGNED:	TTT	DRAWN:	AAV
APPROVED:		CHECKED:	JMG
TITLE: PLC CONTROL PANEL		SHEET 5A OF 6	
W/ SWNG. OUT. PANEL			

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SECTION 19, T. 14 N., R. 13 W.
PLC CONTROL PANEL (5A OF 6)

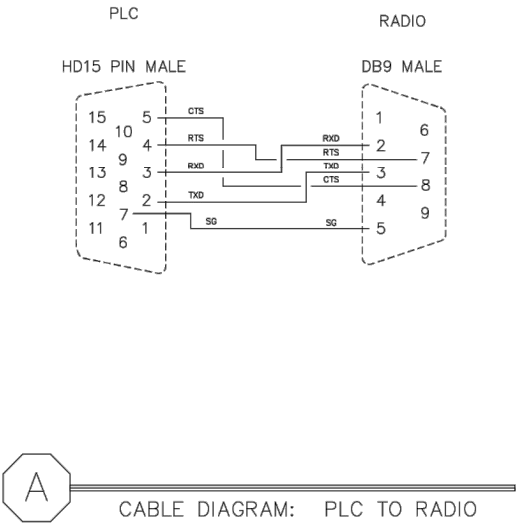
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03	11/14	DWG. UPDATES	NTUA
02	12/12	DWG. UPDATES	NTUA
01	01/11	DWG. UPDATES	NTUA

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DATE:
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APVD:

TITLE	PLC CONTROL PANEL	SHEET 6 OF 6
CABLE PINOUT		



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PLC CONTROL PANEL (6 OF 6)

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E-12