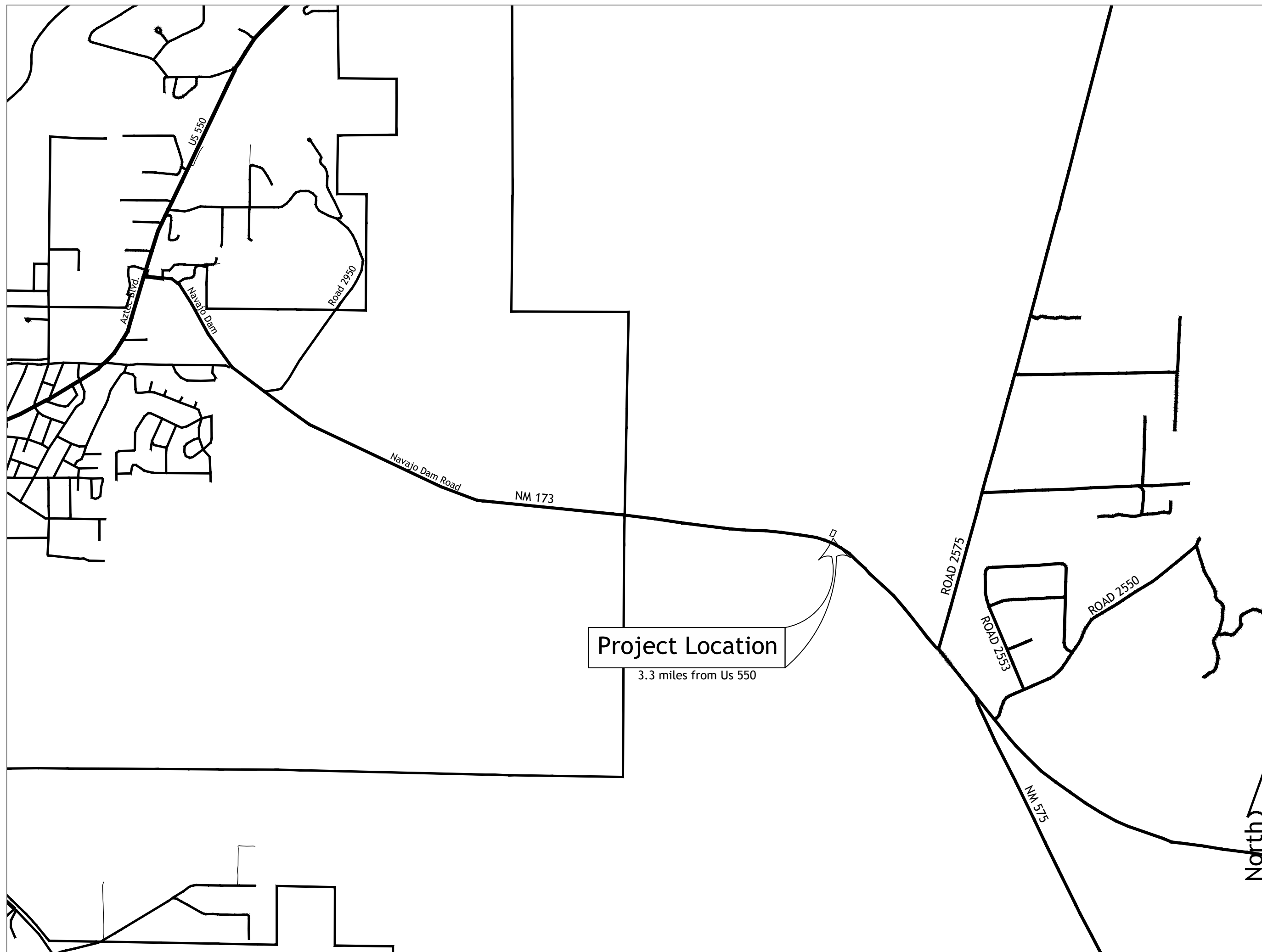
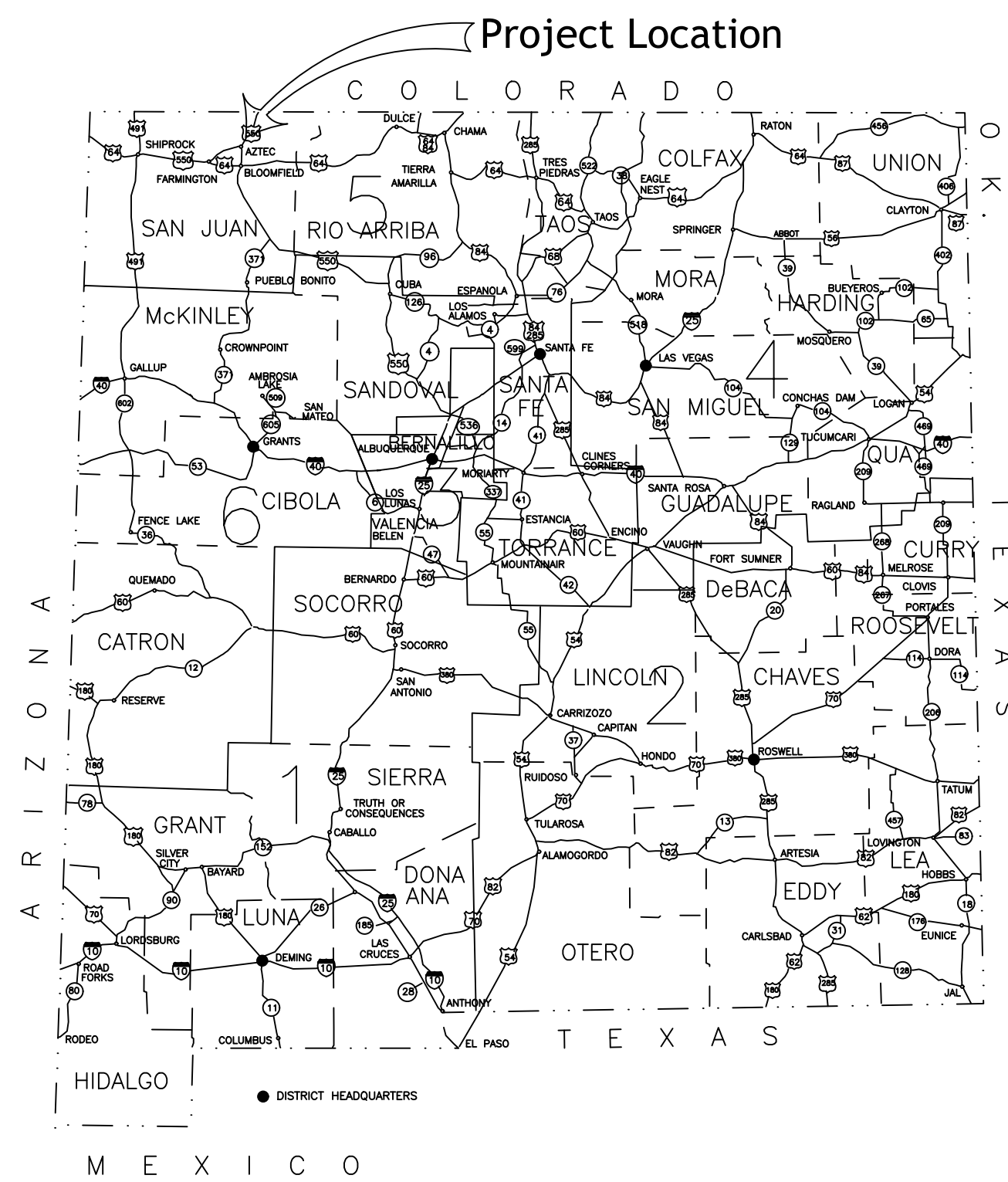


East Aztec Pump Station

City of Aztec, New Mexico

San Juan County



Vicinity Map

Scale: 1"= 2000'



Sheet List Table	
Sheet Number	Sheet Title
1-1	Cover Sheet
1-2	Overview
2-1	Site Plan
3-1	Pump House Piping - Plan View
3-2	Pump House Piping Layout - Section View
E000	Electric Sheet Title & Index
E001	Electric Power One Line 480VAC & 240VAC
E002	Electric Panel Schedules 480VAC & 240VAC
E003	Electric Motor Schematic 480VAC Pump P-100
E004	Electric Motor Schematic 480VAC Pump P-110
E005	Equipment Layout & Conduit Routing Plan
E006	Interior Elevation & Bill Of Materials
E007	Interior Elevation & Bill Of Materials
E008	Lighting & Power Plan
E009	Electric Conduit & Cable Schedule
E010	Pump House Grounding Plan
S1	Foundation & Roof Plans & Details
S2	General Structural Specs & Details



Know what's below.
Call before you dig.

It's the Law!

New Mexico One Call, Inc.



UTILITY OWNERS

CITY OF AZTEC DEPARTMENT OF PUBLIC WORKS
(505) 334-7660

CITY OF AZTEC ELECTRIC DEVELOPMENT
(505) 334-7660

QWEST (TELEPHONE)
(505) 325-2311

COMCAST CABLE
VICTOR APPLGATE 505-402-0055

PNM (GAS)
505-324-3783

Revision Log	
1	.
2	.
3	.
4	.
5	.
6	.
Plot Date: 02/22/2021 — 11:40am	

Owner:

City of Aztec

Project:

EAST AZTEC PUMP STATION

Sheet Description:

COVER SHEET

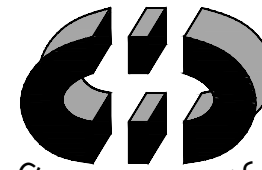


Project Date:

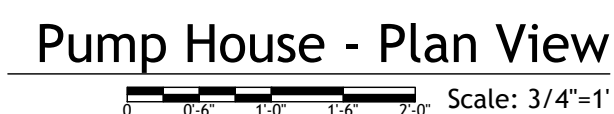
roj: 19003



Drawings created by CH2M Hill, Inc. for the City of Aztec, New Mexico. Date: 02/22/2021. Scale: 1" = 114.00m.

Revision Log		Owner: City of Aztec	Project: EAST AZTEC PUMP STATION	Sheet Description: OVERVIEW	<div>RECORD DRAWINGS: WE HAVE INCORPORATED INFORMATION PROVIDED BY THE PROJECT CONTRACTOR AND BY PERIODIC FIELD VISITS.</div>	<div> CH2M Engineers, LLC 50 Valley Court Durango, CO 970-387-8765</div>	Project Date: 12/18/19	Proj: 19003	1-2
1.	.								
2.	.								
3.	.								
4.	.								
5.	.								
6.	.								
Plot Date: 02/22/2021 — 11:40am									

- All Fittings shall be AWWA C110 PC 250 with Flanged Ends.
- Provide 1" Threadlets welded to spools for gauges and testing ports with appropriate sized inserts.
- All necessary fittings, bolts, gaskets, adjustments, etc. necessary for completion of the project not specifically called out are considered incidental to the project.
- Spools called out as adjustable shall be FLXPE with Mega Flange to be field cut to length.

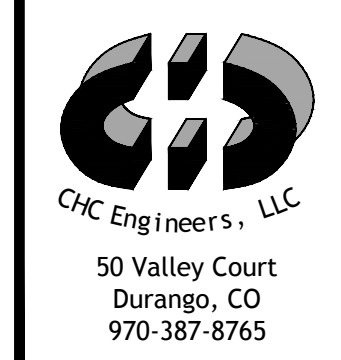
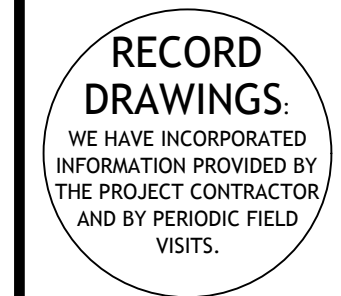


Revision Log	
1	9/20/17 REVISIONS, RPZA AIR INTAKE
2	9/26/17 PUMPHOUSE AS-BUILT
3	.
4	.
5	.
6	.
Plot Date: 02/22/2021 — 11:40am	

City of Aztec

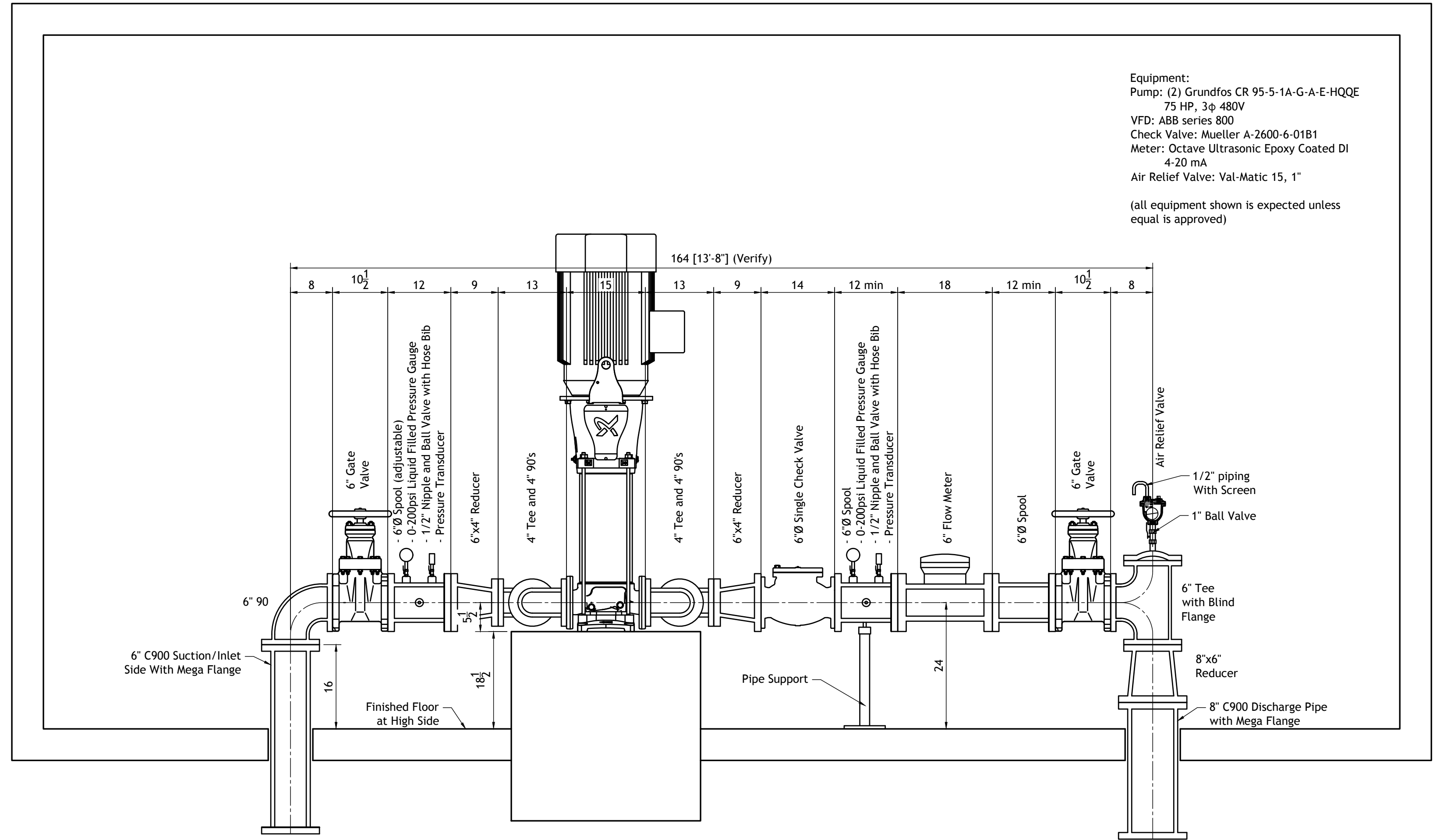
EAST AZTEC PUMP STATION

PLUMP HOUSE PIPING - PLAN VIEW



Proj: 19003

Drawings created by CHC Engineers, LLC for the City of Durango, CO. Project: Pump Station Upgrade. Date: 07/22/2021. 11:40am

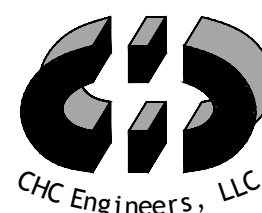


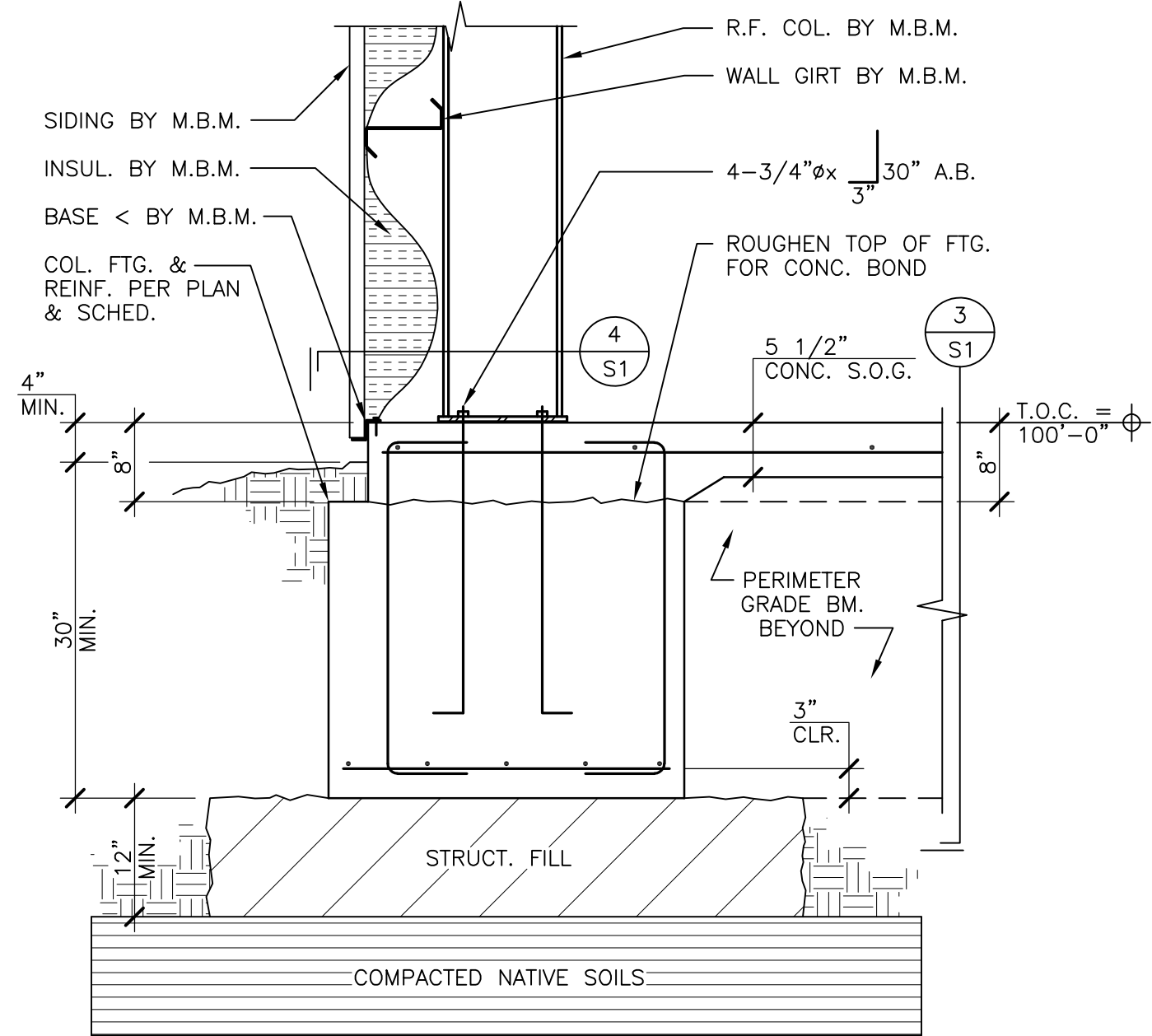
Equipment:
Pump: (2) Grundfos CR 95-5-1A-G-A-E-HQQE
75 HP, 3φ 480V
VFD: ABB series 800
Check Valve: Mueller A-2600-6-01B1
Meter: Octave Ultrasonic Epoxy Coated DI
4-20 mA
Air Relief Valve: Val-Matic 15, 1"

(all equipment shown is expected unless
equal is approved)

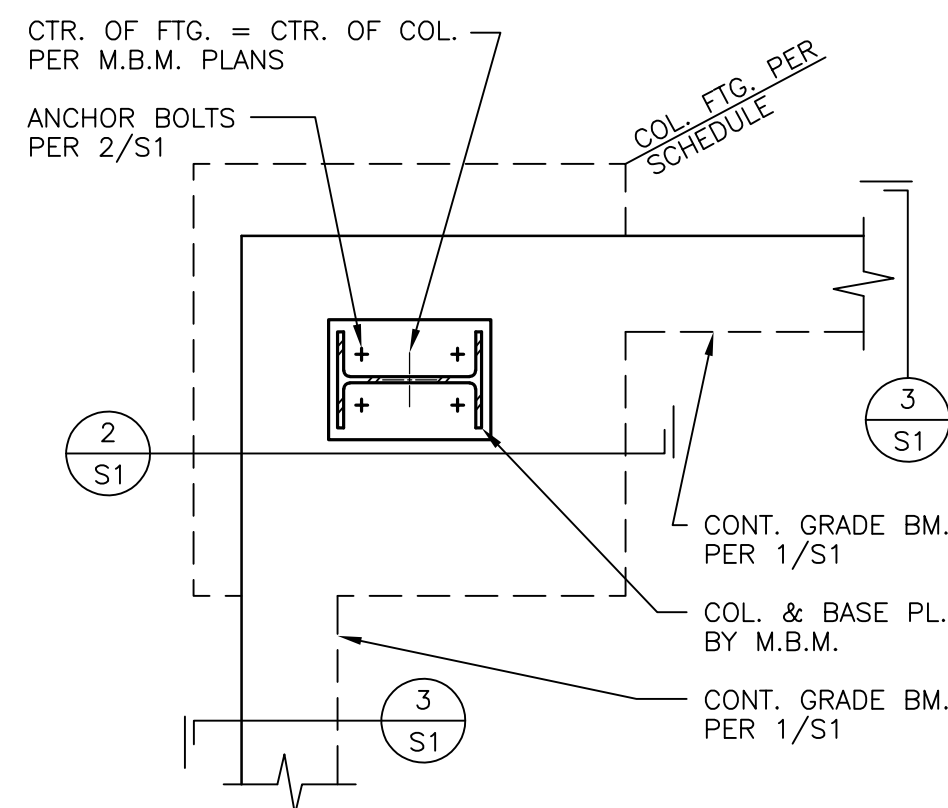
Pump House - Section
Scale: 3/4"=1'

- Note:
- All Fittings shall be AWWA C110 PC 250 with Flanged Ends.
 - Provide 1" Threadlets welded to spools for gauges and testing ports with appropriate sized inserts.
 - All necessary fittings, bolts, gaskets, adjustments, etc. necessary for completion of the project not specifically called out are considered incidental to the project.
 - Spools called out as adjustable shall be FLXPE with Mega Flange to be field cut to length.

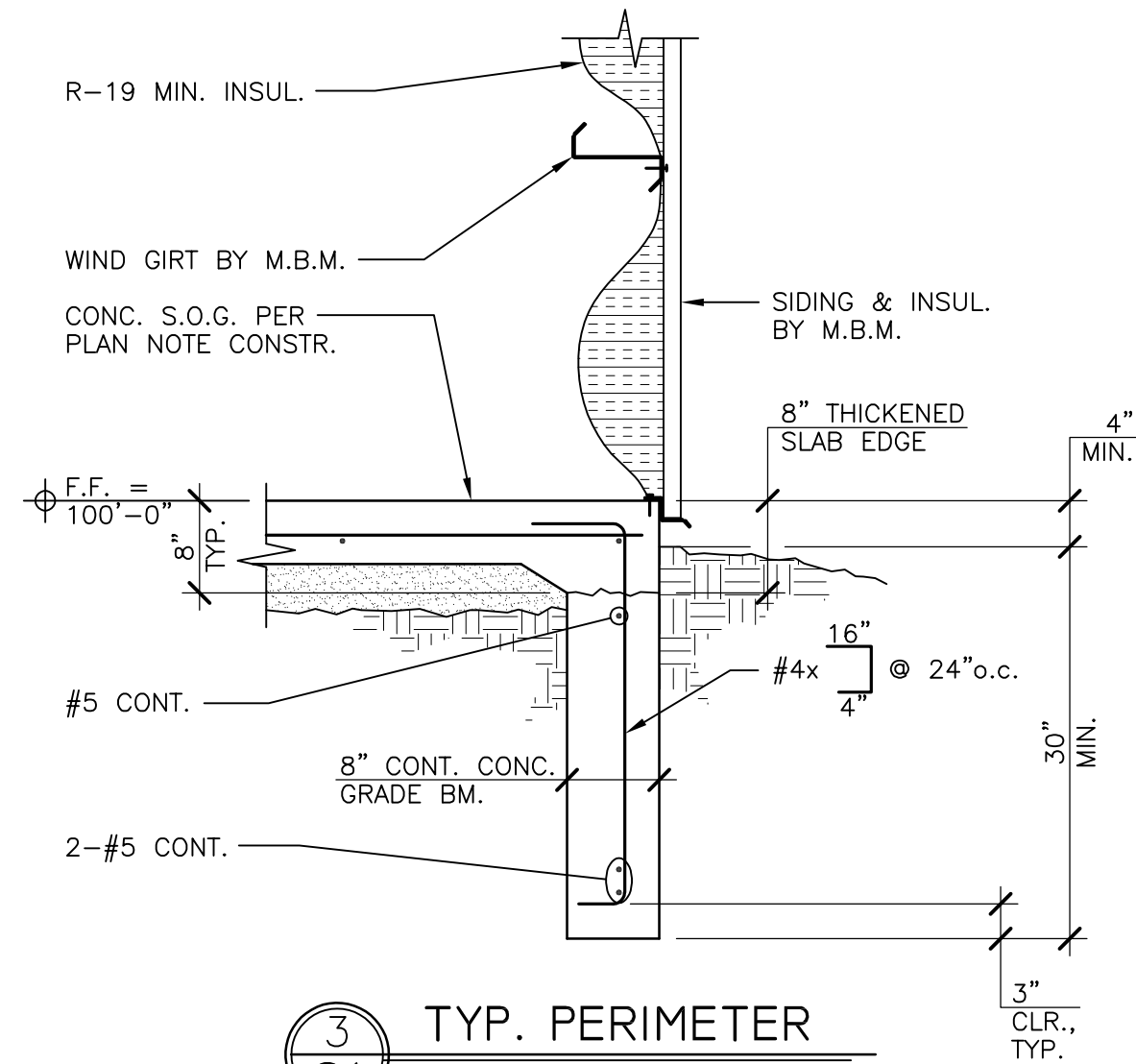
Revision Log		Owner:	Project:	Sheet Description:	RECORD DRAWINGS: WE HAVE INCORPORATED INFORMATION PROVIDED BY THE PROJECT CONTRACTOR AND BY PERIODIC FIELD VISITS.	 CHC Engineers, LLC 50 Valley Court Durango, CO 970-387-8765	Project Date: 12/18/19	Proj: 19003	Plot Date: 02/22/2021 -- 11:40am
1	19/20/17								
2	9/26/17								
3	.								
4	.								
5	.								
6	.								
Revision Log		City of Aztec	EAST AZTEC PUMP STATION	PUMP HOUSE PIPING LAYOUT - SECTION VIEW					
1	19/20/17								
2	9/26/17								
3	.								
4	.								
5	.								
6	.								



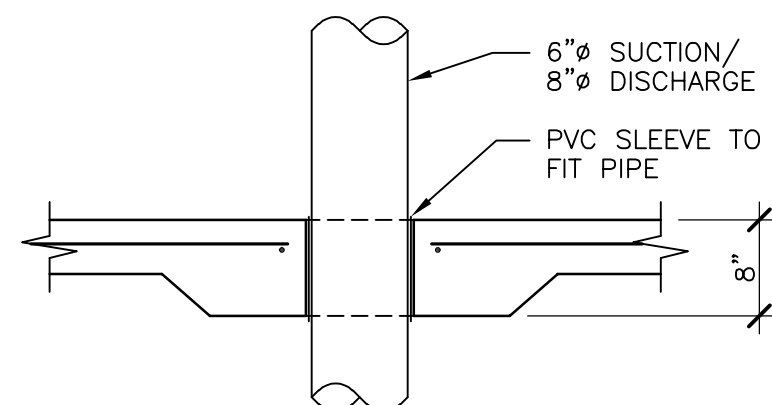
2 TYP. COL. FOUNDATION
(NOT TO SCALE)



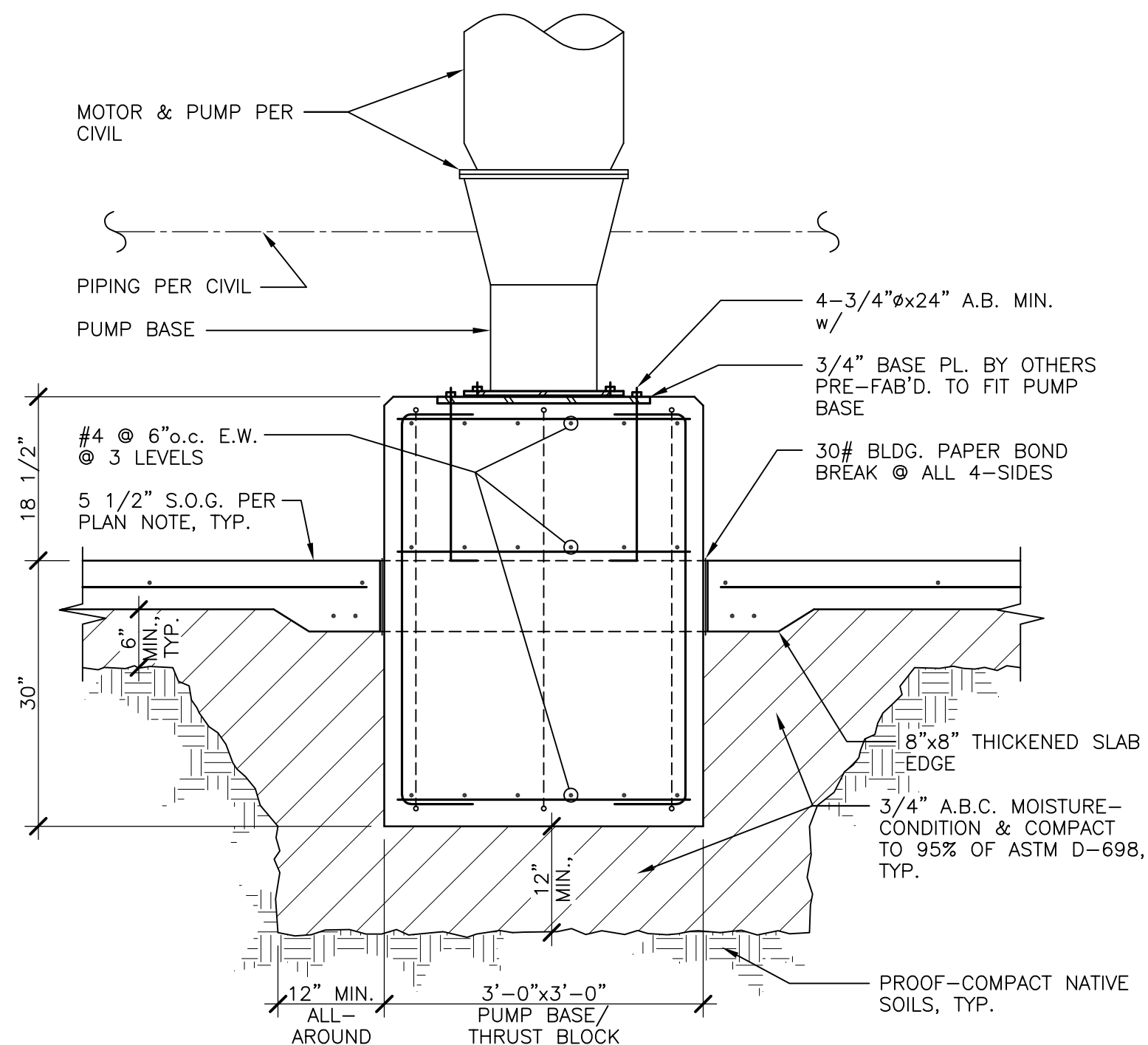
1 TYP. M.B. RIGID FRAME & CRANEWAY BM. CONNS.
(NOT TO SCALE)



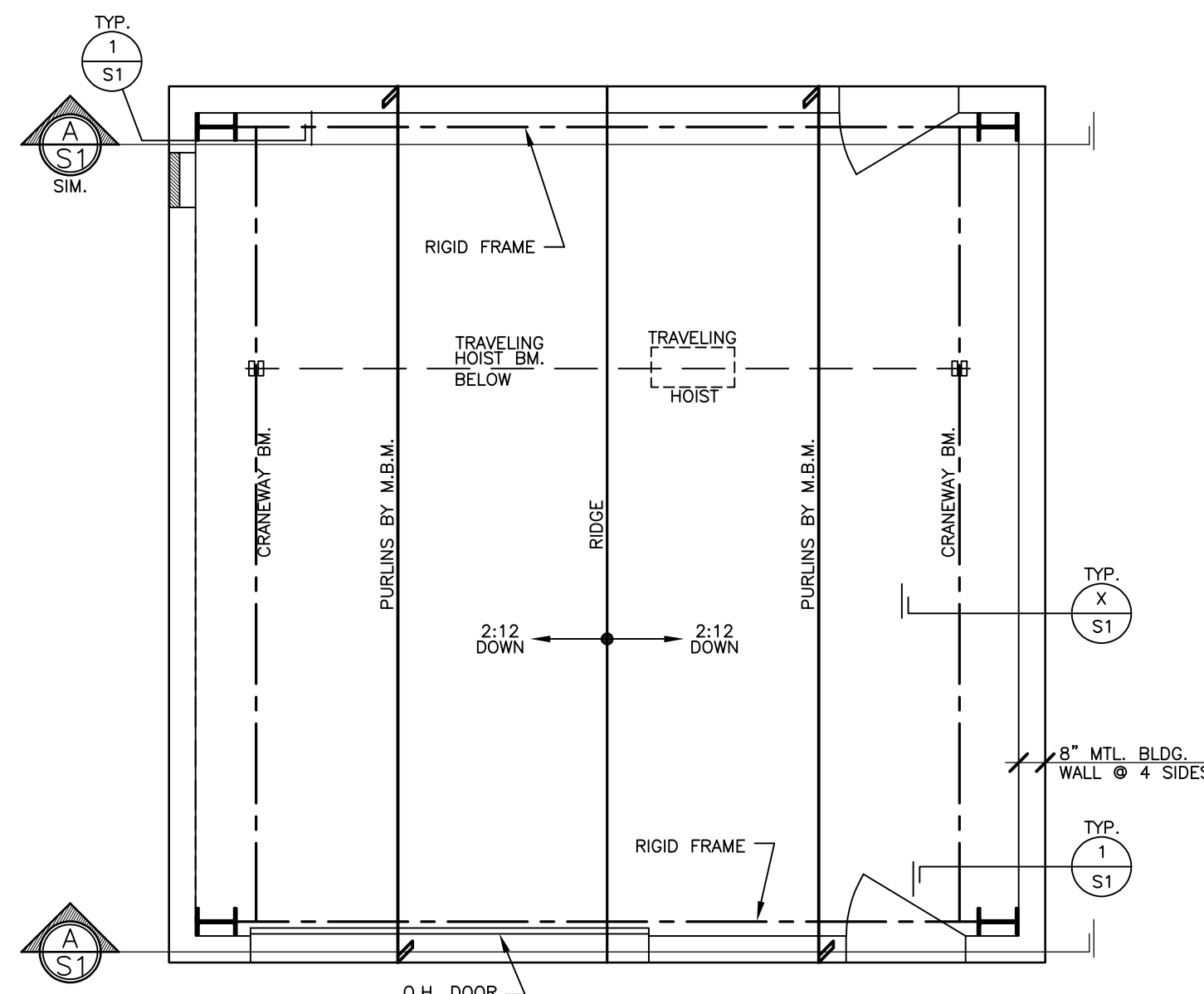
3 TYP. PERIMETER GRADE BM.
(NOT TO SCALE)



6 SLAB DTL. @ SUCTION & DISCHARGE LINES
(NOT TO SCALE)

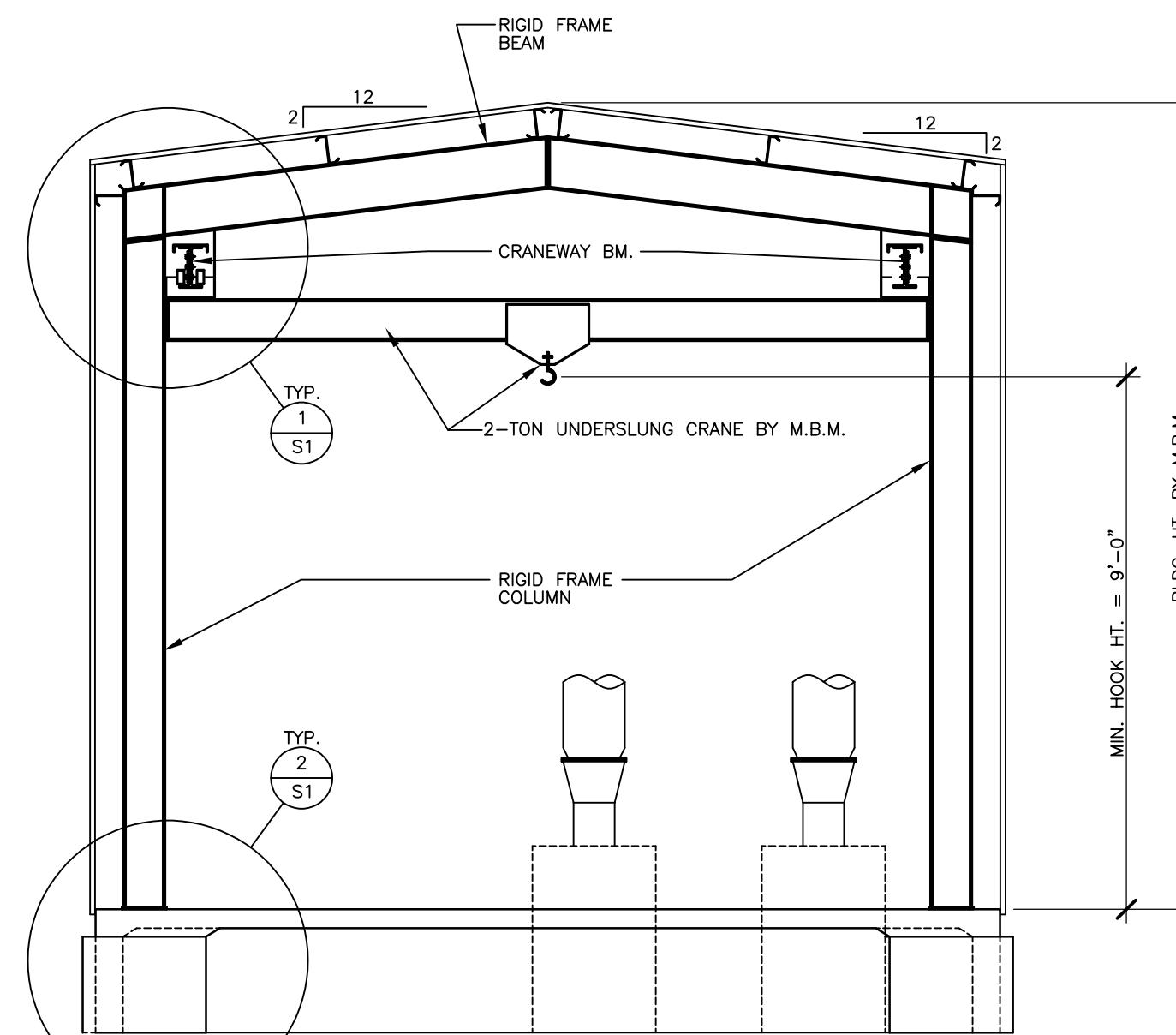


5 PUMP BASE / THRUST BLOCK
(NOT TO SCALE)



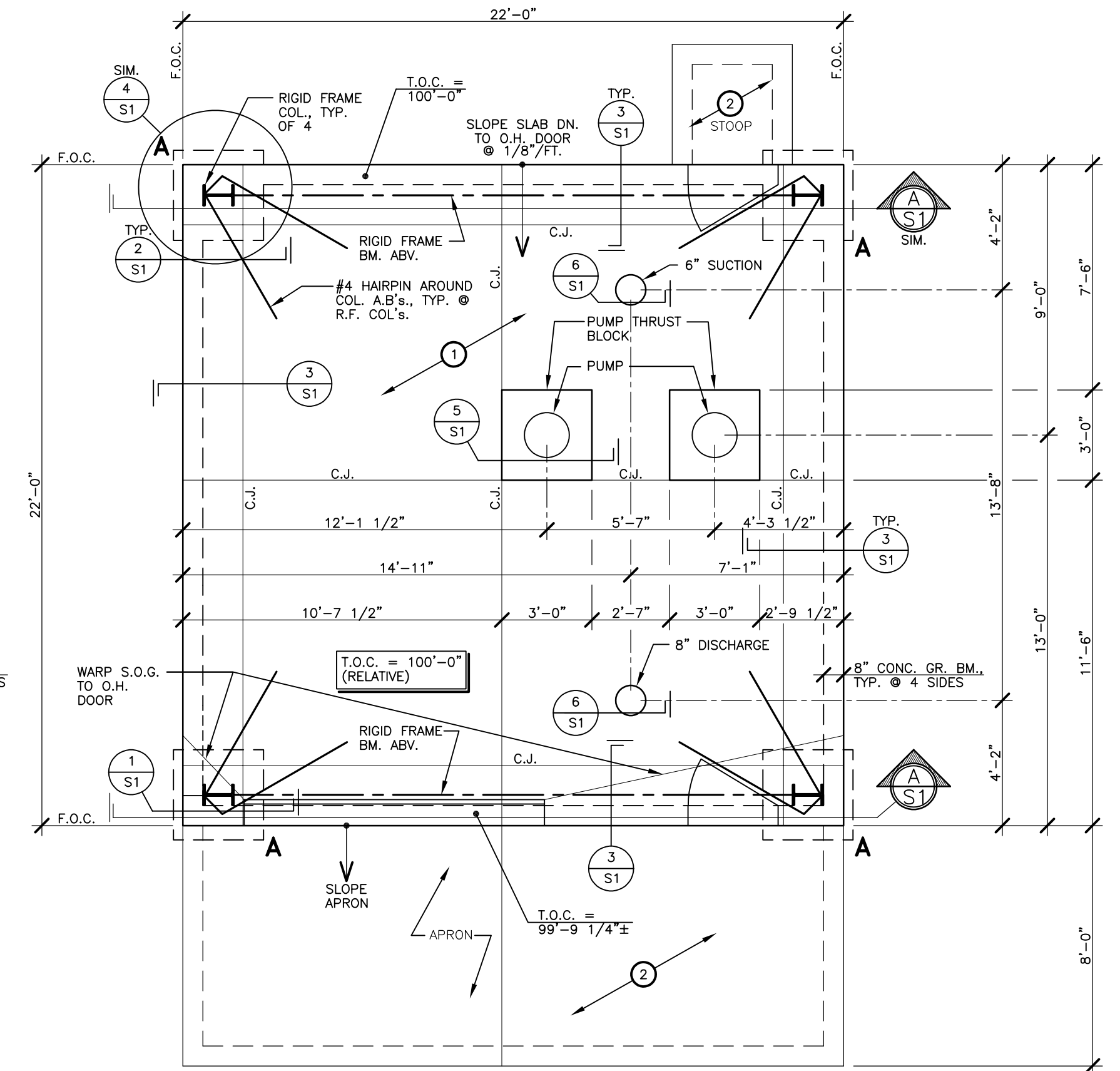
ROOF FRAMING PLAN

SCALE: 1/4"=1'-0"



BLDG. SECTION @ ENDWALLS

SCALE: 1/4"=1'-0"



FOUNDATION PLAN

SCALE: 1/4"=1'-0"

FOUNDATION NOTES:

- SEE DETAIL 2&5/S1 FOR TYPICAL MINIMUM EARTHWORK REQUIREMENTS AT FOUNDATIONS AND SLABS. SEE "EARTHWORK FOR FOUNDATION" NOTES ON SHEET S2 FOR ADDITIONAL REQUIREMENTS.
- SEE SHEET S2 FOR STRUCTURAL SPECIFICATIONS, GENERAL STRUCTURAL NOTES, CONSTRUCTION REQUIREMENTS AND TYPICAL DETAILS NOT SPECIFICALLY REFERENCED BUT WHICH SHALL APPLY TO THE APPROPRIATE CONDITIONS.
- T.O.C. = FINISHED FLOOR ELEVATIONS = TOP OF CONCRETE SLAB-ON-GRADE ELEVATION
- SEE PLANS BY METAL BUILDING MANUFACTURER (M.B.M.) FOR SPECIFIC ANCHOR BOLT LOCATION DIMENSIONS.
- DIMENSIONS ARE TO OUTSIDE FACE-OF-CONCRETE AND TO CENTERLINES OF FOOTINGS AS INDICATED, U.N.O.
- SEE METAL BUILDING NOTES ON S2 FOR DESIGN LIMITATIONS FOR ALLOWABLE DEFLECTIONS FOR THE BUILDING SUPERSTRUCTURE, (WHICH SHALL BE DESIGNED AND PROVIDED BY OTHERS).
- LATERAL BRACING SHALL BE PROVIDED AND INSTALLED ACCORDING TO THE M.B.M. PLANS.
- FOUNDATIONS ARE DESIGNED FOR COLUMNS/GIRTS TO BE PROVIDED IN A 'BY-PASS FRAMED' CONDITION @ ENDWALLS AND SIDE-WALLS PER M.B.M. PLANS.
- FOUNDATIONS ARE DESIGNED FOR WALL GIRT FRAMING TO COL'S. AS INDICATED IN METAL BUILDING DRAWINGS. FINAL SEALED METAL BUILDING DRAWINGS (PDFs) SHALL BE PROVIDED TO THE ENGR. FOR REVIEW & APPROVAL BEFORE ANY CONSTRUCTION BEGINS.
- C.J.: CONTRACTION JT. IN CONC. S.O.G.

FOUNDATION KEYED NOTES:

- INTERIOR CONC. S.O.G. PER TYP. INT. S.O.G. NOTE ON THIS SHEET.
- OPTIONAL EXTERIOR CONC. S.O.G. PER TYP. EXT. S.O.G. NOTE ON THIS SHEET, EXTENT & LOCATION AS DIRECTED BY THE OWNER

FOOTING SCHEDULE

TYPE	SIZE	REINFORCEMENT
A	3'-0"x 3'-0" x 24" THICK	#5 @ 8"o.c. E.W. @ BOT.

TYP. CONCRETE SLABS-ON-GRADE:

- TYPICAL INTERIOR S.O.G.:**
- 4 1/2" THICK CONC. w/ f'c = 3000 psi MIN. @ 28 DAYS.
 - REINFORCE w/ #4 @ 24"o.c. E.W. @ CTR. OF THICKNESS.
 - PLACE ON 6" OF COMPACTED STRUCTURAL FILL.

- TYPICAL OPTIONAL EXTERIOR S.O.G.:**
- 4 1/2" THICK CONC. w/ f'c = 4000 psi MIN. @ 28 DAYS.
 - REINFORCE w/ #4 @ 24"o.c. E.W. @ CTR. OF THICKNESS.
 - PLACE ON 4" OF 3/4" A.B.C. COMPACTED TO 90%.
 - SLOPE DOWN AND AWAY FROM BLDG. @ 1/4" MIN. PER FOOT
 - THICKENED EDGES AROUND PERIMETER PER DTL. 7/S2

FINAL FOR CONSTRUCTION
10-16-2019



WILSON STRUCTURAL ENGINEERING, INC.
1235 THOROUGHbred RD.
DURANGO, CO 81303
Phone: (970) 385-6774

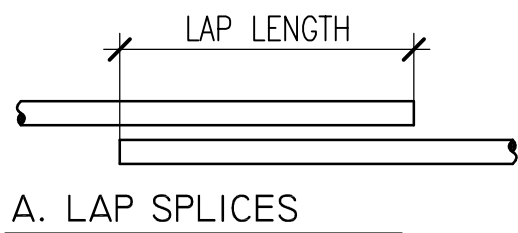
A PROPOSED FOUNDATION DESIGN FOR THE NEW:

AZTEC PUMP STATION
AZTEC, NEW MEXICO

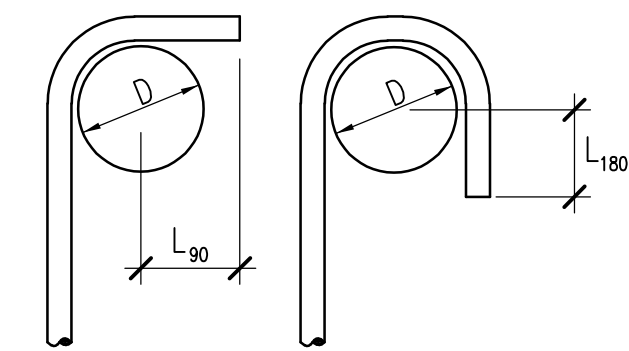
FOUNDATION & ROOF PLANS & DETAILS

DRAWN: GW CHECKED: DW DATE: 10-16-2019

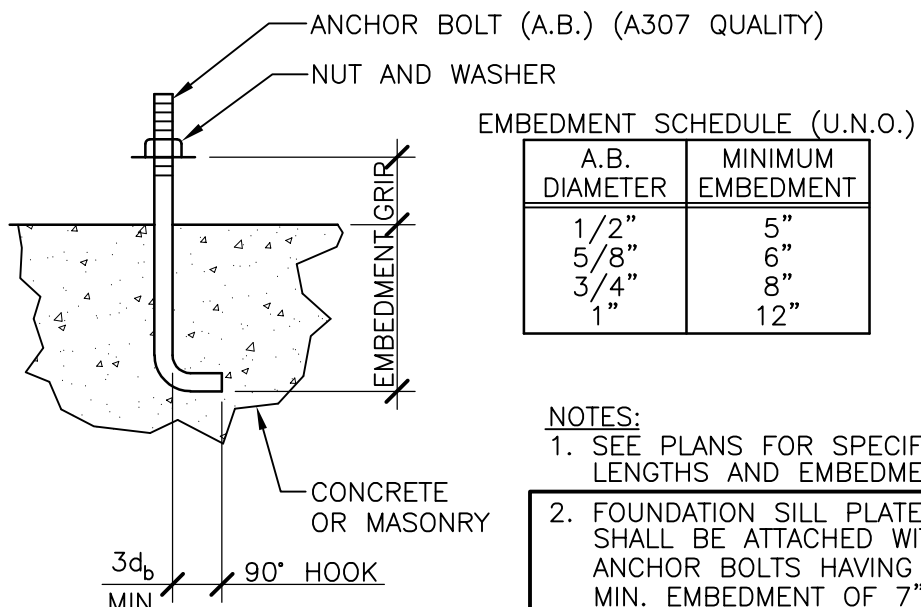
FILE NAME: 06419.S1
PROJECT: 06419
SHEET: **SI**
OF S2



LAP SPLICE SCHEDULE		
BAR SIZE	LAP LENGTH	
# 3	18"	
4	24"	
5	30"	
6	40"	
7	54"	
8	70"	



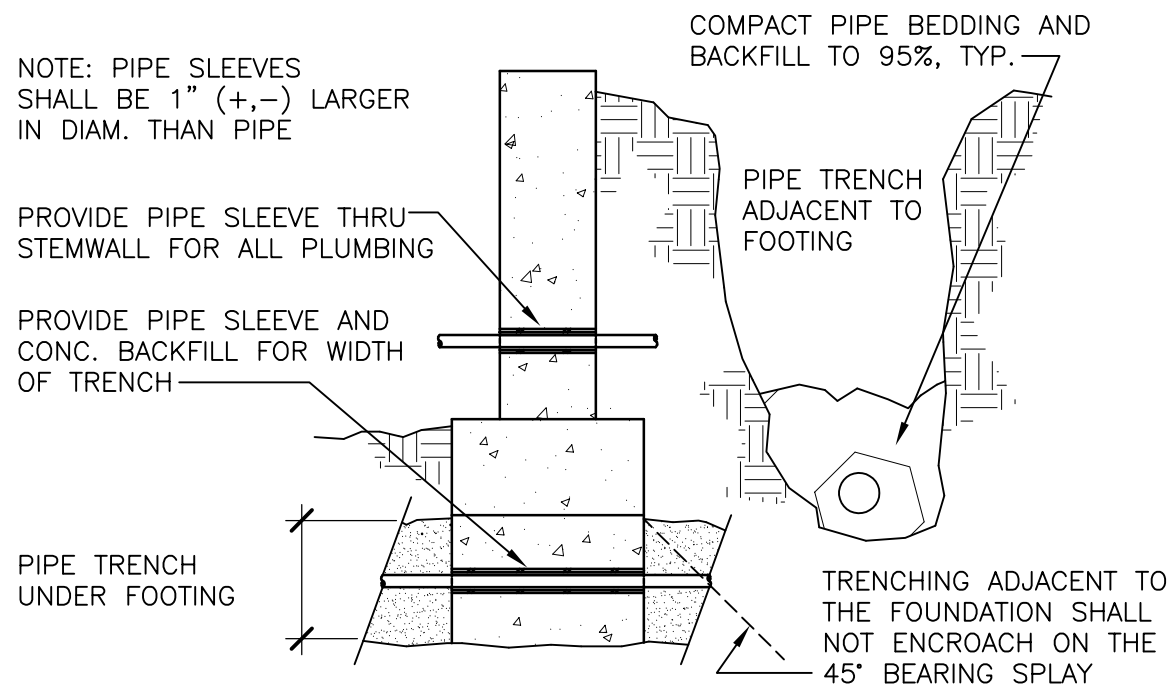
BEND AND HOOK SCHEDULE			
BAR SIZE	D	L ₉₀	L ₁₈₀
3	2-1/4"	4-1/2"	2-1/2"
4	3"	6"	2-1/2"
5	3-3/4"	7-1/2"	2-1/2"
6	4-1/2"	9"	3"
7	5-1/4"	10-1/2"	3-1/2"
8	6"	12"	4"



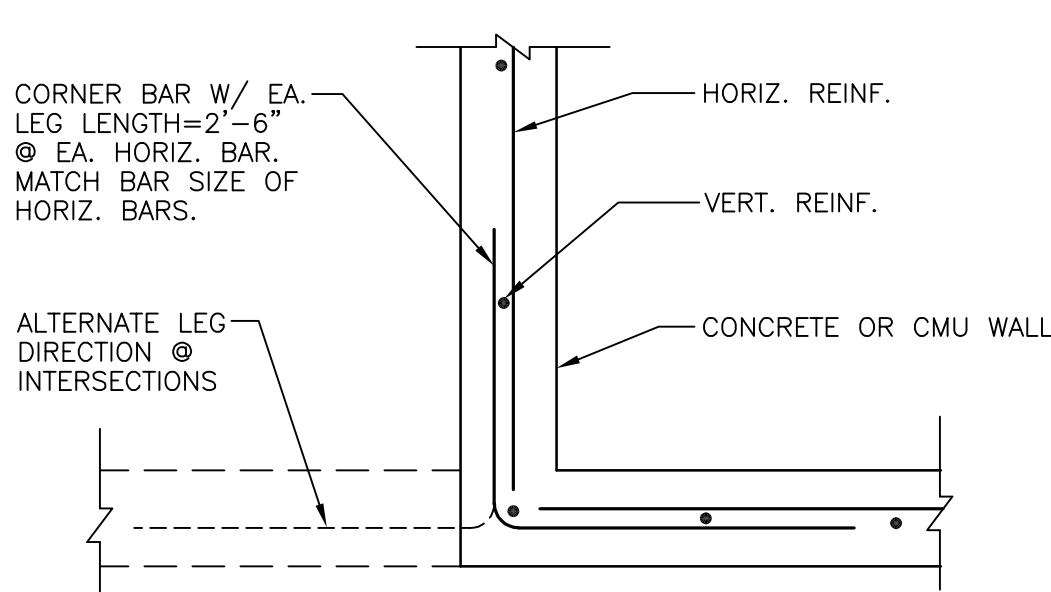
NOTES:
1. SEE PLANS FOR SPECIFIC LENGTHS AND EMBEDMENTS
2. FOUNDATION SILL PLATES SHALL BE ATTACHED WITH ANCHOR BOLTS HAVING A MIN. EMBEDMENT OF 7".

1 TYPICAL ANCHOR BOLTS (NOT TO SCALE)

2 TYPICAL REINFORCING DETAILS FOR CONCRETE REINFORCEMENTS (NOT TO SCALE)

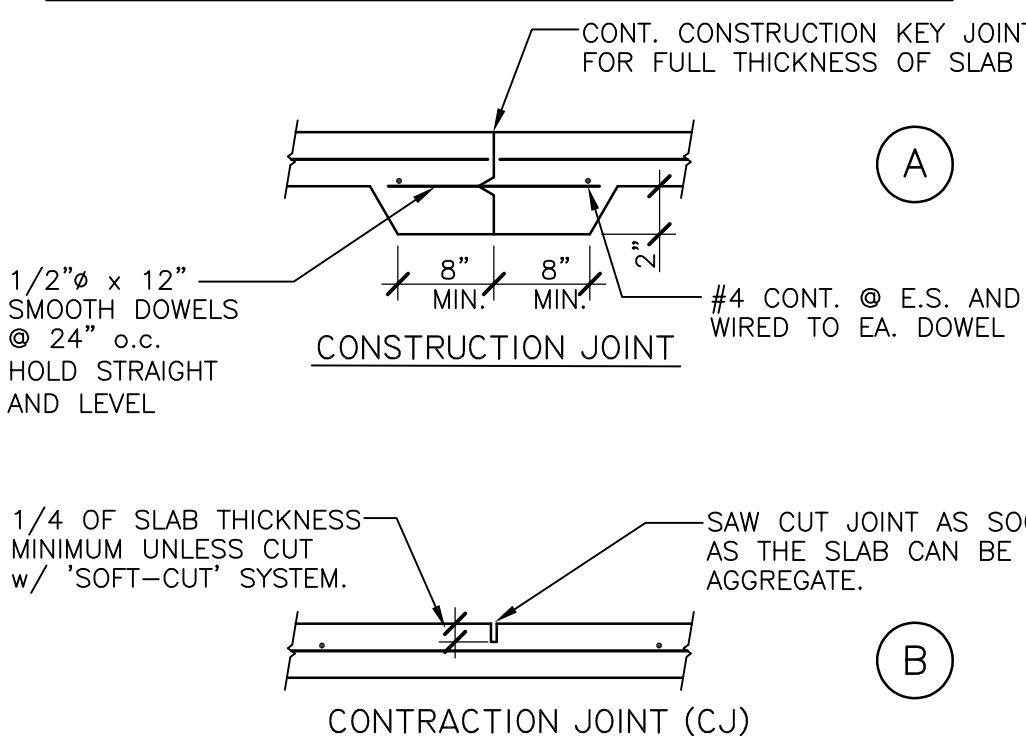


4 TYPICAL PIPING AND TRENCHING AT FOUNDATIONS (NOT TO SCALE)

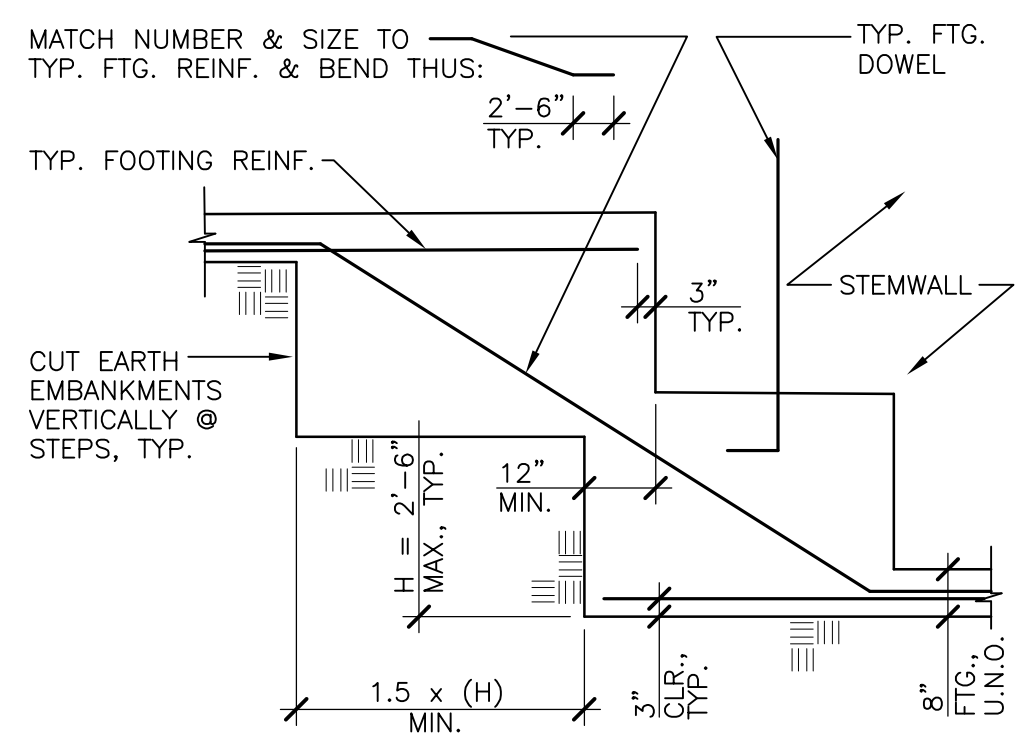


3 TYPICAL CONCRETE WALL CORNER REINFORCING (NOT TO SCALE)

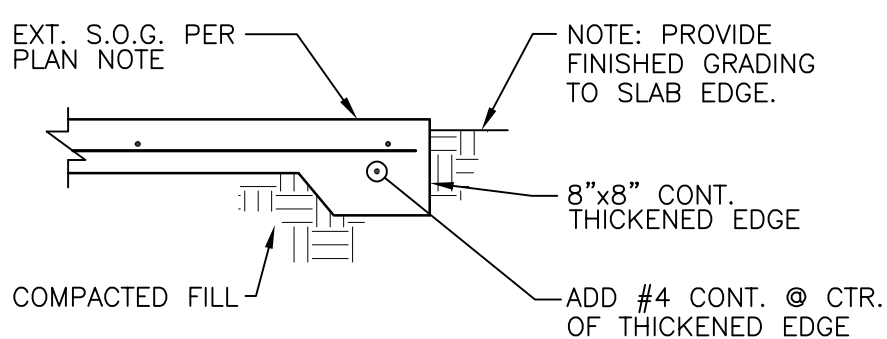
NOTE: TYPICAL JT. SPACING SHALL BE 15'-0" O.C. (+,-) AND 20'-0" MAX. w/ ENGINEER'S APPROVAL, U.N.O. ON PLANS.



5 TYP. JOINTS IN CONC. SLABS (NOT TO SCALE)



6 TYPICAL STEPPED FOOTING DETAIL (NOT TO SCALE)



7 TYP. EXTERIOR SLAB EDGE (NOT TO SCALE)

RECOMMENDED OBSERVATIONS

- The agreement for the design of these structural plans does not include a fee for construction observation or inspections of any kind to verify compliance. However, it is recommended that the owner/contractor contract with the Engineer or other qualified third party observer to make the following observations.
- Exposed native bearing soils shall be observed and approved by a Soils Engineer before placing structural fill or forming for concrete.
- Material for structural backfill shall be observed and approved by a Soils Engineer before use. Structural backfill placement and compaction shall be observed, tested, and approved by a Soils Engineer before placing foundations.
- Concrete reinforcing and formwork shall be observed and approved by the Engineer before placing concrete.
- The metal building components shall be observed and approved relative to materials and connections by a representative approved by the Metal Building Manufacturer.
- Contractor shall provide 24 hour notice for observations.

NOTICE

These plans by Wilson Structural Engineering, Inc. are only of the foundation design. The Metal Building shall be designed and provided by others. No check or warranty will be offered or implied by Wilson Structural Engineering, Inc. in any regard to the Metal Building superstructure. These plans indicate the approximate minimum loads and other minimum requirements for which the building shall be designed and for which the foundation is designed. However, it is the responsibility of the Contractor ordering the building and the Metal Building Manufacturer designing and providing the building to insure that all proper loads and combinations of loads are accounted for in the actual building design. The Metal Building Manufacturer shall provide a separate engineered and stamped set of plans and calculations for the building superstructure.

ABBREVIATIONS

A.A. = Adhesive anchor
A.B. = anchor bolt
AB = above
ABC = aggregate base course
ABV = above
ADJ = adjacent
AGG = aggregate
ARCH = arched
B.B. = bottom beam
B.F. = bottom of footing elev. or = backfill
BLK = block
BLDG = building
BLKG = blocking
BM = beam
BRG = bracing
BTWN = between
B.U. = built-up
CJ = construction joint or = contraction joint or = ceiling joint
CLG = ceiling
CMU = concrete masonry unit
COL. = column
CONC. = concrete
CONN. = connection
CONT. = continuous
CONTR. = contractor
CTR. = center
CTRD = centered
DAS = deformed anchor stud
DL = double
D.F. = Douglas Fir - Larch
DIA. = diameter
DL = dead load
DTL = detail
DWG. = drawing
DWL = dowel
EA = each
EE = each end
Mfr. = manufacturer
E.J. = expansion joint
ENGR. = engineer
EQ. = equal
E.S. = each side
EV = each way
EXP = expansion
EXT. = exterior
FDM = foundation
FF = finished floor elevation
F.J. = floor joint
FG = finished grade elevation
F.G. = face of
FOC = face of concrete
FOM = face of masonry
FRM = framing
F.S. = far side
FTG. = footing
GA = gage
GALV. = galvanized
G.B. = Grade Beam
GL = glue laminated beam
GR = grade
HAB = headed anchor stud
HDR. = header
H.F. = Hem-fir
HORIZ. = horizontal
H.S. = high strength
HFO = information
INT. = interior
JST. = joint
JT. = joint
KB = king stud
LD = load
LS = low load
LH = long leg horizontal
LLV = long leg vertical
LV = laminated veneer lumber
MAB = masonry
MAT = material
MAX = maximum
M.B.M. = metal building mfr.
Mfr. = manufacturer
MIN = minimum
NA = not applicable
N.B. = near side
NTO = not to scale
O = over
O.C. = on center
O.H. = opposite hand
OPNG. = opening
ORB = oriented strand board
PC = precast
PL = plate
PLYWD = plywood
PML = panel
P.T. = pressure treated
REIN. = reinforcing
R.J. = roof joint
RH = Simpson hardware
RHT = sheet
RHTQ. = sheathing
RIM = similar
SPA = space
STL = steel
SL = snow load
S.O.G. = slab on grade
SS = steel stud
SW = shearwall
TB = top of beam
T.J. = top of joint
T.L. = top of ledger
T.M. = top of masonry
TN = toe nail
T.O. = top of
T.O.G. = top of concrete
T.O.S. = top of steel
T.O. SHTG. = top of sheathing
T.O.W. = top of wall
T.P. = top of parapet
T.P.L. = top of plate
T.R. = threaded rod
TB = trim studs or
TYP = tube steel
U.N.O. = unless noted otherwise
VERT. = vertical
WVF = welded wire fabric

CONCRETE AND REINFORCING

- Concrete shall be made from an approved commercial mix of aggregates, potable water and Portland Cement (Type II) meeting ASTM C150 specifications. Admixtures meeting appropriate ASTM requirements may be used when approved by the Engineer.
- The Concrete shall have a minimum of 517 lb. of Portland Cement per yard and have a maximum water to cementitious material ratio of 0.52. Fly ash meeting ASTM specifications may be substituted for up to 15% of the Portland Cement in the mix designs at ratio of 1.1 lb. of fly ash for 1.0 lb. of Portland Cement. The Concrete Mix design shall be provided to the Engineer for approval.
- Concrete shall achieve the following minimum compressive strengths (f'c) in 28 days:
footings, stemwalls.....3000 psi
interior slabs on grade.....3000 psi
exterior slabs on grade.....4000 psi
- Provide the following minimum thickness of concrete coverage around reinforcement:
footings:
to earth.....3"
to formed surfaces.....2"
slabs:
to earth.....1"
stemwalls:
interior face.....3/4"
exterior face.....1 1/2"
face exposed to earth.....2"
- Maximum allowable slump of concrete at the point of placement shall be 4" unless specifically approved otherwise by the Engineer and designed accordingly.
- All concrete (including slabs-on-grade) shall be thoroughly consolidated by mechanical vibration.
- Reinforcing bars shall conform to ASTM A615. Reinforcing to be welded shall conform to ASTM A706.
#3 to #5.....grade 40 (U.N.O.)
#6 to #11.....grade 60
- All reinforcing, anchorages and embedments shall be securely wired in place during concrete placement.
- Reinforcing shall not be heated to be bent.
- See typical details for reinforcing bending and splicing requirements.
- Reinforcing shall be held above earth on concrete adobes, chairs or by suspension. Bars driven into the earth shall not be used to support reinforcing.
- All openings in slabs or walls shall be reinforced with a minimum of 2-#5 on 4 sides extending 2'-0" minimum beyond opening corners.
- Chamfer all exposed concrete edges unless detailed or noted otherwise.
- Openings in concrete shall be formed, cored or sawcut. Chipping and breaking out shall not be done unless specifically approved.
- Concrete exposed to freezing environment either during construction or in place shall be air entrained. Air entrainment of the mix shall be 5% minimum to 8% maximum based on volume.
- Typical slab on grade: See sheet S1 for different slabs and their locations.
- Concrete Curing: Final concrete quality is highly dependant on curing. Inadequate curing can cause excessive shrinkage, cracking, low strength, slab curling and other detrimental effects. Concrete shall be cured as follows: slabs shall be moist cured with water and an impermeable barrier or with a water saturated cover. No portion of the slab shall be allowed to dry for 7 days. Once concrete shall be moist cured or cured with a curing compound conforming to ASTM C308 applied immediately after form work is removed. Special protection measures shall be provided during windy and or hot conditions to prevent rapid drying before curing procedures can begin. Inadequately cured concrete will be adequate cause for rejection.
- Cold weather protection: Concrete shall not be allowed to freeze. Concrete temperature shall be maintained above 40 degrees for the first 7 days. The criteria presented in these notes and the specifications are minimum requirements for the concrete mix design. These minimums will not be adequate in all conditions of cold weather concreting. It shall be the responsibility of the General Contractor to provide additional means to insure the concrete doesn't freeze, remains above 40 degrees for a minimum of 7 days, achieves the minimum required strength and remains durable and serviceable. Additional measures which may include, but are not limited to: insulation and protection blankets, heating and heating, accelerating admixtures, and addition of Portland Cement in the mix design above the minimum requirement.
- Concrete shall be tested as follows: 3 standard ASTM Concrete test cylinders shall be made for every 75 cubic yards of placed concrete with a minimum of 3 cylinders cast for each day that concrete is placed. One slump and one air entrainment test shall be made for each set of cylinders made. The engineer shall be notified immediately of failing tests. Deviations shall not be made from this schedule without the consent of the Engineer.

METAL BUILDING

- All dimensions for footing locations, anchors bolts, and all other entities of the foundation system shown relative to the metal building connections shall be cross-checked and verified with the shop drawings by the Metal Building Manufacturer before excavation, earthwork or forming is begun.
- If the Metal Building Manufacturer wishes to use an alternate framing layout to that which has been assumed and designed for in this set of structural plans, the metal building design engineer shall notify Wilson Structural Engineering before submitting the shop drawings and calculations. Otherwise, the shop drawings will be rejected.
- All structural components and the lateral resisting systems shall be designed for the loads, factors, and criteria described in the contract documents.
- Concentrated loads such as mechanical units and any others which are not specifically shown in the structural plans but are supported by the metal building structure shall be accounted for in the design of the supporting members. The Owner shall coordinate the location and weights with the Metal Building Manufacturer (M.B.M.).
- The metal building design shall be done under the direct supervision of an Engineer experienced in the design of metal buildings for at least 5 years. The Engineer shall be licensed in the state where the building is to be erected and shall stamp and sign the calculations, shop drawings and erection drawings. Stamped copies shall be submitted to the Architect for approval before production according to the specification requirements.
- Structural steel shall be detailed, fabricated, and erected in accordance with the AISC manual for steel construction, the latest edition, using either the ASD or LRFD design. The metal building design shall also be in conformance with the "Metal Building System Manual" by the Metal Building Manufacturers Association. The most stringent criteria for design shall apply when there are differences between the two standards.
- Minimum anchor bolts sizes shall be determined by the M.B.M. and shown in the erection drawings based on the design requirements for the superstructure. Anchor bolts of greater size may be required governed by the foundation design. The contractor shall provide the largest size governing the design.
- All required field modifications required shall be brought to the attention of the Architect and Engineer. Repairs shall be approved. Specific repair details may be required. The expense of the repair design and detailing shall be borne by the Contractor.
- Reactions of all metal building components directly supported by the foundation shall be reported in the calculations for approval and comparison to design assumptions. The reactions shall include the loads from each individual load case with a description of case.
- Deflection of flexural members due to gravity loads shall not exceed the span divided by 240, (L/240). Deflection of the lateral system shall not exceed 1.0" under wind or seismic loads unless approved otherwise by the Architect or Engineer.
- The deflection limits of 10. above for gravity loads are for total dead load plus snow load.
- The M.B.M. shall determine, design, and locate the buildings lateral load resisting system. The system shall limit movements to those described in 8. above. Components shall not interfere with windows, doors or other architectural features. All lateral shears, uplift loads, and moments shall be submitted with their locations to the Engineer for approval before fabrication. Any foundation re-design because of the system requirements or loads in excess of the foundation design capacity shall be paid for by the contractor.
- Design loads for metal building:
Dead Loads:
a) Superstructure load.....weight of building provided by the M.B.M.
b) Collateral load.....3 psf
c) Insulation load.....weight of insulation provided by the M.B.M.
d) Wall mounted equipment....per electrical & mechanical plans
Live Loads:
a) Snow load.....25 psf (Base)
Wind Load: (per chapter 16 of the 2015 International Residential Code)
a) Wind speed.....115 mph (3 sec. gust)
b) Wind exposure.....exposure 'C'
c) Importance factor(I).....1.0
Seismic Load:
a) See design criteria on this sheet

GENERAL NOTES

- In the absence of specific details refer to appropriate typical details or similar details for information. If any questions remain call the Engineer for clarification.
- The plans and details in some areas represent assumptions made of existing conditions. The Contractor shall notify the Engineer immediately if conditions are found different from those assumed. The Engineer shall also be notified if field conditions necessitate changes from the plans. In either case detail changes may be required before work can proceed.
- The plans shall not be scaled to obtain working dimensions. If dimensions are missing from the plans get clarification from the Engineer. Cross-check all dimensions with the Metal Building Manufacturers plans. All layout dimensions shall be closed from both directions.
- All openings or modifications to structure not shown on the structural plans shall be verified with the Engineer before doing the work.
- The Contractor shall repair or replace all damaged materials.
- The Contractor shall notify the Engineer of any discrepancies found in the contract documents (plans and specifications). Clarifications shall be received from the Engineer before proceeding with the work. The most restrictive condition shall govern when clarification is not obtained.
- All mechanical unit weights shall be verified with loads shown on the structural drawings. Notify the Engineer, if weights are different than those shown or units are required where not shown on the structural drawings.
- These plans represent a design for final in-place conditions. It shall be the Contractors' responsibility to account for all construction conditions, loads, sequences, temporary bracing requirements, all safety considerations, OSHA regulations, and all other applicable standards.
- Construction shall follow the plans, details, notes and specifications. The Contractor shall be directly responsible for all uncorrected errors or deviations from the plans without the Engineers approval. The Engineer will be available for considerations and repairs. Excessive repair detailing or revision to the contract documents shall be paid for by the Contractor.
- Each sub-contractor shall inspect the conditions and work in place before they begin. Errors, problems and unacceptable conditions shall be repaired before beginning the new work. Beginning the new work shall be interpreted as acceptance of the previous work and conditions.
- When shop drawings and product information are required for review by the Architect/Engineer, the Contractor shall allow 2 weeks for the review period. When shop drawings and product information are provided in large format (i.e. larger than 8 1/2" x 11"), one set of reproducible shall be included with 3 sets of blueprints for mark-ups and stamping. The reproducible will be returned to the Contractor to allow for his revision of as many sets of marked-up drawings as he shall require.

DESIGN CRITERIA

- Superimposed Design Loads:
Roof DL = 10 psf.....For foundation design only
Roof Snow Load = 25 psf (Importance factor I = 1.0)
- Applicable Building Code = 2015 International Building Code
- Wind Load:
a) Basic wind speed.....115 mph (3 sec. gust)
b) Exposure category.....'C'
c) Importance factor(I).....1.0
- Seismic Load:
a) Use Group.....II
b) Site Class.....D
c) Short Period Spectral response (Ss).....17.9% g
d) Importance factor(Ie).....1.0
- Earthwork per 'Earthwork for Foundations' on this sheet.

SPECIALTY CONNECTIONS / ANCHORAGES / FASTENERS

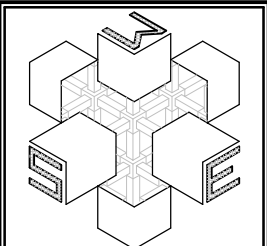
- Expansion bolts, adhesive anchors, shoplugs, headed anchor studs (HAS), self-tapping screws and other proprietary devices shall have ICBO approvals. These approvals along with load capacities and use information shall be submitted to the Engineer when materials other than those specified are proposed.
- Devices shall be used in full accordance with manufacturer's requirements.
- Headed anchor studs shall be welded all around the base of the stud with a 5/16" fillet unless noted otherwise. Stud guns may be used provided the attachment will develop the strength of the stud.
- Typical acceptable anchors (when called out in plans) unless noted otherwise:
Expansion Bolts: 5/8" diameter by Hilti or Redhead with a minimum embedment of 4"
Shoplugs: 0.145" diameter minimum by Hilti or Rammed with 1" minimum embedment in concrete
Headed Anchor Studs: 1/2" diameter x 6" long by Nelson Stud
Adhesive Anchors: Hilti HIT or HVA system sized for bolts required
Self-Tapping Screws: #10 TEK screws

EARTHWORK FOR FOUNDATIONS

- The foundation designs are based on Table 1806.2 of the 2015 International Building Code. Allowable soil bearing pressure on native soils:
@ 3'-0" minimum depth below lowest adjacent ext. grade = 1500 psf
- All column foundations shall bear entirely on structural backfill over proof-compacted native soils. Slabs shall bear on a structural backfill pad placed over proof-compacted native soils. The structural fill shall be compacted to a minimum of 90% of ASTM D-1557. See minimum earthwork detail A/S1 for specifics.
- Unless noted otherwise footings shall bear a minimum of 30" below lowest adjacent grade and 12" minimum below original native grade unless approved otherwise.
- All earthwork cuts and fills shall be made in level benches.
- All structural backfill materials (where necessary) shall be approved by a Soils Engineer. Unless approved otherwise, imported structural (or engineered) backfill shall be granular non-expansive material meeting the following minimum criteria: no more than 5% shall pass a 200 screen, 100% shall pass a 2 inch screen, and the material shall be well graded unless it is sand or 3/4 inch washed gravel. Some site material may be useable for structural backfill when approved by a Soils Engineer.
- Structural backfill shall be moisture conditioned, placed in thin lifts and mechanically compacted. Lifts shall not exceed 6" of compacted depth and shall be of depths compatible with the capabilities of the machinery used.
- Backfill shall be uniformly moisture controlled to maintain specified compaction densities.
- Unless noted otherwise all backfill shall be compacted to a minimum of 90% of the maximum density as determined by ASTM method D-1557. All compaction densities noted in the plans are relative to maximum density per ASTM D-1557 at optimum moisture content plus or minus 3% unless noted otherwise.
- Foundations shall be constructed of concrete cast in clean trenches cut neatly in engineered earth or in secure formwork if the native soils and compacted backfill won't allow clean open trenches.
- Reinforcement for concrete foundations shall be supported 3" minimum from earth on all sides. Reinforcement shall not be supported on bars driven into the earth. It shall be supported on approved chairs or adobes or suspended from above.
- Foundations shall not be placed on frozen earth or unstable conditions. Frozen earth shall be thawed and re-compacted before placing foundations. All soft materials discovered shall be over-excavated as directed by the Soils Engineer and replaced with compacted engineered material. Geotextile fabric shall be provided for stabilization when conditions dictate.
- Water shall not be allowed from any source to accumulate in excavations. The Contractor shall provide de-watering.
- The Contractor shall be responsible for safely retaining all earth embankments.
- Exterior grades adjacent structures without paving shall slope away from the structure on all sides at a minimum slope of 10% for 20 feet. A positive water flow shall be provided for all locations to natural water courses. Provide swales where necessary. No ponding of water shall be allowed.
- Planters shall not be adjacent structure except when a design is specifically provided.
- Roof drains shall not empty onto exterior grade within five feet of the foundations. Splash blocks, leaders, concrete swales, or other means shall be used to direct water away from the structure for at least 5'-0" from the structure.
- Deep rooted vegetation shall not be placed closer than 8'-0" to the structure.
- Backfill shall be tested for compaction. Material failing the tests shall be re-compacted and then re-tested. Failing tests shall be paid for by the earthwork contractor. One compaction test shall be provided for every 32 cubic yards of backfill material. Compaction densities shall also be made under all foundations where the native earth is scarified and re-compacted. One compaction test shall be made for every 50 linear feet of footing. Deviations from this schedule shall require the approval of the Engineer.

10-16-2019

Swift Allen



WILSON STRUCTURAL ENGINEERING, INC.

1235 THOROUGHBRD RD.
DURANGO, CO 81303
Phone: (970) 385-6774

A PROPOSED FOUNDATION DESIGN FOR THE NEW:

AZTEC PUMP STATION
AZTEC, NEW MEXICO
GENERAL STRUCTURAL SPECIFICATIONS
AND TYPICAL DETAILS

FILE NAME:

06419.NOT

PROJECT:

06419

SHEET:

S2

DRAWN:

TS

CHECKED:

DW

DATE:

10-16-2019

OF

S2

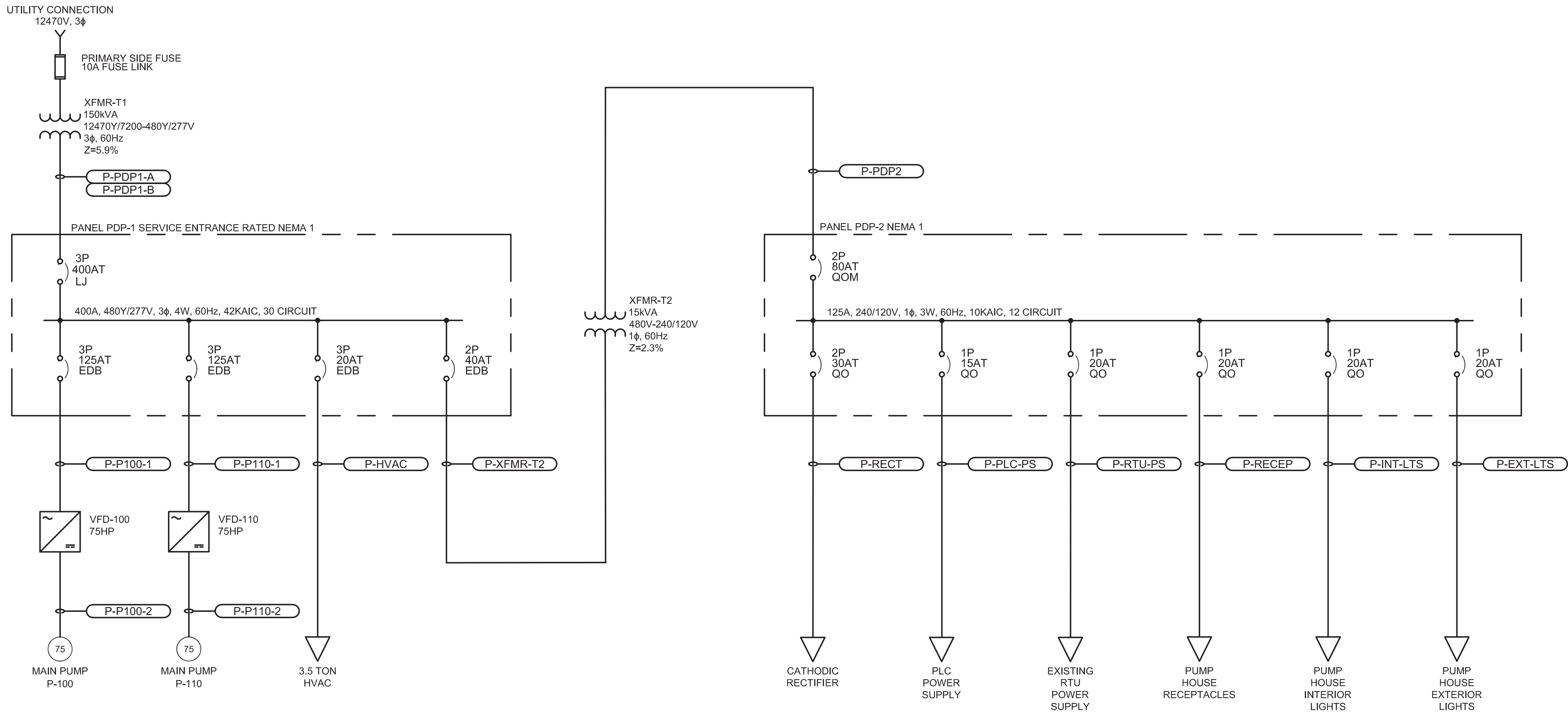
FINAL FOR CONSTRUCTION

10-16-2019

CITY OF AZTEC
UPPER EAST TANK PUMP HOUSE
ELECTRICAL DESIGN
DRAWING PACKAGE

DRAWING LIST				
DRAWING NUMBER	REV	DATE	DESCRIPTION	
1800067-E000	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	SHEET TITLE & INDEX
1800067-E001	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	ELECTRIC POWER ONE LINE 480VAC & 240VAC
1800067-E002	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	ELECTRIC PANEL SCHEDULES 480VAC & 240VAC
1800067-E003	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	ELECTRIC MOTOR SCHEMATIC 480VAC PUMP P-100
1800067-E004	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	ELECTRIC MOTOR SCHEMATIC 480VAC PUMP P-110
1800067-E005	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	EQUIPMENT LAYOUT & CONDUIT ROUTING PLAN
1800067-E006	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	INTERIOR ELEVATION & BILL OF MATERIALS
1800067-E007	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	INTERIOR ELEVATION & BILL OF MATERIALS
1800067-E008	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	LIGHTING & POWER PLAN
1800067-E009	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	ELECTRIC CONDUIT & CABLE SCHEDULE
1800067-E010	0	11/7/2019	AZTEC UPPER EAST TANK PUMP HOUSE	ELECTRIC GROUNDING PLAN

						DESIGNED BY: CRF	<div><p>649 TECH CENTER DR, STE. B DURANGO, CO 81301 970-946-7814</p></div>		AZTEC UPPER EAST TANK PUMP HOUSE SHEET TITLE & INDEX	JOB NO. 18000-67	SCALE
						CHECKED BY: CRF				FILENAME 1800067-E000	NTS
						APPROVED BY: ---				DWG. NO.	REV. NO.
0	11/7/2019	ISSUED FOR CONSTRUCTION	CRF	CRF		CLIENT APPROVAL: ---				1800067-E000	<div><div>0</div></div>
NO	DATE	REVISION	BY	CK.	APPR.						



NOTES:
1.



11/7/2019

					DESIGNED BY: CRF
					CHECKED BY: CRF
					APPROVED BY: ---
					CLIENT APPROVAL: ---
0	11/7/2019	ISSUED FOR CONSTRUCTION	CRF	CRF	
NO	DATE	REVISION	BY	CK.	APPR.



AZTEC UPPER EAST TANK
PUMP HOUSE
ELECTRIC POWER ONE LINE
480VAC & 240VAC

JOB NO.	18000-67	SCALE	
FILENAME	1800067-E001		NTS
DWG. NO.	1800067-E001	REV. NO.	0

PANEL <u>PDP-1</u>			400 <u>AMP BUS</u>						480 / 277 <u>VOLTS</u>			<u>SURFACE</u> <u>MOUNTED</u>					
<u>LOCATION</u> <u>PUMP HOUSE</u>			400 <u>AMP MAIN</u>						3 / 4 <u>PH / WIRE</u>			42,000 A <u>BRACING</u>					
EQUIPMENT DESCRIPTION	PH A (VA)	PH B (VA)	PH C (VA)	TYPE *	COUNT	BREAKER	POLES	CIR #	CIR #	POLES	BREAKER	COUNT	TYPE *	PH A (VA)	PH B (VA)	PH C (VA)	EQUIPMENT DESCRIPTION
BOTTOM FEED THRU POSITION MAIN BRKR					1	400	3	FT	FT								BLANK TOP FEED THRU POSITION
					1	400	3	FT	FT								
					1	400	3	FT	FT								
75 HP WATER PUMP P-100	26,592			M1	1	125	3	1	2	3	20	1	M	4,432			3.5 TON HVAC
		26,592		M1	1	125	3	3	4	3	20	1	M		4,432		
75 HP WATER PUMP P-110	26,592		26,592	M1	1	125	3	5	6	3	20	1	M			4,432	BLANK
				M	1	125	3	7	8								
		26,592		M	1	125	3	9	10								
15 KVA XFMR T-2	4,040		26,592	M	1	125	3	11	12								BLANK
				L	1	40	2	13	14								
		3,020		L	1	40	2	15	16								BLANK
BLANK								17	18								
BLANK								19	20								BLANK
								21	22								
BLANK								23	24								BLANK
								25	26								
								27	28								
								29	30								
* LOAD TYPE	CODE	DEMAND	PH A	PH B	PH C	NEUTRAL BUS: 100% GROUND BUS: 50% ISO. GROUND BUS: NONE FEEDER SOURCE: TOTAL LOAD: 179.9 KVA TOTAL LOAD: 217 AMPS											
LONG CONTINOUS LOAD	L	100%	4,040	3,020	0												
RECEPTACLES	R	100%	0	0	0												
MISC	O	100%	0	0	0												
LARGEST MOTOR	M1	100%	26,592	26,592	26,592												
MOTORS	M	100%	31,024	31,024	31,024												
STANDBY	S	0%	0	0	0												
HEATERS	H	100%	0	0	0												
KITCHEN	K	100%	0	0	0												
TOTAL LOAD PER PHASE			61,656	60,636	57,616	PANEL: PDP-1											

PANEL PDP-2				125 AMP BUS				240 / 120 VOLTS				SURFACE MOUNTED			
LOCATION PUMP HOUSE				80 AMP MAIN				1 / 3 PH / WIRE				10,000 A BRACING			
EQUIPMENT DESCRIPTION	PH A (VA)	PH B (VA)	TYPE *	COUNT	BREAKER	POLES	CIR #	CIR #	POLES	BREAKER	COUNT	TYPE *	PH A (VA)	PH B (VA)	EQUIPMENT DESCRIPTION
CATHODIC RECTIFIER	1,920		L	1	30	2	1	2	1	30	1	L	600		P/H EXTERIOR LIGHTS
		1,920	L	1	30	2	3	4	1	30	1	L		300	P/H INTERIOR LIGHTS
P/H RECEPTACLES	1,200		R	1	20	1	5	6	1	20	1	L	800		PLC POWER SUPPLY
EXISTING RTU P/S		800	L	1	20	1	7	8							BLANK
BLANK							9	10							BLANK
BLANK							11	12							BLANK

* LOAD TYPE	CODE	DEMAND	PH A		PH B	NEUTRAL BUS: 100% GROUND BUS: 50% ISO. GROUND BUS: NONE FEEDER SOURCE: TOTAL LOAD: 7.1 KVA TOTAL LOAD: 29 AMPS PANEL: PDP-2
LONG CONTINOUS LOAD	L	100%	3,320		3,020	
RECEPTACLES	R	60%	720		0	
MISC	O	100%	0		0	
AIR HANDLING EQUIP	M1	80%	0		0	
MOTORS	M	100%	0		0	
STANDBY	S	0%	0		0	
HEATERS	H	100%	0		0	
KITCHEN	K	100%	0		0	
TOTAL LOAD PER PHASE			4,040		3,020	

NOTES:
1.

						DESIGNED BY: CRF
						CHECKED BY: CRF
						APPROVED BY: —
						CLIENT APPROVAL: —
0	11/7/2019	ISSUED FOR CONSTRUCTION		CRF	CRF	
NO	DATE	REVISION	BY	CK.	APPR.	

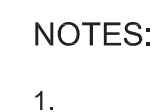


AZTEC UPPER EAST TANK
PUMP HOUSE
ELECTRIC PANEL SCHEDULES
480VAC & 240VAC

JOB NO.	18000-67	SCALE	
FILENAME	1800067-E002	NTS	
DWG. NO.	1800067-E002	REV. NO.	0

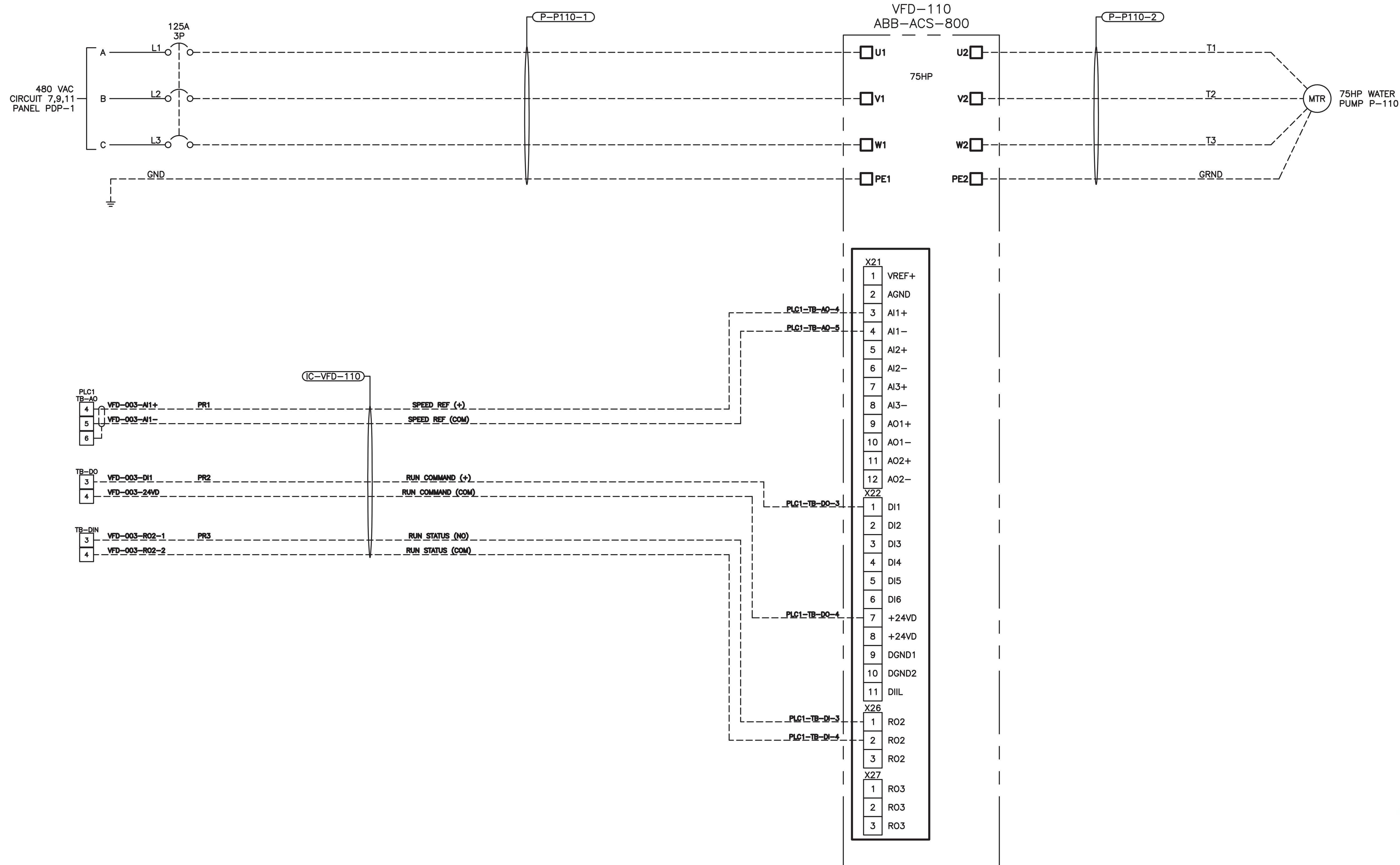


11/7/2019



OPTIMIZED
ENGINEERING SERVICES, LLC
649 TECH CENTER DR. STE. B DURANGO, CO 81301
970-946-7814

JOB NO.	18000-67
FILENAME	1800067-E003
DWG. NO.	1800067-E003



NOTES:

1.

					DESIGNED BY: CRF
					CHECKED BY: CRF
					APPROVED BY: ---
					CLIENT APPROVAL: ---
0	11/7/2019	ISSUED FOR CONSTRUCTION	CRF	CRF	
NO	DATE	REVISION	BY	CK.	APPR.



AZTEC UPPER EAST TANK
PUMP HOUSE
ELECTRIC MOTOR SCHEMATIC
480VAC PUMP P-110

JOB NO. **18000-67**

FILENAME **1800067-E004**

DWG. NO.

1800067-E004

SCALE

NTS

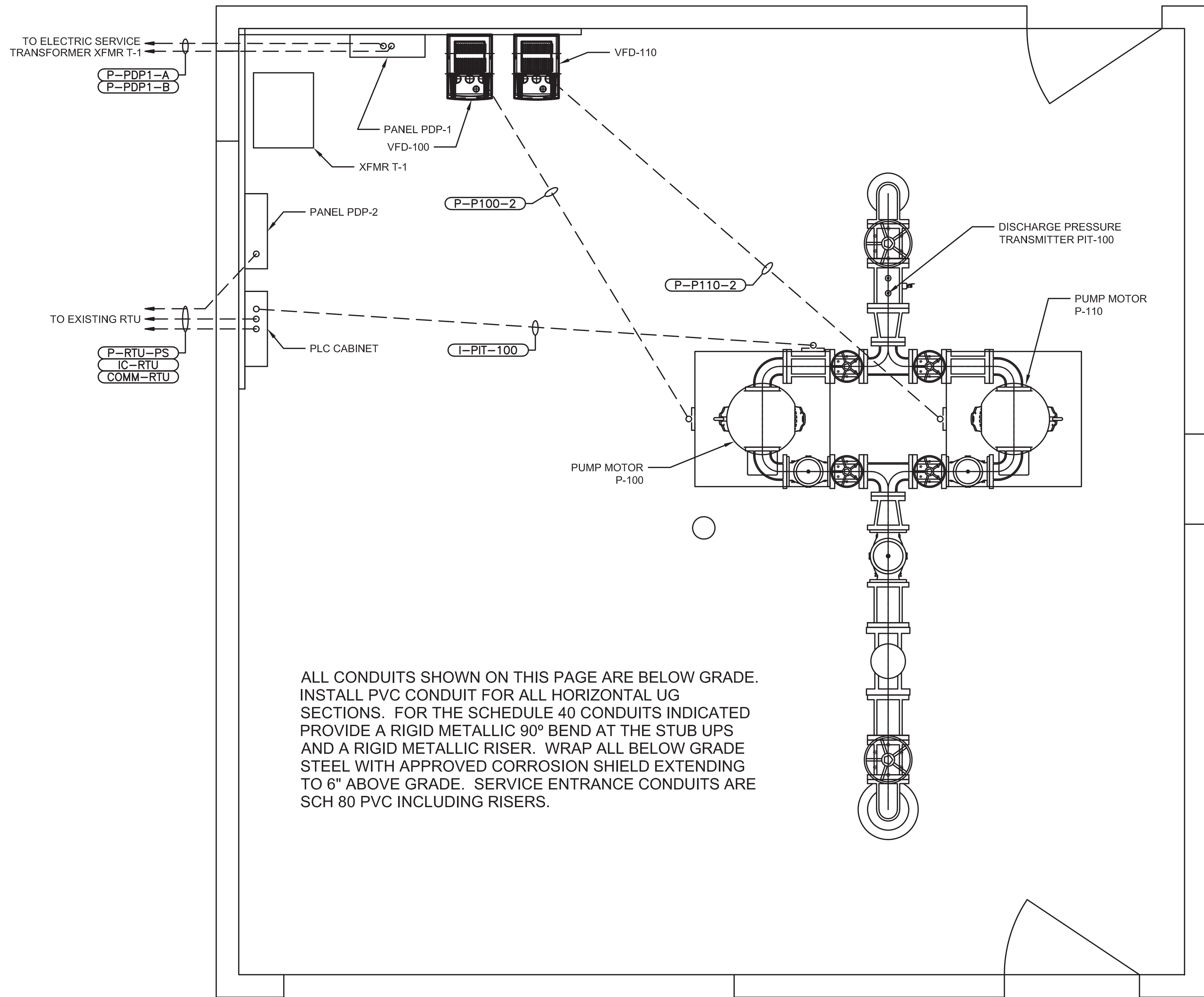
REV. NO.

0



11/7/2019

ANSI D, 22 x 34 in.



ALL CONDUITS SHOWN ON THIS PAGE ARE BELOW GRADE. INSTALL PVC CONDUIT FOR ALL HORIZONTAL UG SECTIONS. FOR THE SCHEDULE 40 CONDUITS INDICATED PROVIDE A RIGID METALLIC 90° BEND AT THE STUB UPS AND A RIGID METALLIC RISER. WRAP ALL BELOW GRADE STEEL WITH APPROVED CORROSION SHIELD EXTENDING TO 6" ABOVE GRADE. SERVICE ENTRANCE CONDUITS ARE SCH 80 PVC INCLUDING RISERS.



11/7/2019

					DESIGNED BY: CRF
					CHECKED BY: CRF
					APPROVED BY: ---
					CLIENT APPROVAL: ---
0	11/7/2019	ISSUED FOR CONSTRUCTION	BWH	CRF	
NO	DATE	REVISION	BY	CK.	APPR.



AZTEC UPPER EAST TANK
PUMP HOUSE TOP VIEW
EQUIPMENT LAYOUT AND
CONDUIT/CABLE ROUTING PLAN

JOB NO.	18000:67	SCALE	1"=1'-0"
FILENAME	1800067-E005	REV. NO.	0
DWG. NO.	1800067-E005		

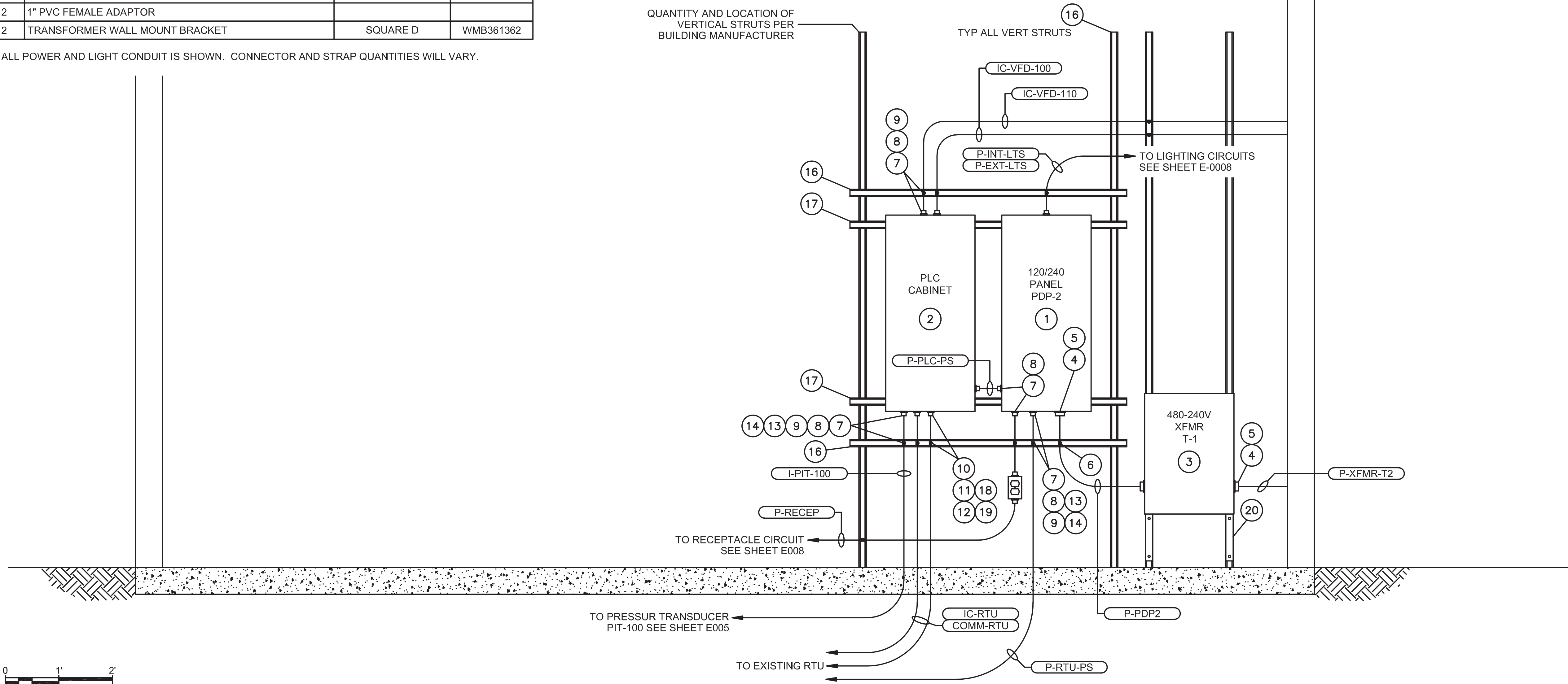
ANSI D, 22 x 34 in.

Nov 11, 2019 - 11:16am by darquar - Path = Y:\065 Projects\Aztec Pump Station\CAD Files\1800067-E005.dwg

BILL OF MATERIAL				
NO.	QTY.	DESCRIPTION	MANUFACTURER	PART NUMBER
1	1	125A, 1Ø 3W 240V 30 SPACE PANELBOARD	SQUARE D	QO112L125G
2	1	VENDOR SUPPLIED PLC CABINET (SUPPLIED BY OTHERS)		
3	1	15KVA, 240/480 X 120/240VAC, DRY TYPE TRANSFORMER	SQUARE D	EE15S3H
4	10 FT	1" LIQUID TIGHT FLEXIBLE METALLIC CONDUIT (LFMC)		
5	3	1" LFMC INSULATED THROAT CONNECTOR		
6	1	1" LFMC STRUT STRAP		
7	A/R	3/4" GALVANIZED RIGID METALLIC CONDUIT (RMC)		
8	10*	3/4" RMC INSULATED THROAT CONDUIT HUB		
9	8*	3/4" RMC STRUT STRAP		
10	A/R	1" GALVANIZED RIGID METALLIC CONDUIT (RMC)		
11	2	1" RMC INSULATED THROAT CONDUIT HUB		
12	2	1" UNI-STRUT STRAP		
13	A/R	3/4" SCHEDULE 40 PVC CONDUIT		
14	2	3/4" PVC FEMALE ADAPTOR		
15	2	1" UNI-STRUT STRAP		
16	A/R	1-5/8" X 1-5/8" GALVANIZED STRUT		
17	A/R	1-5/8" X 7/8" GALVANIZED STRUT		
18	2	1" SCHEDULE 40 PVC CONDUIT		
19	2	1" PVC FEMALE ADAPTOR		
20	2	TRANSFORMER WALL MOUNT BRACKET	SQUARE D	WMB361362

* NOT ALL POWER AND LIGHT CONDUIT IS SHOWN. CONNECTOR AND STRAP QUANTITIES WILL VARY.

WEST INTERIOR ELEVATION



					DESIGNED BY: CRF
					CHECKED BY: CRF
					APPROVED BY: ---
					CLIENT APPROVAL: ---
0	11/7/2019	ISSUED FOR CONSTRUCTION	BWH	CRF	
NO	DATE	REVISION	BY	CK.	APPR.



AZTEC UPPER EAST TANK
PUMP HOUSE INTERIOR
ELEVATION AND EQUIPMENT
BILL OF MATERIALS

JOB NO.	18000:67	SCALE	1"=1'-0"
FILENAME	1800067-E006	REV. NO.	0
DWG. NO.	1800067-E006		

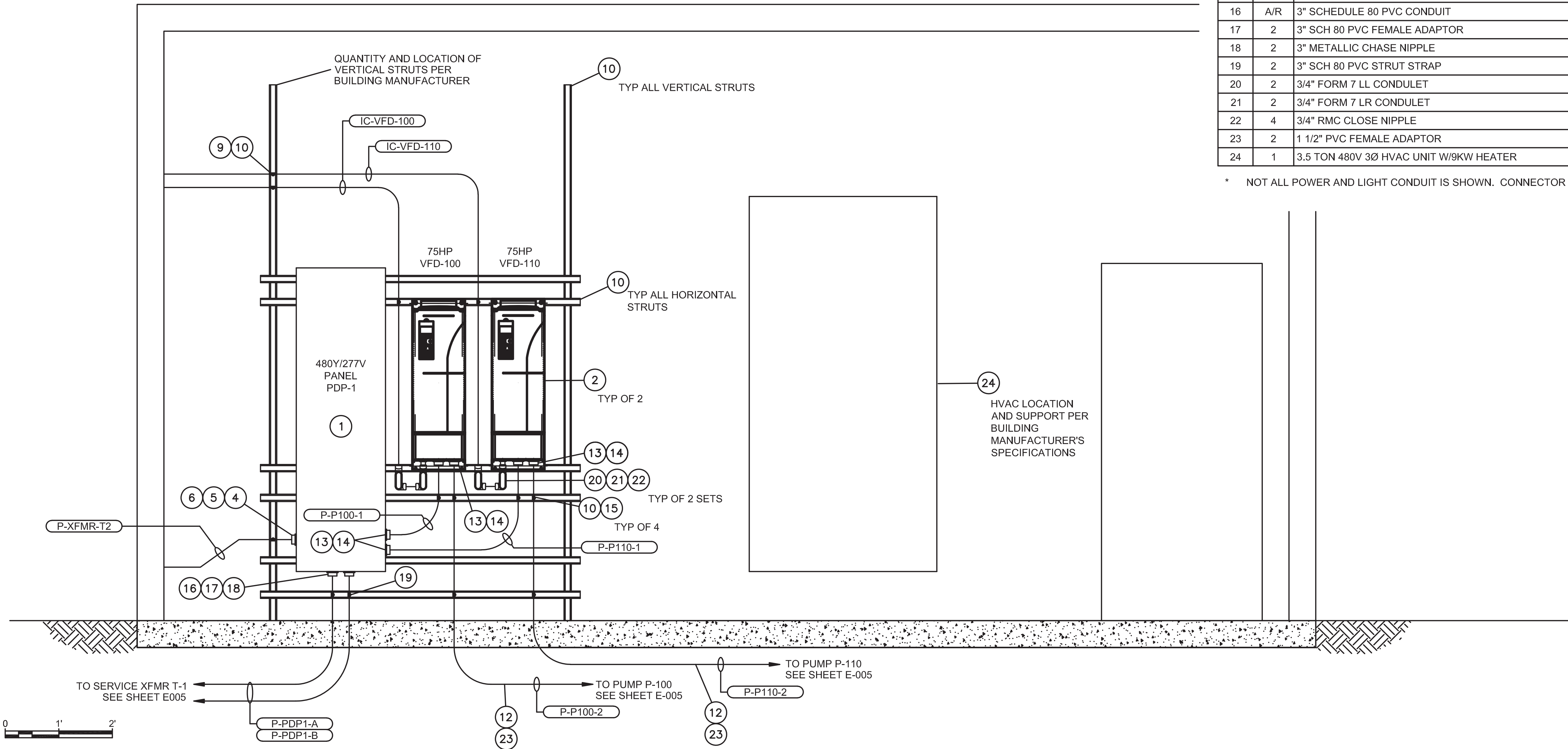


11/7/2019

Nov 11, 2019 - 12:11pm by darquar - Path = Y:\GES Projects\Aztec Pump Station\CAD Files\1800067-E006.dwg

ANSI D, 22 x 34 in.

NORTH INTERIOR ELEVATION



BILL OF MATERIAL				
NO.	QTY.	DESCRIPTION	MANUFACTURER	PART NUMBER
1	1	400A, 3Ø, 4W, 480Y/277V, 30 SPACE PANELBOARD	SQUARE D	NF MB 400A
2	2	75HP, 480V, 3Ø, ACTIVE FRONT END VFD	ABB	ACS800-U31-0100
3	N/A	NOT USED		
4	N/A	1" LIQUID TIGHT FLEXIBLE METALLIC CONDUIT (LFMC)		
5	1	1" LFMC INSULATED THROAT CONNECTOR		
6	1	1" LFMC STRUT STRAP		
7	A/R	3/4" GALVANIZED RIGID METALLIC CONDUIT (RMC)		
8	N/A	3/4" RMC INSULATED THROAT CONDUIT HUB		
9	6*	3/4" RMC STRUT STRAP		
10	A/R	1-5/8" X 1-5/8" GALVANIZED STRUT		
11	A/R	1-5/8" X 7/8" GALVANIZED STRUT		
12	A/R	1-1/2" SCHEDULE 40 PCV CONDUIT		
13	A/R	1-1/2" GALVANIZED RIGID METALLIC CONDUIT (RMC)		
14	6	1-1/2" RMC INSULATED THROAT CONDUIT HUB		
15	6	1-1/2" RMC STRUT STRAP		
16	A/R	3" SCHEDULE 80 PVC CONDUIT		
17	2	3" SCH 80 PVC FEMALE ADAPTOR		
18	2	3" METALLIC CHASE NIPPLE		
19	2	3" SCH 80 PVC STRUT STRAP		
20	2	3/4" FORM 7 LL CONDULET		
21	2	3/4" FORM 7 LR CONDULET		
22	4	3/4" RMC CLOSE NIPPLE		
23	2	1 1/2" PVC FEMALE ADAPTOR		
24	1	3.5 TON 480V 3Ø HVAC UNIT W/9KW HEATER	BARD	W42A#CO9XP4

* NOT ALL POWER AND LIGHT CONDUIT IS SHOWN. CONNECTOR AND STRAP QUANTITIES WILL VARY.

					DESIGNED BY: CRF
					CHECKED BY: CRF
					APPROVED BY: —
					CLIENT APPROVAL: —
0	11/7/2019	ISSUED FOR CONSTRUCTION	BWH	CRF	
NO	DATE	REVISION	BY	CK.	APPR.



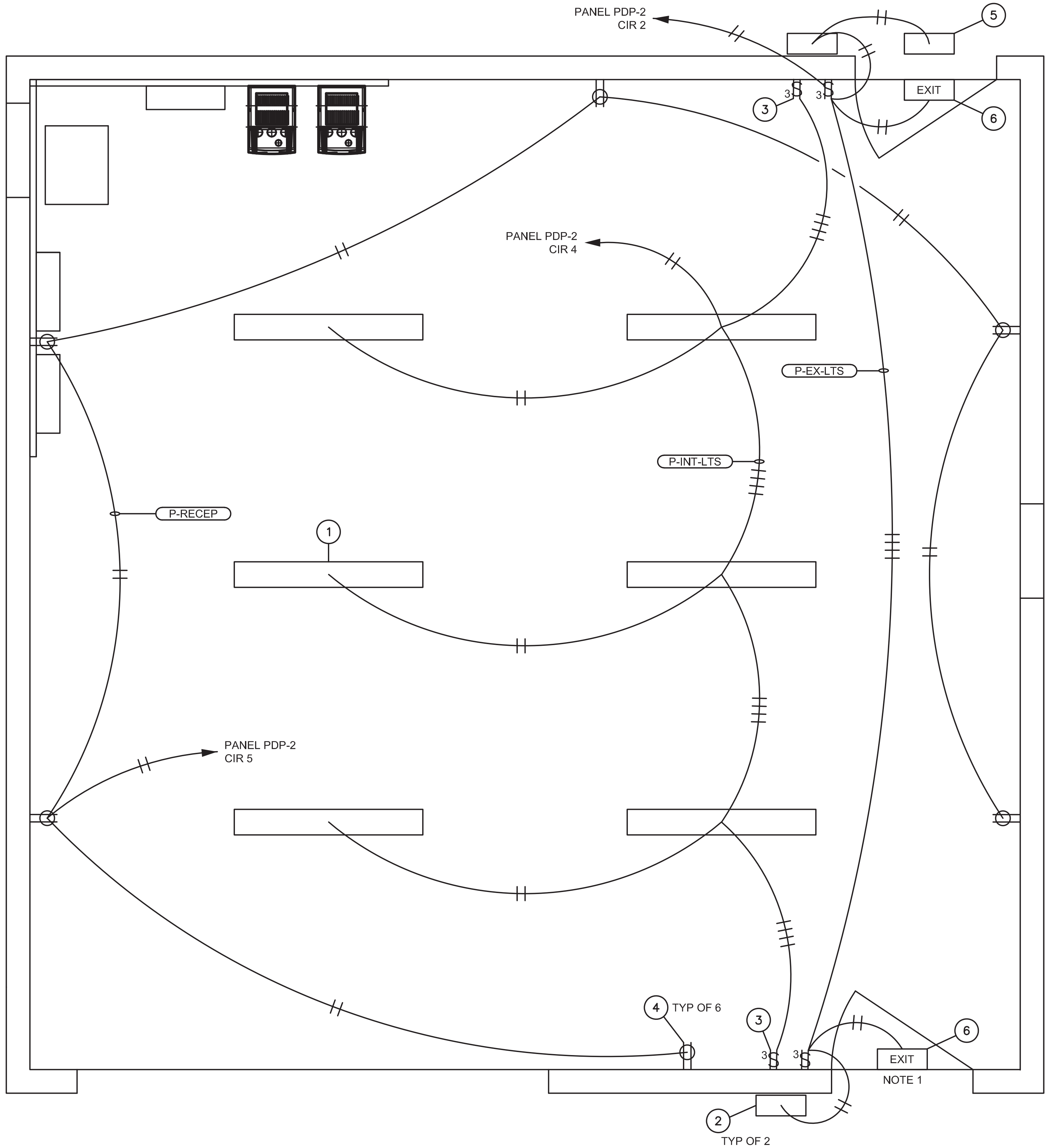
AZTEC UPPER EAST TANK
PUMP HOUSE INTERIOR
ELEVATION AND EQUIPMENT
BILL OF MATERIALS

JOB NO.	18000:67	SCALE	1"=1'-0"
FILENAME	1800067-E007	REV. NO.	0
DWG. NO.	1800067-E007		



11/7/2019

ANSI D, 22 x 34 in.



BILL OF MATERIAL				
NO.	QTY.	DESCRIPTION	MANUFACTURER	PART NUMBER
1	6	38W MULTI-VOLTAGE VAPOR TIGHT 4' LED SURFACE MT	EATON	4VT2-LD4-4-DR-UNV-840-CD1-WL-U
2	2	76W MULTI-VOLTAGE WALL PACK	EATON	WPMLED
3	2	2-GANG SWITCH BOX W/2-3WAY SWITCHES & IND COVER		
4	6	1-GANG SWITCH BOX W/1-DUPLEX RECEPTACLE & IND COVER		
5	1	WALL MOUNT 120V SPOT LIGHT PER OWNERS SPECIFICATION		
6	2	WALL MOUNT COMBO EMERGENCY/EXIT LIGHT	EATON	RCS182LED

NOTES:
1. EXIT/EMERGENCY LIGHTS ARE SUPPLIED BY EXTERIOR LIGHT CIRCUIT WITH NO SWITCHING. TAP FEED CIRCUIT AT SWITCH BOX.

					DESIGNED BY: CRF
					CHECKED BY: CRF
					APPROVED BY: ---
					CLIENT APPROVAL: ---
0	11/7/2019	ISSUED FOR CONSTRUCTION	BWH	CRF	
NO	DATE	REVISION	BY	CK.	APPR.



AZTEC UPPER EAST TANK
PUMP HOUSE
LIGHTING & POWER PLAN

JOB NO.	18000:67	SCALE	1"=1'-0"
FILENAME	1800067-E008	REV. NO.	0
DWG. NO.	1800067-E008		



11/7/2019

ELECTRICAL CONDUIT AND CABLE SCHEDULE						
CABLE #	CONDUIT	SIZE & NUMBERS OF CONDUCTORS	INSULATION	VOLTAGE RATING	FROM	TO
P-PDP1-A	3" SCH 80 PVC	3-1C #3/0 & 1-1C #1/0 GC	XHHW-2	600	150KVA TRANSFORMER XFMR-T1	480 VOLT PANEL PD-1 MAIN CB
P-PDP1-B	3" SCH 80 PVC	3-1C #3/0 & 1-1C #1/0 GC	XHHW-2	600	150KVA TRANSFORMER XFMR-T1	480 VOLT PANEL PD-1 MAIN CB
P-P100-1	1-1/2" RMC	3-1C #1 & 1-1C #6 EGC	THHN	600	480 VOLT PANEL PD-1	75HP WATER PUMP VFD VFD-100
P-P100-2	1-1/2" RMC/SCH 40 PVC	3-1C #1 & 1-1C #6 EGC	THHN	600	75HP WATER PUMP VFD VFD-100	75HP WATER PUMP MOTOR P-100
P-P110-1	1-1/2" RMC	3-1C #1 & 1-1C #6 EGC	THHN	600	480 VOLT PANEL PD-1	75HP WATER PUMP VFD VFD-110
P-P110-2	1-1/2" RMC/SCH 40 PVC	3-1C #1 & 1-1C #6 EGC	THHN	600	75HP WATER PUMP VFD VFD-110	75HP WATER PUMP MOTOR P-110
P-HVAC	3/4" RMC	3-1C #10 & 1-1C #10 EGC	THHN	600	480 VOLT PANEL PD-1	3.5 TON HVAC UNIT #1
P-XFMR-T2	1" RMC/LFMC	2-1C #8 & 1-1C #10 EGC	THHN	600	480 VOLT PANEL PD-1	15KVA TRANSFORMER XFMR-T2
P-PDP2	1" RMC/LFMC	2-1C #4, 1C-#4 GC & 1-1C #8 EGC	THHN	600	15KVA TRANSFORMER XFMR-T2	240/120V PANEL PD-2
P-RECT	3/4" RMC	2-1C #10 & 1-1C #10 EGC	THHN	600	240/120V PANEL PD-2	CATHODIC RECTIFIER
P-PLC-PS	3/4" RMC	2-1C #12 & 1-1C #12 EGC	THHN	600	240/120V PANEL PD-2	PLC POWER SUPPLY
P-RTU-PS	3/4" RMC/SCH 40 PVC	2-1C #12 & 1-1C #12 EGC	THHN	600	240/120V PANEL PD-2	EXISTING RTU CABINET
P-RECEP	3/4" RMC	2-1C #12 & 1-1C #12 EGC	THHN	600	240/120V PANEL PD-2	PUMP HOUSE RECEPTACLES
P-INT-LTS	3/4" RMC	2-1C #12 & 1-1C #12 EGC	THHN	600	240/120V PANEL PD-2	PUMP HOUSE INTERIOR LIGHTS
P-EXT-LTS	3/4" RMC	2-1C #12 & 1-1C #12 EGC	THHN	600	240/120V PANEL PD-2	PUMP HOUSE EXTERIOR LIGHTS

CONTROLS CONDUIT AND CABLE SCHEDULE						
CABLE #	CONDUIT	SIZE & NUMBERS OF CONDUCTORS	INSULATION	VOLTAGE RATING	FROM	TO
I-PIT-100	3/4" RMC/SCH 40 PVC	1-4C #18 CABLE W/OS	TC-TFN	600	PLC CABINET	DISCHARGE PRESSURE TRANSDUCER P-100
IC-VFD-100	3/4" RMC	1-4PR #18 CABLE W IS-OS	TC-TFN	600	PLC CABINET	WATER PUMP P-100 DRIVE VFD-100
IC-VFD-110	3/4" RMC	1-4PR #18 CABLE W IS-OS	TC-TFN	600	PLC CABINET	WATER PUMP P-100 DRIVE VFD-110
IC-RTU	1" RMC/SCH 40 PVC	2-1PR #16 OS & 5-1C #16	TC-ITC/THWN	600	PLC CABINET	EXISTING RTU CABINET
COMM-RTU	1" RMC/SCH 40 PVC	1-4PR #22 CAT 5 OUTDOOR RATED	CAT 5	300	PLC CABINET	EXISTING RTU CABINET

NOTES:

1. GC = GROUNDED CONDUCTOR (NEUTRAL), EGC = EQUIPMENT GROUNDING CONDUCTOR

						DESIGNED BY: CRF
						CHECKED BY: CRF
						APPROVED BY: ---
						CLIENT APPROVAL: ---
0	11/7/2019	ISSUED FOR CONSTRUCTION	CRF	CRF		
NO	DATE	REVISION	BY	CK.	APPR.	

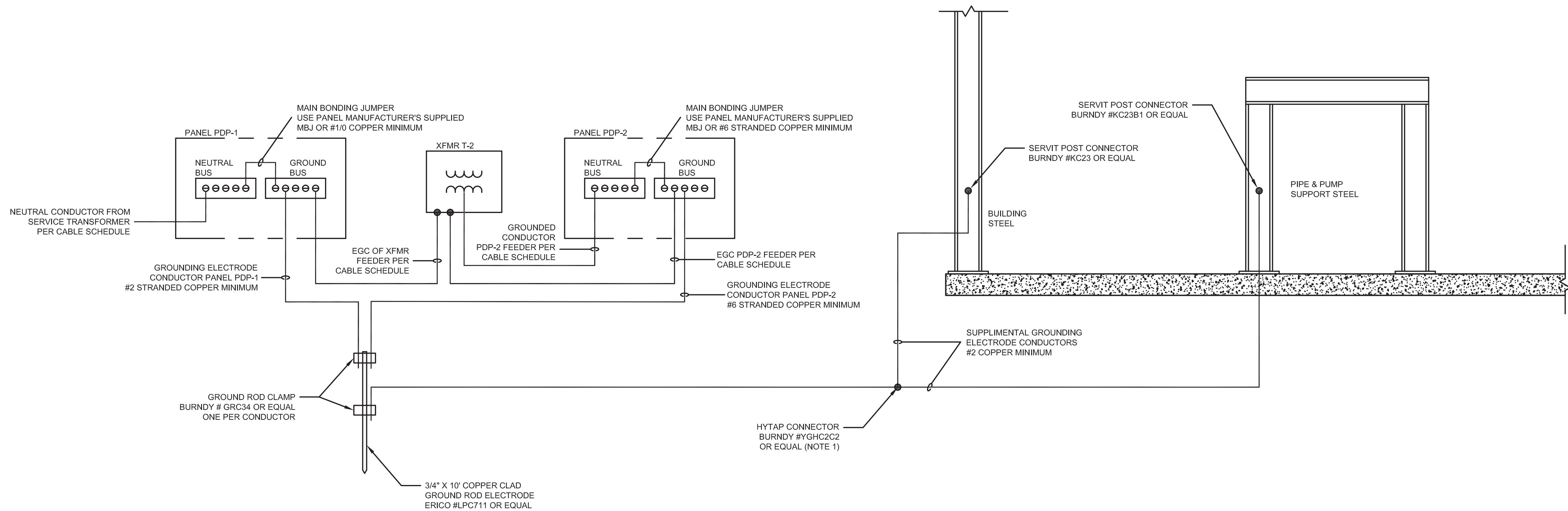


AZTEC UPPER EAST TANK
PUMP HOUSE
ELECTRIC CONDUIT & CABLE
SCHEDULE

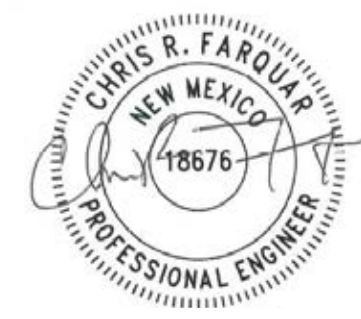
JOB NO.	18000-67	SCALE	
FILENAME	1800067-E009		NTS
DWG. NO.	1800067-E009	REV. NO.	0



11/7/2019



- NOTES:
1. USE BURNDY #K2C23 AT BUILDING STEEL AS ALTERNATE AND AVOID SPLICING A TAP.



					DESIGNED BY: CRF
					CHECKED BY: CRF
					APPROVED BY: ---
					CLIENT APPROVAL: ---
0	11/7/2019	ISSUED FOR CONSTRUCTION	CRF	CRF	
NO	DATE	REVISION	BY	CK.	APPR.



AZTEC UPPER EAST TANK
PUMP HOUSE
GROUNDING PLAN

JOB NO.	18000-67	SCALE	
FILENAME	1800067-E010	NTS	
DWG. NO.	1800067-E010	REV. NO.	0