

Path: C:\BCP\MD2344906 FILENAME: C-100.DWG PLOT DATE: 3/4/2022 4:20 PM CAD USER: TYLER PRIDEMORE



- KEY NOTES**
- GRAVEL SURFACE, SEE DETAIL D / SHEET C-003. APPROX 5655 SF.
 - ELECTRICAL CABINET, REFERENCE ELECTRICAL PLANS
 - 12.0' DOUBLE-WIDE SWING GATE. SEE IHS STD DWG W-34
 - CHAINLINK FENCING. SEE IHS STD DWG W-34
 - CMU PUMPHOUSE, REFERENCE ARCHITECTURAL AND STRUCTURAL PLANS
 - 6' X 9' PRV ASSEMBLY PER IHS STANDARD DETAIL WS-4B AND WS-4C.
 - CONCRETE PAD

MARK	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1595250.35	696477.96	5964.46	FENCE CORNER
2	1595258.95	696566.22	5962.20	FENCE CORNER
3	1595197.52	696572.20	5962.21	FENCE CORNER
4	1595188.92	696483.94	5963.78	FENCE CORNER
5	1595192.18	696517.40	5963.46	FENCE GATE
6	1595193.34	696529.35	5963.27	FENCE GATE
7	1595145.98	696521.20	5963.46	EDGE OF DRIVE
8	1595147.30	696534.63	5963.46	EDGE OF DRIVE



SALT LAKE CITY, UT



CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: C. WILLMORE

DRAWN: T. PRIDEMORE

CHECKED: C. WILLMORE

CHECKED: --

APPROVED: S. BRENCLEY

FILENAME

C-100.dwg

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

CIVIL

DILKON PASS PUMP
STATION GRADING
PLAN

DRAWING NUMBER

C-100

SHEET NUMBER
OF

14

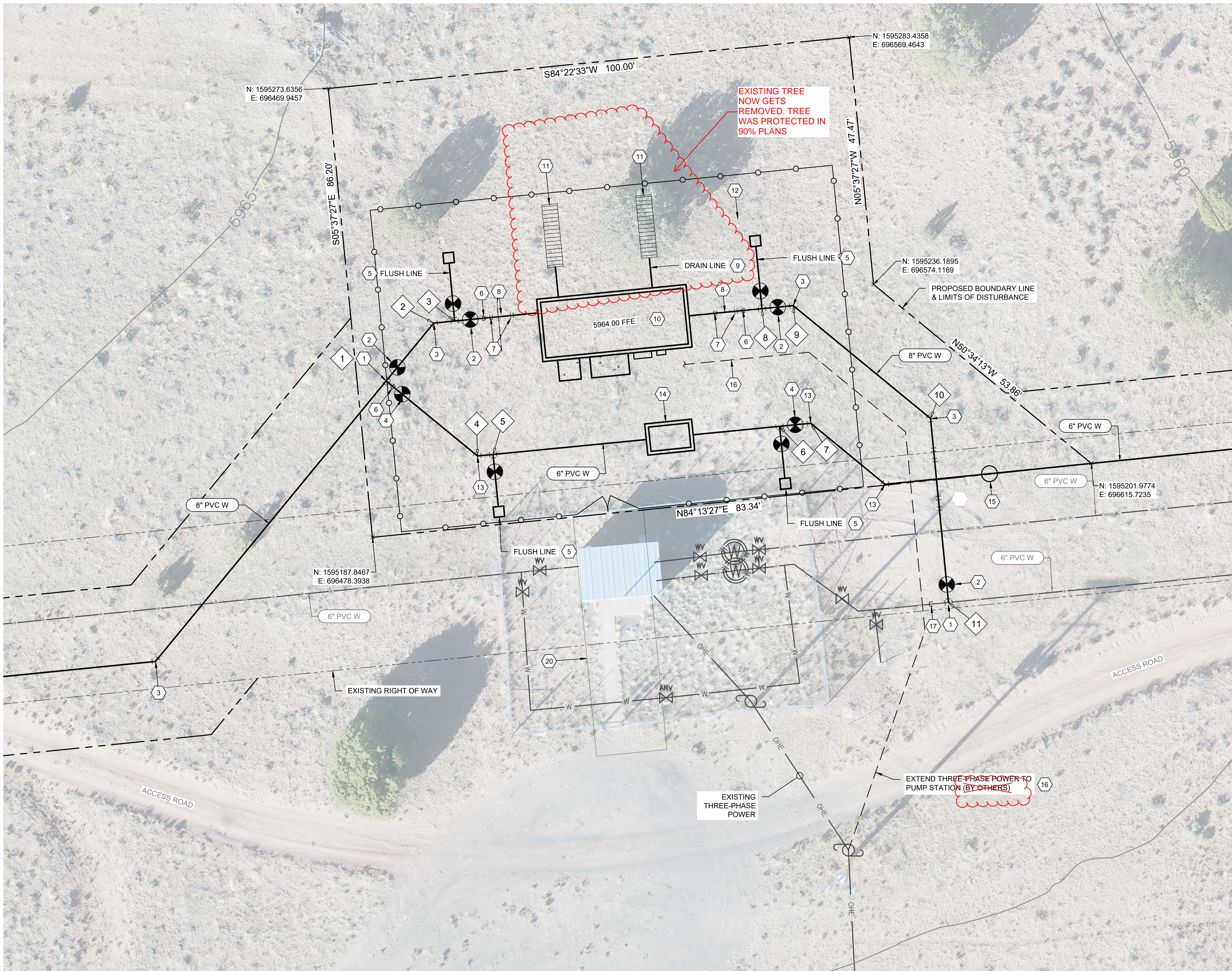
59

Call at least two full working days
before you begin excavation.

ARIZONA 811
Arizona Blue Stake, Inc.

Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Path: C:\BOPM\02344906 FILENAME: C-101.DWG PLOT DATE: 3/4/2022 4:21 PM CAD USER: TYLER PRIDEMORE



GENERAL NOTES

- ALL LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY AND POT HOLE AS REQUIRED TO COMPLETE THE WORK.
- CONTRACTOR TO FIELD VERIFY LOCATION, ELEVATIONS, INVERTS, MATERIAL, DIMENSIONS AND CONDITION OF EXISTING UTILITIES.
- CONTRACTOR TO PROVIDE THRUST BLOCKS AT ALL ELBOWS, TEES, CROSSES PER NTUA STD DWG WS-19. MECHANICAL JOINT RESTRAINTS CAN BE UTILIZED IN PLACE OF THRUST BLOCKS. EBA IRON MEGALUG SERIES 2000 PV FOR FITTINGS AND SERIES 2500 FOR PIPE JOINTS - INSTALL PER MANUFACTURE'S RECOMMENDATIONS.
- CONTRACTOR TO INSTALL PIPE IN TRENCH PER DETAIL C / SHEET C-003.
- CONTRACTOR TO INSTALL MARKER POST PER NTUA STD DWG WS-13.
- EASEMENT DIMENSIONS AND PIPELINE OFFSETS ARE SHOWN IN DETAIL B/C-002.
- SEE V-001 FOR COORDINATE CONTROL INFORMATION.
- ALL YARD PIPING TO HAVE MJ X MJ FITTINGS UNLESS NOTED OR OTHERWISE SHOWN IN DETAILS.

KEY NOTES

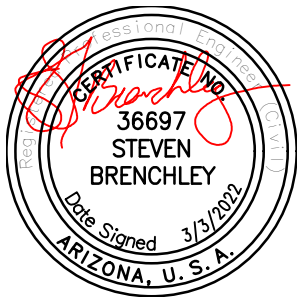
- 8" X 8" DI TEE
- 8" DIA GATE VALVE
- 8" DI 45D FITTING
- 6" DIA GATE VALVE
- 2" DIA FLUSH LINE, SEE NTUA STD DWG WS-11
- 8" X 6" REDUCER
- 6" DIA ROMAC STYLE 501 FLEXIBLE COUPLING
- 6" DIA DIP PC 350
- 4" DIA HDPE DRAIN LINE
- CMU PUMPHOUSE, REFERENCE ARCHITECTURAL AND STRUCTURAL PLANS
- DRAINAGE INFILTRATORS, SEE DETAIL B / SHEET C-003
- 4" 45D FITTING
- 6" 45D FITTING
- 6" X 8" ANTI-CAVITATION PRV ASSEMBLY PER IHS STANDARD DETAIL WS-4B AND WS-4C. SET DOWNSTREAM PRV PRESSURE SETTING TO 60 PSI.
- COMBO AIR VALVE, SEE NTUA STD DETAL WS-10
- 4" SCHEDULE 200 PVC CONDUIT FOR ELECTRICAL POWER LINE
- CUT & CAP EXISTING PIPE ONCE NEW BOOSTER PUMP STATION HAS BEEN COMPLETED AND BROUGHT ONLINE

SITE PIPING

MARK	DESCRIPTION	NORTHING	EASTING
1	8" X 8" TEE	1595217.73	696481.01
2	8" 45D FITTING	1595228.80	696490.11
3	8" X 8" X 2" TEE	1595229.19	696494.09
4	6" 45D FITTING	1595203.39	696498.45
5	6" X 6" X 2" TEE	1595203.69	696501.44
6	6" X 6" X 2" TEE	1595209.06	696556.17
7	6" 45D FITTING	1595209.65	696562.14
8	8" X 8" X 2" TEE	1595231.55	696552.81
9	8" 45D FITTING	1595232.13	696558.77
10	8" 45D FITTING	1595210.57	696585.00
11	8" 90D FITTING	1595175.40	696588.43



SALT LAKE CITY, UT



CONSTRUCTION ISSUE



DILKON PASS PIPELINE AND PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: C. WILLMORE
DRAWN: T. PRIDEMORE
CHECKED: C. WILLMORE
CHECKED: --
APPROVED: S. BRANCHLEY
FILENAME: C-101.dwg
BC PROJECT NUMBER: 157520
CLIENT PROJECT NUMBER

CIVIL

DILKON PASS PUMP STATION YARD PIPING PLAN

DRAWING NUMBER

C-101

SHEET NUMBER OF

15

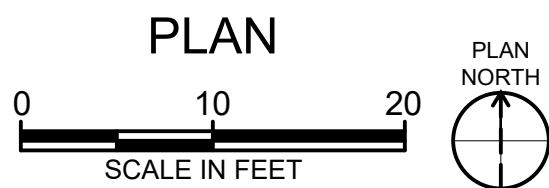
59

Call at least two full working days before you begin excavation.

ARIZONA 811
Arizona Blue Stake, Inc.

Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Path: C:\BCP\MD2344906 FILENAME: C-110.DWG PLOT DATE: 3/4/2022 4:22 PM CAD USER: TYLER PRIDEMORE



GENERAL NOTES

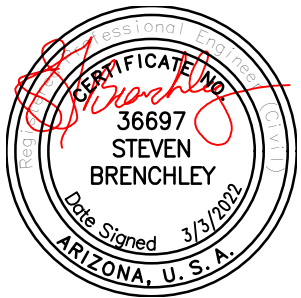
1. ALL LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY AND POTHOLE AS REQUIRED TO COMPLETE THE WORK.
2. CONTRACTOR TO FIELD VERIFY LOCATION, ELEVATIONS, INVERTS, MATERIAL, DIMENSIONS AND CONDITION OF EXISTING UTILITIES.
3. CONTRACTOR TO PROVIDE THRUST BLOCKS AT ALL ELBOWS, TEES, CROSSES PER NTUA STD DWG WS-19. MECHANICAL JOINT RESTRAINTS CAN BE UTILIZED IN PLACE OF THRUST BLOCKS. EBA IRON MEGALUG SERIES 2000 PV FOR FITTINGS AND SERIES 2500 FOR PIPE JOINTS - INSTALL PER MANUFACTURE'S RECOMMENDATIONS.
4. CONTRACTOR TO INSTALL PIPE IN TRENCH PER DETAIL C / SHEET C-003.
5. CONTRACTOR TO INSTALL MARKER POST PER NTUA STD DWG WS-13.
6. EASEMENT DIMENSIONS AND PIPELINE OFFSETS ARE SHOWN IN DETAIL B/C-002.
7. SEE V-001 FOR COORDINATE CONTROL INFORMATION.
8. ALL YARD PIPING TO HAVE MJ X MJ FITTINGS UNLESS NOTED OR OTHERWISE SHOWN IN DETAILS.

KEY NOTES

- 1 6" 90d BEND
- 2 CUT EXISTING WATER MAIN
- 3 6" DIA GATE VALVE PER NTUA STD DWG WS-14 AND SECTION 15102
- 4 5" MANHOLE W/ 4" CHECK VALVE AND TWO (2) REDUCERS. SEE DETAIL A / SHEET C-002
- 5 2" DIA DI PC 350 FLUSH LINE, SEE NTUA STD DWG WS-11
- 6 REMOVE EXISTING 6" PVC PIPE



SALT LAKE CITY, UT



CONSTRUCTION ISSUE



DILKON PASS PIPELINE AND PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: C. WILLMORE

DRAWN: T. PRIDEMORE

CHECKED: C. WILLMORE

CHECKED: --

APPROVED: S. BRENCHEY

FILENAME

C-110.dwg

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

CIVIL

CHECK VALVE SITE PLAN

DRAWING NUMBER

C-110

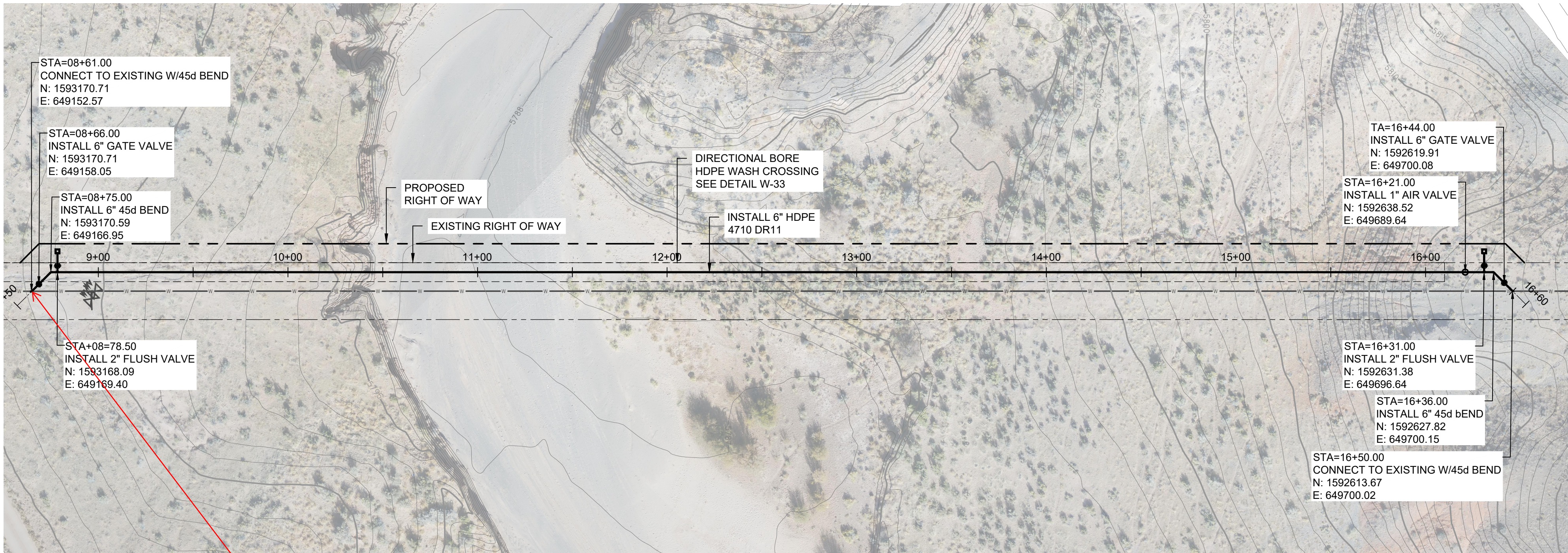
16 SHEET NUMBER
OF 59

Call at least two full working days
before you begin excavation.

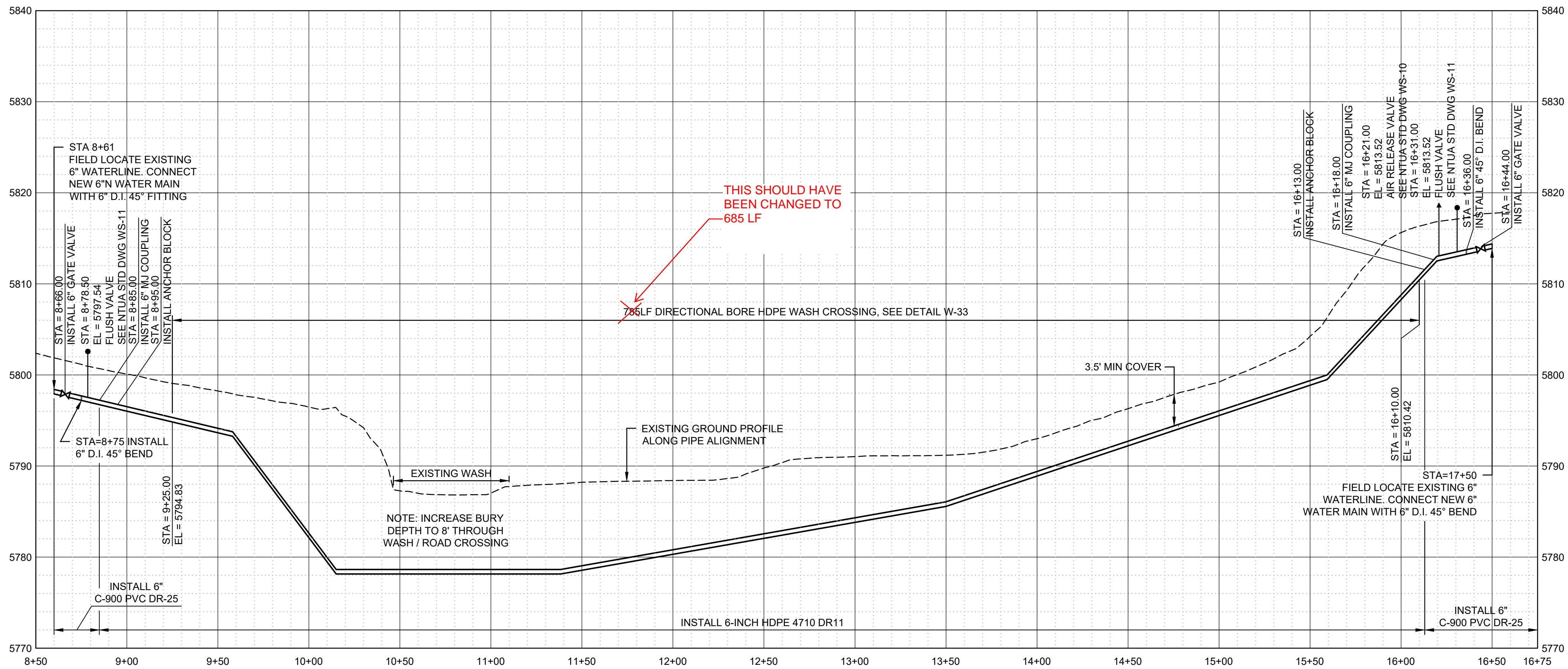
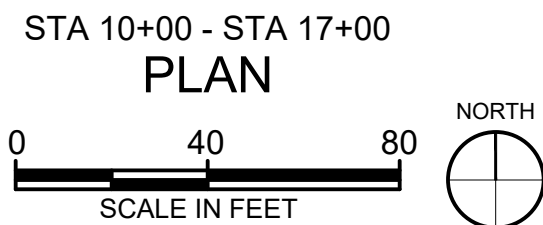


Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Path: C:\BPC\DWG\2024\4906 FILENAME: C-211.DWG PLOT DATE: 3/8/2022 9:30 AM CAD USER: TYLER PRIDEMORE



TIE IN LOCATION HAS BEEN CHANGED FROM THE 90% DRAWINGS. ALIGNMENT HAS BEEN UPDATED TO MATCH NEW TIE IN LOCATION.



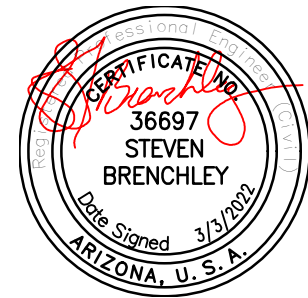
PROFILE
SCALE H: 1" = 40'
V: 1" = 4'

GENERAL NOTES

- ALL LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY AND POTHOLE AS REQUIRED TO COMPLETE THE WORK.
- CONTRACTOR TO FIELD VERIFY PHYSICAL LOCATION, ELEVATIONS AND INVERTS. ELEVATIONS ARE BASED ON NAVD 88 EXPRESSED IN INTERNATIONAL FEET.
- CONTRACTOR TO PROVIDE THRUST BLOCKS AT ALL ELBOWS, TEES, CROSSES PER NTUA STD DWG WS-19. MECHANICAL JOINT RESTRAINTS CAN BE UTILIZED IN PLACE OF THRUST BLOCKS. EBA IRON MEGALUG SERIES 2000 PV FOR FITTINGS AND SERIES 2500 FOR PIPE JOINTS - INSTALL PER MANUFACTURE'S RECOMMENDATIONS.
- CONTRACTOR TO INSTALL PIPE IN TRENCH PER DETAIL C / SHEET C-003.
- CONTRACTOR TO INSTALL MARKER POSTS PER NTUA STD DWG WS-13.
- EASEMENT DIMENSIONS AND PIPELINE OFFSETS ARE PROVIDED ON SHEET C-002.
- DEFLECT PIPE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AS NECESSARY.
- ALL YARD PIPING TO HAVE MJ x MJ DI FITTINGS UNLESS NOTED OR OTHERWISE SHOWN IN DETAILS.



SALT LAKE CITY, UT



CONSTRUCTION ISSUE



DILKON PASS PIPELINE AND PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: WILLMORE

DRAWN: T. PRIDEMORE

CHECKED: C. WILLMORE

CHECKED: --

APPROVED: S. BRANCHLEY

FILENAME

C-211.dwg

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

CIVIL

PLAN AND PROFILE - COYOTE WASH

DRAWING NUMBER

C-211

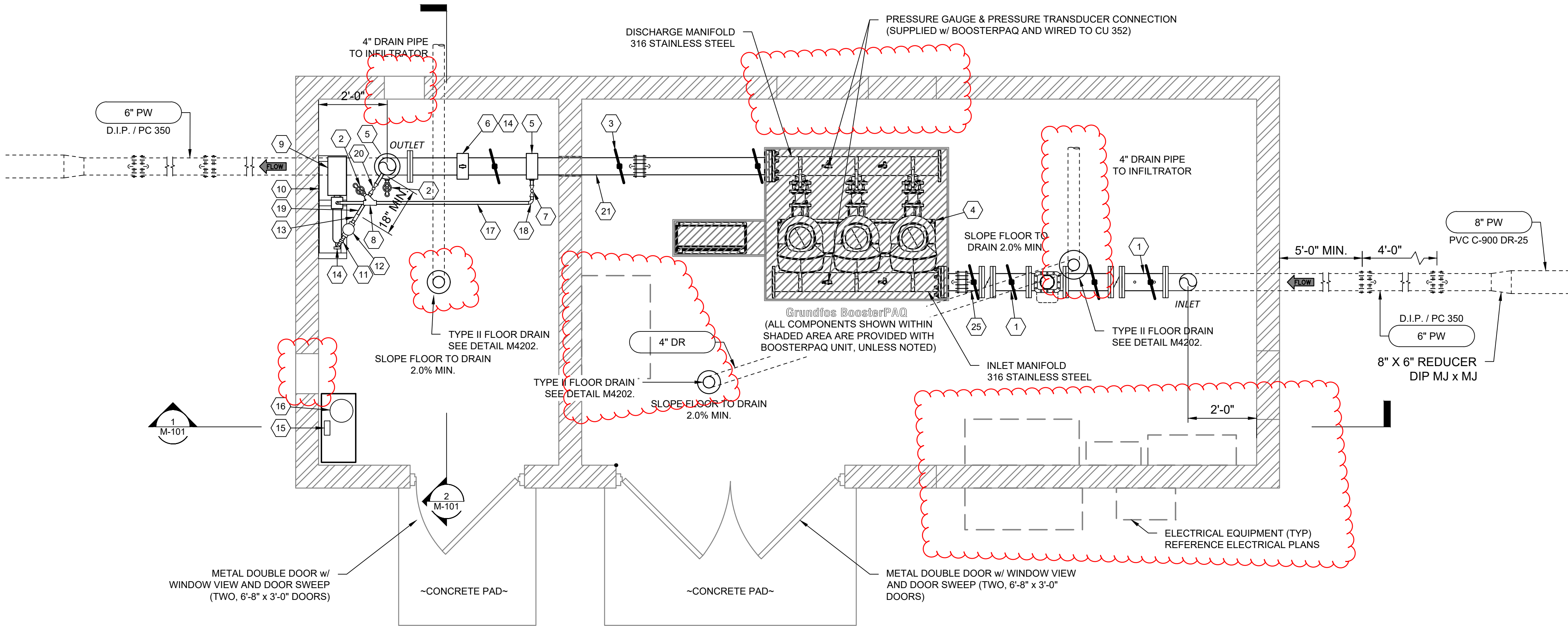
28 SHEET NUMBER
OF 59

Call at least two full working days
before you begin excavation.



Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Path: C:\BCP\M\023449\0 FILENAME: M-100.DWG PLOT DATE: 3/4/2022 4:24 PM CAD USER: TYLER PRIDEMORE



PLAN
SCALE: 1/2" = 1'-0"

GENERAL NOTES

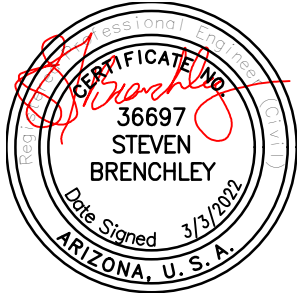
- BOOSTER STATION PIPING DIAMETER VARIES TO FACILITATE: 1) MATCHING MANIFOLD DIAMETER SIZE; 2) DESIGN FLOW OF BOOSTER STATION; 3) AND MAXIMUM ELECTROMAGNETIC METER VELOCITY LIMITS.

KEY NOTES

- 6" FLG X FLG DUCTILE IRON PIPE. PC-350 (TYP.)
- 3/4" HOSE BIB MIPT BRASS
- COATED STEEL PIPE SUPPORT W/ ADJUSTABLE NUT (TYP.)
- GRUNDFOS HYDRO MPC E 3CRE45-4
- SADDLE, 6" x 1" IPT
- SADDLE, 6" x 1" IPT, W/ 1" x 1/4" BUSHING
- GATE VALVE, 1" BRASS, FIPT
- STRAINER, 1" x 1" FIPT G.I.P.
- FRANKLIN ELECTRIC SINGLE PHASE 115/230 VOLTS 3/4 HP BOOSTER PUMP MODEL 5FBT07S4
- BOOSTER PUMP BRACKET
- UNION 1" SLIP SCH. 80 PVC
- WALLACE AND TIERNAN 300 99-C CHLORINE INJECTOR (10LB/DAY)
- COUPLING, 1" SLIP SCH. 80 PVC
- GAUGE GLYCER 1/4" O-350
- CHLORINE SCALE
- GAS CHLORINE CYLINDER
- PIPE 1" CUT AND THREADED TO FIT, G.I.P. (TYP.)
- ELBOW 90° 1" FIPT G.I.P.
- PIPE 1" CUT TO FIT SCH. 80 PVC (TYP.)
- BALL VALVE 1" SLIP SCH. 80 PVC
- 6" DUCTILE IRON FLG'D X PE SPOOL (TYP.)



SALT LAKE CITY, UT



CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: C.WILLMORE

DRAWN: T. PRIDEMORE

CHECKED: C.WILLMORE

CHECKED: ---

APPROVED: S. BRENCHELEY

FILENAME

M-100.dwg

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

PROCESS

DILKON PASS PUMP
STATION BUILDING
PLAN

DRAWING NUMBER

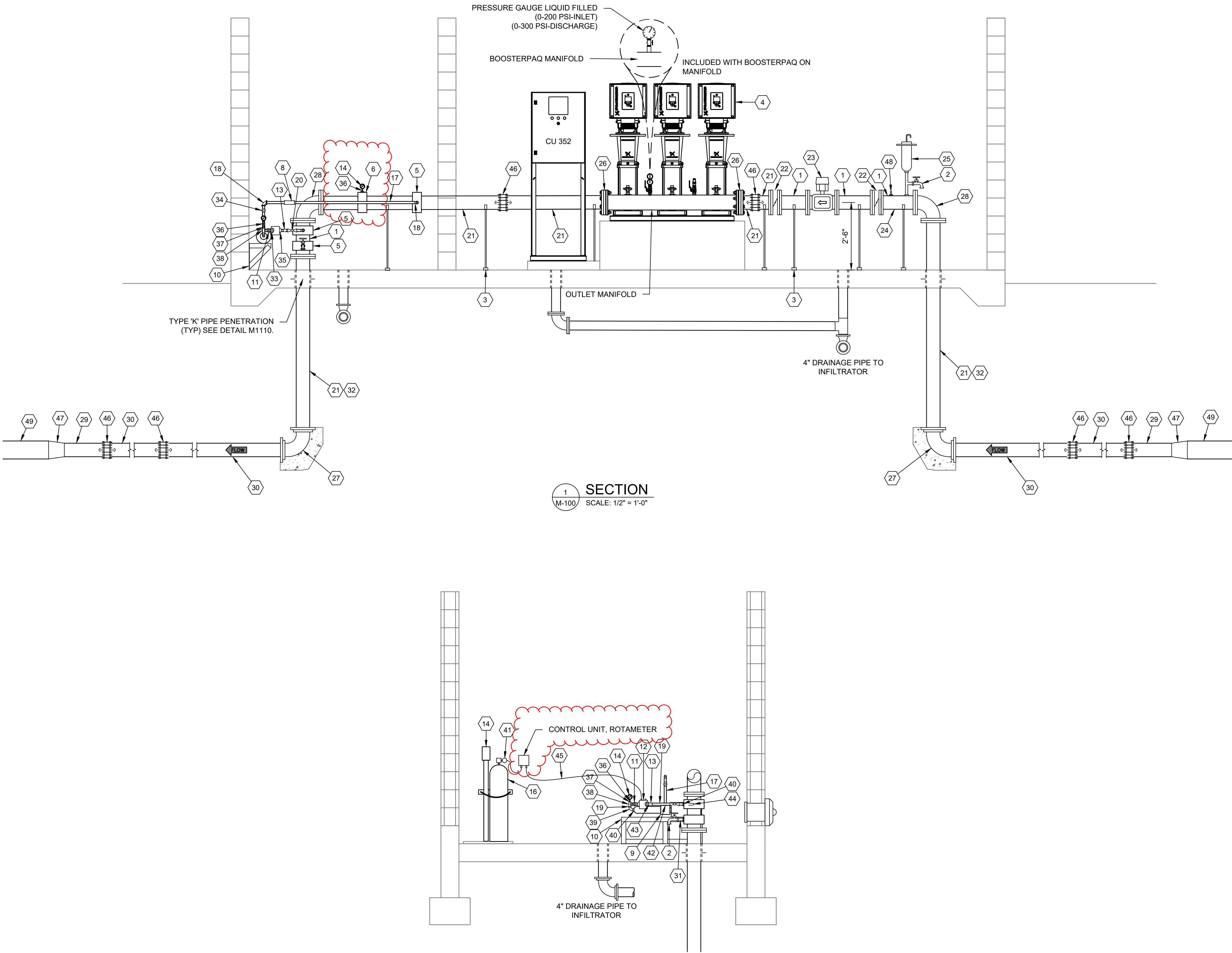
M-100

30

SHEET NUMBER
OF

59

Path: C:\BCP\DWG M-101.DWG PLOT DATE: 3/4/2022 4:40 PM CAD USER: TYLER PRIDEMORE



GENERAL NOTES

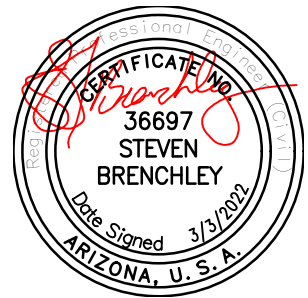
- BOOSTER STATION PIPING DIAMETER VARIES TO FACILITATE: 1) MATCHING MANIFOLD DIAMETER SIZE; 2) DESIGN FLOW OF BOOSTER STATION; 3) AND MAXIMUM ELECTROMAGNETIC METER VELOCITY LIMITS.

KEY NOTES

- 6" FLG X FLG DUCTILE IRON PIPE. PC-350 (TYP.)
- 3/4" HOSE BIB MIPT BRASS
- COATED STEEL PIPE SUPPORT W/ ADJUSTABLE NUT (TYP.)
- GRUNDFOS HYDRO MPC E 3CRE45-4
- SADDLE, 6" x 1" IPT
- SADDLE, 6" x 1" IPT, W/ 1" x 1/4" BUSHING
- GATE VALVE, 1" BRASS, FIPT
- STRAINER, 1" x 1" FIPT G.I.P.
- FRANKLIN ELECTRIC SINGLE PHASE 115/230 VOLTS 3/4 HP BOOSTER PUMP MODEL 5FBT07S4
- BOOSTER PUMP BRACKET
- UNION 1" SLIP SCH. 80 PVC
- WALLACE AND TIERNAN 300 99-C CHLORINE INJECTOR (10LB/DAY)
- COUPLING, 1" SLIP SCH. 80 PVC
- GAUGE GLYCER 1/4" O-350
- CHLORINE SCALE
- GAS CHLORINE CYLINDER
- PIPE 1" CUT AND THREADED TO FIT, G.I.P. (TYP.)
- ELBOW 90° 1" FIPT G.I.P.
- PIPE 1" CUT TO FIT SCH. 80 PVC (TYP.)
- BALL VALVE 1" SLIP SCH. 80 PVC
- 6" DUCTILE IRON FLG'D X PE SPOOL (TYP.)
- 6" MUELLER LINESEAL III BUTTERFLY VALVE, FLANGED ENDS
- 6" EVOO4 ELECTROMAGNETIC METER
- SPOOL TO INCLUDE TAPPING BOSS FOR 3/4" HOSE BIB AND CAV VALVE AND PRESSURE TRANSDUCER
- 3/4" COMBINATION AIR/VACUUM VALVE, SEE SPECIFICATION 15150
- DIELECTRIC INSULATING JOINT AND FLANGE SPACER WITH BOLT ISOLATORS
- DIP MJ X MJ 90° BEND WITH THRUST BLOCK AND MEGALUG RESTRAINED JOINTS
- 6" FLG'D 90° DUCTILE IRON ELBOW
- 6" PVC PIPE, SEE SITE PLAN SHEET C-100
- 6" DI PIPE, PC 350 (WRAP IN TWO (2) LAYERS OF 8 MIL. POLYETHYTENE
- BUSHING, 1" x 3/4"
- WRAP IN TWO (2) LAYERS OF 8 MIL. POLYETHYTENE
- NOZZLE EJECTOR
- UNION, 1" FIPT G.I.P.
- TAILWAY EJECTOR
- VALVE PRESSURE COCK 1/4" MIPT BRASS
- BUSHING 1" S X 1/4" FIPT SCH. 80 PVC
- TEE 1" SLIP SCH. 80 PVC
- ELBOW 90° 1" SLIP SCH. 80 PVC
- ADAPTER 1" S X MIPT SCH. 80 PVC
- PRESSURE REGULATOR
- BUSHING 1-1/4" X 1" G.I.P.
- BUSHING 1" S X 3/4" FIPT SCH. 80 PVC
- 1/2" PVC-SOLUTION TUBE
- TUBING
- 6" ROMAC STYLE 501 FLEXIBLE COUPLING
- 8" x 6" MJ x MJ REDUCER
- WICA C-10 PRESSURE TRANSDUCER
- 8" PVC PIPE, SEE SITE PLAN SHEET C-100



SALT LAKE CITY, UT



CONSTRUCTION ISSUE



DILKON PASS PIPELINE AND PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: C.WILLMORE

DRAWN: T. PRIDEMORE

CHECKED: C. WILLMORE

CHECKED: - -

APPROVED: S. BRENCHELY

FILENAME

M-101.dwg

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

PROCESS

DILKON PASS PUMP STATION BUILDING SECTION

DRAWING NUMBER

M-101

31

SHEET NUMBER
OF

59

Path: C:\BCPM\02344908 FILENAME: S-001.DWG PLOT DATE: 3/4/2022 4:25 PM CAD USER: THOMAS BOUFFARD

GENERAL

- G 1

SCOPE

THE GENERAL NOTES AND STANDARD DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.
- G 2

PRECEDENCE

IF THERE IS A CONFLICT BETWEEN PROJECT SPECIFICATIONS AND STRUCTURAL DRAWINGS, INCLUDING STRUCTURAL NOTES, CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR CLARIFICATION. SPECIFIC NOTES AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- G 3

DIMENSIONS

STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO THE MECHANICAL OR ELECTRICAL EQUIPMENT AND DIMENSIONS RELATED TO EXISTING FACILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION DIMENSIONS AND NOTIFYING CONSTRUCTION MANAGER OF DISCREPANCIES IN A TIMELY FASHION.
- G 4

PROVISIONS FOR EQUIPMENT

MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND EMBEDMENTS NOT SPECIFIED ON THE STRUCTURAL DRAWINGS, BUT SPECIFIED ON OTHER CONTRACT DRAWINGS, SHALL BE PROVIDED PRIOR TO CASTING CONCRETE.
- G 5

MEANS, METHODS & CONSTRUCTION LOADS

CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS AND SEQUENCE OF CONSTRUCTION, AND SHALL MAKE ADEQUATE PROVISION TO MAINTAIN THE INTEGRITY OF ALL STRUCTURES AT ALL STAGES OF CONSTRUCTION. DETERMINATION OF AND PROVISIONS FOR CONSTRUCTION LOADING SHALL BE PROVIDED BY THE CONTRACTOR.
- G 6

SAFETY

CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO ENSURE THE SAFETY OF WORKERS AND VISITORS TO THE SITE, INCLUDING BUT NOT LIMITED TO SHORING, BRACING AND ACCESS RESTRICTION. COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY CODES AND STANDARDS.
- G 7

DRAINAGE SURFACES

SLOPE DRAINAGE SURFACES UNIFORMLY TO DRAIN. SLOPE SHALL BE 1/8" TO 1/4" PER FOOT EXCEPT WHERE NOTED OTHERWISE ON THE PLANS.
- G 8

OPENINGS

OPENINGS THROUGH NEW AND EXISTING WALLS AND SLABS FOR PIPES, DUCTS, CONDUITS, ETC., ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES AND PROVIDE THESE OPENINGS IN ACCORDANCE WITH THE OTHER CONTRACT DOCUMENTS.

DESIGN CRITERIA

- D 1

GOVERNING BUILDING CODE

CONSTRUCTION AND DESIGN SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE. THIS CODE SHALL GOVERN EXCEPT WHERE OTHER APPLICABLE CODES OR CONTRACT PROVISIONS ARE MORE RESTRICTIVE.
- D 2

LIVE LOADS

1. PUMP STATION ROOF LIVE LOAD 20 PSF

2. SLAB ON GRADE LIVE LOAD 250 PSF
- D 3

SNOW LOADS

PUMP STATION

GROUND SNOW LOAD $p_g = 30$ PSF

SNOW EXPOSURE FACTOR $C_e = 0.9$

THERMAL FACTOR $C_t = 1.1$

SNOW LOAD IMPORTANCE FACTOR $I_s = 1.1$

FLAT ROOF SNOW LOAD $p_f = 25$ PSF

PLUS DRIFT LOADS IN ACCORDANCE WITH ASCE 7-10
- D 4

WIND

RISK CATEGORY III

EXPOSURE CATEGORY G

TOPOGRAPHIC FACTOR $K_{zt} = 1.0$

PUMP STATION

BASIC WIND SPEED (ULTIMATE) 115 MPH
- D 5

SEISMIC

MCE ACCELERATION, SHORT PERIOD $S_s = 0.149$ g

MCE ACCELERATION, 1-SEC PERIOD $S_1 = 0.052$ g

SITE CLASS D

DESIGN ACCEL, SHORT PERIOD $S_{DS} = 0.159$ g

DESIGN ACCEL, 1-SEC PERIOD $S_{D1} = 0.083$ g

RISK CATEGORY III

SEISMIC IMPORTANCE FACTOR $I_e = 1.25$ $I_p = 1.5$

SEISMIC DESIGN CATEGORY B

PUMP STATION BUILDING

ORDINARY REINFORCED MASONRY SHEAR WALLS

(ASCE 7-10, TABLE 12.2-1) $R = 2$ $\Omega_o = 2.5$

ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

FOUNDATION

- F 1

DESIGN BASIS

FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT, "DILKON PASS PUMP HOUSE AND PIPELINE PROJECT, DILKON, AZ" BY WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. DATED 02/14/22. CONTRACTOR SHALL FOLLOW THE PROJECT SPECIFICATIONS AND TAKE INTO CONSIDERATION RECOMMENDATIONS CONTAINED IN THE REPORT. NOTIFY THE CONSTRUCTION MANAGER OF CONFLICTS BETWEEN SPECIFICATIONS AND THE REPORT RECOMMENDATIONS FOR RESOLUTION.
- F 2

ALLOWABLE BEARING PRESSURE

SHALLOW FOUNDATIONS SHALL BEAR ON AT LEAST 3 FEET OF STRUCTURAL FILL AND HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2,000 PSF.
- F 3

MINIMUM FOUNDATION PREPARATION

ALL NEW FOUNDATIONS, BEDDING MATERIAL AND SLAB ON GRADE FLOORS SHALL BE SUPPORTED ON A MINIMUM OF 3 FEET OF PROPERLY PLACED AND COMPACTED STRUCTURAL FILL (SEE GEOTECHNICAL REPORT).
- F 4

DIFFERING CONDITIONS

FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED IN THE REPORT SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER. CONTRACTOR IS RESPONSIBLE FOR REPLACING WORK CONDUCTED AFTER SUCH NOTIFICATION BUT BEFORE CONSTRUCTION MANAGER PROVIDES ADDITIONAL DIRECTIONS.
- F 5

EXCAVATION, DE-WATERING & SAFETY

CONTRACTOR SHALL PROVIDE FOR ALL DE-WATERING OF EXCAVATIONS, AND DESIGN / PROVIDE ALL CRIBBING, SHORING AND BRACING REQUIRED FOR SAFETY AND TO ALLOW CONSTRUCTION OF THE WORK PRESENTED HEREIN.
- F 6

STRUCTURAL BACKFILL

UNLESS NOTED OTHERWISE, STRUCTURAL BACKFILL SHALL BE PLACED IN UNIFORM LAYERS AND SHALL BE BROUGHT UP UNIFORMLY AROUND THE STRUCTURE. ADDITIONALLY, BACKFILL SHALL BE BROUGHT UP UNIFORMLY ON BOTH SIDES OF FOUNDATION WALLS. SEE SPECIFICATION 02200 FOR ADDITIONAL INFORMATION.

CONCRETE

- C 1

APPLICABLE CODES

CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 301-10 "SPECIFICATIONS FOR STRUCTURAL CONCRETE", AND THE FOLLOWING CODES:
ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
- C 2

REINFORCING STEEL DETAILS

ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH ACI DETAILING MANUAL (ACI SP-66), LATEST EDITION.
- C 3

DESIGN STRENGTH

1. STRUCTURAL CAST-IN-PLACE CONCRETE $f_c = 4,500$ PSI

2. REINFORCING STEEL ASTM A615, GRADE 60 DEFORMED BARS UNLESS OTHERWISE NOTED
- C 4

CONCRETE COVER

CONCRETE COVER FOR REINFORCING BARS SHALL CONFORM TO ACI 318 AND AS FOLLOWS WITH MINIMUM COVER OF ONE BAR DIAMETER:

1. CONCRETE CAST AGAINST EARTH 3"

2. CONCRETE EXPOSED TO EARTH, WASTEWATER, CHEMICALS OR WEATHER 2"

3. CONCRETE NOT EXPOSED TO EARTH, WASTEWATER, CHEMICALS OR WEATHER 1-1/2"
- C 5

BAR DEVELOPMENT AND LAP SPLICE LENGTH

SEE TABLE AT THE END OF THESE STRUCTURAL NOTES. IN SLABS, BEAMS, GIRDERS AND HORIZONTAL REINFORCING AT WALLS, SPLICES OF ADJACENT REINFORCING STEEL BARS SHALL BE STAGGERED AT LEAST ONE SPLICE LENGTH, UNLESS OTHERWISE SPECIFIED.
- C 6

STANDARD HOOKS

BARS ENDING IN RIGHT ANGLE BENDS OR HOOKS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-14. PROVIDE STANDARD HOOK IN BARS WHICH TERMINATE AT WALL OR SLAB EDGES / INTERSECTIONS THAT PROVIDE LESS THAN THE SPECIFIED DEVELOPMENT LENGTH.
- C 7

CHAMFERS

EXCEPT AS OTHERWISE REQUIRED, EXPOSED CONCRETE CORNERS AND EDGES SHALL HAVE 3/4" CHAMFERS. RE-ENTRANT CORNERS SHALL NOT HAVE FILLETS.
- C 8

ANCHOR BOLTS

ANCHOR BOLTS SHALL BE STAINLESS STEEL TYPE 316 MATERIAL UNLESS OTHERWISE NOTED (SEE SPECIFICATIONS).
- C 9

COMPATIBLE FINISHES

CURING COMPOUNDS AND OTHER SURFACE TREATMENTS, CONCRETE ADMIXTURES AND SUB-SLAB DRAINAGE SHALL BE REVIEWED BY CONTRACTOR AND CERTIFIED COMPATIBLE WITH FINISHES TO BE APPLIED LATER IN THE CONSTRUCTION SEQUENCE.
- C10

VAPOR BARRIER BELOW SLAB ON GRADE

VAPOR BARRIER, WHERE NOTED ON THE DRAWINGS, SHALL BE 10 MIL MINIMUM CLASS A OR B PLASTIC WATER VAPOR RETARDER PER ASTM E1745. INSTALL PER ASTM E1643. LAP JOINTS 6" AND SEAL WITH MANUFACTURER'S RECOMMENDED TAPE OR ADHESIVE.

GROUT

- GR 1

EQUIPMENT GROUTING

SEE MECHANICAL SPECIFICATIONS AND SPECIFICATION SECTION 03600, GROUT.
- GR 2

EPOXY ADHESIVE GROUT AT ANCHORS INTO CONCRETE: HILTI HIT-RE 500v3 EPOXY ADHESIVE ANCHOR SYSTEM BY HILTI INC. OR EQUAL APPROVED BY ENGINEER OF RECORD. INSTALLERS OF HORIZONTAL OR UPWARDLY INCLINED ADHESIVE ANCHORS SHALL BE CERTIFIED IN ACCORDANCE WITH THE ACI / CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.
- GR 3

MASONRY ADHESIVE ANCHORS: HILTI HIT-HY 270.

REINFORCED CONCRETE MASONRY

- MA 1

CONCRETE MASONRY UNITS (CMU) SHALL BE HOLLOW LOAD BEARING UNITS CONFORMING TO ASTM C90, MEDIUM WEIGHT.
- MA 2

SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f_m) = 2,000 PSI.
- MA 3

CMU WALLS SHALL BE SOLID GROUTED.
- MA 4

MORTAR SHALL BE TYPE S CONFORMING TO ASTM C270.
- MA 5

CMU AND MORTAR AT WEATHER ENCLOSURE WALLS OR AT ELECTRICAL CONTROL ROOMS IN HIGH MOISTURE ENVIRONMENTS SHALL CONTAIN "DRY BLOCK ADMIXTURE" AS MANUFACTURED BY W.R. GRACE CO., AMOUNT PER MANUFACTURER'S RECOMMENDATION.
- MA 6

GROUT SHALL BE $f_c = 2,000$ PSI CONFORMING TO ASTM C476.
- MA 7

REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 DEFORMED BARS.
- MA 8

RUNNING BOND SHALL BE USED THROUGHOUT.
- MA 9

USE 3/8" FLUSH MORTAR JOINTS THROUGHOUT, TOOLED CONCAVE.

STEEL

- ST 1

ALL STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360-10) AND AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303-10).
- ST 2

MATERIALS

1. STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A36.

2. ALL STAINLESS STEEL SHALL BE TYPE 316 MEETING ASTM A276 FOR BARS AND SHAPES, AND ASTM A240 FOR PLATES, UNLESS OTHERWISE SPECIFIED. ALL STAINLESS STEEL SHALL BE PASSIVATED PER ASTM A380.
- ST 3

WELDING

1. WELDING SHALL CONFORM TO AWS D1.1-1 AND AISC 341-10.

2. ELECTRODES FOR SHOP AND FIELD WELDS SHALL CONFORM TO AWS A5.1 OR A5.5, CLASS E70XX.

3. STAINLESS STEEL WELDING SHALL CONFORM TO AWS D1.6 WITH A5.4 OR A5.9 ELECTRODES.
- ST 4

BOLTS
STRUCTURAL BOLTS AT STEEL FRAMING SHALL BE GALVANIZED AND CONFORM TO ASTM A325N (TYPE 1) FOR CONNECTION OF GALVANIZED OR PAINTED FRAMING. HIGH STRENGTH BOLTS SHALL BE FULLY TENSIONED UNLESS CONNECTING HSS SHAPES OR OTHERWISE NOTED. STAINLESS STEEL TYPE 316 BOLTS SHALL BE USED FOR CONNECTION OF STAINLESS STEEL FRAMING.
- ST 5

EXPANSION ANCHORS SHALL BE STAINLESS STEEL "KWIK BOLT TZ2" BY HILTI INC. OR EQUAL APPROVED BY OWNER.

STEEL ROOF DECK

- SD 1

DECKING SHALL BE VERCO MANUFACTURING COMPANY TYPE PLB-36 PROFILE, 1 1/2" DEEP, 20 GAUGE, GALVANIZED (G-60), OR EQUAL AS APPROVED BY OWNER.
- SD 2

ALL STEEL ROOF DECK FLASHING SHALL BE 22 GAUGE MINIMUM, G-60 GALVANIZED STEEL UNLESS NOTED OTHERWISE ON DRAWINGS.



SALT LAKE CITY, UT

CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: S. BELLIS

DRAWN: T. BOUFFARD

CHECKED: J. HARPER

CHECKED:

APPROVED: C. WILLMORE

FILENAME

S-001.dwg

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

STRUCTURAL

GENERAL
STRUCTURAL
NOTES

DRAWING NUMBER

S-001

0

SHEET NUMBER
OF

60

Path: C:\BCP\W\02344908 FILENAME: S-002.DWG PLOT DATE: 3/4/2022 4:29 PM CAD USER: THOMAS BOUFFARD

D

C

B

A

TABLE 1				
REQUIRED SPECIAL INSPECTIONS - STRUCTURAL SYSTEMS				
SYSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION		REMARKS
		CONTINUOUS	PERIODIC	
SOILS	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X	
	VERIFY SOIL MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY		X	
	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X	
	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X	SEE TABLE 2
	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X		SEE TABLE 2
CONCRETE	INSPECT FORMWORK FOR LOCATION AND DIMENSIONS OF MEMBER BEING FORMED		X	
	VERIFY MATERIAL FOR REINFORCEMENT		X	CONTRACTOR TO SUBMIT CERTIFIED MILL TEST REPORTS
	REINFORCING STEEL PLACEMENT		X	
	INSPECT ANCHORS TO BE CAST IN CONCRETE		X	PRIOR TO AND DURING CONCRETE PLACEMENT
	INSPECT POST-INSTALLED CONCRETE ANCHORS: - HORIZONTAL AND UPWARDLY INCLINED ADHESIVE ANCHORS - OTHER ANCHORS UNLESS ICC REPORT REQUIRED CONTINUOUS INSPECTION	X	X	INSPECTION TO CONFORM TO IBC AND TO ANCHOR MANUFACTURER'S RECOMMENDATIONS AND ICC REPORTS
	VERIFY USE OF REQUIRED CONCRETE MIX DESIGN(S)		X	
	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND TEMPERATURE OF CONCRETE	X		CONTINUOUS DURING PREPARATION OF SAMPLES
	CONCRETE PLACEMENT	X		
	INSPECTION FOR MAINTENANCE OF CURING PROCEDURES AND TEMPERATURE		X	VERIFY APPROPRIATE CURING METHOD HAS BEEN IMPLEMENTED AFTER EACH POUR
	VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM STRUCTURAL SLABS AND BEAMS		X	
	CEMENTITIOUS GROUTING OF BASE PLATES AND EPOXY GROUTING FOR EQUIPMENT MOUNTING	X		
STRUCTURAL STEEL	FABRICATION OF STRUCTURAL ELEMENTS			FABRICATOR SHALL BE APPROVED IN ACCORDANCE WITH IBC, CHAPTER 17 TO PERFORM WORK WITHOUT SPECIAL INSPECTION
	VERIFY MATERIAL OF ANCHOR BOLTS AND THREADED RODS		X	CONTRACTOR TO SUBMIT MANUFACTURER'S CERTIFIED TEST REPORTS
	VERIFY MATERIAL OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS		X	CONTRACTOR TO SUBMIT MANUFACTURER'S CERTIFIED TEST REPORTS
	VERIFY MATERIAL FOR STRUCTURAL STEEL SHAPES, PLATES, BARS, ETC.		X	CONTRACTOR TO SUBMIT CERTIFIED MILL TEST REPORTS
	VERIFY MATERIALS FOR WELD FILLER MATERIALS		X	
	VERIFY WELDER QUALIFICATIONS		X	CONTRACTOR TO SUBMIT WELDERS CERTIFICATES
	VERIFY USE OF PROPER WELDING PROCEDURES		X	
	INSPECT COMPLETE AND PARTIAL-PENETRATION GROOVE WELDS, MULTI-PASS FILLET WELDS, AND SINGLE-PASS FILLET WELDS GREATER THAN 5/16"	X		
	INSPECT SINGLE-PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"		X	VISUALLY INSPECT ALL WELDS
	INSPECT HIGH-STRENGTH BEARING-TYPE BOLTED CONNECTIONS		X	
	VERIFY TYPE, DEPTH AND GAGE OF DECKING		X	

TABLE 1				
REQUIRED SPECIAL INSPECTIONS - STRUCTURAL SYSTEMS				
SYSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION		REMARKS
		CONTINUOUS	PERIODIC	
	INSPECT INSTALLATION (ATTACHMENT) OF DECKING		X	
	INSPECT FRAME TO VERIFY THAT BRACING, STIFFENERS, MEMBER LOCATIONS AND JOINT DETAILS COMPLY WITH APPROVED CONSTRUCTION DRAWINGS		X	
MASONRY	VERIFY PROPORTIONS OF SITE -PREPARED MORTAR AND GROUT		X	AT START OF MASONRY CONSTRUCTION
	VERIFY SPECIFIED TYPE, GRADE AND SIZE OF REINFORCEMENT		X	CONTRACTOR TO SUBMIT CERTIFIED MILL TEST REPORTS
	VERIFY MATERIALS FOR MASONRY UNITS, MORTAR, GROUT, ANCHORS, TIES AND ACCESSORIES		X	CONTRACTOR TO SUBMIT MANUFACTURER'S CERTIFIED COMPLIANCE REPORTS
	VERIFY TYPE, SIZE, LOCATION AND INSTALLATION OF EMBEDDED CONNECTORS AND ANCHORS		X	
	VERIFY SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X	
	VERIFY TYPE, SIZE AND LOCATION OF ANCHORAGE OF MASONRY TO OTHER CONSTRUCTION		X	
	VERIFY PROTECTION PROVISIONS FOR COLD AND HOT WEATHER MASONRY CONSTRUCTION		X	
	PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS		X	
	REINFORCING STEEL PLACEMENT		X	
	VERIFY GROUT SPACE IS CLEAN		X	
	VERIFY PROPORTIONS OF GROUT; USE OF REQUIRED GROUT MIX DESIGN		X	
	OBSERVE GROUT PLACEMENT	X		
	OBSERVE PREPARATION OF ANY GROUT OR MORTAR SPECIMENS AND/OR PRISMS	X		CONTINUOUS DURING PREPARATION OF SAMPLES

QUALITY ASSURANCE NOTES

- THE QUALITY OF THE WORKMANSHIP AND THE QUALITY OF THE MATERIALS OF CONSTRUCTION ARE GOVERNED BY THE INTERNATIONAL BUILDING CODE, 2015 EDITION (IBC).
- ALL NEW STRUCTURES AND MODIFICATIONS TO EXISTING STRUCTURES TO BE CONSTRUCTED AS A PART OF THIS PROJECT ARE CLASSIFIED AS RISK CATEGORY III IN ACCORDANCE WITH THE IBC. THE STRUCTURES ARE CLASSIFIED AS SEISMIC DESIGN CATEGORY B.
- TO ASSURE THE QUALITY OF THE CONSTRUCTION OF THIS PROJECT, STRUCTURAL TESTS, SPECIAL INSPECTION AND STRUCTURAL OBSERVATION WILL BE PERFORMED IN ACCORDANCE WITH IBC, CHAPTER 17.
- WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE CONTINUOUS, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED AND PROVIDING FULL-TIME OBSERVATION OF THE WORK REQUIRING SPECIAL INSPECTION.
- WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE PERIODIC, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK (PRIOR TO THE NEXT CONSTRUCTION TASK).
- SPECIAL INSPECTIONS ARE IN ADDITION TO INSPECTIONS BY THE BUILDING OFFICIALS. CONSTRUCTION IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL. COORDINATE WITH BUILDING DEPARTMENT TO DETERMINE REQUIRED INSPECTIONS.
- CONTRACTOR SHALL PROVIDE ACCESS TO THE WORK FOR REQUIRED INSPECTIONS. CONTRACTOR SHALL PROVIDE NOTIFICATION IN ADVANCE OF REQUIRED INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS.



SALT LAKE CITY, UT

CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: S. BELLIS
DRAWN: T. BOUFFARD
CHECKED: J. HARPER
CHECKED:
APPROVED: C. WILLMORE
FILENAME S-002.dwg
BC PROJECT NUMBER 157520
CLIENT PROJECT NUMBER

STRUCTURAL

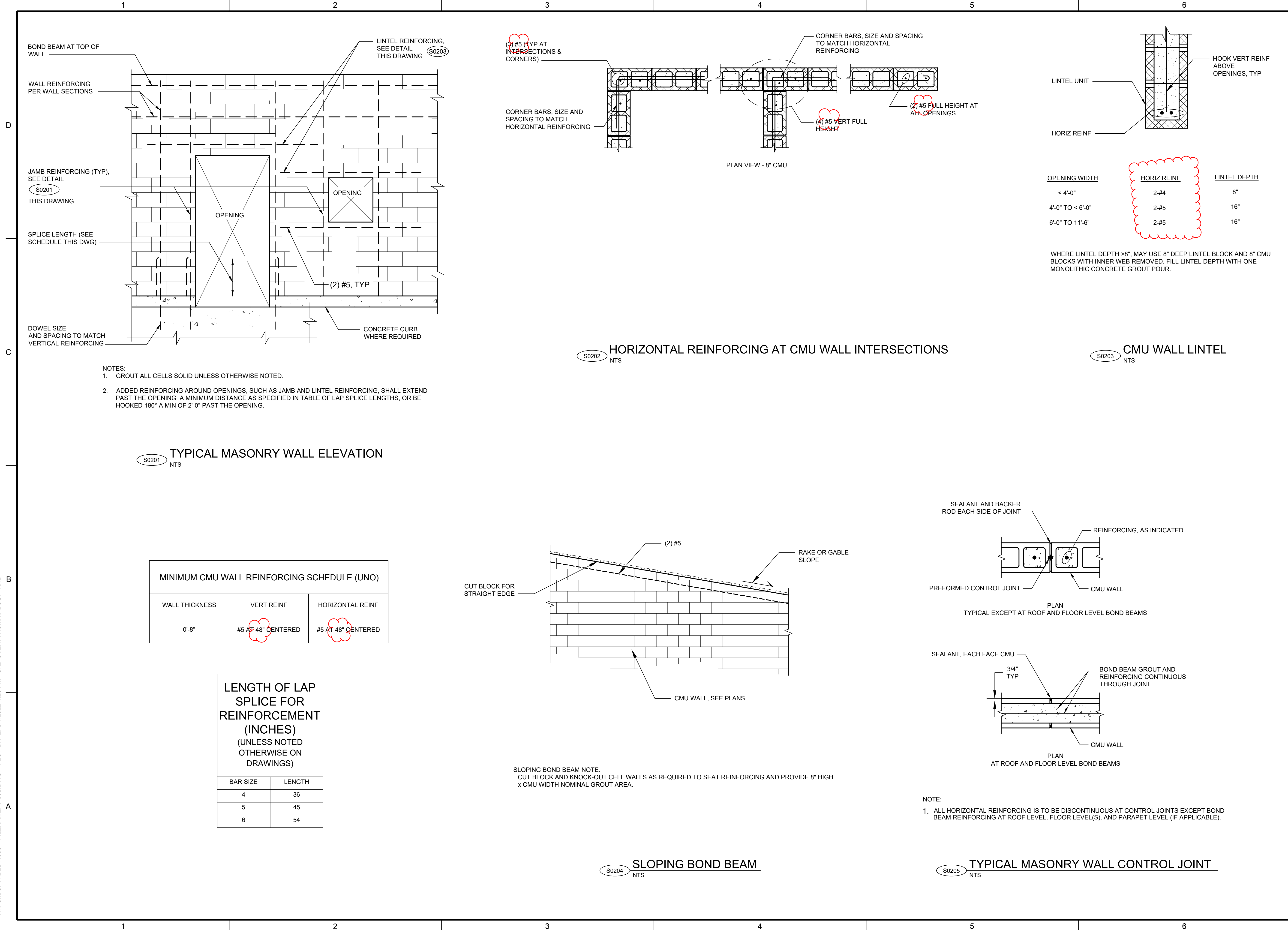
SPECIAL
INSPECTIONS 1

DRAWING NUMBER

S-002

0 SHEET NUMBER OF 60

Path: C:\BCPM\02344908 FILENAME: S-005.DWG PLOT DATE: 3/4/2022 1:23 PM CAD USER: THOMAS BOUFFARD



SALT LAKE CITY, UT

CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: S. BELLIS
DRAWN: T. BOUFFARD
CHECKED: J. HARPER
CHECKED:
APPROVED: C. WILLMORE
FILENAME S-005.dwg
BC PROJECT NUMBER 157520
CLIENT PROJECT NUMBER

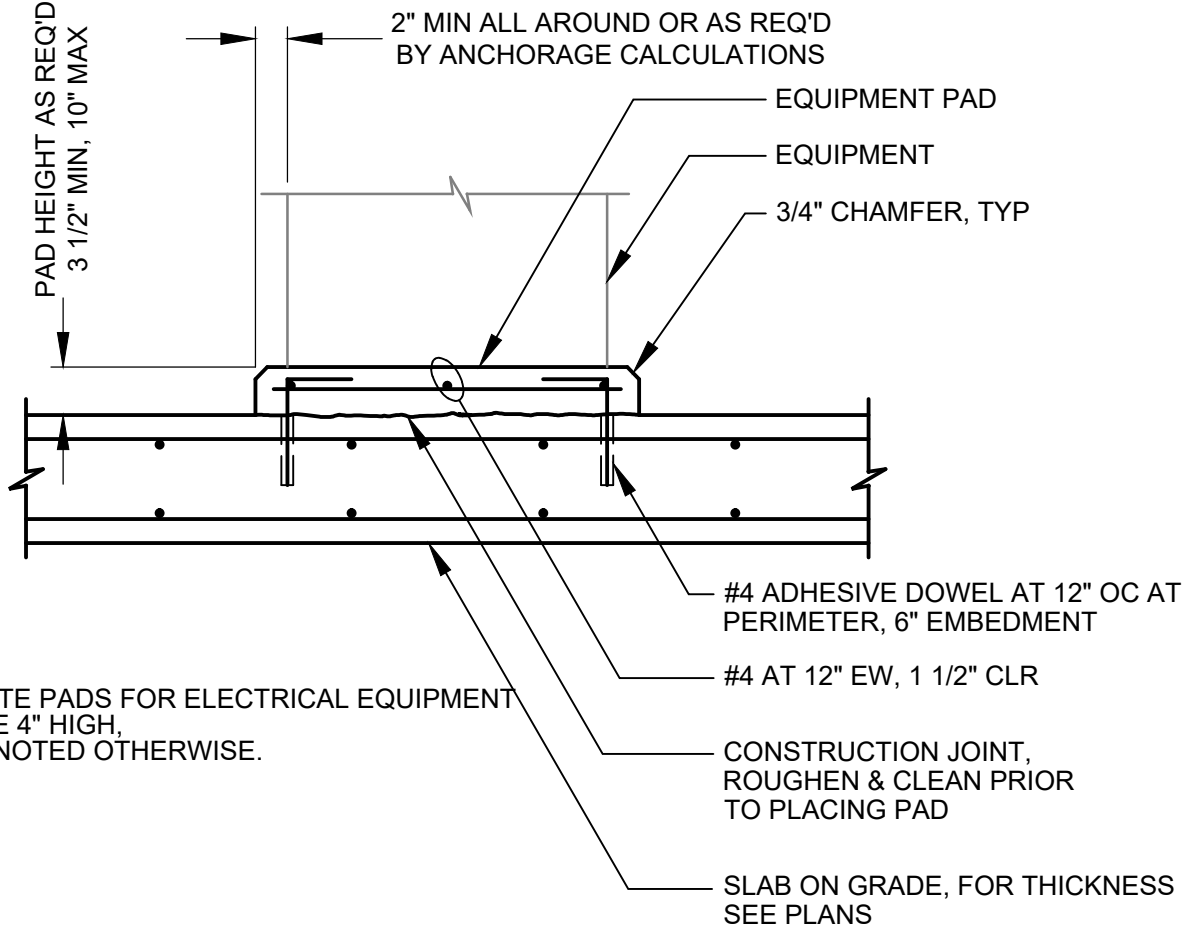
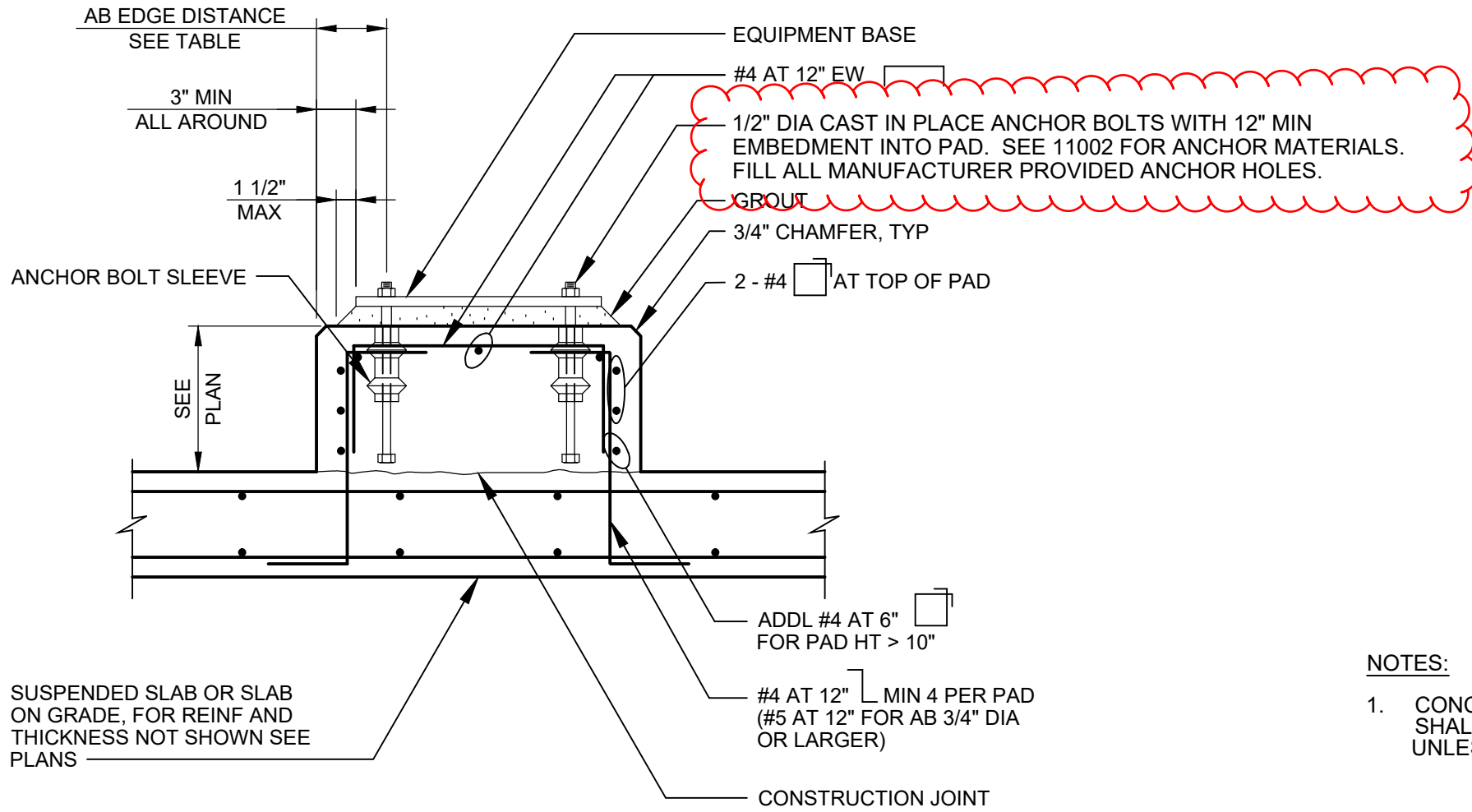
STRUCTURAL

STANDARD DETAILS
2

DRAWING NUMBER
S-005

0 SHEET NUMBER
OF 60

Path: C:\BOPM\02344908 FILENAME: S-006.DWG PLOT DATE: 3/4/2022 1:23 PM CAD USER: THOMAS BOUFFARD



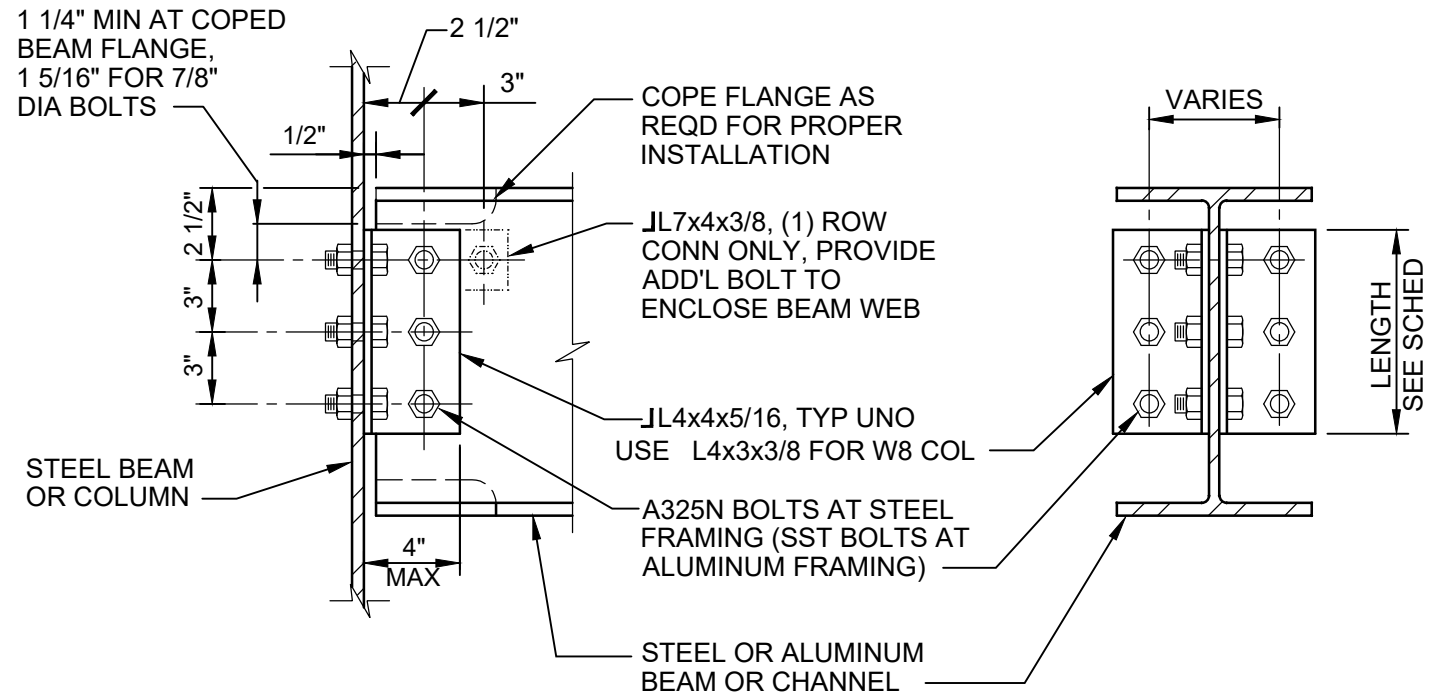
- NOTES:
1. CONCRETE PADS FOR ELECTRICAL EQUIPMENT SHALL BE 4" HIGH, UNLESS NOTED OTHERWISE.

TYPE A

TYPE E

EQUIPMENT PAD DIMENSIONS											
AB DIA (IN.)	1/2	5/8	3/4	7/8	1	1 1/4	1 3/8	1 1/2	1 3/4	2	
MIN PAD HT (IN.)	7 1/2	9 1/2	11	12 1/2	14	17 1/2	19	20 1/2	24	27	
MIN AB EDGE DISTANCE	4 1/2	4 1/2	4 1/2	5 1/4	6	7 1/2	8 1/4	9	10 1/2	12	

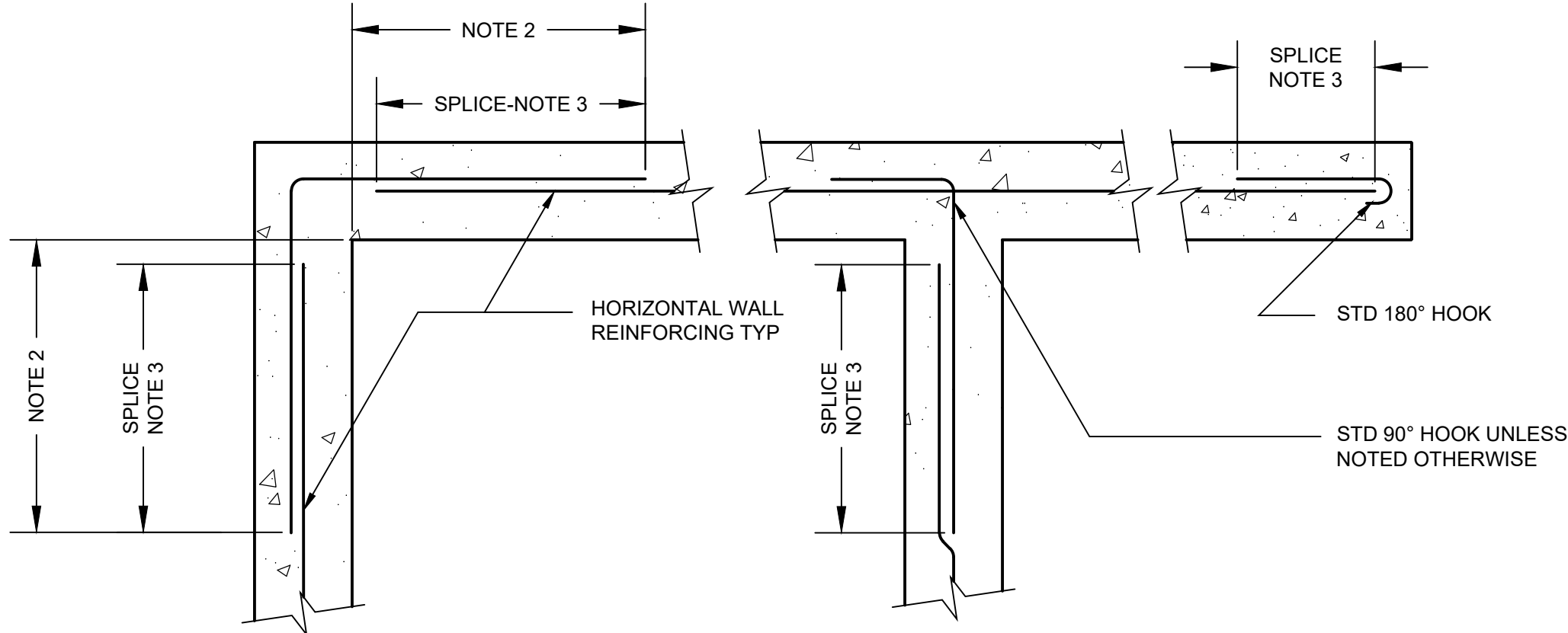
S0301
NTS
EQUIPMENT PADS



NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS	BOLT DIA	DOUBLE ANGLE, LENGTH	COMMENTS
8-10	2	3/4"	0'-5 1/2"	-

- NOTES:
1. UNLESS OTHERWISE NOTED, NUMBER OF ROWS IS EQUAL TO NUMBER OF BOLTS TO ENCLOSE BEAM WEB.
 2. ALL BEAM FRAMING CONNECTIONS SHALL CONFORM TO THIS DETAIL UNLESS SPECIFICALLY NOTED OTHERWISE OR APPROVED IN WRITING BY THE ENGINEER.
 3. FOR NOMINAL BEAM DEPTHS LESS THAN 8", EXTEND LONG LEG OF DOUBLE ANGLE ALONG BEAM WEB AND PROVIDE ADDITIONAL BOLT TO ENCLOSE BEAM WEB AS SHOWN.
 4. PROVIDE ADDITIONAL 1 1/2" LENGTH TO DOUBLE ANGLE FOR STAGGERED BOLT CONNECTIONS WHERE REQUIRED. DIMENSION SHALL BE 3" UNLESS OTHERWISE REQUIRED FOR PROPER FABRICATION.

S0303
NTS
TYPICAL BEAM CONNECTION



SINGLE MAT REINFORCING

- NOTES:
1. UNLESS NOTED OTHERWISE, SIZE AND SPACING OF CORNER OR INTERSECTION REINFORCING SHALL MATCH HORIZONTAL REINFORCING SHOWN IN SPECIFIC SECTIONS OR DETAILS. VERTICAL REINFORCING NOT SHOWN FOR CLARITY.
 2. UNLESS NOTED OTHERWISE, BAR SPLICE SHALL BE LOCATED OUTSIDE OF CORNER OR INTERSECTION AREA TO AVOID CONGESTION. CONTRACTORS OPTION TO PROVIDE SINGLE BENT BAR IN LIEU OF SPLICE CONFIGURATION AT ONE END ONLY.
 3. SEE GENERAL STRUCTURAL NOTES FOR SPLICE LENGTH. HORIZONTAL WALL BARS SHALL BE CONSIDERED TOP BARS FOR DEVELOPMENT AND SPLICE LENGTHS.

S0302
NTS
TYPICAL HORIZONTAL WALL REINFORCING



SALT LAKE CITY, UT

CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: S. BELLIS
DRAWN: T. BOUFFARD
CHECKED: J. HARPER
CHECKED:
APPROVED: C. WILLMORE
FILENAME
S-006.dwg
BC PROJECT NUMBER
157520
CLIENT PROJECT NUMBER

STRUCTURAL

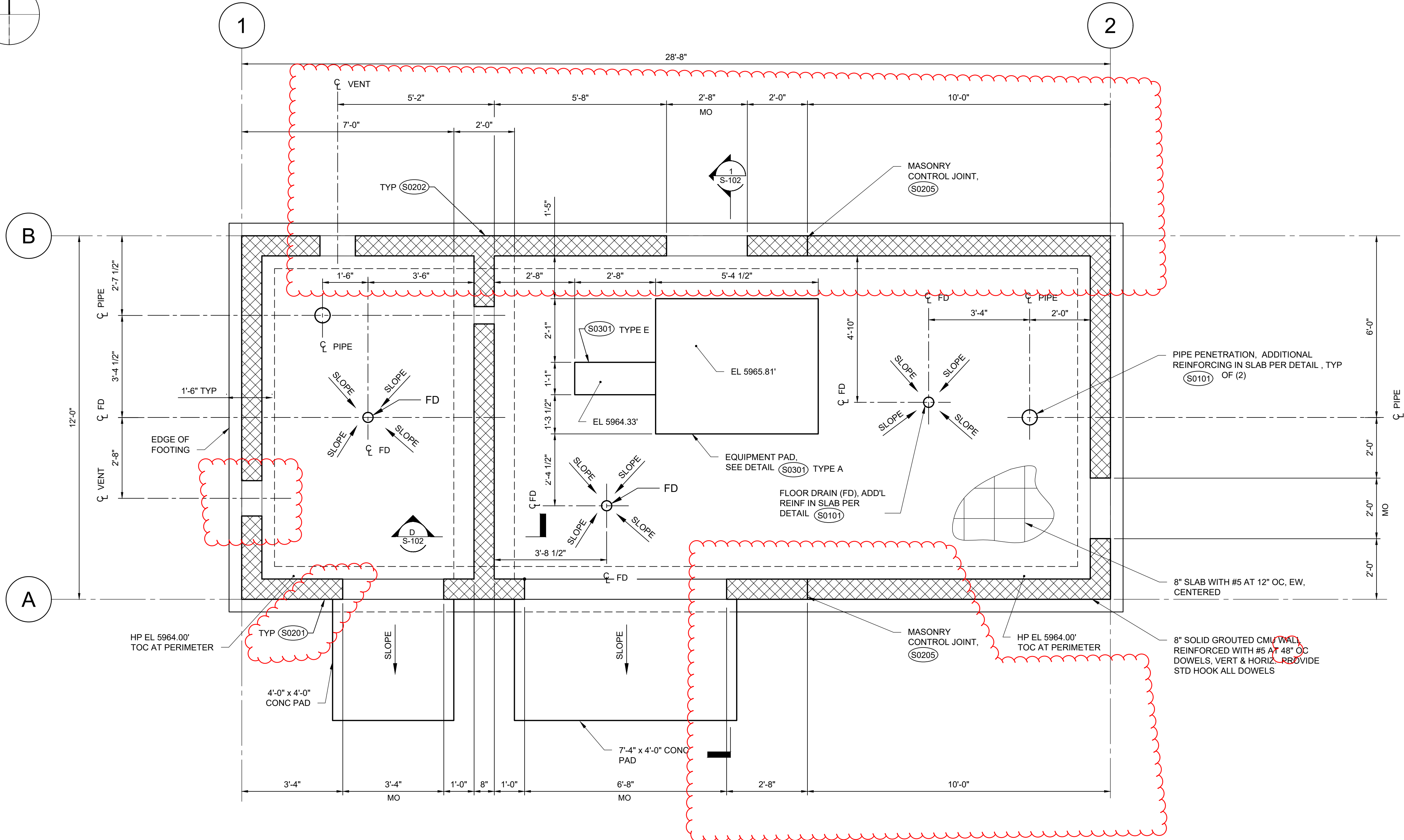
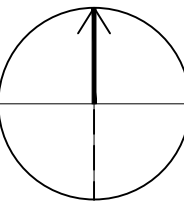
STANDARD DETAILS
3

DRAWING NUMBER
S-006

0 SHEET NUMBER
OF 60

Path: C:\BCPM\02344908 FILENAME: S-100.DWG PLOT DATE: 3/4/2022 1:23 PM CAD USER: THOMAS BOUFFARD

PLAN
NORTH



PLAN
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. SEE CIVIL FOR BUILDING COORDINATES.
2. SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. COORDINATE ALL OPENINGS WITH ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
4. COORDINATE SIZE AND LOCATION OF ELEC/MECH PADS WITH APPROVED EQUIPMENT SUBMITTALS AND ELECTRICAL AND MECHANICAL DRAWINGS.



SALT LAKE CITY, UT

CONSTRUCTION ISSUE



DILKON PASS PIPELINE AND PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: S. BELLIS
DRAWN: T. BOUFFARD
CHECKED: J. HARPER
CHECKED:
APPROVED: C. WILLMORE
FILENAME
S-100.dwg
BC PROJECT NUMBER
157520
CLIENT PROJECT NUMBER

STRUCTURAL

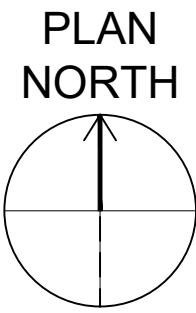
DILKON PASS PUMP STATION BUILDING FOUNDATION PLAN

DRAWING NUMBER

S-100

0 SHEET NUMBER
OF 60

Path: C:\BCPM\02344908 FILENAME: S-101.DWG PLOT DATE: 3/4/2022 1:23 PM CAD USER: THOMAS BOUFFARD

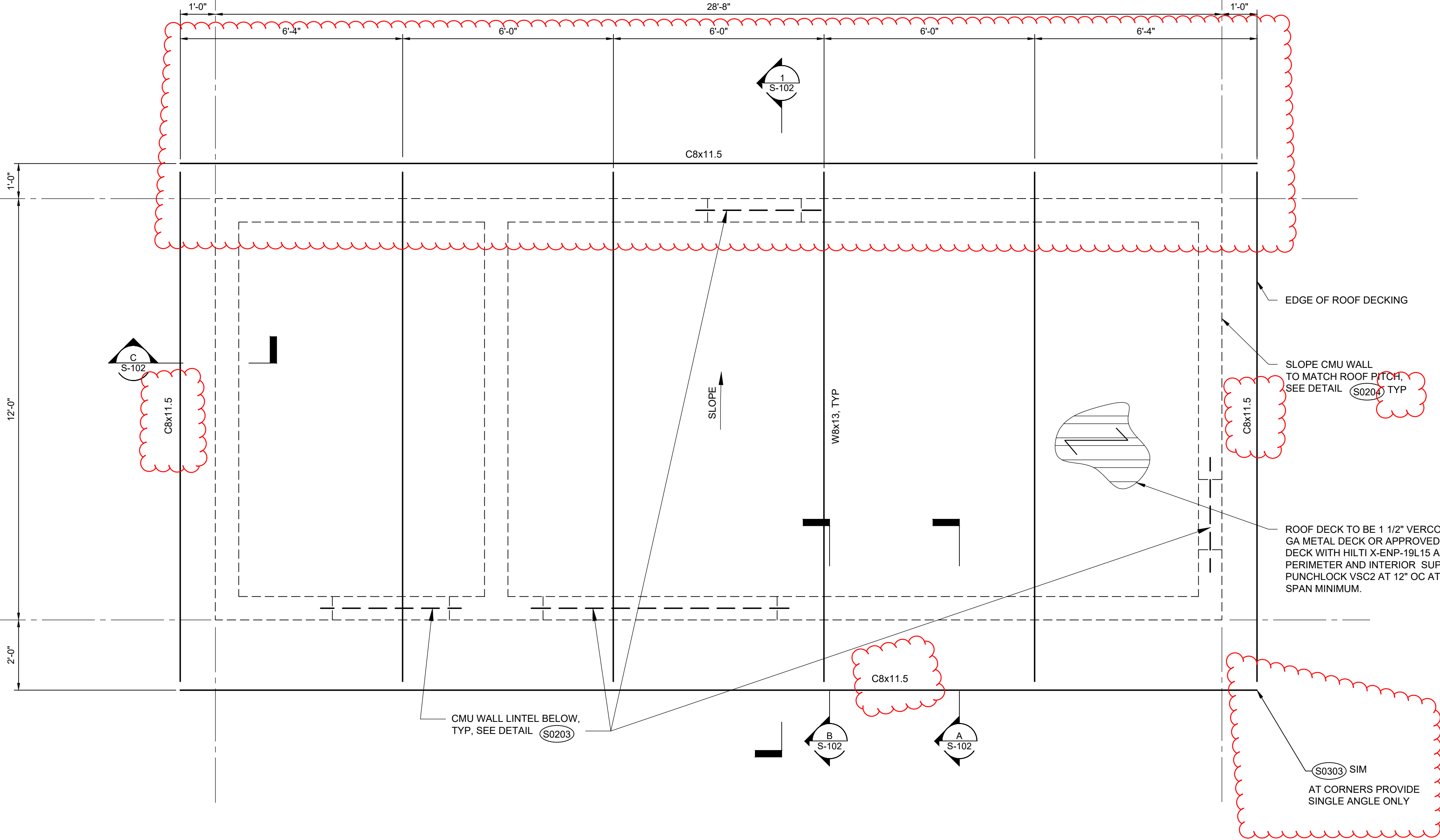


1

2

B

A



PLAN
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. SEE CIVIL FOR BUILDING COORDINATES.
2. SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. COORDINATE ALL OPENINGS WITH ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
4. COORDINATE SIZE AND LOCATION OF ELEC/MECH PADS WITH APPROVED EQUIPMENT SUBMITTALS AND ELECTRICAL AND MECHANICAL DRAWINGS.



SALT LAKE CITY, UT

CONSTRUCTION ISSUE



DILKON PASS PIPELINE AND PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: S. BELLIS
DRAWN: T. BOUFFARD
CHECKED: J. HARPER
APPROVED: C. WILLMORE
FILENAME: S-101.dwg
BC PROJECT NUMBER: 157520
CLIENT PROJECT NUMBER

STRUCTURAL

DILKON PASS PUMP STATION BUILDING ROOF FRAMING PLANS

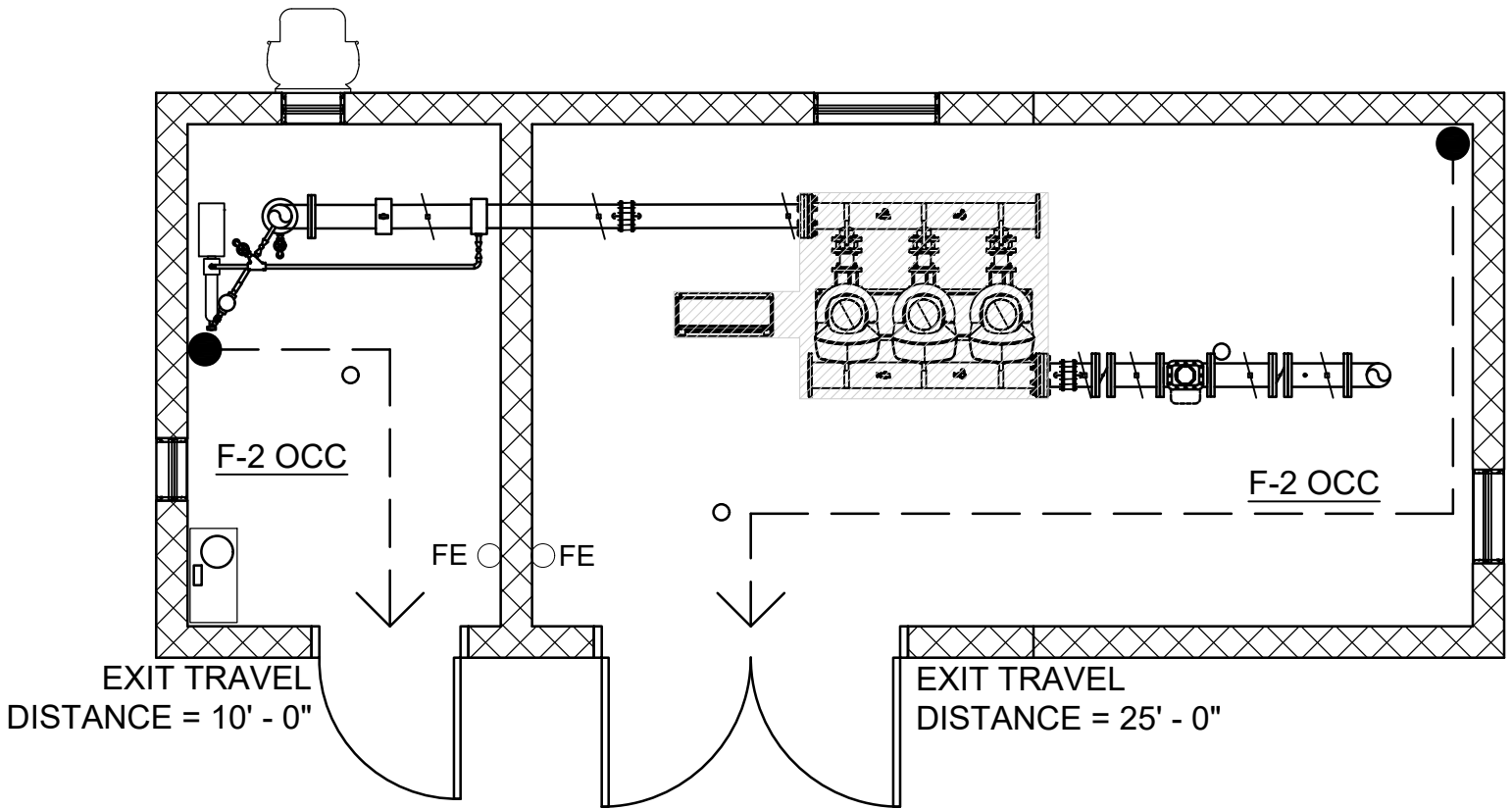
DRAWING NUMBER

S-101

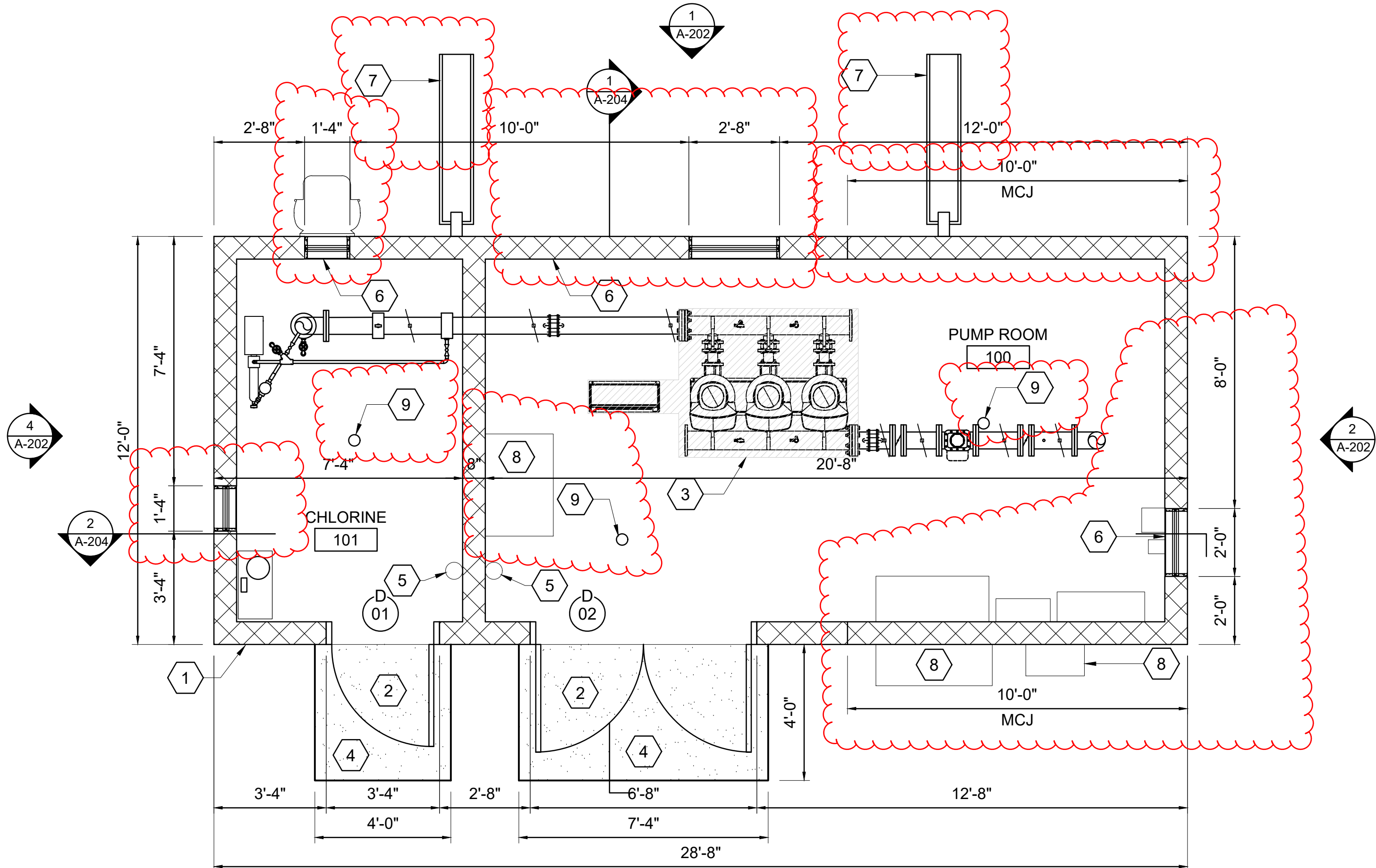
0 SHEET NUMBER OF 60

BUILDING CODE ANALYSIS

AHJ	NAVAJO NATION (STRUCTURAL DESIGN CRITERIA NAVAJO COUNTY)	
BUILDING CODES	2015 INTERNATIONAL BUILDING CODE 2015 INTERNATIONAL MECHANICAL CODE 2015 INTERNATIONAL FUEL GAS CODE 2015 INTERNATIONAL PLUMBING CODE 2015 INTERNATIONAL ENERGY CONSERVATION CODE 2017 NATIONAL ELECTRICAL CODE 2012 INTERNATIONAL FIRE CODE	FIRE EXTINGUISHERS IBC 906.3.1: FIRE EXTINGUISHERS PROVIDED PER IBC TABLE 906.3(1), MIN. KEY BOXES IFC 506.1: KEY BOXES PER UL 1037 IS WILL BE PROVIDED IN LOCATIONS APPROVED BY THE FIRE CODE OFFICIAL ACCESSIBILITY OCCUPANCY GROUP F-2: EXEMPT FROM ACCESSIBILITY REQUIREMENTS PER IBC 1103.2.9 EGRESS DISTANCE TO EXITS: (TABLE 1014.3) F-2 75 FT MAXIMUM, WITHOUT SPRINKLER SYSTEM OCCUPANCY LOADS: (TABLE 1004.1.2) F-2 OCCUPANCY 220 SF / 300 (MECHANICAL EQUIPMENT ROOM) = 1 EXITS REQUIRED EXITS = 1 ACUAL EXITS = 1
OCCUPANCY	F-2 LOW HAZARD	
CONSTRUCTION TYPE	TYPE II-B	
ALLOWABLE AREAS	23,000 SF / 3 STORIES / 55 FT	
ACTUAL AREAS	220 SF / 1 STORY / 11'-6" FT	



1 CODE PLAN
A102 SCALE: 1/4" = 1'-0"



2 FLOOR PLAN
A102 SCALE: 3/8" = 1'-0"

CHEMICAL TABLE																	
CHEMICAL				HAZARD						MAX ALLOWABLE QUANTITY PER CONTROL AREA				NFPA 704 IDENTIFICATION			
NAME	CAS NUMBER	OTHER NAME	FORMULA	TYPE	CLASSIFICATION	STATE	SOLUTION STRENGTH	ACTUAL AMOUNT	CONTAINER	BASIC	SPRINKLERED BUILDING OR CABINETS	SPRINKLERED BUILDING AND CABINETS	OCCUPANCY	HEALTH	FIRE	REACTIVITY	SPECIFIC
CHLORINE	7782-50-5	---	Cl ₂	PHYSICAL	GAS-LIQUEFIED	GAS	100%	150 LBS	500 GAL	500 LBS	1,000 LBS	2,000 LBS	F-2	3	0	0	OX
				HEALTH	CORROSIVE												

- KEY NOTES
- 1 8" CMU WALL, WATER REPELLENT FULL EXTENT
 - 2 HM DOOR AND FRAME, PAINT, RE: DOOR SCHEDULE
 - 3 EQUIPMENT, RE: MECH
 - 4 CONCRETE PAD, RE: CIVIL
 - 5 FIRE EXTINGUISHER
 - 6 INLINE EXHAUST FAN, MOTORIZED DAMPER, AND LOUVER, RE: MECH
 - 7 5' LONG CONCRETE SPLASHBLOCK
 - 8 ELECTRICAL EQUIPMENT, RE: ELEC
 - 9 FLOOR DRAIN, RE: MECH



SALT LAKE CITY, UT



CONSTRUCTION ISSUE



DILKON PASS PIPELINE AND PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: K. WOESSNER
DRAWN: K. WOESSNER
CHECKED: G. SHORT
CHECKED: ---
APPROVED: G. SHORT

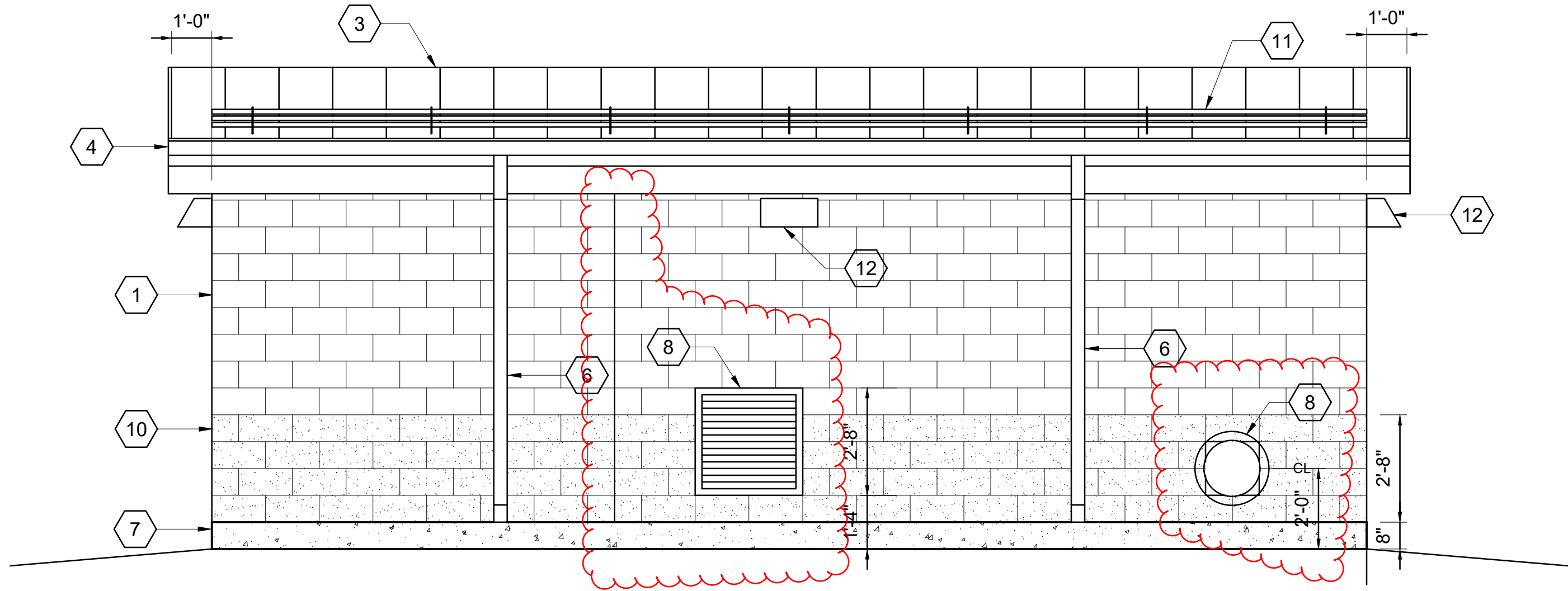
FILENAME
DILKON PUMP STATION A BASE
BC PROJECT NUMBER
157520
CLIENT PROJECT NUMBER
00357.21
ARCH

CODE & FLOOR PLAN

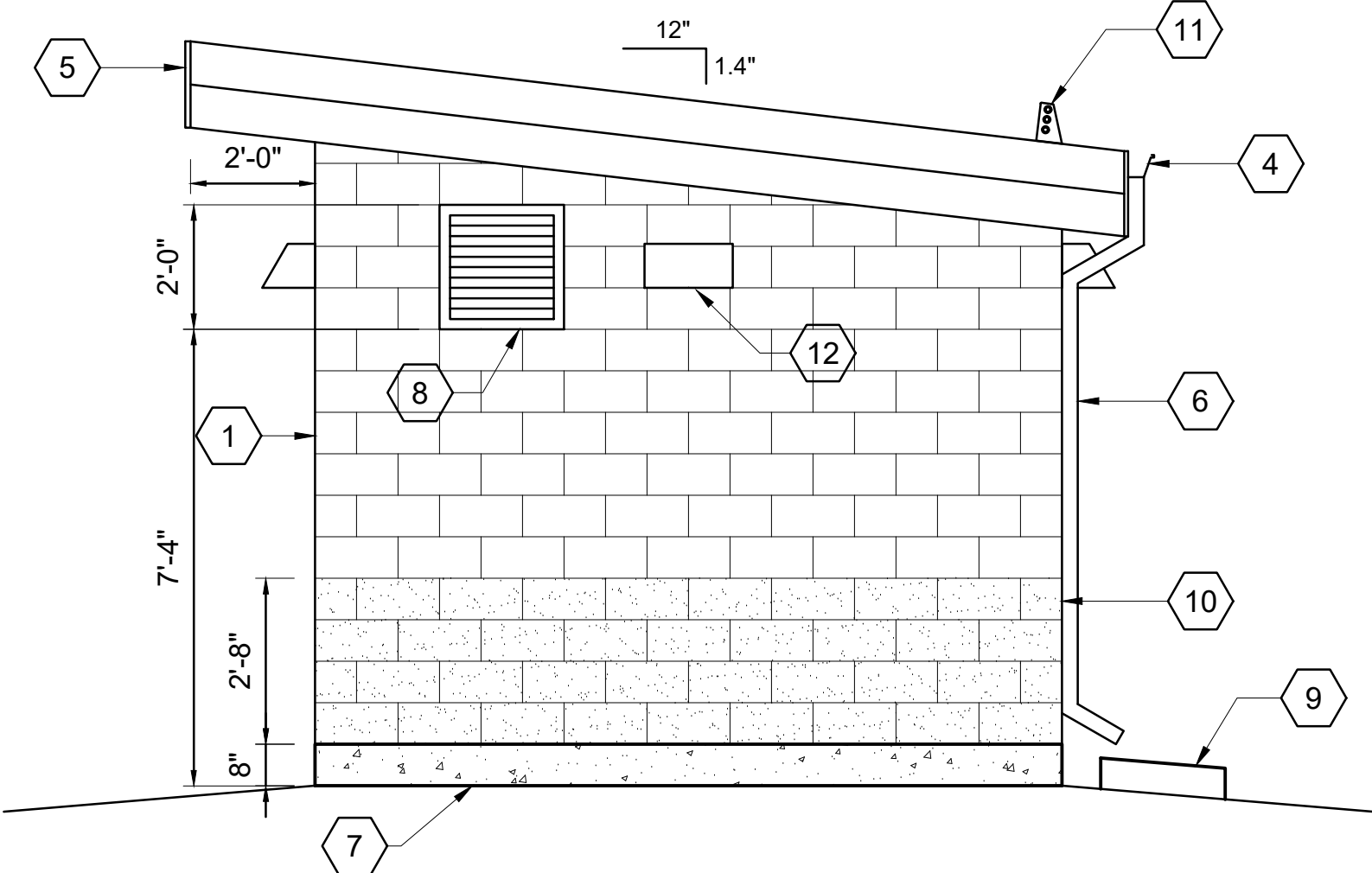
DRAWING NUMBER
A-101

SHEET NUMBER OF 113

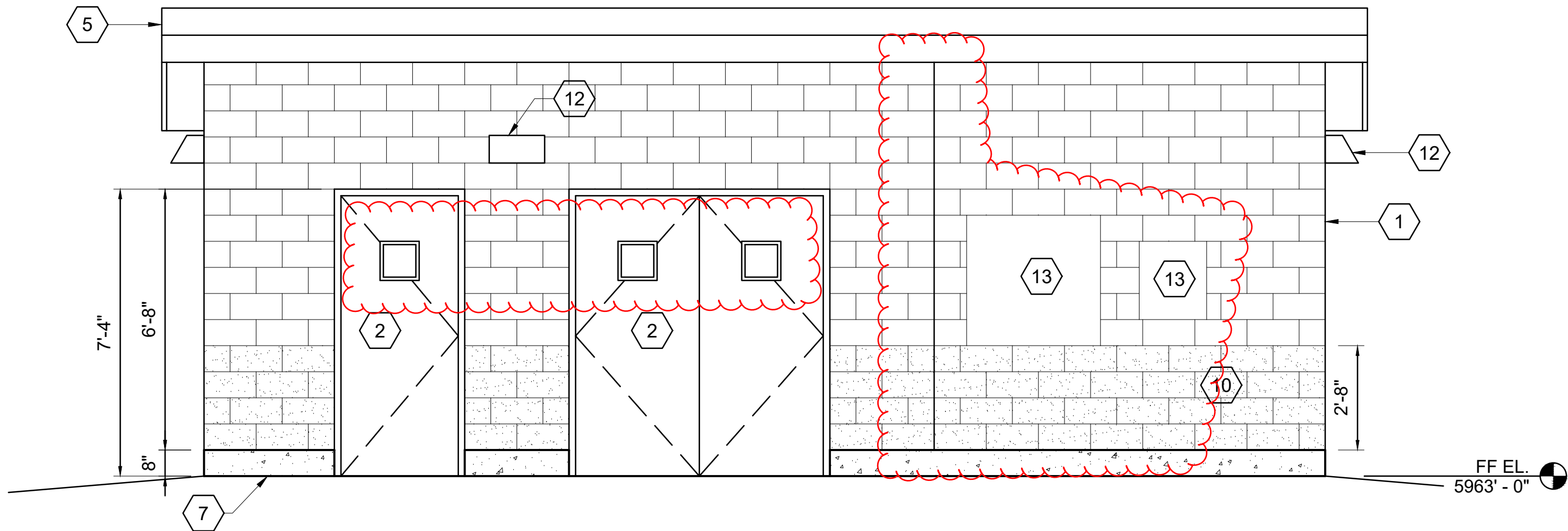
Path: C:\USERS\KWOESSNER\DDTG CLOUD SYNC FOLDER\BUSINESS DEVELOPMENT\DLKON2-DD (CURRENT)\DRAWINGS\DLKON PASS PUMP STATION_A_BASE.DWG PLOT DATE: 3/14/2022 9:20 AM CAD USER: KATIE WOESSNER



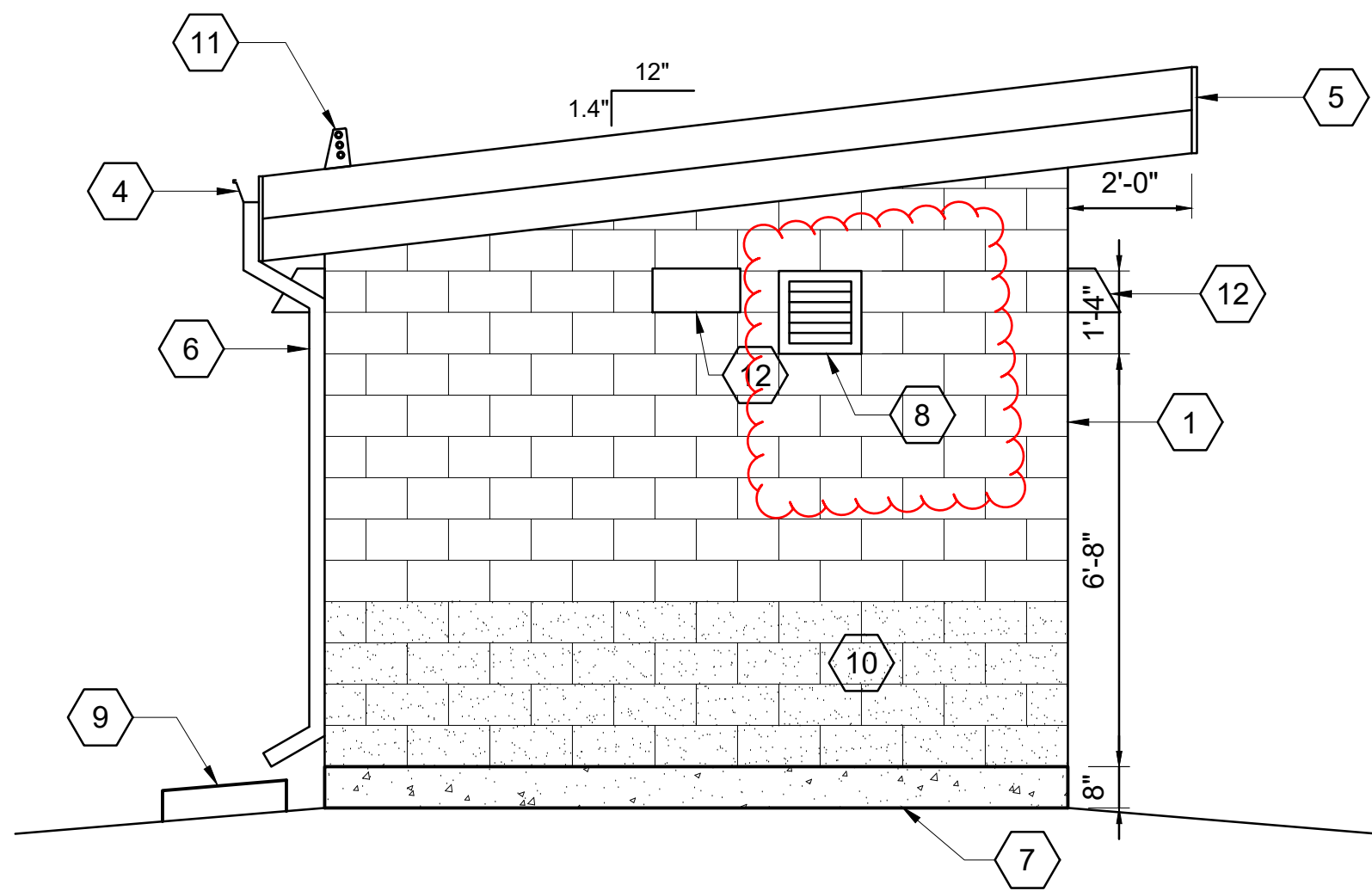
1 NORTH ELEVATION
A201 3/8"=1'-0"



2 EAST ELEVATION
A201 3/8"=1'-0"



3 SOUTH ELEVATION
A201 3/8"=1'-0"



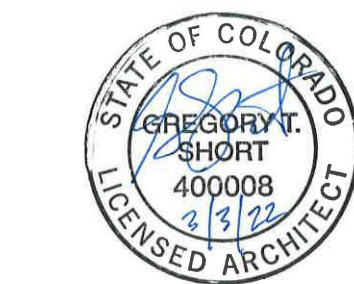
4 WEST ELEVATION
A201 3/8"=1'-0"

KEY NOTES

- 1 8" CMU WALL, SMOOTH FACE, WATER REPELLENT FULL EXTENT, COLOR A
- 2 HM DOOR AND FRAME, PAINT, RE: DOOR SCHEDULE
- 3 STANDING SEAM METAL ROOF OVER METAL DECK
- 4 GUTTER - PRE-FINISHED SHEET METAL
- 5 FASCIA - PRE-FINISHED SHEET METAL
- 6 DOWNSPOUT - PRE-FINISHED SHEET METAL
- 7 CONCRETE CURB, RE: STRUCT
- 8 INLINE EXHAUST FAN, MOTORIZED DAMPER, AND LOUVER, RE: MECH
- 9 CONCRETE SPLASHBLOCK
- 10 8" CMU WALL, SPLIT FACE, WATER REPELLENT FULL EXTENT, COLOR B
- 11 SNOWGUARD
- 12 EXTERIOR LIGHTING, RE: ELEC
- 13 ELECTRICAL EQUIPMENT, RE: ELEC



SALT LAKE CITY, UT



CONSTRUCTION ISSUE



DILKON PASS PIPELINE AND PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: K. WOESSNER

DRAWN: K. WOESSNER

CHECKED: G. SHORT

CHECKED: ---

APPROVED: G. SHORT

FILENAME
DILKON PUMP STATION_A_BASE
BC PROJECT NUMBER
157520
CLIENT PROJECT NUMBER
00357.21

ARCH

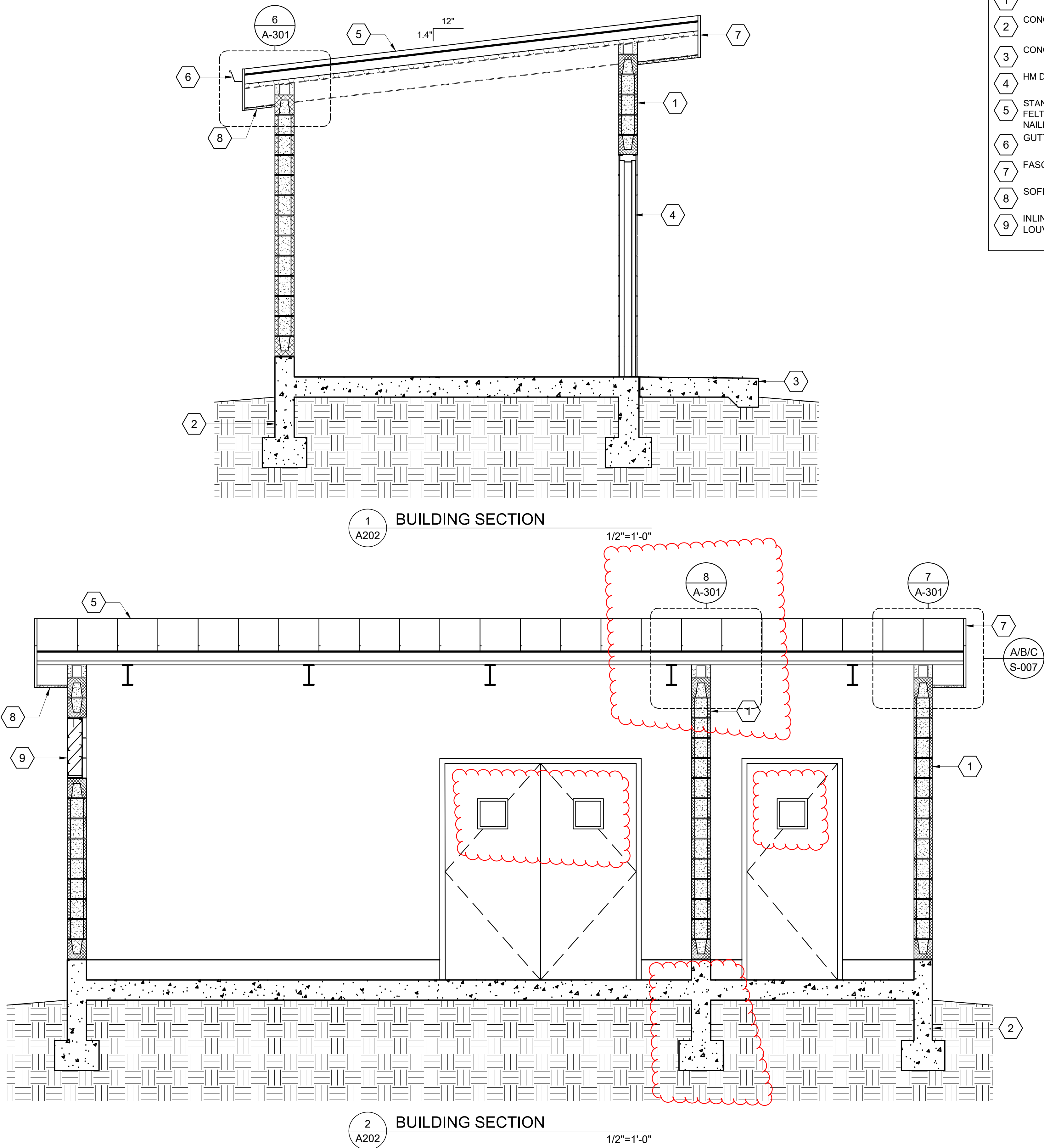
BUILDING ELEVATIONS

DRAWING NUMBER

A-201

SHEET NUMBER
OF 113

Path: C:\USERS\KWOESSNER\DDTG CLOUD SYNC FOLDER\BUSINESS DEVELOPMENT\DLKON2-DD (CURRENT)\DRAWINGS\DLKON PASS PUMP STATION_2022.3.3 FILENAME: DLKON PUMP STATION_A_BASE.DWG PLOT DATE: 3/14/2022 9:20 AM CAD USER: KATIE WOESSNER



- KEY NOTES
- 1 8" CMU WALL, WATER REPELLENT FULL EXTENT
 - 2 CONCRETE FOUNDATION, RE: STRUCT
 - 3 CONCRETE PAD, RE: CIVIL
 - 4 HM DOOR AND FRAME, PAINT, RE: DOOR SCHEDULE
 - 5 STANDING SEAM METAL ROOF ON 2 LAYERS 30# BUILDING FELT OVER SELF-ADHERING UNDERLAYMENT, 4" NAILBASE INSULATION, AND METAL FRAMING
 - 6 GUTTER - PRE-FINISHED SHEET METAL
 - 7 FASCIA - PRE-FINISHED SHEET METAL
 - 8 SOFFIT - PRE-FINISHED SHEET METAL
 - 9 INLINE EXHAUST FAN, MOTORIZED DAMPER, AND LOUVER, RE: MECH



SALT LAKE CITY, UT



CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: K. WOESSNER
DRAWN: K. WOESSNER
CHECKED: G. SHORT
CHECKED: ---
APPROVED: G. SHORT
FILENAME
DILKON PUMP STATION_A_BASE
BC PROJECT NUMBER
157520
CLIENT PROJECT NUMBER
00357.21
ARCH

BUILDING SECTIONS

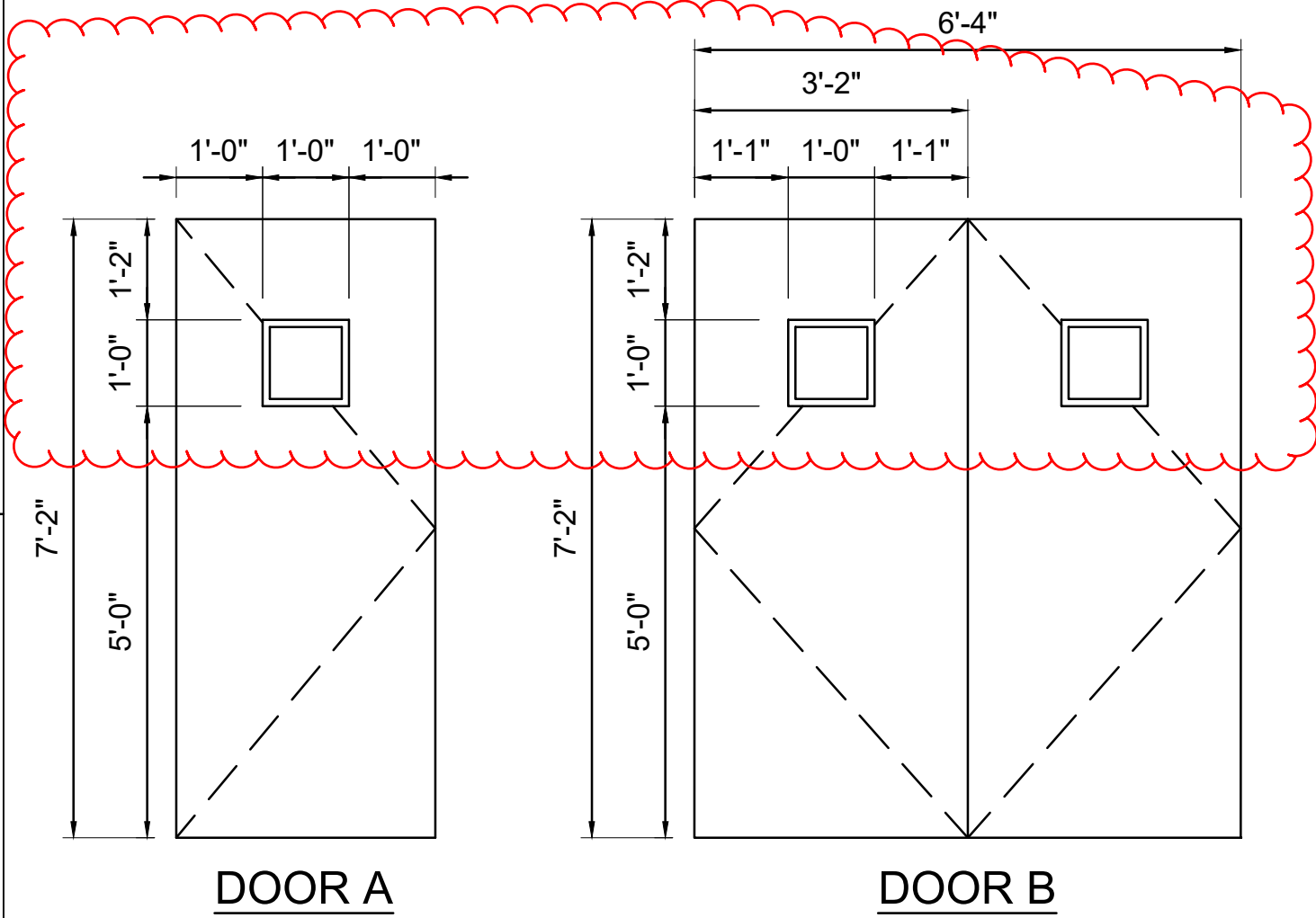
DRAWING NUMBER
A-202

SHEET NUMBER
OF 113

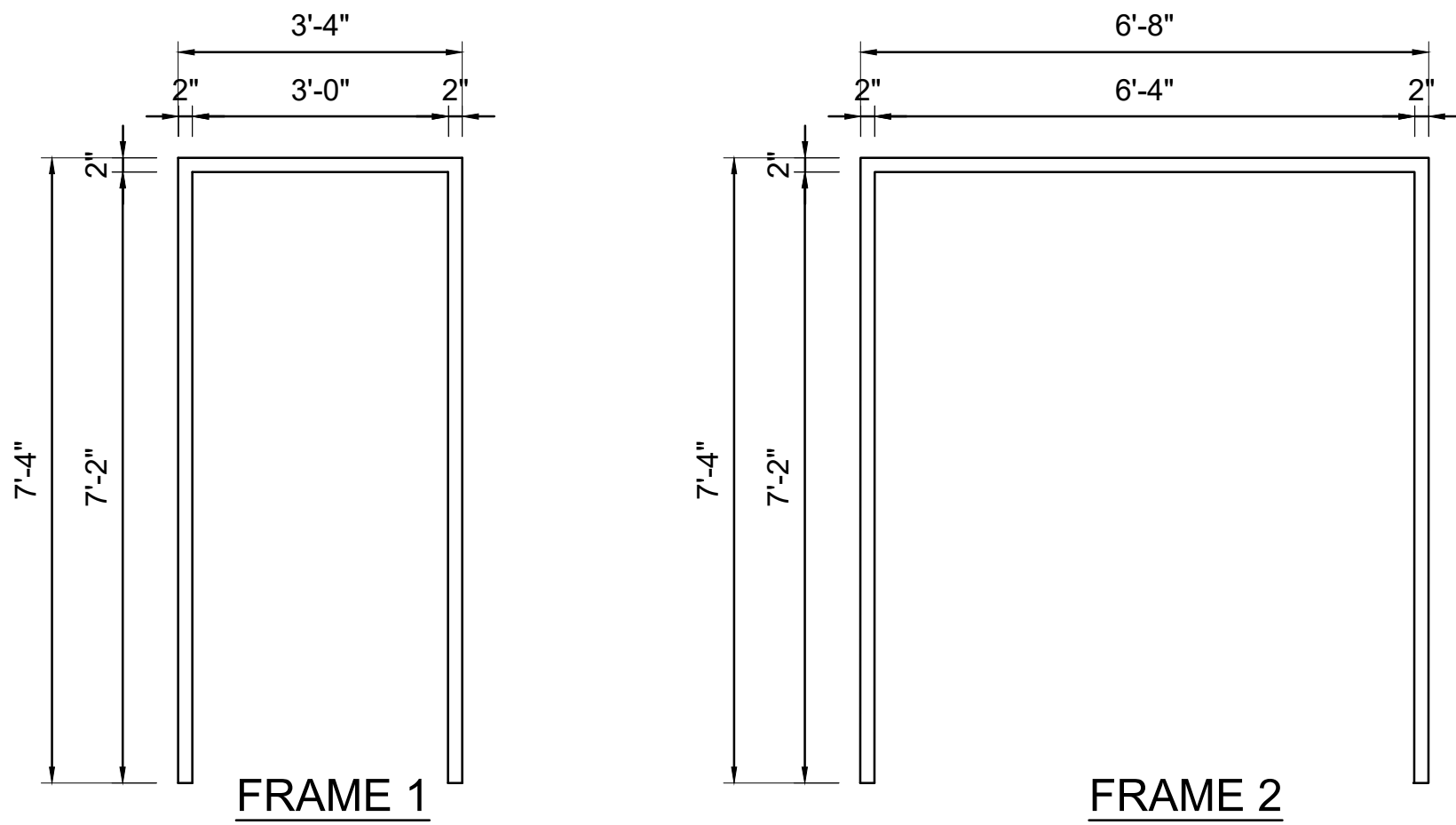
Path: C:\USERS\KWOESSNER\DDTG_CLOUD_SYNC_FOLDER\BUSINESS_DEVELOPMENT\DLKON2-DD (CURRENT)\DRAWINGS\DLKON PASS PUMP STATION_A_BASE.DWG PLOT DATE: 3/14/2022 9:20 AM CAD USER: KATIE WOESSNER

DOOR SCHEDULE		DOOR SCHEDULE NOTES:												
DOORS							GEN.	FRAMES						
DOOR NO.	TYPE	DIMENSIONS			MATERIAL	FINISH	HDWRE	TYPE	DETAILS			MATERIAL	FINISH	REMARKS / RATING
		W	H	TH					SILL	HEAD	JAMB			
1	A	3'-0"	7'-2"	1-3/4"	HM	PAINT	1	1	3/A301	1/A301	2/A301	HM	PAINT	---
2	B	6'-4"	7'-2"	1-3/4"	HM	PAINT	2	2	3/A301	1/A301	2/A301	HM	PAINT	---

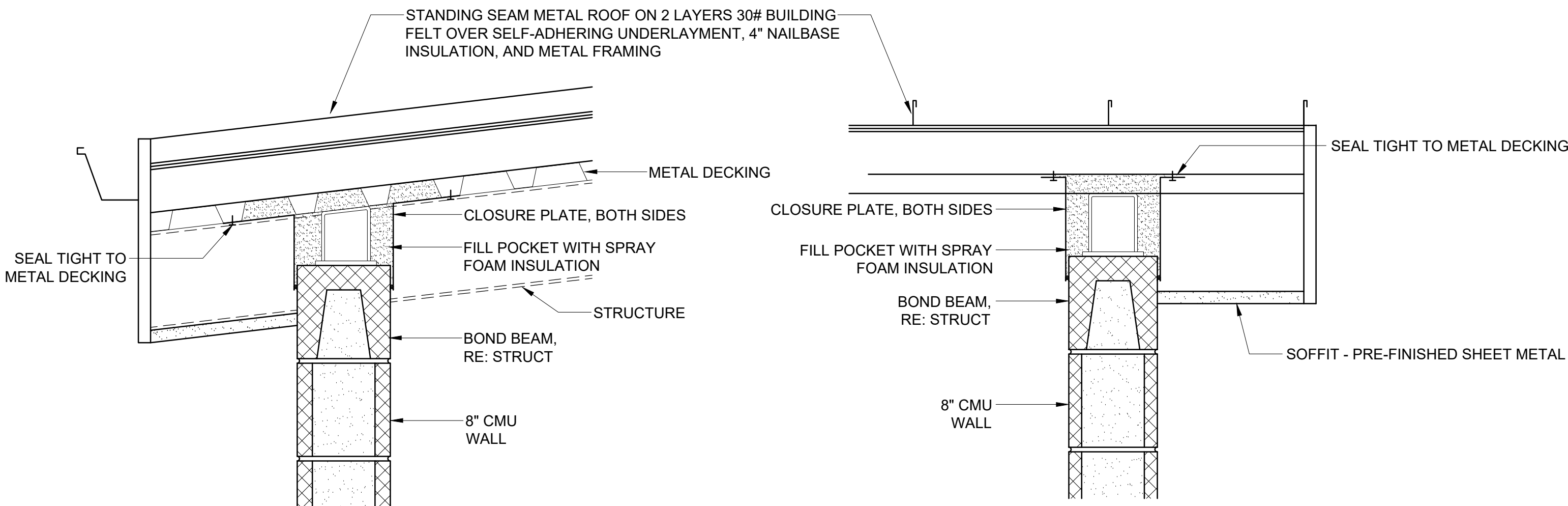
- CLEAR INSULATING GLASS:
- OVERALL UNIT THICKNESS: 1 INCH
 - MINIMUM THICKNESS OF EACH GLASS LITE: 6 MM
 - OUTDOOR LITE: FULLY TEMPERED FLOAT GLASS
 - INTERSPACE CONTENT: AIR
 - INDOOR LITE: FULLY TEMPERED FLOAT GLASS
 - SAFETY GLAZING REQUIRED



DOOR ELEVATIONS
1/2"=1'-0"

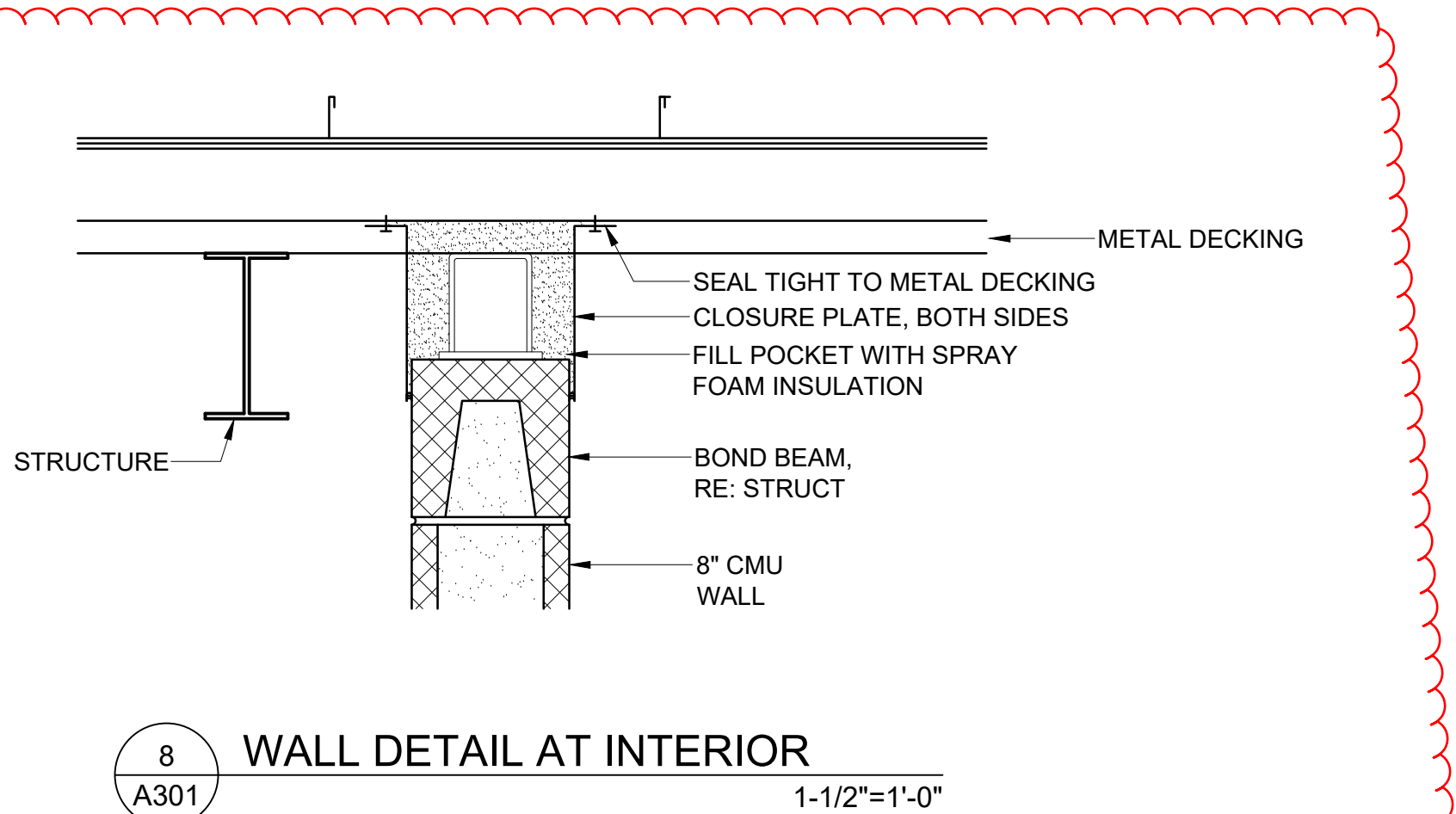


FRAME ELEVATION
1/2"=1'-0"

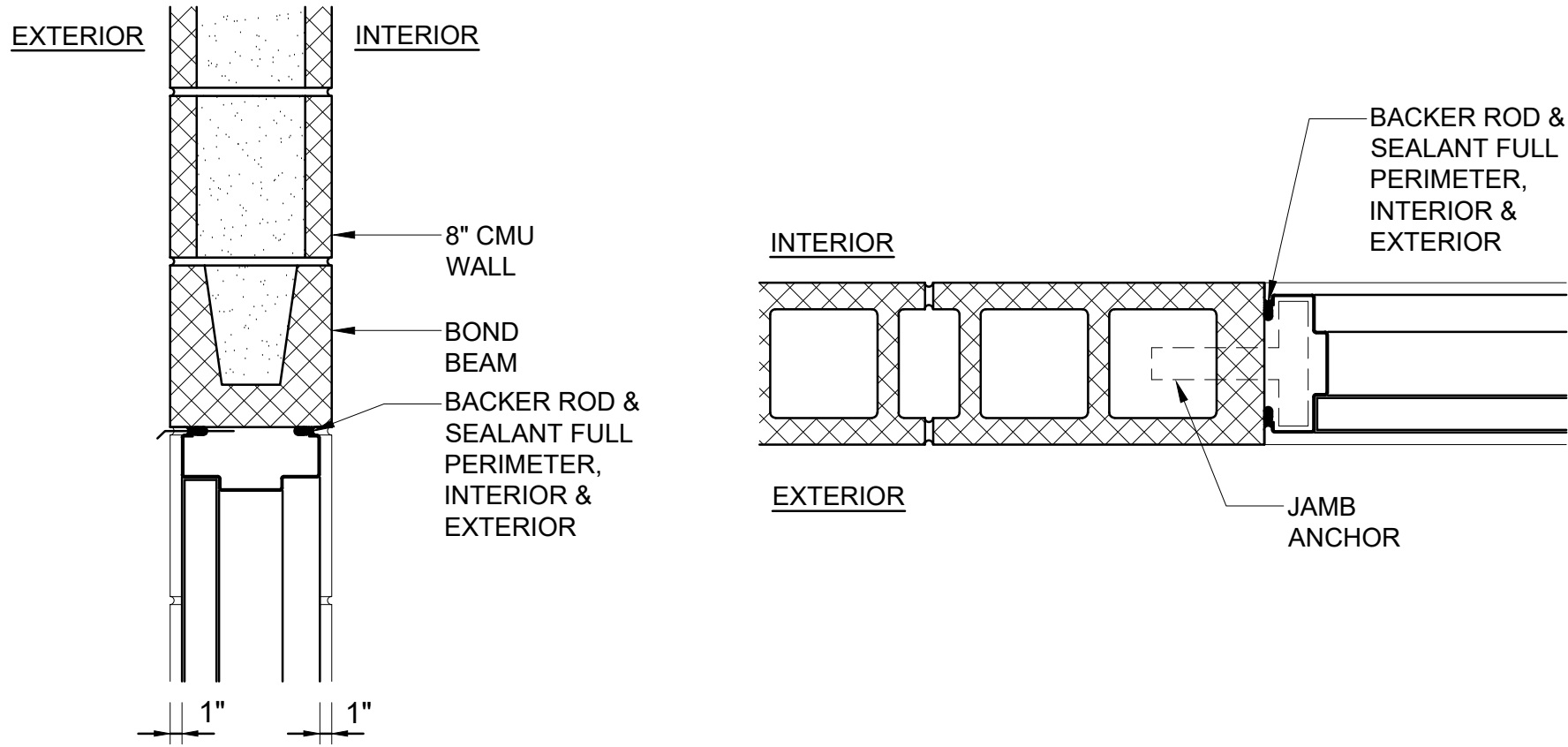


WALL DETAIL AT EAVE
1-1/2"=1'-0"

WALL DETAIL AT RAKE
1-1/2"=1'-0"

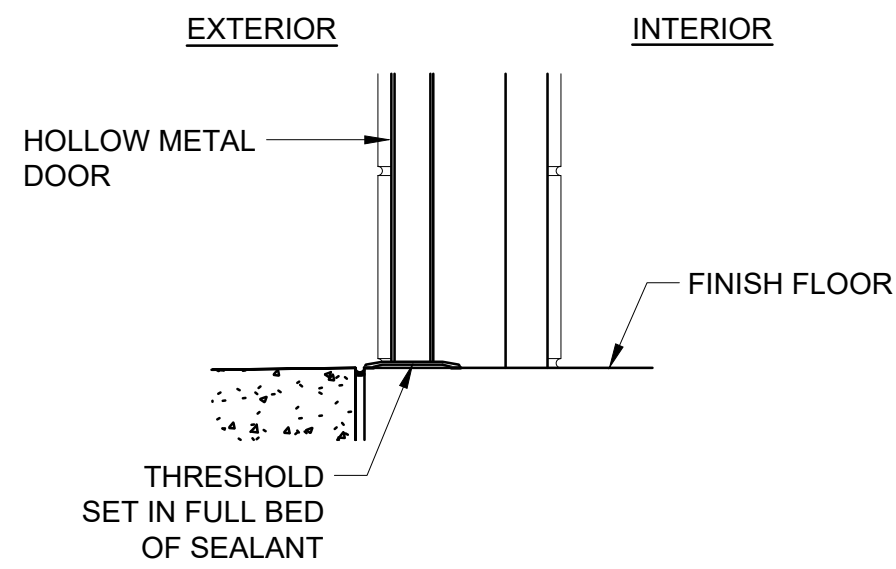


WALL DETAIL AT INTERIOR
1-1/2"=1'-0"

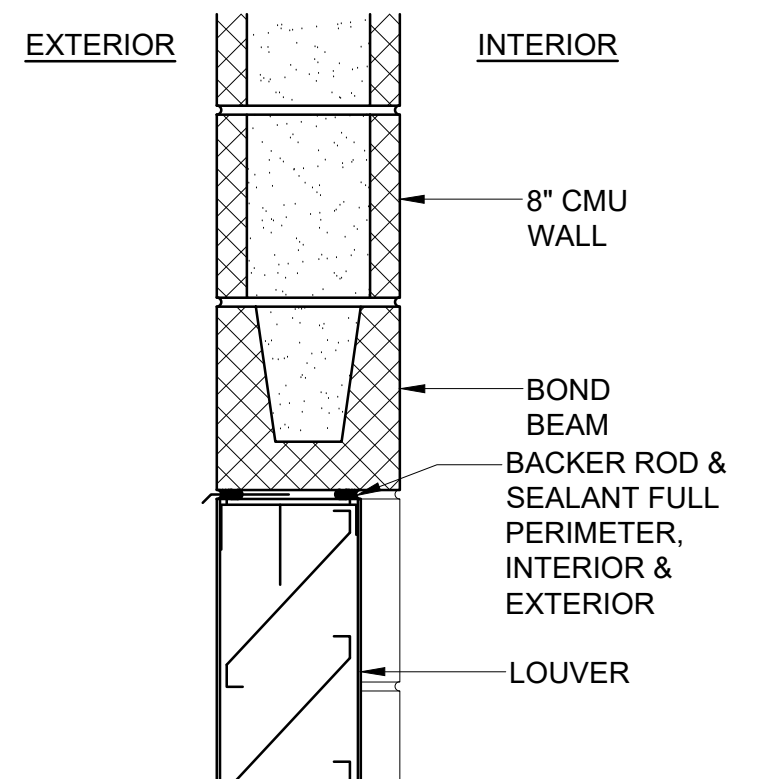


DOOR HEAD DETAIL
1-1/2"=1'-0"

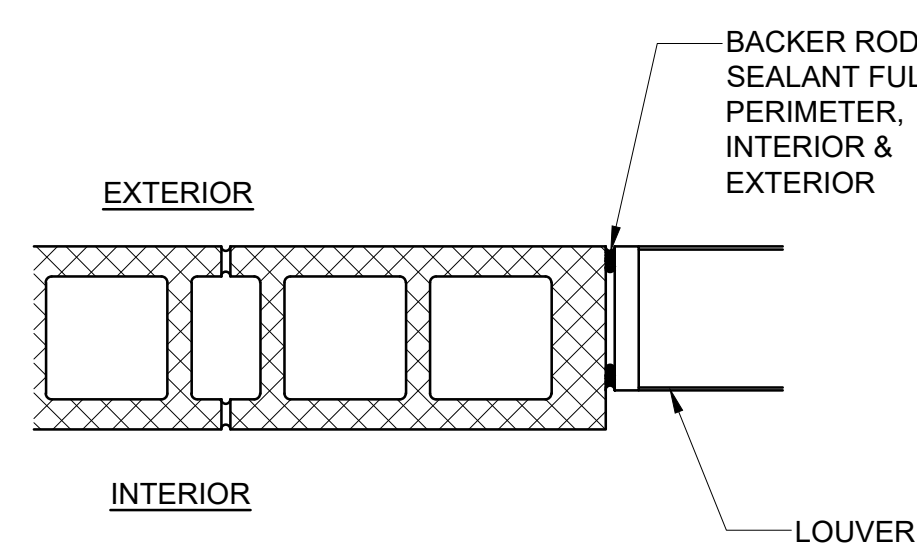
DOOR JAMB DETAIL
1-1/2"=1'-0"



DOOR SILL DETAIL
1-1/2"=1'-0"



LOUVER HEAD/SILL DETAIL
1-1/2"=1'-0"



LOUVER JAMB DETAIL
1-1/2"=1'-0"



SALT LAKE CITY, UT



CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: K. WOESSNER

DRAWN: K. WOESSNER

CHECKED: G. SHORT

CHECKED: ---

APPROVED: G. SHORT

FILENAME

DILKON PUMP STATION_A_BASE

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

00357.21

ARCH

DOOR SCHEDULE
AND DETAILS

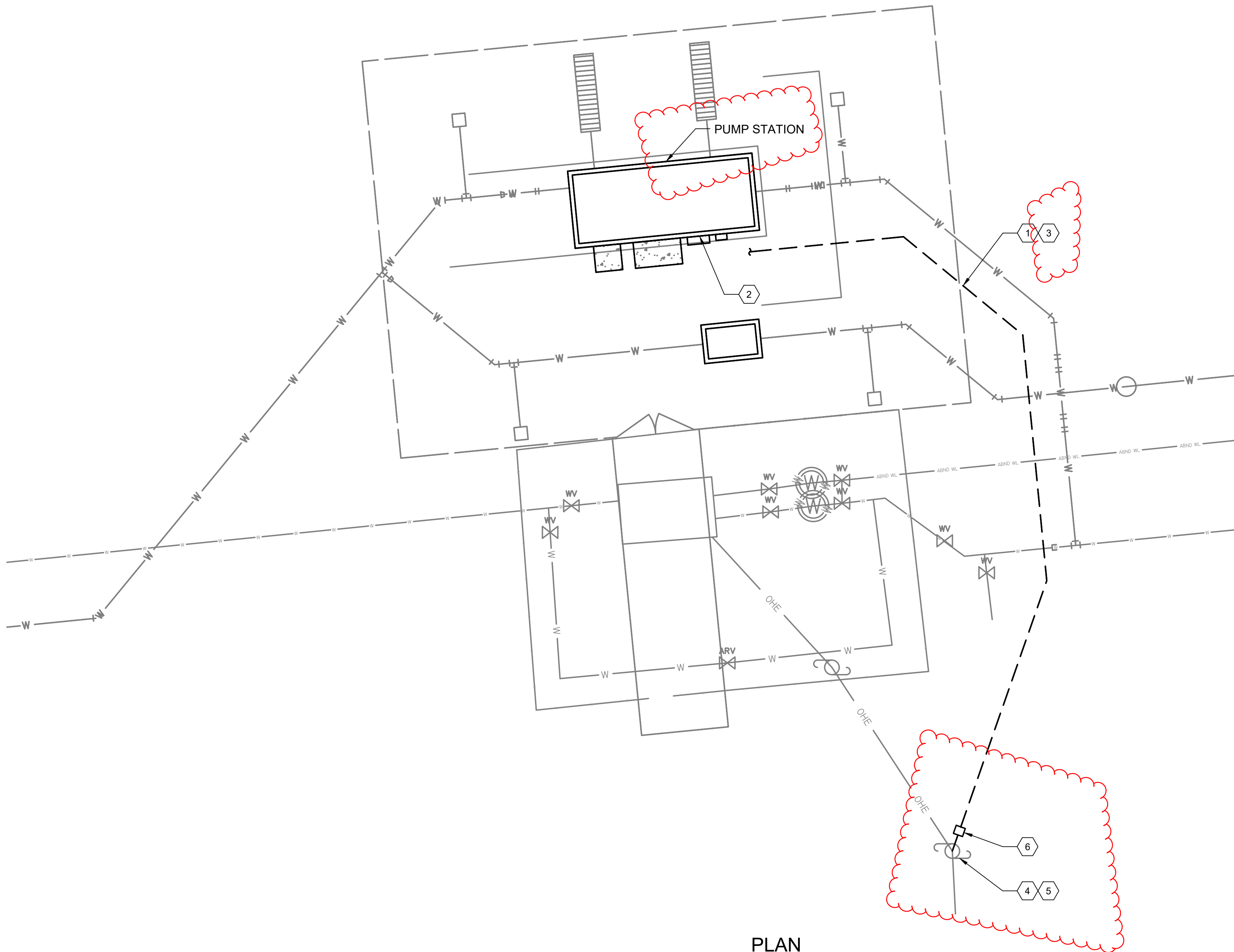
DRAWING NUMBER

A-301

SHEET NUMBER

OF 113

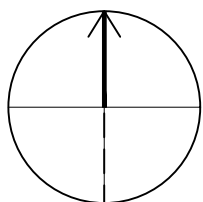
Path: C:\USERS\DEHMANN\PC\DWG\ID2344918 FILENAME: E-100.DWG PLOT DATE: 2/25/2022 1:51 PM CAD USER: DANIEL EHMANN



PLAN
SCALE: 3/32" = 1'-0"



PLAN
NORTH



GENERAL NOTES

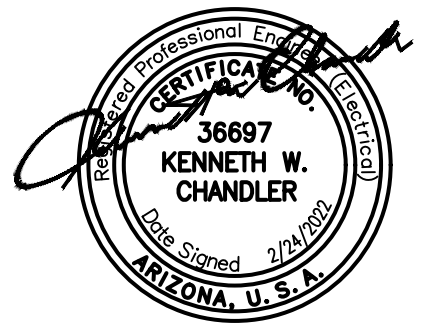
1. PROVIDE ELECTRICAL, INSTRUMENTATION, AND TELEMETRY SYSTEM.
2. POWER UTILITY: NAVAJO TRIBAL UTILITY AUTHORITY (NTUA), (928) 729-5721.

KEY NOTES

1. UNDERGROUND CIRCUITS BY OTHERS PER DRAWING E-102, POWER UTILITY REQUIREMENTS TO PREVAIL.
2. PROVIDE SERVICE ENTRANCE SECTION METER, ARRESTOR ON OUTSIDE OF BUILDING.
3. FIBER OPTIC CIRCUIT SC-1.
4. EXISTING OVERHEAD SERVICE LINE AND POWER POLE.
5. PROVIDE SLACK ENCLOSURE AND 100 FOOT CABLE ON POLE. CARLON SLK12 OR EQUAL. TERMINATION OF FIBERS AT EXISTING POWERLINE/FO CABLE ROUTE BY NTUA, REFER TO DRAWING C-100.
6. FIBER OPTIC PULLBOX



SALT LAKE CITY, UT



CONSTRUCTION ISSUE



DILKON PASS PIPELINE AND PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: K. CHANDLER

DRAWN: D. EHMANN

CHECKED: H. PACE

CHECKED: ---

APPROVED: S. BRENCLEY

FILENAME

E-100.dwg

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

ELECTRICAL

DILKON PASS PUMP STATION SITE PLAN

DRAWING NUMBER

E-100

SHEET NUMBER

52

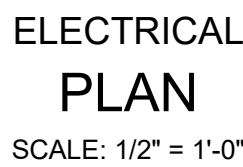
OF

60





Call at least two full working days
before you begin excavation.

ARIZONA 811
Arizona Blue Stake, Inc.

Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100



LUMINAIRE SCHEDULE

LUMINAIRE SCHEDULE		
TYPE	DESCRIPTION	MODEL #
	LITHONIA WST LED - SURFACE MOUNT, RUGGED DIE-CAST ALUMINUM HOUSING, ACRYLIC LENS, HIGH-EFFECIENCY LED'S, ZERO UPLIGHT, NIGHTTIME FRIENDLY, IP65 RATED, CONSISTENT WITH LEED AND GREEN GLOBE CRITERIA FOR ELIMINATING WASTEFUL UPLIGHT, 120VAC	LITHONIA WST LED P2 3000 50K VF MVOLT DDBTDX
	LITHONIA FEM LED - SURFACE MOUNT, FIBERGLASS HOUSING, REPLACEABLE DIFFUSER LENS, HIGH-EFFICIENCY LED'S, 4000K TEMPERATURE STANDARD, CSA CERTIFIED TO UL AND C-UL STANDARDS, 120VAC	LITHONIA FEM L48 4000LM LPAFL MD MVOLT GZ10 40K 80CRI
	LITHONIA ELM2 LED - SURFACE MOUNT, THERMOPLASTIC HOUSING, POLYCARBONATE LENS, LED SYSTEM, 90 MINUTE EMERGENCY LAMP CAPACITY, NICKEL CADMIUM BATTERY, MEETS UL 924, NFPA 101, NEC AND OSHA ILLUMINATION STANDARDS, 120VAC	LITHONIA ELM2 LED HO
	LITHONIA LQM - SURFACE MOUNT, THERMOPLASTIC HOUSING, LED SYSTEM, 90 MINUTE EMERGENCY LAMP CAPACITY, NICKEL CADMIUM BATTERY, MEETS UL 924, NFPA 101, NEC AND OSHA ILLUMINATION STANDARDS, 120VAC	LITHONIA LQM S W 3 R 120/277 EL N

1. GENERAL REQUIREMENTS: SPECIFICATION 16000.
2. TESTING: SPECIFICATION 16030.
3. ARC FLASH HAZARD ANALYSIS AND LABELING: SPECIFICATION 16431.
4. CIRCUITS: DRAWING E-102.
5. SCHEDULE AND COORDINATE WORK TO MINIMIZE WATER SYSTEM CONTROL OUTAGES. REFER TO SPECIFICATION 01014 AND 17900.
6. SUBMIT ELECTRICAL EQUIPMENT LAYOUT PRIOR TO CONDUIT ROUGH-IN.

1. SERVICE ENTRANCE SECTION
2. MAIN DISCONNECT SWITCH
3. PUMP MANAGEMENT UNIT
4. PUMP 1
5. PUMP 2
6. PUMP 3
7. SUCTION LEVEL SWITCH
8. DISCHARGE PRESSURE SWITCH
9. LOAD CENTER DISCONNECT SWITCH
10. FLOW METER
11. FLOW INDICATOR
12. TELEMETRY PLC
13. TRANSFORMER AND LOAD CENTER
14. TELEMETRY ANTENNA ON 2" x 20'-0" PIPE, ANCHORED TO BUILDING. ALIGN TO DILKON PASS TANK SITE. PROVIDE ANTENNA CABLE IN CONDUIT. PROVIDE CGB FITTING AND EXPOSE LOOP OF CABLE FOR FINAL CONNECTION TO ANTENNA. MAKE PENETRATION TO BUILDING WATER TIGHT.
15. HEATER
16. FLOW AMI UNIT
17. FAN, DRAWING H-101
18. MOTORIZED DAMPER
19. DOOR SWITCH
20. THERMOSTAT
21. CHLORINE LEAK DETECTOR. LOCATE SENSOR BELOW AT HEIGHT PER MANUFACTURER. MOUNT BEACON ABOVE.
22. AIR TEMPERATURE SENSOR/SWITCH
23. SUCTION PRESSURE TRANSDUCER
24. DISCHARGE PRESSURE TRANSDUCER
25. CHLORINATOR CONTROLLER
26. SCADA NETWORK CABINET

[illegible]

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: K. CHANDLER
DRAWN: D. EHMANN
CHECKED: H. PACE
CHECKED: ----
APPROVED: S. BRENCHELEY
FILENAME E-101.dwg
BC PROJECT NUMBER 157520
CLIENT PROJECT NUMBER

ELECTRICAL

DILKON PASS PUMP STATION PLAN

DRAWING NUMBER

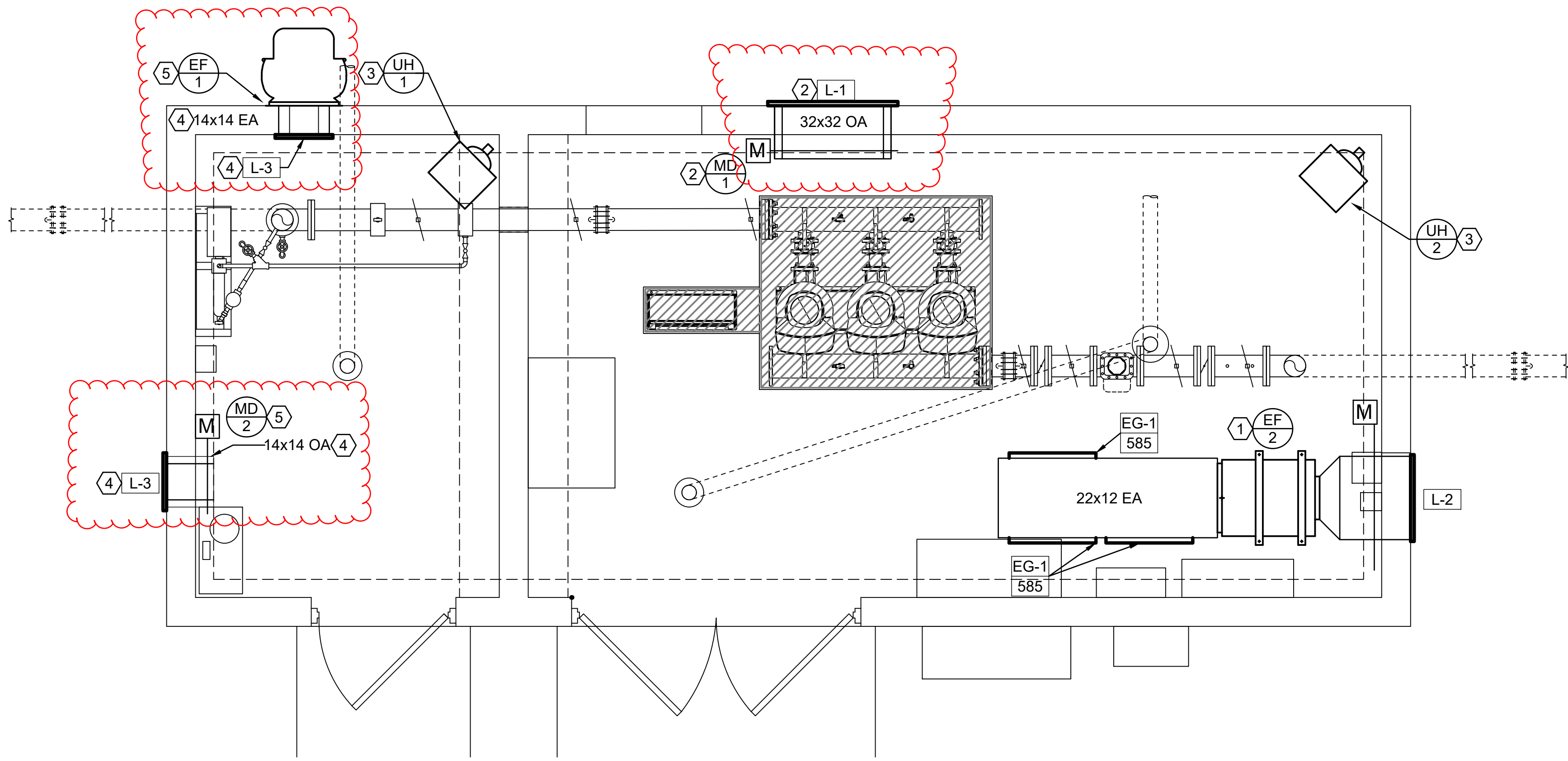
E-101

53

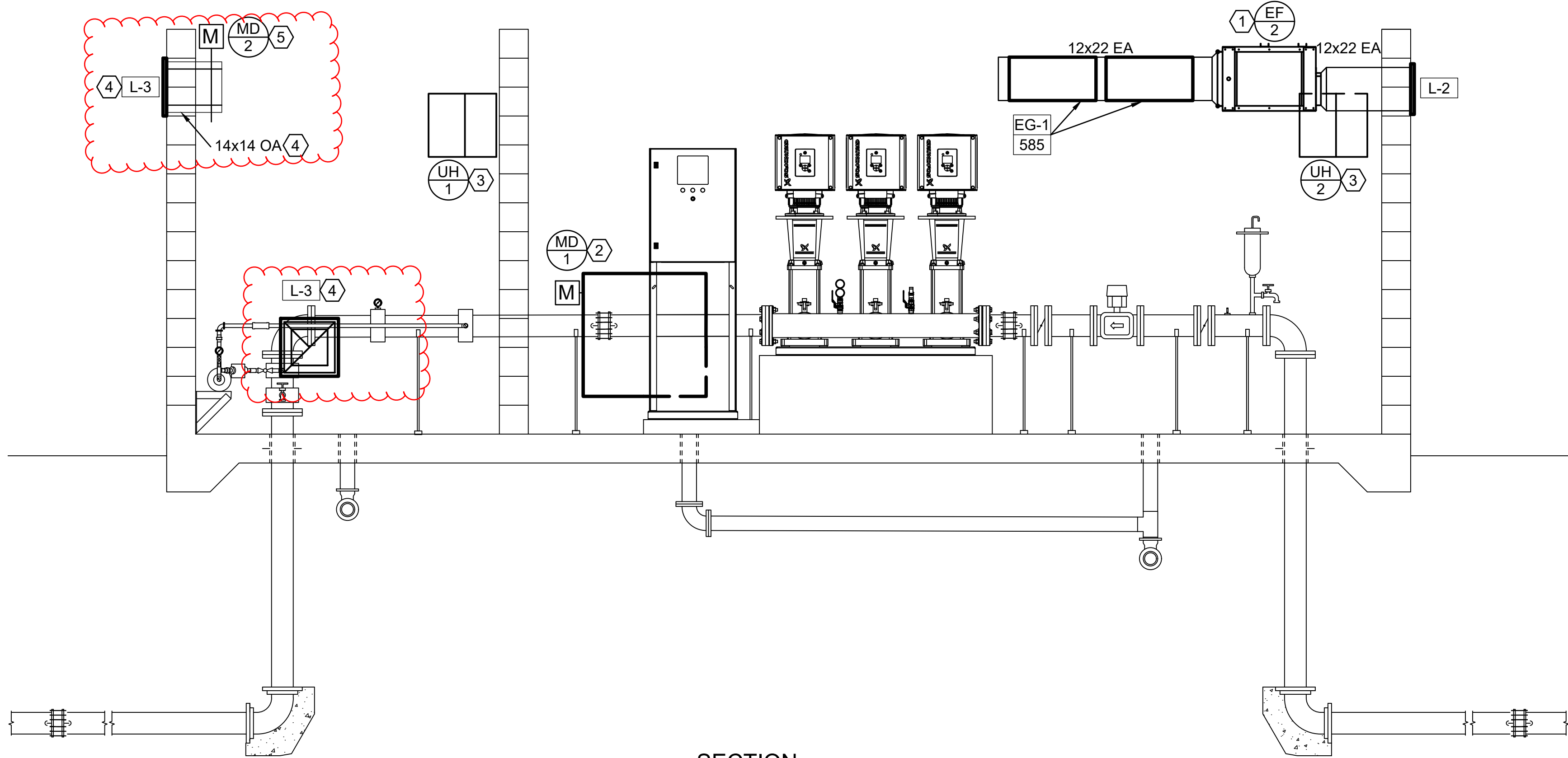
SHEET NUMBER
OF

60

Path: P:\2021\21161 DILKON PASS BPS & PIPELINE\DRAWINGS FILENAME: M 21161 DILKON PASS BPS & PIPELINE.DWG PLOT DATE: 3/2/2022 5:13 PM CAD USER: ETHAN RIGBY



PLAN
SCALE: 1/2" = 1'-0"

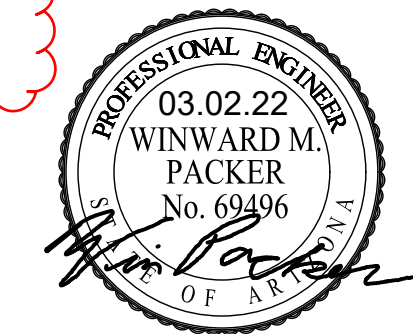


SECTION
SCALE: 1/2" = 1'-0"

- SHEET NOTES:
1. PROVIDE INLINE EXHAUST FAN, MOTORIZED DAMPER, AND LOUVER. INTERLOCK WITH FRESH AIR INLET DAMPER AND DISTRICT SCADA SYSTEM.
 2. PROVIDE INTAKE LOUVER, LINED DUCT ELBOW, AND MOTORIZED DAMPER. INTERLOCK DAMPER WITH EXHAUST FAN AND DISTRICT SCADA CONTROL SYSTEM.
 3. PROVIDE ELECTRIC UNIT HEATERS. INSTALL PER MANUFACTURE'S RECOMMENDATIONS. TIE TEMPERATURE CONTROL INTO SCADA SYSTEM.
 4. DUCTWORK & LOUVERS IN CHLORINE ROOM TO BE ALUMINUM.
 5. FAN & DAMPER TO BE OPERATED ON SWITCH PLACED NEAR DOOR. PROVIDE WITH SIGNAGE ON DOOR FOR FAN TO BE TURNED ON FOR 5 MINUTES PRIOR TO ENTERING.



SALT LAKE CITY, UT



CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: E. RIGBY

DRAWN: E. RIGBY

CHECKED: J. LARSEN

CHECKED: ---

APPROVED: W. PACKER

FILENAME

H-101.dwg

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

00357.21

HVAC

DILKON PASS PUMP
STATION HVAC
PLAN AND SECTION

DRAWING NUMBER

H-101

56

SHEET NUMBER

OF

113

Path: P:\2021\2161 DILKON PASS BPS & PIPELINE\DRAWINGS FILENAME: M 2161 DILKON PASS BPS & PIPELINE.DWG PLOT DATE: 3/2/2022 5:13 PM CAD USER: ETHAN RIGBY

EXHAUST FAN SCHEDULE										
SYMBOL	MANUFACTURER & MODEL No.	SERVES	C.F.M.	STATIC PRESSURE IN. WG.	MAX NOISE SONES	MOTOR			OPER. WT. (LBS)	SCHEDULE NOTES
						V - Ø - Hz	HP	RPM		
<div>EF1</div>	COOK 100 ACWB OR80	CHLORINE ROOM	350	0.35	7.6	115-1-60	1/6	1725	47	1,3,5,6
<div>EF2</div>	COOK DB9	PUMP ROOM	1750	0.35	11.5	115-1-60	1/2	869	98	1,2,3,4
<div>1. MANUFACTURER TO BE LOREN COOK, CARNES, GREENHECK, TWIN CITY JENCO, OR PRIOR APPROVED EQUAL.</div> <div>2. INLINE FAN, SUPPORT FROM SPRING HANGERS.</div> <div>3. PROVIDE WITH BACK-DRAFT DAMPER.</div> <div>4. SEE DETAIL E ON SHEET E-102 FOR ONE-LINE CONTROL DIAGRAM.</div> <div>5. FAN TO OPERATE BY SWITCH NEAR LIGHT. SIGNAGE ON DOOR TO RUN FAN FOR 5 MINUTES BEFORE ENTERING.</div> <div>6. FAN PROVIDED SHALL BE COATED INSIDE AND OUT IN PHENOLIC EPOXY COATING. ALL INTERNAL FERROUS MATERIALS SHALL ALSO BE PROVIDE COATED WITH PHENOLIC EPOXY COATING. ALL FASTENERS SHALL BE STAINLESS STEEL HARDWARE.</div>										

ELECTRIC UNIT HEATER SCHEDULE											
SYMBOL	MANUFACTURERS AND MODEL NO.	CFM	BTUH	ELECTRICAL			RPM	AIR TEMP RISE (F)	THROW (FT)	WEIGHT (LBS)	SCHEDULE NOTES
				SERVICE	KW	HP					
<div>UH1</div>	MODINE HER30	380	10200	208-1-60	3	1/40	1550	25	12	34	1,2
<div>UH2</div>	MODINE HER30	380	10200	208-1-60	3	1/40	1550	25	12	34	1,2
<div>1. MANUFACTURER TO BE MODINE, MARLEY, QMARK, MARKEL, CHORMALOX, INDEECO, OR PRIOR APPROVED EQUAL.</div> <div>2. PROVIDE WITH TEMPERATURE SENSOR AND TIE INTO SCADA SYSTEM. COORDINATE WITH SCADA CONTRACTOR.</div>											

REGISTER, LOUVER, & GRILLE SCHEDULE									
SYMBOL	TYPE	SERVICE	MAX CFM	NOMINAL SIZE	THROAT SIZE	CEILING TYPE	FT./MIN.	MANUF. & MODEL	SCHEDULE NOTES
<div>L-1</div>	WALL	INTAKE	1750	34X34	34X34	N/A	500	RUSKIN ELF811	1,2,3,4,5
<div>L-2</div>	WALL	EXHAUST	1750	28X40	28X40	N/A	600	RUSKIN ELF811	1,2,3,4,5
<div>L-3</div>	WALL	INTAKE	350	16x16	14x14	N/A	500	RUSKIN ELF811	1,2,3,4,5
<div>EG-1</div>	DUCT	EXHAUST	750	24X12	24X12	DUCT MOUNTED	500	PRICE 500	2,4,5
<div>1. SEAL ALL PENETRATIONS WEATHER TIGHT.</div> <div>2. MAXIMUM FT/MIN AT CFM LISTED.</div> <div>3. PROVIDE TRANSITION TO LOUVER THROAT SIZE AS REQUIRED TO DUCTWORK SHOWN ON PLAN.</div> <div>4. MANUFACTURER TO BE RUSKIN, GREENHECK, POTTORF, CARNES, OR PRIOR APPROVED EQUAL.</div> <div>5. FINISH SHALL BE SPECIFIED BY ARCHITECT.</div>									

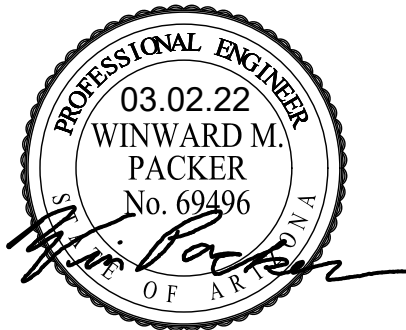
CONTROL DAMPER SCHEDULE					
SYMBOL	SIZE	NO. REQUIRED	LOCATION	MANUF.& MODEL	COMMENTS
<div>MD1</div>	32"X32"	1	PUMP RM.	RUSKIN CD40	2,3,4
<div>MD2</div>	14"X14"	1	CHLORINE RM.	RUSKIN CD40	1,3,4
<div>1. DAMPER TO BE LOW LEAKAGE OF ALUMINUM CONSTRUCTION.</div> <div>2. ACTUATOR TO BE BELIMO 120/1/60.</div> <div>3. DAMPER MANUFACTURER TO BE RUSKIN, GREENHECK, POTTORF, CARNES, OR PRIOR APPROVED EQUAL.</div>					



SALT LAKE CITY, UT



WHW
ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
1104 East 2100 South Suite 200
SALT LAKE CITY, UT 84143
(801)462-1100 FAX 462-8892
EMAIL: ecobacco@whw-engineering.com



CONSTRUCTION
ISSUE



DILKON PASS
PIPELINE AND
PUMP STATION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: E. RIGBY

DRAWN: E. RIGBY

CHECKED: J. LARSEN

CHECKED: ---

APPROVED: W. PACKER

FILENAME

H-501.dwg

BC PROJECT NUMBER

157520

CLIENT PROJECT NUMBER

00357.21

HVAC

HVAC SCHEDULES

DRAWING NUMBER

H-501

58

SHEET NUMBER
OF

113

NAVAJO TRIBAL UTILITY AUTHORITY

PUMP CONTROL PANEL LAYOUT

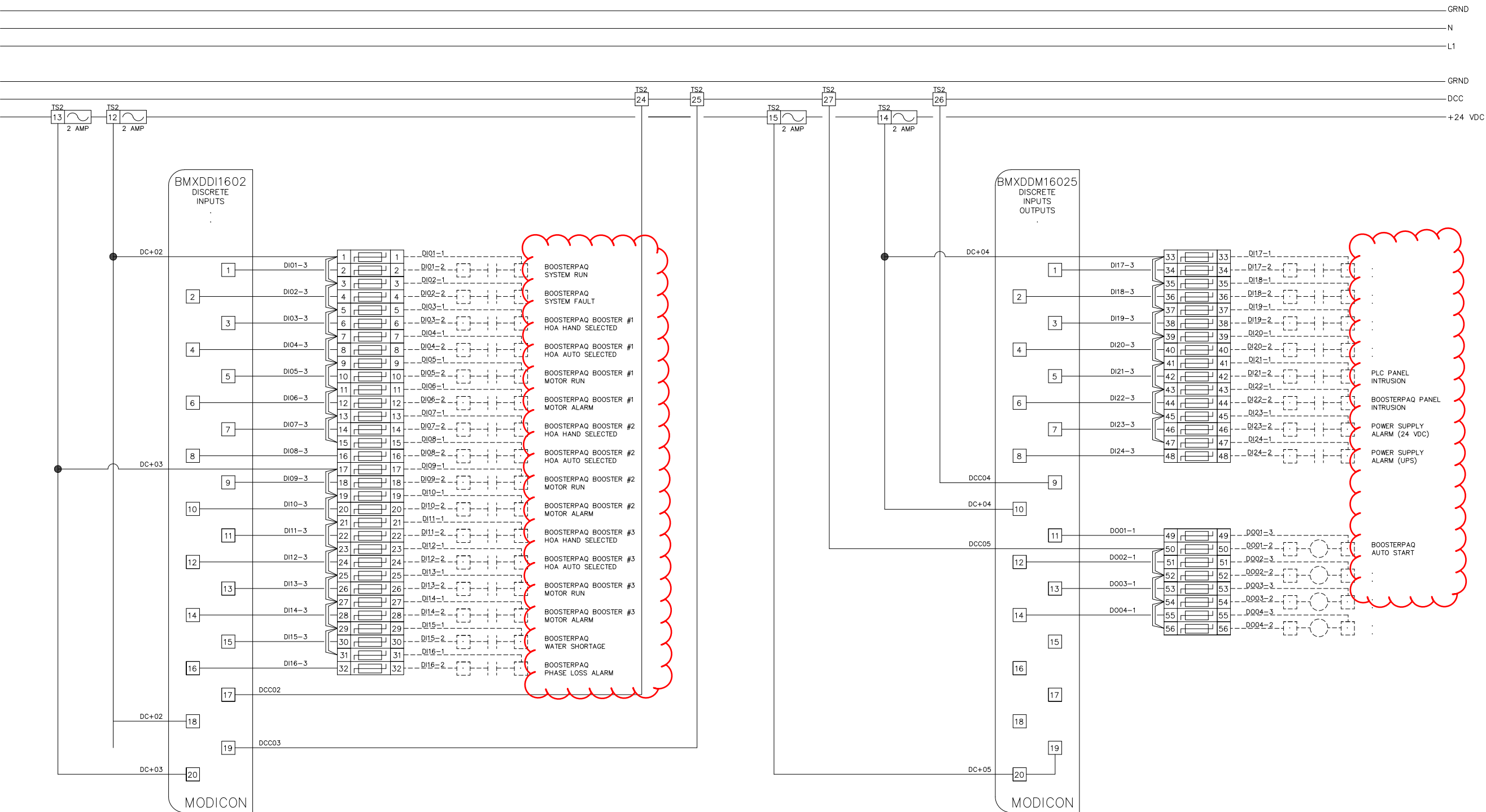


PLC CONTROL PANEL

SCHEDULE OF DRAWINGS			
SHEET	FILENAME	TITLE	NOTES
1	PLC_CV	COVERSHEET	SCHEDULE OF DRAWINGS
2	PLC_DI	DISCRETE I/O	WIRING
3	PLC_AI	ANALOG INPUT	WIRING
3A	PLC_AO	ANALOG OUTPUT	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	

01	3/22	DWG MODIFICATION "DILKON PASS BOOSTER"	NTUA
NO.	DATE	DESCRIPTION	BY
NTUA			
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE: NONE	REVISIONS		BY DATE
DATE:			
DRN:	CRD:		
APVD:			
TITLE: PLC CONTROL PANEL			NO. #
COVER SHEET			SHEET 1 OF 6

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



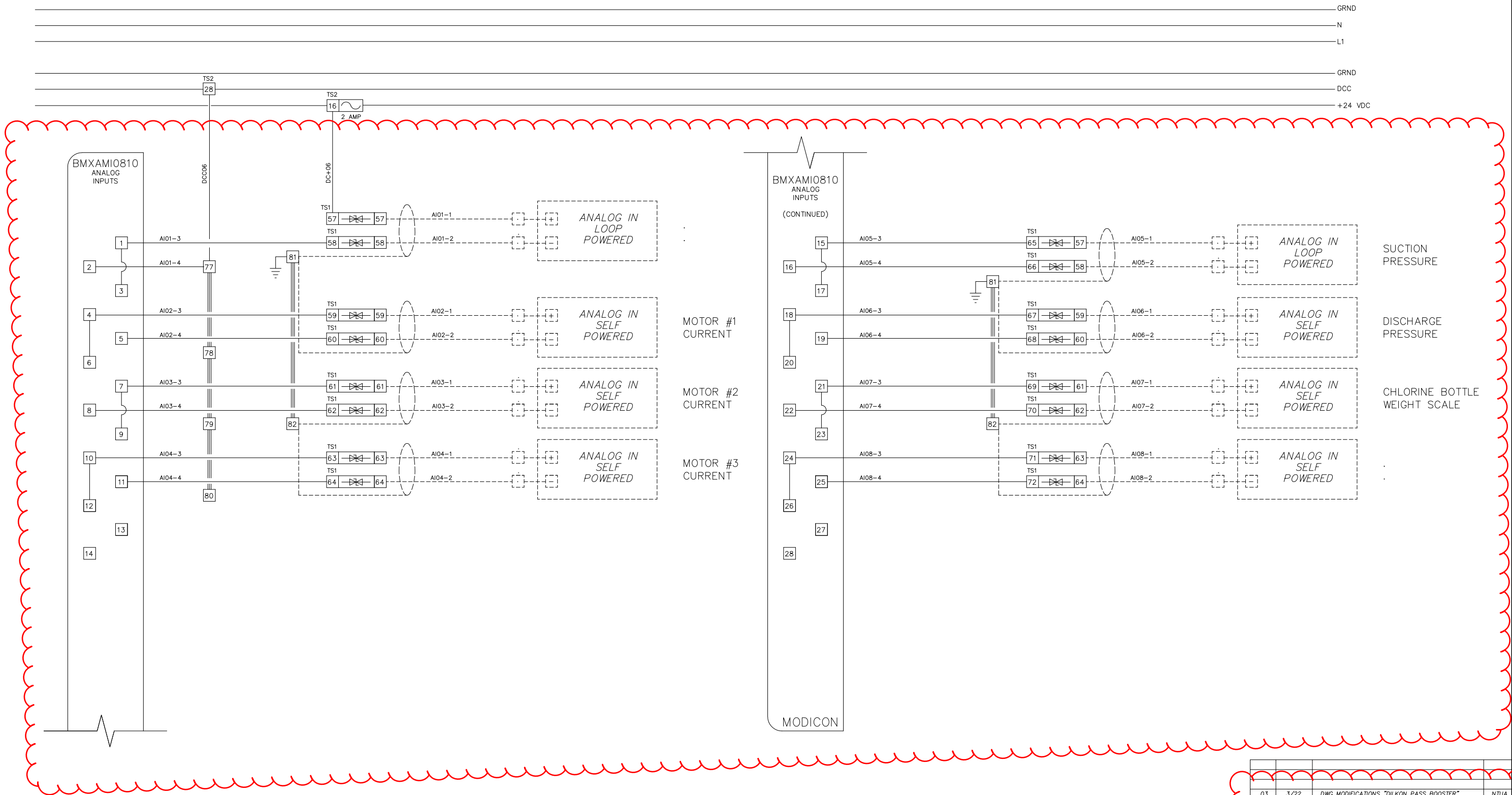
LEGEND

Field Terminations -----

Panel Wiring _____

02	12/21	DWG UPDATES "DILKON PASS BOOSTER"	NTUA
01	3/15	DWG UPDATES	NTUA
NO.	DATE	DESCRIPTION	BY
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE: NONE	REVISIONS		BY DATE
DATE:			
DRN:	DRN:		
APVD:			
TITLE: PLC CONTROL PANEL DISCRETE I/O (BOOSTER WITH BOOSTERPAQ)			SHEET 2 OF 6

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	_____

NO.	DATE	DESCRIPTION	BY
03	3/22	DWG MODIFICATIONS "DILKON PASS BOOSTER"	NTUA
02	12/21	DWG UPDATES	NTUA
01	3/19	DWG UPDATES	NTUA
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE:	NONE	REVISIONS	BY DATE
DATE:			
DRN:	CRD:		
APVD:			
TITLE: PLC CONTROL PANEL ANALOG INPUT (BOOSTER WITH BOOSTERPAQ)			NO.#
			SHEET 3 OF 6

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

GRND

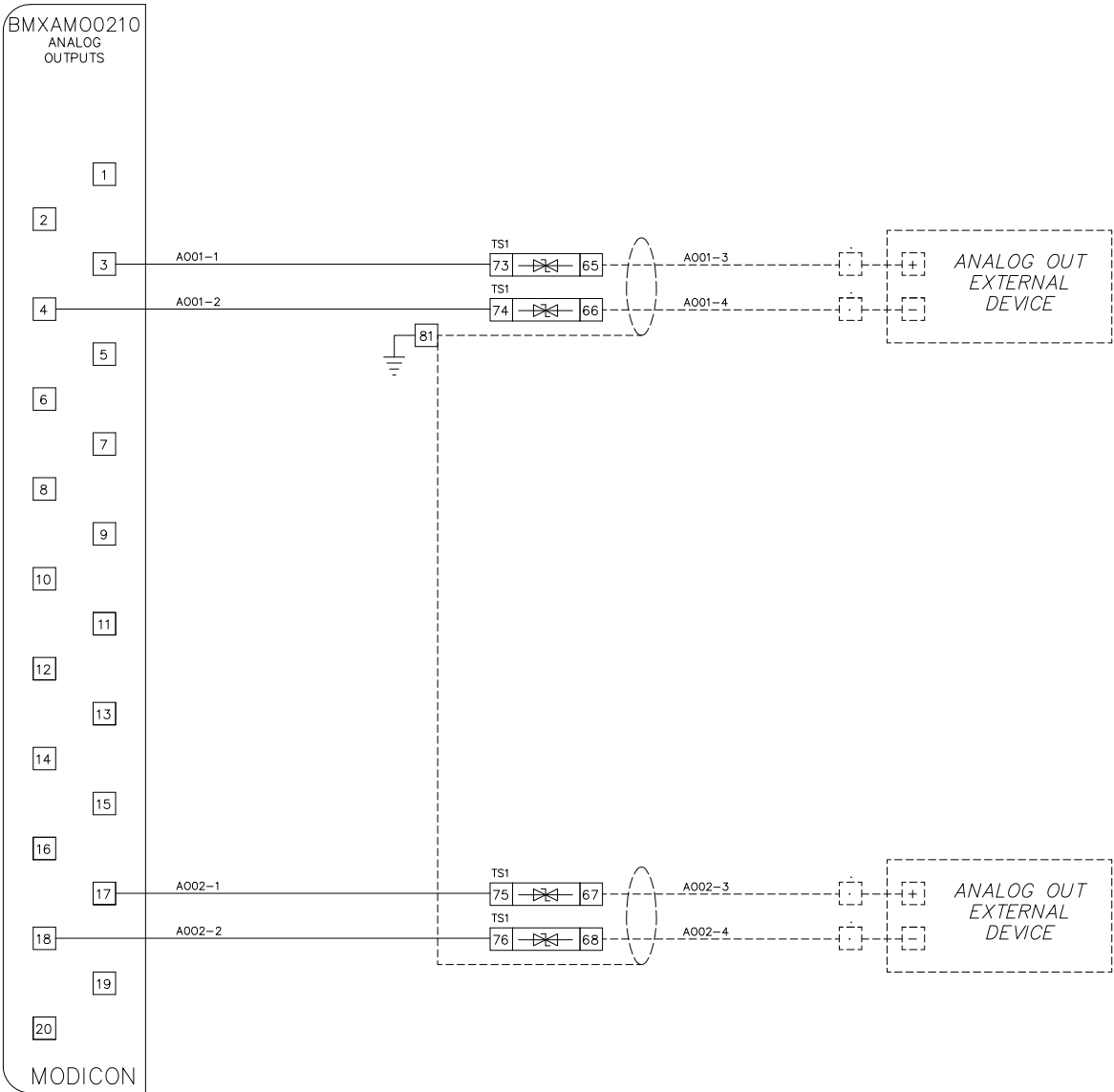
N

L1

GRND

DCC

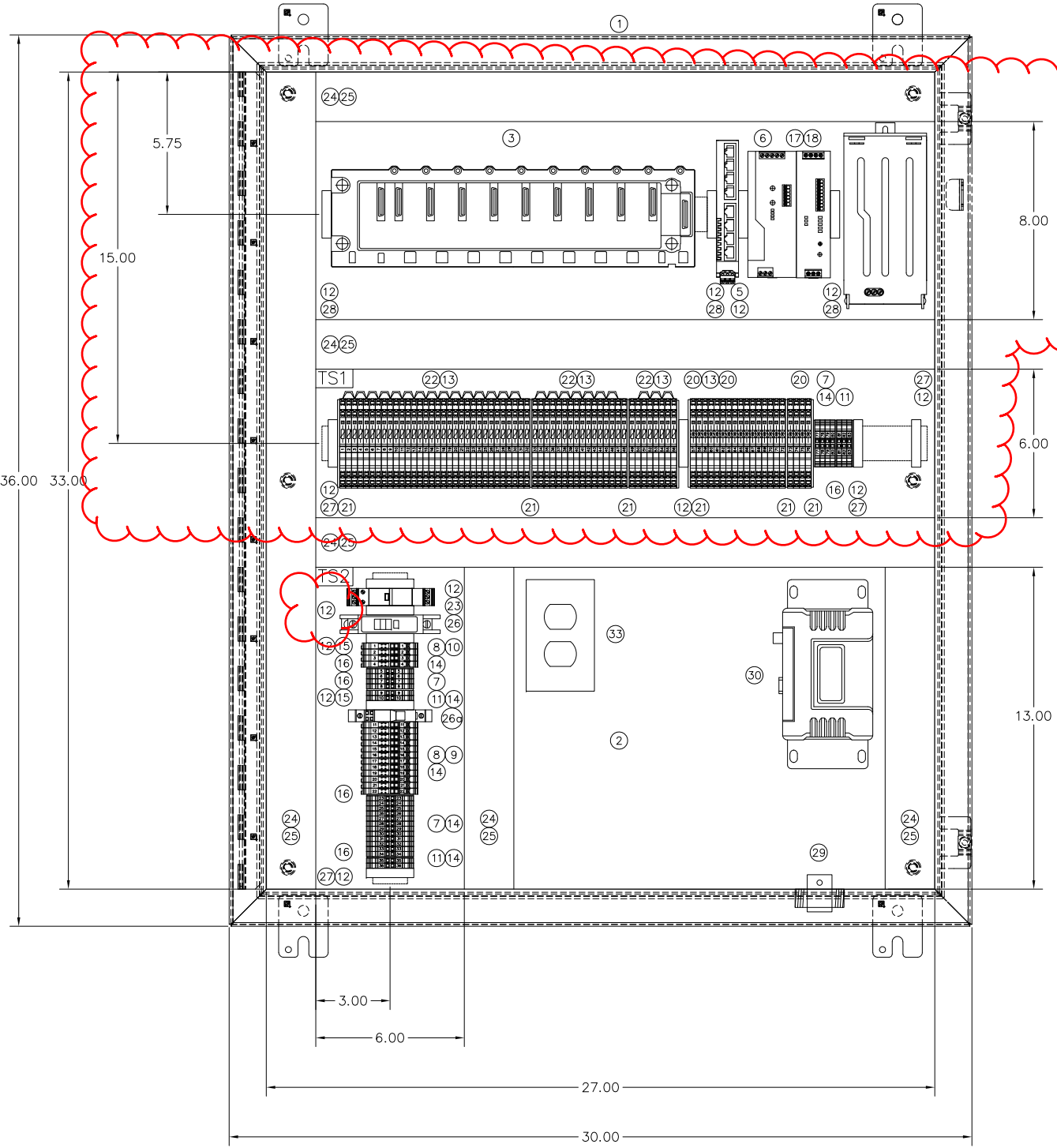
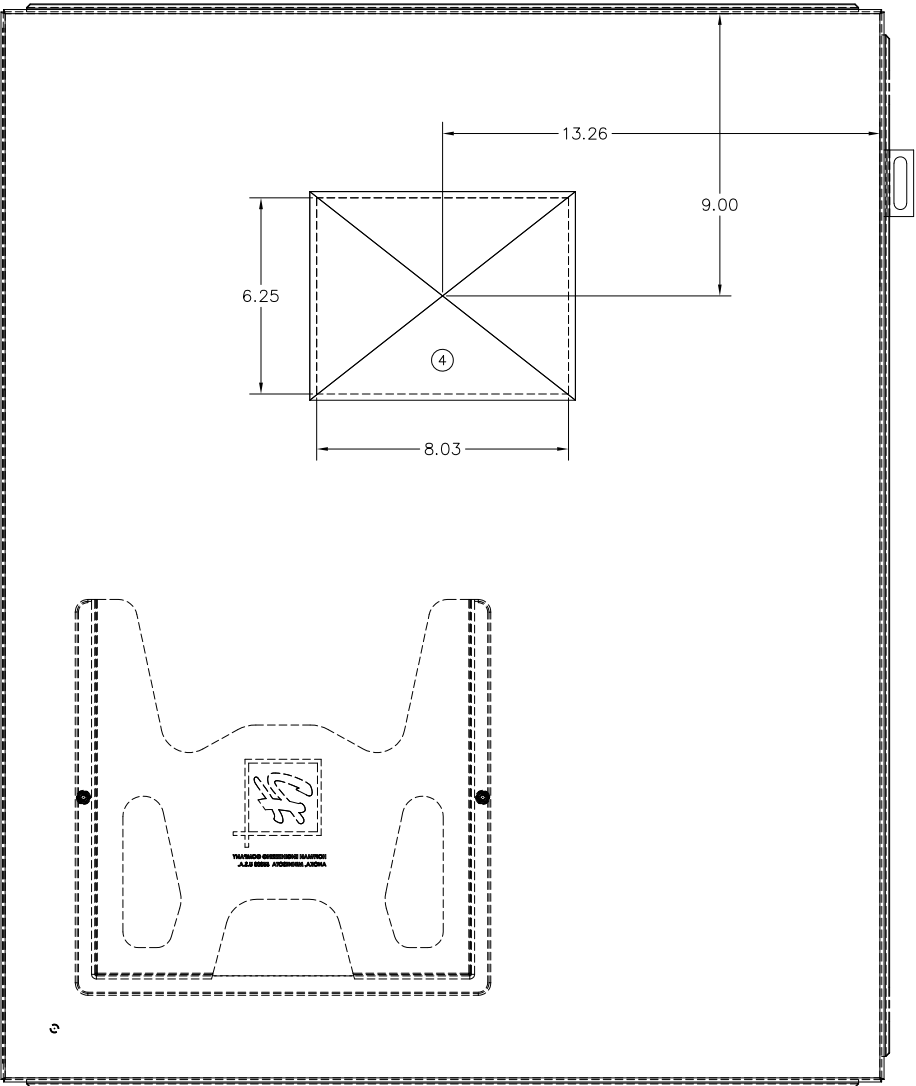
+24 VDC



LEGEND

Field Terminations -----
Panel Wiring _____

03	3/22	DWG MODIFICATIONS "DILKON PASS BOOSTER"	NTUA
02	12/21	DWG UPDATES	NTUA
01	3/19	DWG UPDATES	NTUA
NO.	DATE	DESCRIPTION	BY
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE:	NONE	REVISIONS	BY DATE
DATE:	.	.	.
DRN:	DRN:	.	.
APVD:	APVD:	.	.
TITLE: PLC CONTROL PANEL ANALOG OUTPUT (BOOSTER WITH BOOSTERPAQ)			SHEET 3a OF 6



BILL OF MATERIALS				
ITEM	QTY	PART NO.	DESCRIPTION	MFG
1	1	A-363012LP	SINGLE-DOOR TYPE 12 ENCLOSURE	HOFFMAN
2	1	A-36P30	BACKPLANE	HOFFMAN
3*	.	M340	MODICON M340 BOM	SCHNEIDER
3a	1	BMXXBP0800	8-SLOT RACK	ELECTRIC
3b	1	BMXCPS3020	MODULE POWER SUPPLY	ELECTRIC
3c	1	BMXP342020	MODULE CPU PROCESSOR	ELECTRIC
3d	1	BMXDD1602	MODULE DIGITAL INPUT	ELECTRIC
3e	1	BMXDD16025	MODULE DIGITAL INPUT/OUTPUT	ELECTRIC
3f	1	BMXAMI0810	MODULE ANALOG INPUT	ELECTRIC
3g	1	BMXAMI0820	MODULE ANALOG OUTPUT	ELECTRIC
3h	1	BMXFTB2800	REMOVABLE CONNECTION BLOCK - SCREW CLAMP	ELECTRIC
3i	1	BMXFTB2800	REMOVABLE CONNECTION BLOCK - CASE SPRING	ELECTRIC
4	1	AMIC704310	TOUCHSCREEN (MAGELIS) INDUSTRIAL ETHERNET	SCHNEIDER
5	1	FL SWITCH 1008N	SWITCH	PHOENIX
6	1	QUINT4-PS/1AC/ 24DC/10	POWER SUPPLY 22.5-28.5V ADJUSTABLE	CONTACT
7	26	UT2,5	UT2,5 TERMINALS	PHOENIX
8	16	UT4TG	FUSE TERMINAL BASE	CONTACT
9	12	P-FU5X20LED24	FUSE PLUG	CONTACT
10	4	P-FU5X20LA250	FUSE PLUG	CONTACT
11	7	UT2,5PE	GROUNDING TERMINAL	CONTACT
12	15	E/NS35N	END CLAMP	CONTACT
13	4	FBS 20-6 BU #3032208	FIXED BRIDGE	CONTACT
14	4	FBS 20-5 BU #3036929	INSERTION BRIDGE	CONTACT
15	6	D-UT2,5/10	END COVER	CONTACT
16	6	ATP-UT	PARTITION PLATES	CONTACT
17	1	QUINT4-UPS/24DC/ 24DC/10	UNINTERRUPTIBLE POWER SUPPLY	CONTACT
18	1	UPS-BAT/PB/ 24DC/4.0AH	ENERGY STORAGE	CONTACT
19
20	20	TTC-6-TVSD-C- 24DC-UT-I	SURGE PROTECTION #2906831	CONTACT
21	7	TTC-6-LCP #2908729	END COVER	CONTACT
22	56	TTC-6-MOV-C- 24DC-UT-I	SURGE PROTECTION #2906837	CONTACT
23	1	PLT-SEC-T3-120 -FM-UT	TYPE 3 SURGE PROTECTION DEVICE	CONTACT
24	AN	FX4LG6	TYPE F NARROW SLOT WIRING DUCT	PANDUIT
25	AN	C2LG6	WIRING DUCT COVER	PANDUIT
26	1	TMC 71C 10A #0902072	CIRCUIT BREAKER	CONTACT
26a	1	UT6-TMCM 10A #0916610	CIRCUIT BREAKER	CONTACT
27	AN	1492DR6	EXTENDED DIN RAIL	ALLEN BRADLEY
28	AN	1492-DR5	DIN RAIL	ALLEN BRADLEY
29	1	IS-50NX-C2	LIGHTNING ARRESTER	POLYPHASER
30	1	ORBIT OR TRANSNET	902 - 928 MHz RADIO SPREAD SPECTRUM	GEMDS
31	2	CAT6	ETHERNET PATCH CABLE (4' - BLACK)	BELDEN
32	.	.	CABLE - PLC TO MODEM (TO LENGTH)	.
33	1	DRUBGF115	DIN RAIL UTILITY BOX	HUBBELL

AN - As needed
3* - BOM - To include items 3a-3h.

02	3/22	DWG MODIFICATIONS "DILKON PASS BOOSTER"	NTUA
01	3/19	DWG UPDATES	NTUA
NO	DATE	DESCRIPTION	BY
NAVAJO TRIBAL UTILITY AUTHORITY			
SCALE:	NONE	REVISIONS	BY DATE
DATE:	.	.	.
DRN:	CRD.	.	.
APVD:	.	.	.
TITLE	PLC CONTROL PANEL		NO. #
	BACKPLANE		SHEET 5 OF 6