



J-U-B COMPANIES



THE
LANGDON
GROUP



GATEWAY
MAPPING
INC.

ADDENDUM NO. 5

DATE: August 26, 2025

FROM: Matt Filla, PE, on behalf of the Town of Palisade

TO: All Bidders of Record

RE: Sewer Transfer Project

All Bidders of Record responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following bid document modifications:

1. The following sheets shall be deleted and replaced with the attached updated drawing:
 - a. D-101, D-102, D-301, D-302, D-303, D-501
 - b. S-102, S-301, S-402, S-504
 - c. M1-1, M3-1
 - d. E1-1, E2-1, E3-1

The original solicitation for the project noted above is amended as noted. All other conditions of the subject remain the same.

Respectfully,

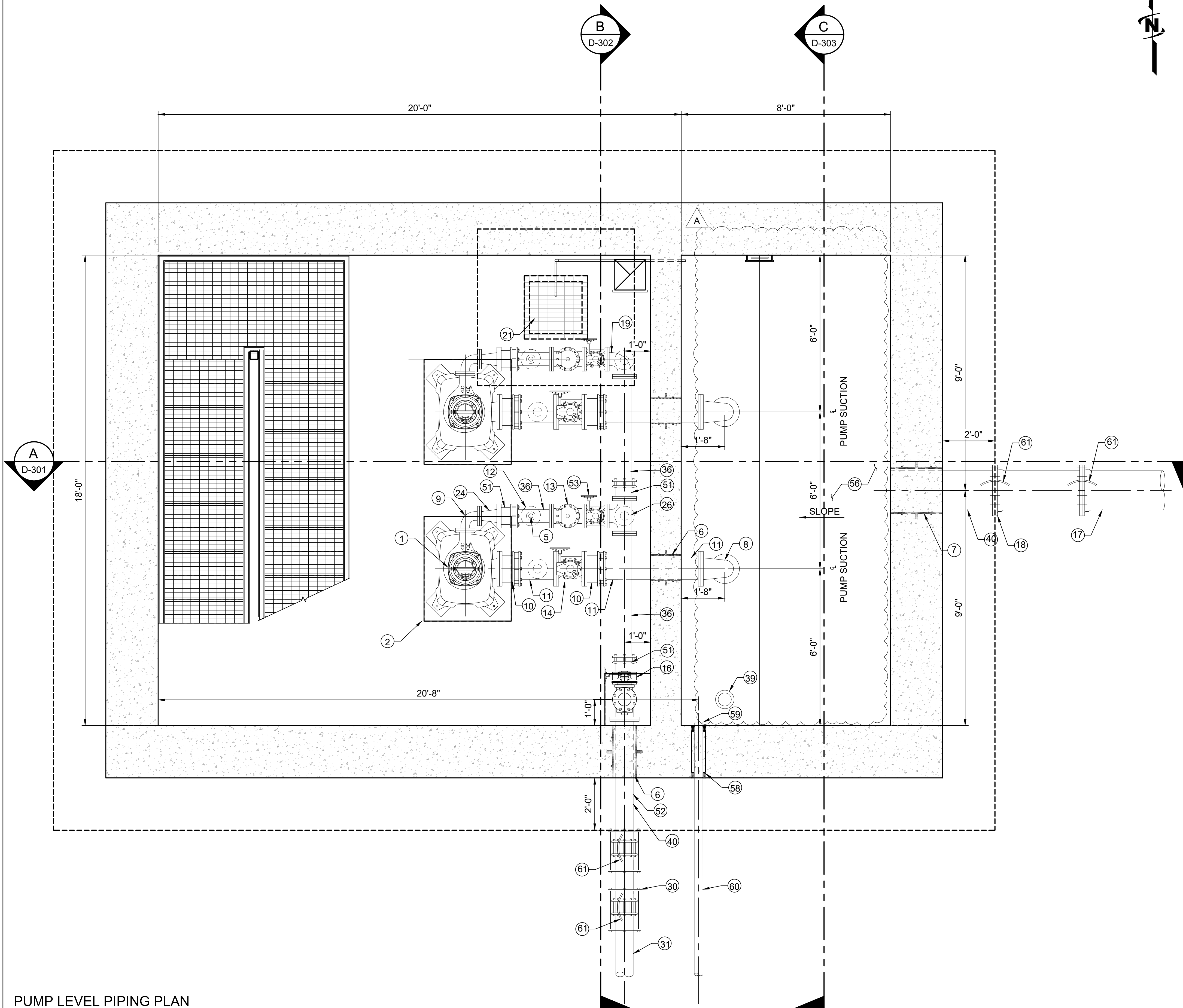
A handwritten signature in blue ink, appearing to read "Matt Filla".

Matt Filla, PE

Project Engineer – Lead, J-U-B Engineers, Inc.

(1) VERTICAL DRY PIT SUBMERSIBLE PUMP W/ 45 HP MOTOR, PER SECTION 43 25 04.
 (2) CONCRETE PUMP PEDESTAL, SEE DETAIL D-05000/D-501.
 (3) 30"x30" MIN. CLEAR OPENING ALUMINUM SINGLE LEAF ACCESS DOOR W/ STAINLESS STEEL HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL). HATCH SHALL BE 300 PSF RATED WITH CHANNEL FRAME FOR DRAINAGE. SEE DETAIL D-05010/D-501.
 (4) INSTALL PROTECTIVE COATING ON INTERIOR WET WELL SURFACES, SEWER SHIELD 150 SPRAYABLE, OR APPROVED EQUAL. SEE TECHNICAL SECTION 2 CORROSION PROTECTION.
 (5) MANUAL AIR RELEASE PIPE TAP TYPE B, CONNECT TO FLEX TUBING AND ROUTE TO SUMP, SEE DETAIL D-15164/D-506.
 (6) SLEEVED PIPE WALL PENETRATION TYPE A, SEE DETAIL D-15005/D-502.
 (7) PIPE SPOOL WALL PENETRATION TYPE D, SEE DETAIL D-15000/D-502.
 (8) 10" D.I. 90° BEND (FLxFLARE).
 (9) 4" D.I. 90° BEND.
 (10) 10" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
 (11) 10" D.I. PIPE (FLxPE).
 (12) ADJUSTABLE PIPE SUPPORT. SEE DETAIL D-15070/D-504.
 (13) 6" CHECK VALVE (CV-2, PER SECTION 43 30 00) WITH LEVER POSITION INDICATOR (FL).
 (14) 10" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
 (15) 6"x6"x8" D.I. TEE (FL).
 (16) FLANGED PRESSURE SENSOR WITH PRESSURE GAUGE SEE DETAIL D-15161/D-506.
 (17) 18" D.I. PIPE (MJ).
 (18) LARGE PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02123/C-503.
 (19) 6" D.I. 90° BEND (FL).
 (20) 8" STAINLESS STEEL 90° BEND, WELDED.
 (21) SUMP PUMP, SEE DETAIL 1/D-508.
 (22) ABOVE GRADE WALL PIPE PENETRATION TYPE B, SEE DETAIL D-15010/D-503.
 (23) 48"x30" MIN. ALUMINUM DOUBLE LEAF ACCESS DOOR WITH STAINLESS HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL). SEE DETAIL D-05015/D-501.
 (24) 6"x4" ECCENTRIC REDUCER, INSTALL FLAT SIDE UP.
 (25) 8" STAINLESS STEEL PIPE, WELDED JOINTS.
 (26) 6"x6"x6" D.I. TEE (FL).
 (27) 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH CHAIN OPERATOR (FL).
 (28) PIPE WALL ANCHOR, SEE DETAIL D-15100/D-504.
 (29) 6" MAGNETIC FLOW METER (FL), PER SECTION 40 90 00.
 (30) PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02122/C-503.
 (31) 8" D.I. PIPE (MJ).
 (32) 6" 90° BEND W/ BASE (FL). SEE DETAIL D-15075/D-504.
 (33) 8" ALUMINUM MALE CAMLOCK FITTING WITH CAMLOCK PLUG.
 (34) FLOOR PENETRATION TYPE A, SEE DETAIL D-15020/D-503.
 (35) 8"x6" D.I. REDUCING 90° BEND (FL).
 (36) 6" D.I. PIPE (FLxPE).
 (37) SCREENED VENT, SEE DETAIL D-05100/D-501.
 (38) pH/TEMP SENSOR, PER SECTION 40 90 00.
 (39) 8" STAINLESS STEEL PIPE, WELDED (FLARExPE).
 (40) SINGLE ANODE TEST STATION, SEE DETAIL 2/C-502.
 (41) VAPEX ODOR CONTROL SYSTEM DROP NOZZLE ASSEMBLY. PROVIDE 10" FLOOR PENETRATION FOR NOZZLE ACCESS AND ASSEMBLY INSTALLATION.
 (42) BACKUP FLOAT SWITCHES FOR PUMP CONTROL, PER SECTION 40 90 00.
 (43) RADAR LEVEL TRANSMITTER, PER SECTION 40 90 00.
 (44) NOT USED.
 (45) REFRIGERATED COMPOSITE SAMPLER. EMERALD COAST WAVE WASTEWATER SAMPLER OR APPROVED EQUAL.
 (46) HEARTLAND OXYGEN GENERATOR (HOX-060-3) AND CONTROL BOX.
 (47) UTILITY SINK AND EYEWASH STATION W/ DRAIN BACK TO WETWELL SEE DETAILS 3&4/D-508.
 (48) HEARTLAND 120 GAL OXYGEN STORAGE TANK.
 (49) NOT USED.
 (50) MANHOLE STEP. RUNGS @ 1'-0".
 (51) 6" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
 (52) 8" D.I. PIPE (FLxPE).
 (53) 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
 (54) 8"x6" D.I. 90° BEND (FL).
 (55) INSTALL PERMANENT DECK MOUNT SLEEVE DAVIT MOUNT BASE WITH HEAVY-DUTY SLEEVE CAP TO FIT 3M DBI-SALA CONFINED SPACE PERMANENT FLUSH FLOOR MOUNT SLEEVE DAVIT MAST BASE 8512828, STAINLESS STEEL ONE-PIECE OFFSET DAVIT MAST, OR EQUAL, SEE SHEET D-301.
 (56) CONCRETE FILLET TO CREATE SLOPE, SEE SHEET S-301.
 (57) NOT USED.
 (58) SLEEVED PIPE PENETRATION TYPE D, SEE D-15005/D-502.
 (59) 4" BACK WATER FLOOD VALVE (CV-8, PER SECTION 43 30 00).
 (60) 6"Ø CAST IRON FLOOR DRAIN (INSIDE PIGGING STATION VAULT), P-TRAP, & 4" PVC DRAIN TO WETWELL SLOPED AT 2% MIN.
 (61) CATHODIC PROTECTION BOND WIRES, SEE DETAIL 2/C-502.
 (62) SEE MECHANICAL SHEET, M1-1.
 (63) CONTROL PANEL, SEE ELECTRICAL SHEETS.
 (64) VAPEX NANO ODOR CONTROL SYSTEM.
 (65) H2S GAS MONITOR, ACRULOG PPM OR APPROVED EQUAL, PER SECTION 40 90 00. CONTRACTOR TO PROVIDE STAINLESS HANGER ACCESSORIES WET WELL AND MANHOLE INSTALLATION.

1. COORDINATE PROCESS MECHANICAL DRAWINGS WITH STRUCTURAL, CIVIL, HVAC, AND ELECTRICAL DRAWINGS. NOTIFY ENGINEER OF ANY DISCREPANCIES.



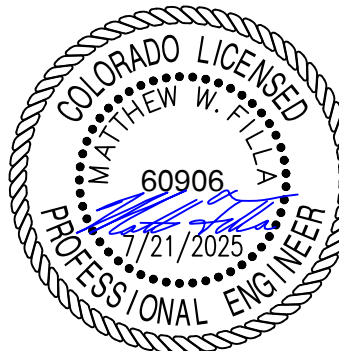
SCALE: 1/2"=1'-0"



JUB ENGINEERS, INC.
305 S. Main Street
Unit 6
Palisade, CO 81526

Phone: 970.208.8508
www.jub.com

BID SET



REUSE OF DRAWINGS

JU-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT JU-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY JU-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JU-B.

REVISION				
A	REVISED ODOR CONTROL EQUIPMENT & LAYOUT	JDM	KR	8-20-25

SEWER TRANSFER PROJECT TOWN OF PALISADE

PUMP LEVEL PIPING PLAN

FILE : 81-23-029_D-101X

JUB PROJ. # :81-23-029

DRAWN BY: WVE

DESIGN BY: KAR / AMN

CHECKED BY: GMV / MWF

ONE INCH

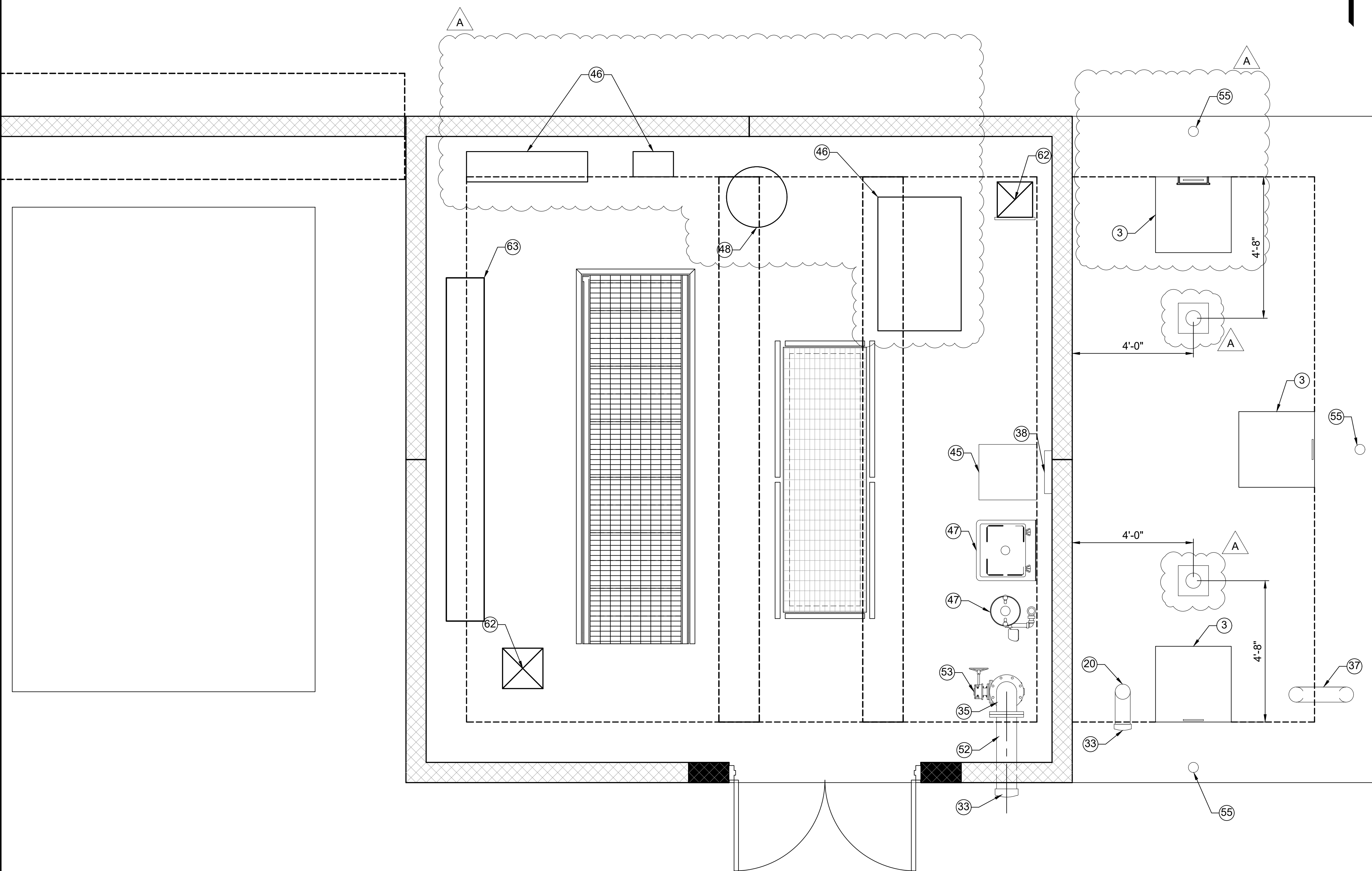
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

SHEET NUMBER

D-101

(1) VERTICAL DRY PIT SUBMERSIBLE PUMP W/ 45 HP MOTOR, PER SECTION 43 25 04.
 (2) CONCRETE PUMP PEDESTAL, SEE DETAIL D-05000/D-501.
 (3) 30"x30" MIN. CLEAR OPENING ALUMINUM SINGLE LEAF ACCESS DOOR W/ STAINLESS STEEL HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL). HATCH SHALL BE 300 PSF RATED WITH CHANNEL FRAME FOR DRAINAGE. SEE DETAIL D-05010/D-501.
 (4) INSTALL PROTECTIVE COATING ON INTERIOR WET WELL SURFACES, SEWER SHIELD 150 SPRAYABLE, OR APPROVED EQUAL. SEE TECHNICAL SECTION 2 CORROSION PROTECTION.
 (5) MANUAL AIR RELEASE PIPE TAP TYPE B, CONNECT TO FLEX TUBING AND ROUTE TO SUMP, SEE DETAIL D-15164/D-506.
 (6) SLEEVED PIPE WALL PENETRATION TYPE A, SEE DETAIL D-15005/D-502.
 (7) PIPE SPOOL WALL PENETRATION TYPE D, SEE DETAIL D-15000/D-502.
 (8) 10" D.I. 90° BEND (FLxFLARE).
 (9) 4" D.I. 90° BEND.
 (10) 10" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
 (11) 10" D.I. PIPE (FLxPE).
 (12) ADJUSTABLE PIPE SUPPORT. SEE DETAIL D-15070/D-504.
 (13) 6" CHECK VALVE (CV-2, PER SECTION 43 30 00) WITH LEVER POSITION INDICATOR (FL).
 (14) 10" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
 (15) 6"x6"x8" D.I. TEE (FL).
 (16) FANGED PRESSURE SENSOR WITH PRESSURE GAUGE SEE DETAIL D-15161/D-506.
 (17) 18" D.I. PIPE (MJ).
 (18) LARGE PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02123/C-503.
 (19) 6" D.I. 90° BEND (FL).
 (20) 8" STAINLESS STEEL 90° BEND, WELDED.
 (21) SUMP PUMP, SEE DETAIL 1/D-508.
 (22) ABOVE GRADE WALL PIPE PENETRATION TYPE B, SEE DETAIL D-15010/D-503.
 (23) 48"x30" MIN. ALUMINUM DOUBLE LEAF ACCESS DOOR WITH STAINLESS HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL). SEE DETAIL D-05015/D-501.
 (24) 6"x4" ECCENTRIC REDUCER, INSTALL FLAT SIDE UP.
 (25) 8" STAINLESS STEEL PIPE, WELDED JOINTS.
 (26) 6"x6"x6" D.I. TEE (FL).
 (27) 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH CHAIN OPERATOR (FL).
 (28) PIPE WALL ANCHOR, SEE DETAIL D-15100/D-504.
 (29) 6" MAGNETIC FLOW METER (FL), PER SECTION 40 90 00.
 (30) PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02122/C-503.
 (31) 8" D.I. PIPE (MJ).
 (32) 6" 90° BEND W/ BASE (FL). SEE DETAIL D-15075/D-504.
 (33) 8" ALUMINUM MALE CAMLOCK FITTING WITH CAMLOCK PLUG.
 (34) FLOOR PENETRATION TYPE A, SEE DETAIL D-15020/D-503.
 (35) 8"x6" D.I. REDUCING 90° BEND (FL).
 (36) 6" D.I. PIPE (FLxPE).
 (37) SCREENED VENT, SEE DETAIL D-05100/D-501.
 (38) pH/TEMP SENSOR, PER SECTION 40 90 00.
 (39) 8" STAINLESS STEEL PIPE, WELDED (FLAREXP).
 (40) SINGLE ANODE TEST STATION, SEE DETAIL 2/C-502.
 (41) VAPEX ODOR CONTROL SYSTEM DROP NOZZLE ASSEMBLY. PROVIDE 10" FLOOR PENETRATION FOR NOZZLE ACCESS AND ASSEMBLY INSTALLATION. A
 (42) BACKUP FLOAT SWITCHES FOR PUMP CONTROL, PER SECTION 40 90 00.
 (43) RADAR LEVEL TRANSMITTER, PER SECTION 40 90 00.
 (44) NOT USED. A
 (45) REFRIGERATED COMPOSITE SAMPLER. EMERALD COAST WAVE WASTEWATER SAMPLER OR APPROVED EQUAL.
 (46) HEARTLAND OXYGEN GENERATOR (HOX-060-3) AND CONTROL BOX. A
 (47) UTILITY SINK AND EYEWASH STATION W/ DRAIN BACK TO WETWELL SEE DETAILS 3&4/D-508.
 (48) HEARTLAND 120 GAL OXYGEN STORAGE TANK. A
 (49) NOT USED A
 (50) MANHOLE STEP, RUNGS @ 1'-0".
 (51) 6" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
 (52) 8" D.I. PIPE (FLxPE).
 (53) 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
 (54) 8"x6" D.I. 90° BEND (FL).
 (55) INSTALL PERMANENT DECK MOUNT SLEEVE DAVIT MOUNT BASE WITH HEAVY-DUTY SLEEVE CAP TO FIT 3M DBI-SALA CONFINED SPACE PERMANENT FLUSH FLOOR MOUNT SLEEVE DAVIT MAST BASE 8512828, STAINLESS STEEL ONE-PIECE OFFSET DAVIT MAST, OR EQUAL, SEE SHEET D-301.
 (56) CONCRETE FILLET TO CREATE SLOPE, SEE SHEET S-301.
 (57) NOT USED. A
 (58) SLEEVED PIPE PENETRATION TYPE D, SEE D-15005/D-502.
 (59) 4" BACK WATER FLOOD VALVE (CV-8, PER SECTION 43 30 00).
 (60) 6"Ø CAST IRON FLOOR DRAIN (INSIDE PIGGING STATION VAULT), P-TRAP, & 4" PVC DRAIN TO WETWELL SLOPED AT 2% MIN.
 (61) CATHODIC PROTECTION BOND WIRES, SEE DETAIL 2/C-502.
 (62) SEE MECHANICAL SHEET, M1-1.
 (63) CONTROL PANEL, SEE ELECTRICAL SHEETS.
 (64) VAPEX NANO ODOR CONTROL SYSTEM. A
 (65) H2S GAS MONITOR, ACRULOG PPM OR APPROVED EQUAL, PER SECTION 40 90 00. CONTRACTOR TO PROVIDE STAINLESS HANGER ACCESSORIES WET WELL AND MANHOLE INSTALLATION.

1. COORDINATE PROCESS MECHANICAL DRAWINGS WITH STRUCTURAL, CIVIL, HVAC, AND ELECTRICAL DRAWINGS. NOTIFY ENGINEER OF ANY DISCREPANCIES.



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

Unit 6
Delicious CO 91530

Phone: 970.208.8508

www.jub.com

REUSE OF DRAWINGS

J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION			
A	REVISED ODOR CONTROL EQUIPMENT & LAYOUT	JDM	8-20-25

SEWER TRANSFER PROJECT
TOWN OF PALISADE

MAIN LEVEL PIPING PLAN

FILE : 81-23-029_D-101X
JUB PROJ.#:81-23-029
DRAWN BY: WVD
DESIGN BY: KAR / AMN
CHECKED BY: GMV / MWF
 ONE INCH AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/26/2025
SHEET NUMBER:

SHEET NUMBER

D-102

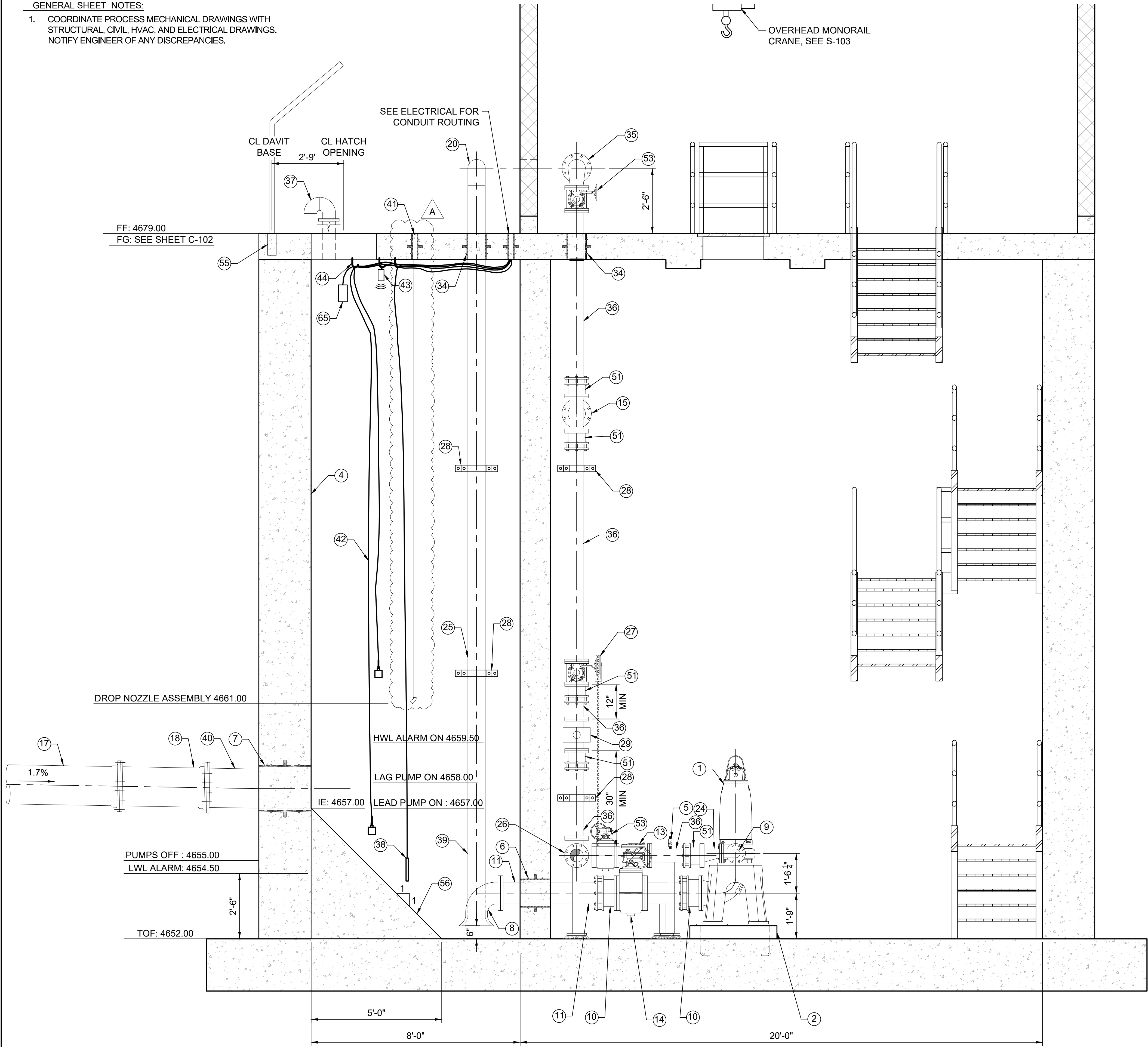
Proj Date: 8/26/2025 3:50 PM Plotted By: Matt Filla
Date Created: 8/26/2025 JUB-ENGINEERS, INC. PALISADE PROJECT 81-23-029 SEWERTREATMENT PLANT MECHANICAL 81-23-029 D-301X.DWG

PUMP AND PIPING NOTES:

- VERTICAL DRY PIT SUBMERSIBLE PUMP W/ 45 HP MOTOR, PER SECTION 43 25 04.
- CONCRETE PUMP PEDESTAL, SEE DETAIL D-05000/D-501.
- 30"x30" MIN. CLEAR OPENING ALUMINUM SINGLE LEAF ACCESS DOOR W/ STAINLESS STEEL HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL). HATCH SHALL BE 300 PSF RATED WITH CHANNEL FRAME FOR DRAINAGE. SEE DETAIL D-05010/D-501.
- INSTALL PROTECTIVE COATING ON INTERIOR WET WELL SURFACES, SEWER SHIELD 150 SPRAYABLE, OR APPROVED EQUAL. SEE TECHNICAL SECTION 2 CORROSION PROTECTION.
- MANUAL AIR RELEASE PIPE TAP TYPE B, CONNECT TO FLEX TUBING AND ROUTE TO SUMP, SEE DETAIL D-15164/D-506.
- SLEEVED PIPE WALL PENETRATION TYPE A, SEE DETAIL D-15005/D-502.
- PIPE SPOOL WALL PENETRATION TYPE D, SEE DETAIL D-15000/D-502.
- 10" D.I. 90° BEND (FLxFLARE).
- 4" D.I. 90° BEND.
- 10" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
- 10" D.I. PIPE (FLxPE).
- ADJUSTABLE PIPE SUPPORT. SEE DETAIL D-15070/D-504.
- 6" CHECK VALVE (CV-2, PER SECTION 43 30 00) WITH LEVER POSITION INDICATOR (FL).
- 10" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
- 6"x6"x8" D.I. TEE (FL).
- FLANGED PRESSURE SENSOR WITH PRESSURE GAUGE SEE DETAIL D-15161/D-506.
- 18" D.I. PIPE (MJ).
- LARGE PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02123/C-503.
- 6" D.I. 90° BEND (FL).
- 8" STAINLESS STEEL 90° BEND, WELDED.
- SUMP PUMP, SEE DETAIL 1/D-508.
- ABOVE GRADE WALL PIPE PENETRATION TYPE B, SEE DETAIL D-15010/D-503.
- 48"x30" MIN. ALUMINUM DOUBLE LEAF ACCESS DOOR WITH STAINLESS HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL). SEE DETAIL D-05015/D-501.
- 6"x4" ECCENTRIC REDUCER, INSTALL FLAT SIDE UP.
- 8" STAINLESS STEEL PIPE, WELDED JOINTS.
- 6"x6"x6" D.I. TEE (FL).
- 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH CHAIN OPERATOR (FL).
- PIPE WALL ANCHOR, SEE DETAIL D-15100/D-504.
- 6" MAGNETIC FLOW METER (FL), PER SECTION 40 90 00.
- PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02122/C-503.
- 8" D.I. PIPE (MJ).
- 6" 90° BEND W/ BASE (FL), SEE DETAIL D-15075/D-504.
- 8" ALUMINUM MALE CAMLOCK FITTING WITH CAMLOCK PLUG.
- FLOOR PENETRATION TYPE A, SEE DETAIL D-15020/D-503.
- 8"x6" D.I. REDUCING 90° BEND (FL).
- 6" D.I. PIPE (FLxPE).
- SCREENED VENT, SEE DETAIL D-05100/D-501.
- pH/TEMP SENSOR, PER SECTION 40 90 00.
- 8" STAINLESS STEEL PIPE, WELDED (FLARExPE).
- SINGLE ANODE TEST STATION, SEE DETAIL 2/C-502.
- VAPEX ODOR CONTROL SYSTEM DROP NOZZLE ASSEMBLY. PROVIDE 10" FLOOR PENETRATION FOR NOZZLE ACCESS AND ASSEMBLY INSTALLATION.
- BACKUP FLOAT SWITCHES FOR PUMP CONTROL, PER SECTION 40 90 00.
- RADAR LEVEL TRANSMITTER, PER SECTION 40 90 00.
- NOT USED.
- REFRIGERATED COMPOSITE SAMPLER. EMERALD COAST WAVE WASTEWATER SAMPLER OR APPROVED EQUAL.
- HEARTLAND OXYGEN GENERATOR (HOX-060-3) AND CONTROL BOX.
- UTILITY SINK AND EYEWASH STATION W/ DRAIN BACK TO WETWELL SEE DETAILS 3&4/D-508.
- HEARTLAND 120 GAL OXYGEN STORAGE TANK.
- NOT USED.
- MANHOLE STEP. RUNGS @ 1'-0".
- 6" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
- 8" D.I. PIPE (FLxPE).
- 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
- 8"x6" D.I. 90° BEND (FL).
- INSTALL PERMANENT DECK MOUNT SLEEVE DAVIT MOUNT BASE WITH HEAVY-DUTY SLEEVE CAP TO FIT 3M DBI-SALA CONFINED SPACE PERMANENT FLUSH FLOOR MOUNT SLEEVE DAVIT MAST BASE 8512828, STAINLESS STEEL ONE-PIECE OFFSET DAVIT MAST, OR EQUAL, SEE SHEET D-301.
- CONCRETE FILLET TO CREATE SLOPE, SEE SHEET S-301.
- NOT USED.
- SLEEVED PIPE PENETRATION TYPE D, SEE D-15005/D-502.
- 4" BACK WATER FLOOD VALVE (CV-8, PER SECTION 43 30 00).
- 6"Ø CAST IRON FLOOR DRAIN (INSIDE PIGGING STATION VAULT), P-TRAP, & 4" PVC DRAIN TO WETWELL SLOPED AT 2% MIN.
- CATHODIC PROTECTION BOND WIRES, SEE DETAIL 2/C-502.
- SEE MECHANICAL SHEET, M1-1.
- CONTROL PANEL, SEE ELECTRICAL SHEETS.
- VAPEX NANO ODOR CONTROL SYSTEM.
- H2S GAS MONITOR, ACRULOG PPM OR APPROVED EQUAL, PER SECTION 40 90 00. CONTRACTOR TO PROVIDE STAINLESS HANGER ACCESSORIES WET WELL AND MANHOLE INSTALLATION.

GENERAL SHEET NOTES:

- COORDINATE PROCESS MECHANICAL DRAWINGS WITH STRUCTURAL, CIVIL, HVAC, AND ELECTRICAL DRAWINGS. NOTIFY ENGINEER OF ANY DISCREPANCIES.



A MAIN AND PUMP LEVEL PIPING SECTION
SCALE: 1/2"=1'-0"

OVERHEAD MONORAIL
CRANE, SEE S-103



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.

305 S. Main Street
Unit 6
Palisade, CO 81526

Phone: 970.208.8508
www.jub.com

BID SET



REUSE OF DRAWINGS
JUB SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RIGHTS IN ANY DESIGN OR DRAWING. NO PART OF ANY DESIGN OR DRAWING SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF JUB. ANY REUSE WITHOUT WRITTEN CONSENT BY JUB WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.

REVISION		DATE	
NO.	DESCRIPTION	BY	DATE

SEWER TRANSFER PROJECT
TOWN OF PALISADE

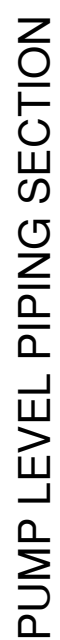
MAIN AND PUMP LEVEL PIPING SECTION

FILE: 81-23-029_D-301X
JUB PROJ. #: 81-23-029
DRAWN BY: WVD
DESIGN BY: KAR / AMN
CHECKED BY: GMV / MWF
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/26/2025
SHEET NUMBER:

D-301

1 VERTICAL DRY PIT SUBMERSIBLE PUMP W/ 45 HP MOTOR, PER SECTION 43 25 04.
 2 CONCRETE PUMP PEDESTAL, SEE DETAIL D-05000/D-501.
 3 30"x30" MIN. CLEAR OPENING ALUMINUM SINGLE LEAF ACCESS DOOR W/ STAINLESS STEEL HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL). HATCH SHALL BE 300 PSF RATED WITH CHANNEL FRAME FOR DRAINAGE. SEE DETAIL D-05010/D-501.
 4 INSTALL PROTECTIVE COATING ON INTERIOR WET WELL SURFACES, SEWER SHIELD 150 SPRAYABLE, OR APPROVED EQUAL. SEE TECHNICAL SECTION 2 CORROSION PROTECTION.
 5 MANUAL AIR RELEASE PIPE TAP TYPE B, CONNECT TO FLEX TUBING AND ROUTE TO SUMP, SEE DETAIL D-15164/D-506.
 6 SLEEVED PIPE WALL PENETRATION TYPE A, SEE DETAIL D-15005/D-502.
 7 PIPE SPOOL WALL PENETRATION TYPE D, SEE DETAIL D-15000/D-502.
 8 10" D.I. 90° BEND (FLxFLARE).
 9 4" D.I. 90° BEND.
 10 10" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
 11 10" D.I. PIPE (FLxPE).
 12 ADJUSTABLE PIPE SUPPORT. SEE DETAIL D-15070/D-504.
 13 6" CHECK VALVE (CV-2, PER SECTION 43 30 00) WITH LEVER POSITION INDICATOR (FL).
 14 10" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
 15 6"x6"x8" D.I. TEE (FL).
 16 FLANGED PRESSURE SENSOR WITH PRESSURE GAUGE SEE DETAIL D-15161/D-506.
 17 18" D.I. PIPE (MJ).
 18 LARGE PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02123/C-503.
 19 6" D.I. 90° BEND (FL).
 20 8" STAINLESS STEEL 90° BEND, WELDED.
 21 SUMP PUMP, SEE DETAIL 1/D-508.
 22 ABOVE GRADE WALL PIPE PENETRATION TYPE B, SEE DETAIL D-15010/D-503.
 23 48"x30" MIN. ALUMINUM DOUBLE LEAF ACCESS DOOR WITH STAINLESS HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL), SEE DETAIL D-05015/D-501.
 24 6"x4" ECCENTRIC REDUCER, INSTALL FLAT SIDE UP.
 25 8" STAINLESS STEEL PIPE, WELDED JOINTS.
 26 6"x6"x6" D.I. TEE (FL).
 27 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH CHAIN OPERATOR (FL).
 28 PIPE WALL ANCHOR, SEE DETAIL D-15100/D-504.
 29 6" MAGNETIC FLOW METER (FL), PER SECTION 40 90 00.
 30 PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02122/C-503.
 31 8" D.I. PIPE (MJ).
 32 6" 90° BEND W/ BASE (FL), SEE DETAIL D-15075/D-504.
 33 8" ALUMINUM MALE CAMLOCK FITTING WITH CAMLOCK PLUG.
 34 FLOOR PENETRATION TYPE A, SEE DETAIL D-15020/D-503.
 35 8"x6" D.I. REDUCING 90° BEND (FL).
 36 6" D.I. PIPE (FLxPE).
 37 SCREENED VENT, SEE DETAIL D-05100/D-501.
 38 pH/TEMP SENSOR, PER SECTION 40 90 00.
 39 8" STAINLESS STEEL PIPE, WELDED (FLAREXPE).
 40 SINGLE ANODE TEST STATION, SEE DETAIL 2/C-502.
 41 VAPEX ODOR CONTROL SYSTEM DROP NOZZLE ASSEMBLY, PROVIDE 10" FLOOR PENETRATION FOR NOZZLE ACCESS AND ASSEMBLY INSTALLATION. A
 42 BACKUP FLOAT SWITCHES FOR PUMP CONTROL, PER SECTION 40 90 00.
 43 RADAR LEVEL TRANSMITTER, PER SECTION 40 90 00.
 44 NOT USED. A
 45 REFRIGERATED COMPOSITE SAMPLER. EMERALD COAST WAVE WASTEWATER SAMPLER OR APPROVED EQUAL.
 46 HEARTLAND OXYGEN GENERATOR (HOX-060-3) AND CONTROL BOX. A
 47 UTILITY SINK AND EYEWASH STATION W/ DRAIN BACK TO WETWELL SEE DETAILS 3&4/D-508.
 48 HEARTLAND 120 GAL OXYGEN STORAGE TANK. A
 49 NOT USED A
 50 MANHOLE STEP, RUNGS @ 1'-0".
 51 6" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
 52 8" D.I. PIPE (FLxPE).
 53 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
 54 8"x6" D.I. 90° BEND (FL).
 55 INSTALL PERMANENT DECK MOUNT SLEEVE DAVIT MOUNT BASE WITH HEAVY-DUTY SLEEVE CAP TO FIT 3M DBI-SALA CONFINED SPACE PERMANENT FLUSH FLOOR MOUNT SLEEVE DAVIT MAST BASE 8512828, STAINLESS STEEL ONE-PIECE OFFSET DAVIT MAST, OR EQUAL, SEE SHEET D-301.
 56 CONCRETE FILLET TO CREATE SLOPE, SEE SHEET S-301.
 57 NOT USED. A
 58 SLEEVED PIPE PENETRATION TYPE D, SEE D-15005/D-502.
 59 4" BACK WATER FLOOD VALVE (CV-8, PER SECTION 43 30 00).
 60 6"Ø CAST IRON FLOOR DRAIN (INSIDE PIGGING STATION VAULT), P-TRAP, & 4" PVC DRAIN TO WETWELL SLOPED AT 2% MIN.
 61 CATHODIC PROTECTION BOND WIRES, SEE DETAIL 2/C-502.
 62 SEE MECHANICAL SHEET, M1-1.
 63 CONTROL PANEL, SEE ELECTRICAL SHEETS.
 64 VAPEX NANO ODOR CONTROL SYSTEM. A
 65 H2S GAS MONITOR, ACRULOG PPM OR APPROVED EQUAL, PER SECTION 40 90 00.
 CONTRACTOR TO PROVIDE STAINLESS HANGER ACCESSORIES WET WELL AND MANHOLE INSTALLATION.

1. COORDINATE PROCESS MECHANICAL DRAWINGS WITH STRUCTURAL, CIVIL, HVAC, AND ELECTRICAL DRAWINGS. NOTIFY ENGINEER OF ANY DISCREPANCIES.



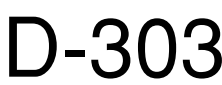
SHEET NUMBER:

D-302

D-302

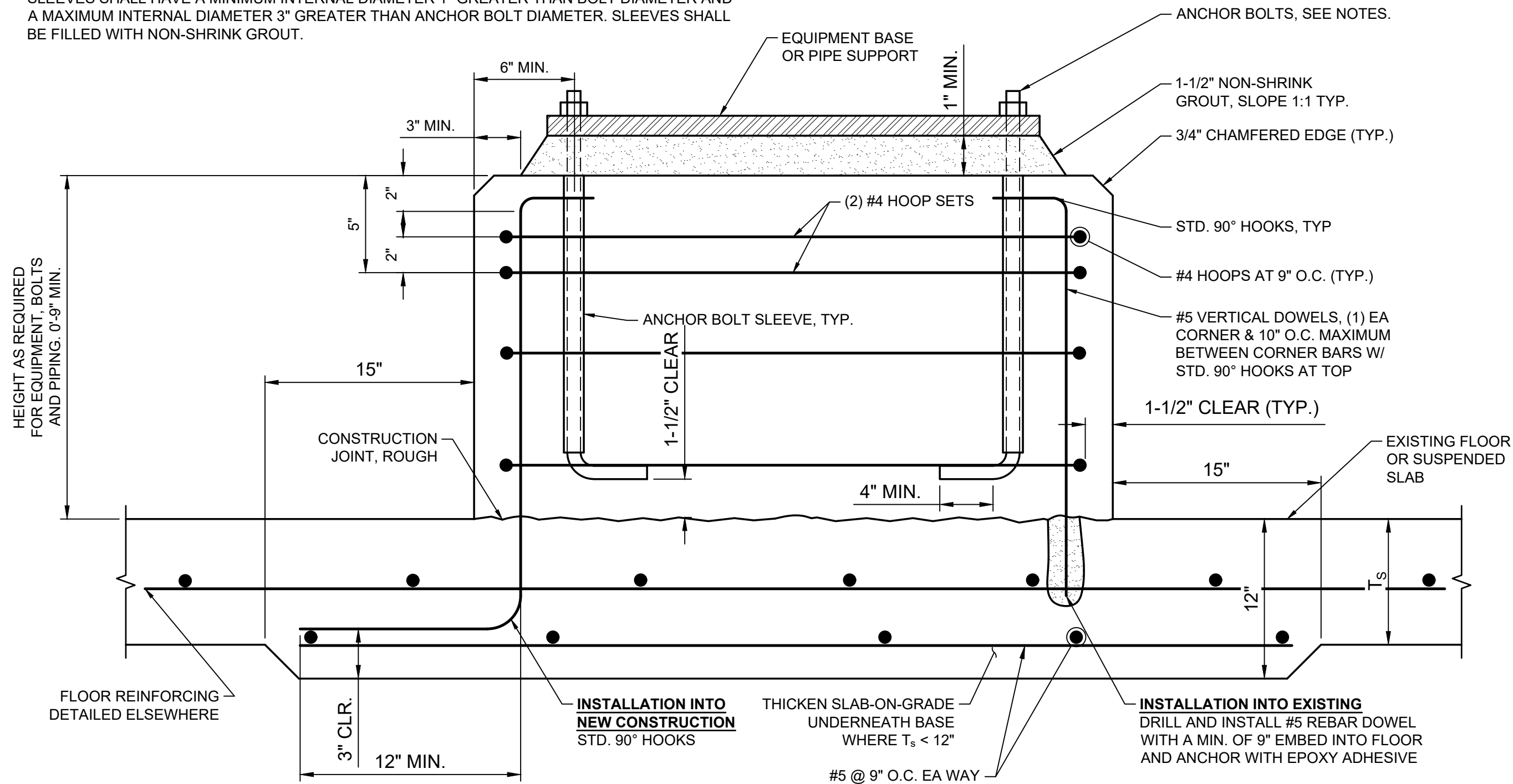
1 VERTICAL DRY PIT SUBMERSIBLE PUMP W/ 45 HP MOTOR, PER SECTION 43 25 04.
 2 CONCRETE PUMP PEDESTAL, SEE DETAIL D-05000/D-501.
 3 30"x30" MIN. CLEAR OPENING ALUMINUM SINGLE LEAF ACCESS DOOR W/ STAINLESS STEEL HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL), HATCH SHALL BE 300 PSF RATED WITH CHANNEL FRAME FOR DRAINAGE. SEE DETAIL D-05010/D-501.
 4 INSTALL PROTECTIVE COATING ON INTERIOR WET WELL SURFACES, SEWER SHIELD 150 SPRAYABLE, OR APPROVED EQUAL. SEE TECHNICAL SECTION 2 CORROSION PROTECTION.
 5 MANUAL AIR RELEASE PIPE TAP TYPE B, CONNECT TO FLEX TUBING AND ROUTE TO SUMP, SEE DETAIL D-15164/D-506.
 6 SLEEVED PIPE WALL PENETRATION TYPE A, SEE DETAIL D-15005/D-502.
 7 PIPE SPOOL WALL PENETRATION TYPE D, SEE DETAIL D-15000/D-502.
 8 10" D.I. 90° BEND (FLxFLARE).
 9 4" D.I. 90° BEND.
 10 10" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
 11 10" D.I. PIPE (FLxPE).
 12 ADJUSTABLE PIPE SUPPORT. SEE DETAIL D-15070/D-504.
 13 6" CHECK VALVE (CV-2, PER SECTION 43 30 00) WITH LEVER POSITION INDICATOR (FL).
 14 10" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
 15 6"x6"x8" D.I. TEE (FL).
 16 FLANGED PRESSURE SENSOR WITH PRESSURE GAUGE SEE DETAIL D-15161/D-506.
 17 18" D.I. PIPE (MJ).
 18 LARGE PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02123/C-503.
 19 6" D.I. 90° BEND (FL).
 20 8" STAINLESS STEEL 90° BEND, WELDED.
 21 SUMP PUMP, SEE DETAIL 1/D-508.
 22 ABOVE GRADE WALL PIPE PENETRATION TYPE B, SEE DETAIL D-15010/D-503.
 23 48"x30" MIN. ALUMINUM DOUBLE LEAF ACCESS DOOR WITH STAINLESS HARDWARE, LADDER UP ASSEMBLY, AND ORANGE SAFETY GRATE (HALLIDAY PRODUCTS OR EQUAL), SEE DETAIL D-05015/D-501.
 24 6"x4" ECCENTRIC REDUCER, INSTALL FLAT SIDE UP.
 25 8" STAINLESS STEEL PIPE, WELDED JOINTS.
 26 6"x6"x6" D.I. TEE (FL).
 27 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH CHAIN OPERATOR (FL).
 28 PIPE WALL ANCHOR, SEE DETAIL D-15100/D-504.
 29 6" MAGNETIC FLOW METER (FL), PER SECTION 40 90 00.
 30 PIPE TO STRUCTURE TRANSITION, SEE DETAIL C-02122/C-503.
 31 8" D.I. PIPE (MJ).
 32 6" 90° BEND W/ BASE (FL), SEE DETAIL D-15075/D-504.
 33 8" ALUMINUM MALE CAMLOCK FITTING WITH CAMLOCK PLUG.
 34 FLOOR PENETRATION TYPE A, SEE DETAIL D-15020/D-503.
 35 8"x6" D.I. REDUCING 90° BEND (FL).
 36 6" D.I. PIPE (FLxPE).
 37 SCREENED VENT, SEE DETAIL D-05100/D-501.
 38 pH/TEMP SENSOR, PER SECTION 40 90 00.
 39 8" STAINLESS STEEL PIPE, WELDED (FLAREXPE).
 40 SINGLE ANODE TEST STATION, SEE DETAIL 2/C-502.
 41 VAPEX ODOR CONTROL SYSTEM DROP NOZZLE ASSEMBLY, PROVIDE 10" FLOOR PENETRATION FOR NOZZLE ACCESS AND ASSEMBLY INSTALLATION.
 42 BACKUP FLOAT SWITCHES FOR PUMP CONTROL, PER SECTION 40 90 00.
 43 RADAR LEVEL TRANSMITTER, PER SECTION 40 90 00.
 44 NOT USED.
 45 REFRIGERATED COMPOSITE SAMPLER. EMERALD COAST WAVE WASTEWATER SAMPLER OR APPROVED EQUAL.
 46 HEARTLAND OXYGEN GENERATOR (HOX-060-3) AND CONTROL BOX.
 47 UTILITY SINK AND EYEWASH STATION W/ DRAIN BACK TO WETWELL SEE DETAILS 3&4/D-508.
 48 HEARTLAND 120 GAL OXYGEN STORAGE TANK.
 49 NOT USED.
 50 MANHOLE STEP, RUNGS @ 1'-0".
 51 6" D.I. FLANGE COUPLING ADAPTER, RESTRAIN WITH 6 SS TIE RODS.
 52 8" D.I. PIPE (FLxPE).
 53 6" PLUG VALVE (PV-1, PER SECTION 43 30 00) WITH GEAR OPERATOR.
 54 8"x6" D.I. 90° BEND (FL).
 55 INSTALL PERMANENT DECK MOUNT SLEEVE DAVIT MOUNT BASE WITH HEAVY-DUTY SLEEVE CAP TO FIT 3M DBI-SALA CONFINED SPACE PERMANENT FLUSH FLOOR MOUNT SLEEVE DAVIT MAST BASE 8512828, STAINLESS STEEL ONE-PIECE OFFSET DAVIT MAST, OR EQUAL, SEE SHEET D-301.
 56 CONCRETE FILLET TO CREATE SLOPE, SEE SHEET S-301.
 57 NOT USED.
 58 SLEEVED PIPE PENETRATION TYPE D, SEE D-15005/D-502.
 59 4" BACK WATER FLOOD VALVE (CV-8, PER SECTION 43 30 00).
 60 6"Ø CAST IRON FLOOR DRAIN (INSIDE PIGGING STATION VAULT), P-TRAP, & 4" PVC DRAIN TO WETWELL SLOPED AT 2% MIN.
 61 CATHODIC PROTECTION BOND WIRES, SEE DETAIL 2/C-502.
 62 SEE MECHANICAL SHEET, M1-1.
 63 CONTROL PANEL, SEE ELECTRICAL SHEETS.
 64 VAPEX NANO ODOR CONTROL SYSTEM.
 65 H2S GAS MONITOR, ACRULOG PPM OR APPROVED EQUAL, PER SECTION 40 90 00. CONTRACTOR TO PROVIDE STAINLESS HANGER ACCESSORIES WET WELL AND MANHOLE INSTALLATION.

1. COORDINATE PROCESS MECHANICAL DRAWINGS WITH STRUCTURAL, CIVIL, HVAC, AND ELECTRICAL DRAWINGS. NOTIFY ENGINEER OF ANY DISCREPANCIES.



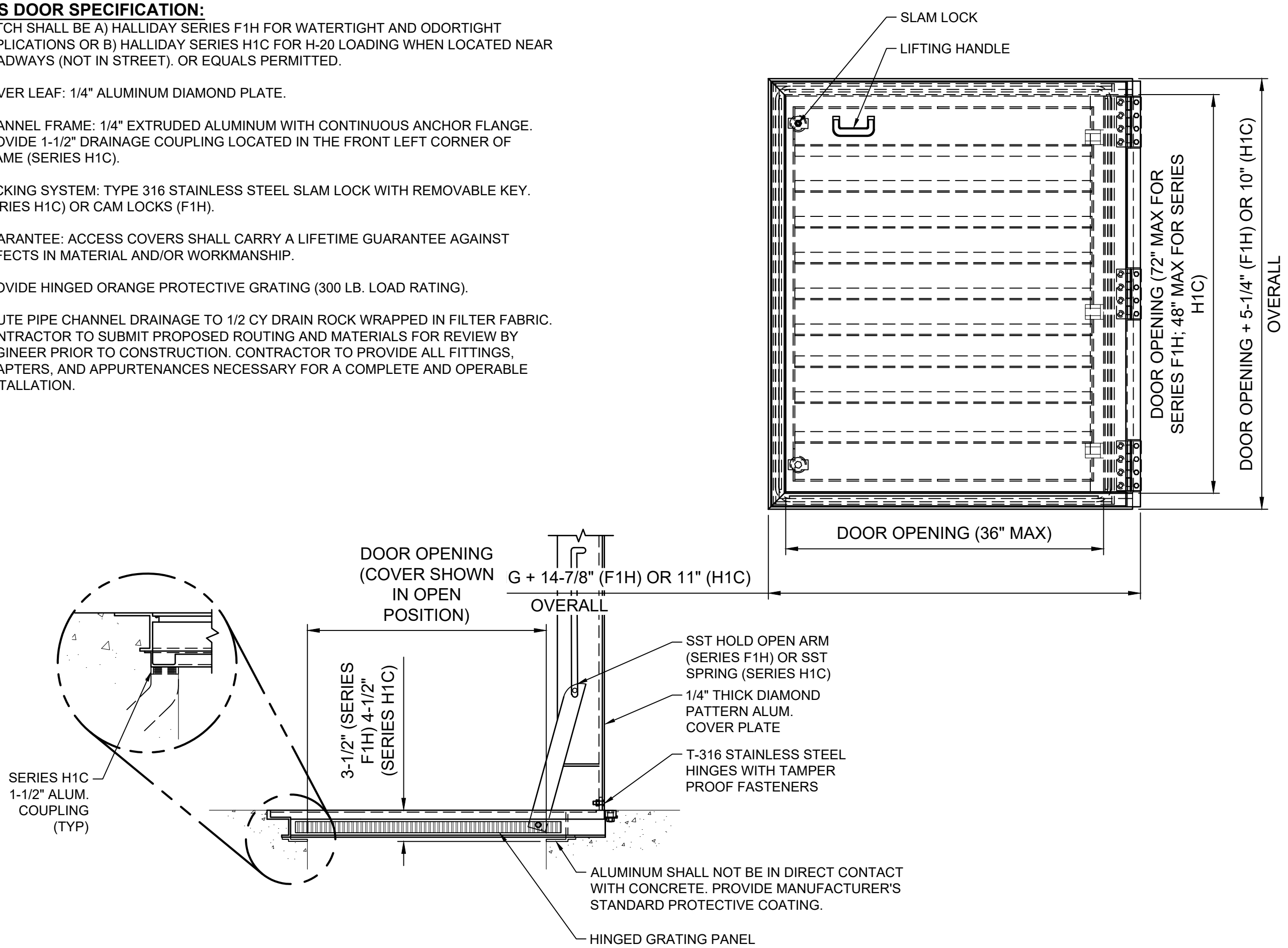
1. THIS DETAIL DEPICTS THE MINIMUM REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH THE EQUIPMENT OR PIPE SUPPORT MANUFACTURER AND ENSURE THE PAD MEETS ALL MANUFACTURER REQUIREMENTS.
2. THE SIZE, NUMBER, TYPE, LOCATION, THREAD PROJECTION, CLEARANCE TO EDGE OF CONCRETE AND EMBEDMENT OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER, AND SHALL BE AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE PAD IS BEING POURED.
3. ANCHOR BOLT SLEEVES SHALL BE USED TO PROVIDE THE ANCHOR BOLT A MINIMUM MOVEMENT OF 1/2" IN ALL DIRECTIONS. THE MINIMUM SLEEVE LENGTH SHALL BE 8 TIMES THE BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT. SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER THAN BOLT DIAMETER AND A MAXIMUM INTERNAL DIAMETER 3" GREATER THAN ANCHOR BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT.

4. EQUIPMENT OR PIPE SUPPORTS SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE.
5. STAINLESS STEEL WEDGES OR SHIMS SHALL BE USED TO SUPPORT THE EQUIPMENT BASE OR PIPE SUPPORT WHILE THE NON-SHRINK GROUT IS PLACED. TEMPORARY LEVELING NUTS SHALL BE BACKED OFF. IF LEFT IN, THE WEDGES OR SHIMS SHALL NOT BE EXPOSED TO VIEW.
6. T_s = SLAB-ON-GRADE PLAN THICKNESS.



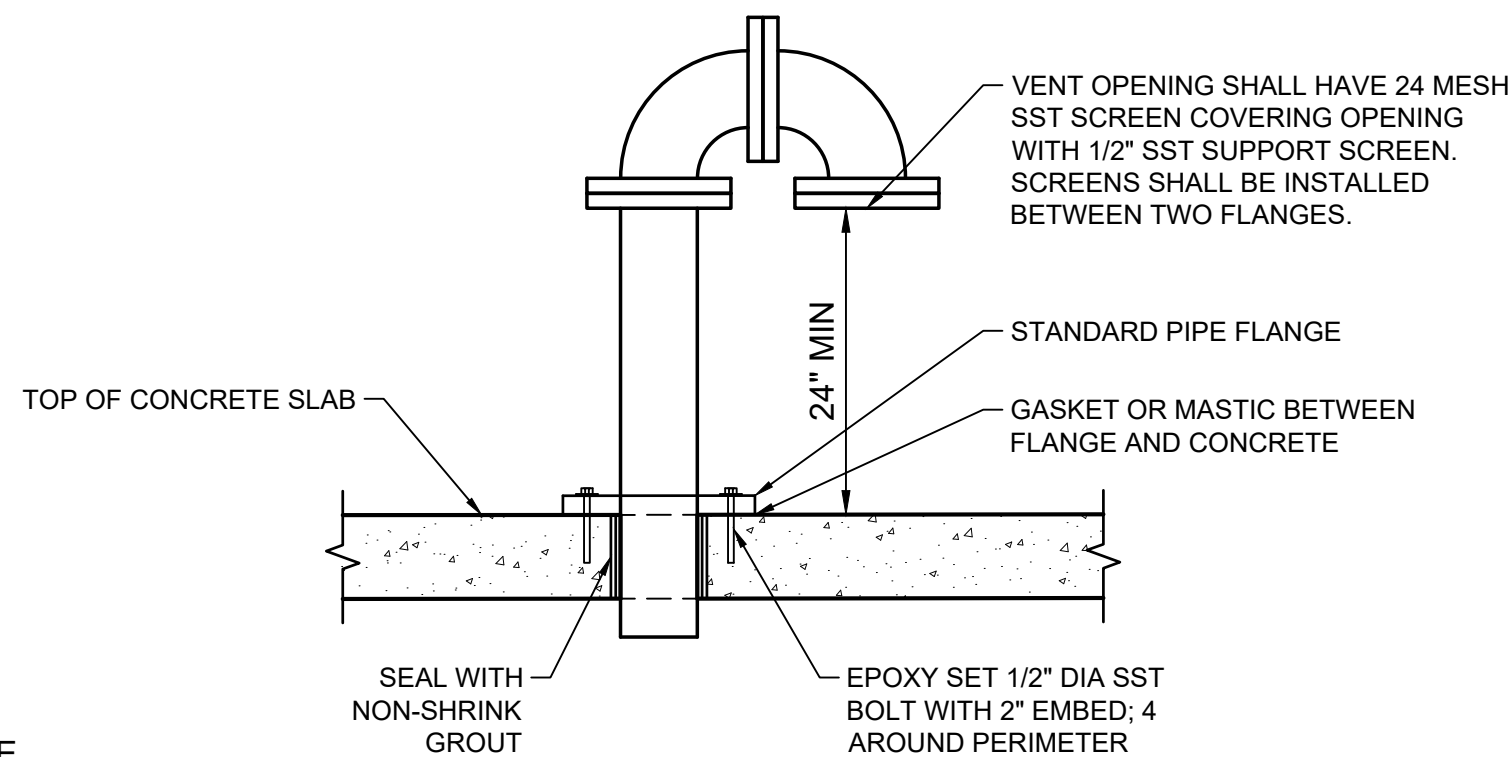
D-05000 MECHANICAL PAD DETAIL
NOT TO SCALE

1. HATCH SHALL BE A HALLIDAY SERIES F1H FOR WATERTIGHT AND ODORTIGHT APPLICATIONS OR B) HALLIDAY SERIES H1C FOR H-20 LOADING WHEN LOCATED NEAR ROADWAYS (NOT IN STREET), OR EQUALS PERMITTED.
2. COVER LEAF: 1/4" ALUMINUM DIAMOND PLATE.
3. CHANNEL FRAME: 1/4" EXTRUDED ALUMINUM WITH CONTINUOUS ANCHOR FLANGE. PROVIDE 1-1/2" DRAINAGE COUPLING LOCATED IN THE FRONT LEFT CORNER OF FRAME (SERIES H1C).
4. LOCKING SYSTEM: TYPE 316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY. (SERIES H1C) OR CAM LOCKS (F1H).
5. GUARANTEE: ACCESS COVERS SHALL CARRY A LIFETIME GUARANTEE AGAINST DEFECTS IN MATERIAL AND/OR WORKMANSHIP.
6. PROVIDE HINGED ORANGE PROTECTIVE GRATING (300 LB. LOAD RATING).
7. ROUTE PIPE CHANNEL DRAINAGE TO 1/2 CY DRAIN ROCK WRAPPED IN FILTER FABRIC. CONTRACTOR TO SUBMIT PROPOSED ROUTING AND MATERIALS FOR REVIEW BY ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO PROVIDE ALL FITTINGS, ADAPTERS, AND APPURTENANCES NECESSARY FOR A COMPLETE AND OPERABLE INSTALLATION.



D-05010 ALUMINUM SINGLE LEAF ACCESS HATCH
NOT TO SCALE

1. MATERIAL SHALL BE 316 SST.
2. PIPE JOINTS/ FITTINGS SHALL BE FLANGED OR WELDED, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
3. PIPE SIZE SHALL BE AS INDICATED ON THE PLANS, 4" MIN.



D-05100 SCREENED VENT PIPE
NOT TO SCALE



J-U-B ENGINEERS, INC.

305 S. Main Street
Unit 6
Palisade, CO 81526

Phone: 970.208.8508
www.jub.com

BID SET



REUSE OF DRAWINGS

J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION			
A	REVISED ODOR CONTROL EQUIPMENT & LAYOUT	JDM	KR 8-20-25

SEWER TRANSFER PROJECT TOWN OF PALISADE

MECHANICAL DETAILS

FILE : 81-23-029 D-501X

JUB PROJ. # :81-23-029

DRAWN BY: WVD

DESIGN BY: KAR / AMN

CHECKED BY: GMV / MWF

A horizontal scale bar with arrows at both ends, labeled "ONE INCH" above it.

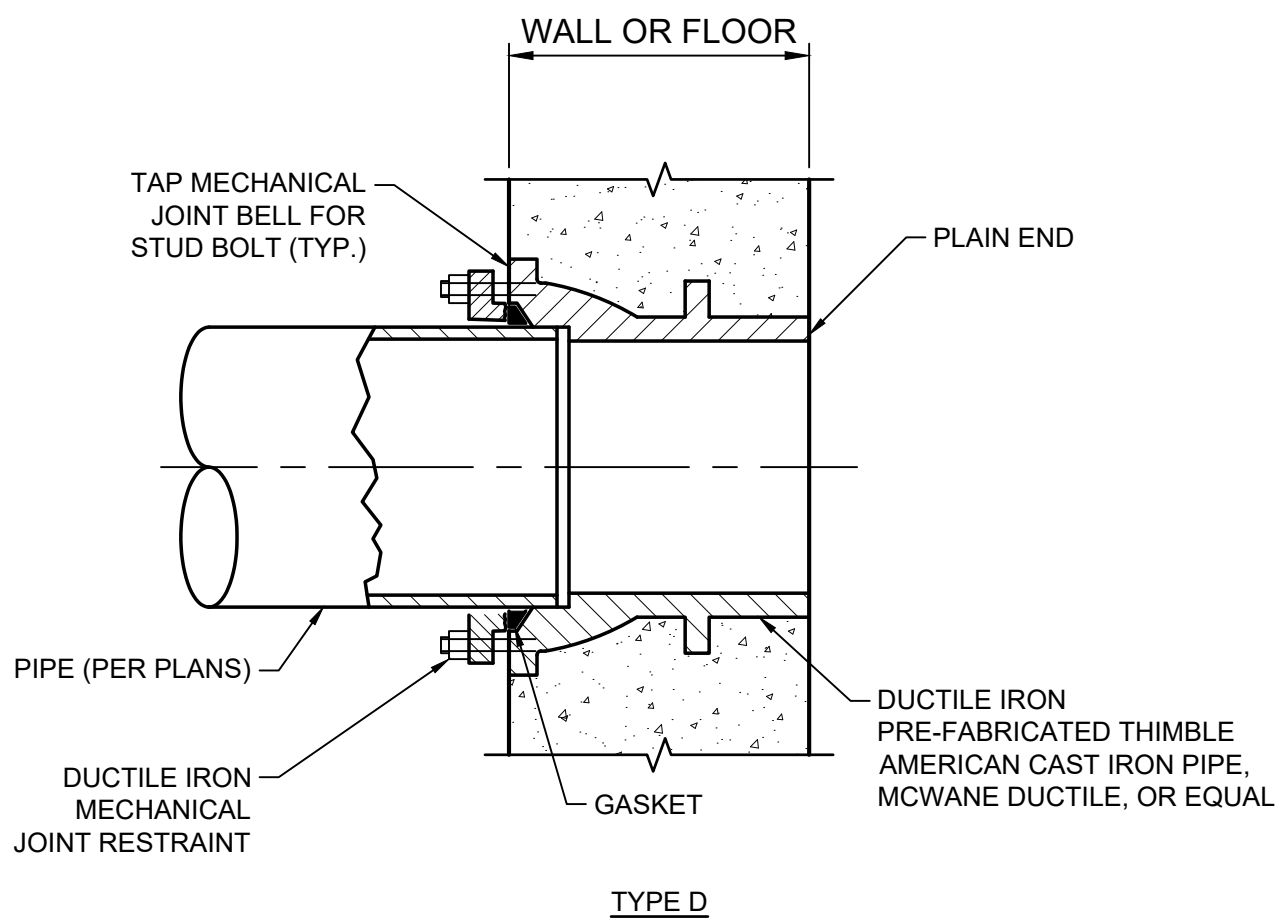
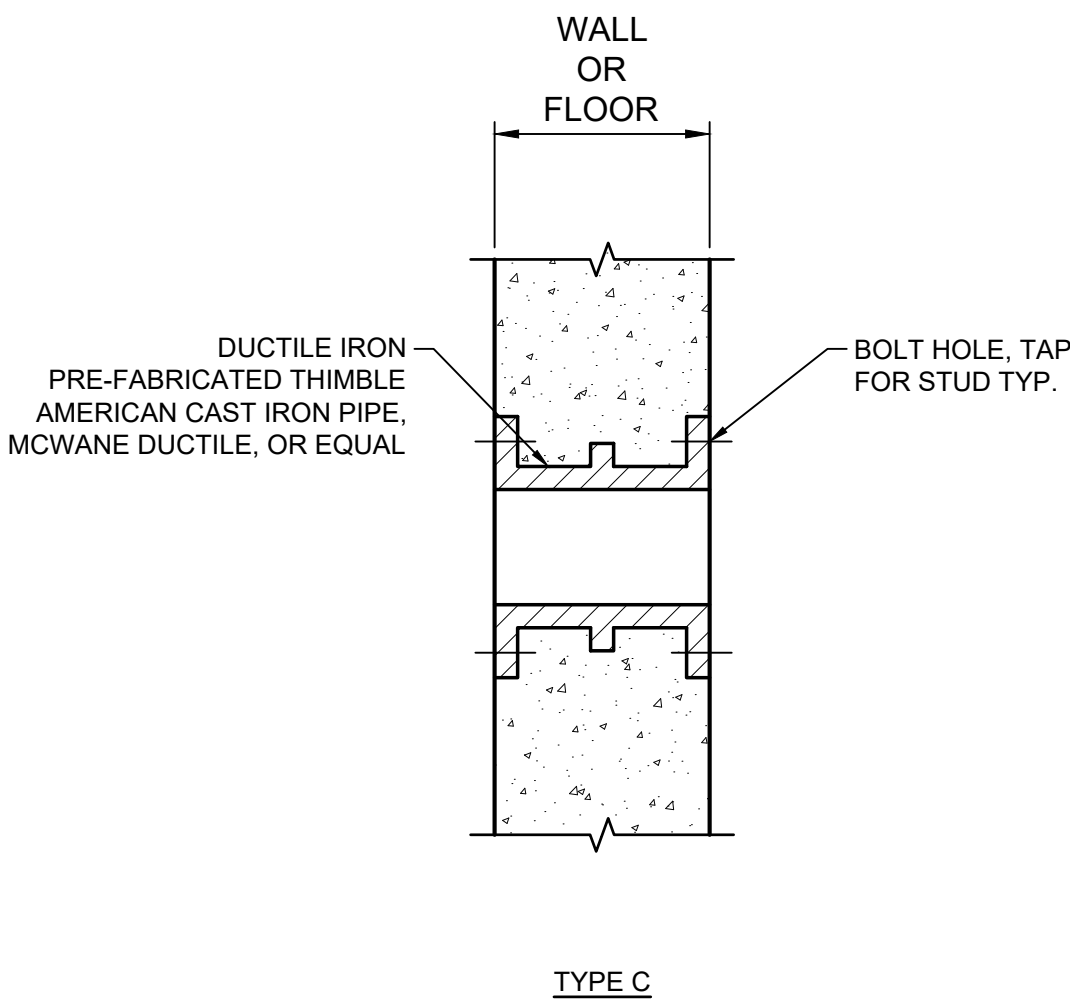
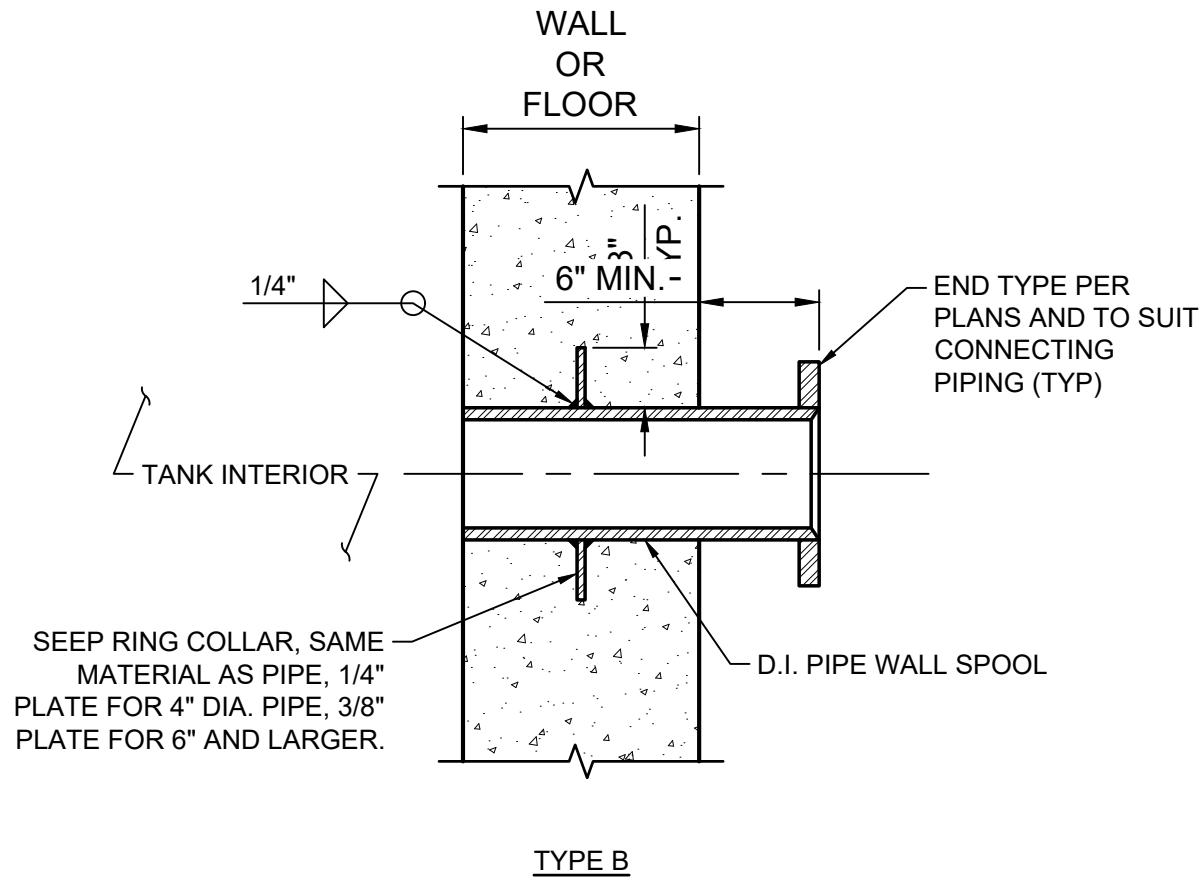
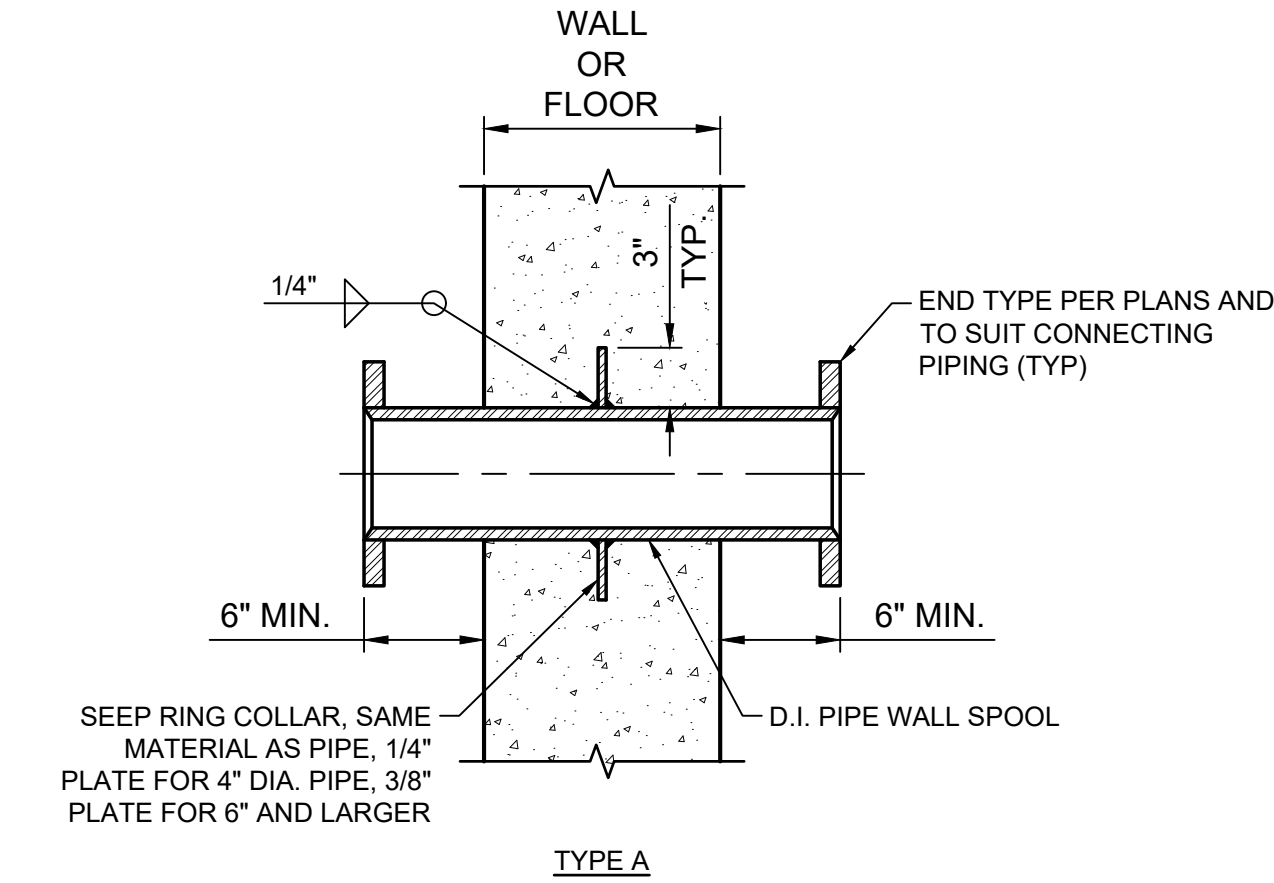
AT FULL SIZE, IF NOT
INCH SCALE ACCORD

LAST UPDATED: 8/26/2025

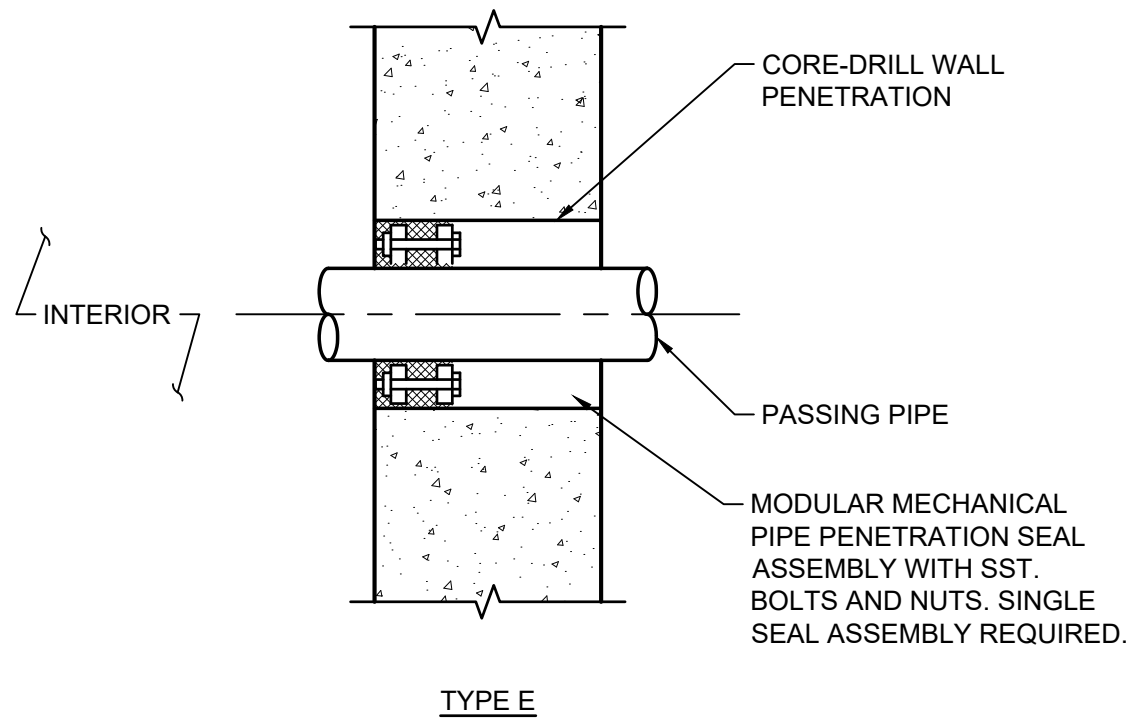
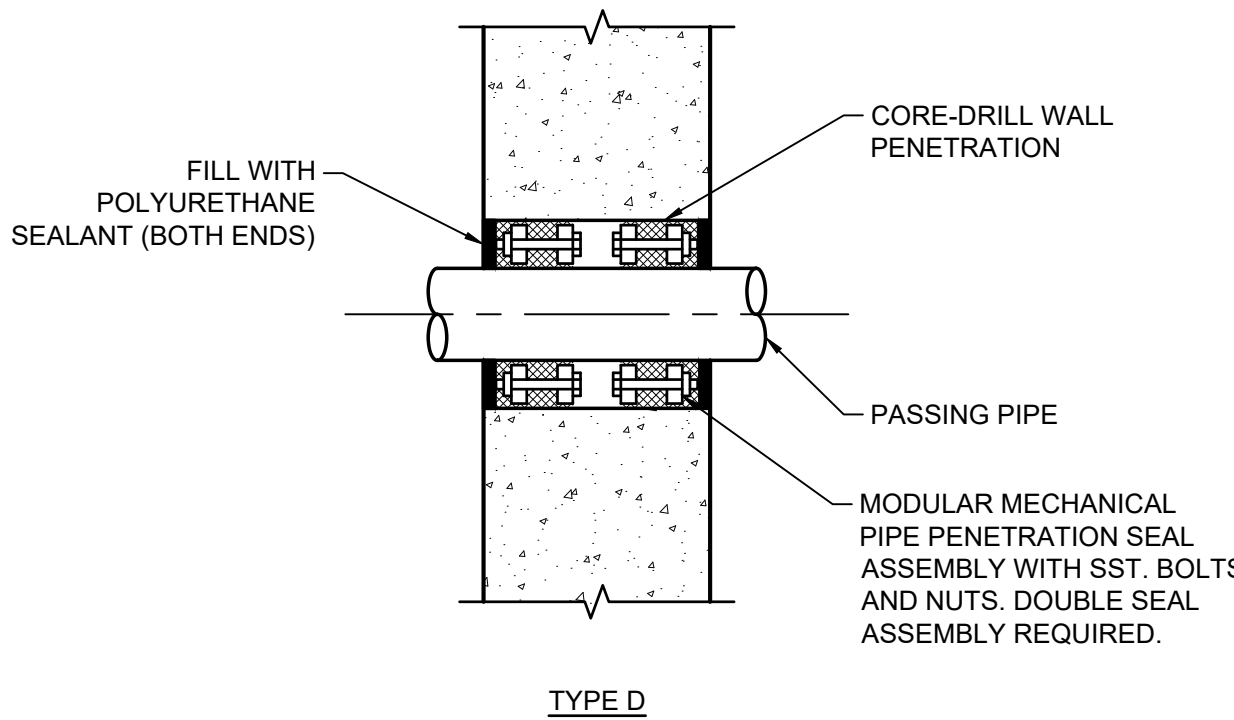
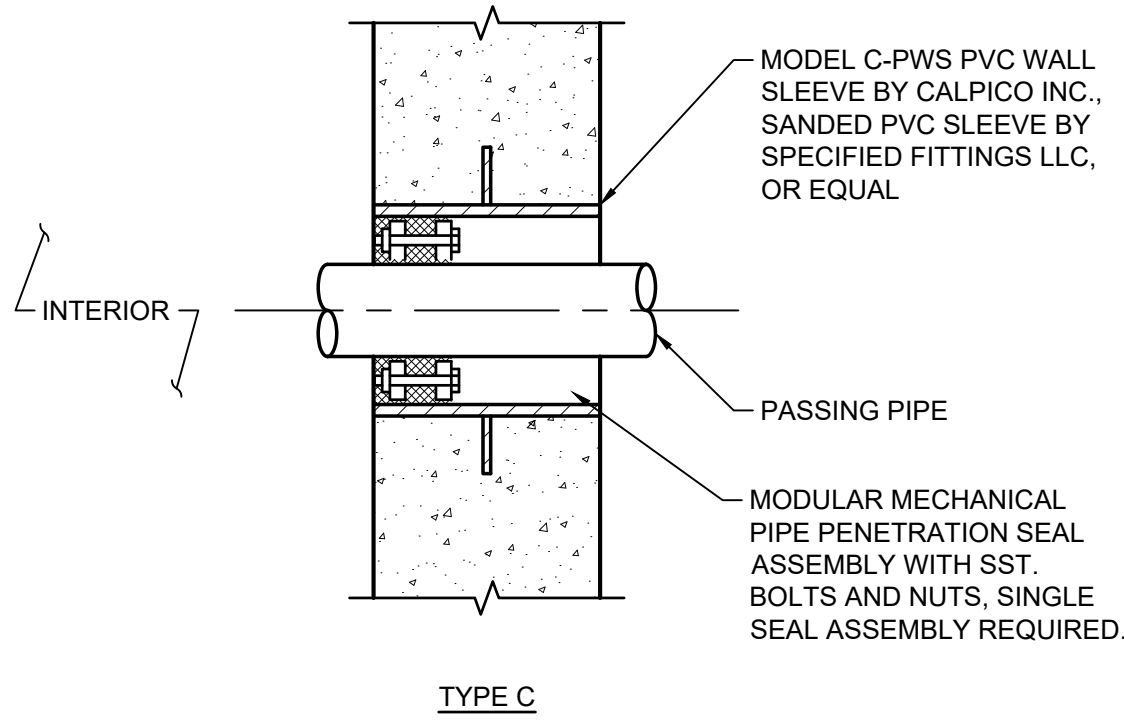
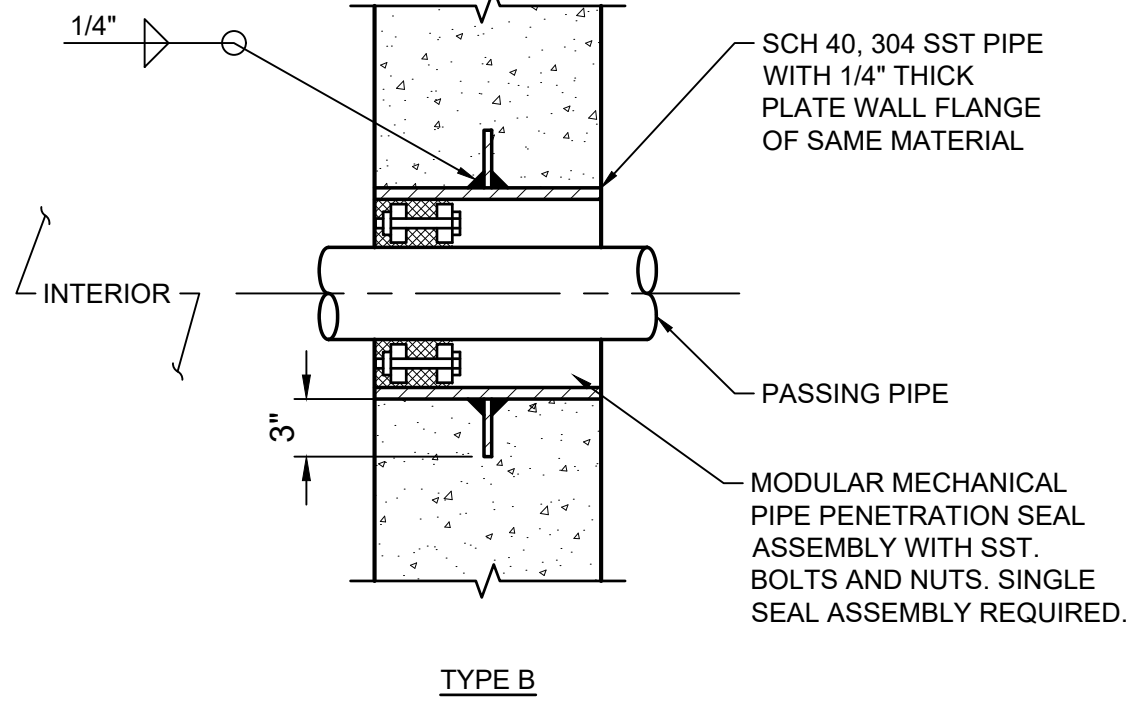
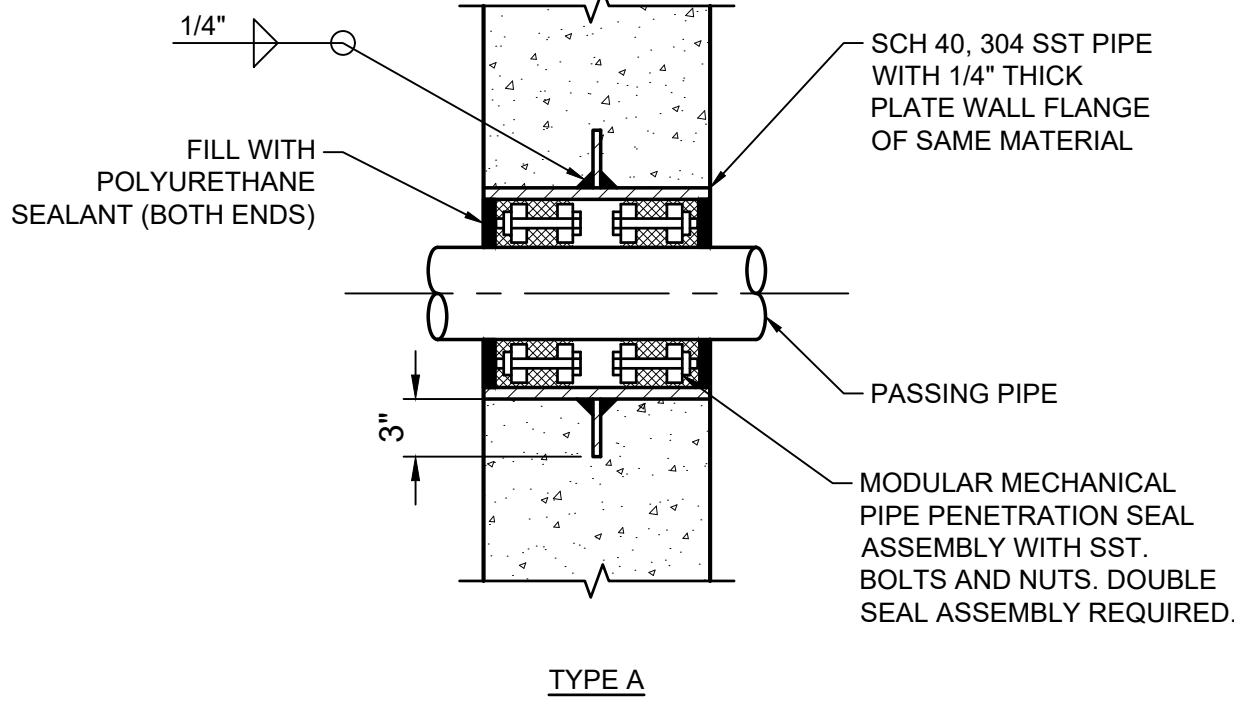
SHEET NUMBER:

D-501

- GENERAL NOTES:**
- PIPE PENETRATIONS SHALL BE DUCTILE IRON PIPE AND HARDWARE SHALL BE 316 SST, UNLESS SPECIFICALLY STATED OTHERWISE ON THE PLANS.
 - ALL PENETRATIONS SHALL BE INSTALLED WITH THE ASSOCIATED FORMWORK PRIOR TO THE CONCRETE POUR. BLOCKOUTS AND POUR-BACKS SHALL NOT BE ACCEPTABLE UNLESS PRIOR CONSENT IS RECEIVED FROM THE ENGINEER, AND MAY REQUIRE ADDITIONAL WORK WHICH SHALL BE AT THE CONTRACTOR'S EXPENSE.
 - PROVIDE INSULATING GASKET PER STANDARD DETAIL **D-15030** WHERE DI PIPE PENETRATION IS USED WITH DISSIMILAR METAL PIPING SYSTEM.

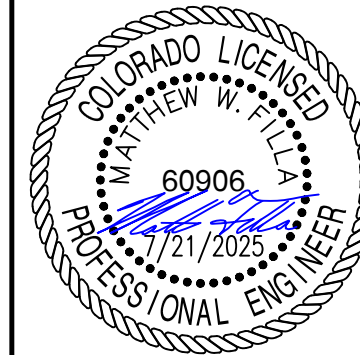


D-15000 DUCTILE IRON PIPE SPOOL PENETRATIONS
NOT TO SCALE



D-15005 SLEEVED PIPE PENETRATIONS
NOT TO SCALE

BID SET



REUSE OF DRAWINGS		REVISION		BY		DATE	
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RIGHTS IN ANY DESIGN OR INVENTION. NO PART OF THIS DESIGN OR INVENTION SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF J-U-B ENGINEERS, INC. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.		NO.		DESCRIPTION		BY	

**SEWER TRANSFER PROJECT
TOWN OF PALISADE**

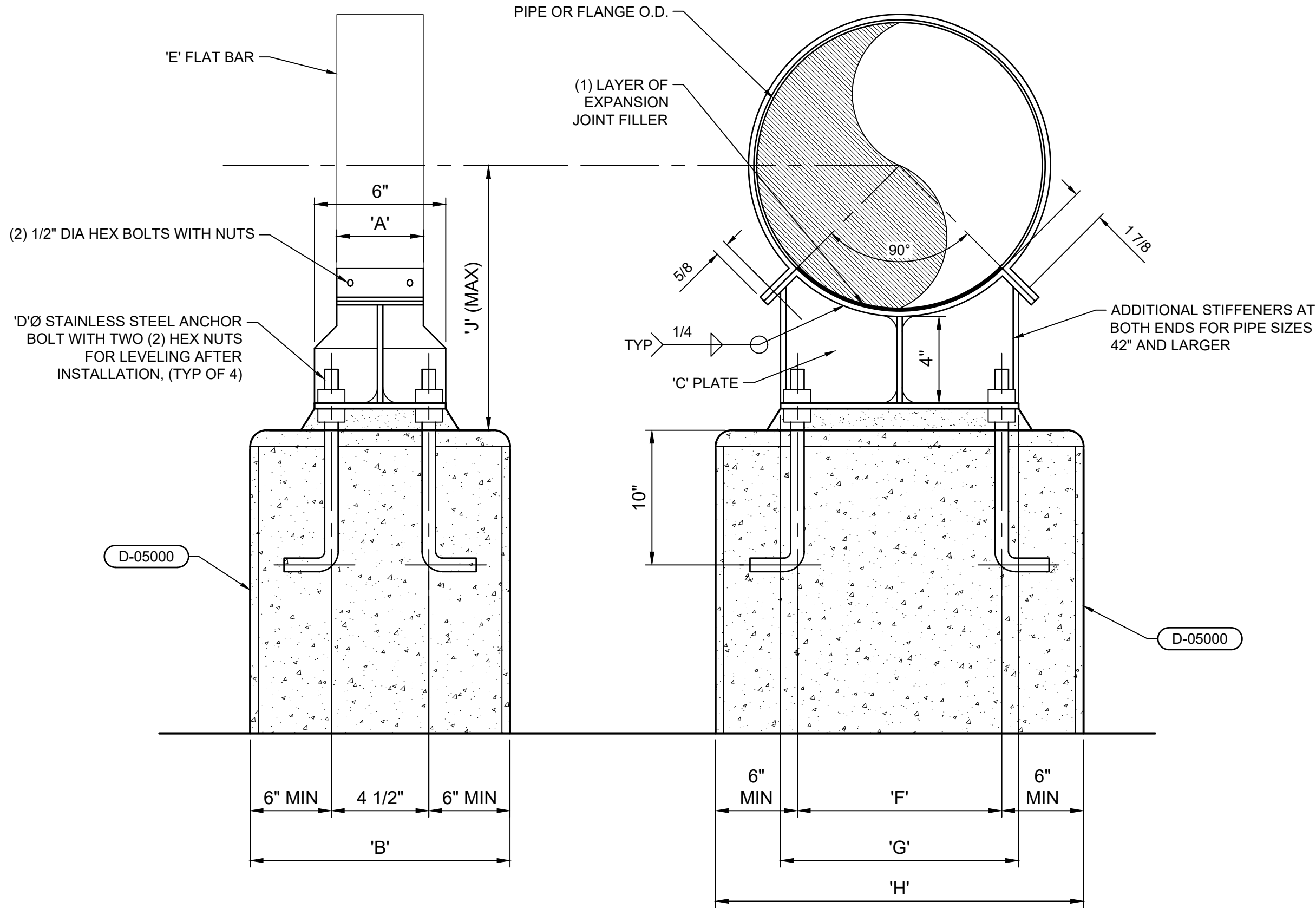
MECHANICAL DETAILS

Plot Date: 2/26/2025 3:53 PM Plotted By: Matt Filla
Date Created: 2/26/2025 W:\CENTRAL CLIENTS\TOWN OF PALISADE\PROJECTS\81-23-029 SEWER TRANSFER DESIGN\CAD SHEET MECHANICAL\81-23-029 D-501X.DWG

NOTES:

1. WHEN SUPPORTING PIPE AND FLANGE ALTERNATELY ON THE SAME LINE CONCRETE PIERS FOR PIPE SUPPORTS SHALL ALL HAVE THE SAME DIMENSION 'H' FOR FLANGE SUPPORT.
2. HARDWARE AND FASTENERS, INCLUDING ANCHOR BOLTS, SHALL BE STAINLESS STEEL. ALL OTHER STEEL COMPONENTS SHALL BE CARBON STEEL COATED PER THE TECHNICAL SPECIFICATIONS.
3. COORDINATE SUPPORT HEIGHT TO ACHIEVE REQUIRED PIPE ELEVATION AS STATED ON THE PLANS.

DIMENSIONS IN INCHES													
NOMINAL PIPE SIZE						SUPPORTING							
						PIPE				FLANGE			
	A	B	C	D	E	F	G	H	J(MAX)	F	G	H	J(MAX)
4 & 6	4	12	3/8	5/8	1/4	4 1/2	6	12	10	6 1/2	9	16	13
8	4	12	3/8	5/8	1/4	5	8	13	11	7 1/2	9	16	14
10	4	12	3/8	5/8	1/4	6	9	15	12	9	13	18	15
12	4	12	3/8	5/8	1/4	7	11	17	13	10	15	20	16
14	4	12	3/8	5/8	1/4	8	12	17	14	11	16	21	17
16	4	12	3/8	5/8	1/4	9	13	19	15	12	18	24	18
18	4	12	3/8	5/8	1/4	10	14	20	16	13	19	24	19
20	5	12	3/8	5/8	3/8	10	15	21	17	15	21	26	21
22	5	12	3/8	5/8	3/8	12	18	24	18	16	23	28	22
24	5	12	3/8	5/8	3/8	13	19	24	19	16	24	30	23
26	5	12	3/8	3/4	3/8	14	21	27	20	18	26	32	24
30	5	12	3/8	3/4	3/8	15	23	28	22	20	29	34	26
34	5	15	3/8	3/4	3/8	18	26	32	24	22	33	39	29
36	6	15	3/8	3/4	3/8	19	27	32	25	24	34	40	30
42	6	18	1/2	1	3/8	21	31	36	28	27	39	45	33



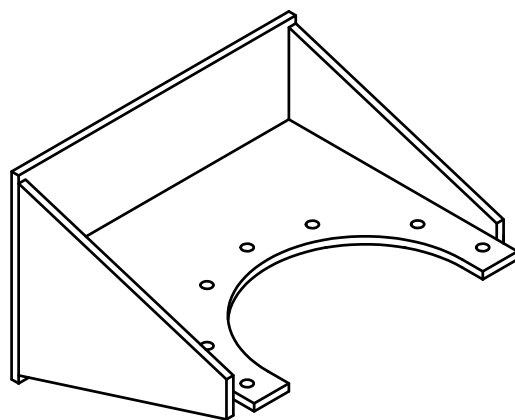
D-15136 PIPE SUPPORT - CONCRETE PEDESTAL WITH OR WITHOUT STRAP
NOT TO SCALE

NOTES:

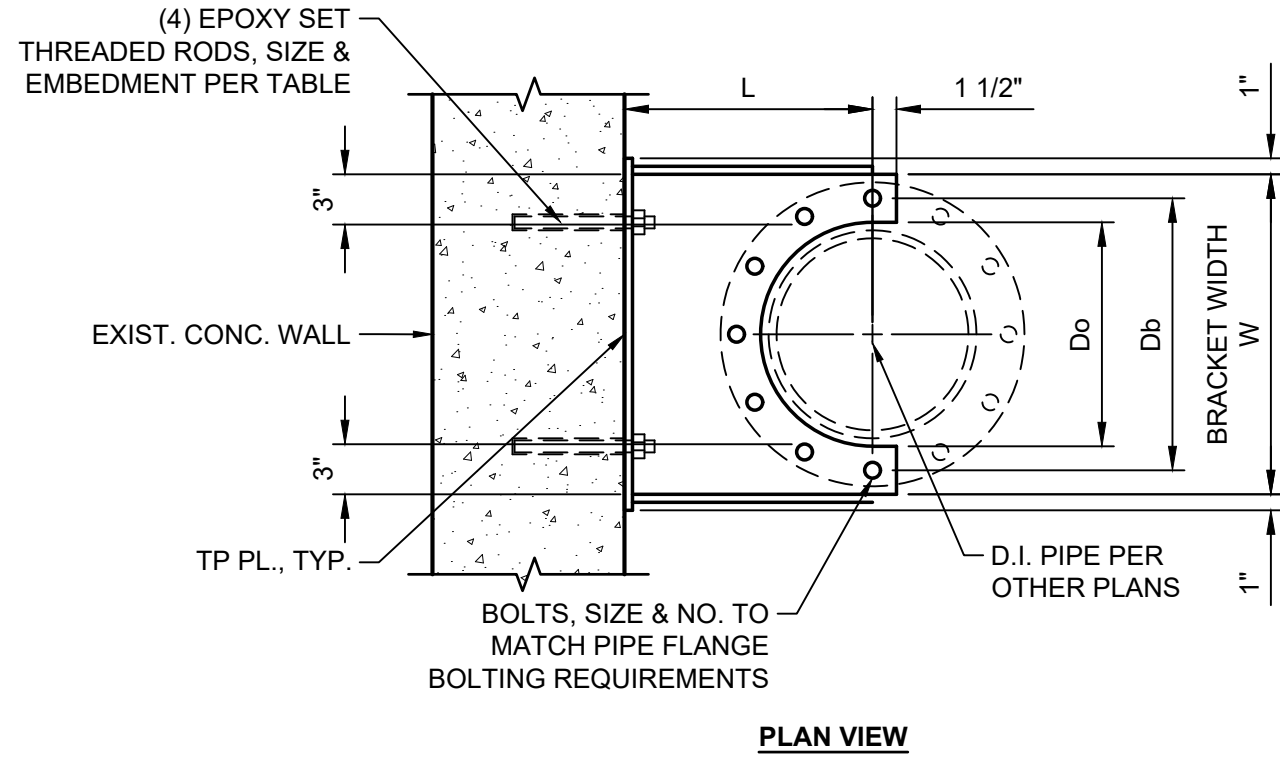
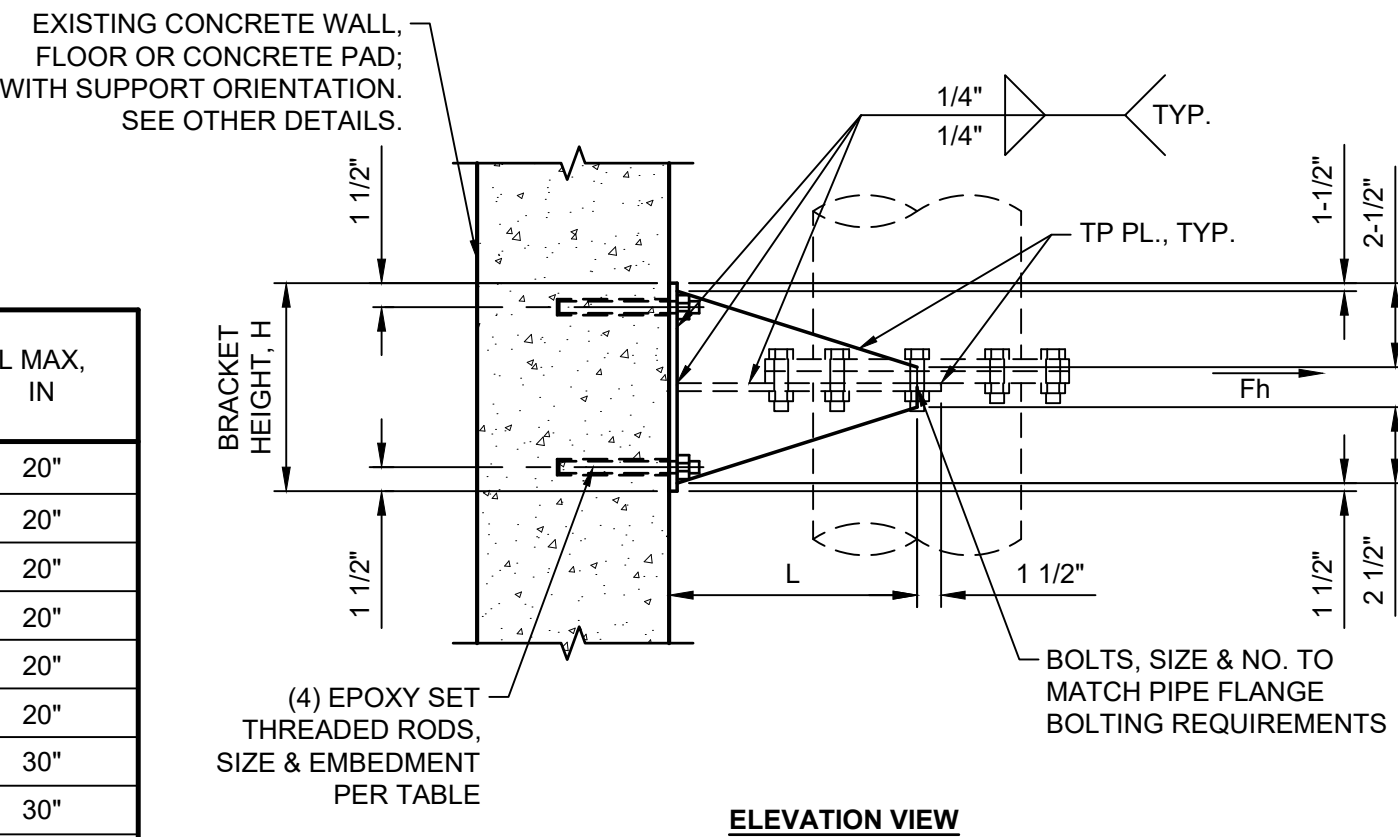
1. REFER TO TABLE FOR ADDITIONAL ANCHOR REQUIREMENTS.
2. RODS TO BE SET UTILIZING THE HILTI HIT HY 200 SYSTEM.
3. Do , Db , AND RELATED ITEMS SHALL MATCH PIPE FLANGE AND BOLTING REQUIREMENTS.
4. Fv AND Fh DENOTE VERTICAL AND HORIZONTAL FORCES, RESPECTIVELY.
5. L = MINIMUM OF 3".

NOMINAL PIPE DIA Dp, in.	BRACKET WIDTH W, in.	BRACKET HEIGHT H, in.	BRACKET THICKNESS Tp, in.	FILLET WELD SIZE Tw, in.	ANCHOR RODS		L MAX, IN
					DIAMETER Ad, in.	EMBEDMENT E, in.	
4	10.50	10.50	0.375	0.250	0.625	5.00	20"
6	12.50	10.50	0.375	0.250	0.625	5.00	20"
8	14.75	13.00	0.500	0.250	0.750	6.625	20"
10	17.25	13.00	0.500	0.250	0.750	6.625	20"
12	20.00	14.50	0.500	0.250	0.875	7.50	20"
14	21.75	14.50	0.625	0.3125	0.875	7.50	20"
16	24.25	15.50	0.625	0.3125	1.000	8.25	30"
18	25.75	15.50	0.625	0.3125	1.000	8.25	30"
20	28.00	18.00	0.625	0.3125	1.000	8.25	30"
24	32.00	21.00	0.625	0.3125	1.000	8.25	30"

ANCHOR SYSTEM: HILTI HIT HY 200 V3 ADHESIVE SYSTEM, OR
APPROVED EQUIVALENT



ISOMETRIC VIEW



D-15135 TYPICAL DUCTILE IRON PIPE WALL CRADLE SUPPORT
NOT TO SCALE



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main Street
Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET



REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND
OTHER RIGHTS IN ALL DRAWINGS AND DOCUMENTS. NO PARTS
SHALL BE REUSED WITHOUT WRITTEN CONSENT BY J-U-B. ANY
REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S
SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	REVISION	DESCRIPTION	BY	DATE

SEWER TRANSFER PROJECT
TOWN OF PALISADE

MECHANICAL DETAILS

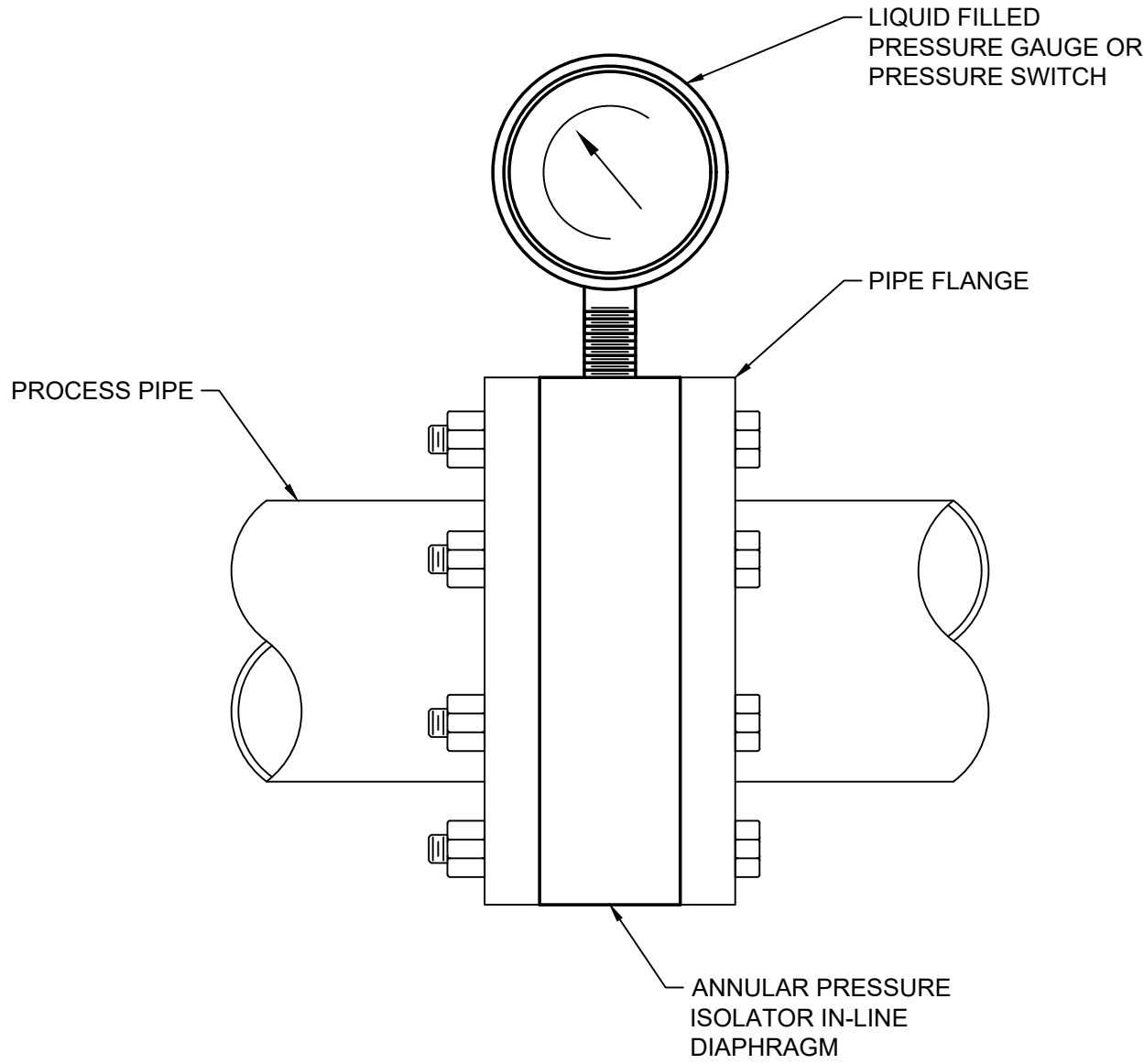
FILE : 81-23-029_D-501X
JUB PROJ. # : 81-23-029
DRAWN BY: WVD
DESIGN BY: KAR / AMN
CHECKED BY: GMV / MWF
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/26/2025

SHEET NUMBER:

D-505

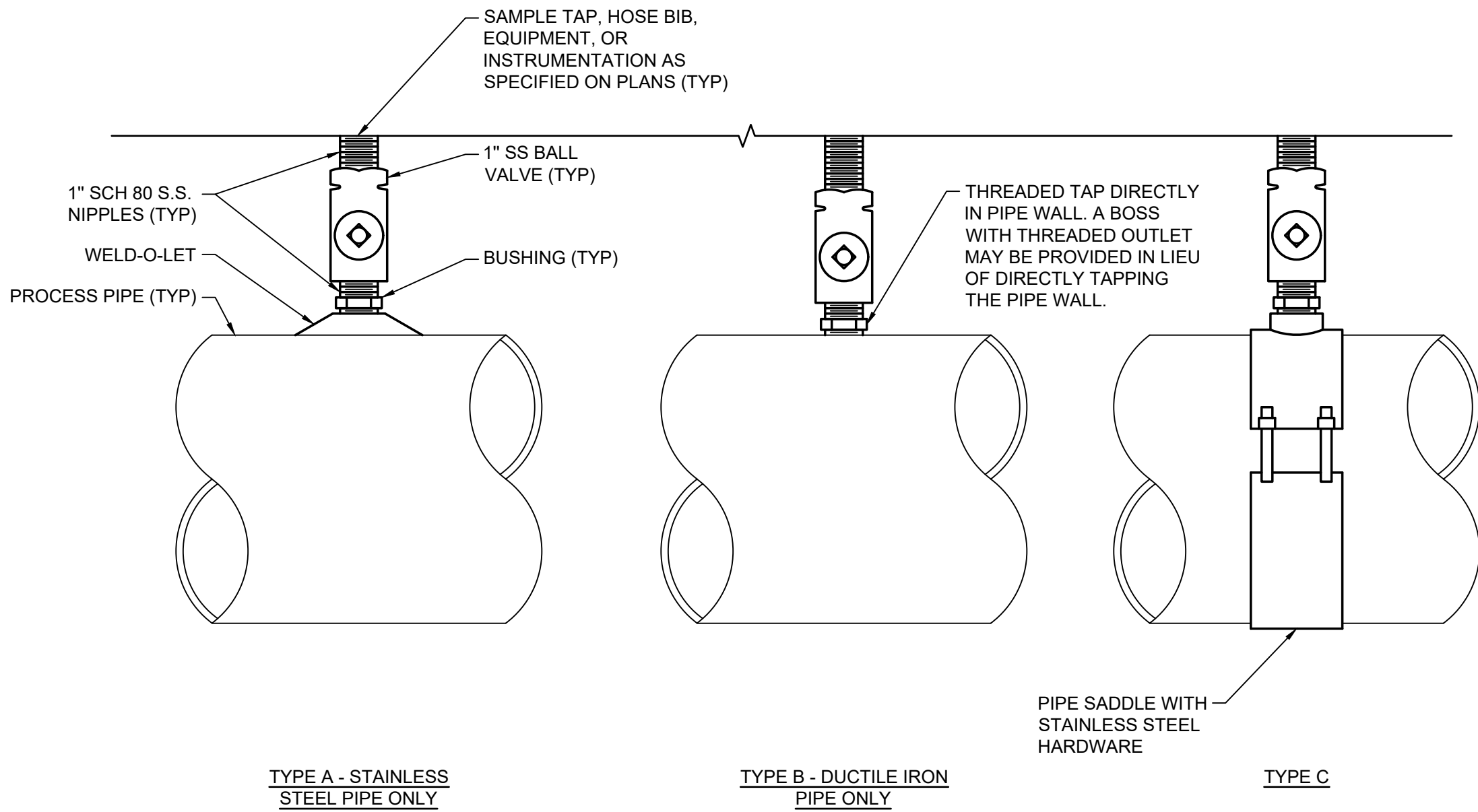
Proj Date: 8/26/2025 3:32 PM Plotted By: Matt Filla
Date Created: 8/26/2025 JUB-CENTRAL CLIENTS COOPALISADE PROJECT SHEET 23-029 SEWERTransferDesign CAD SHEET MECHANICAL 8/23/2029 D-501X.DWG

NOTES:
1. PROVIDE ADDITIONAL APPURTENANCES AS REQUIRED.



D-15161 PRESSURE GAUGE OR PRESSURE SWITCH
WITH PIPE SLEEVE PRESSURE SENSOR
NOT TO SCALE

NOTES:
1. BALL VALVES, LADISH CO. LAD-2000, JAMESBURY TYPE A-36 OR EQUAL.



D-15164 TYPICAL PIPE TAP
NOT TO SCALE



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main Street
Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET



REUSE OF DRAWINGS
JUB SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RIGHTS IN ANY DESIGN OR DRAWING. NO PART OF ANY DESIGN OR DRAWING SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF JUB. ANY REUSE WITHOUT WRITTEN CONSENT BY JUB WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.

REVISION		DESCRIPTION		BY	DATE
NO.					

SEWER TRANSFER PROJECT
TOWN OF PALISADE

MECHANICAL DETAILS

FILE: 81-23-029_D-501X
JUB PROJ. #: 81-23-029
DRAWN BY: WVD
DESIGN BY: KAR / AMN
CHECKED BY: GMV / MWF
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/26/2025

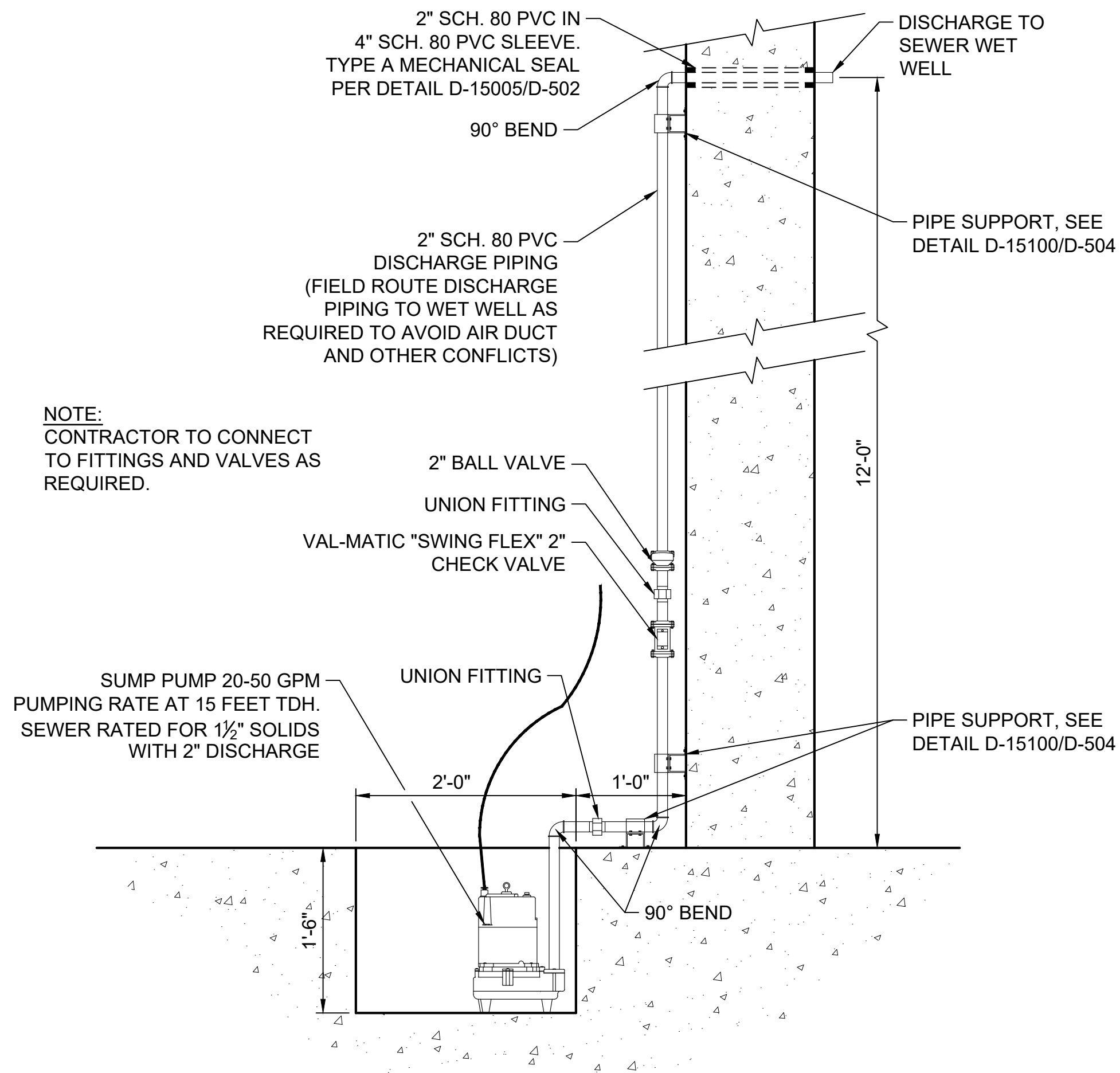
SHEET NUMBER:

D-506

Plot Date: 8/26/2025 3:33 PM Plotter: By: Matt Filla
Date Created: 8/26/2025 User: JUB\CENTRAL\CLIENTS\TOWN OF PALISADE\PROJECTS\81-23-029 SEWER TRANSFER DESIGN\CAD\DWG\MECHANICAL\81-23-029 D-501X.DWG

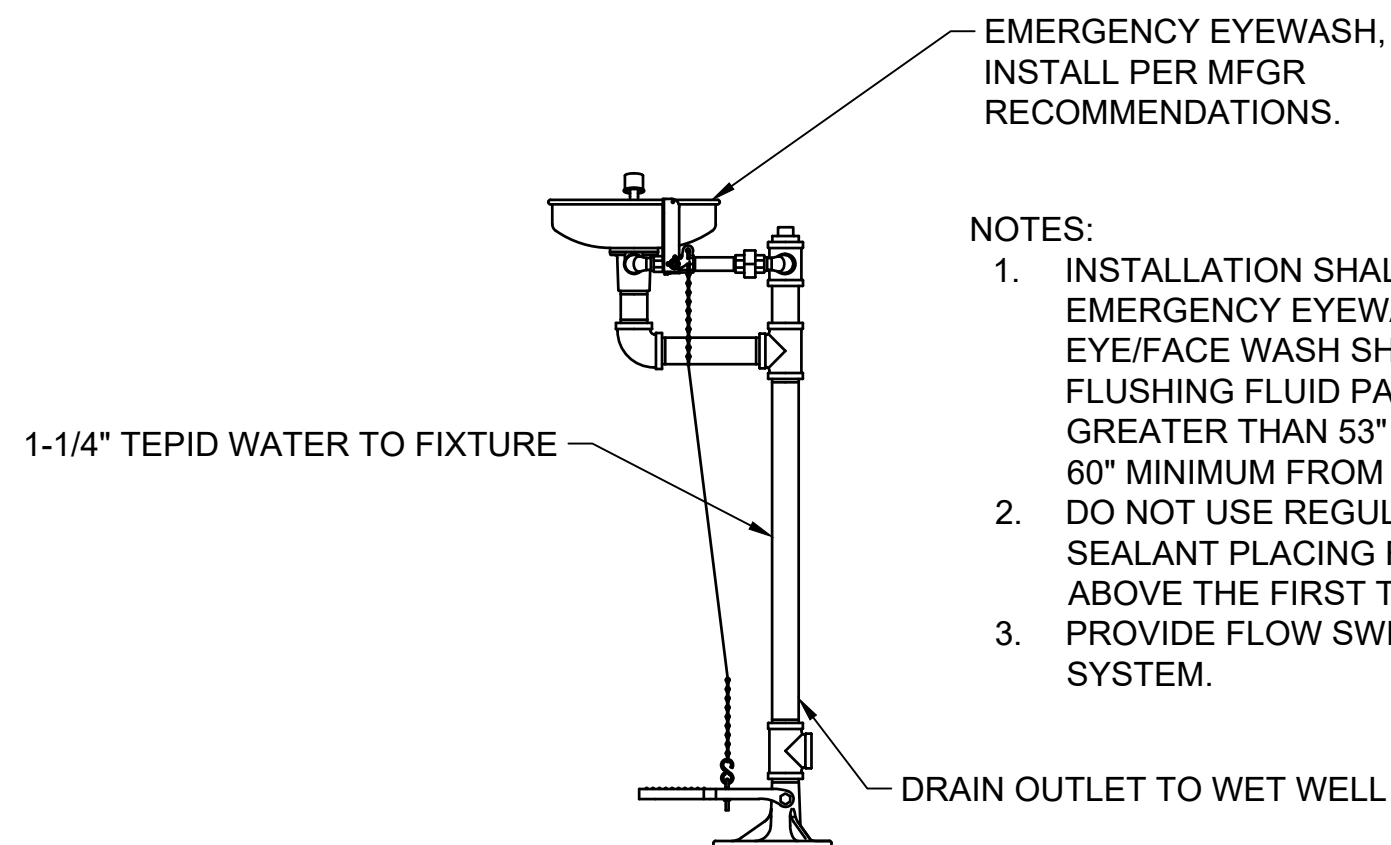
1 SUMP DETAIL

SCALE: NOT TO SCALE



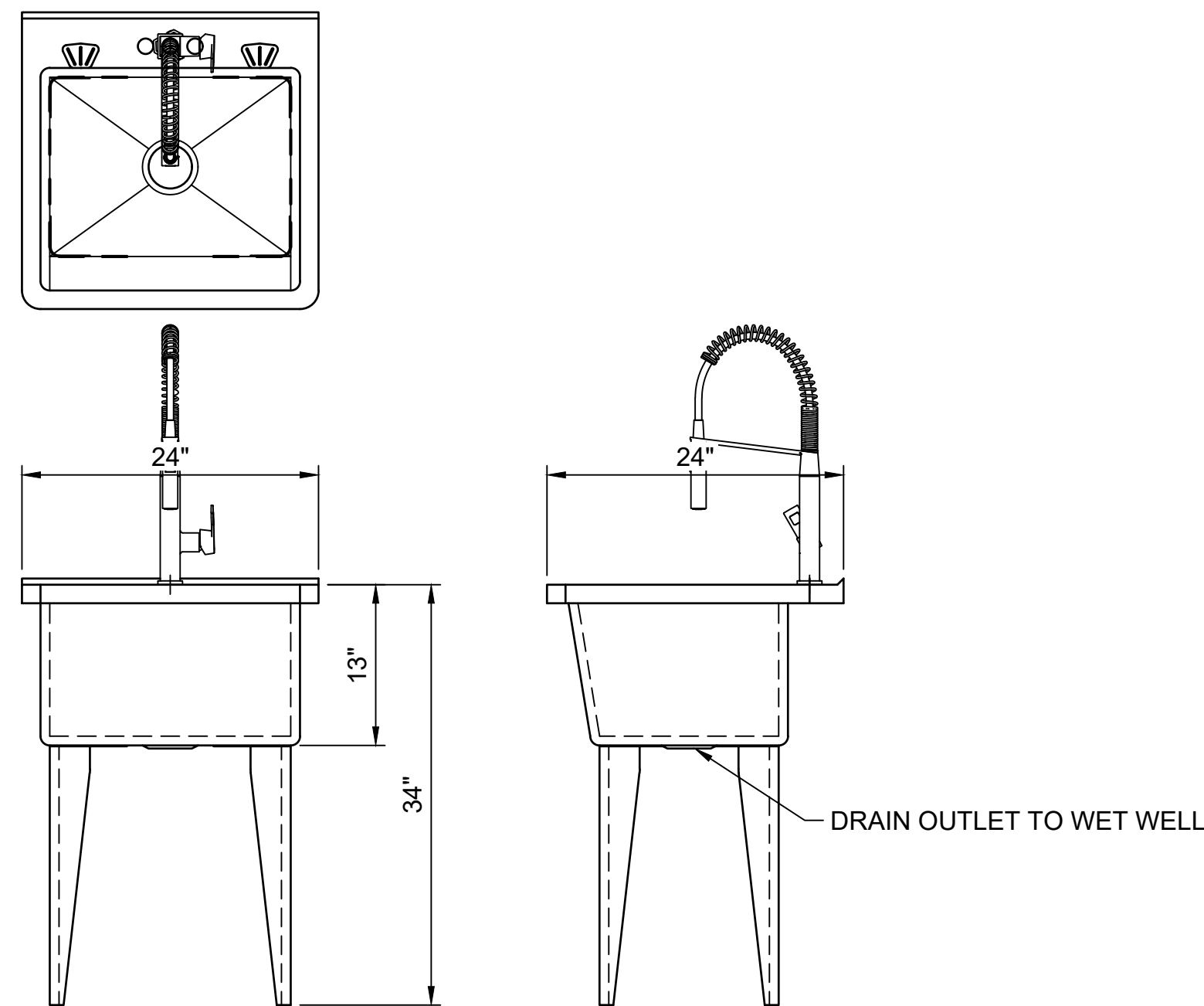
2 EYEWASH DETAIL

SCALE: NOT TO SCALE



3 UTILITY SINK DETAIL

SCALE: NOT TO SCALE



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.

305 S. Main Street

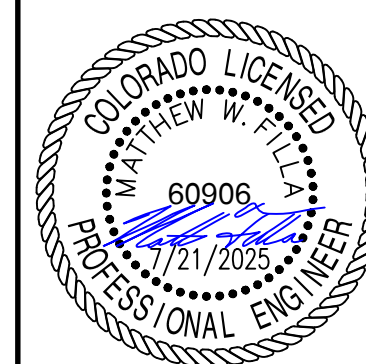
Unit 6

Palisade, CO 81526

Phone: 970.208.8508

www.jub.com

BID SET



REUSE OF DRAWINGS
JUB SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RIGHTS IN ANY DESIGN OR DRAWING. NO PART OF ANY DESIGN OR DRAWING SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF JUB. ANY REUSE WITHOUT WRITTEN CONSENT BY JUB WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.

REVISION		DESCRIPTION		NO.	DATE

SEWER TRANSFER PROJECT
TOWN OF PALISADE

MECHANICAL DETAILS

FILE: 81-23-029_D-501X

JUB PROJ. #: 81-23-029

DRAWN BY: WVD

DESIGN BY: AMN / KAR

CHECKED BY: GMV / MWF

ONE INCH

AT FULL SIZE, IF NOT ONE

INCH, SCALE ACCORDINGLY

LAST UPDATED: 8/26/2025

SHEET NUMBER:

D-508

JUB

J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.

305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970-208-8508
www.jub.com

BID SET

REUSE OF DRAWINGS

JUB SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF INVENTORS, DESIGNERS, ARCHITECTS, ENGINEERS, SURVEYORS, CONSULTANTS, OR ANY OTHER PARTY TO THE SAME WITHOUT WRITTEN CONSENT BY JUB WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.

REVISION

NO.	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE
STRUCTURAL (S)
PUMP BUILDING
GENERAL STRUCTURAL NOTES

FILE:

JUB PROJ. #81-23-029

DRAWN BY:EM

DESIGN BY:JLS

CHECKED BY:JCH

ONE INCH =
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

LAST UPDATED: 06/11/2024

DRAWING:

S-002

CAST-IN-PLACE CONCRETE CONTINUED

6. DETAILS OF REINFORCEMENT
A. PLACEMENT OF ALL REINFORCING STEEL WITHIN CONCRETE STRUCTURES SHALL BE IN CONFORMANCE WITH ACI 318/350 CHAPTER 7.
B. REINFORCING STEEL HOOKS, BENDS, TIES, SPLICES AND OTHER REINFORCEMENT DETAILS SHALL BE IN ACCORDANCE WITH ACI 315; DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.
C. SPACING LIMITS FOR REINFORCEMENT SHALL BE IN CONFORMANCE WITH ACI 318/350 SECTION 7.6. CONCRETE PROTECTION FOR REINFORCEMENT. UNLESS NOTED ELSEWHERE ON THE DRAWINGS, ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER:
a. FOR NON-LIQUID CONTAINING CONCRETE STRUCTURES; PER ACI 318 SECTION 7.7:

1. CONCRETE CAST AGAINST EARTH: 3.00 INCH
2. CONCRETE EXPOSED TO EARTH OR WEATHER:
A. NO. 5 OR SMALLER BARS: 1.50-INCH
B. NO. 6 OR LARGER BARS: 2.00-INCH
3. CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
A. NO. 11 OR SMALLER BARS: 0.75-INCH
B. NO. 14 OR LARGER BARS: 1.50-INCH

BEAMS AND COLUMNS:
A. PRIMARY REINFORCEMENT, TIES, STIRRUPS OR SPIRALS: 1.50-INCH
b. FOR LIQUID CONTAINING CONCRETE STRUCTURES; PER ACI 350 SECTION 7.7:

1. CONCRETE CAST AGAINST EARTH: 3.00 INCH
2. CONCRETE EXPOSED TO EARTH, LIQUID OR WEATHER:
A. SLABS AND JOINTS: 2.00-INCH
B. WALLS: 2.00-INCH
3. BEAMS AND COLUMNS:
A. TIES, STIRRUPS OR SPIRALS: 2.00-INCH
B. PRIMARY REINFORCEMENT: 2.50-INCH
4. FOOTINGS AND BASE SLABS;
A. FORMED SURFACES: 2.00-INCH
B. TOP OF FOOTINGS AND BASE SLABS: 2.00-INCH

E. CONCRETE BLOCK OR PLASTIC CHAIRS SHALL BE PROVIDED FOR SUPPORT OF ALL SLAB REINFORCING STEEL, SUFFICIENT IN NUMBER TO PREVENT SETTLEMENT OR SAGGING, BUT IN NO CASE SHALL SUCH SUPPORT BE CONTINUOUS. METAL CLIPS OR SUPPORTS SHALL NOT BE PLACED IN CONTACT WITH THE FORMS OR THE SUB-GRADE.
F. DOWELS AND ANCHOR BOLTS SHALL BE WIRED OR OTHERWISE HELD IN CORRECT POSITION PRIOR TO PLACING CONCRETE. CARE SHALL BE TAKEN TO INSURE THAT DOWELS AND ANCHOR BOLTS REMAIN PLUM AFTER CONCRETE IS POURED AND VIBRATED. IN NO CASE SHALL DOWELS OR ANCHOR BOLTS BE STABBED INTO FRESHLY POURED CONCRETE!
G. PROVIDE DOWELS IN FOOTINGS AND AT CONSTRUCTION JOINTS TO MATCH VERTICAL REINFORCING BAR SIZE AND SPACING, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
H. COORDINATE PLACEMENT OF DOWELS INTO MASONRY OR BRICK WALLS WITH THE MASONRY SHOP DRAWINGS.
I. WHERE DRILLED IN ANCHORS ARE TO BE POST-INSTALLED INTO CONCRETE SURFACES TAKE CARE TO LOCATE REINFORCING STEEL SO THAT IT WILL NOT INTERFERE WITH THE DRILLING OPERATIONS. MOVE BARS PLUS OR MINUS 1 TO 2 INCHES IN ORDER TO AVOID DRILLING CONFLICTS.
J. ALL BAR BENDS, HOOKS, SPLICES AND OTHER REINFORCING STEEL DETAILS SHALL CONFORM TO THE REQUIREMENTS OF ACI 315.
K. UNLESS OTHERWISE NOTED ON THE PLANS ALL BARS SHALL BE SPLICED WITH A MINIMUM CLASS B LAP SPLICE; LAP SPLICES OF DEFORMED BARS AND DEFORMED WIRE IN COMPRESSION ZONES MAY BE CLASS A SPLICES.
L. AT ALL CORNERS AND WALL INTERSECTIONS PROVIDE BENT BARS TO MATCH THE HORIZONTAL REINFORCING STEEL AND IN ACCORDANCE WITH THE TYPICAL CORNER REINFORCING DETAILS.
M. CHAMFER ALL EXPOSED CORNERS AND FILLET ENTRANT ANGLES 3/4" UNLESS OTHERWISE NOTED ON THE DRAWINGS.
N. WATERSTOP, ALL CONTROL AND CONSTRUCTION JOINTS IN LIQUID-RETAINING STRUCTURES SHALL BE DOWELED, KEYED AND PROVIDED WITH CONTINUOUS WATER-STOP, PER THE TYPICAL DETAILS, TECHNICAL SPECIFICATIONS OR AS DIRECTED BY THE PROJECT ENGINEER.
O. AT SLAB AND WALL OPENINGS PROVIDE A MINIMUM OF (4) #5 BARS; OVER, UNDER AND AT EITHER SIDE OF THE OPENINGS. EXTEND THESE BARS A MINIMUM OF 24" PAST THE OPENING EDGE. PROVIDE (1) MATT OF (4) #5 BARS FOR WALLS OR SLABS WITH SINGLE-LAYER REINFORCING AND (2) MATTS OF (4) #5 BARS FOR DOUBLE-LAYER REINFORCING WALLS OR SLABS. PROVIDE #4, 4'-LONG DIAGONAL BARS AT EACH RE-ENTRANT CORNER IN SLABS; (1) BAR FOR SLABS WITH SINGLE LAYER REINFORCING AND (2) BARS FOR SLABS WITH DOUBLE LAYER REINFORCING.
7. CONCRETE FINISHING. ALL CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ACI 301.
A. FORMED CONCRETE SURFACES. AFTER REMOVAL OF FORMS, GIVE EACH FORMED SURFACE ONE OR MORE OF THE FOLLOWING FINISHES IN CONFORMANCE WITH ACI 301 SECTION 5.3.3 FINISHING FORMED SURFACES:
a. NON-LIQUID RETAINING CONCRETE STRUCTURES:

1. CONCRETE FOOTINGS AND FOUNDATIONS NOT EXPOSED TO VIEW. PROVIDE AN AS-CAST FINISH.
2. FOUNDATION WALL AND OTHER SURFACES BELOW GRADE AND NOT EXPOSED TO VIEW. PROVIDE A SURFACE FINISH TYPE SF-1.0.
3. INTERIOR, EXTERIOR AND TOP SURFACES EXPOSED TO VIEW TO 6-INCHES BELOW GRADE. PROVIDE A SURFACE FINISH TYPE SF-2.0.
4. COLUMN, BEAM AND JOIST SURFACES THAT ARE EXPOSED TO VIEW. PROVIDE A SURFACE FINISH TYPE SF-2.0.
5. INTERIOR CONCRETE SURFACES TO BE PAINTED OR RECEIVE OTHER COATING SYSTEMS SHALL RECEIVE A SURFACE FINISH TYPE SF-3.0.
b. LIQUID RETAINING CONCRETE STRUCTURES:

1. INTERIOR SURFACES FROM TOP OF WALL TO FLOOR SLAB, EXTERIOR AND TOP SURFACES EXPOSED TO VIEW TO 6-INCHES BELOW GRADE. PROVIDE A GROUT-CLEANED FINISH. PRESSURE-WASH ALL CONCRETE SURFACES TO RECEIVE A GROUT-CLEANED FINISH WITH HIGH-PRESSURE WATER PRIOR TO GROUTING. (ALTERNATE, PROVIDE A SURFACE FINISH TYPE SF-3.0.)
2. SURFACES BELOW GRADE AND NOT EXPOSED TO VIEW. PROVIDE A SURFACE FINISH TYPE SF-2.0.
c. SPECIAL OR ARCHITECTURAL FINISHES: REFER TO THE ARCHITECTURAL SPECIFICATIONS FOR SPECIAL OR ARCHITECTURAL FINISH REQUIREMENTS.
B. UNFORMED CONCRETE SURFACES. UNFORMED CONCRETE SURFACES INCLUDING THE TOP SURFACE OF ALL CONCRETE ROOF AND FLOOR SLABS SHALL BE FINISHED IN ACCORDANCE WITH ACI 301 SECTION 5.3.4 AND ACI 302 CHAPTER 8.

a. FOR THE TOP SURFACES OF WALLS, PROVIDE A SCRATCHED FINISH.
b. INTERIOR OFFICES, LABORATORY SPACES AND OTHER AREAS RECEIVING ONLY LIGHT FOOT TRAFFIC SHALL RECEIVE A TROVELED FINISH.
c. INTERIOR GARAGE, INDUSTRIAL OR WORK AREAS SUBJECT TO EQUIPMENT OR TRAFFIC LOADS SHALL RECEIVE A BROOM FINISH.
d. PROVIDE A NONSLIP FINISH FOR EXTERIOR SURFACES AND WHERE INDICATED ON THE PLANS.
e. REFER TO THE ARCHITECTURAL PLANS FOR FINISH REQUIREMENTS FOR FLOORS TO RECEIVE ARCHITECTURAL COVERINGS.

C. SAWED CONTRACTION JOINTS. CONFORM TO ACI 301 SECTION 5.3.5.

STRUCTURAL STEEL

1. STRUCTURAL MATERIALS
A. W & WT SHAPES: ASTM A992 GRADE 50, F_y: 50 KSI
B. M, S, C, MC & L SHAPES: ASTM A36, F_y: 36 KSI
C. PLATES, BARS, CHANNELS & ANGLES: ASTM A36, F_y: 36 KSI
D. STEEL PIPE: ASTM A53 GRADE B, F_y: 35 KSI
E. SQUARE, RECTANGULAR HSS, STEEL TUBING: ASTM A500 GRADE C, F_y: 50 KSI
F. RAISED PATTERN FLOOR PLATE: ASTM A786, F_y: 36 KSI.
2. WELDING OF STRUCTURAL STEEL
A. ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT AWS STRUCTURAL ALL WELDING CODE D1.1-02
B. WELD METAL: FEXX: 70 KSI, TYPICAL UNLESS OTHERWISE NOTED OR REQUIRED BY AWS.
C. ALL WELDERS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING AGENCY.
D. ALL WELDERS SHALL BE CURRENTLY LISTED WITH WABO. (FOR WASHINGTON STATE PROJECTS)
E. QUALIFICATION OF WELDERS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR STANDARD QUALIFICATION PROCEDURE OF THE AWS.
F. CONTRACTOR SHALL SUBMIT A WPS FOR EACH TYPE 1 MOMENT CONNECTION WELD TO BE PERFORMED ON THE JOB. THE WPS SHALL FOLLOW THE REQUIREMENTS OF AWS D1.1 AND SPECIFY AT A MINIMUM THE FOLLOWING: PROCEDURE IDENTIFICATION, BASE METAL IDENTIFICATION, WELDING PROCESS, TYPE OF WELDING, POSITION OF WELDING, FILLER METAL SPECIFICATIONS, FILLER METAL CLASSIFICATION, NUMBER OF PASSES, WELDING CURRENT, WELDING POLARITY, PRE-HEAT AND INTER-PASS TEMPERATURES, CONTROLLED COOLING REQUIREMENTS, WELDING PARAMETERS SUCH AS ELECTRODE DIAMETER, AMPERAGE RANGE, VOLTAGE RANGE, TRAVEL SPEED RANGE, WIRE FEED SPEED RANGE, AND ELECTRICAL STICK-OUT.

COATING OF METALS

1. ALUMINUM AND DISSIMILAR METAL INSULATION COATING
A. ALL ALUMINUM SURFACES IN CONTACT WITH CEMENTITIOUS MATERIALS AND DISSIMILAR METAL SURFACES IN CONTACT WITH EACH OTHER SHALL BE INSULATION AGAINST CORROSION.
B. PREPARE SURFACES BY SOLVENT CLEANING (SP 1).
C. APPLY (1) COAT OF SINGLE-COMPONENT, COAL-TAR PITCH BASED BITUMINOUS PANT.
D. MINIMUM COVER SHALL BE 10 MDFT.
2. PAINTING OF EXTERIOR STRUCTURAL STEEL
A. ALL EXTERIOR STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE PAINTED IN CONFORMANCE WITH THIS SECTION.
B. PAINTING SHALL BE IN CONFORMANCE WITH THE COLORADO TRANSPORTATION DEPARTMENT STANDARD SPECIFICATION, 2004 EDITION.
C. PAINTING SHALL BE IN CONFORMANCE WITH SECTION 627 - PAINTING.
D. PAINT MATERIALS SHALL CONFORM WITH SECTION 707 - PAINT.
E. COLORS SHALL BE AS APPROVED BY THE PROJECT ENGINEER OR OWNER.
F. SUBMIT COLOR CHIPS TO THE PROJECT ENGINEER OR OWNER FOR THEIR APPROVAL PRIOR TO ORDERING MATERIALS.
3. ALL STRUCTURAL AND MISCELLANEOUS METALS SHALL BE PROTECTED FROM CORROSION WITH ONE OF THE FOLLOWING SYSTEMS:
A. STAINLESS STEEL:

a. UN-COATED.
B. STEEL:

a. HOT-DIP GALVANIZED STEEL.
b. PAINTED.

C. ALUMINUM:

a. ANODIZED.
b. PAINTED.

D. REFER TO SPECIFICATION 09900 OF THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
E. STRUCTURAL STEEL INCLUDES HOT-ROLLED STEEL FRAMING, BRACING, STEEL BAR JOISTS AND GIRDER.
F. MISCELLANEOUS STEEL INCLUDES METAL STAIRS, WALKWAYS, GRATED FLOORS AND SUPPORTS, AND METAL RAILINGS AND GUARD RAILS.
G. REFER TO THE TECHNICAL SPECIFICATIONS FOR ALL EQUIPMENT, PIPING, MECHANICAL, ELECTRICAL, ARCHITECTURAL AND SUBMERGED METAL ITEMS.
4. ALUMINUM TO BE ANODIZED SHALL BE COATED AS FOLLOWS:
A. ALL EXPOSED SURFACES SHALL RECEIVE AN ANODIZED FINISH IN CONFORMANCE WITH ALUMINUM ASSOCIATIONS STANDARD SSA-46 OR AAMA 611 STANDARD.
B. PROCESS SHALL BE SULFURIC OR EQUIVALENT ANODIZING WITH ELECTROLYTIC OR IMMERSION DEPOSITED INORGANIC PIGMENTATION IN THE COATING.
C. THE RESULTING ANODIZED FINISH SHALL BE CONTINUOUS, FULLY SEALED AND FREE OF POWDERY SURFACES, SMUT AND BLEMSHES.
D. ANODIC FILM THICKNESS SHALL BE .0002 IN

JUB

J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS

J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RIGHTS IN THIS DOCUMENT. NO PART OF THIS DOCUMENT SHALL BE REUSED OR REPRODUCED FOR ANY PROJECT WITHOUT THE WRITTEN CONSENT OF JUB. ANY REUSE WITHOUT WRITTEN CONSENT BY JUB WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.

REVISION

NO.	DESCRIPTION	BY	APPR.	DATE

SEWER TRANSFER
TOWN OF PALISADE

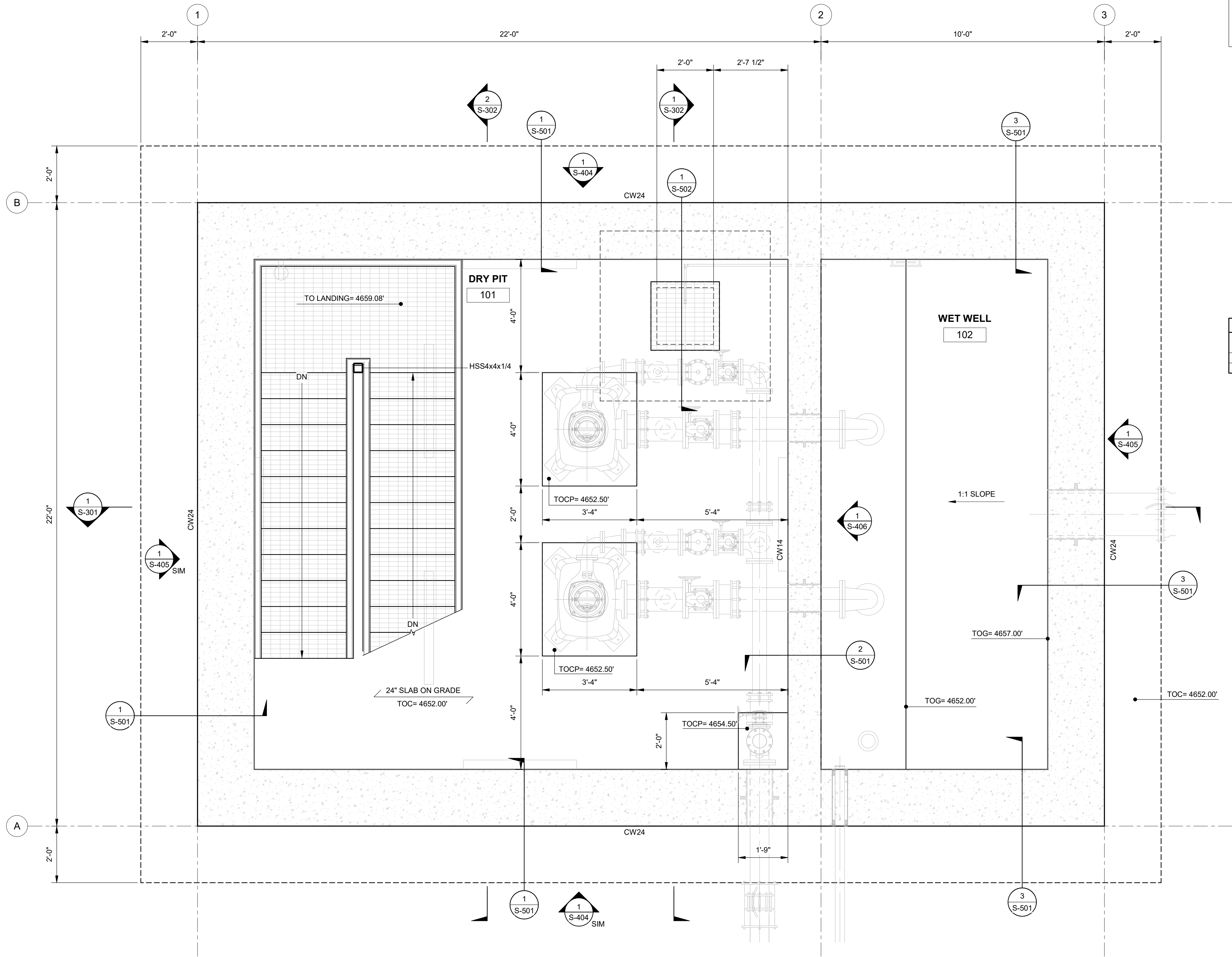
STRUCTURAL (S)
PUMP BUILDING
GENERAL STRUCTURAL NOTES

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

S-003

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_enoralesP7SX.rvt



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



FOUNDATION PLAN NOTES

1. CONTRACTOR TO COORDINATE & VERIFY ALL DIMENSIONS & ELEVATIONS WITH CIVIL, MECHANICAL, & ARCHITECTURAL SHEETS.
2. SEE SHEETS S-001 & S-002 FOR THE GENERAL STRUCTURAL NOTES REQUIREMENTS.
3. SEE SHEET S-510 FOR DOOR SCHEDULE.

CONCRETE WALL SCHEDULE			
MARK	THICKNESS	REINFORCING	
		VERTICAL	HORIZONTAL
CW14	14"	SEE 1/S-404 & 1/S-405	SEE 1/S-404 & 1/S-405
CW24	24"	SEE 1/S-404 & 1/S-405	SEE 1/S-404 & 1/S-405

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION			
NO.	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE
STRUCUTRAL (S)
PUMP BUILDING
PUMP LEVEL FLOOR PLAN

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:
S-101

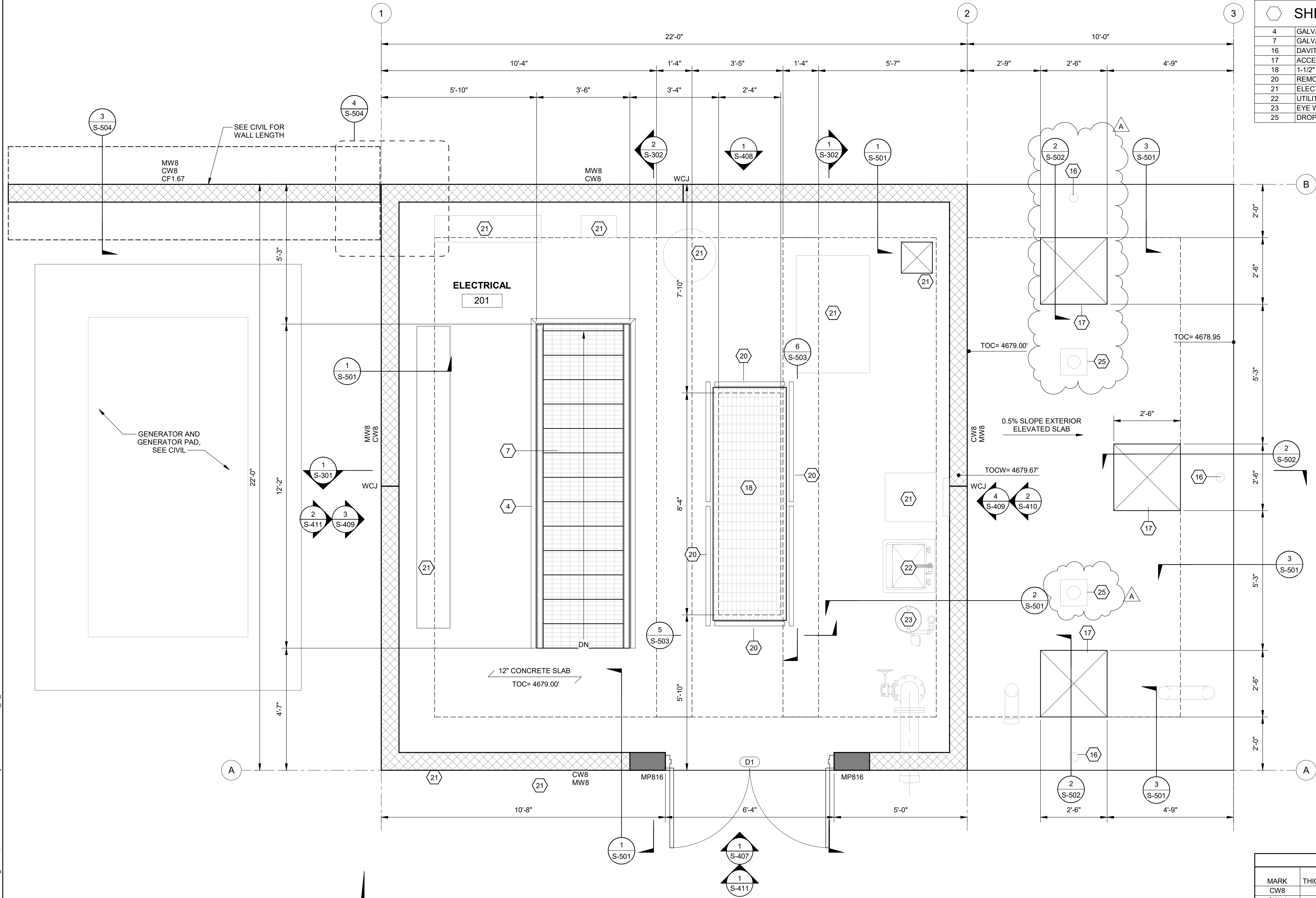
J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET



J-U-B ENGINEERS, INC.

C:\Users\jenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit\Project Local\81-23-029_S_emo\rales6P7SX.rvt



1 MAIN LEVEL FLOOR PLAN
SCALE: 1/2" = 1'-0"



FOUNDATION PLAN NOTES

- CONTRACTOR TO COORDINATE & VERIFY ALL DIMENSIONS & ELEVATIONS WITH CIVIL, MECHANICAL, & ARCHITECTURAL SHEETS.
- SEE SHEETS S-001 & S-002 FOR THE GENERAL STRUCTURAL NOTES REQUIREMENTS.
- SEE SHEET S-510 FOR DOOR SCHEDULE.

SHEET KEYED NOTES

4	GALVANIZED STEEL RAILING
7	GALVANIZED STEEL STAIRS
16	DAVIT MOUNT, RE: PROCESS MECH, SEE DETAIL 2/S-504
17	ACCESS HATCH, RE: PROCESS MECH
18	1-1/2" BAR GRATING, RE: TYPICAL DETAILS
20	REMOVABLE STEEL RAILING, SEE DETAILS 5/S-503 & 6/S-503
21	ELECTRICAL EQUIPMENT, RE: ELECTRICAL
22	UTILITY SINK, RE: PROCESS MECHANICAL
23	EYE WASH, RE: PROCESS MECHANICAL
25	DROP NOZZLE, RE: ME: PROCESS MECHANICAL



J-U-B ENGINEERS, INC.

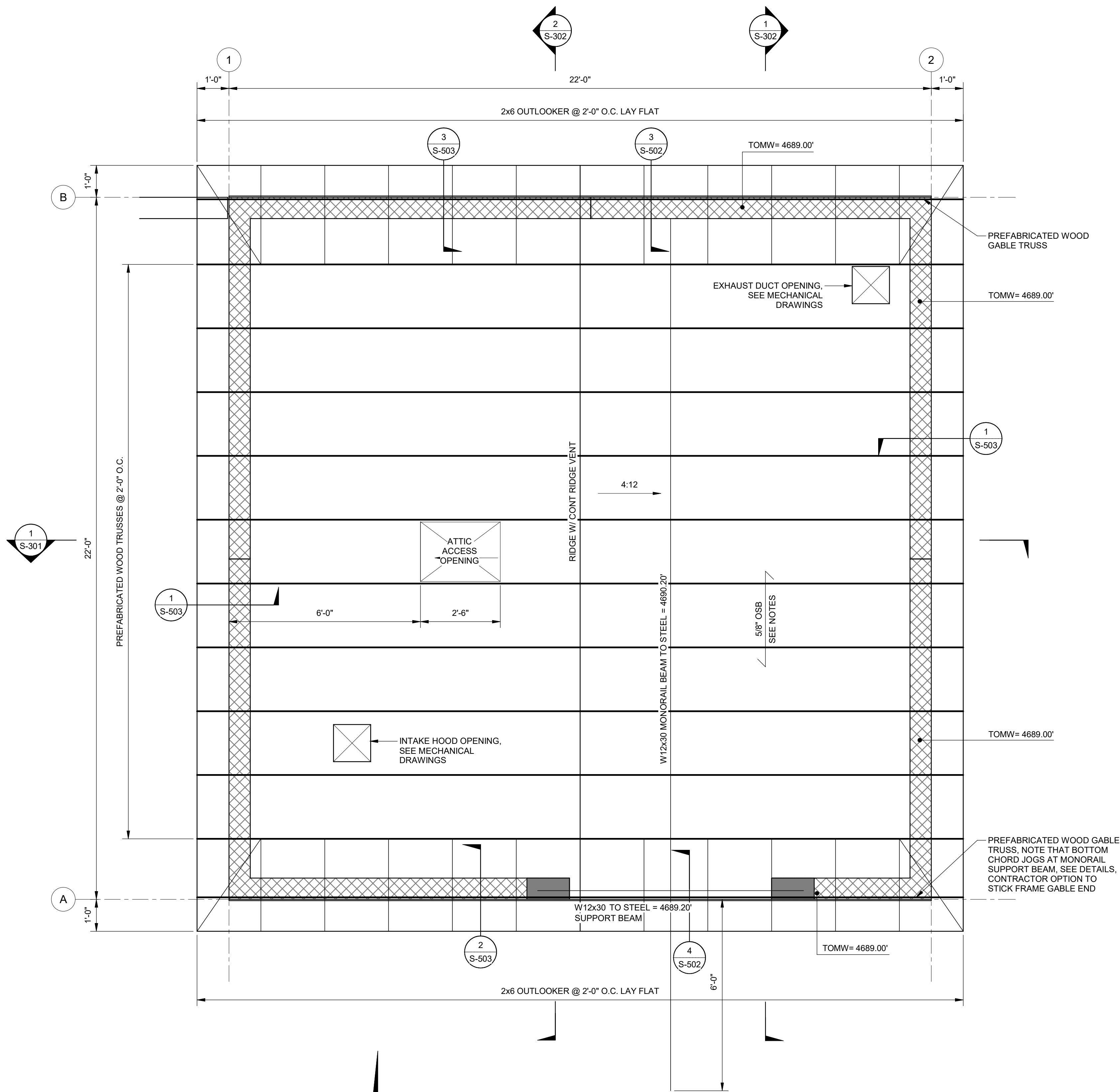
J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION									
								</	

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit\Project Local\81-23-029_S_emoiralesP7SX.rvt



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

ROOF FRAMING NOTES

- CONTRACTOR TO COORDINATE & VERIFY ALL DIMENSIONS & ELEVATIONS WITH CIVIL, MECHANICAL, & ARCHITECTURAL SHEETS.
- SEE SHEETS S-001, S-002, AND S-003 FOR THE GENERAL STRUCTURAL NOTES REQUIREMENTS.
- MONORAIL CRANE NOTES:
 - MONORAIL CRANE SHALL BE A HARRINGTON (N)ERM015SD-L/S OR EQUAL
 - LIFTING MOTOR
 - 9.1 AMPS
 - TRAVERSING MOTOR
 - 208V TO 230V
 - 3.4 AMPS
 - 1 1/2 TON CAPACITY
 - ELECTRIC HOIST & TROLLEY
 - LIFT = 36'-0"
- TYPICAL ROOF FRAMING CONSISTS OF 5/8" APAP RATED SHEATHING (INDEX 32/16), LAID FACE GRAIN PERPENDICULAR OVER PRE-FAB TRUSSES @ 24" O.C., BY OTHERS. STAGGER JOINTS.
- NAIL ROOF SHEATHING TO FRAMING WITH 10d NAILS @ 6" O.C. AT ALL PANEL EDGES AND 10d NAILS @ 12" O.C. AT INTERMEDIATE FRAMING MEMBERS (UNBLOCKED UNO), SEE TYPICAL DETAILS.
- PROVIDE 2x BLOCK BETWEEN EACH TRUSS AT SUPPORTS.



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENTS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION		NO.	DESCRIPTION	BY	DATE
DATE	DESCRIPTION				

SEWER TRANSFER
TOWN OF PALISADE

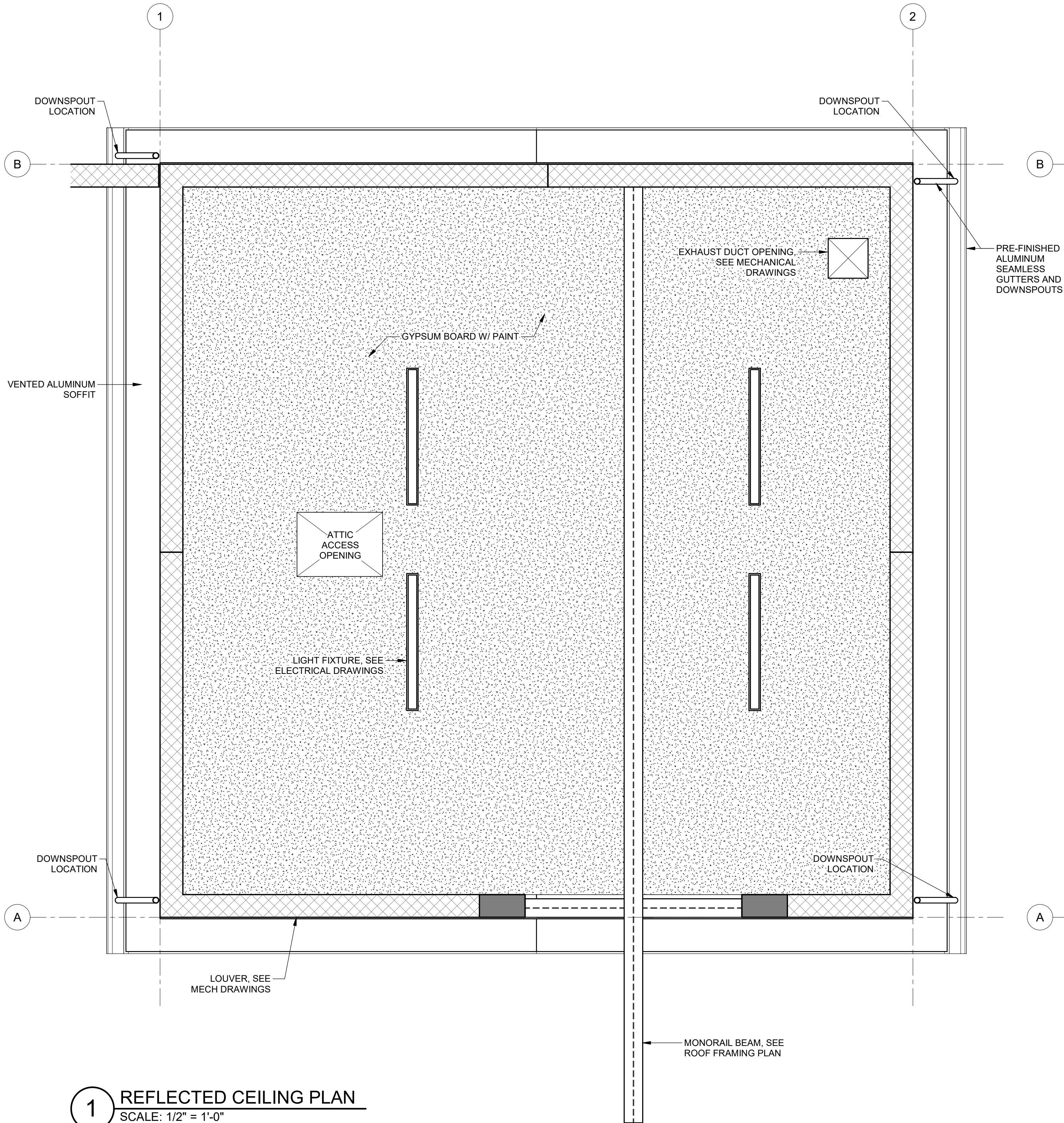
STRUCTURAL (S)
PUMP BUILDING
ROOF FRAMING PLAN

FILE:
JUB PROJ. #81-23-029
DRAWN BY: EM
DESIGN BY: JLS
CHECKED BY: JCH
1" = 1'-0"
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

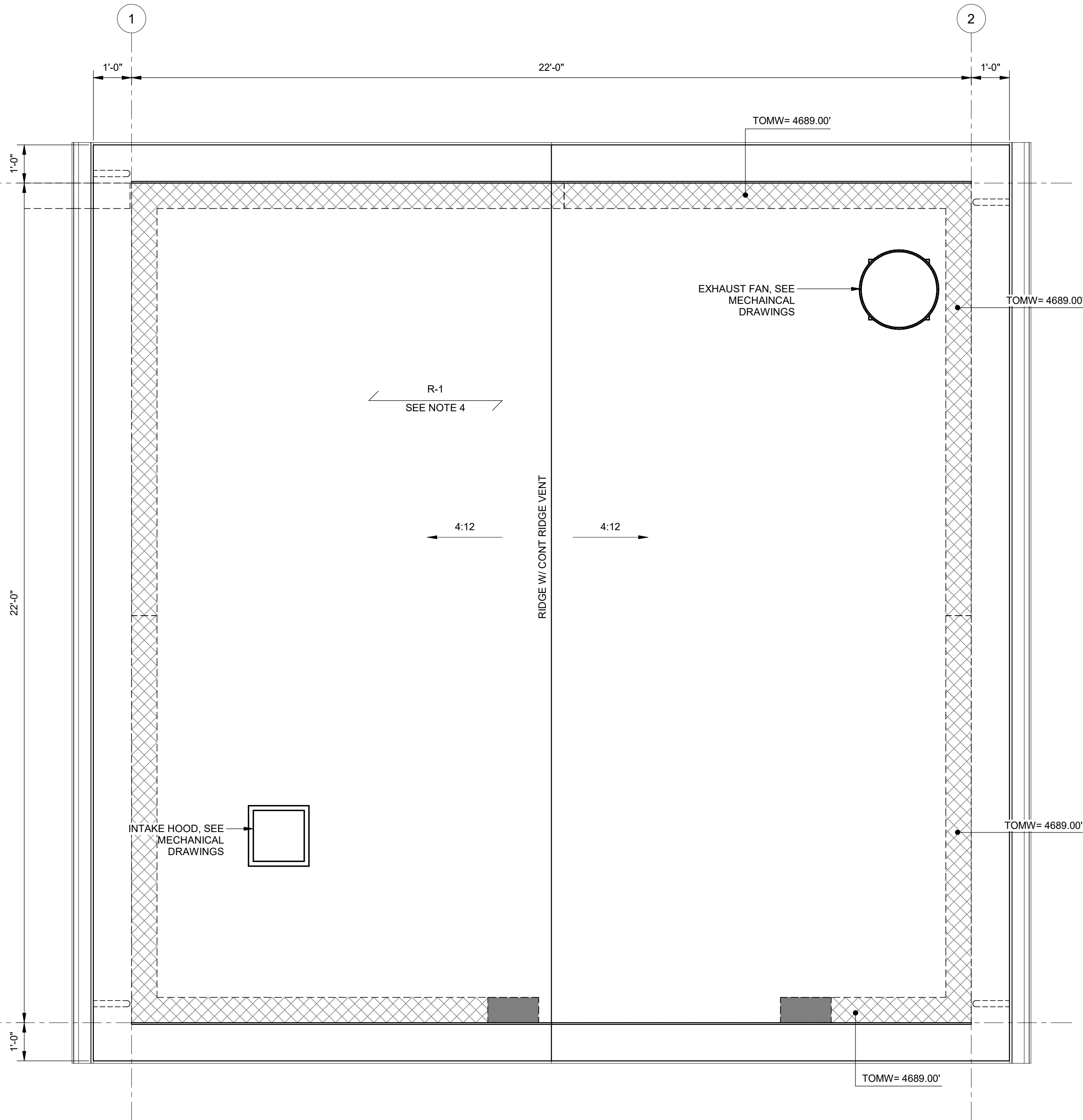
S-103

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit\Project Local\81-23-029_S_enoralesP7SX.rvt

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



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



ROOF PLAN NOTES

- CONTRACTOR TO COORDINATE & VERIFY ALL DIMENSIONS & ELEVATIONS WITH CIVIL, MECHANICAL, & ARCHITECTURAL SHEETS.
- SEE SHEETS S-001, S-002, AND S-003 FOR THE GENERAL STRUCTURAL NOTES REQUIREMENTS.
- INSTALL ICE AND WATER SHIELD MINIMUM 30" PAST EXTERIOR WALL.
- R-1 = STANDING SEAM METAL ROOF, CONTRACTOR TO COORDINATE COLOR WITH OWNER.
- GUTTER AND DOWNSPOUT COLOR TO MATCH TRIM COLOR.



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REVISION			
NO.	DESCRIPTION	BY	DATE

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

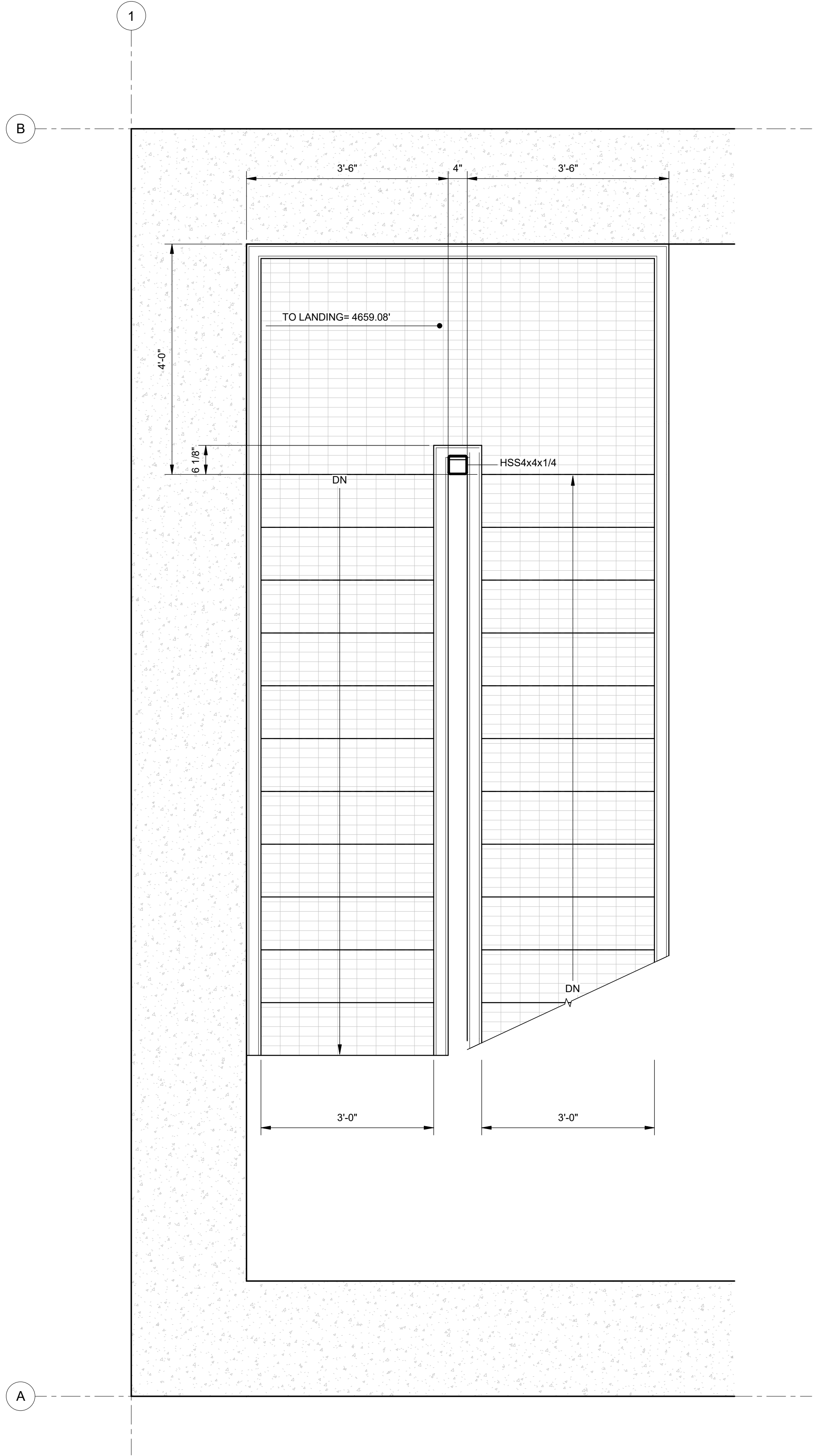
SEWER TRANSFER
TOWN OF PALISADE

STRUCTURAL (S)
PUMP BUILDING
REFLECTED CEILING PLAN & ROOF PLAN

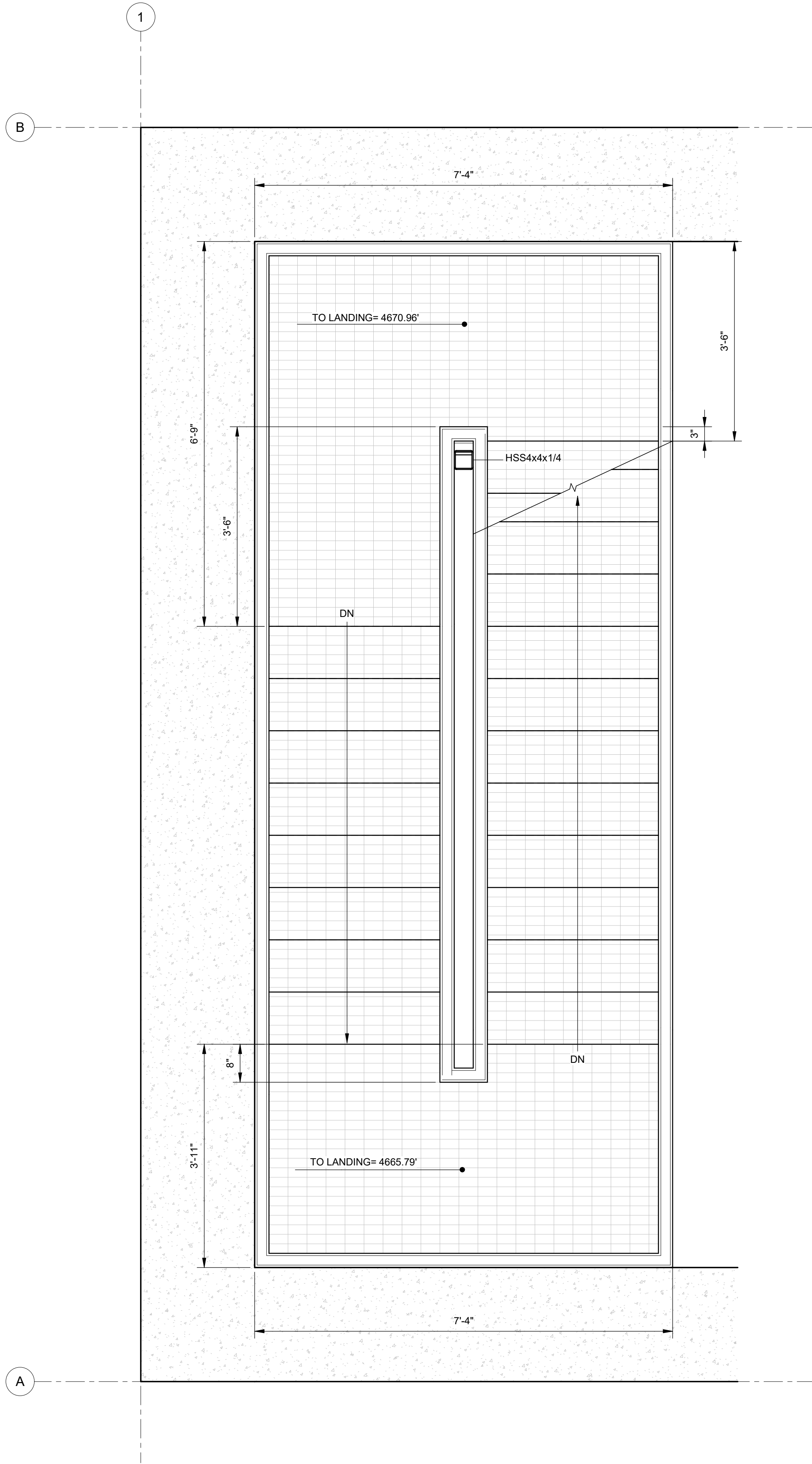
FILE:
JUB PROJ. #81-23-029
DRAWN BY: EM
DESIGN BY: JLS
CHECKED BY: JCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

S-104

C:\Users\norales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_enoralesP7SX.rvt



1 ENLARGED STAIRWAY - PUMP LEVEL
SCALE: 3/4" = 1'-0"



2 ENLARGED STAIRWAY - MID LANDING
SCALE: 3/4" = 1'-0"



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION			
NO.	DESCRIPTION	BY	DATE

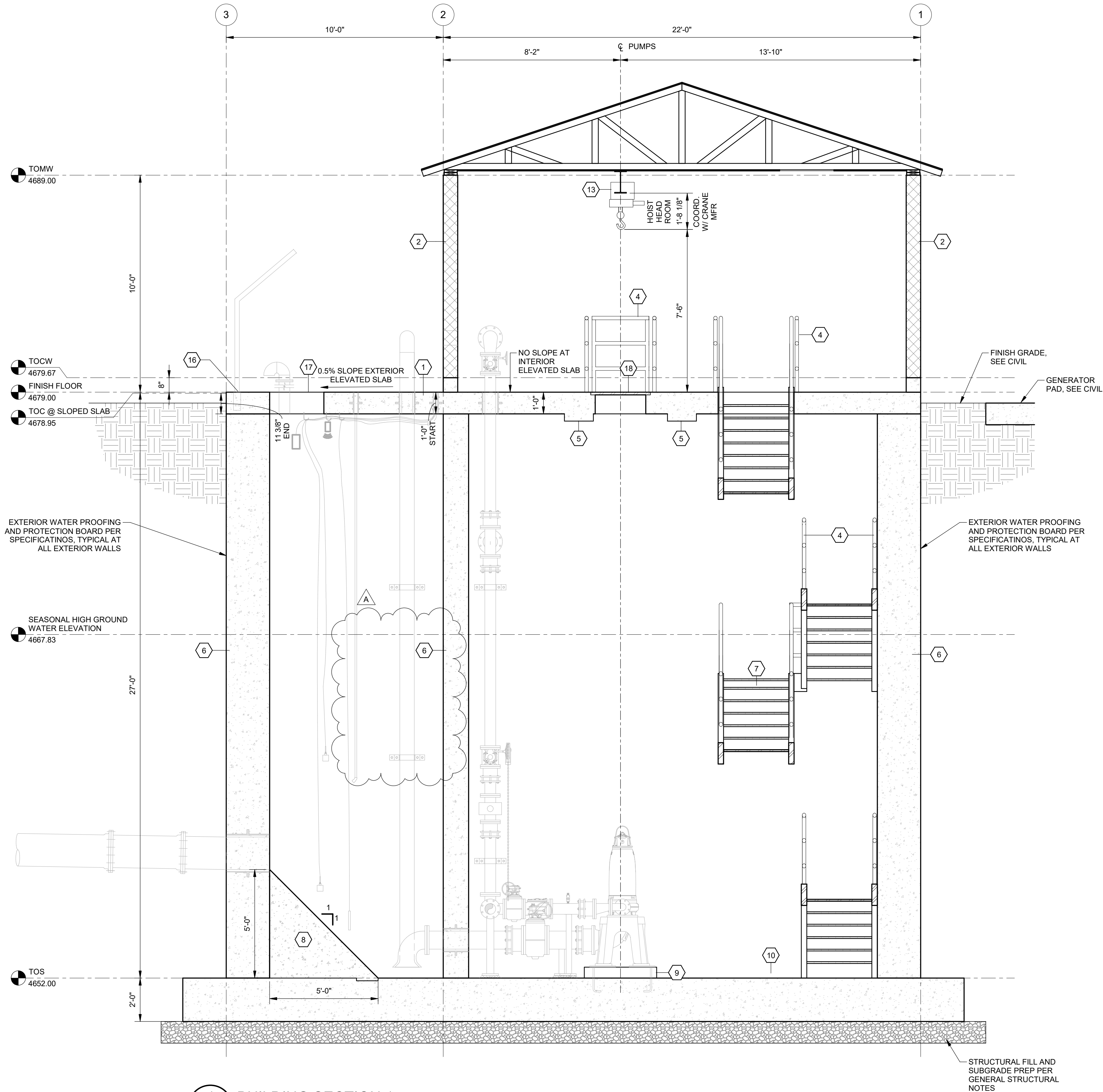
SEWER TRANSFER
TOWN OF PALISADE

STRUCUTRAL (S)
PUMP BUILDING
ENLARGED PLANS

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024

DRAWING:
S-201

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_emo\rales6P7SX.rvt



1 BUILDING SECTION 1
S-101 SCALE: 3/8" = 1'-0"

SHEET KEYED NOTES

- | | |
|----|---|
| 1 | ELEVATED REINFORCED CONCRETE SLAB PER PLAN |
| 2 | MEDIUM WEIGHT REINFORCED CMU WALL PER PLAN |
| 4 | GALVANIZED STEEL RAILING |
| 5 | REINFORCED CONCRETE BEAM PER PLAN |
| 6 | REINFORCED CONCRETE WALL PER PLAN |
| 7 | GALVANIZED STEEL STAIRS |
| 8 | SLOPED GROUT PER PLAN |
| 9 | REINFORCED CONCRETE PEDESTAL PER PLAN |
| 10 | REINFORCED CONCRETE SLAB PER PLAN |
| 13 | 1.5 TON MONORAIL ELECTRIC CHAIN HOIST & MOTORIZED TROLLEY |
| 16 | DAVIT MOUNT, RE: PROCESS MECH, SEE DETAIL 2/S-504 |
| 17 | ACCESS HATCH, RE: PROCESS MECH |
| 18 | 1-1/2" BAR GRATING, RE: TYPICAL DETAILS |



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS			
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENTS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.			
REVISION			
NO.	DESCRIPTION	BY	DATE
A	REVISED OOR EQUIPMENT & LAYOUT	EM	8/30/25

SEWER TRANSFER
TOWN OF PALISADE
STRUCUTRAL (S)
PUMP BUILDING
SECTIONS

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

S-301

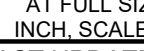


J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Pallisade, CO 81526
Phone: 970.208.8508
www.jub.com

[illegible]

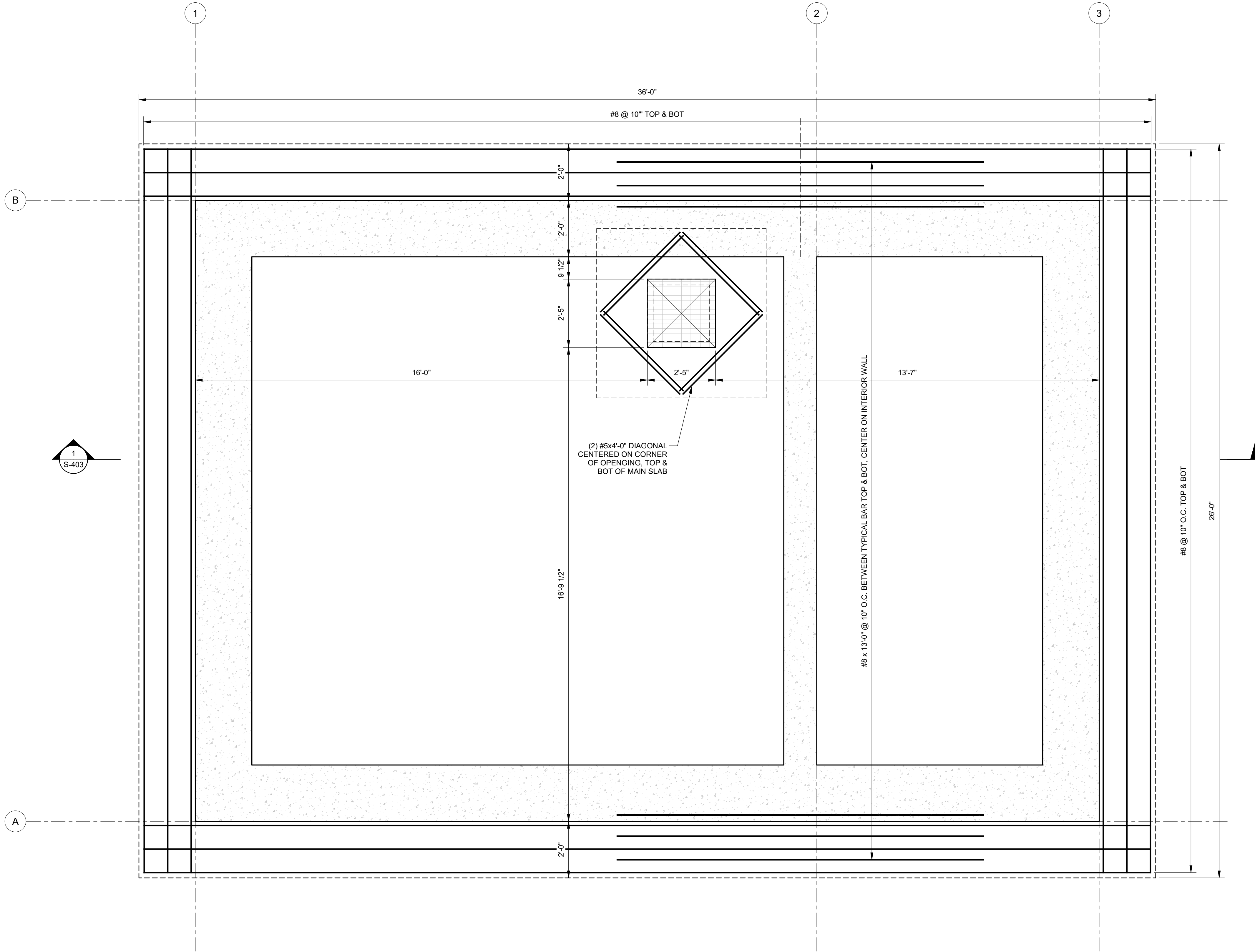
SEWER TRANSFER TOWN OF PALISADE	STRUCUTRAL (S) PUMP BUILDING SECTIONS
------------------------------------	---

FILE:
JUB PROJ. #:81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH

LAST UPDATED: 06/11/2024
DRAWING:
S-302

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_emo\rales6P7SX.rvt

1 BASEMENT STRUCTURAL SLAB REBAR LAYOUT PLAN

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





J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS

J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION		BY		DATE	
NO.	DESCRIPTION	NO.	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE

STRUCTURAL (S)
PUMP BUILDING

BASEMENT STRUCTURAL SLAB REBAR LAYOUT PLAN

FILE:
JUB PROJ. #81-23-029
DRAWN BY: EM
DESIGN BY: JLS
CHECKED BY: JCH

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY

LAST UPDATED: 06/11/2024

DRAWING:
S-401

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

		REVISION			
NO	A	REVISD	ODOR EQUIPMENT & LAYOUT DESCRIPTION	EM BV APP	JLS DATE

SEWER TRANSFER
TOWN OF PALISADE

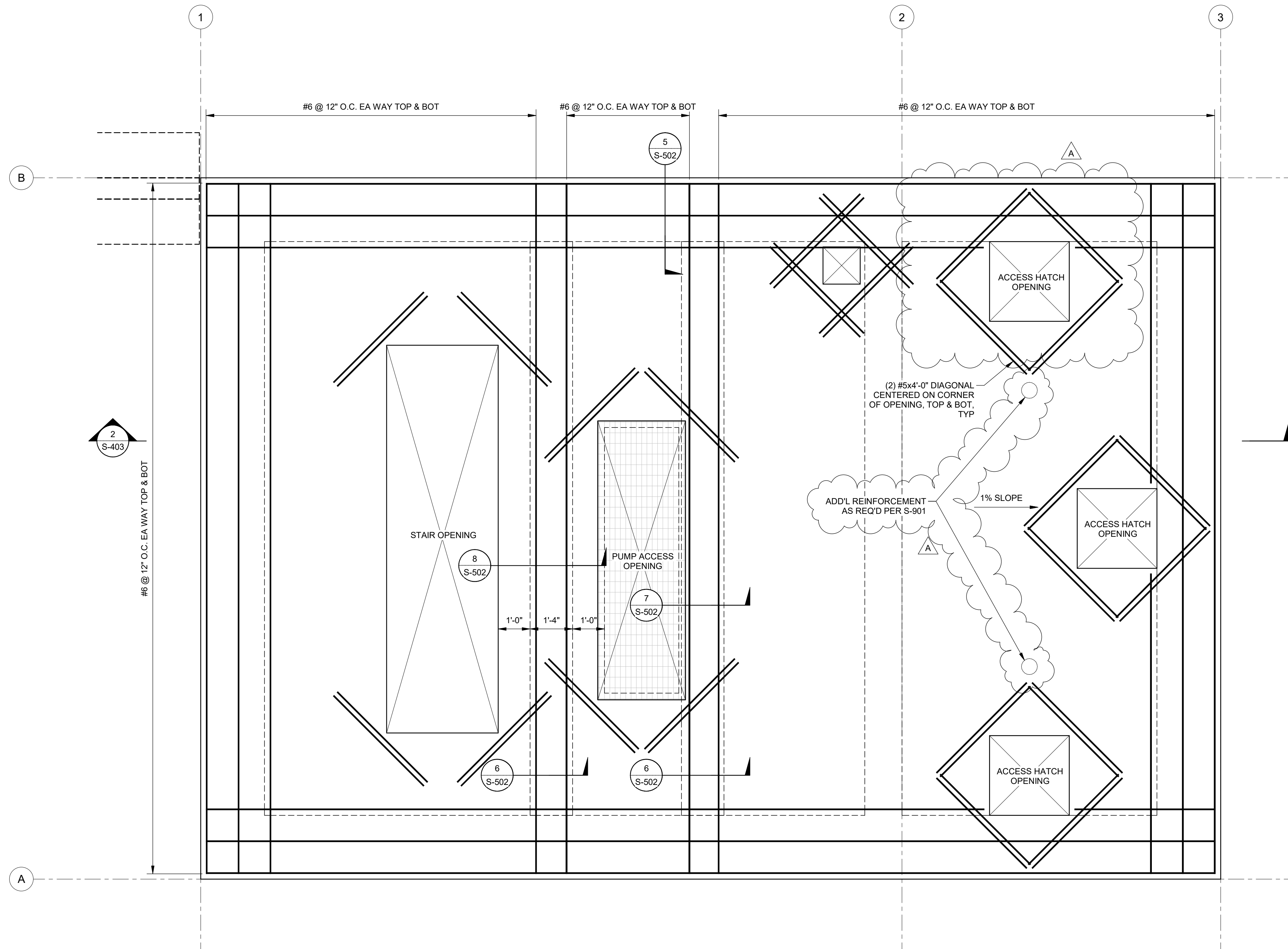
STRUCTURAL (S)
PUMP BUILDING
GROUND LEVEL STRUCTURAL SLAB REBAR LAYOUT PLAN

FILE:
JUB PROJ. #:81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024

DRAWING:

S-402



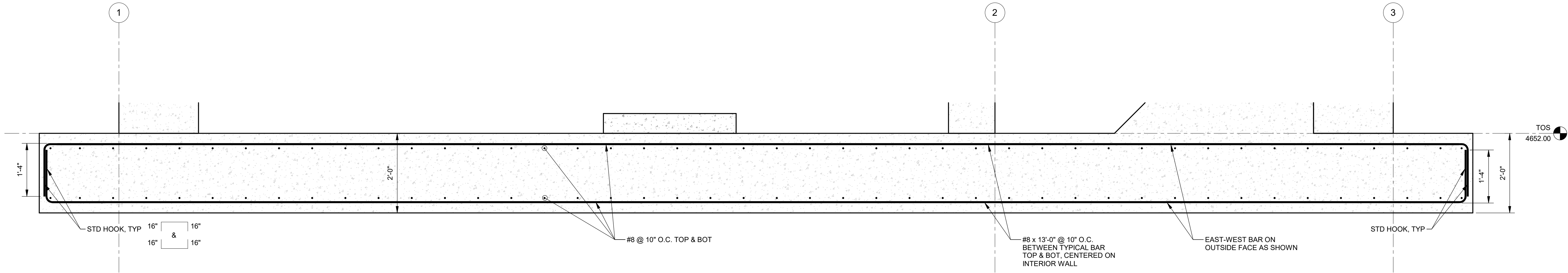
1

GROUND LEVEL STRUCTURAL SLAB REBAR LAYOUT PLAN

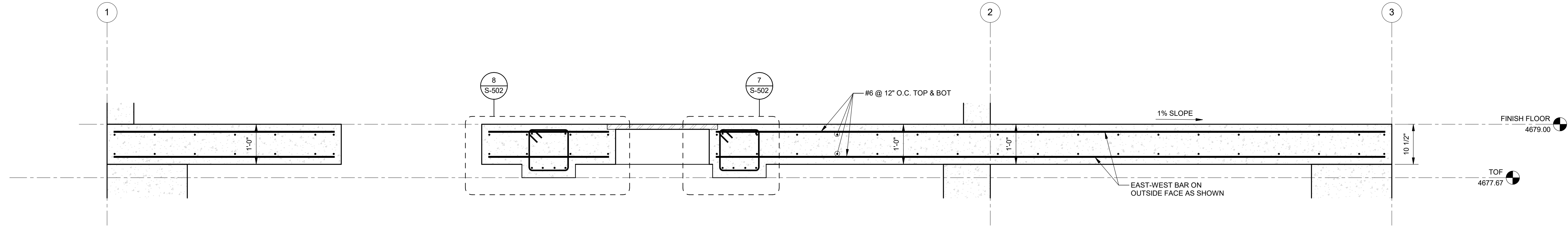
SCALE: 1/2" = 1'-0"



C:\Users\emorales\OneDrive - JUB Engineers, Inc\Documents\Revit Project Local\81-23-029_S_emorales\PTXS.rvt



1 BASEMENT STRUCTURAL SLAB REBAR LAYOUT SECTION
S-401 SCALE: 3/4" = 1'-0"



2 GROUND LEVEL STRUCTURAL SLAB REBAR LAYOUT SECTION
S-402 SCALE: 3/4" = 1'-0"



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
JUB SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND
OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL
BE THE PROPERTY OF JUB. NO PART OF THESE DRAWINGS SHALL
BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY
MEANS, WITHOUT WRITTEN CONSENT BY JUB. WILL BE AT THE CLIENT'S SOLE
RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.

NO.	REVISION	DESCRIPTION	BY	DATE

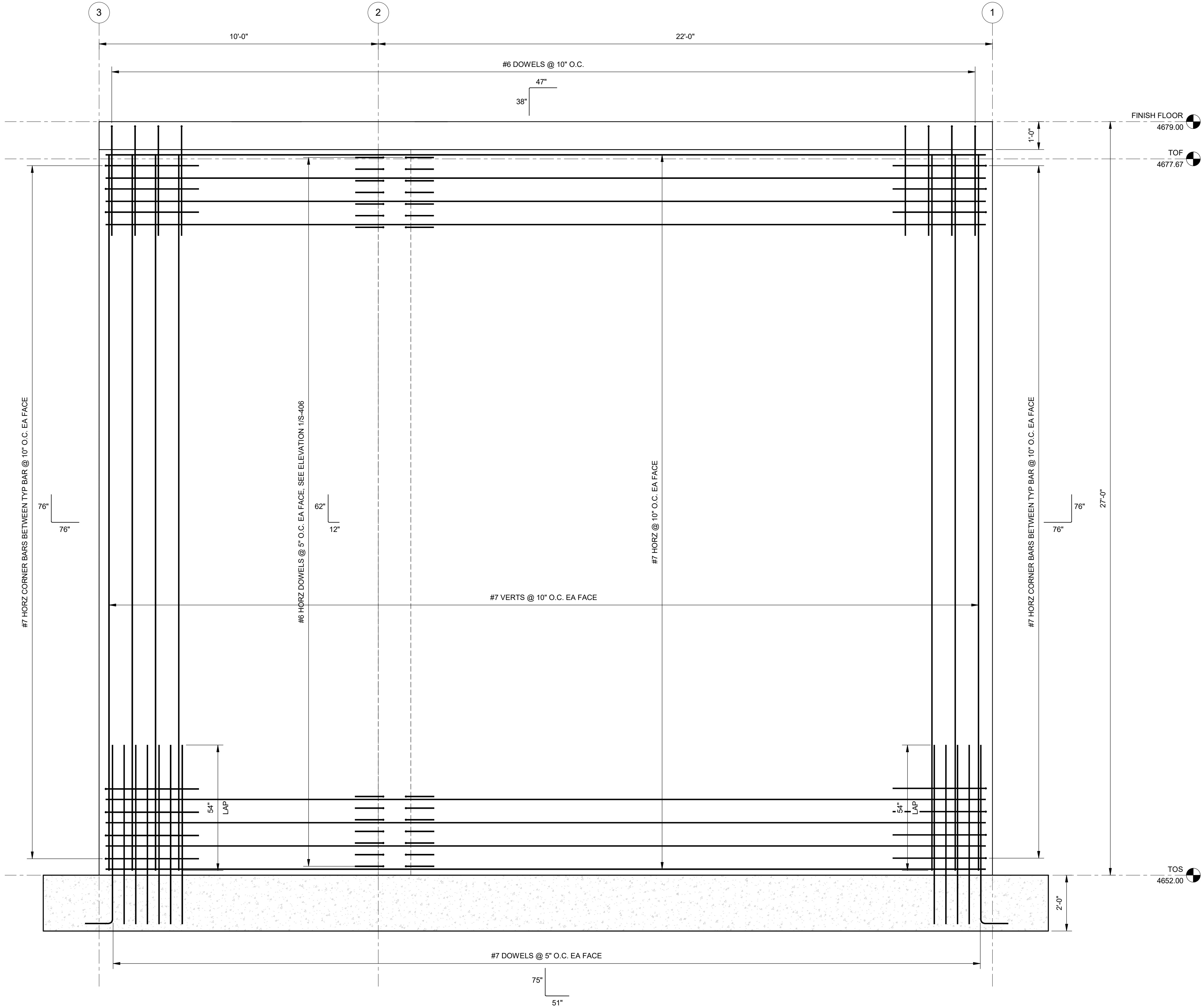
SEWER TRANSFER
TOWN OF PALISADE

STRUCTURAL (S)
PUMP BUILDING
STRUCTURAL SLAB REBAR LAYOUT SECTIONS

FILE:
JUB PROJ. #81-23-029
DRAWN BY: EM
DESIGN BY: JLS
CHECKED BY: JCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

S-403

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_emo\rales6P7SX.rvt



1 NORTH & SOUTH CONCRETE WALL REBAR ELEVATION
S-101 SCALE: 1/2" = 1'-0"



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

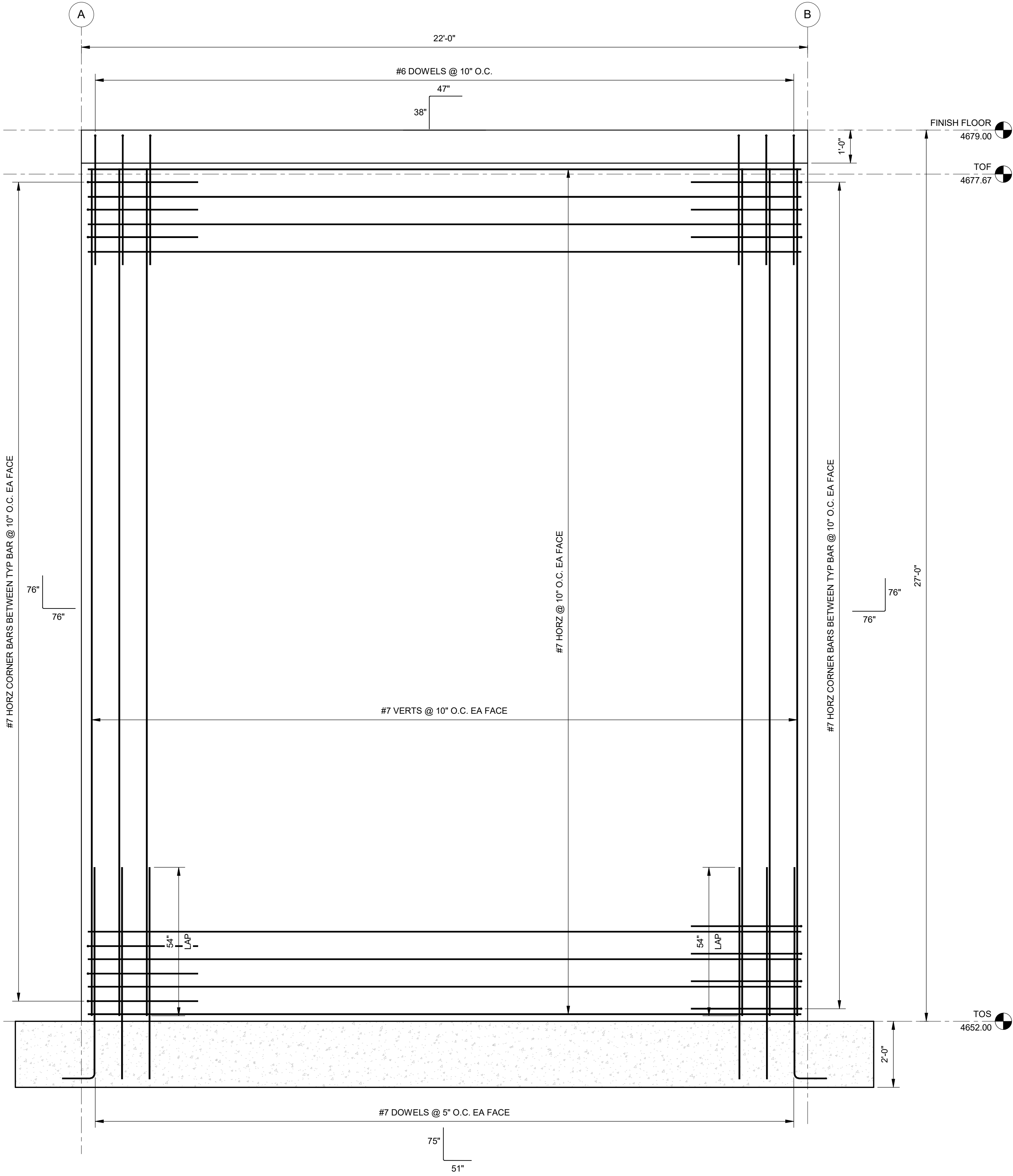
REVISION			
NO.	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE

STRUCUTRAL (S)
PUMP BUILDING
CONCRETE WALL REINFORCEMENT

FILE:
JUB PROJ. #81-23-029
DRAWN BY: EM
DESIGN BY: JLS
CHECKED BY: JCH
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:
S-404

C:\Users\emorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_emoralesP75X.rvt



1 EAST & WEST CONCRETE WALL REBAR ELEVATION
S-101 SCALE: 1/2" = 1'-0"



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION		BY		DATE
NO.	DESCRIPTION			

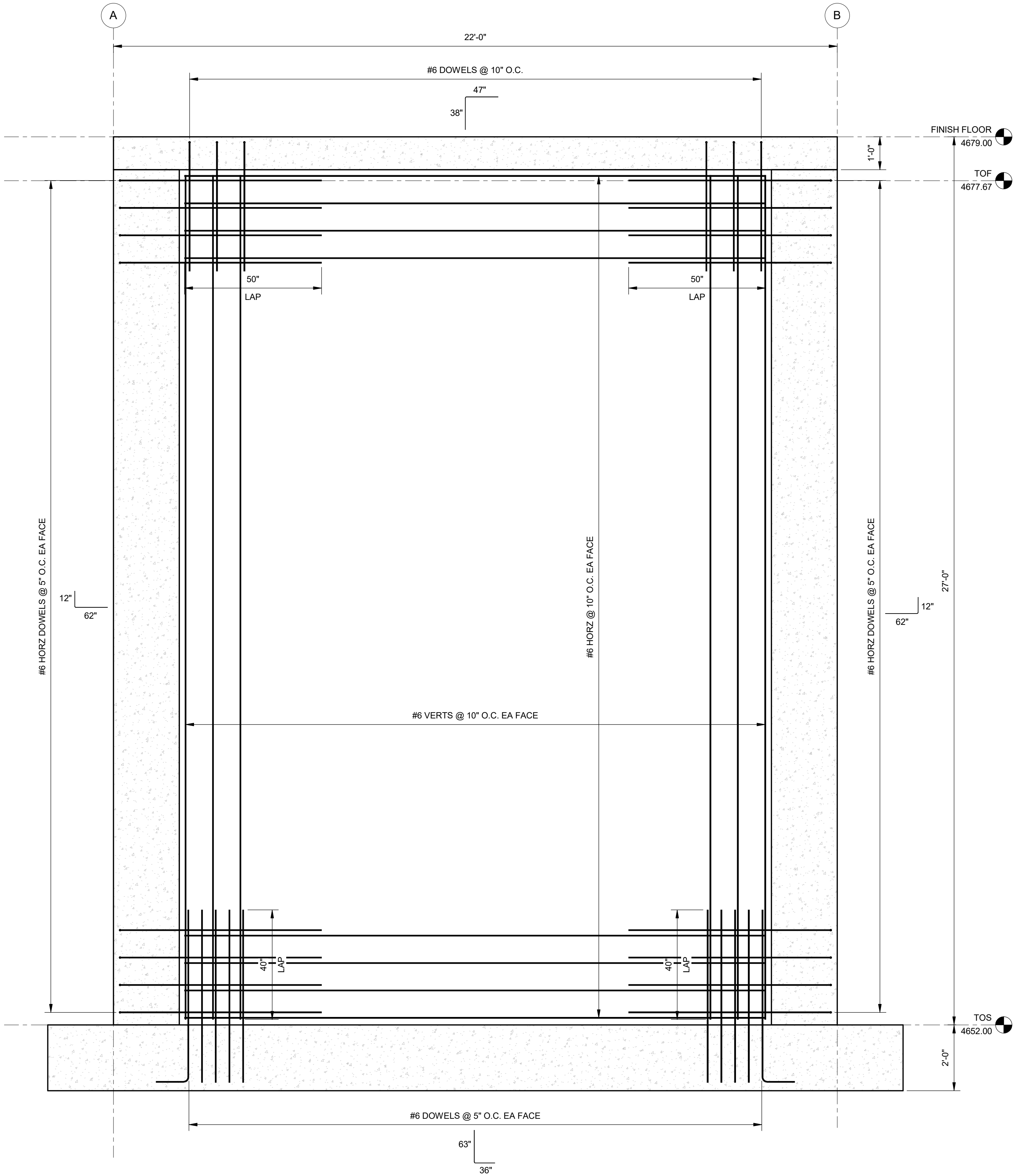
SEWER TRANSFER
TOWN OF PALISADE

STRUCUTRAL (S)
PUMP BUILDING
CONCRETE WALL REINFORCEMENT

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

S-405

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_emo\rales6P7SX.rvt



1 INTERIOR CONCRETE WALL REBAR ELEVATION
S-101 SCALE: 1/2" = 1'-0"



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS

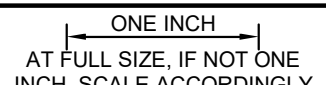
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION			
NO.	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE

STRUCUTRAL (S)
PUMP BUILDING
CONCRETE WALL REINFORCEMENT

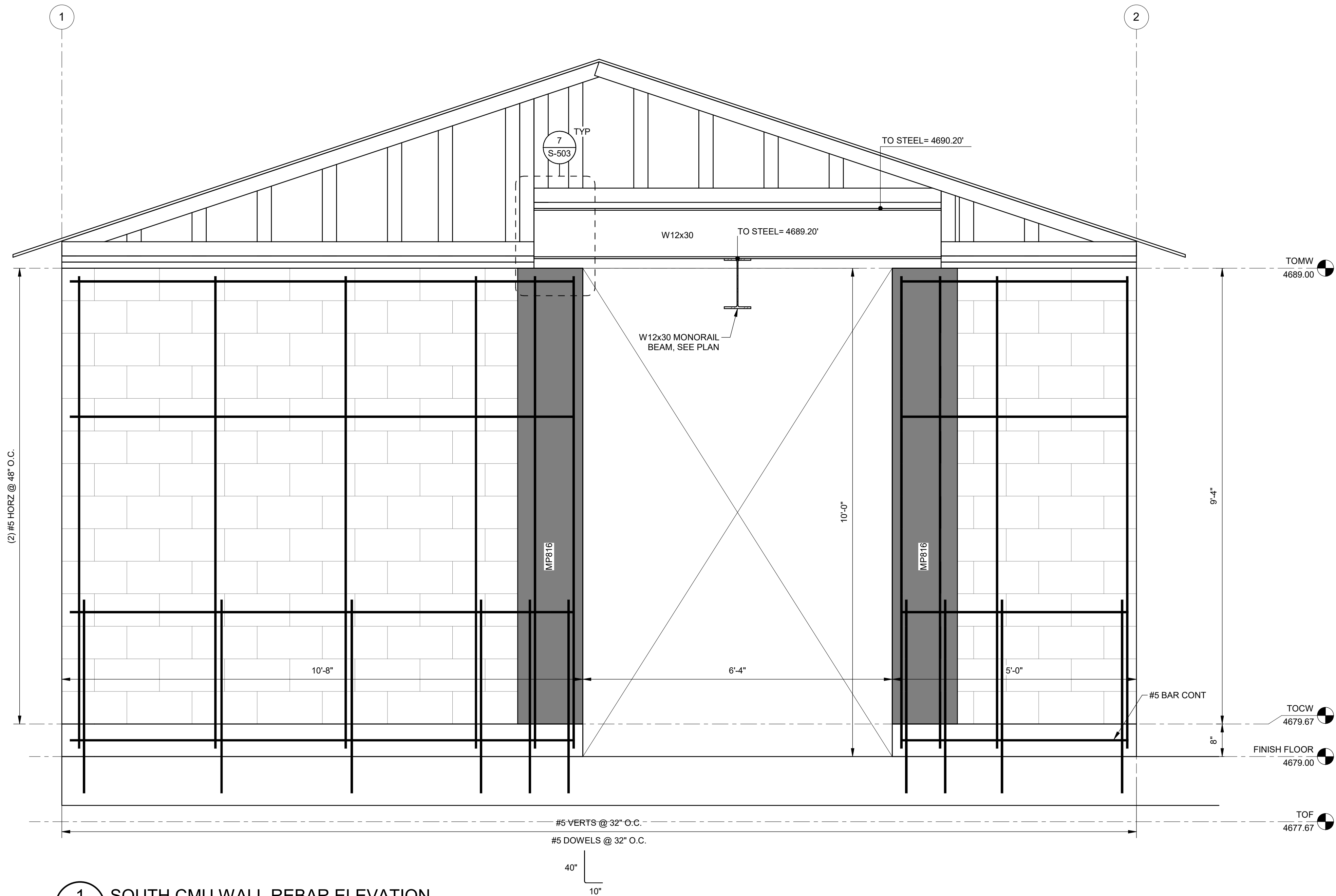
FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH



ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY

LAST UPDATED: 06/11/2024
DRAWING:
S-406

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_enmoralesP7SX.rvt



1 SOUTH CMU WALL REBAR ELEVATION
S-102 SCALE: 3/4" = 1'-0"



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION			
NO.	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE

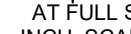
STRUCUTRAL (S)
PUMP BUILDING
CMU WALL REINFORCEMENT

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024

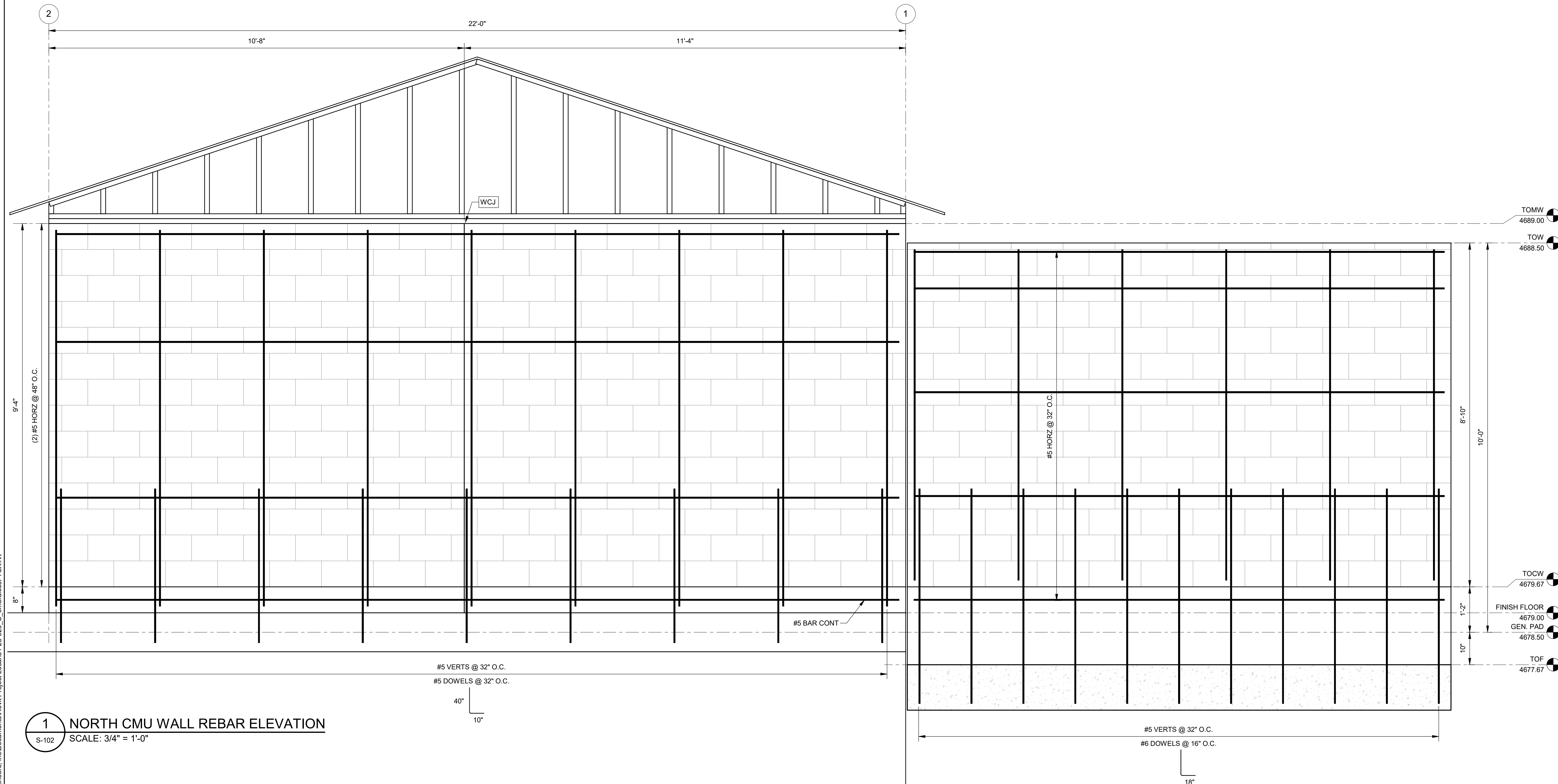
DRAWING:
S-407

[illegible][illegible]

SEWER TRANSFER
TOWN OF PALISADE

FILE:
JUB PROJ. #:81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH

LAST UPDATED: 06/11/2024
DRAWING:

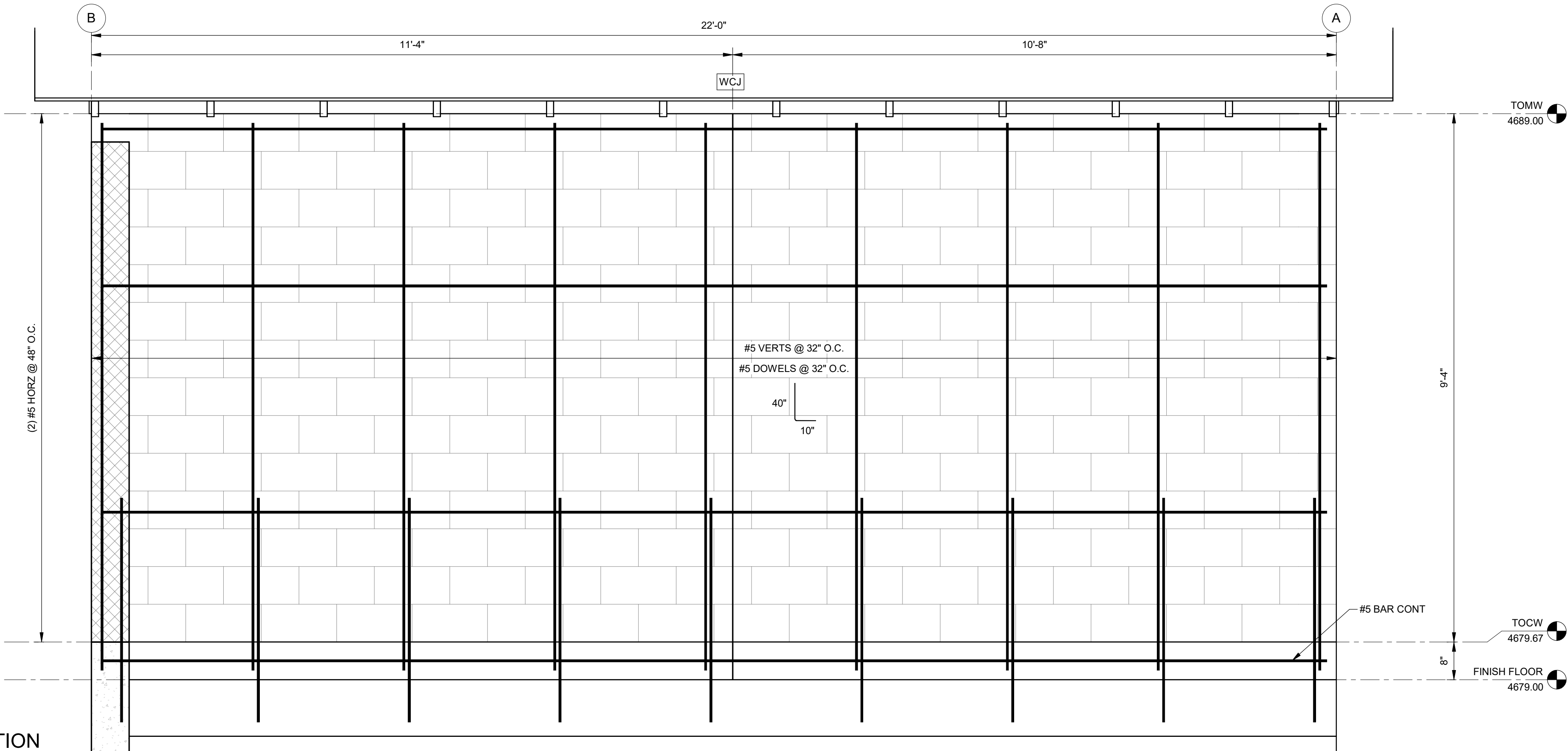
S-408



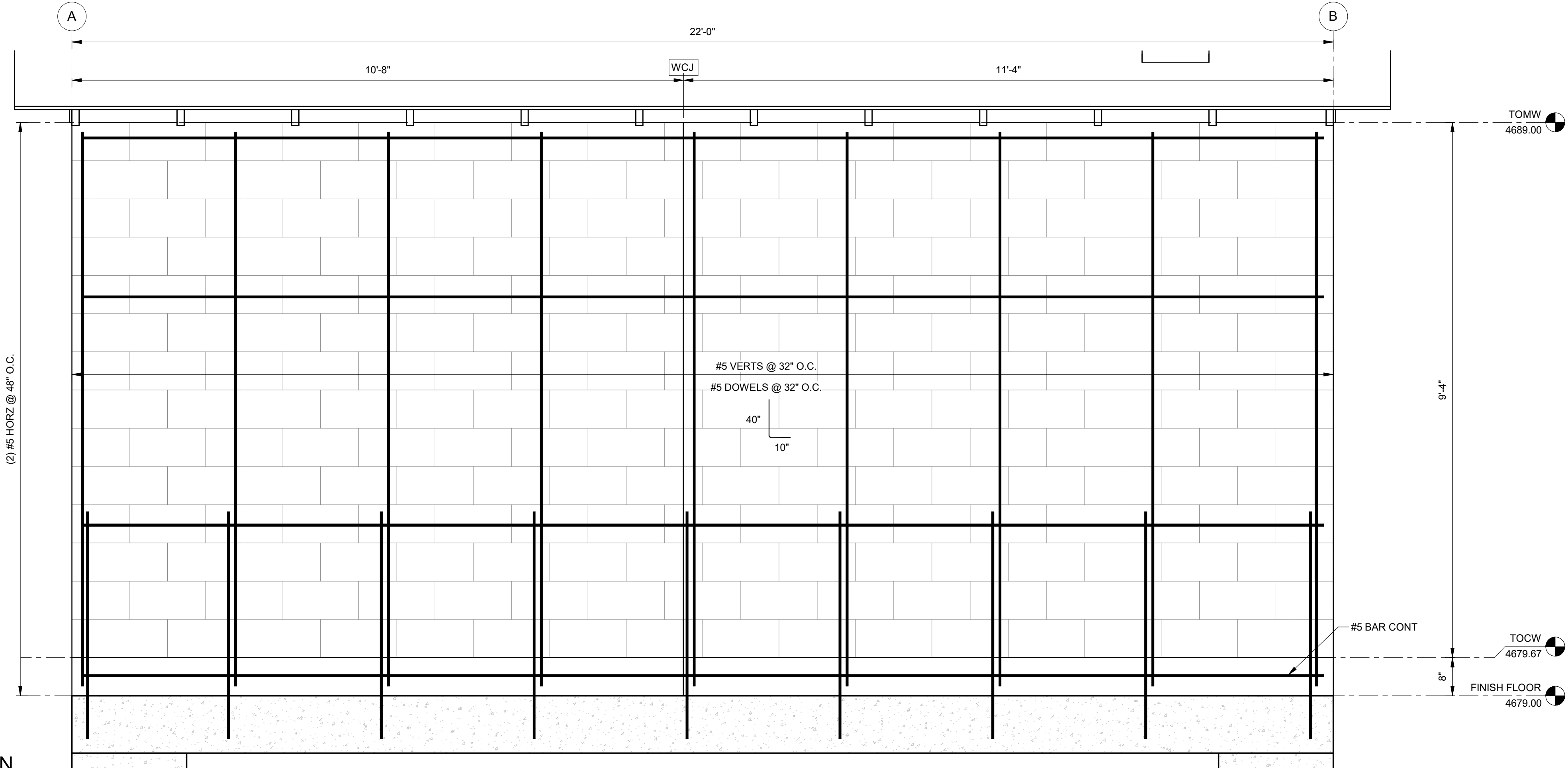
1 NORTH CMU WALL REBAR ELEVATION
S-102 SCALE: 3/4" = 1'-0"

C:\Users\norales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_enoralesP7SX.rvt

3 WEST CMU WALL REBAR ELEVATION
SCALE: 3/4" = 1'-0"



4 EAST CMU WALL REBAR ELEVATION
SCALE: 3/4" = 1'-0"



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

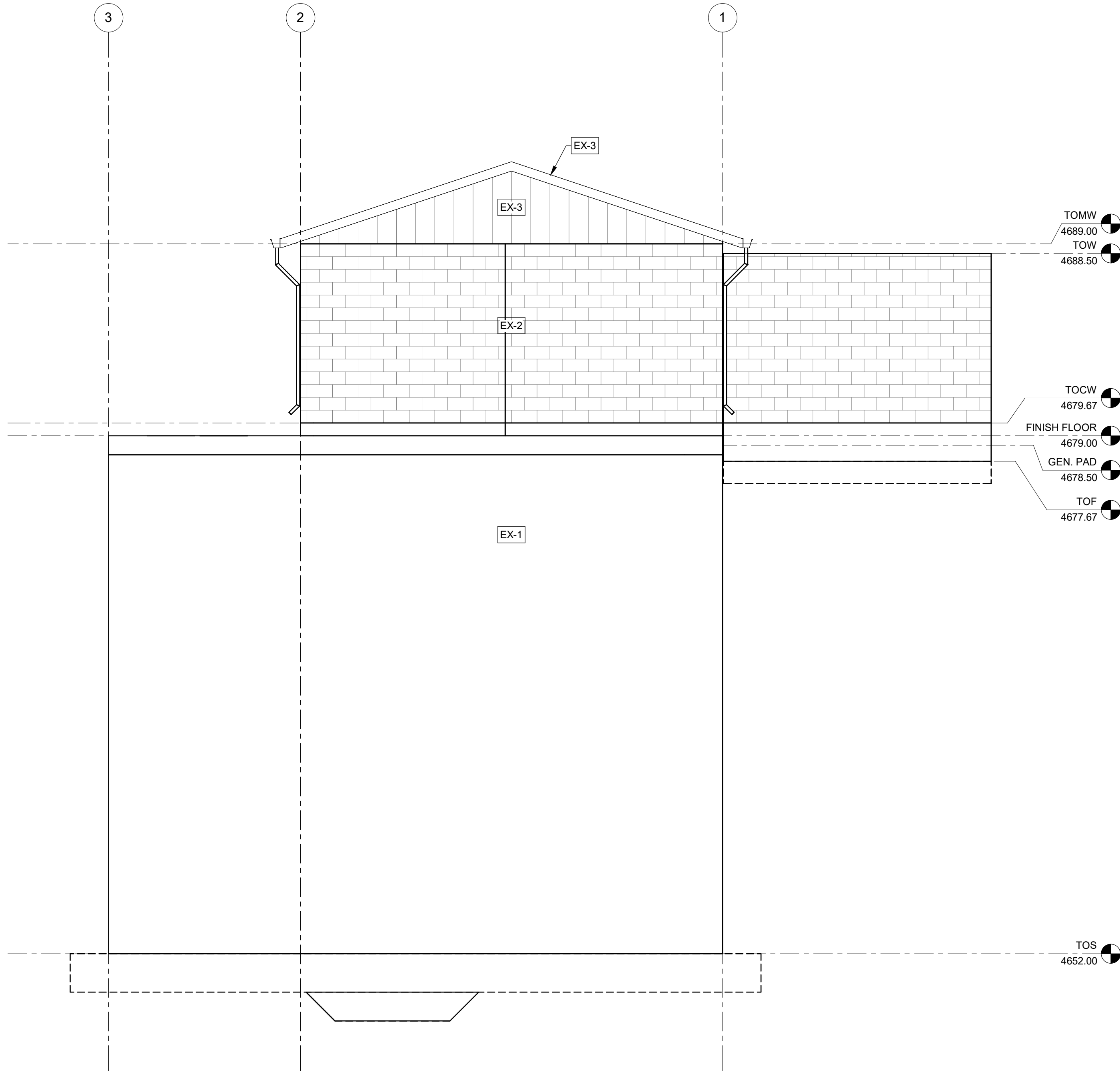
REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND
OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL
BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE
DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM
WITHOUT WRITTEN CONSENT BY J-U-B. RISK AND WITHOUT LIABILITY TO J-U-B.

REVISION		NO.	DESCRIPTION	BY	DATE
DATE	DESCRIPTION				

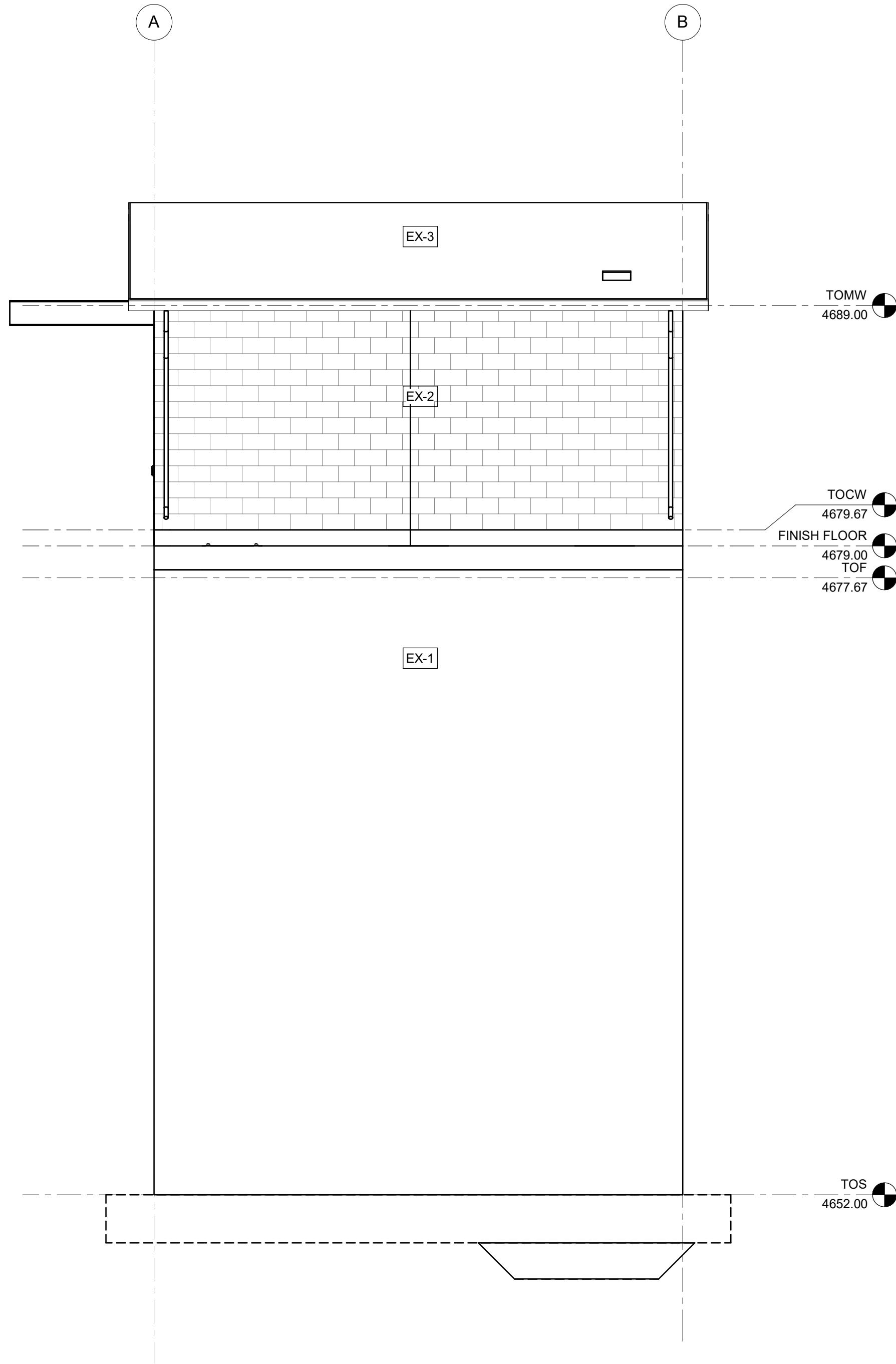
SEWER TRANSFER
TOWN OF PALISADE
STRUCUTRAL (S)
PUMP BUILDING
CMU WALL REINFORCEMENT

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:
S-409

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_enorales6P7SX.rvt



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



2 EAST ELEVATION
SCALE: 1/4" = 1'-0"

ELEVATION NOTES

- CONTRACTOR SHALL FURNISH AND INSTALL TRIMS, FLASHING, AND FINISH PIECES TO PRESENT A FINISHED APPEARANCE.
- SEE SHEET S-510 FOR EXTERIOR COLOR SCHEDULE



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION		NO.	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE

STRUCUTRAL (S)
PUMP BUILDING
EXTERIOR ELEVATIONS

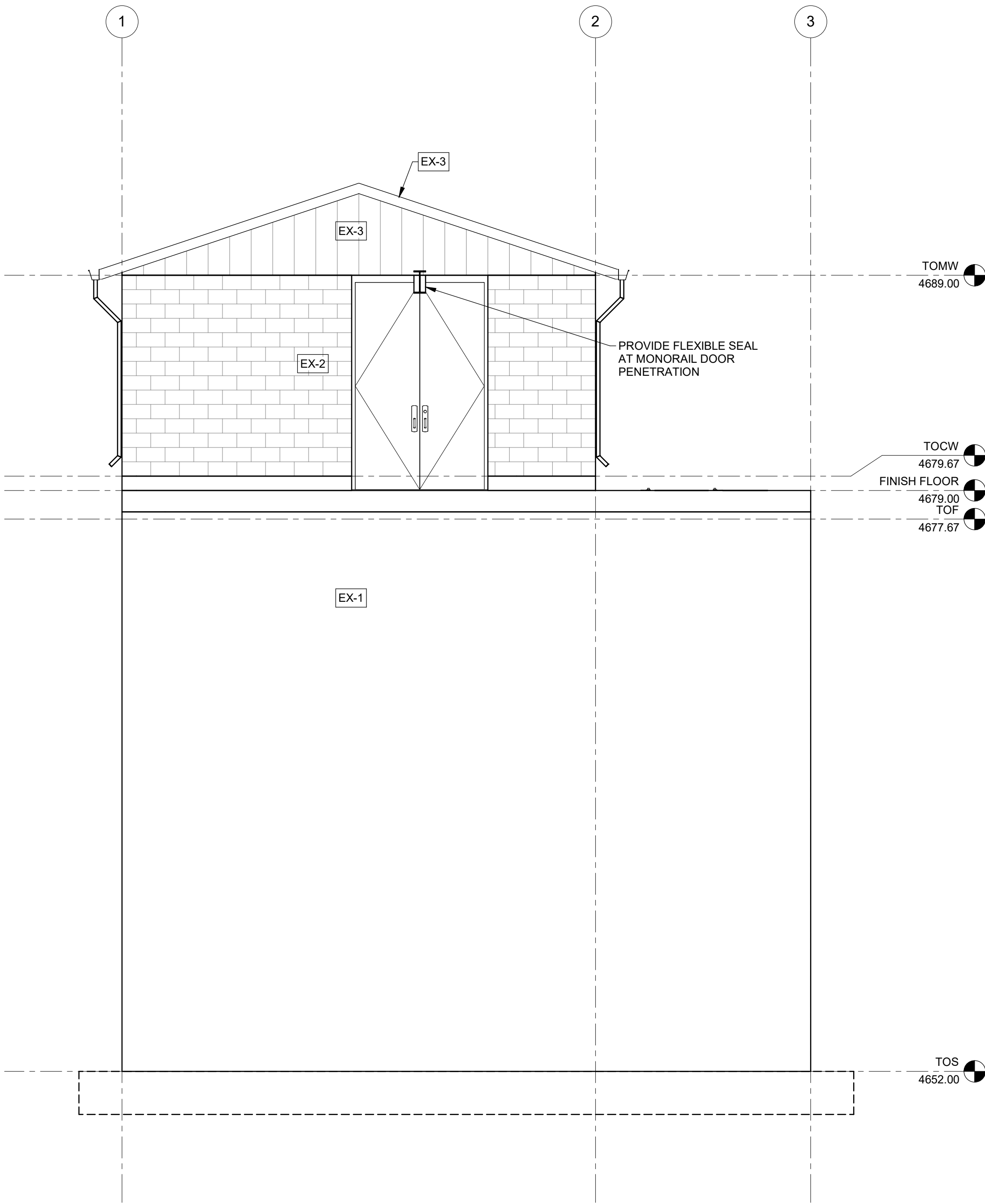
FILE:
JUB PROJ. #81-23-029
DRAWN BY: EM
DESIGN BY: JLS
CHECKED BY: JCH

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024

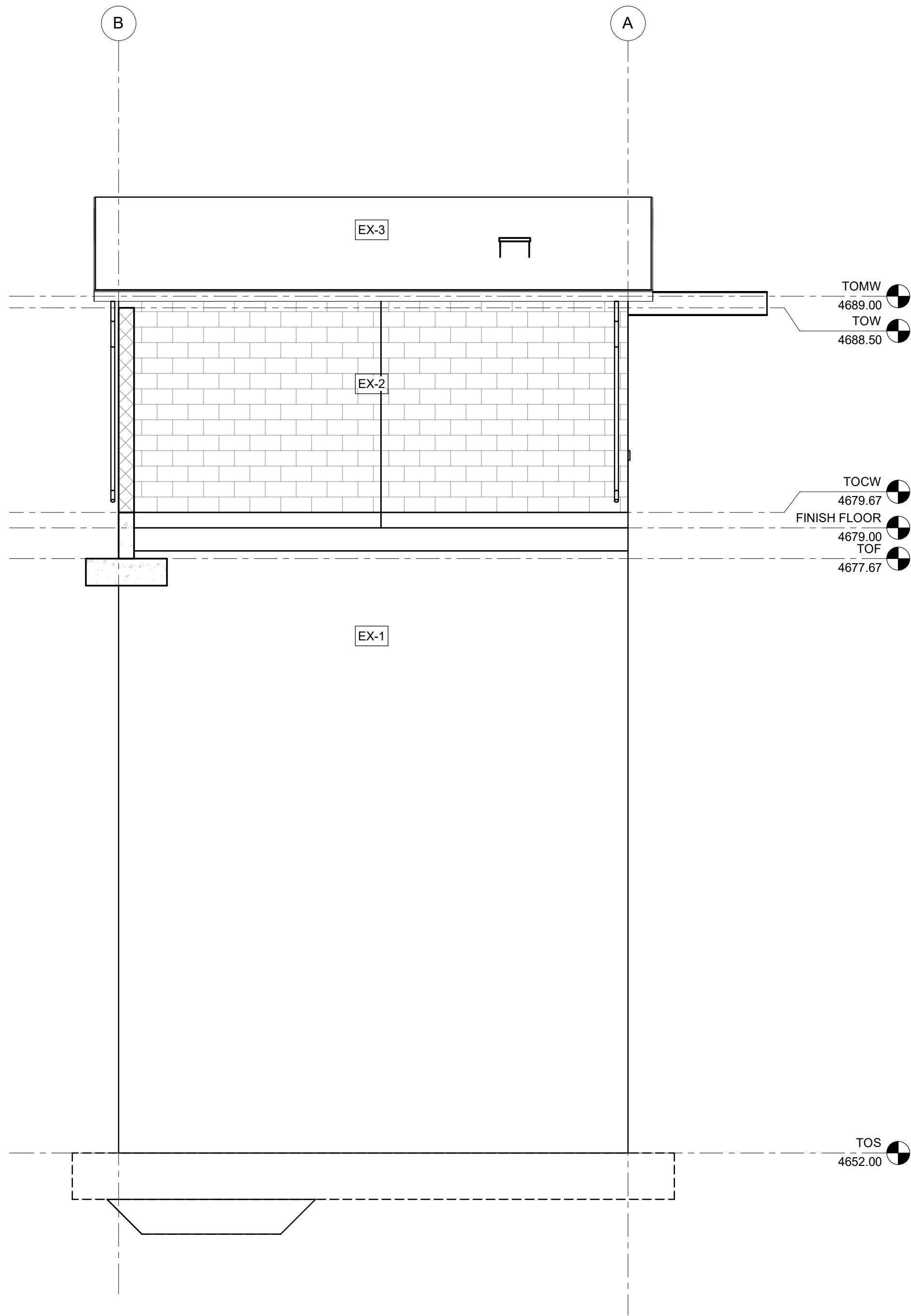
DRAWING:

S-410

C:\Users\norales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_emo\rales6P7SX.rvt



1 SOUTH ELEVATION
S-102 SCALE: 1/4" = 1'-0"



2 WEST ELEVATION
S-102 SCALE: 1/4" = 1'-0"

ELEVATION NOTES

- CONTRACTOR SHALL FURNISH AND INSTALL TRIMS, FLASHING, AND FINISH PIECES TO PRESENT A FINISHED APPEARANCE.
- SEE SHEET S-510 FOR EXTERIOR COLOR SCHEDULE



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. WILL BE AT THE CLIENTS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION		DESCRIPTION	BY	APR	DATE
NO.					

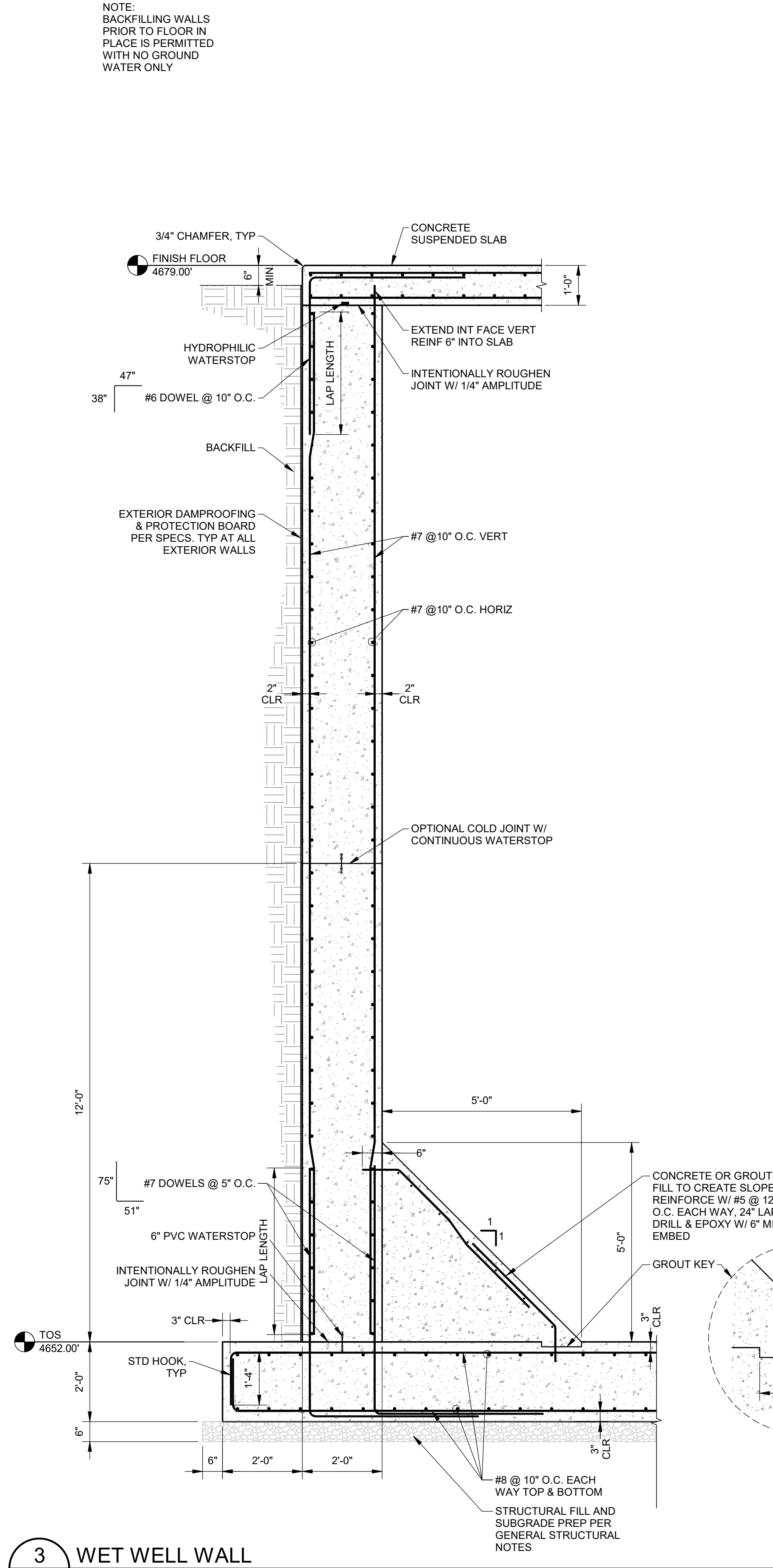
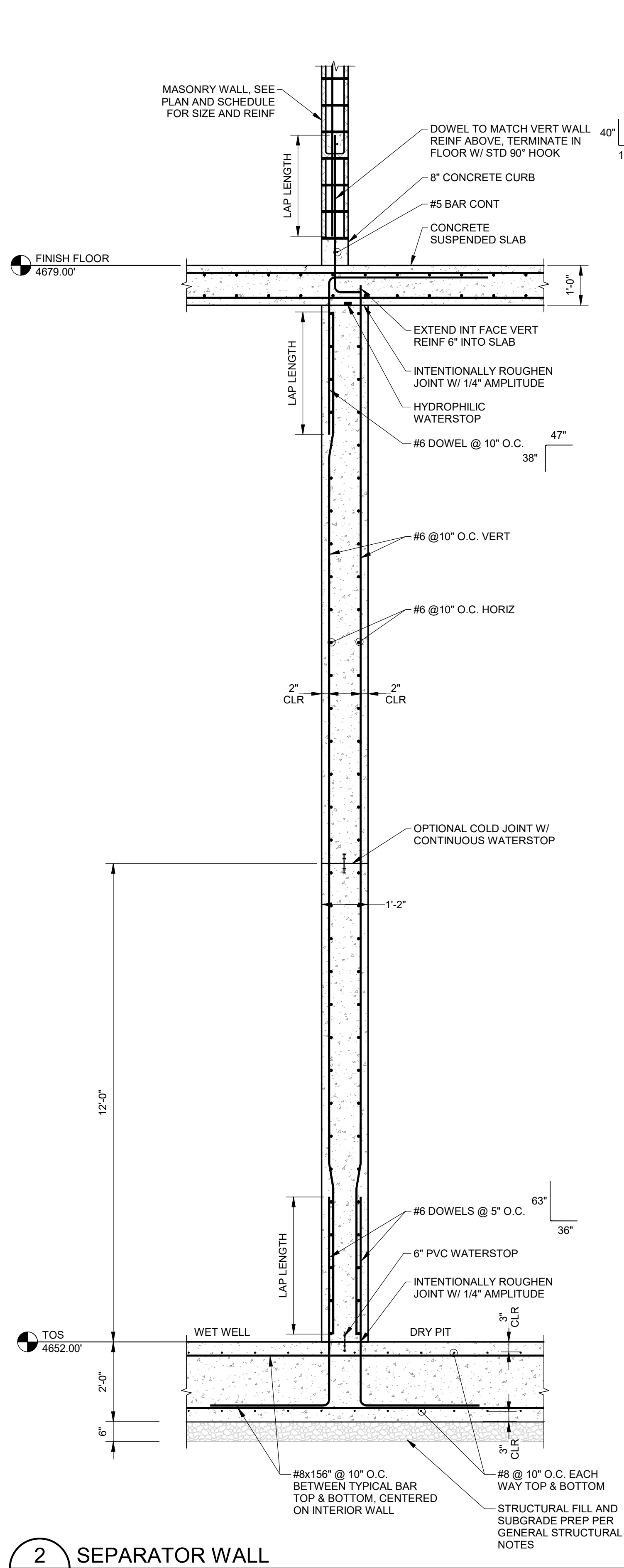
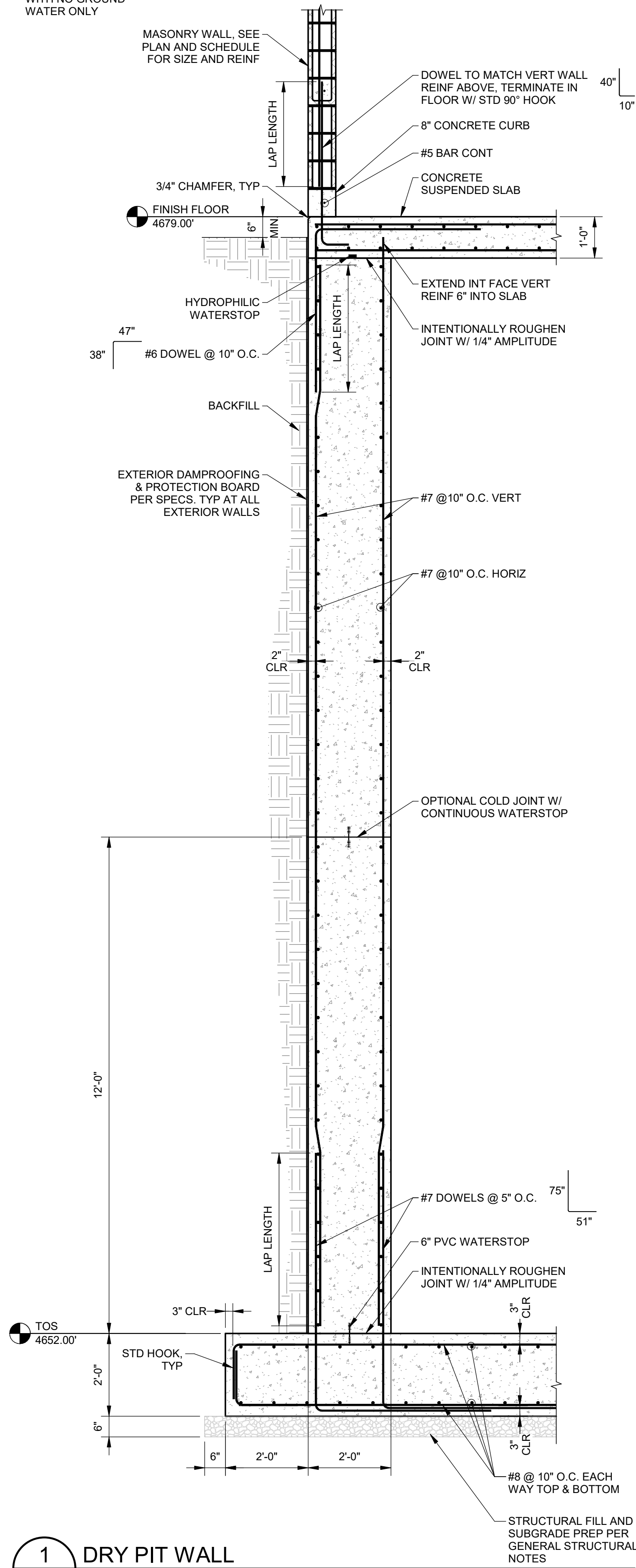
SEWER TRANSFER
TOWN OF PALISADE
STRUCUTRAL (S)
PUMP BUILDING
EXTERIOR ELEVATIONS

FILE:
JUB PROJ. #81-23-029
DRAWN BY: EM
DESIGN BY: JLS
CHECKED BY: JCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

S-411

C:\Users\jenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit\Project Local\81-23-029_S_emo\rales6P7SX.rvt

NOTE:
BACKFILLING WALLS
PRIOR TO FLOOR IN
PLACE IS PERMITTED
WITH NO GROUND
WATER ONLY



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND
OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL
BE THE PROPERTY OF J-U-B. NO PART OF THESE DRAWINGS SHALL
BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS,
ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING,
OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT
WRITTEN CONSENT BY J-U-B. THIS CONSENT SHALL BE AT THE CLIENT'S SOLE
RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	REVISION	DESCRIPTION	BY	APP.	DATE

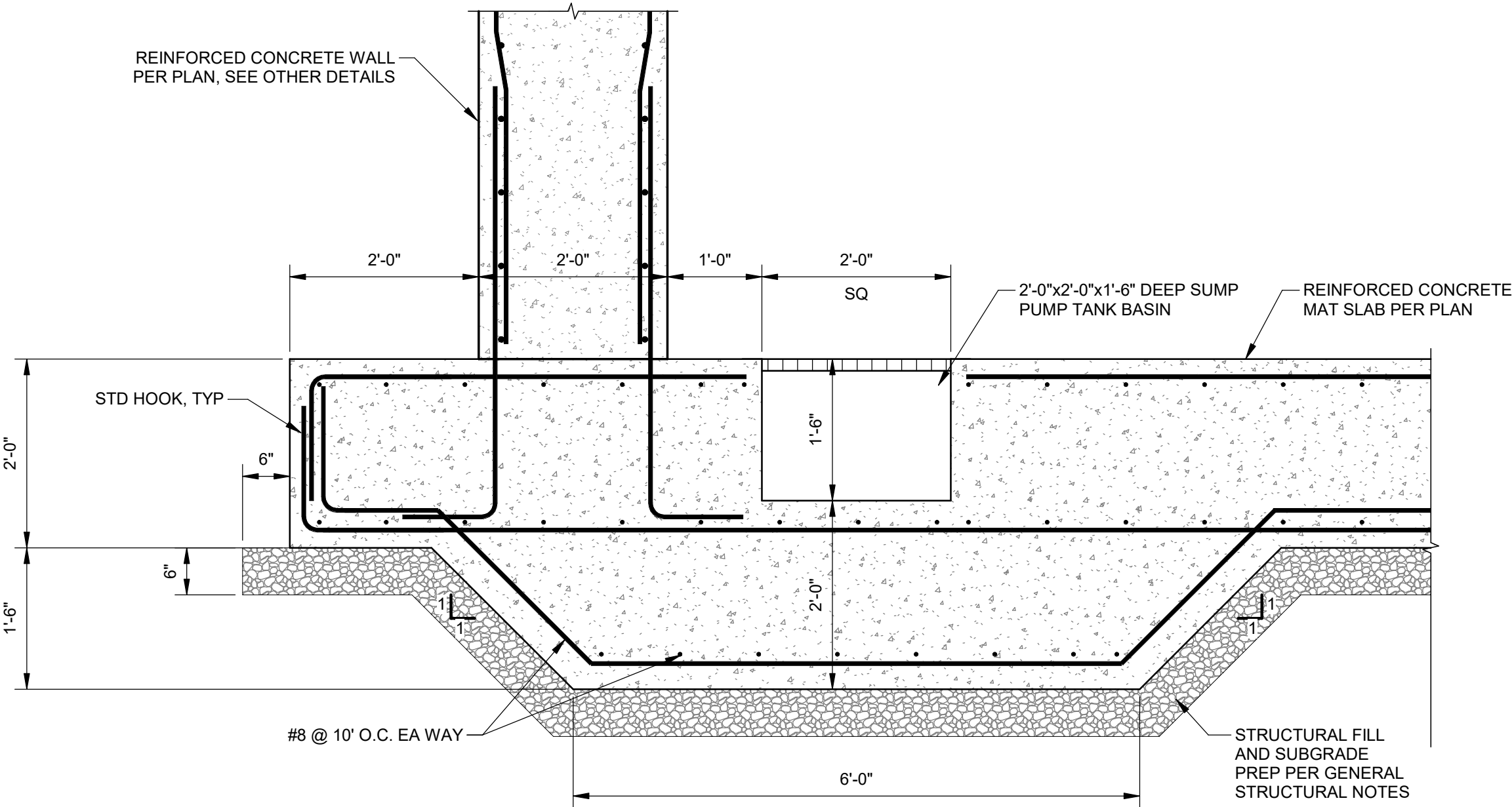
SEWER TRANSFER
TOWN OF PALISADE

STRUCUTRAL (S)
PUMP BUILDING
STRUCTURAL DETAILS

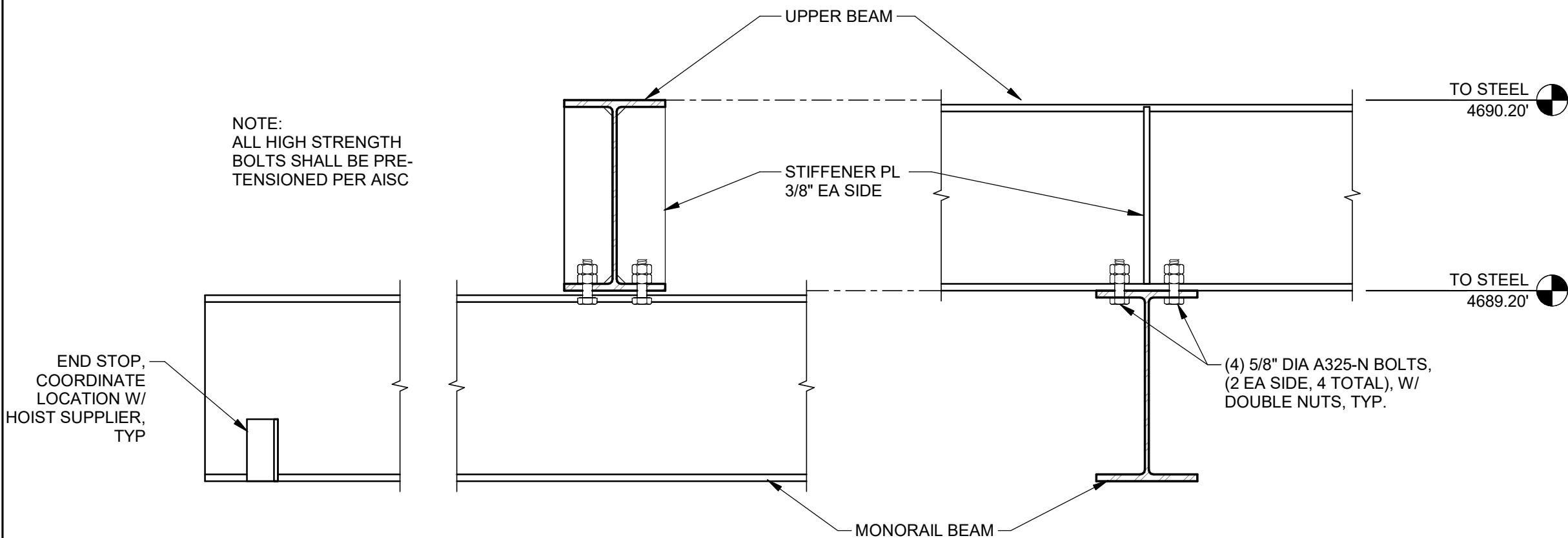
FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

S-501

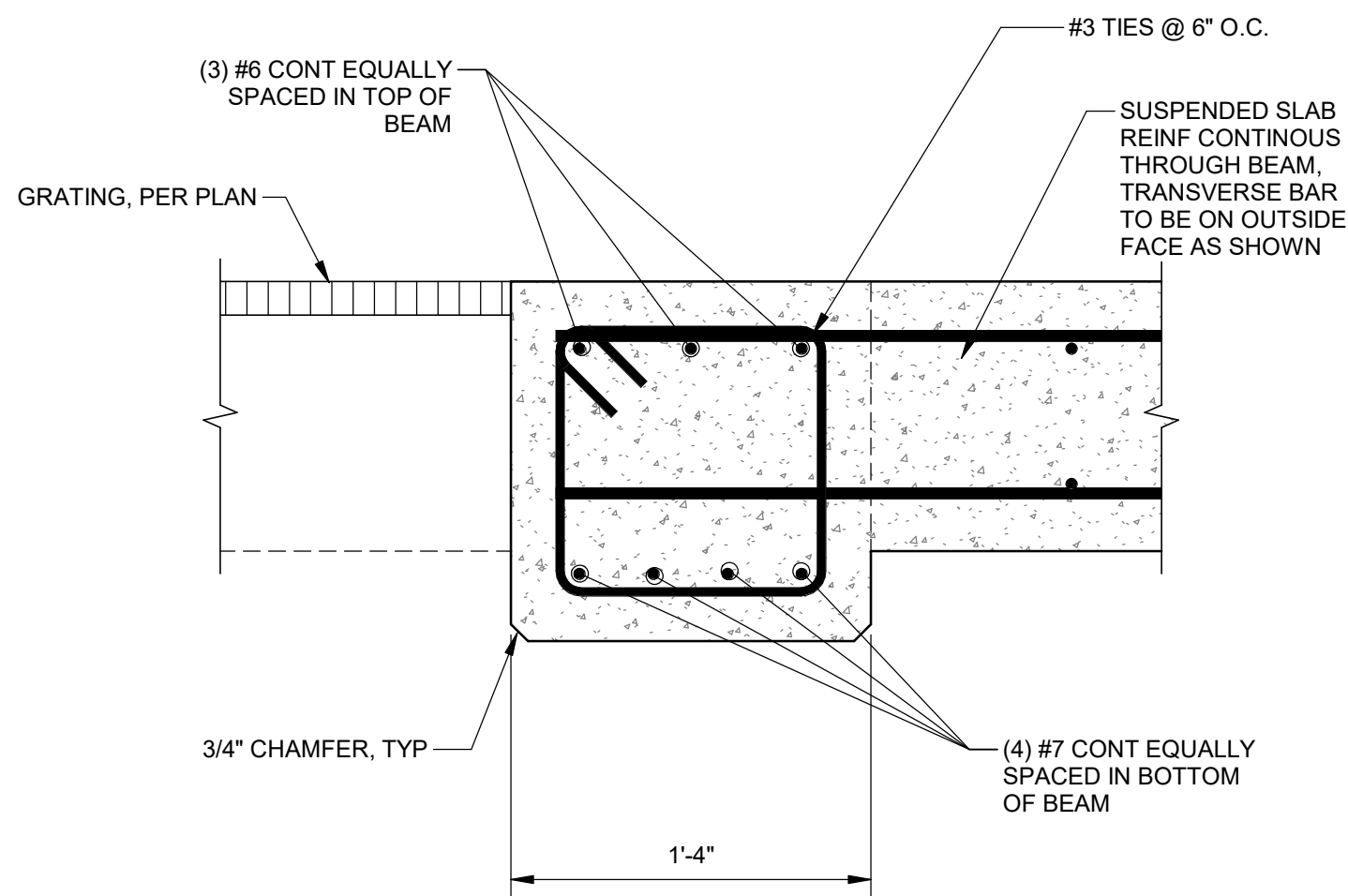
C:\Users\jenorales\OneDrive - JUB Engineers, Inc\Documents\Revit\Project Local\81-23-029_S_emoiralesP7SX.rvt



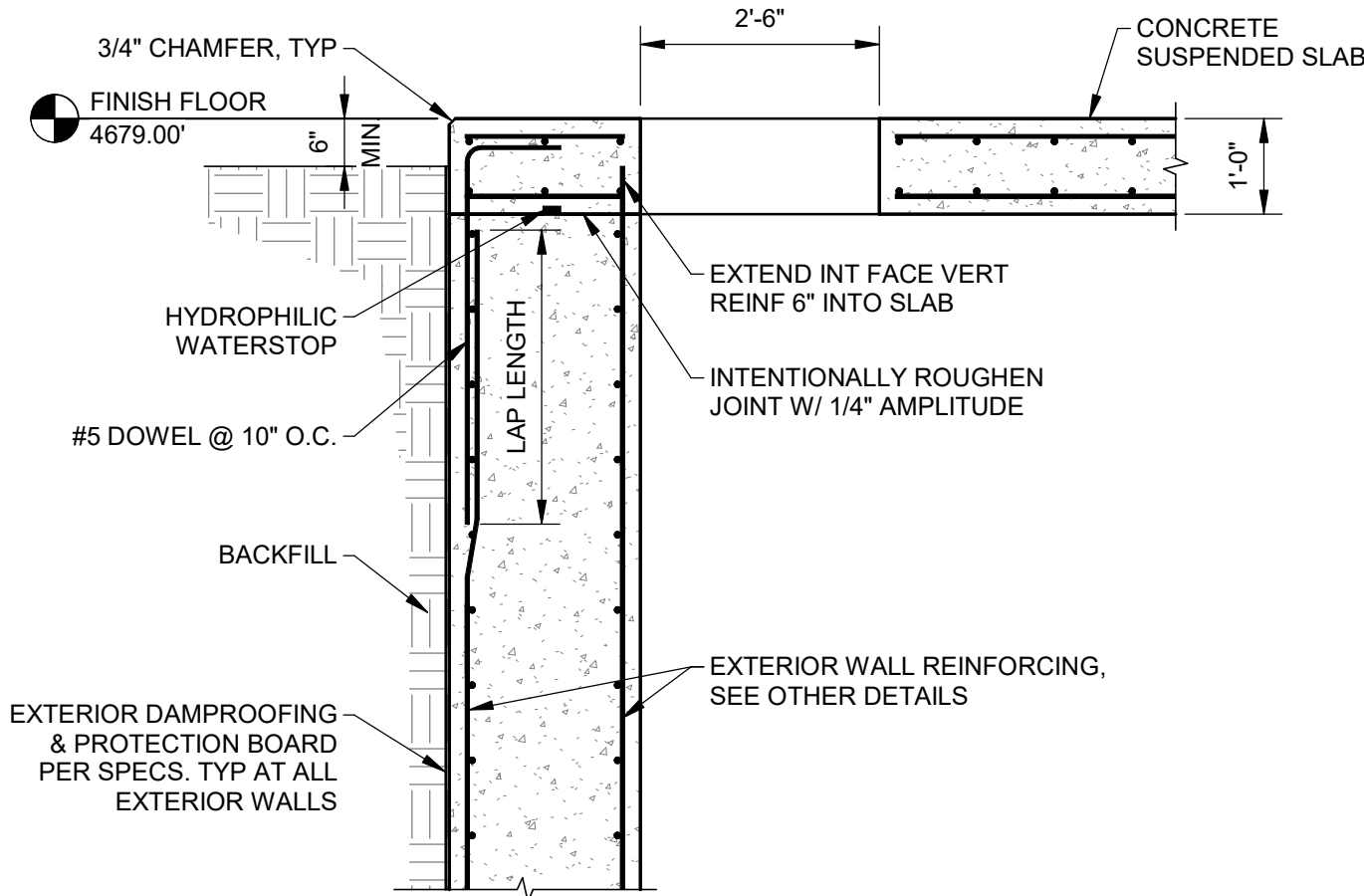
1 SUMP PUMP
S-101 SCALE: 3/4" = 1'-0"



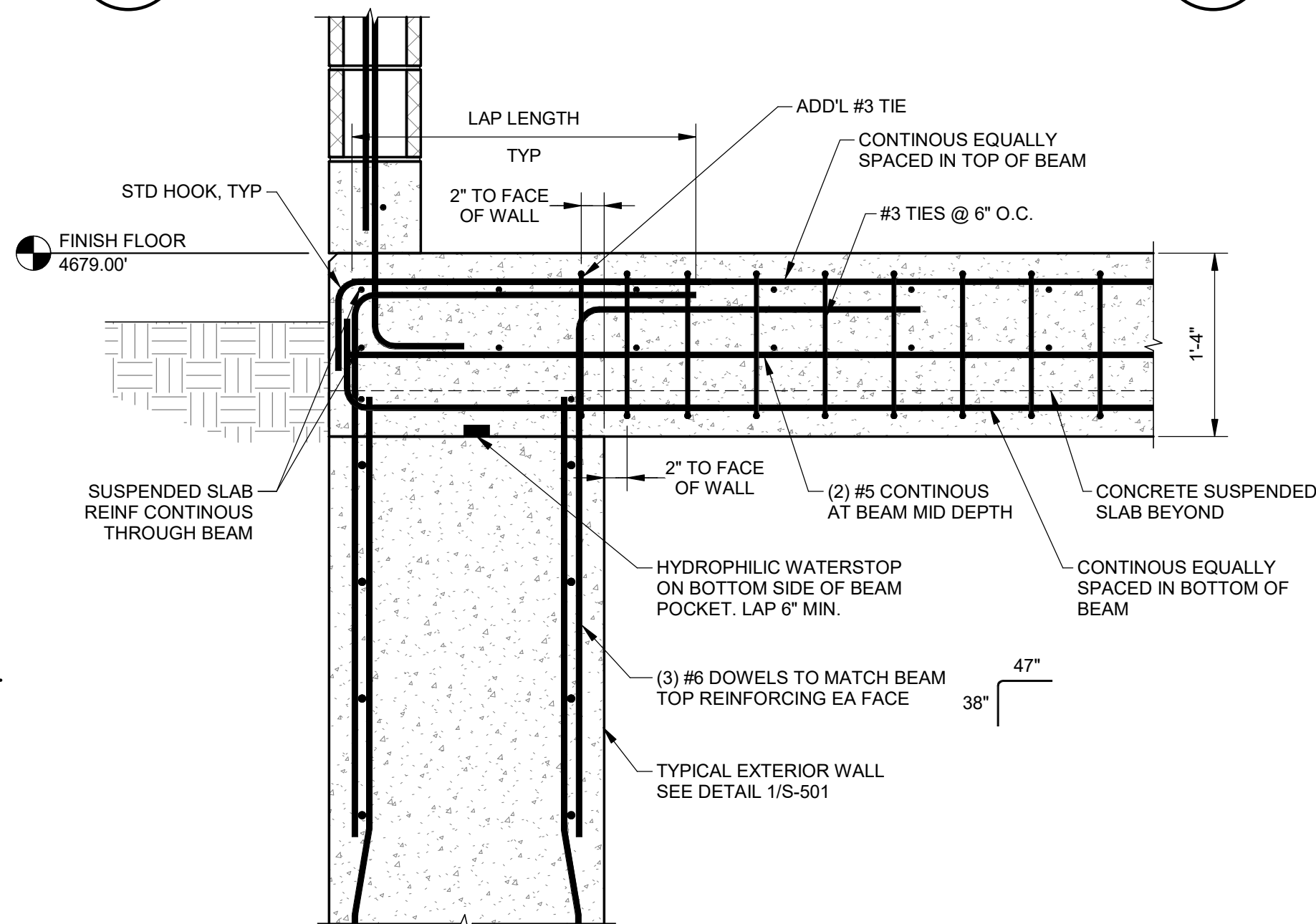
4 MONORAIL BEAM CONNECTION
S-103 SCALE: 1 1/2" = 1'-0"



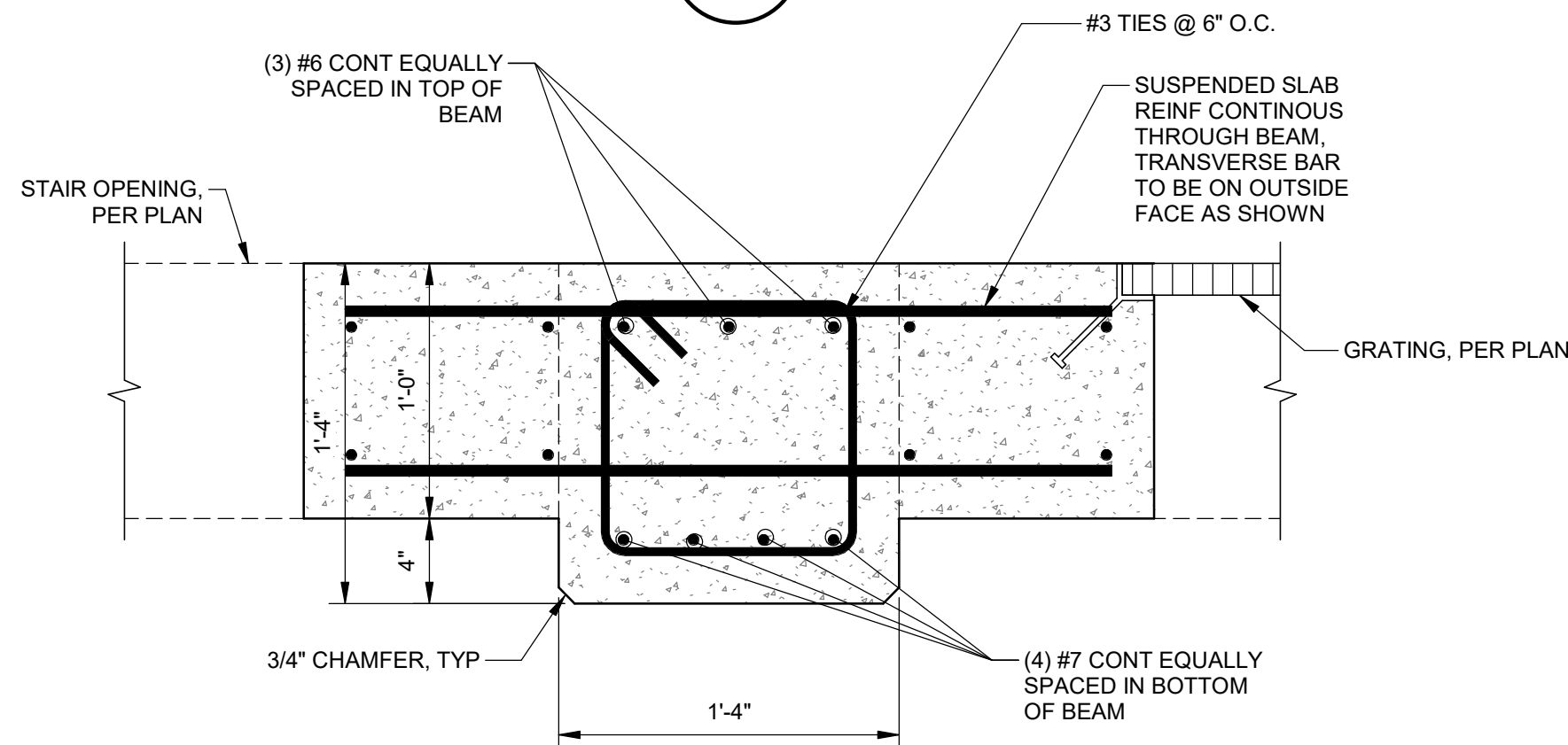
7 CONCRETE BEAM AT GRATING
S-402 SCALE: 1 1/2" = 1'-0"



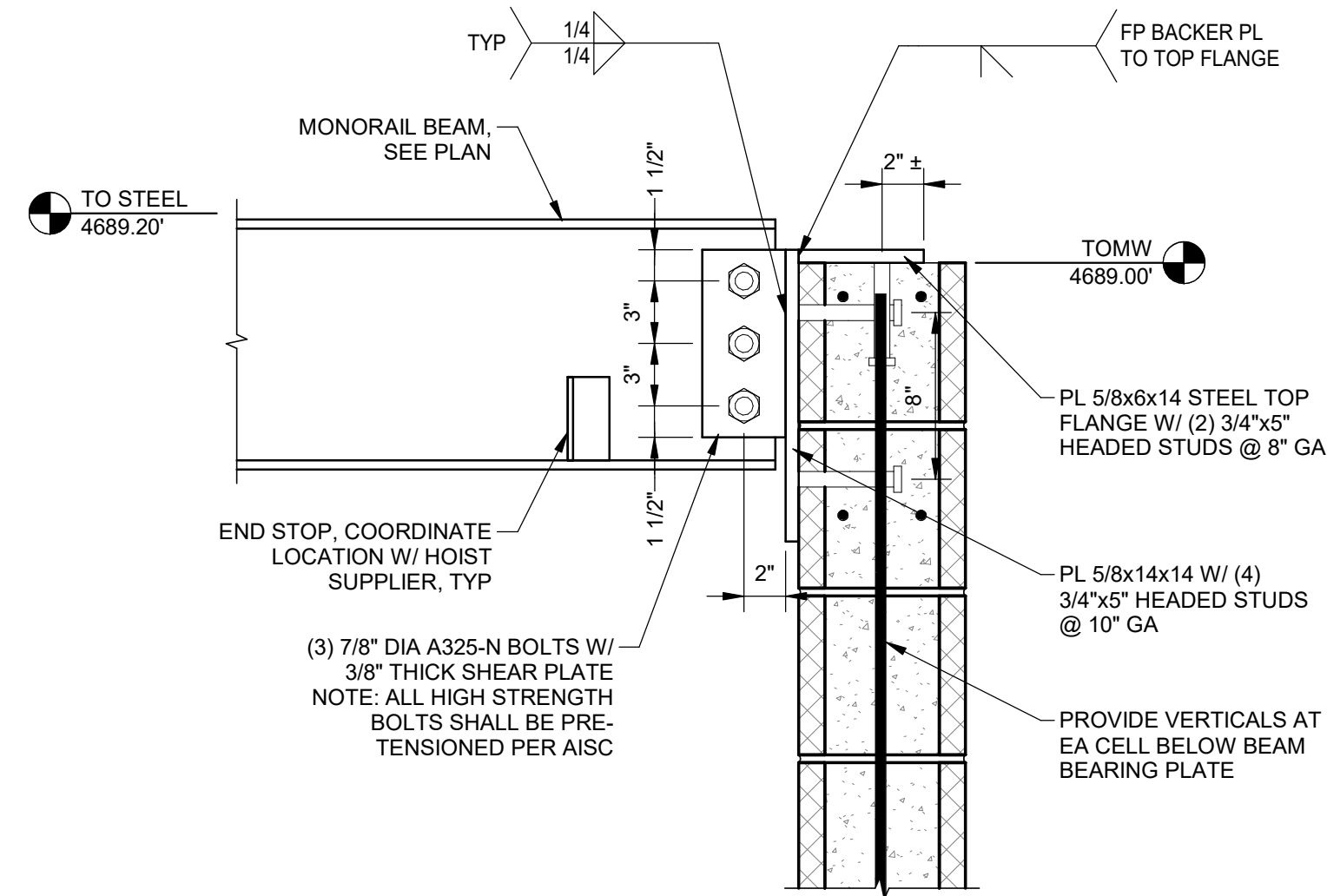
2 WET WELL SLAB OPENING
S-102 SCALE: 1/2" = 1'-0"



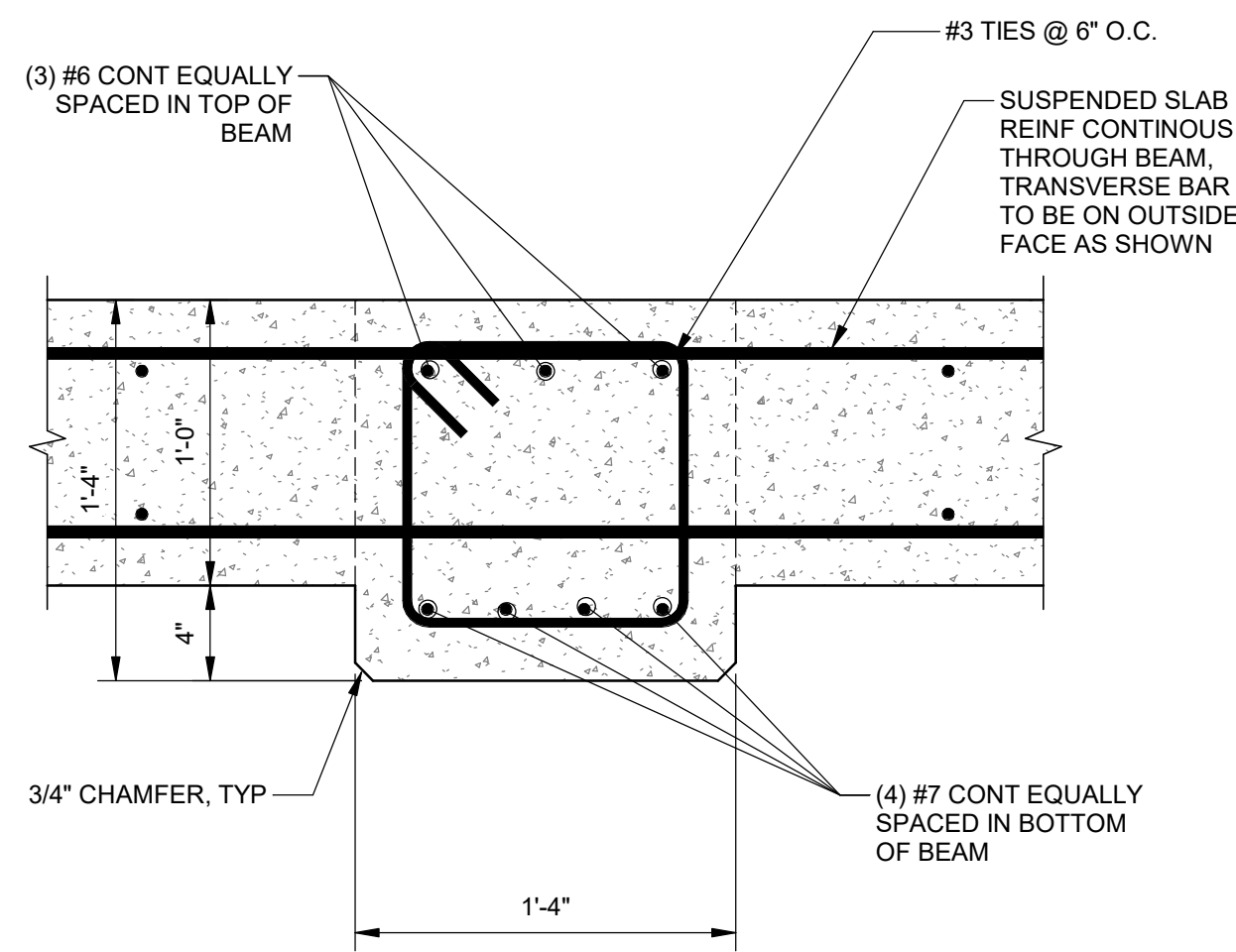
5 CONCRETE BEAM AT EXTERIOR WALL
S-402 SCALE: 1" = 1'-0"



8 CONCRETE BEAM @ OPENINGS
S-402 SCALE: 1 1/2" = 1'-0"



3 BEAM EMBED AT WALL
S-103 SCALE: 1 1/2" = 1'-0"



6 CONCRETE BEAM
S-402 SCALE: 1 1/2" = 1'-0"



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

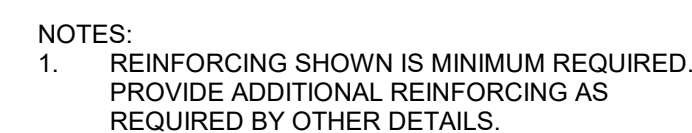
REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	REVISION	DESCRIPTION	BY	APP.	DATE

SEWER TRANSFER
TOWN OF PALISADE
STRUCTURAL (S)
PUMP BUILDING
STRUCTURAL DETAILS

FILE:
JUB PROJ. #81-23-029
DRAWN BY: EM
DESIGN BY: JLS
CHECKED BY: JCH
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

S-502



JU-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT JU-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY JU-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JU-B.

		REVISION					
A	REVISED OQOR EQUIPMENT & LAYOUT	EM	JLS	8-20-25			
NO		BY	APP	DATE			

SEWER TRANSFER
TOWN OF PALISADE

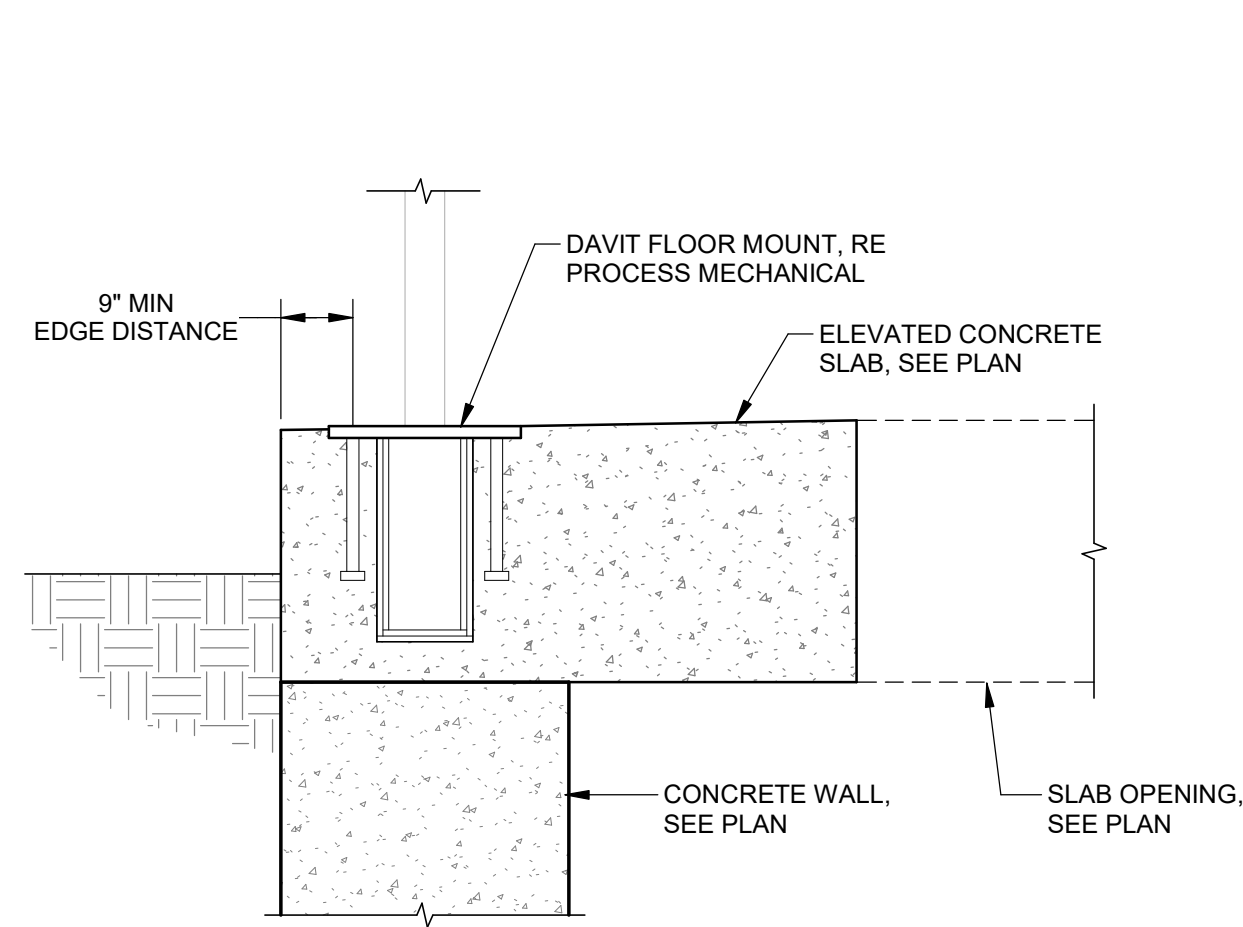
STRUCTURAL (S) PUMP BUILDING STRUCTURAL DETAILS

E:
B PROJ. #:81-23-029
AWN BY:EM
SIGN BY:JLS
ECKED BY:JCH

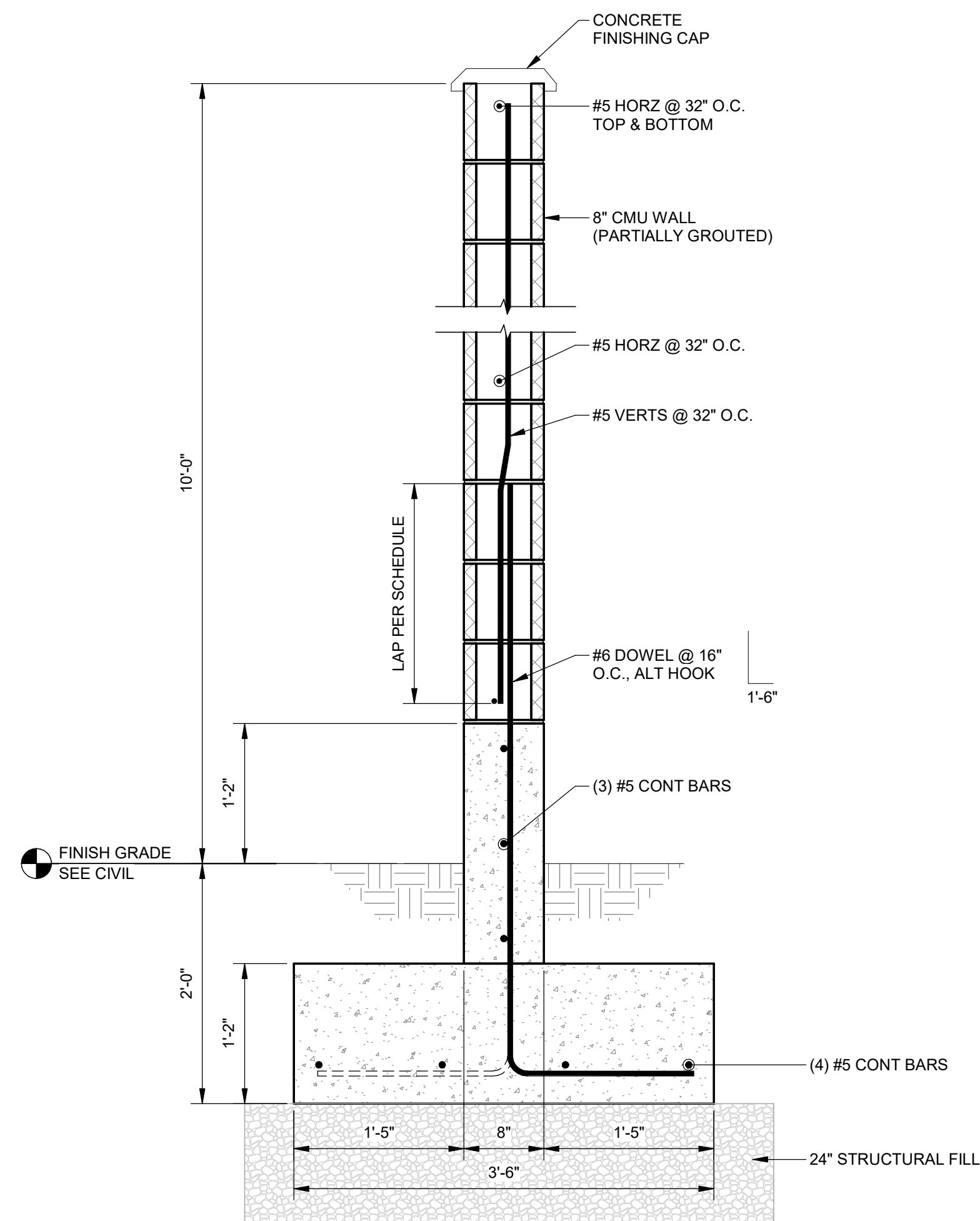
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY

DRAWING:

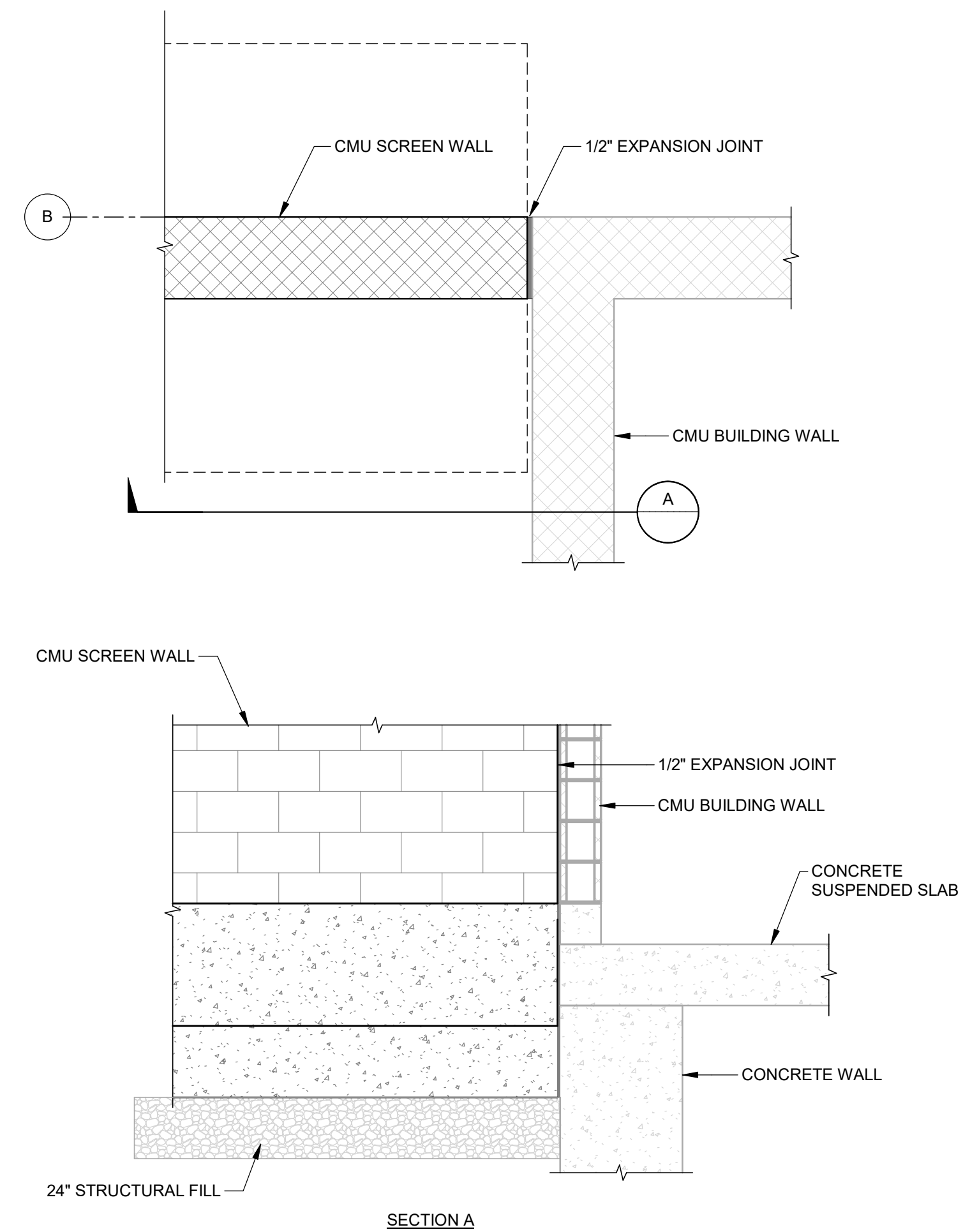
S-504



2 DAVIT MOUNT
SCALE: 1 1/2" = 1'-0"



3 CMU SCREEN WALL DETAIL
S-102 SCALE: 1" = 1'-0"



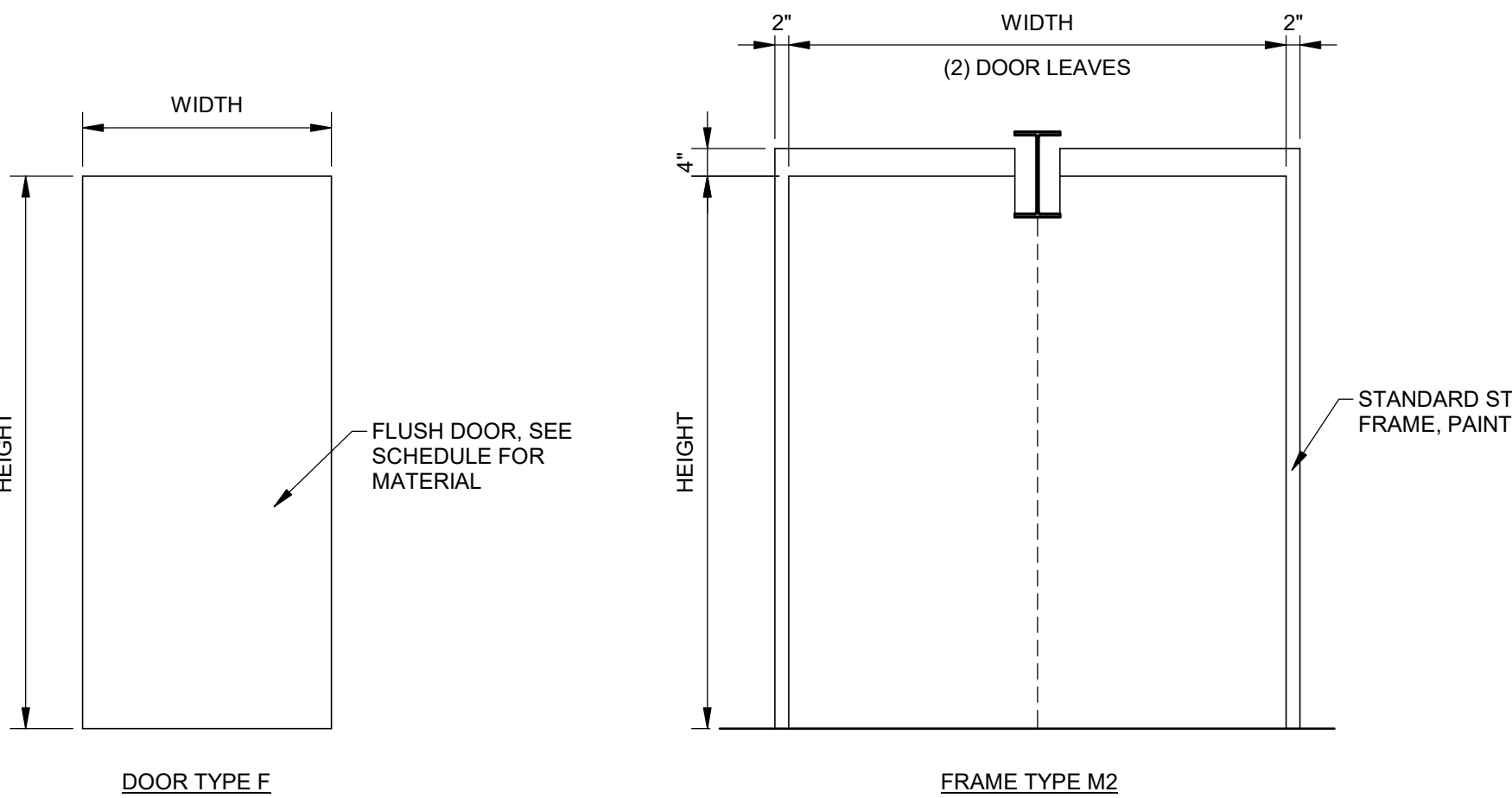
4 CMU SCREEN WALL TO BUILDING
SCALE: 1" = 1'-0"

DOOR SCHEDULE													
DOOR TAG	DOOR							FRAME			FIRE RATING	HARDWARE GROUP	COMMENTS
	TYPE	MATERIAL	FINISH	GLAZING	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH			
D1	F	METAL	PAINT		6'-0"	9'-8"	1 3/4"	M2	HOLLOW METAL	PAINT		1	PAIR OF DOORS W/ MONORAIL BLOCKOUT AND FLEXIBLE SEAL

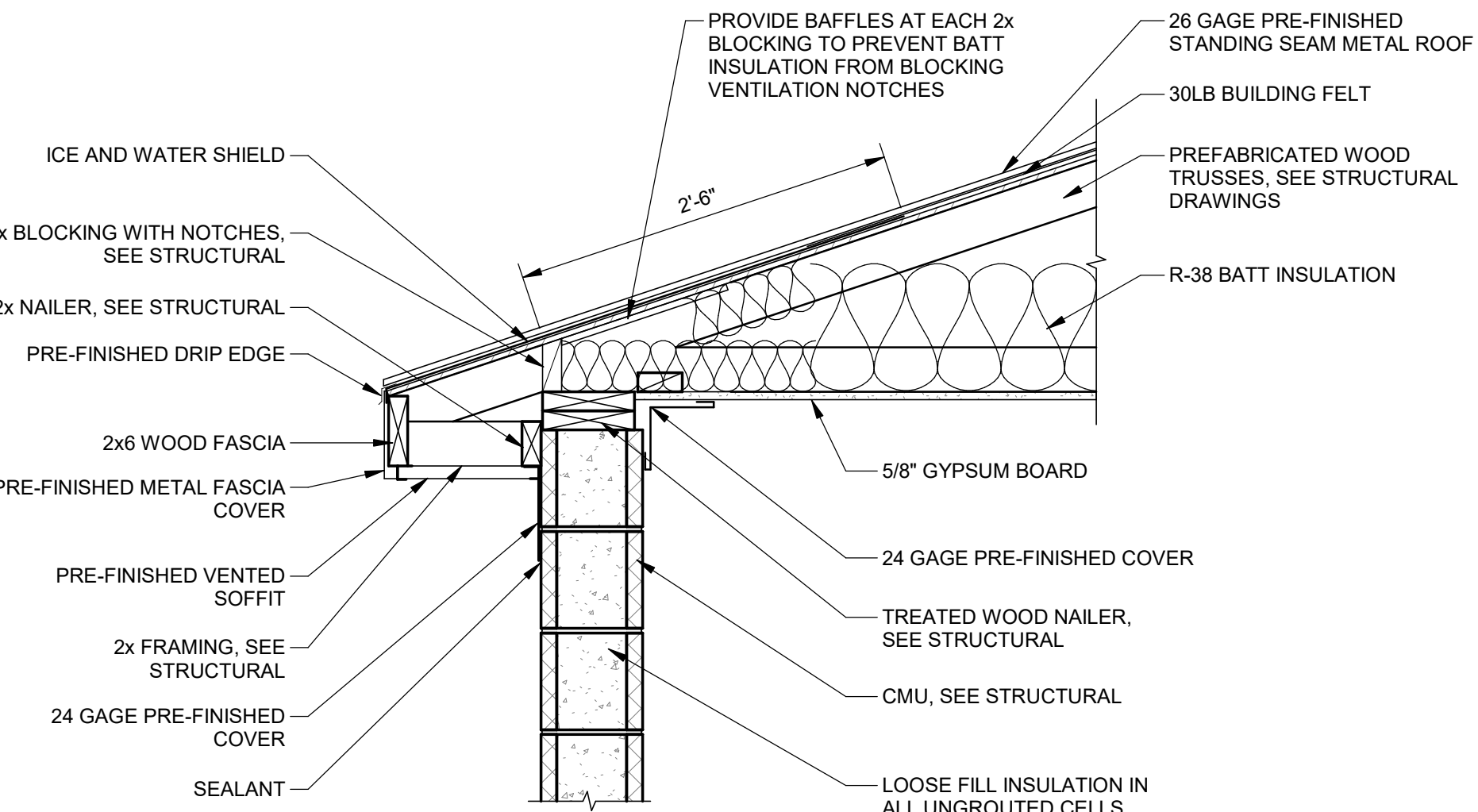
DOOR HARDWARE GROUP SCHEDULE																																						
1	GROUP NUMBER	HINGES					LOCKSETS												STOPS		DOOR SEAL				MISCELLANEOUS													
		3	NUMBER	X	BALL BEARING	CONTINUOUS	PIVOTS	BRONZE/BRASS	X	STAINLESS STEEL	NON-REMOVABLE PINS	KEY ENTRY	INTERCONNECT	PRIVACY	INDICATOR/PRIVACY	PASSAGE	INACTIVE/DUMMY	CLASSROOM	CLASSROOM SECURITY	STORE ROOM	KEYPAD	CARD READ	REMOTE	FLUSH BOLTS	SURFACE BOLTS	WALL STOP	FLOOR STOP	SMOKE STRIP	WEATHER STRIP	ASTRAGAL	SWEEP	THRESHOLD	CLOSER	COORDINATOR	ARMOR PLATE	KICK PLATE	ARMOR PLATE	

INTERIOR FINISH SCHEDULE						
ROOM NO.	NAME	FLOOR FINISH	WALL FINISH	CEILING FINISH	CEILING HEIGHT	REMARKS
101	DRY PIT	EPOXY COAT FLOOR AND 1'-0" BASE OF WALL	SEALED CONCRETE	NATURAL	26'-0"	EPOXY COATING TO BE LIGHT GRAY, ALL OTHER COLORS TO BE NATURAL
102	WET WELL	SEALED CONCRETE	SEALED CONCRETE	NATURAL	26'-0"	ALL COLORS TO BE NATURAL
201	ELECTRICAL	EPOXY COAT FLOOR	SEALED SMOOTH FACE CMU	GYPSUM BOARD PAINTED	10'-3"	CEILING PAINT AND PRE-FINISHED METAL COVER TO BE WHITE

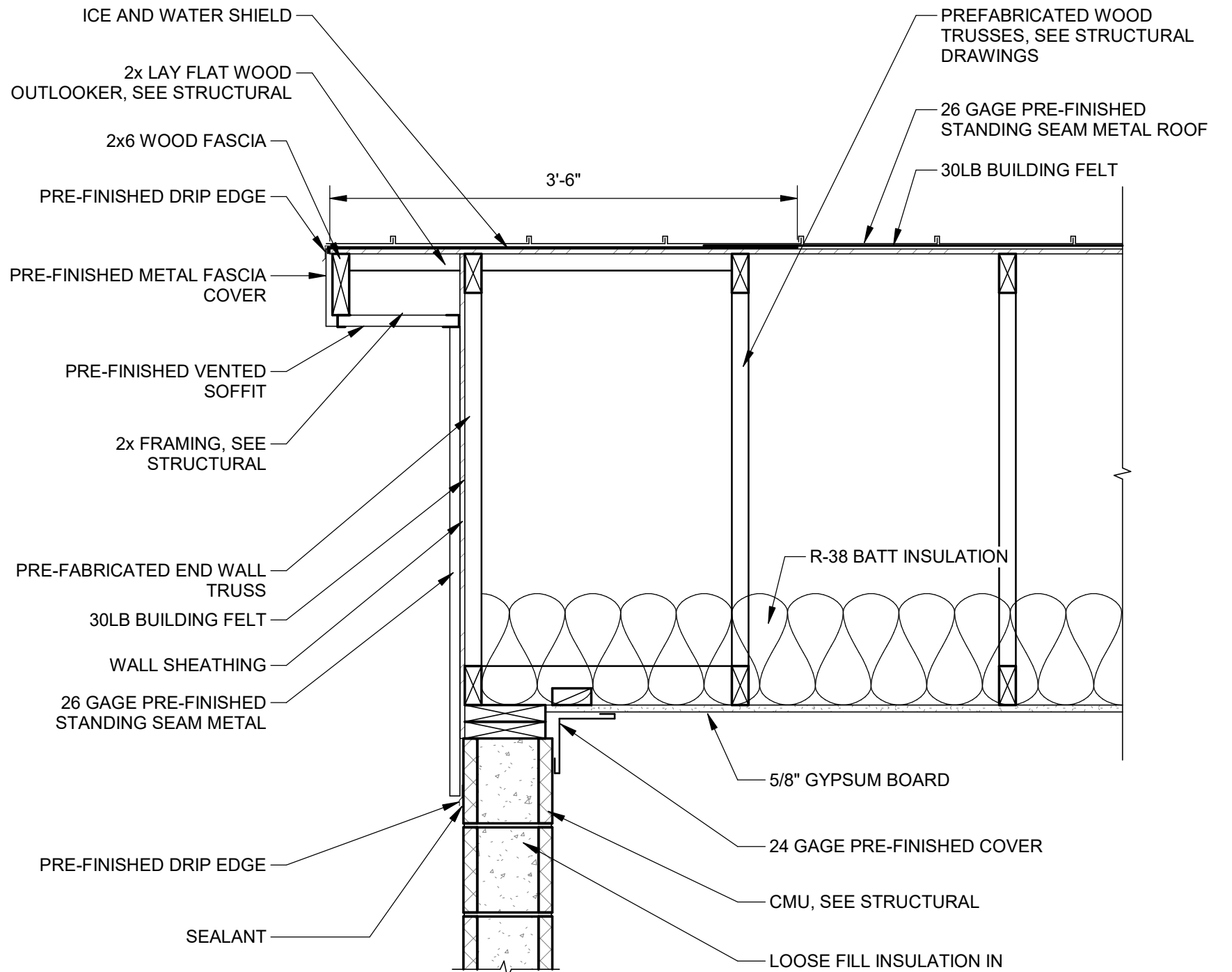
EXTERIOR COLOR SCHEDULE					
TAG	MATERIAL	MANUFACTURER	FINISH	COLOR	REMARKS
EX-1	CONCRETE	-	SMOOTH FORM	NATURAL	CONC WALLS TYP
EX-2	CMU	BUEHNER BLOCK	SMOOTH FACE W/ ANTI-GRAFFITI COATING	TAN	FIELD COLOR
EX-3	STANDING SEAM	MBCI	PRE-FINISHED	DARK BROWN	METAL ROOF/ SIDING/ FASCIA/ SOFFIT
EX-4	DOOR & FRAME	-	PAINTED	MATCH ROOF COLOR	DOOR & FRAME
EX-5	LOUVER/VENTS	-	PRE-FINISHED	MATCH ROOF COLOR	LOUVER/ TURTLE VENTS GABLE VENTS



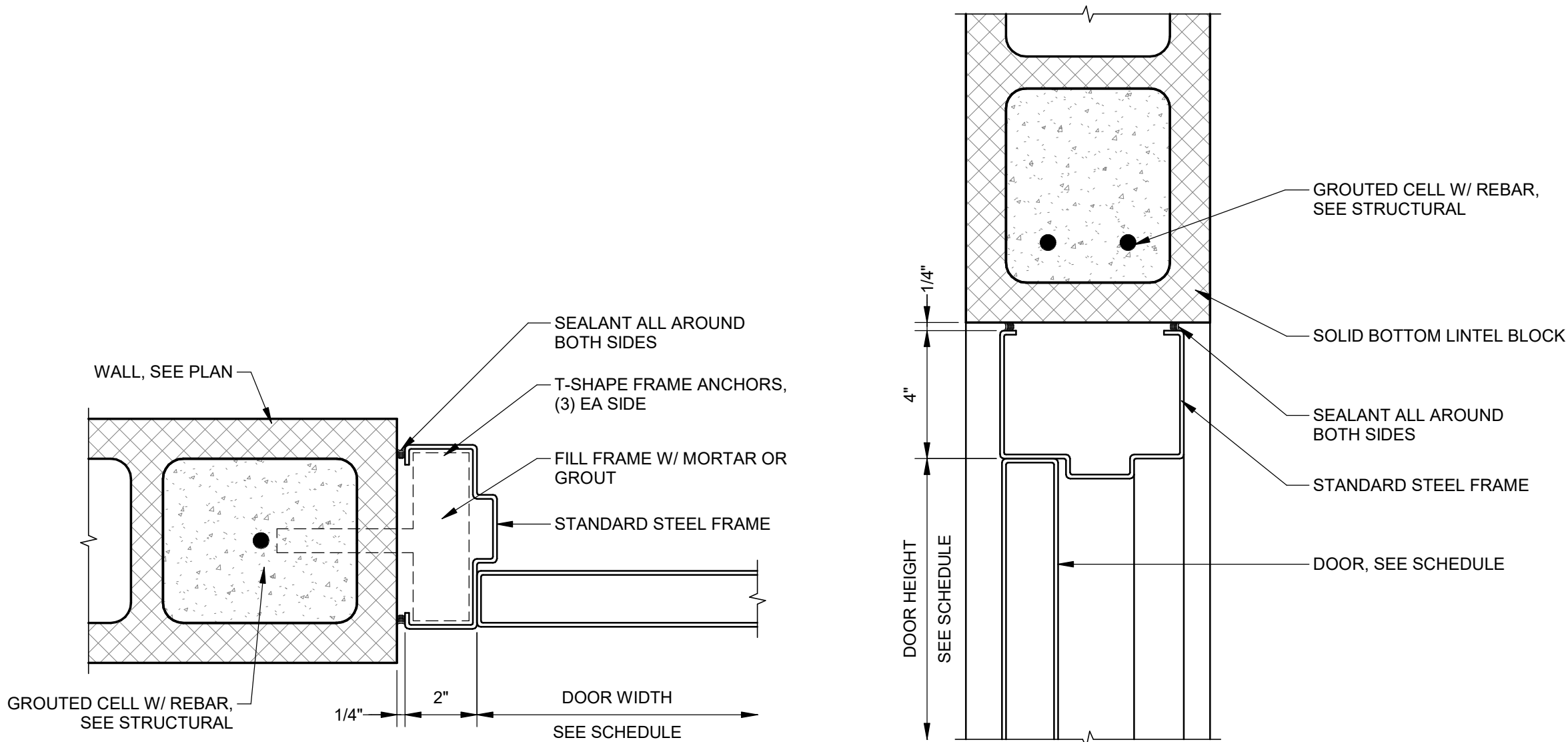
1 DOOR AND FRAME TYPE
SCALE: NTS



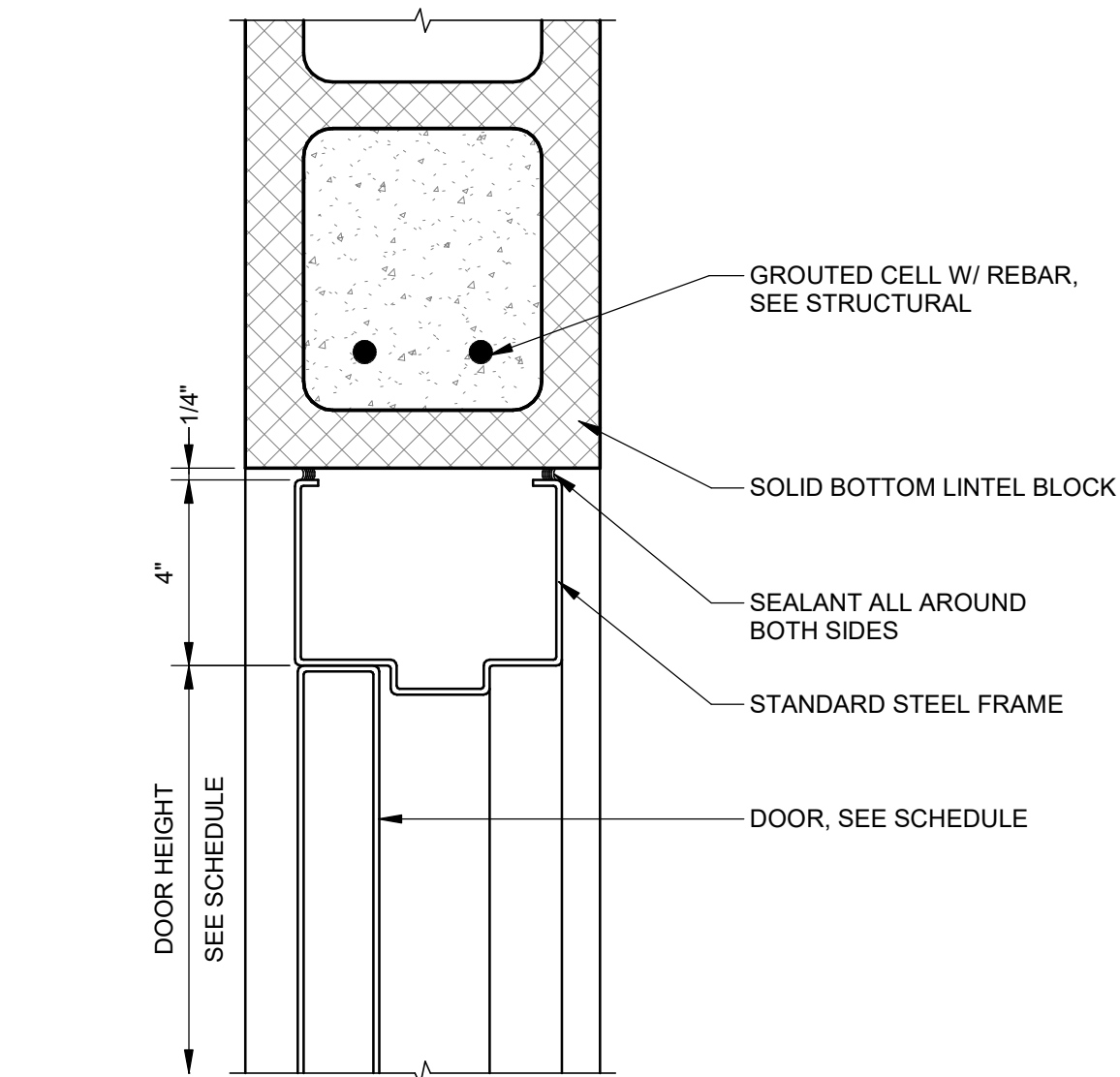
2 SOFFIT
SCALE: NTS



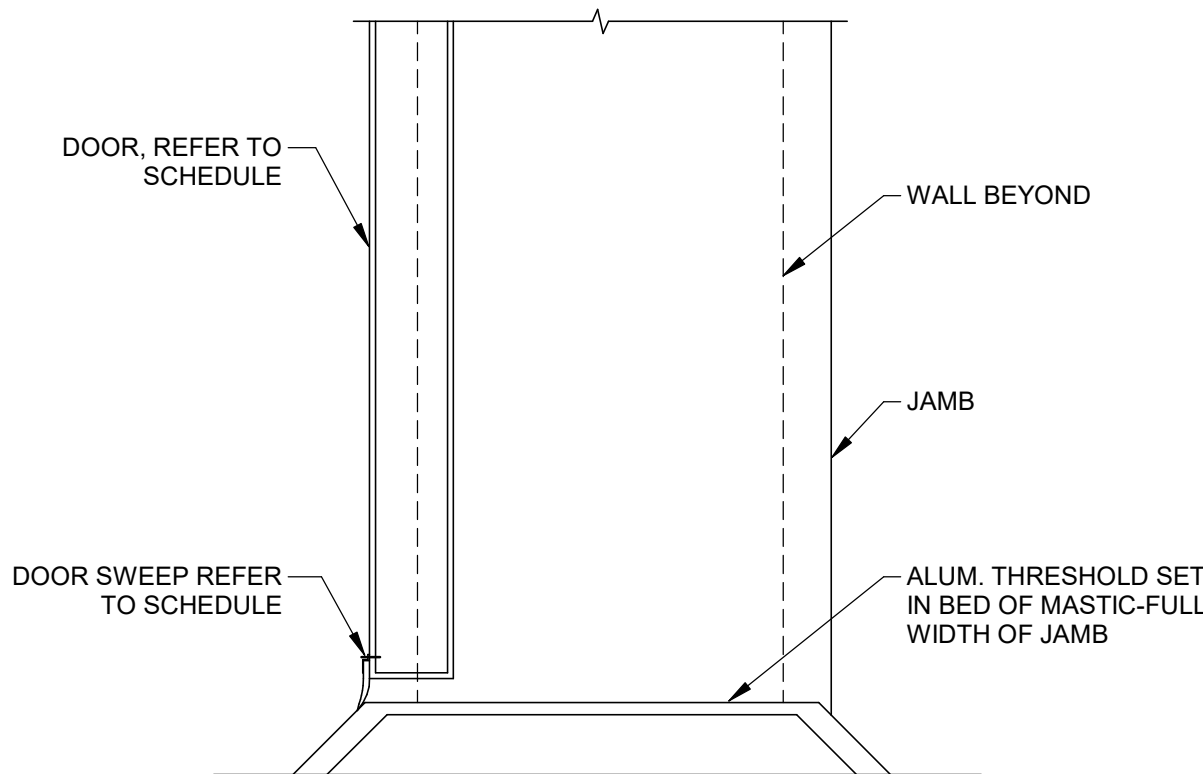
3 OUTLOOKER
SCALE: NTS



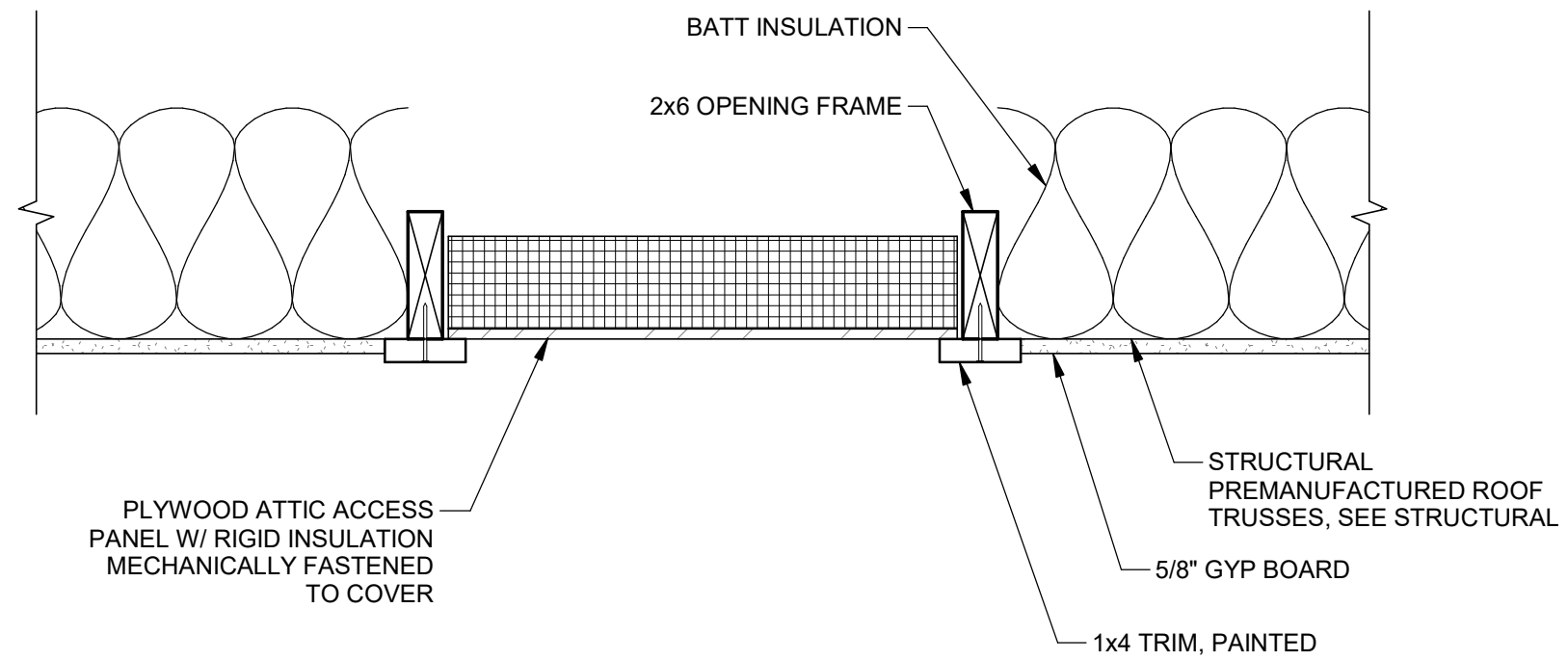
4 DOOR JAMB
SCALE: NTS



5 DOOR HEADER
SCALE: NTS



6 DOOR THRESHOLD
SCALE: NTS



7 ATTIC ACCESS PANEL
SCALE: NTS



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. THIS AGREEMENT SHALL BE IN FULL FORCE AND EFFECT FROM THE DATE OF SIGNATURE OF THE CLIENTS SOLE AGENT AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

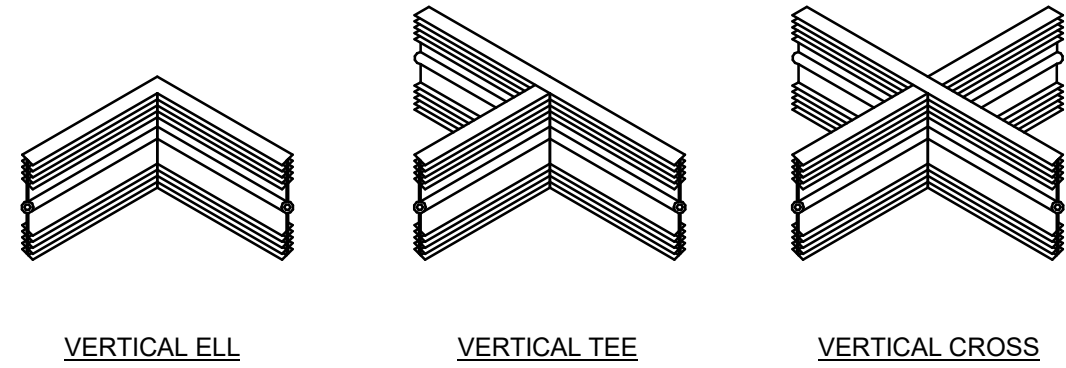
NO.	REVISION	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE
STRUCTURAL (S)
PUMP BUILDING
ARCHITECTURAL DETAILS

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

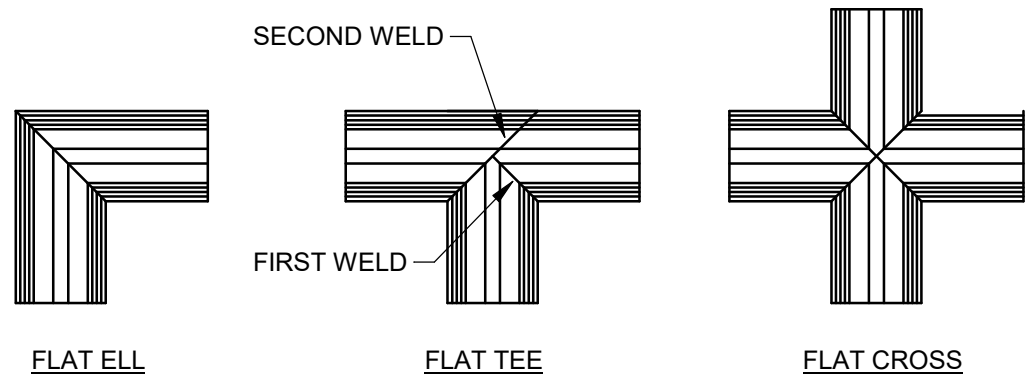
S-510

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit\Project Local\81-23-029_S_enorales6P7SX.rvt



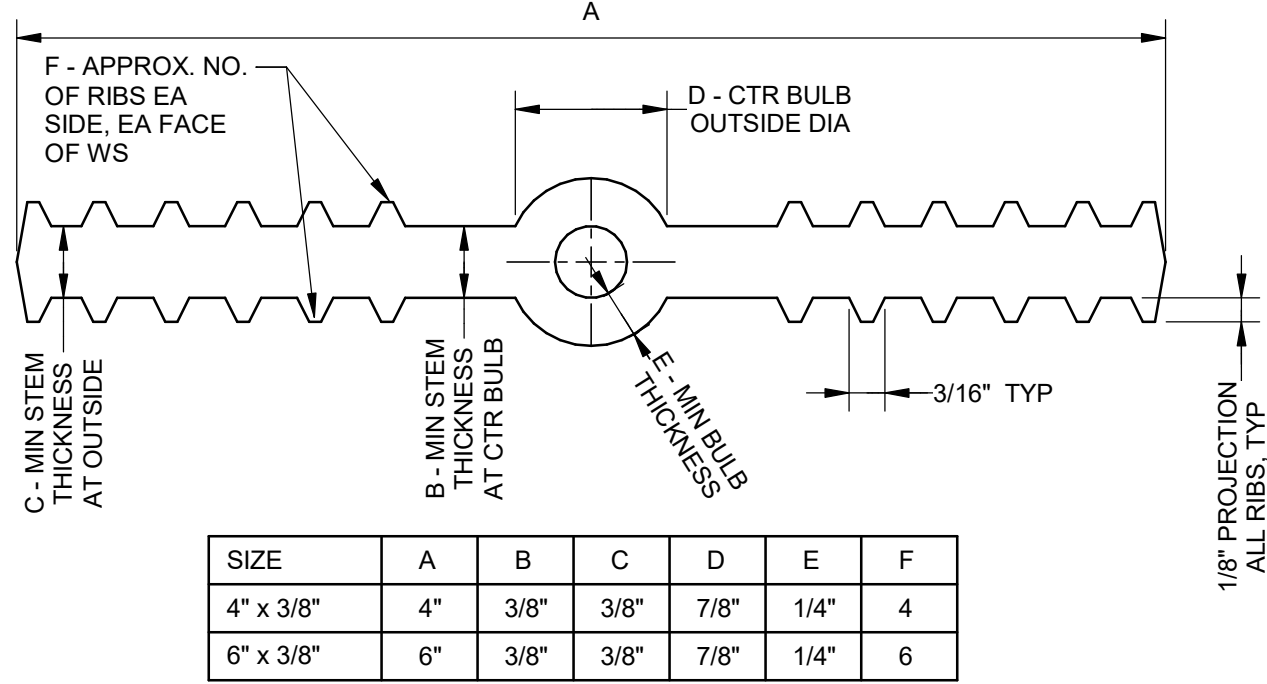
VERTICAL INTERSECTIONS

- NOTES:
1. PROVIDE FACTORY MADE WATERSTOP FABRICATIONS FOR ALL VERTICAL INTERSECTIONS AND CORNERS.
 2. INSTALL AND SEAL FABRICATIONS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
 3. FABRICATIONS SHALL BE MADE FROM THE SAME MATERIAL AS THE WATERSTOP CONNECTED.



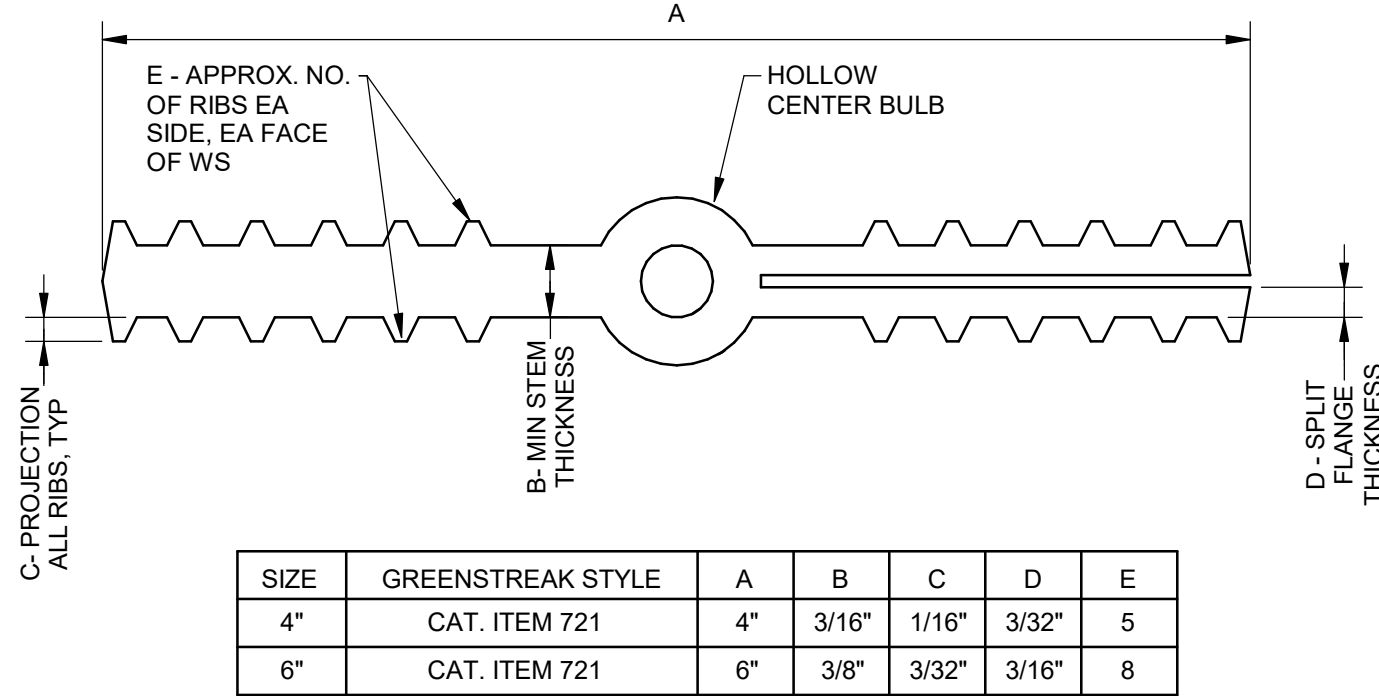
HORIZONTAL (FLAT) INTERSECTIONS

- NOTES:
1. PROVIDE TEFLON COATED THERMOSTATICALLY CONTROLLED WATERSTOP SPLICING IRONS FOR ALL FIELD BUTT SPLICED.
 2. FIELD BUTT SPLICES SHALL BE FULLY HEATED FUSED FOLLOWING THE MANUFACTURER'S RECOMMENDATIONS.
 3. LAPPING OF WATERSTOP, USE OF ADHESIVES, OR SOLVENTS SHALL NOT BE ALLOWED.



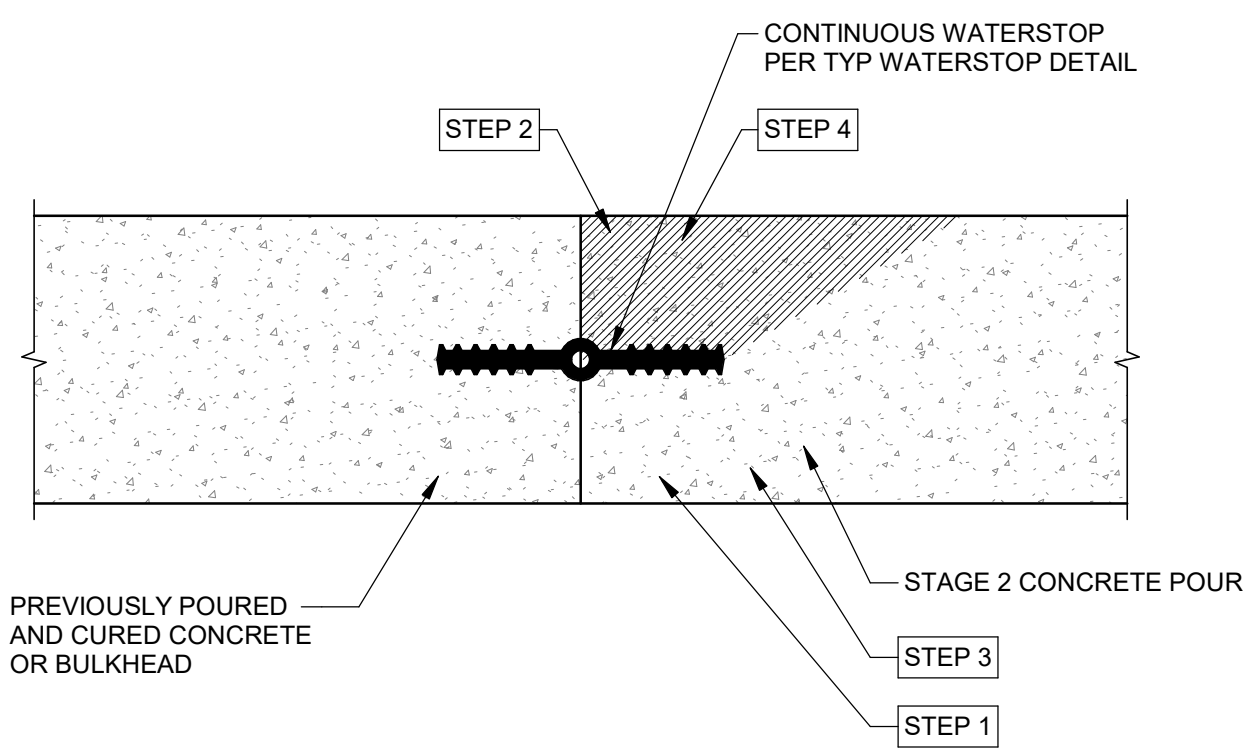
SIZE	A	B	C	D	E	F
4" x 3/8"	4"	3/8"	3/8"	7/8"	1/4"	4
6" x 3/8"	6"	3/8"	3/8"	7/8"	1/4"	6

- NOTES:
1. WATERSTOP SHALL BE PVC AND SHALL CONFORM TO ASTM D570, ASTM D746, ASTM D1149, AND CRD-C572.
 2. WHEN AVAILABLE, PROVIDE PRE-FABRICATED INTERSECTION SECTIONS AT ALL WATER STOP INTERSECTIONS.



SIZE	GREENSTREAK STYLE	A	B	C	D	E
4"	CAT. ITEM 721	4"	3/16"	1/16"	3/32"	5
6"	CAT. ITEM 721	6"	3/8"	3/32"	3/16"	8

- NOTES:
1. WATERSTOP SHALL BE PVC AND SHALL CONFORM TO ASTM D570, ASTM D746, ASTM D1149, AND CRD-C572.
 2. WHEN AVAILABLE, PROVIDE PRE-FABRICATED INTERSECTION SECTIONS AT ALL WATER STOP INTERSECTIONS.



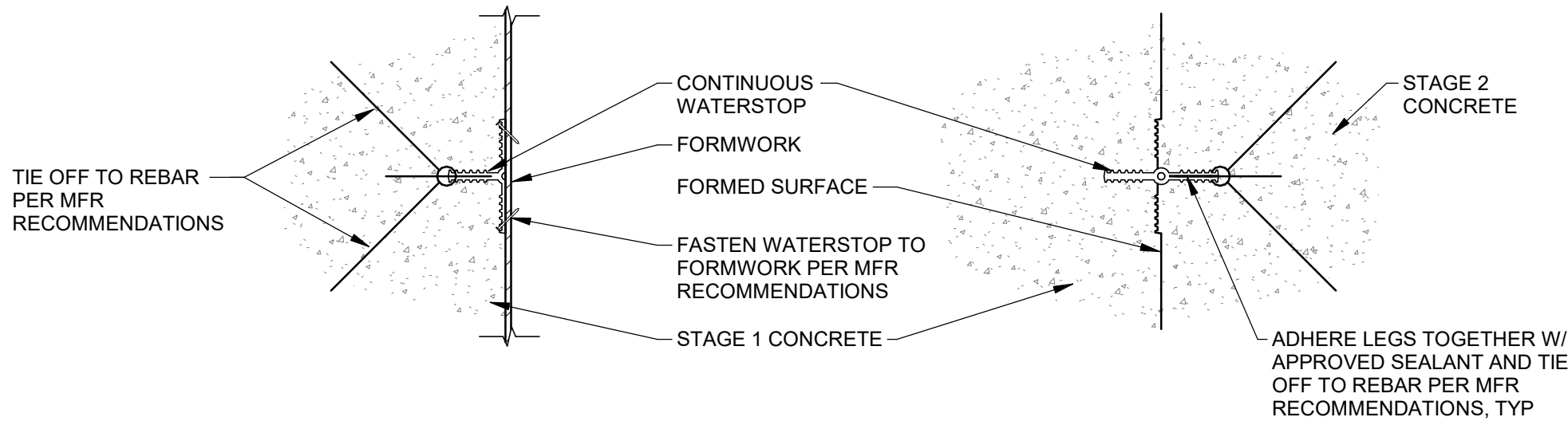
- STEP 1 PLACE CONCRETE BELOW WATERSTOP FIRST. REMOVE ALL AIR VOIDS BY VIBRATING THOROUGHLY.
- STEP 2 TO CONFIRM THERE ARE NO AIR VOIDS, LIFT WATERSTOP. A CONTINUOUS IMPRESSION OF THE WATERSTOP, INCLUDING THE EDGE OF THE BULB, SHOULD BE VISIBLE IN THE FRESH CONCRETE. CONTINUE THIS PROCEDURE ALONG THE ENTIRE POURED JOINT, END TO END. IF CONTINUOUS IMPRESSION IS CONFIRMED, PROCEED WITH STEP 4. IF VOID LARGER THAN 1/4" IN DIAMETER IS PRESENT ANYWHERE IN THE WATERSTOP IMPRESSION, PROCEED WITH STEP 3.
- STEP 3 IF A VOID LARGER THAN 1/4" IN DIAMETER IS PRESENT IN THE WATERSTOP IMPRESSION, ADDITIONAL CONCRETE SHALL BE PLACED UNDER THE WATERSTOP, VIBRATED, AND STEP 2 REPEATED.
- STEP 4 FINISH PLACING CONCRETE ABOVE THE WATERSTOP TO TOP OF SLAB.

1 TYP WATERSTOP TYPE

SCALE: NTS

2 TYP SPLIT WATERSTOP TYPE

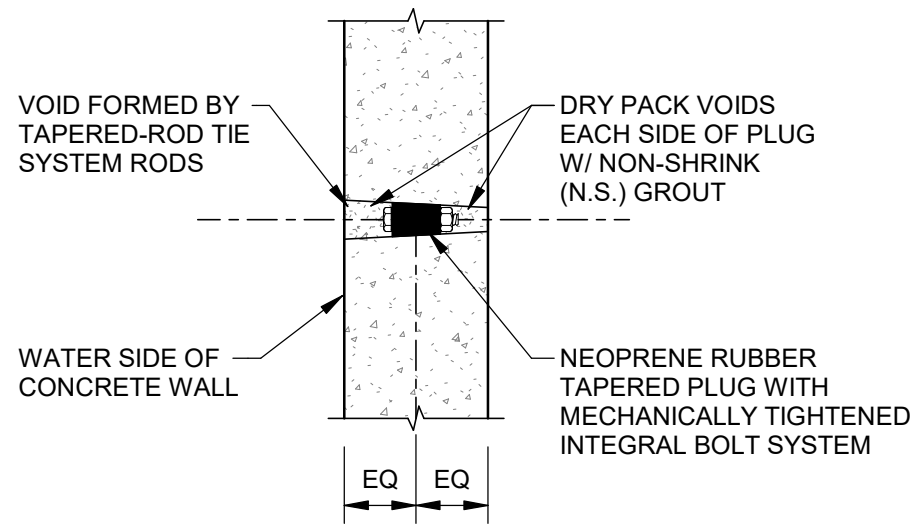
SCALE: NTS



- NOTES:
1. SECURE WATERSTOP FIRMLY IN PLACE BEFORE PLACING CONCRETE.
 2. THOROUGHLY CONSOLIDATE CONCRETE AROUND ALL WATERSTOP.
 3. FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR WATERSTOP INSTALLATION.
 4. SPLICE WATERSTOP ONLY AS PROVIDED IN THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

3 TYP WELED WATERSTOP INTERSECTIONS

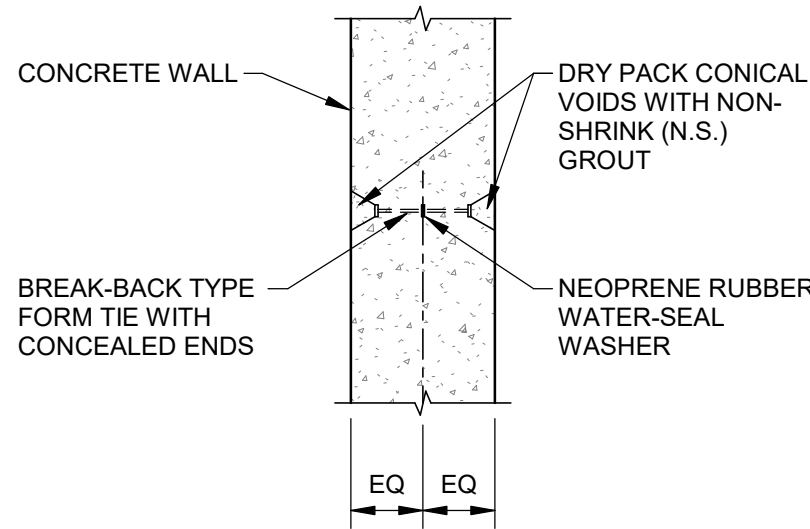
SCALE: NTS



- NOTES:
1. CLEAN VOIDS WITH WIRE BRUSH PRIOR TO PLACING PLUG AND N.S. GROUT.
 2. STRIK OFF N.S. GROUT WITH STEEL TOOLS FOR SMOOTH UNIFORM FINISH.
 3. FORM TIES SHALL BE UNIFORMLY SPACED IN BOTH DIRECTIONS.
 4. INSTALL PLUG AND TIGHTEN BOLT PER MFG'S WRITTEN INSTRUCTIONS.
 5. PROVIDE X-PLUG MECHANICAL PLUG BY GREENSTREAK OR APPROVED EQUAL.

4 TYP SPLIT WATERSTOP INSTALLATION

SCALE: NTS



- NOTES:
1. CLEAN CONICAL VOIDS PRIOR TO PLACING N.S. GROUT.
 2. STRIK OFF N.S. GROUT WITH STEEL TOOLS FOR SMOOTH UNIFORM FINISH.
 3. FORM TIES SHALL BE UNIFORMLY SPACED IN BOTH DIRECTIONS.
 4. INSTALL TIES PER MFG'S WRITTEN INSTRUCTIONS.

6 TYP WATER-TIGHT FORM TIE DETAIL

SCALE: NTS

7 TYP WATER-TIGHT FORM TIE DETAIL

SCALE: NTS



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

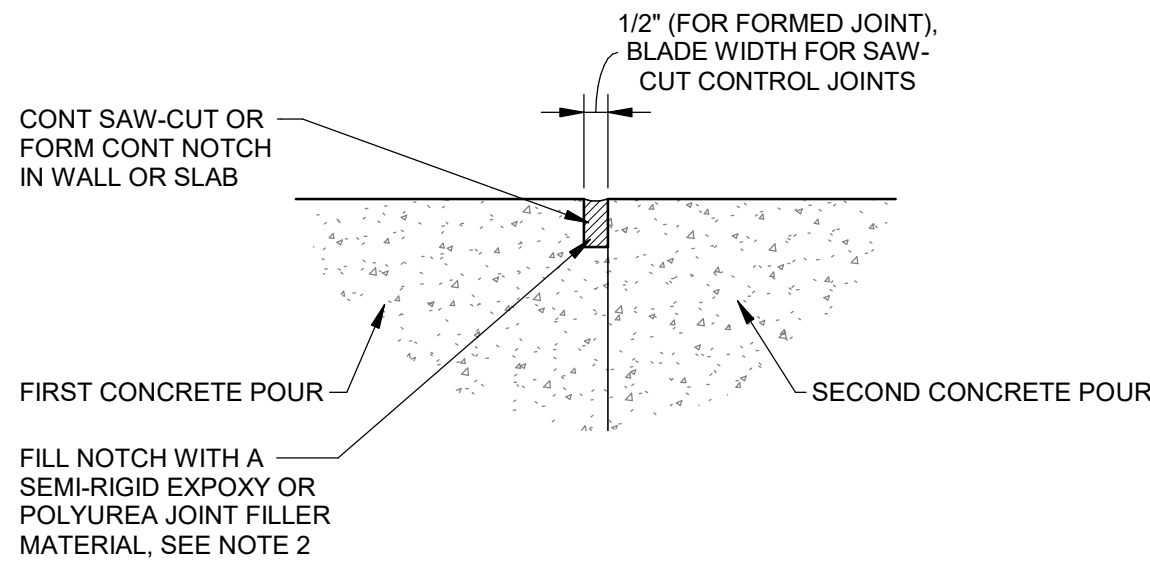
REVISION	NO.	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE
STRUCUTRAL (S)
PUMP BUILDING
TYPICAL CONCRETE DETAILS

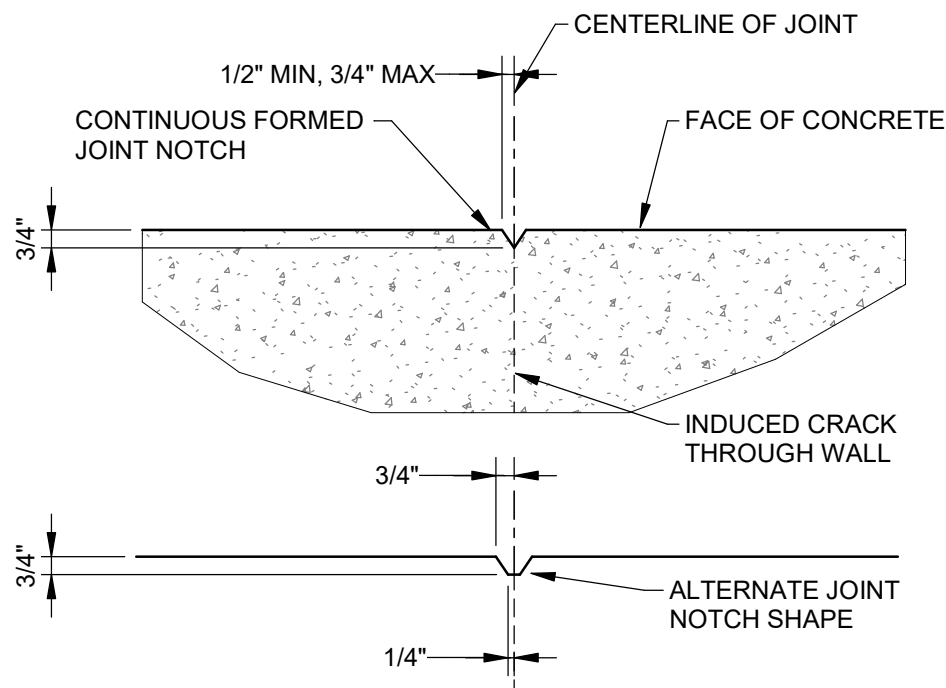
FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

S-902

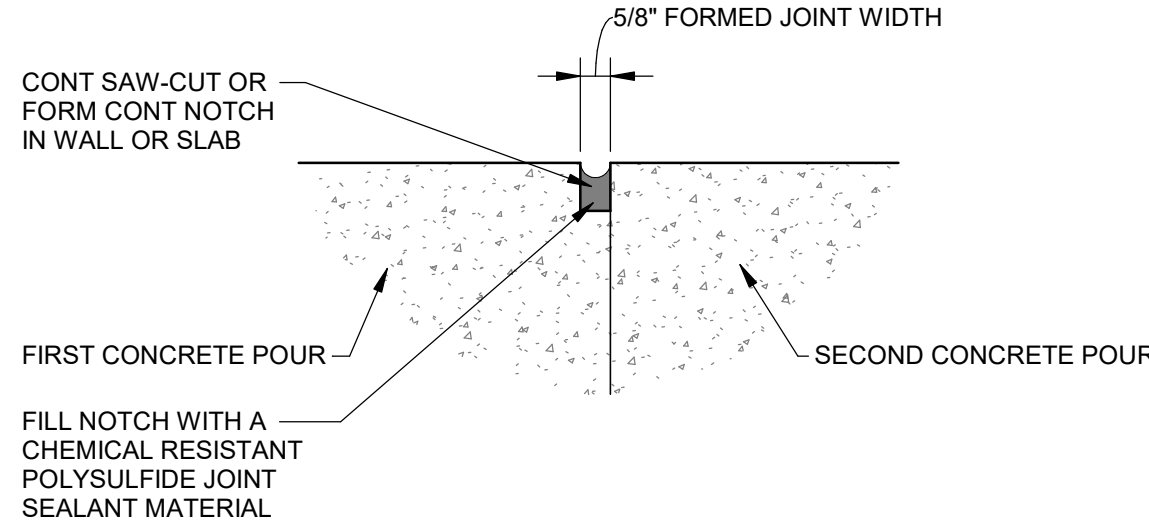
C:\Users\norales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_enorales6P7SX.rvt



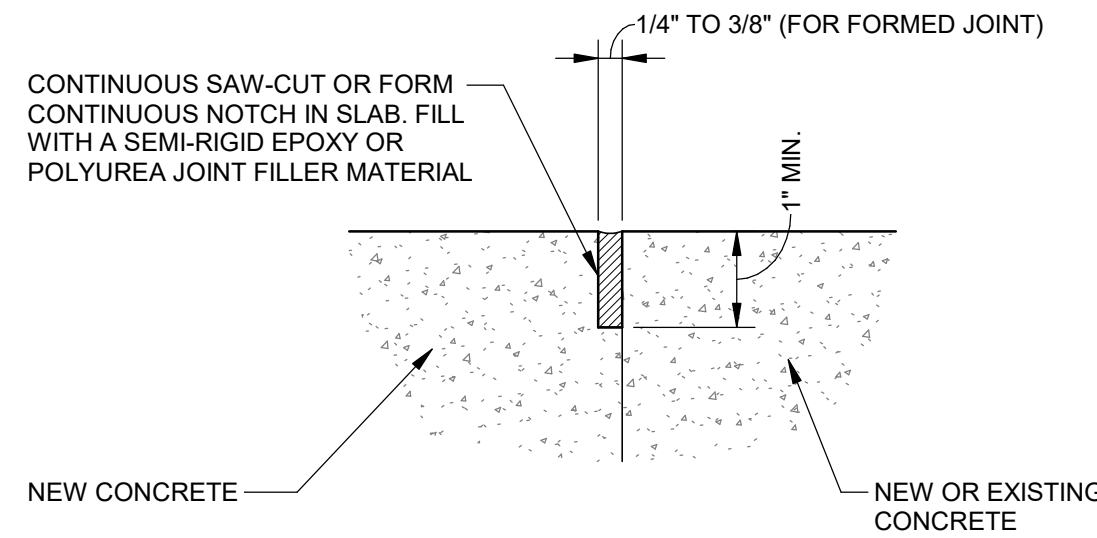
- NOTES:
- SEE OTHER DETAILS FOR SLAB REINFORCING REQUIREMENTS.
 - PROVIDE METZGER / McQUIRE MM-80 SEMI-RIGID EPOXY JOINT FILLY OR REZ-WELD FLEX, SEMI-RIGID EPOXY JOINT FILLER.



- NOTE:
- CENTER CONTROL JOINT NOTCHES ON EXACT CENTERLINE OF JOINTS, & WATERSTOPS, TYPICAL.
 - THIS NOTCH STYLE IS TO BE USED ON NON-LIQUID SIDES OF WALLS & TOP OF WALLS WHERE TOP OF WALL IS EXPOSED TO VIEW.



- NOTES:
- SEE OTHER DETAILS FOR WALL REINFORCING REQUIREMENTS.
 - PROVIDE Sika DUOFLEX NS TWO COMPONENT NON-SAG SEALANT OR EQUIVALENT.



- NOTE: REFER TO OTHER TYPICAL DETAILS FOR SLAB REINFORCING REQUIREMENTS. PROVIDE METZGER/McQUIRE MM-80 SEMI-RIGID EPOXY JOINT FILLER OR REZ-WELD FLEX, SEMI-RIGID JOINT FILLER.

1 TYP SEALED FLOOR NOTCH

SCALE: NTS

2 TYP CONTROL JOINT NOTCH

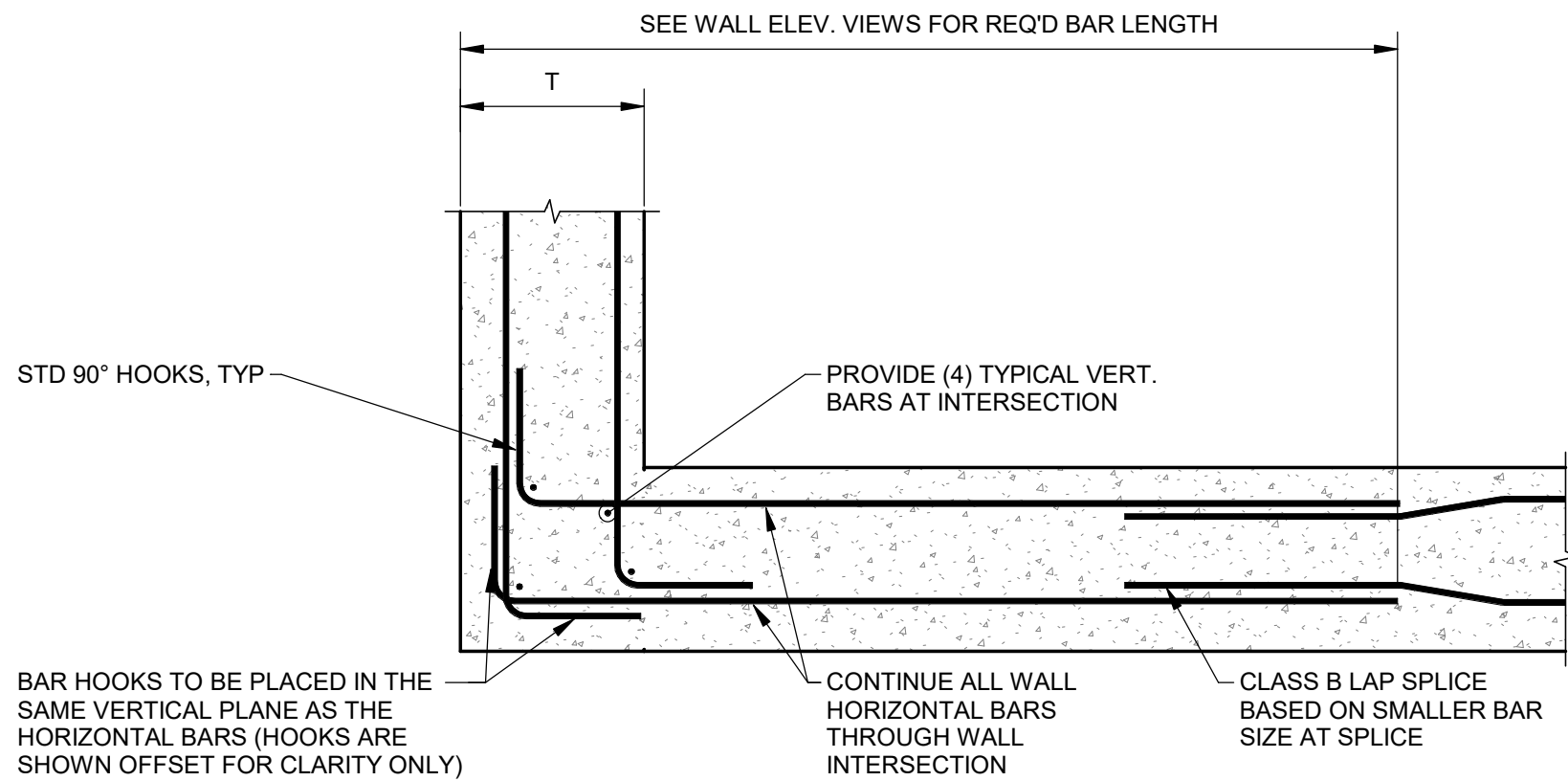
SCALE: NTS

3 TYP SEALED WALL NOTCH

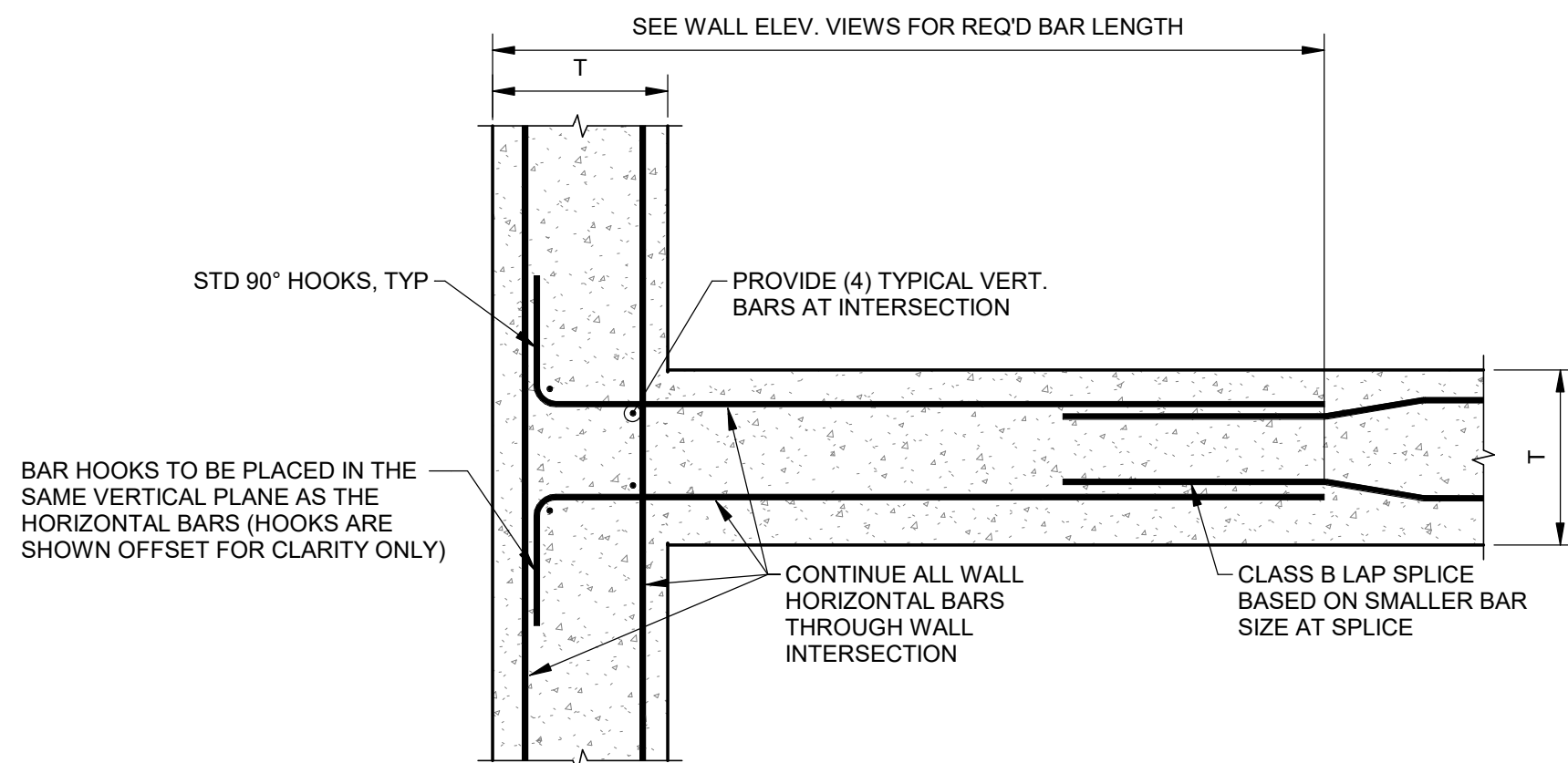
SCALE: NTS

4 TYP SLAB ON GRADE CONTROL JOINT DETAIL

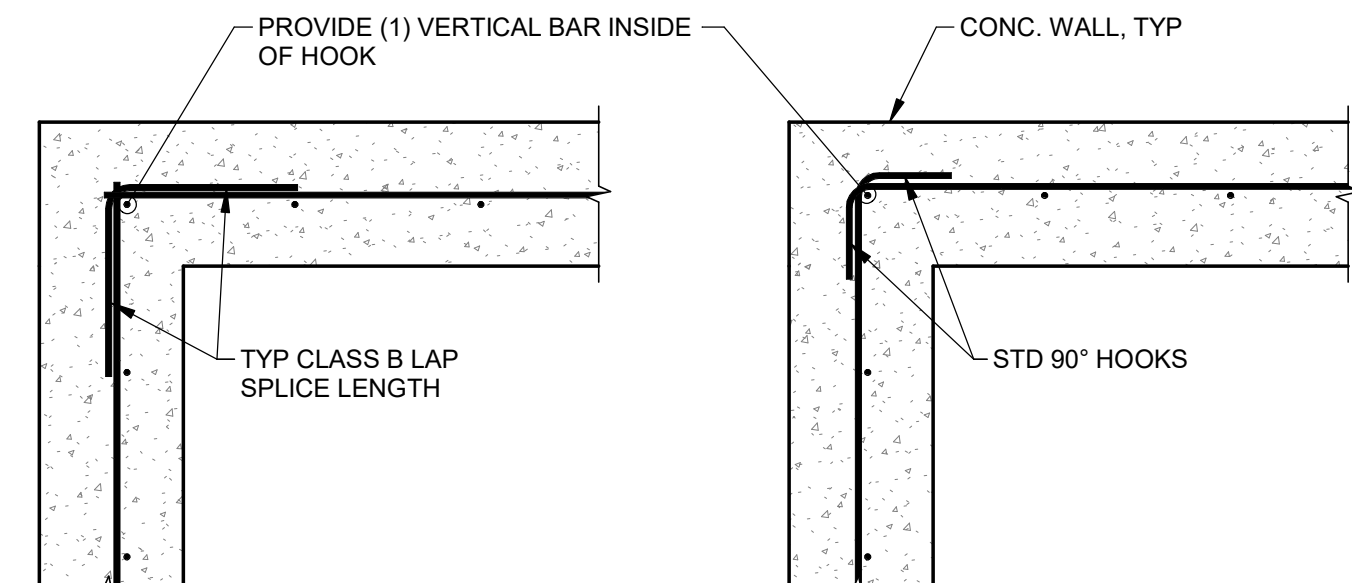
SCALE: NTS



- NOTES:
- CORNER AND INTERSECTION BARS TO MATCH SIZE & SPACING OF HORIZ. BARS.
 - REFER TO OTHER SECTIONS & DETAILS FOR REQ'D BAR SIZE AND SPACING.
 - NOT ALL VERTICAL BARS ARE SHOWN FOR CLARITY, REFER TO OTHER DETAILS.
 - TYPICAL DETAIL FOR WATER OR NON-WATER RETAINING CONCRETE WALLS.
 - LOCATIONS OF HORIZONTAL BAR LAP SPLICES IN WATER-RETAINING WALLS SHALL BE STAGGERED PER OTHER TYPICAL DETAILS.



- NOTES:
- CORNER AND INTERSECTION BARS TO MATCH SIZE & SPACING OF HORIZ. BARS.
 - REFER TO OTHER SECTIONS & DETAILS FOR REQ'D BAR SIZE AND SPACING.
 - NOT ALL VERTICAL BARS ARE SHOWN FOR CLARITY, REFER TO OTHER DETAILS.
 - TYPICAL DETAIL FOR WATER OR NON-WATER RETAINING CONCRETE WALLS.
 - LOCATIONS OF HORIZONTAL BAR LAP SPLICES IN WATER-RETAINING WALLS SHALL BE STAGGERED PER OTHER TYPICAL DETAILS.



- NOTES:
- CORNER AND INTERSECTION BARS TO MATCH SIZE & SPACING OF HORIZ. BARS.
 - CENTER VERTICAL BARS IN WALL U.N.O.
 - REFER TO OTHER DETAILS FOR REQUIRED BAR SIZE AND SPACING.
 - THIS IS A TYPICAL DETAIL FOR WALLS WITH (1) MATT OF REINFORCING.
 - THIS IS A TYPICAL DETAIL FOR NON-WATER RETAINING WALLS.

5 TYP CORNER WALL INTERSECTION DETAIL

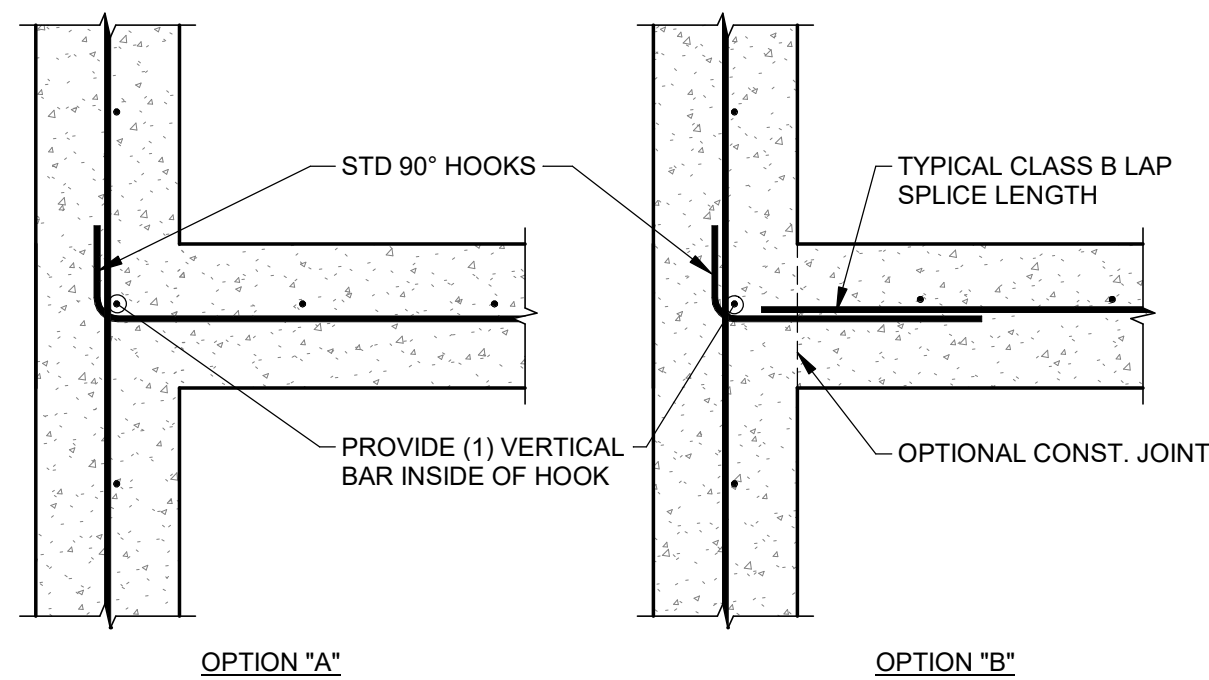
SCALE: NTS

6 TYP WALL 3-WAY INTERSECTION DETAIL

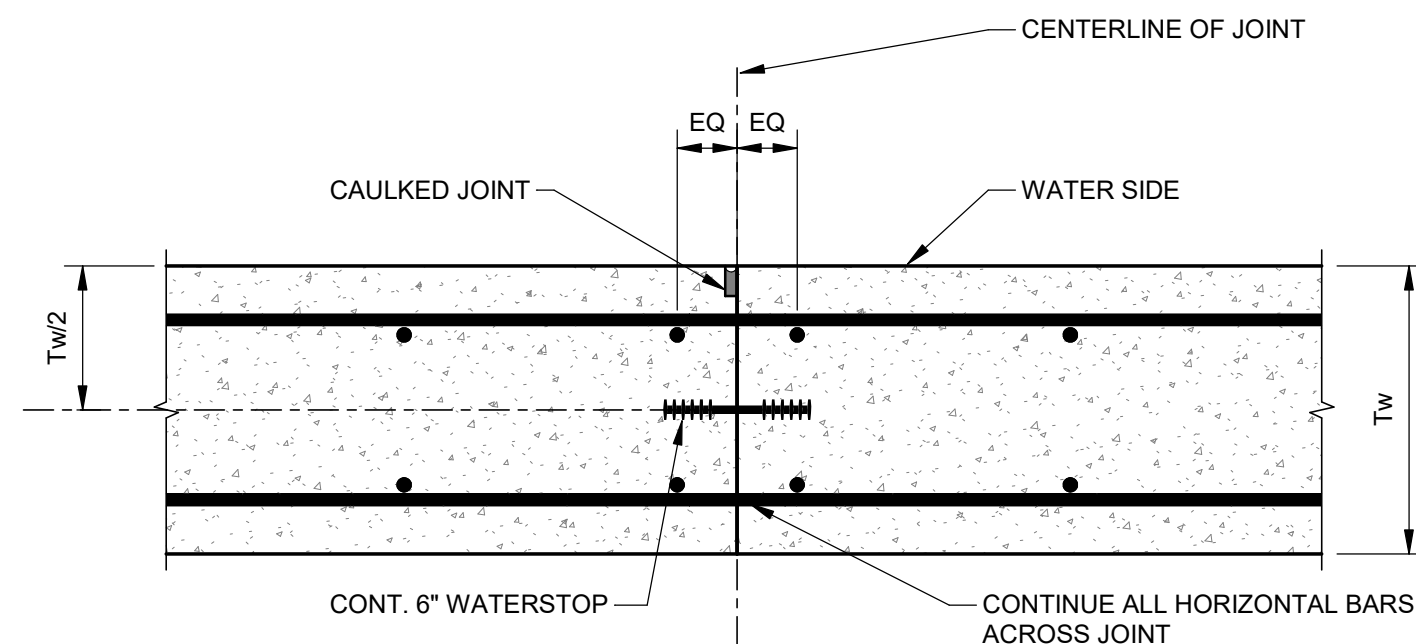
SCALE: NTS

7 TYP WALL INTERSECTION REBAR DETAILS

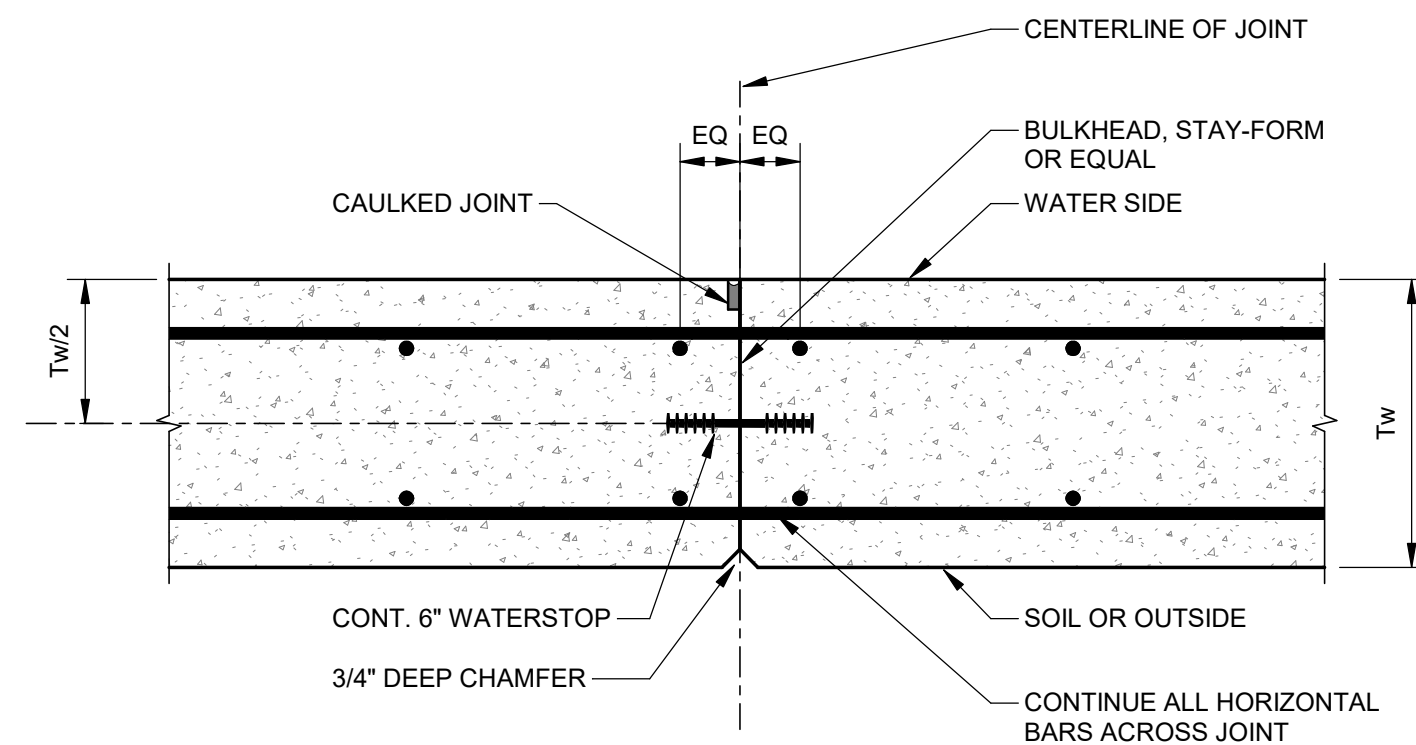
SCALE: NTS



- NOTES:
- CORNER AND INTERSECTION BARS TO MATCH SIZE & SPACING OF HORIZ. BARS.
 - CENTER VERTICAL BARS IN WALL U.N.O.
 - REFER TO OTHER DETAILS FOR REQUIRED BAR SIZE AND SPACING.
 - THIS IS A TYPICAL DETAIL FOR WALLS WITH (1) MATT OF REINFORCING.
 - THIS IS A TYPICAL DETAIL FOR NON-WATER RETAINING WALLS.



NOTE: TYPICAL FOR SLABS WITH TWO MATS OF REINFORCING BARS



NOTE: TYPICAL FOR WALLS WITH LIQUID ONE SIDE OF WALL ONLY. TYPICAL FOR WALLS WITH TWO-MATS OF REINFORCING STEEL

8 TYP WALL INTERSECTION REBAR DETAILS

SCALE: NTS

9 TYP HORIZONTAL SLAB CONTROL JOINT DETAIL

SCALE: NTS

10 TYP VERTICAL WALL CONTROL JOINT DETAIL

SCALE: NTS



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	REVISION	DESCRIPTION	BY	APP.	DATE

SEWER TRANSFER

TOWN OF PALISADE

STRUCTURAL (S)

PUMP BUILDING

TYPICAL CONCRETE DETAILS

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024

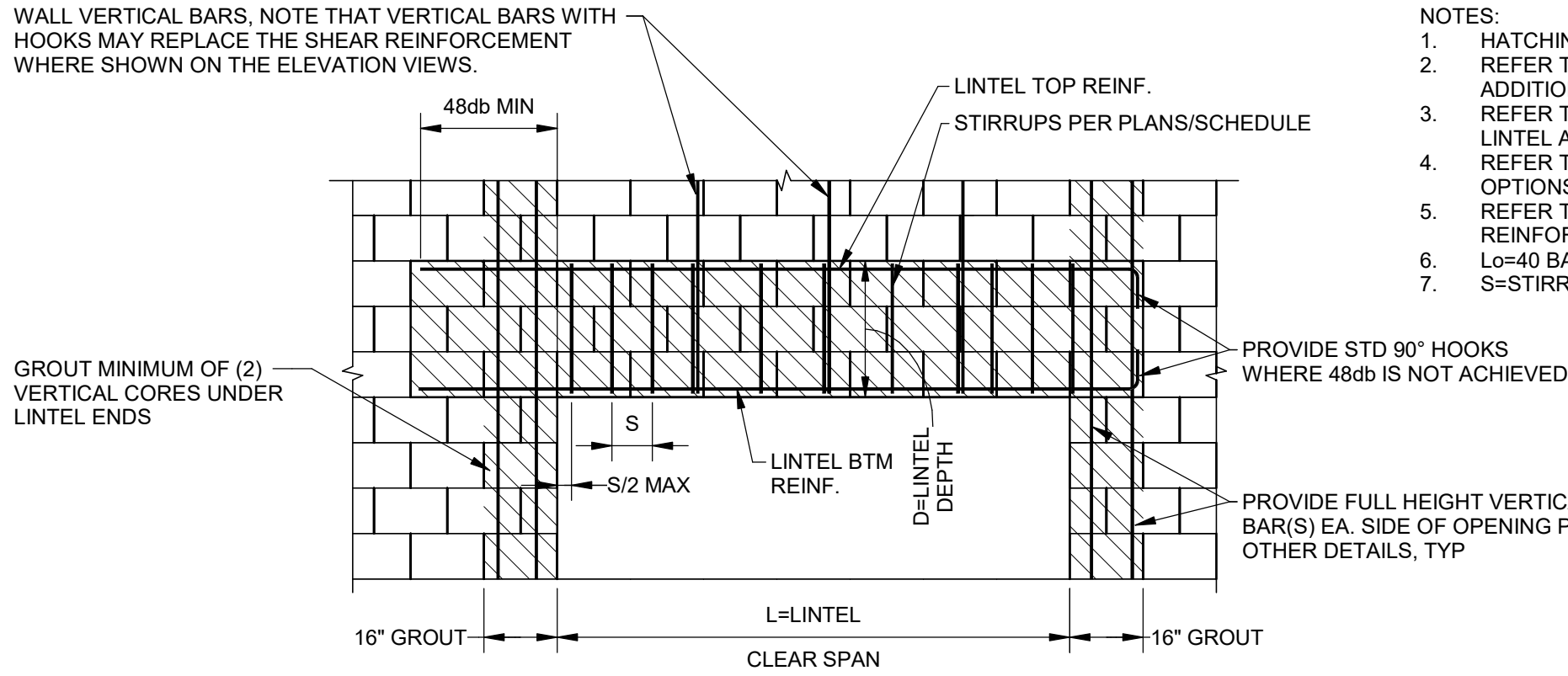
DRAWING:

S-903

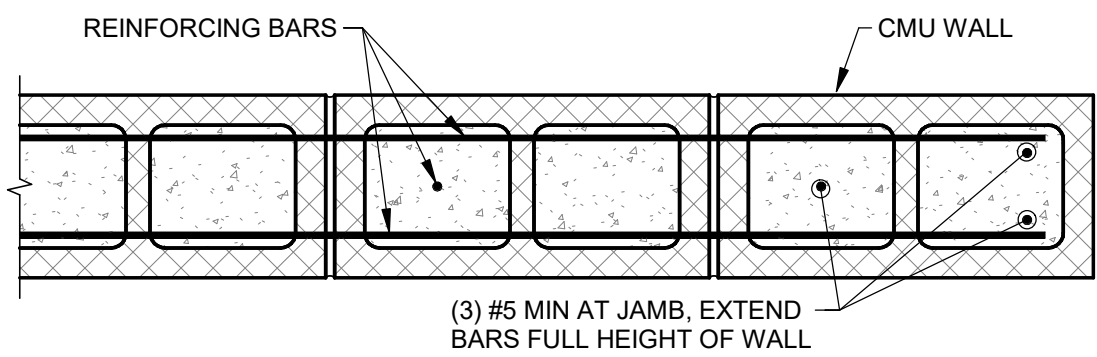
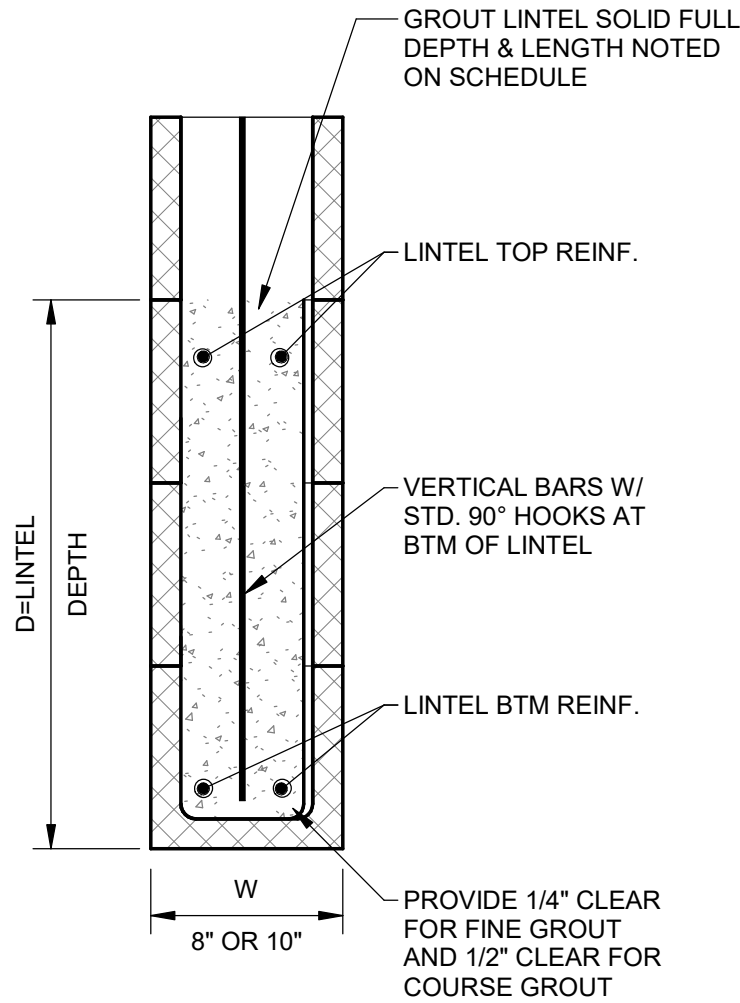


NOTES: WALL SHOWN IS A REPRESENTATIVE SECTION OF TYPICAL MASONRY OR BRICK WALL. FOR ACTUAL WALL AND OPENING DIMENSIONS REFER TO THE PLANS AND ELEVATION VIEWS. REFER TO OTHER DETAILS AND STRUCTURAL NOTES FOR REINFORCING REQUIREMENTS.

C:\Users\lenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_enorales\6P7SX.rvt



- NOTES:
1. HATCHING INDICATES SOLID GROUTED CMU CORES, TYPICAL. REFER TO TYPICAL CMU OPENING ELEVATION VIEW FOR ADDITIONAL REQUIREMENTS.
 2. REFER TO CMU LINTEL SECTION VIEW & SCHEDULE FOR LINTEL ADDITIONAL REQUIREMENTS.
 3. REFER TO TYPICAL LINTEL STIRRUP DETAIL FOR STIRRUP OPTIONS.
 4. REFER TO WALL ELEVATION VIEWS FOR TYPICAL CMU WALL REINFORCING REQUIREMENTS.
 5. L_o=40 BAR DIAMETERS (BOTTOM BARS), 24\"/>



NOTE: REFER TO OTHER DETAILS & NOTES FOR REINFORCING.

6 TYP MASONRY WALL OPENING LINTEL ELEVATION

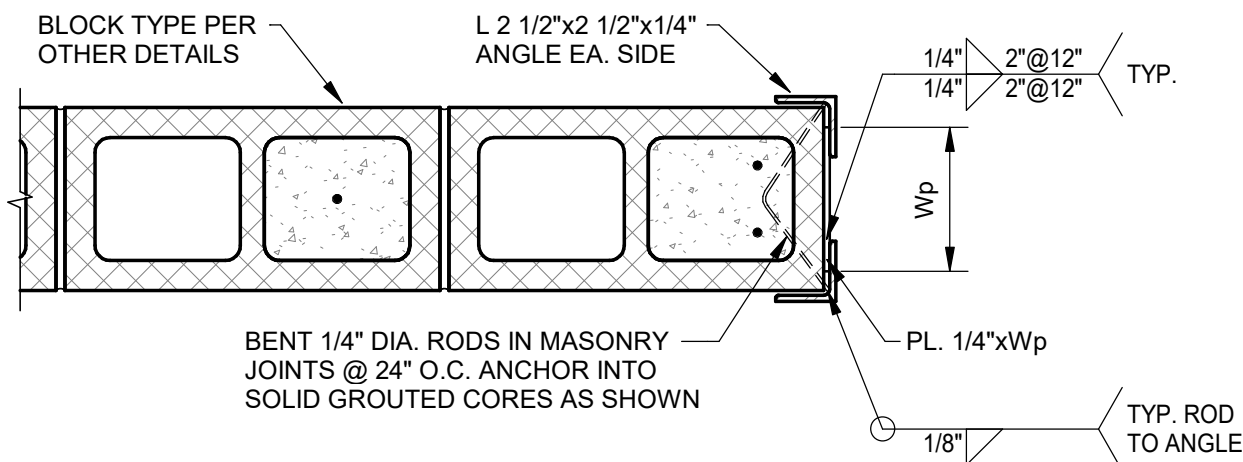
SCALE: NTS

3 TYP MASONRY LINTEL DETAIL

SCALE: NTS

4 TYP MASONRY JAMB DETAIL

SCALE: NTS



NOMINAL CMU SIZE	NOMINAL CMU SIZE
	Wp
8"	6"
10"	8"
12"	10"

5 CMU DOOR JAMB PROTECTION DETAIL

SCALE: NTS



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS

J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	REVISION	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE

STRUCUTRAL (S)
PUMP BUILDING
TYPICAL MASONRY DETAILS

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024

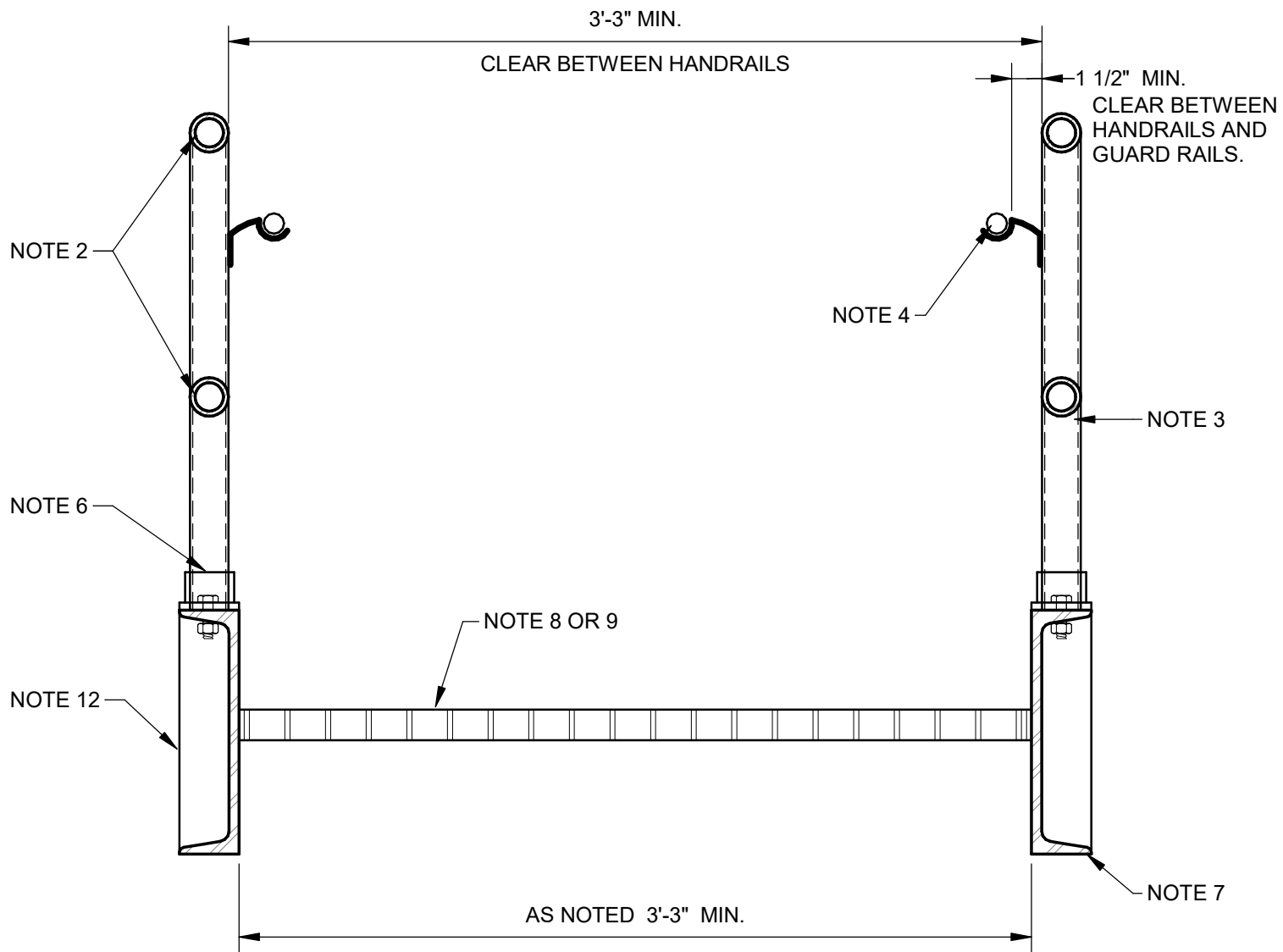
DRAWING:

S-922

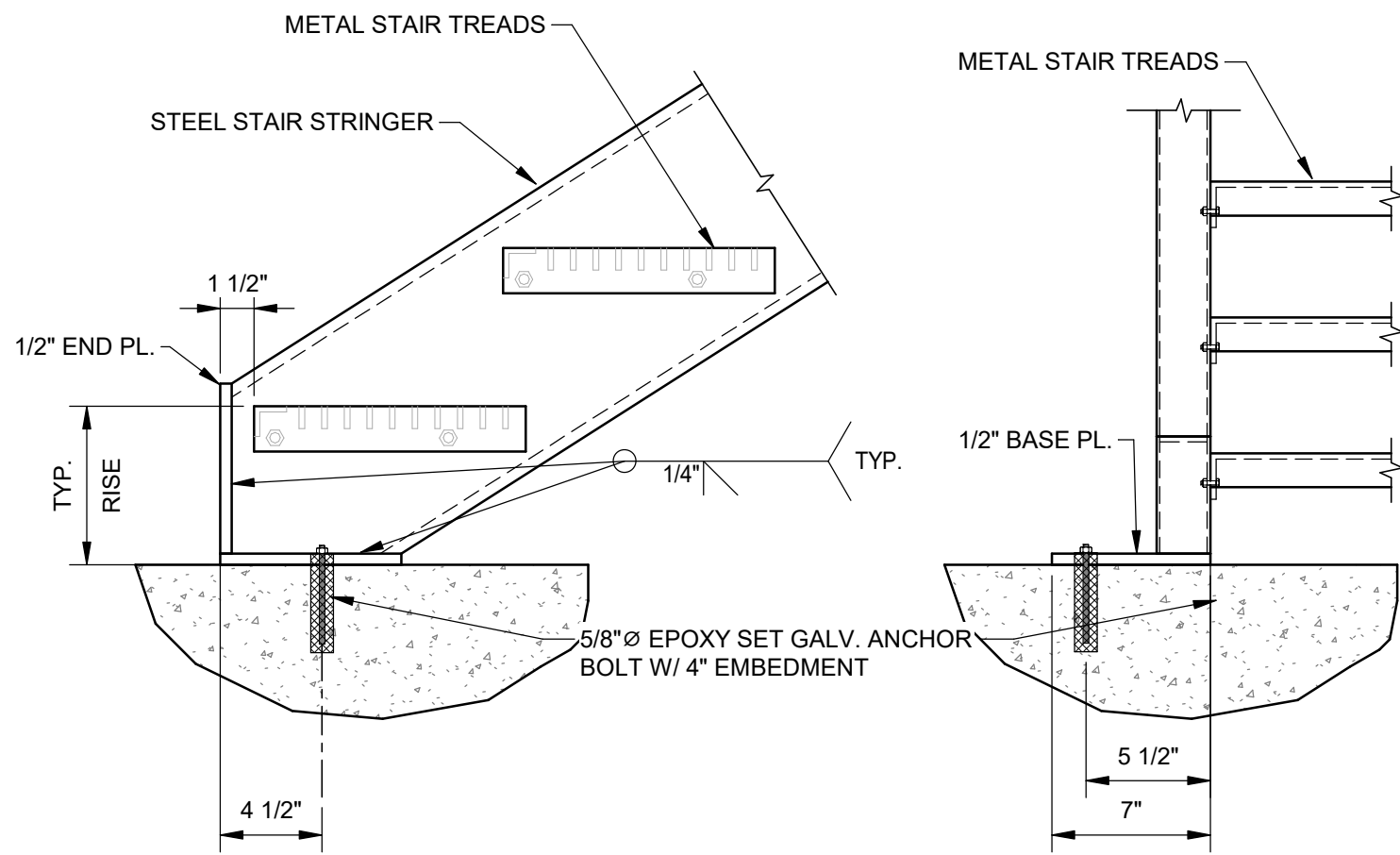
C:\Users\jenorales\OneDrive - J-U-B Engineers, Inc\Documents\Revit Project Local\81-23-029_S_emo\railesP7SX.rvt

KEYED NOTES:

1. REFER TO METAL FABRICATIONS OR METAL STAIR SYSTEMS TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. (2) EVENLY SPACED 2" NOMINAL DIAMETER ALUMINUM GUARDS.
3. 2" NOMINAL DIAMETER ALUMINUM POSTS @ 6' O.C., MAX SPACING.
4. 1 1/2" NOMINAL DIAMETER ALUMINUM HAND RAIL, EACH SIDE.
5. EXTEND GUARD RAIL OUT PER BUILDING CODE REQUIREMENTS.
6. ATTACH METAL POSTS TO STAIR STRINGERS WITH MFG. STANDARD BRACKETS (SPEED-RAIL SYSTEM BY HOLLAENDER MFR CO OR EQUAL).
7. C12x20.7 STEEL STRINGER EACH SIDE, MITER CUT INTERSECTIONS & SEAL WELD ENDS TOGETHER, TYPICAL.
8. ALUMINUM STAIR TREADS W/ SERRATED SURFACE & SAFETY NOSING, ATTACH TO STRINGERS W/ (2) 5/8" DIA. SST BOLT, TYPICAL.
9. 1 1/2" DEEP ALUMINUM BAR GRATE LANDING.
10. ATTACH TO CONCRETE FLOOR/SLAB PER TYPICAL DETAILS.
11. ATTACH TO CONCRETE WALL PER TYPICAL DETAILS.
12. 3/8" THICK VERTICAL STIFFENER PL'S CENTERED UNDER EACH GUARD POST W/ 3/16 FILLET WELDS (3) EDGES TO STRINGER, TYPICAL.
13. 3" DIA. STEEL PIPE POST W/ 3/8" PLATE EA. END W/ (2) 5/8" DIA. BOLTS TOP & (2) 5/8" DIA.x4" EXPANSION BOLTS BOTTOM.
14. FINISH, ALL FABRICATED STEEL SHALL BE HOT DIPPED GALVANIZED PER SPECIFICATIONS SECTION 05 04 10.

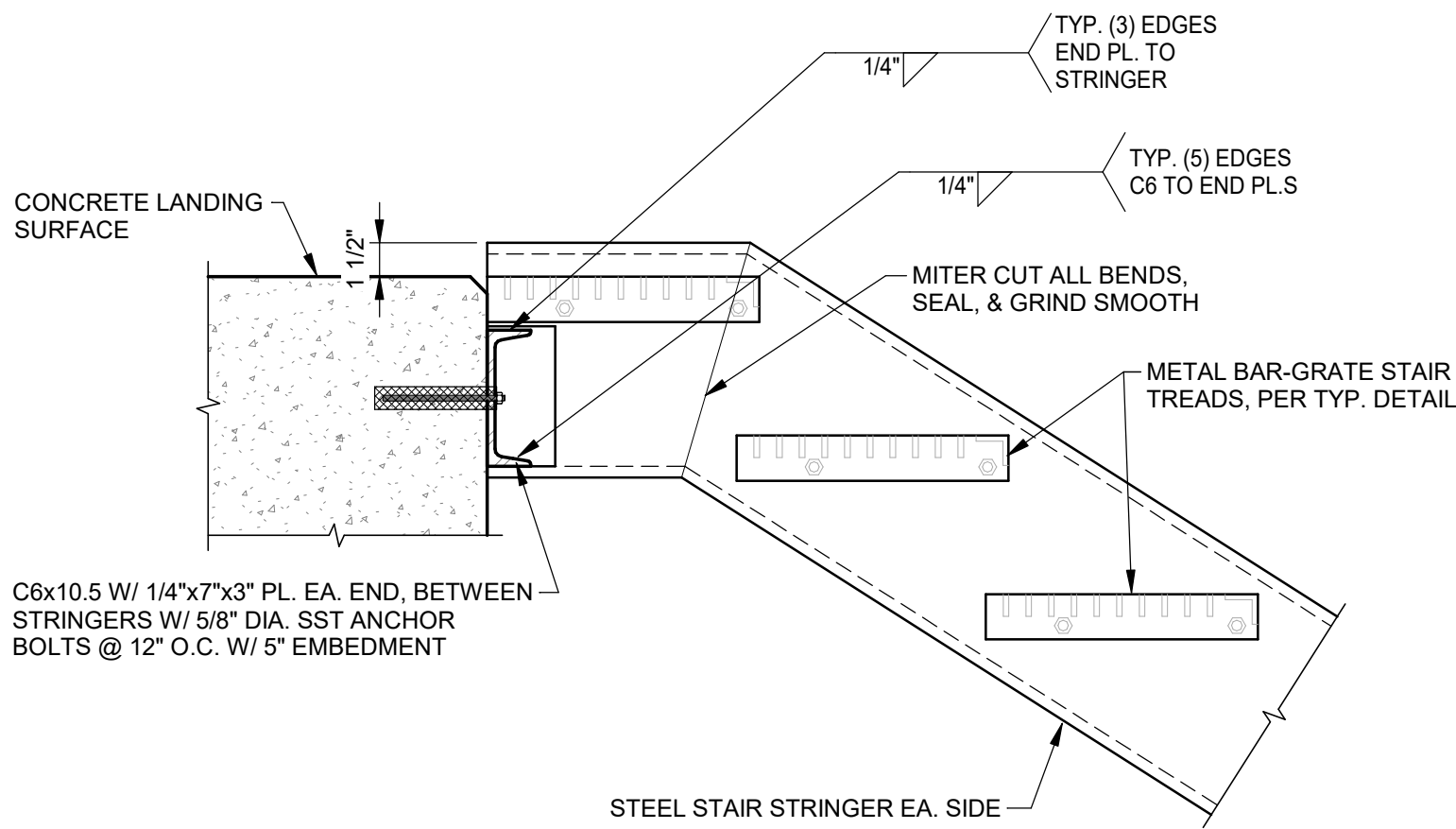


2 TYP METAL STAIR SECTION VIEW
SCALE: NTS



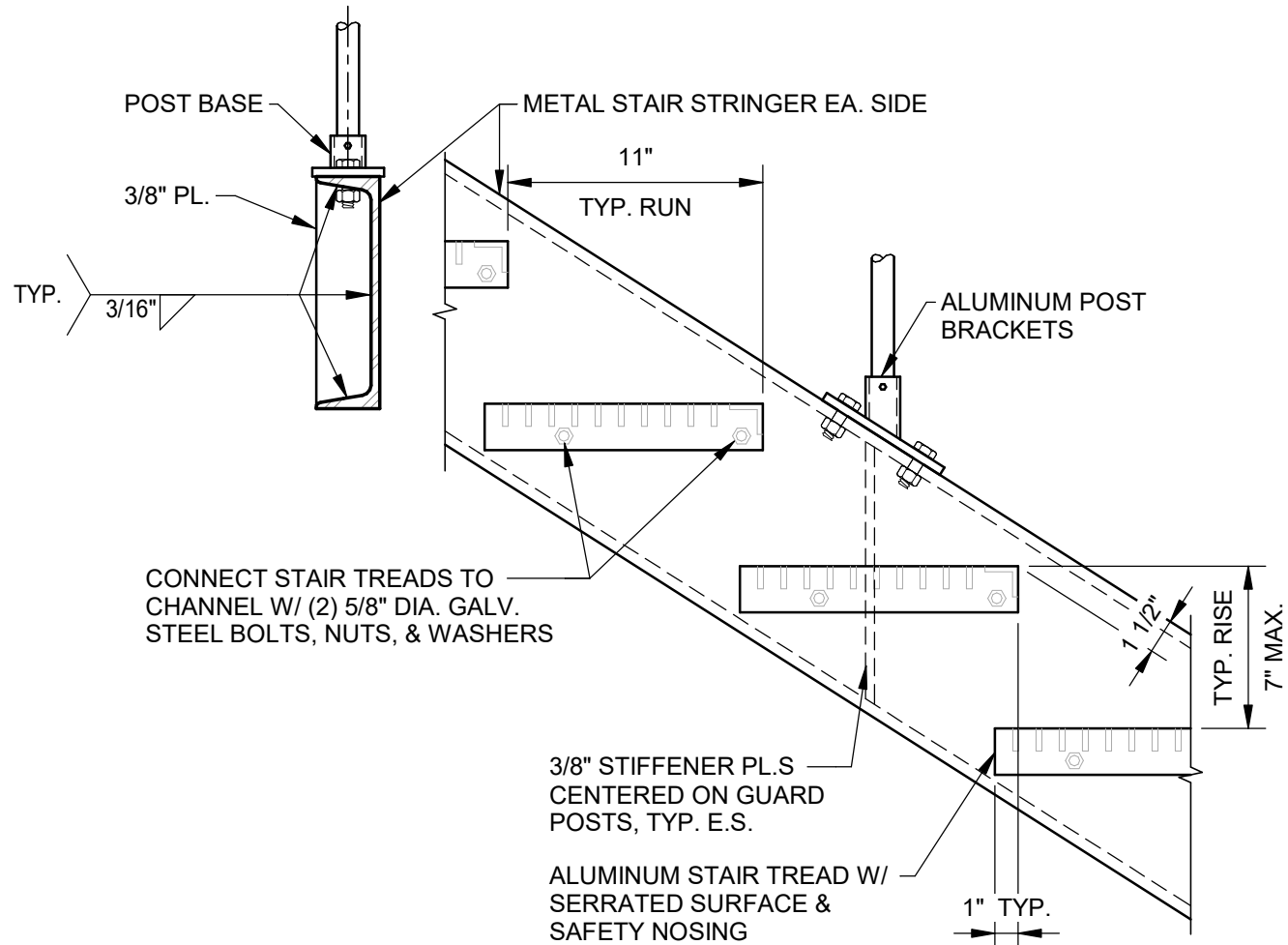
NOTE: REFER TO OTHER DETAILS FOR STAIR RISE AND RUN. REFER TO TYPICAL METAL STAIR CONSTRUCTION SPECIFICATIONS. GUARD RAIL, POST, & HAND RAIL ARE NOT SHOWN ON THIS VIEW FOR CLARITY.

3 TYP STAIR STRINGER BASE PL. DETAIL
SCALE: NTS



NOTE: REFER TO OTHER DETAILS FOR STAIR RISE AND RUN. REFER TO TYPICAL METAL STAIR CONSTRUCTION SPECIFICATIONS. GUARD RAIL, POSTS, & HAND RAIL ARE NOT SHOWN ON THIS VIEW FOR CLARITY.

4 TYP METAL STAIR LANDING CONNECTION
SCALE: NTS



NOTE: REFER TO OTHER DETAILS FOR STAIR RISE AND RUN. REFER TO TYPICAL METAL STAIR CONSTRUCTION SPECIFICATIONS. GUARD RAIL, POSTS, & HAND RAIL ARE NOT SHOWN ON THE VIEW FOR CLARITY.

5 TYP METAL STAIR TREAD DETAIL
SCALE: NTS



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN CONSENT BY J-U-B. WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION		DESCRIPTION	BY	APP.	DATE
NO.					

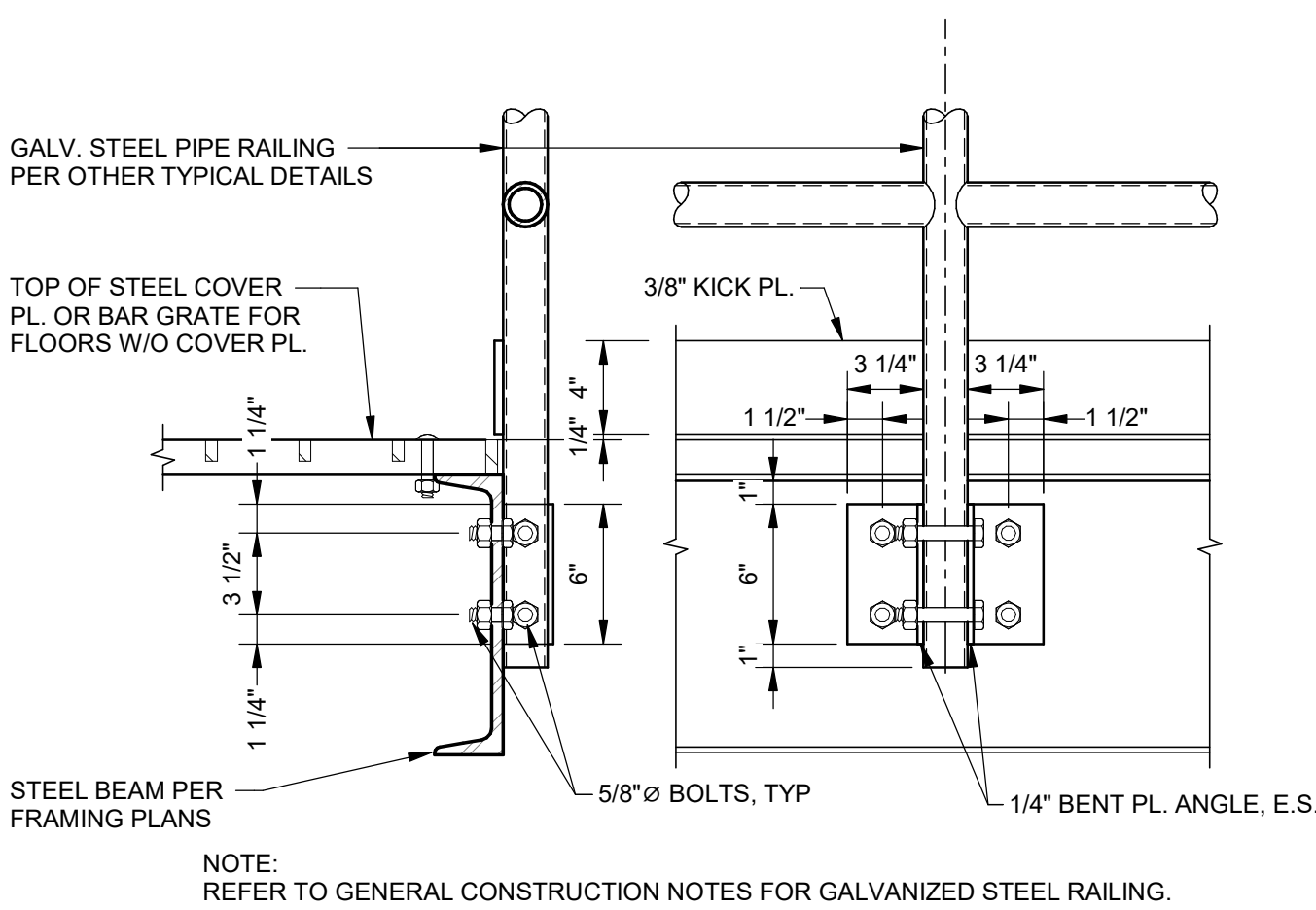
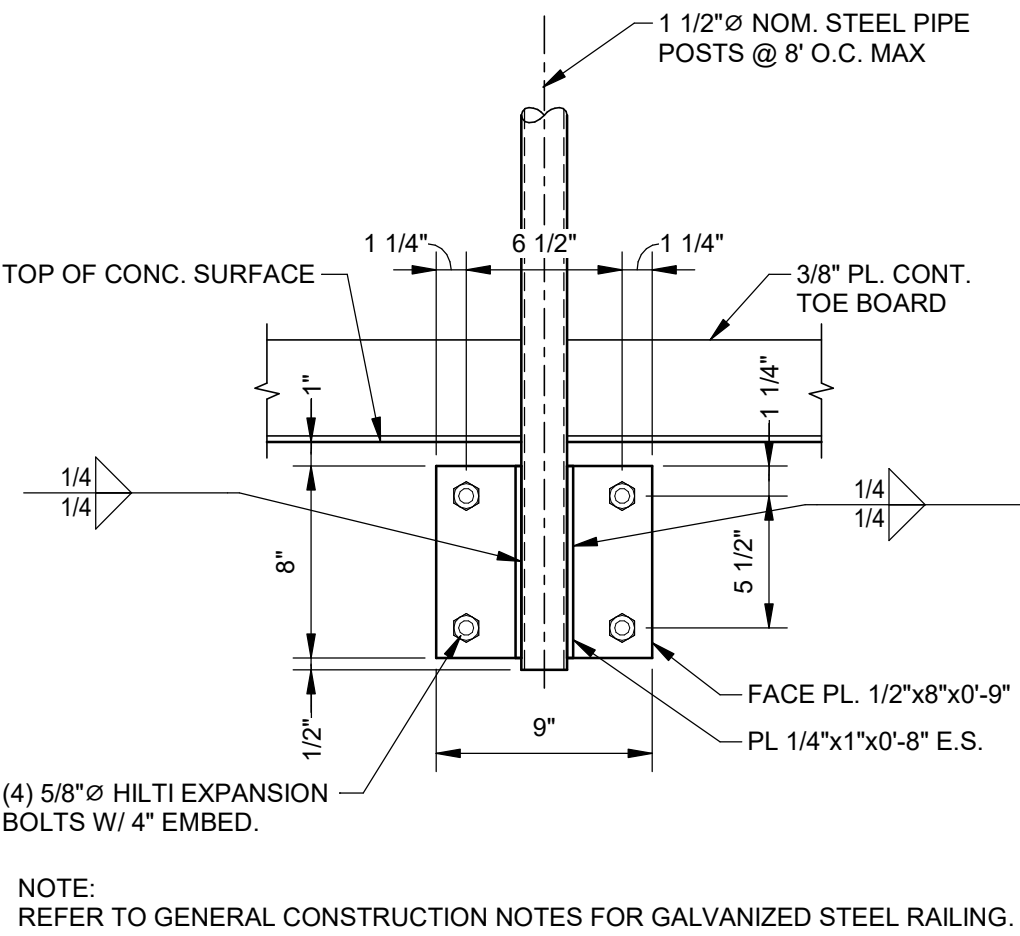
SEWER TRANSFER
TOWN OF PALISADE

STRUCUTRAL (S)
PUMP BUILDING
TYPICAL STAIR DETAILS

FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 06/11/2024
DRAWING:

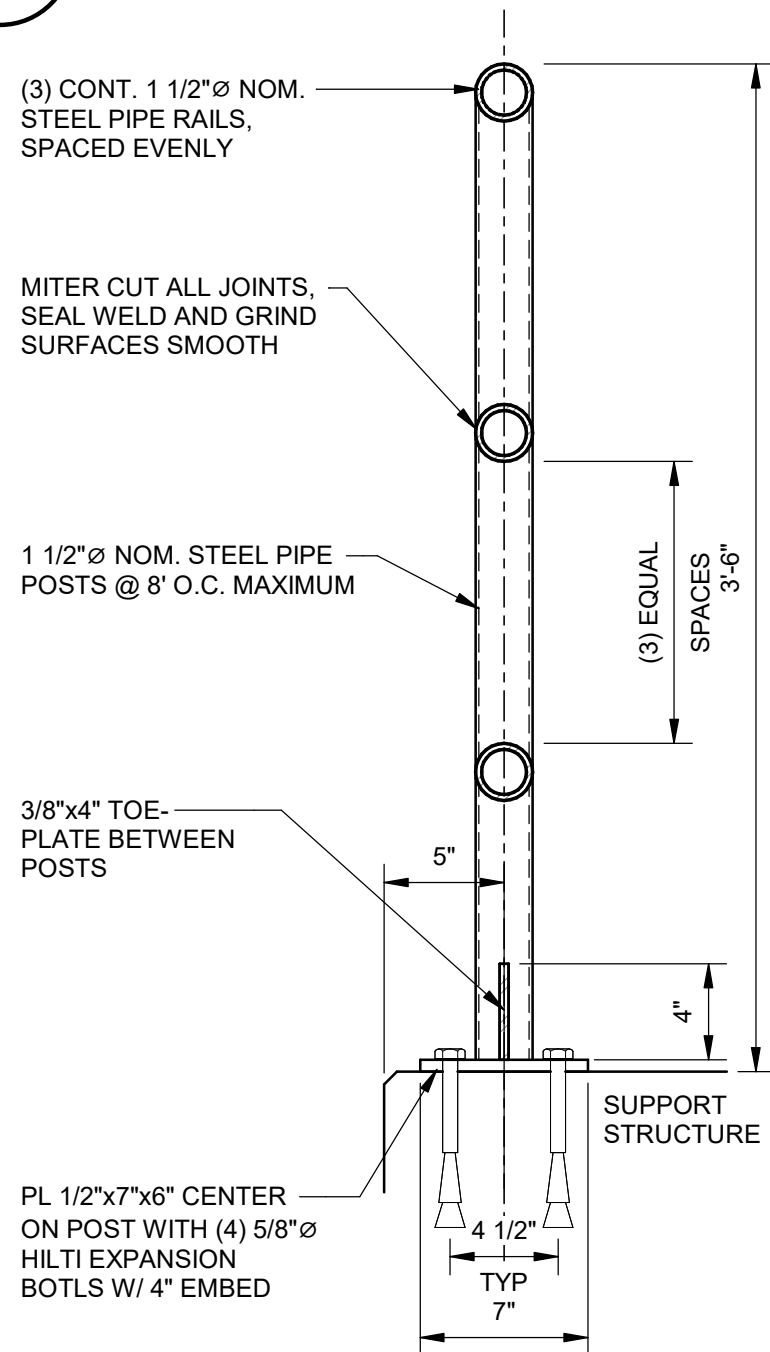
S-931

- STEEL PIPE TO BE ASTM A53 GRADE B; WITH $F_y = 35$ KSI.
- STEEL PLATES, CHANNELS, & ANGLES TO BE ASTM A36; WITH $F_y = 36$ KSI.
- ALL WELDING TO CONFORM TO CURRENT AWS D1.1 REQUIREMENTS.
- COMPLETE ASSEMBLY OR SUB-ASSEMBLIES, BRACKETS, RAILING AND MISCELLANEOUS STEEL PIECES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- STRUCTURAL BOLTS, NUTS, & WASHERS SHALL BE HOT-DIP GALVANIZED.
- EXPANSION ANCHORS TO BE HILTI KWIK-BOLT II OR APPROVED EQUAL. INSTALL EXPANSION ANCHORS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- EXPANSION BOLTS, NUTS, & WASHERS SHALL BE STAINLESS STEEL.
- REFER TO OTHER DETAILS FOR CONCRETE REINFORCING REQUIRMENTS.
- COORDINATE REBAR PLACEMENT IN CONCRETE TO MISS ANCHOR BOLTS & INSERTS.
- GALVANIZED AREAS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH AN APPROVED COLD-GALVANIZING COMPOUND.
- EPOXY SET ANCHORS SHALL UTILIZE HILTI HIT HY 150 CONSTRUCTION ADHESIVE AND HAS GALVANIZED OR STAINLESS STEEL THREADED RODS.
- FIELD SPLICES SHALL BE MADE UTILIZING GALVANIZED STEEL PIPE SLEEVE INSERTS AND HOT-DIP GALVANIZED STEEL BOLTS, NUTS, AND WASHERS.



1 TYP STEEL GUARD RAIL NOTES

SCALE: NTS

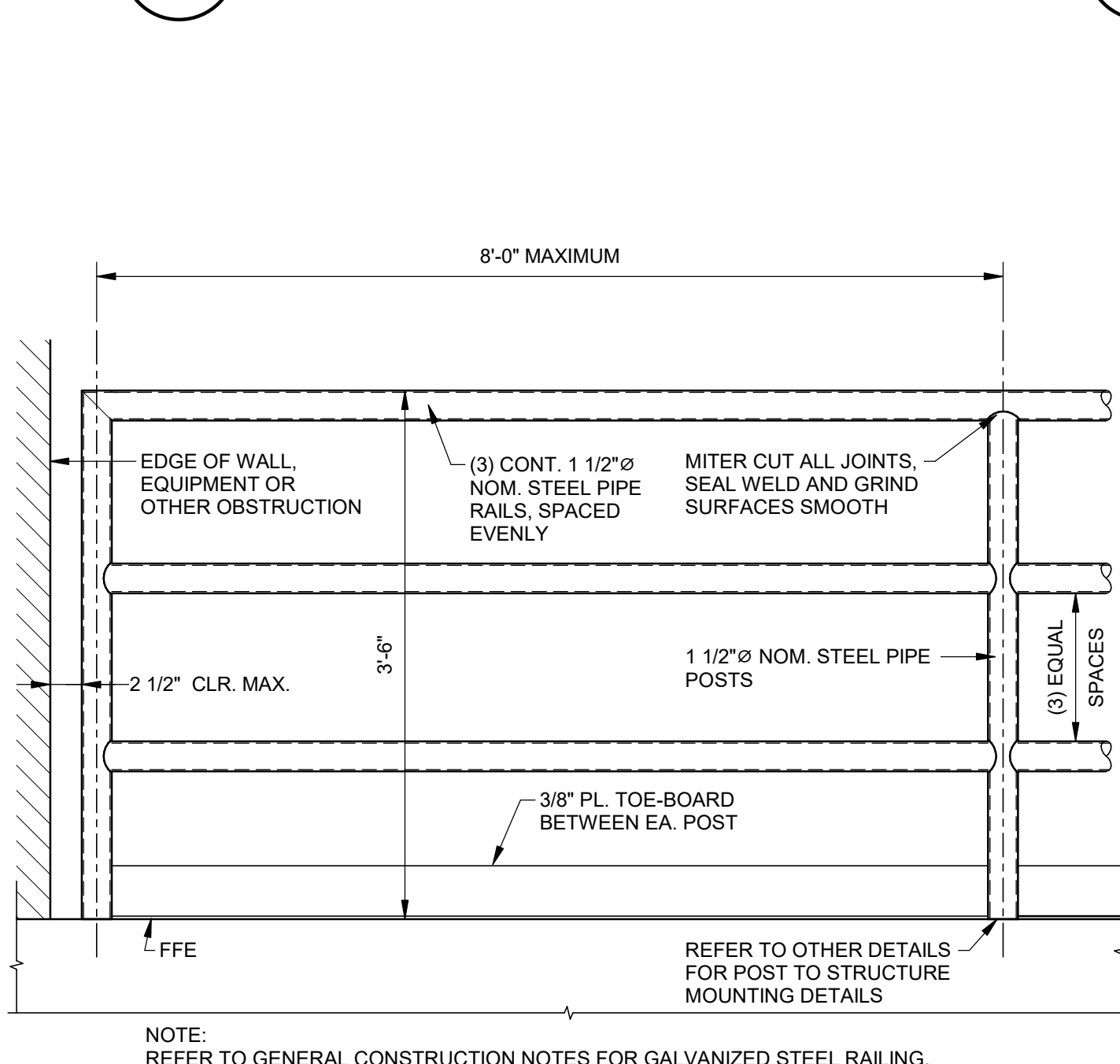


5 TYP STEEL GUARD RAIL DETAIL

SCALE: NTS

2 TYP STEEL GUARD RAIL DETAIL 3

SCALE: NTS

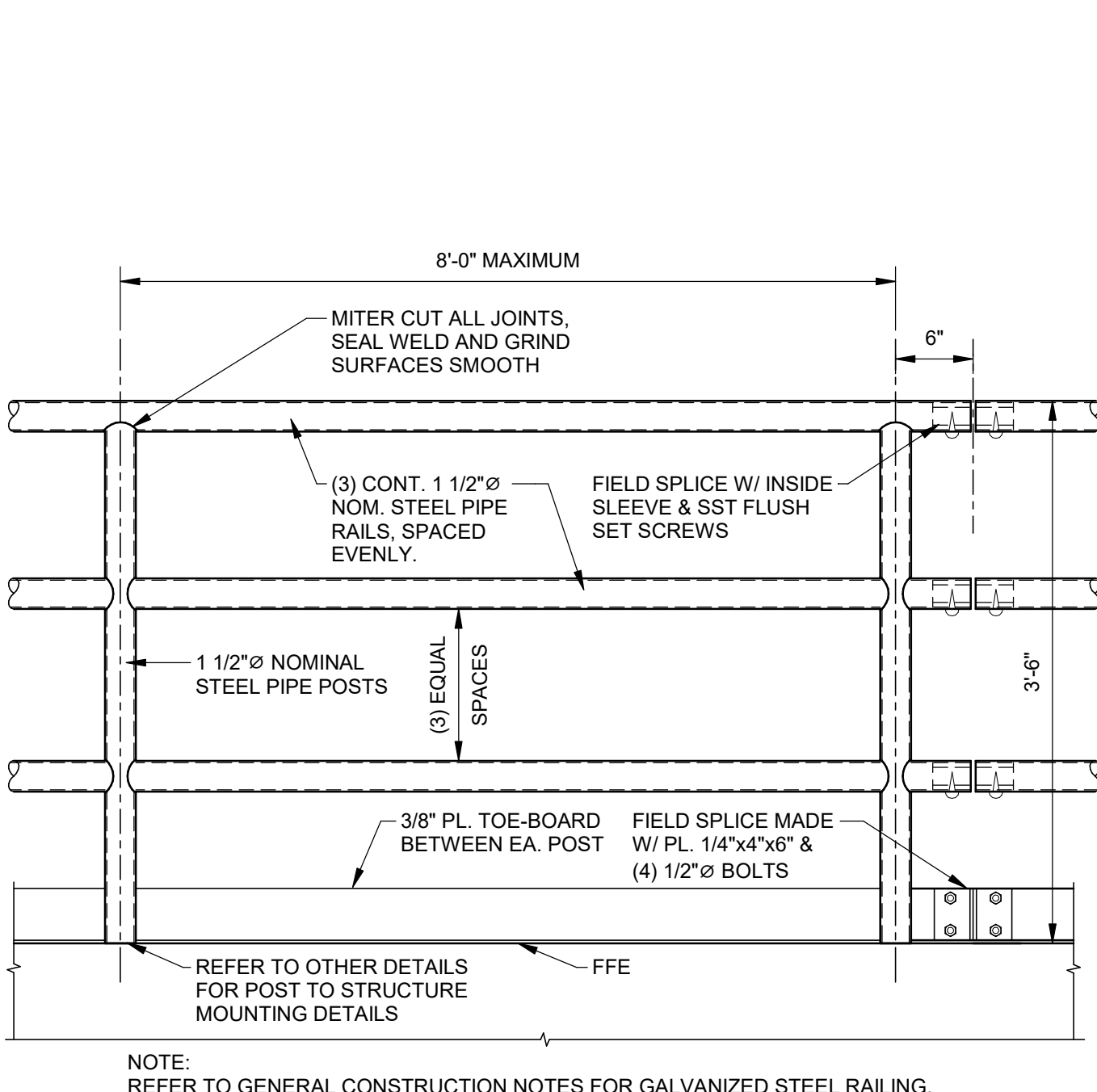


9 TYP STEEL GUARD RAIL DETAIL

SCALE: NTS

4 TYP STEEL PIPE RAILING ATTACHMENT TO STEEL CHANNELS

SCALE: NTS



10 TYP STEEL GUARD RAIL DETAIL

SCALE: NTS



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
305 S. Main St. Unit 6
Palisade, CO 81526
Phone: 970.208.8508
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL BE THE PROPERTY OF J-U-B ENGINEERS, INC. AND SHALL BE USED WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	REVISION	DESCRIPTION	BY	DATE

SEWER TRANSFER
TOWN OF PALISADE

STRUCUTRAL (S)
PUMP BUILDING
TYPICAL GUARD RAIL DETAILS

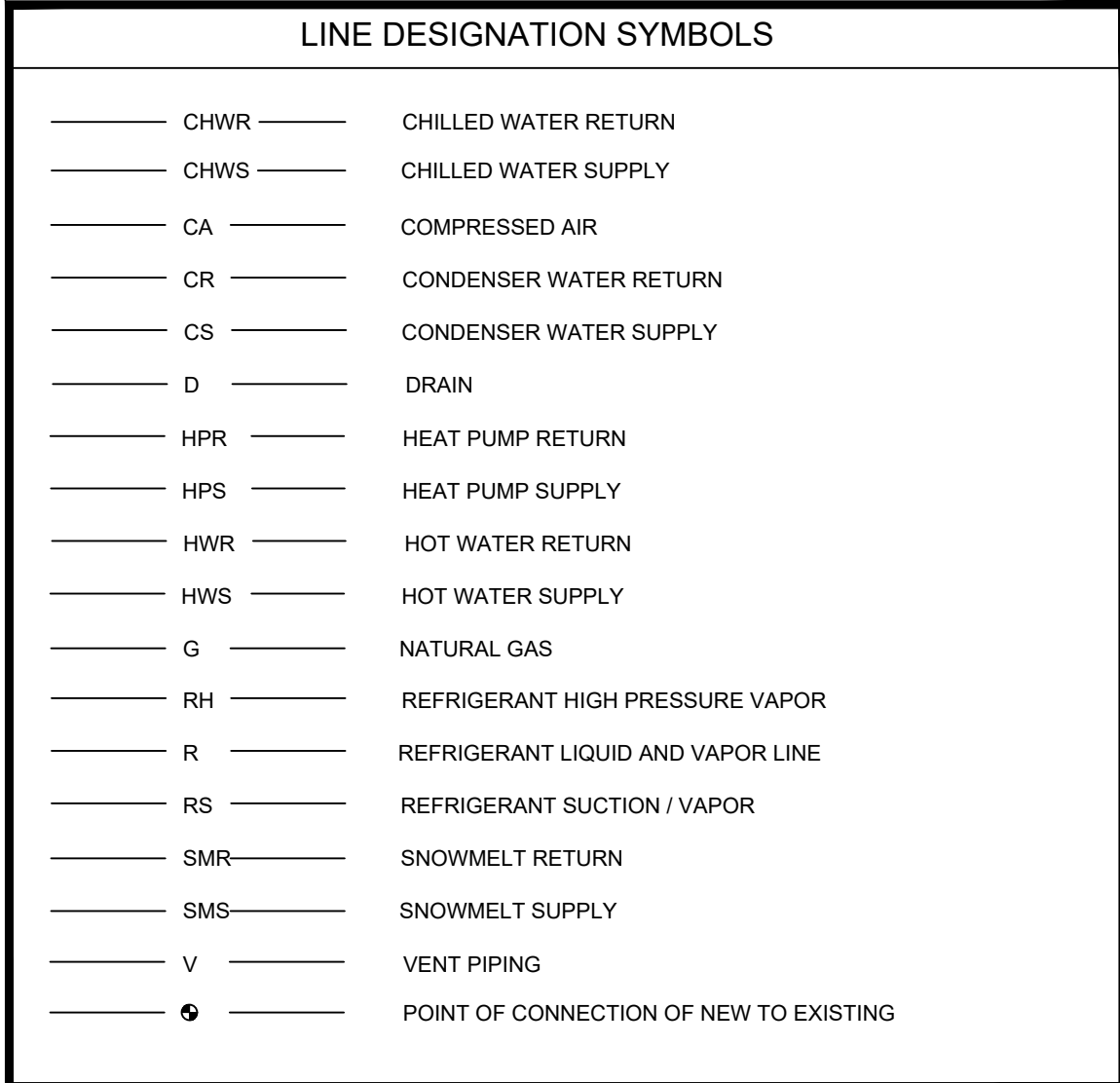
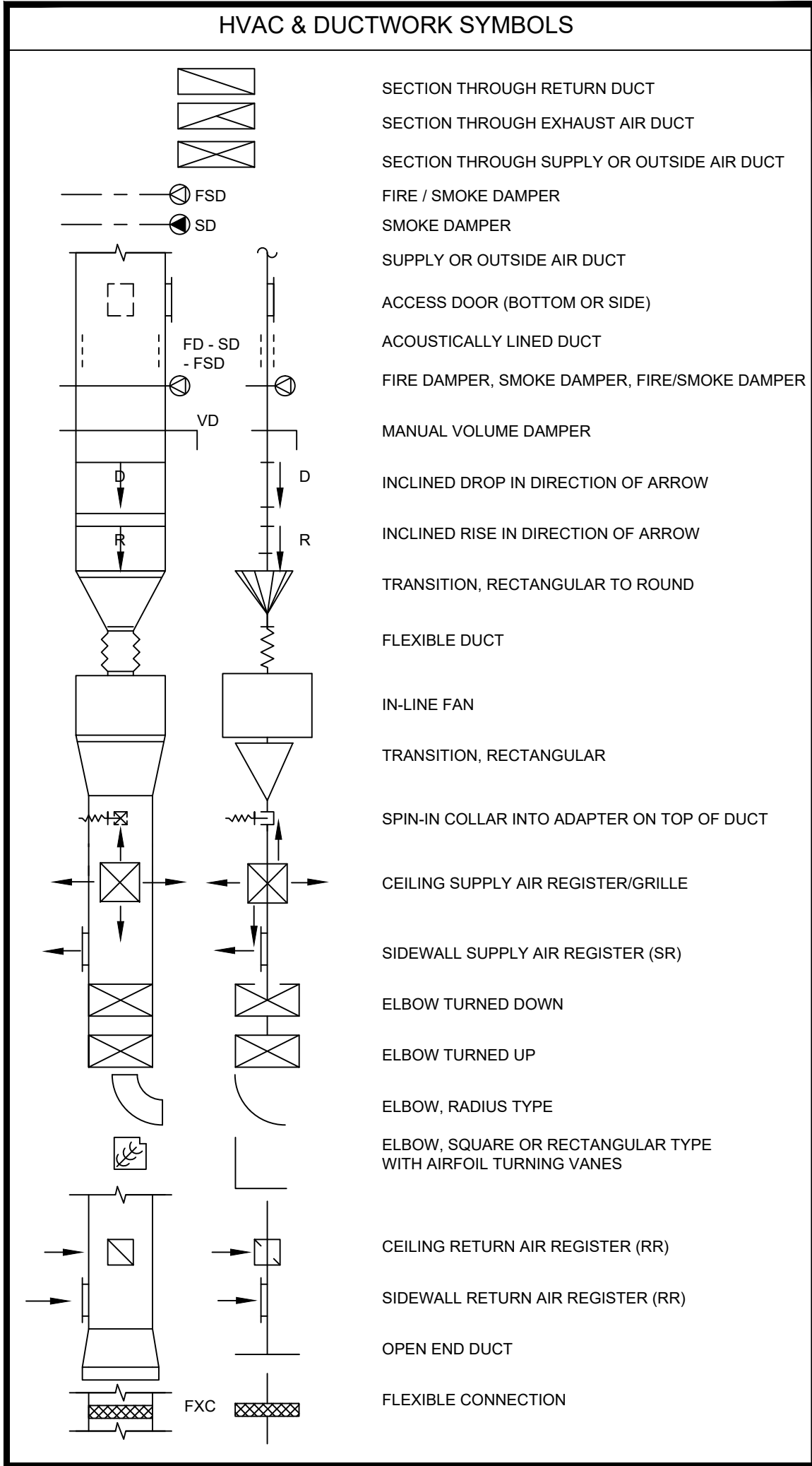
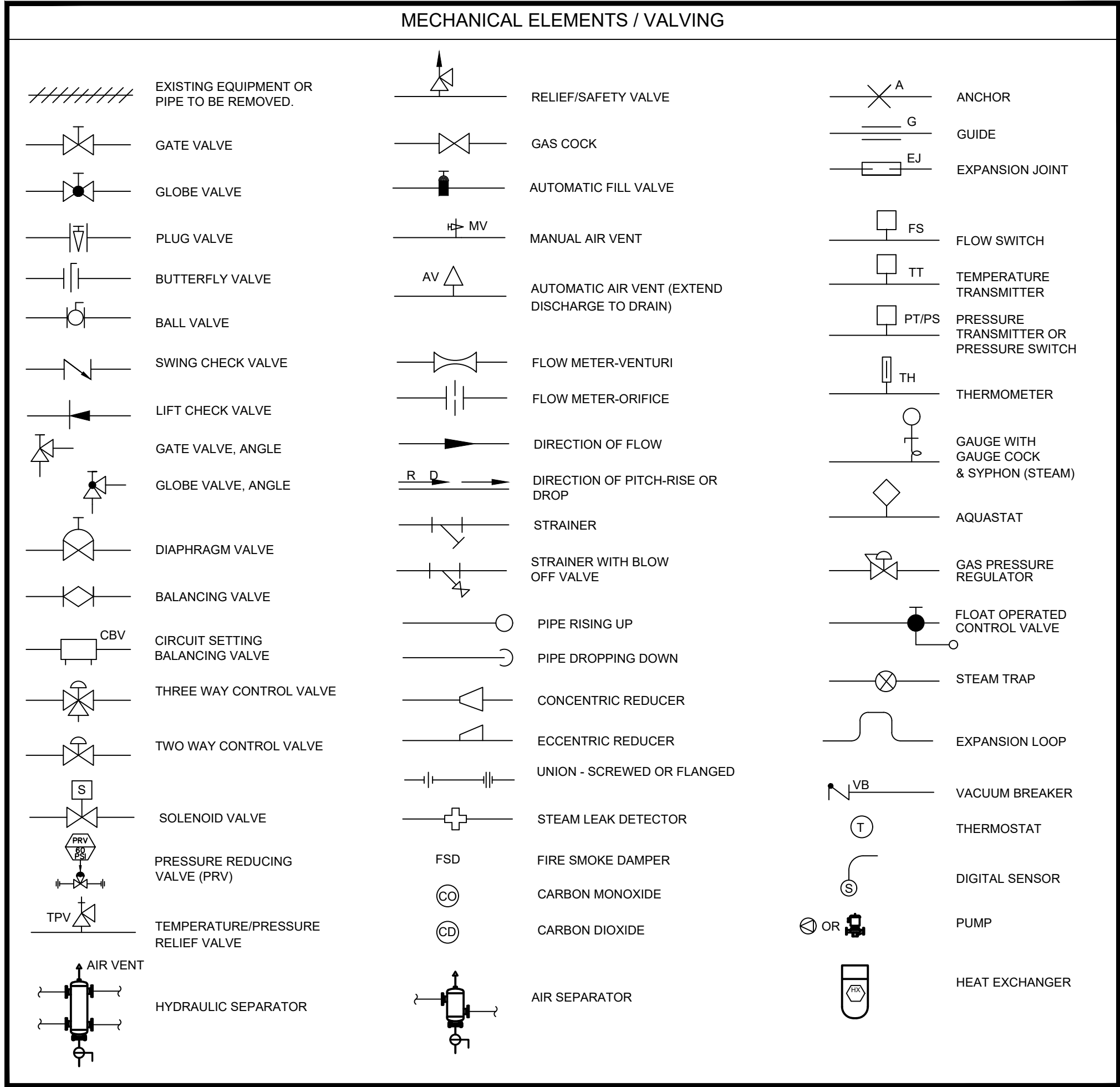
FILE:
JUB PROJ. #81-23-029
DRAWN BY:EM
DESIGN BY:JLS
CHECKED BY:JCH

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY

LAST UPDATED: 06/11/2024

DRAWING:

S-932



RESPONSIBLE DIVISION:

UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED AS FOLLOWS:

EQUIPMENT	FURNISHED	SET	POWER WIRED	CONTROL WIRED
COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23(1)	26	26(2)	23
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26	--
MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS (LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)	--	23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)	--	23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

SUBSCRIPT FOOTNOTES:

1. MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1) NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.
2. IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23. CONNECT UNDER DIVISION 26.

ABBREVIATIONS:

44" MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER OF DEVICE	DIA DIAMETER	HP HORSEPOWER	PTAC PACKAGED TERMINAL AIR CONDITIONER
A AMPS	DIAG DIAGRAM	HR HOUR	PV PLUG VALVE
A.D. ACCESS DOOR	DIFF DIFFERENTIAL	HT HEIGHT	PVC POLYVINYL CHLORIDE
AAV AIR ADMITTANCE VALVE	DISCH DISCHARGE	HTR HEATER	QTY QUANTITY
ABV ABOVE	DIV DIVISION	HWR HEATING WATER RETURN	RA RETURN AIR GRILLE / REGISTER
AC AIR CONDITIONING UNIT	DN DOWN	HWS HEATING WATER SUPPLY	RCP REFLECTED CEILING PLAN
AC ABOVE COUNTER	DS DUCT SILENCER	HX HEAT EXCHANGER	RD ROOF DRAIN
AD AREA DRAIN (SEE SYMBOLS)	DWG DRAWING	ID INSIDE DIAMETER	REL RELIEF
A.F.C. ABOVE FINISHED CEILING	DX DIRECT EXPANSION	IG ISOLATED GROUND	REQD REQUIRED
A.F.G. ABOVE FINISHED GRADE	(E) EXISTING	IN INCHES	RF RETURN FAN
AIC AMPERE INTERRUPTING CAPACITY	EA EXHAUST AIR GRILLE/REGISTER	INV INVERT	RH RELATIVE HUMIDITY
AFCI ARC FAULT CIRCUIT INTERRUPTERS	EAT ENTERING AIR TEMPERATURE	JBOX JUNCTION BOX	RHC REHEAT COIL
AHU AIR HANDLING UNIT	EC ELECTRICAL CONTRACTOR	K KELVIN	RLA RATED LOAD AMPS
ALUM ALUMINUM	ECC ECCENTRIC	KW KILOWATT	RM ROOM
AP ACCESS PANEL OR DOOR	EF EXHAUST FAN	KVA KILO VOLT - AMPS	RPM REVOLUTIONS PER MINUTE
ATS AUTOMATIC TRANSFER SWITCH	EFF EFFICIENCY	L LENGTH	SA SUPPLY AIR GRILLE / REGISTER
AV AUDIO / VIDEO	EL ELEVATION	LAT LEAVING AIR TEMPERATURE	SC SHORT CIRCUIT
AVG AVERAGE	ELEC ELECTRIC	LV LAVATORY	SCA SHORT CIRCUIT AVAILABLE
AWG AMERICAN WIRE GAGE	ELEV ELEVATOR	LB POUND	SCOR SHORT CIRCUIT CURRENT RATING
BAS BUILDING AUTOMATION SYSTEM	EM EMERGENCY FUNCTION	LD LINEAR DIFFUSER	SCH SCHEDULE
BB BASEBOARD	ENT ENTERING	LF LINEAR FEET	SD SMOKE DAMPER
BD BACK DRAFT DAMPER	EMT ELECTRIC METALLIC TUBE	LIN LINEAR	SEF SMOKE EXHAUST FAN
BFP BACK FLOW PREVENTOR	EQ EQUAL	LIQ LIQUID	SF SUPPLY FAN
BL BOILER	EQUIP EQUIPMENT	LM LUMEN	SH SENSIBLE HEAT
BLDG BUILDING	EQUIV EQUIVALENT	LRA LOCKED ROTOR AMPS	SH SHOWER
BLW BELOW	ES END SWITCH	LV LOUVER	SP STATIC PRESSURE
BOB BOTTOM OF BEAM	ESP EXTERNAL STATIC PRESSURE	LWG LEAVING	SPD SURGE PROTECTION DEVICE
BOD BOTTOM OF DUCT	ET EXPANSION TANK	LWT LEAVING WATER TEMPERATURE	SPEC SPECIFICATION
BOP BOTTOM OF PIPE	EWG ELECTRIC WATER COOLER	MBH THOUSANDS OF BTU PER HOUR	SQ SQUARE
BSMT BASEMENT	EWT ENTERING WATER TEMPERATURE	MC MECHANICAL CONTRACTOR	SS STAINLESS STEEL
BTU BRITISH THERMAL UNIT	EX EXHAUST	MCA MINIMUM CIRCUIT AMPACITY	SS SAFETY SHOWER
C CHILLER	EXPAN EXPANSION	MCB MAIN CIRCUIT BREAKER	STD STANDARD
CAFCI COMBINATION ARC FAULT CIRCUIT INTERRUPTERS	EXT EXTERNAL	MD MOTORIZED DAMPER	STL STEEL
CAP CAPACITY	F DEGREES FAHRENHEIT	MDP MAIN DISTRIBUTION PANEL	SYS SYSTEM
CB CIRCUIT BREAKER	FC FREE AREA	MED MEDIUM	TEMP TEMPERATURE
CBV CIRCUIT BALANCING VALVE	FC FAN COIL UNIT	MFR MANUFACTURER	TR TRANSFER GRILLE / REGISTER
CCT CORRELATED COLOR TEMPERATURE	FC FOOTCANDLE	MIN MINIMUM	TR TAMPER RESISTANT
CKT CIRCUIT	FCV FLOW CONTROL VALVE	MISC MISCELLANEOUS	TT TEMPERATURE TRANSMITTER
CFH CUBIC FEET PER HOUR	FD FIRE DAMPER	MLO MAIN LUG ONLY	TTB TELECOMMUNICATIONS TERMINAL BACKBOARD
CFM CUBIC FEET PER MINUTE	FD FLOOR DRAIN	MOCP MAXIMUM OVERCURRENT PROTECTION	TYP TYPICAL
CHWR CHILLED WATER RETURN	FIN FINISHED	MTD MOUNTED	TX TRANSFORMER
CHWS CHILLED WATER SUPPLY	FLA FULL LOAD AMPS	MUA MAKE-UP AIR UNIT	UC UNDERCUT DOOR
CI CAST IRON	FLEX FLEXIBLE	N NEUTRAL	UH UNIT HEATER
CL CENTER LINE	FLR FLOOR	NC NORMALLY CLOSED	UNO UNLESS NOTED OTHERWISE
CLG CEILING	FOB FLAT ON BOTTOM	NEG NEGATIVE	UNOCC UNOCCUPIED
CMU CONCRETE MASONRY UNIT	FOT FLAT ON TOP	NIC NOT IN CONTRACT	UR URINAL
CO CLEAN OUT	FP FIRE PROTECTION	NL NIGHT / SECURITY LIGHT - DO NOT SWITCH	V VOLTS
COL COLUMN	FP FIRE PUMP	NO NORMALLY OPEN	VA VOLT AMPERE
COMP COMPRESSOR	FPM FEET PER MINUTE	NOM NOMINAL	VA VALVE
CONC CONCRETE	FPS FEET PER SECOND	NTS NOT TO SCALE	VAV VARIABLE AIR VOLUME UNIT
COND CONDENSATE	FS FLOW SWITCH	OA OUTSIDE AIR	VFD VARIABLE FREQUENCY DRIVE
CONN CONNECTION	FSD FIRE/SMOKE DAMPER	OBD OPPOSED BLADE DAMPER	VRF VARIABLE REFRIGERANT FLOW
CONT CONTINUATION	FT FEET	OC ON CENTER	VOLT VOLTAGE
CONTR CONTRACTOR	FXC FLEXIBLE CONNECTION	OCC OCCUPIED	VTR VENT THROUGH ROOF
CRI COLOR RENDERING INDEX	GND GROUND	OCP OVER CURRENT PROTECTION	W WIDTH
CT COOLING TOWER	GAL GALLON	OD OUTSIDE DIAMETER	W WATTS
CT CURRENT TRANSFORMER	GALV GALVANIZED	OL OVERLOAD	W/ WITH
CU CONDENSING UNIT	GEO GROUND ELECTRODE CONDUCTOR	ORD OVERFLOW ROOF DRAIN	W/O WITHOUT
CU COPPER	GFCI / GFI GROUND FAULT CIRCUIT INTERRUPTER	OZ OUNCE	WB WET BULB
CUH CABINET UNIT HEATER	GC GENERAL CONTRACTOR	PBD PARALLEL BLADE DAMPER	WC WATER COLUMN
CVB CONSTANT VOLUME BOX	GPH GALLONS PER HOUR	PD PRESSURE DROP	WC WATER CLOSET
CWR CONDENSER WATER RETURN	GPM GALLONS PER MINUTE	PH PHASE	WG WATER GAUGE
CWS CONDENSER WATER SUPPLY	GRSLB GRAINS PER POUND	POS POSITIVE PRESSURE	WP WEATHERPROOF
DB DRY BULB	H 2O WATER	POS POINT OF SALES	WPIU WEATHERPROOF IN-USE
DEPT DEPARTMENT	HB HOSE BIBB	PRV PRESSURE REDUCING VALVE	WSR WITHSTAND RATING
DF DRINKING FOUNTAIN	HD HEAD (SEE SCHEDULES)	PS PRESSURE SWITCH	XFMR TRANSFORMER
	HP HEAT PUMP	PT PRESSURE TRANSMITTER	

SUBSTITUTIONS:

A. SUBSTITUTIONS: SUBSTITUTION OF SPECIFIED EQUIPMENT WILL BE ALLOWED THROUGH A PRIOR APPROVAL PROCESS INITIATED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT INTENDED SUBSTITUTION AT LEAST FIVE DAYS PRIOR TO BID FOR APPROVAL FROM ENGINEER. SUBMITTAL SHALL INCLUDE CAPACITIES, DIMENSIONS AND OPERATING INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT. SUBSTITUTION SHALL OCCUR AT NO COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF APPROVED SUBSTITUTION AND SHALL INCUR ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING STRUCTURAL MODIFICATIONS, SPACE LAYOUT AND REDESIGN COSTS. SEE ALSO DIVISION I GENERAL REQUIREMENTS.

EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS:

A. EXAMINE CAREFULLY THE SITE AND CONDITIONS OF THE SITE. PROVIDE ALL NECESSARY EQUIPMENT AND LABOR TO INSTALL A COMPLETE WORKING SYSTEM WITHIN THE SITE CONDITIONS.

B. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND 5 DAYS PRIOR TO BIDDING REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES, AND CONFLICTS TO THE ENGINEER TO BE REMEDIED IN AN ADDENDUM TO THE PROJECT PRIOR TO BID TIME.

C. DRAWINGS ARE DIAGRAMMATIC AND CATALOG NUMBERS GIVEN ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE CAPACITY OF THE EQUIPMENT MEETS THE DRAWING REQUIREMENTS AND SHALL NOT DIMENSION FROM THE MECHANICAL, PLUMBING, OR PIPING DRAWINGS.

D. THE LATEST ADOPTED VERSIONS OF THE INTERNATIONAL BUILDING CODES SHALL BE USED AS REQUIRED. THIS WILL ALSO INCLUDE THE LATEST ADOPTED VERSIONS OF THE MECHANICAL, PLUMBING, AND ENERGY CONSERVATION CODES. ALL METHODS AND MATERIALS REQUIRED BY THESE CODES SHALL BE REQUIRED BY THESE SPECIFICATIONS UNLESS INDICATED OTHERWISE. OTHER APPLICABLE LOCAL CODES AND ORDINANCES SHALL BE AS REQUIRED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE KNOWLEDGEABLE OF THESE REQUIREMENTS.

E. WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL BEING INSTALLED, PRINTED COPIES OF THESE RECOMMENDATIONS SHALL BE FURNISHED TO THE ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF THE ITEM WILL NOT BE ALLOWED TO PROCEED UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH THESE RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL.



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.

www.jub.com

Bighorn Consulting Engineers, Inc.

Mechanical & Electrical Engineers

386 Indian Road

CO 80501

Phone: (970) 241-8789



REUSE OF DRAWINGS

J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RIGHTS IN ANY DESIGN OR DRAWING. NO PART OF ANY DESIGN OR DRAWING SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF J-U-B ENGINEERS, INC. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION	CONSTRUCTION DOCUMENTS	DATE
1	CODE COMMENT REVISION	10/31/2025
2	BID SET	10/17/2025
3	BID AND ADDENDUM	08/22/2025
4	DESCRIPTION	BY AFR
NO.	DATE	

SEWER TRANSFER PROJECT

TOWN OF PALISADE

MECHANICAL - COVER SHEET

FILE:

JUB PROJ. #: 81-23-029

DRAWN BY: GW

DESIGN BY: GW

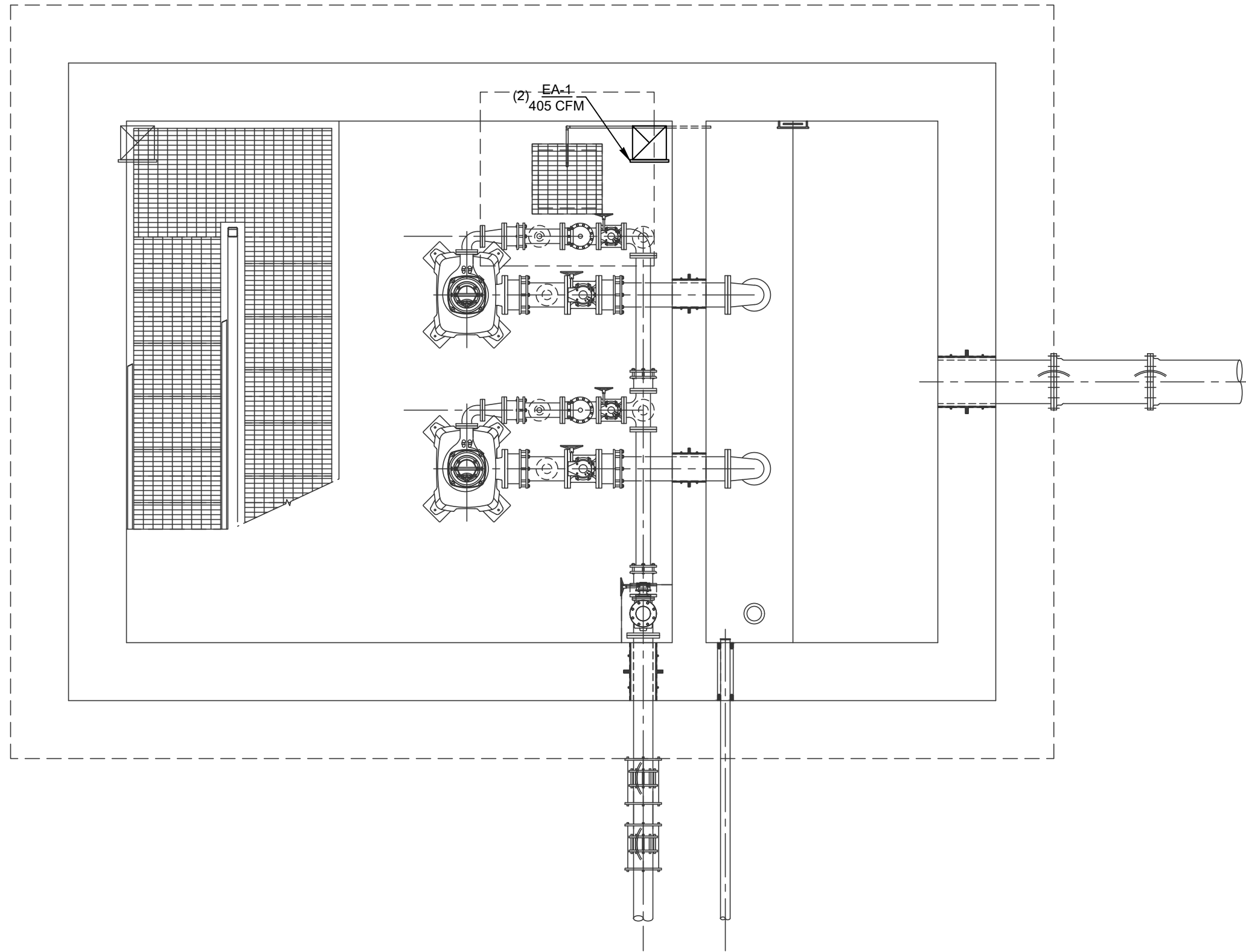
CHECKED BY: MH

AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 8/26/2025

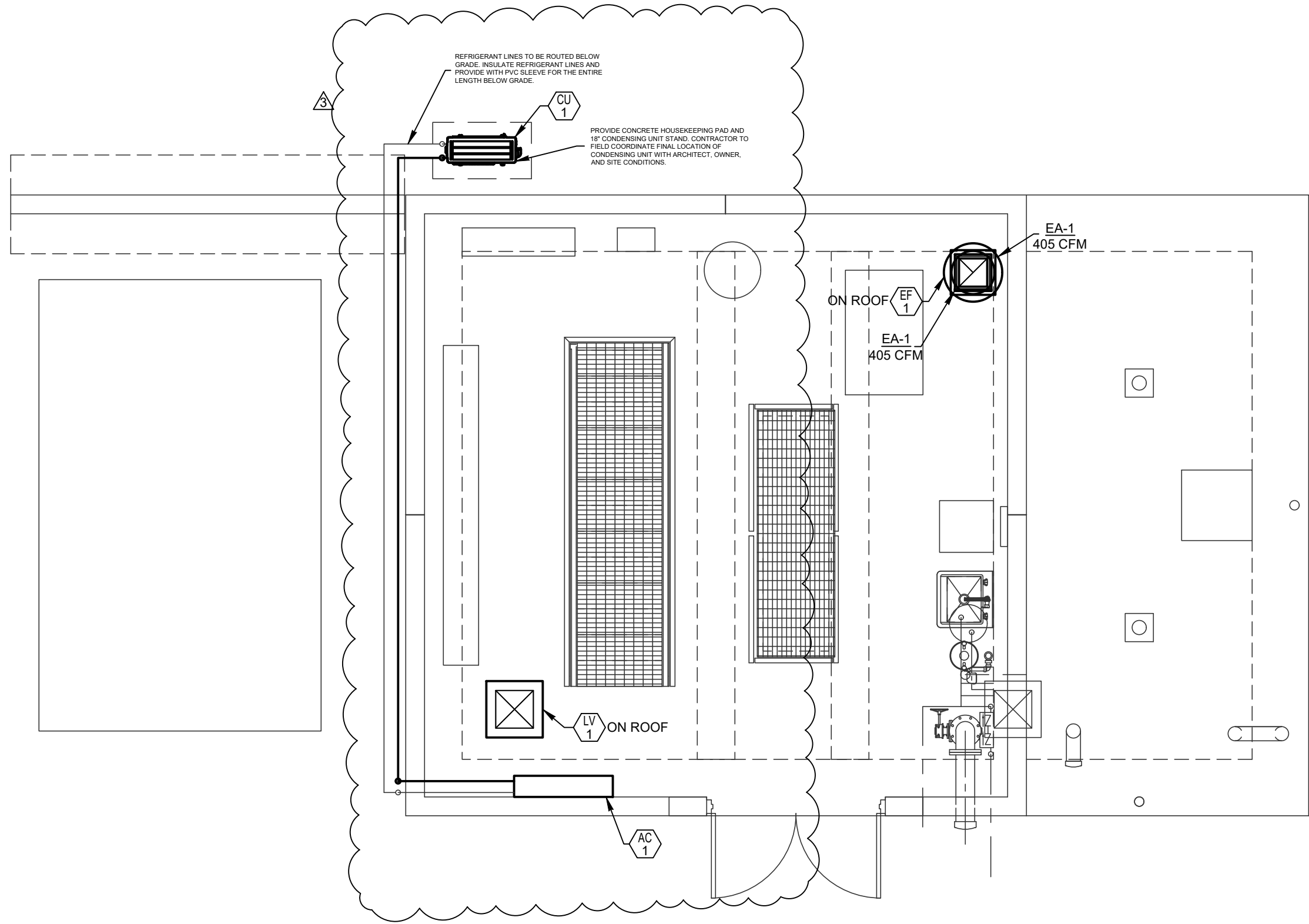
SHEET NUMBER:

M0-1



MECHANICAL - DRY WELL PLAN

SCALE: #####

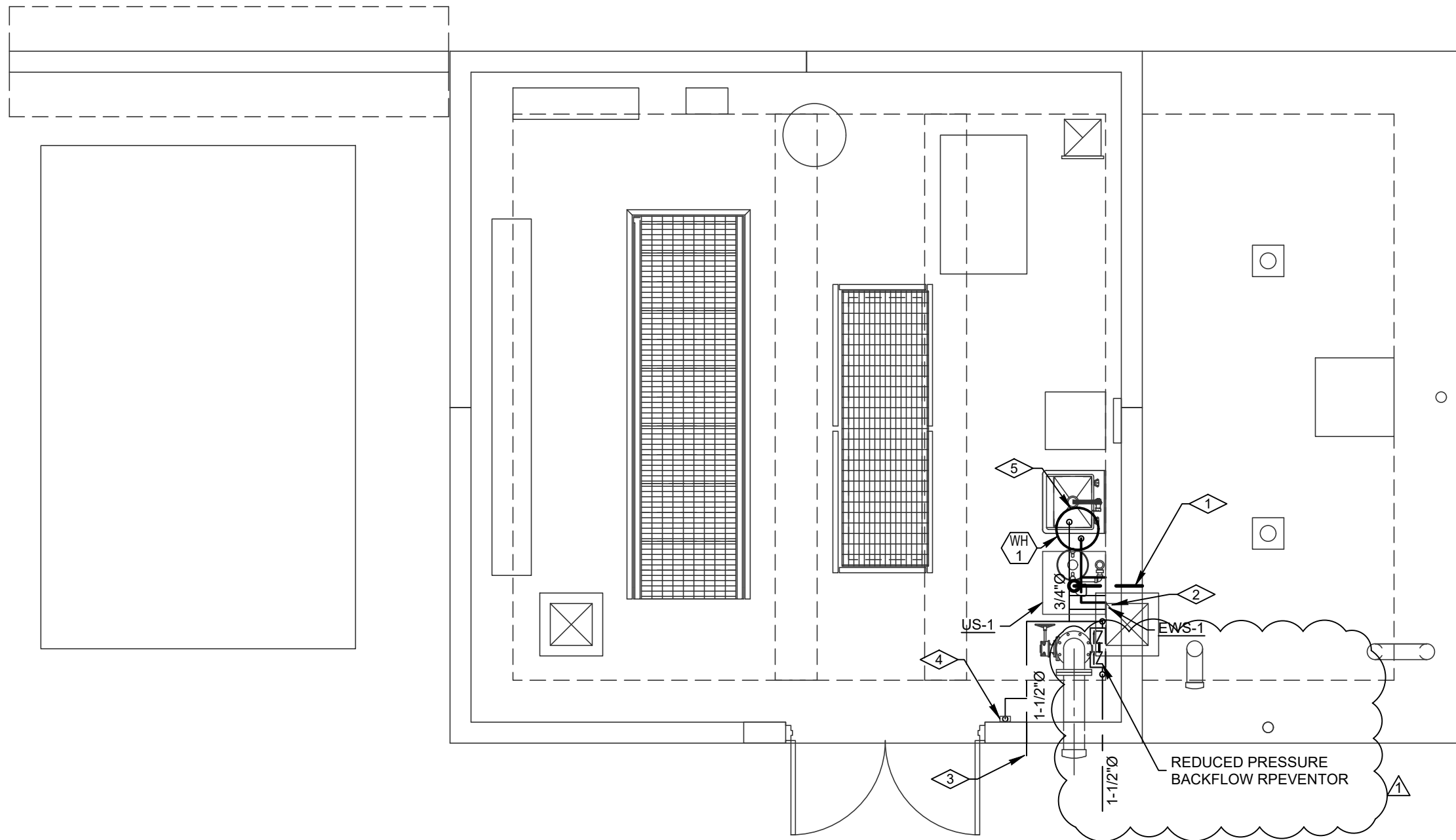


MECHANICAL - MAIN LEVEL PLAN

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

PLUMBING KEYNOTES:

- 3"Ø DRAIN FROM UTILITY SINK BASIN TO BE PROVIDED WITH A P-TRAP AND ROUTED TO THE WET WELL. REFERENCE UTILITY SINK DETAIL 4/D-508
- PROVIDE EYE WASH STATION WITH LOCAL MIXING VALVE TO ENSURE OSHA REQUIRED TEPID WATER. REFERENCE EYEWASH DETAIL 3/D-508
- PROVIDE 1-1/2" HOSE CONNECTION ON EXTERIOR OF BUILDING. HOSE BIB SHALL BE FREEZE PROOF. COORDINATE EXACT LOCATION WITH OWNER.
- PROVIDE INTERIOR HOSE BIB SURFACED MOUNTED ON INTERIOR. SIMILAR TO WOODFORD V28
- WATER HEATER WALL MOUNTED ABOVE SINK .



PLUMBING - MAIN LEVEL PLAN

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



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
www.jub.com

Bighorn Consulting Engineers, Inc.
Mechanical & Electrical Engineers
388 Indian Road
Grand Junction, CO 81501
Phone: (970) 241-1579



REUSE OF DRAWINGS
JUB SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT JUB'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY JUB WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.

NO.	REVISION	DATE	BY	DATE
1	CONSTRUCTION DOCUMENTS	01/31/2025		
2	CODE CORRECTIONS	07/17/2025		
3	BID SET	08/22/2025		
4	BID ADDENDUM			

SEWER TRANSFER PROJECT
TOWN OF PALISADE

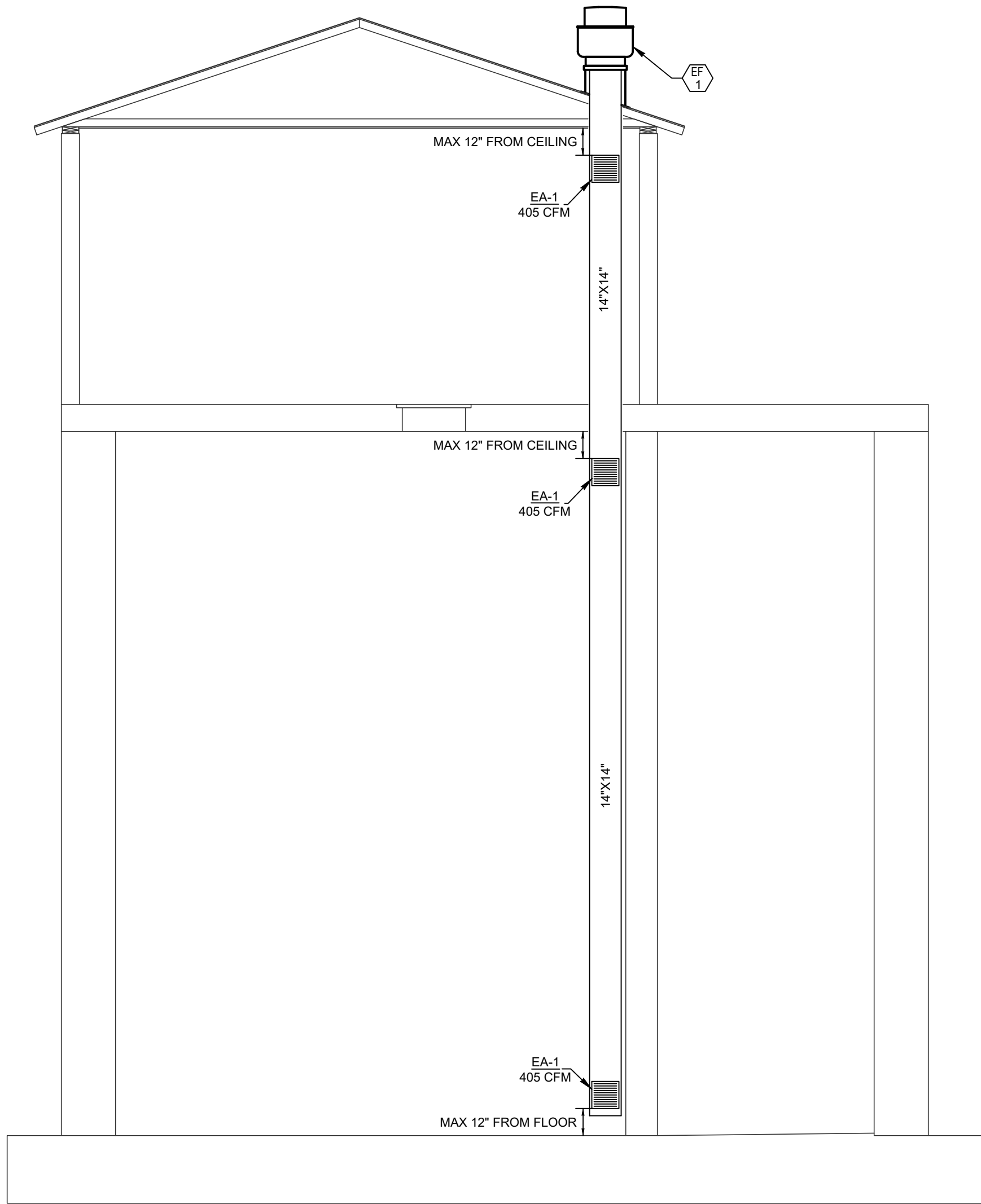
MECHANICAL/PLUMBING FLOOR PLANS

FILE:
JUB PROJ. #: 81-23-029
DRAWN BY: GW
DESIGN BY: GW
CHECKED BY: MH

AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/26/2025

SHEET NUMBER:

M1-1



EXHAUST DUCT RISER

SCALE: NOT TO SCALE

PLUMBING FIXTURE SCHEDULE								
FIXTURE NO.	DESCRIPTION	MANUFACTURER	MODEL	TRIM	PIPING CONNECTIONS			
					S/W	VENT	C.W.	HW
US-1	UTILITY SINK	FIAT	FL1	FIAT A1 FAUCET WITH 360° SWING SPOUT.	1 1/2"	1 1/2"	1/2"	1/2"
					PROVIDE WITH P-TRAP, DRAIN, DRAIN PLUG, AERATOR, AND HOSE ADAPTOR.			

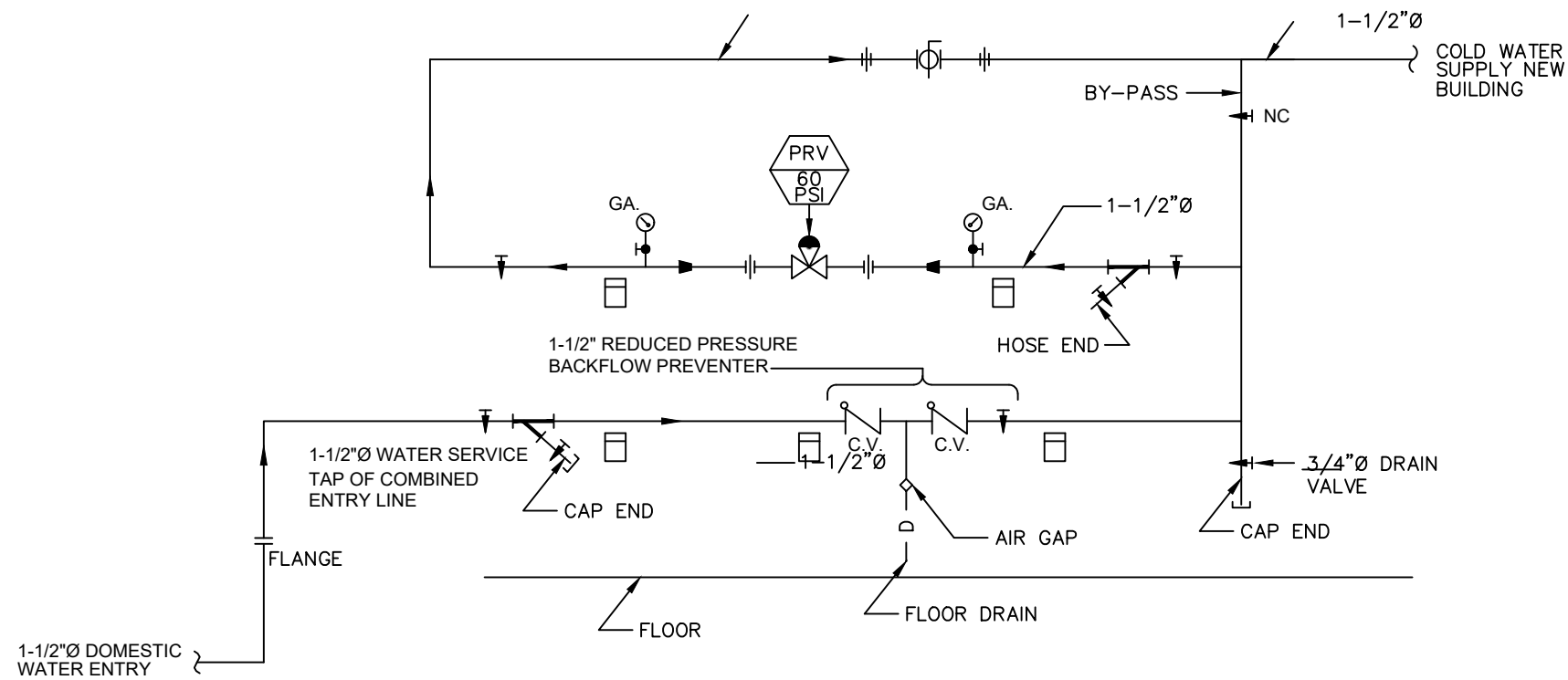
DUCTLESS SPLIT AIR CONDITIONING SYSTEM SCHEDULE								
EQUIPMENT NO.	SERVICE	COOLING CAPACITY (BTU/H)	CFM	EFFICIENCY (SEER2)	ELECTRICAL			MANUFACTURER & MODEL
					MCA (A)	MOCP (A)	V./PH./HZ.	
AC-1	SPACE COOLING	12,000	215-385	21.1	1	-	208/1/60	mitsubishi electric - PKA-AL12NL
CU-1	SPACE COOLING	12,000	-	21.1	16	27	208/1/60	mitsubishi electric - PUY-AK12NL
NOTES: 1. PROVIDE WITH FACTORY CONTROLS WITH WIRED PROGRAMMABLE THERMOSTAT, WALL MOUNTING HARDWARE, CONDENSATE LINE WITH TRAP, AND LINESET PER MANUFACTURERS INSTALLATION INSTRUCTIONS. 2. PROVIDE WITH 4" THICK CONCRETE HOUSEKEEPING PAD, 18" HIGH CONDENSING UNIT STAND, WIND BAFFLES, HAIL GUARDS, AND LINESET PER MANUFACTURERS INSTALLATION INSTRUCTIONS.								

ELECTRIC WATER HEATER SCHEDULE								
EQUIPMENT NO.	CAPACITY	RECOVERY @ 90 DEG. F. RISE	BTU/H	WATER CONN.	HEATING ELEMENT KW	V/PH/HZ	MANUFACTURER & MODEL	OPTIONS/ACCESSORIES
WH-1	28	21	15354	3/4"	4.5	240/1/60	RHEEM PROE28 S2 RH93 SB	NOTE-1
NOTES: 1. PROVIDE WITH T&P RELIEF VALVE, EXPANSION TANK, SIDE CONNECTIONS, AUTOMATIC THERMOSTAT.								

EXHAUST FAN SCHEDULE								
EQUIPMENT NO.	SERVICE	LOCATION	CFM	EXTERNAL STATIC PRESS (IN. W.G.)				MANUFACTURER & MODEL
					HP	RPM	VOLT/PH/HZ	
EF-1	SPACE EXHAUST	ROOF	1215	0.75	1/4 HP	1305	120/1/60	GREENHECK CUE-120-VG
NOTES: 1. PROVIDE VARIGREEN MOTOR, ROOF CURB, ALUMINUM WHEEL. WALL SWITCH IN SPACE. FAN TO BE RATED FOR CONTINUOUS OPERATION.								

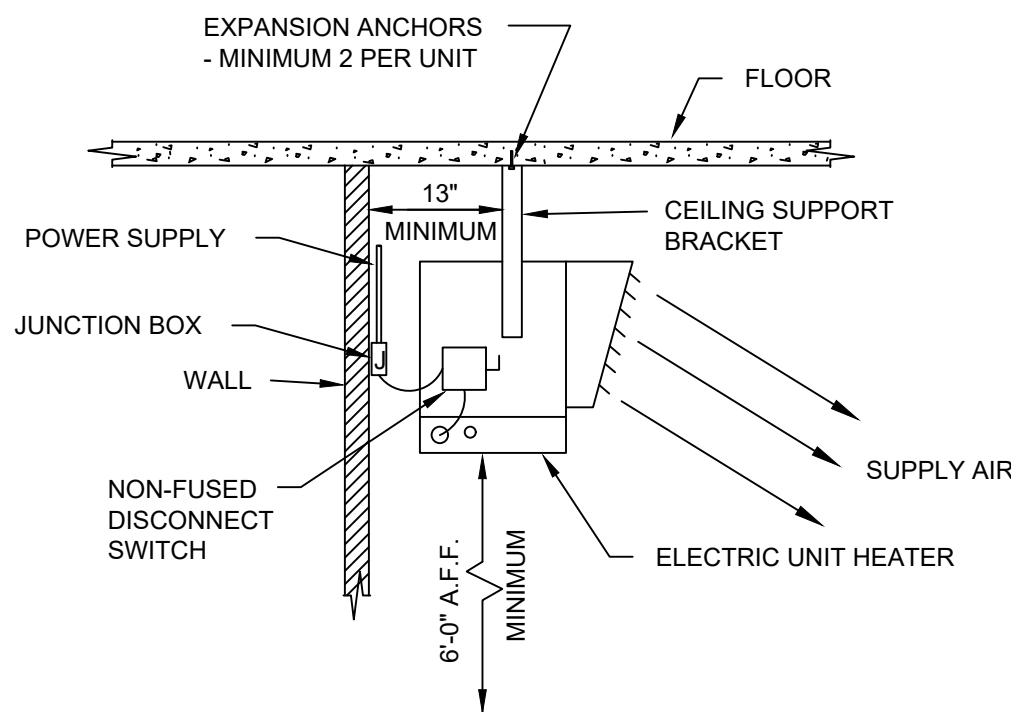
ELECTRIC UNIT HEATER SCHEDULE											
EQUIPMENT NO.	SERVICE	CFM	HP	BTU/HR	AIR TEMP. RISE (F)	KW	FLA(A)	MCA (A)	MOCP(A)	V/PH/HZ	MANUFACTURER & MODEL
EUH-1	SPACE HEAT	1750	1/2	68,240	70°	20	42.5	53.1	60	480/3/60	MODINE - HEX-480160-200
NOTES: 1. EPOXY COATED 14 GAUGE STEEL CABINET, ADJUSTABLE EXTRUDED ALUMINUM LOUVERS, LIQUID TO AIR FIN TUBE HEAT EXCHANGER CORE, THEADED EXPLOSION PROOF COVERS ON JUNCTION BOXES, EXPLOSION PROOF THERMOSTAT.											

INTAKE AND RELIEF HOOD SCHEDULE					
EQUIPMENT NO.	THROAT SIZE (Lin X Win)	HOOD SIZE (Lin X Win)	TYPE	MANUFACTURER & MODEL	OPTIONS/ACCESSORIES
LV-1	16"x16"	24"x24"	PENT HOUSE	GREENHECK WIH	NOTE-1
NOTES: 1. PROVIDE ROOF CURB, BIRD SCREEN, MOTORIZED DAMPER.					



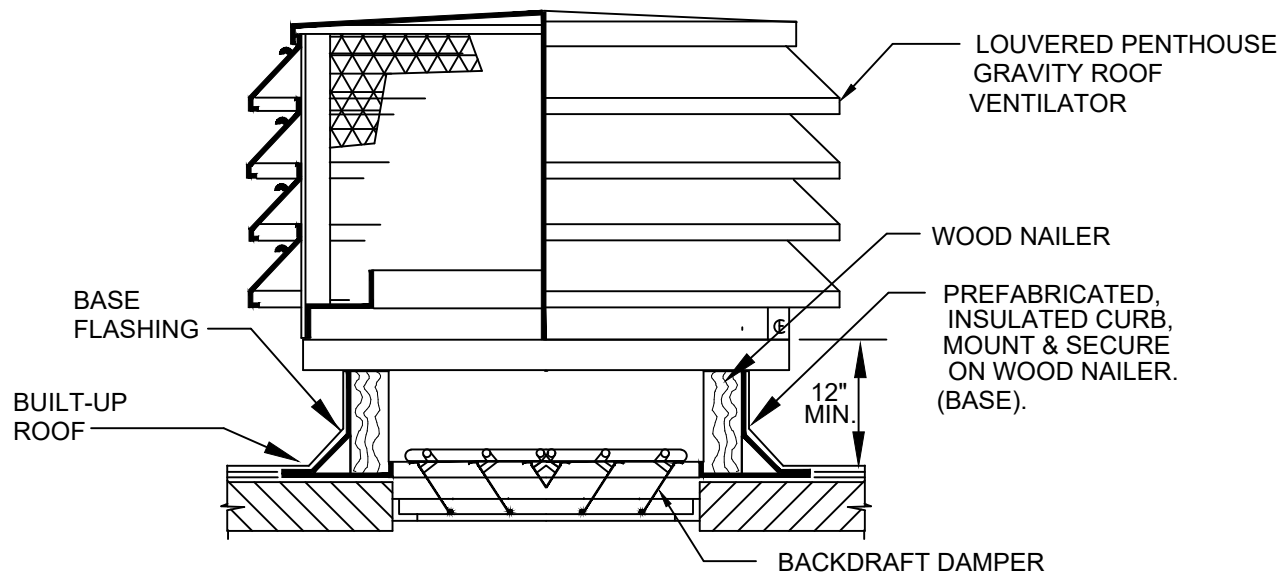
DOMESTIC WATER PRESSURE REDUCING STATION DETAIL

NOT TO SCALE



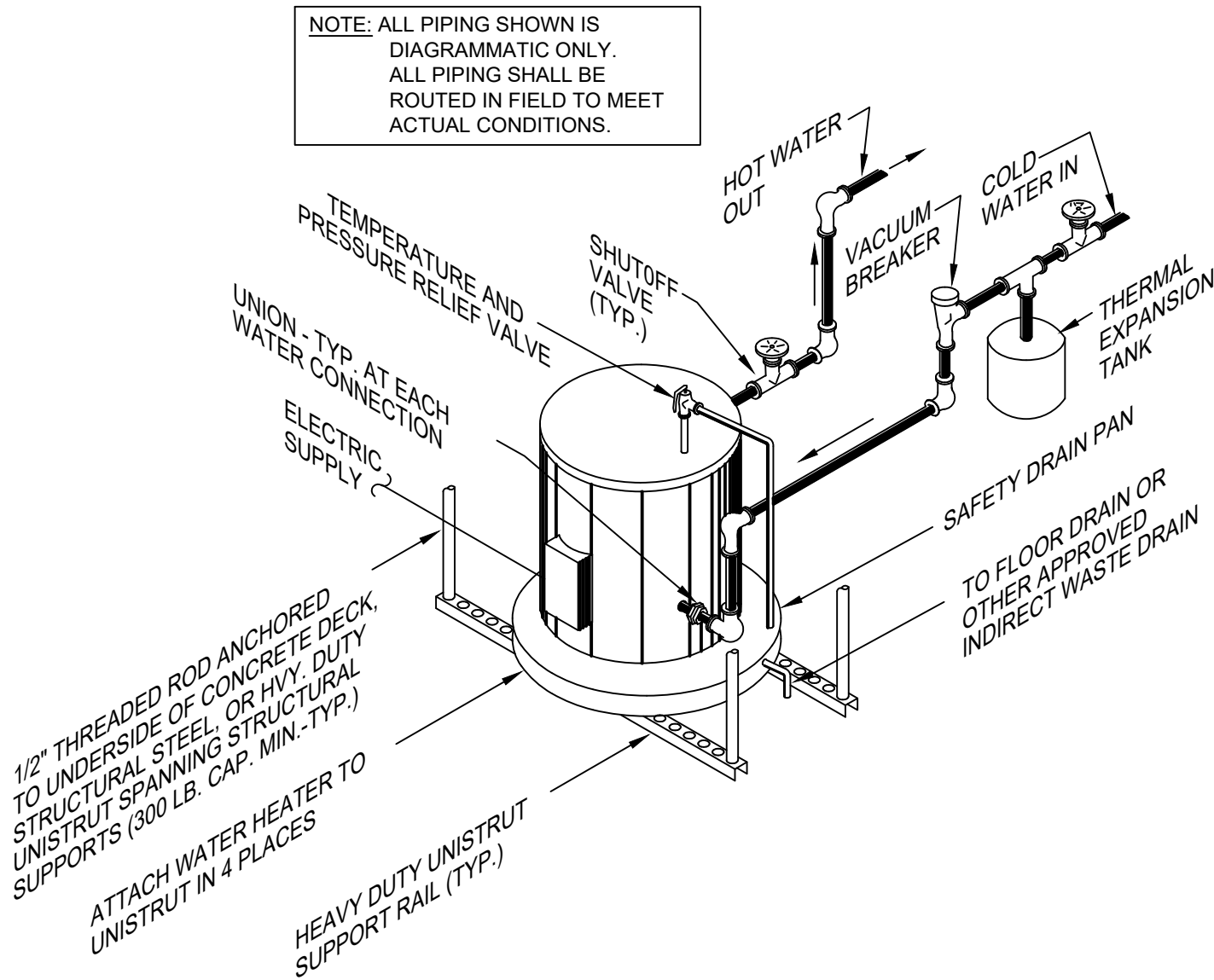
ELECTRIC UNIT HEATER MOUNTING DETAIL

N.T.S.



PENTHOUSE ROOF VENTILATOR WITH CURB DETAIL

NOT TO SCALE



ELECTRIC WATER HEATER DETAIL - SUSPENDED FROM CEILING/ROOF STRUCTURE ON UNISTRUT SUPPORTS

NOT TO SCALE



REUSE OF DRAWINGS JUB SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT JUB'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY JUB WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.		REVISION		DATE
		CONSTRUCTION DOCUMENTS	REVISION	BY
		CODE BOOK REVISION	REVISION	DATE
		BID SET	REVISION	DATE
		BID ADDENDUM	REVISION	DATE
		NO.	DESCRIPTION	DATE
		1		
		2		
		3		
		4		

FIRE ALARM EQUIPMENT LEGEND	
	FIRE ALARM CONTROL PANEL
	FIRE ALARM PULL STATION
	FIRE ALARM HORN
	FIRE ALARM STROBE
	FIRE ALARM HORN/STROBE
	CEILING MOUNTED SPEAKER
	DUCT DETECTOR
	REMOTE LAMP
	SMOKE DETECTOR - PHOTOELECTRIC
	135° STANDARD HEAT DETECTOR
	PIR DETECTOR
	DOOR HOLD - MAGNETIC HOLD
	FLOW SWITCH
	TAMPER SWITCH

COMMUNICATION LEGEND	
	CLOCK ONLY
	CLOCK / PA SPEAKER WALL MOUNTED
	ROUND CEILING MOUNTED SPEAKER
	SQUARE SPEAKER
	INTERCOM PUSH TO CALL SWITCH
	WIRELESS ACCESS POINT ABOVE THE CEILING
	ABOVE THE CEILING PROJECTOR CONNECTION
	WALL MOUNTED HDMI
	PLAIN DATA OUTLET
	PLAIN DATA OUTLET WITH MOUNTING HEIGHT
	COMBINATION DATA/TELEPHONE
	FLOOR MOUNTED COMBINATION DATA/TELEPHONE
	CEILING MOUNTED COMBINATION DATA/TELEPHONE
	TELEVISION OUTLET

SECURITY SYSTEM LEGEND	
	SECURITY CAMERA
	ADA DOOR OPERATOR PUSH BUTTON
	ELECTRIC DOOR STRIKE
	CARD READER FOR DOOR OPERATOR

GENERAL ELECTRICAL NOTES:

- ALL ELECTRICAL WORK TO COMPLY WITH LATEST EDITION OF NEC, IECC AND ALL APPLICABLE GOVERNING CODES.
 - FIELD COORDINATION DURING CONSTRUCTION IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
 - ELECTRIC UTILITY TO ADVISE OWNER AND/OR THE ELECTRICAL ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
- WIRING:
- ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWING. FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
 - ALL CONDUITS AND CONVEYANCES SHALL BE CONCEALED. IN THE EVENT THAT A NEW DEVICE IS BEING INSTALLED IN AN EXISTING DRYWALL PARTITION, PROVIDE A CUT IN TYPE BOX AND FISH FLEXIBLE CONDUIT DOWN INSIDE THE WALL FROM ABOVE THE CEILING AND REPAIR THE DRYWALL AROUND THE CONDUIT. TRANSITION TO EMT ONCE ABOVE THE CEILING.
 - SIZES OF WIRE AND CABLES ARE BASED UPON COPPER CONDUCTORS, UNLESS OTHERWISE INDICATED. ALL CIRCUITS SHALL CONTAIN (2) #12 AWG WITH (1) #12 GND IN 1/2" CONDUIT UNLESS NOTED OTHERWISE.
 - ALL BRANCH CIRCUITS WITH HOME RUNS OVER 50 FEET, WILL BE SIZED ONE SIZE LARGER.
 - ALL PENETRATIONS IN OR THROUGH FIRE RATED PARTITIONS SHALL BE FIRE STOPPED IN SUCH A WAY THAT THE PENETRATION MATCHES THE FIRE RATING OF THE WALL.
 - THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION BETWEEN THE APPROPRIATE DISCIPLINES AND CONTRACTORS.
 - COORDINATE ALL DEVICE, FIXTURE AND HARDWARE COLOR SELECTIONS WITH THE ARCHITECT PRIOR TO MAKING SHOP DRAWING SUBMITTALS.
 - COORDINATE THE MOUNTING HEIGHTS OF ALL RECEPTACLES MOUNTED ABOVE COUNTERS, CASEWORK AND APPLIANCE RECEPTACLES WITH ARCHITECTURAL ELEVATIONS.
 - BRANCH CIRCUIT AND SPECIAL SYSTEMS WIRING FOR DEVICES ON WALLS IN FINISHED AREAS WHICH CANNOT BE CONCEALED SHALL BE INSTALLED IN SURFACE MOUNTED RACEWAY.
 - ALL EXPOSED CONDUITS, BOXES, ETC. IN ROOMS TO BE PAINTED SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE. EXPOSED CONDUITS, BOXES, ETC. IN ROOMS WHICH ARE NOT PAINTED MAY BE LEFT UN-PAINTED. EXPOSED CONDUIT, BOXES, ETC. ON THE EXTERIOR OF BUILDINGS SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE AS CLOSELY AS POSSIBLE.
 - THE CONTRACTOR IS RESPONSIBLE FOR PATCHING, PAINTING, REPAIRING OR REPLACEMENT OF ALL WALLS, CEILING OR OTHER BUILDING ELEMENTS WHICH ARE DISTURBED AS PART OF THE DEMOLITION AND/OR INSTALLATION OF ELECTRICAL WORK.
 - PROVIDE ELECTRICAL CONNECTION TO ALL FIRE, SMOKE, AND FIRE / SMOKE DAMPERS INCLUDING POWER AND FIRE ALARM. VERIFY EXACT SIZE AND FINAL LOCATION OF ALL DAMPERS WITH THE MECHANICAL CONTRACTOR. ALL ROOFTOP UNITS RATED AT MORE THAN 2000 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN THE RETURN DUCT. ALL ROOFTOP UNITS RATED AT MORE THAN 15000 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN BOTH THE SUPPLY AND RETURN DUCT AT ROOFTOP LEVEL AND IN THE

LIGHTING LEGEND	
NOTES:	
SYMBOLS SHOWN ARE STANDARD. VARIATION AND/OR COMBINATIONS MAY BE USED ON THE PLANS. THIS LIST SHOWS STANDARD SYMBOLS AND ALL MAY NOT APPEAR ON THE PROJECT DRAWINGS; HOWEVER, WHEREVER THE SYMBOL ON THE PROJECT DRAWINGS OCCUR, THE ITEM SHALL BE PROVIDED AND INSTALLED.	
VARIATION AND/OR COMBINATION MAY BE USED ON THE PLANS.	
A NUMBER NEXT TO A RECEPTACLE OR DEVICE INDICATES A CIRCUIT NUMBER.	
AN UPPER CASE LETTER NEXT TO A SWITCH INDICATES THE FUNCTION OF THE SWITCH. A LOWER CASE LETTER INDICATES THE SWITCH CIRCUIT.	
AN UPPER CASE LETTER NEXT TO A LIGHT FIXTURE INDICATES THE TYPE OF FIXTURE. REFER TO THE LUMINAIRE SCHEDULE FOR FIXTURE SPECIFICATIONS. A LOWER CASE LETTER NEXT TO A LIGHT CORRESPONDS TO THE SWITCH DESIGNATION.	

SWITCHES	
	S SINGLE POLE SWITCH
	S ₂ TWO POLE SWITCH
	S ₃ THREE-WAY SWITCH
	S ₄ FOUR-WAY SWITCH
	S _D DIMMER SWITCH
	S _{3D} 3 WAY DIMMER SWITCH - (4D INDICATES A 4WAY DIMMER)
	S _{DR} DOOR ACTIVATED SWITCH
	S _{MA} WALL MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACANCY SENSOR SWITCH
	S _V LOW VOLTAGE LIGHT SWITCH
	S _{TO} MANUAL MOTOR STARTER
	S _P PILOT LIGHT SWITCH
	S _{OS} AUTO ON / AUTO OFF LIGHT SWITCH
	S _{MO} DUAL TECHNOLOGY MOTION / OCCUPANCY SENSOR LIGHT SWITCH
	S _{MA} MANUAL ON / AUTO OFF DIMMING LIGHT SWITCH
	S _K KEY OPERATED LIGHT SWITCH
	S _T MANUAL ON - TIMED OFF LIGHT SWITCH
	S _{MO} CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH
	S _{MA} CEILING MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACANCY SENSOR
	S _{DS} CEILING MOUNTED DAYLIGHT HARVESTING SENSOR
	S _{SC} SCENE CONTROL STATION
	S _{MS} UNIT LIGHTING MANAGEMENT CONTROL STATION,

LIGHT FIXTURES	
	A 1'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	A 2'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	A 2'x2' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
	I OPEN STRIP FIXTURE
	L WALL BRACKET LINEAR FIXTURE
	A 1 WALL MOUNTED SCONCE LIGHT FIXTURE
	A 1 RECESSED DOWNLIGHT CAN FIXTURE
	A 1 SURFACE CEILING OR PENDANT MOUNTED FIXTURE
	EX2 1 DOUBLE FACE EXIT SIGN, WALL AND CEILING MOUNTED
	EX1 1 SINGLE FACE EXIT SIGN, WALL AND CEILING MOUNTED
	EM 1 WALL MOUNTED EMERGENCY LIGHT
	EMR 1 EMERGENCY EXTERIOR EGRESS FIXTURE

RETURN DUCT AT EVERY LEVEL THAT IS SERVED. ELECTRICAL CONTRACTOR WILL PROVIDE A REMOTE TEST STATION AND ALL WIRING NECESSARY TO COMPLETE INSTALLATION.

13. REFER TO THE MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH PLUMBING AND HVAC EQUIPMENT AND OWNER/GENERAL CONTRACTOR FURNISHED EQUIPMENT.

LUMINAIRES:

- COORDINATE THE LOCATION OF ALL LIGHTING EQUIPMENT INCLUDING BUT NOT LIMITED TO THE LUMINAIRES, SWITCHES WITH THE ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND ALL OTHER TRADES AS REQUIRED. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR DIMENSIONAL LOCATION OF LIGHT FIXTURES.
- LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE AND SHALL NOT BE SUPPORTED FROM THE T-BAR CEILING GRID.
- THE ELECTRICAL CONTRACTOR IS TO CONFIRM THE LIGHT FIXTURES ORDERED WILL BE COMPATIBLE WITH THE CEILING TYPES AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING THE FIXTURES.
- VERIFY LUMINAIRE MOUNTING REQUIREMENTS AND OVERALL HEIGHT OF ALL PENDANT MOUNTED FIXTURES PRIOR TO ORDERING.
- ALL LIGHT FIXTURES NEED TO BE COMPATIBLE WITH THE SWITCHES AND CONTROLS BEING PROVIDED.
- THE LIGHTING PACKAGE SHALL BE APPROVED BY BOTH THE ARCHITECT AND ENGINEER AS APPROVED EQUAL BEFORE BID. NO LIGHT FIXTURE SHALL BE ORDERED UNTIL THE LIGHT FIXTURE SUBMITTAL PACKAGE HAS BEEN APPROVED IN WRITING BY THE ARCHITECT, GENERAL CONTRACTOR AND ELECTRICAL ENGINEER.
- COORDINATE LUMINAIRE MOUNTING REQUIREMENTS PRIOR TO PLACING ORDER.

ELECTRICAL EQUIPMENT LEGEND	
	BRANCH CIRCUIT PANELBOARD
	TELEPHONE TERMINAL BOARD
	ELECTRIC MOTOR
	FUSED SAFETY SWITCH / DISCONNECT COMBINATION
	MOTOR STARTER
	CONTACTOR
	CIRCUITRY HOMERUN: PANEL LA - CIR. #7
	CONDUIT OR WIRE CONCEALED IN WALL/CLG. (SOLID LINE TYPE)
	CONDUIT OR WIRE UNDERFLOOR/UNDERGND. (CENTER LINE TYPE)

MAIN DISTRIBUTION GEAR	
	CIRCUIT BREAKER IN A PANEL BOARD
	PAD MOUNTED UTILITY TRANSFORMER
	FUSED DISCONNECT 100A = AMP RATING 2P = NUMBER OF POLES
	ELECTRICAL METER SHOWN ON ONE-LINE DIAGRAMS
	ELECTRICAL POWER PANEL WITH MAIN LUG OR MAIN BREAKER PP1= PANEL NAME 225A MLO = MAIN LUG OR BREAKER SIZE 120/208V = PANEL VOLTAGE 3PH, 4 WIRE = PANEL PHASE, DISTRIBUTION TYPE
	225A MCB 120/208V 3PH, 4W
	225A MLO 120/208V 3PH, 4W

ELECTRICAL DEVICE LEGEND	
	CEILING JUNCTION BOX - SURFACE/FLUSH
	WALL JUNCTION BOX - SURFACE/FLUSH
	DUPLEX RECEPTACLE
	FLOOR MOUNTED RECEPTACLE
	SPLIT WIRED DUPLEX RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	FLOOR MOUNTED FOURPLEX RECEPTACLE
	APPLIANCE RECEPTACLE - 3 WIRE
	DUPLEX RECEPTACLE
	FOURPLEX RECEPTACLE
	ELECTRIC HAND DRYER
	THERMOSTAT
	OPEN/CLOSE/STOP PUSH BUTTON
	DRAWING KEY NOTES
	ROOM DESIGNATION

RESPONSIBLE DIVISION:

UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED AS FOLLOWS:

ITEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED
EQUIPMENT	23	23	26	--
COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23(1)	26	26(2)	23
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26	--
MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS (LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)	--	23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)	--	23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

SUBSCRIPT FOOTNOTES:

- MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1) NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.
- IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23, CONNECT UNDER DIVISION 26.

ABBREVIATIONS:

44" MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTER OF DEVICE	A AMPS	A.D. ACCESS DOOR	AAV AIR ADMITTANCE VALVE	ABV ABOVE	AC AIR CONDITIONING UNIT	AC ABOVE COUNTER	AD AREA DRAIN (SEE SYMBOLS)	A.F.C. ABOVE FINISHED CEILING	A.F.G. ABOVE FINISHED GRADE	AIC AMPERE INTERRUPTING CAPACITY	AFCI ARC FAULT CIRCUIT INTERRUPTERS	A.F.F. ABOVE FINISHED FLOOR	AHU AIR HANDLING UNIT	ALUM ALUMINUM	AP ACCESS PANEL OR DOOR	ATS AUTOMATIC TRANSFER SWITCH	AV AUDIO / VIDEO	AVG AVERAGE	AWG AMERICAN WIRE GAGE	BAS BUILDING AUTOMATION SYSTEM	BB BASEBOARD	BD BACK DRAFT DAMPER	BFP BACK FLOW PREVENTOR	BL BOILER	BLDG BUILDING	BLW BELOW	BOB BOTTOM OF BEAM	BOD BOTTOM OF DUCT	BOP BOTTOM OF PIPE	BSMT BASEMENT	BTU BRITISH THERMAL UNIT	C CHILLER	CAFCI COMBINATION ARC FAULT CIRCUIT INTERRUPTERS	CAP CAPACITY	CB CIRCUIT BREAKER	CBV CIRCUIT BALANCING VALVE	CCT CORRELATED COLOR TEMPERATURE	CKT CIRCUIT	CFH CUBIC FEET PER HOUR	CFM CUBIC FEET PER MINUTE	CHWR CHILLED WATER RETURN	CHWS CHILLED WATER SUPPLY	CI CAST IRON	CL CENTER LINE	CLG CEILING	CMU CONCRETE MASONRY UNIT	CO CLEAN OUT	COL COLUMN	COMP COMPRESSOR	CONC CONCRETE	COND CONDENSATE	CONN CONNECTION	CONT CONTINUATION	CONTR CONTRACTOR	CRI COLOR RENDERING INDEX	CT COOLING TOWER	CT CURRENT TRANSFORMER	CU CONDENSING UNIT	CU COPPER	CUH CABINET UNIT HEATER	CVB CONSTANT VOLUME BOX	CWR CONDENSER WATER RETURN	CWS CONDENSER WATER SUPPLY	DB DRY BULB	DEPT DEPARTMENT	DF DRINKING FOUNTAIN	DIA DIAMETER	DIAG DIAGRAM	DIFF DIFFERENTIAL	DISCH DISCHARGE	DIV DIVISION	DN DOWN	DS DUCT SILENCER	DWG DRAWING	DX DIRECT EXPANSION	EX EXISTING	EA EXHAUST AIR GRILLE/REGISTER	EAT ENTERING AIR TEMPERATURE	EC ELECTRICAL CONTRACTOR	ECC ECCENTRIC	EF EXHAUST FAN	EFF EFFICIENCY	EL ELEVATION	ELEC ELECTRIC	ELEV ELEVATOR	EM EMERGENCY FUNCTION	ENT ENTERING	EMT ELECTRIC METALLIC TUBE	EQ EQUAL	EQUIP EQUIPMENT	EQUIV EQUIVALENT	ES END SWITCH	ESP EXTERNAL STATIC PRESSURE	ET EXPANSION TANK	EWC ELECTRIC WATER COOLER	EWI ENTERING WATER TEMPERATURE	EX EXHAUST	EXPAN EXPANSION	EXT EXTERNAL	F DEGREES FAHRENHEIT	FC FAN COIL UNIT	FD FOOTCANDLE	FCV FLOW CONTROL VALVE	FD FIRE DAMPER	FD FLOOR DRAIN	FIN FINISHED	FLA FULL LOAD AMPS	FLEX FLEXIBLE	FLR FLOOR	FOB FLAT ON BOTTOM	FOT FLAT ON TOP	FP FIRE PROTECTION	FP FIRE PUMP	FPM FEET PER MINUTE	FPS FEET PER SECOND	FS FLOW SWITCH	FSD FIRE/SMOKE DAMPER	FT FEET	FX FLEXIBLE CONNECTION	GND GROUND	GA GAUGE	GAL GALLON	GALV GALVANIZED	GD GROUND ELECTRODE CONDUCTOR	GFCI / GFI GROUND FAULT CIRCUIT INTERRUPTER	GC GENERAL CONTRACTOR	GPH GALLONS PER HOUR	GPM GALLONS PER MINUTE	GRS/LB GRAINS PER POUND	H 2O WATER	HB HOSE BIBB	HD HEAD (SEE SCHEDULES)	HP HEAT PUMP	HP HORSEPOWER	HR HOUR	HT HEIGHT	HTR HEATER	HWR HEATING WATER RETURN	HWS HEATING WATER SUPPLY	HX HEAT EXCHANGER	HZ HERTZ	ID INSIDE DIAMETER	IG ISOLATED GROUND	IN INCHES	INV INVERT	JBOX JUNCTION BOX	K KELVIN	KW KILOWATT	KVA KILO VOLT - AMPS	L LENGTH	LAT LEAVING AIR TEMPERATURE	LV LAVATORY	LB POUND	LD LINEAR DIFFUSER	LF LINEAR FEET	LIN LINEAR	LIQ LIQUID	LM LUMEN	LRA LOCKED ROTOR AMPS	LV LOUVER	LVG LEAVING	LWT LEAVING WATER TEMPERATURE	MBH THOUSANDS OF BTU PER HOUR	MC MECHANICAL CONTRACTOR	MCA MINIMUM CIRCUIT AMPACITY	MCB MAIN CIRCUIT BREAKER	MD MOTORIZED DAMPER	MDP MAIN DISTRIBUTION PANEL	MED MEDIUM	MFR MANUFACTURER	MIN MINIMUM	MISC MISCELLANEOUS	MLO MAIN LUG ONLY	MOCP MAXIMUM OVERCURRENT PROTECTION	MTD MOUNTED	MUA MAKE-UP AIR UNIT	N NEUTRAL	NC NORMALLY CLOSED	NEG NEGATIVE	NIC NOT IN CONTRACT	NL NIGHT / SECURITY LIGHT - DO NOT SWITCH	NO NORMALLY OPEN	NOM NOMINAL	NTS NOT TO SCALE	OA OUTSIDE AIR	OBD OPPOSED BLADE DAMPER	OC ON CENTER	OCC OCCUPIED	OCP OVER CURRENT PROTECTION	OD OUTSIDE DIAMETER	OL OVERLOAD	ORD OVERFLOW ROOF DRAIN	OZ OUNCE	PBD PARALLEL BLADE DAMPER	PD PRESSURE DROP	PH PHASE	POS POSITIVE PRESSURE	POS POINT OF SALES	PRV PRESSURE REDUCING VALVE	PS PRESSURE SWITCH	PSI POUNDS PER SQUARE INCH	PT PRESSURE TRANSMITTER	PTAC PACKAGED TERMINAL AIR CONDITIONER	PV PLUG VALVE	QTY QUANTITY	RA RETURN AIR GRILLE / REGISTER	RCP REFLECTED CEILING PLAN	RD ROOF DRAIN	REL RELIEF	REQD REQUIRED	RF RETURN FAN	RH RELATIVE HUMIDITY	RHC REHEAT COIL	RLA RATED LOAD AMPS	RM ROOM	RPM REVOLUTIONS PER MINUTE	SA SUPPLY AIR GRILLE / REGISTER	SC SHORT CIRCUIT	SCA SHORT CIRCUIT AVAILABLE	SCCR SHORT CIRCUIT CURRENT RATING	SCH SCHEDULE	SD SMOKE DAMPER	SEF SMOKE EXHAUST FAN	SF SUPPLY FAN	SH SENSIBLE HEAT	SH SHOWER	SP STATIC PRESSURE	SPD SURGE PROTECTION DEVICE	SPEC SPECIFICATION	SQ SQUARE	SS STAINLESS STEEL	SS SAFETY SHOWER	STD STANDARD	STL STEEL	SYS SYSTEM	TEMP TEMPERATURE	TR TRANSFER GRILLE / REGISTER	TR TAMPER RESISTANT	TT TEMPERATURE TRANSMITTER	TB TELECOMMUNICATIONS TERMINAL BACKBOARD	TYP TYPICAL	TX TRANSFORMER	UC UNDERCUT DOOR	UH UNIT HEATER	UNO UNLESS NOTED OTHERWISE	UNOCC UNOCCUPIED	UR URINAL	V VOLTS	VA VOLT AMPERE	VA VALVE	VAV VARIABLE AIR VOLUME UNIT	VFD VARIABLE FREQUENCY DRIVE	VRF VARIABLE REFRIGERANT FLOW	VOLT VOLTAGE	VTR VENT THROUGH ROOF	W WIDTH	W WATTS	W WITH	W/O WITHOUT	WB WET BULB	WC WATER COLUMN	WC WATER CLOSET	WG WATER GAUGE	WP WEATHERPROOF	WPIU WEATHERPROOF-IN-USE	WSR WITHSTAND RATING	XFMR TRANSFORMER
--	--------	------------------	--------------------------	-----------	--------------------------	------------------	-----------------------------	-------------------------------	-----------------------------	----------------------------------	-------------------------------------	-----------------------------	-----------------------	---------------	-------------------------	-------------------------------	------------------	-------------	------------------------	--------------------------------	--------------	----------------------	-------------------------	-----------	---------------	-----------	--------------------	--------------------	--------------------	---------------	--------------------------	-----------	--	--------------	--------------------	-----------------------------	----------------------------------	-------------	-------------------------	---------------------------	---------------------------	---------------------------	--------------	----------------	-------------	---------------------------	--------------	------------	-----------------	---------------	-----------------	-----------------	-------------------	------------------	---------------------------	------------------	------------------------	--------------------	-----------	-------------------------	-------------------------	----------------------------	----------------------------	-------------	-----------------	----------------------	--------------	--------------	-------------------	-----------------	--------------	---------	------------------	-------------	---------------------	-------------	--------------------------------	------------------------------	--------------------------	---------------	----------------	----------------	--------------	---------------	---------------	-----------------------	--------------	----------------------------	----------	-----------------	------------------	---------------	------------------------------	-------------------	---------------------------	--------------------------------	------------	-----------------	--------------	----------------------	------------------	---------------	------------------------	----------------	----------------	--------------	--------------------	---------------	-----------	--------------------	-----------------	--------------------	--------------	---------------------	---------------------	----------------	-----------------------	---------	------------------------	------------	----------	------------	-----------------	-------------------------------	---	-----------------------	----------------------	------------------------	-------------------------	------------	--------------	-------------------------	--------------	---------------	---------	-----------	------------	--------------------------	--------------------------	-------------------	----------	--------------------	--------------------	-----------	------------	-------------------	----------	-------------	----------------------	----------	-----------------------------	-------------	----------	--------------------	----------------	------------	------------	----------	-----------------------	-----------	-------------	-------------------------------	-------------------------------	--------------------------	------------------------------	--------------------------	---------------------	-----------------------------	------------	------------------	-------------	--------------------	-------------------	-------------------------------------	-------------	----------------------	-----------	--------------------	--------------	---------------------	---	------------------	-------------	------------------	----------------	--------------------------	--------------	--------------	-----------------------------	---------------------	-------------	-------------------------	----------	---------------------------	------------------	----------	-----------------------	--------------------	-----------------------------	--------------------	----------------------------	-------------------------	--	---------------	--------------	---------------------------------	----------------------------	---------------	------------	---------------	---------------	----------------------	-----------------	---------------------	---------	----------------------------	---------------------------------	------------------	-----------------------------	-----------------------------------	--------------	-----------------	-----------------------	---------------	------------------	-----------	--------------------	-----------------------------	--------------------	-----------	--------------------	------------------	--------------	-----------	------------	------------------	-------------------------------	---------------------	----------------------------	--	-------------	----------------	------------------	----------------	----------------------------	------------------	-----------	---------	----------------	----------	------------------------------	------------------------------	-------------------------------	--------------	-----------------------	---------	---------	--------	-------------	-------------	-----------------	-----------------	----------------	-----------------	--------------------------	----------------------	------------------

SUBSTITUTIONS:

A. SUBSTITUTIONS. SUBSTITUTION OF SPECIFIED EQUIPMENT WILL BE ALLOWED THROUGH A PRIOR APPROVAL PROCESS INITIATED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT INTENDED SUBSTITUTION AT LEAST FIVE DAYS PRIOR TO BID FOR APPROVAL FROM ENGINEER. SUBMITTAL SHALL INCLUDE CAPACITIES, DIMENSIONS AND OPERATING INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT. SUBSTITUTION SHALL OCCUR AT NO COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF APPROVED SUBSTITUTION AND SHALL INCUR ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING STRUCTURAL MODIFICATIONS, SPACE LAYOUT AND REDESIGN COSTS. SEE ALSO DIVISION I GENERAL REQUIREMENTS.

EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS:

- EXAMINE CAREFULLY THE SITE AND CONDITIONS OF THE SITE. PROVIDE ALL NECESSARY EQUIPMENT AND LABOR TO INSTALL A COMPLETE WORKING SYSTEM WITHIN THE SITE CONDITIONS.
- EXAMINE THE DRAWINGS AND SPECIFICATIONS AND 5 DAYS PRIOR TO BIDDING REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES, AND CONFLICTS TO THE ENGINEER TO BE REMEDIED IN AN ADDENDUM TO THE PROJECT PRIOR TO BID TIME.
- DRAWINGS ARE DIAGRAMMATIC AND CATALOG NUMBERS GIVEN ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE CAPACITY OF THE EQUIPMENT MEETS THE DRAWING REQUIREMENTS AND SHALL NOT DIMENSION FROM THE MECHANICAL, PLUMBING, OR PIPING DRAWINGS.
- THE LATEST ADOPTED VERSIONS OF THE INTERNATIONAL BUILDING CODES SHALL BE USED AS REQUIRED. THIS WILL ALSO INCLUDE THE LATEST ADOPTED VERSIONS OF THE MECHANICAL, PLUMBING, AND ENERGY CONSERVATION CODES. ALL METHODS AND MATERIALS REQUIRED BY THESE CODES SHALL BE REQUIRED BY THESE SPECIFICATIONS UNLESS INDICATED OTHERWISE. OTHER APPLICABLE LOCAL CODES AND ORDINANCES SHALL BE AS REQUIRED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE KNOWLEDGEABLE OF THESE REQUIREMENTS.
- WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL BEING INSTALLED, PRINTED COPIES OF THESE RECOMMENDATIONS SHALL BE FURNISHED TO THE ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF THE ITEM WILL NOT BE ALLOWED TO PROCEED UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH THESE RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL.

J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
www.jub.com

Big Horn Consulting Engineers, Inc.
Mechanical & Electrical Engineers
380 Indian Road
Grand Junction, CO 81501
Phone: (970) 241-1509

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

REVISION	DATE	BY	DATE
1	07/31/2025		
2	07/17/2025		
3	06/22/2025		
4			

CONSTRUCTION DOCUMENTS
BID SET
BID SET
BID SET

NO.

SEWER TRANSFER PROJECT
TOWN OF PALISADE

ELECTRICAL - COVER SHEET

FILE

JUB PROJ. #: 81-23-029

DRAWN BY: GC

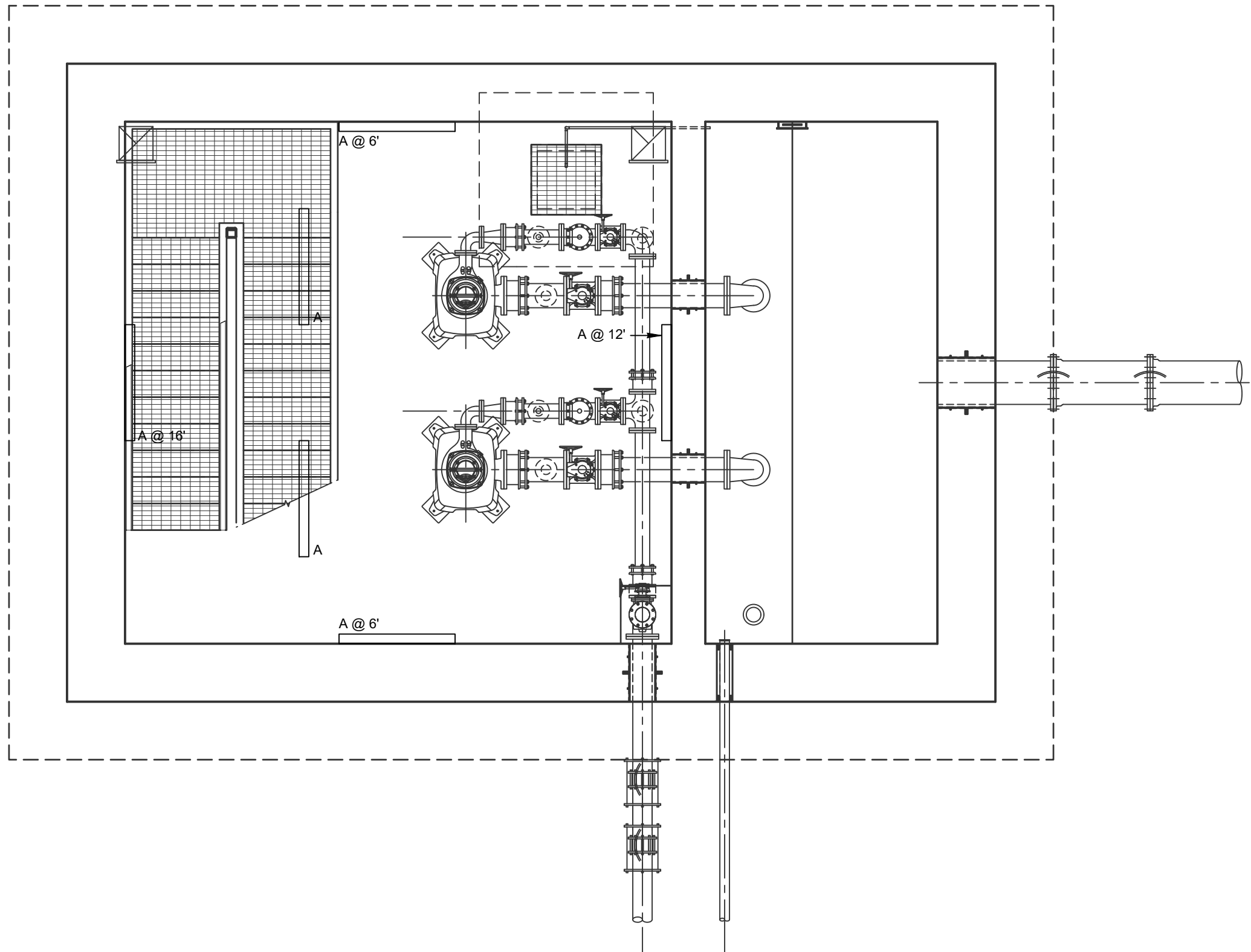
DESIGN BY: DB

CHECKED BY:

ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 5/25/2025

SHEET NUMBER:
E0-1

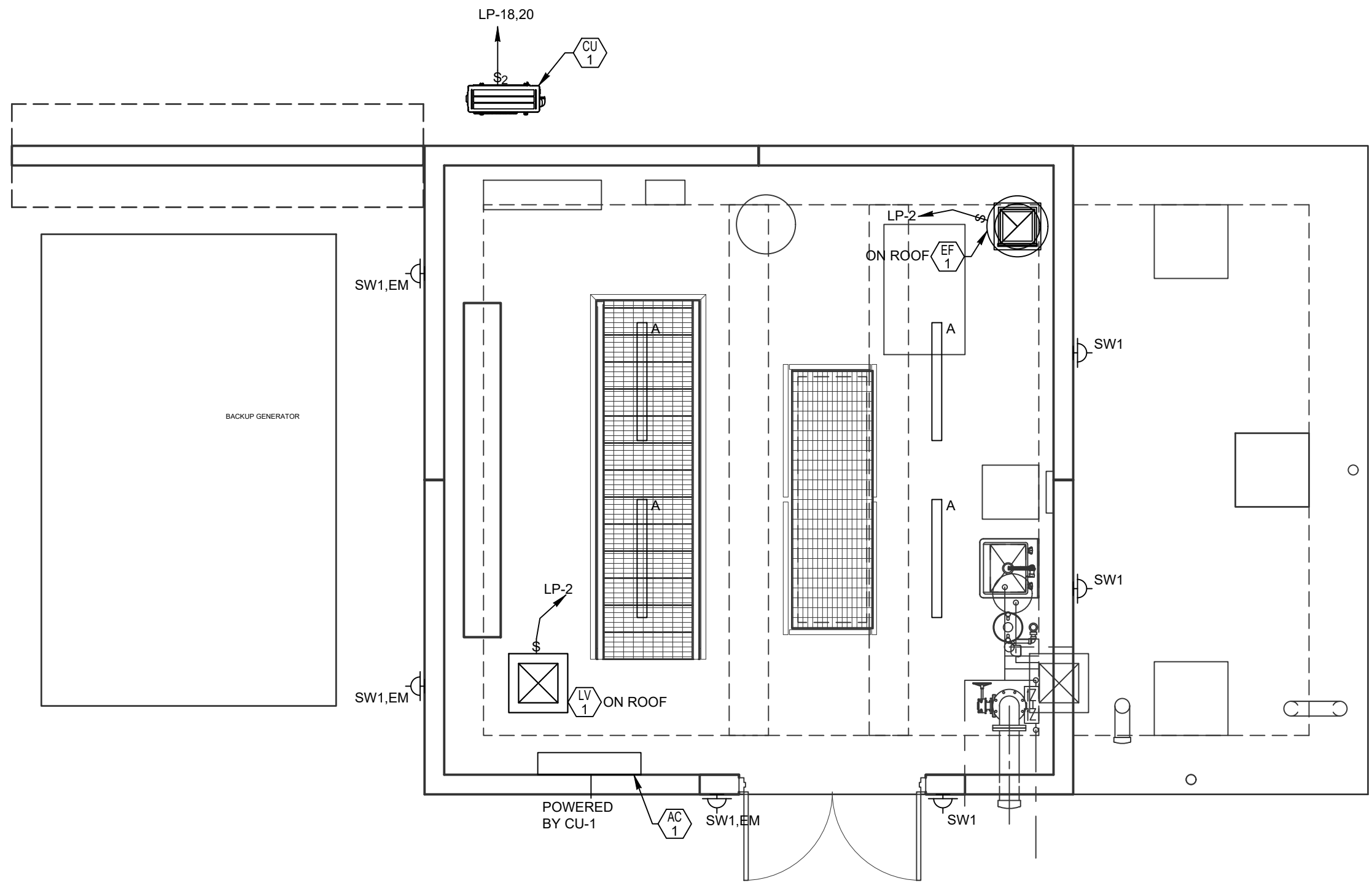


LIGHTING - LOWER LEVEL PLAN

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

PUMP LEVEL PLAN NOTES

1. LIGHT FIXTURES WITHOUT HEIGHTS ARE SURFACE MOUNTED TO CONCRETE DECK. OTHER LIGHTS ARE MOUNTED ON WALL AT HEIGHTS SHOWN ON PLAN.
2. CIRCUIT LIGHTS TO LP-6.



LIGHTING - MAIN LEVEL PLAN

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

MAIN LEVEL PLAN NOTES

1. INTERIOR LIGHTS SHOWN ARE MOUNTED ON CEILING. EXTERIOR LIGHTS ARE MOUNTED AT 8' AFG.
2. CIRCUIT LIGHTS TO LP-6.



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.

www.jub.com

Bighorn Consulting Engineers, Inc.

Mechanical & Electrical Engineers

388 Indian Road

Grand Junction, CO 81501

Phone: (970) 241-1575



REUSE OF DRAWINGS
JUB SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT, AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT JUB'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY JUB WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.

REVISION	DESCRIPTION	DATE	BY	DATE
1	CONSTRUCTION DOCUMENTS	07/31/2025		
2	CODE CORRECTIONS	07/17/2025		
3	BID SET	08/22/2025		
4	BID ADDENDUM			

SEWER TRANSFER PROJECT

TOWN OF PALISADE

LIGHTING PLANS

FILE:

JUB PROJ. #:

81-23-029

DRAWN BY:

GC

DESIGN BY:

DB

CHECKED BY:

ONE INCH

AT FULL SIZE, IF NOT ONE

INCH, SCALE ACCORDINGLY

LAST UPDATED: 8/26/2025

SHEET NUMBER:

E1-1



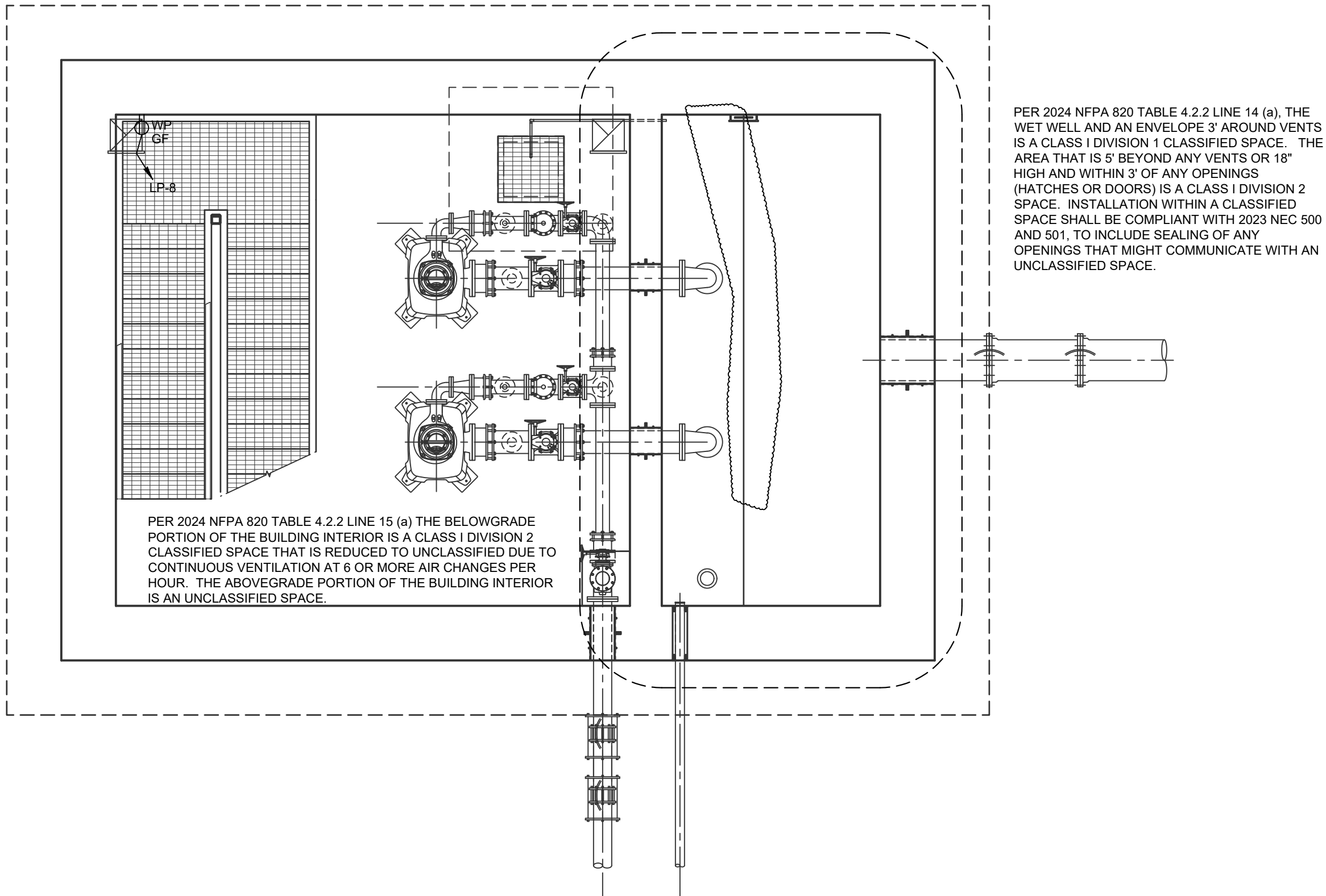
REUSE OF DRAWINGS		J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT, AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.	
CONSTRUCTION DOCUMENTS		REVISION	
1	CODE BOOK REVISION	07/31/2025	DATE
2	BID SET	07/17/2025	BY
3	BID ADDENDUM	08/22/2025	DATE
4	BID SET		BY
NO.		DESCRIPTION	

SEWER TRANSFER PROJECT TOWN OF PALISADE		ELECTRICAL PLANS	
--	--	------------------	--

FILE:	
JUB PROJ. #:	81-23-029
DRAWN BY:	GC
DESIGN BY:	DB
CHECKED BY:	
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY.	
LAST UPDATED: 8/26/2025	
SHEET NUMBER:	
E2-1	

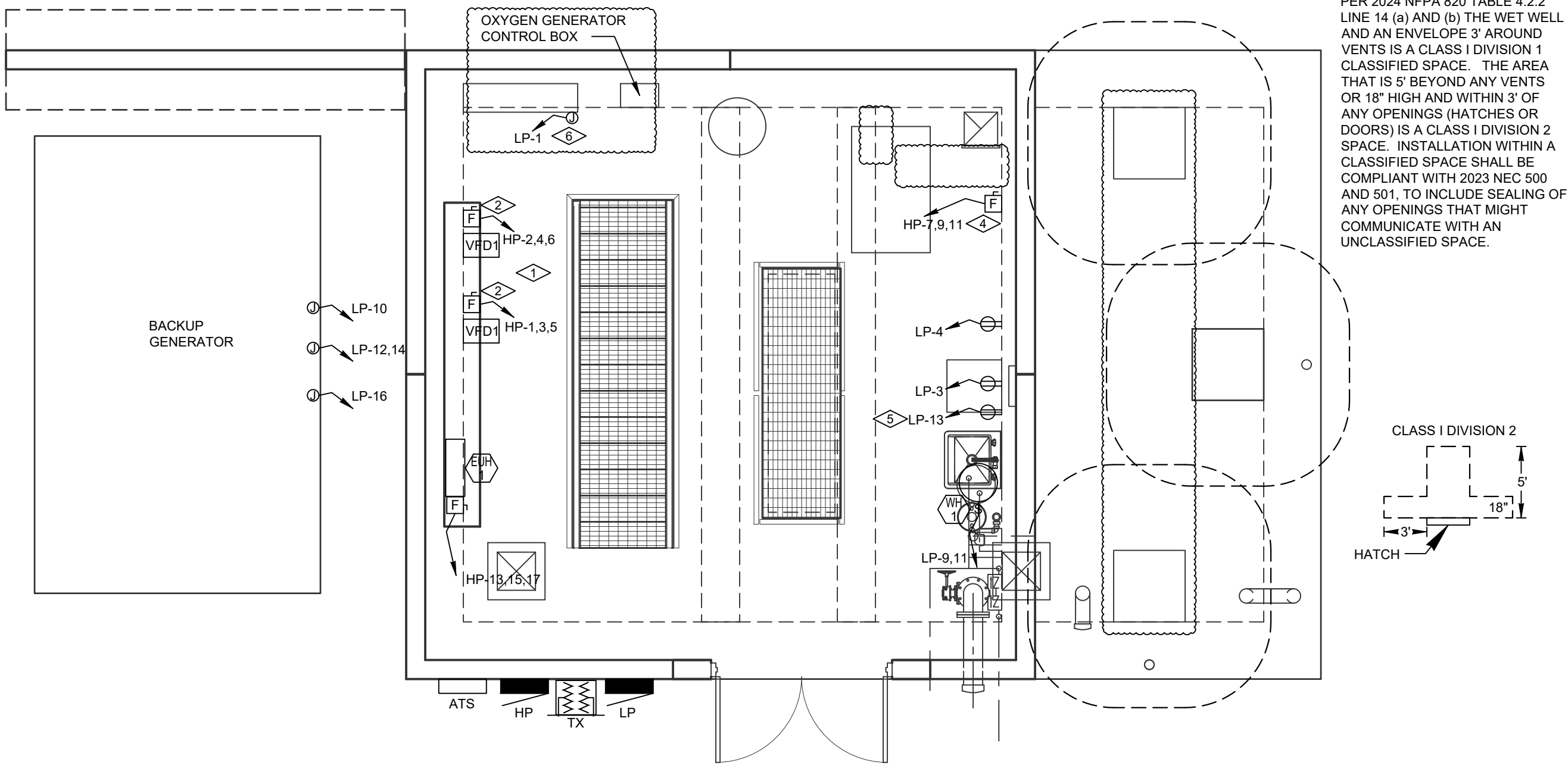
ELECTRICAL KEYED NOTES

- PROVIDE SEALED CONNECTION PLUG AT A COORDINATED LOCATION TO PROVIDE SEPARATION FROM CLASSIFIED SPACE FOR POWER FEEDS TO PUMPS. PROVIDE ADDITIONAL CONNECTION FOR FUTURE PUMP.
- DISCONNECT FOR VFD FOR EFFLUENT PUMP.
- REMOVED
- DISCONNECT FOR ODOR TREATMENT SYSTEM.
- POWER FOR SC4500 WET WELL SENSOR DIGITAL CONTROLLER
- POWER FOR OXYGEN GENERATION ODOR CONTROL SYSTEM



ELECTRICAL - LOWER LEVEL

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



ELECTRICAL - MAIN LEVEL ELECTRICAL PLAN

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



REUSE OF DRAWINGS				REVISION			
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE REUSED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.				CONSTRUCTION DOCUMENTS	NO.	BY	DATE
				1	CODE CORRECTIONS		07/31/2025
				2	BID SET		07/17/2025
				3	BID ADDENDUM		09/22/2025
				4	BID SET		

SEWER TRANSFER PROJECT

TOWN OF PALISADE

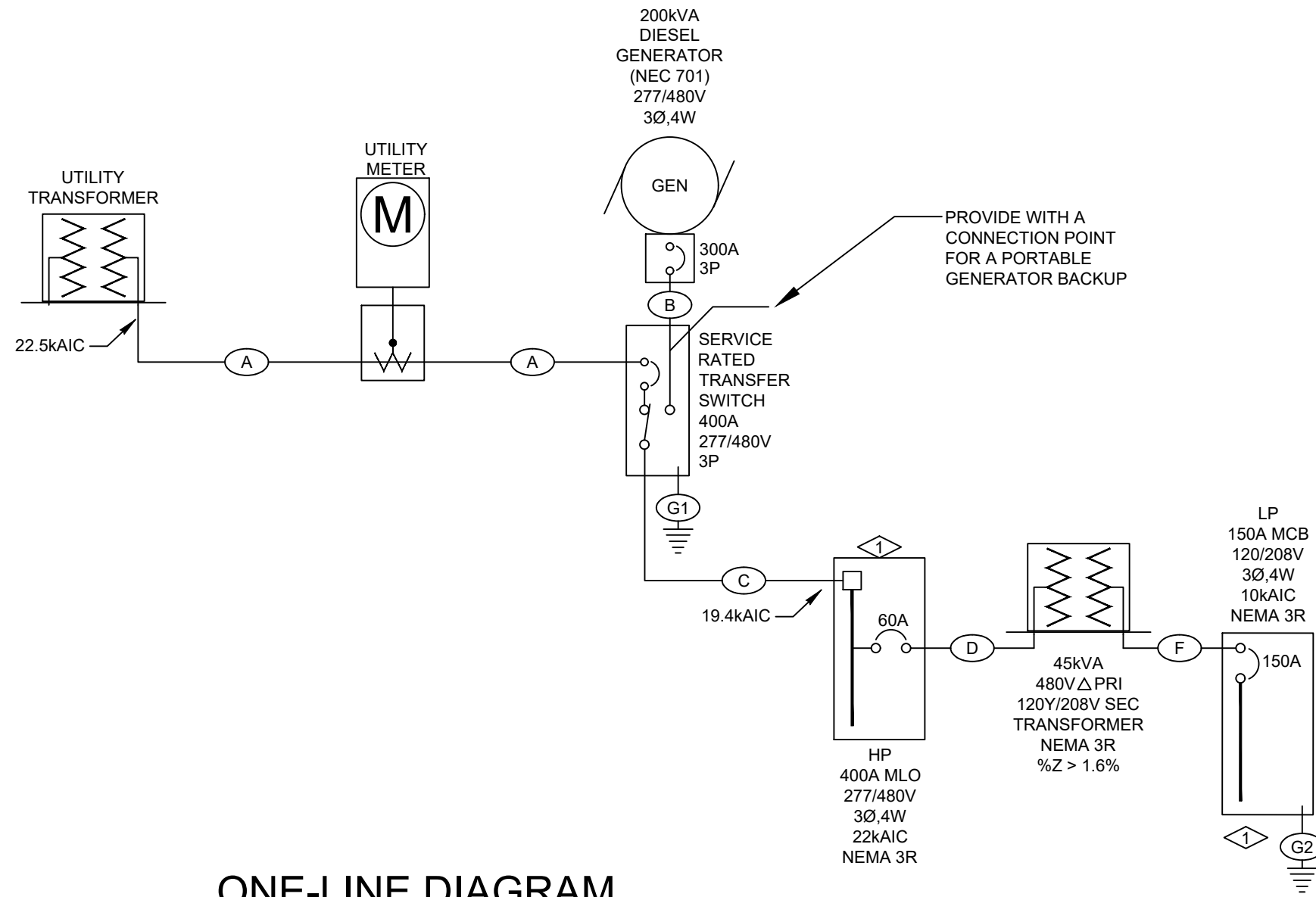
ELECTRICAL - DETAILS

FILE:	
JUB PROJ. #:	81-23-029
DRAWN BY:	GC
DESIGN BY:	DB
CHECKED BY:	
ONE INCH AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY	
LAST UPDATED: 9/25/2025	
SHEET NUMBER:	

E3-1

FAULT CURRENT CALCULATIONS:
 $F = \frac{L \times I_k^3}{N \times C \times E}$
L - LENGTH OF CABLE IN FEET
I - AVAILABLE FAULT CURRENT
N - NUMBER OF CONDUCTORS PER PHASE
C - CONDUCTANCE CONSTANT
E - VOLTAGE LINE TO LINE
F - INTERMEDIARY VALUE FOR COMPUTATION
M = $1/(1+F)$
I(SC) = I(SC)*M

RUN #1: TRANSFORMER TO SERVICE
 $F = \frac{L \times I_k^3}{N \times C \times E} = \frac{50 \text{ FT} \times 22,500 \text{ A} \times 3^3}{2 \times 12,862 \times 480 \text{ V}} = 0.158$
 $N \times C \times E = 2 \times 12,862 \times 480 \text{ V}$
M = $1 = \frac{1}{1+0.158} = 0.864$
 $I(SC) = I_k \times M = 22,500 \text{ A} \times 0.864 = 19,433 \text{ A}$



ONE-LINE DIAGRAM

- NOT TO SCALE
- NOTES:
- PROVIDE GROUNDING AND BONDING TO MEET THE 2023 NEC ARTICLE 250 REQUIREMENTS.
 - FAULT CURRENT CALCULATIONS BASED UPON AN ANTICIPATED 300KVA TRANSFORMER WITH AVAILABLE FAULT CURRENT OF 22,500A AT AN ESTIMATED DISTANCE OF 50FT FROM THE TRANSFORMER TO THE SERVICE DISTRIBUTION PANEL.
 - PROVIDE LABELING TO MEET THE REQUIREMENTS OF NEC 110.21.
 - EQUIPMENT AND BREAKER SELECTIONS ARE TO BE PROVIDED BY THE MANUFACTURER/SUPPLIER WITH DOCUMENTATION TO SHOW SELECTIVE COORDINATION FOR THE SYSTEM.
 - TRANSFER SWITCH SHALL BE ELECTRICALLY OPERATED AND MECHANICALLY HELD.
 - PROVIDE A DOCKING STATION FOR A TEMPORARY GENERATOR AND A MANUAL TO BE USED DURING GENERATOR MAINTENANCE OR TESTING.

ELECTRICAL FLAG NOTES:

◇◇ PROVIDE A SURGE PROTECTIVE DEVICE IN THIS PANEL.

WIRE SCHEDULE:

- (A) (2) 2 1/2" C - (4#250KCMIL(AL,XHHW))
- (B) (2) 2" C - (4#30AWG(AL,XHHW) + #2AWG(AL,GND))
- (C) (2) 2 1/2" C - (4#250KCMIL(AL,XHHW) + #1AWG(AL,GND))
- (D) 1" C - (3#6AWG(CU,THWN) + 1#10AWG(CU,GND))
- (E) 2 1/2" C - (4#30AWG(AL,XHHW) + 1#6AWG(CU,GND))
- (G1) #2AWG CU TO METAL WATER PIPES AND STRUCTURAL STEEL
- (G2) #6AWG CU TO METAL WATER PIPES AND STRUCTURAL STEEL

LUMINAIRE SCHEDULE					
TYPE	MANUFACTURER CATALOG NO.	ALTERNATE CATALOG NO.	VOLTAGE MOUNTING	DRIVER LAMP SPECIFICATION	
A	COOPER METALUX 4VT2-LD5-8-DR100-W-UNV-L840 -CD1-TEH	APPROVED EQUIVALENT	120-277V SURFACE, SUSPENDED	4000K, 8000LM, 80CRI 58W	4' LED VAPORTITE STRIP LIGHT, WET LOCATION, HIGH-IMPACT DIFFUSE LENS
SW1	COOPER LUMARK XTOR3B-Y-BZ-PC1	APPROVED EQUIVALENT	120-277V SURFACE	3000K, 2575LM, 70CRI 26W	FULL CUTOFF LED WALL PACK, WET LOCATION, IP66, DARK SKY APPROVED. PROVIDE BATTERY BACKUP OF "EM" DESIGNATED FIXTURES.

- NOTES:
- PROVIDE ALL APPURTENANCES REQUIRED FOR A COMPLETE AND FUNCTIONING SYSTEM.
 - COORDINATE FIXTURES WITH STAIRWELL.
 - COORDINATE ALL LOCATIONS OF FIXTURES IN FIELD, PRIOR TO FINAL INSTALLATION WITH CLIENT AND EQUIPMENT.
 - COORDINATE LOCATION OF SWITCHES WITH CLIENT IN FIELD.
 - INTERIOR LIGHTING CONTROLS SHALL INCORPORATE MANUAL ON AND AUTOMATIC OFF FUNCTIONALITY IN ACCORDANCE WITH 2018 IECC.
 - EXTERIOR LIGHTING CONTROLS SHALL BE PHOTOCELL AND MOTION SENSOR CONTROLLED. PROVIDE MANUAL SWITCH FOR MANUAL OFF.

PANEL SCHEDULE - HP		TYPE: VOLTAGE: ENCLOSURE:	PANELBOARD 277/480 NEMA3R	BUS SIZE: MAIN BRKR: MOUNTING:	400 NONE SURFACE	PHASES: WIRES: SC RATING:	3 4 22000	NEUTRAL BUS: GROUND BUS:	YES YES
LOAD TYPE	LOAD DESCRIPTION	AMPS POLES	CKT# LOAD	0	CKT# LOAD	AMPS POLES	LOAD TYPE	LOAD DESCRIPTION	
MOTOR	---	---	1 16628	A	2 16628	---	MOTOR	---	
MOTOR	PUMP 1	75A 3P	3 16628	B	4 16628	75A 3P	MOTOR	PUMP 2	
MOTOR	---	---	5 16628	C	6 16628	---	MOTOR	---	
SPACE	---	---	7 0	A	8 0	---	SPACE	---	
SPACE	---	---	9 0	B	10 0	---	SPACE	---	
SPACE	---	---	11 0	C	12 0	---	SPACE	---	
MECH HEATING	---	---	13 6667	A	14 7778	---	SUBFEED	---	
MECH HEATING	EUH-1	35A 3P	15 6667	B	16 7150	70A 3P	SUBFEED	PANEL LP	
MECH HEATING	---	---	17 6667	C	18 8713	---	SUBFEED	---	
SPACE	---	---	19 0	A	20 0	---	SPACE	---	
SPACE	---	---	21 0	B	22 0	---	SPACE	---	
SPACE	---	---	23 0	C	24 0	---	SPACE	---	
SPACE	---	---	25 0	A	26 0	---	SPACE	---	
SPACE	---	---	27 0	B	28 0	---	SPACE	---	
SPACE	---	---	29 0	C	30 0	---	SPACE	---	
SPACE	---	---	31 0	A	32 0	---	SPACE	---	
SPACE	---	---	33 0	B	34 0	---	SPACE	---	
SPACE	---	---	35 0	C	36 0	---	SPACE	---	
SPACE	---	---	37 0	A	38 0	---	SPACE	---	
SPACE	---	---	39 0	B	40 0	---	SPACE	---	
SPACE	---	---	41 0	C	42 0	---	SPACE	---	
LOADS BY TYPE:		LOADS BY PHASE:							
LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)	PHASE	CONNECTED LOAD (VA)	CONNECTED LOAD (AMPS)	BALANCE (PERCENT)		
LIGHTING	765.00	1.25	956.25	A	47700.10	172.20	A-B: 93.4		
KITCHEN	0.00	1.00	0.00	B	44572.10	160.91	B-C: 96.6		
PROCESS	3020.00	1.00	3020.00	C	46135.10	166.55	C-A: 96.7		
RECEPTACLES	4920.00	1.00	4920.00	TOTAL/AVERAGE		138407.00	166.56	95.6	
MECH HEATING	24500.00	1.00	24500.00						
MECH COOLING	0.00	1.00	0.00						
MECH YEAR ROUND	4436.00	1.00	4436.00						
APPLIANCE	0.00	1.00	0.00						
MISCELLANEOUS	0.00	1.00	0.00						
MOTOR	99786.00	1.00	149649.00						
MOTOR	1000.00	1.00	1000.00						
LARGEST MOTOR	1	ABOVE	12470.75						
TOTAL	138407.00		151069.00						
				NOTES:					
				1. THE LARGEST CONNECTED MOTOR LOAD IS INCLUDED IN MECHANICAL, PROCESS, OR MOTOR LOADS.					

PANEL SCHEDULE - LP		TYPE: VOLTAGE: ENCLOSURE:	PANELBOARD 120/208 NEMA3R	BUS SIZE: MAIN BRKR: MOUNTING:	225 150 SURFACE	PHASES: WIRES: SC RATING:	3 4 10000	NEUTRAL BUS: GROUND BUS:	YES YES
LOAD TYPE	LOAD DESCRIPTION	AMPS POLES	CKT# LOAD	0	CKT# LOAD	AMPS POLES	LOAD TYPE	LOAD DESCRIPTION	
RECEPTACLE	OXYGEN CONCENTRATOR	35A 1P	1 2240	A	2 900	20A 1P	MECH YEAR ROUND	EF-1 & LV-1	
RECEPTACLE	VACUUM SAMPLER	20A 1P	3 500	B	4 500	20A 1P	RECEPTACLE	CONTROLS	
RECEPTACLE	SERVICE	20A 1P	5 180	C	6 765	20A 1P	LIGHTING	LIGHTS	
SPARE	1KW SPARE	20A 1P	7 1000	A	8 500	20A 1P	RECEPTACLE	LOWER LEVEL RECEPTACLE	
MECH HEATING	WH-1	30A 2P	9 2250	B	10 1000	20A 1P	RECEPTACLE	GENERATOR BATTERY CHARGER	
MECH HEATING	---	---	11 2250	C	12 1250	20A 2P	PROCESS	GENERATOR BLOCK HEATER	
PROCESS	SC4500 DIGITAL CONTROLLER	20A 1P	13 120	A	14 1250	---	PROCESS	---	
MOTOR	OZONE ODOR CONTROL TREATMENT SYSTEM	30A 2P	15 2500	B	16 400	20A 1P	PROCESS	GENERATOR OIL HEATER	
MOTOR	---	---	17 2500	C	18 1768	20A 2P	MECH YEAR ROUND	CU-1, AC-1	
SPACE	---	---	19 0	A	20 1768	---	MECH YEAR ROUND	---	
SPACE	---	---	21 0	B	22 0	---	SPACE	---	
SPACE	---	---	23 0	C	24 0	---	SPACE	---	
SPACE	---	---	25 0	A	26 0	---	SPACE	---	
SPACE	---	---	27 0	B	28 0	---	SPACE	---	
SPACE	---	---	29 0	C	30 0	---	SPACE	---	
LOADS BY TYPE:		LOADS BY PHASE:							
LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)	PHASE	CONNECTED LOAD (VA)	CONNECTED LOAD (AMPS)	BALANCE (PERCENT)		
LIGHTING	765.00	1.25	956.25	A	7778.00	64.82	A-B: 91.9		
KITCHEN	0.00	0.00	0.00	B	7150.00	59.58	B-C: 82.1		
PROCESS	3020.00	1.00	3020.00	C	8713.00	72.61	C-A: 89.3		
RECEPTACLES	4920.00	1.00	4920.00	TOTAL/AVERAGE		23641.00	65.67	87.8	
MECH HEATING	4500.00	1.00	4500.00						
MECH COOLING	0.00	1.00	0.00						
MECH YEAR ROUND	4436.00	1.00	4436.00						
APPLIANCE	0.00	1.00	0.00						
MISCELLANEOUS	0.00	1.00	0.00						
MOTOR	5000.00	1.00	7500.00						
SPARE	1000.00	1.00	1000.00						
LARGEST MOTOR	1	ABOVE	1250.00						
TOTAL	23641.00		25082.00						
				NOTES:					
				1. THE LARGEST CONNECTED MOTOR LOAD IS INCLUDED IN MECHANICAL, PROCESS, OR MOTOR LOADS.					