

GENERAL NOTES

- DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STRUCTURAL ENGINEER'S WET STAMP IS AFFIXED TO DRAWINGS.
- ANY DISCREPANCIES IN THE DRAWINGS, NOTES AND SPECIFICATIONS, SHALL BE REPORTED TO ENGINEER/ARCHITECT FOR CLARIFICATION. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, AND TOP OF CONC. PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING AND SHORING DURING CONSTRUCTION.
- CONTRACTOR TO SUBMIT A REQUEST TO ENGINEER & ARCHITECT FOR ANY SUBSTITUTION OF MATERIALS OR PRODUCTS SPECIFIED ON THE DRAWINGS.
- STRUCTURAL DESIGN PER 2018 INTERNATIONAL BUILDING CODE (IBC).
- ALL CONSTRUCTION TO CONFORM TO 2018 IBC.
- THE FOLLOWING NOTES APPLY UNLESS SHOWN OTHERWISE.
- THESE DRAWINGS HAVE BEEN PREPARED SOLELY FOR THE USE IN THE CONSTRUCTION OF A PROPOSED BUILDING TO WHICH THESE NOTES ARE ATTACHED. THE DRAWINGS SHALL NOT BE USED IN WHOLE OR IN PART, FOR FABRICATION OR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
- THE OWNER SHALL NOTIFY ENGINEER IF ANY UNIQUE SOILS CONDITIONS EXIST ON SITE WHICH MAY BE DETECTED DURING CONSTRUCTION. THESE INCLUDE BUT SHALL NOT BE LIMITED TO:
 - SATURATED SOIL AT FOOTING SUBGRADE
 - GROUNDWATER
 - UNDOCUMENTED FILL
 - CLAY SOIL WITH SWELL OR COLLAPSE POTENTIAL
 - FILL BEING PLACED BELOW FOOTINGS
- EPIC ENGINEERING CANNOT BE HELD RESPONSIBLE FOR SOIL CONDITIONS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO WORK PROCEEDING. IT IS THE RESPONSIBILITY OF THE OWNER TO HIRE A GEO-TECHNICAL ENGINEER IF NEEDED. THE CONTRACTOR SHALL VISUALLY INSPECT THE SITE PRIOR TO WORK PROCEEDING AND SHALL NOTIFY ENGINEER IF ANY UNIQUE SOIL CONDITIONS EXIST THAT COULD AFFECT THE PERFORMANCE OF THE FOUNDATION SYSTEM PRIOR TO ANY WORK PROCEEDING.

CONCRETE

- GENERAL REQUIREMENTS: STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI. CONCRETE IS EXPOSURE CLASS F2. CONCRETE FOR SLABS ON GRADE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AND A MAXIMUM WATER/CEMENT RATIO OF 0.5. MINIMUM CEMENT CONTENT SHALL BE 5 SACKS/YD. MAXIMUM AGGREGATE SHALL BE 3/4". INCLUDE 4% TO 6% AIR ENTRAINMENT WITH SLUMP NOT TO EXCEED 4" BELOW ALL HEARINGS AND FIREPLACES AT THE FOUNDATION, ENSURE FOOTING PROJECTS FROM FACE OF EARTH/ FIREPLACE A MINIMUM OF 6" AND IS REINFORCED WITH A MINIMUM OF #5 AT 12" O/C EACH WAY. TYP. U.N.O.
- CAST IN PLACE CONCRETE
 - FORM WORK: CONCRETE FORM WORK TO BE OF ADEQUATE SIZE AND STRENGTH, PROPERLY BRACED TO PREVENT SAGGING OR BULGING. PROTECT ALL CONCRETE FROM FREEZING TEMPERATURES. REFER TO DRAWING FOR DIMENSIONS OF CONCRETE MEMBERS AND SIZE AND LOCATION OF ALL REINFORCEMENT.
 - FOOTINGS: NO FOOTING SHALL BE PLACED ON DISTURBED (OR FROZEN) SOIL (IF DISTURBED, COMPACT SOIL IN 6" LIFTS TO 95% OF MAXIMUM DRY DENSITY PER ASTM D1557). FOOTINGS SHALL BE STEPPED DOWN ONE (1) VERTICALLY TO ONE AND ONE HALF (1 1/2) HORIZONTALLY, UNLESS BULK HEADED & STOPPED VERTICALLY.
 - FOUNDATION WALLS: REINFORCE PER DRAWINGS. DO NOT BACKFILL WALLS UNTIL MAIN FLOOR IS FRAMED, THE SUBFLOOR INSTALLED, SHEATHED AND CONCRETE HAS CURED A MINIMUM OF 7 DAYS. SEE SPECIAL PROVISIONS FOR COLD WEATHER CONCRETE BELOW. USE HAND OPERATED COMPACTION EQUIPMENT ADJACENT TO NEWLY PLACED CONCRETE BASEMENT WALLS. CONCRETE PADS AND THICKENED SLABS: REFER TO DRAWINGS AS TO SIZE AND REINFORCEMENT.
 - CONCRETE SLABS: REFER TO DRAWINGS AS TO SIZE AND REINFORCEMENT.
 - REINFORCING BARS: REINFORCEMENT SHALL BE PER ASTM A615, GRADE 60 FOR #5 BARS AND LARGER, GRADE 40 FOR #3 AND #4 BARS. ALL REBAR LAPPED 30 TIMES DIAMETER, REBAR AT FOOTINGS TO HAVE 3" CLEAR COVER OF CONCRETE (U.N.O. ON DRAWINGS). PROVIDE CORNER BARS WITH 18" LEGS AT THE CORNERS OF ALL WALLS AND FOOTINGS. SIZE AND PLACEMENT TO MATCH HORIZONTAL REINFORCEMENT.
 - COLD-WEATHER CONCRETING: CONTRACTOR SHALL SUBMIT TO ENGINEER FOR REVIEW THE PROPOSED MEASURES TO SATISFY PLACEMENT & CURING OF CONCRETE DURING COLD WEATHER. FOR OPTIMUM STRENGTH GAIN, IT IS RECOMMENDED TO CONSIDER A BLEND OF TYPE I AND TYPE II CEMENT WITH A 6 BAG MIX, LOW SAND TO AGGREGATE RATIO, BATCHED TO A 1" SLUMP WITH SUPER PLASTICIZER ADDED FOR 4"-5" SLUMP WORKABILITY. 1%-2% NON-CHLORINE ACCELERATOR & CONCRETE MAINTAINED AT 50" MINIMUM FOR 7 DAYS. AVOID MORE THAN 25" TEMPERATURE CHANGE PER DAY WHEN HEATING IS TERMINATED.
 - ANCHOR BOLTS AND HOLD-DOWN: ANCHOR BOLTS TO BE ASTM F1554 GR. 36, 5/8"x10" EMBEDDED IN FOUNDATION WALLS PER SHEAR WALL SCHEDULE (SEE FOUNDATION PLAN FOR REQUIREMENTS AT SHEAR WALLS). BOLTS TO BE WITHIN 1'-0" OF SILL PLATE ENDS (COORDINATE WITH GENERAL CONTRACTOR). MINIMUM OF TWO ANCHOR BOLTS PER SILL PLATE.
 - ALL POSTS SUPPORTED BY ISOLATED FOOTINGS TO HAVE POST ANCHORS UNLESS SPACED IN STUD WALLS
 - REFER TO DRAWINGS FOR HOLD-DOWN REQUIREMENTS. INSTALL REQUIRED EMBEDDED ITEMS PER MANUFACTURER'S CATALOG TO ENGAGE HOLD-DOWN.
 - CONSTRUCTION AND CRACK CONTROL JOINTS: ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS AND OTHER FOREIGN MATERIAL PRIOR TO PLACING ADJACENT CONCRETE. CRACK CONTROL JOINTS IN SLABS SHALL HAVE A MAXIMUM SPACING OF 15'-0" IN BOTH DIRECTIONS. THE CONTRACTOR SHALL SUBMIT THE DETAILS AND PROPOSED LOCATIONS OF CONSTRUCTION JOINTS AND CRACK CONTROL JOINTS FOR REVIEW BEFORE STARTING CONSTRUCTION.
 - EPOXY ANCHORS: ANCHORING ADHESIVE SHALL BE A TWO-COMPONENT HIGH-SOLIDS, EPOXY SYSTEM SUPPLIED IN MANUFACTURER'S STANDARD CARTRIDGE AND DISPENSED THROUGH A STATIC-MIXING NOZZLE SUPPLIED BY THE MANUFACTURER. THE ADHESIVE ANCHOR SHALL HAVE BEEN TESTED AND QUALIFIED FOR PERFORMANCE IN CRACKED CONCRETE PER ICC-ES AC308. ADHESIVE SHALL BE SET-3G EPOXY-TIE ADHESIVE FROM SIMPSON STRONG-TIE, PLEASANTON, CA. ANCHORS SHALL BE INSTALLED PER SIMPSON STRONG-TIE INSTRUCTIONS FOR SET-3G EPOXY-TIE ADHESIVE. NOTE: THE USE OF EPOXY ANCHORS REQUIRES SPECIAL INSPECTION OF INSTALLATION PER CURRENT ICO REPORT. CONTRACTOR TO PROVIDE SPECIAL INSPECTION REPORTS TO ENGINEER, BUILDING OFFICIAL, & ARCHITECT.

STRUCTURAL STEEL AND MISCELLANEOUS METALS

- ALL STRUCTURAL STEEL SHALL COMPLY WITH THE PREFERRED ASTM MATERIAL SPECIFICATION FOR VARIOUS SHAPES PER TABLES 2-3 AND 2-4 OF AISC'S STEEL CONSTRUCTION MANUAL (THIRTEENTH EDITION).
- ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", & AISC 341 FOR FABRICATION OF LATERAL ELEMENTS. SHOP DRAWINGS SHALL BE SUBMITTED FOR THE OWNER'S REPRESENTATIVES' REVIEW BEFORE COMMENCING FABRICATION. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. ALL WELDING SHALL BE DONE BY "STRUCTURAL WELDING CODE", AWS D1.1. ALL FIELD WELDING TO BE ACCOMPLISHED BY AWS CERTIFIED WELDERS.
- ALL STEEL ANCHORS, TIES AND OTHER MEMBERS TO BE EMBEDDED IN CONCRETE OR MASONRY SHALL BE LEFT UNPAINTED. ALL MACHINE BOLTS SHALL BE ASTM A307 U.N.O. (SEE CONNECTION SCHEDULE FOR A325 BOLTS) AND SHALL BE PROVIDED WITH LOCK WASHERS UNDER NUTS OR SELF LOCKING NUTS. ALL NUTS, BOLTS, WASHERS AND MISC. STEEL EXPOSED TO WEATHER SHALL BE GALVANIZED.
- WELDED HEADED STUDS (WHS)+ TYPICAL WELD OF WHS TO STEEL SHALL BE FILLET WELD ALL AROUND SIZE EQUAL TO ONE-HALF THE DIAMETER OF THE STUD.

SUBSTITUTIONS

- SUBSTITUTION FOR ANY SPECIFIED STRUCTURAL COMPONENT MUST BE REQUESTED IN WRITING BY THE CONTRACTOR. THE ENGINEER WILL REVIEW THE REQUESTED ALTERNATIVE & RESPOND IN WRITING. ADDITIONAL SUPERVISION OR SPECIAL INSPECTION MAY BE REQUIRED FOR THE REQUESTED SUBSTITUTION.

JOB SAFETY

- THE ENGINEER HAS NOT BEEN RETAINED NOR COMPENSATED TO PROVIDE DESIGN AND/OR CONSTRUCTION REVIEW SERVICES RELATED TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES FOR THE CONTRACTOR TO PERFORM HIS WORK. THE UNDERTAKING OF PERIODIC SITE VISITS BY THE ENGINEER SHALL NOT BE CONSTRUED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR, SUBCONTRACTORS, SUPPLIERS OR THEIR EMPLOYEES, OR FOR ACCESS, VISIT, USE, WORK, OR OCCUPANCY BY ANY PERSON.

MISCELLANEOUS

- PROPRIETARY PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.

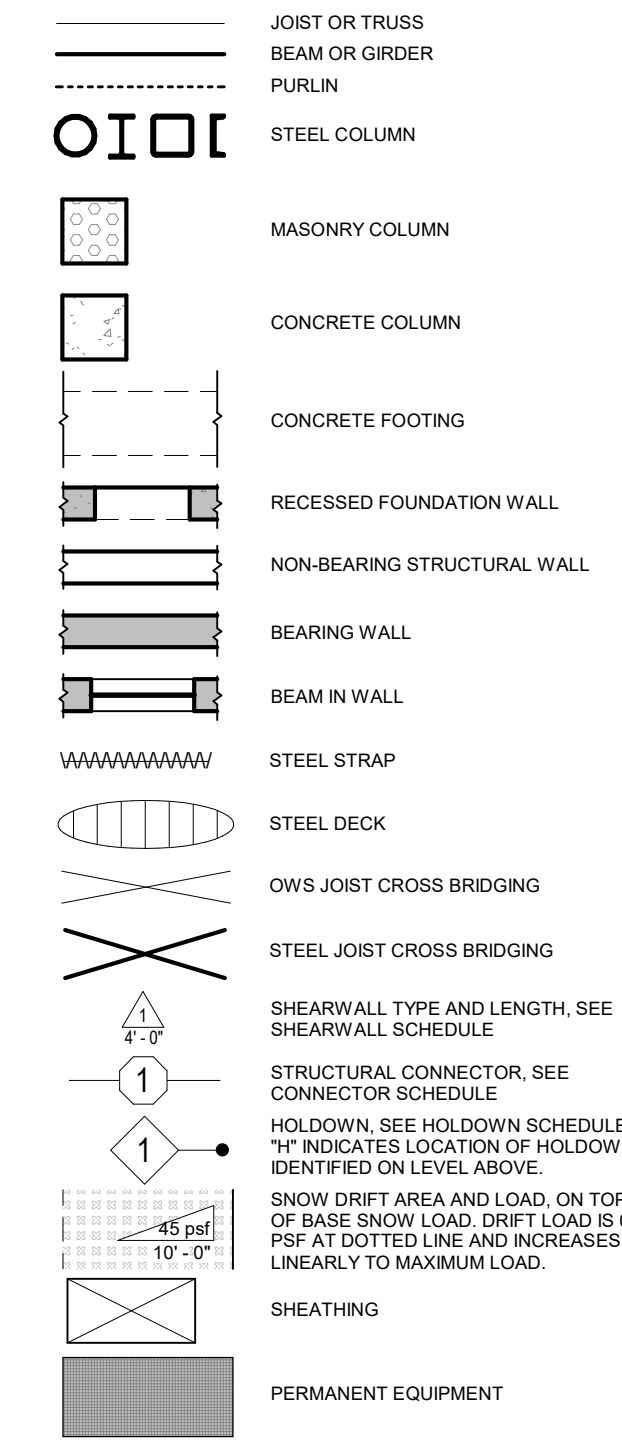
SHOP DRAWINGS

- CONCRETE AND STEEL REINFORCING CONTRACTOR, TRUSS SUPPLIER, AND STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.

STRUCTURAL TAGS LEGEND

TAG	DESCRIPTION
AB-1	ANCHOR BOLT. SEE ANCHOR BOLT SCHEDULE
CB-1	CONCRETE BEAM. SEE CONCRETE BEAM SCHEDULE
CC-1	CONCRETE COLUMN. SEE CONCRETE COLUMN SCHEDULE
CF-1	CONCRETE FOOTING. SEE CONCRETE FOOTING SCHEDULE
CS-1	CONCRETE SLAB. SEE CONCRETE SLAB SCHEDULE
CW-1	CONCRETE WALL. SEE CONCRETE WALL SCHEDULE
DB-1	COLD-FORMED STEEL BEAM. SEE COLD-FORMED STEEL BEAM SCHEDULE
DJ-1	COLD-FORMED STEEL JOIST. SEE COLD-FORMED STEEL JOIST SCHEDULE
DW-1	COLD-FORMED STEEL WALL. SEE COLD-FORMED STEEL WALL SCHEDULE
MC-1	MASONRY COLUMN. SEE MASONRY COLUMN SCHEDULE
ML-1	MASONRY LINTEL. SEE MASONRY LINTEL SCHEDULE
MW-1	MASONRY WALL. SEE MASONRY WALL SCHEDULE
SB-1	STEEL BEAM. SEE STEEL BEAM SCHEDULE
SC-1	STEEL COLUMN. SEE STEEL COLUMN SCHEDULE
SD-1	STEEL DECK. SEE STEEL DECK SCHEDULE
SJ-1	STEEL JOIST. SEE STEEL JOIST SCHEDULE
WB-1	WOOD BEAM. SEE WOOD BEAM SCHEDULE
WC-1	WOOD COLUMN. SEE WOOD COLUMN SCHEDULE
WJ-1	WOOD JOIST. SEE WOOD JOIST SCHEDULE

STRUCTURAL PLAN LEGEND



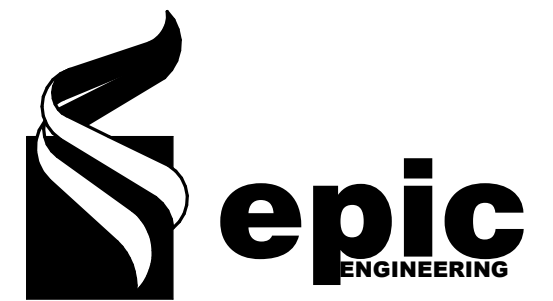
CONSTRUCTION NOTES

GOVERNING CODE 2018 IBC
 RISK CATEGORY I
 IMPORTANCE FACTOR: 1.0

SOIL PROPERTIES:
 SITE CLASS D
 SOIL BEARING PRESSURE 1500 PSF
 FROST DEPTH 36"

DATE

DECEMBER 2022



REVISIONS

MARK	DATE	DESCRIPTION

DRAWN: CRC
 DESIGNER: JD
 REVIEWED: JD

PROJECT #
 21SM4634

SCALES



PROJECT NAME:

**DIVERSION
STRUCTURE**

PROJECT LOCATION:

41.167° N, 111.697° W

SHEET TITLE:

STRUCTURAL NOTES

PLAN SET:

PERMIT S0.1

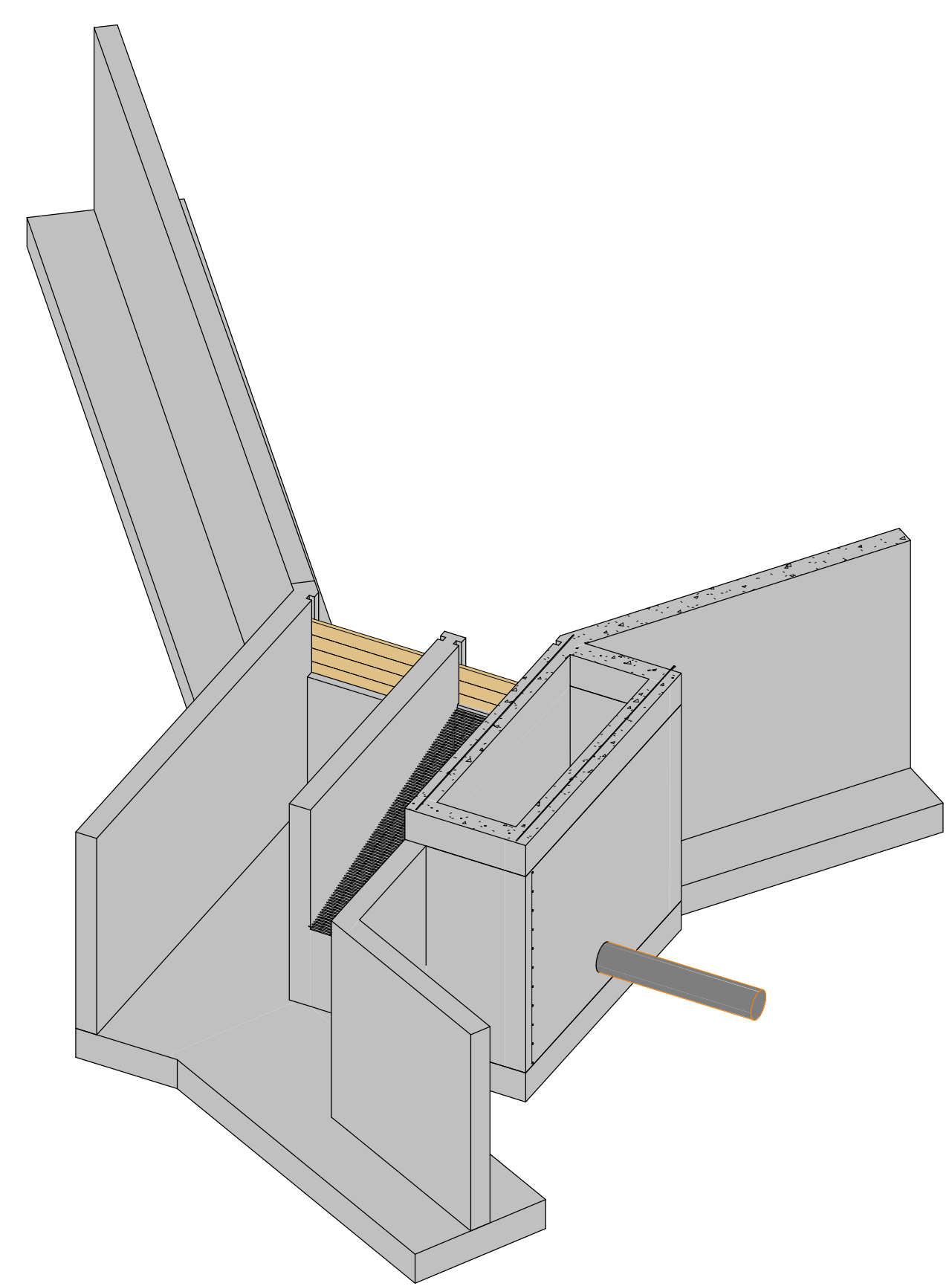
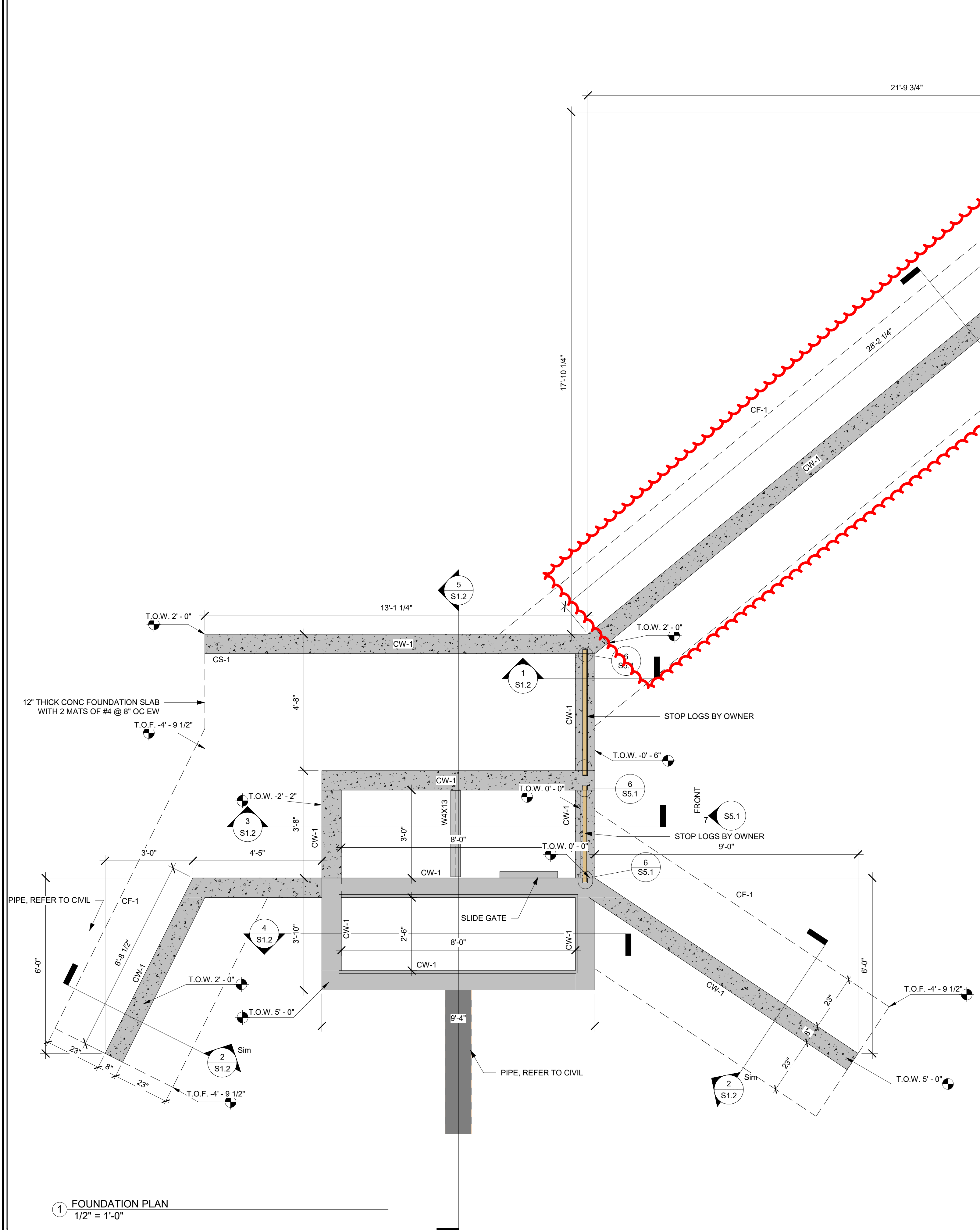
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CONCRETE FOOTING SCHEDULE						
MARK	WIDTH	LENGTH	THICK	LONG REINF	PERP REINF	REMARKS
CF-1	4' - 6"	<varies>	1' - 0"	(2) MATS #4 @8"O.C.	(2) MATS #4 @8"O.C.	

CONCRETE WALL SCHEDULE					
MARK	THICKNESS	HORIZ REINF	VERT REINF	TYPE	REMARKS
CW-1	0' - 8"	#4 @8"O.C.	#4 @8"O.C.		

CONCRETE SLAB SCHEDULE			
MARK	THICK	REBAR	REMARKS
CS-1	1' - 0"	(2) MATS #4 @8"O.C. E.W.	

This section was not replaced. We don't know why and if a contract credit was issued or what?

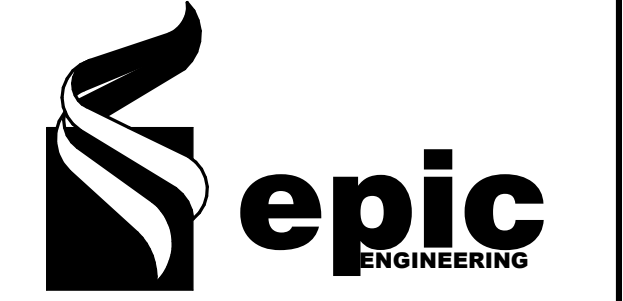


1 FOUNDATION PLAN
1/2" = 1'-0"

CONSTRUCTION NOTES

1) THIS IS ONE PAGE OF A SET OF PROJECT DOCUMENTS AND MAY NOT BE USED ALONE. THE CONTRACTOR, SUBCONTRACTORS AND OWNER SHALL REVIEW AND BE RESPONSIBLE FOR ALL INFORMATION CONTAINED IN ALL PROJECT DOCUMENTS PRIOR TO INITIATION OF ANY WORK ON THE PROJECT.

DATE
DECEMBER 2022



REVISIONS		
MARK	DATE	DESCRIPTION

DRAWN: CRC
DESIGNER: JD
REVIEWED: JD

PROJECT #
21SM4634

REGISTERED PROFESSIONAL ENGINEER
JEREMY DYE
No. 8845726
ELECTRONIC SEAL
12/1/2022
STATE OF UTAH

SCALES	
1/2" = 1'-0"	

PROJECT NAME:
DIVERSION STRUCTURE

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41.167° N, 111.697° W

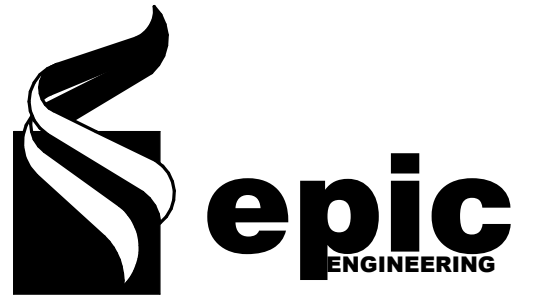
SHEET TITLE:
FOUNDATION PLAN

PLAN SET: PERMIT
SHEET: S1.1

CONSTRUCTION NOTES

DATE

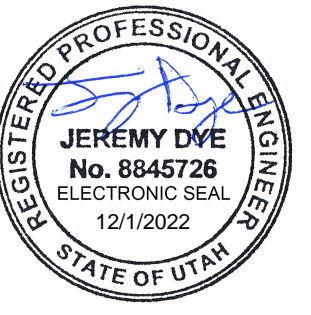
DECEMBER 2022



REVISIONS

MARK	DATE	DESCRIPTION

DRAWN: CRC
 DESIGNER: JD
 REVIEWED: JD



PROJECT #
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SCALES

1" = 1'-0"

PROJECT NAME:

**DIVERSION
 STRUCTURE**

PROJECT LOCATION:

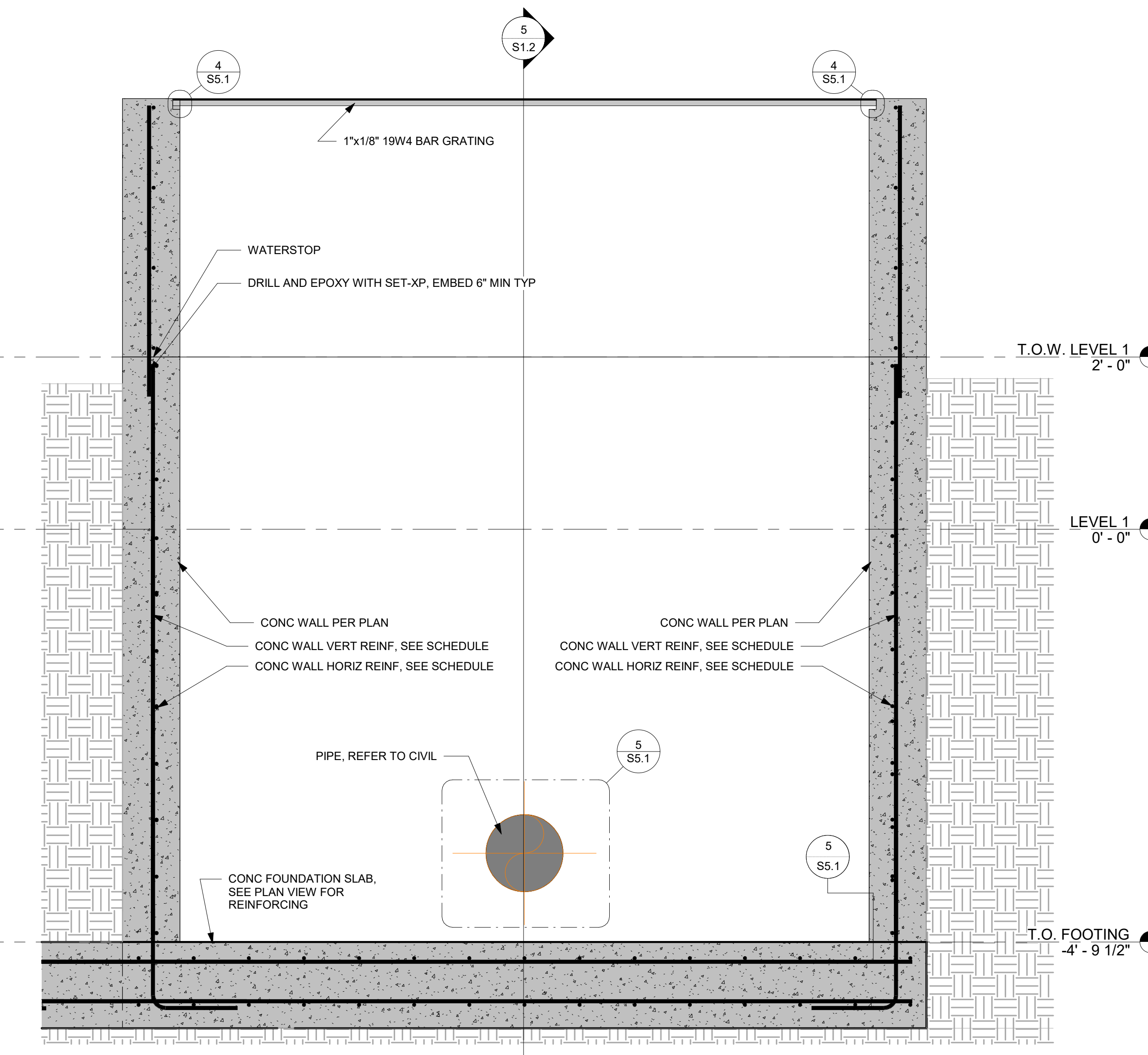
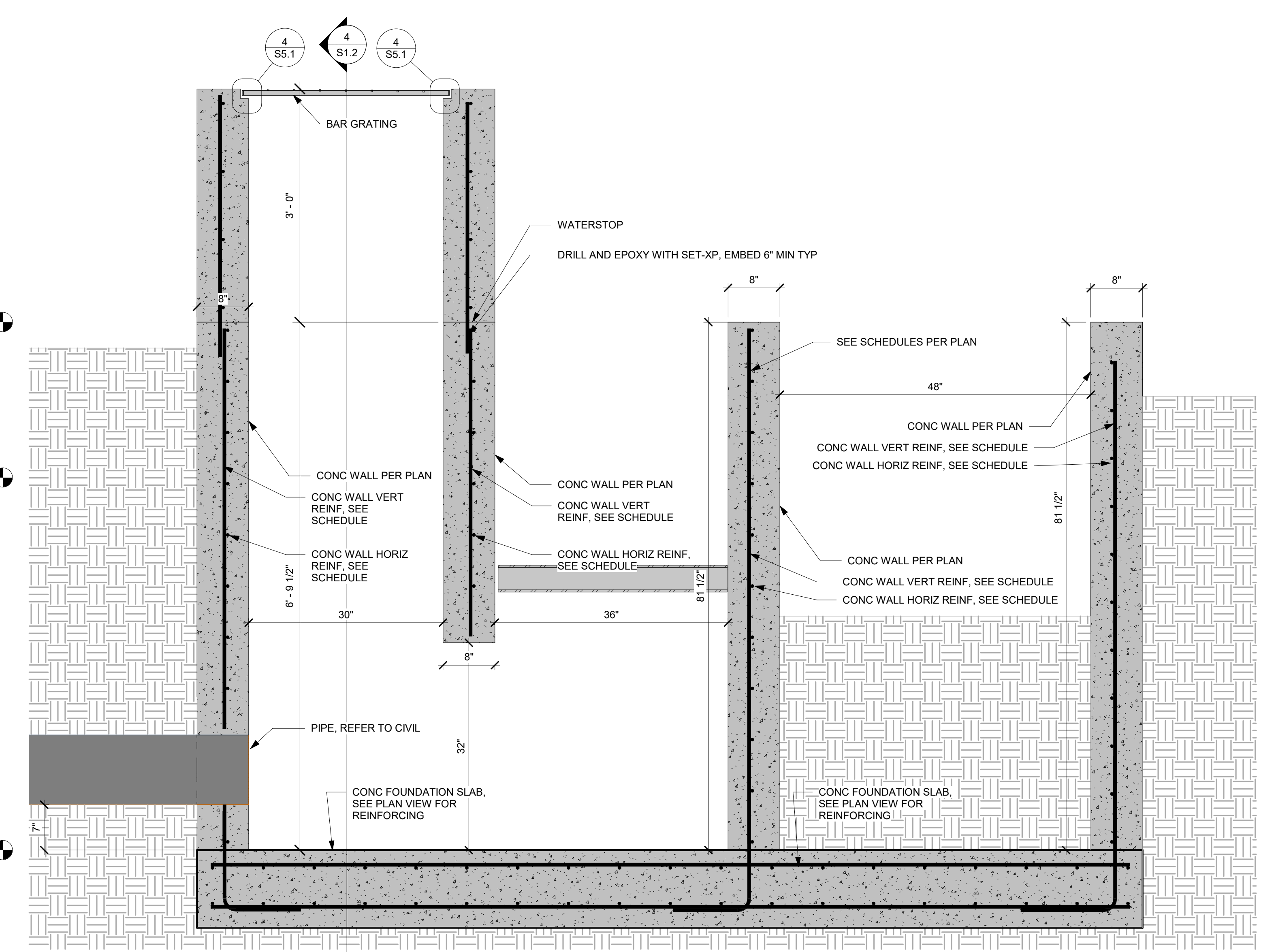
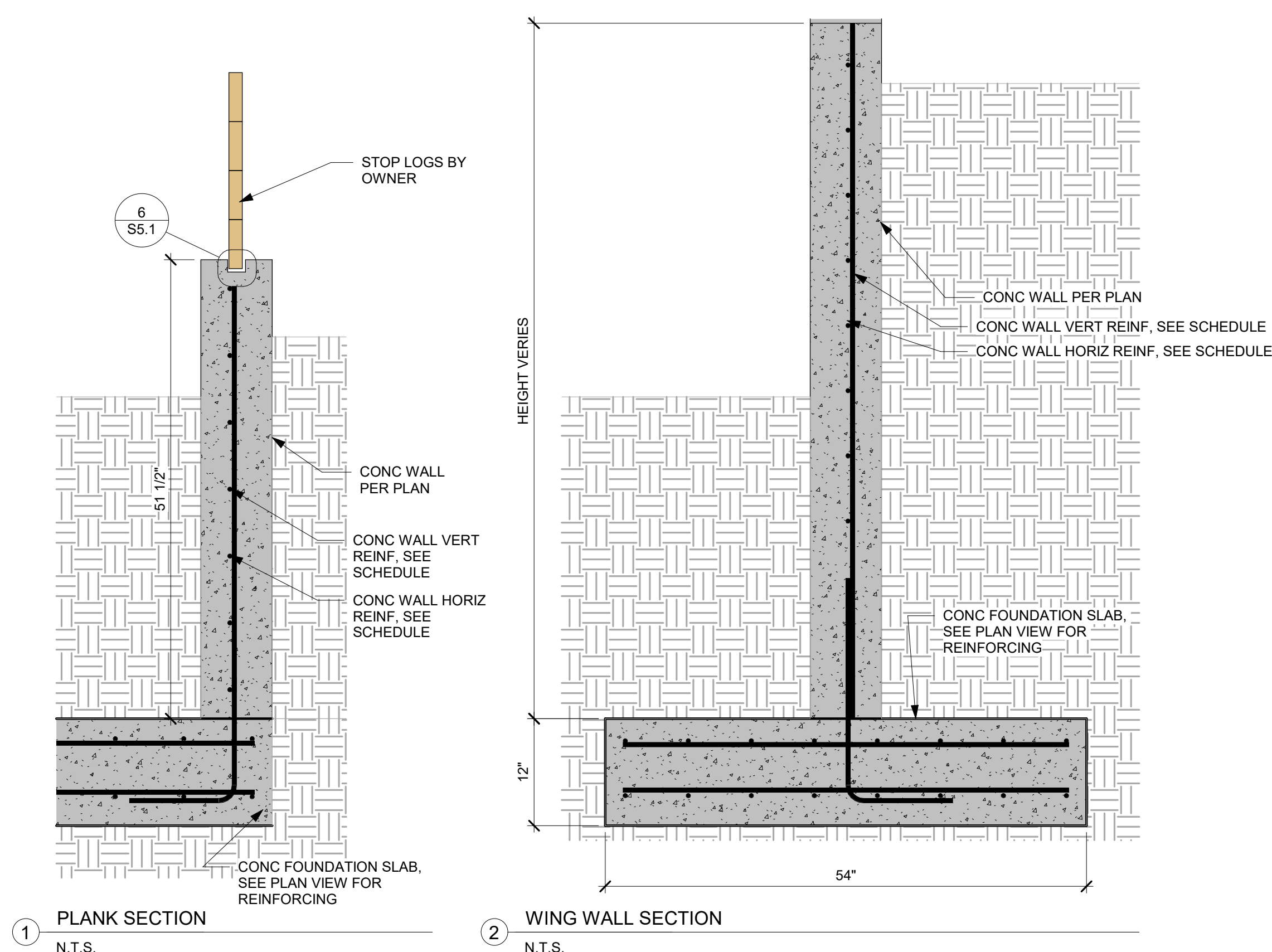
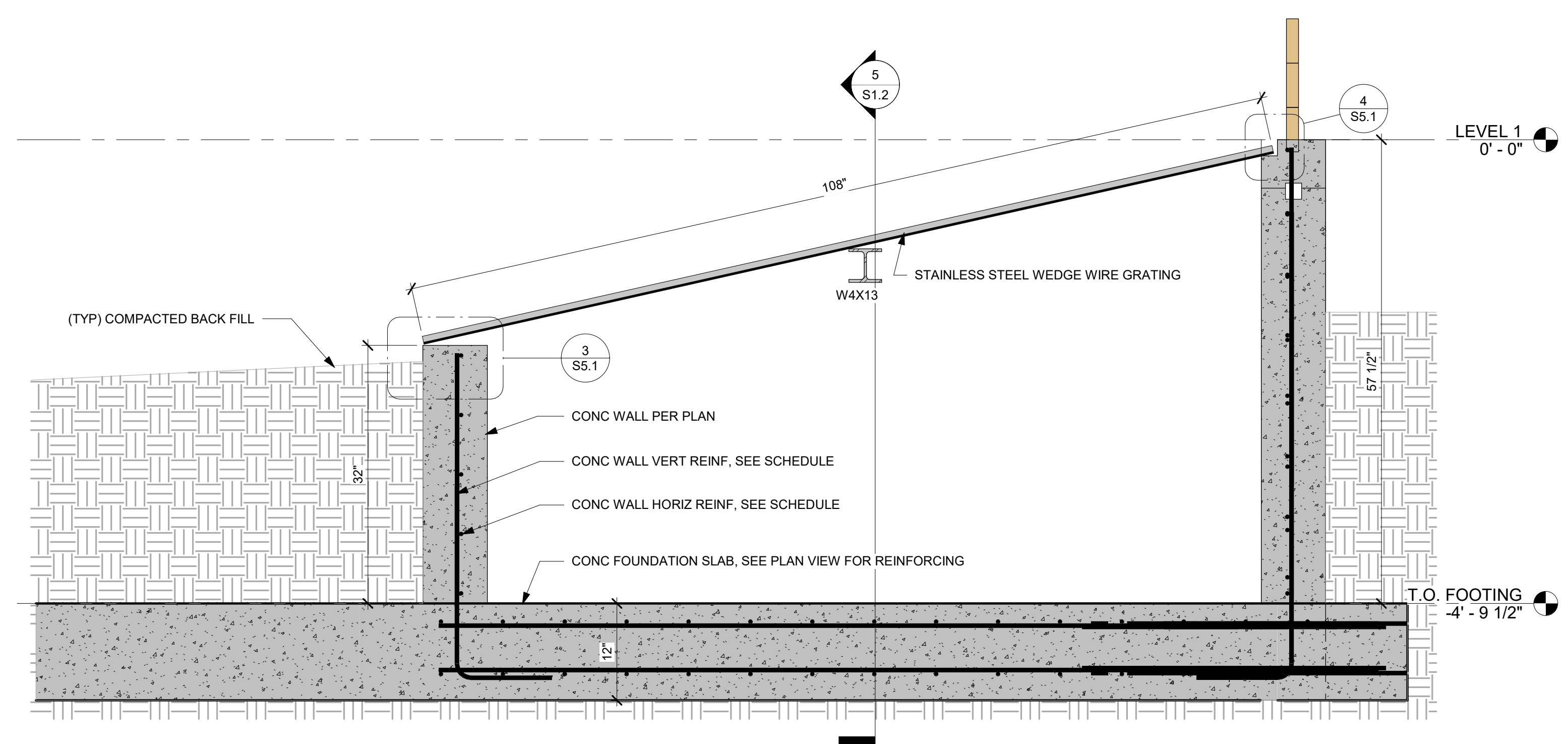
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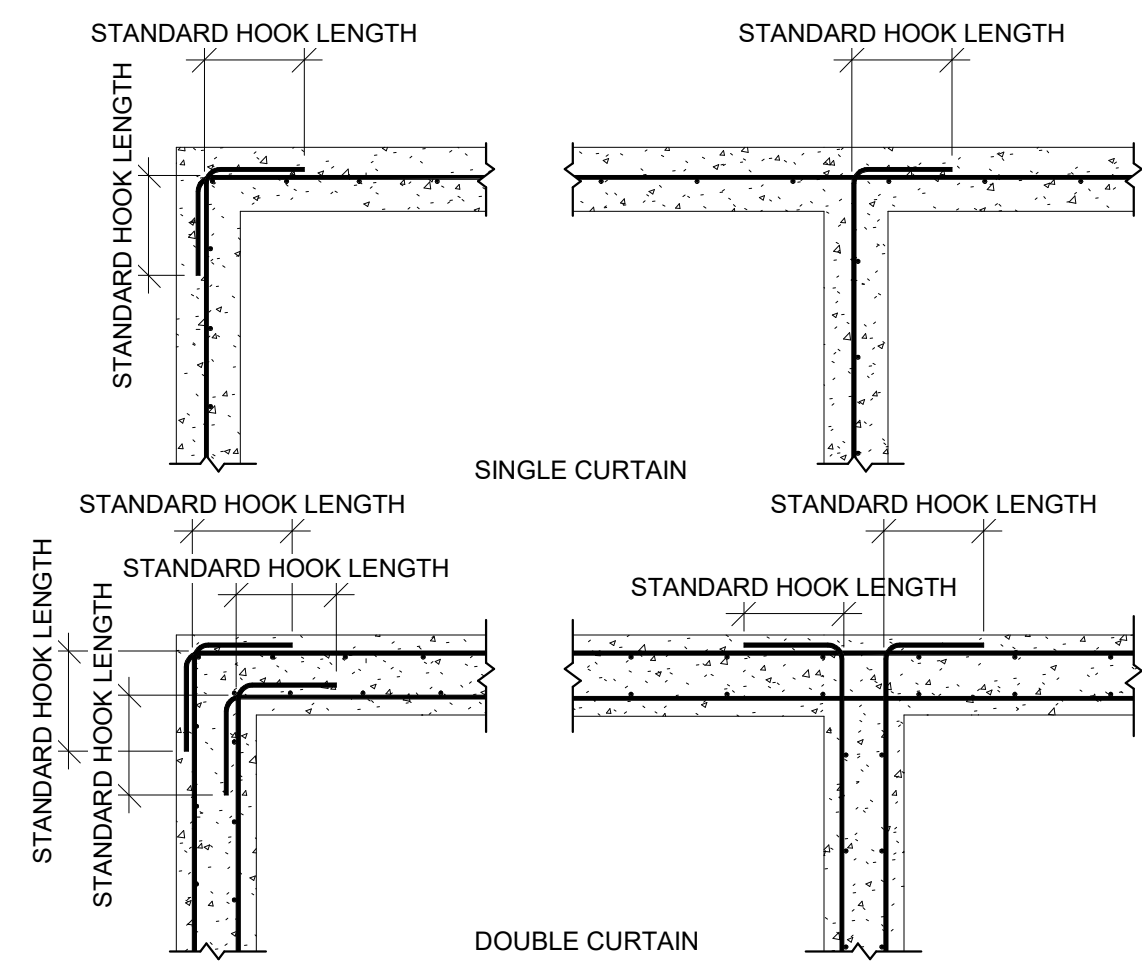
WALL ELEVATIONS

PLAN SET:

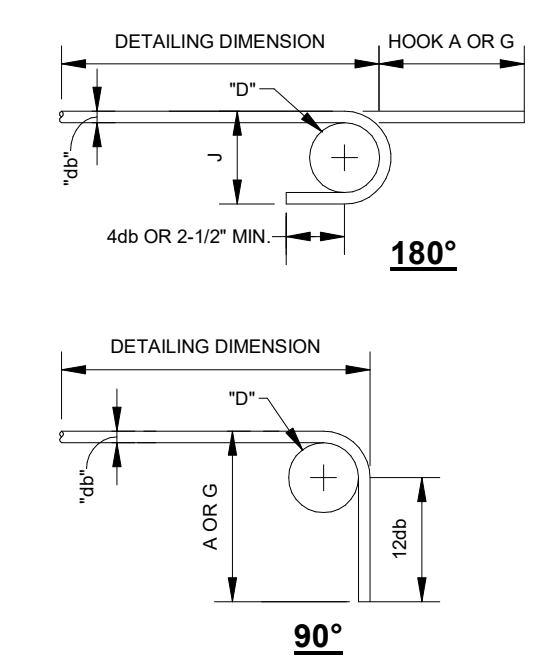
PERMIT S1.2



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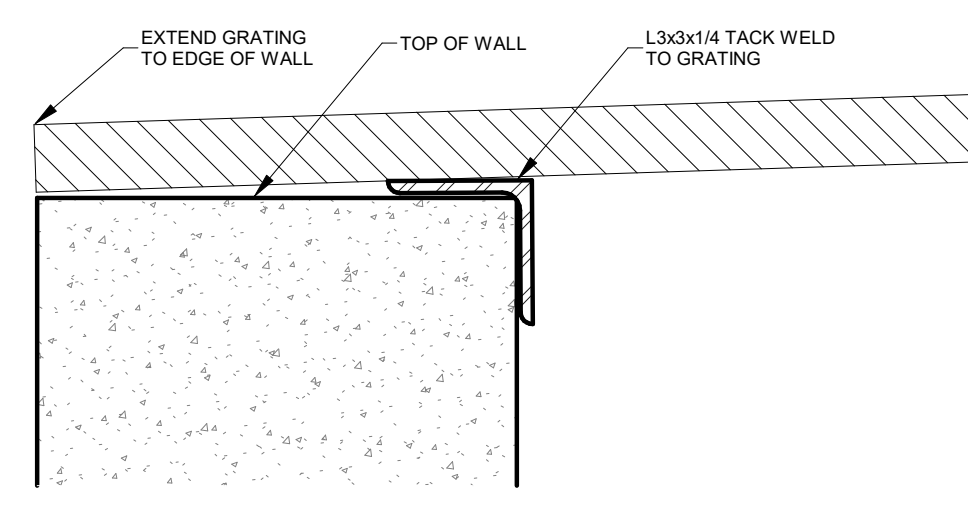
1 REINFORCEMENT AT CORNERS AND INTERSECTIONS
N.T.S.



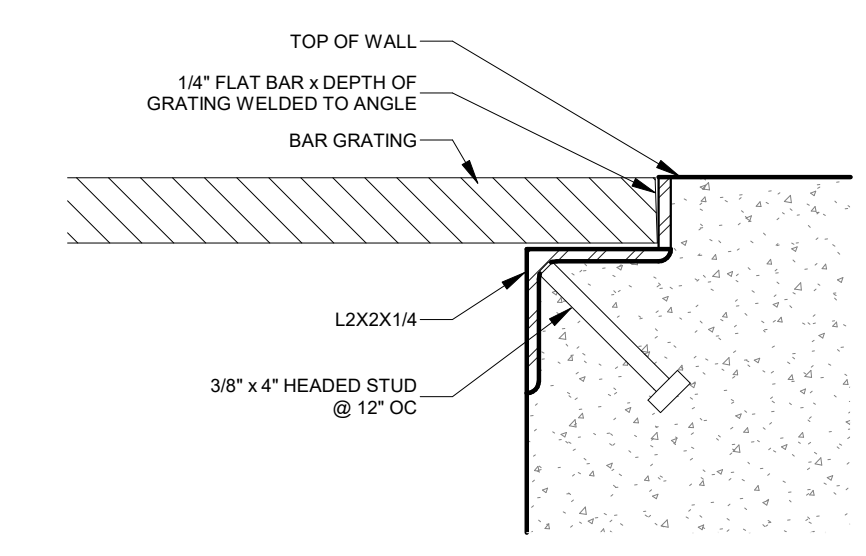
2 REINFORCING STEEL BEND
N.T.S.

BAR SIZE	180° HOOKS		90° HOOKS	
	A OR G	J	A OR G	J
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	11-1/2"
#7	5-1/4"	10"	7"	12"
#8	6"	11"	8"	14"
#9	9-1/2"	1-3"	11-3/4"	1-7"
#10	10-3/4"	1-5"	1-1-1/4"	1-10"
#11	12"	1-7"	1-2-3/4"	2-0"
#14	18-1/4"	2-3"	1-9-3/4"	2-7"
#18	24"	3-0"	2-4-1/2"	3-5"

D = FINISHED INSIDE BEND DIA
 db = NOMINAL BAR DIAMETER
 Min. D = 6db FOR #3 THROUGH #8
 = 8db FOR #9, #10, AND #11
 = 10db FOR #14, AND #18



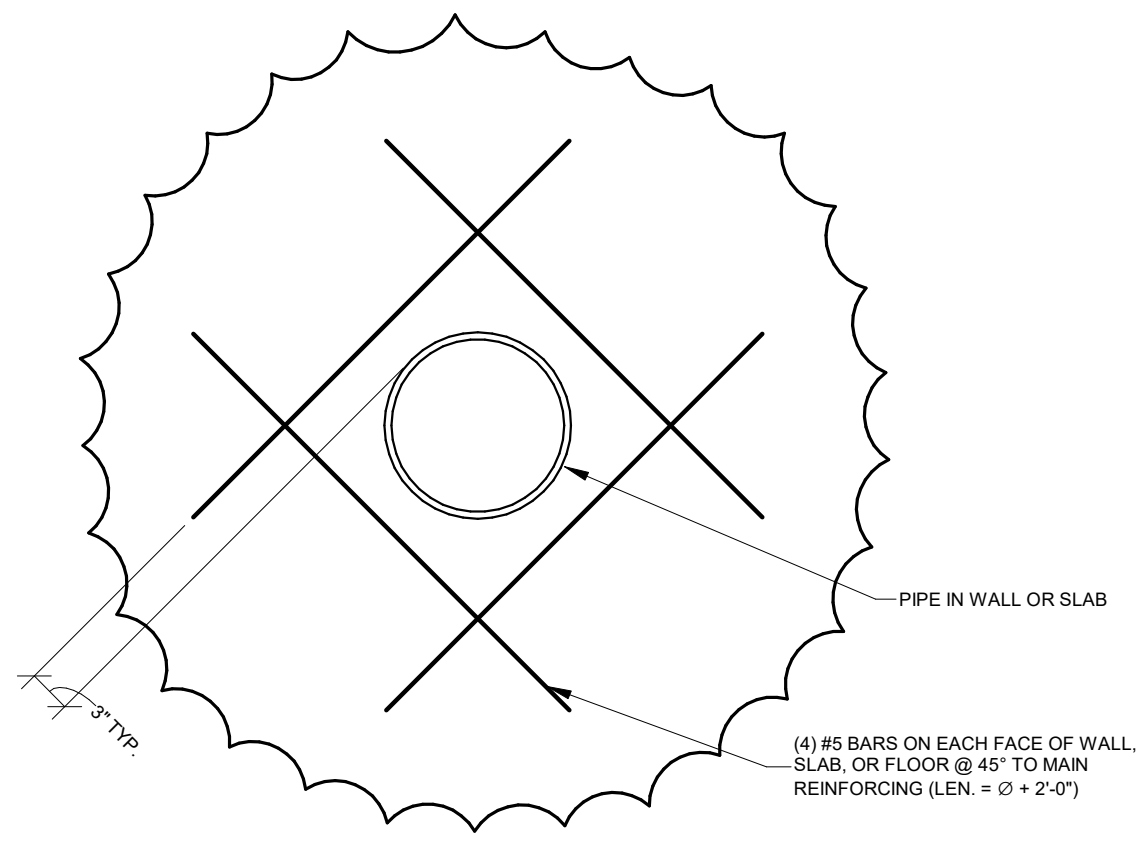
3 BAR GRATING OVER TOP OF WALL
N.T.S.



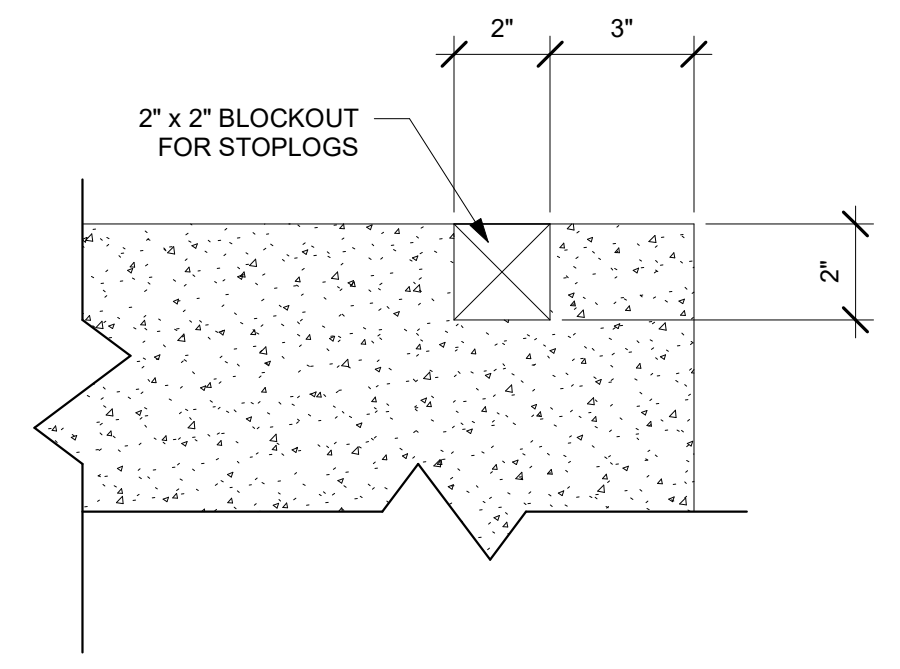
4 BAR GRATING RECESSED SHELF
N.T.S.

SPECIFIED CONCRETE COVER FOR CAST-IN-PLACE NONPRESTRESSED CONCRETE MEMBERS

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER, IN.
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	NO. 6 THROUGH NO. 18	2
		NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER	1-1/2
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, AND WALLS	NO. 14 AND NO. 18 BARS	1-1/2
		NO. 11 BAR AND SMALLER	3/4
	BEAMS, COLUMNS, PEDESTALS, AND TENSION TIES	PRIMARY REINFORCEMENT, STIRRUPS, TIES, SPIRALS, AND HOOPS	1-1/2



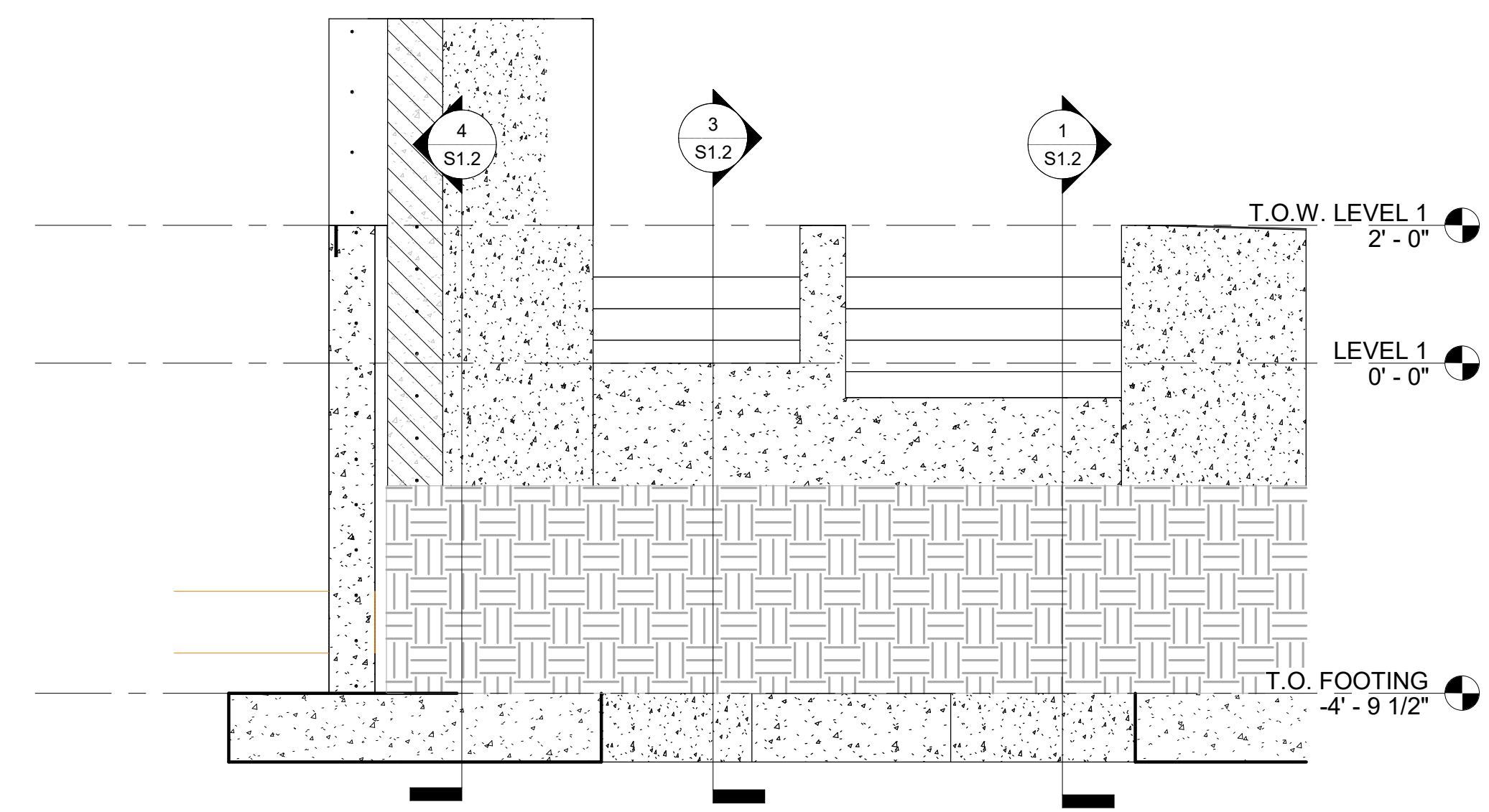
5 TYPICAL PIPE PENETRATION
N.T.S.



6 WALL NOTCH
N.T.S.

REINFORCING LAP LENGTH SPLICE SCHEDULE
TENSION BARS "Ld"

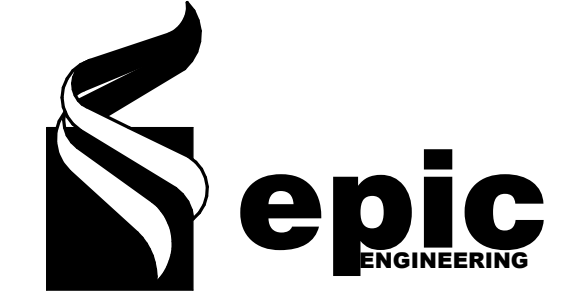
BAR SIZE	CONCRETE BELOW REBAR	
	> 12"	< 12"
#3	13"	12"
#4	18"	15"
#5	22"	18"
#6	26"	22"
#7	40"	32"
#8	54"	42"
#9	68"	56"
#10	87"	68"



7 FRONT
N.T.S.

CONSTRUCTION NOTES

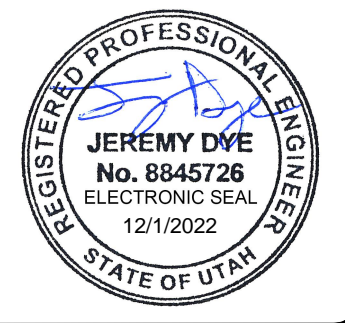
DATE
DECEMBER 2022



REVISIONS

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 DESIGNER: JD
 REVIEWED: JD
 PROJECT #
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SCALES

As indicated	0' 1'
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PROJECT NAME:
DIVERSION STRUCTURE

PROJECT LOCATION:
41.167° N, 111.697° W

SHEET TITLE:
STRUCTURAL DETAILS

PLAN SET:
PERMIT S5.1