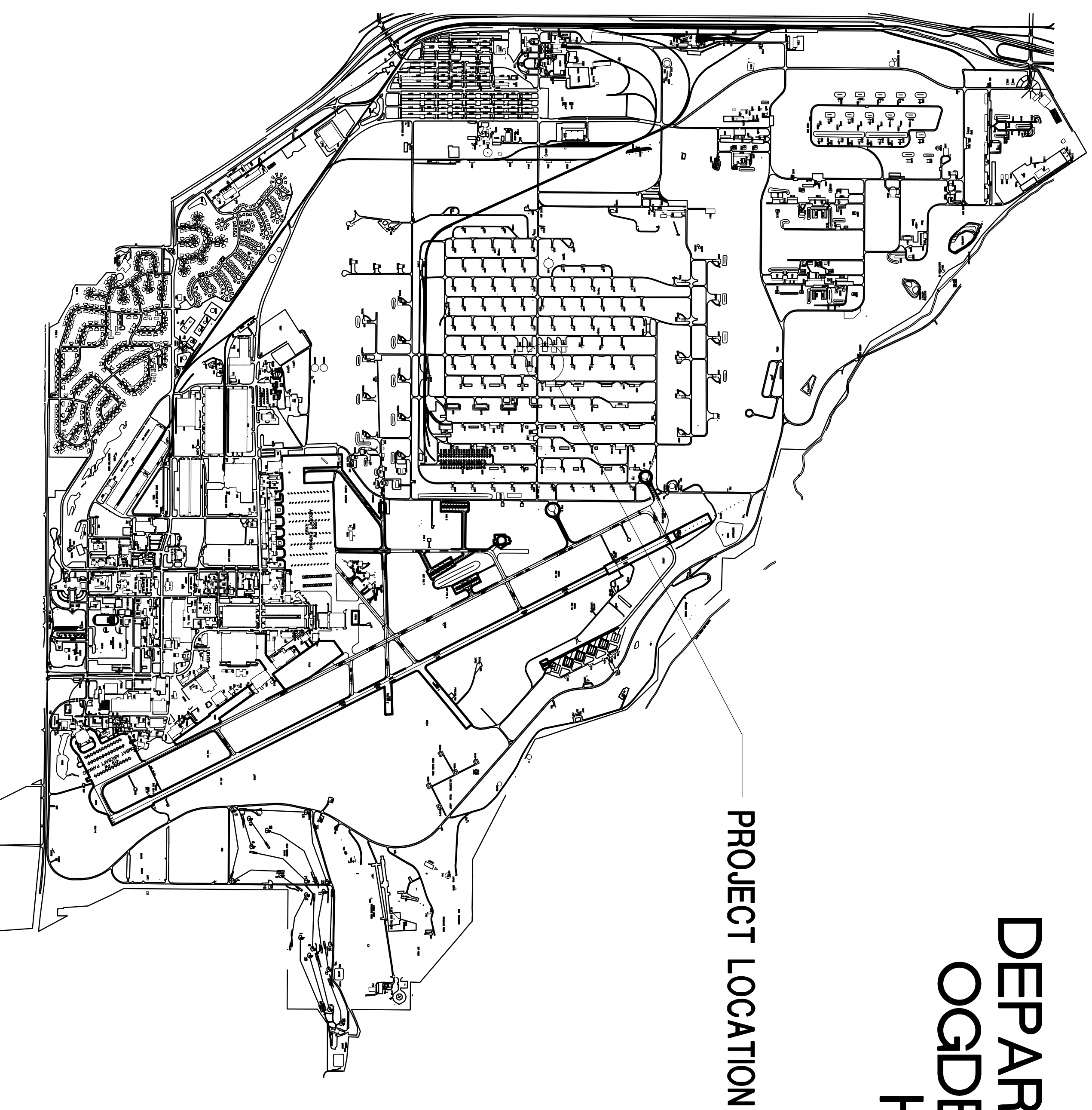


MUNITIONS STORAGE MODULE BUILDINGS

HILL AIR FORCE BASE, UTAH

PROJECT NOS. KRSM 003013, 033005, and 033004

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
HILL AIR FORCE BASE
OGDEN, UTAH



DRAWING INDEX		
SHEET NO.	DRAWING NO.	DESCRIPTION
1	G1	COVER SHEET AND VICINITY MAP
2	G2	GENERAL NOTES AND ABBREVIATIONS
3	G3	GENERAL STRUCTURAL NOTES
4	C1	SITE PLAN (30 SCALE)
5	C2	CIVIL SITE PLAN (20 SCALE)
6	G3	GRADING PLAN
7	S1	FOUNDATION PLAN
8	S2	BUILDING SECTIONS
9	S3	RETAINING WALL
10	S4	PRECAST PANELS SECTIONS AND DETAILS
11	S5	WALL SECTIONS
12	S6	ROOF PLAN
13	S7	ROOF PANEL PLAN
14	S8	ROOF SECTIONS, DETAILS AND PLAN VIEW
15	S9	DOOR FRAME, SECTION AND DETAILS
16	S10	LEFT DOOR ASSEMBLY
17	S10A	DOOR ELEVATION
18	S11	DOOR DETAILS
19	S12	RIGHT DOOR ASSEMBLY
20	S13	ILD SECTIONS AND DETAILS
21	S14	ELECTRICAL SITE PLAN AND DETAILS
22	E1	POWER AND LIGHTING PLAN
23	E2	GROUNDING/SIGNAL
24	E3	LIGHTNING PROTECTION
25	E4	ELECTRICAL ONE LINE
26	E5	LIGHTNING PROTECTION
27	E6	

HILL AIR FORCE BASE

PROJECT LOCATION

75.000 - HILL AIR FORCE
CAD COMPUTER IN DIVISION
PRJ # 997

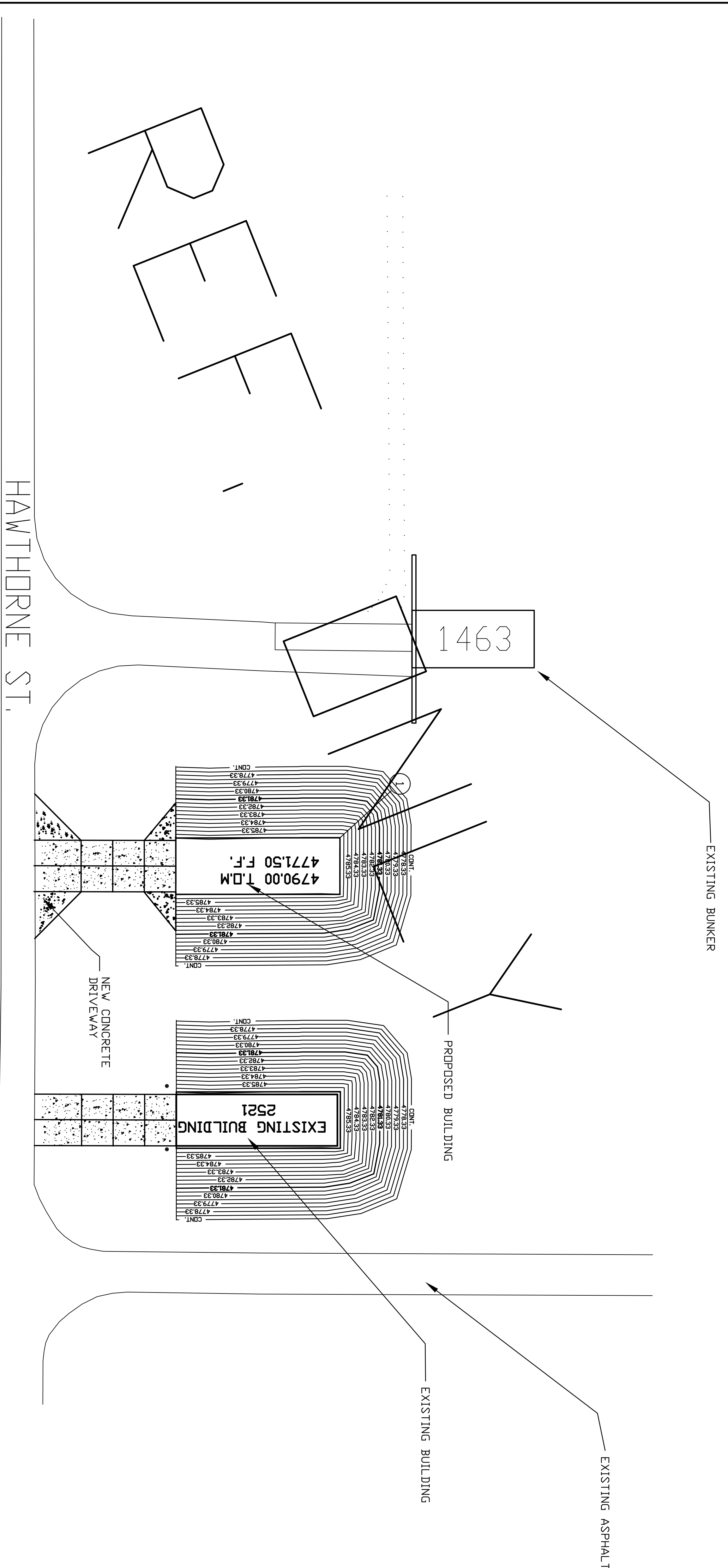
SIGNATURE ON THIS SHEET
IS APPROVAL FOR ALL OTHER
SHEETS INCLUDED

REVISION	DATE	DESCRIPTION	BY

CIVIL/STRUCTURAL REVIEW	DATE		
ELECTRICAL REVIEW	DATE		
MACHINICAL/COMMITTEE	DATE		
PIVS INSPECTOR/PIV DESIGN	DATE		
BASE COMMITTEE/PIV NUMBER	DATE		
ENERGY CONSERVATION REVIEW	DATE		
PIVS INSPECTOR REVIEW	DATE		
ENVIRONMENTAL REVIEW	DATE		
CONSTRUCTION REVIEW	DATE		
CUSTOMER-FUNCTION REVIEW	DATE		
SECURITY POLICE	DATE		
TELECOMMUNICATIONS	DATE		

DESIGNER	DATE	27	ATG
ENGINEERING ASSISTANT	DATE		
PROJECT NO.	DATE		
MAKE FILE NO.	DATE		
APPROVED-BASE CIVIL ENGINEER	DATE		

DEPARTMENT OF THE AIR FORCE OGDEN AIR LOGISTICS CENTER OFFICE OF CIVIL ENGINEERING	DESIGNER LYNN ADAMS
MODULAR STORAGE MAGAZINE COVER SHEET	ENGINEERING ASSISTANT



NOTE: BENCHMARK 73-49
 N 232279.745
 E 1864574.895
 EL. 4777.17

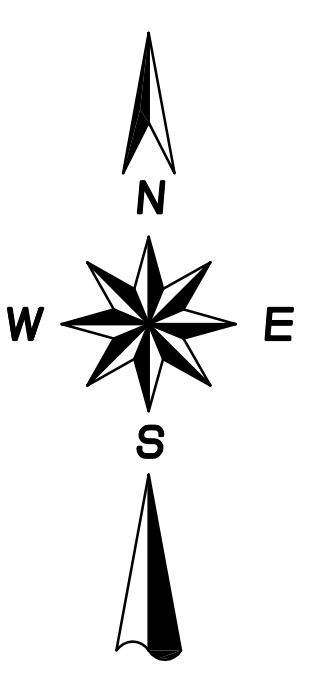
COORDINATE IS POSITION OF OUTSIDE
 CORNER OF PREFAB CONCRETE WALL
 NAD 27
 COORDINATE TABLE

NO.	NORTHING	EASTING	ELEVATION
1			

NOTE: COORDINATES BELOW ARE TO THE OUTSIDE CONCRETE WALL. THE CONTRACTOR IS RESPONSIBLE TO CONSTRUCT THE BUILDING TO ITS PROPER SIZE AND PROVIDE 30 INCHES OF EARTH COVER OVER THE ENTIRE STRUCTURE. CONTRACTOR SHALL SURVEY AND SUBMIT DOCUMENT WITH NORTHING AND EASTING BEFORE PLACEMENT OF ANY CONCRETE.

CIVIL LEGEND

	NEW		EXISTING		TO BE REMOVED
	BUILDING		ASPHALT CONC. P.V.M.T.		PORTLAND CEMENT CONC. P.V.M.T.
	CONTOUR LINES		FINISH GRADE		SPOT ELEVATION
	SWALE OR DITCH		WATER LINE		FIRE HYDRANT
	GATE VALVE		GATE VALVE W/ INDICATOR POST		SANITARY SEWER LINE
	CLEANOUT		STORM DRAIN		INLET OR CATCH BASIN
	DIRECTION OF FLOW		GAS LINE		TELEPHONE LINE (UT = UNDERGROUND)
	ELECTRICAL LINE (UG = UNDERGROUND)		POWER POLE		LUMINAIRE
	CHAIN LINK FENCE		BENCH MARK		



GRAPHIC SCALE
 0 15' 30' 60' 90'
 Scale: 1"=30'

75 06 07 HILL AIRB
 CAD COMPUTER INFORMATION
 PROU .dgn

SIGNATURE ON THIS SHEET IS APPROVAL FOR ALL OTHER SHEETS INCLUDED.

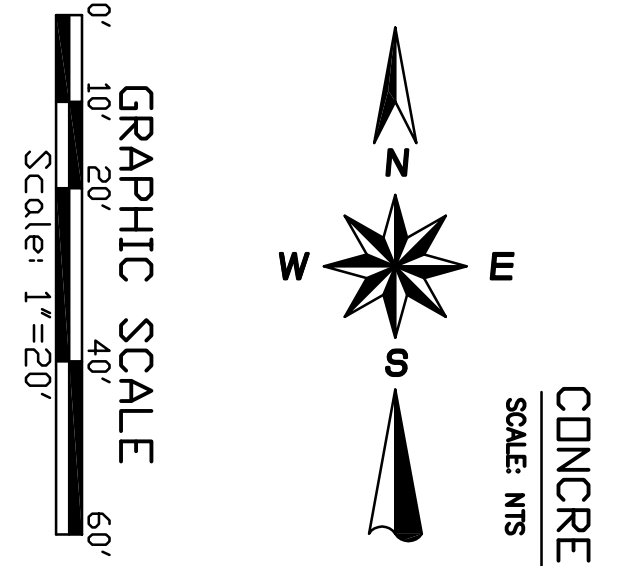
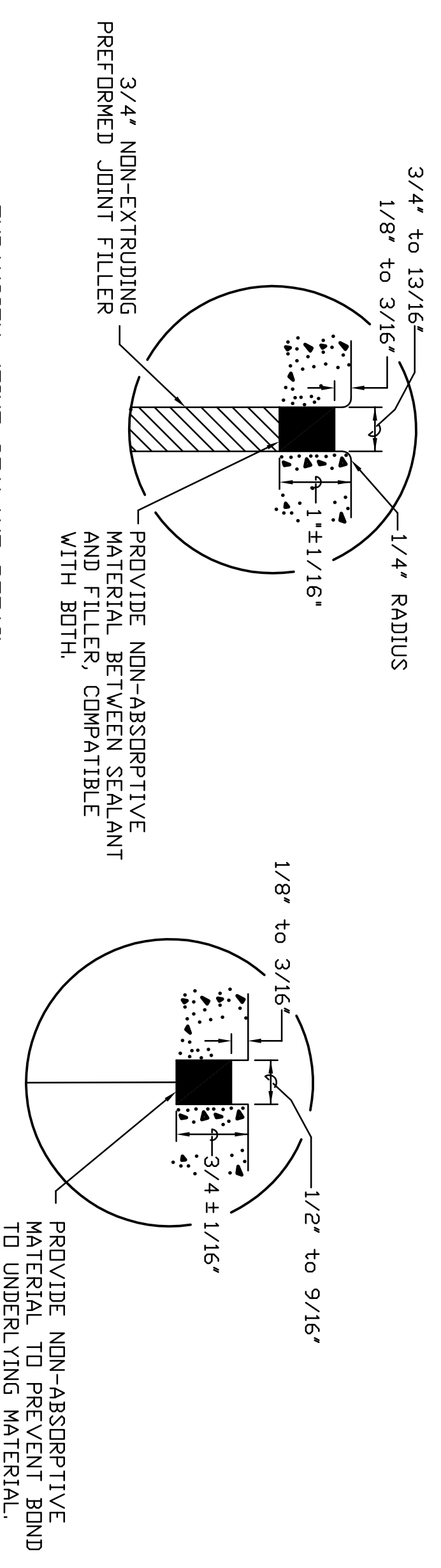
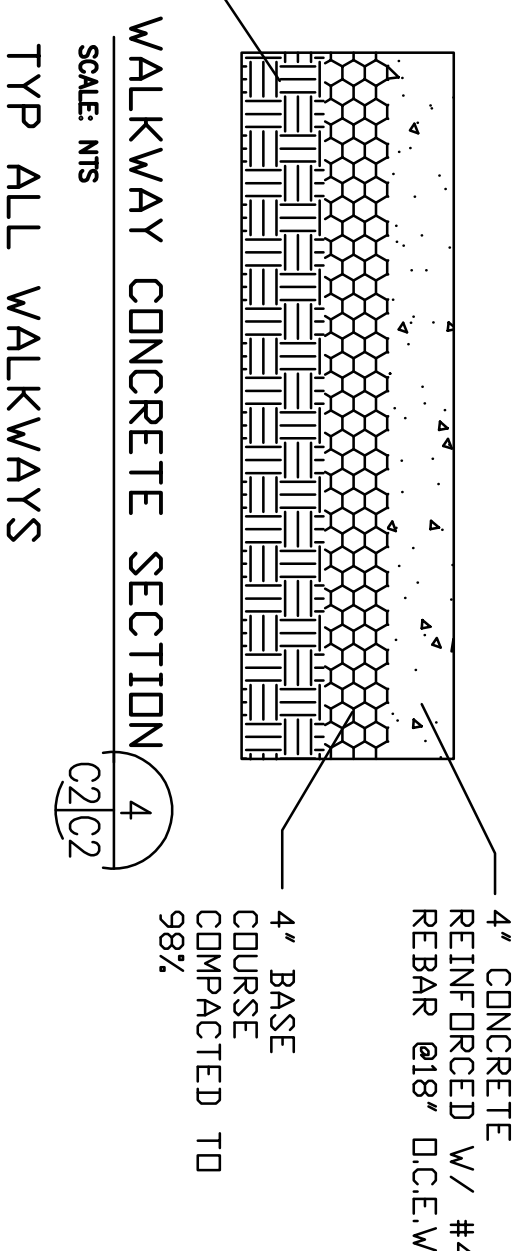
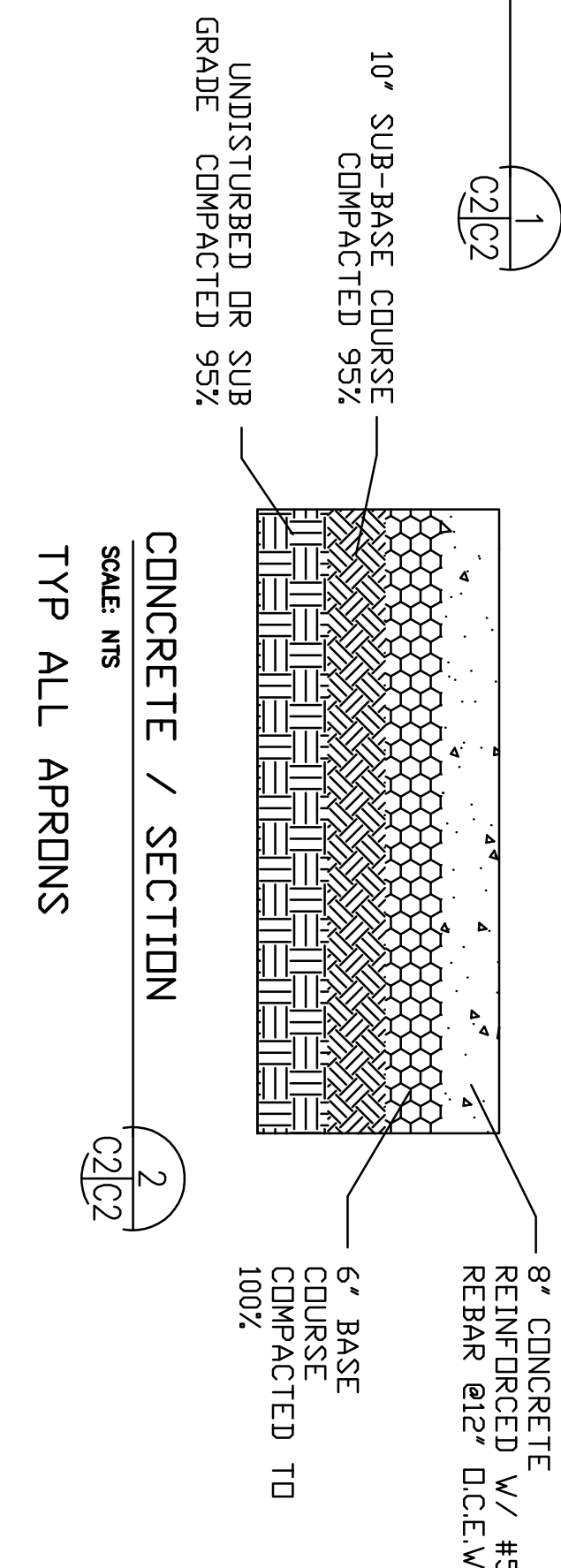
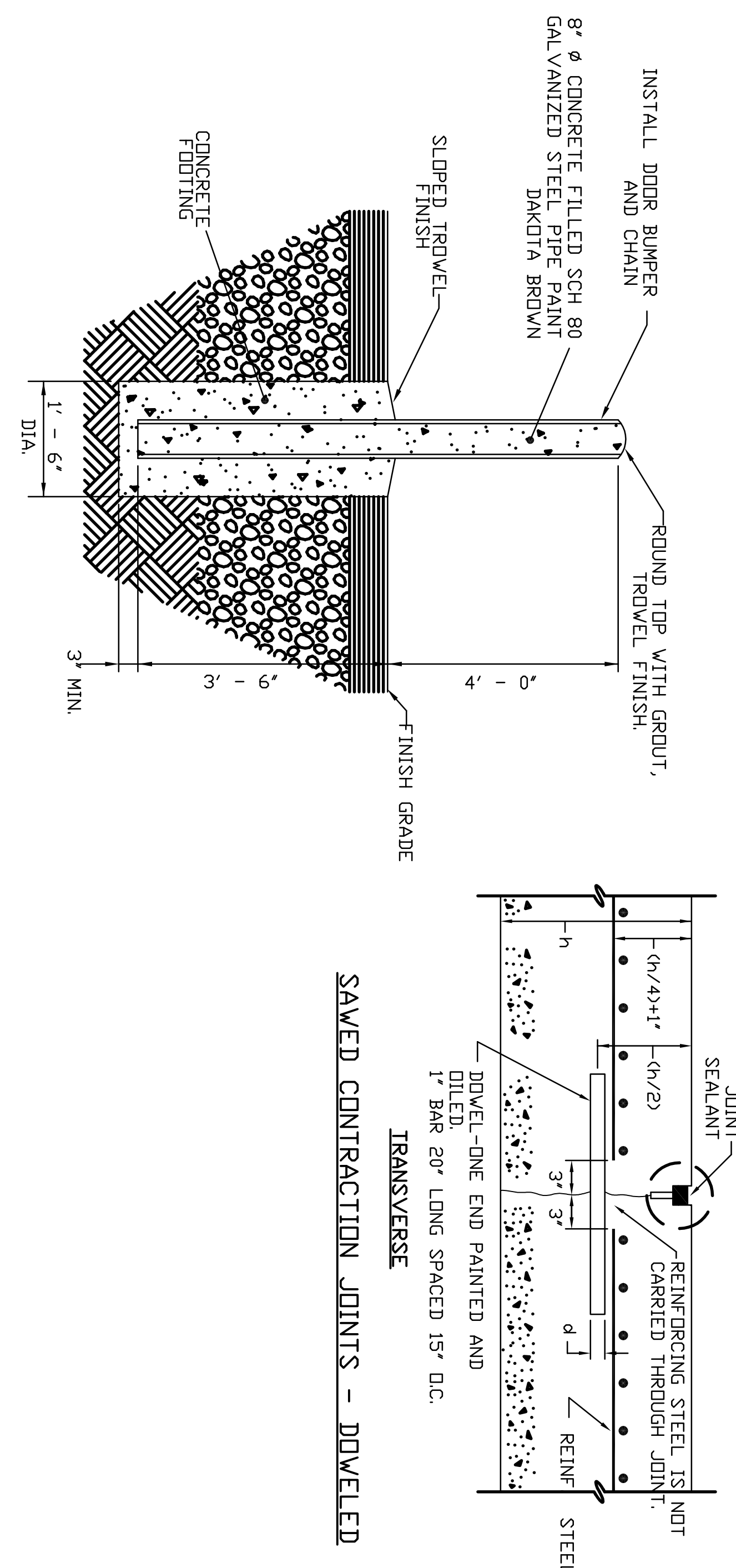
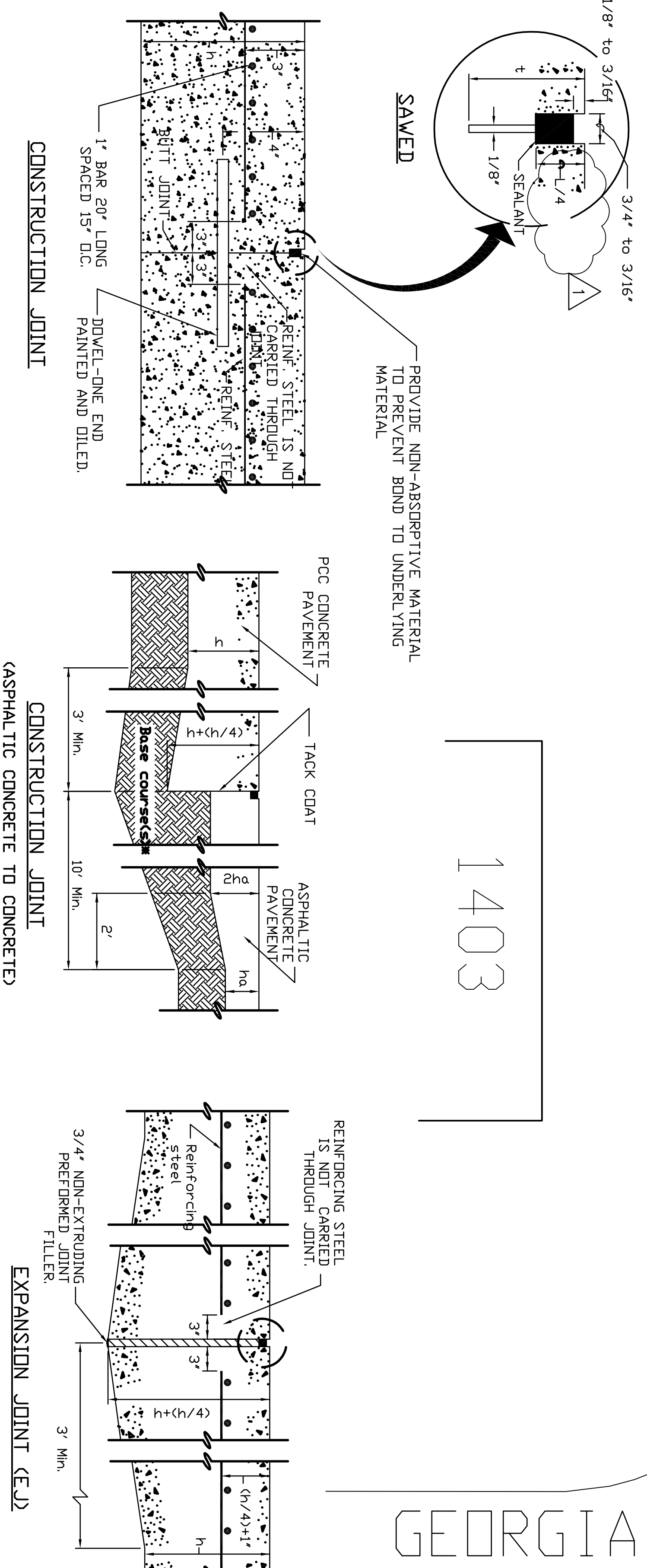
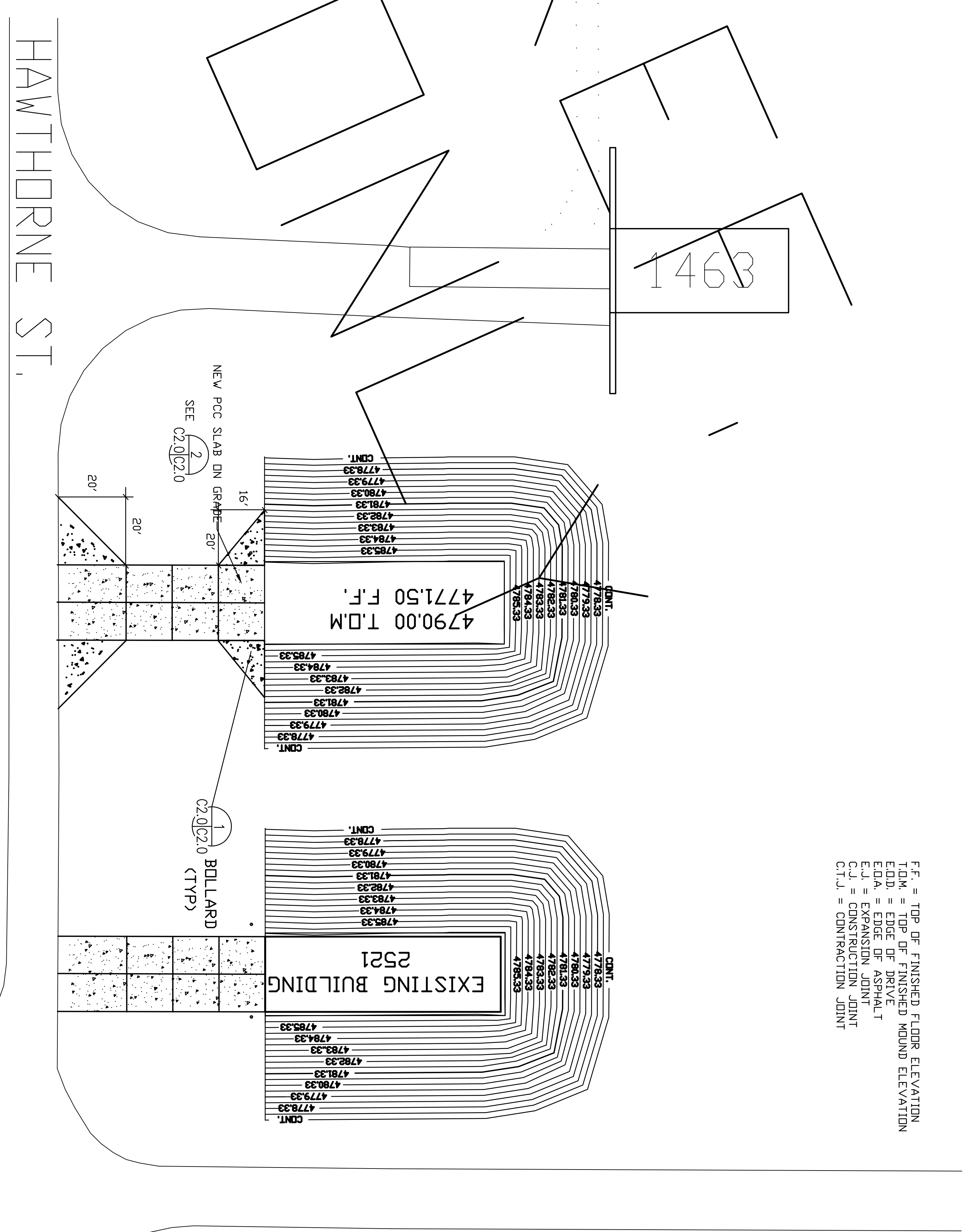
PROPOSED/REVISION REVIEW	DATE	DESCRIPTION	BY
CONCEPTUAL REVIEW			
PRELIMINARY REVIEW			
FINAL REVIEW			
CONSTRUCTION REVIEW			
FINAL REVIEW			

DESIGNED BY	DATE	DESCRIPTION	BY
CHECKED BY	DATE		
IN CHARGE	DATE		
PROJECT MANAGER	DATE		
PROJECT ENGINEER	DATE		
PROJECT ASSISTANT	DATE		
PROJECT FILE NO.	DATE		
PROJECT NO.	DATE		
PROJECT TITLE	DATE		
PROJECT NO.	DATE		
PROJECT TITLE	DATE		
PROJECT NO.	DATE		

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PROJECT ASSISTANT	DATE		
PROJECT FILE NO.	DATE		
PROJECT NO.	DATE		
PROJECT TITLE	DATE		
PROJECT NO.	DATE		

F.F. = TOP OF FINISHED FLOOR ELEVATION
 T.D.M. = TOP OF FINISHED MOUND ELEVATION
 E.O.D. = EDGE OF DRIVE
 E.A. = EDGE OF ASPHALT
 C.J. = EXPANSION JOINT
 C.T.J. = CONSTRUCTION JOINT



ARCHITECTURAL REVIEW	DATE	DESCRIPTION	BY
CONSTRUCTION REVIEW	DATE	REVISION	DATE
STRUCTURAL REVIEW	DATE	3/29/25	RS
MECHANICAL REVIEW	DATE	DEPARTMENT OF THE AIR FORCE	
ELECTRICAL REVIEW	DATE	ODDEN AIR LOGISTICS CENTER	
HAZARDOUS MATERIAL REVIEW	DATE	OFFICE OF CIVIL ENGINEERING	
ENVIRONMENTAL REVIEW	DATE		
HYDROLOGICAL REVIEW	DATE		
TRANSPORTATION REVIEW	DATE		
SAFETY REVIEW	DATE		
CONSTRUCTION REVIEW	DATE		
SECURITY REVIEW	DATE		

ARCHITECTURAL REVIEW	DATE	DESCRIPTION	BY
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HAZARDOUS MATERIAL REVIEW	DATE	OFFICE OF CIVIL ENGINEERING	
ENVIRONMENTAL REVIEW	DATE		
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TRANSPORTATION REVIEW	DATE		
SAFETY REVIEW	DATE		
CONSTRUCTION REVIEW	DATE		
SECURITY REVIEW	DATE		

MODULAR STORAGE MAGAZINE GRADING PLAN

TINN ADAMS ENGINEERING ARCHITECT

DATE: 3/29/25

PROJECT NO. 2521

DATE: 3/29/25

DATE: 3/29/25

DATE: 3/29/25

DATE: 3/29/25

DATE: 3/29/25

DATE: 3/29/25

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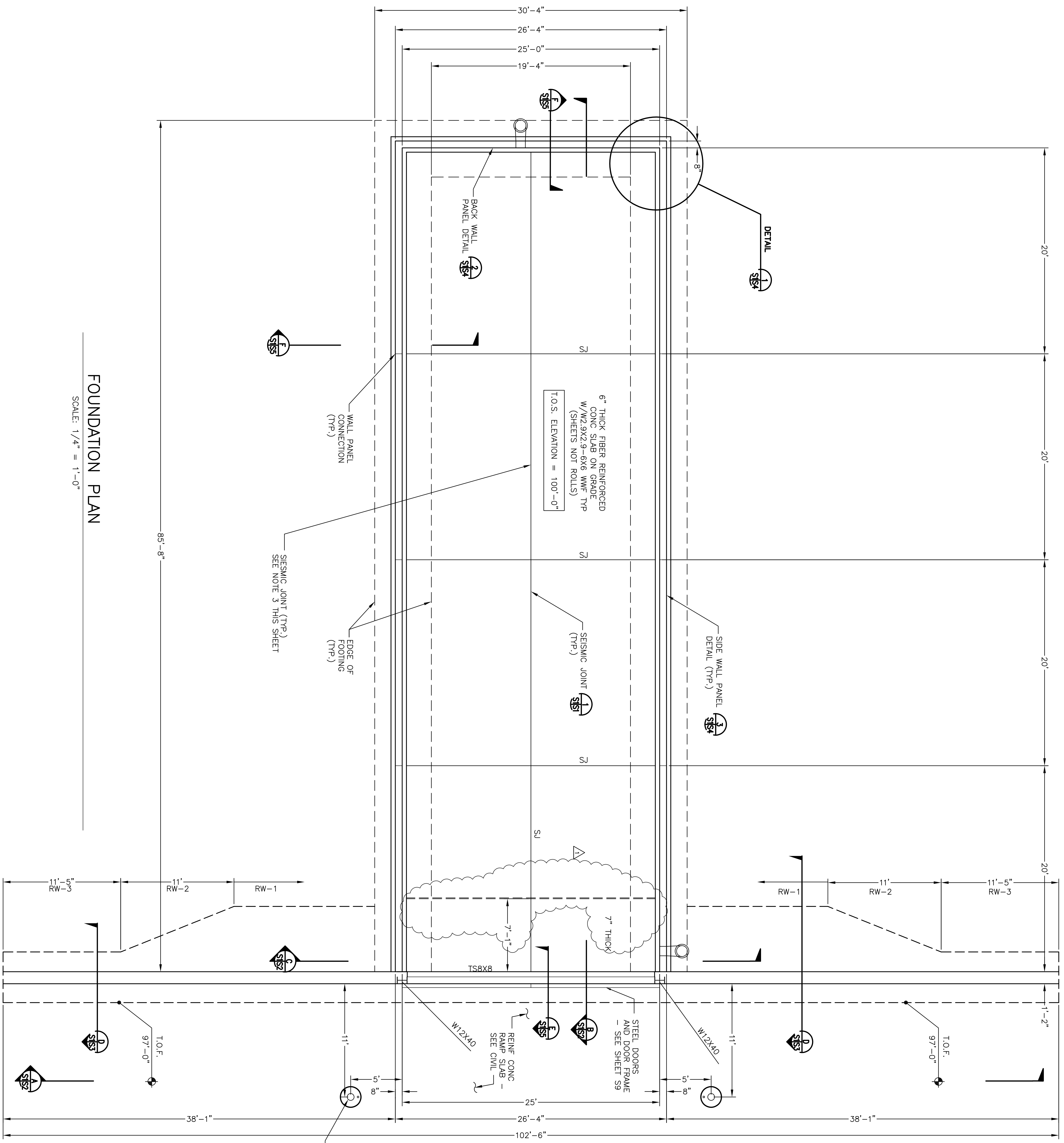
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DATE: 3/29/25

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DATE: 3/29/25

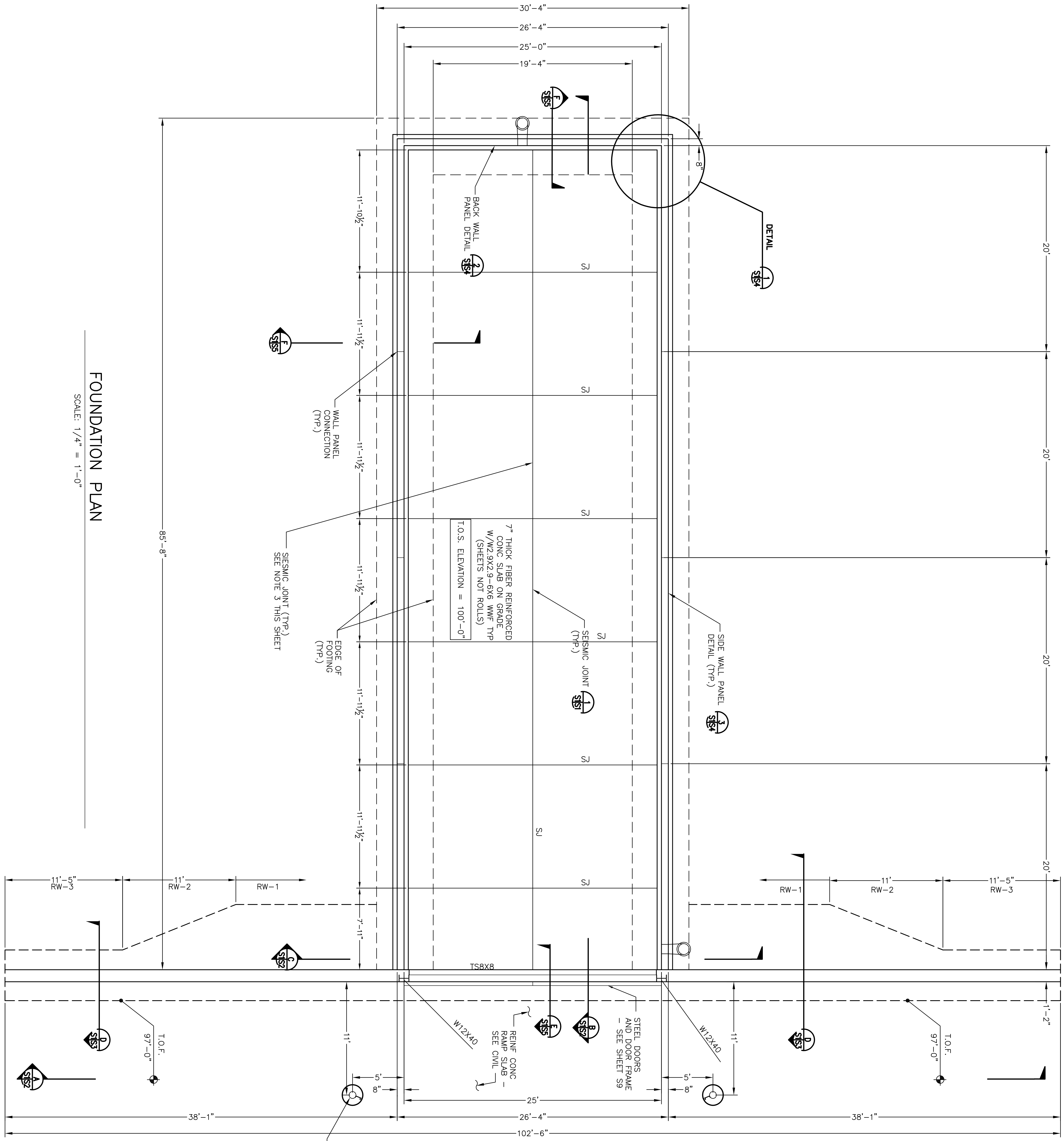
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FOUNDATION PLAN

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

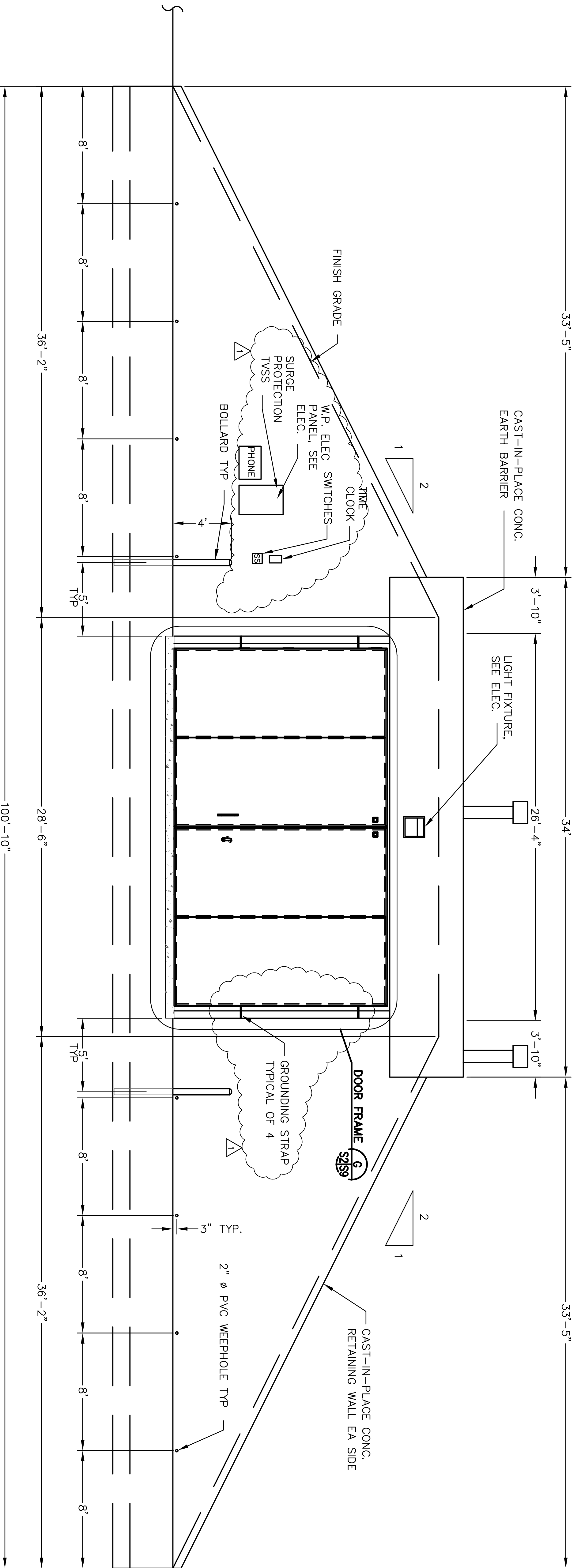
8
P
W
M
K
C



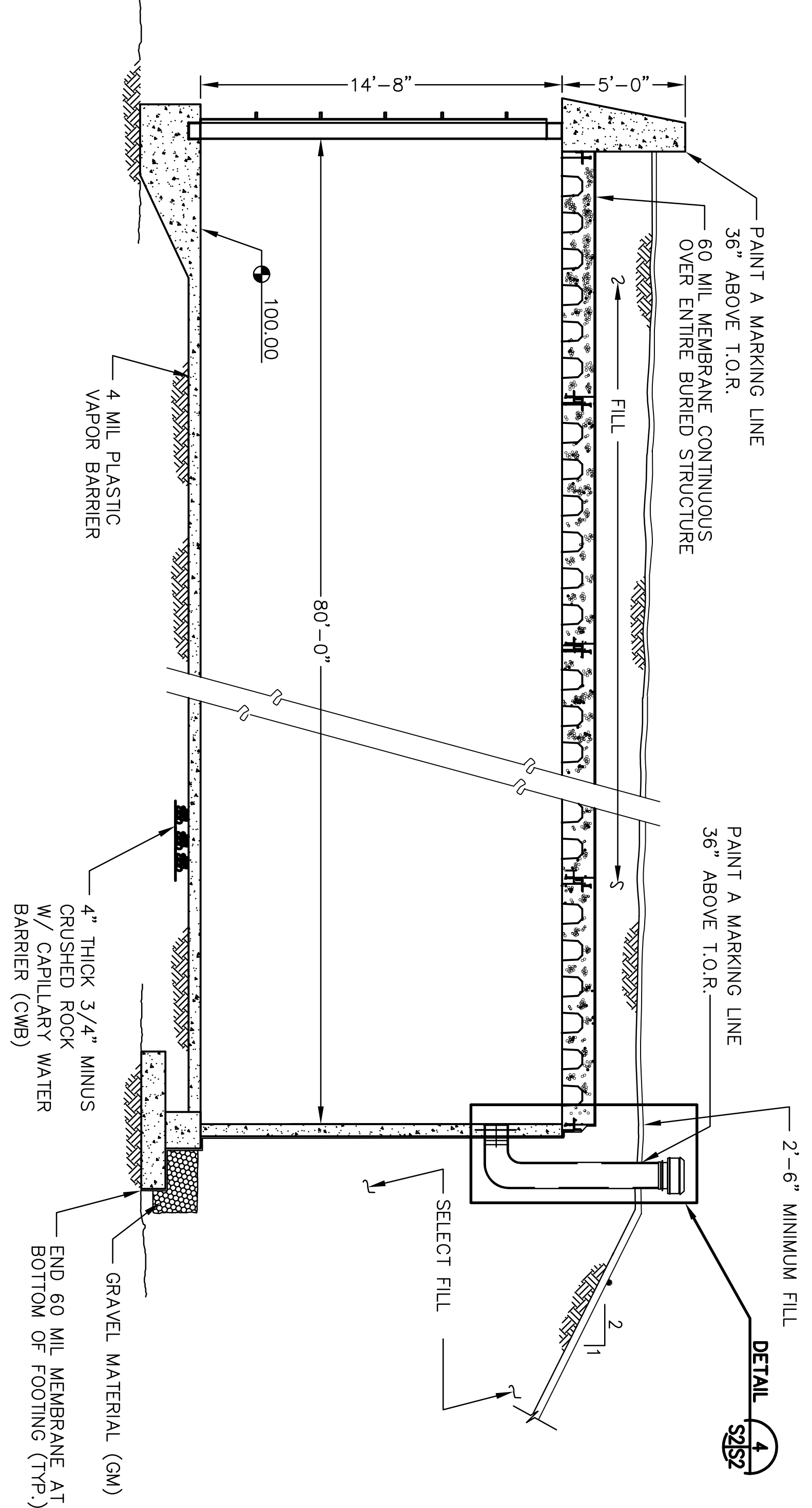
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FOUNDATION PLAN

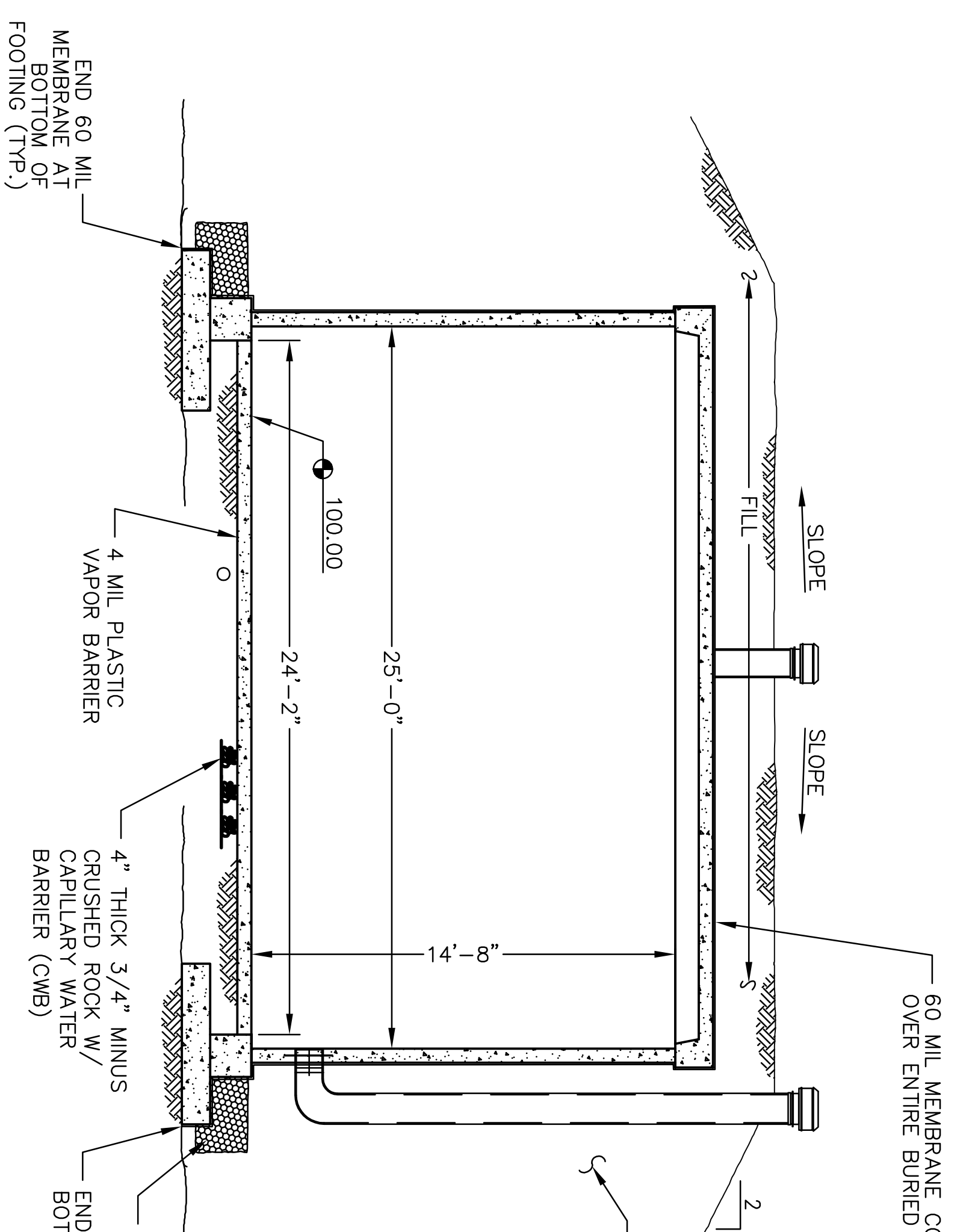
SCALE: 1/4" = 1'-0"



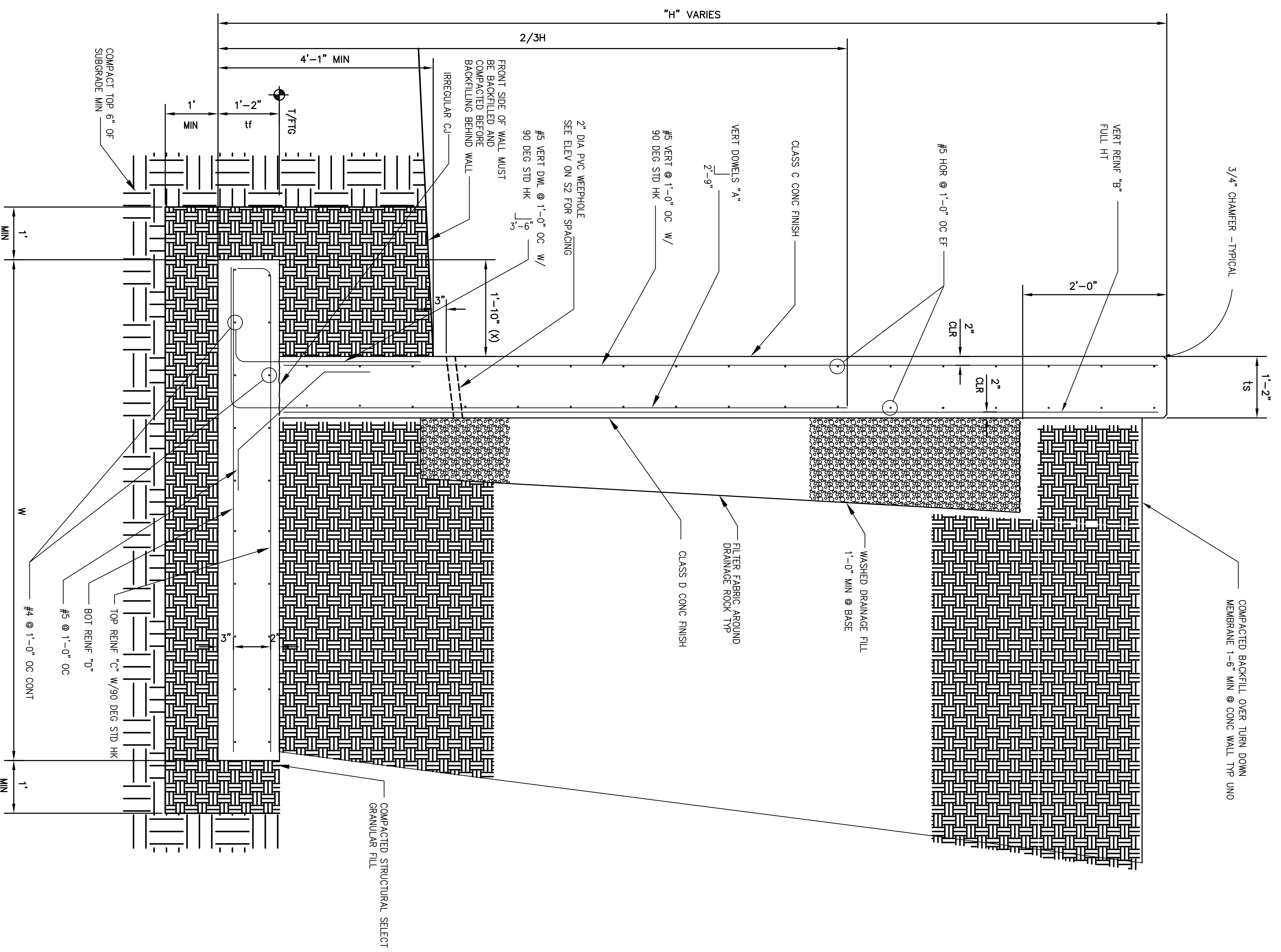
A
ELEVATION
SCALE: 1/4" = 1'-0"



B, J
SECTION
SCALE: 1/4" = 1'-0"



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



D RETAINING WALL SECTION

SCALE: 1" = 1'-0"

ROW	W	X	ts	tf	STEM REINF			BOTOM
					DOWELS A	VERT B	TOP C	
RW-1	10'	1'-10"	1'-2"	1'-2"	#7 @ 1/2"	#7 @ 11"	#7 @ 1/2"	#5 @ 11"
RW-2	VARIABLES 4'-10" 10'-0"	1'-10"	1'-2"	1'-2"	#7 @ 11"	#7 @ 11"	#7 @ 11"	#5 @ 11"
RW-3	4'-10"	1'-10"	1'-2"	1'-2"	#5 @ 12"	#5 @ 12"	#5 @ 12"	#5 @ 12"

RETAINING WALL SCHEDULE

SCALE: N.T.S.

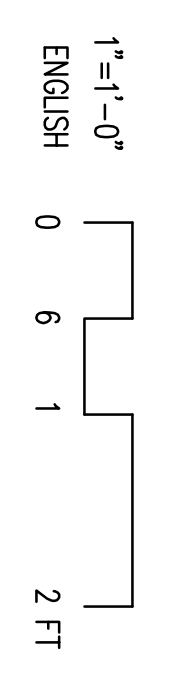
BAR SIZE	Ld			ALL OTHERS (WALLS, SLABS) CONCRETE COVER (C)	BAR SIZE	Lb, Lc, Lcs		
	BEAMS AND COLUMNS	BAR SPACING (S)	4db < S < 6db			C > db	Lb	Lc
#3	13	13	13	13	#3	9	12	12
#4	18	17	17	18	#4	11	15	12
#5	27	21	21	27	#5	14	19	14
#6	39	27	25	39	#6	17	23	17
#7	53	37	29	53	#7	20	26	20
#8	70	49	35	70	#8	22	30	23
#9	88	62	44	88	#9	25	34	26
#10	112	78	56	112	#10	28	38	29
#11	137	96	69	137	#11	31	42	32
#14	187	131	93	187	#14	39	N/A	N/A
#18	274	192	137	274	#18	50	N/A	N/A

DEFINITIONS:

- db = NOMINAL BAR DIAMETER (IN)
- S = CENTERLINE BAR SPACING (IN)
- C = CONCRETE COVER (IN)
- fc = CONCRETE DESIGN STRENGTH (PSI)
- Ld = TENSION DEVELOPMENT LENGTH FOR TOP BARS OTHER THAN TOP BARS
- Lt = TENSION DEVELOPMENT LENGTH FOR TOP BARS: Lt = 1.3 x Ld
- Lsb = TENSION LAP SPICE LENGTH FOR TOP BARS OTHER THAN TOP BARS: Lsb = 1.3 x Ld
- Lsbt = TENSION LAP SPICE LENGTH FOR TOP BARS: Lsbt = 1.69 x Ld
- Lb = COMPRESSION DEVELOPMENT LENGTH FOR BARS AND DOWELS: Lb = 22 x db
- Lc = COMPRESSION LAP SPICE FOR TIED COLUMNS: Lc = 30 x db
- Lcs = COMPRESSION LAP SPICE FOR SPIRAL, TIED COLUMNS: Lcs = 22.5 x db
- TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF CONCRETE CAST BELOW

REBAR / LAP SLICE SCHEDULE

SCALE: N.T.S.



ARCHITECTURAL REVIEW	DATE		DESCRIPTION	DATE
CIVIL/STRUCTURAL REVIEW	DATE		REVISION	DATE
MECHANICAL REVIEW	DATE			
ELECTRICAL REVIEW	DATE			
ARCHITECTURAL COMPETITIVITY	DATE			
PLANS HANDOFF/PAINT DESIGN	DATE			
BASE COMPREHENSIVE EXAMINER	DATE			
ENERGY CONSERVATION REVIEW	DATE			
FIRE PROTECTION REVIEW	DATE			
COMMISSION ENGINEER	DATE			
CUSTOMER-FUNCTIONAL REVIEW	DATE			
SECURITY FORCES	DATE			

ARCHITECTURAL REVIEW	DATE		DESCRIPTION	DATE
CIVIL/STRUCTURAL REVIEW	DATE		REVISION	DATE
MECHANICAL REVIEW	DATE			
ELECTRICAL REVIEW	DATE			
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PLANS HANDOFF/PAINT DESIGN	DATE			
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ENERGY CONSERVATION REVIEW	DATE			
FIRE PROTECTION REVIEW	DATE			
COMMISSION ENGINEER	DATE			
CUSTOMER-FUNCTIONAL REVIEW	DATE			
SECURITY FORCES	DATE			

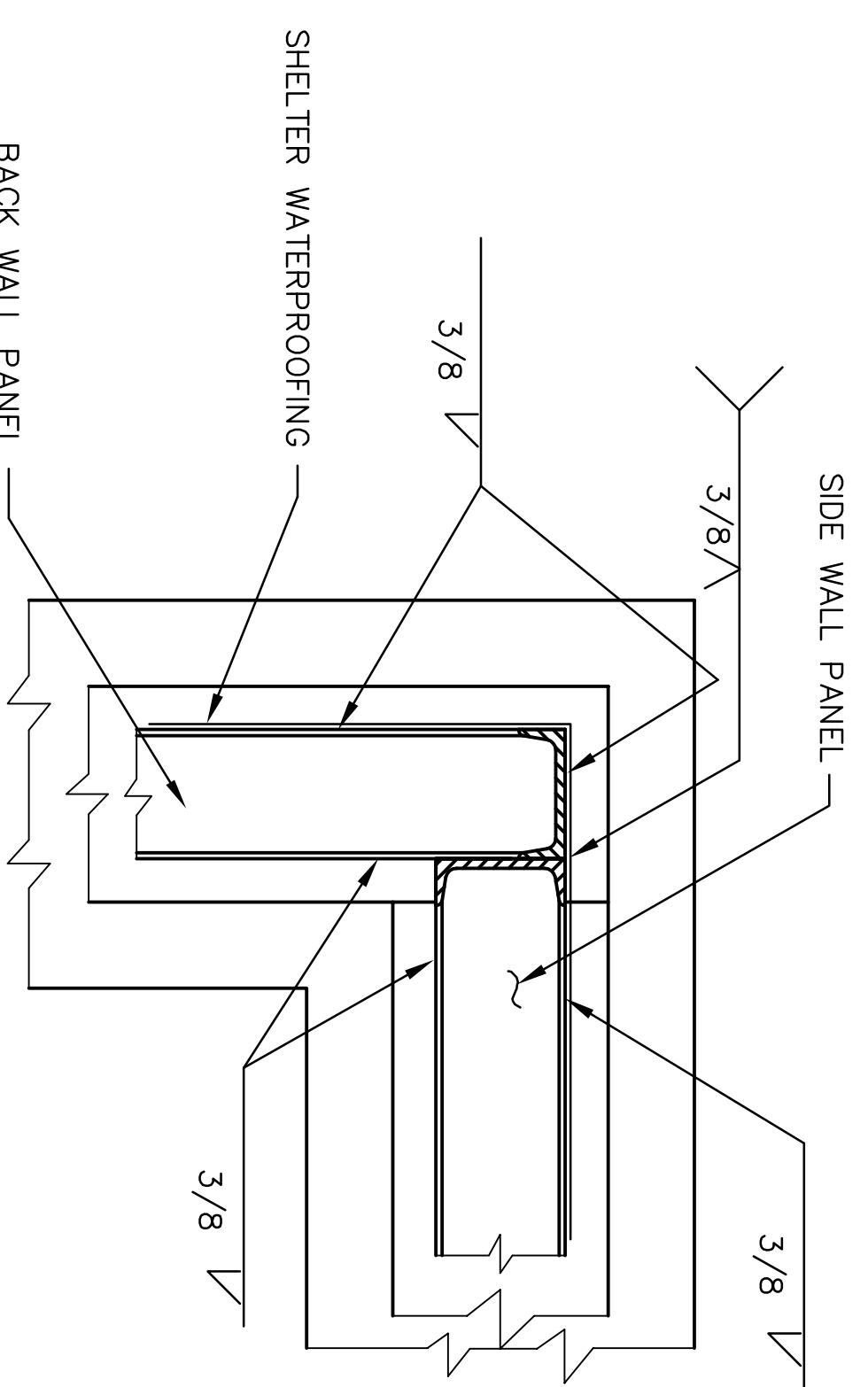
MODULAR STORAGE MAGAZINE

RETAINING WALL

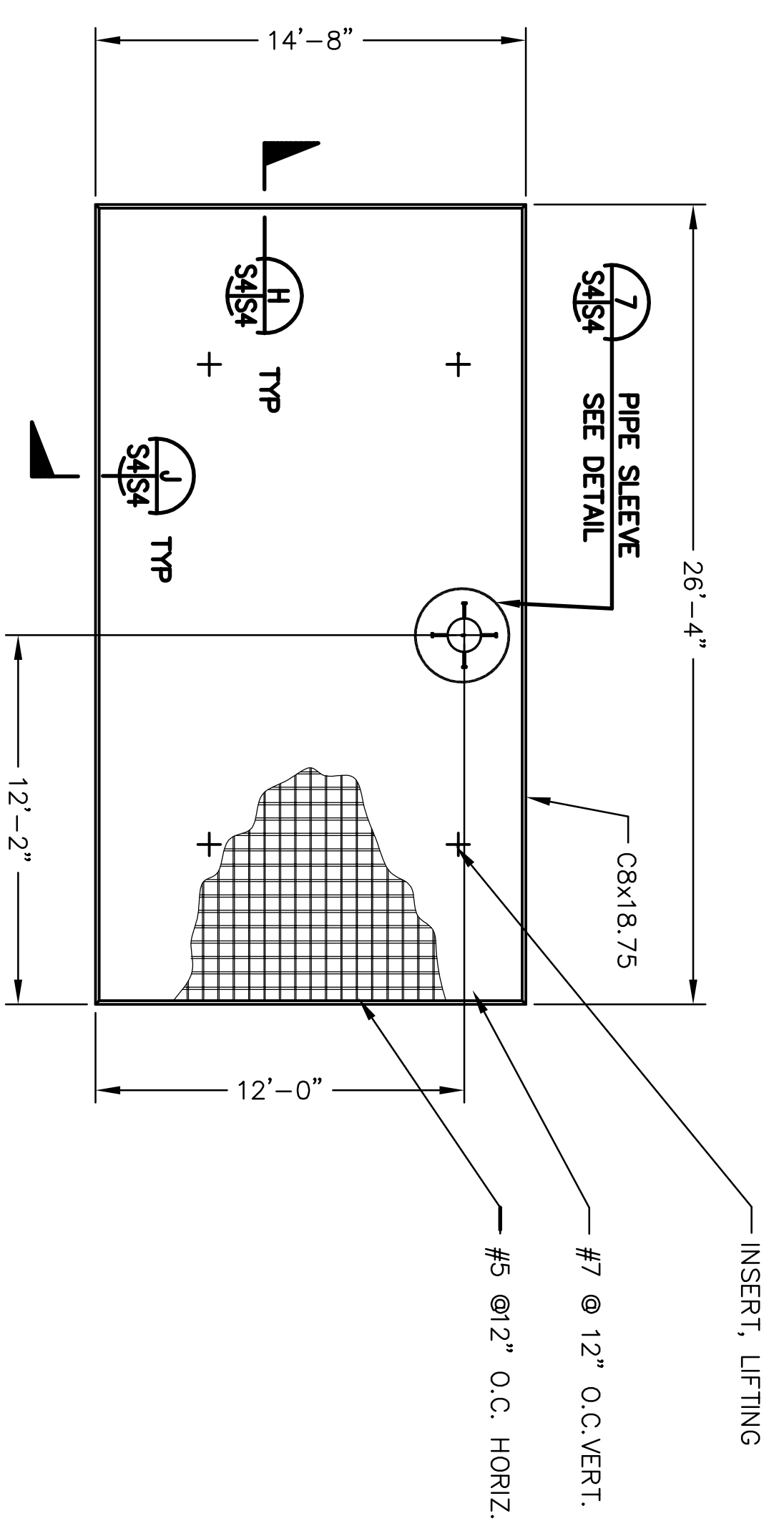
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
 OGDEN, UTAH

DESIGNER: **LMN OLMS**
 PROJECT MANAGER: **LMN OLMS**
 ENGINEERING ASSISTANT: **LMN OLMS**

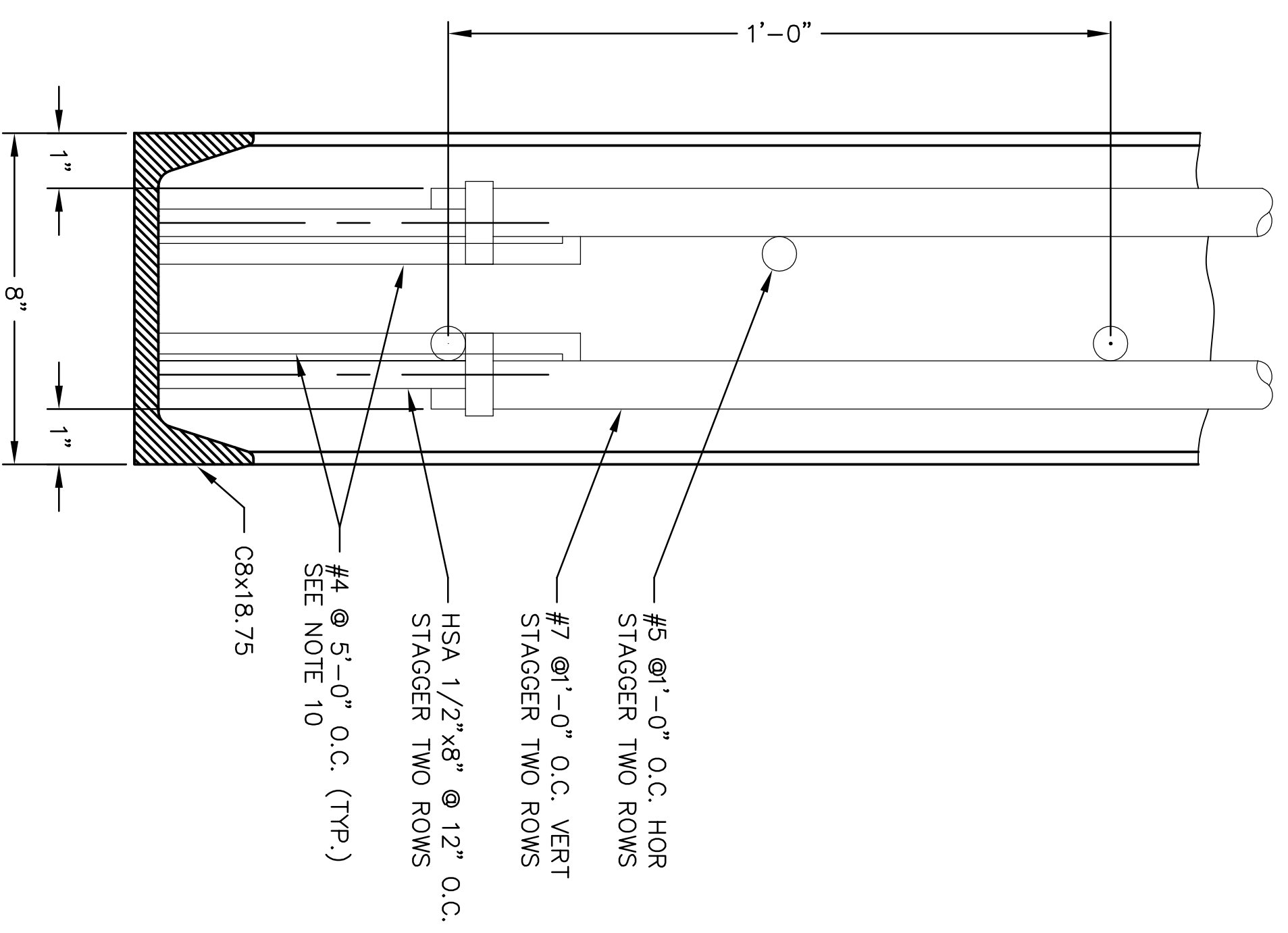
SHEET **95_9** OF **27**



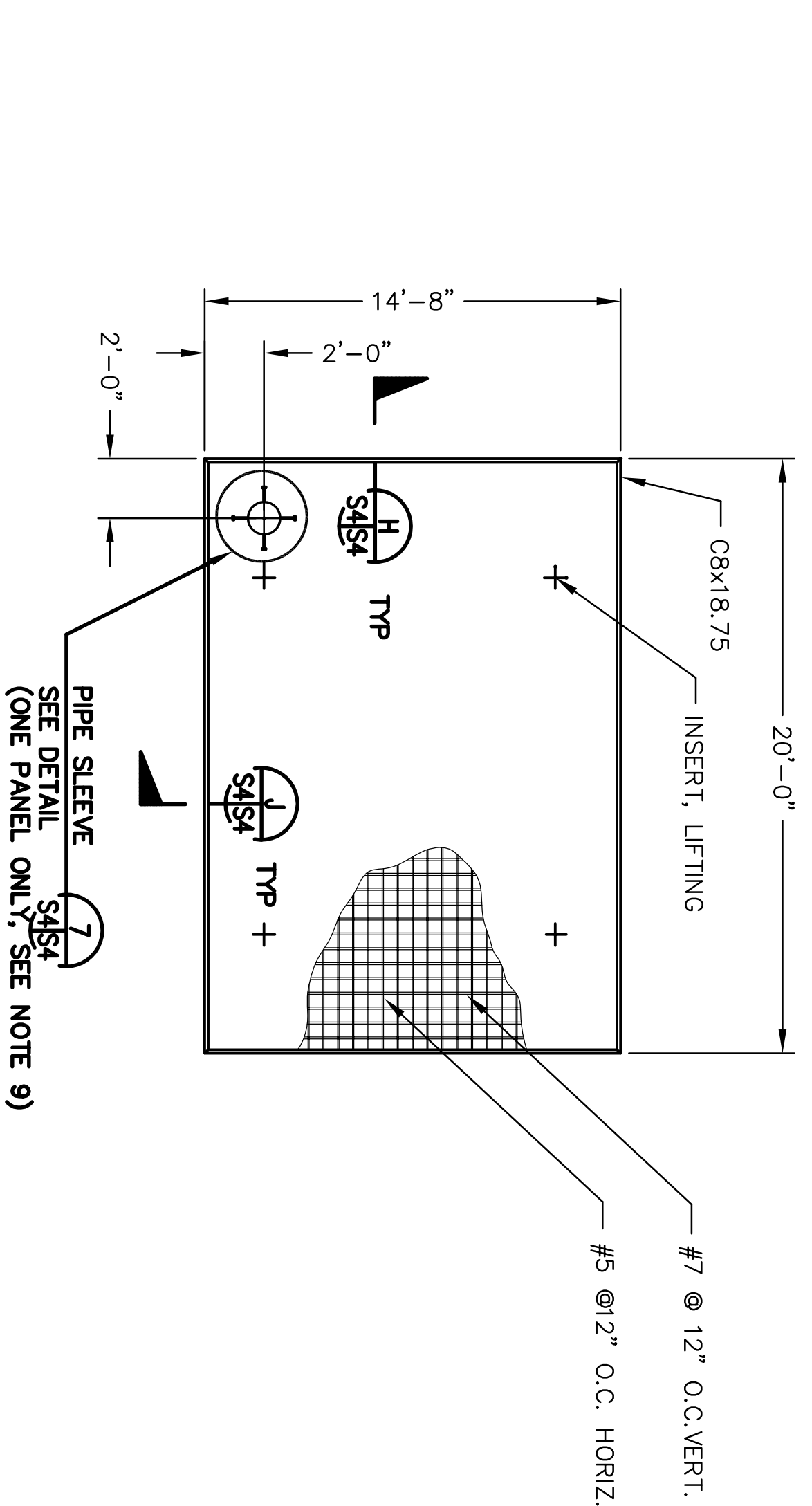
1 DETAIL
S41S4 SCALE: N.T.S.



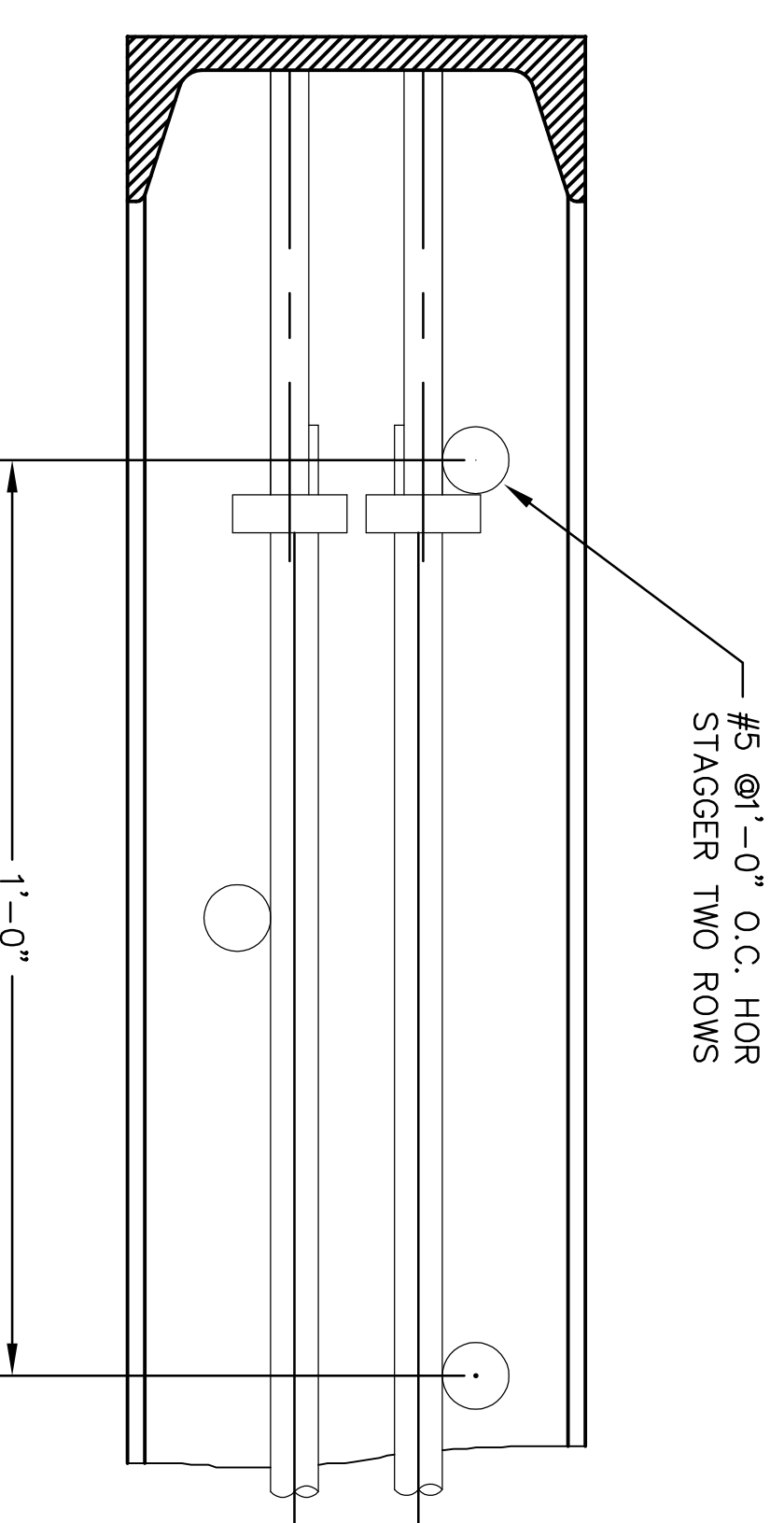
2 BACK WALL PANEL
S41S4 SCALE: N.T.S.



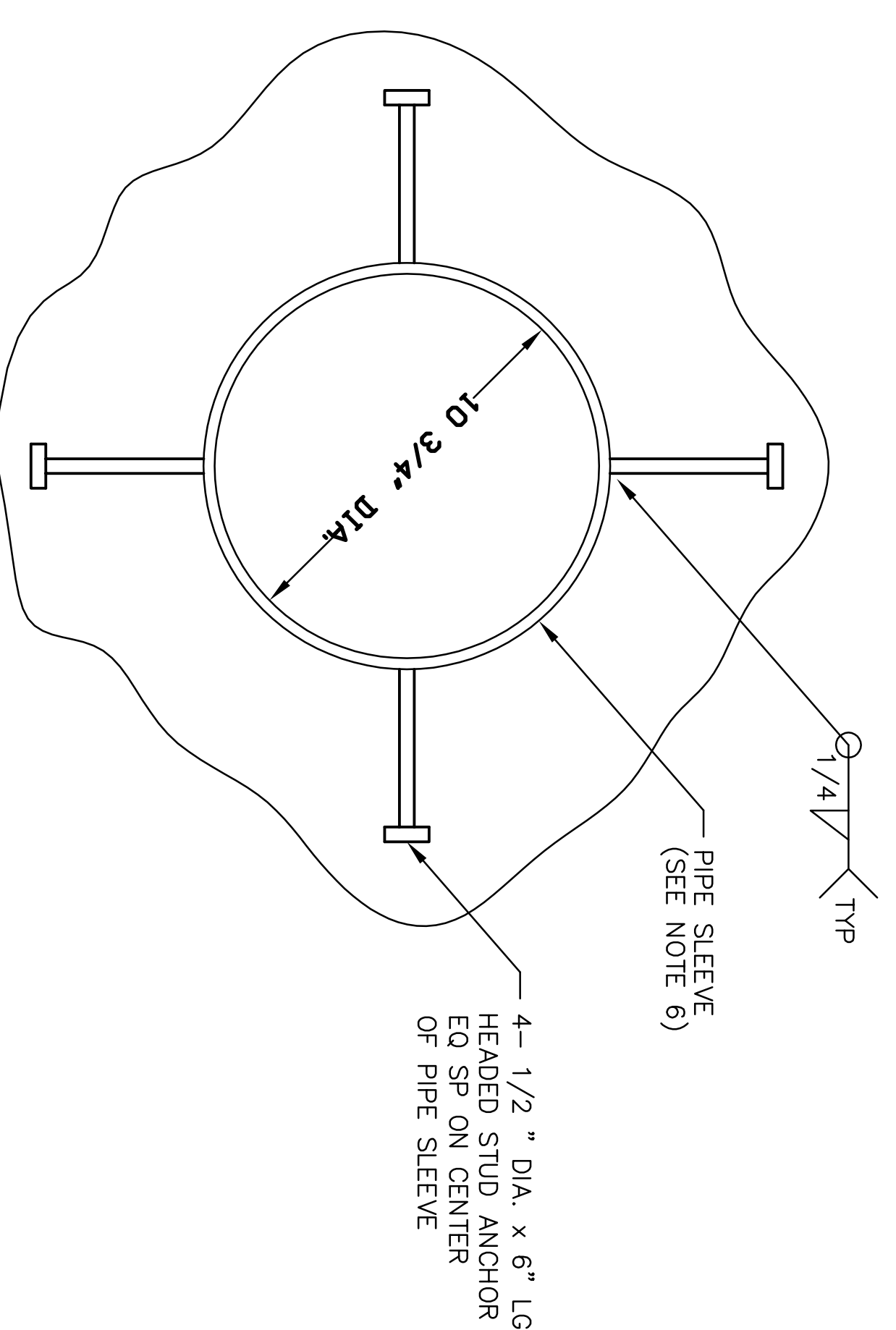
J PANEL SECTION
S41S4 SCALE: N.T.S.



3 SIDE WALL PANEL, SEE NOTE 3 ON THIS SHEET
S41S4 SCALE: N.T.S.



H PANEL SECTION
S41S4 SCALE: N.T.S.



7 PIPE SLEEVE DETAIL
S41S4 SCALE: N.T.S.

GENERAL NOTES:

- UNLESS OTHERWISE NOTED CONCRETE COVER OVER REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ACI 318.
- REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60.
- CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. PANELS MAY BE PRECAST BY A MANUFACTURER SPECIALIZING IN PRECAST PRODUCTS OR PRECAST AT THE JOB SITE.
- WIRE THE REINFORCING BAR AS NEEDED, USING NO 14 WIRE.
- A CLASS C FINISH IS REQUIRED FOR EXPOSED FORMED SURFACES OF PRECAST PANELS. A CLASS D FINISH IS REQUIRED FOR SURFACES WHICH WILL BE BELOW GRADE OR NOT EXPOSED TO VIEW AFTER FINAL ASSEMBLY.
- PIPE SLEEVE MATERIAL: 3/8" THICK X 8" WIDE X 42" LONG STEEL PLATE PER ASTM A36 ROLLED TO 10 3/4" I.D.
- SIZE, LOCATION, AND QUANTITY OF TILT-UP BRACE ATTACHMENT POINTS AND LIFTING INSERTS TO BE DETERMINED BY CONTRACTOR.
- THE TWO REBAR PATTERNS IN PANELS ARE TO BE STAGGERED TO PRODUCE A 6" X 6" SQUARE MESH PATTERN OF #5 AND #7 REBAR.
- PROVIDE ONE SIDE WALL PANEL TO BE VENTED SIMILAR TO PIPING CONFIGURATION AS PROVIDED IN DETAIL 4, SHEET S2.
- PROVIDE ELECTRICAL CONTINUITY FOR LIGHTNING PROTECTION BY BONDING #4 BAR @ 5'-0" O.C. E.F.E.W. TO C8 CHANNELS AND PRECAST VERTICAL AND HORIZONTAL REINFORCEMENT.
- PROVIDE ELECTRICAL CONTINUITY BY WELDING VERTICAL AND HORIZONTAL REINFORCEMENTS TO VENT PIPE SLEEVE.

REVISION	DATE	DESCRIPTION	BY
ARCHITECTURAL REVIEW	DATE		
CIVIL/STRUCTURAL REVIEW	DATE		
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ELECTRICAL REVIEW	DATE		
ARCHITECTURAL COMPLETIBILITY	DATE		
FINAL HANDOFF/PAINT DESIGN	DATE		
BASE COMPREHENSIVE PLANNER	DATE		
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COMBUSTION ENGINEER	DATE		
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SECURITY FORCES	DATE		
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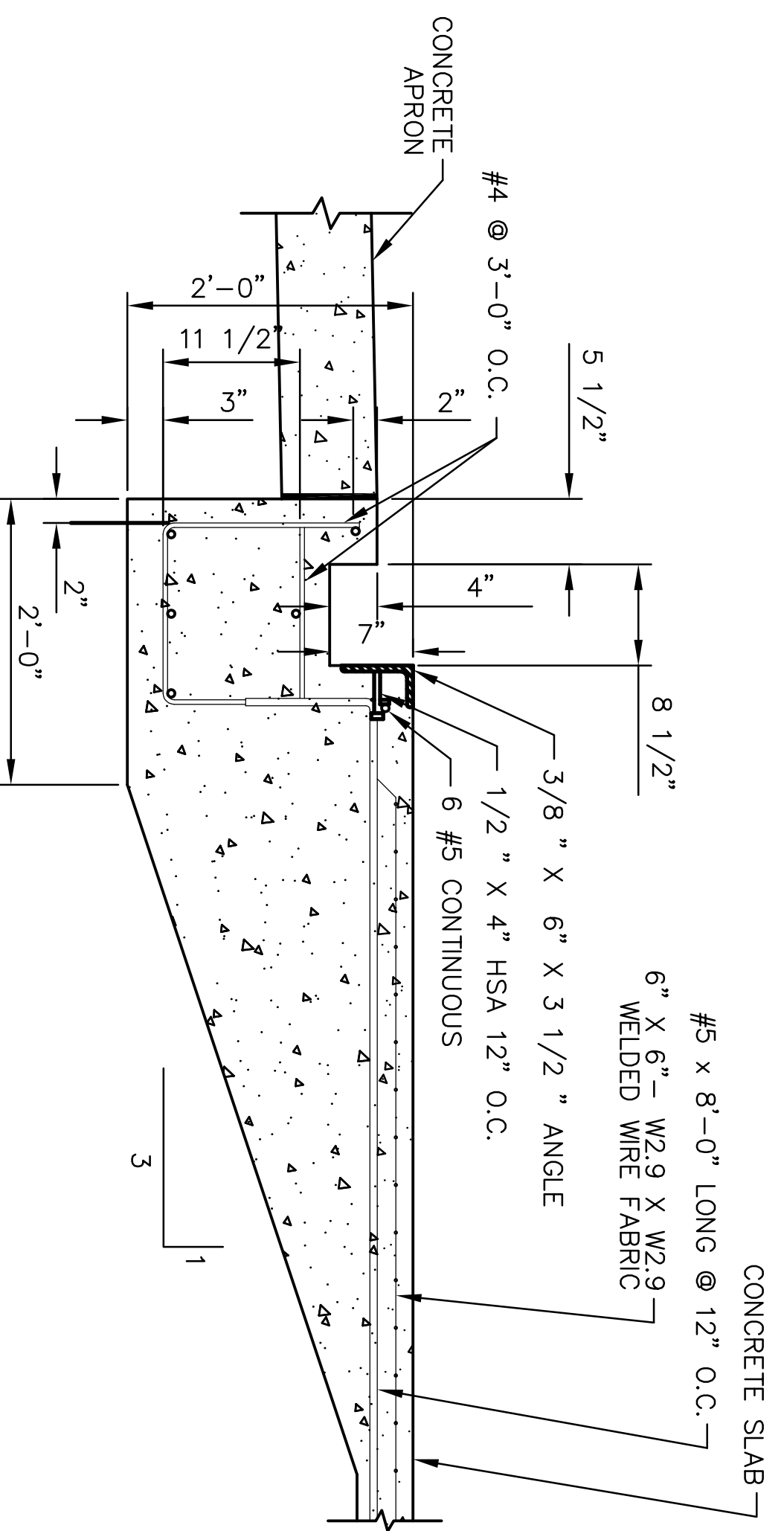
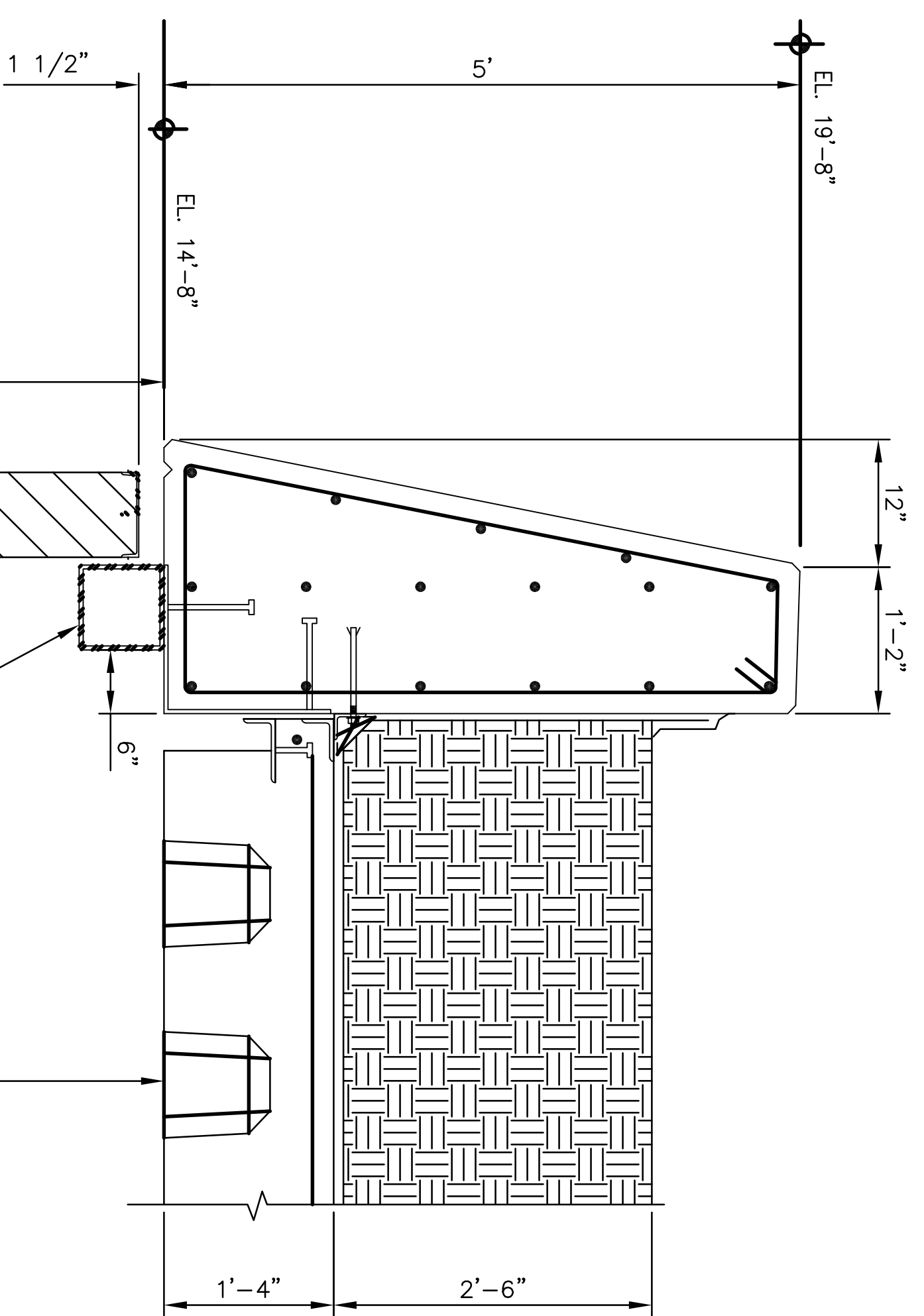
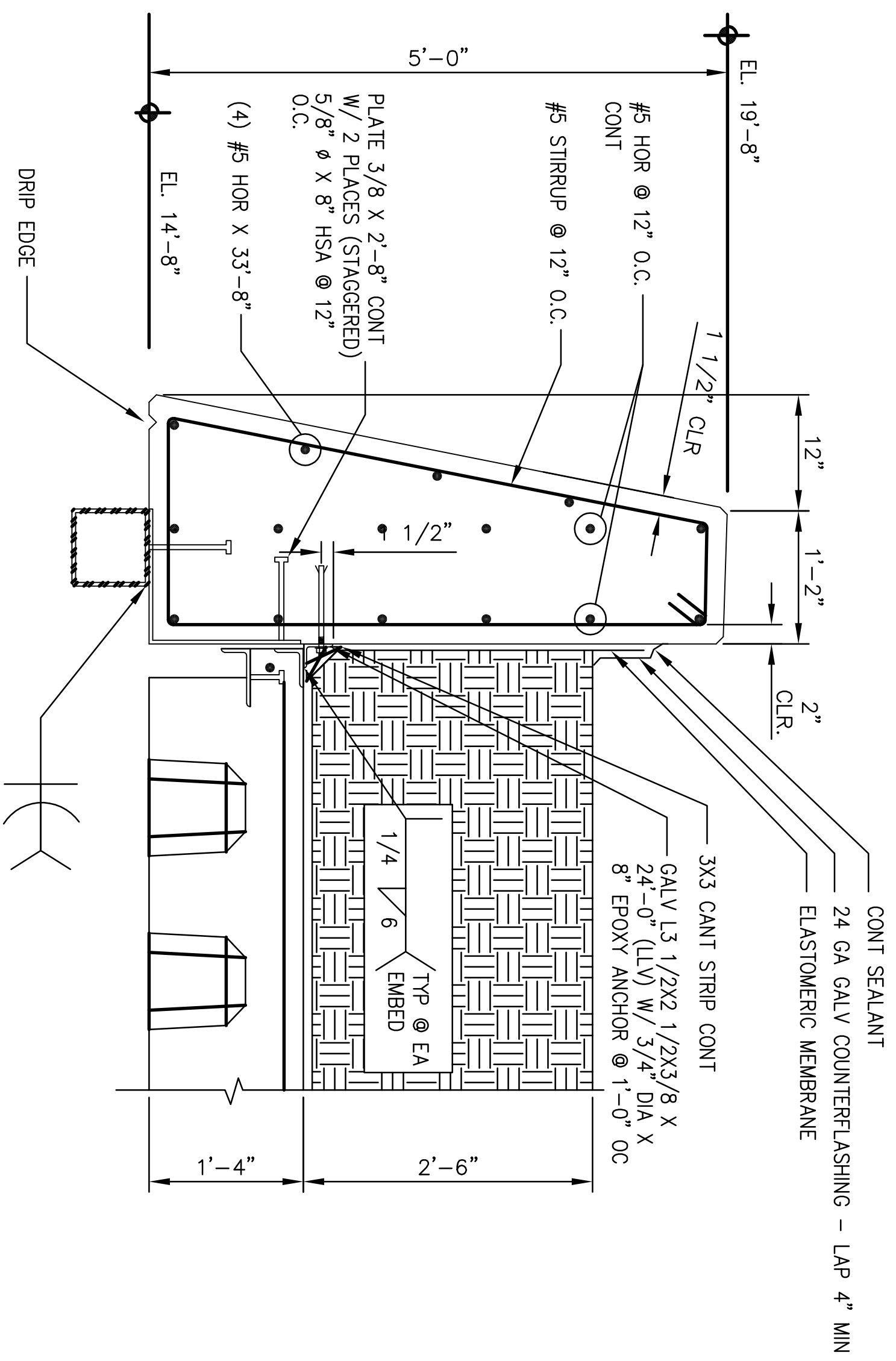
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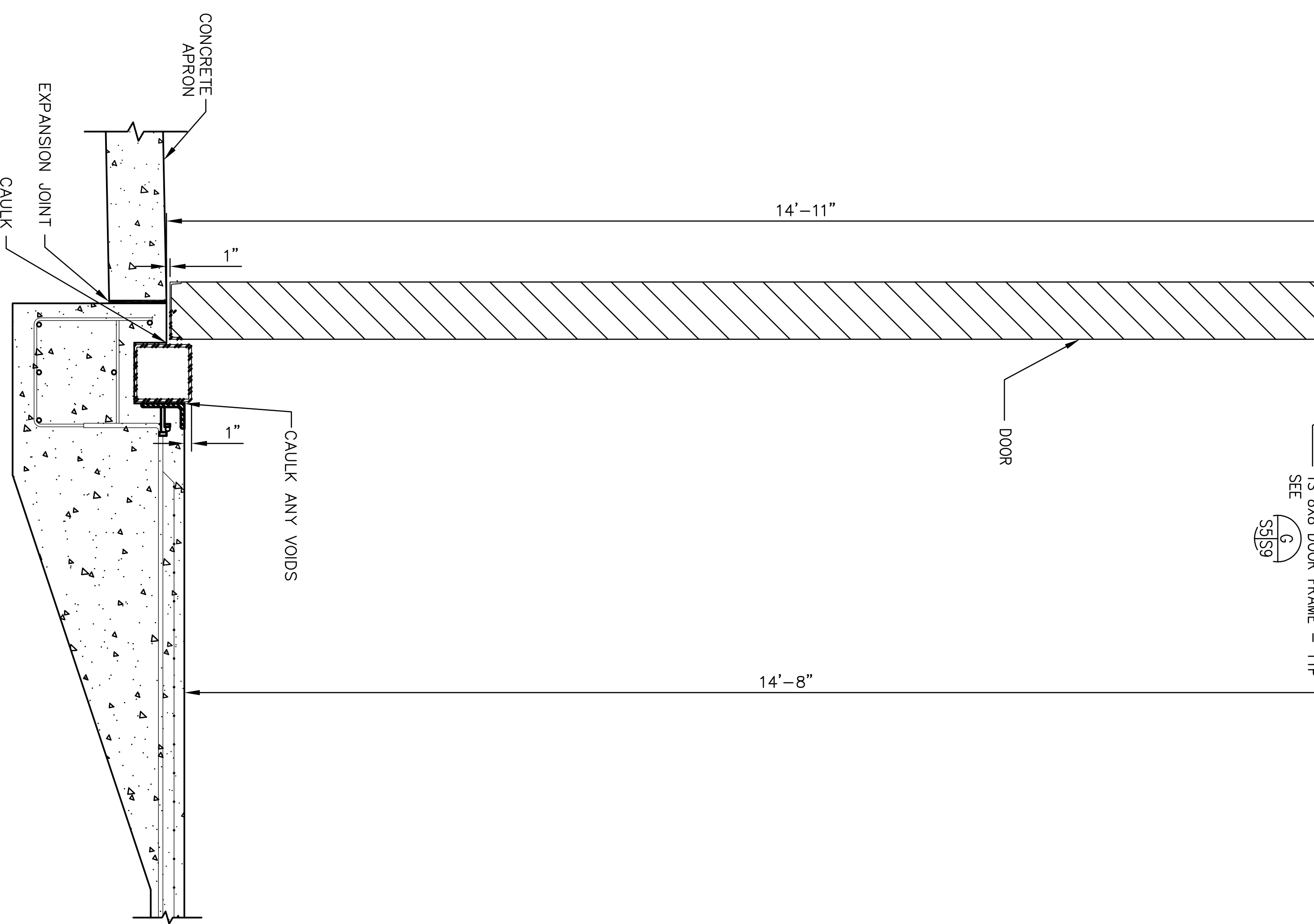
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CUSTOMER-FUNCTIONAL REVIEW	DATE		
SECURITY FORCES	DATE		

REVISION	DATE	DESCRIPTION	BY
ARCHITECTURAL REVIEW	DATE		
CIVIL/STRUCTURAL REVIEW	DATE		
MECHANICAL REVIEW	DATE		
ELECTRICAL REVIEW	DATE		
ARCHITECTURAL COMPLETIBILITY	DATE		
FINAL HANDOFF/PAINT DESIGN	DATE		
BASE COMPREHENSIVE PLANNER	DATE		
ENERGY CONSERVATION REVIEW	DATE		
PIPE PROTECTION REVIEW	DATE		
COMBUSTION ENGINEER	DATE		
CUSTOMER-FUNCTIONAL REVIEW	DATE		
SECURITY FORCES	DATE		



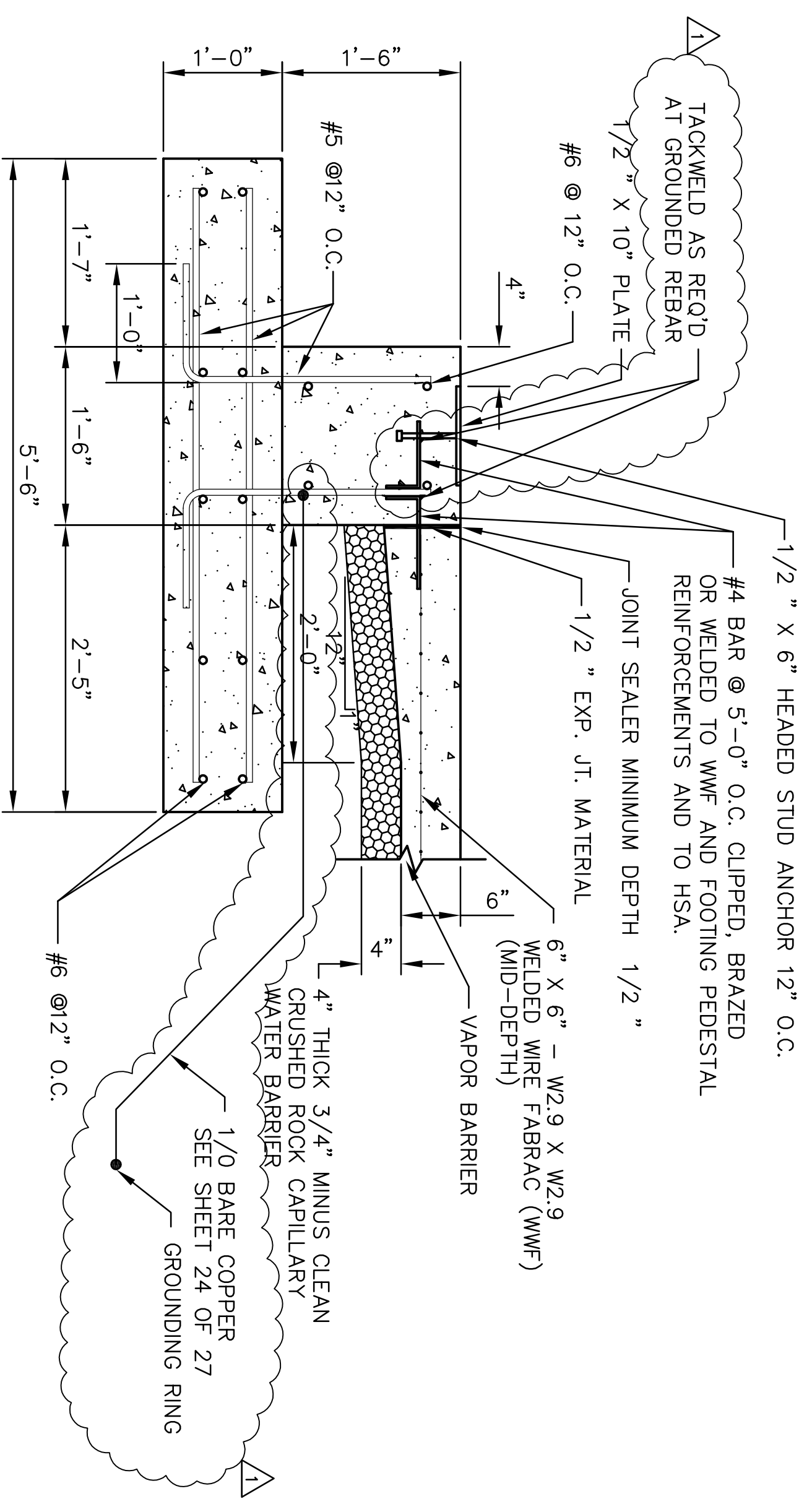
NOTE: UNLESS OTHERWISE NOTED 3"
MINIMUM COVERAGE ON ALL REBAR

E SECTION AT FRONT DOOR
SCALE: NTS



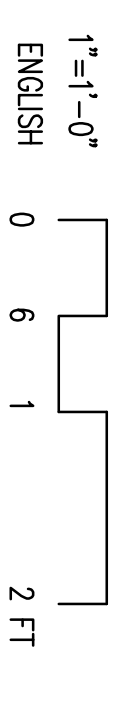
NOTE: UNLESS OTHERWISE NOTED 3"
MINIMUM COVERAGE ON ALL REBAR

E SECTION OF FRONT DOOR ASSEMBLY
SCALE: NTS



NOTE: UNLESS OTHERWISE NOTED 3"
MINIMUM COVERAGE ON ALL REBAR

F TYP. SECTION AT SIDE AND BACK WALL
SCALE: 1" = 1'-0"



ARCHITECTURAL REVIEW	DATE		DESCRIPTION	BY
CIVIL/STRUCTURAL REVIEW	DATE			
MECHANICAL REVIEW	DATE			
ELECTRICAL REVIEW	DATE			
ARCHITECTURAL CONSULTIVITY	DATE			
FINAL HANDOFF/PART DESIGN	DATE			
BASE COMPETITIVE BANNER	DATE			
ENERGY CONSERVATION REVIEW	DATE			
FIRE PROTECTION REVIEW	DATE			
COMMISSION ENGINEER	DATE			
CUSTOMER-FUNCTIONAL REVIEW	DATE			
SECURITY FORCES	DATE			

REVISION	DATE	DESCRIPTION	BY
1	3/25/16	AS-BUILT	JRS

DESIGNER	DATE	PROJECT MANAGER	DATE
ENGINEERING ASSISTANT	DATE		DATE
PROJECT MANAGER	DATE		DATE
PROJECT ENGINEER	DATE		DATE
CHIEF PROJECT MANAGER	DATE		DATE
CHIEF ENGINEER	DATE		DATE
CHIEF COMMANDER	DATE		DATE
775 CES COMMANDER	DATE		DATE
APPROVED-775 CEG	DATE		DATE
FIRE DEPARTMENT	DATE		DATE

ARCHITECT	DATE	PROJECT MANAGER	DATE
DESIGNER	DATE		DATE
ENGINEERING ASSISTANT	DATE		DATE
PROJECT MANAGER	DATE		DATE
PROJECT ENGINEER	DATE		DATE
CHIEF PROJECT MANAGER	DATE		DATE
CHIEF ENGINEER	DATE		DATE
CHIEF COMMANDER	DATE		DATE
775 CES COMMANDER	DATE		DATE
APPROVED-775 CEG	DATE		DATE
FIRE DEPARTMENT	DATE		DATE

ARCHITECTURAL REVIEW	DATE		DESCRIPTION	BY
CIVIL/STRUCTURAL REVIEW	DATE			
MECHANICAL REVIEW	DATE			
ELECTRICAL REVIEW	DATE			
ARCHITECTURAL CONSULTIVITY	DATE			
FINAL HANDOFF/PART DESIGN	DATE			
BASE COMPETITIVE BANNER	DATE			
ENERGY CONSERVATION REVIEW	DATE			
FIRE PROTECTION REVIEW	DATE			
COMMISSION ENGINEER	DATE			
CUSTOMER-FUNCTIONAL REVIEW	DATE			
SECURITY FORCES	DATE			

REVISION	DATE	DESCRIPTION	BY
1	3/25/16	AS-BUILT	JRS

DESIGNER	DATE	PROJECT MANAGER	DATE
ENGINEERING ASSISTANT	DATE		DATE
PROJECT MANAGER	DATE		DATE
PROJECT ENGINEER	DATE		DATE
CHIEF PROJECT MANAGER	DATE		DATE
CHIEF ENGINEER	DATE		DATE
CHIEF COMMANDER	DATE		DATE
775 CES COMMANDER	DATE		DATE
APPROVED-775 CEG	DATE		DATE
FIRE DEPARTMENT	DATE		DATE

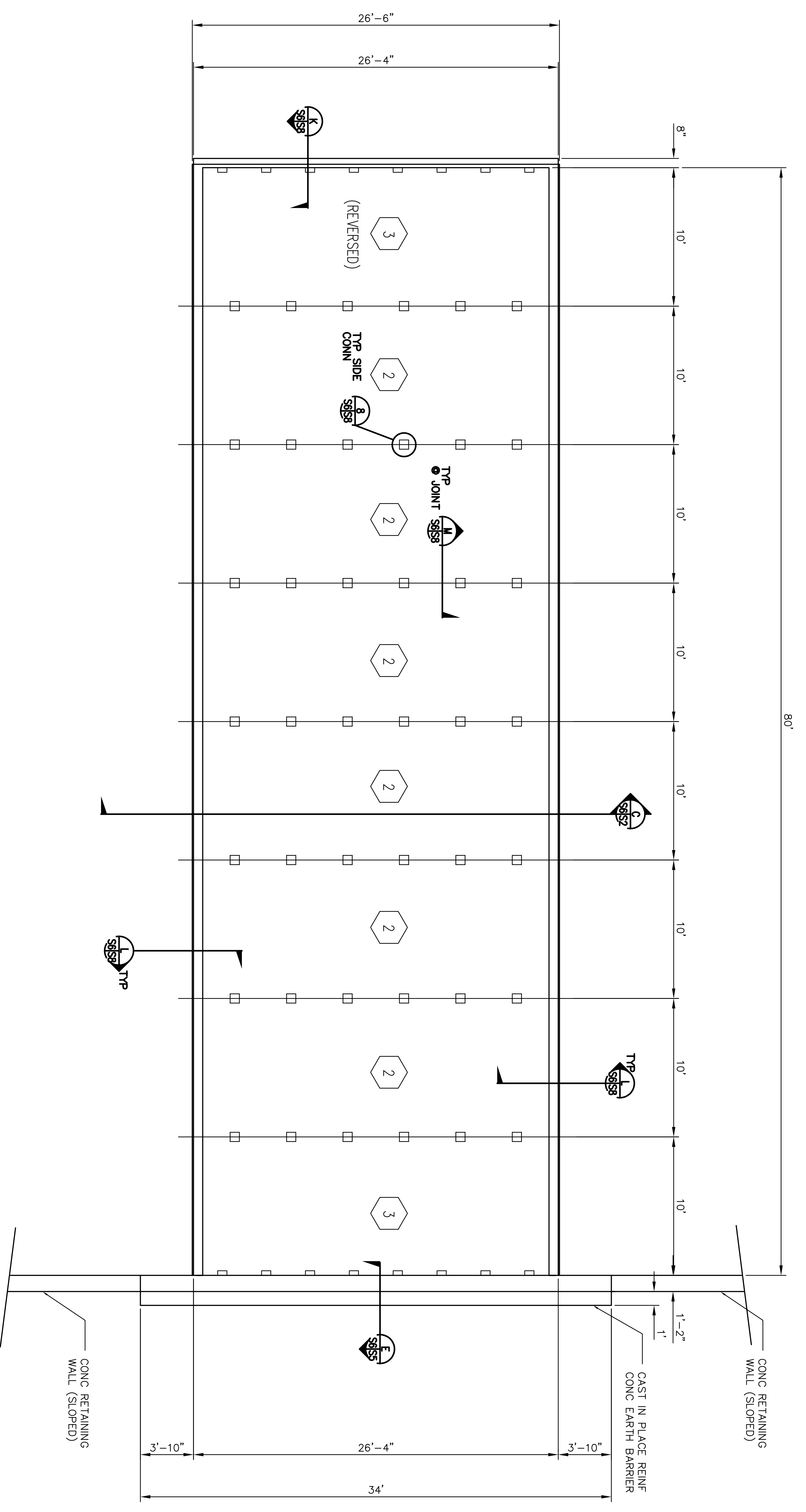
ARCHITECT	DATE	PROJECT MANAGER	DATE
DESIGNER	DATE		DATE
ENGINEERING ASSISTANT	DATE		DATE
PROJECT MANAGER	DATE		DATE
PROJECT ENGINEER	DATE		DATE
CHIEF PROJECT MANAGER	DATE		DATE
CHIEF ENGINEER	DATE		DATE
CHIEF COMMANDER	DATE		DATE
775 CES COMMANDER	DATE		DATE
APPROVED-775 CEG	DATE		DATE
FIRE DEPARTMENT	DATE		DATE

MODULAR STORAGE MAGAZINE
WALL SECTIONS

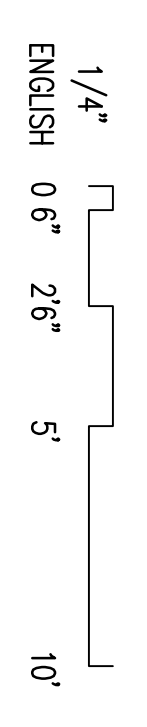


DEPARTMENT OF THE AIR FORCE
HILL AIR FORCE BASE
OFFICE OF CIVIL ENGINEERING

4-8 FIRM
DOENR, UTAH



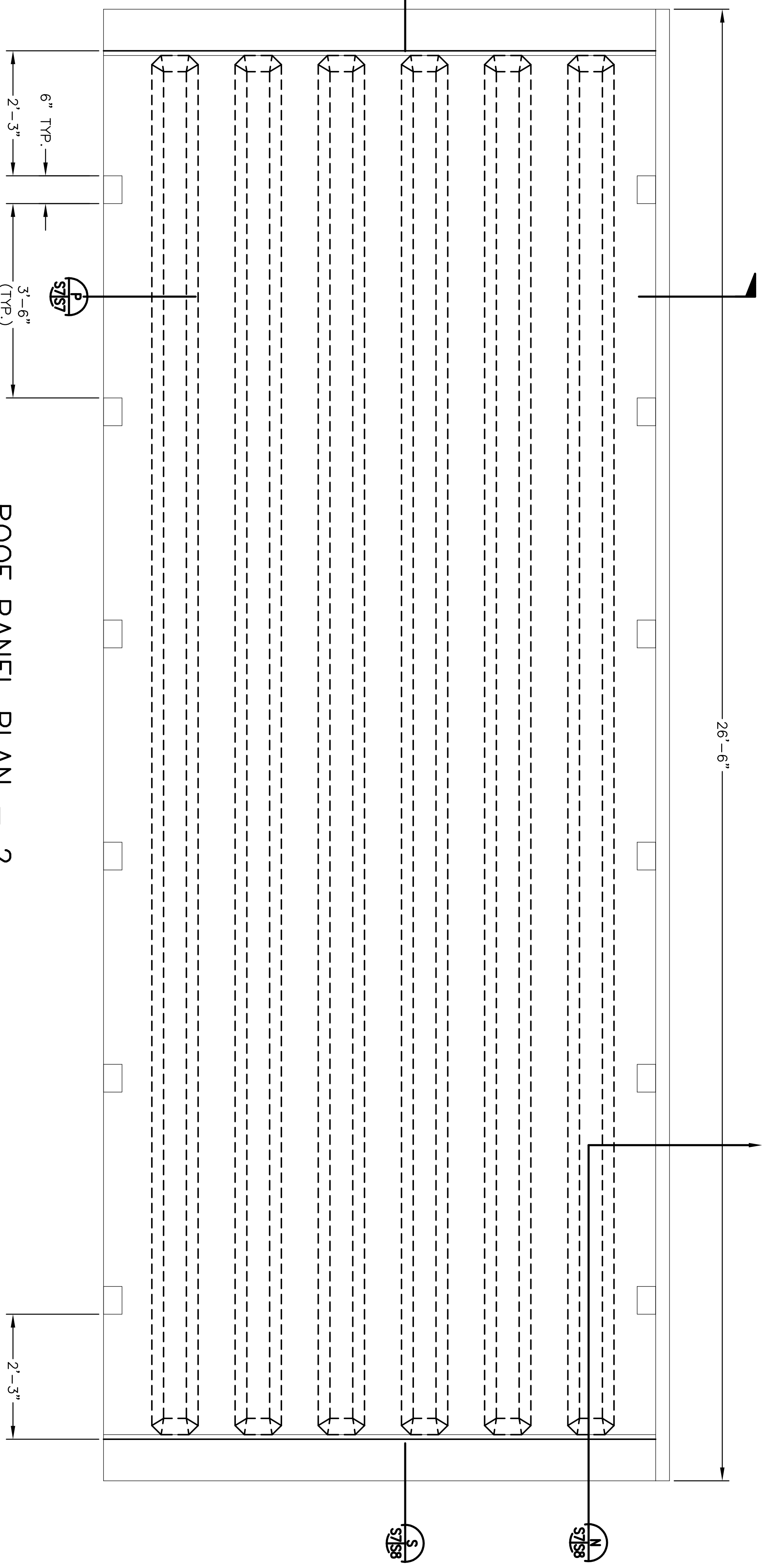
ROOF PLAN
SCALE: 1/4" = 1'-0"



NOTES

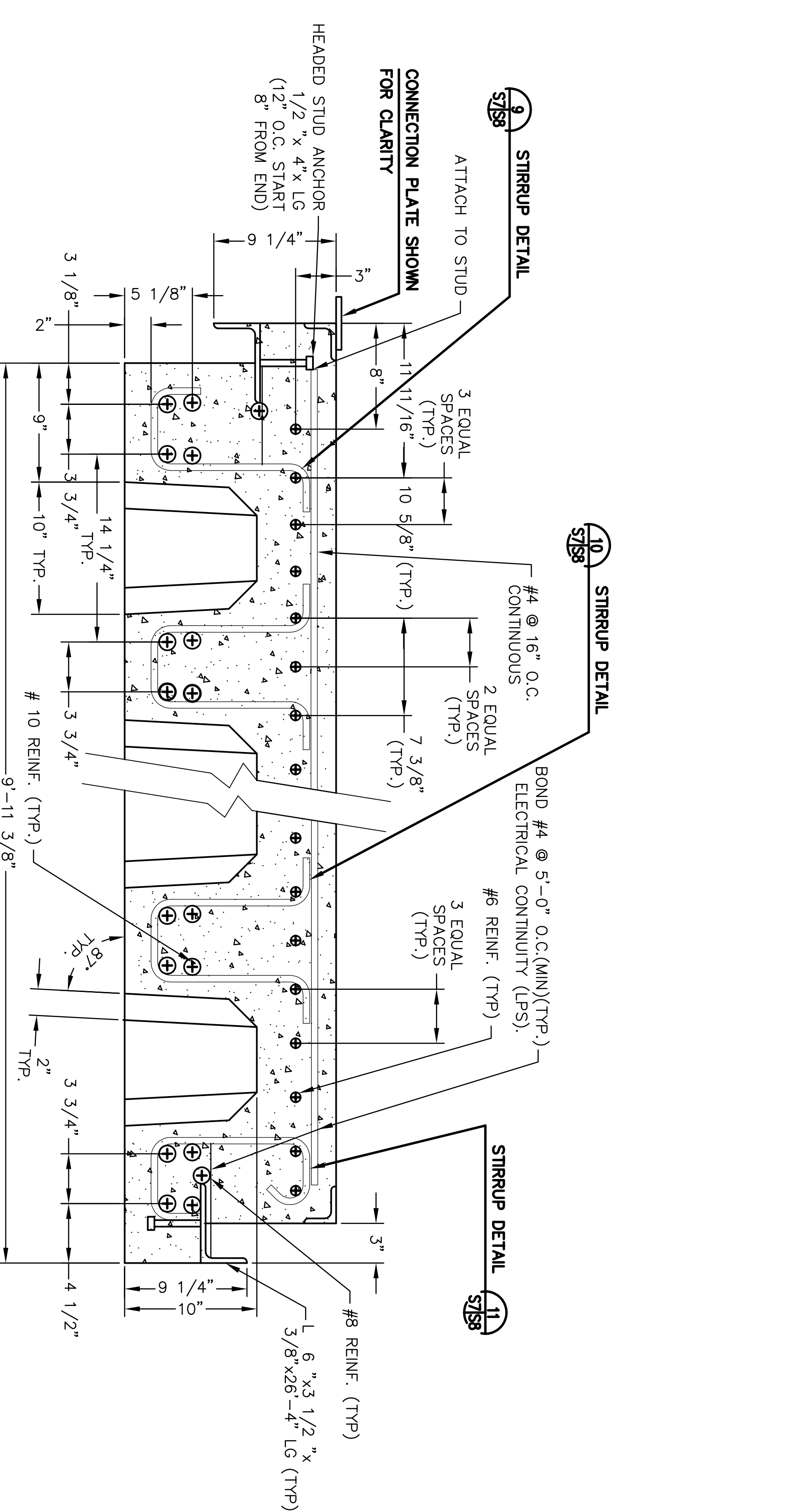
1. SEE SHEET G3 FOR GENERAL STRUCTURAL NOTES.
2. (2) INDICATES PRECAST ROOF PANEL TYPE "2". SEE SHEET S7.

ARCHITECTURAL REVIEW	DATE		DESCRIPTION	DATE	PROJECT MANAGER
CIVIL/STRUCTURAL REVIEW	DATE		MODULAR STORAGE MAGAZINE	DATE	PROJECT MANAGER
MECHANICAL REVIEW	DATE		ROOF PLAN	DATE	PROJECT MANAGER
ELECTRICAL REVIEW	DATE		DESIGNER	DATE	PROJECT MANAGER
ARCHITECTURAL COMPATIBILITY	DATE		DESIGNER	DATE	PROJECT MANAGER
PAVS HANDOFF/PAYINT DESIGN	DATE		DESIGNER	DATE	PROJECT MANAGER
BASE COMPREHENSIVE PLANNER	DATE		DESIGNER	DATE	PROJECT MANAGER
ENERGY CONSERVATION REVIEW	DATE		DESIGNER	DATE	PROJECT MANAGER
FIRE PROTECTION REVIEW	DATE		DESIGNER	DATE	PROJECT MANAGER
COMMISSION ENGINEER	DATE		DESIGNER	DATE	PROJECT MANAGER
CUSTOMER-FUNCTIONAL REVIEW	DATE		DESIGNER	DATE	PROJECT MANAGER
SECURITY FORCES	DATE		DESIGNER	DATE	PROJECT MANAGER



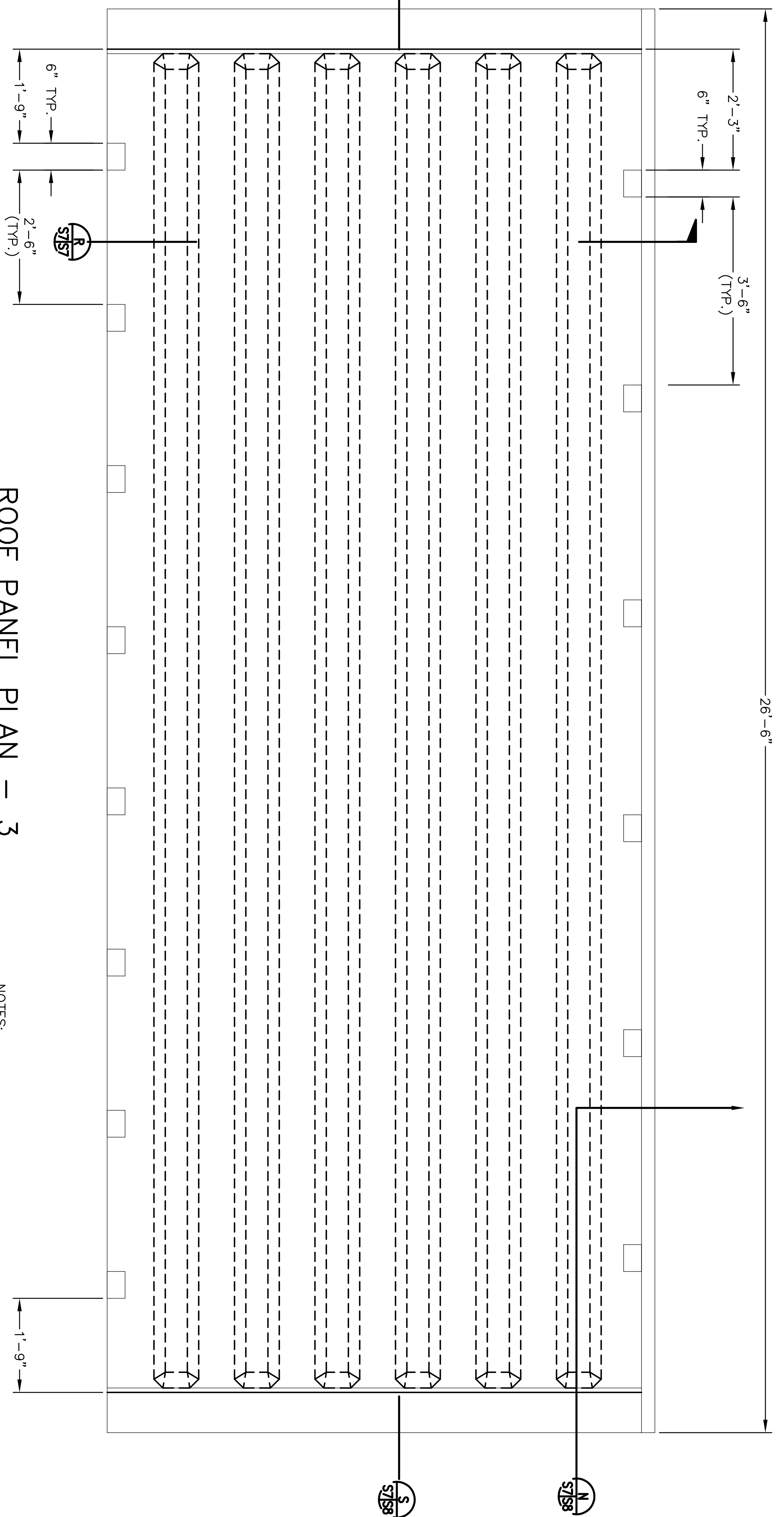
ROOF PANEL PLAN - 2

SCALE: 3/4" = 1'-0"



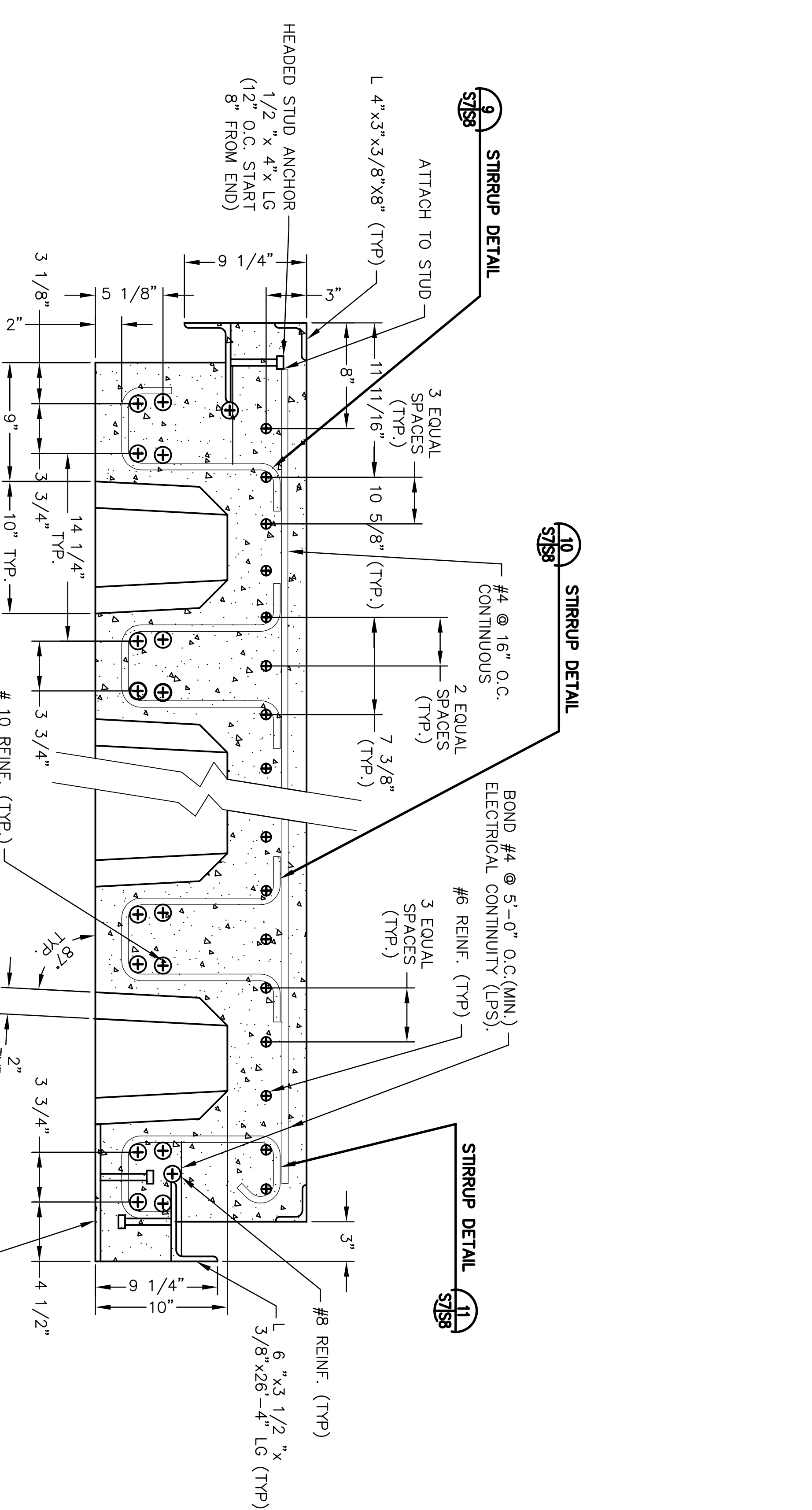
P SECTION

SCALE: N.T.S.



ROOF PANEL PLAN - 3

SCALE: 3/4" = 1'-0"

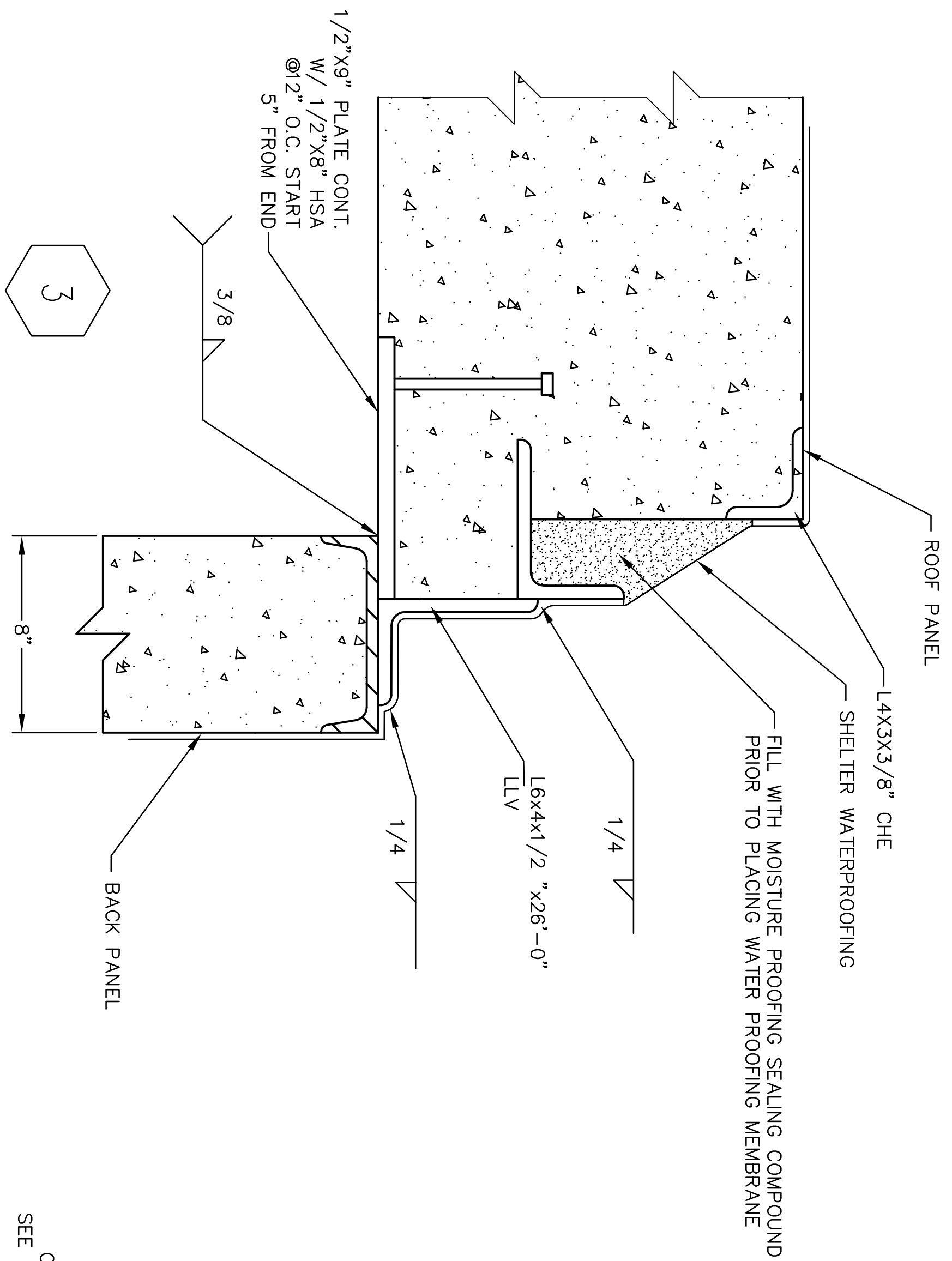


R SECTION

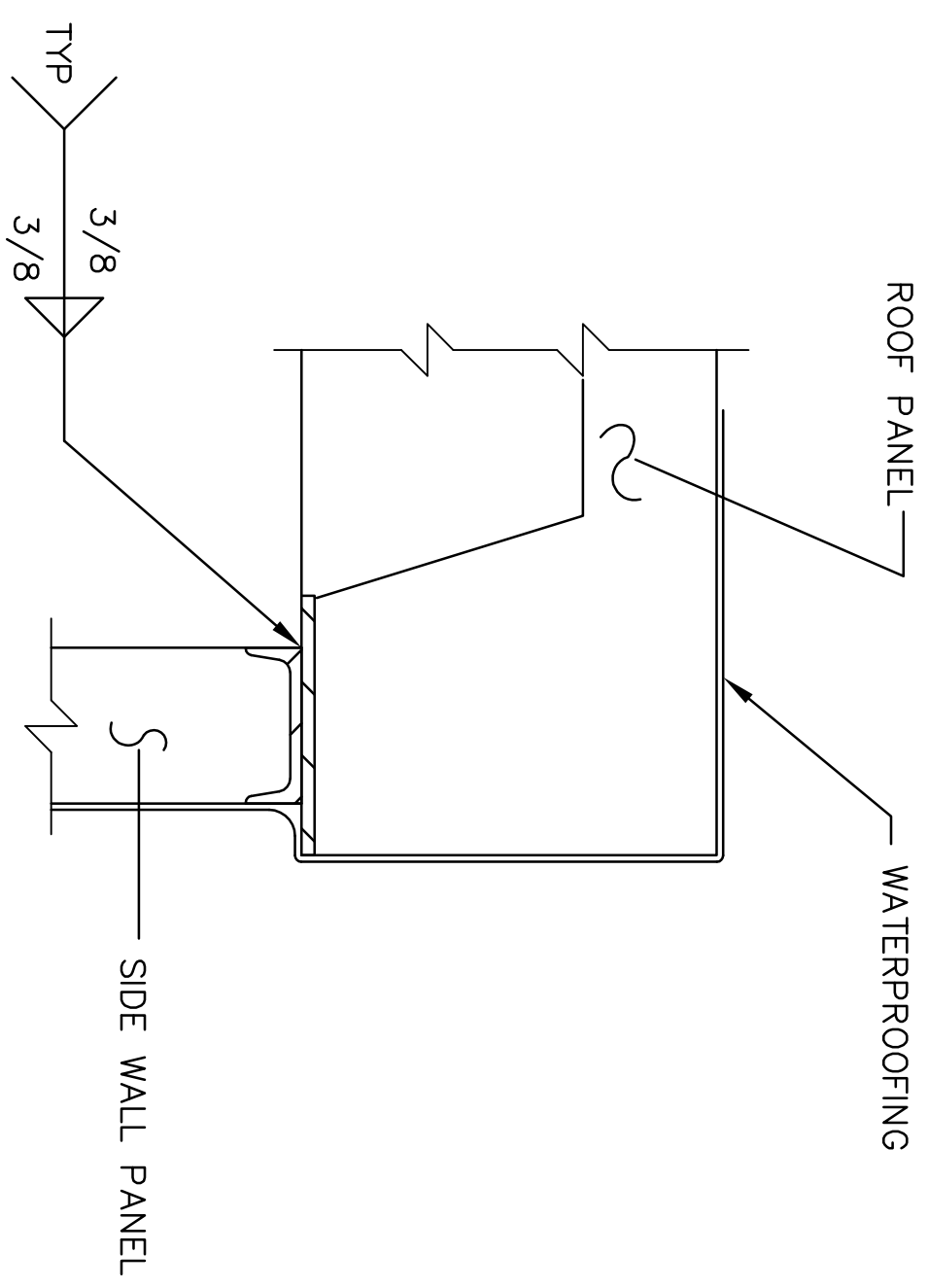
SCALE: N.T.S.

- NOTES:
1. UNLESS OTHERWISE NOTED CONCRETE COVER OVER STEEL REINFORCEMENT SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF ACI 318.
 2. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 OR GRADE 60.
 3. CONCRETE USED SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI. PANEL MAY BE PRECAST BY A MANUFACTURER SPECIALIZING IN PRECAST PRODUCTS OR PRECAST AT THE JOB SITE.
 4. WIRE THE REINFORCING BAR AS NEEDED, USING WIRE NO. 14.
 5. A CLASS C FINISH IS REQUIRED FOR EXPOSED FORMED SURFACES OF ROOF PANEL. A CLASS 'D' FINISH IS REQUIRED FOR SURFACES WHICH WILL BE BELOW GRADE OR NOT EXPOSED TO VIEW AFTER FINAL ASSEMBLY.
 6. SIZE, LOCATION AND QUANTITY OF LIFTING INSERTS TO BE DETERMINED BY CONTRACTOR.
 7. PROVIDE ELECTRICAL CONTINUITY WITHIN THE ROOF PRECAST PANEL, BY WELDING AT 5 LINEAR FEET INTERVALS ACROSS TOP OF STIRRUPS TO END ANGLES IN ONE DIRECTION, IN THE OTHER DIRECTION, FROM BOTTOM PLATE TO #4 REINFORCEMENT.

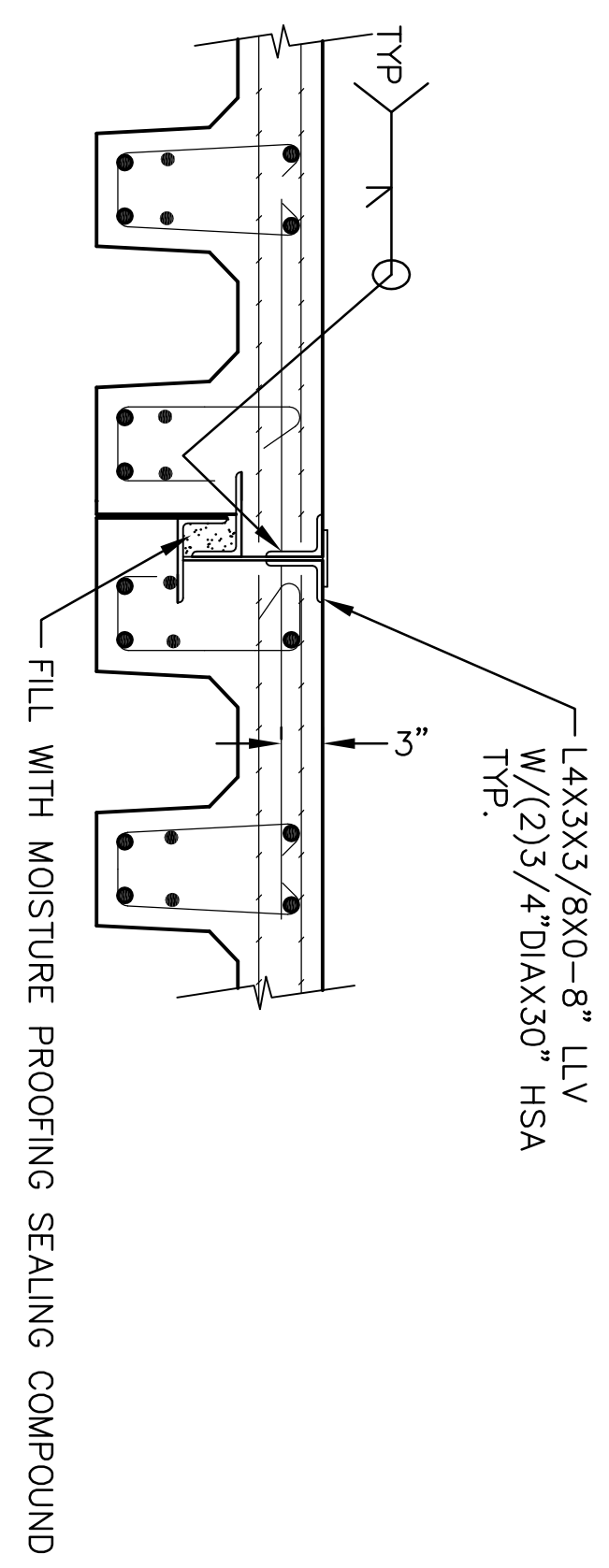
ARCHITECTURAL REVIEW	DATE		DESCRIPTION	DATE
CIVIL/STRUCTURAL REVIEW	DATE		DEPARTMENT OF THE AIR FORCE	DATE
MECHANICAL REVIEW	DATE		ODDEN AIR LOGISTICS CENTER	DATE
ELECTRICAL REVIEW	DATE		OFFICE OF CIVIL ENGINEERING	DATE
ARCHITECTURAL COMPATIBILITY	DATE		HILL AIR FORCE BASE	DATE
PLANS MANAGEMENT/PRINT DESIGN	DATE		MODULAR STORAGE MAGAZINE	DATE
BASE COMPREHENSIVE REVIEW	DATE		ROOF PANEL PLANS	DATE
ENERGY CONSERVATION REVIEW	DATE		DESIGNER	DATE
FIRE PROTECTION REVIEW	DATE		PROJECT MANAGER	DATE
ENVIRONMENTAL REVIEW	DATE		ENGINEERING ASSISTANT	DATE
COMMISSION ENGINEER	DATE		PROJECT NO.	DATE
COMMISSION ENGINEER	DATE		FILE NO.	DATE
CUSTOMER-FUNCTIONAL REVIEW	DATE		APPROVED BY CEG	DATE
SECURITY FORCES	DATE		SHEET	DATE



K SECTION
SCALE: N.T.S.

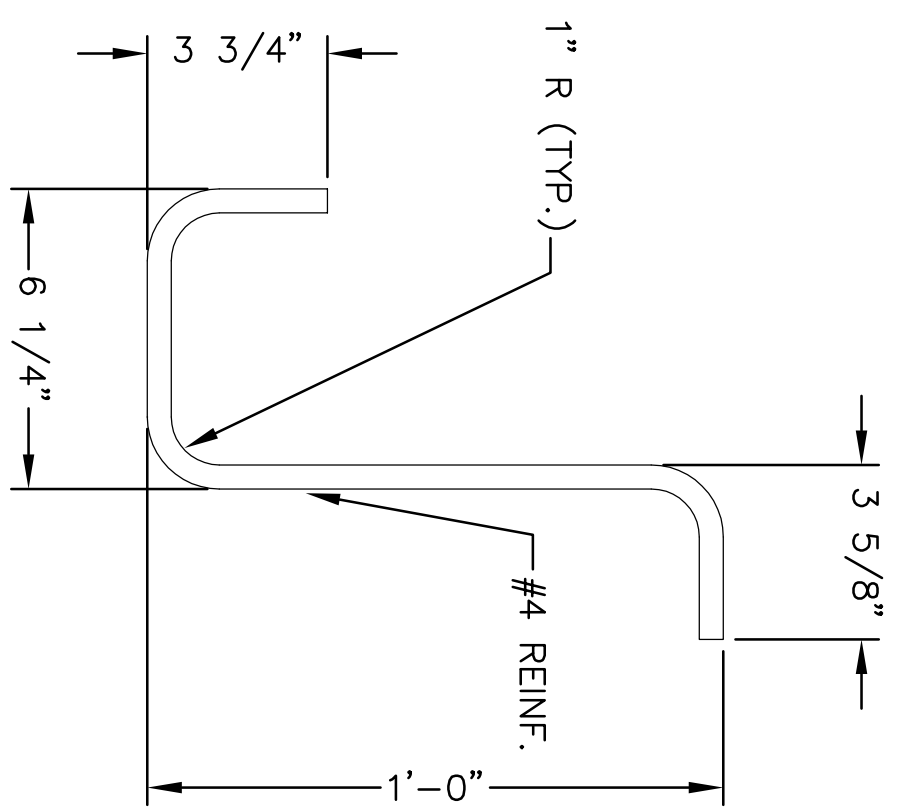


L SECTION
SCALE: N.T.S.

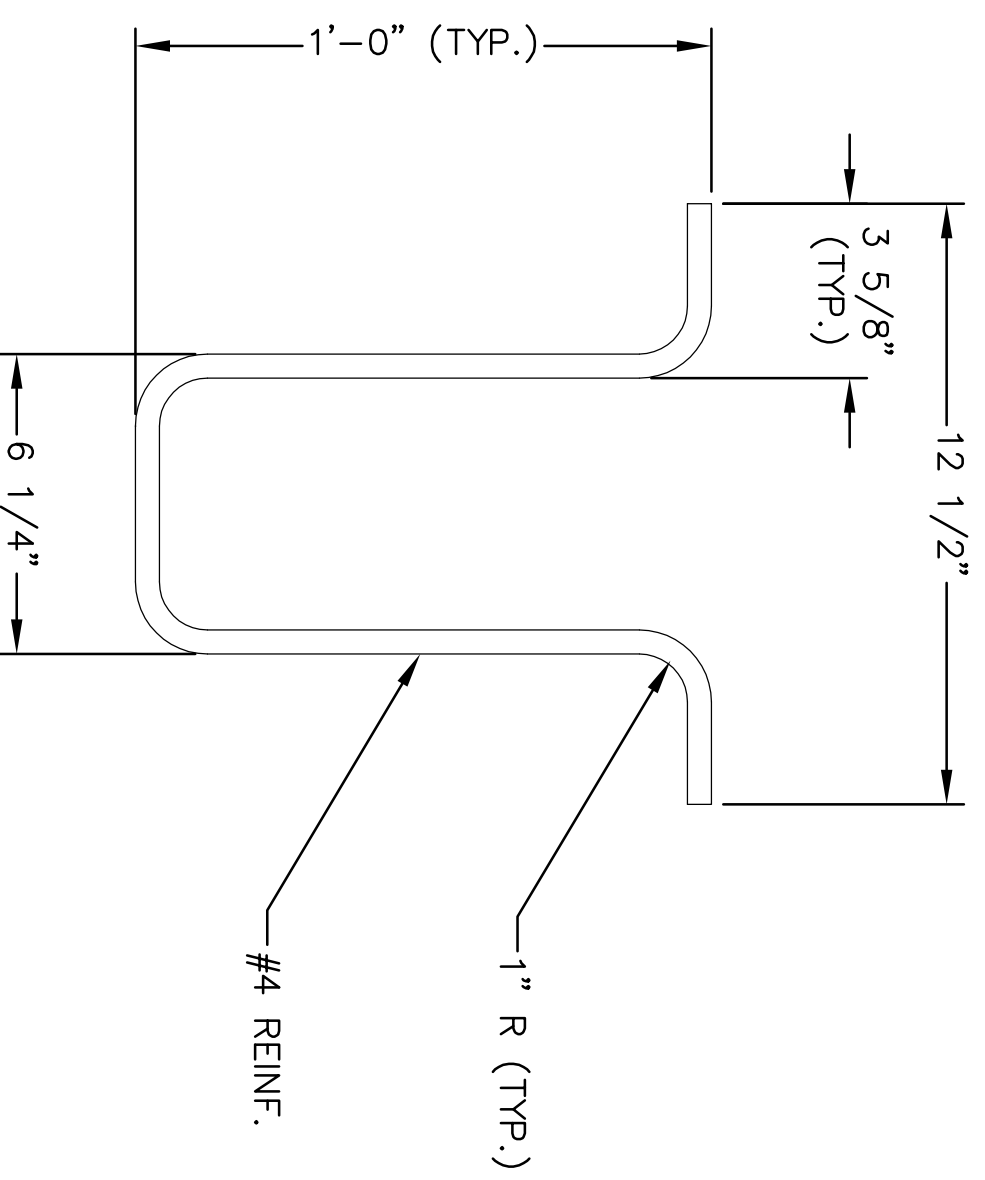


M SECTION
SCALE: N.T.S.

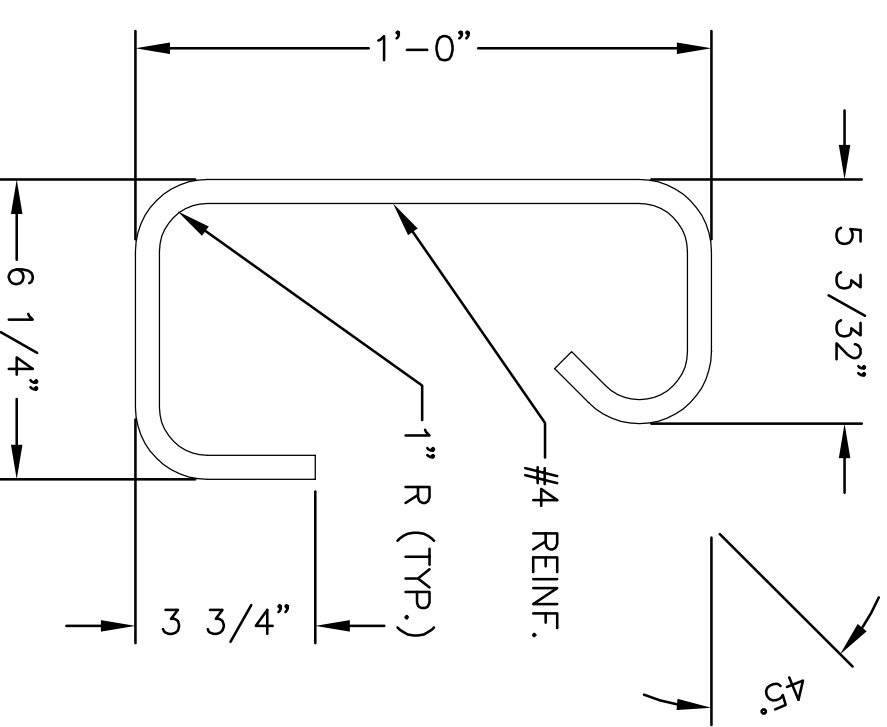
8 DETAIL
SCALE: N.T.S.



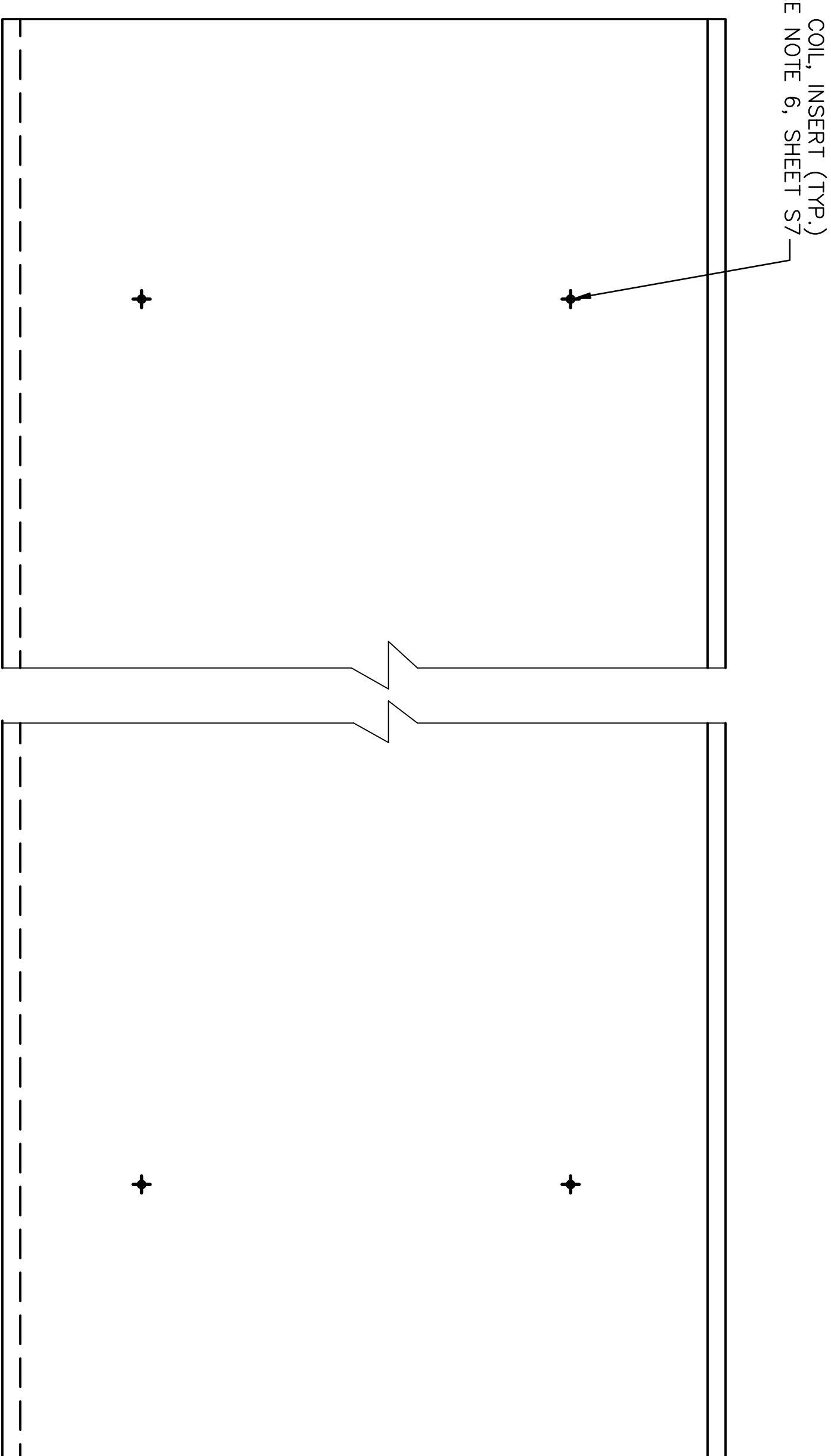
9 STIRRUP DETAIL
SCALE: N.T.S.



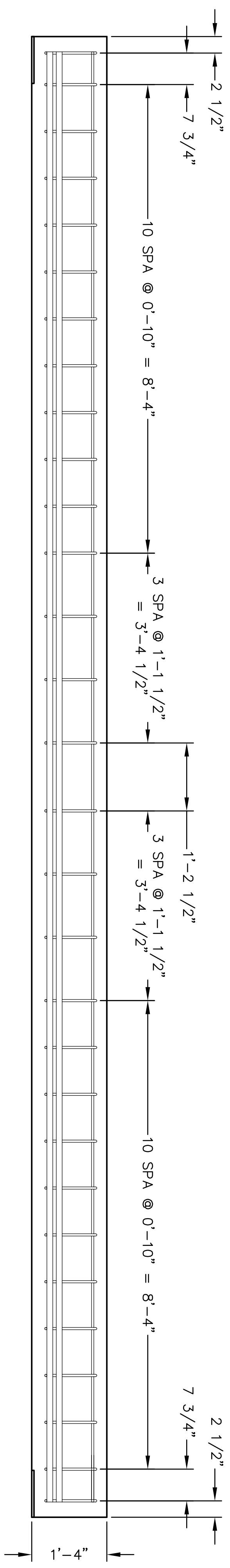
10 STIRRUP DETAIL
SCALE: N.T.S.



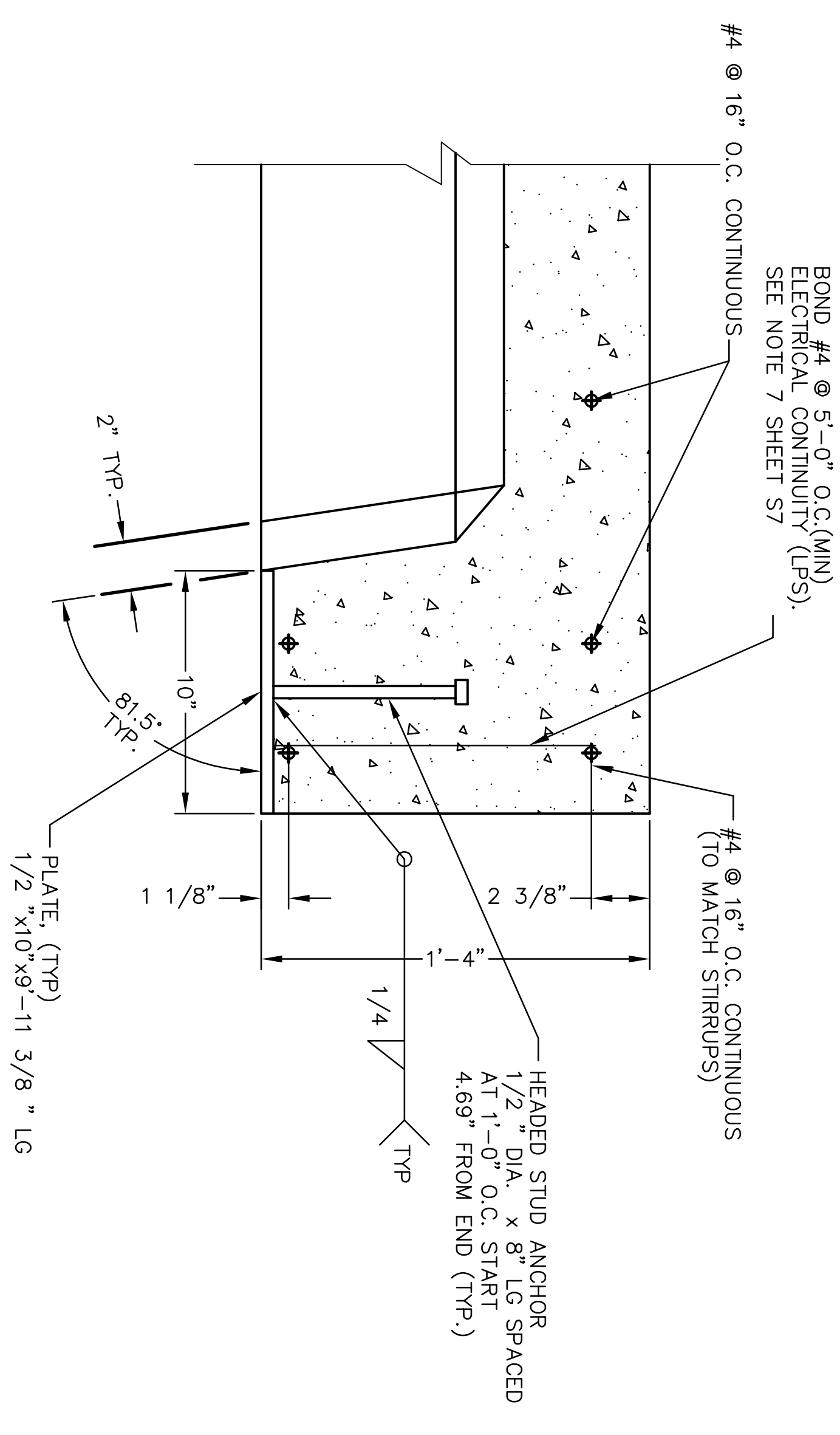
11 STIRRUP DETAIL
SCALE: N.T.S.



PLAN VIEW
SCALE: N.T.S.

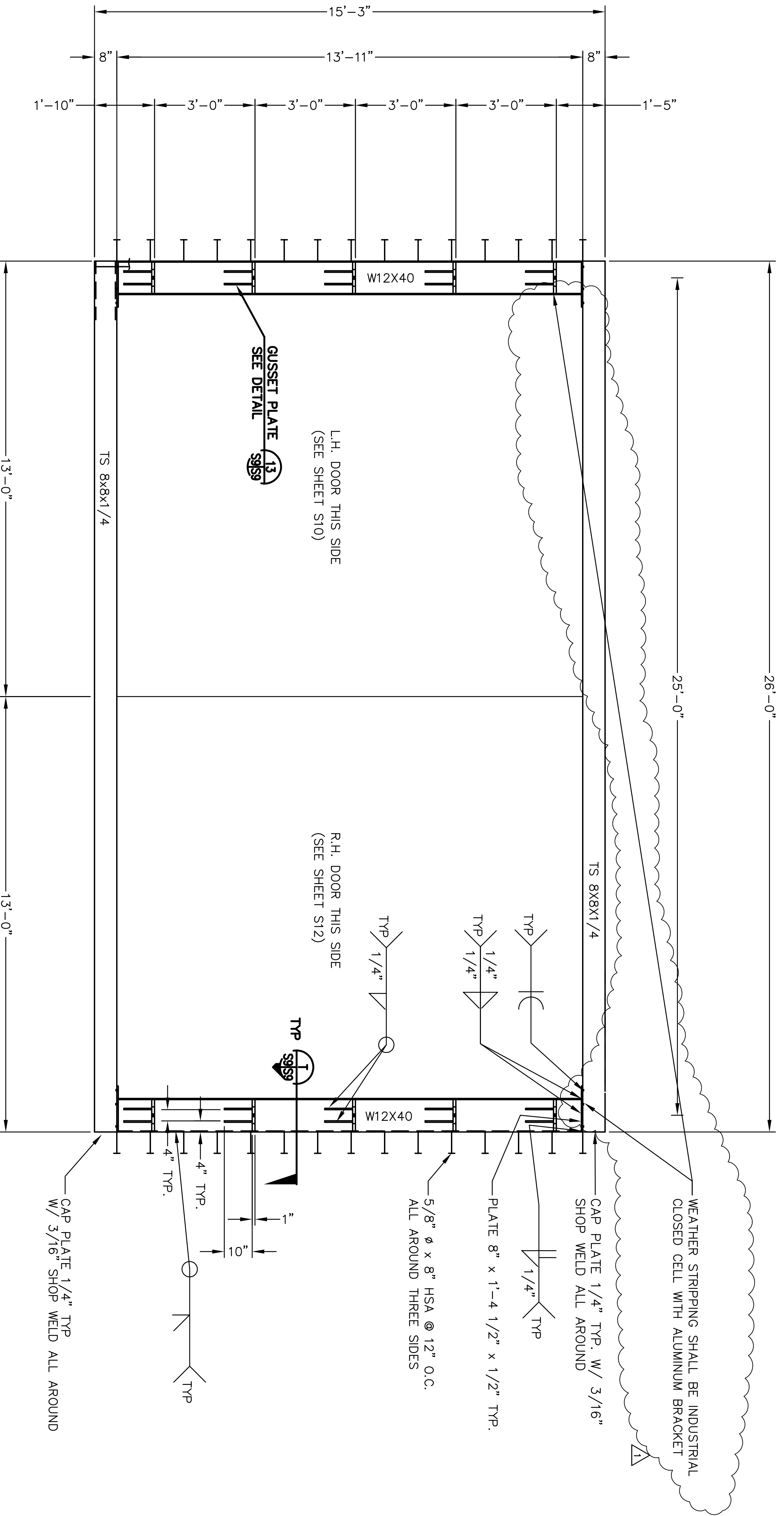


S SECTION
SCALE: N.T.S.

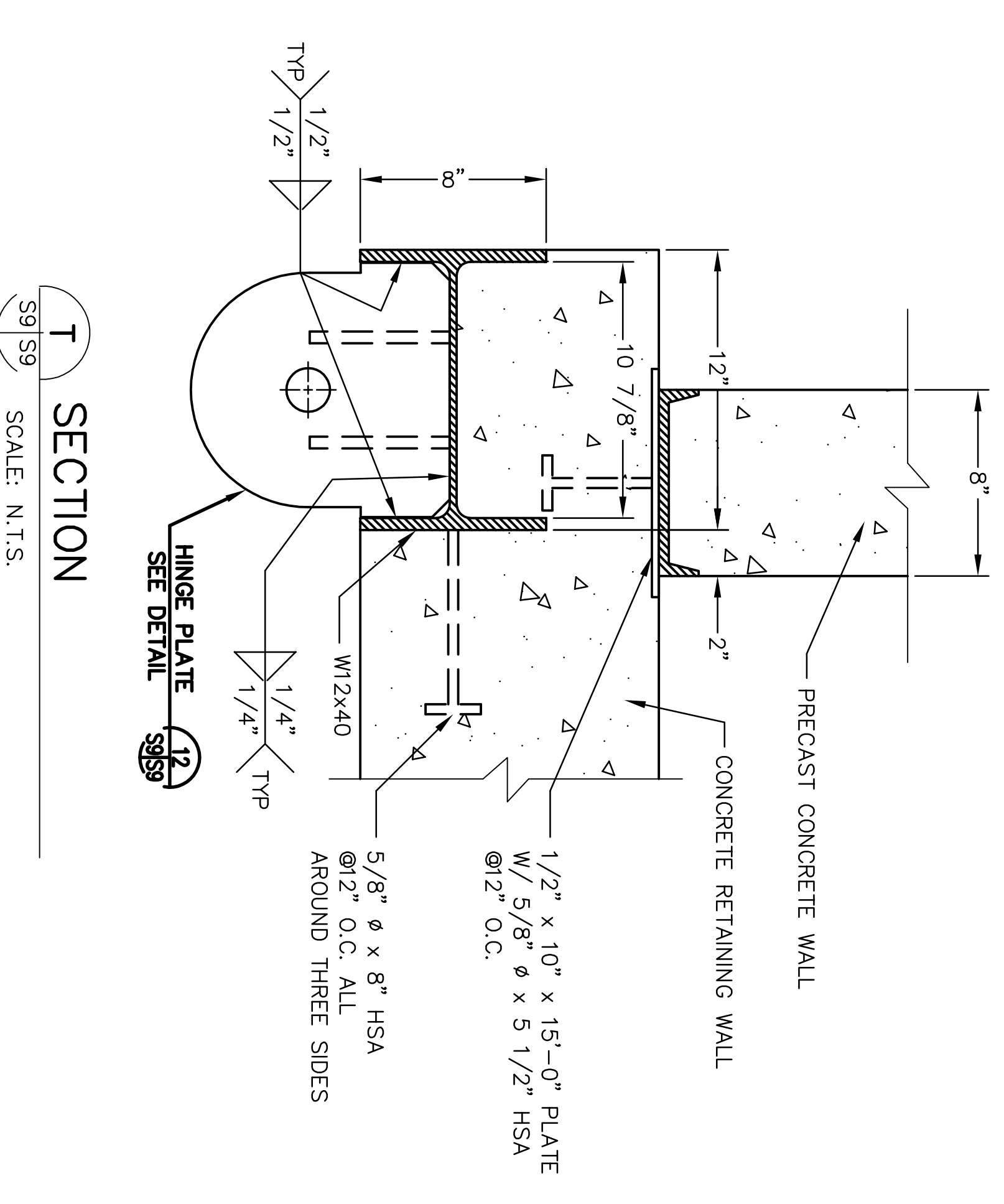


N SECTION
SCALE: N.T.S.

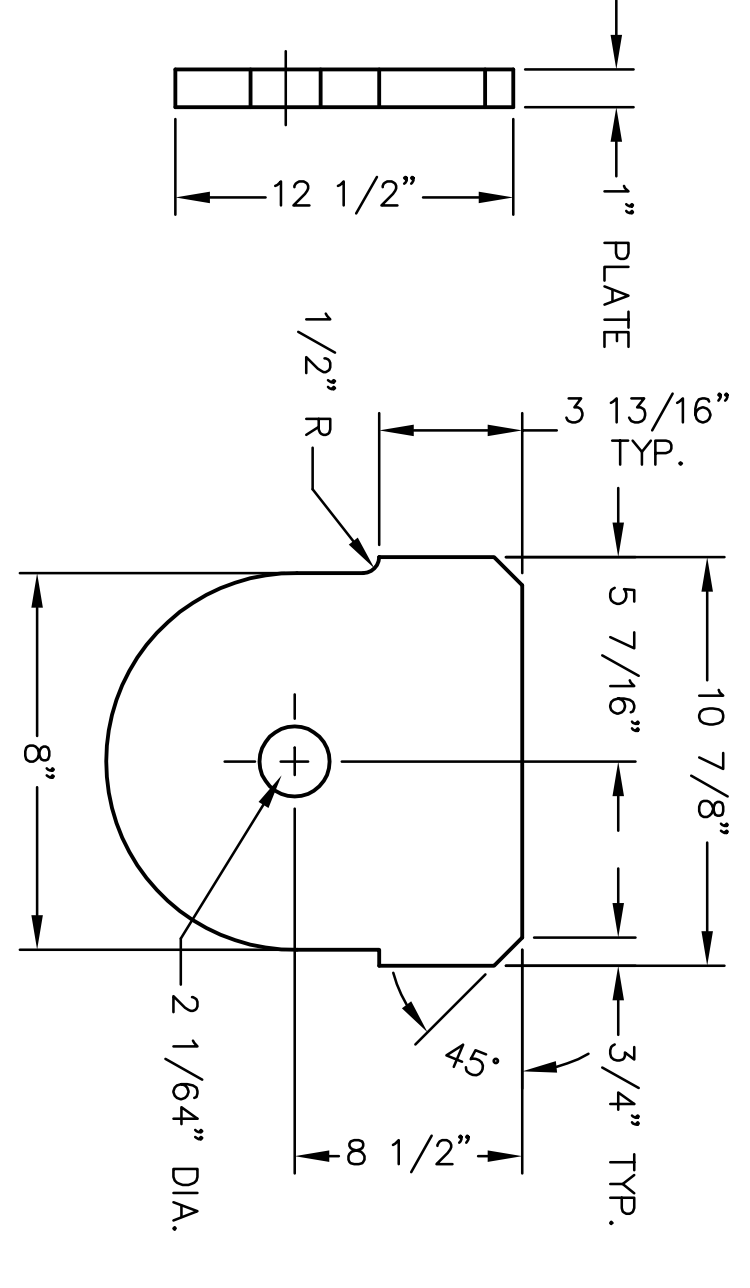
ARCHITECTURAL REVIEW	DATE	REVISION	DATE	DESCRIPTION
CIVIL/STRUCTURAL REVIEW	DATE	1	DATE	DEPARTMENT OF THE AIR FORCE ODGEN AIR LOGISTICS CENTER OFFICE OF CIVIL ENGINEERING
MECHANICAL REVIEW	DATE	2	DATE	4-4 FIRM
ELECTRICAL REVIEW	DATE	3	DATE	DESIGNER
ARCHITECTURAL COMPATIBILITY	DATE	4	DATE	ENGINEERING ASSISTANT
PLANS HANDOFF/PART DESIGN	DATE	5	DATE	
BASE COMPREHENSIVE REVISION	DATE	6	DATE	
ENERGY CONSERVATION REVIEW	DATE	7	DATE	
FIRE PROTECTION REVIEW	DATE	8	DATE	
COMMISSION ENGINEER	DATE	9	DATE	
CUSTOMER-FUNCTIONAL REVIEW	DATE	10	DATE	
SECURITY FORCES	DATE	11	DATE	



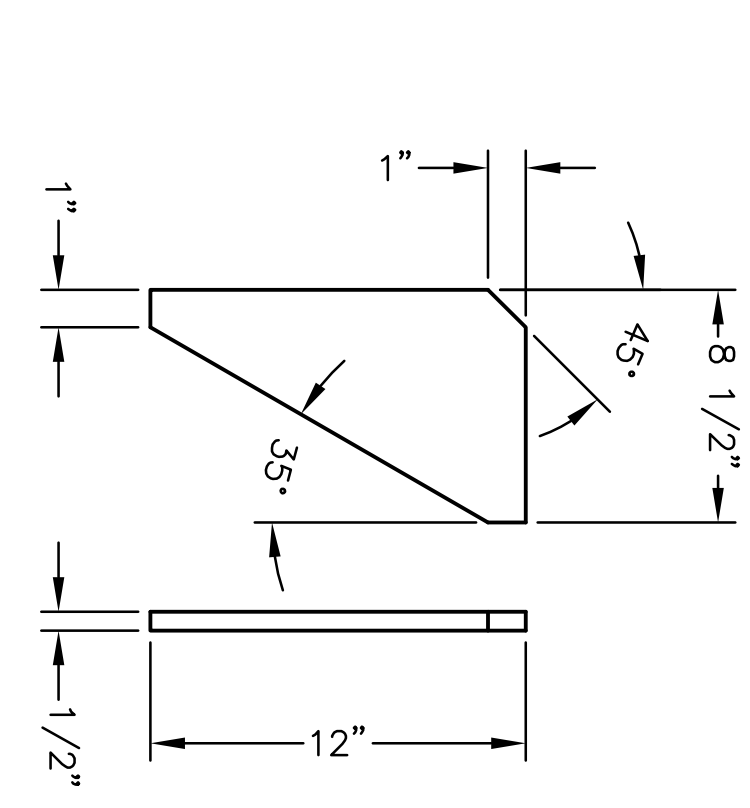
ELEVATION: DOOR FRAME
SCALE 1/2"=1'-0"



T SECTION
SCALE: N.T.S.

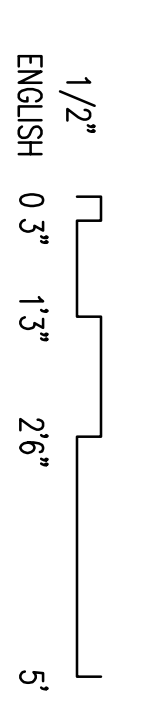


12 HINGE PLATE DETAIL
SCALE: N.T.S.



13 GUSSET PLATE DETAIL
SCALE: N.T.S.

- NOTE:**
1. CONTRACTOR SHALL FABRICATE AND ASSEMBLE DOOR, HINGE, AND FRAME SUCH THAT THE INHERENT MATERIAL TOLERANCES DO NOT INTERFERE WITH THE FINISHED DOOR INSTALLATION AND OPERATION.
 2. CONTRACTOR SHALL INSTALL WEATHER STRIPPING OF CLOSED CELL, HEAVY DUTY MATERIAL TO OUTER GAP OF DOORS.



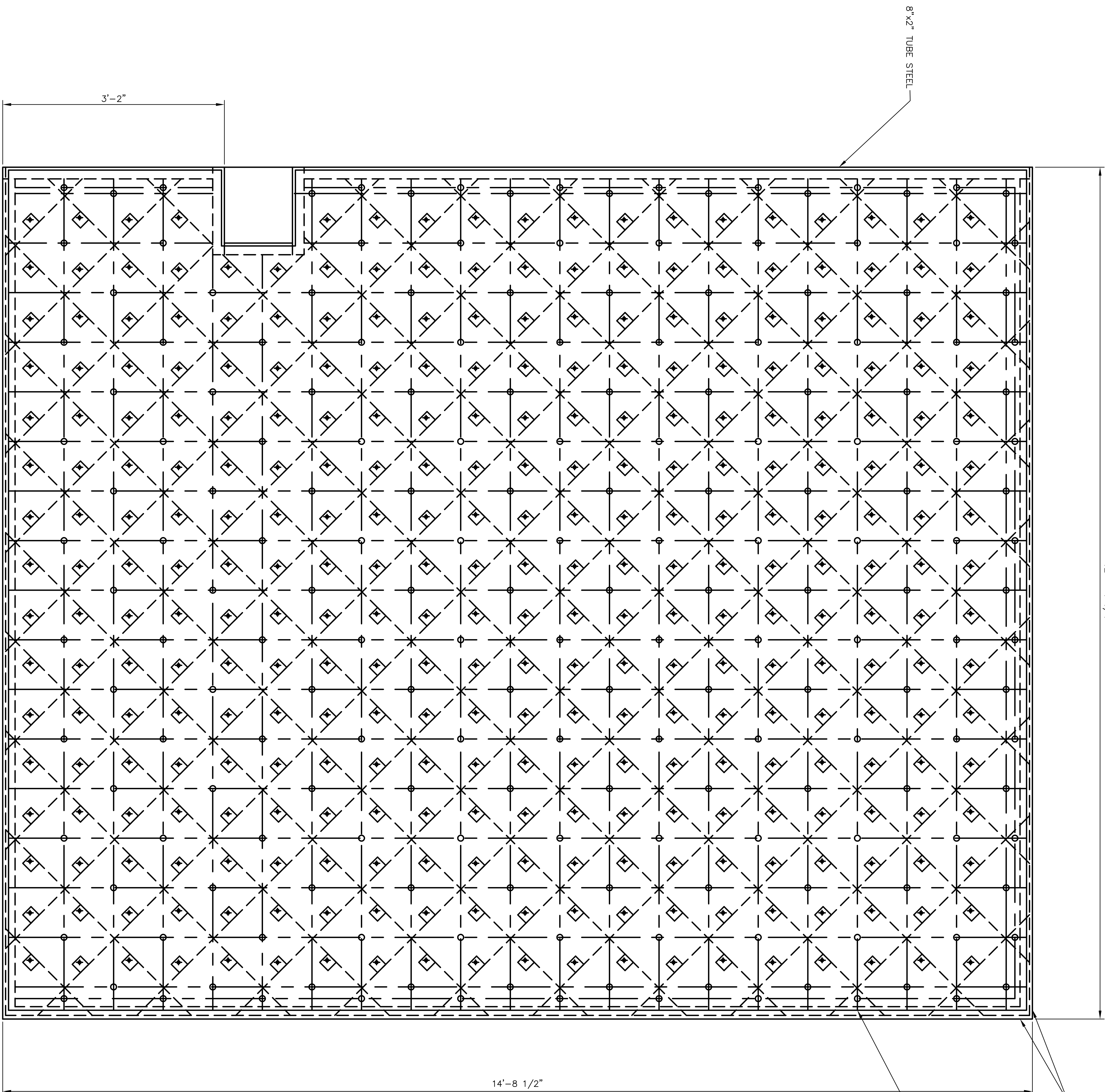
REVISION	DATE	DESCRIPTION	BY
1	3/23/18	AS-BUILT	JRS

ARCHITECTURAL REVIEW	DATE		
CIVIL/STRUCTURAL REVIEW	DATE		
Mechanical Review	DATE		
Electrical Review	DATE		
Architectural Compatibility	DATE		
Plans Handoff/Point Review	DATE		
Base Comprehensive Review	DATE		
Energy Conservation Review	DATE		
Fire Protection Review	DATE		
Commissioning	DATE		
Customer-Functional Review	DATE		
Security Forces	DATE		

ARCHITECTURAL REVIEW	DATE		
CIVIL/STRUCTURAL REVIEW	DATE		
Mechanical Review	DATE		
Electrical Review	DATE		
Architectural Compatibility	DATE		
Plans Handoff/Point Review	DATE		
Base Comprehensive Review	DATE		
Energy Conservation Review	DATE		
Fire Protection Review	DATE		
Commissioning	DATE		
Customer-Functional Review	DATE		
Security Forces	DATE		

REVISION	DATE	DESCRIPTION	BY
1	3/23/18	AS-BUILT	JRS

ARCHITECTURAL REVIEW	DATE		
CIVIL/STRUCTURAL REVIEW	DATE		
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Plans Handoff/Point Review	DATE		
Base Comprehensive Review	DATE		
Energy Conservation Review	DATE		
Fire Protection Review	DATE		
Commissioning	DATE		
Customer-Functional Review	DATE		
Security Forces	DATE		



DOOR ELEVATION, OUTSIDE VIEW

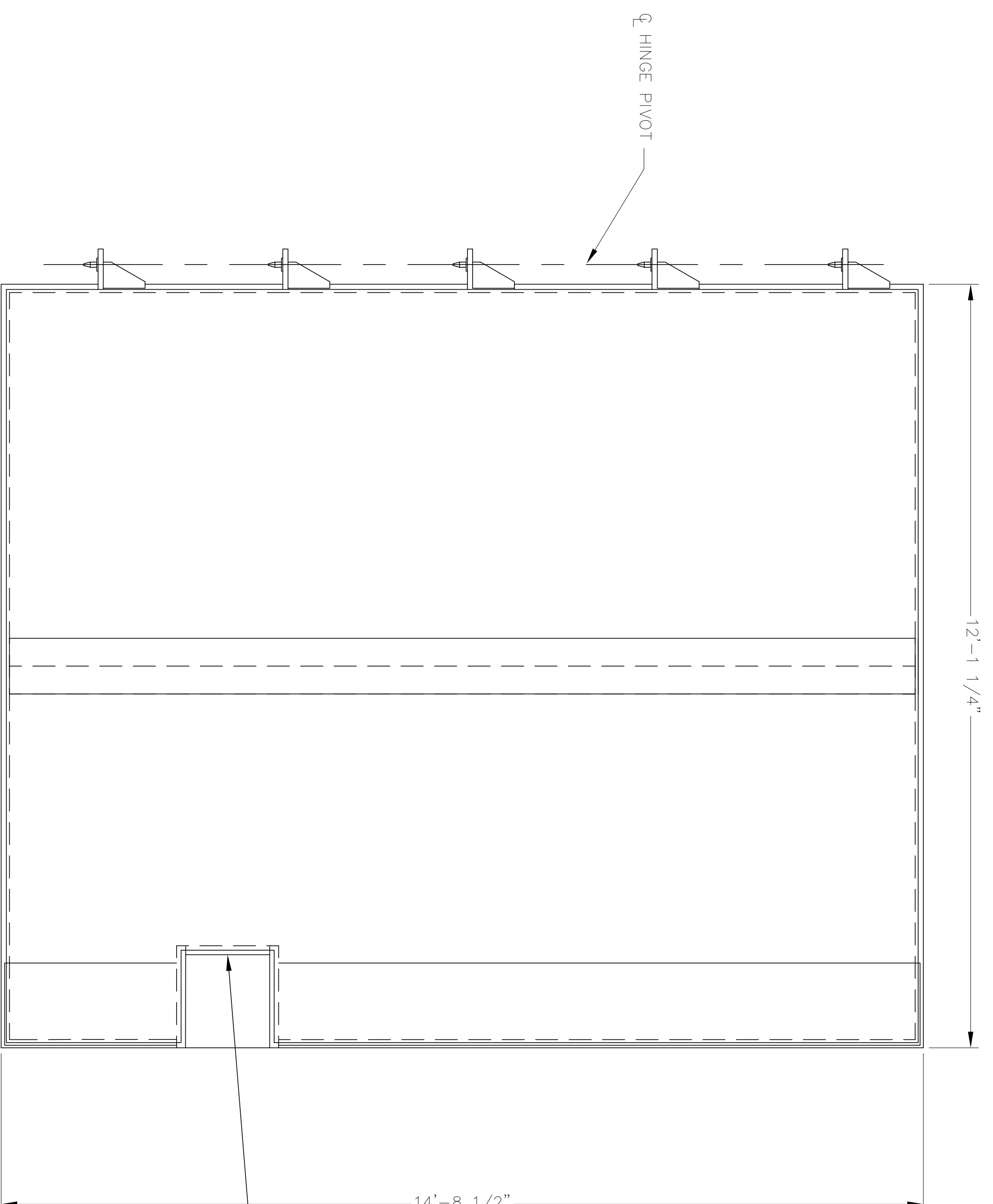
SCALE: 8" = 1'-0"

NOTE: PLATE SUPPORT NOT SHOWN FOR CLARITY

REVISION	DATE	DESCRIPTION
ARCHITECTURAL REVIEW	DATE	
CIVIL/STRUCTURAL REVIEW	DATE	
MECHANICAL REVIEW	DATE	
ELECTRICAL REVIEW	DATE	
ARCHITECTURAL COMPATIBILITY	DATE	
PLANS HANDOFF/PART DESIGN	DATE	
BASE COMPREHENSIVE PLANNER	DATE	
ENERGY CONSERVATION REVIEW	DATE	
FIRE PROTECTION REVIEW	DATE	
COMMISSION ENGINEER	DATE	
CUSTOMER-FUNCTIONAL REVIEW	DATE	
SECURITY FORCES	DATE	

REVISION	DATE	DESCRIPTION
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2		REVISED PER COMMENTS
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100		REVISED PER COMMENTS

DEPARTMENT OF THE AIR FORCE
 OGDEN AIR LOGISTICS CENTER
 OFFICE OF CIVIL ENGINEERING
 HILL AIR FORCE BASE
 MODULAR STORAGE MAGAZINE
 DOOR
 ELEVATION
 PROJECT MANAGER: LARRY ADAMS
 PROJECT NO. 17-01
 SHEET 17 OF 27



INSIDE VIEW, RIGHT DOOR ASSEMBLY

(SAME AS S-10 EXCEPT AS NOTED)

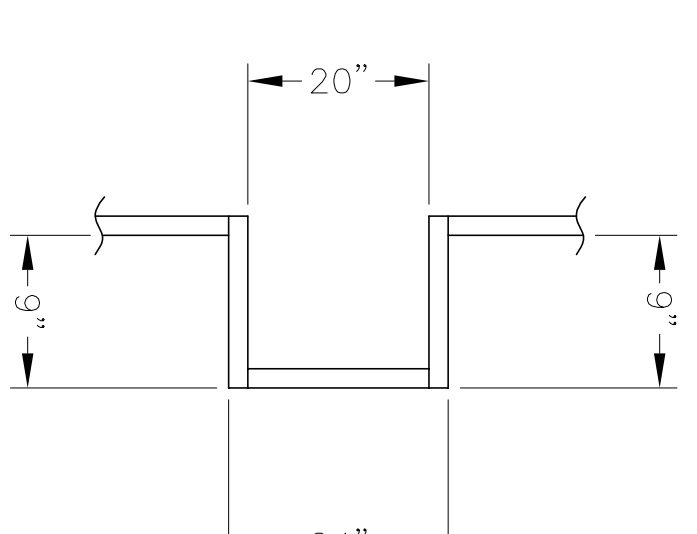
SCALE: N.T.S.

NOTES:

1. INTERPRET DRAWING PER MIL-STD-100 AND ANSI/ASME Y14.5M 1994.
2. USE DRILL BUSHING (ITEM 7) TO LOCATE HOLES IN SWINGING DOOR
3. USE DRILL BUSHING (ITEM 8) TO LOCATE HOLE IN SWINGING DOOR FOR HANDLE BUSHING (ITEM 3).
4. DO NOT FULLY TIGHTEN NUT, CAM OF ITEM 1 MUST BE ALLOWED TO ROTATE FREELY.
5. THE CONTRACTOR SHALL INSTALL INTERNAL LOCKING DEVICES ON THE MAGAZINE DOORS. THE INTERNAL LOCKING DEVICES WILL BE PROVIDED BY NSWC CRANE. THE CONTRACTOR SHALL NOTIFY NAVAL FACILITIES ENGINEERING SERVICE CENTER (VICTOR ACAYAN AT 805-982-1123) TO ARRANGE TO HAVE NFESC PERSONNEL ON-SITE WHEN INSTALLING LOCKS TO THE MAGAZINE AND ITS DOORS. THE CONTRACTOR SHALL FOLLOW ALL INSTRUCTIONS ISSUED BY NFESC REGARDING THE INSTALLATION OF THE LOCKS TO THE MAGAZINE AND ITS DOORS.
6. SEE SUPPLEMENTAL I/D DRAWINGS FOR COMPLETE ASSEMBLY AND PARTS LIST.
7. KEYS SHALL NOT BE DELIVERED TO THE LOCK SMITH. CONTACT HILL AFB PM LYNN ADAMS AT 777-3151.

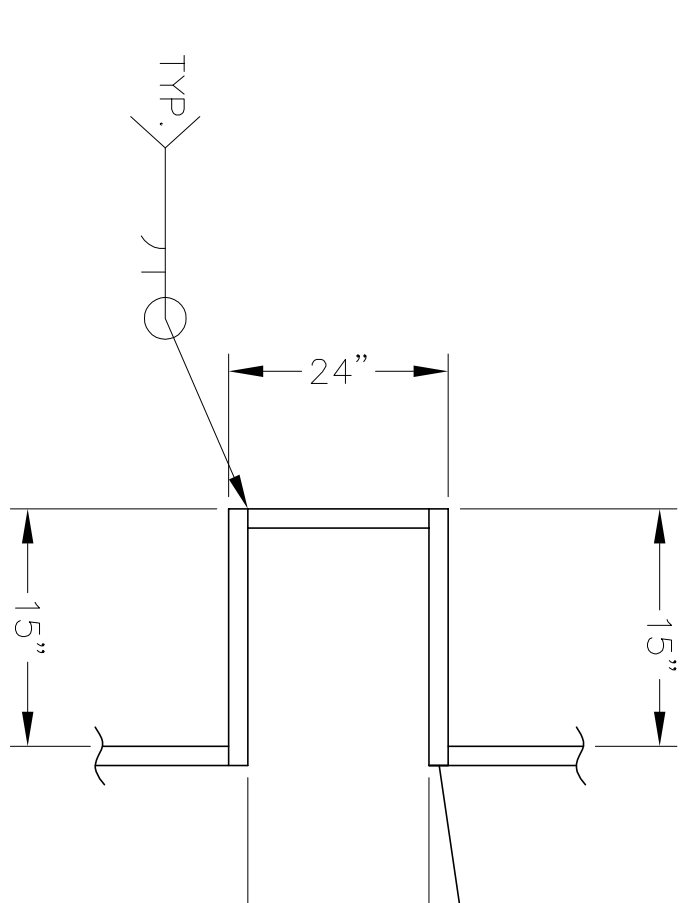
FRAME DETAIL
S12/S12

ONE DOOR			
ITEM NO.	QTY	DESCRIPTION	UNIT
101	1	RIGHT DOOR ASSEMBLY	
102	1	RECTANGULAR TUBING	16.00' 8" 2" 1/4" STEEL
103	1	C CHANNEL	39.04' 8" 18.75 LB
105	4	PLATE SUPPORT	56" 12" 1/2"
106	280	ANGLES	47" 2" 2" 1/4"
107	40	FLAT BAR	330.6' 8" 1/4"
108	9	TUBING SUPPORT	3' 8" 1/2"
109	4	PLATE	360 SQ FT 3/8" STEEL



1 FRAME DETAIL
S10/S12 SCALE: N.T.S.
(LEFT DOOR)

NOTE: 3/8" SKIN PLATE NOT SHOWN FOR CLARITY

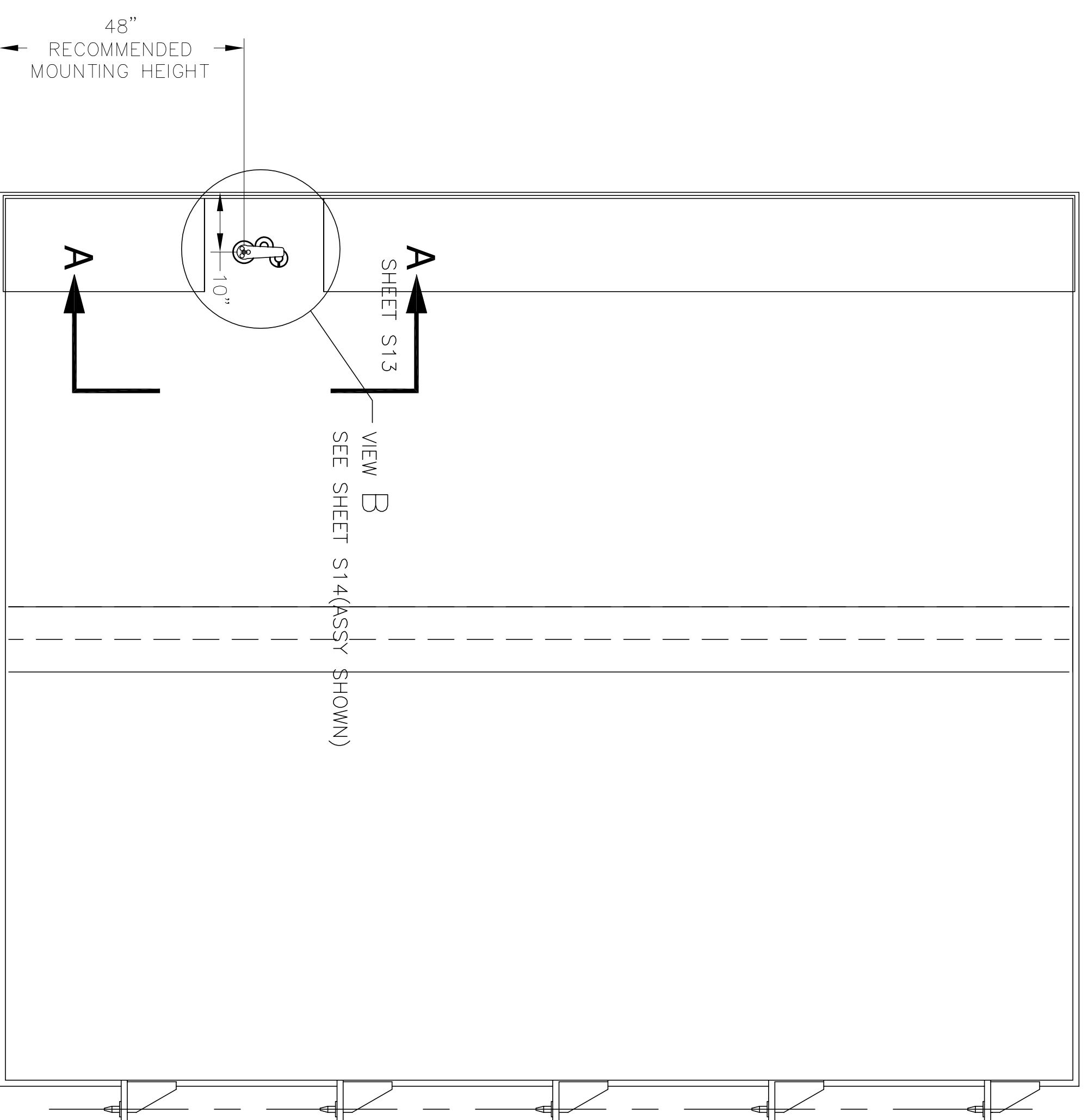


2 FRAME DETAIL
S12/S12 SCALE: N.T.S.
(RIGHT DOOR)

NOTE: 3/8" SKIN PLATE NOT SHOWN FOR CLARITY

PARTS LIST

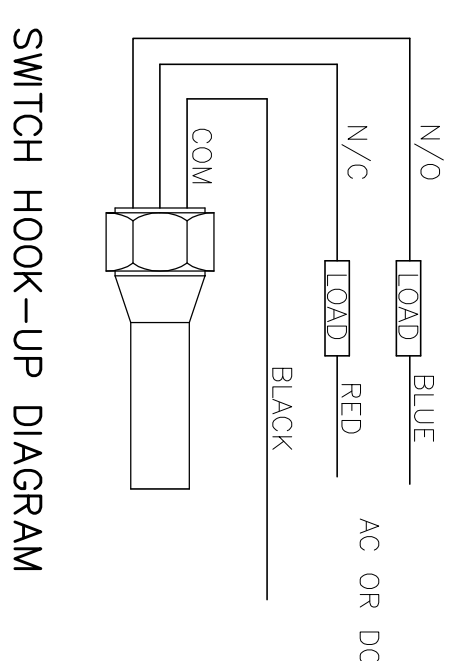
ITEM NO.	QTY	DESCRIPTION	PART OR DRAWING NO.	REVISION	REF DES.
1	1	BOLT WORK ASSEMBLY	301201		
2	1	KEY GUIDE BUSHING	301209-2		
3	1	HANDLE BUSHING	301210-2		
4	1	I/D ASSEMBLY, DUAL KEY	550101-3		
6	1	KEY GUIDE ASSEMBLY	550129		
7	1	DRILL BUSHING, KEY GUIDE	301211		
8	1	DRILL BUSHING, HANDLE	301212		



OUTSIDE VIEW, RIGHT DOOR ASSEMBLY

(SAME AS S-10 EXCEPT AS NOTED)

SCALE: N.T.S.



SWITCH HOOK-UP DIAGRAM

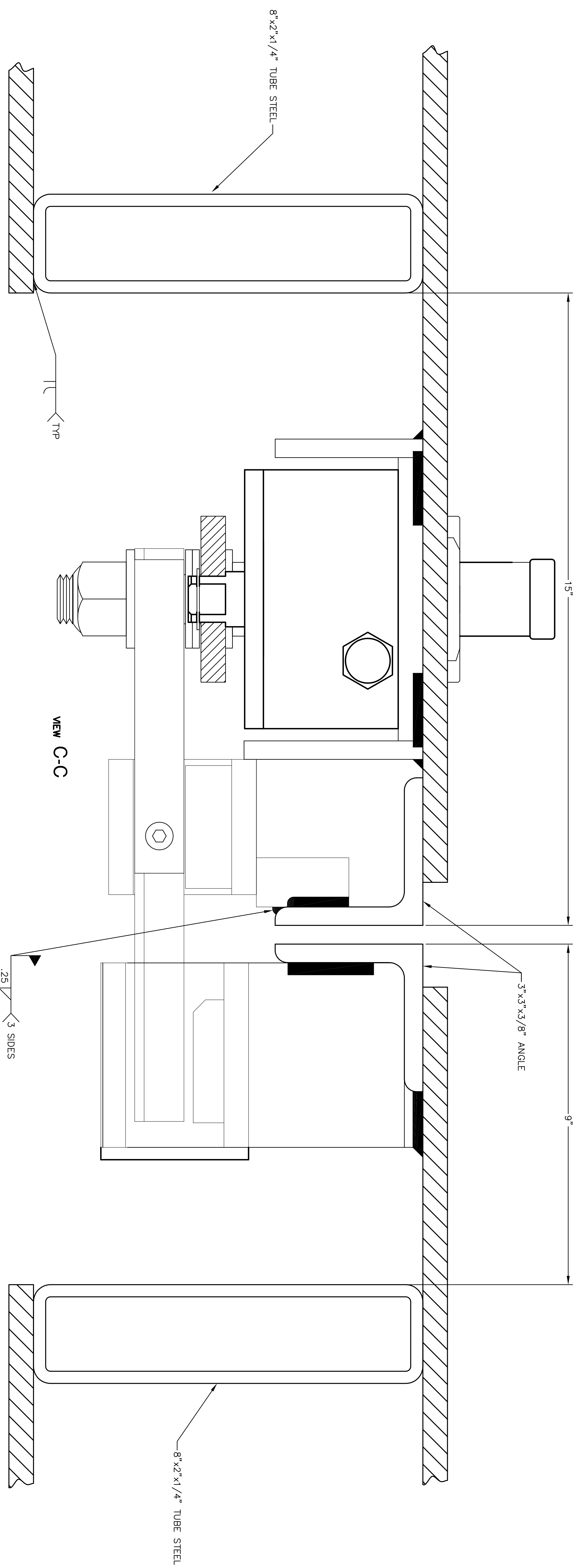
REVISION	DATE	DESCRIPTION	BY
1			

ARCHITECTURAL REVIEW	DATE		
CIVIL/STRUCTURAL REVIEW	DATE		
MECHANICAL REVIEW	DATE		
ELECTRICAL REVIEW	DATE		
APPROVED FOR CONSTRUCTION	DATE		
PROJECT MANAGER	DATE		
ENGINEERING ASSISTANT	DATE		

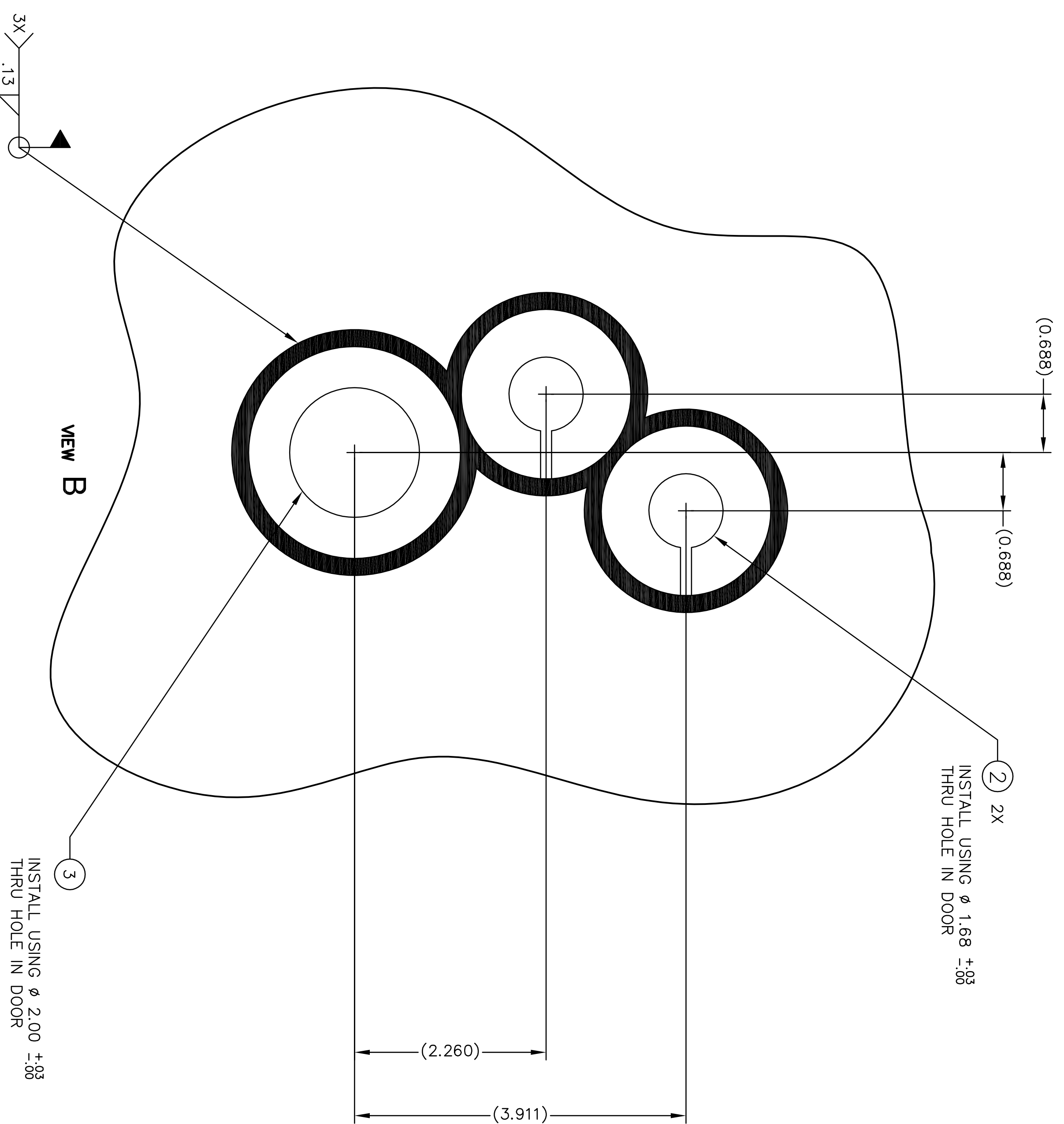
DEPARTMENT OF THE AIR FORCE	ODDEN AIR LOGISTICS CENTER	ODDEN, UTAH
HILL AIR FORCE BASE	OFFICE OF CIVIL ENGINEERING	
MODULAR STORAGE MAGAZINE	RIGHT DOOR ASSEMBLY	

PROJECT MANAGER	LYNN ADAMS
PROJECT ENGINEER	
QUALITY ENGINEER	
775 CES COMMANDER	
APPROVED BY 775 CES	

SHEET 512 OF 22



CC INSIDE TOP VIEW
SCALE: 1/1



BB FRONT VIEW
SCALE: 1/1

REVISION	DATE	DESCRIPTION
1		ISSUED FOR CONSTRUCTION
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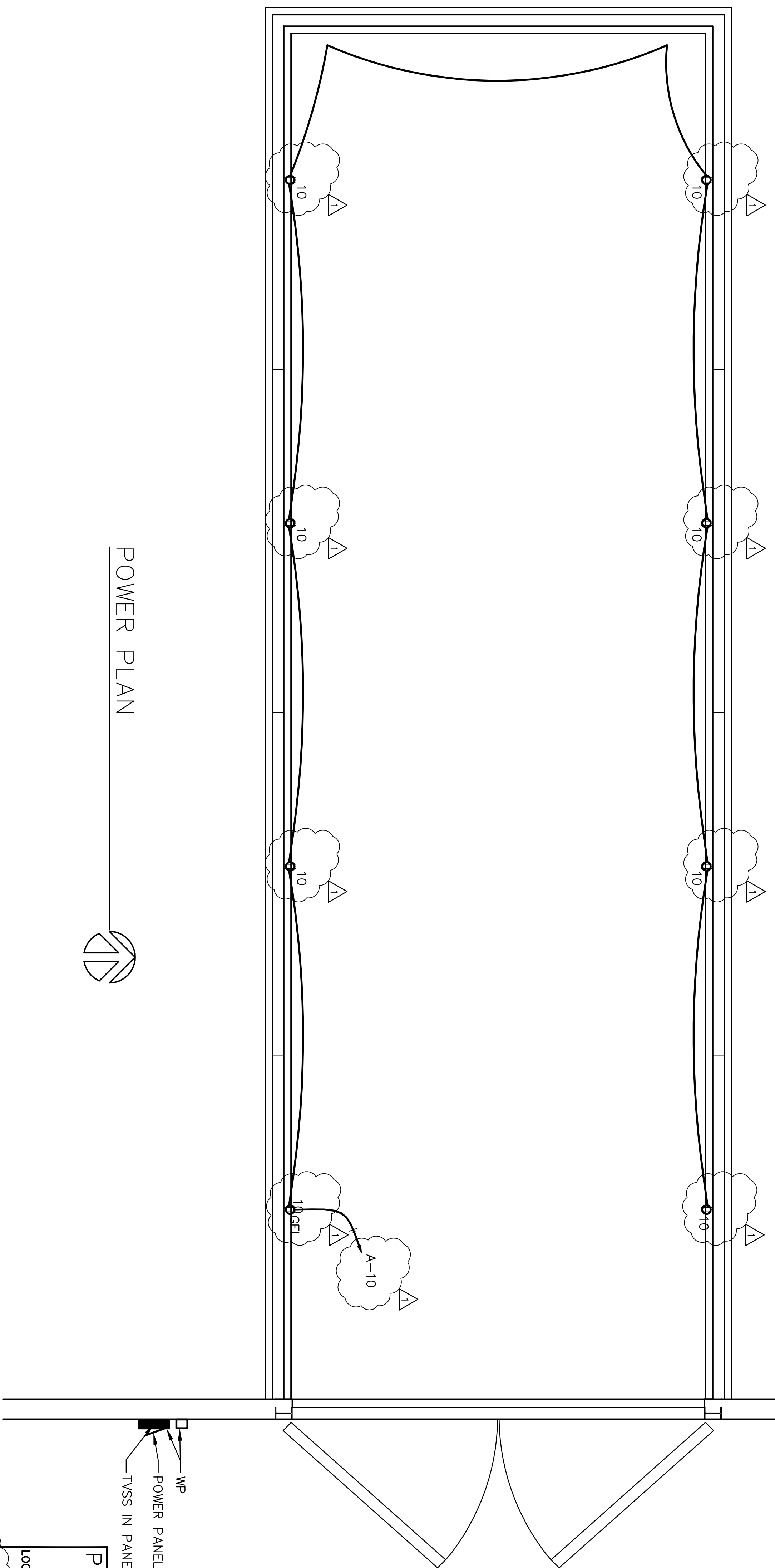
GENERAL NOTES

1. LOCATION OF COMPONENTS ARE APPROXIMATE. COORDINATE AND CONFIRM LOCATIONS BEFORE INSTALLATION.
2. Φ GFI - GROUND FAULT CONVENIENCE OUTLET MASTER - OTHER OUTLETS PROTECTED.
3. 3/4" GRC CONDUITS FROM PANEL UNDERGROUND INTO BUILDING. GROUND CONDUIT TO GROUND RING.
4. INCLUDE (2) 1" GRC CONDUITS FROM BELOW THE PANEL ON THE OUTSIDE TO BELOW THE PANEL ON THE INSIDE. GROUND CONDUIT TO THE GROUNDING RING.
5. INSTALL ALL OUTLETS 4'-0" AFF.

FIXTURE SCHEDULE

TYPE	LAMPS	DESCRIPTION	RECOMMENDED OR SERIES	CATALOG NO.	MOUNTING/VOL. TAG
AA	(1) 400W HPS	VANDAL RESISTANT WALL PACK FIXTURE REFLECTOR IS UV-STABILIZED POLYCARBONATE USE WITH CWA BALLAST. MOUNT AT 18' A.F.F.	GAMBOCO	BRP-UT 141-FT-400HPS-120	SURFACE/120V
D3	(4) F32 T8 / T835/ALTO	8'-0" - 2-LAMP FLUORESCENT CHANNEL WITH WIRE GUARD. ELECTRONIC BALLAST ENCLOSED. GASKETED. VANDERBILT. PHILIPS ALTO LAMPS.	DATBRITE	TY2048B-232-120-1/4EB	UNISTRUT/120V
E		EMERGENCY BALLAST TO PROVIDE 1100 LUMENS FOR 90 MIN.	BOBINE	B-90	120V

POWER PLAN



WP - TOWER PHOTO ELECTRIC CELL COMBINATION WITH MANUAL OVERRIDE.
 PE CELL
 AA
 1-400

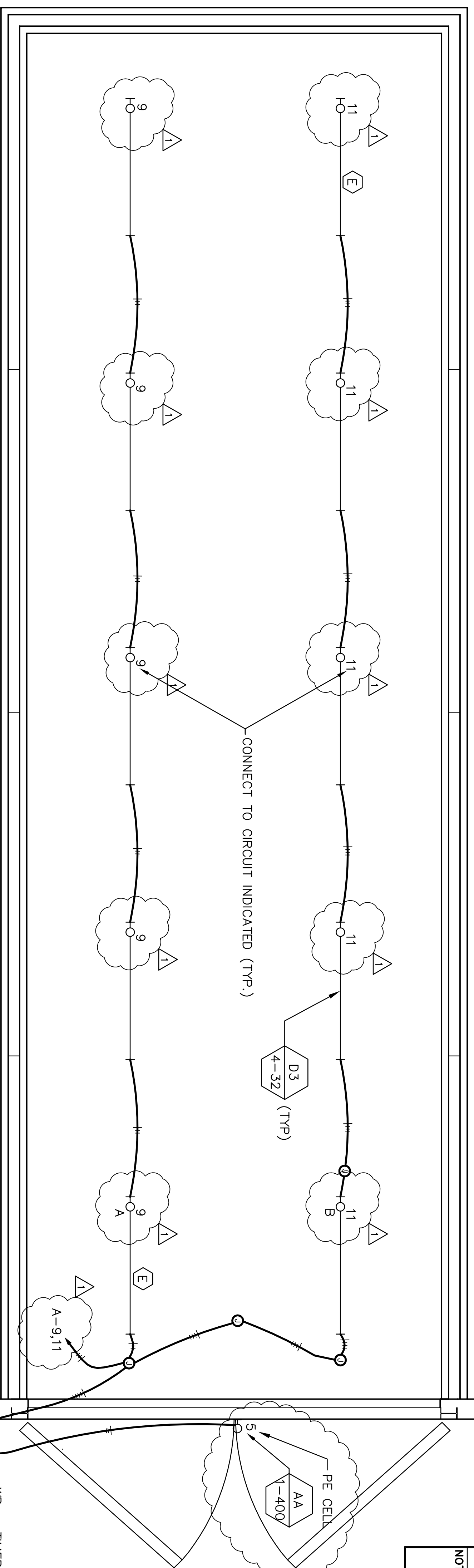
PANEL A

TYPE BOLT-ON
 100 AMPS
 120/240 VOLTS
 NEMA 3R
 FLUSH MOUNTED
 TOP FEED
 MAIN BREAKER
 COPPER MAINS
 FULL NEUTRAL
 20" WIDE 5.75" DEEP
 HINGED TYPE COVER

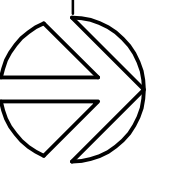
BR.	GRC.	BKBR.	LOAD (VA)	CONN.	LOAD	DESCRIPTION	LOAD (VA)	P.	BR.	GRC.	BKBR.	NOTES			
1	20	1	465			SPARE	1	20	2						
3	20	1				SPARE	1	20	4						
5	20	1	465			WALL PACK	1	20	6						
7	20	1				SPARE	1	20	8						
9	20	1	750			INTERIOR LIGHTS	1	20	10			*			
11	20	1	750			INTERIOR LIGHTS	1	20	12						
13	20	1				SPARE	1	20	14						
15	20	1				SPARE	1	20	16						
17	20	1				SPARE	1	20	18						
19	20	1				SPARE	1	20	20						
PHASE TOTALS											1965				
PANEL TOTALS											3565				(19,58333 AMPS)

NOTES: * GFI MASTER OUTLET PROTECTS 7 RECEPTACLES

CONNECT TO CIRCUIT INDICATED (TYP.)



LIGHTING PLAN



WP - TOWER PHOTO ELECTRIC CELL COMBINATION WITH MANUAL OVERRIDE.
 PE CELL
 AA
 1-400

POWER AND LIGHTING PLAN

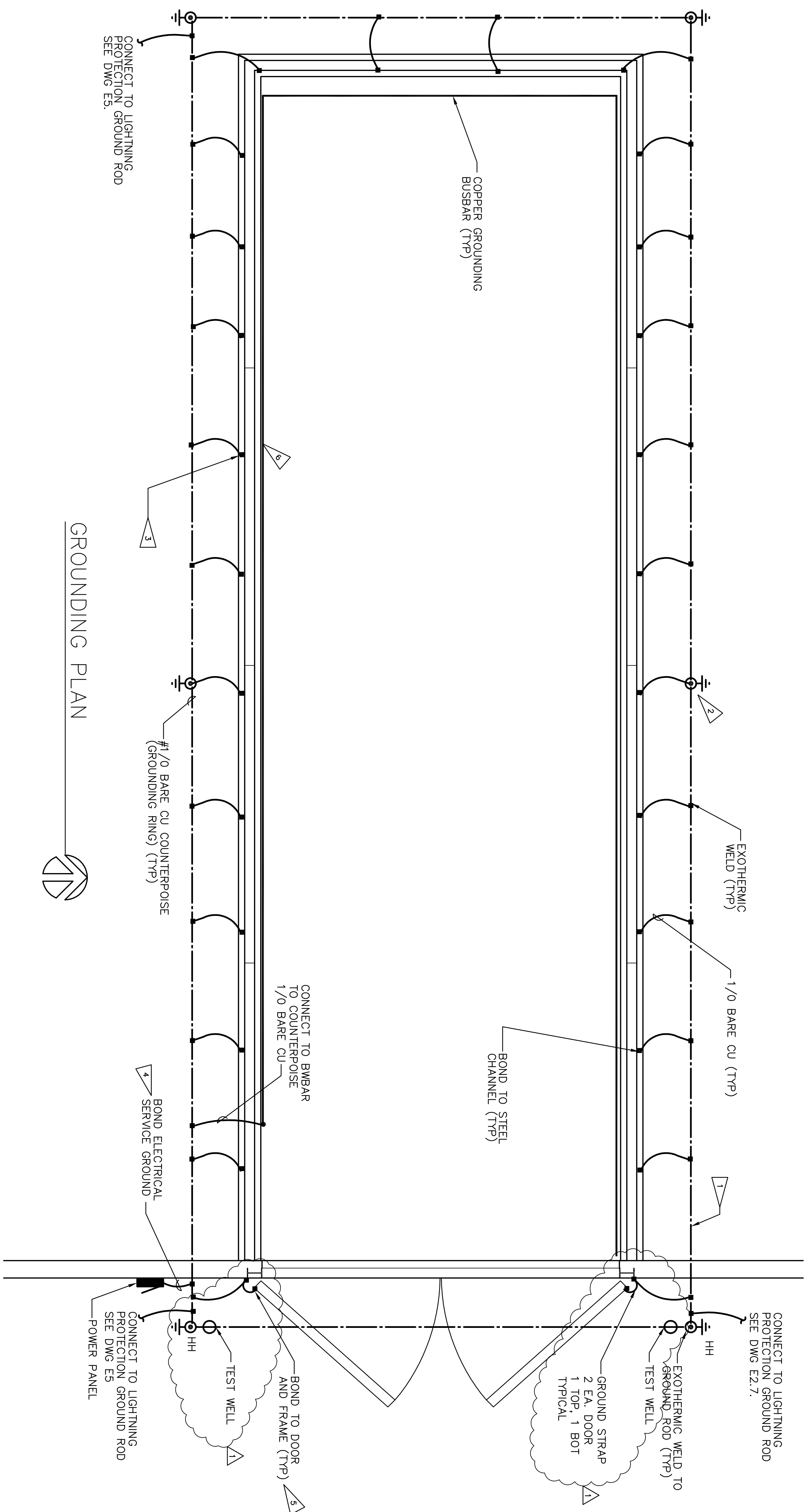
REVISION	DATE	DESCRIPTION	BY
1	3/23/16	AS-BUILT	JRS

ARCHITECTURAL REVIEW	DATE		
CIVIL/STRUCTURAL REVIEW	DATE		
Mechanical REVIEW	DATE		
ELECTRICAL REVIEW	DATE		
ARCHITECTURAL CONSULTABILITY	DATE		
PHYS. HANDOFF/PAINT DESIGN	DATE		
BASE COMPREHENSIVE PLANNER	DATE		
ENERGY CONSERVATION REVIEW	DATE		
FINISH PROTECTION REVIEW	DATE		
COMMISSION ENGINEER	DATE		
CUSTOMER-FUNCTIONAL REVIEW	DATE		
SECURITY FORCES	DATE		

DESIGNER	DATE		
ENGINEERING ASSISTANT	DATE		
PROJECT MANAGER	DATE		
CHIEF PROJECT MANAGER	DATE		
CHIEF ENGINEER	DATE		
CHIEF COMMANNER	DATE		
APPROVED-75 DEG	DATE		

PROJECT: **MODULAR STORAGE MAGAZINE**
POWER AND LIGHTING PLAN
 4-8 FIRM
 HILL AIR FORCE BASE
 DEPARTMENT OF THE AIR FORCE
 OGDEN AIR LOGISTICS CENTER
 OFFICE OF CIVIL ENGINEERING
 OGDEN, UTAH

SHEET **02** OF **27**



GROUNDING PLAN

GENERAL NOTES

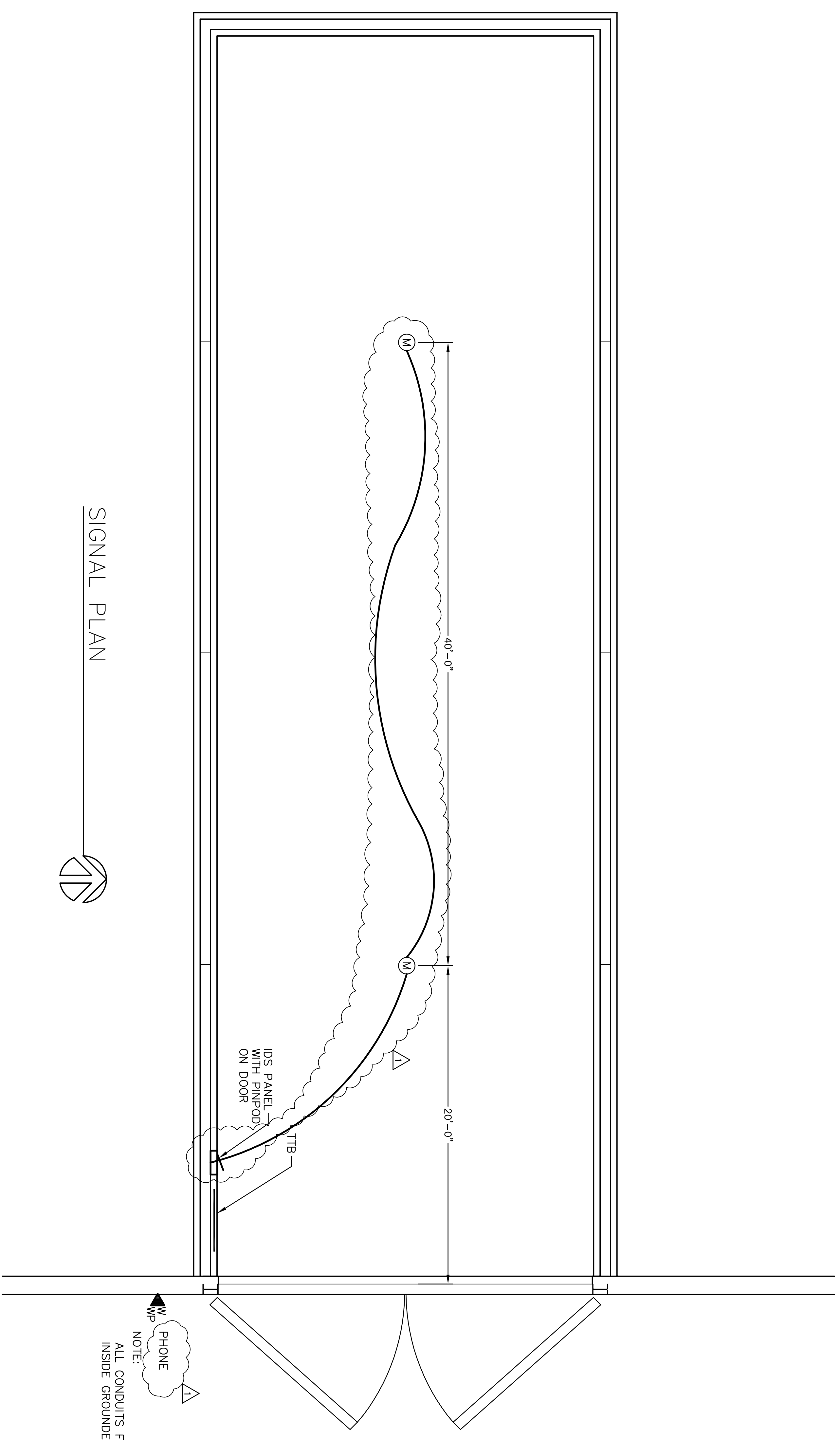
1. LOCATION OF COMPONENTS ARE APPROXIMATE. COORDINATE AND CONFIRM EQUIPMENT LOCATIONS BEFORE INSTALLATION.
2. EXOTHERMICALLY WELD ALL GROUNDING CONDUCTORS, SPLICES AND BONDS.

FLAG NOTES

1. #1/0 BARE COPPER (BCC) COUNTERPOISE (GROUND RING) ENCIRCLING BUILDING PERIMETER. INSTALL IN DIRECT EARTH CONTACT, 900mm (3') MINIMUM BELOW EARTH SURFACE AND 900mm MINIMUM FROM EDGE OF GRADE BEAM.
2. DRIVEN GROUND ROD. TOP OF ROD 350mm (3'-2") BELOW EARTH SURFACE. ALL GROUND RODS TO BE BONDED TO COUNTERPOISE WITH EXOTHERMIC WELD. GROUND ROD 19mm X 3050mm (3/4"x10').
3. BOND / FOOTING TOP STEEL PLATE TO COUNTERPOISE WITH #1/0 (BCC). EXOTHERMICALLY WELD AT EACH END. CABLE IN PLASTIC CONDUIT WHERE IT PASSES THROUGH CONCRETE.
4. #4 BCC GROUNDING CONDUCTOR IN PVC CONDUIT, CONNECT ELECTRICAL SERVICE TO COUNTERPOISE.
5. BOND DOOR FRAME TO GROUND COUNTERPOISE. BOND DOORS TO FRAME WITH BRADED COPPER STRAP EQUAL TO #1/0 COPPER CONDUCTOR.
6. COPPER GROUNDING BUSBAR: 51mm X 6mm (2"x1/4") MOUNTED 25-30 AL.F.F. FROM WALL. SHALL BE ERGO B542A004, OR EQUAL, WITH INSULATORS AND MOUNTING BRACKETS.

SIGNAL LEGEND

- (M) VOLUMETRIC DETECTOR (ACTIVE MOTION SENSOR) CEILING MOUNT FOR 360 DEGREE WITH 80 DIAMETER (2 EACH) 516-50812-00.
- IDS CONTRACTOR REQUIRED TO CONTACT VENDOR FOR PURCHASE AND INSTALLATION OF INTRUSION DETECTION SYSTEM. (VENDOR TECHNOLOGIES) PANEL PROGRAMMING, FRONT END PROGRAMMING AND INSTALLATION. 950-00003-02.
- TTB TELEPHONE TERMINAL BOARD - 4'x8'x3/4" PLYWOOD BACKBOARD AND 6 PAIR PROTECTED 188-TYPE BLOCK WITH GAS TUBE PROTECTORS. BACKBOARD SHALL BE TREATED WITH TWO COATS OF VARNISH TO SEAL IT ON BOTH SIDES PRIOR TO BEING MOUNTED.
- (W) EXTERIOR, WEATHER PROOF WALL MOUNTED TELEPHONE (GAI-TRONICS, MODEL NO. 256-001)



SIGNAL PLAN

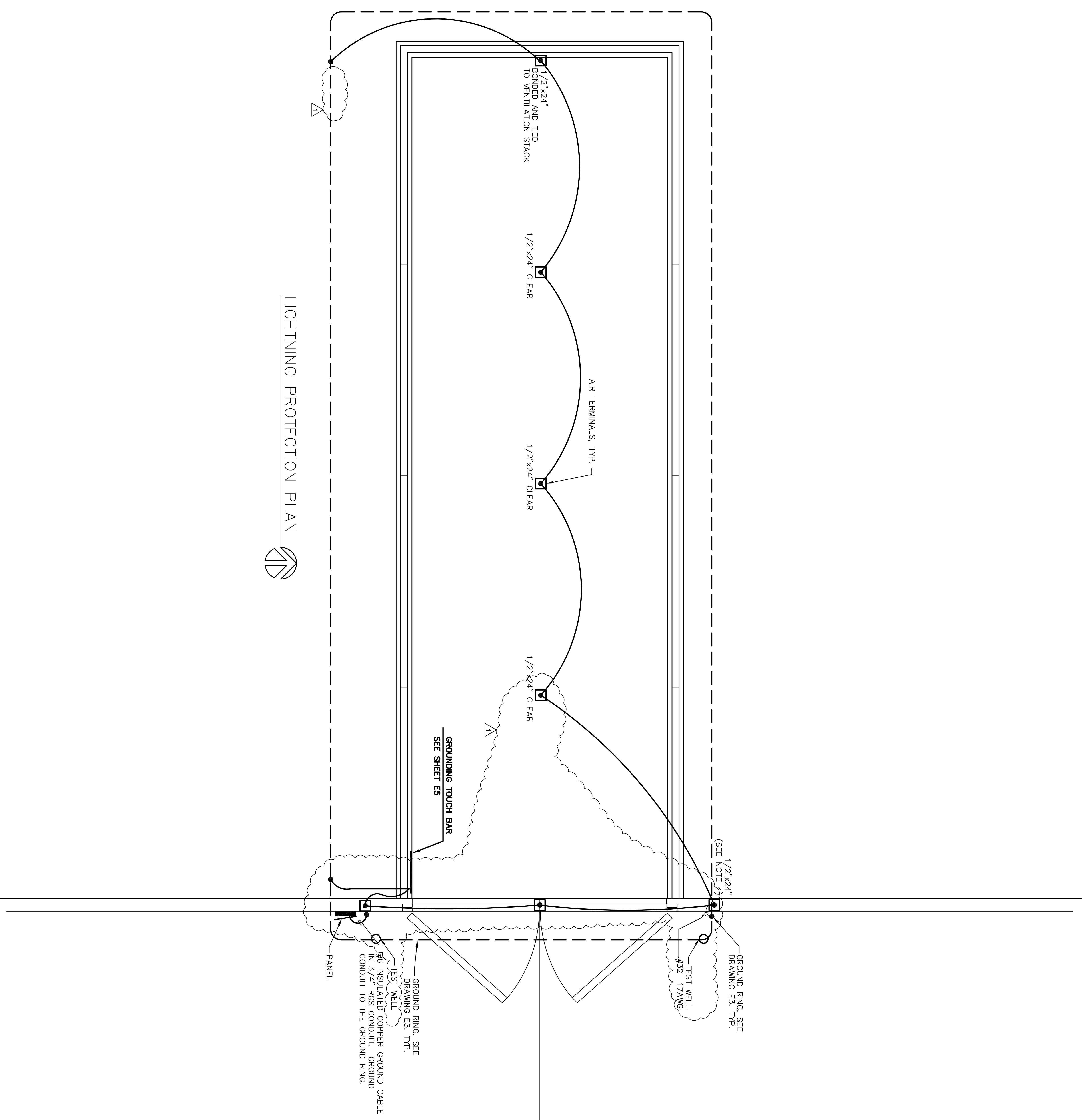
REVISION	DATE	DESCRIPTION	BY	CHK
1	3/2/20	ISSUE	BY	

ARCHITECTURAL REVIEW	DATE			
CIVIL/STRUCTURAL REVIEW	DATE			
MECHANICAL REVIEW	DATE			
ELECTRICAL REVIEW	DATE			
ARCHITECTURAL COMPATIBILITY	DATE			
PIVS HANDOFF/TW SECTION	DATE			
BASE COMPETITIVE NUMBER	DATE			
ENERGY CONSERVATION REVIEW	DATE			
FLUE PROTECTION REVIEW	DATE			
COMMISSION ENGINEER	DATE			
COLLIDER-FUNCTIONAL REVIEW	DATE			
SECURITY SERVICES	DATE			

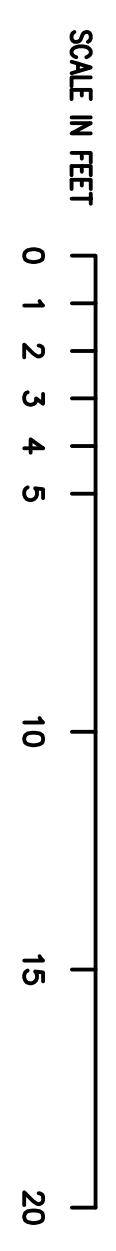
DESIGNER	PROJECT MANAGER
ENGINEERING ASSISTANT	

DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE

LIGHTNING PROTECTION PLAN



- NOTES:
1. PROVIDE TRANSIENT VOLTAGE SURGE SUPPRESSION, UL 1449 TESTED FOR POWER PANEL.
 2. ALL UNDERGROUND CONNECTIONS SHALL BE EXOTHERMIC.
 3. THE MAXIMUM SPACING BETWEEN AIR TERMINALS SHALL NOT EXCEED 25 FT.
 4. AIR TERMINAL SHALL BE BONDED AND TIED TO VENTILATION STACK.
 5. EACH AIR TERMINAL SHALL CONSIST OF THE FOLLOWING:
 - SAFETY TIP AIR TERMINAL (1/2"x12" VFC CAT.
 - AIR TERMINAL BRACE, 12" LONG, VFC CAT. NO. 140-12
 - 1/2"x12" AIR TERMINAL EXTENSION, VFC CAT. NO. 149-12
 - 1/2" SWIVEL BASE, VFC CAT NO. CVBS 12
 - 12M SPRING AIR TERMINAL ADAPTER - ABOVE TERMINAL BRACE TO COUPLE EXTENSION TO TERMINAL



ARCHITECTURAL REVIEW	DATE	REVISION	DATE	DESCRIPTION	DATE	PROJECT NO.	FILE NO.
CIVIL/STRUCTURAL REVIEW		1/2/06	12-20-05	DEPARTMENT OF THE AIR FORCE HILL AIR FORCE BASE OFFICE OF CIVIL ENGINEERING			
REVISION							
ARCHITECTURAL REVIEW							
ARCHITECTURAL COMPATIBILITY							
PHYS. HANDLING/TYP. SECTION							
BASE COMPETITIVE PLANNER							
ENERGY CONSERVATION REVIEW							
BIENVIRONMENTAL REVIEW							
ENVIRONMENTAL REVIEW							
COMMISSION ENGINEER							
SAFETY							
COMMISSION ENGINEER							
COMMUNICATIONS							
775 GCS COMMANDER							
SECURITY FORCE							
SECURITY FORCE							