



SYCAMORE TOWNSHIP, KENWOOD RD. COMPLEX
HAMILTON COUNTY, OHIO



NORTH

SCALE:
1" = 30'-0"

August 19, 2019



SYCAMORE TOWNSHIP, KENWOOD RD. COMPLEX
HAMILTON COUNTY, OHIO



SYCAMORE TOWNSHIP, KENWOOD RD. COMPLEX
HAMILTON COUNTY, OHIO

Sycamore Township Equipment Storage Facility

NOT FOR CONSTRUCTION

August 13, 2019

Construction Documents

Progress Set

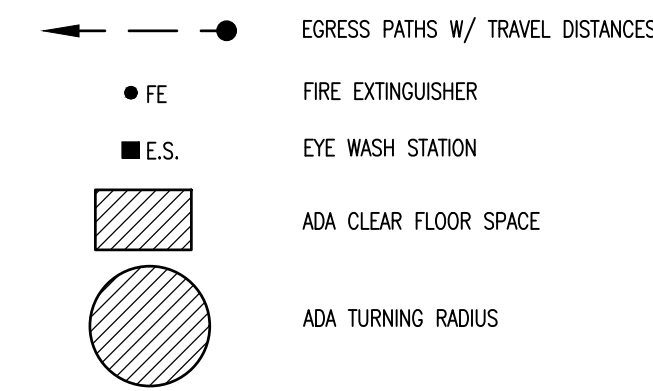
General Notes

- DO NOT SCALE DRAWINGS.
- TRAVEL DISTANCE NOTED ON PLAN IS LONGEST EGRESS PATH PER AREA.
- ALL DOORS & WINDOW ASSEMBLIES IN RATED WALLS ARE TO CARRY RATING FOR ENTIRE ASSEMBLY, INCLUDING HARDWARE.
- CONTRACTOR TO CONTACT FIRE PREVENTION BUREAU AND OWNER TO REVIEW EGRESS STRIPING PRIOR TO INSTALLING ALONG WITH EXIT LIGHTING.

EGRESS PATHS - FROM MOST REMOTE PT. TO NEAREST EXIT

MAXIMUM TRAVEL TO EXIT ACCESS (Table 1017.2)	
EGRESS PATH (1)	TRAVEL TO EXIT = 71'-0"
EGRESS PATH (2)	TRAVEL TO EXIT = 198'-4"
EGRESS PATH (3)	TRAVEL TO EXIT = 68'-4"
EGRESS PATH (4)	TRAVEL TO EXIT = 112'-2"
EGRESS PATH (5)	TRAVEL TO EXIT = 64'-8"
EGRESS PATH (6)	TRAVEL TO EXIT = 198'-0"

Code Plan Legend

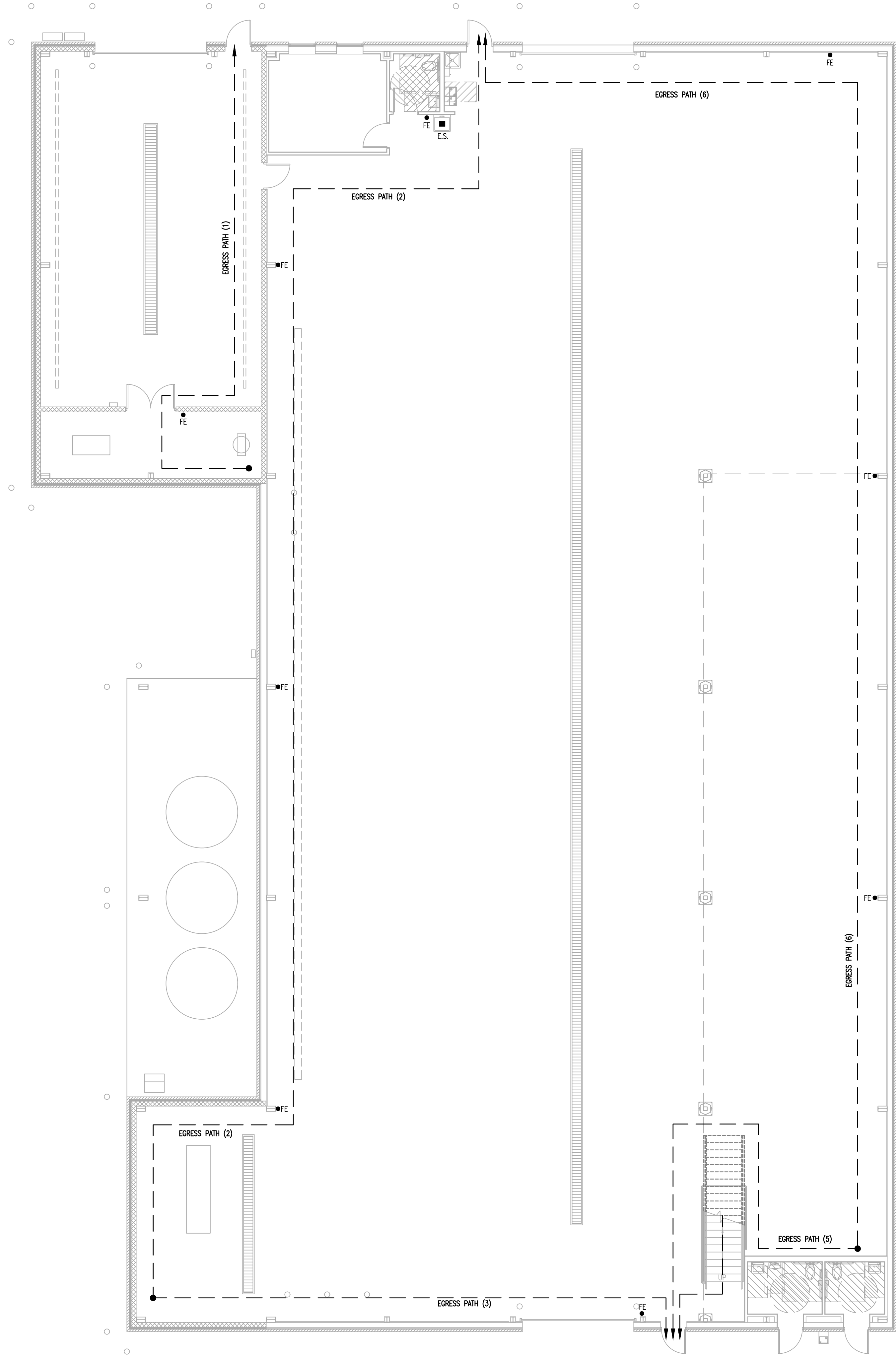


Design Criteria / Code Data

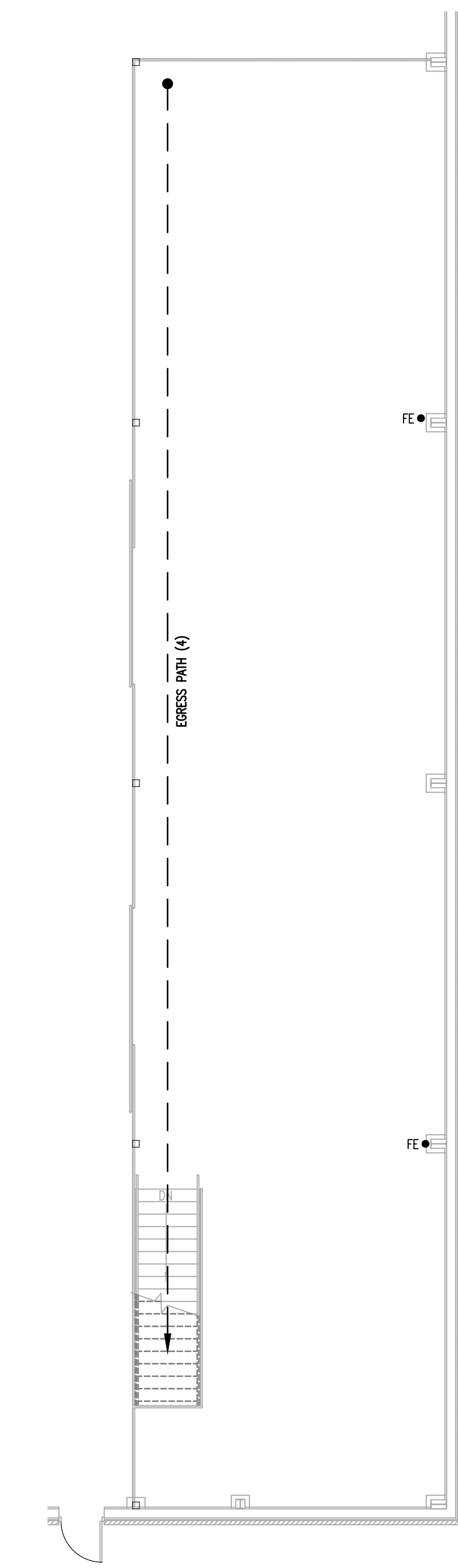
Code Compliance (2017 Ohio Building Code)

Maintenance Building	
Construction Type:	2B (Pre Engineered Metal Building)
Use Group:	Low-Hazard Storage, S2 (Section 311) (Equipment Storage)
Building Area: (Allowed)	S2 -104,000 SF PER FLOOR (NON-SPRINKLED)
Building Area: (Actual)	First Floor (S2, Equipment Storage) 14,735 GSF Canopy 835 GSF Mezzanine 2,460 GSF Total 15,570 GSF
Building Perimeter:	569'-8" Linear Feet
Building Height: (Actual)	1 Story with Mezzanine (Approximately 24'-0" to top of roof)
Occupant Load:	Maintenance Garage (S2 Use Group @ 200sf): 53
Exit Access Travel Distance:	S2 - 400ft (Sprinkled) (Table 1017.2)
Required Exits:	2 Minimum Required (Section 1006.2.1) 4 Actual
Plumbing Requirements:	Plumbing Fixtures (Required Per 403.1 of the 2017 Ohio Building Code)
	Water Closets: 1 Lavatories: 1 Drinking Fountains: 2 (High/Low Combination Unit) Service Sinks: 1

Salt Dome	
Construction Type:	5B (Concrete Walls with Wood Roof Assembly)
Use Group:	Low-Hazard Storage, S2 (Section 311) (Salt Dome)
Building Area: (Actual)	First Floor (S2, Salt Dome) 3,390 GSF
Building Perimeter:	212'-3" Linear Feet
Building Height: (Actual)	1 Story (Approximately 37'-8" to top of roof)
Occupant Load:	Salt Dome (S2 Use Group @ 200sf) 17



A1 Maintenance Facility Code Plan
1/8"=1'-0"



A4 Mezzanine Code Plan
1/8"=1'-0"

Area Map



Vicinity Map



Sheet Index

General	
G-001	COVER SHEET GENERAL INFORMATION & CODE DATA
Civil	
C-100	PRELIMINARY BOUNDARY ABSTRACT
C-101	BOUNDARY SURVEY
C-102	EXISTING CONDITIONS (PRE-DEMOLITION)
C-103	DEMOLITION PLAN
C-104	EXISTING CONDITIONS (POST-DEMOLITION)
C-201	SITE IMPROVEMENTS PLAN
C-202	PAVEMENT JOINT LAYOUT
C-203	SITE VIEWS
C-301	UTILITY PLAN
C-302	STORM SEWER PLAN
C-401	GRADING PLAN
C-501	LANDSCAPE
Structural	
S-100	GENERAL NOTES & SPECIAL INSPECTIONS
S-101	FOUNDATION & FRAMING PLANS
S-501	DETAILS
Architectural	
A-101	FLOOR PLANS
A-102	ROOF PLANS
A-201	EXTERIOR ELEVATIONS
A-301	SECTIONS
A-302	SECTIONS
A-303	SECTIONS
A-501	DETAILS
A-601	SCHEDULES & DETAILS
Plumbing	
P-101	SANITARY DWV PLAN
P-201	DOMESTIC WATER PLAN
P-301	GAS PIPING PLAN
P-501	PLUMBING DETAILS
P-601	PLUMBING SCHEDULE & NOTES
Mechanical	
M-101	MECHANICAL PLAN
M-501	MECHANICAL SCHEDULES & DETAILS
Electrical	
E-101	ELECTRICAL SITE PLAN
E-101	LIGHTING PLAN
E-102	POWER PLAN
E-501	PANEL SCHEDULES & SINGLE LINE PLAN
E-601	ELECTRICAL DETAILS

Agencies & Project Team

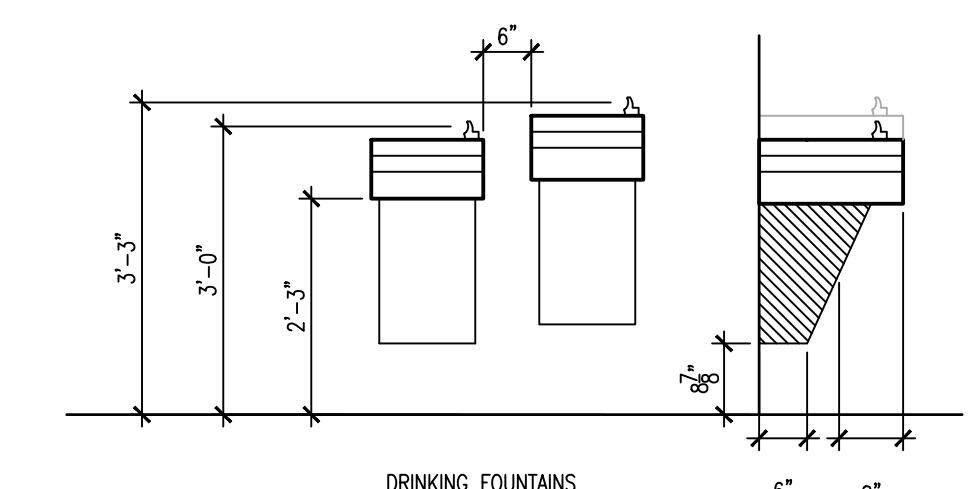
Owner
SYCAMORE TOWNSHIP
BOARD OF TRUSTEES
8540 KENWOOD ROAD
CINCINNATI, OHIO 45236

Civil Engineer
BRANDSTETTER CARROLL
2360 CHALMUR DRIVE
LEXINGTON, KY 40517
PH: 859.268.1933
FAX: 859.268.3341

Architect
BRANDSTETTER CARROLL
2360 CHALMUR DRIVE
LEXINGTON, KY 40517
PH: 859.268.1933
FAX: 859.268.3341

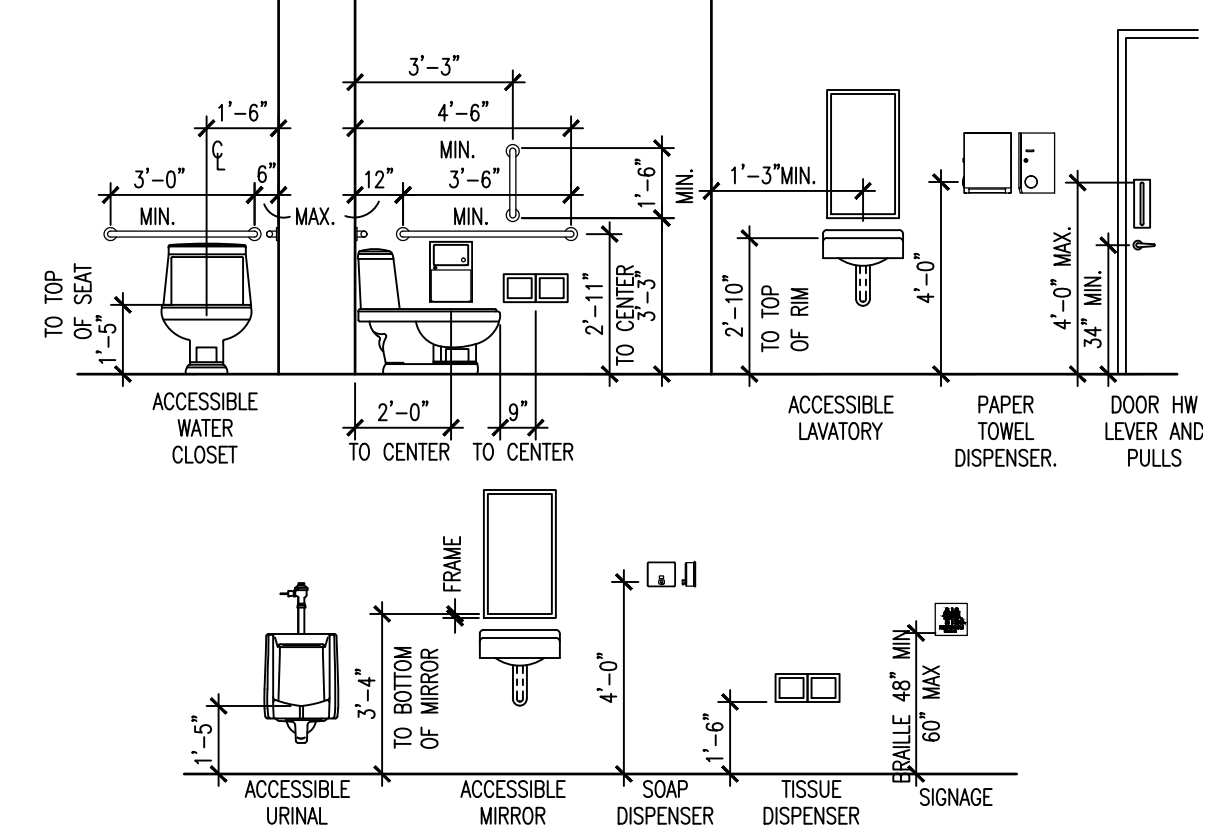
Structural Engineer
GDP LIMITED
644 LINN STREET #936
CINCINNATI, OH 45203
PH: 513.621.7073

Mechanical & Electrical Engineer
EJM ENGINEERS
2867 STANTON AVENUE
CINCINNATI, OH 45206
PH: 513.587.0950



B6 Drinking Fountain Elevation
1/2"=1'-0"

- NOTES:
- ALL MOUNTING HEIGHTS ARE TO CORRESPOND TO ADA INSTALLATION STANDARDS.
 - MAXIMUM MOUNTING HEIGHTS SHOWN FOR RESTROOM ACCESSORIES WITH OPERABLE PARTS. REFER TO CURRENT ADA STANDARDS FOR MINIMUM MOUNTING HEIGHTS.
 - ALL DIMENSIONS ARE TO FINISHED WALL.
 - FIXTURE ELEVATIONS ARE SHOWN FOR GRAPHIC PURPOSES ONLY. REFER TO PLUMBING PLANS AND SCHEDULES FOR EXACT TYPE AND PROFILE.
 - PROVIDE BLOCKING AS REQUIRED.



A6 ADA Installation Standards
1/4"=1'-0"

Revisions:
Issue Date: August 13, 2019

Sycamore Township Equipment Storage Facility

8540 Kenwood Road
Sycamore Township, Ohio 45236

General Information & Code Data

Project No.

G-001

17120



PAVEMENT LEGEND

	HEAVY DUTY - FULL DEPTH ASPHALT PAVEMENT / PATCH
	LIGHT DUTY ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	HEAVY DUTY CONCRETE PAVEMENT
	LIGHT DUTY CONCRETE PAVEMENT
	BUILDING FOOTPRINT SLAB ON GRADE



CONSTRUCTION NOTES:

SEE ARCHITECT'S PLANS FOR BUILDING DIMENSIONS. SEE CIVIL DETAIL SHEETS FOR ADDITIONAL INFO.

- ASPHALT PAVEMENT:**
- HEAVY DUTY ASPHALT PAVEMENT.
 - MEDIUM DUTY ASPHALT.
 - ASPHALT MILLING AND RESURFACING. (1-1/2" THICKNESS).

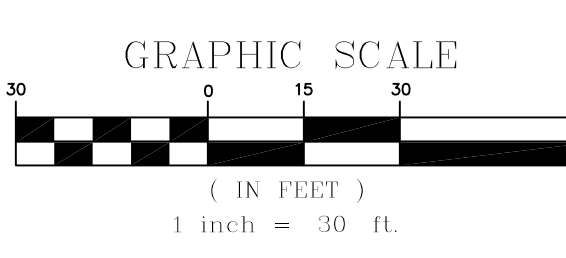
- CONCRETE PAVEMENT:**
- HEAVY DUTY CONCRETE PAVEMENT.
 - MEDIUM DUTY CONCRETE PAVEMENT FOR GENERATOR PAD.
 - LIGHT DUTY CONCRETE PAVEMENT FOR SIDEWALKS. (5" THICK).
 - LIGHT DUTY 5' WIDE CONCRETE SIDEWALK WITH STEPS AND RAILING.
 - CONCRETE CURB WITH 12" GUTTER (ODOT TYPE 2 MODIFIED).
 - CONCRETE HEADER CURB (ODOT TYPE 6) FOR PARKING LOT PERMETER AND ISLANDS TO BE 6" X 12" = 18".
 - CONCRETE CURB AT BACK OF WALK (ODOT TYPE 7 - 10" HEIGHT).
 - CONCRETE FILLED BOLLARD.
 - 6" DIA. X 4' TALL (TYPICAL).
 - CONCRETE PAVEMENT FOR TRANSITION WEDGE AT SALT DOME ENTRANCE. (8" THICK).

- STRIPING:**
- PARKING LOT STRIPING FOR CAR PARKING: 4" WIDE (WHITE PAINT).
 - STRIPING FOR HC STALLS AND INTERNATIONAL HANDICAP PARKING SYMBOL: 4" WIDE (BLUE PAINT).
 - PAINTED STOP BARS AT LOCATIONS SHOWN: 24" WIDE (WHITE PAINT).
 - CROSS WALK AT LOCATIONS SHOWN WITH 6" BORDER STRIPE (WHITE PAINT).
 - TRAFFIC DIRECTION ARROWS: (YELLOW PAINT).
 - PAINTED DIAGONAL STRIPING FOR SEPARATION OF ROADWAY FROM FACILITY APRON.
 - SOCCER FIELD SHOWN FOR INFORMATIONAL PURPOSES ONLY. NO STRIPING REQUIRED.

- SIGNAGE:**
- STANDARD "STOP" SIGN.
 - HANDICAP PARKING SIGNS AT ALL HANDICAP SPACES SHOWN. WHERE HC LOADING STALLS ARE 8-FT. WIDE, INSTALL VAN-ACCESSIBLE PARKING SIGNS.

- WALLS, RAILINGS & FENCING:**
- PRECAST CONCRETE BLOCKS FOR MATERIAL BINS. (BY OWNER).
 - MODULAR BLOCK RETAINING WALL, APPROX. 30" TALL. SEE CIVIL DETAILS. SEE GRADING FOR ELEVATIONS.
 - 6" HIGH CHAIN LINK FENCE. INCLUDES: FRAMING TO BE GALVANIZED SCHEDULE 40 STEEL PIPE WITH 2.875" O.D. TERMINAL POSTS, 2.375" O.D. LINE POSTS AT 10' O.C. MAX (ALL POSTS SET IN CONCRETE), 1.66" O.D. TOP RAIL AND BOTTOM TENSION WIRE.
 - SWING GATE & POSTS - 4' OPENING. (2) LOCATIONS.
 - SWING GATE & POSTS - 4' OPENING WITH CARD READER. (1) LOCATION.
 - CANTILEVERED SLIDING GATE 25' OPENING. BASE BID - (2) PLACES. ALTERNATE - SEE SHEET C-203.

- MISCELLANEOUS:**
- LOCATION OF SALVAGED FLAG POLE, APPROX. (50-FT. TALL). INSTALL NEW FOOTING PER DETAIL SHEET.



Revisions:
Issue Date: 2019-08-13

**Sycamore Township
Equipment Storage Facility**

8540 Kenwood Road
Sycamore Township, Ohio 45236

SITE IMPROVEMENT PLAN

Project No.

C-201

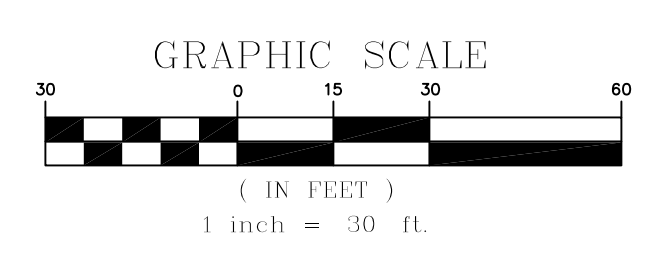
17120



KEY	QTY	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	REMARKS
DECIDUOUS TREES						
SYC	4	AMERICAN PLANETREE	Plantanus occidentalis "Sycamore"	2.5" min.	-	B & B
WH	5	WINTERKING HAWTHORN	Crataegus viridis "Winter King"	2.5" min.	-	B & B
RM	2	RED MAPLE	Acer rubrum "Red Maple"	2.5" min.	-	B & B
RH	3	RED HICKORY	Carya ovalis "Red Hickory"	2.5" min.	-	B & B
RO	4	RED OAK	Quercus rubra "Red Oak"	2.5" min.	-	B & B
IS	2	IVORY SILK JAPANESE TREE LILAC	Syringa reticulata ssp. reticulata "Ivory Silk"	2" min.	-	B & B
PSC	1	CANADA CHERRY	Prunus virginiana "Schubert"	2" min.	-	B & B
CONIFEROUS TREES						
NS	39	NORWAY SPRUCE	Picea abies	8" - 10"	-	B & B
BS	3	BLUE SPRUCE	Picea pungens "Colorado Blue Spruce"	8" - 10"	-	B & B
SHRUBS						
VJ	9	VIBURNUM JUDDI	Viburnum x juddii	30"-36"	-	B & B 3'0" O.C.

LANDSCAPE LEGEND

- WH, RO, RH, RM, SL, SYC
- IS, PSC
- NS, BS VJ



Revisions:
 Issue Date: 2019-08-13

Sycamore Township Equipment Storage Facility

8540 Kenwood Road
 Sycamore Township, Ohio 45236

PRELIMINARY LANDSCAPE PLAN

Project No.

C-503

17120

Special Inspections

Table 1705.3 (2012 INTERNATIONAL BUILDING CODE)
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

APPLICABLE (Unless noted N/A)	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD *	IBC REFERENCE
	1. Inspection of reinforcing steel, including prestressing tendons, and placement.	-	X	ACI 318: 3.5, 7.1-7.7	1910.4
N/A	2. Inspection of reinforcing steel welding in accordance with Table 1705.2.2, Item 2b.	-	-	AMS D14 ACI 318: 3.5.2	-
	3. Inspection of anchors cast in concrete where allowable loads have been increased or where strength design is used.	-	X	ACI 318: 8.1.3, 21.2.8	1908.5, 1909.1
	4. Inspection of anchors post-installed in hardened concrete members.	-	X	ACI 318: 3.8.6, 8.1.3, 21.2.8	1909.1
	5. Verifying use of required design mix.	-	X	ACI 318: Ch. 4, 5.2-5.4	1904.2, 1910.2, 1910.3
	6. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	-	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1910.10
	7. Inspection of concrete and shotcrete placement for proper application techniques.	X	-	ACI 318: 5.9, 5.10	1910.6, 1910.7, 1910.8
	8. Inspection for maintenance of specified curing temperature and techniques.	-	X	ACI 318: 5.11-5.13	1910.9
N/A	9. Inspection of prestressed concrete: a. Application of prestressing forces. b. Grouting of bonded prestressing tendons in the seismic force-resisting system.	X X	-	ACI 318: 18.20 ACI 318: 18.18.4	-
N/A	10. Erection of precast concrete members.	-	X	ACI 318: Ch. 16	-
	11. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	-	X	ACI 318: 6.2	-
	12. Inspect formwork for shape, location and dim's of the concrete member being formed.	-	X	ACI 318: 6.1.1	-

For SI: 1 inch = 25.4 mm.
a. Where applicable, see also Section 1705.11, Special inspections for seismic resistance.
b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with ACI 308.2 or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.

Table 1705.6 (2012 INTERNATIONAL BUILDING CODE)
REQUIRED VERIFICATION AND INSPECTION OF SOILS

APPLICABLE (Unless noted N/A)	VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
	1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	-	X
	2. Verify excavations are extended to proper depth and have reached proper material.	-	X
	3. Perform classification and testing of compacted fill materials.	-	X
	4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X	-
	5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	-	X

Material and Work Requiring Special Inspections

Per 2012 International Building Code

GENERAL NOTE

SPECIAL INSPECTION NOTES AND TABLES WITHIN CONSTRUCTION DOCUMENTS ARE TO BE USED IN CONJUNCTION WITH IBC 2012, CHAPTER 17.

1. INSPECTION OF FABRICATORS

UNLESS EXEMPT BY CODE SECTION 1704.2.5, THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.

2. STEEL CONSTRUCTION

THE SPECIAL INSPECTIONS FOR STEEL ELEMENTS OF BUILDINGS AND STRUCTURES SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-10.

3. CONCRETE CONSTRUCTION

UNLESS EXEMPT BY CODE SECTION 1705.3 THE SPECIAL INSPECTIONS AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY TABLE 1705.3

4. MASONRY CONSTRUCTION

MASONRY CONSTRUCTION SHALL BE INSPECTED AND VERIFIED IN ACCORDANCE WITH TMS 402 / ACI 530 / ASCE 5 (TABLE 1.19.1, 1.19.2 OR 1.19.3) AND TMS 602 / ACI 530.1 / ASCE 6 QUALITY ASSURANCE PROGRAM REQUIREMENTS UNLESS EXEMPT BY CODE SECTION 1705.4.

5. SOILS (PERFORMED BY SITE TESTING AGENCY)

A. SITE PREPARATION
PRIOR TO PLACEMENT OF THE PREPARED FILL, THE SPECIAL INSPECTOR SHALL DETERMINE THAT THE SITE HAS BEEN PREPARED IN ACCORDANCE WITH THE APPROVED SOILS REPORT.

B. DURING FILL PLACEMENT OF 12" OR GREATER
DURING PLACEMENT AND COMPACTION OF THE FILL MATERIAL, THE SPECIAL INSPECTOR SHALL DETERMINE THAT THE MATERIAL BEING USED AND THE MAXIMUM LIFT THICKNESS COMPLY WITH THE APPROVED REPORT.

C. EVALUATION OF IN-PLACE DENSITY
THE SPECIAL INSPECTOR SHALL DETERMINE, AT THE APPROVED FREQUENCY, THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL COMPLIES WITH THE APPROVED REPORT.

D. REFER TO DRAWINGS FOR ALLOWABLE SOIL BEARING PRESSURE VERIFICATION.

6. SPRAYED FIRE-RESISTANT MATERIALS

SPECIAL INSPECTIONS FOR SPRAYED FIRE-RESISTANT MATERIALS APPLIED TO STRUCTURAL ELEMENTS AND DECKS SHALL BE IN ACCORDANCE WITH SECTION 1705.13. SPECIAL INSPECTIONS SHALL BE BASED ON THE FIRE RESISTANCE DESIGN AS DESIGNATED IN THE CONSTRUCTION DOCUMENTS.

7. COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION

PROVIDE PERIODIC INSPECTION OF BOLT SIZES AND WELD ATTACHMENT OF ELEMENTS OF THE MAIN LATERAL FORCE RESISTING SYSTEM, INCLUDING: SHEAR WALLS, BRACES, DAMPHRAGMS, COLLECTORS (DRAG STRUTS), AND HOLD-DOWNS.

Pre-Engineered Metal Building Notes

- ANCHOR BOLTS SHALL BE ASTM A307.
- ALL DIMENSIONS & CONDITIONS RELATED TO THE PROPOSED METAL BUILDING SHALL BE VERIFIED WITH FINAL METAL BUILDING SHOP DRAWINGS & COORDINATED WITH SAME.
- ALL STRUCTURAL STEEL FRAMES ARE NON-SELF-SUPPORTING. PROVIDE TEMPORARY BRACING UNTIL ROOF DAMPHRAGM IS IN PLACE, BRACING INSTALLED, AND ALL CONNECTIONS ARE COMPLETE.
- EXPANSION BOLTS SHALL BE "X" BOLT #7, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- REVIEW - SUBMITTALS SHALL BE MADE IN A TIMELY FASHION FOR THE FOLLOWING ITEMS:
PRE-ENGINEERED METAL BUILDING - THIS SUBMITTAL SHALL BEAR THE SEAL OF THE LICENSED KENTUCKY PROFESSIONAL ENGINEER RESPONSIBLE FOR ITS PRODUCTION.
- STEEL METAL BUILDING STRUCTURE SHALL BE COLLUM WITH RIGID FRAME IN ACCORDANCE WITH AISC M016, EXCEPT THAT THE FRAMES MAY BE OF RIGID FRAME OR BEAM AND COLUMN DESIGN.
- LOADS AND FORCES USED FOR METAL BUILDING DESIGN SHALL BE IN ACCORDANCE WITH LOCAL BUILDING CODE HAVING LEGAL JURISDICTION FOR THE PROJECT SITE. THE DESIGN SHALL BE CAPABLE OF WITHSTANDING WIND LOADS WITH MINIMUM WIND SPEED SPECIFIED PER ASCE 7. SEISMIC DESIGN OF THE METAL BUILDING SYSTEMS SHALL BE IN ACCORDANCE WITH STANDARDS AND CODES APPLICABLE TO SITE. OTHER LOADS (ROOF LIVE, ROOF DEAD, AND SNOW) SHALL BE DESIGNED TO WITHSTAND THE MOST CRITICAL EFFECTS OF LOAD FACTORS AND LOAD COMBINATIONS ARE REQUIRED BY MBMA.
- MAXIMUM DEFLECTION OF MAIN FRAMING MEMBERS AND FOR ROOF MEMBERS SHALL NOT EXCEED 1/180TH OF THEIR RESPECTIVE SPANS.
- DEFLECTION OF PURLINS AND ROOM PANELS DUE TO LIVE, SNOW, OR WIND SHALL NOT EXCEED 1/180. THE DESIGN ANALYSIS SHALL ESTABLISH THAT THE ROOF WHEN DEFLECTED UNDER DEAD PLUS LIVE OR SNOW LOADS, WILL NOT RESULT IN A NEGATIVE GRADIENT. MAXIMUM DEFLECTIONS SHALL BE BASED ON SHEETS CONTINUOUS ACROSS TWO OR MORE SUPPORTS WITH SHEETS UNFASTENED AND FREE TO DEFLECT. BRACING OF PURLIN COMPRESSION FLANGES SHALL BE PROVIDED AS REQUIRED TO RESIST APPLIED LOADING.
- FOUNDATIONS FOR PRE-ENGINEERED METAL BUILDING SHALL NOT BE PLACED UNTIL DESIGN LOADS AND ANCHOR BOLT SIZES AND ARRANGEMENT HAVE BEEN SUBMITTED ON SHOP DRAWINGS, AND APPROVED BY ENGINEER OF RECORD.

Structural Design Loading

FOUNDATION DESIGN CRITERIA:

MAXIMUM ALLOWABLE SOIL BEARING PRESSURE SHALL NOT EXCEED 1500 PSF FOR FOOTINGS. SOIL CAPACITY TO BE VERIFIED BY GEOTECHNICAL ENGINEER PRIOR TO POURING OF FOOTINGS.
PROVIDE COPIES OF INSPECTION AND COMPACTION REPORTS PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER.

FLOOR DESIGN LOADS (2017 OHIO BUILDING CODE):

Live Load = 100 psf - Slab on grade

ROOF DESIGN LOADS (2017 OHIO BUILDING CODE):

Minimum Roof Live Load = 20 psf

SNOW LOAD:

Ground Snow Load, p_g = 20.0 psf
Flat Roof Snow Load, p_f = 14.0 psf
Sloped Roof Snow Load, p_s = 11.1 psf
Snow Importance Factor, I_S = 1.0
Thermal Factor, C_t = 1.0
Exposure Factor, C_e = 1.0
Rain-on-Snow Surcharge (Slope < 1/2°) = 5 psf
Snow Drift Loads per ASCE 7-05

WIND LOAD:

Ultimate Wind Speed, V_{ult} = 115 mph
Basic Wind Speed (3 second gust), V = 90 mph
Wind Importance Factor, I_W = 1.0
Risk Category II
Wind Exposure B
Internal Pressure Coefficient = +/- 0.18
MWFRS
 p_{s30} , horizontal = 16.0 psf
 p_{s30} , vertical = 8.0 psf

SEISMIC LOAD:

Occupancy Category II
SDS = 0.152 Ss = 0.142
SD1 = 0.120 S1 = 0.075
Site Soil Class D
Seismic Design Category B

Basic Seismic Force Resisting System:

Ordinary Steel Moment Resisting Frame
 R = 3.5
 I_E = 1.0
 C_d = 3.0
 Ω = 2.5
 C_s = 0.034

Seismic Analysis - Equivalent Lateral Force Procedure

Base Shear
 V = 8.0 kips

Masonry Openings

NOT OTHERWISE COVERED IN THE SCHEDULED OR NONSCHEDULED UNTIL TABLE FOR EACH 4" OF MASONRY THICKNESS PROVIDE: (TO BE USED FOR BRICK OPENINGS):

L 3'-1/2"x3'-1/2"x1/4"	4"	UP TO 5'-11" MAS OPNG
L 4"x3'-1/2"x3/16" LVV	4"	4'-0" TO 4'-11" MAS OPNG
L 5"x3'-1/2"x3/16" LVV	6"	5'-0" TO 5'-11" MAS OPNG
L 6"x3'-1/2"x3/16" LVV	6"	6'-0" TO 9'-0" MAS OPNG
L 8"x4"x7/16" LVV	8"	9'-1" TO 13'-0" MAS OPNG

NOTES:

- NOT-DIP GALVANIZE ALL EXTERIOR STEEL UNITS
- COORDINATE HORIZONTAL LEG OF STEEL ANGLE AND BRICK CONDITIONS



Lexington • Cincinnati • Cleveland • Dallas

NOT FOR CONSTRUCTION



644 Lin Street, Suite 936, Cincinnati, Ohio 45203 (513) 621-7073

Revisions:

Issue Date: August 13, 2019

Sycamore Township
Equipment Storage Facility

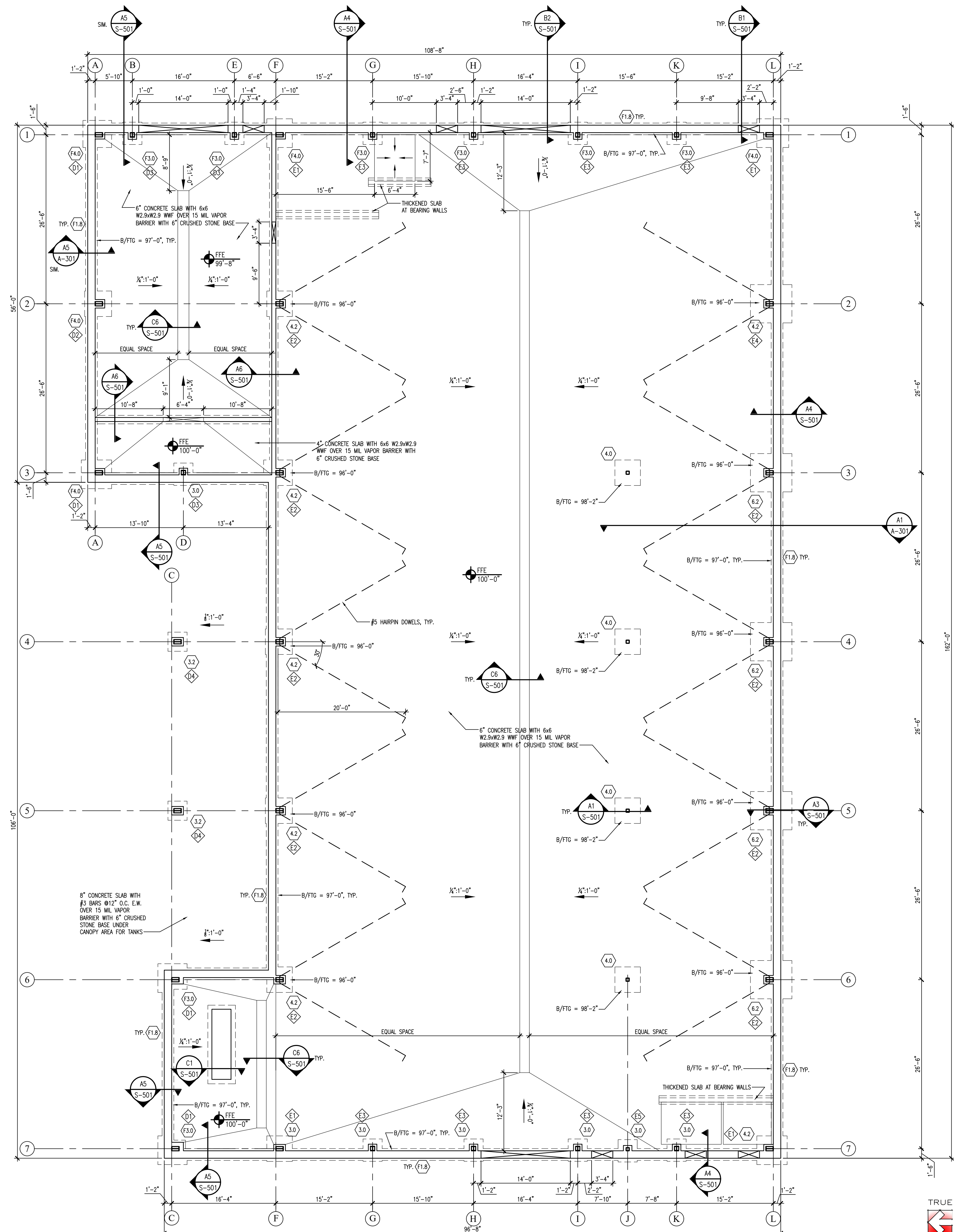
8540 Kenwood Road
Sycamore Township, Ohio 45236

General Notes

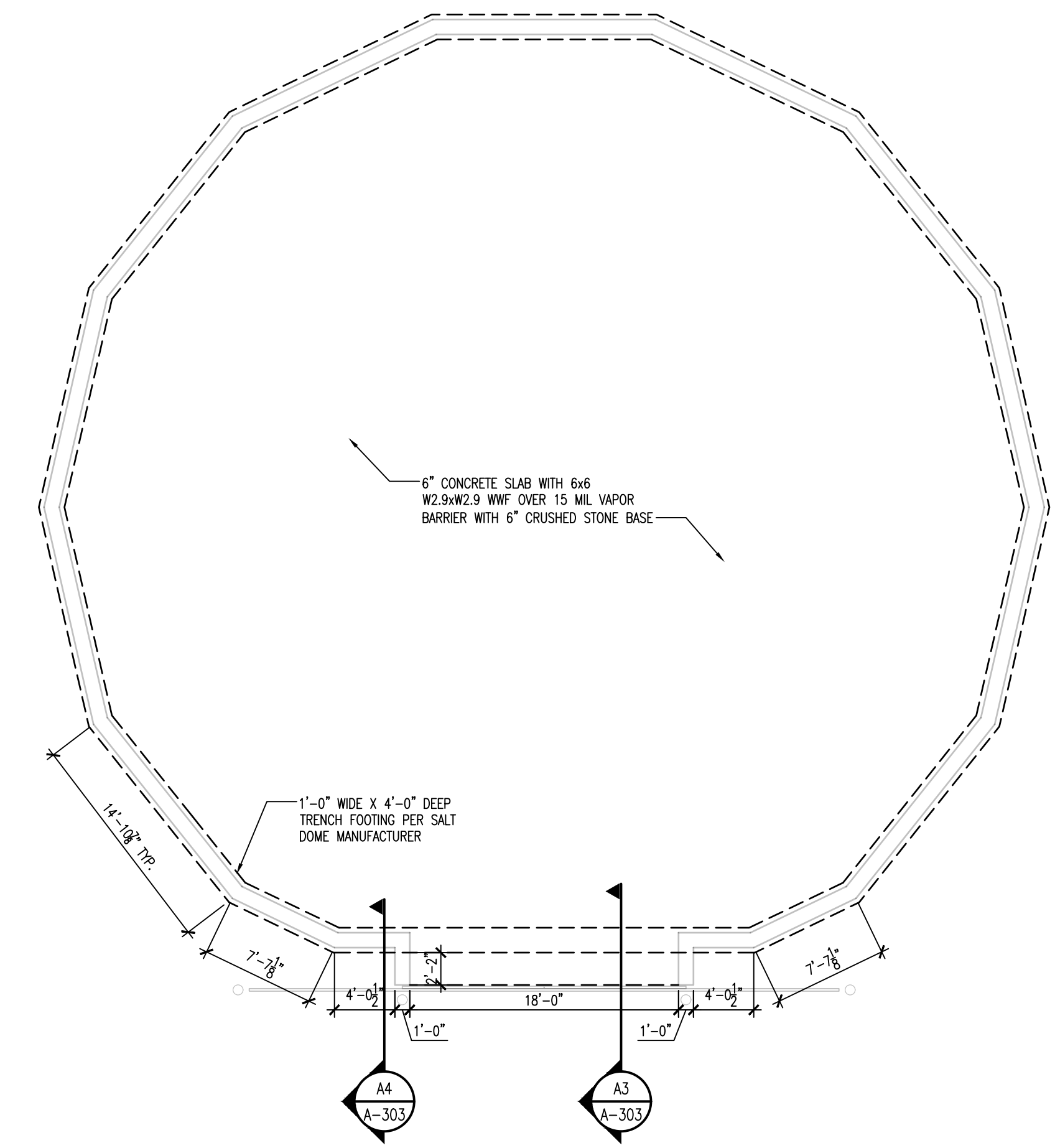
Project No.

17120

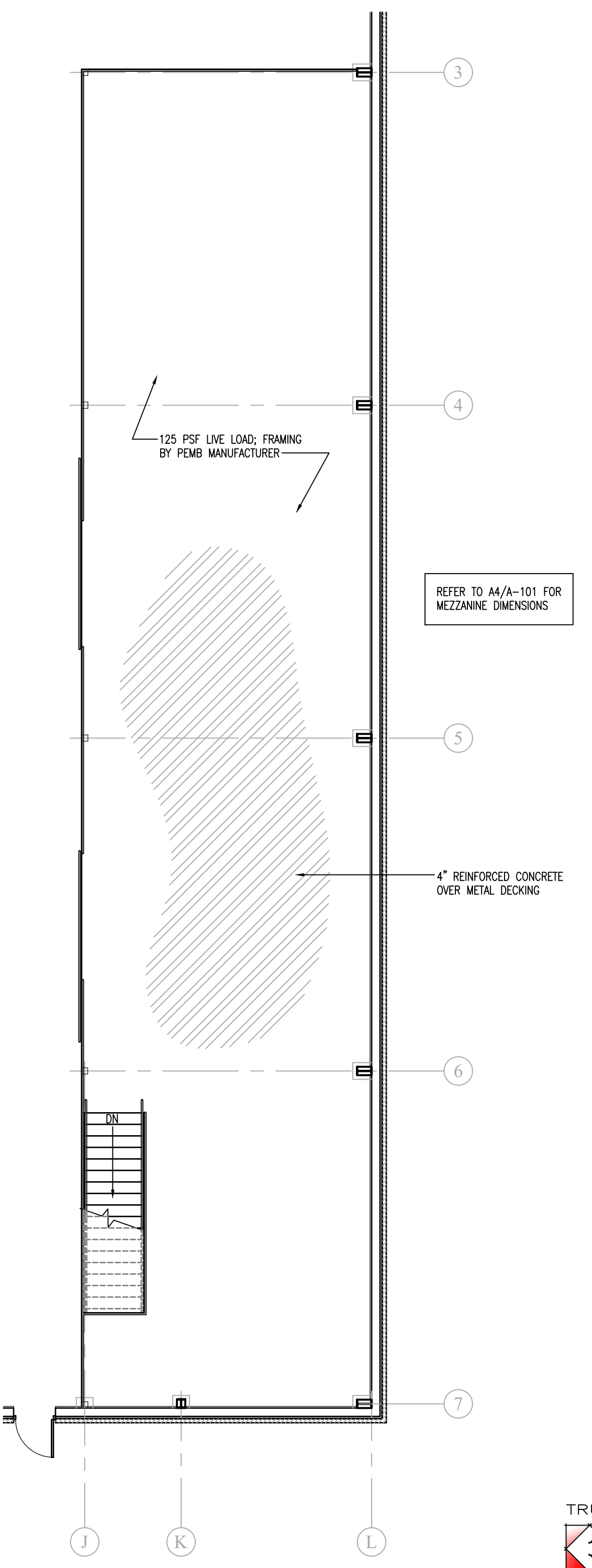
S-100



A1 Maintenance Facility Foundation Plan
1/8" = 1'-0"



D4 Salt Dome Foundation Plan
1/8" = 1'-0"



A4 Mezzanine Framing Plan
1/8" = 1'-0"

General Notes

- DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- ALL DIMENSIONS ARE TO FACE OF STUDS OR CENTERLINE OF STRUCTURAL STEEL UNLESS OTHERWISE INDICATED. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT IF ANY DISCREPANCIES ARISE.

NOT FOR CONSTRUCTION



644 Lin Street, Suite 936, Cincinnati, Ohio 45203 (616) 621-7073

Footing Schedule

MARK	DESCRIPTION	BENCHMARK
(F1.8)	1'-8" WIDE x 12" DEEP	(2) #5 CONT.
(F3.0)	3'-0" x 3'-0" x 1'-0" DEEP	(3) #5 EA. WAY
(F3.2)	3'-0" x 3'-0" x 1'-0" DEEP	(5) #5 EA. WAY, TAB
(F4.0)	4'-0" x 4'-0" x 1'-0" DEEP	(5) #5 EA. WAY
(F4.2)	4'-0" x 4'-0" x 2'-0" DEEP	(5) #5 EA. WAY, TAB
(F6.2)	6'-0" x 6'-0" x 2'-0" DEEP	(7) #5 EA. WAY, TAB

Pedestal Schedule

(E1)	REFER TO E1/S-501 FOR PEDESTAL DETAILS
(E2)	REFER TO E2/S-501 FOR PEDESTAL DETAILS
(E3)	REFER TO E3/S-501 FOR PEDESTAL DETAILS
(E4)	REFER TO E4/S-501 FOR PEDESTAL DETAILS
(E5)	REFER TO E5/S-501 FOR PEDESTAL DETAILS
(D1)	REFER TO D1/S-501 FOR PEDESTAL DETAILS
(D2)	REFER TO D2/S-501 FOR PEDESTAL DETAILS
(D3)	REFER TO D3/S-501 FOR PEDESTAL DETAILS
(D4)	REFER TO D4/S-501 FOR PEDESTAL DETAILS

Revisions:
Issue Date: August 13, 2019

Sycamore Township
Equipment Storage Facility

8540 Kenwood Road
Sycamore Township, Ohio 45236

Foundation &
Framing Plans

Project No.

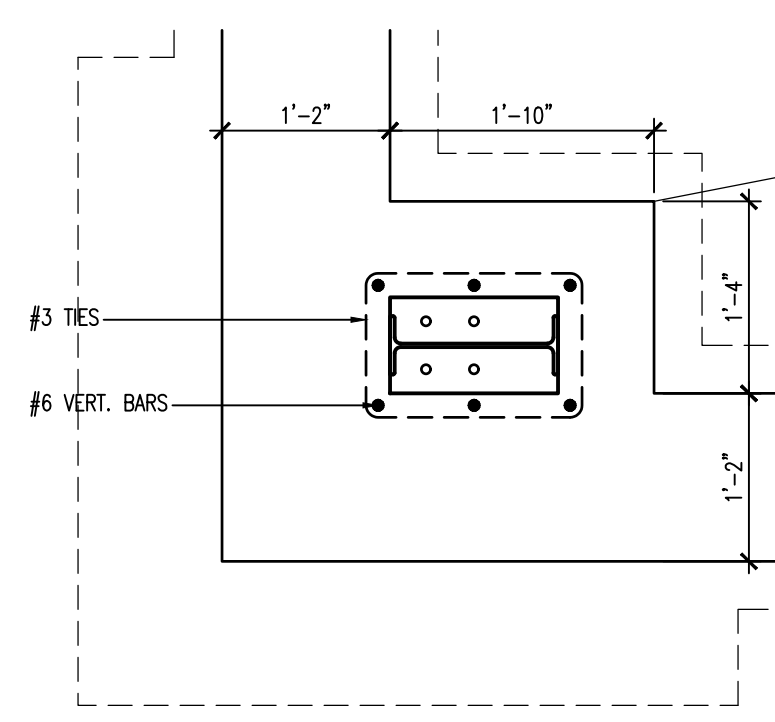
S-101

17120

**NOT FOR
CONSTRUCTION**

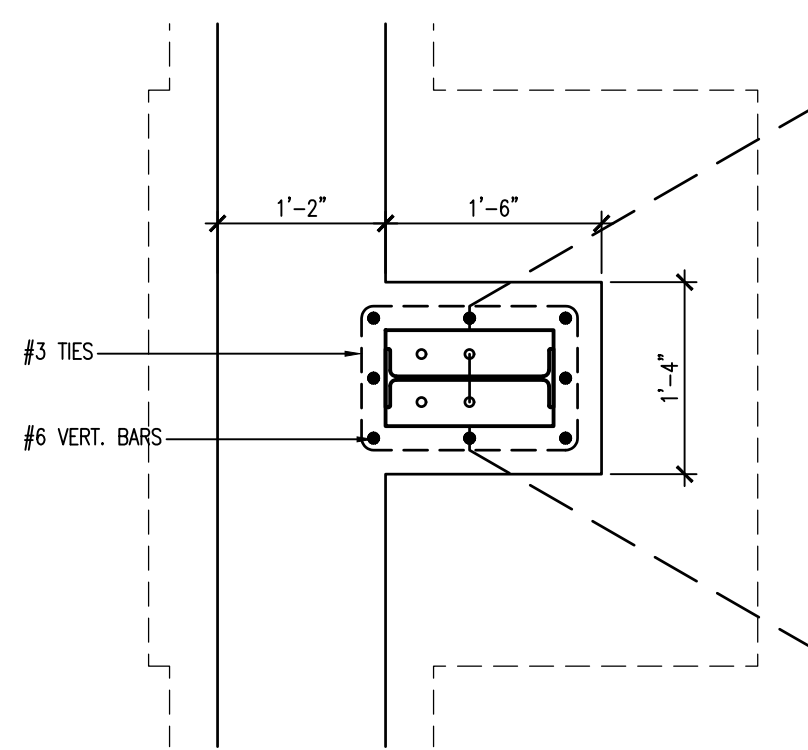
GOP Limited
Sustainable · Engineers

644 Lin Street, Suite 936, Cincinnati, Ohio 45203 (513) 621-7073



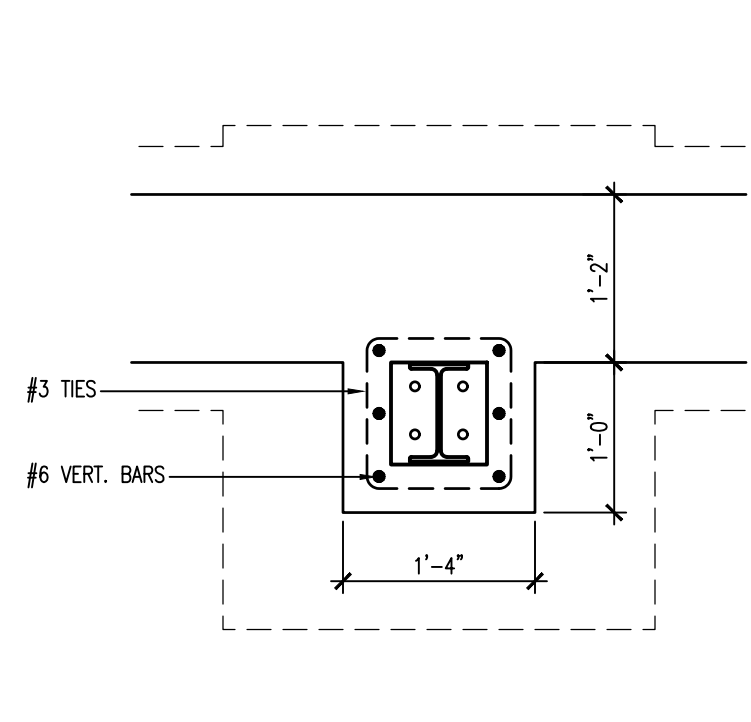
VERT: (6) #6 VERTICAL DOWELS
TIES: (3) #3 #4", REMAINING #6"
○ DENOTES ANCHOR BOLTS, SEE PEMB DRAWINGS & MATCH DIA, SIZE, SPACING AND LOCATION OF BOLTS.

E1 Pedestal Detail
3/4"=1'-0"



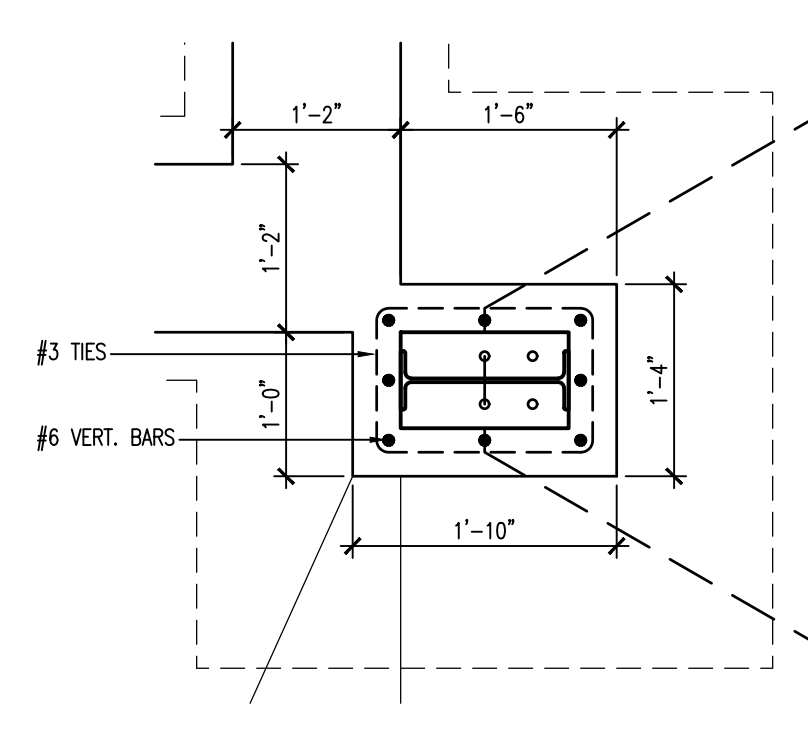
VERT: (6) #6 VERTICAL DOWELS
TIES: (3) #3 #4", REMAINING #6"
○ DENOTES ANCHOR BOLTS, SEE PEMB DRAWINGS & MATCH DIA, SIZE, SPACING AND LOCATION OF BOLTS.

E2 Pedestal Detail
3/4"=1'-0"



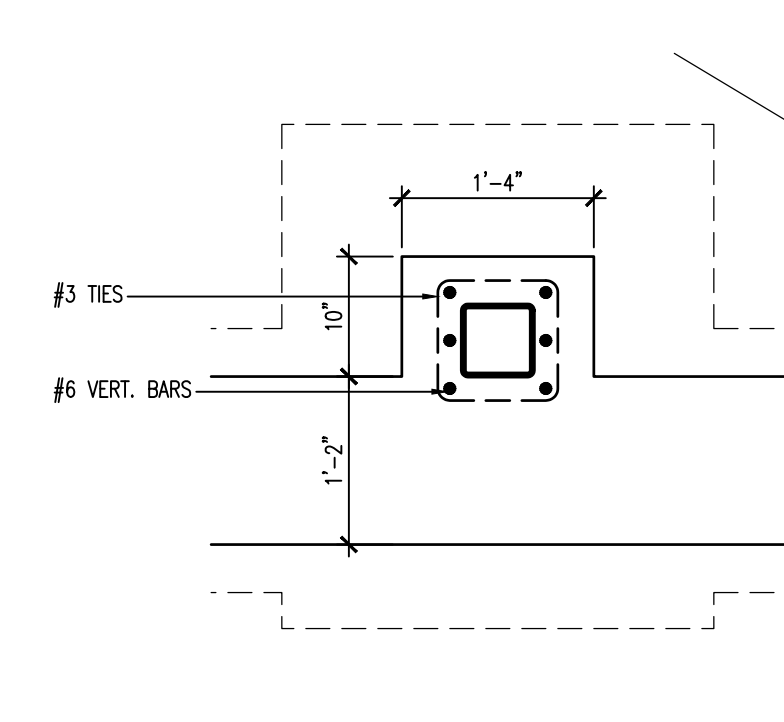
VERT: (6) #6 VERTICAL DOWELS
TIES: (3) #3 #4", REMAINING #6"
○ DENOTES ANCHOR BOLTS, SEE PEMB DRAWINGS & MATCH DIA, SIZE, SPACING AND LOCATION OF BOLTS.

E3 Pedestal Detail
3/4"=1'-0"



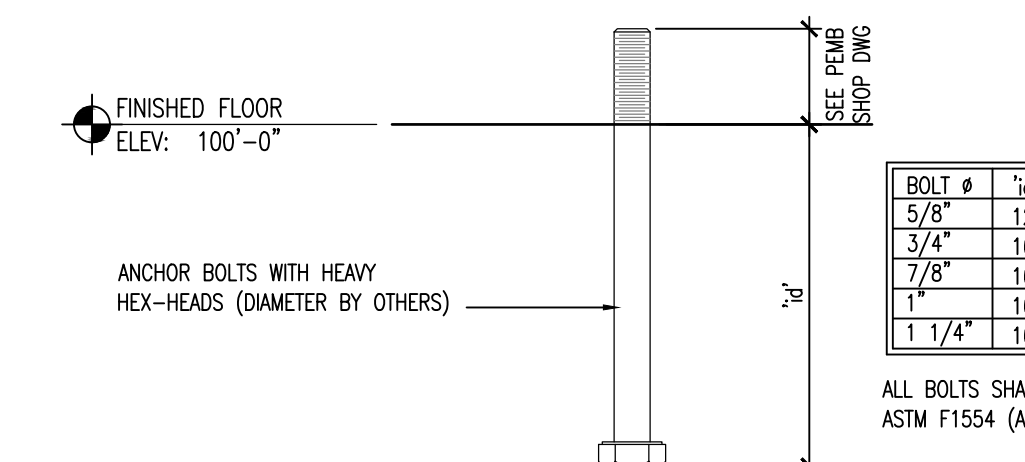
VERT: (6) #6 VERTICAL DOWELS
TIES: (3) #3 #4", REMAINING #6"
○ DENOTES ANCHOR BOLTS, SEE PEMB DRAWINGS & MATCH DIA, SIZE, SPACING AND LOCATION OF BOLTS.

E4 Pedestal Detail
3/4"=1'-0"

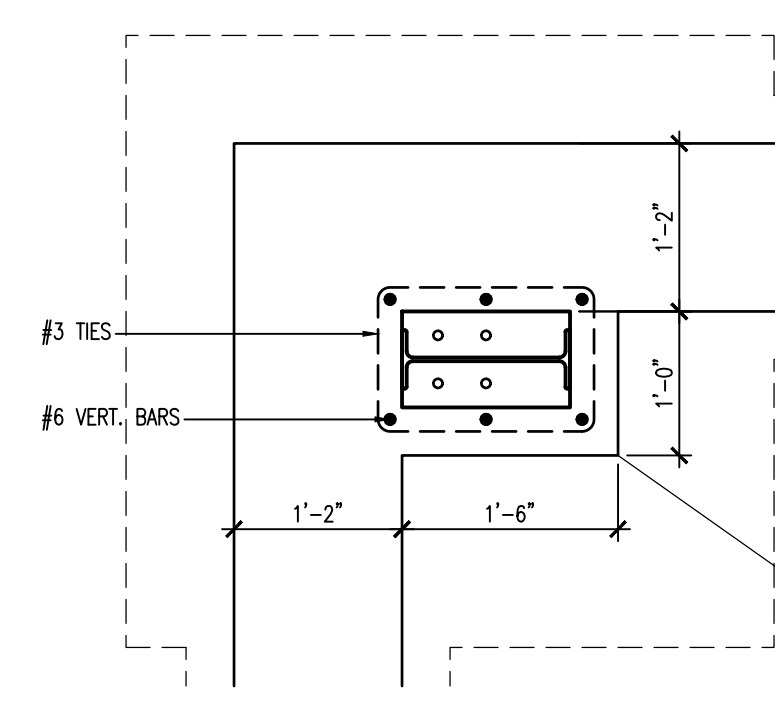


VERT: (6) #6 VERTICAL DOWELS
TIES: (3) #3 #4", REMAINING #6"
○ DENOTES ANCHOR BOLTS, SEE PEMB DRAWINGS & MATCH DIA, SIZE, SPACING AND LOCATION OF BOLTS.

E5 Pedestal Detail
3/4"=1'-0"

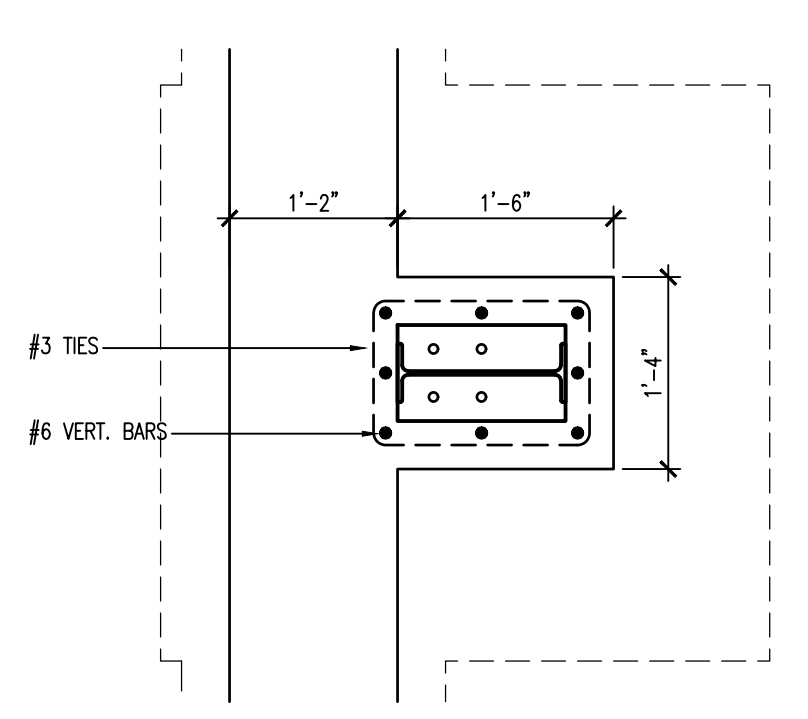


E6 Typical Anchor Bolt Embedment Detail
N.T.S.



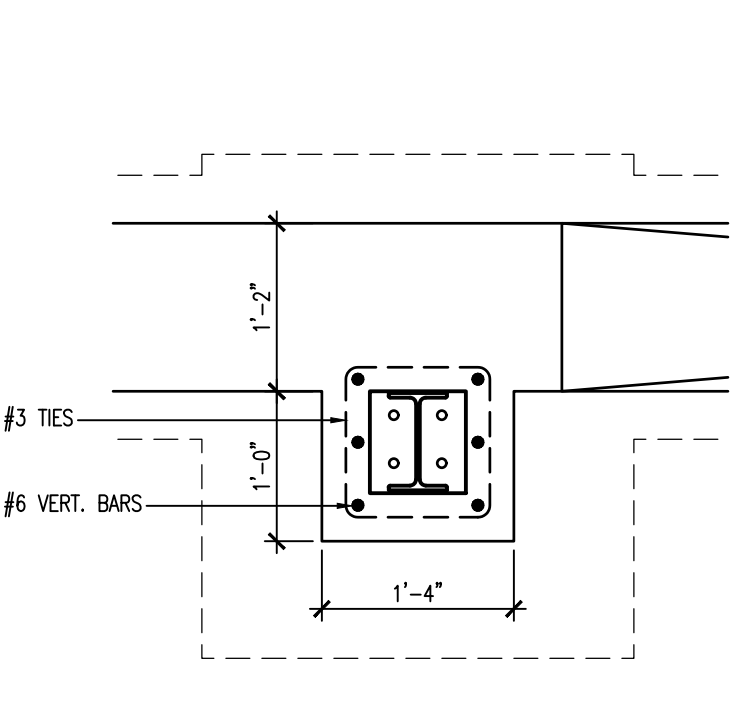
VERT: (6) #6 VERTICAL DOWELS
TIES: (3) #3 #4", REMAINING #6"
○ DENOTES ANCHOR BOLTS, SEE PEMB DRAWINGS & MATCH DIA, SIZE, SPACING AND LOCATION OF BOLTS.

D1 Pedestal Detail
3/4"=1'-0"



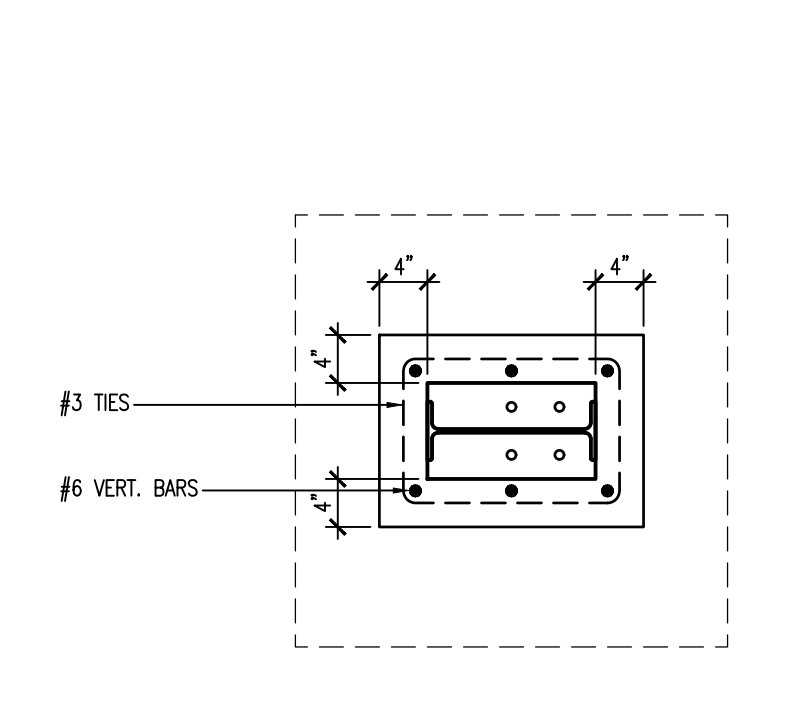
VERT: (6) #6 VERTICAL DOWELS
TIES: (3) #3 #4", REMAINING #6"
○ DENOTES ANCHOR BOLTS, SEE PEMB DRAWINGS & MATCH DIA, SIZE, SPACING AND LOCATION OF BOLTS.

D2 Pedestal Detail
3/4"=1'-0"



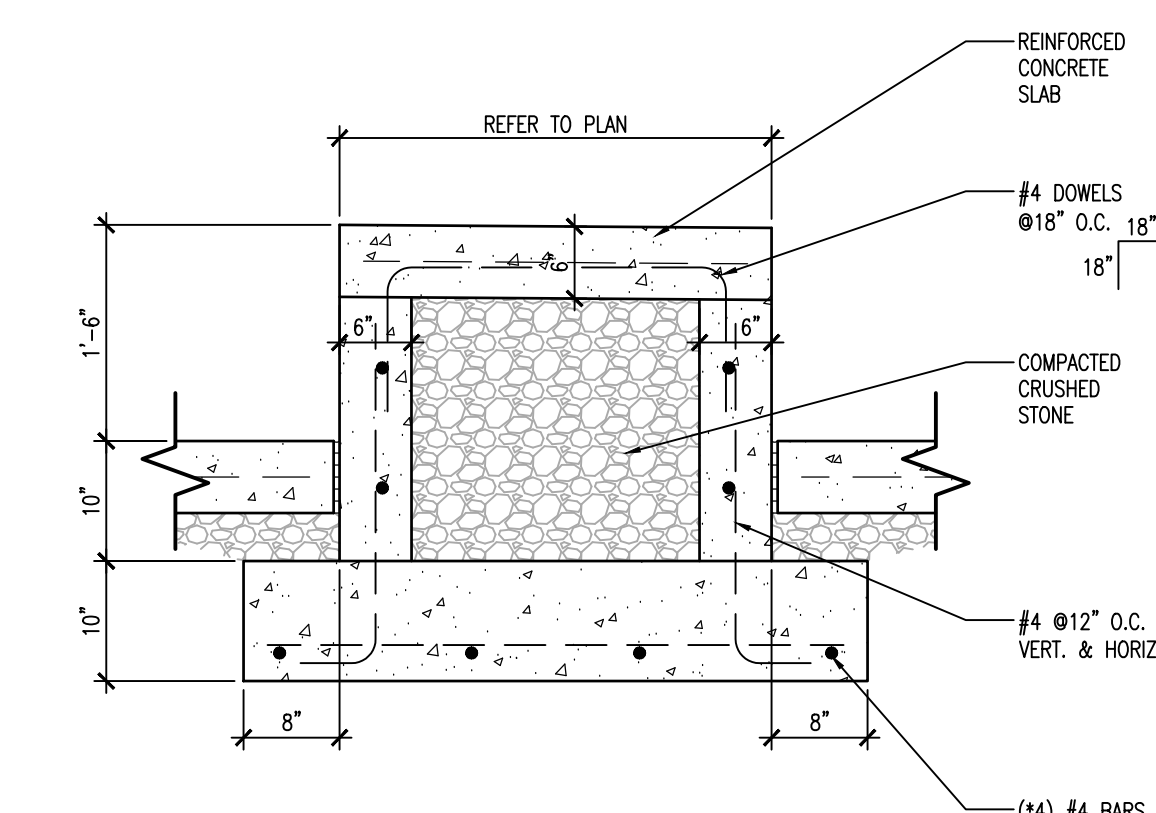
VERT: (6) #6 VERTICAL DOWELS
TIES: (3) #3 #4", REMAINING #6"
○ DENOTES ANCHOR BOLTS, SEE PEMB DRAWINGS & MATCH DIA, SIZE, SPACING AND LOCATION OF BOLTS.

D3 Pedestal Detail
3/4"=1'-0"

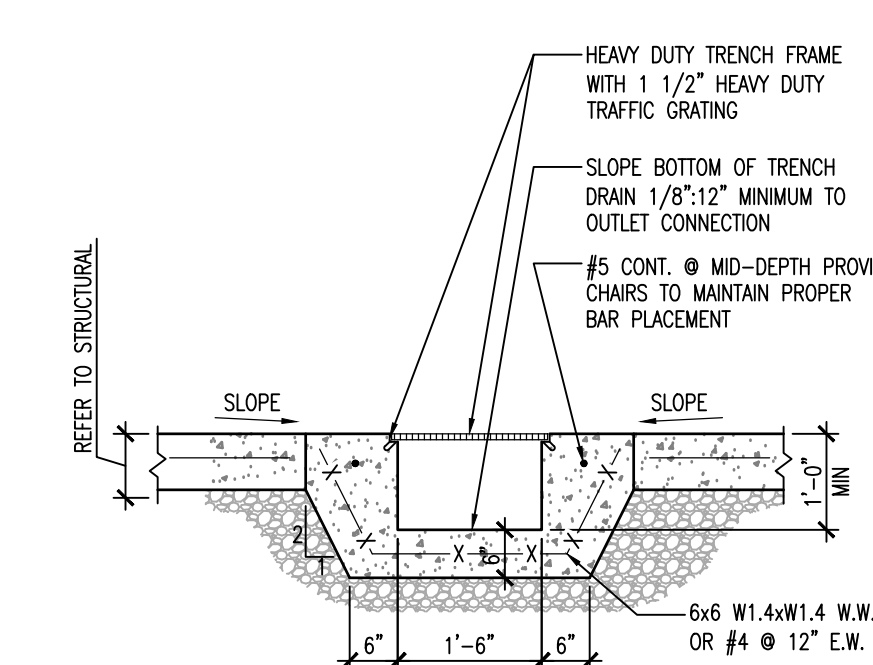


VERT: (6) #6 VERTICAL DOWELS
TIES: (3) #3 #4", REMAINING #6"
○ DENOTES ANCHOR BOLTS, SEE PEMB DRAWINGS & MATCH DIA, SIZE, SPACING AND LOCATION OF BOLTS.

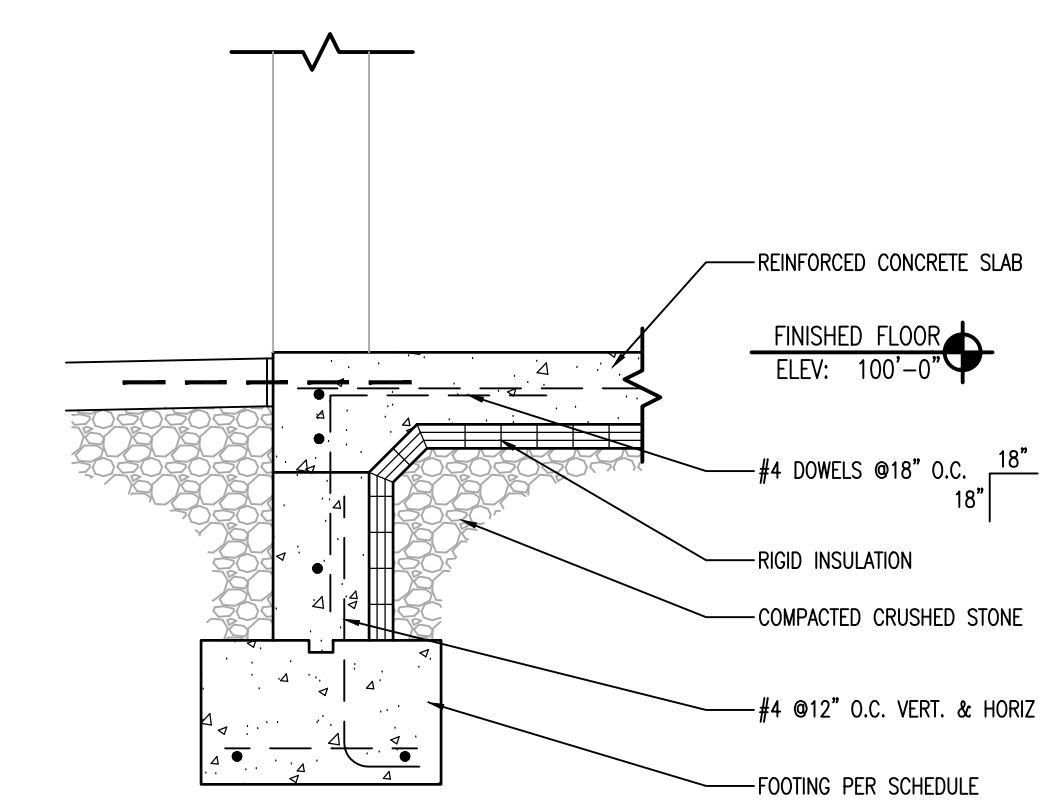
D4 Pedestal Detail
3/4"=1'-0"



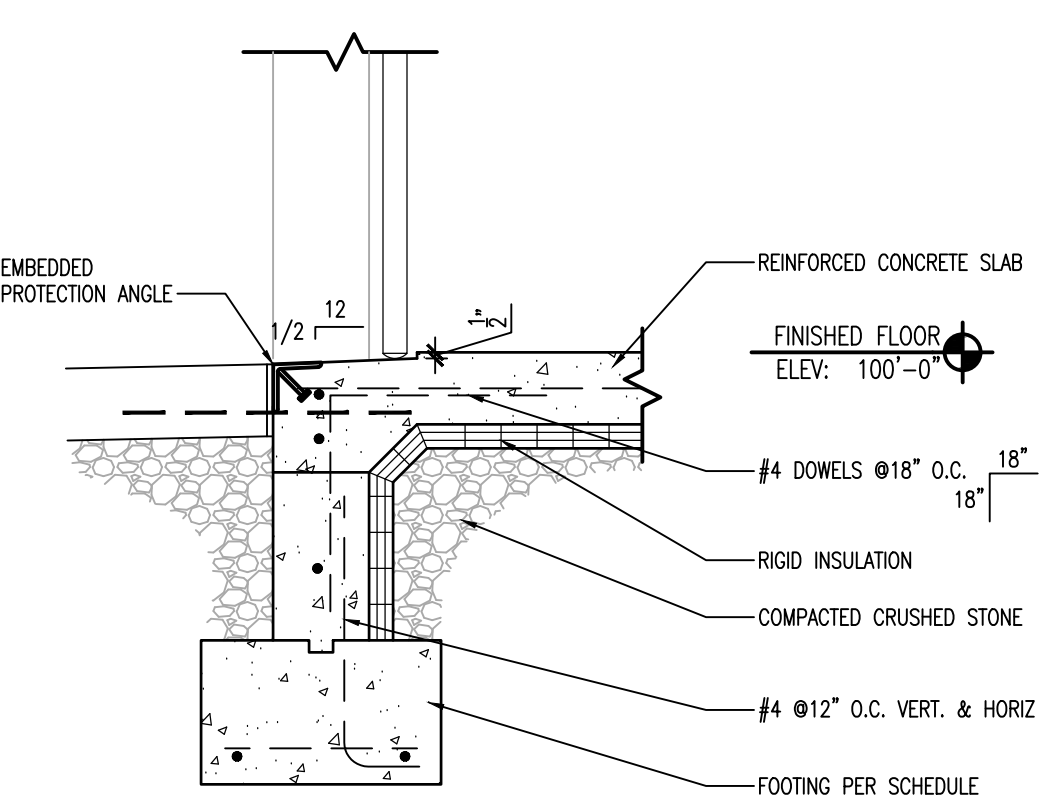
C1 Elevated Pad Section
3/4"=1'-0"



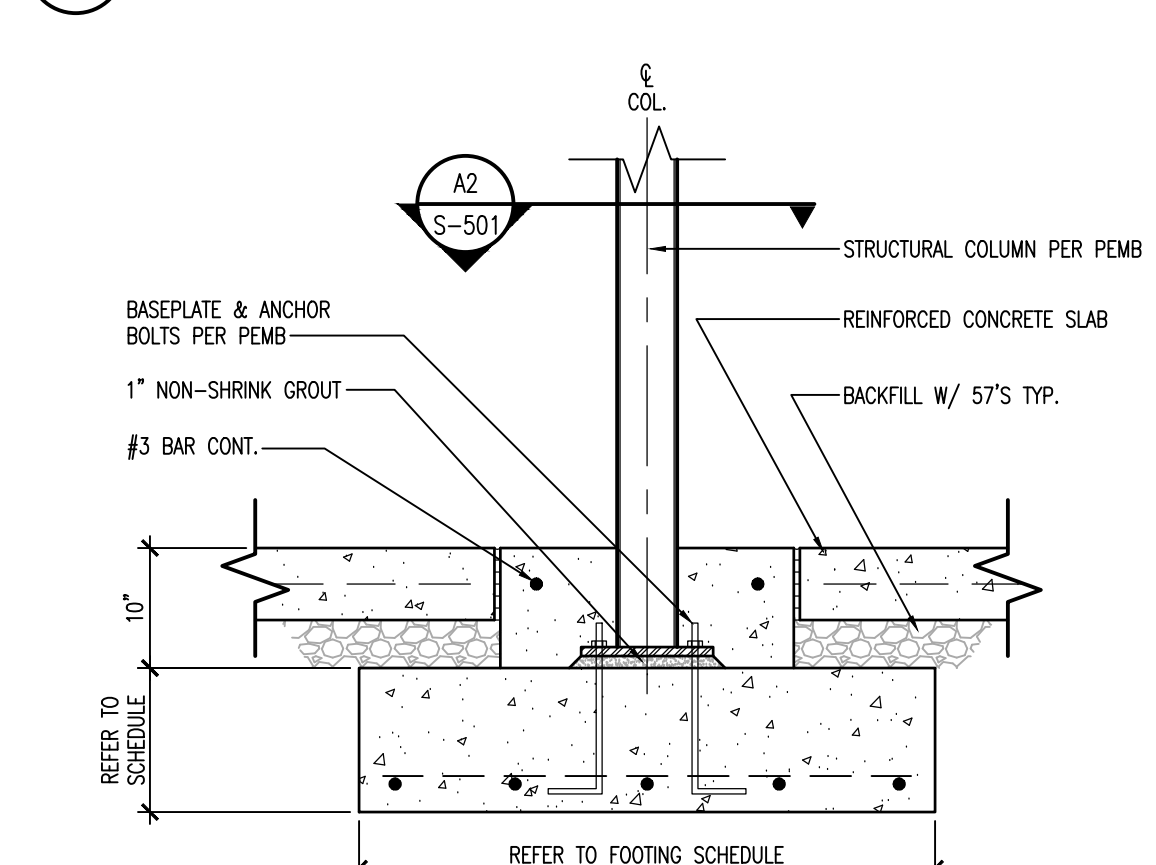
C6 Trench Drain Detail Typ.
1/2"=1'-0"



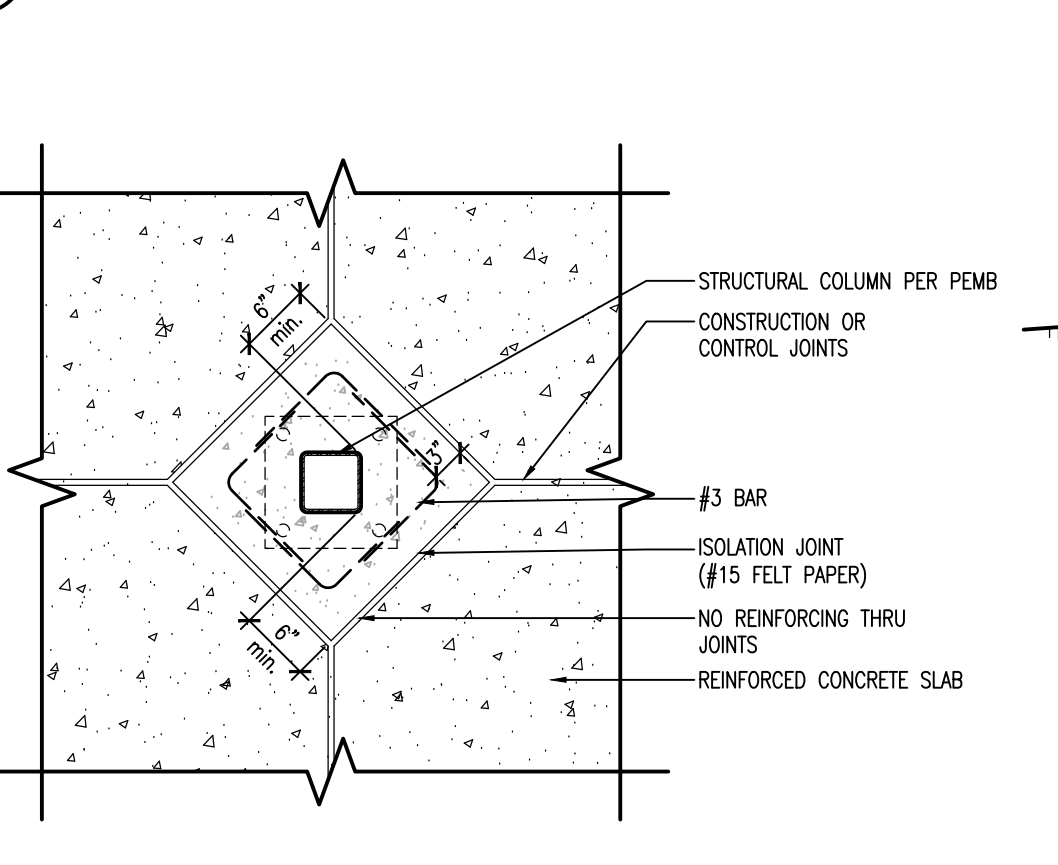
B1 Man Door - Typical
3/4"=1'-0"



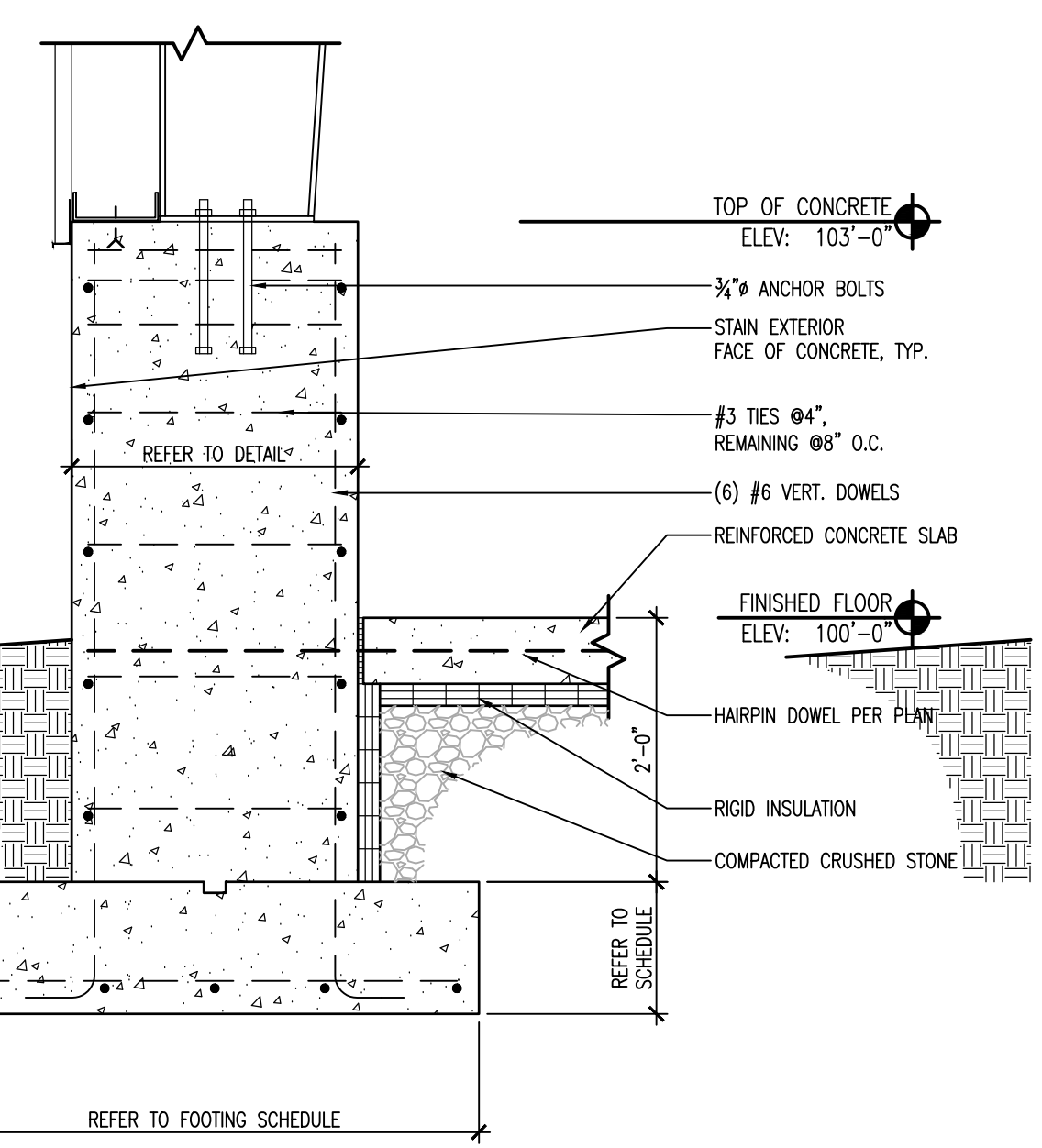
B2 Overhead Door - Typical
3/4"=1'-0"



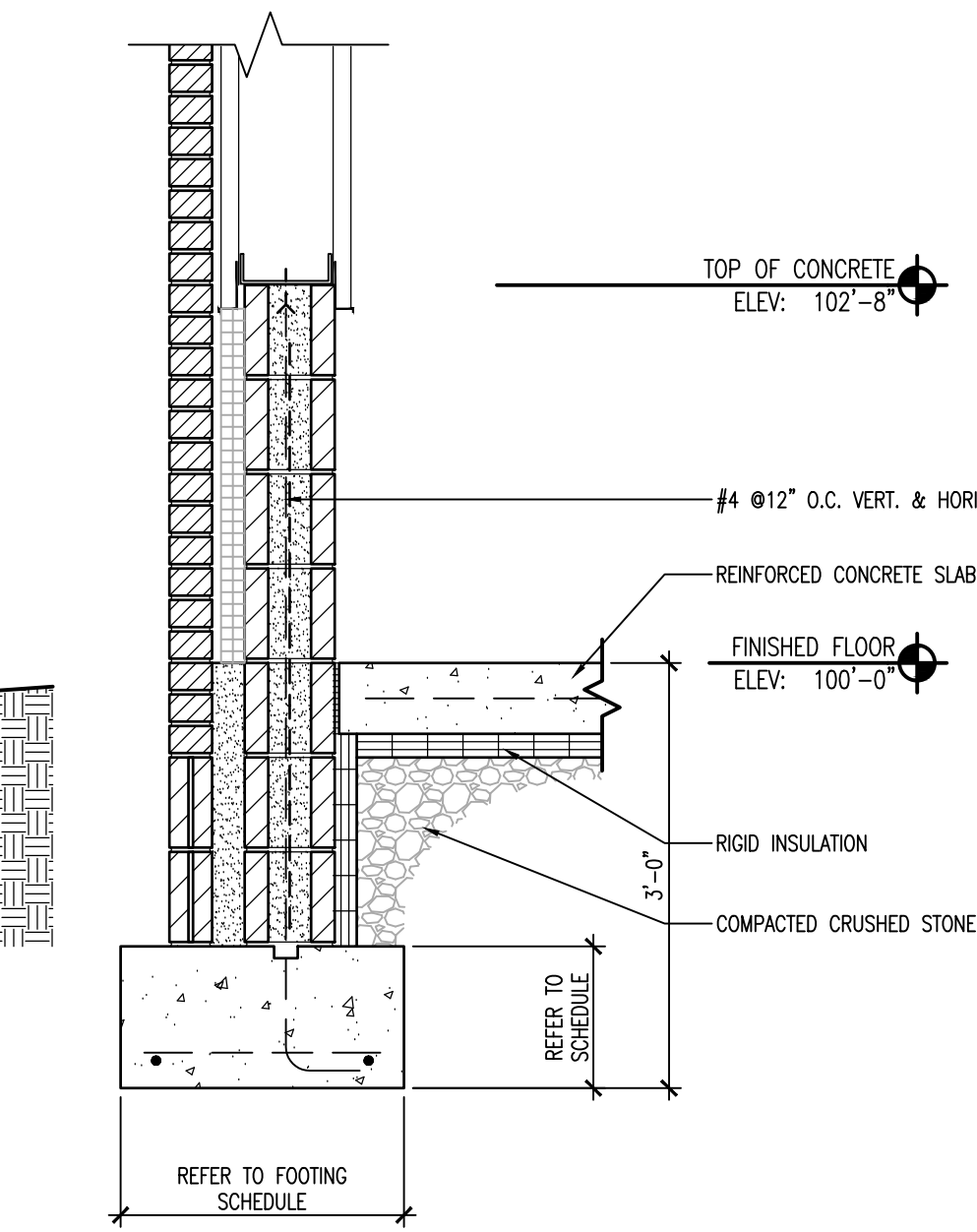
A1 Interior Column Section
3/4"=1'-0"



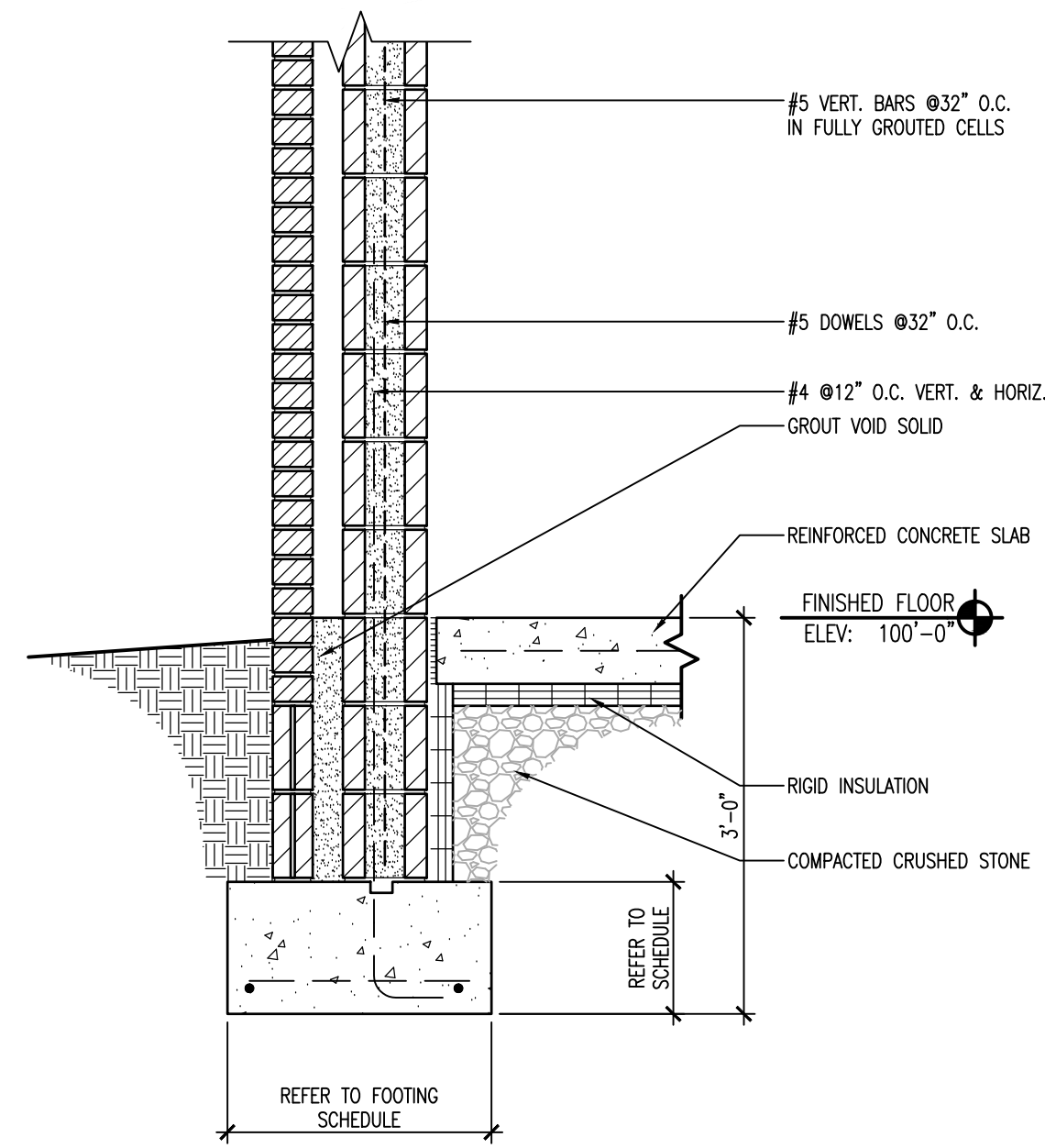
A2 Interior Column Detail
3/4"=1'-0"



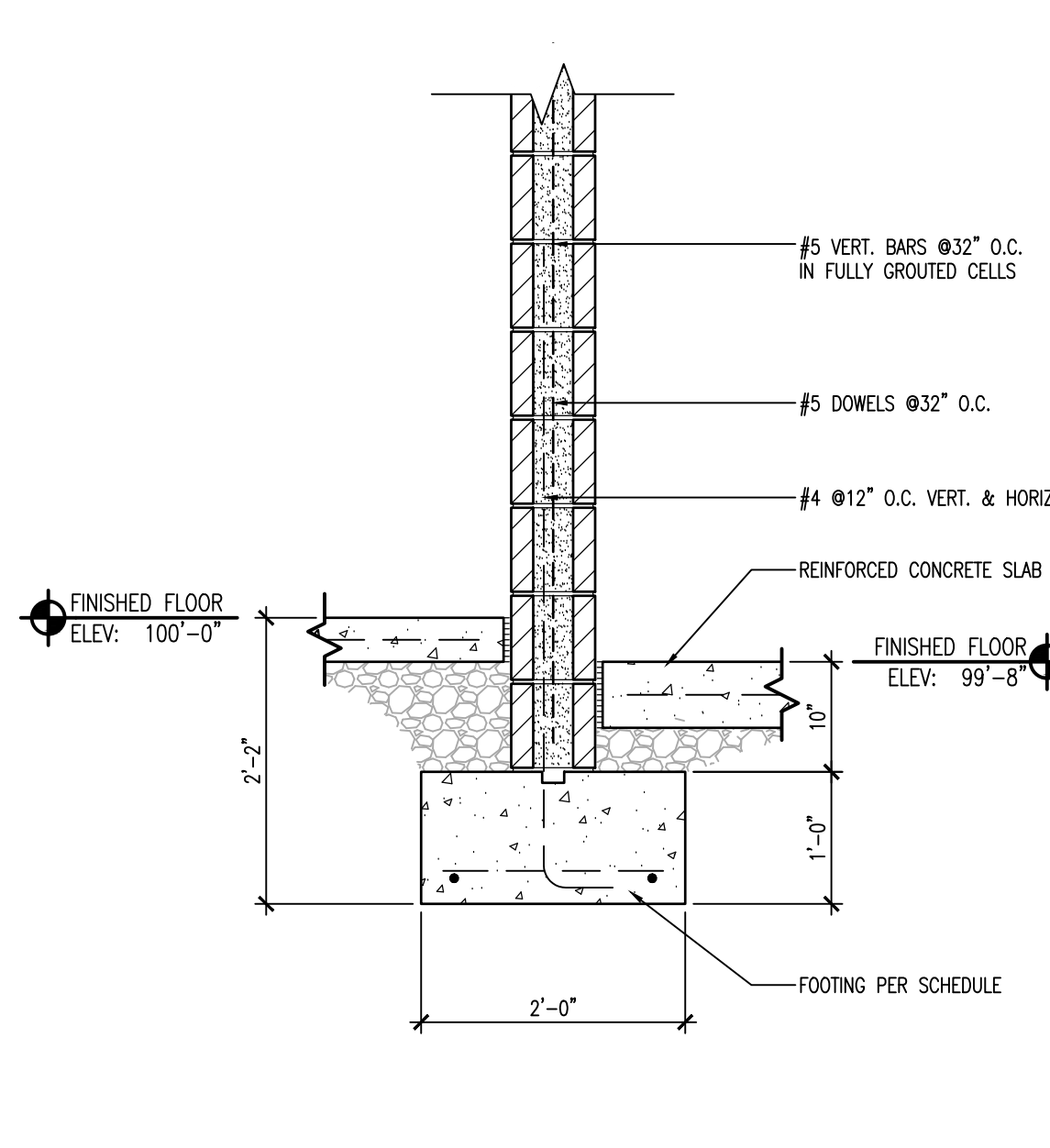
A3 Typical Column Pedestal
3/4"=1'-0"



A4 Typical Perimeter Footing
3/4"=1'-0"



A5 Perimeter Footing @CMU
3/4"=1'-0"



A6 Interior Wall & Footing
3/4"=1'-0"

Revisions:
Issue Date: August 13, 2019

**Sycamore Township
Equipment Storage Facility**

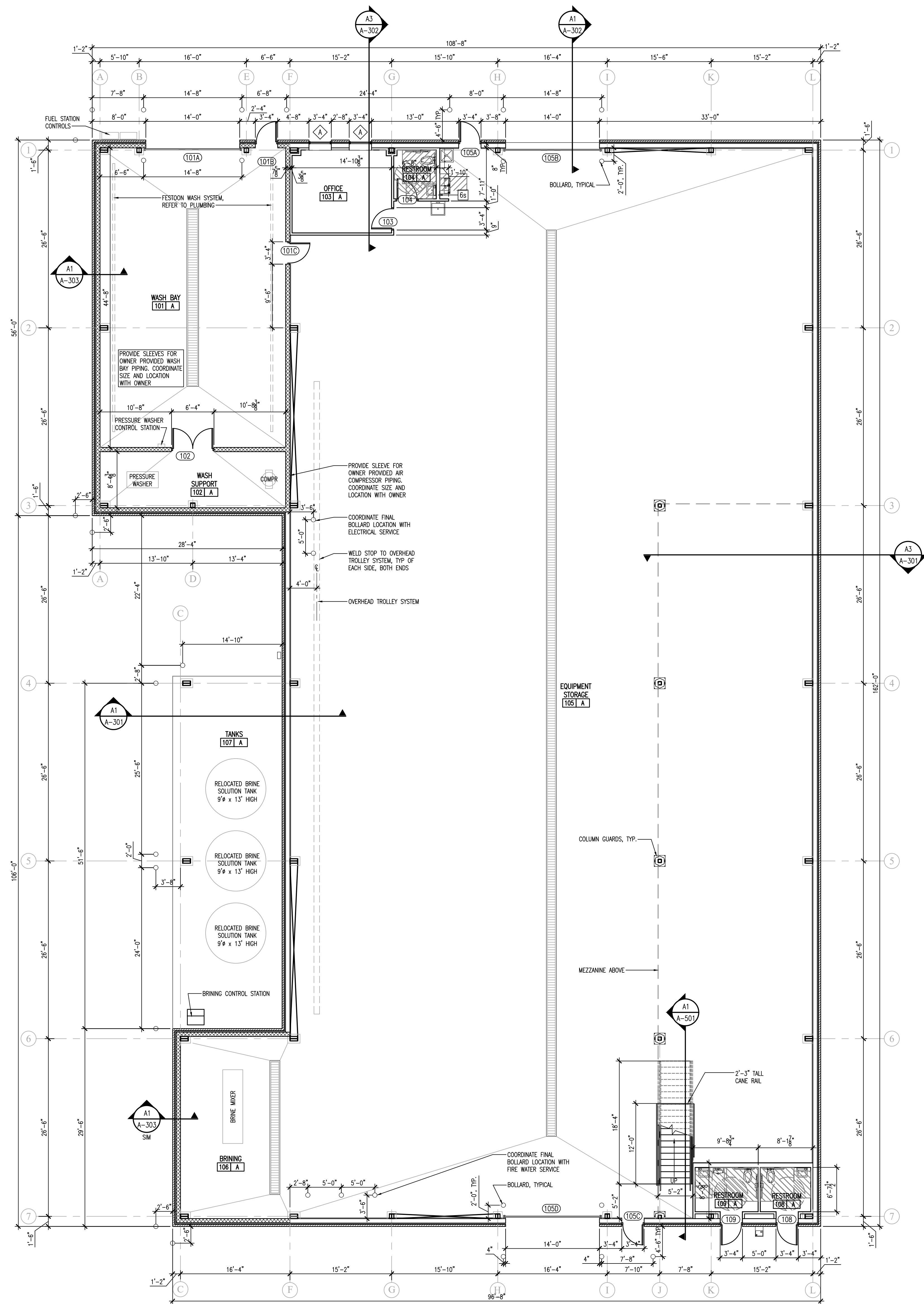
8540 Kenwood Road
Sycamore Township, Ohio 45236

Details

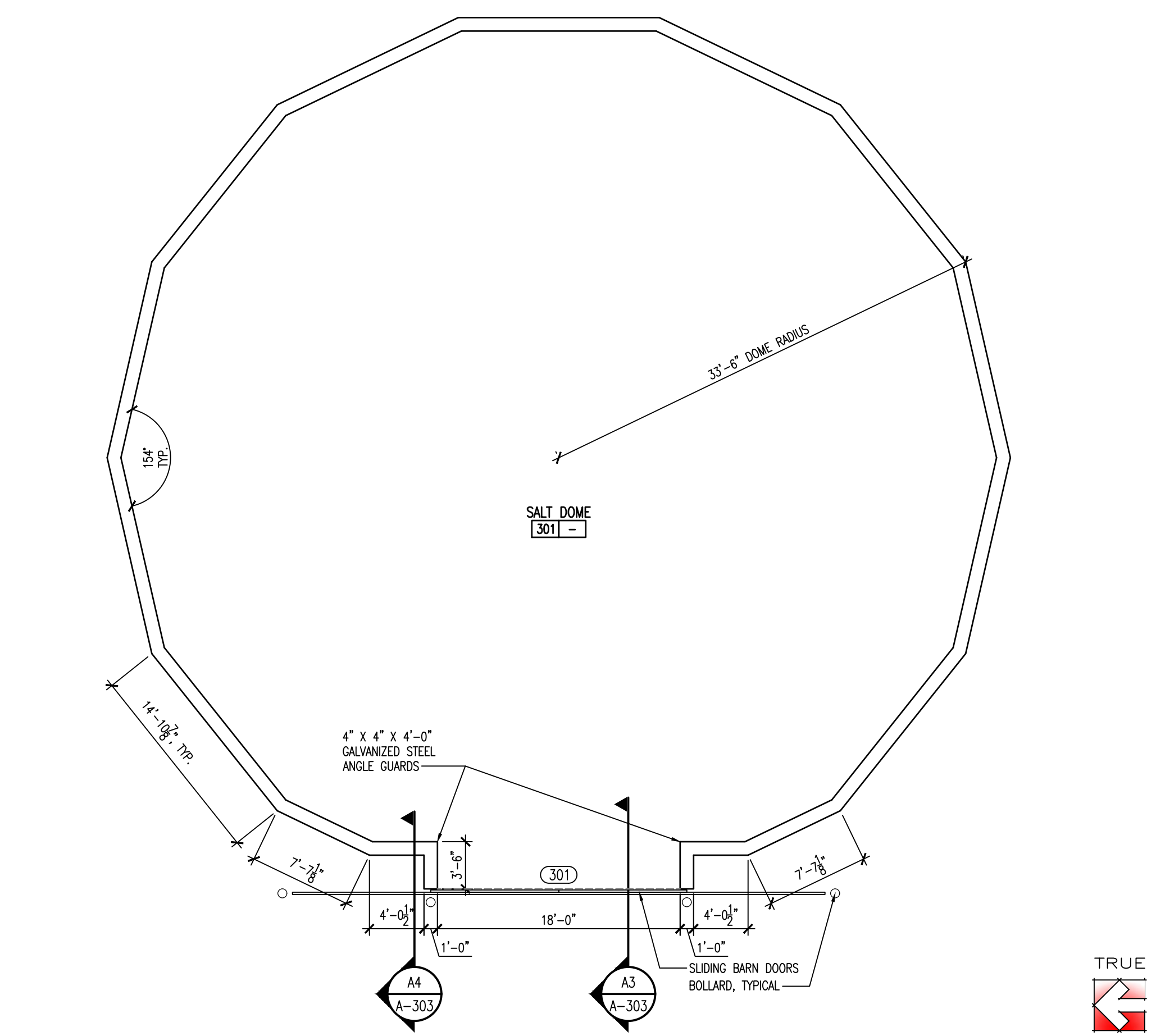
Project No.

17120

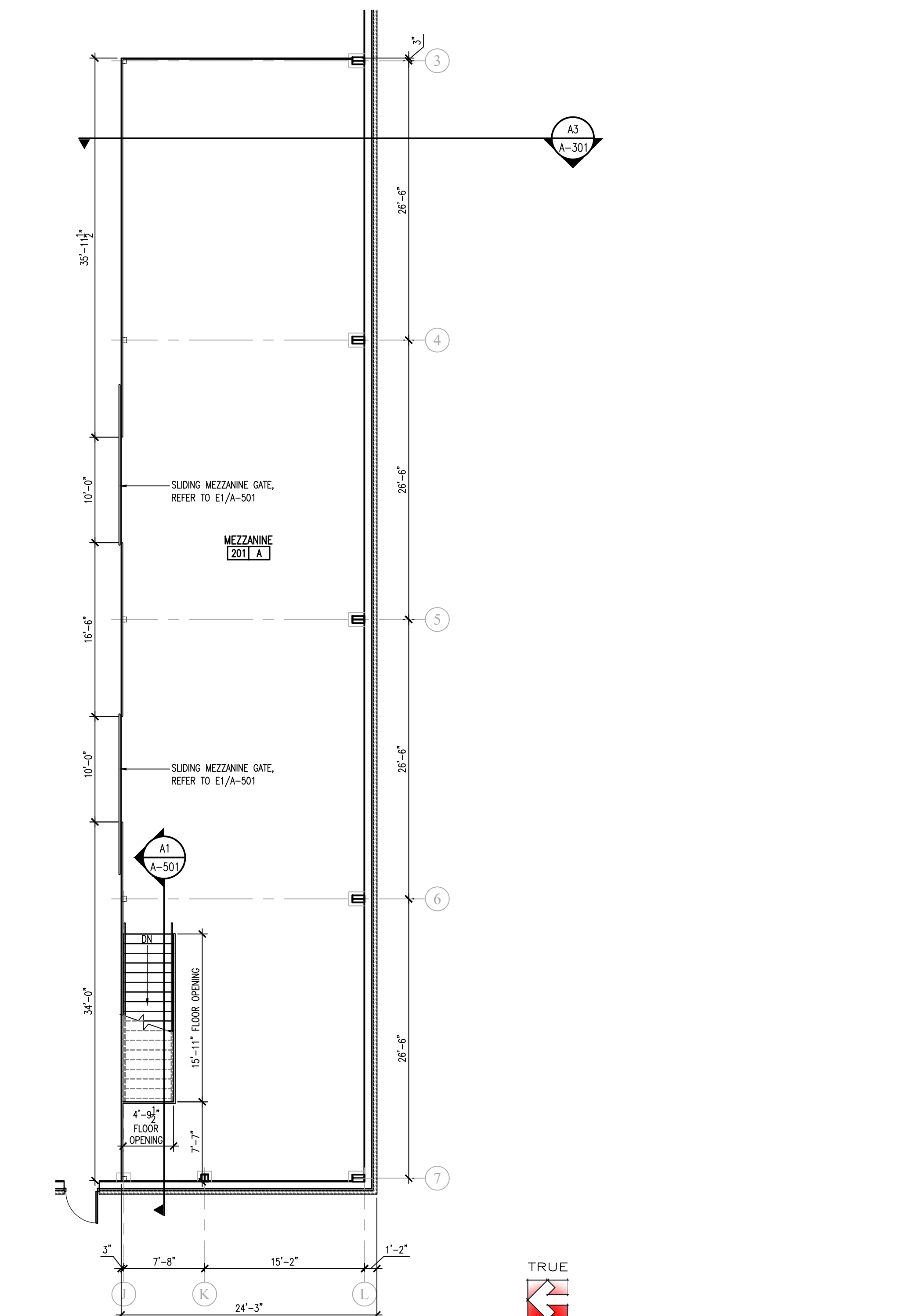
S-501



A1 Maintenance Facility Floor Plan
1/8" = 1'-0"



D4 Salt Dome Floor Plan
1/8" = 1'-0"



A4 Mezzanine Floor Plan
1/8" = 1'-0"

General Floor Plan Notes

- DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- ALL DIMENSIONS ARE TO FACE OF STUDS OR CENTERLINE OF STRUCTURAL STEEL UNLESS OTHERWISE INDICATED. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT IF ANY DISCREPANCIES ARISE.
- MECHANICAL AND ELECTRICAL ITEMS ARE SHOWN FOR THE SOLE PURPOSE OF INDICATING THEIR RESPECTIVE LOCATIONS. REFER TO MECHANICAL AND ELECTRICAL DRAWING FOR SIZE, TYPE, AND OTHER REQUIREMENTS PERTAINING SPECIFICALLY TO THESE ITEMS.
- REFER TO STRUCTURAL DRAWINGS FOR SIZE, TYPES, LOCATION, CONNECTIONS, REINFORCEMENT AND OTHER REQUIREMENTS PERTAINING TO STRUCTURAL COMPONENTS. CONTRACTOR RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, ELEVATIONS, INVERTS, BENCHMARKS, UTILITIES, & STRUCTURAL ELEMENTS. CONTRACTOR SHALL ADJUST BASED ON CONDITIONS AS NEEDED.
- ALL PENETRATIONS IN WALLS, ROOFS, FLOORS, OR SHAFTS, TO BE SEALED PER CODE. FIRE BLOCKING TO BE PROVIDED AS REQUIRED BY CODE.
- WHERE ITEMS CANNOT BE INSTALLED AS NEW WALLS, STRUCTURE, OR FLOORS ARE BEING INSTALLED OR ERRECTED, INSTALL BRICKS, SLEEVES, INSERT FIXTURES, OR OTHER DEVICES AS NECESSARY TO PERMIT INSTALLATION OF WORK DURING OTHER PHASES OF CONSTRUCTION. LAYOUT CHANGES, HOLES, OR OTHER OPENINGS WHICH MUST BE PROVIDED IN MASONRY, CONCRETE, OR OTHER TYPES OF CONSTRUCTION.
- ALL PIPING, CONDUIT, DUCTWORK & EQUIPMENT ON EXPOSED AREAS TO BE MOUNTED AS HIGH AS POSSIBLE.
- ALL PIPES, CONDUIT, DUCTWORK & EQUIPMENT TO BE CONCEALED IN WALLS, ABOVE CEILING, & BELOW FLOORS WHEN APPLICABLE.
- CONTRACTOR TO PATCH & REPAIR ANY ITEMS DAMAGED DURING CONSTRUCTION ACTIVITIES TO FINISH STATE & MATCHING ADJACENT MATERIALS.
- PROVIDE & INSTALL BLOCKING IN WALL FOR ALL EQUIPMENT, FIXTURES, ACCESSORIES AS REQUIRED, COORDINATE W/ OWNER FOR SPECIALTY & OWNER PROVIDED EQUIPMENT.
- ALL GYPSUM BOARD SHALL BE TYPE "X", USE WATER RESISTANT GYPSUM BOARD IN RESTROOM.
- REFER TO MECHANICAL, PLUMBING, & ELECTRICAL DRAWINGS FOR ADDITIONAL BOLLARD LOCATIONS.
- ALL DOORS IN STUD WALLS ARE TO BE LOCATED 4" FROM THE WALL TO THE EDGE OF FRAME UNLESS NOTED OTHERWISE.
- ALL OPENINGS AND CORNERS IN CMU WALLS TO RECEIVE 1" BULLNOSE.

Legend

SYMBOL DESIGNATIONS	
(XXX)	ROOM NAME
---	DOOR NUMBER
---	ROOM NUMBER
◇	WINDOW TYPE
Xs	WALL TYPE

WALL TYPES	
=====	INDICATES EXTERIOR WALLS TO BE PEMB FRAMING, INTERIOR WALLS TO BE 1/2" METAL STUD FRAMING UNLESS NOTED OTHERWISE. ALL STUDS @ 16" O.C. SHEATHED WITH 5/8" TYPE "X" GYPSUM BOARD AND SOUND ATTENUATION INSULATION
[6s]	INDICATES 6" METAL STUD
-----	INDICATES 7 1/2" CMU WALL, FULL HEIGHT CONCRETE MASONRY UNITS, EXTEND TO UNDERSIDE OF STRUCTURE WHERE OCCURS.
=====	INDICATES 3 1/2" FULL HEIGHT BRICK VENER

NOT FOR CONSTRUCTION

Revisions:
Issue Date: August 13, 2019
Sycamore Township Equipment Storage Facility

8540 Kenwood Road
Sycamore Township, Ohio 45236

Floor Plans

Project No.

A-101

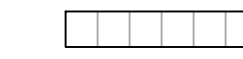
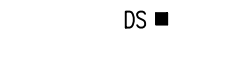


17120

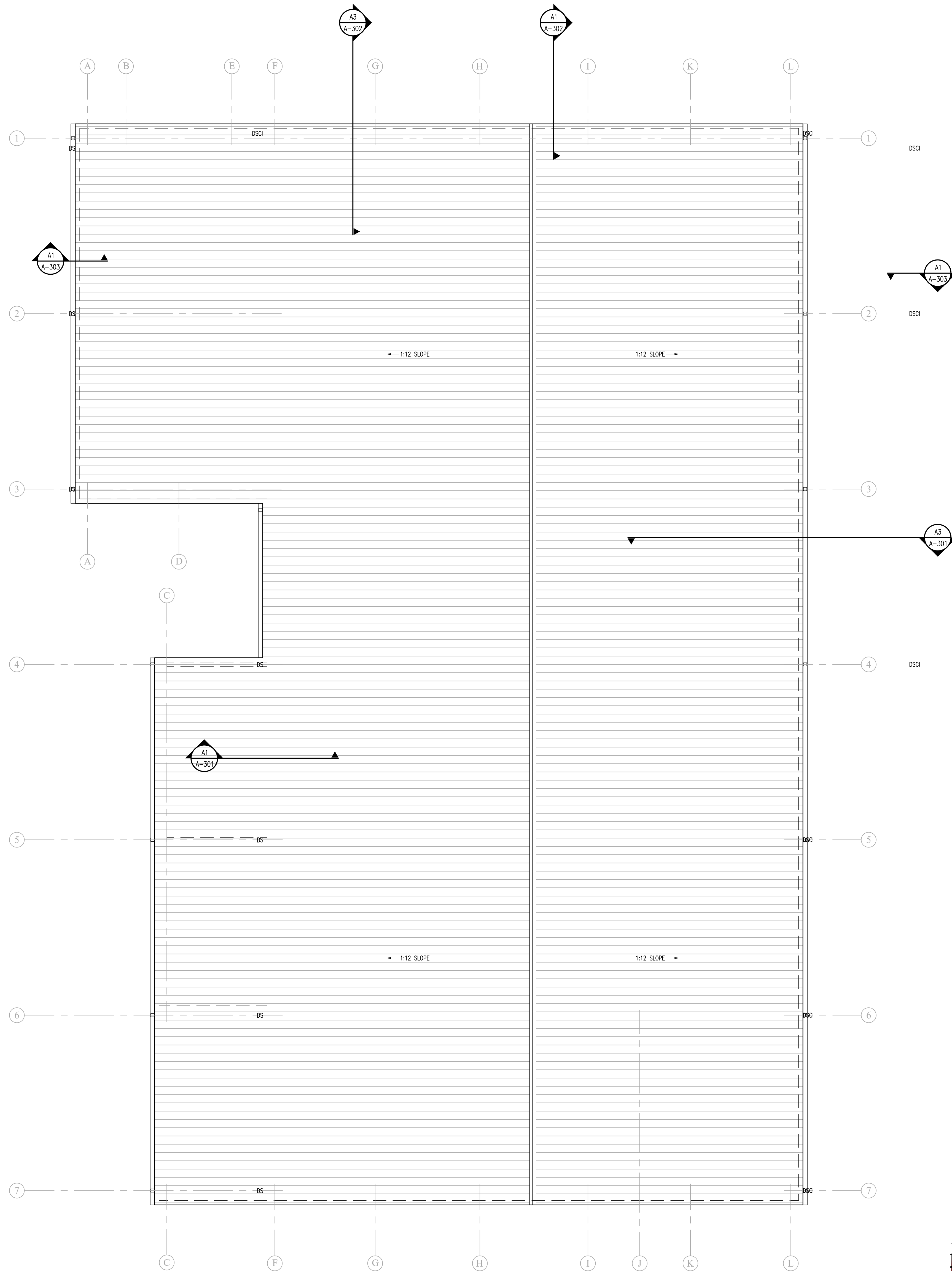
**NOT FOR
 CONSTRUCTION**

General Roof Plan Notes

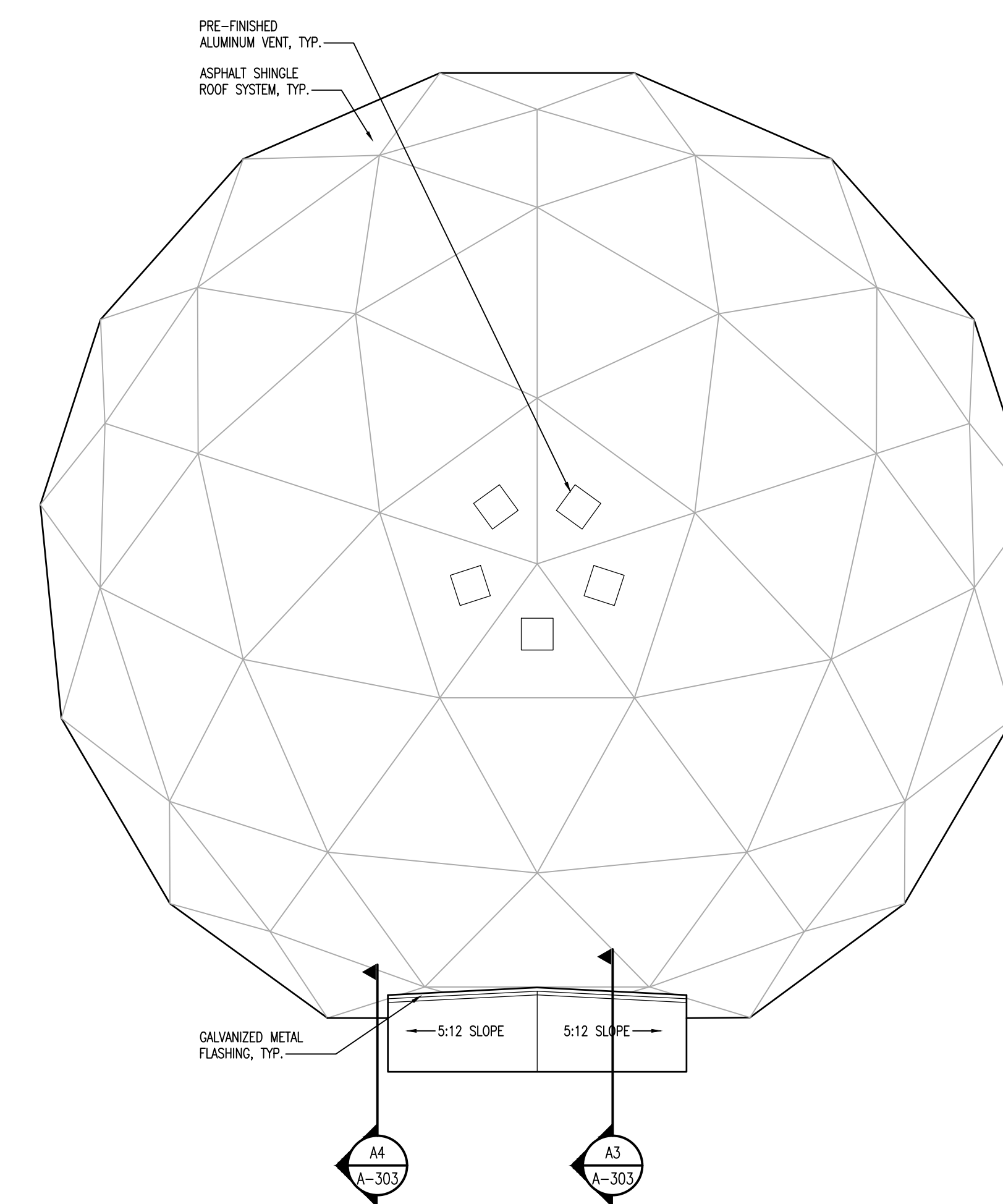
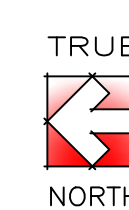
- DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS ARE SHOWN FOR THE SOLE PURPOSE OF INDICATING THEIR RESPECTIVE LOCATIONS. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR SIZES, TYPES, AND OTHER REQUIREMENTS.
- ALL DIMENSIONS ARE TO FACE OF MASONRY OR STUD UNLESS NOTED OTHERWISE.
- ALL DOWNSPOUTS ARE TO BE INTO THE PERIMETER DRAINAGE SYSTEM. PROVIDE CAST IRON DOWNSPOUT BOOTS AT EACH LOCATION INDICATED. REFER TO SPECIFICATIONS FOR DETAILS.
- ALL MECHANICAL, PLUMBING AND ELECTRICAL ROOF PENETRATIONS ARE TO BE PAINTED TO MATCH THE ROOF COLOR.

Legend

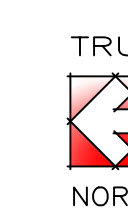
-  STANDING SEAM METAL ROOF SYSTEM
-  6x6 PREFINISHED DOWNSPOUT WITH PVC BOOT
-  6x6 PREFINISHED DOWNSPOUT WITH CAST IRON BOOT
-  OUTLINE OF BUILDING/STRUCTURE



A1 Maintenance Facility Roof Plan
 1/8" = 1'-0"



A4 Salt Dome Roof Plan
 1/8" = 1'-0"



Revisions:
 Issue Date: August 13, 2019

**Sycamore Township
 Equipment Storage Facility**

8540 Kenwood Road
 Sycamore Township, Ohio 45236

Roof Plans

Project No.

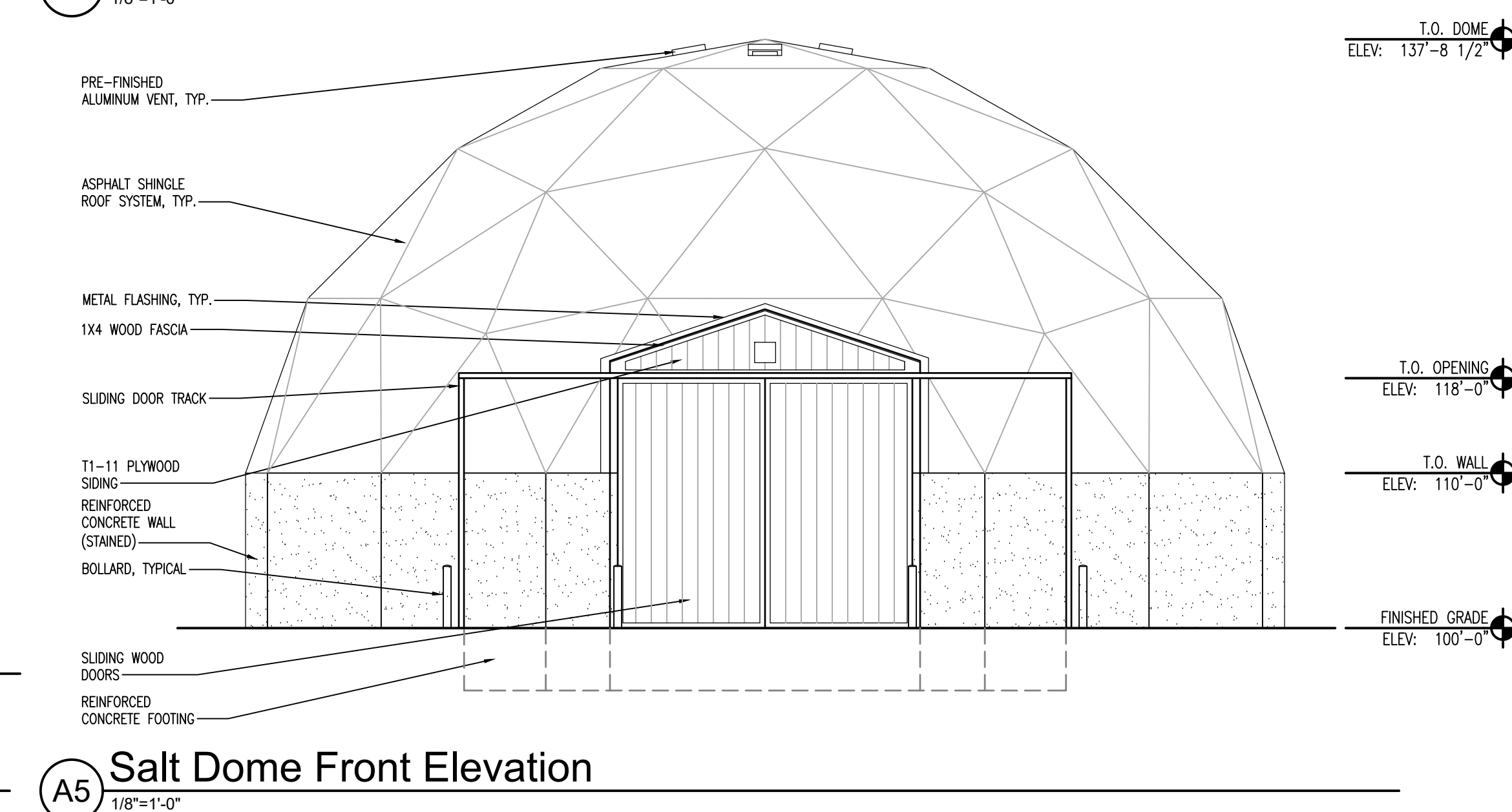
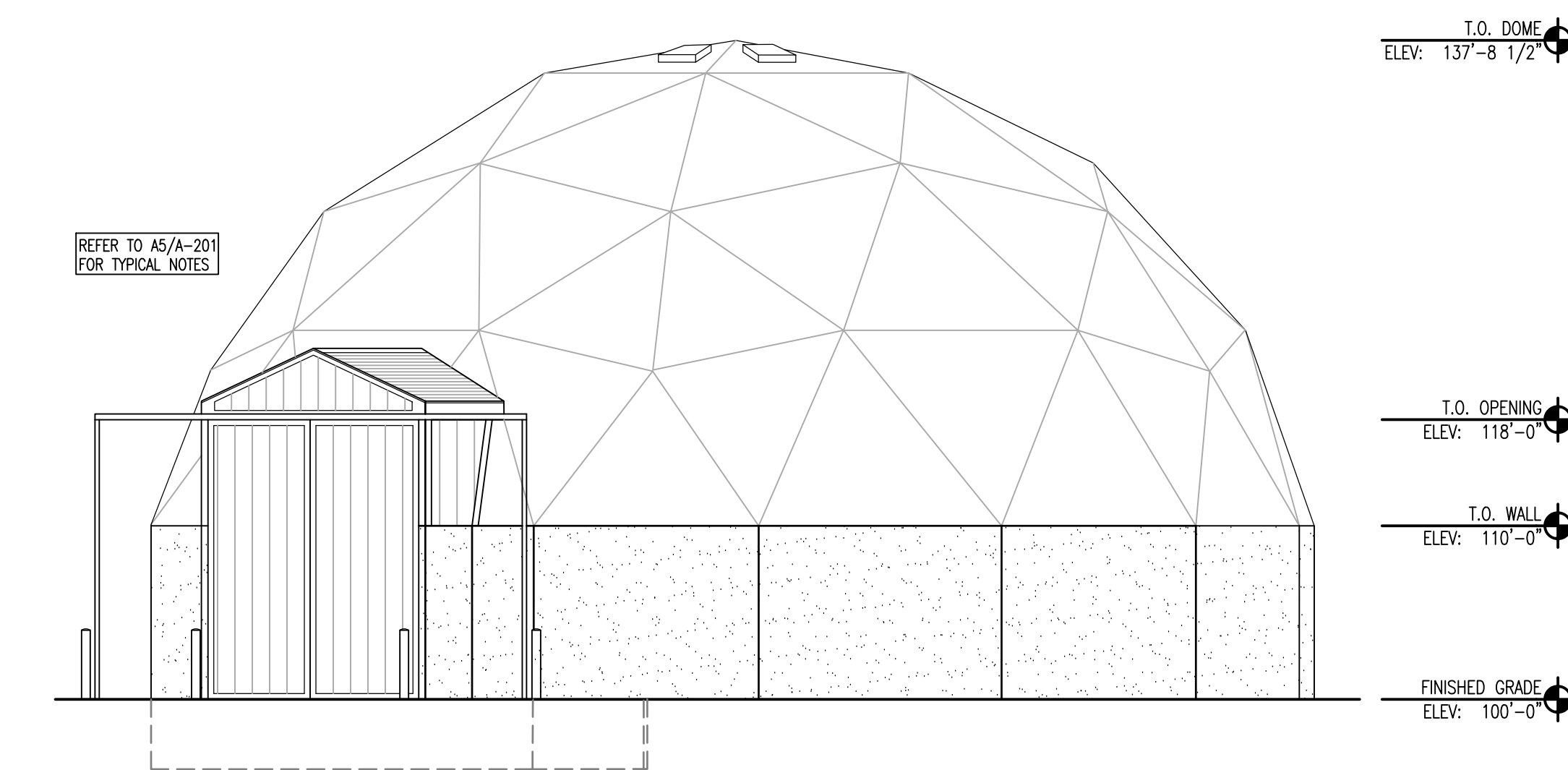
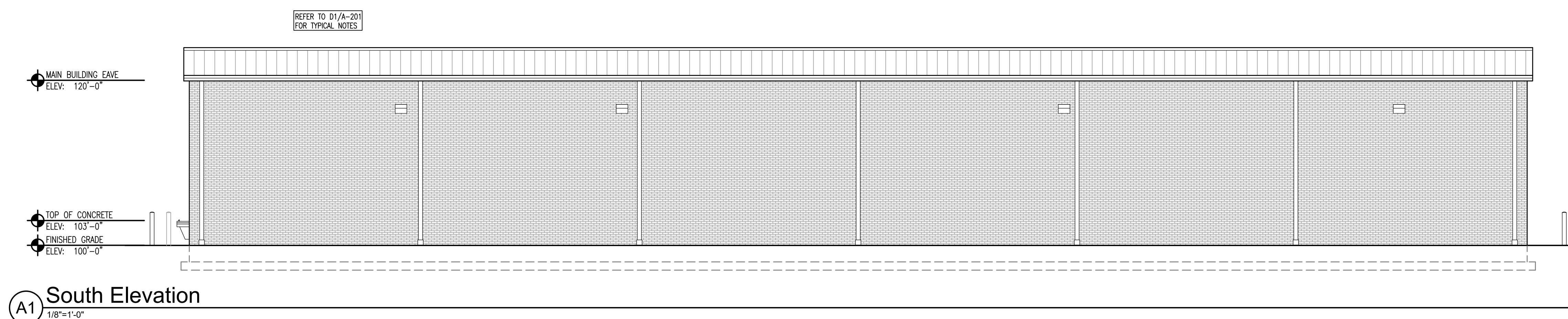
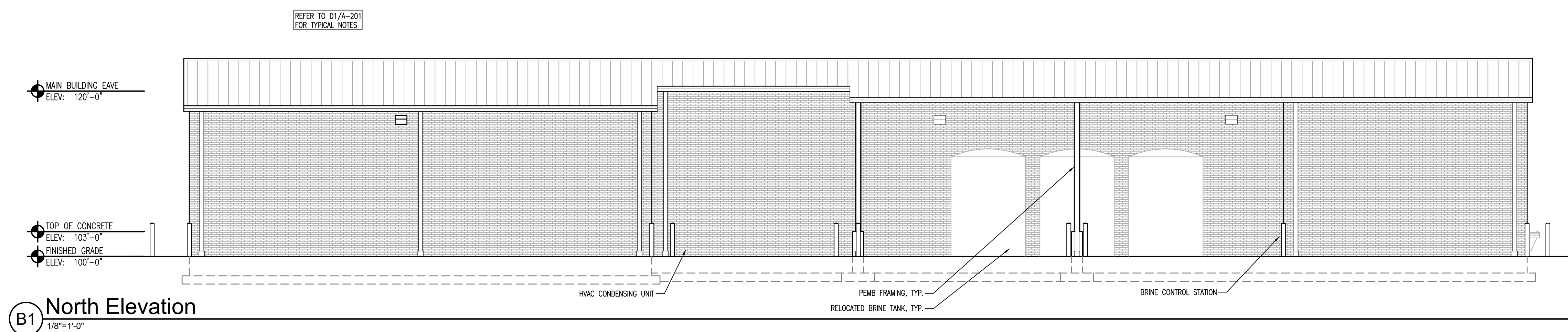
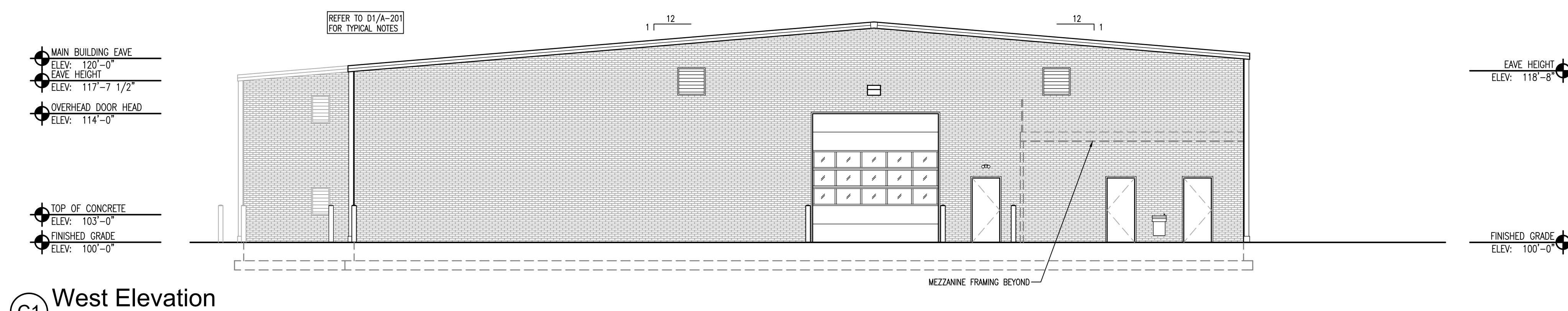
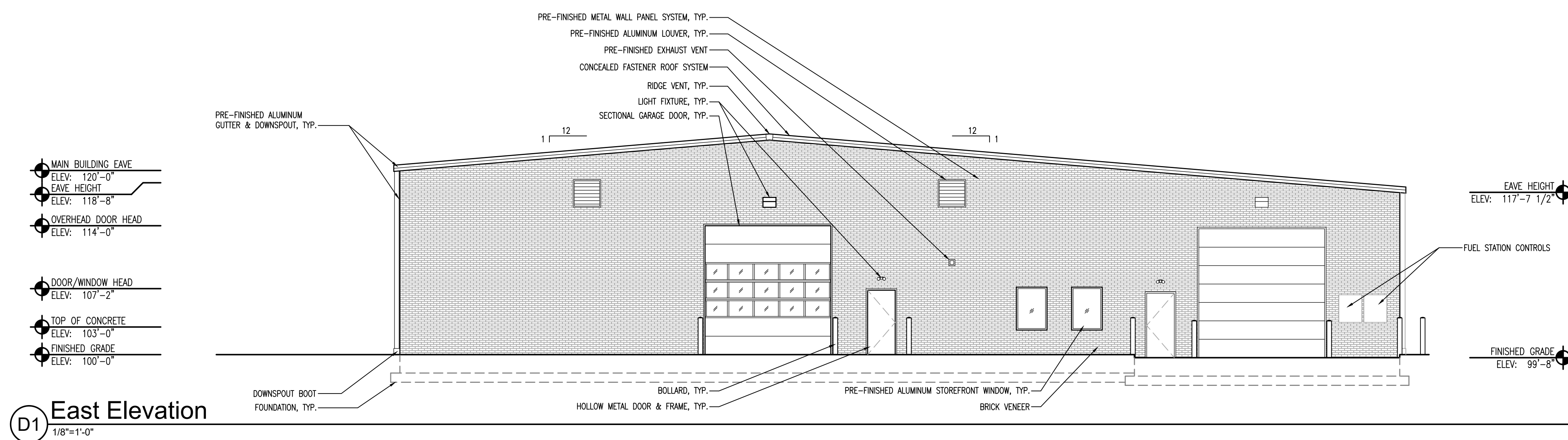
17120

A-102

NOT FOR
CONSTRUCTION

General Notes

- DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- ALL DIMENSIONS ARE TO FACE OF STUDS OR CENTERLINE OF STRUCTURAL STEEL UNLESS OTHERWISE INDICATED. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT IF ANY DISCREPANCIES ARISE.
- REFER TO FLOOR PLANS FOR DOOR NUMBERS & WINDOW TYPES.
- SEE FLOOR PLANS & WALL SECTIONS FOR IDENTIFYING AND DETERMINING THE PLACEMENT OF EXTERIOR MATERIALS & FINISHES RENDERED IN THE BUILDING ELEVATIONS.
- ELECTRICAL AND COMMUNICATIONS ITEMS ARE SHOWN FOR GRAPHIC PURPOSES ONLY. REFER THEIR RESPECTIVE DRAWINGS FOR LOCATIONS.



Revisions:
 Issue Date: August 13, 2019
**Sycamore Township
 Equipment Storage Facility**
 8540 Kenwood Road
 Sycamore Township, Ohio 45236

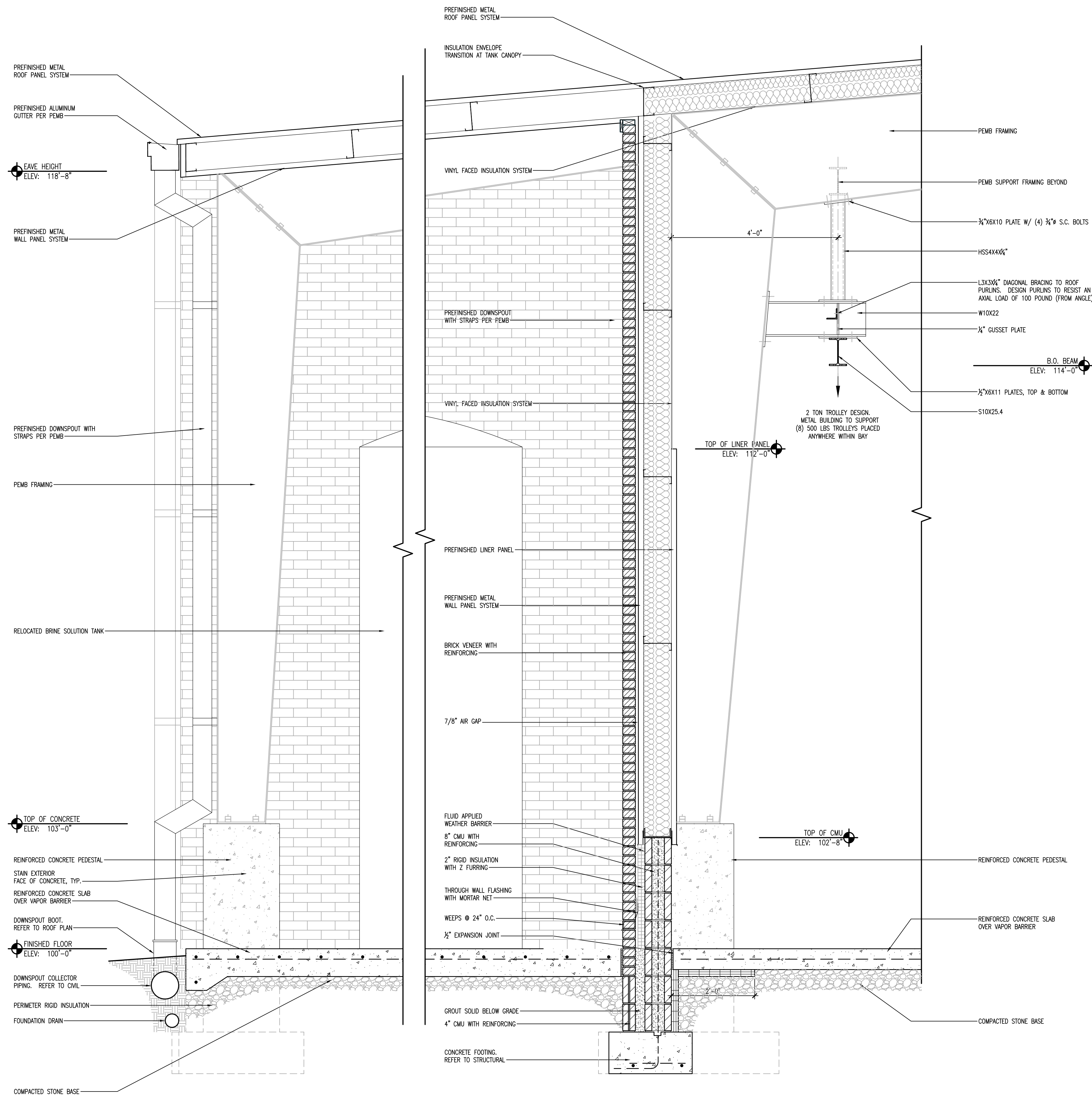
Exterior Elevations

Project No.

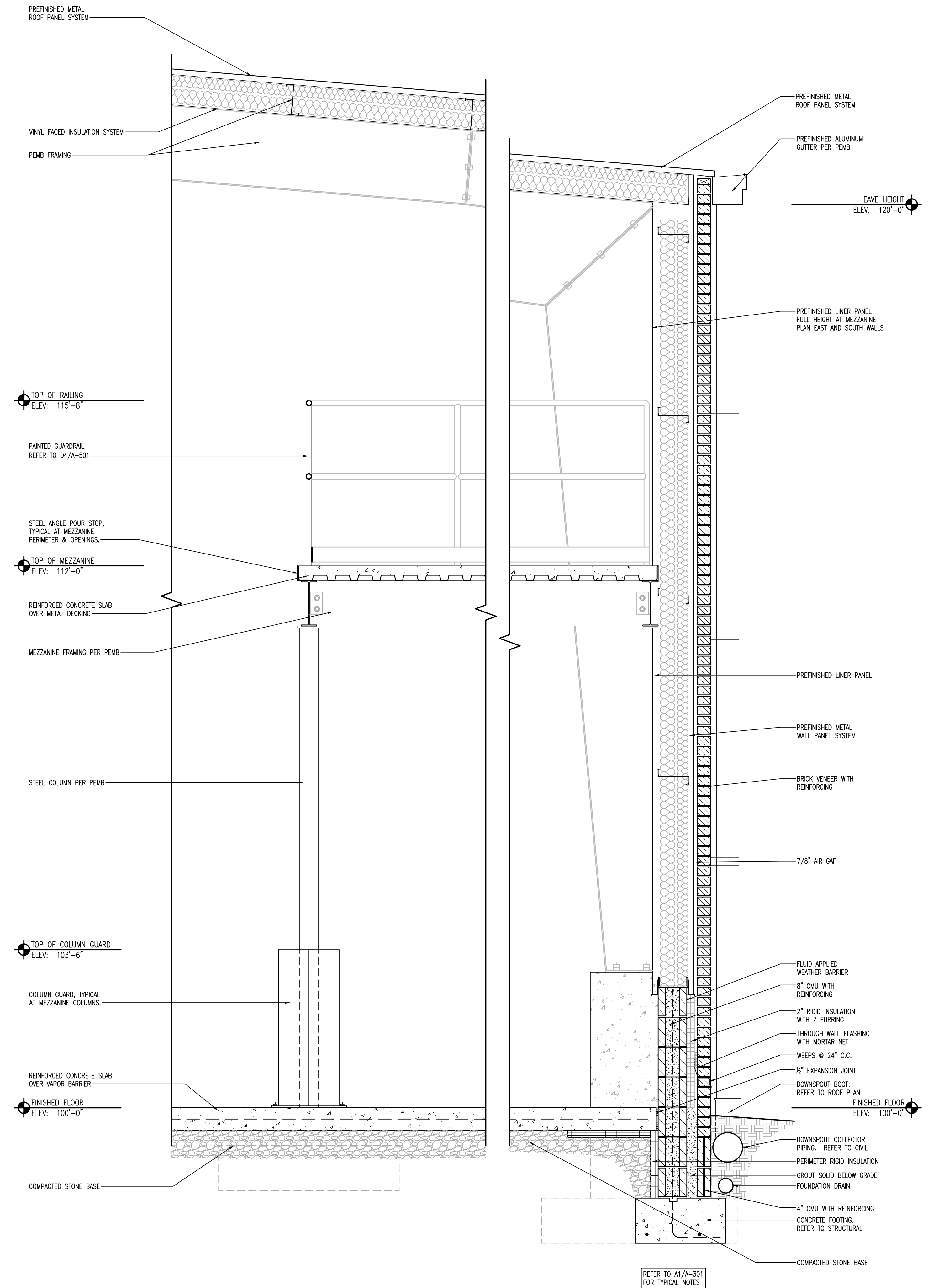
17120

A-201

NOT FOR
CONSTRUCTION



A1 Wall Section - Typical
3/4"=1'-0"



A3 Wall Section
3/4"=1'-0"

Revisions:
Issue Date: August 13, 2019

Sycamore Township
Equipment Storage Facility

8540 Kenwood Road
Sycamore Township, Ohio 45236

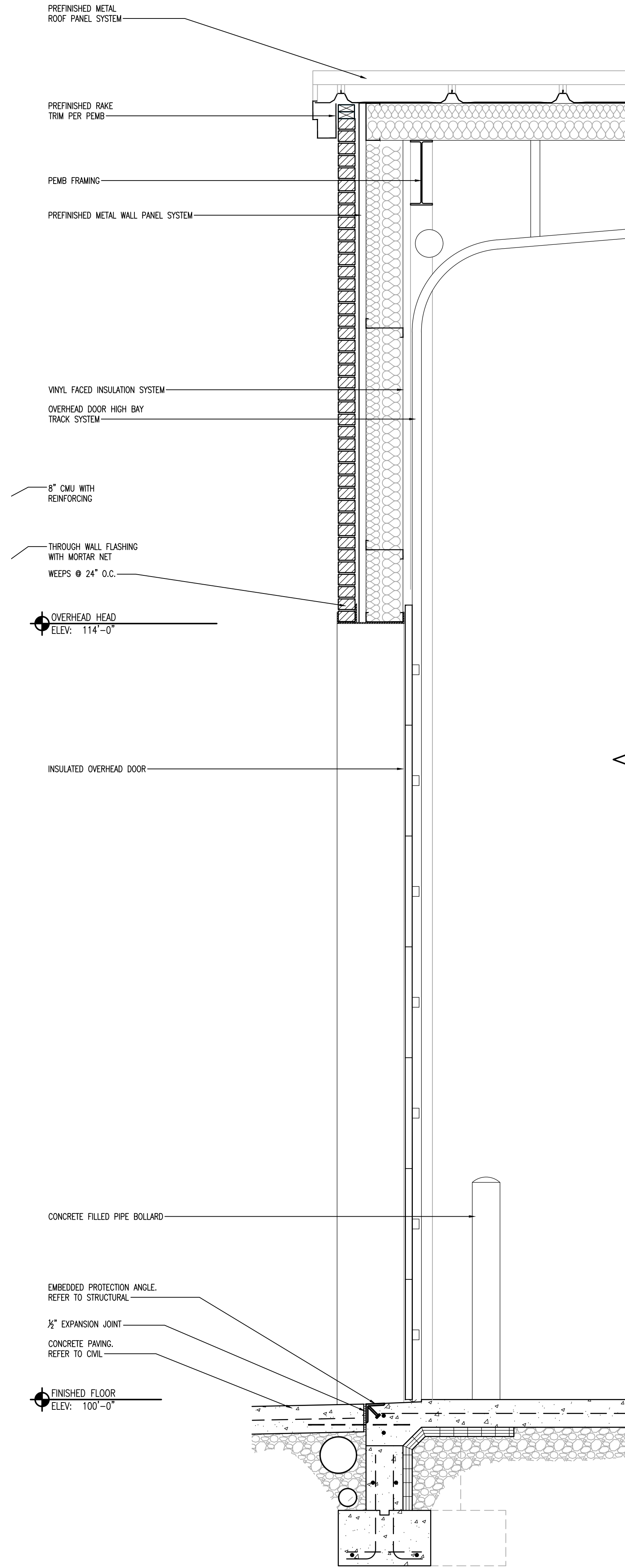
Sections

Project No.

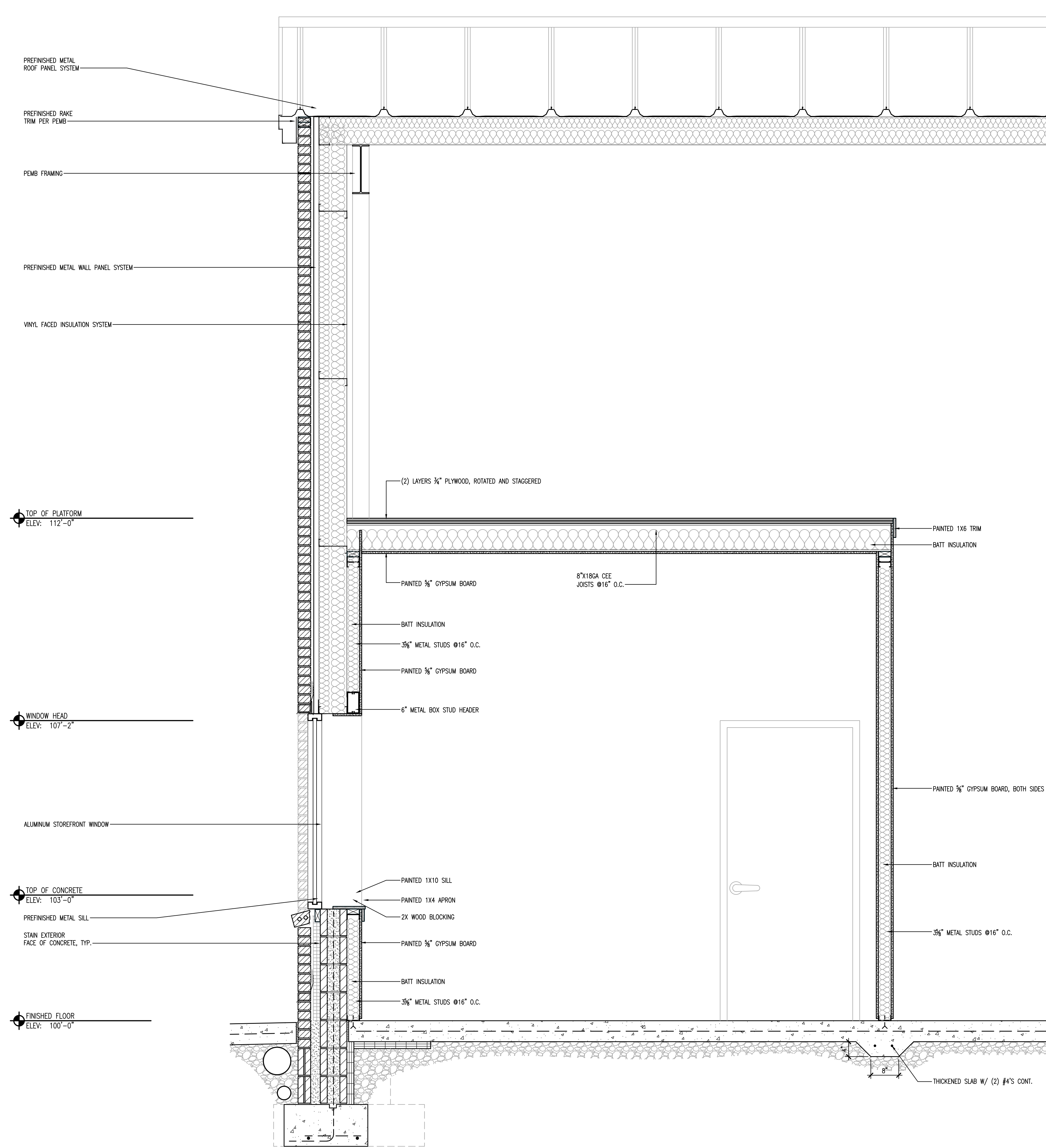
A-301

17120

NOT FOR
CONSTRUCTION



A1 Wall Section
3/4"=1'-0"



A3 Wall Section
3/4"=1'-0"

Revisions:
Issue Date: August 13, 2019

Sycamore Township
Equipment Storage Facility

8540 Kenwood Road
Sycamore Township, Ohio 45236

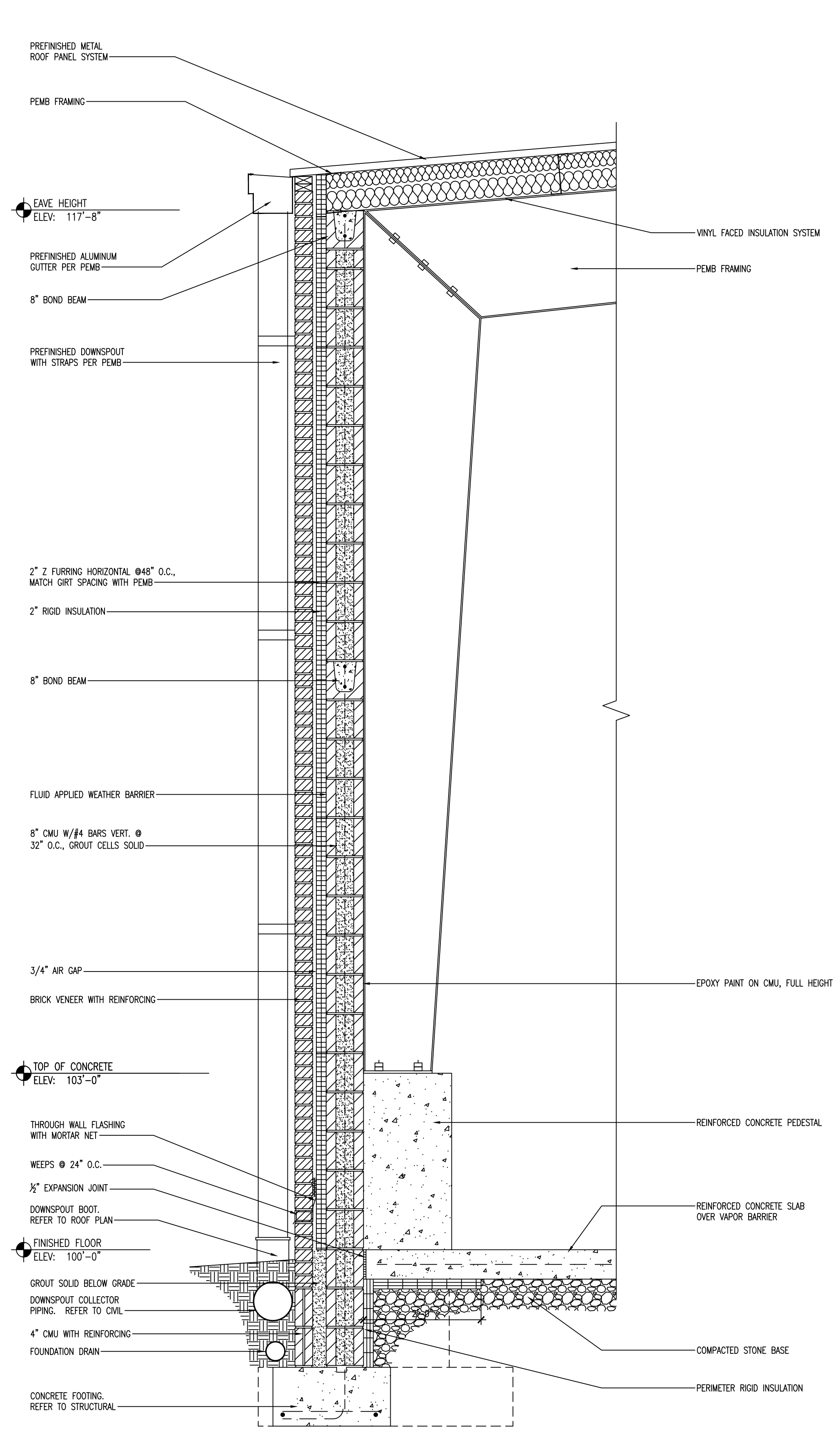
Sections

Project No.

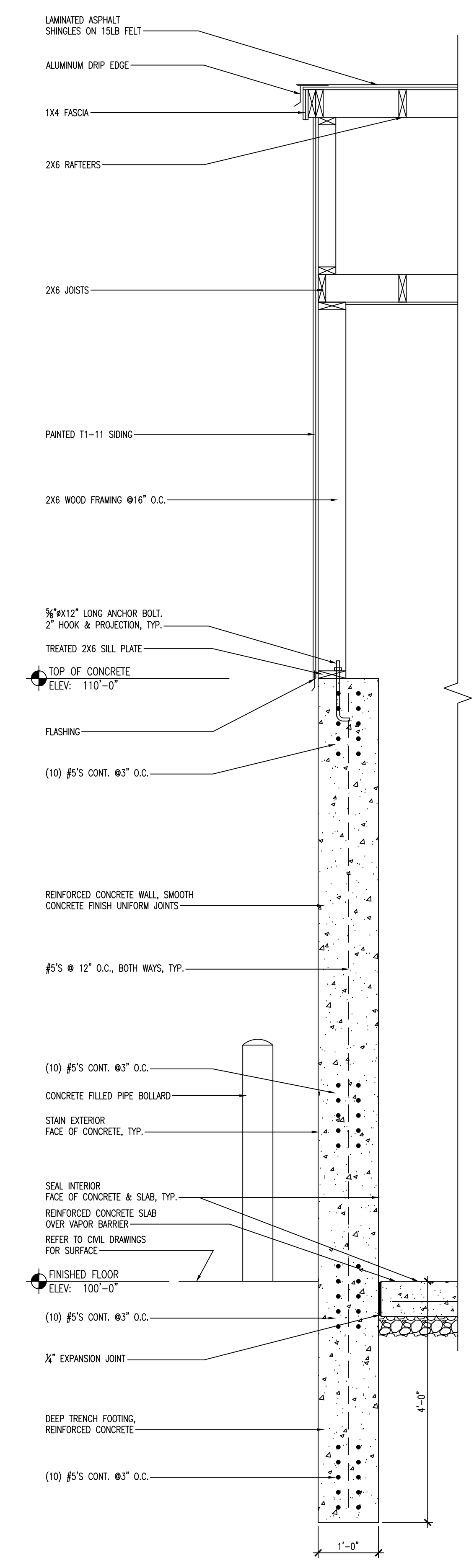
17120

A-302

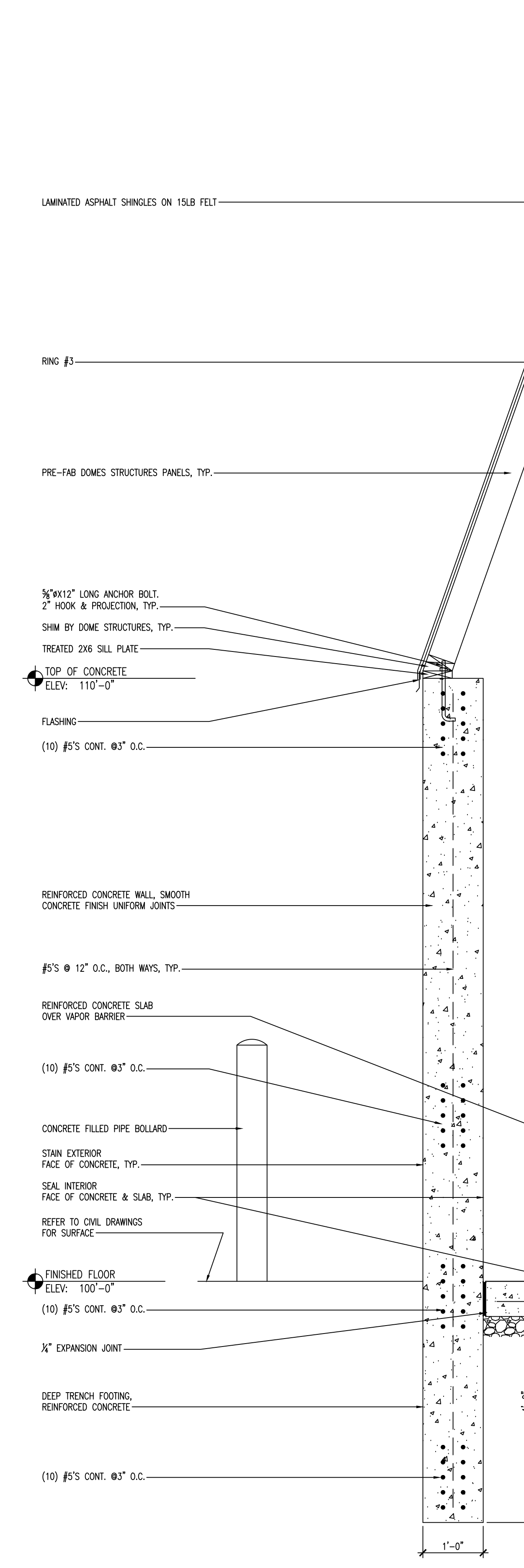
NOT FOR
CONSTRUCTION



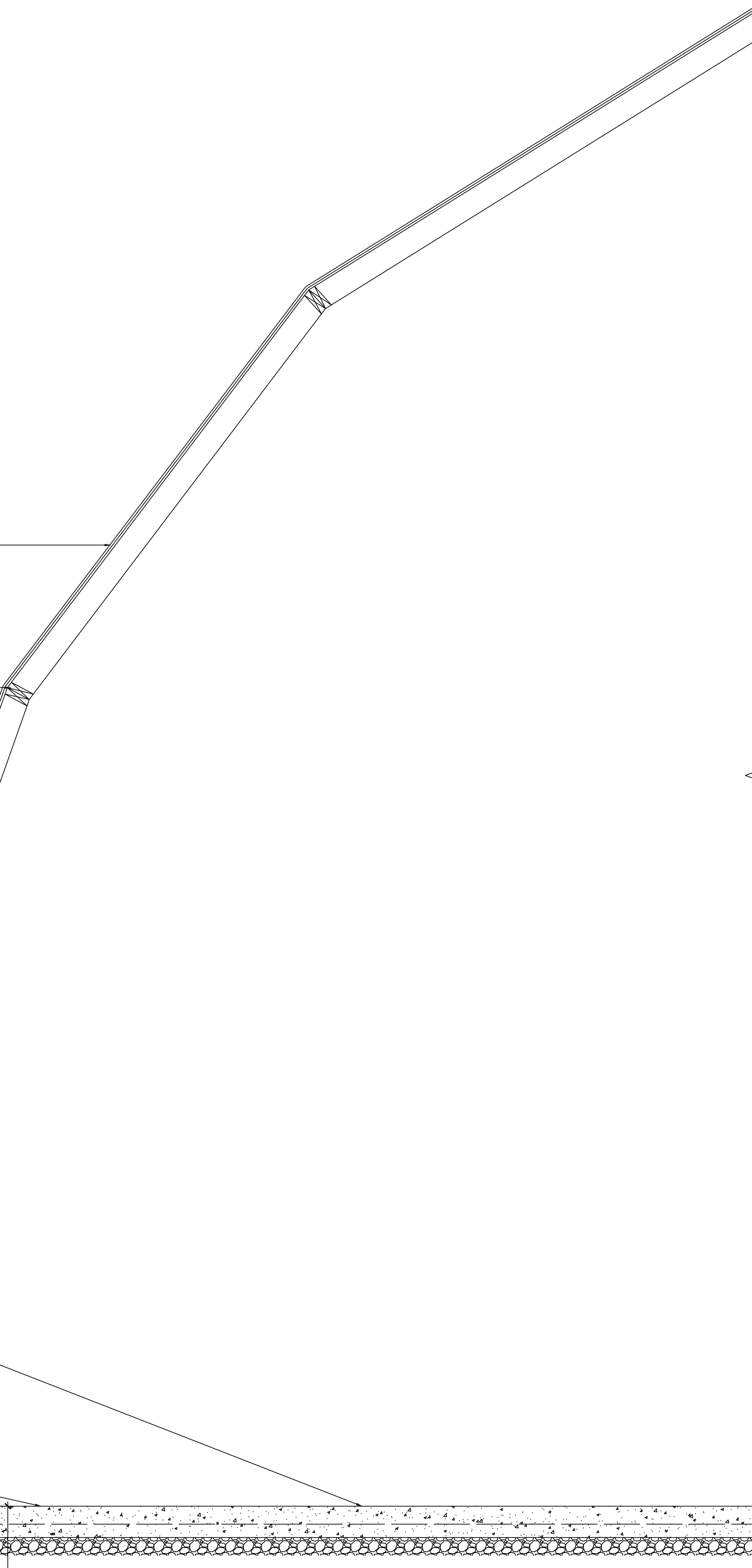
A1 Wall Section
3/4"=1'-0"



A3 Wall Section
3/4"=1'-0"



A4 Wall Section
3/4"=1'-0"



Revisions:
Issue Date: August 13, 2019

**Sycamore Township
Equipment Storage Facility**

8540 Kenwood Road
Sycamore Township, Ohio 45236

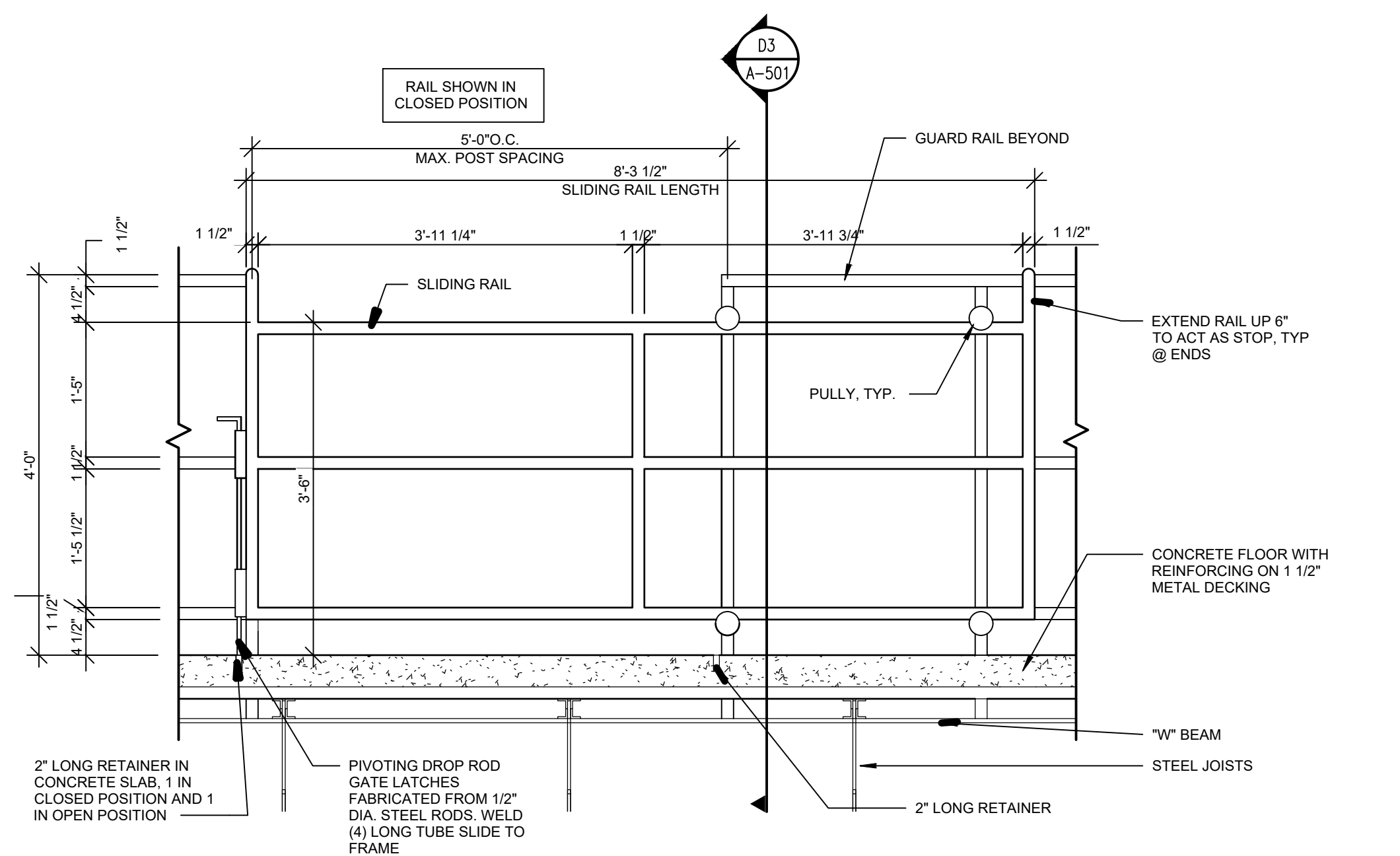
Sections

Project No.

A-303

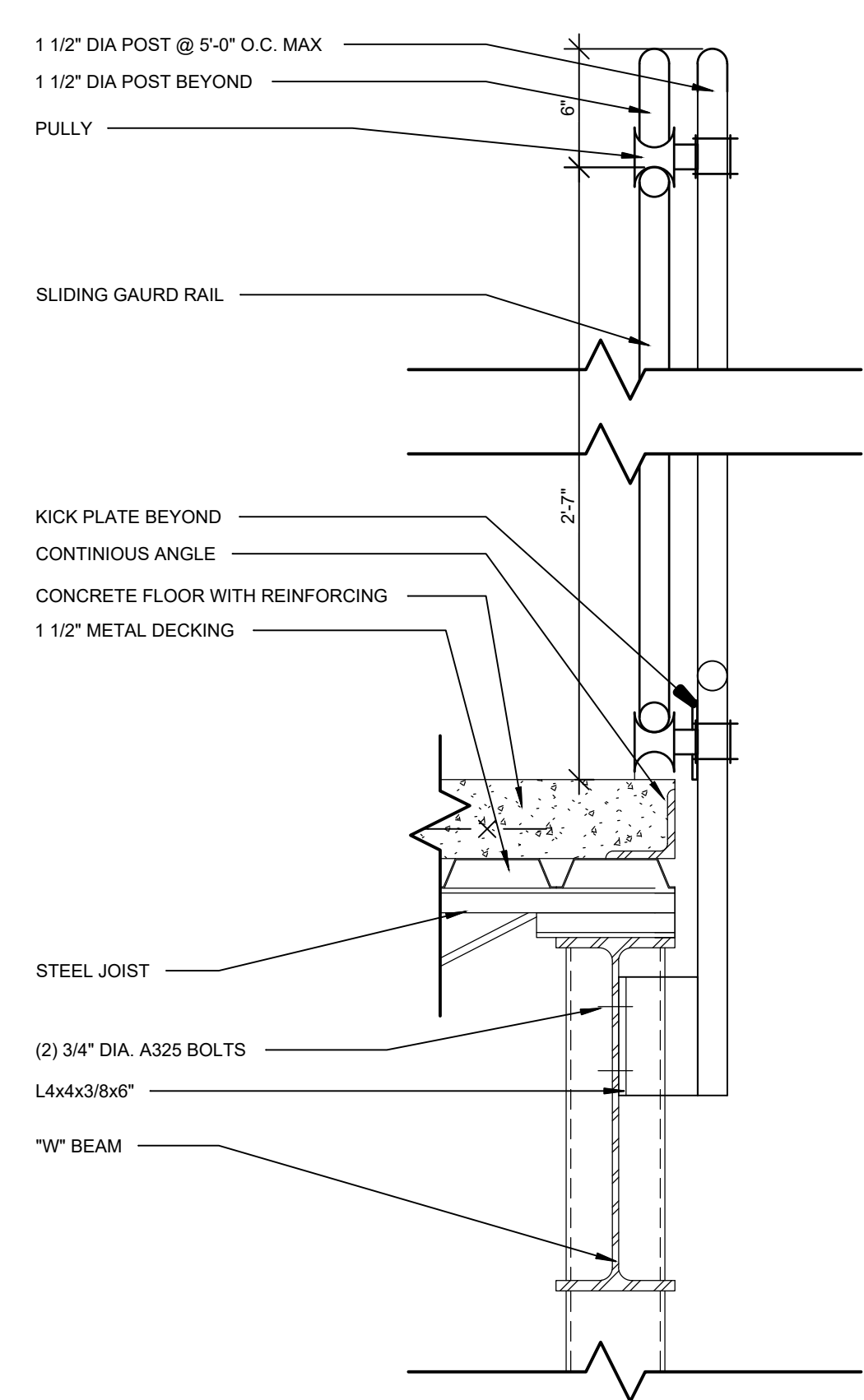
17120

NOT FOR
CONSTRUCTION



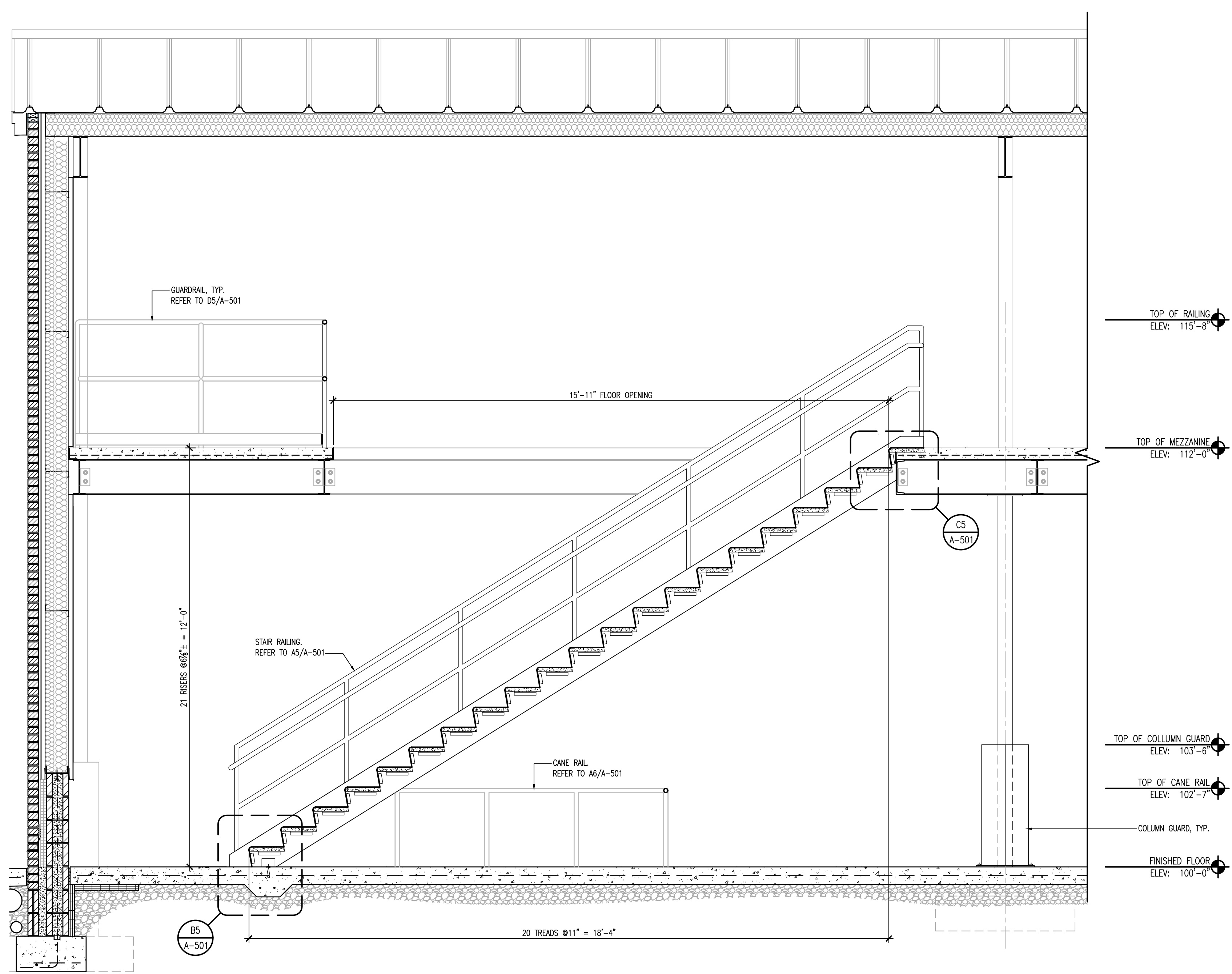
E1 Sliding Railing Elevation

3/4"=1'-0"



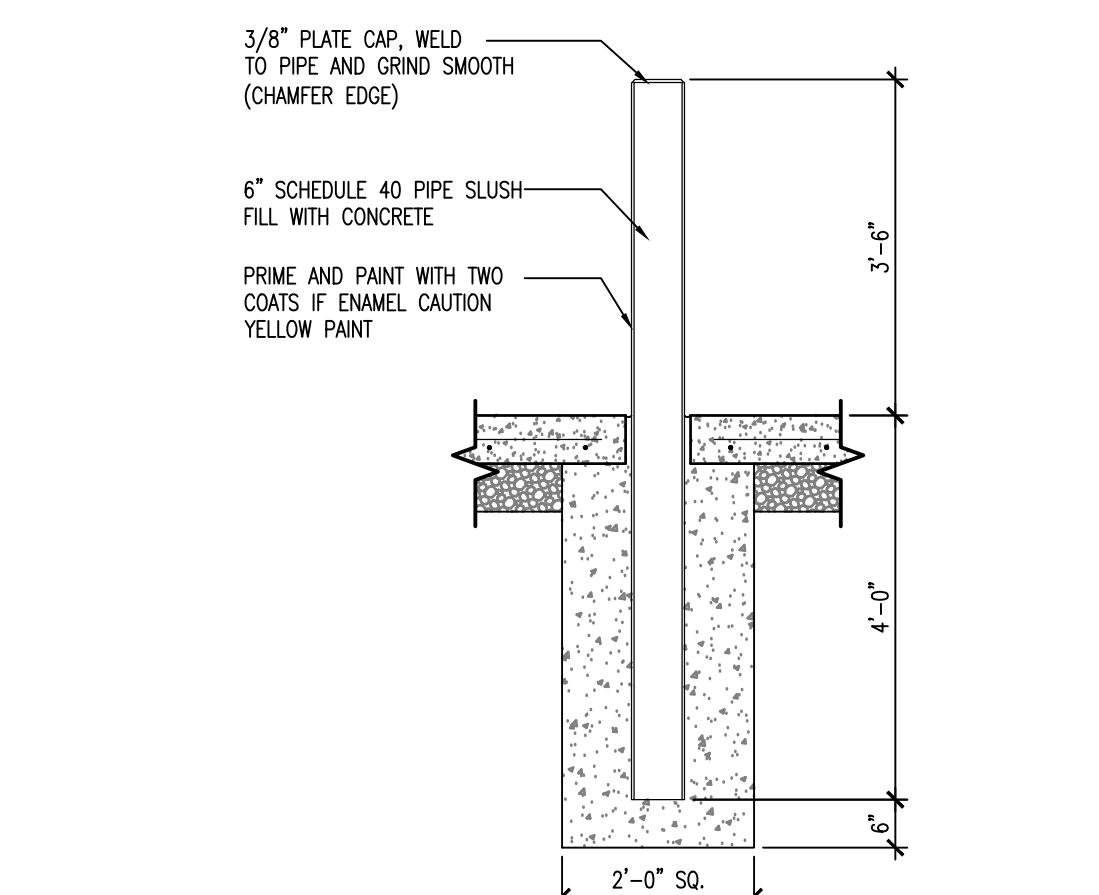
D3 Sliding Railing Section

1 1/2"=1'-0"



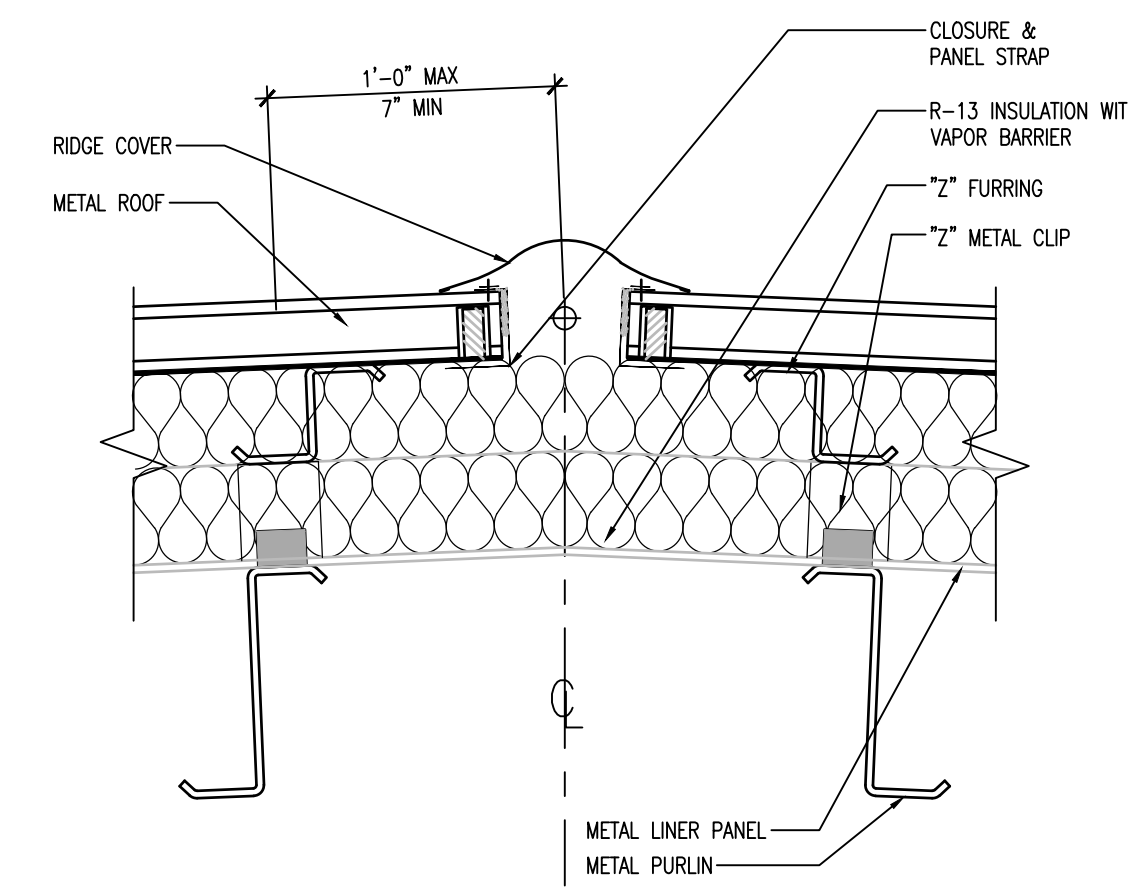
A1 Stair Section

1/2"=1'-0"



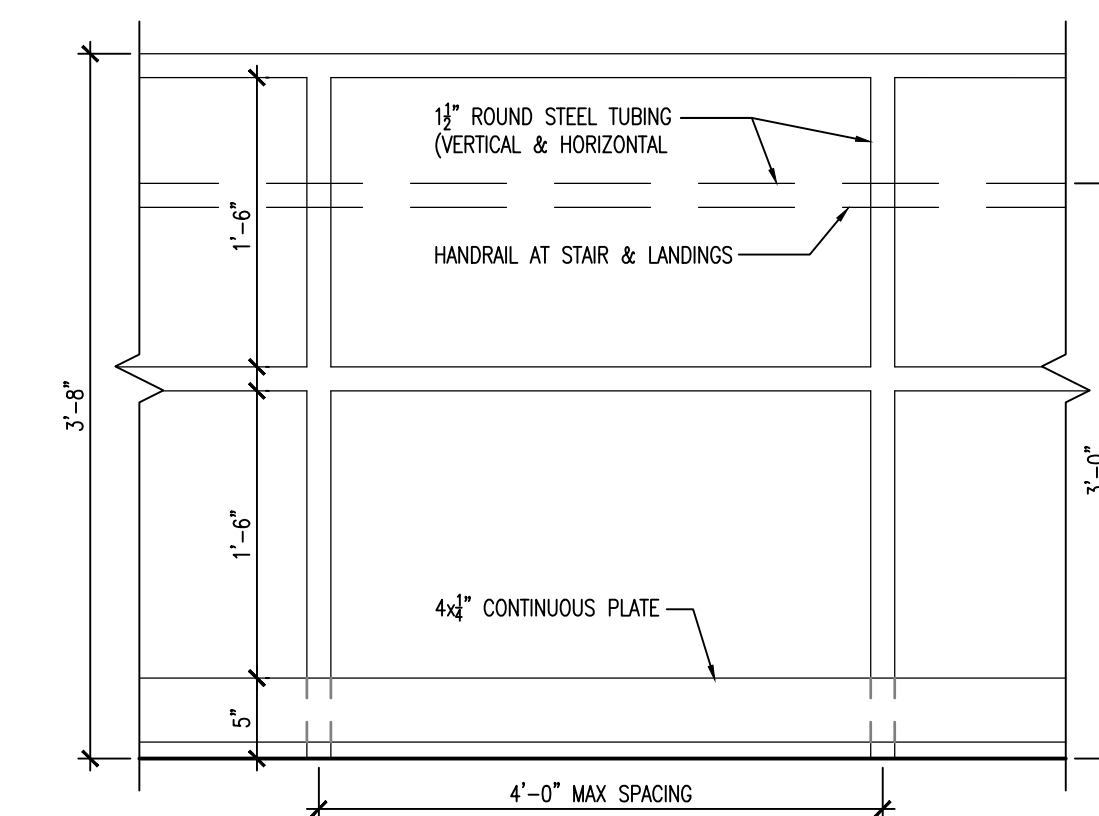
E5 Pipe Bollard Section

1/2"=1'-0"



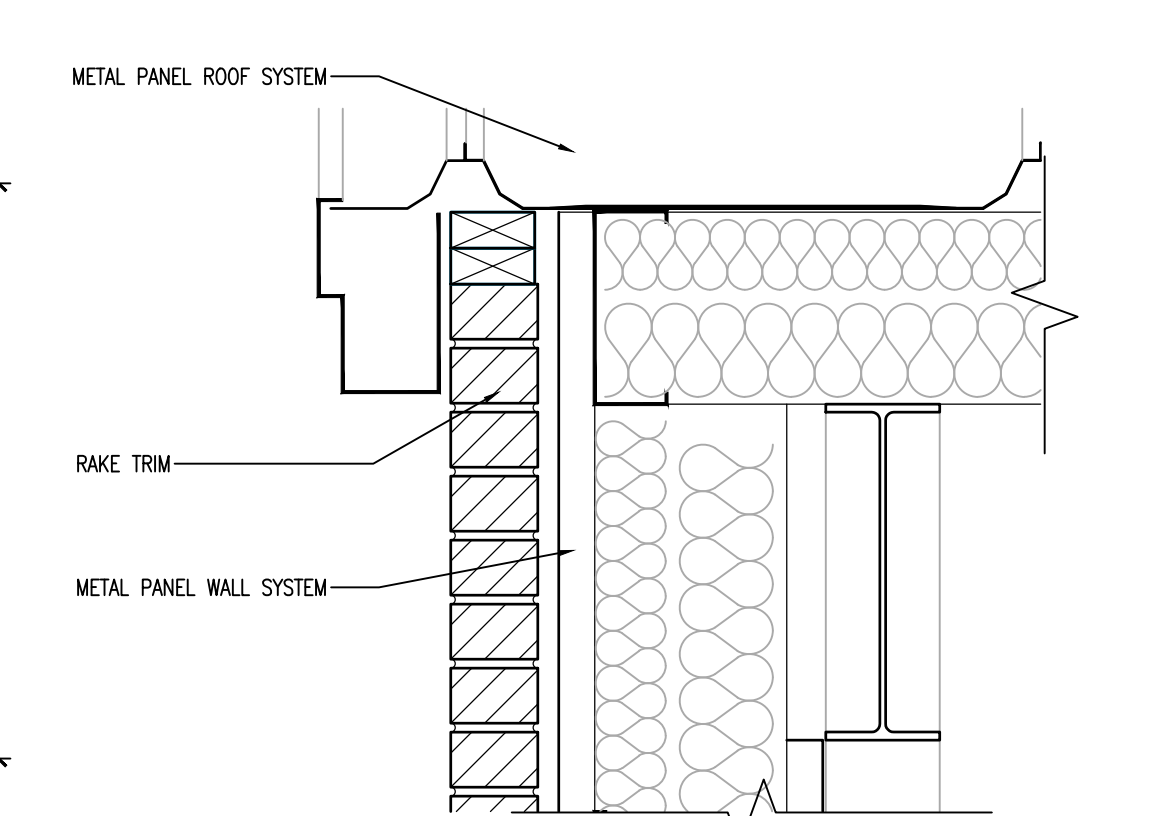
E6 Ridge Detail

1 1/2"=1'-0"



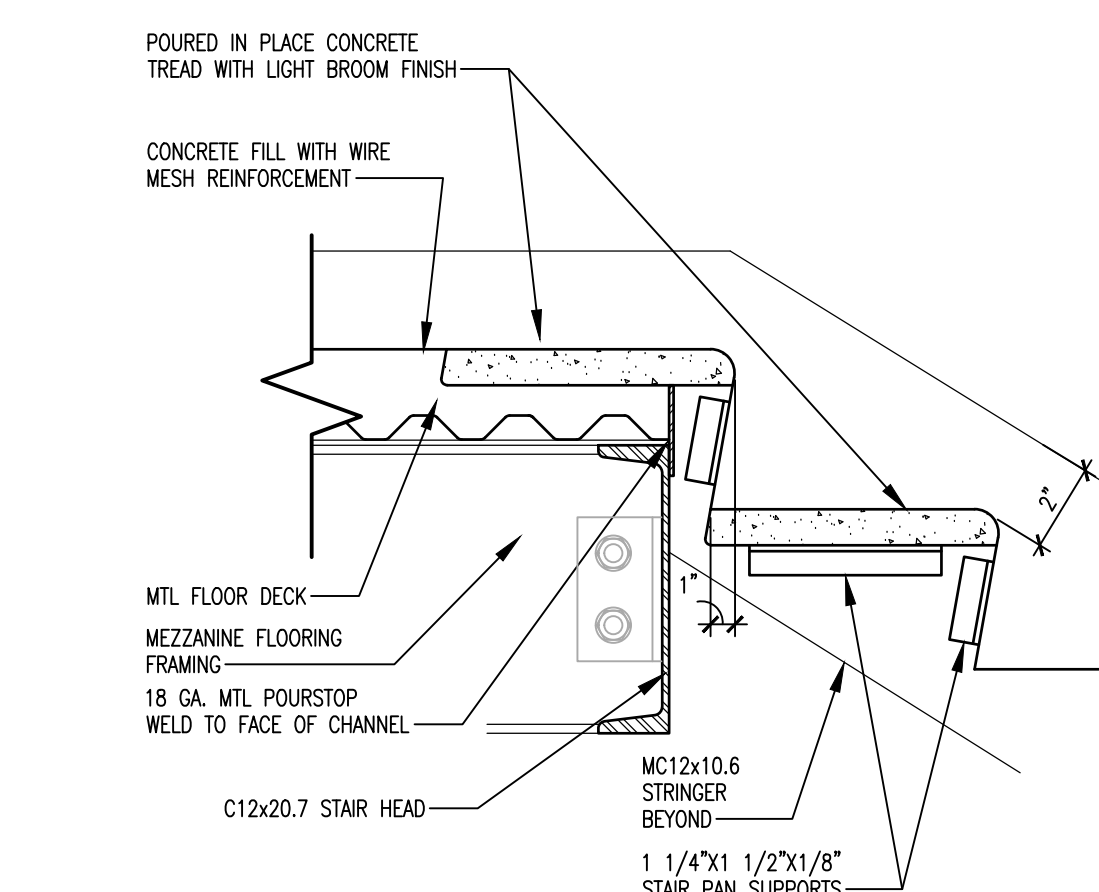
D5 Guardrail/Handrail Detail

1"=1'-0"



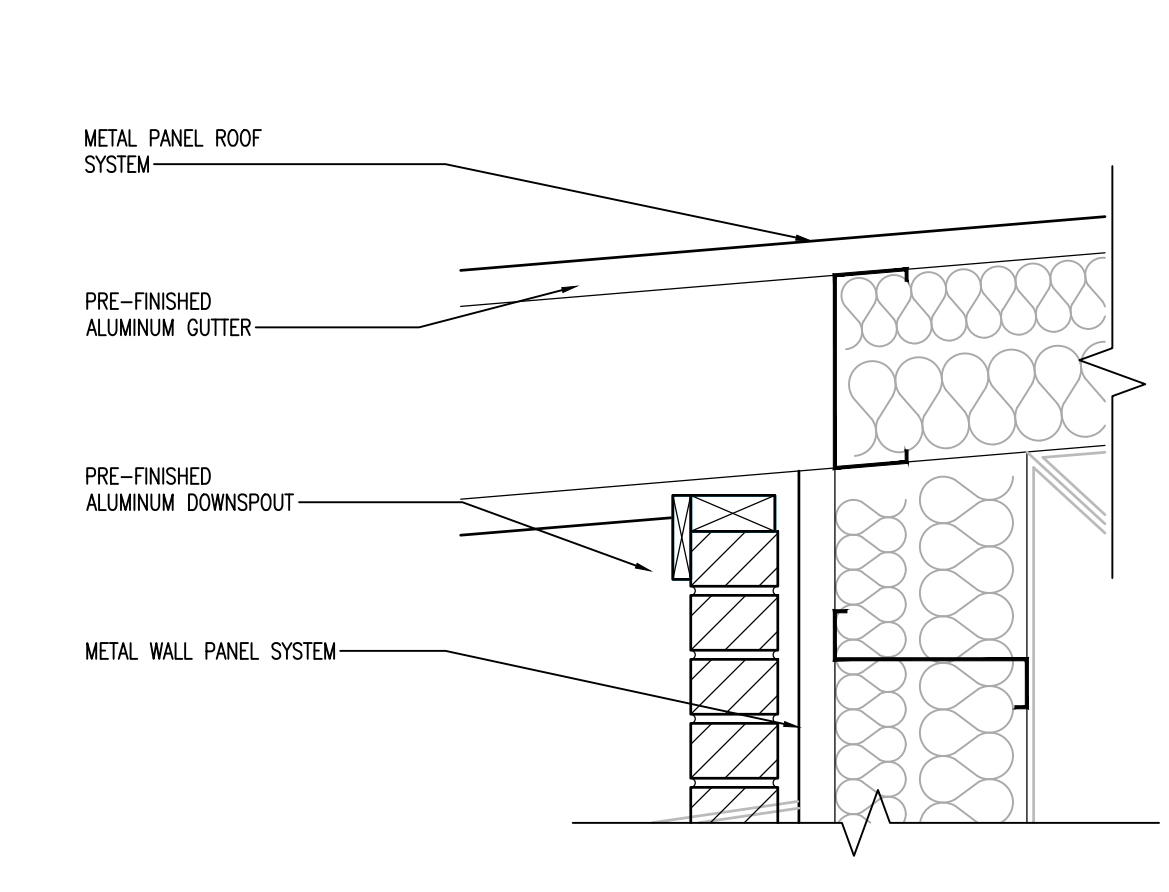
E6 Rake Edge Detail

1 1/2"=1'-0"



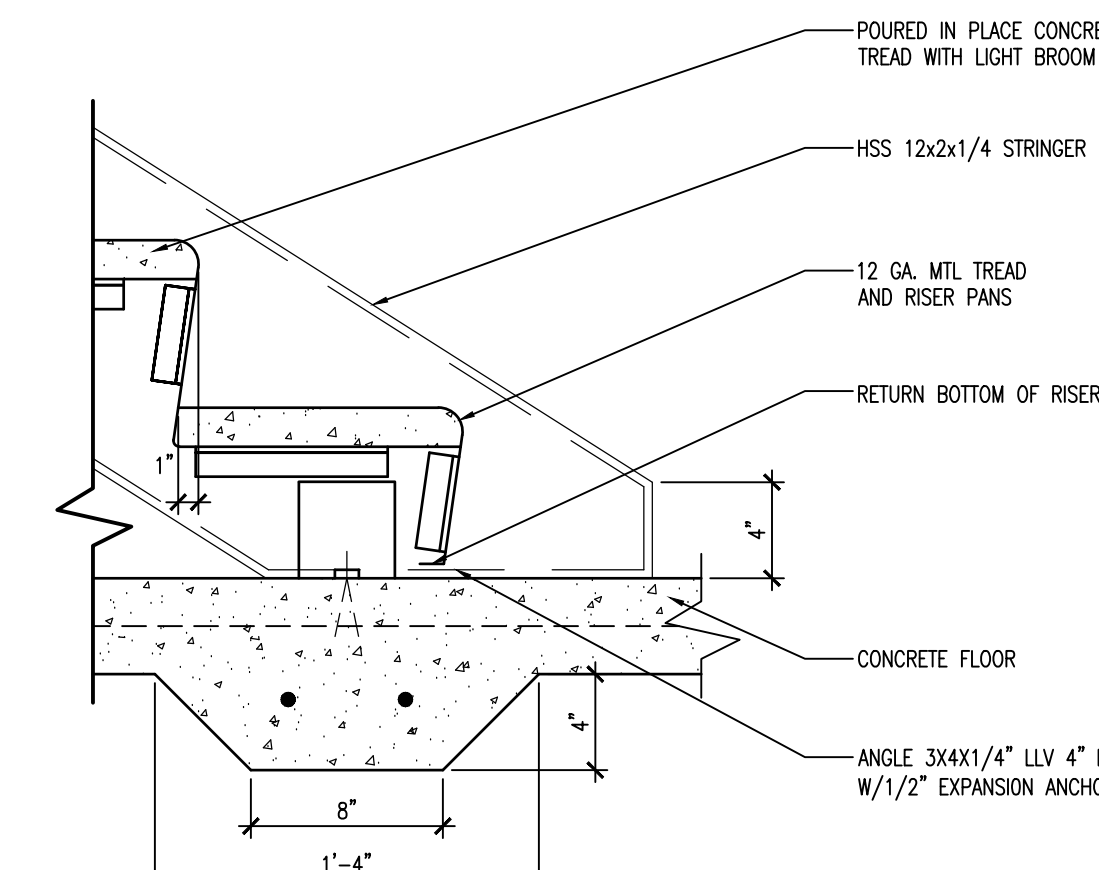
C5 Stair Header Detail

1 1/2"=1'-0"



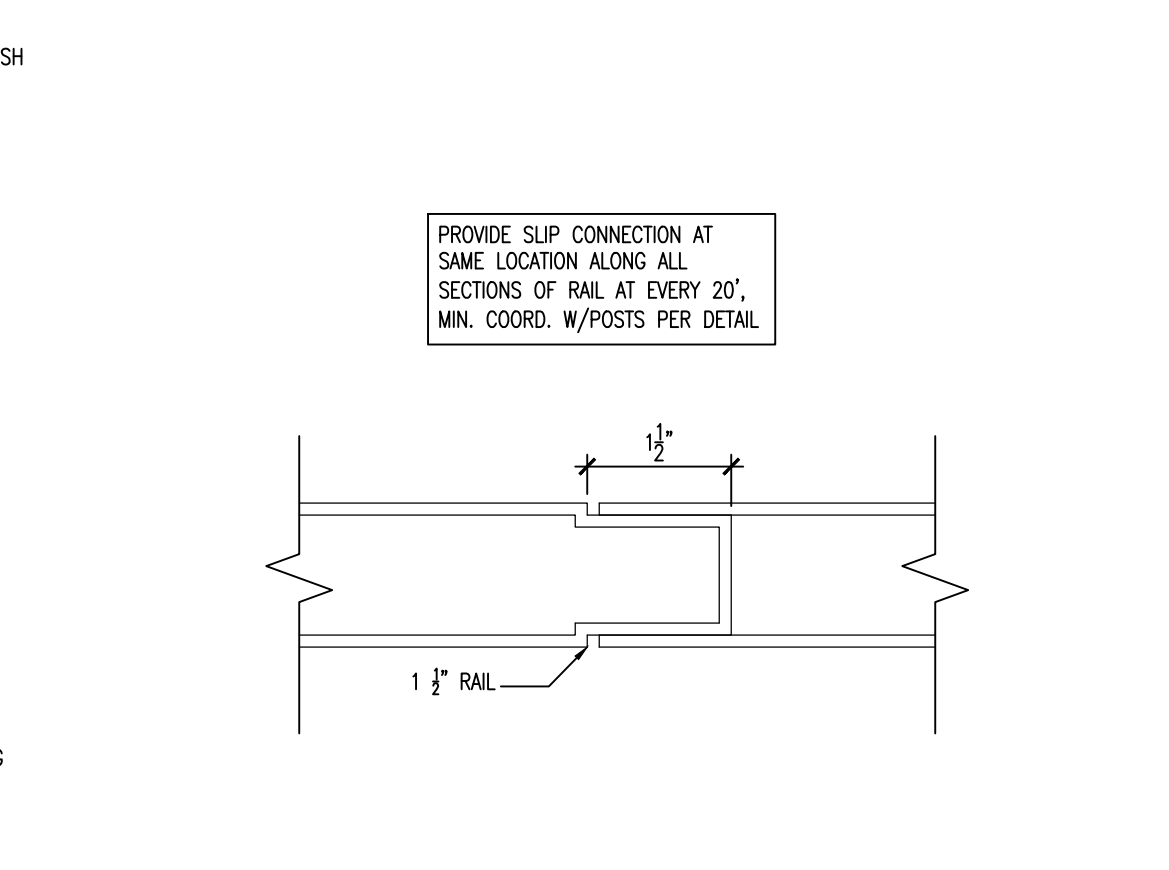
C6 Metal Panel Eave Detail

1 1/2"=1'-0"



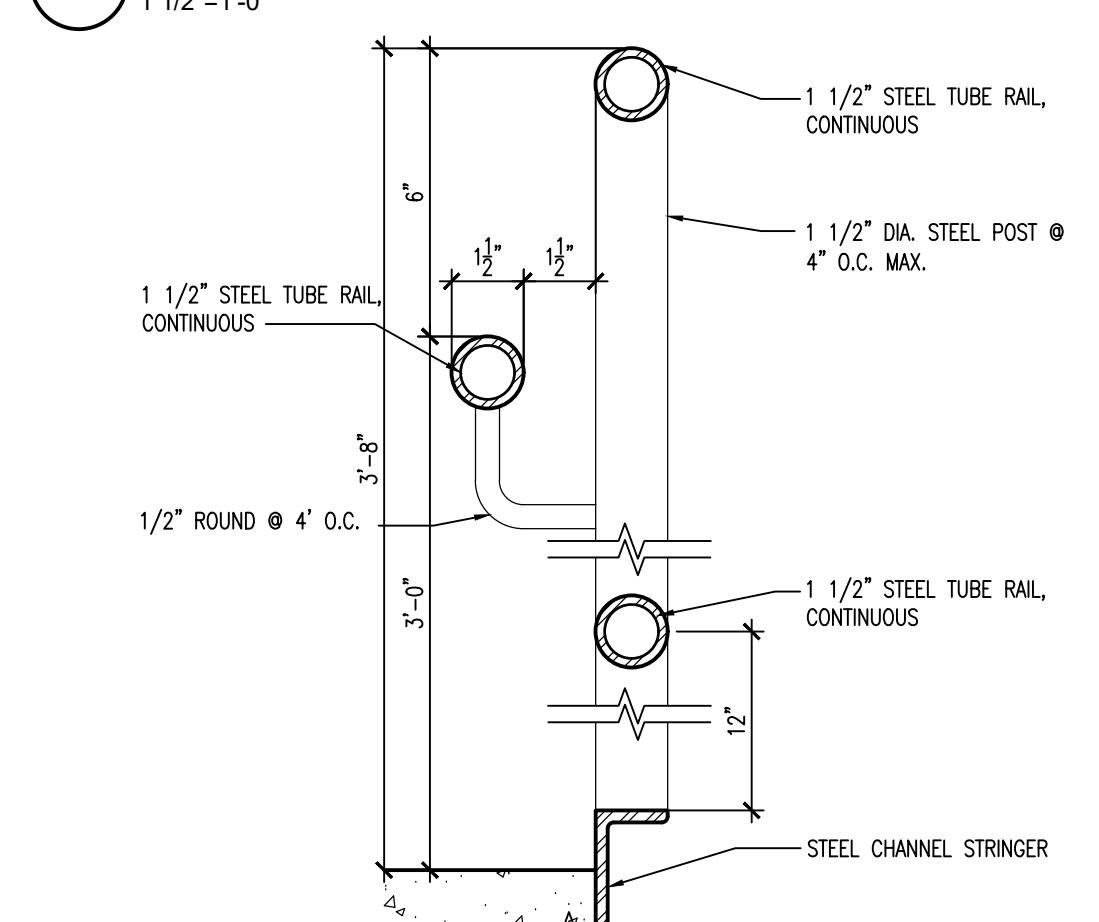
B5 Stair Foot Detail

1 1/2"=1'-0"



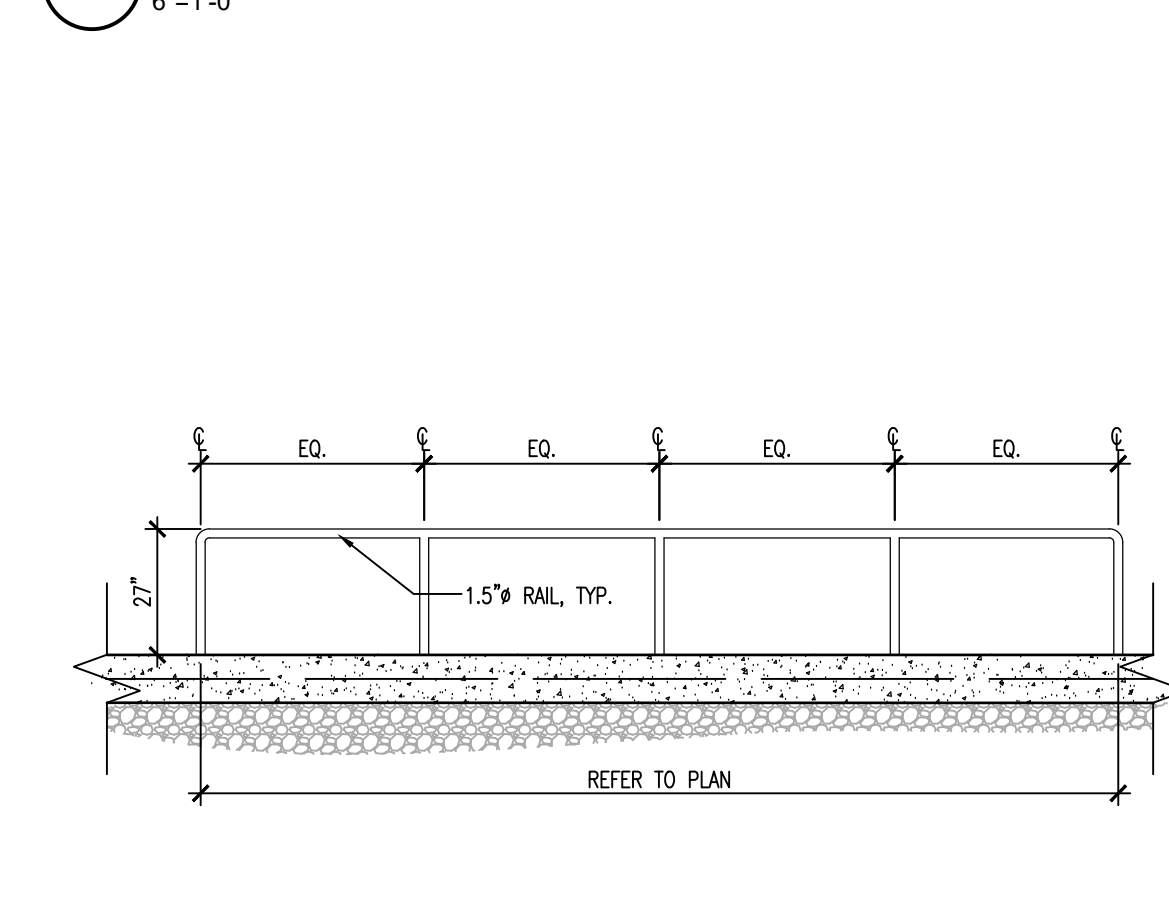
B6 Railing Slip Connection

6"=1'-0"



A5 Stair Rail Detail

3/8"=1'-0"



A6 Cain Rail Elevation

3/8"=1'-0"

Revisions:
Issue Date: August 13, 2019

Sycamore Township
Equipment Storage Facility

8540 Kenwood Road
Sycamore Township, Ohio 45236

Details

Project No.

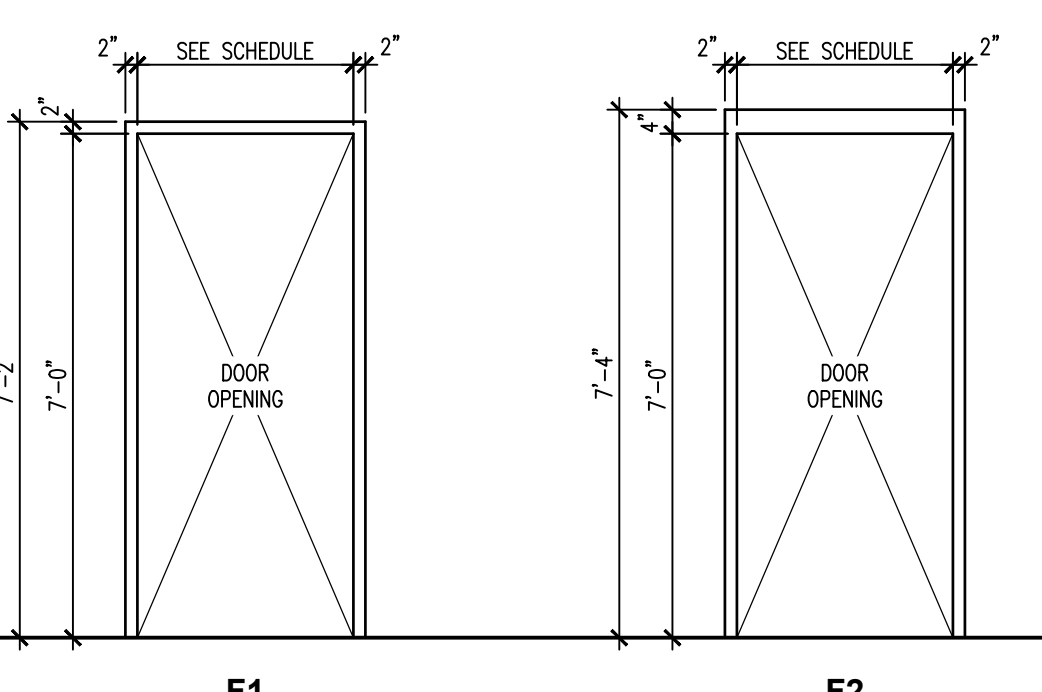
A-501

17120

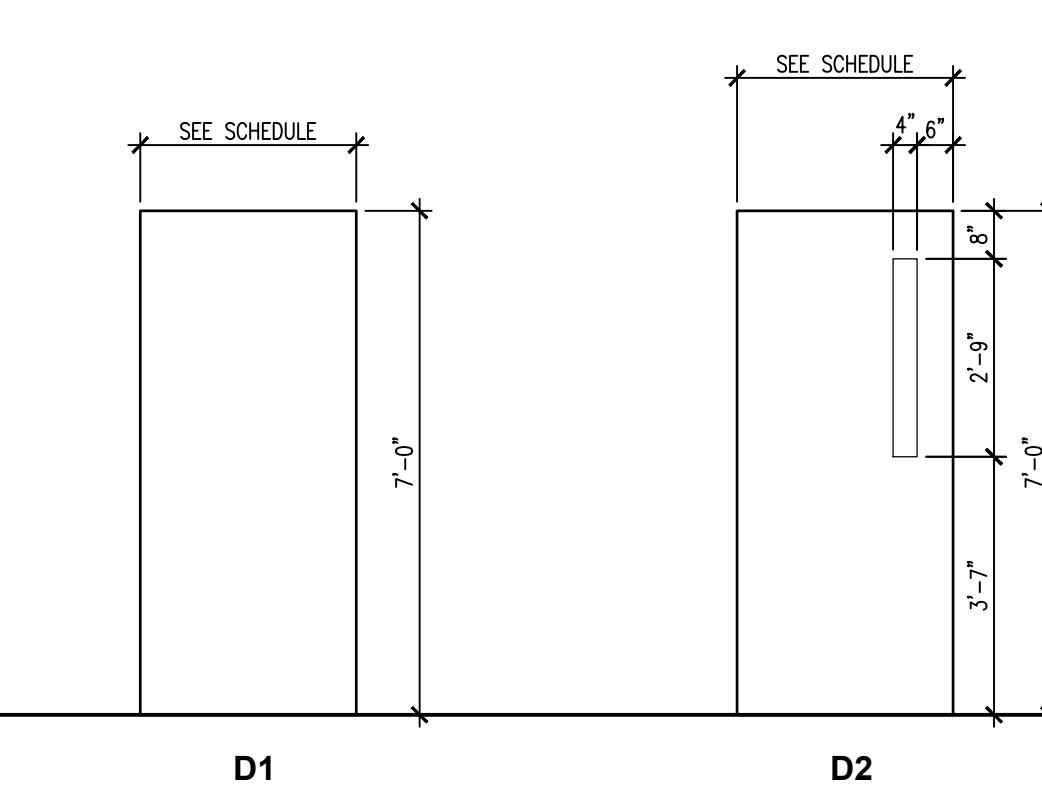
DOOR SCHEDULE									
DOOR NO	WIDTH	HEIGHT	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	HEAD	JAMB	REMARKS
101A	14'-0"	14'-0"	D4	ALUMINUM	-	-			
101B	3'-0"	7'-0"	D1	HOLLOW METAL	F2	HOLLOW METAL			
101C	3'-0"	7'-0"	D1	HOLLOW METAL	F2	HOLLOW METAL			
102	PR 3'-0"	7'-0"	D1	HOLLOW METAL	F2	HOLLOW METAL			
103	3'-0"	7'-0"	D2	HOLLOW METAL	F1	HOLLOW METAL			
104	3'-0"	7'-0"	D1	HOLLOW METAL	F1	HOLLOW METAL			
105A	3'-0"	7'-0"	D1	HOLLOW METAL	F1	HOLLOW METAL			
105B	14'-0"	14'-0"	D3	ALUMINUM	-	-			
105C	3'-0"	7'-0"	D1	HOLLOW METAL	F1	HOLLOW METAL			
105D	14'-0"	14'-0"	D3	ALUMINUM	-	-			
108	3'-0"	7'-0"	D1	HOLLOW METAL	F1	HOLLOW METAL			
109	3'-0"	7'-0"	D1	HOLLOW METAL	F1	HOLLOW METAL			

NOTES:
 ALL HOLLOW METAL DOORS ARE TO BE GALVANIZED.
 ALL EXTERIOR HOLLOW METAL DOORS ARE TO BE INSULATED.
 ALL SECTIONAL DOORS ARE TO BE INSULATED.

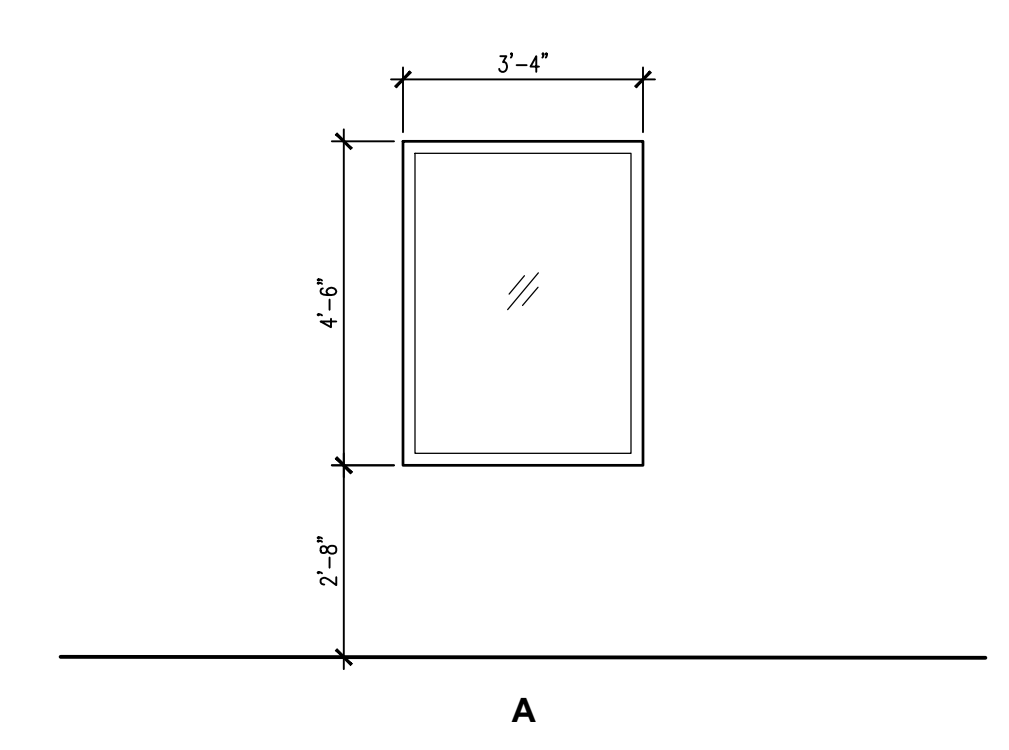
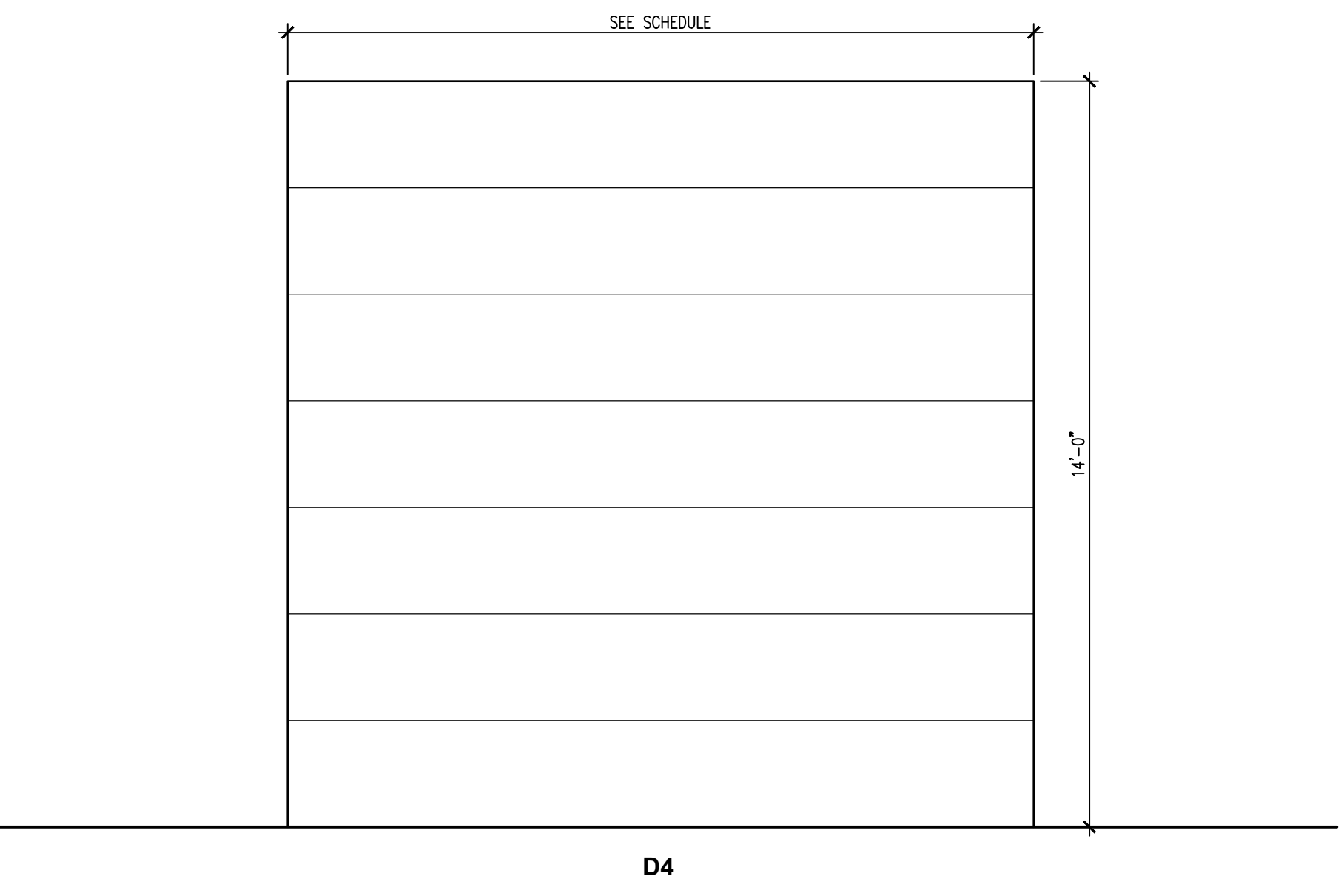
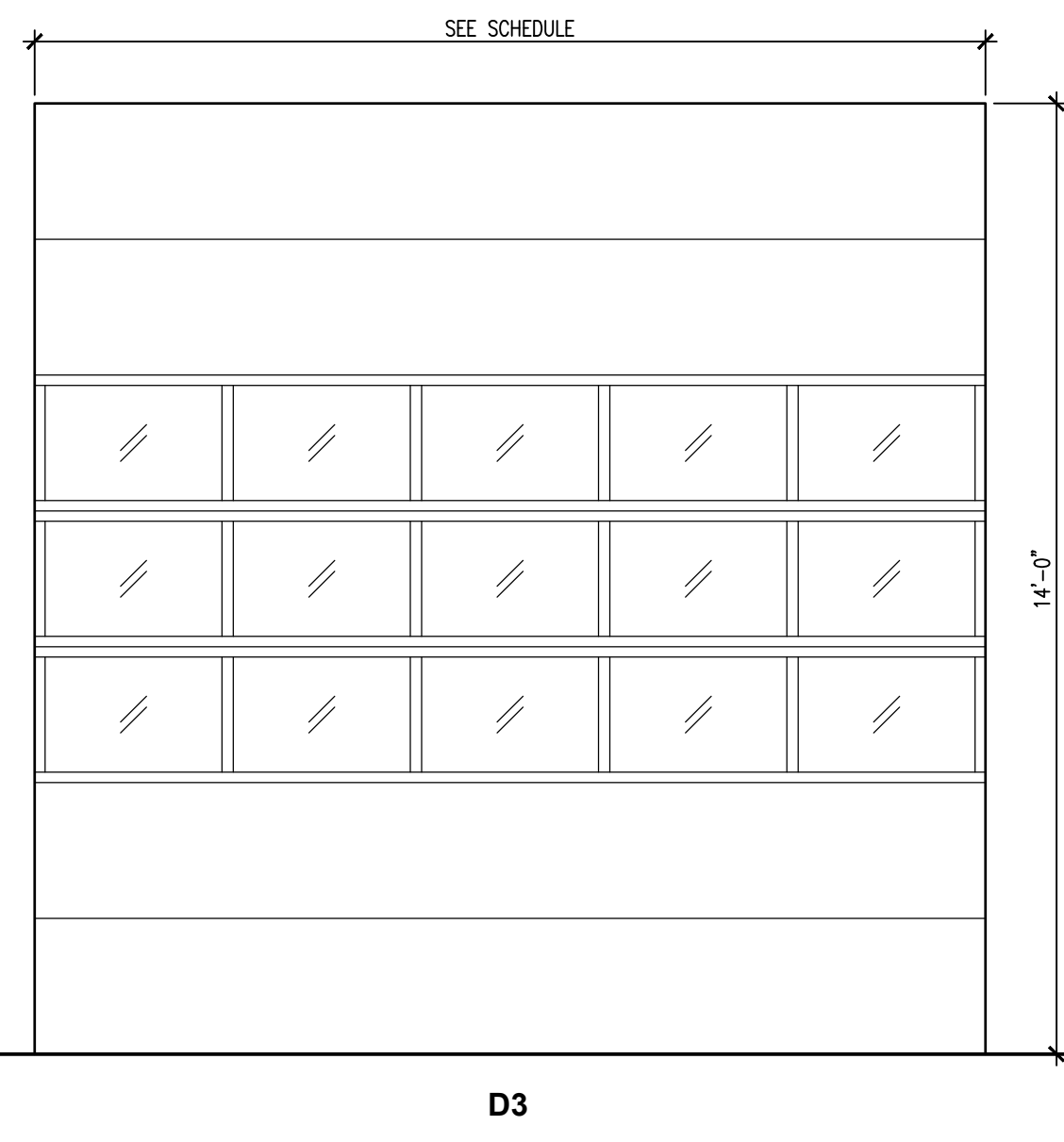
GENERAL NOTES:
 1. ALL GLAZING AT EXTERIOR WALL ASSEMBLIES AND ASSOCIATED FRAMES TO BE INSULATED.
 2. ALL GLAZING BELOW 60 A.F.F. TO BE SAFETY (TEMPERED) GLAZING.
 3. ALL EXTERIOR GLAZING TO BE FRONT SET.
 4. ALL INTERIOR GLAZING TO BE CENTER SET.
 5. ARCHITECTURAL LOUVERS ARE SHOWN ON FLOOR PLANS AND ON DOOR & WINDOW TYPES. OTHER SMALLER LOUVERS ARE COVERED IN MECHANICAL DRAWINGS.
 6. EXTERIOR HOLLOW METAL DOORS TO BE GALVANIZED AND INSULATED.



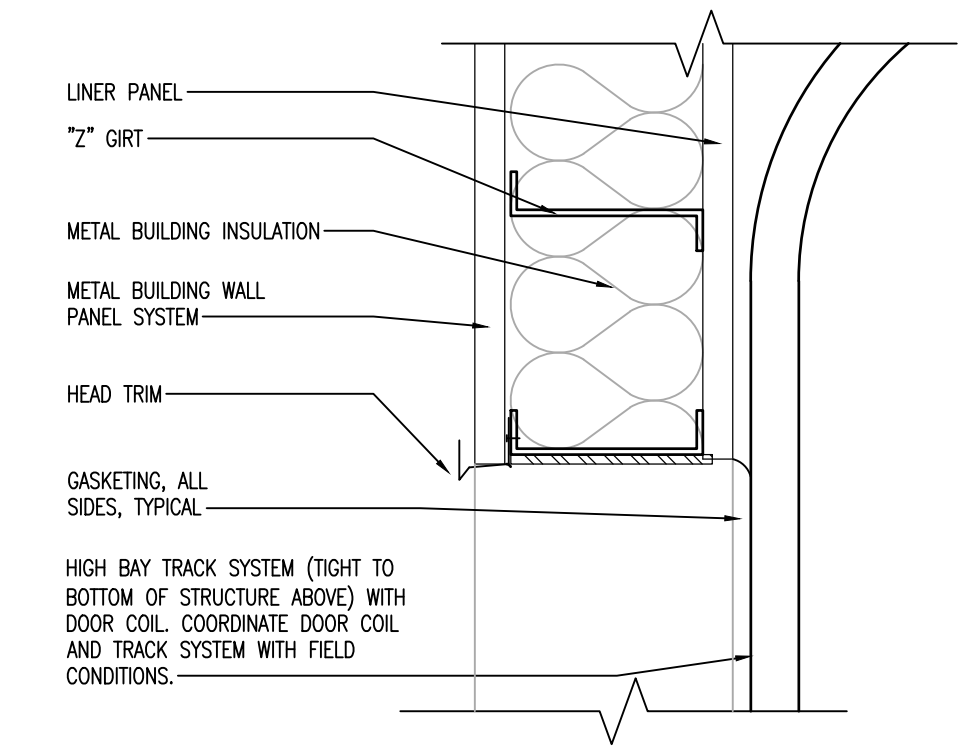
B1 Door Frame Profiles
 3/8"=1'-0"



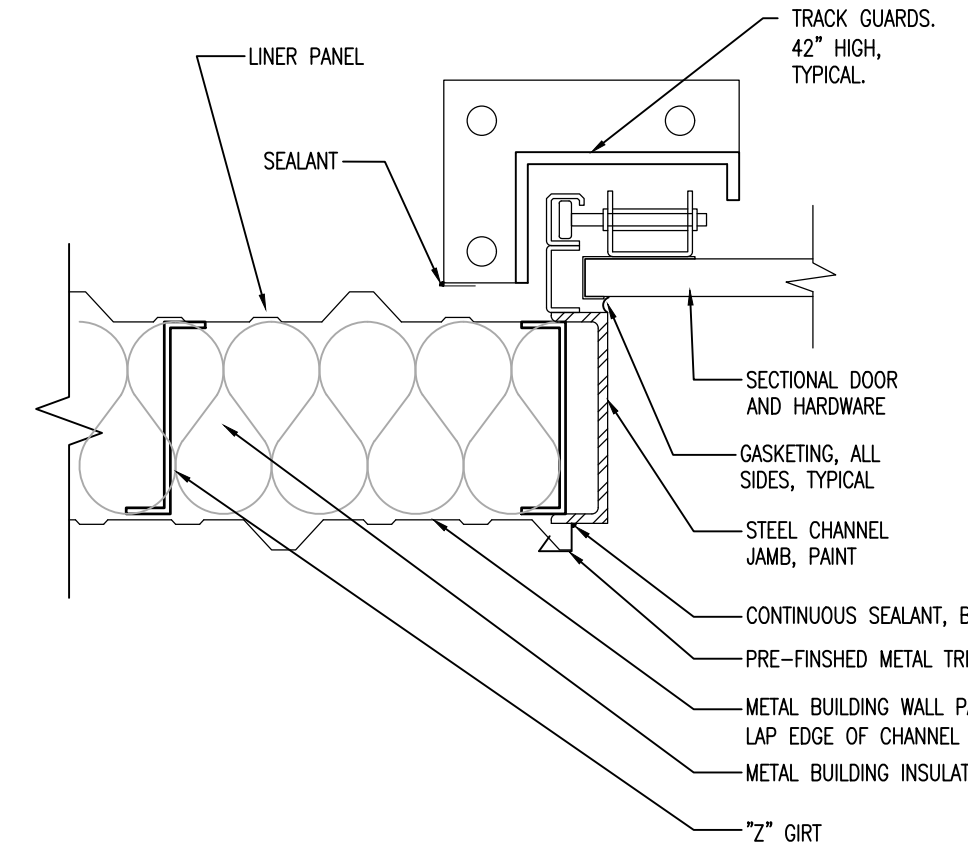
A1 Door Profiles
 3/8"=1'-0"



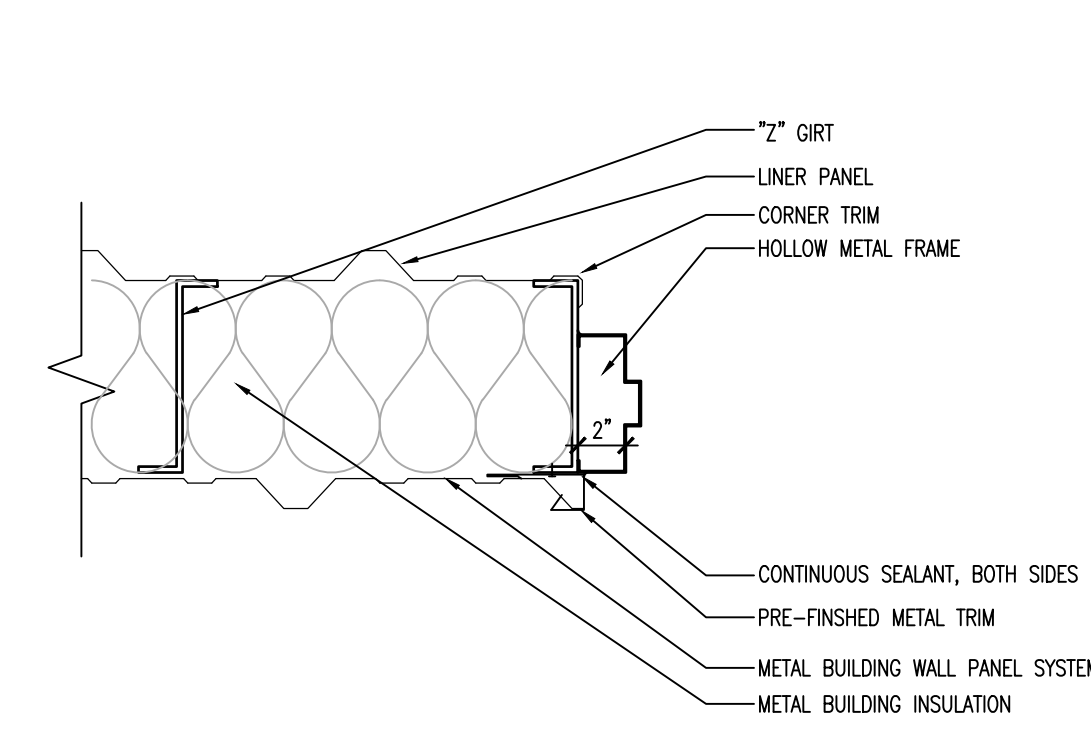
A5 Window Types
 3/8"=1'-0"



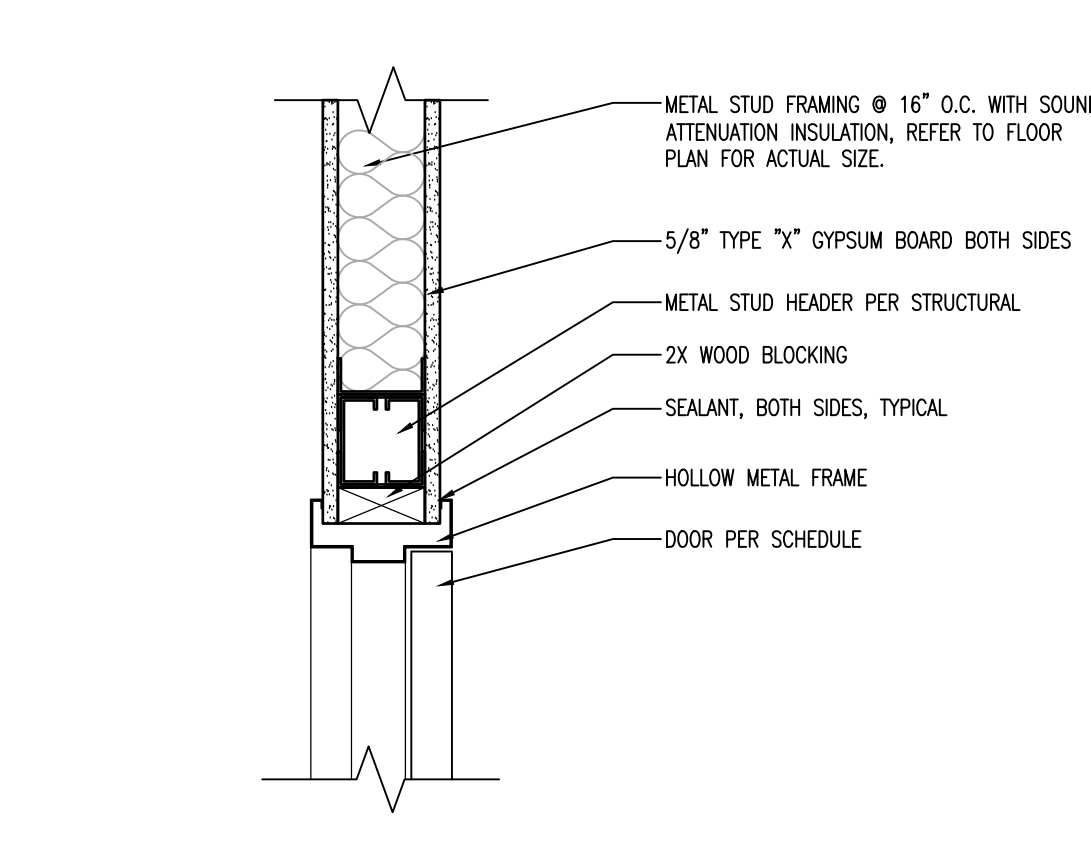
E4 Sectional Door Head
 1 1/2"=1'-0"



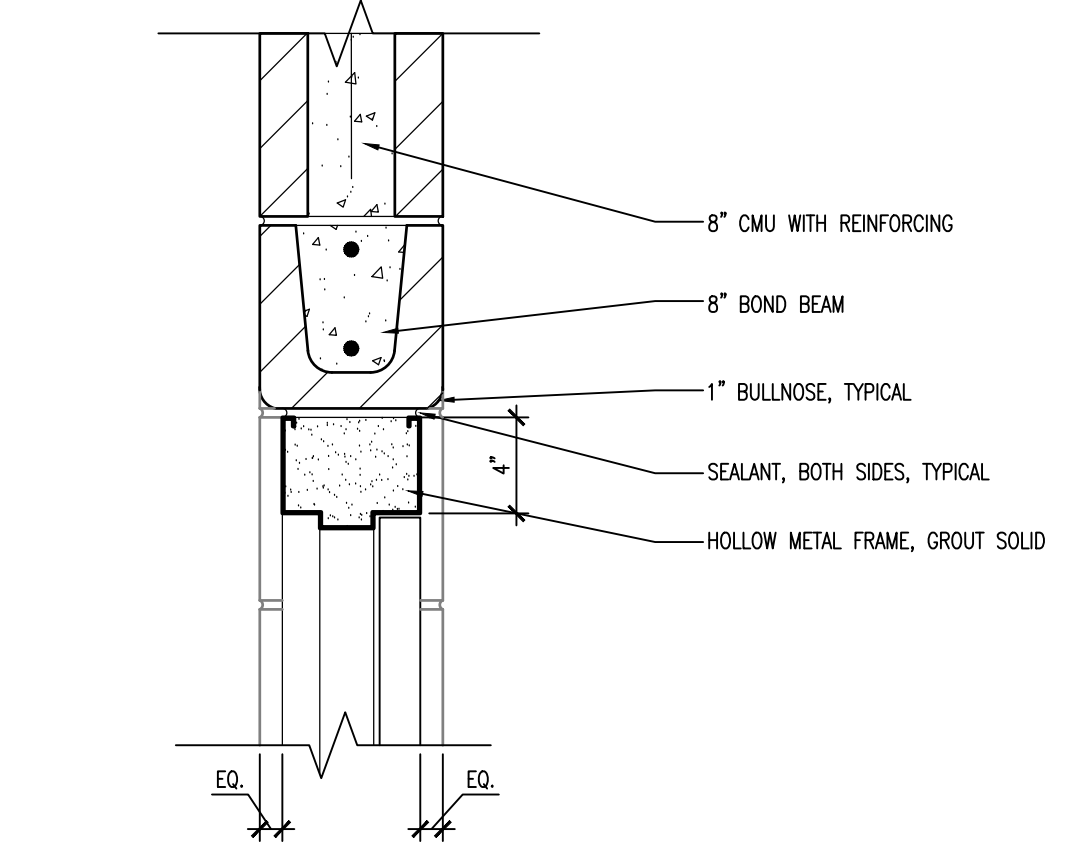
D4 Sectional Door Jamb
 1 1/2"=1'-0"



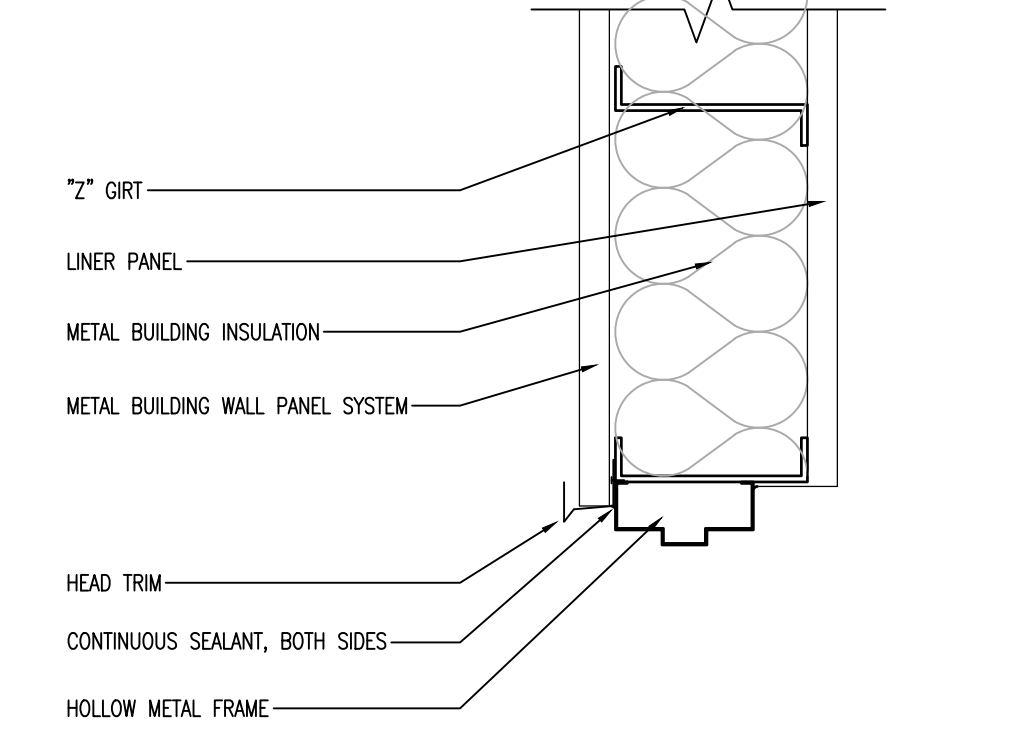
E5 Door Jamb @ Exterior
 1 1/2"=1'-0"



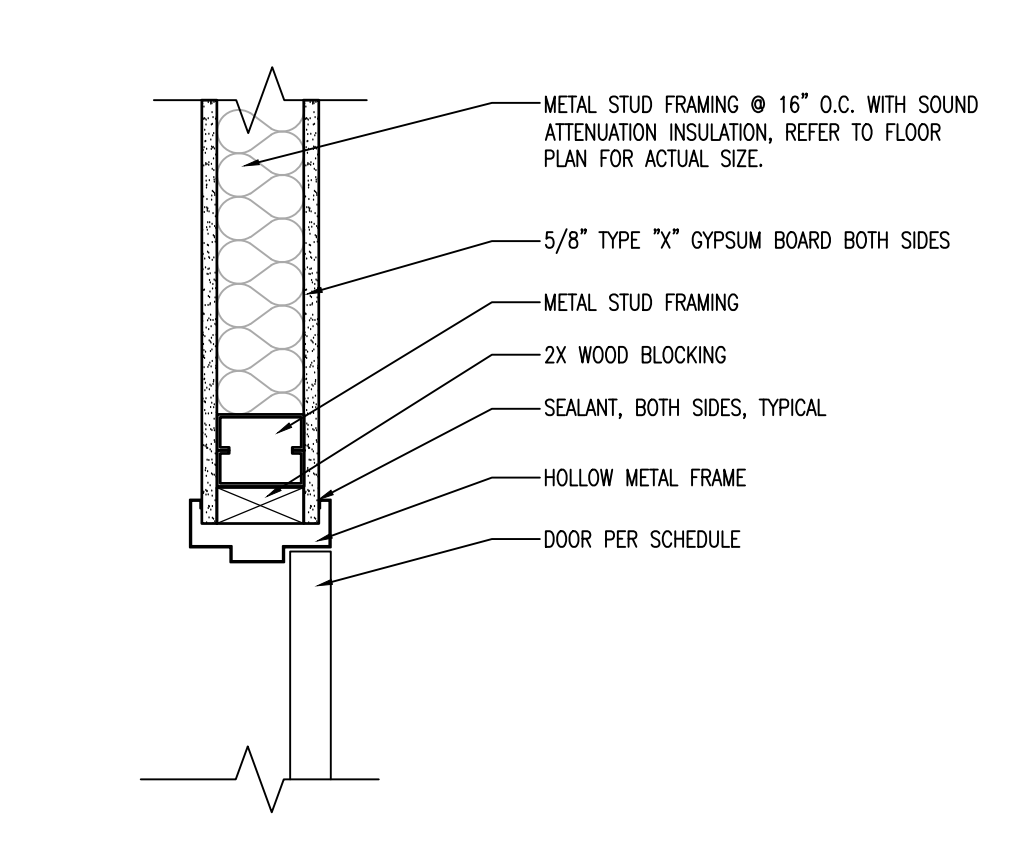
D5 Interior Door Head
 1 1/2"=1'-0"



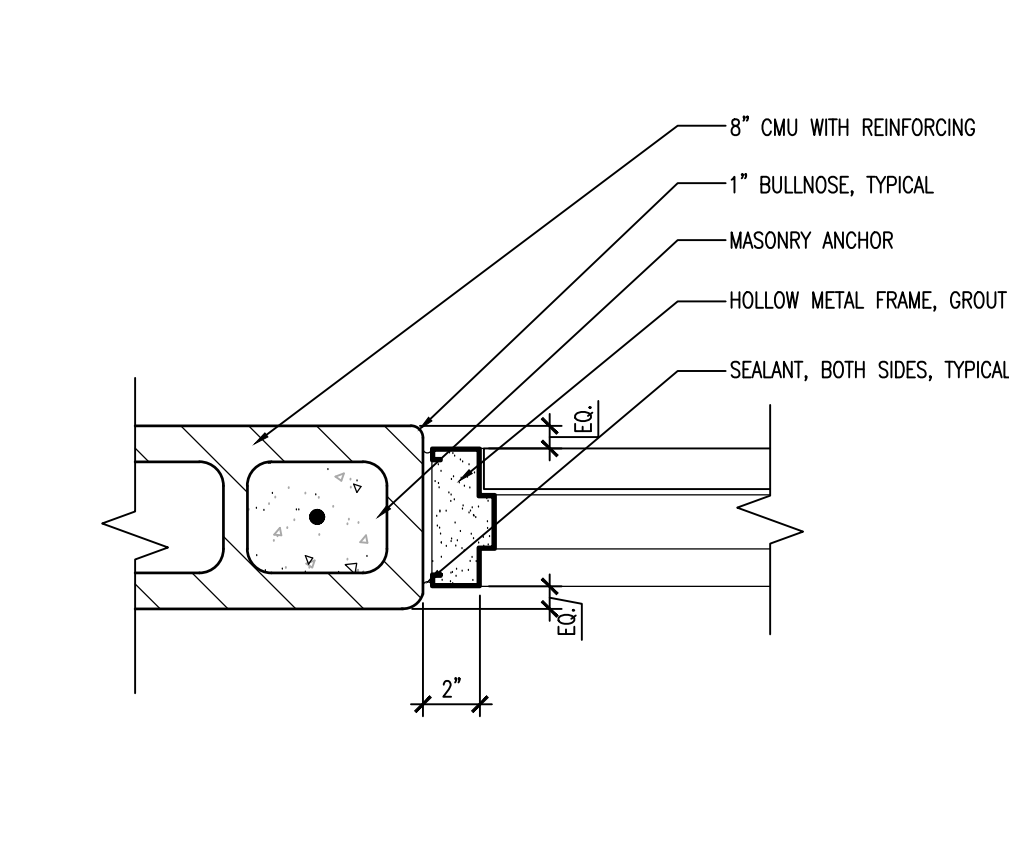
C5 Interior Door Head
 1 1/2"=1'-0"



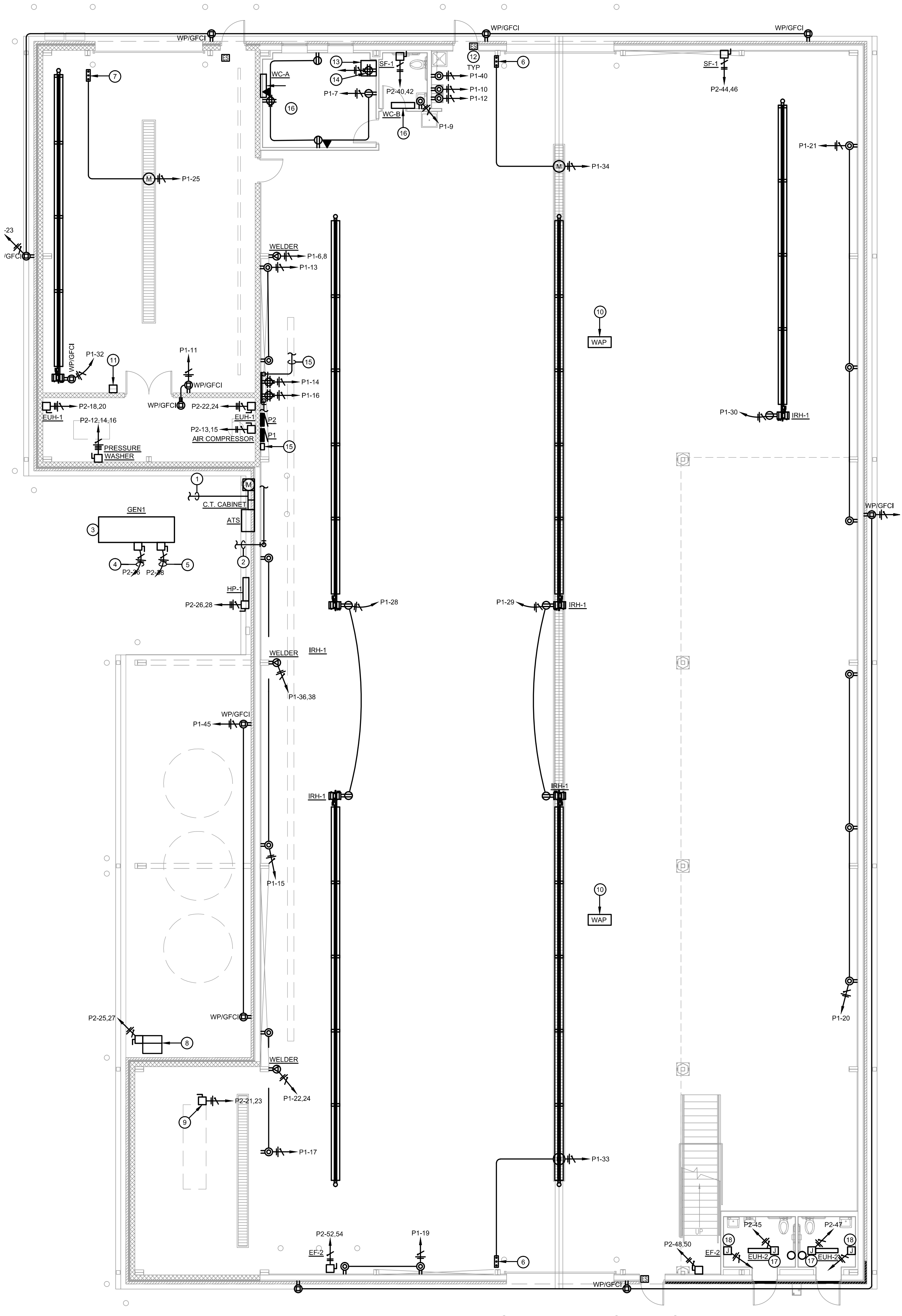
E6 Door Head @ Exterior
 1 1/2"=1'-0"



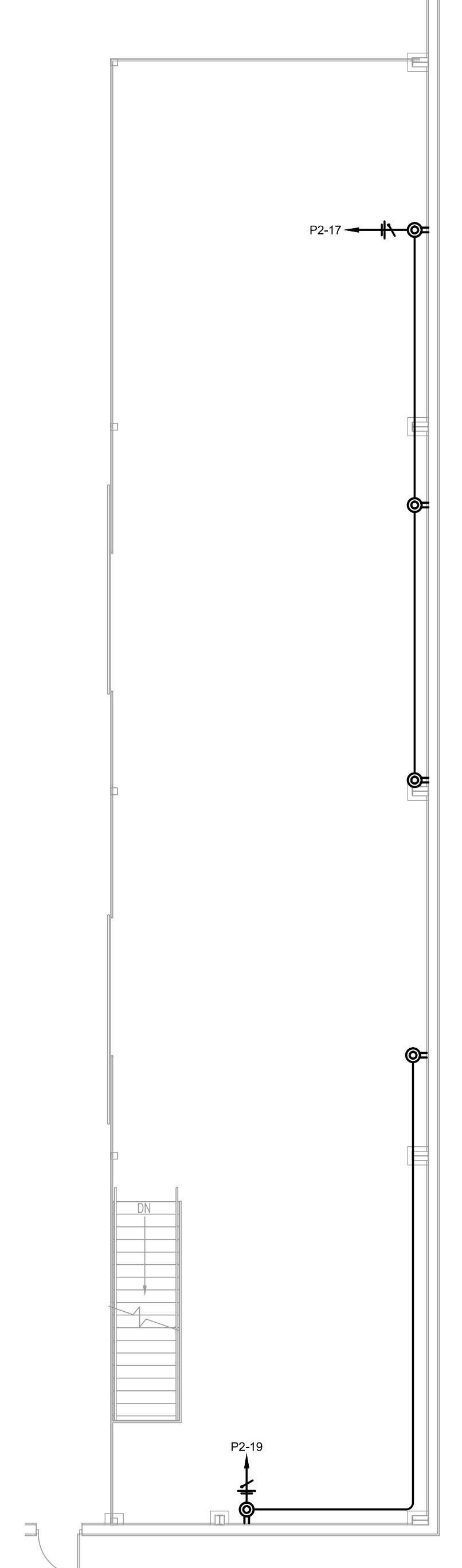
D6 Interior Door Jamb
 1 1/2"=1'-0"



C6 Interior Door Jamb
 1 1/2"=1'-0"



1 MAINTENANCE FACILITY POWER PLAN
E-102 SCALE: 1/8" = 1'-0"

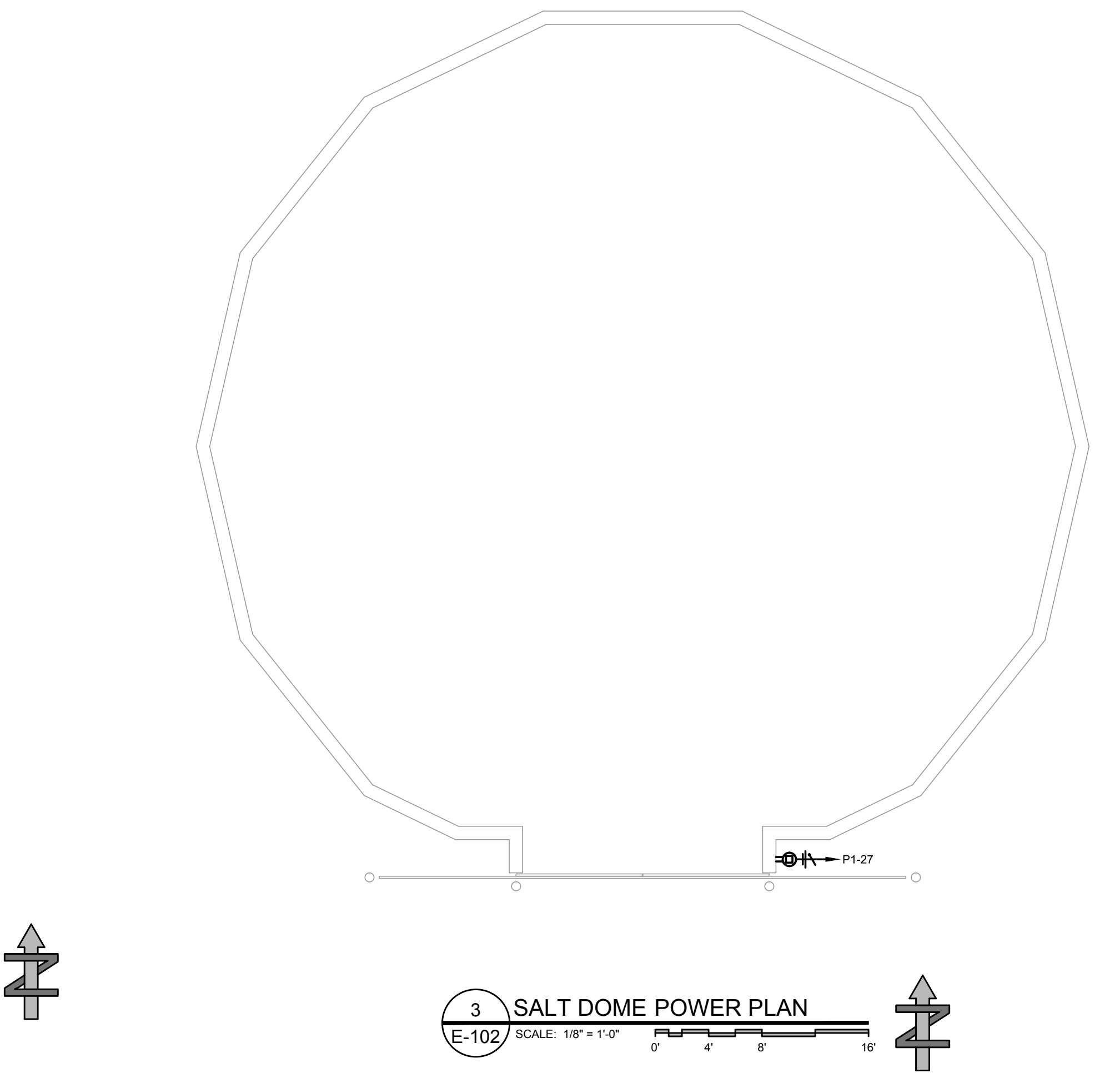


2 MEZZANINE POWER PLAN
E-102 SCALE: 1/8" = 1'-0"

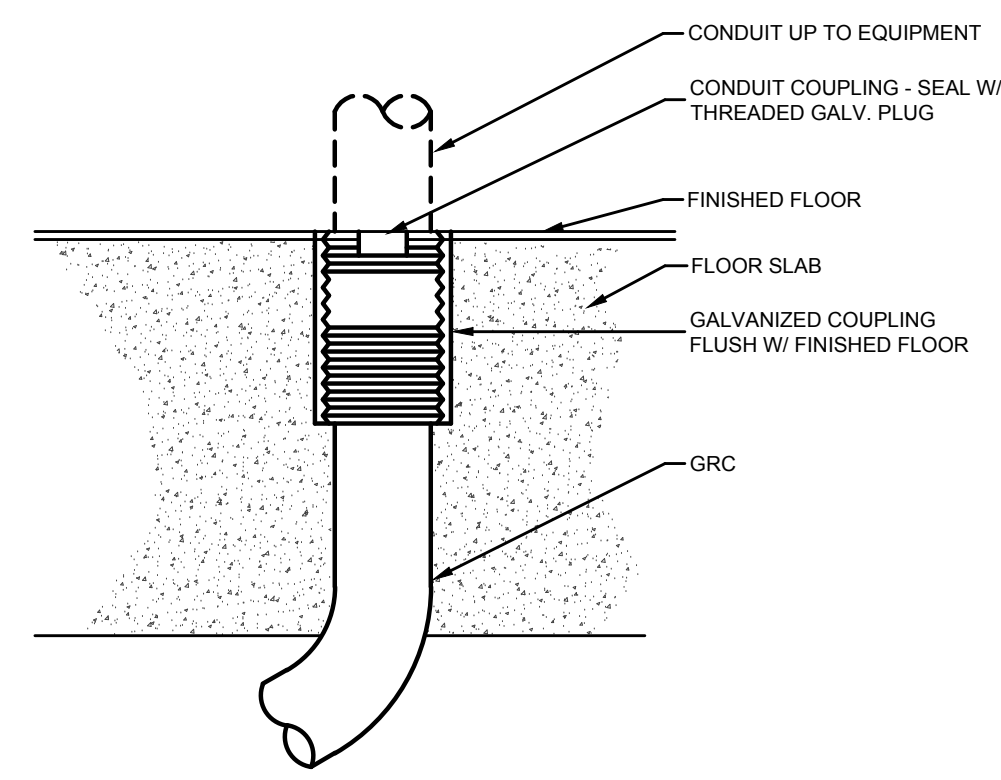
PLAN NOTES	
1	INCOMING ELECTRIC SERVICE REFER TO SITE PLAN AND RISER DIAGRAM FOR ADDITIONAL INFORMATION.
2	(3) 4" EMPTY CONDUITS FOR INCOMING TELEPHONE SERVICE.
3	NEW 150KW GEN SET. FIELD VERIFY EXACT LOCATION PRIOR TO COMMENCING WORK. REFER TO GENERATOR PAD DETAIL ON E-501 FOR MORE INFORMATION.
4	PROVIDE (3) #12 AWG IN 1" CONDUIT GEN SET BATTERY CHARGER.
5	PROVIDE (3) #8 AWG IN 1" CONDUIT GEN SET HEATER.
6	CONTRACTOR TO PROVIDE 3/4" RACEWAY FOR CONTROL WIRING OF OVERHEAD DOOR SYSTEM. CONDUIT TO BE INSTALLED FROM DOOR OPENER TO 3-BUTTON START/STOP STATION MOUNTED AT +48" AFF.
7	CONTRACTOR TO PROVIDE 3/4" RACEWAY FOR CONTROL WIRING OF OVERHEAD DOOR SYSTEM. CONDUIT TO BE INSTALLED FROM DOOR OPENER TO 3-BUTTON START/STOP STATION MOUNTED AT +48" AFF. DOOR OPENER AND CONTROL STATION SHALL BE RATED FOR WET LOCATION.
8	PROVIDE CONNECTION TO BRINE TRUCK FILL STATION. INSTALL PER MANUFACTURER'S INSTRUCTIONS. PROVIDE WITH ALL COMPONENTS AND WIRING FOR COMPLETE WORKING SYSTEM.
9	PROVIDE CONNECTION TO BRINE CONTROL STATION. INSTALL PER MANUFACTURER'S INSTRUCTIONS. PROVIDE WITH ALL COMPONENTS AND WIRING FOR COMPLETE WORKING SYSTEM.
10	PROVIDE ROUGH-IN FOR WIRELESS ACCESS POINT. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
11	REMOTE START CONTROL STATION PROVIDED BY PLUMBING CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
12	PROVIDE ROUGH-IN FOR DOOR ACCESS AT LOCATION SHOWN. EXTEND 3/4" CONDUIT BACK TO IT EQUIPMENT IN OFFICE #88. COORDINATE ELECTRIC STRIKE REQUIREMENTS WITH DOOR HARDWARE SCHEDULE ON ARCHITECTURAL PLAN AND WIRING OF THE DOOR ACCESS AND ELECTRIC STRIKE TO THE SECURITY PANEL WITH SECURITY CONTRACTOR.
13	PROVIDE WALL MOUNTED IT CABINET. COORDINATE EXACT CABINET REQUIREMENTS WITH OWNER PRIOR TO COMMENCING WORK.
14	PROVIDE DEDICATED QUAD IN IT CABINET FOR IT EQUIPMENT. COORDINATE EXACT MOUNTING HEIGHT WITH CABINET LOCATION PRIOR TO ROUGH-IN.
15	EXTEND 2" CONDUIT AND FIBER OPTIC CABLE FROM TELECOM EQUIPMENT BOARD TO IT CABINET IF OFFICE 103.
16	INDOOR WALL CASSETTE UNIT TO BE WIRED AND POWERED FROM EXTERIOR HEAT PUMP. COORDINATE WITH MECHANICAL CONTRACTOR.
17	PROVIDE DEDICATED 120V CIRCUIT AND LOCAL DISCONNECT FOR INFRARED HEATER PANEL.
18	PROVIDE CONNECTION TO HAND DRYER. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT. PROVIDE WITH RECESSED LOCKING SWITCH EQUAL TO HUBBELL MODEL # HBL1201LG.

POWER PLAN SYMBOL LEGEND	
	DUPLEX RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED
	SPECIAL USE DEDICATED RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED REFER TO PANEL SCHEDULE FOR MORE INFORMATION
	GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED
	WEATHER PROOF RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED
	QUADRUPLEX RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED
	QUADRUPLEX GFCI RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED
	DUPLEX RECEPTACLE WITH SPECIAL MOUNTING REQUIREMENTS. CLO = CEILING MOUNTED, CORD = CORD DROP, BLANK = FLOOR MOUNTED
	TELEPHONE JACK MOUNT AT +54" A.F.F. UNLESS OTHERWISE NOTED
	DATA JACK MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED
	COMBINATION COMPUTER / PHONE JACK MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED
	TELEVISION JACK MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED
	JUNCTION BOX
	NON-FUSED DISCONNECT
	10 MOTOR CONNECTION
	30 MOTOR CONNECTION
	FLUSH MOUNTED PANEL A = PANEL DESIGNATION
	SURFACE MOUNTED PANEL A = PANEL DESIGNATION
	METER
	HOME RUN A = PANEL DESIGNATION B = CIRCUIT NUMBER
	N = NEW E = EXISTING R = RELOCATED D = DEMO F = FUTURE +0" = MOUNTING HEIGHT OF THE DEVICE ABOVE FINISHED FLOOR.

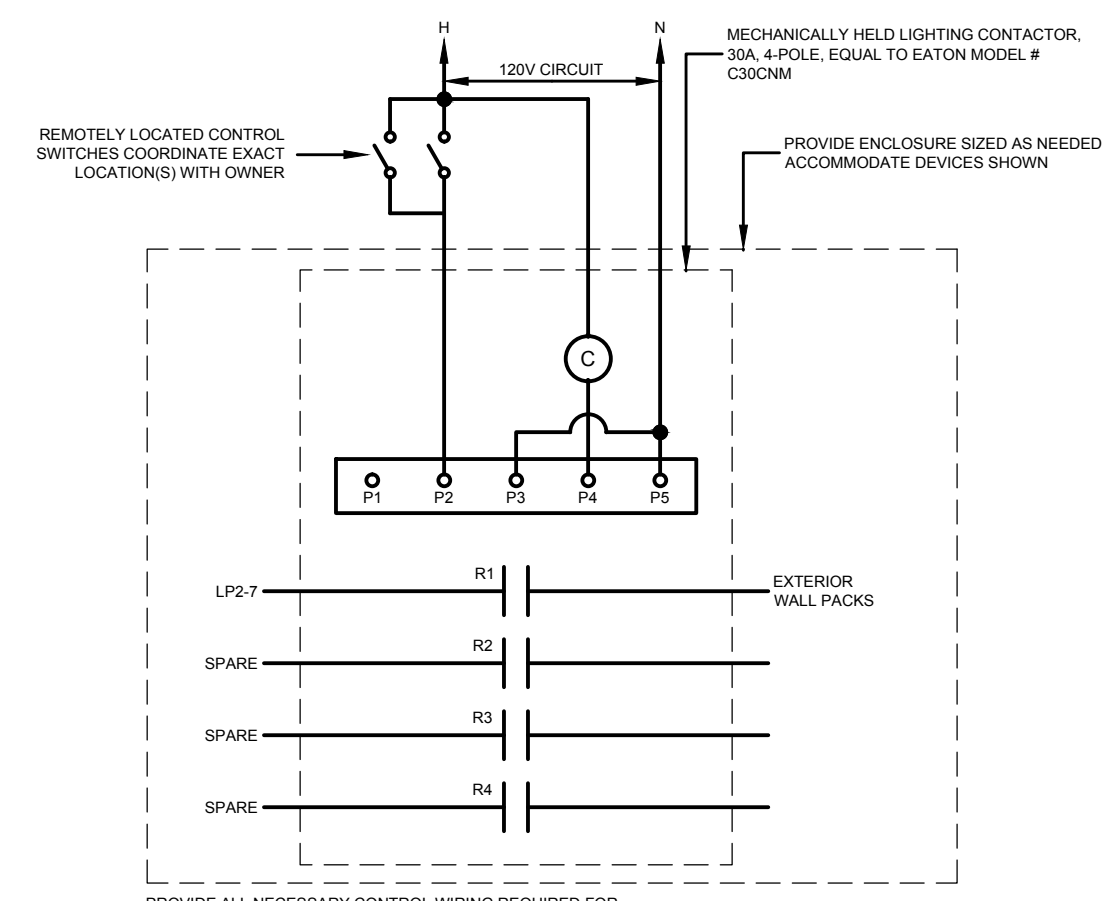
GENERAL NOTES	
1.	ALL DEVICES IN EQUIPMENT STORAGE 105, WASH BAY 101 AND MEZZANINE 201 SHALL BE WHITE WITH STAINLESS STEEL COVER PLATES.
2.	ALL DEVICES INSTALLED IN OFFICE 103 AND RESTROOM 104 SHALL BE WHITE WITH WHITE COVER PLATES.



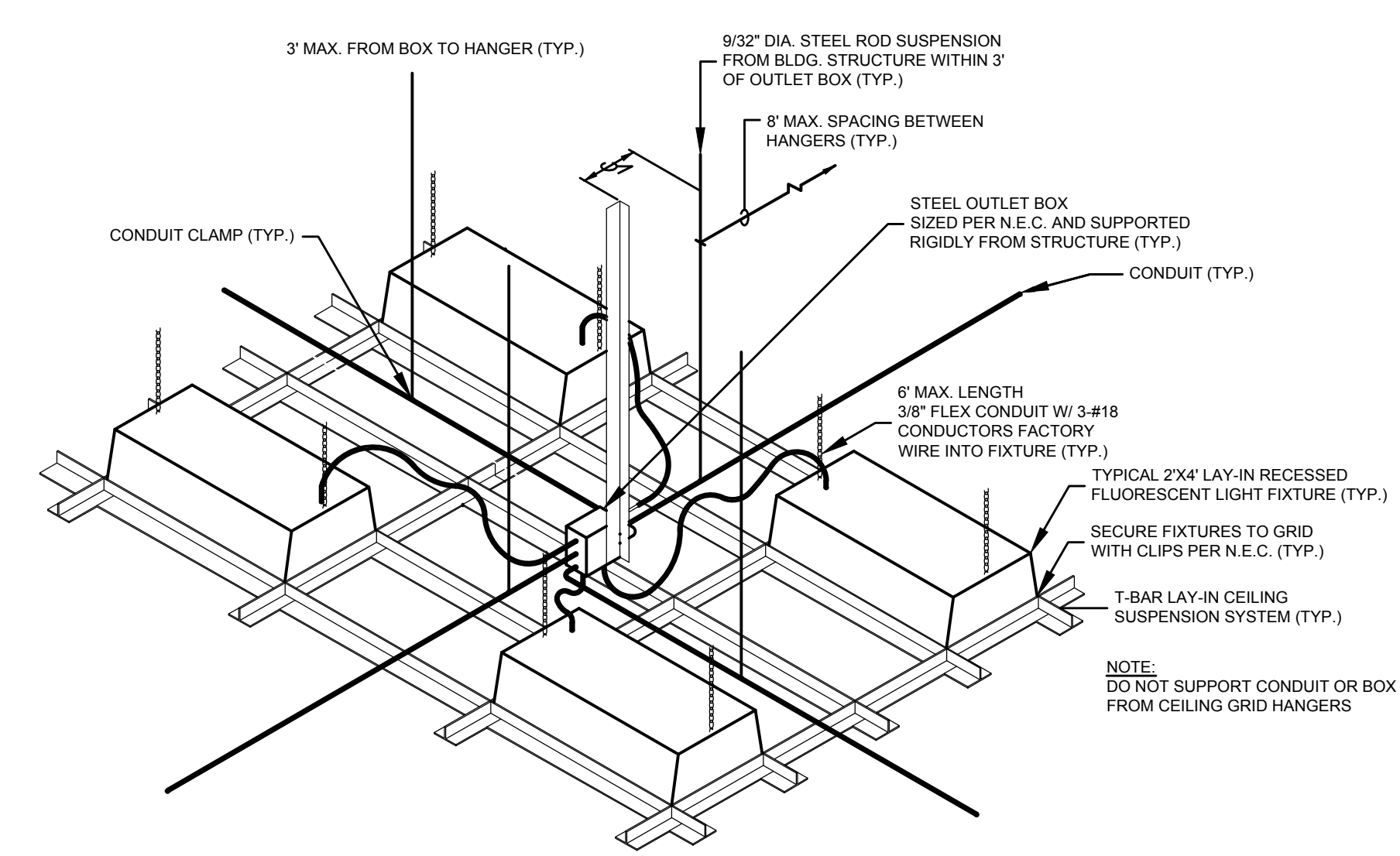
3 SALT DOME POWER PLAN
E-102 SCALE: 1/8" = 1'-0"



B2 CONDUIT STUB-UP DETAIL
1/8"=1'-0"



C3 EXTERIOR LIGHTING CONTRACTOR DETAILS
1/8"=1'-0"

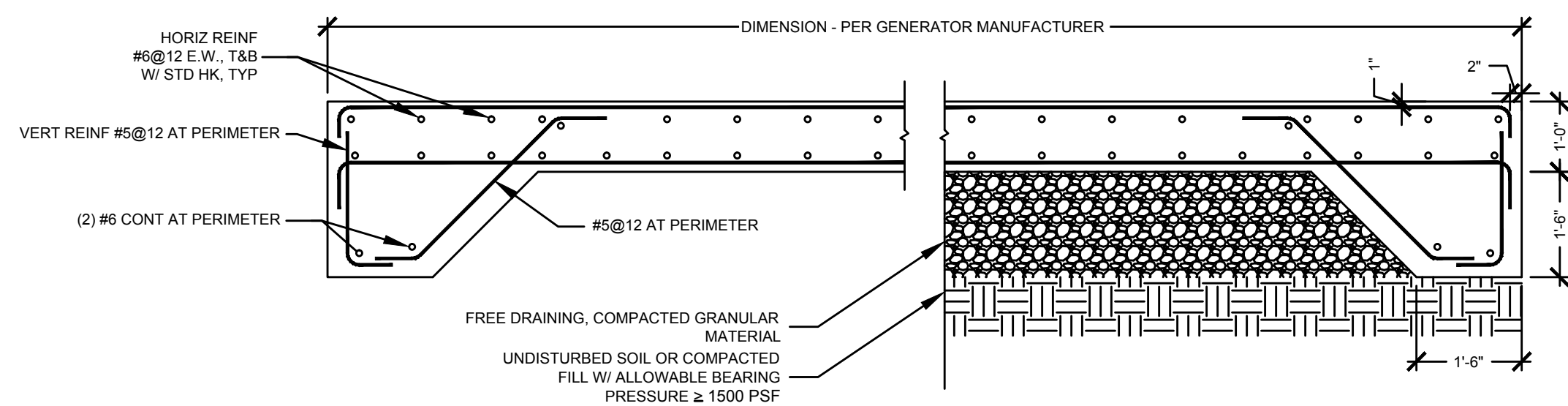


D4 TYPICAL RECESSED TOFFER DETAIL
3/16"=1'-0"

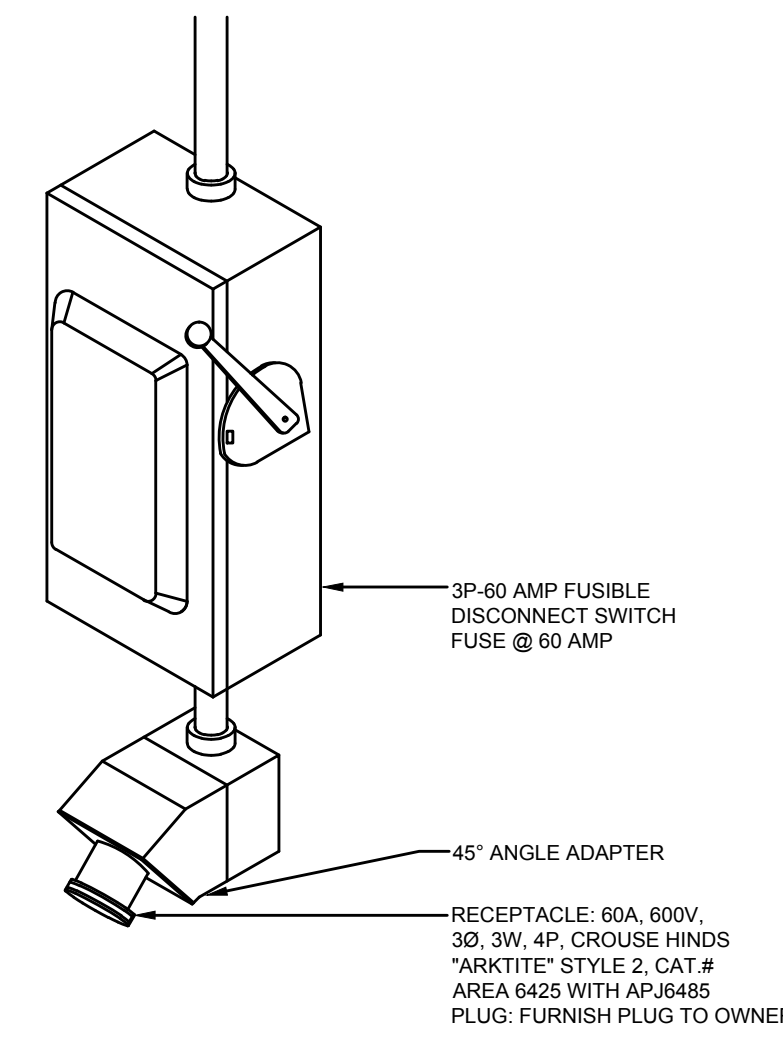
EMERGENCY GENERATOR SCHEDULE													
MARK	MANUFACTURER / MODEL #	RATED KW	VOLTS	PHASE	HERTZ	TEMP RISE LIMIT	ALTERNATOR TYPE	MOTOR STARTING	MODEL NUMBER	FUEL TYPE	STANDBY RATED	ENCLOSURE TYPE	OPTIONS AND ACCESSORIES
GEN	CUMMINS / C100DEC	100	208	3	60	105°	PMG	663 KVA	B415	DIESEL	YES	WEATHER	...

NOTES:
1. REFER TO CONCRETE PAD DETAILS FOR SPECIFICATIONS.

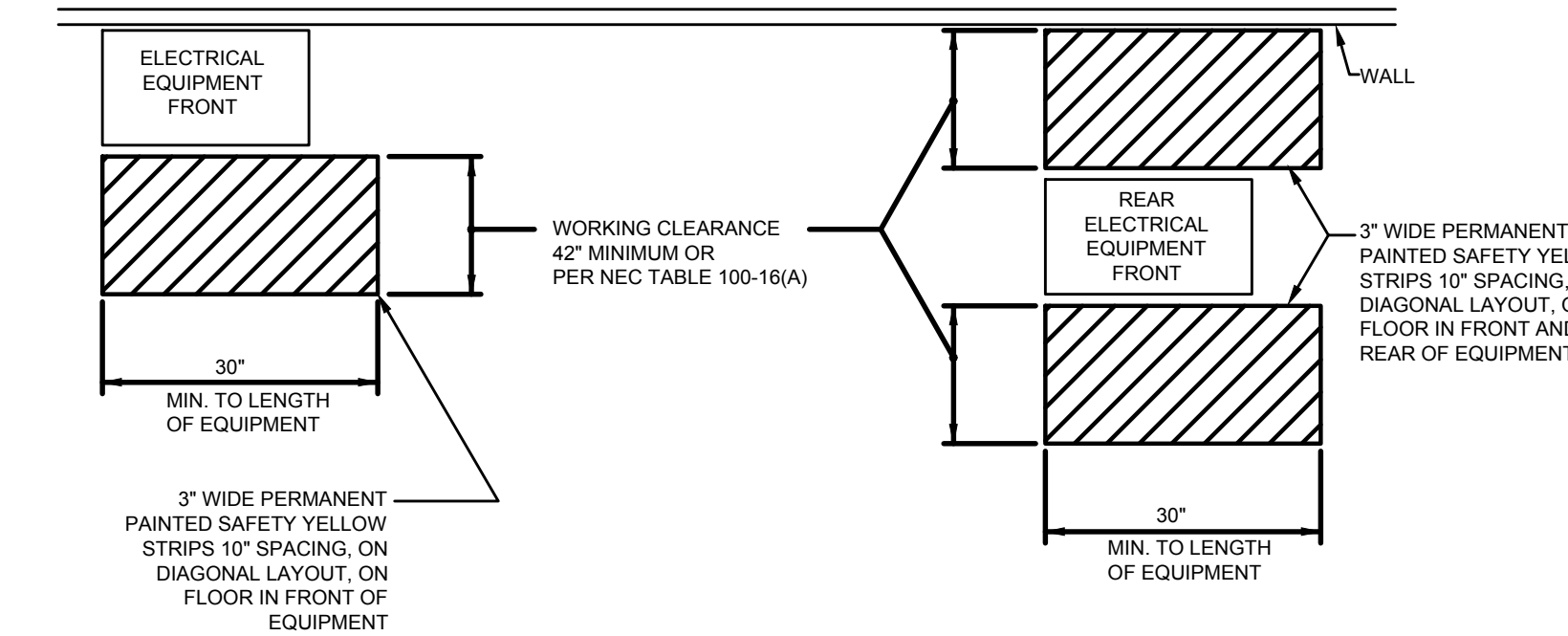
AUTOMATIC TRANSFER SWITCH (ATS)
BASIS OF DESIGN SHALL BE CUMMINS MODEL # OTEC-SER. PROVIDE WITH AMP METER AND BAR GRAPH DISPLAY.



A6 GENERATOR PAD DETAIL
N.T.S.



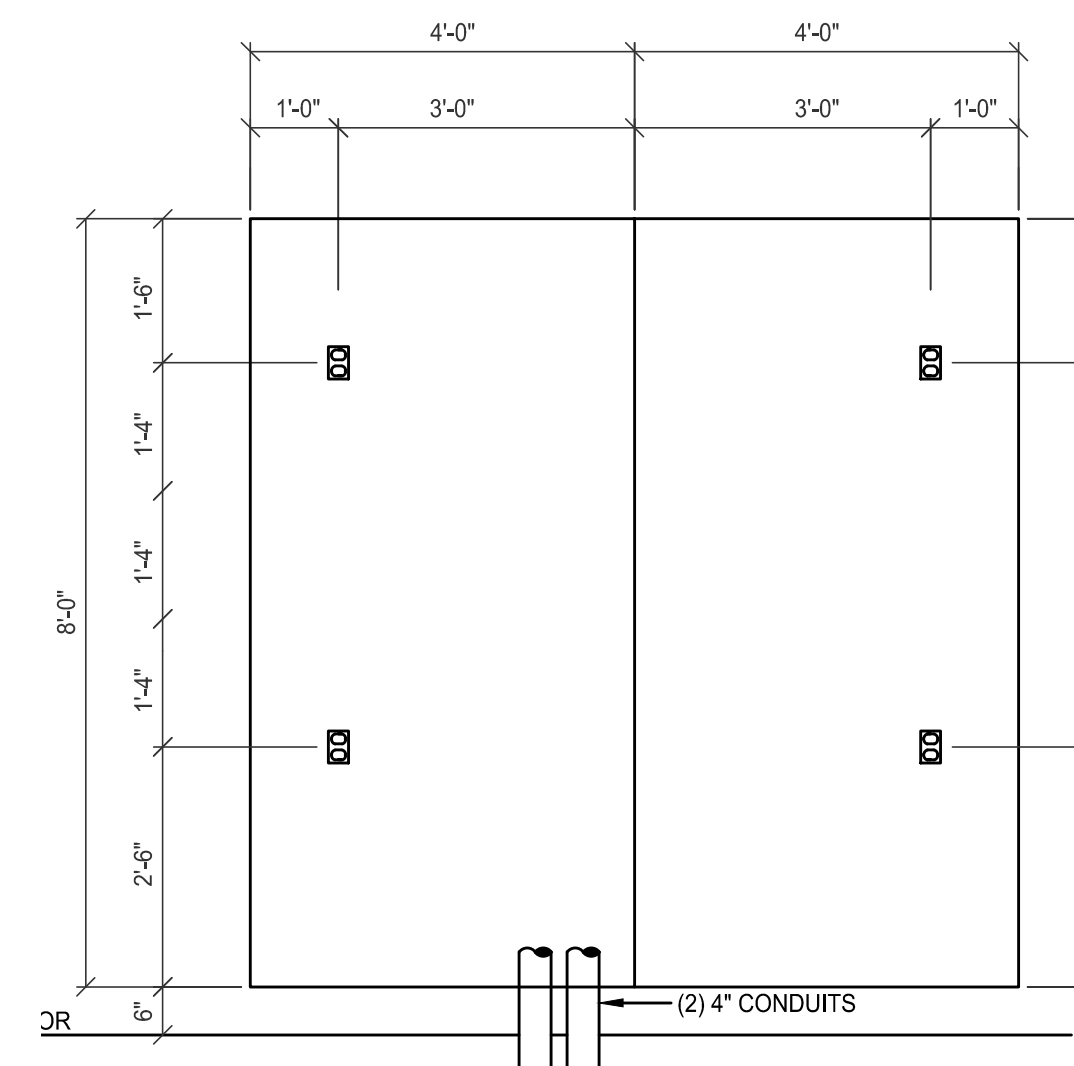
C2 WELDER OUTLINE DETAIL
1/8"=1'-0"



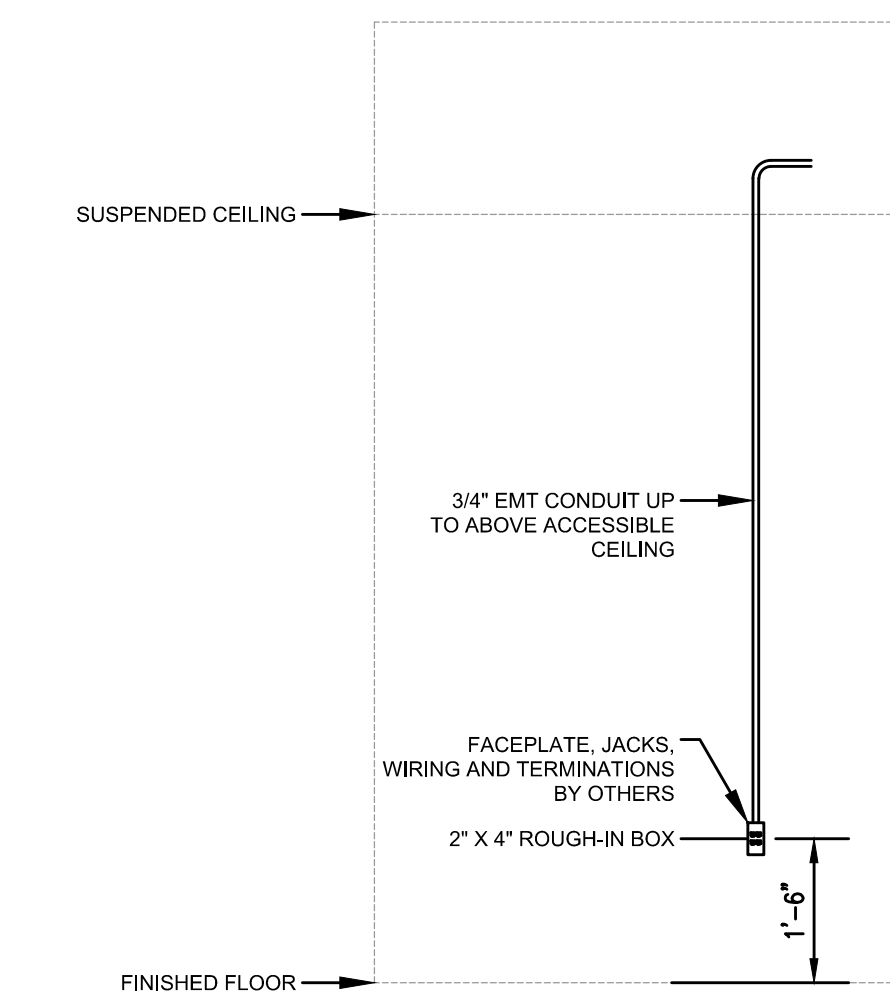
NOTES:

1. PAINTED AREAS (DENOTING NEC "WORKING CLEARANCE") REQUIRED IN MECHANICAL ROOMS, CLOSETS AND OTHER AREAS AS SHOWN ON THE DRAWINGS OR IN THE AREAS REQUESTED BY THE ENGINEER.
2. PAINTED AREAS NOT TO BE PROVIDED IN CORRIDORS, OFFICES AND FINISHED ROOMS.
3. PAINTING TO BE PROVIDED AS SOON AS FLOOR INSTALLATION ALLOWS. AREAS ARE TO BE RE-PAINTED BEFORE OCCUPANCY.
4. PAINT SHALL BE GLIDDEN URETHANE GLOSS ENAMEL, NO. 6000 SERIES OR APPROVED EQUAL.

B4 ELECTRICAL WORKING CLEARANCE (NEC) FOR EQUIPMENT ACCESS
3/16"=1'-0"

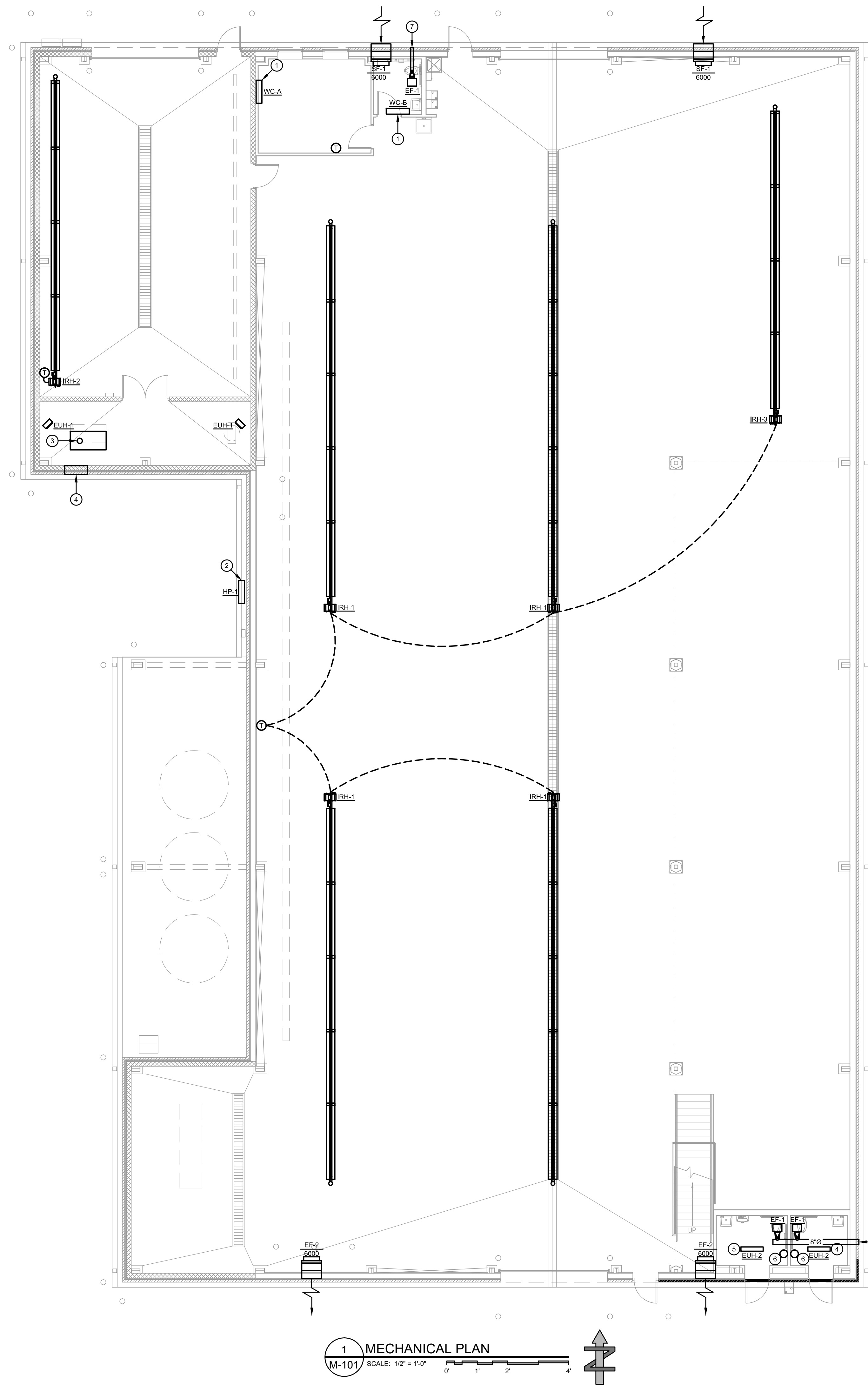


A4 TELEPHONE EQUIPMENT BOARD ELEVATION
1/8"=1'-0"



A5 TYPICAL VOICE/DATA ROUGH IN
1/2"=1'-0"

NOT FOR CONSTRUCTION



1 MECHANICAL PLAN
M-101 SCALE: 1/2" = 1'-0"

PLAN NOTES	
①	INSTALL DUCTLESS SPLIT SYSTEM WALL CASSETTE HIGH ON WALL. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND ACCORDANCE WITH STATE AND LOCAL CODES. PROVIDE WITH P-COPPER CONDENSATE LINE DOWN TO LOCAL FLOOR DRAIN. PROVIDE WITH WIRED THERMOSTAT.
②	INSTALL DUCTLESS SPLIT SYSTEM OUTDOOR HEAT PUMP ON MANUFACTURER APPROVED WALL BRACKET. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND IN ACCORDANCE WITH STATE AND LOCAL CODES. ALL REFRIGERANT LINES SHALL BE SIZED AND INSULATED PER MANUFACTURER'S INSTRUCTIONS.
③	EXTEND FLUE PIPING THROUGH ROOF AND TERMINATE AT ROOF CAP. INSTALL FLUE PIPING PER MANUFACTURER'S INSTRUCTIONS.
④	PROVIDE LVR-1 AND LVR-2 FOR COMBUSTION AIR. INSTALL IN ACCORDANCE WITH IFGC. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOUVER LOCATION.
⑤	INFRARED CEILING PANEL. INSTALL PER MANUFACTURER'S INSTRUCTIONS. PROVIDE WITH TAMPER RESISTANT WALL THERMOSTAT.
⑥	PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
⑦	PROVIDE HOODED WALL CAP WITH BIRDINSECT SCREEN WHERE EXHAUST DUCT PENETRATES EXTERIOR WALL.



Lexington · Cincinnati · Cleveland · Dallas

NOT FOR
CONSTRUCTION



2867 STANTON AVE.
CINCINNATI, OH 45206
TEL: 513.587.0050
FAX: 513.951.7306
www.e2m-eng.com

Revisions:
Issue Date: 2019-08-13 PROGRESS

Sycamore Township
Equipment Storage
Facility

8540 Kenwood Road
Sycamore Township, Ohio 45236

MECHANICAL PLAN

Project No.

M-101

17120

© 2018 Brandstetter Carroll Inc. All rights reserved.

EXHAUST FAN SCHEDULE											
MARK	MANUFACTURER	MODEL	FAN DATA			MOTOR DATA			BACKDRAFT DAMPER	ACCESSORIES	NOTES
			CFM	SP	RPM	VOLTS	PHASE	WATTS / HP			
EF-1	AIRKING	AIRKING / FRAS80	50	0.150	2800	120	1	83 W	YES	---	1,2
EF-2	GREENHECK	SBCE-3L24-10	5,845	0	848	208	3	1 HP	YES	1,2,4	---
EF-3	GREENHECK	SO-65-VG-D	150	0.200	1550	120	1	1 1/10 HP	YES	6	1,2
SF-1	GREENHECK	SBCR-30-20	11,685	.25	1246	208	3	2 HP	YES	1,3,5	---

ACCESSORIES:
1. WALL COLLAR
2. ALUMINUM 45° WEATHER HOOD WITH BIRD SCREEN
3. ALUMINUM 90° WEATHER HOOD WITH BIRD SCREEN
4. GRAVITY BACKDRAFT DAMPER
5. MOTOR ACTUATED DAMPER, 120V

NOTES:
1. FIRE RATED OR EQUAL
2. OR EQUAL

DUCTLESS SPLIT SYSTEM SCHEDULE																
SYSTEM	MARK	TYPE	MANUFACTURER	MODEL #	COOLING CAPACITY (BTU)	HEATING CAPACITY (BTU)	REFRIGERANT PIPE DIM.				CFM	ELECTRICAL DATA				NOTES
							LOW PRESS.	HIGH PRESS.	SUPPLY	O.A.		VOLTS	PHASE	WATT/HP	MCA	
1	WCA	WALL CASSETTE	DAIKIN	MSZ-GL09NA-U1	9,000	11,000	3/8"	1/4"	406	0	230	1	---	---	---	1,2
	WC-B	WALL CASSETTE	MITSUBISHI	MSZ-GL09NA-U1	9,000	11,000	3/8"	1/4"	406	0	230	1	---	---	---	1,2
	HP-A	HEAT PUMP	MITSUBISHI	MXZ-2C20N4HZ-U1	18,000	22,000	3/8"	1/4"	-	-	230	1	-	29.5	40	3,4

NOTES:
1. POWERED BY OUTDOOR UNIT, COORDINATE WITH ELECTRICAL CONTRACTOR.
2. PROVIDE UNIT WIRED, WALL MOUNTED PROGRAMMABLE THERMOSTAT CONTROLLER.
3. UNIT TO BE INSTALLED ON SIDEWALL. PROVIDE MANUFACTURER APPROVED PREFORMED WALL BRACKET.
4. PROVIDE ALL CONTROL WIRING PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

INFRA-RED HEATER SCHEDULE									
MARK	MANUFACTURER	MODEL NUMBER	TUBE LENGTH	BTU	ELECTRIC DATA			NOTES	
					VOLTS	PHASE	HERTZ		
IRH-1	RE-VERBER-RAY	HL3-50-125	50"	125,000	120	1	60	1,2,3	
IRH-2	RE-VERBER-RAY	HL2-50-80	50"	125,000	120	1	60	1,2,3	
IRH-3	RE-VERBER-RAY	HL2-40-80	40"	125,000	120	1	60	1,2,3	

NOTES:
1. UNITS TO BE SPECIFIED FOR NATURAL GAS OPERATION
2. MOUNTING TO BE 16'-0" OFF FINISHED FLOOR
3. MOUNTING TO BE AT HIGHEST POINT ALLOWABLE PER MANUFACTURER'S REQUIREMENTS.

ELECTRIC HEATER SCHEDULE										
MARK	MANUFACTURER	MODEL	TYPE	CAPACITY	CFM	ELECTRIC DATA			NOTES	
						WATTS	BTU	VOLTS		PHASE
ELH-1	QMARK	MMUHSD4	UNIT HEATER	2,500	8,532	270	240	1	60	1,2
ELH-2	RE-VERBER-RAY	BAH-35-A-17	INFRARED	1,750	5,900	---	120	1	60	1,2

NOTES:
1. PROVIDED WITH WIRED WALL THERMOSTAT
2. COLOR SHALL BE WHITE.

LOUVER SCHEDULE									
MARK	SERVICE	WIDTH	HEIGHT	WALL THICKNESS	MATERIAL	DAMPER	MANUFACTURER	MODEL	OPTIONS
LVR-1	COMBUSTION AIR	24"	36"	6"	ALUMINUM	GRAVITY	GREENHECK	EDD-601	1,2
LVR-2	COMBUSTION AIR	24"	36"	6"	ALUMINUM	GRAVITY	GREENHECK	EDD-601	1,2

NOTES:
1. PROVIDE WITH GRAVITY BACKDRAFT DAMPER.
2. INTERNAL BIRD SCREEN

MECHANICAL PLAN SYMBOL LEGEND	
DUCT LEGEND (NOT ALL SYMBOLS MAY BE USED)	
	NEW METAL DUCTWORK.
	EXISTING METAL DUCTWORK.
	METAL DUCTWORK TO BE DEMOLISHED.
	NEW FLEX DUCTWORK. SIZE SHALL BE EQUAL TO ASSOCIATED DEVICE AND DUCTWORK UNLESS OTHERWISE NOTED.
	EXISTING FLEX DUCTWORK. SIZE SHALL BE EQUAL TO ASSOCIATED DEVICE AND DUCTWORK UNLESS OTHERWISE NOTED.
	FLEX DUCTWORK TO BE DEMOLISHED.
DEVICE LEGEND (NOT ALL SYMBOLS MAY BE USED)	
	NEW OR RELOCATED DIFFUSER. REFER TO SCHEDULE FOR MORE INFORMATION.
	EXISTING DIFFUSER TO REMAIN. REFER TO SCHEDULE FOR MORE INFORMATION.
	SUPPLY AIR DIFFUSER.
	DUCTED RETURN AIR DIFFUSER/GRILLE.
	RETURN AIR GRILLE TO PLENUM ABOVE.
	EXHAUST AIR DIFFUSER/GRILLE.
	LINEAR SLOT DIFFUSER
	SIDWALL OR DUCT MOUNTED GRILLE.
	CABINET STYLE EXHAUST FAN
MISCELLANEOUS LEGEND (NOT ALL SYMBOLS MAY BE USED)	
	POINT OF CONNECTION TO EXISTING SYSTEM ELEMENTS.
	DEVICE IDENTIFIER. RL - RELOCATE, EX-EXISTING BALANCE OR REBALANCE TO CFM SHOWN. SEE AIR DEVICE AND EQUIPMENT SCHEDULES.
	TEMPERATURE SENSOR. REFER TO SPECIFICATIONS.

- PROJECT GENERAL NOTES**
- THE DRAWINGS ARE DIAGRAMMATIC ONLY AND INDICATE THE GENERAL ARRANGEMENT OF THE SYSTEMS AND ARE TO BE FOLLOWED INsofar AS POSSIBLE. IF DEVIATIONS FROM THE LAYOUTS ARE NECESSITATED BY FIELD CONDITIONS, DETAILED LAYOUTS OF THE PROPOSED DEPARTURES SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW BEFORE PROCEEDING WITH THE WORK.
 - THE MECHANICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS IN DETAIL AS THEY MAY RELATE TO THEIR WORK.
 - EACH CONTRACTOR SHALL INSPECT THE SITE ON WHICH THE WORK IS TO BE PERFORMED, AND THE OBSTACLES THAT MAY BE ENCOUNTERED, AND ALL RELEVANT MATTERS CONCERNING THE WORK.
 - THE CONTRACTOR SHALL FILE ALL NECESSARY NOTICES, OBTAIN AND PAY FOR ALL PERMITS, FEES, AND OTHER COSTS INCLUDING UTILITY CONNECTIONS OR EXTENSION, IN CONNECTION WITH HIS WORK, AS NECESSARY. HE SHALL FILE ALL REQUIRED PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL UTILITY AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.
 - IGNORANCE OF CODES, RULES, AND REGULATIONS, UTILITY COMPANY REQUIREMENTS, LAWS, ETC. SHALL NOT DIMINISH OR ABSOLVE CONTRACTORS RESPONSIBILITIES TO PROVIDE AND COMPLETE ALL WORK IN COMPLIANCE WITH SUCH.
 - ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE OHIO MECHANICAL CODES, NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL AGENCIES OR DEPARTMENTS HAVING JURISDICTION.

MINI-SPLIT SYSTEM NOTE

THE CONTRACTOR SHALL PROVIDE A COMPLETE DUCTLESS SPLIT SYSTEM SUBMITTAL FOR ENGINEER APPROVAL PRIOR TO COMMENCING WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL TAKE-OFFS AND LENGTHS BETWEEN ALL SYSTEM COMPONENTS ALL ELECTRICAL CONNECTIONS SHALL BE FIELD COORDINATED WITH THE ELECTRICAL CONTRACTOR. THIS DIAGRAM IS NOT FOR CONSTRUCTION AND MAY NOT SHOW ALL REQUIRED COMPONENTS, FITTINGS, ADAPTERS, CONNECTORS, SUPPORTS, CONTROLS, WIRING, ETC.

- HVAC NOTES**
- SCOPE OF WORK**
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
 - ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE INTERNATIONAL MECHANICAL CODE 2006, ALL LOCAL CODES AND ALL OTHER REGULATION GOVERNING WORK OF THIS NATURE.
 - THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY EFFECT THE WORK. NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.
 - ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR APPROVED EQUAL BY THE ENGINEER OR ARCHITECT.
 - SHOP DRAWINGS**
 - SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.
 - FLEXIBLE TYPE DUCT**
 - SHALL BE OF TWO ELEMENT SPIRAL CONSTRUCTION COMPOSED OF A CORROSION RESISTANT METAL SUPPORTING SPIRAL AND COATED FABRIC WITH A MINERAL BASE. FLEXIBLE DUCT CONSTRUCTIONS SHALL BE LISTED BY I.L. CLASS 1 DUCTS, AND SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50. USE OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO NO MORE THAN 8 LINEAR FEET PER RUN. CONTRACTOR SHALL BE CAREFUL SO AS NOT TO KINK OR COLLAPSE FLEXIBLE DUCT.
 - REFRIGERANT PIPING**
 - CONTRACTOR SHALL PROVIDE AND INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN SUCH A WAY AS TO BE IMPROVED AND FREE FROM ANY POSSIBLE CONDENSATION. INSULATE REFRIGERANT LINES WITH ARMOUR-FLEX TYPE INSULATION.
 - SHALL BE TYPE "K" COPPER TUBING, WITH WROUGHT COPPER SOLDER TYPE FITTINGS SUITABLE FOR CONNECTION WITH SILVER SOLDER DUCTWORK.
 - SHEET METAL DUCT WORK**
 - THE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "SMACNA" APPLICABLE MANUALS. ALL DUCTWORK SHALL BE THE LOW VELOCITY TYPE, UNLESS SPECIFIED OTHERWISE.
 - CONTRACTOR SHALL PROVIDE AND INSTALL APPROVED FIRE DAMPERS AND ACCESS PANELS IN ANY AND ALL DUCTWORK WHICH PENETRATES A HORIZONTAL OR VERTICAL FIRE PARTITION, OR AS OTHERWISE SHOWN ON DRAWINGS.
 - ALL BRANCH DUCTS TO HAVE VOLUME DAMPERS.
 - SMOOTH TURN RADIUS DUCTWORK OR TURNING VANES SHALL BE USED THROUGHOUT WHERE FLOW EXCEEDS 150 CFM.
 - ALL DUCT JOINTS TO BE SEALED IN ACCORDANCE WITH "SMACNA" STANDARDS AND ACCEPTED GOOD PRACTICE.
 - ALL DUCT DIMENSIONS SHOWN ARE NET INSIDE VALUES. DIMENSIONS MAY BE CHANGED SO LONG AS THE NET FREE FACE AREA IS MAINTAINED.
 - ALL CONCEALED DUCTWORK SHALL BE INSULATED WITH 1-1/2" FIBERGLASS INSULATING BLANKET WITH ALUMINUM FOIL FACING.
 - ALL SUPPLY AND RETURN DUCTWORK 15 FEET DOWNSTREAM OF THE HVAC UNIT SHALL BE INTERNALLY LINED WITH A 1/2" ACOUSTICAL DUCT LINER.
 - DRAINAGE PIPING (CONDENSATE)**
 - SHALL BE COPPER PIPE WITH SOLDER JOINTS. PITCH HORIZONTAL LINES 1" IN 10'-0". CONDENSATE DRAINS SHALL BE ROUTED TO FLOOR DRAIN OR INDIRECT WASTE DRAIN.
 - HVAC CONTROLS**
 - CONTRACTOR TO SUPPLY AND INSTALL ALL CONTROL WIRING AND THERMOSTATS AS REQUIRED.
 - ELECTRICAL**
 - CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR LOCATION OF WIRING FOR EACH HVAC UNIT.
 - PIPE SUPPORTS**
 - ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. THE USE OF WIRE OR METAL STRAP TO SUPPORT PIPES WILL NOT BE PERMITTED. SPACING OF PIPE SUPPORTS SHALL NOT EXCEED 8 FEET FOR ALL PIPING. PLASTIC PIPING TO BE SUPPORTED EVERY 4 FEET.
 - MISCELLANEOUS**
 - ALL EXTERIOR OPENINGS TO BE PROPERLY CAULKED AND SEALED WITH A SEALANT OF HIGH QUALITY AND LONG LIFE, TO PREVENT INFILTRATION OF OUTSIDE AIR INTO CONDITIONED SPACE.
 - COORDINATE INSTALLATION OF ALL ROOF FLASHING AT ROOF PENETRATION.
 - DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS, AND DIMENSIONS AT THE JOB SITE.
 - THE MECHANICAL PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE.
 - ALL AIR FILTERS SHALL CONFORM TO SECTION 605 OF THE INTERNATIONAL MECHANICAL CODE.
 - TESTING AND BALANCING**
 - THE HVAC SYSTEM SHALL BE TESTED AND BALANCED BY AN INDEPENDENT AGENCY, UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. A SEALED TYPE WRITTEN REPORT SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL.
 - GUARANTEE**
 - MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE(1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTOR'S EXPENSE.
 - FOR THE SAME PERIOD, THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.



Lexington • Cincinnati • Cleveland • Dallas

NOT FOR CONSTRUCTION



Revisions:
Issue Date: 2019-08-13 PROGRESS

**Sycamore Township
Equipment Storage
Facility**

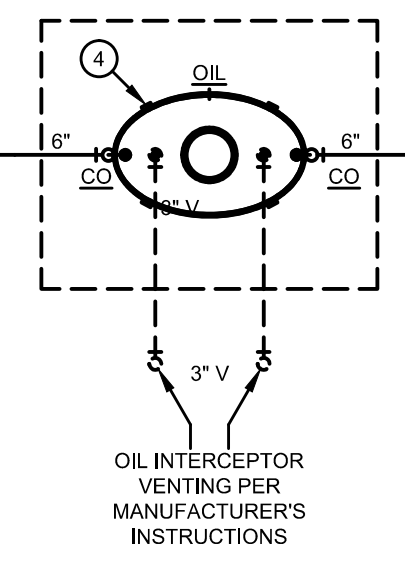
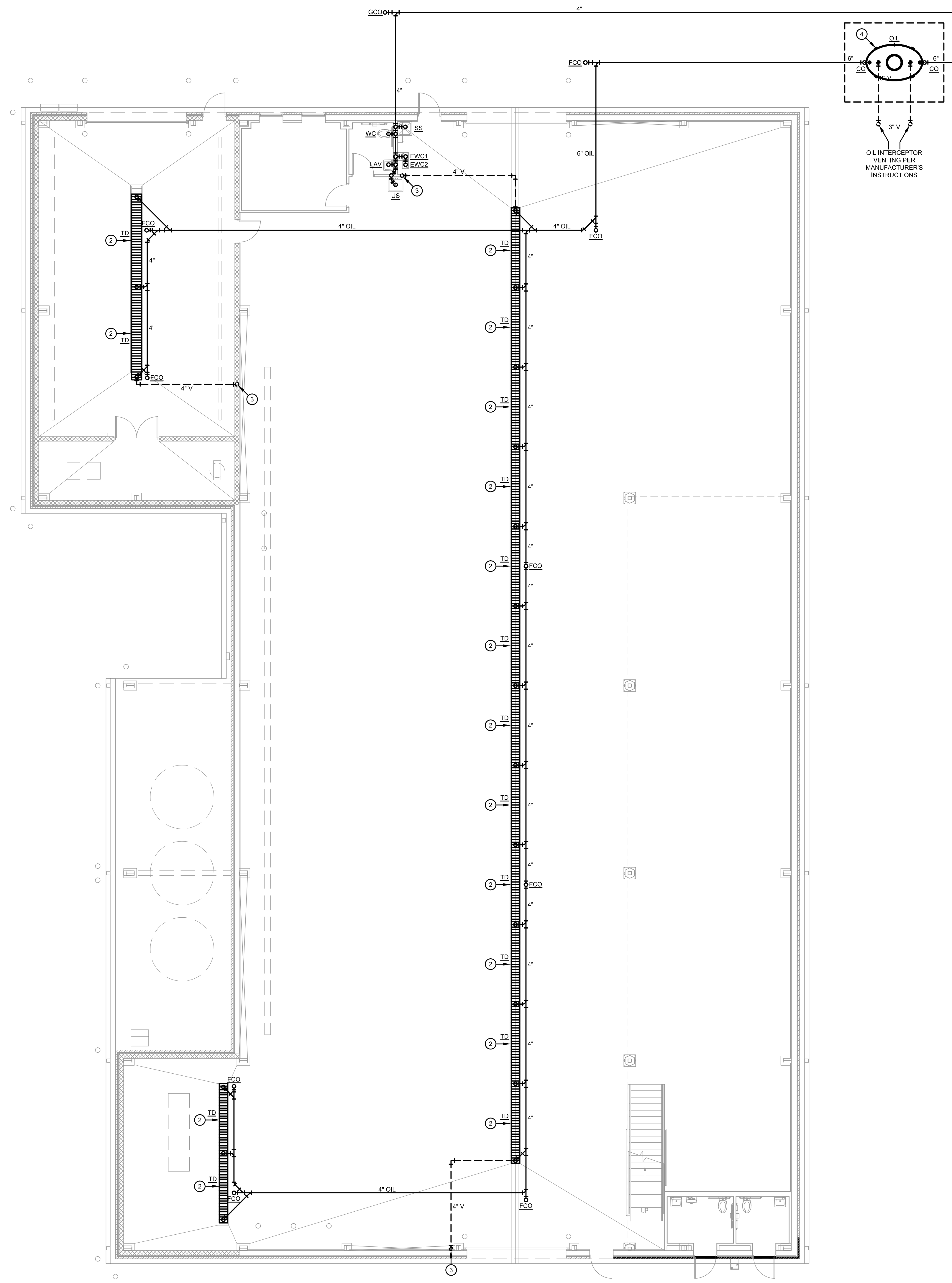
8540 Kenwood Road
Sycamore Township, Ohio 45236

MECHANICAL
SCHEDULES AND
DETAILS

Project No.

M-501

17120



PLAN NOTES	
①	4" SANITARY SERVICE LINE. COORDINATE WITH CIVIL DRAWINGS FOR CONTINUATION.
②	CAST-IN-PLACE TRENCH DRAIN. REFER TO DETAIL B6 ON A-501 FOR TRENCH DRAIN SPECIFICATIONS.
③	PLUMBING VENT UP TO CEILING.
④	REFER TO CIVIL PLANS FOR EXACT LOCATION OF OIL INTERCEPTOR.
⑤	EXTEND TO CONNECT TO MAIN SANITARY LINE. REFER TO CIVIL PLANS FOR EXACT LOCATION.

1 SANITARY DWV PLAN
 P-101 SCALE: 1/8" = 1'-0"



Lexington · Cincinnati · Cleveland · Dallas

NOT FOR CONSTRUCTION



Revisions:
 Issue Date: 2019-08-13 PROGRESS

Sycamore Township
 Equipment Storage
 Facility

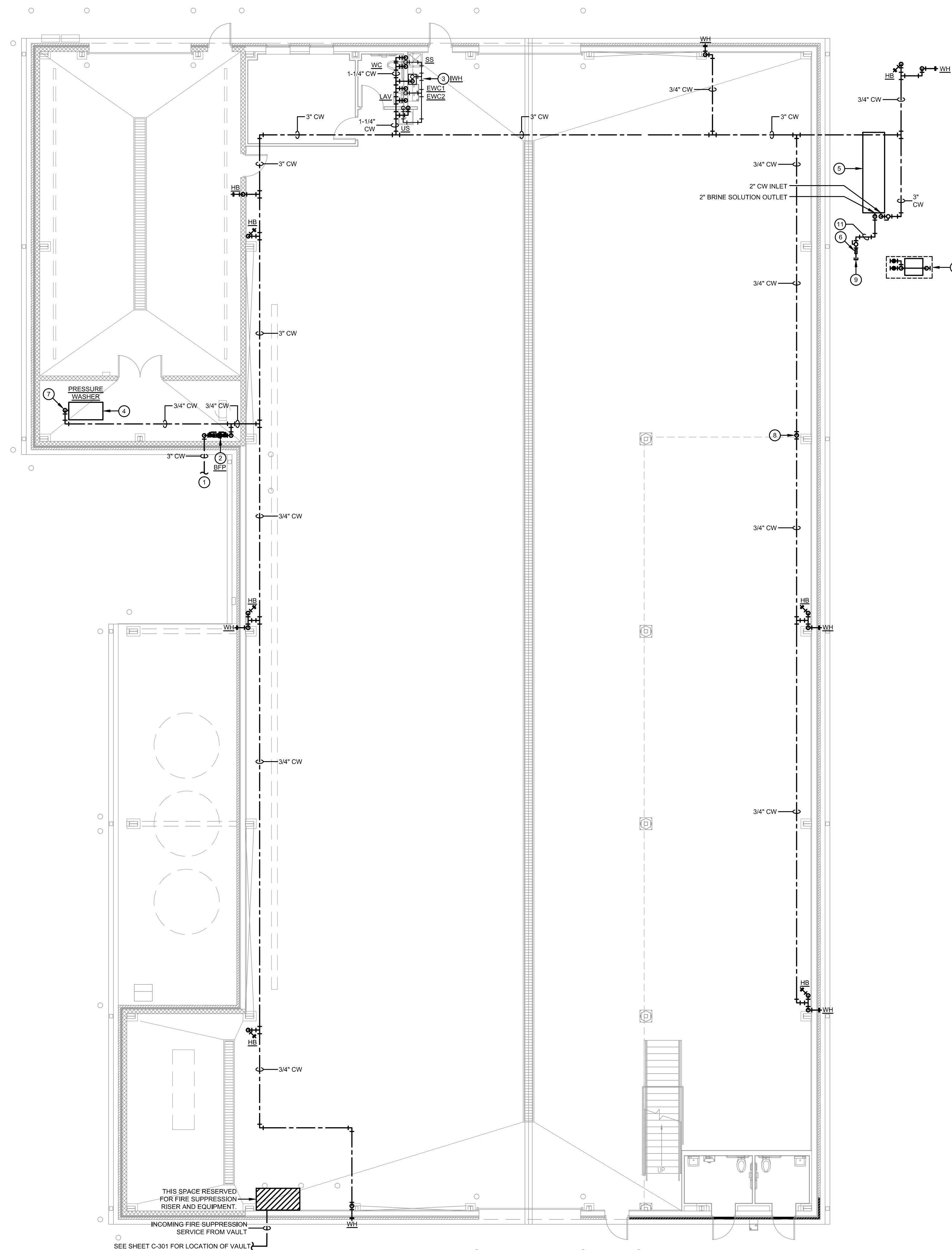
8540 Kenwood Road
 Sycamore Township, Ohio 45236

SANITARY DWV
 PLAN

Project No.

P-101

17120



PLAN NOTES	
1	NEW 2" DOMESTIC WATER SERVICE. COORDINATE WITH CIVIL DRAWINGS FOR CONTINUATION.
2	2" REDUCED PRESSURE BACKFLOW PREVENTOR. REFER TO PLUMBING FIXTURE SCHEDULE FOR SPECIFICATIONS.
3	INSTALL INSTANTANEOUS WATER HEATER ON WALL. INSTALL PER MANUFACTURER'S INSTRUCTIONS. SEE INSTANTANEOUS WATER DETAIL ON P-201 FOR MORE INFORMATION.
4	OWNER PROVIDED GAS FIRED PRESSURE WASHER.
5	PROVIDE BRINE MIXING SYSTEM. BRINE MIXER TO BE HENDERSON PRODUCTS MODEL NUMBER BRINE EXTREME PRO. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
6	PROVIDE SLEEVE WHERE BRINE SOLUTION PIPING PENETRATES EXTERIOR WALL. COORDINATE EXACT LOCATION WITH BRINE EQUIPMENT INSTALLATION PRIOR TO COMMENCING WORK.
7	EXTEND 3/4" CW CONNECTION DOWN TO OWNER PROVIDED PRESSURE WASHER. FIELD VERIFY EXACT LOCATION PRIOR TO COMMENCING WORK. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
8	COLD WATER PIPING TO EXTEND DOWN TO BELOW MEZZANINE. HOLD PIPING TIGHT TO COLUMN.
9	STUB BRINE SOLUTION PIPING THROUGH WALL FOR FUTURE CONNECTION OF FLEXIBLE PIPING.
10	PROVIDE BRINE TRUCK FILL STATION. FILL STATION TO BE HENDERSON PRODUCTS MODEL # "BRINE EXTREME TRUCK-FILL PRO". PROVIDE OPTIONAL (1) ADDITIONAL VALVE TO ALLOW FOR BLEND/STACKING OF (2) BRINE SOLUTIONS. INSTALL PER MANUFACTURER'S INSTRUCTION.
11	EXTEND PIPING FROM BRINE MIXING UNIT TO WALL SLEEVE. COORDINATE WITH OWNER FOR EXACT PIPING MATERIAL AND ROUTING.

1 DOMESTIC WATER PLAN
 P-201 SCALE: 1/8" = 1'-0"



Lexington · Cincinnati · Cleveland · Dallas

NOT FOR CONSTRUCTION



2867 STANTON AVE.
 CINCINNATI, OH 45206
 TEL: 513.587.0050
 FAX: 513.951.7306
 www.e2m-eng.com

Revisions:
 Issue Date: 2019-08-13 PROGRESS

Sycamore Township
 Equipment Storage
 Facility

8540 Kenwood Road
 Sycamore Township, Ohio 45236

DOMESTIC WATER
 PLAN

Project No.

P-201

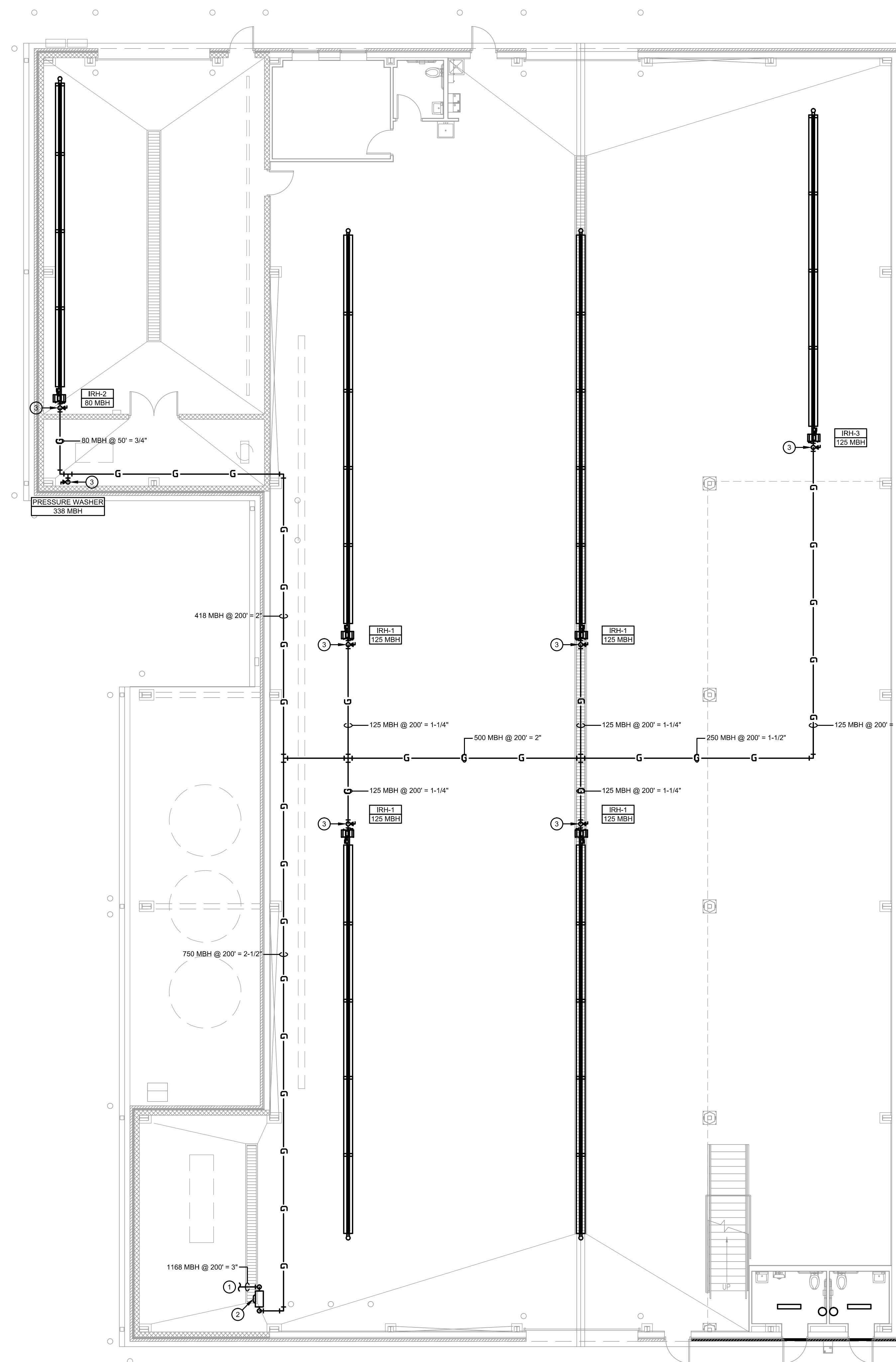
17120

PLAN NOTES	
①	REFER TO CIVIL DRAWINGS FOR CONTINUATION OF GAS PIPING.
②	PROVIDE GAS METERING PER LOCAL UTILITY COMPANY SPECIFICATIONS.
③	PROVIDE UNION, GAS COCK, AND 4" DIRT LEG AT EQUIPMENT CONNECTION. INSTALL PER MANUFACTURER'S INSTRUCTIONS.



Lexington · Cincinnati · Cleveland · Dallas

**NOT FOR
CONSTRUCTION**



1 GAS PIPING PLAN
P-301 SCALE: 1/2" = 1'-0"

Revisions: 2019-08-13 PROGRESS
Issue Date:

**Sycamore Township
Equipment Storage
Facility**

8540 Kenwood Road
Sycamore Township, Ohio 45236

GAS PIPING PLAN

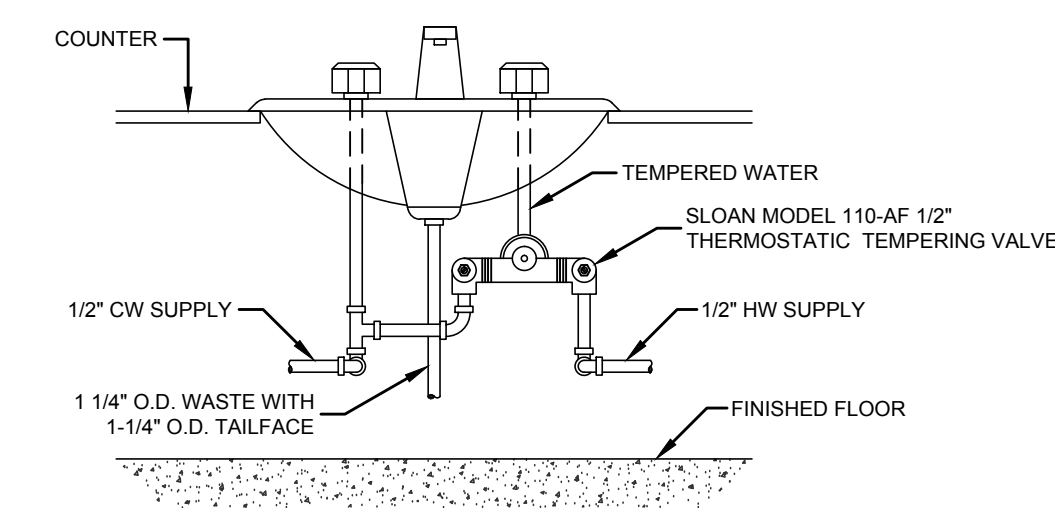
Project No.

P-301

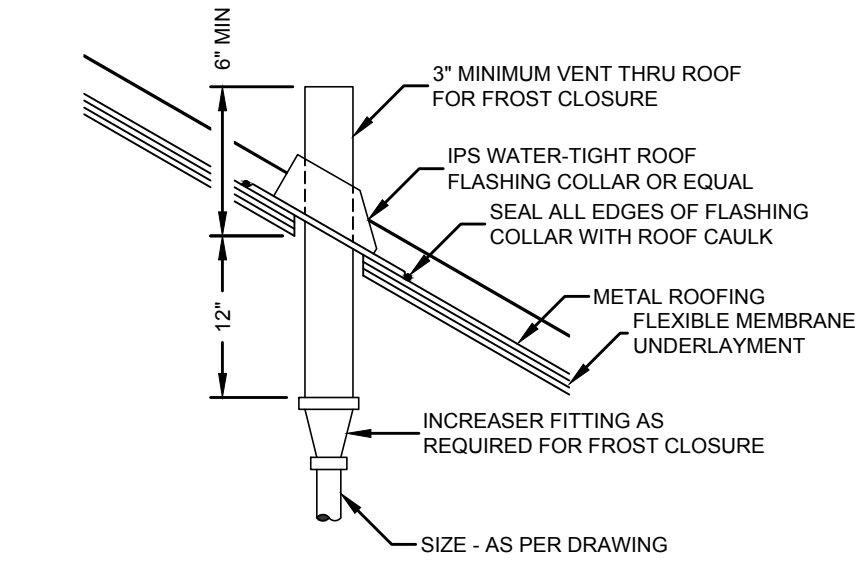
17120

© 2018 Brandstetter Carroll Inc. All rights reserved.

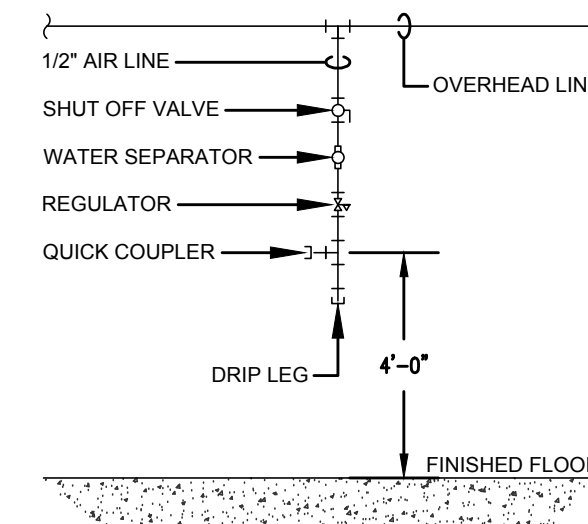
NOT FOR
CONSTRUCTION



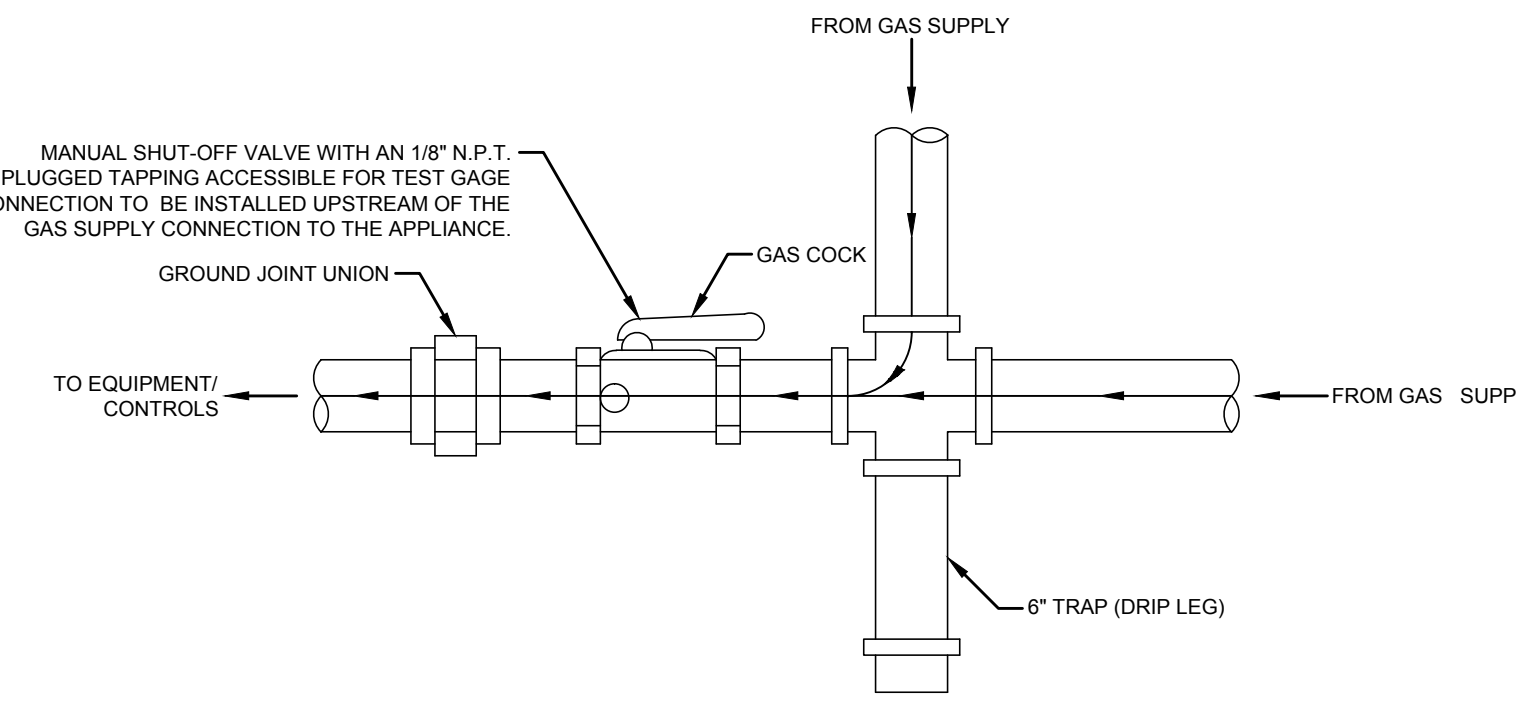
D3 LOCAL MIXING VALVE DETAIL
NTS



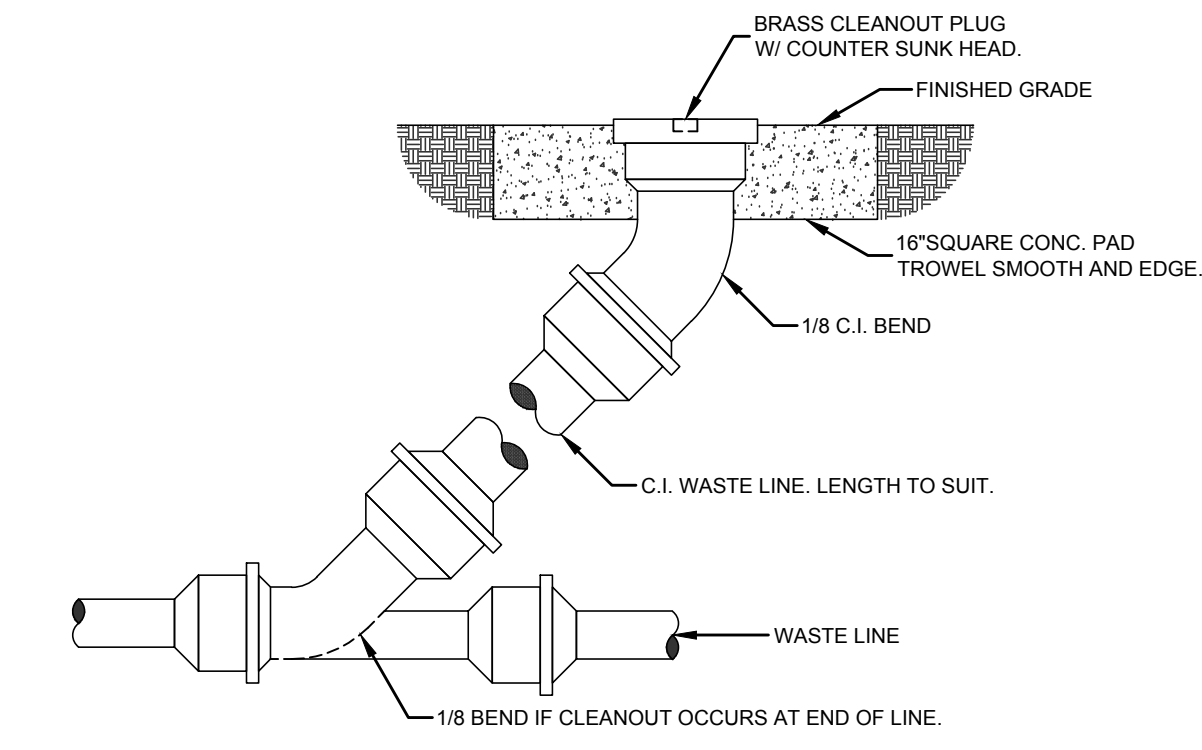
D4 VENT THROUGH PITCHED ROOF DETAIL
NTS



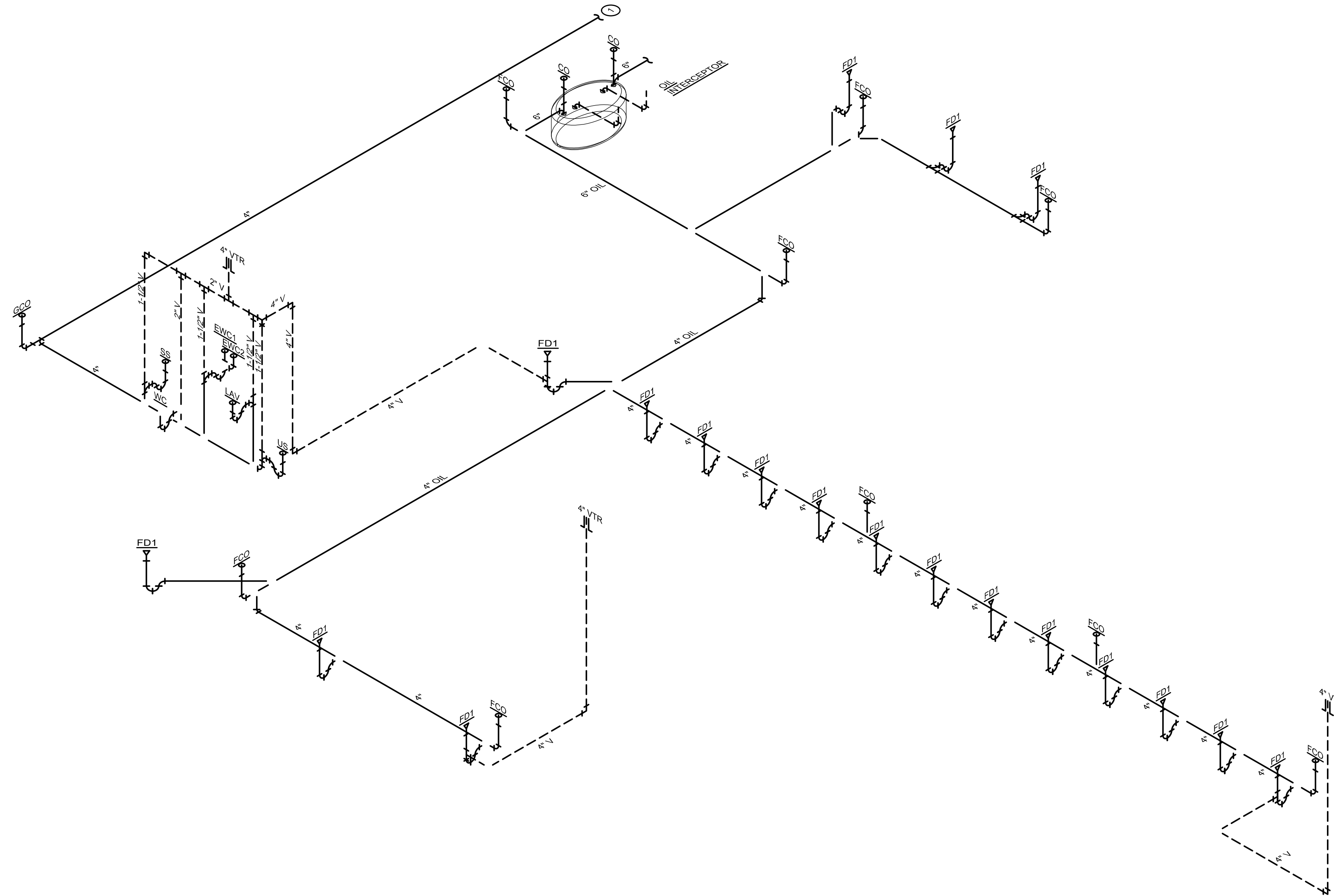
A3 COMPRESSED AIR DROP DETAIL
NTS



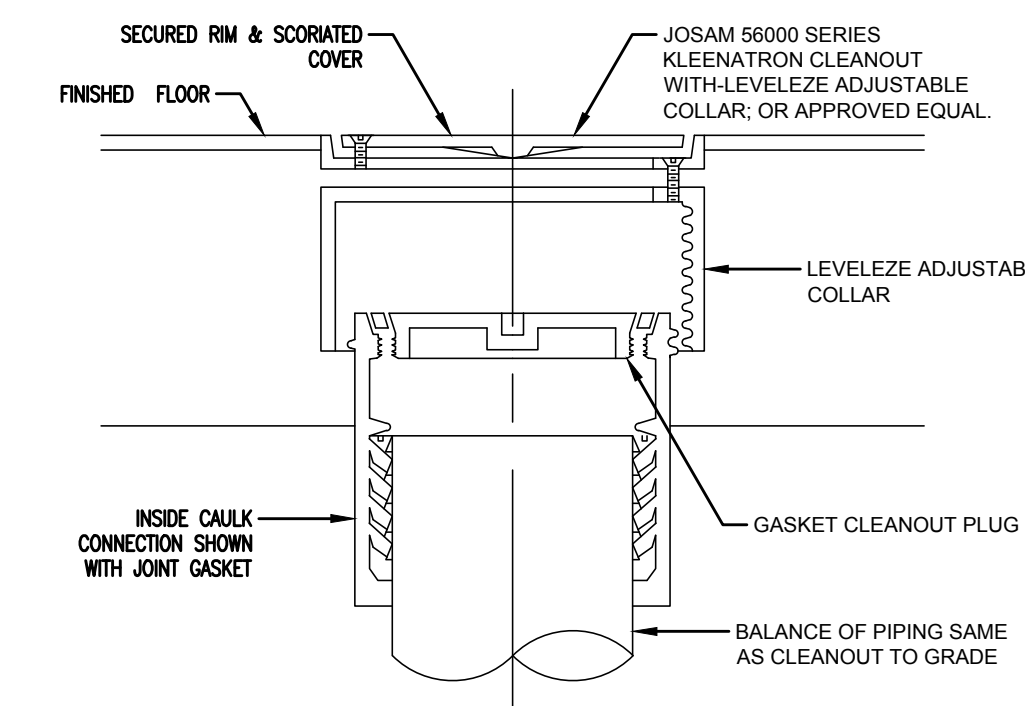
C2 GAS CONNECTION TO EQUIPMENT DETAIL
NTS



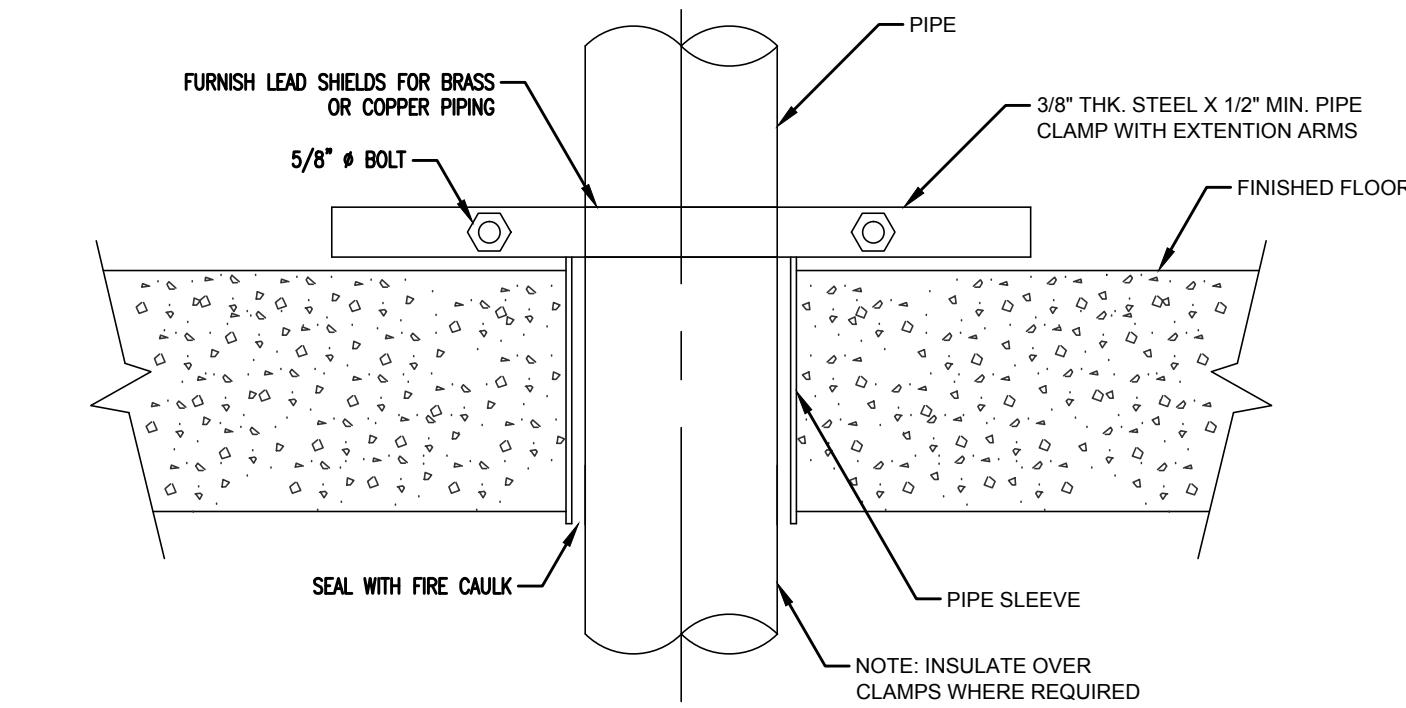
C4 GRADE CLEANOUT DETAIL
NTS



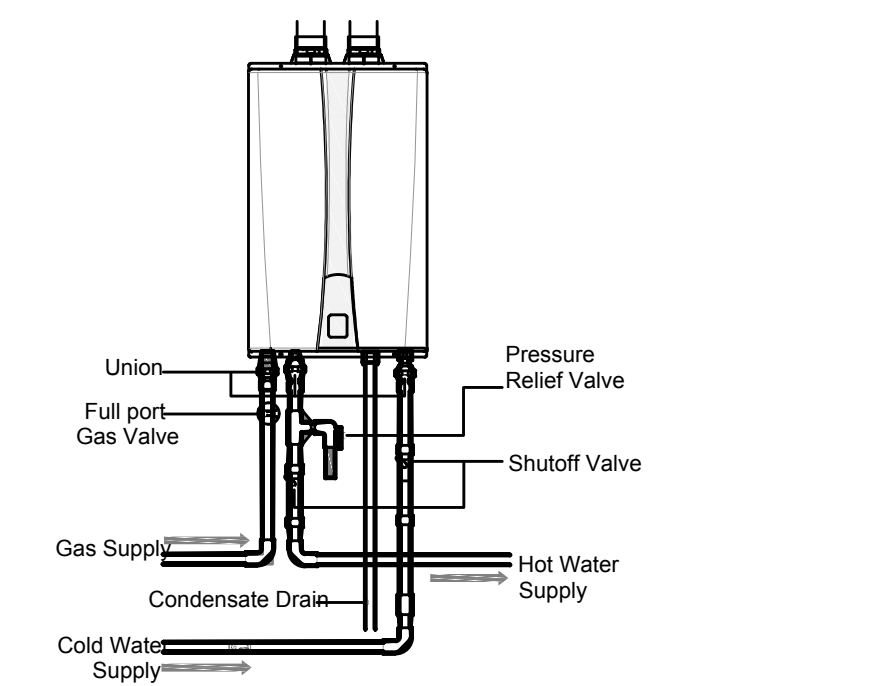
1 SANITARY DWV ISOMETRIC DETAIL
P-501 SCALE: NONE



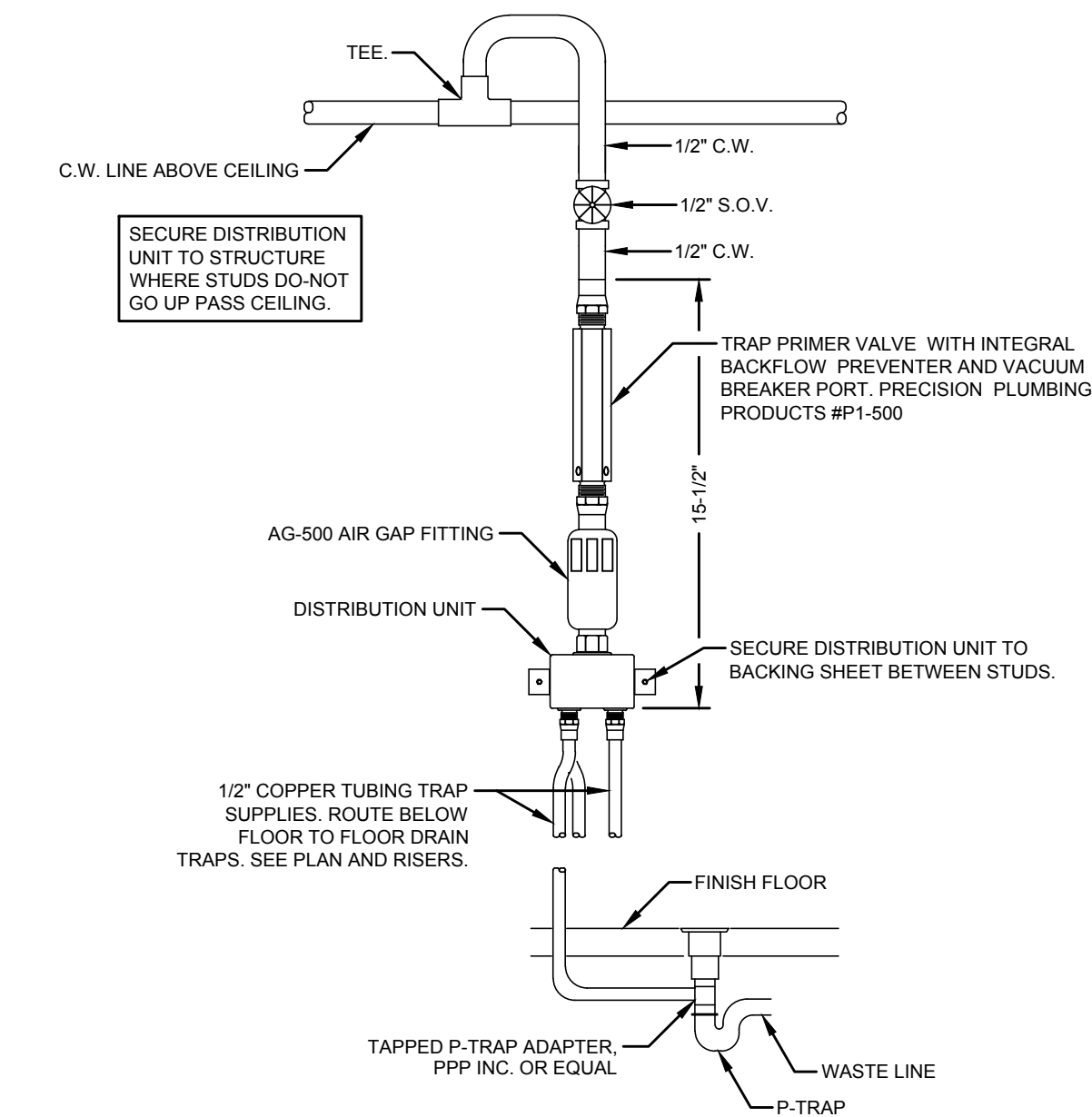
B2 FLOOR CLEANOUT DETAIL
NTS



B3 PIPE RISER SUPPORT DETAIL
NTS



B4 INSTANTANEOUS WATER HEATER INSTALLATION DETAIL
NTS



B5 TRAP PRIMER INSTALLATION DETAIL
NTS

Revisions: Issue Date: 2019-08-13 PROGRESS

**Sycamore Township
Equipment Storage
Facility**

8540 Kenwood Road
Sycamore Township, Ohio 45236

PLUMBING DETAILS

Project No.

P-501

17120

ID	DESCRIPTION	MANUFACTURER	MODEL NUMBER	SUPPLY			RECD COMP	NOTES
				HOT	COLD	SANITARY		
BFP	R.P.2. BACK FLOW PREVENTER	WATTS	909 NRS	---	2"	---	---	---
CO	CLEANOUT	J.R. SMITH	FIG 4031 SERIES	---	3"	---	---	---
ESH	EMERGENCY SHOWER	BRADLEY	4R655	---	12"	1-1/4"	1-1/4"	---
EW-1	ELECTRIC WATER COOLER	ELKAY	EZS8L	---	3/8"	1-1/4"	4	3
EW-2	ELECTRIC WATER COOLER	ELKAY	EZS8L	---	3/8"	1-1/4"	4	4
GCO	GRADE CLEANOUT	J.R. SMITH	4220 SERIES	---	---	---	---	---
FDO	FLOOR CLEANOUT	J.R. SMITH	FIG 4220 SERIES	---	---	3"	---	---
FD	FLOOR DRAIN	ZURN	Z-1191	---	---	3"	1-1/2"	1
HB	HOSE BIBB	ZURN	Z-1341	---	12"	---	---	---
HB2	HOSE BIBB	DIXON	AV151	---	1-1/2"	---	---	---
IWH	INSTANTANEOUS WATER HEATER	EEMAX	SP55	12"	12"	---	---	---
LAV1	LAV - INTEGRAL BOWL & COUNTER	BY OTHERS	BY OTHERS	12"	12"	1-1/2"	1-1/2"	6 2
OIL	OIL INTERCEPTOR	PROCEPTOR	CMC-1000	---	---	6"	---	7
US	UTILITY SINK EMERG. EYE WASH	FIAT	FL-1	1/2"	1/2"	1-1/2"	1-1/2"	8
SS	SERVICE SINK	FIAT	MSB2424	1/2"	1/2"	3"	1-1/2"	9
TD1	TRENCH DRAIN	PER DETAIL BS ON A-601	PER DETAIL BS ON A-601	---	---	8"	---	3
TP	TRAP PRIMER	PRECISION PLUMBING	PH-500	---	12"	---	---	5
TV	TEMPERING VALVE	SPARCO	AM-100	---	---	---	---	1
WC	WATER CLOSET	AMERICAN STANDARD	2855.128	---	12"	3"	2"	1
WCO	WALL CLEANOUT	J.R. SMITH	FIG 4532 SERIES	---	---	3"	---	---
WH	WALL HYDRANT	ZURN	Z-1300-SS	---	3/4"	---	---	2

ITEM NO.	CAPACITY (GALLONS)	RECOVERY @ 100°F ROSE	BTU PER HOUR	GAS CONN.	WATER CONN.	MANUFACTURER AND MODEL	REMARKS
GFVH	N/A	N/A	180,000	3/4"	3/4"	NAVEN NPE-210S	SEALED COMBUSTION THROUGH SIDE WALL. 50 EQUIVALENT FEET OF EXHAUST AND 50 EQUIVALENT FEET OF INTAKE WITH 3" VENT.

1. COLOR:	WHITE VITREOUS CHINA
2. TYPE:	MANUAL FLUSH VALVE
3. SEAT:	CENTRO 500 SERIES OPEN FRONT
4. FLOOR MOUNTING:	FLOOR
5. MISC:	PROVIDE WITH ANGLED SUPPLY STOP

1. 1,000 GALLON TOTAL VOLUME. SEPARATOR SHALL BE PROVIDED WITH INLETOULET CLEANOUT, SAMPLE AND VENTILATION PORTS TOGETHER WITH AN EXTENSION COLLAR AND FRAME AND COVER TO ALLOW ACCESS FOR OIL AND SOLIDS REMOVAL. THE SEPARATOR SHALL PROVIDE ADEQUATE TREATMENT TIME TO LIMIT THE EFFLUENT DISCHARGE LEVELS OF NON-EMULSIFIED SOLVENT EXTRACTABLE MATTER OF MINERAL OR SYNTHETIC ORIGIN TO A MAXIMUM OF 10 PPM AND TOTAL SUSPENDED SOLIDS (TSS) TO A MAXIMUM OF 300 PPM. SEPARATOR SHALL BE CONSTRUCTED USING AN ISOPHTHALIC POLYESTER RESIN SPECIFICALLY DESIGNED FOR THE MANUFACTURE OF REINFORCED FIBERGLASS PRODUCTS. THE RESULTING MATERIAL IS INERT, NON-CORROSIVE AND IMPERVIOUS TO RETAINED WASTE. SEPARATOR SHALL INCLUDE A 30-YEAR WARRANTY AGAINST LEAKAGE, CORROSION AND STRUCTURAL FAILURE. SEPARATOR SHALL BE SUITABLE FOR UNDERGROUND INSTALLATION AND SHOULD BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. A REINFORCED CONCRETE RELIEVING SLAB, PROVIDED AND INSTALLED AT GRADE BY OTHER VENDORS, ENABLES THE SEPARATOR TO BE INSTALLED BENEATH TRAFFIC LOADING AREAS. PROVIDE WITH CAST IRON COVER FOR H20 TRAFFIC LOADING. PROVIDE WITH EXTENSION COLLAR.

1. FAUCET:	BRADLEY 519-3028
2. CHECK VALVES:	PROVIDE CHECK VALVES ON CW AND HW SUPPLIES
3. CHECK VALVES:	PROVIDE TV ON HW LINE.

1. FAUCET:	CHICAGO FAUCET MODEL 803-311-244BCP
2. MISC:	PROVIDE WITH GRID DRAIN, SUPPLY STOPS, 1-1/4" P-TRAP, TV

1. FAUCET:	CHICAGO FAUCET MODEL 8897
2. CHECK VALVES:	PROVIDE CHECK VALVES ON CW AND HW SUPPLIES

1. PLUMBING CONTRACTOR SHALL ADJUST HEIGHT AND ROTATION (SQUARE WITH WALLS). TILE CONTRACTOR TO PROVIDE FINAL GROUT.
2. INSULATE PIPING BELOW LAVATORY WITH TRUEBRO "LAVGUARD".
3. INSTALL FIXTURE WITH ORIFICE HEIGHT AT 38-3/8" AFF.
4. INSTALL FIXTURE WITH ORIFICE HEIGHT AT 32-7/8" AFF.

PROJECT GENERAL NOTES

- THE DRAWINGS ARE DIAGNOSTIC ONLY AND INDICATE THE GENERAL ARRANGEMENT OF THE SYSTEMS AND ARE TO BE FOLLOWED INsofar AS POSSIBLE. IF DEVIATIONS FROM THE LAYOUTS ARE NECESSITATED BY FIELD CONDITIONS, DETAILED LAYOUTS OF THE PROPOSED DEPARTURES SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW BEFORE PROCEEDING WITH THE WORK.
- THE PLUMBING CONTRACTOR SHALL REVIEW ALL DRAWINGS IN DETAIL AS THEY MAY RELATE TO THEIR WORK.
- EACH CONTRACTOR SHALL INSPECT THE SITE ON WHICH THE WORK IS TO BE PERFORMED, AND THE OBSTACLES THAT MAY BE ENCOUNTERED, AND ALL RELEVANT MATTERS CONCERNING THE WORK.
- THE CONTRACTOR SHALL FILE ALL NECESSARY NOTICES, OBTAIN AND PAY FOR ALL PERMITS, FEES, AND OTHER COSTS INCLUDING UTILITY CONNECTIONS OR EXTENSION, IN CONNECTION WITH HIS WORK. AS NECESSARY, HE SHALL FILE ALL REQUIRED PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL UTILITY AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.
- IGNORANCE OF CODES, RULES, AND REGULATIONS, UTILITY COMPANY REQUIREMENTS, LAWS, ETC. SHALL NOT DIMINISH OR ABSOLVE CONTRACTOR'S RESPONSIBILITIES TO PROVIDE AND COMPLETE ALL WORK IN COMPLIANCE WITH SUCH.
- ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE OHIO MECHANICAL CODES, NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL AGENCIES OR DEPARTMENTS HAVING JURISDICTION.

PLUMBING FIXTURE ABBREVIATIONS

XXX	FIXTURE DESIGNATION. SEE PLUMBING FIXTURE SCHEDULE FOR EQUIPMENT SPECIFICATIONS.	RO	ROUGH ONLY
AD	AREA DRAIN	RFC	ROUGH AND CONNECT
AFF	ABOVE FINISHED FLOOR BACK FLOW PREVENTER	RELOC	RELOCATED
BFP	BACK FLOW PREVENTER	S	SANITARY SINK
C	CLOSET	SD	SHOWER DRAIN
CI	CAST IRON CLEAN OUT	SS	SCRUB SINK
CO	CONDENSING UNIT	SH	SHOWER
CU	CONDENSING UNIT	SPH	SPRINKLER HEAD
DF	DOWNSPOUT	T	TRENCH DRAIN
ELEV	ELEVATOR	TP	TRAP PRIMER
EW	ELECTRIC WATER COOLER	TV	TEMPERING VALVE
FD	FLOOR DRAIN	UR	URINAL
FP	FLOOR PORT	URV	URINAL VENT THRU ROOF
HB	HOSE BIBB	WH	WALL HYDRANT
INV	INVERT	WS	WASHER SINK
JV	JANITOR SINK	WC	WATER CLOSET
KS	KITCHEN SINK	WF	WASH FOUNTAIN
LAV	LAVATORY		
LD	ROOF DRAIN		

OIL SEPARATOR SIZING

SIZING PER OHIO PLUMBING CODE 1003.4.2.2

TOTAL VEHICLE SERVICE AREA SQUARE FEET: 11,410

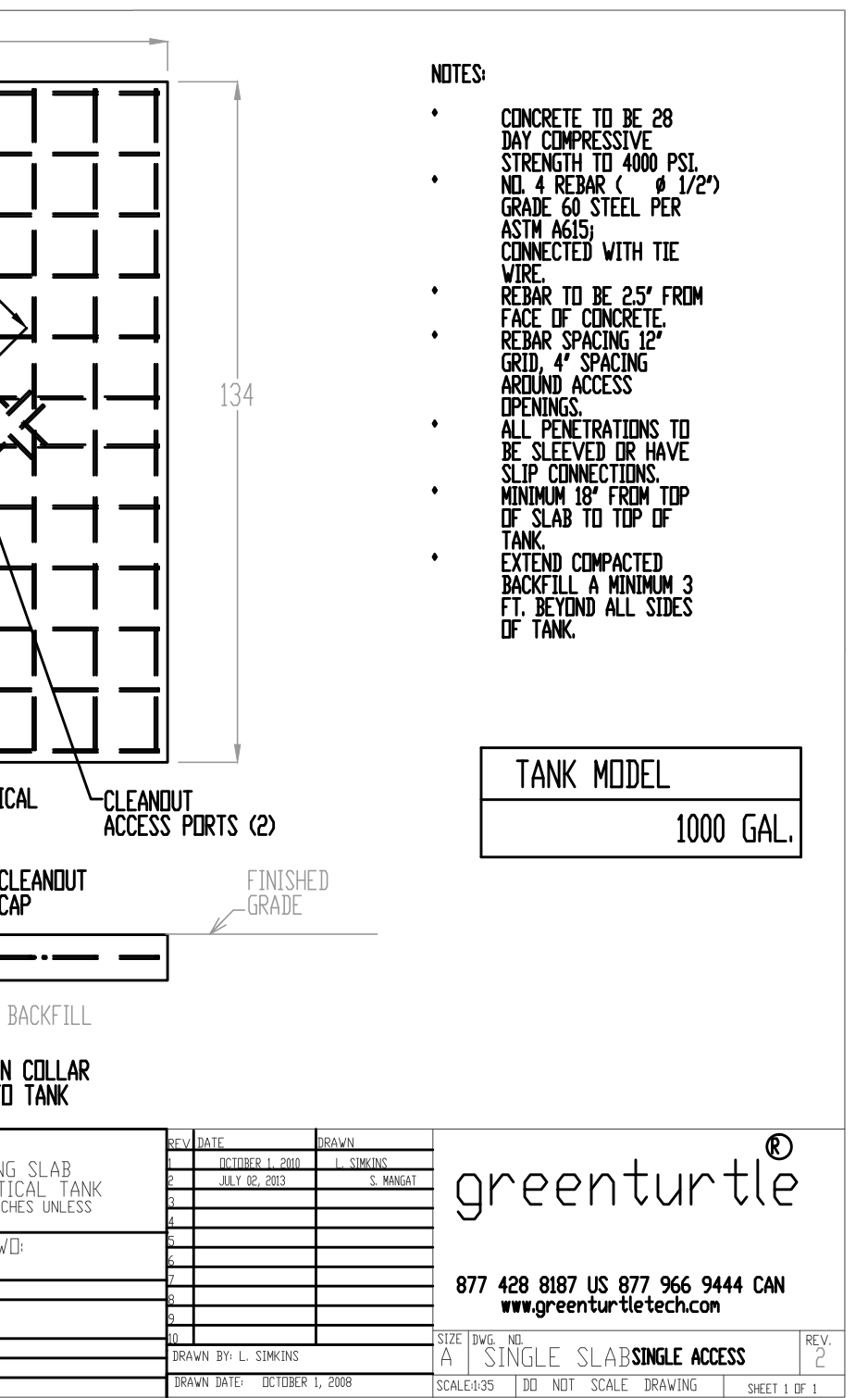
FIRST 100 FT² = 6 FT³ OF SEPARATOR CAPACITY

REMAINING SQUARE FEET = 1 FT³ OF SEPARATOR CAPACITY PER 100 FT²

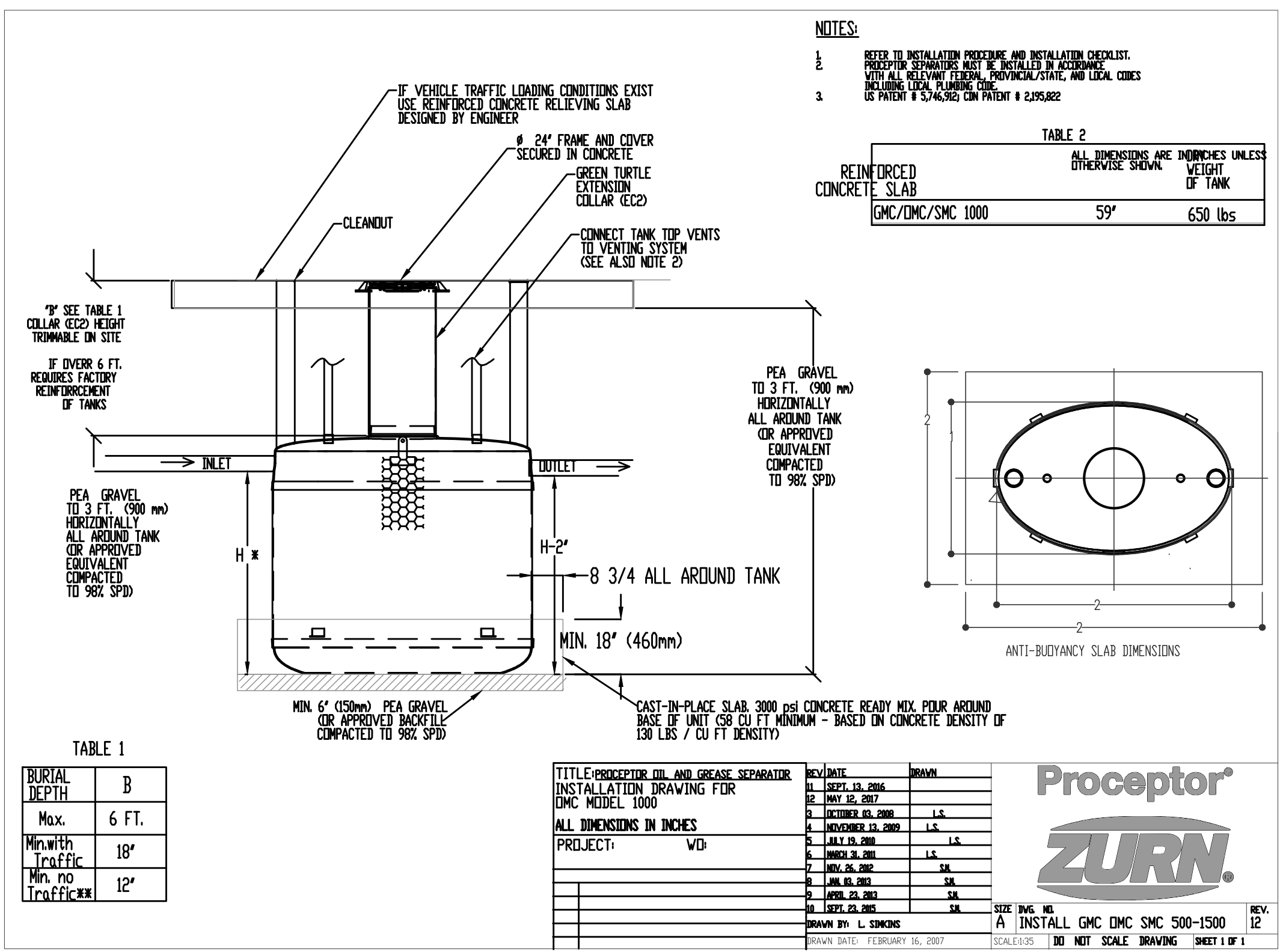
11,410 FT² - 100 FT² = 11,310 FT²
 11,310 FT² / 100 FT² = 113.1 FT³
 113.1 FT³ ÷ 6 FT³ = 19.1 FT³

119.1 FT³ X 7.481 = 890.6 GALLONS

OIL SEPARATOR SIZE PROVIDED: 1,000 GALLONS



2 OIL/WATER SEPARATOR RELIEVING SLAB INSTALLATION DETAIL
SCALE: NONE



1 OIL/WATER SEPARATOR INSTALLATION DETAIL
SCALE: NONE

PLUMBING PIPE LEGEND

---	DOMESTIC COLD WATER
---	DOMESTIC HOT WATER
---	SANITARY WASTE LINE
---	VENT LINE
G	GAS LINE
⊖	PIPE TURNED DOWN
⊕	PIPE TURNED UP
⊖	PIPE TEE DOWN
⊕	PIPE TEE UP
⊞	METER
⊞	CLEAN OUT
⊞	FLOOR DRAIN
⊞	POINT OF CONNECTION TO EXISTING SYSTEM ELEMENTS.

PLUMBING PIPE FIXTURE LEGEND

⊖	BALL VALVE
⊖	BUTTERFLY VALVE
⊖	GATE VALVE
⊖	GLOBE VALVE
⊖	ANGLED GATE VALVE
⊖	ANGLED GLOBE VALVE
⊖	RELIEF VALVE
⊖	BALANCING VALVE
⊖	CALIBRATED BALANCING VALVE
⊖	PRESSURE REDUCING VALVE
⊖	CHECK VALVE
⊖	CHECK VALVE WITH BALL DROP
⊖	O. S. AND Y VALVE
⊖	O. S. AND Y VALVE
⊖	AUTOMATIC AIR VENT
⊖	MANUAL AIR VENT
⊖	PUMP

PLUMBING SPECIFICATIONS

- SCOPE OF WORK**
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO BE PROVIDED BY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
 - ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE NATIONAL STANDARD PLUMBING CODE (LATEST EDITION), ALL LOCAL CODES, AND ALL OTHER REGULATIONS GOVERNING WORK OF THIS NATURE.
 - THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY AFFECT THE WORK. NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.
 - ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUIP." BY ENGINEER OR ARCHITECT.
- PERMITS**
 - THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.
- SHOP DRAWINGS**
 - SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR ALL EQUIPMENT/FIXTURES TO THE ARCHITECT OR ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT THREE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.
 - DOMESTIC WATER SUPPLY PIPING**
 - UNDERGROUND: PROVIDE TYPE "K" SOFT DRAWN COPPER TUBING WITH BRAZED CONNECTIONS.
 - ABOVEGROUND: PROVIDE TYPE "L" HARD DRAWN COPPER TUBING WITH 125 PSI SOLDER JOINTS, COPPER OR BRASS FITTINGS, ALL SOLDER TO BE "NO LEAD" TYPE.
 - ALL HOT WATER PIPING TO BE INSULATED WITH 1" FIBERGLASS INSULATION.
 - ALL COLD WATER PIPING TO BE INSULATED WITH 1/2" FOAM INSULATION.
 - SANITARY/SYSTEM DRAINAGE AND VENT PIPING**
 - ABOVE GRADE: A SCH. 40 GALV. STL. PIPE WITH SCREWED 2" AND BELOW: ENDS OR SCH. 40 PVC WITH SOLVENT JOINTS OR DWV COPPER WITH SOLDER JOINTS. ALL SOLDER TO BE "NO LEAD" TYPE.
 - 3" AND ABOVE: SERVICE WT. CAST IRON WITH NO-HUB OR BELL AND SPIGOT JOINTS; OR SCH. 40 PVC WITH SOLVENT JOINTS. SERVICE WT. CAST IRON WITH BELL AND
 - BELOW GRADE: B. SPIGOT JOINTS OR SCH. 40 PVC WITH SOLVENT JOINTS.
 - PVC PIPING SHALL NOT BE USED IN AIR PLenums CEILING AND SHALL NOT CROSS FIRE RATED WALLS, CEILING, OR FLOORS.
 - DRAINAGE PIPING SHALL BE RUN AS STRAIGHT AS POSSIBLE AND SHALL HAVE LONG TURN FITTINGS.
 - DRAINAGE PIPING 3" SIZE AND SMALLER SHALL RUN AT A UNIFORM GRADE OF AT LEAST 1/8" PER FOOT, AND PIPING LARGER THAN 3" SHALL BE RUN AT A GRADE OF NO LESS THAN 1/8" PER FOOT.
 - ALL VENT PIPING SHALL BE SLOPED TO DRAIN BACK TO FIXTURES.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FLASHING OF THE VENT PIPING RUN THROUGH THE ROOF.
 - PIPE SUPPORTS**
 - ABOVE GRADE
 - ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. THE USE OF WIRE AND PERFORMED METAL TO SUPPORT PIPES WILL NOT BE PERMITTED. SPACING OF PIPE SUPPORTS SHALL BE AS SPECIFIED IN CHAPTER 8 OF THE NATIONAL STANDARD PLUMBING CODE.
 - BELOW GRADE
 - EARTH SHALL BE EXCAVATED TO A MINIMUM DEPTH WITH AN EVEN SURFACE TO INSURE SOLID BEARING OF PIPE FOR ITS ENTIRE LENGTH.
 - INTERIOR: THE PIPE SHALL BE INSTALLED UNLESS OTHERWISE SPECIFIED A MINIMUM OF 4 INCHES BELOW THE BOTTOM OF THE SLAB AND SHALL NOT BE IN ANY DIRECT CONTACT WITH THE CONCRETE AT ANY POINT.
 - EXTERIOR: THE WATER PIPE SHALL HAVE A MINIMUM OF 42" OF COVER AND THE SANITARY WASTE PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.
 - MISCELLANEOUS**
 - COORDINATE INSTALLATION OF ALL ROOF FLASHING AT A ROOF PENETRATION.
 - DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS, AND DIMENSIONS AT THE JOB SITE.
 - THE PLUMBING PLANS ARE INTENDED TO BE DIAGNOSTIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT.
 - THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE.
 - TESTING**
 - PLUMBING SYSTEMS SHALL BE FLOW AND PRESSURE TESTED IN ACCORDANCE WITH STANDARD PRACTICE AND THE NATIONAL STANDARD PLUMBING CODE.
 - GUARANTEE**
 - MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE(1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTOR'S EXPENSE.
 - FOR THE SAME PERIOD, THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.



NOT FOR CONSTRUCTION



Revisions: Issue Date: 2019-08-13 PROGRESS

Sycamore Township Equipment Storage Facility

8540 Kenwood Road Sycamore Township, Ohio 45236

PLUMBING SCHEDULES AND NOTES

Project No.

P-601

17120

© 2018 Brandstetter Carroll Inc. All rights reserved.