

# PROJECT DESCRIPTION

FOR

# Public Safety Training Facility Range Building

BY

City of Elyria

AT

Garden Street  
Elyria, Ohio 44035  
For Construction

## PROJECT DESCRIPTION

The Scope of Work proposed as a part of this submittal includes a single-story range building with ammunition storage, weapons cleaning, offices, classrooms, multi-purpose space.

## GENERAL PROJECT NOTES

- The work shall conform to all applicable local, state, and national codes.
- Field verify existing conditions prior to performing any demolition, fabrication, or construction work.
- Dimensions are to finished surfaces (not rough framing) except where noted otherwise.
- All dimensions and elevations noted as "(REF)" are for reference only and shall be field verified by the contractor prior to using them for any demolition, or construction activities.
- Contractor shall review and become familiar with all existing conditions prior to commencing work. Any conditions not documented on these drawings or observed to be different than those shown on these drawings are to be reported to the architect / engineer and owner prior to commencing the work.
- Contractor shall submit all not already submitted permit documents, qualifications, etc. and be responsible for all fees associated with permits, utility extensions, tap-inspections, etc. The architect/engineer shall submit construction documents for owner's review and permit plan review; however, the contractor will be responsible for obtaining the permits, and all associated permit and inspection costs / fees.
- The contractor shall be responsible for removal of all debris resulting from construction work on this project.
- All contractors are responsible for familiarizing themselves with the entire set of contract documents. Trades work may be shown in various locations on various sheets of the drawing set.
- Hazardous materials in the work area will be abated by the owner prior to construction. If a contractor encounters any materials believed to be hazardous, immediately stop work and notify the owner, general contractor, and architect. Do not resume work in the area in question until the area has been properly assessed.
- Fire suppression contractors shall provide certified fire suppression drawings and hydraulic calculations to the authority having jurisdiction. The local fire official shall have the opportunity to review the construction documents.

## DRAWING INDEX

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G2.00	Phase One Site Plan	11.07.2024	A
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A1.00	Floor Plan	11.07.2024	A
A1.10	Reflected Ceiling Plan	11.07.2024	A
A1.11	Finish Floor Plan	11.07.2024	A
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A5.00	Wall Sections	11.07.2024	A
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S1.20	Roof Framing Plan	09.26.2024	
S2.00	Foundation Details & Sections	09.26.2024	
S3.00	Framing Details & Sections	09.26.2024	
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P3.00	Plumbing Schedules	09.26.2024	
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M3.00	Mechanical Schedules	11.07.2024	A
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Client:

City of Elyria

131 Court St - Suite 101  
Elyria, Ohio 44035

Project:

Public Safety  
Training Facility  
Range Building

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Revisions:

A 11.07.2024 ADDENDUM A  
09.26.2024 For Construction

Project Number: 5039 01 23  
Drawn by: HLM  
Checked by: GLP  
Copyright: 2024

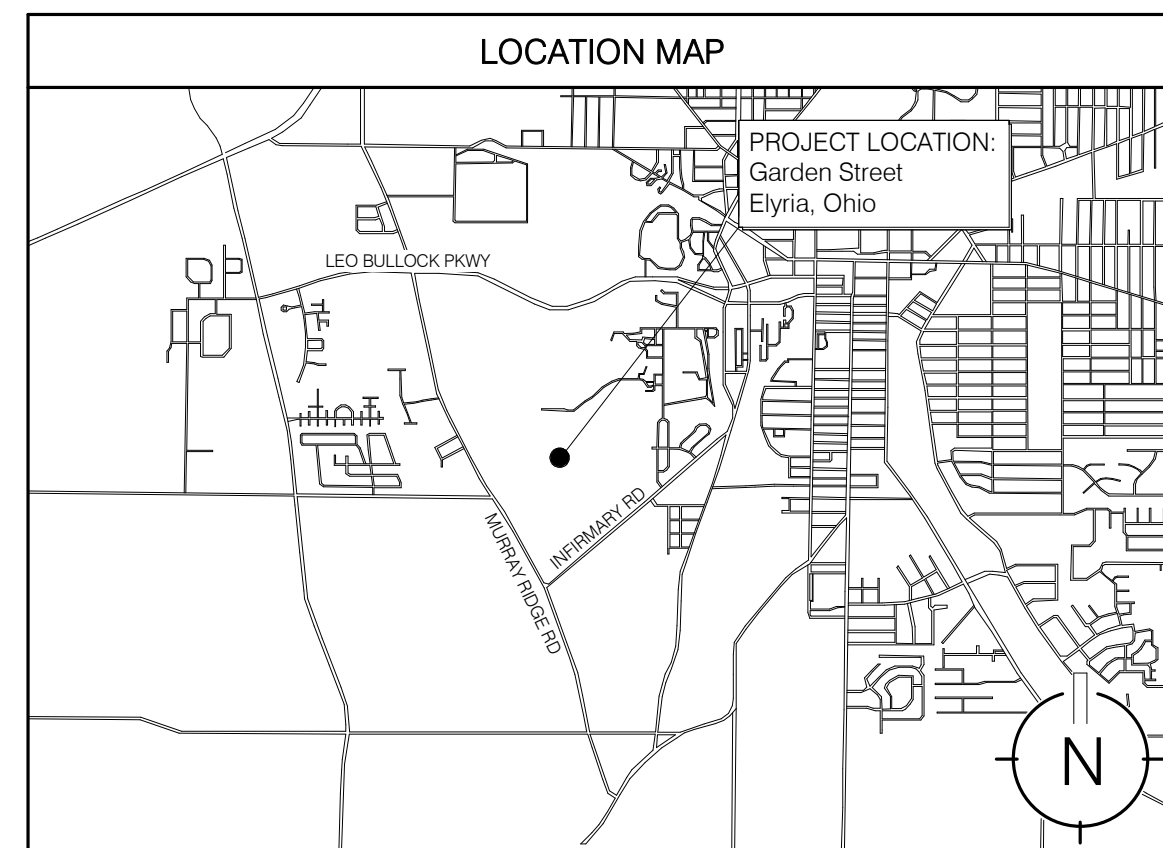
Title Sheet

**T1.00**

SHEET SCALE  
0" 1/2" 1" 2"

SYMBOL LEGEND			
X	CEILING MATERIAL	#	ROOM NUMBER
X-X'	CEILING HEIGHT		
○	DETAIL MARK	↻	SECTION CUT
#	DOOR MARK	⊕	TEMPERED GLASS
⊕	ELEVATION BENCHMARK	↻	WALL SECTION CUT
□	ELEVATION MARK	X	WALL TYPE
X	KEYNOTE	#	WINDOW MARK

ABBREVIATIONS			
A	AMPERE	MO	MASONRY OPENING
AB	ANCHOR BOLT	MASY	MASONRY
AFF	ABOVE FINISH FLOOR	MAX	MAXIMUM
ALUM	ALUMINUM	MECH	MECHANICAL
AV	AUDIO VISUAL	MEP	MECHANICAL, ELECTRICAL, & PLUMBING
B/	BOTTOM OF	MFR	MANUFACTURER
B/DECK	BOTTOM OF DECK	MIN	MINIMUM
BD	BOARD	MO	MASONRY OPENING
BLDG	BUILDING	MTL	METAL
BOTT	BOTTOM		
BM	BEAM	NIC	NOT IN CONTRACT
		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CO	CLEANOUT		
CAB	CABINET		
CFM	CUBIC FEET PER MINUTE	O/	OVER/OVER
CLG	CEILING	OC	ON CENTER
CLR	CLEAR	OZ	OUNCE
CMU	CONCRETE MASONRY UNIT	OA	OUTSIDE AIR
COL	COLUMN	OBC	OHIO BUILDING CODE
CONC	CONCRETE	OCC	OCCUPANT(S)
CONT	CONTINUOUS	OPP	OPPOSITE
CPT	CARPET		
		PT	PRESSURE TREATED
DS	DOWNSPOUT	PERIM	PERIMETER
DEMO	DEMOLITION/DEMOLISH	PERF	PERFORATED
DIA	DIAMETER	PLAM	PLASTIC LAMINATE
DN	DOWN	PLYWD	PLYWOOD
DR	DOOR	FR	PAIR
DWG	DRAWING	PSF	POUNDS PER SQUARE FOOT
		PTD	PAINTED
ETR	EXISTING TO REMAIN	PVC	POLYVINYL CHLORIDE
EA	EACH		
ELEV	ELEVATION	(R)	RELOCATE
EMT	ELECTRICAL METALLIC TUBING	RO	ROUGH OPENING
EO	EQUAL	RAG	RETURN AIR GRILLE
EXIST	EXISTING	RD	ROAD
EXT	EXTERIOR	REF	REFERENCE
		REQD	REQUIRED/REQUIREMENTS
FD	FLOOR DRAIN	RH	RIGHT HAND
FE	FIRE EXTINGUISHER	RM	ROOM
FFE	FINISH FLOOR ELEVATION	RTU	ROOF TOP UNIT
FRP	FIBERGLASS REINFORCED PLASTIC	SS	STAINLESS STEEL
FRT	FIRE RETARDANT TREATED	SAG	SUPPLY AIR GRILLE
FT	FEET/FOOT	SAN	SANITARY
FTG	FOOTING	SCHED	SCHEDULE
FWY	FREEWAY	SF	SQUARE FOOT/SQUARE FOOTAGE
		SIM	SIMILAR
GA	GAUGE	SS	STAINLESS STEEL
GAL	GALLON	STL	STEEL
GALV	GALVANIZED	STRUCT	STRUCTURE/ STRUCTURAL
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER		
GWB	GYPSON WALL BOARD	T/	TOP OF
GYP	GYPSON	TYP	TYPICAL
		UL	UNDERWRITERS LABORATORIES
H	HIGH	UNO	UNLESS NOTED OTHERWISE
HDPE	HIGH DENSITY POLYETHYLENE		
HM	HOLLOW METAL	V	VOLT
HORIZ	HORIZONTAL	VB	VAPOR BARRIER
HR	HOUR	VIF	VERIFY IN FIELD
HSS	HOLLOW STEEL SECTION	VERT	VERTICAL
		VTR	VENT THROUGH ROOF
ICC	INTERNATIONAL CODE COUNCIL	W	WIDE
IECC	INTERNATIONAL ENERGY CONSERVATION CODE	W/	WITH
INSUL	INSULATION	WD	WOOD
		WWF	WELDED WIRE FABRIC
LAV	LAVATORY	@	AT
LG	LONG/LENGTH	⊕	CENTERLINE
LH	LEFT HAND	∅	DIAMETER



CIVIL

STRUCTURAL

MEP

ARCHITECT

CONSTRUCTION MANAGER

CLIENT

City of Elyria  
131 Court Street  
Elyria, Ohio 44035  
  
Bill Forthofer  
wforthofer@cityofelyria.org  
440-326-1444

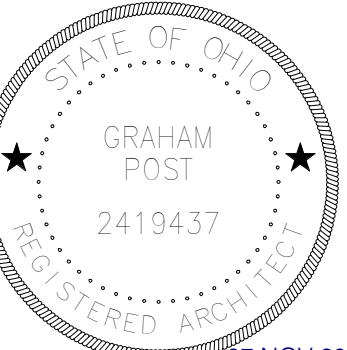
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Sixmo Architecture  
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Cleveland, Ohio 44113  
  
Graham Post  
gpost@sixmoarchitecture.com  
216-767-5400

COMPANY NAME (TO BE DETERMINED)  
STREET ADDRESS  
CITY, STATE ZIP  
  
CONTACT NAME  
EMAIL  
PHONE NUMBER

City of Elyria  
131 Court Street  
Elyria, Ohio 44035  
  
Kathryn McKillips  
kmckillips@cityofelyria.org  
440-326-1444



Applicable Codes:		2024 Ohio Building Code (OBC) 2024 Ohio Plumbing Code (OPC) 2024 Ohio Mechanical Code (OMC) 2023 National Electric Code (NEC) 2017 ICC A.117.1 (ADA) ASHRAE 90.1-2019			
<b>General Building Information:</b>					
Building Area:	5,628 GSF				
Occupant Load:	106				
<b>Use and Occupancy Classification – OBC Chapter 3</b>					
Separated Occupancies B - Business H-3 - High Hazard					
<b>General Building Heights and Areas – OBC Chapter 5</b>					
Allowable Area:	9,000 sf (OBC Allowable Area - OBC Table 506.2)				
Allowable Height:	2 stories (OBC Allowable Height - OBC Table 504.4)				
Actual Area:	5,628 square feet				
Actual Height:	1 Stories / 20 feet				
	Allowable	Actual			
B:	9,000 sf	5,228 sf			
	2 stories	1 story			
	40 ft	40 ft			
H-3:	5,000 sf	400 sf			
	1 story	1 story			
	40 ft	40 ft			
H-3 occupancy shall be separated from B occupancy by a 2-hr rated fire barrier per Table 508.4.					
<b>Types of Construction – OBC Chapter 6</b>					
Construction Type: 5B Table 601: Fire Resistance Rating Requirements for Building Elements					
	Primary Structural Frame	0 Hours			
	Exterior Bearing Walls	0 Hours			
	Interior Bearing Walls	0 Hours			
	Interior Non-Bearing Walls & Partitions	0 Hours			
	Floor Construction and Secondary Members	0 Hours			
	Roof Construction and Secondary Members	0 Hours			
<b>Fire and Smoke Protection Features – OBC Chapter 7</b>					
Table 705.5: Exterior Walls Based on Fire Separation Distance					
	X < 5'	1 Hour			
	5' ≤ X < 10'	1 Hour			
	10' ≤ X < 30'	0 Hours			
	X ≥ 30'	0 Hours			
<b>Interior Finishes – OBC Chapter 8</b>					
Interior Wall and Ceiling Finish Requirements: Interior exit stairs, ramps, and passageways: Class A Corridors: Class B Rooms and Enclosed Spaces: Class C					
<b>Fire Protection Systems – OBC Chapter 9</b>					
Building is not fully sprinklered. Group H Ammo Storage rooms to be sprinklered per OBC 415.3 and 415.4 and NFPA 495.					
Building is not equipped with a fire alarm system per OBC 907.2.2. Group H Ammo Storage rooms to be equipped with a manual emergency alarm system per OBC 415.5.1 with alarm initiating devices outside each interior exit access door.					
Portable fire extinguishers are to be provided and maintained in accordance to NFPA 10.					
<b>Means of Egress – OBC Chapter 10</b>					
Occupant Load = 106					
Table 1006.2.1: Maximum Common Path of Egress Travel Distance shall be 100 feet in spaces with one exit or exit access doorway.					
Maximum Occupant Load shall be 49 for spaces with one exit or exit access doorway.					
Table 1017.2: Exit Access Travel Distance = 200 feet (without sprinkler system)					
1020.4 Dead end corridors shall not exceed 20 feet.					
<b>Accessibility - OBC Chapter 11</b>					
1109.2 Each toilet room shall be accessible. At least one of each fixture, element, control, or dispenser in each accessible toilet room and bathing room shall be accessible. Where there is one urinal provided in a toilet room, the urinal is not required to be accessible.					
1109.2.2 At least 5% of the total number of compartments shall be wheelchair accessible.					
1109.2.3 At least 5%, but not less than one, lavatory shall be accessible.					
1109.3 Where sinks are provided, at least 5% but not less than one provided in accessible spaces shall be accessible.					
ANSI 117.1-2009 606.2 Exception 1: A parallel approach shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided.					
1109.4 Where kitchens and kitchenettes are provided in accessible spaces or rooms, they shall be accessible.					
<b>Plumbing Fixtures - OBC Chapter 29</b>					
Table 2902.1 The Minimum number of required plumbing fixtures are as follows:					
Occupant Type	Occupant Load	Water Closets Male Female	Lavatories Male Female	Drinking Fountain	Service Sink
B	106	1 per 25 for first 50, 1 per 50 thereafter	1 per 40 for first 80, 1 per 80 thereafter	1 per 100	1
<b>Water Closets</b>			<b>Lavatories</b>		
Classroom: 42 @ 50 per = 0.84			Classroom: 42 @ 50 per = 0.84		
Office: 9 @ 25 per = 0.36			Office: 9 @ 40 per = 0.22		
Storage: 2 @ 100 per = 0.02			Storage: 2 @ 100 per = 0.02		
Total Required = 1.22 = 2			Total Required = 1.08 = 2		
<b>Drinking Fountain</b>			<b>Service Sink</b>		
Classroom: 84 @ 100 per = 0.84			Classroom: 84 @ 100 per = 0.84		
Office: 18 @ 100 per = 0.18			Office: 18 @ 100 per = 0.18		
Storage: 4 @ 100 per = 0.04			Storage: 4 @ 100 per = 0.04		
Total Required = 1.06 = 2			Total Required = 1.06 = 2		
<b>Men's WC/Urinal</b>			<b>Women's WC</b>		
Men's WC: 2			Women's WC: 2		
Men's Urinal: 2			Women's Urinal: 2		
Drinking Fountain: 2			Service Sink: 2*		
Service Sink: 1			Service Sink: 1		
*Water Dispensers provided per OPC 410.4					

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Code Compliance  
and Energy  
Compliance

**G1.00**  
SHEET SCALE

0' 1/2' 1' 2'

**COMcheck Software Version COMcheckWeb**  
**Envelope Compliance Certificate**

**Project Information**  
Energy Code: 90.1 (2019) Standard  
Project Title: Range Support Building  
Location: Elyria, Ohio  
Climate Zone: 5a  
Project Type: New Construction  
Vertical Glazing / Wall Area: 0%  
Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPW: USA\_OH\_Cleveland-Hopkins.Intl.AP.725240\_TMY3.epw)

Construction Site: Elyria, Ohio  
Owner/Agent: City of Elyria  
131 Court Street, Suite 101  
Elyria, Ohio 44035  
Designer/Contractor: Sixmo Architecture  
1101 Auburn Avenue  
Cleveland, Ohio 44113

Building Area	Floor Area
1-Office - Nonresidential	5628

Envelope Assemblies	Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor <sub>req</sub>
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Office]		5628	38.0	0.0	0.027	0.021
Floor: Unheated Slab-On-Grade, Horizontal with vertical 2 ft., [Bldg. Use 1 - Office] (b)		305	---	10.0	0.700	0.520
<b>NORTH</b>						
Ext. Wall: Concrete Block, Bin., Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - Office]		952	13.0	7.5	0.068	0.090
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]		21	---	---	0.390	0.370
<b>EAST</b>						
Ext. Wall: Concrete Block, Bin., Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - Office]		1407	13.0	7.5	0.068	0.090
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Office]		80	---	---	0.390	0.310
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]		24	---	---	0.390	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]		24	---	---	0.390	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]		24	---	---	0.390	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]		24	---	---	0.390	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]		24	---	---	0.390	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]		21	---	---	0.390	0.370
Window: Vinyl Frame: Fixed, Perf. Type: Energy code default, Single Pane, Clear, SHGC 0.82, VT 0.76, [Bldg. Use 1 - Office]		12	---	---	1.250	0.360
Window: Vinyl Frame: Fixed, Perf. Type: Energy code default, Single Pane, Clear, SHGC 0.82, VT 0.76, [Bldg. Use 1 - Office]		12	---	---	1.250	0.360
<b>SOUTH</b>						
Ext. Wall: Concrete Block, Bin., Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - Office]		952	13.0	7.5	0.068	0.090
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Office]		80	---	---	0.390	0.310
<b>WEST</b>						

Project Title: Range Support Building  
Data filename: Report date: 06/06/24  
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Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor <sub>req</sub>
Ext. Wall: Concrete Block, Bin., Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - Office]	1407	13.0	7.5	0.068	0.090
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]	21	---	---	0.390	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]	24	---	---	0.390	0.370

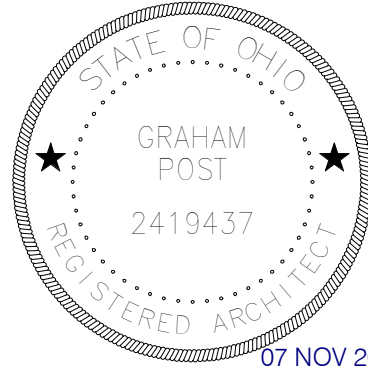
(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.  
(b) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 0.1% better than code

**Envelope Compliance Statement**  
Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Hallie Myers - Designer  
Name - Title Signature Date 6/6/2024

Project Title: Range Support Building  
Data filename: Report date: 06/06/24  
Page 2 of 9



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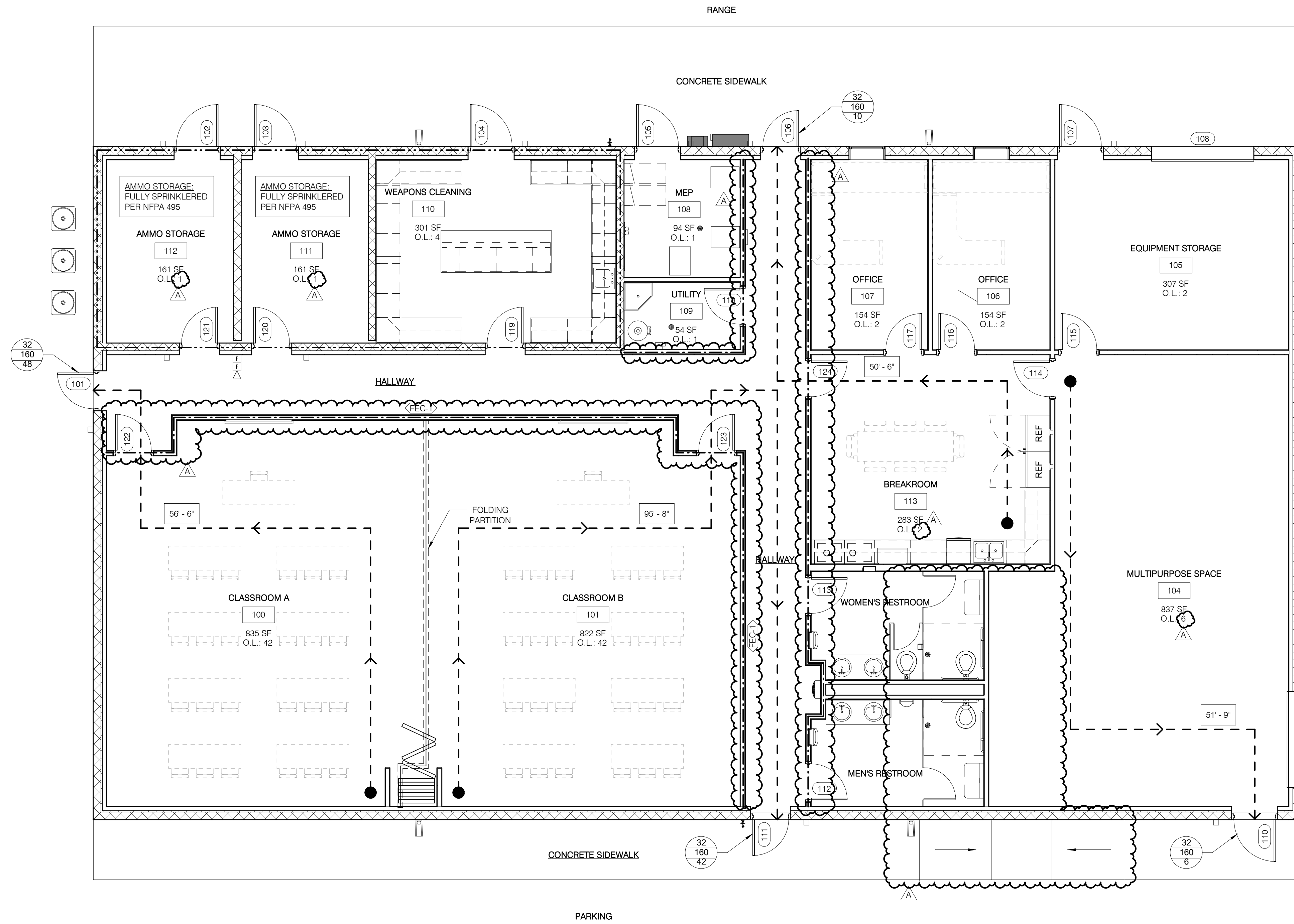
Life Safety Plan

**G1.01**

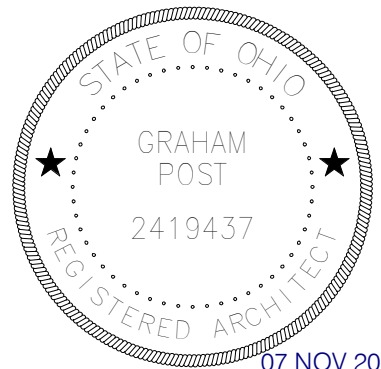
SHEET SCALE  
0" 1/2" 1" 2"

EGRESS LEGEND

- WALL-MOUNTED, SEMI-RECESSED FIRE EXTINGUISHER CABINET & EXTINGUISHER WITH HANDLE @ 42" A.F.F. - MULTIPURPOSE
- INDICATES CLEAR WIDTH OF EGRESS DOOR (INCHES)
- MAXIMUM EXIT CAPACITY OF EGRESS DOOR (OCCUPANTS)
- ACTUAL EXIT CAPACITY OF EGRESS DOOR (OCCUPANTS)
- INDICATES 1-HOUR FIRE-RATED BARRIER
- INDICATES 2-HOUR FIRE-RATED BARRIER
- INDICATES MAXIMUM TRAVEL DISTANCE W/ DISTANCE INDICATED



A1	LIFE SAFETY PLAN
G1.01	3/16" = 1'-0"



07 NOV 2024  
Graham Lochridge Post, License #2419437  
Expiration Date 12/31/2025

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Phase One Site Plan

**G2.00**

SHEET SCALE  
0' 1/2' 1' 2'

**SITE INFORMATION**

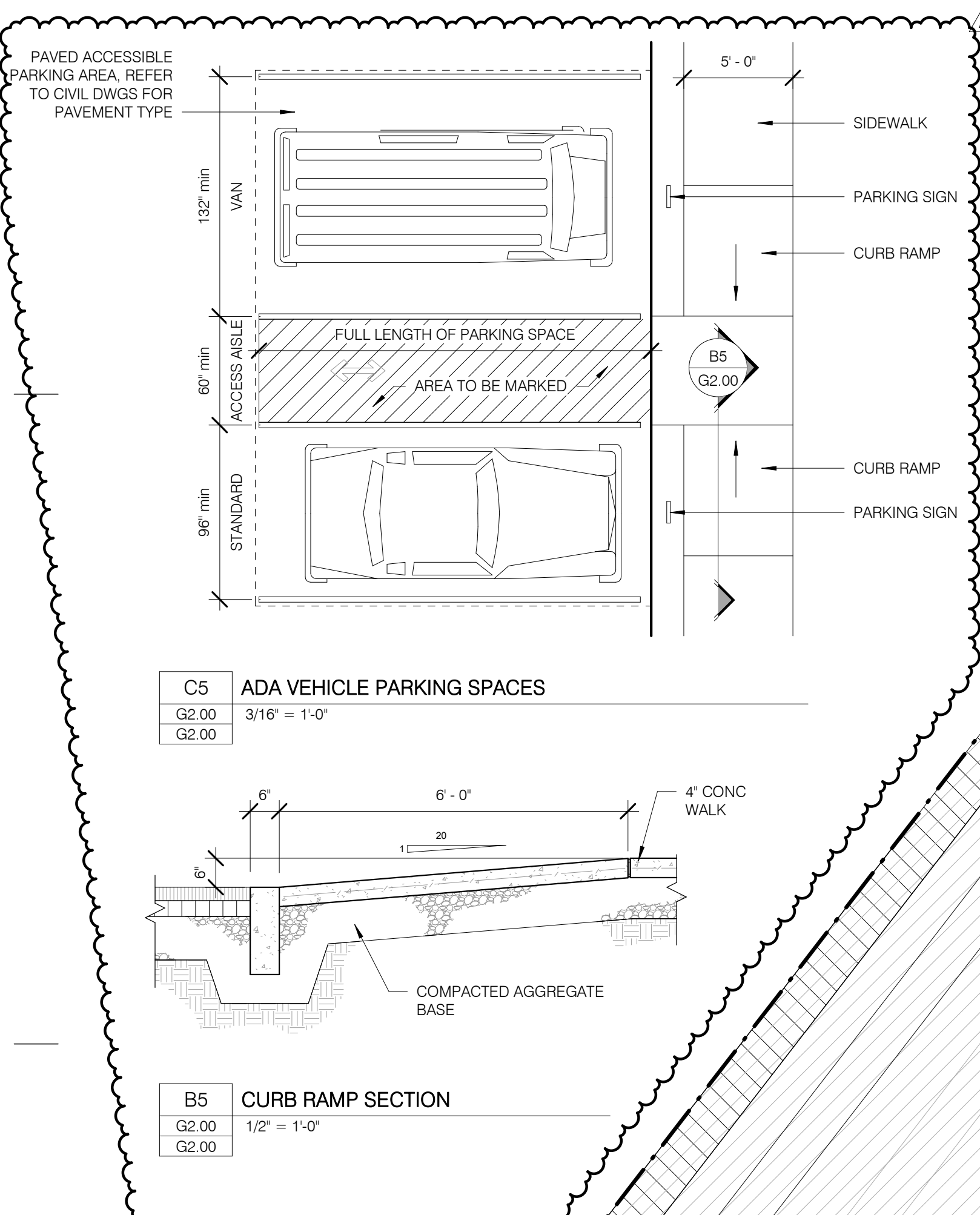
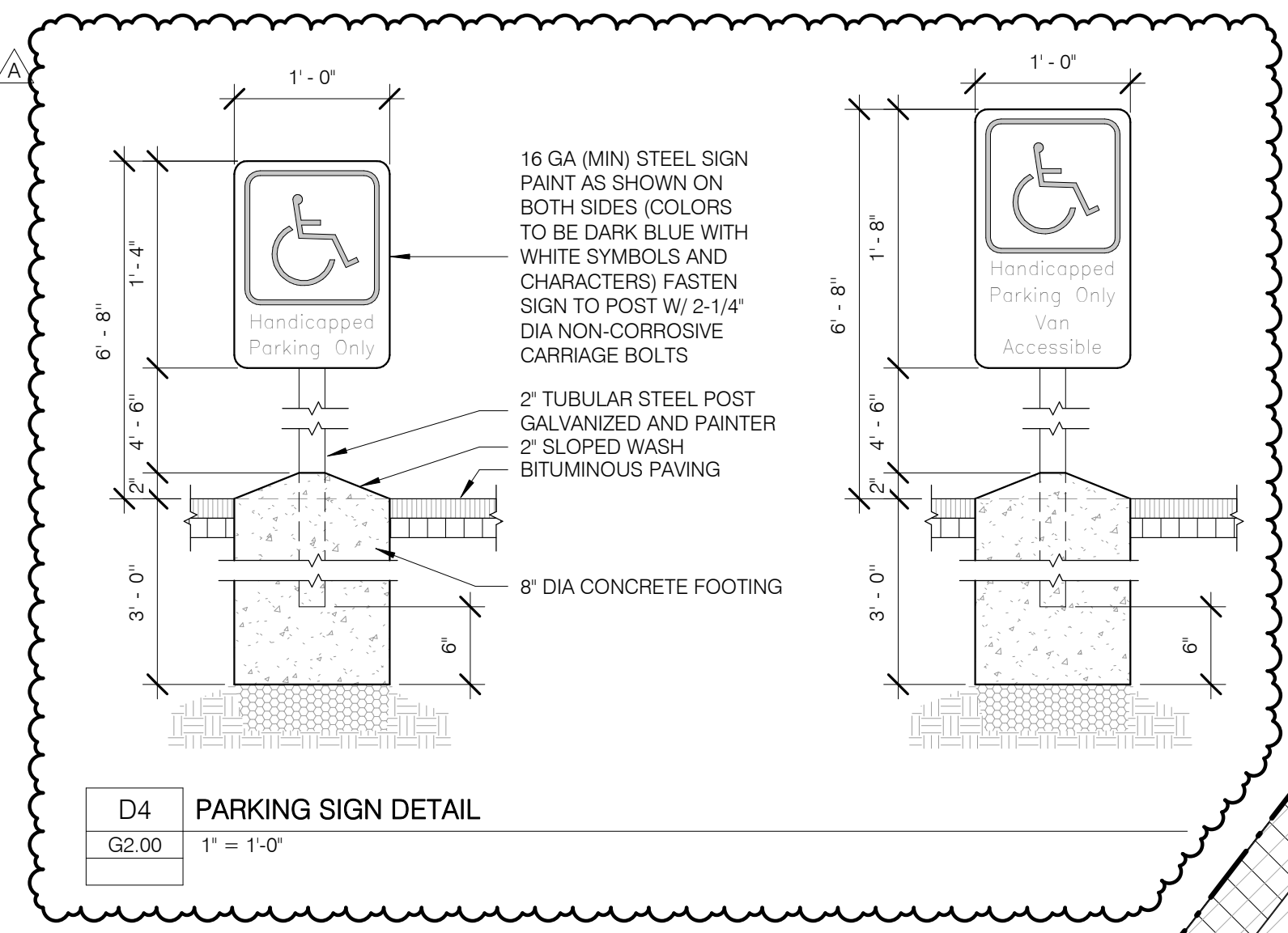
PROJECT NAME: PROJECT # 767072 (ABUTTING 7670028)  
MUNICIPALITY: CITY OF ELYRIA  
PROJECT ADDRESS: GARDEN STREET  
APN / ACRE / AREA: 062400600011 / 35.55 ACRES / 1,548,616 SF  
062400500039 / 2.29 ACRES / 99,939 SF  
062400400031 / 21.20 ACRES / 923,626 SF  
ZONING: R-MD RESIDENTIAL - MEDIUM DENSITY; NON-COMMERCIAL  
ADJACENT ZONING: NORTH - R-MD  
SOUTH - R-MD  
EAST - H-1  
WEST - R-MHL

SETBACKS:  
LOT FRONTAGE: 60 FT  
FRONT YARD: 30 FT (ABUTTING STREETS)  
SIDE YARD: 18 FT - 8 FT MIN  
REAR YARD: 30 FT

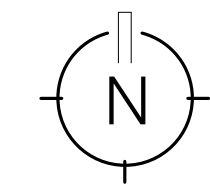
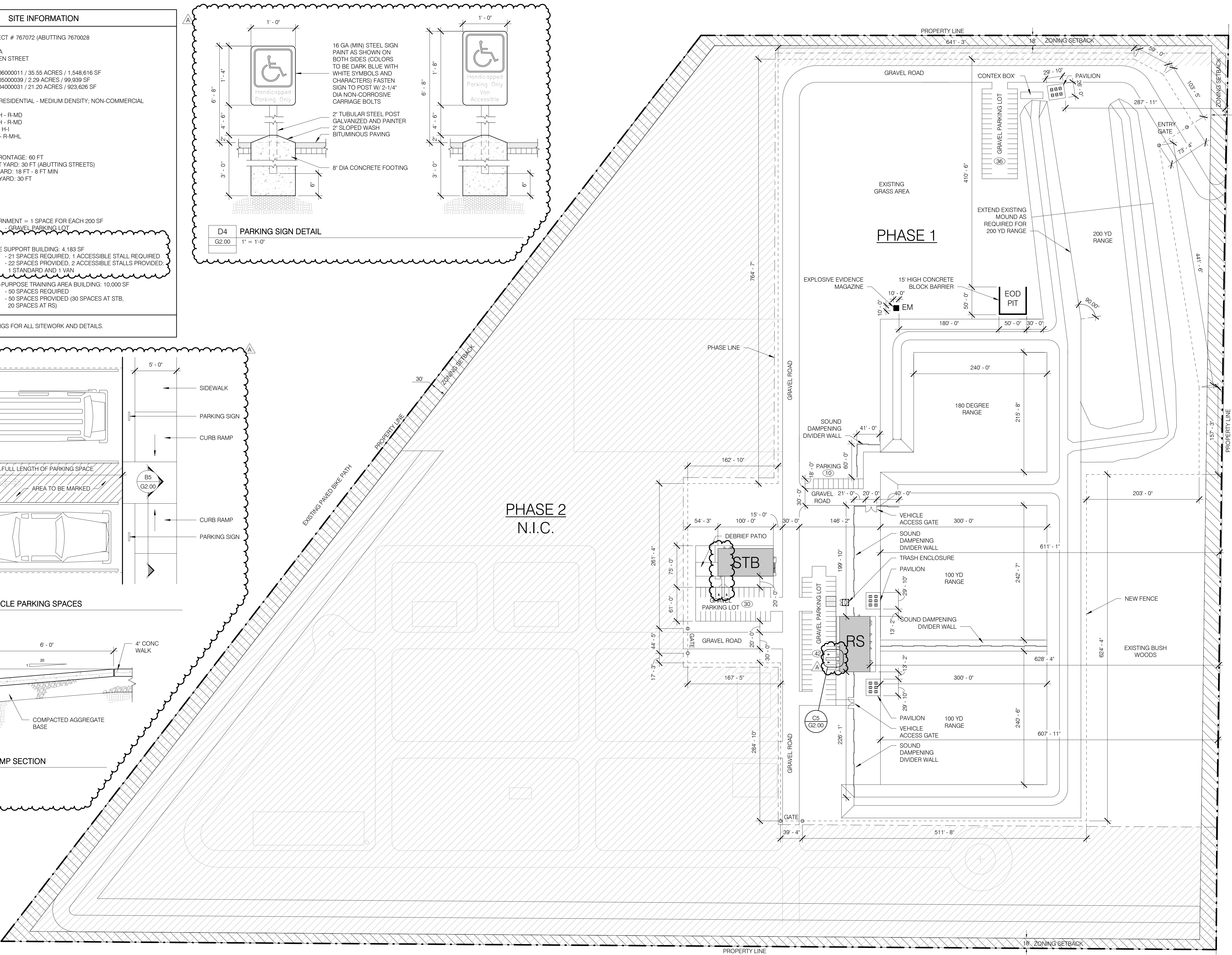
CORNER YARD: N/A  
HEIGHT LINE: 35 FT  
PARKING: GOVERNMENT = 1 SPACE FOR EACH 200 SF - GRAVEL PARKING LOT

RANGE SUPPORT BUILDING: 4,183 SF  
- 21 SPACES REQUIRED, 1 ACCESSIBLE STALL REQUIRED  
- 22 SPACES PROVIDED, 2 ACCESSIBLE STALLS PROVIDED  
1 STANDARD AND 1 VAN  
MULTI-PURPOSE TRAINING AREA BUILDING: 10,000 SF  
- 50 SPACES REQUIRED  
- 50 SPACES PROVIDED (30 SPACES AT STB, 20 SPACES AT RS)

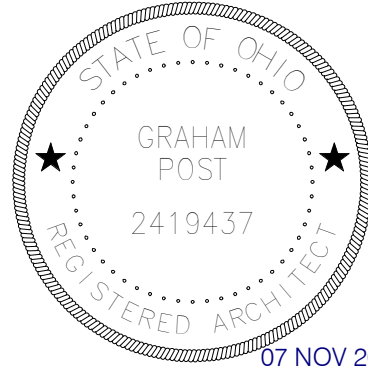
NOTE: REFER TO CIVIL DRAWINGS FOR ALL SITEMARKS AND DETAILS.



A1 PHASE 1 SITE PLAN  
G2.00 1" = 80'-0"



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Expiration Date 12/31/2025

**DESIGN NO. UL U419**

FIRE RATING: 1 HOUR  
STC RATING: 52  
SOUND TEST: RAL T11473  
SYSTEM THICKNESS: 5.31" (137 MM)  
LOCATION: INTERIOR  
FRAMING TYPE: STEEL STUD (NONLOAD-BEARING)

**ASSEMBLY REQUIREMENTS:**

GYPSUM PANELS: ONE LAYER 5/8" (15.9 MM) SHEETROCK® GYPSUM PANEL (UL TYPE SCX)  
RESILIENT CHANNEL: 1/2" (12.7 MM) RESILIENT CHANNEL, 25 GA. (0.018"), 24" (610 MM) O.C.  
STEEL STUDS: 3-5/8" (92 MM) STEEL STUDS, EDZS (0.018"), 24" (610 MM) O.C.  
INSULATION: 3-1/2" (89 MM) FIBERGLASS INSULATION  
GYPSUM PANELS: ONE LAYER 5/8" (15.9 MM) SHEETROCK® GYPSUM PANEL (UL TYPE SCX)

**GENERAL WALL NOTES:**

- REFER TO APPLICABLE CODES REQUIREMENTS TO ENSURE COMPLIANCE PRIOR TO CONSTRUCTION.
- FOR THE MOST UP-TO-DATE DETAILS, INCLUDING CONSTRUCTION VARIATIONS, REFER TO THE PUBLISHED DESIGN.
- WHERE DESIGN NO. INDICATES "PST", THE FIRE RATING IS BASED ON LABORATORY TEST DATA OF THE REFERENCED SIMILARLY CONSTRUCTED ASSEMBLIES.
- STUD SIZES AND INSULATION THICKNESS ARE MINIMUM UNLESS OTHERWISE STATED IN THE PUBLISHED ASSEMBLY.
- STUD AND FASTENER SPACINGS ARE MAXIMUM UNLESS OTHERWISE STATED IN THE PUBLISHED ASSEMBLY.
- PANEL ORIENTATION SHALL BE AS SPECIFIED IN THE PUBLISHED DESIGN.
- FIRE RATINGS ARE FROM BOTH SIDES UNLESS OTHERWISE STATED.
- FIRE RATINGS ARE MAINTAINED WITH ONE OR MORE OF THE FOLLOWING MODIFICATIONS: INCREASE STUD DEPTH, INCREASE STUD MATERIAL THICKNESS, DECREASE STUD SPACING, DECREASE FASTENER SPACING, INCREASE INSULATION THICKNESS UP TO CAVITY DEPTH.
- WHERE ACOUSTICAL PERFORMANCE IS PROVIDED IN AN ESTIMATED RANGE, THE VALUES ARE BASED ON LABORATORY TEST DATA OF SIMILARLY CONSTRUCTED ASSEMBLIES.
- SOUND RATINGS ARE MAINTAINED WITH ONE OR MORE OF THE FOLLOWING MODIFICATIONS: INCREASE STUD DEPTH, DECREASE STUD MATERIAL THICKNESS, INCREASE STUD SPACING, INCREASE FASTENER SPACING, INCREASE INSULATION THICKNESS UP TO CAVITY DEPTH. MODIFICATIONS MUST NOT EXCEED LIMITATIONS OF FIRE RATING.

**USG CGC**  
USG Corporation  
100 West Superior Street  
Chicago, IL 60661 USA  
www.usg.com  
T. 800-USA4YOU

**ISSUE RECORD:**  
Revision Date  
10/09/2021 11:50:01 PM

**SHEET INFORMATION:**  
SN-P-1-16

**UL FIRE RATED**  
**Design No. U905**

**BEARING/NONBEARING WALL RATING - 2 HR.**  
SCALE: 1/2" = 1'-0"

- CONCRETE BLOCKS\* - Various designs. Classification D-2 (2 hr).
- MORTAR - Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
- PORTLAND CEMENT STUCCO OR GYPSUM PLASTER - If used, add 1/2 hr. to Classification. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).
- LOOSE MASONRY FILL - If all core spaces are filled with loose dry expanded slag, expanded clay or shale (rotary kiln process), water repellent vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr. to Classification.
- FOAMED PLASTIC\* - (Optional - not shown) 1-1/2 in thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).

Celotex Corp. - Type Thermax  
\*Bearing the UL Classification Marking

Client:

City of Elyria

131 Court St - Suite 101  
Elyria, Ohio 44035

Project:

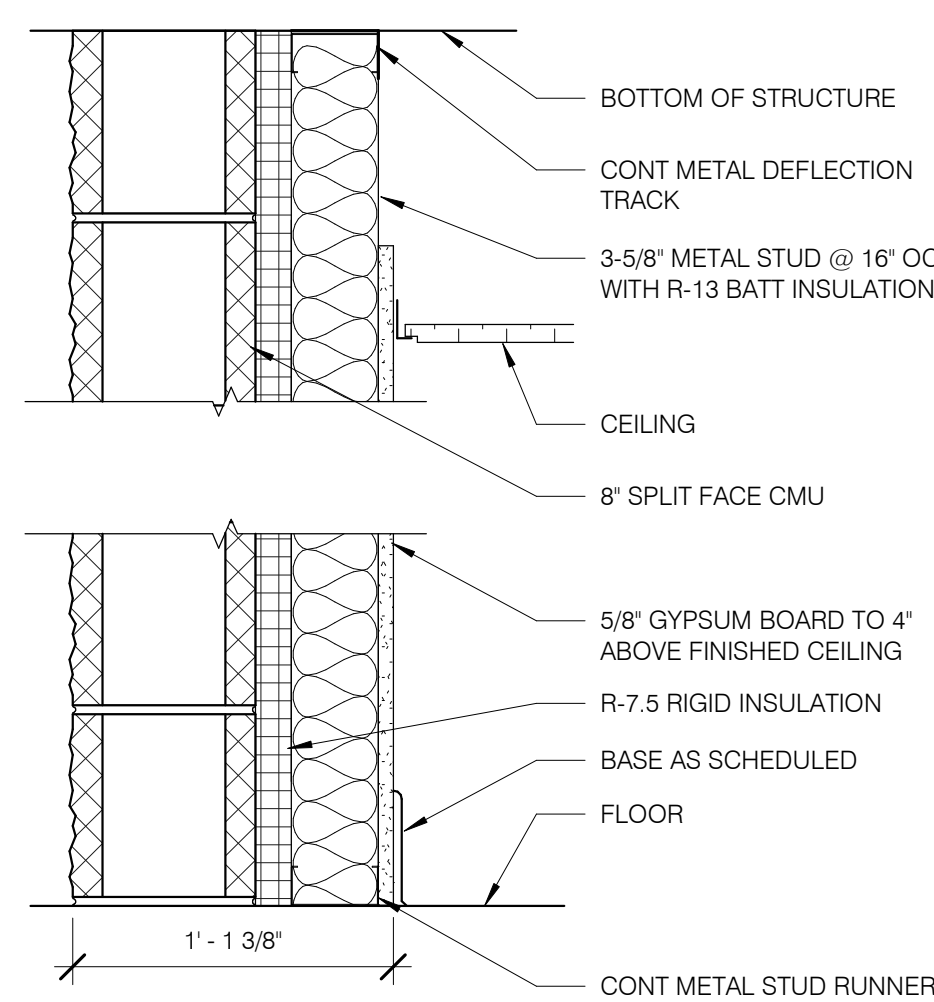
Public Safety  
Training Facility  
Range Building

Garden Street  
Elyria, Ohio 44035

Revisions:

A 11.07.2024 ADDENDUM A  
0 09.26.2024 For Construction

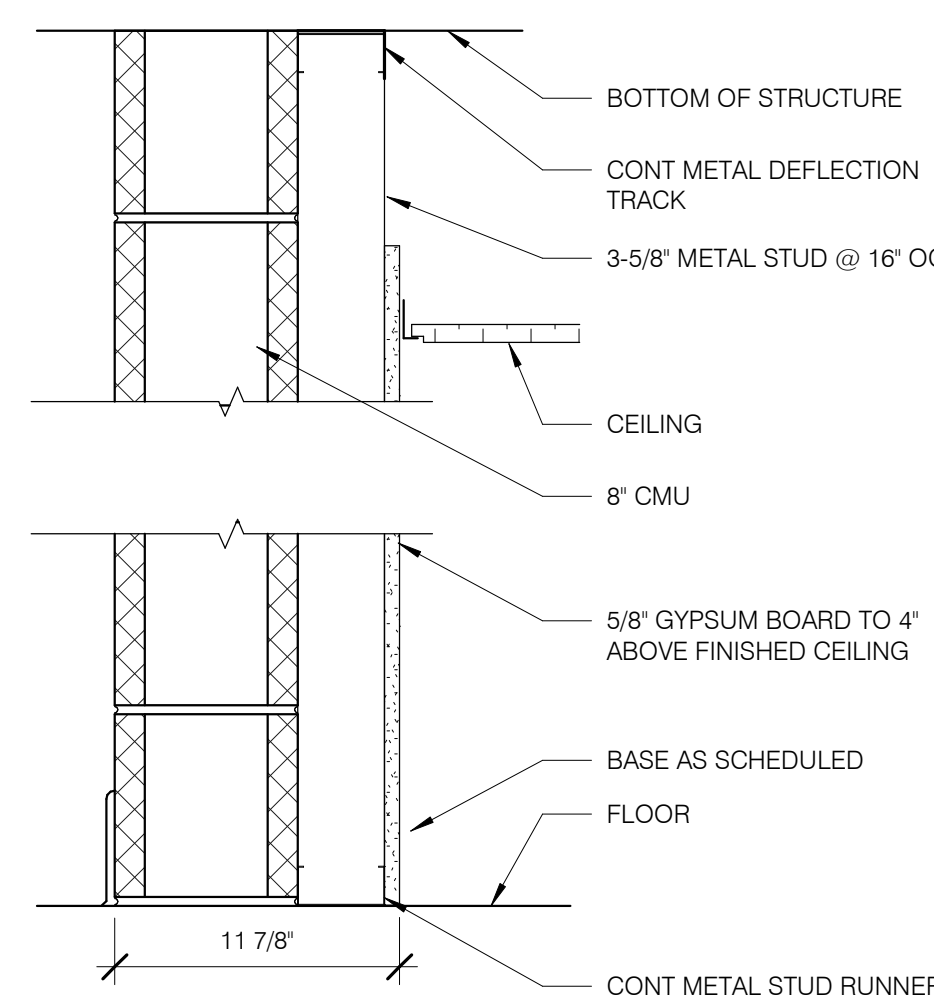
Project Number: 5039 01 23  
Drawn by: HLM  
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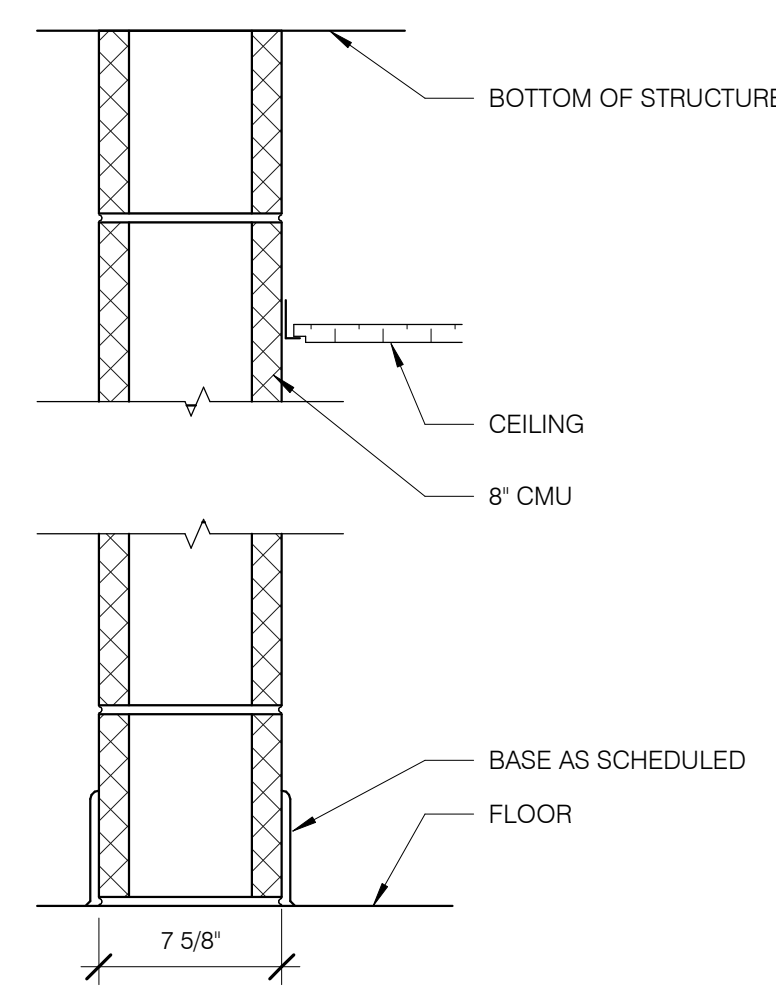
**A** AS SHOWN, NON-FIRE RATED, BEARING WALL

**A2** AS SHOWN, 2-HR FIRE RATED, BEARING WALL  
8" CMU, UL DESIGN U905

**A5** TYPICAL WALL TYPES  
A0.00 1 1/2" = 1'-0"

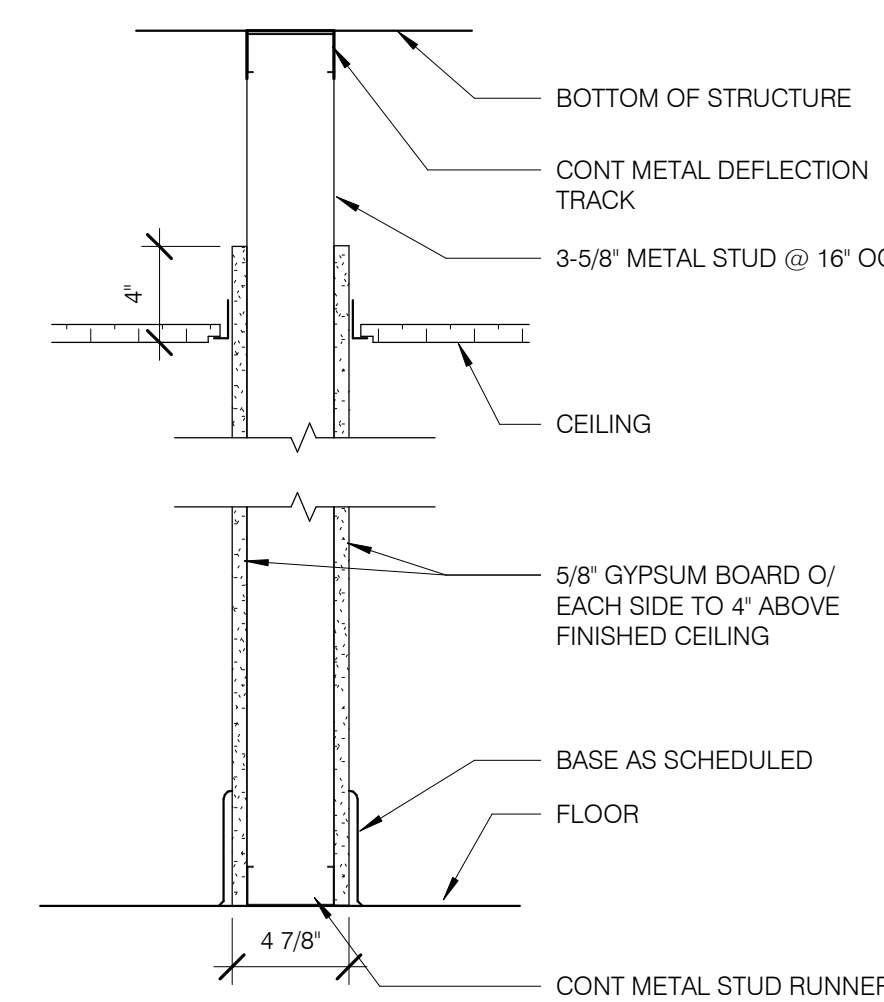


**B2** AS SHOWN, 2-HR FIRE RATED, NON-BEARING WALL  
8" CMU, UL DESIGN U905



**C** AS SHOWN, NON-FIRE RATED, NON-BEARING WALL

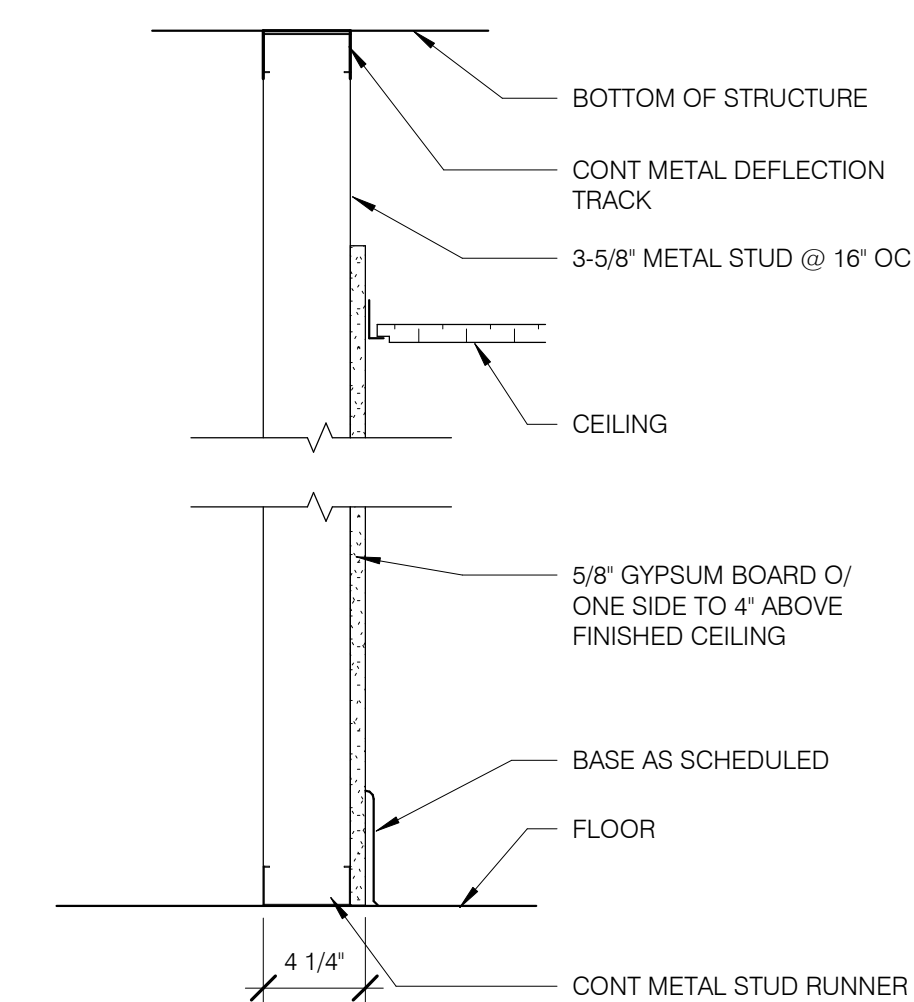
**C2** AS SHOWN, 2-HR FIRE RATED, NON-BEARING WALL  
8" CMU, UL DESIGN U905



**D** AS SHOWN, NON-FIRE RATED, NON-BEARING WALL

**D.6** AS SHOWN, NON-FIRE RATED, NON-BEARING WALL  
WITH 6" METAL STUDS IN LIEU OF 3-5/8" METAL STUDS

**D1** AS SHOWN, 1-HR RATED, NON-BEARING WALL WITH  
1/2" RESILIENT CHANNEL 1 SIDE AND 5/8" TYPE X GYP  
EACH SIDE, UL DESIGN U419

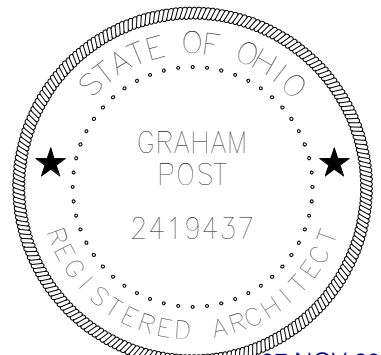


**E** AS SHOWN, NON-FIRE RATED, NON-BEARING WALL

Typical Wall  
Assemblies

**A0.00**

SHEET SCALE  
0" 1/2" 1" 2"



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**FLOOR PLAN GENERAL NOTES**

1. FINISHED FLOOR ELEVATION OF 0'-0".
2. EXTERIOR WALL DIMENSIONS ARE TO FACE OF MASONRY.
3. INTERIOR WALL DIMENSIONS ARE TO FINISHED FACE, EXCEPT WHERE NOTED OTHERWISE.
4. REFER TO ENLARGED PLANS FOR ADDITIONAL NOTES, DETAILS, AND DIMENSIONS.
5. REFER TO INTERIOR AND EXTERIOR ELEVATIONS FOR ADDITIONAL NOTES, DETAILS, AND DIMENSIONS.
6. FIELD VERIFICATION OF ALL EXISTING CONDITIONS AND DIMENSIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO NOTIFY THE ARCHITECT OF ANY DISCREPANCIES IMMEDIATELY.
7. ALL NEW WALL TYPES ARE TO BE TYPE A UNLESS NOTED OTHERWISE.
8. SECURITY AND ACCESS CONTROL TO BE PROVIDED AND INSTALLED BY OWNER.
9. ALL FURNITURE TO BE FURNISHED AND INSTALLED BY OWNER, UNLESS NOTED OTHERWISE. ALL EQUIPMENT IN WEAPONS CLEANING TO BE FURNISHED AND INSTALLED BY OWNER.

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Revisions:

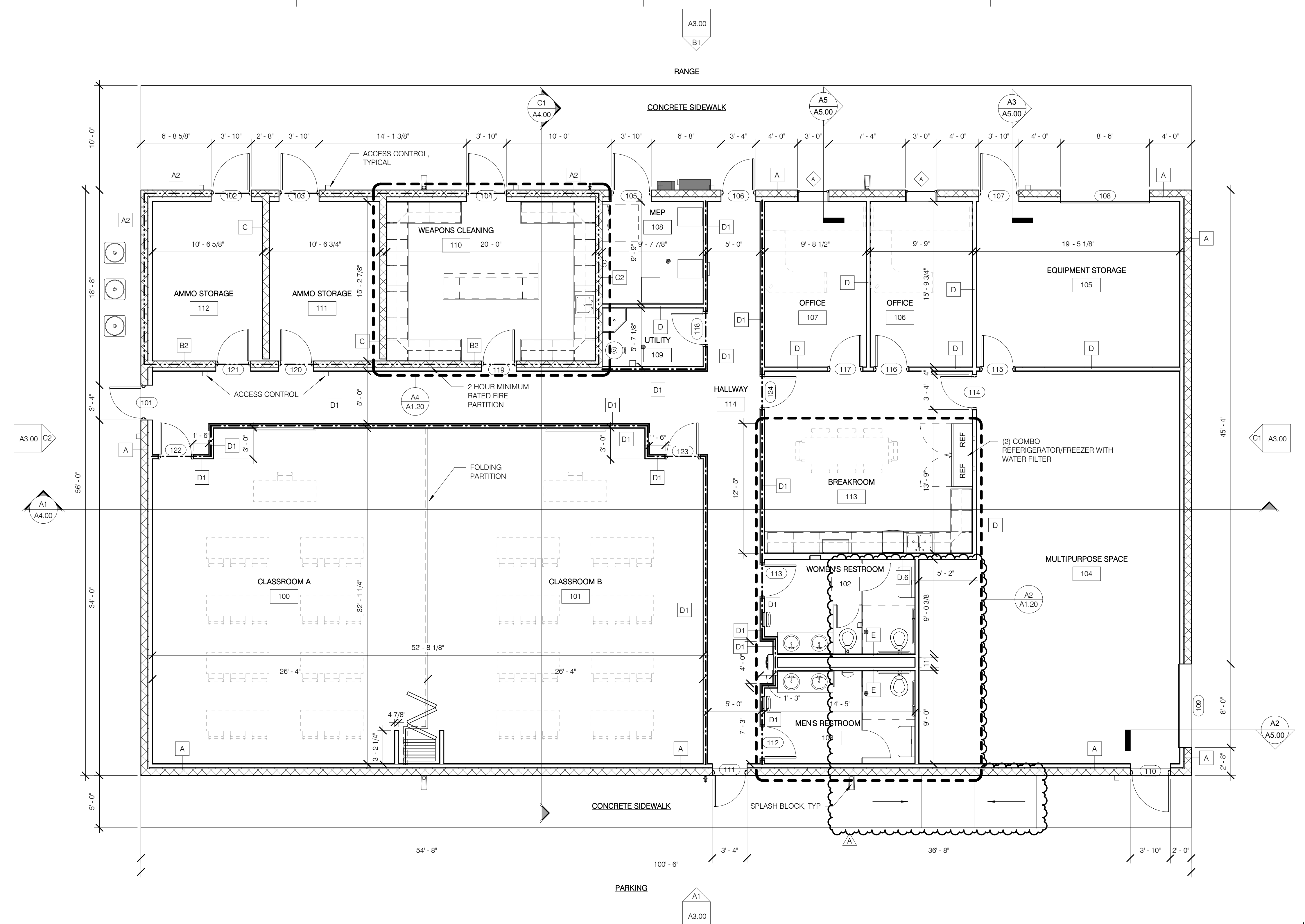
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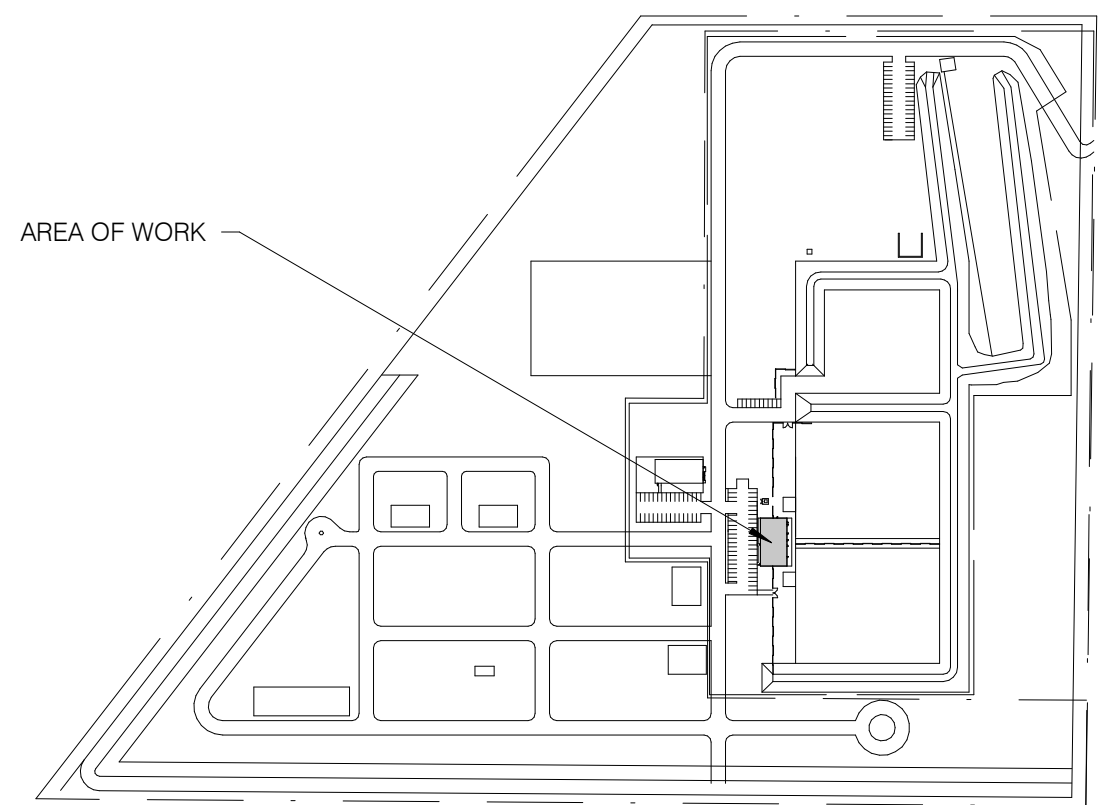
Floor Plan

**A1.00**

SHEET SCALE  
0' 1/2" 1' 2'

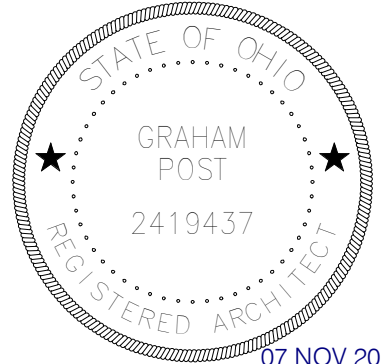


A1 FLOOR PLAN  
A1.00 3/16" = 1'-0"



A2 KEY PLAN  
A1.00 N.T.S.

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**REFLECTED CEILING PLAN GENERAL NOTES**

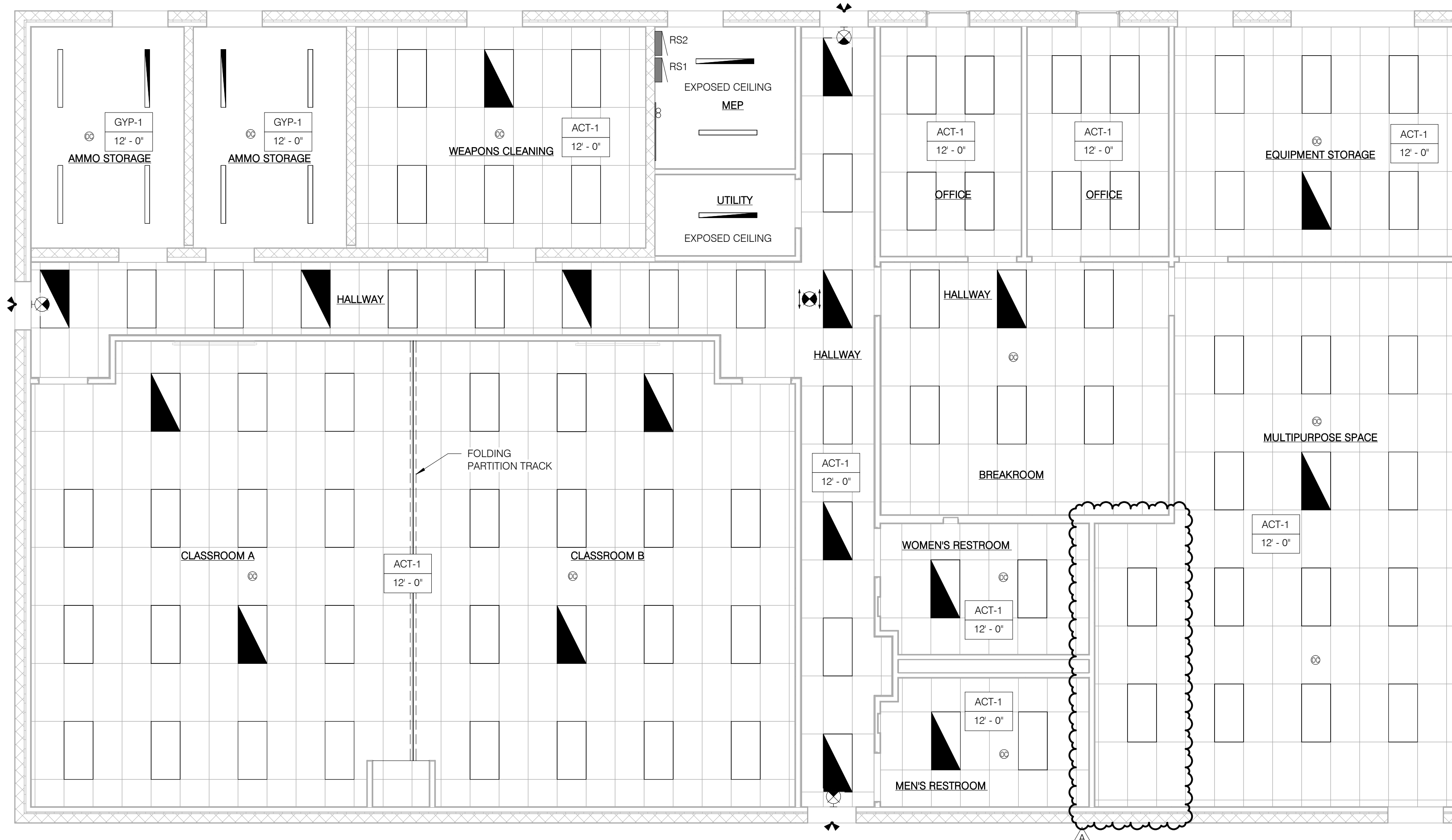
1. CEILING GRIDS TO BE CENTERED IN ROOMS, UNLESS NOTED OTHERWISE.
2. ALL LIGHTS, SPRINKLER HEADS AND CEILING MOUNTED DEVICES ARE TO BE CENTERED IN THE CEILING TILE, UNLESS NOTED OTHERWISE.
3. REFER TO FINISH LEGEND AND SCHEDULE FOR CEILING MATERIAL TYPES.

**REFLECTED CEILING PLAN LEGEND**

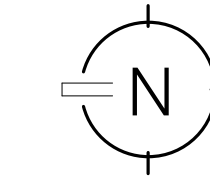
- TROUGHER LIGHT PROVIDED WITH EMERGENCY BATTERY BACKUP, SEE SHEET E1.01 FOR MORE INFORMATION
- TROUGHER LIGHT, SEE SHEET E1.01 FOR MORE INFORMATION
- 4 STRIP LIGHT PROVIDED WITH EMERGENCY BATTERY BACKUP, SEE SHEET E1.01 FOR MORE INFORMATION
- 4 STRIP LIGHT, SEE SHEET E1.01 FOR MORE INFORMATION
- OCCUPANCY SENSOR
- EXIT SIGN, SEE ELECTRICAL
- DUAL HEAD REMOTE EGRESS FIXTURE, SEE ELECTRICAL
- X → CEILING TYPE  
X'-X" → CEILING HEIGHT
- SUPPLY DIFFUSER, SEE MECHANICAL
- RETURN GRILLE, SEE MECHANICAL

**CEILING TYPES**

- ACT-1 2x4 ACOUSTIC TILE CEILING - WATER REPELLENT AND WASHABLE
- GYP-1 3/8" WIRE MESH GYPSUM BOARD



A1	REFLECTED CEILING PLAN
A1.10	3/16" = 1'-0"



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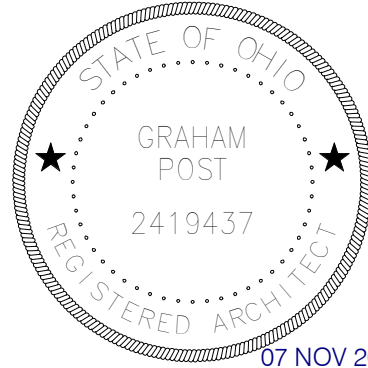
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Reflected Ceiling  
Plan

**A1.10**

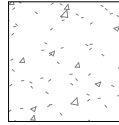
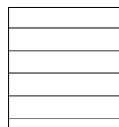
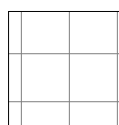
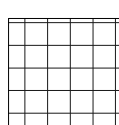
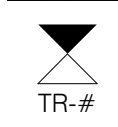
SHEET SCALE  
0" 1/2" 1" 2"

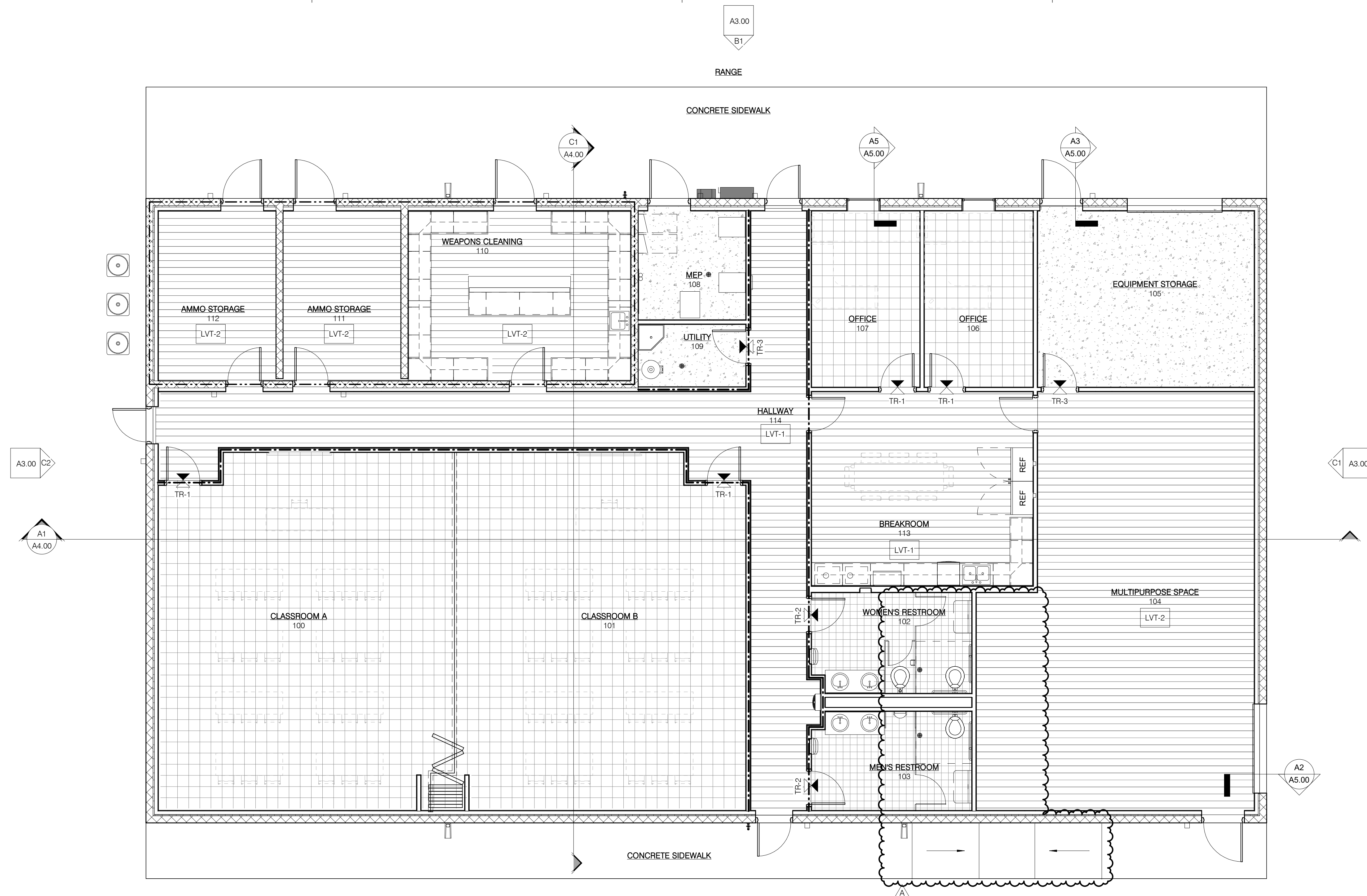


**FINISH FLOOR PLAN GENERAL NOTES**

1. MANUFACTURER'S RECOMMENDED INSTALLATION METHODS AND MATERIALS FOR ALL FINISHES SHALL BE USED.
2. SUBCONTRACTOR SHALL ENDEAVOR TO ORDER FINISH MATERIALS IN A TIMELY MANNER TO ENSURE AVAILABILITY. SUBCONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IF A SPECIFIED FINISH BECOMES UNAVAILABLE.
3. ALL CARPET TO CONFORM TO OBC CRITICAL RADIANCE FLUX OF CLASS 1, 0.45 WATTS PER SQ CENTIMETER OR GREATER.
4. CLEAN ALL CARPET AND OTHER FINISH SURFACES FOLLOWING COMPLETION OF INSTALLATION/CONSTRUCTION.
5. SEE FINISH PLANS AND SCHEDULE FOR FLOOR FINISH LOCATIONS.
6. PROVIDE AND INSTALL TRANSITION STRIPS FOR ALL LOCATIONS WITH FLOORING CHANGES IN WHICH THE THICKNESS OF THE MATERIAL VARIES GREATER THAN 1/4" UNLESS NOTED OTHERWISE. SUBCONTRACTOR TO CONFIRM SIZES BASED ON FLOORING. ALL TRANSITIONS SHALL BE ADA COMPLIANT AND INSTALLED AT CENTER LINE OF DOORS.
7. ALL GYPSUM BOARD WALLS AND CEILING TO HAVE ORANGE PEEL FINISH.
8. ALL FLOORING GRID PATTERN TO BE CENTERED IN ROOM, UNLESS NOTED OTHERWISE.
9. FLOORING TO EXTEND UNDER SHELVING, APPLIANCES AND BASE CABINETRY.

**FINISH FLOOR PLAN LEGEND**

-  SC - SEALED CONCRETE (SC-1)
-  LVT - LUXURY VINYL TILE (LVT-1 AND LVT-2)
-  CPT - CARPET TILE (CPT-1)
-  CT - CERAMIC TILE (CT-1)
-  FLOOR FINISH TRANSITION  
TR-#



A1 FINISH FLOOR PLAN  
A1.11 3/16" = 1'-0"

Client:  
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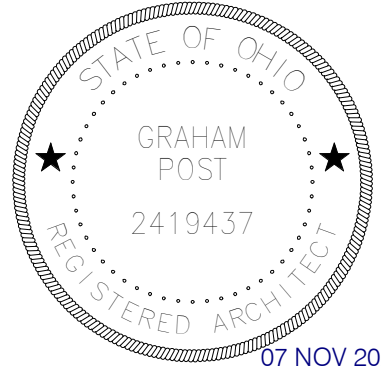
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Finish Floor Plan

**A1.11**

SHEET SCALE  
0" 1/2" 1" 2"





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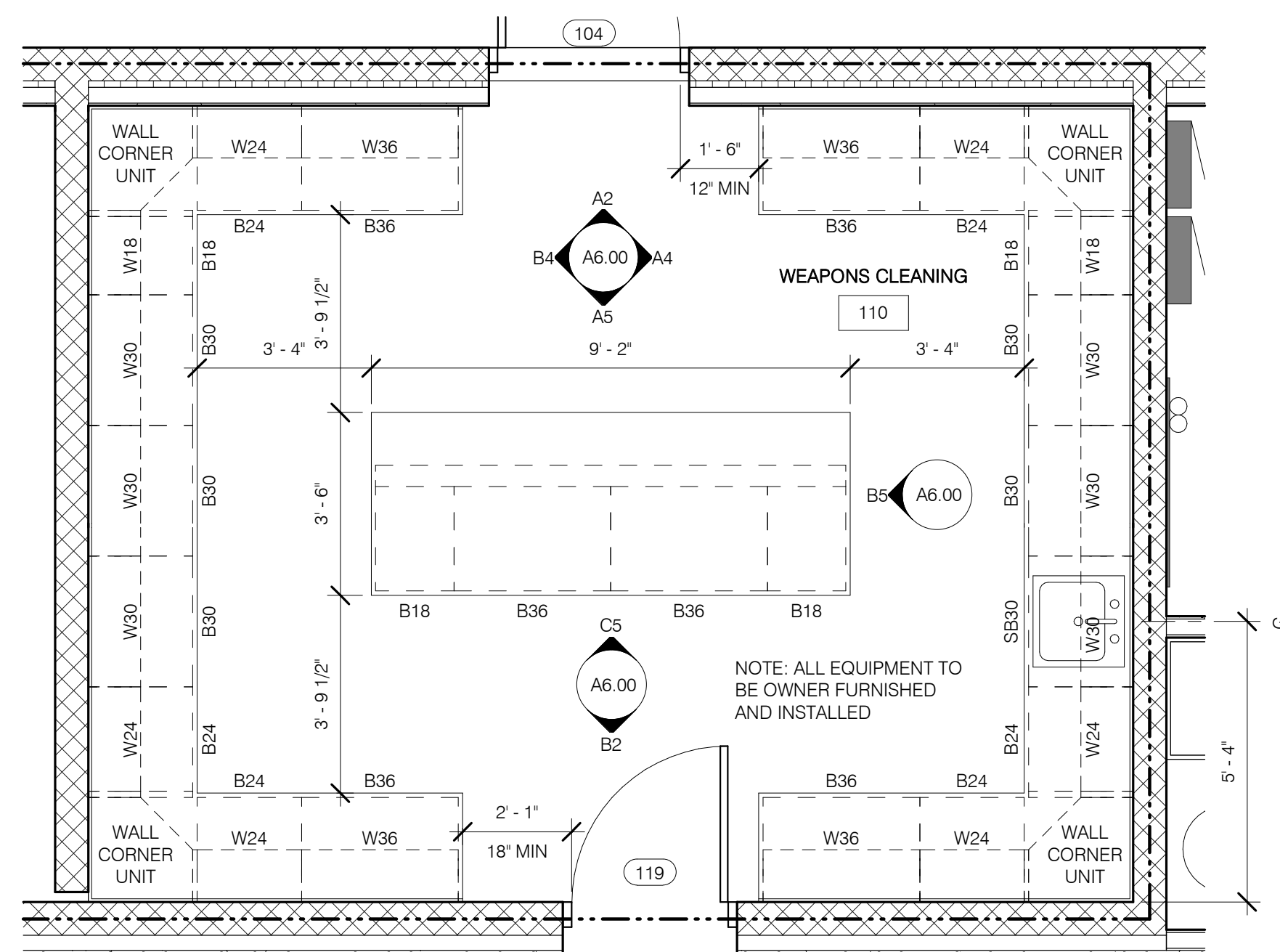
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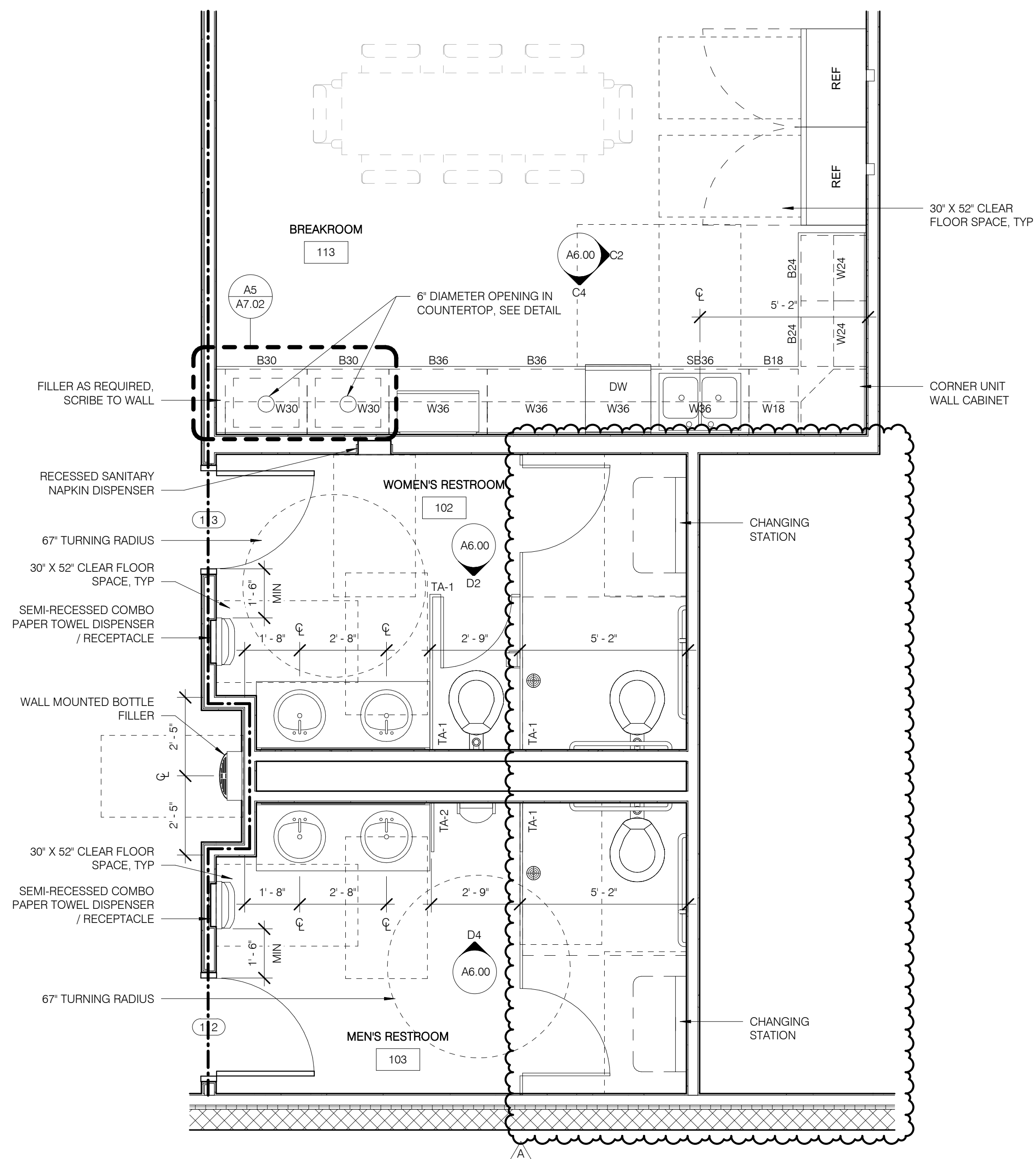
Enlarged Floor Plans

**A1.20**

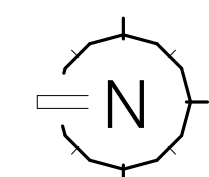
SHEET SCALE  
0' 1/2' 1' 2'



**A4 WEAPONS CLEANING ENLARGED PLAN**  
A1.20 3/8" = 1'-0"  
A1.00



**A2 RESTROOMS AND BREAKROOM ENLARGED PLAN**  
A1.20 3/8" = 1'-0"  
A1.00





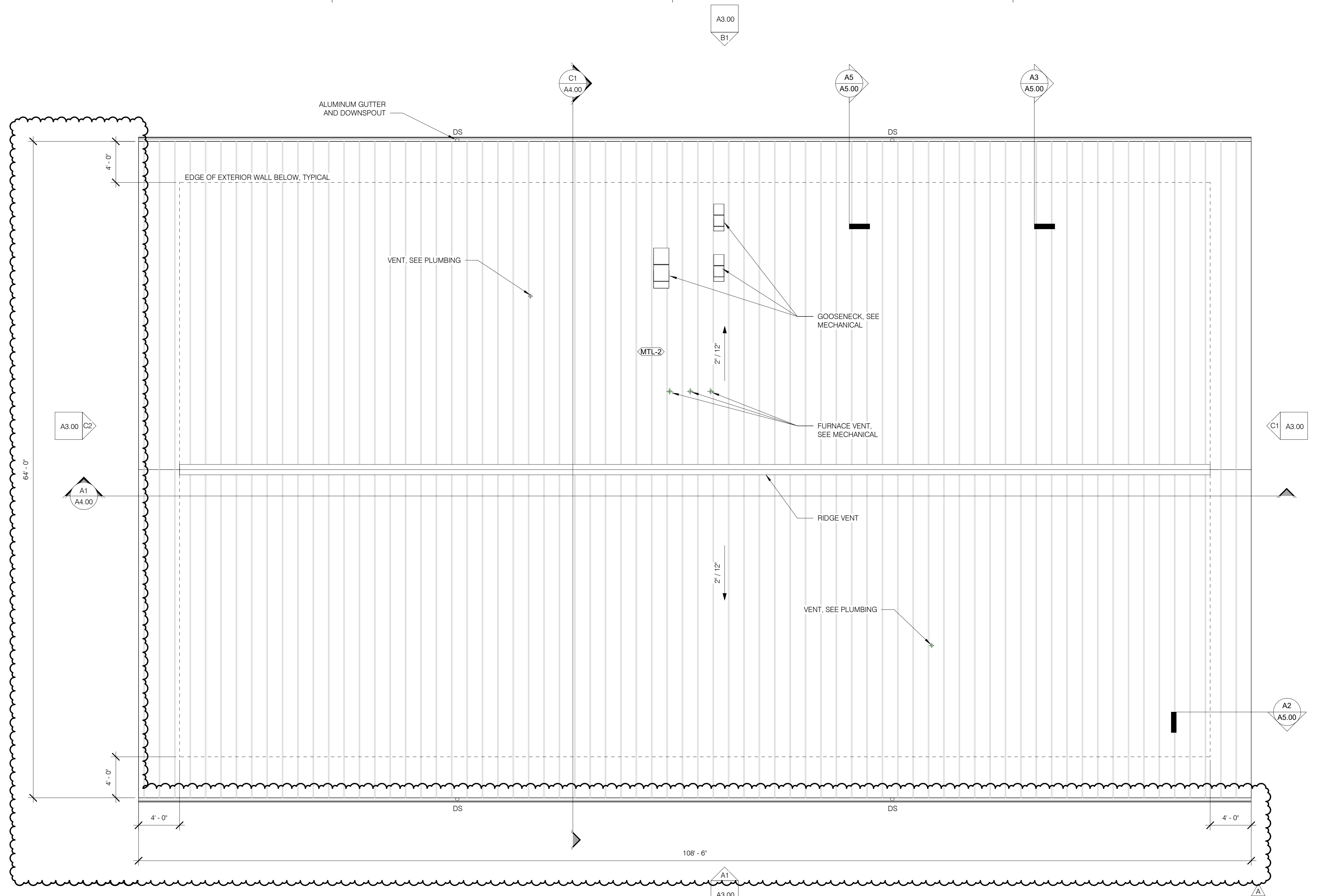
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Expiration Date 12/31/2025

**ROOF PLAN GENERAL NOTES**

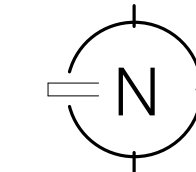
1. CONTRACTOR IS RESPONSIBLE FOR POSITIVE DRAINAGE AROUND EQUIPMENT AND PENETRATIONS.
2. PROVIDE WALKWAY PADS AROUND ALL REGULARLY SERVICED EQUIPMENT TO ROOF ACCESS POINT.
3. VENT THRU ROOF (VTR) SHALL BE A MIN. 10'-0" AWAY FROM OUTSIDE AIR INTAKE OPENINGS.
4. ATTICS SHALL BE VENTILATED WITH INTAKE VENTS AT OR NEAR THE SOFFIT WITH A MIN. NET FREE AREA OF 8 SQ. IN. PER LINEAR FOOT AND RIDGE VENTS WITH A MIN. NET FREE AREA OF 15 SQ. IN. PER LINEAR FOOT.

**ROOF ASSEMBLY TYPES**

◀MTL-2> STANDING SEAM METAL ROOF O/ SELF ADHERED SHEET AIR AND VAPOR BARRIER, O/ 3/4" EXTERIOR RATED OSB SHEATHING O/ PRE-ENGINEERED WOOD TRUSSES. PROVIDE ICE AND WATER GUARD FROM FASCIA TO 2'-0" FROM INSIDE FACE OF WALL.



A1	ROOF PLAN
A2.00	3/16" = 1'-0"



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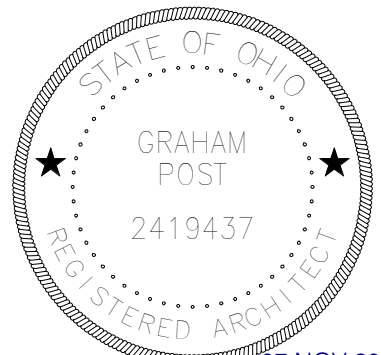
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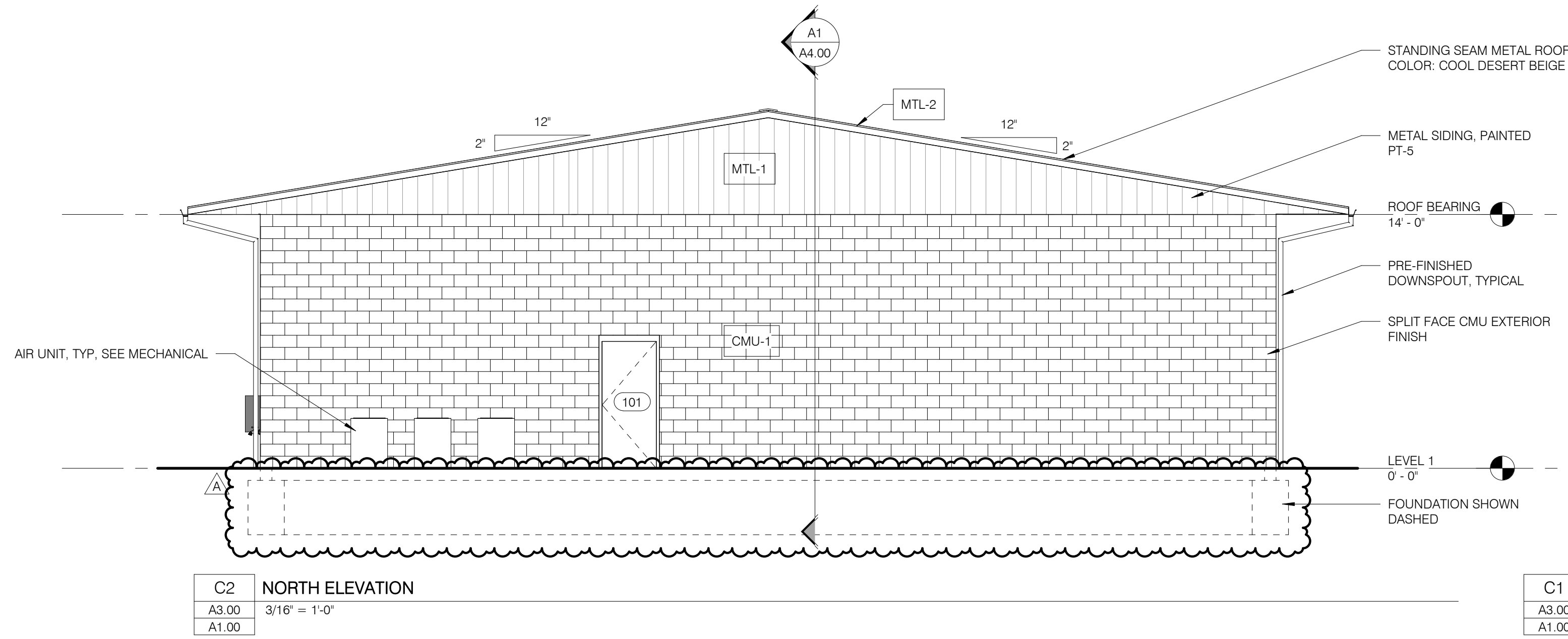
Roof Plan

**A2.00**

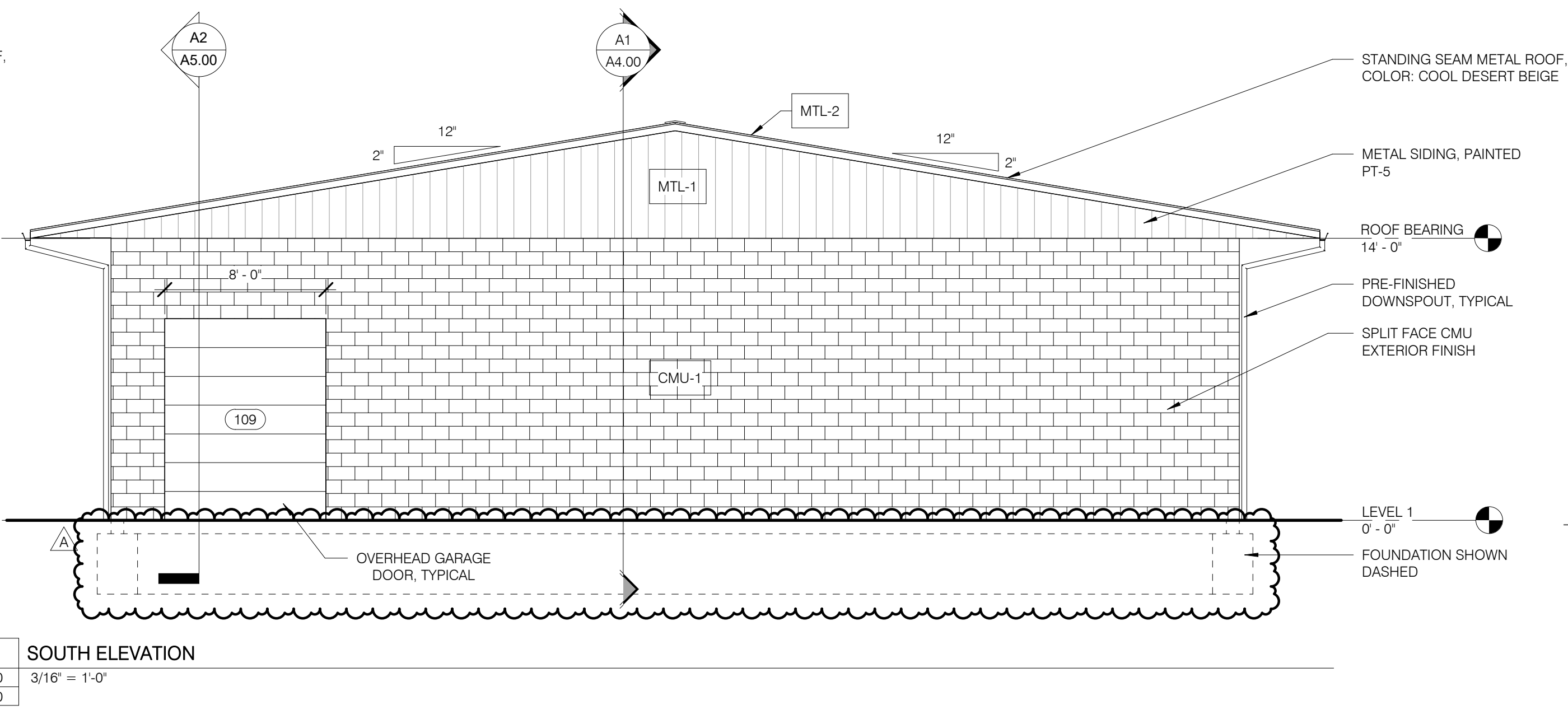
SHEET SCALE  
0" 1/2" 1" 2"



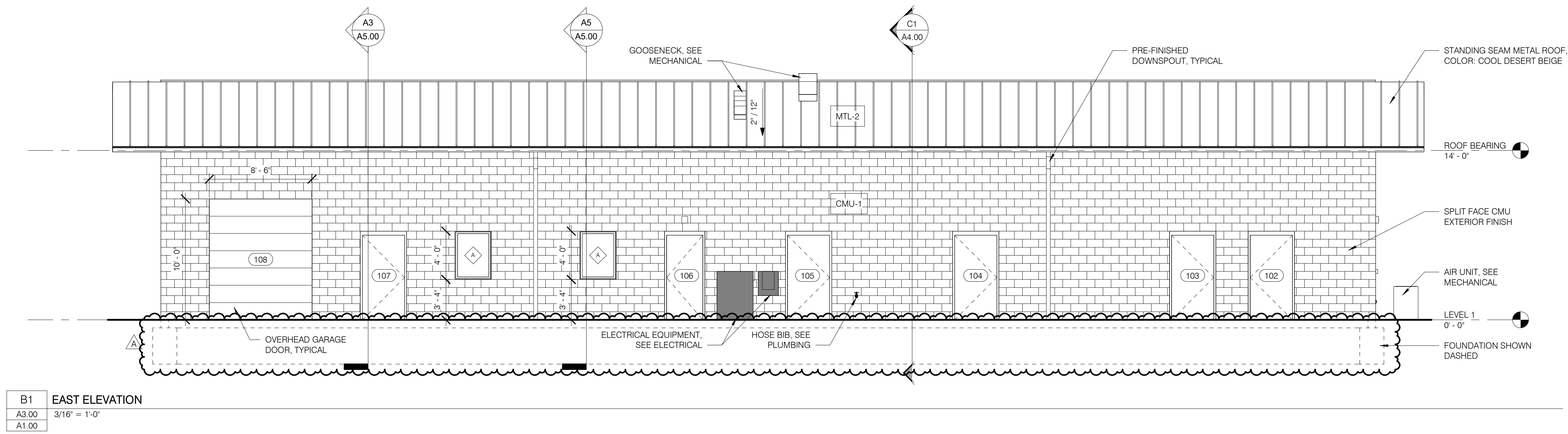
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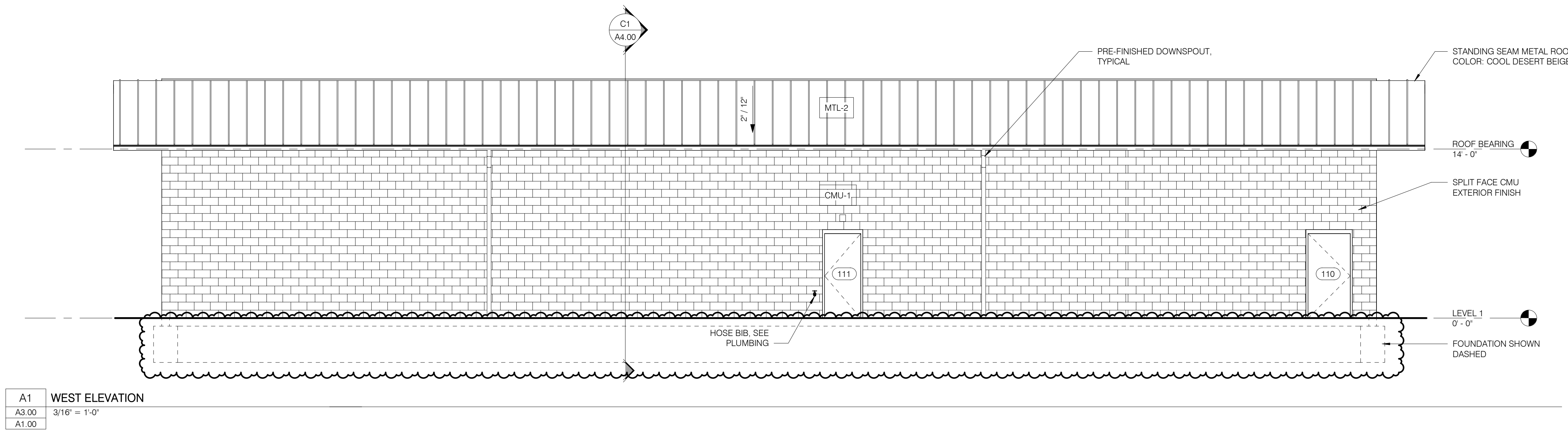
**C2 NORTH ELEVATION**  
A3.00 3/16" = 1'-0"  
A1.00



**C1 SOUTH ELEVATION**  
A3.00 3/16" = 1'-0"  
A1.00



**B1 EAST ELEVATION**  
A3.00 3/16" = 1'-0"  
A1.00



**A1 WEST ELEVATION**  
A3.00 3/16" = 1'-0"  
A1.00

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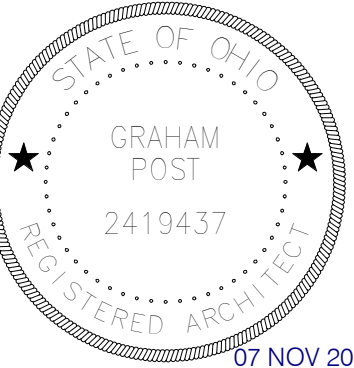
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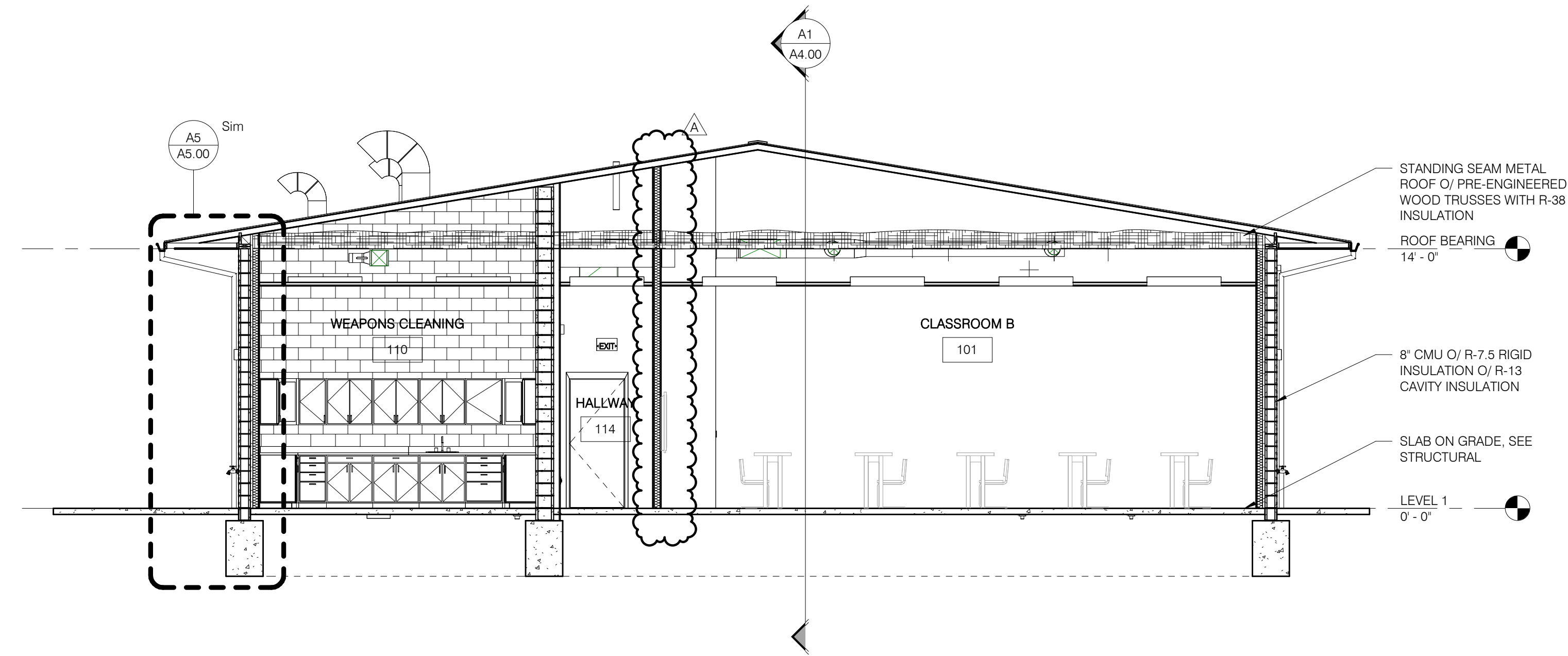
Exterior Elevations

**A3.00**

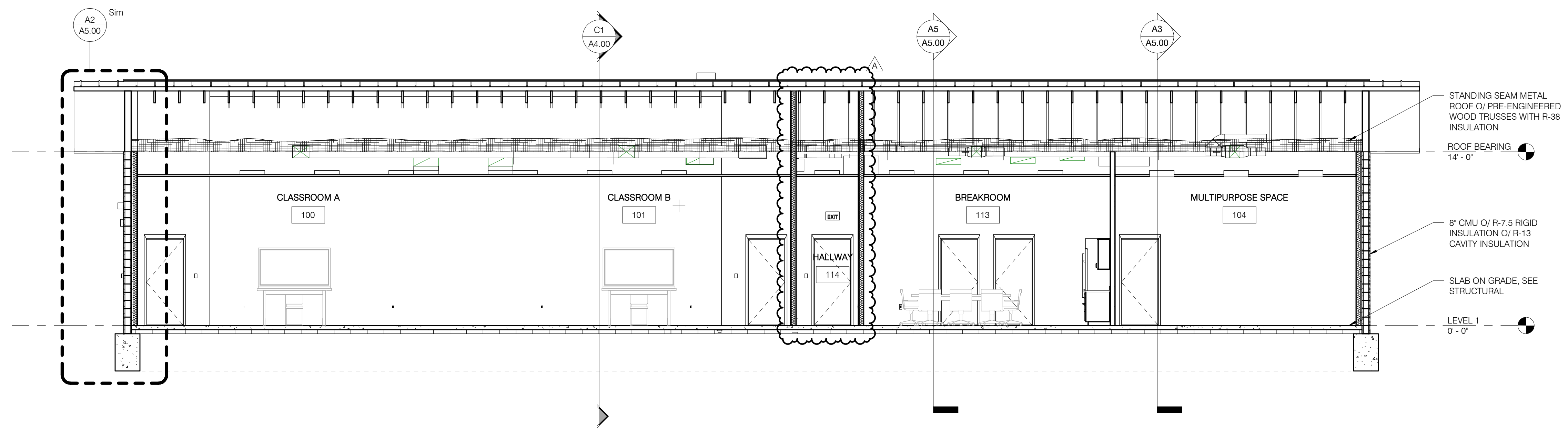
SHEET SCALE  
0" 1/2" 1" 2"



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Expiration Date 12/31/2025



**C1 CROSS SECTION**  
A4.00 3/16" = 1'-0"  
A1.00



**A1 BUILDING SECTION**  
A4.00 3/16" = 1'-0"  
A1.00

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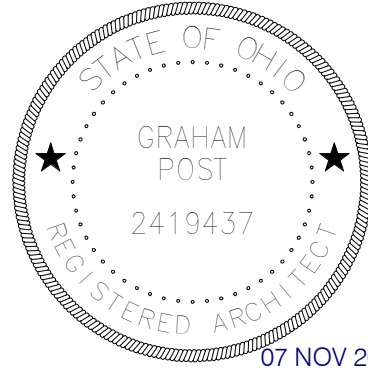
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Building Sections

**A4.00**

SHEET SCALE  
0' 1/2' 1' 2'



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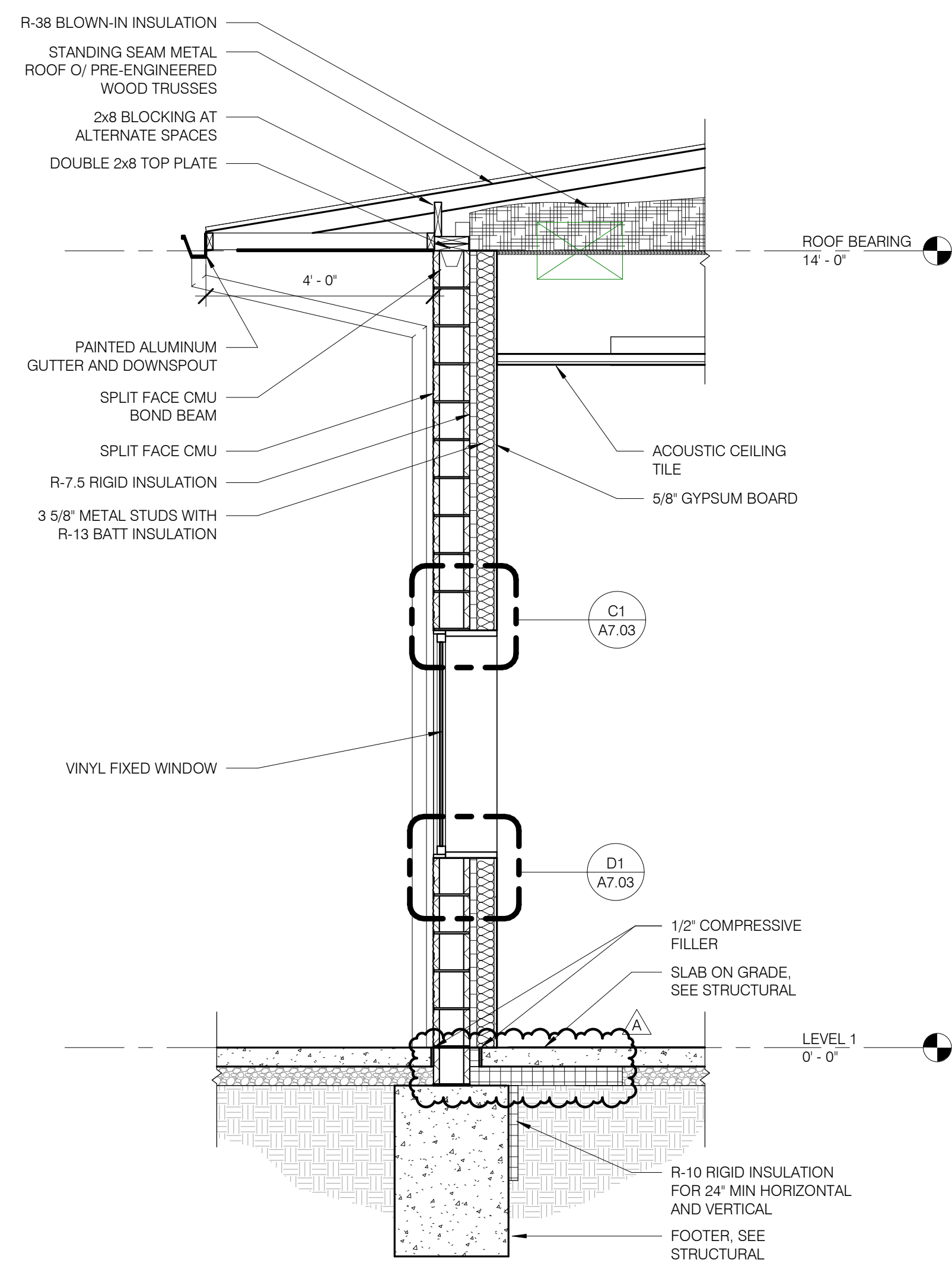
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Garden Street  
Elyria, Ohio 44035

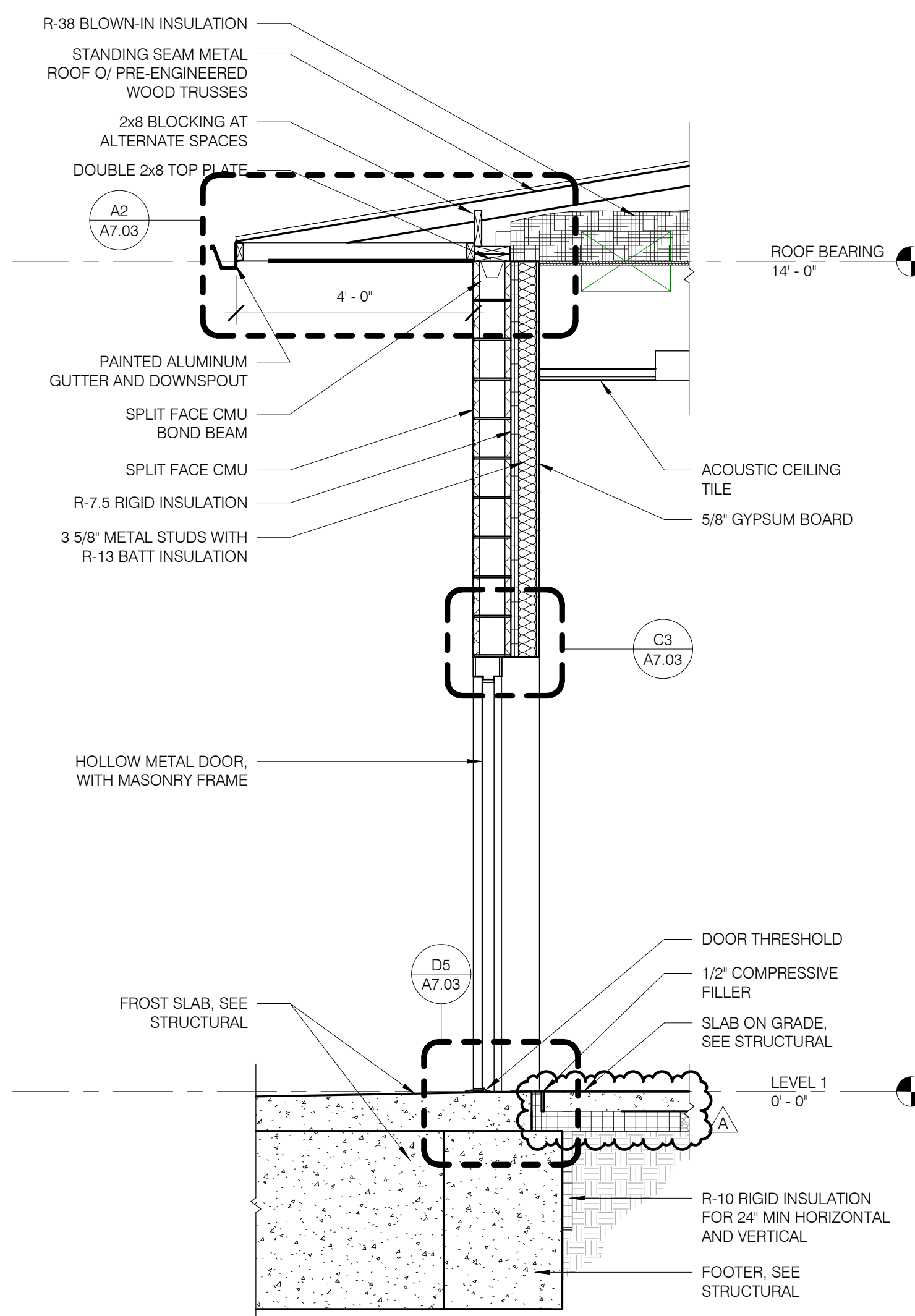
Revisions:

A 11.07.2024 ADDENDUM A  
0 09.26.2024 For Construction

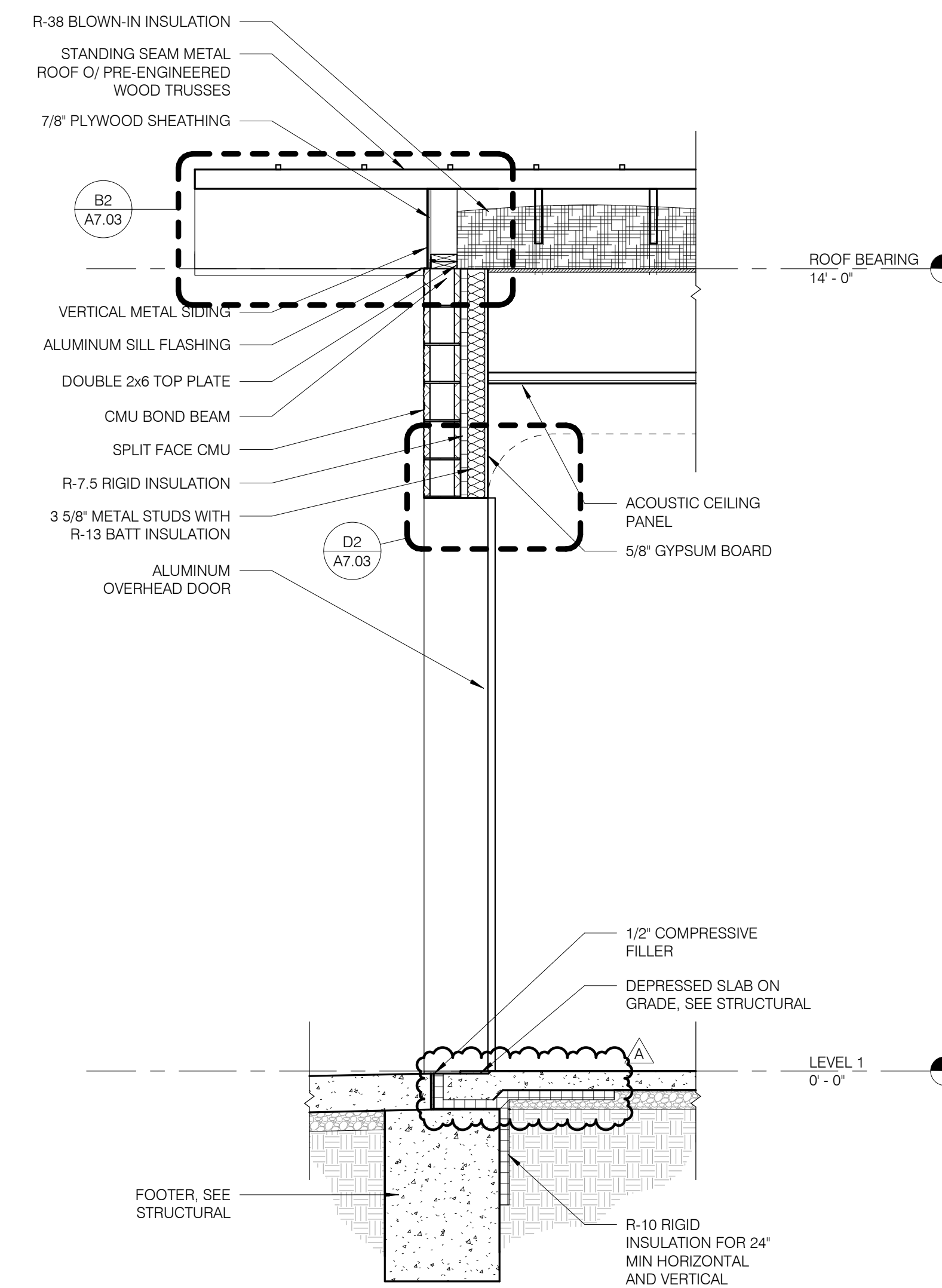
Project Number: 5039 01 23  
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**A5** WALL SECTION @ WINDOW  
A5.00 1/2" = 1'-0"  
A1.00



**A3** TYPICAL WALL SECTION  
A5.00 1/2" = 1'-0"  
A1.00

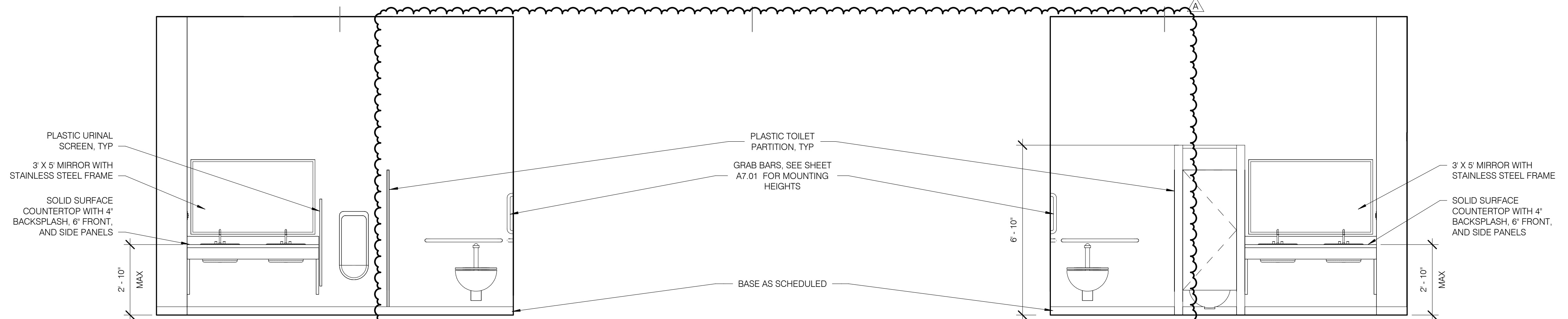
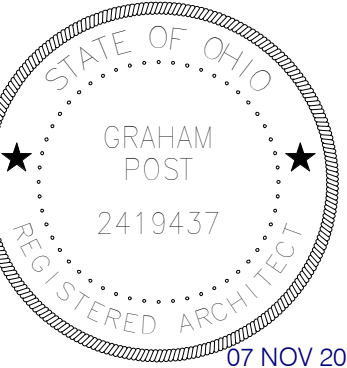


**A2** WALL SECTION @ OVERHEAD DOOR  
A5.00 1/2" = 1'-0"  
A1.00

Wall Sections

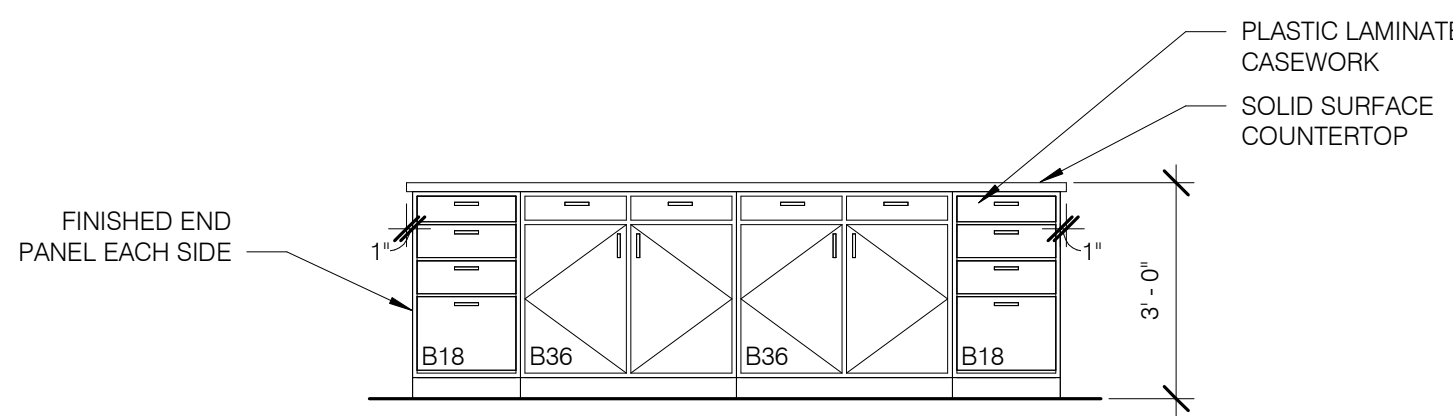
**A5.00**

SHEET SCALE  
0' 1/2' 1' 2'

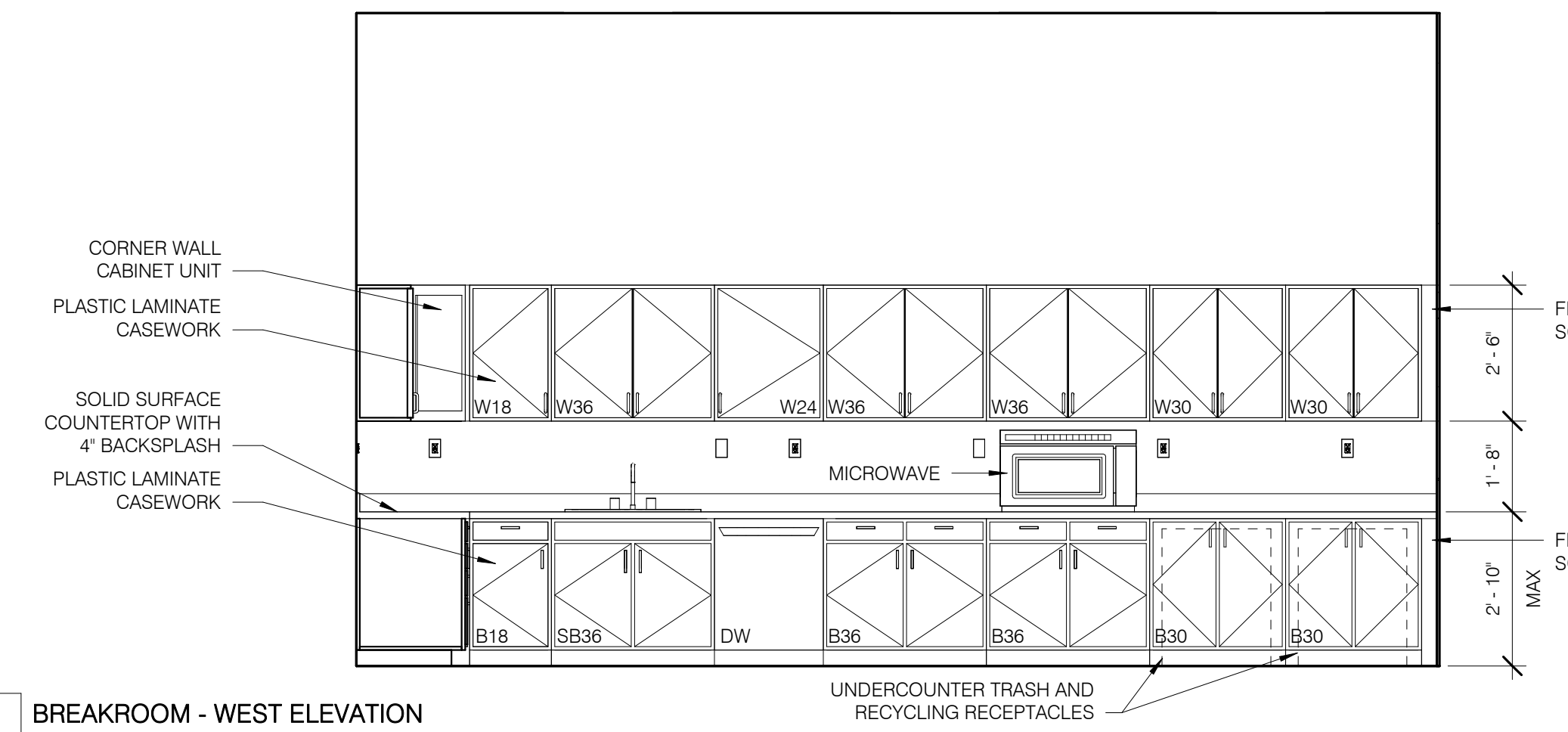


**D4 MENS RESTROOM - EAST ELEVATION**  
A6.00 3/8" = 1'-0"  
A1.20

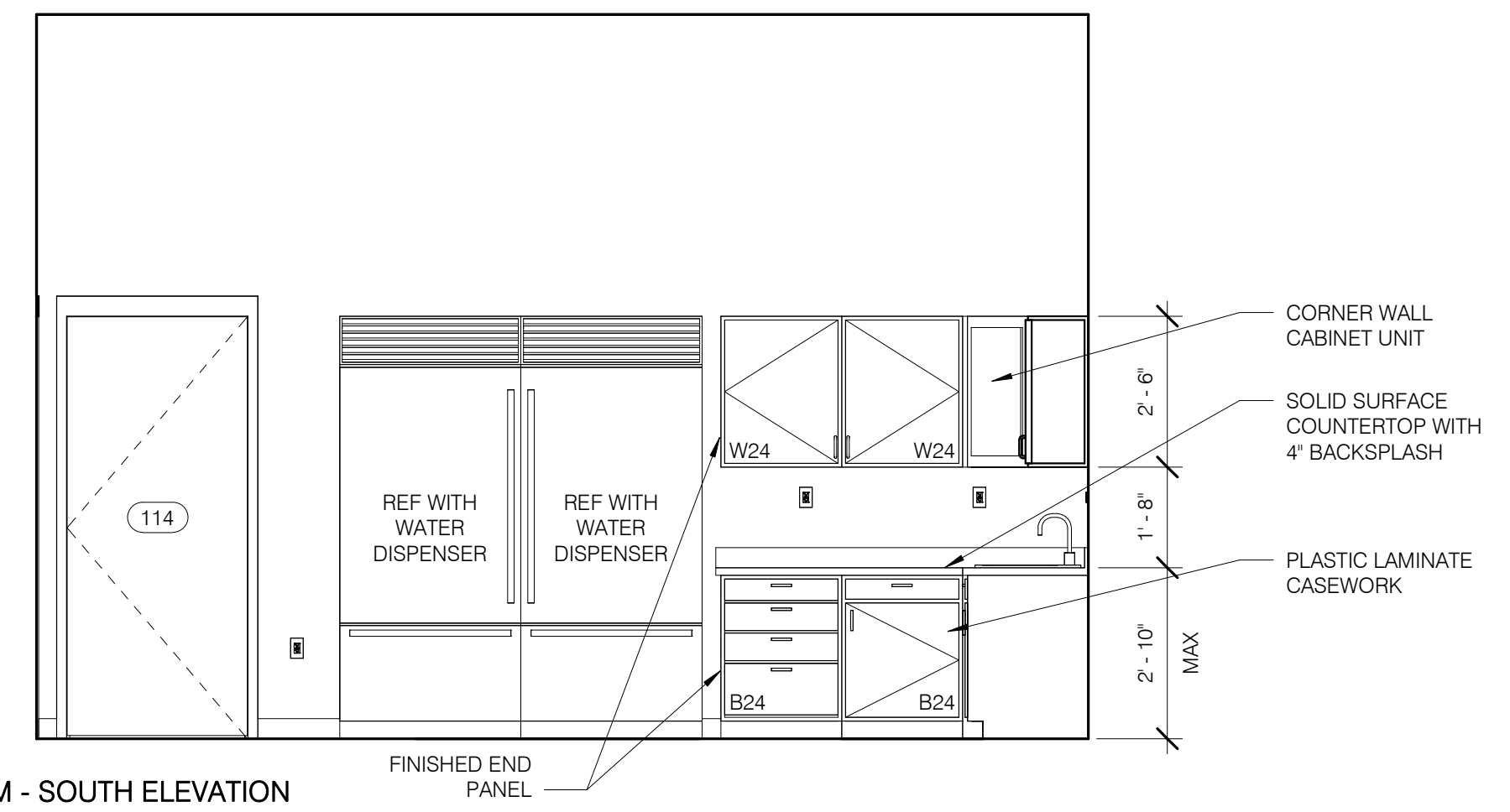
**D2 WOMEN'S RESTROOM - WEST ELEVATION**  
A6.00 3/8" = 1'-0"  
A1.20



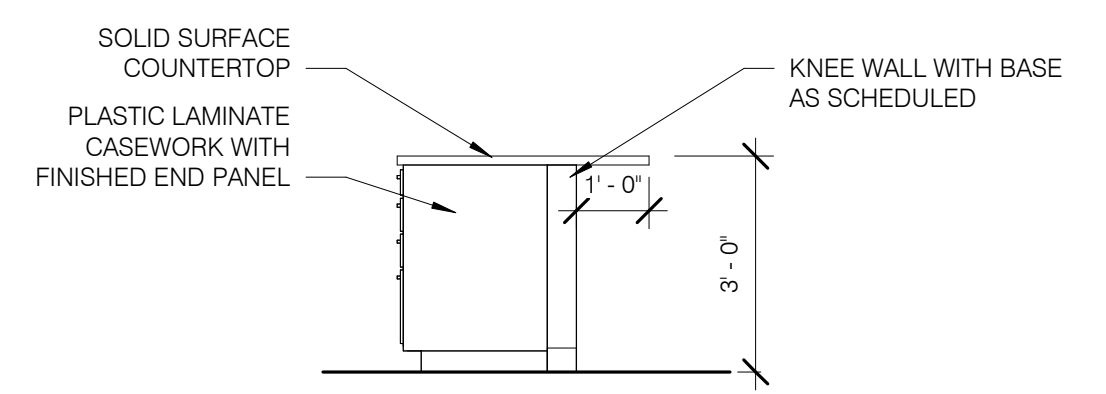
**C5 WEAPONS CLEANING - ISLAND ELEVATION 3**  
A6.00 3/8" = 1'-0"  
A1.20



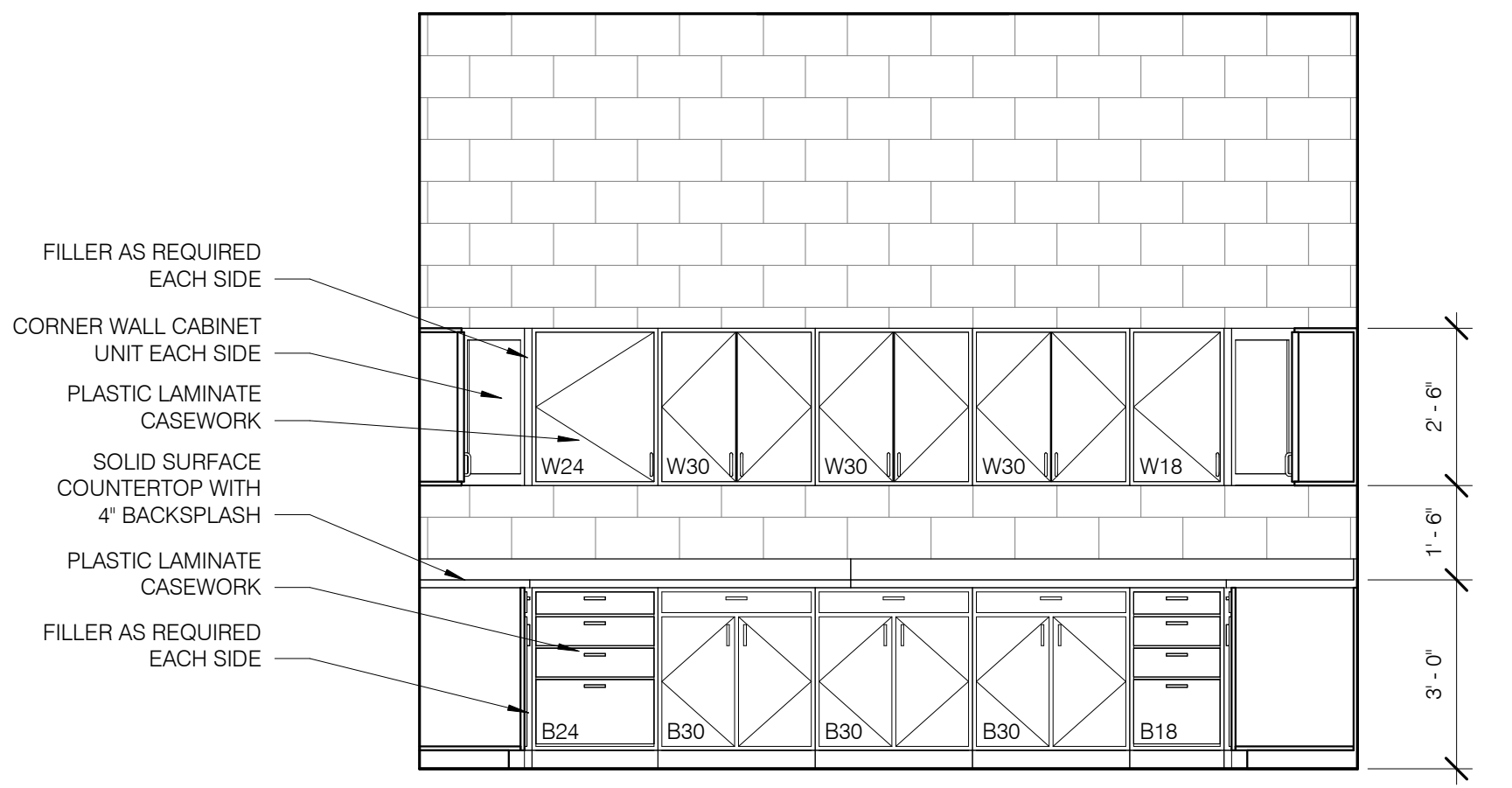
**C4 BREAKROOM - WEST ELEVATION**  
A6.00 3/8" = 1'-0"  
A1.20



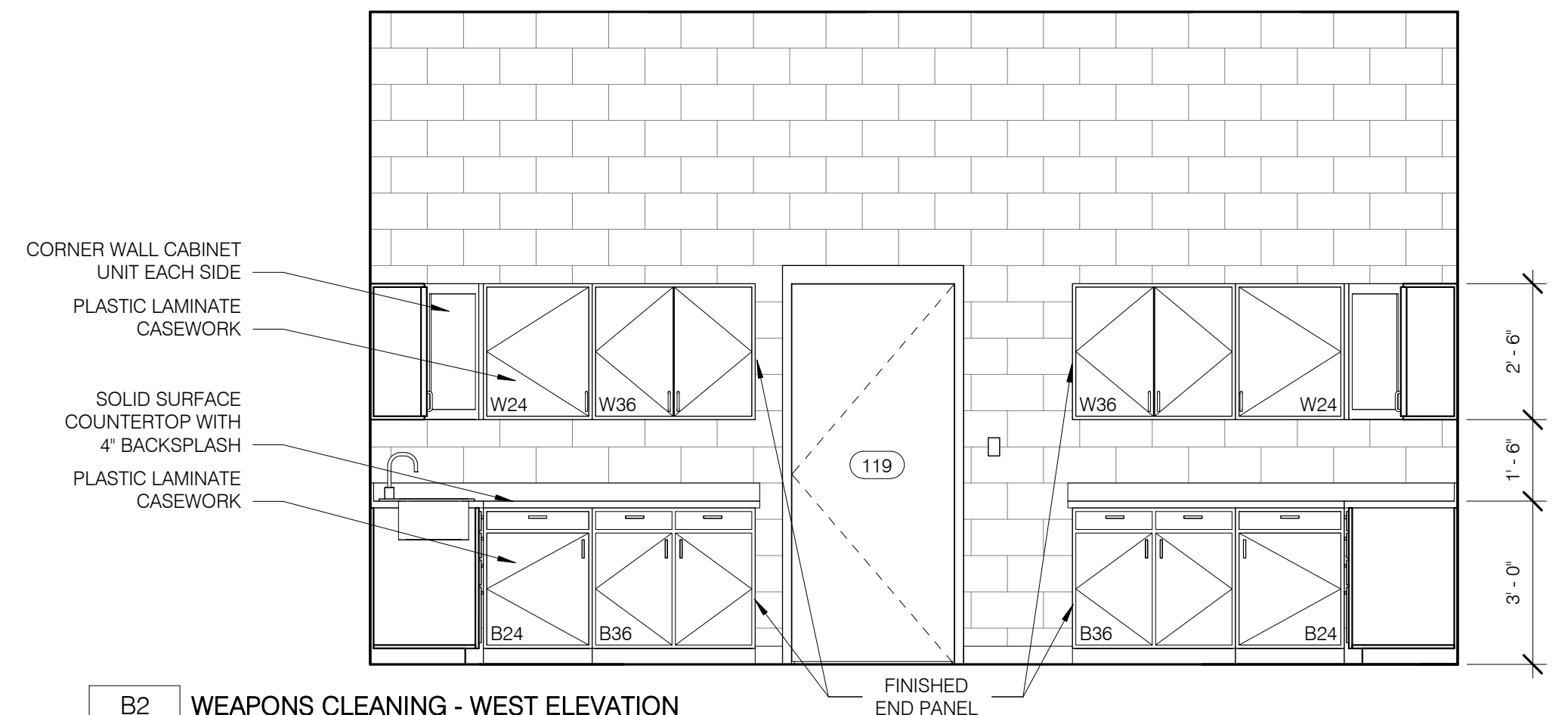
**C2 BREAKROOM - SOUTH ELEVATION**  
A6.00 3/8" = 1'-0"  
A1.20



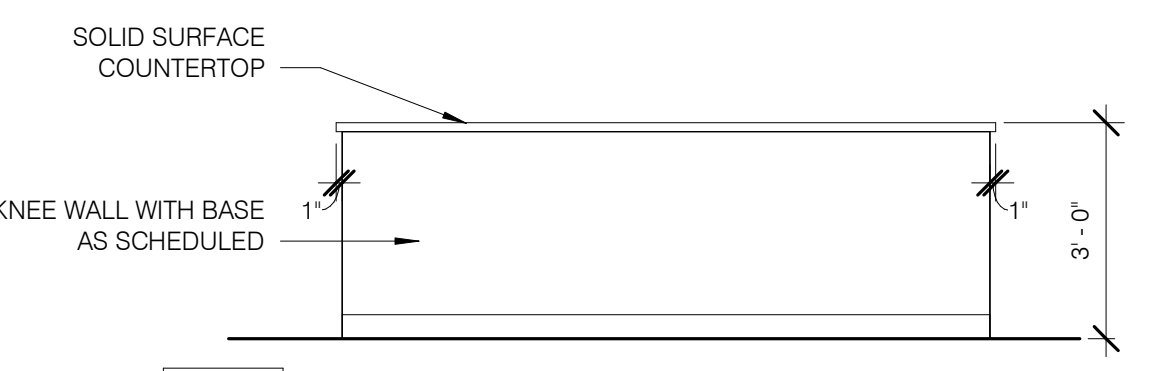
**B5 WEAPONS CLEANING - ISLAND ELEVATION 2**  
A6.00 3/8" = 1'-0"  
A1.20



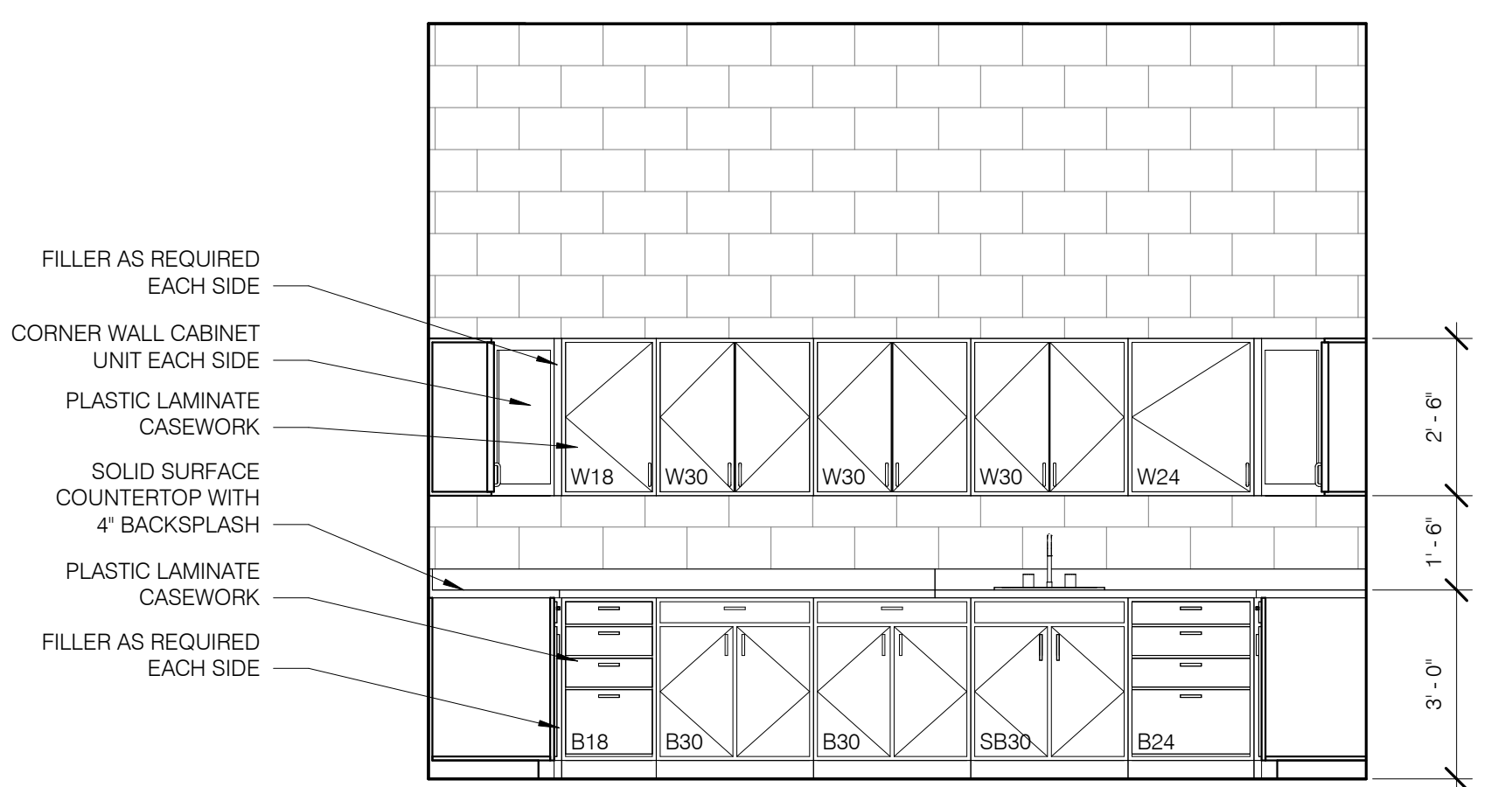
**B4 WEAPONS CLEANING - NORTH ELEVATION**  
A6.00 3/8" = 1'-0"  
A1.20



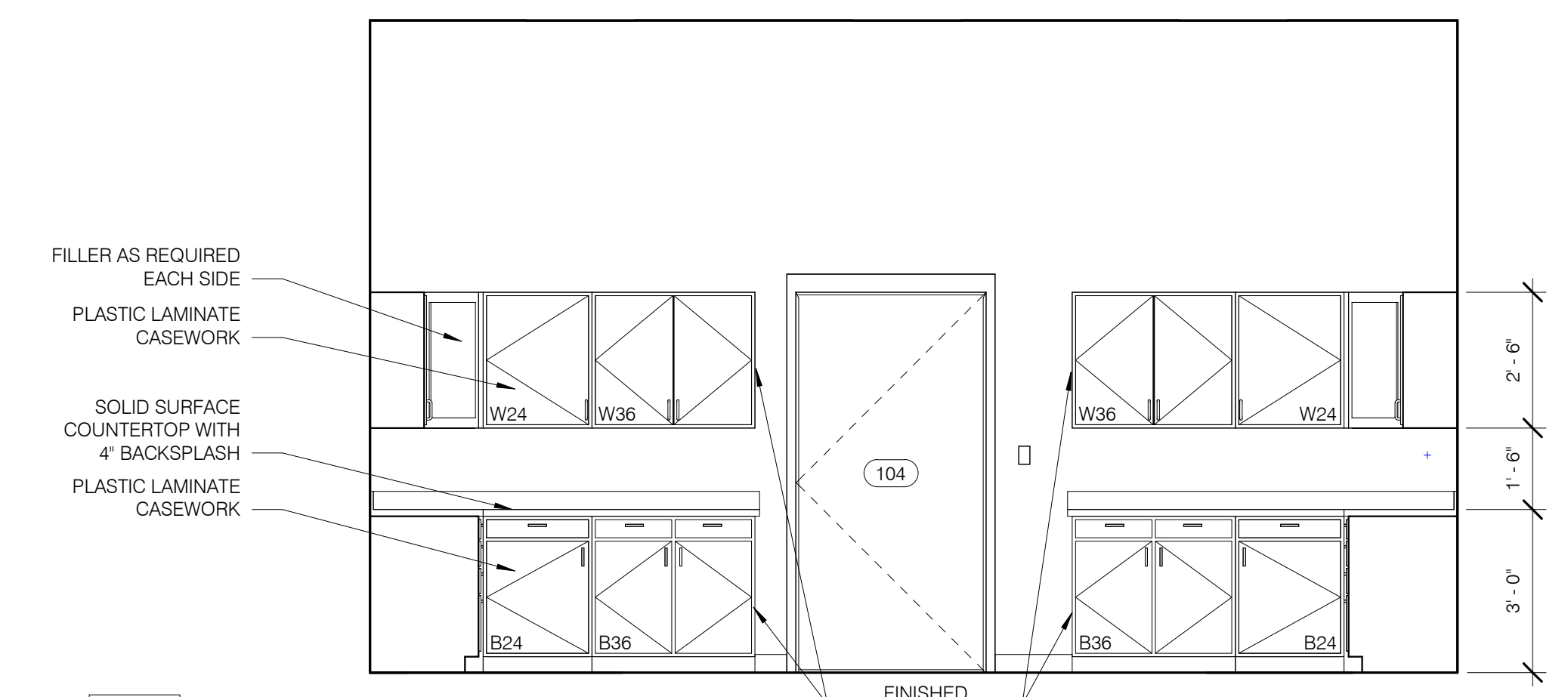
**B2 WEAPONS CLEANING - WEST ELEVATION**  
A6.00 3/8" = 1'-0"  
A1.20



**A5 WEAPONS CLEANING - ISLAND ELEVATION 1**  
A6.00 3/8" = 1'-0"  
A1.20



**A4 WEAPONS CLEANING - SOUTH ELEVATION**  
A6.00 3/8" = 1'-0"  
A1.20



**A2 WEAPONS CLEANING - EAST ELEVATION**  
A6.00 3/8" = 1'-0"  
A1.20

Client:  
**City of Elyria**

131 Court St - Suite 101  
Elyria, Ohio 44035

Project:  
**Public Safety  
Training Facility  
Range Building**

Garden Street  
Elyria, Ohio 44035

Revisions:

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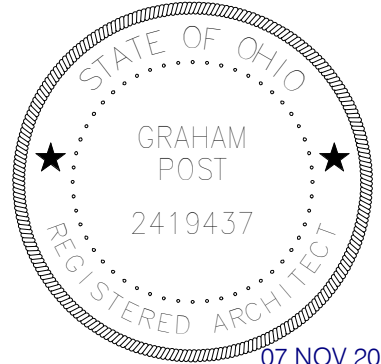
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Interior Elevations

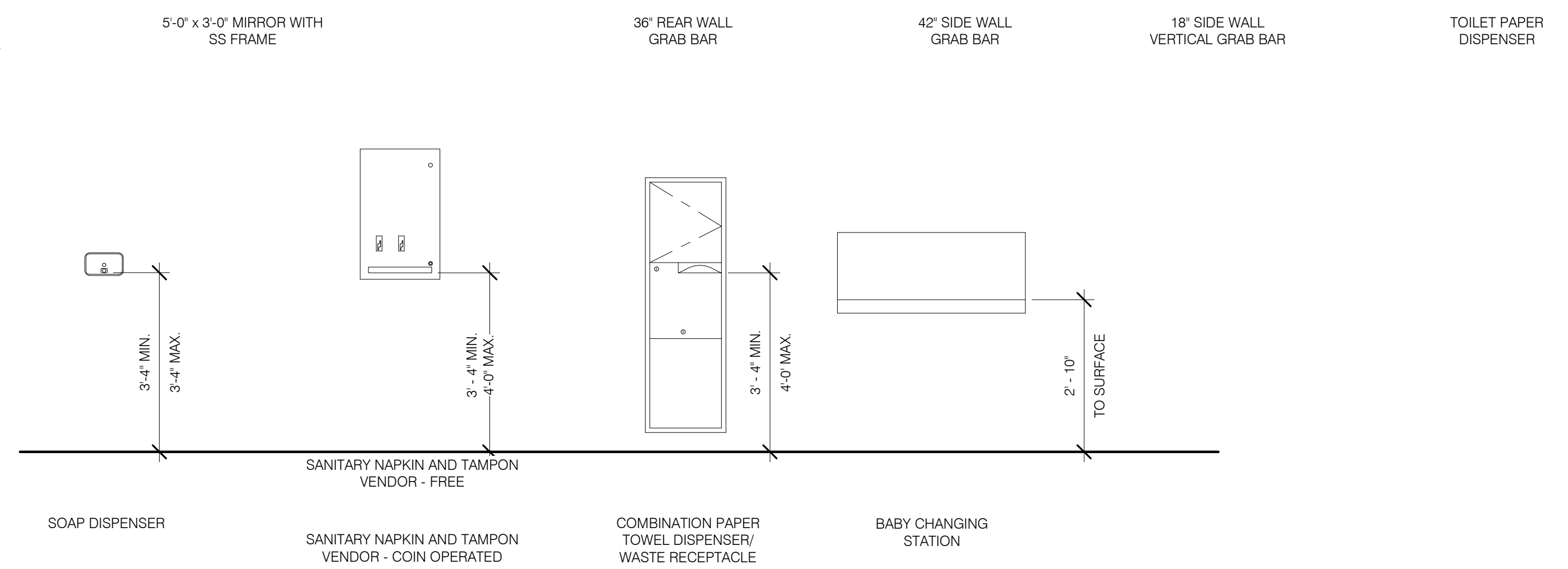
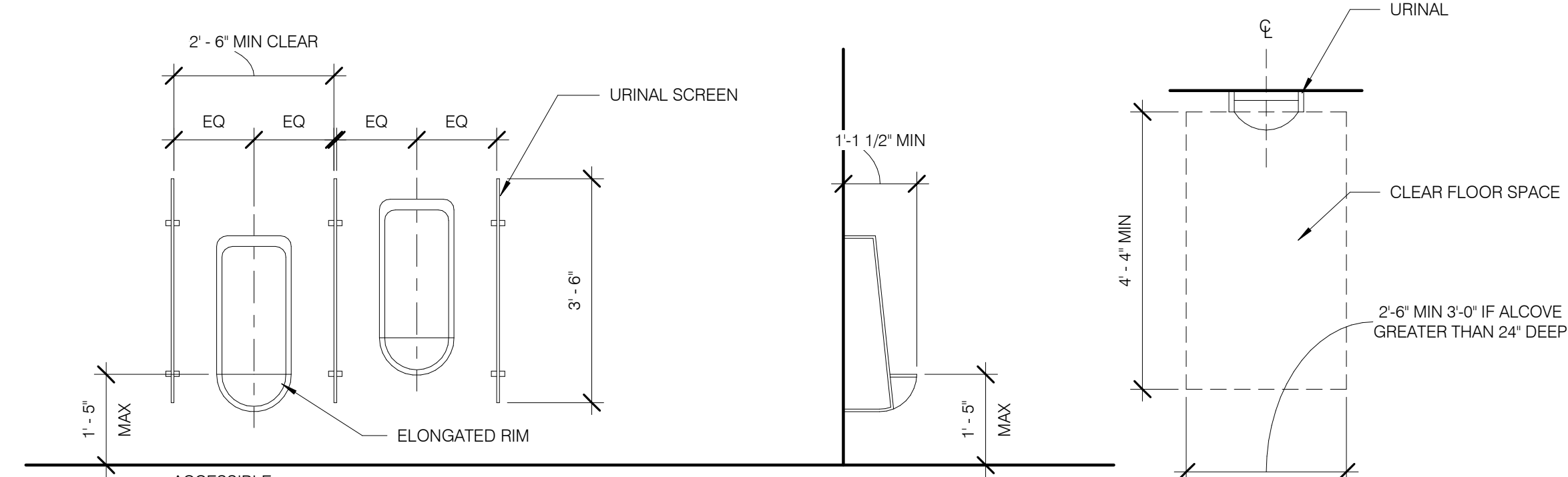
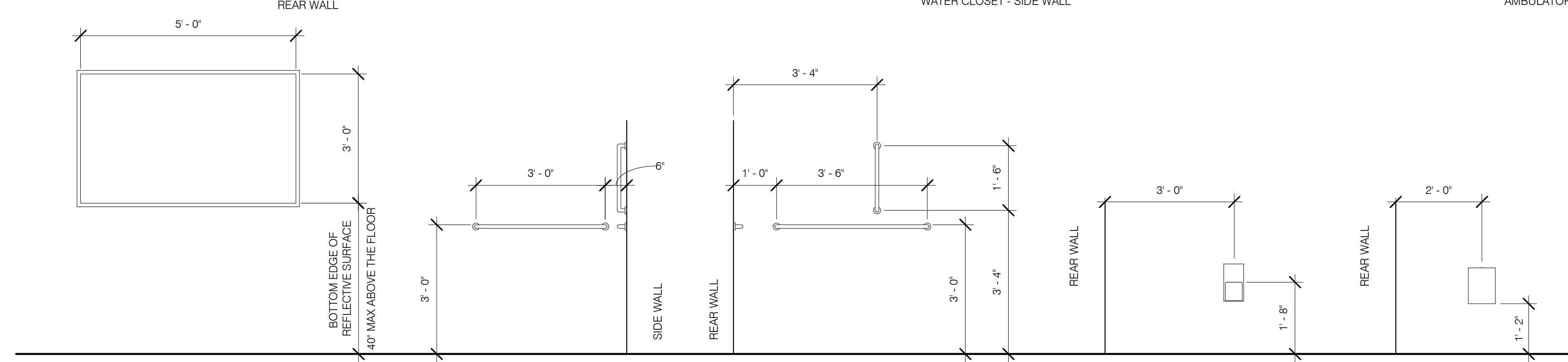
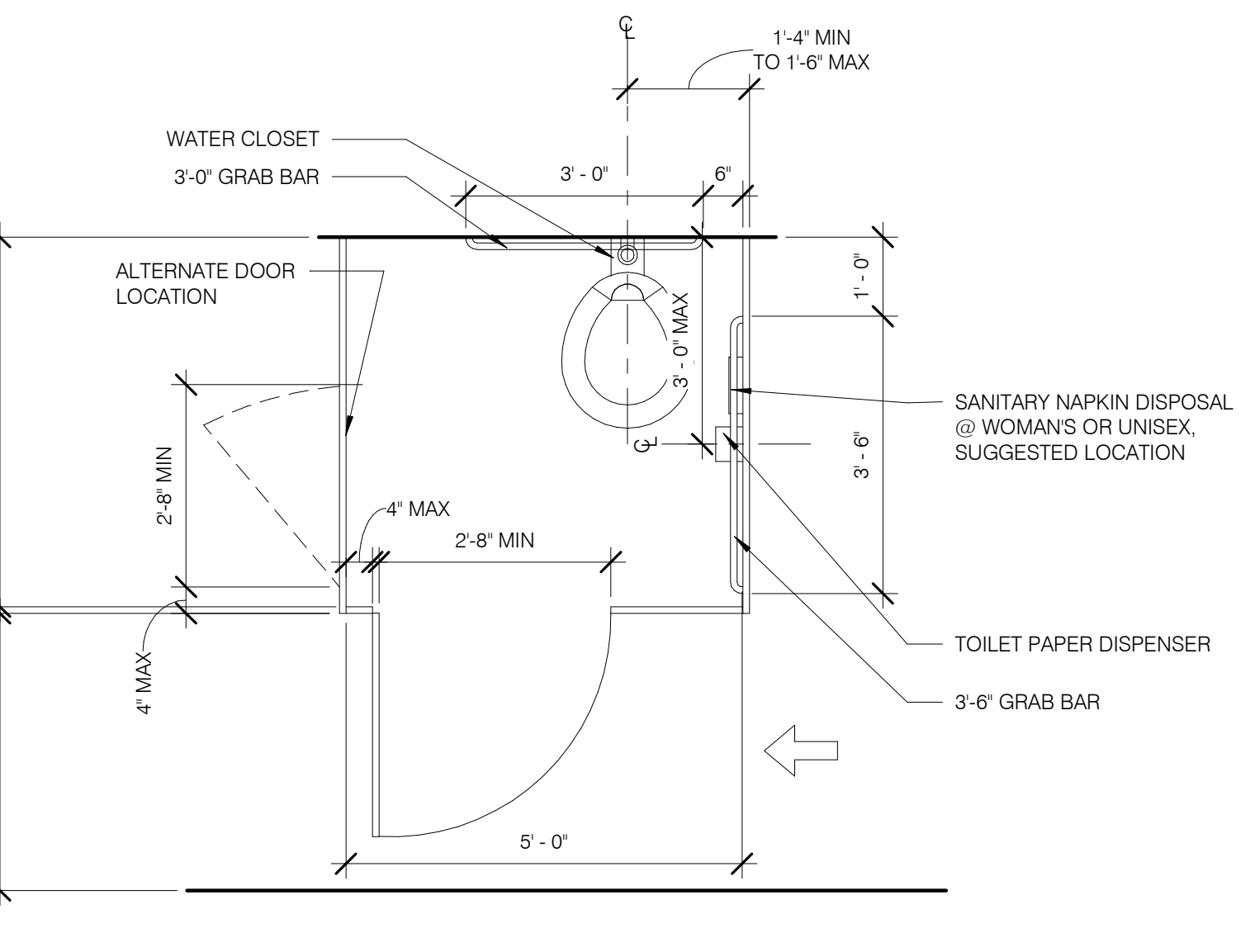
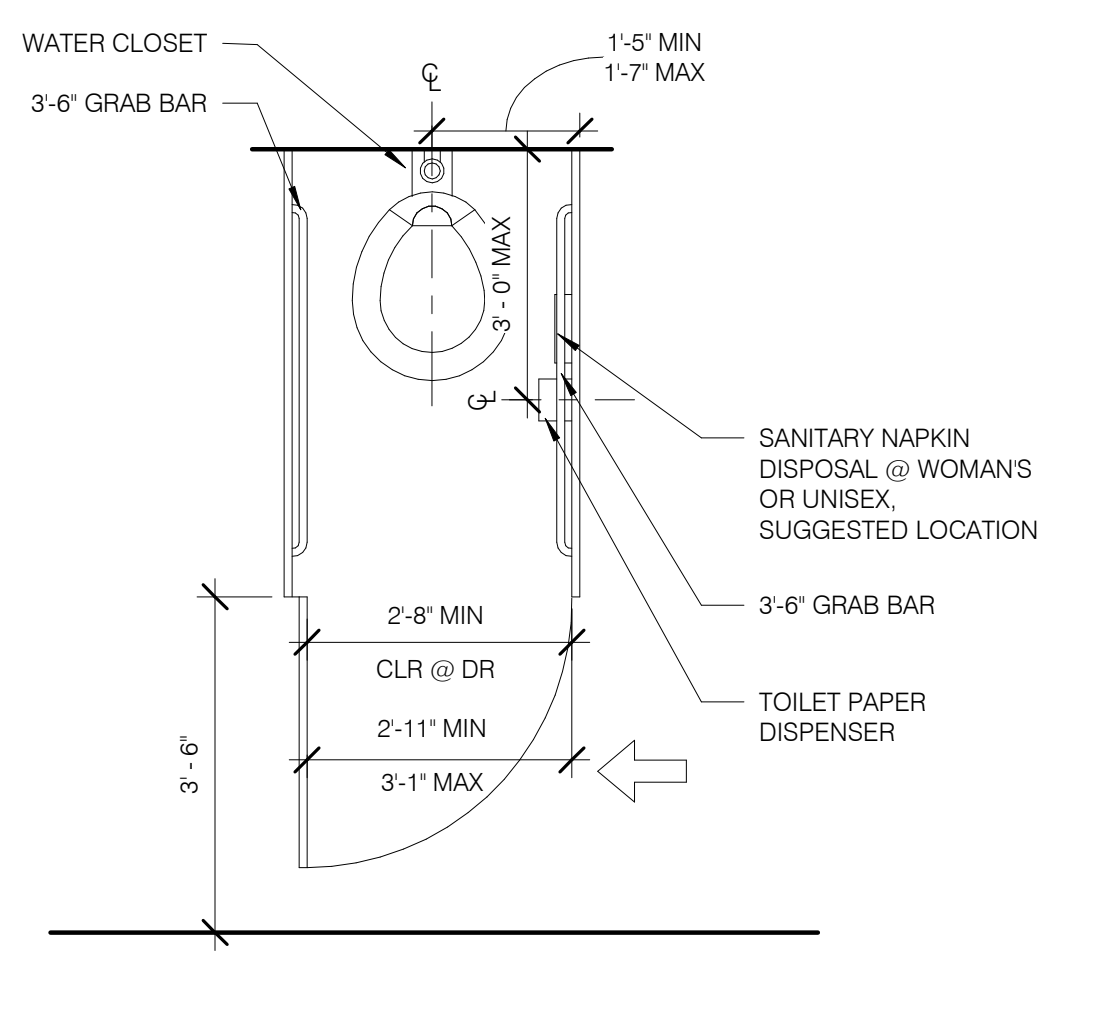
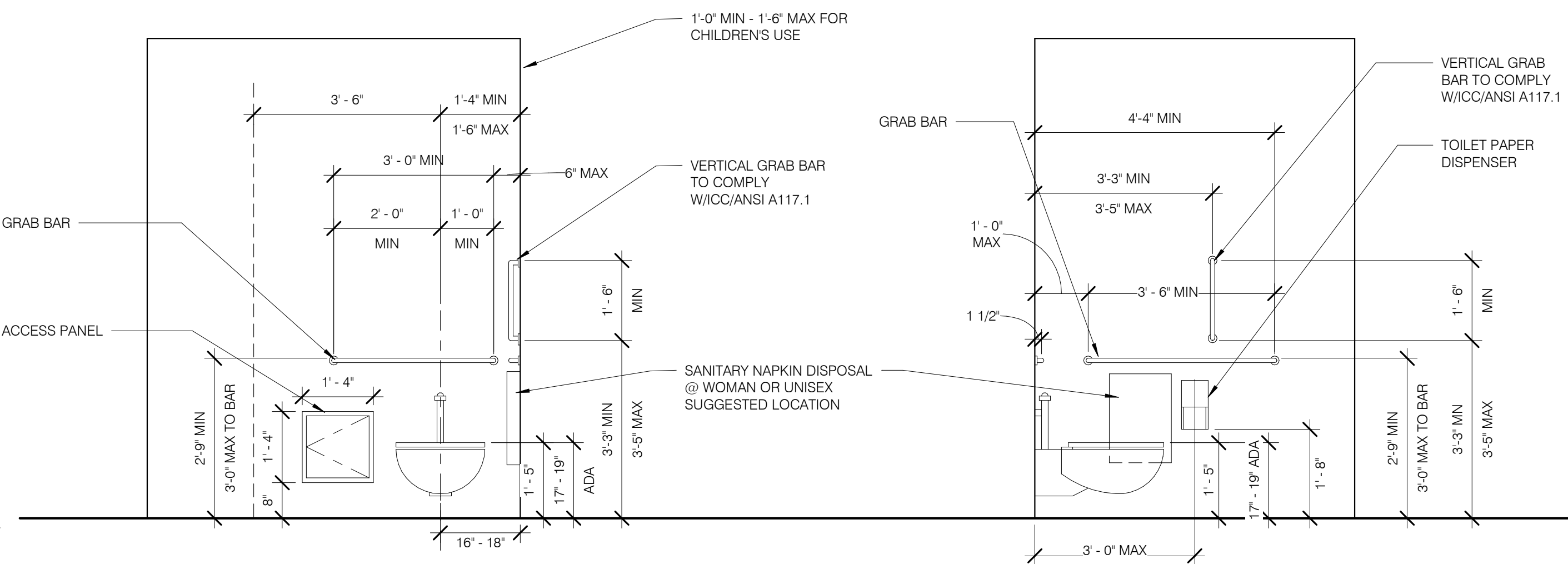
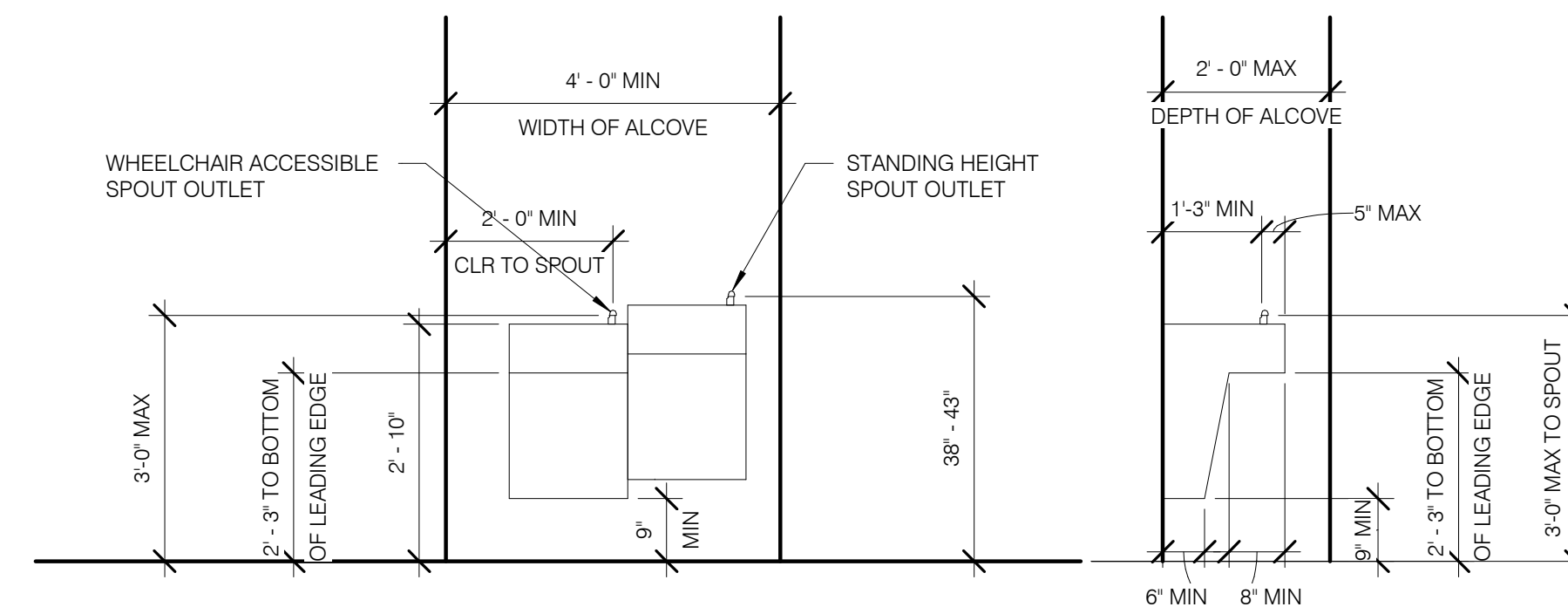
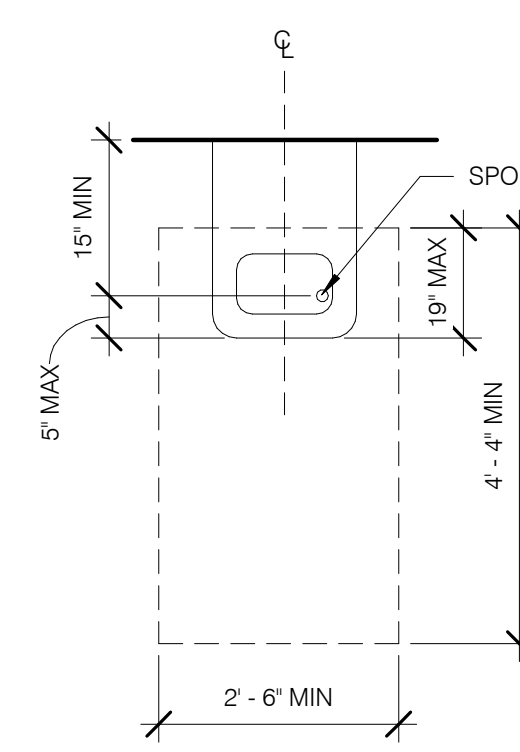
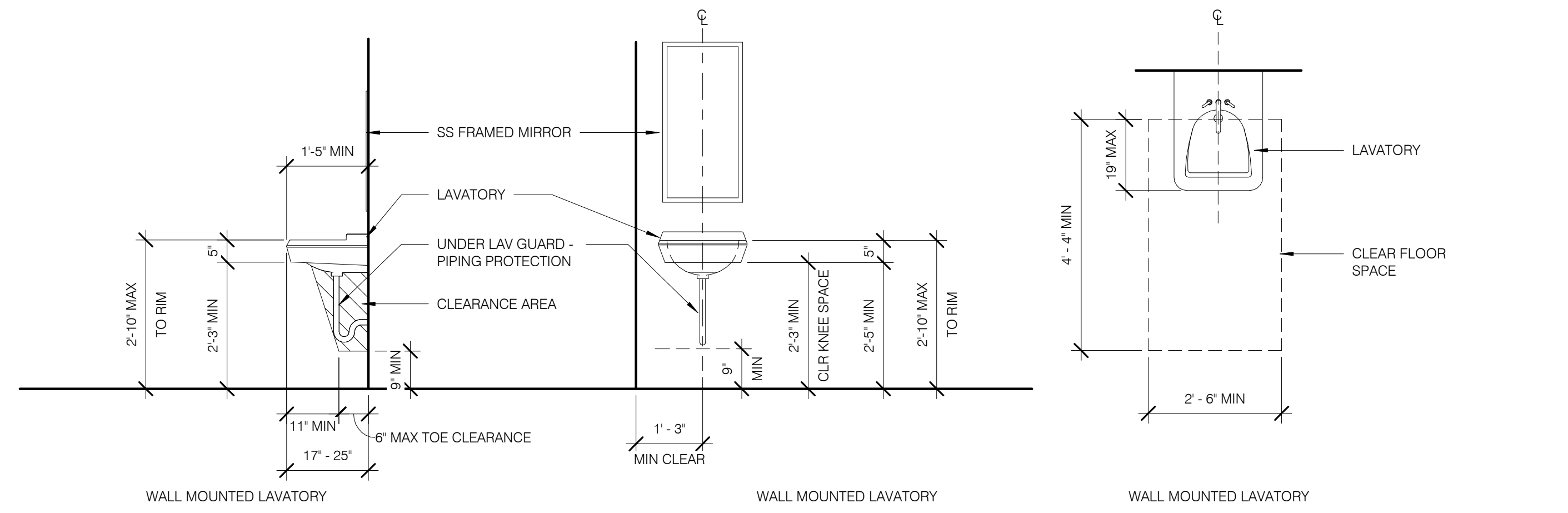
**A6.00**

SHEET SCALE  
0' 1/2' 1' 2'

v2023 11/7/2024 2:46:11 PM C:\Users\HMyers\OneDrive - Sixmo Inc\Documents\60390123\_Safety Facility Range Support Building\_v2023\_Central\_InchudGNHKG6.rvt



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Expiration Date 12/31/2025



Client:  
**City of Elyria**

131 Court St - Suite 101  
Elyria, Ohio 44035

Project:  
**Public Safety Training Facility Range Building**

Garden Street  
Elyria, Ohio 44035

Revisions:

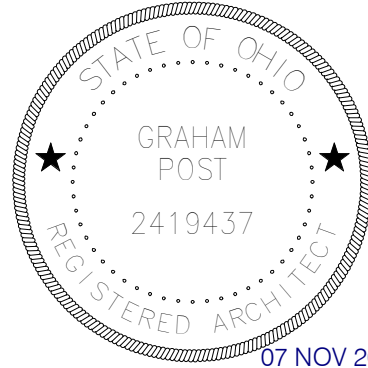
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Details

**A7.01**

SHEET SCALE  
0' 1/2' 1' 2'

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Elyria, Ohio 44035

Revisions:

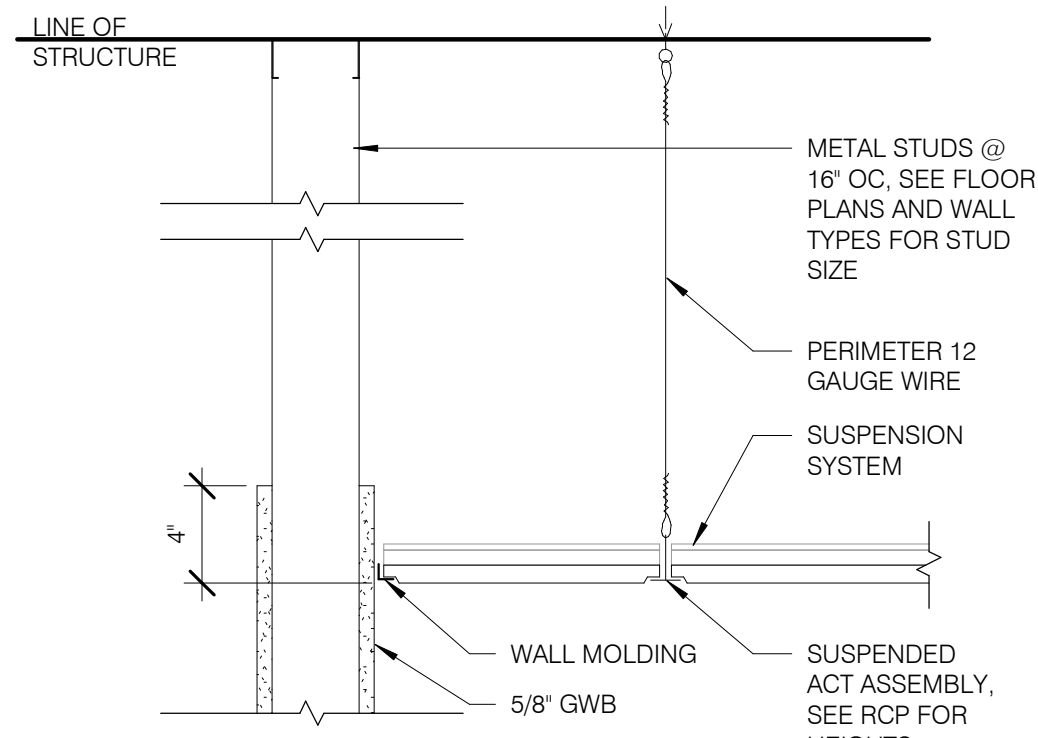
0 09.26.2024 For Construction

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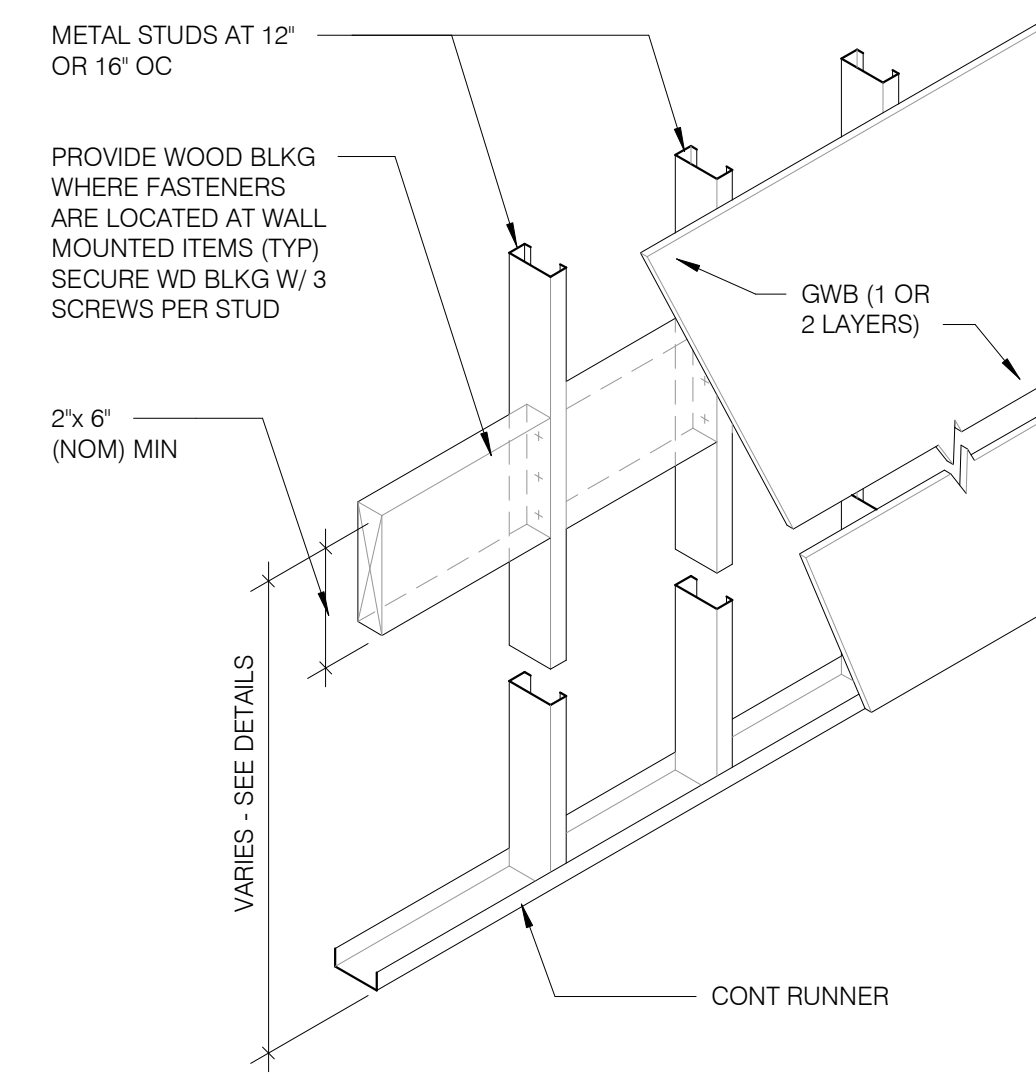
Details

**A7.02**

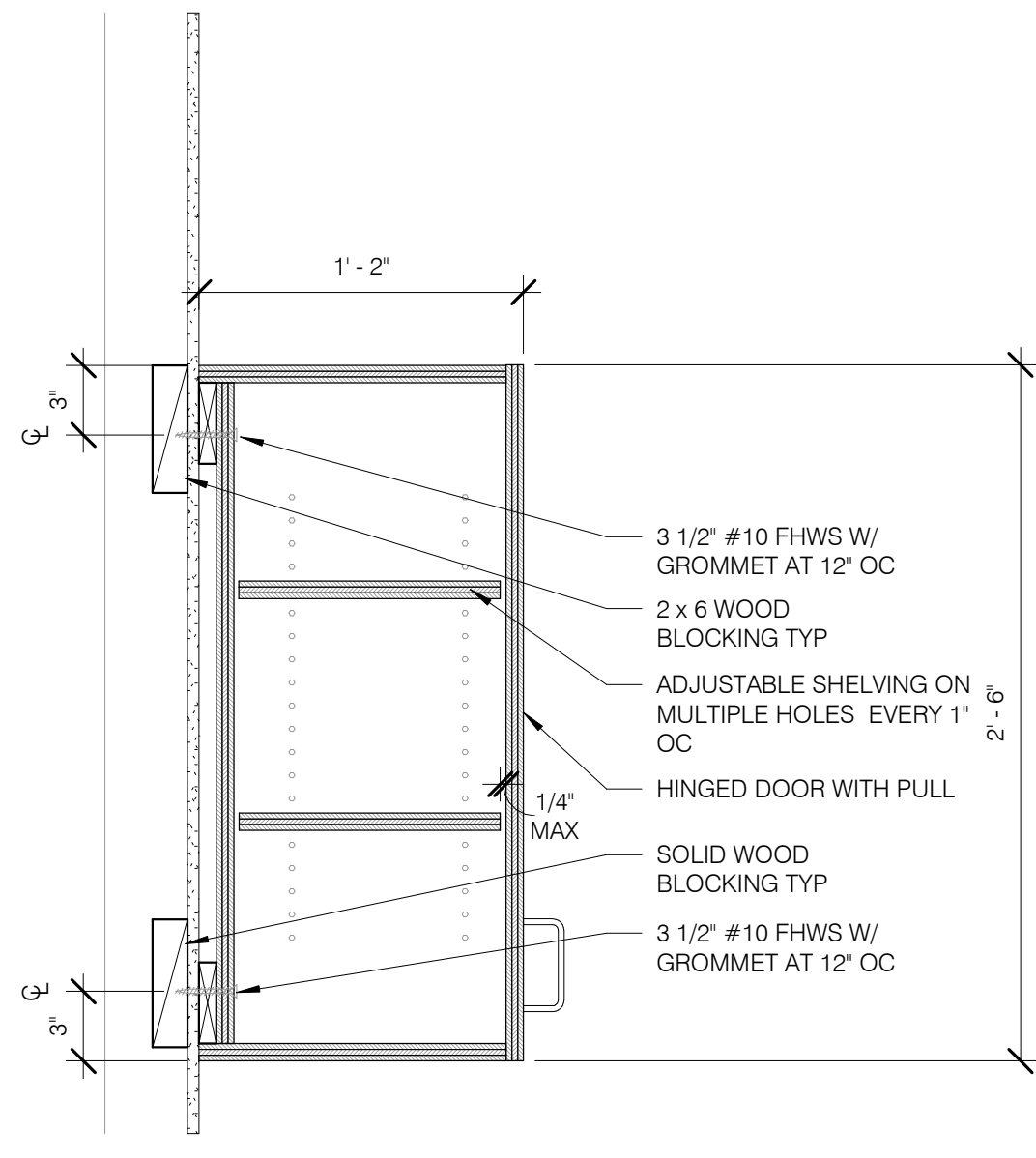
SHEET SCALE  
0' 1/2' 1' 2'



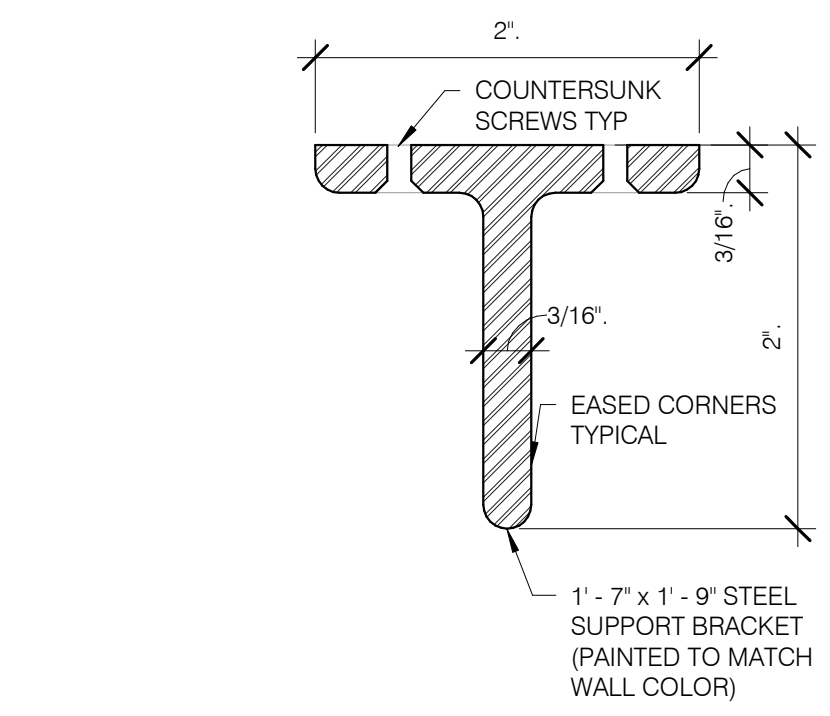
**C5 TYPICAL ACOUSTIC CEILING TILE**  
A7.02 1 1/2\"/>



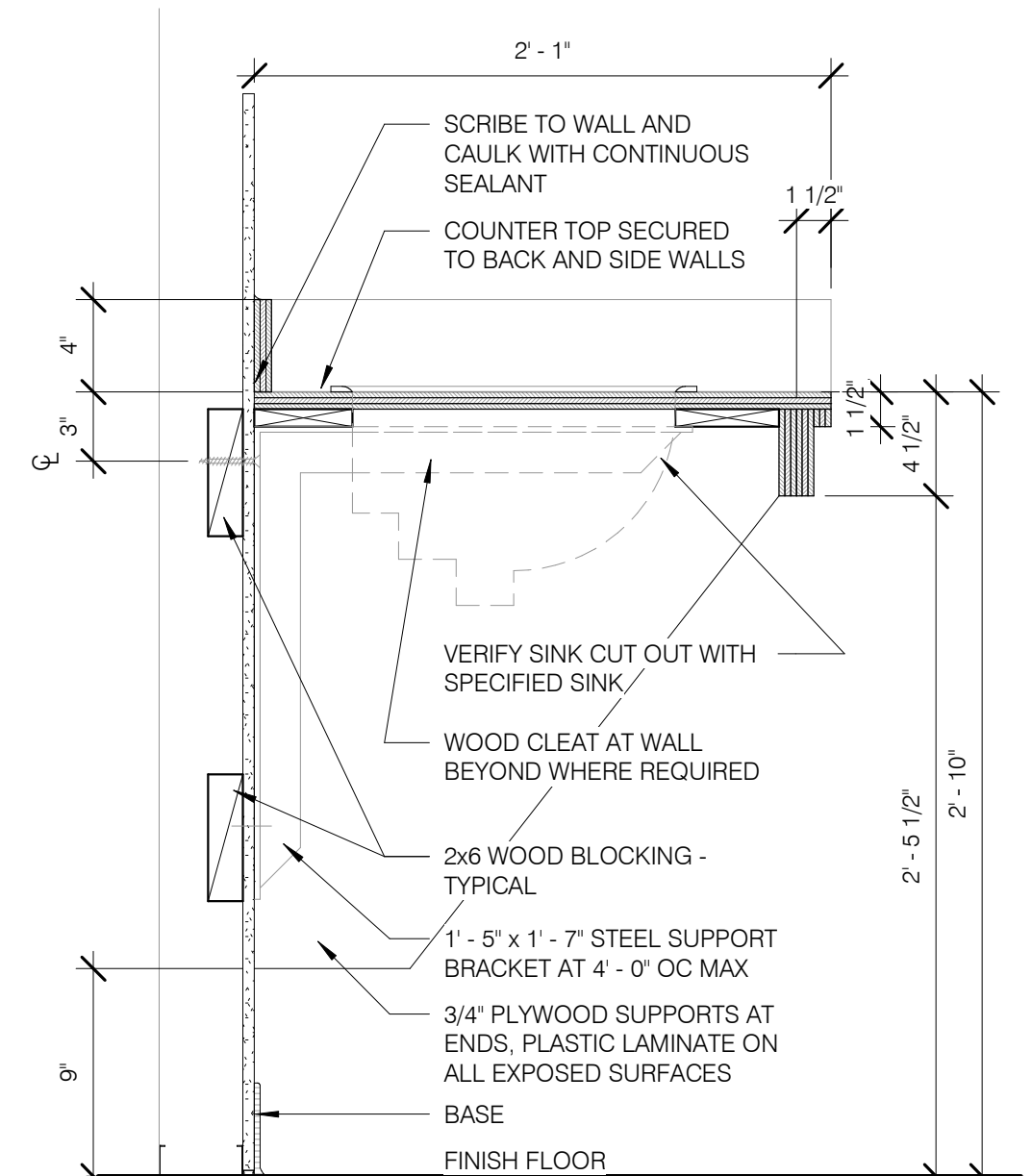
**C4 IN WALL BLOCKING**  
A7.02 3/4\"/>



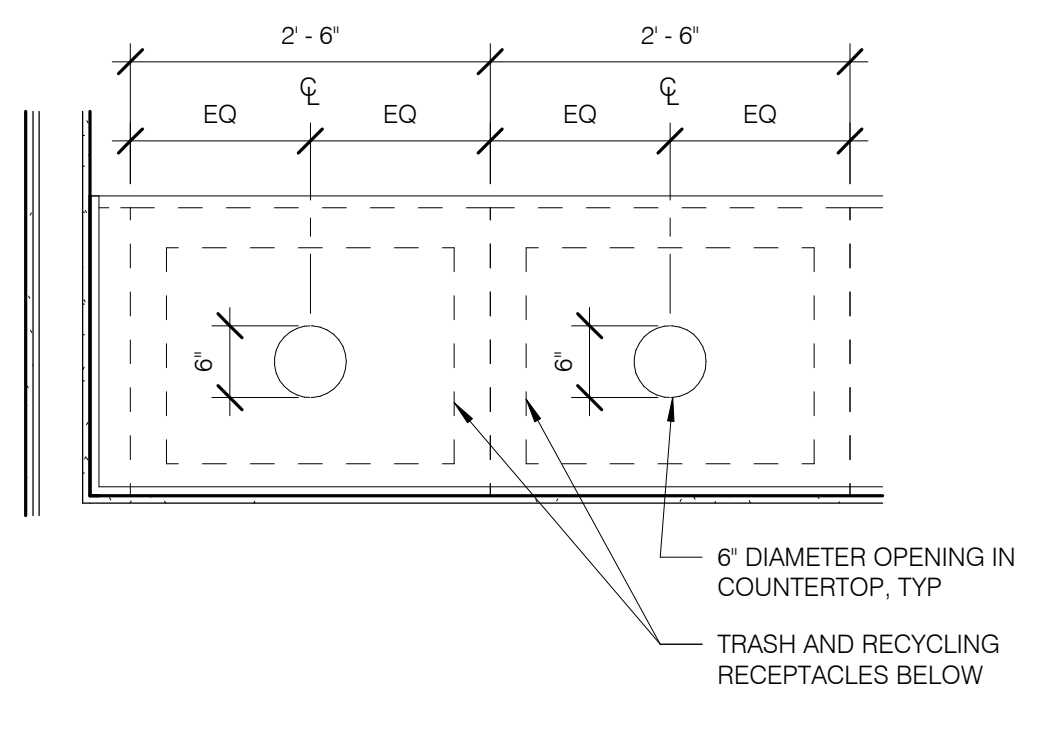
**C3 WALL CABINET TYPICAL**  
A7.02 1 1/2\"/>



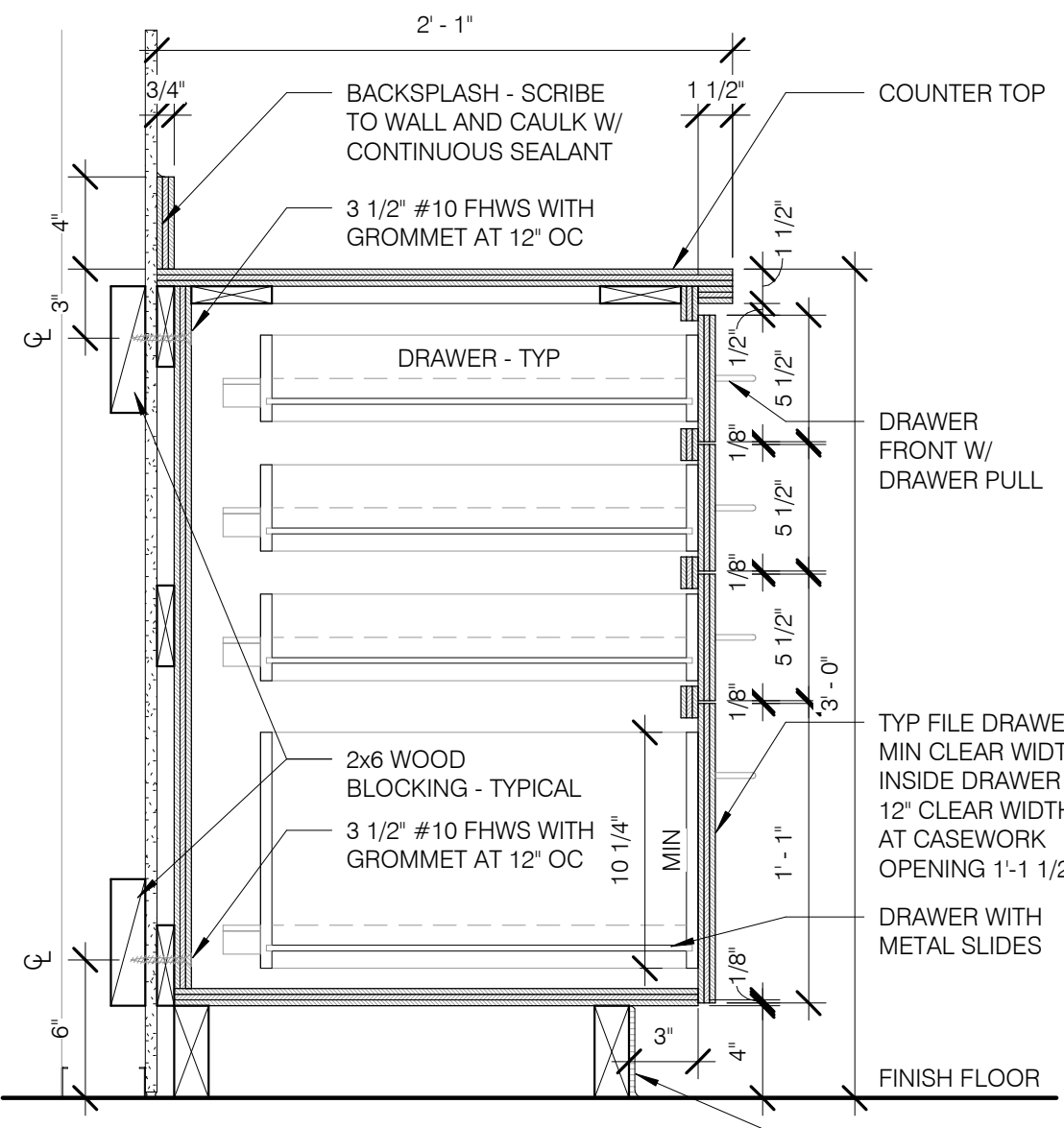
**C2 STEEL SUPPORT BRACKET**  
A7.02 1 1/2\"/>



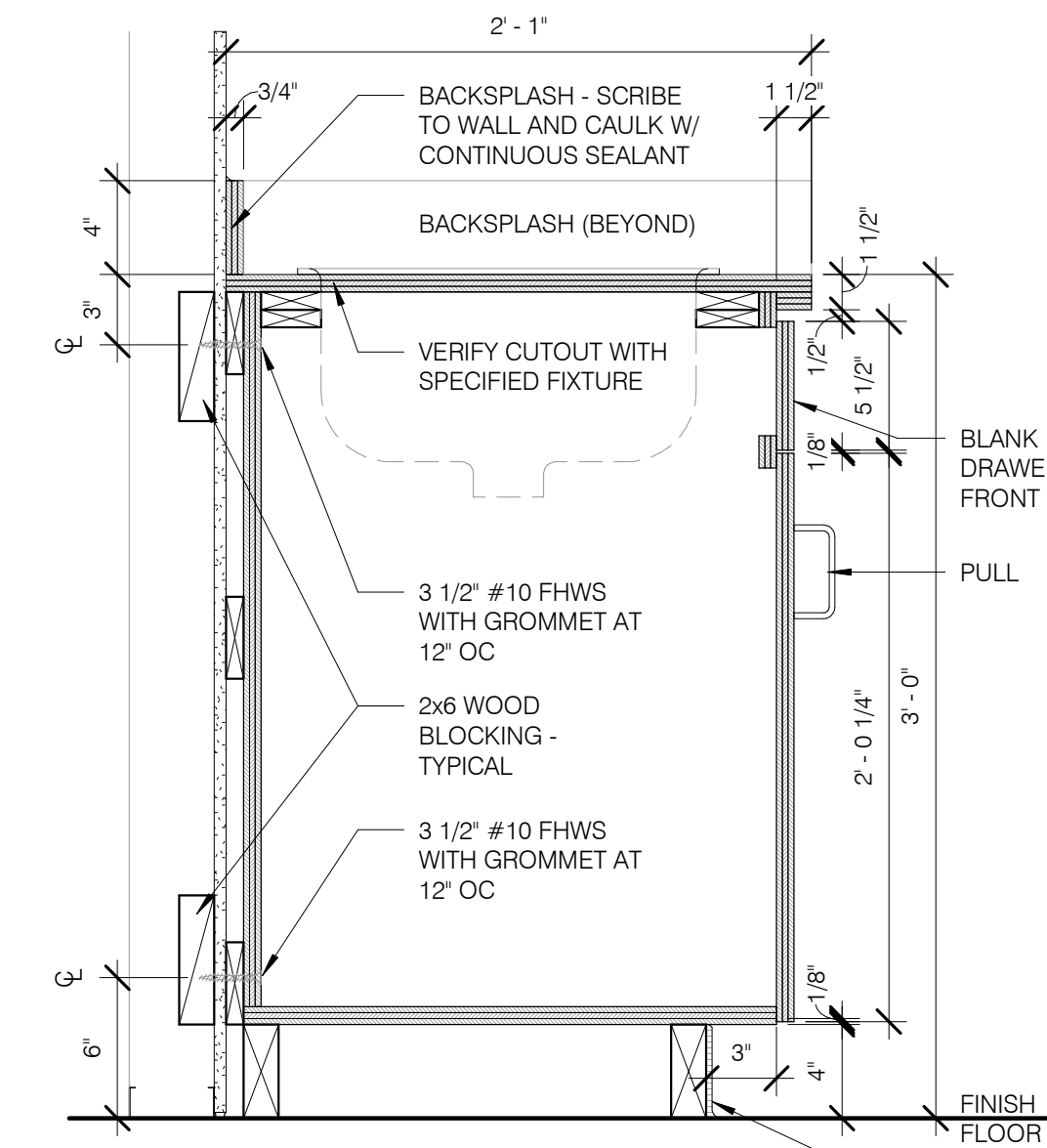
**C1 COUNTER WITH SINK**  
A7.02 1 1/2\"/>



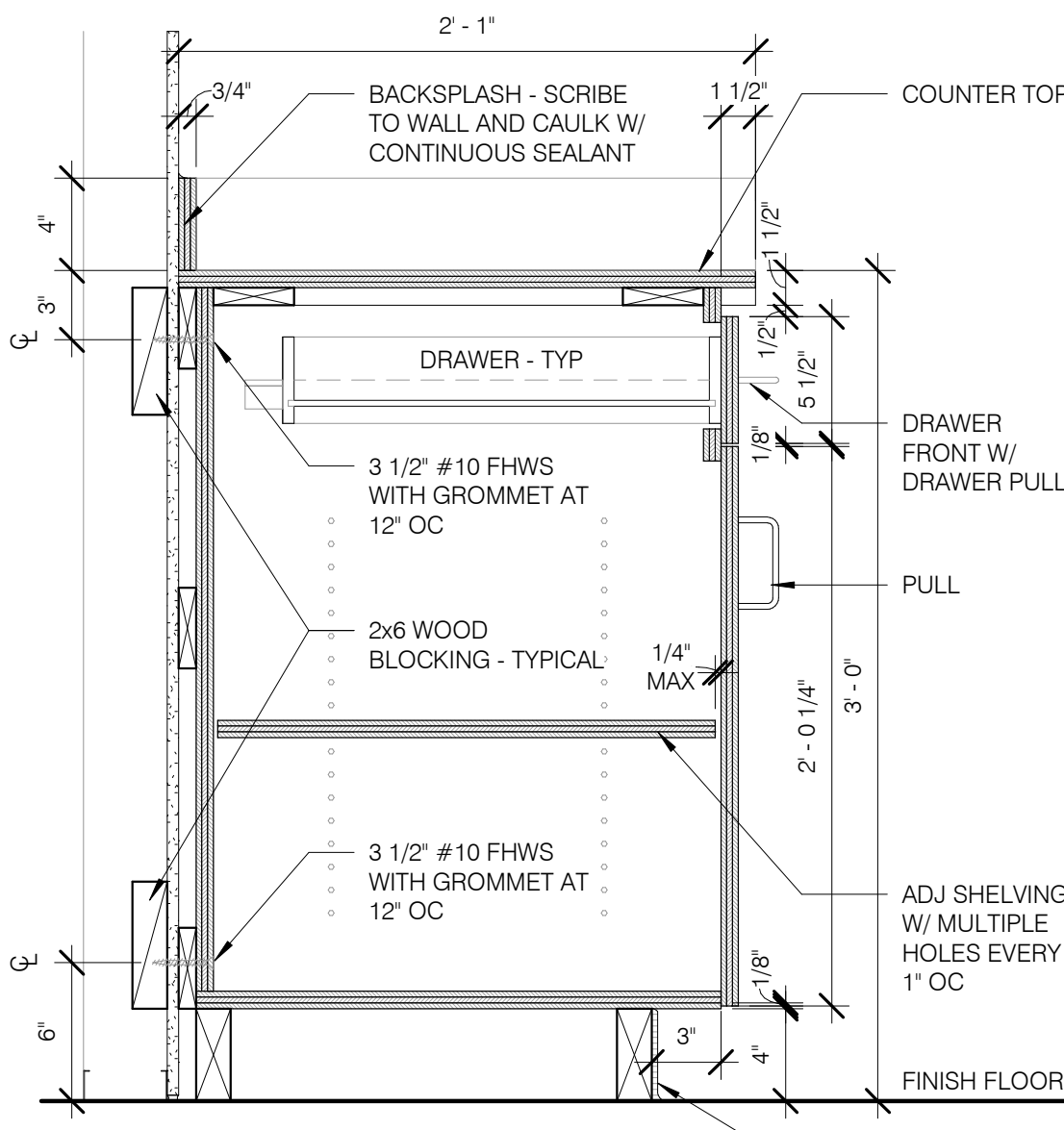
**A5 COUNTERTOP RECEPTACLE OPENING**  
A7.02 3/4\"/>



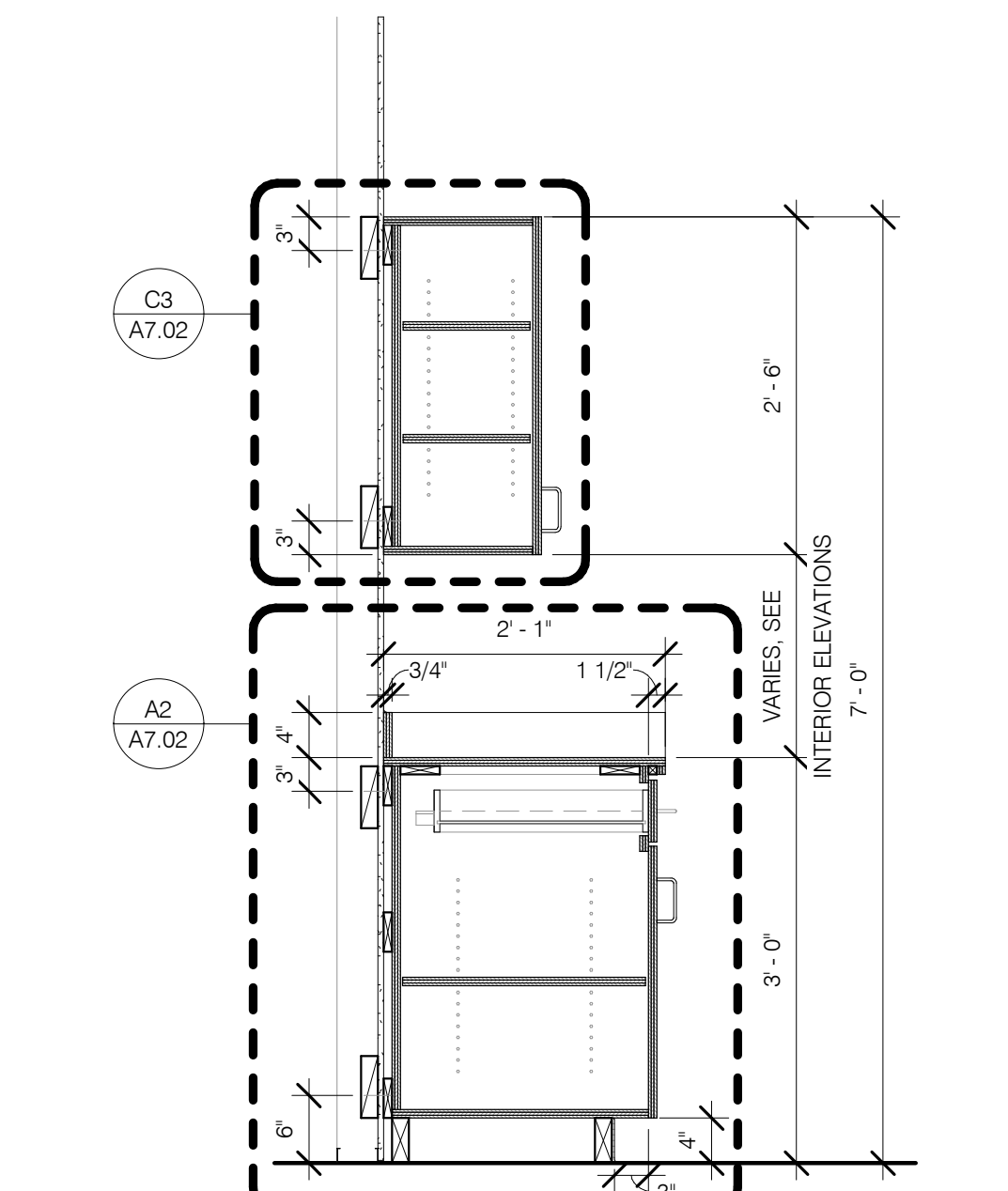
**A4 BASE CABINET WITH DRAWERS**  
A7.02 1 1/2\"/>



**A3 BASE CABINET WITH SINK**  
A7.02 1 1/2\"/>



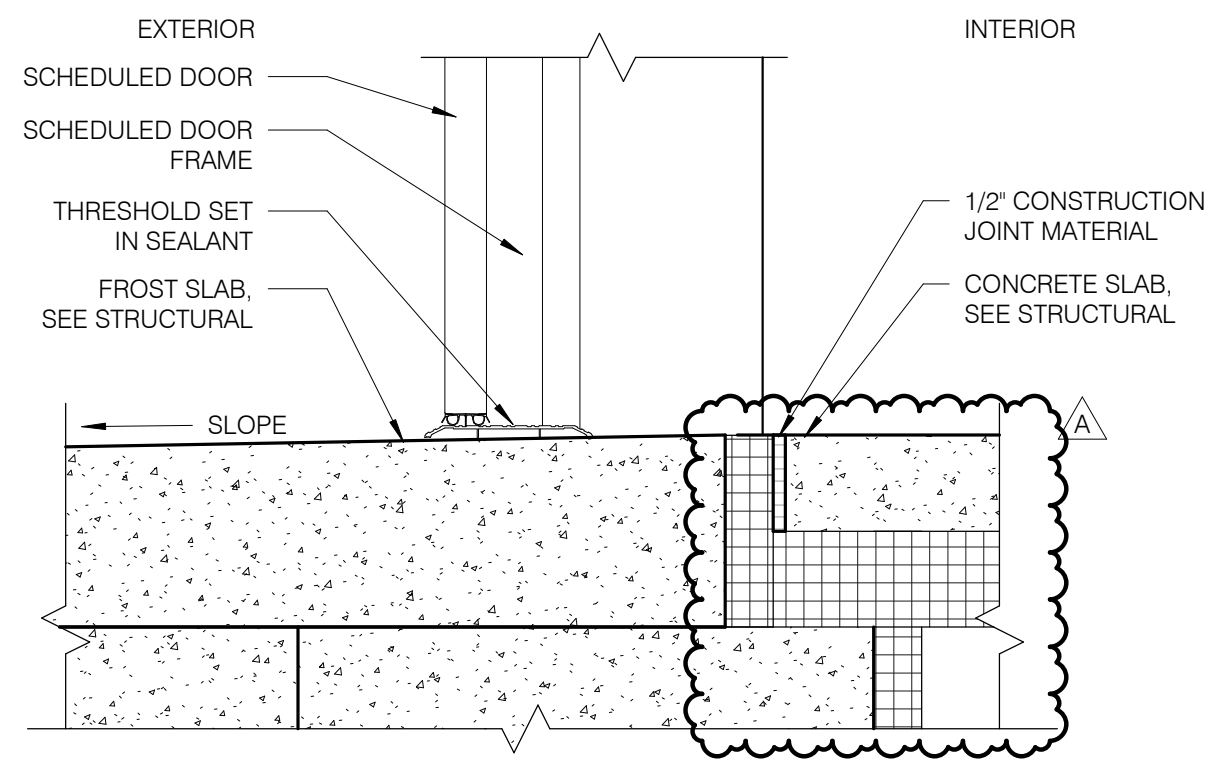
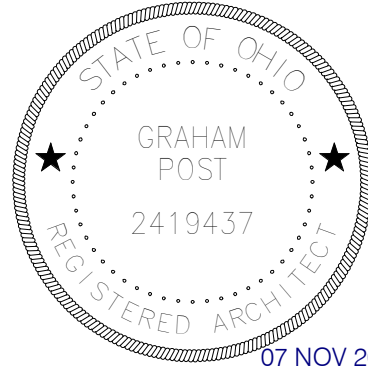
**A2 BASE CABINET TYPICAL**  
A7.02 1 1/2\"/>



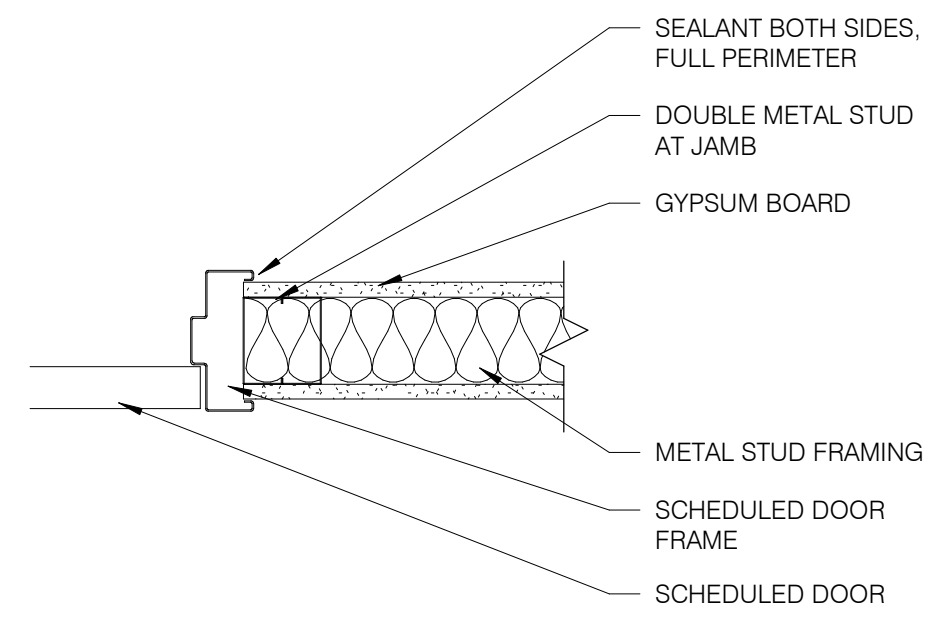
**A1 BASE AND WALL CABINET**  
A7.02 3/4\"/>

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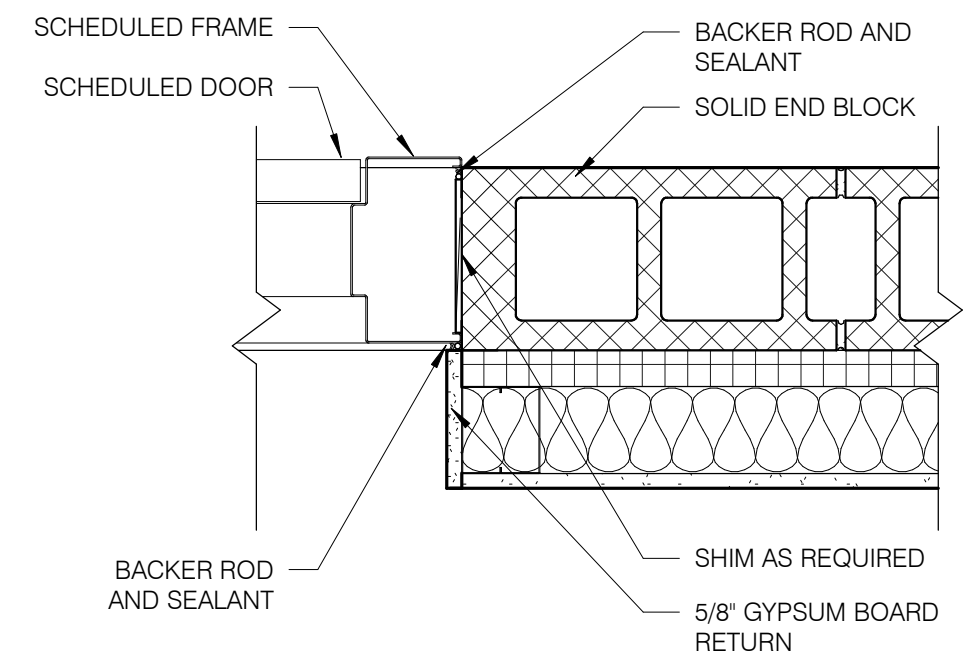




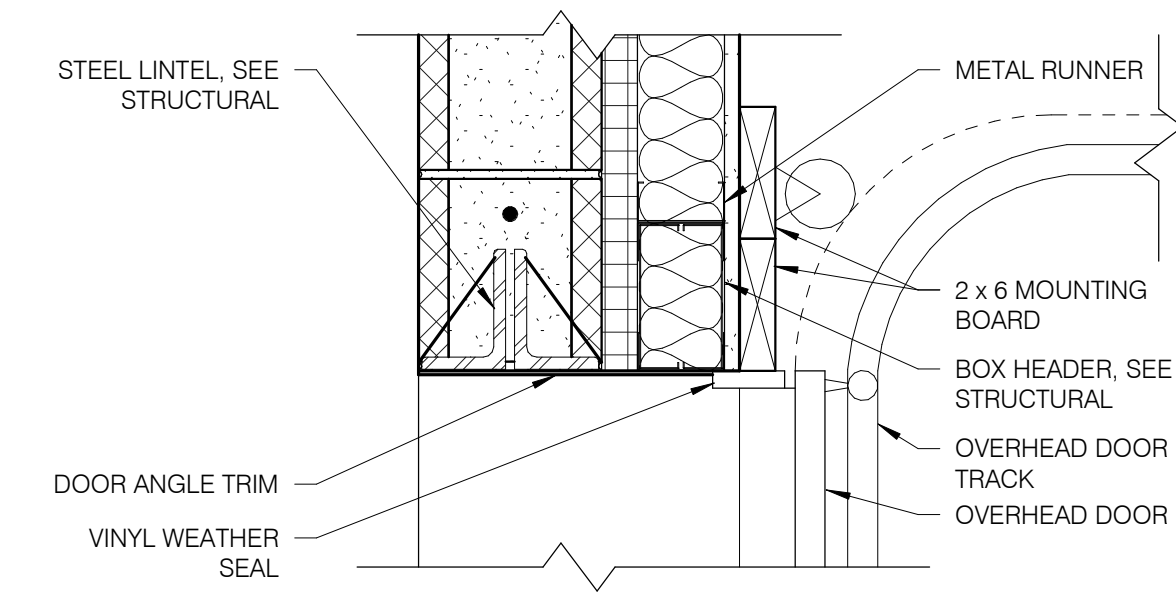
**D5 DOOR THRESHOLD AT CMU**  
A7.03 1 1/2" = 1'-0"  
A5.00



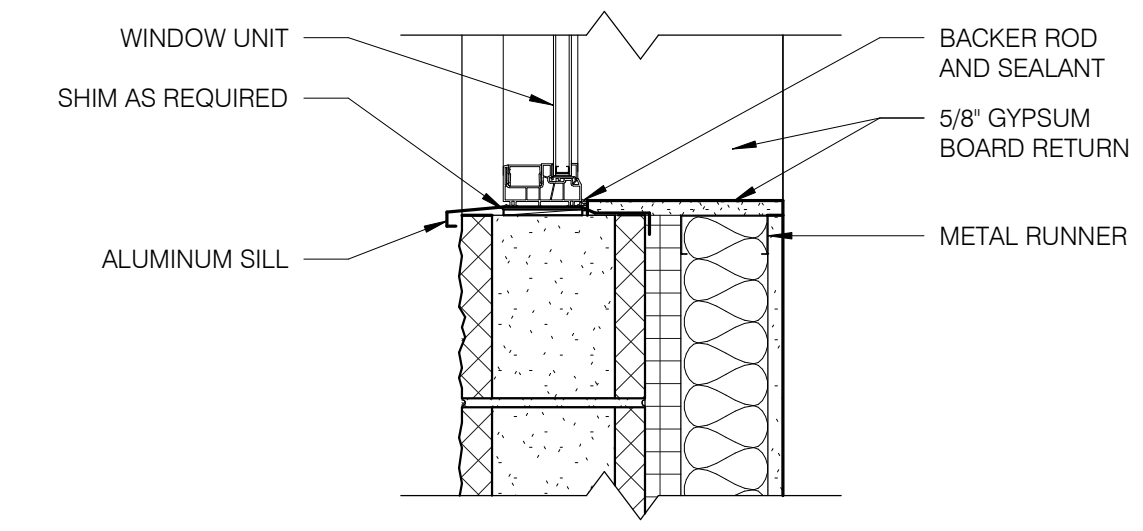
**D4 DOOR JAMB AT GYPSUM PARTITION**  
A7.03 1 1/2" = 1'-0"



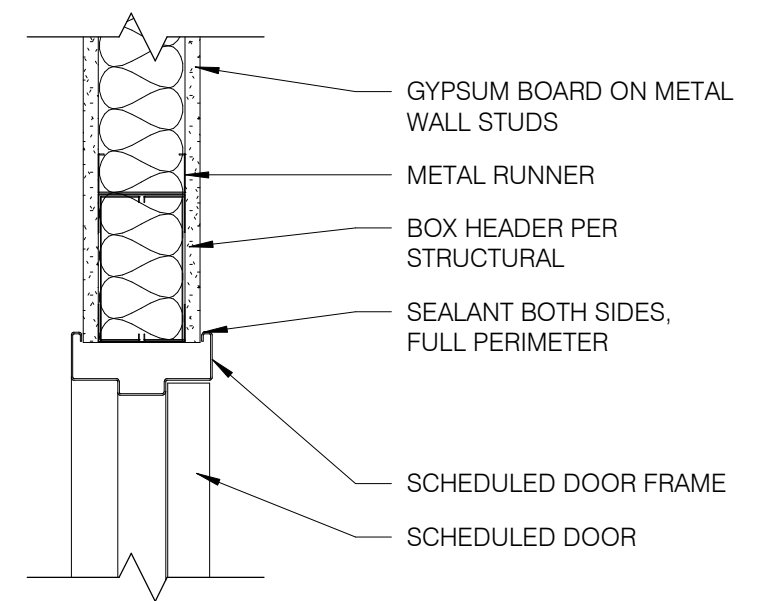
**D3 DOOR JAMB AT CMU**  
A7.03 1 1/2" = 1'-0"



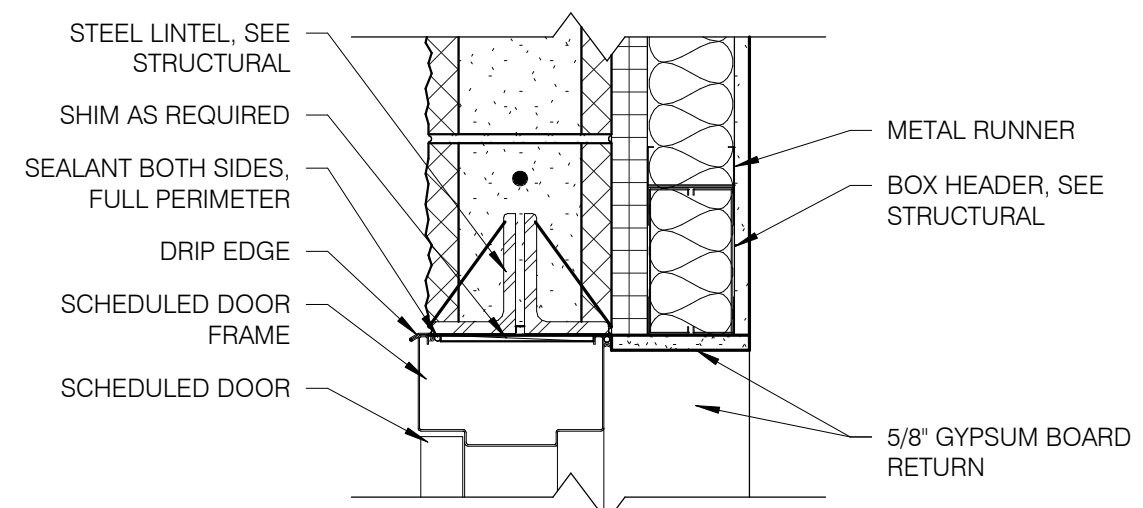
**D2 OVERHEAD DOOR HEAD AT CMU**  
A7.03 1 1/2" = 1'-0"  
A5.00



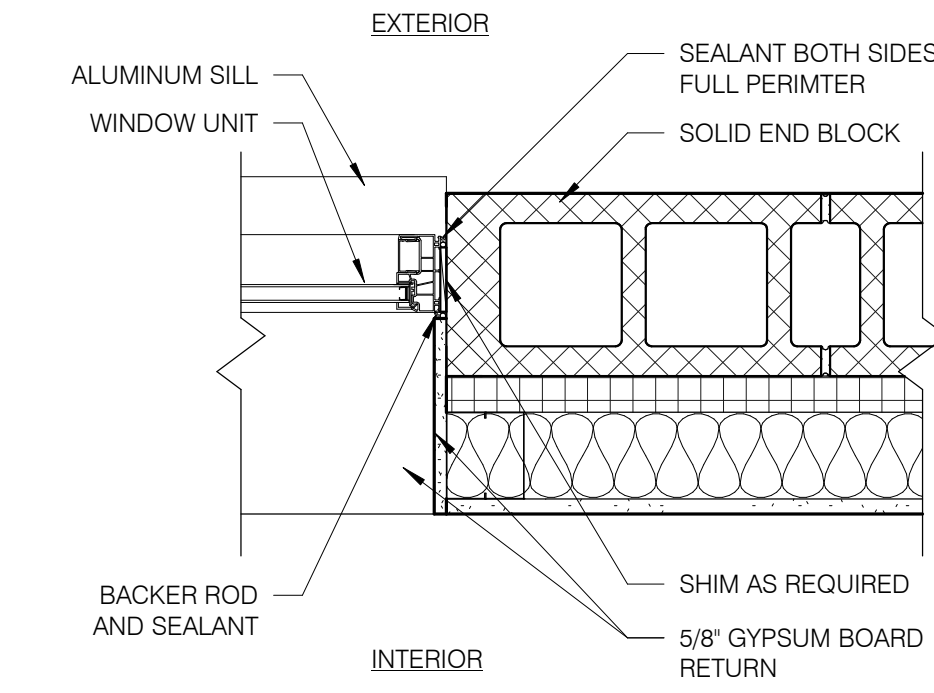
**D1 WINDOW SILL**  
A7.03 1 1/2" = 1'-0"  
A5.00



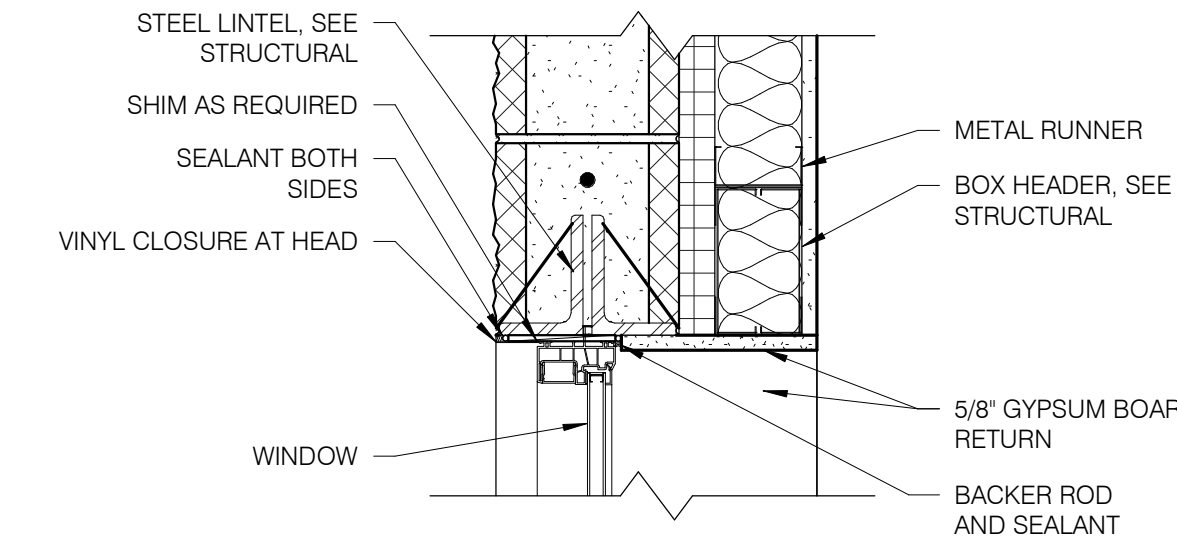
**C4 DOOR HEAD AT GYPSUM PARTITION**  
A7.03 1 1/2" = 1'-0"



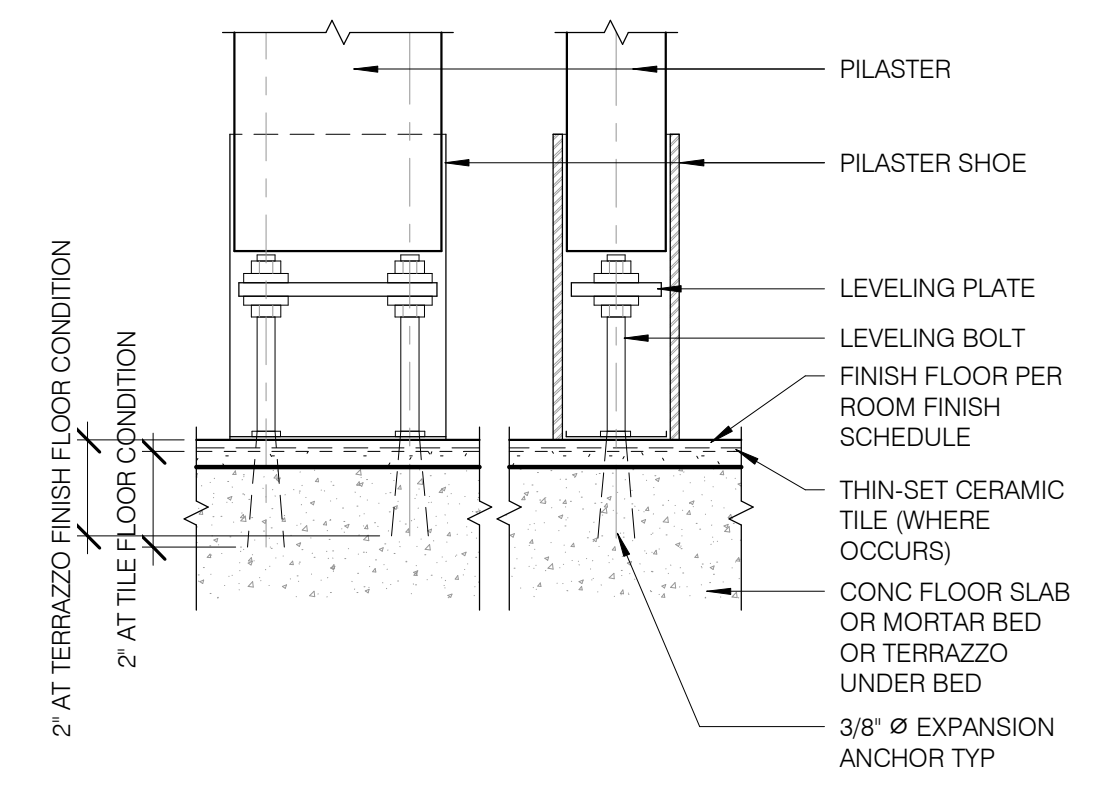
**C3 DOOR HEAD AT CMU**  
A7.03 1 1/2" = 1'-0"  
A5.00



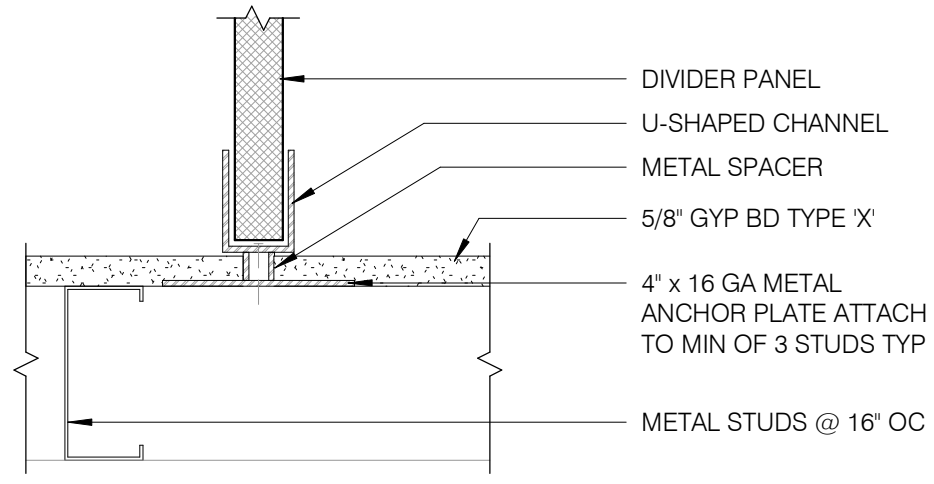
**C2 WINDOW JAMB**  
A7.03 1 1/2" = 1'-0"



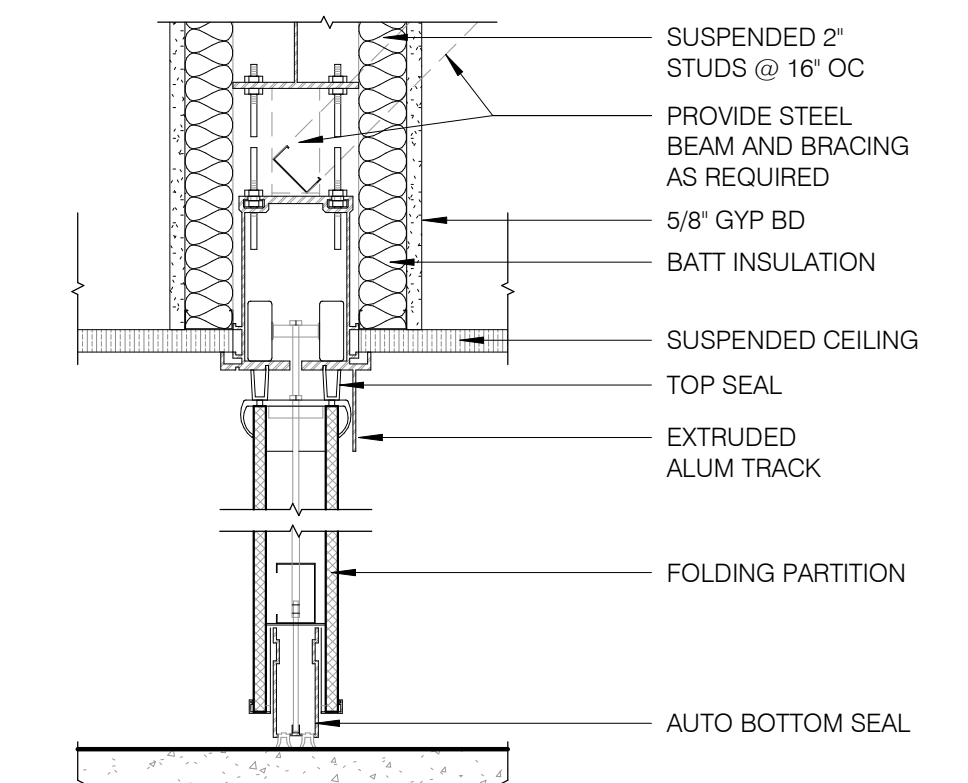
**C1 WINDOW HEAD**  
A7.03 1 1/2" = 1'-0"  
A5.00



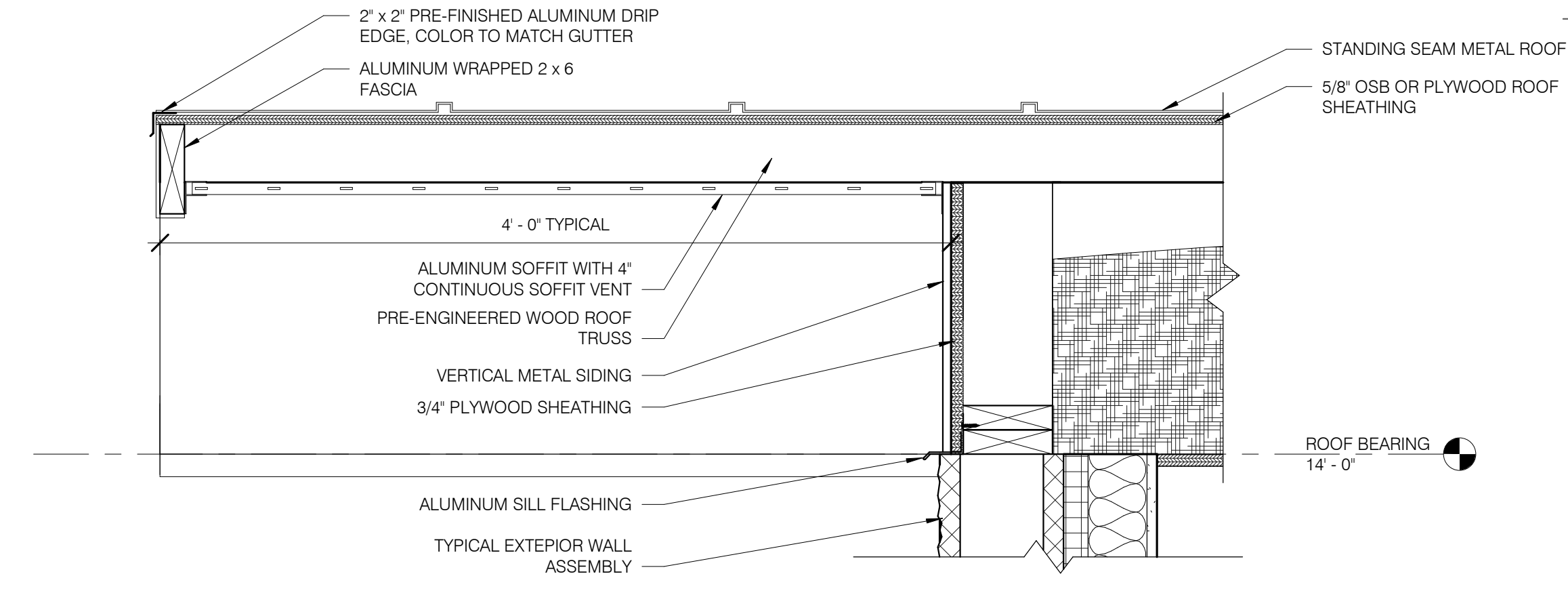
**B5 TOILET PARTITION FLOOR ANCHORAGE**  
A7.03 3\"/>



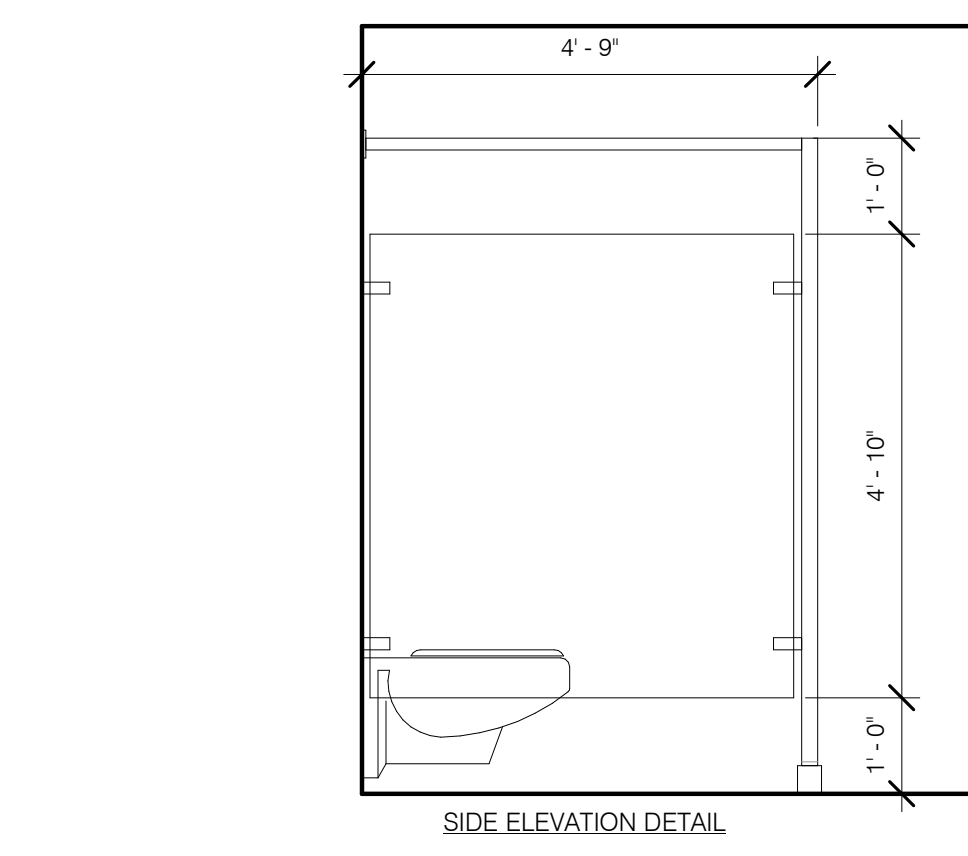
**B4 TOILET PARTITION WALL ANCHORAGE**  
A7.03 3\"/>



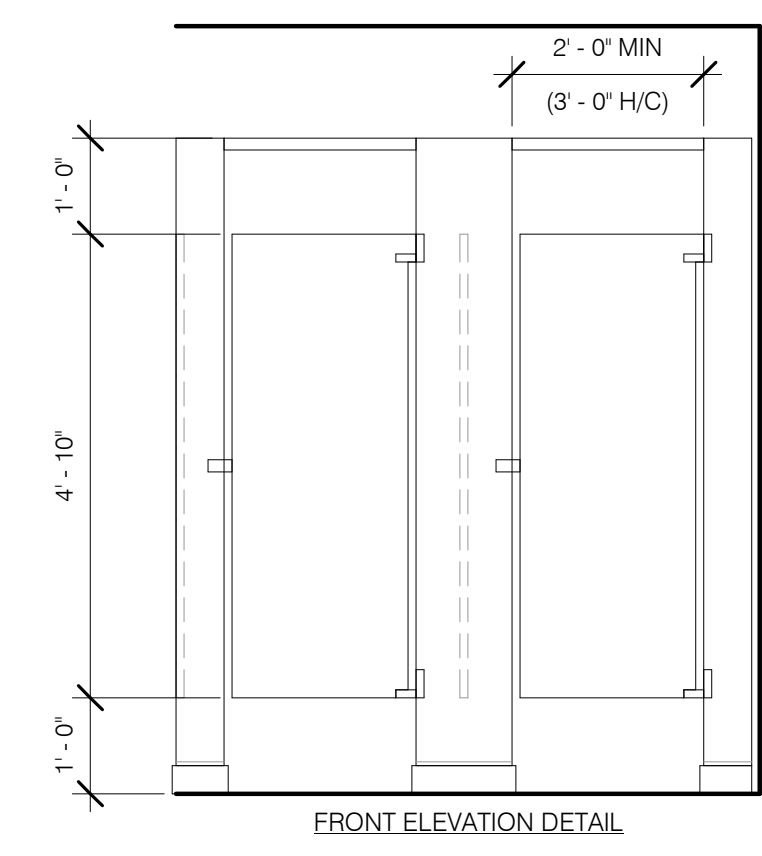
**B3 FOLDING PARTITION VERTICAL SECTION**  
A7.03 1 1/2" = 1'-0"



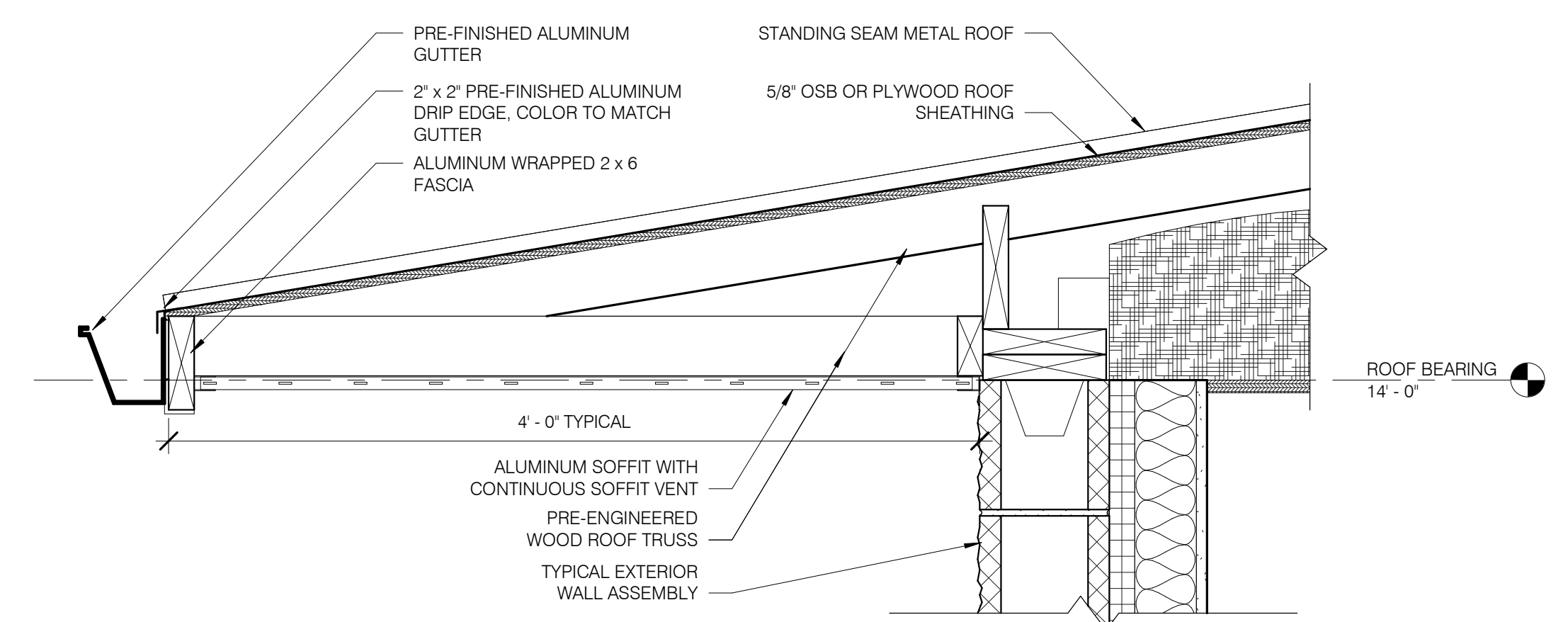
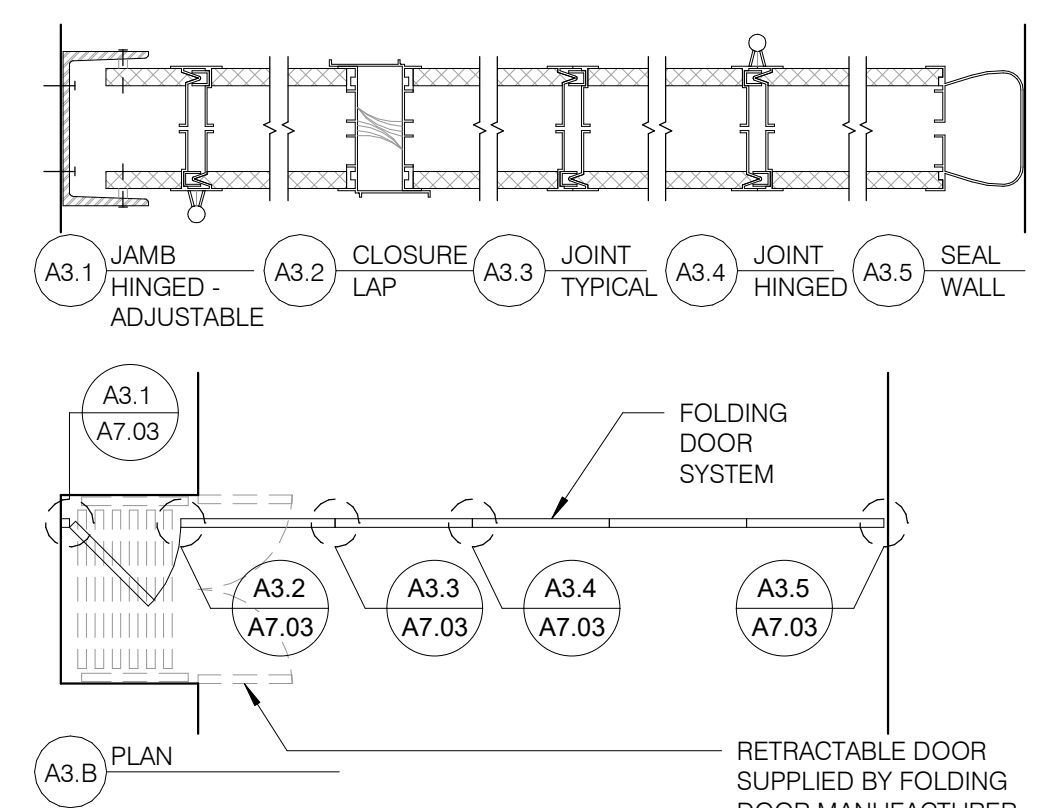
**B2 TYPICAL GABLE**  
A7.03 1 1/2" = 1'-0"  
A5.00



**A5 TOILET PARTITION - FLOOR MOUNTED / WALL BRACED**  
A7.03 1/2" = 1'-0"



**A3 FOLDING PARTITION PLAN**  
A7.03 1 1/2" = 1'-0"



**A2 TYPICAL EAVE**  
A7.03 1 1/2" = 1'-0"  
A5.00

Client:

**City of Elyria**

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Revisions:

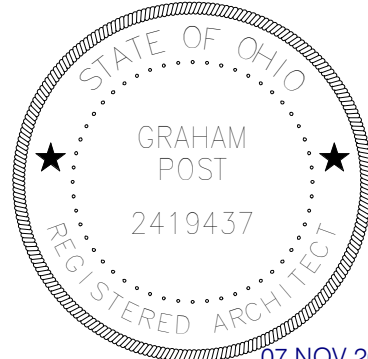
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Details

**A7.03**

SHEET SCALE  
0" 1/2" 1" 2"



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Client:

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131 Court St - Suite 101  
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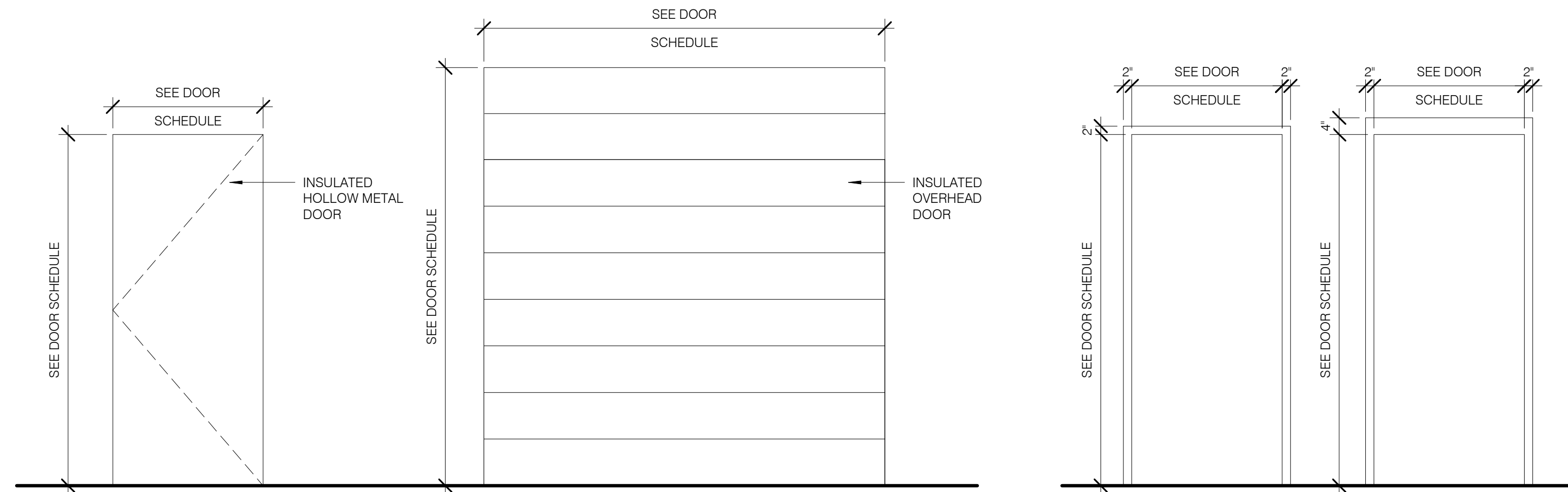
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Schedules

**A8.00**

SHEET SCALE  
0' 1/2' 1' 2'



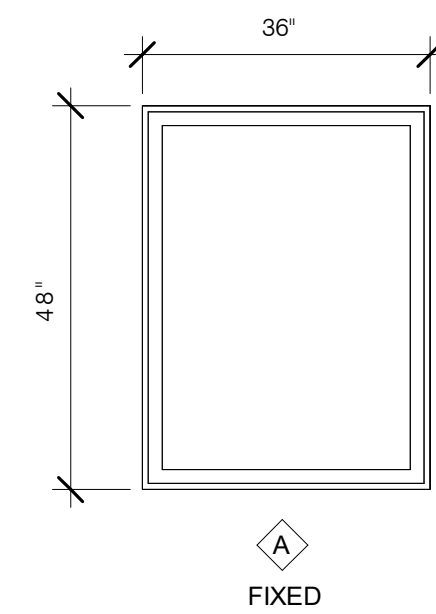
DOOR TYPE  
**A**  
SINGLE  
SOLID FLUSH

DOOR TYPE  
**F**  
OVERHEAD

FRAME TYPE  
**F1**  
HOLLOW METAL  
2" HEAD

FRAME TYPE  
**F2**  
HOLLOW METAL  
4" HEAD

D5	DOOR AND FRAME TYPES
A8.00	1/2" = 1'-0"



WINDOW NOTES:

- ALL WINDOWS TO BE DOUBLE PANE LOW-E GLAZING.
- MINIMUM U-FACTOR 0.30, TYP.
- SIZES NOTED ARE ACTUAL.

C5	WINDOW TYPE
A8.00	1/2" = 1'-0"

FINISH LEGEND EXTERIOR

EXTERIOR FINISHES:			
PT	PAINT	MTL	METAL PANEL
PT-5	SHERWIN WILLIAMS, COLOR: SW 6328 FIREWEED (METAL SIDING)	MTL-1	AC BUILDING PRODUCTS, METAL SIDING, COLOR: PAINTED PT-5
CMU	CONCRETE MASONRY UNIT	MTL-2	AC BUILDING PRODUCTS, STANDING SEAM METAL PANEL, COLOR: DESERT BEIGE
CMU-1	COLOR: SANDSTONE		

FINISH LEGEND INTERIOR

FLOOR:		WALLS:	
CPT	CARPET TILE	PT	PAINT
CPT-1	MANNINGTON, COLOR: SENSORY WEAVE, GAUNTLET GRAY, SIZE: 12" x 12" INSTALL: 3 VERTICAL ASHLAR	PT-1	SHERWIN WILLIAMS, COLOR: SW 7029 AGREEABLE GRAY
CT	CERAMIC FLOOR TILE	PT-2	SHERWIN WILLIAMS, COLOR: SW 7005 PURE WHITE
CT-1	DALTILE, 24" x 12" FLOOR TILE, COLOR: HAUT MONDE, EMPIRE BLACK	PT-3	SHERWIN WILLIAMS, COLOR: 7031 MEGA GREIGE
LVT	LUXURY VINYL TILE	PT-4	SHERWIN WILLIAMS, COLOR: SW 7674 PEPPERCORN (DOORS AND FRAMES)
LVT-1	MANNINGTON, COLOR: SPACIA STONE, JULEP		
LVT-2	MANNINGTON, COLOR: SPACIA STONE, MONUMENT CONCRETE	BASE:	
SC	SEALED CONCRETE	RB	RESILIENT BASE
SC-1	H+C CONCRETE SEALER, CLEAR WET LOOK, WATER-BASED	RB-1	JOHNSONITE, 4" HIGH COVE BASE, COLOR: CHARCOAL
TR	FLOORING TRANSITION	CTB	CERAMIC TILE BASE
TR-1	LVT - CPT TRANSITION MANNINGTON 720 FUSION TRANSITION STRIP, COLOR: TO BE SELECTED FROM MANUFACTURER'S FULL STANDARD COLOR LINE	CTB-1	DALTILE, UNIVERSAL TRIM, 2" x 2" MB-5B, COLOR: HAUT MONDE, EMPIRE BLACK
TR-2	LVT - CT TRANSITION SCHLUTER RENO-RAMP 3/8", COLOR: TO BE SELECTED FROM MANUFACTURER'S FULL STANDARD COLOR LINE	CASEWORK:	
TR-2	LVT - SC TRANSITION JOHNSONITE REDUCER RRS-XX-D, COLOR: TO BE SELECTED FROM MANUFACTURER'S FULL STANDARD COLOR LINE	PLAM	PLASTIC LAMINATE
		PLAM-1	WILSONART, COLOR: 8226K-79 DERING FOREST
		PLAM-2	WILSONART, COLOR: Y0856 EVERGREEN
		PLAM-3	WILSONART, COLOR: 7850 BEIGEWOOD (COUNTERTOP ALTERNATE)
		SS	SOLID SURFACE
		SS-1	WILSONART, COLOR: 9115GS ZEN GREY
CEILING:		TA	TOILET PARTITIONS
ACT	ACOUSTICAL CEILING TILE	TA-1	GENERAL PARTITIONS, FLOOR MOUNTED, OVERHEAD BRACED, COLOR: TO BE SELECTED FROM MANUFACTURER'S FULL STANDARD COLOR LINE
ACT-1	ARMSTRONG, SCHOOL ZONE FINE FISSURED WITH HUMIGUARD PLUS, 24"x48"x3/4" SQUARE LAY-IN TILE # 1714, 15/16" PRELUDE XL SUSPENSION SYSTEM	TA-2	GENERAL PARTITIONS, URINAL SCREENS, COLOR: TO BE SELECTED FROM MANUFACTURER'S FULL STANDARD COLOR LINE
PT	PAINT		
PT-6	SHERWIN WILLIAMS, COLOR: SW 7007 CEILING BRIGHT WHITE (GYP. CEILINGS AND EXPOSED STRUCTURE)		

INTERIOR FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH	CABINET	COUNTERTOP	NOTES
100	CLASSROOM A	CPT-1	RB-1	PT-1	ACT-1	-	-	
101	CLASSROOM B	CPT-1	RB-1	PT-1	ACT-1	-	-	
102	WOMEN'S RESTROOM	CT-1	CTB-1	PT-3	ACT-1	-	SS-1	
103	MEN'S RESTROOM	CT-1	CTB-1	PT-3	ACT-1	-	SS-1	
104	MULTIPURPOSE SPACE	LVT-2	RB-1	PT-1	ACT-1	-	-	
105	EQUIPMENT STORAGE	SC-1	RB-1	PT-2	ACT-1	-	-	
106	OFFICE	CPT-1	RB-1	PT-1	ACT-1	-	-	
107	OFFICE	CPT-1	RB-1	PT-1	ACT-1	-	-	
108	MEP	SC-1	RB-1	PT-2	-	-	-	
109	UTILITY	SC-1	RB-1	PT-2	-	-	-	
110	WEAPONS CLEANING	LVT-2	RB-1	PT-1	ACT-1	PLAM-1	SS-1	
111	AMMO STORAGE	LVT-2	RB-1	PT-1	GWB-1	-	-	IMPACT RESISTANT GWB CEILING WITH WIRE MESH, PT-5
112	AMMO STORAGE	LVT-2	RB-1	PT-1	GWB-1	-	-	IMPACT RESISTANT GWB CEILING WITH WIRE MESH, PT-5
113	BREAKROOM	LVT-1	RB-1	PT-2	ACT-1	PLAM-2	SS-1	PLAM-3 COUNTERTOP ALTERNATE
114	HALLWAY	LVT-1	RB-1	PT-1	ACT-1	-	-	

TOILET ACCESSORY SCHEDULE

TYPE	DESCRIPTION	SIZE	MATERIAL AND FINISH	BASIS OF DESIGN	ADDITIONAL INFORMATION
1	MIRROR W/ S.S. FRAME	36" x 60"	STAINLESS STEEL ANGLE FRAME	AMERICAN SPECIALTIES 0600-6036	MANUFACTURER'S STANDARD CORNERS
2	36" S.S. GRAB BAR	1-1/4" Ø	STAINLESS STEEL, 18 GA. SMOOTH, NO. 4 FINISH (SATIN) ON ENDS AND SLIP-RESISTANT TEXTURE IN GRIP AREA	AMERICAN SPECIALTIES 164	MOUNTING: FLANGES WITH CONCEALED FASTENERS
3	42" S.S. GRAB BAR	1-1/4" Ø	STAINLESS STEEL, 18 GA. SMOOTH, NO. 4 FINISH (SATIN) ON ENDS AND SLIP-RESISTANT TEXTURE IN GRIP AREA	AMERICAN SPECIALTIES 167	MOUNTING: FLANGES WITH CONCEALED FASTENERS
4	18" VERTICAL S.S. GRAB BAR	1-1/4" Ø	STAINLESS STEEL, 18 GA. SMOOTH, NO. 4 FINISH (SATIN) ON ENDS AND SLIP-RESISTANT TEXTURE IN GRIP AREA	AMERICAN SPECIALTIES 159	MOUNTING: FLANGES WITH CONCEALED FASTENERS
5	S.S. TOILET PAPER DISPENSER - DOUBLE ROLL	6" x 12" x 6 1/2"	STAINLESS STEEL, NO. 4 FINISH (SATIN)	AMERICAN SPECIALTIES 0030	CAPACITY: UP TO 5-1/4" Ø TISSUE ROLLS
6	S.S. COMBINATION TOWEL DISPENSER/WASTE RECEPTACLE	12 GAL	STAINLESS STEEL, NO. 4 FINISH (SATIN)	AMERICAN SPECIALTIES 0469-9	SURFACE MOUNTED; CAPACITY: 800 MULTI-FOLD PAPER TOWELS
7	S.S. SOAP DISPENSER	40 OZ.	STAINLESS STEEL, NO. 4 FINISH (SATIN)	AMERICAN SPECIALTIES 0345	SURFACE MOUNTED; LIQUID SOAP FORM
8	SANITARY NAPKIN DISPOSAL	1-1.5 GAL.	STAINLESS STEEL, NO. 4 FINISH (SATIN)	AMERICAN SPECIALTIES 0473-A	SURFACE MOUNTED
9	INSULATED PIPE WRAP		ANTIMICROBIAL, MOLDED PLASTIC, WHITE	TRUBURO LAV GUARD 2	ALLOW SERVICE ACCESS WITHOUT REMOVING COVERINGS
10	ACCESS PANEL	16" x 16"	FATORY PRIMED, FIELD PAINTED	ACUDOR DW-5040	FLUSH ACCESS DOOR WITH CONCEALED FLANGES; CYLINDER LOCK
11	BABY CHANGING STATION	50 LB CAPACITY	FUNGUS AND BACTERIA-RESISTANT PLASTIC	AMERICAN SPECIALTIES 9014	SURFACE MOUNTED, HORIZONTAL

NOTE: ALL TOILET ACCESSORIES SHALL BE FROM A SINGLE SOURCE MANUFACTURER WHEN POSSIBLE.

## A. STRUCTURAL DESIGN

CODE | 2024 OHIO BUILDING CODE (OBC)

**LIVE LOADS:** ROOF: 20 PSF (REDUCIBLE)

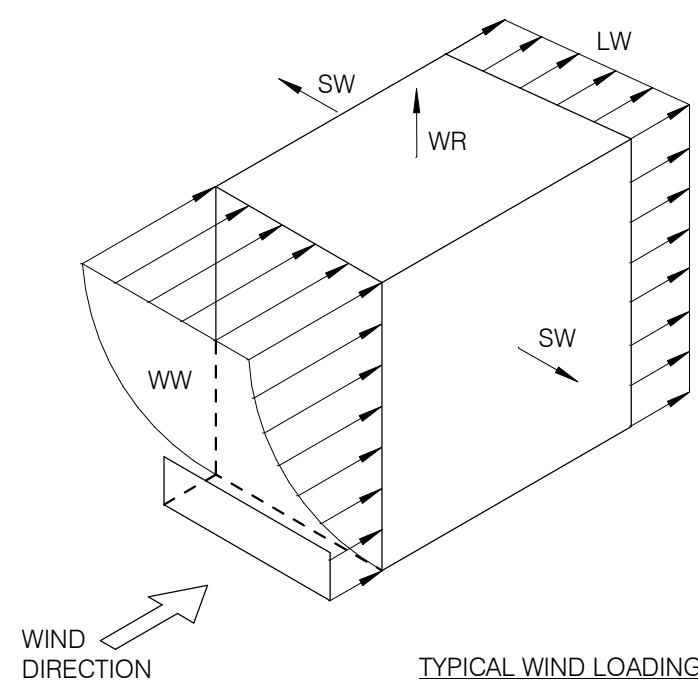
**ROOF SNOW LOADS:**  
 DESIGN UNIFORM ROOF SNOW LOAD 20.0 PSF  
 FLAT ROOF SNOW LOAD(Pf) 14.0 PSF  
 GROUND SNOW LOAD (Pg) 20.0 PSF  
 IMPORTANCE FACTOR (I) 1.0  
 SNOW EXPOSURE FACTOR (Ce) 1.0  
 THERMAL FACTOR(Ct) 1.0

STRUCTURAL ROOF MEMBERS DESIGNED FOR UNBALANCED LOAD CONDITIONS AS DETERMINED PER ASCE 7

**WIND DESIGN DATA:**  
 ULTIMATE WIND SPEED 115 MPH  
 RISK CATEGORY II  
 MEAN ROOF HT (H) 18.7 FT  
 EXPOSURE CATEGORY C  
 ENCLOSURE CLASSIF. ENCLOSED BUILDING  
 INTERNAL PRESSURE COEF. +/-0.18  
 DIRECTIONALITY (Kd) 0.85

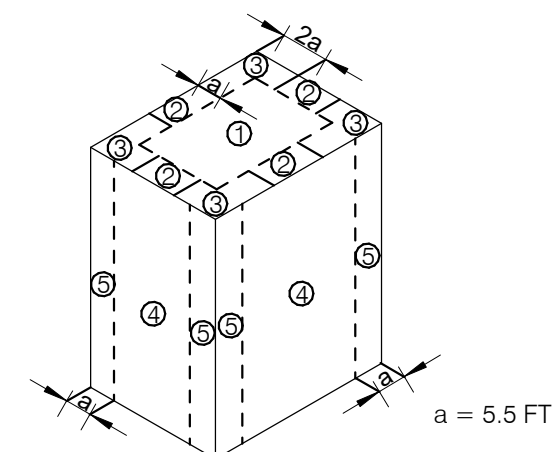
**ULTIMATE MWFRS (PSF):**

Z	Kz	Kzt	qzGCP	w/+q/GCpi	w/-q/GCpi
0 TO 15'	0.85	1.00	16.6	12.0	21.2
18.7 FT	0.89	1.00	17.4	12.8	22.0
23.3 FT	0.93	1.00	18.2	13.6	22.8



**COMPONENT AND CLADDING WIND PRESSURES (ULTIMATE LOADS):**

Surface Pressure (psf)	100 sf	500 sf	1000 sf
Roof	Area 10 sf	50sf	100 sf
Negative Zone 1	-27.6	-25.8	-25.1
Negative Zone 2	-48.1	-39.2	-35.3
Negative Zone 3	-71.1	-60.4	-55.9
Positive Zone 1	17.4	16.0	16.0
Positive Zone 2&3	17.4	16.0	16.0
Overhang Zone 2	-56.3	-56.3	-56.3
Overhang Zone 3	-94.7	-73.2	-64.0
Wall	Area 10 sf	100 sf	500 sf
Negative Zone 4	-29.9	-25.9	-23.0
Negative Zone 5	-36.8	-28.7	-23.0
Positive Zone 4&5	27.6	23.6	20.7



**EARTHQUAKE DESIGN DATA:**  
 RISK CATEGORY: II  
 IMPORTANCE FACTOR (I): 1.00  
 MAPPED SPECTRAL RESPONSE ACCELERATION  
 Ss: 0.133  
 S1: 0.055  
 C (PER GEOTECH REPORT)  
 SITE CLASS C  
 SPECTRAL RESPONSE COEFFICIENT  
 Sps: 0.106  
 Sps1: 0.062  
 SEISMIC DESIGN CATEGORY: A  
 BASIC STRUCTURAL SYSTEM: BEARING WALL SYSTEMS  
 SEISMIC RESISTING SYSTEM: INTERMEDIATE REINFORCED MASONRY SHEAR WALLS  
 RESPONSE MODIFICATION FACTOR, (R): 4.0  
 ANALYSIS PROCEDURE: EQUIV LATERAL-FORCE  
 SEISMIC RESPONSE COEF. (Cs): 0.027  
 DESIGN BASE SHEAR (V): 0.027W

## B. GENERAL

- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND EXISTING CONSTRUCTION PRIOR TO DEMOLITION, FABRICATION, AND CONSTRUCTION.
- THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER IT IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCES AND ENSURE THE SAFETY OF THE CONSTRUCTION PERSONNEL, BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, TEMPORARY BRACING, ETC. (BEYOND THAT DEPICTED HEREIN) THAT MAY BE NECESSARY.
- THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION ACTIVITIES FOR THE PROJECT IN A MANNER AND SEQUENCE THAT IS BASED ON ACCEPTED INDUSTRY STANDARDS THAT RECOGNIZE THE INTERACTION OF THE COMPONENTS THAT COMPRISE THE STRUCTURE WITHOUT CAUSING DISTRESS, UNANTICIPATED MOVEMENTS OR IRREGULAR LOAD PATHS AS A RESULT OF THE CONSTRUCTION MEANS AND METHODS EMPLOYED.
- THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY OF ANY INCONSISTENCIES BETWEEN THE DRAWINGS AND THE FIELD CONDITIONS THAT COULD AFFECT THE CONSTRUCTION.
- THE CONTRACTOR SHALL AT ALL TIMES KEEP THE WORK AREA AND SURROUNDING PREMISES FREE OF WASTE, SURPLUS MATERIALS, RUBBISH, AND DEBRIS RESULTING FROM THE WORK.
- MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHALL BE STORED AT OWNER DESIGNATED LOCATION(S).
- MATERIAL REMOVED AS PART OF ANY DEMOLITION WORK SHALL BE REMOVED AND DISPOSED OF LEGALLY OFF-SITE, UNLESS OTHERWISE DIRECTED BY THE OWNER.
- WHERE CONFLICTS ARISE BETWEEN NOTES, DRAWINGS, OR SPECIFICATIONS, THE CONTRACTOR SHALL NOT PROCEED WITH THE AFFECTED WORK UNTIL THE STRUCTURAL ENGINEER ISSUES A CLARIFICATION.

## C. BUILDING PAD PREPARATION

- ALL TREES, BRUSH, ROOTS, TOPSOIL, RUBBLE, ORGANICALLY CONTAMINATED, OR OTHERWISE OBJECTIONABLE MATERIALS ENCOUNTERED ARE TO BE REMOVED FROM STRUCTURAL AREAS OF THE SITE.
- SUBGRADE SECTORS WHICH WILL EXIST IN CUT AND THOSE WHICH AREA TO SUPPORT FILL STRUCTURES ARE TO BE PROOF ROLLED. AREA EXHIBITING INSTABILITY ARE TO BE UNDERCUT AND BACKFILLED ON A LIFT-BY-LIFT BASIS WITH EACH LIFT CAREFULLY COMPACTED.
- IF UNSTABLE SUBGRADE SECTORS CANNOT BE STABILIZED BY EXCAVATION AND RE-COMPACTION, THEN CRUSHED STONE OR SIMILAR COARSE AGGREGATE MATERIALS SHALL BE ROLLED INTO THE SUBGRADE UNTIL A FIRM SUBGRADE REACTION IS ACHIEVED.
- ENGINEERED FILL SHALL BE DETERMINED BY A SOILS LABORATORY AND MATERIALS ARE TO BE PLACED IN LIFTS NOT EXCEEDING 8 INCHES IN LOOSE MEASURED THICKNESS. EACH LIFT IS TO BE COMPACTED WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT AS FOLLOWS (UNLESS DIRECTED OTHERWISE BY GEOTECHNICAL REPORT):  
 SLAB ON GRADE: MINIMUM OF 98% MAXIMUM DENSITY BY ASTM D696  
 FOOTING BEARING ON FILL: MINIMUM OF 98% MAXIMUM DENSITY BY ASTM D696
- THE EARTH-WORK PROGRAM SHOULD BE CONDUCTED UNDER THE SUPERVISION OF A SOILS LABORATORY. THE IN-PLACE DENSITIES ACHIEVED ARE TO BE VERIFIED BY FIELD TESTING.

## D. FOUNDATIONS

- FOUNDATION DESIGN BASED ON NET ALLOWABLE BEARING PRESSURE OF 3000 PSF ON UNDISTURBED SOIL OR ENGINEERED FILL. PER GEOTECHNICAL INVESTIGATION REPORT BY CTL ENGINEERING, 3065 INTERSTATE PARKWAY, BRUNSWICK, OH 44212; (330)-220-8900, REPORT DATED DECEMBER 4, 2020. BEARING PRESSURE IS TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO PLACEMENT OF FOUNDATIONS.
- CONTRACTOR SHALL BECOME FAMILIAR WITH THE GEOTECHNICAL REPORT PRIOR TO BUILDING PAD PREPARATION, EXCAVATION, AND CONSTRUCTION OF FOUNDATIONS. WHERE ANY CONFLICTS OCCUR BETWEEN THE SOILS REPORT AND THE DRAWINGS THE CONTRACTOR SHALL NOT PROCEED WITH THE AFFECTED WORK UNTIL THE STRUCTURAL ENGINEER ISSUES A CLARIFICATION.
- INUNDATION AND LONG TERM EXPOSURE OF BEARING SURFACES WHICH WILL RESULT IN DETERIORATION OF BEARING FORMATIONS SHALL BE PREVENTED. FOOTINGS SHALL BE PLACED IMMEDIATELY FOLLOWING FOOTING EXCAVATIONS AND BEARING SURFACE INSPECTION.
- ALL FILL MATERIALS SHALL BE ENGINEERED STRUCTURAL FILL FREE OF ORGANIC CONTAMINANTS AND OTHER DELETERIOUS MATTER.
- THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY UNUSUAL SOIL CONDITIONS.
- PRIOR TO THE START OF EXCAVATIONS THE CONTRACTOR SHALL MEET WITH THE OWNER TO DETERMINE THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES OR STRUCTURES.
- WHERE FOOTINGS ARE IN CLOSE PROXIMITY OF SEWERS, DRAINS, UNDERGROUND CONDUITS AND FLOOR PIPES, BOTTOM OF ALL FOOTINGS SHALL BE AT OR BELOW INVERT ELEVATIONS OF ELEMENTS. SEE TYPICAL FOUNDATION DETAIL.
- ALL EXTERIOR SPREAD AND CONTINUOUS FOOTINGS SHALL BEAR A MINIMUM OF 3'-6" BELOW THE FINAL EXTERIOR GRADE TO PROVIDE ADEQUATE FROST PROTECTION.
- ALL INTERIOR SPREAD AND CONTINUOUS FOOTINGS SHALL BEAR A MINIMUM OF 3'-6" BELOW THE FINISHED FLOOR ELEVATION TO PROVIDE ADEQUATE BEARING.

## E. CONCRETE

- CONCRETE WORK SHALL CONFORM WITH THE LATEST EDITION OF THE FOLLOWING ACI CODES:  
 ACI 301 ..... SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS  
 ACI 305R ..... HOT WEATHER CONCRETING  
 ACI 306 ..... COLD WEATHER CONCRETING  
 ACI 318 ..... BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE  
 ACI 117 ..... STANDARD SPECIFICATION TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS
- CONCRETE SHALL DEVELOP THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS IN A 28 DAY PERIOD  
 FOOTINGS AND ALL OTHER CONCRETE NOT NOTED ..... 3000 PSI (MAX AGGR = 1 1/4")  
 INTERIOR SLAB ON GRADE ..... 4000 PSI (MAX AGGR = 1 1/4")  
 EXTERIOR CONCRETE EXPOSED TO WEATHER OR VULNERABLE DEICERS ..... 4500 PSI (MAX AGGR = 1 1/4")
- PROVIDE 6% AIR ENTRAINMENT (+/- 1.5%) IN ALL CONCRETE EXPOSED TO WEATHER OR VULNERABLE DEICERS.
- MAXIMUM ALLOWABLE WATER/CEMENT (w/cm) RATIO FOR FOOTINGS IS 0.55. SLAB ON GRADE WORK IS 0.45. ALL OTHER CONCRETE WORK IS 0.50.
- GROUT UNDER BASE PLATES SHALL BE 1" THICK NON-SHRINK NON-METALLIC UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANCHOR BOLTS, CLIPS, INSERTS, CONNECTION PLATES, SLEEVES, SLOTS AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND IN COOPERATION WITH THE OTHER TRADES PRIOR TO PLACING THE CONCRETE.
- REINFORCING BARS SHALL MEET THE REQUIREMENTS OF ASTM A615, GRADE 60 (60,000 PSI).
- WELDED WIRE FABRIC SHALL MEET THE REQUIREMENTS OF ASTM A1064. (FLAT SHEETS ONLY).
- BARS SHALL BE CLEANED, TAGGED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 318 FOR THE YEAR REFERENCED BY THE BUILDING CODE NOTED.
- BAR SPLICES SHALL BE STAGGERED, LAP TYPE CONFORMING TO THE REQUIREMENTS OF ACI 318 FOR THE YEAR REFERENCED BY THE BUILDING CODE NOTED, UNLESS NOTED OTHERWISE.
- DETAILED SHOP DRAWINGS SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER "FOR REVIEW" (NOT APPROVAL) PRIOR TO FABRICATION.
- EMBEDMENT DEPTH OF DOWELS SHALL BE THE TENSION DEVELOPMENT LENGTH (Ld) IN ACCORDANCE WITH ACI 318 FOR THE YEAR REFERENCED BY THE BUILDING CODE NOTED.
- NO TACK WELDING OF REINFORCING IN THE FIELD WILL BE PERMITTED UNLESS NOTED OTHERWISE.

## F. MASONRY

- ALL MASONRY MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF ACI 530, LATEST EDITION.
- CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT HOLLOW CORE UNITS LAID IN RUNNING BOND CONFORMING TO ASTM C90 WITH MINIMUM 2000 PSI NET AREA COMPRESSIVE STRENGTH AND fm = 2000 PSI.
- GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM 2000 PSI 28 DAY COMPRESSIVE STRENGTH.
- MORTAR SHALL BE TYPE M OR S CONFORMING TO ASTM C270 WITH A MINIMUM 1800 PSI COMPRESSIVE STRENGTH FOR ALL LOAD-BEARING, EXTERIOR, AND REINFORCED WALLS.
- PROVIDE 9 GAGE STANDARD LADDER WIRE JOINT REINFORCING CONFORMING TO ASTM A951 AT EVERY OTHER COURSE OF BLOCK.
- REINFORCING STEEL SHALL BE GRADE 60 CONFORMING TO ASTM A615. LAP BARS 52 BAR DIAMETERS (U.N.O.)
- LAY MASONRY UNITS WITH FULL MORTAR BEDDING ON HORIZONTAL AND VERTICAL FACES.
- ALL CORNERS ARE TO BE TIED IN MASONRY BOND.

## G. MASONRY STEEL LINTEL SCHEDULE

- FOR 4" BRICK VENEER AND WALLS 8" OR THICKER:  
 OPENING WIDTHS UP TO 4'-0" USE L31/2 x 31/2 x 5/16 ANGLE.  
 OPENING WIDTHS OVER 4'-0" AND UP TO 5'-0" USE L4 x 31/2 x 5/16 LLV.  
 OPENING WIDTHS OVER 5'-0" AND UP TO 6'-0" USE L5 x 31/2 x 5/16 LLV.  
 OPENING WIDTHS OVER 6'-0" AND UP TO 8'-0" USE L6 x 31/2 x 5/16 LLV.  
 OPENING WIDTHS GREATER THAN 8'-0" SEE PLANS.
- USE ONE ANGLE FOR EACH 4' WYTHE OF MASONRY.
- ALL LINTELS SHALL HAVE A BEARING AT EACH END OF 1 INCH PER FOOT OF OPENINGS WITH A MINIMUM OF 6".
- ALL LINTELS SHALL BEAR ON 16" SOLID MASONRY EXTENDING 16" BEYOND END OF LINTEL.
- ALL EXTERIOR LINTELS AND EXPOSED EXTERIOR BOTTOM LINTEL PLATES SHALL BE GALVANIZED; LINTELS SHALL BE GALVANIZED AFTER FABRICATION.

## H. TIMBER TRUSS DESIGN CRITERIA

- | TOP CHORD     | DEAD LOAD                                | 10 PSF |
|---------------|------------------------------------------|--------|
| LIVE LOAD     | SEE STRUCTURAL DESIGN NOTES THIS DRAWING |        |
| BOTTOM CHORD  | DEAD LOAD                                | 10 PSF |
| MAXIMUM TRUSS | DEAD WEIGHT                              | 15 PLF |
- SUBMIT TRUSS DESIGN DRAWINGS AND CALCULATIONS STAMPED BY AN ENGINEER REGISTERED IN THE GOVERNING JURISDICTION. MINIMUM LUMBER TYPE FOR TRUSSES SHALL BE MSR w/ Fb = 1,200PSI AND E = 1,200,000PSI.
  - ROOF TRUSSES AND BRIDGING/BRACING SHALL BE DESIGNED TO RESIST A NET ALLOWABLE UPLIFT LOAD RESULTING FROM THE LOAD COMBINATION (0.6DL-0.6WL) OF 9.0 PSF AT PERIMETER (MARKED BY DISTANCE 'a' ON WIND LOAD DIAGRAM) AND 5.0 PSF ELSEWHERE.
  - IN ADDITION TO LOAD CASES SHOWN ABOVE, THE TRUSSES SHALL BE DESIGNED IN CONJUNCTION WITH TRANSIENT LOADING INDICATED ON THIS DRAWING.
  - TEMPORARY AND PERMANENT BRIDGING OF WOOD TRUSSES SHALL BE PROVIDED IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE, INC. PUBLICATION "HIB-91, BRACING WOOD TRUSSES" COMMENTARY AND RECOMMENDATIONS". TEMPORARY BRIDGING SHALL BE FURNISHED AS REQUIRED TO MAINTAIN STABILITY, SPACING, AND TO PREVENT BUCKLING DURING ERECTION. THE FOLLOWING MINIMUM PERMANENT BRIDGING SHALL BE PROVIDED:  
 A. BOTTOM CHORD: CONT HORIZ 2x4 @ 8'-0" OC FOR ROOF TRUSSES. PROVIDE HORIZ DIAGONAL BRIDGING @ 45 DEGREE ANGLE AT ENDS OF BUILDING AND @ 20'-0" INTERVALS THROUGHOUT.  
 B. WEB MEMBER BRIDGING: CONT HORIZ BRIDGING @ 12'-0" O.C FOR ROOF TRUSSES. PROVIDED VERTICAL DIAGONAL BRIDGING @ 45 DEGREE ANGLE AT ENDS OF BUILDING AND @ 20'-0" INTERVALS THROUGHOUT.
  - THE TOTAL LOAD DEFLECTION OF ROOF JOISTS SHALL BE LIMITED TO = SPAN/180  
 THE LIVE LOAD DEFLECTION OF ROOF JOISTS SHALL BE LIMITED TO = SPAN/240  
 THE TOTAL LOAD DEFLECTION OF FLOOR JOISTS SHALL BE LIMITED TO = SPAN/240  
 THE LIVE LOAD DEFLECTION OF FLOOR JOISTS SHALL BE LIMITED TO = SPAN/360
  - ADDITIONAL LOADS SHALL BE SUSPENDED FROM TRUSS CHORDS ONLY. HANGING LOADS MUST BE ATTACHED TO TRUSS PER TYPICAL TRUSS REINFORCING DETAIL PROVIDED ON THIS SET OF DRAWINGS.

## J. STRUCTURAL DEFERRED SUBMITTALS

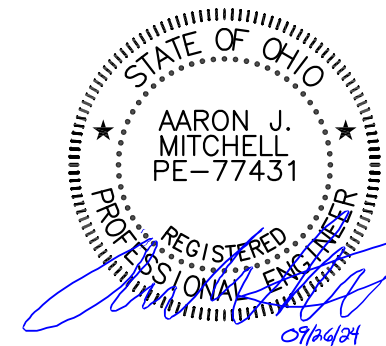
- DEFERRED SUBMITTALS SHALL CONFORM TO CHAPTER 17 OF THE GOVERNING BUILDING CODE.
- THE FOLLOWING ARE STRUCTURAL DEFERRED SUBMITTAL ITEMS:  
 TIMBER TRUSSES
- THE SUBMITTALS SHALL INCLUDE BUT SHALL NOT BE LIMITED TO LAYOUT DRAWING, ANY NECESSARY SECTIONS AND/OR DETAILS, AND DESIGN CALCULATIONS STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE GOVERNING STATE.
- SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD FOR REVIEW PRIOR TO SUBMISSION TO THE BUILDING OFFICIAL.
- TEN WORKING DAYS SHALL BE ALLOWED FOR THE ARCHITECT OR THE ENGINEER TO REVIEW EACH DEFERRED SUBMITTAL.
- THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
- DEFERRED SUBMITTALS SHALL BE MADE FAR ENOUGH IN ADVANCE SUCH THAT NO DELAY IN CONSTRUCTION OCCURS.

## K. SPECIAL INSPECTION

- | ITEM                  | SPECIAL INSPECTION REQUIRED | CODE SECTION |
|-----------------------|-----------------------------|--------------|
| FABRICATION           | YES*                        | 1704.2.5     |
| CONCRETE CONSTRUCTION | YES                         | 1705.3       |
| WOOD CONSTRUCTION     | NO                          | 1705.5       |
| SOIL                  | YES                         | 1705.6       |
| WIND RESISTANCE       | NO                          | 1705.11      |
| SEISMIC RESISTANCE    | NO                          | 1705.12      |
- \*SPECIAL INSPECTION IS NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTIONS PER SECTION 1704.2.5.1 OF THE GOVERNING CODE.
- THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER OR ARCHITECT OF RECORD, AND OTHER DESIGNED PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE PROPER DESIGN AUTHORITY AND TO THE BUILDING OFFICIAL.
  - THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR THE CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATION, AND THE FOLLOWING TABLE:
  - THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTIONS, TO THE BEST OF THE INSPECTORS KNOWLEDGE, WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISION OF THE GOVERNING BUILDING CODE. REPORTS SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 1704.2.4 OF THE GOVERNING BUILDING CODE.

## L. ABBREVIATIONS

BLK	BLOCKING	FOW	FACE OF WALL
BM	BEAM	FS	FAR SIDE
B.N.	BOUNDARY NAILING	(FV)	FIELD VERIFY
BOTT	BOTTOM	GA	GAGE
BRG	BEARING	HD	HEADER
BTWN	BETWEEN	HR	HANDRAIL
CJ	CONTROL JOINT (OR CONSTRUCTION JOINT)	LG	LONG
COL	COLUMN	LT	LIGHT
COM	COMMON	NS	NEAR SIDE
CONC	CONCRETE	PL	PLATE
CONN	CONNECTION	PLCS	PLACES
CONT	CONTINUOUS/CONTINUITY	(P.T.)	PRESSURE TREATED
(E)	EXISTING	REF	REFERENCE
EA	EACH	REQD	REQUIRED
EF	EACH FACE	SCHD	SCHEDULE
EL	ELEVATION	STL	STEEL
E.N.	EDGE NAILING	T&B	TOP AND BOTTOM
EW	EACH WAY	THD	THREADED
EQUIP	EQUIPMENT	TYP	TYPICAL
FDTN	FOUNDATION	UNO	UNLESS NOTED OTHERWISE
FLG	FLANGE	WD	WOOD
F.N.	FIELD NAILING	WP	WORK POINT
FOS	FACE OF SHEATHING	WWF	WELDED WIRE FABRIC



Client:

City of Elyria

131 Court St. - Suite 101  
Elyria, Ohio 44035

Project:

Public Safety  
Training Facility  
Range Building

Garden Street  
Elyria, Ohio 44035

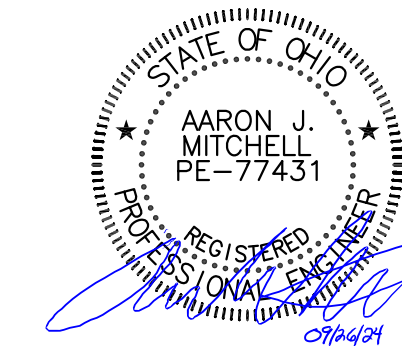
Revisions:

09.26.2024 For Construction

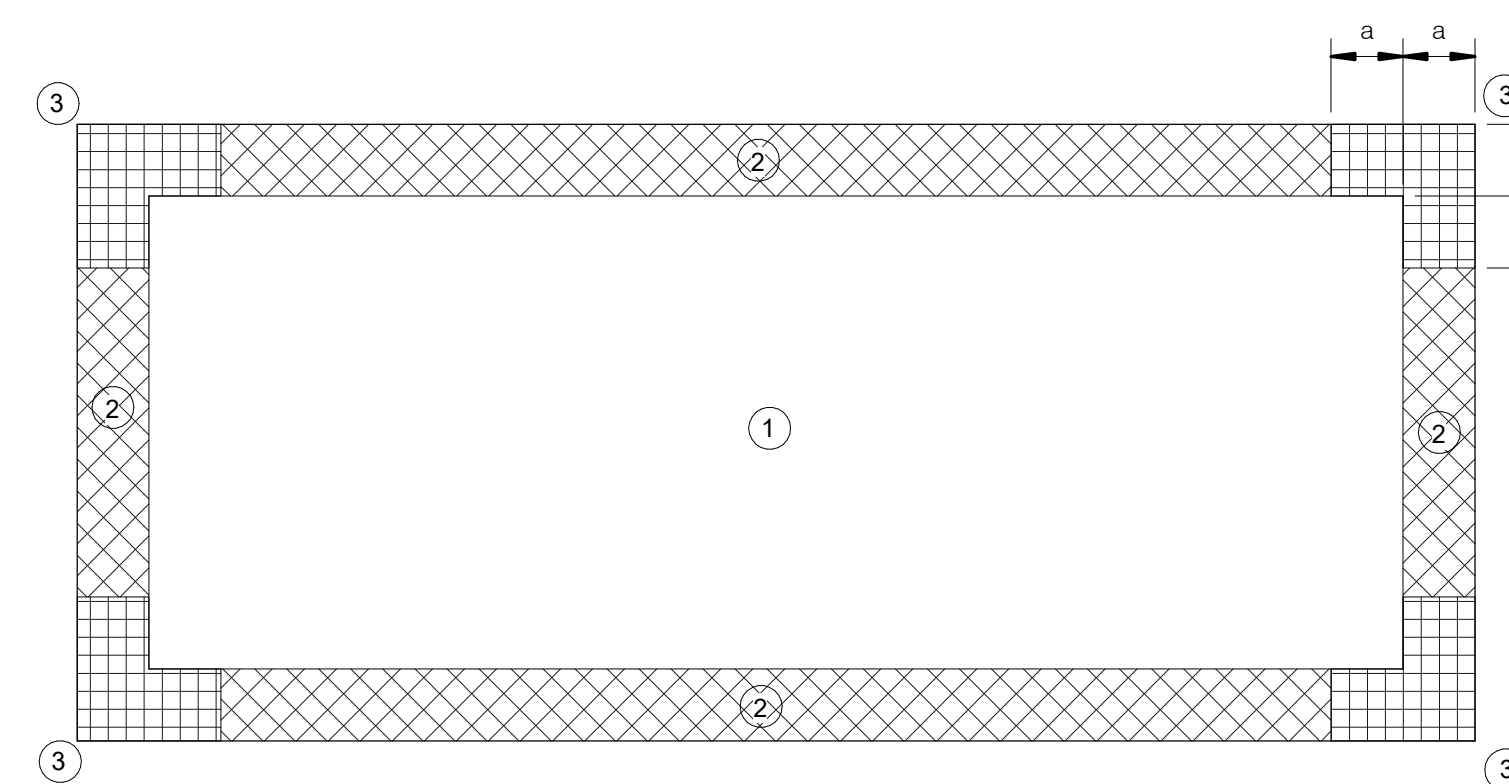
Project Number: 5039 01 23  
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General Notes

**50.00**  
SHEET SCALE  
0' 1/2' 1' 2'



FOOTING SCHEDULE		
MARK	FTG SIZE (L x W x D)	FTG REINFORCING
WF2.0	CONT. x 2'-0" x 3'-0"	(3) #5 T&B CONT.



1 Wind Uplift Diagram  
S0.10 3/4" = 1'-0"

	GROSS WIND PRESSURE	NET UPLIFT
Zone 1 (Empty)	ZONE 1: +17.4 PSF / -27.6 PSF	-21.6 PSF
Zone 2 (Cross-hatched)	ZONE 2: +17.4 PSF / -48.1 PSF	-42.1 PSF
Zone 3 (Grid-hatched)	ZONE 3: +17.4 PSF / -71.1 PSF	-65.1 PSF

h = 18.7FT    a = 5.5FT

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Diagrams &  
Schedules

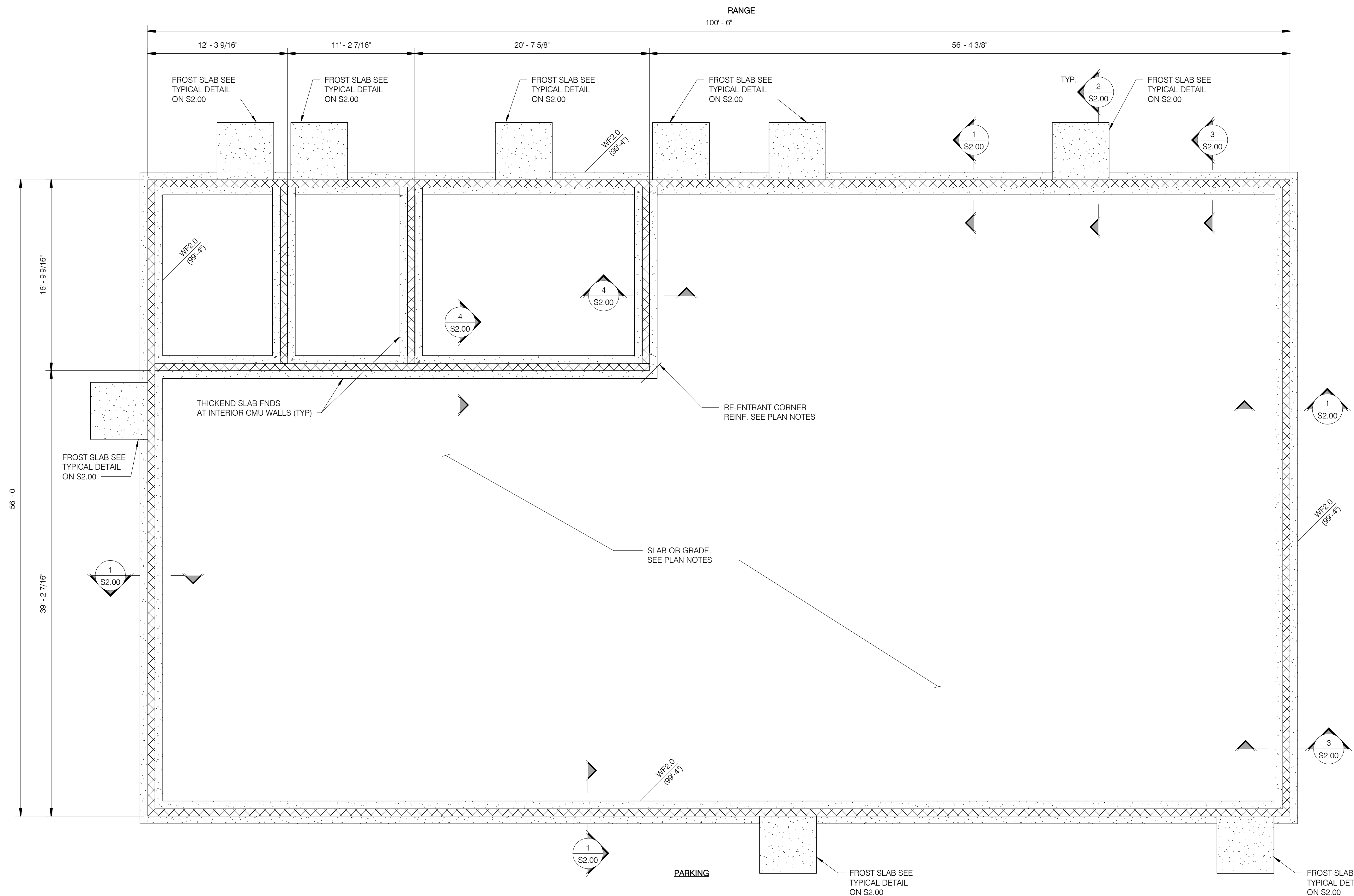
**S0.10**

SHEET SCALE  
0' 1/2' 1' 2'



**PLAN NOTES**

1. FOR GENERAL NOTES SEE DRAWING S0.00.
2. FOR TYPICAL FOUNDATION DETAILS SEE DRAWING S2.00.
3. T/SLAB AT FIRST FLOOR = 100'-0" (REFERENCE ELEVATION VARIES, SEE CIVIL).
4. ALL SLAB ON GRADE CONSTRUCTION SHALL BE 4" THICK SLAB-ON-GRADE REINF. w/ 6x6-W2.1xW2.1 WWF OVER 10 MIL POLY VAPOR RETARDER OVER 6" OF WELL COMPACTED GRANULAR MATERIAL ON WELL COMPACTED SUB-GRADE. CONTRACTION JOINTS SHALL BE SPACED @ 10'-0" OC MAX.
5. CONTRACTION JOINTS (CJ) SHALL BE SAWN AS SOON AS POSSIBLE. TIMING OF SAW CUTS SHALL BE PER THE CONCRETE CONTRACTORS EXPERIENCE AND EMPLOYED MEANS AND METHODS. PROVIDE JOINT SEALER POST SAWCUT.
6. CONSTRUCTION JOINTS SHALL BE PROVIDED AT THE END OF ANY SINGLE POUR. A CONSTRUCTION JOINT MAY REPLACE A CONTRACTION JOINT.
7. FOR WALL OPENINGS AND ADDITIONAL DIMENSIONS SEE ARCHITECTURAL DRAWINGS.
8. FOOTING DESIGNATION IS AS FOLLOWS:  
 WF.X DENOTES WALL FOOTING  
 TSX.X DENOTES THICKENED SLAB  
 SEE SHEET S0.10 FOR FOOTING SCHEDULE
10. PROVIDE (1) #4 x 4'-0" BAR PLACED 1" DOWN FROM T/SLAB FROM FACE OF ALL RE-ENTRANT CORNERS.



4 Range Support Building Foundation Plan  
 S1.00 3/16" = 1'-0"

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Foundation Plan

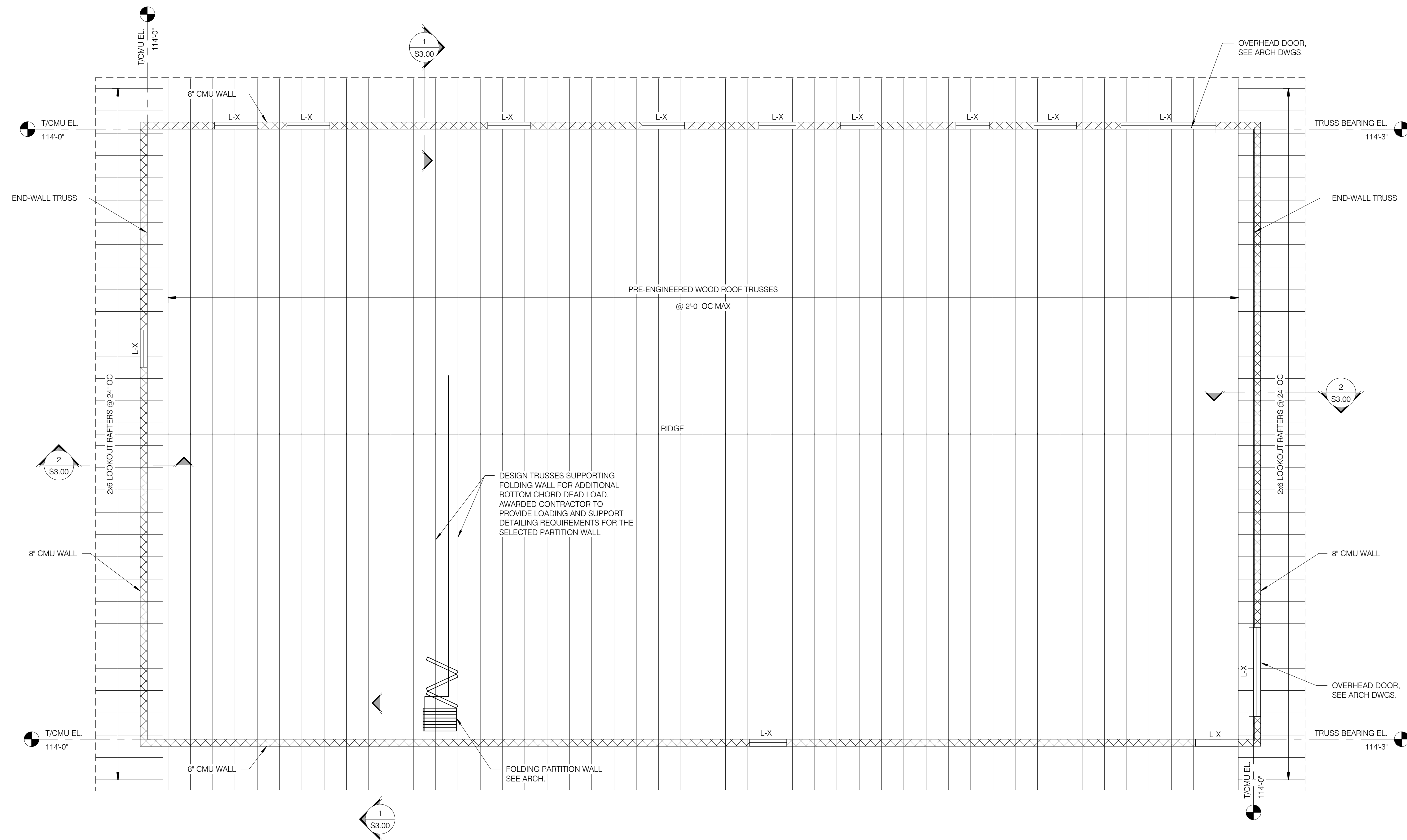
**S1.00**

SHEET SCALE  
 0' 1/2' 1' 2'



**PLAN NOTES**

1. FOR GENERAL NOTES SEE DRAWING S0.00.
2. FOR TYPICAL FRAMING DETAILS SEE DRAWING S3.00.
3. SEE FOUNDATION PLAN FOR DIMENSIONS.
4. SEE OVERALL SITE PLAN FOR BUILDING ORIENTATION RELATIVE TO NORTH.
5. SEE PLAN FOR TRUSS BEARING ELEVATIONS.
6. SEE PLAN FOR T/WALL ELEVATIONS.
7. ROOF SHEATHING SHALL BE 5/8" APA-RATED SHEATHING (32/16) W/ 8d NAILS @ 6" OC AT ALL PANEL EDGES (E.N.) AND 6" OC AT INTERMEDIATE PANEL SUPPORTS (F.N.), BLOCKED (UNO).
8. L-X DENOTES LOOSE UNTEL HEADER, SEE DRAWING S0.00 FOR HEADER SCHEDULE.



**1** Range Support Building Roof Framing Plan  
S1.20 3/16" = 1'-0"

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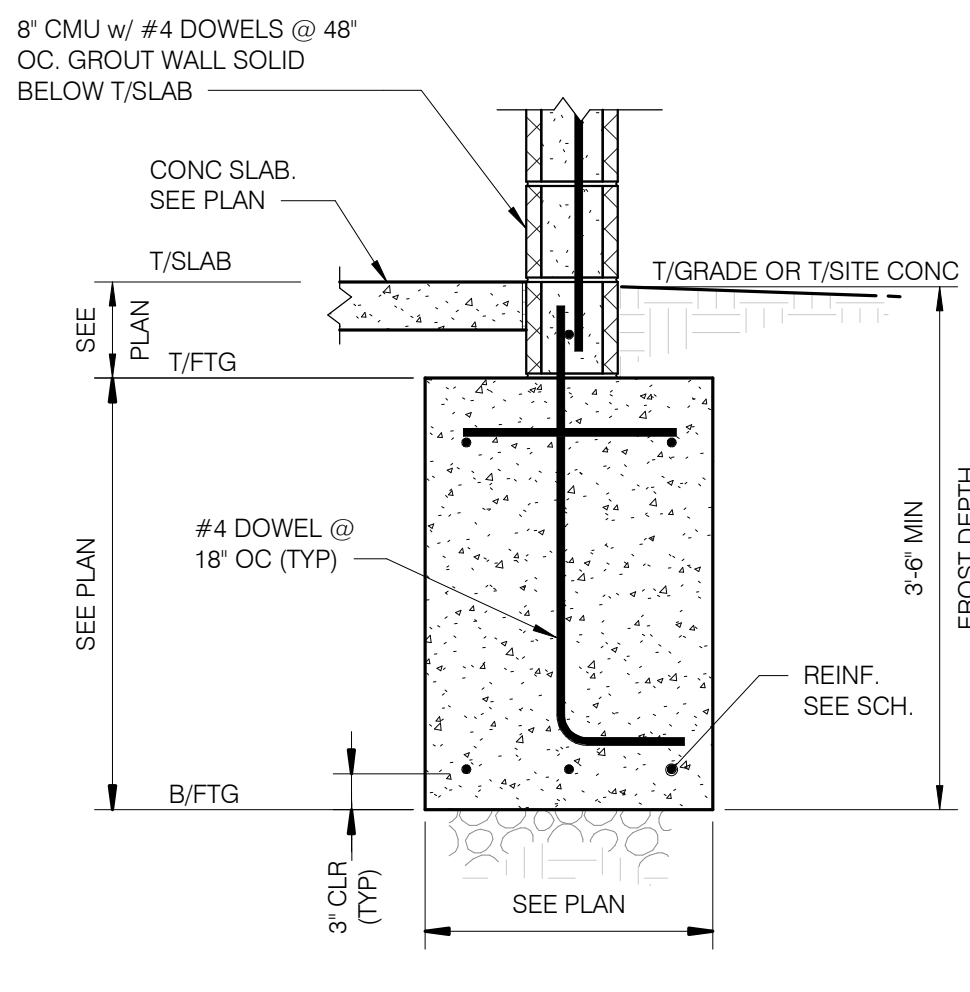
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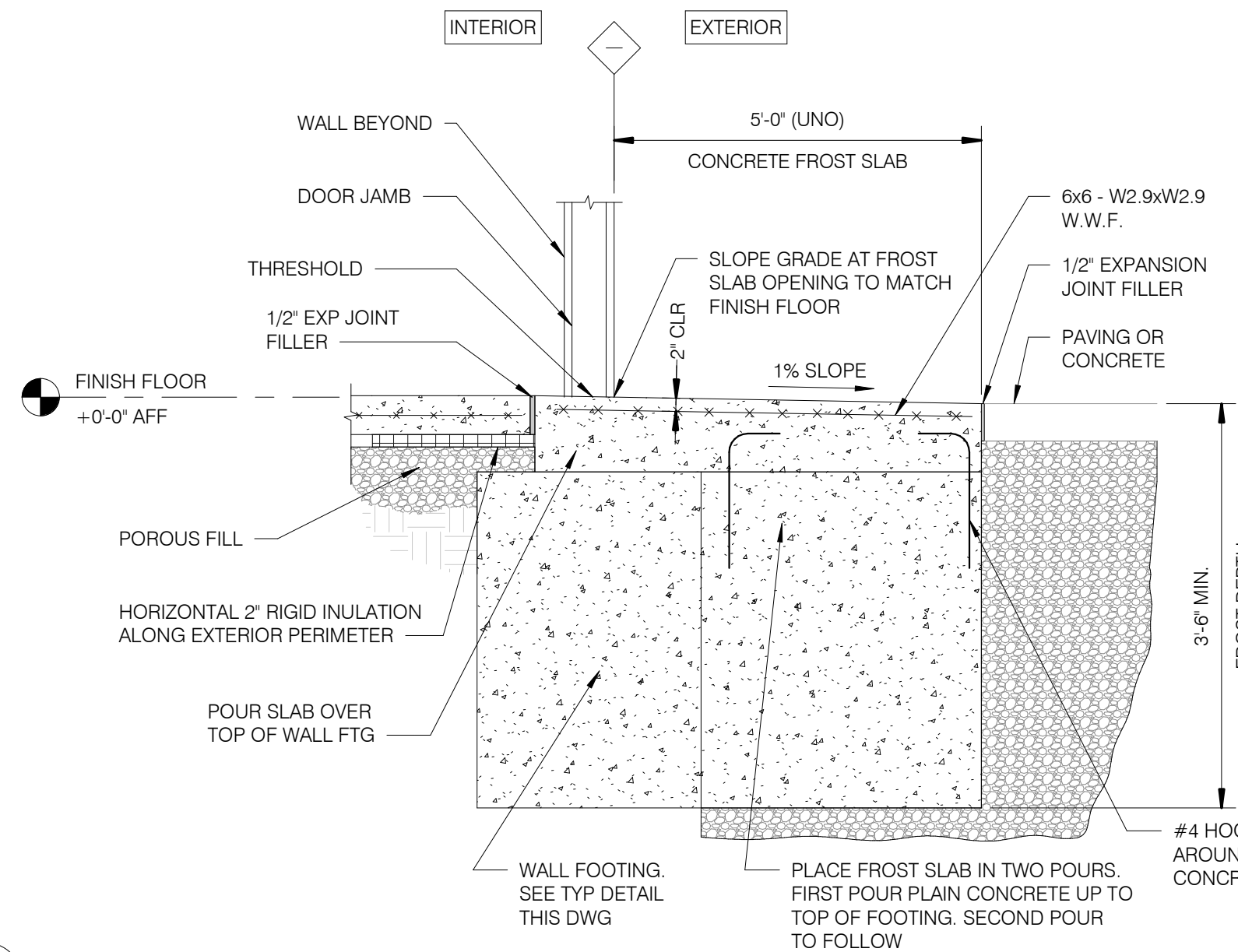
Roof Framing Plan

**S1.20**

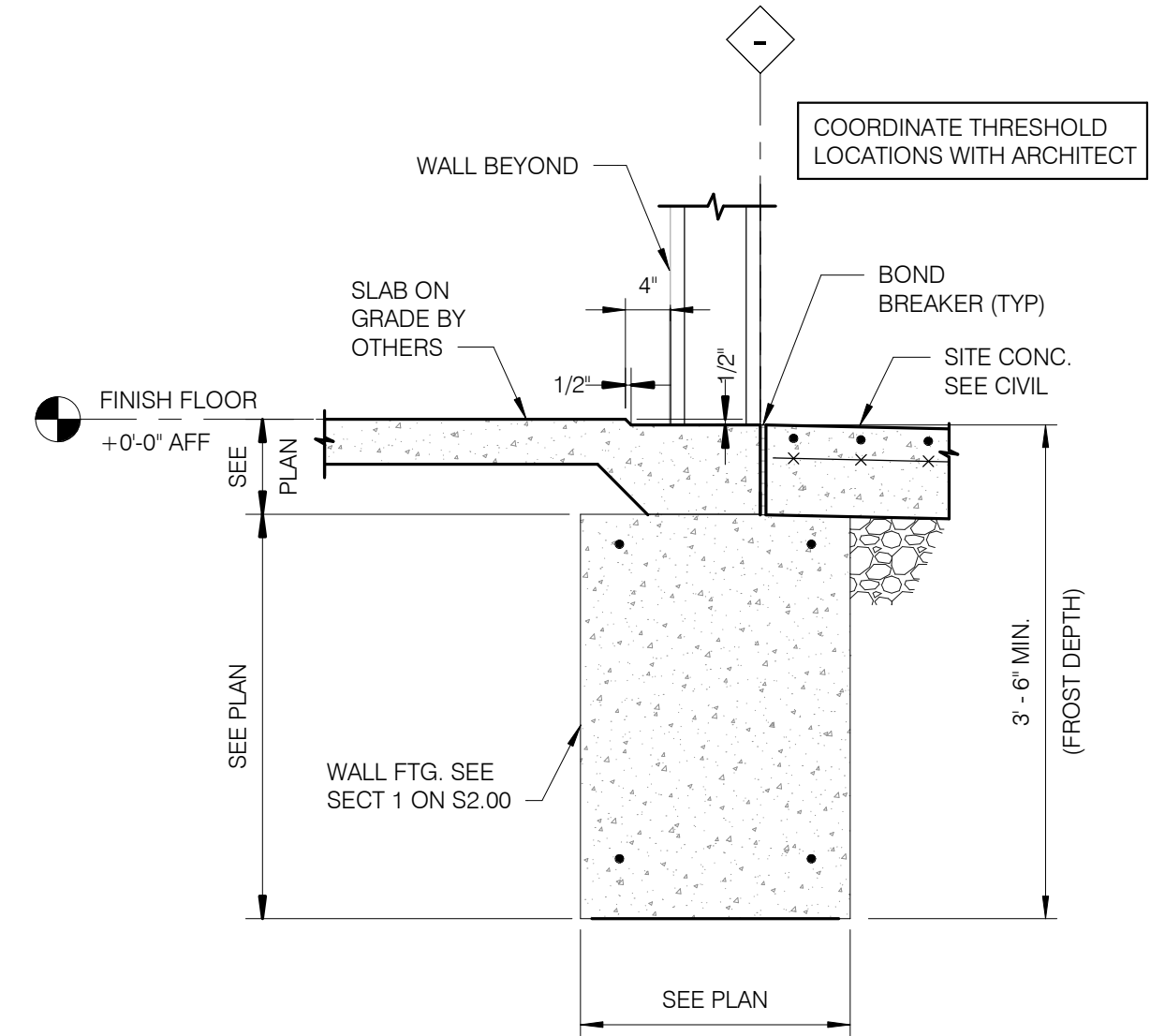
SHEET SCALE  
0' 1/2' 1' 2'



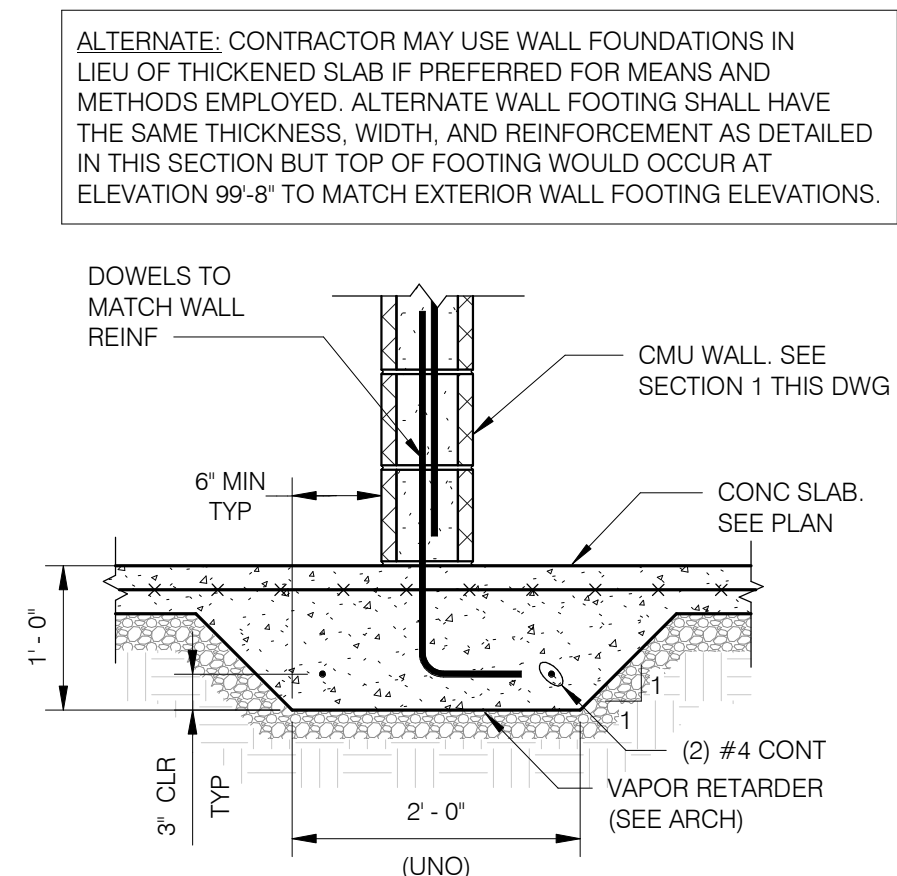
1 Typical Bearing Wall Footing Detail  
S2.00 3/4\"/>



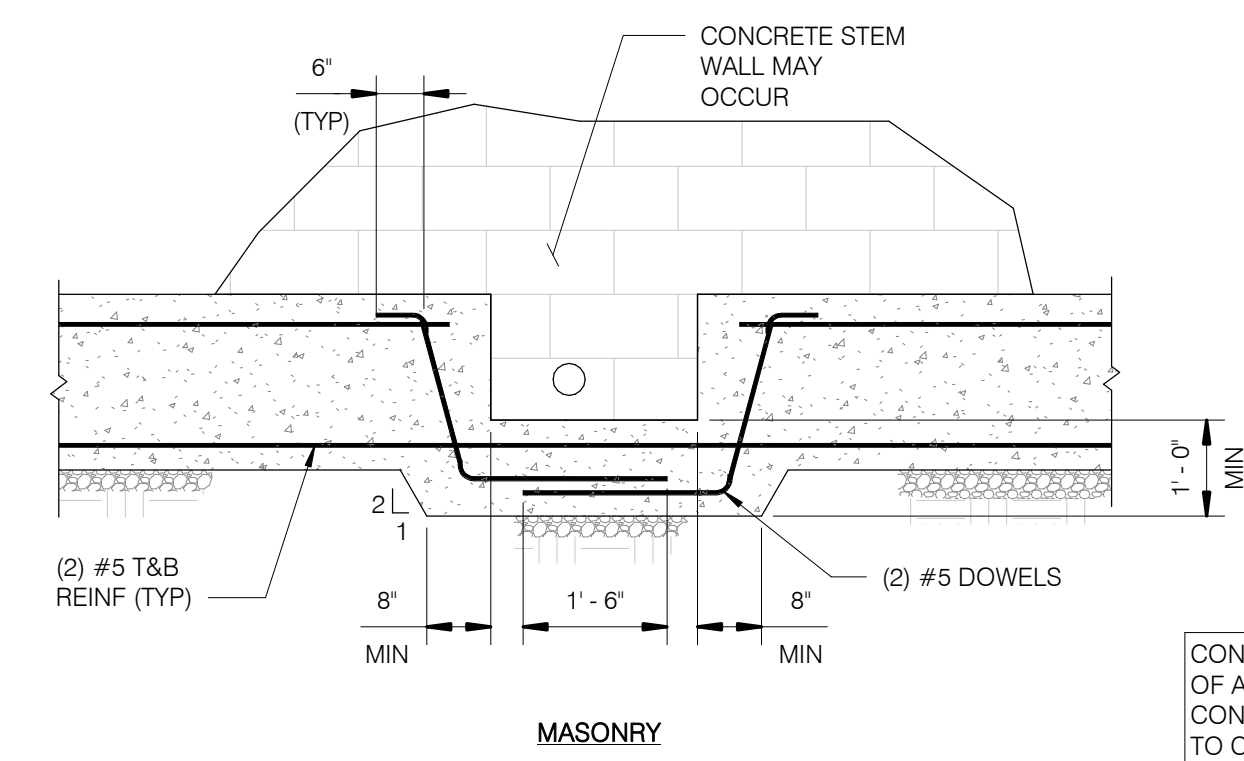
2 Typical Frost Slab Detail  
S2.00 3/4\"/>



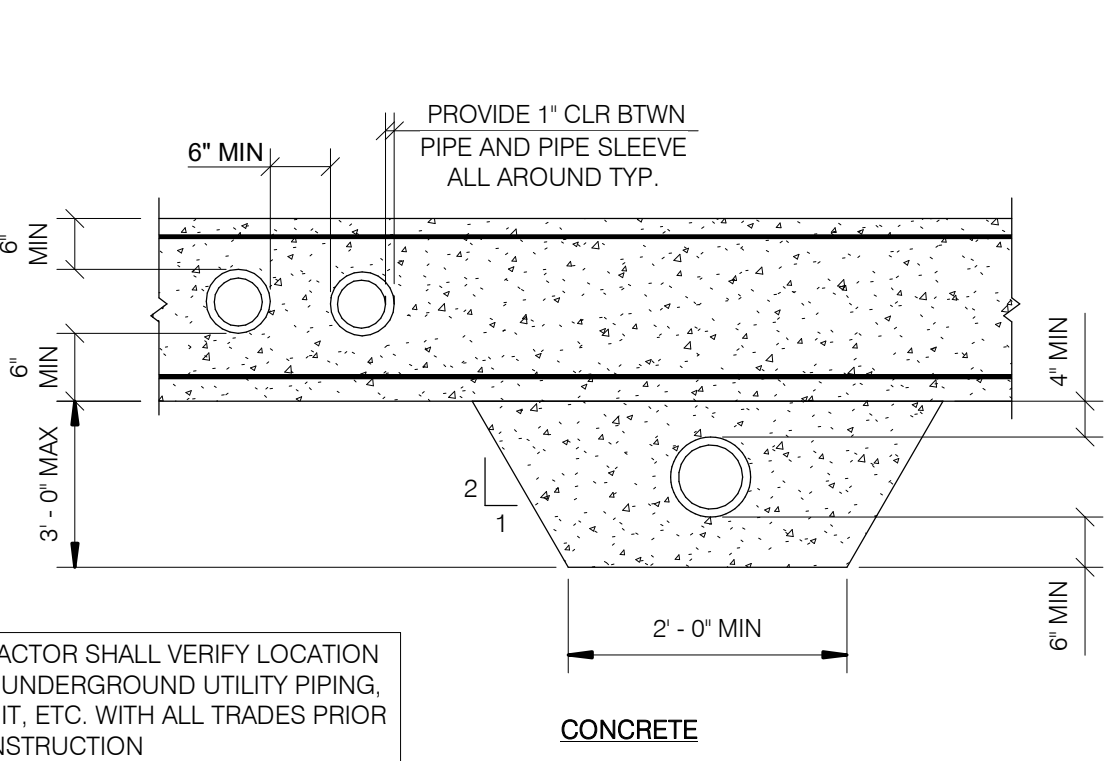
3 Overhead Door Threshold Detail  
S2.00 3/4\"/>



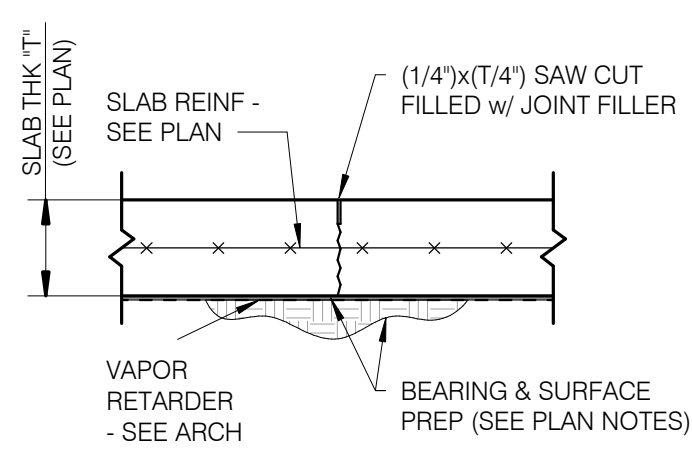
4 Typical Thickened Slab at Non-Bearing Interior Wall Footing  
S2.00 3/4\"/>



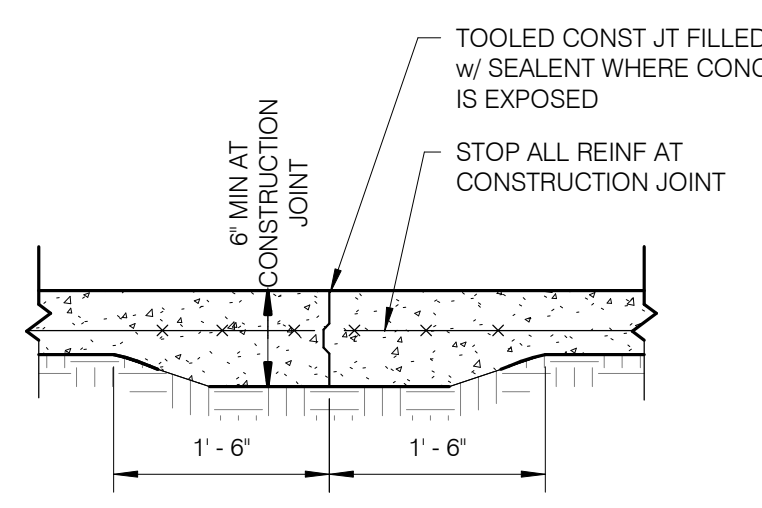
5 Typical Utility Line Penetration Detail  
S2.00 1/2\"/>



CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITY PIPING, CONDUIT, ETC. WITH ALL TRADES PRIOR TO CONSTRUCTION



6 Typical Slab On Grade Detail  
S2.00 NONE



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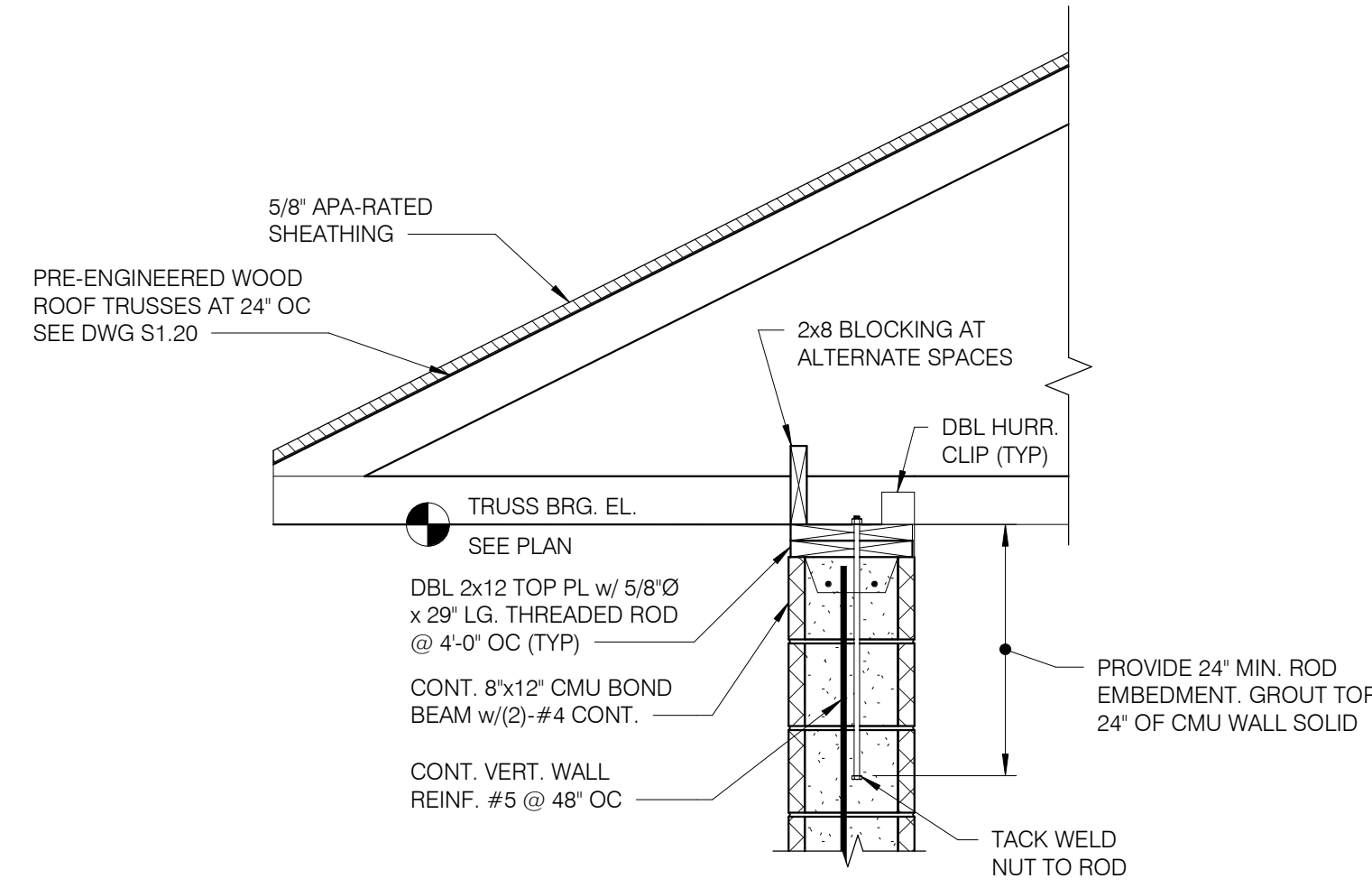
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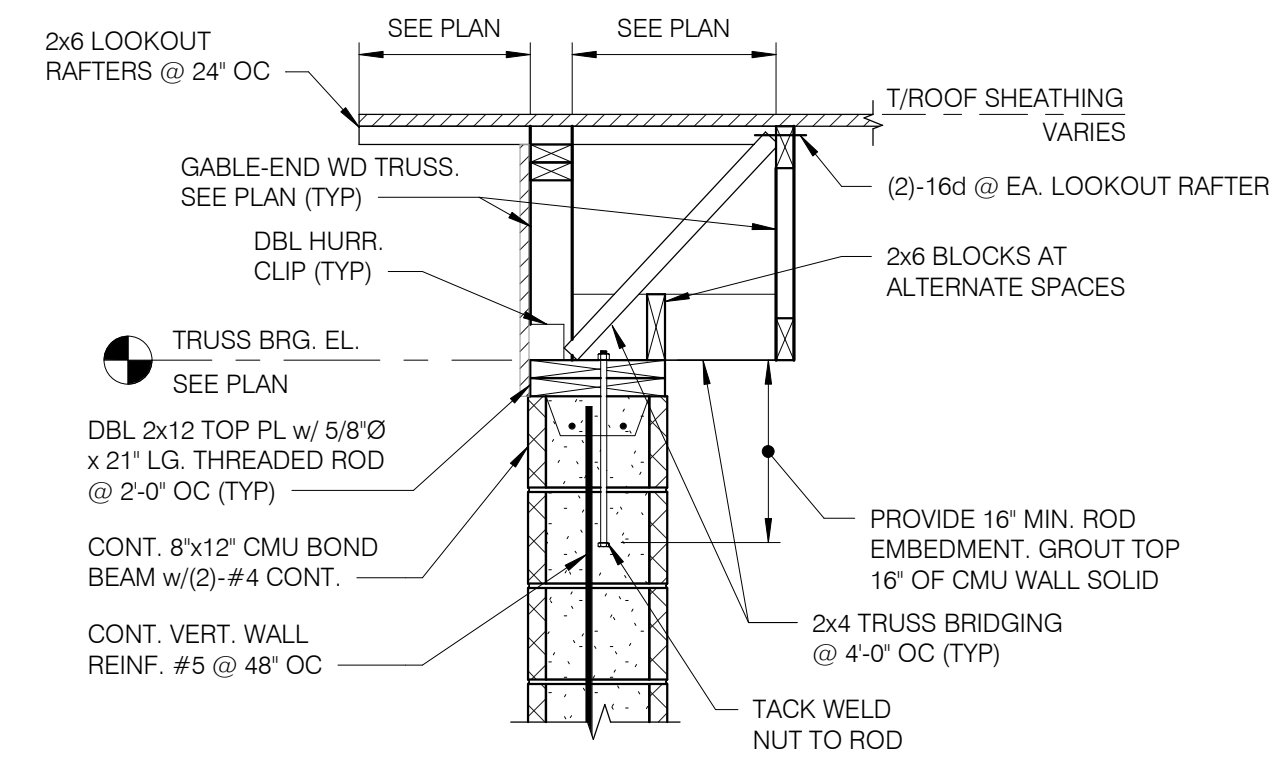
Foundation Details &  
Sections

**S2.00**

SHEET SCALE  
0' 1/2' 1' 2'



1 Section  
S3.00 3/4" = 1'-0"



2 Section  
S3.00 3/4" = 1'-0"

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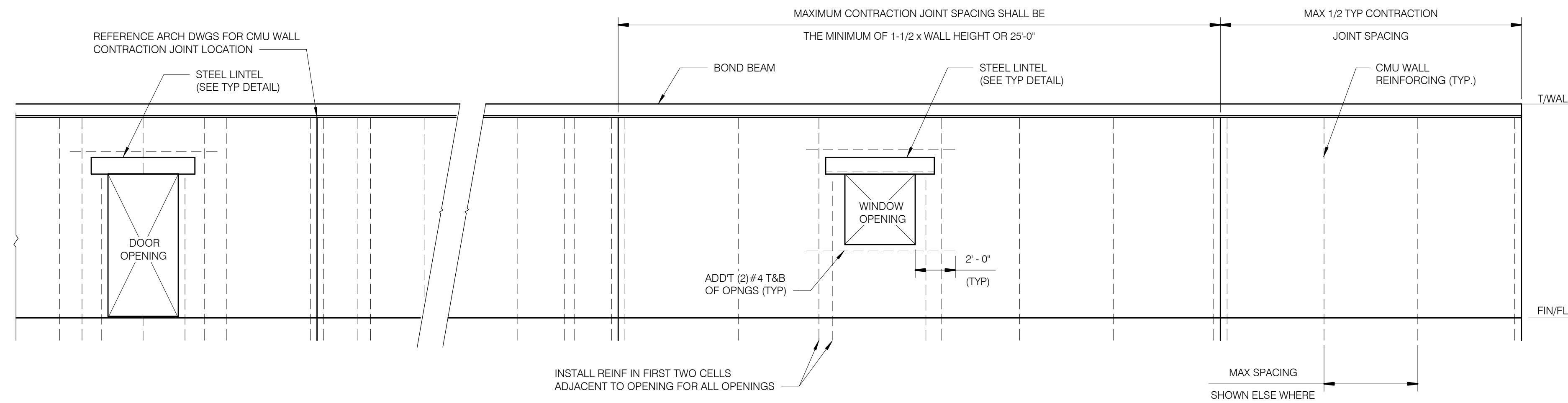
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Framing Details &  
Sections

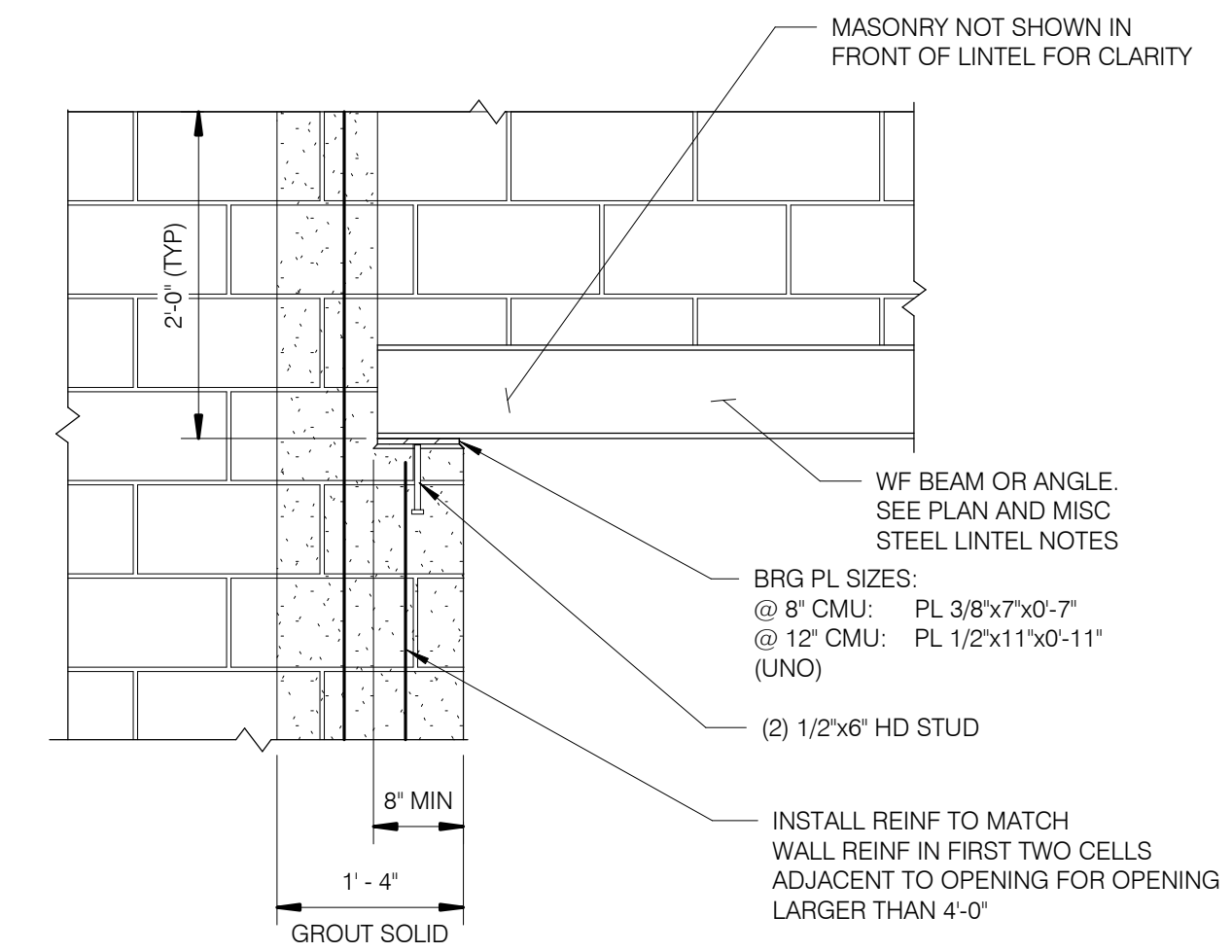
**S3.00**

SHEET SCALE  
0" 1/2" 1" 2"

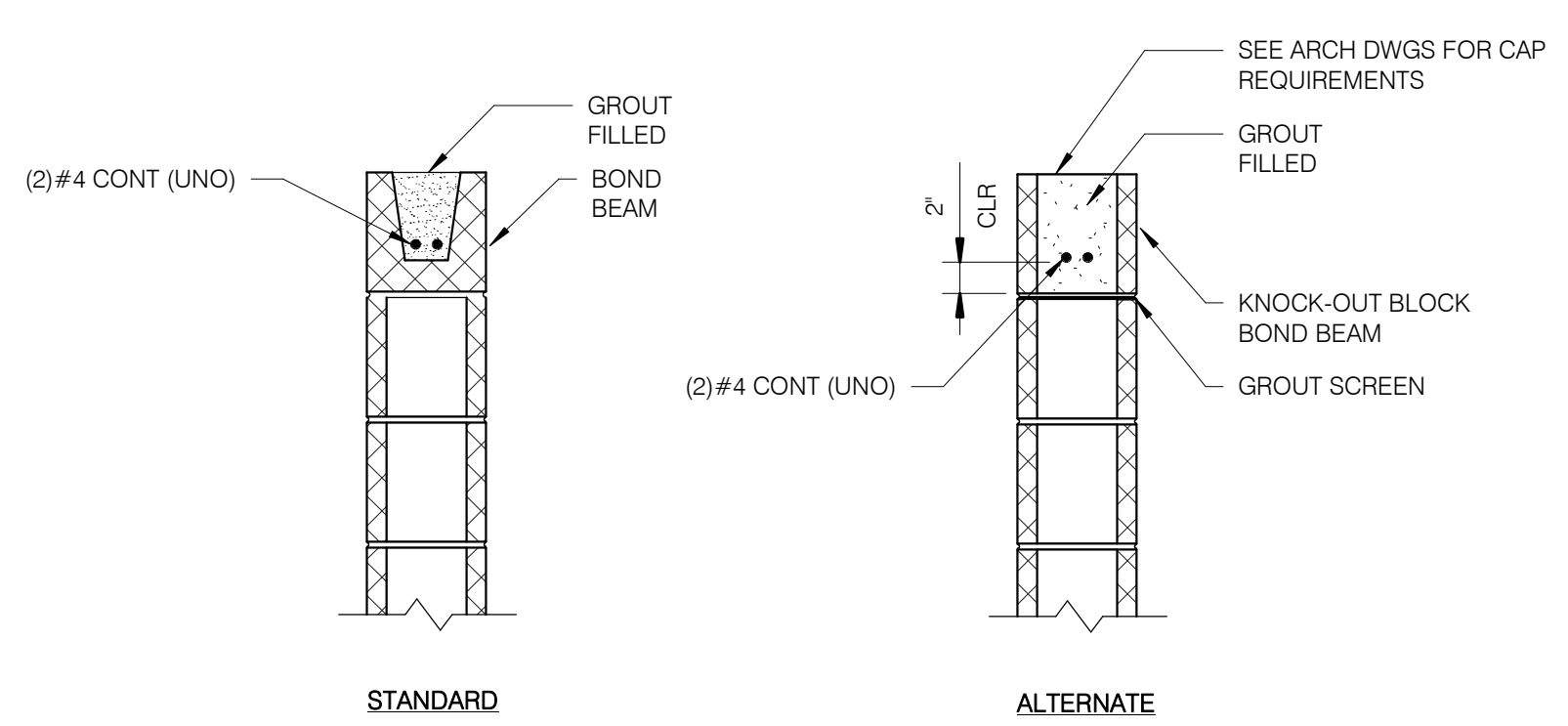




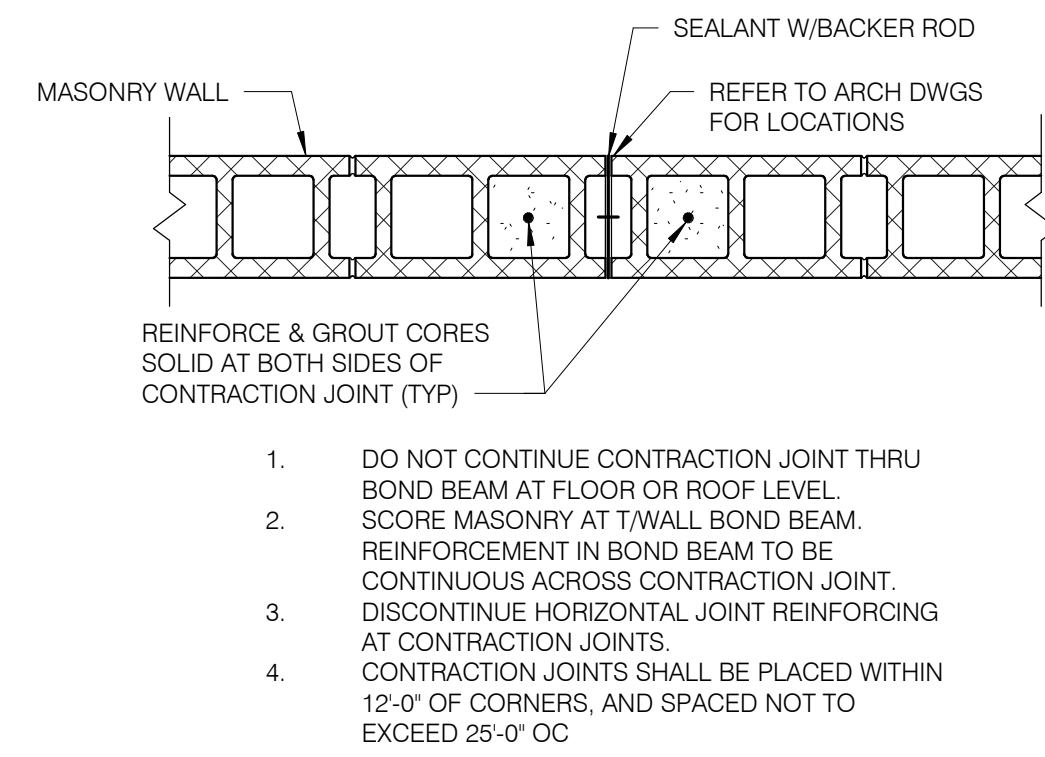
1 Typical CMU Wall Reinforcing Detail  
1/4" = 1'-0"



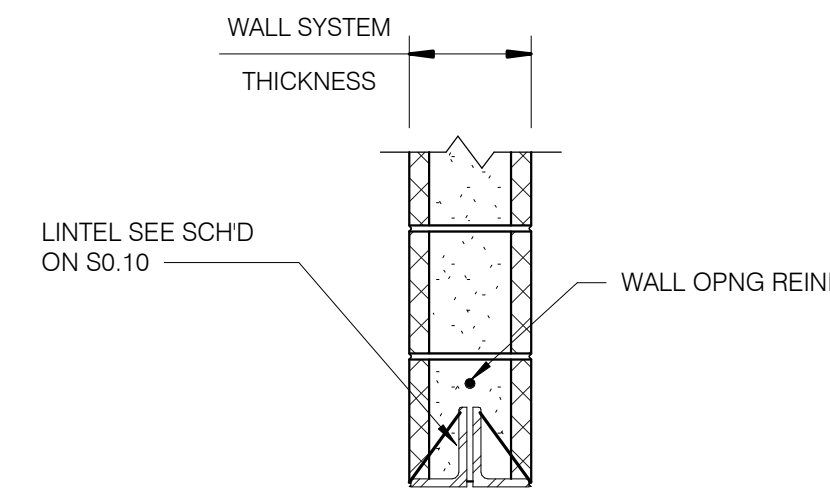
2 Typical Beam Bearing Detail  
3/4" = 1'-0"



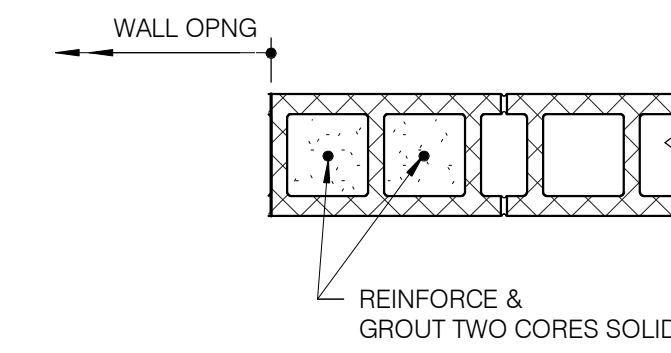
3 Typical Bond Beam Detail  
1" = 1'-0"



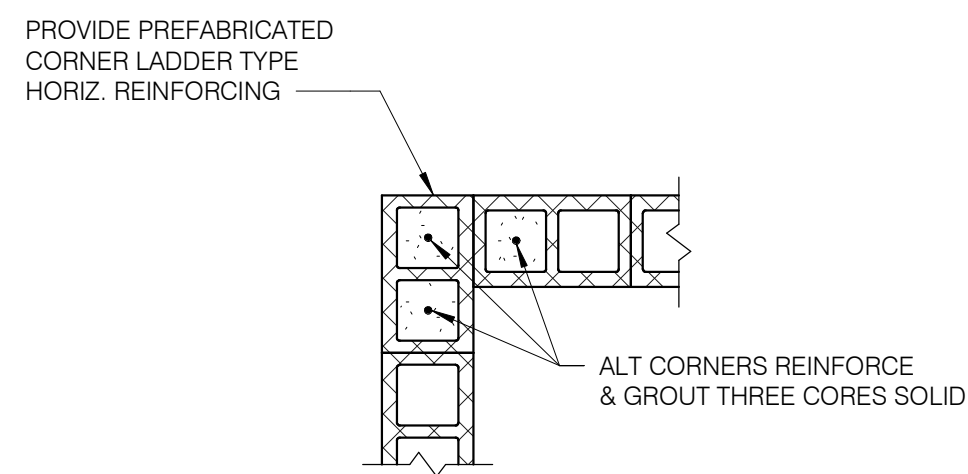
4 MASONRY CONTRACTION JOINT DETAIL  
SCALE: NONE



5 Typical Steel Lintel Detail  
1" = 1'-0"



6 Typical Wall Opng Detail  
1" = 1'-0"



7 CMU Corner Detail  
3/4" = 1'-0"

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Typical Masonry  
Details

**S5.00**

SHEET SCALE  
0" 1/2" 1" 2"



Plumbing Sheet List		
Sheet Number	Sheet Name	Discipline Order
P0.00	Plumbing Symbols, Notes & Abbreviations	4 - PLUMBING
P1.00	Below Ground Plumbing Plan	4 - PLUMBING
P1.01	First Floor Plumbing Plan	4 - PLUMBING
P2.00	Plumbing Details and Diagrams	4 - PLUMBING
P3.00	Plumbing Schedules	4 - PLUMBING
P4.00	Isometric Plumbing Plans	4 - PLUMBING

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Plumbing Symbols,  
Notes &  
Abbreviations

**P0.00**

SHEET SCALE  
0" 1/2" 1" 2"

ABBREVIATIONS (ALL ABBREVIATIONS ARE NOT NECESSARILY USED)		PLUMBING SYMBOLS (ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)		GENERAL NOTES																															
AG	ABOVE GRADE	—	EXISTING PLUMBING	1.	THE WORK SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES.																														
ADD	ADDENDUM	—	NEW PLUMBING	2.	FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING ANY DEMOLITION, FABRICATION, OR CONSTRUCTION WORK.																														
ADDL	ADDITIONAL	⊙	CONNECT NEW TO EXISTING. VERIFY FIELD CONDITIONS.	3.	ALL DIMENSIONS AND ELEVATIONS NOTED AS 'REF' ARE FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO USING THEM FOR ANY CONSTRUCTION ACTIVITIES.																														
ADJ	ADJUSTABLE	⊞	CIRCUIT SETTER	4.	CONTRACTOR SHALL REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THESE DRAWINGS ARE TO BE REPORTED TO THE ENGINEER AND OWNER PRIOR TO COMMENCING THE WORK.																														
AFF	ABOVE FINISH FLOOR	⊞	BALL VALVE OR SHUT-OFF VALVE	5.	CONTRACTOR SHALL CONTACT LOCAL UTILITIES AS REQUIRED. SUBMIT ALL NOT PRIOR SUBMITTED PERMIT DOCUMENTS, QUALIFICATIONS, ETC. AND BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH PERMITS, UTILITY EXTENSIONS, TAP-INSPECTIONS, ETC. THE ENGINEER SHALL SUBMIT CONSTRUCTION DOCUMENTS FOR OWNER'S REVIEW AND PERMIT PLAN REVIEW; HOWEVER, THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS, AND ALL ASSOCIATED PERMIT AND INSPECTION COSTS/FEES.																														
AFG	ABOVE FINISH GRADE	⊞	SPRING CHECK VALVE	6.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL DEBRIS RESULTING FROM DEMOLITION AND/OR CONSTRUCTION WORK ON THIS PROJECT.																														
ALT	ALTERNATE	⊞	PRESSURE REDUCING VALVE (PRV)	7.	EACH SUB-CONTRACTOR IS RESPONSIBLE TO COORDINATE AND SCHEDULE THEIR WORK WITH THE GENERAL CONTRACTOR AND ALL OTHER CONTRACTORS WHOSE WORK WILL BE AFFECTED BY THEIR WORK.																														
BFF	BELOW FINISH FLOOR	⊞	RPZ VALVE OR BACKFLOW PREVENTER	8.	PARKING AT THE SITE BY CONSTRUCTION PERSONNEL SHALL BE LIMITED TO THE LOCATIONS DESIGNATED BY THE OWNER/OWNER'S REPRESENTATIVE.																														
BFG	BELOW FINISH GRADE	⊞	HAMMER ARRESTOR (PISTON TYPE)	<b>LINETYPE LEGEND</b> ———— SANITARY - SAN - - - - - SANITARY BELOW GRADE- SAN - - - - - VENT - V - - - - - NATURAL GAS - NG - - - - - HOT WATER - HW - - - - - HOT WATER RETURN - HWR - - - - - COLD WATER - CW																															
BG	BELOW GRADE	⊞	HAMMER ARRESTOR (BELLOWS TYPE)																																
CA	COMPRESSED AIR	⊞	PIPE REDUCER FITTING																																
CO	CLEANOUT	⊞	END CAP																																
CO2	CARBON DIOXIDE	⊞	PIPE CONNECTION																																
COL	COLUMN	⊞	FLOW DIRECTION ARROW																																
CONT	CONTINUATION	⊞	PIPING ELBOW DOWN																																
CW	COLD WATER	⊞	PIPING ELBOW UP OR PIPING RISER UP & DOWN																																
DN	DOWN	⊞	PIPING TEE DOWN																																
DW	DISHWASHER	⊞	PIPING TEE UP OR PIPING RISER UP & DOWN																																
EC	ELECTRICAL CONTRACTOR	⊞	HOSE BIB OR WALL HYDRANT																																
EO	EQUAL	⊞	FLOW METER																																
FCO	FLOOR CLEANOUT	⊞	PRESSURE REGULATOR																																
FD	FLOOR DRAIN	⊞	CIRCULATING PUMP (HOT WATER RETURN)																																
FLR	FLOOR	⊞	NEW TO EXISTING PIPE CONNECTION																																
FT	FOOT, FEET	⊞	KEYNOTE SYMBOL																																
F	FURNACE	⊞	REVISION MARK																																
G	GAS	<b>FIRESTOP SCHEDULE</b> <table border="1"> <thead> <tr> <th>PENETRATION</th> <th>RATING</th> <th>U.L. SYSTEM</th> </tr> </thead> <tbody> <tr> <td>INSULATED METAL PIPE THROUGH GYPSUM BOARD</td> <td>1 OR 2 HOUR</td> <td>HILTI UL #WL5029 OR APPROVED EQUAL</td> </tr> <tr> <td>INSULATED METAL PIPE THROUGH MASONRY/CONCRETE</td> <td>2 HOUR</td> <td>HILTI UL #CAJ5091 OR APPROVED EQUAL</td> </tr> <tr> <td>INSULATED METAL PIPE THROUGH POURED CONCRETE FLOOR SLAB</td> <td>2 HOUR</td> <td>HILTI UL #CAJ5091 OR APPROVED EQUAL</td> </tr> <tr> <td>METAL PIPE THROUGH GYPSUM BOARD</td> <td>1 OR 2 HOUR</td> <td>HILTI UL #WL1054 OR APPROVED EQUAL</td> </tr> <tr> <td>METAL PIPE THROUGH MASONRY/CONCRETE</td> <td>2 HOUR</td> <td>HILTI UL #CAJ1291 OR APPROVED EQUAL</td> </tr> <tr> <td>METAL PIPE THROUGH POURED CONCRETE FLOOR SLAB</td> <td>3 HOUR</td> <td>HILTI UL #FA1017 OR APPROVED EQUAL</td> </tr> <tr> <td>PLASTIC PIPE THROUGH GYPSUM BOARD</td> <td>1 OR 2 HOUR</td> <td>HILTI UL #WL2078 OR APPROVED EQUAL</td> </tr> <tr> <td>PLASTIC PIPE THROUGH MASONRY/CONCRETE</td> <td>2 HOUR</td> <td>HILTI UL #CAJ2271 OR APPROVED EQUAL</td> </tr> <tr> <td>PLASTIC PIPE THROUGH POURED CONCRETE FLOOR SLAB</td> <td>3 HOUR</td> <td>HILTI UL #FA2054 OR APPROVED EQUAL</td> </tr> </tbody> </table>				PENETRATION	RATING	U.L. SYSTEM	INSULATED METAL PIPE THROUGH GYPSUM BOARD	1 OR 2 HOUR	HILTI UL #WL5029 OR APPROVED EQUAL	INSULATED METAL PIPE THROUGH MASONRY/CONCRETE	2 HOUR	HILTI UL #CAJ5091 OR APPROVED EQUAL	INSULATED METAL PIPE THROUGH POURED CONCRETE FLOOR SLAB	2 HOUR	HILTI UL #CAJ5091 OR APPROVED EQUAL	METAL PIPE THROUGH GYPSUM BOARD	1 OR 2 HOUR	HILTI UL #WL1054 OR APPROVED EQUAL	METAL PIPE THROUGH MASONRY/CONCRETE	2 HOUR	HILTI UL #CAJ1291 OR APPROVED EQUAL	METAL PIPE THROUGH POURED CONCRETE FLOOR SLAB	3 HOUR	HILTI UL #FA1017 OR APPROVED EQUAL	PLASTIC PIPE THROUGH GYPSUM BOARD	1 OR 2 HOUR	HILTI UL #WL2078 OR APPROVED EQUAL	PLASTIC PIPE THROUGH MASONRY/CONCRETE	2 HOUR	HILTI UL #CAJ2271 OR APPROVED EQUAL	PLASTIC PIPE THROUGH POURED CONCRETE FLOOR SLAB	3 HOUR	HILTI UL #FA2054 OR APPROVED EQUAL
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GAL	GALLON																																		
GC	GENERAL CONTRACTOR																																		
GD	GARBAGE DISPOSAL																																		
GPM	GALLONS PER MINUTE																																		
GW	GREASY WASTE																																		
HW	HOT WATER																																		
HWR	HOT WATER RETURN																																		
IE	INVERT ELEVATION																																		
LA	LABORATORY AIR																																		
LP	LIQUID PROPANE																																		
MA	MEDICAL AIR																																		
MANUF	MANUFACTURER																																		
MC	MECHANICAL CONTRACTOR																																		
MECH	MECHANICAL																																		
MIN	MINIMUM																																		
MV	MEDICAL VACUUM																																		
N	NITROGEN																																		
NG	NATURAL GAS																																		
NPCW	NON POTABLE COLD WATER																																		
NPHW	NON POTABLE HOT WATER																																		
NTS	NOT TO SCALE																																		
O2	OXYGEN																																		
OS	OPEN SITE DRAIN																																		
PC	PLUMBING CONTRACTOR																																		
PLBG	PLUMBING																																		
PRES	PRESSURE																																		
QTY	QUANTITY																																		
REG	REGULATOR																																		
RO	REVERSE OSMOSIS																																		
SAN	SANITARY																																		
SCH	SCHEDULE																																		
SCW	SOFT COLD WATER																																		
SHW	SOFT HOT WATER																																		
SPEC	SPECIFICATIONS																																		
SS	STAINLESS STEEL																																		
TEMP	TEMPORARY																																		
TW	TEPID WATER																																		
TYP	TYPICAL																																		
UNO	UNLESS NOTED OTHERWISE																																		
V	VENT																																		
VTR	VENT THRU ROOF																																		
W/	WITH																																		
W/O	WITHOUT																																		
WA	WASTE ANESTHESIA																																		
WCO	WALL CLEANOUT																																		
WC	WATER CLOSET																																		
WC	WATER COLUMN																																		
X	EXISTING																																		

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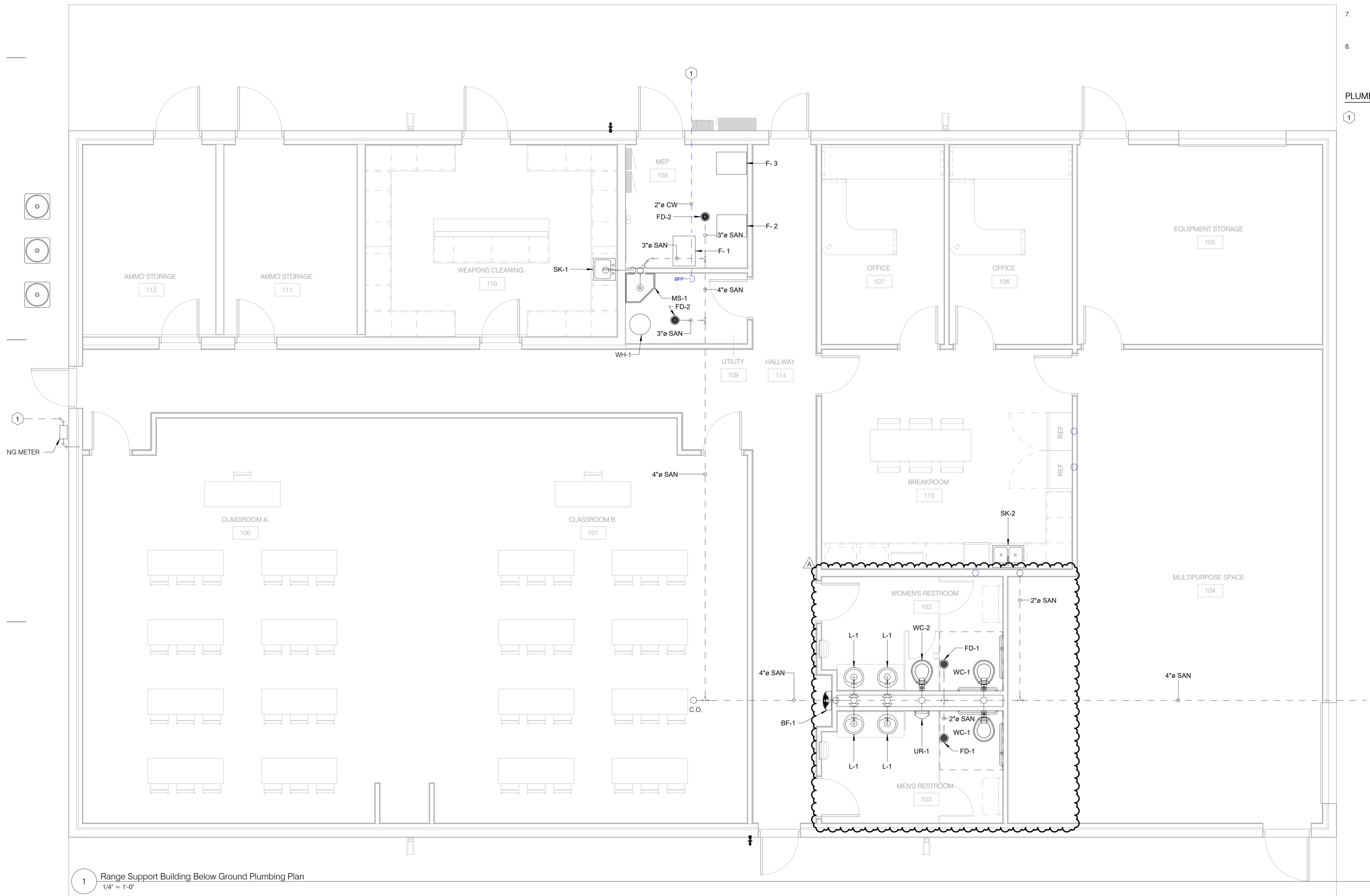


**PLUMBING GENERAL NOTES**

1. THE PLUMBING CONTRACTOR SHALL COORDINATE FINAL ELECTRICAL REQUIREMENTS OF EQUIPMENT PRIOR TO ORDERING.
2. PVC PIPING SHALL NOT BE ALLOWED WITHIN A RETURN AIR PLENUM. ALL PIPING UTILIZED IN A RETURN AIR PLENUM IS TO BE LABELED BY THE MANUFACTURER WITH A FLAME-SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS AS TESTED UNDER ASTM E 84.
3. REFER TO ARCHITECTURAL PLANS AND DETAILS FOR EXACT DIMENSIONS, ELEVATIONS AND LOCATIONS OF EQUIPMENT, FIXTURES, OPENINGS, FIRE AND SMOKE WALL AND RATED STRUCTURES.
4. PIPING INSTALLATION SHALL BE COORDINATED WITH OTHER TRADES AS TO NOT HINDER ACCESS TO EQUIPMENT. INSTALLATION OF PIPING SHALL ENABLE ACCESS TO VALVES ABOVE CEILING WHILE ALLOWING MINIMUM OF 6" CLEAR FOR CEILING REMOVAL.
5. PLUMBING VENTS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ALL OUTDOOR AIR INTAKES.
6. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR DESIGN REQUIREMENTS OF PENETRATIONS. CONTRACTOR TO TAKE EXTRA CARE AS TO NOT CORE THROUGH EXISTING STRUCTURAL MEMBERS.
7. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR THE EXACT LOCATIONS OF FLOOR DRAINS REQUIRED TO SERVE MECHANICAL EQUIPMENT.
8. REFER TO PLUMBING ISOMETRICS FOR ANY SANITARY AND VENT PIPING AND SIZES NOT INDICATED ON THE PLANS.

**PLUMBING PLAN KEYNOTES**

- 1 SEE CIVIL UTILITY PLANS FOR PIPING CONTINUATION.



1 Range Support Building Below Ground Plumbing Plan  
1/4" = 1'-0"

Client:  
City of Elyria

131 Court St - Suite 101  
Elyria, Ohio 44035

Project:  
Public Safety  
Training Facility  
Range Building

Garden Street  
Elyria, Ohio 44035

Revisions:

A 11.07.2024 ADDENDUM A  
09.26.2024 For Construction

Project Number: 5039 01 23  
Drawn by: BMH  
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Below Ground  
Plumbing Plan

**P1.00**

SHEET SCALE  
0" 1/2" 1" 2"

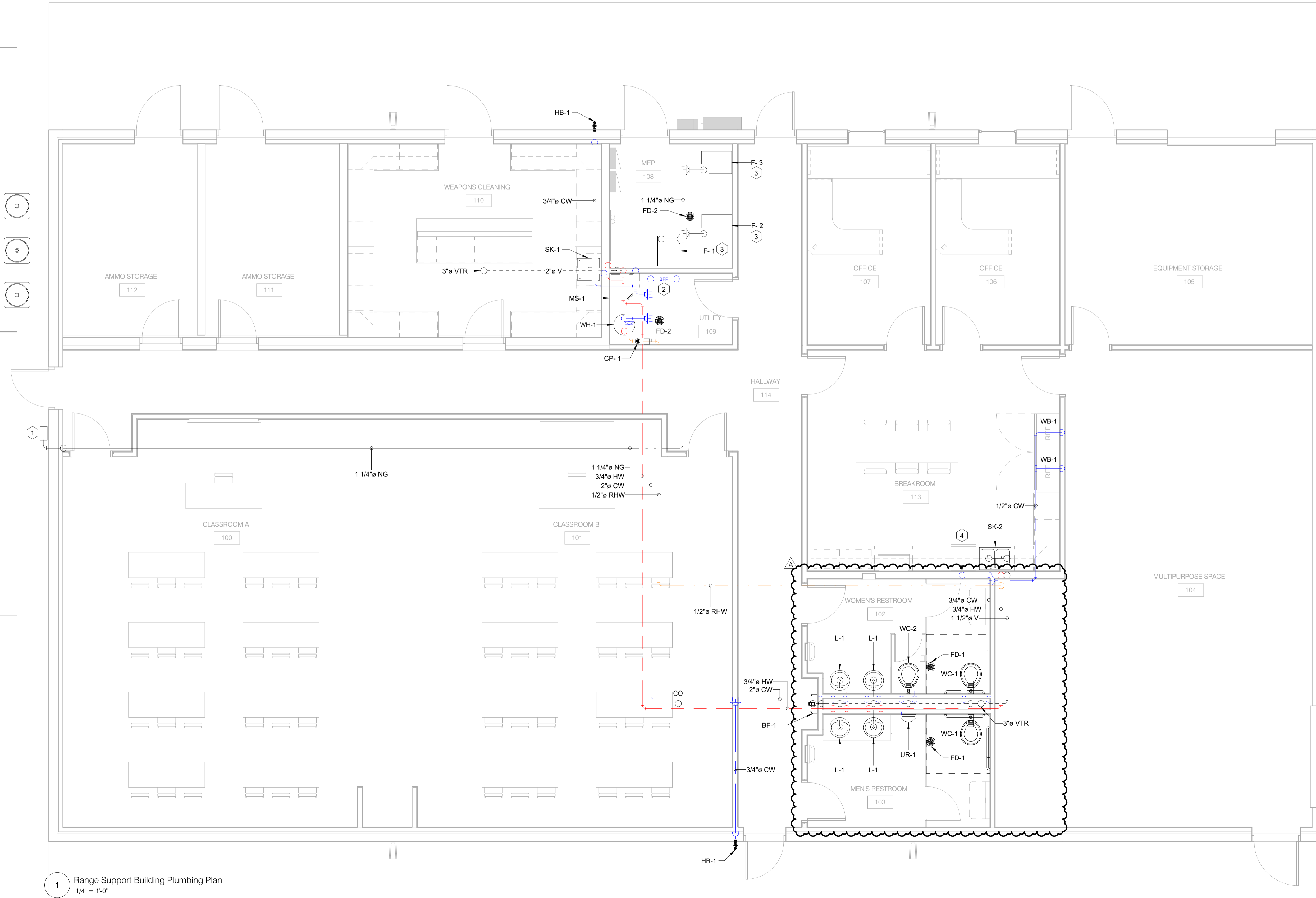


**PLUMBING GENERAL NOTES**

1. THE PLUMBING CONTRACTOR SHALL COORDINATE FINAL ELECTRICAL REQUIREMENTS OF EQUIPMENT PRIOR TO ORDERING.
2. PVC PIPING SHALL NOT BE ALLOWED WITHIN A RETURN AIR PLENUM. ALL PIPING UTILIZED IN A RETURN AIR PLENUM IS TO BE LABELED BY THE MANUFACTURER WITH A FLAME-SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS AS TESTED UNDER ASTM E 84.
3. REFER TO ARCHITECTURAL PLANS AND DETAILS FOR EXACT DIMENSIONS, ELEVATIONS AND LOCATIONS OF EQUIPMENT, FIXTURES, OPENINGS, FIRE AND SMOKE WALL AND RATED STRUCTURES.
4. PIPING INSTALLATION SHALL BE COORDINATED WITH OTHER TRADES AS TO NOT HINDER ACCESS TO EQUIPMENT. INSTALLATION OF PIPING SHALL ENABLE ACCESS TO VALVES ABOVE CEILING WHILE ALLOWING MINIMUM OF 8" CLEAR FOR CEILING REMOVAL.
5. PLUMBING VENTS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ALL OUTDOOR AIR INTAKES.
6. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR DESIGN REQUIREMENTS OF PENETRATIONS. CONTRACTOR TO TAKE EXTRA CARE AS TO NOT CORE THROUGH EXISTING STRUCTURAL MEMBERS.
7. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR THE EXACT LOCATIONS OF FLOOR DRAINS REQUIRED TO SERVE MECHANICAL EQUIPMENT.
8. REFER TO PLUMBING ISOMETRICS FOR ANY SANITARY AND VENT PIPING AND SIZES NOT INDICATED ON THE PLANS.

**PLUMBING PLAN KEYNOTES**

1. PROVIDE NATURAL GAS METER AND APPURTENANCES PER LOCAL GAS COMPANY. ROUTE PIPING FROM METER INTO BUILDING THROUGH WEATHERPROOF SLEEVE ABOVE BUILDING FOUNDATION. SEE CIVIL UTILITY PLANS FOR UNDERGROUND PIPING CONTINUATION.
2. PROVIDE DOMESTIC WATER METER AND APPURTENANCES PER LOCAL WATER COMPANY. PROVIDE ASSE 1013 BACKFLOW PREVENTER. ROUTE ASSE 1013 DRAIN TO ADJACENT MOP SINK.
3. PROVIDE 3/4" NATURAL GAS PIPING TO FURNACE. PROVIDE ISOLATION VALVE, DIRT LEG AND UNION. (80 MBH)
4. EXTEND 1/2" DOMESTIC WATER LINE UNDER CABINETS TO COFFEE MAKER AND TERMINATE WITH WATTS SD-3 VACUUM BREAKER.



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First Floor Plumbing  
Plan

**P1.01**

SHEET SCALE  
0" 1/2" 1" 2"

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1 Range Support Building Plumbing Plan  
1/4" = 1'-0"



Client:

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Project:

Public Safety  
Training Facility  
Range Building

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Revisions:

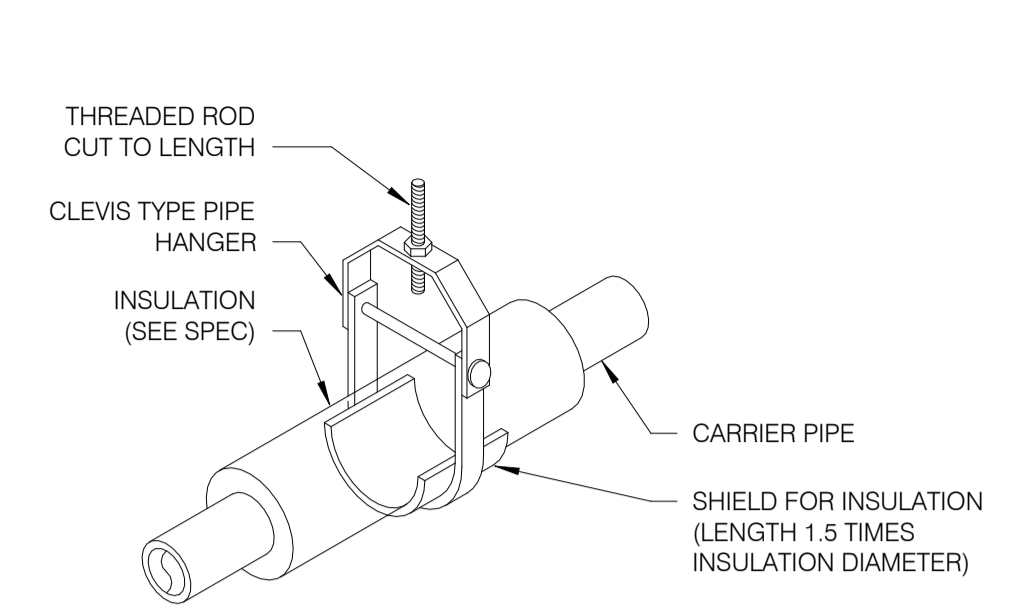
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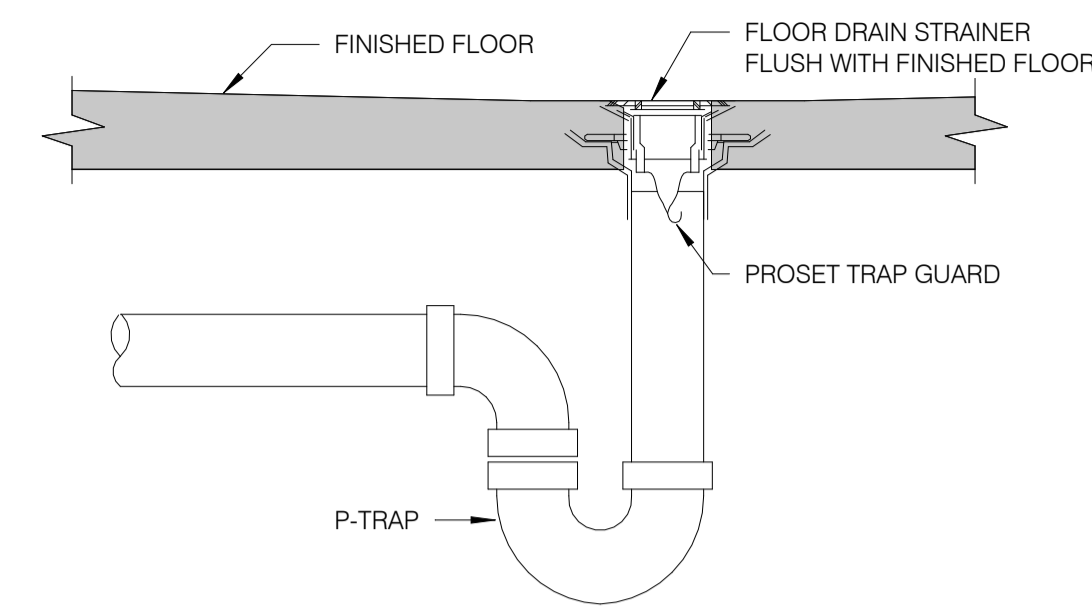
Plumbing Details  
and Diagrams

**P2.00**

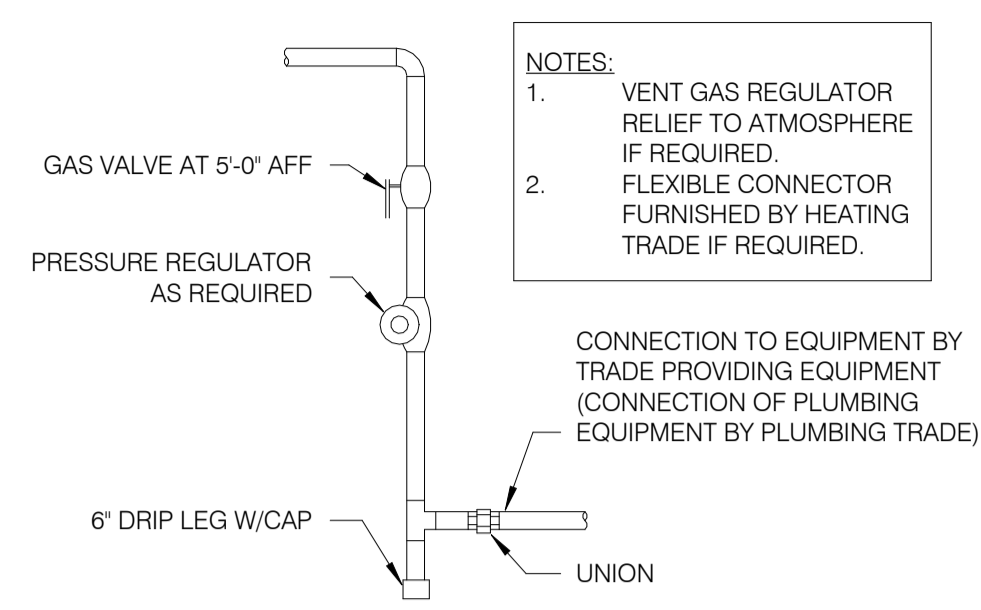
SHEET SCALE  
0" 1/2" 1" 2"



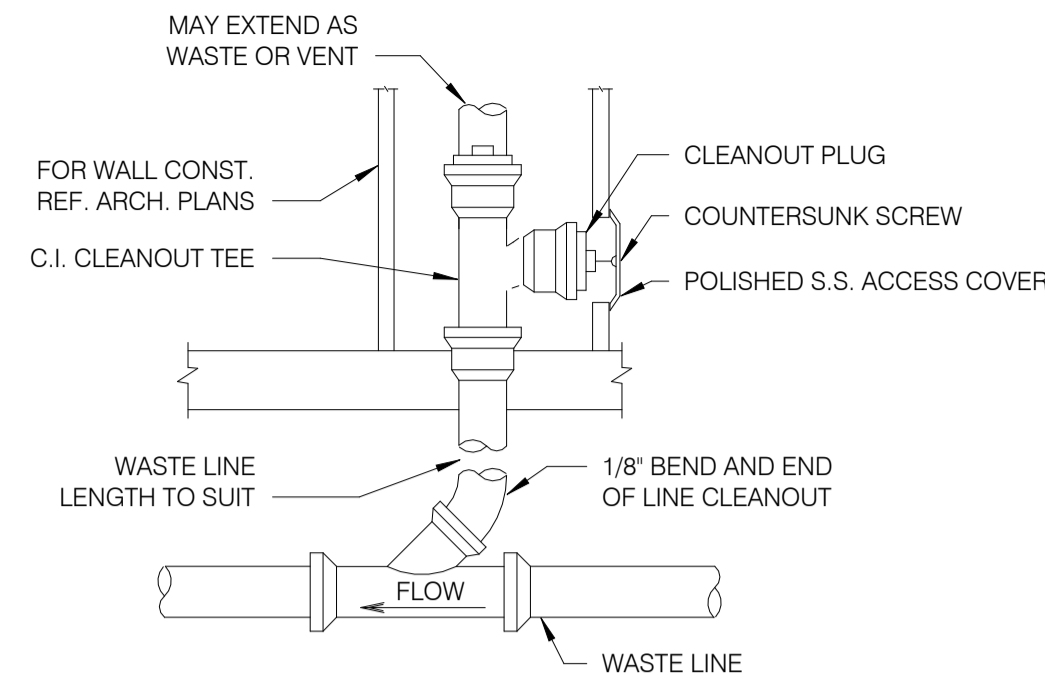
**1** Clevis Type Pipe Hanger Detail  
P2.00 NO SCALE



**2** Floor Drain Detail  
P2.00 NO SCALE

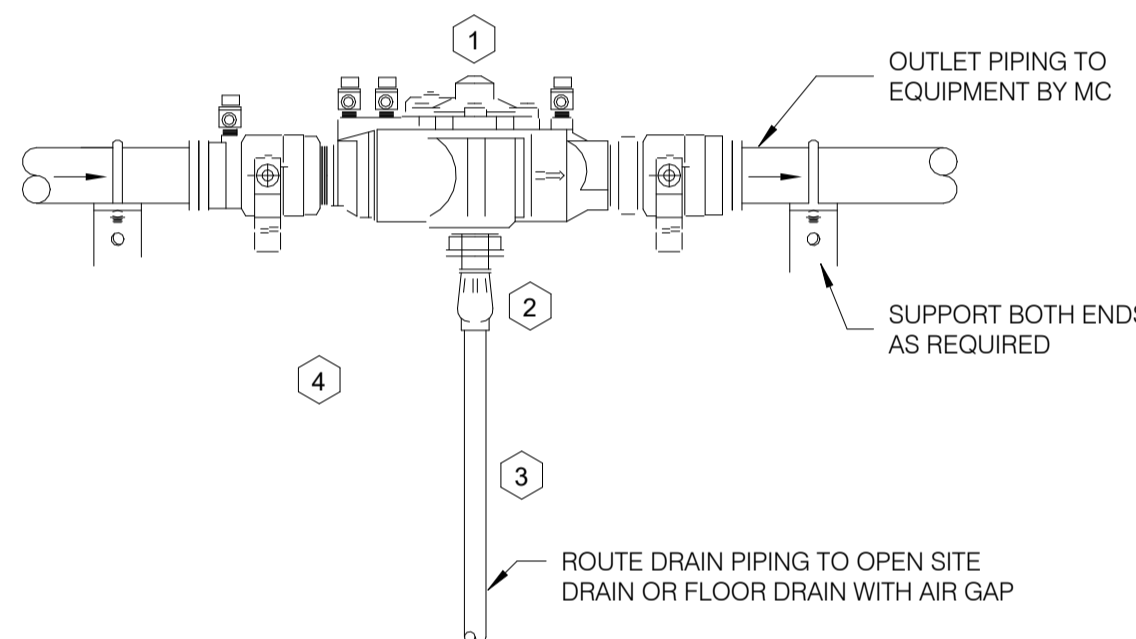


**3** Typical Gas Connection Detail  
P2.00 NO SCALE

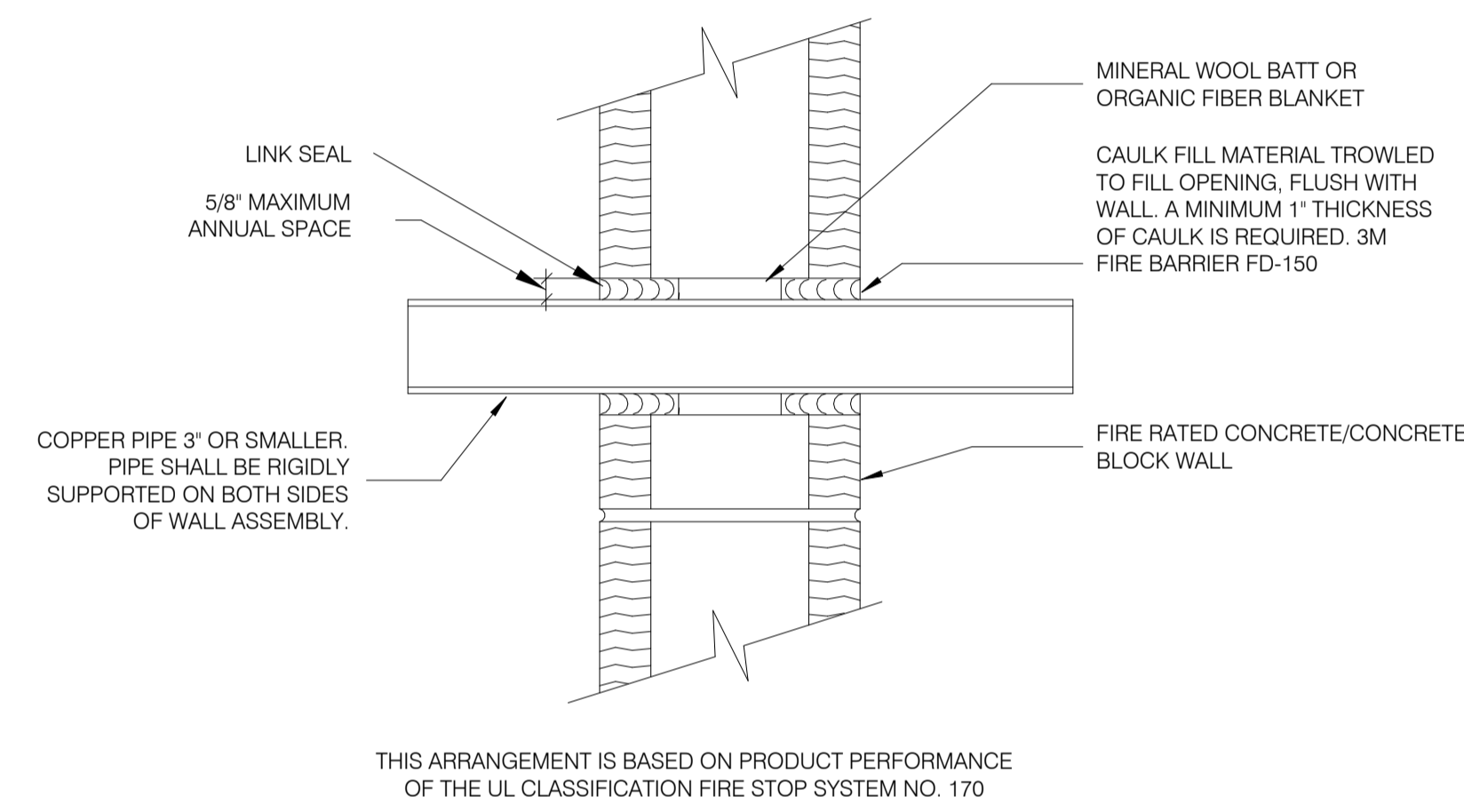


**4** Wall Cleanout Detail  
P2.00 NO SCALE

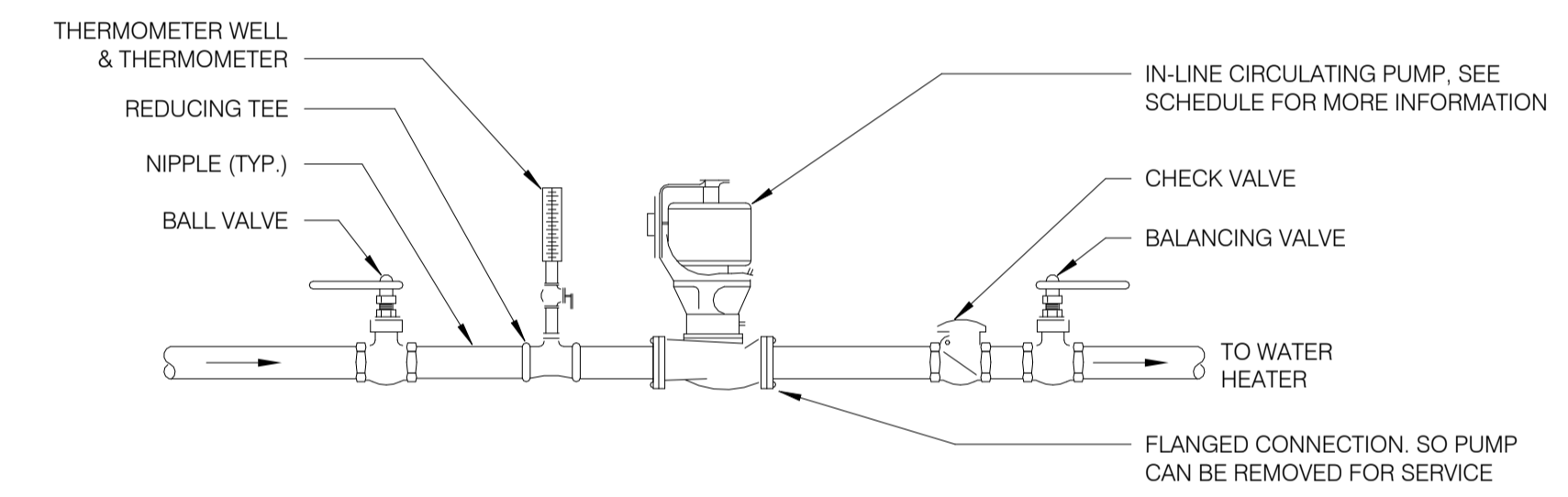
DETAIL KEYNOTES	
1	PROVIDE ADEQUATE CLEARANCE ABOVE THE UNIT FOR THE OPERATION OF VALVES AROUND THE UNIT FOR REPAIR AND TESTING.
2	THE AIR GAP FITTING SHALL BE PROVIDED WITH THE BACKFLOW PREVENTER.
3	FOR ONE BACKFLOW PREVENTER, THE MINIMUM DRAIN PIPING SIZE IS THE SAME SIZE AS THE AIR GAP BACKFLOW PREVENTER PORT SIZE.
4	A BACKFLOW PREVENTER INSTALLED HORIZONTALLY MORE THAN 5 FT. ABOVE THE FLOOR SHALL BE PROVIDED WITH A PLATFORM CAPABLE OF SUPPORTING A TESTER OR MAINTENANCE PERSON.



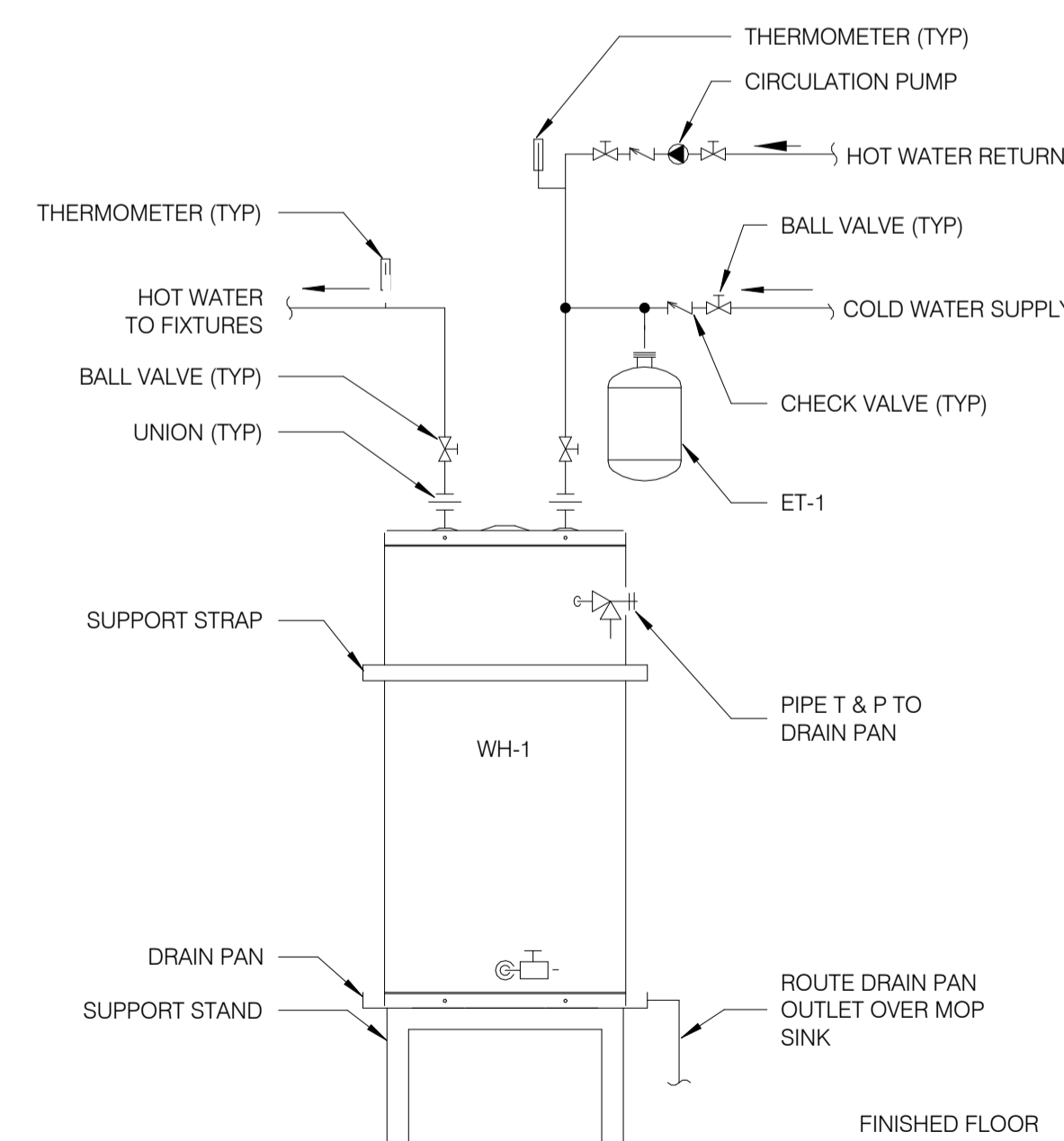
**7** Reduced Pressure Backflow Preventer Detail  
P2.00 NO SCALE



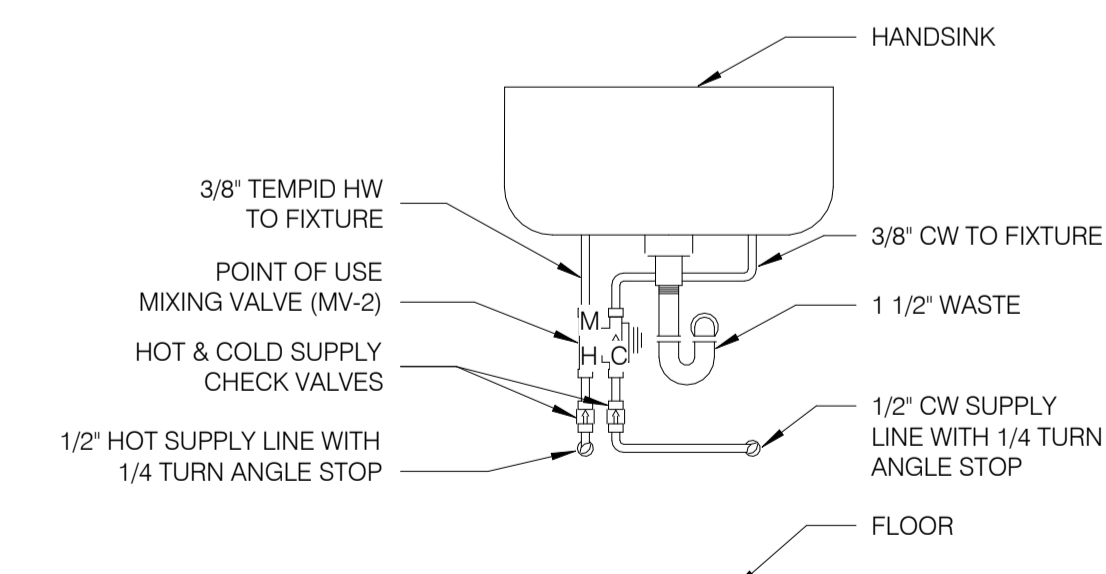
**6** Rated Penetration for Piping Through Conc. Wall  
P2.00 NO SCALE



**5** Hot Water Recirculation Pump Detail  
P2.00 NO SCALE



**9** Electric Water Heater Detail  
P2.00 NO SCALE



**8** Point of Use Mixing Valve Detail  
P2.00 NO SCALE

NOTES:  
1. ALL EXPOSED PIPE SHALL BE POLISHED CHROME PLATED BRASS AND TRIMMED WITH POLISHED CHROME SHALLOW ESCUTCHEONS.  
2. INSTALL TRUEBRO TRAP WRAP.  
3. VERIFY LAVATORY HEIGHTS FOR EACH AREA WITH ARCHITECTURAL PLANS.

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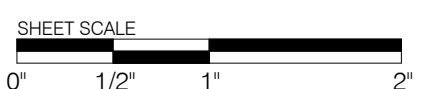
Revisions:

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Plumbing Schedules

**P3.00**



**NG LOAD SCHEDULE**

TAG	EQUIPMENT TYPE	LOAD (CFH)
F-1	FURNACE	80
F-2	FURNACE	80
F-3	FURNACE	80
TOTAL CONNECTED LOAD (CFH)		240
ESTIMATED DEVELOPED LENGTH (FT)		125
REQUESTED NATURAL GAS PRESSURE*		7 IN WC

NOTES:  
1. NATURAL GAS PIPE SIZING BASED ON 2018 INTERNATIONAL FUEL GAS CODE, SECTION 402.4.2 BRANCH LENGTH METHOD AND TABLE 402.4 FOR SCHEDULE 40 METALLIC PIPE.  
2. CONTRACTOR SHALL INSTALL GAS METER, PRESSURE REGULATOR, AND ALL ASSOCIATED VALVING AS PER THE LOCAL NATURAL GAS COMPANY REQUIREMENTS.  
3. OWNER IS REQUIRED TO SUBMIT FINAL APPLICATION TO NATURAL GAS UTILITY FOR SERVICE. OWNER/CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER IMMEDIATELY IF THERE IS AN ISSUE WITH THE REQUESTED SERVICE.  
\*THE ABOVE REQUESTED PRESSURE INDICATED IS FOR THE AFTER METER HOUSELINE.

**PLUMBING FIXTURE SCHEDULE**

TAG	FIXTURE	MANUFACTURER	MODEL	MOUNT	COLD	HOT	WASTE	VENT	DESCRIPTION	NOTES
L-1	UNDERMOUNT LAVATORY (ADA)	SLOAN	SS-3001	UNDER	-	-	1-1/2"	1-1/2"	ADA COMPLIANT INSTALLATION, 16-1/2" X 19-1/2" X 7-1/5" VITREOUS CHINA WALL UNDERMOUNT OVAL LAVATORY. PROVIDE WITH ALL MOUNTING HARDWARE. PROVIDE WITH P-TRAP, TAILPIECE, ANGLE VALVES AND TRUEBRO ADA LAV GUARD.	1,2
	FAUCET	SLOAN	EBF-650	DECK	1/2"	1/2"	-	-	ADA COMPLIANT, DECK MOUNTED, BATTERY POWERED SENSOR FAUCET, 0.5 GPM. PROVIDE WITH ASSE 1070 BELOW DECK THERMOSTATIC MIXING VALVE SIMILAR TO SLOAN MIX-135-A.	1,2,3
SK-1	SINK	ELKAY	DLR221910PD	DROP IN	-	-	1-1/2"	1-1/2"	22"x19-1/2"x10-1/8" SINGLE BOWL, 18 GAUGE 304 STAINLESS STEEL CENTER DRAIN, DROP IN, PROVIDE WITH ALL MOUNTING HARDWARE. PROVIDE WITH P-TRAP, TAILPIECE AND ANGLE VALVES.	1,2
	FAUCET	ELKAY	LKD232SBH5C	DECK	1/2"	1/2"	-	-	8" CENTERSET CONCEALED DECK MOUNT FAUCET WITH GOOSENECK SPOUT AND 4" LEVER HANDLES + STOP CHROME. 1.5 GPM.	1,2
SK-2	SINK	ELKAY	LRAD292265PD	DROP IN	-	-	1-1/2"	1-1/2"	29"x22"x6-1/2" DOUBLE BOWL, 18 GAUGE 304 STAINLESS STEEL, REAR CENTER DRAIN, DROP IN, PROVIDE WITH ALL MOUNTING HARDWARE. PROVIDE WITH P-TRAP, TAILPIECE AND ANGLE VALVES. PROVIDE WITH 1/2 HP DISPOSAL EQUAL TO INSINKERATOR BADGER 5.	1,2
	FAUCET	ELKAY	LK6000	DECK	1/2"	1/2"	-	-	SINGLE HOLE DECK MOUNT KITCHEN FACUET WITH PULLDOWN SPRAY, FORWARD ONLY LEVER HANDLE. 1.5 GPM.	1,2
WC-1	ADA WATER CLOSET	SLOAN	ST-2459	WALL	1"	-	4"	2"	ADA COMPLIANT INSTALLATION, VITREOUS CHINA WALL MOUNTED WATER CLOSET, 1.28 GPF, ELONGATED BOWL, 1-1/2" IPS TOP SPUD INLET. PROVIDE WITH BEMIS 1955CT OPEN FRONT TOILET SEAT. PROVIDE WITH SLOAN G2 8111-1.28 BATTERY POWERED FLUSHMETER.	1,2
WC-2	WATER CLOSET	SLOAN	ST-2459	WALL	1"	-	4"	2"	STANDARD INSTALLATION, VITREOUS CHINA WALL MOUNTED WATER CLOSET, 1.28 GPF, ELONGATED BOWL, 1-1/2" IPS TOP SPUD INLET. PROVIDE WITH BEMIS 1955CT OPEN FRONT TOILET SEAT. PROVIDE WITH SLOAN G2 8111-1.28 BATTERY POWERED FLUSHMETER.	1,2
UR-1	URINAL	SLOAN	SU-7009	WALL	3/4"	-	2"	1-1/2"	ADA COMPLIANT INSTALLATION, VITREOUS CHINA WALL MOUNTED WASH DOWN URINAL, 0.125 GPF, INTEGRAL FLUSHING RIM, 3/4" IPS TOP SPUD INLET. PROVIDE WITH SLOAN ECOS 8186-0.125 BATTERY POWERED FLUSHMETER.	1,2
FD-1	EMERGENCY FLOOR DRAIN	ZURN	Z5XX	FLOOR	-	-	2"	-	DUCO-COATED CAST IRON BODY WITH GALVANIZED STEEL COVER, VANDAL PROOF, PROVIDE WITH ZURN MODEL Z1072 ASSE 1072 TRAP SEAL DEVICE	1
FD-2	FLOOR DRAIN	ZURN	Z5XX	FLOOR	-	-	3"	-	DUCO-COATED CAST IRON BODY WITH GALVANIZED STEEL COVER, VANDAL PROOF, PROVIDE WITH ZURN MODEL Z1072 ASSE 1072 TRAP SEAL DEVICE	1
WB-1	REFRIGERATOR WALL BOX	OATEY	37703	-	3/8"	-	-	-	ICE MAKER/REFRIGERATOR WALL SUPPLY BOX WITH HAMMER ARRESTOR AND VALVE.	1
MS-1	MOP SINK	FIAT	MSB 2424	FLOOR	3/4"	3/4"	3"	1-1/2"	MOLDED STONE, PROVIDE WITH 830-AA SERVICE FAUCET-CHROME PLATED WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK AND 3/4" HOSE THREAD ON SPOUT	1
BF-1	BOTTLE FILLER	ELKAY	LZ8WSSMC	WALL	1/2"	-	1-1/2"	1-1/2"	REFRIGERATED SURFACE MOUNT BOTTLE FILLING STATION, FILTERED, 8 GALLONS PER HOUR CHILLING CAPACITY, 115V/1PH/60HZ, INSTALL PER ADA REQUIREMENTS.	1,2
CO-1	INTERIOR CLEANOUT	ZURN	ZS14XX	WALL/FLOOR	-	-	SEE PLANS	SEE PLANS	DUCO-COATED CAST IRON BODY WITH STAINLESS STEEL COVER, VANDAL PROOF	1
CO-2	EXTERIOR CLEANOUT	EAST JORDAN	#3675	FLOOR	-	-	SEE PLANS	SEE PLANS	CLEANOUT BOX AND HEAVY DUTY COVER ENGRAVE LID SANITARY OR STORM. FLUSH RISER CAPPED WITH DOUBLE GASKETED CAP.	1
MV-1	MIXING VALVE	SLOAN	MIX-135-A	-	1/2"	1/2"	-	-	LEAD FREE, UNDER SINK THERMOSTATIC MIXING VALVE, DUAL CHECK VALVES, INTEGRAL STRAINER	1
HB-1	HOSE BIBB	MIFAB	MIFY-20-WC	WALL	3/4"	-	-	-	LEAD FREE, NON-FREEZE WALL HYDRANT WITH NICKEL BRONZE BOX, KEY OPERATED, INTEGRAL VACUUM BREAKER, FINAL SELECTION TO BE APPROVED BY OWNER.	1

NOTES:  
1. ACCEPTABLE MANUFACTURERS: KOHLER, AMERICAN STANDARD, SLOAN, CHICAGO FAUCETS, TOTO, WATTS, STERLING, MOEN, ZURN  
2. UNIT TO CONFORM TO ICC/ANSI A 117.1 - 2009.  
3. PROVIDE ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE.

**ELECTRIC DOMESTIC WATER HEATER SCHEDULE**

TAG	MANUFACTURER	MODEL	GALLONS	UEF	RECOVER @ 90 DEG RISE (GPH)	MAX WATTAGE	V	PH	PRESSURE RELIEF (PSIG)	SIZE (ØxH")	WEIGHT FULL (LBS)	NOTES
WH-1	AO SMITH	DEL-40	38	0.92	7	6KW	240	1	150	23"x32"	500	1,2

NOTES:  
1. ALTERNATE MANUFACTURERS SHALL BE APPROVED BY OWNER AND ENGINEER.  
2. PROVIDE WITH FLOOR STAND AND DRAIN PAN. ROUTE DRAIN TO MOP SINK.

**EXPANSION TANK SCHEDULE**

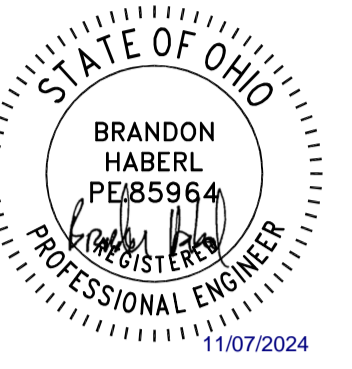
MARK	LOCATION	GALLONS	MANUFACTURER & MODEL NUMBER	FULL WEIGHT (LBS)	NOTES
ET-1	MECHANICAL ROOM	2	WESSELS T-5	-	1

NOTES:  
1. ACCEPTABLE MANUFACTURERS: AMTROL, ARMSTRONG, BELL & GOSSETT, TACO, THRUSS.

**HOT WATER RECIRCULATION PUMP SCHEDULE**

TAG	LOCATION	SYSTEM	PUMP TYPE	DESIGN FLOW (GPM)	HEAD (FT)	MAXIMUM SHUT OFF HEAD (FT)	MOTOR					PUMP SIZE		WEIGHT (LBS)	MANUFACTURER & MODEL NO.	NOTES
							VOLTS/□	AMPS	HP	BHP	RPM	SUCTION (IN)	DISCHARGE (IN)			
CP-1	SEE PLANS	HOT WATER RETURN	INLINE	3	14	15	115/1	1	1/25	-	3250	3/4	3/4	8	TACO 008	1,2

NOTES:  
1. PROVIDE WITH AQUASTAT.  
2. FURNISHED AND INSTALLED BY PC. WIRED BY EC.



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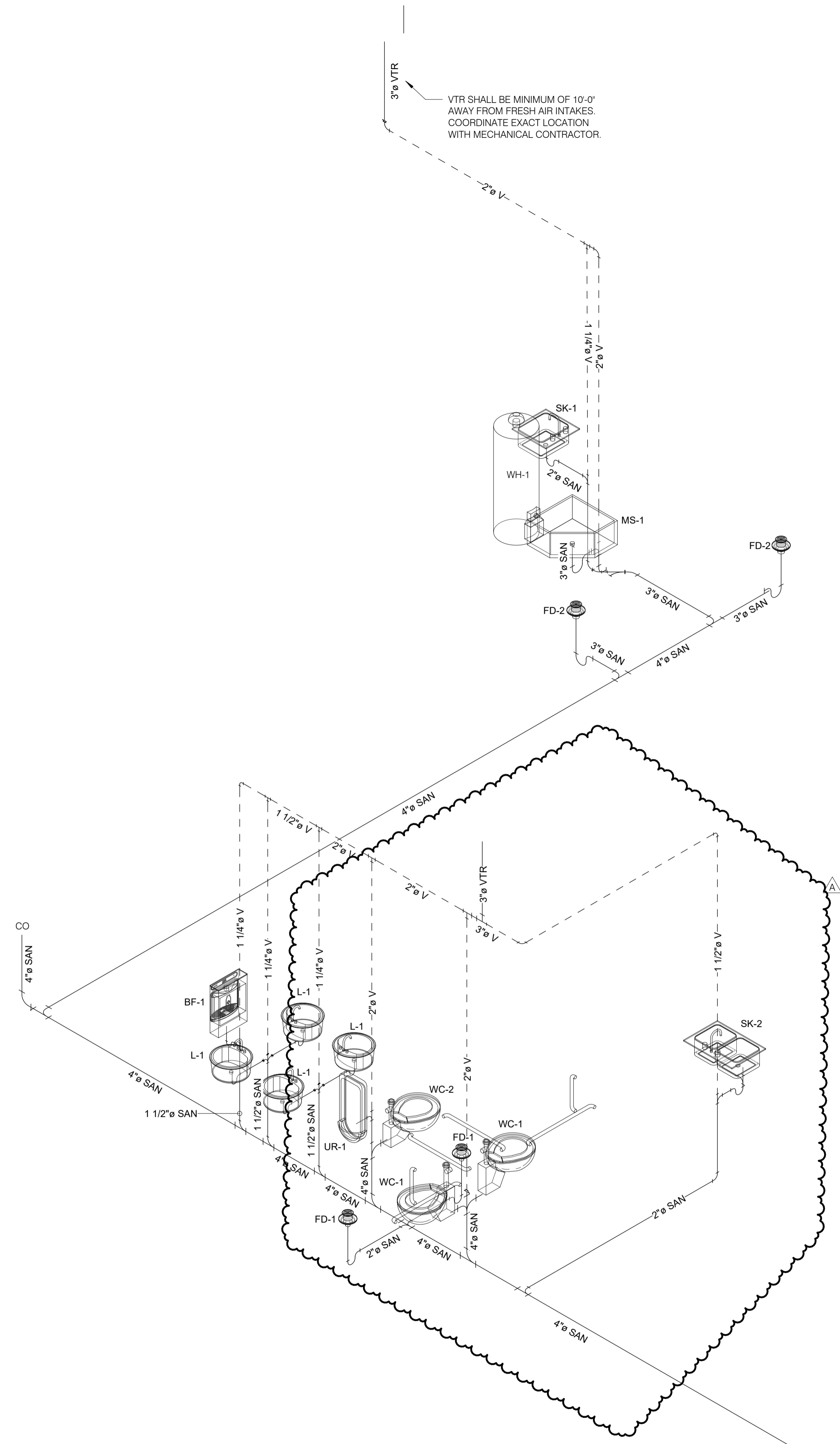
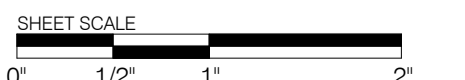
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Isometric Plumbing  
Plans

**P4.00**





Client:  
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Mechanical  
Symbols, Notes &  
Abbreviations

**M0.00**

SHEET SCALE  
0" 1/2" 1" 2"

ABBREVIATIONS (ALL ABBREVIATIONS ARE NOT NECESSARILY USED)	MECHANICAL SYMBOLS (ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)	GENERAL NOTES
AABC ASSOCIATED AIR BALANCE COUNCIL ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATING, & AIR CONDITIONING ENGINEERS	— EXISTING HVAC	<ol style="list-style-type: none"> <li>THE WORK SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES.</li> <li>FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING ANY DEMOLITION, FABRICATION, OR CONSTRUCTION WORK.</li> <li>ALL DIMENSIONS AND ELEVATIONS NOTED AS '(REF)' ARE FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO USING THEM FOR ANY CONSTRUCTION ACTIVITIES.</li> <li>CONTRACTOR SHALL REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THESE DRAWINGS ARE TO BE REPORTED TO THE ENGINEER AND OWNER PRIOR TO COMMENCING THE WORK.</li> <li>CONTRACTOR SHALL CONTACT LOCAL UTILITIES AS REQUIRED. SUBMIT ALL NOT PRIOR SUBMITTED PERMIT DOCUMENTS, QUALIFICATIONS, ETC. AND BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH PERMITS, UTILITY EXTENSIONS, TAP-INSPECTIONS, ETC. THE ENGINEER SHALL SUBMIT CONSTRUCTION DOCUMENTS FOR OWNERS REVIEW AND PERMIT PLAN REVIEW; HOWEVER, THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS, AND ALL ASSOCIATED PERMIT AND INSPECTION COSTS/FEES.</li> <li>THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL DEBRIS RESULTING FROM DEMOLITION AND/OR CONSTRUCTION WORK ON THIS PROJECT.</li> <li>EACH SUB-CONTRACTOR IS RESPONSIBLE TO COORDINATE AND SCHEDULE THEIR WORK WITH THE GENERAL CONTRACTOR AND ALL OTHER CONTRACTORS WHOSE WORK WILL BE AFFECTED BY THEIR WORK.</li> <li>PARKING AT THE SITE BY CONSTRUCTION PERSONNEL SHALL BE LIMITED TO THE LOCATIONS DESIGNATED BY THE OWNER/OWNERS REPRESENTATIVE.</li> </ol>
ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS	— NEW HVAC	
CFM CUBIC FEET PER MINUTE	⊙ CONNECT NEW TO EXISTING. VERIFY FIELD CONDITIONS.	
D OR Ø DIAMETER	⊙ ROUND SUPPLY DIFFUSER	
DN DOWN	⊠ SQUARE SUPPLY DIFFUSER	
EA EXHAUST AIR	⊠ SQUARE SUPPLY DIFFUSER WITH BLANK OFF	
FG FLOOR GRILLE	⊠ SQUARE RETURN GRILLE	
HVAC HEATING, VENTILATION, & AIR CONDITIONING	⊠ SQUARE EXHAUST GRILLE	
IECC INTERNATIONAL ENERGY CONSERVATION CODE	↔ MANUAL BALANCE DAMPER	
MAX MAXIMUM	⊙ THERMOSTAT	
MERV MINIMUM EFFICIENCY REPORTING	⊙ CARBON DIOXIDE SENSOR	
NEBB NATIONAL ENVIRONMENTAL BALANCING BUREAU	⬠ KEYNOTE SYMBOL	
NEC NATIONAL ELECTRIC CODE	⚠ REVISION MARK	
NFPA NATIONAL FIRE PROTECTION ASSOCIATION	→ AIRFLOW DIRECTION	
NG NATURAL GAS	↔ CONTINUATION	
NPT NATIONAL PIPE THREAD		
OA OUTSIDE AIR		
OCC OCCUPANCY		
OH OHIO		
OMC OHIO MECHANICAL CODE		
OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION		
PCF POUND-FORCE PER CUBIC FOOT		
PVC POLYVINYL CHLORIDE		
R RADIUS		
RA RETURN AIR		
REF REFERENCE		
REQ REQUIRED		
SA SUPPLY AIR		
SAN SANITARY WASTE		
SCH SCHEDULE		
SD SUPPLY DIFFUSER		
SF SQUARE FEET		
SMACNA SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION		
UL UNDERWRITERS LABORATORIES		
UV ULTRAVIOLET		
WG WATER GAUGE		

Mechanical Sheet List	
Sheet Number	Sheet Name
M0.00	Mechanical Symbols, Notes & Abbreviations
M1.01	First Floor Mechanical Plan
M2.00	Mechanical Details and Diagrams
M3.00	Mechanical Schedules
M1.02	Roof Mechanical Plan



**COMcheck Software Version COMcheckWeb**  
**Mechanical Compliance Certificate**

**Project Information**

Energy Code:	90.1 (2019) Standard
Project Title:	Range Support Building
Location:	Elyria, Ohio
Climate Zone:	5a
Project Type:	New Construction

Construction Site:	Owner/Agent:	Designer/Contractor:
Elyria, Ohio	City of Elyria 131 Court Street, Suite 101 Elyria, Ohio 44035	Sixmo Architecture 1101 Auburn Avenue Cleveland, Ohio 44113

**Mechanical Systems List**

**Quantity System Type & Description**

1 F-1 (Single Zone):  
Heating: 1 each - Central Furnace, Gas, Capacity = 100 kBtu/h  
Proposed Efficiency = 96.00% Et, Required Efficiency = 80.00 % Et (or 80% AFUE)  
Cooling: 1 each - Split System, Capacity = 60 kBtu/h, Air-Cooled Condenser, Air Economizer  
Proposed Efficiency = 17.00 SEER2, Required Efficiency = 13.40 SEER2  
Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00  
Fan System: F-1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:  
FAN 1 Supply, Constant Volume, 1800 CFM, 1.0 motor nameplate hp, 1.00 fan energy index

1 F-2 (Single Zone):  
Heating: 1 each - Central Furnace, Gas, Capacity = 80 kBtu/h  
Proposed Efficiency = 96.00% Et, Required Efficiency = 80.00 % Et (or 80% AFUE)  
Cooling: 1 each - Split System, Capacity = 47 kBtu/h, Air-Cooled Condenser  
Proposed Efficiency = 17.00 SEER2, Required Efficiency = 13.40 SEER2  
Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00  
Fan System: F-2 AND F-3 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:  
F-2 AND F-3 Supply, Constant Volume, 1400 CFM, 1.0 motor nameplate hp, 1.00 fan energy index

1 F-3 (Single Zone):  
Heating: 1 each - Central Furnace, Gas, Capacity = 80 kBtu/h  
Proposed Efficiency = 96.00% Et, Required Efficiency = 80.00 % Et (or 80% AFUE)  
Cooling: 1 each - Split System, Capacity = 47 kBtu/h, Air-Cooled Condenser  
Proposed Efficiency = 17.00 SEER2, Required Efficiency = 13.40 SEER2  
Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00  
Fan System: F-2 AND F-3 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:  
F-2 AND F-3 Supply, Constant Volume, 1400 CFM, 1.0 motor nameplate hp, 1.00 fan energy index

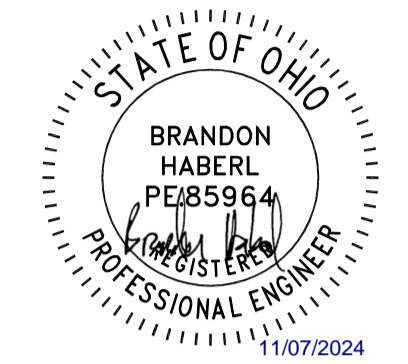
**Mechanical Compliance Statement**

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Brandon Habler - Senior Mechanical Engineer  
Name - Title: Brandon Habler Signature: *Brandon Habler* Date: 11.06.2024

Project Title: Range Support Building Report date: 11/06/24  
Data filename: Page 5 of 17





**MECHANICAL GENERAL NOTES**

1. THE MECHANICAL CONTRACTOR SHALL COORDINATE FINAL ELECTRICAL REQUIREMENTS OF EQUIPMENT PRIOR TO ORDERING.
2. PVC PIPING SHALL NOT BE ALLOWED WITHIN A RETURN AIR PLENUM. ALL PIPING UTILIZED IN A RETURN AIR PLENUM IS TO BE LABELED BY THE MANUFACTURER WITH A FLAME-SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS AS TESTED UNDER ASTM E 84.
3. REFER TO ARCHITECTURAL PLANS AND DETAILS FOR EXACT DIMENSIONS, ELEVATIONS AND LOCATIONS OF EQUIPMENT, FIXTURES, OPENINGS, FIRE AND SMOKE WALL AND RATED STRUCTURES.
4. DUCTWORK AND PIPING INSTALLATION SHALL BE COORDINATED WITH OTHER TRADES AS TO NOT HINDER ACCESS TO EQUIPMENT. INSTALLATION OF PIPING SHALL ENABLE ACCESS TO VALVES ABOVE CEILING WHILE ALLOWING MINIMUM OF 8' CLEAR FOR CEILING REMOVAL.
5. RETURN AIR DUCTWORK EXTENDING FROM EQUIPMENT SERVING A RETURN AIR PLENUM SHALL BE INTERNALLY INSULATED WITH 1/2" DUCT LINER FOR THE ENTIRE LENGTH OF THE DUCT FROM THE UNIT TO THE OUTLET.
6. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR DESIGN REQUIREMENTS OF PENETRATIONS.
7. EXPOSED SUPPLY AIR DUCTWORK WITHIN FINISHED SPACES SHALL BE INTERNALLY INSULATED PER THE SPECIFICATIONS. DUCTWORK SIZE SHOWN IS FREE AREA DIMENSION REQUIRED OF DUCTWORK.
8. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE PLUMBING CONTRACTOR THE EXACT LOCATIONS OF FLOOR DRAINS REQUIRED TO SERVE MECHANICAL EQUIPMENT.

**MECHANICAL PLAN KEYNOTES**

1. EXTEND EXHAUST DUCT THROUGH WALL AND TERMINATE WITH SEIHO MODEL SX OR EQUAL ALUMINUM VENT LOUVER. SEE PLANS FOR DUCT INLET SIZE.
2. INSTALL FURNACE PER MANUFACTURERS RECOMMENDATIONS. PROVIDE PRIMARY AND SECONDARY CONDENSATE AND ROUTE TO FLOOR DRAIN. PROVIDE FURNACE ECONOMIZER SIMILAR TO MICROMETL CUBE WITH INTEGRAL CONTROLS. ROUTE OUTSIDE AIR DUCT UP THROUGH ROOF AND PROVIDE GOOSENECK. PROVIDE FLUE AND COMBUSTION AIR VENT OUT THROUGH ROOF.
3. CONDENSING UNIT TO BE MOUNTED LEVEL IN ALL DIRECTIONS ON ROOF WITH EQUIPMENT STAND. EXTEND RL/RS LINES THROUGH WALL WITH SLEEVE AND SEAL WEATHERTIGHT. RL/RS LINES SHALL BE SIZED PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE 1-1/2 HOUR FIRE DAMPER AT 2 HOUR WALL PENETRATION.
5. EXTEND FULL SIZE RETURN AIR DUCT OUT TO RETURN AIR PLENUM. COVER RETURN AIR DUCT OPENING WITH WELDED WIRE MESH.
6. PROVIDE 24X18 RETURN AIR PATH THROUGH RATED WALL. PROVIDE 1-1/2 HOUR FIRE DAMPER AT WALL PENETRATION.
7. PROVIDE 1-1/2 HOUR FIRE DAMPER AT 1 HOUR WALL PENETRATION.

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Training Facility  
Range Building

Garden Street  
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Revisions:

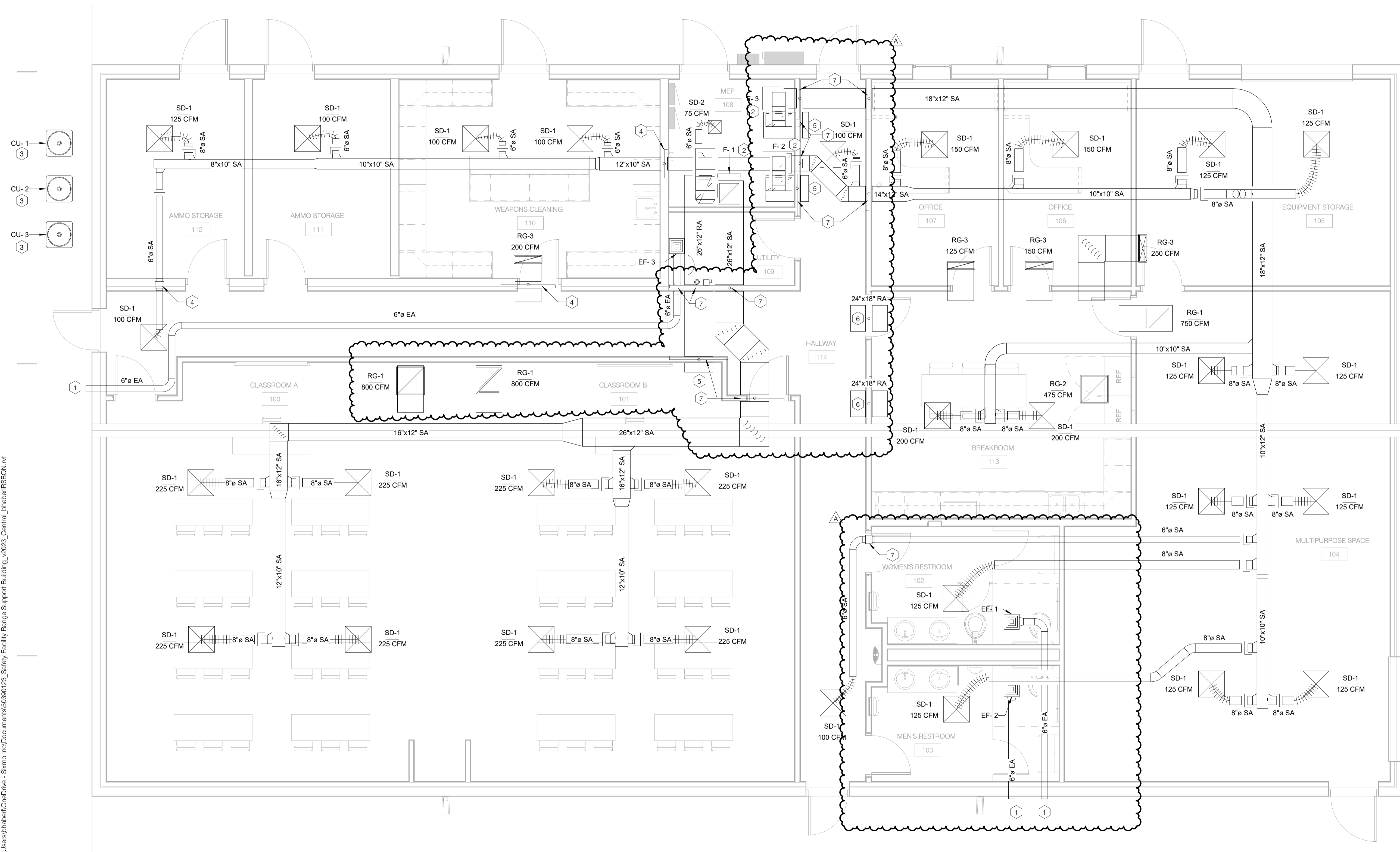
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09.26.2024 For Construction

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First Floor  
Mechanical Plan

**M1.01**

0' 1/2' 1' 2'



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1 Mechanical Plan  
M1.01 1/4" = 1'-0"

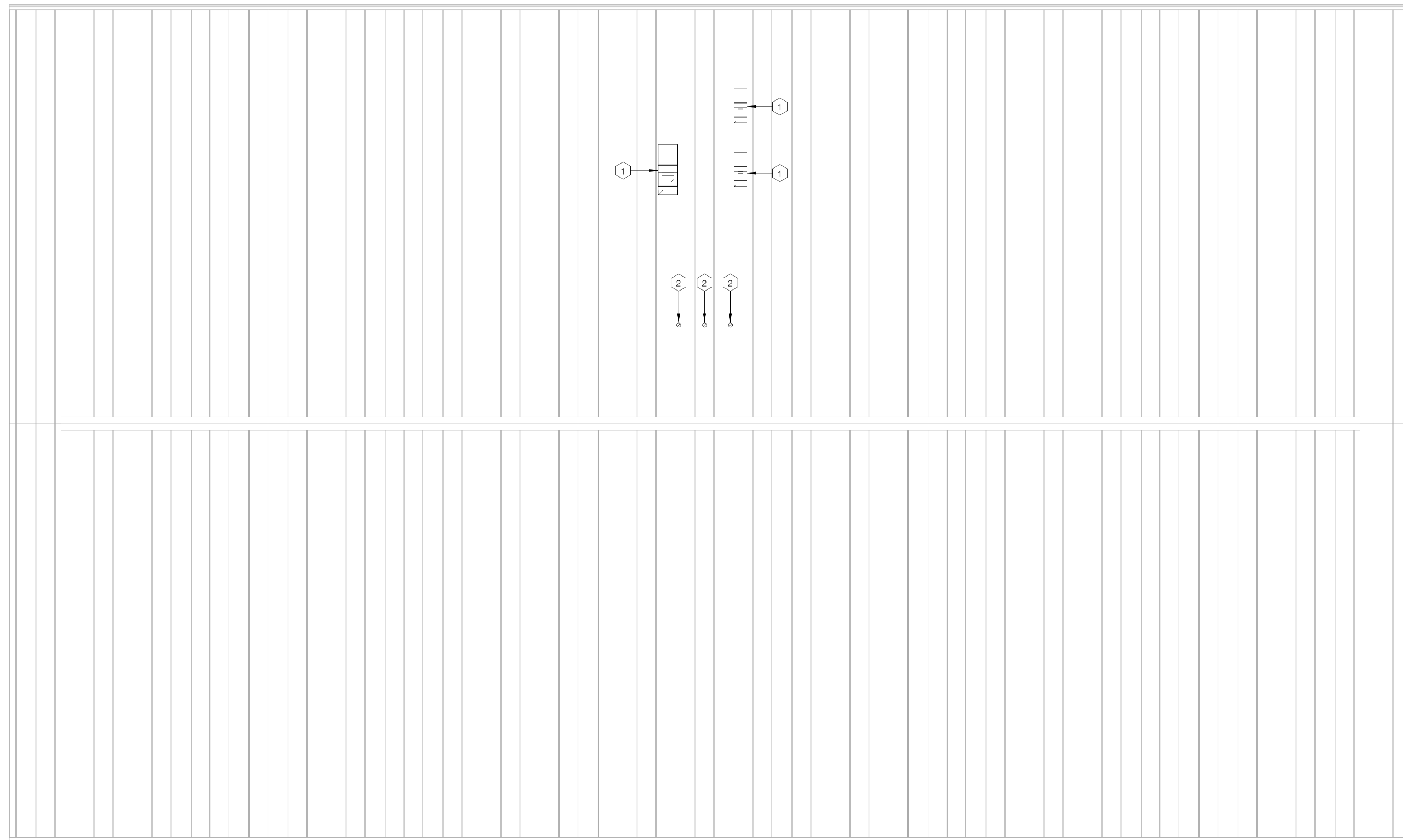


**MECHANICAL GENERAL NOTES**

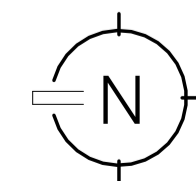
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6. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR DESIGN REQUIREMENTS OF PENETRATIONS.
7. EXPOSED SUPPLY AIR DUCTWORK WITHIN FINISHED SPACES SHALL BE INTERNALLY INSULATED PER THE SPECIFICATIONS. DUCTWORK SIZE SHOWN IS FREE AREA DIMENSION REQUIRED OF DUCTWORK.
8. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE PLUMBING CONTRACTOR THE EXACT LOCATIONS OF FLOOR DRAINS REQUIRED TO SERVE MECHANICAL EQUIPMENT.

**MECHANICAL PLAN KEYNOTES**

- ① ROUTE OUTSIDE AIR DUCT UP THROUGH ROOF TERMINATE WITH GOOSENECK. OUTSIDE AIR DUCT SHALL BE MINIMUM OF 10'-0" AWAY FROM ANY EXHAUSTS, FLUES OR PLUMBING VENTS.
- ② TENTATIVE LOCATON OF FURNACE CONCENTRIC VENT.



1 Roof Mechanical Plan  
M1.02 3/16" = 1'-0"



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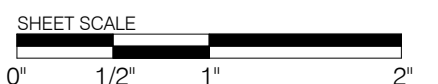
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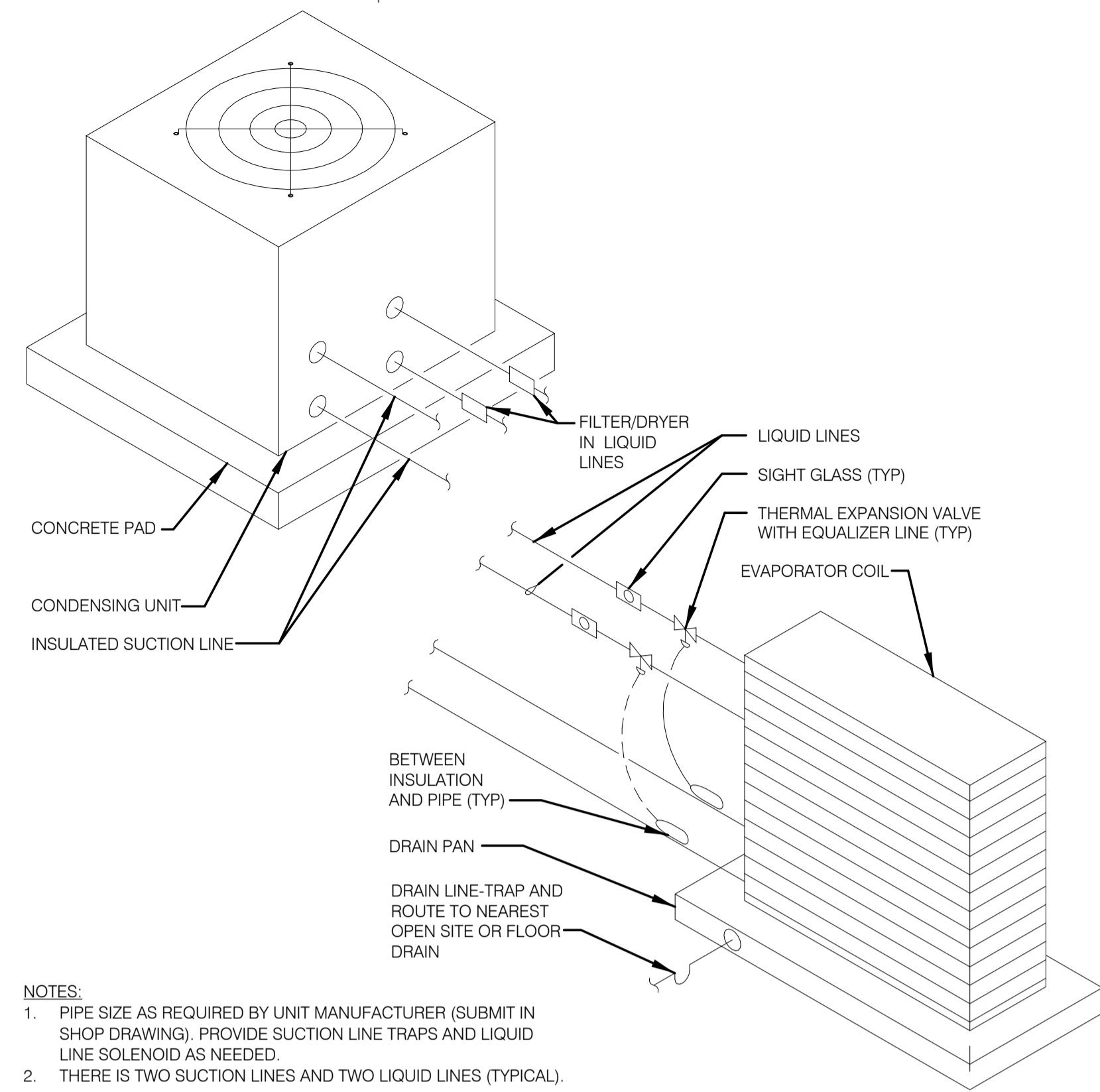
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**Roof Mechanical  
Plan**

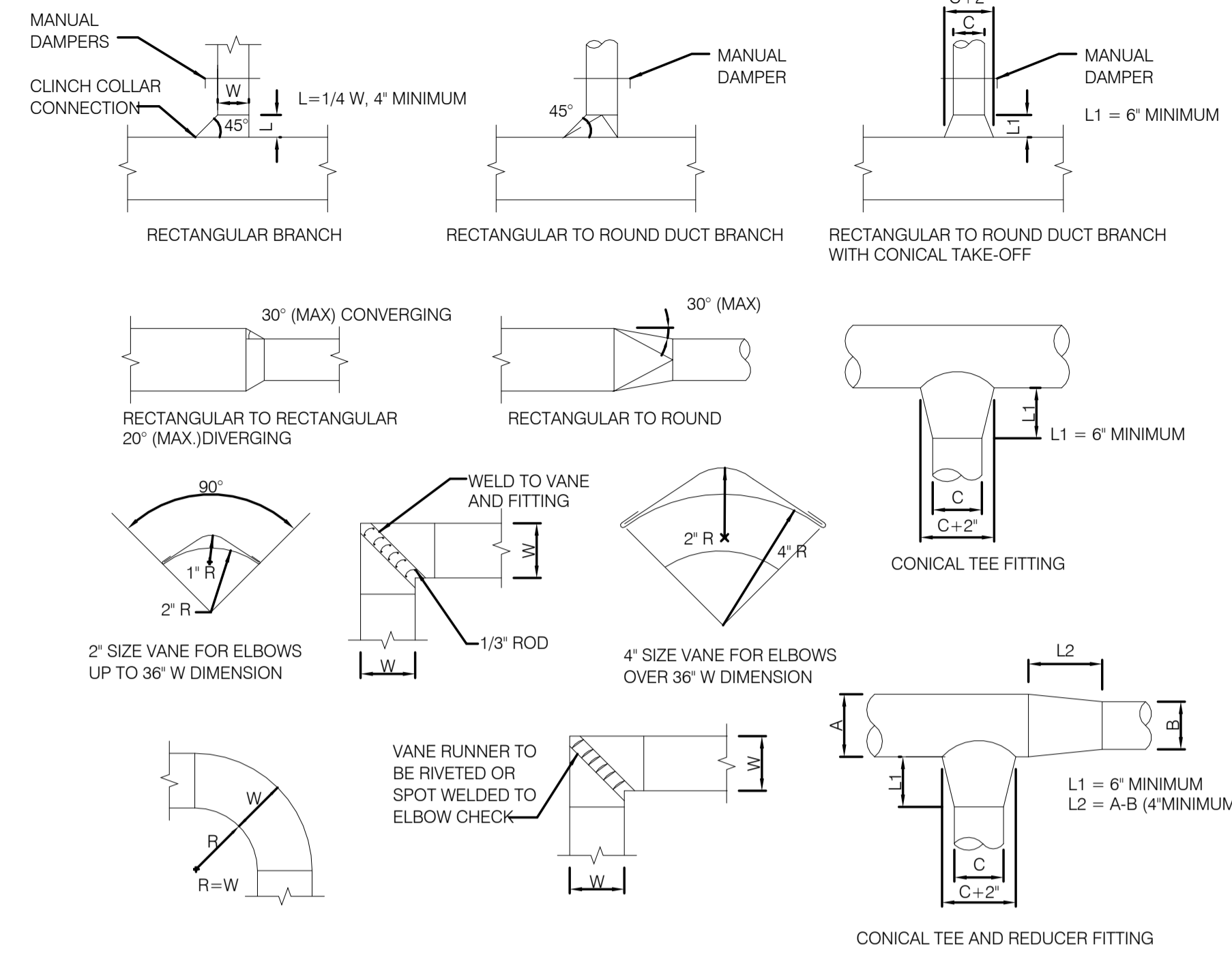
**M1.02**





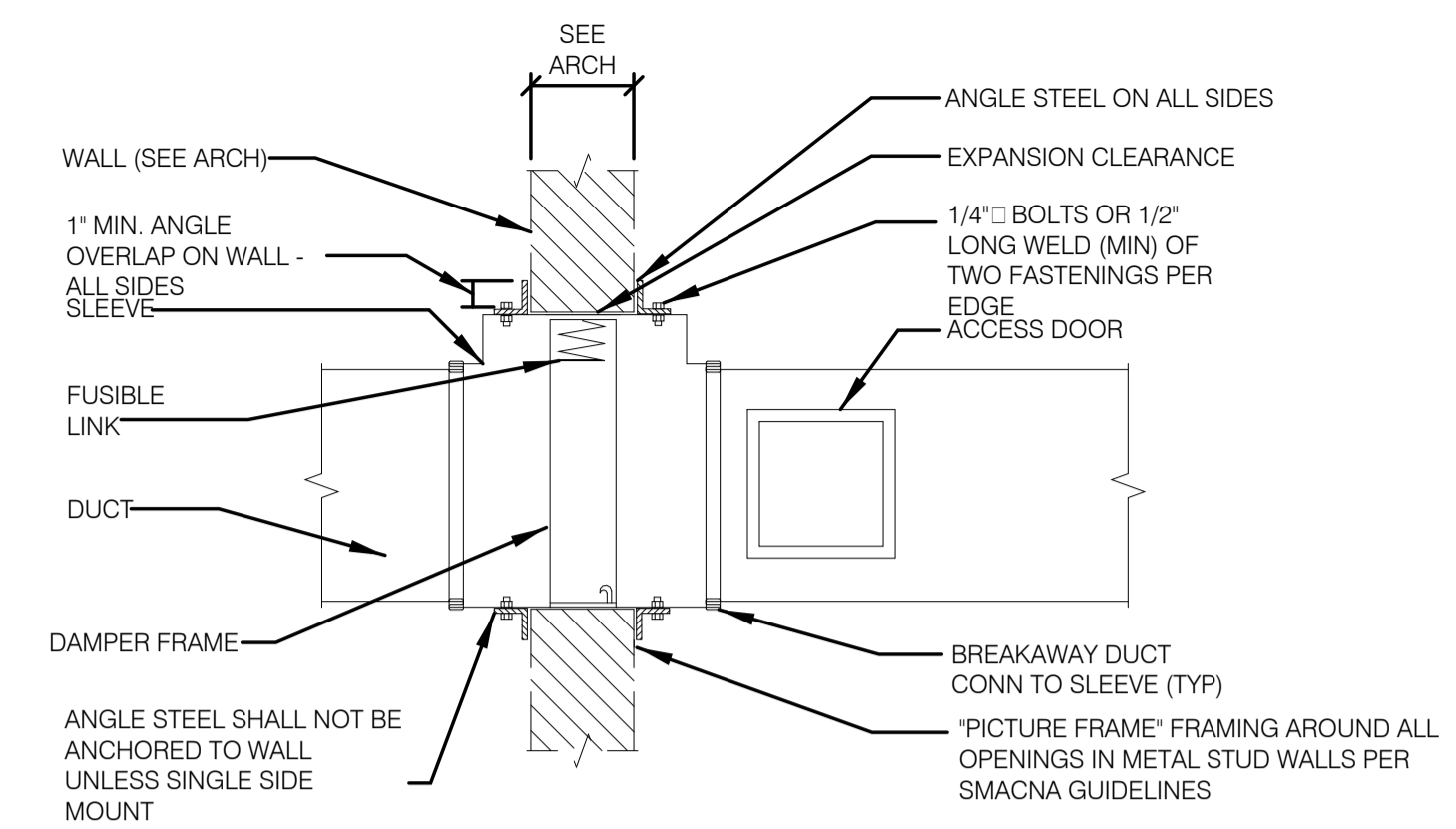
- NOTES:
- PIPE SIZE AS REQUIRED BY UNIT MANUFACTURER (SUBMIT IN SHOP DRAWING). PROVIDE SUCTION LINE TRAPS AND LIQUID LINE SOLENOID AS NEEDED.
  - THERE IS TWO SUCTION LINES AND TWO LIQUID LINES (TYPICAL).

**C REFRIGERANT PIPING COMPONENT DIAGRAM**  
SCALE: NONE



- NOTES:
- ALL DUCTWORK TO BE CONSTRUCTED TO MEET S.M.A.C.N.A. STANDARDS
  - REMOVE EVERY OTHER TURNING VANE IN RETURN/EXHAUST DUCTS.

**B TYPICAL DUCTWORK DETAILS**  
SCALE: NONE

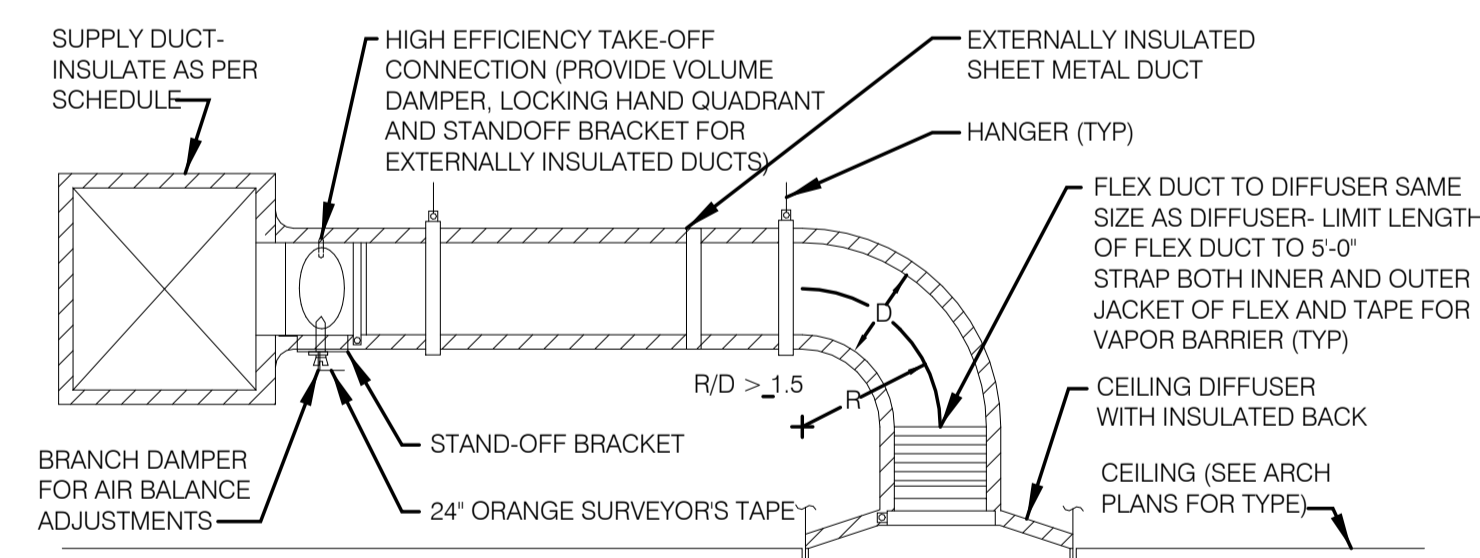


DUCT DIMENSION	MINIMUM GAUGE
0-12"	26
13-30"	24
31-54"	22
55-84"	20
85" AND UP	18

LENGTH	MINIMUM ANGLE SIZE	FASTENER LOCATION
0-48"	1 1/2" x 1 1/2" x 1/8"	8" ON CENTER
49-96"	2" x 2" x 1/8"	6" ON CENTER
96" AND OVER	2 1/2" x 2 1/2" x 3/16"	6" ON CENTER

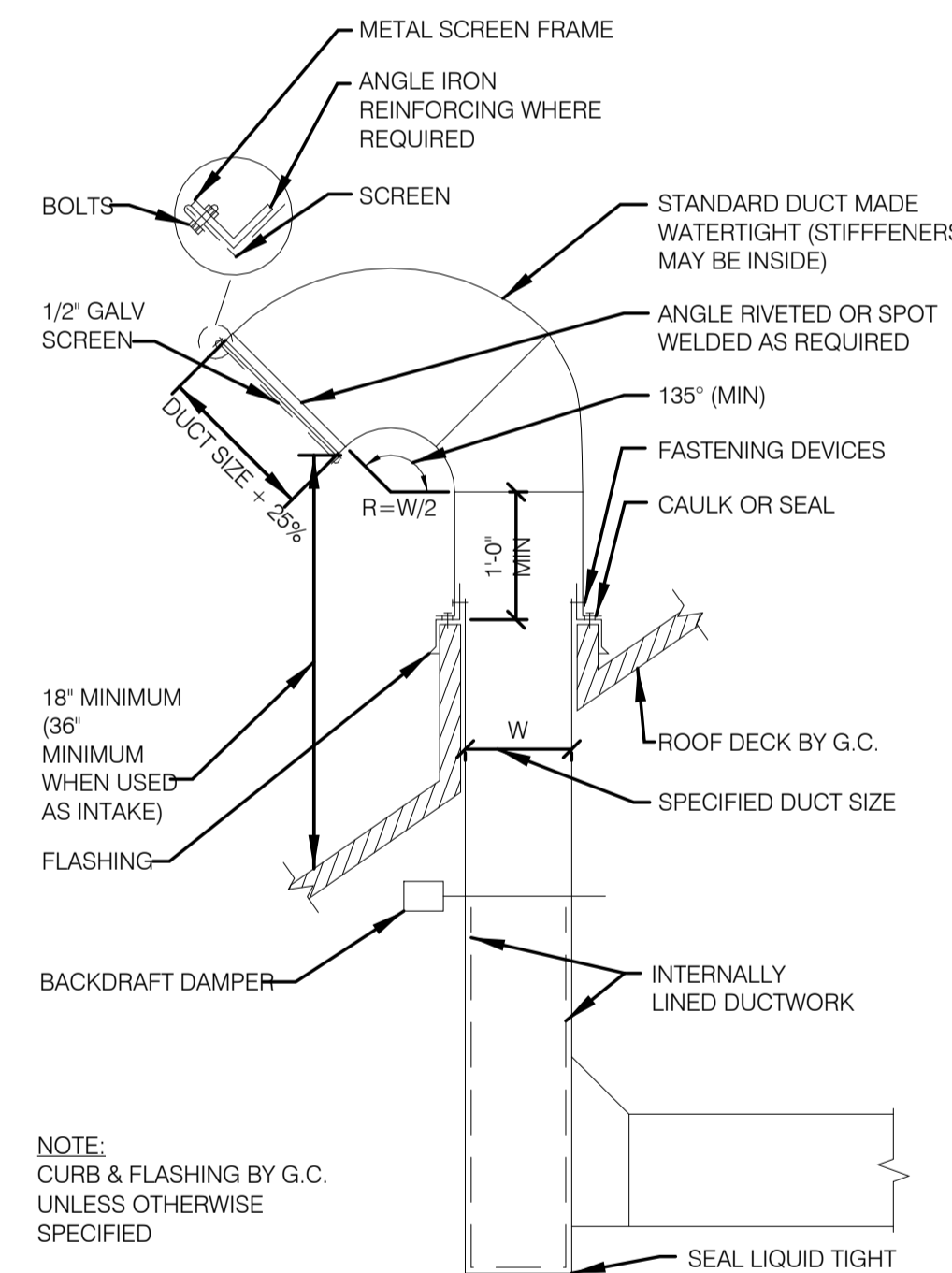
- NOTES:
- DAMPERS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH THE U.L. REQUIREMENTS.
  - VERTICAL DAMPER SHOWN - HORIZONTAL INSTALLATION SIMILAR EXCEPT WITH SPRING LOADED DAMPER.
  - PRODUCT TO MEET REQUIREMENTS SET IN UL LISTING 555. ALL DAMPERS TO BE DYNAMIC TESTED.
  - DAMPERS SHALL BE INSTALLED ACCORDING TO MANUFACTURERS INSTALLATION REQUIREMENTS.
  - STEEL ANGLES AROUND DAMPER SHALL OVERLAP "PICTURE FRAME" IN WALL STUDS BY A MINIMUM OF 1".
  - CONTRACTOR TO TEST DAMPERS IN PLACE AND RECORD RESULTS FOR SUBMITTAL TO ENGINEER.

**A TYPE B FIRE DAMPER DETAIL (VERTICAL)**  
SCALE: NONE



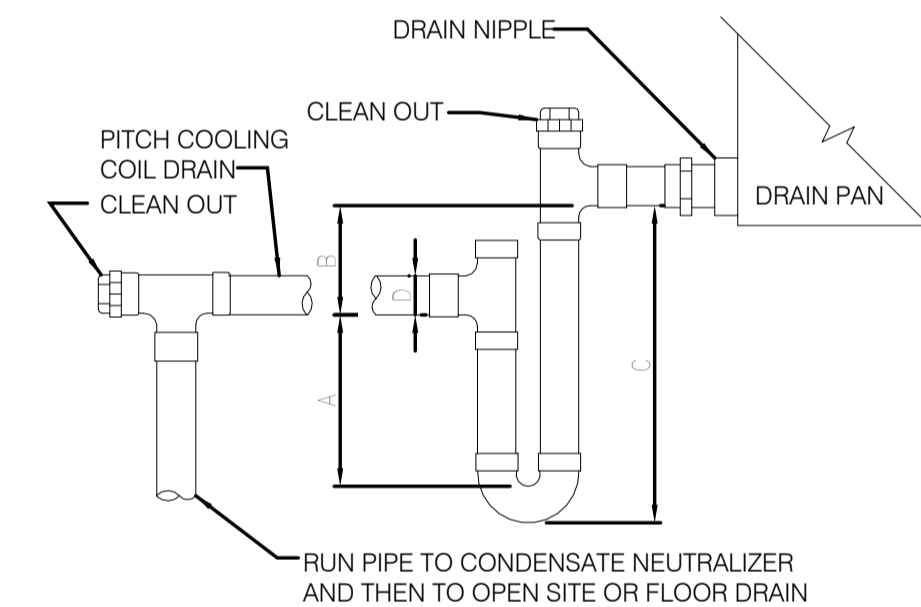
NOTE:  
COORDINATE DIFFUSER MOUNTING TYPE WITH CEILING TYPE.

**G CEILING DIFFUSER DETAIL**  
SCALE: NONE



NOTE:  
CURB & FLASHING BY G.C. UNLESS OTHERWISE SPECIFIED

**F GOOSENECK DETAIL**  
SCALE: NONE



BLOW-THROUGH (POSITIVE PRESSURE)		DRAW-THROUGH (NEGATIVE PRESSURE)	
A	B	A	B
$A = SP^* + 1/2"$	$B = 1/2"$ (MIN)	$A = 1/2B$	$B = SP^* + 1"$
$C = A + B + D$		$C = A + B + D$	

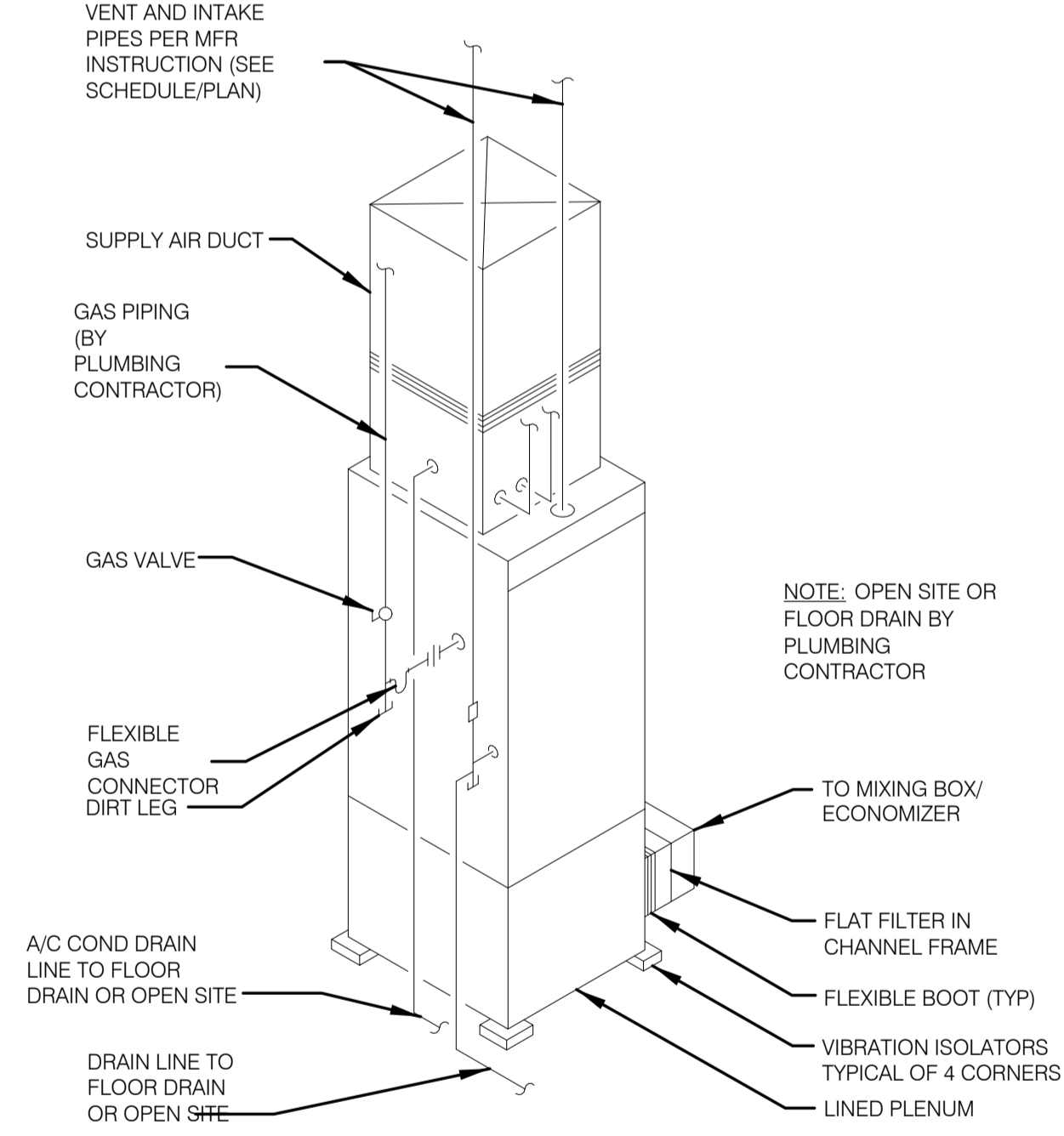
  

COOLING TONS	D	COOLING TONS	D
- UP TO 5 TONS	1" PIPE	- UP TO 5 TONS	1" PIPE
- 5 TONS-30 TONS	1 1/4" PIPE	- 5 TONS-30 TONS	1 1/4" PIPE
- 30 TONS-50 TONS	1 1/2" PIPE	- 30 TONS-50 TONS	1 1/2" PIPE
- 50 TONS-UP	2" PIPE	- 50 TONS-UP	2" PIPE

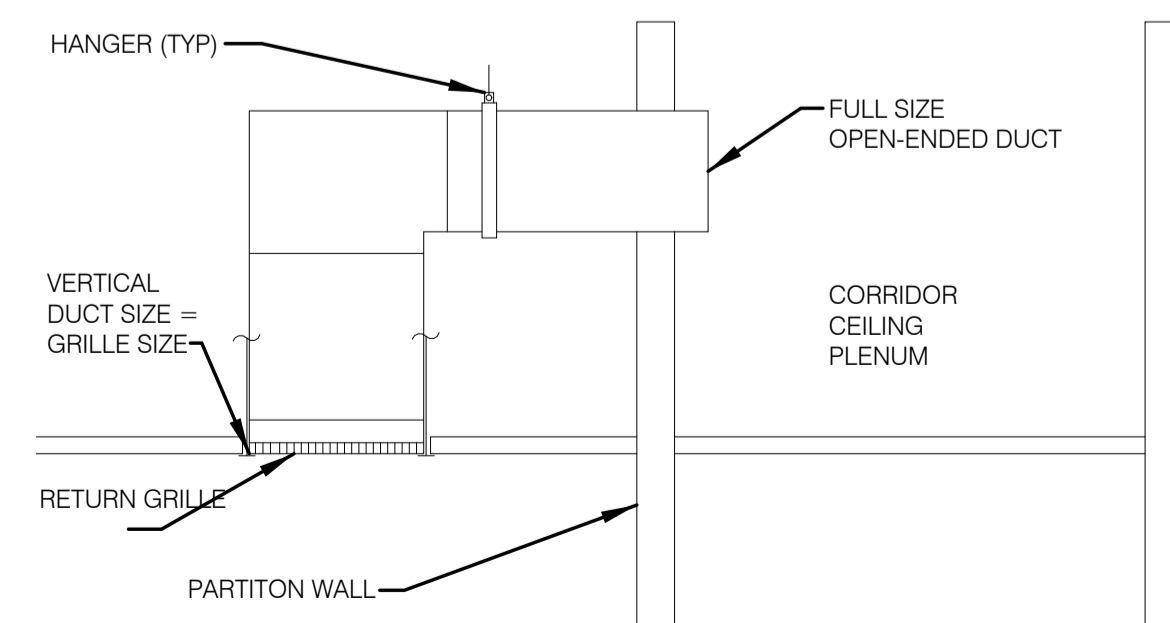
NOTE:  
\* SP EQUALS POSITIVE STATIC PRESSURE AT FAN DISCHARGE FOR BLOW THROUGH AIR HANDLING UNIT.

NOTE:  
\* SP EQUALS ABSOLUTE VALUE OF NEGATIVE STATIC PRESSURE AT FAN SUCTION FOR DRAW THROUGH AIR HANDLING UNIT.

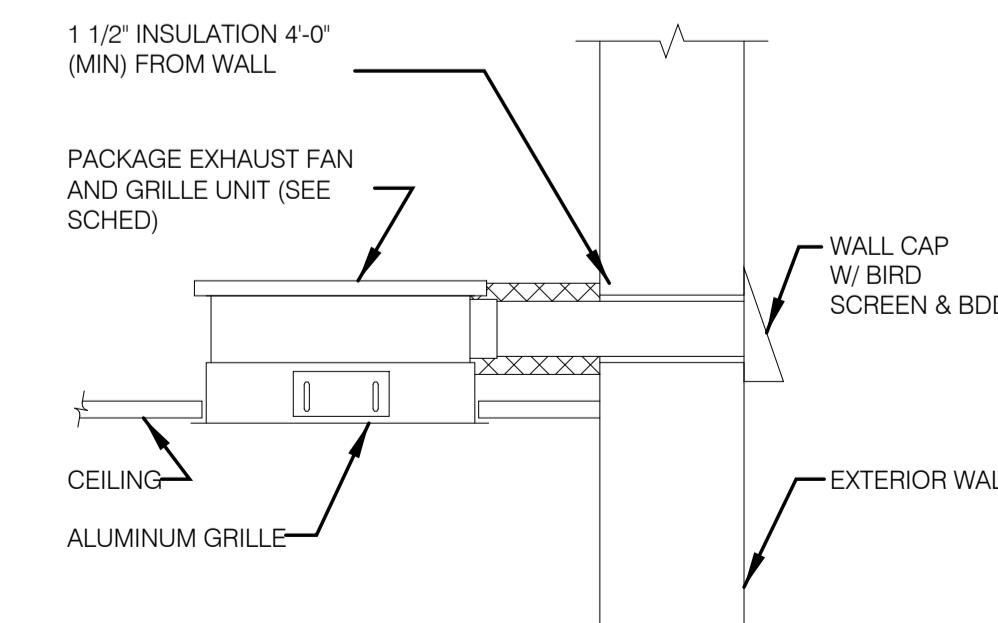
**E CONDENSATE DRAIN DETAIL**  
SCALE: NONE



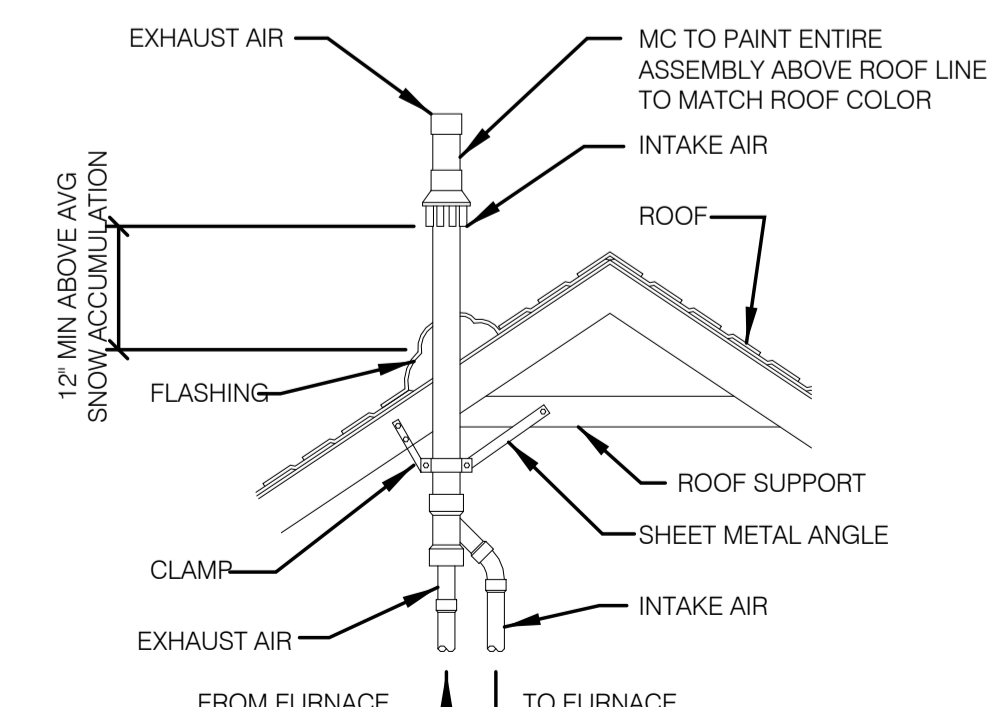
**D GAS FURNACE DETAIL**  
SCALE: NONE



**J RETURN/TRANSFER GRILLE DETAIL**  
SCALE: NONE



**I CEILING EXHAUST FAN DETAIL**  
SCALE: NONE



**H VENT TERMINATION DETAIL**  
SCALE: NONE

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Revisions:

09.26.2024 For Construction

Project Number: 5039 01 23  
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Mechanical Details  
and Diagrams

**M2.00**

SHEET SCALE  
0" 1/2" 1" 2"



### NATURAL GAS FURNACE SCHEDULE

TAG	SERVES	INPUT MBH	OUTPUT MBH	CAPACITY STAGES	TEMP RISE	NOMINAL COOLING TONS	TOTAL CFM	EXTERNAL SP (IN)	BLOWER MOTOR (HP)	ELECTRICAL				WEIGHT	MANUFACTURER & MODEL NO.	NOTES	
										VOLTS	PHASE	HZ	AMPS				
F-1	SEE PLANS	100	96	2	49.2	5	1800	0.5	1	115	1	60	-	13.7	260	CARRIER 59TN6B	1-11
F-2	SEE PLANS	80	78	2	51.3	4	1400	0.5	1	115	1	60	-	13.6	260	CARRIER 59TN6B	1-11
F-3	SEE PLANS	80	78	2	51.3	4	1400	0.5	1	115	1	60	-	13.6	260	CARRIER 59TN6B	1-11

- NOTES:
1. ACCEPTABLE MANUFACTURERS: CARRIER, BRYANT, JCI, LENNOX, RUUD, TRANE.
  2. PROVIDE WITH DOUBLE WALL INSULATED CABINET AND CASED EVAPORATOR COIL.
  3. PROVIDE 7-DAY PROGRAMMABLE, AUTO-CHANGEOVER, DIGITAL THERMOSTAT.
  4. PROVIDE MERV-6 AIR FILTER.
  5. PROVIDE THERMAL EXPANSION VALVE.
  6. PROVIDE WITH LITTLE GIANT MODEL AGS-2 OVERFLOW CONDENSATE SWITCH.
  7. PROVIDE WITH PVC FLUE AND INTAKE PIPING; PROVIDE CONCENTRIC TERMINATION KIT.
  8. EXTEND 1" CONDENSATE FROM FLUE CONDENSATE DRAIN LINES (WITH P-TRAP) TO ADJACENT DRAIN. PROVIDE FLUE CONDENSATE WITH ACID NEUTRALIZATION KIT.
  9. EC TO PROVIDE AND INSTALL DISCONNECT SWITCH.
  10. UNIT SHALL BE ASHRAE 90.1 COMPLIANT.
  11. PROVIDE UNIT WITH MICROMETL MIXING BOX CUBE WITH INTEGRAL ENTHALPY CONTROLLER.

### AIR COOLED CONDENSING UNIT SCHEDULE

TAG	UNITS	SYSTEM	NOMINAL TONS	TOTAL (MBH)	SENS (MBH)	SEER AT ARI	REFRIG.	CONDENSER FAN				ELECTRICAL				WEIGHT	MANUFACTURER & MODEL NO.	NOTES		
								TYPE	CFM	RPM	AMPS	MOTOR HP	VOLTS	PHASE	HZ				AMPS	
CU-1	SEE PLANS	F-1	5	60	43	17	PURON	PROP	-	-	-	-	208	1	60	-	27.8	323	CARRIER 24ACB	1-8
CU-2	SEE PLANS	F-2	4	47.5	34.3	17	PURON	PROP	-	-	-	-	208	1	60	-	27.8	277	CARRIER 24ACB	1-8
CU-3	SEE PLANS	F-2	4	47.5	34.3	17	PURON	PROP	-	-	-	-	208	1	60	-	27.8	277	CARRIER 24ACB	1-8

- NOTES:
1. ACCEPTABLE MANUFACTURERS: CARRIER, BRYANT, JCI, LENNOX, RUUD, TRANE.
  2. PROVIDE WITH HI/LO PRESSURE CONTROL, CONDENSER COIL, HAIL GUARDS, AND CRANKCASE HEATER.
  3. MOUNT ON DIVERSITECH MODEL 'ACB' OR EQUAL EQUIPMENT PLATFORM WITH VIBRATION ISOLATOR PADS.
  4. PROVIDE WITH 2-STAGE COMPRESSOR AND COMPRESSOR FAN.
  5. PROVIDE WITH COMPLETE REFRIGERANT LINESET SIZED BY MANUFACTURER.
  6. E.C. TO PROVIDE AND INSTALL DISCONNECT SWITCH.
  7. UNIT SHALL BE ASHRAE 90.1 COMPLIANT.
  8. UNIT SHALL BE SAME MANUFACTURER AS PAIRED INDOOR UNIT.

### EXHAUST FAN SCHEDULE

TAG	LOCATION	SYSTEM	CFM	ESP	RPM	BHP	ELECTRICAL			BDD	DRIVE	FAN TYPE	WEIGHT (LBS)	MANUFACTURER & MODEL NO.	NOTES
							VOLTS/Ø	WATTS	MCP						
EF-1	RR	GENERAL EXHAUST	150	.5	1050	-	120 / 1	128	15	YES	DIRECT	CABINET	10	GREENHECK SP-B150	1-3
EF-2	RR	GENERAL EXHAUST	150	.5	1050	-	120 / 1	128	15	YES	DIRECT	CABINET	10	GREENHECK SP-B150	1-3
EF-3	RR	LOCATION UTILITY	150	.5	775	-	120 / 1	128	15	YES	DIRECT	CABINET	16	GREENHECK SP-LF0511	1-3

- NOTES:
1. ACCEPTABLE MANUFACTURERS: BROAN-NUTONE, GREENHECK, LOREN COOK, PANASONIC.
  2. PROVIDE WITH VIBRATION ISOLATORS, INTEGRAL DISCONNECT SWITCH AND BACKDRAFT DAMPER.
  3. UNIT SHALL BE CONTROLLED BY SWITCH.

### GRILLE, REGISTER, AND DIFFUSER SCHEDULE

TAG	DESCRIPTION	MATERIAL	FINISH	MAX NOISE CRITERIA	MANUFACTURER & MODEL NO.	NOTES
SD-1	24X24, ALUMINUM PLAQUE DIFFUSER, SEE PLANS FOR NECK SIZE	ALUMINUM	NOTE 2	25	TITUS OMNI-AA	1
SD-2	12X12, ALUMINUM PLAQUE DIFFUSER, SEE PLANS FOR NECK SIZE	ALUMINUM	NOTE 2	25	TITUS OMNI-AA	1
RG-1	24X24, EGGCRATE RETURN GRILLE 1/2"X1/2"X1/2" CORES	ALUMINUM	NOTE 2	25	TITUS 50F	1
RG-2	24X24, EGGCRATE RETURN GRILLE 1/2"X1/2"X1/2" CORES, PROVIDE WITH RETURN AIR CANOPY	ALUMINUM	NOTE 2	25	TITUS 50F	1
RG-3	24X6, EGGCRATE RETURN GRILLE 1/2"X1/2"X1/2" CORES	ALUMINUM	NOTE 2	25	TITUS 50F	1

- NOTES:
1. ACCEPTABLE MANUFACTURERS: TITUS, PRICE, ANEMOSTAT, HART & COOLEY, KRUEGER, TUTTLE & BAILEY.
  2. SHALL BE COLOR #2 BRITISH WHITE.

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Mechanical  
Schedules

**M3.00**

SHEET SCALE  
0" 1/2" 1" 2"



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Checked by: ACG  
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Electrical Symbols,  
Notes &  
Abbreviations

**E0.00**

SHEET SCALE  
0" 1/2" 1" 2"

ELECTRICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	PANELBOARD SURFACE MOUNTED 6'-6" TO TOP. SEE PANEL SCHEDULES AND ONE-LINE DIAGRAM.
	CONDUIT WITH WIRING RUN CONCEALED IN OR ABOVE CEILING OR WALL, OR RUN EXPOSED IN UNFINISHED AREAS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS (#12 AWG - MINIMUM), PROVIDE A CODE-SIZED GROUND WIRE IN ALL CONDUITS IN ADDITION TO THE CONDUCTORS SHOWN.  CONDUIT WITH WIRING RUN CONCEALED BELOW FLOOR. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS (#12 AWG - MINIMUM), PROVIDE A CODE-SIZED GROUND WIRE IN ALL CONDUITS IN ADDITION TO THE CONDUCTORS SHOWN.
	<b>RECEPTACLE NOTES AND DESIGNATIONS:</b>
	<ul style="list-style-type: none"> <li>RATED 125V, 20A UON</li> <li>MOUNTED AT 18" AFF UON</li> </ul>
###	MOUNTED AT ###"
AC	RECESSED 6" ABOVE COUNTERTOP
C	RECESSED MOUNTED FLUSH IN FINISHED CEILING, RECEPTACLE AND FACEPLATE FINISH TO MATCH CEILING FINISH
GFI	GROUND FAULT INTERRUPTING TYPE
H	HORIZONTAL
IG	ISOLATED GROUND
T	TAMPER RESISTANT LISTED
UC	BELOW COUNTER
USB	DUPLEX RECEPTACLE WITH (1) USB TYPE A AND (1) USB TYPE C PORTS
WP	WEATHER RESISTANT LISTED WITH DIE-CAST ALUMINUM "WHILE IN-USE COVER"
DR	DRYER - 20A - 250V GROUNDING TYPE SIMPLEX RECEPTACLE MOUNTED 4'-0" AFF. UNLESS NOTED OTHERWISE, VERIFY EXACT MOUNTING HEIGHT AND LOCATION OF DEVICE WITH DRYER MANUFACTURERS INSTALLATION INSTRUCTIONS PRIOR TO ROUGH-IN. FURNISH AND INSTALL MATCHING CORD AND PLUG. DISPOSAL - 20A - 125V GROUNDING TYPE DUPLEX RECEPTACLE MOUNTED AT 18" AFF WITHIN CABINET WITH CONTROL SWITCH LOCATED 6" ABOVE THE TOP OF THE COUNTER. FURNISH AND INSTALL MATCHING CORD AND PLUG. COORDINATE LOCATIONS OF DEVICES WITH INTERIOR ELEVATIONS INDICATED ON ARCHITECTURAL PLANS. WIRED TO GFCI TYPE BREAKER.
DW	DISHWASHER - 20A - 125V GFI TYPE INSTALLED WITHIN CABINET BELOW SINK
FG	FRIIDGE - 20A - 125V RECEPTACLE INSTALLED 5'-0" AFF. WIRED TO GFCI TYPE BREAKER
MW/AC	MICROWAVE - 20A - 125V RECEPTACLE INSTALLED 6" ABOVE COUNTERTOP. WIRE TO GFCI TYPE BREAKER
MW/C	MICROWAVE - 20A - 125V RECEPTACLE INSTALLED WITHIN CABINET +/-90° AFF. BOTTOM, LEFT CORNER OF RECEPTACLE TO ALIGN WITH BOTTOM, LEFT CORNER OF CABINET. WIRE TO GFCI TYPE BREAKER
WS	WASHING MACHINE - 20A - 125V GFI TYPE RECEPTACLE INSTALLED AT 4'-0" AFF
	20A - 125V GROUNDING TYPE DUPLEX RECEPTACLE MOUNTED 18" AFF TO CENTER OF BOX, UNLESS NOTED OTHERWISE.
	20A - 125V GROUNDING TYPE QUADRAPLEX RECEPTACLE MOUNTED 18" AFF TO CENTER OF BOX, UNLESS NOTED OTHERWISE.
S	<b>LIGHT SWITCH NOTES AND DESIGNATIONS:</b>
	<ul style="list-style-type: none"> <li>RATED 120/277V, 20A UON</li> <li>MOUNTED AT 48" AFF TO CENTERLINE OF DEVICE UON</li> <li>SWITCHES SHALL BE GANGED TOGETHER WHERE APPLICABLE.</li> <li>E.C. SHALL DERATE GANGED SWITCHES PER MANUFACTURER SHOP DRAWINGS.</li> <li>NO SUBSCRIPT INDICATES SINGLE POLE SWITCH</li> <li>SUBSCRIPT D INDICATES DIMMING AND MAY BE COMBINED WITH OTHER SWITCH TYPE SUBSCRIPTS. COORDINATE DIMMING REQUIREMENTS WITH ASSOCIATED FIXTURE TYPE.</li> <li>LOWERCASE SUBSCRIPTS INDICATE LIGHTING CONTROL ZONE.</li> </ul>
3	THREE POLE TOGGLE SWITCH
4	FOUR POLE TOGGLE SWITCH
OC	OCCUPANCY SENSOR SWITCH
V	VACANCY SENSOR SWITCH
FS	FAN CONTROL AND LIGHT DIMMER
H	HORIZONTAL
	120V/277V OCCUPANCY SENSING SWITCH CEILING MOUNTED, UNLESS NOTED OTHERWISE. SUBSCRIPT DELINEATES LIGHTING CONTROL ZONE
	TELEVISION OUTLET MOUNTED 60" AFF TO CENTER OF BOX, UNLESS NOTED OTHERWISE. PROVIDE 3/4" HDPE WITH PULL WIRE FROM J-BOX WITH SINGLE GANG PLASTER RING TO ACCESSIBLE ASSOCIATED TELEPHONE CLOSET. FURNISH AND INSTALL CONDUIT BUSHINGS.
	FIRE ALARM AUDIO/VISUAL (HORN/STROBE) NOTIFICATION APPLIANCE WALL MOUNTED AT THE LESSOR OF 80" AFF TO BOTTOM OR 6" BELOW FINISHED CEILING.
	FIRE ALARM MANUAL PULL STATION MOUNTED 48" AFF TO TOP.

ELECTRICAL DEMOLITION NOTES	
1.	THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE TO BE USED AS A GUIDELINE ONLY FOR THE SCOPE OF DEMOLITION WORK. THE CONTRACTOR SHALL VISIT THE PROJECT SITE DURING THE BID PHASE TO VERIFY THE EXACT CONDITIONS AND SCOPE OF WORK REQUIRED FOR A COMPLETE AND INCLUSIVE DEMOLITION PACKAGE.
2.	THE CONTRACTOR SHALL BE HELD TO HAVE EXAMINED THE PREMISES AND SITE SO AS TO COMPARE THEM WITH THE CONTRACT DOCUMENTS AND TO HAVE SATISFIED HIMSELF AS TO THE CONDITIONS OF THE PREMISES, THE SITE, ANY OBSTRUCTIONS, THE ACTUAL LEVELS, ACCESS PANELS, AND ALL OTHER EXISTING CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD. SHALL CHECK LOCATION OF AND CONNECTION TO EXISTING FACILITIES, AND SHALL ASSUME ALL RESPONSIBILITY FOR SAME. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES IN WORK AREA PRIOR TO INITIATION OF DEMOLITION ACTIVITIES. BEGINNING OF DEMOLITION SHALL SIGNIFY CONTRACTORS ACCEPTANCE OF EXISTING CONDITIONS AND THE COST OF REWORKING ANY EXISTING SYSTEMS DUE TO CONFLICTS WITH EXISTING CONDITIONS SHALL BE PAID BY CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED DEMOLITION WHETHER SHOWN ON THE PLANS OR NOT.
3.	THE CONTRACTOR SHALL COORDINATE WITH THE TENANT AND/OR BUILDING MANAGEMENT ALL INTERRUPTION OF ELECTRICAL SERVICES WITHIN THE TENANT SPACE AND/OR BUILDING.
4.	THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL, MECHANICAL, HVAC, AND PLUMBING DEMOLITION DRAWINGS FOR ALL EQUIPMENT BEING DEMOLISHED, AND SHALL DISCONNECT AND REMOVE COMPLETE THE ELECTRICAL SERVICES TO ALL EQUIPMENT AND WIRING DEVICES. DEMOLITION DRAWINGS OF ALL DISCIPLINES MUST BE CHECKED AND ALL ASSOCIATED ELECTRICAL DEVICES OF EQUIPMENT REMOVED BY OTHERS MUST BE REMOVED.
5.	ALL EXISTING LUMINAIRES AND ASSOCIATED CONTROLS, ELECTRICAL EQUIPMENT, WIRING DEVICES, FIRE ALARM DEVICES, ETC. NOT INDICATED ON THIS PLAN SHALL BE EXISTING TO REMAIN, UNLESS SPECIFICALLY NOTED OTHERWISE. FOR ALL RENOVATION/REMODELING WORK, INCLUDING ALL AREAS OF NO OR MINIMAL WORK, EXISTING ELECTRICAL SERVICES SHALL BE MAINTAINED TO LUMINAIRES, EQUIPMENT, WIRING DEVICES, ETC. (POWER, LIGHTING, ETC.), THAT ARE REQUIRED TO BE MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THESE SERVICES, EQUIPMENT, WIRING DEVICES THAT ARE EXISTING TO REMAIN, WHETHER OR NOT INDICATED ON THE PLANS.
6.	DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, WIRING DEVICES, TELECOM DEVICES, BLANK COVER PLATES, ETC. LOCATED IN WALLS/PARTITIONS LABELED AS "TO BE REMOVED". REMOVE ALL EXISTING BRANCH CIRCUITING (CONDUCTORS AND CONDUIT) BACK TO LAST ACTIVE DEVICE (OR SOURCE IF NO ACTIVE DEVICES REMAIN).
7.	ALL ELECTRICAL LUMINAIRES, EQUIPMENT, WIRING DEVICES, TELECOMMUNICATIONS VOICE/DATA CABLING, ETC. SHALL BE REMOVED COMPLETE, BACK TO SOURCE, (PANELBOARD, TERMINAL BOARDS, ETC.), INCLUDING ALL BRANCH CIRCUITING, (CONDUCTORS AND CONDUIT), FEEDERS, SUPPORTS, JUNCTION BOXES, PULL BOXES, ETC.
8.	PROVIDE AND MAINTAIN TEMPORARY ELECTRICAL SERVICES, SUCH AS LIGHTING AND POWER IN ALL AREAS OF DEMOLITION AND SURROUNDING AREAS NOT IN DEMOLITION FOR THE DURATION OF THE PROJECT. COORDINATE ALL TEMPORARY ELECTRICAL SERVICES WITH OWNERS SITE REPRESENTATIVE AND/OR LOCAL ELECTRICAL UTILITY.
9.	EQUIPMENT AND WIRING DEVICES INDICATED AS (RL) - EXISTING TO BE RELOCATED, SHALL BE STORED FOR RE-USE AND RELOCATED TO NEW LOCATION AS INDICATED ON NEW PLAN DRAWINGS. DEVICES SHALL BE CLEANED, LUMINAIRES RE-LAMPED PER SPECIFICATIONS, AND BALLAST REPLACED WHERE FOUND TO BE INOPERABLE.
10.	EXISTING FIRE ALARM DEVICES THAT ARE LABELED (E) - EXISTING TO REMAIN, SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE AND DIRT. THE FIRE ALARM SYSTEM SHALL BE KEPT OPERABLE DURING CONSTRUCTION.
11.	ANY CIRCUITS FEEDING THROUGH EQUIPMENT OR DEVICES THAT ARE BEING DEMOLISHED, REWORKED, OR RELOCATED, AND FEEDING OTHER EQUIPMENT/DEVICES THAT REMAIN ARE TO BE MAINTAINED.
12.	ALL CUTTING AND PATCHING OF WALLS, CEILING, OR FLOORS THAT ARE DISTURBED BY DEMOLITION SHALL BE RETURNED TO THEIR ORIGINAL CONDITION. REFER TO THE ARCHITECTURAL DOCUMENTS FOR EXACT SPECIFICATION REQUIREMENTS. PATCH FLOOR TO ORIGINAL CONSTRUCTION SPECIFICATIONS AND U.L. FIRE RATING LISTINGS FOR ALL FLOOR MOUNTED DEVICES SUCH AS FLOOR BOXES, (FIRE RATED) POKE-THROUGH, ETC. WHICH HAVE BEEN REMOVED.
13.	ALL EQUIPMENT AND/OR DEVICES THAT ARE REMOVED AND NOT RE-USED SHALL BE TURNED OVER TO THE TENANT AND/OR BUILDING MANAGEMENT OR DISPOSED OF PER THEIR DIRECTION. MATERIAL OF NO SALVAGEABLE VALUE INCLUDING CONDUIT, WIRE AND TRASH RESULTING FROM THE DEMOLITION WORK SHALL BE REMOVED BY THE ELECTRICAL CONTRACTOR PROMPTLY FROM THE JOB SITE AND PROPERLY DISPOSED OF IN A LEGAL MANNER. NO BURNING SHALL BE PERMITTED ON THE SITE.
14.	IT SHALL BE THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO CONDUCT ALL DEMOLITION IN ACCORDANCE WITH OSHA, EPA, AND ALL OTHER APPLICABLE CODES AND REGULATIONS FOR TYPE OF WORK.
15.	ANY AND ALL ABANDONED CONDUIT AND/OR WIRING FOUND DURING DEMOLITION SHALL BE REMOVED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL EXPENSE.
16.	REMOVE ALL ELECTRICAL EQUIPMENT, DEVICES, BOXES, CONDUIT AND WIRE IN THE AREA OF NEW CONSTRUCTION UNLESS OTHERWISE NOTED. CONDUIT, WIRE AND ELECTRIC DEVICES WHICH MAY PASS THRU THE AREA OF NEW CONSTRUCTION AND/OR MAY BE AFFECTED BY DEMOLITION SHALL REMAIN OR, IF REQUIRED, SHALL BE RE-WORKED TO KEEP THOSE ITEMS OPERATIONAL.
17.	AREAS AND SERVICES ADJACENT TO DEMOLITION AREAS SHALL BE PROTECTED FROM THE DEMOLITION PROCESS. PROTECTIVE MEASURES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL WORK AND SHALL BE MAINTAINED CONTINUOUSLY UNTIL DEMOLITION IS COMPLETED.
18.	ALL DEMOLITION AND MATERIAL REMOVAL OPERATIONS SHALL BE CAREFULLY AND SAFELY CARRIED OUT. ELECTRICAL CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR HIS SAFE PRACTICES AND OPERATIONS.
19.	PROTECTIVE MEASURES SHALL BE TAKEN DURING DEMOLITION TO KEEP THE INTERIOR OF THE REMAINING BUILDING WEATHERTIGHT. ANY OPENINGS IN THE BUILDING SHELL RESULTING FROM THE DEMOLITION PROCESS SHALL BE PROMPTLY SEALED.
20.	ANY ITEM INTENDED TO BE REMOVED BUT NOT SHOWN SHALL BE VERIFIED AND REMOVED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL COST ALL EXISTING CONDUITS PENETRATING FLOORS OR WALLS NOT REQUIRED TO BE REMOVED AND ALL NEW CONDUITS SHALL BE SEALED WITH FIRESTOPPING SEALANT.
21.	SHIFT AND REROUTE (IF REQUIRED) ANY EXISTING CONDUIT WHICH MAY INTERFERE WITH NEW CONSTRUCTION. ALL DEVICES REMAINING MUST BE LEFT IN A CLEAN AND OPERATING CONDITION.
22.	ALL BELOW SLAB CONDUIT BEING ABANDONED SHALL BE CUT FLUSH WITH FLOOR AFTER CONDUIT REMOVAL AND GROUTED FLUSH WITH FINISHED FLOOR.
23.	ALL DEMOLITION WORK SHALL BE PERFORMED IN AN ORDERLY FASHION WITHOUT ANY DAMAGE TO EXISTING STRUCTURE AND SYSTEMS.
24.	EC SHALL FURNISH AND INSTALL ADDITIONAL CONDUIT AND WIRE AS REQUIRED AND EXTEND EXISTING CIRCUITING TO FIXTURES AND DEVICES WHICH REMAIN BUT WHICH MAY BE AFFECTED BY EXISTING FIXTURES AND DEVICES BEING REMOVED AND/OR RELOCATED. FULL EXTENT OF WORK REQUIRED SHALL BE FIELD VERIFIED.

ELECTRICAL GENERAL NOTES	
1.	ELECTRICAL DRAWINGS ARE GENERALLY DIAGRAMMATIC. ARE INTENDED TO CONVEY THE SCOPE OF WORK, AND INDICATE GENERAL ARRANGEMENT OF LIGHTING FIXTURES, DEVICES, CONTROLS, ELECTRICAL FIXTURES, MOTORS, PANELBOARDS, EQUIPMENT, ETC. THE LOCATIONS OF ALL ITEMS SHOWN ON ELECTRICAL DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT EXPLICITLY FIXED BY DIMENSIONS ARE APPROXIMATE. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE PROJECT. ALL LOCATIONS OF WORK EXPOSED TO VIEW ARE SUBJECT TO APPROVAL OF THE ARCHITECT PRIOR TO ROUGH-INS.
2.	ALL DEVICES, EQUIPMENT, FIXTURES, ETC., MUST BE GROUNDED BY USE OF A PROPERLY SIZED GROUNDING CONDUCTOR. MECHANICAL/ELECTRICAL BONDS OF THE METALLIC RACEWAY SYSTEM SHALL ALSO BE MAINTAINED.
3.	REFER TO MECHANICAL, PLUMBING, AND FIRE PROTECTION PLANS FOR EXACT LOCATION OF MECHANICAL AND PLUMBING EQUIPMENT. COORDINATE LOCATION OF DISCONNECT SWITCH ASSOCIATED WITH EACH PIECE OF EQUIPMENT WITH RESPECTIVE CONTRACTOR AND INSTALL IN ACCORDANCE WITH THE NEC.
4.	REFER TO DIVISION 15 (21, 22 & 23) SPECIFICATIONS, HVAC, PLUMBING & FIRE PROTECTION PLANS FOR ADDITIONAL ELECTRICAL WORK REQUIREMENTS & COORDINATION.
5.	ALL RECEPTACLES SHOWN BACK-TO-BACK IN WALLS SHALL BE SEPARATED HORIZONTALLY BY 8" MINIMUM.
6.	WHERE OPEN WIRING METHODS FOR LOW VOLTAGE SYSTEMS ARE PERMITTED BY THE CONTRACT DOCUMENTS, OWNER AND LOCAL AUTHORITY, THE CABLE/CONDUCTOR INSULATION SHALL BE RATED PER NEC FOR ENVIRONMENT (I.E. PLENUM RATED, ETC.) BEING INSTALLED.
7.	BRANCH CIRCUIT CONDUCTOR SIZES (& CONDUITS) SHALL BE INCREASED FROM THOSE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. BRANCH CIRCUITS SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP BETWEEN THE PANEL & THE LOADS DO NOT EXCEED A LIMIT OF 3%.
8.	REGARDLESS OF THE TEMPERATURE RATING OF THE CONDUCTOR INSULATION, ALL CONDUCTOR AMPACITY RATINGS FOR THIS PROJECT SHALL BE DETERMINED FROM THE 75°C CONDUCTOR TEMPERATURE RATINGS INDICATED IN THE NEC TABLES. WHERE EQUIPMENT OR DEVICES ARE PROVIDED WITH TERMINALS/LUGS RATED FOR 60°C, THE AMPACITY RATING OF THE 75°C CONDUCTOR SHALL BE LIMITED TO ITS ASSOCIATED 60°C RATING AS INDICATED IN THE NEC TABLES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO INCREASE THE CONDUCTORS AND CONDUIT SIZE AS REQUIRED.
9.	ALL 120V AND 277V BRANCH CIRCUITS SHALL BE PROVIDED WITH SEPARATE NEUTRAL CONDUCTORS. SHARED NEUTRALS WILL NOT BE PERMITTED FOR MULTI-CIRCUIT INSTALLATIONS. WHERE MULTIPLE CIRCUITS ARE RUN IN A COMMON RACEWAY, THE AMPACITY OF THE CONDUCTORS SHALL BE PROPERLY DERATED & CONDUIT SHALL BE SIZED PER CODE. UNDER NO CIRCUMSTANCES SHALL MORE THAN SIX (6) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT. REFERENCE NEC ARTICLE AND TABLE 310.15(B)(3)(ii).
10.	ALL CONDUITS SHALL CONTAIN A GROUND CONDUCTOR SIZED PER NEC TABLE #250.122. IN ADDITION, WHERE AN ISOLATED, INSULATED GROUND IS REQUIRED, A SEPARATE GROUND CONDUCTOR WITH GREEN INSULATION SHALL BE RUN FROM THE PANEL GROUND BUS TO THE ISOLATED GROUND CONNECTION OF THE DEVICE. IN NO CASE SHALL THE SYSTEM GROUND (CONDUCTOR & ASSOCIATED OUTLET BOXES, CONDUIT & BUILDING STEEL) BE ALLOWED TO CONTACT THE ISOLATED GROUND (CONDUCTOR & DEVICE) WHERE CIRCUIT CONDUCTORS ARE INCREASED IN SIZE FOR ANY REASON (I.E. VOLTAGE DROP, DERATING, ETC.). THE GROUND CONDUCTOR SIZE SHALL BE INCREASED PROPORTIONATELY (ACCORDING TO CIRCULAR MIL AREA) FROM THE SIZE REQUIRED BY NEC TABLE #250.122.
11.	ELECTRICAL INSTALLATION REQUIREMENTS FOR ALL HVAC, PLUMBING, FIRE PROTECTION, SPECIAL SYSTEMS AND OWNER EQUIPMENT BEING FURNISHED BY OTHERS SHALL BE REVIEWED AND COORDINATED WITH OTHER TRADES PRIOR TO ROUGH-IN. OBTAIN EQUIPMENT SHOP DRAWINGS FROM INSTALLER/SUPPLIER/CONTRACTOR/OWNER FURNISHING EQUIPMENT, AS REQUIRED, FOR REVIEW AND COORDINATION. CONTACT ARCHITECT/ENGINEER WITH ANY DISCREPANCIES FOUND BETWEEN CONSTRUCTION DRAWINGS AND EQUIPMENT BEING FURNISHED PRIOR TO ROUGH-IN.
12.	THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL ACCESS PANELS, AS REQUIRED FOR SERVICES AND TESTING. FOR EQUIPMENT AND/OR DEVICES FURNISHED UNDER HIS CONTRACT, THE GENERAL CONTRACTOR SHALL INSTALL ACCESS PANELS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF EACH ACCESS PANEL WITH THE ARCHITECT AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN.
13.	ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID ALL CUTTING, TRENCHING AND PATCHING ASSOCIATED WITH THE ELECTRICAL INSTALLATION.
14.	ALL PENETRATIONS IN OR THROUGH FIRE RATED ASSEMBLIES ASSOCIATED WITH THE ELECTRICAL INSTALLATION SHALL BE FIRE-STOPPED USING A UL APPROVED METHOD. FURNISH AND INSTALL UL LISTED FIRE RATED MATERIALS AND EQUIPMENT SUCH AS BOXES, PUDDY PADS, ENDOTHERMIC MAT, LIGHT FIXTURES WITH RATED ENCLOSURES, ETC. TO COMPLY WITH CODE FOR PROJECT CONDITIONS. FURNISH AND INSTALL SLEEVES, WHERE REQUIRED. UL APPROVED METHOD FOR FIRE STOPPING SHALL MEET OR EXCEED FIRE RATING OF STRUCTURE BEING PENETRATED. REFERENCE ARCHITECTURAL PLANS FOR FIRE RATED STRUCTURES.
15.	NO CONDUIT, BOXES, WIRING, OR CABLES SHALL BE INSTALLED WITHIN 1 1/2" OF THE LOWEST POINT OF THE UNDERSIDE OF THE ROOF DECKING, NOR SHALL THEY BE INSTALLED CONCEALED WITHIN METAL-CORRUGATED ROOF DECKING. FOR EXISTING INSTALLATIONS, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE AND/OR REWORK EXISTING CONDUIT, BOXES, WIRING, AND CABLING THAT IS NOT IN COMPLIANCE WITH THIS REQUIREMENT. ALL ELECTRICAL EQUIPMENT AND DEVICES FOR THIS PROJECT MUST BE UL LISTED. DEVICES, EQUIPMENT, SYSTEMS SHALL BE INSTALLED PER N.E.C. REQUIREMENTS AND MANUFACTURERS INSTRUCTIONS.
17.	THE DESIGN INTENT IS ALL DEVICES SHALL BE RECESSED MOUNTED, UNLESS OTHERWISE NOTED. THE DEVICE BACK-BOX AND RACEWAY BEING FURNISHED SHALL BE RATED TO COMPLY WITH NEC PER THE APPLICATION. WHERE MOUNTED WITHIN A FIRE RATED WALL OR STRUCTURE, FURNISH AND INSTALL UL APPROVED FIRE STOPPING ASSEMBLIES AND MATERIALS TO MAINTAIN RATING OF WALL OR STRUCTURE. WHEN THERE IS NO AVAILABLE OPTION BUT TO INSTALL A SURFACE MOUNTED DEVICE, CONSULT ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
18.	THE DESIGN INTENT IS ALL CONDUIT, CABLES, RACEWAYS AND PATHWAYS SHALL BE CONCEALED FROM SIGHT WITHIN THE BUILDING CONSTRUCTION, UNLESS OTHERWISE NOTED. THE CONDUIT, CABLES, RACEWAYS AND PATHWAYS BEING FURNISHED SHALL BE RATED TO COMPLY WITH NEC PER THE APPLICATION. WHEN THERE IS NO AVAILABLE OPTION BUT TO INSTALL A VISIBLE CONDUIT, CABLE, RACEWAY OR PATHWAY, CONSULT ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
19.	ALL CONDUIT AND CABLING SHALL BE PROPERLY SUPPORTED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE. FOR EXISTING INSTALLATIONS, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE AND/OR REWORK EXISTING CONDUIT AND/OR CABLING THAT IS NOT IN COMPLIANCE WITH THIS REQUIREMENT.
20.	CONTRACTOR SHALL FIELD VERIFY SLAB ON GRADE FLOOR CONSTRUCTION TYPE PRIOR TO CUTTING. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR CUT A STRUCTURAL FLOOR SLAB THICKER THAN FOUR (4) INCHES WITHOUT PRIOR WRITTEN APPROVAL FROM ENGINEER OF RECORD. NOTIFY ENGINEER OF RECORD OF ANY SLAB THICKNESS GREATER THAN FOUR (4) INCHES PRIOR TO PROCEEDING WITH ANY SAW CUTTING.
21.	IN OTHER THAN DWELLING UNITS, ALL 125-VOLT THROUGH 250-VOLT RECEPTACLES SUPPLIED BY SINGLE PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY THREE PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS, INSTALLED IN LOCATIONS IDENTIFIED IN 210-8(B) SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. WHERE DEVICE IS READILY ACCESSIBLE, THE DEVICE SHALL BE PROVIDED WITH INTEGRAL GROUND FAULT PROTECTION. WHERE DEVICE IS NOT READILY ACCESSIBLE AND/OR NOT AVAILABLE WITH INTEGRAL GROUND FAULT PROTECTION, THE BRANCH CIRCUIT BREAKER SERVING THE DEVICE(S) SHALL BE GROUND FAULT TYPE.
22.	ANY AND ALL "BUILDING STANDARDS" AND/OR "BUILDING SPECIFICATIONS" SHALL BE CONSIDERED AN INTEGRAL PART OF THESE DOCUMENTS AND THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN A COPY OF THESE DOCUMENTS AND COMPLY WITH ALL REQUIREMENTS AND STANDARDS CONTAINED WITHIN.

ELECTRICAL ABBREVIATIONS	
A	AMPERES, AMPERAGE
A/C	AIR CONDITIONING
ADA	AMERICANS WITH DISABILITIES ACT
AFCI	ARC FAULT CURRENT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINAL GRADE
AIC	AVAILABLE INTERRUPTING CURRENT
AL	ALUMINUM
ANSI	AMERICAN NATL. STANDARDS INSTITUTE
ARCH	ARCHITECT, ARCHITECTURAL
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
AV	AUDIO/VISUAL
BD	BUS DUCT
BKR	BREAKER
BLDG	BUILDING
°C	CELSIUS DEGREES
C	CIRCUIT
C/B	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CRI	COLOR RENDERING INDEX
CT	CURRENT TRANSFORMER
CU	COPPER
dB	DECIBEL
DISC.DS	DISCONNECT SWITCH
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EF	EXISTING FAN
EFR	EXISTING TO REMAIN
EMT	ELECTRICAL METALLIC TUBING
EX	EXISTING
EXT	EXTERIOR
°F	FAHRENHEIT DEGREES
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FARA	FIRE ALARM REMOTE ANNUNCIATOR
FPC	FIRE PUMP CONTROL PANEL
FT	FOOT, FEET
GND	GROUND
GC	GENERAL CONTRACTOR
GFI,GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSEPOWER
HVAC	HEATING, VENTILATING, & A/C
IBC	INTERNATIONAL BUILDING CODE
IG	ISOLATED GROUND
KVA	KILOVOLT-AMPS
KW	KILOWATTS
KWH	KILOWATT-HOUR
LED	LIGHT EMITTING DIODE
LTG	LIGHTING
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCP	MECHANICAL ELECTRICAL, PLUMBING
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MOCPP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
N/A	NOT APPLICABLE
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MFRS ASSOC.
NFPA	NATIONAL FIRE PROTECTION ASSOC.
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
O/C	ON CENTER
O/H	OVERHEAD
OBC	OHIO BUILDING CODE
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMIN.
P	POLE
PC	PLUMBING CONTRACTOR
PH.Ø	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RCP	REFLECTED CEILING PLAN
REC	RECEPTACLE
RL	REMOVE AND RELOCATE
REQD	REQUIRED
REV	REVISION
RM	REMOVE EXISTING
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RTU	ROOFTOP UNIT
SER	SERVICE ENTRANCE RATED
SF	SQUARE FOOT, SQUARE FEET
T/C,TC	TIME CLOCK
THRU	THROUGH
TYP	TYPICAL
UC	UNDERCOUNTER
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES, INC.
USB	UNIVERSAL SERIAL BUS
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTED POWER SUPPLY
VA	VOLT-AMPERE
V	VOLTS, VOLTAGE
W	WATT, WATTS
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER

**ELECTRICAL GENERAL NOTES**

- A. REFERENCE ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ELECTRICAL WORK WITH OTHER TRADES.
- B. WHERE THE UTILITY TRANSFORMER, SWITCHING AND/OR METERING EQUIPMENT SHALL BE INSTALLED PAD-MOUNTED IN A PAVED AREA ACCESSIBLE TO VEHICULAR TRAFFIC, THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE FILLED BOLLARDS AROUND ALL SUCH ELECTRICAL EQUIPMENT. PROVIDE BOLLARDS AT ALL ACCESSIBLE CORNERS OF EQUIPMENT WITH ADDITIONAL BOLLARDS IN BETWEEN AS REQUIRED FOR A MAXIMUM SPACING OF 4'-0" ON CENTER. VERIFY EXACT LOCATION OF BOLLARDS WITH ENGINEER AND ARCHITECT PRIOR TO INSTALLATION. MAINTAIN ALL REQUIRED CLEARANCE AND ACCESS REQUIREMENTS PER POWER COMPANY, CODE AND LOCAL AUTHORITY HAVING JURISDICTION.
- C. MINIMUM UNDERGROUND CONDUIT SIZE SHALL BE 1 INCH, UNLESS OTHERWISE NOTED.
- D. TELEPHONE, DATA, CABLE TV, AND ELECTRIC UTILITY DUCT BANKS SHALL BE INSTALLED PER RESPECTIVE UTILITY COMPANY/PROVIDERS REQUIREMENTS.
- E. CAP ALL CONDUIT STUBS AND MARK ENDS WITH IRON PINS.
- F. PROVIDE PULL-WIRE IN ALL DUCT BANKS.
- G. PROVIDE METALLIC MARKING TAPE OVER ALL DUCTS/DUCTBANKS.
- H. TOP OF ELECTRICAL DUCT BANK SHALL BE A MINIMUM OF 36" BELOW FINISHED GRADE. TOP OF TELEPHONE, DATA, CABLE TV (COMMUNICATIONS) DUCT BANKS SHALL BE A MINIMUM OF 24" BELOW FINISHED GRADE. UNLESS OTHERWISE REQUIRED BY RESPECTIVE UTILITY COMPANIES.
- I. CONCRETE ENCASE DUCT BANKS AND/OR CONDUIT WHERE ROUTED UNDER DRIVEWAYS, ROADWAYS OR PARKING AREAS.
- J. COORDINATE ROUTING AND INSTALLATION OF PROPOSED ELECTRIC PRIMARY, ELECTRIC SECONDARY, AND COMMUNICATION DUCTBANKS. COORDINATE PATHS, DEPTHS AND CONFIGURATIONS TO MAINTAIN CODE REQUIRED DEPTHS FROM TOP OF DUCTBANK TO FINISHED GRADE WHERE DUCTBANKS CROSS PATHS.
- K. CONTRACTORS SHALL RETURN THE EXISTING AREAS BACK TO ITS ORIGINAL CONDITION WHERE NEW WORK IS TO BE PERFORMED IN EXISTING AREAS TO REMAIN.
- L. REFERENCE CIVIL UTILITY PLANS FOR SITE UTILITY DESIGN INFORMATION. COORDINATE WORK WITH OTHER TRADES.
- M. CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED SURVEYOR TO IDENTIFY, COORDINATE AND RECORD EXACT LOCATIONS OF UNDERGROUND UTILITIES. RECORD DRAWINGS (HARD COPIES AND ELECTRONIC CAD FILES) SHALL BE PROVIDED TO OWNER.
- N. CONTRACTOR SHALL INCLUDE ALL TRENCHING AND BACKFILLING ASSOCIATED WITH ELECTRICAL WORK IN BID.
- O. WHERE DEVICES AND EQUIPMENT ARE SUBJECT TO WATER AND OR MOISTURE, THE DEVICE OR ASSOCIATED CIRCUIT SHALL BE GFI PROTECTED. EQUIPMENT ENCLOSURES SHALL BE NEMA 3R RATED AT A MINIMUM.
- P. COORDINATE FINAL LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT WITHIN LANDSCAPED AND HARDSCAPED AREAS WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
- Q. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR CONDUIT SIZES AND QUANTITIES ASSOCIATED WITH THE UNDERGROUND PRIMARY AND SECONDARY SERVICE LATERAL DUCT BANKS.
- R. ALL CONDUIT IN UNDERGROUND DUCT BANKS SHALL BE SUPPORTED WITH BASE AND INTERMEDIATE DUCT SPACERS.
- S. ELECTRICAL CONTRACTOR SHALL BACKFILL ALL ELECTRICAL TRENCHES USING CLEAN FILL MATERIAL FREE OF ORGANIC CONTAMINATIONS AND OTHER DELETERIOUS MATTER. PLACE BACKFILL MATERIAL IN 8" THICK LAYERS WITH EACH LIFT COMPACTED AT NEAR OPTIMUM MOISTURE CONTENT. COMPACT LIFTS TO ACHIEVE A MINIMUM IN PLACE DENSITY OF 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698.
- T. ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES, AND DRAINAGE PRIOR TO TRENCHING OR AUGERING FOR POLE BASE (TYPICAL).



Client:  
**City of Elyria**  
131 Court St - Suite 101  
Elyria, Ohio 44035

Project:  
**Public Safety  
Training Facility  
Range Building**

Garden Street  
Elyria, Ohio 44035

Revisions:

09.26.2024 For Construction  
Project Number: 5039 01 23  
Drawn by: ACG  
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Electrical Site Plan

**E0.01**



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GENERAL NOTES:

- ALL ELECTRICAL ROOMS, TECHNOLOGY/DATA CLOSETS, EXIT STAIRWELLS, AND ELEVATOR EQUIPMENT ROOMS. UNDER NO CIRCUMSTANCES SHALL PIPING, DUCTWORK, OR EQUIPMENT BE INSTALLED IN OR ROUTED THROUGH THESE ROOMS OR AREAS EXCEPT FOR BRANCH PIPING OR DUCTWORK SPECIFICALLY SERVING THE ROOM OR AREA. DEDICATED SPACE SHALL EXTEND VERTICALLY FROM FLOOR TO STRUCTURAL CEILING.
- REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION RELATED TO THE ELECTRICAL INSTALLATION. COORDINATE LIGHT FIXTURE LOCATIONS AND MOUNTING OPTIONS WITH CEILING TYPE BEING INSTALLED.
- ARCHITECTURAL DRAWINGS HAVE PRIORITY OVER MEP DRAWINGS WITH REGARD TO LOCATIONS OF ALL VISIBLE ELEMENTS AND DEVICES. COORDINATE EXACT DEVICE LOCATION WITH ARCHITECTURAL DRAWINGS.
- REFERENCE MECHANICAL, PLUMBING, FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ELECTRICAL CONDUIT, WIRE, LIGHT FIXTURE AND EQUIPMENT LOCATIONS WITH MECHANICAL, PLUMBING AND FIRE PROTECTION EQUIPMENT.
- WHERE EMERGENCY AND EXIT FIXTURES WITH AN INTEGRAL BATTERY PACK ARE USED, WIRE FIXTURES AHEAD OF ALL SWITCHING ON CIRCUIT INDICATED. EMERGENCY BATTERY BALLASTS ASSOCIATED WITH THE LIGHT FIXTURES SHALL BE WIRED FOR SWITCHED OPERATION, UNLESS INDICATED OTHERWISE. PROVIDE AN ADDITIONAL HOT WIRE TO EMERGENCY BALLAST FOR SWITCHED OPERATION.
- WHERE STANDARD LIGHT FIXTURES ARE USED FOR EMERGENCY LIGHTING POWERED FROM GENERATOR CIRCUITS, WIRE FIXTURES TO ALLOW FOR SWITCHED OPERATION, UNLESS OTHERWISE NOTED. PROVIDE THE REQUIRED LIGHTING CONTROL EQUIPMENT AND/OR DEVICES THAT ARE UL 924 LISTED TO ENABLE FIXTURES WIRED TO EMERGENCY POWER CIRCUITS TO OPERATE AT FULL RATED LUMEN OUTPUT.
- LIGHT FIXTURES DESIGNATED AS NIGHT LIGHTS (NL) SHALL BE WIRED FOR 24 HOUR OPERATION (NON-SWITCHED).
- FURNISH AND INSTALL OCCUPANCY AND DAYLIGHT SENSORS PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE WITH THE G.C., OWNER AND/OR OWNER'S REPRESENTATIVE TO COMMISSION AND ADJUST THE SETTINGS OF EACH SENSOR.
- PROVIDE TEMPORARY POWER AND TEMPORARY EMERGENCY, EXIT AND GENERAL LIGHTING FOR ALL AREAS OF CONSTRUCTION AS REQUIRED. COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR.
- PRIOR TO ROUGH-IN COORDINATE EXACT POWER REQUIREMENTS AND LOW VOLTAGE ROUGH-IN REQUIREMENTS FOR EQUIPMENT AND SYSTEMS FURNISHED BY THE OWNER.
- COORDINATE SCHEDULE WITH G.C. AND OWNER'S REPRESENTATIVE TO CORE DRILL AND SAW CUT FLOOR SLABS FOR INSTALLATION OF FLOOR BOXES. ASSUME CORING AND SAW CUTTING OF SLABS IS TO OCCUR DURING NON-BUSINESS HOURS.
- NEW CONDUIT/RACEWAY BEING INSTALLED SHALL BE CONCEALED WITHIN NEW AND EXISTING CONSTRUCTION. WHERE REQUIRED, INSTALL MC CABLE IN EXISTING STUD WALLS AND INSTALL SURFACE MOUNTED RACEWAY ON EXISTING BLOCK WALLS. WHEN THERE IS NO AVAILABLE OPTION BUT TO SURFACE MOUNT A VISIBLE CONDUIT/RACEWAY, CONSULT ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- ALL EXISTING UNUSED WIRE, CABLING, CONDUIT AND EQUIPMENT SHALL BE REMOVED COMPLETE.
- REFERENCE DEMOLITION NOTES, DRAWING E0.00.
- ALL LOW VOLTAGE CABLING AND WIRING LOCATED OUTSIDE OF TENANT'S LEASED SPACE SHALL BE INSTALLED IN RIGID CONDUIT.
- WHEN MULTIPLE DEVICES ARE ADJACENT TO EACH OTHER, GANG DEVICES TOGETHER WITHIN COMMON COVERPLATE.

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A 11.07.2024 ADDENDUM A  
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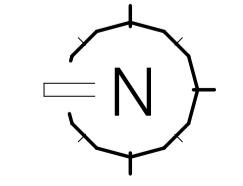
Lighting Plan

**E1.01**

SHEET SCALE  
0" 1/2" 1" 2"

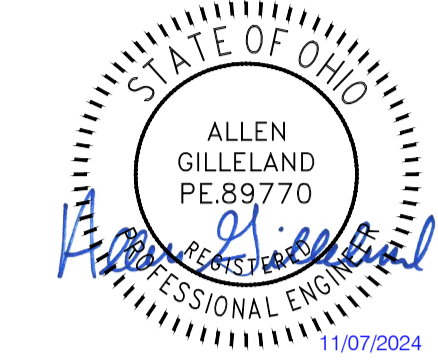


1 Range Support Building Lighting Plan  
1/4" = 1'-0"



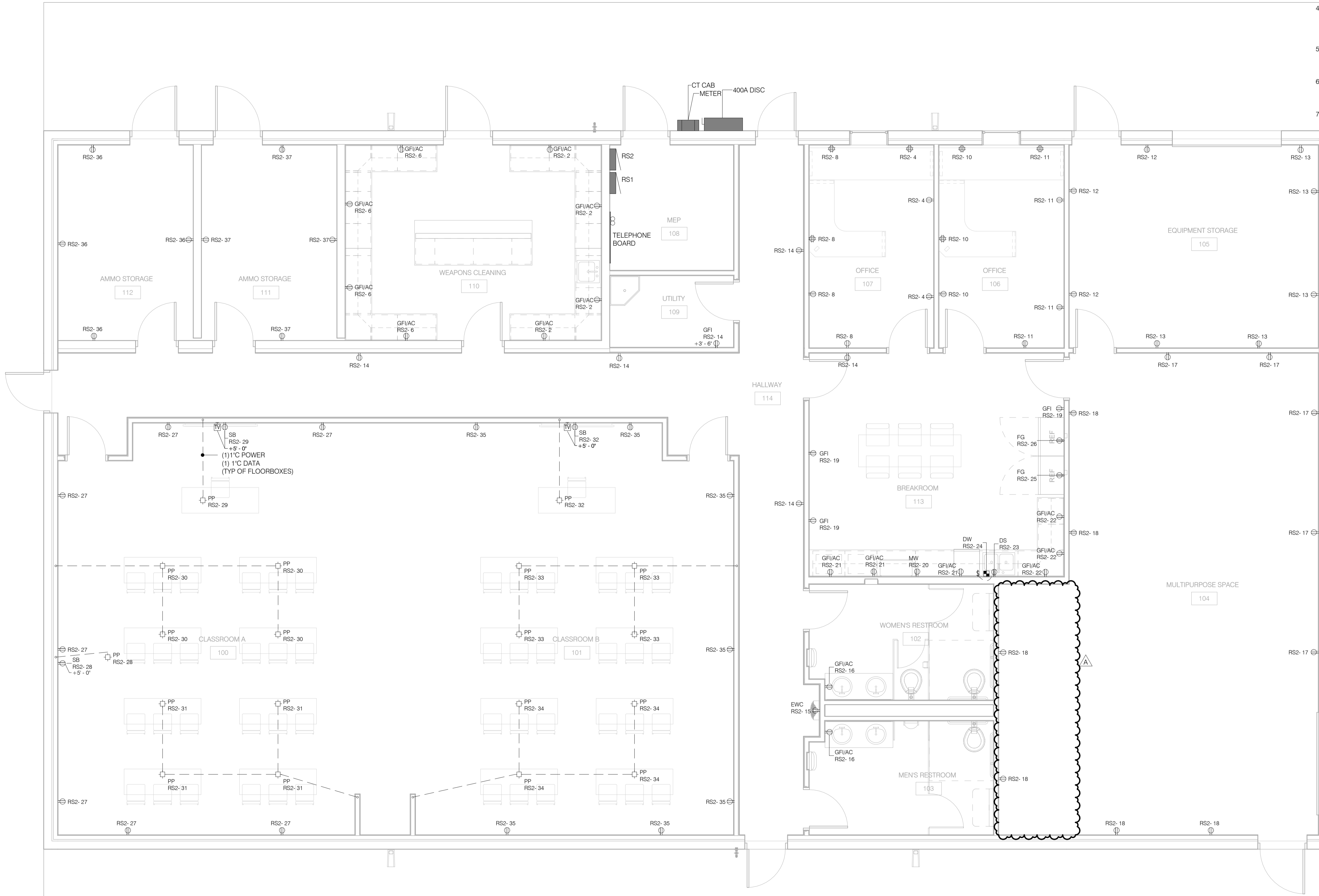
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v2023 11/07/24 3:21:01 PM



POWER GENERAL NOTES:

1. ALL ELECTRICAL ROOMS, TECHNOLOGY/DATA CLOSETS, EXIT STAIRWELLS, AND ELEVATOR EQUIPMENT ROOMS. UNDER NO CIRCUMSTANCES SHALL PIPING, DUCTWORK, OR EQUIPMENT BE INSTALLED IN OR ROUTED THROUGH THESE ROOMS OR AREAS EXCEPT FOR BRANCH PIPING OR DUCTWORK SPECIFICALLY SERVING THE ROOM OR AREA. DEDICATED SPACE SHALL EXTEND VERTICALLY FROM FLOOR TO STRUCTURAL CEILING.
2. REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION RELATED TO THE ELECTRICAL INSTALLATION. COORDINATE DEVICE LOCATIONS WITH FURNITURE AND EQUIPMENT BEING PROVIDED.
3. ARCHITECTURAL DRAWINGS HAVE PRIORITY OVER MEP DRAWINGS WITH REGARD TO LOCATIONS OF ALL VISIBLE ELEMENTS AND DEVICES. COORDINATE EXACT DEVICE LOCATIONS WITH DIMENSIONS INDICATED ON ARCHITECTURAL DRAWINGS. REFERENCE ARCHITECTURAL ELEVATIONS AND TYPICAL DEVICE MOUNTING DETAILS AND NOTES.
4. REFERENCE MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ELECTRICAL CONDUIT, WIRE, LIGHT FIXTURES, DEVICES AND EQUIPMENT LOCATIONS WITH MECHANICAL AND PLUMBING EQUIPMENT.
5. PRIOR TO ROUGH-IN, COORDINATE EXACT POWER REQUIREMENTS AND LOW VOLTAGE ROUGH-IN REQUIREMENTS FOR ALL EQUIPMENT AND SYSTEMS BEING FURNISHED BY OWNER AND OTHER TRADES.
6. PROVIDE TEMPORARY POWER AND TEMPORARY, EMERGENCY, EXIT AND GENERAL LIGHTING FOR AREAS OF CONSTRUCTION, AS REQUIRED.
7. WHEN MULTIPLE DEVICES ARE ADJACENT TO EACH OTHER, GANG DEVICES TOGETHER WITHIN COMMON COVERPLATE.



Client:  
City of Elyria

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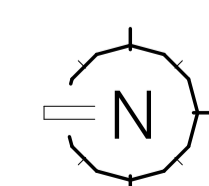
Project:  
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Power Plan

**E2.01**

SHEET SCALE  
0" 1/2" 1" 2"



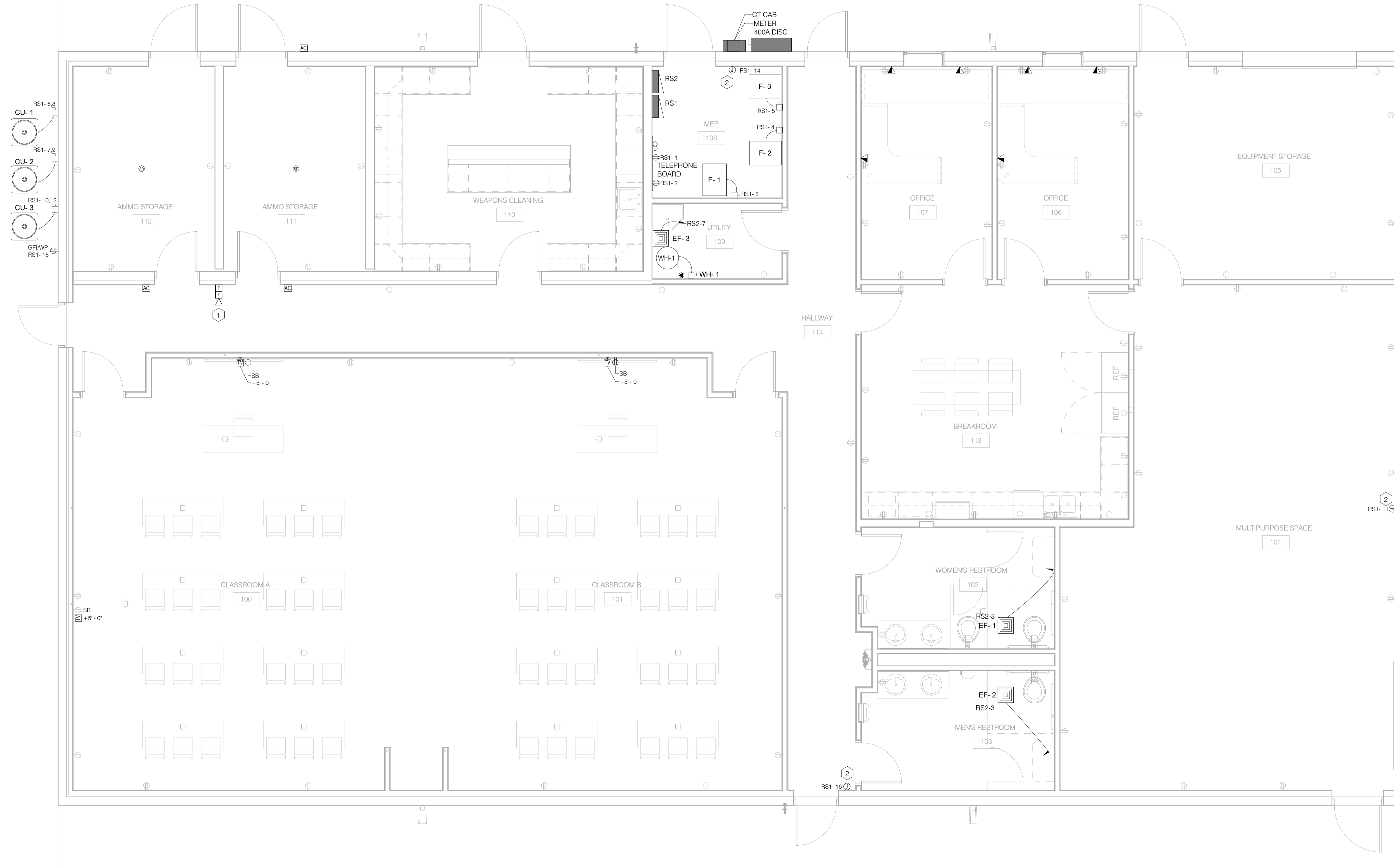


**POWER GENERAL NOTES:**

- ALL ELECTRICAL ROOMS, TECHNOLOGY DATA CLOSETS, EXIT STAIRWELLS, AND ELEVATOR EQUIPMENT ROOMS, UNDER NO CIRCUMSTANCES SHALL PIPING, DUCTWORK, OR EQUIPMENT BE INSTALLED IN OR ROUTED THROUGH THESE ROOMS OR AREAS EXCEPT FOR BRANCH PIPING OR DUCTWORK SPECIFICALLY SERVING THE ROOM OR AREA. DEDICATED SPACE SHALL EXTEND VERTICALLY FROM FLOOR TO STRUCTURAL CEILING.
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- WHEN MULTIPLE DEVICES ARE ADJACENT TO EACH OTHER, GANG DEVICES TOGETHER WITHIN COMMON COVERPLATE.

**CODED NOTES:**

- PROVIDE MANUAL EMERGENCY ALARM SYSTEM PER OBC 415.5.1 WITH ALARM INITIATING DEVICES OUTSIDE EACH INTERIOR EXIT ACCESS DOOR.
- GATE CONTROL CIRCUIT, REFERENCE E0.01 ELECTRICAL SITE PLAN.



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Systems Plan

**E3.01**

SHEET SCALE  
0" 1/2" 1" 2"



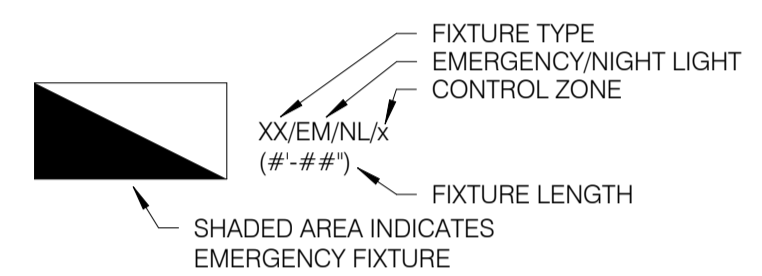
MECHANICAL EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULE													
TYPE	MAR K	VOLTAGE	PHASE	LOAD	MCA	MOC	HP	LOAD CLASSIFICATION	PANEL	CKT #	CONNECTION	FEEDER SIZE	COMMENTS
CU	1	208 V	1	5782 VA	28 A	0 A		Motor			NEMA 3R 30A/2P DISCONNECT SWITCH	(2) #10 & (10) #10 GND IN 3/4" C	
CU	2	208 V	1	5782 VA	28 A	0 A		Motor			NEMA 3R 30A/2P DISCONNECT SWITCH	(2) #10 & (10) #10 GND IN 3/4" C	
CU	3	208 V	1	5782 VA	28 A	0 A		Motor			NEMA 3R 30A/2P DISCONNECT SWITCH	(2) #10 & (10) #10 GND IN 3/4" C	
EF	1	120 V	1	62 VA	1 A	15 A		Motor	RS2	3	DIRECT	(2) #12 & (1) #12 GND IN 3/4" C	CONNECT TO LOCAL LIGHTSWITCH
EF	2	120 V	1	62 VA	1 A	15 A		Motor	RS2	3	DIRECT	(2) #12 & (1) #12 GND IN 3/4" C	CONNECT TO LOCAL LIGHTSWITCH
EF	3	120 V	1	17 VA	0 A	15 A		Motor	RS2	7	DIRECT	(2) #12 & (1) #12 GND IN 3/4" C	CONNECT TO LOCAL LIGHTSWITCH
F	1	120 V	1	1644 VA	14 A	20 A		Motor	RS1	3	NEMA 1 30A/1P FUSED DISCONNECT	(2) #12 & (1) #12 GND IN 3/4" C	PROVIDE PATHWAY TO REMOTE THERMOSTAT
F	2	120 V	1	1632 VA	14 A	20 A		Motor	RS1	4	NEMA 1 30A/1P FUSED DISCONNECT	(2) #12 & (1) #12 GND IN 3/4" C	PROVIDE PATHWAY TO REMOTE THERMOSTAT
F	3	120 V	1	1632 VA	14 A	20 A		Motor	RS1	5	NEMA 1 30A/1P FUSED DISCONNECT	(2) #12 & (1) #12 GND IN 3/4" C	PROVIDE PATHWAY TO REMOTE THERMOSTAT
WH	1	208 V	1	8000 VA	36 A	40 A		Misc. Power	RS1	13, 15	NEMA 1 60A/1P FUSED DISCONNECT	(2) #8 & (1) #10 GND IN 3/4" C	

LIGHTING FIXTURE SCHEDULE												
TYPE	LOAD	VOLTAGE	LAMP(S) NO.	TYPE	LUMENS	COLOR TEMP	CRI	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	FINISH	
A4	65 VA	120 V	-	LED	5500	3500 K	80	CURRENT	CBT24-75CS *ELL10	2X4 BACKLIT TROFFER WITH SWITCHABLE LUMENS. PROVIDE WITH EMERGENCY BATTERY BACKUP WHERE 'EM' IS INDICATED ON PLANS.	WHITE	
ER	1 VA	120 V	2	LED	0 K	-	-	COMPASS LIGHTING	CWRD	DUAL HEAD REMOTE EGRESS FIXTURE	GREY	
EX	2 VA	120 V	-	LED	0 K	-	-	COMPASS LIGHTING	CERRC	THERMOPLASTIC EXIT SIGN WITH RED LETTERS AND CHEVRONS. NI-CAD BATTERY WITH REMOTE CAPACITY AND SELF TEST/DIAGNOSTIC BUTTON. COORDINATE QUANTITY OF FACES, CHEVRON ARROWS AND MOUNTING WITH DRAWINGS.	WHITE	
G	42 VA	120 V	-	LED	3600	3500 K	80	CURRENT	MPS 4 40 MW F W ED U *ELL14 CSHC	4" LINEAR SUSPENDED STRIP WITH FLAT LENS AND MEDIUM DISTRIBUTION. PROVIDE WITH WHITE CHAIN MOUNTING KIT. PROVIDE WITH EMERGENCY BATTERY BACKUP WHERE 'EM' IS INDICATED ON PLANS.		

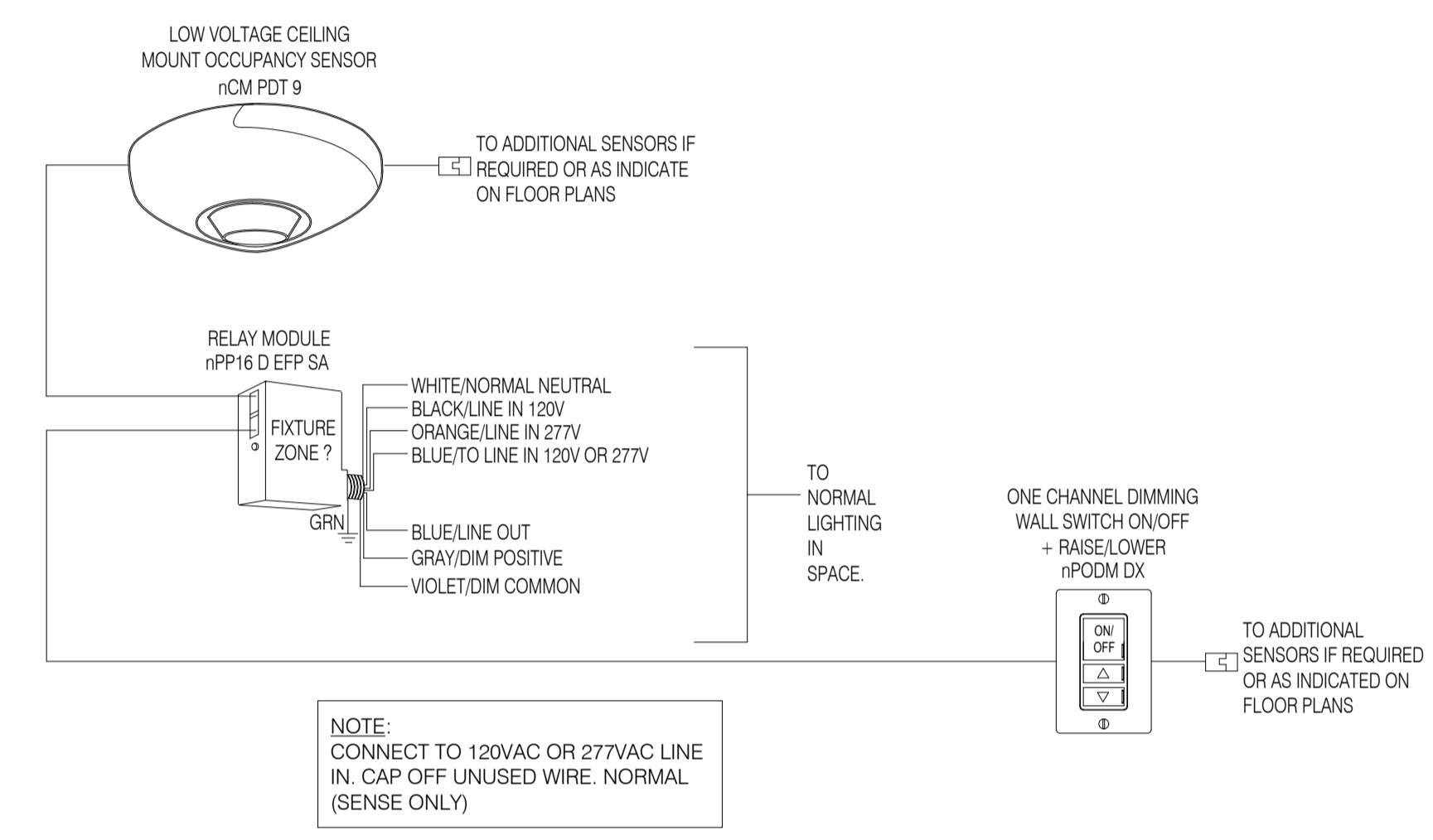
**LIGHTING FIXTURE SCHEDULE NOTES:**

- LUMINAIRE INDICATED IN SCHEDULE IS BASIS OF DESIGN. CONTRACTOR MAY SUBMIT ALTERNATE, EQUIVALENT OR BETTER, FIXTURES FOR REVIEW BY OWNER, ARCHITECT AND ENGINEER. FOR ANY LUMINAIRE SUBMITTED OTHER THAN BASIS OF DESIGN LUMINAIRE, A POINT-BY-POINT PHOTOMETRIC PLAN SHALL BE PROVIDED FOR THE PROPOSED LUMINAIRE AS PART OF THE SHOP DRAWING SUBMITTAL. POINT-BY-POINT CALCULATIONS SHALL FOLLOW IESNA RECOMMENDED PRACTICES AND INCLUDE LIGHT LOSS FACTOR (LLF) USED FOR ALL LUMINAIRE TYPES, SURFACE REFLECTANCES, AVERAGE FOOTCANDLE LEVEL, MINIMUM FOOTCANDLE LEVEL(S), AND MAXIMUM-TO-MINIMUM RATIO FOR ALL AREAS WHERE ALTERNATE PROPOSED LUMINAIRE IS TO BE INSTALLED (ONE CALCULATION FOR TYPICAL AREAS IS ACCEPTABLE. ALL LUMINAIRE SHALL BE IN ACCORDANCE AND SHALL CONFORM TO THE CONTENTS OF THE LUMINAIRE SCHEDULE AND ALL PROVISIONS OF THE CONTRACT DOCUMENTS.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL CEILING TYPES, LUMINAIRE COLORS, LENGTHS, TRIMS, FINISHES, MOUNTING HARDWARE, CONFIGURATIONS AND HEIGHTS OF SUSPENDED LUMINAIRE, ETC. WITH ARCHITECT PRIOR TO ANY ROUGH-INS AND PLACING FINAL PURCHASE ORDERS.
- VERIFY FINAL LUMINAIRE LOCATIONS WITH OTHER CEILING MOUNTED EQUIPMENT SUCH AS DIFFUSERS, FIRE ALARM DEVICES, SPEAKERS, ETC. WITH ARCHITECTURAL RCP (REFLECTED CEILING PLANS).
- VERIFY EXACT HEIGHT AND LOCATIONS OF ALL WALL MOUNTED AND PENDANT/CABLE MOUNTED LUMINAIRE WITH ARCHITECTURAL ELEVATIONS PRIOR TO ANY ROUGH-IN.
- LUMINAIRE SHALL NOT BE SUPPORTED FROM SUSPENDED CEILING SUPPORTS UNLESS ADDITIONAL CEILING FRAMING AND SUPPORTS ARE ADDED BY THE CEILING CONTRACTOR ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, U.L. LISTINGS, AND ANY APPLICABLE STATE OR LOCAL CODES.
- CONNECTIONS TO RECESSED LUMINAIRE SHALL BE MADE WITH MINIMUM 1/2" FLEXIBLE METAL CONDUIT (FMC) FROM FIXTURE TO OUTLET BOX. LENGTH OF FMC SHALL NOT EXCEED 6'.
- AT THE CONCLUSION OF THE WORK, EACH LUMINAIRE MUST BE CLEANED PER MANUFACTURER'S INSTRUCTIONS, EQUIPPED WITH THE PROPER TYPE, NUMBER OF LAMPS, INCLUDING KELVIN TEMPERATURE AND WATTAGE, AND ALL IN GOOD OPERATING CONDITION.
- FINAL COLOR SELECTION BY ARCHITECT/OWNER AT FIXTURE SUBMITTAL.
- LENSED FIXTURES SHALL HAVE A MINIMUM OF 0.125" THICK ACRYLIC LENS UNLESS OTHERWISE NOTED.

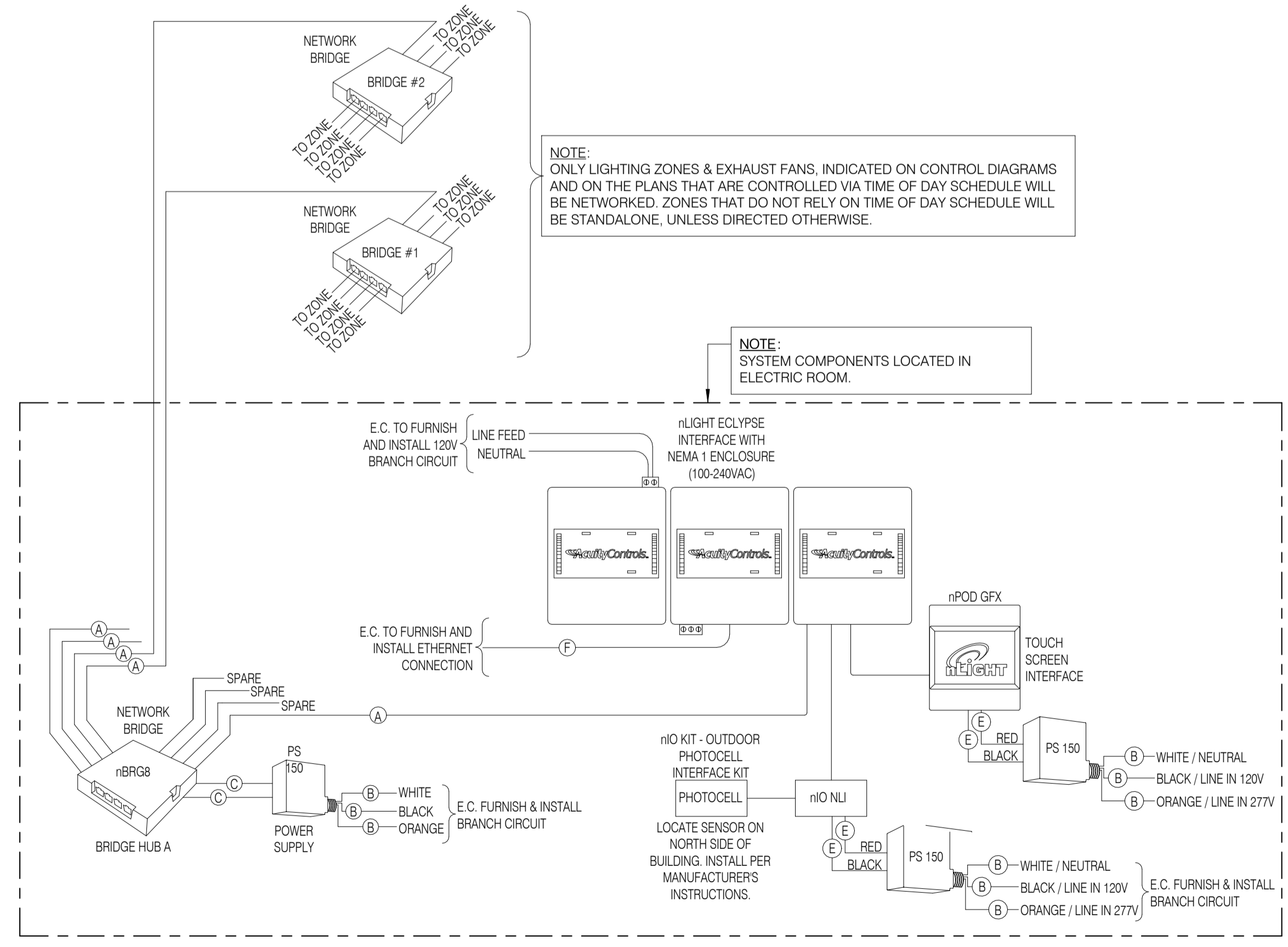
**LIGHTING FIXTURE LEGEND**



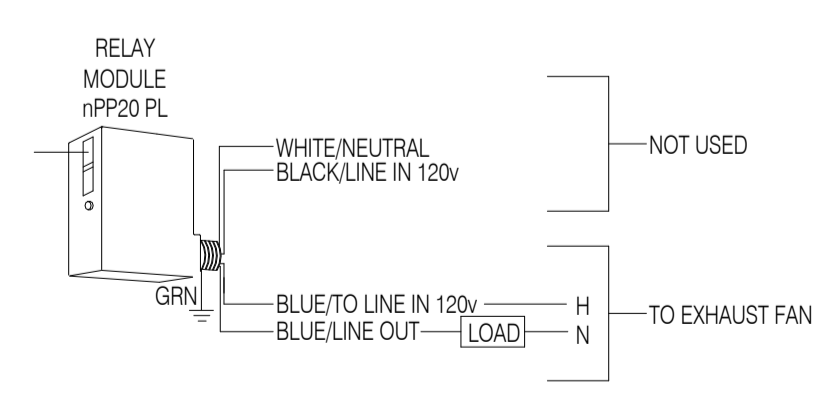
LIGHTING CONTROL PANEL - LCP1									
LCP	ZONE	RELAY #	DESCRIPTION	SWITCH	ON/OFF	PANEL	CKT	TYPE	DIMMING
LCP	1	1	HALLWAY	OR	TC/TC	RS2	9	A4	0-10V
LCP	1	2	BREAKROOM	b	OC/OC	RS2	9	A4	0-10V
LCP	1	3	CLASSROOM A	a	OC/OC	RS2	1	A4	0-10V
LCP	1	4	CLASSROOM B	c	OC/OC	RS2	1	A4	0-10V
LCP	1	5	CLASSROOM A BACK	c	OC/OC	RS2	1	A4	0-10V
LCP	1	7	MULTIPURPOSE SPACE		OC/OC	RS2	5	A4	0-10V



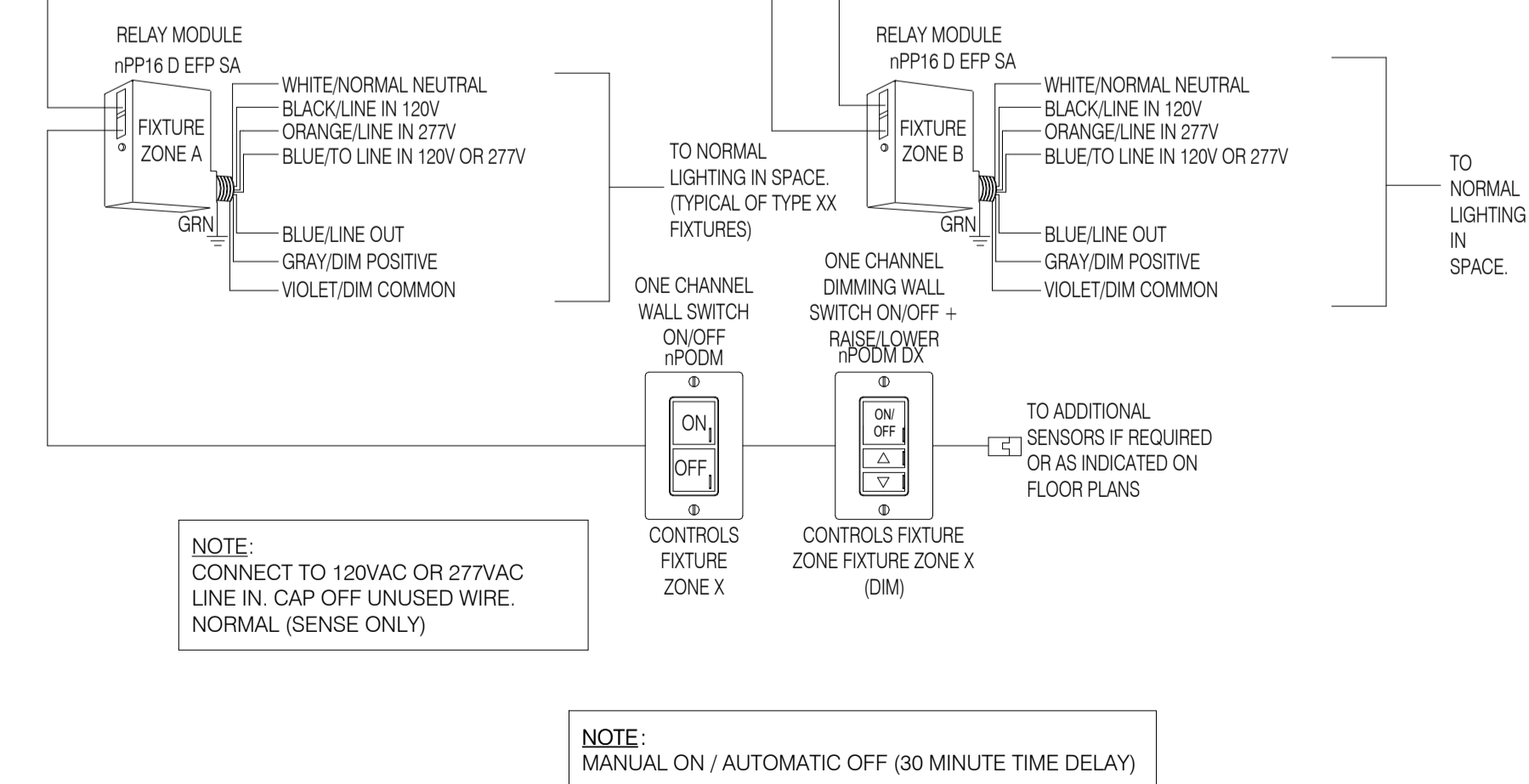
**5 E\_TYPICAL OFFICE LC**  
E5.00 1/4" = 1'-0"



**4 LIGHTING CONTROL NETWORK BACKBONE DIAGRAM (ACUITY BRANDS nLIGHT CONTROLS)**  
E5.00 1/4" = 1'-0"



**2 EXHAUST FAN CONTROL DIAGRAM**  
E5.00 1/4" = 1'-0"



**3 MULTIZONE LIGHTING CONTROL**  
E5.00 1/4" = 1'-0"

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Electrical Details and Diagrams



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Electrical One-Line  
Diagram & Panel  
Schedules

**E6.00**

0" 1/2" 1" 2"

ONE-LINE DIAGRAM NOTES

- THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL POWER COMPANY REQUIREMENTS PRIOR TO BIDDING & INCLUDE THE COST OF ALL ASSOCIATED LABOR, MATERIALS, & CHARGES IN THEIR BID.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE UTILITY COMPANY PRIOR TO BIDDING AND PROVIDE EQUIPMENT RATED ACCORDINGLY. SUBMIT FAULT CURRENT CALCULATIONS WITH SHOP DRAWING SUBMITTAL.
- CONDUCTORS SHALL BE COPPER, UNLESS NOTED OTHERWISE.
- ALL BUSSING SHALL BE COPPER.
- GROUNDING ELECTRODE SYSTEM CONDUCTORS SHALL BE COPPER.
- PROVIDE FULL LENGTH VERTICAL BUSSING IN ALL SWITCHBOARDS, DISTRIBUTION PANELS & PANELBOARDS.
- PROVIDE FULL SIZE HORIZONTAL BUSSING IN ALL SWITCHBOARDS.
- ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE. ALL WALL-MOUNTED EQUIPMENT SHALL BE MOUNTED ON 3/4" FIRE RATED BACKBOARD.
- ALL FLOOR-MOUNTED EQUIPMENT SHALL BE MOUNTED ON 4" HIGH CONCRETE HOUSEKEEPING PAD.
- DRY TYPE TRANSFORMERS SHALL BE GROUNDED TO THE BUILDING GROUNDING ELECTRODE SYSTEM PER NEC.
- EXTERIOR MOUNTED ELECTRICAL EQUIPMENT SHALL BE NEMA 3R RATED AND BE FURNISHED WITH HEATERS, THERMOSTAT AND DISCONNECTING MEANS INTEGRAL TO EQUIPMENT.
- PROVIDE NAMEPLATES INDICATING EQUIPMENT DESIGNATION AND DESIGNATION OF SOURCE SUPPLYING THE DISCONNECTING MEANS FOR ALL SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, ENCLOSURES AND ELECTRICAL CABINETS, ACCESS DOORS/PANELS FOR CONCEALED ELECTRICAL EQUIPMENT, ENCLOSED SWITCHES/CIRCUIT BREAKERS/CONTROLLERS, POWER-TRANSFER DEVICES, PUSH-BUTTONS, CONTACTORS, LIGHTING CONTROL SYSTEMS, INVERTERS, GENERATORS, UPS, MONITORING EQUIPMENT, STARTERS, DISCONNECT SWITCHES, METER SOCKETS, RELAYS, TRANSFORMERS, AND JUNCTION BOXES GREATER THAN 4 1/16" SQUARE. PROVIDE NAMEPLATES ON BRANCH SWITCHES/BREAKERS OF SWITCHBOARDS AND DISTRIBUTION PANELS. NAMEPLATES SHALL BE ENGRAVED LAMACOID, 5/32" LETTERS CENTERED AT TOP OF PANEL AND SECURED WITH ADHESIVE TYPE FASTENERS. NORMAL POWER SHALL BE LABELED WITH WHITE BACKGROUND, BLACK LETTERS; EMERGENCY POWER AND MAIN SERVICE NAMEPLATE DISCONNECTS WITH RED BACKGROUND, WHITE LETTERING.
- COORDINATE SPACE WITH ALL OTHER TRADES TO MAINTAIN ALL CODE-REQUIRED CLEARANCES.
- REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL SETTINGS REQUIRED FOR ALL ADJUSTABLE/ELECTRONIC TYPE CIRCUIT BREAKERS WITH LONGTIME, SHORT TIME, GF, INSTANTANEOUS, ETC. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL COORDINATION STUDY.
- PROPER CLEARANCE MUST BE MAINTAINED ABOUT ELECTRICAL EQUIPMENT PER NEC. FIELD VERIFY EXACT MOUNTING SPACE AVAILABLE IN ELECTRICAL ROOM / AREA PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT.
- ELECTRICAL CONTRACTOR SHALL BALANCE PANELS AND ELECTRICAL EQUIPMENT TO ±10% BETWEEN PHASES: A/B, B/C, A/C REGARDLESS OF CIRCUITING INDICATED.
- HVAC CIRCUIT BREAKERS TO BE "HACR" TYPE WHERE REQUIRED BY EQUIPMENT NAMEPLATE PER NEC.
- FEEDER ROUTING IS DIAGRAMMATIC ONLY. ACTUAL ROUTING OF FEEDERS (OVERHEAD OR UNDERGROUND) IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- PROVIDE ARC ENERGY REDUCTION AS APPLICABLE:
  - WHERE BREAKERS ARE UTILIZED WITHIN ELECTRICAL DISTRIBUTION EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL PROVIDE BREAKERS EQUIPPED WITH ADJUSTABLE INSTANTANEOUS TRIP SETTING TO COMPLY WITH NEC 240.87 ARC ENERGY REDUCTION. THE ADJUSTABLE INSTANTANEOUS TRIP SETTING OPTION SHALL BE PROVIDED WHERE THE HIGHEST CONTINUOUS TRIP SETTING FOR WHICH THE ACTUAL OVERCURRENT DEVICE IS INSTALLED IN A CIRCUIT BREAKER IS RATED OR CAN BE ADJUSTED IS 1200A OR HIGHER.
  - WHERE FUSES ARE UTILIZED WITHIN ELECTRICAL DISTRIBUTION EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL PROVIDE FUSES EQUIPPED WITH CLEARING TIME OF 0.7 SECONDS OR LESS AT AVAILABLE ARCING CURRENT TO COMPLY WITH NEC 240.67 ARC ENERGY REDUCTION. THIS SHALL BE PROVIDED WHERE THE FUSE IS RATED AT 1200A OR HIGHER.
  - PROVIDE PERFORMANCE TESTING PER NEC FOR ARC ENERGY REDUCTION SYSTEM. ENGAGE A FACTORY AUTHORIZED SERVICE REPRESENTATIVE TO PERFORM TESTING AND PROVIDE REQUIRED DOCUMENTATION. PROVIDE COPY OF TESTING AND DOCUMENTATION TO EOR AND LOCAL AHJ.
  - THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH NEC ARTICLE 110.16 FOR LABELING OF PANELS FOR ARC FLASH HAZARD WARNING AS WELL AS FOLLOWING REQUIRED SAFETY PRECAUTIONS WHEN SERVICING OR MAINTAINING ELECTRICAL EQUIPMENT.
  - PROVIDE SURGE-PROTECTIVE DEVICE (SPD) FOR ALL DWELLING UNIT SERVICES. INSTALLATION SHALL COMPLY WITH NEC 230.67.

FEEDER NOTES

- ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS INDICATED ON THE PLANS AND ONE-LINE DIAGRAM ARE BASED UPON THE USE OF COPPER CONDUCTORS, UNLESS NOTED OTHERWISE. "AL" - WITHIN THE FEEDER SIZE INDICATES ALUMINUM CONDUCTORS SPECIFIED. IF APPROVED FOR USE BY THE OWNER, THE CONTRACTOR MAY FURNISH AND INSTALL ALUMINUM CONDUCTORS FOR THE FOLLOWING:
  - SECONDARY ELECTRIC SERVICE LATERALS
  - FEEDERS RATED 100A AND LARGER.
- ALL FEEDERS AND BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER, UNLESS OTHERWISE INDICATED.
- ALUMINUM CONDUCTORS ARE PROHIBITED FROM BEING USED TO SERVE ANY EQUIPMENT THAT SPECIFICALLY CALLS FOR THE USE OF COPPER CONDUCTORS OR PROHIBITS THE USE OF ALUMINUM CONDUCTORS WITHIN THE EQUIPMENT'S RESPECTIVE WRITTEN INSTALLATION INSTRUCTIONS.
- ALUMINUM FEEDER SIZES, INDICATED ON PLANS AND ONE-LINE DIAGRAM, ARE BASED ON STABILLOY TYPE XHHW-2 COMPACT STRANDED ALUMINUM CONDUCTORS (AA-8000 SERIES ALUMINUM ALLOY).
- ALL LUG TERMINATIONS ASSOCIATED WITH ALUMINUM CONDUCTORS SHALL BE "HI-PRESS" COMPRESSION TYPE AS MANUFACTURED PER THE ELECTRICAL DISTRIBUTION EQUIPMENT MANUFACTURERS WRITTEN INSTRUCTIONS FOR THE INSTALLATION OF COMPRESSION CONNECTIONS.
- ELECTRICAL DISTRIBUTION EQUIPMENT AND OVERCURRENT DEVICES (NEW OR EXISTING) SHALL BE MANUFACTURED (NEW) OR MODIFIED IN FIELD (EXISTING) USING AN APPROVED MANUFACTURERS KIT TO ACCEPT THE APPROPRIATELY RATED, QUANTITY, TYPE AND SIZE OF COMPRESSION LUGS FOR THE INSTALLATION OF THE ALUMINUM CONDUCTORS BEING FURNISHED AND INSTALLED.
- WHERE RECOMMENDED BY WIRE AND/OR TERMINATION MANUFACTURERS, FURNISH AND INSTALL OXIDE INHIBITOR AT TERMINATIONS.
- THE GROUNDING ELECTRODE SYSTEM SHALL UTILIZE COPPER CONDUCTORS.
- IF ALUMINUM CONDUCTORS ARE UTILIZED, BASED ON THE ABOVE CRITERIA, THE ALUMINUM CONDUCTOR SIZES BEING FURNISHED SHALL BE INCREASED TO MEET OR EXCEED THE RATINGS OF THE SPECIFIED COPPER FEEDER CHARACTERISTICS, SUCH AS AMPERAGE AND VOLTAGE DROP. THE CONDUIT, ASSOCIATED WITH EACH OF THE FURNISHED ALUMINUM FEEDERS, SHALL ALSO BE INCREASED IN SIZE TO COMPLY WITH CODE FOR THE QUANTITY AND SIZE OF ALUMINUM CONDUCTORS BEING UTILIZED. THE SHORT CIRCUIT RATINGS OF THE ELECTRICAL DISTRIBUTION EQUIPMENT SHALL BE INCREASED, AS REQUIRED, TO ACCOMMODATE THE HIGHER AVAILABLE SHORT CIRCUIT RATING AT THE RESPECTIVE EQUIPMENT'S TERMINALS DUE TO ALUMINUM CONDUCTORS BEING UTILIZED.

PANELBOARD DESIGNATION: RS2

Notes	CKT	Circuit Description	Tripp	Poles	Load Class	A	B	C	Load Class	Poles	Tripp	Circuit Description	CKT	Notes		
	9	1	LTG - 100.101	20	1	L	2.0	0.7			R	1	20	REC - 110	2	
	9	3	LTG - 102.103	20	1	M, L		0.4	0.7		R	1	20	REC - 107	4	
	9	5	LTG - 104.105, 106, 107	20	1	L				1.8	0.7		1	20	REC - 110	6
	9	7	LTG - 108-112	20	1	M, L	0.7	1.1			R	1	20	REC - 107	8	
	9	9	LTG - 113, 114	20	1	L			1.5	0.9			1	20	REC - 106	10
	11	REC - 106	20	1	R				0.9	0.5		R	1	20	REC - 105	12
	13	REC - 105	20	1	R			0.9	1.1			R	1	20	REC - 114	14
	3	15	EWG - 114	20	1	R		0.1	0.4			R	1	20	REC - 102, 103	16
	17	REC - 104	20	1	R				0.9	1.1		R	1	20	REC - 104	18
	19	REC - 113	20	1	R	0.5	1.2				R	1	20	REC - 114 MW	20	
	21	REC - 113	20	1	R			0.5	0.5			R	1	20	REC - 113	22
	23	REC - 113 DS	20	1	R				1.2	1.8		R	1	20	REC - 113 DW	24
	25	REC - 113 FG	20	1	R	0.8	0.8				R	1	20	REC - 113 FG	26	
	27	REC - 100	20	1	R			1.3	0.3			R	1	20	REC - 100 SB	28
	29	REC - 100 SB	20	1	R				0.3	0.7		R	1	20	REC - 100 FB	30
	31	REC - 100 FB	20	1	R	0.7	0.3				R	1	20	REC - 101 SB	32	
	33	REC - 101 FB	20	1	R			0.7	0.7			R	1	20	REC - 101 FB	34
	35	REC - 10	20	1	R				1.3	0.7		R	1	20	REC - 112	36
	37	REC - 111	20	1	R	0.7	0.0				--	1	20	SPARE	38	
	39	SPARE	20	1	--			0.0	0.0		--	1	20	SPARE	40	
	41	SPARE	20	1	--				0.0	0.0	--	1	20	SPARE	42	
						VA:	11541	8024	11990							
						Amps:	101	67	104							

Load Classification	Connected Load	NEC Demand Factor	Estimated Demand	Panel Totals
Lighting	6164 VA	100.00%	6164 VA	Connected Load: 62210 VA
Motor	22396 VA	100.00%	22396 VA	
Misc. Power	7500 VA	100.00%	7500 VA	Estimated Demand Load: 54135 VA
Receptacle	26150 VA	69.12%	18075 VA	Connected Current: 173 A
				Estimated Demand Current: 150 A

PANELBOARD NOTES:

ALL BREAKERS SHALL BE 20A/1P, HACR RATED, UNLESS OTHERWISE NOTED.

- SWD RATED
- ARC FAULT
- GFI - 5mA FOR PERSONNEL - 30mA FOR EQUIPMENT
- SHUNT-TRIP TYPE
- COMBINATION ARC FAULT/GFI
- LOCK-ON CLIP
- LOCK-ON CLIP WITH RED MARKING
- REMOTE GFI MODULE MOUNTED ADJACENT TO PANELBOARD
- CIRCUIT ROUTED THROUGH LIGHTING CONTROL PANEL
- HANDLE TIES FOR MULTIPLEXED CIRCUITS
- NEW BRANCH CIRCUIT USING EXISTING BREAKER
- NEW CIRCUIT BREAKER IN EXISTING PANEL

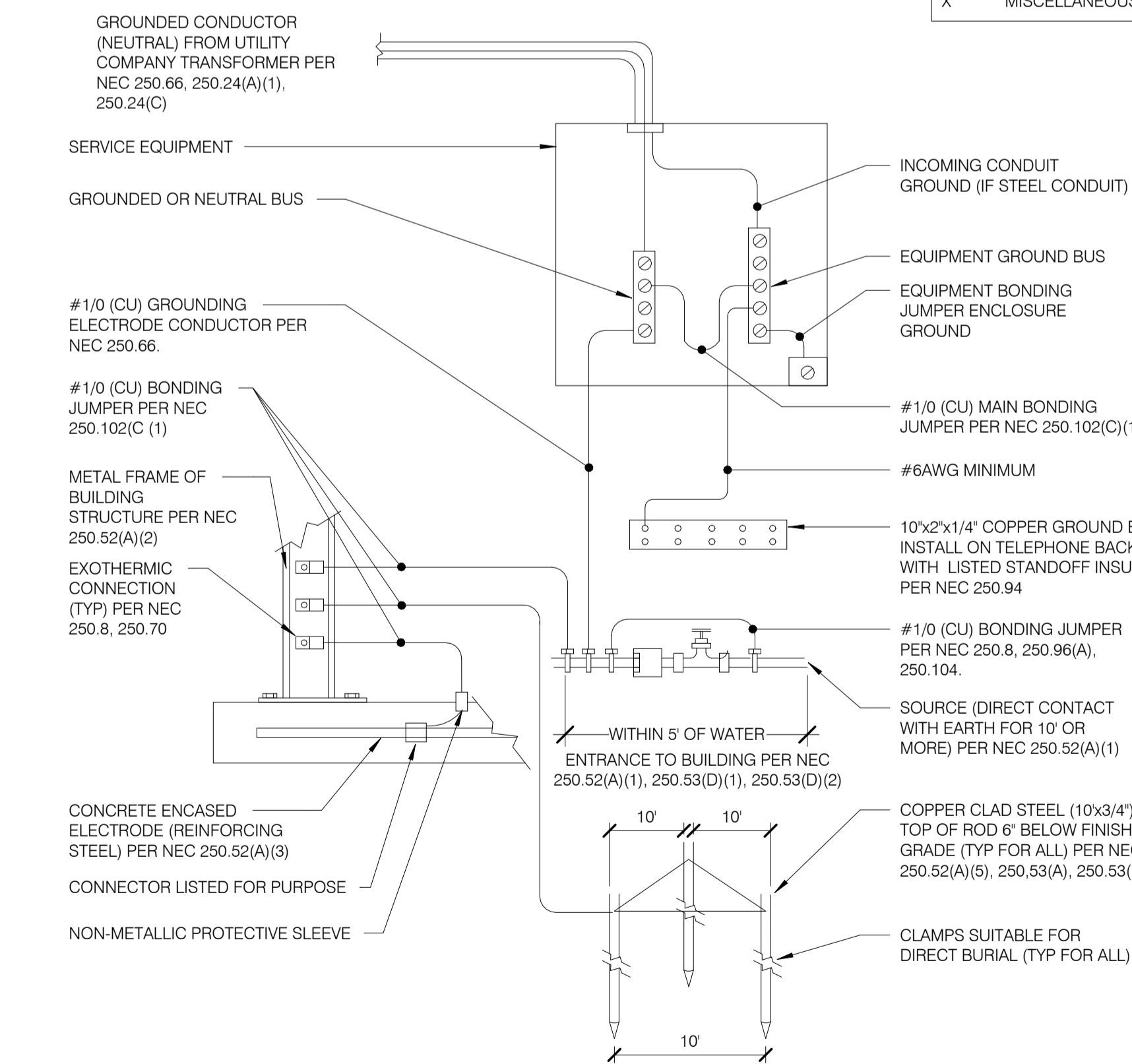
LOAD CLASSIFICATION ABBREVIATIONS:

A	APPLIANCE
C	COOLING
EL	ELEVATOR
H	HEATING
HVAC	HVAC
K	KITCHEN
L	LIGHTING
M	MOTOR
R	RECEPTACLE
V	VENTILATION
X	MISCELLANEOUS POWER

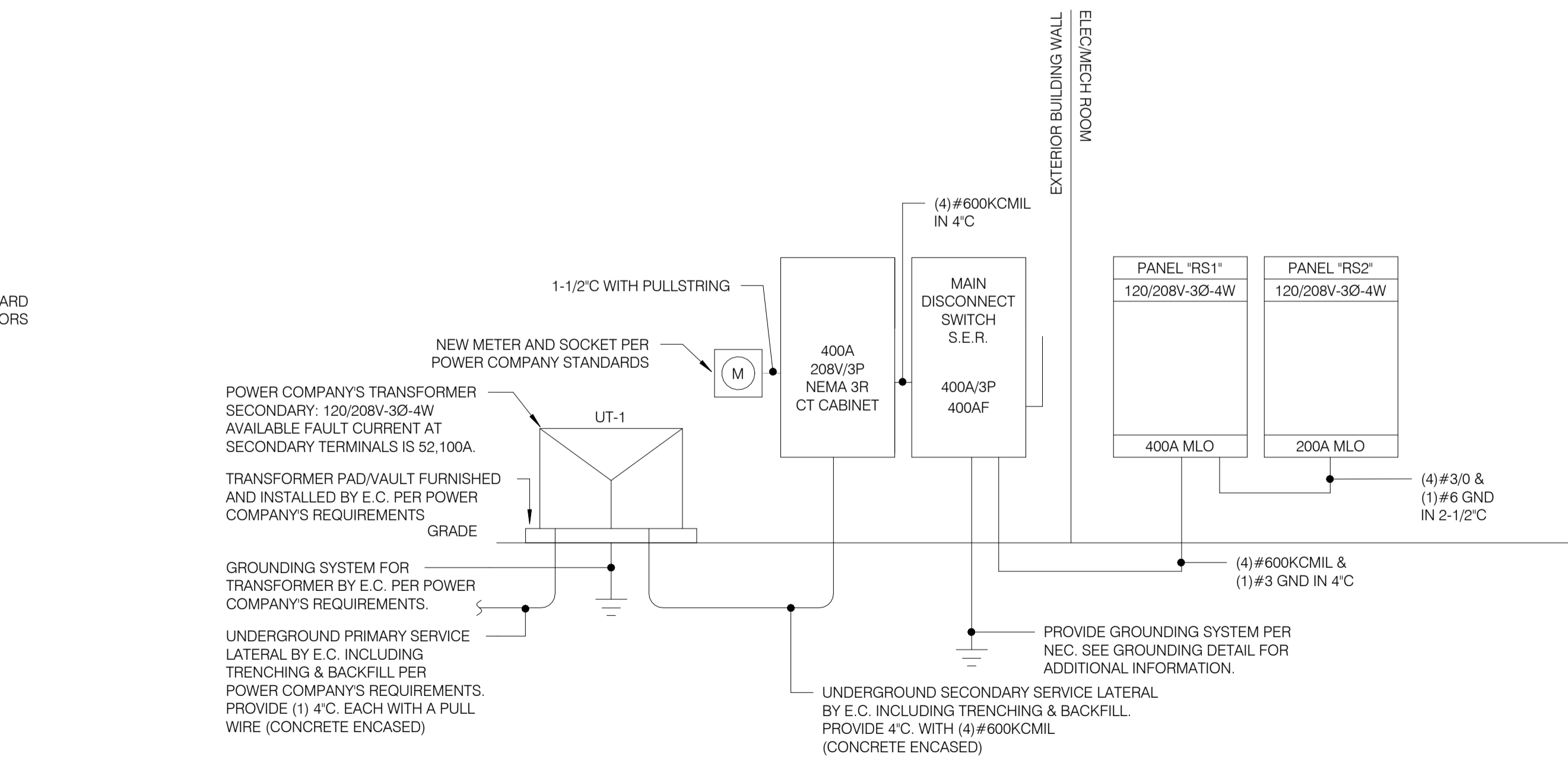
PANELBOARD DESIGNATION: RS1

Notes	CKT	Circuit Description	Tripp	Poles	Load Class	A	B	C	Load Class	Poles	Tripp	Circuit Description	CKT	Notes	
	1	REC - TELE BOARD	20	1	R	0.4	0.4					REC - TELE BOARD	2		
	3	F-1	20	1	M		1.6	1.6			M	1	20	F-2	4
	5	F-3	20	1	M			1.6	2.9		M	2	30	CU-1	6
	7	CU-2	30	2	M	2.9	2.9				--	--	--	8	
	9	--	--	--	--			2.9	2.9		M	2	30	CU-3	10
	11	GATE CONTROL	20	1	X			0.5	2.9		--	--	--	12	
	13	WH-1	40	2	X	3.0	0.5				X	1	20	GATE CONTROL	14
	15	--	--	--	--			3.0	0.5		X	1	20	GATE CONTROL	16
	17	SPARE	20	1	--				0.0	0.2	R	1	20	REC - EXTERIOR	18
	19	SPARE	20	1	--	0.0	0.0				--	1	20	SPARE	20
	21	SPARE	20	1	--			0.0	0.0		--	1	20	SPARE	22
	23	SPARE	20	1	--			0.0	0.0		--	1	20	SPARE	24
	25	SPARE	20	1	--	0.0	0.0				--	1	20	SPARE	26
	27	SPARE	20	1	--			0.0	0.0		--	1	20	SPARE	28
	29	SPARE	20	1	--				0.0	0.0	--	1	20	SPARE	30
	31	SPARE	20	1	--	0.0	0.0				--	1	20	SPARE	32
	33	SPARE	20	1	--			0.0	0.0		--	1	20	SPARE	34
	35	SPARE	20	1	--			0.0	0.0		--	1	20	SPARE	36
	37	SPARE	20	1	--	0.0	0.0				--	1	20	SPARE	38
	39	SPARE	20	1	--			0.0	0.0		--	1	20	SPARE	40
	41	SPARE	20	1	--				0.0	0.0	--	1	20	SPARE	42
						VA:	21543	20582	20084						
						Amps:	180	172	167						

Load Classification	Connected Load	NEC Demand Factor	Estimated Demand	Panel Totals
Lighting	6164 VA	100.00%	6164 VA	Connected Load: 62210 VA
Motor	22396 VA	100.00%	22396 VA	
Misc. Power	7500 VA	100.00%	7500 VA	Estimated Demand Load: 54135 VA
Receptacle	26150 VA	69.12%	18075 VA	Connected Current: 173 A
				Estimated Demand Current: 150 A



2 Grounding & Bonding Detail  
12" = 1'-0"



1 One-Line Diagram  
12" = 1'-0"