

POLICE DEPARTMENT MIDTOWN DISTRICT



MILWAUKEE | MADISON | TUSCON | CHICAGO

City of Madison Police Department
4020 Mineral Point Road, Madison WI 53705

PUBLIC IMPROVEMENT PROJECT APPROVED: RES - 17 - 00377 FILE ID: 46725 DATE: May 2, 2017 BY THE COMMON COUNCIL OF MADISON, WI	PUBLIC IMPROVEMENT DESIGN APPROVED BY: <i>Michael R. Daily</i> CITY ENGINEER 5/03/2017 DATE
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PROJECT

SEAL

DRAWINGS CONSULTANTS

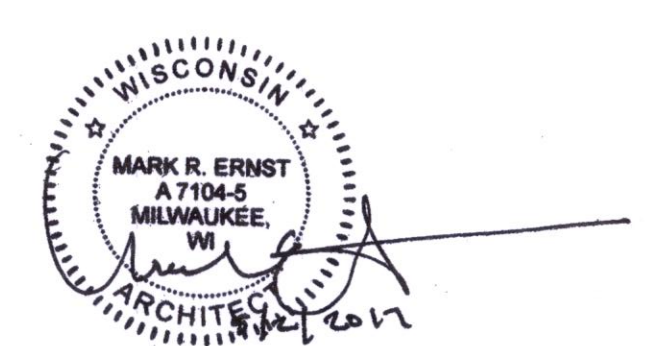


CIVIL / LANDSCAPING

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MADISON, WI 53713
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CITY OF MADISON ENGINEERING



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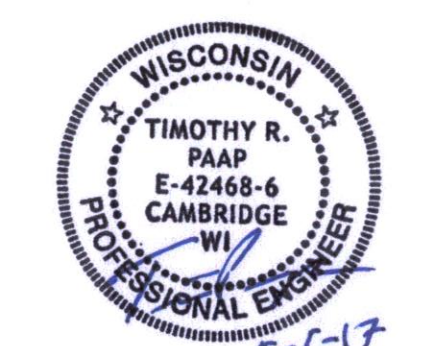
STRUCTURAL

KJWW Engineering
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MADISON, WI 53562
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MECHANICAL

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ELECTRICAL

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PLUMBING & FIRE PROTECTION

KJWW Engineering
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TECHNOLOGY

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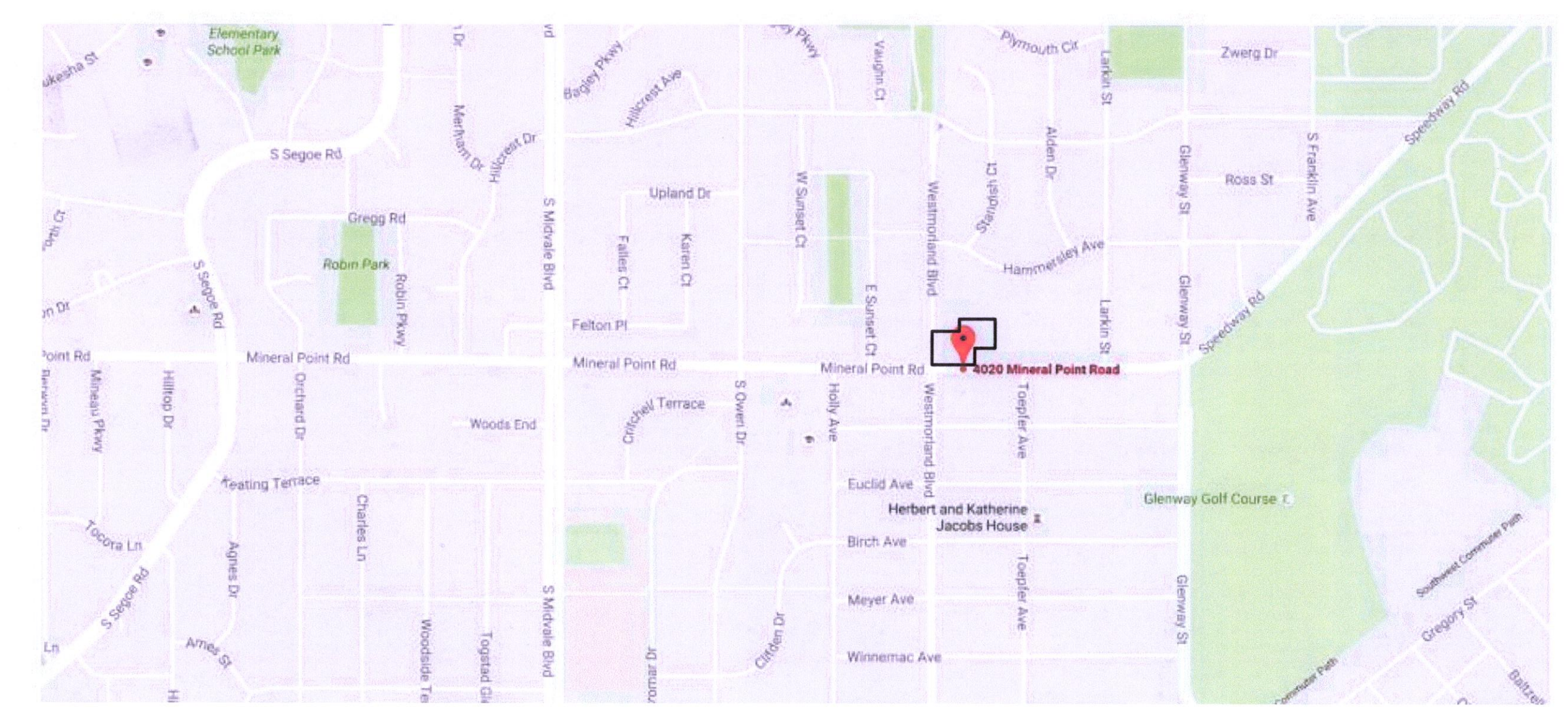
POLICE DEPARTMENT MIDTOWN DISTRICT
4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01
CONTRACT NUMBER 7726
MUNIS NUMBER 10390

C000	EXISTING CONDITIONS	R100	DETAILS	A001	ABBREVIATIONS	S001	GENERAL NOTES	M000	COVER SHEET - MECHANICAL	E000	COVER SHEET - ELECTRICAL	P000	COVER SHEET - PLUMBING	T000	COVER SHEET - TECHNOLOGY
C100	SITE DEMOLITION AND EROSION CONTROL PLAN			A002	CODE CONFORMANCE PLAN	S100	FOUNDATION PLAN	M100	LOWER LEVEL - VENTILATION	E001	UDC SUBMITTAL	P100	UNDERFLOOR PLAN - PLUMBING	T001	GENERAL TECHNOLOGY EQUIPMENT SCHEDULE
C200	SITE PLAN			A100	LOWER LEVEL PLAN	S101	FIRST FLOOR FRAMING PLAN	M101	FIRST FLOOR PLAN - VENTILATION	E050	SITE PLAN - ELECTRICAL	P101	LOWER LEVEL - PLUMBING	T050	SITE PLAN - TECHNOLOGY
C300	SITE GRADING			A101	FIRST FLOOR PLAN	S102	ROOF FRAMING PLAN	M103	ROOF PLAN - MECHANICAL	E100	LOWER LEVEL - LIGHTING	P102	FIRST FLOOR PLAN - PLUMBING	T100	LOWER LEVEL - TECHNOLOGY
C400	SITE UTILITY PLAN			A102	CLERESTORY PLAN	S300	CONCRETE DETAILS	M110	LOWER LEVEL - PIPING	E101	FIRST FLOOR PLAN - LIGHTING	P200	RISER DIAGRAM - PLUMBING	T101	FIRST FLOOR PLAN - TECHNOLOGY
C500	LANDSCAPE PLAN			A103	ROOF PLAN	S301	CONCRETE DETAILS	M111	FIRST FLOOR PLAN - PIPING	E103	ROOF PLAN - ELECTRICAL	P201	RISER DIAGRAM - PLUMBING	T300	ENLARGED PLANS - TECHNOLOGY
C601	DETAILS			A200	LOWER LEVEL REFLECTED CEILING PLAN	S400	STEEL DETAILS	M200	ENLARGED PLANS MECHANICAL	E110	LOWER LEVEL - POWER	P202	RISER DIAGRAM - PLUMBING	T400	RISER DIAGRAMS - TECHNOLOGY
C602	DETAILS			A201	FIRST FLOOR REFLECTED CEILING PLAN	S401	STEEL DETAILS	M201	SECTIONS - MECHANICAL	E120	LOWER LEVEL - FIRE ALARM	P203	RISER DIAGRAM - PLUMBING	T401	RISER DIAGRAMS - TECHNOLOGY
C603	DETAILS			A301	ENLARGED PLANS	S500	MASONRY DETAILS	M300	CONTROL DIAGRAMS - MECHANICAL	E121	FIRST FLOOR PLAN - FIRE ALARM	P300	FLOW DIAGRAM - PLUMBING	T500	DETAILS AND SCHEDULES - TECHNOLOGY
C604	DETAILS			A302	ENLARGED TRELLIS PLAN & DETAILS	S600	PRECAST DETAILS	M301	CONTROL DIAGRAMS - MECHANICAL	E200	ONE-LINE DIAGRAM - ELECTRICAL	P301	DETAILS - PLUMBING	T501	DETAILS AND SCHEDULES - TECHNOLOGY
				A303	ENLARGED BREAKROOM PLAN & DETAILS			M302	CONTROL DIAGRAMS - MECHANICAL	E300	ENLARGED PLANS AND DETAILS - ELECTRICAL	P400	PLUMBING MATERIAL LIST - PLUMBING		
				A400	EXTERIOR ELEVATIONS			M303	CONTROL DIAGRAMS - MECHANICAL	E500	ELECTRICAL SCHEDULES	P401	PLUMBING MATERIAL LIST - PLUMBING		
				A401	EXTERIOR ELEVATIONS			M304	CONTROL DIAGRAMS - MECHANICAL	E501	ELECTRICAL SCHEDULES	F000	COVER SHEET - FIRE PROTECTION		
				A410	BUILDING SECTIONS			M305	CONTROL DIAGRAMS - MECHANICAL	E502	ELECTRICAL SCHEDULES	F100	LOWER LEVEL - FIRE PROTECTION		
				A411	STAIR & ELEVATOR ENLARGED PLANS & SECTIONS			M400	FLOW DIAGRAMS - MECHANICAL			F101	FIRST FLOOR PLAN - FIRE PROTECTION		
				A412	STAIR ENLARGED PLANS AND SECTIONS			M401	FLOW DIAGRAMS - MECHANICAL						
				A500	WALL SECTIONS			M500	DETAILS - MECHANICAL						
				A501	WALL SECTIONS			M501	DETAILS - MECHANICAL						
				A502	WALL SECTIONS			M502	DETAILS - MECHANICAL						
				A510	WALL DETAILS			M600	SCHEDULES - MECHANICAL						
				A511	WALL DETAILS			M601	SCHEDULES - MECHANICAL						
				A512	WALL DETAILS										
				A513	DETAILS										
				A514	PLAN DETAILS										
				A600	WALL TYPES										
				A610	DOOR SCHEDULE & DETAILS										
				A611	FRAME ELEVATIONS										
				A700	LOWER LEVEL FINISH PLAN										
				A701	FIRST FLOOR FINISH PLAN										
				A710	ROOM SCHEDULE & NOTES										
				A711	FURNITURE PLAN - FOR REFERENCE ONLY										
				A800	INTERIOR ELEVATIONS										
				A801	INTERIOR ELEVATIONS										
				A802	INTERIOR ELEVATIONS - STAINED GLASS										
				A803	INTERIOR ELEVATIONS										
				A810	CASEWORK SECTIONS										
				A811	CASEWORK SECTIONS & DETAILS										

ISSUED FOR:
CONSTRUCTION 5-5-2017

REVISION FOR:
NO. DESCRIPTION DATE



DRAWN BY MMZ
CHECKED BY SK

TITLE SHEET

TL101

Midtown Police Station

4020 Mineral Point Road, Madison WI

City of Madison
210 MLK, Jr. Blvd
Madison, WI 53703

PROJECT NUMBER 152413.01
AYRES PROJECT NUMBER 27-1034.00

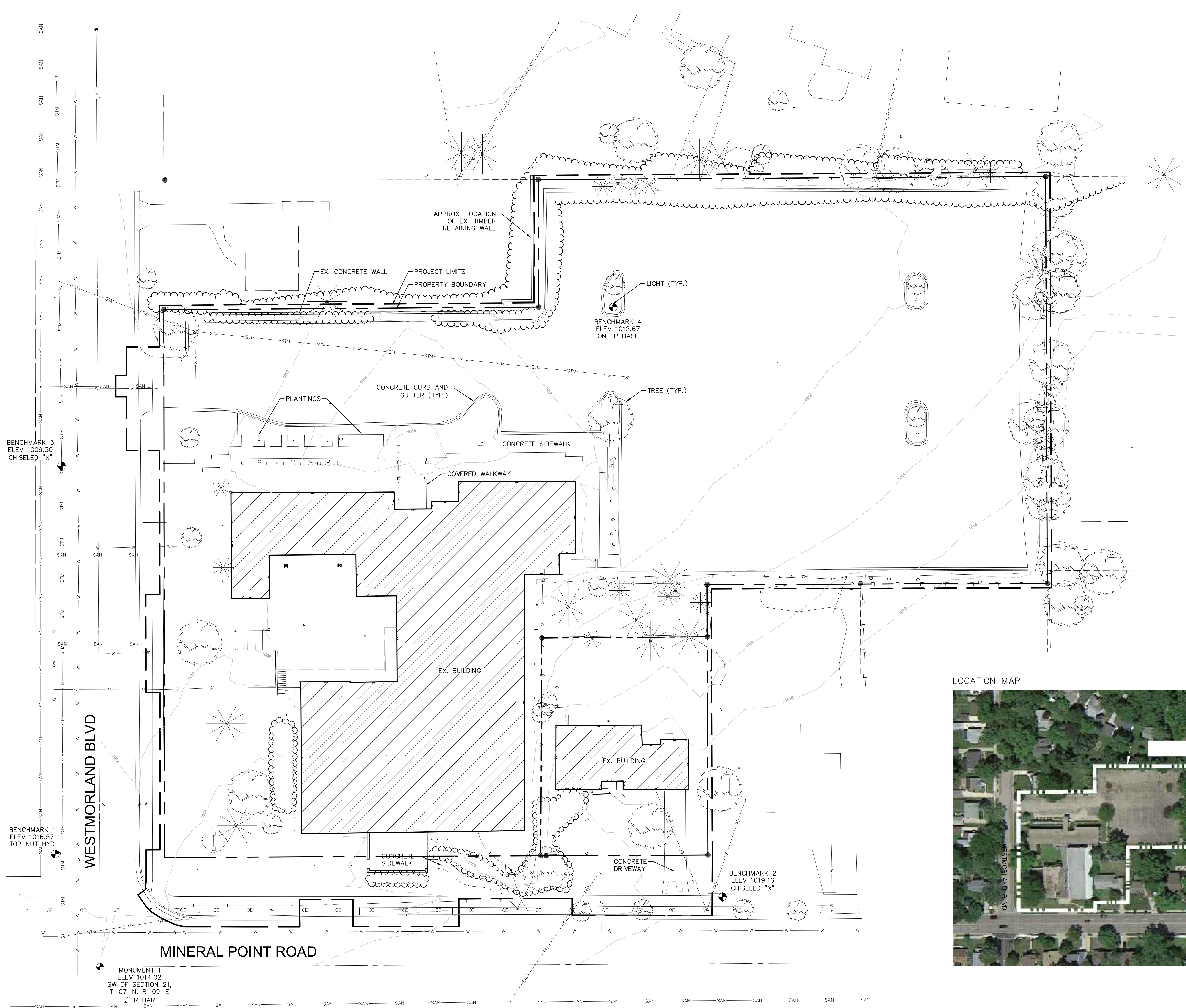
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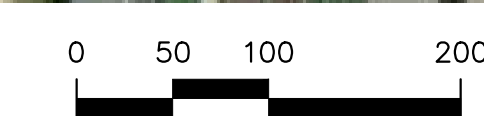
LEGEND

- — — — — PROPERTY LINE
- — — — — PROJECT LIMIT LINE
- - - - -1012- CONTOUR
- — — — — BUILDING
- G — G — GAS SERVICE
- SAN — SAN — SANITARY SEWER
- STM — STM — STORM SEWER
- W — W — WATER MAIN
- T — T — TELEPHONE LINE
- E — E — UNDERGROUND ELECTRIC LINE
- OE — OE — OVERHEAD ELECTRIC LINE
- □ — □ — WOOD FENCE
- ○ — ○ — CHAIN LINK FENCE
- — — — — BUSHLINE

- TREE (DECIDUOUS)
- TREE (EVERGREEN)



LOCATION MAP



- NOTES:
1. SHEETS ARE INTENDED AS 30"x42" FULL SIZE.
 2. PROJECT LIMIT LINE OFFSET FOR GRAPHIC CLARITY
 3. DRAWING BASE INFORMATION DERIVED FROM:
—SURVEY DATA PREPARED BY CEDAR CORPORATION, DATED DEC 2015
—GOOGLE EARTH AERIAL IMAGERY 6/2014



FOR CONSTRUCTION

DRAWN BY SK, SS
CHECKED BY JB

Existing Conditions

C000

Midtown Police Station

4020 Mineral Point Road, Madison WI

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Madison, WI 53703

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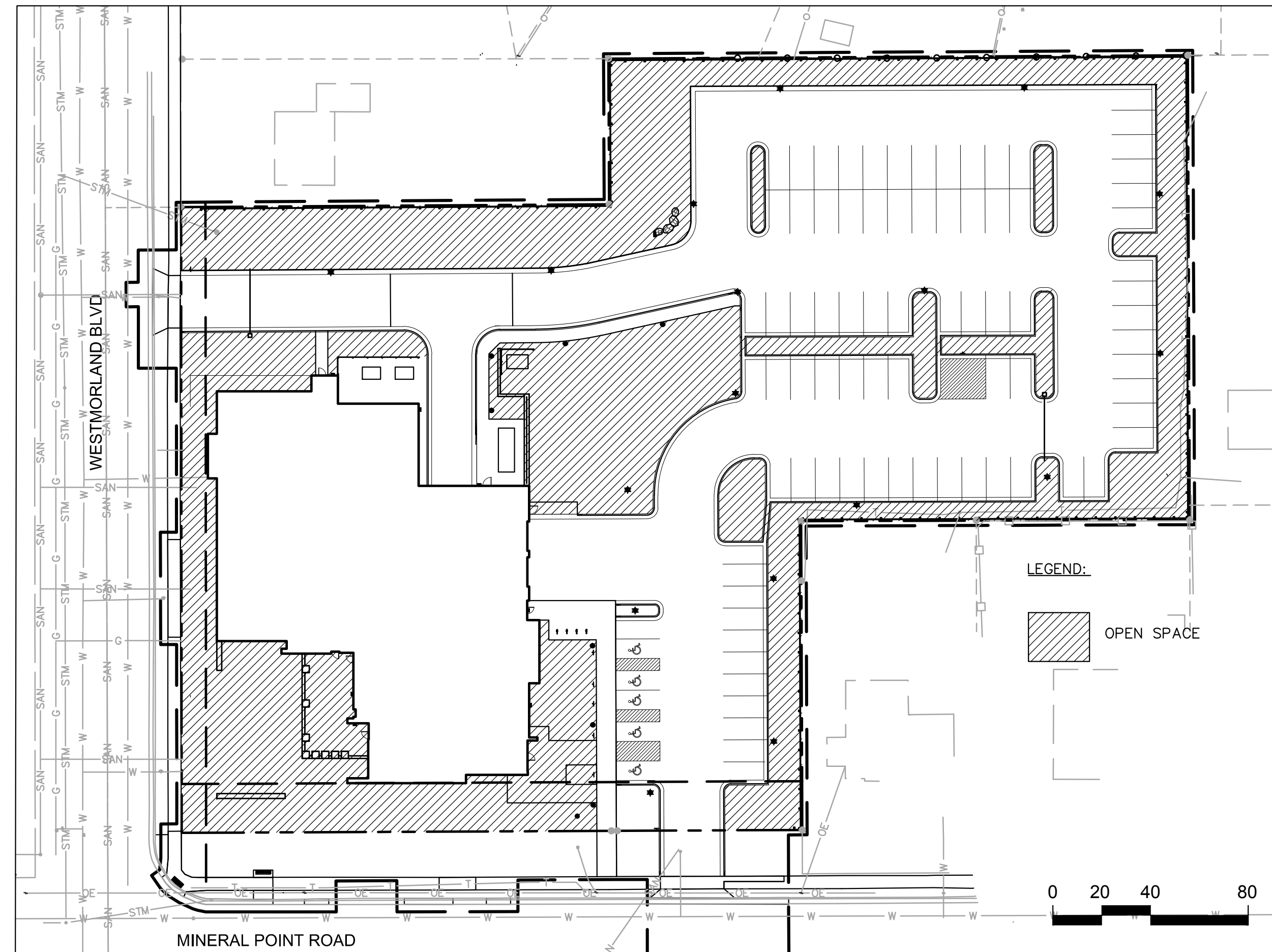
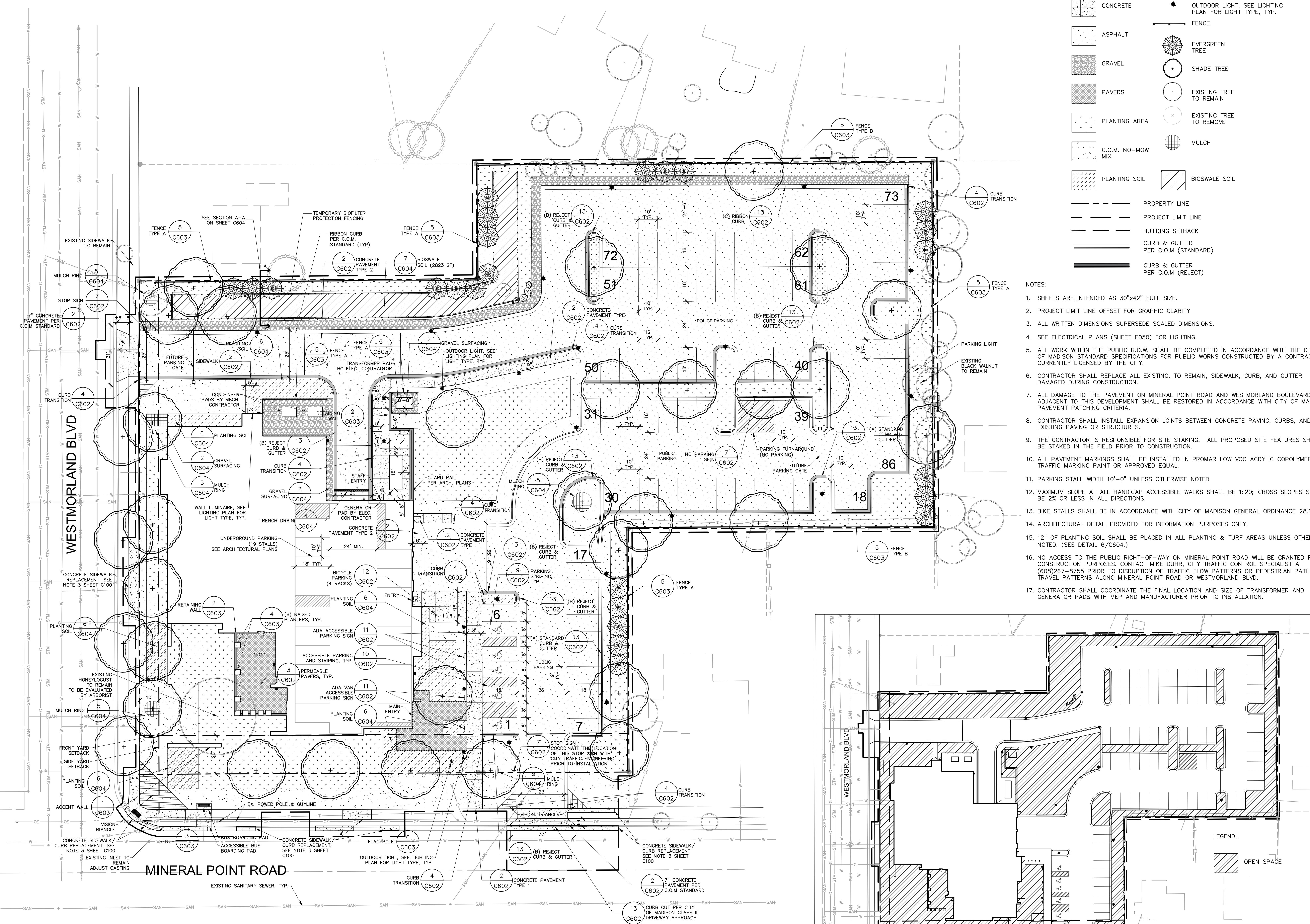
ISSUED FOR:
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- LEGEND:**
- CONCRETE
 - ASPHALT
 - GRAVEL
 - PAVERS
 - PLANTING AREA
 - C.O.M. NO-MOW MIX
 - PLANTING SOIL
 - BIOSWALE SOIL
 - OUTDOOR LIGHT, SEE LIGHTING PLAN FOR LIGHT TYPE, TYP.
 - FENCE
 - EVERGREEN TREE
 - SHADE TREE
 - EXISTING TREE TO REMAIN
 - EXISTING TREE TO REMOVE
 - MULCH
- PROPERTY LINE
PROJECT LIMIT LINE
BUILDING SETBACK
CURB & GUTTER PER C.O.M. (STANDARD)
CURB & GUTTER PER C.O.M. (REJECT)

NOTES:

1. SHEETS ARE INTENDED AS 30"x42" FULL SIZE.
2. PROJECT LIMIT LINE OFFSET FOR GRAPHIC CLARITY.
3. ALL WRITTEN DIMENSIONS SUPERSEDE SCALED DIMENSIONS.
4. SEE ELECTRICAL PLANS (SHEET E050) FOR LIGHTING.
5. ALL WORK WITHIN THE PUBLIC R.O.W. SHALL BE COMPLETED IN ACCORDANCE WITH THE CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTED BY A CONTRACTOR CURRENTLY LICENSED BY THE CITY.
6. CONTRACTOR SHALL REPLACE ALL EXISTING, TO REMAIN, SIDEWALK, CURB, AND GUTTER DAMAGED DURING CONSTRUCTION.
7. ALL DAMAGE TO THE PAVEMENT ON MINERAL POINT ROAD AND WESTMORLAND BOULEVARD ADJACENT TO THIS DEVELOPMENT SHALL BE RESTORED IN ACCORDANCE WITH CITY OF MADISON PAVEMENT PATCHING CRITERIA.
8. CONTRACTOR SHALL INSTALL EXPANSION JOINTS BETWEEN CONCRETE PAVING, CURBS, AND EXISTING PAVING OR STRUCTURES.
9. THE CONTRACTOR IS RESPONSIBLE FOR SITE STAKING. ALL PROPOSED SITE FEATURES SHALL BE STAKED IN THE FIELD PRIOR TO CONSTRUCTION.
10. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN PROMAR LOW VOC ACRYLIC COPOLYMER TRAFFIC MARKING PAINT OR APPROVED EQUAL.
11. PARKING STALL WIDTH 10'-0" UNLESS OTHERWISE NOTED
12. MAXIMUM SLOPE AT ALL HANDICAP ACCESSIBLE WALKS SHALL BE 1:20; CROSS SLOPES SHALL BE 2% OR LESS IN ALL DIRECTIONS.
13. BIKE STALLS SHALL BE IN ACCORDANCE WITH CITY OF MADISON GENERAL ORDINANCE 28.141.
14. ARCHITECTURAL DETAIL PROVIDED FOR INFORMATION PURPOSES ONLY.
15. 12" OF PLANTING SOIL SHALL BE PLACED IN ALL PLANTING & TURF AREAS UNLESS OTHERWISE NOTED. (SEE DETAIL 6/C604.)
16. NO ACCESS TO THE PUBLIC RIGHT-OF-WAY ON MINERAL POINT ROAD WILL BE GRANTED FOR CONSTRUCTION PURPOSES. CONTACT MIKE DUHR, CITY TRAFFIC CONTROL SPECIALIST AT (608)267-8755 PRIOR TO DISRUPTION OF TRAFFIC FLOW PATTERNS OR PEDESTRIAN PATH OF TRAVEL PATTERNS ALONG MINERAL POINT ROAD OR WESTMORLAND BLVD.
17. CONTRACTOR SHALL COORDINATE THE FINAL LOCATION AND SIZE OF TRANSFORMER AND GENERATOR PADS WITH MEP AND MANUFACTURER PRIOR TO INSTALLATION.



SITE STATISTICS

REQ'D	PROPOSED	PROPOSED	ACCESSIBLE SPACES	TOTAL PARKING:
SITE AREA	OPEN SPACE (35%)	MAXIMUM LOT COVERAGE (65%)	REQ'D:	88 Surface
100,052.6 sf (2.3 ac)	35,018.41 sf	65,034.19 sf (1.49 acres)	5 (4 Standard & 1 Van)	19 Below Ground
BUILDING AREA:	PROPOSED	PROPOSED	ACCESSIBLE SPACES	105 Spaces (Total)
15,497.2 sf (FOOTPRINT)	OPEN SPACE	LOT COVERAGE	5 (4 Standard & 1 Van)	
33,000 sf (TOTAL SF)	36,363.74 sf (36.34%)	47,568.24 (47.54%)		

FOR CONSTRUCTION

DRAWN BY SK, SS

CHECKED BY JB

Site Plan

Midtown Police Station

4020 Mineral Point Road, Madison WI

City of Madison
210 MLK, Jr. Blvd
Madison, WI 53703

PROJECT NUMBER 152413.01
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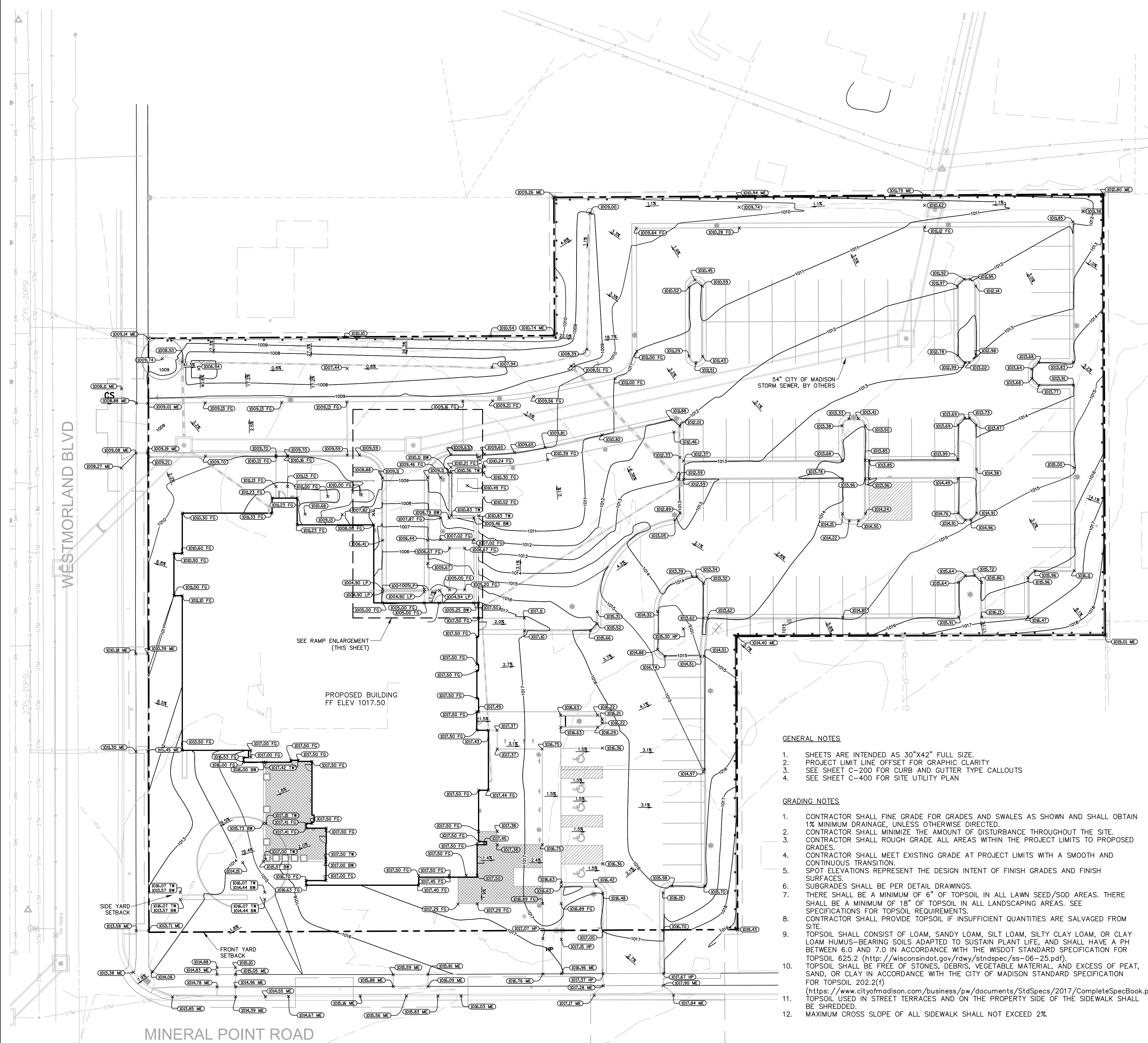
Know what's below.
Call before you dig.

- LEGEND:**
- - - 1015 - - - EXISTING CONTOUR
 - 1015 — PROPOSED CONTOUR
 - — — — — PROPERTY LINE
 - — — — — PROJECT LIMIT LINE
 - — — — — BUILDING SETBACK
 - — — — — PROPOSED STORM SEWER
 - — — — — PROPOSED FLOW DIRECTION
 - — — — — PROPOSED STORM INLET
 - — — — — PROPOSED ENDWALL
 - LIGHT
 - ⊕ FENCE
 - EXISTING TREE TO REMAIN

- SPOT ELEVATION ABBREVIATIONS:**
- ME = MATCH INTO EXISTING
 - TW = TOP OF WALL
 - BW = BOTTOM OF WALL
 - HP = HIGH POINT
 - LP = LOW POINT
 - FG = FINISHED GRADE

NOTE: ANY POINTS WITH NO NOTATION ARE ASSUMED TO BE FLOWLINE ELEVATIONS

NOTE: ALL ELEVATIONS NOTED AS ME SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IF ANY DISCREPANCIES ARE DISCOVERED, CONTRACTOR SHALL NOTIFY ENGINEER.

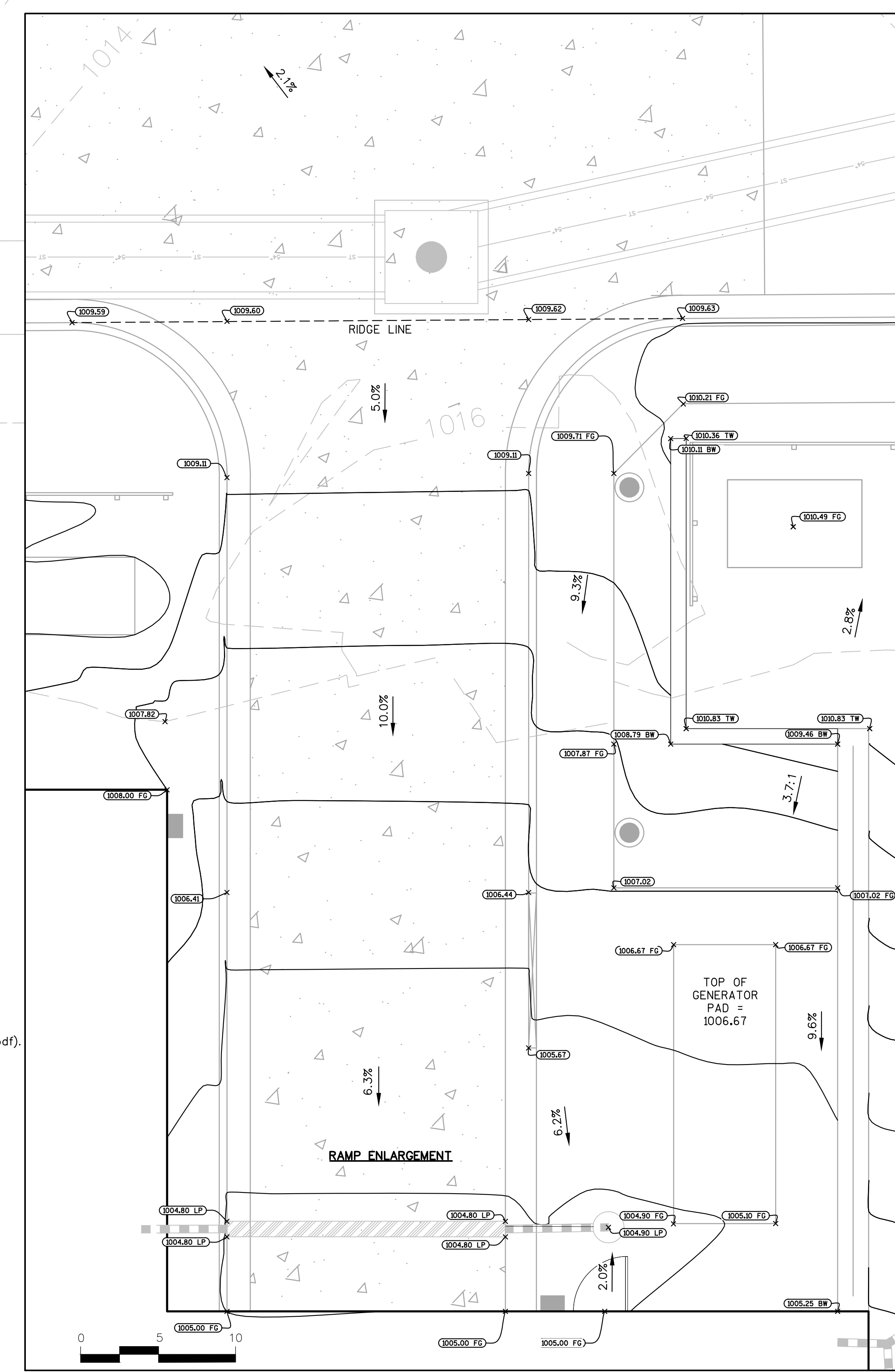


GENERAL NOTES

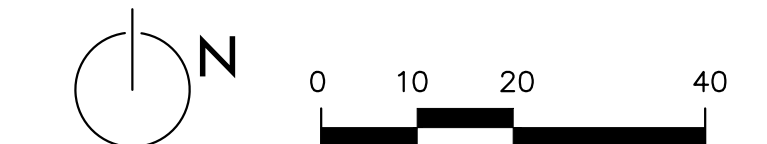
1. SHEETS ARE INTENDED AS 30"x42" FULL SIZE.
2. PROJECT LIMIT LINE OFFSET FOR GRAPHIC CLARITY
3. SEE SHEET C-200 FOR CURB AND GUTTER TYPE CALLOUTS
4. SEE SHEET C-400 FOR SITE UTILITY PLAN

GRADING NOTES

1. CONTRACTOR SHALL FINE GRADE FOR GRADES AND SWALES AS SHOWN AND SHALL OBTAIN 1% MINIMUM DRAINAGE, UNLESS OTHERWISE DIRECTED.
2. CONTRACTOR SHALL MINIMIZE THE AMOUNT OF DISTURBANCE THROUGHOUT THE SITE.
3. CONTRACTOR SHALL ROUGH GRADE ALL AREAS WITHIN THE PROJECT LIMITS TO PROPOSED GRADES.
4. CONTRACTOR SHALL MEET EXISTING GRADE AT PROJECT LIMITS WITH A SMOOTH AND CONTINUOUS TRANSITION.
5. SPOT ELEVATIONS REPRESENT THE DESIGN INTENT OF FINISH GRADES AND FINISH SURFACES.
6. SUBGRADES SHALL BE PER DETAIL DRAWINGS.
7. THERE SHALL BE A MINIMUM OF 6" OF TOPSOIL IN ALL LAWN SEED/SOD AREAS. THERE SHALL BE A MINIMUM OF 18" OF TOPSOIL IN ALL LANDSCAPING AREAS. SEE SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.
8. CONTRACTOR SHALL PROVIDE TOPSOIL IF INSUFFICIENT QUANTITIES ARE SALVAGED FROM SITE.
9. TOPSOIL SHALL CONSIST OF LOAM, SANDY LOAM, SILT LOAM, SILTY CLAY LOAM, OR CLAY LOAM HUMUS-BEARING SOILS ADAPTED TO SUSTAIN PLANT LIFE, AND SHALL HAVE A PH BETWEEN 6.0 AND 7.0 IN ACCORDANCE WITH THE WISDOT STANDARD SPECIFICATION FOR TOPSOIL 625.2 (<http://wisconsin.gov/travel/stndspes/ss-06-25.pdf>).
10. TOPSOIL SHALL BE FREE OF STONES, DEBRIS, VEGETABLE MATERIAL, AND EXCESS OF PEAT, SAND, OR CLAY IN ACCORDANCE WITH THE CITY OF MADISON STANDARD SPECIFICATION FOR TOPSOIL 202.2(1) (<https://www.cityofmadison.com/business/pw/documents/StdSpecs/2017/CompleteSpecBook.pdf>).
11. TOPSOIL USED IN STREET TERRACES AND ON THE PROPERTY SIDE OF THE SIDEWALK SHALL BE SHREDDED.
12. MAXIMUM CROSS SLOPE OF ALL SIDEWALK SHALL NOT EXCEED 2%.



RAMP ENLARGEMENT



ISSUED FOR: CONSTRUCTION 5-5-2017

REVISION FOR: NO. DESCRIPTION DATE

FOR CONSTRUCTION

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CHECKED BY JB

Site Grading

Midtown Police Station

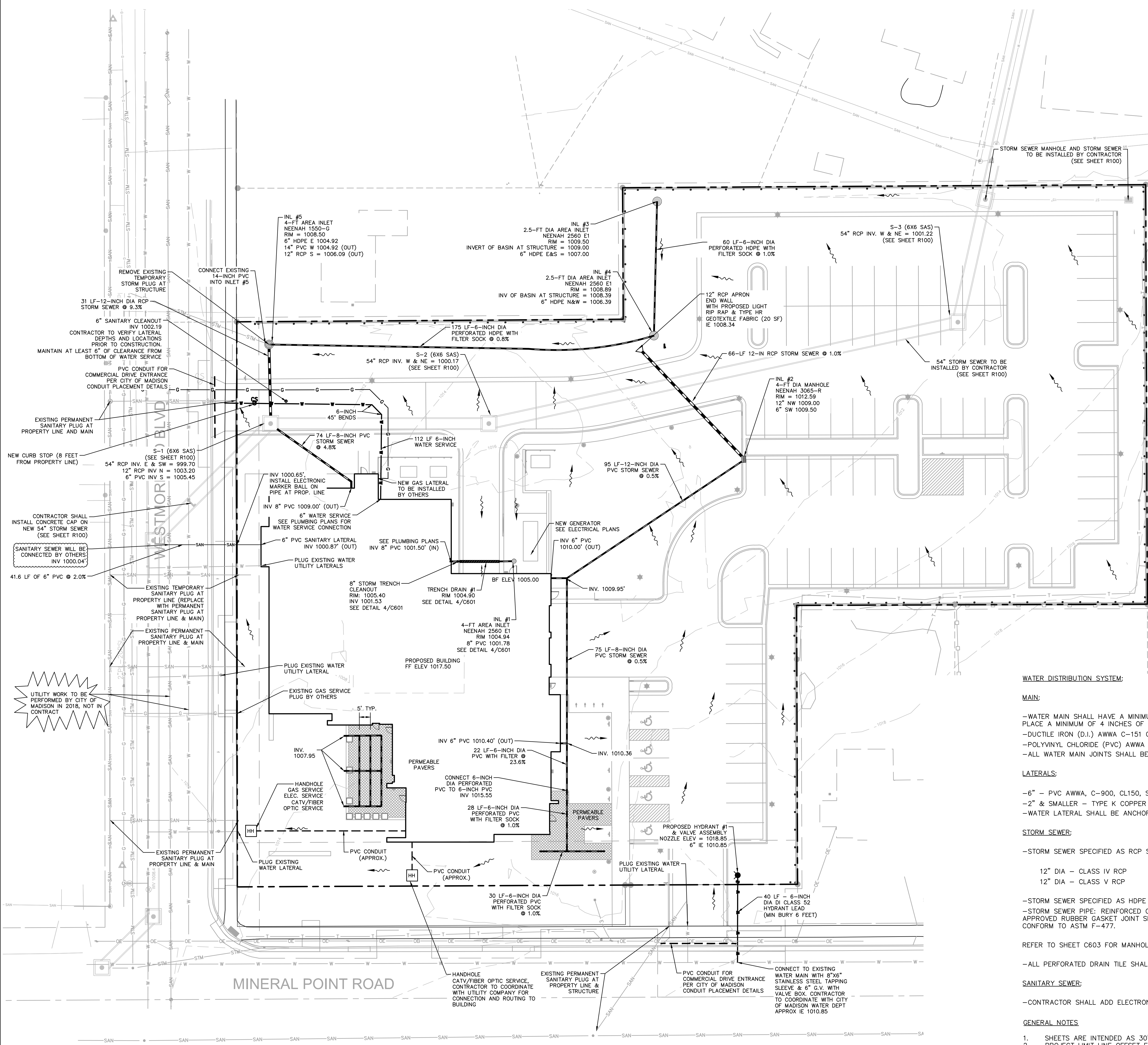
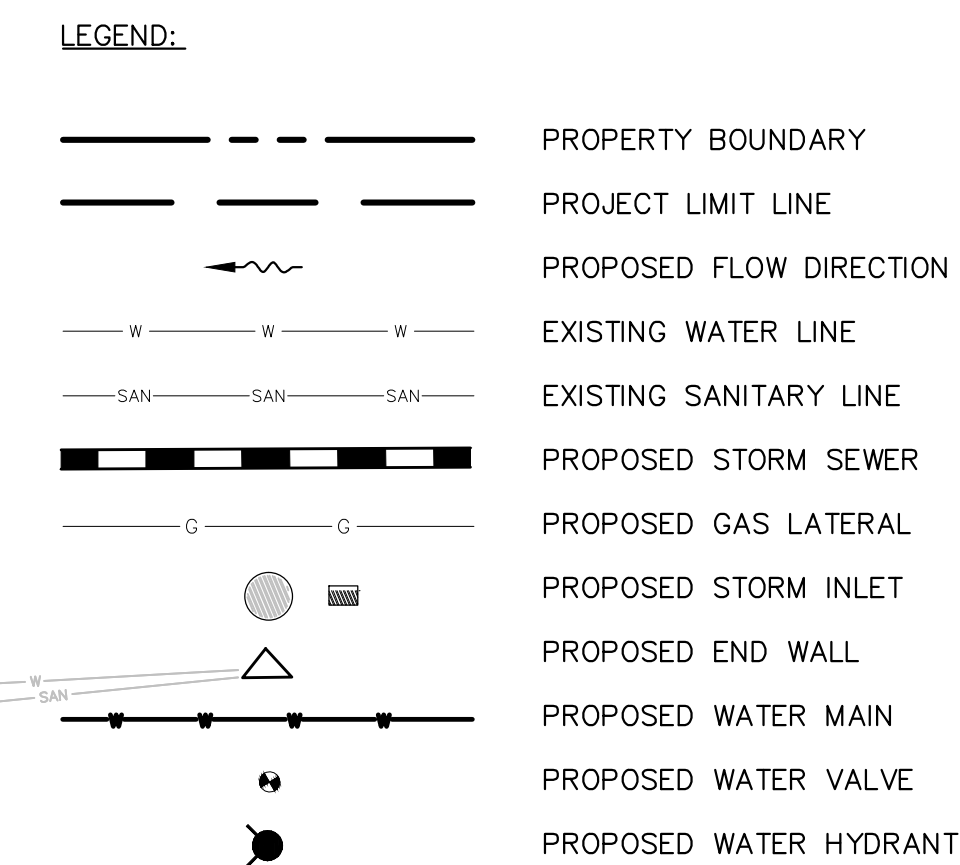
4020 Mineral Point Road, Madison WI

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UTILITY NOTES:

1. THE CONTRACTOR SHALL OBTAIN A CONNECTION PERMIT AND EXCAVATION PERMIT PRIOR TO COMMENCING THE STORM SEWER CONSTRUCTION.
2. ALL UTILITIES SHALL BE DIGITALLY SURVEYED BY THE CONTRACTOR PRIOR TO BEING BURIED. SEE PROJECT SPECIFICATIONS.
3. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE PERFORMED BY A CITY-LICENSED CONTRACTOR.
4. ALL DAMAGE TO THE PAVEMENT ON MINERAL POINT ROAD AND WESTMORLAND BOULEVARD ADJACENT TO THE PROJECT SITE SHALL BE RESTORED IN ACCORDANCE WITH THE CITY OF MADISON'S PAVEMENT PATCHING CRITERIA.
5. THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE A MINIMUM OF 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
6. REFER TO CITY OF MADISON SDD 5.4.4 FOR RIPRAP PLACEMENT DETAIL.
7. STANDARD SPECIFICATIONS: PERFORM ALL WORK IN ACCORDANCE WITH THE PROVISIONS OF:
 - CITY OF MADISON SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION, LATEST EDITION
 - "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN" (SSWC) LATEST EDITION
 - STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (WISDOT) LATEST EDITION
 - CONTRACTOR SHALL OBTAIN A CURRENT COPY OF THE CITY OF MADISON'S STANDARD SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION.
 - INCLUDING ALL SUPPLEMENTAL SPECIFICATIONS AND OTHER REVISIONS TO DATE, UNLESS OTHERWISE SPECIFIED IN THE SPECIFICATIONS.
 - WITHIN THE RIGHT-OF-WAY OR UNDERNEATH PAVEMENTS OR BUILDINGS, GRANULAR TRENCH BACKFILL MUST BE USED TO FILL THE TRENCH. ALL OTHER AREAS MAY UTILIZE EXCAVATED TRENCH SOIL FOR BACKFILL PROVIDING THAT THE MATERIAL IS FREE OF ORGANIC MATERIAL AND STONES LARGER THAN 6" IN DIAMETER.
 - A MEANS TO LOCATE BURIED UNDERGROUND EXTERIOR NON-METALLIC SEWERS/MAINS AND WATER SERVICES/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORD WITH THE PROVISIONS OF THESE CODE SECTIONS AS PER 182.0715(2R) OF THE STATUTES.

WATER DISTRIBUTION SYSTEM:

- MAIN:**
- WATER MAIN SHALL HAVE A MINIMUM BURY DEPTH OF 6 FEET TO THE TOP OF PIPE. IF 6 FEET OF BURY CANNOT BE OBTAINED, CONTRACTOR SHALL PLACE A MINIMUM OF 4 INCHES OF STYROFOAM INSULATION ON TOP AND ON THE SIDES OF THE WATER MAIN TO THE 6 FOOT BURY LINE PER THE SSSWC.
 - DUCTILE IRON (D.I.) AWWA C-151 CLASS 52 WITH CABLE BOND CONDUCTORS, FURNISHED AND INSTALLED PER CHAPTER 8.180 (WSWS) OR
 - POLYVINYL CHLORIDE (PVC) AWWA C-900, FURNISHED AND INSTALLED PER CHAPTER 8.20.0 (WSWS)
 - ALL WATER MAIN JOINTS SHALL BE RESTRAINED.

- LATERALS:**
- 6" - PVC AWWA, C-900, CL150, SDR 18 OR DUCTILE IRON AWWA C-151, CLASS-52
 - 2" & SMALLER - TYPE K COPPER
 - WATER LATERAL SHALL BE ANCHORED.

- STORM SEWER:**
- STORM SEWER SPECIFIED AS RCP SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO THE FOLLOWING SPECIFICATIONS UNLESS OTHERWISE NOTED:
 - 12" DIA - CLASS IV RCP
 - 12" DIA - CLASS V RCP
 - STORM SEWER SPECIFIED AS HDPE SHALL BE CORRUGATED HDPE, SMOOTH INTERIOR ASTM F2306.
 - STORM SEWER PIPE: REINFORCED CONCRETE PIPE (RCP) CONFORMING TO ASTM C-76. POLYETHYLENE MATERIAL SHALL CONFORM TO ASTM D3350. AN APPROVED RUBBER GASKET JOINT SHALL BE USED FOR EITHER OPTION. JOINTS FOR RCP SHALL CONFORM TO ASTM D-471. JOINTS FOR HDPE SHALL CONFORM TO ASTM F-477.

REFER TO SHEET C603 FOR MANHOLE INLET DETAILS.

-ALL PERFORATED DRAIN TILE SHALL BE PLASTIC WITH A FILTER SOCK.

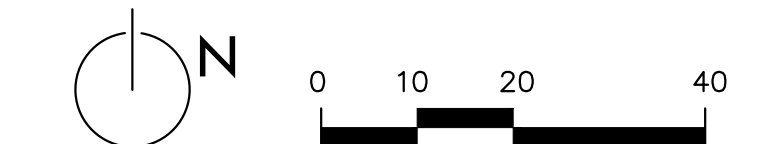
SANITARY SEWER:

-CONTRACTOR SHALL ADD ELECTRONIC MARKER BALL OVER SANITARY SEWER LATERAL AT THE PROPERTY LINE.

- GENERAL NOTES:**
1. SHEETS ARE INTENDED AS 30"x42" FULL SIZE
 2. PROJECT LIMIT LINE OFFSET FOR GRAPHIC CLARITY

UTILITY WORK TO BE PERFORMED BY CITY OF MADISON IN 2018, NOT IN CONTRACT

MINERAL POINT ROAD



C400

Midtown Police Station

4020 Mineral Point Road, Madison WI

City of Madison
210 MLK, Jr. Blvd
Madison, WI 53703

PROJECT NUMBER 152413.01
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LEGEND:

	CONCRETE		LIGHT
	GRAVEL		FENCE
	PAVERS		SHRUBS
	WET SOIL MIX		EVERGREEN TREE
	ORNAMENTAL PRAIRIE MIX		SHADE TREE
	C.O.M. NO-MOW MIX		EXISTING TREE TO REMAIN
	PERENNIAL PLANTING		MULCH
	PROPERTY LINE		MASTER GARDENER PLOT
	PROJECT LIMIT LINE		EROSION CONTROL MAT

WET SOIL MIX

Botanical Name	Common Name	% of Mix	Seeds/ft ²	Lbs/ac	Qty	Size
GRAMINOIDS						
<i>Juncus effusus</i>	Common Rush	50.00%	150	0.41		
<i>Panicum virgatum</i>	Switchgrass	24.00%	72	21.78		
<i>Schizachyrium scoparium</i>	Little Bluestem	23.00%	69	20.87		
<i>Spartina pectinata</i>	Red River Prairie Cordgrass	1.00%	3	0.91		
FORBS (SEED)						
<i>Bidens cernua</i>	Nodding Bur-marigold	1.00%	3	0.58		
<i>Rudbeckia subtomentosa</i>	Sweet Black-eyed Susan	1.00%	3	1.03		
FORBS (PLUG)* *plant randomly in Bioswale Mix area after seeding						
<i>Bidens cernua</i>	Nodding Bur-marigold				50	Plug
<i>Iris virginica shrevei</i>	Blue Flag Iris				100	Plug
<i>Phlox glaberrima interior</i>	Marsh Phlox				100	Plug
<i>Rudbeckia subtomentosa</i>	Sweet Black-eyed Susan				50	Plug
TOTAL		100.00%	300	45.58	300	

ORNAMENTAL PRAIRIE MIX

Botanical Name	Common Name	% of Mix	Seeds/ft ²	Lbs/ac
GRAMINOIDS				
<i>Bouteloua curtipendula</i>	Sideoats Grama Grass	30.00%	90	24.63
<i>Bouteloua gracilis</i>	Blue Grama Grass	40.00%	120	7.22
<i>Juncus effusus</i>	Common Rush	1.00%	3	0.01
<i>Schizachyrium scoparium</i>	Little Bluestem	25.00%	75	22.69
<i>Sporobolus heterolopsis</i>	Prairie Dropseed	2.00%	6	1.17
FORBS				
<i>Echinacea pallida</i>	Pale Purple Coneflower	0.20%	0.6	0.36
<i>Phlox pilosa</i>	Prairie Phlox	0.10%	0.3	0.03
<i>Rudbeckia triloba</i>	Brown-eyed Susan	1.20%	3.6	0.29
<i>Tradescantia ohiensis</i>	Ohio spiderwort	0.50%	1.5	0.52
TOTAL		100.00%	300	56.90

CITY OF MADISON NO-MOW MIX

Botanical Name	Common Name	% of Mix	Seeds/ft ²	Lbs/ac
GRAMINOIDS				
<i>Festuca commutata</i>	SR5130 chewing fescue	23.75%		
<i>Festuca longifolia</i>	chariot hard fescue	11.94%		
<i>Festuca ovina</i>	sheep fescue	23.44%		
<i>Festuca rubra</i>	heron hard fescue	11.85%		
<i>Festuca rubra</i>	sea link creeping red fescue	11.82%		
<i>Festuca rubra</i>	SR5250 creeping red fescue	11.68%		
<i>Lolium multiflorum</i>	annual ryegrass	3.95%		
TOTAL		100.00%		

SPECIES LIST

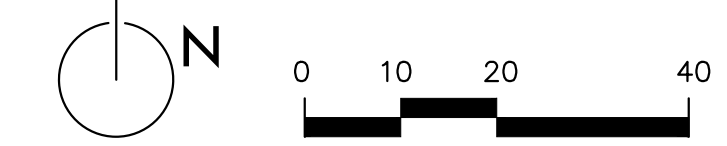
Symbol	Botanical Name	Common Name	Size	Root	Qty	Spacing	% of Total Proposed Tree Planting
TREES							
AL	<i>Amelanchier laevis</i>	Allegheny serviceberry	1.5"	B&B	1	na	1.89%
CO	<i>Celtis occidentalis</i>	hackberry	2.5"	B&B	5	na	5.66%
GB	<i>Ginkgo biloba 'Princeton Sentry'</i>	Princeton Sentry ginkgo	2.5"	B&B	1	na	
MI	<i>Malus ioensis</i>	prairie crabapple	1.5"	B&B	3	na	5.66%
PM	<i>Picea mariana</i>	black spruce	6' ht.	B&B	12	na	22.64%
PP	<i>Picea pungens</i>	blue spruce	6' ht.	B&B	12	na	22.64%
PT	<i>Populus tremuloides</i>	quaking aspen	1.5"	B&B	3	na	5.66%
QA	<i>Quercus alba</i>	white oak	2.5"	B&B	4	na	7.55%
QB	<i>Quercus bicolor</i>	swamp white oak	2.5"	B&B	5	na	9.43%
QM	<i>Quercus macrocarpa</i>	burr oak	2.5"	B&B	5	na	9.43%
QR	<i>Quercus rubra</i>	northern red oak	2.5"	B&B	5	na	9.43%
TA	<i>Tilia americana 'McK Sentry'</i>	American Sentry linden	2.5"	B&B	1	na	na
SHRUBS							
Am	<i>Aronia melanocarpa</i>	Black Chokeberry	#3	Cont.	36	3'	
Cs	<i>Cornus sericea</i>	Red Twig Dogwood	#3	Cont.	21	5'	
Iv	<i>Ilex verticillata 'Nana' RED SPRITE</i>	Winterberry	#3	Cont.	28	4'	
GRASSES/PERENNIALS							
bc	<i>Bouteloua curtipendula</i>	Sideoats Grama Grass	Qrt.	Cont.	269	12" o.c.	
bg	<i>Bouteloua gracilis</i>	Blue Grama Grass	Qrt.	Cont.	324	12" o.c.	
cv	<i>Carex vulpinoidea</i>	Fox sedge	Qrt.	Cont.	133	18" o.c.	
ep	<i>Echinacea pallida</i>	Pale Purple Coneflower	Qrt.	Cont.	3	12" o.c.	
eh	<i>Equisetum hyemale</i>	Scouring Rush	Qrt.	Cont.	56	12" o.c.	
pv	<i>Panicum virgatum</i>	Switchgrass	Qrt.	Cont.	3120	12" o.c.	
rt	<i>Rudbeckia triloba</i>	Brown-eyed Susan	Qrt.	Cont.	12	12" o.c.	
sh	<i>Sporobolus heterolopsis</i>	Prairie Dropseed	Qrt.	Cont.	37	18" o.c.	

LANDSCAPE POINTS

DEVELOPED AREA REQUIREMENTS:	DEVELOPED AREA (EXCLUDING BUILDING FOOTPRINT)	47,568.24 SF
	DEVELOPED AREA POINTS REQUIRED (46,590.2/300)x5	793 POINTS
DEVELOPMENT FRONTAGE LANDSCAPING:	PROPOSED FRONTAGE	511 LF
	REQUIRED LANDSCAPING	17 OVERSTORY TREES & 85 SHRUBS
	PROPOSED LANDSCAPING	22 OVERSTORY TREES & 85 SHRUBS
		ADDITIONAL LANDSCAPING AS SHOWN
INTERIOR PARKING LOT LANDSCAPING:	8% OF PARKING AREA DEVOTED TO PLANTING ISLANDS OR LANDSCAPE STRIPS	REQUIRED=3,304 SF
		PROVIDED=4,426 SF
	1 CANOPY TREE/160 SF OF REQUIRED LANDSCAPE AREA (3,304 SF)	REQUIRED=21 TREES
		PROVIDED=22 TREES
	MAXIMUM NUMBER OF PARKING SPACES PROVIDED WITHOUT A LANDSCAPING ISLAND =12	
FOUNDATION PLANTING LANDSCAPING:	AS SHOWN ON PLAN	
TOTAL LANDSCAPE POINTS REQUIRED		793 POINTS
TOTAL LANDSCAPE POINTS		2,345 POINTS

NOTES:

- SHEETS ARE INTENDED AS 30"x42" FULL SIZE.
- PROJECT LIMIT LINE OFFSET FOR GRAPHIC CLARITY
- SEE LANDSCAPE DETAILS
- SEE C-200 FOR AREAS TO RECEIVE PLANTING SOIL.
- ALL LANDSCAPE PLANTING BEDS SHALL HAVE SHOVEL CUT EDGES.
- RESTORE ALL EXISTING TURF ON ADJACENT PROPERTIES DAMAGED DURING CONSTRUCTION.
- ANNUAL RYE GRASS SHALL BE SEED AT 40 LB/ACRE WITH THE WET SOIL MIX IN THE AREAS SURROUNDING THE BASIN, ON SIDE SLOPES, AND OVER ANY LAND THAT DISCHARGES INTO THE BASIN FOR EROSION CONTROL WHEN BASIN IS BROUGHT ON-LINE. ROOTSTOP AND PLUGS ARE REQUIRED TO ESTABLISH VEGETATION AT THE INVERT OF THE BASIN.
- CONTRACTOR SHALL INSTALL TREE PROTECTION FENCING IN THE AREA BETWEEN THE CURB AND SIDEWALK AND EXTEND IT AT LEAST 5 FEET FROM BOTH SIDES OF THE TREE ALONG THE LENGTH OF THE TERRACE. NO EXCAVATION IS PERMITTED WITHIN 5 FEET OF THE OUTSIDE EDGE OF A TREE TRUNK. IF EXCAVATION WITHIN 5 FEET OF ANY TREE IS NECESSARY, CONTRACTOR SHALL CONTACT CITY FORESTRY (266-4816) PRIOR TO EXCAVATION TO ASSESS THE IMPACT TO THE TREE AND ROOT SYSTEM. TREE PRUNING SHALL BE COORDINATED WITH CITY FORESTRY. TREE PROTECTION SPECIFICATIONS CAN BE FOUND IN SECTION 107.13 OF CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION -HTTP://WWW.CITYOFMADISON.COM/BUSINESS/PW/DOCUMENTS/STDSPECS/2013/PART1.PDF
- CONTRACTOR SHALL CONTACT CITY FORESTRY AT LEAST ONE WEEK PRIOR TO PLANTING TO SCHEDULE MARKING THE PLANTING SITES, INSPECTING THE NURSERY STOCK, AND REVIEWING PLANTING SPECIFICATIONS WITH THE LANDSCAPER.



C500

FOR CONSTRUCTION

DRAWN BY SK, SS

CHECKED BY JB

Landscape Plan

Midtown Police Station

4020 Mineral Point Road, Madison WI

City of Madison
210 MLK, Jr. Blvd
Madison, WI 53703

PROJECT NUMBER 152413.01
AYRES PROJECT NUMBER 27-1034.00

ISSUED FOR:
CONSTRUCTION 5-5-2017

REVISION FOR:
NO. DESCRIPTION DATE

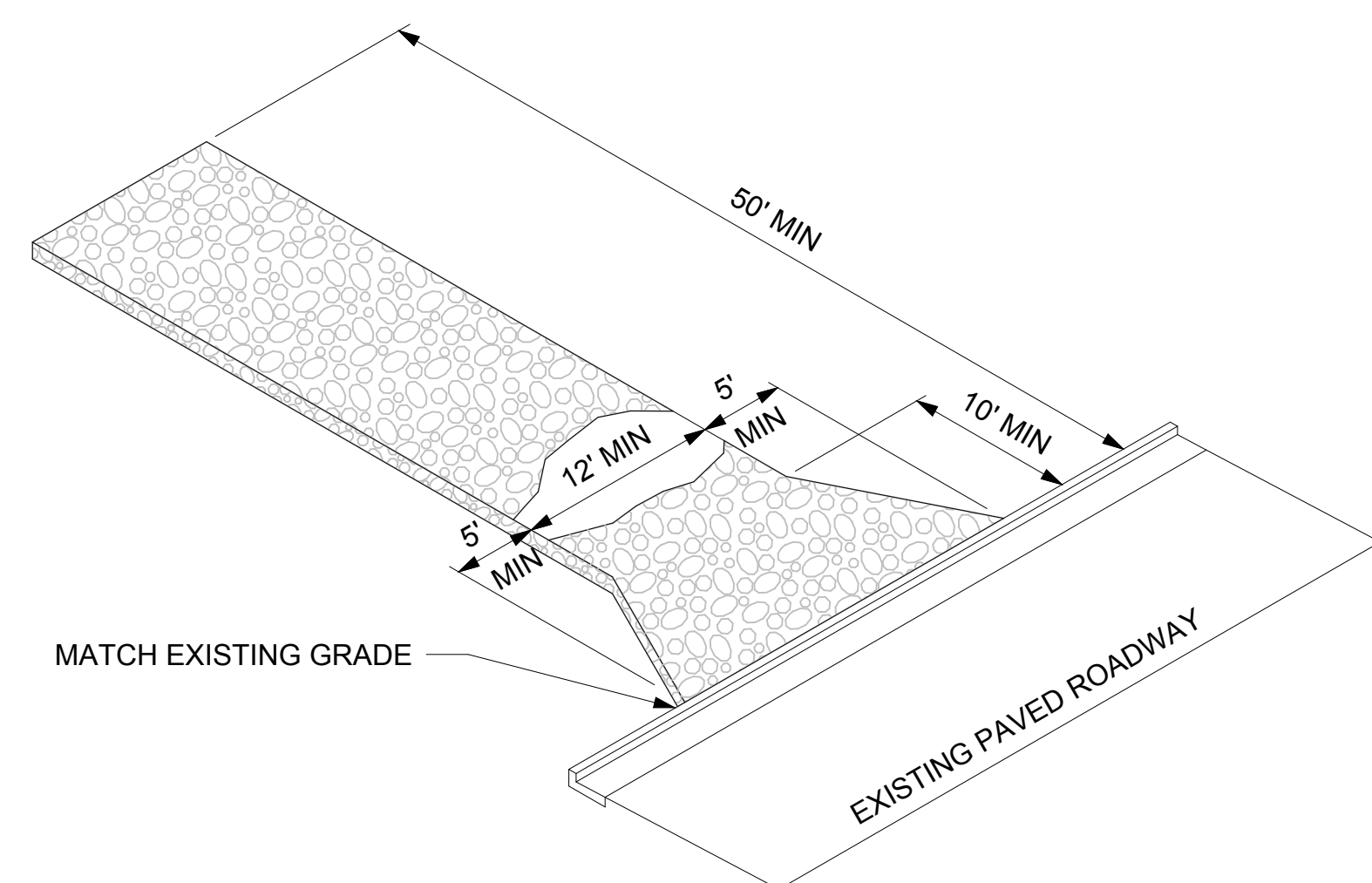
FOR CONSTRUCTION

DRAWN BY SK, SS

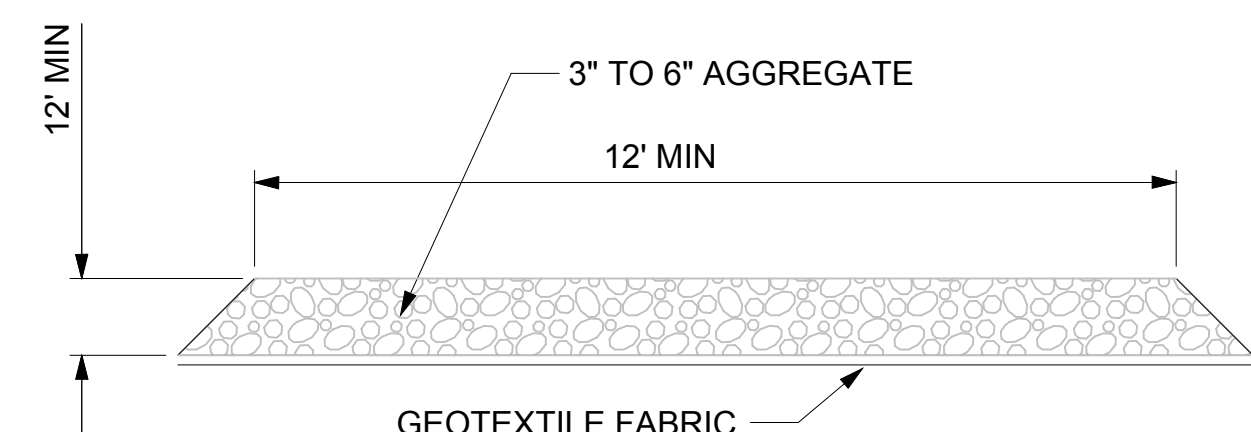
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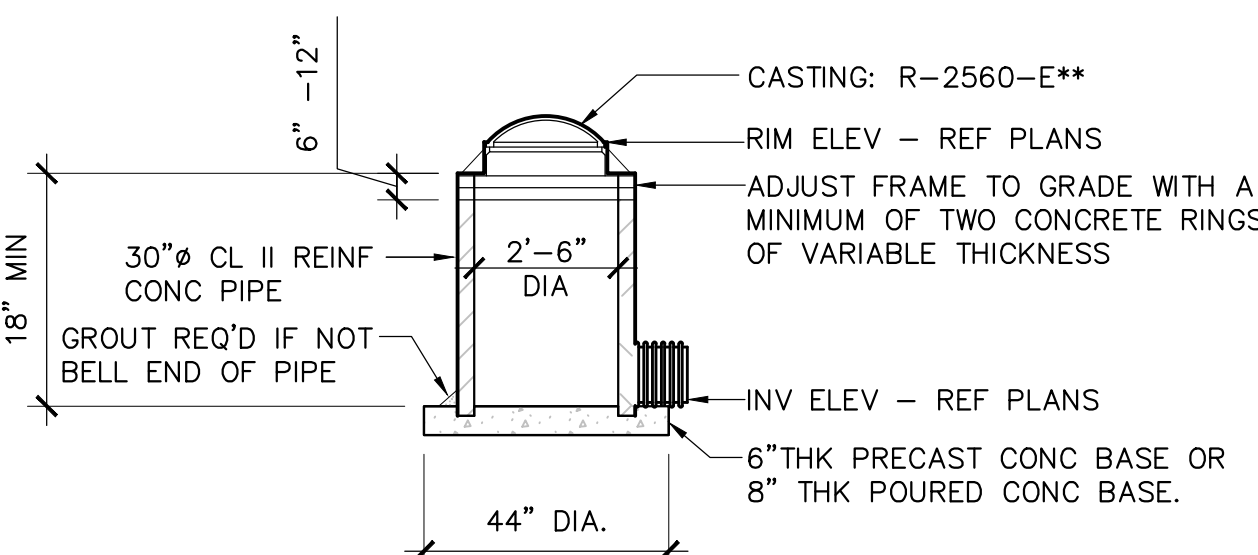
C601



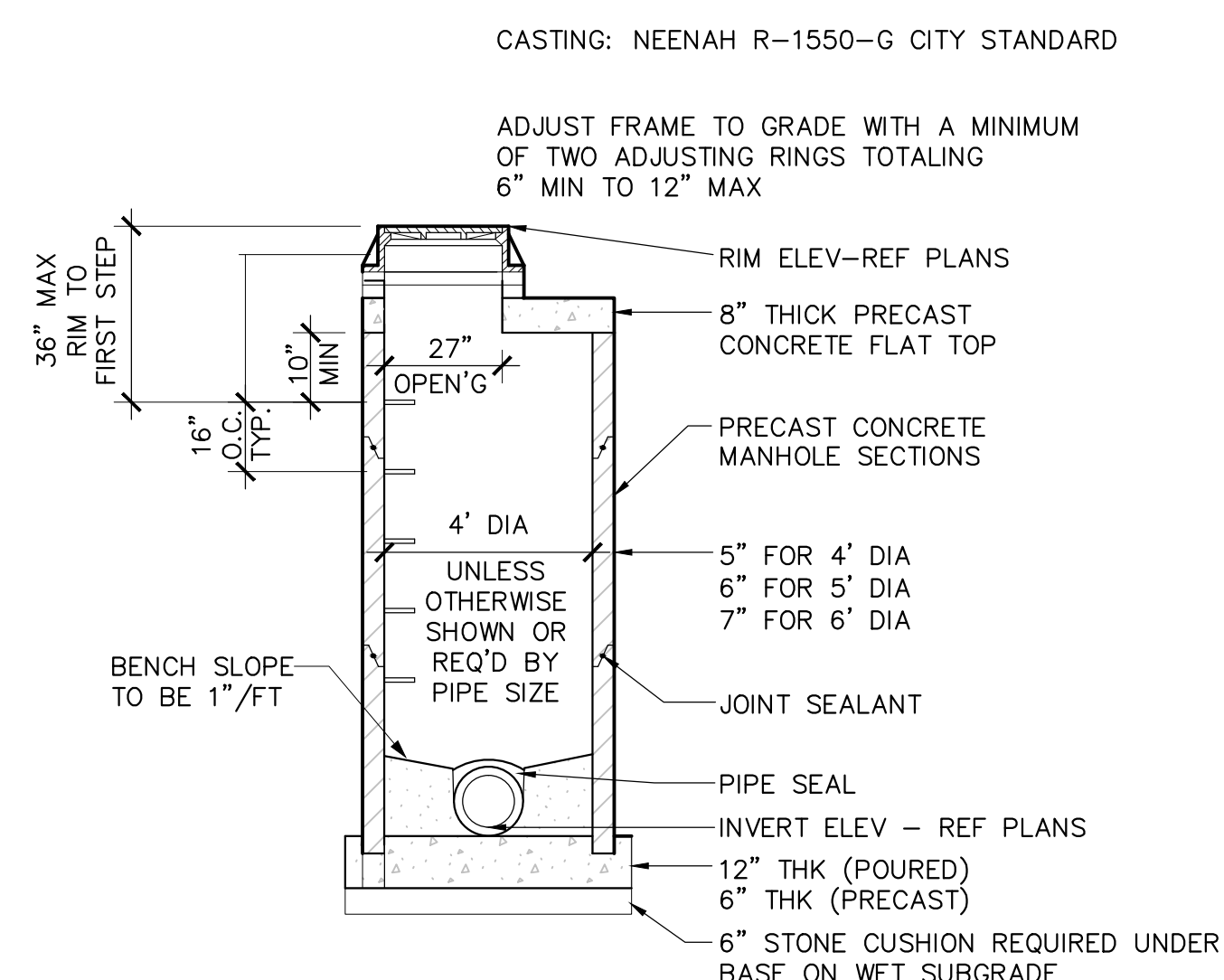
PLAN



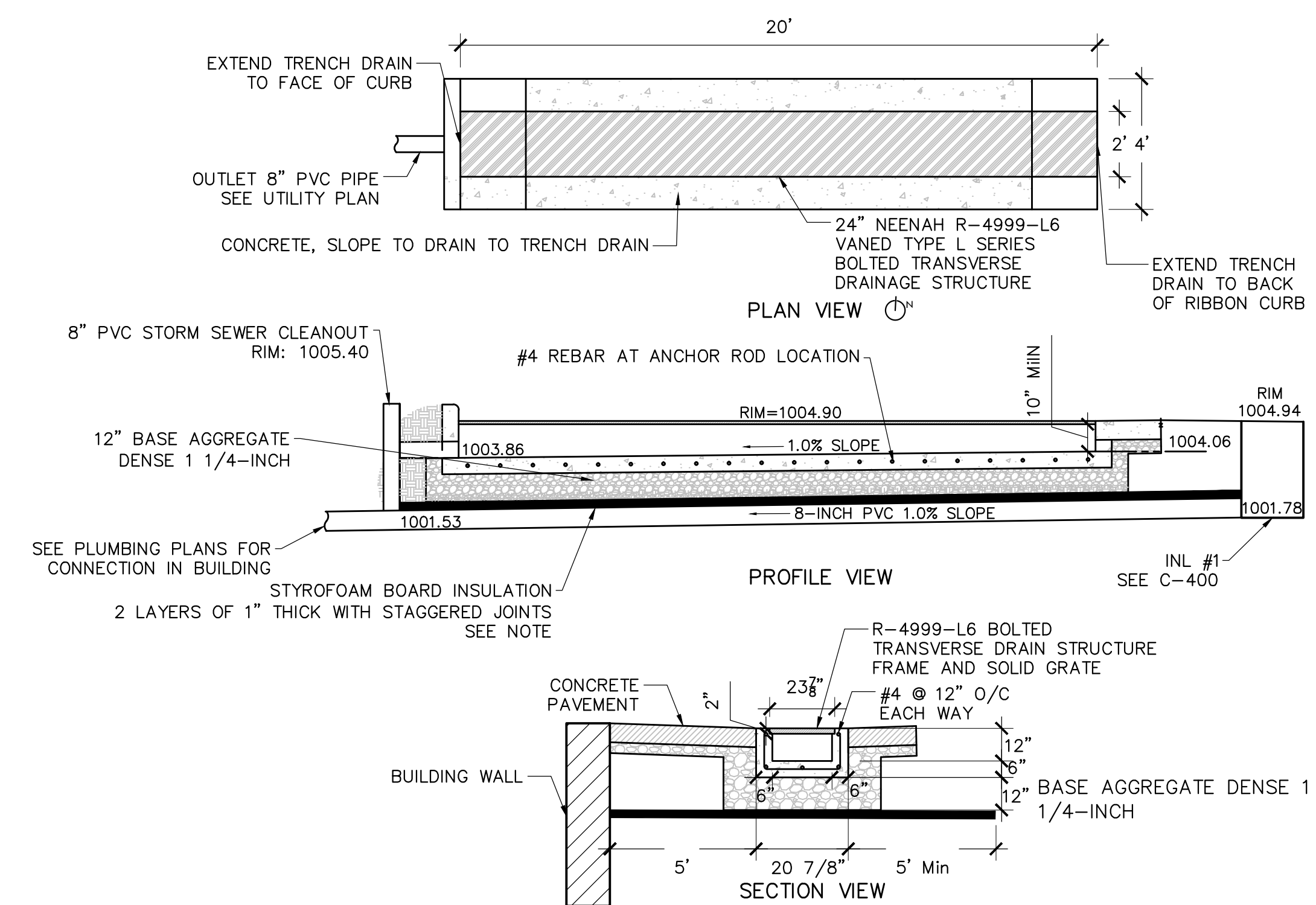
SECTION



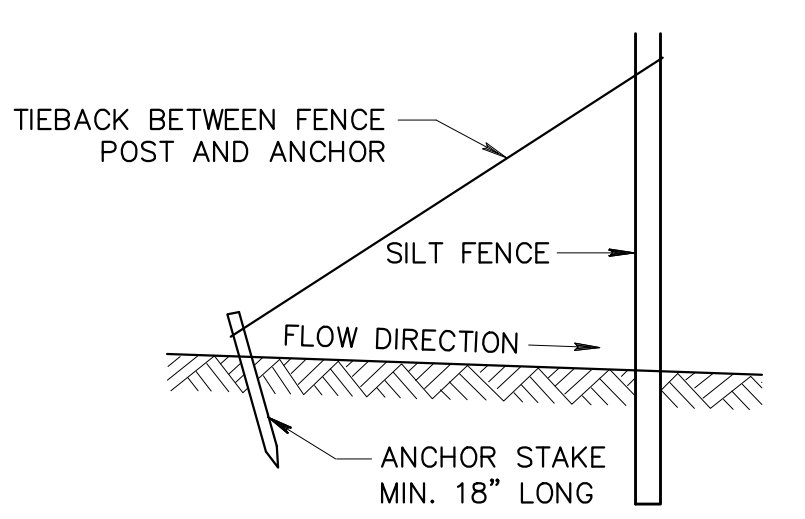
** CASTING VARIES BETWEEN NEENAH CASTING R-2560-E AND R-2050-G CASTING. SEE UTILITY PLAN ON SHEET C400 FOR CASTING TYPE.



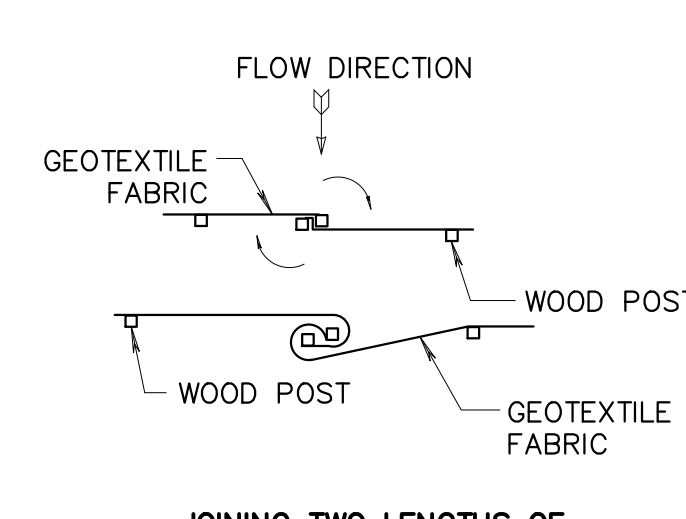
3 4-FT AREA INLET
C601 NTS



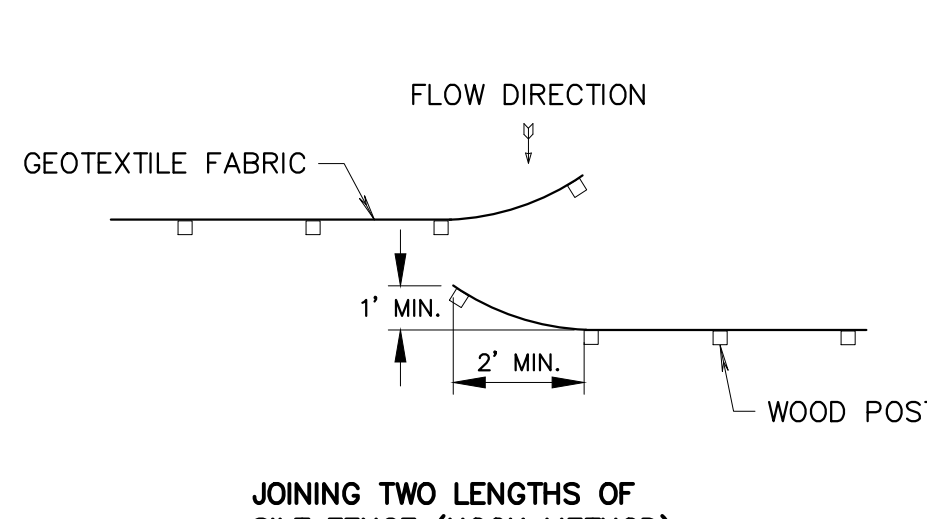
4 TRENCH DRAIN
C601 NTS



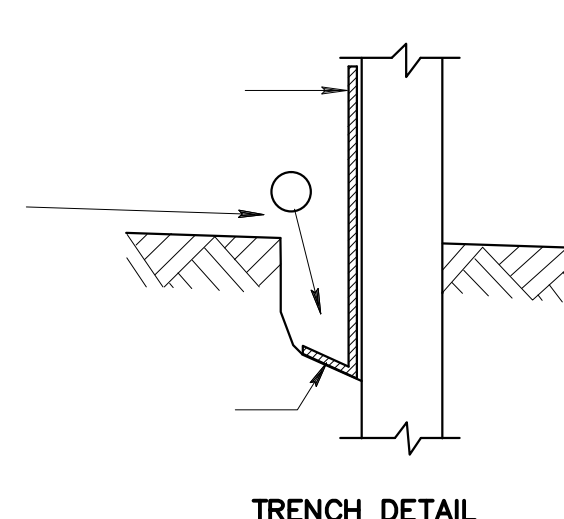
SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)



JOINING TWO LENGTHS OF
SILT FENCE (TWIST METHOD)

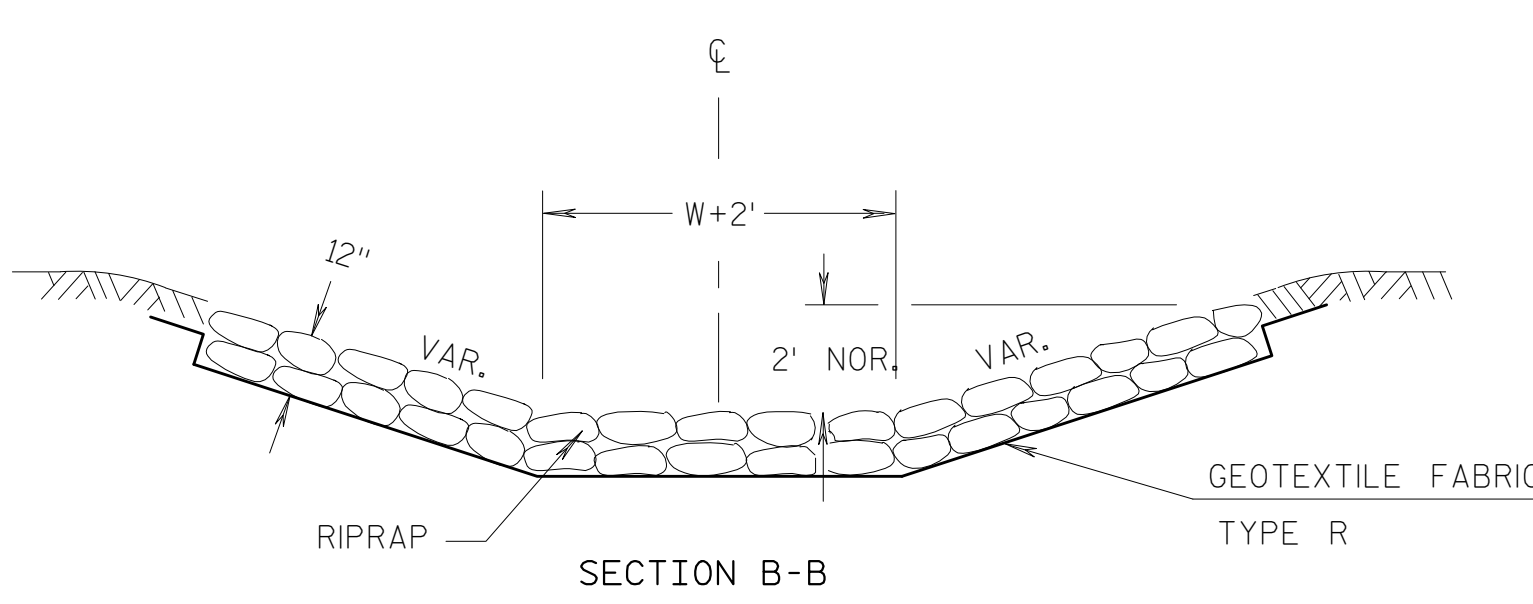
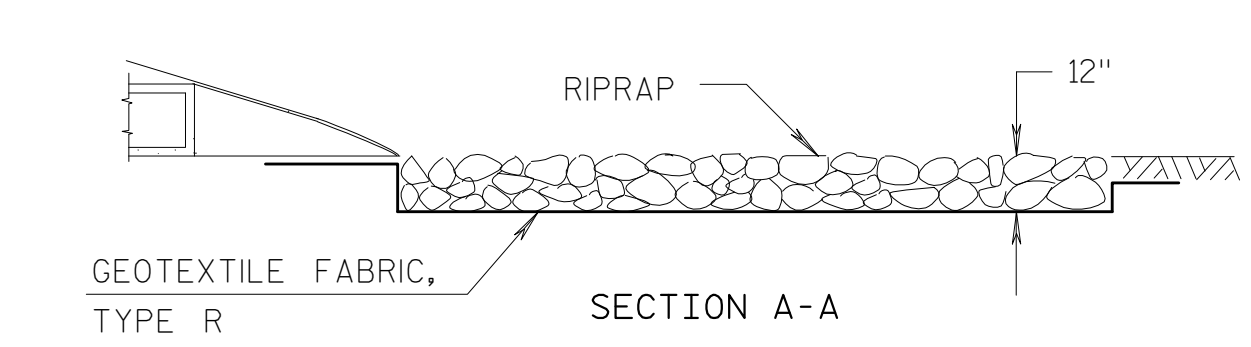
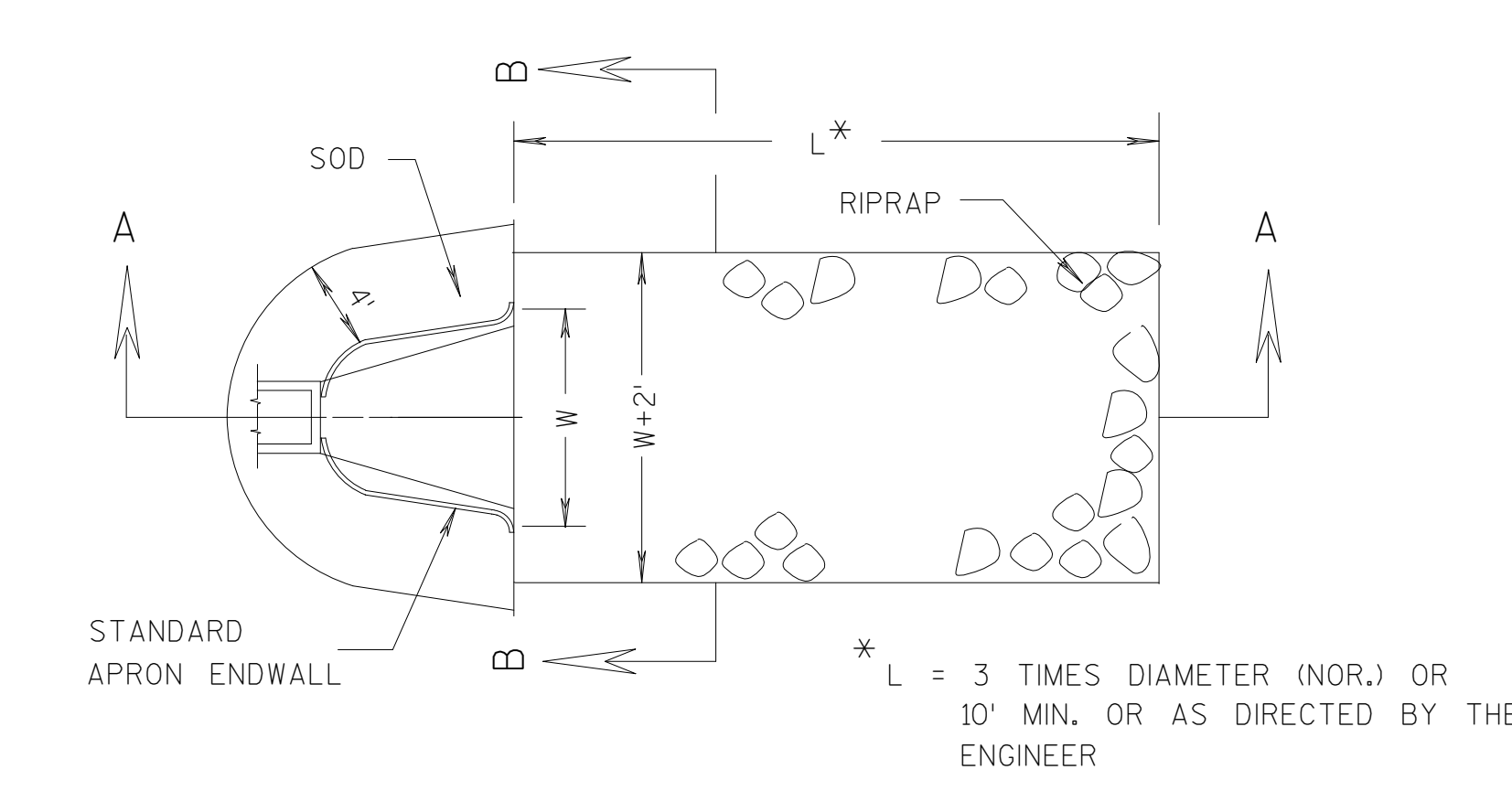


JOINING TWO LENGTHS OF
SILT FENCE (HOOK METHOD)

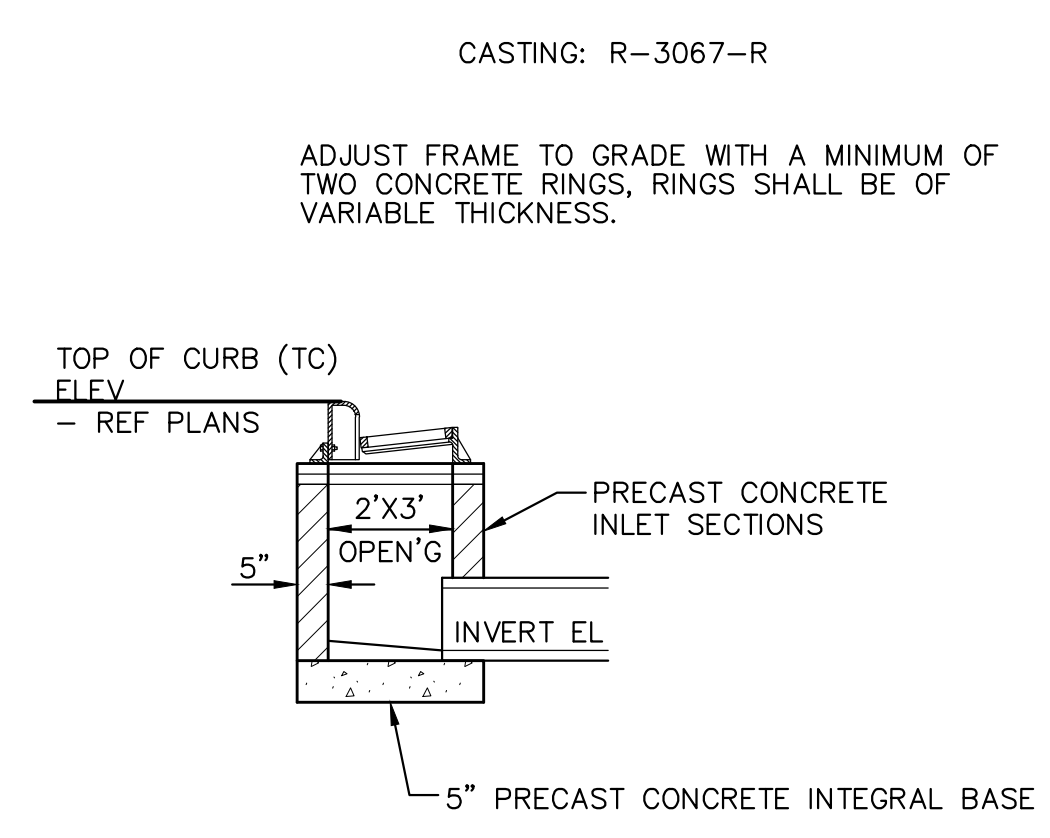


TRENCH DETAIL

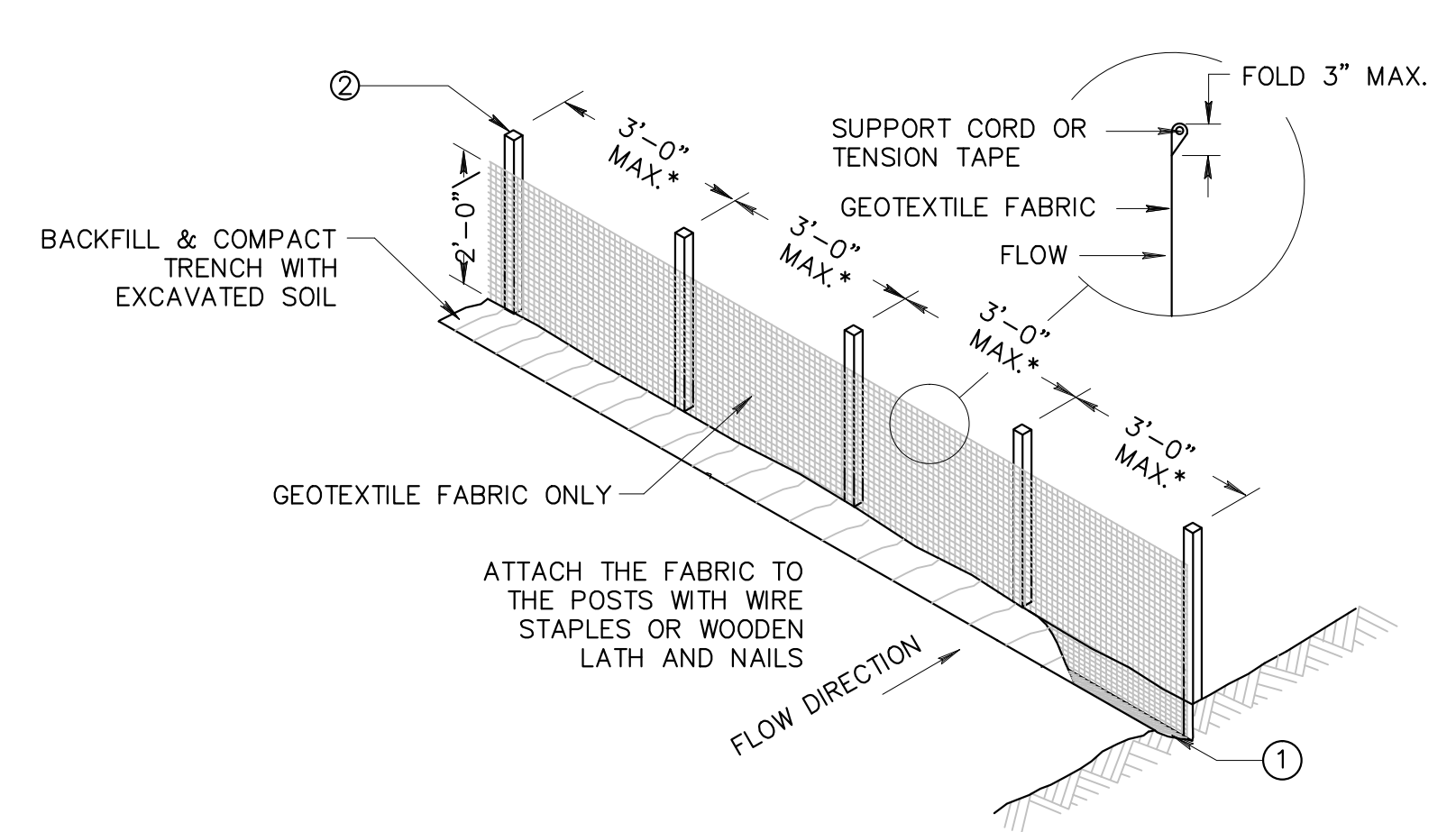
NOTES:
① TRENCH SHALL BE A MINIMUM OF 4\"/>



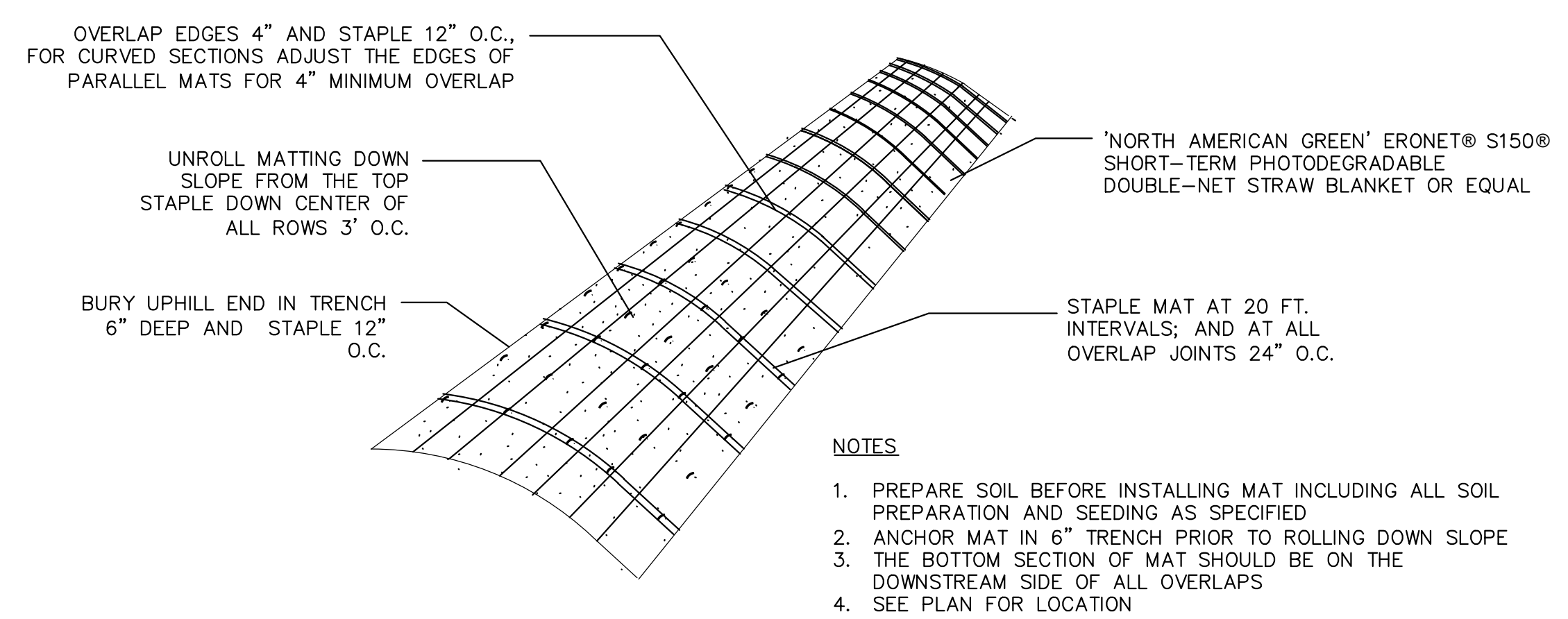
7 RIP RAP AT APRON ENDWALLS
C601 NOT TO SCALE



5 2X3 FT CURB INLET
C601



6 SILT FENCE
C601



NOTES:
1. PREPARE SOIL BEFORE INSTALLING MAT INCLUDING ALL SOIL PREPARATION AND SEEDING AS SPECIFIED
2. ANCHOR MAT IN 6\"/>

8 EROSION CONTROL MAT
C601 (REFERENCE ONLY) NTS

Midtown Police Station

4020 Mineral Point Road, Madison WI

City of Madison
210 MLK, Jr. Blvd
Madison, WI 53703

PROJECT NUMBER 152413.01
AYRES PROJECT NUMBER 27-1034.00

ISSUED FOR:
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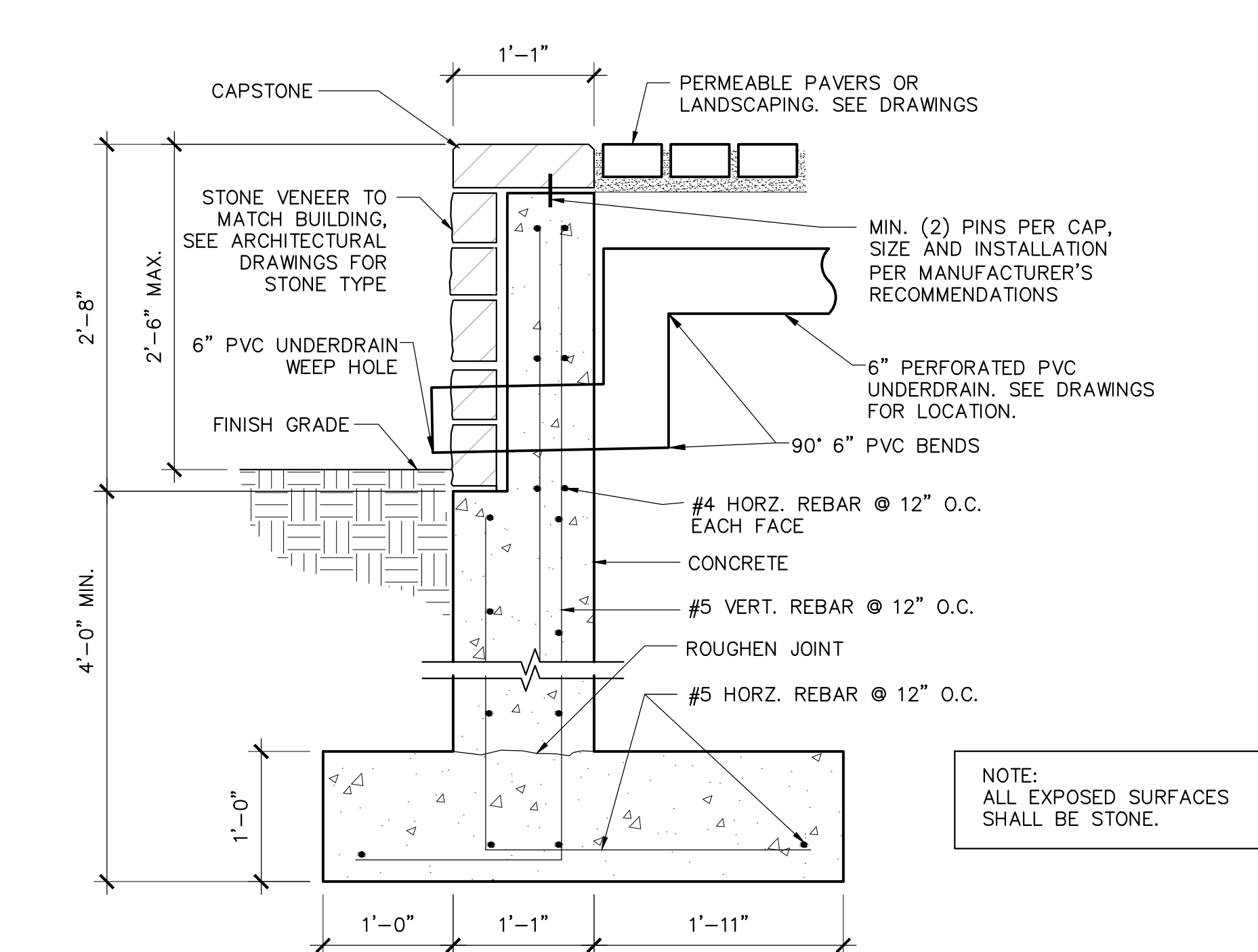
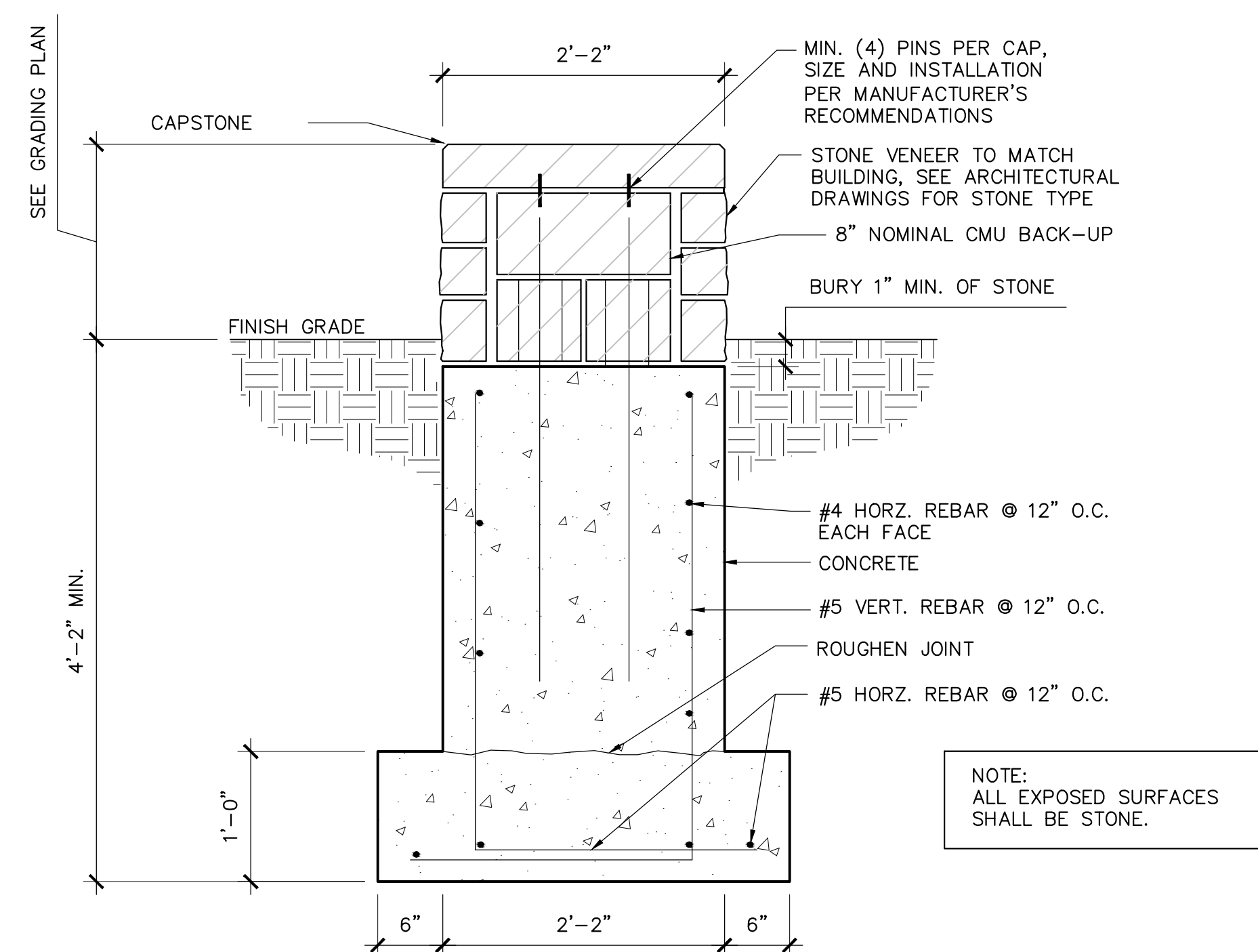
FOR CONSTRUCTION

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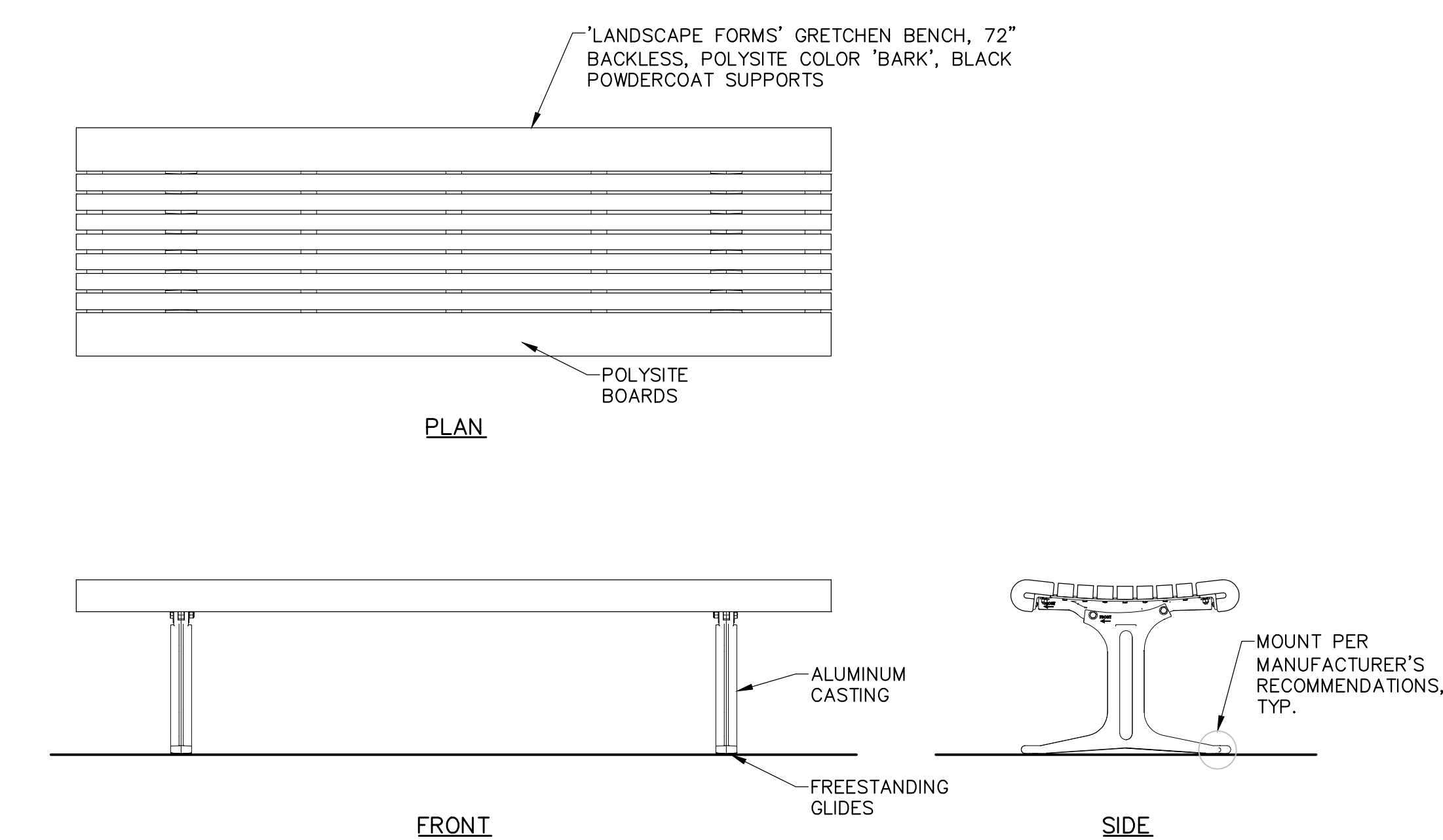
Details

C603

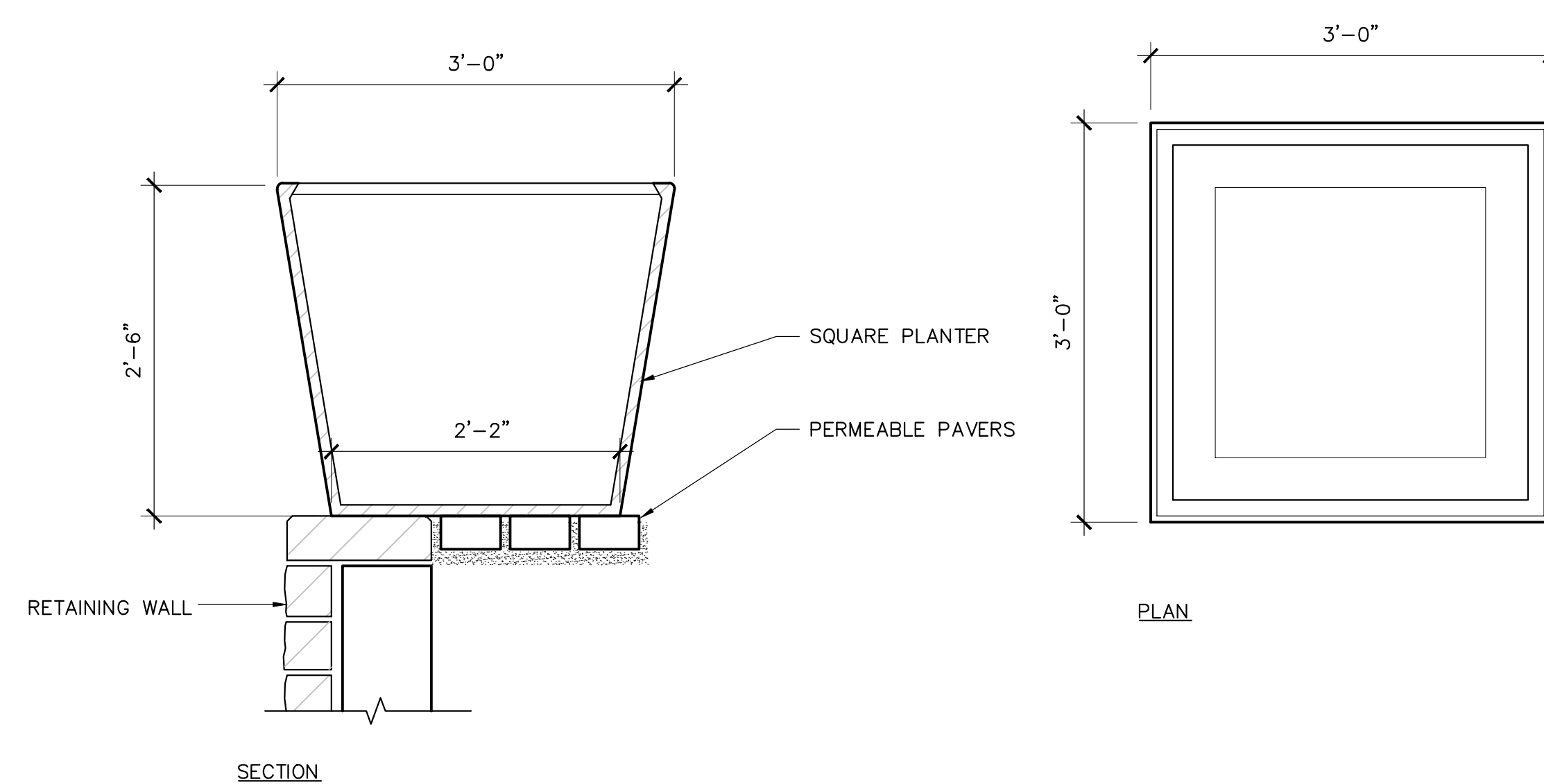


1 ACCENT WALL SCALE 1" = 1'-0"

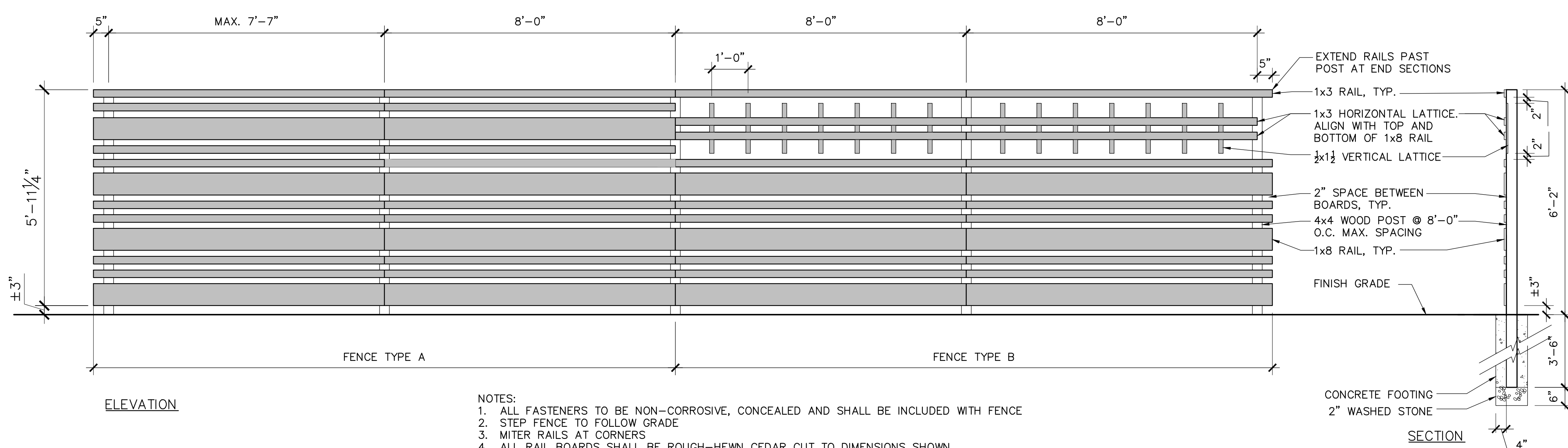
2 RETAINING WALL SCALE 1" = 1'-0"



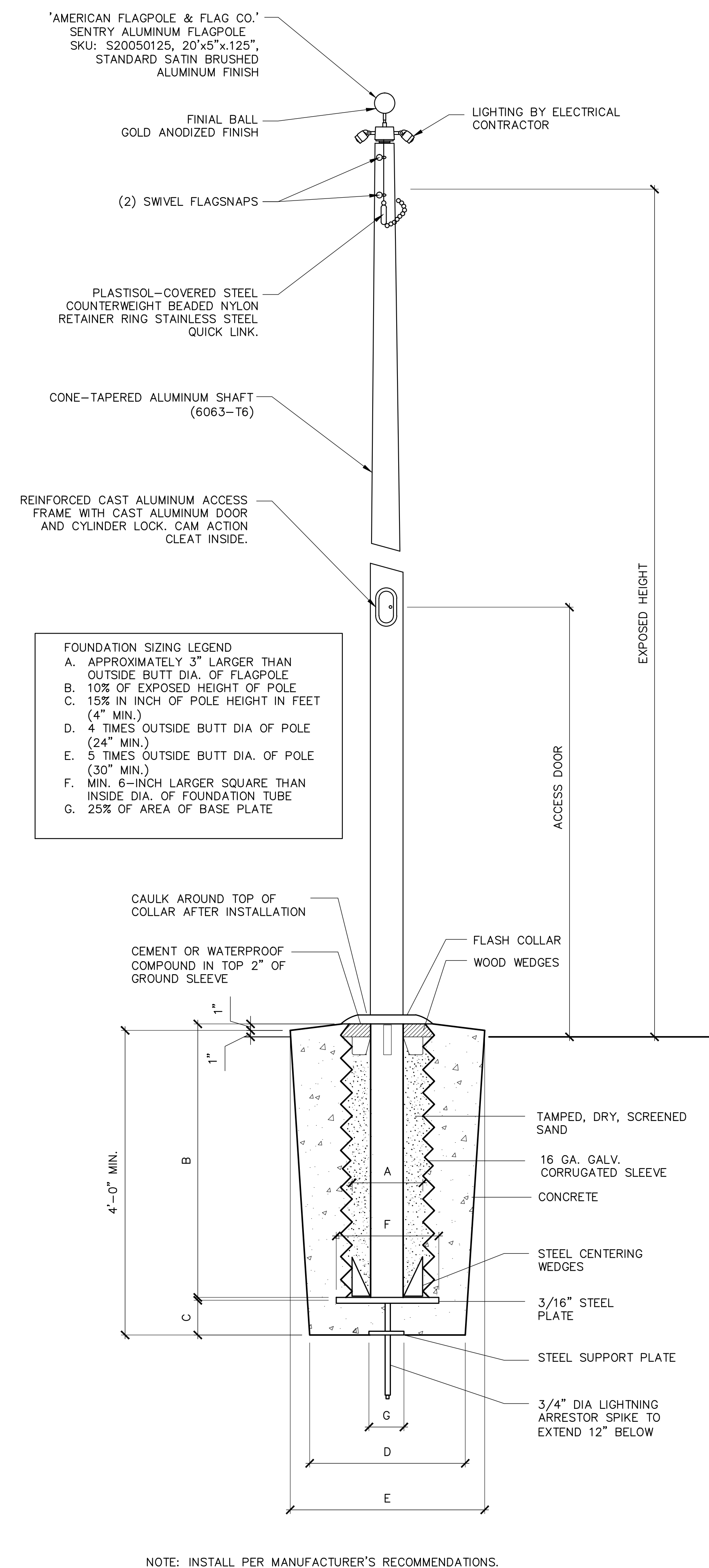
3 BENCH SCALE NTS



4 RAISED PLANTER SCALE 1" = 1'-0"



5 FENCE TYPE A & B SCALE 1/2" = 1'-0"



6 FLAG POLE SCALE NTS

Midtown Police Station

4020 Mineral Point Road, Madison WI

City of Madison
210 MLK, Jr. Blvd
Madison, WI 53703

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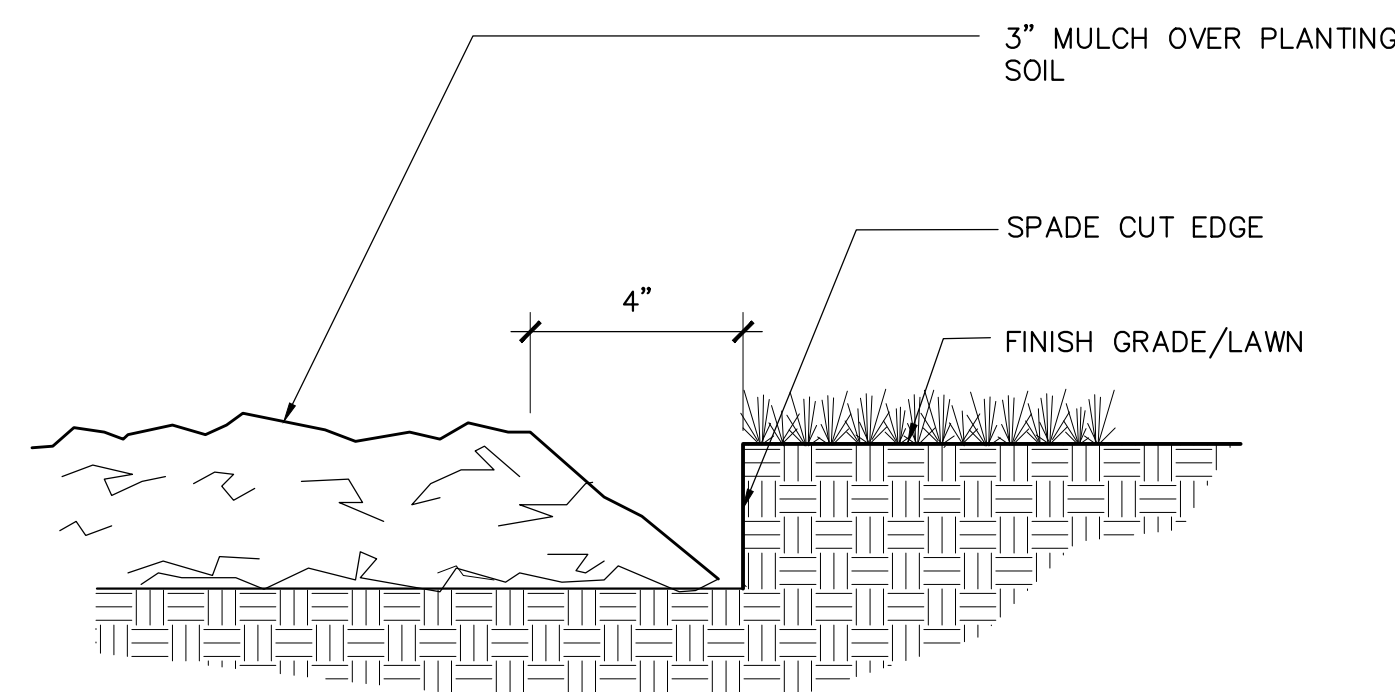
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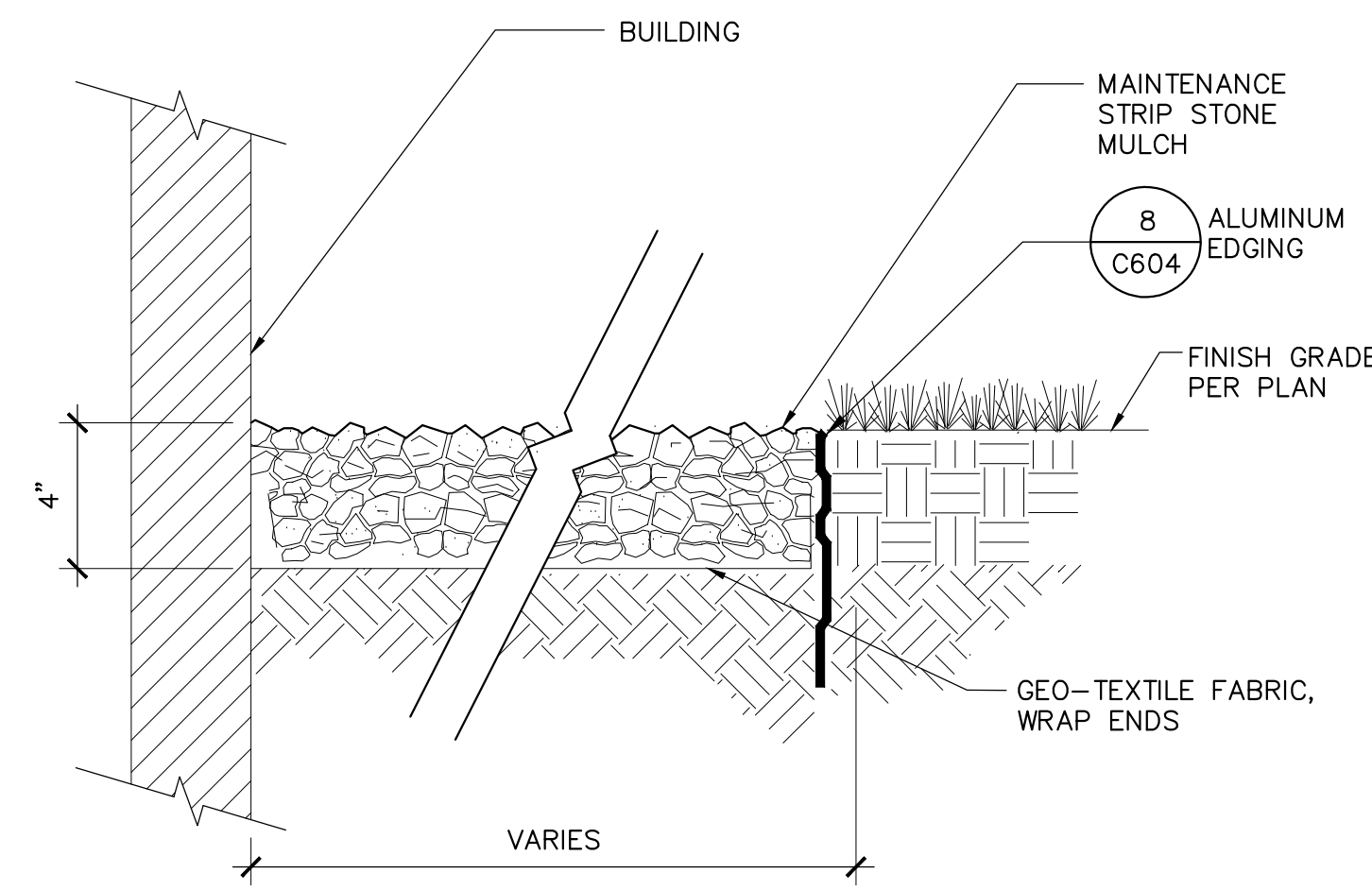
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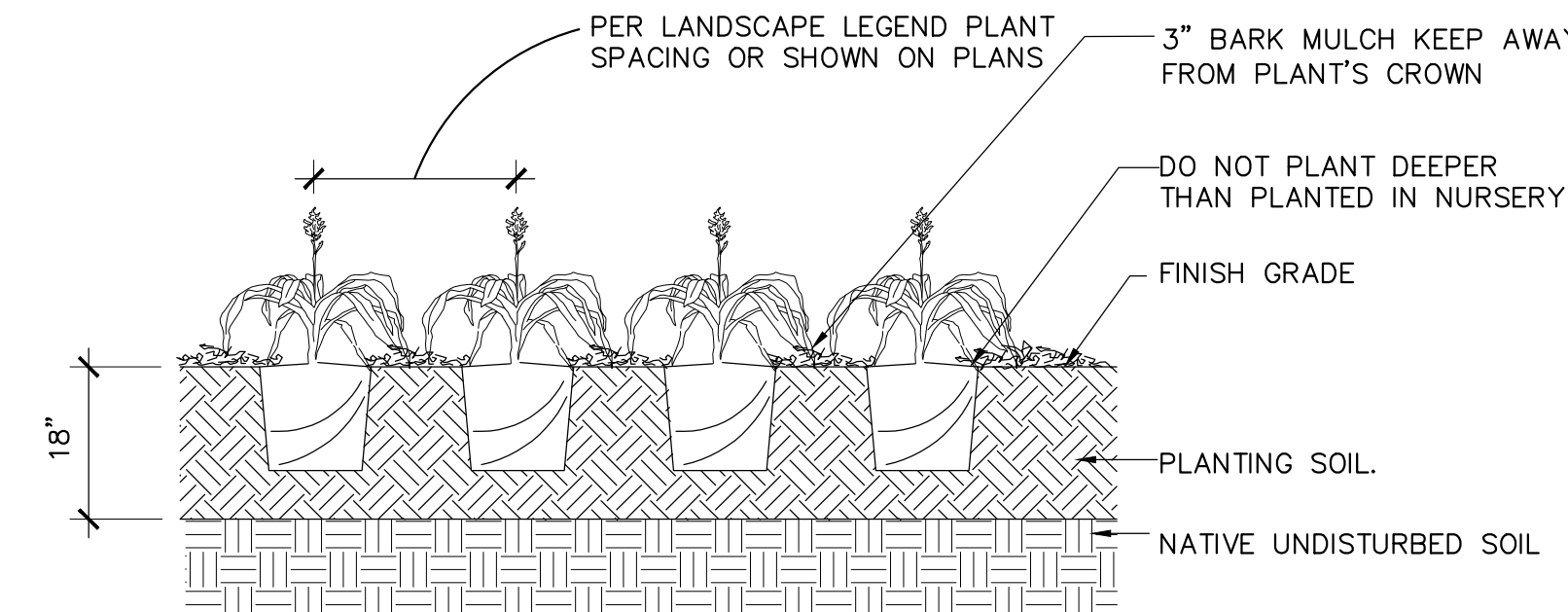
C604



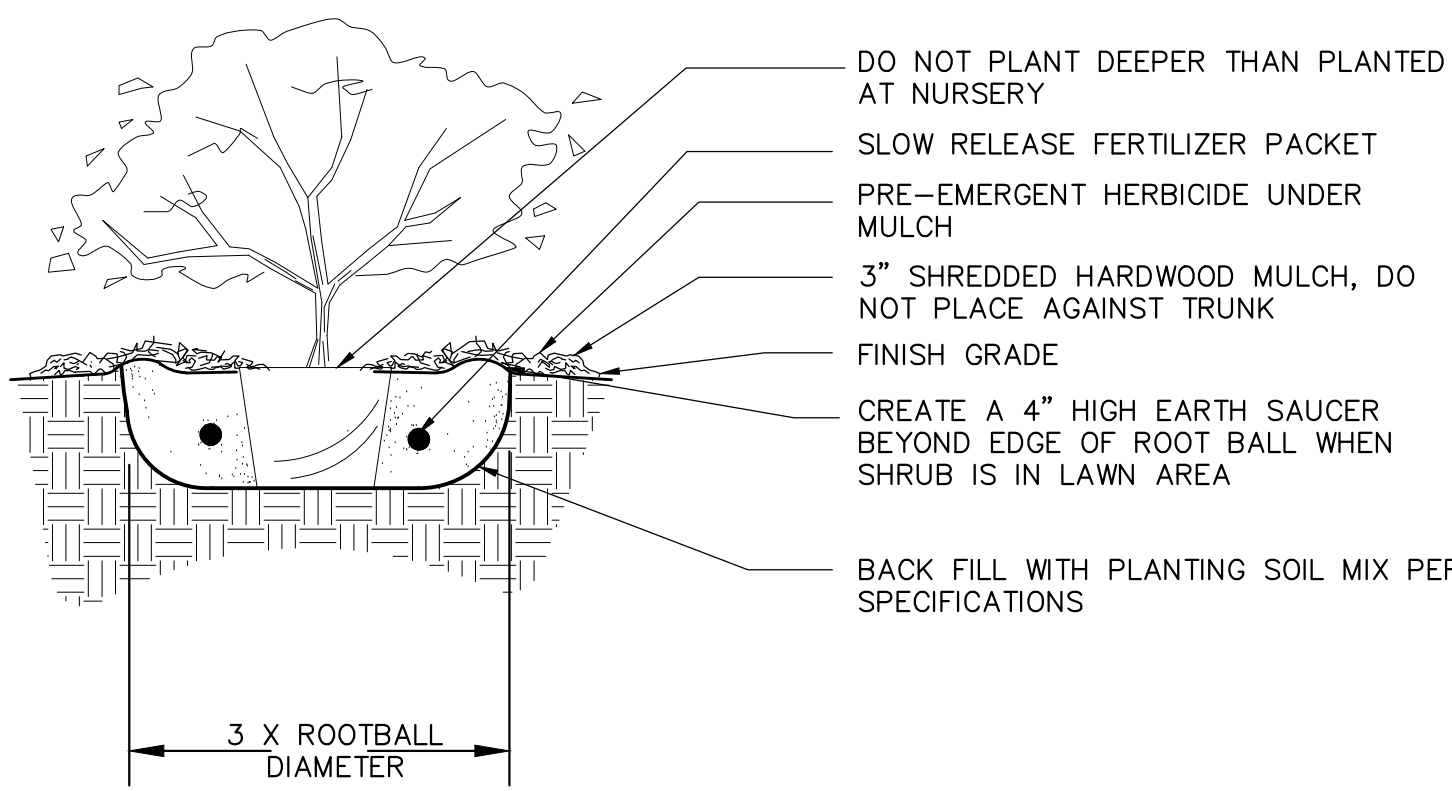
1 SHOVEL CUT EDGE
C604 NTS



2 GRAVEL SURFACING
C604 NTS



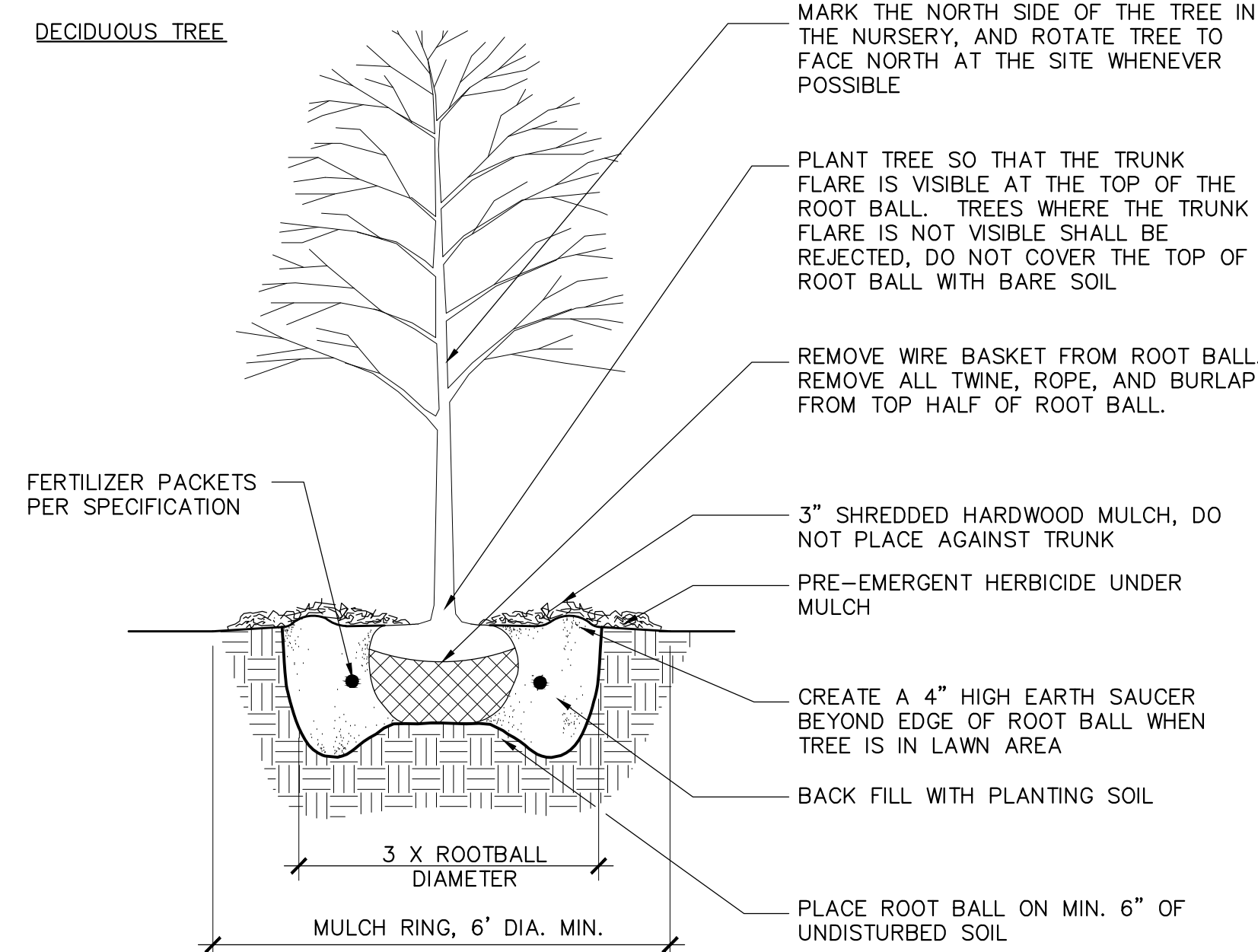
3 PERENNIAL BED
C604 NTS



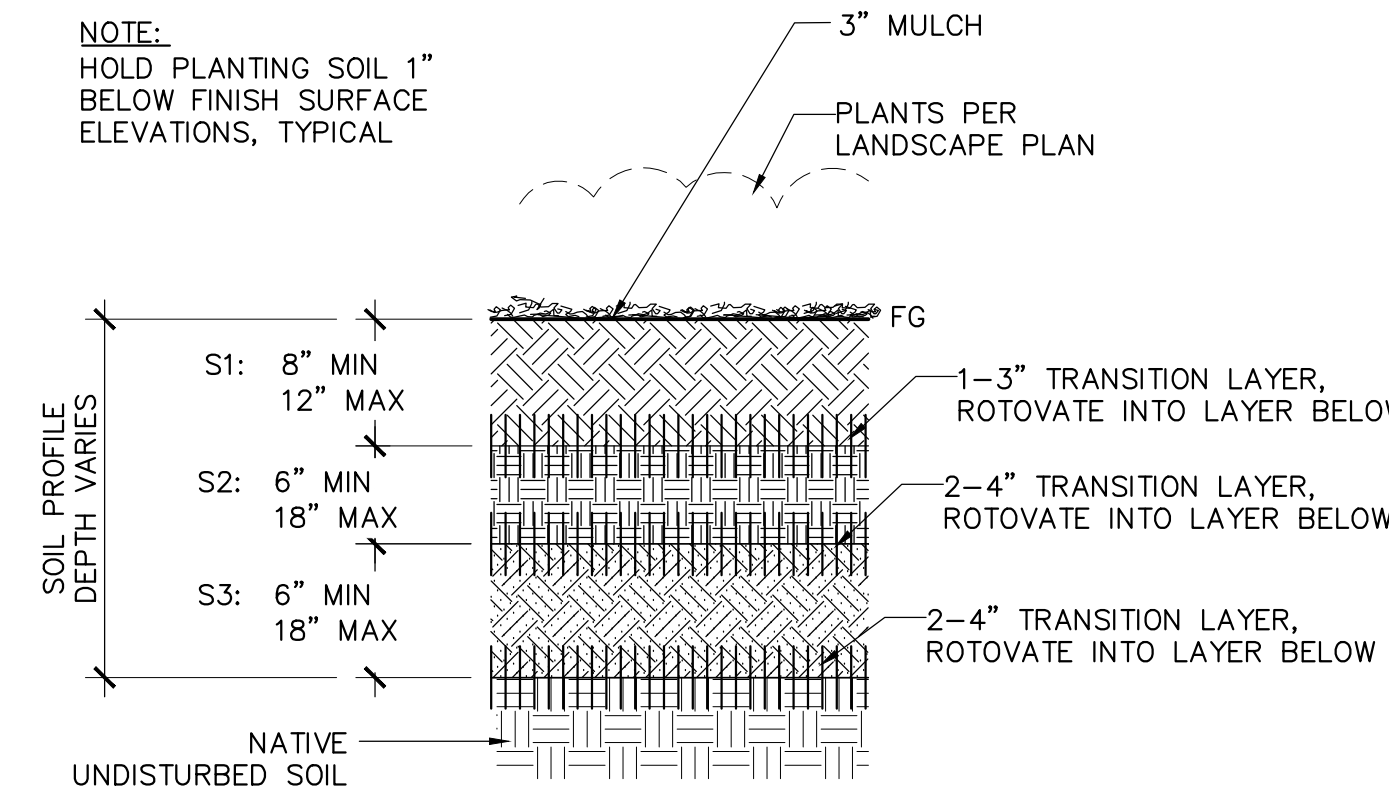
4 CONTAINER SHRUB PLANTING
C604 NTS

INFILTRATION DEVICES ARE DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR), COUNTY, MUNICIPALITY, AND ENGINEERING STANDARD OF CARE. ALL DESIGNATED INFILTRATION AREAS (e.g. RAIN GARDENS, INFILTRATION BASINS, BIORETENTION DEVICES) SHALL BE FENCED PRIOR TO CONSTRUCTION AND REMAIN UNDISTURBED AND PROTECTED DURING THE CONSTRUCTION OF PROPOSED SITE IMPROVEMENTS. PROPOSED BIORETENTION DEVICES SHALL NOT BE CONSTRUCTED UNTIL THE DEVICE'S CONTRIBUTING WATERSHED AREA MEETS ESTABLISHED VEGETATION REQUIREMENTS SET FORTH WITHIN THE RESPECTIVE WDNR TECHNICAL STANDARDS. IF THE LOCATION OF THE INFILTRATION AREA CONFLICTS WITH CONSTRUCTION STAGING AND/OR CONSTRUCTION TRAFFIC AND IS DISTURBED, COMPACTION MITIGATION WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR IS REQUIRED TO PROVIDE QUALIFIED STAFF FOR INSPECTION AND OBSERVATION OF THE CONSTRUCTION ACTIVITIES RELATING TO ALL JOB SITE REGULATORY COMPLIANCE INCLUDING THE PROTECTION AND CONSTRUCTION OF ALL STORMWATER MANAGEMENT FEATURES. ANY OBSERVATION OF PLAN OR SITE DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.



5 B&B TREE PLANTING/MULCH RING
C604 NTS



NOTE: HOLD PLANTING SOIL 1" BELOW FINISH SURFACE ELEVATIONS, TYPICAL

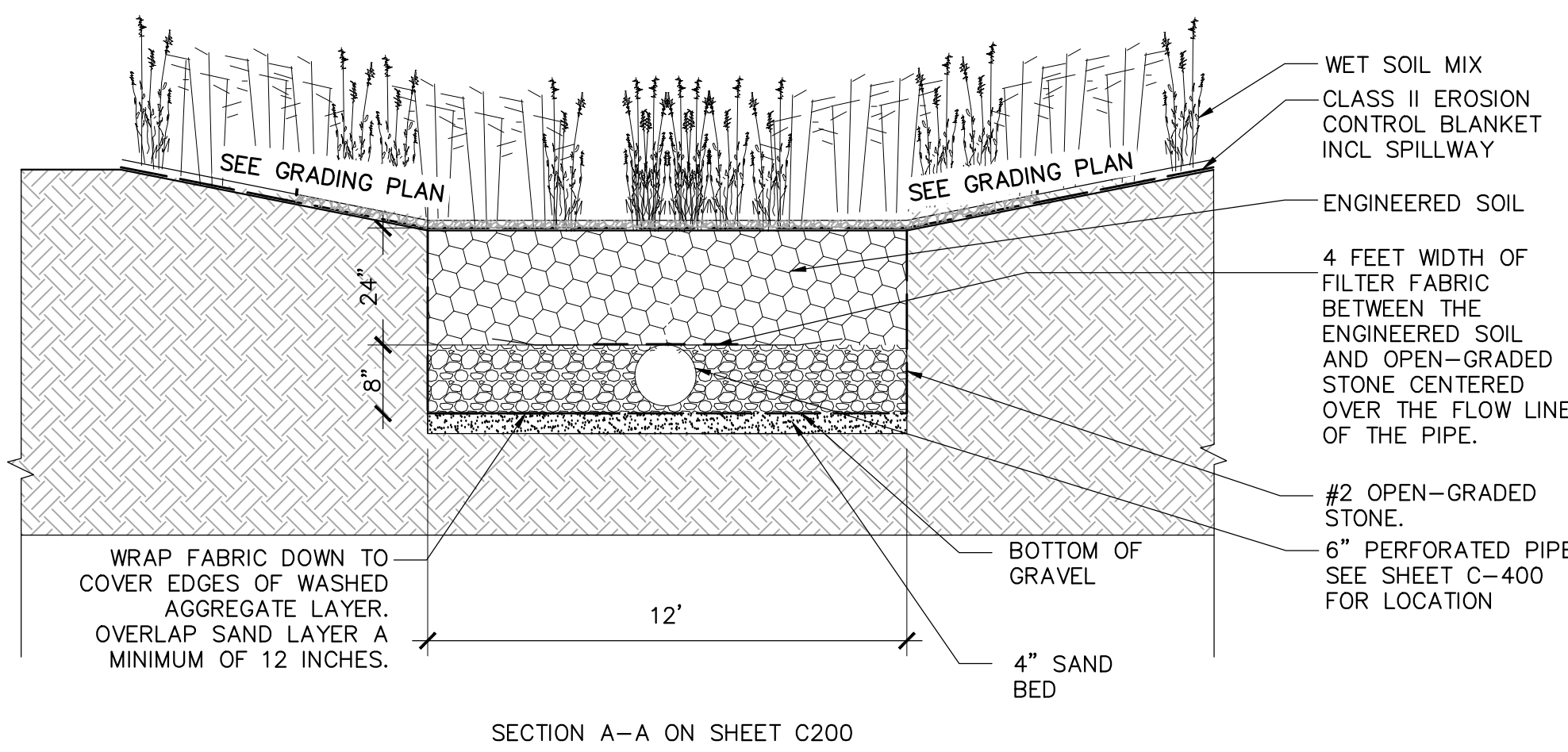
S1 LAYER:
1. 40-70% SAND, BY DRY WEIGHT
2. 20-40% SILTY, BY DRY WEIGHT
3. 10-30% CLAY, BY DRY WEIGHT
4. 8-10% ORGANIC MATTER BY DRY WEIGHT
5. TOTAL POROSITY: 55% MIN. AT MAX COMPACTION RATE OF 70-80% PROCTOR DENSITY
6. BULK DENSITY: 1.0-1.3 g/cu cm AT MAX COMPACTION RATE OF 70% PROCTOR DENSITY
7. C:N RATION OF 11-12:1
8. pH OF 6-8

S2 LAYER:
1. 50-75% SAND, BY DRY WEIGHT
2. 10-20% VERY COARSE SAND - USDA PARTICLE SIZE 10-20% COARSE SAND - USDA PARTICLE SIZE
3. 10-20% SILTY, BY DRY WEIGHT
4. 3-5% ORGANIC MATTER BY DRY WEIGHT
5. TOTAL POROSITY: 45% MIN. AT MAX COMPACTION RATE OF 80-85% PROCTOR DENSITY
6. BULK DENSITY: 1.0-1.5 g/cu cm AT MAX COMPACTION RATE OF 80% PROCTOR DENSITY
7. pH OF 6-8

S3 LAYER:
1. 60-85% SAND, BY DRY WEIGHT
2. 10-20% VERY COARSE SAND - USDA PARTICLE SIZE 10-20% COARSE SAND - USDA PARTICLE SIZE
3. 5-10% SILTY, BY DRY WEIGHT
4. 1-3% ORGANIC MATTER BY DRY WEIGHT
5. TOTAL POROSITY: 45% MIN. AT MAX COMPACTION RATE OF 80-85% PROCTOR DENSITY
6. BULK DENSITY: 1.3-1.6 g/cu cm AT MAX COMPACTION RATE OF 80% PROCTOR DENSITY
7. pH OF 6-8

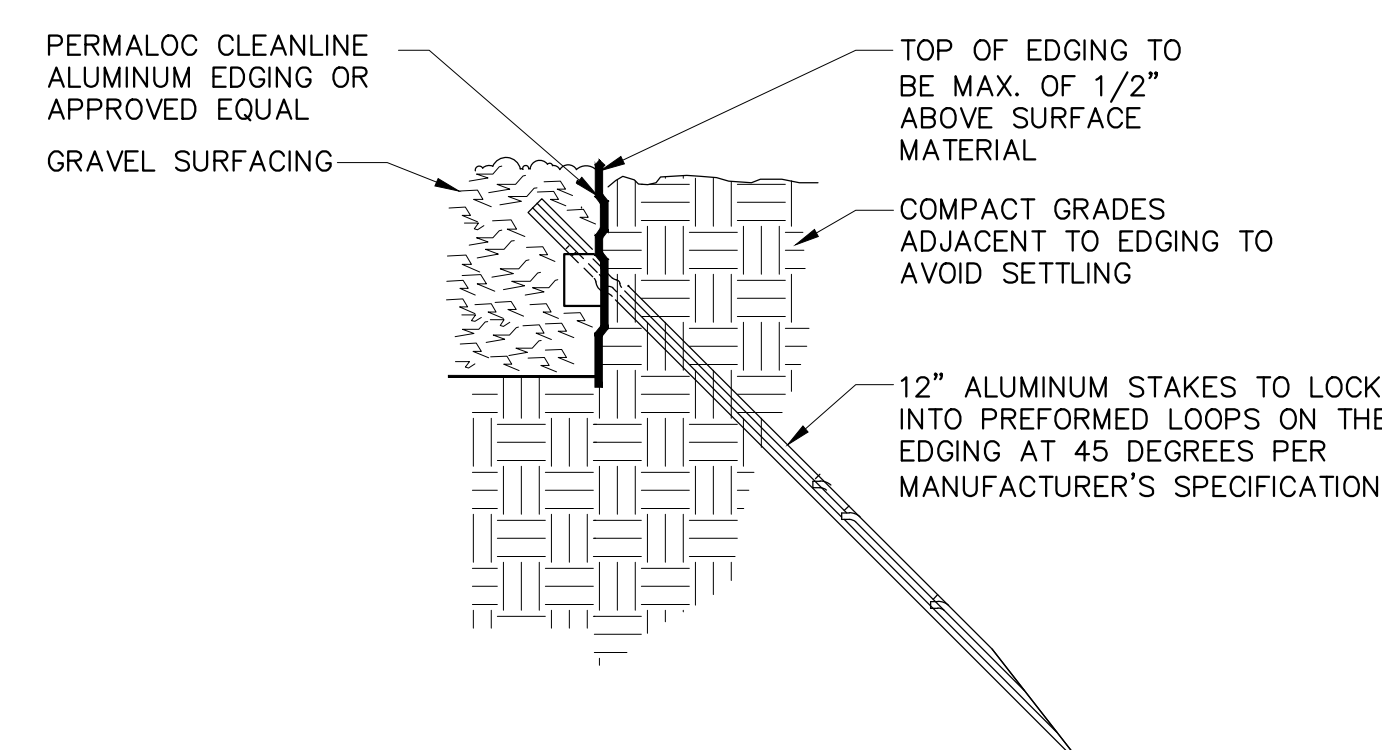
* ORGANIC MATTER SHALL BE COMPOSED OF CLASS A COMPOST AS DEFINED BY THE WISCONSIN DNR: PUB. WA1589

6 PLANTING SOIL
C604 NTS



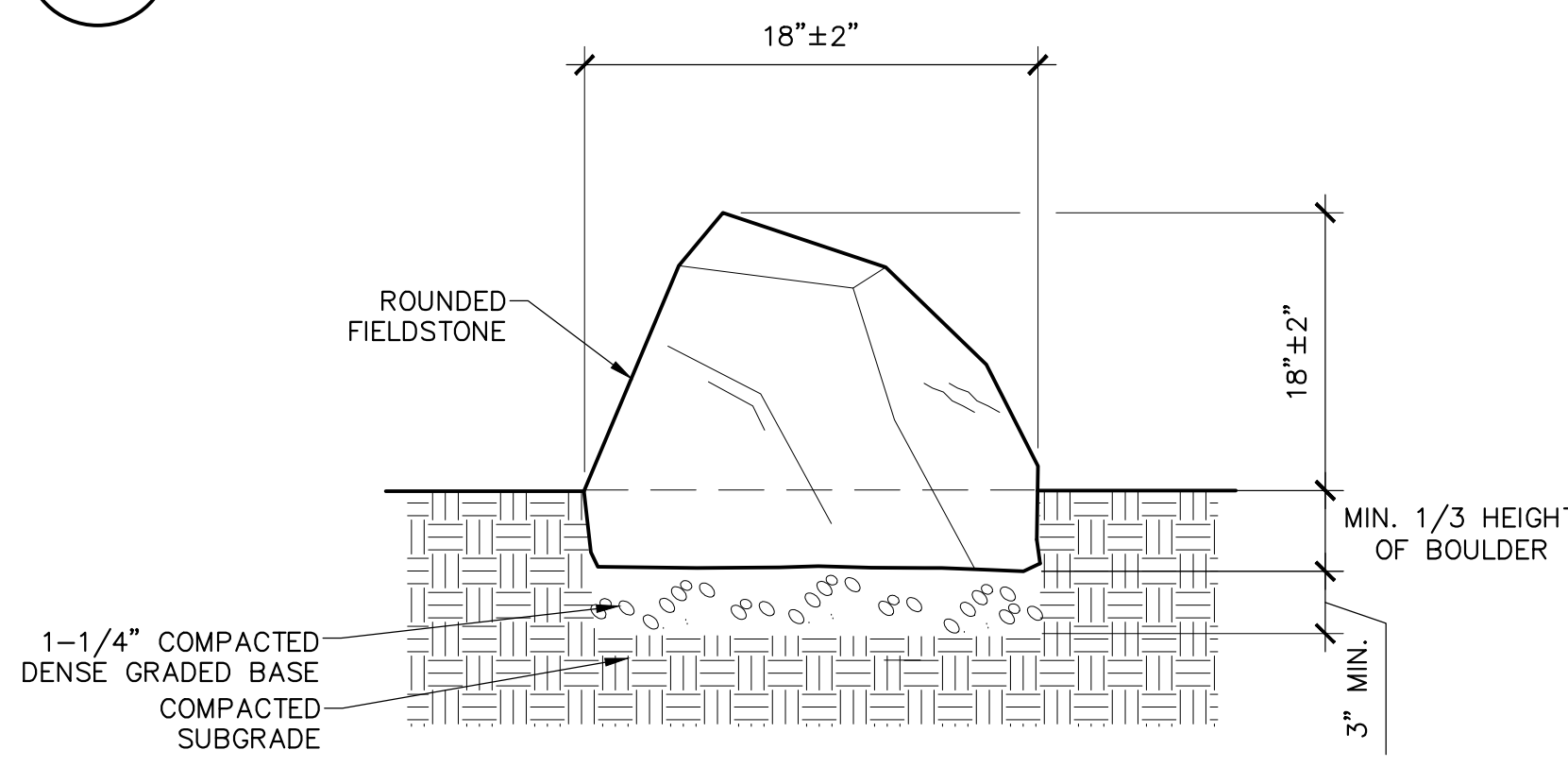
- BIOSWALE GENERAL NOTES:**
- CONTRACTOR SHALL INSTALL 24" OF ENGINEERED SOIL CONSISTING OF: 75% ASTM C33 SAND AND 25% CERTIFIED COMPOST (S100) TO ACCOMMODATE DESIRED INFILTRATION RATE. FILL BIO-SWALE AREA 2-3" ABOVE SURROUNDING FINISH GRADE TO ACCOMMODATE SETTLING OF BIO-SWALE MATERIAL.
 - CERTIFIED COMPOST SHALL CONSIST OF: >40% ORGANIC MATTER, <60% ASH CONTENT, pH OF 6-8, AND MOISTURE CONTENT OF 35-50% BY WEIGHT. COMPOST SHALL MEET THE REQUIREMENTS OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES SPECIFICATION S100, COMPOST.
 - SAND/NATIVE SOIL INFILTRATION LAYER SHALL BE FORMED BY A LAYER OF SAND 3 INCHES DEEP, WHICH IS VERTICALLY MIXED WITH THE NATIVE SOIL TO A DEPTH OF 2-4 INCHES.
 - RUNOFF MUST INFILTRATE WITHIN 48 HOURS. BASINS UNABLE TO MAINTAIN THESE RATES MUST BE DEEP TILLED, RE-GRADED, AND IF NECESSARY REPLANTED TO RESTORE ORIGINAL INFILTRATION RATES.
 - ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH APPLICABLE LOCAL, REGIONAL, AND STATE STORMWATER STANDARDS FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER.
 - BIO-SWALE AREAS SHALL BE HAND OR BACK HOE LAID. EQUIPMENT SHALL NOT BE DRIVEN ON SOIL MIX DURING OR AFTER INSTALLATION.
 - MULCH BIOSWALE SOIL AREAS AFTER PLANTING.
 - EROSION MAT SHALL BE PLACED ON TOP OF HARDWOOD MULCH.

7 BIOSWALE SOIL
C604 SCALE NTS



- NOTES:**
- SIZE: 3/16" X 4" WITH 0.187" EXPOSED TOP LIP
 - FINISH: MILL FINISH-NATURAL ALUMINUM
 - INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES. LANDSCAPE ARCHITECT TO INSPECT PRIOR TO BURIAL OF EDGING.
 - 16" SECTIONS TO INCLUDE (5) 12" ALUMINUM STAKES
 - CORNERS: CUT BASE EDGING UP HALFWAY AND FORM A CONTINUOUS CORNER

8 ALUMINUM EDGING
C604 NTS



9 BOULDER
C604 NTS



**POLICE DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

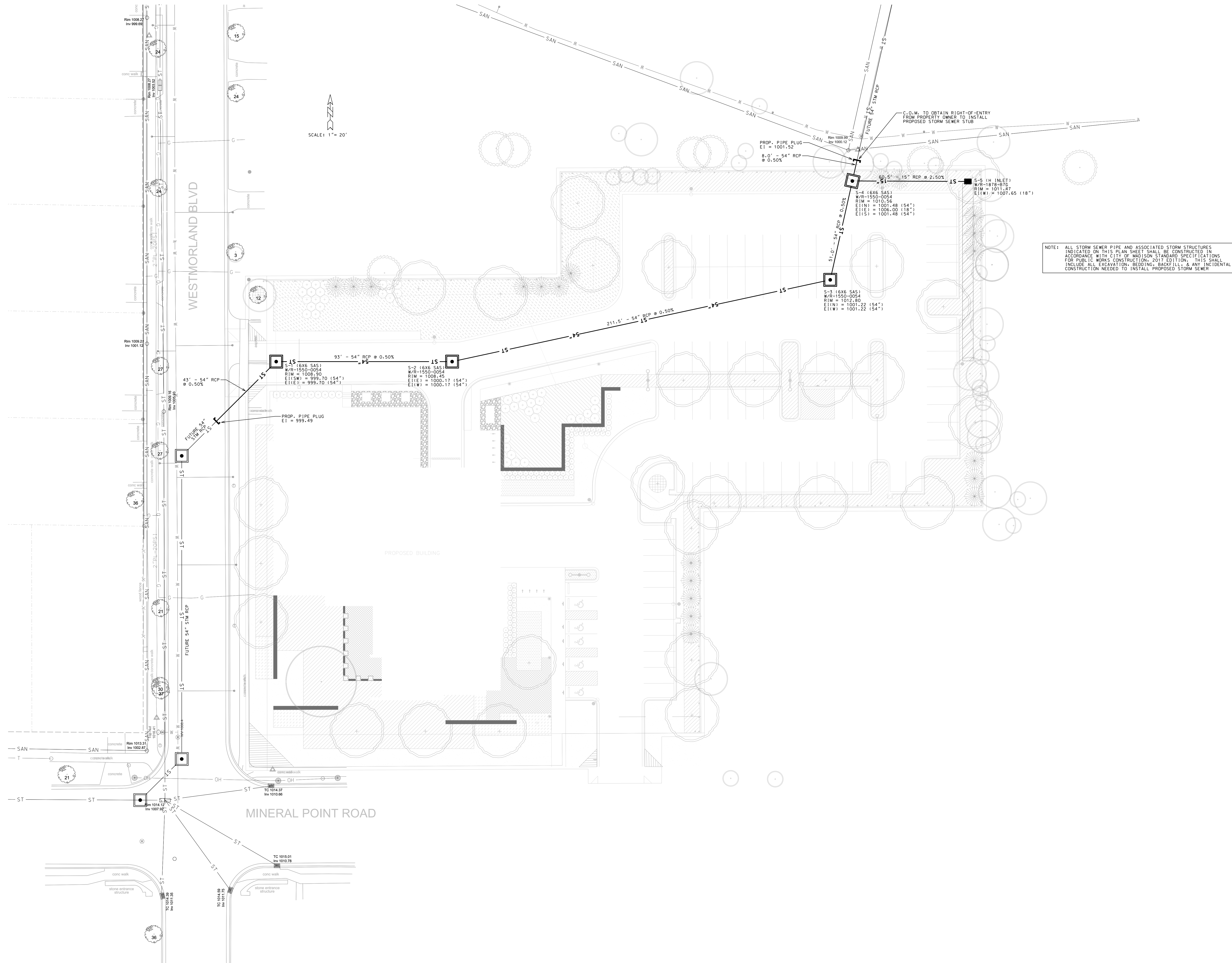
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CHECKED BY Checker

DETAILS

R100



**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

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DRAWN BY MMZ

CHECKED BY SK

ABBREVIATIONS

Angle	DBL	Double	GALV	Galvanized	MIN	Minimum	SD	Smoke Detector
Centerline	DEG	Degree	GB	Grab Bar	MISC	Miscellaneous	SIM	Similar
Plate	DEMO	Demolish/Demolition	GC	General Contractor	MO	Masonry Opening	SPEC	Specification(s)
Number	DEPT	Department	GLULAM	Glue-Laminated	MTL	Metal	SPKR	Speaker
@	DIAG	Diagonal	GND	Ground	MULL	Mullion	SQ	Square
ø	DIAM	Diameter	GS	Galvanized Steel			SS	Stainless Steel
AC	DIM	Dimension	GWB	Gypsum Wall Board	NIC	Not in Contract	STA	Station
ACT	DL	Dead Load	GYP	Gypsum	NO	Number	STC	Sound Transmission Coefficient
ADJ	DN	Down			NOM	Nominal	STD	Standard
AFF	DT	Drain Tile	HB	Hose Bibb	NRC	Noise Reduction Coefficient	STL	Steel
ALT	DWG	Drawing	HCPD	Handicapped	NTS	Not To Scale	STOR	Storage
ALUM			HDWR	Hardware			STR	Structural
ANOD	EA	Each	HM	Hollow Metal	OC	On Center	SUSP	Suspend(ed)
APPROX	EDF	Electric Drinking Fountain	HORIZ	Horizontal	OD	Outside Diameter	SV	Sheet Vinyl
ASPH	EIFS	Ext. Insul. & Finish System	HVAC	Heating, Ventilating, & Air Conditioning	OFF	Office		
AVG	EJ	Expansion Joint	HW	Hot Water	OPNG	Opening	T	Tread
	EL	Elevation			OPP	Opposite	T&B	Top and Bottom
B/.....	ELEC	Electric(al)	ID	Inside Diameter	OPT	Option(al)	T&G	Tongue & Groove
BD	ELEV	Elevator	INCAND	Incandescent	OZ	Ounce	T.O.	Top of... (steel, conc., etc.)
BITUM	EMER	Emergency	INCL	Include(d), (ing), (tion)	P.T.	Pressure Treated	TEL	Telephone
BLDG	ENCL	Enclosure(ure)	INCL	Include(d), (ing), (tion)	PBD	Particle Board	TEMP	Temperature
BRG	EP	Electrical Panel	INT	Interior	PC	Precast Concrete	THRESH	Threshold
BSMT	EQ	Equal	JAN	Janitor	PED	Pedestal	TLT	Toilet
BTM	EWC	Electric Water Cooler	JT	Joint	PER	Perforated	TS	Tubular Steel
BUR	EXIST	Existing	KIT	Kitchen	PERIM	Perimeter	TV	Television
	EXT	Exterior			PERP	Perpendicular	TYP	Typical
CAB	FA	Fire Alarm			PKG	Parking	UG	Underground
CB	FAB	Fabricate	LAB	Laboratory	PLAM	Plastic Laminate	UL	Underwriter's Laboratories
CG	FD	Floor Drain	LAM	Laminate(d)	PRELIM	Preliminary	UNO	Unless Noted Otherwise
CJ	FE	Fire Extinguisher	LAV	Lavatory	PROP	Property	UR	Urinal
CLG	FEC	Fire Extinguisher Cabinet w/Extinguisher	LBS	Pounds	PRV	Power Roof Ventilator	UTIL	Utility
CM	FHC	Fire Hose Cabinet	LL	Live Load	PSF	Pounds per Square Foot		
CMU	FIN	Finish(ed)	LVR	Louver	PSI	Pounds per Square Inch		
CO	FLR	Floor			QT	Quarry Tile	VCT	Vinyl Composition Tile
COL	FND	Foundation	MAS	Masonry	QTY	Quantity	VENT	Ventilation
CONC	FO	Face Of	MATL	Material(s)			VERT	Vertical
CONST	MAX	Foot, Feet	MAX	Maximum	R	Riser(s)	VEST	Vestibule
CONT	FT	Foot, Feet	MDO	Medium Density Overlay	RAD	Radius	VTR	Vent Through Roof
CONTR	FTG	Footing	MECH	Mechanical	RB	Resilient Base	WVC	Vinyl Wall Covering
CORR	FUT	Future	MFR	Manufacturer	RD	Roof Drain	W/	With
CPT	G	Gas	MH	Manhole	REF	Refer, Reference	W/O	Without
CRS	GA	Gauge			REFR	Refrigerator	WC	Water Closet
CT	GAL	Gallon			REINF	Refrigerator Reinforce(d), (ing)	WCO	Wall Clean Out
CUH					REV	Revision(s), Revise(d)	WD	Wood
					RM	Room	WH	Water Heater
D					RO	Rough Opening	WP	Weatherproof
					ROW	Right of Way	WSC	Wainscot
					RTU	Roof Top Unit	WWF	Welded Wire Fabric
					RWL	Rain Water Leader	YD	Yard(s)
					SCHED	Schedule		

MATERIAL DESIGNATIONS

	EARTH		ROUGH WOOD FRAMING
	MULCH		ROUGH WOOD BLOCKING
	POROUS FILL		RIGID INSULATION
	ROCK		PLYWOOD
	CONCRETE		FINISHED WOOD
	CMU		BATT INSULATION
	BRICK		PLASTER, SAND, ETC.
	STONE		CERAMIC TILE
	METAL		ACT

ARCHITECTURAL SYMBOLS

	Detail Number		Room Name
	BUILDING ELEVATION		Room Name
	Sheet Number		Actual Square Footage
	Detail Number		Room Name
	BUILDING SECTION		Room Number
	Sheet Number		Room Name
	Detail Number		Room Number
	WALL SECTION		Actual Square Footage
	Sheet Number		Room Name
	Detail Number		Room Number
	DETAIL REFERENCE		Program Required Square Footage
	Sheet Number		Actual Square Footage
	Elevation Number		NEW COLUMN GRID
	Sheet Number		EXISTING COLUMN GRID
	KEY NOTE		ELEVATION INDICATOR
	WALL TYPE		
	WINDOW OR BORROWED LIGHT		
	REVISION BUBBLE		
	Ceiling Type		
	CEILING TYPE		
	Ceiling Elevation		
	DOOR TAG		

SEE DRAWINGS OF RESPECTIVE DISCIPLINES FOR ADDITIONAL SYMBOLS

WALL AND DOOR SYMBOLS

	NEW WALLS; REFER TO DETAILS AND WALL TYPES
	NEW CMU WALL
	NEW CONCRETE WALL
	EXISTING WALL TO BE REMOVED
	NEW DOOR
	EXISTING DOOR AND WALL
	EXISTING DOOR TO BE REMOVED IN EXISTING WALL
	NEW OVERHEAD DOOR

**POLICE
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NO. DESCRIPTION DATE
1 USPS ADDITIONAL INFORMATION 4-7-17

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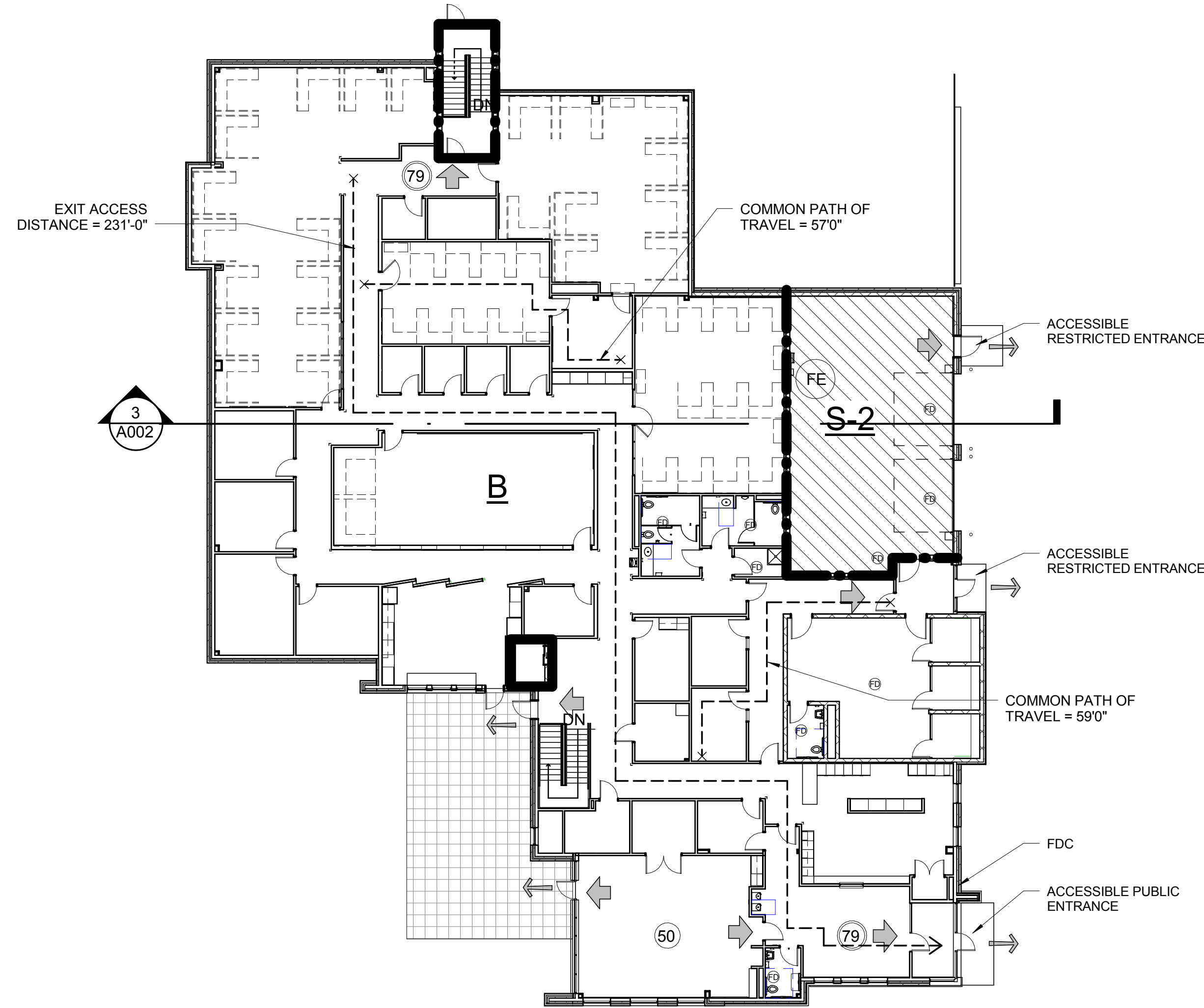
**CODE
CONFORMANCE
PLAN**

APPLICABLE CODES	
ZONING CODE	CITY OF MADISON ZONING CODE - 'TE' DISTRICT SUBCHAPTER 28F - REV 12/15/12
BUILDING CODE	Wisconsin SPS 362 / IBC 2009
ACCESSIBILITY CODE	ANSI A-117.1
FIRE SAFETY CODE	Wisconsin SPS 314 / NFPA 1
PLUMBING CODE	Wisconsin SPS 381-387 / IPC 2009
ELECTRICAL CODE	Wisconsin SPS 316 / NEC 2011 / NFPA 70
MECHANICAL CODE	Wisconsin SPS 345 / IMC 2009
ENERGY CODE	Wisconsin SPS 363 / IECC 2009
ELEVATOR CODE	Wisconsin SPS 318
BUILDING DATA	
OCC. CLASSIFICATION	B - BUSINESS; S-2 - STORAGE
CONSTRUCTION TYPE	III-B
SPRINKLERED	FULLY SPRINKLERED PER NFPA 13
SEISMIC CATEGORY	A
NUMBER OF STORIES	2
SQUARE FEET/ FLOOR	
LOWER LEVEL	15,527 SF
FIRST FLOOR	15,544 SF
BUILDING TOTAL SIZE	31,071 SF
CONSTRUCTION REQUIREMENTS	
EXT. WALLS-NON BEARING	0 HOURS - GREATER THAN 30 FEET FIRE SEPARATION DISTANCE
OPENINGS	GREATER THAN 30 FEET - NOT REQUIRED
STRUCTURAL FRAME	0 HOURS
BEARING WALLS - EXTERIOR	2 HOURS
BEARING WALLS - INTERIOR	0 HOURS
SHAFT ENCLOSURES	1 HOUR
FLOOR CONSTRUCTION	0 HOURS
ROOF CONSTRUCTION	0 HOURS
OCCUPANCY SEPARATION	1 HOUR BETWEEN B & S-2 OCCUPANCY
ALLOWABLE BUILDING HEIGHT	GROUP B - 3 STORIES; GROUP S2 - 3 STORIES
ALLOWABLE BUILDING AREA	GROUP B - 19,000 SF; GROUP S2 - 19,000 SF
MEANS OF EGRESS	
OCCUPANT LOAD	
LOWER LEVEL	100 OCCUPANTS
FIRST FLOOR	157 OCCUPANTS
TOTAL STAIR WIDTH REQ'D	39 INCHES - 0.3 / OCCUPANT
TOTAL STAIR WIDTH PROVIDED	46 INCHES
EXIT DOOR WIDTH REQ'D	51 INCHES - 0.2 / OCCUPANT
EXIT DOOR WIDTH PROVIDED	36" PER DOOR 96" TOTAL
COMMON PATH OF TRAVEL	OCCUPANCY B & S - 100' MAX
EXIT ACCESS DISTANCE	(S - 400 FEET ; B - 300 FEET) WITH SPRINKLER
DEAD END CORRIDOR	S & B - 50 FEET MAX. WITH SPRINKLER;
COMMON PATH OF EGRESS TRAVEL	S & B - 100 FEET MAX.
ZONING	
CLASSIFICATION	TR-C1 TRADITIONAL RESIDENTIAL - CONSENT DISTRICT 1
PERMITTED USE	PUBLIC SAFETY FACILITIES
MINIMUM LOT SIZE	6,000 SQFT - 65% MAX LOT COVERAGE
MAXIMUM HEIGHT	55 FEET - 2 STORIES
SETBACKS REQUIRED	
FRONT YARD	20 FEET
SIDE YARD	10 FEET
REAR YARD	GREATER OF BUILDING HEIGHT OR 35 FEET
PARKING	
# OF SPACES REQ'D	NONE
# OF SPACES PROVIDED	88 SURFACE / 21 BELOW GRADE - 109 TOTAL

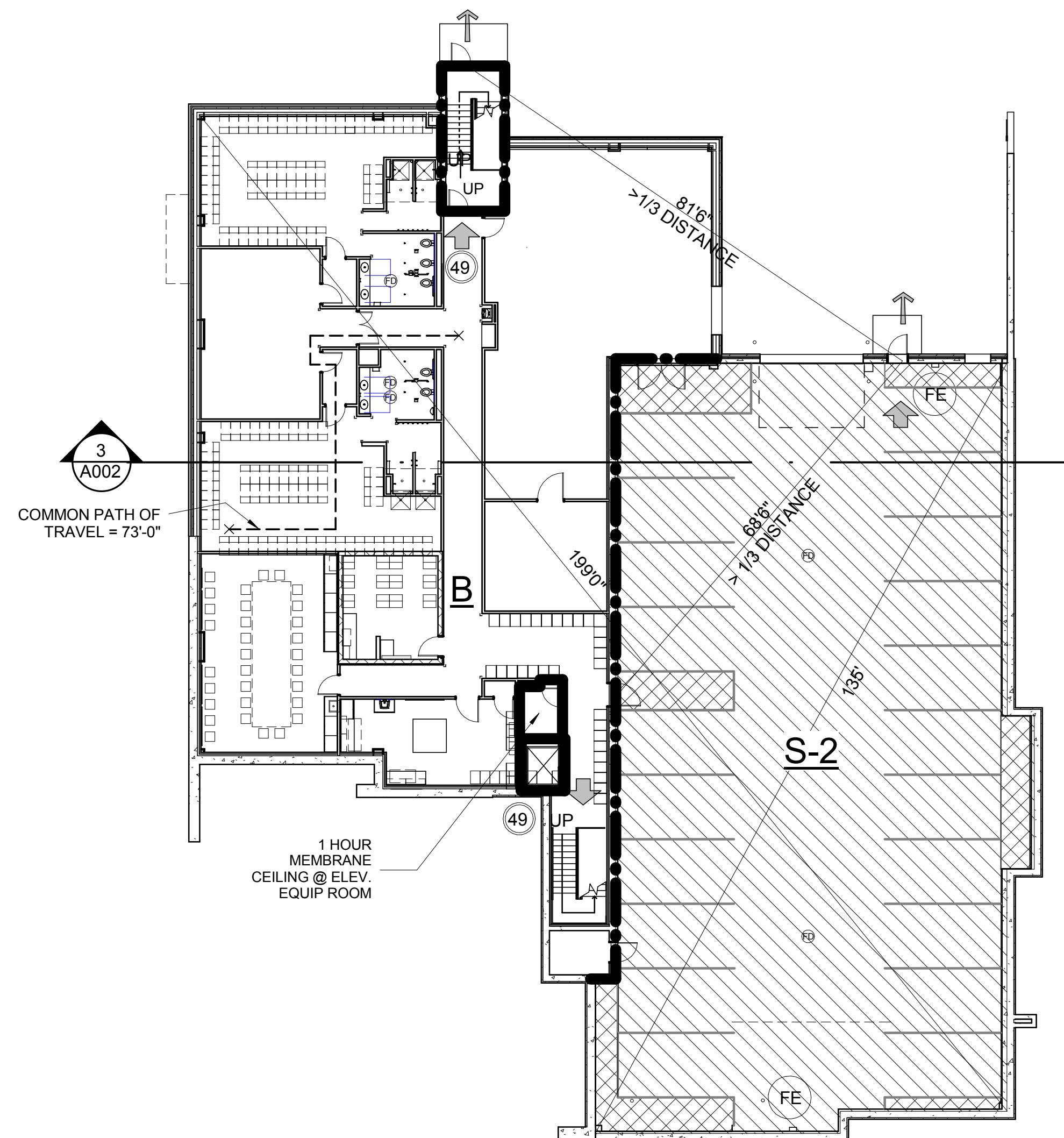
GRAPHIC SYMBOLS	
	PATH OF EGRESS
	EXIT ARROW
	EXIT TO GRADE
	EXIT CAPACITY AT EGRESS COMPONENT
	TOTAL OCCUPANT LOAD FOR AREA
	FIRE EXTINGUISHER ON WALL BRACKET
	1 HOUR FIRE PARTITION
SEE ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING LOCATIONS	

EXTERIOR BUILDING SYSTEMS	R VALUES	SYSTEM U-VALUE
HOOK AND STRAP WALL CONSTRUCTION 1	RIGID = R15 SPRAY FOAM = R 3.6	.040
HOOK AND STRAP WALL CONSTRUCTION 2	RIGID = R15	.048
BRICK WALL CONSTRUCTION TYPE 1	RIGID = R15 SPRAY FOAM = R 3.6	.043
BRICK WALL CONSTRUCTION TYPE 2	RIGID = R15	.053
STONE WALL CONSTRUCTION TYPE 1	RIGID = R15 SPRAY FOAM = R 3.6	.043
INTERIOR WALL CONSTRUCTION @ FOUNDATION	SPRAY FOAM = R 13	.064
BELOW GRADE WALL CONSTRUCTION	RIGID = R10	.043
TYPICAL ROOF CONSTRUCTION	RIGID = R22.5	.079
ALUMINUM WINDOW SYSTEM	NA	.36
ALUMINUM STOREFRONT SYSTEM	NA	.3
METAL INSULATED OVERHEAD DOOR	R=17.5	.057

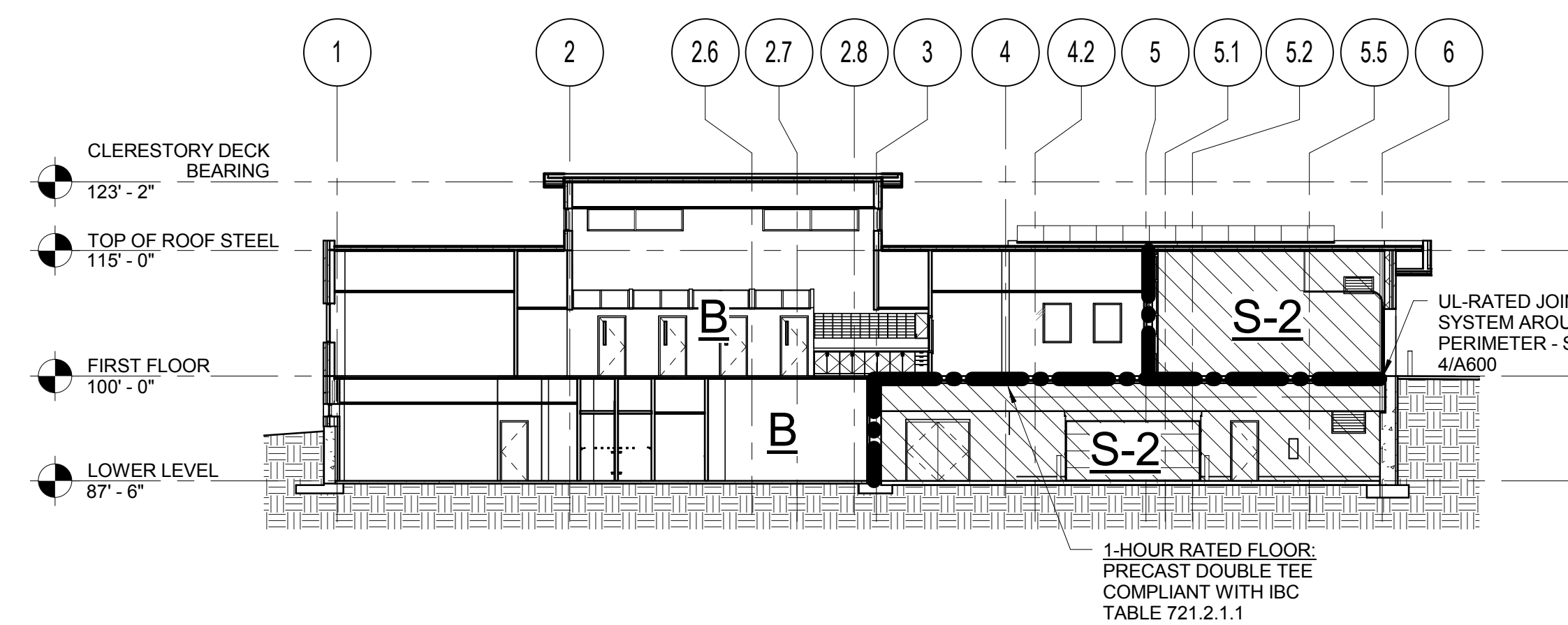
OCCUPANCY SCHEDULE					
NUMBER	NAME	FUNCTION	OCCUPANT / SF	AREA	OCCUPANT LOAD
LOWER LEVEL					
B008B	M SHOWER	(none)		96 SF	
B012B	W SHOWER	(none)		94 SF	
B010	CORR.	(none)		399 SF	
ST-1	STAIR 1	(none)		292 SF	
ST-2	STAIR 2	(none)		189 SF	
B008A	M TOILET	(none)		117 SF	
B012A	W TOILET	(none)		130 SF	
B004A	LCKR	(none)		12 SF	
B012	W LOCKER	LOCKER ROOMS	50	602 SF	13
B011	FITNESS	EXERCISE ROOMS	50	518 SF	11
B008	M LOCKER	LOCKER ROOMS	50	644 SF	13
B006	ARMORY	BUSINESS AREAS	100	241 SF	3
B004	PROP.	BUSINESS AREAS	100	322 SF	4
B005	INCIDENT ROOM	BUSINESS AREAS	100	647 SF	7
B002	STAFF ENTRY	BUSINESS AREAS	100	316 SF	4
B001	PARKING	PARKING GARAGES	200	7182 SF	36
B003	ELEV. EQ.	ACCESSORY	300	53 SF	1
B001A	STOR.	ACCESSORY	300	63 SF	1
B007	ELECT	ACCESSORY	300	322 SF	2
B009	MECH/SWGEAR	ACCESSORY	300	1494 SF	5
					100
FIRST FLOOR					
100	ENTRY	(none)		95 SF	
135D	INTAKE TOILET	(none)		56 SF	
113	WOMENS	(none)		136 SF	
101A	TOILET	(none)		51 SF	
ST-1	STAIR 1	(none)		188 SF	
121	CORR.	(none)		446 SF	
175	ELEV.	(none)		43 SF	
133	VEST	(none)		91 SF	
134	CORR.	(none)		148 SF	
112	MENS	(none)		112 SF	
111	JAN.	(none)		41 SF	
105	CORR.	(none)		238 SF	
136	CORR.	(none)		144 SF	
109	CORR.	(none)		64 SF	
117	CORR.	(none)		288 SF	
129	CORR.	(none)		291 SF	
130	CORR.	(none)		152 SF	
124	CORR.	(none)		132 SF	
103	COMMUNITY ROOM	ASSEMBLY - UNCONCENTRATED	15	738 SF	50
125	OUTREACH	BUSINESS AREAS	100	980 SF	10
123	DETECT.	BUSINESS AREAS	100	1524 SF	16
122	LT	BUSINESS AREAS	100	155 SF	2
121	LT	BUSINESS AREAS	100	157 SF	2
120	CAPT.	BUSINESS AREAS	100	228 SF	3
118	LT	BUSINESS AREAS	100	163 SF	2
115	BRIEF	BUSINESS AREAS	100	825 SF	9
131	COMM.	BUSINESS AREAS	100	845 SF	9
104	INT	BUSINESS AREAS	100	97 SF	1
107	STORAGE	BUSINESS AREAS	100	90 SF	1
108	INT	BUSINESS AREAS	100	130 SF	2
137	INT	BUSINESS AREAS	100	110 SF	2
138	INT	BUSINESS AREAS	100	115 SF	2
102	PRT	BUSINESS AREAS	100	505 SF	6
101	LOBBY	BUSINESS AREAS	100	413 SF	5
129C	PATROL	BUSINESS AREAS	100	53 SF	1
116	BREAK ROOM	BUSINESS AREAS	100	382 SF	4
135	INTAKE	BUSINESS AREAS	100	496 SF	5
135C	HOLDING 3	BUSINESS AREAS	100	63 SF	1
135B	HOLDING 2	BUSINESS AREAS	100	62 SF	1
135A	HOLDING 1	BUSINESS AREAS	100	62 SF	1
125A	CONF.	BUSINESS AREAS	100	169 SF	2
127	SGT.	BUSINESS AREAS	100	493 SF	5
129B	PATROL	BUSINESS AREAS	100	53 SF	1
129A	PATROL	BUSINESS AREAS	100	53 SF	1
129D	PATROL	BUSINESS AREAS	100	52 SF	1
132	SALLYPORT	PARKING GARAGES	200	1271 SF	7
114	ELECT.	ACCESSORY	300	99 SF	1
106	MDF	ACCESSORY	300	89 SF	1
103A	STORAGE	ACCESSORY	300	95 SF	1
126	ELEC.	ACCESSORY	300	51 SF	1
110	CORR.	ACCESSORY	300	181 SF	1
					157



1 FIRST FLOOR CODE CONFORMANCE
SCALE: 1/16" = 1'-0"



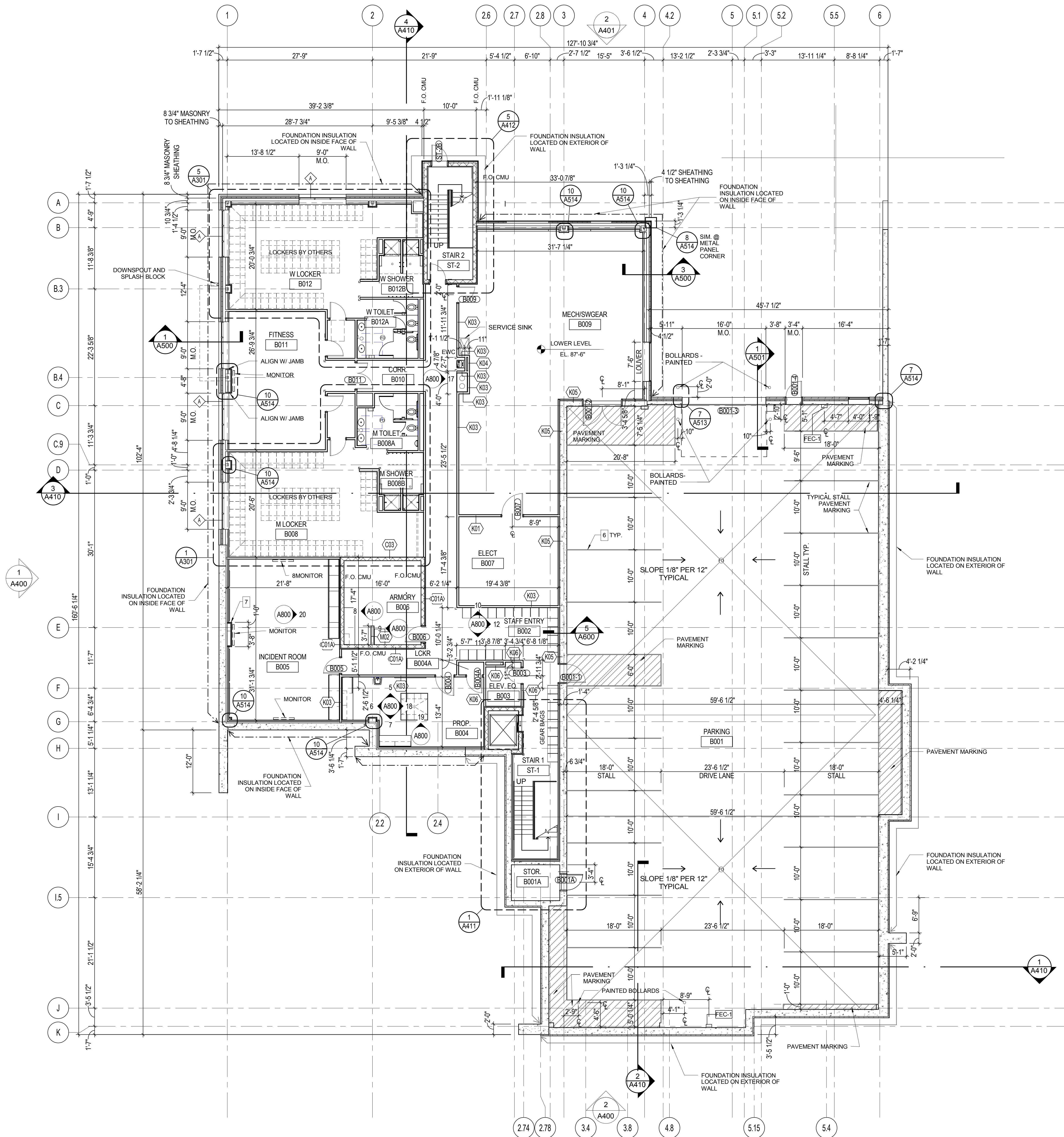
2 LOWER LEVEL CODE CONFORMANCE
SCALE: 1/16" = 1'-0"



3 CODE CONFORMANCE SECTION
SCALE: 1/16" = 1'-0"

GENERAL NOTES - FLOOR PLANS

1. ALL EXTERIOR DIMENSIONS ARE TO FACE OF EXTERIOR WALL SHEATHING, U.N.O.
2. ALL DIMENSIONS OF INTERIOR WALLS ARE TO FACE OF FINISHED GYPSUM BOARD, U.N.O.
3. VERIFY ALL EXTERIOR ROUGH OPENING DIMENSIONS WITH PRODUCT. INTERIOR DOOR JAMBS ARE 4" DIMENSIONS FROM FACE OF JAMB TO ADJACENT WALL UNLESS NOTED OTHERWISE.
4. REFER TO FINISH PLANS FOR MONITOR, WHITEBOARD, TACK BOARD, CHALKBOARD AND INTERIOR SIGNAGE LOCATIONS.
5. REFER TO A711 FOR FURNITURE (N.I.C.) BY OWNER. SEE ELECTRICAL & TECHNOLOGY PLANS FOR COORDINATION OF REQUIRED CONNECTIONS.



**POLICE
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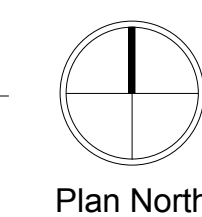
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LOWER LEVEL PLAN

1 LOWER LEVEL PLAN
SCALE: 1/8" = 1'-0"



GENERAL NOTES - FLOOR PLANS

1. ALL EXTERIOR DIMENSIONS ARE TO FACE OF EXTERIOR WALL SHEATHING, U.N.O.
2. ALL DIMENSIONS OF INTERIOR WALLS ARE TO FACE OF FINISHED GYPSUM BOARD, U.N.O.
3. VERIFY ALL EXTERIOR ROUGH OPENING DIMENSIONS WITH PRODUCT.
4. INTERIOR DOOR JAMBS ARE 4" DIMENSIONS FROM FACE OF JAMB TO ADJACENT WALL UNLESS NOTED OTHERWISE.
5. REFER TO FINISH PLANS FOR MONITOR, WHITEBOARD, TACK BOARD, CHALKBOARD AND INTERIOR SIGNAGE LOCATIONS.
6. REFER TO A711 FOR FURNITURE (N.I.C.) BY OWNER. SEE ELECTRICAL & TECHNOLOGY PLANS FOR COORDINATION OF REQUIRED CONNECTIONS.

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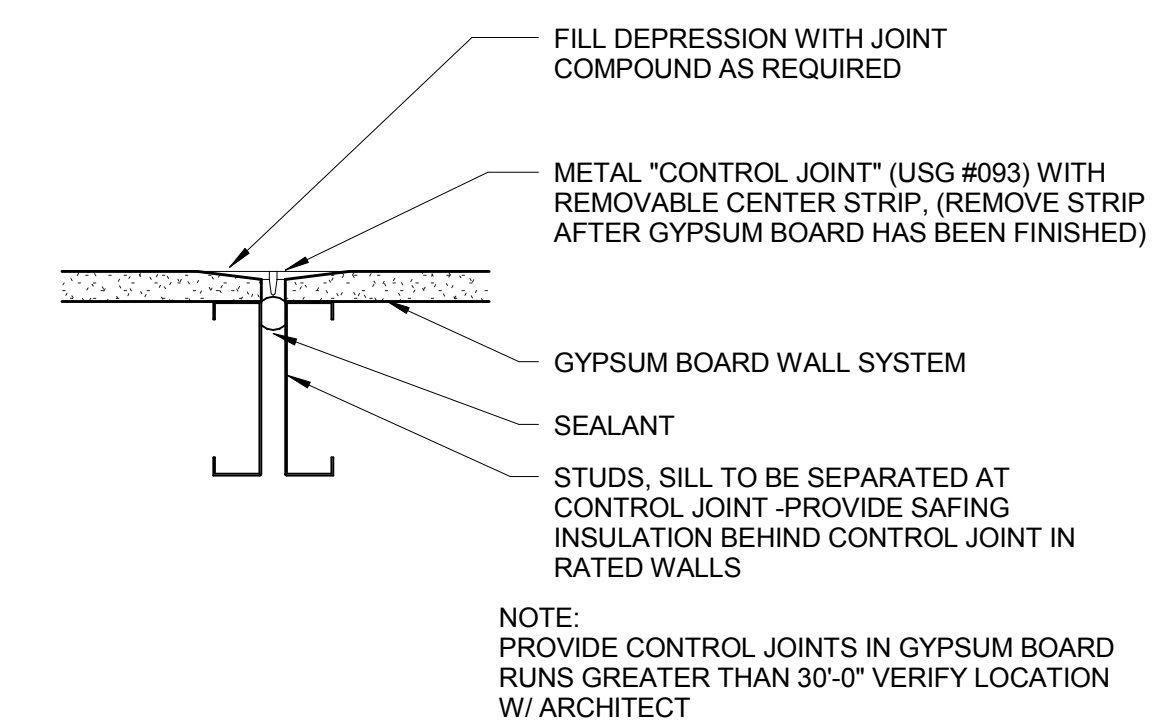
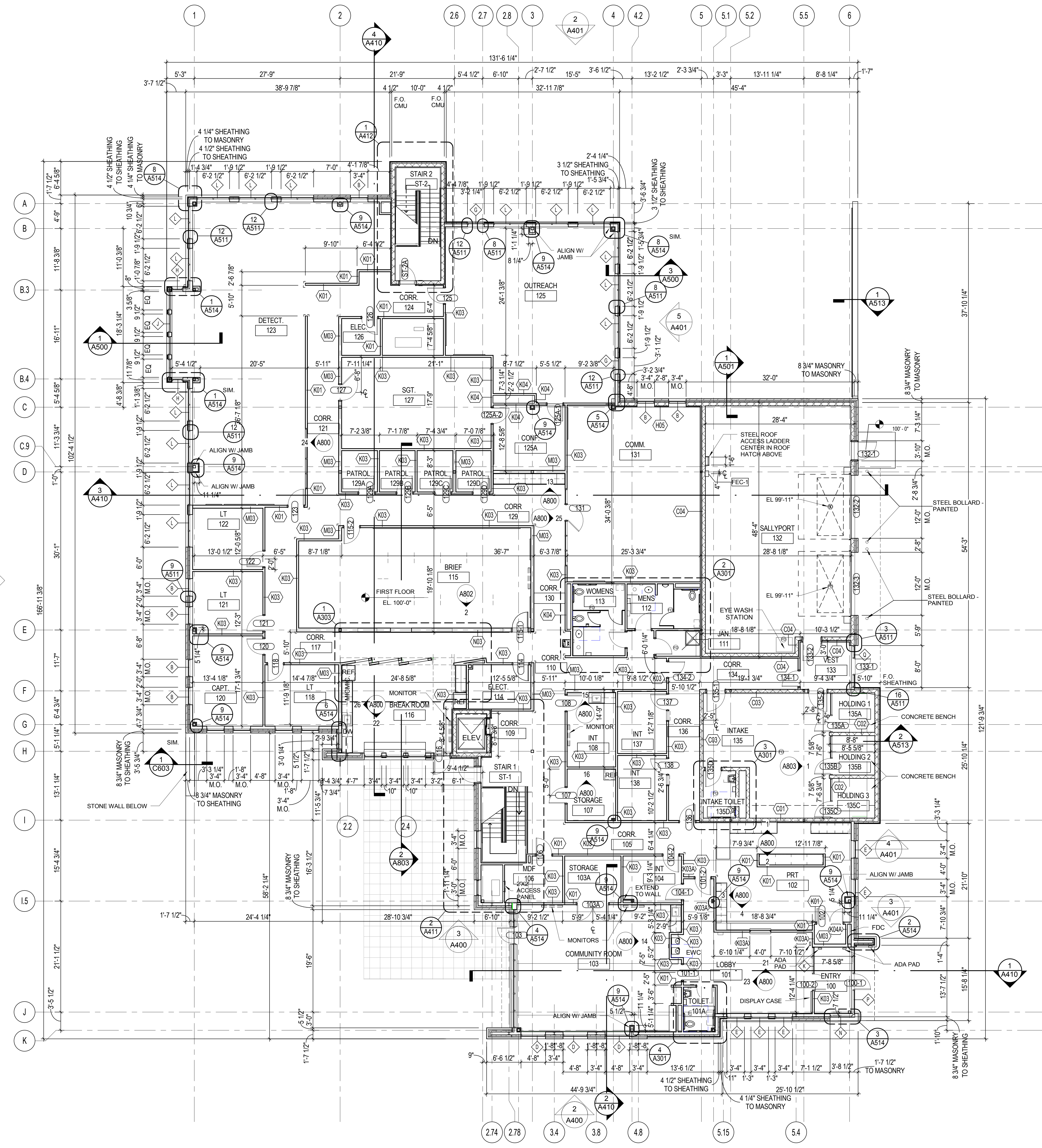
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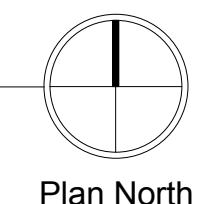
FIRST FLOOR PLAN

A101



2 GYPSUM BOARD CONTROL JOINT DETAIL
SCALE: 3" = 1'-0"

1 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



GENERAL NOTES - CLERESTORY PLAN

1. ALL EXTERIOR DIMENSIONS ARE TO FACE OF EXTERIOR WALL SHEATHING, U.N.O.
2. ALL DIMENSIONS OF INTERIOR WALLS ARE TO FACE OF FINISHED GYPSUM BOARD, U.N.O.
3. REFER TO ROOF PLAN FOR ROOF SLOPE, DRAIN, AND SCUPPER CONSTRUCTION, DIMENSIONS, DETAIL CALLOUTS AND ADDITIONAL NOTES

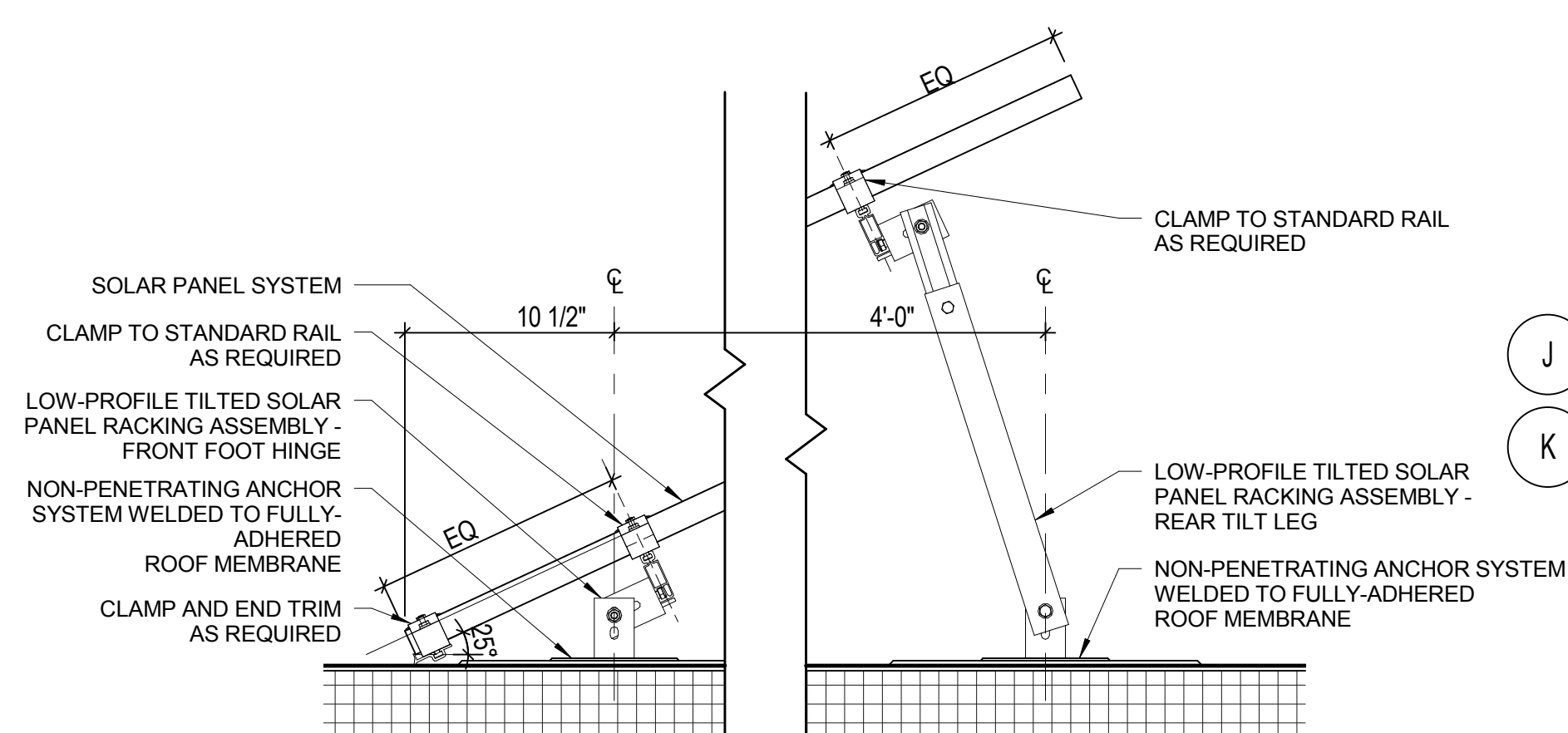
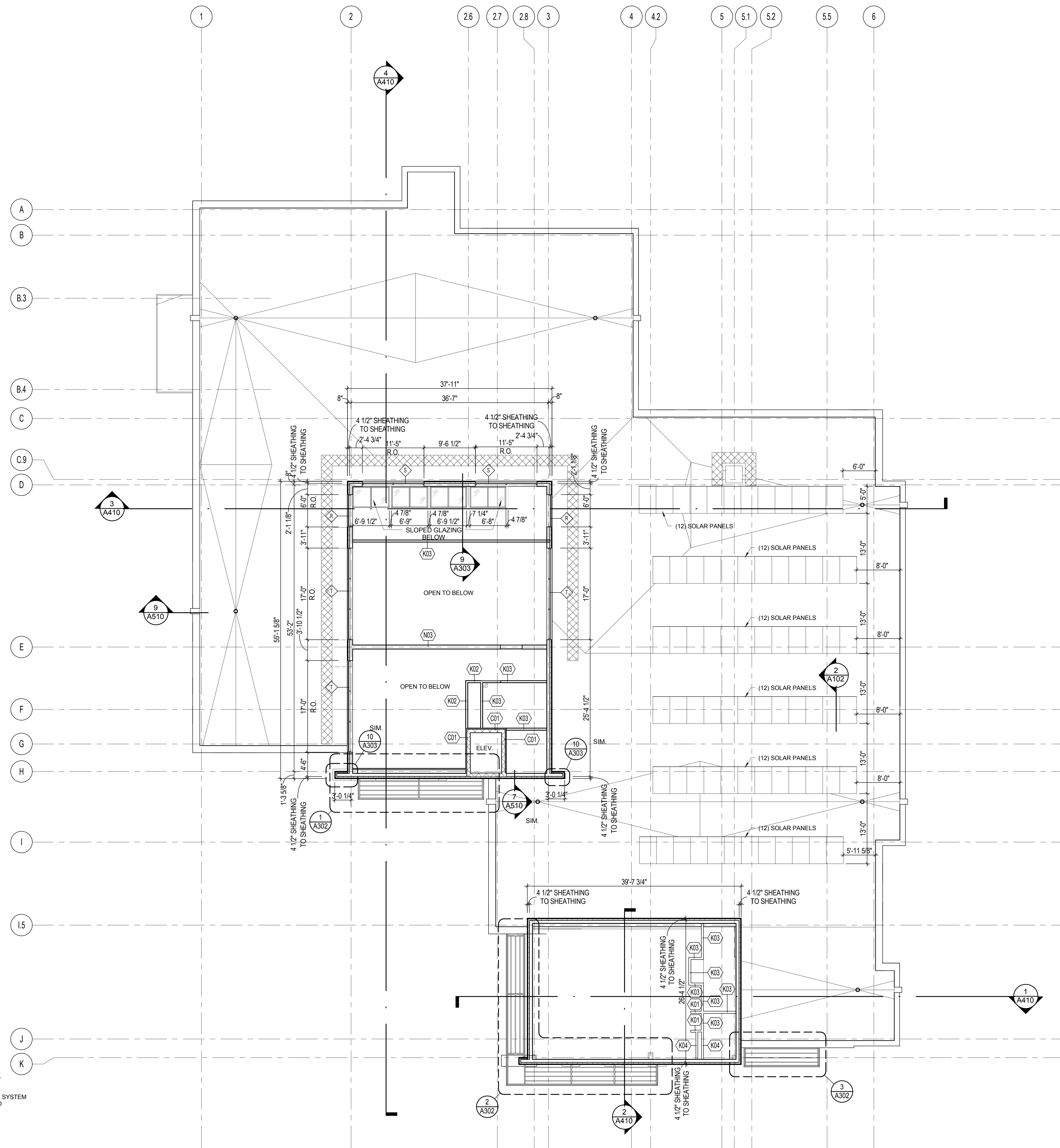
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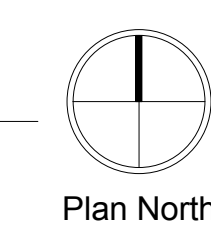


2 SOLAR PANEL MOUNTING DETAIL
SCALE: 1 1/2" = 1'-0"

1 CLERESTORY PLAN
SCALE: 1/8" = 1'-0"

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CLERESTORY PLAN

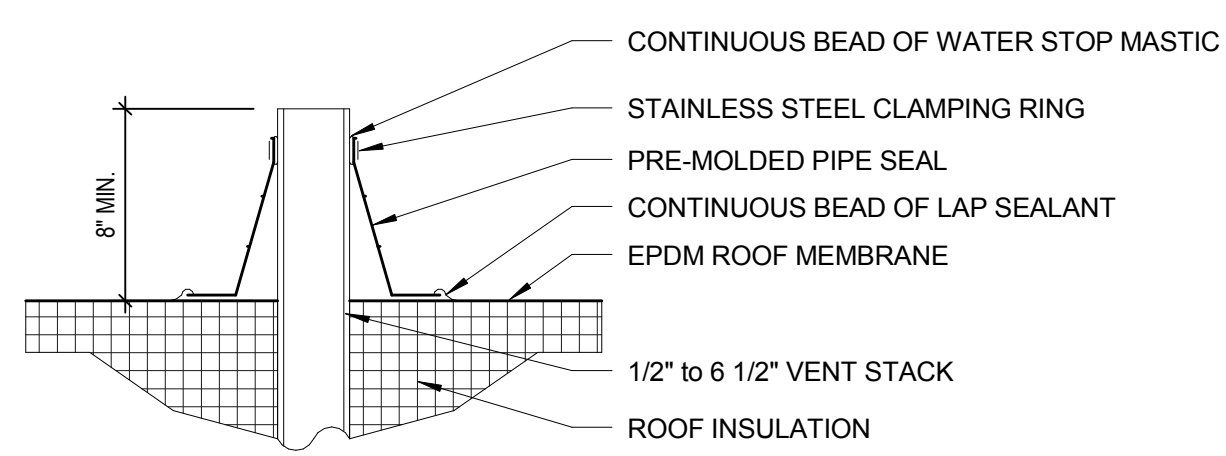


A102

GENERAL NOTES - ROOF PLAN

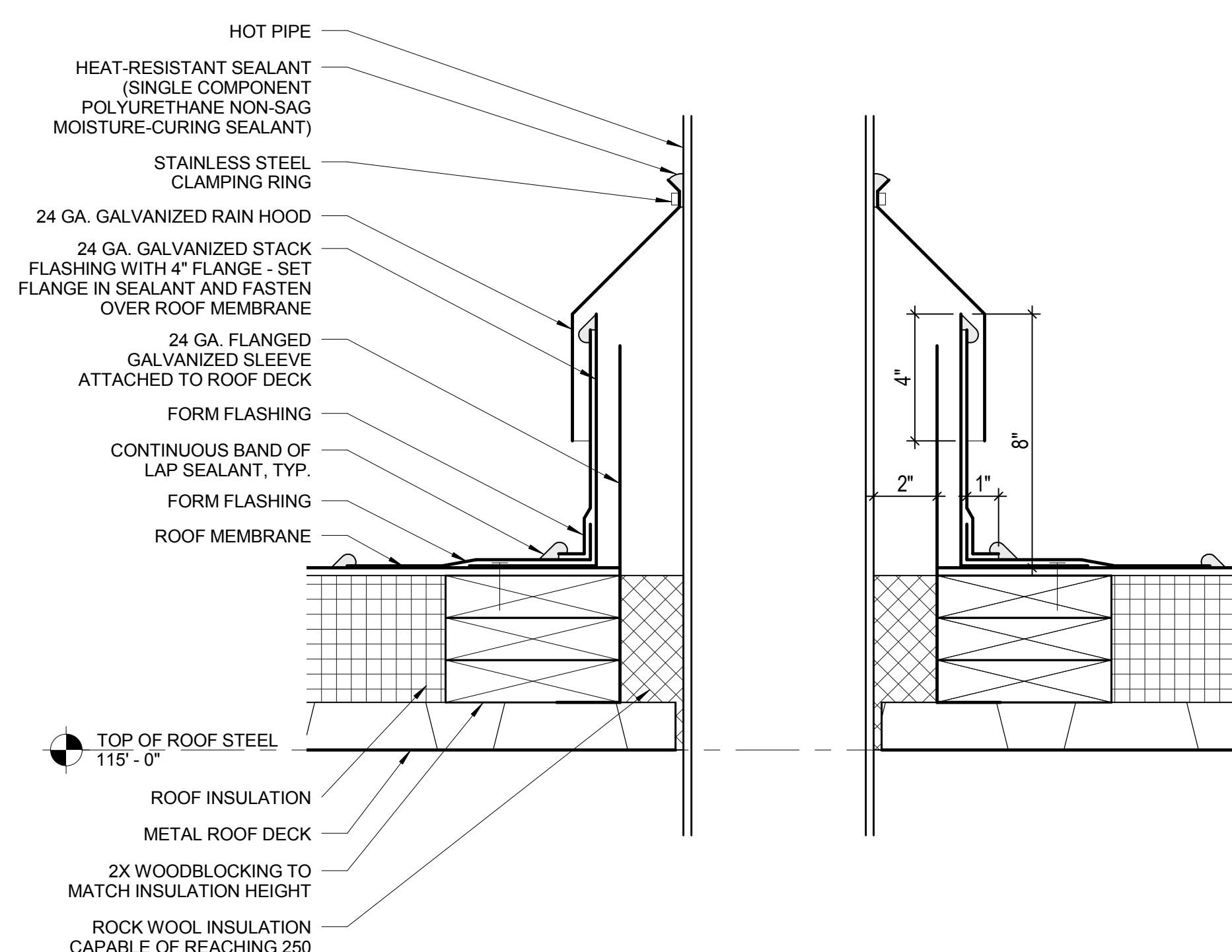
- SOLAR PANELS NOT SHOWN FOR CLARITY. REFER TO CLERESTORY PLAN FOR LOCATIONS.
- ROOF PENETRATIONS SHOWN FOR REFERENCE - SEE MEP DRAWINGS FOR ADDITIONAL INFORMATION.

THIS DETAIL BASED UPON DSF DETAIL A2.4 AND "CARLISLE" DESIGN DETAIL PS-9-C. PROVIDE AS SHOWN OR AS REQUIRED BY THE ACTUAL ROOFING MANUFACTURER TO ACHIEVE WARRANTY



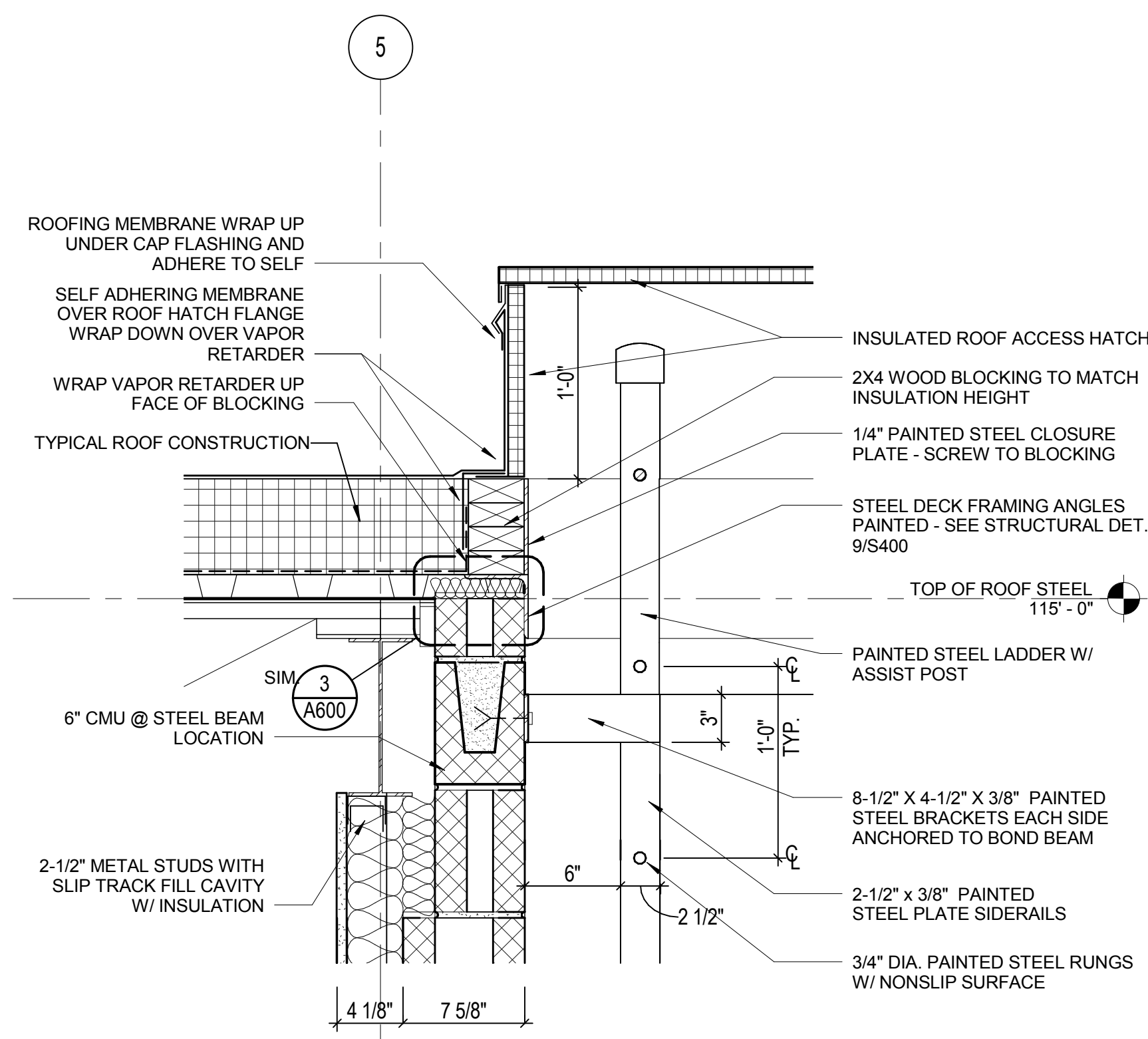
2 ROOF DETAIL - TYPICAL VENT STACK

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



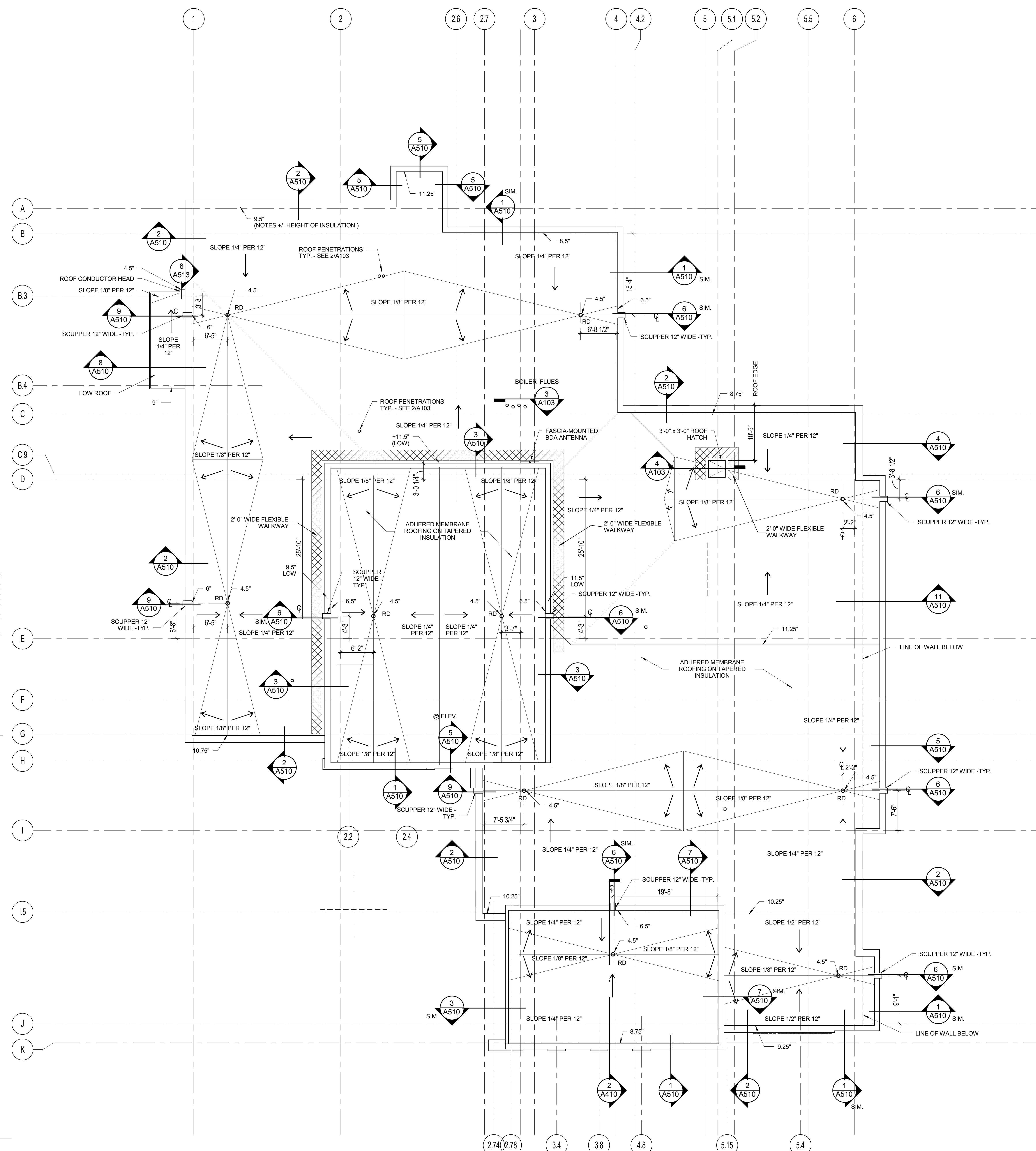
3 HOT TEMPERATURE PIPE DETAIL

SCALE: 3" = 1'-0"



4 ROOF HATCH DETAIL

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



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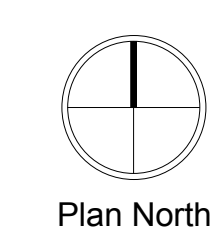
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ROOF PLAN

1 ROOF PLAN

SCALE: 1/8" = 1'-0"



Plan North

A103

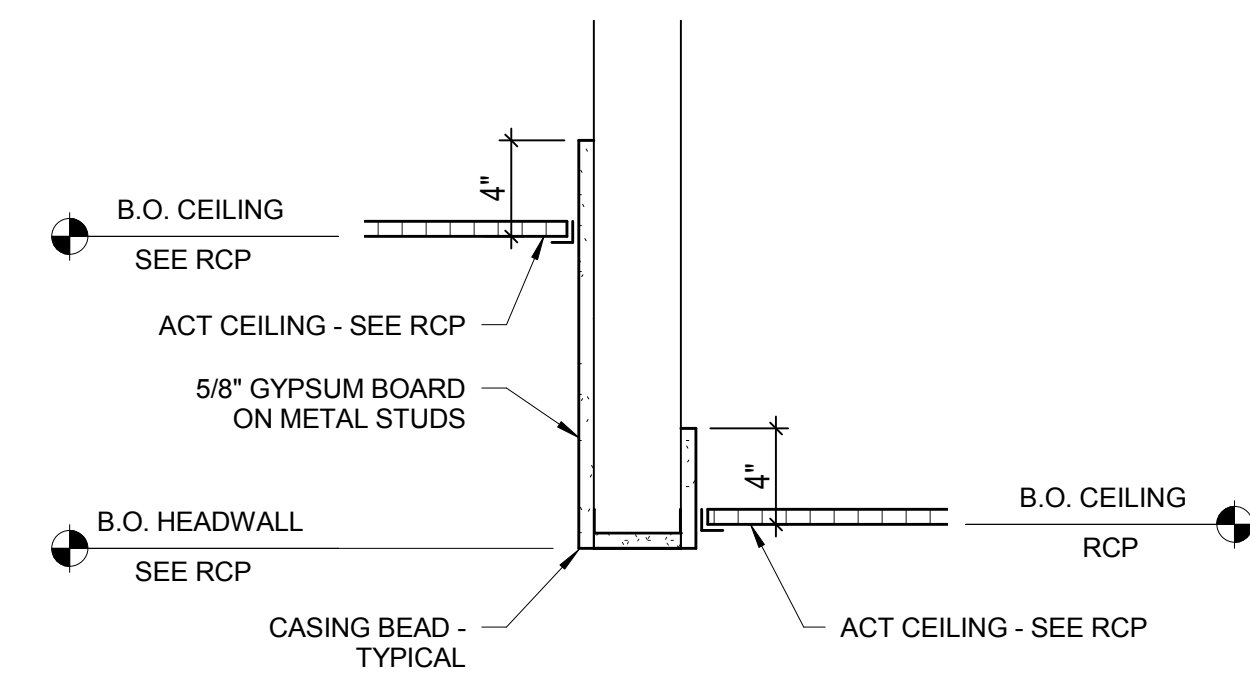
**POLICE
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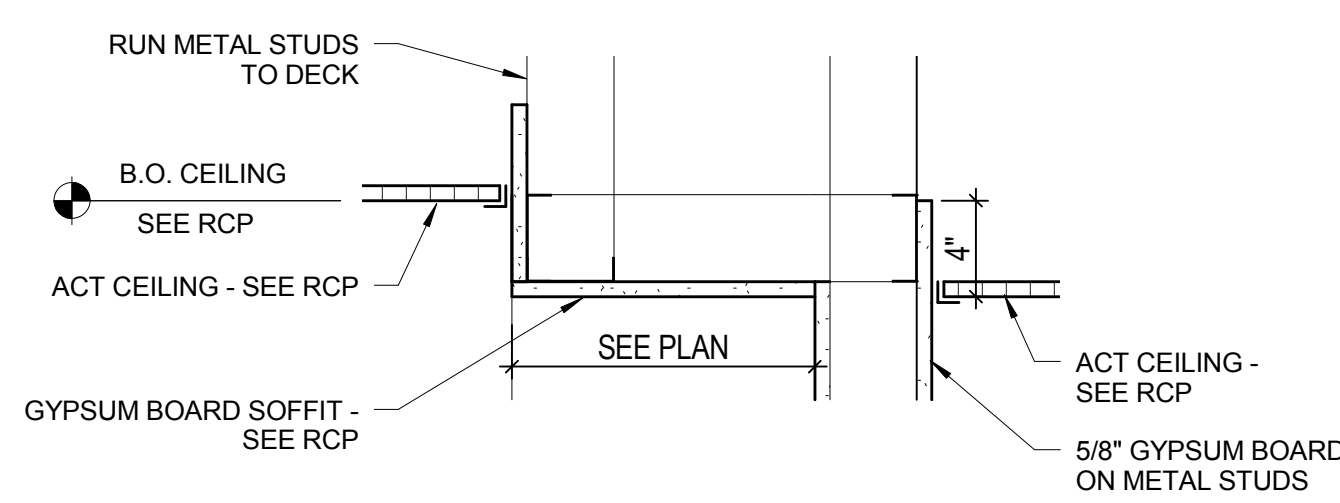
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4 BULKHEAD DETAIL
SCALE: 1 1/2" = 1'-0"



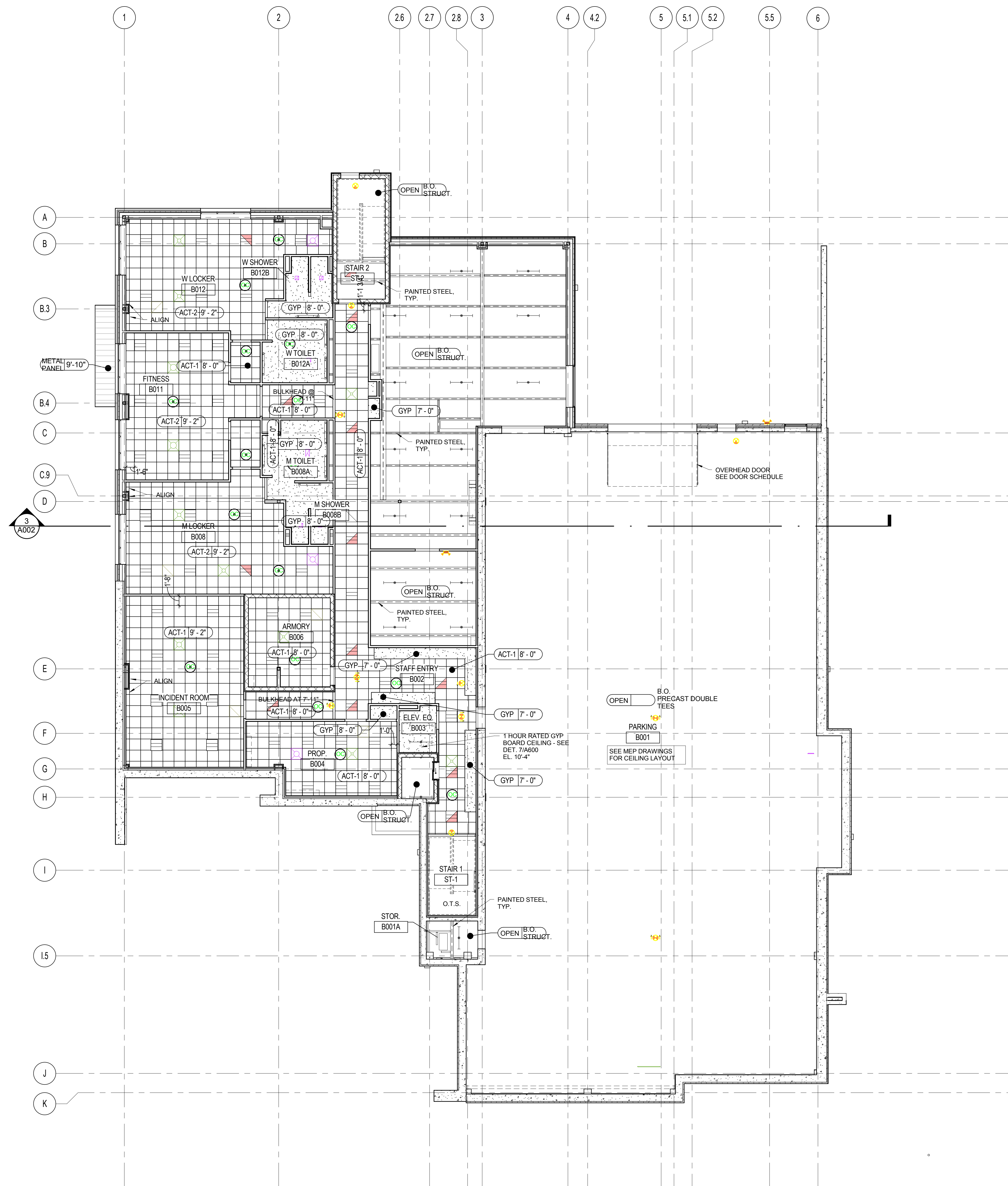
5 GYP. SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"

GENERAL NOTES - REFLECTED CEILING PLANS

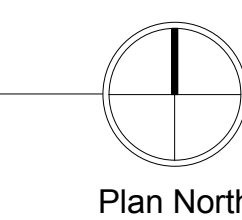
- LIGHTING SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL DRAWINGS FOR COMPLETE LIST AND LOCATIONS OF ELECTRICAL FIXTURES.
- REFER TO ELECTRICAL LIGHTING PLANS FOR LOCATIONS OF EXIT LIGHTING.
- REFER TO MECHANICAL DRAWINGS FOR COORDINATION OF GRILLES, DIFFUSERS, ETC.
- CEILING IS CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.

GRAPHIC SYMBOLS

	ACOUSTICAL CEILING TILES
	ACT-1 2x2
	ACT-2 2x2 VINYL
	PAINTED GYP BOARD CEILING
	EXPOSED PAINTED STRUCTURE
	CEILING MATERIAL AND TYPE
	CEILING HEIGHT AFF
	SUPPLY AIR LOUVER
	RETURN AIR LOUVER
	LINEAR SLOT DIFFUSER
	ACCESS PANEL
	PENDANT LED LUMINAIRE - REFER TO ELECTRICAL DRAWINGS
	WALL MOUNTED LINEAR LED - REFER TO ELECTRICAL DRAWINGS
	LED STRIP LIGHT - REFER TO ELECTRICAL DRAWINGS
	RECESSED 2x2 - REFER TO ELECTRICAL DRAWINGS
	RECESSED CEILING LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
	CEILING MOUNTED EXIT LIGHT
	OCCUPANCY SENSOR
	DAYLIGHT SENSOR



1 LOWER LEVEL REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"



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**LOWER LEVEL
REFLECTED CEILING
PLAN**

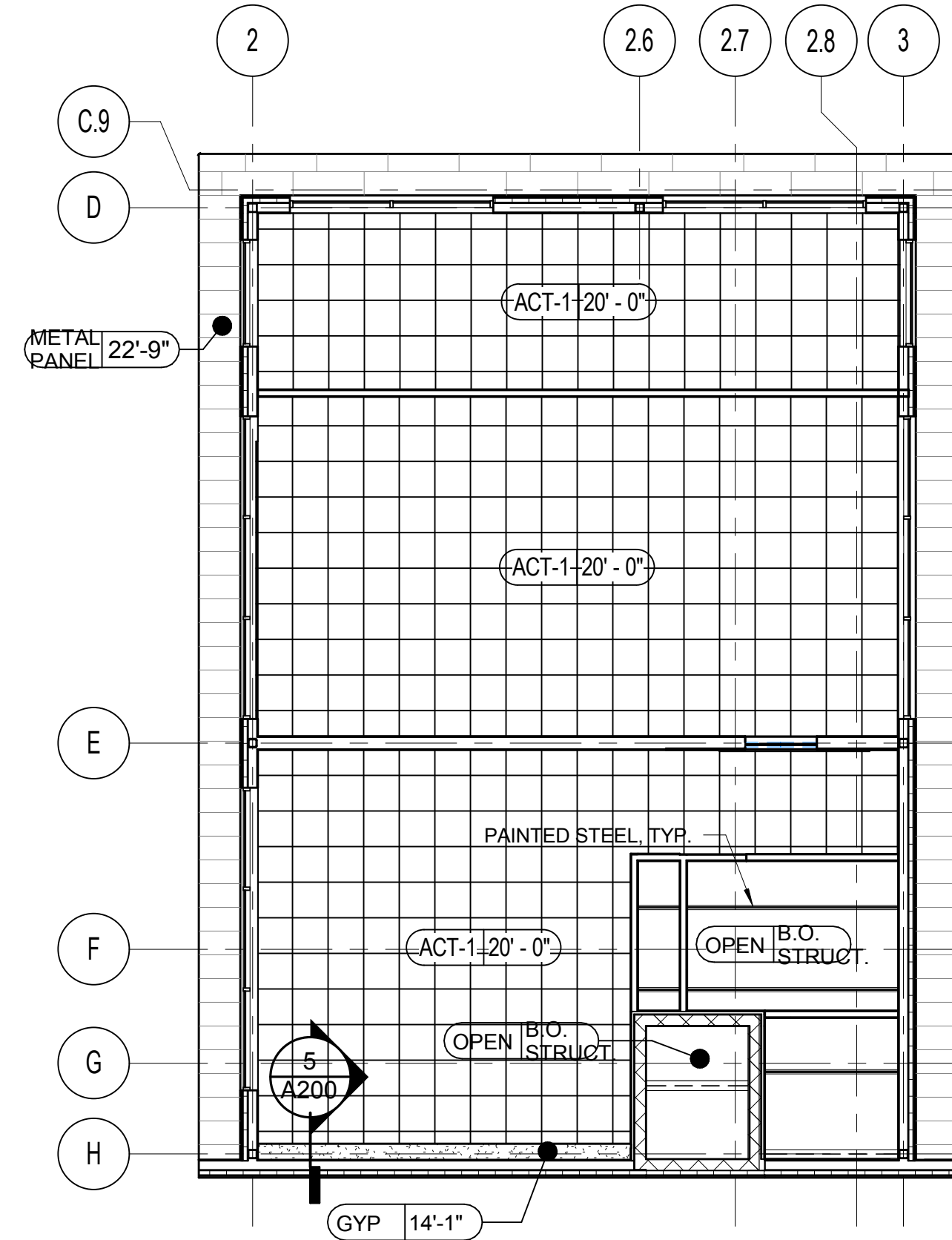
**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
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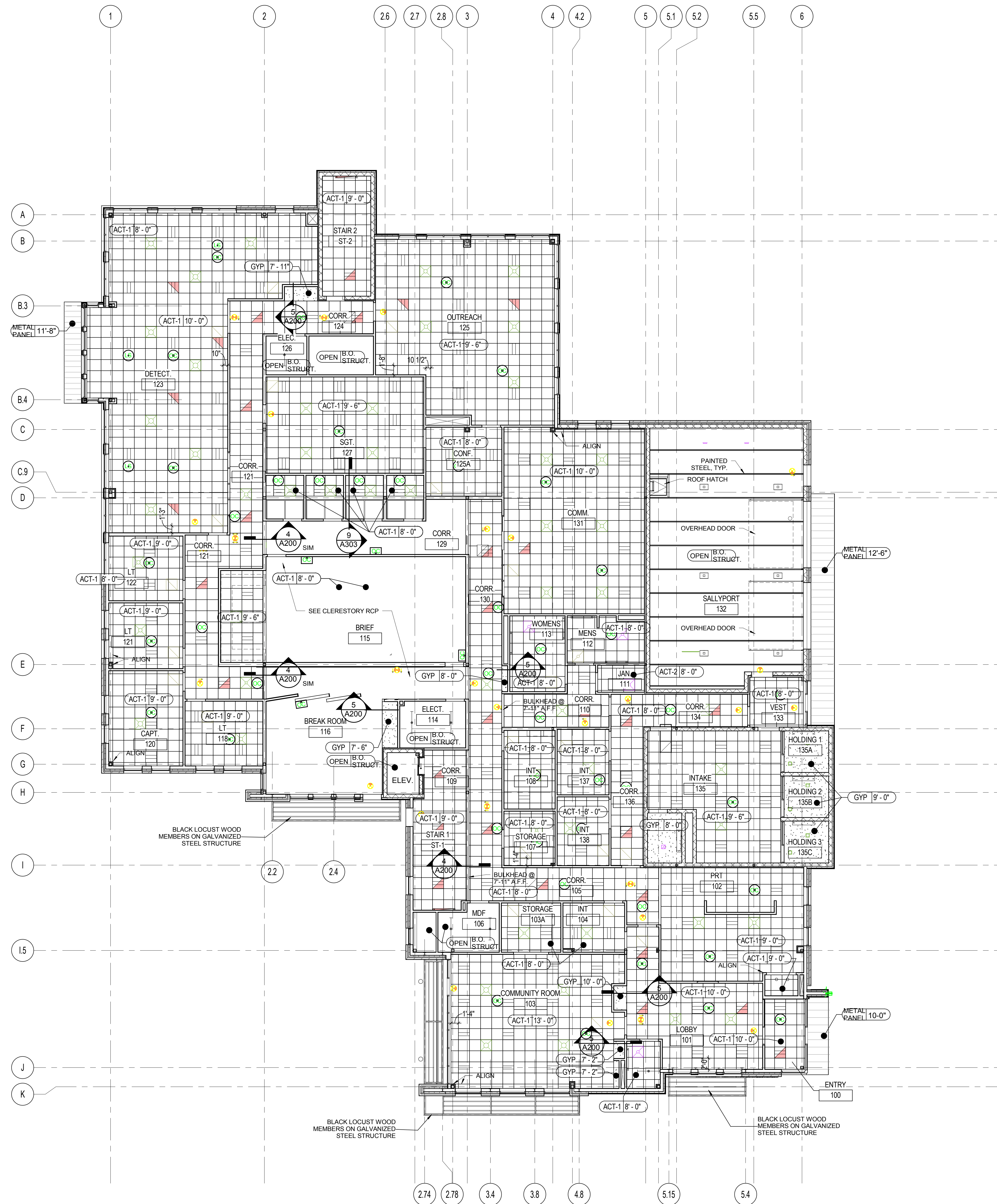
2 CLERESTORY REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES - REFLECTED CEILING PLANS

- LIGHTING SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL DRAWINGS FOR COMPLETE LIST AND LOCATIONS OF ELECTRICAL FIXTURES.
- REFER TO ELECTRICAL LIGHTING PLANS FOR LOCATIONS OF EXIT LIGHTING.
- REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF GRILLES, DIFFUSERS, ETC.
- CEILING IS CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.

GRAPHIC SYMBOLS

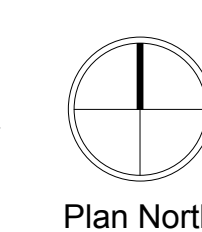
	ACOUSTICAL CEILING TILES
	ACT-1 2x2
	ACT-2 2x2 VINYL
	PAINTED GYP BOARD CEILING
	EXPOSED PAINTED STRUCTURE
	CEILING MATERIAL AND TYPE
	CEILING HEIGHT AFF
	SUPPLY AIR LOUVER
	RETURN AIR LOUVER
	LINEAR SLOT DIFFUSER
	ACCESS PANEL
	PENDANT LED LUMINAIRE - REFER TO ELECTRICAL DRAWINGS
	WALL MOUNTED LINEAR LED - REFER TO ELECTRICAL DRAWINGS
	LED STRIP LIGHT - REFER TO ELECTRICAL DRAWINGS
	RECESSED 2x2 - REFER TO ELECTRICAL DRAWINGS
	RECESSED CEILING LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
	CEILING MOUNTED EXIT LIGHT
	OCCUPANCY SENSOR
	DAYLIGHT SENSOR



1 FIRST FLOOR REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

DRAWN BY MMZ
CHECKED BY SK

**FIRST FLOOR
REFLECTED CEILING
PLAN**



Plan North

A201

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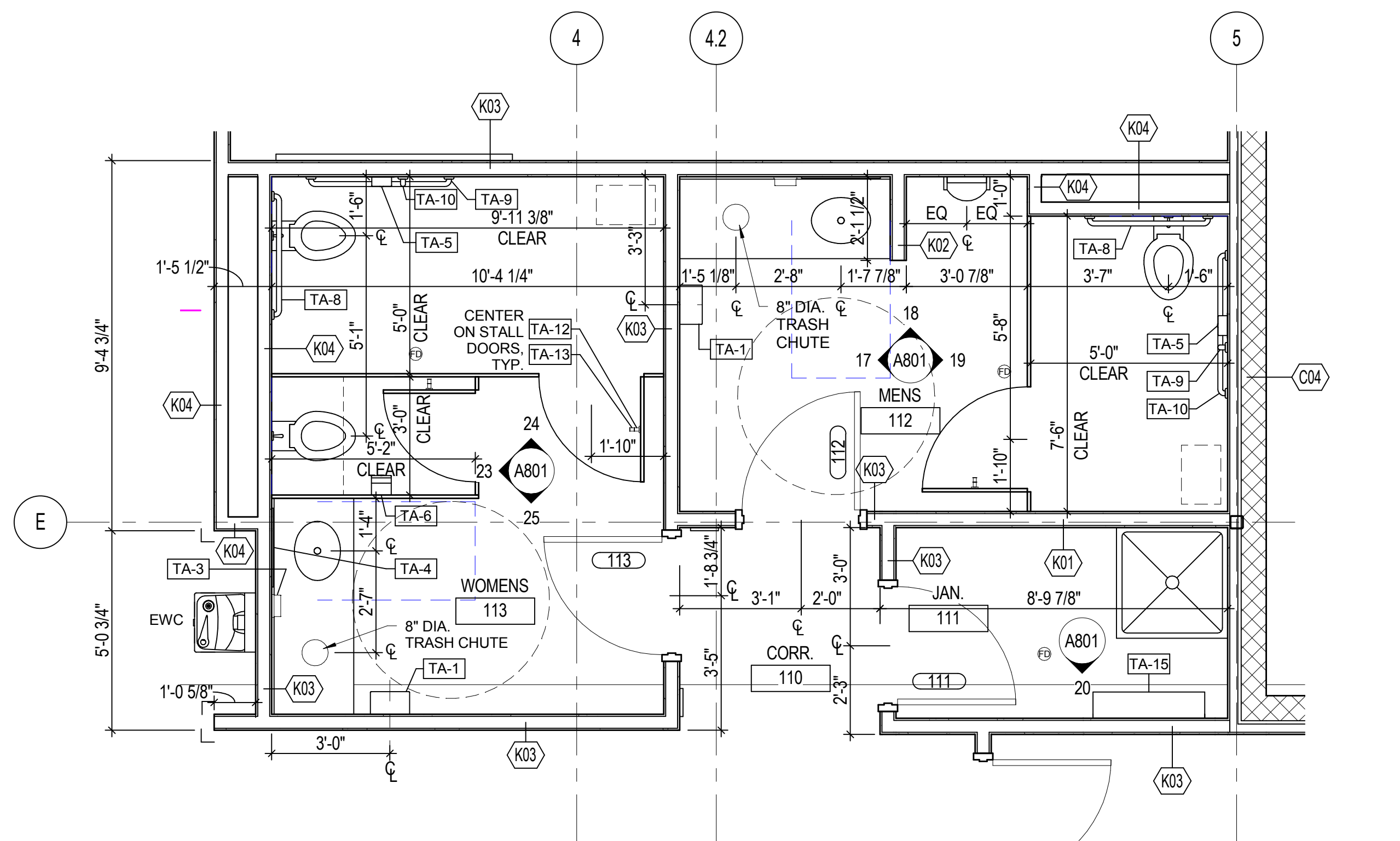
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ENLARGED PLANS

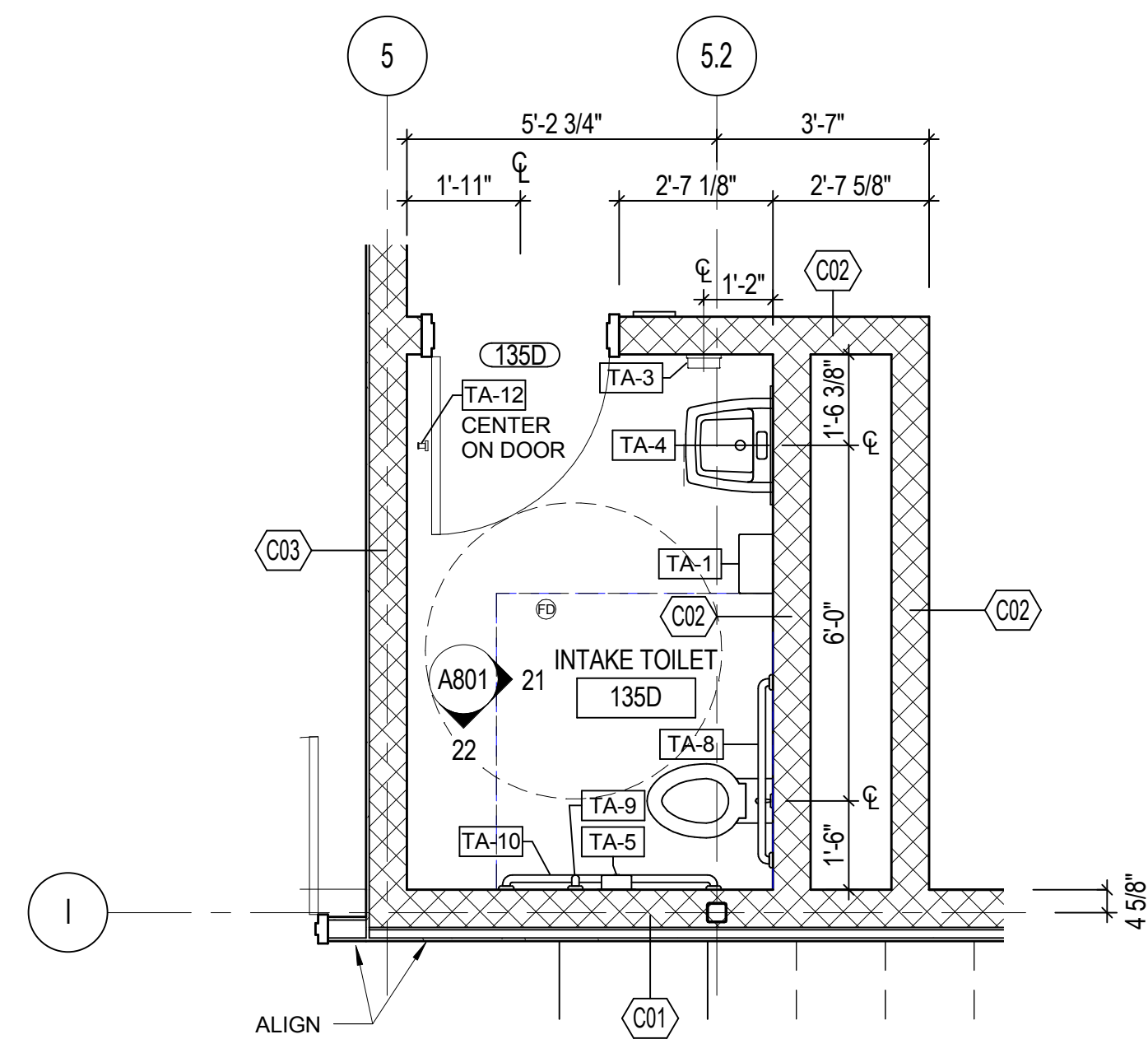
A301



2 STAFF RESTROOM
SCALE: 3/8" = 1'-0"



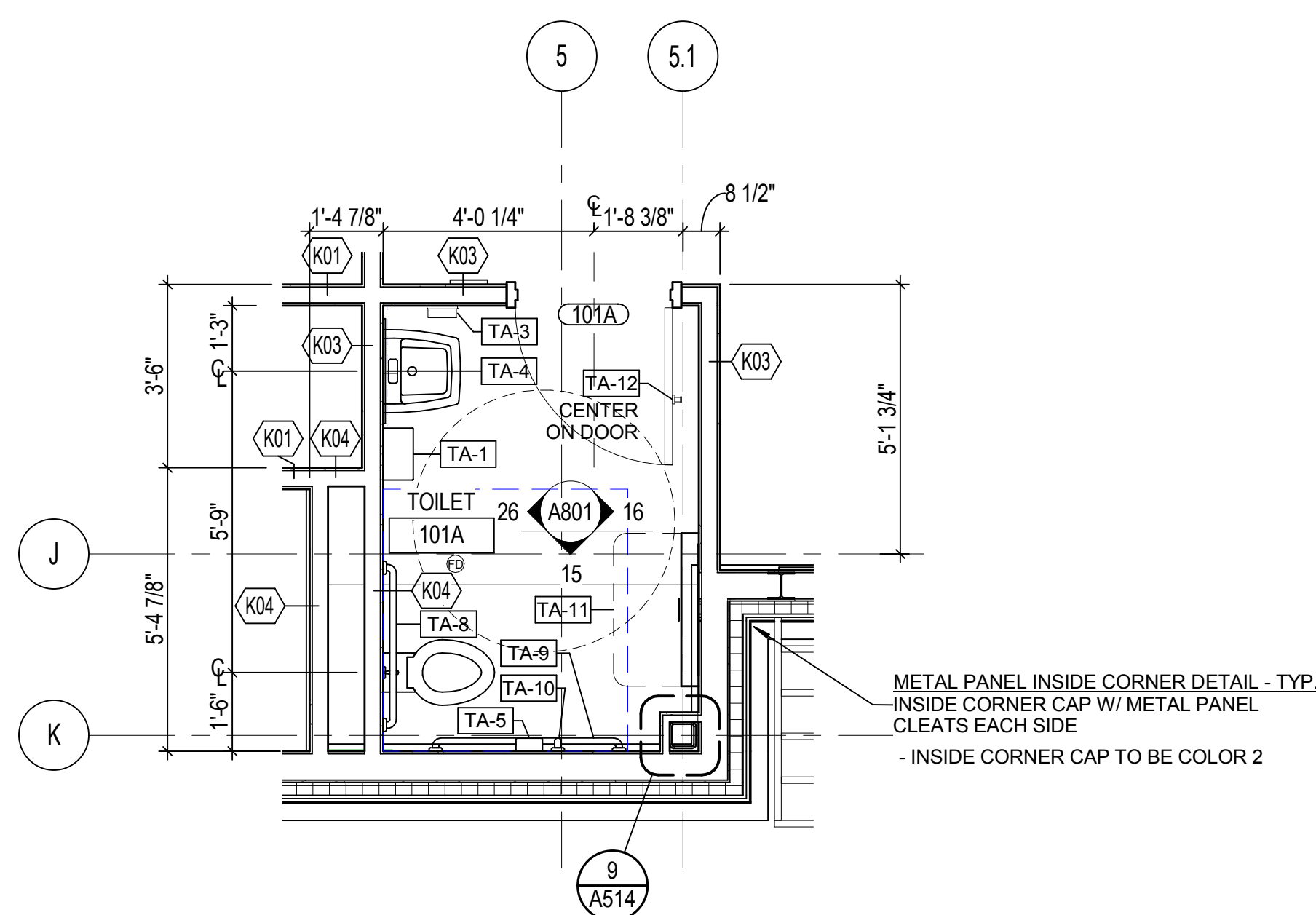
Plan North



3 INTAKE RESTROOM
SCALE: 3/8" = 1'-0"



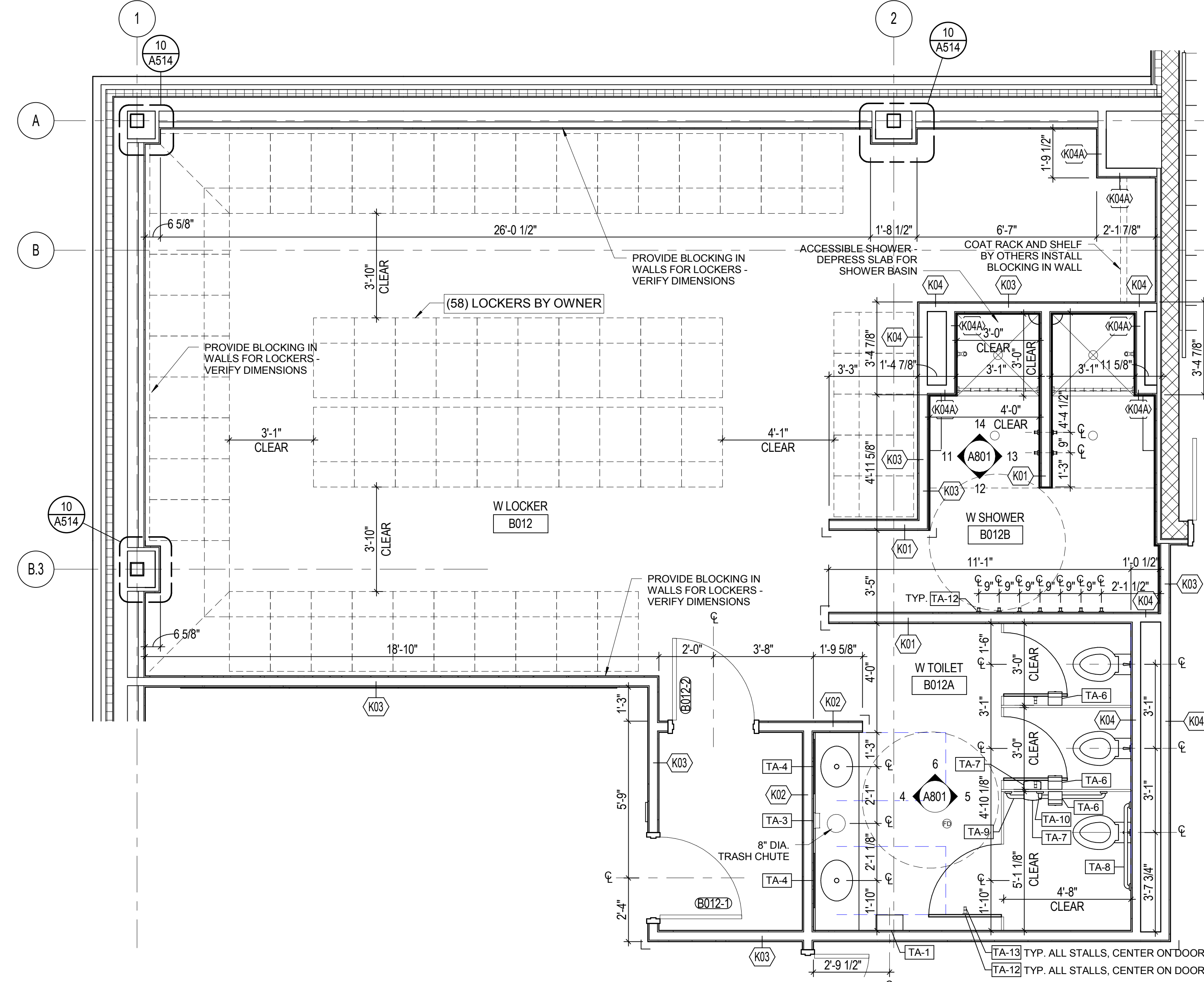
Plan North



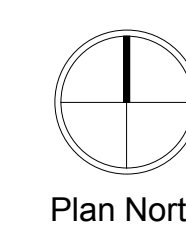
4 LOBBY RESTROOM
SCALE: 3/8" = 1'-0"



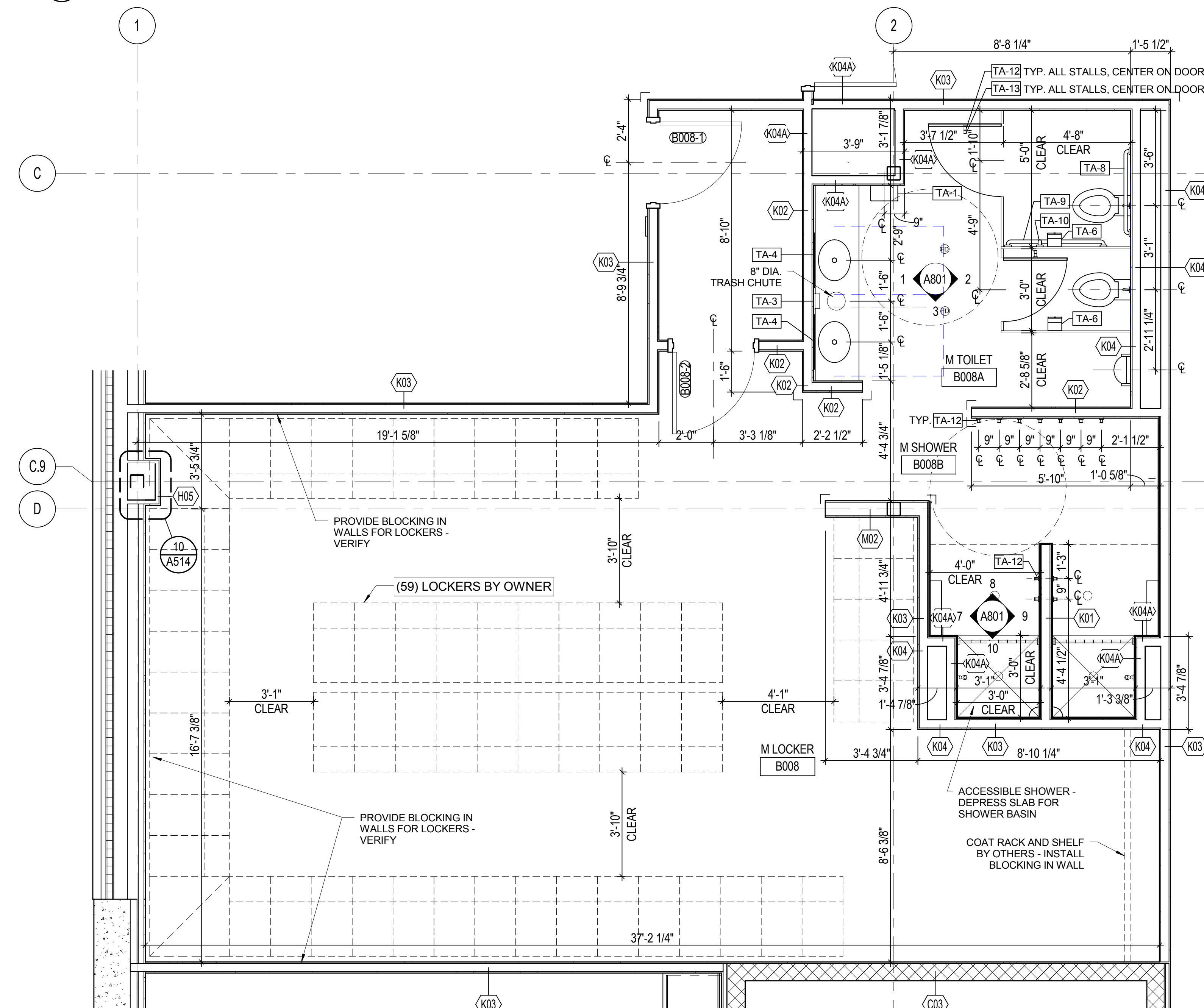
Plan North



5 ENLARGED WOMENS LOCKER ROOM PLAN
SCALE: 3/8" = 1'-0"



Plan North



1 ENLARGED MENS LOCKER ROOM PLAN
SCALE: 3/8" = 1'-0"



Plan North

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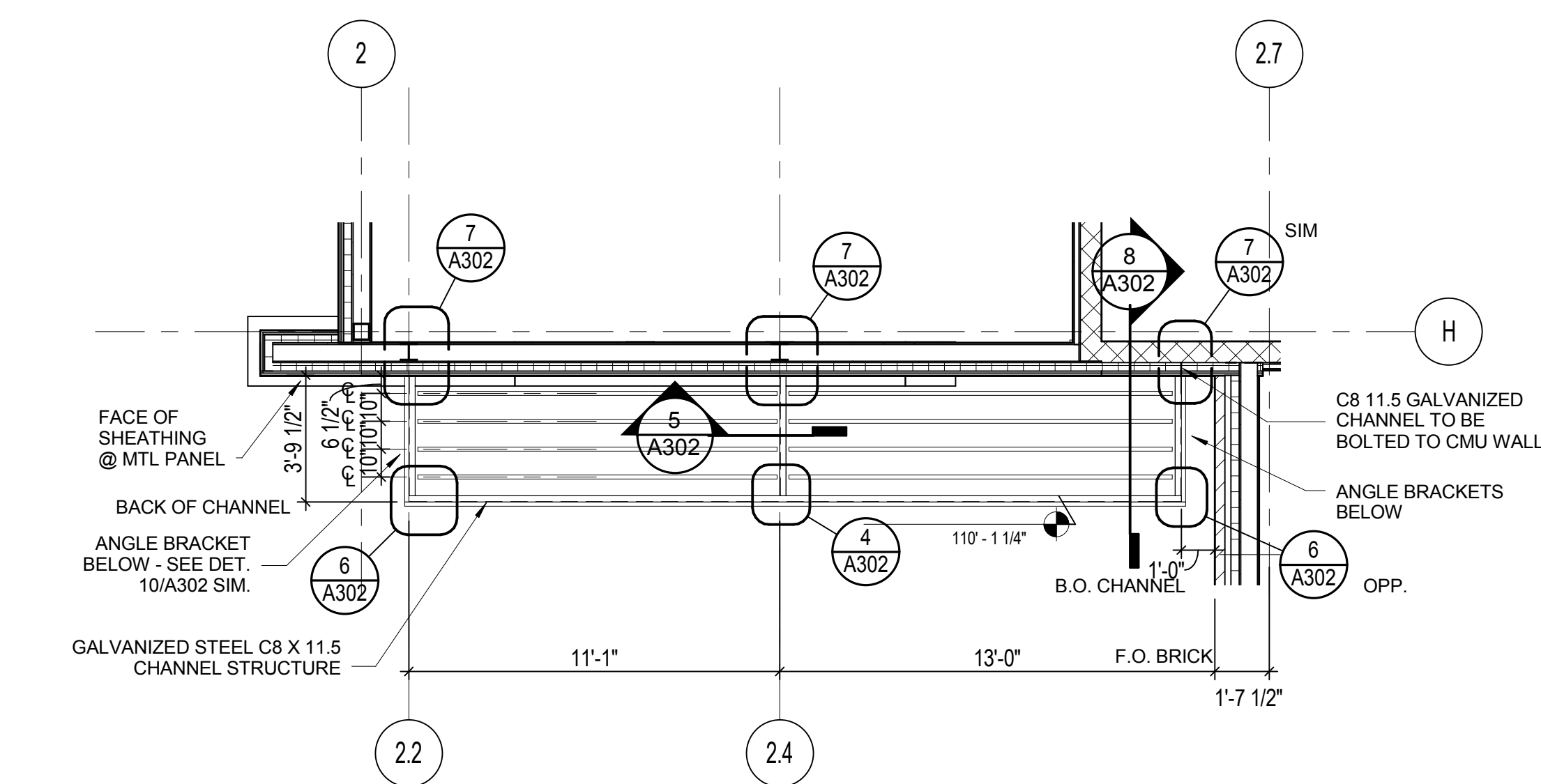
PROJECT NUMBER 152413.01

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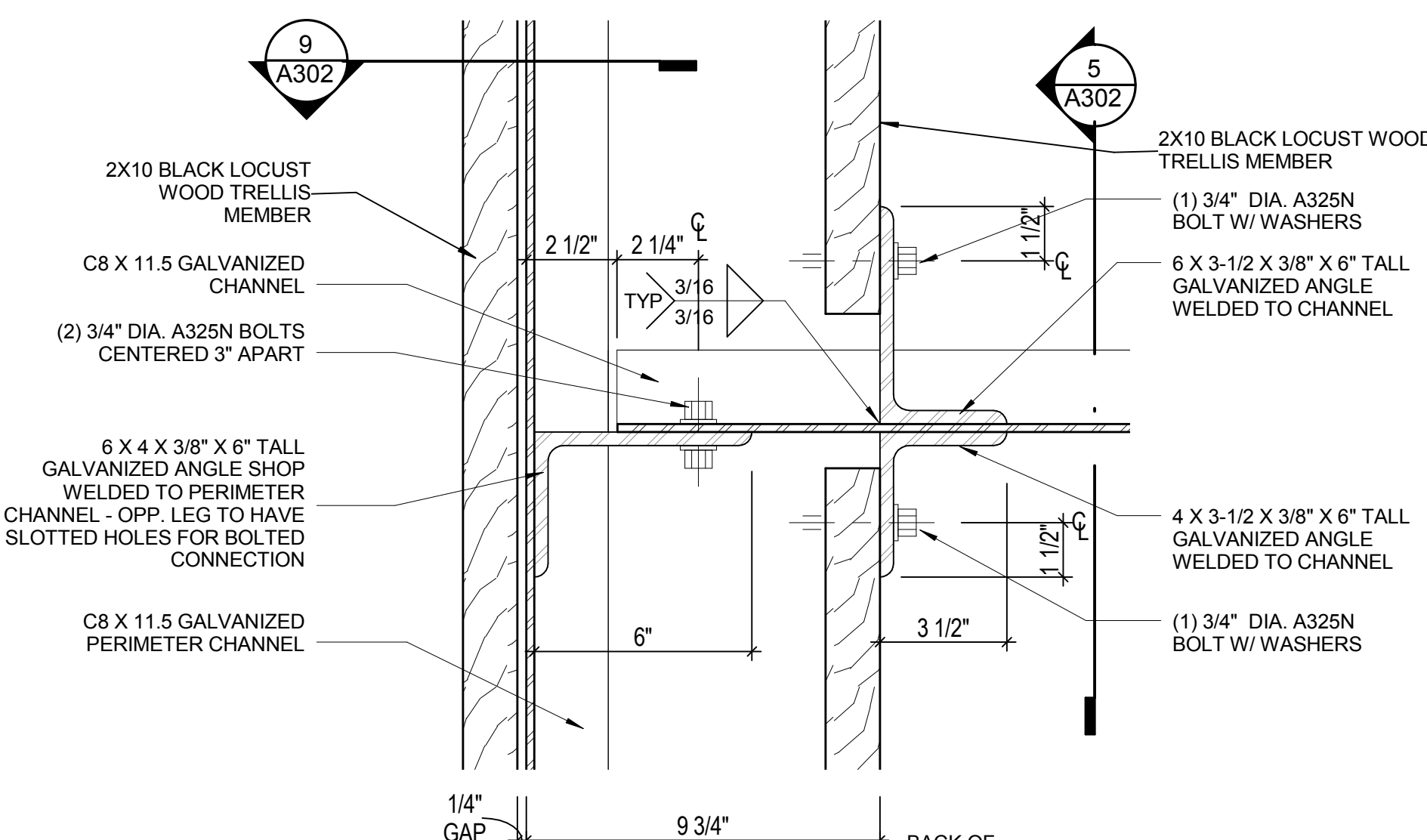
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CHECKED BY SK

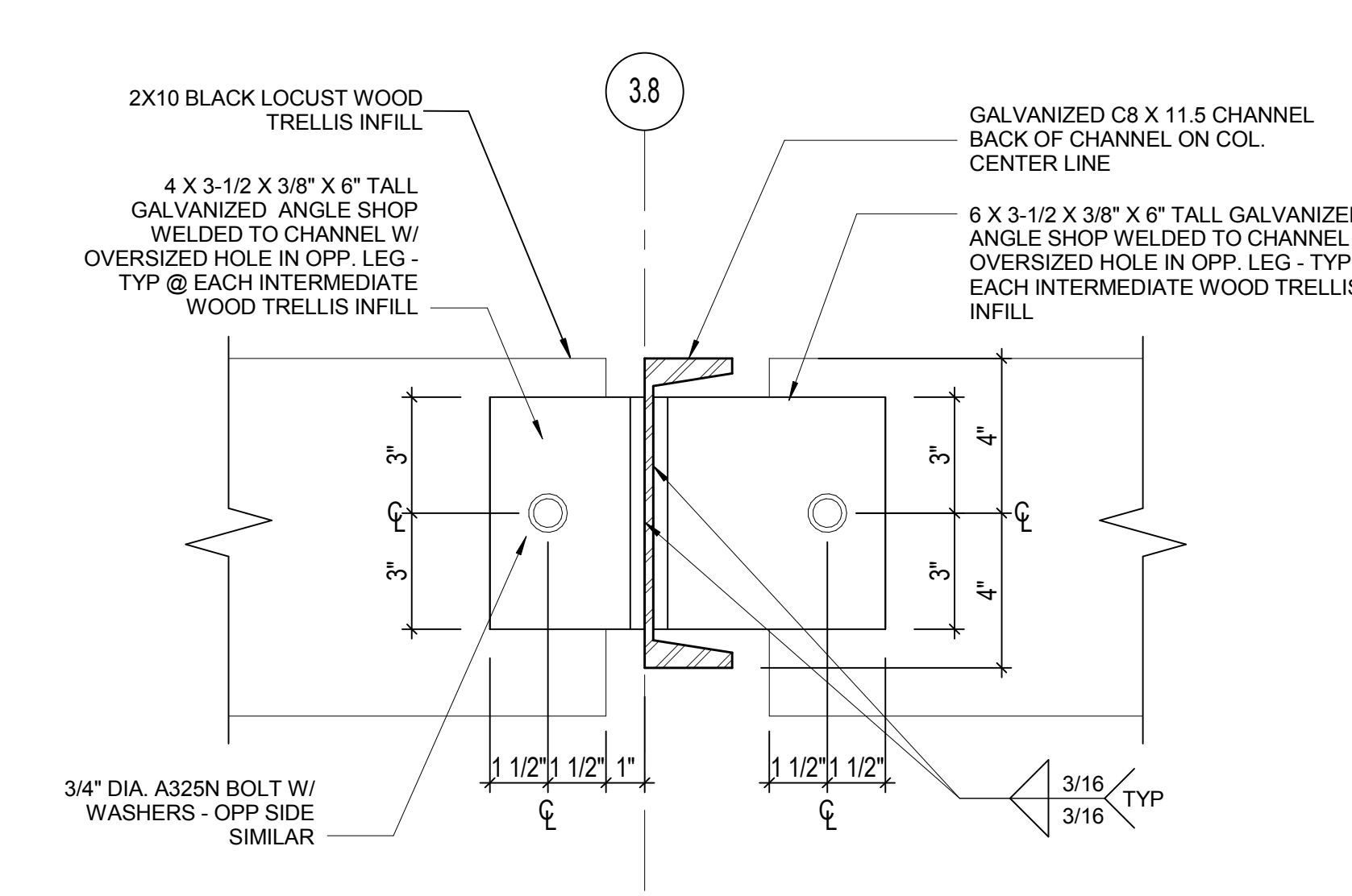
**ENLARGED TRELLIS
PLAN & DETAILS**



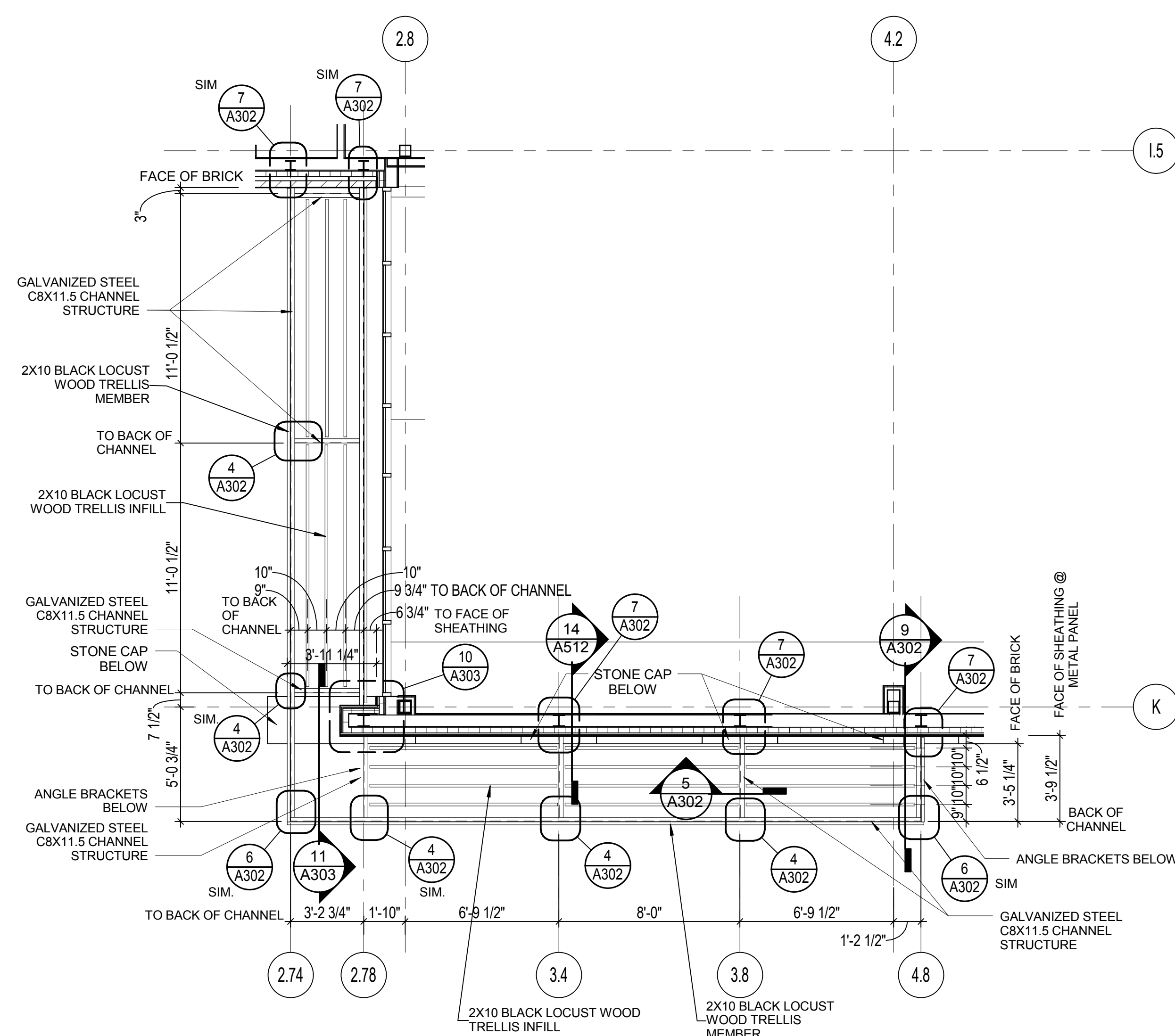
1 TRELLIS PLAN @ BREAK ROOM
SCALE: 1/4" = 1'-0"



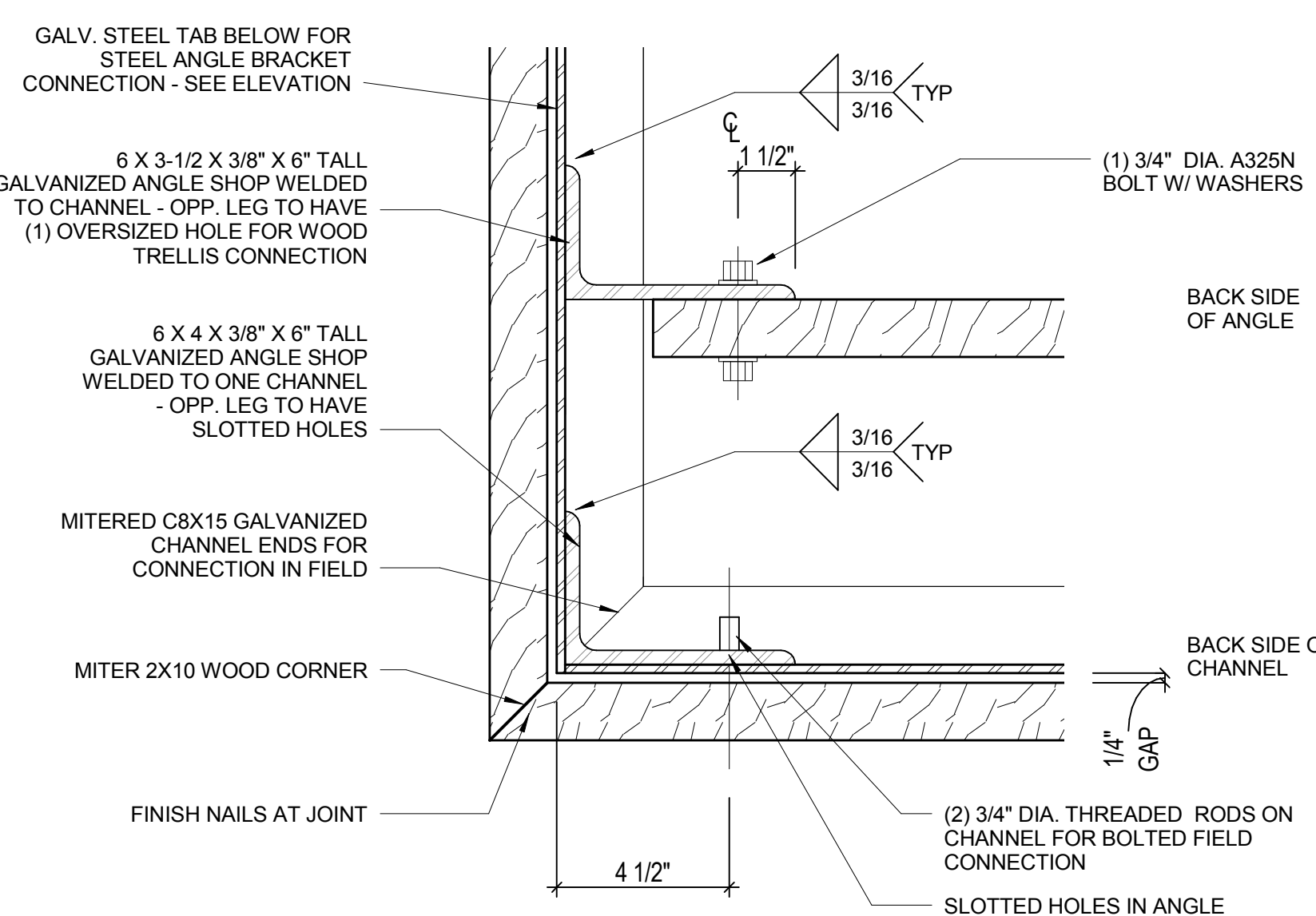
4 TRELLIS DETAIL @ INTERMEDIATE CHANNEL
SCALE: 3" = 1'-0"



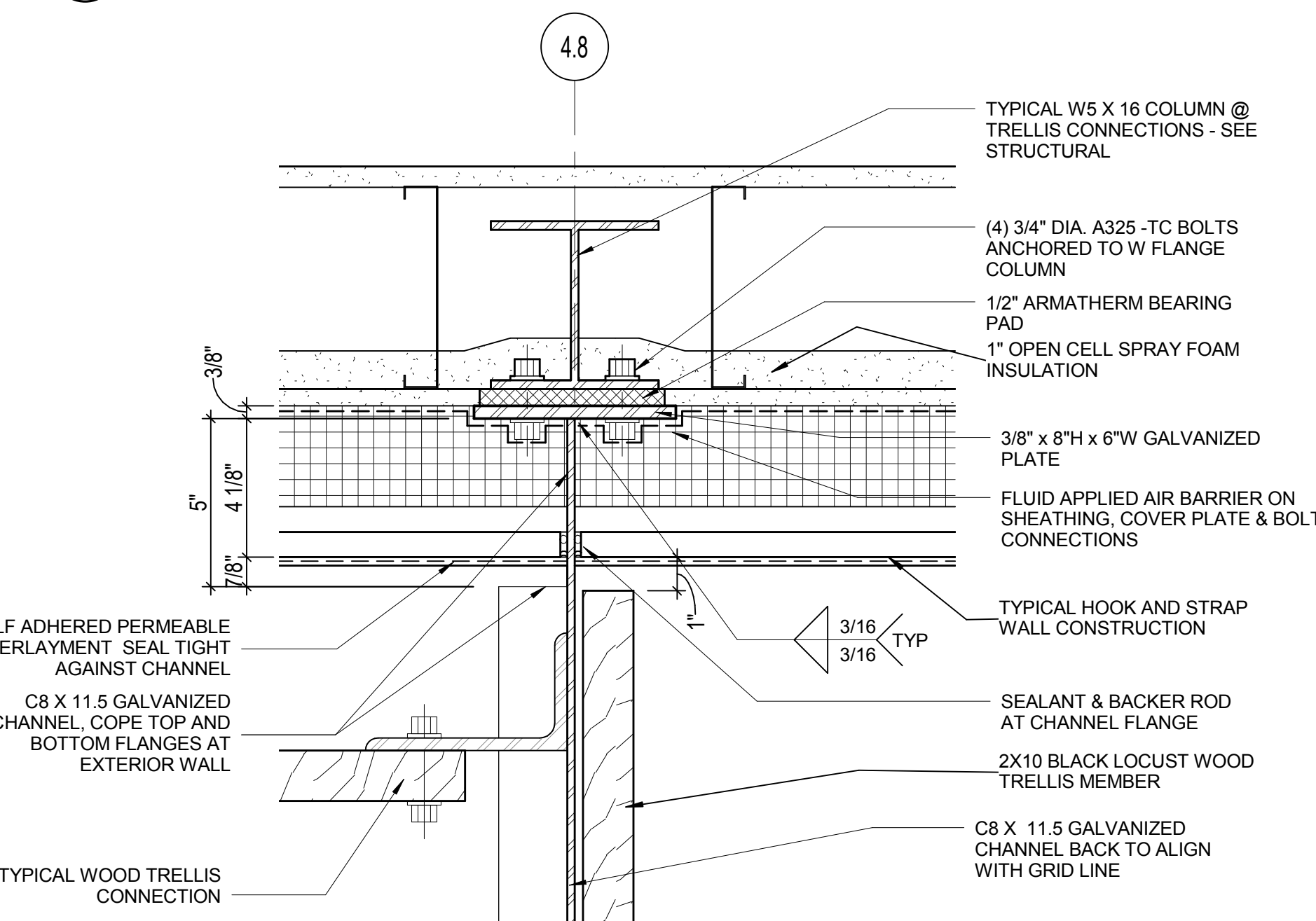
5 WOOD CONNECTION DETAIL @ INTERMEDIATE CHANNEL
SCALE: 3" = 1'-0"



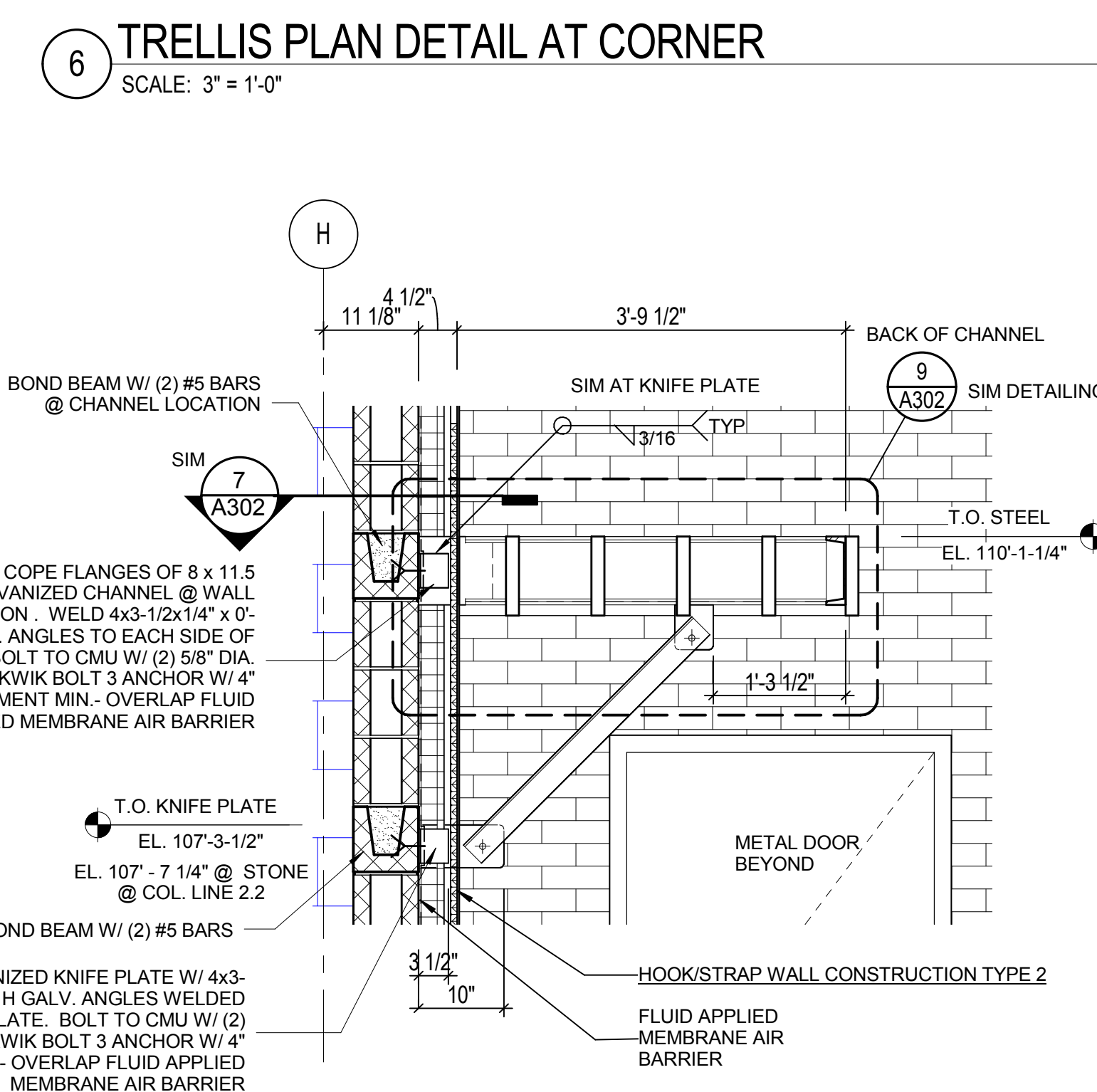
2 TRELLIS PLAN @ COMMUNITY ROOM
SCALE: 1/4" = 1'-0"



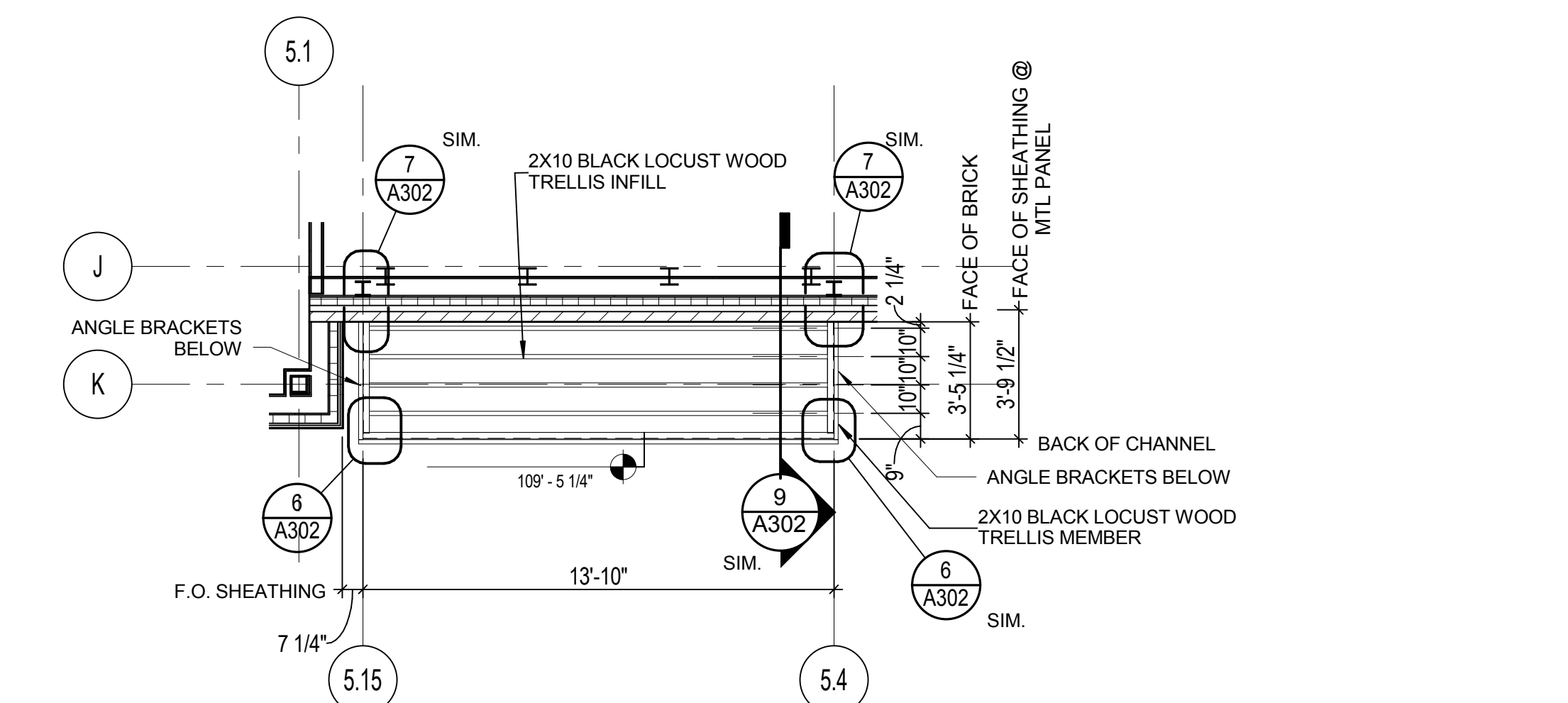
6 TRELLIS PLAN DETAIL AT CORNER
SCALE: 3" = 1'-0"



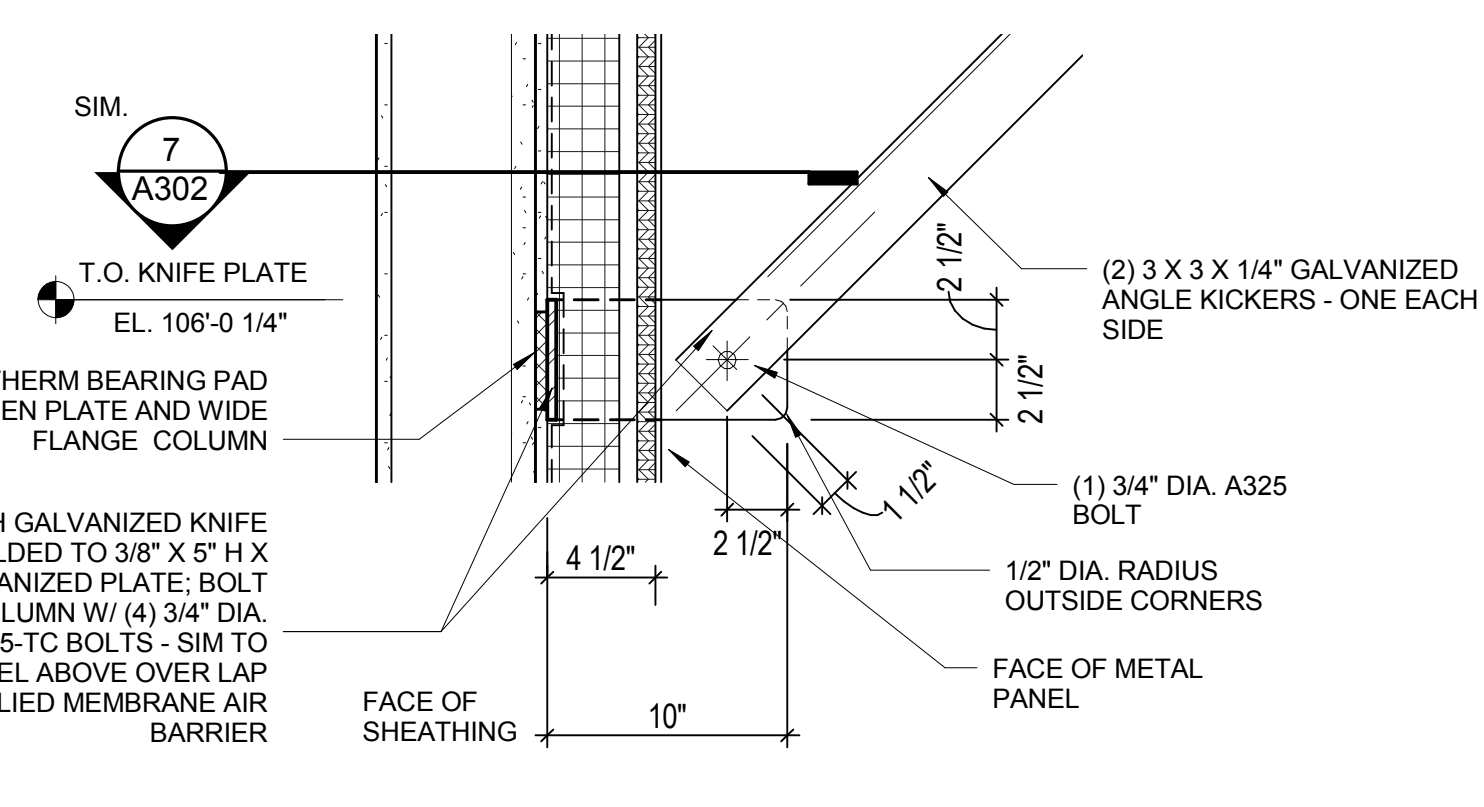
7 TRELLIS PLAN DETAIL @ COLUMN
SCALE: 3" = 1'-0"



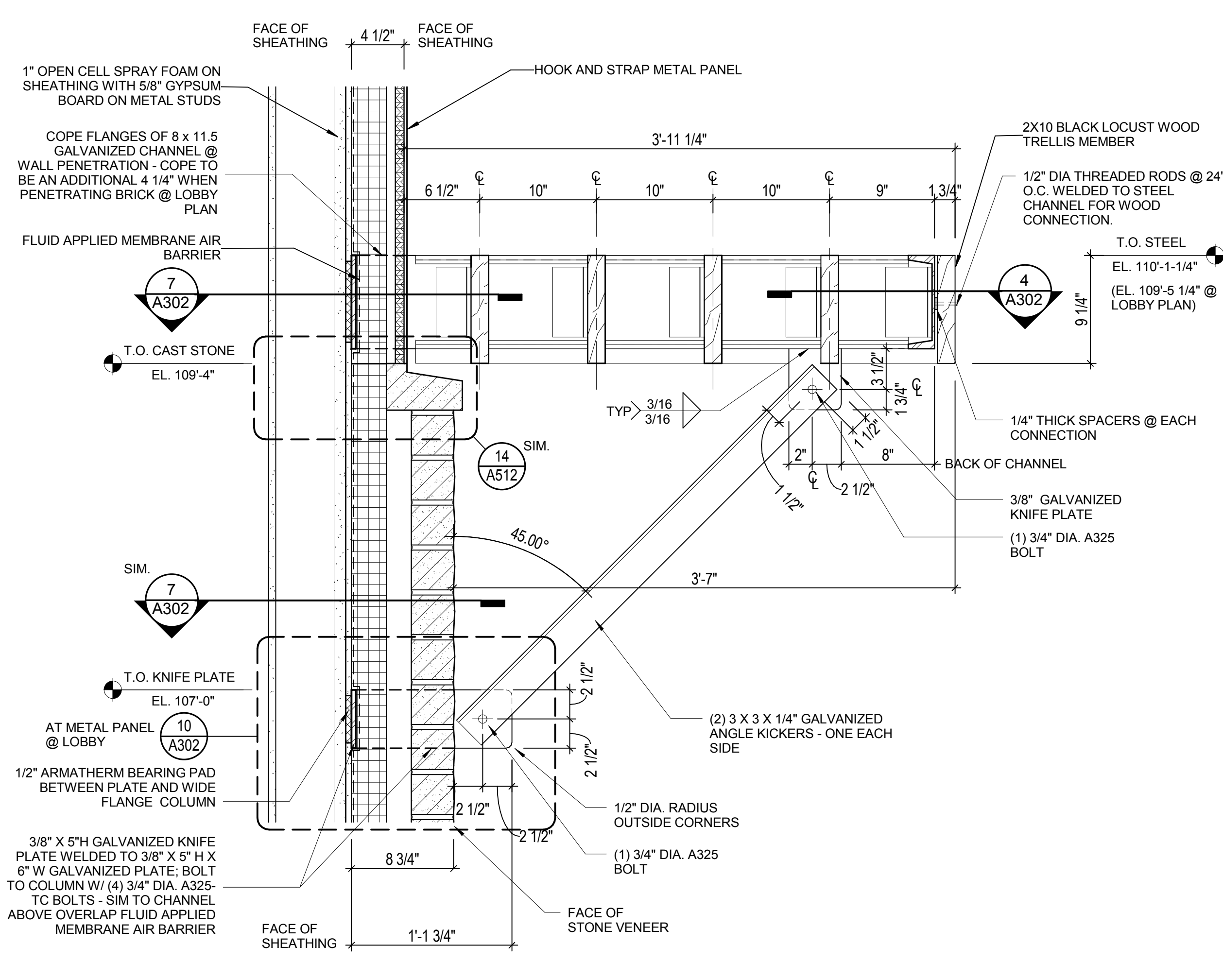
8 TRELLIS BRACKET DETAIL @ BREAKROOM
SCALE: 3/4" = 1'-0"



3 TRELLIS PLAN - LOBBY
SCALE: 1/4" = 1'-0"



9 KNIFE PLATE DETAIL @ METAL PANEL (LOBBY)
SCALE: 1 1/2" = 1'-0"



9 TRELLIS BRACKET DETAIL
SCALE: 1 1/2" = 1'-0"

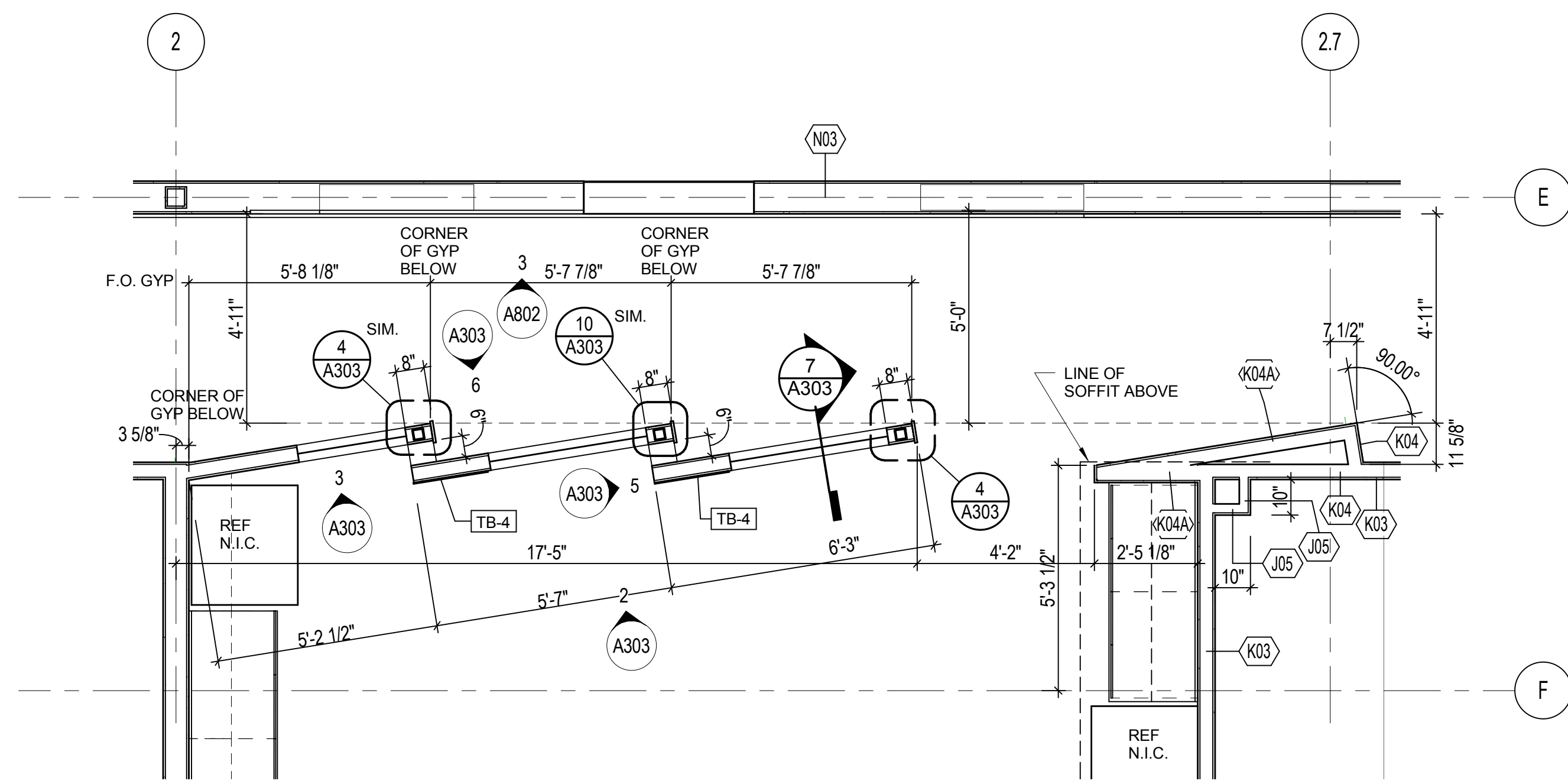
**POLICE
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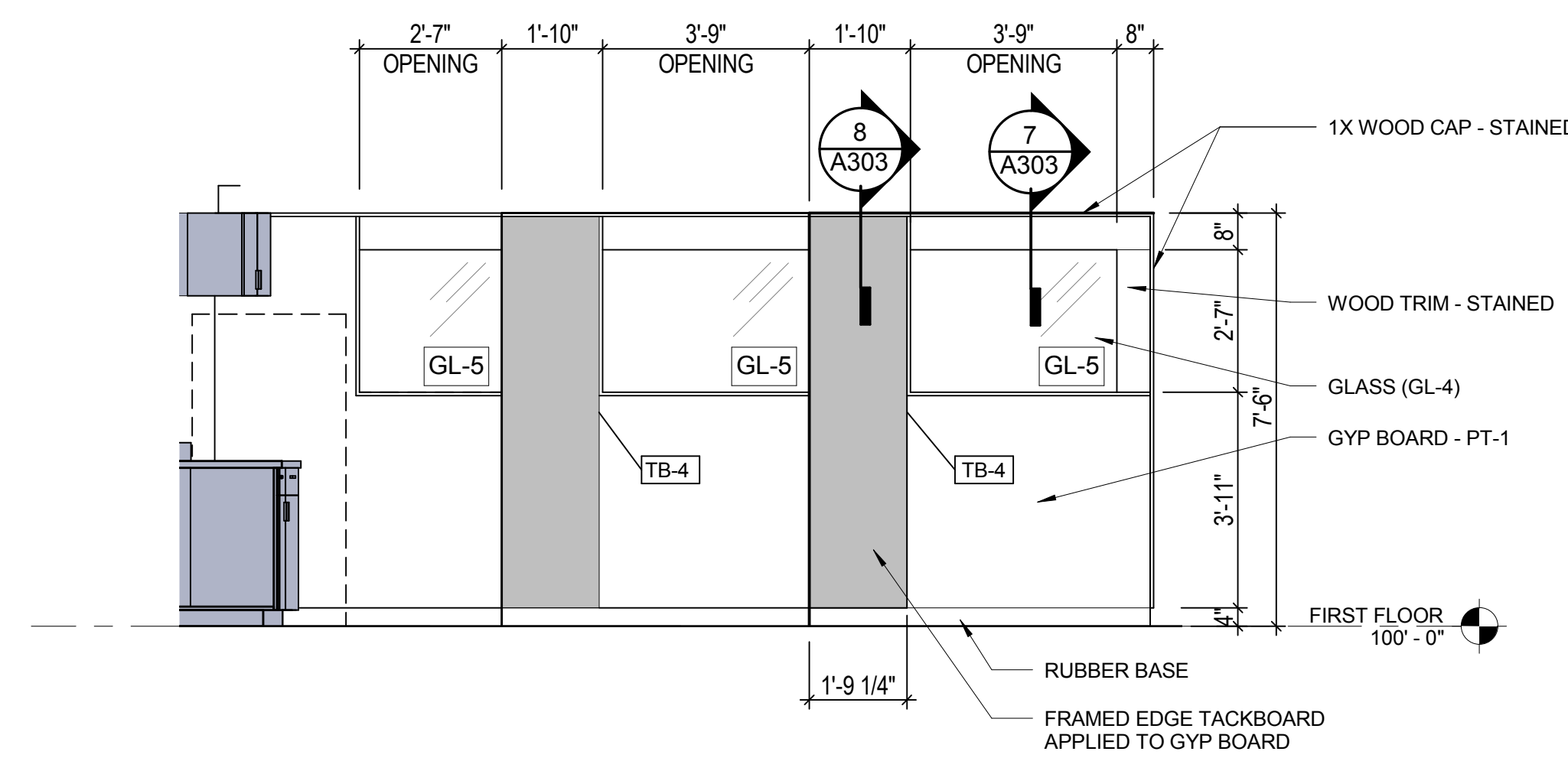
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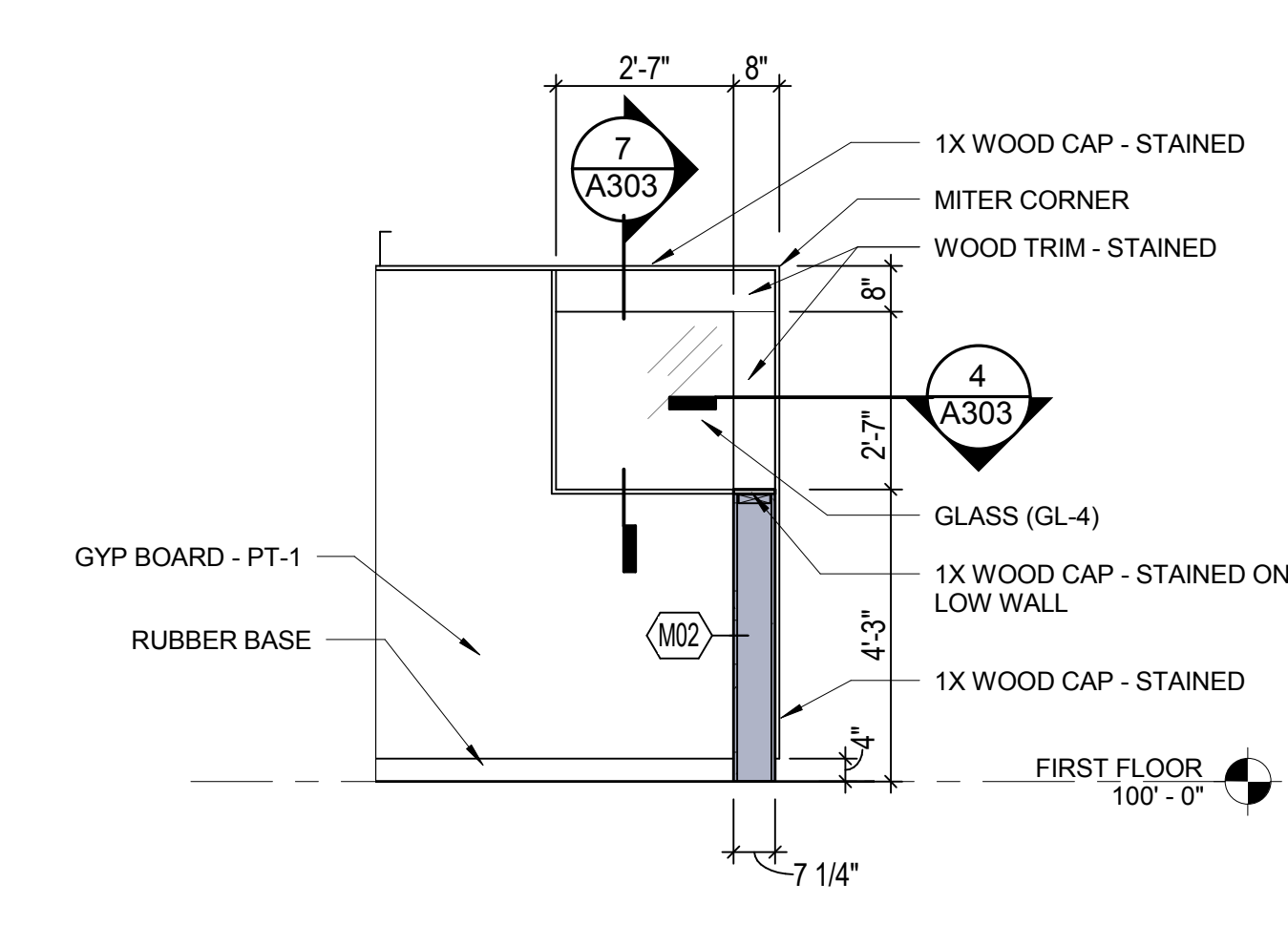
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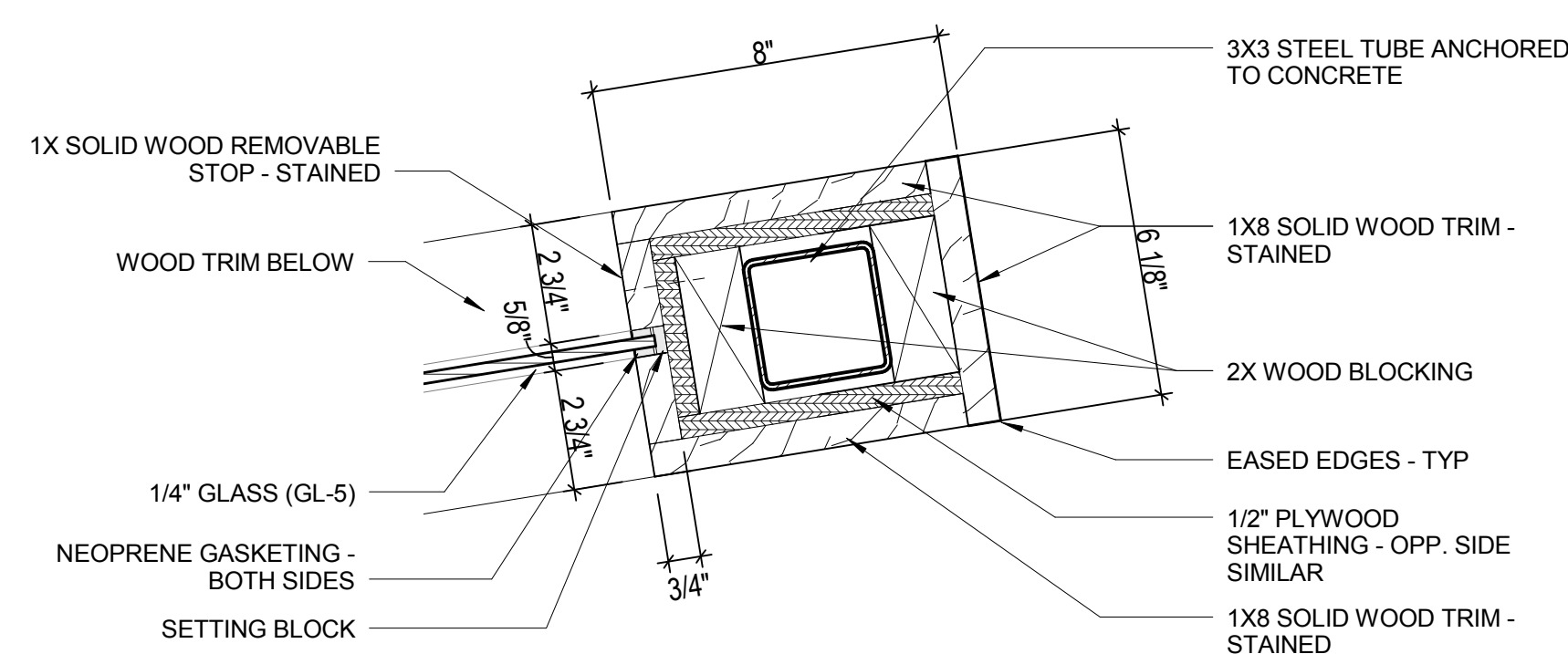
1 ENLARGDE BREAK ROOM WALL PLAN
SCALE: 3/8" = 1'-0"



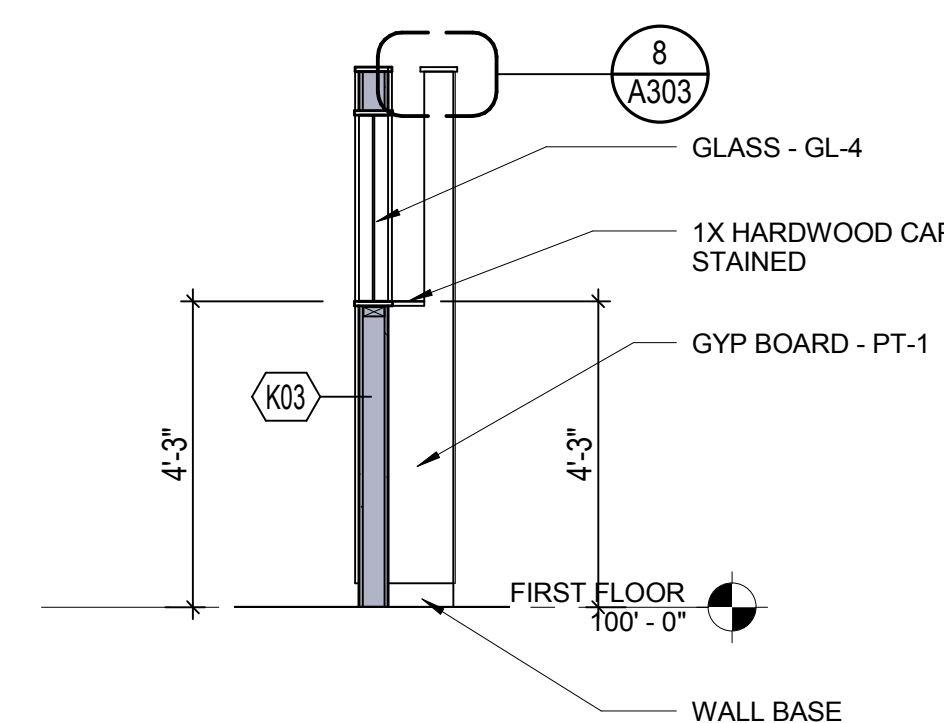
2 SOUTH BREAK ROOM WALL ELEVATION
SCALE: 3/8" = 1'-0"



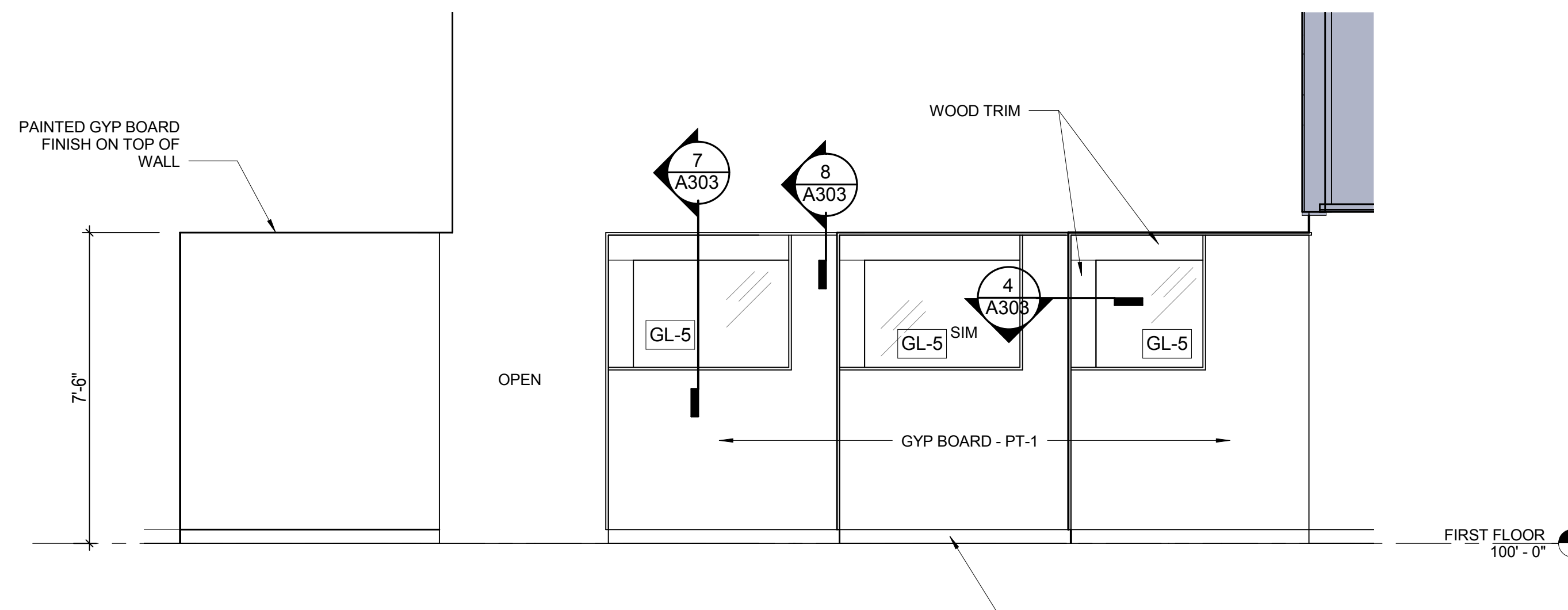
3 WALL PANEL ELEVATION
SCALE: 3/8" = 1'-0"



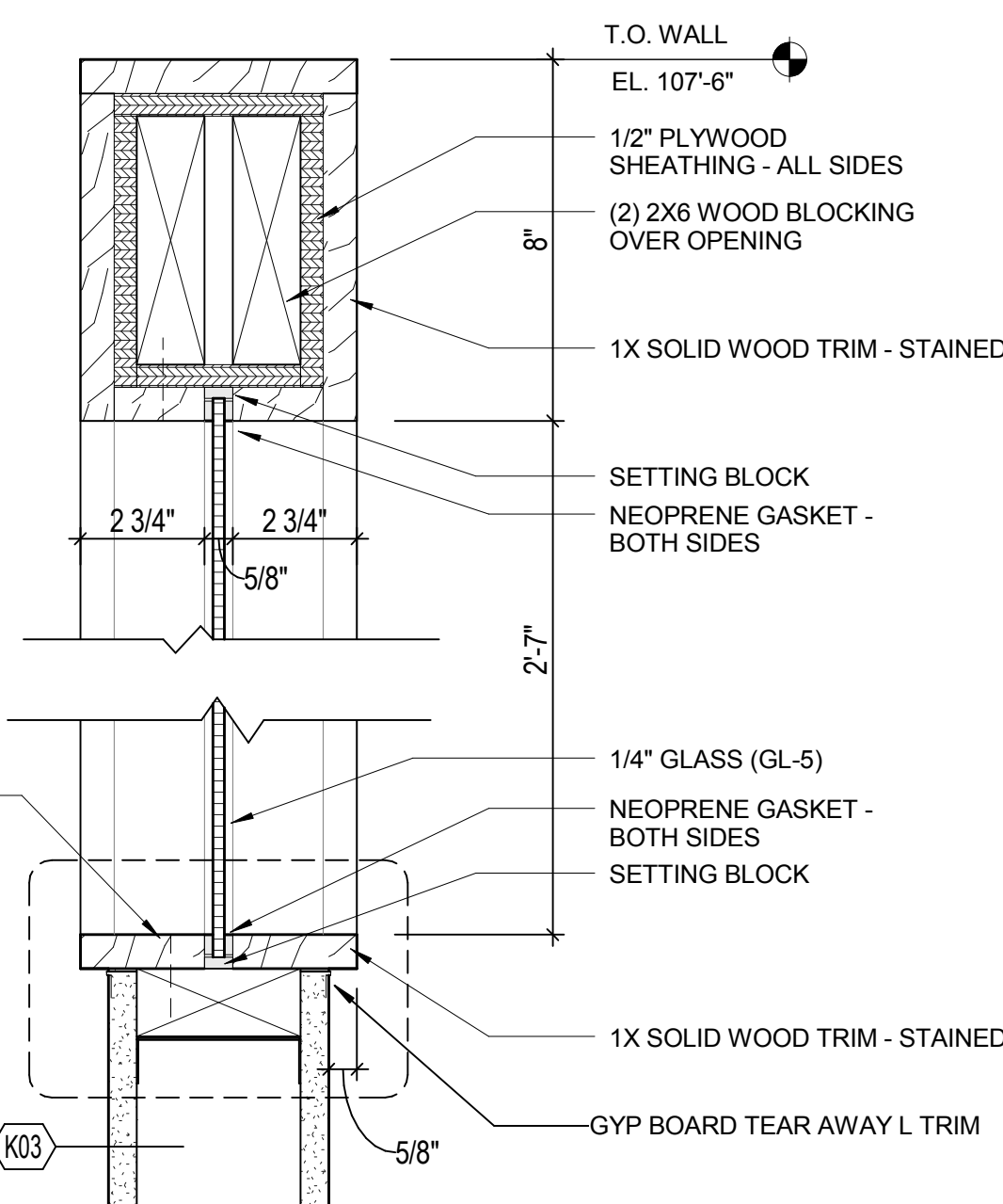
4 WALL END PLAN DETAIL
SCALE: 3" = 1'-0"



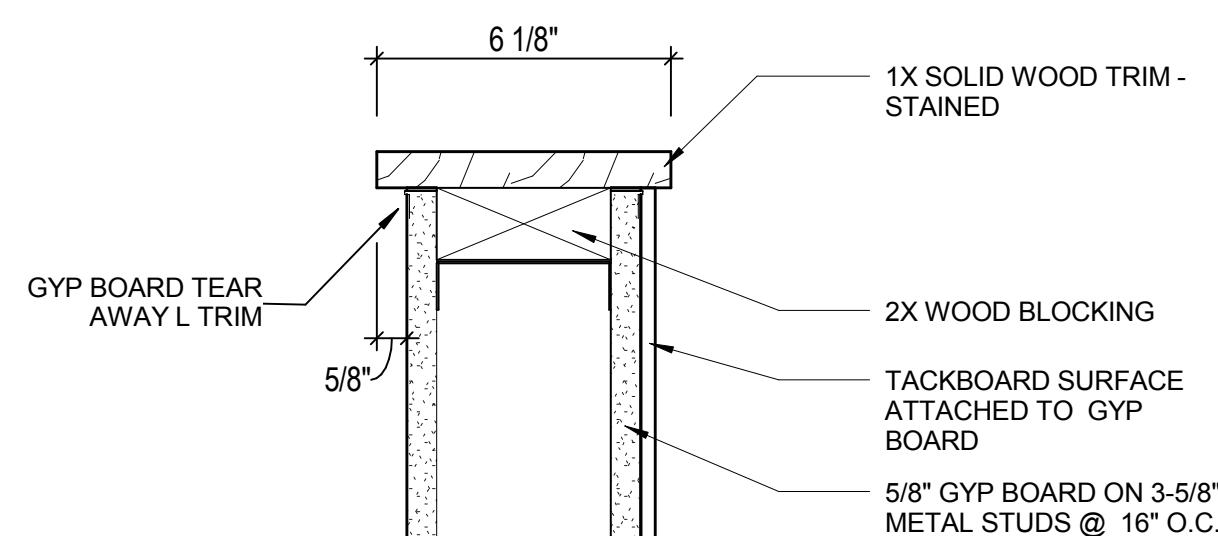
5 END WALL ELEVATION
SCALE: 3/8" = 1'-0"



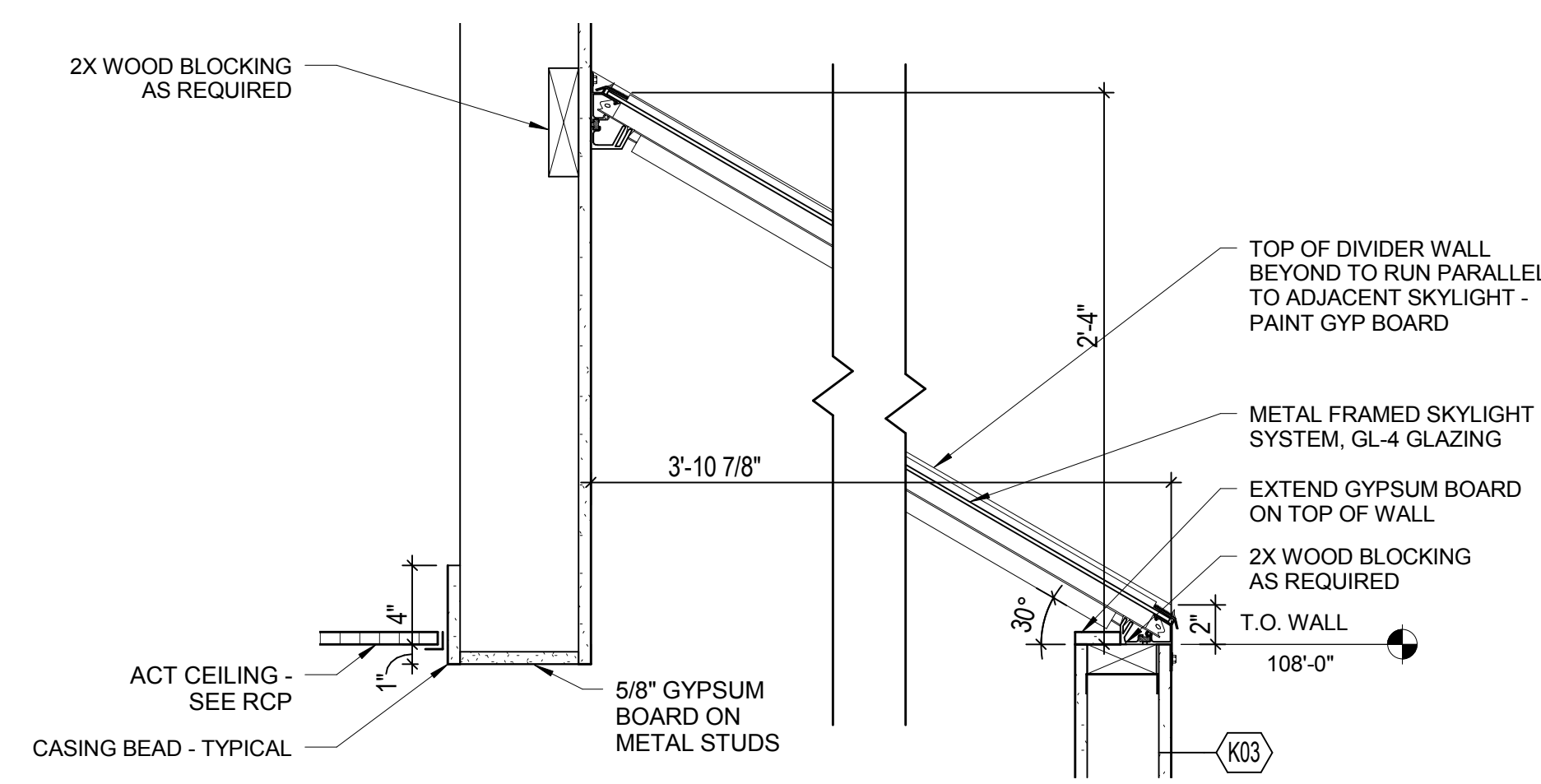
6 NORTH BREAK ROOM WALL ELEVATION
SCALE: 3/8" = 1'-0"



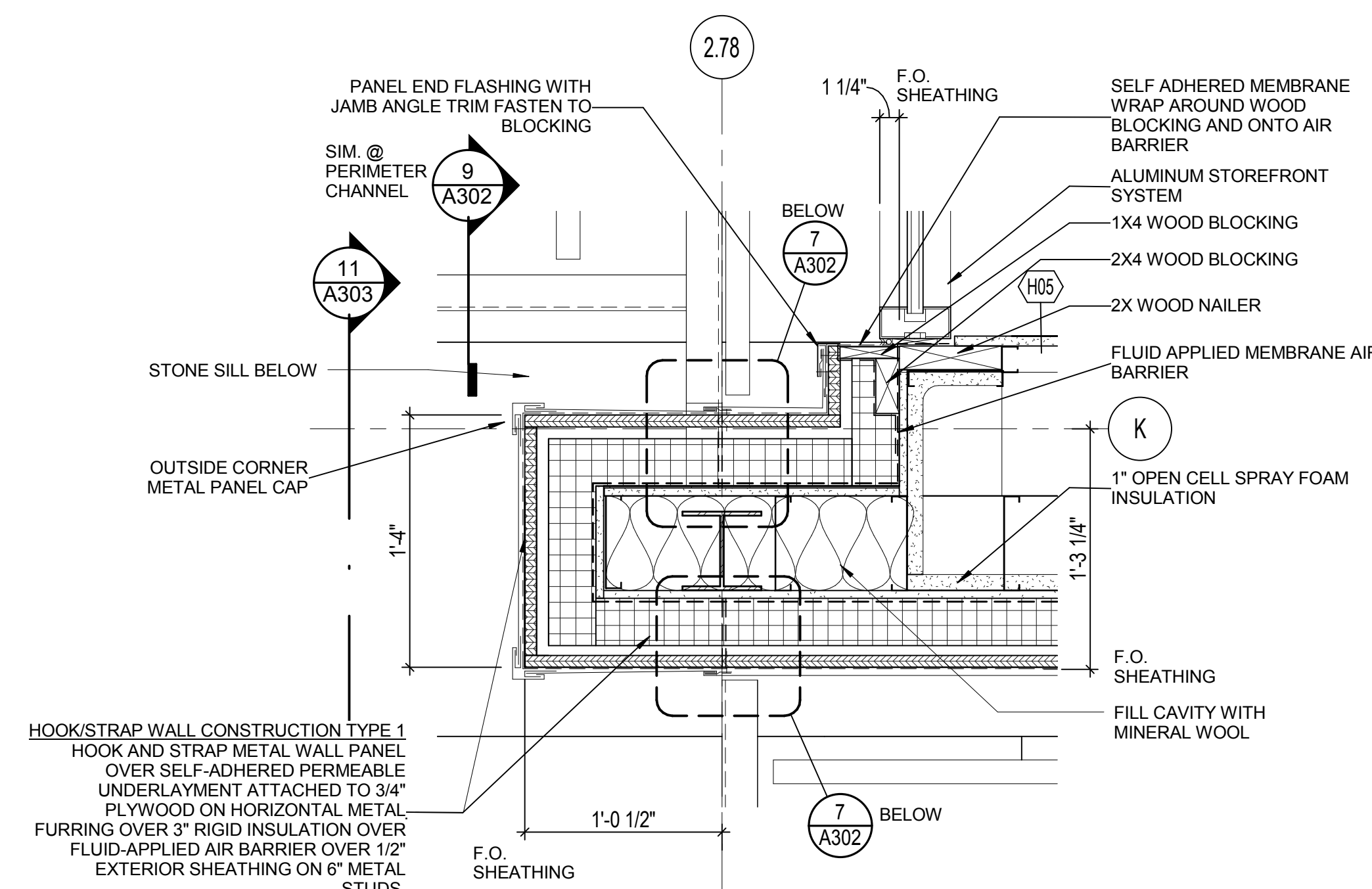
7 WALL DETAIL @ GLASS
SCALE: 3" = 1'-0"



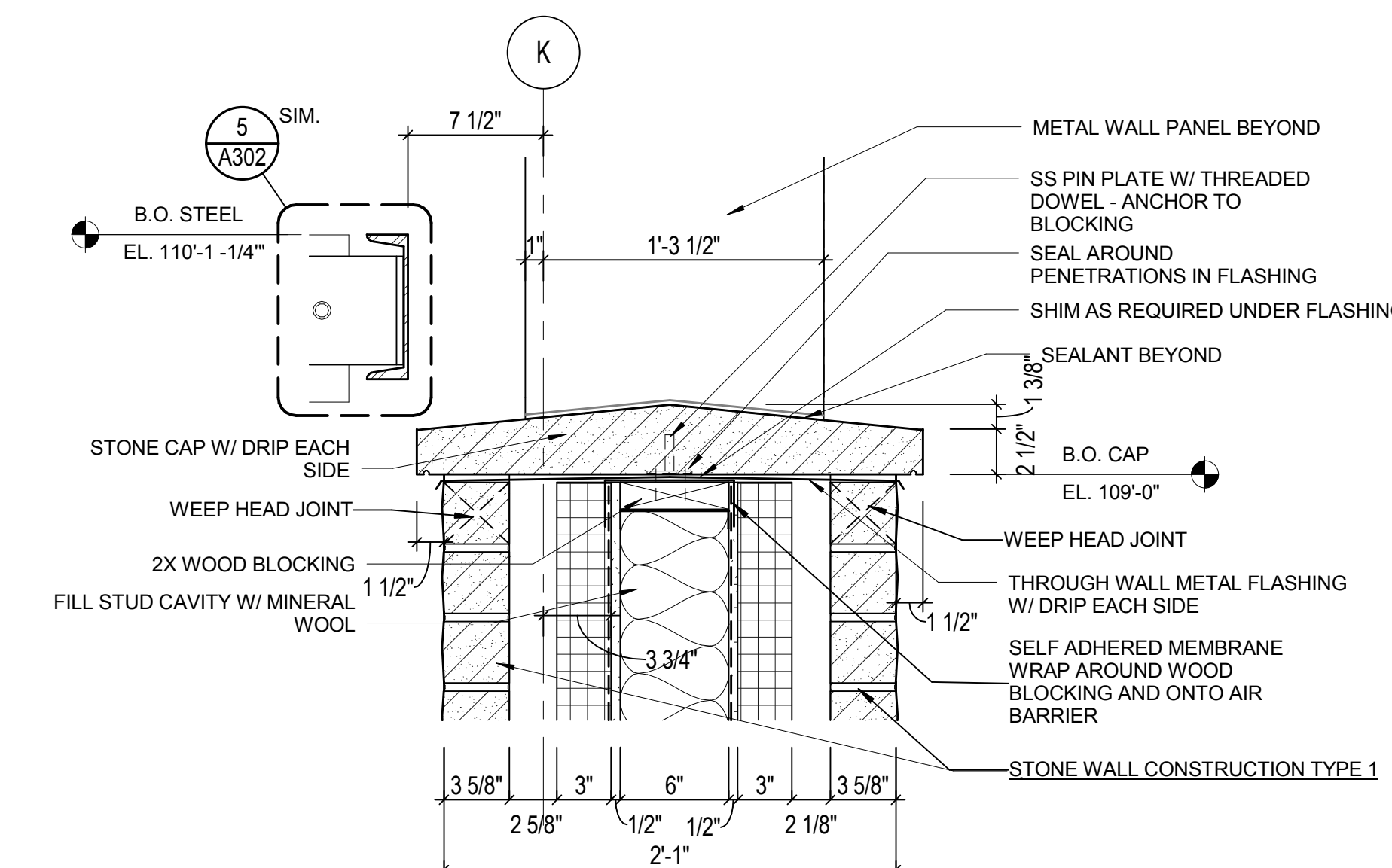
8 WALL CAP DETAIL
SCALE: 3" = 1'-0"



9 METAL FRAMED SKYLIGHT DETAIL
SCALE: 1 1/2" = 1'-0"



10 TRELIS PLAN DETAIL @ PIER
SCALE: 1 1/2" = 1'-0"



11 PIER DETAIL AT WING WALL
SCALE: 1 1/2" = 1'-0"

DRAWN BY MMZ

CHECKED BY SK

**ENLARGED
BREAKROOM PLAN &
DETAILS**

A303

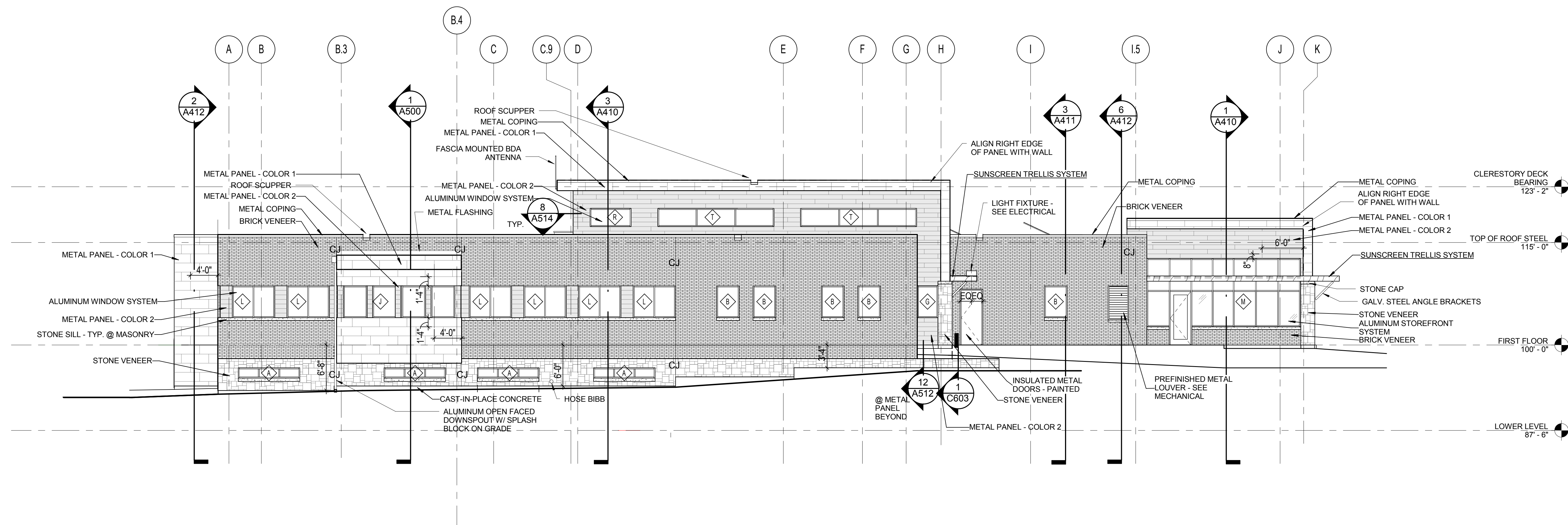
**POLICE
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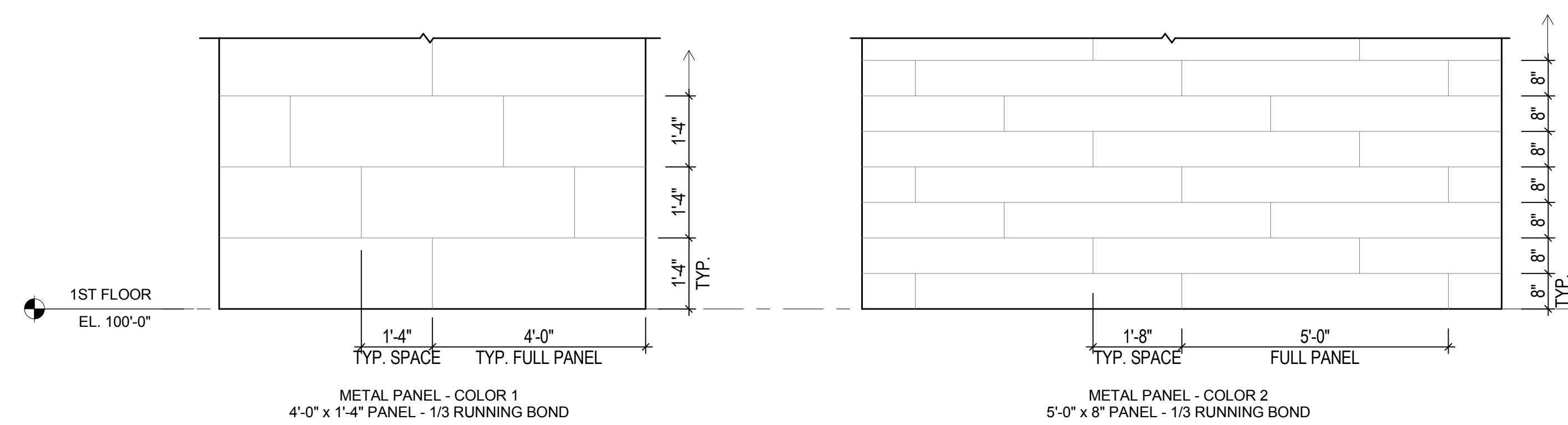
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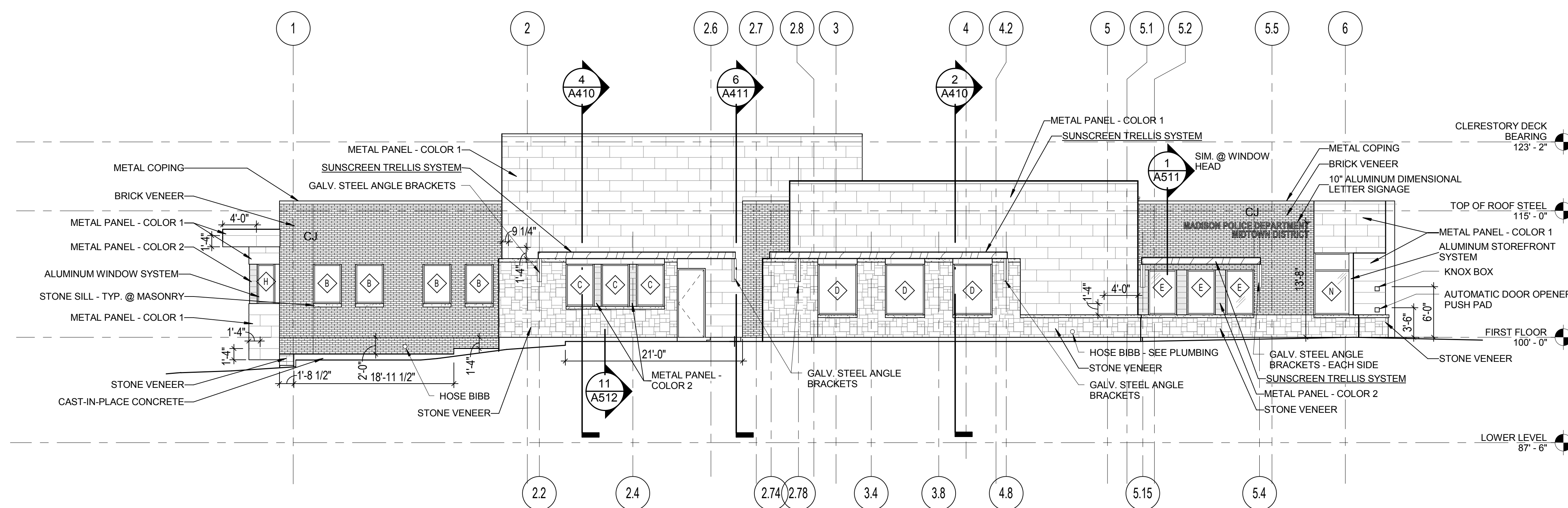
1 WEST ELEVATION
SCALE: 1/8" = 1'-0"



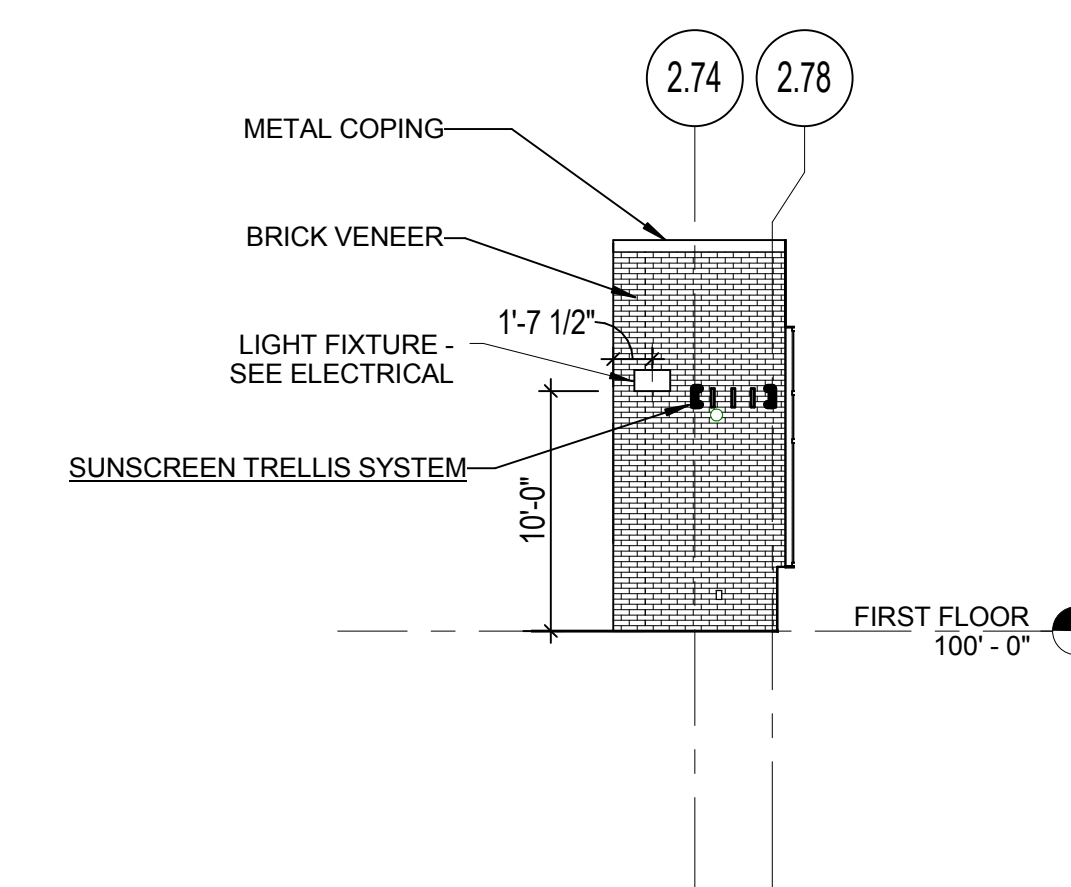
4 TYPICAL METAL PANEL PATTERN DETAILS
SCALE: 1/2" = 1'-0"

GENERAL NOTES - EXTERIOR ELEVATIONS

- EXTERIOR STONE PATTERN SHOWN FOR MATERIAL LOCATIONS ONLY - SEE SPECIFICATIONS FOR COURSING
- REFER TO CIVIL DRAWINGS FOR GRADE ELEVATIONS



2 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



3 PARTIAL SOUTH ELEV. @ COMMUNITY ROOM
SCALE: 1/8" = 1'-0"

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**EXTERIOR
ELEVATIONS**

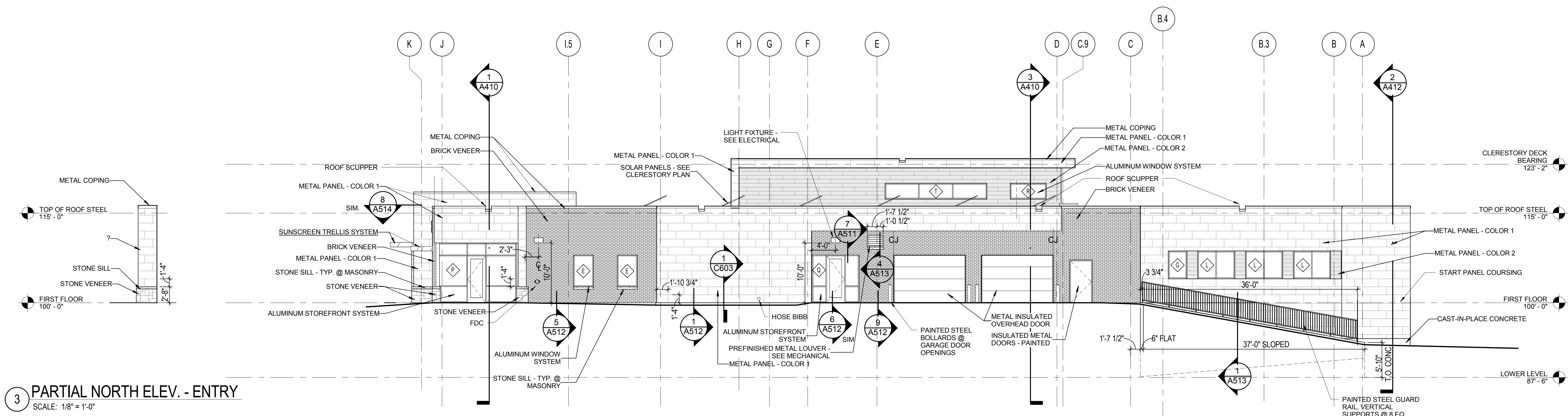
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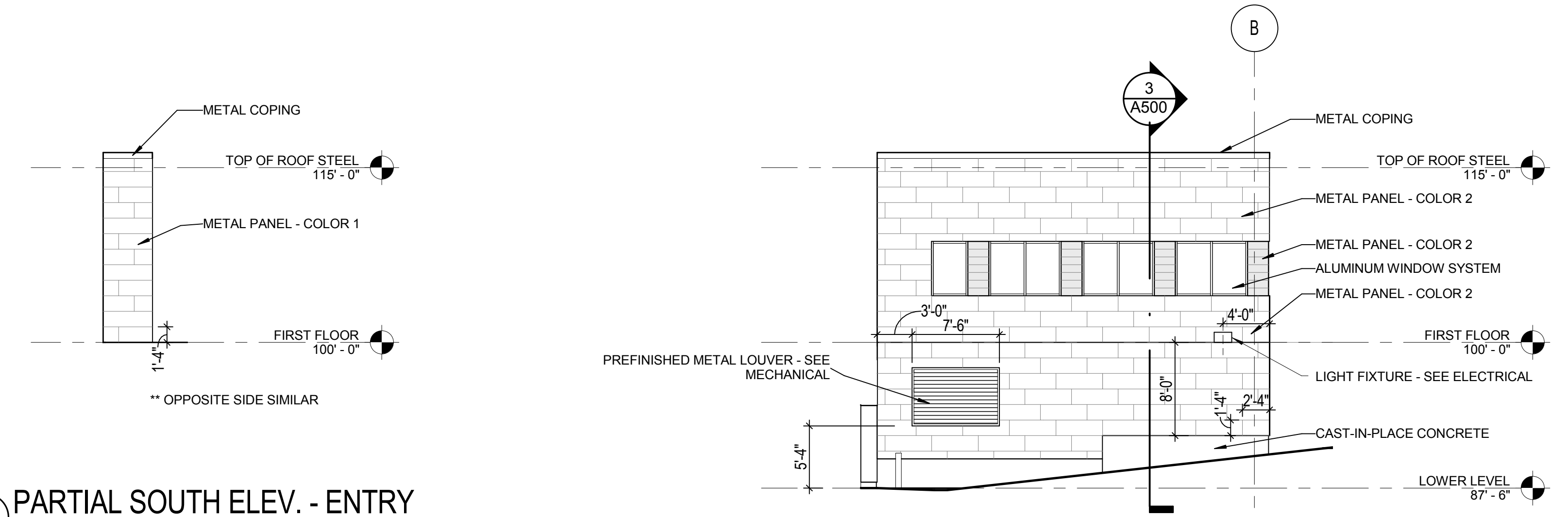
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3 PARTIAL NORTH ELEV. - ENTRY
SCALE: 1/8" = 1'-0"

1 EAST ELEVATION
SCALE: 1/8" = 1'-0"

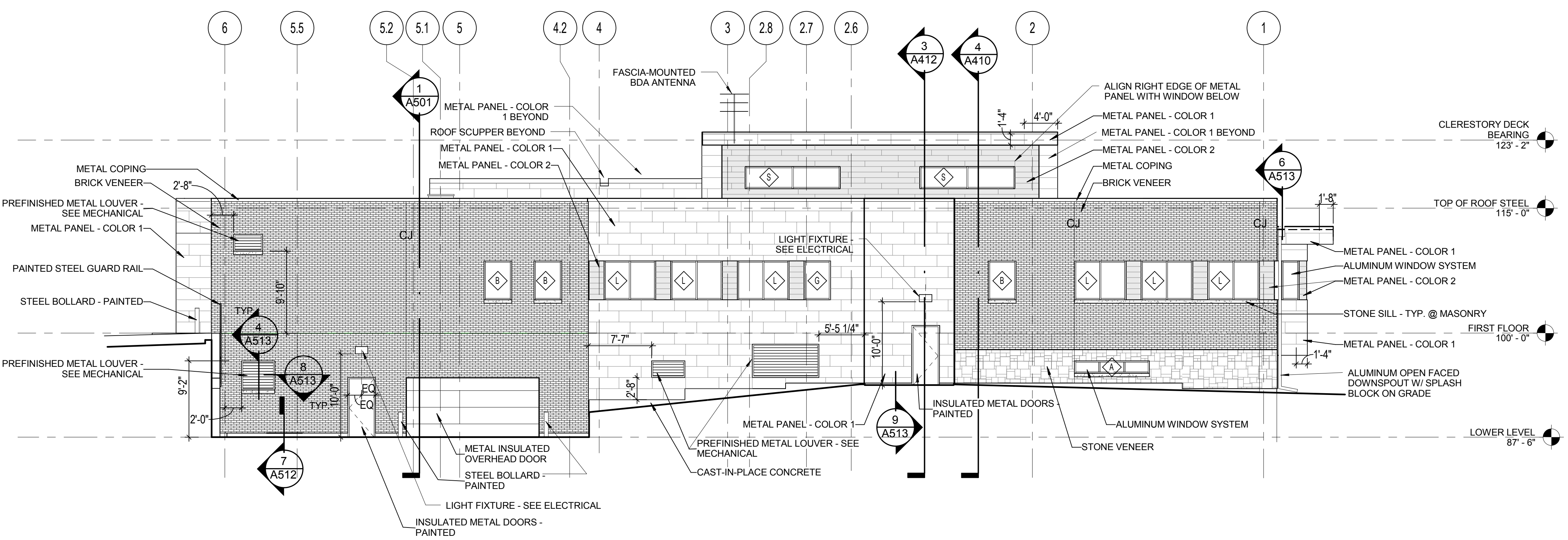


4 PARTIAL SOUTH ELEV. - ENTRY
SCALE: 1/8" = 1'-0"

5 PARTIAL EAST ELEVATION - OUTREACH
SCALE: 1/8" = 1'-0"

GENERAL NOTES - EXTERIOR ELEVATIONS

- EXTERIOR STONE PATTERN SHOWN FOR MATERIAL LOCATIONS ONLY - SEE SPECIFICATIONS FOR COURSING
- REFER TO CIVIL DRAWINGS FOR GRADE ELEVATIONS



2 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

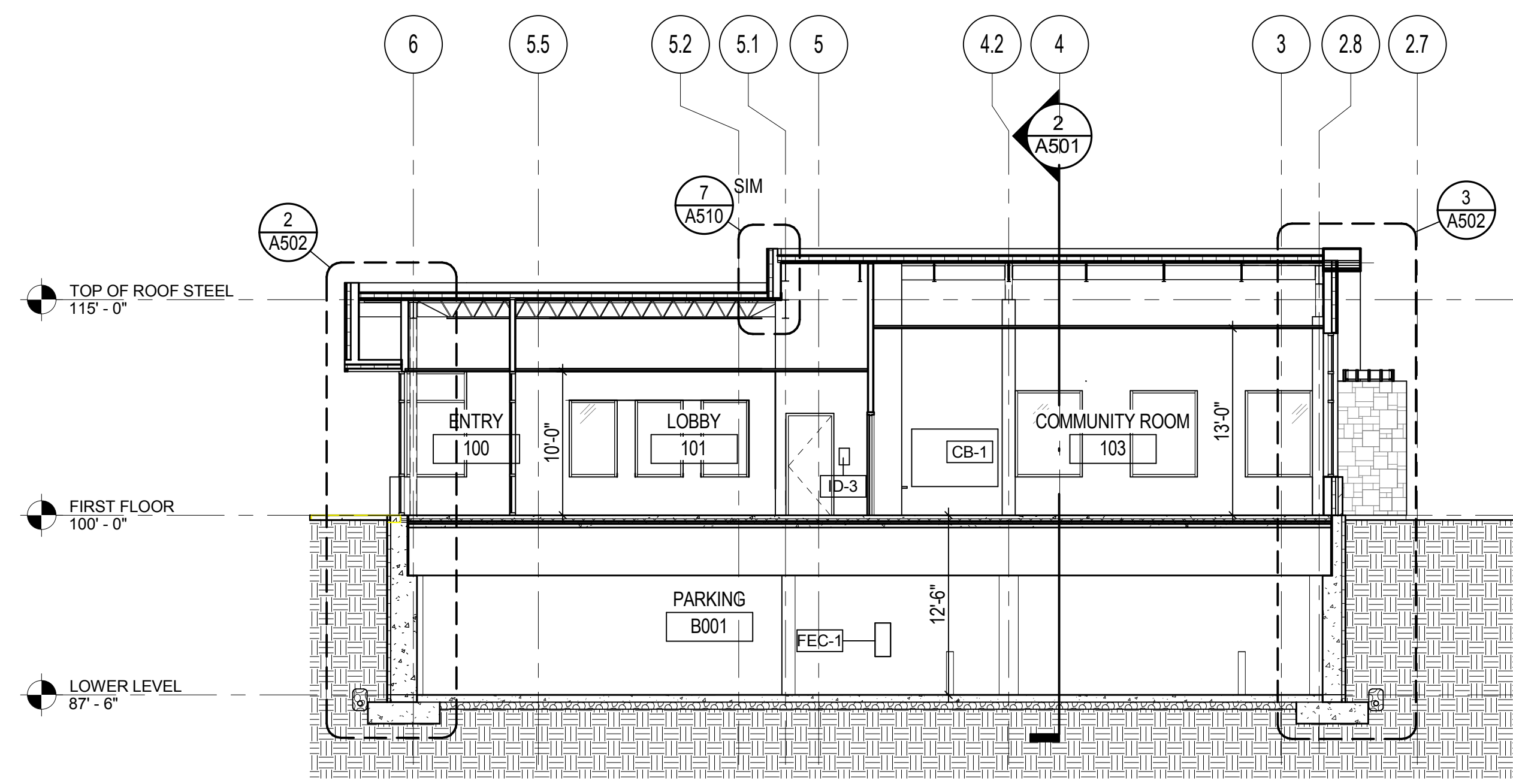
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CHECKED BY Checker

**EXTERIOR
ELEVATIONS**

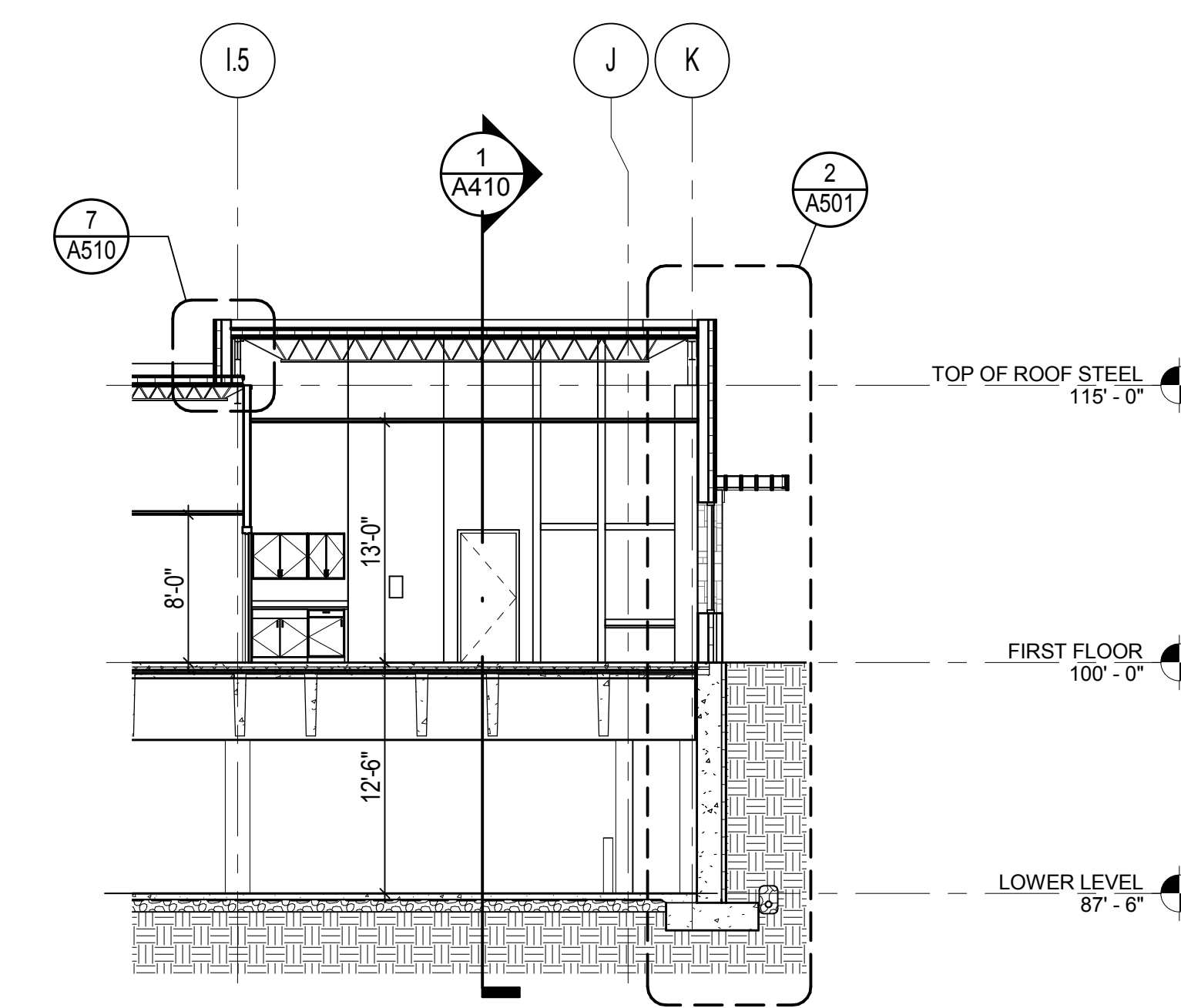
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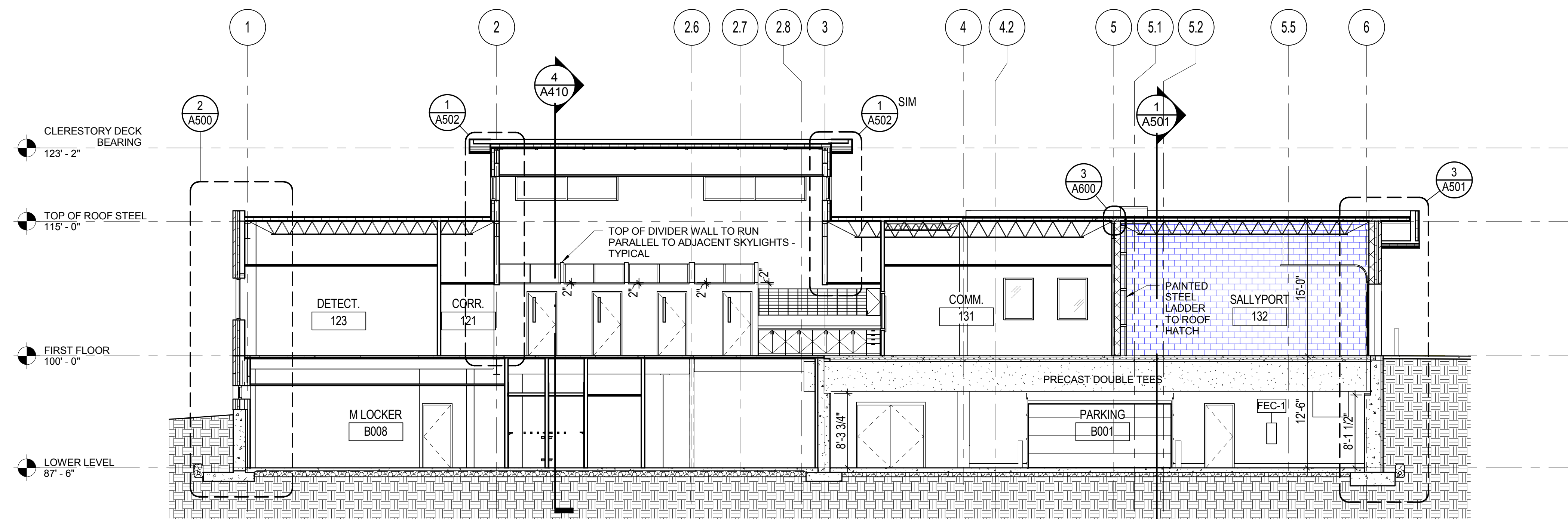
PROJECT NUMBER 152413.01



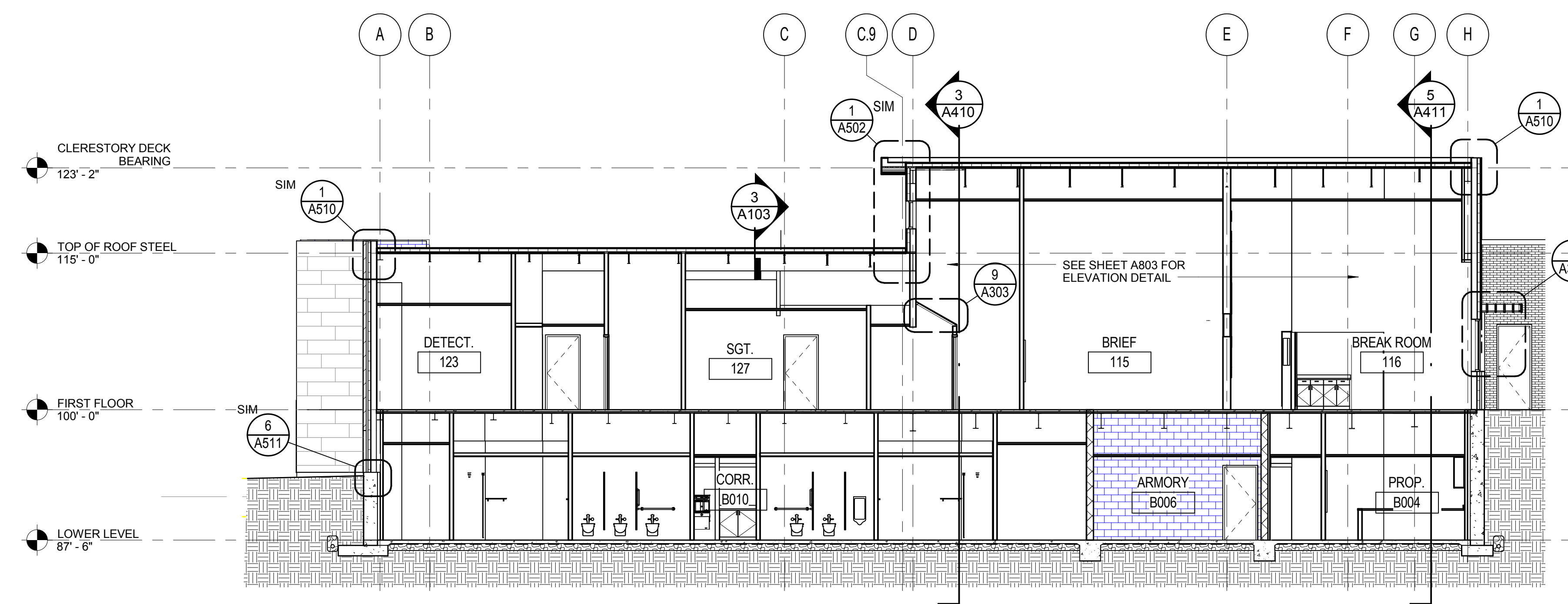
1 BUILDING SECTION @ COMMUNITY ROOM - EAST / WEST
SCALE: 1/8" = 1'-0"



2 BUILDING SECTION @ COMMUNITY ROOM - NORTH / SOUTH
SCALE: 1/8" = 1'-0"



3 BUILDING SECTION EAST WEST
SCALE: 1/8" = 1'-0"



4 BUILDING SECTION NORTH - SOUTH
SCALE: 1/8" = 1'-0"

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BUILDING SECTIONS

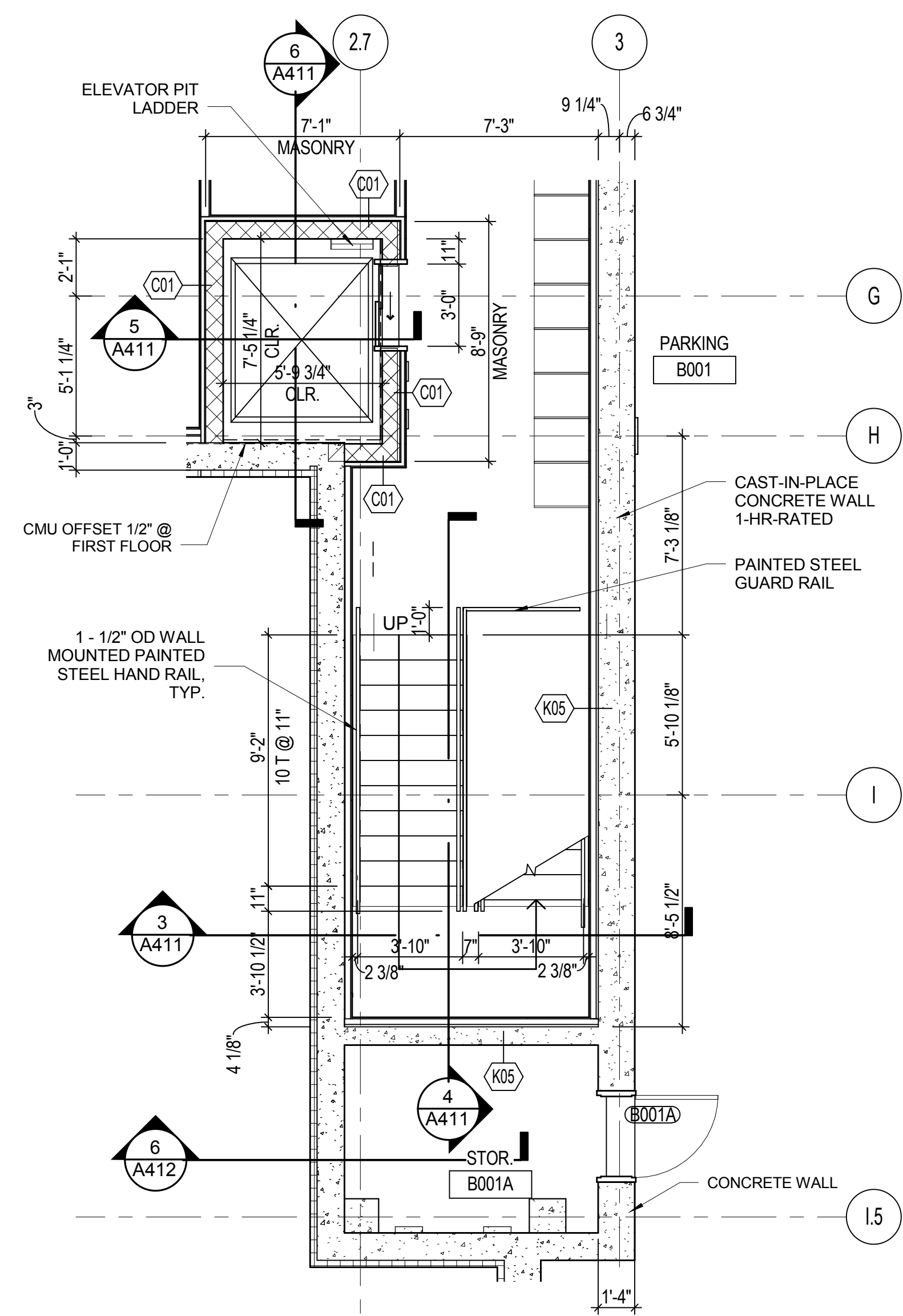
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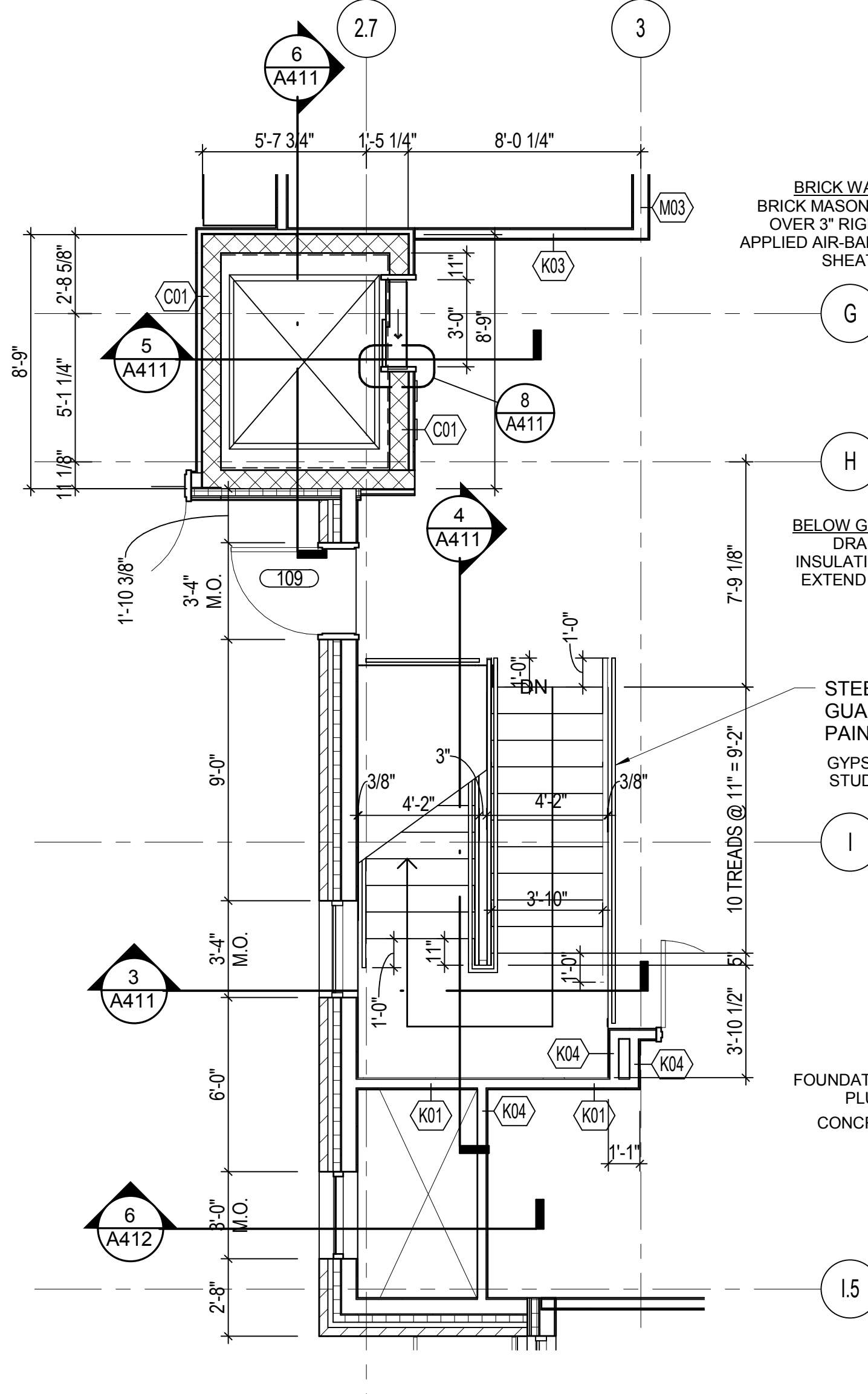
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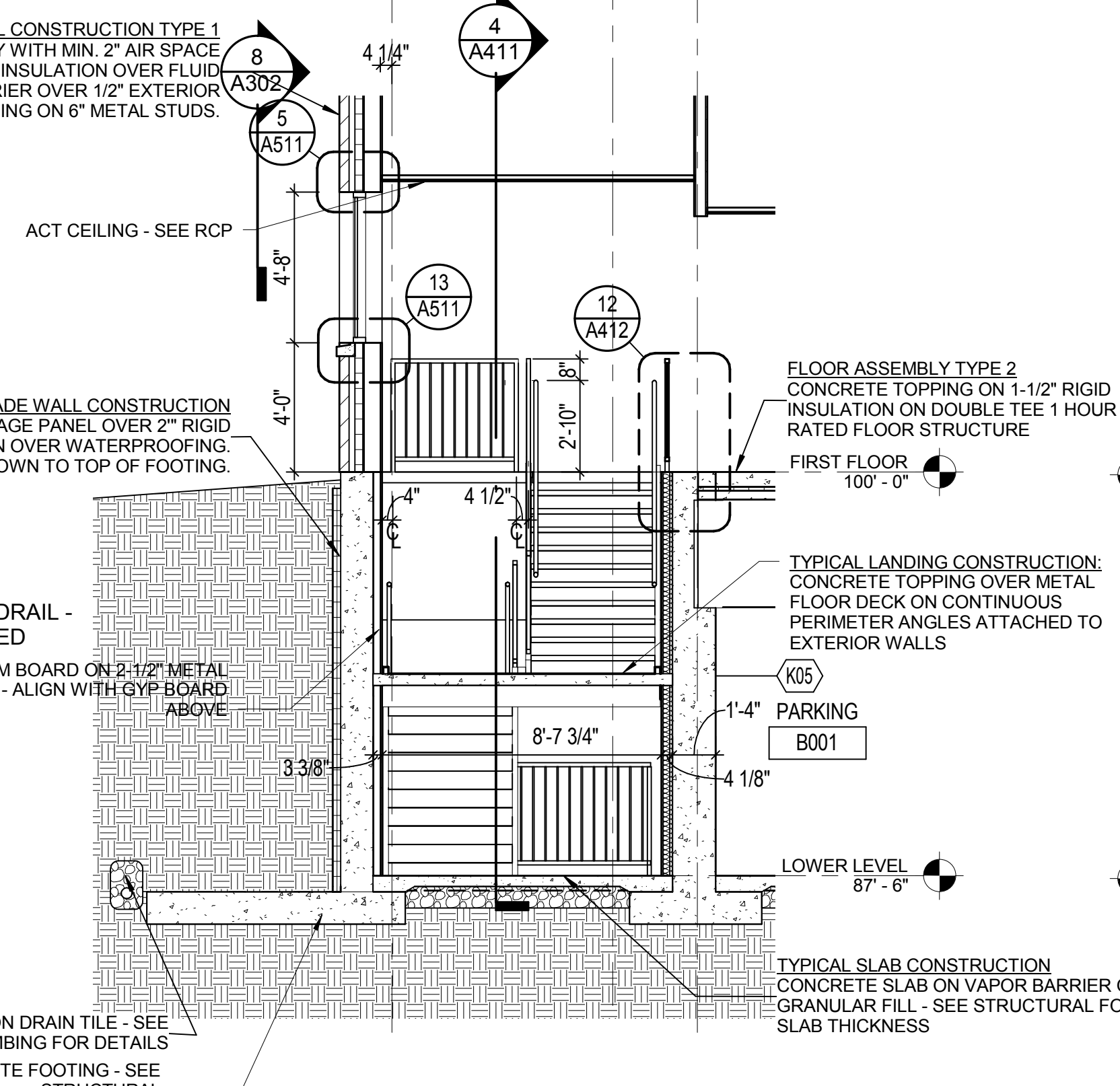
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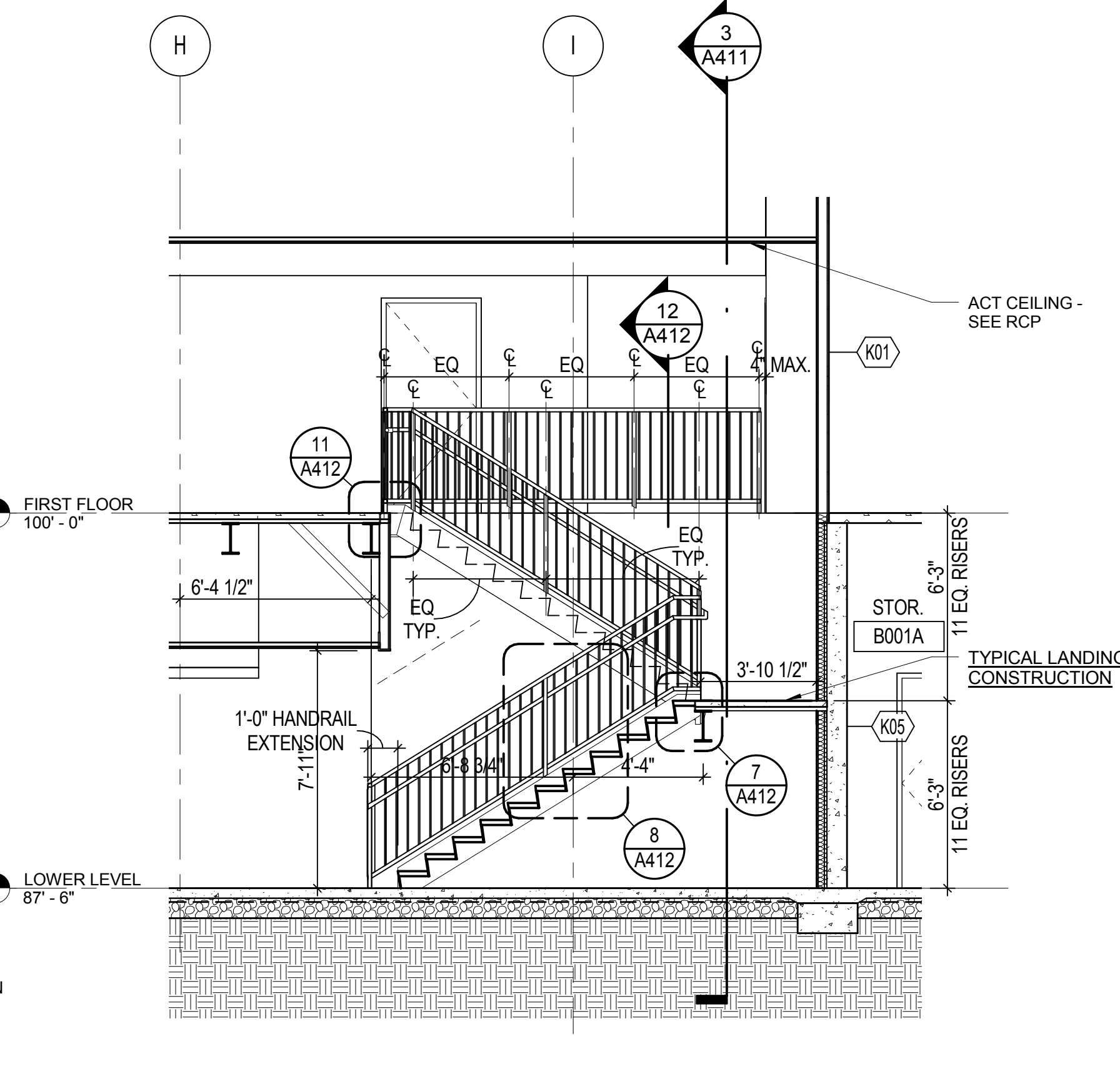
1 STAIR 1 & ELEVATOR - LOWER LEVEL PLAN
SCALE: 1/4" = 1'-0"



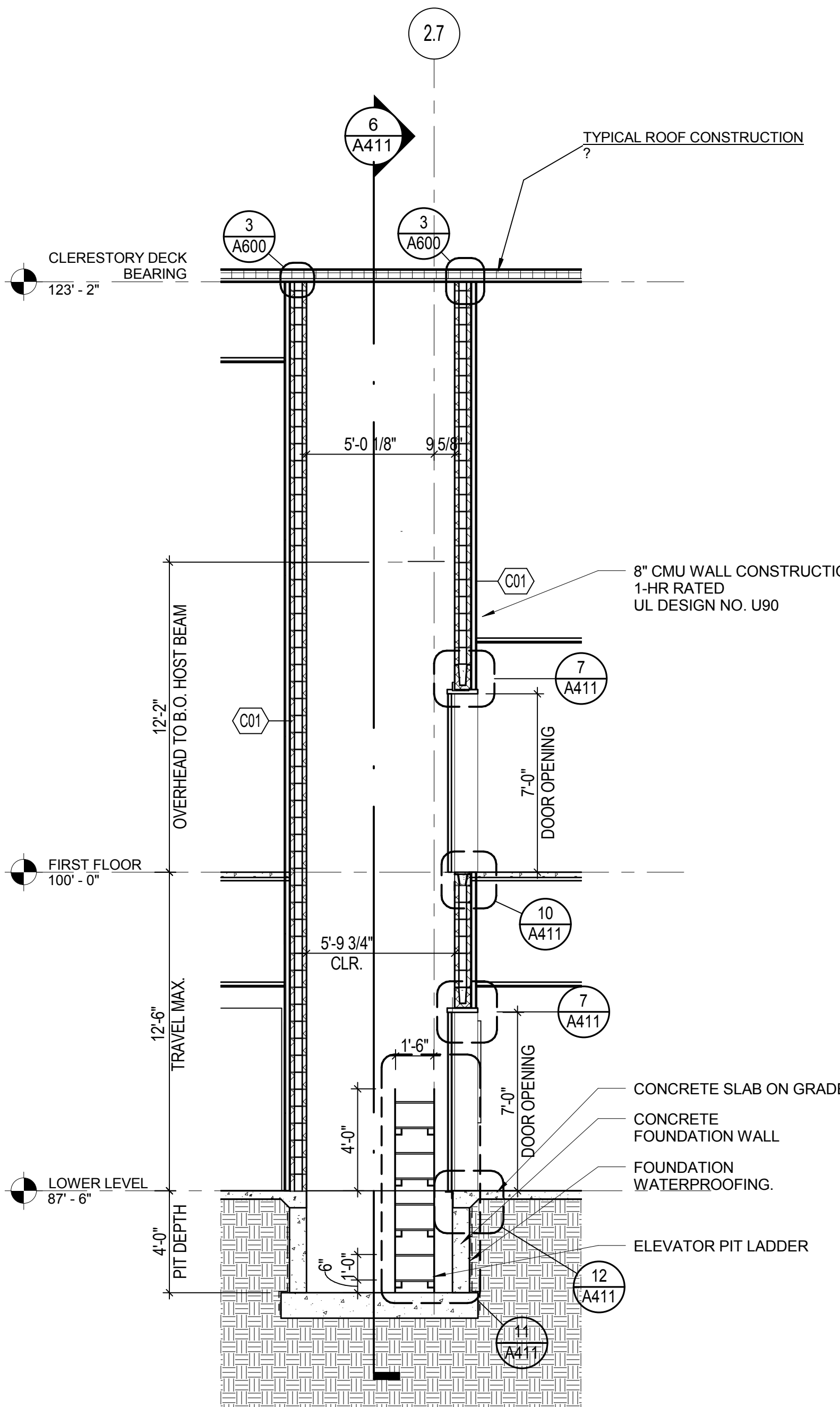
2 STAIR 1 & ELEVATOR - FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"



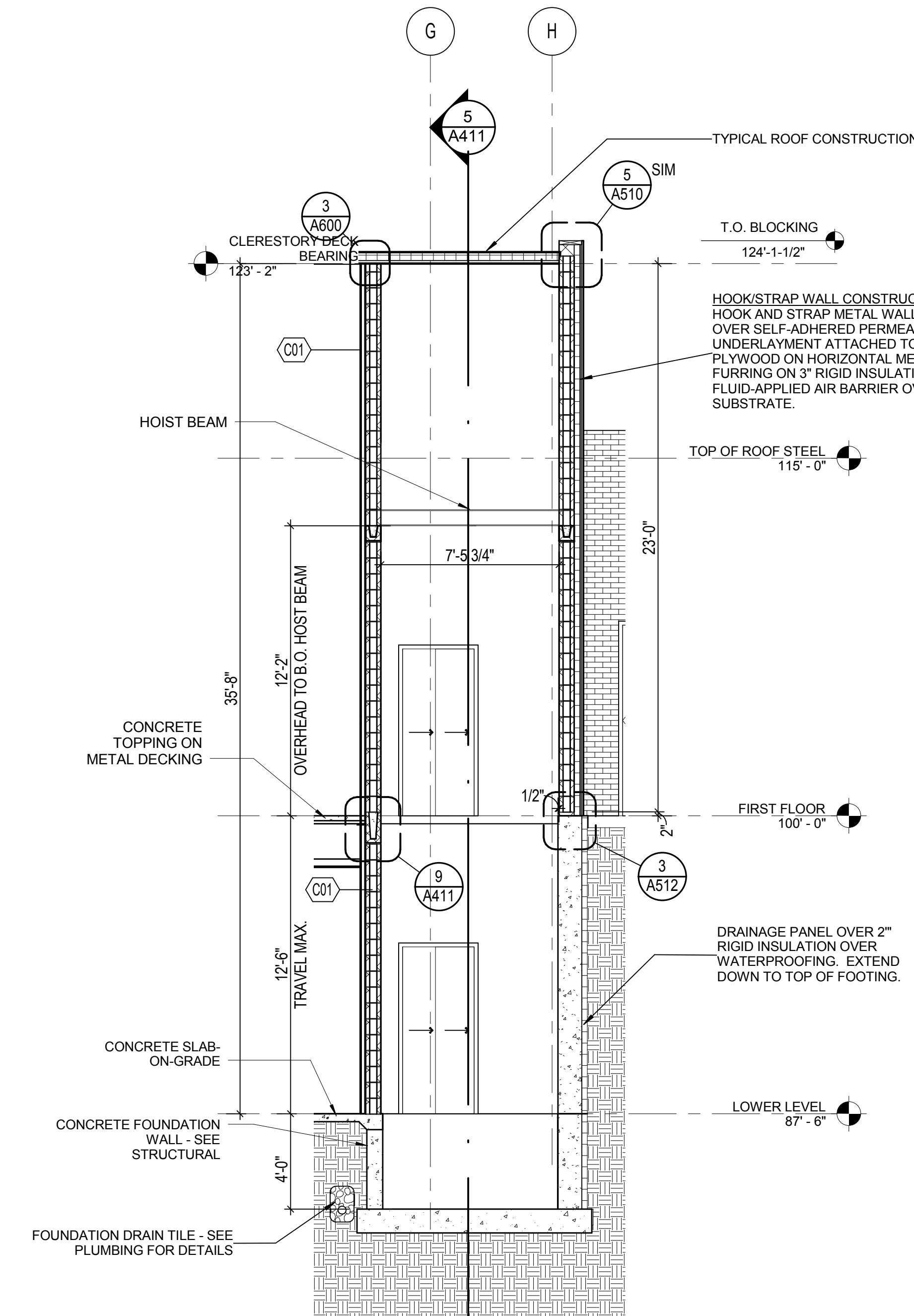
3 STAIR 1 - EAST/WEST SECTION
SCALE: 1/4" = 1'-0"



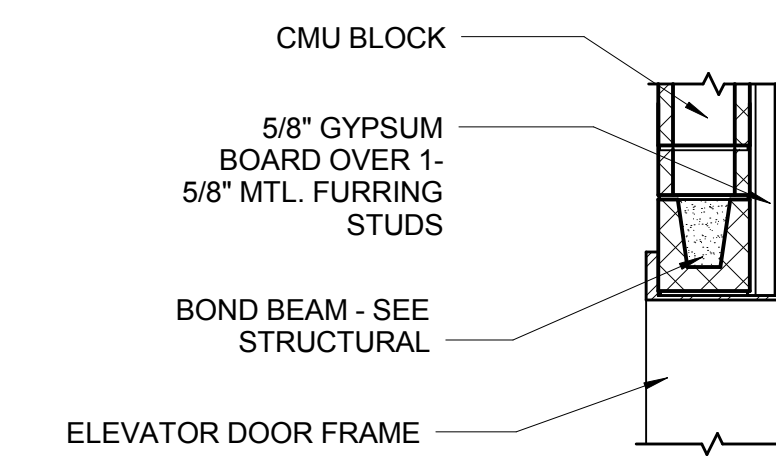
4 STAIR 1 - NORTH / SOUTH SECTION
SCALE: 1/4" = 1'-0"



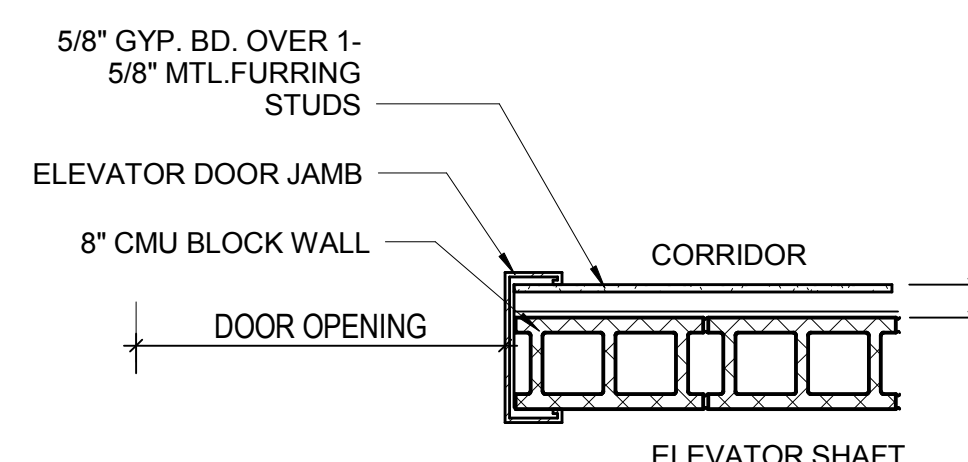
5 ELEVATOR SECTION - EAST/WEST
SCALE: 1/4" = 1'-0"



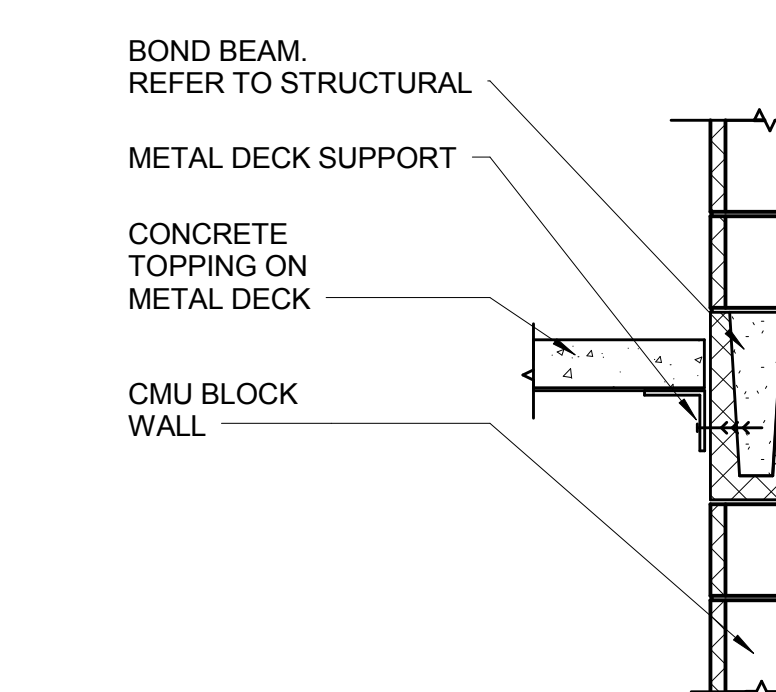
6 ELEVATOR SECTION - NORTH / SOUTH
SCALE: 1/4" = 1'-0"



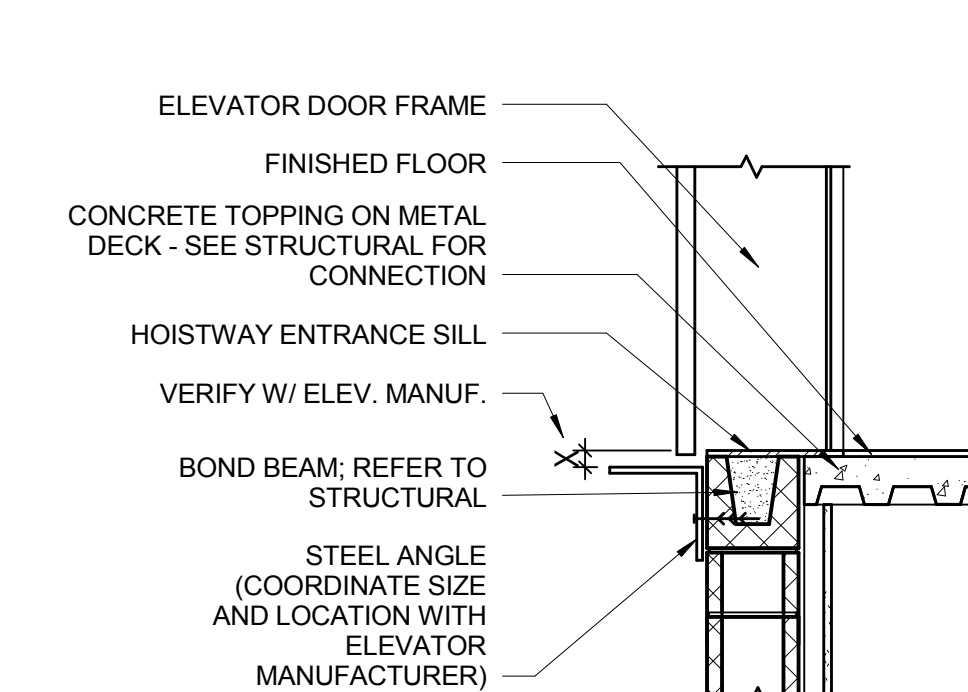
7 ELEVATOR DOOR HEAD DETAIL
SCALE: 3/4" = 1'-0"



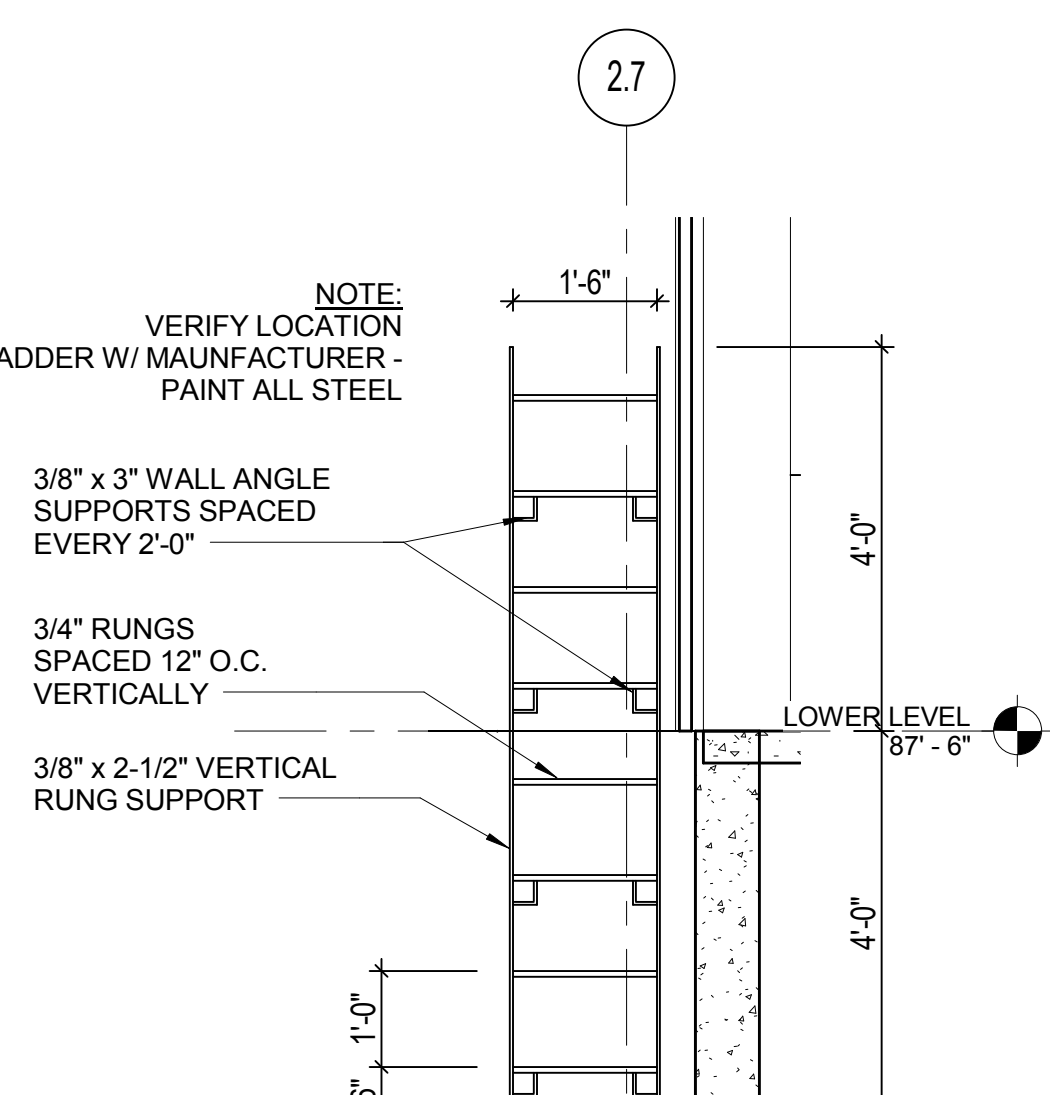
8 ELEVATOR DOOR JAMB DETAIL
SCALE: 3/4" = 1'-0"



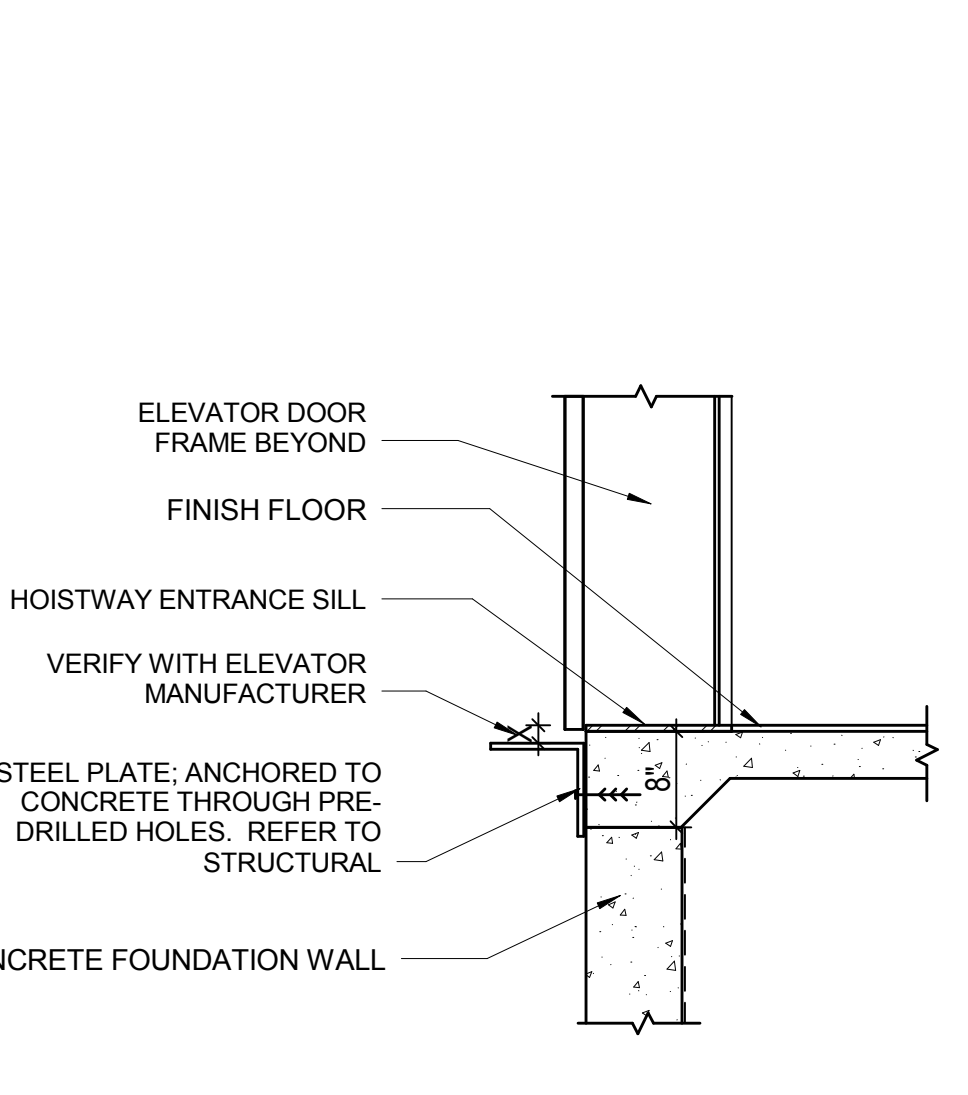
9 FLOOR SUPPORT @ SHAFT
SCALE: 3/4" = 1'-0"



10 ELEVATOR SILL
SCALE: 3/4" = 1'-0"



11 PIT LADDER ELEVATION
SCALE: 1/2" = 1'-0"



12 ELEVATOR SILL AT FOUNDATION WALL
SCALE: 3/4" = 1'-0"

DRAWN BY MMZ
CHECKED BY SK

**STAIR & ELEVATOR
ENLARGED PLANS &
SECTIONS**

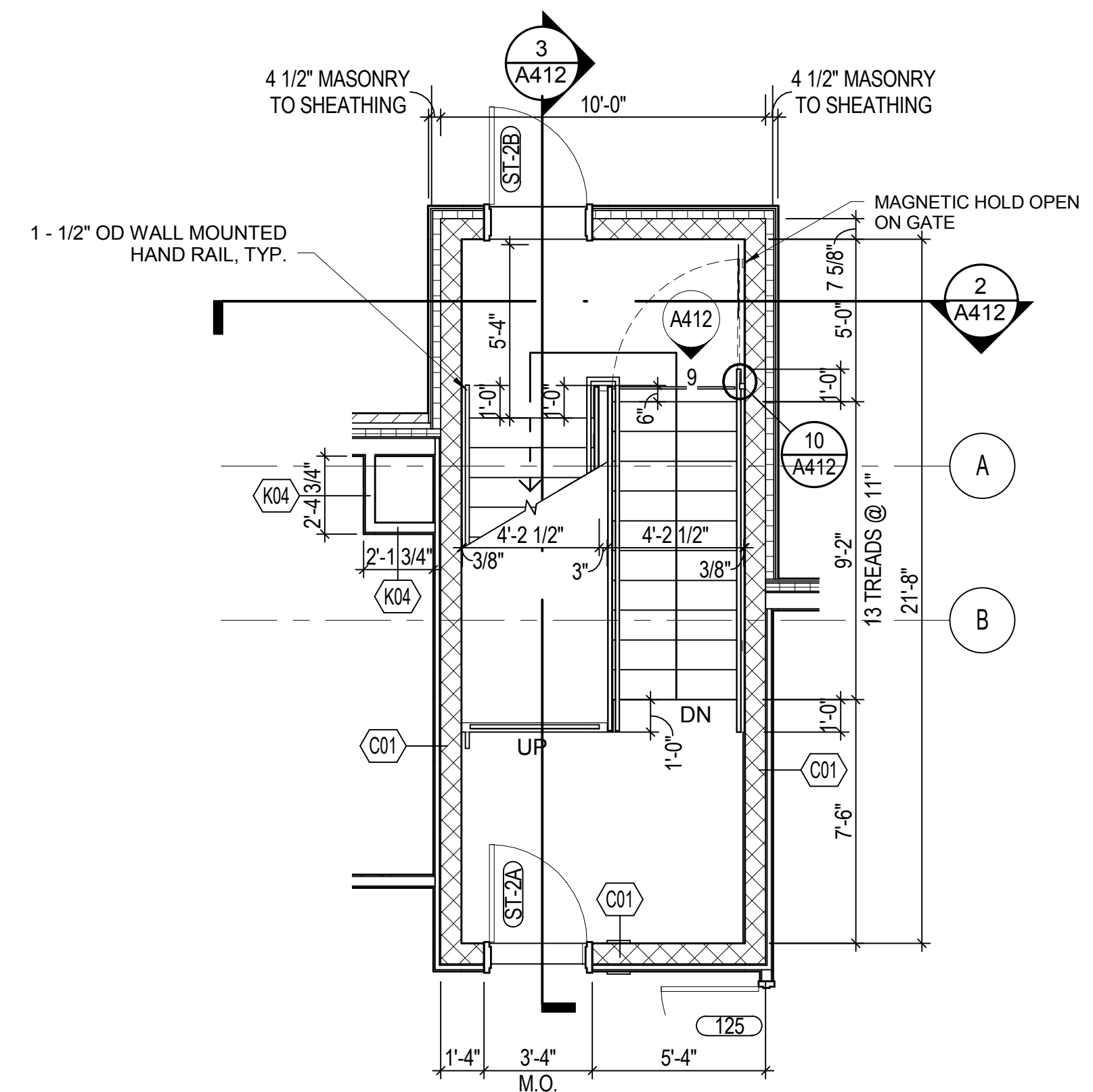
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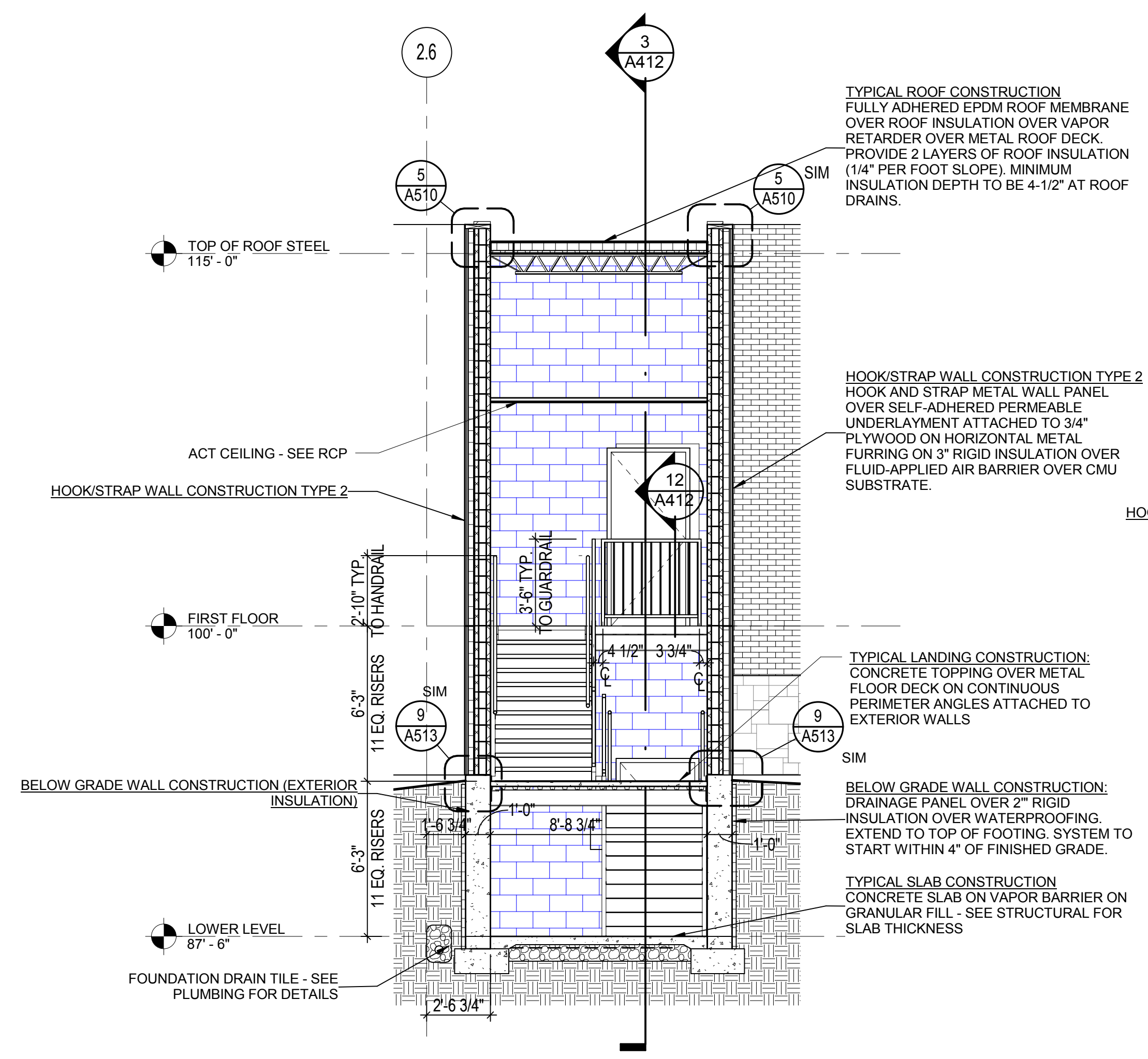
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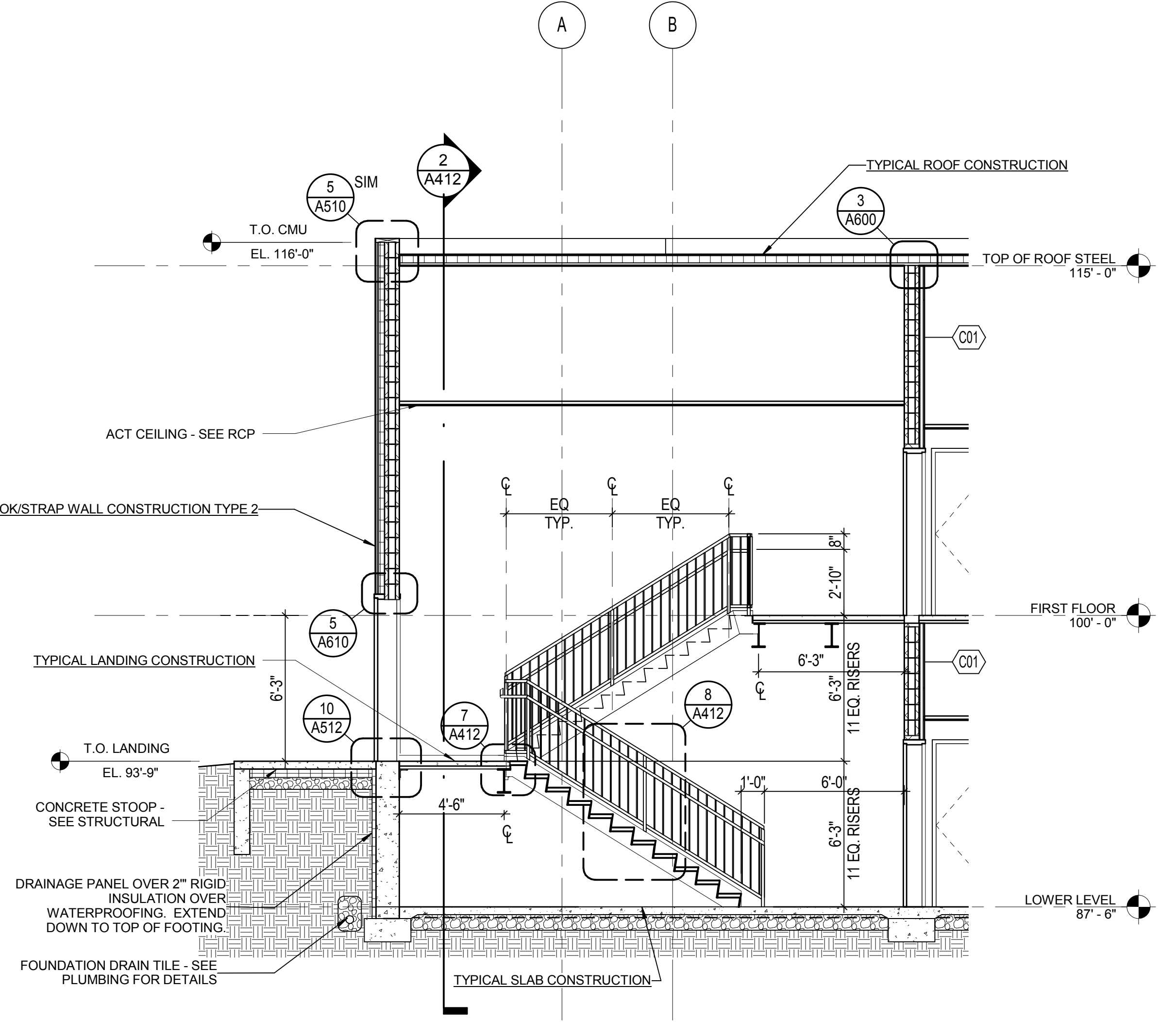
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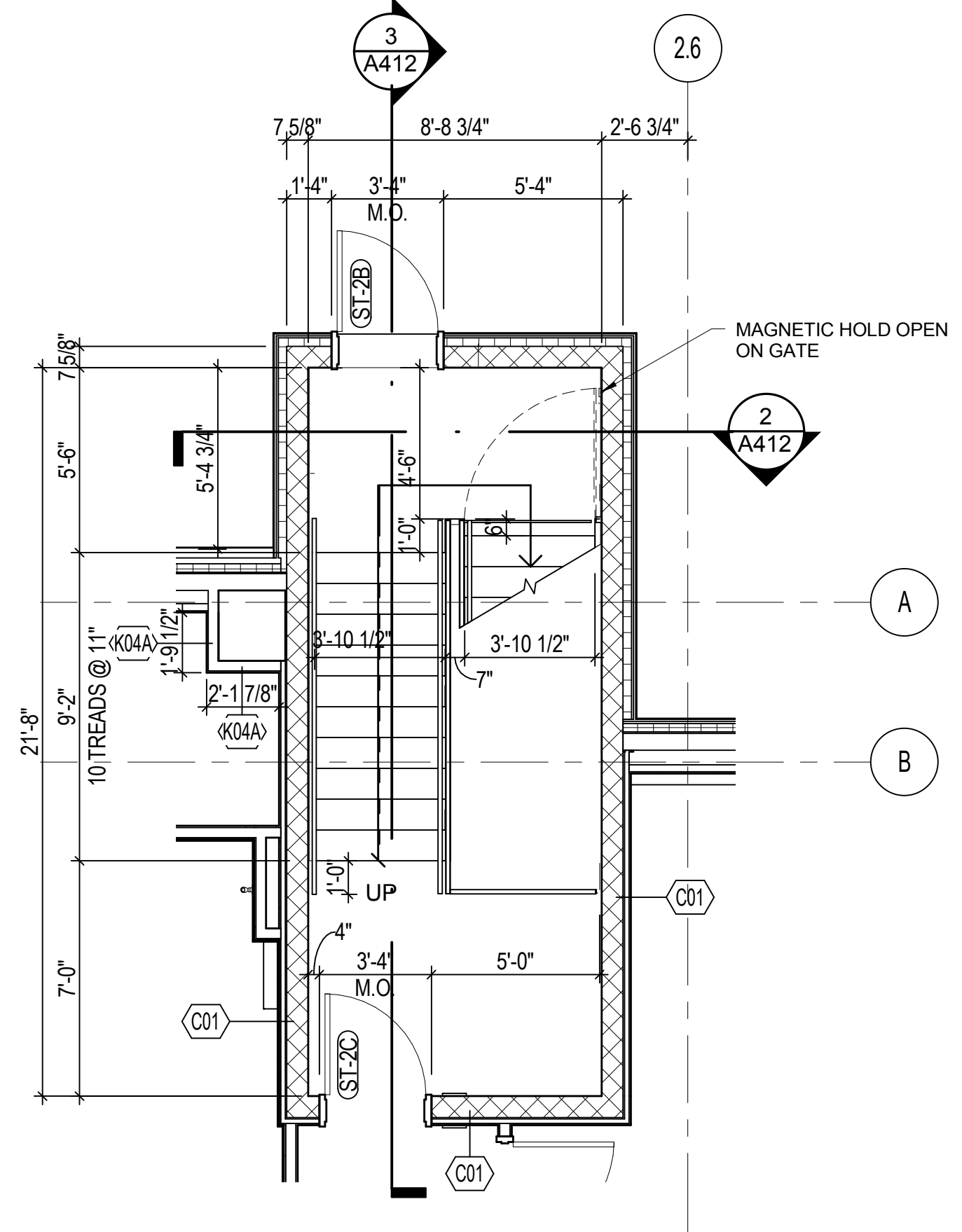
1 STAIR 2 - FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"



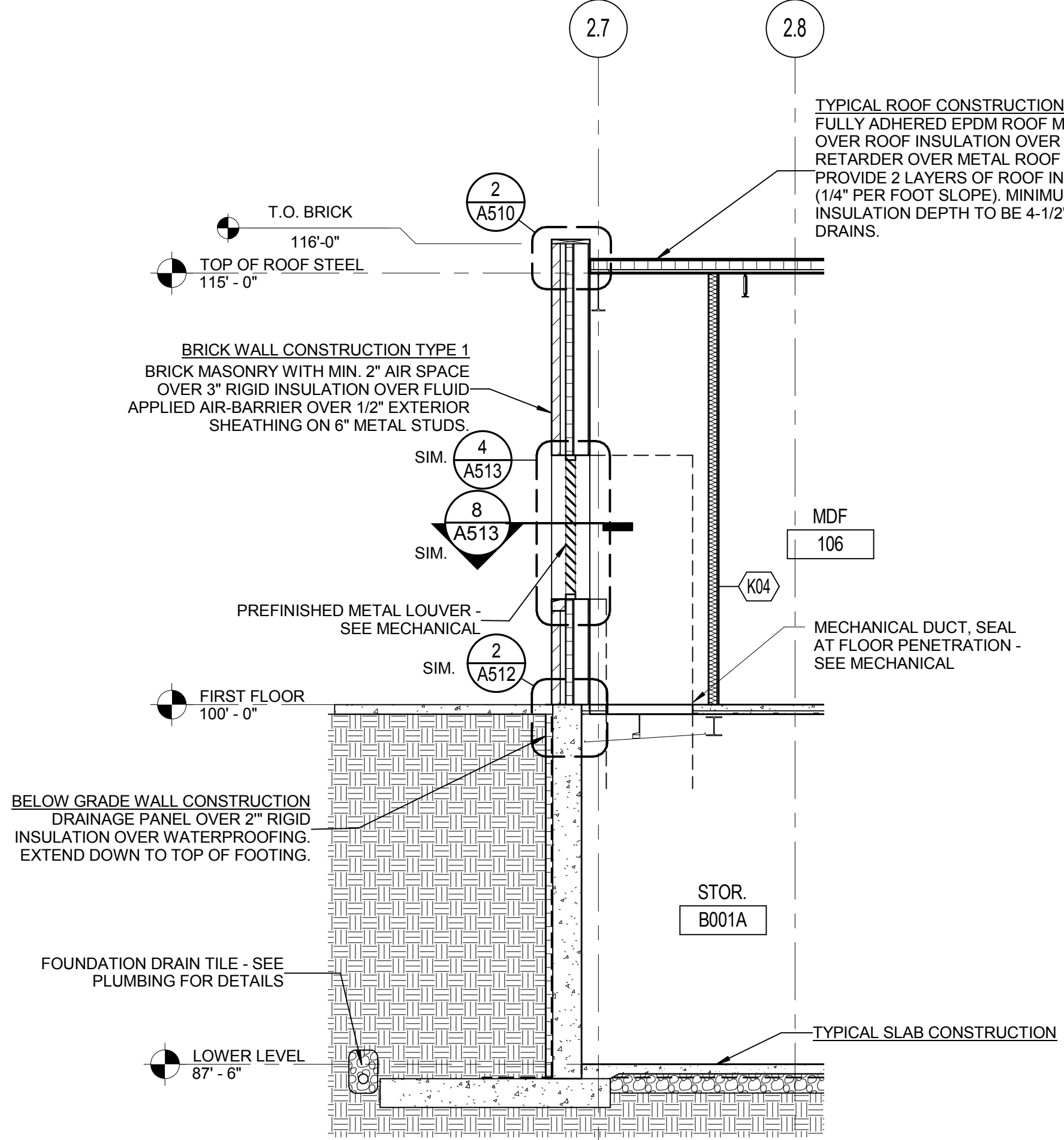
2 STAIR 2 - EAST/WEST SECTION
SCALE: 1/4" = 1'-0"



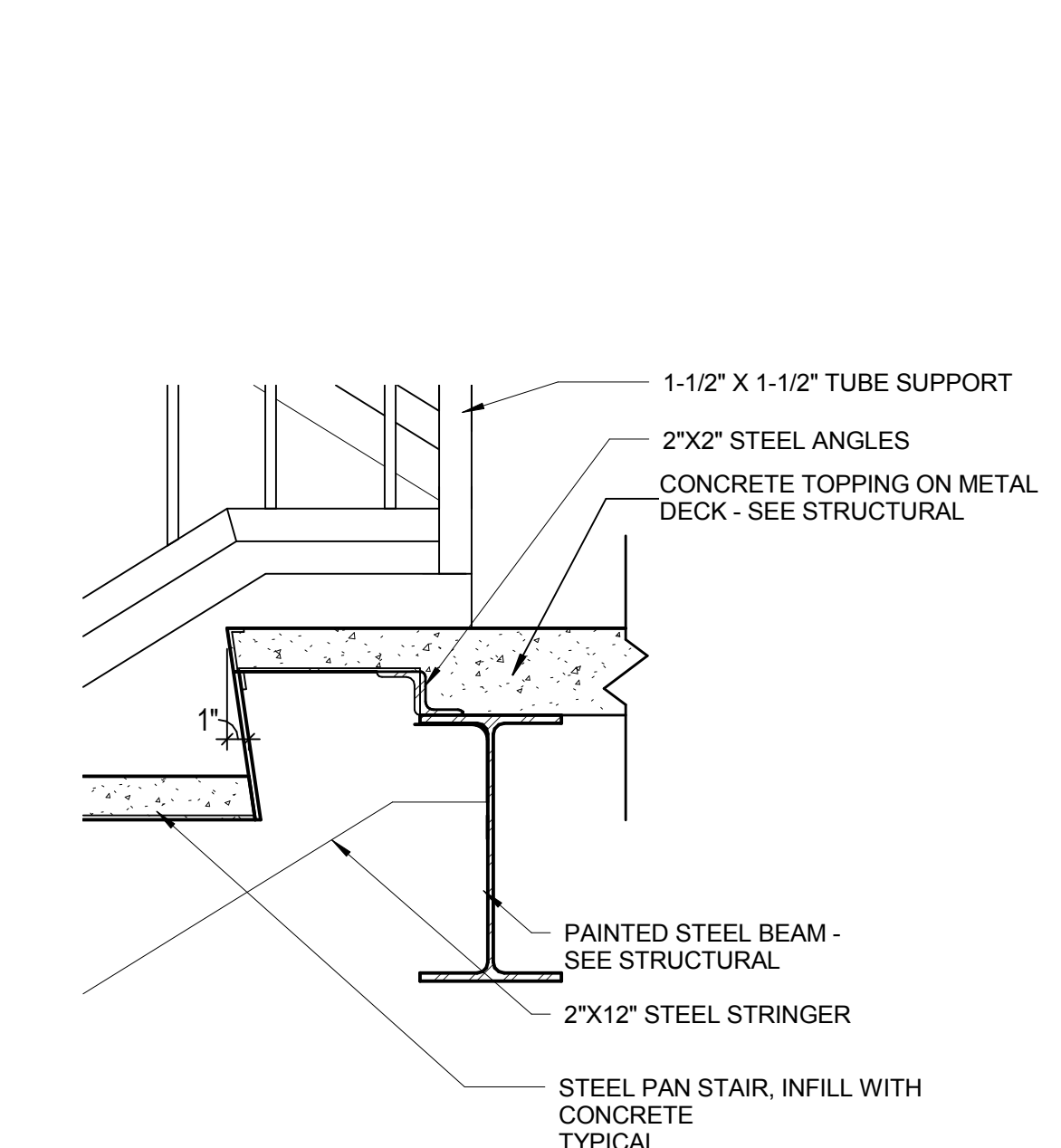
3 STAIR 2 - NORTH/SOUTH SECTION
SCALE: 1/4" = 1'-0"



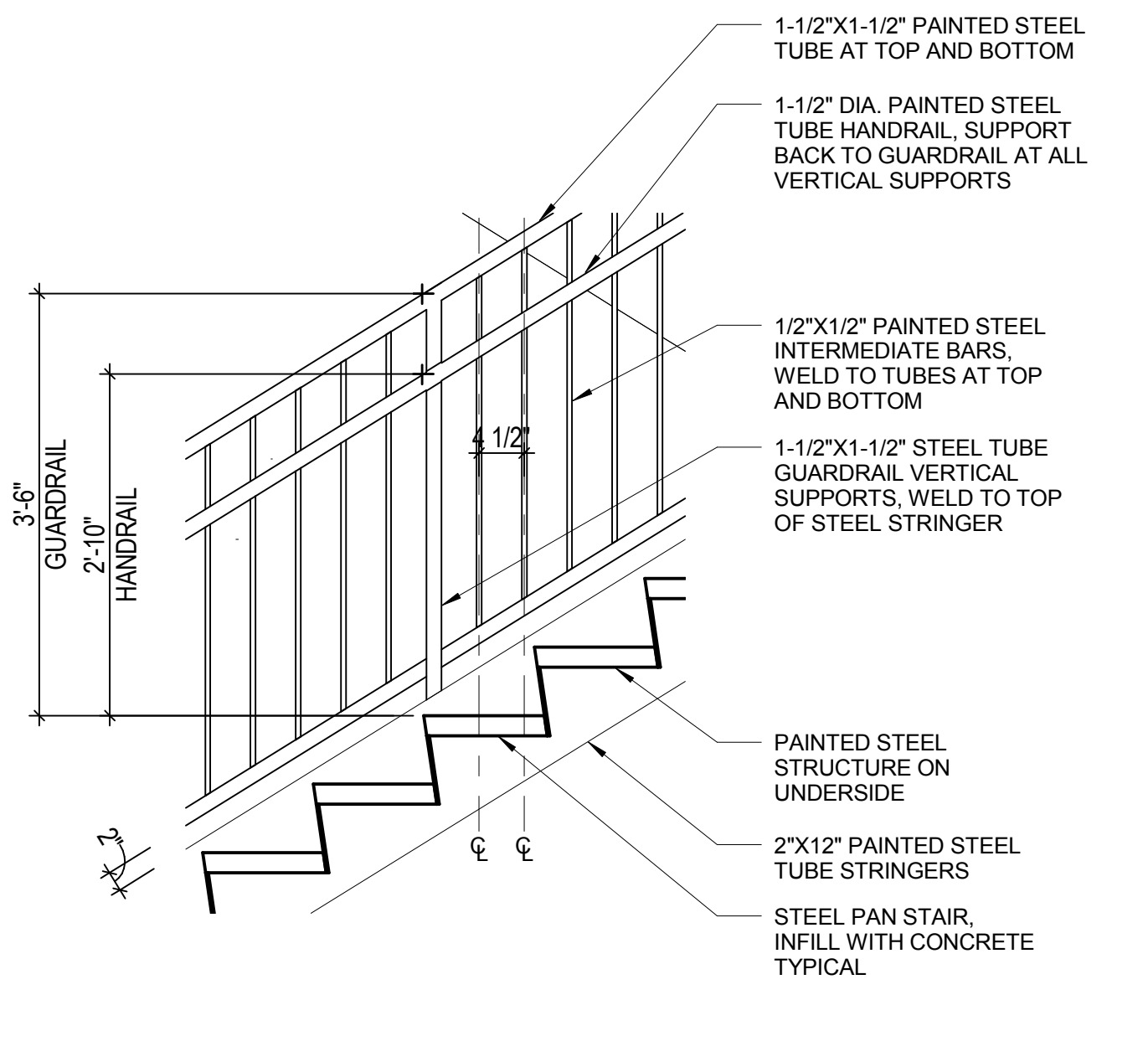
5 STAIR 2 - LOWER LEVEL PLAN
SCALE: 1/4" = 1'-0"



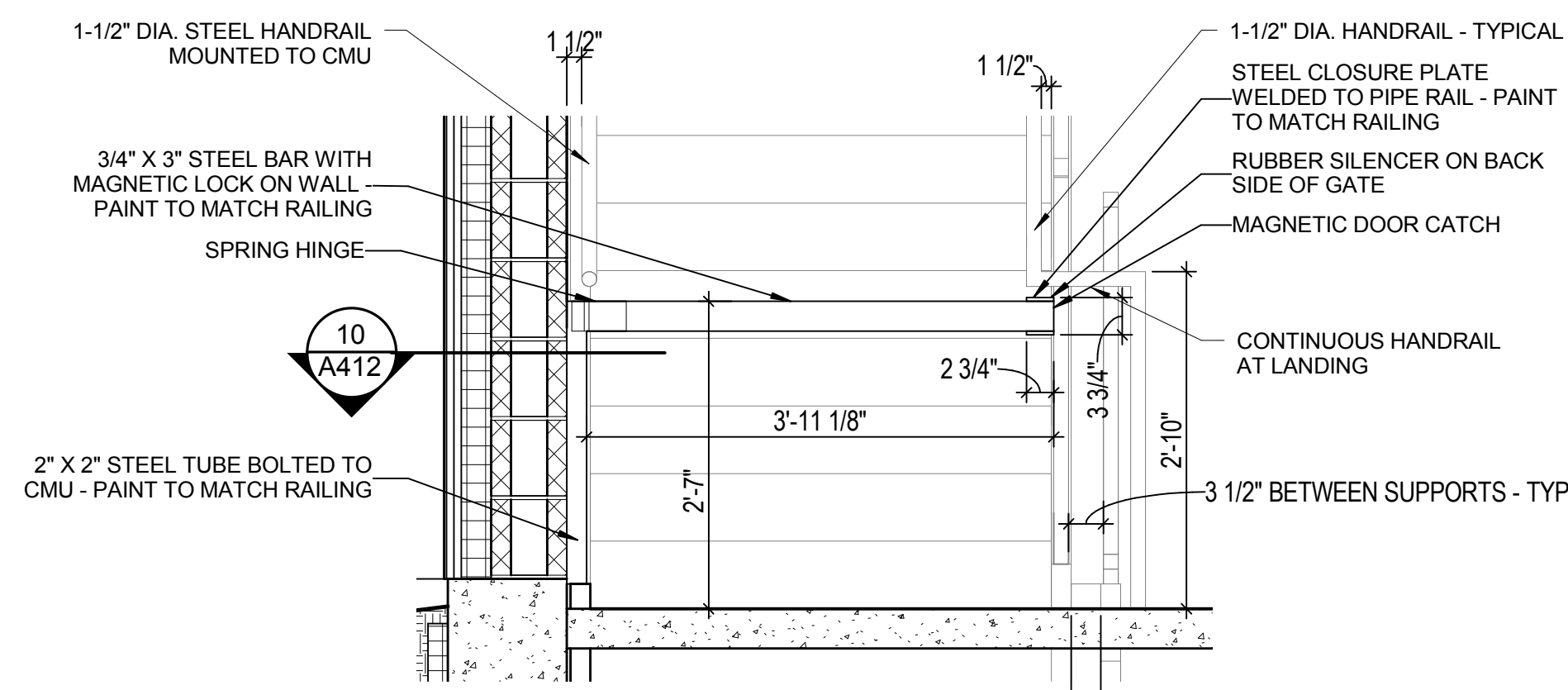
6 WALL SECTION @ IDF
SCALE: 1/4" = 1'-0"



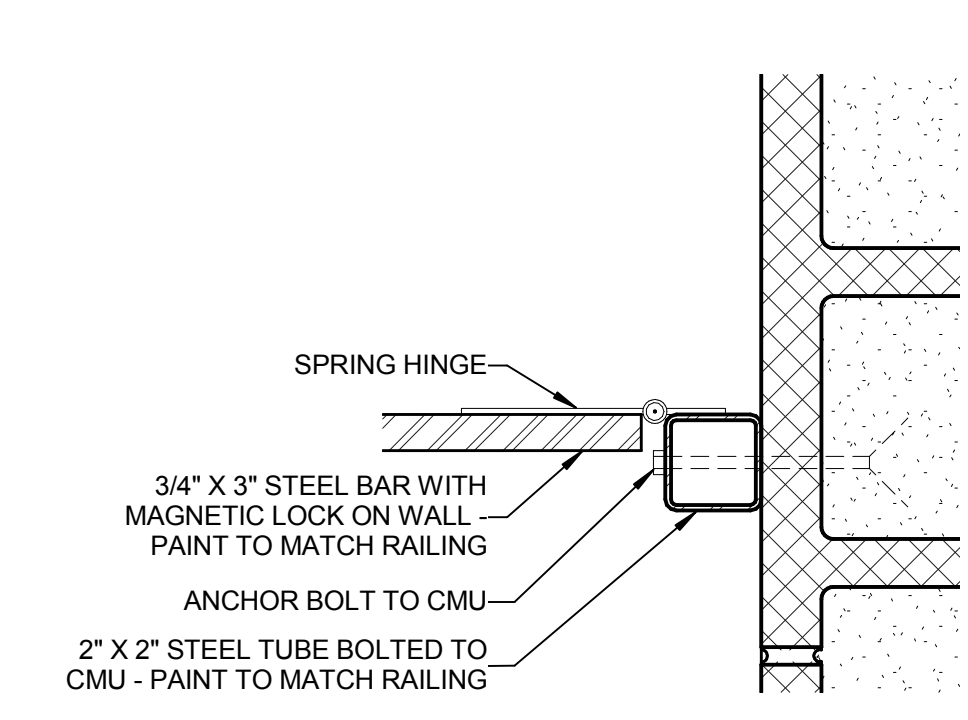
7 STAIR TREAD DETAIL
SCALE: 1 1/2" = 1'-0"



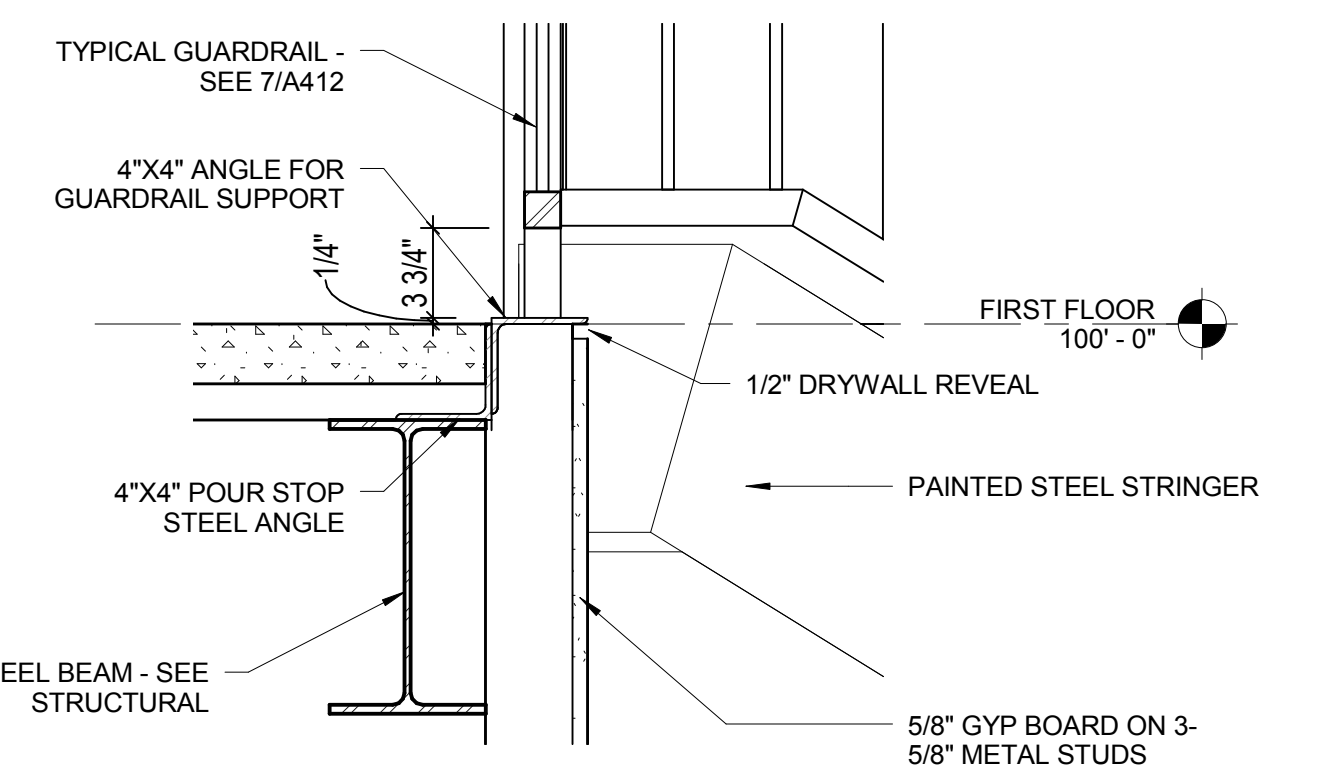
8 TYPICAL RAILING DETAIL
SCALE: 3/4" = 1'-0"



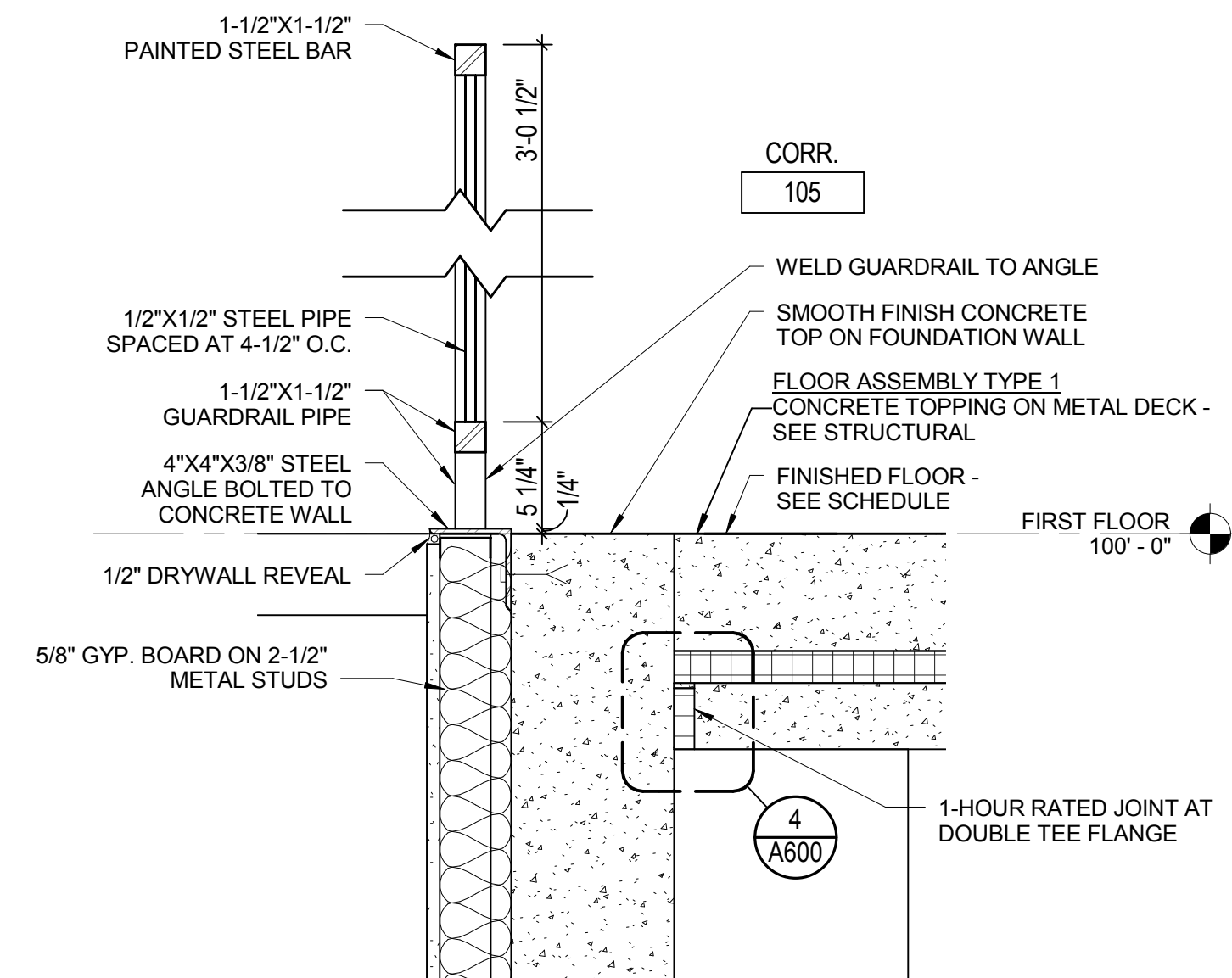
9 EXIT BARRIER GATE ELEVATION @ LANDING
SCALE: 3/4" = 1'-0"



10 EXIT BARRIER GATE DETAIL
SCALE: 3" = 1'-0"



11 GUARD RAIL DETAIL
SCALE: 1 1/2" = 1'-0"



12 GUARD RAIL DETAIL @ FLOOR
SCALE: 1 1/2" = 1'-0"

DRAWN BY MMZ
CHECKED BY SK

**STAIR ENLARGED
PLANS AND
SECTIONS**

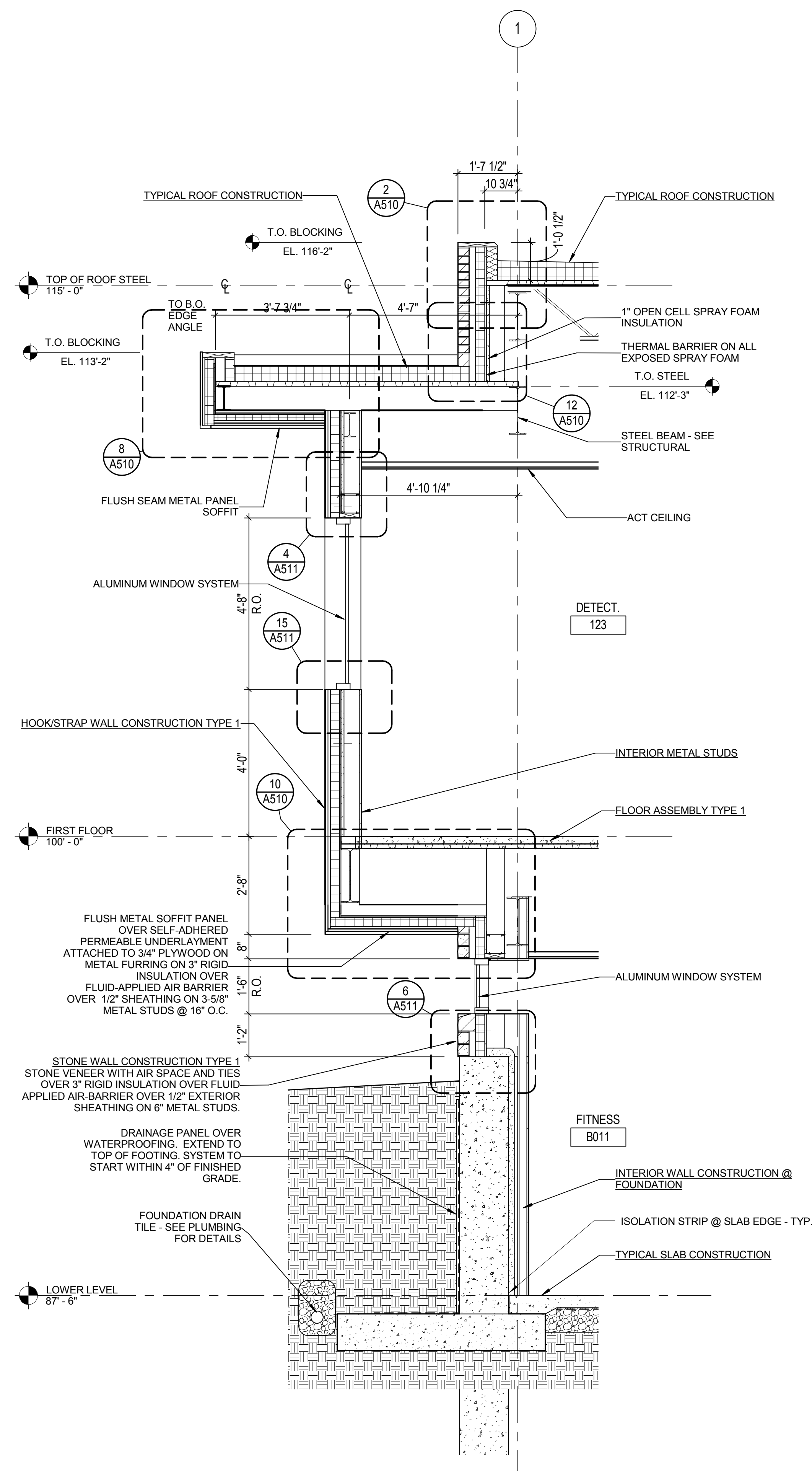
**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

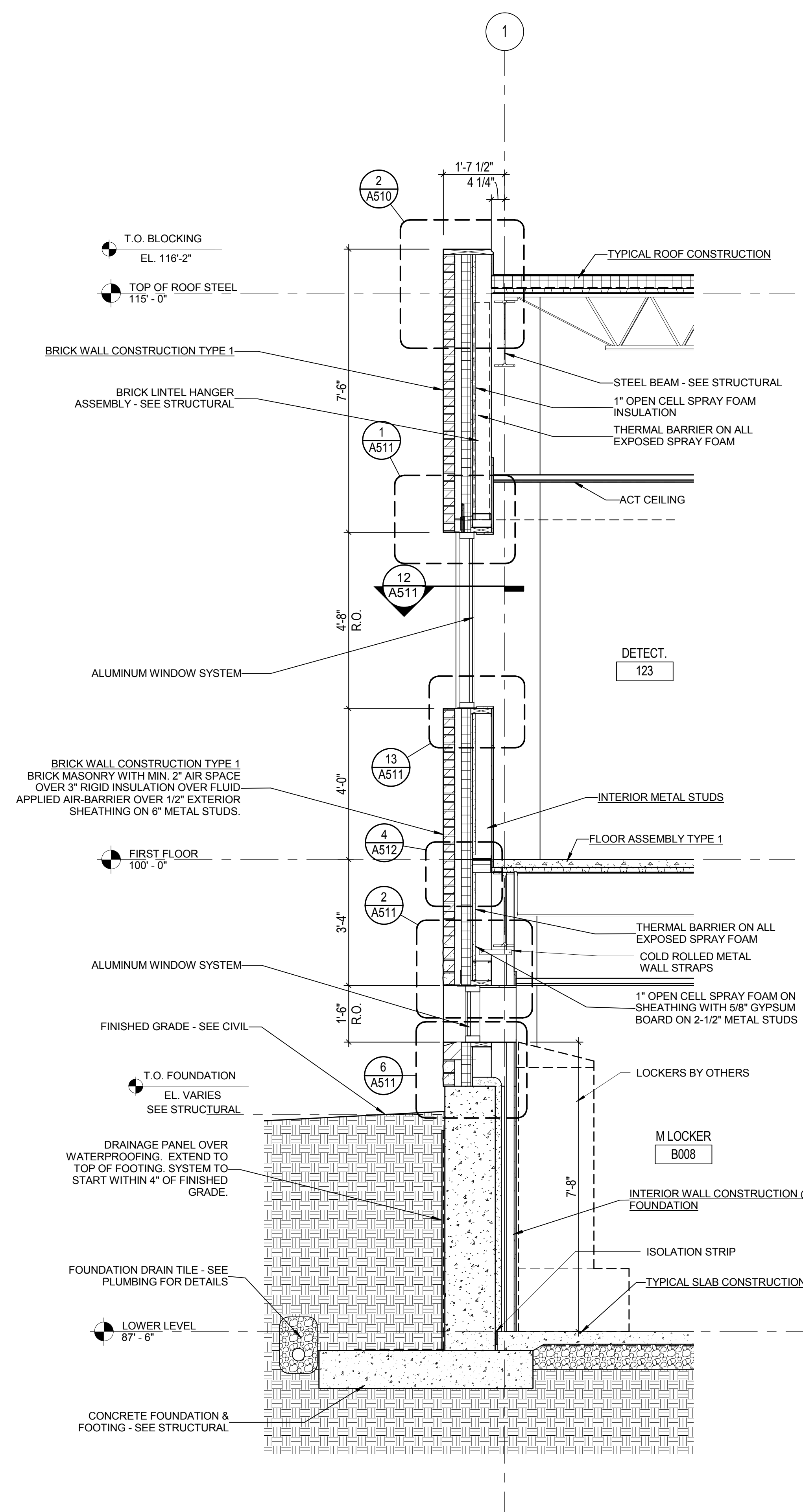
PROJECT NUMBER 152413.01

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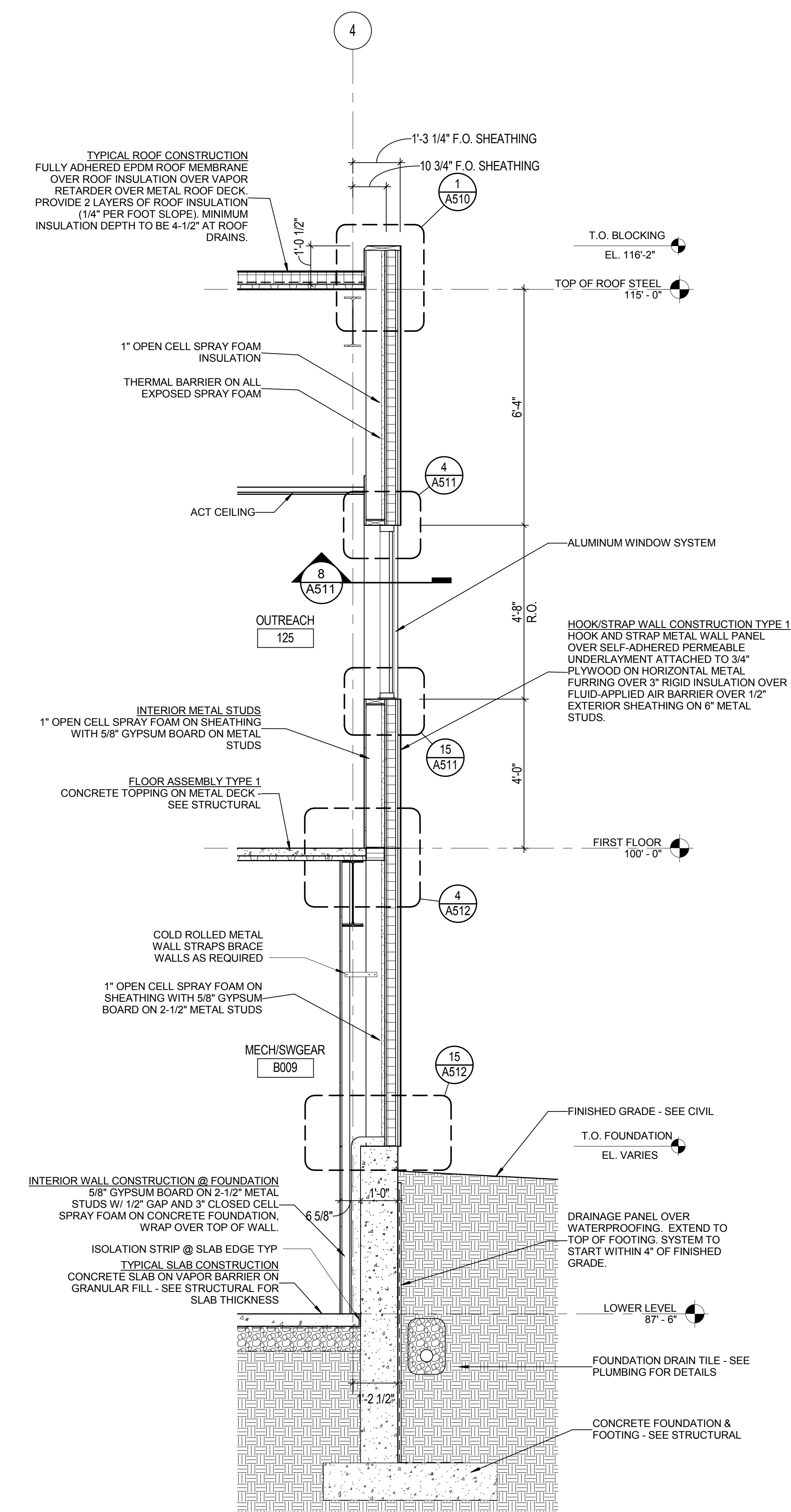
REVISION FOR:
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1 WALL SECTION @ WEST PROJECTION
SCALE: 1/2" = 1'-0"



2 WALL SECTION @ WEST
SCALE: 1/2" = 1'-0"



3 WALL SECTION @ OUTREACH
SCALE: 1/2" = 1'-0"

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WALL SECTIONS

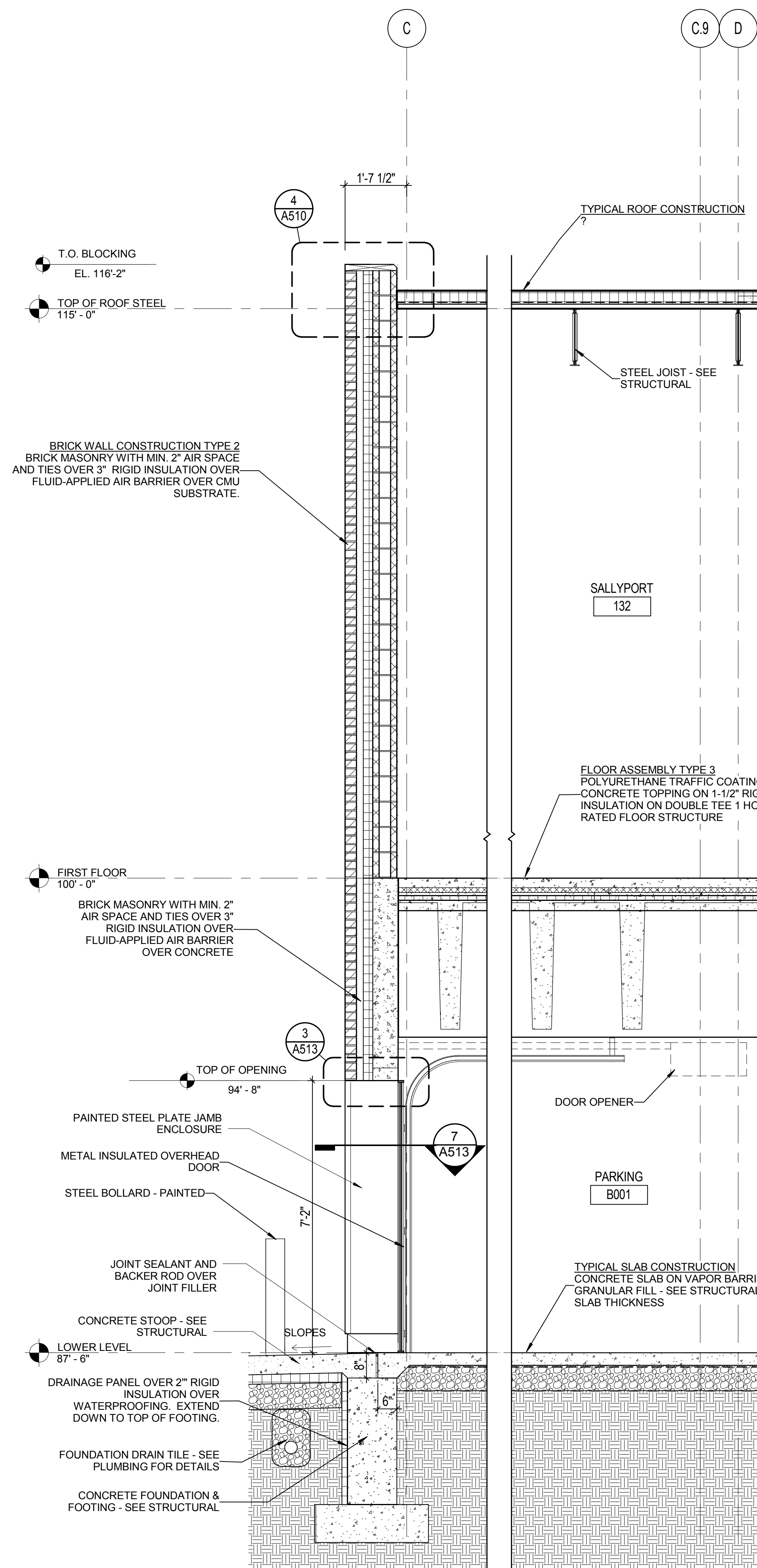
**POLICE
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MIDTOWN DISTRICT**

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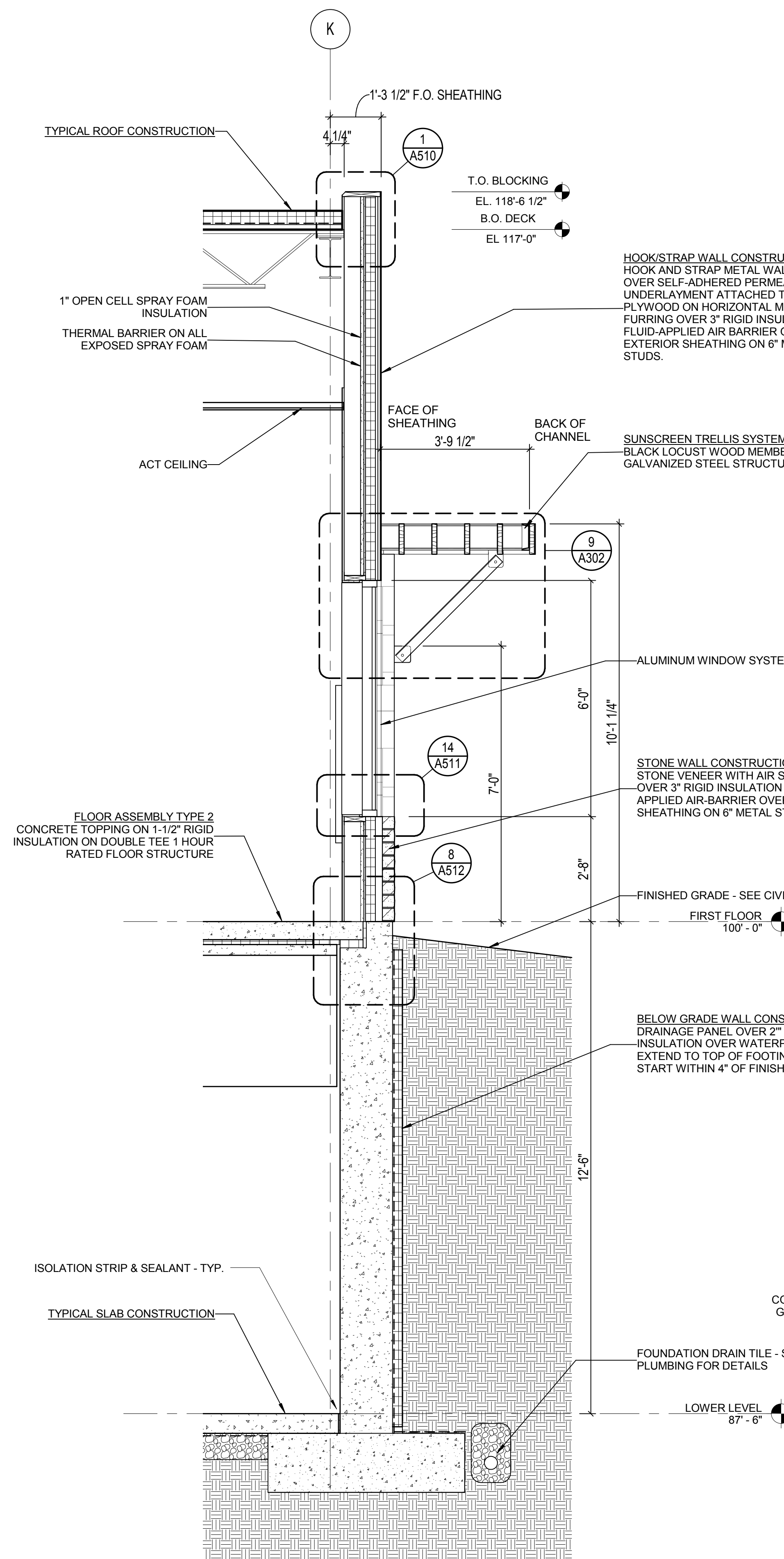
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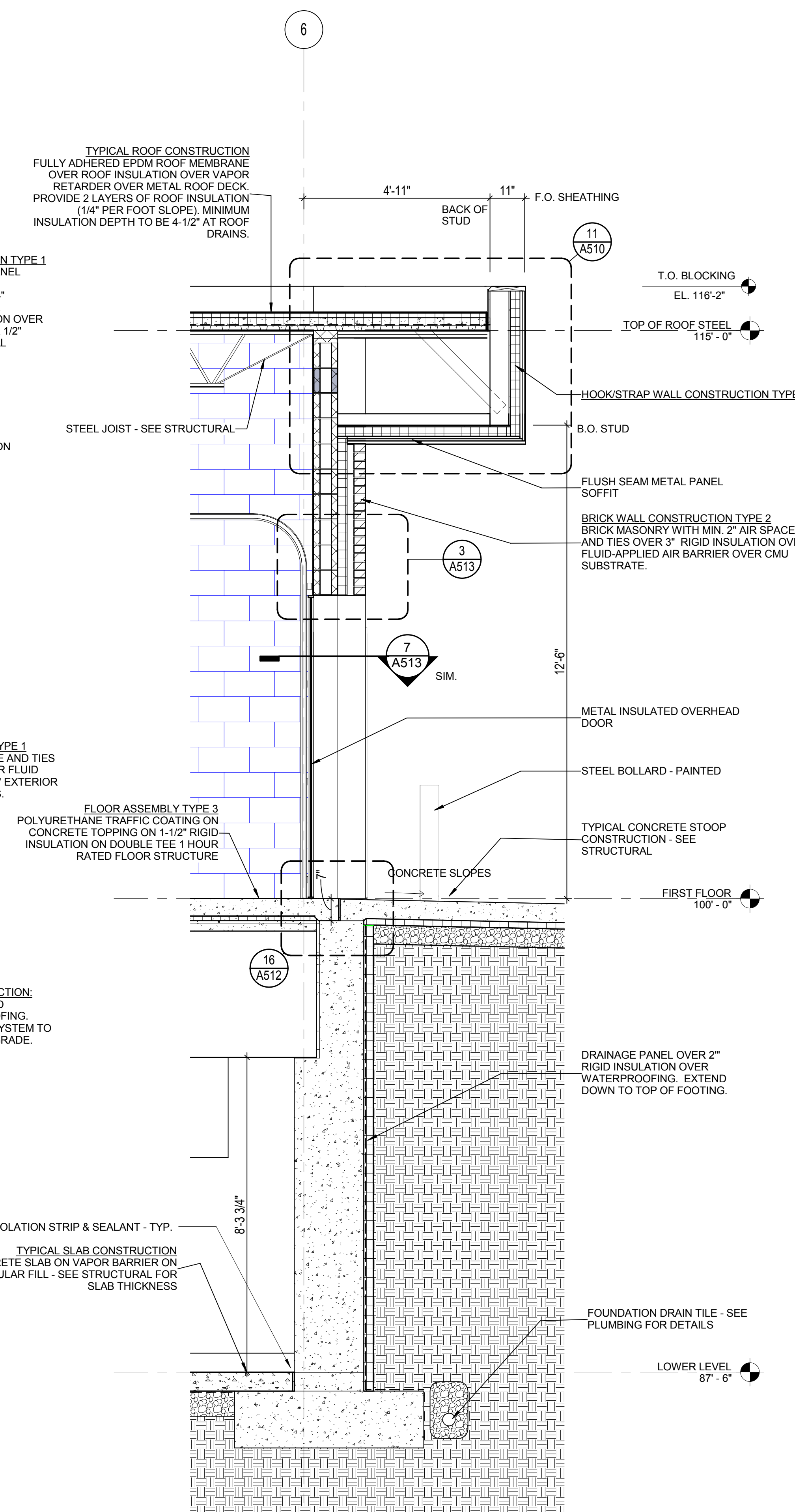
REVISION FOR:
NO. DESCRIPTION DATE



1 WALL SECTION @ SALLYPORT
SCALE: 1/2" = 1'-0"



2 WALL SECTION @ COMMUNITY ROOM
SCALE: 1/2" = 1'-0"



3 WALL SECTION @ SALLYPORT
SCALE: 1/2" = 1'-0"

WALL SECTIONS

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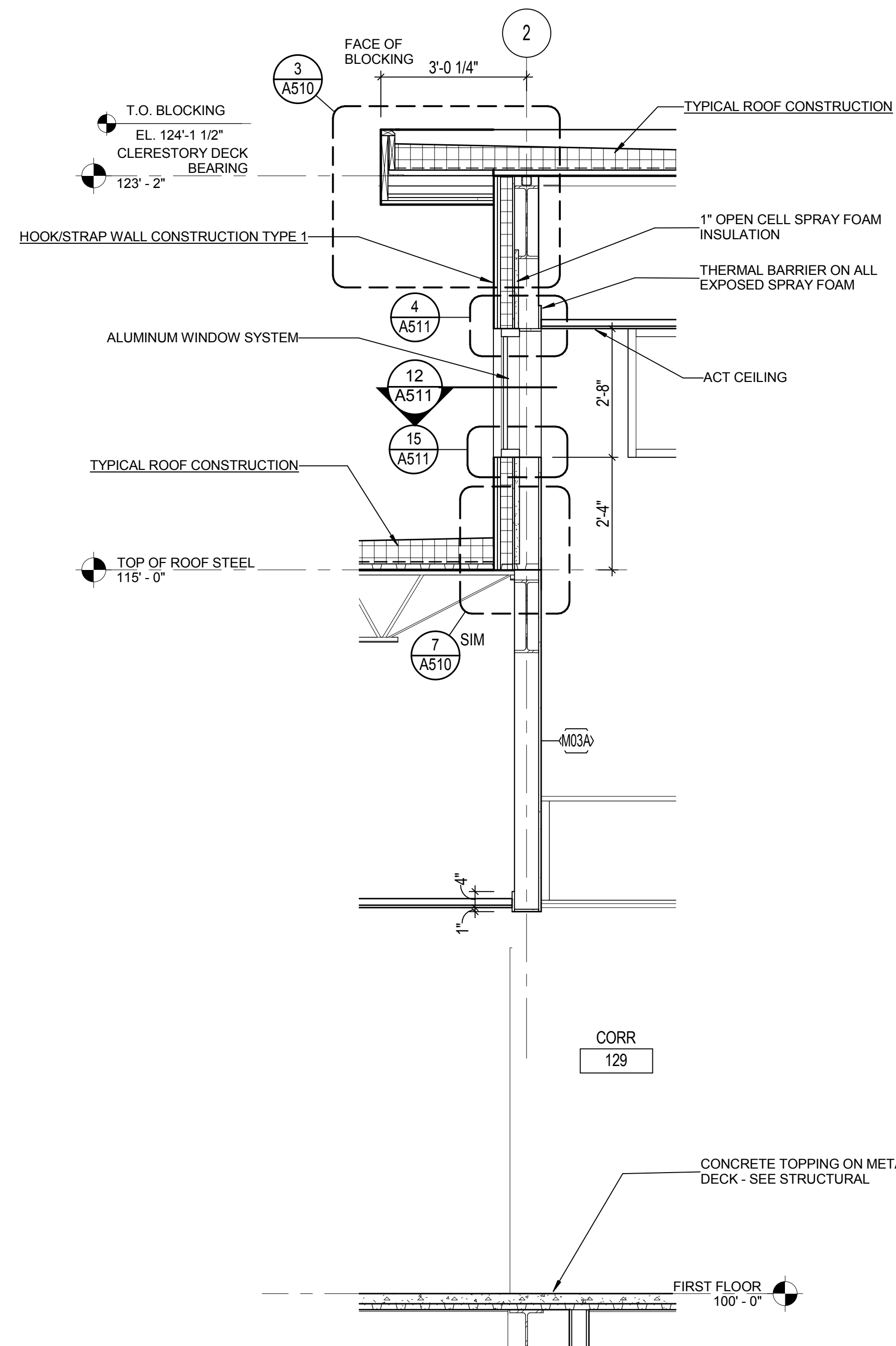
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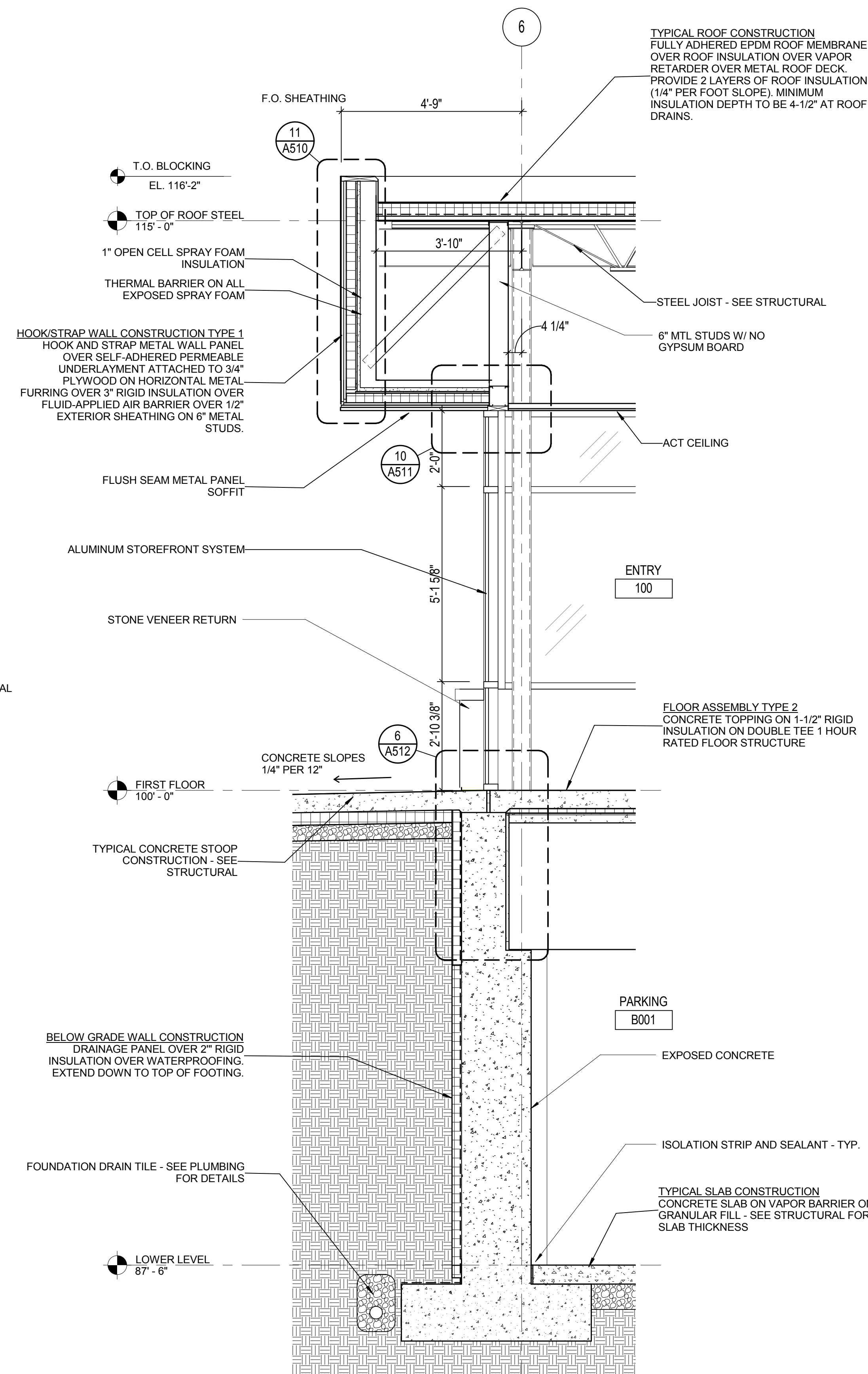
PROJECT NUMBER 152413.01

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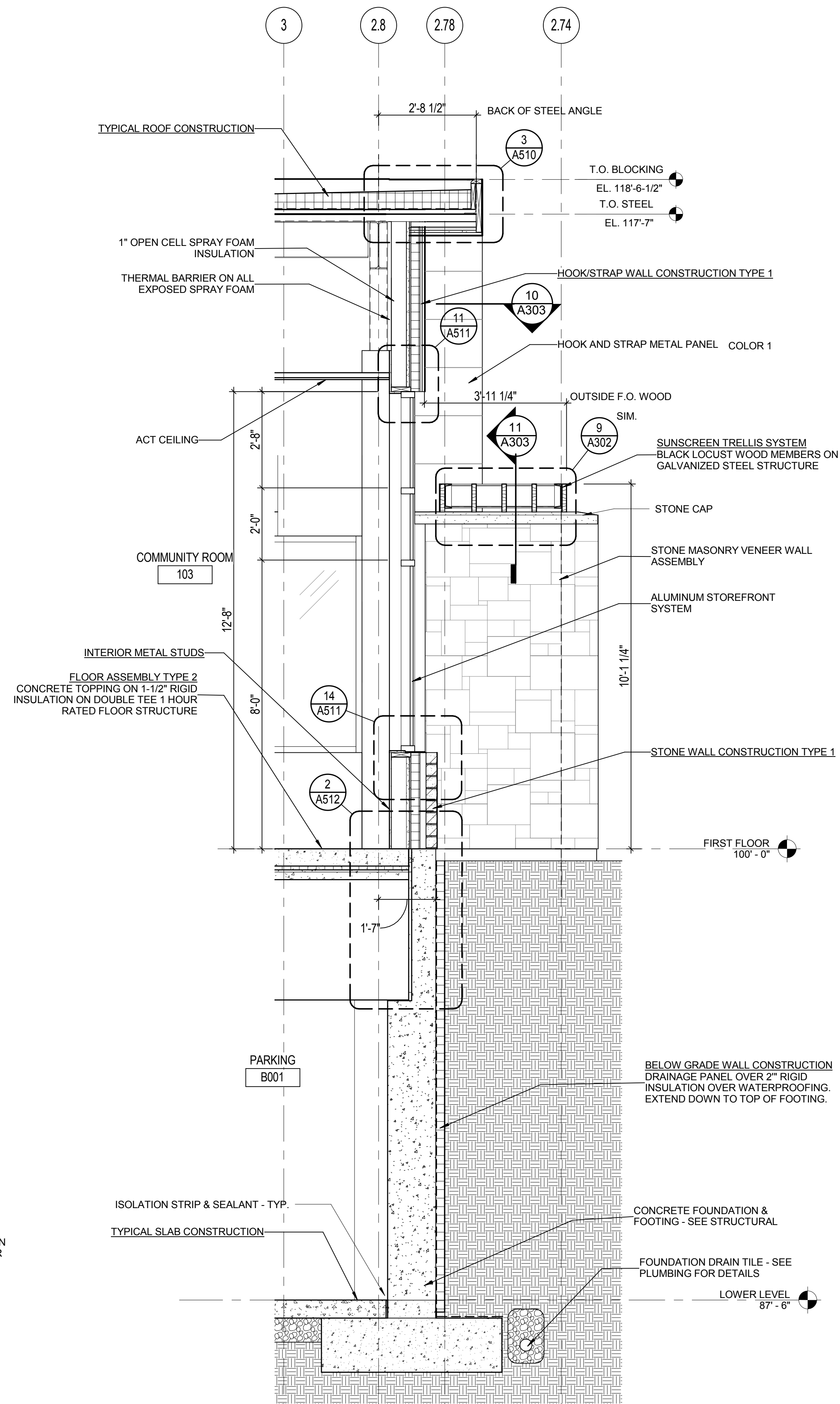
REVISION FOR:
NO. DESCRIPTION DATE



1 WALL SECTION @ CLERESTORY
SCALE: 1/2" = 1'-0"



2 WALL SECTION @ ENTRY
SCALE: 1/2" = 1'-0"



3 WALL SECTION @ COMMUNITY ROOM
SCALE: 1/2" = 1'-0"

DRAWN BY MMZ

CHECKED BY SK

WALL SECTIONS

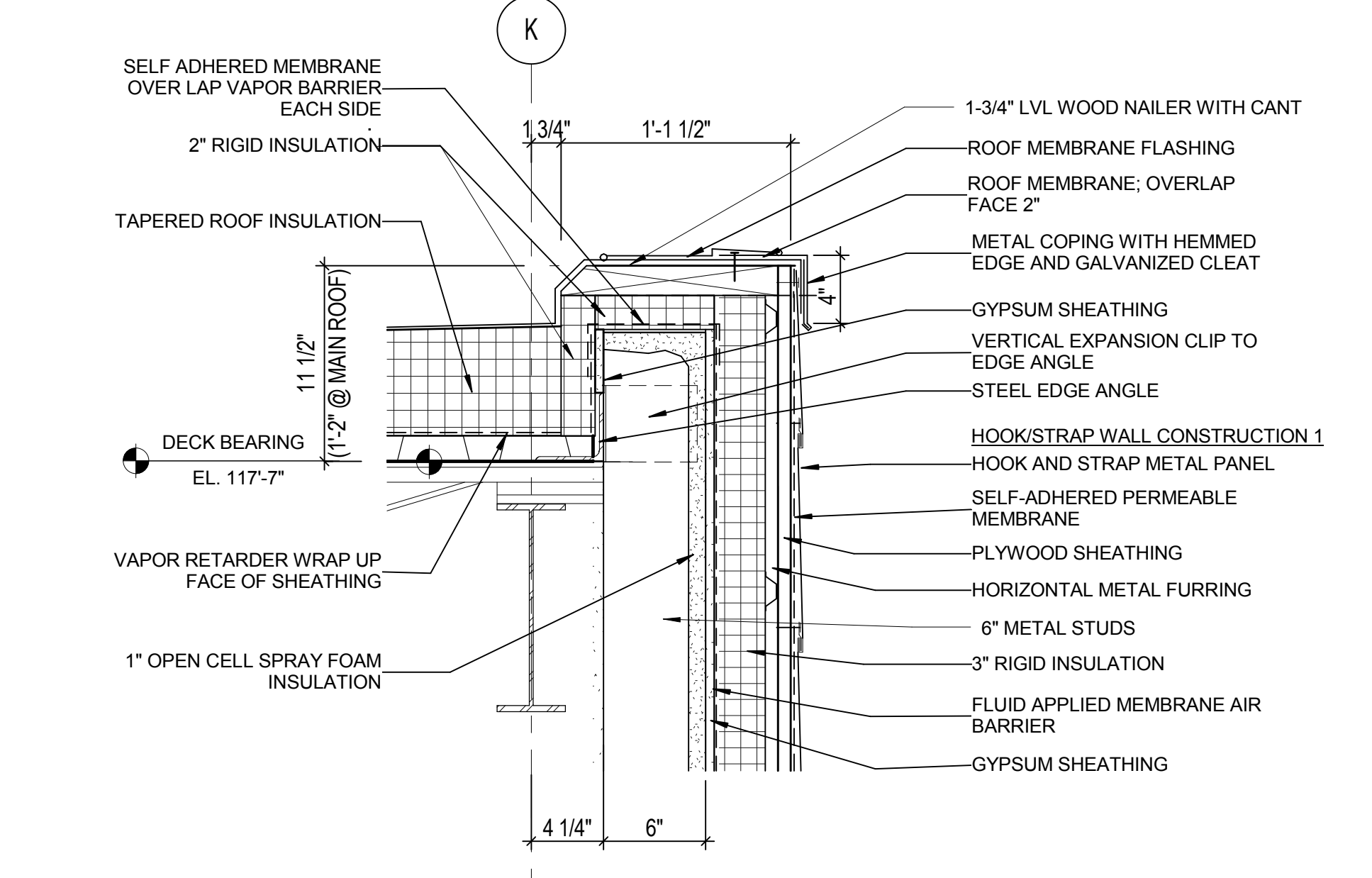
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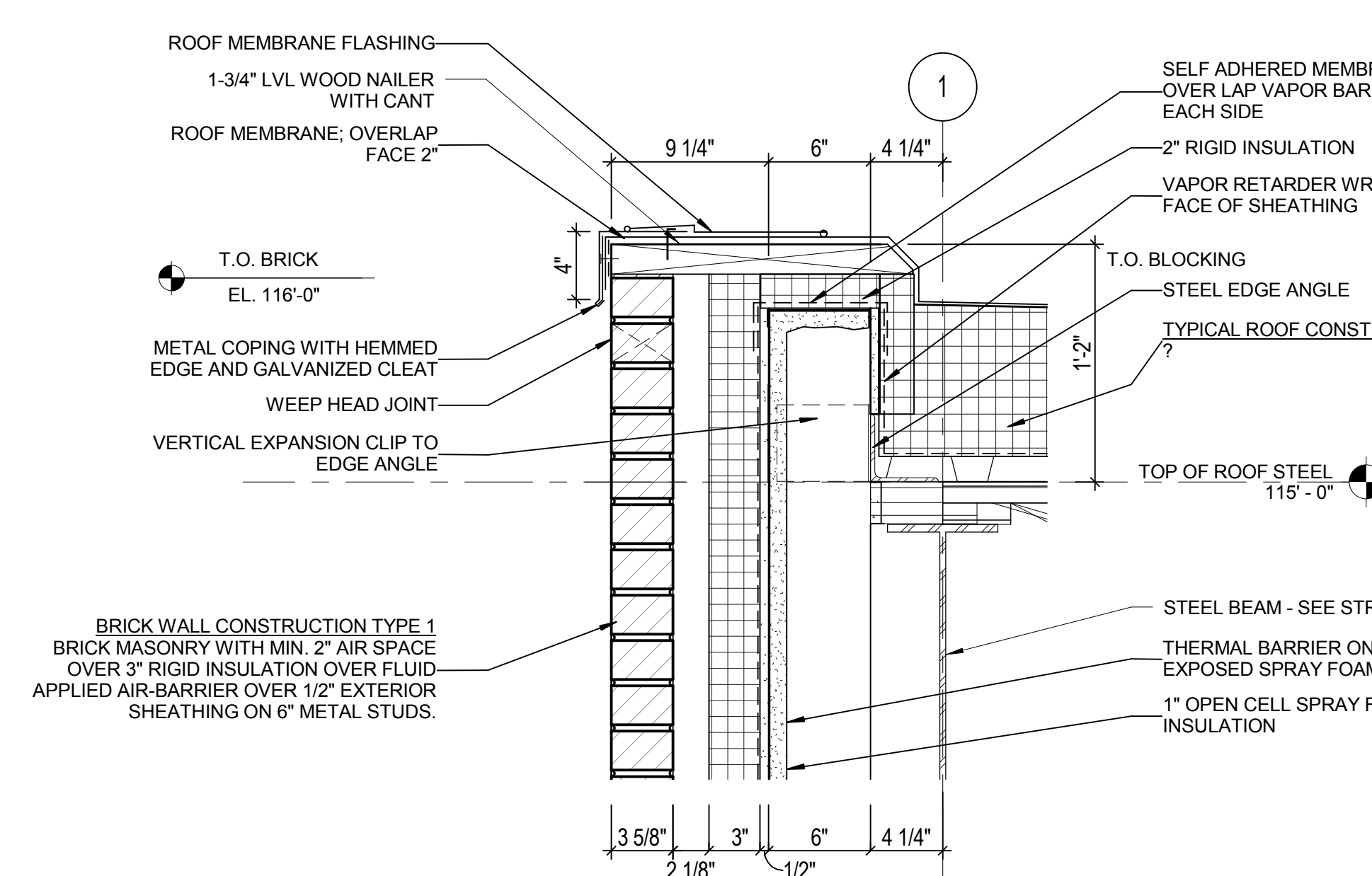
PROJECT NUMBER 152413.01

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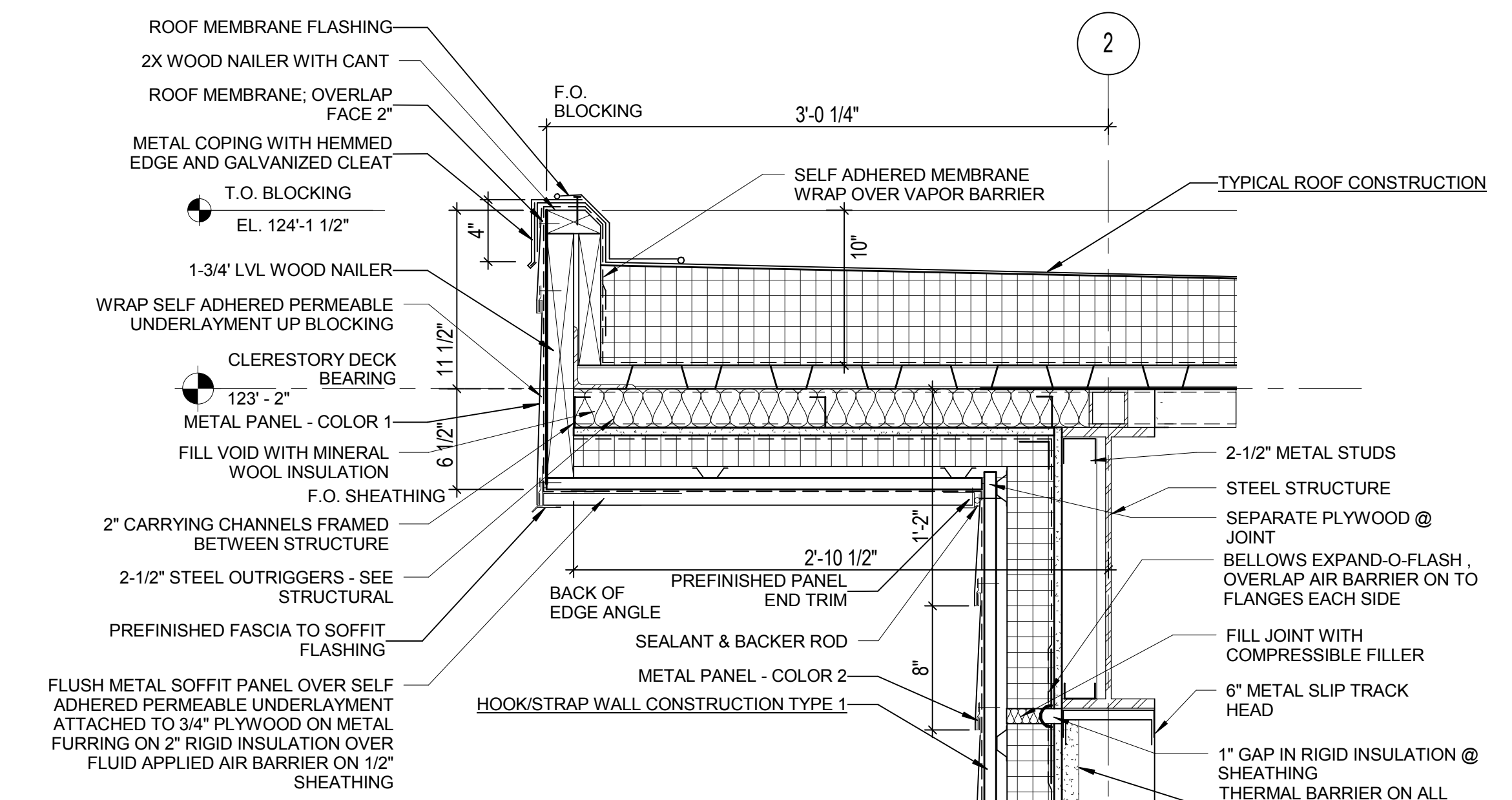
REVISION FOR:
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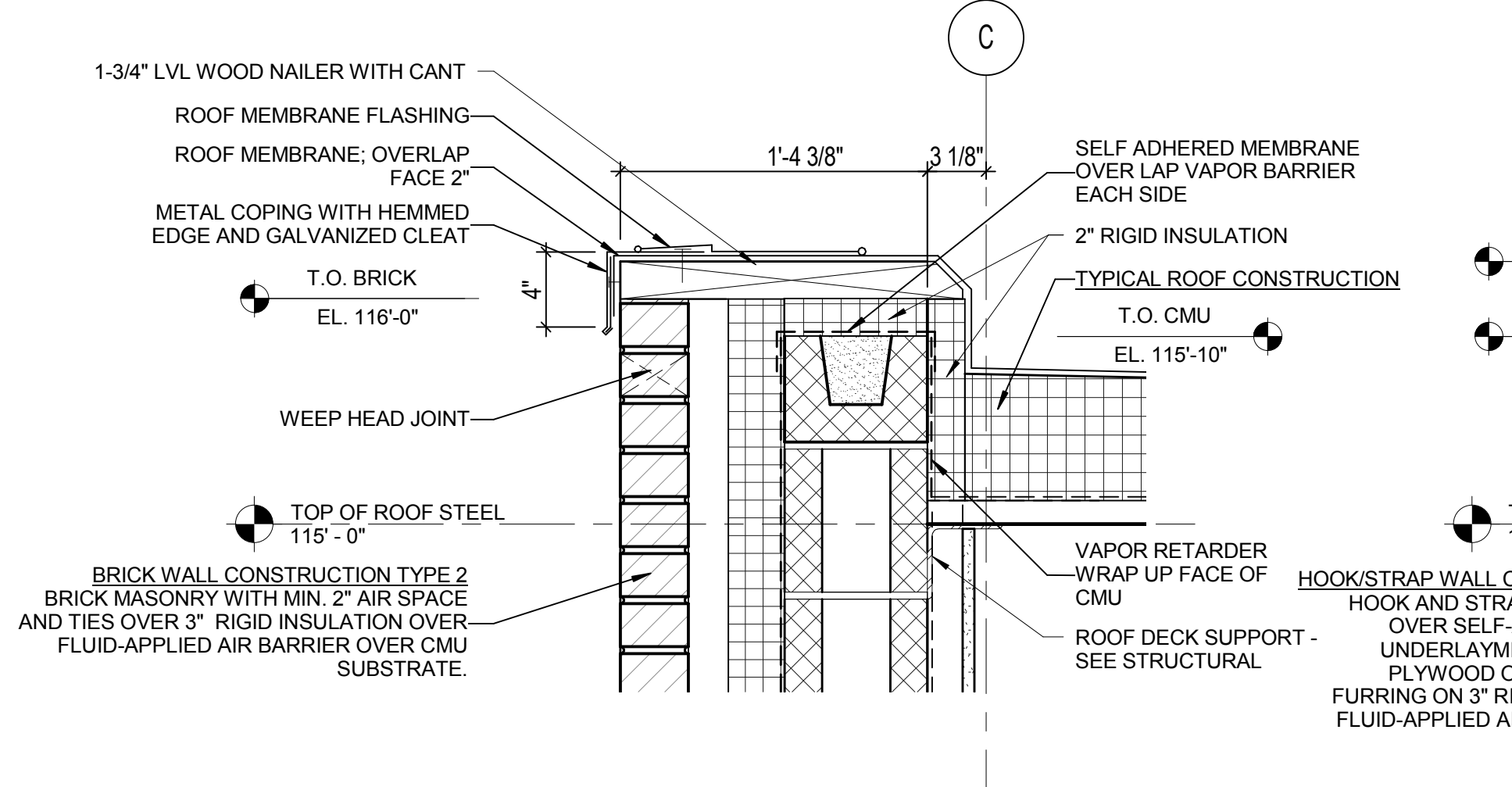
1 ROOF EDGE DETAIL @ METAL PANEL
SCALE: 1 1/2" = 1'-0"



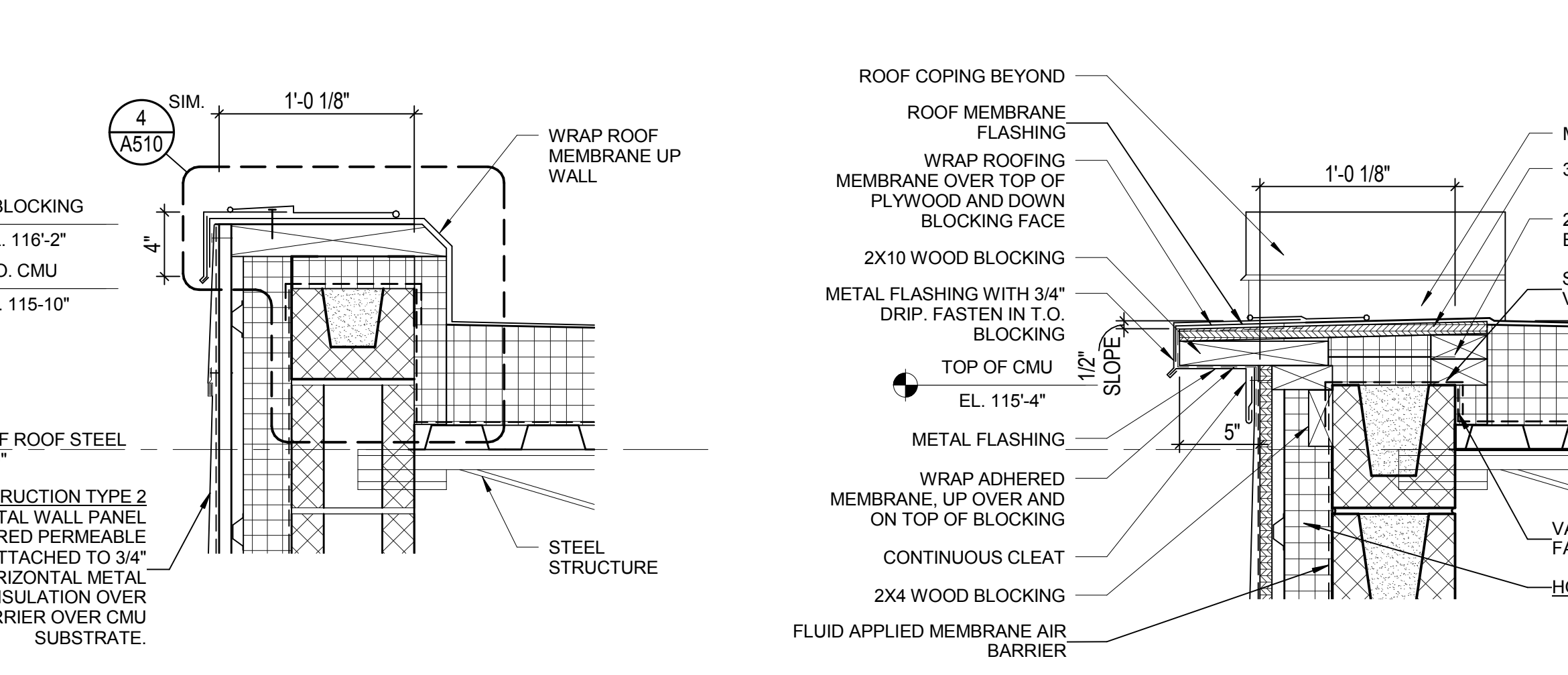
2 ROOF EDGE DETAIL AT BRICK
SCALE: 1 1/2" = 1'-0"



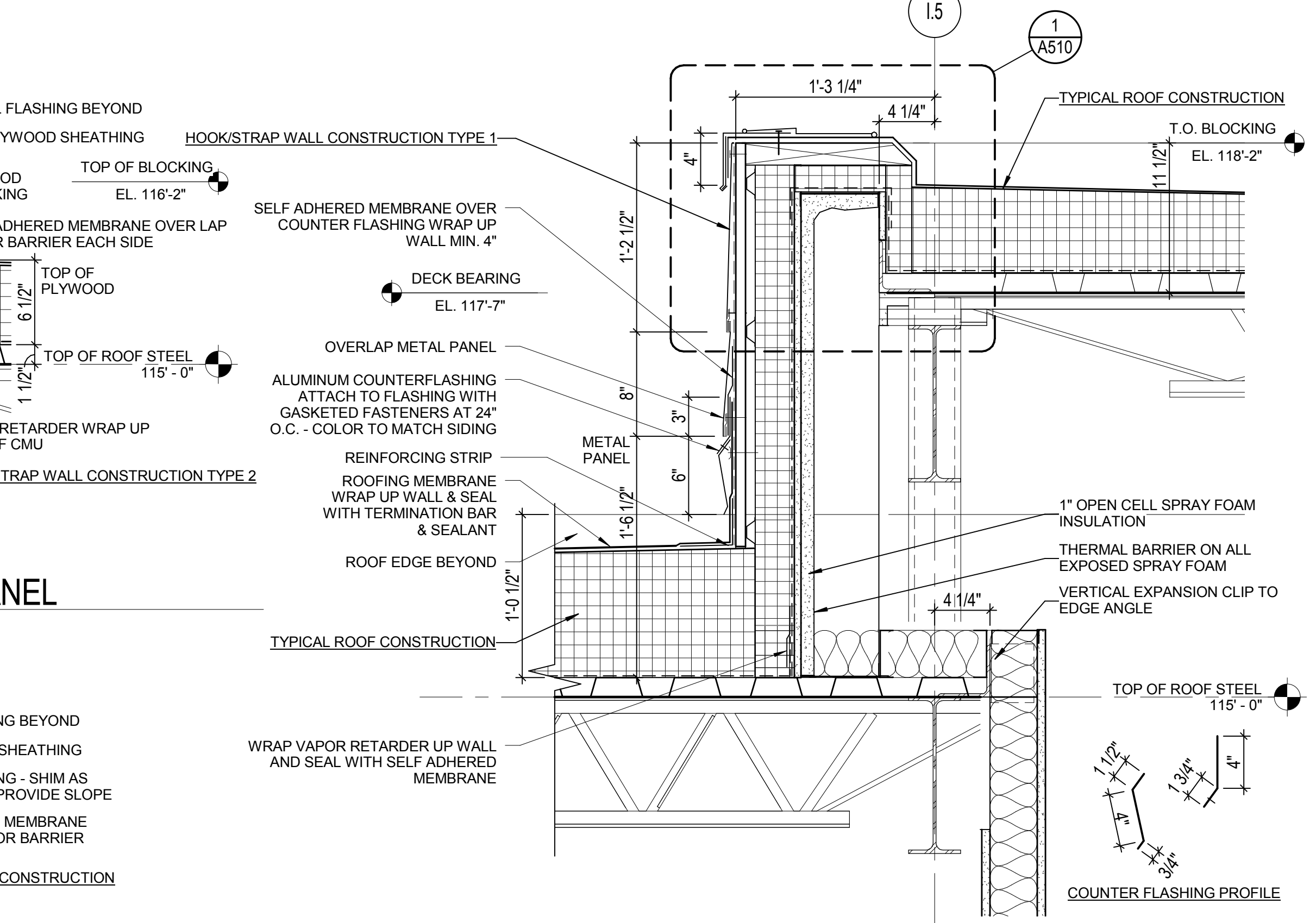
3 ROOF EDGE DETAIL @ CLERESTORY
SCALE: 1 1/2" = 1'-0"



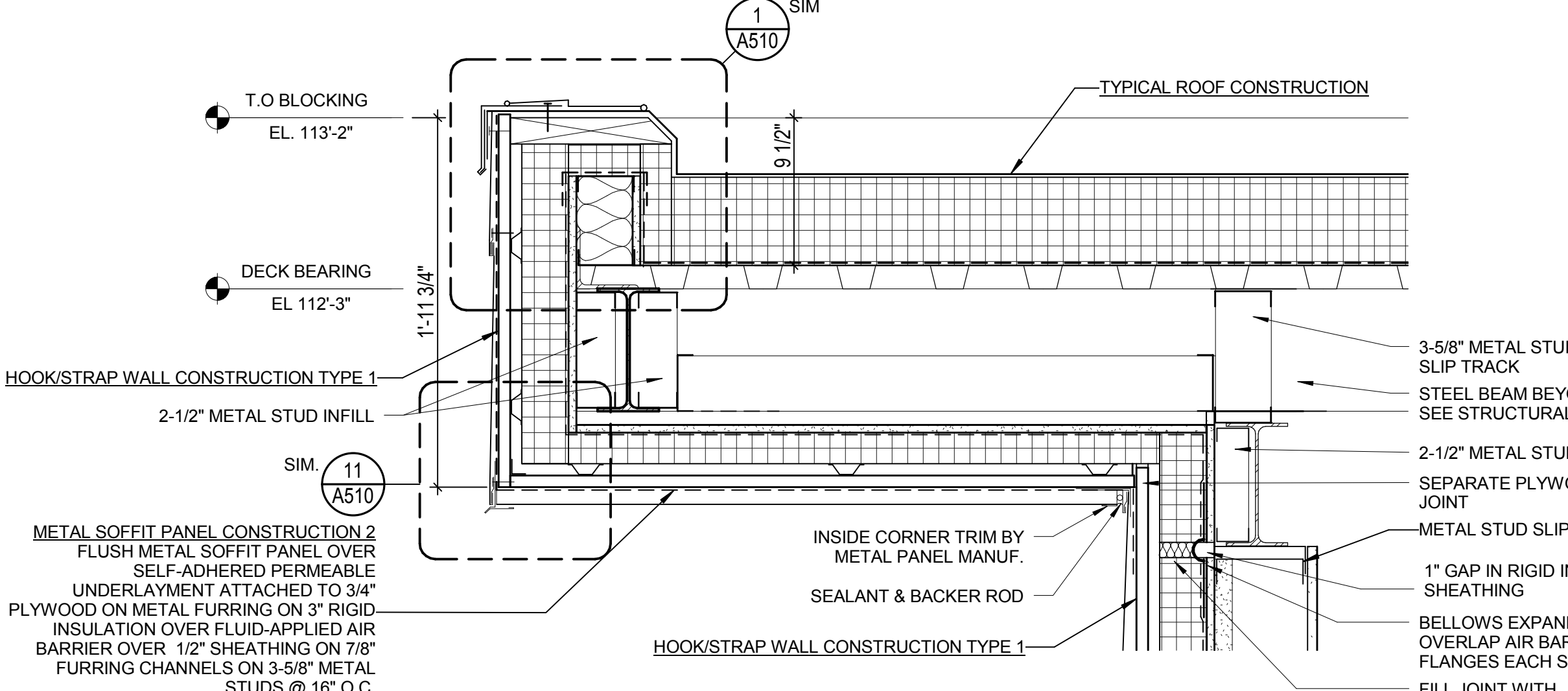
4 ROOF EDGE DETAIL @ CMU & BRICK
SCALE: 1 1/2" = 1'-0"



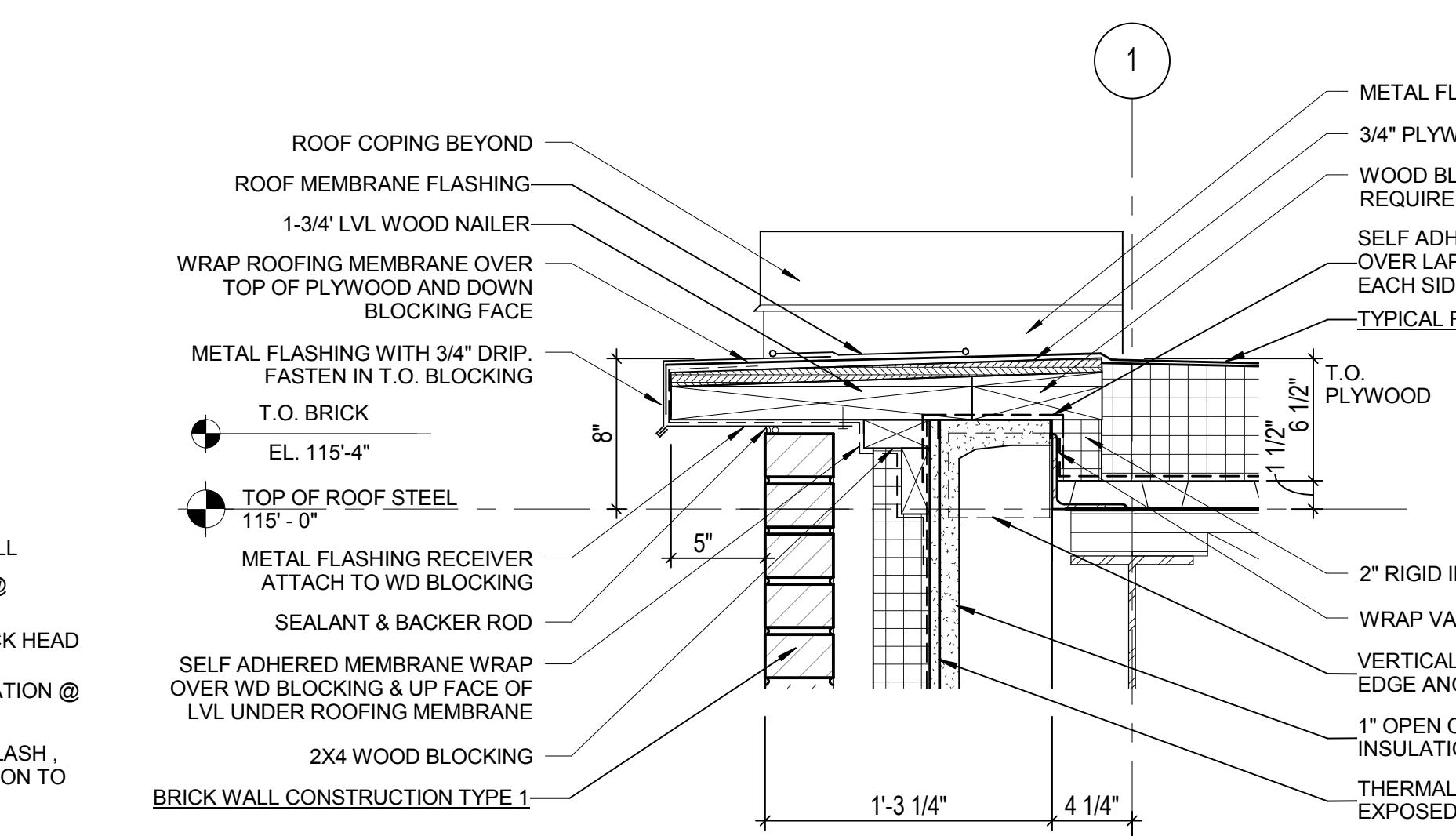
5 ROOF EDGE DETAIL @ CMU
SCALE: 1 1/2" = 1'-0"



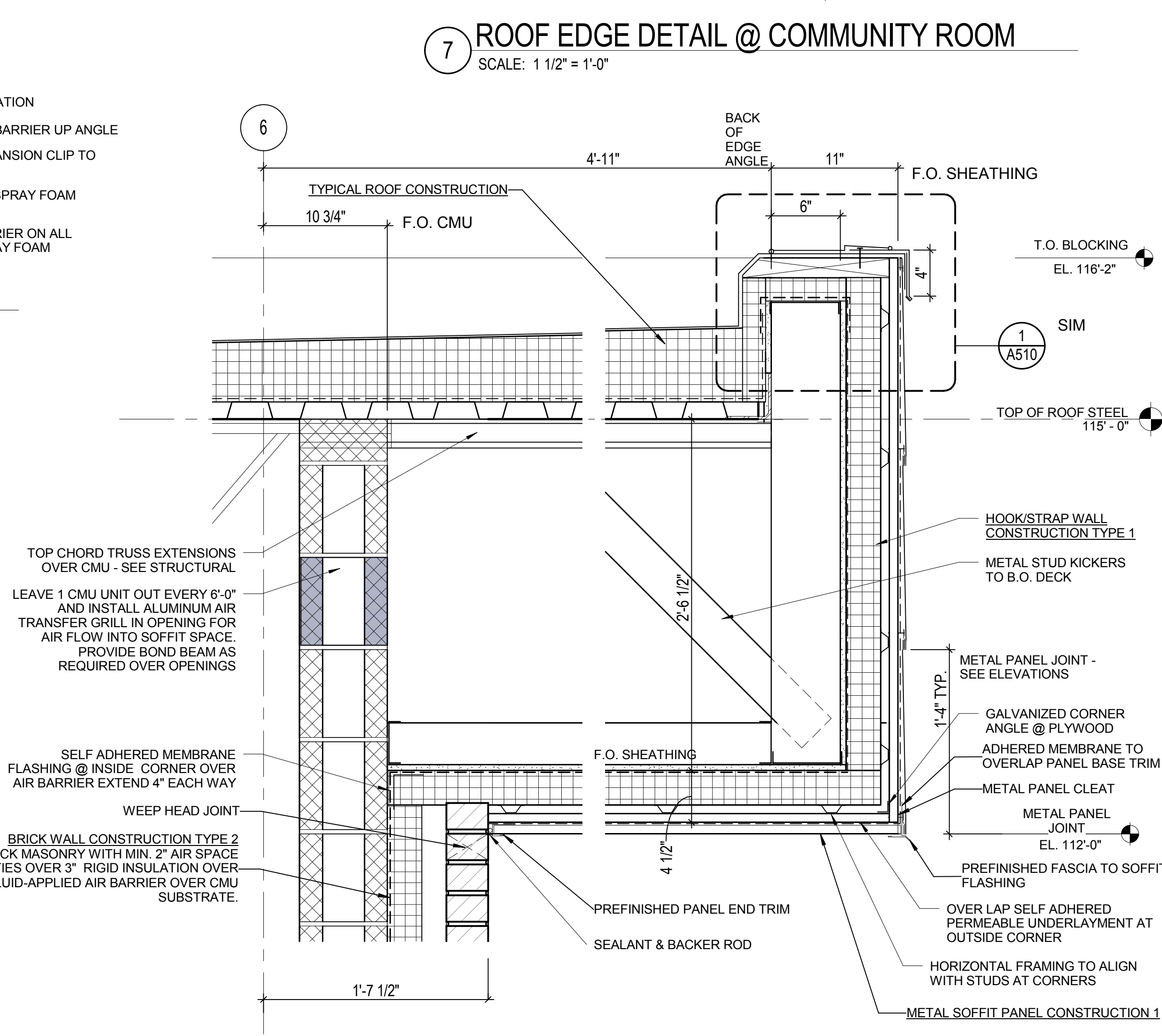
6 ROOF SCUPPER DETAIL @ CMU/MTL PANEL
SCALE: 1 1/2" = 1'-0"



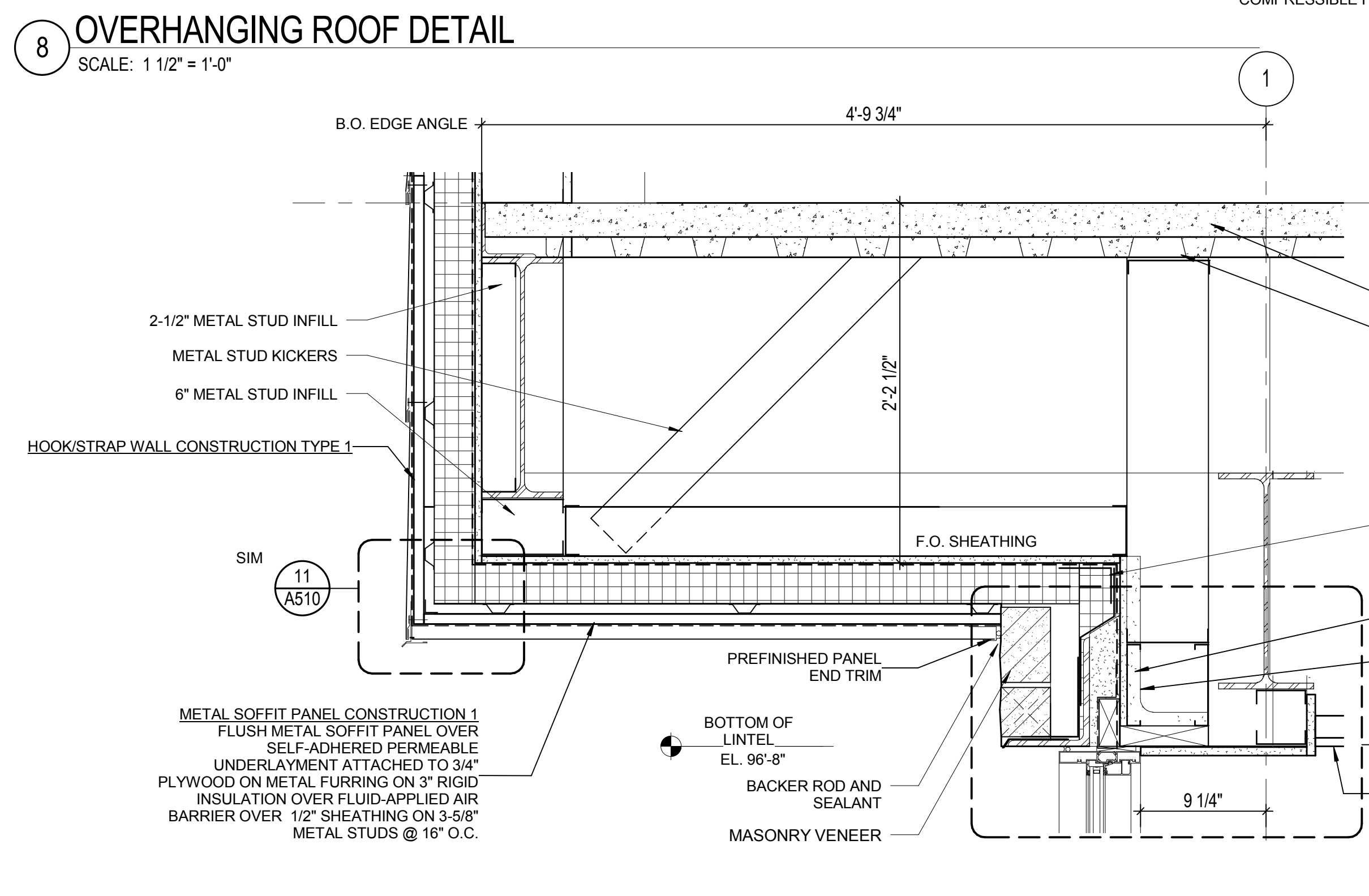
8 OVERHANGING ROOF DETAIL
SCALE: 1 1/2" = 1'-0"



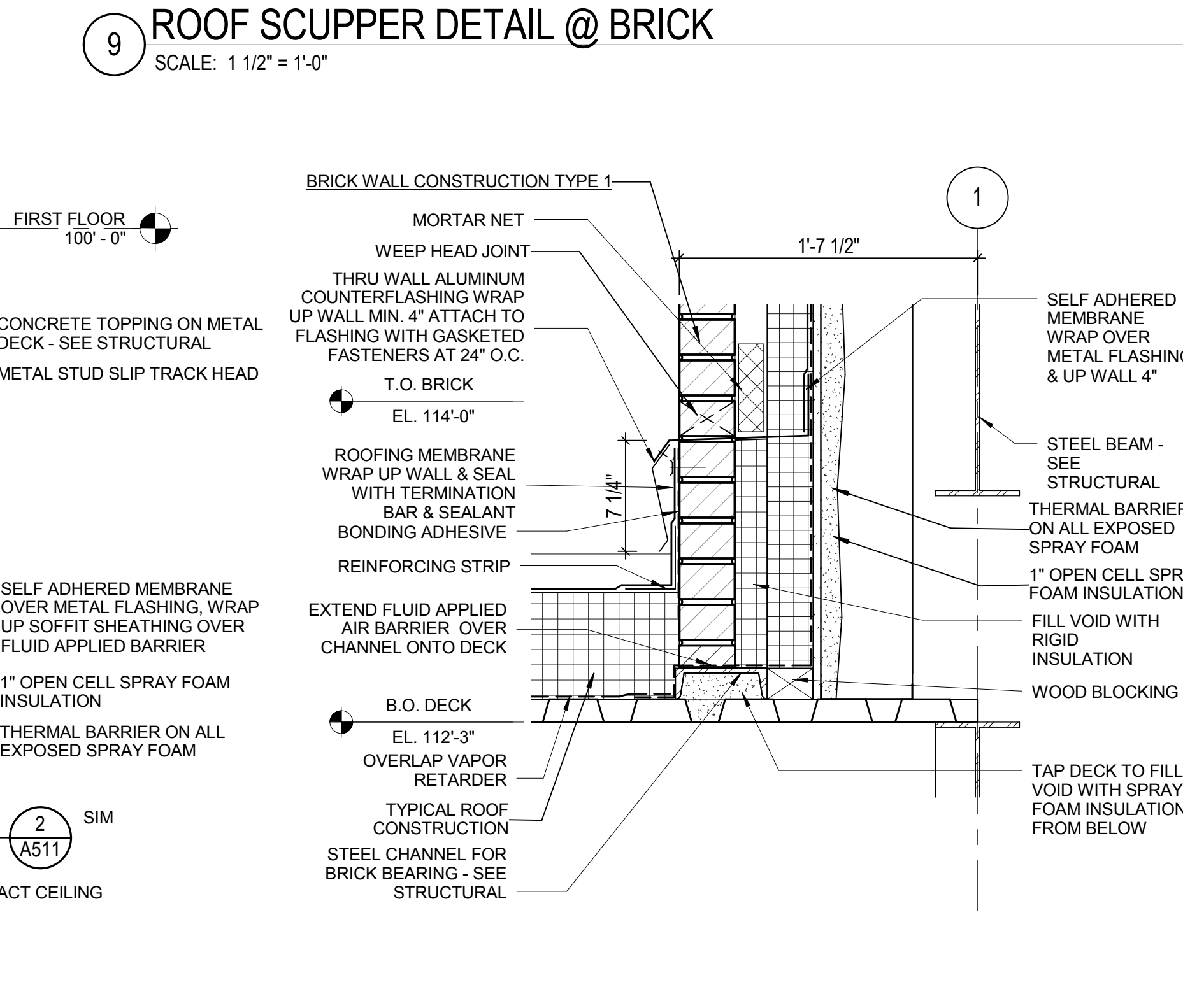
9 ROOF SCUPPER DETAIL @ BRICK
SCALE: 1 1/2" = 1'-0"



11 ROOF DETAIL @ SALLYPORT
SCALE: 1 1/2" = 1'-0"



10 CANTILEVERED FLOOR DETAIL
SCALE: 1 1/2" = 1'-0"



12 ROOF DETAIL
SCALE: 1 1/2" = 1'-0"

DRAWN BY MMZ
CHECKED BY SK

WALL DETAILS

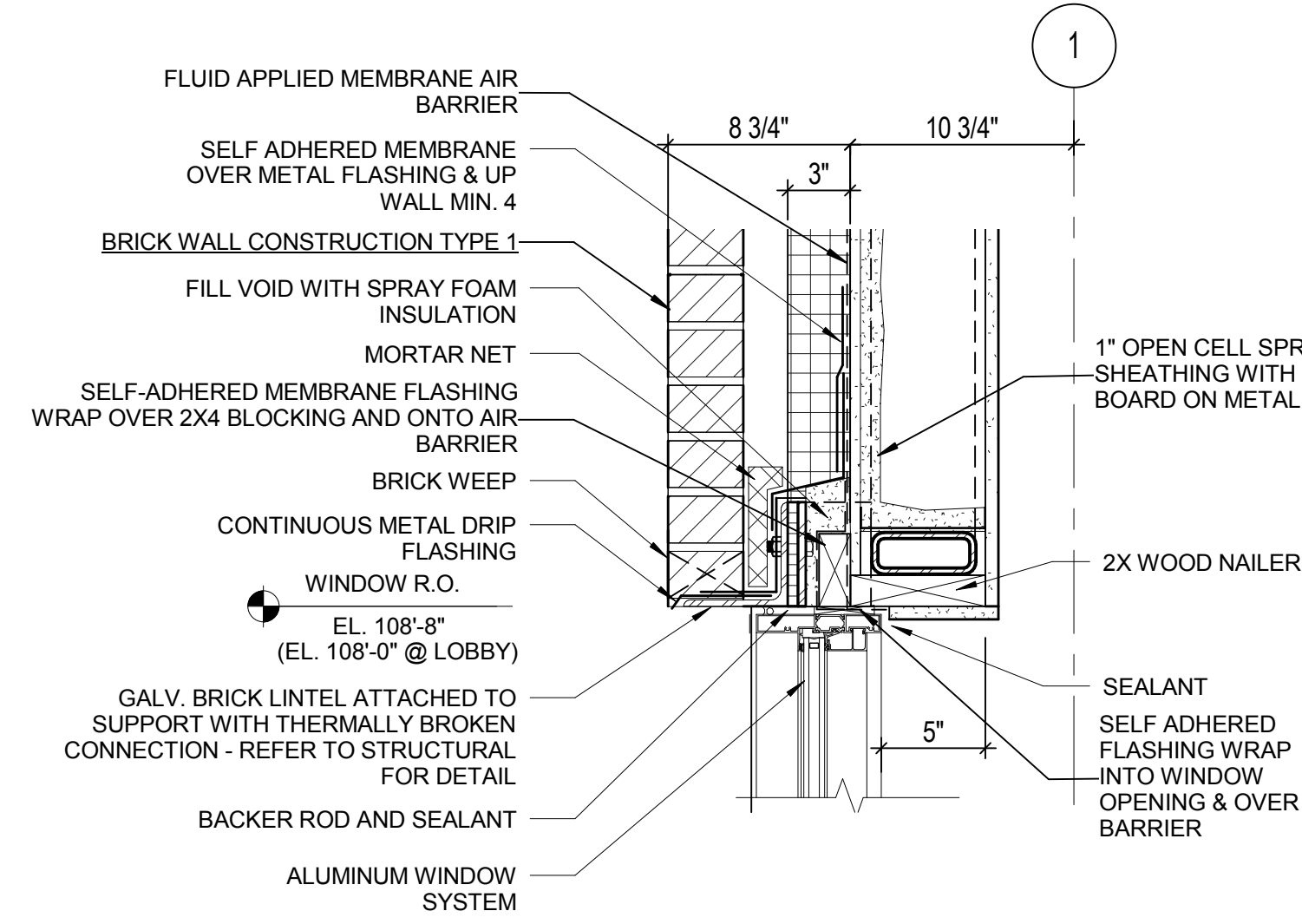
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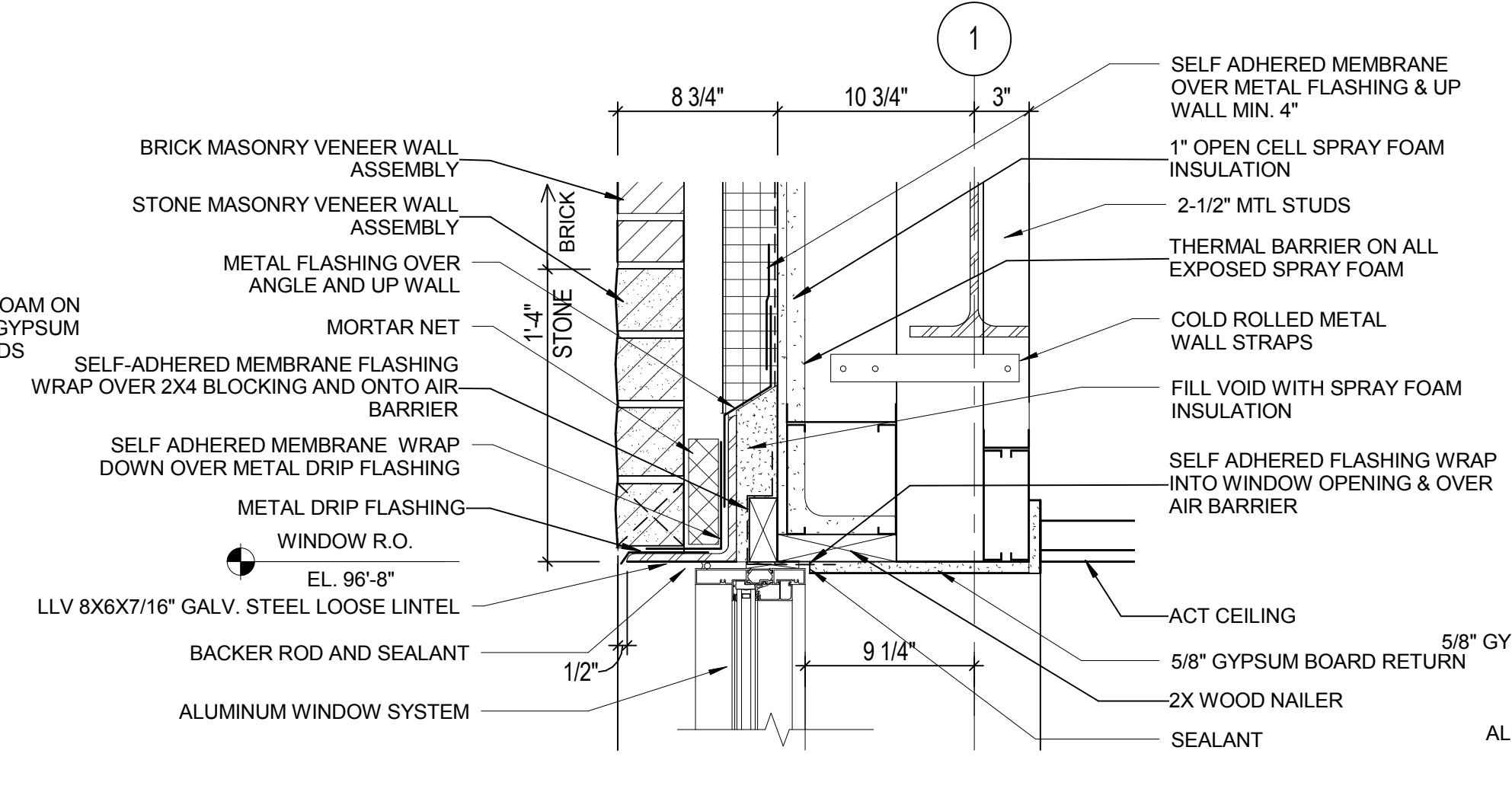
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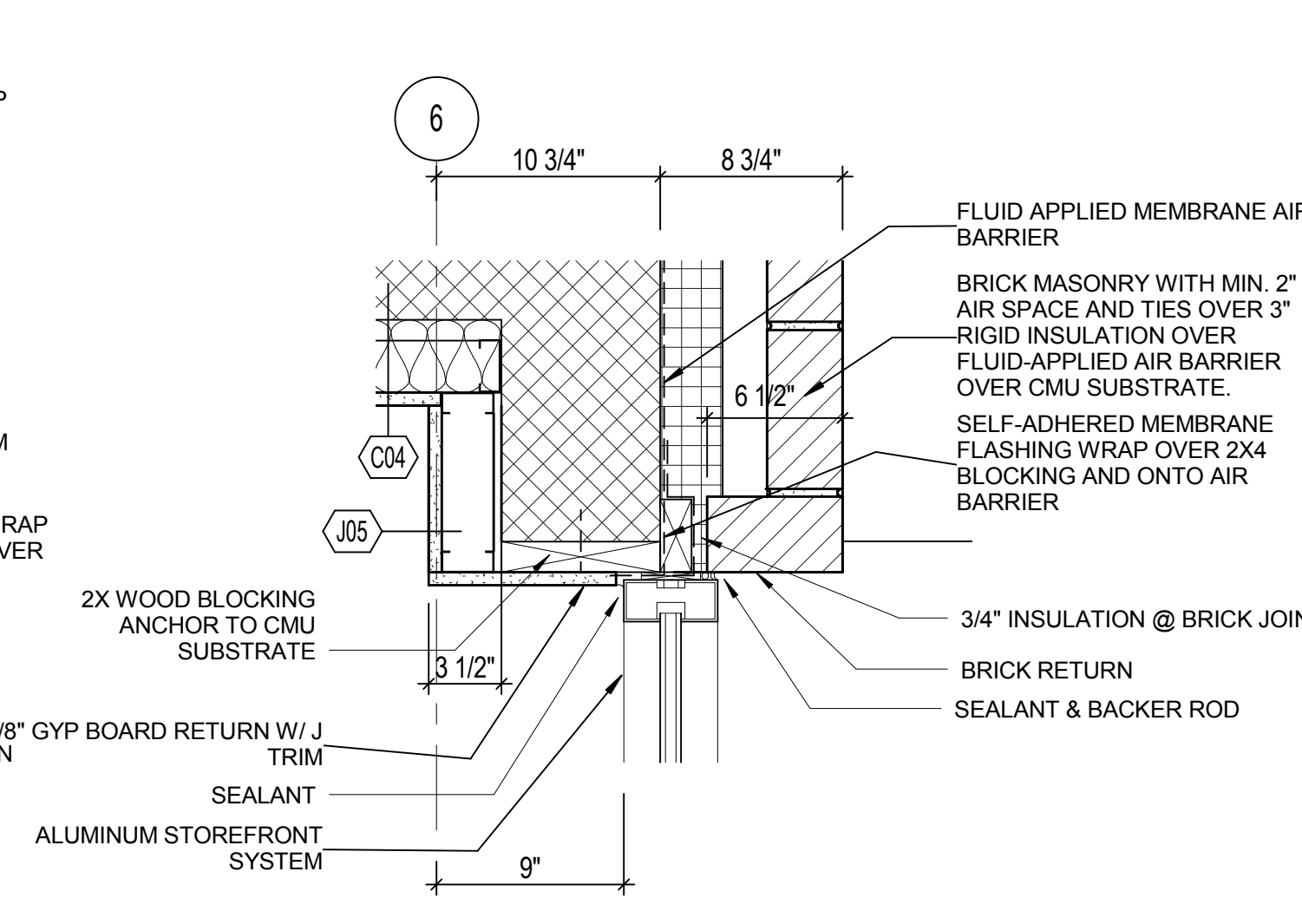
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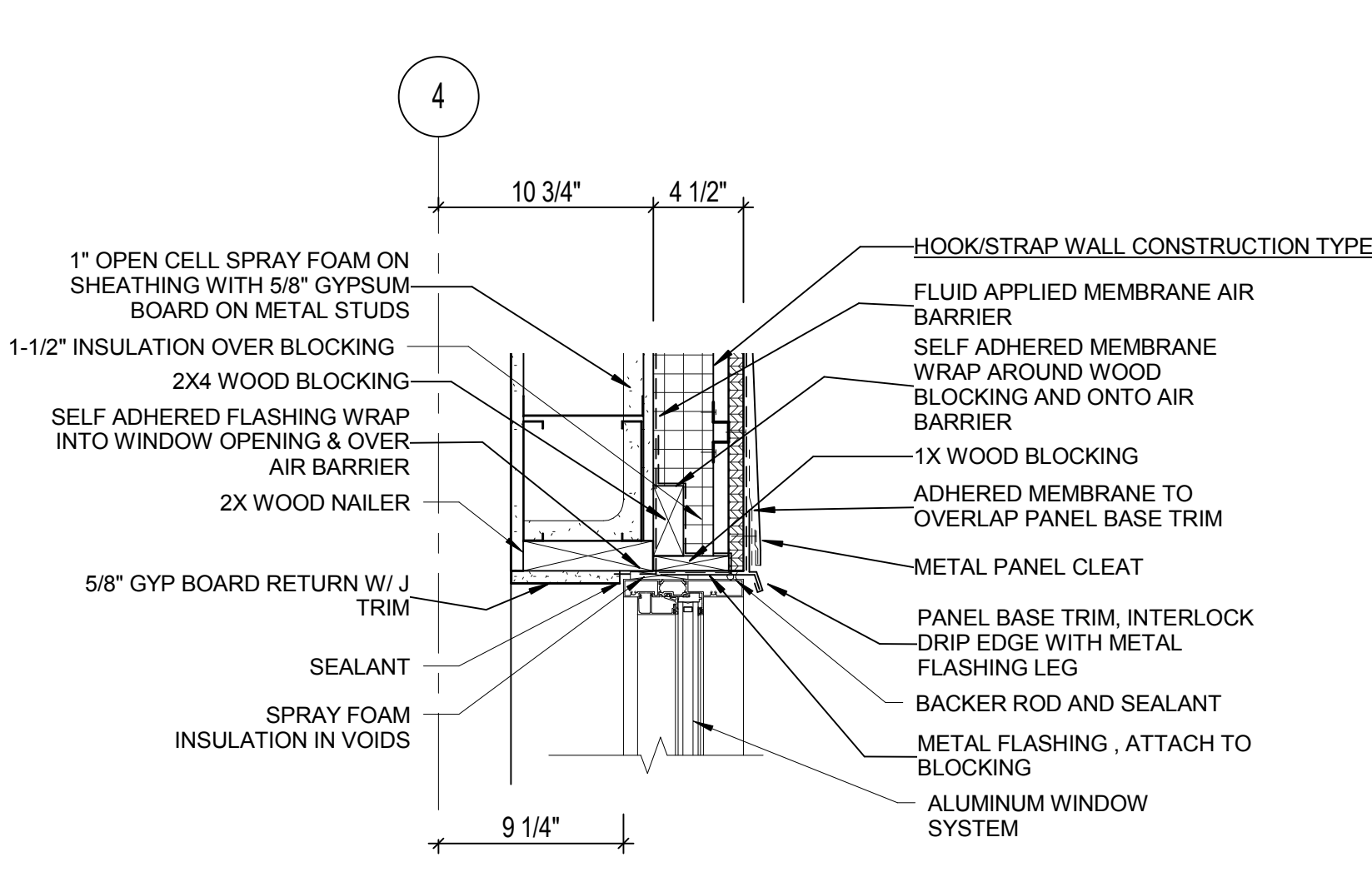
1 HEAD DETAIL @ BRICK / CONT. OPENING
SCALE: 1 1/2" = 1'-0"



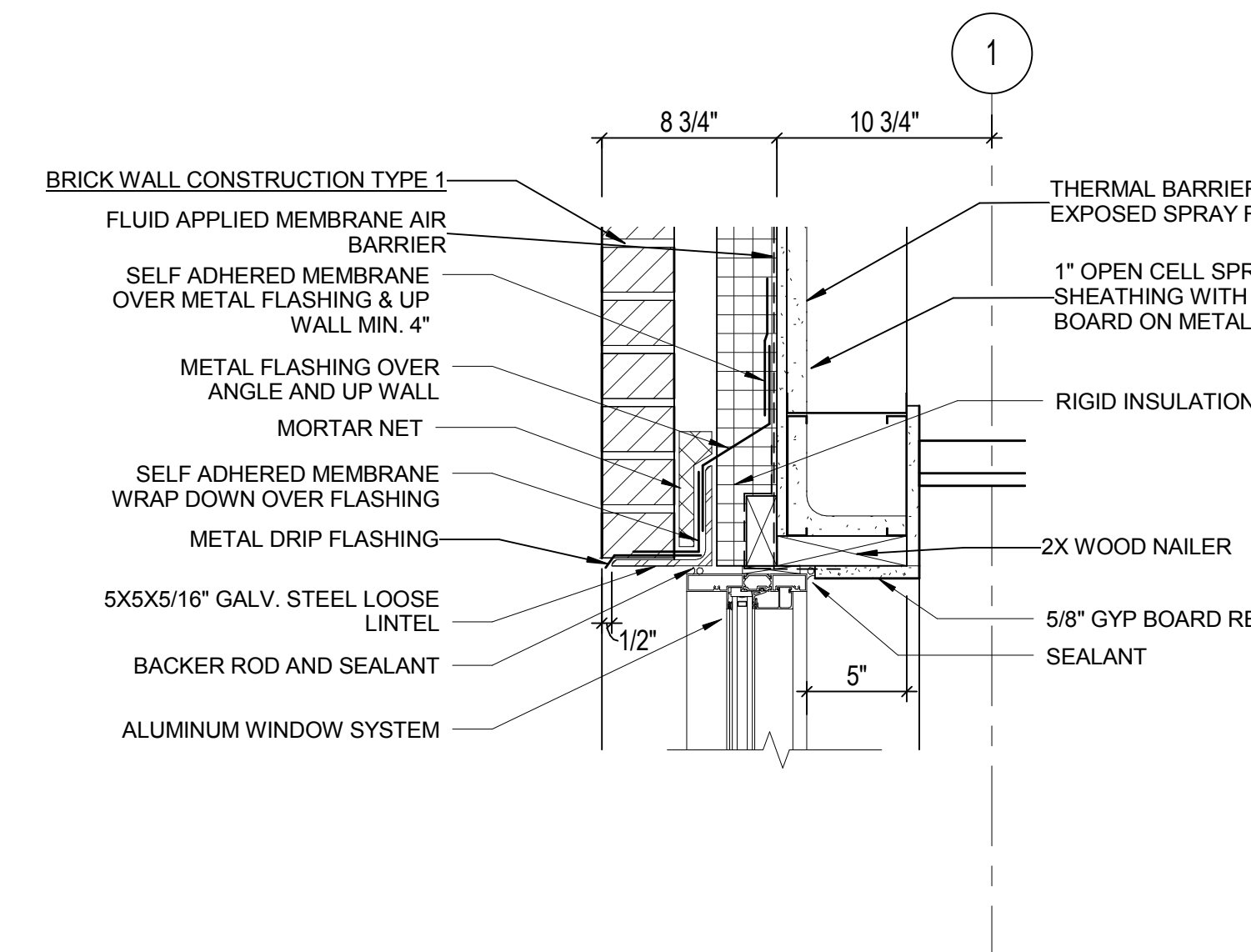
2 TYP. WINDOW HEAD DETAIL @ LOWER LEVEL
SCALE: 1 1/2" = 1'-0"



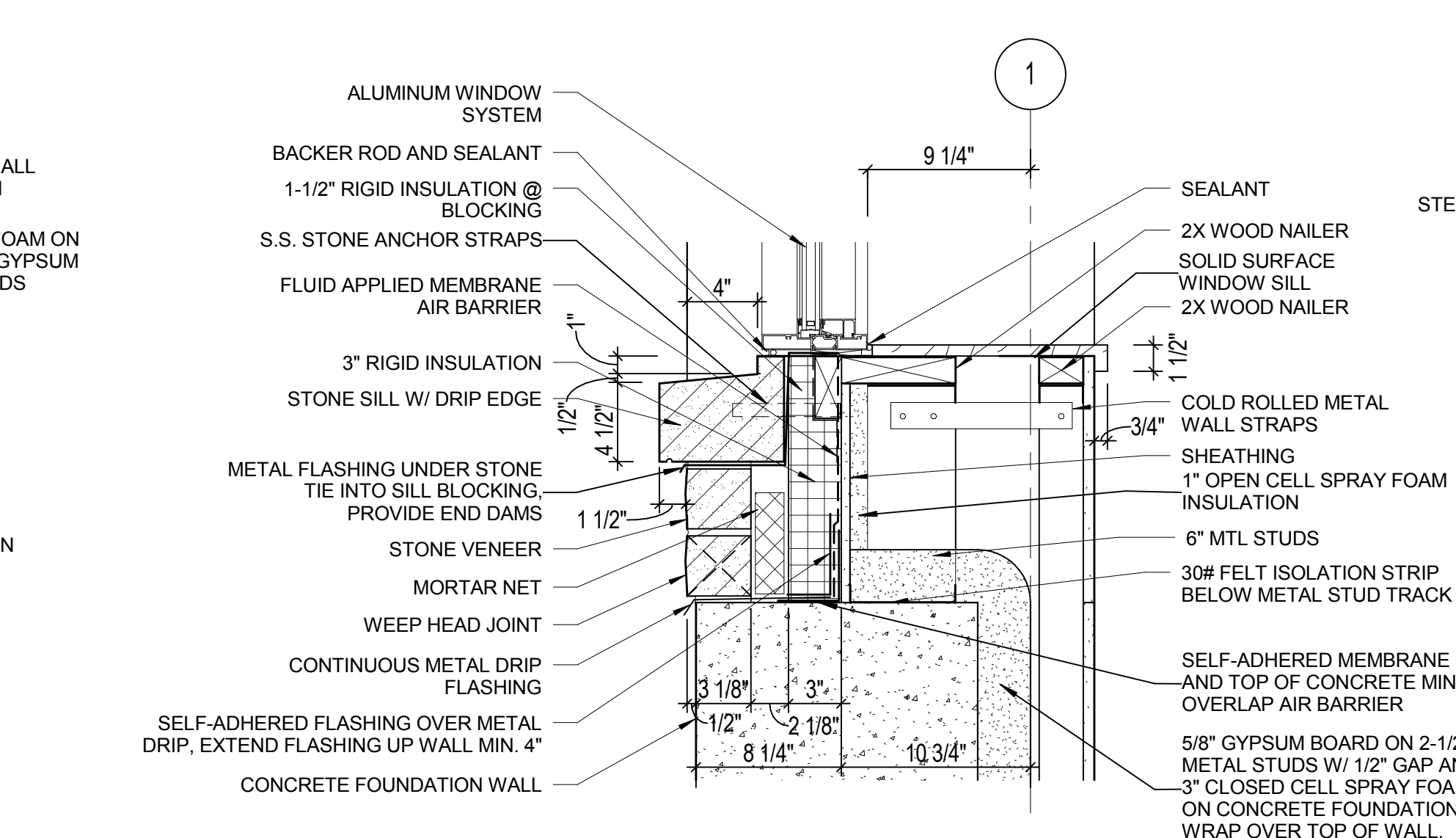
3 STOREFRONT JAMB DETAIL @ BRICK
SCALE: 1 1/2" = 1'-0"



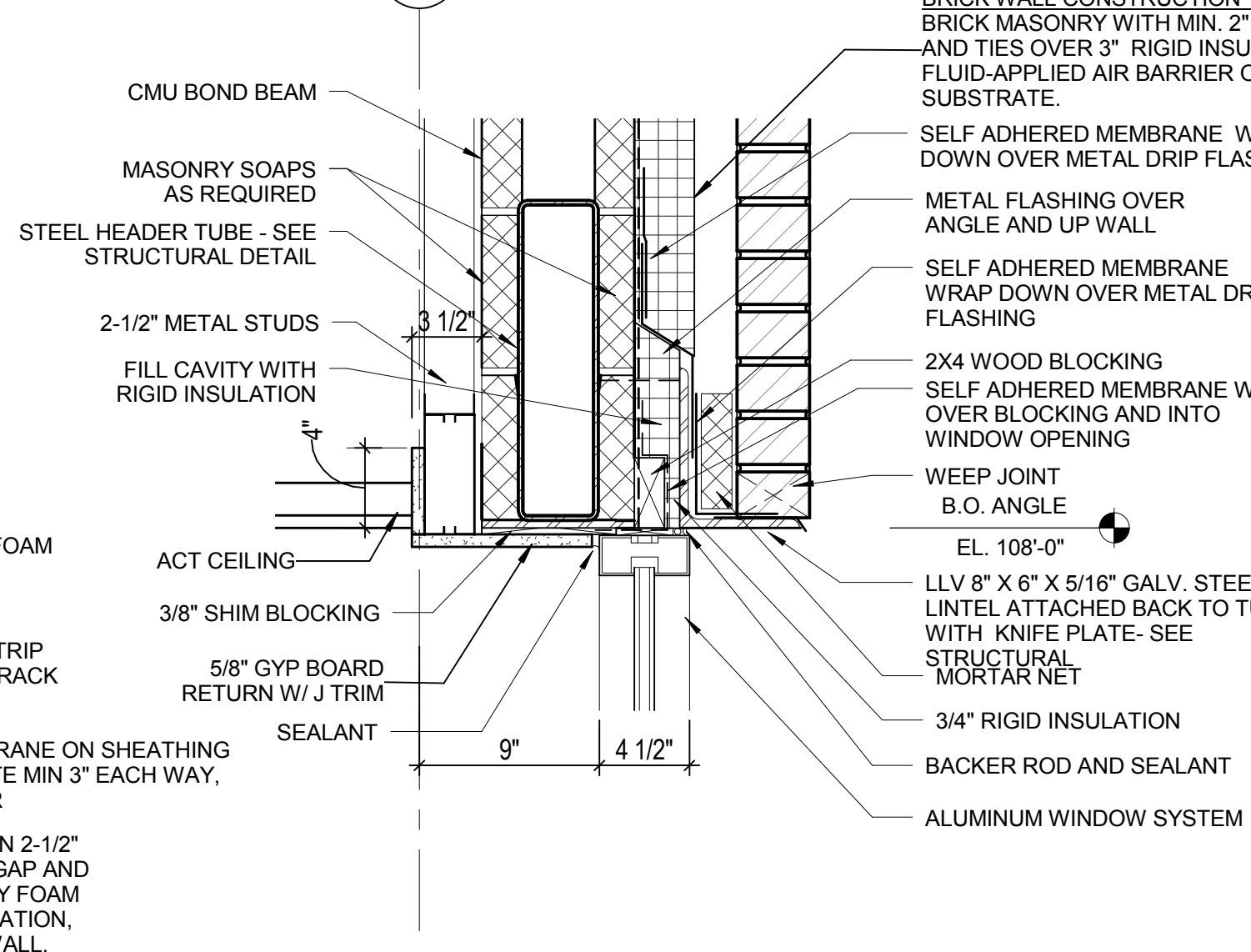
4 TYP. WINDOW HEAD DETAIL @ METAL PANEL
SCALE: 1 1/2" = 1'-0"



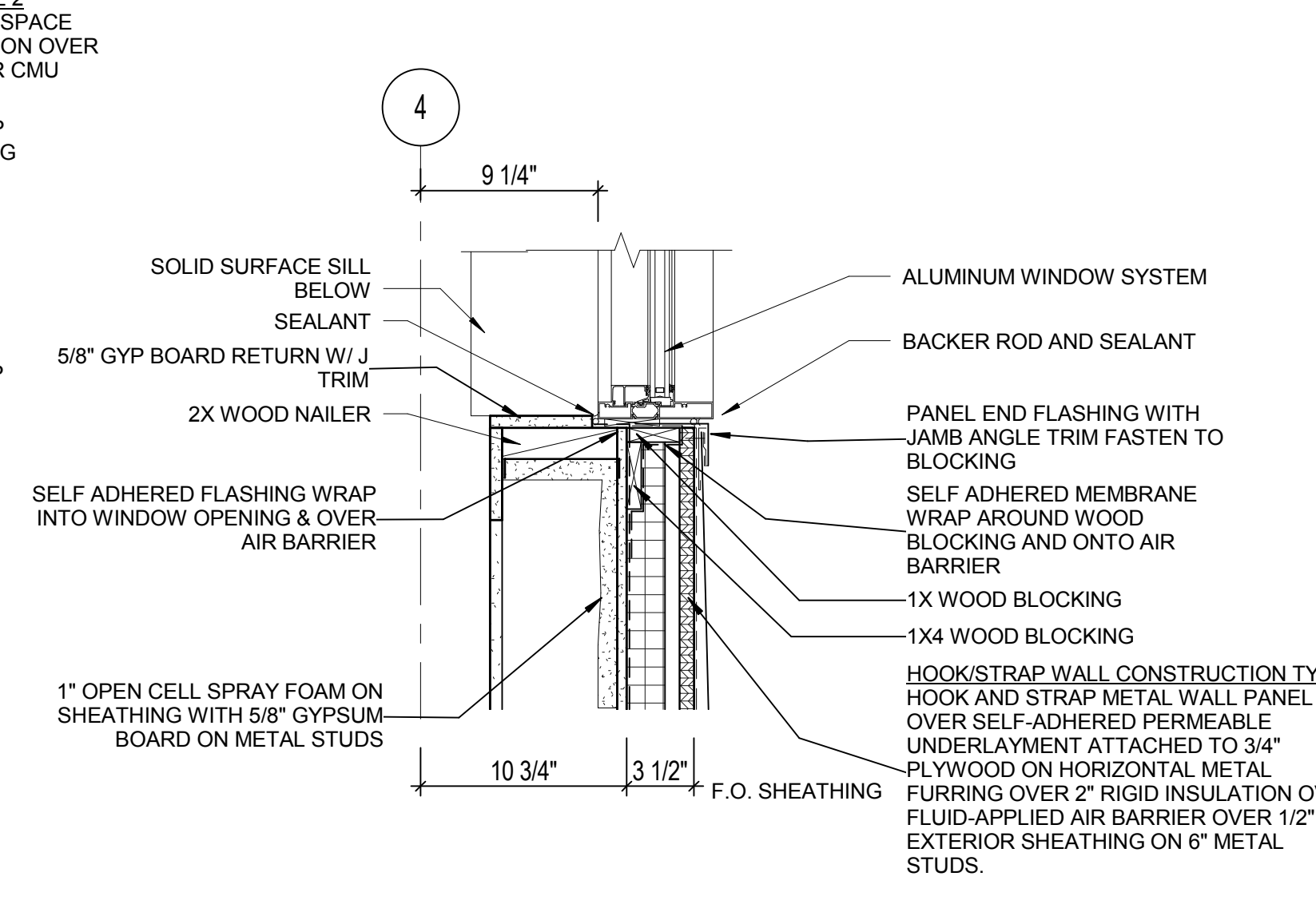
5 WINDOW HEAD DETAIL @ BRICK
SCALE: 1 1/2" = 1'-0"



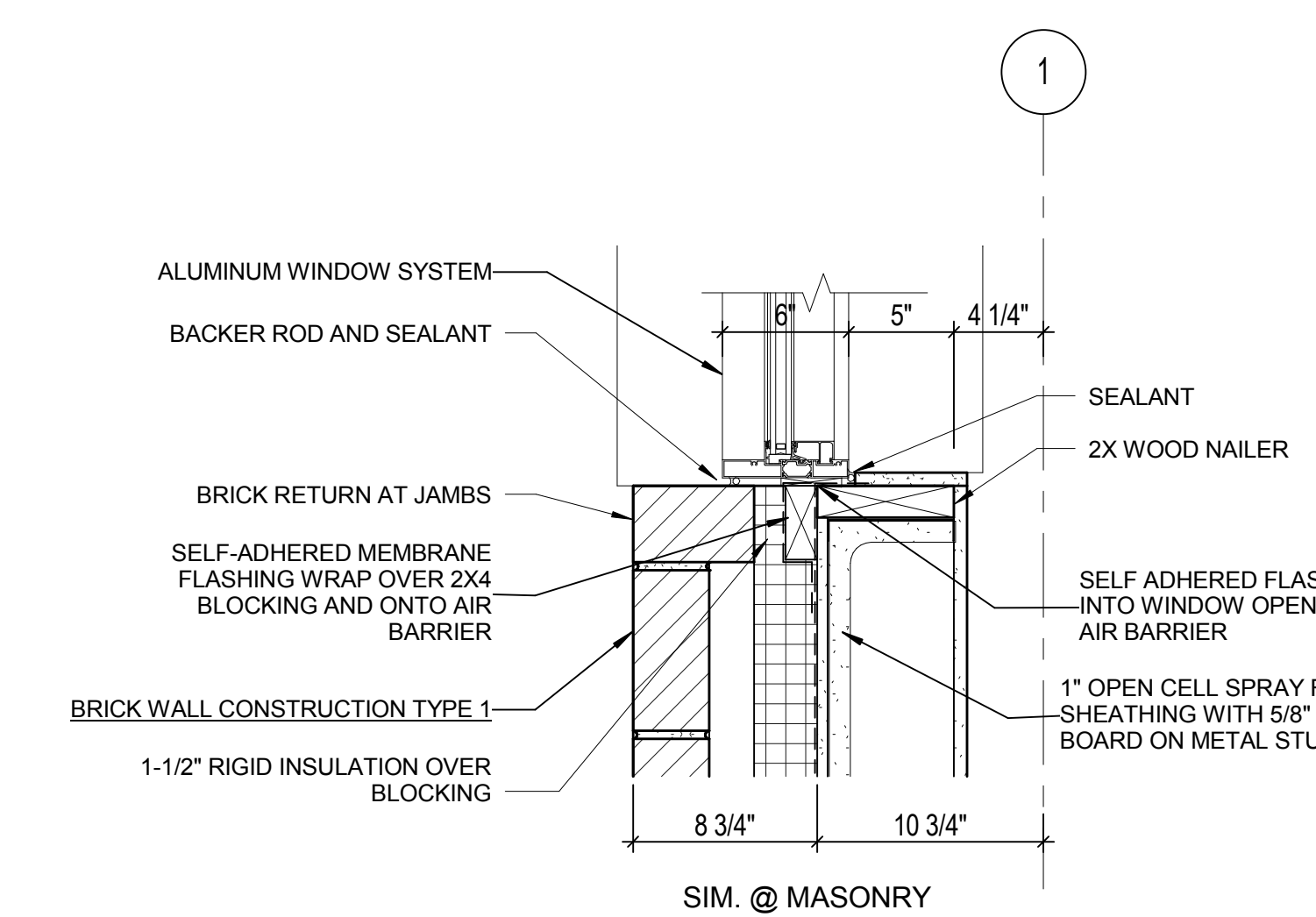
6 MASONRY WINDOW SILL DETAIL @ FOUNDATION
SCALE: 1 1/2" = 1'-0"



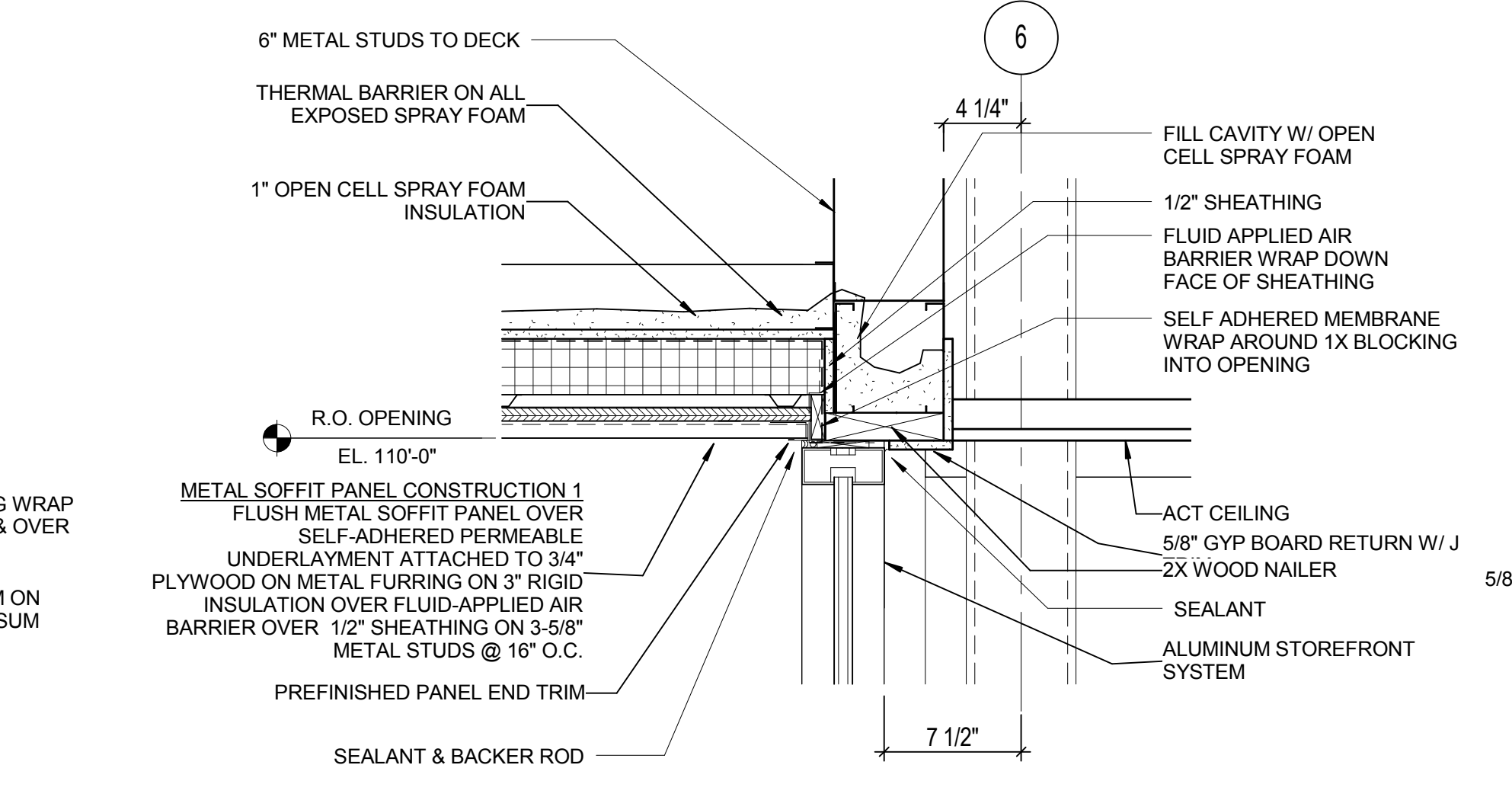
7 STOREFRONT HEAD DETAIL @ MASONRY
SCALE: 1 1/2" = 1'-0"



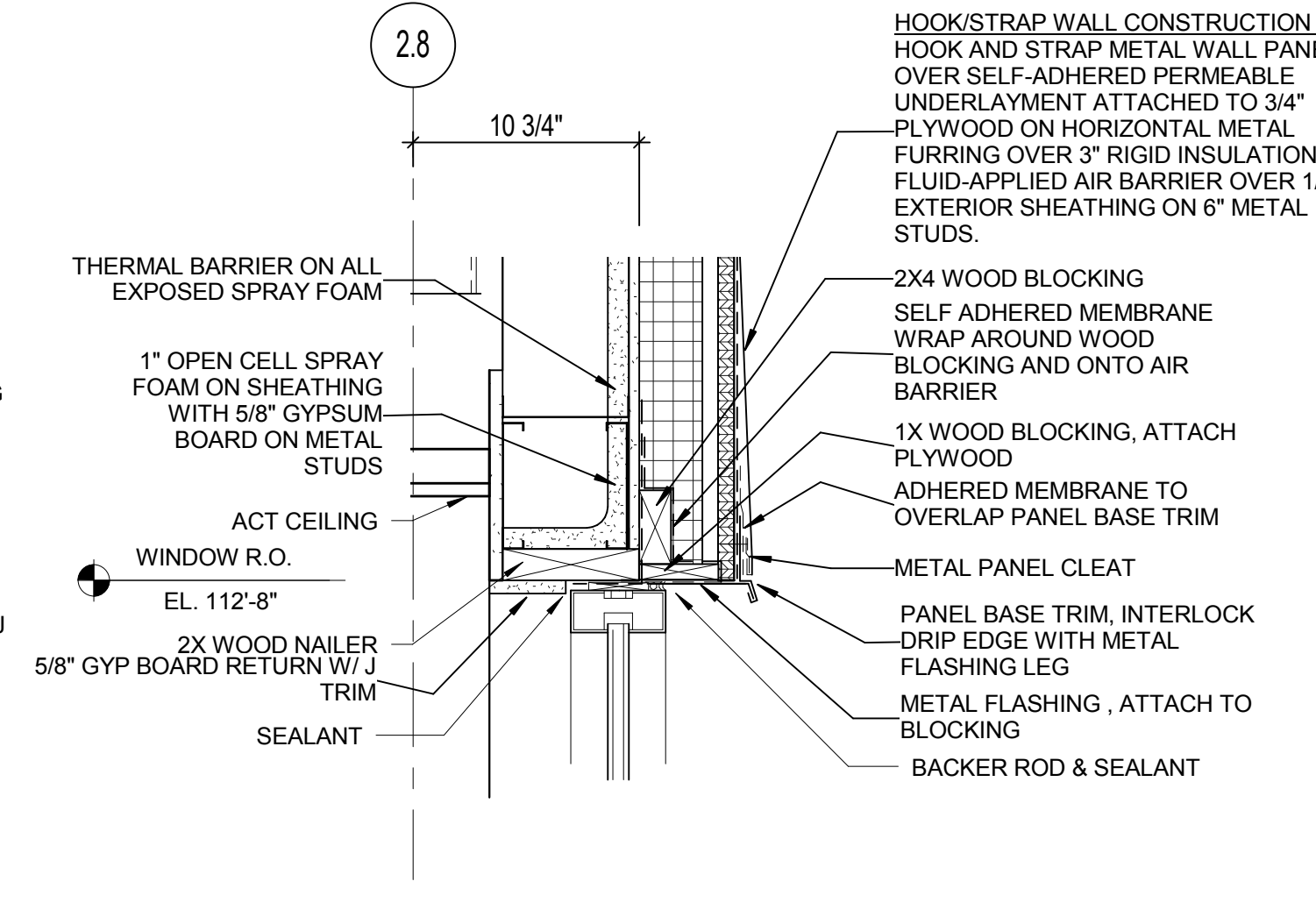
8 TYP. WINDOW JAMB DETAIL @ INFILL PANEL
SCALE: 1 1/2" = 1'-0"



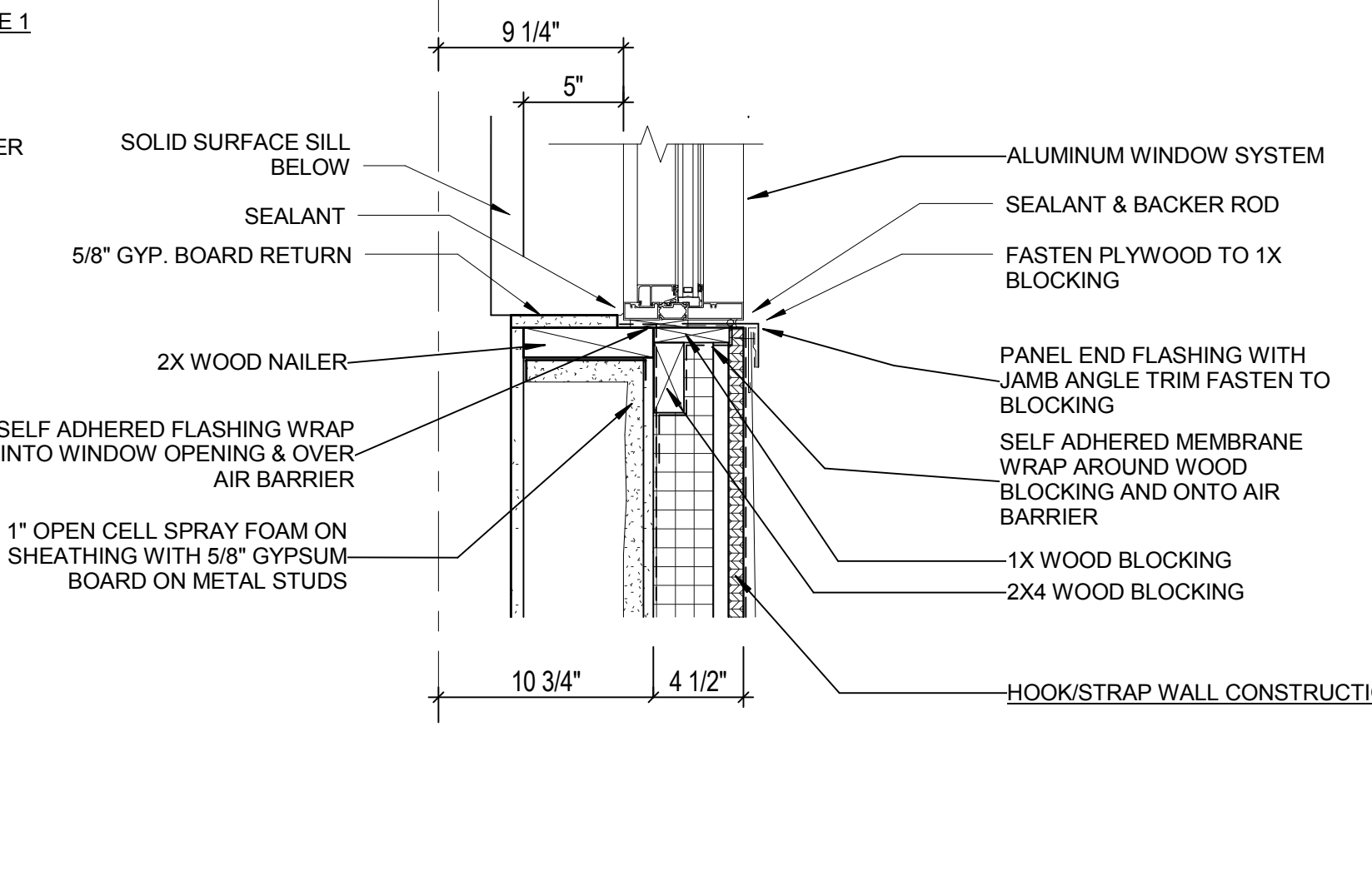
9 WINDOW JAMB DETAIL @ BRICK (SIM. @ STONE)
SCALE: 1 1/2" = 1'-0"



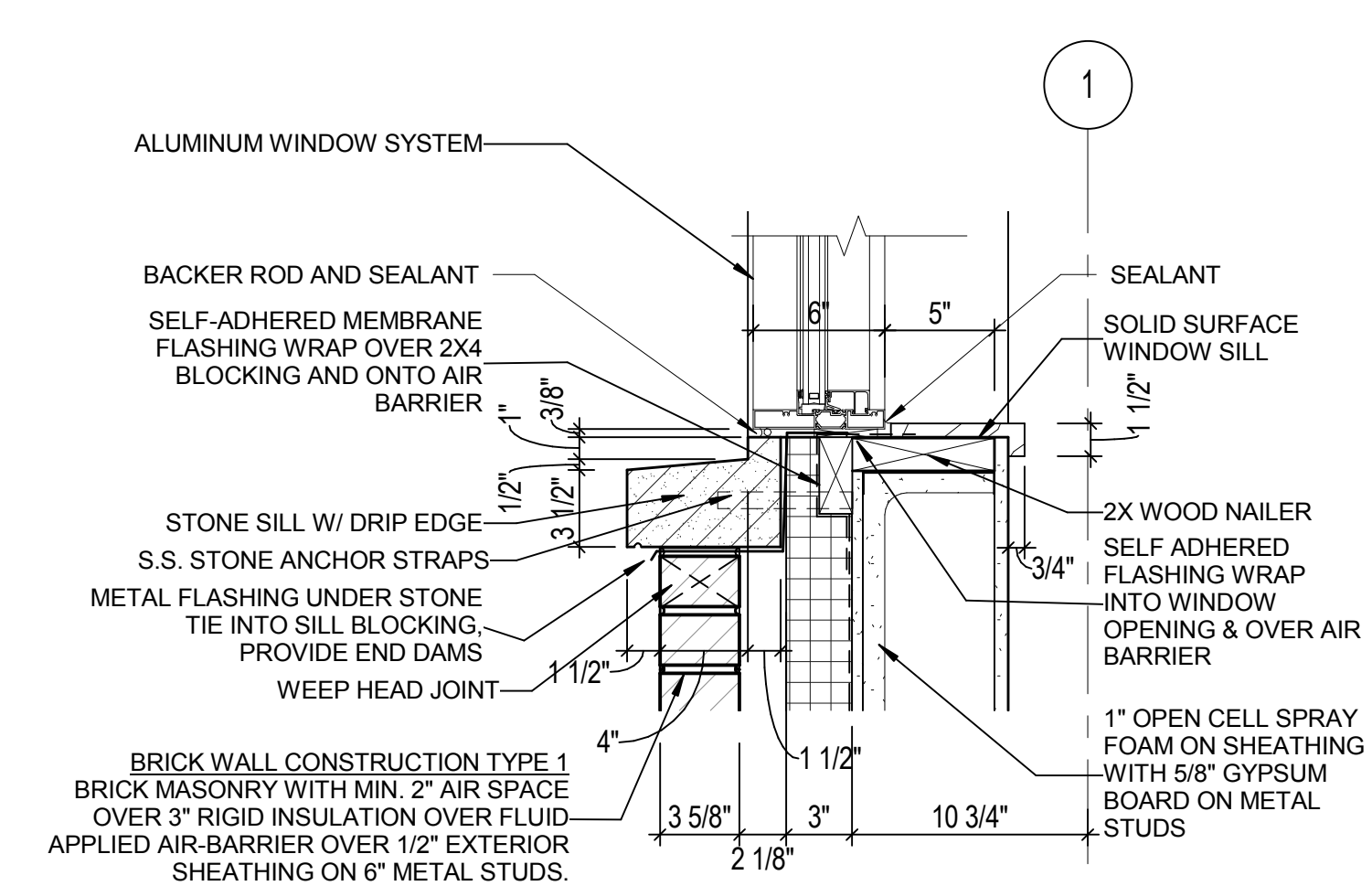
10 SOFFIT DETAIL @ ENTRY STOREFRONT
SCALE: 1 1/2" = 1'-0"



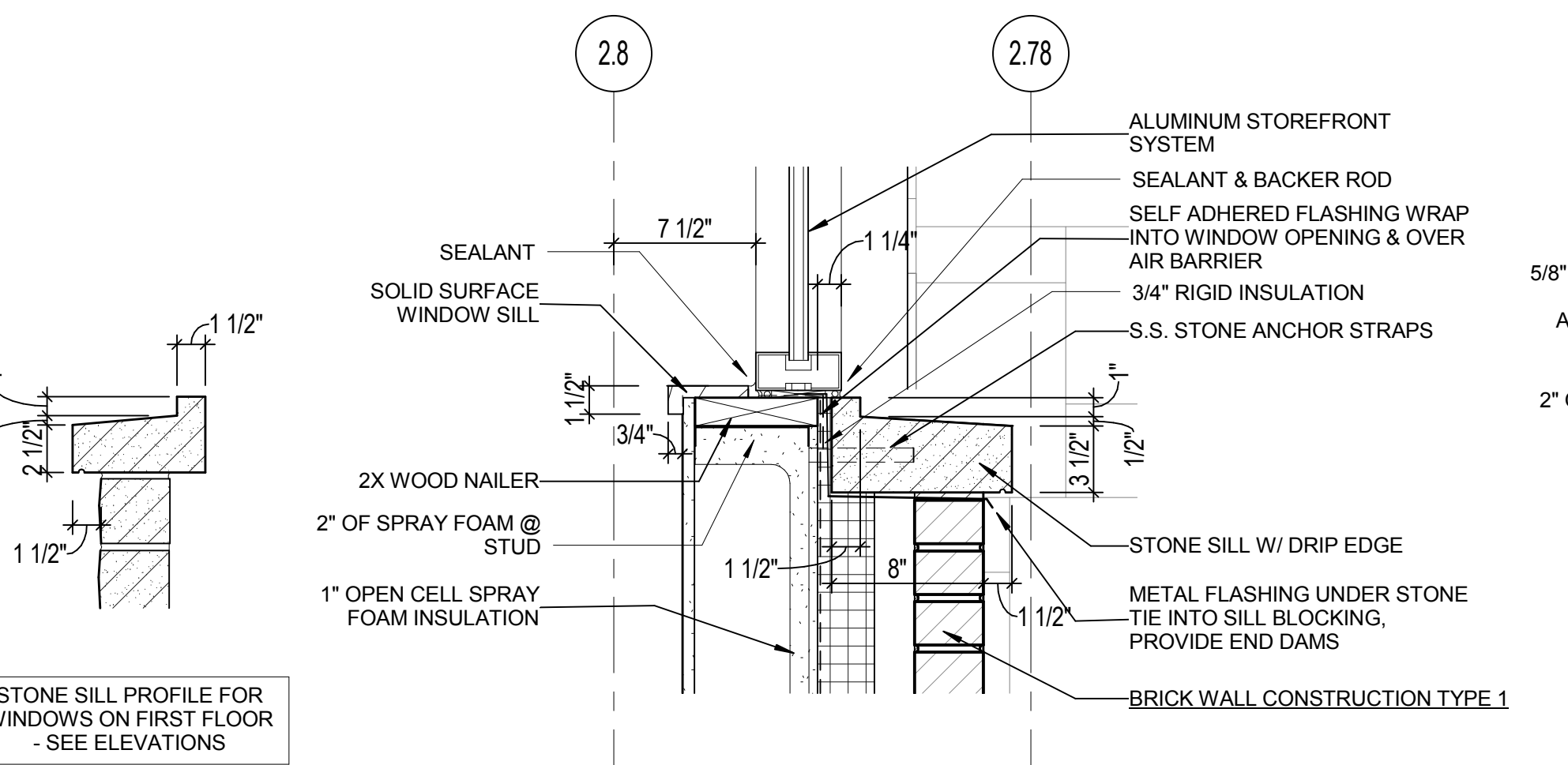
11 STOREFRONT HEAD DETAIL @ METAL PANEL
SCALE: 1 1/2" = 1'-0"



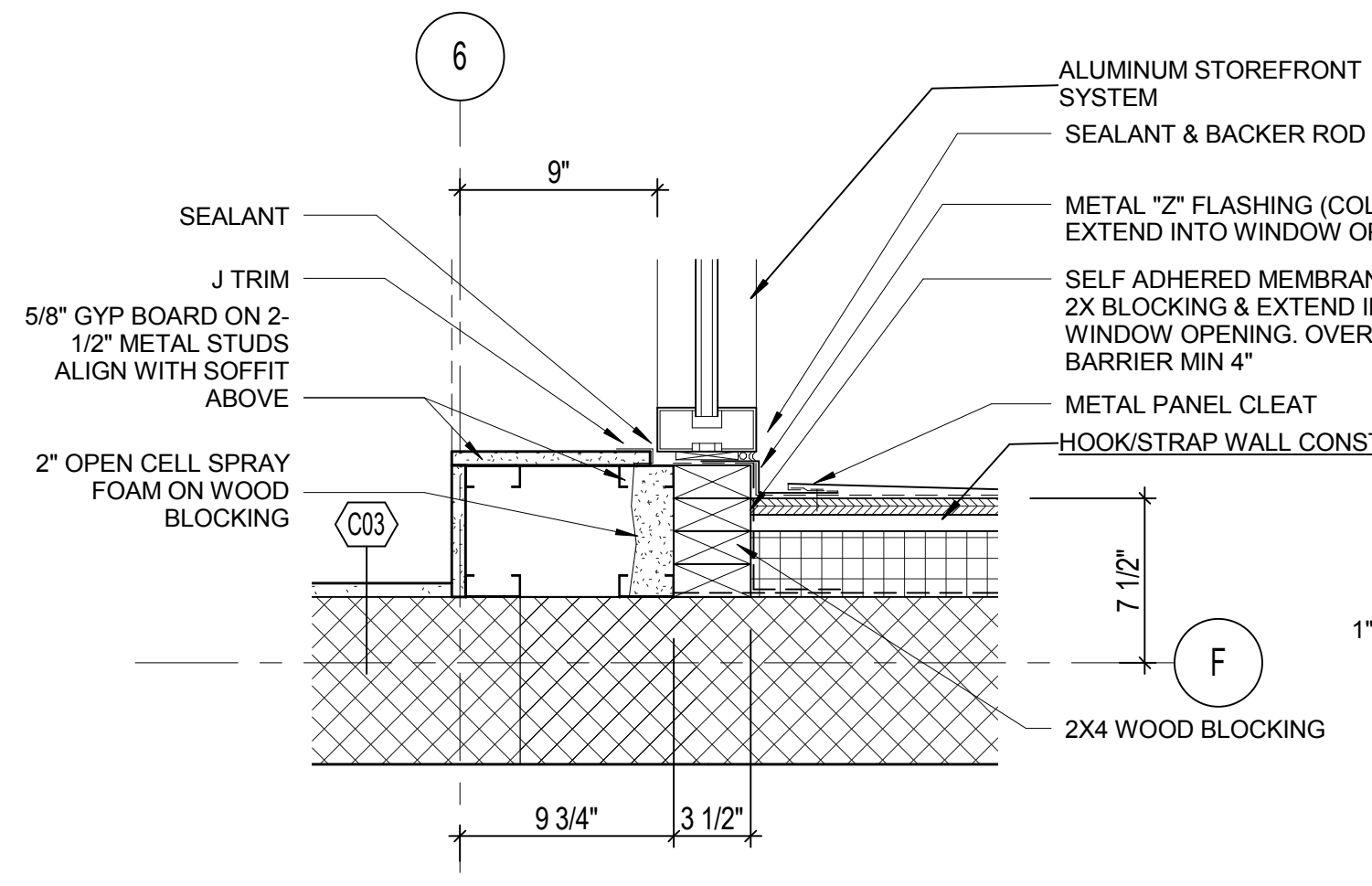
12 TYPICAL JAMB DETAIL @ METAL PANEL
SCALE: 1 1/2" = 1'-0"



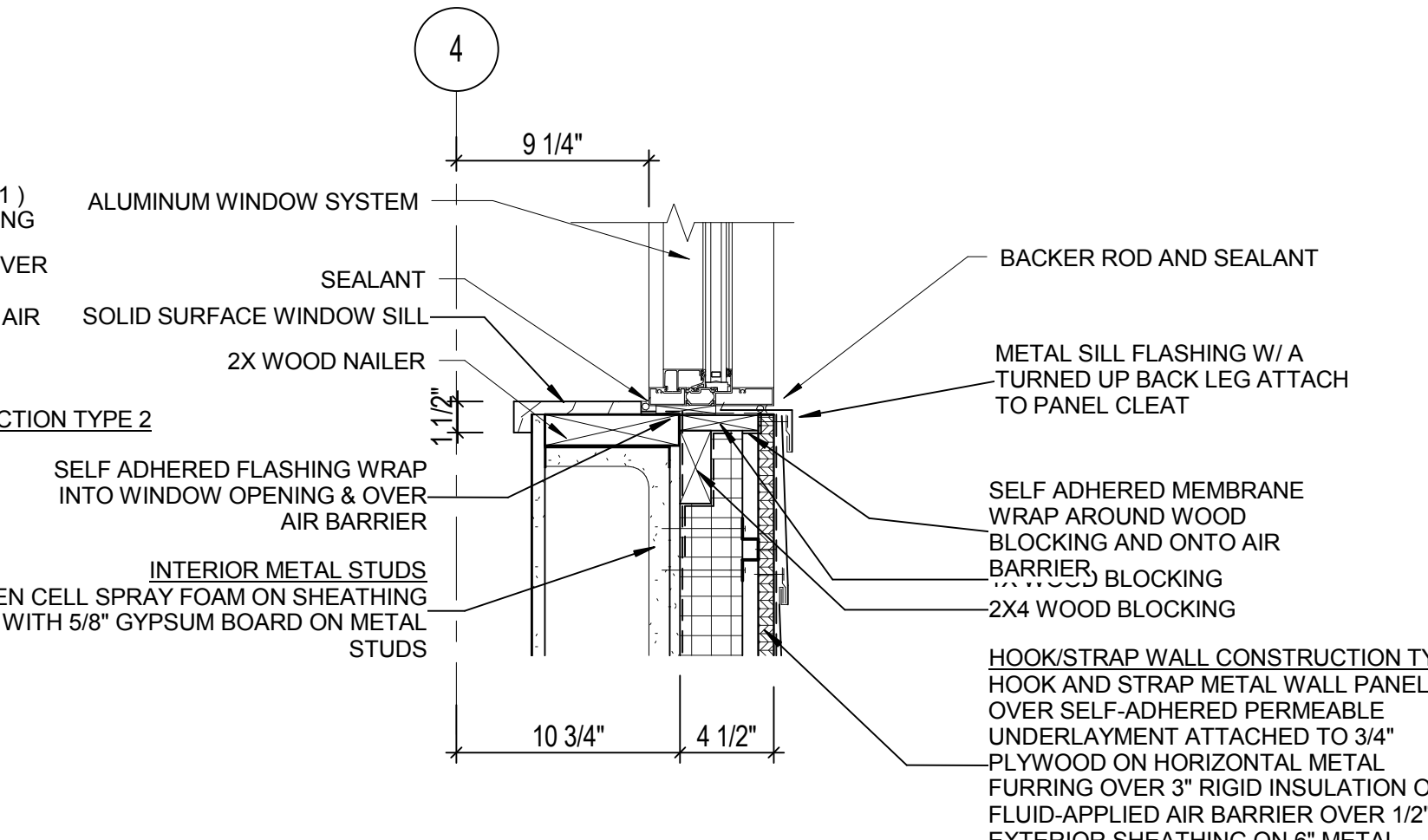
13 WINDOW SILL DETAIL @ BRICK (SIM. @ STONE)
SCALE: 1 1/2" = 1'-0"



14 STOREFRONT SILL DETAIL @ MASONRY
SCALE: 1 1/2" = 1'-0"



16 STOREFRONT JAMB DETAIL @ INTAKE
SCALE: 1 1/2" = 1'-0"



15 TYP. WINDOW SILL DETAIL @ METAL PANEL
SCALE: 1 1/2" = 1'-0"

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WALL DETAILS

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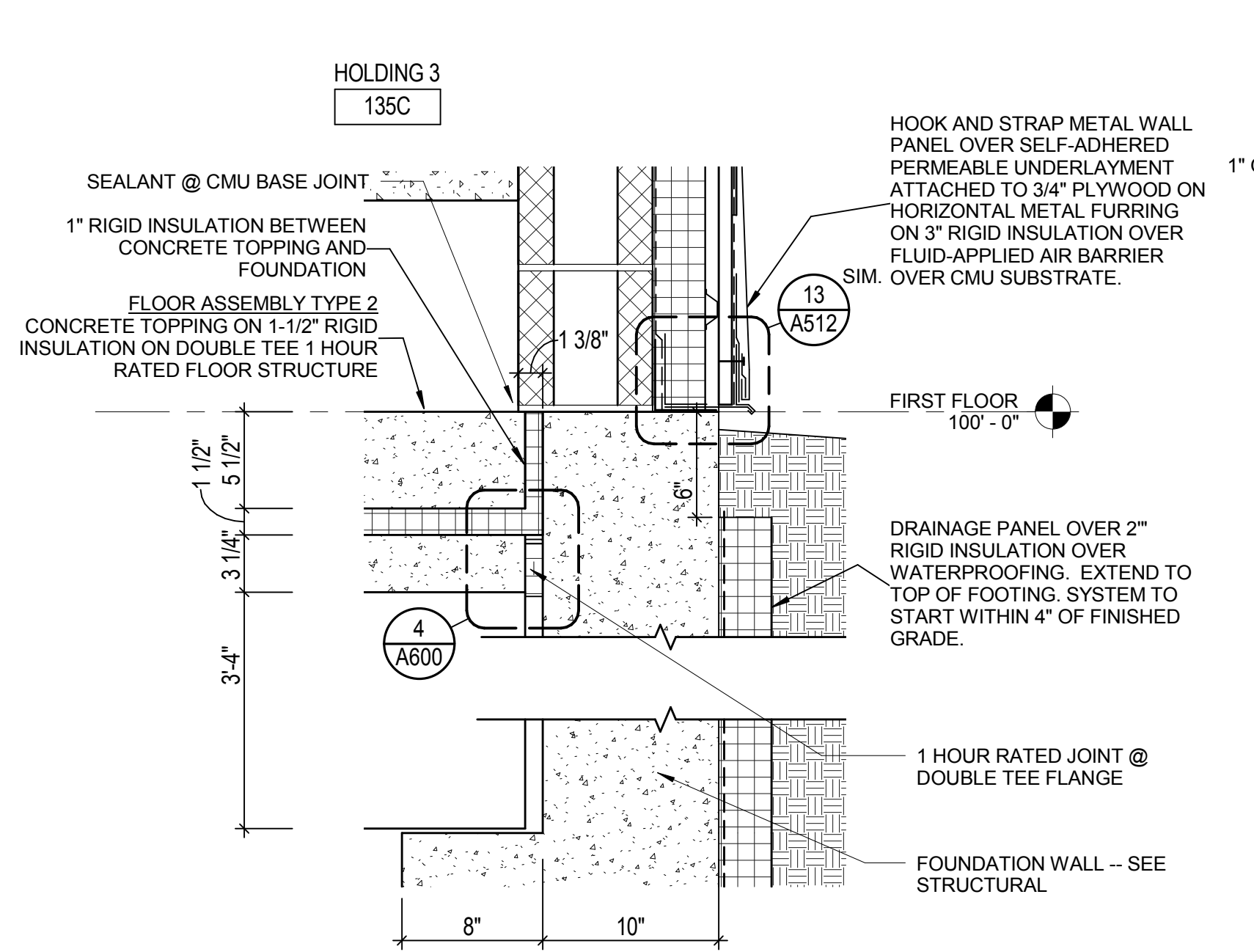
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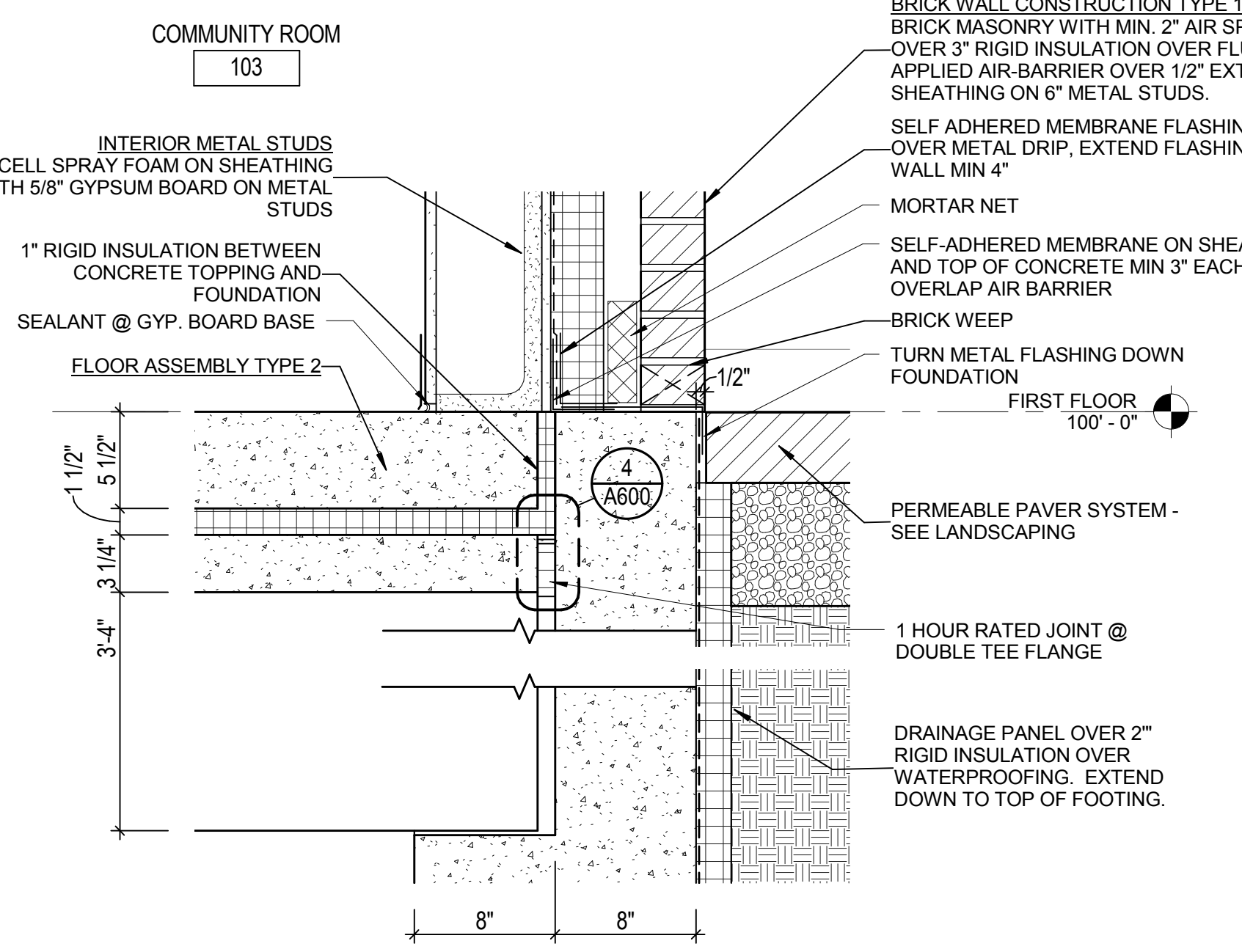
CHECKED BY SK

WALL DETAILS

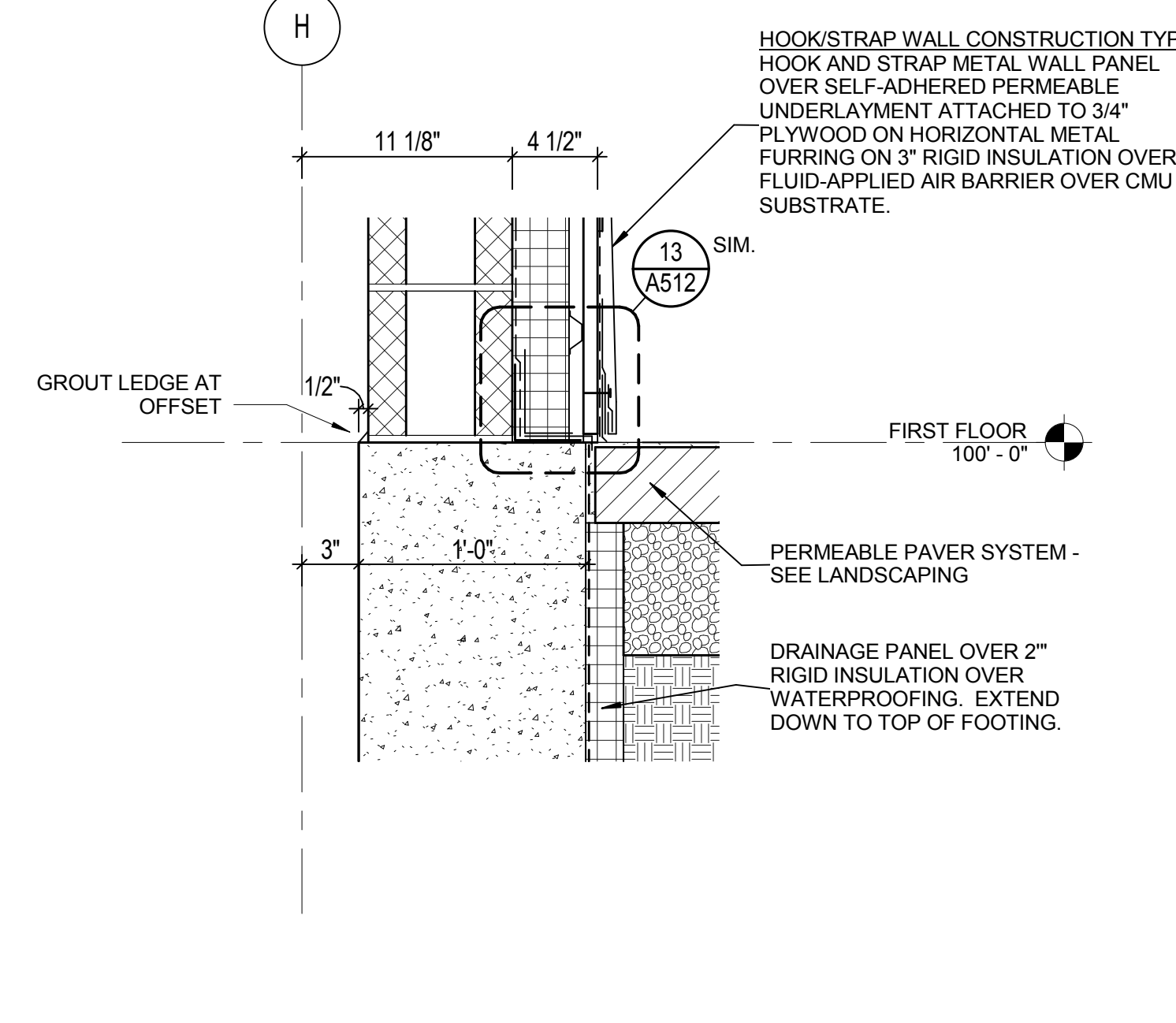
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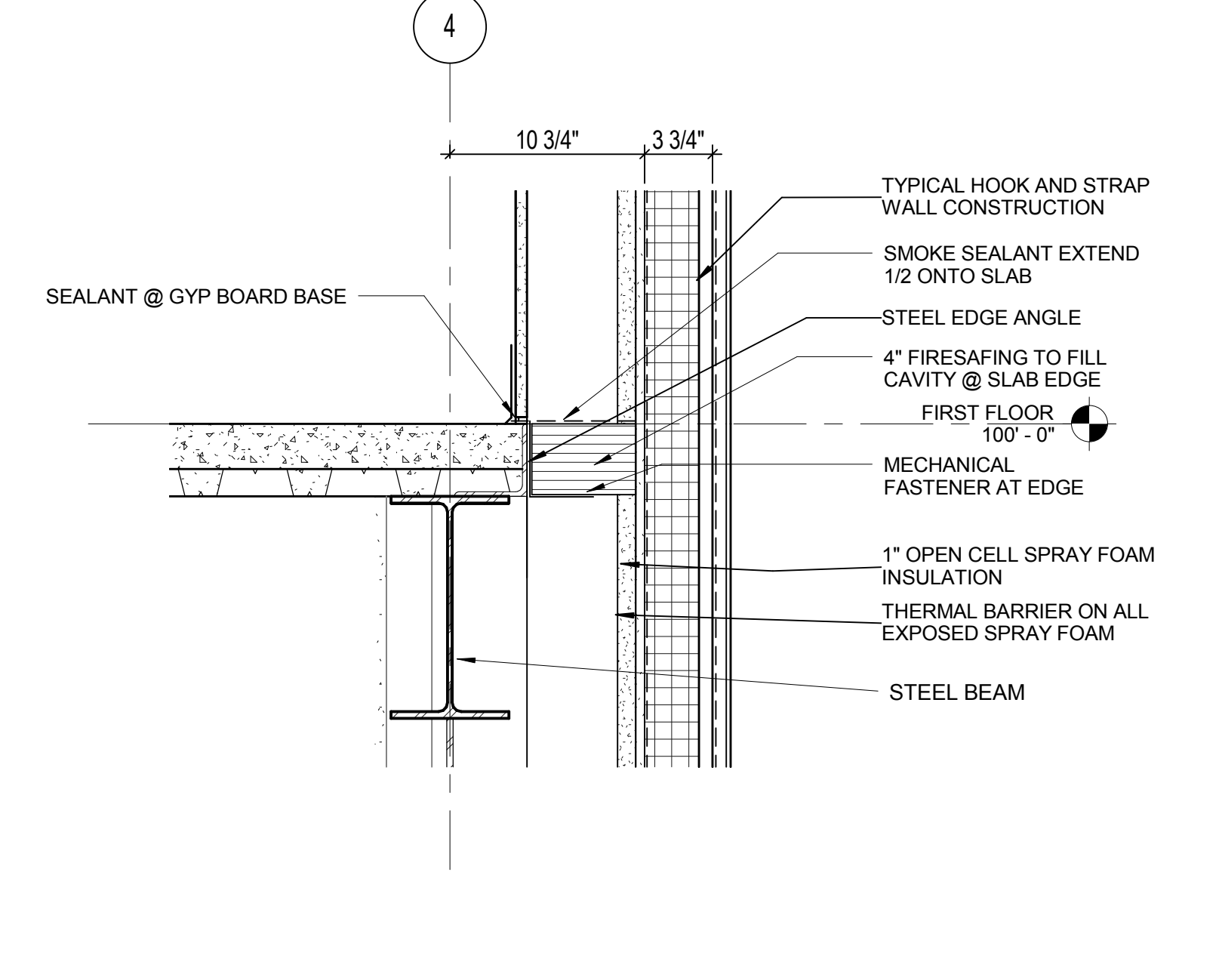
1 FOUNDATION DETAIL @ MTL & DOUBLE TEE EAST
SCALE: 1 1/2" = 1'-0"



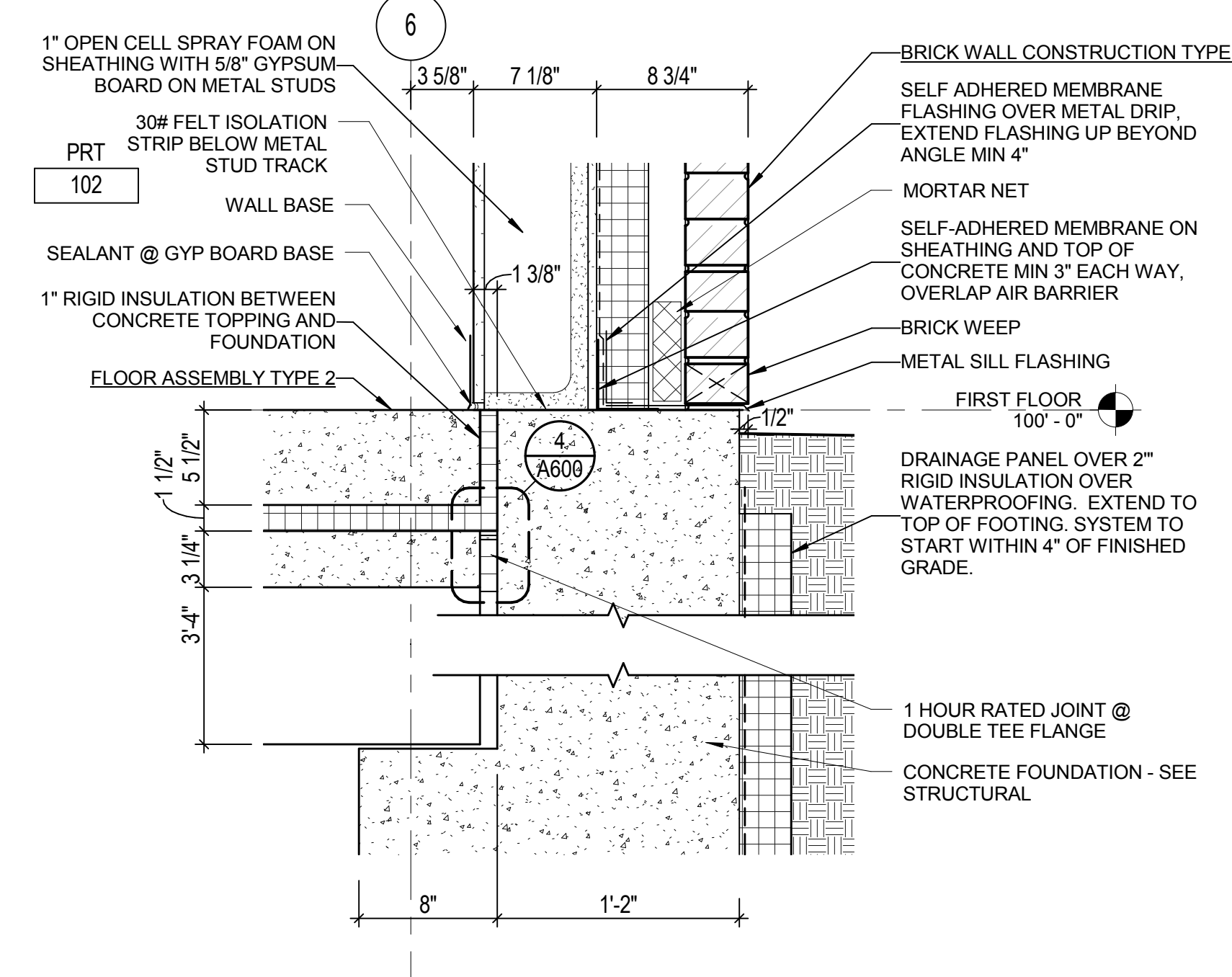
2 FOUNDATION DETAIL @ BRICK & DOUBLE TEE - WEST
SCALE: 1 1/2" = 1'-0"



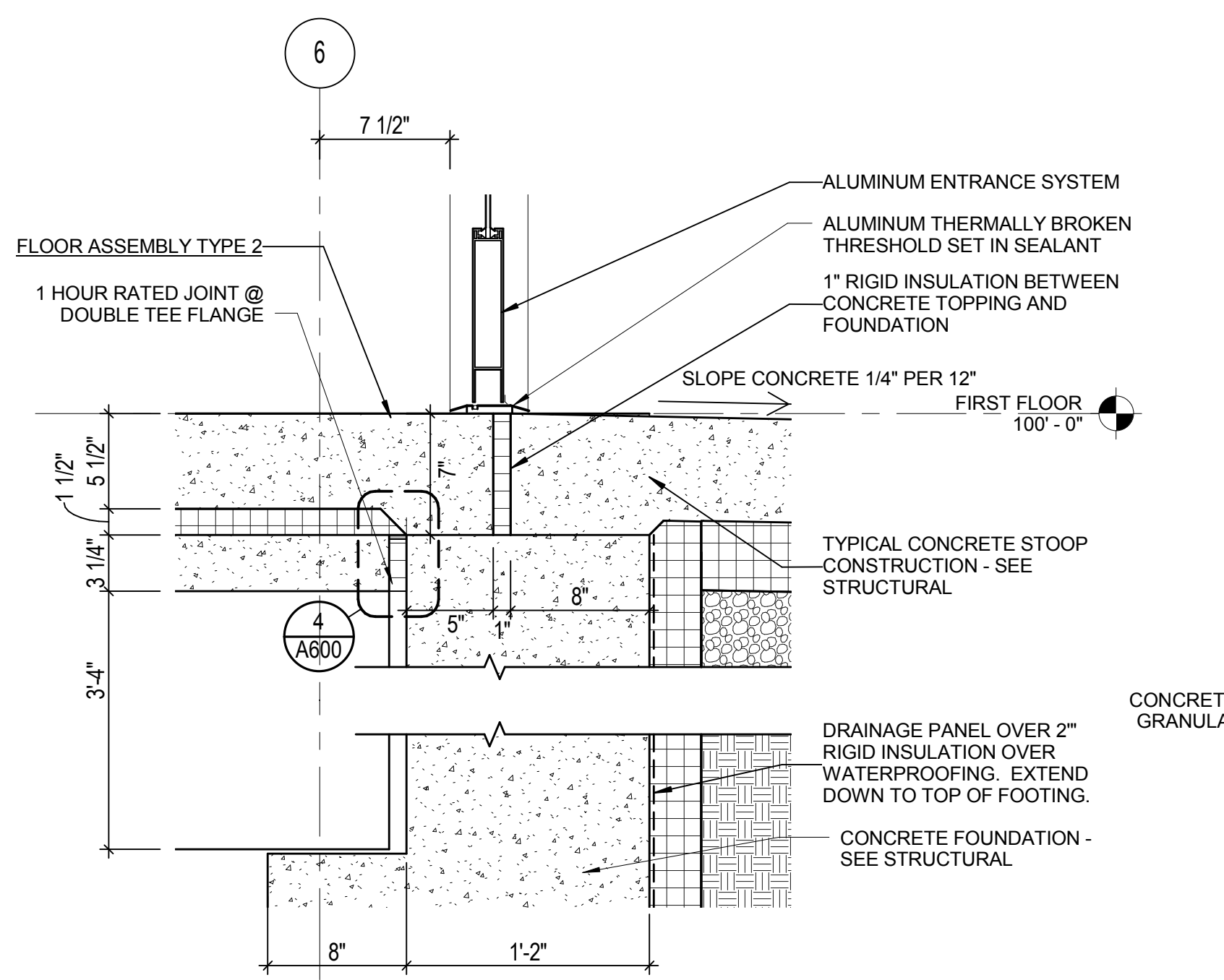
3 FOUNDATION DETAIL @ ELEVATOR
SCALE: 1 1/2" = 1'-0"



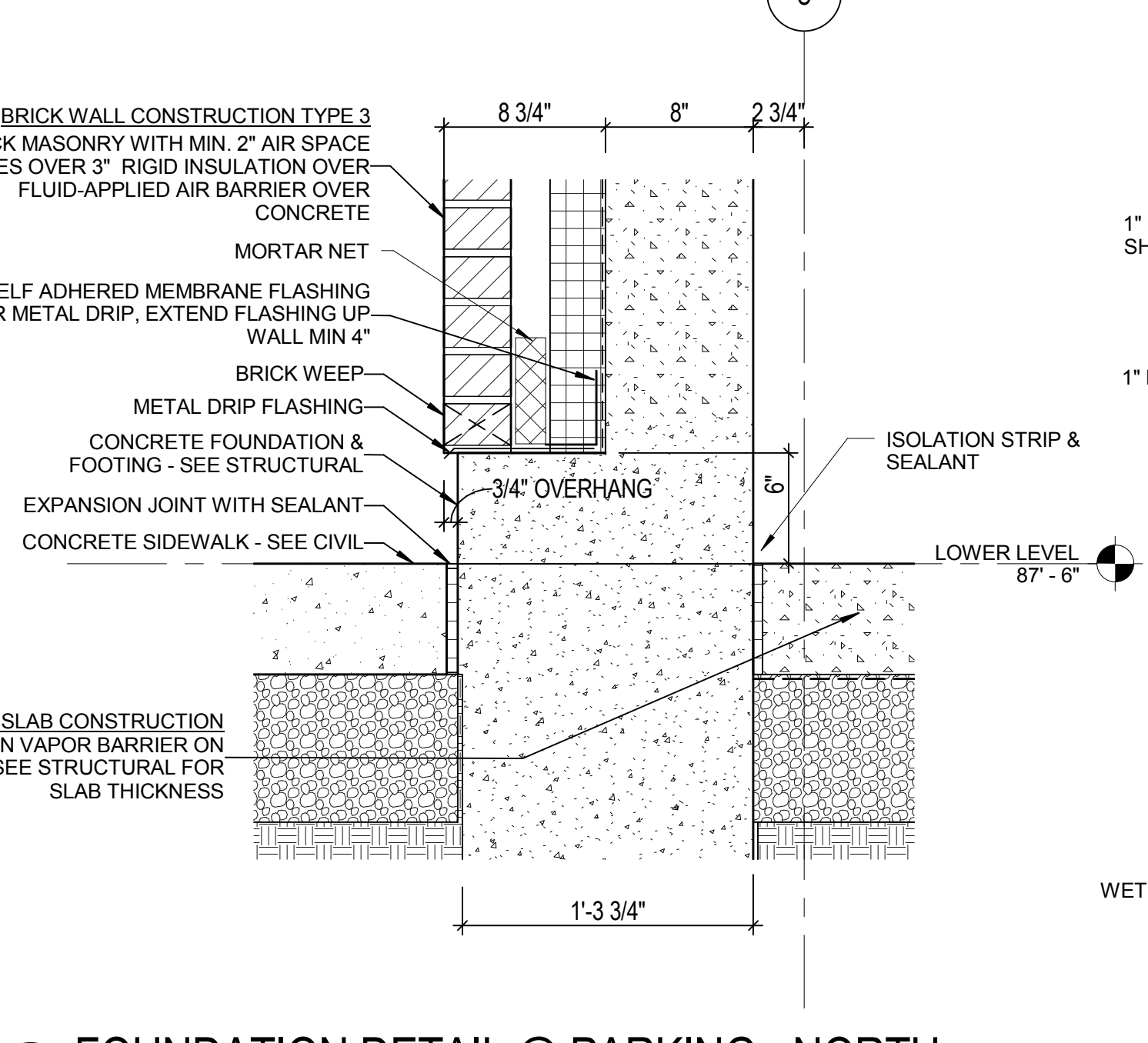
4 TYPICAL SLAB EDGE DETAIL
SCALE: 1 1/2" = 1'-0"



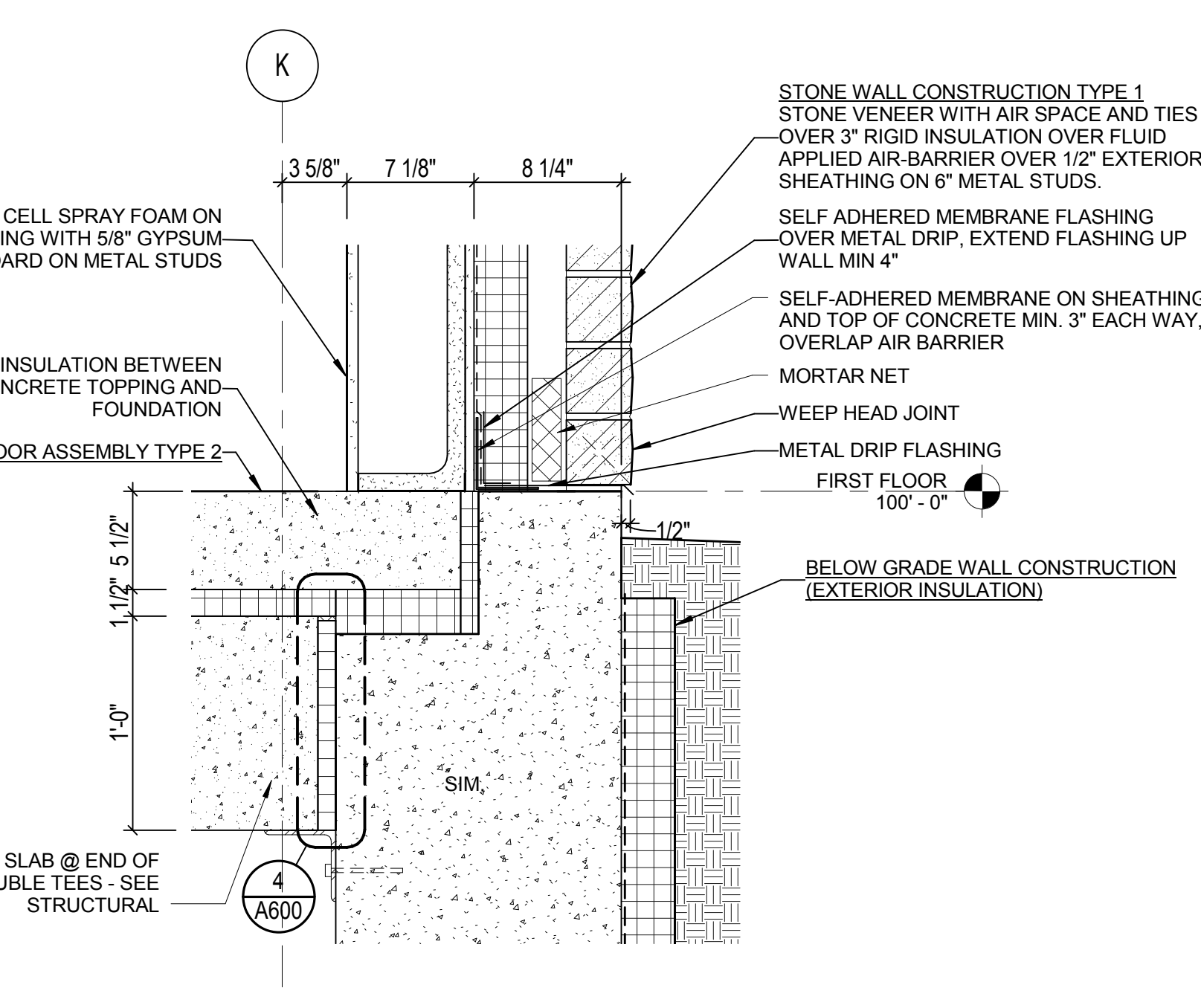
5 FOUNDATION AT BRICK & DOUBLE TEE - EAST
SCALE: 1 1/2" = 1'-0"



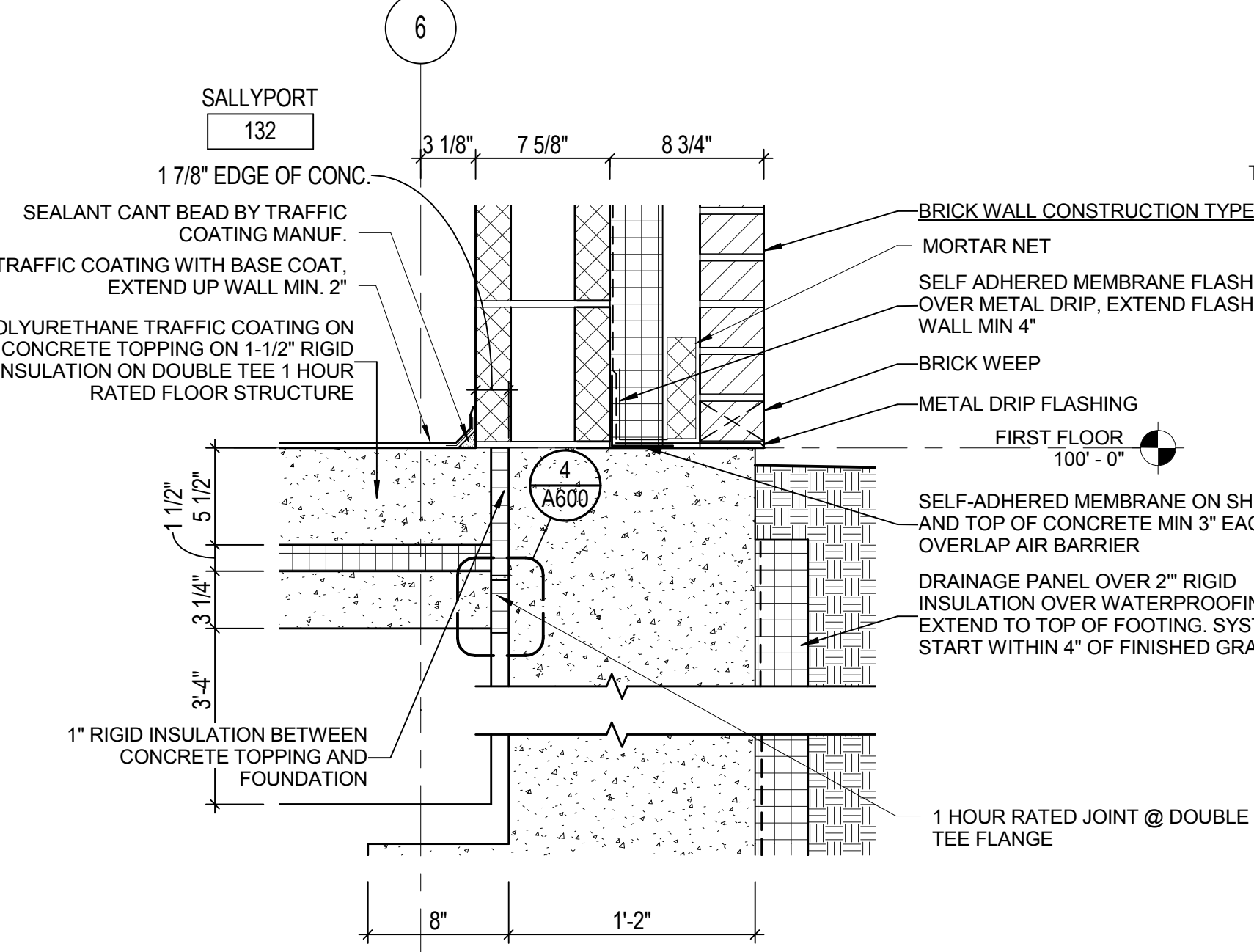
6 FOUNDATION DETAIL @ DOOR THRESHOLD - EAST
SCALE: 1 1/2" = 1'-0"



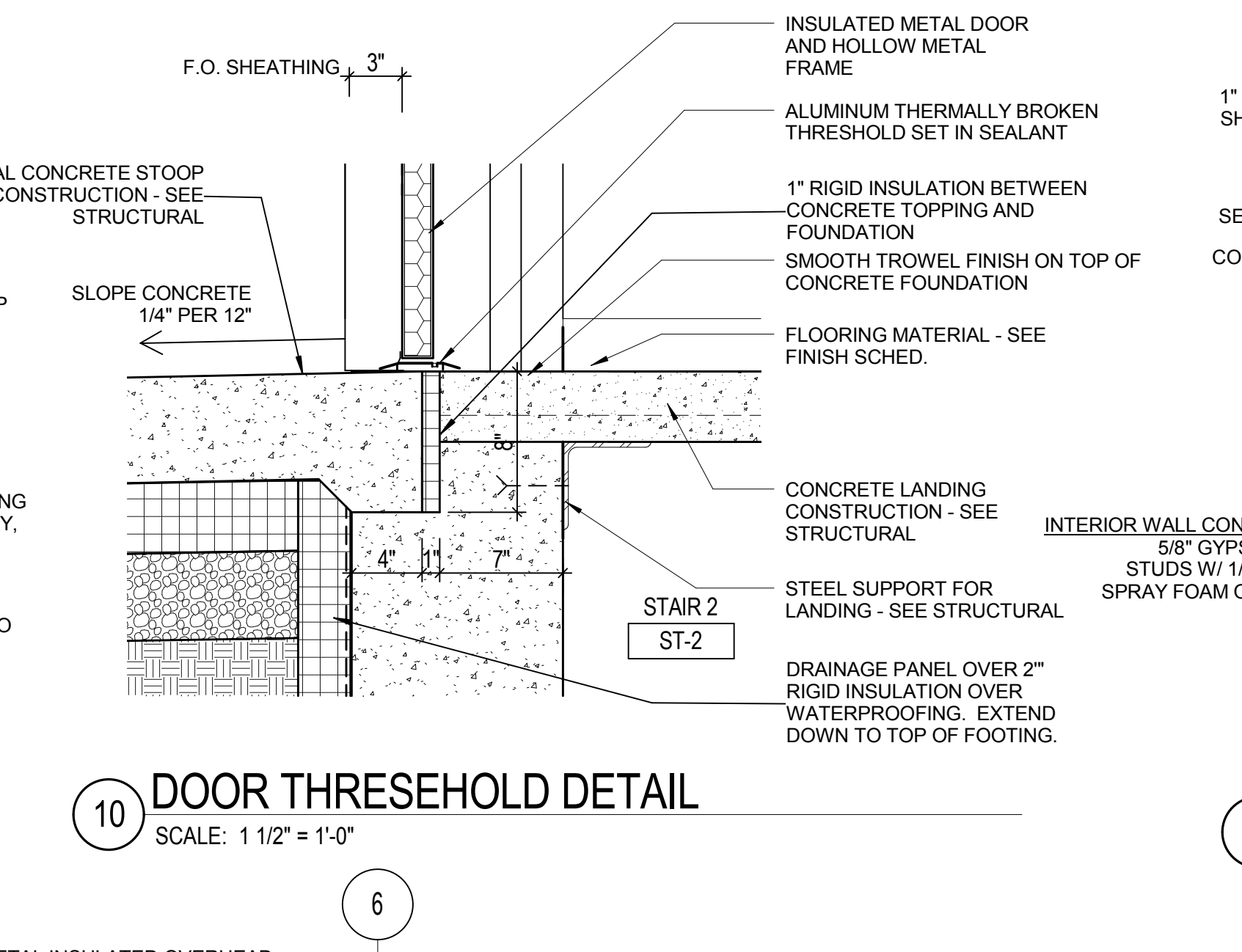
7 FOUNDATION DETAIL @ PARKING - NORTH
SCALE: 1 1/2" = 1'-0"



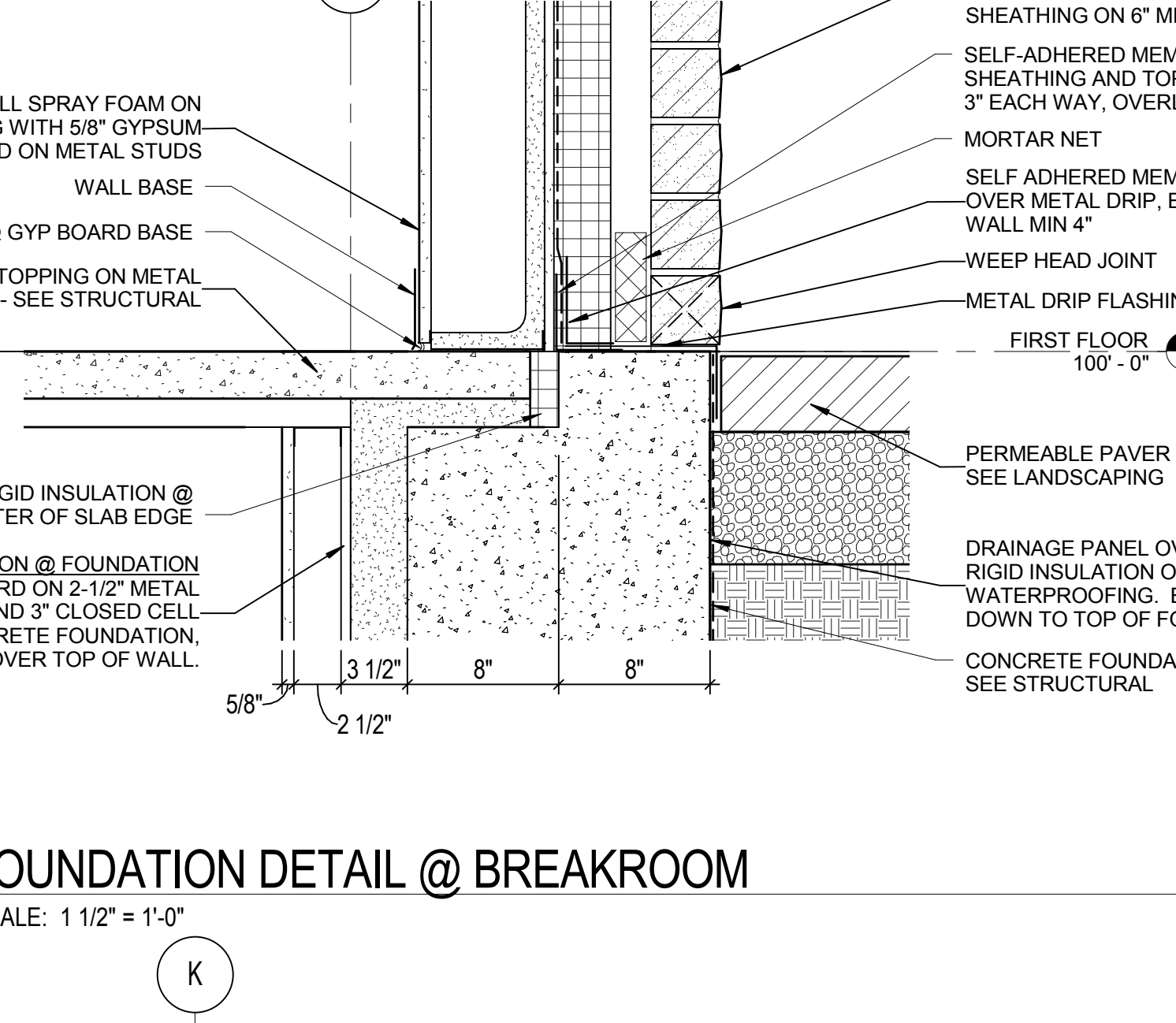
8 FOUNDATION DETAIL @ COMMUNITY ROOM - SOUTH
SCALE: 1 1/2" = 1'-0"



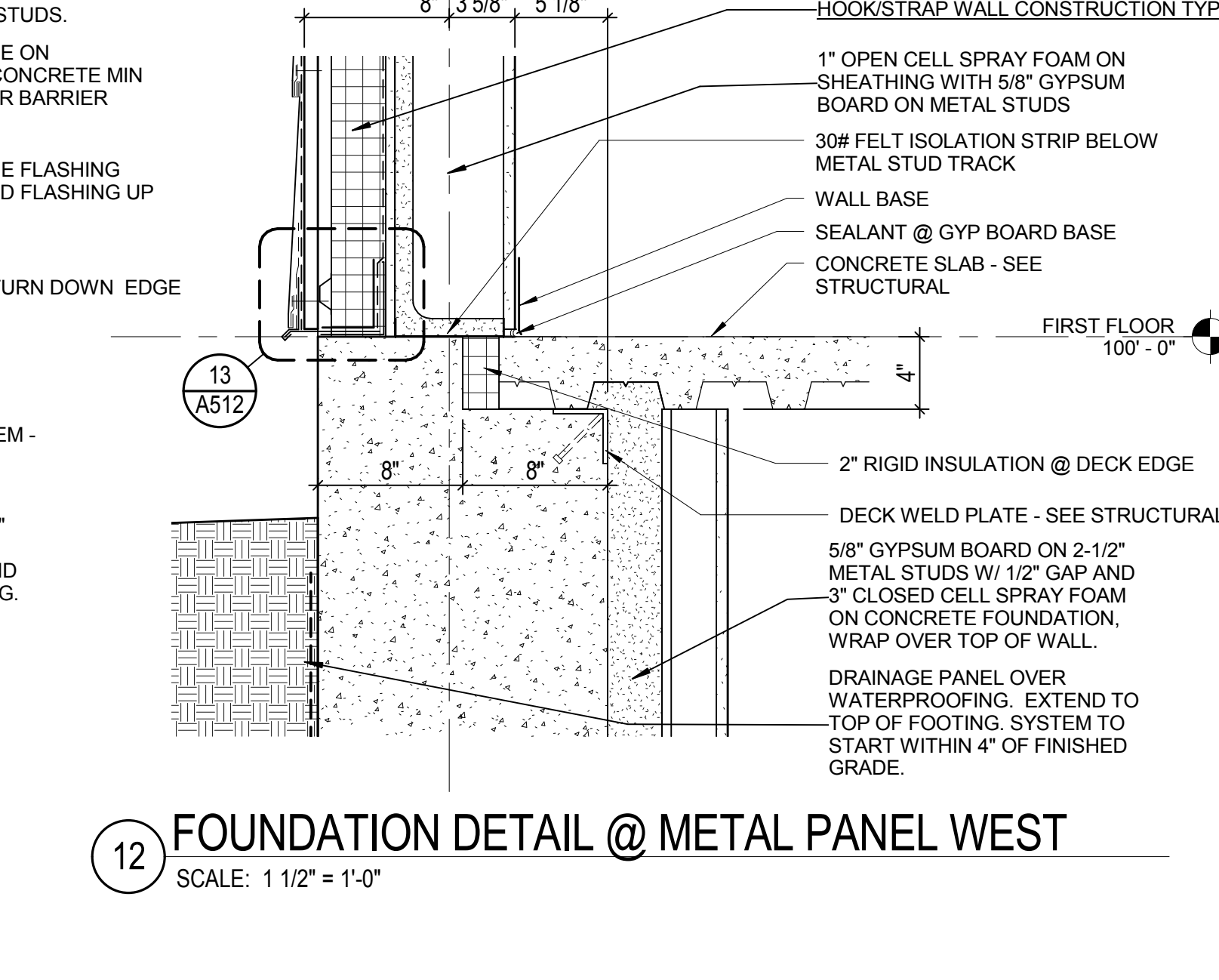
9 FOUNDATION DETAIL @ CMU/BRICK DOUBLE TEE- EAST
SCALE: 1 1/2" = 1'-0"



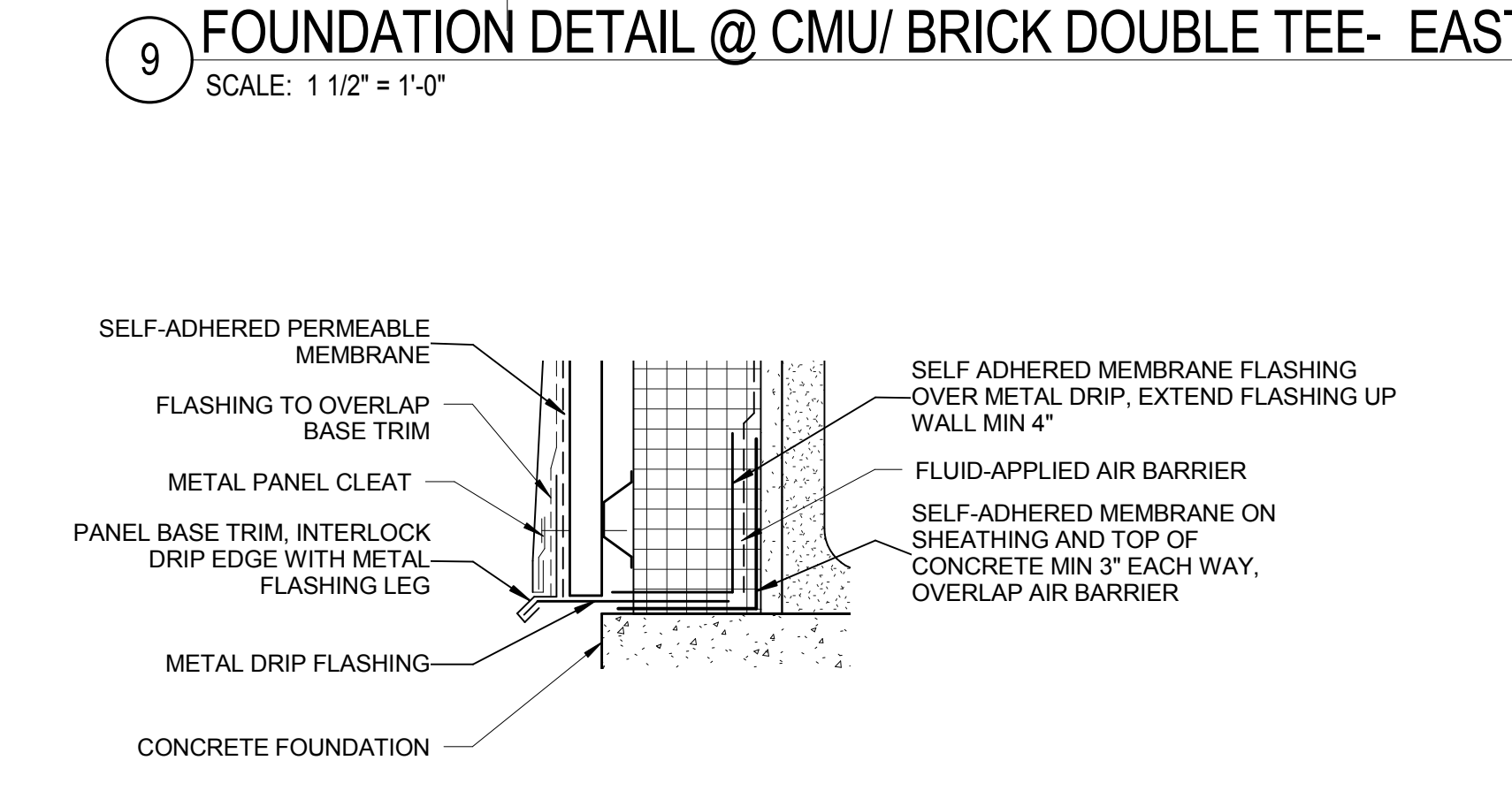
10 DOOR THRESHOLD DETAIL
SCALE: 1 1/2" = 1'-0"



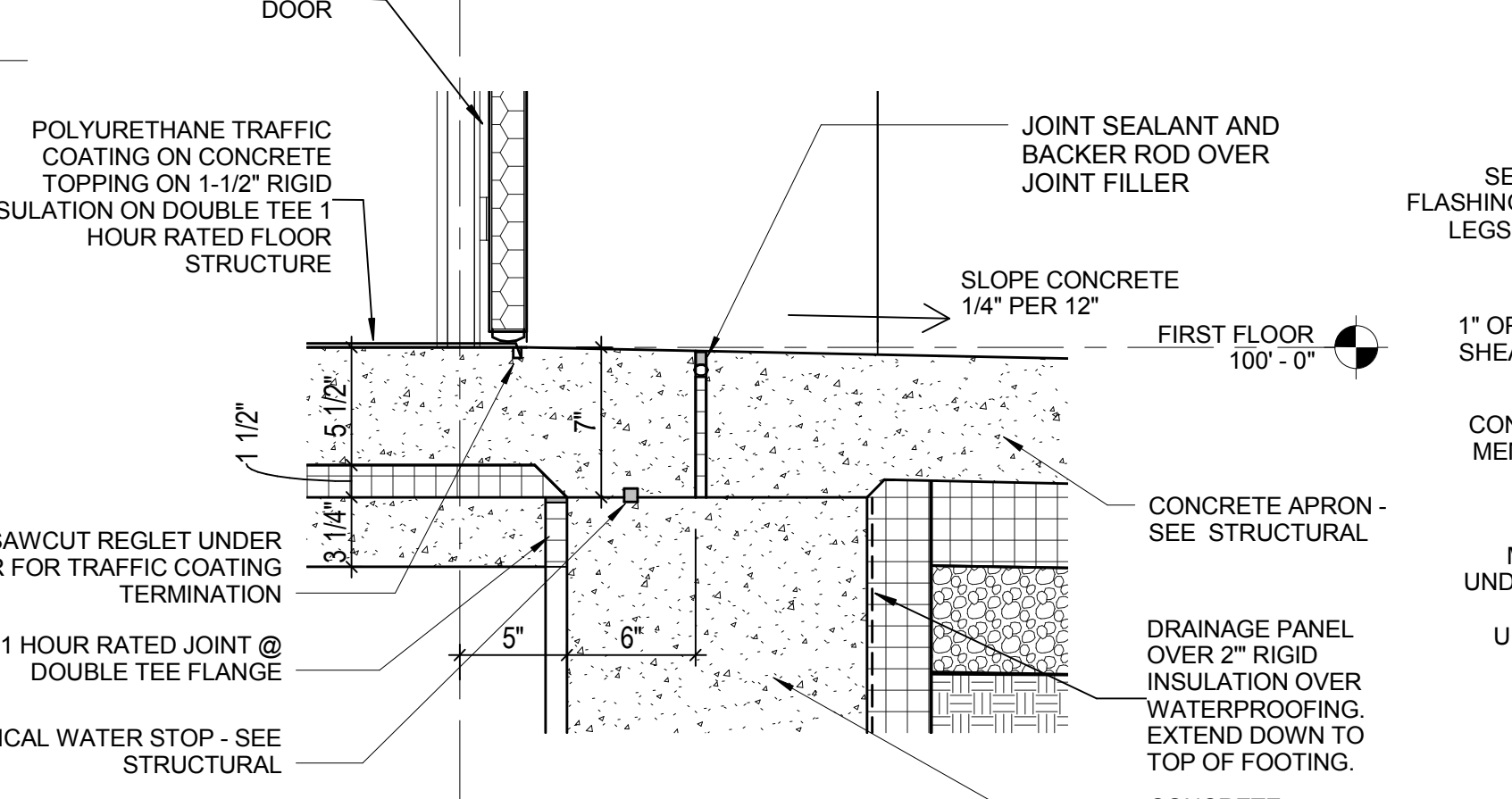
11 FOUNDATION DETAIL @ BREAKROOM
SCALE: 1 1/2" = 1'-0"



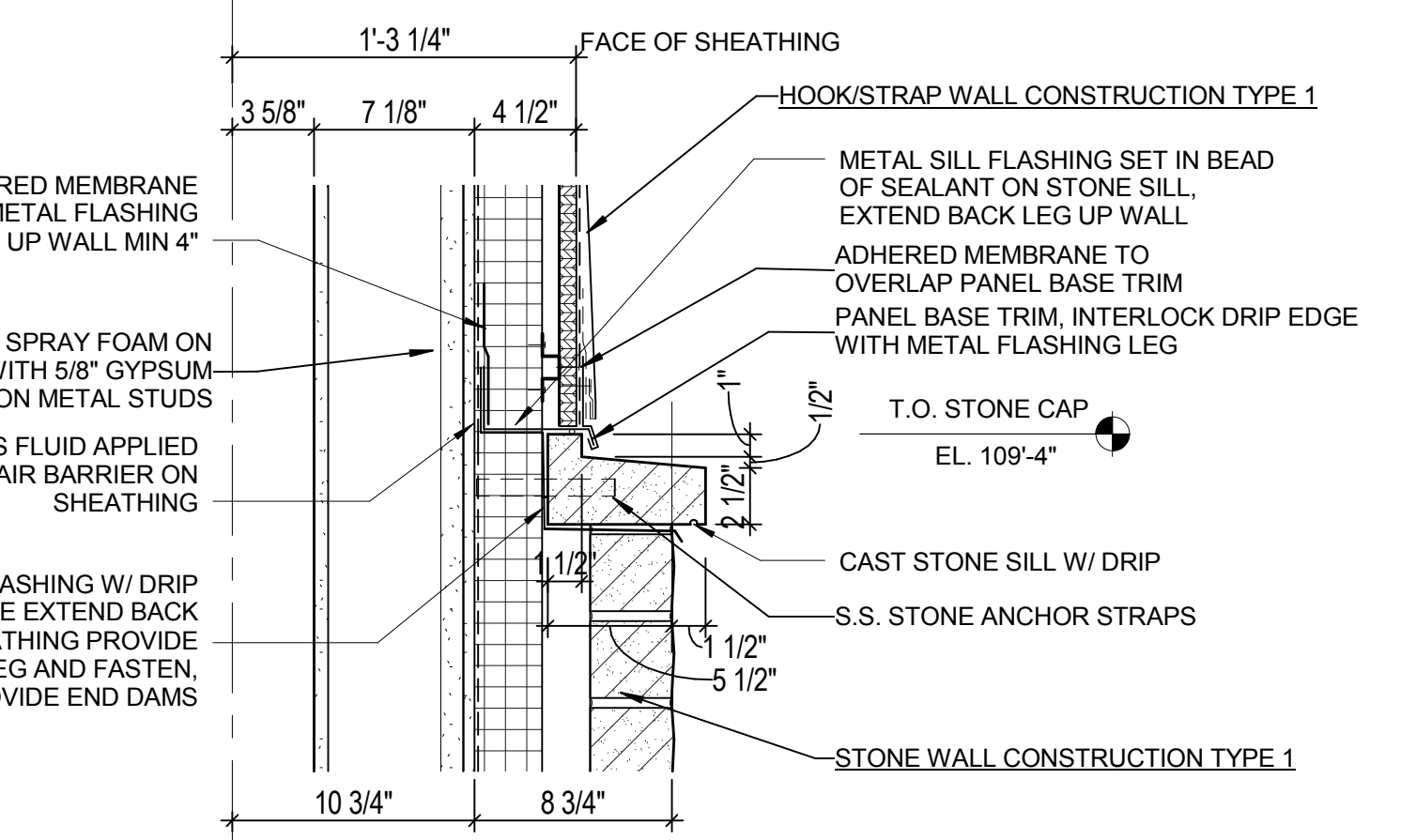
12 FOUNDATION DETAIL @ METAL PANEL WEST
SCALE: 1 1/2" = 1'-0"



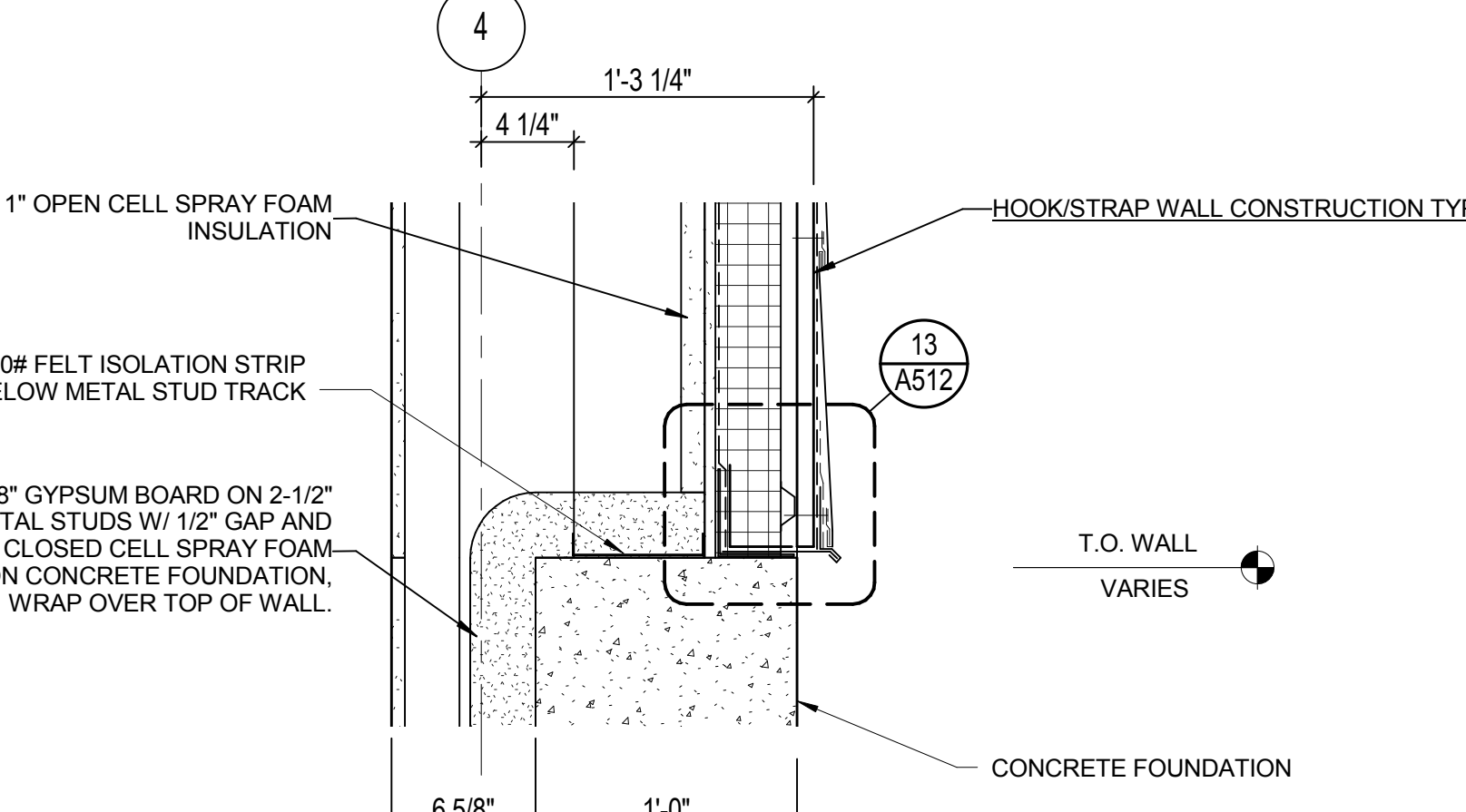
13 TYP. FLASHING DETAIL @ BASE
SCALE: 3" = 1'-0"



16 THRESHOLD DETAIL @ SALLYPORT
SCALE: 1 1/2" = 1'-0"



14 METAL PANEL TO STONE TRANSITION
SCALE: 1 1/2" = 1'-0"



15 FOUNDATION DETAIL @ METAL PANEL
SCALE: 1 1/2" = 1'-0"

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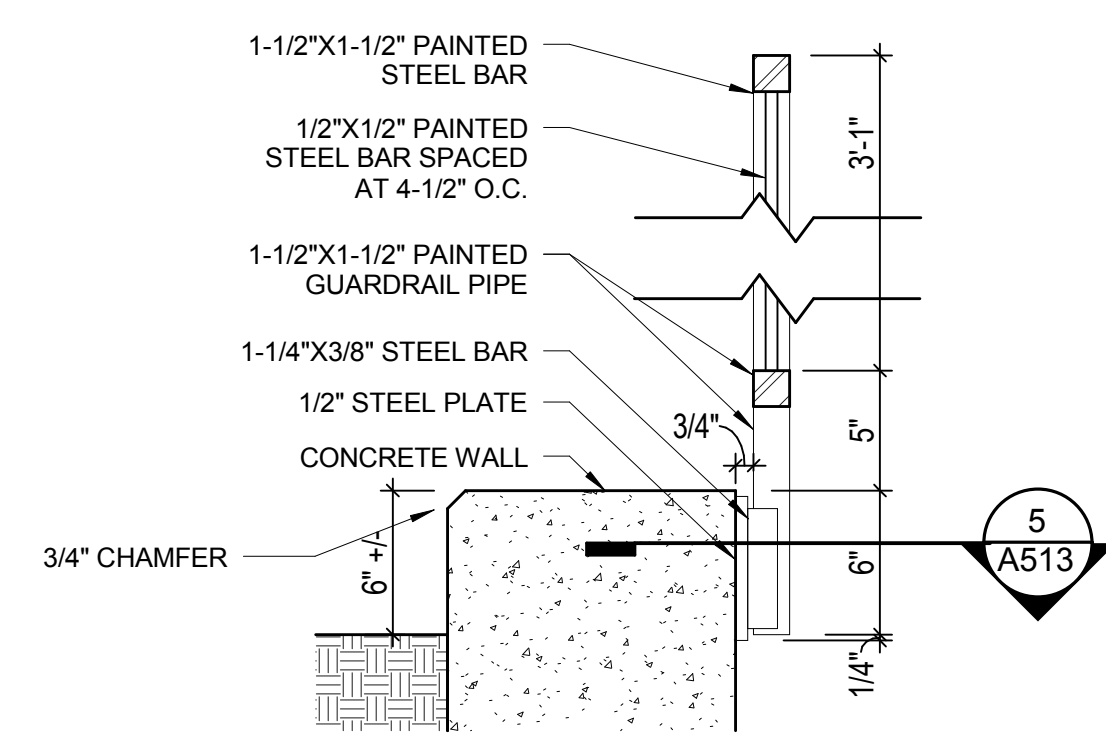
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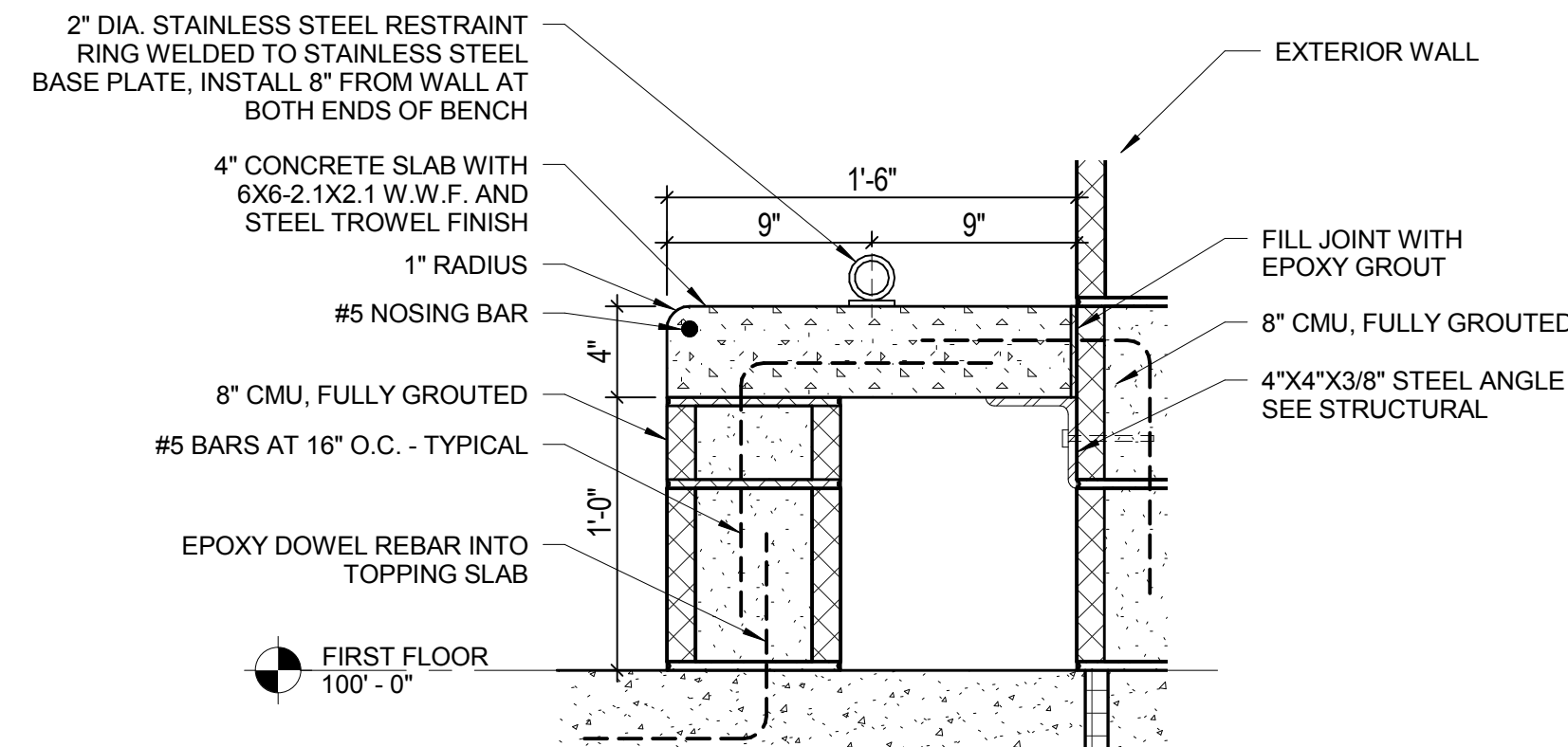
DRAWN BY MMZ

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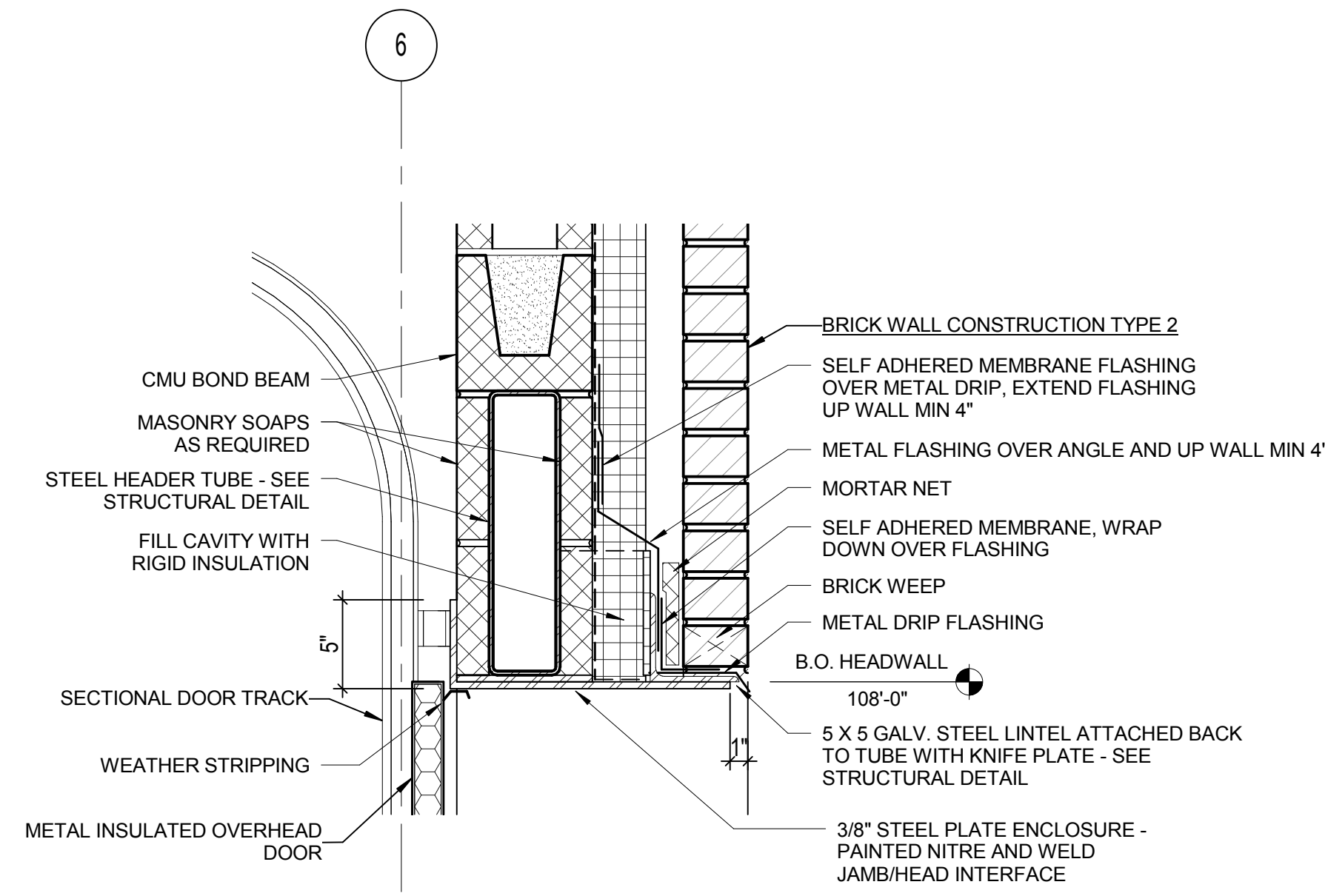
DETAILS



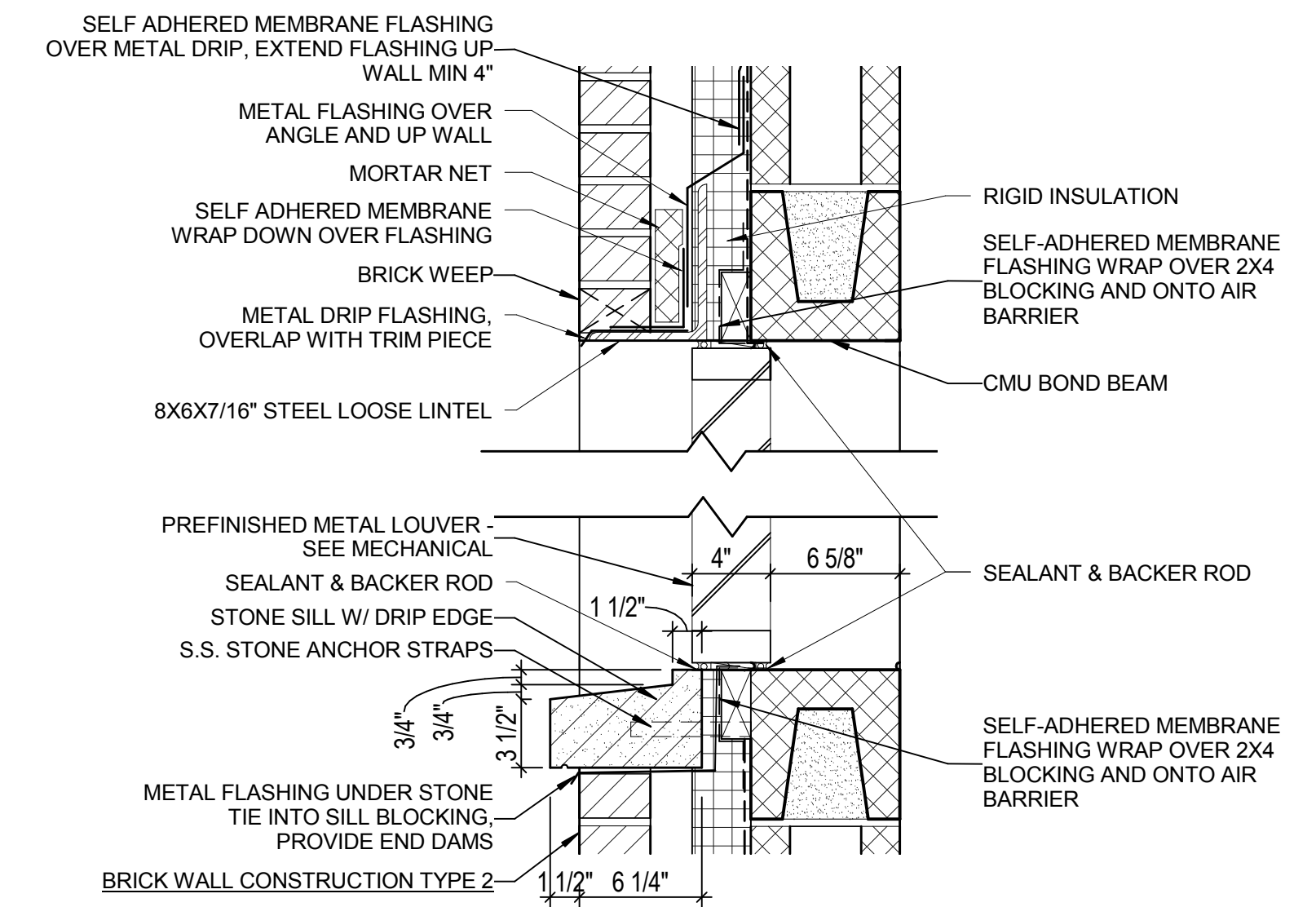
1 RAILING SIDE MOUNT SECTION
SCALE: 1 1/2" = 1'-0"



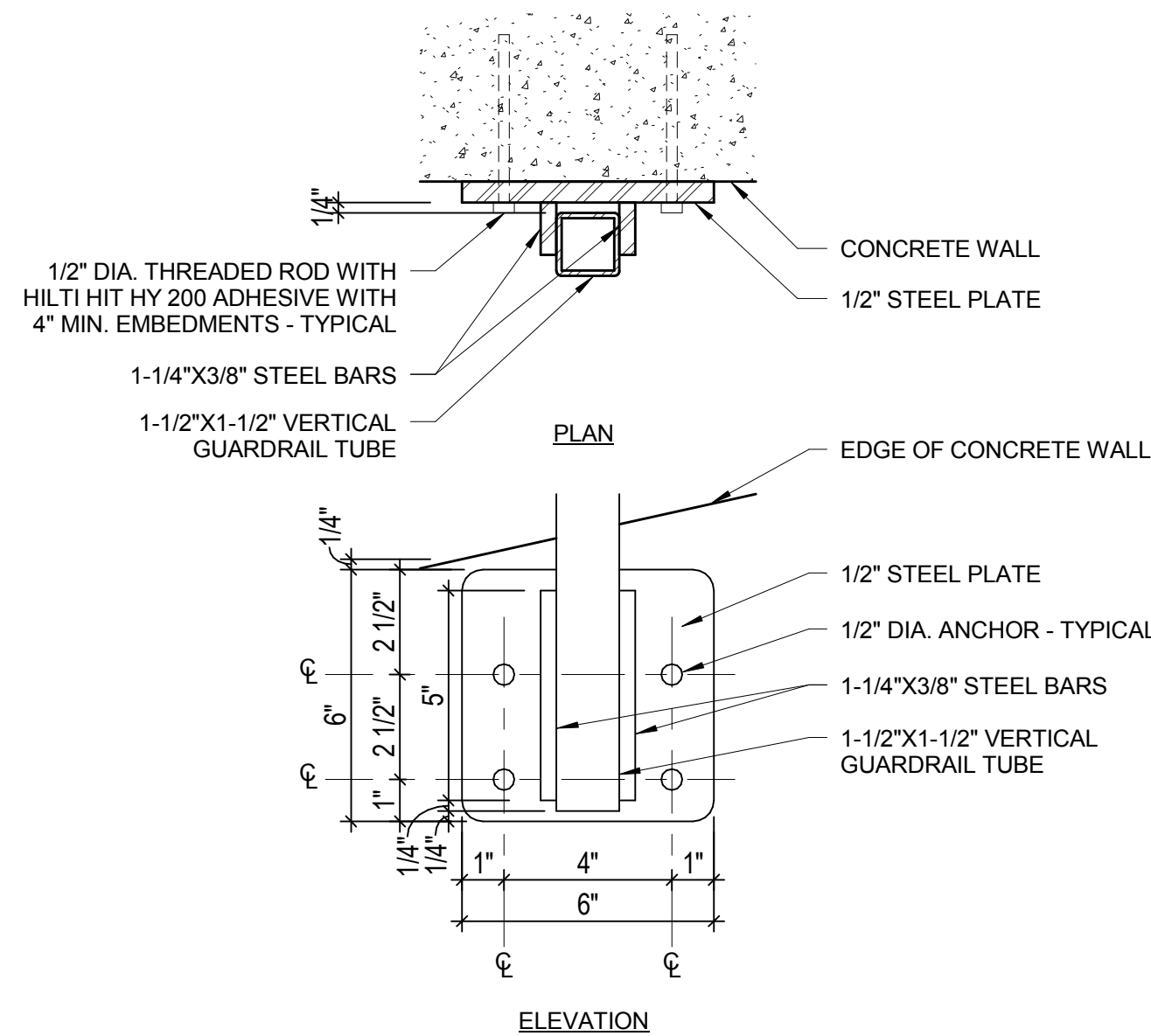
2 HOLDING CELL BENCH DETAIL
SCALE: 1 1/2" = 1'-0"



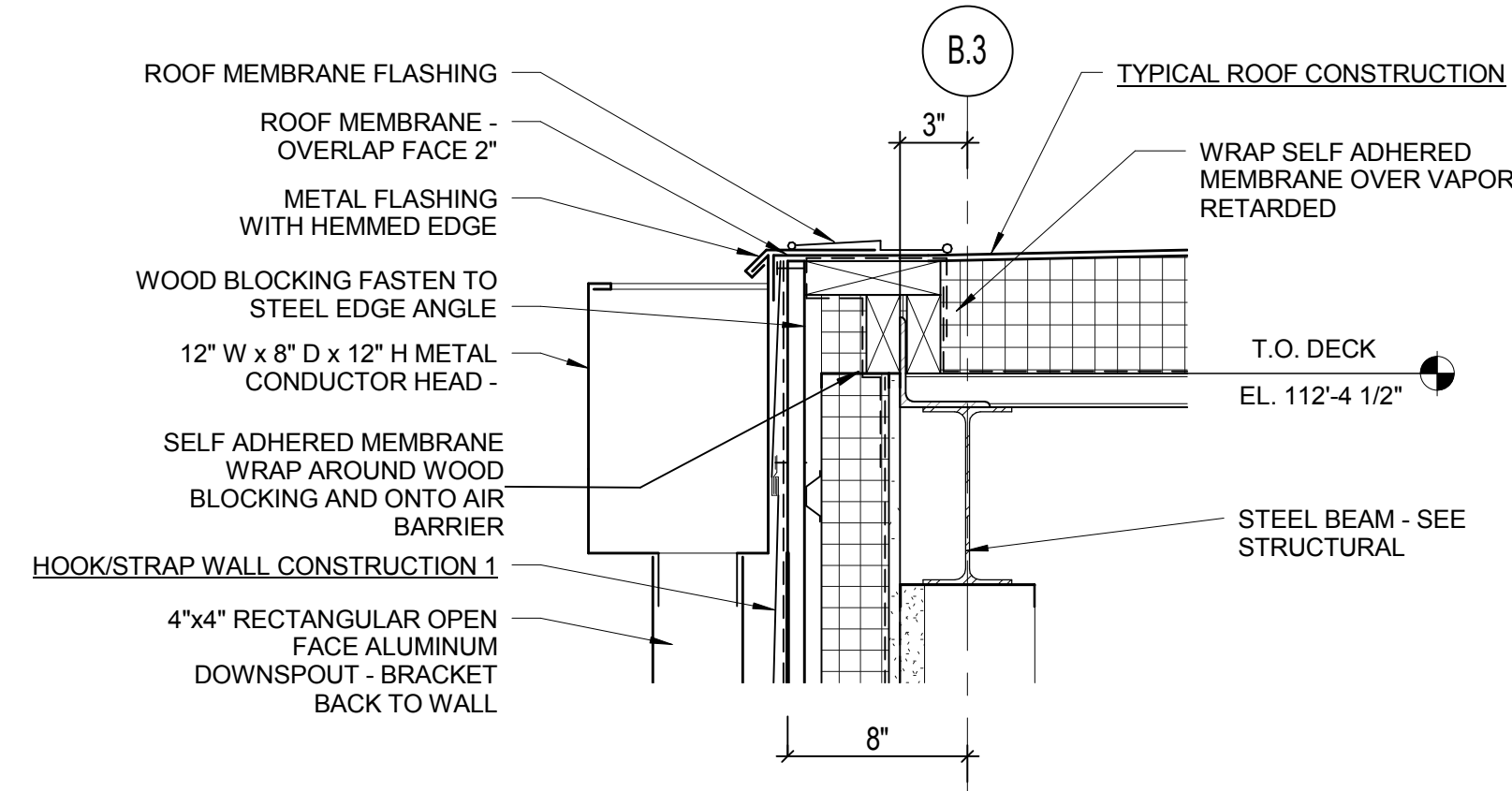
3 HEAD DETAIL @ SALLYPORT
SCALE: 1 1/2" = 1'-0"



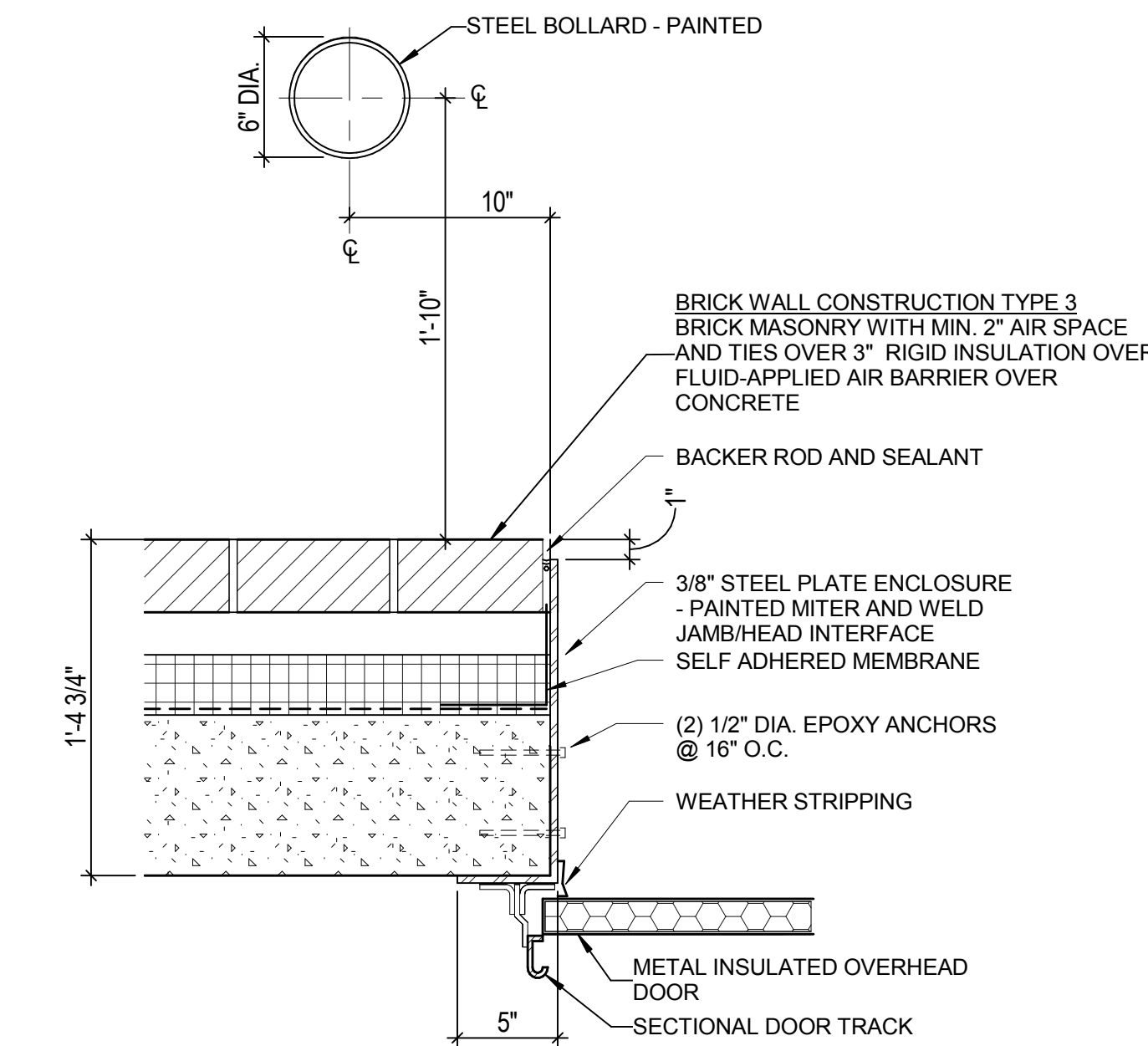
4 LOUVER HEAD/SILL DETAIL
SCALE: 1 1/2" = 1'-0"



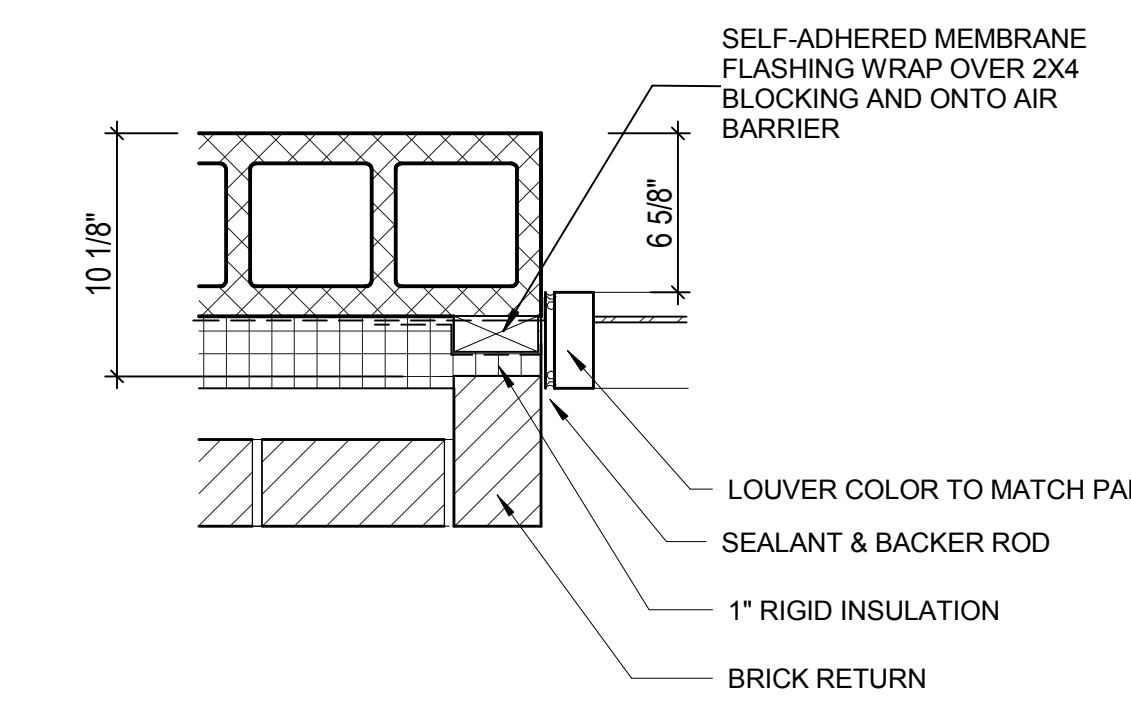
5 RAILING SIDE MOUNT PLATE
SCALE: 3" = 1'-0"



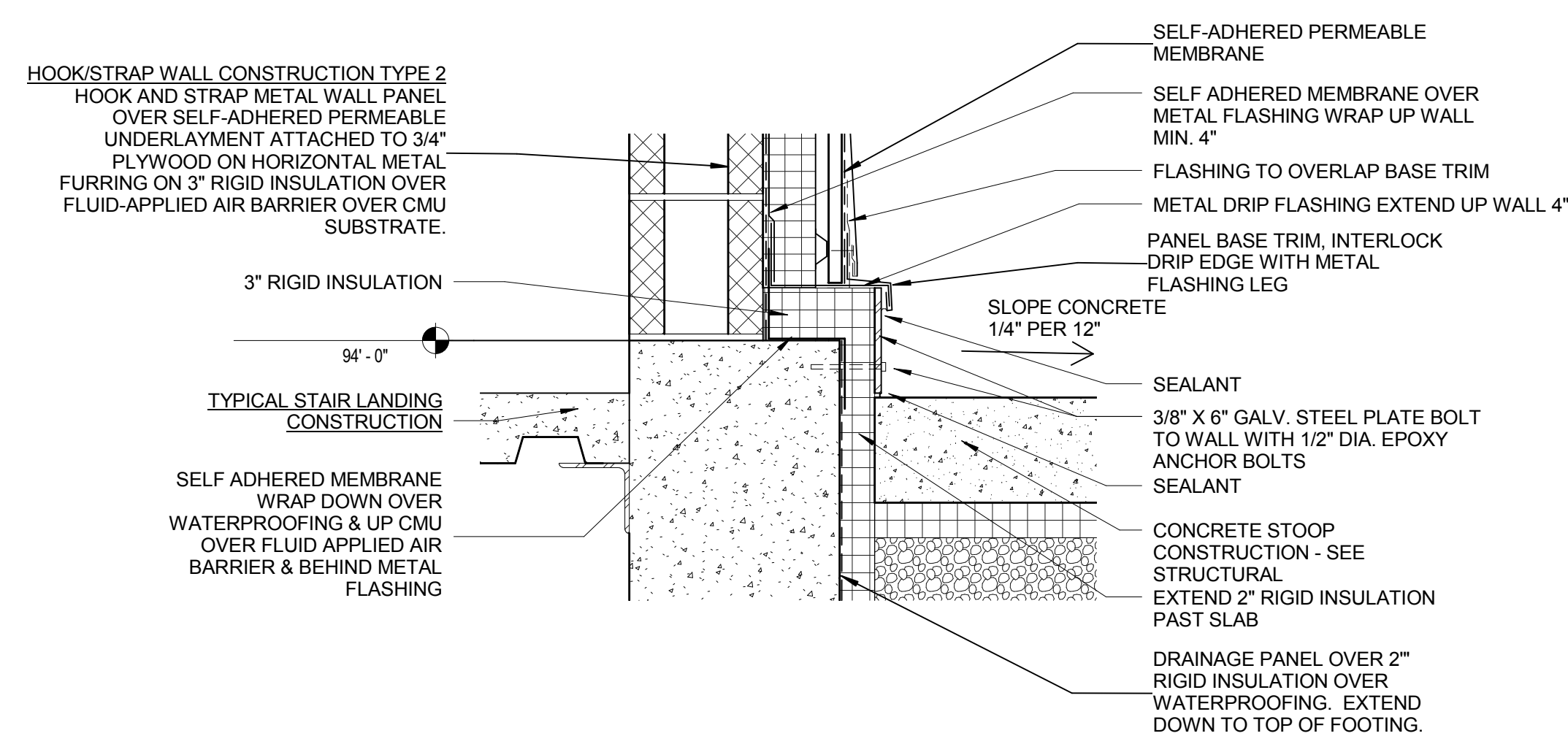
6 CONDUCTOR HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



7 OVERHEAD SECTIONAL DOOR JAMB DETAIL / CMU SIM.
SCALE: 1 1/2" = 1'-0"



8 LOUVER JAMB DETAIL
SCALE: 1 1/2" = 1'-0"



9 FOUNDATION DETAIL @ STAIR
SCALE: 1 1/2" = 1'-0"

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211 South Carroll Street
Madison, WI 53703

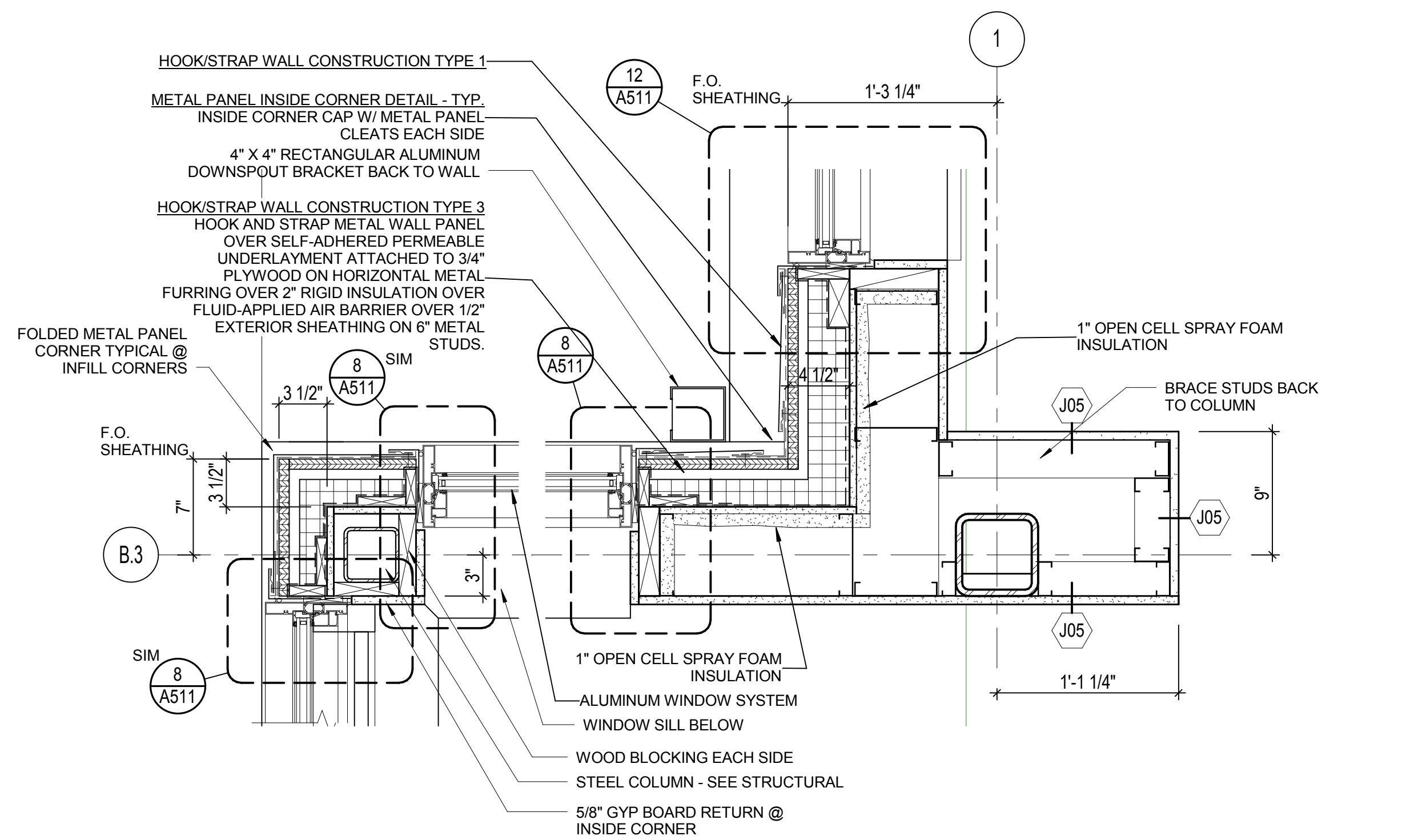
PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-2017

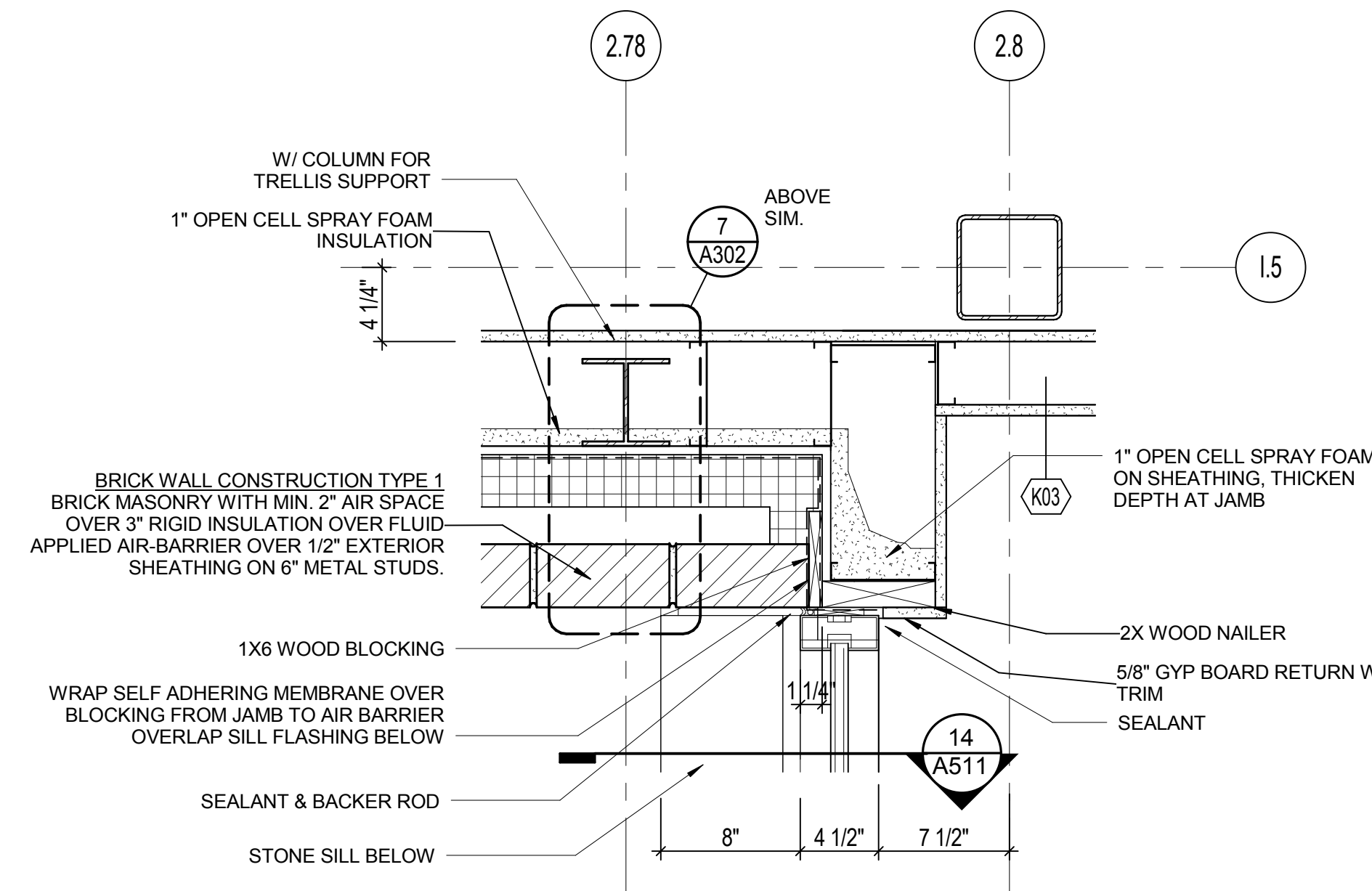
REVISION FOR:
NO. DESCRIPTION DATE

DRAWN BY MMZ
CHECKED BY SK

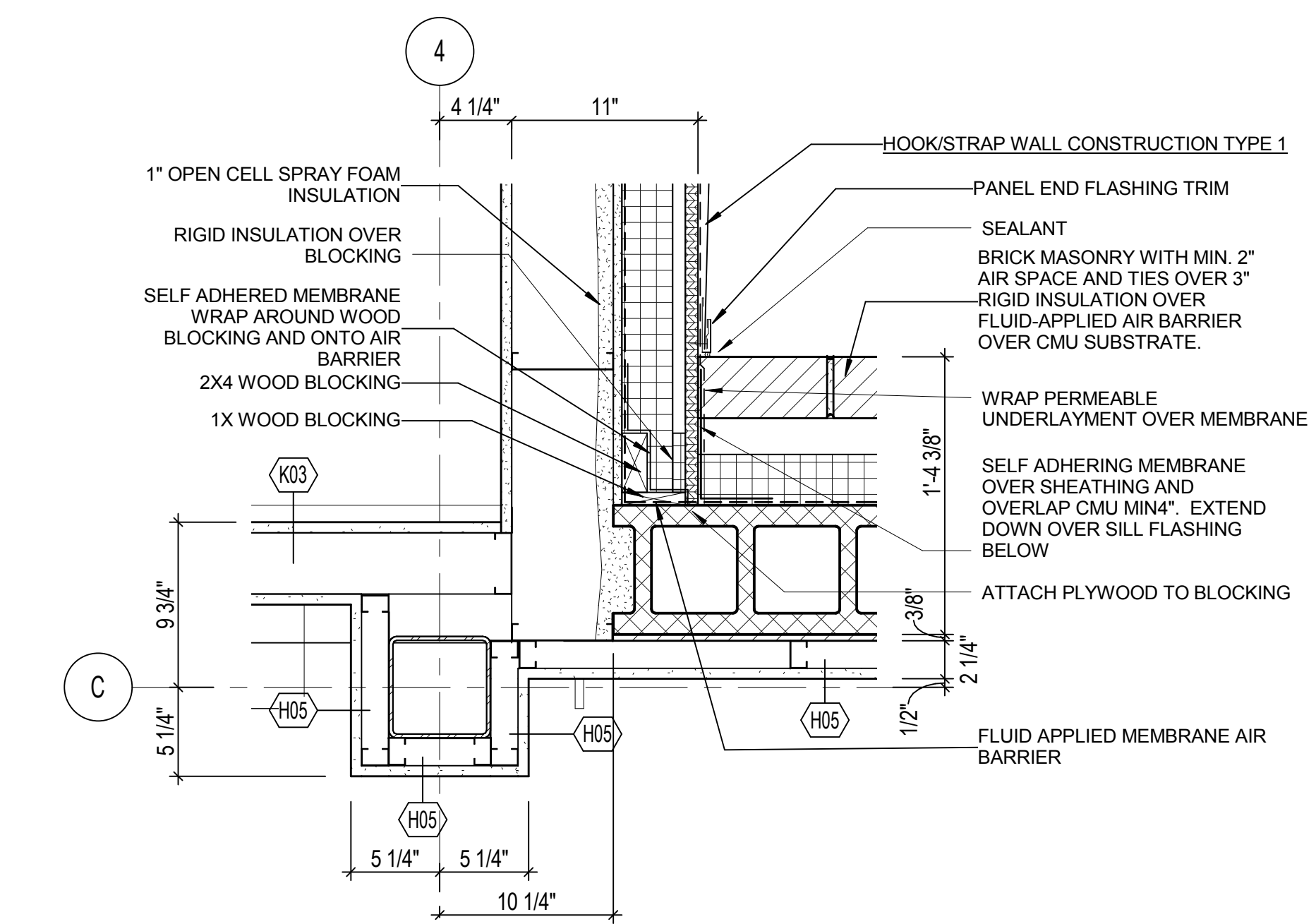
PLAN DETAILS



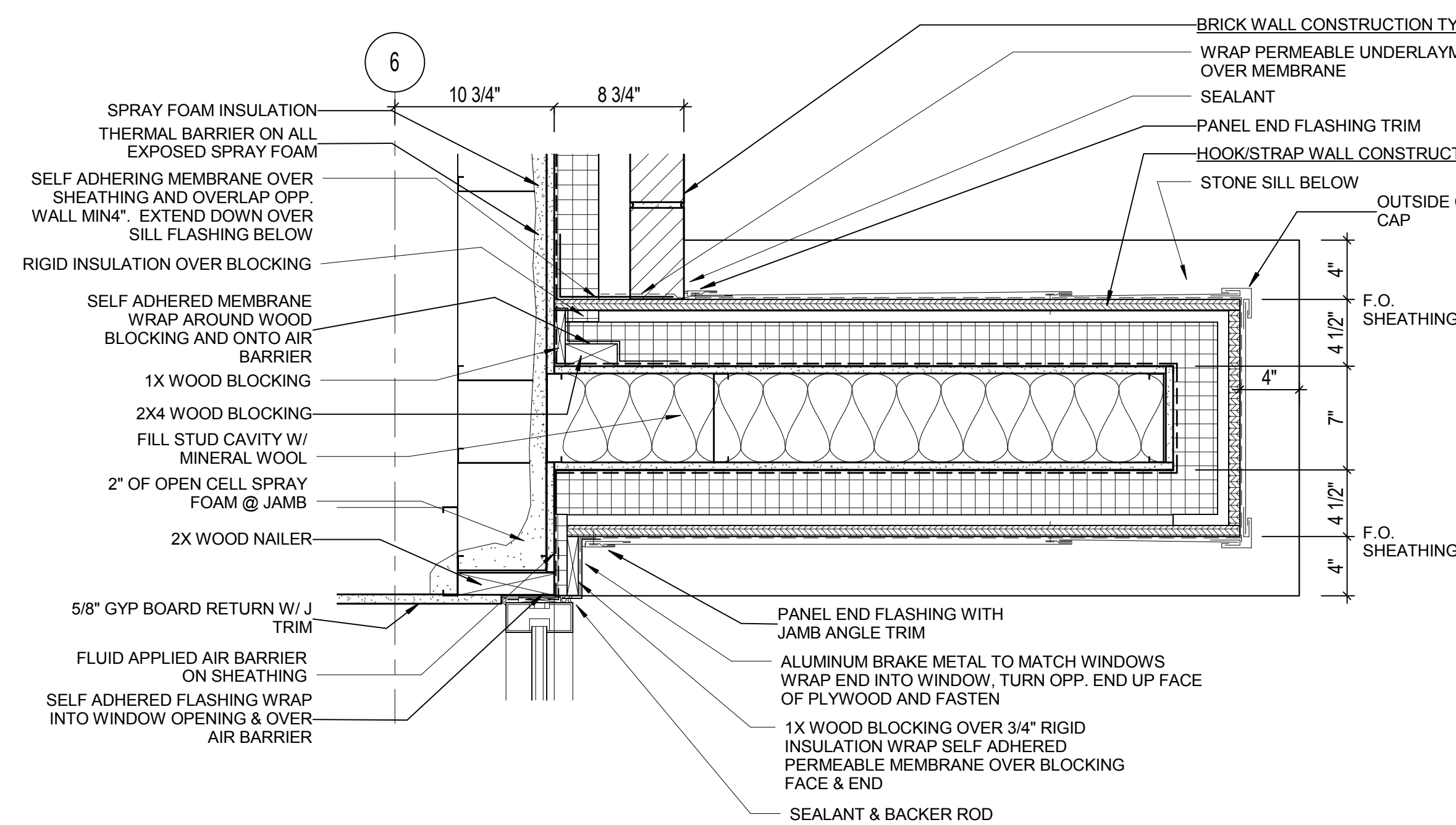
1 ENLARGED PLAN - WEST PROJECTION
SCALE: 1 1/2" = 1'-0"



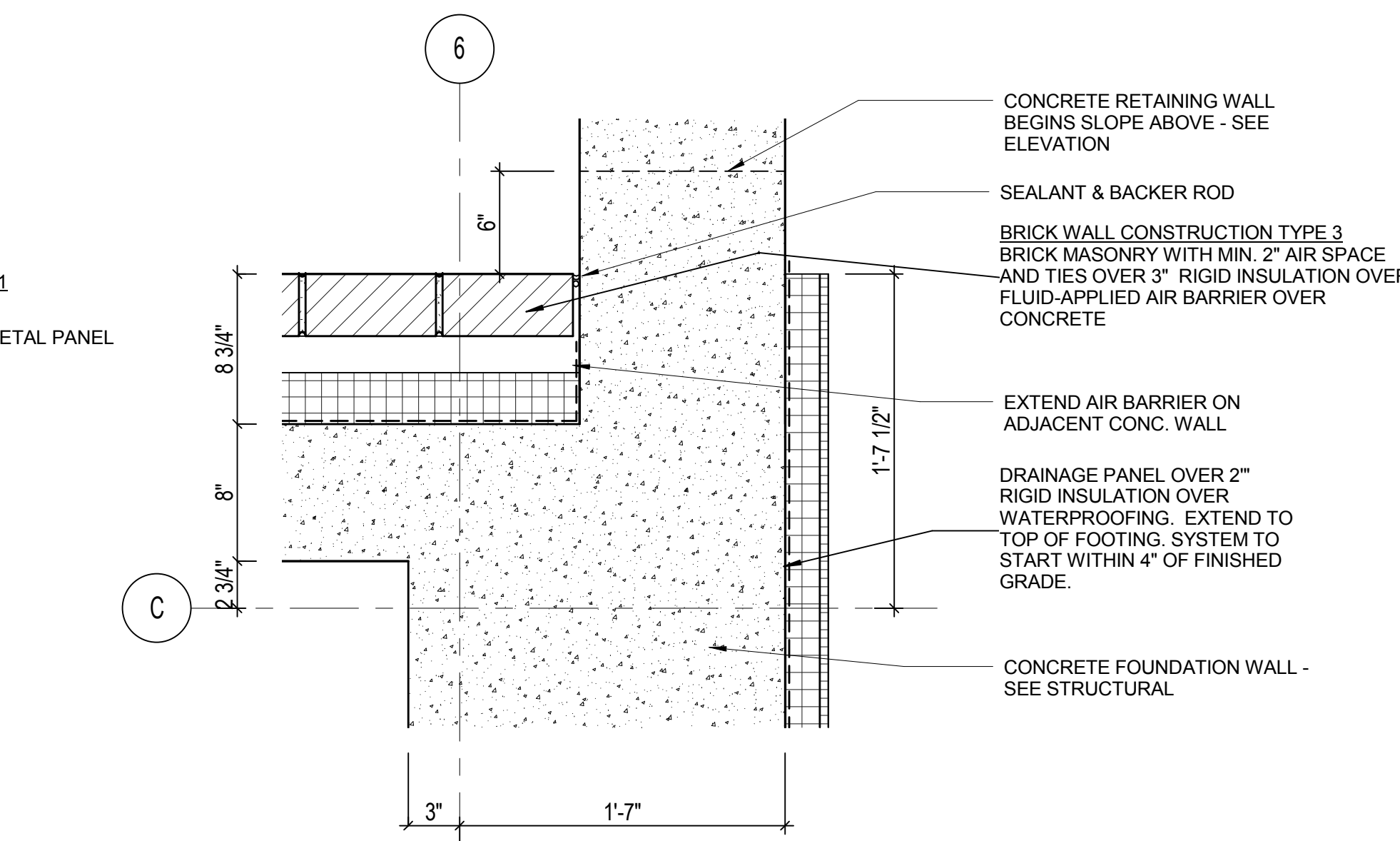
4 PLAN DETAIL - COMMUNITY ROOM
SCALE: 1 1/2" = 1'-0"



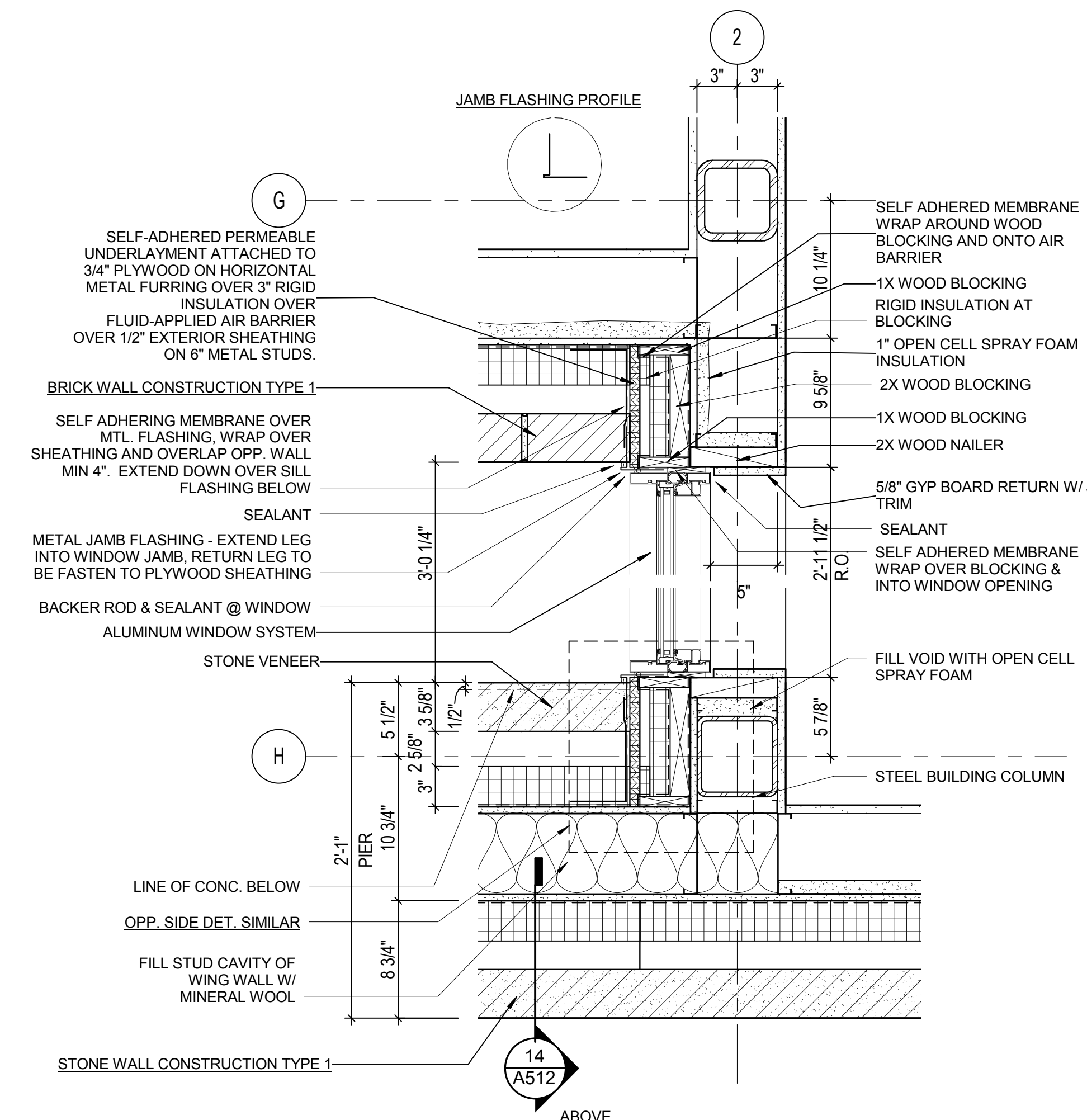
5 PLAN DETAIL @ INSIDE CORNER
SCALE: 1 1/2" = 1'-0"



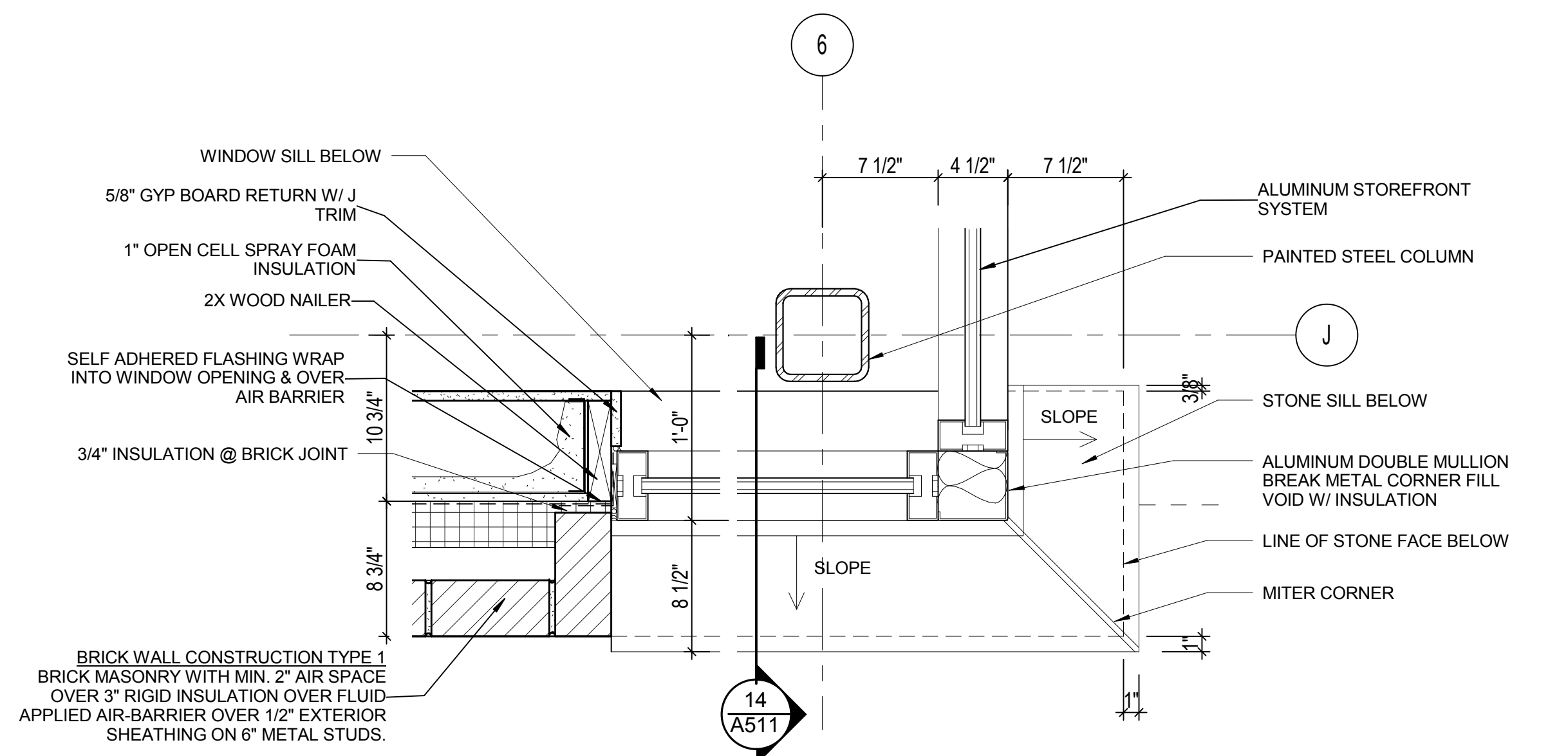
2 ENLARGED PLAN - ENTRY NORTHEAST CORNER
SCALE: 1 1/2" = 1'-0"



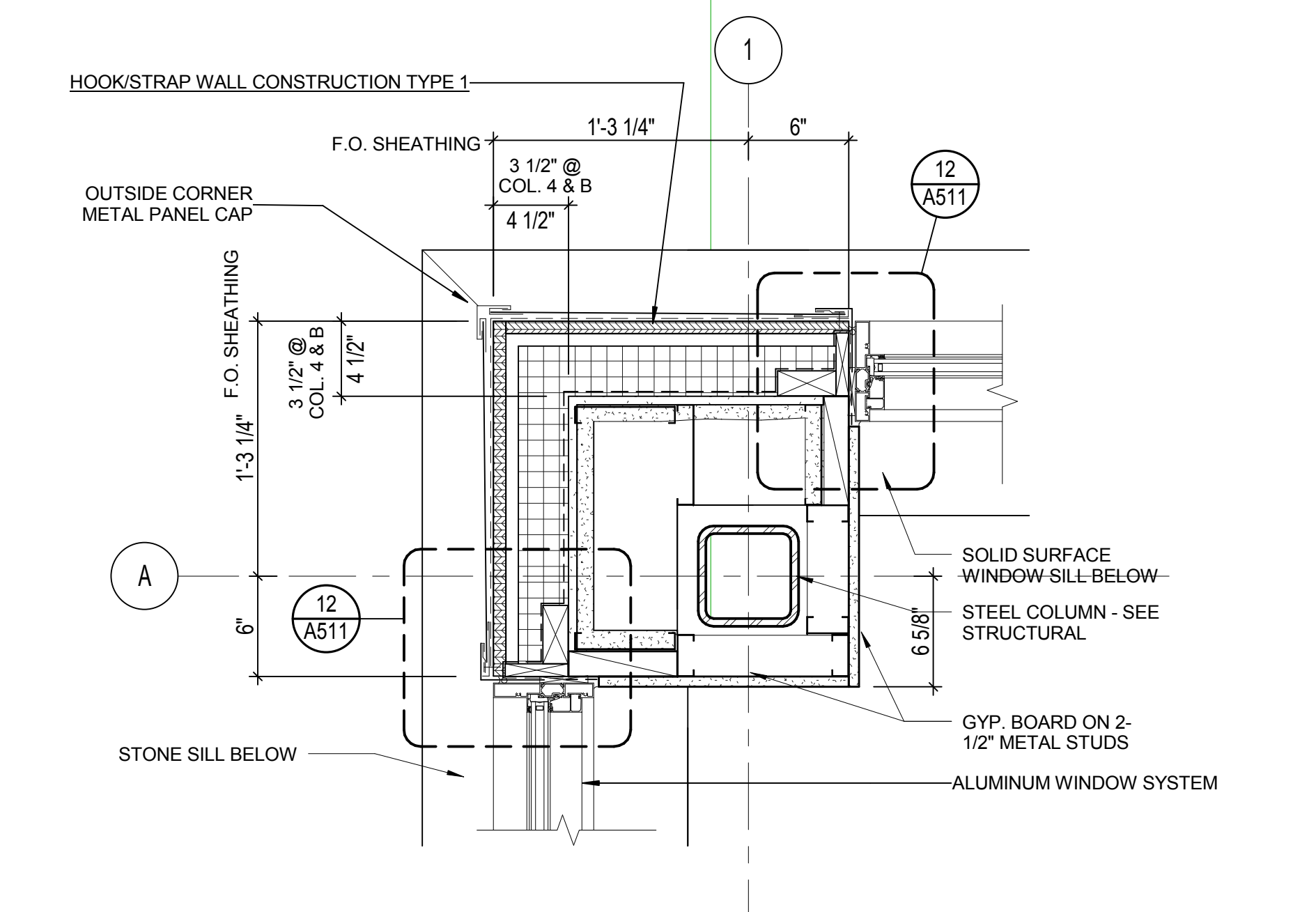
7 PLAN DETAIL - LOWER LEVEL @ GARAGE
SCALE: 1 1/2" = 1'-0"



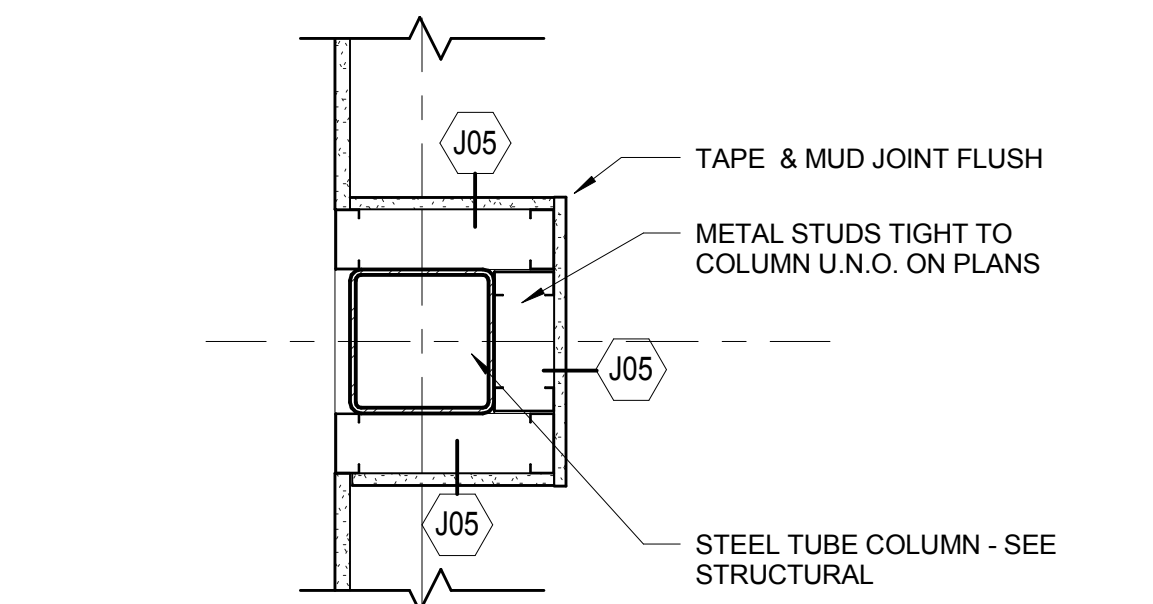
6 ENLARGED PLAN - SOUTHWEST CORNER BREAKROOM
SCALE: 1 1/2" = 1'-0"



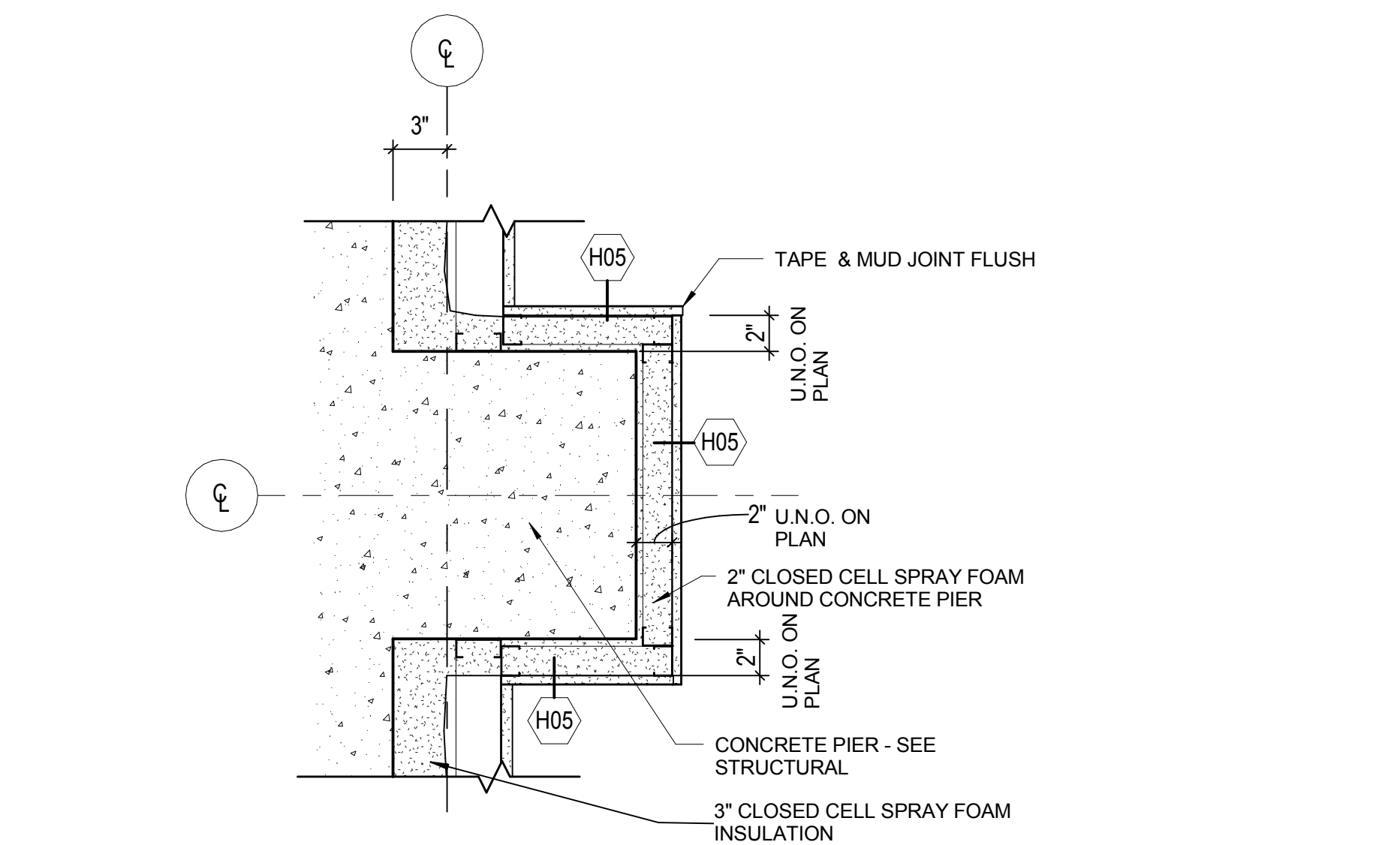
3 PLAN DETAIL - STOREFRONT @ ENTRY
SCALE: 1 1/2" = 1'-0"



8 METAL PANEL @ CORNER
SCALE: 1 1/2" = 1'-0"



9 INTERIOR COLUMN ENCLOSURE - TYP.
SCALE: 1 1/2" = 1'-0"



10 PIER ENCLOSURE IN EXT. WALL - TYP.
SCALE: 1 1/2" = 1'-0"

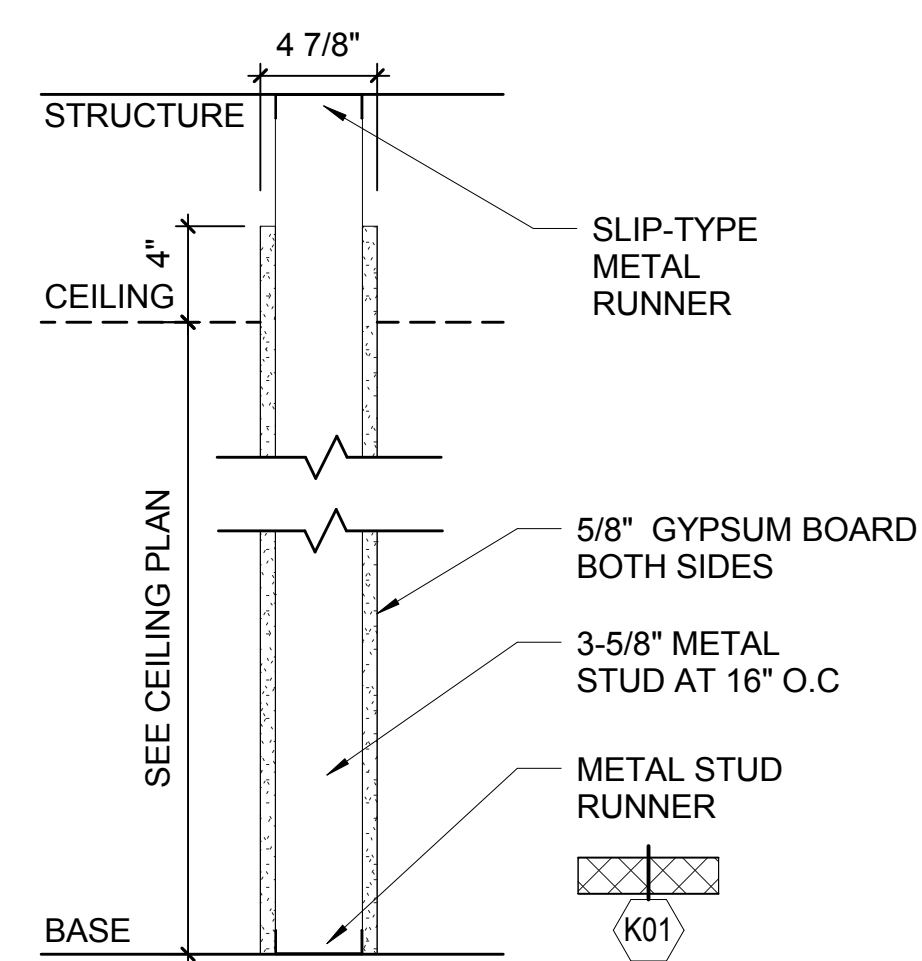
**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

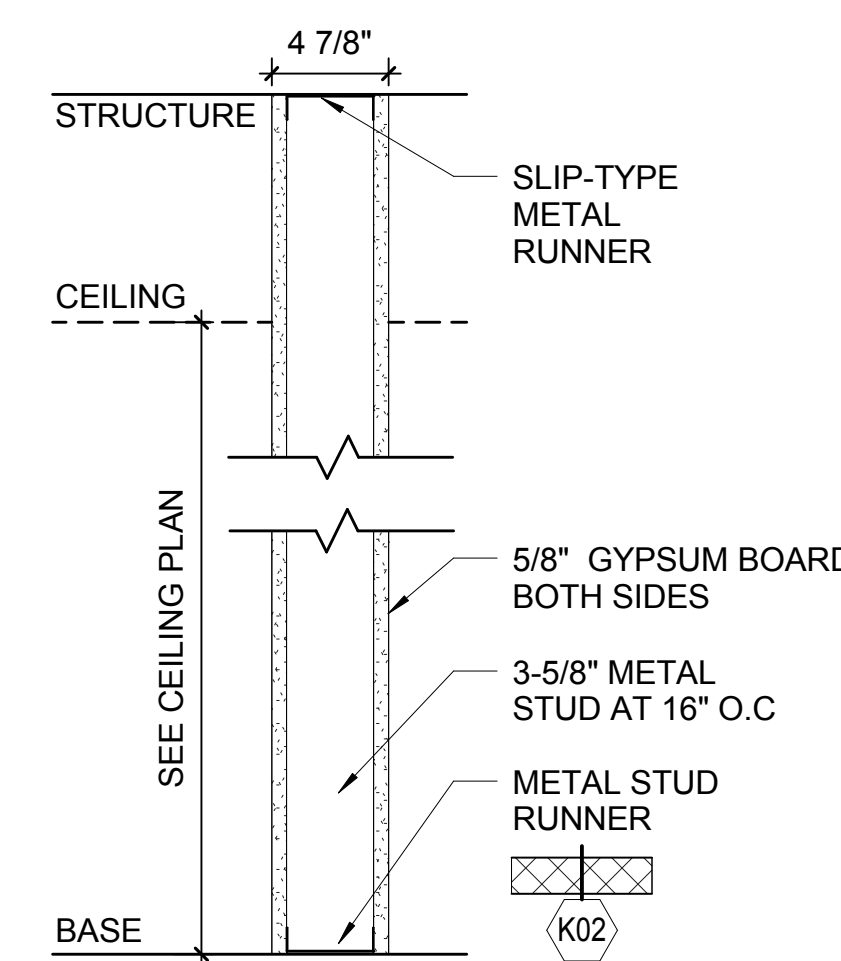
PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-2017

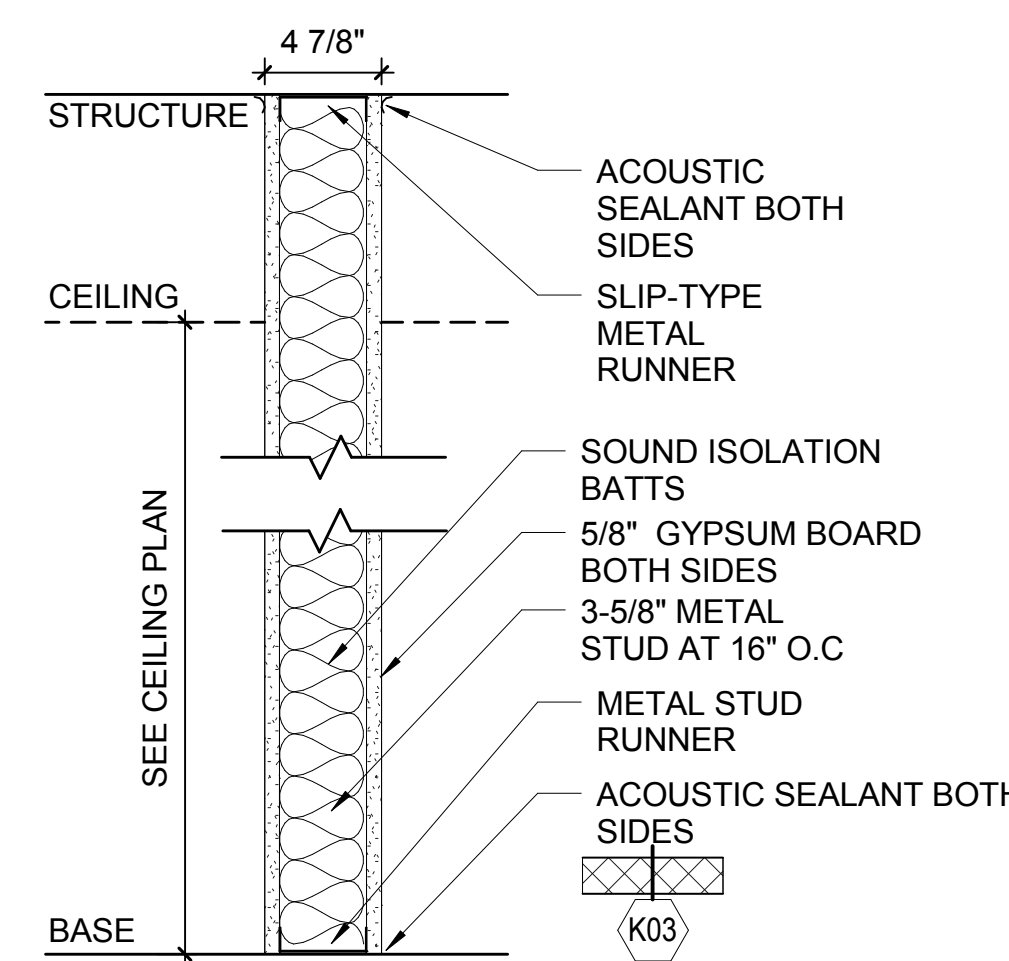
REVISION FOR:
NO. DESCRIPTION DATE



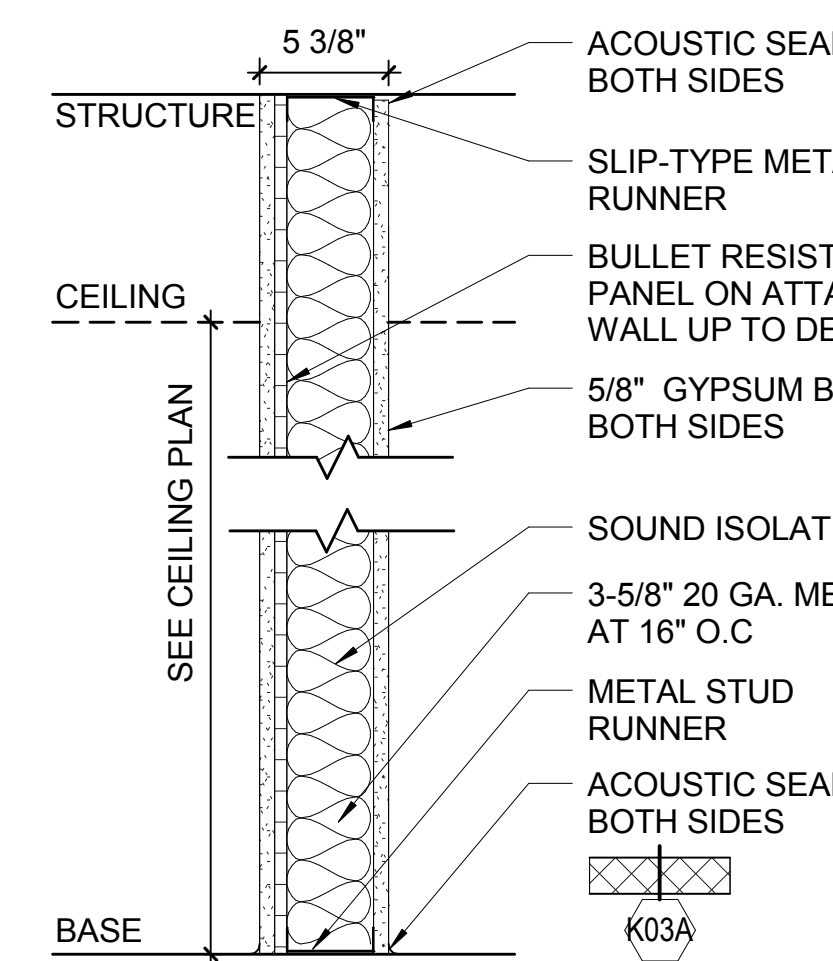
WALL TYPE K01 - NON RATED



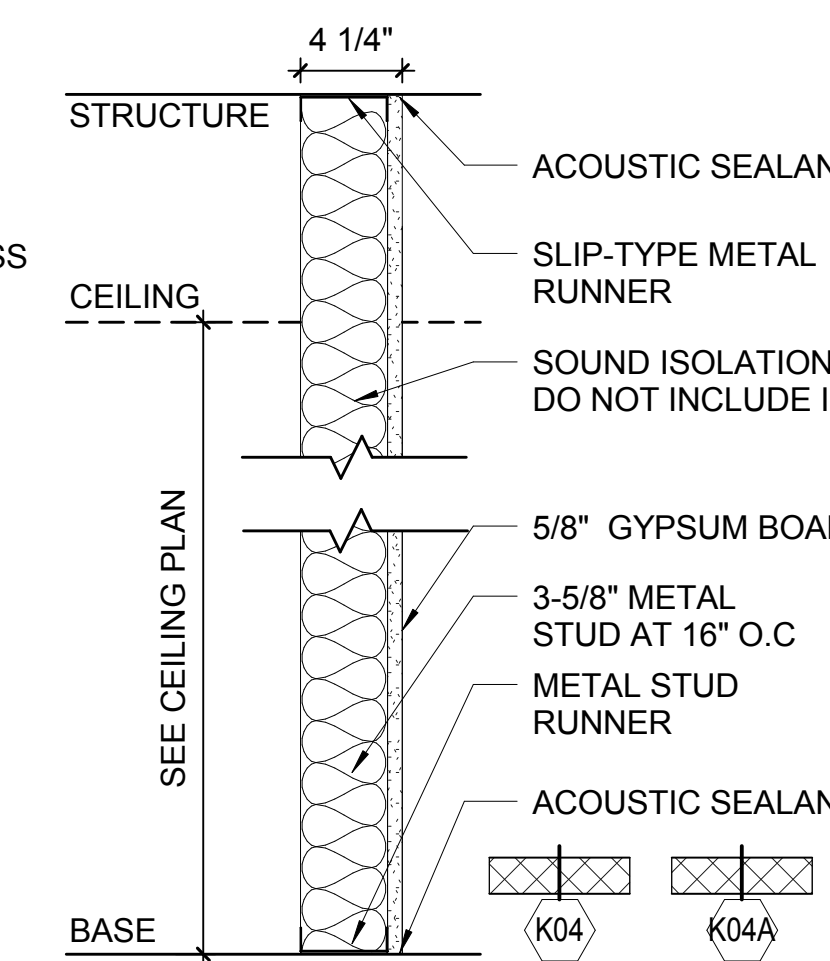
WALL TYPE K02 - NON RATED



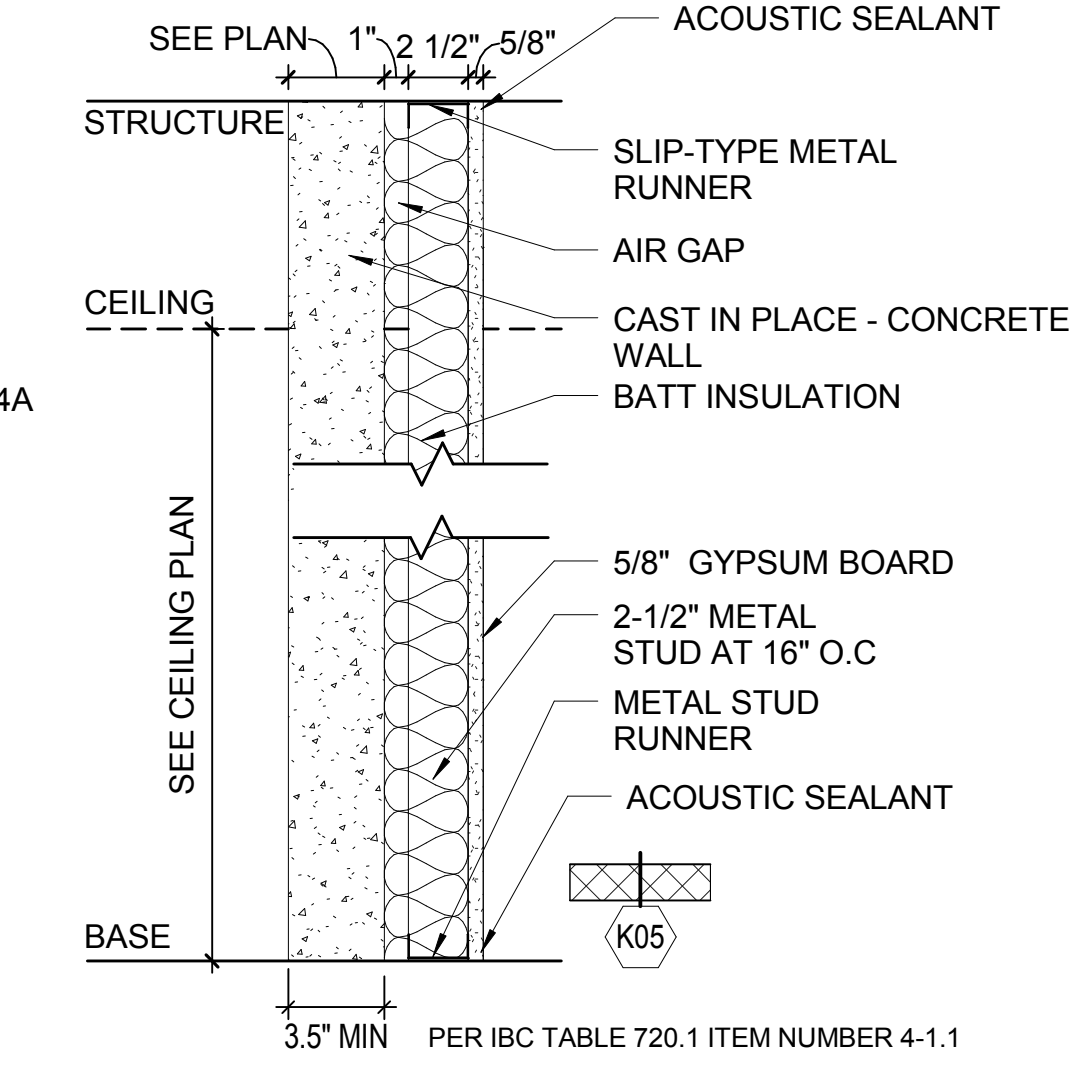
WALL TYPE K03 - NON RATED



WALL TYPE K03A - NON RATED



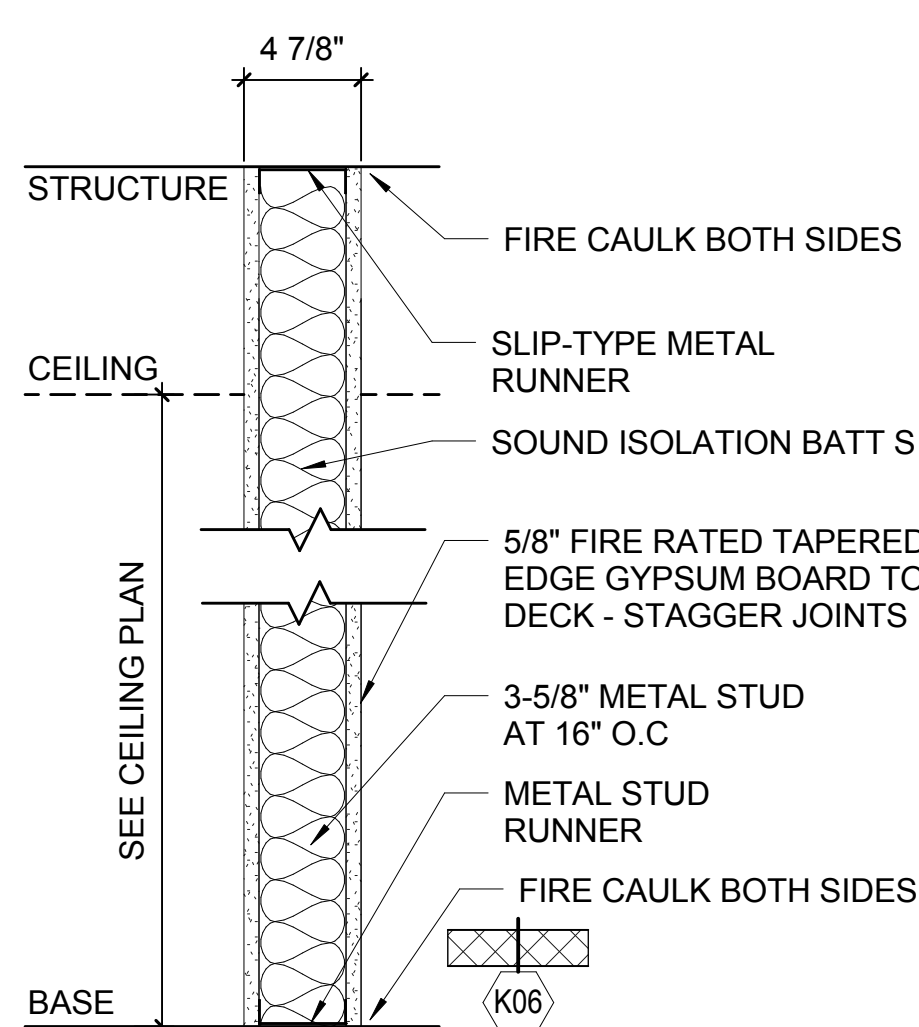
WALL TYPE K04 - NON RATED



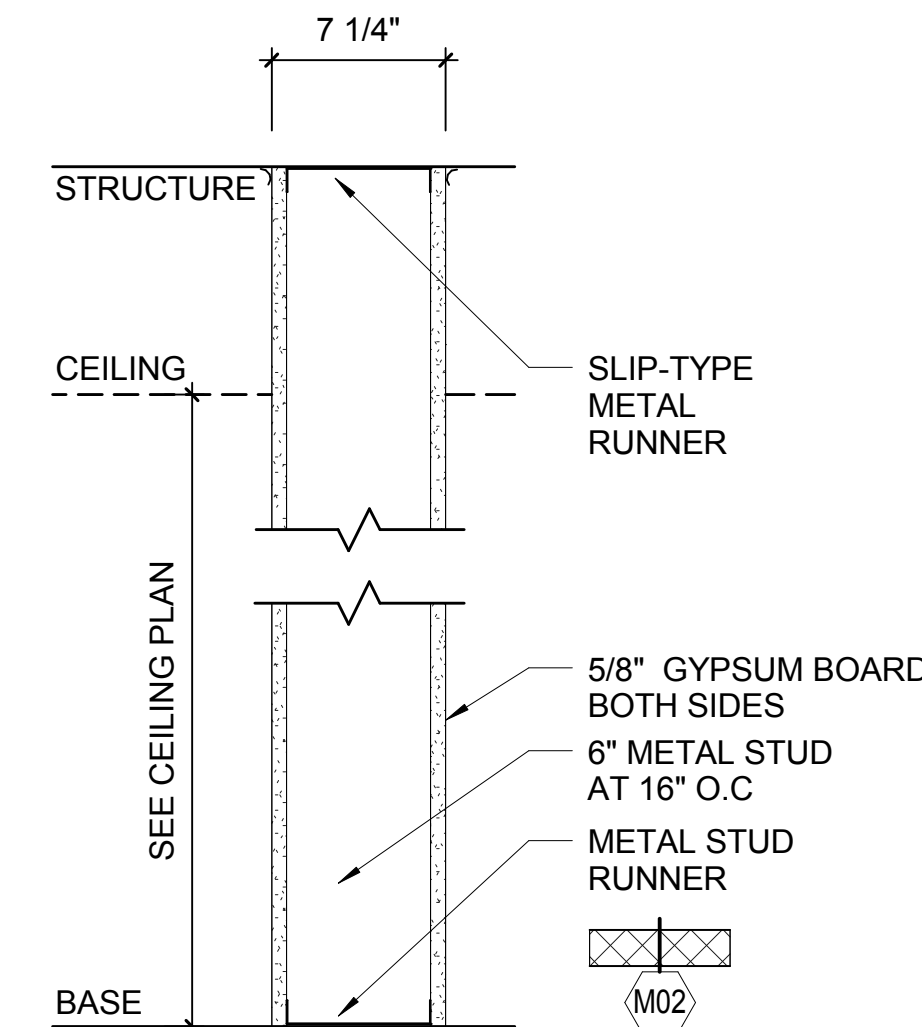
WALL TYPE K05 - 1-HOUR RATED

WALL TYPES GENERAL NOTES

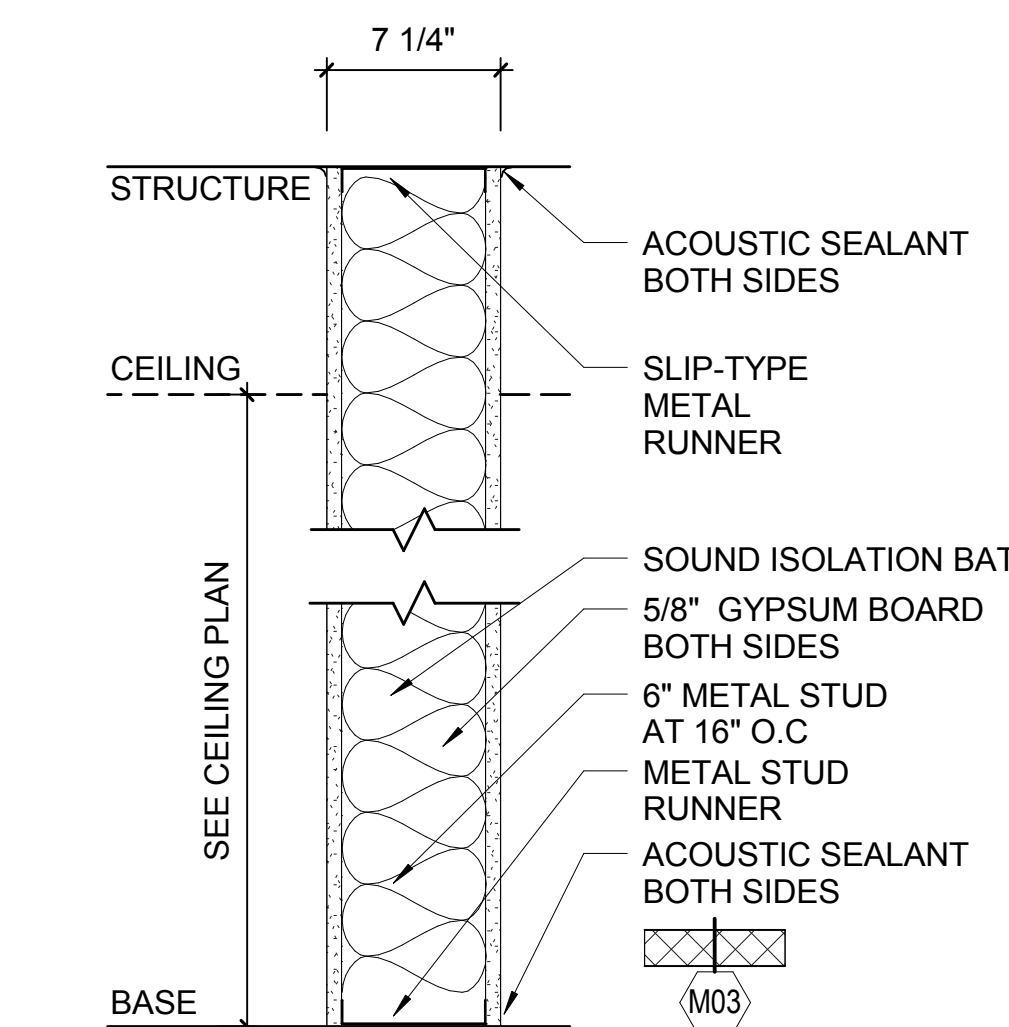
- SUBSTITUTE 5/8" CEMENT BOARD AT ALL TILE AND SHOWER AREAS.



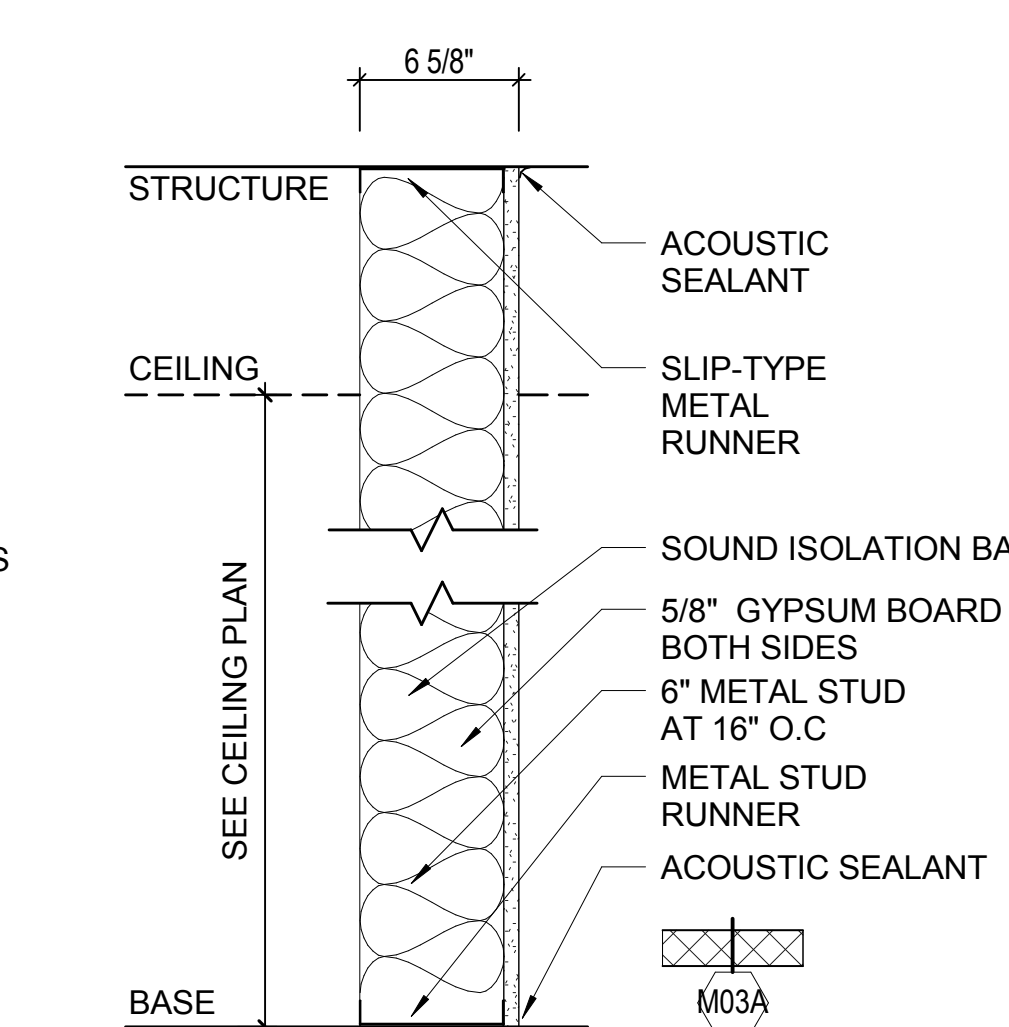
WALL TYPE K06 - 1-HOUR RATED



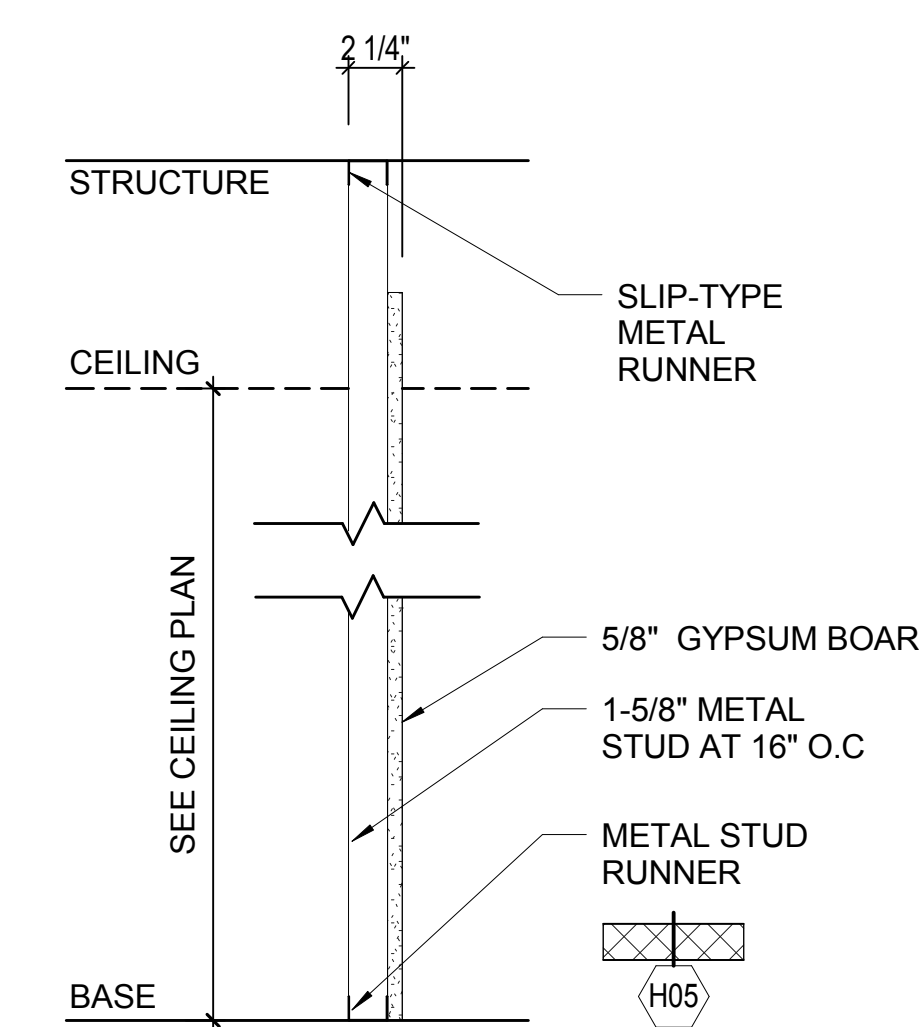
WALL TYPE M02 - NON RATED



WALL TYPE M03 - NON RATED

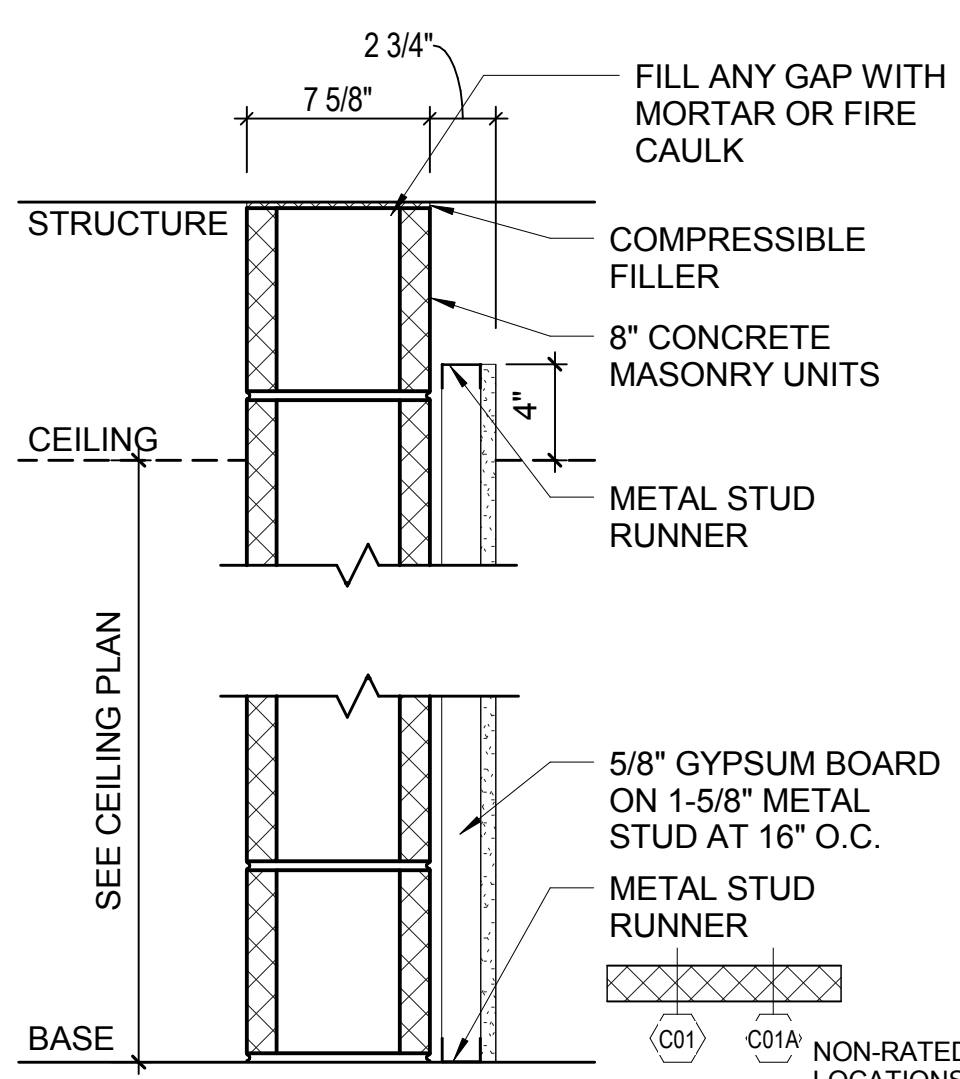
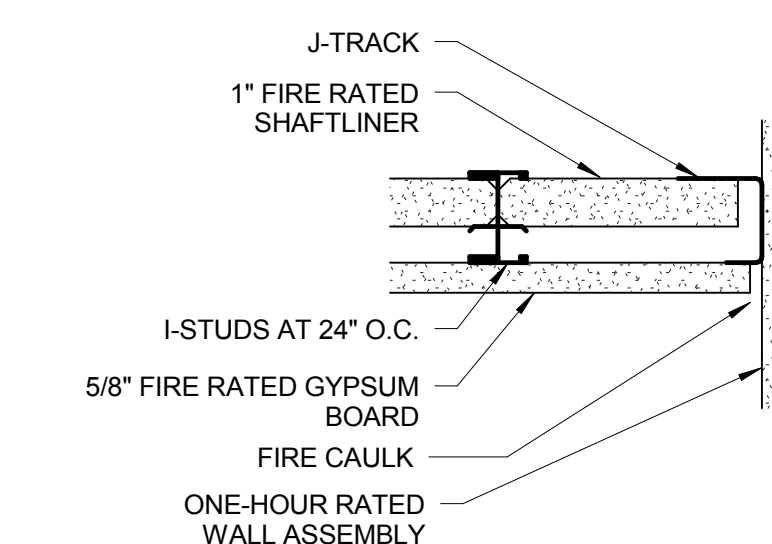


WALL TYPE M03A - NON RATED

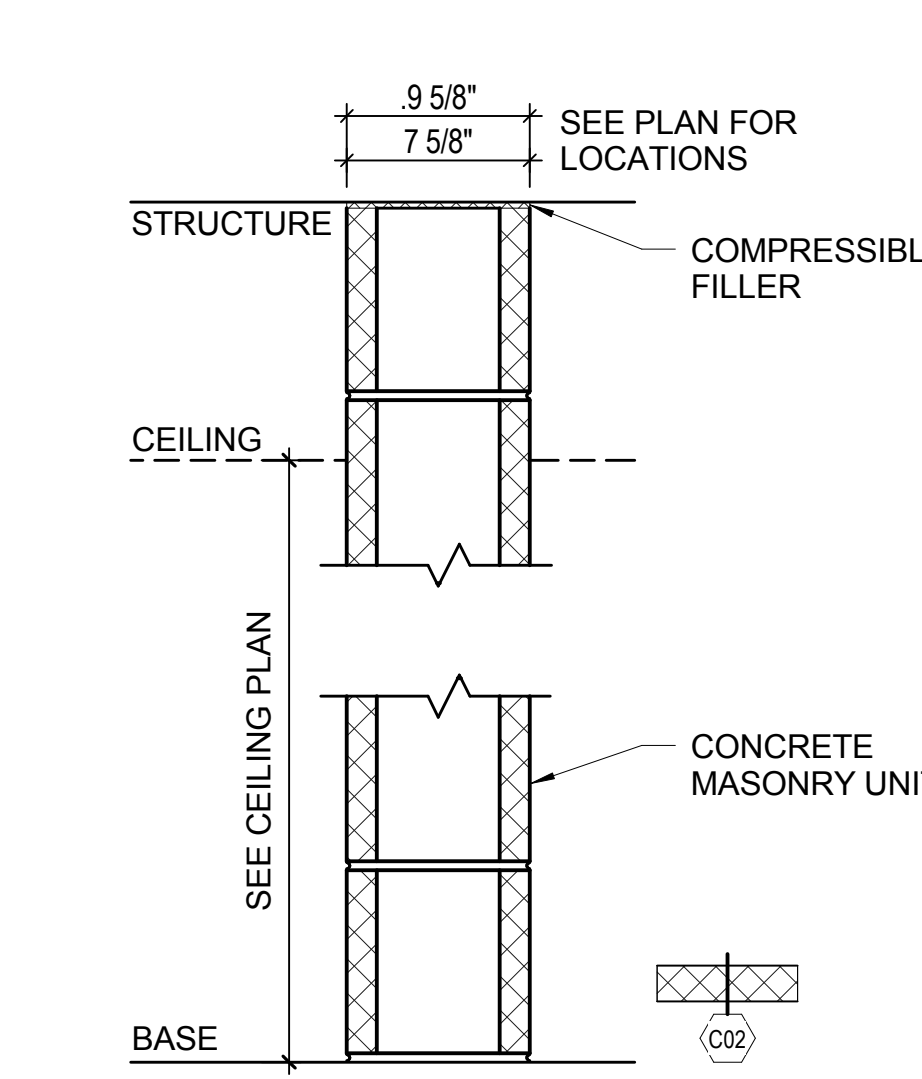


WALL TYPE H05 - NON RATED

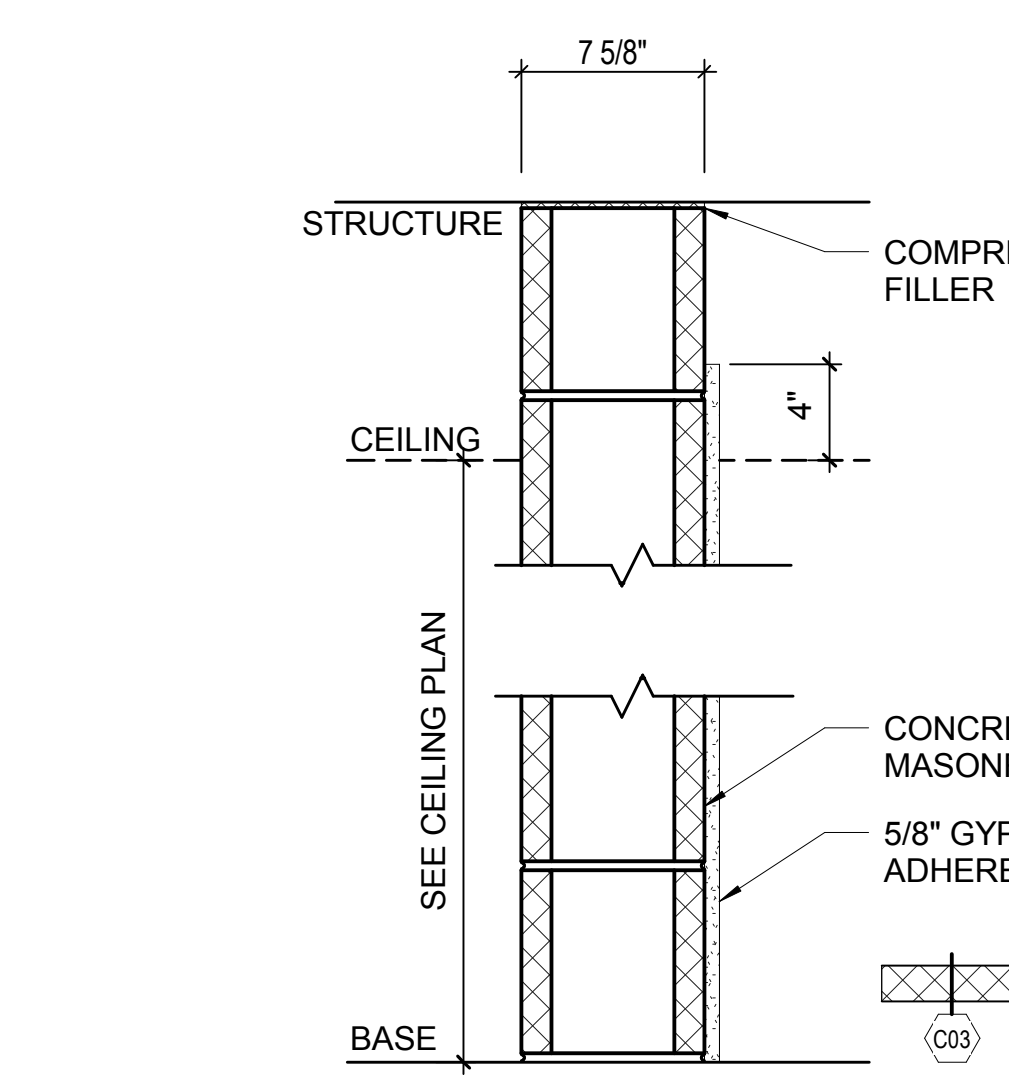
7 ONE-HOUR RATED CEILING DETAIL
SCALE: 3" = 1'-0"



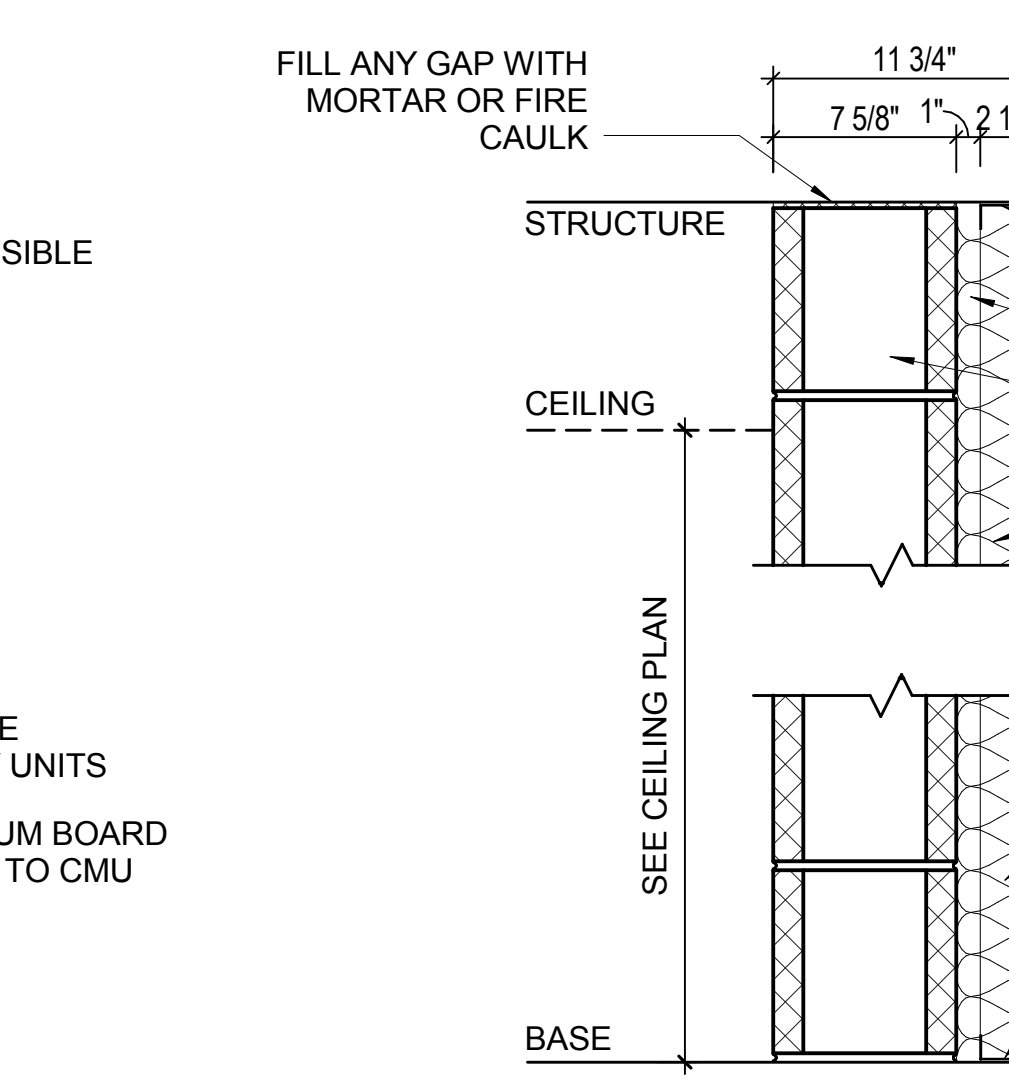
WALL TYPE C01 - 1 HOUR RATED



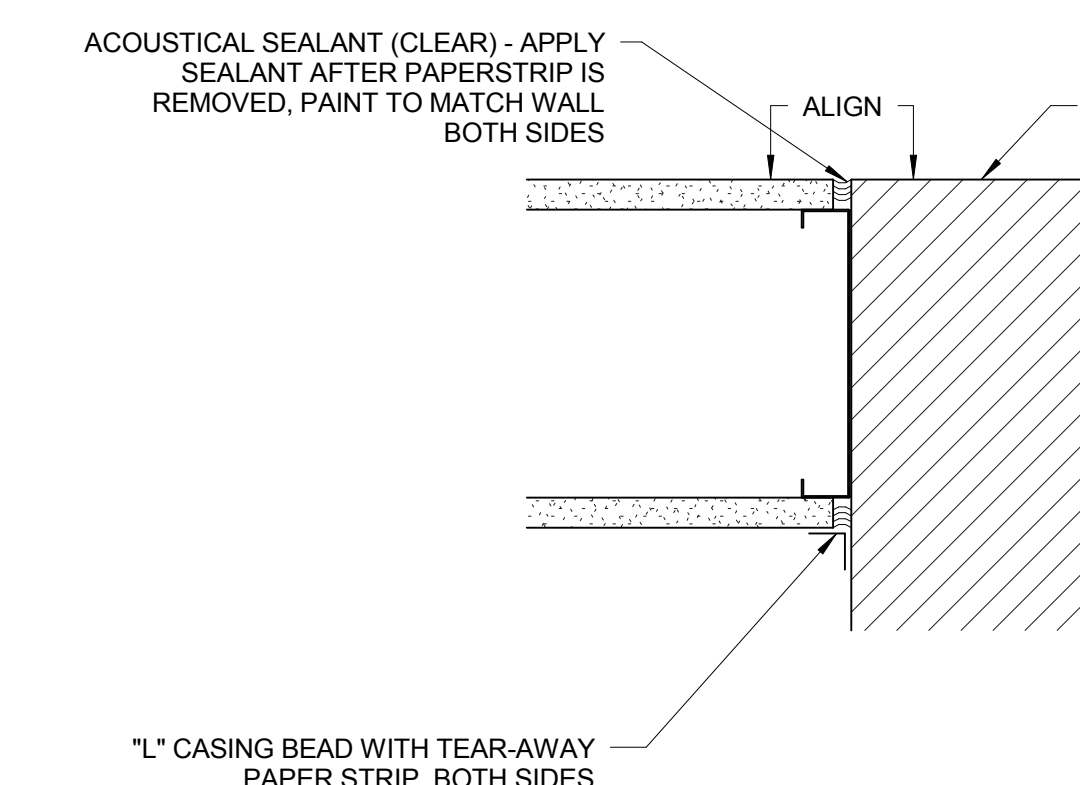
WALL TYPE C02 - NON RATED



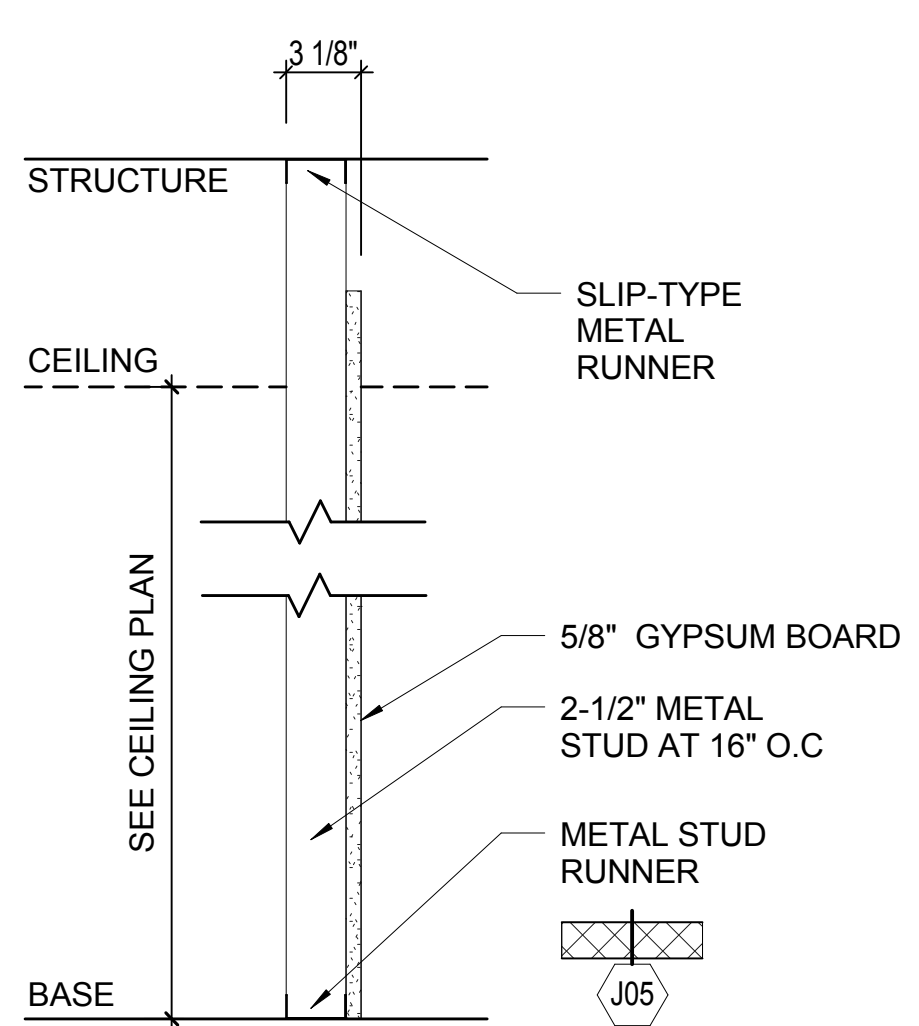
WALL TYPE C03 - NON RATED



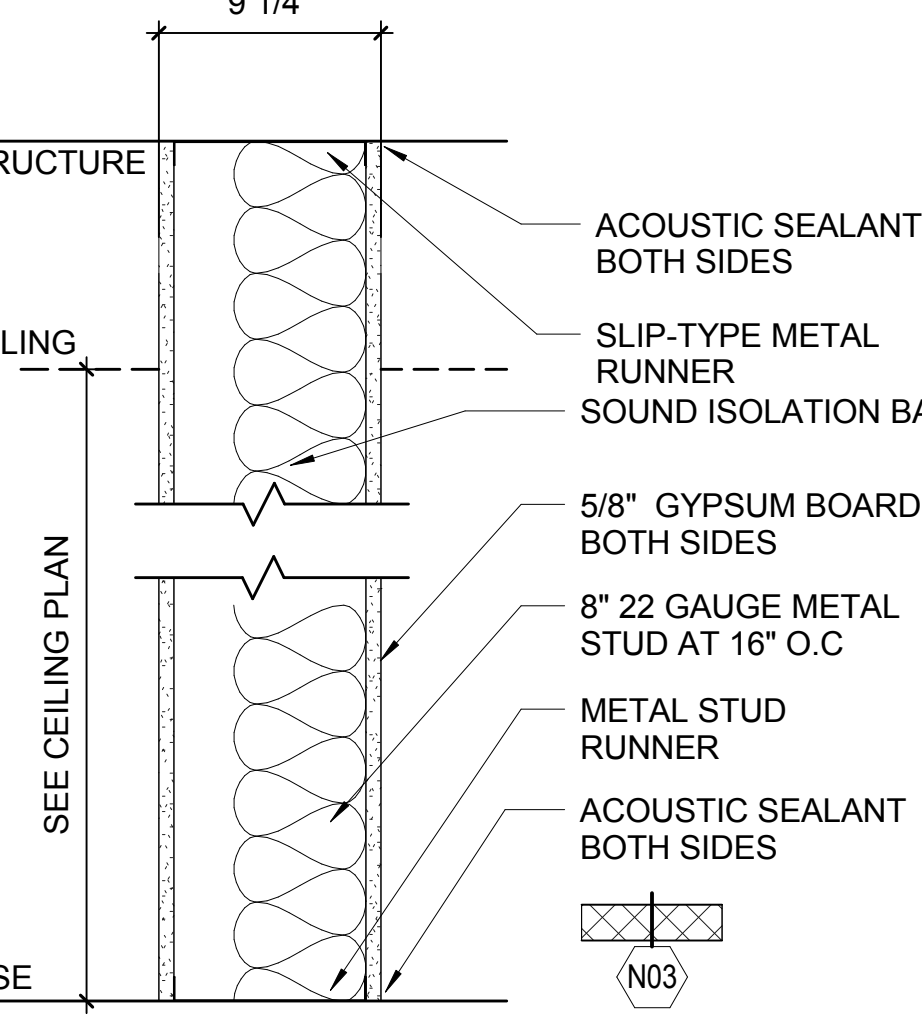
WALL TYPE C04 - 1-HOUR RATED



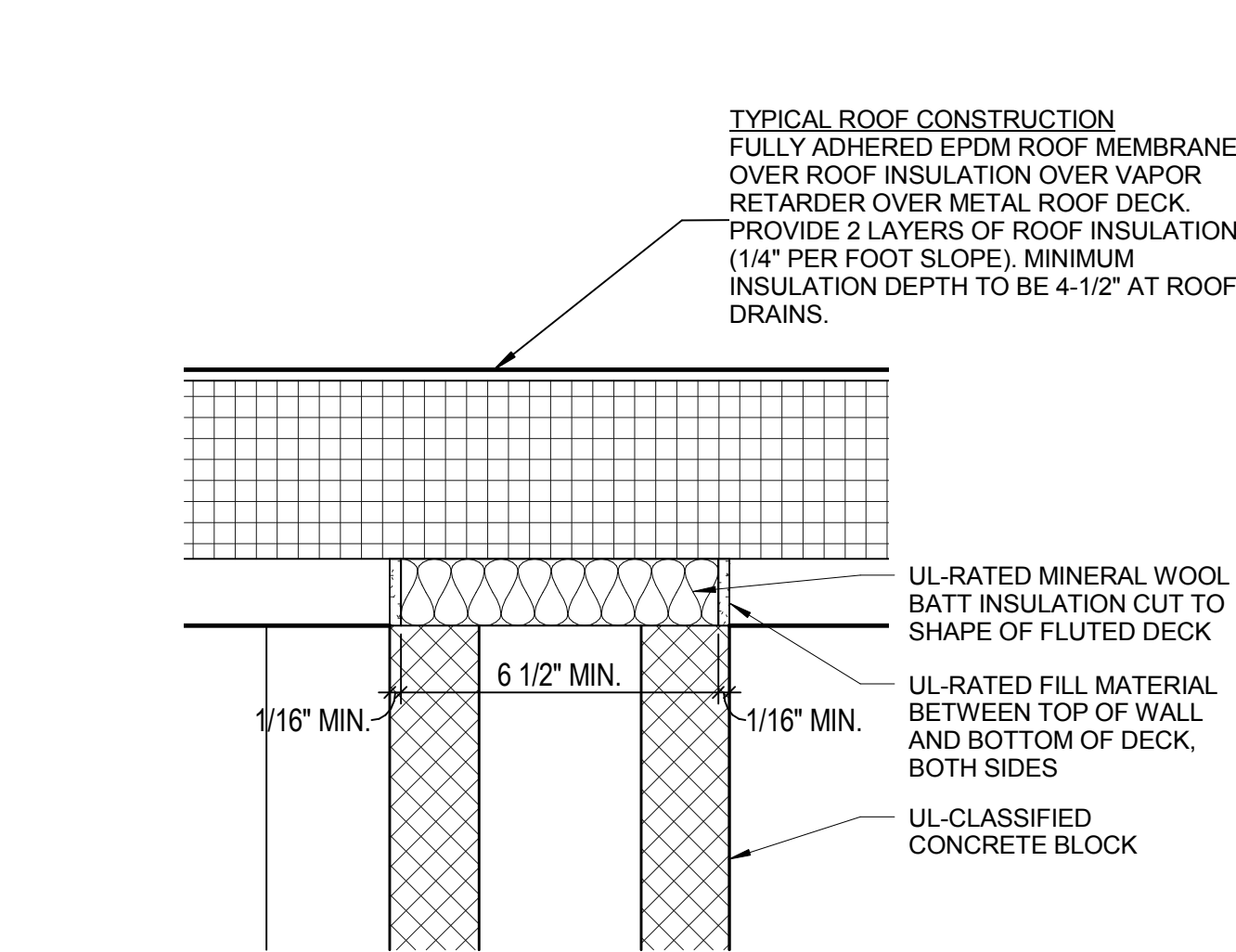
2 GWB WALL TO CMU TRANSITION
SCALE: 3" = 1'-0"



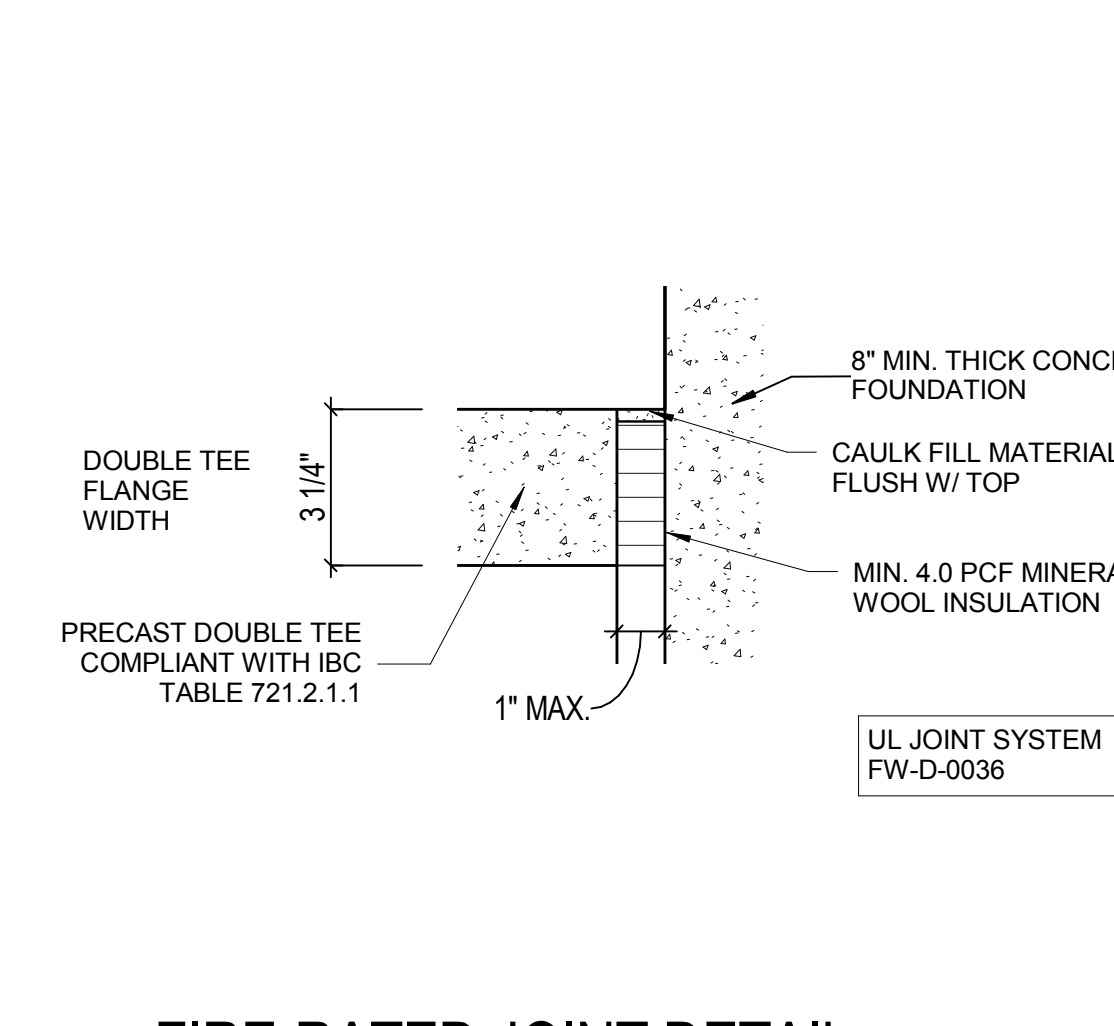
WALL TYPE J05 - NON RATED



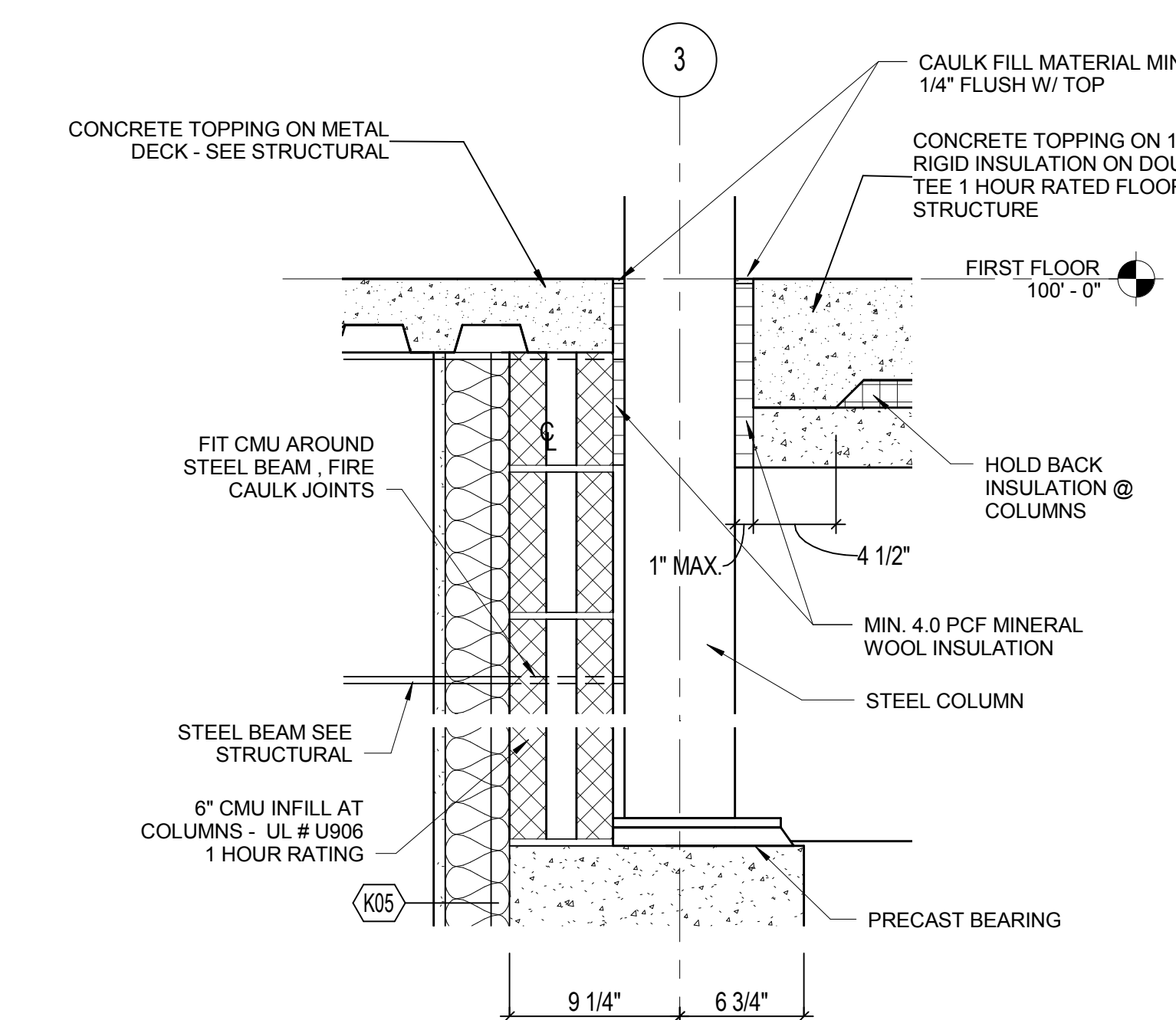
WALL TYPE N03 - NON RATED



3 FIRE-RATED ROOF CONNECTION DETAIL
SCALE: 3" = 1'-0"



4 FIRE-RATED JOINT DETAIL
SCALE: 3" = 1'-0"

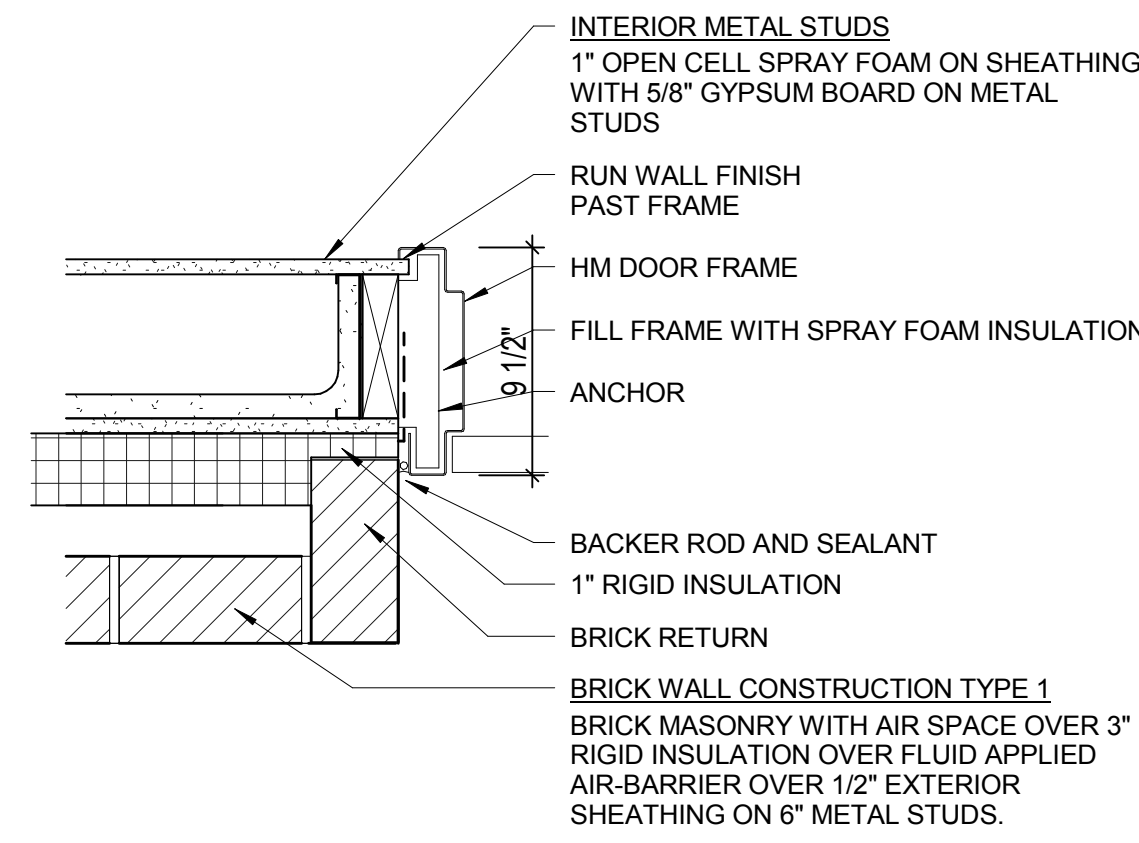


5 CONCRETE WALL DETAIL @ PARKING
SCALE: 1 1/2" = 1'-0"

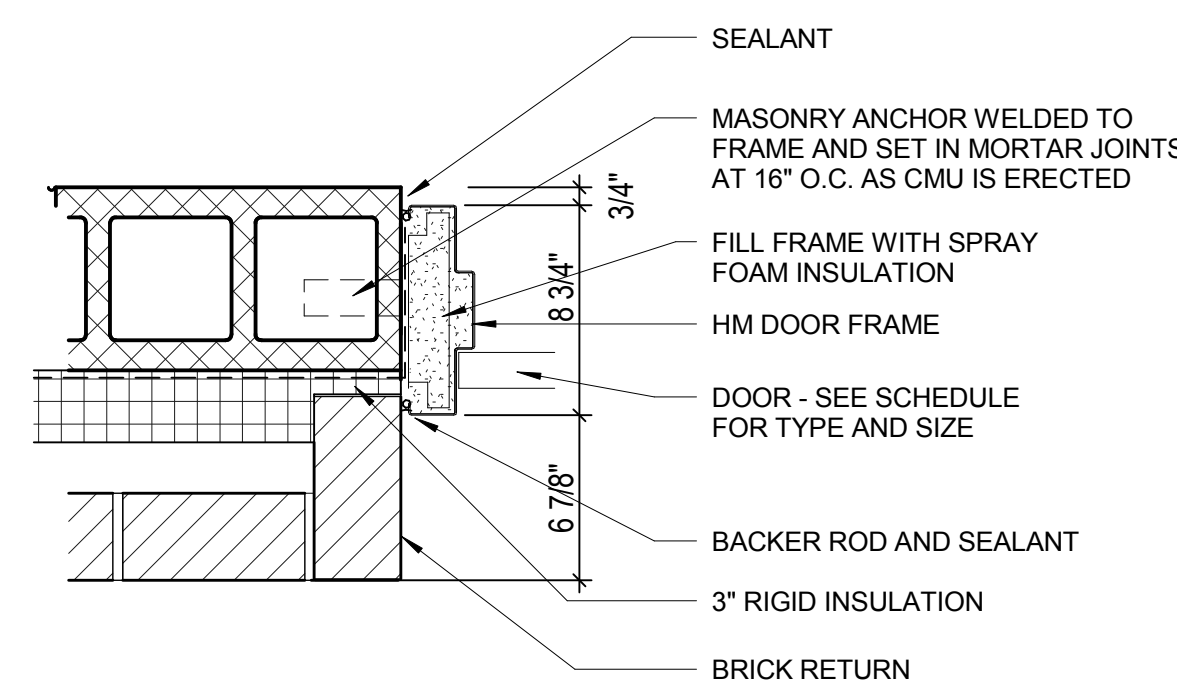
DRAWN BY MMZ

CHECKED BY SK

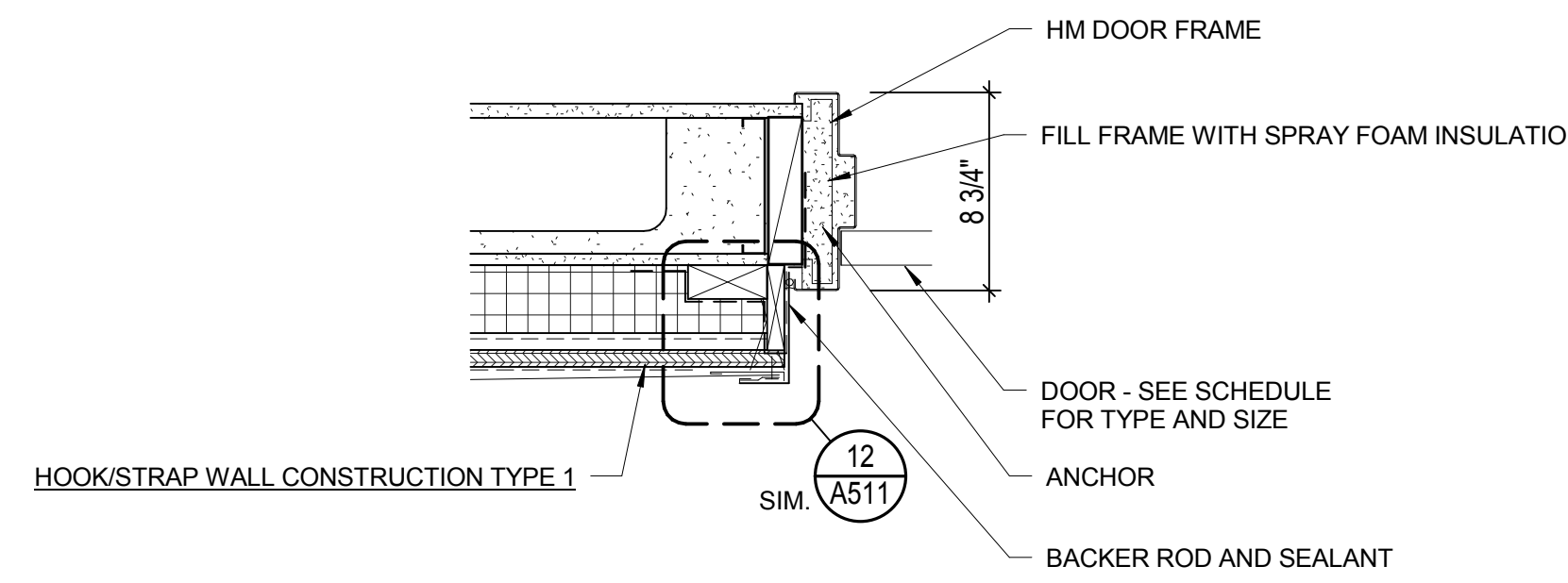
WALL TYPES



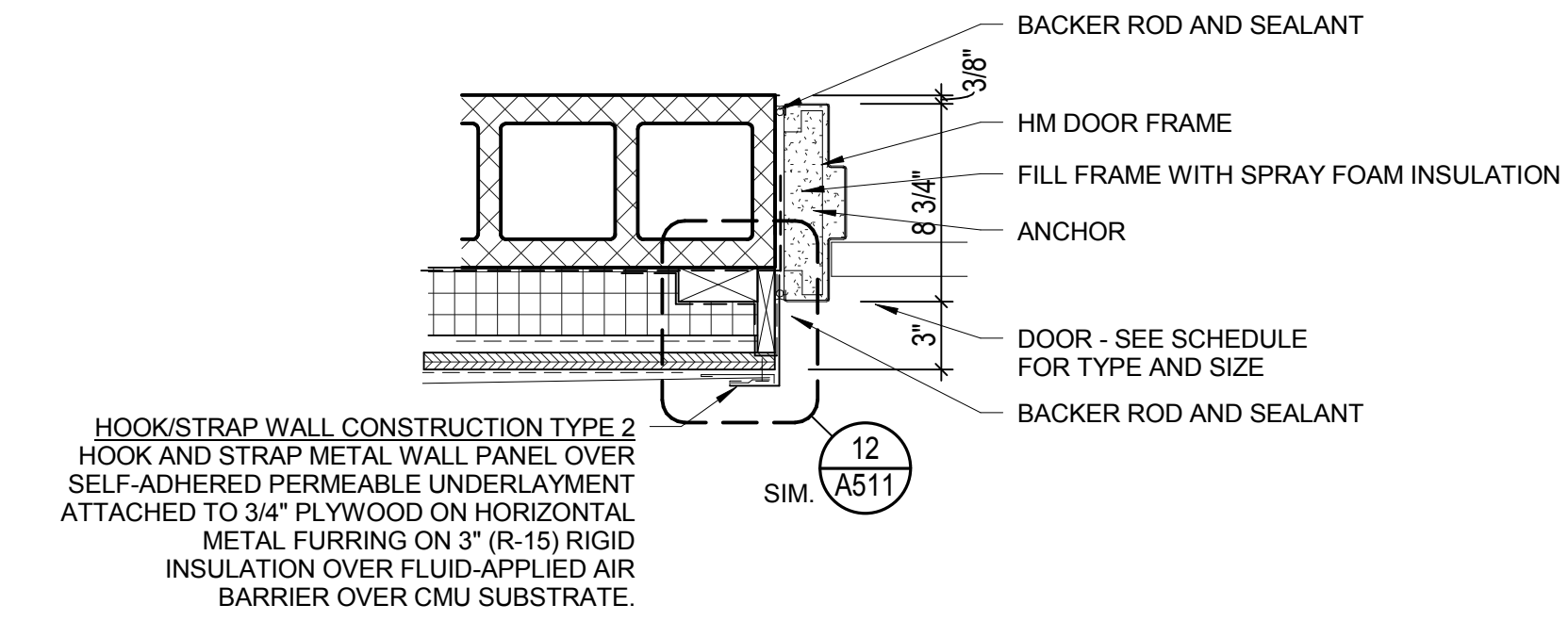
1 HM DOOR JAMB AT MASONRY W/ METAL STUDS
SCALE: 1 1/2" = 1'-0"



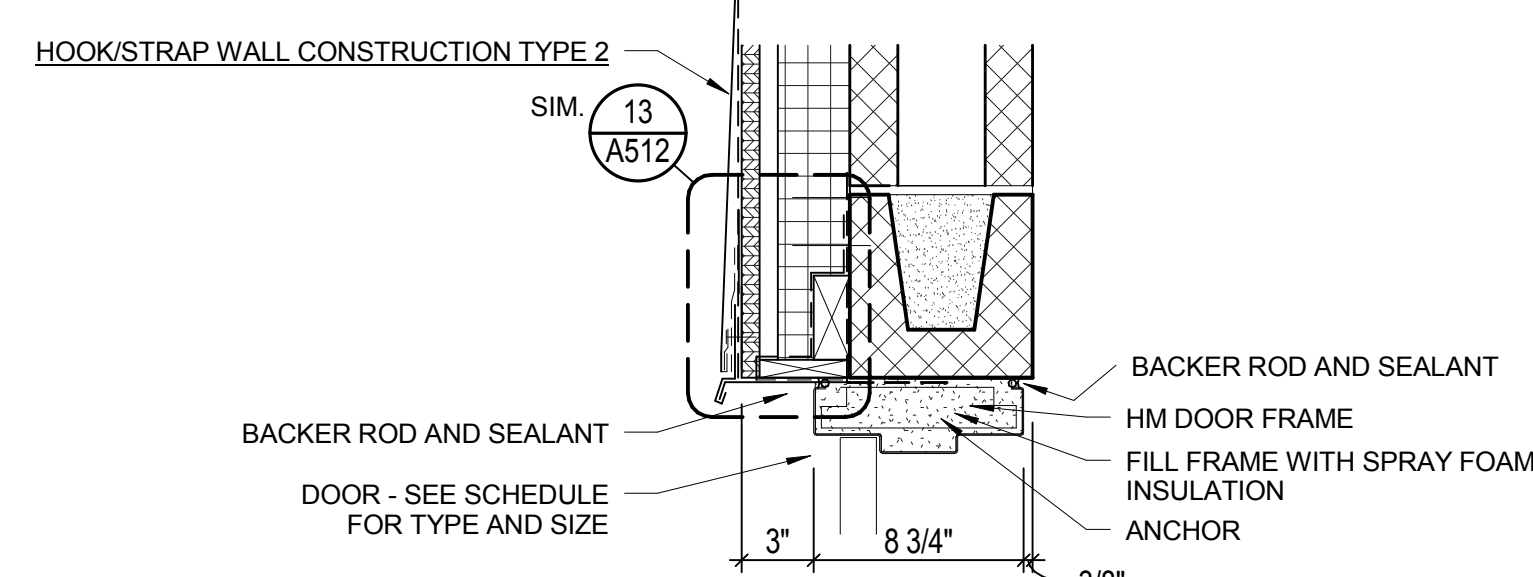
2 HM DOOR JAMB AT MASONRY W/ CMU
SCALE: 1 1/2" = 1'-0"



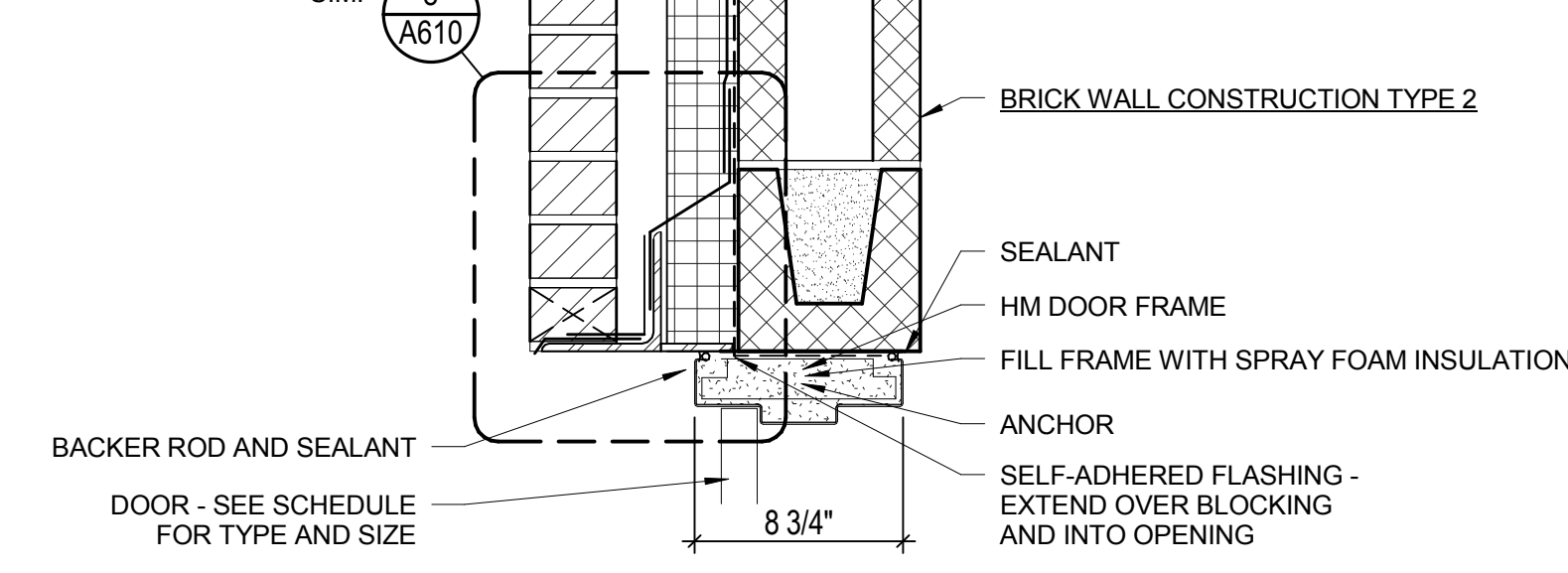
3 HM DOOR JAMB AT METAL PANEL W/ METAL STUDS
SCALE: 1 1/2" = 1'-0"



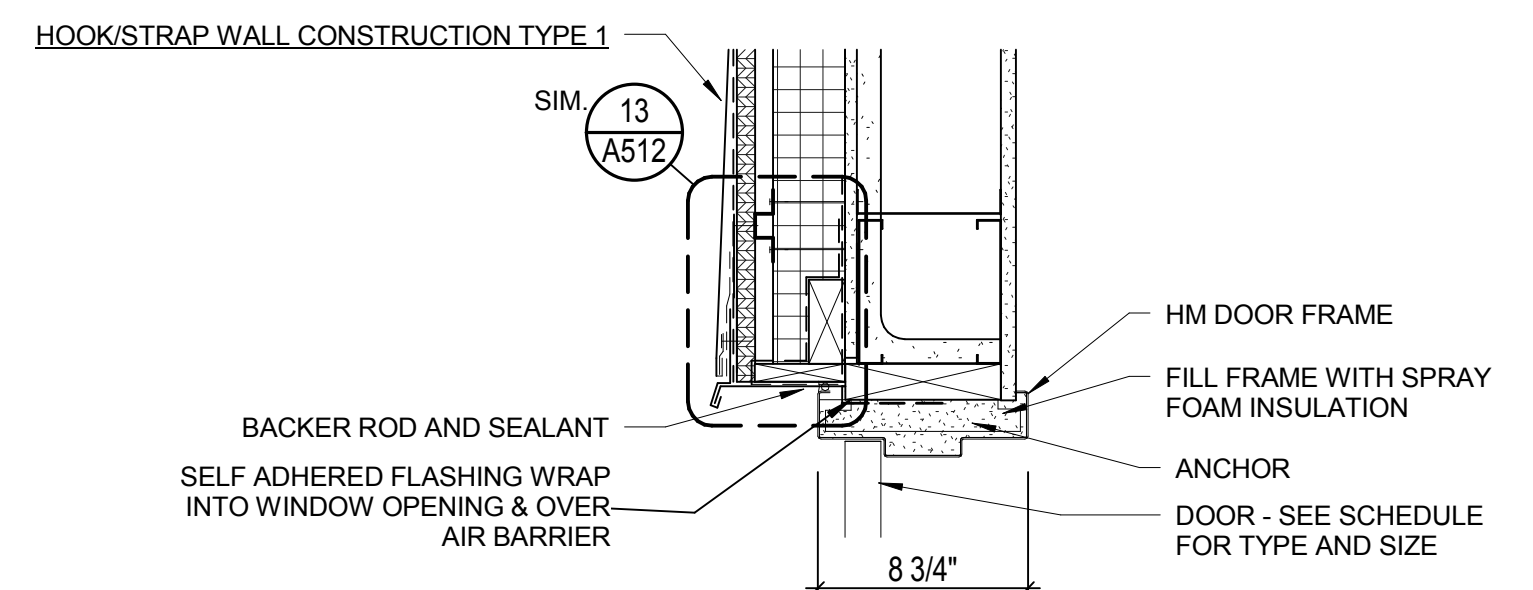
4 HM DOOR JAMB AT METAL PANEL W/ CMU
SCALE: 1 1/2" = 1'-0"



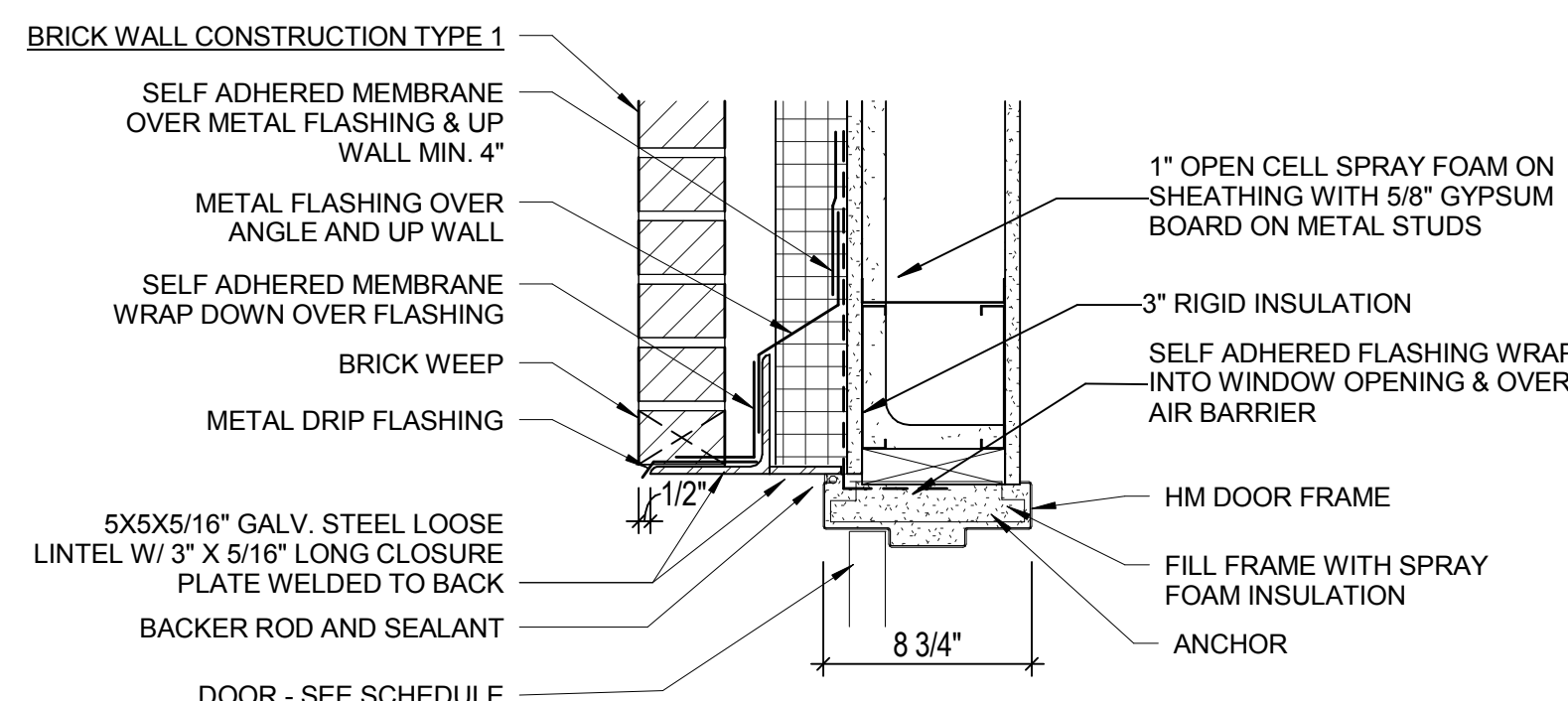
5 HM DOOR HEAD AT METAL PANEL W/ CMU
SCALE: 1 1/2" = 1'-0"



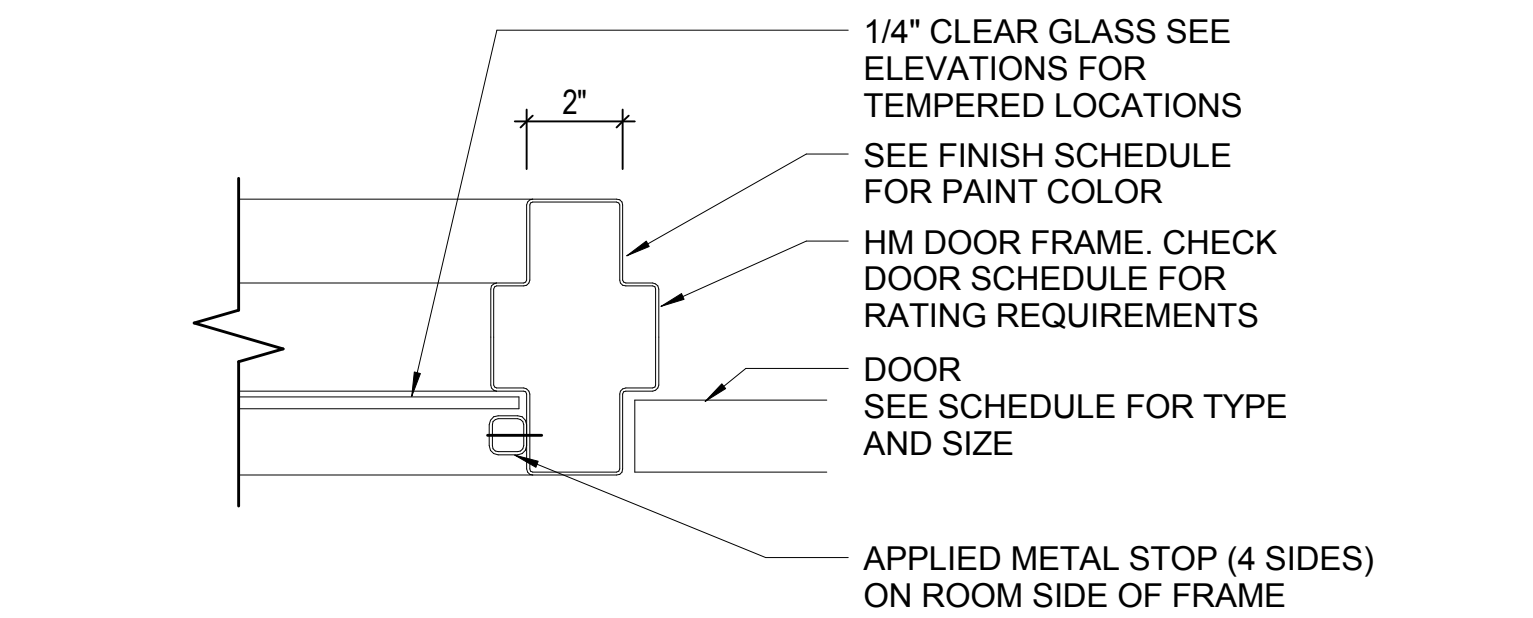
6 HM DOOR HEAD AT MASONRY W/ CMU
SCALE: 1 1/2" = 1'-0"



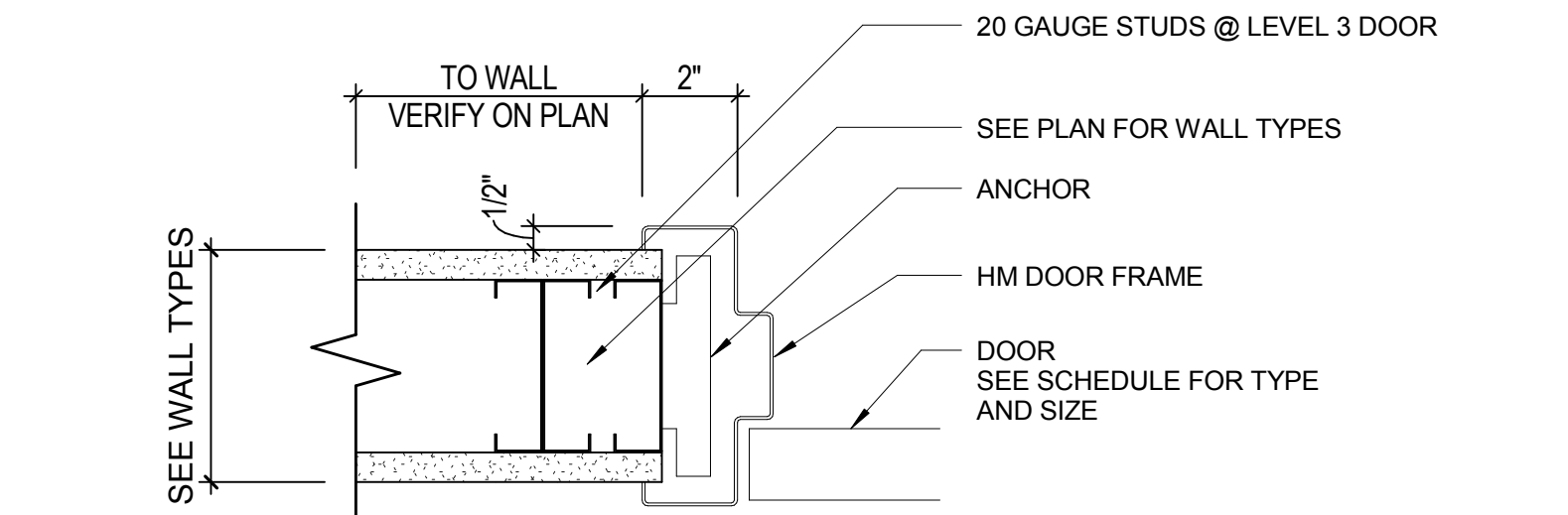
7 HM DOOR HEAD AT METAL PANEL W/ METAL STUDS
SCALE: 1 1/2" = 1'-0"



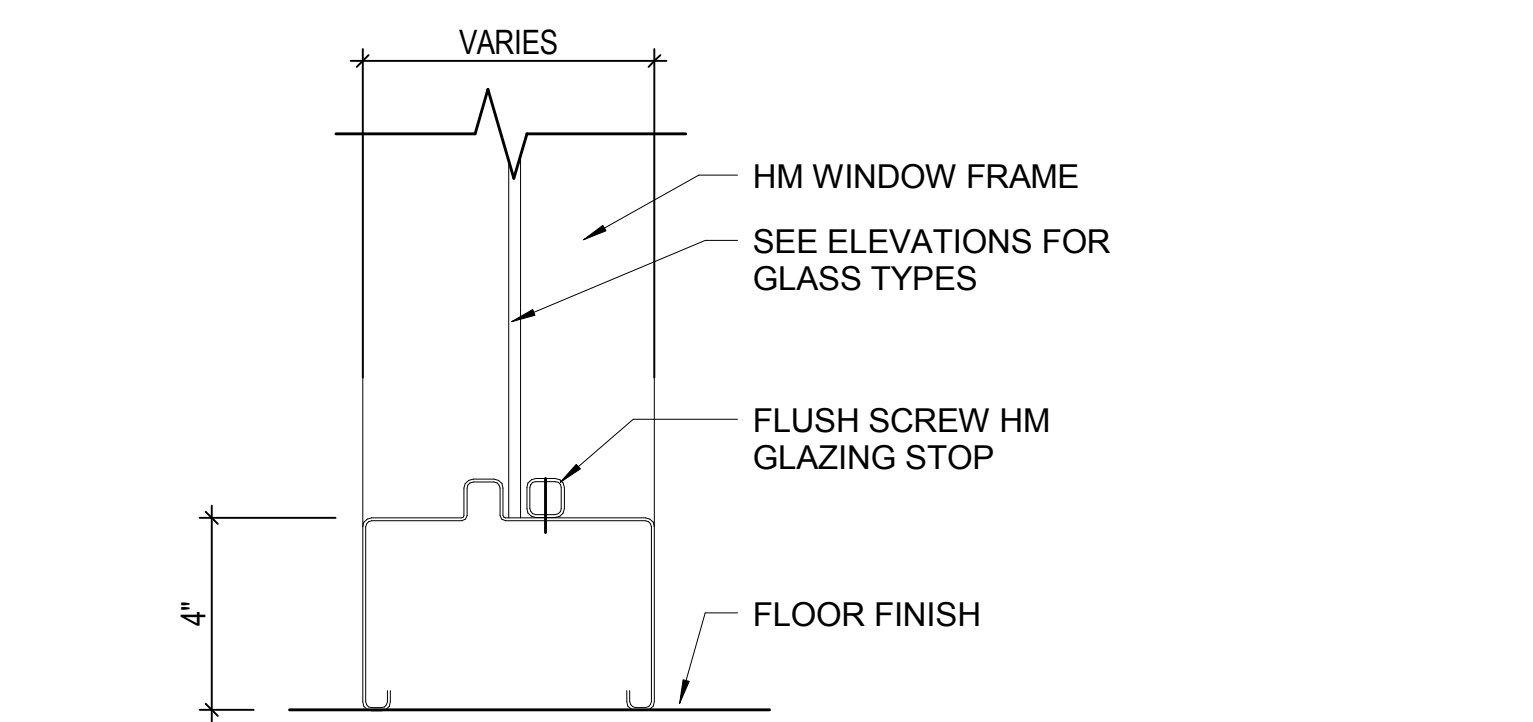
8 HM DOOR HEAD AT MASONRY W/ METAL STUDS
SCALE: 1 1/2" = 1'-0"



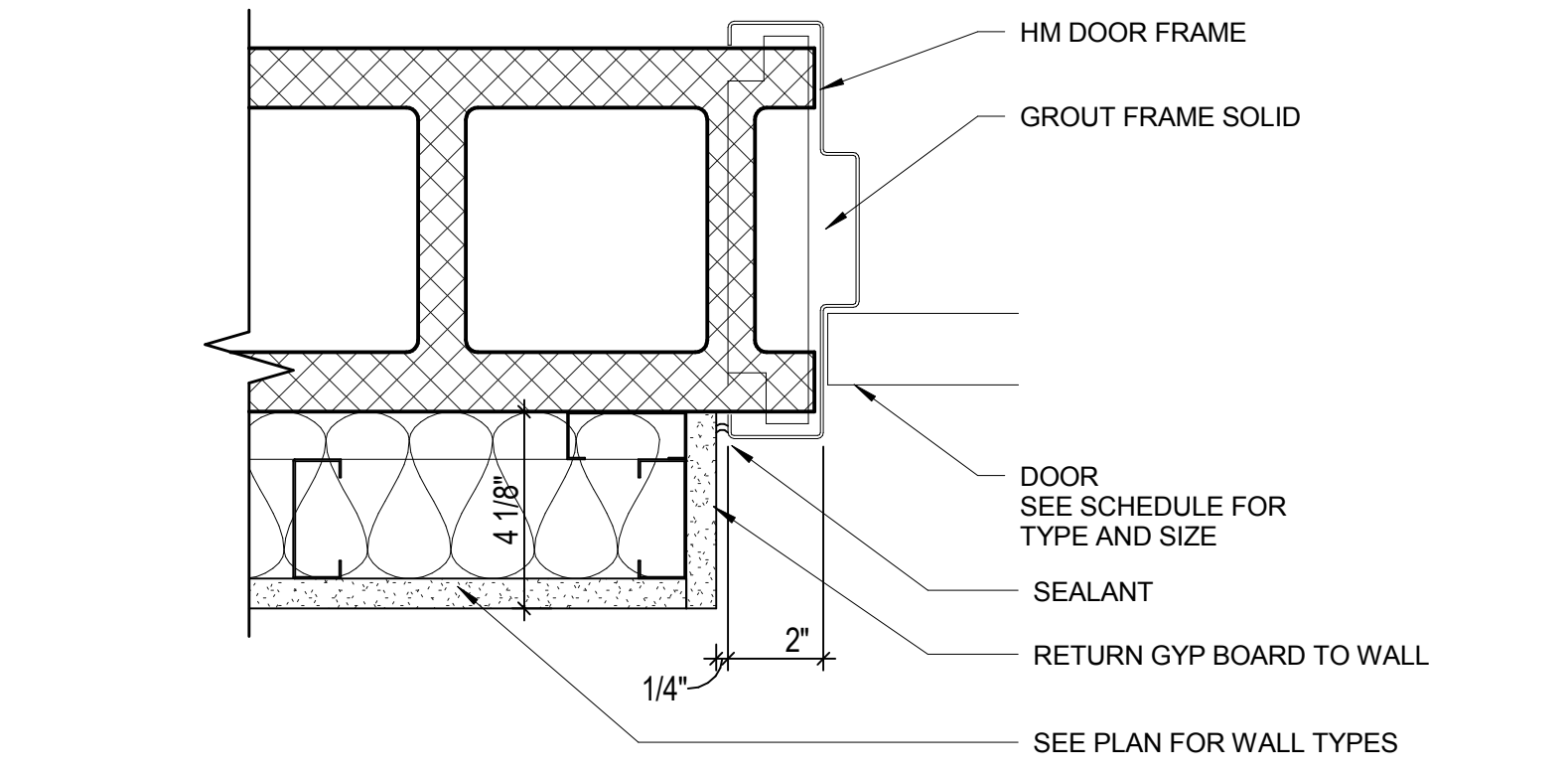
9 HM DOOR W/ SIDELITE JAMB
SCALE: 3" = 1'-0"



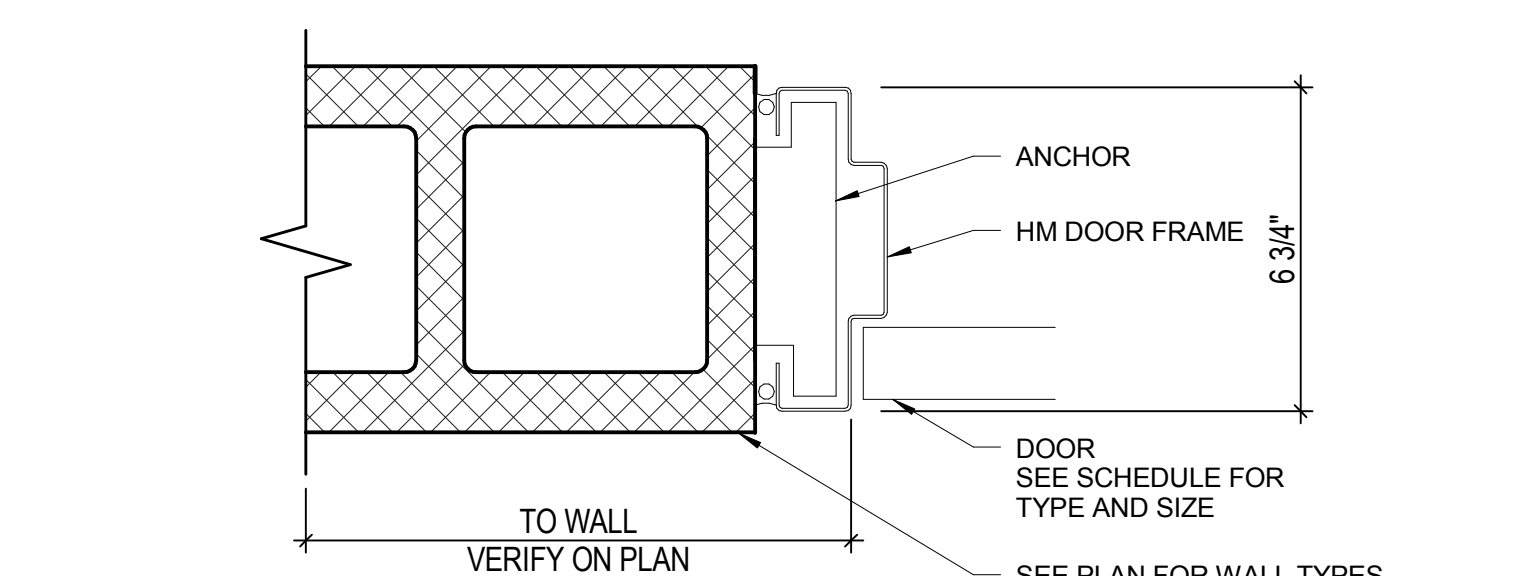
10 HM HEAD/JAMB DETAIL AT METAL STUDS - TYP.
SCALE: 3" = 1'-0"



11 HM SILL TO FLOOR DETAIL
SCALE: 3" = 1'-0"



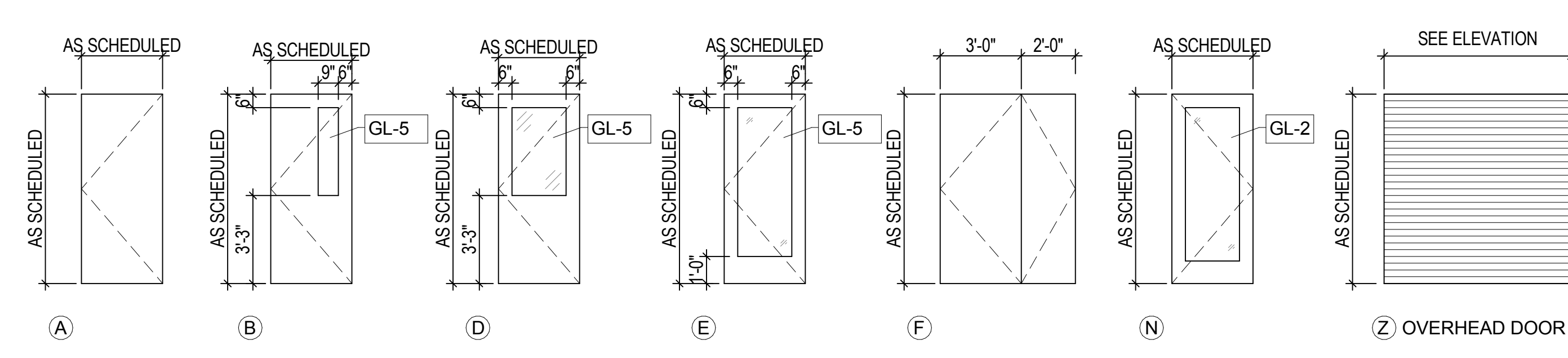
12 HM HEAD/JAMB DETAIL AT 1 HOUR CMU WALL
SCALE: 3" = 1'-0"



13 HM HEAD/JAMB DETAIL AT CMU
SCALE: 3" = 1'-0"

DOOR AND FRAME SCHEDULE																
NUMBER	TYPE	DOOR		FRAME			DETAIL			LABEL	HARDWARE	REMARKS	NUMBER			
		MAT'L	FINISH	WIDTH	HEIGHT	TYPE	MAT'L	FINISH	THRESH					JAMB	HEAD	
100-1	N	ALUM	ALUM	3'-0"	7'-10"	P	ALUM	ALUM	6/A512			AL2	100-1			
100-2	N	ALUM	ALUM	3'-0"	7'-10"	K	ALUM	ALUM				AL1	100-2			
101-1	A	WD	STN	3'-0"	7'-0"	1	HM	PT				1A	CARD READER ACCESS / STAINED GLASS BY OWNER	101-1		
101-2	A	WD	STN	3'-0"	7'-0"	1	HM	PT				2A	LEVEL 3 BULLET-RESISTANT DOOR; CARD READER ACCESS	101-2		
101A	A	WD	STN	3'-0"	7'-0"	1	HM	PT				3A		101A		
102	A	WD	STN	(2)	2'-6"	7'-0"	1	HM	PT			4A		102		
103	N	ALUM	ALUM	3'-0"	7'-10"	Q	ALUM	ALUM	6/A512			AL3		103		
103A	A	WD	STN	(2)	3'-0"	7'-0"	1	HM	PT			5A		103A		
104-1	A	WD	STN	3'-0"	7'-0"	1	HM	PT				2B	CARD READER ACCESS	104-1		
104-2	B	WD	STN	3'-0"	7'-0"	1	HM	PT				2B	CARD READER ACCESS	104-2		
106	A	WD	STN	3'-0"	7'-0"	1	HM	PT				2B	CARD READER ACCESS	106		
107	A	WD	STN	3'-0"	7'-0"	1	HM	PT				6A		107		
108	A	WD	STN	3'-0"	7'-0"	1	HM	PT				6B		108		
109	A	METAL	PT	3'-0"	8'-0"	1	HM	PT	10/A512	1/A610	8/A610	10A		109		
111	A	WD	STN	3'-0"	7'-0"	1	HM	PT				7A		111		
112	A	WD	STN	3'-0"	7'-0"	1	HM	PT				8A		112		
113	A	WD	STN	3'-0"	7'-0"	1	HM	PT				8A		113		
114	A	WD	STN	3'-0"	7'-0"	1	HM	PT				7B		114		
115-1	A	WD	STN	3'-0"	7'-0"	1	HM	PT				9A		115-1		
115-2	A	WD	STN	3'-0"	7'-0"	1	HM	PT				9A		115-2		
116	A	METAL	PT	3'-0"	8'-0"	1	HM	PT	10/A512	3/A610	7/A610	11A	CARD READER ACCESS	116		
118	A	WD	STN	3'-0"	7'-0"	1	HM	PT				6B		118		
120	A	WD	STN	3'-0"	7'-0"	1	HM	PT				6B		120		
121	A	WD	STN	3'-0"	7'-0"	1	HM	PT				6B		121		
122	A	WD	STN	3'-0"	7'-0"	1	HM	PT				6B		122		
123	A	WD	STN	3'-0"	7'-0"	1	HM	PT				9A		123		
125	A	WD	STN	3'-0"	7'-0"	1	HM	PT				9B		125		
125A-1	A	WD	STN	3'-0"	7'-0"	1	HM	PT				6B		125A-1		
125A-2	A	WD	STN	3'-0"	7'-0"	1	HM	PT				6C		125A-2		
126	A	WD	STN	3'-0"	7'-0"	1	HM	PT				7B		126		
127	A	WD	STN	3'-0"	7'-0"	1	HM	PT				9B	180-DEGREE SWING	127		
129A	B	WD	STN	3'-0"	7'-0"	1	HM	PT				9B		129A		
129B	B	WD	STN	3'-0"	7'-0"	1	HM	PT				9B		129B		
129C	B	WD	STN	3'-0"	7'-0"	1	HM	PT				9B		129C		
129D	B	WD	STN	3'-0"	7'-0"	1	HM	PT				9B		129D		
131	D	WD	STN	3'-0"	7'-0"	4	HM	PT				9B	180-DEGREE SWING	131		
132-1	A	METAL	PT	3'-6"	7'-0"	1	HM	PT	10/A512	2/A610	6/A610	11A	CARD READER ACCESS	132-1		
132-2	Z	METAL	PT	12'-0"	8'-0"							B/O	INSULATED METAL OVERHEAD DOOR	132-2		
132-3	Z	METAL	PT	12'-0"	8'-0"							B/O	INSULATED METAL OVERHEAD DOOR	132-3		
133-1	N	ALUM	ALUM	3'-0"	7'-10"	M	ALUM	ALUM	6/A512			AL4	CARD READER ACCESS	133-1		
133-2	B	METAL	PT	3'-6"	7'-0"	1	HM	PT		12/A610	12/A610	45 MIN	12A	CARD READER ACCESS	133-2	
134-1	B	WD	STN	3'-0"	7'-0"	1	HM	PT				8B		134-1		
134-2	B	METAL	PT	3'-0"	7'-0"	1	HM	PT				2B	CARD READER ACCESS	134-2		
135-1	A	METAL	PT	3'-6"	7'-0"	1	HM	PT		13/A610 SIM	13/A610 SIM	8C		135-1		
135-2	A	METAL	PT	3'-6"	7'-0"	1	HM	PT		13/A610 SIM	13/A610 SIM	8C		135-2		
135A	E	METAL	PT	3'-0"	7'-0"	2	HM	PT		9/A610	9/A610	8D	SIDELITE	135A		
135B	E	METAL	PT	3'-0"	7'-0"	2	HM	PT		9/A610	9/A610	8D	SIDELITE	135B		
135C	E	METAL	PT	3'-0"	7'-0"	2	HM	PT		9/A610	9/A610	8D	SIDELITE	135C		
135D	A	METAL	PT	3'-0"	7'-0"	1	HM	PT		13/A610	13/A610	9B		135D		
136	B	WD	STN	3'-0"	7'-0"	1	HM	PT				2B	CARD READER ACCESS	136		
137	A	WD	STN	3'-0"	7'-0"	3	HM	PT				9B	SIDELITE	137		
138	A	WD	STN	3'-0"	7'-0"	3	HM	PT				9B	SIDELITE	138		
B001-1	A	METAL	PT	3'-6"	7'-0"	1	HM	PT		12/A610 SIM	12/A610 SIM	45 MIN	10B	INSULATED METAL DOOR; CARD READER ACCESS	B001-1	
B001-2	A	METAL	PT	(2)	3'-8"	7'-0"	1	HM	PT		12/A610	12/A610	45 MIN	7C	INSULATED METAL DOOR	B001-2
B001-3	Z	METAL	PT	16'-0"	7'-2"							B/O	INSULATED METAL OVERHEAD DOOR	B001-3		
B001-4	A	METAL	PT	3'-0"	7'-0"	1	HM	PT	10/A512	2/A610	6/A610 SIM	10C	INSULATED METAL DOOR; CARD READER ACCESS	B001-4		
B001A	A	METAL	PT	3'-0"	7'-0"	1	HM	PT		13/A610	13/A610	7B		B001A		
B003	A	WD	STN	3'-0"	7'-0"	1	HM	PT				7B		B003		
B004	A	WD	STN	3'-6"	7'-0"	1	HM	PT				2C	CARD READER ACCESS	B004		
B004A	A	WD	STN	3'-0"	7'-0"	1	HM	PT				7A		B004A		
B005	A	WD	STN	3'-0"	7'-0"	1	HM	PT				2D	CARD READER ACCESS	B005		
B006	A	WD	STN	3'-0"	7'-0"	1	HM	PT		12/A610	12/A610	2B	CARD READER ACCESS	B006		
B007	A	METAL	PT	4'-0"	7'-0"	1	HM	PT				10D		B007		
B008-1	A	WD	STN	3'-0"	7'-0"	1	HM	PT				8B		B008-1		
B008-2	A	WD	STN	3'-0"	7'-0"	1	HM	PT				8B		B008-2		
B009	A	METAL	PT	3'-0"	7'-0"	1	HM	PT				7B		B009		
B011	F	WD	STN	(2)	5'-0"	7'-0"	1	HM	PT			9C		B011		
B012-1	A	WD	STN	3'-0"	7'-0"	1	HM	PT				8B		B012-1		
B012-2	A	WD	STN	3'-0"	7'-0"	1	HM	PT				8B		B012-2		
ST-2A	A	WD	STN	3'-0"	7'-0"	1	HM	PT		12/A610	12/A610	1 HOUR	10E	ST-2A		
ST-2B	A	METAL	PT	3'-0"	7'-0"	1	HM	PT	10/A512	4/A610	5/A610	10F	CARD READER ACCESS	ST-2B		
ST-2C	A	METAL	PT	3'-0"	7'-0"	1	HM	PT		12/A610	12/A610	1 HOUR	10E	ST-2C		

Grand total: 72



DOOR ELEVATIONS

DOOR SCHEDULE GENERAL NOTES
1. REFER TO HEAD/JAMB DETAIL 10/A610 FOR ALL INTERIOR HM DOORS U.N.O.
2. SEE SHEET A611 FOR FRAME ELEVATIONS

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-2017

REVISION FOR:
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**DOOR SCHEDULE &
DETAILS**

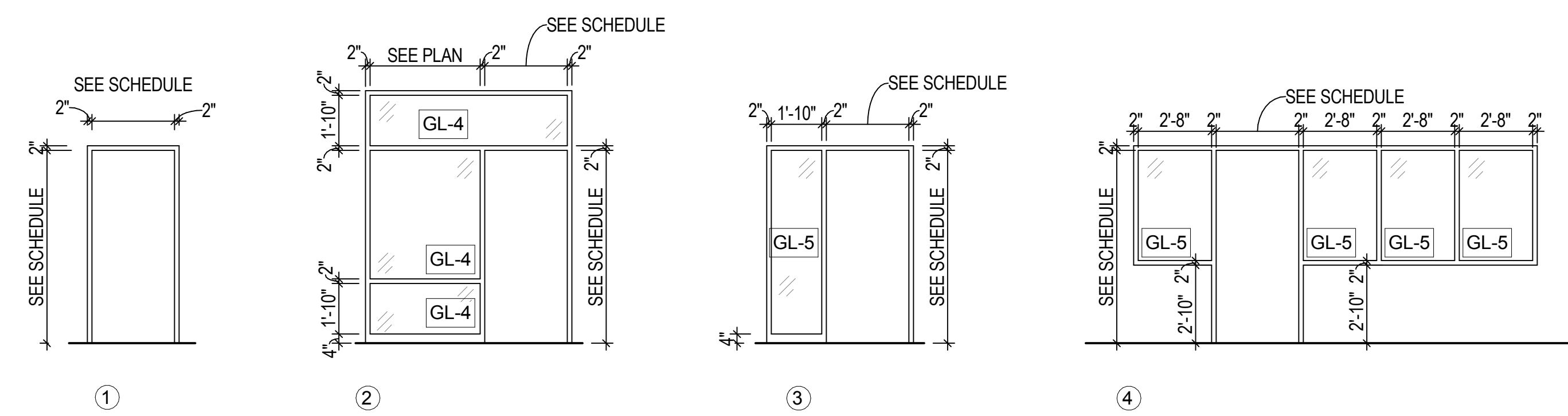
**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

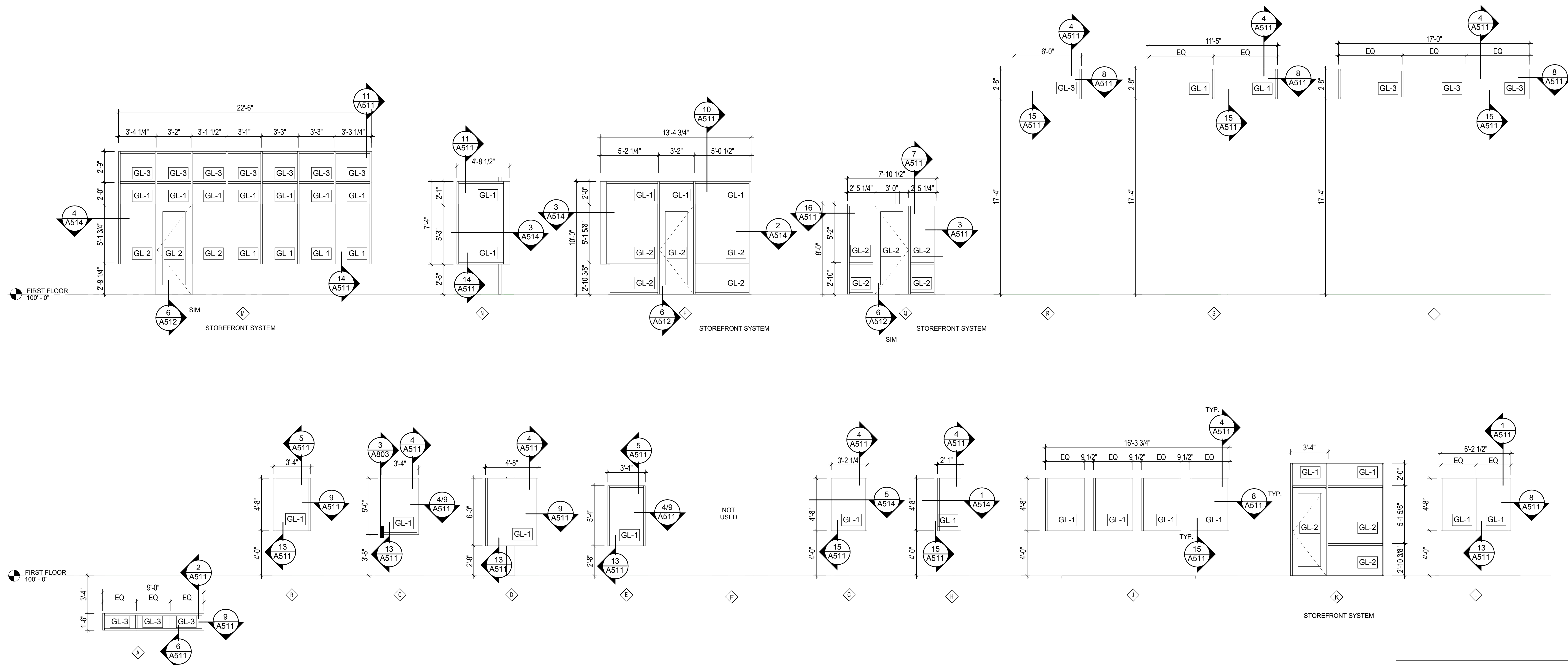
PROJECT NUMBER 152413.01

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HOLLOW METAL DOOR FRAME ELEVATIONS



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FRAME ELEVATIONS

GENERAL NOTES
1. ALL DIMENSIONS TO ROUGH OPENINGS.
2. ROUGH OPENINGS TO BE FIELD VERIFIED

ALUMINUM WINDOW & STOREFRONT FRAME ELEVATIONS

A611

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

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City of Madison Police Department
211 South Carroll Street
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PROJECT NUMBER 152413.01

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**LOWER LEVEL
FINISH PLAN**

WRITING SURFACE SCHEDULE

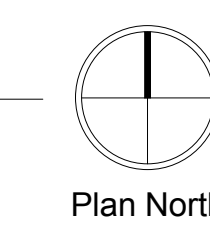
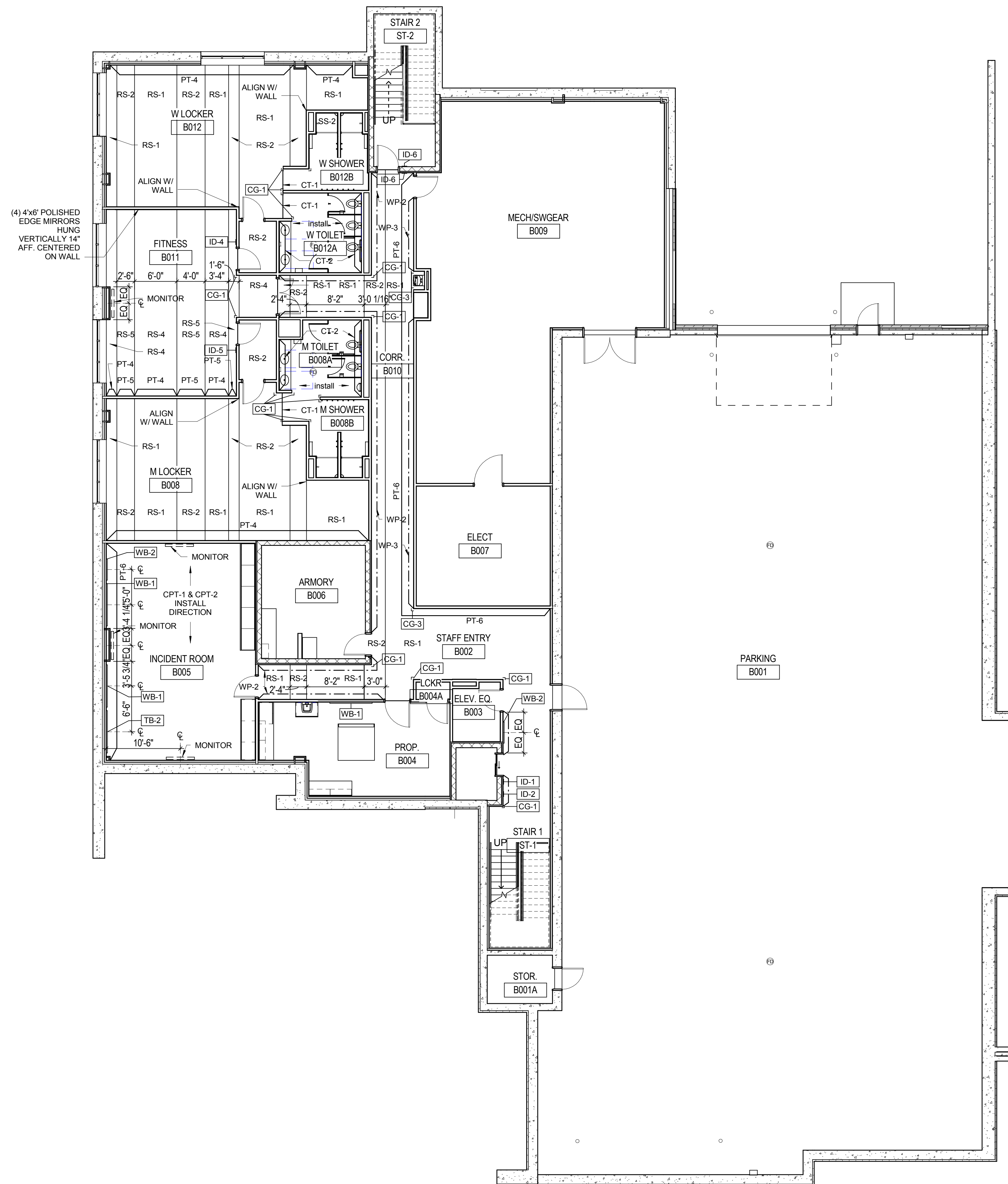
CB-1	CHALKBOARD, ALUMINUM FRAME 6' x 4', LANDSCAPE ORIENTATION - MOUNT BOTTOM 12" AFF.
TB-1	TACK BOARD, ALUMINUM FRAME 6' x 4', LANDSCAPE ORIENTATION
TB-2	TACK BOARD, ALUMINUM FRAME 3' x 4', PORTRAIT ORIENTATION
TB-3	TACK BOARD, ALUMINUM FRAME 28' x 4', LANDSCAPE ORIENTATION
TB-4	TACK BOARD, ALUMINUM FRAME 7'-1" x 1'-9", PORTRAIT ORIENTATION
WB-1	WHITEBOARD, ALUMINUM FRAME 6' x 4', LANDSCAPE ORIENTATION
WB-2	WHITEBOARD, ALUMINUM FRAME 3' x 4', PORTRAIT ORIENTATION
WB-3	WHITEBOARD, ALUMINUM FRAME 4' x 4'

GENERAL NOTES:
1. BOTTOM OF ALL WRITING SURFACES TO BE MOUNTED 2'-8" A.F.F. UNLESS NOTED OTHERWISE.

ROOM SIGN GENERAL NOTES

ID-X ROOM SIGN

GENERAL NOTES:
1. SEE SPECIFICATIONS FOR SIGN SCHEDULE.
2. SEE MOUNTING DETAIL FOR ALL SIGNS REQUIRED TO HAVE VISUAL AND TACTILE CHARACTERS U.N.O.



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REVISION FOR:
NO. DESCRIPTION DATE
1 DSSP ADDITIONAL INFORMATION 4-7-17

WRITING SURFACE SCHEDULE

CB-1	CHALKBOARD, ALUMINUM FRAME 6' x 4', LANDSCAPE ORIENTATION - MOUNT BOTTOM 12" AFF.
TB-1	TACK BOARD, ALUMINUM FRAME 6' x 4', LANDSCAPE ORIENTATION
TB-2	TACK BOARD, ALUMINUM FRAME 3' x 4', PORTRAIT ORIENTATION
TB-3	TACK BOARD, ALUMINUM FRAME 28' x 4', LANDSCAPE ORIENTATION
TB-4	TACK BOARD, ALUMINUM FRAME 7'-1" x 1'-9", PORTRAIT ORIENTATION
WB-1	WHITEBOARD, ALUMINUM FRAME 6' x 4', LANDSCAPE ORIENTATION
WB-2	WHITEBOARD, ALUMINUM FRAME 3' x 4', PORTRAIT ORIENTATION
WB-3	WHITEBOARD, ALUMINUM FRAME 4' x 4'

GENERAL NOTES:

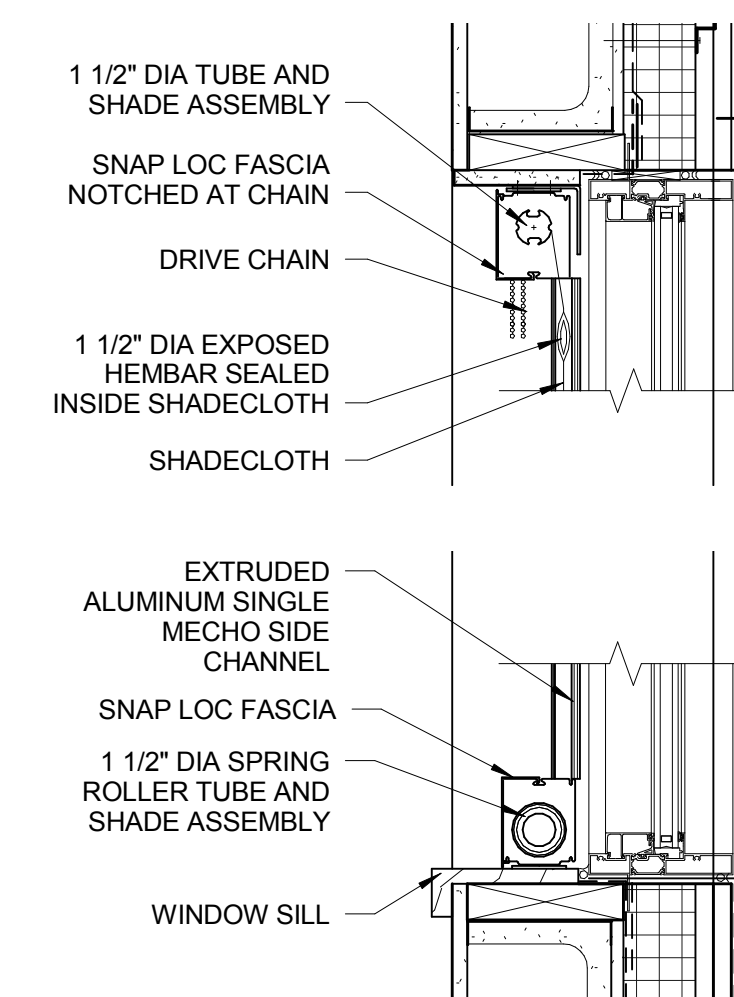
1. BOTTOM OF ALL WRITING SURFACES TO BE MOUNTED 2'-8" A.F.F. UNLESS NOTED OTHERWISE.

ROOM SIGN GENERAL NOTES

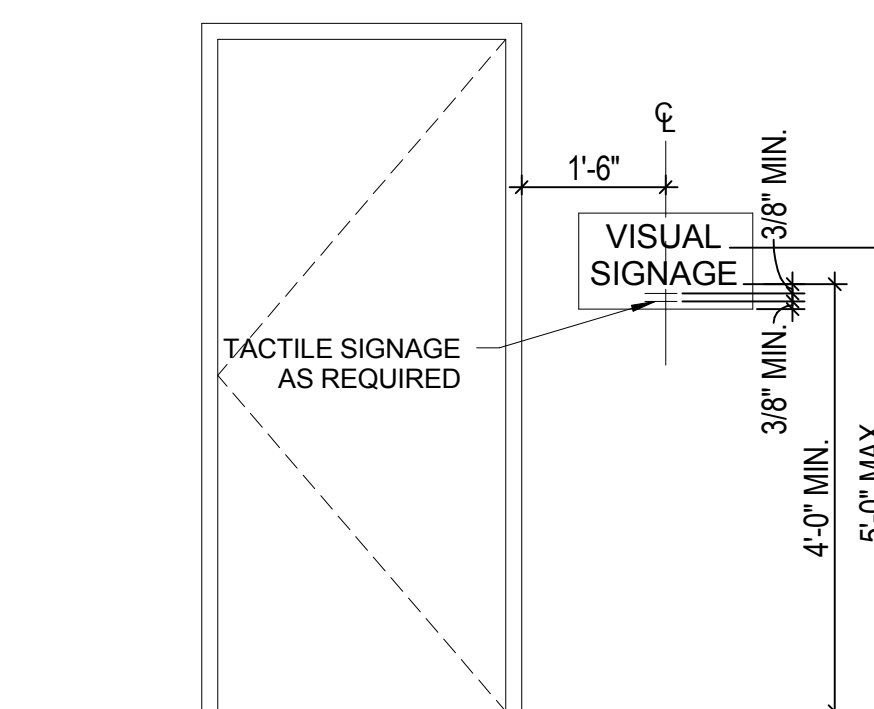
ID-X ROOM SIGN

GENERAL NOTES:

1. SEE SPECIFICATIONS FOR SIGN SCHEDULE.
2. SEE MOUNTING DETAIL FOR ALL SIGNS REQUIRED TO HAVE VISUAL AND TACTILE CHARACTERS U.N.O.

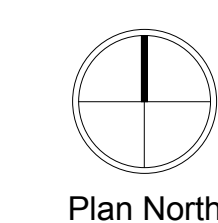


2 BOTTOM UP WINDOW SHADE DETAIL - WT-2
SCALE: 1 1/2" = 1'-0"



3 SIGNAGE MOUNTING
SCALE: 1/2" = 1'-0"

1 FIRST FLOOR FINISH PLAN
SCALE: 1/8" = 1'-0"



DRAWN BY JV

CHECKED BY SK

**FIRST FLOOR FINISH
PLAN**

FINISH PLAN REFERENCE LEGEND

CB-X	CHALKBOARD
CG-X	CORNER GUARD
CPT-X	CARPET
CT-X	CERAMIC TILE
ID-X	SIGNAGE
PT-X	PAINT
RS-X	RESILIENT FLOORING
TB-X	TACK BOARD
WB-X	WHITEBOARD
WVC-X	WALLPAPER
WT-X	WINDOW TRIM

GENERAL NOTES:
1. SEE SPECIFICATIONS FOR PRODUCT INFORMATION.

RM #	ROOM NAME	FINISH SCHEDULE							REMARKS	RM #
		FLOORS	BASE	WALL FINISH			CEILING			
		FINISH	FINISH	NORTH FINISH	EAST FINISH	SOUTH FINISH	WEST FINISH	FINISH		
100	ENTRY	CPT-4	RB-2	PT-1	PT-1	PT-1	PT-1	ACT-1		100
101	LOBBY	CPT-4, CT-3	RB-3	PT-1,WVC-2,CH-1	PT-1, WVC-2,CH-1	PT-1, WVC-2,CH-1	PT-1, WVC-2,CH-1, CT-2	ACT-1	NO RB-3 ON TILE WALL BEHIND DRINKING FOUNTAINS; SEE INTERIOR ELEVATIONS FOR TYP. WP-1 HEIGHT	101
101A	TOILET	CT-1	CTB-1	PT-1	PT-1	PT-1	CT-2	ACT-2		101A
102	PRT	CPT-1	RB-2	PT-6	PT-1	PT-1	PT-1	ACT-1	PL-1 CABINETS, PL-2 COUNTERTOPS	102
103	COMMUNITY ROOM	CPT-1, CPT-2	RB-2	PT-1, WVC-1,CH-1	PT-1, WVC-1,CH-1	PT-1, WVC-1,CH-1	PT-1, WVC-1,CH-1	ACT-1	PL-1 CABINET, PL-2 COUNTERTOP, 25% CPT-2, 75% CPT-1 RANDOM INSTALL; SEE INTERIOR ELEVATION FOR TYP WP-1 HEIGHT	103
103A	STORAGE	CPT-1	RB-2	PT-1	PT-1	PT-1	PT-1	ACT-1		103A
104	INT	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1		104
105	CORR.	CPT-1	RB-2	PT-6, WP-3	-	PT-1, WP-2	PT-1, WP-2	ACT-1		105
106	MDF	RS-1	RB-1	PT-1	PT-1	PT-1	PT-1	EXP		106
107	STORAGE	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1	PL-1 CABINETS, PL-2 COUNTERTOPS	107
108	INT	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1	PL-1 CABINETS, PL-2 COUNTERTOPS	108
109	CORR.	CT-3	CTB-2	PT-1	PT-6, WP-3	PT-1	PT-1	ACT-1		109
110	CORR.	CPT-1	RB-2	PT-1, WP-2	PT-1	PT-6, WP-3	PT-1	ACT-1		110
111	JAN.	RS-1	RB-1	PT-1, WP-2	PT-1, WP-2	PT-1, WP-2	PT-1	ACT-2	INSTALL WP-2 TO 4'-0" AFF	111
112	MENS	CT-1	CTB-1	CT-2	PT-1	PT-1	PT-1	ACT-2	SS-1 COUNTERTOP	112
113	WOMENS	CT-1	CTB-1	PT-1	PT-1	PT-1	CT-2	ACT-2	SS-1 COUNTERTOP	113
114	ELECT.	RS-1	RB-1	PT-1	PT-1	PT-1	PT-1	EXP		114
115	BRIEF	CPT-1, CPT-2	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1	25% CPT-2, 75% CPT-1, RANDOM INSTALL	115
116	BREAK ROOM	RS-1, RS-2, RS-3	RB-2	PT-1	PT-1, FWP-2	PT-1	PT-1	ACT-1/GYP/PT-8	SS-2 COUNTERTOPS, PL-1 CABINETS; SEE INTERIOR ELEVATIONS VOR FWP-2	116
117	CORR.	CPT-1	RB-2	PT-2, FWP-1, FWP-2	-	PT-1, WP-2	PT-1, WP-2	ACT-1	SEE INTERIOR ELEVATIONS FOR FWP-1 & 2	117
118	LT	CPT-3	RB-2	PT-2	PT-3	PT-2	PT-2	ACT-1		118
120	CAPT.	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1		120
121	LT	CPT-3	RB-2	PT-3	PT-2	PT-2	PT-2	ACT-1		121
121	CORR.	CPT-1	RB-2	PT-1, WP-2	PT-1, PT-2, WP-2, WP-4	PT-2, WP-4	PT-1, WP-2	ACT-1		121
122	LT	CPT-3	RB-2	PT-3	PT-2	PT-2	PT-2	ACT-1		122
123	DETECT.	CPT-1	RB-2	PT-2	PT-2	PT-2	PT-7	ACT-1		123
124	CORR.	CPT-1	RB-2	PT-1, WP-2	PT-1	PT-1, WP-2	-	ACT-1/GYP/PT-8		124
125	OUTREACH	CPT-3	RB-2	PT-2	PT-7	PT-2	PT-2	ACT-1		125
125A	CONF.	CPT-1	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1		125A
126	ELEC.	RS-1	RB-1	PT-1	PT-1	PT-1	PT-1	EXP		126
127	SGT.	CPT-3	RB-2	PT-7	PT-2	PT-2	PT-2	ACT-1		127
129	CORR.	CPT-1	RB-2	PT-1, WP-2	PT-1	PT-2, WP-4	PT-1, WP-2	ACT-1	PL-1 CABINETS, PL-2 COUNTERTOPS	129
129A	PATROL	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1		129A
129B	PATROL	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1		129B
129C	PATROL	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1		129C
129D	PATROL	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1		129D
130	CORR.	CPT-1	RB-2	PT-1	PT-1, WP-2	PT-1, WP-2	PT-2, WP-4	ACT-1		130
131	COMM.	CPT-3	RB-2	PT-2	PT-7	PT-2	PT-2	ACT-1		131
132	SALLYPORT	TC-1	--	--	--	--	--	EXP		132
133	VEST	CPT-4	RB-2	PT-1	PT-1	PT-1	PT-1	ACT-1		133
134	CORR.	RS-1	RB-1	PT-1, WP-2	PT-1	PT-1	PT-1, WP-2	ACT-1		134
135	INTAKE	RS-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1		135
135A	HOLDING 1	RS-1	RB-1	PT-1	PT-1	PT-1	PT-1	GYP/PT-8		135A
135B	HOLDING 2	RS-1	RB-1	PT-1	PT-1	PT-1	PT-1	GYP/PT-8		135B
135C	HOLDING 3	RS-1	RB-1	PT-1	PT-1	PT-1	PT-1	GYP/PT-8		135C
135D	INTAKE TOILET	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	GYP/PT-8		135D
136	CORR.	RS-1	RB-1	PT-1, WP-2	PT-1	PT-1	PT-1, WP-2	ACT-1		136
137	INT	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1		137
138	INT	CPT-3	RB-2	PT-2	PT-2	PT-2	PT-2	ACT-1		138
175	ELEV.	RS-1	--	--	--	--	--	--		175
B001	PARKING	TC-1	--	--	--	--	--	EXP		B001
B001A	STOR.	SC-1	--	--	--	--	--	EXP		B001A
B002	STAFF ENTRY	RS-1, RS-2	RB-1	PT-6	PT-1	PT-1, WP-2	PT-1, WP-2	ACT-1	PL-1 LOCKERS	B002
B003	ELEV. EQ.	RS-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-2		B003
B004	PROP.	UR-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	SS-3 COUNTERTOP, PL-1 CABINET	B004
B004A	LCKR	UR-1	RB-1	PT-1	PT-1	PT-1	PT-1	GYP/PT-8		B004A
B005	INCIDENT ROOM	CPT-1, CPT-2	RB-2	PT-2	PT-2	PT-2	PT-6	ACT-1	PL-1 CABINET, PL-2 COUNTERTOP, 25% CPT-2, 75% CPT-1 RANDOM INSTALL	B005
B006	ARMORY	UR-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1		B006
B007	ELECT	SC-1	RB-1	PT-1	PT-1	PT-1	PT-1	EXP		B007
B008	M LOCKER	RS-1, RS-2	RB-1	PT-1	PT-1	PT-4	PT-1	ACT-2		B008
B008A	M TOILET	CT-1	CTB-1	PT-1	CT-2	PT-1	PT-1, CT-2	GYP/PT-8	SS-1 COUNTERTOP, TP-1, SEE FINISH PLANS	B008A
B008B	M SHOWER	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	GYP/PT-8	SHOWER WALL PANELS TO BE SS-2	B008B
B009	MECH/SWGEAR	SC-1	RB-1	PT-1	PT-1	PT-1	PT-1	EXP		B009
B010	CORR.	RS-1, RS-2	RB-1	PT-1, WP-2	PT-6, WP-3	PT-1, WP-2	PT-1, WP-2	ACT-1/GYP/PT-8	PL-1 CABINETS, PL-2 COUNTERTOP, WP-2 AT PT-1 LOCATIONS & WP-3 AT PT-6 LOCATIONS	B010
B011	FITNESS	RS-4, RS-5	RB-1	PT-1	PT-1	PT-4, PT-5	PT-1	ACT-1		B011
B012	W LOCKER	RS-1, RS-2	RB-1	PT-1,PT-4	PT-1	PT-1	PT-1	ACT-2		B012
B012A	W TOILET	CT-1	CTB-1	PT-1	CT-2	PT-1	CT-2	GYP/PT-8	SS-1 COUNTERTOP, TP-1, SEE FINISH PLANS	B012A
B012B	W SHOWER	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	GYP/PT-8	SHOWER WALL PANELS TO BE SS-2	B012B
ST-1	STAIR 1	RS-1, RT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1/GYP/PT-8		ST-1
ST-1	STAIR 1	RS-1, RT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1/GYP/PT-8		ST-1
ST-2	STAIR 2	RS-1, RT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1/GYP/PT-8		ST-2
ST-2	STAIR 2	RS-1, RT-1	RB-1	PT-1	PT-1	PT-1	PT-1	--		ST-2

Grand total: 72

GENERAL NOTES - FINISHES

- ALL GRILLES, VENTS, LOUVERS, FIRE EXTINGUISHER CABINETS, ETC SHALL BE PAINTED TO MATCH THE WALL ON WHICH THEY OCCUR.
- STAIR STRINGERS, HANDRAILS AND GUARDRAILS SHALL BE PAINTED TO MATCH RB-1
- ALL HOLLOW METAL DOOR FRAMES, METAL DOORS & EXPOSED COLUMNS SHALL BE PAINTED TO MATCH RB-2
- ALL CEILING PAINT TO BE FLAT FINISH, ALL WALL PAINT TO BE EGGSHELL
- DOORS TO BE STAINED TO MATCH PL-1
- WINDOW SILLS TO BE SS-5

DRAWN BY JV

CHECKED BY SK

ROOM SCHEDULE & NOTES

- ALL DASHED FFE N.I.C. - BY OWNER
 - COORDINATE ALL POWER & DATA CONNECTIONS TO FURNITURE
 - REFER TO FLOOR PLANS FOR ALL BUILT-IN CABINETRY

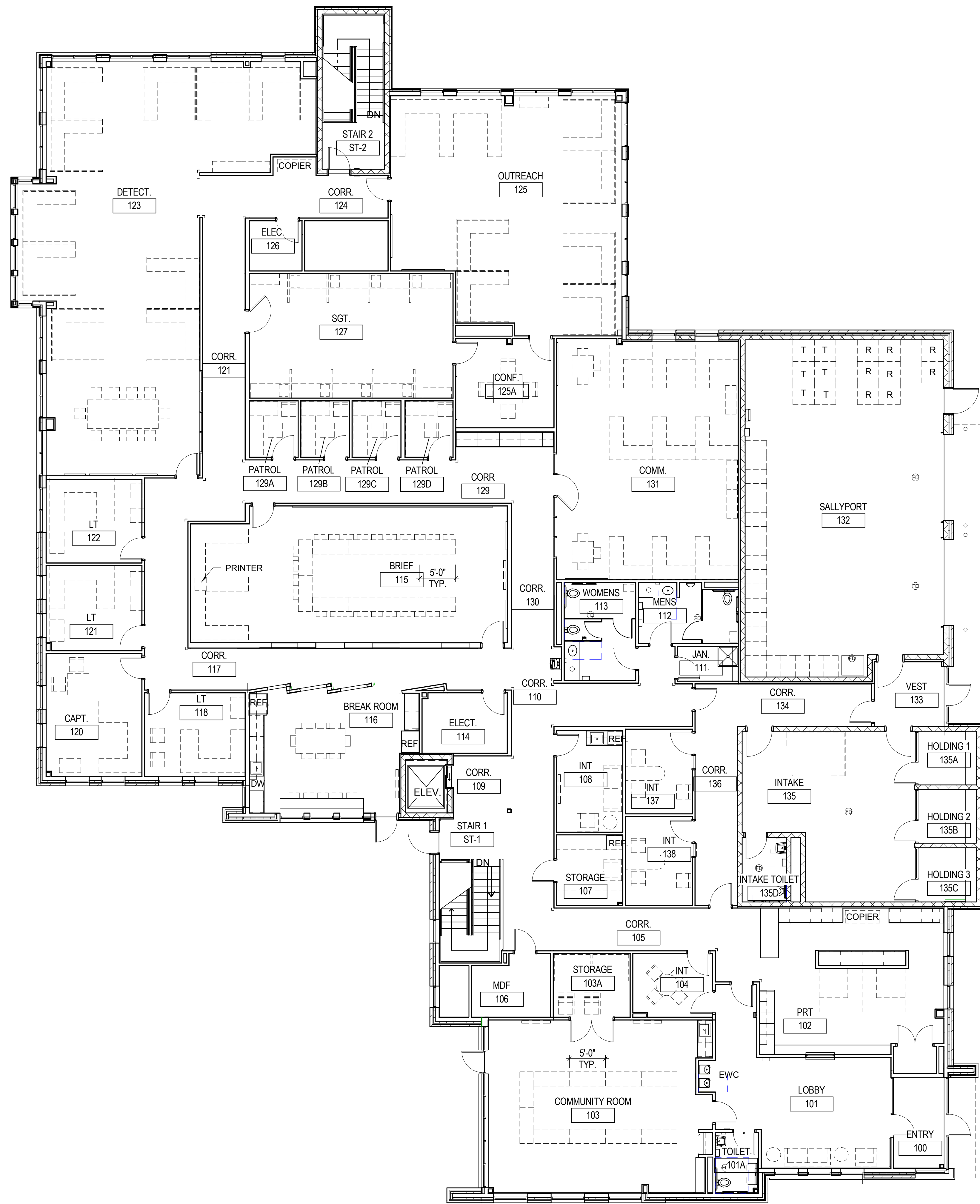
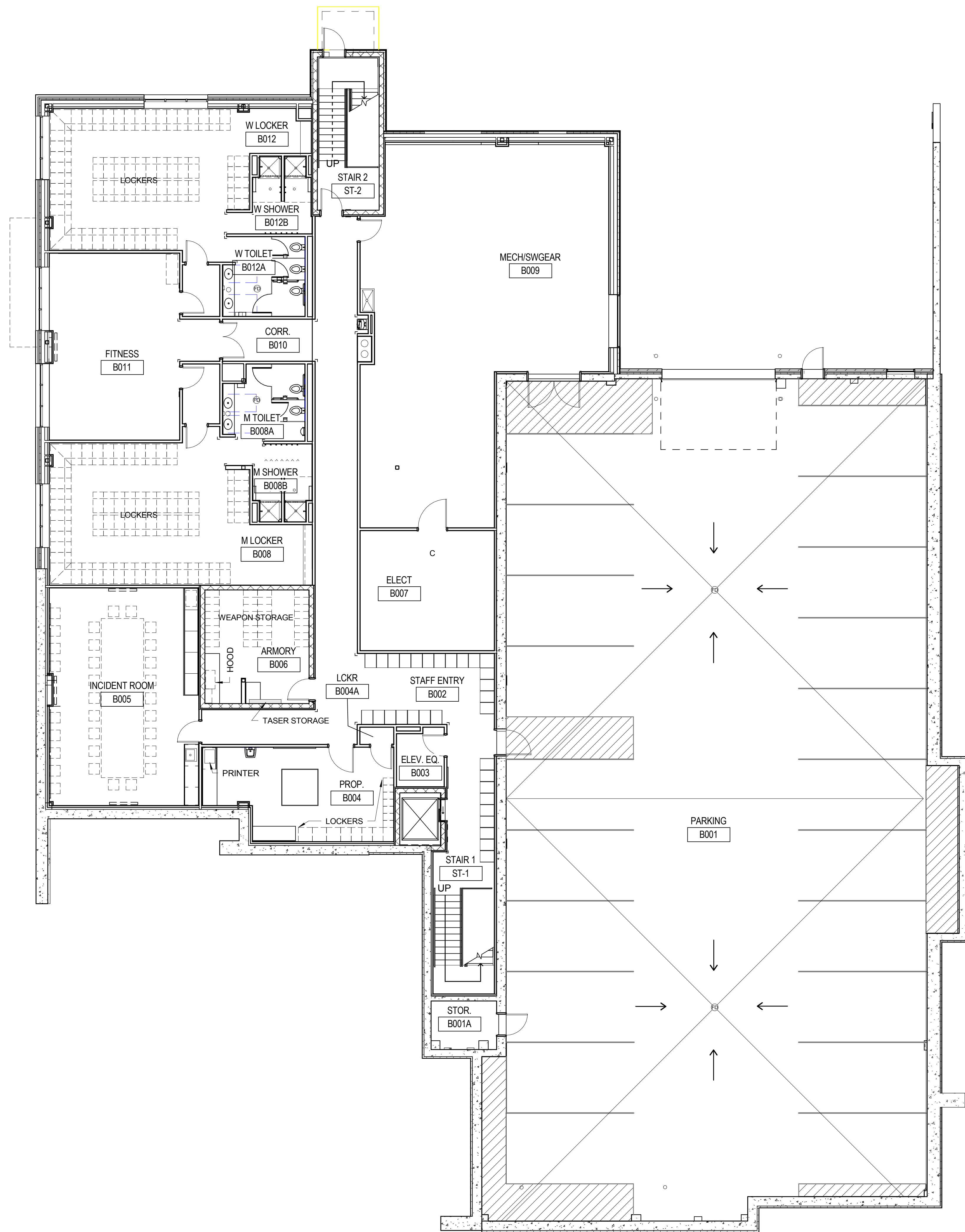
**POLICE DEPARTMENT
MIDTOWN DISTRICT**

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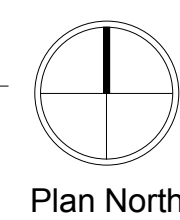
PROJECT NUMBER 152413.01

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2 LOWER LEVEL FURNITURE PLAN - FOR REFERENCE ONLY
SCALE: 1/8" = 1'-0"



Plan North

1 FIRST FLOOR FURNITURE PLAN - FOR REFERENCE ONLY
SCALE: 1/8" = 1'-0"



Plan North

DRAWN BY MMZ
 CHECKED BY SK

**FURNITURE PLAN -
FOR REFERENCE
ONLY**

**POLICE DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
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PROJECT NUMBER 152413.01

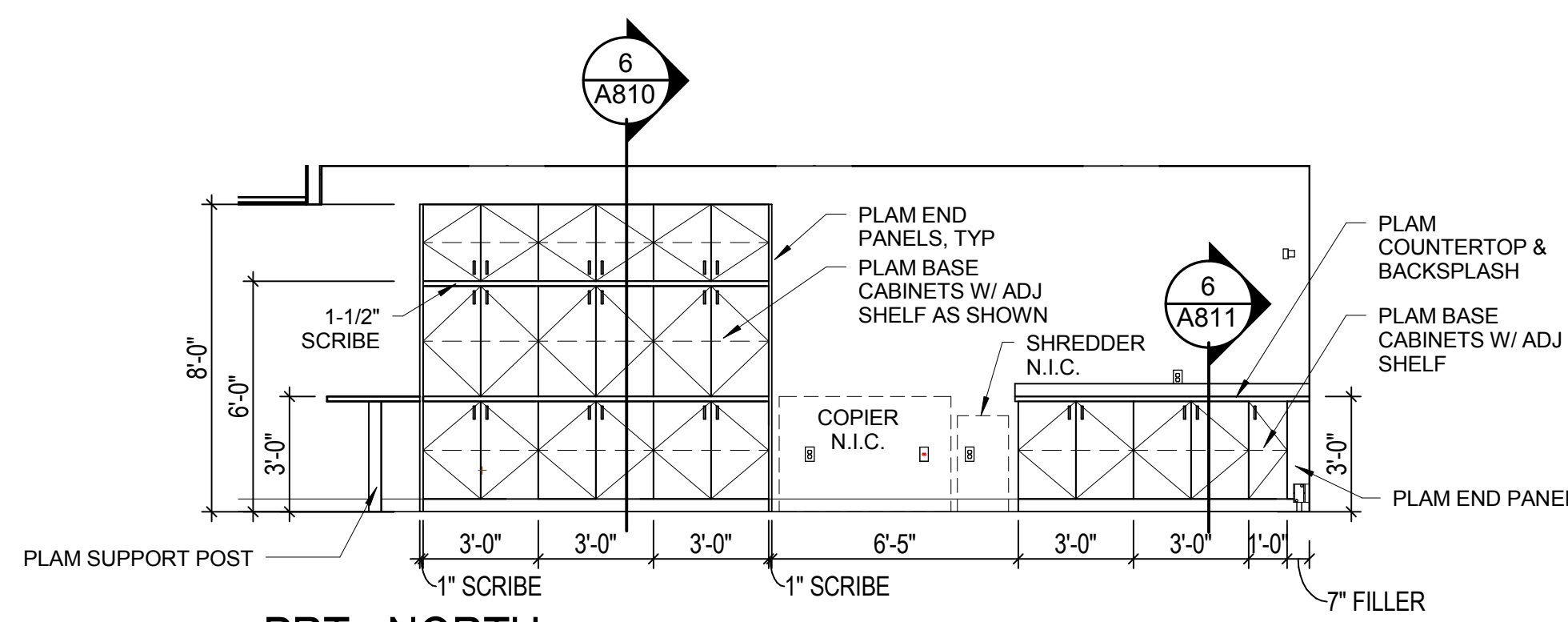
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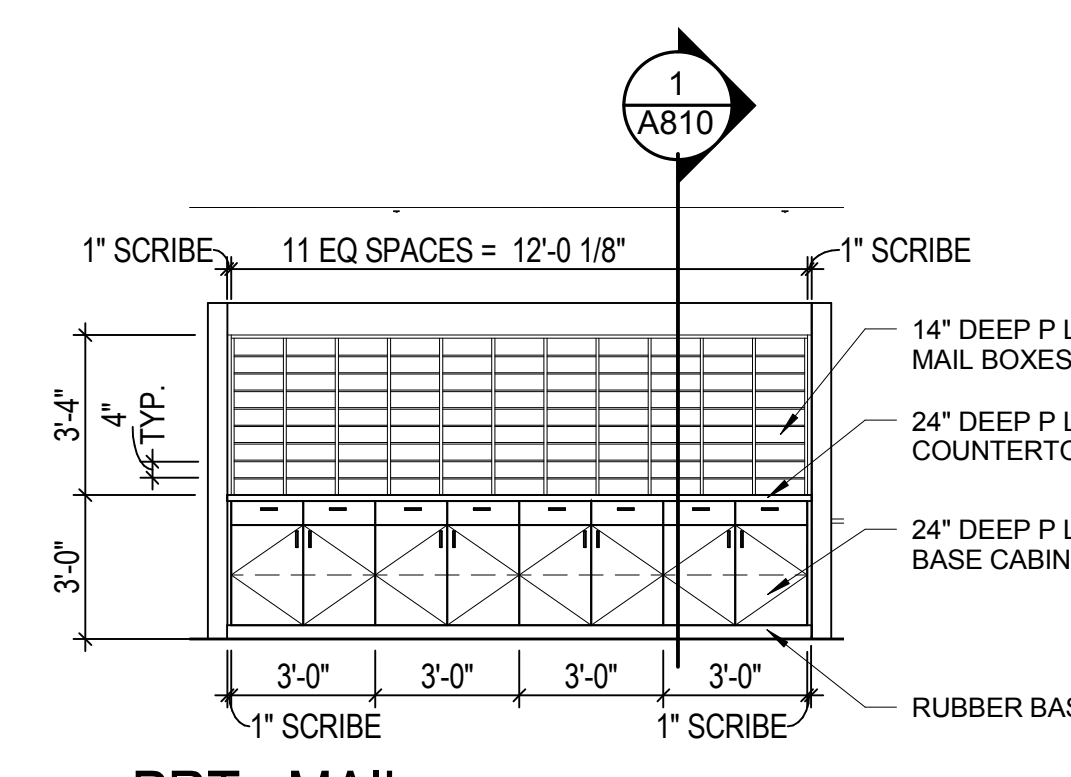
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**INTERIOR
ELEVATIONS**

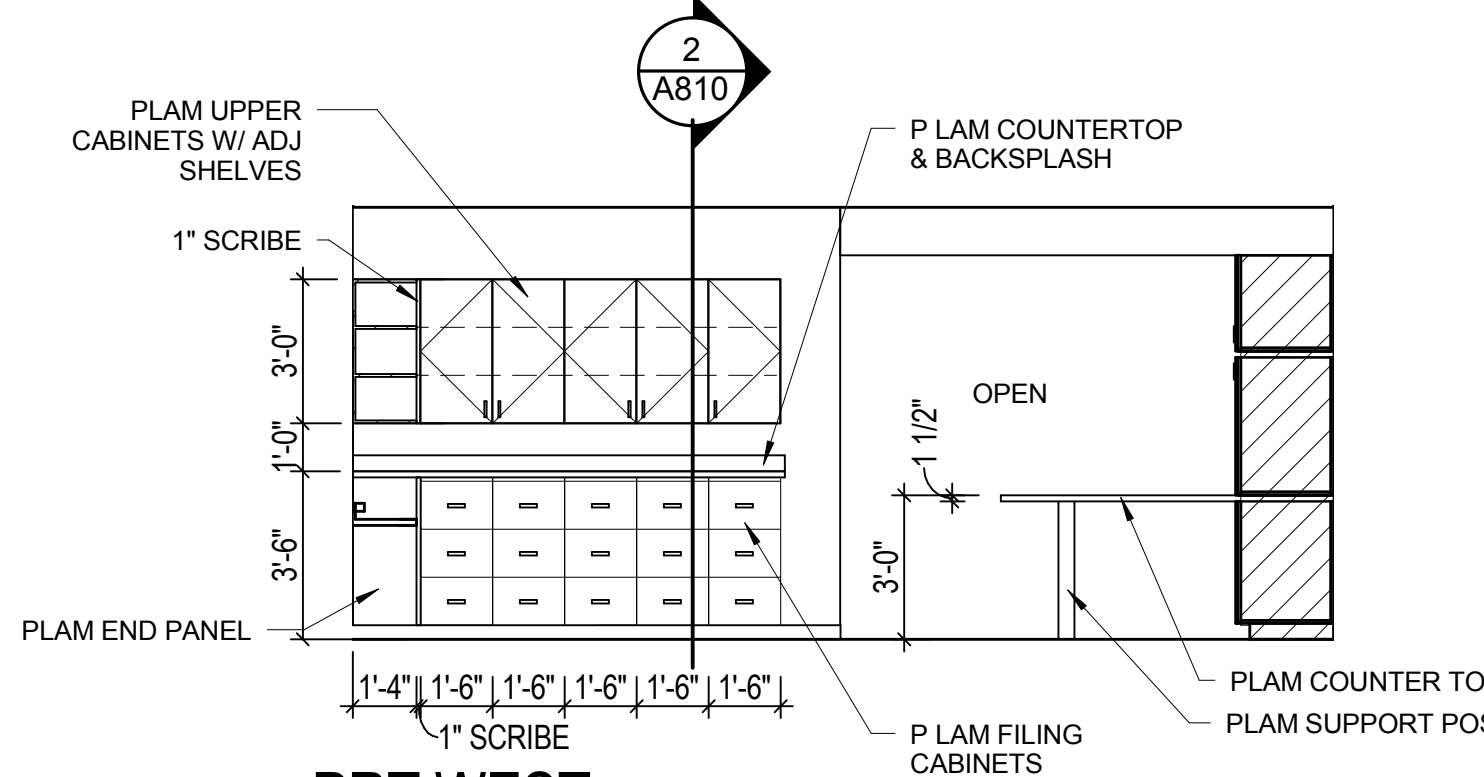
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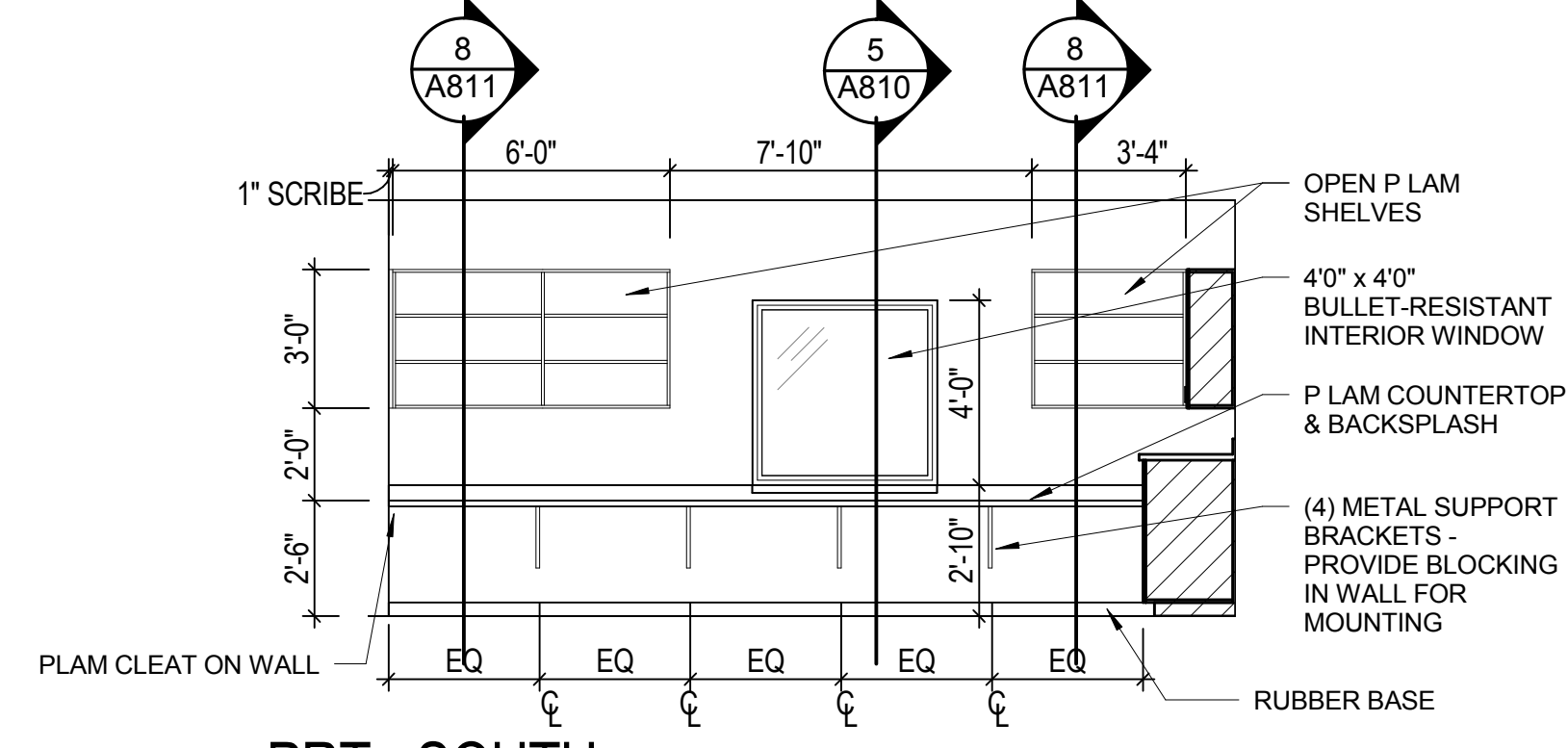
1 PRT - NORTH
SCALE: 1/4" = 1'-0"



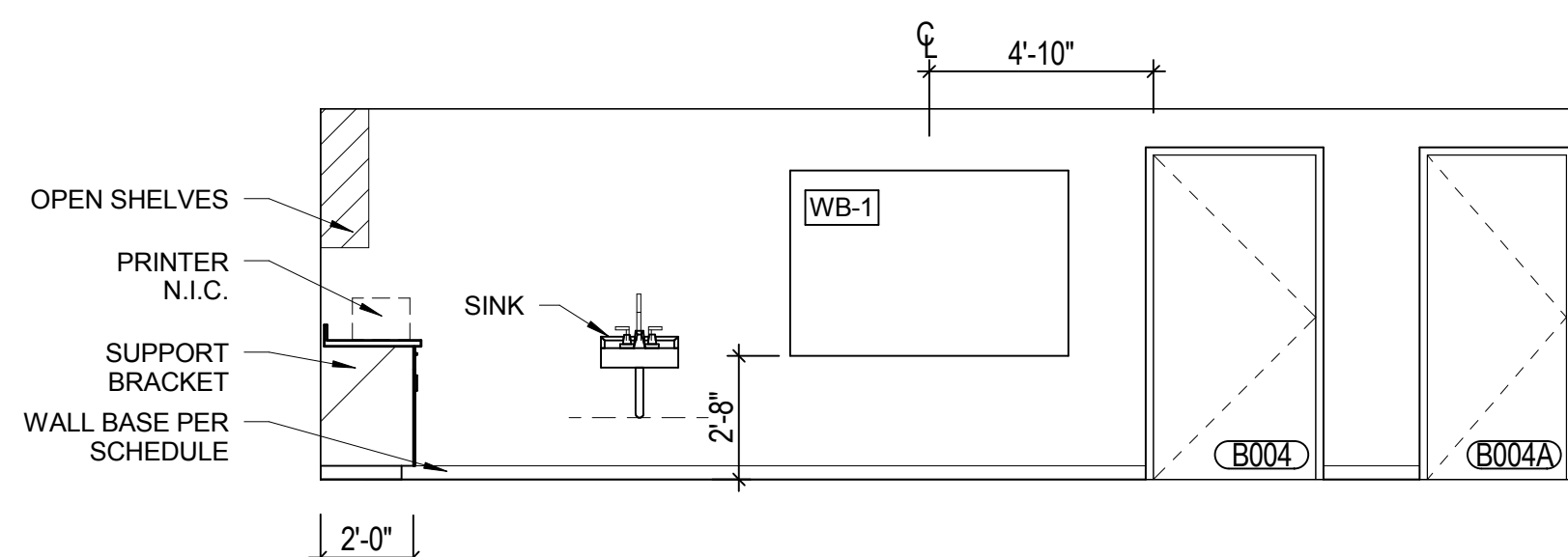
2 PRT - MAIL
SCALE: 1/4" = 1'-0"



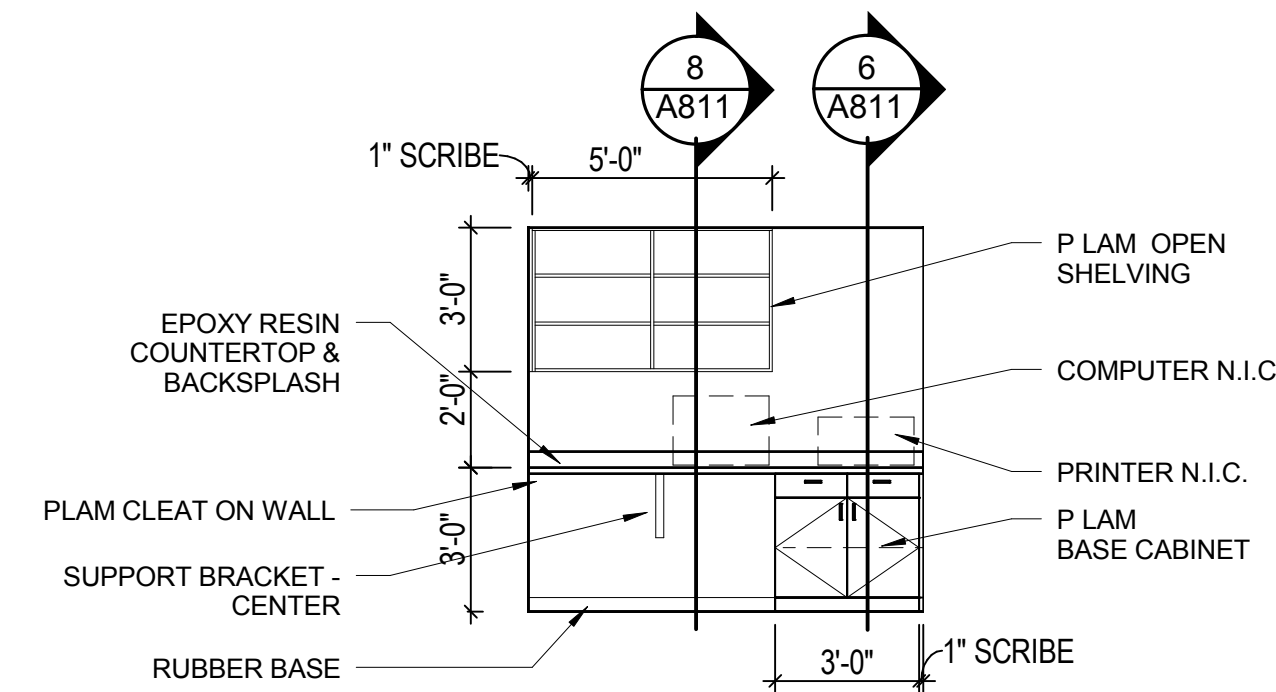
3 PRT WEST
SCALE: 1/4" = 1'-0"



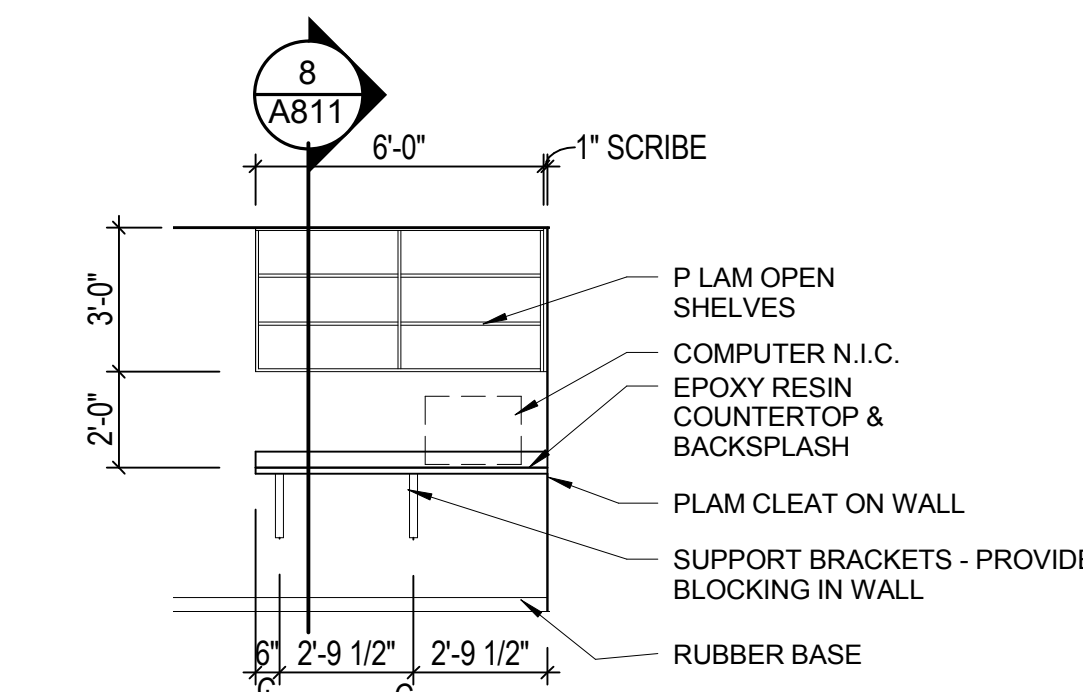
4 PRT - SOUTH
SCALE: 1/4" = 1'-0"



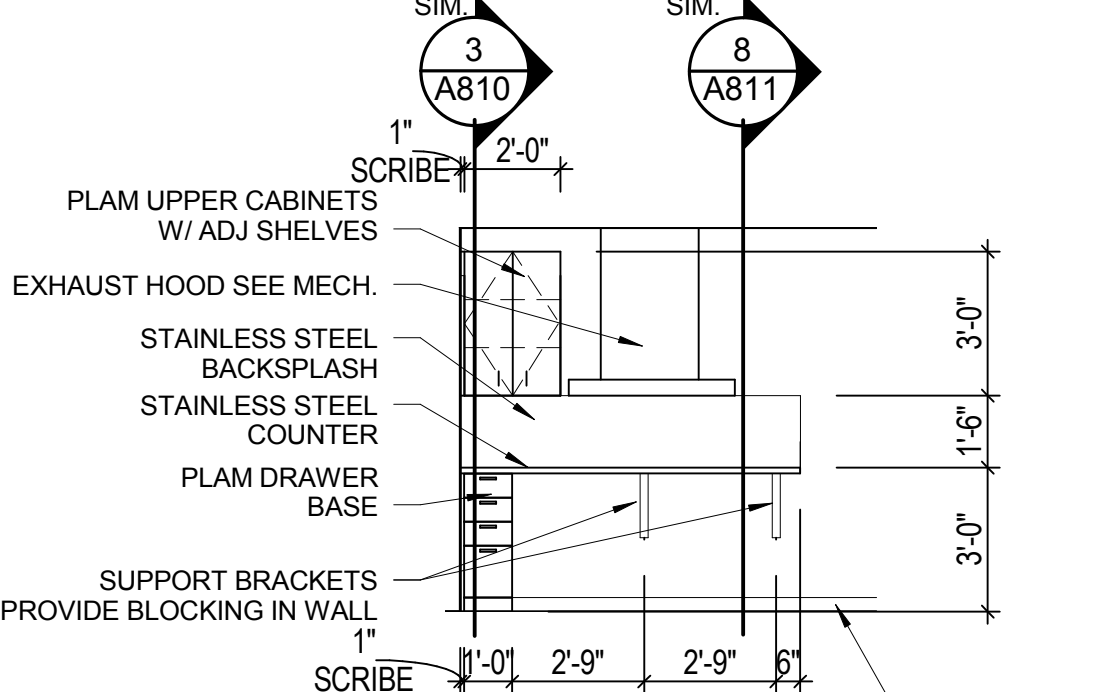
5 PROPERTY ROOM - NORTH
SCALE: 1/4" = 1'-0"



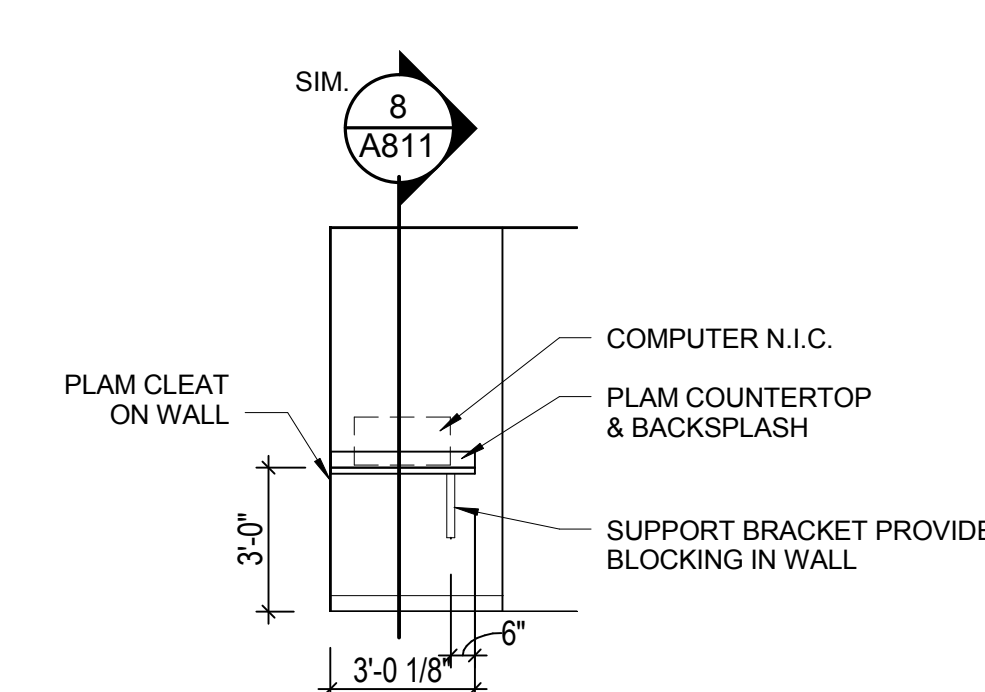
6 PROPERTY ROOM - WEST
SCALE: 1/4" = 1'-0"



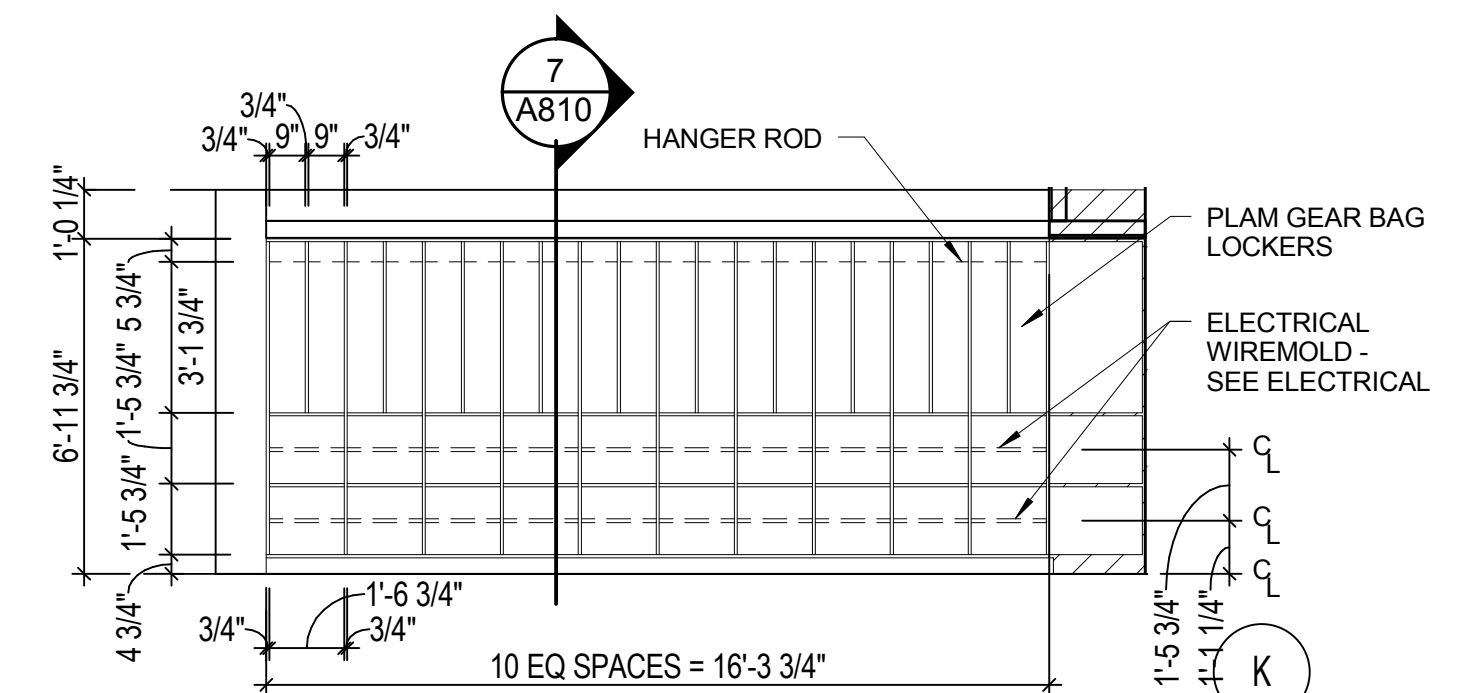
7 PROPERTY ROOM - SOUTH
SCALE: 1/4" = 1'-0"



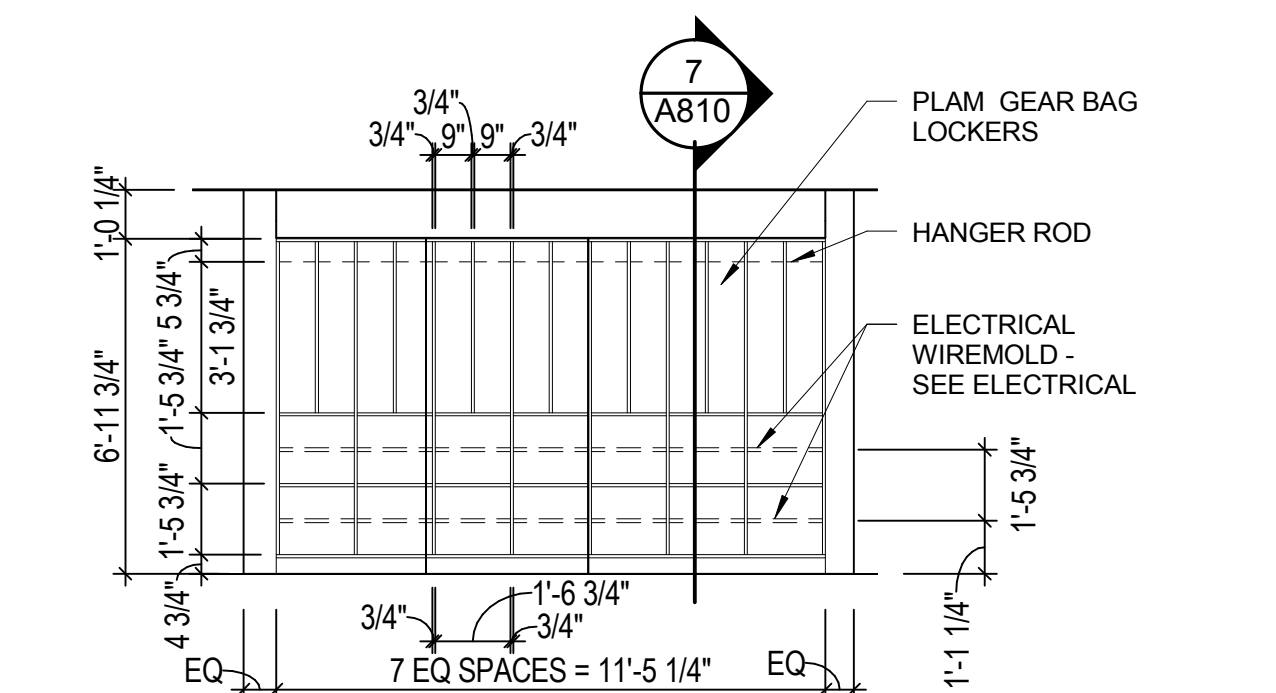
8 ARMORY - WEST
SCALE: 1/4" = 1'-0"



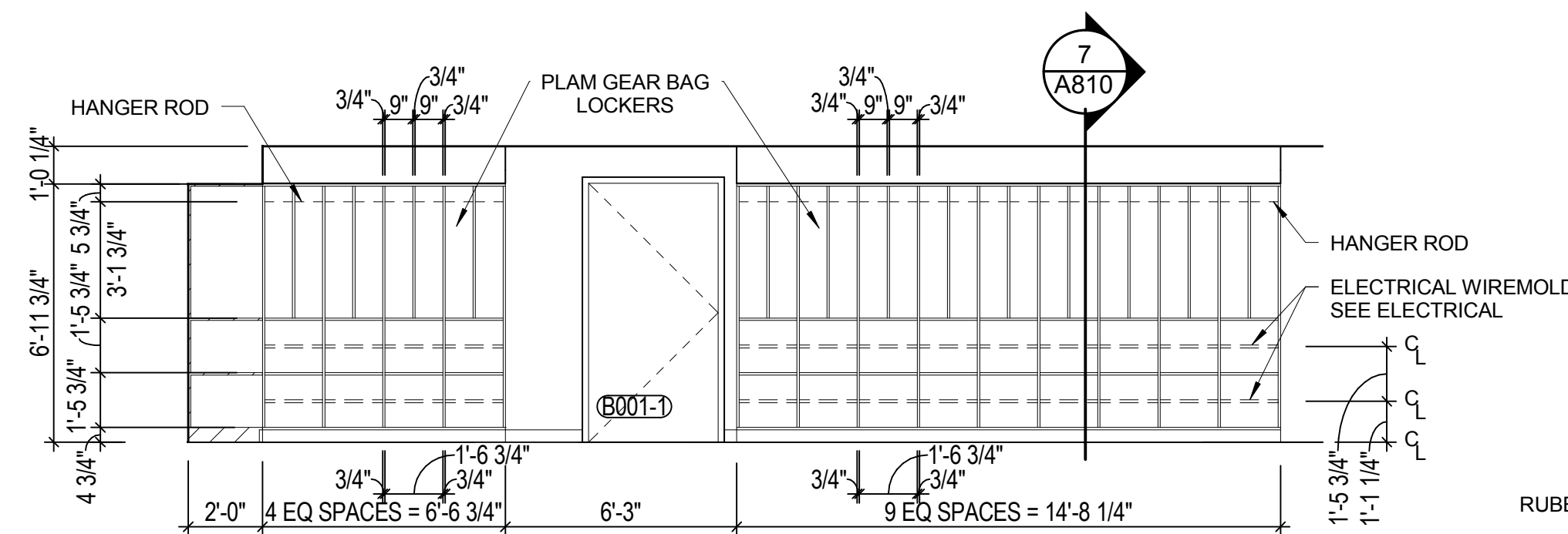
9 ARMORY - COMP
SCALE: 1/4" = 1'-0"



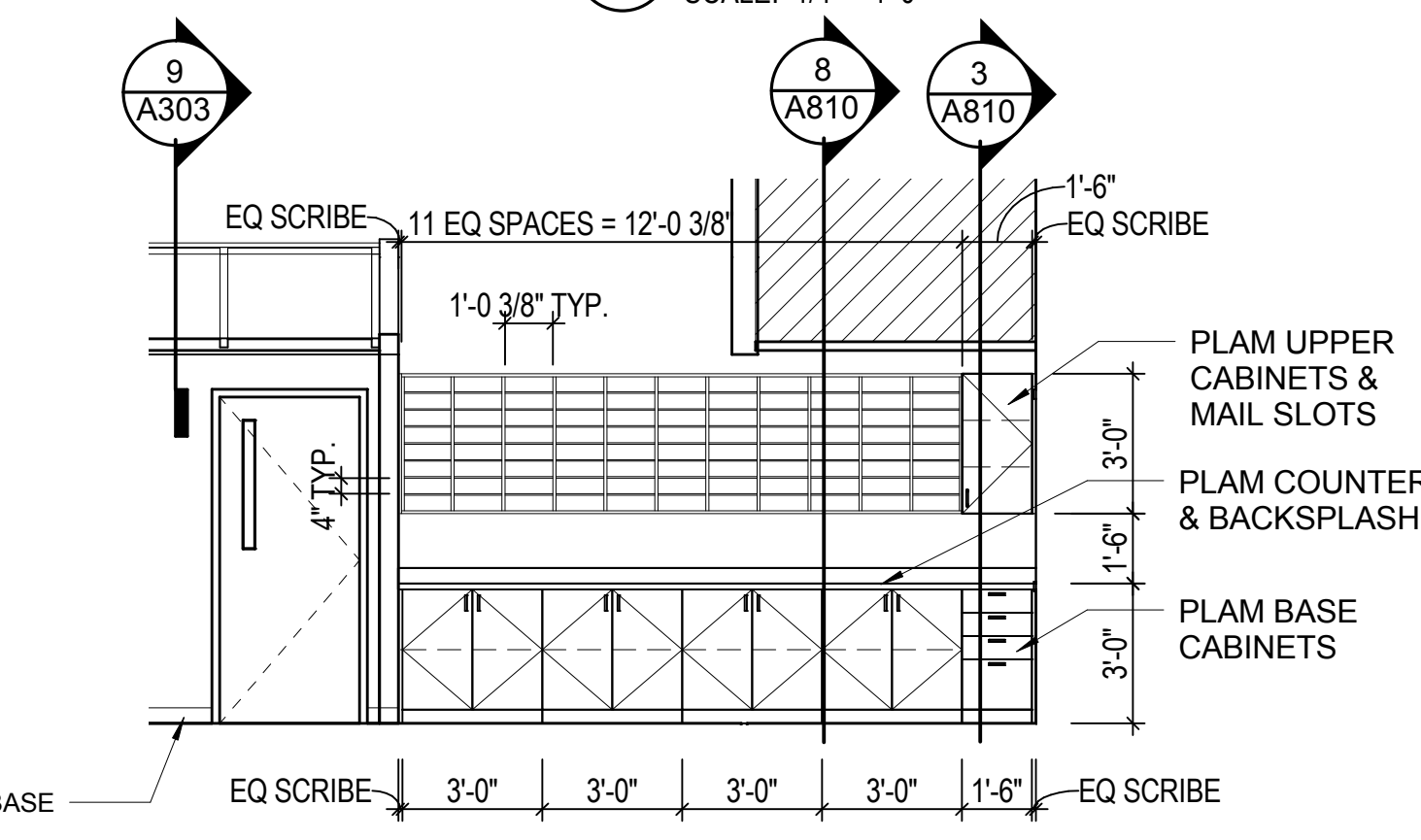
10 STAFF ENTRY - NORTH
SCALE: 1/4" = 1'-0"



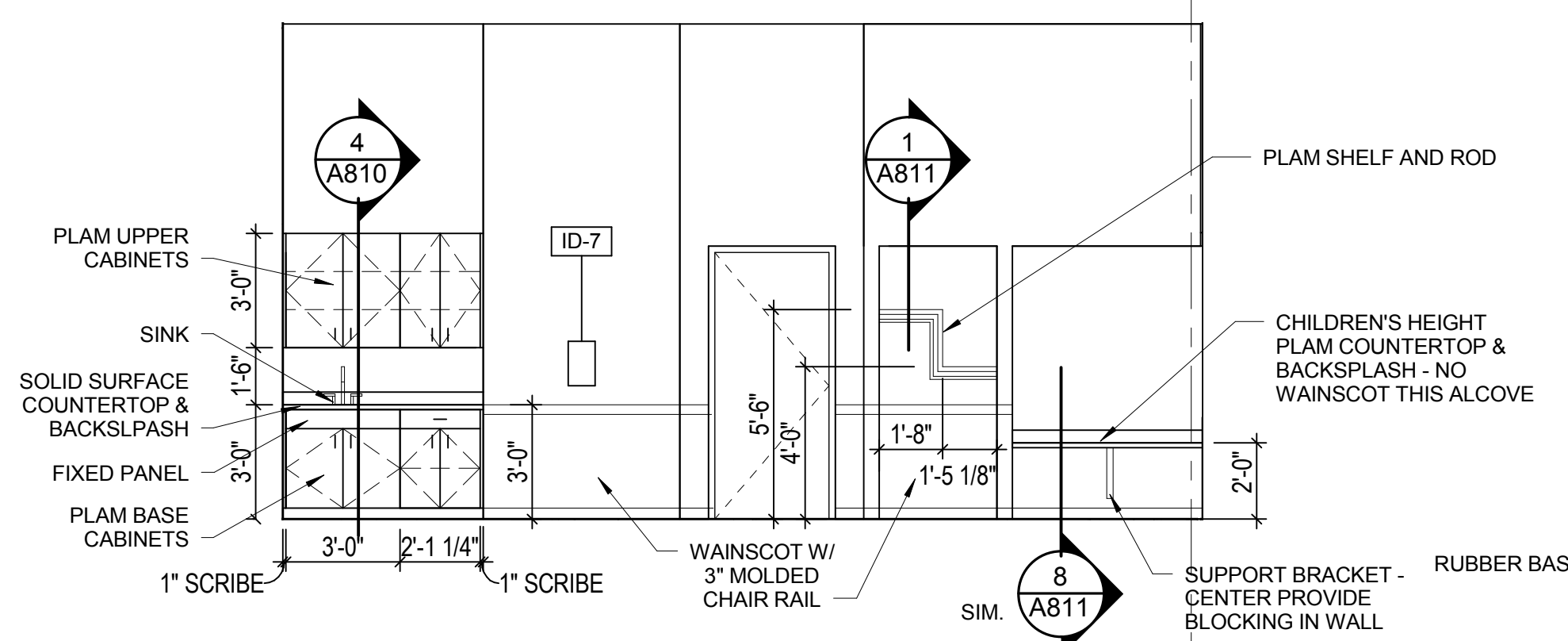
11 STAFF ENTRY - SOUTH
SCALE: 1/4" = 1'-0"



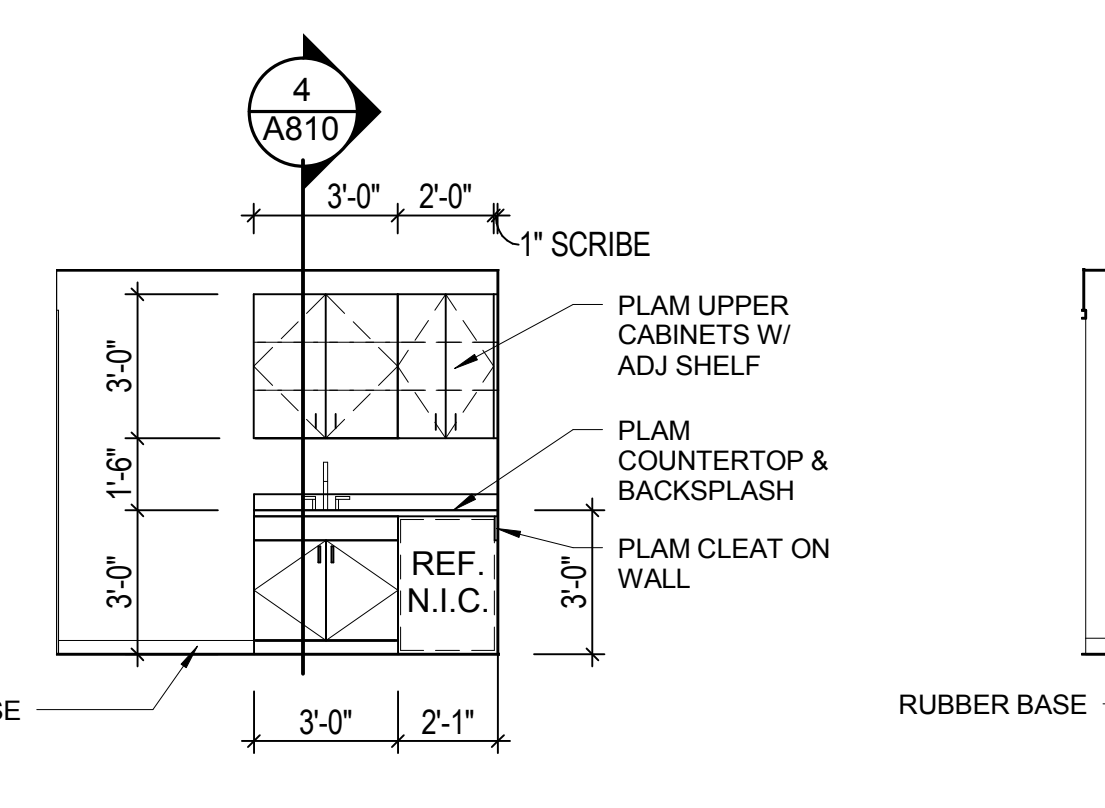
12 STAFF ENTRY - EAST
SCALE: 1/4" = 1'-0"



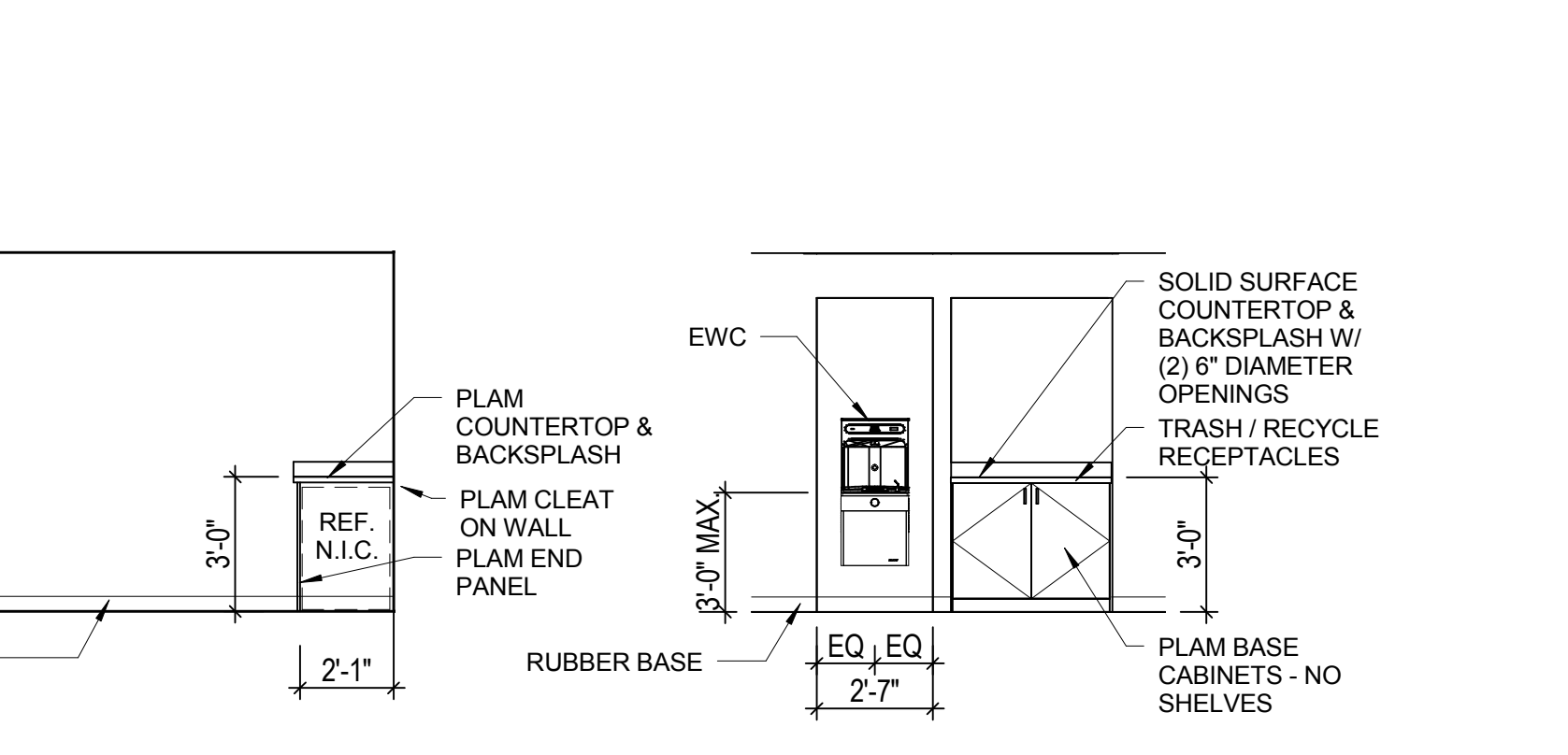
13 PATROL - NORTH
SCALE: 1/4" = 1'-0"



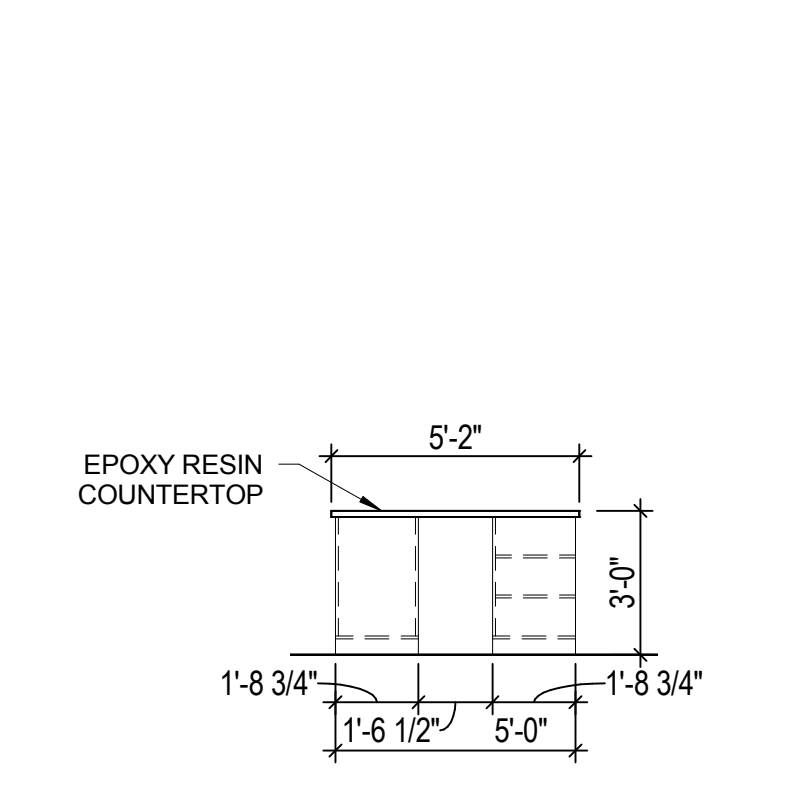
14 COMMUNITY ROOM - EAST
SCALE: 1/4" = 1'-0"



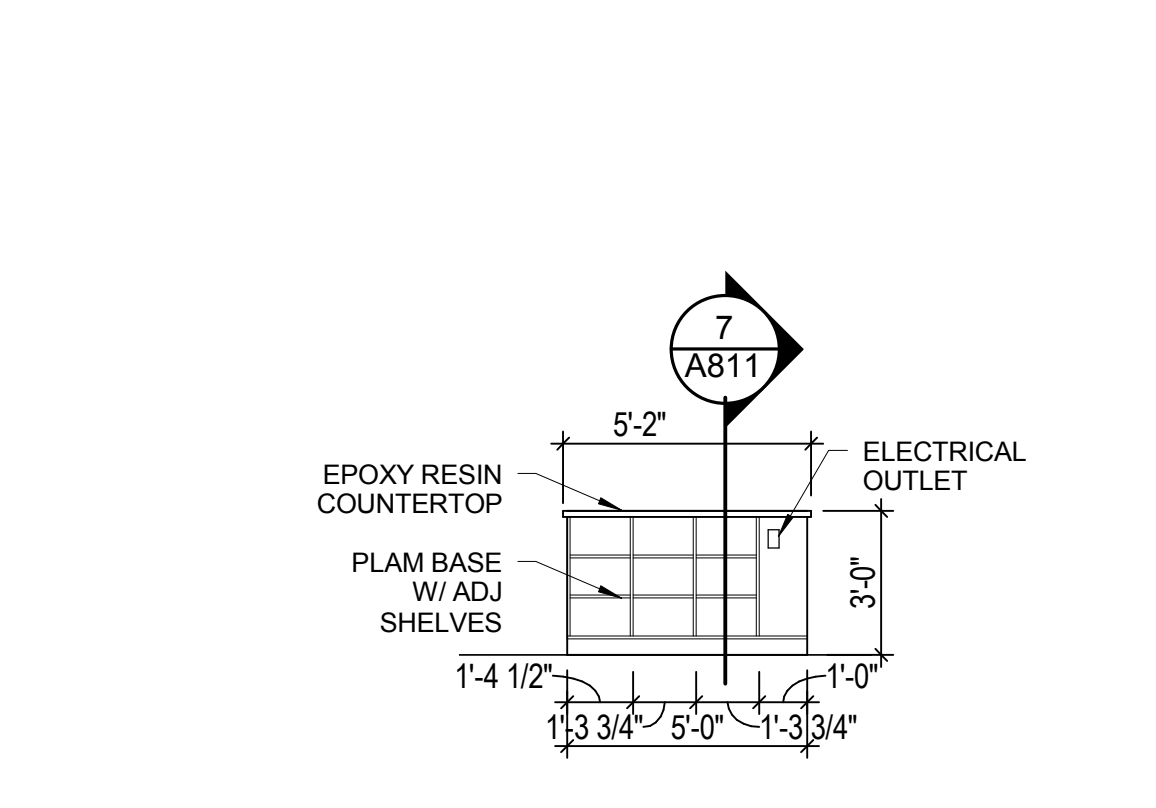
15 INTERVIEW ROOM - NORTH
SCALE: 1/4" = 1'-0"



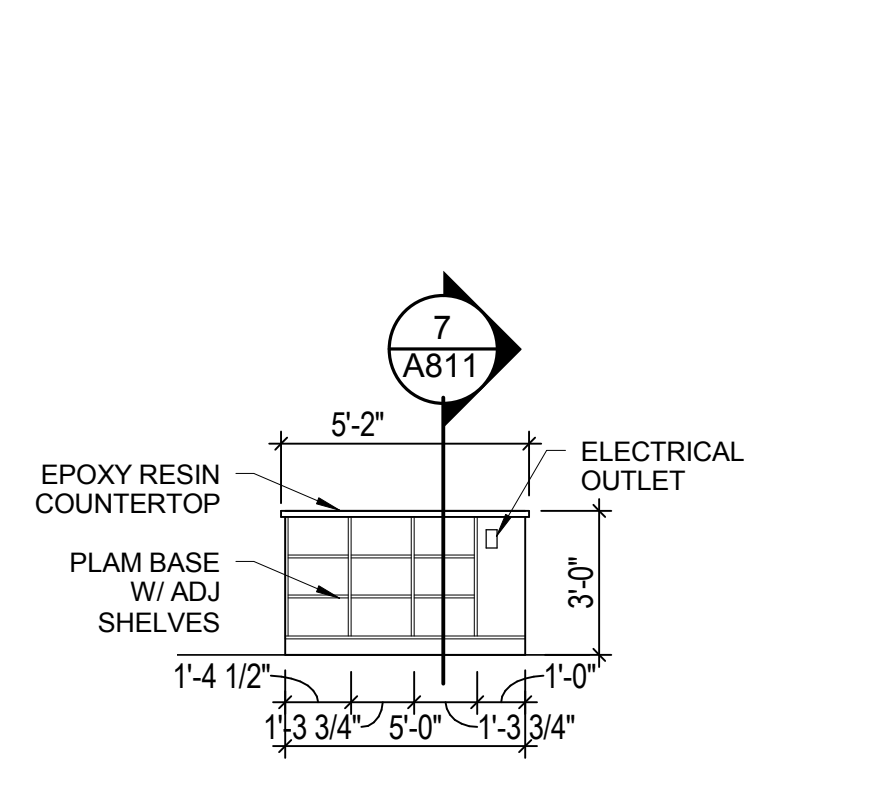
16 STORAGE - NORTH
SCALE: 1/4" = 1'-0"



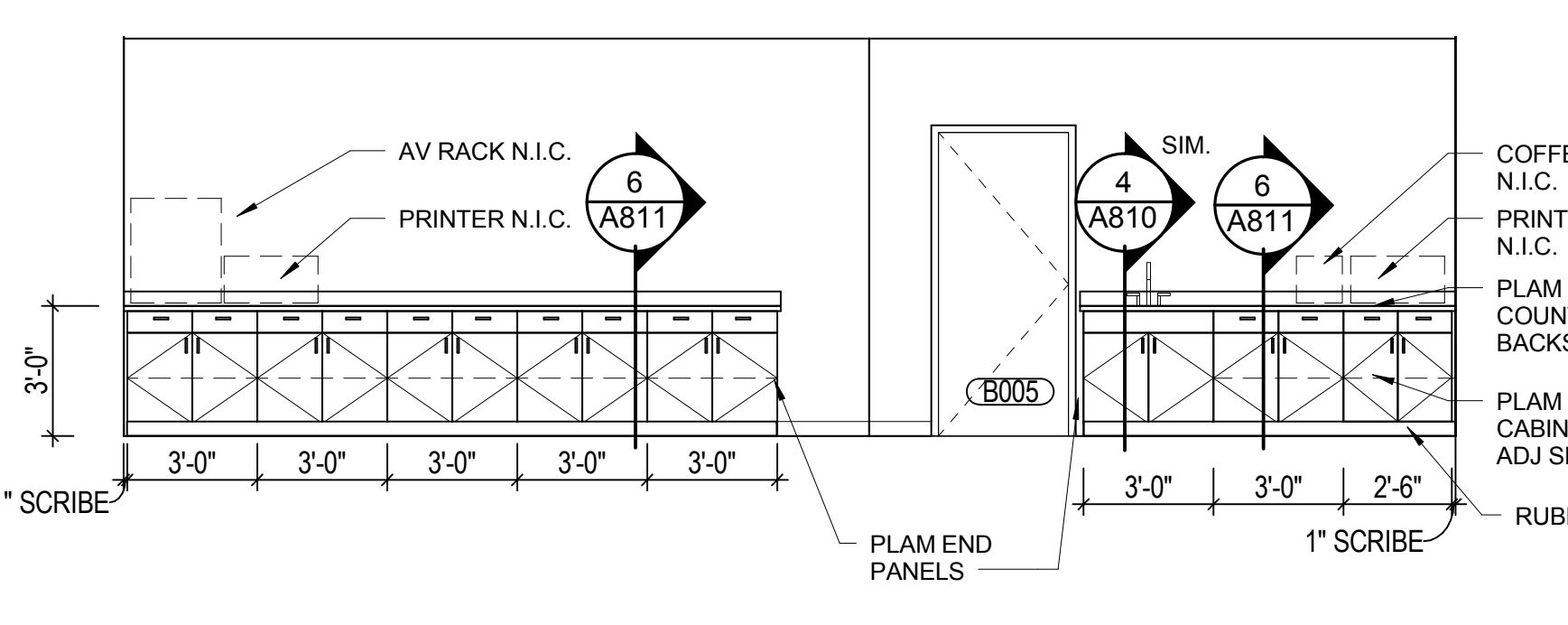
17 CORRIDOR ELEVATION
SCALE: 1/4" = 1'-0"



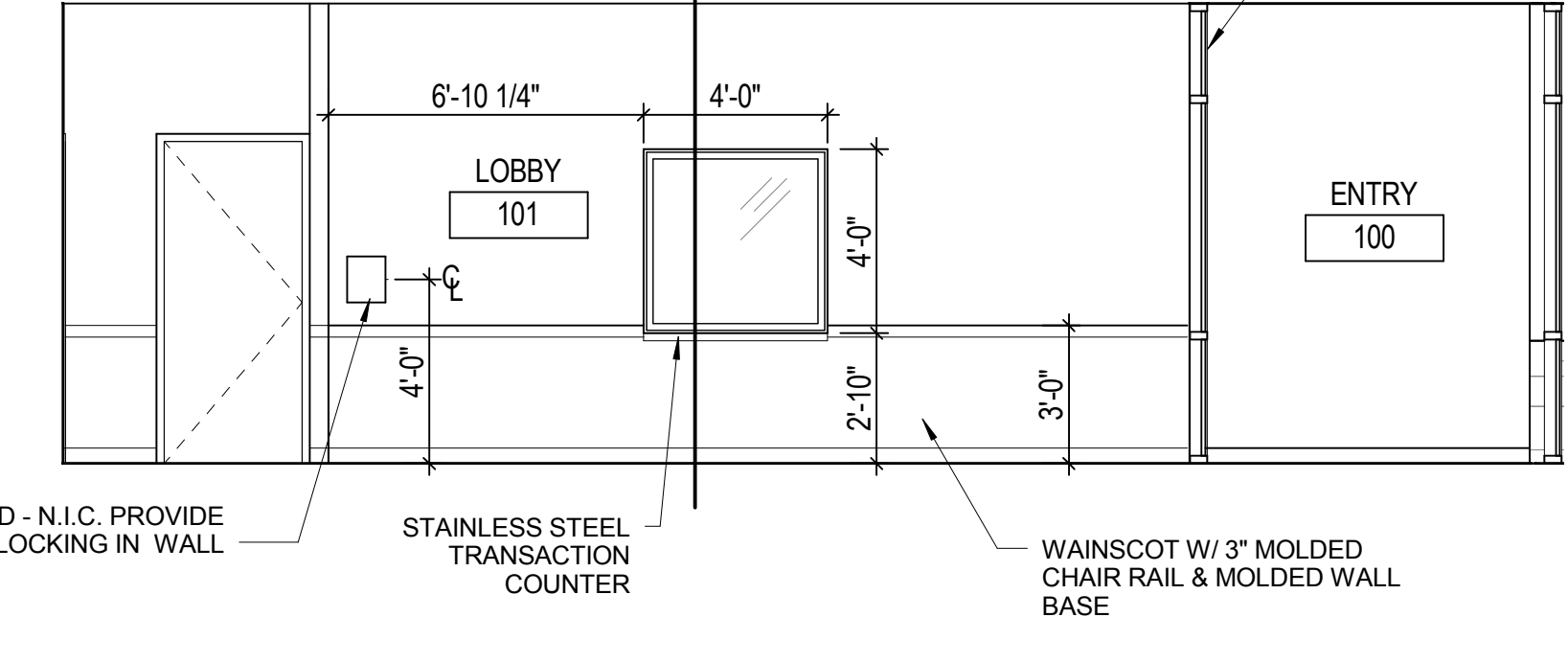
18 PROPERTY ROOM TABLE 2
SCALE: 1/4" = 1'-0"



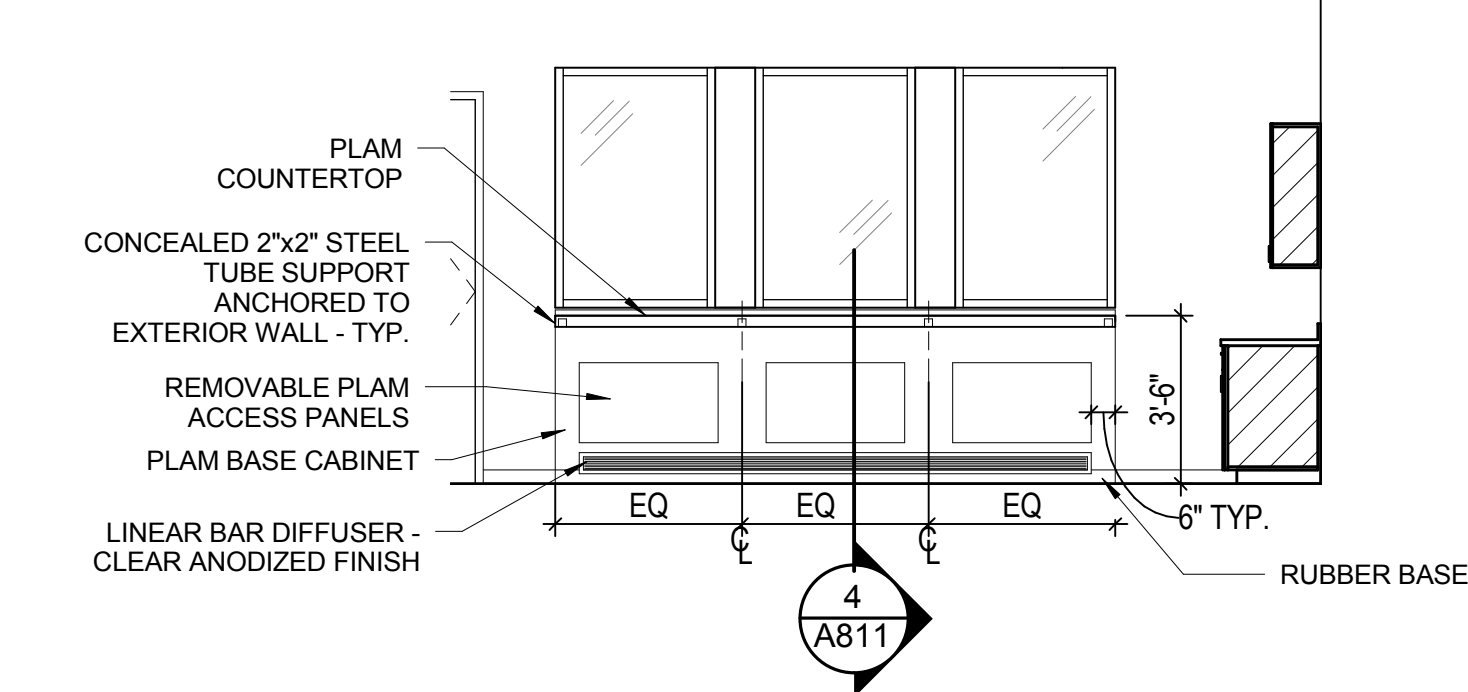
19 PROPERTY ROOM TABLE
SCALE: 1/4" = 1'-0"



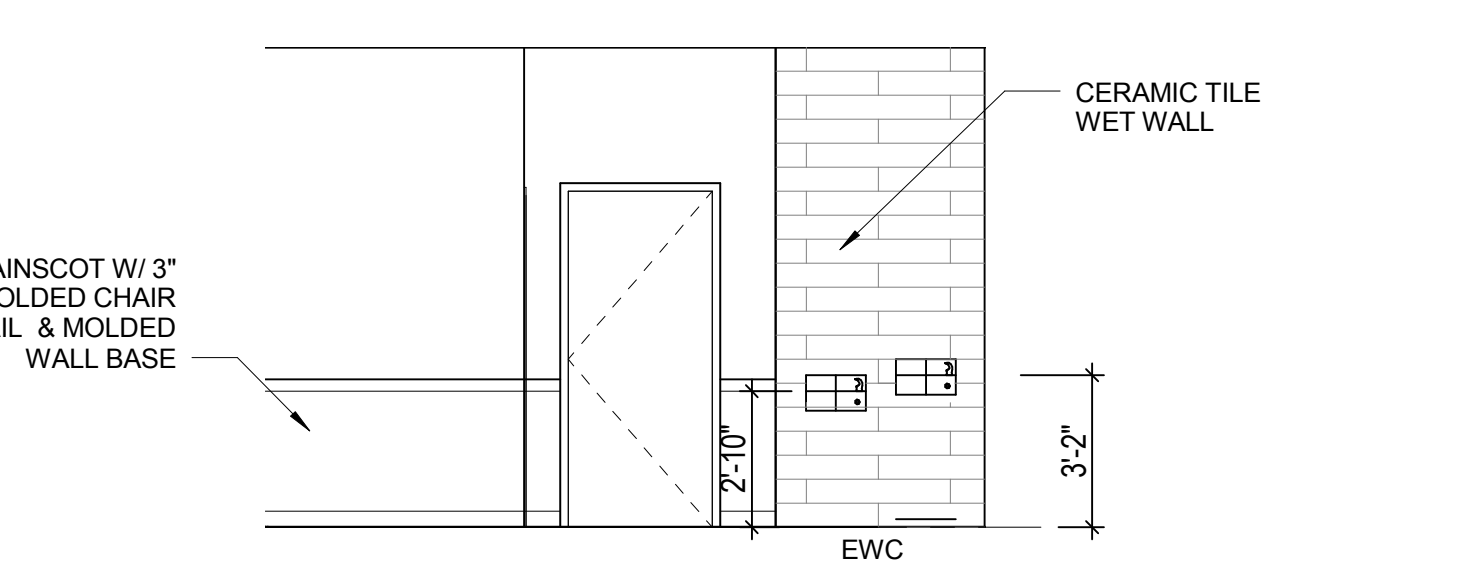
20 INCIDENT ROOM EAST
SCALE: 1/4" = 1'-0"



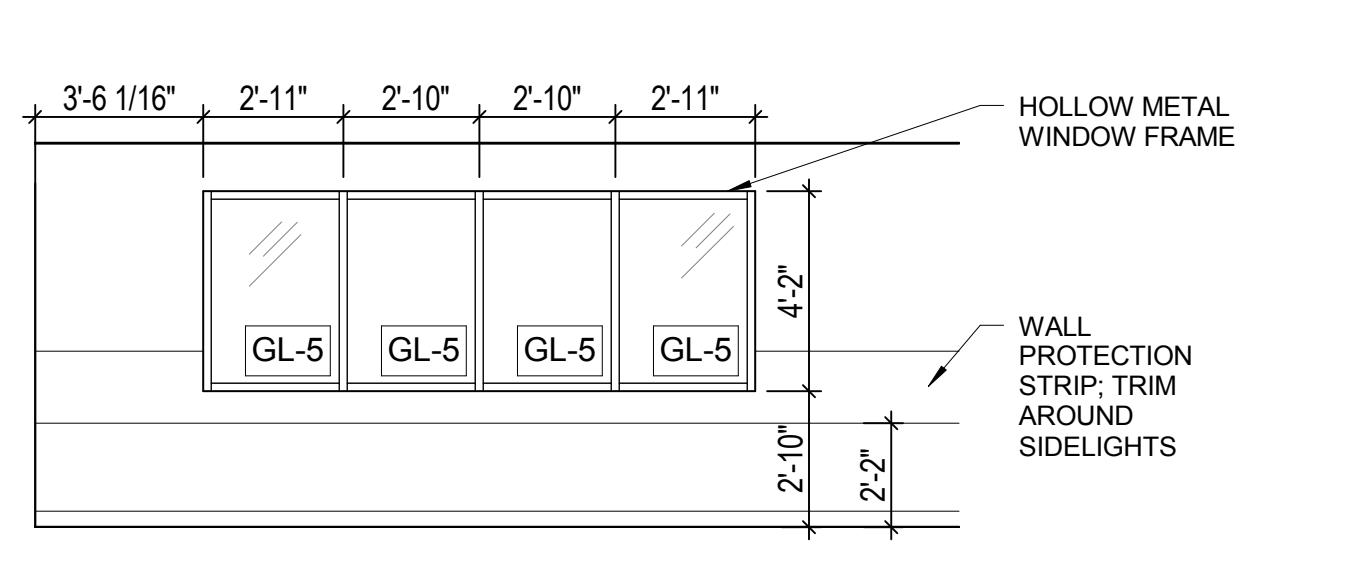
21 LOBBY - NORTH
SCALE: 1/4" = 1'-0"



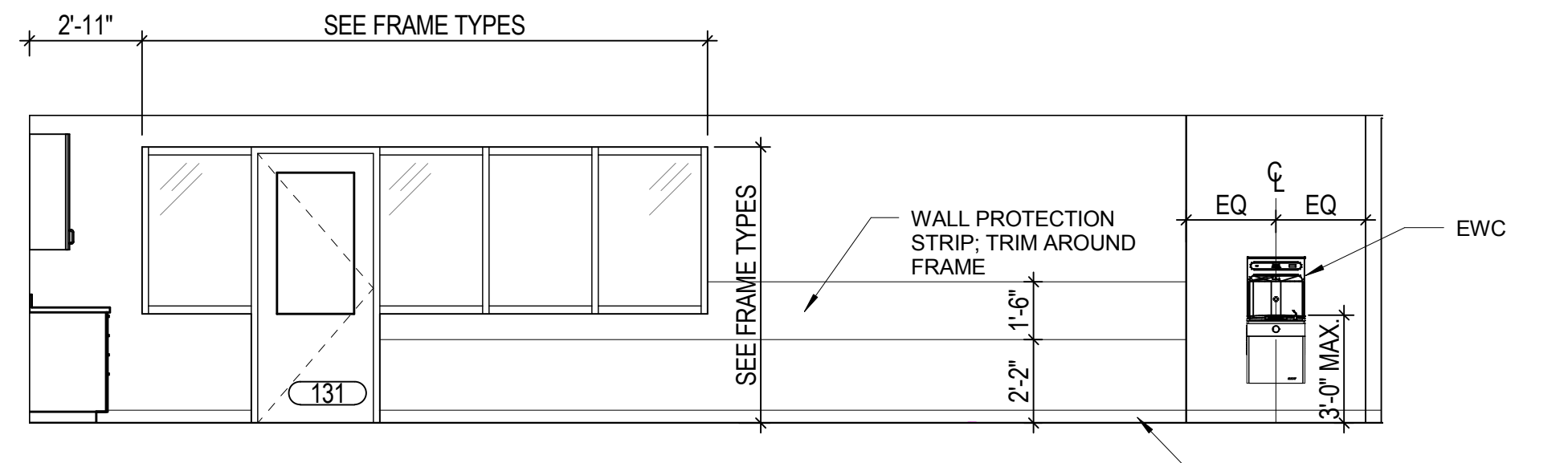
22 BREAKROOM - SOUTH
SCALE: 1/4" = 1'-0"



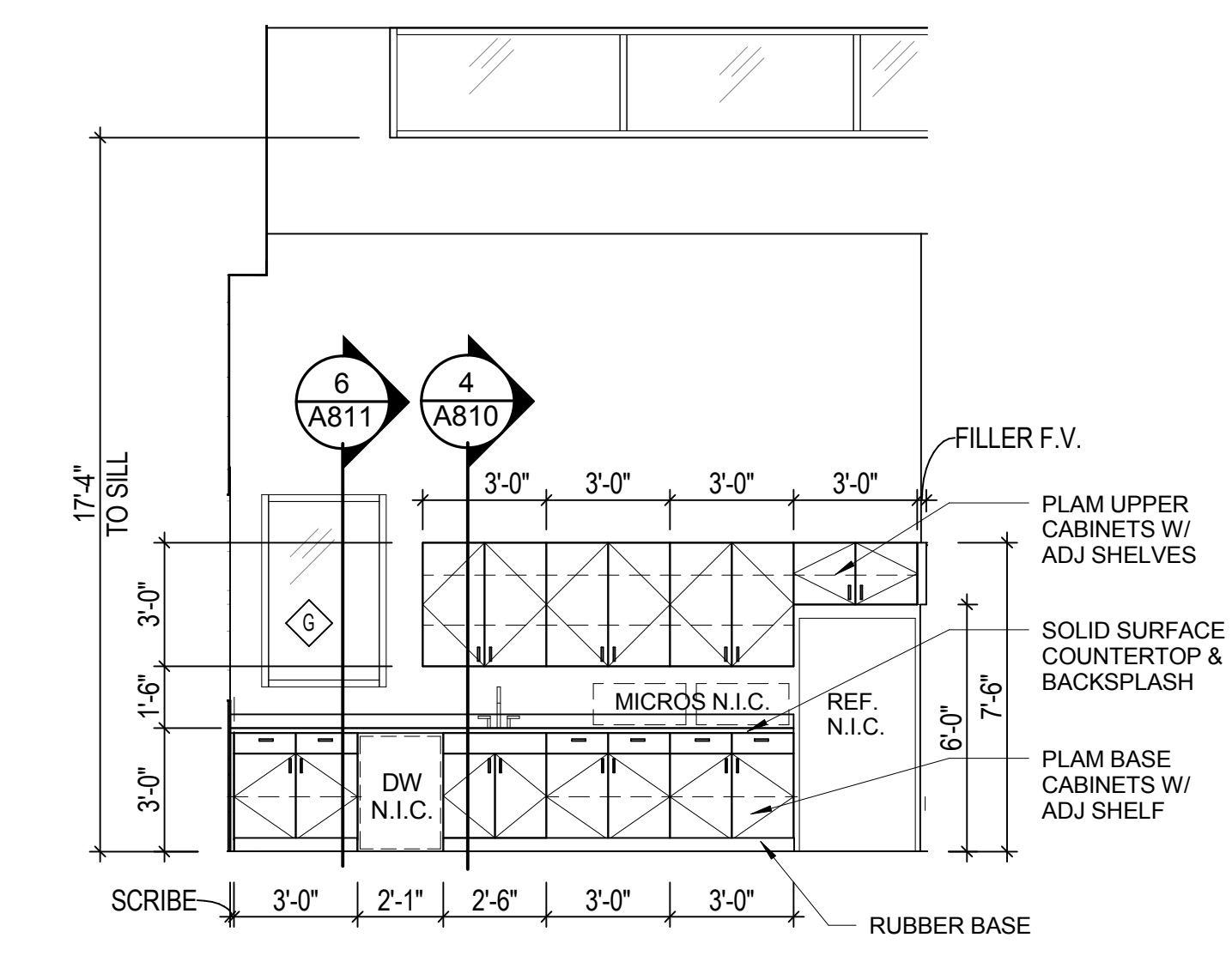
23 LOBBY - WEST
SCALE: 1/4" = 1'-0"



24 CORRIDOR 121 - WEST
SCALE: 1/4" = 1'-0"



25 CORRIDOR 130 - EAST
SCALE: 1/4" = 1'-0"



26 BREAK ROOM - WEST
SCALE: 1/4" = 1'-0"

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

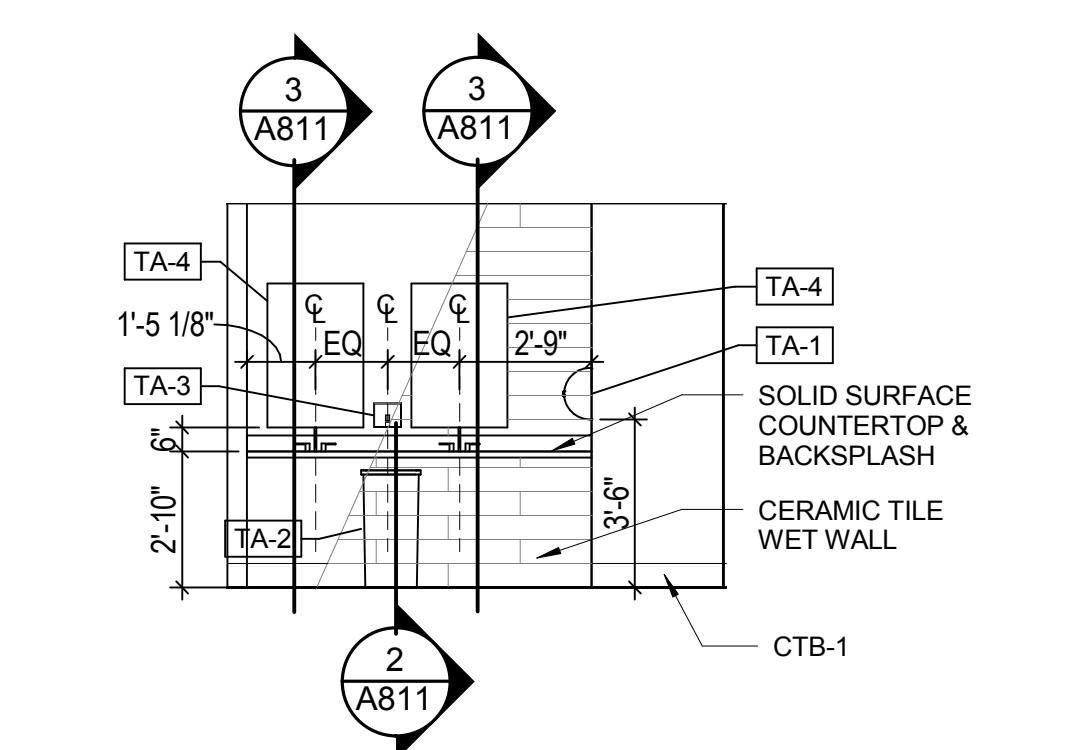
ISSUED FOR:
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NO. DESCRIPTION DATE

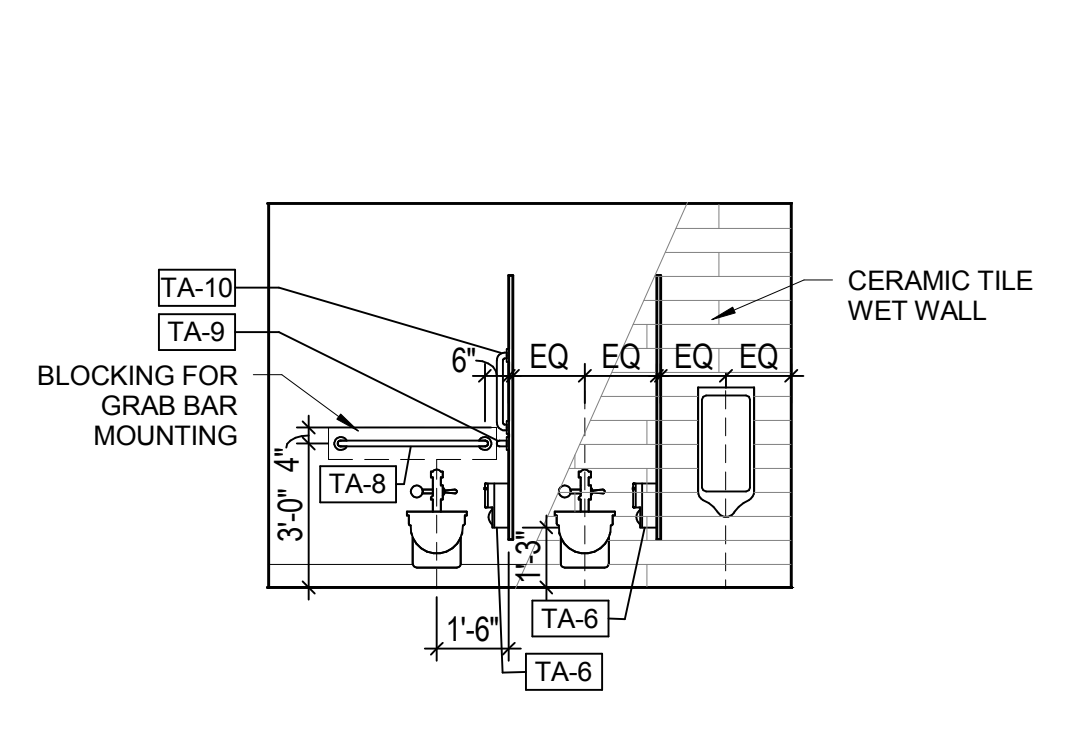
DRAWN BY MMZ

CHECKED BY SK

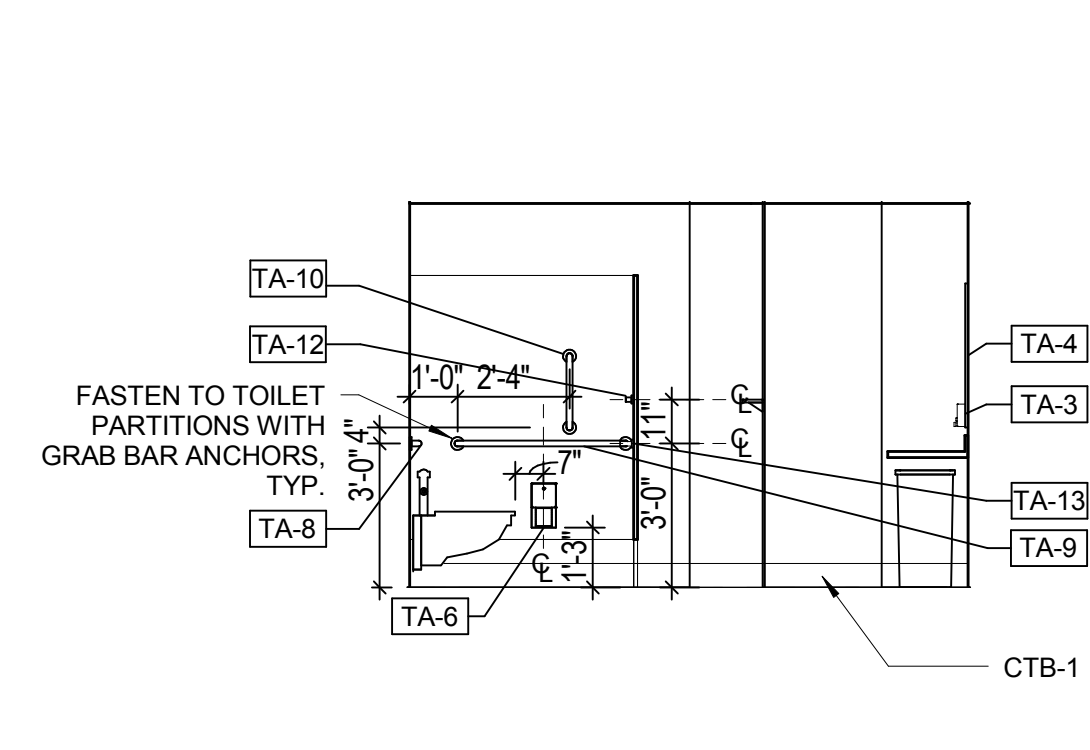
**INTERIOR
ELEVATIONS**



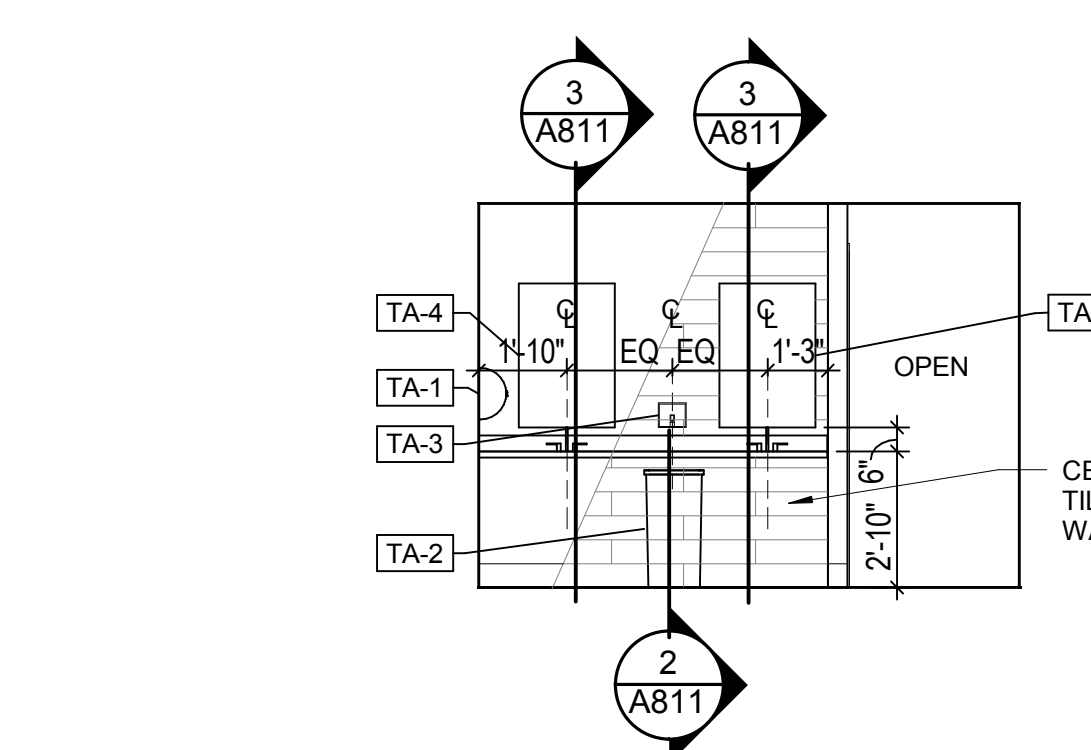
1 LOWER LEVEL MEN'S ROOM - WEST
SCALE: 1/4" = 1'-0"



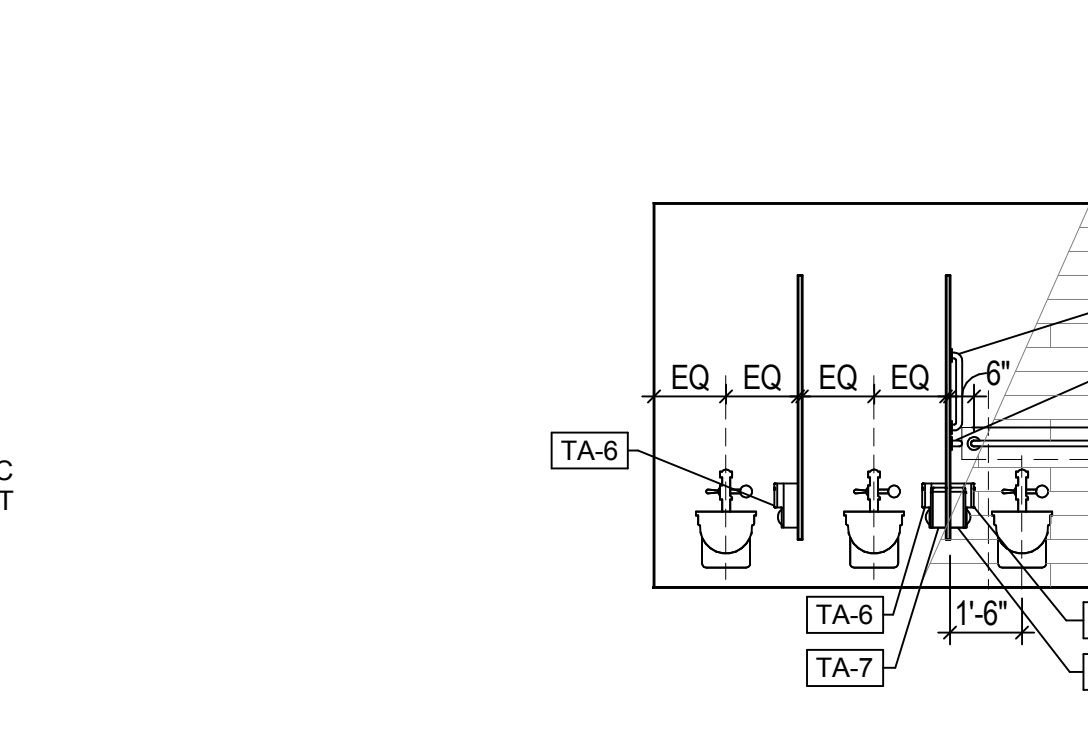
2 LOWER LEVEL MEN'S ROOM - EAST
SCALE: 1/4" = 1'-0"



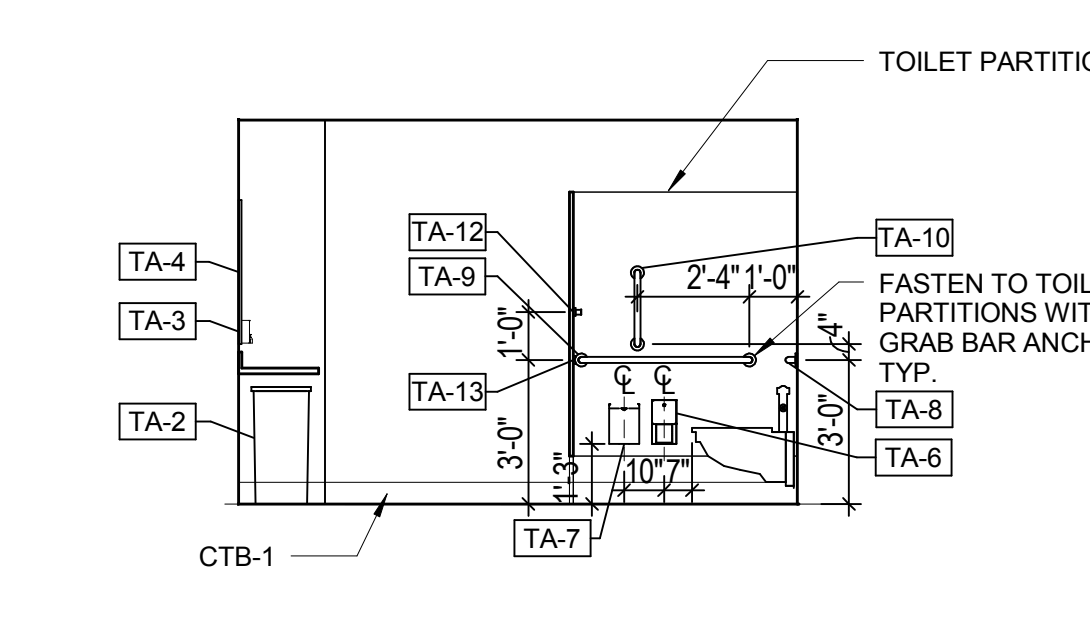
3 LOWER LEVEL MEN'S ROOM SOUTH
SCALE: 1/4" = 1'-0"



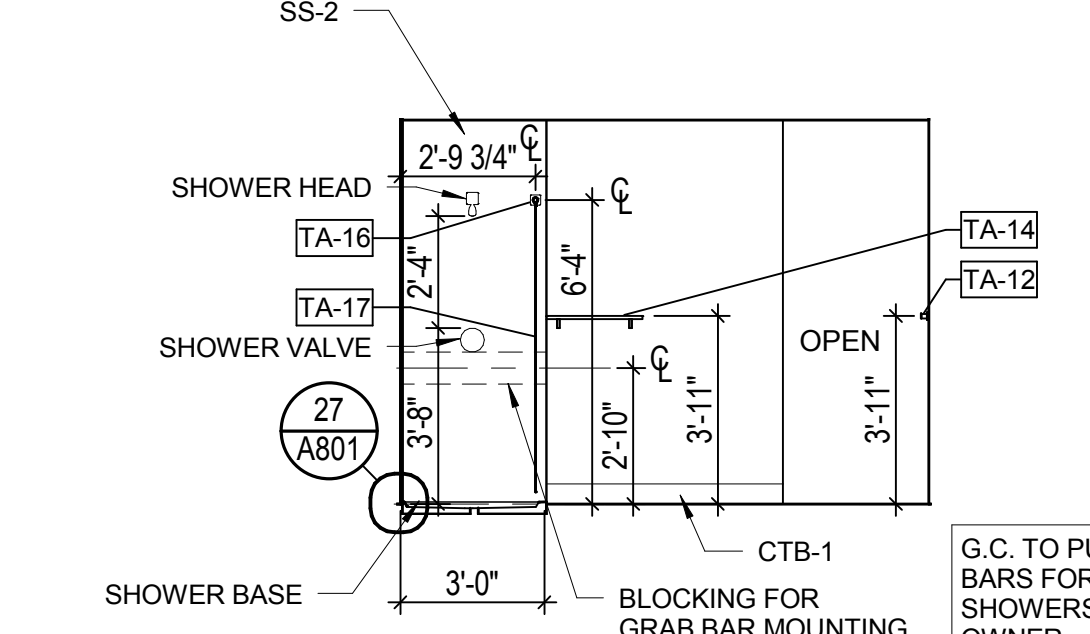
4 LOWER LEVEL WOMEN'S ROOM - WEST
SCALE: 1/4" = 1'-0"



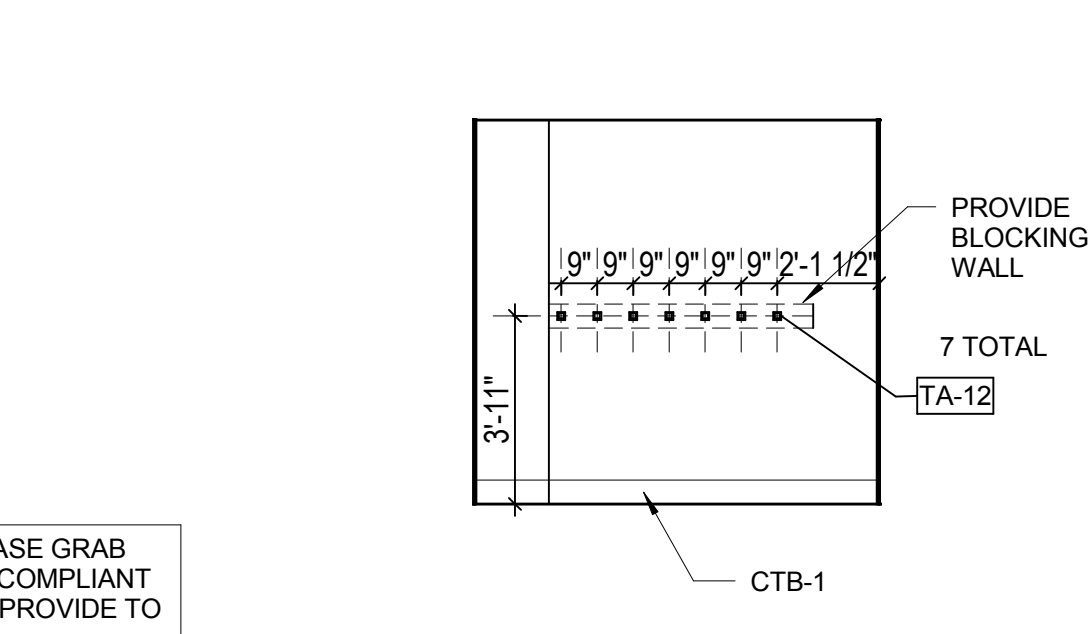
5 LOWER LEVEL WOMEN'S ROOM - EAST
SCALE: 1/4" = 1'-0"



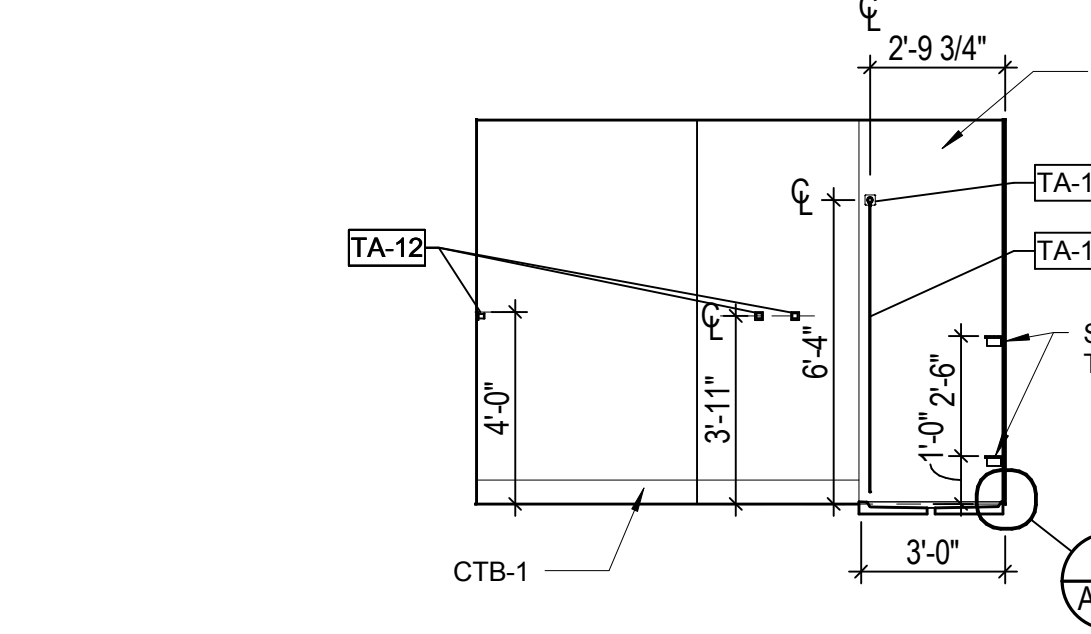
6 LOWER LEVEL WOMEN'S ROOM - NORTH
SCALE: 1/4" = 1'-0"



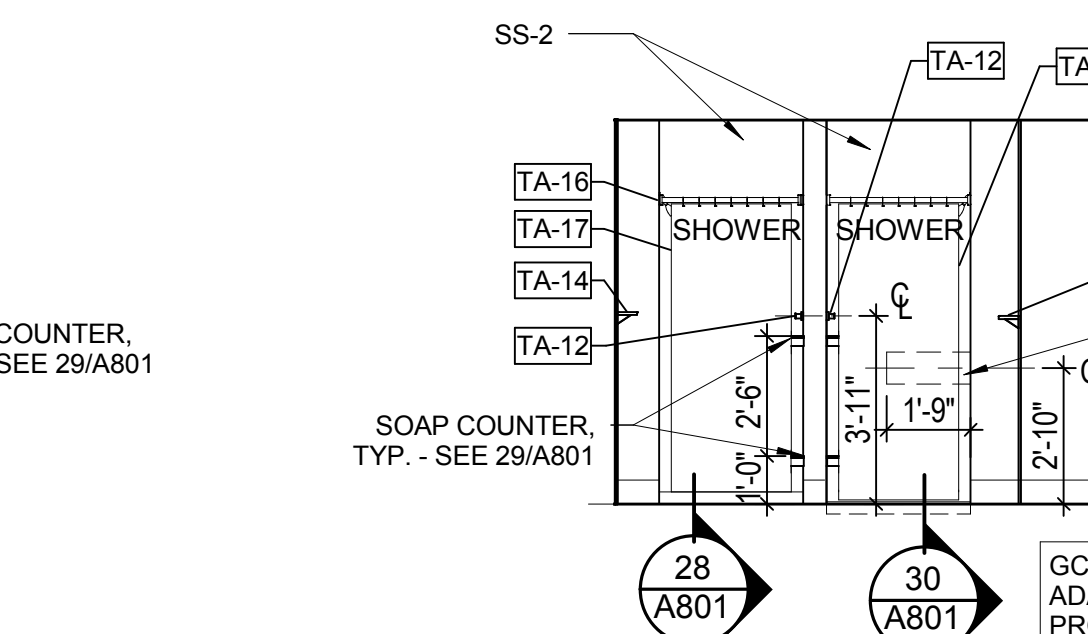
7 MEN'S SHOWER - WEST
SCALE: 1/4" = 1'-0"



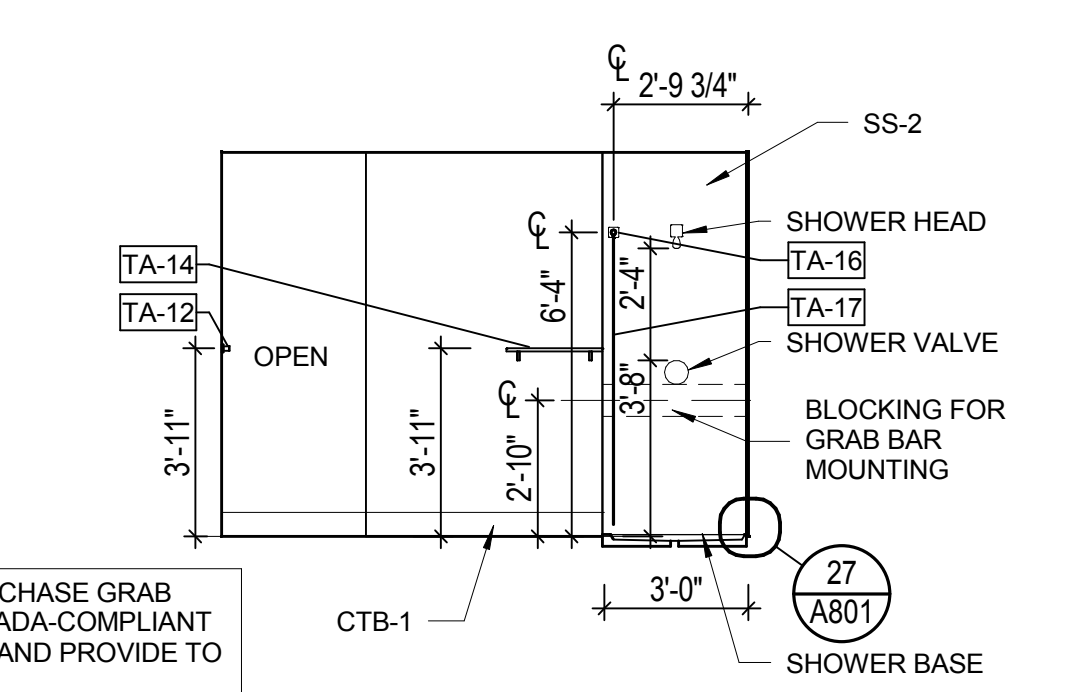
8 MEN'S SHOWER - NORTH
SCALE: 1/4" = 1'-0"



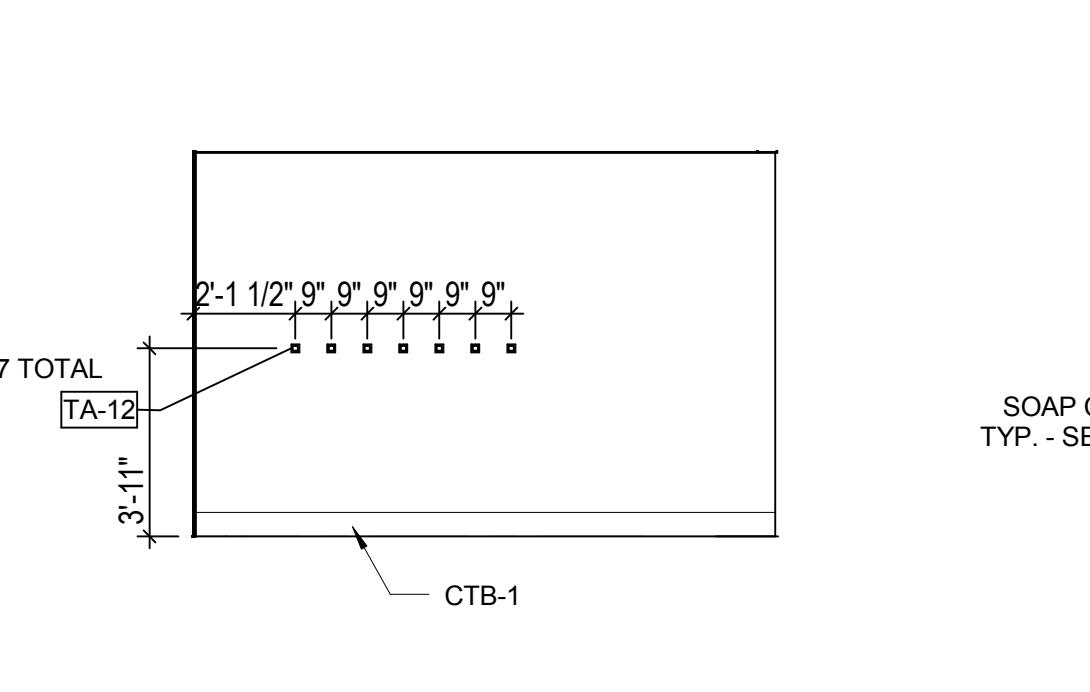
9 MEN'S SHOWER - EAST
SCALE: 1/4" = 1'-0"



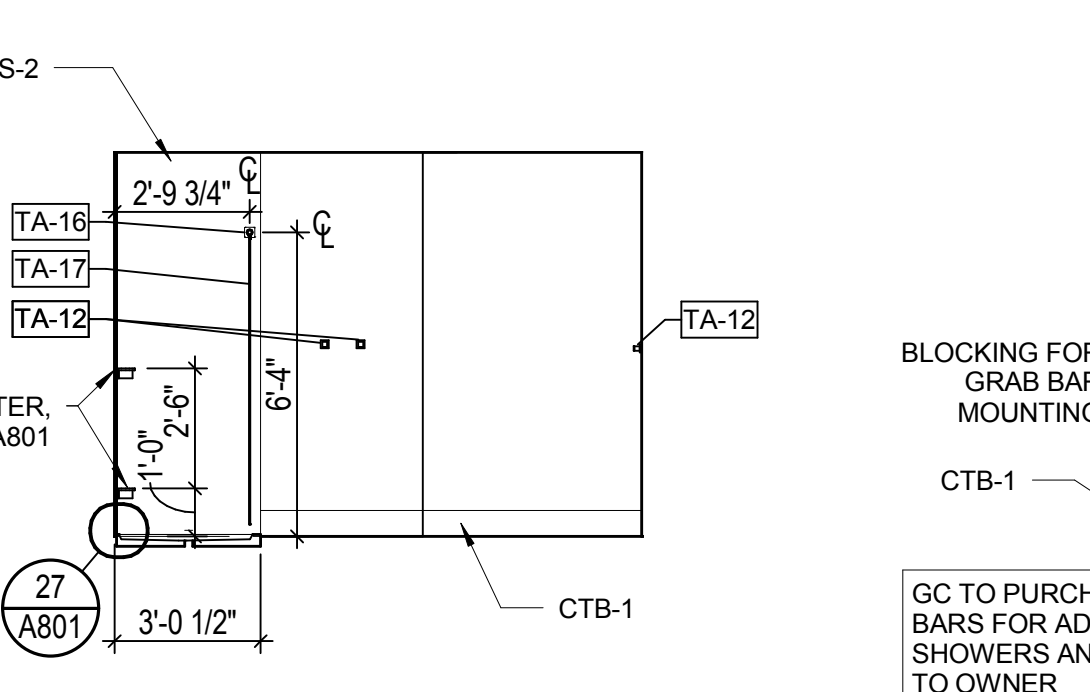
10 MEN'S SHOWER - SOUTH
SCALE: 1/4" = 1'-0"



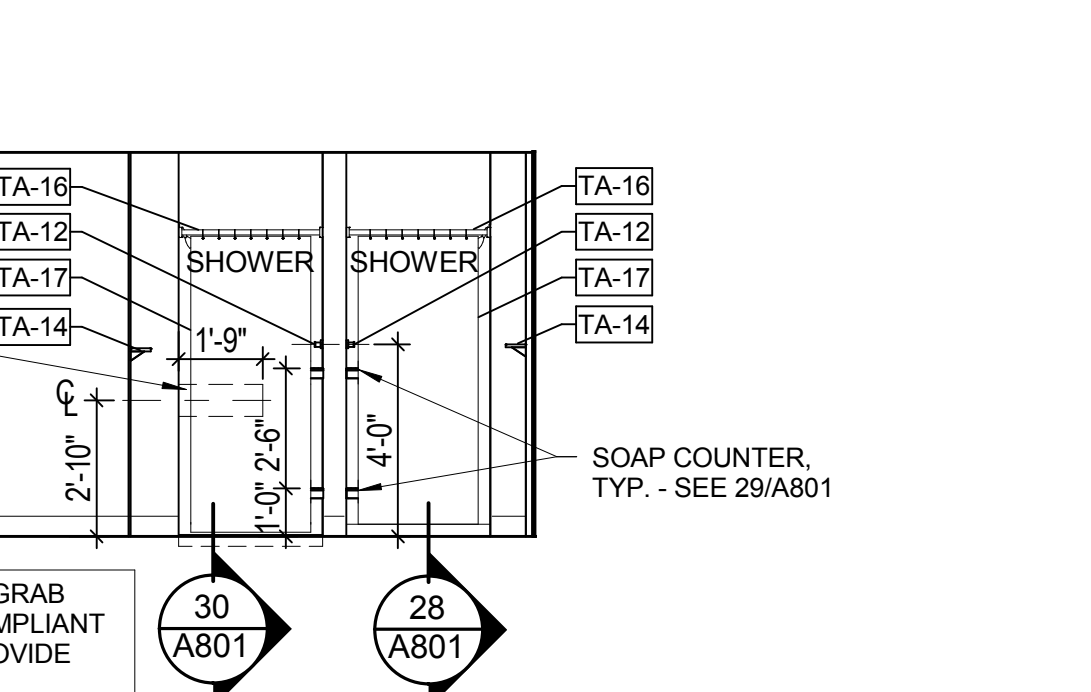
11 WOMEN'S SHOWER - WEST
SCALE: 1/4" = 1'-0"



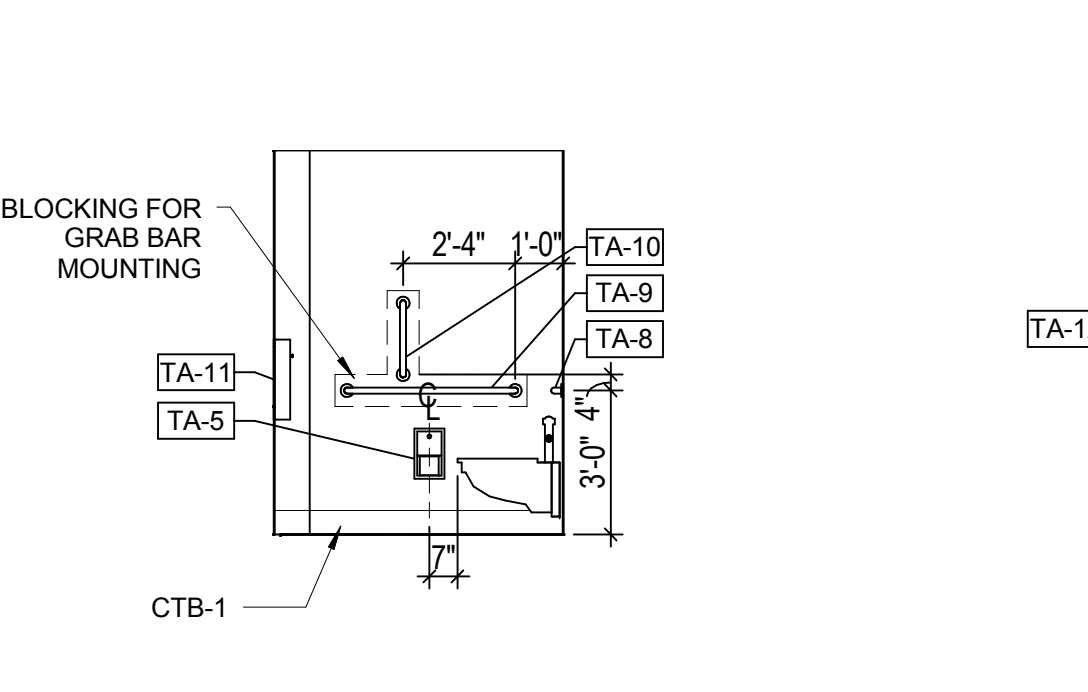
12 WOMEN'S SHOWER - SOUTH
SCALE: 1/4" = 1'-0"



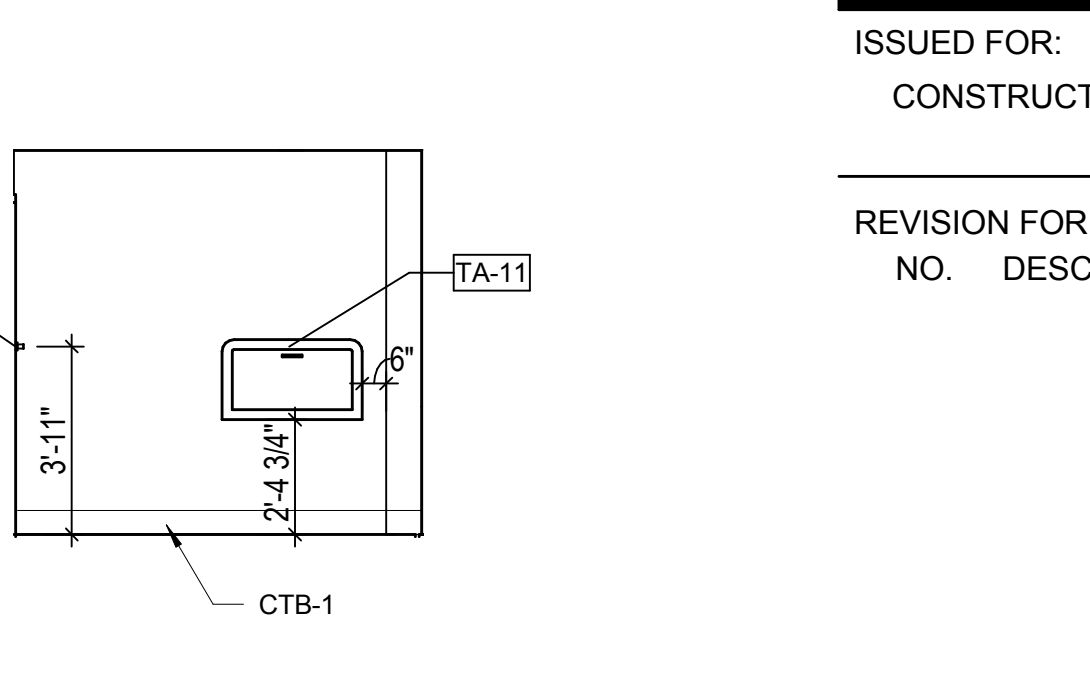
13 WOMEN'S SHOWER - EAST
SCALE: 1/4" = 1'-0"



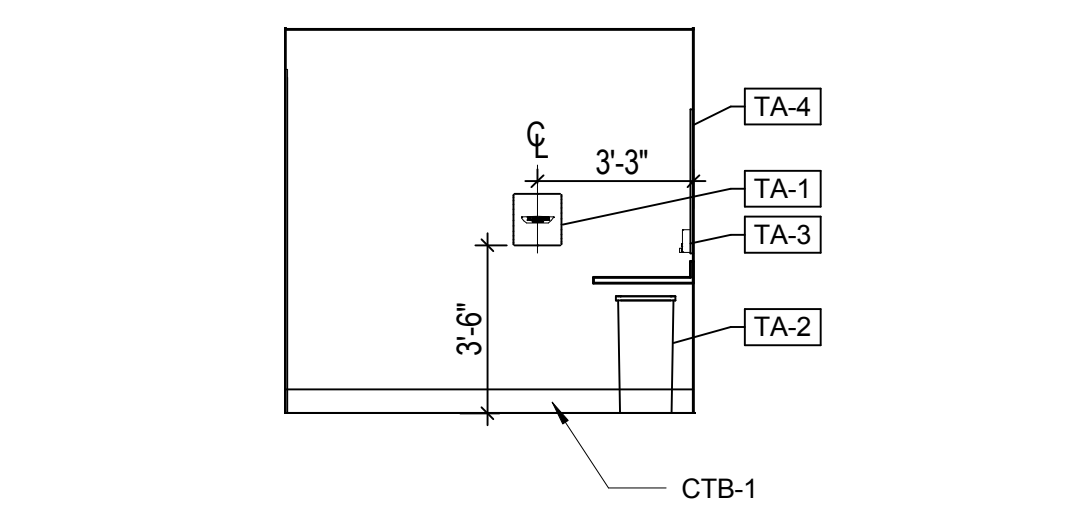
14 WOMEN'S SHOWER - NORTH
SCALE: 1/4" = 1'-0"



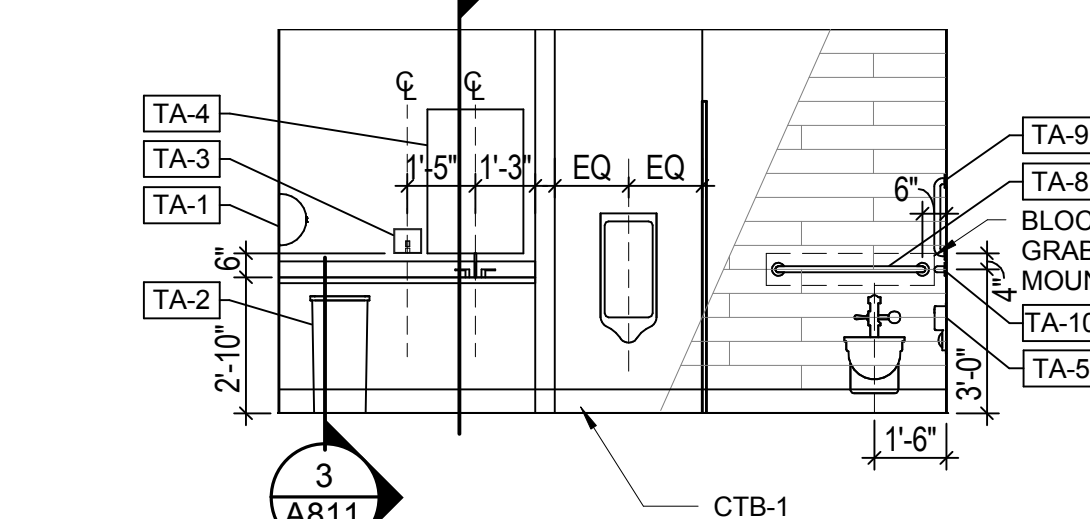
15 LOBBY RESTROOM - SOUTH
SCALE: 1/4" = 1'-0"



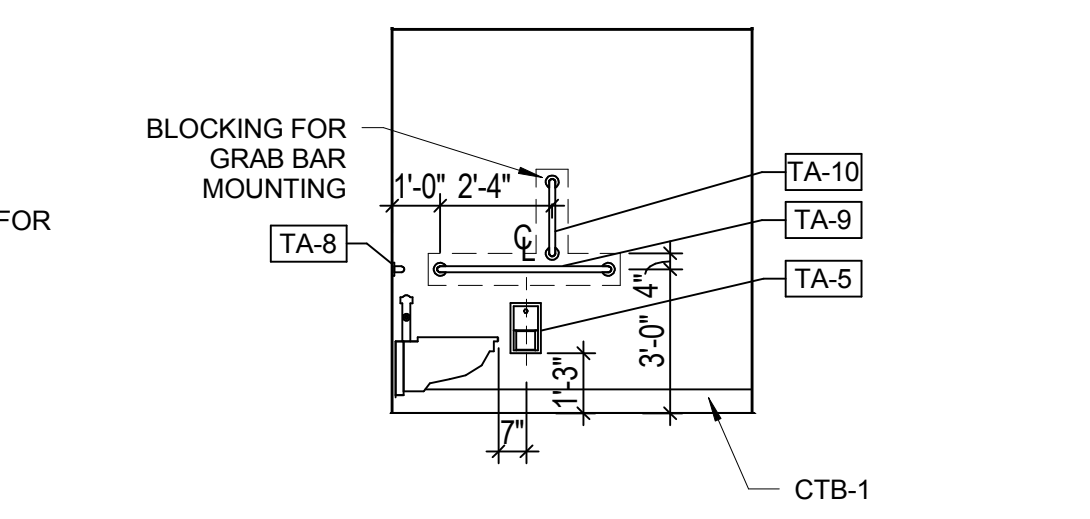
16 LOBBY RESTROOM - EAST
SCALE: 1/4" = 1'-0"



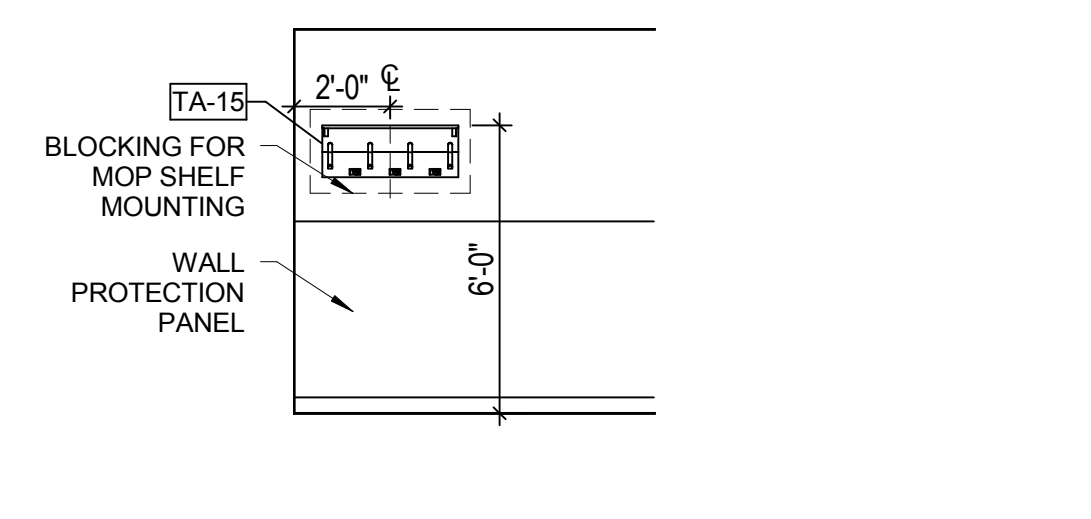
17 MEN'S RESTROOM - WEST
SCALE: 1/4" = 1'-0"



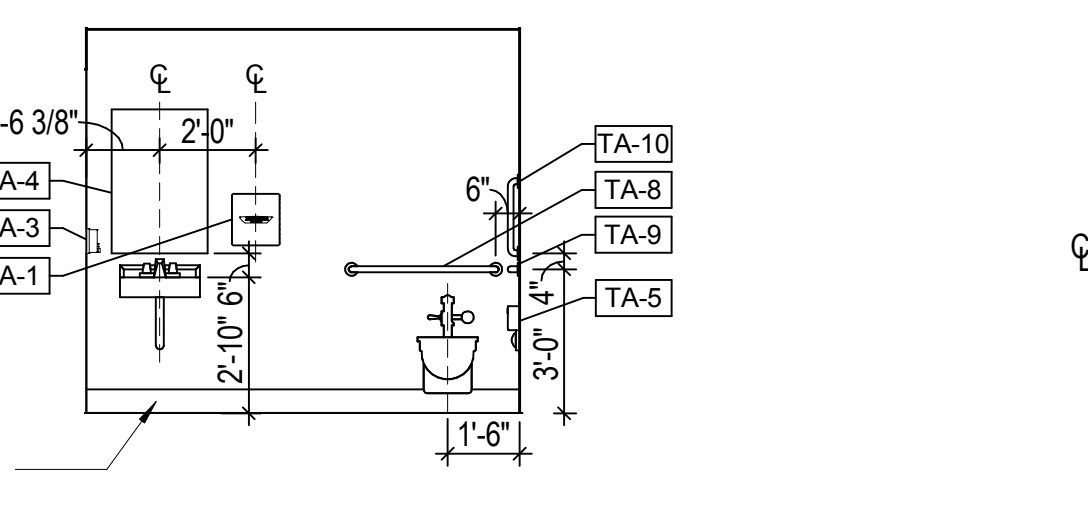
18 MEN'S RESTROOM - NORTH
SCALE: 1/4" = 1'-0"



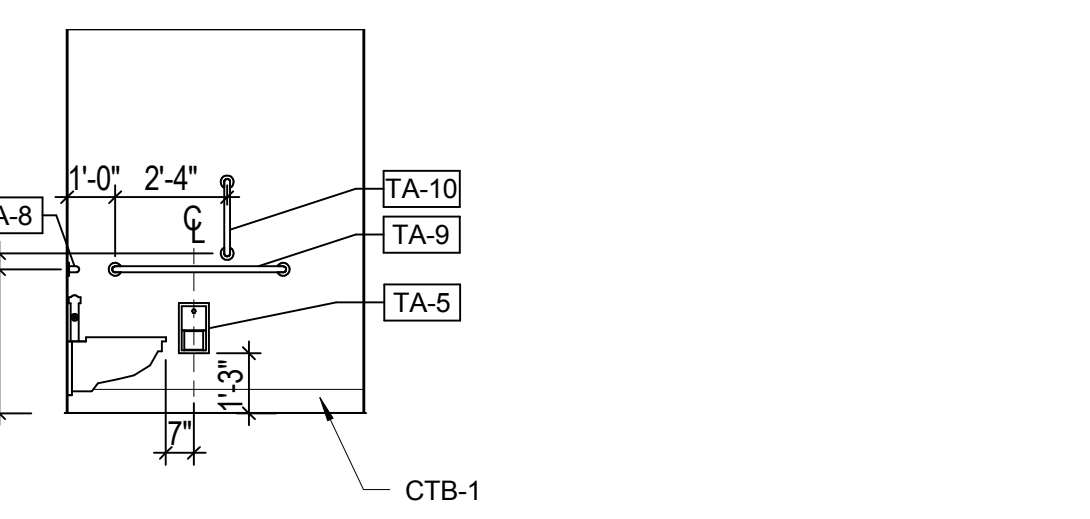
19 MEN'S RESTROOM - EAST
SCALE: 1/4" = 1'-0"



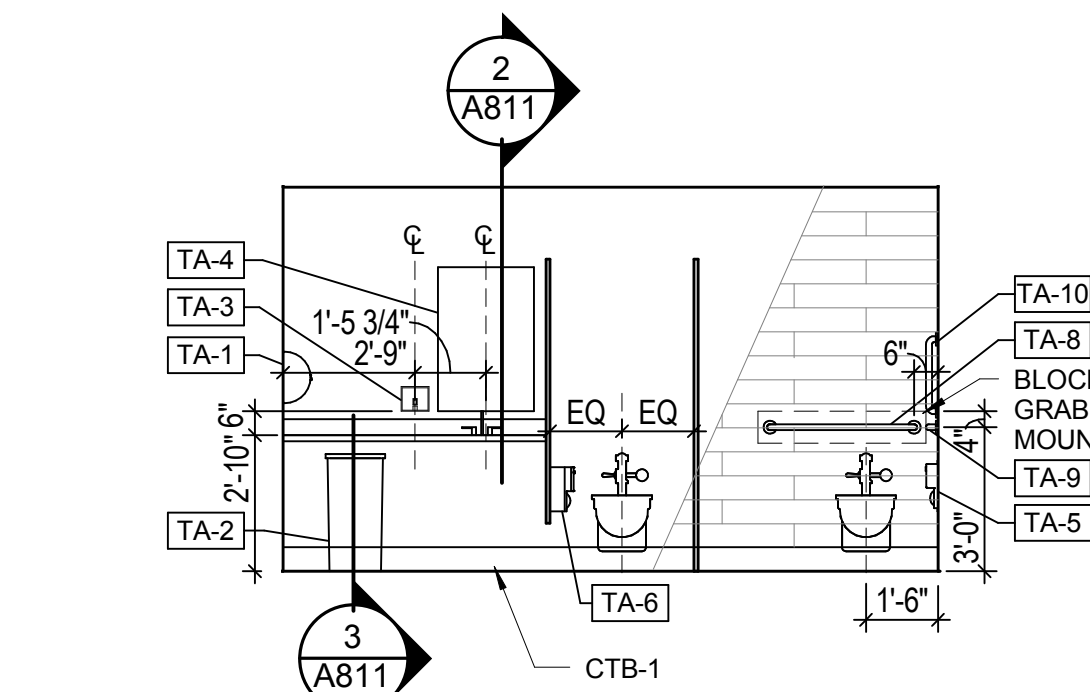
20 JANITOR'S CLOSET - SOUTH
SCALE: 1/4" = 1'-0"



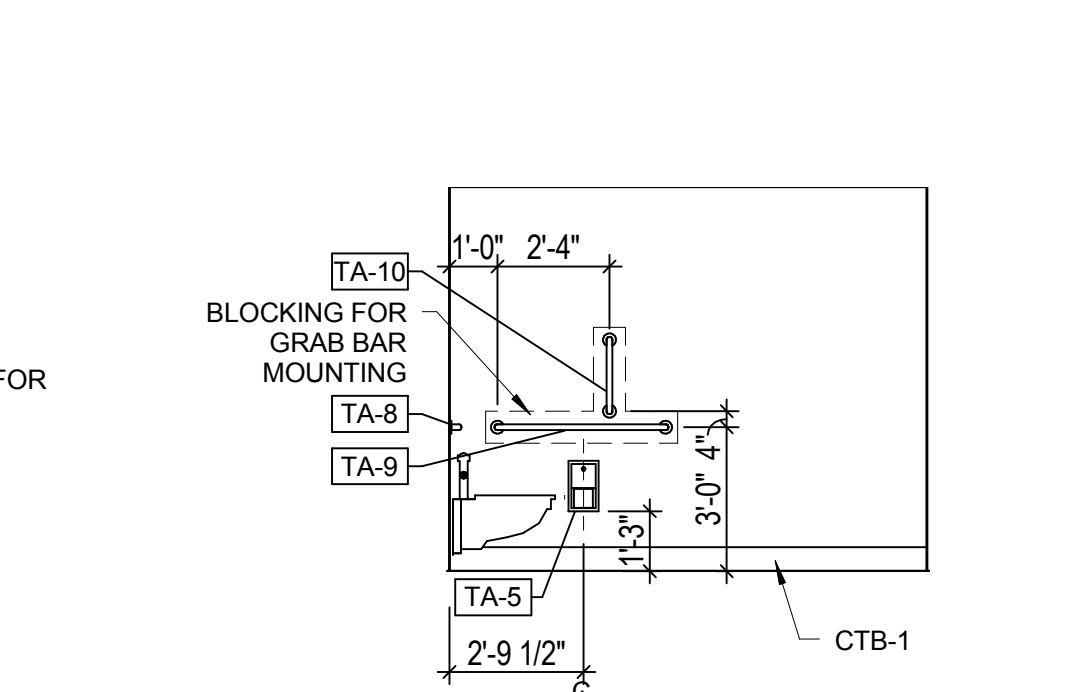
21 INTAKE RESTROOM - EAST
SCALE: 1/4" = 1'-0"



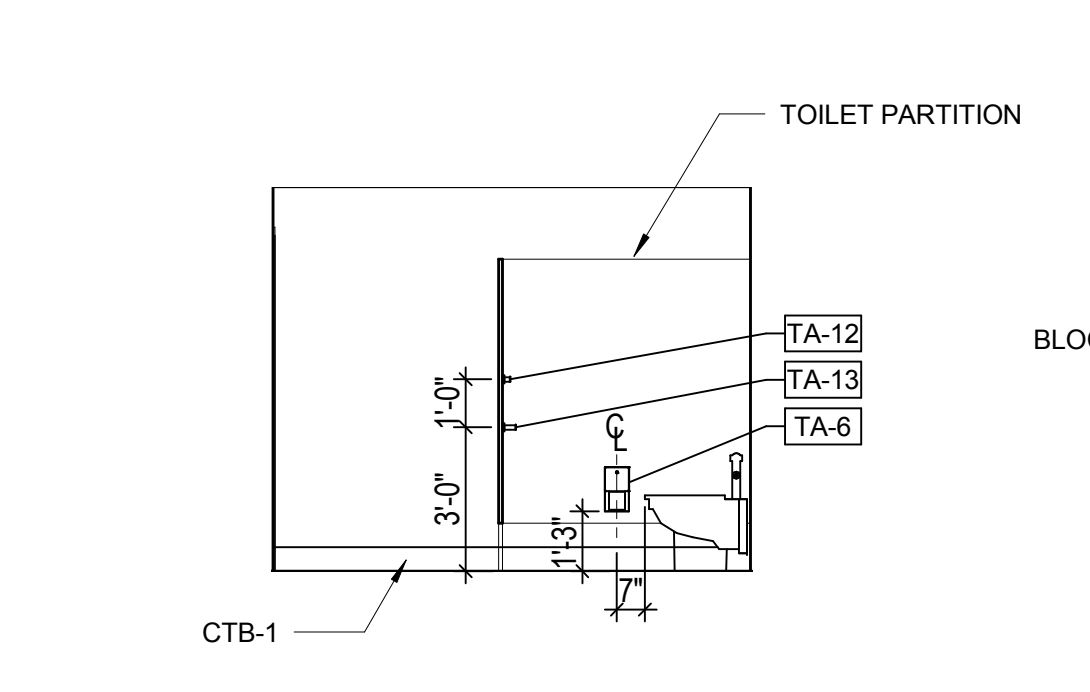
22 INTAKE RESTROOM - SOUTH
SCALE: 1/4" = 1'-0"



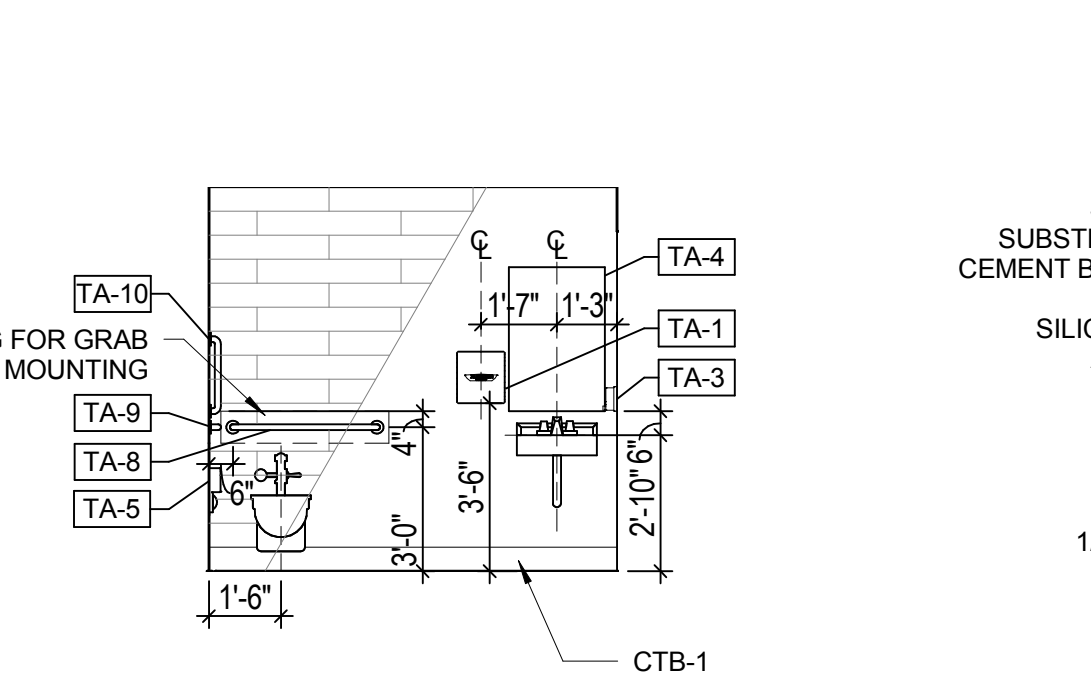
23 WOMEN'S RESTROOM - WEST
SCALE: 1/4" = 1'-0"



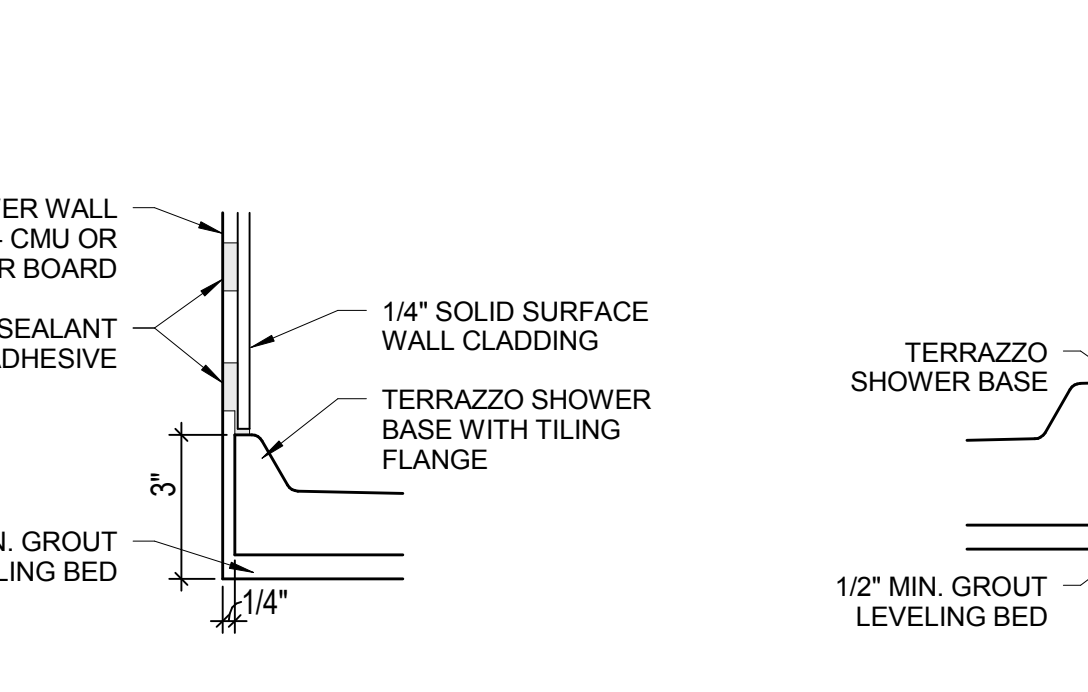
24 WOMEN'S RESTROOM NORTH
SCALE: 1/4" = 1'-0"



25 WOMEN'S RESTROOM - SOUTH
SCALE: 1/4" = 1'-0"



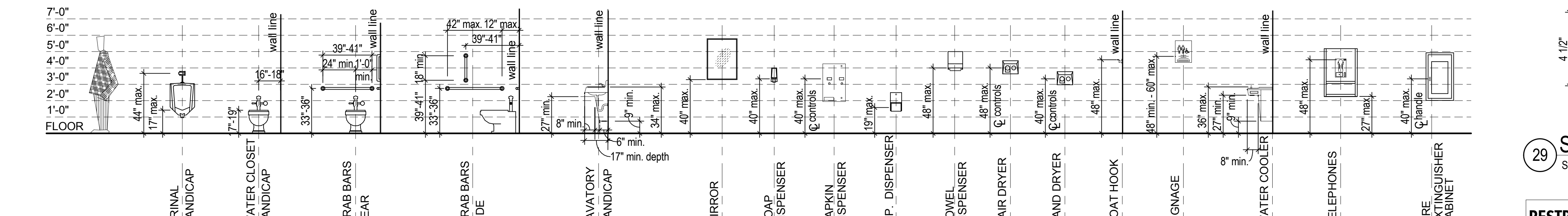
26 LOBBY RESTROOM - WEST
SCALE: 1/4" = 1'-0"



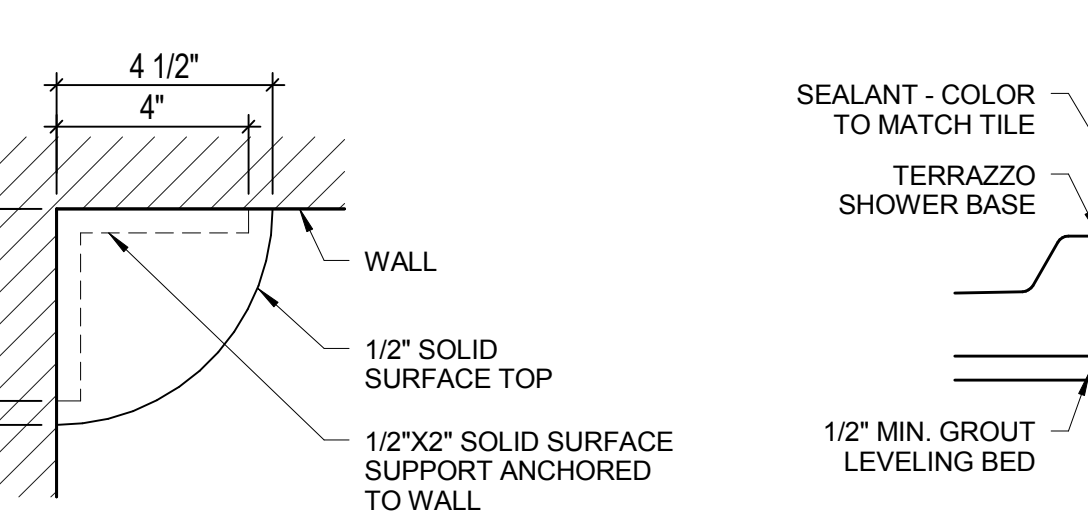
27 SS SHOWER BASE DETAIL
SCALE: 3" = 1'-0"



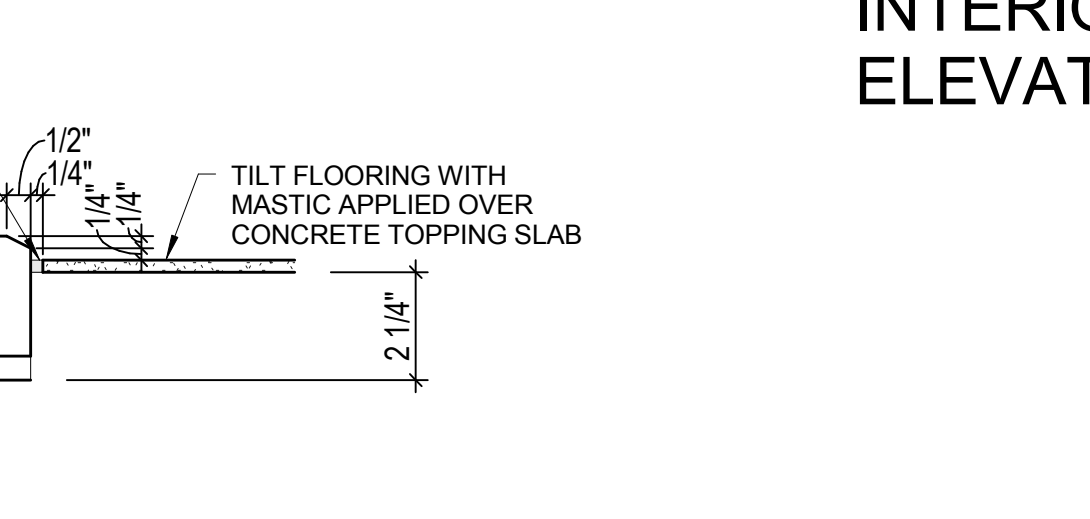
28 SHOWER THRESHOLD TRANSITION
SCALE: 3" = 1'-0"



TYPICAL MOUNTING HEIGHTS LEGEND (ANSI)



29 SOAP COUNTER
SCALE: 3" = 1'-0"



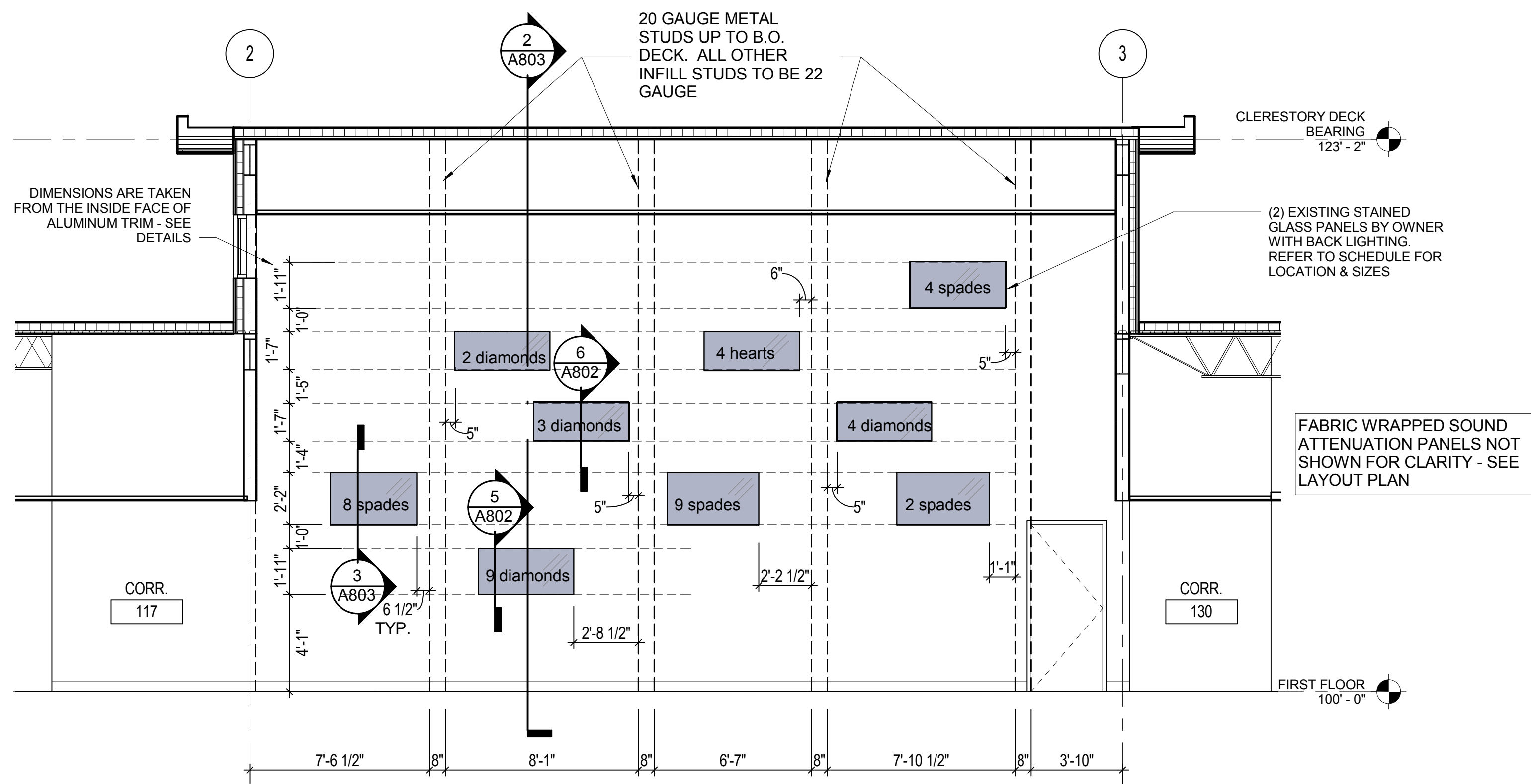
30 ACCESSIBLE SHOWER THRESHOLD DETAIL
SCALE: 3" = 1'-0"

RESTROOM ELEVATIONS GENERAL NOTES
1. PROVIDE BLOCKING FOR ALL WALL-MOUNTED RESTROOM EQUIPMENT.

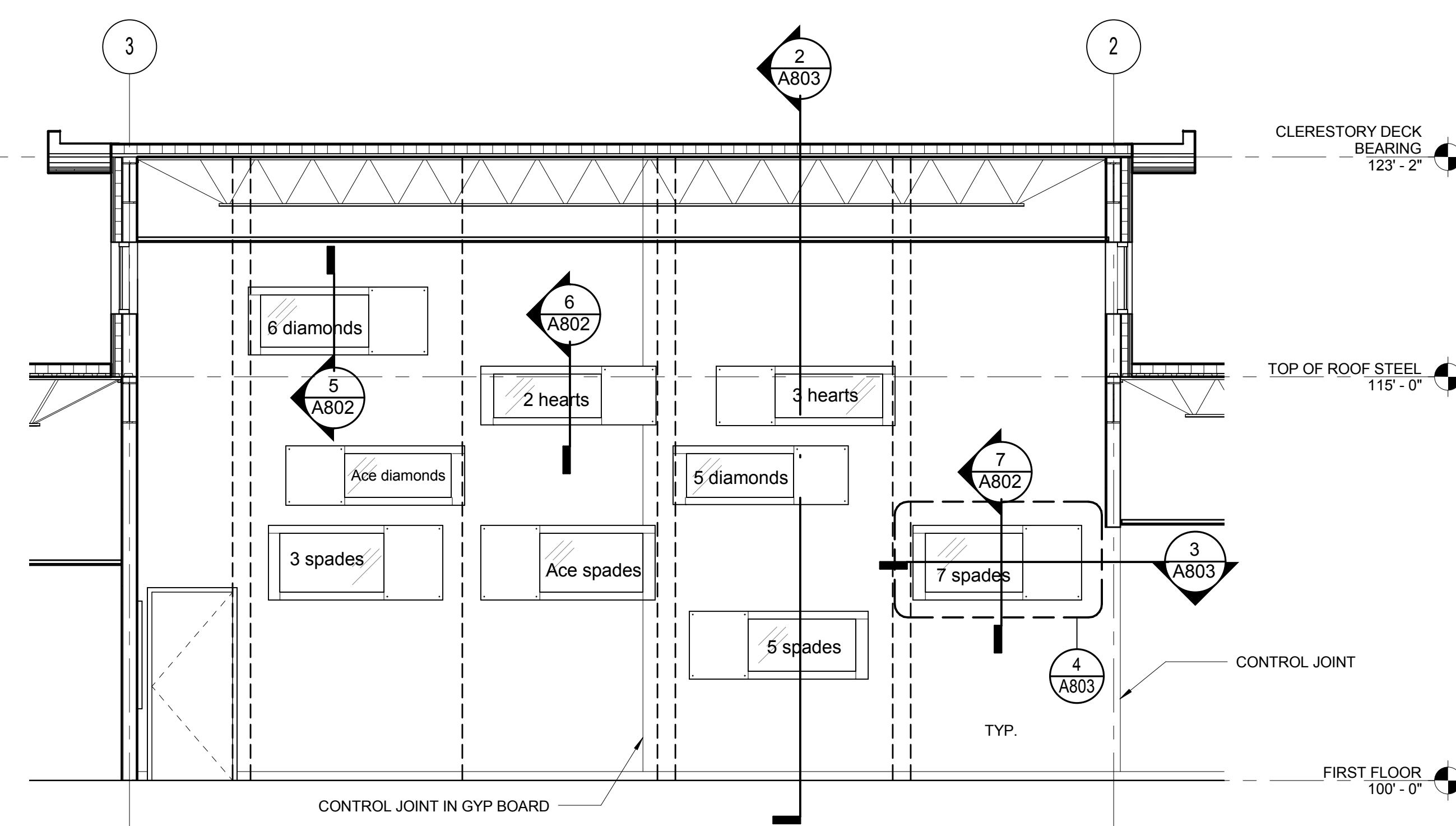
**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

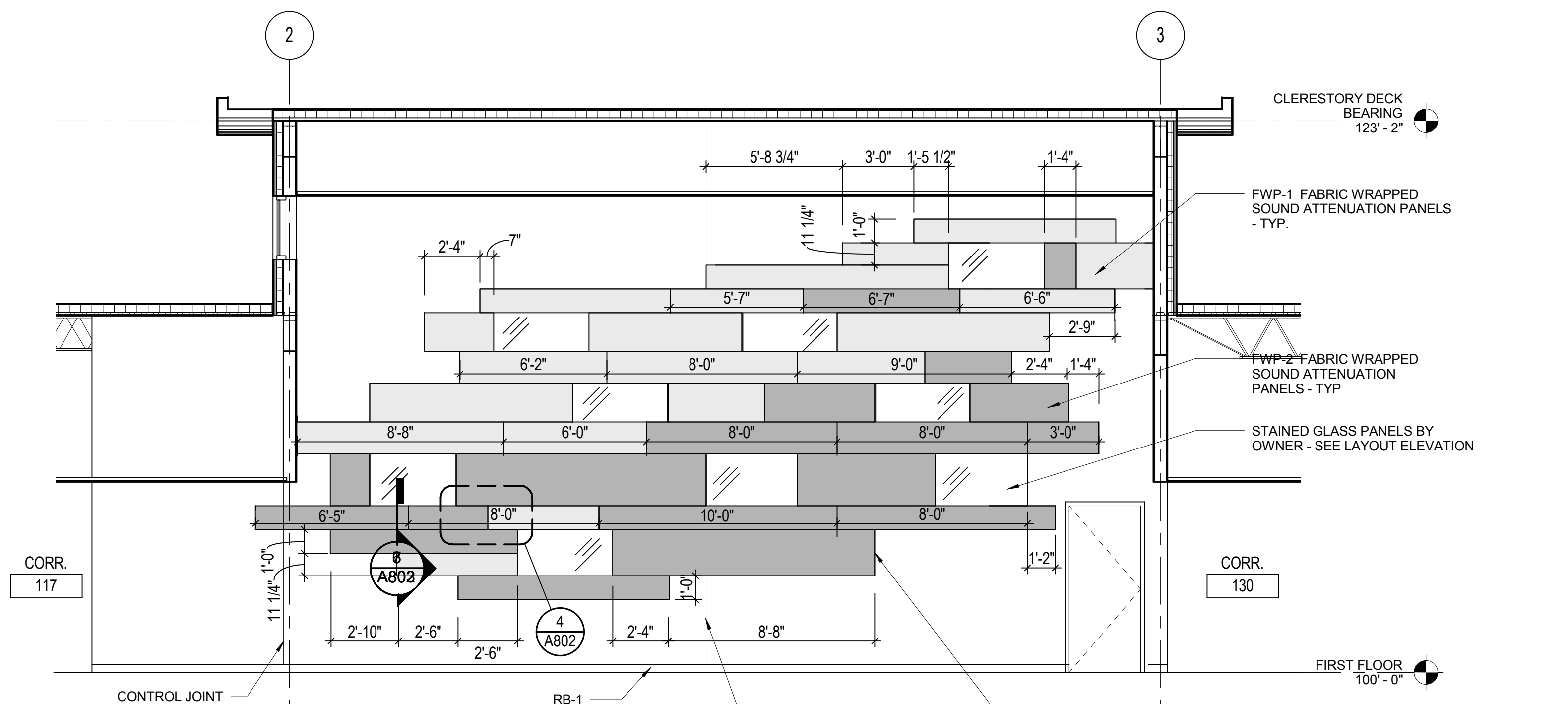
PROJECT NUMBER 152413.01



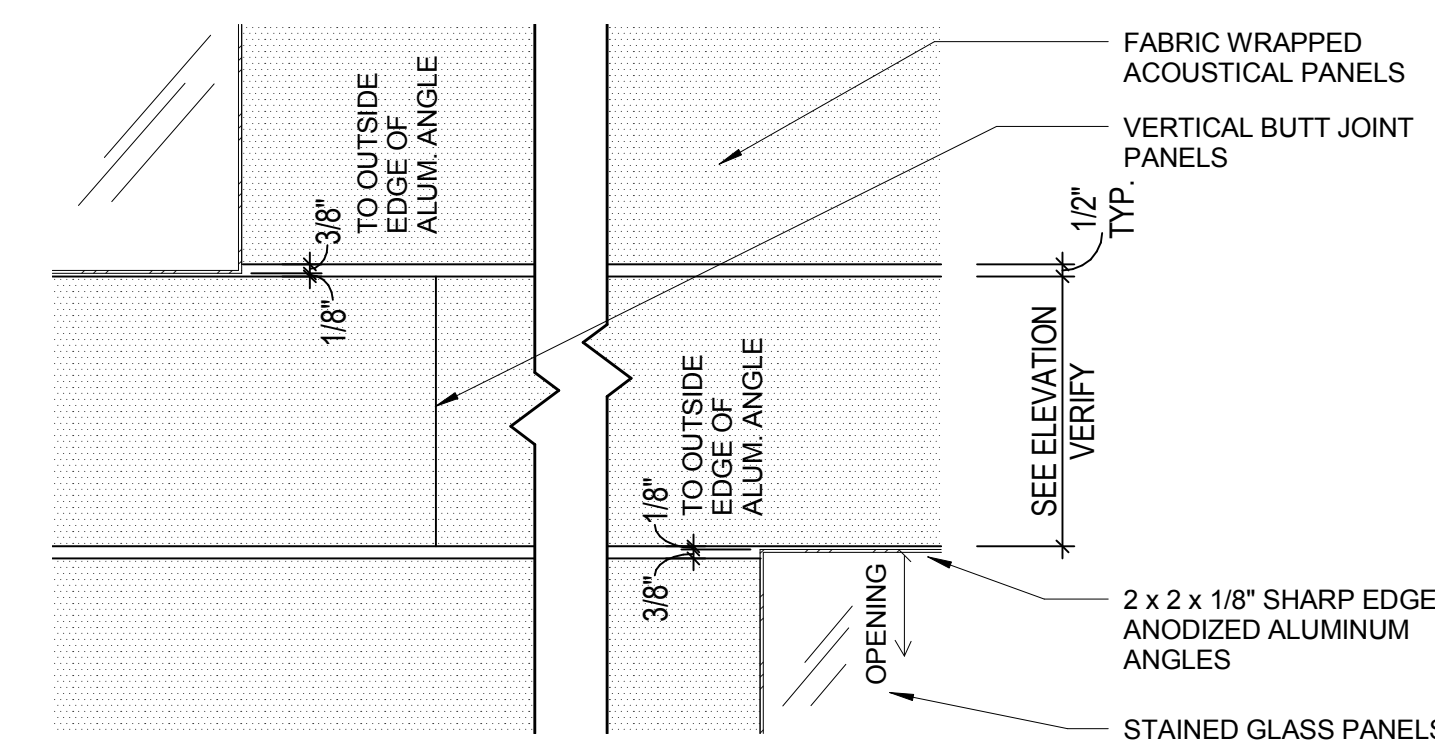
1 STAINED GLASS SOUTH ELEVATION - OPENING LAYOUT
SCALE: 1/4" = 1'-0"



2 STAINED GLASS NORTH ELEVATION - BRIEFING ROOM
SCALE: 1/4" = 1'-0"



3 FABRIC PANEL LAYOUT PLAN
SCALE: 1/4" = 1'-0"



4 ELEVATION DETAIL @ FABRIC PANEL
SCALE: 1 1/2" = 1'-0"

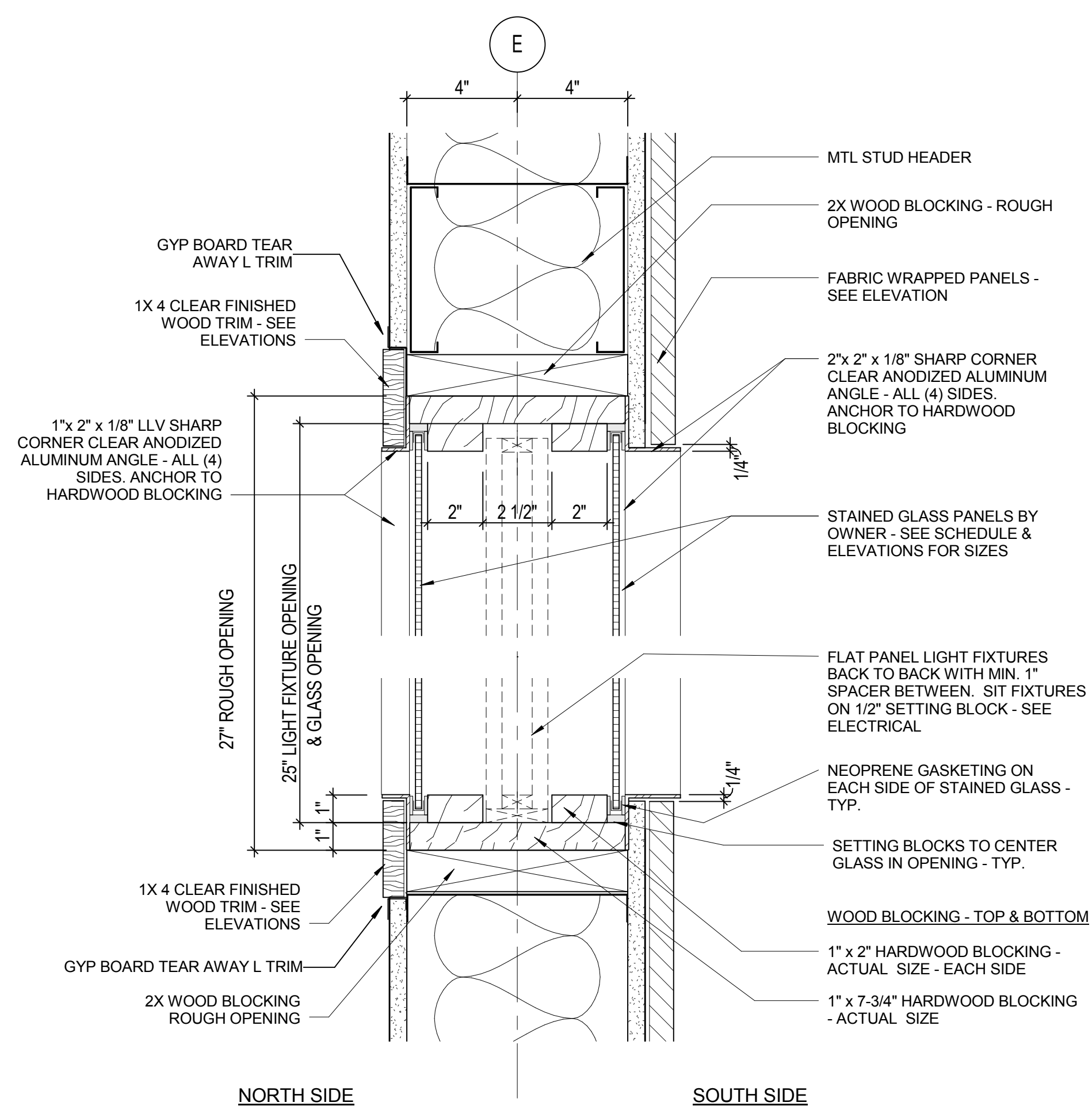
STAINED GLASS SCHEDULE					
	TITLE	SIDE OF WALL	OVERALL GLASS SIZE	SECTION DETAIL	GLASS OPENING WIDTH
PAIR	4 SPADES	SOUTH	49-1/2" WIDE X 24-1/2" TALL	A	50"
PAIR	6 DIAMONDS	NORTH	49-5/8" WIDE X 24-1/2" TALL	C	50"
PAIR	2 SPADES	SOUTH	49-1/2" WIDE X 27-1/2" TALL		
PAIR	3 SPADES	NORTH	49-3/4" WIDE X 27-5/8" TALL	B	50"
PAIR	4 HEARTS	SOUTH	49-1/2" WIDE X 20-5/8" TALL		
PAIR	2 HEARTS	NORTH	49-1/4" WIDE X 20-5/8" TALL	B	50"
PAIR	4 DIAMONDS	SOUTH	49-1/8" WIDE X 20-3/4" TALL		
PAIR	ACE DIAMONDS	NORTH	49-1/8" WIDE X 20-3/4" TALL	C	50"
PAIR	9 SPADES	SOUTH	49-1/4" WIDE X 27-5/8" TALL		
PAIR	ACE SPADES	NORTH	49-1/4" WIDE X 27-1/2" TALL	B	50"
PAIR	3 DIAMONDS	SOUTH	49-1/2" WIDE X 20-3/4" TALL		
PAIR	5 DIAMONDS	NORTH	49-1/2" WIDE X 20-3/4" TALL	A	50"
PAIR	9 DIAMONDS	SOUTH	49-1/8" WIDE X 24-1/2" TALL		
PAIR	5 SPADES	NORTH	49-1/4" WIDE X 24-1/2" TALL	C	46"
PAIR	8 SPADES	SOUTH	45-1/8" WIDE X 27-1/2" TALL		
PAIR	7 SPADES	NORTH	44-3/4" WIDE X 27-1/2" TALL	B	50" & 47.5"
PAIR	2 DIAMONDS	SOUTH	49-1/4" WIDE X 20-3/4" TALL		
PAIR	3 HEARTS	NORTH	46-7/8" WIDE X 20-5/8" TALL		

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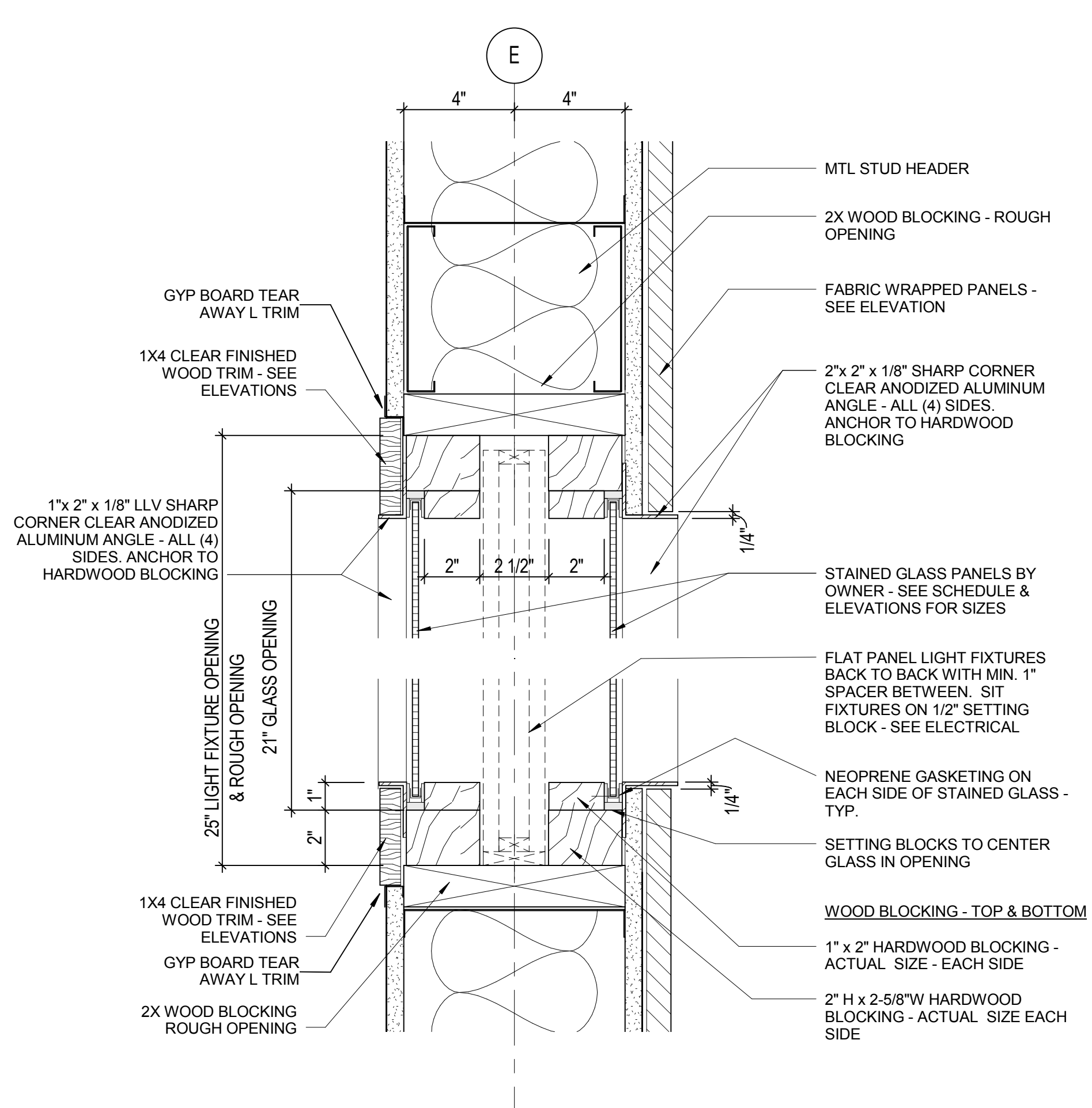
REVISION FOR:
NO. DESCRIPTION DATE

NOTES:

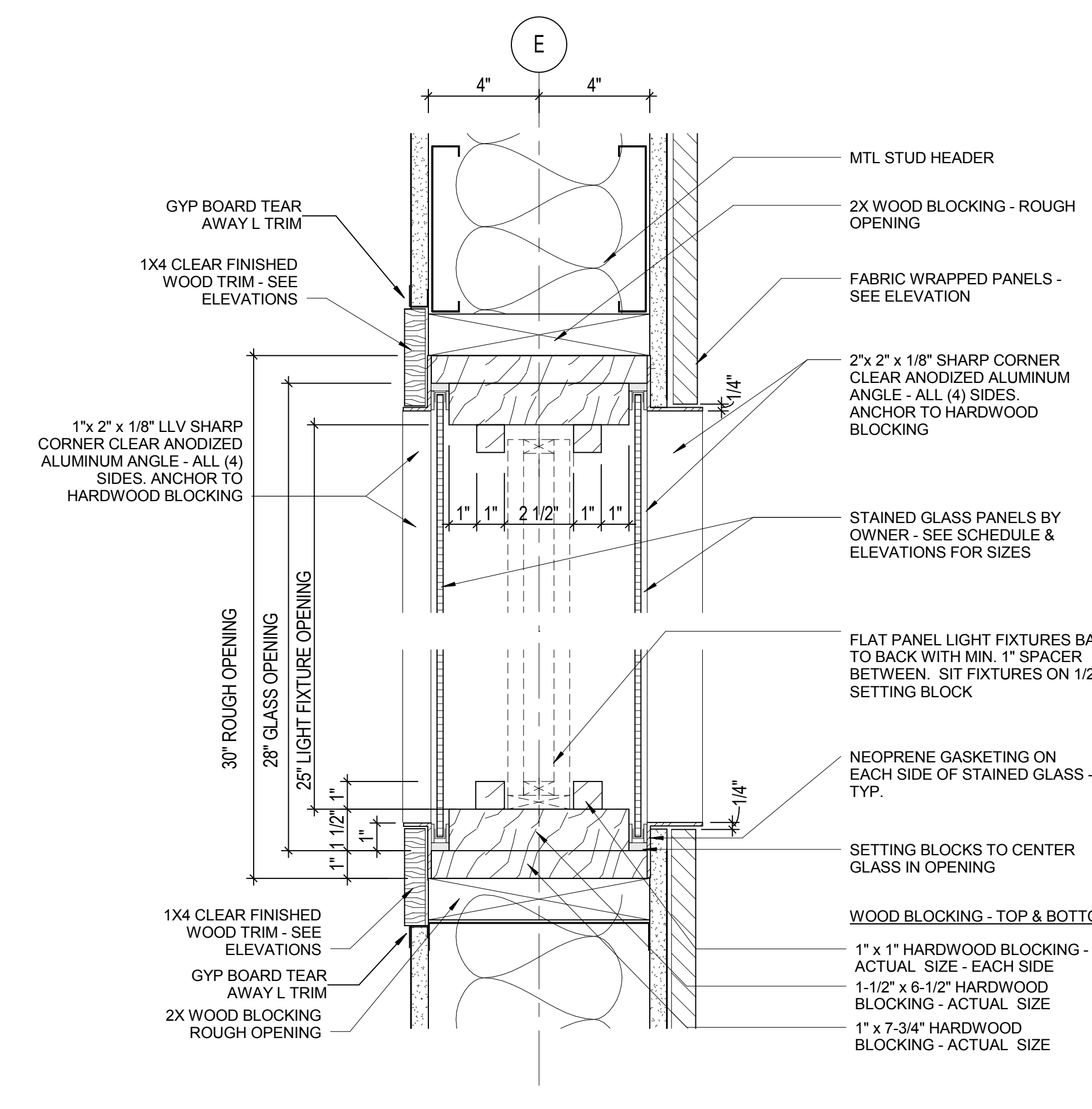
- OWNER SUPPLIED STAINED GLASS GC TO INSTALL.
- STAINED GLASS TITLES PER OWNERS STORAGE SYSTEM.
- ALL DIMENSIONS OF EXISTING GLASS TO BE VERIFIED BY GC PRIOR TO ROUGH FRAMING.



5 STAINED GLASS OPENING DETAIL TYPE "A"
SCALE: 3" = 1'-0"



6 STAINED GLASS OPENING DETAIL TYPE "B"
SCALE: 3" = 1'-0"



7 STAINED GLASS OPENING DETAIL TYPE "C"
SCALE: 3" = 1'-0"

DRAWN BY MMZ

CHECKED BY SK

**INTERIOR
ELEVATIONS -
STAINED GLASS**

A802

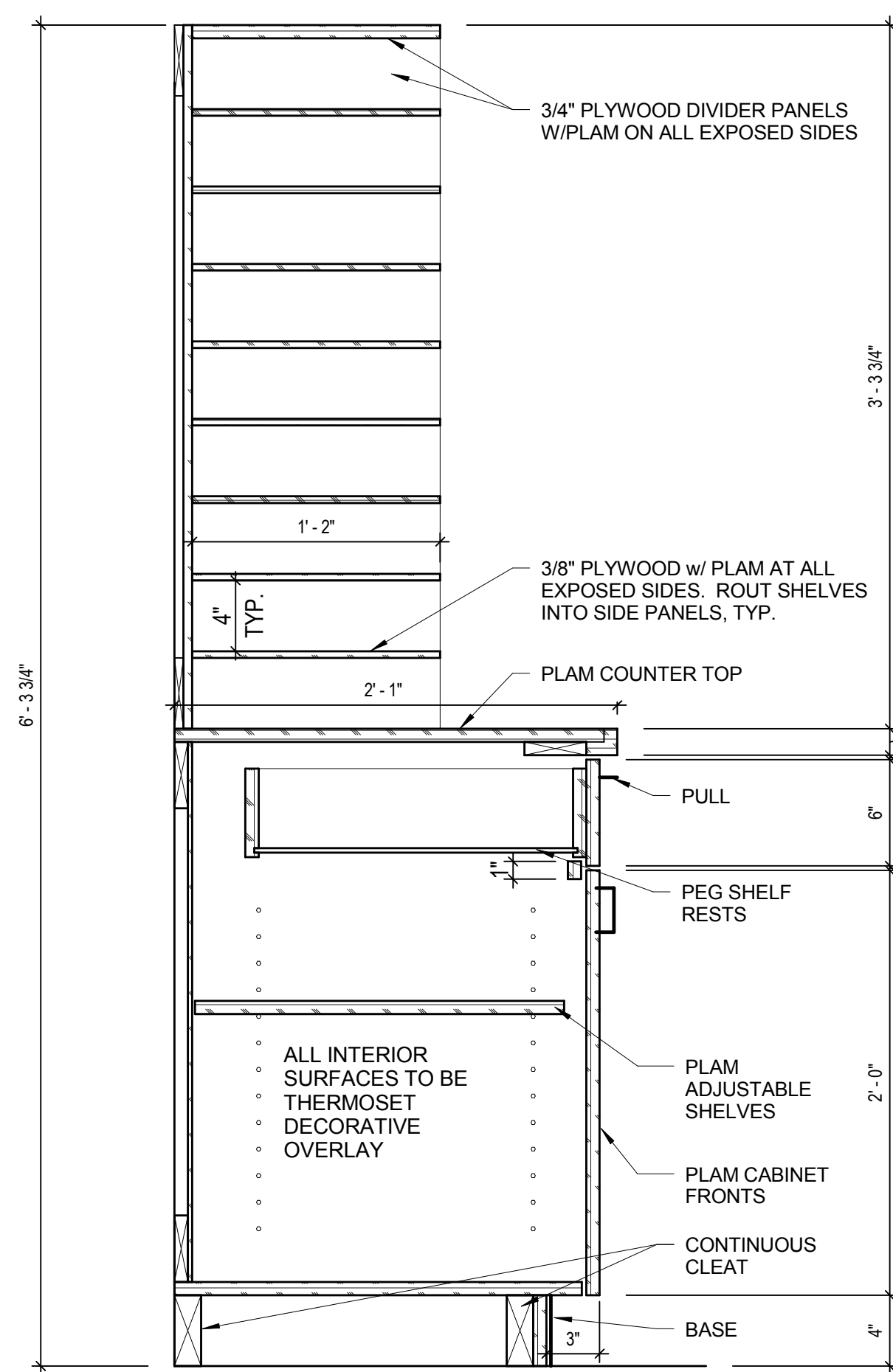
**POLICE
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MIDTOWN DISTRICT**

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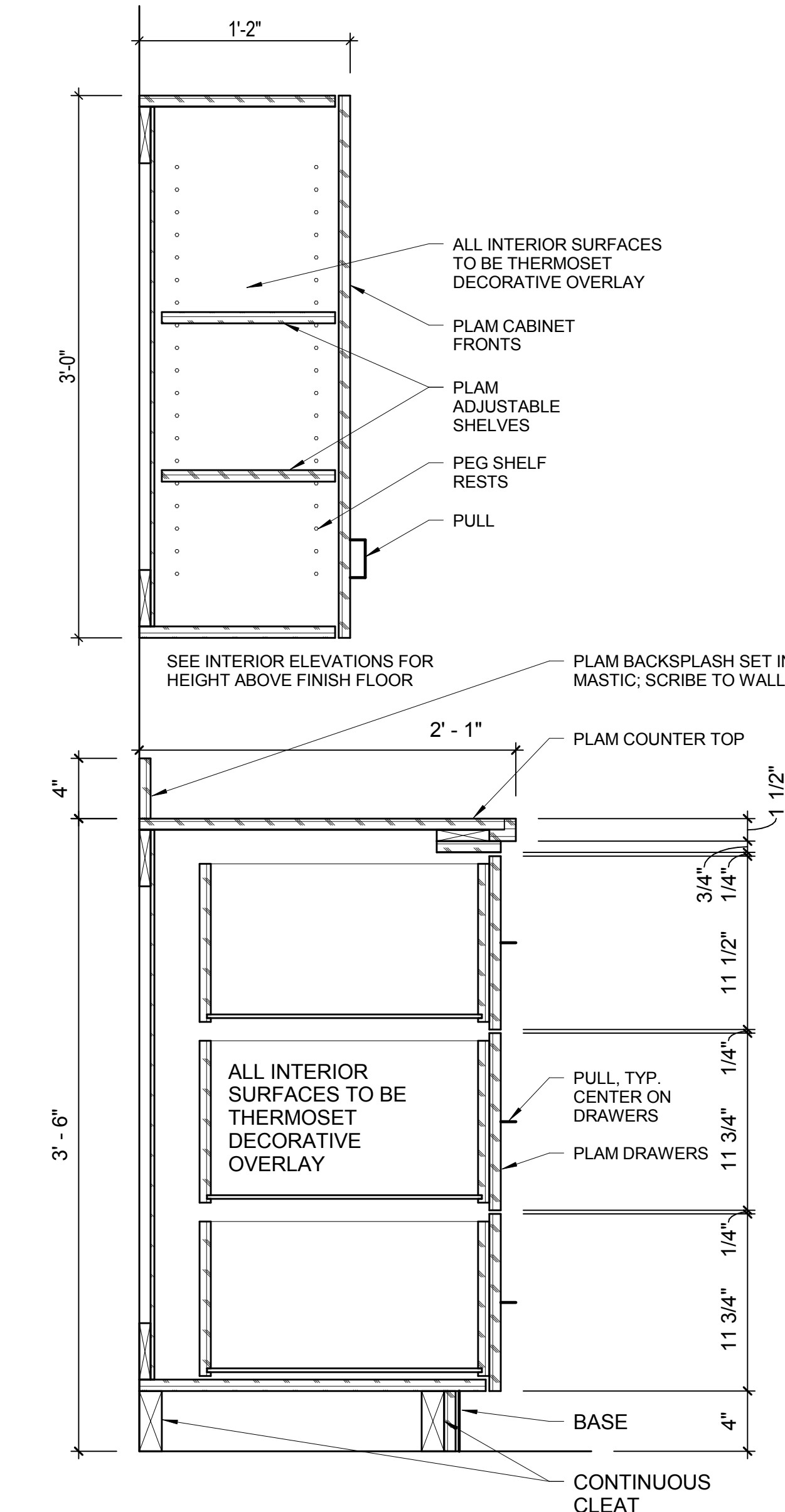
PROJECT NUMBER 152413.01

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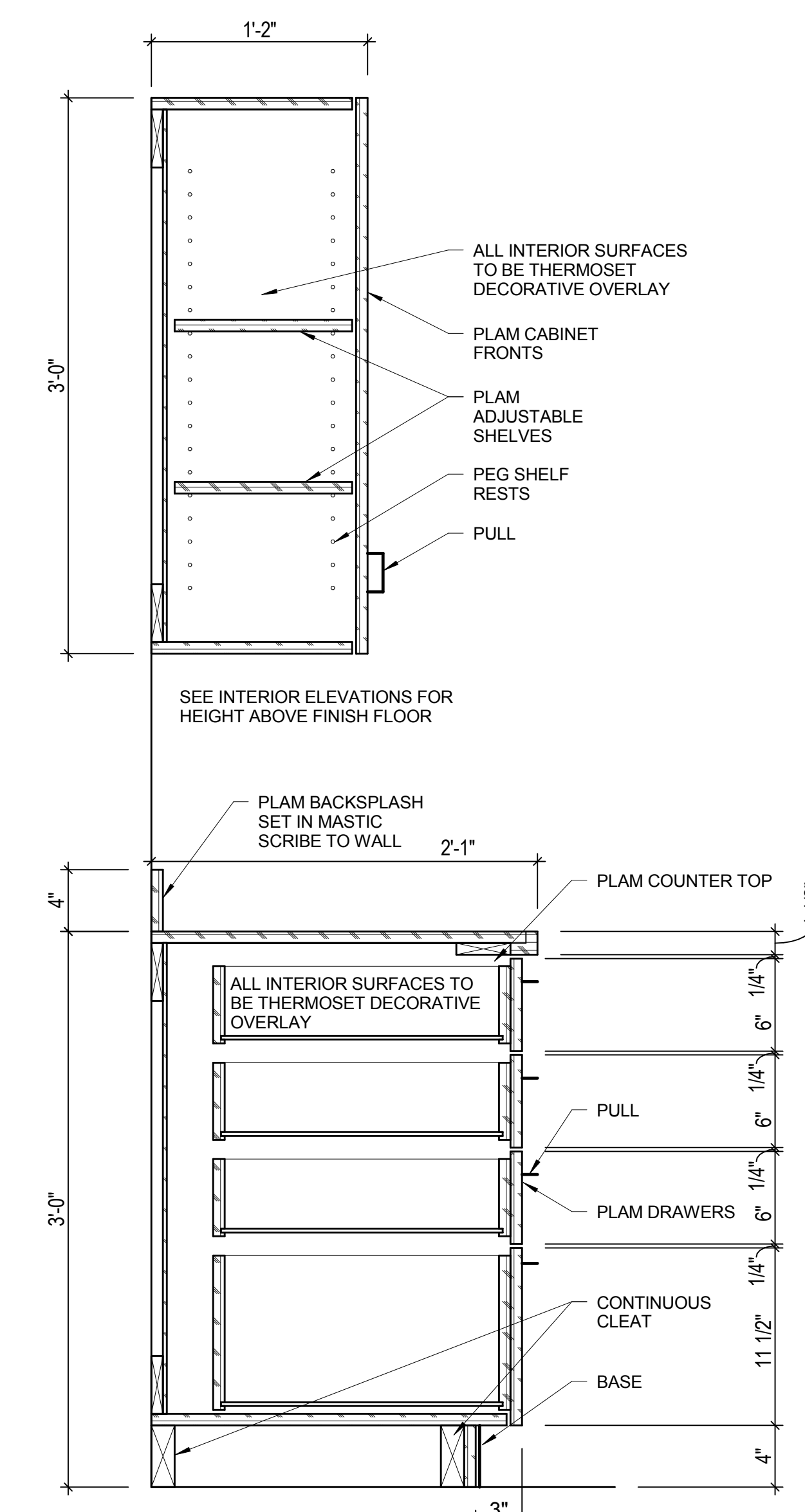
REVISION FOR:
NO. DESCRIPTION DATE



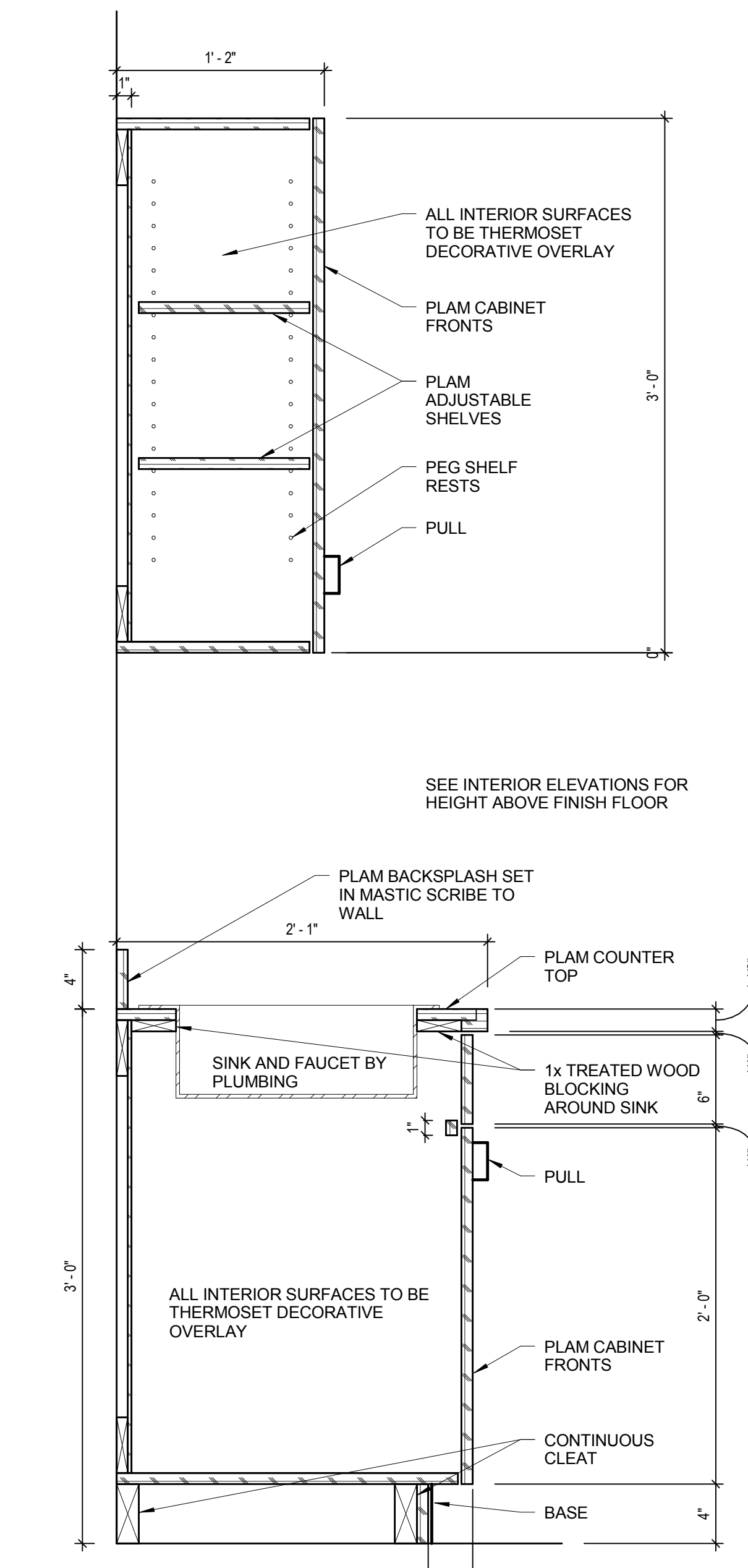
1 BASE CABINET WITH OPEN SLOTS
SCALE: 1 1/2" = 1'-0"



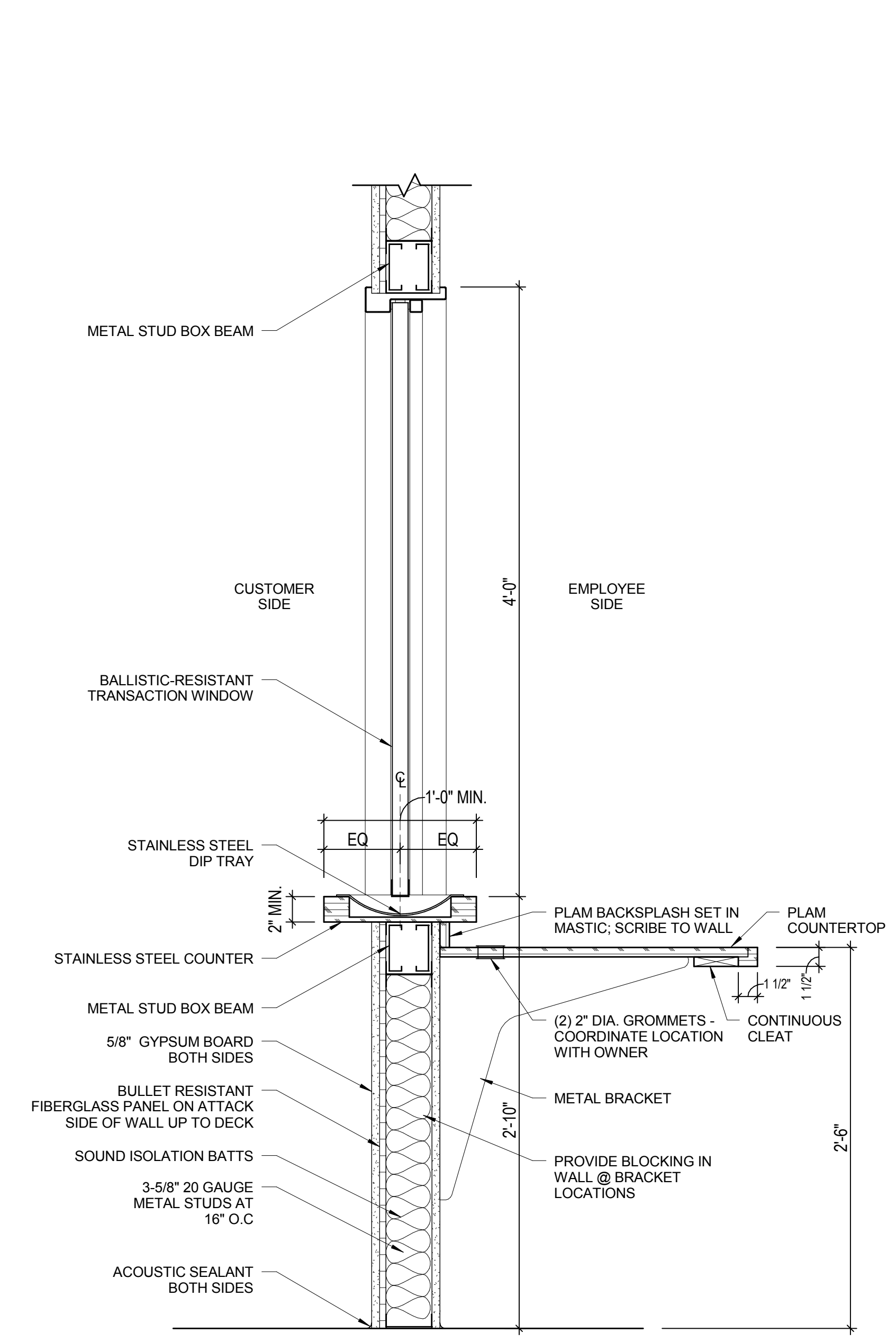
2 FILING CABINET
SCALE: 1 1/2" = 1'-0"



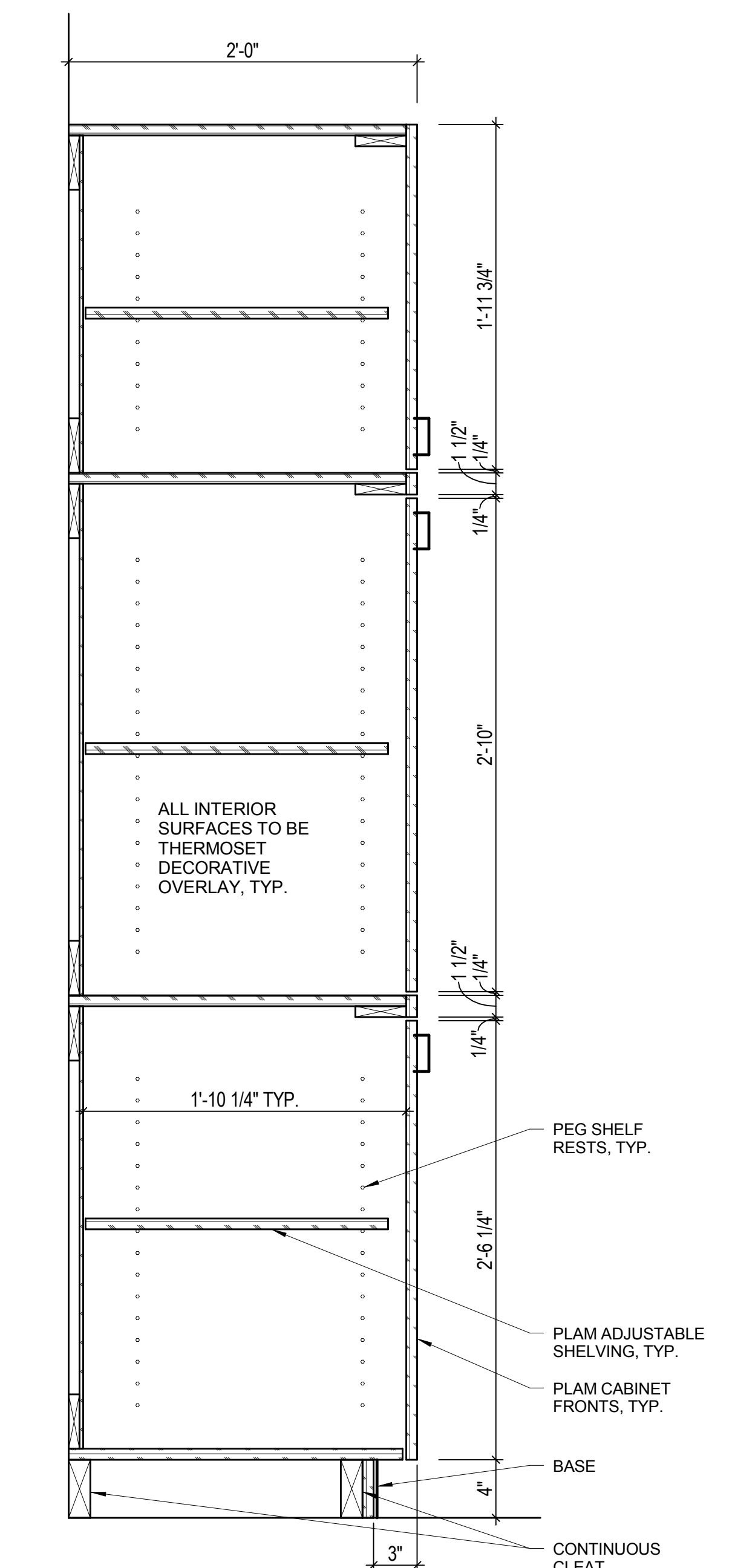
3 BASE CABINET WITH DRAWERS
SCALE: 1 1/2" = 1'-0"



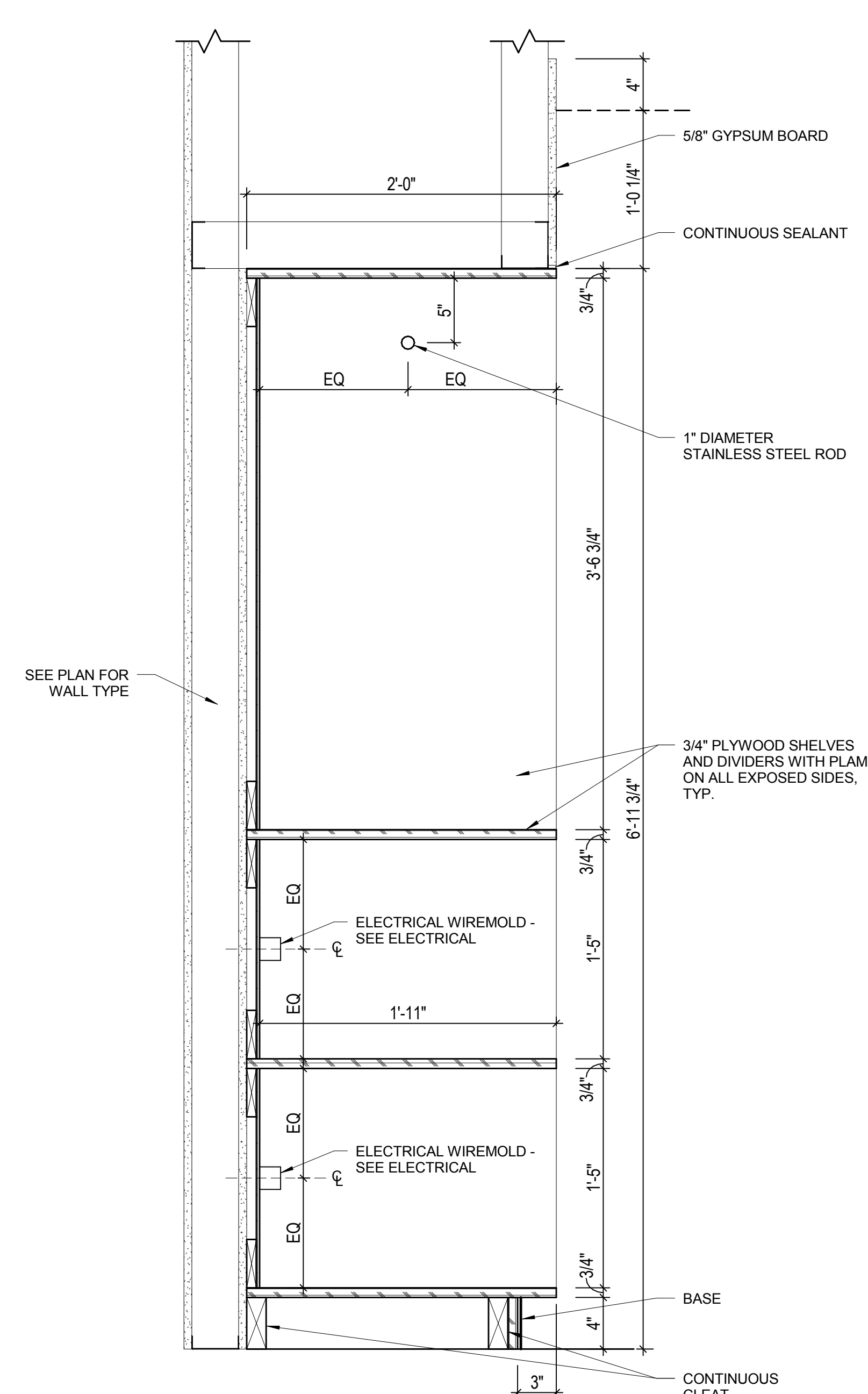
4 TYPICAL BASE & UPPER CABINET
SCALE: 1 1/2" = 1'-0"



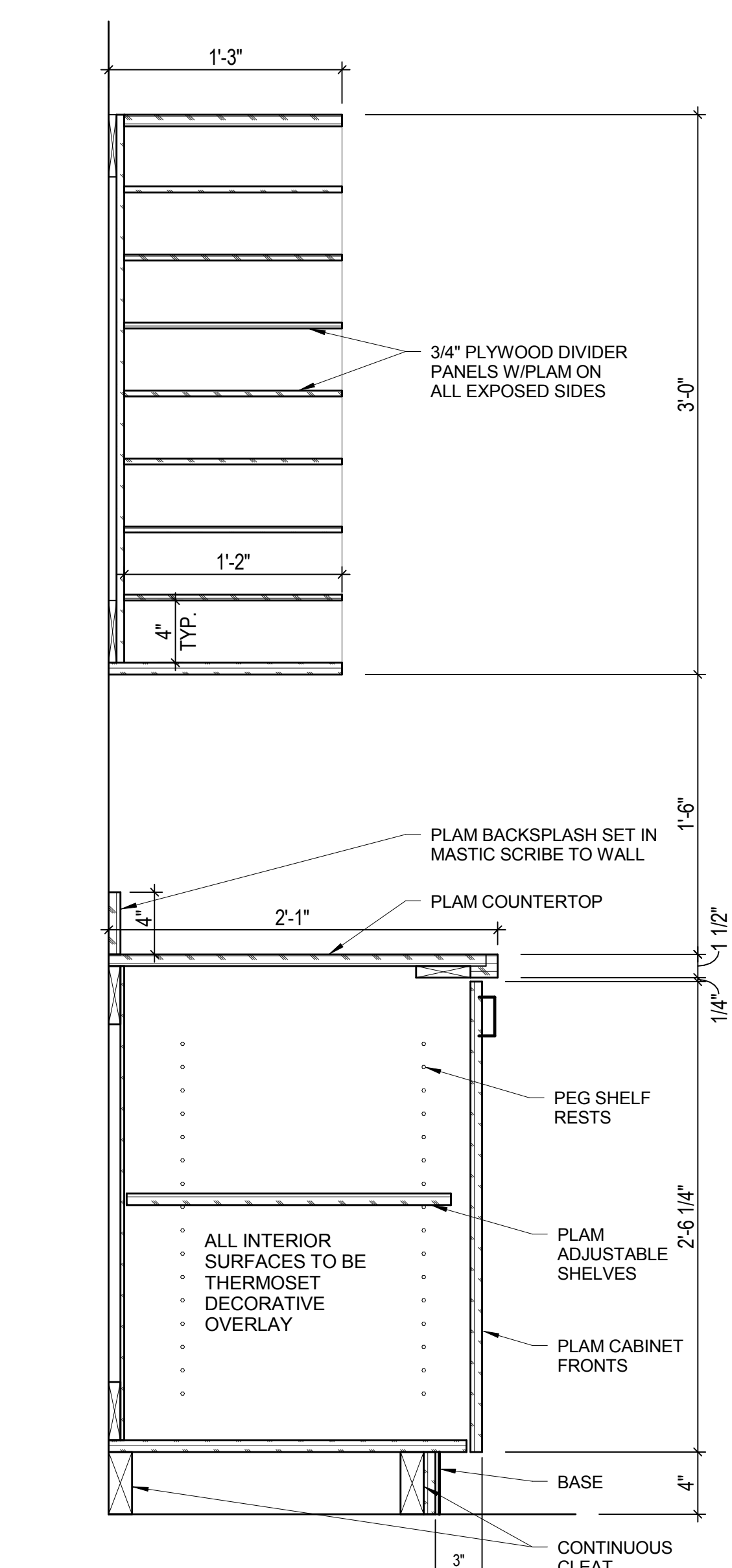
5 BULLET RESISTANT WINDOW
SCALE: 1 1/2" = 1'-0"



6 STORAGE CABINETS
SCALE: 1 1/2" = 1'-0"



7 OPEN LOCKERS
SCALE: 1 1/2" = 1'-0"



8 PATROL ROOM CABINET WITH OPEN SLOTS
SCALE: 1 1/2" = 1'-0"

DRAWN BY MMZ
CHECKED BY SK

**CASEWORK
SECTIONS**

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

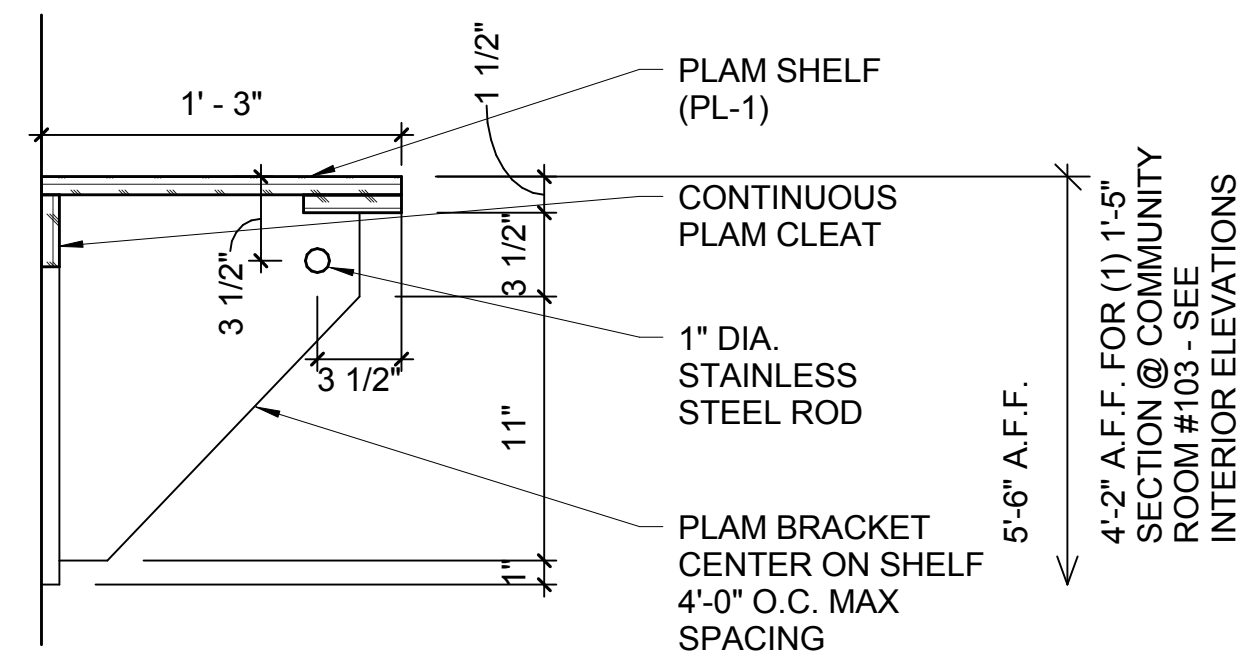
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NO. DESCRIPTION DATE

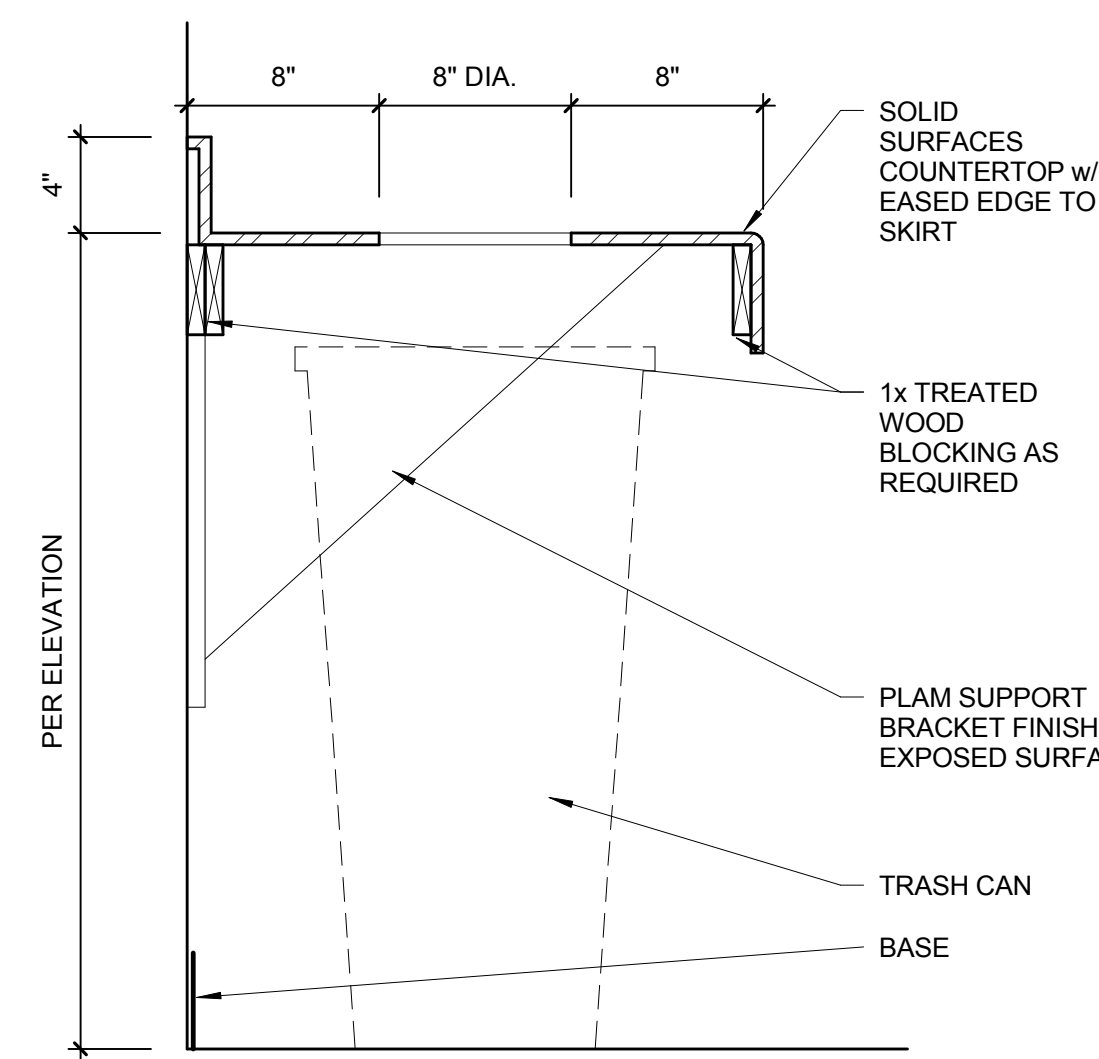
DRAWN BY MMZ
CHECKED BY SK

**CASEWORK
SECTIONS &
DETAILS**



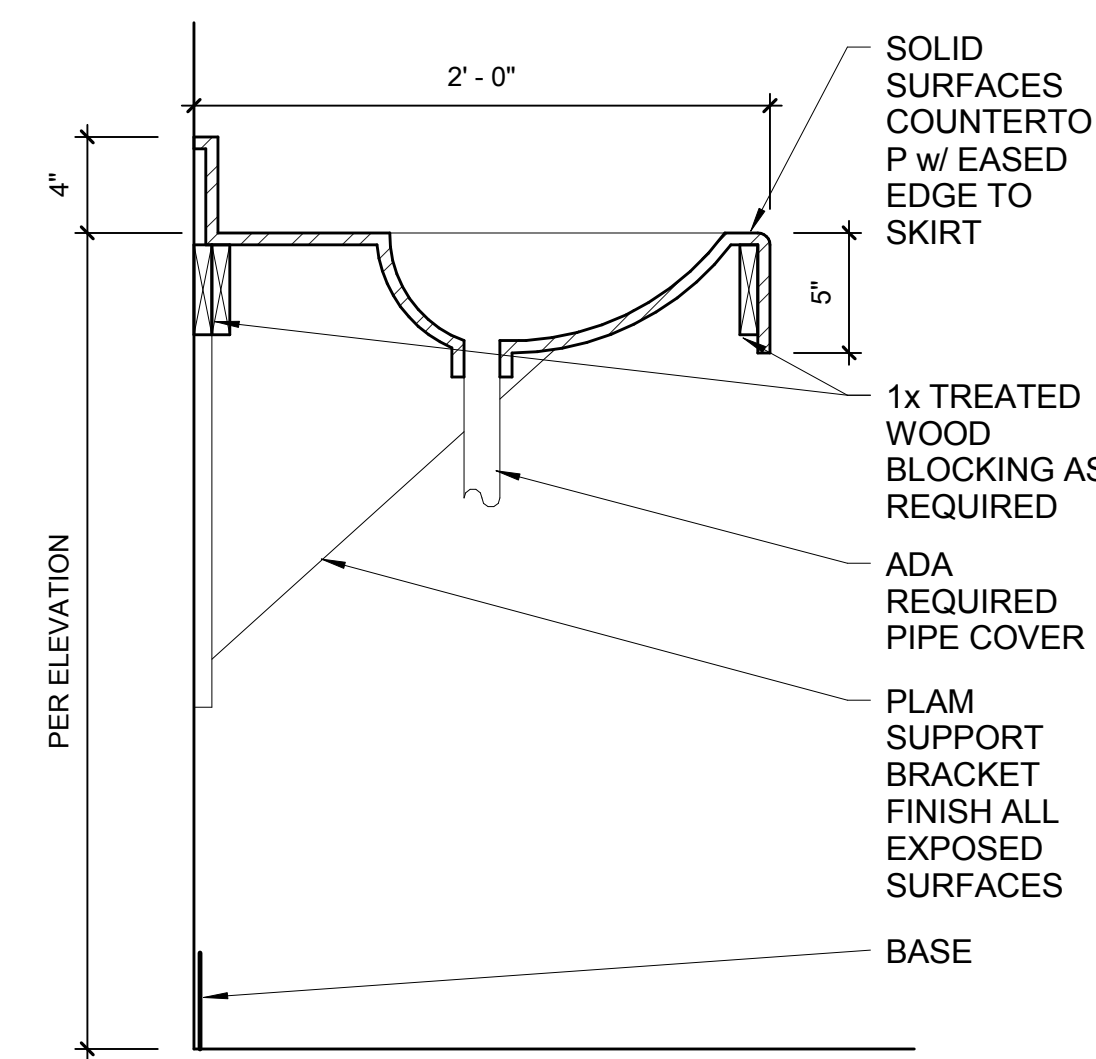
1 COAT RACK & SHELF DETAIL

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



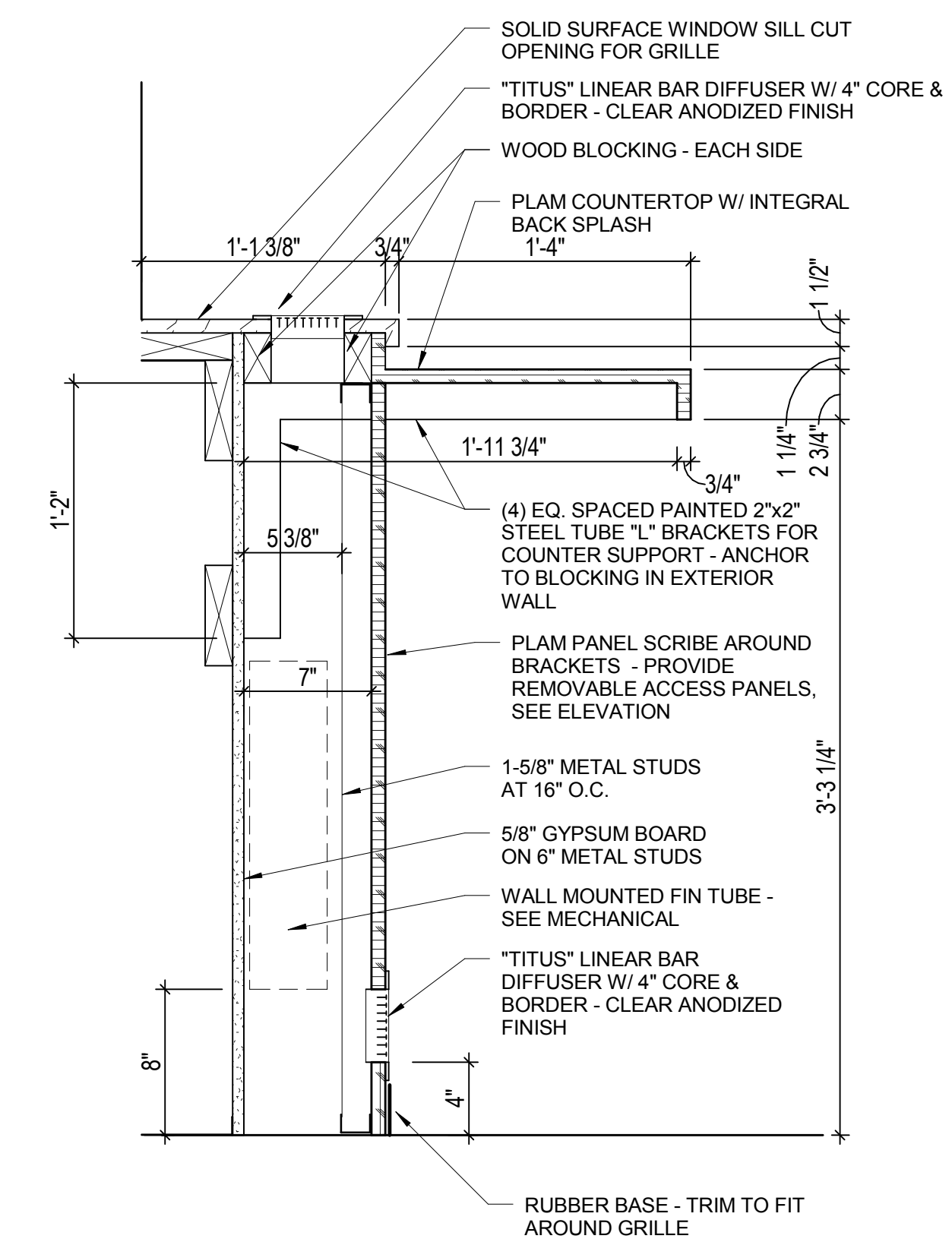
2 TRASH CHUTE DETAIL

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



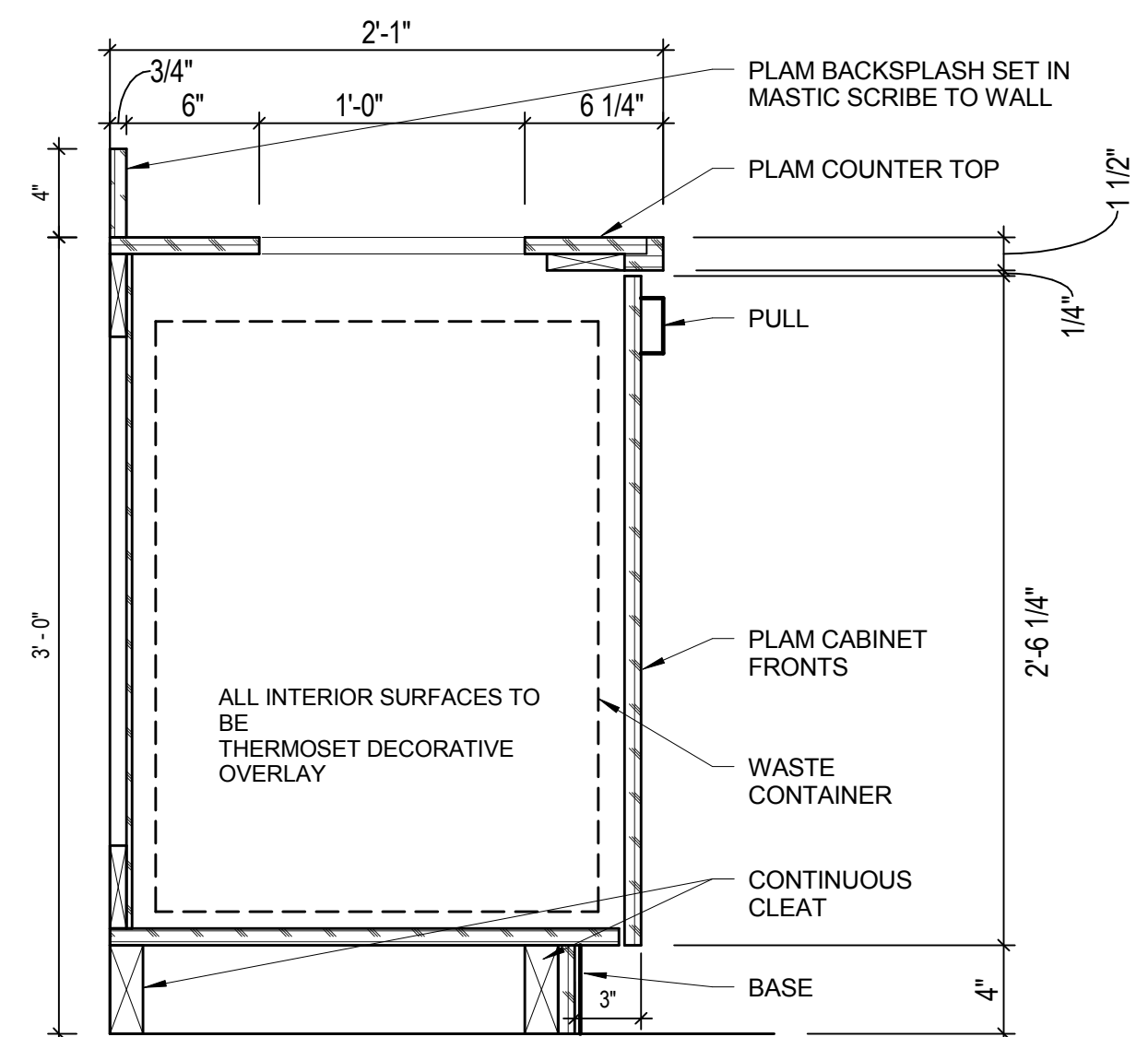
3 VANITY DETAIL

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



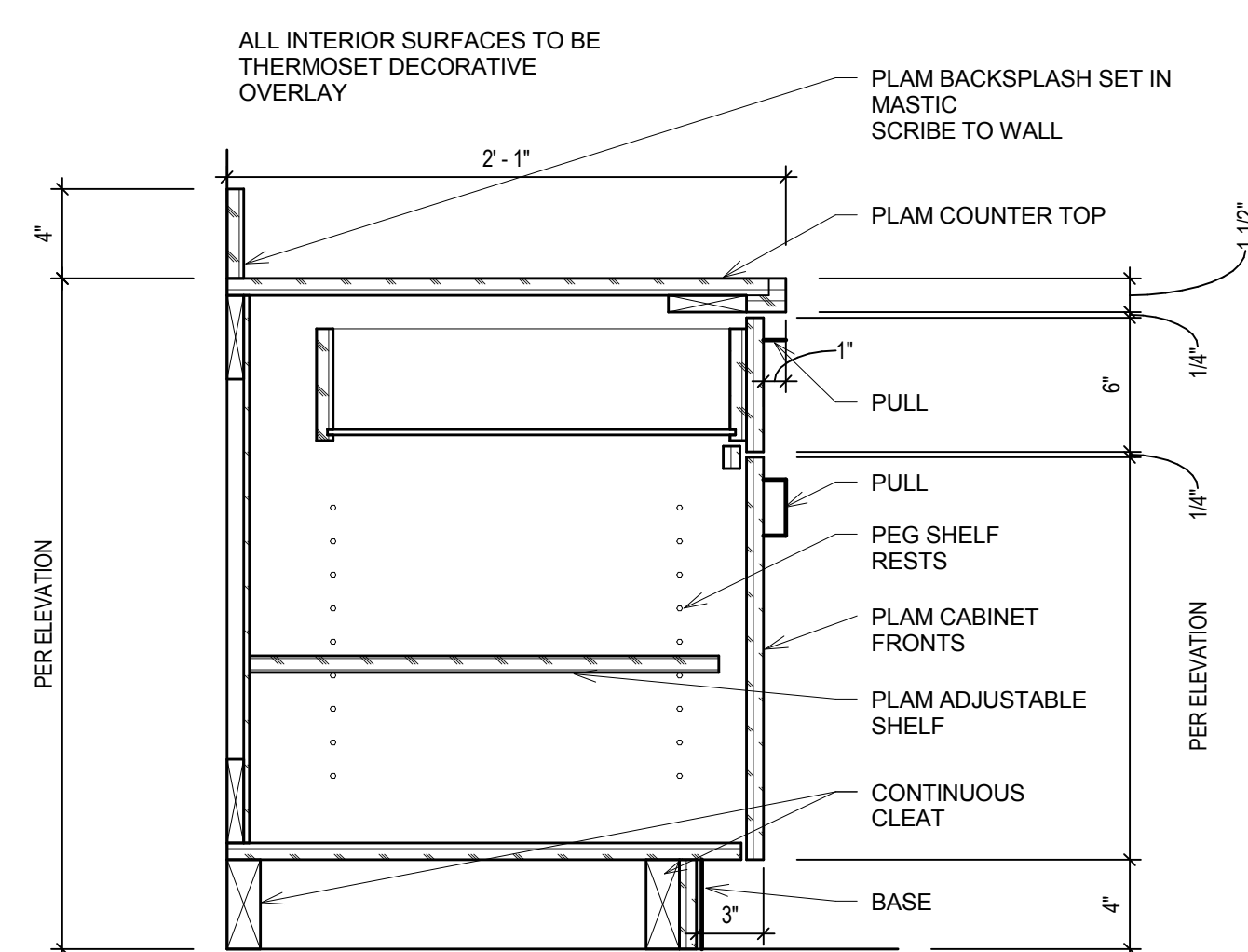
4 BREAKROOM COUNTER DETAIL

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



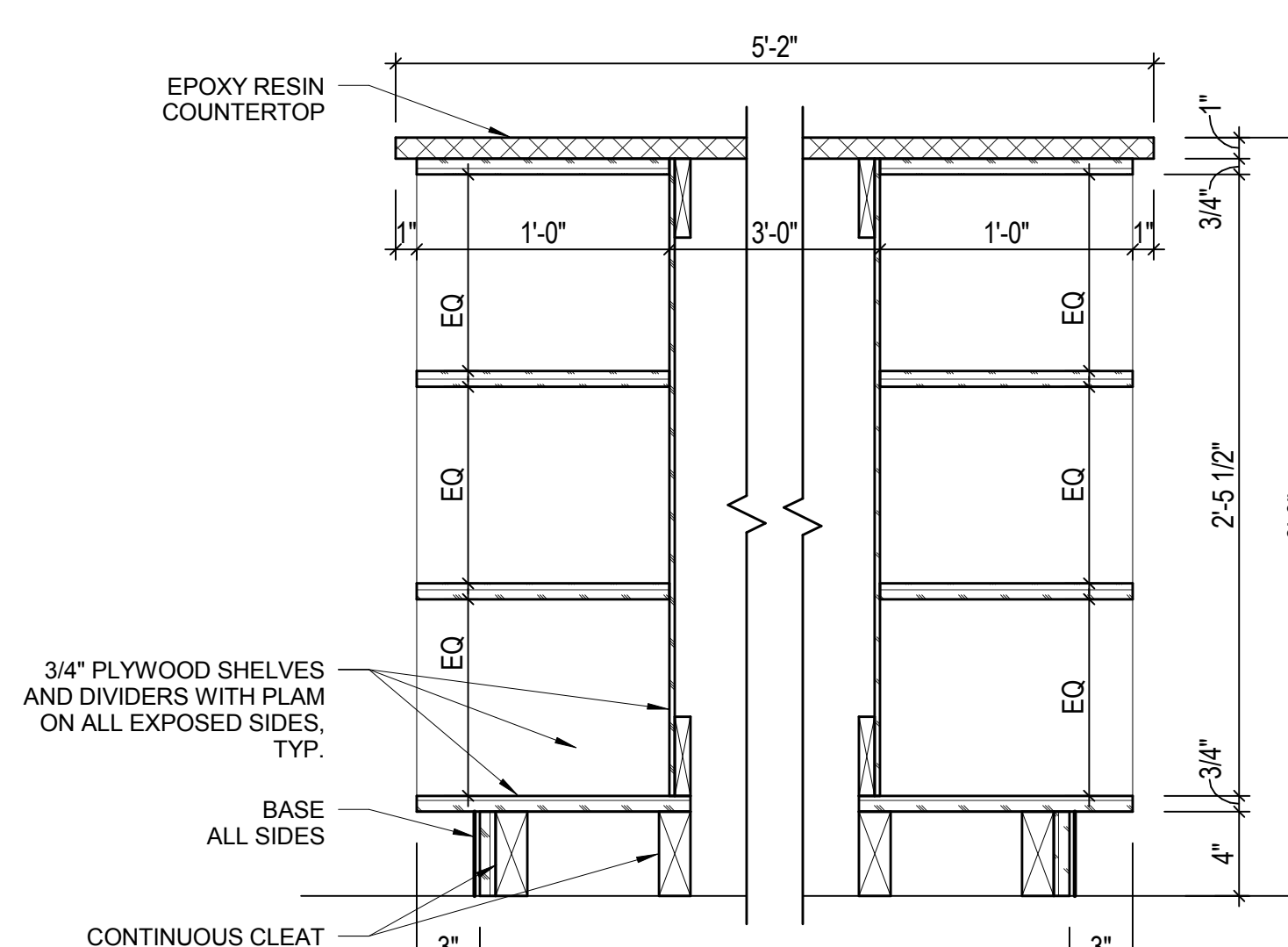
5 BASE TRASH PULLOUT

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



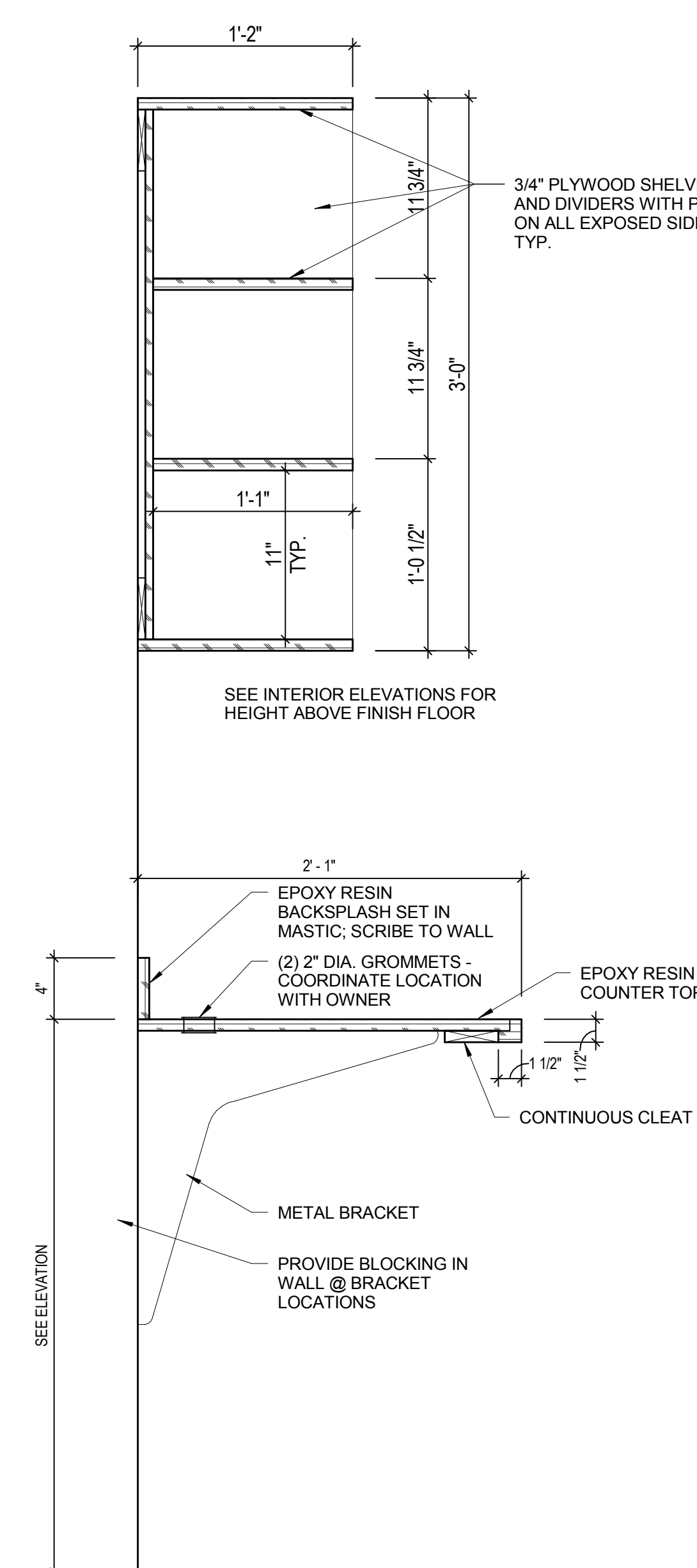
6 TYPICAL BASE CABINET

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



7 PROPERTY ROOM TABLE

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



8 WORKCOUNTER CASEWORK

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

POLICE DEPARTMENT MIDTOWN DISTRICT

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

REVISION FOR:
NO. DESCRIPTION DATE

DRAWN BY CHRMAR

CHECKED BY Checker

GENERAL NOTES

S001

DESIGN CRITERIA

- CODES:
 - INTERNATIONAL BUILDING CODE (IBC) 2009
 - AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-08)
 - AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-08)
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
 - ALLOWABLE STRENGTH DESIGN (ASD)(AISC 360-05) THIRTEENTH EDITION, 2005
 - AMERICAN WELDING SOCIETY D1.1
 - AMERICAN INSTITUTE (AISI) SPECIFICATION FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS, 2015
- DESIGN LOADS:
 - OCCUPANCY CATEGORY IV
 - BACKFILL 55 PCF
 - EQUIVALENT FLUID PRESSURE
 - SEISMIC (IBC)
 - SOIL CLASSIFICATION D
 - SPECTRAL RESPONSE ACCELERATION, S_s 0.110 g
 - SPECTRAL RESPONSE ACCELERATION, S₁ 0.041 g
 - SHORT PERIOD DESIGN ACCELERATION, S_{0.2} 0.111 g
 - LONG PERIOD DESIGN ACCELERATION, S_{d1} 0.066 g
 - IMPORTANCE FACTOR 1.50
 - SEISMIC DESIGN CATEGORY A
 - SEISMIC FORCE RESISTING SYSTEM STEEL SYSTEMS NOT SPECIFICALLY DESIGNED FOR SEISMIC RESISTANCE & ORDINARY REINFORCED MASONRY WALLS
 - RESPONSE MODIFICATION FACTOR, R 2
 - ANALYSIS PROCEDURE ASCE 7-05 SECTION 11.7
 - SEISMIC RESPONSE COEFFICIENT, C_s 0.01
 - DESIGN BASE SHEAR, V = C_s x W 0.01 x W
 - WIND - PARAMETERS
 - BASIC WIND SPEED 90 MPH
 - IMPORTANCE FACTOR 1.15
 - EXPOSURE CLASS B
 - WIND - MAIN WIND FORCE RESISTING SYSTEM PRESSURES
 - WIND DESIGN PRESSURE 15 PSF
 - ROOF UPLIFT PRESSURE 18 PSF (GROSS) [I.C. 1.0W]
 - ROOF UPLIFT PRESSURE 6 PSF (NET) [I.C. 0.8DL + 1.0 WL]
 - WIND - ELEMENTS AND COMPONENTS PER APPLICABLE BUILDING CODE
- LIVE LOADS:
 - CORRIDOR AND PUBLIC SPACE 100 PSF UNREDUCIBLE
 - MECHANICAL 125 PSF UNREDUCIBLE
 - OFFICE 50 PSF UNREDUCIBLE
 - PARTITIONS 20 PSF UNREDUCIBLE
 - STAIRS 100 PSF UNREDUCIBLE
- SNOW LOADS:
 - GROUND SNOW LOAD 30 PSF
 - SNOW EXPOSURE FACTOR 0.9
 - THERMAL FACTOR 1.0
 - IMPORTANCE FACTOR 1.2
 - FLAT ROOF SNOW LOAD 24 PSF
 - DRIFTING LOAD 15 PSF
 - DRIFTING LOAD REFER TO PLAN
- NET ALLOWABLE SOIL BEARING PRESSURES
 - SPREAD FOOTINGS 3500 PSF
 - CONTINUOUS FOOTINGS 3000 PSF
- MINIMUM FROST PROTECTION DEPTH FROM ADJACENT GRADE:
 - EXTERIOR FOOTINGS ADJACENT TO HEATED AREA -4'-0"
 - EXTERIOR FOOTINGS IN UNHEATED AREA -4'-7"
- SPECIFIED 28-DAY CONCRETE COMPRESSIVE STRENGTHS (f'_c)
 - SLAB ON DECK 4000 PSI
 - FOOTINGS 3000 PSI
 - FOUNDATION WALLS 4000 PSI
 - SLAB ON GRADE 4000 PSI
 - PRECAST 4000 PSI
 - TYPICAL UNLESS NOTED OTHERWISE 4000 PSI
- CONCRETE REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE FOLLOWING STANDARDS:
 - CAST-IN-PLACE REINFORCING BARS ASTM A615, GRADE 60 F_y = 60 KSI
 - WELDED WIRE REINFORCING ASTM A185 F_y = 65 KSI
 - EPOXY-COATED REINFORCING BARS ASTM A775 F_y = 60 KSI
- MATERIALS FOR CONCRETE UNIT MASONRY SHALL CONFORM TO THE FOLLOWING STANDARDS:
 - CONCRETE MASONRY UNITS ASTM C90
 - MORTAR MATERIALS ASTM C270, TYPE S
 - GROUT FOR MASONRY ASTM C1315
 - REINFORCING STEEL FOR MASONRY ASTM A615, GRADE 60 (UNO)
 - FLATE AND BENT BAR ANCHORS ASTM A1008
 - SHEET METAL ANCHORS AND TIES ASTM A185
 - WIRE MESH TIES ASTM A951
 - WIRE TIES AND ANCHORS ASTM A937, GRADE A
 - ANCHOR BOLTS FOR MASONRY
- MINIMUM 28 DAY COMPRESSIVE STRENGTHS FOR MASONRY (f_m):
 - DESIGN ASSEMBLY STRENGTH, f_m 1500 PSI
 - INDIVIDUAL CONCRETE MASONRY UNITS 1800 PSI
 - MORTAR FOR MASONRY (TYPE S REQUIRED) 2000 PSI
 - GROUT FOR MASONRY 2000 PSI
- PRECAST CONCRETE PRESTRESSING STEEL WIRE SHALL BE HIGH STRENGTH STEEL WIRES HAVING A MINIMUM ULTIMATE STRENGTH OF 270,000 PSI AND CONFORM TO ASTM A416.
 - STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:
 - WIDE FLANGE SECTIONS ASTM A992 F_y = 50 KSI
 - OTHER ROLLED SECTIONS ASTM A36 F_y = 36 KSI
 - SQUARE AND RECTANGULAR HSS ASTM A500, GR B F_y = 46 KSI
 - SQUARE, RECTANGULAR, ROUND HSS ASTM A1085 F_y = 46 KSI
 - CAP AND BASE PLATES ASTM A36 F_y = 36 KSI
 - CONNECTION MATERIAL ASTM A36 F_y = 36 KSI
 - ANCHOR PLATES ASTM A36 F_y = 36 KSI
 - ANCHOR RODS ASTM F1554, GR 36 F_y = 36 KSI
 - HIGH STRENGTH BOLTS (AISC 360-05 ASD) A325 (3/4" DIAMETER UNO) F_y = 24 KSI
 - HIGH STRENGTH BOLTS (AISC 360-05 LRFD) A325 (3/4" DIAMETER UNO) F_y = 36 KSI
 - TWIST-OFF BOLT/NUT/WASHER ASSEMBLIES ASTM F182
 - HEAVY HEX NUTS ASTM A563
 - WASHERS ASTM F436
 - HEADED WELDED STEEL STUDS ASTM A108, TYPE B
 - ELECTRODES FOR ARC WELDING AWS A5.1, E70XX
- COLD-FORMED STRUCTURAL STUDS SHALL CONFORM TO THE FOLLOWING STANDARDS:
 - ROLLED SECTIONS, CONNECTION MATERIAL, STIFFENER, PLATES 16 GAUGE AND THINNER ASTM A653, GR 33 F_y = 33 KSI
 - 16 GAUGE AND THICKER ASTM A653, GR 40 F_y = 50 KSI
 - ANCHOR RODS ASTM A36 F_y = 36 KSI
 - CONNECTION MATERIAL (3/16" THICK) ASTM F1554, GR 36 F_y = 36 KSI
 - ANCHOR RODS ASTM A307 F_y = 36 KSI
 - BOLTS ASTM A307 F_y = 10 KSI
 - COATINGS - HOT DIPPED ASTM A924, 660
 - ELECTRO - PLATE ASTM A951
 - ALUMINUM - ZINC ASTM A792, GR 40
 - INSTALLATION ASTM C955 AND ASTM C1007
 - ELECTRODES FOR ARC WELDING AWS A5.1, E60XX
- STEEL DECK AND ALL ACCESSORIES SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO THE FOLLOWING STANDARDS:
 - GALVANIZED COMPOSITE FLOOR DECK ASTM A653, GR 50 F_y = 50 KSI
 - GALVANIZED STEEL ROOF DECK ASTM A653, GR 33 F_y = 33 KSI
- THERMAL INSULATION MATERIAL
 - A. THERMAL INSULATION MATERIAL AND WASHER SHALL CONFORM TO THE FOLLOWING PROPERTIES:
 - COMPRESSIVE STRENGTH 40,000 PSI ASTM D638
 - COMPRESSIVE MODULUS 673,400 PSI ASTM D695
 - SHEAR STRENGTH 16,000 PSI ASTM D732
 - THERMAL CONDUCTIVITY ASTM C1518 01 05 BTU IN/HR SF DEGREE F
 - COEFFICIENT OF THERMAL EXPANSION ASTM E831Z 2, 10E-6 IN/IN DEGREE F
 - THERMAL RESISTANCE (R VALUE) ASTM C518 95 HR SF DEGREE F/BTU
 - B. ACCEPTABLE MANUFACTURERS:
 - 1. ARMAATHERM
 - OR PRE-APPROVED MANUFACTURER.

- FLOOR, WALL AND ROOF FINISHES.
- STAIR FRAMING AND DETAILS. ALSO REFER TO STAIR MANUFACTURER'S APPROVED SHOP DRAWINGS.
- DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
- FIRE PROTECTION REQUIREMENTS.
- REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
 - A. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALLS AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN.
 - B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
 - C. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
 - D. SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES OR CURBS AND ANCHOR BOLTS FOR MOTOR MOUNTS.
- BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, EACH BIDDER SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPES OF EQUIPMENT, ETC. THE BID SHALL INCLUDE ALL SLIMS REQUIRED TO DO THE WORK WITHIN THE EXISTING CONDITIONS, DISRUPTION OF NORMAL ACTIVITIES IN THE WORK AREA SHALL BE KEPT TO A MINIMUM.
- SHOP DRAWINGS PREPARED BY SUPPLIERS, SUBCONTRACTORS, AND OTHERS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED, INITIALED AND DATED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR.
- SHOP DRAWINGS PREPARED BY THE SUBCONTRACTORS, SUPPLIERS, AND OTHERS SHALL BE REVIEWED BY THE ARCHITECT ONLY FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. REVIEW BY THE ARCHITECT SHALL NOT BEGIN WITHOUT THE PRIOR COORDINATION AND REVIEW BY THE GENERAL CONTRACTOR. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE ARCHITECT. NOTATIONS MADE BY THE ARCHITECT ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
- OPTIONS ARE FOR THE CONTRACTOR'S CONVENIENCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES RESULTING FROM CHOOSING AN OPTION AND SHALL COORDINATE ALL DETAILS. THE COST OF ADDITIONAL DESIGN WORK NECESSITATED BY SELECTION OF AN OPTION SHALL BE BORNE BY THE CONTRACTOR.
- THE COST OF ADDITIONAL DESIGN WORK DUE TO ERRORS OR OMISSIONS BY THE CONTRACTOR IN CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.
- ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW OR RECORD SHALL BEAR THE STAMP AND SIGNATURE OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WISCONSIN.
- ELEVATIONS ARE BASED ON THE FIRST FLOOR ELEVATION OF (+100'-0") WHICH IS EQUAL TO CIVIL ELEVATION OF (1017'-5").

FOUNDATIONS/SLAB-ON-GRADE

- CROSS REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS TO ASSURE PROPER DIMENSIONS AND PLACEMENT OF ALL ANCHOR BOLTS, INSERTS, NOTCHES, EDGES IN GRADE BEAMS, FOUNDATION WALLS AND PIERS.
- FOUNDATION DESIGN BASED ON GEOTECHNICAL ENGINEERING REPORT, C10050-1 DATED APRIL 28, 2016 BY GCG, INC. REPORT IS ON FILE WITH THE ARCHITECT.
- ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOOR IS COMPLETELY IN PLACE AND HAS ATTAINED FULL STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS, AND INSTALLATION OF SHORING AND/OR SHEETING. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB ABOVE IS IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS.
- UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL BE CENTERED UNDER WALLS, PIERS OR COLUMNS.
- PROVIDE SAW CUT CONTROL JOINTS IN ALL SLABS-ON-GRADE. LOCATE JOINTS ALONG COLUMN LINES WITH INTERMEDIATE JOINTS SPACED PER THE TABLE BELOW. UNLESS NOTED OTHERWISE, CONTROL JOINTS SHALL BE CONTINUOUS, NOT STAGGERED. CONTROL JOINTS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5 TO 1. PROVIDE ADDITIONAL CONTROL JOINTS AT ALL RE-ENTRANT CORNERS FORMED IN SLAB ON GRADE.

SLAB ON GRADE THICKNESS	MAX JOINT SPACING
4"	12'-0"
6"	15'-0"

REINFORCING STEEL

- FOR CAST-IN-PLACE CONCRETE THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT UNLESS NOTED OTHERWISE:
 - CONCRETE CAST AGAINST PERMANENTLY EXPOSED TO EARTH 3 INCHES
 - CONCRETE EXPOSED TO EARTH OR WEATHER NO. 6 BARS OR LARGER 2 INCHES
 - NO. 8 BARS OR SMALLER 1 1/2 INCHES
 - BEAMS AND COLUMNS NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH 1 1/2 INCHES
 - SLAB AND WALLS NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH NO. 11 BARS OR SMALLER 3/4 INCHES
- DIMENSIONS OF CONCRETE COVER FOR REINFORCEMENT INDICATED ON DRAWINGS ARE TO OUTERMOST REINFORCING BARS. FOR BEAMS OR COLUMNS WITH STIRRUPS OR TIES, CLEAR COVER INDICATED IS TO STIRRUPS OR TIES.
- BAR SPLICES: SPLICE REINFORCING WHERE INDICATED ON THE DRAWINGS. ALL SPLICES SHALL BE CLASS 'B' AS DEFINED IN ACI 318. IF SPLICE LENGTH IS NOT GIVEN ON THE DRAWINGS, PROVIDE LAP LENGTHS (IN INCHES) AS FOLLOWS:

BAR SIZE	3000 PSI CONCRETE		4000 PSI CONCRETE	
	OTHER	TOP	OTHER	TOP
#3	29	28	25	25
#4	36	47	31	41
#5	43	56	37	49
#6	63	81	54	71
#8	72	93	62	81

LAP LENGTHS ASSUME CLEAR SPACING BETWEEN BARS OF 2 BAR DIAMETERS, AND A MINIMUM COVER OF 1 BAR DIAMETER. FOR DEVELOPMENT LENGTHS, DIVIDE BY 1.3. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 1'-0" OF FRESH CONCRETE BELOW. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

- EPOXY FOR EPOXY DOWELING SHALL BE HILTI HIT HY 200, POWERS PE 1000+, OR SIMPSON SET XP. EMBEDMENT LENGTH SHALL BE AS INDICATED ON THE DRAWINGS. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

PRESTRESSED/PRECAST CONCRETE

- STRUCTURAL PRECAST IS PERFORMANCE SPECIFIED. DESIGN INFORMATION INCLUDED IN THESE DOCUMENTS ARE TO BE CONSIDERED GUIDELINES FOR BIDDING PURPOSES ONLY. CONNECTION DETAILS ARE ONLY AN INDICATION OF SUGGESTED SUPPORT AND JOINT ORIENTATION. PRECAST MEMBER DESIGN, CONNECTIONS AND SIMILAR DETAILS ARE THE RESPONSIBILITY OF THE MANUFACTURER BASED ON LOADS GIVEN ON THE PLANS AND SPECIFICATIONS.

MASONRY (CONCRETE MASONRY UNITS)

- MORTAR SHALL CONFORM TO AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) DESIGNATION CITED UNDER DESIGN CRITERIA, AND PROJECT SPECIFICATIONS. REFER TO DESIGN CRITERIA FOR MINIMUM COMPRESSIVE STRENGTH OF MORTAR.
- REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE. ALL BLOCK SHALL BE RUNNING BOND UNLESS NOTED OTHERWISE.
- THE LOAD BEARING CONCRETE MASONRY WALLS FOR THIS PROJECT WERE DESIGNED TO SPAN VERTICALLY AND BE BRACED BY THE ROOF AND FLOOR FRAMING ELEMENTS OF THE STRUCTURE. DURING CONSTRUCTION THE MASONRY CONTRACTOR SHALL PROVIDE LATERAL BRACING UNTIL THE ROOF STRUCTURE IS INSTALLED AS RECOMMENDED BY ACI 530 AND THE LATEST REVISION OF "STANDARD PRACTICE FOR BRACING MASONRY WALLS UNDER CONSTRUCTION". PREPARED BY THE COUNCIL FOR MASONRY WALL BRACING IS TO PREVENT UNNECESSARY STRESS OR DAMAGE TO THE MASONRY WALLS FROM WIND LOADS, WHICH CAN OCCUR WHILE THE WALLS ARE NOT PROPERLY BRACED BY THE ROOF AND FLOOR STRUCTURE.
- BAR SPLICES: SPLICE REINFORCING WHERE INDICATED ON THE DRAWINGS. IF SPLICE LENGTH IS NOT GIVEN ON THE DRAWINGS PROVIDE LAP LENGTHS (IN INCHES) AS FOLLOWS:

MINIMUM LAP SPLICE LENGTH	BAR SIZE	LAP LENGTH
#3		27
#4		36
#5		45
#6		54
#7		63
#8		72

POST INSTALLED STEEL ANCHORS

- POST INSTALLED EXPANSION ANCHORS SERVING AS THE BASIS OF DESIGN ARE SHOWN ON THE DRAWINGS. ACCEPTABLE ALTERNATE ANCHORS MAY BE SUPPLIED PROVIDED THAT THE QUANTITY AND CONFIGURATION MATCHES THE CAPACITY OF THE DESIGN ANCHOR QUANTITY AND CONFIGURATION. ANY ACCEPTABLE ALTERNATES ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. THE FOLLOWING TABLE SUMMARIZES THE EXPANSION ANCHORS USED ON THE PROJECT:

ANCHORED INTO:	BASIS OF DESIGN	ACCEPTABLE ALTERNATES AT CONTRACTOR'S OPTION
HOLLOW CMU	HILTI HLC SLEEVE	POWERS LOK/BOLT, ITW/RED HEAD DYNABOLT SLEEVE
GROUTED CMU	HILTI KWIK BOLT 3	POWER STUD+ SD1, SIMPSON WEDGE-ALL
UNCRACKED CONCRETE	HILTI KWIK BOLT 3	POWER STUD+ SD2, ITW/RED HEAD TRIBOLT+, SIMPSON STRONG BOLT
CRACKED CONCRETE	HILTI KWIK BOLT TZ	POWER STUD+ SD2, ITW/RED HEAD TRIBOLT+, SIMPSON STRONG BOLT
- ADHESIVE ANCHOR SYSTEMS FOR ATTACHMENT INTO CONCRETE SHALL CONSIST OF ASTM A193 GRADE B7 RODS, HEAVY DUTY NUTS AND WASHERS, AND A TWO COMPONENT STRUCTURAL ADHESIVE. ADHESIVE ANCHORING SYSTEMS SERVING AS THE BASIS OF DESIGN ARE SHOWN ON THE DRAWINGS. ACCEPTABLE ALTERNATE ANCHORS MAY BE SUPPLIED PROVIDED THAT THE QUANTITY AND CONFIGURATION MATCHES THE CAPACITY OF THE DESIGN ANCHOR QUANTITY AND CONFIGURATION. ANY ACCEPTABLE ALTERNATES ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. ANCHORING SYSTEMS INTO HOLLOW CMU SHALL INCLUDE A SCREEN TUBE. THE FOLLOWING TABLE SUMMARIZES THE ADHESIVE ANCHORS USED ON THE PROJECT:

ANCHORED INTO:	BASIS OF DESIGN	ACCEPTABLE ALTERNATES AT CONTRACTOR'S OPTION
HOLLOW CMU	HILTI HIT HY 70	POWERS AC 100+ GOLD, ITW AT ACRYLIC
GROUTED CMU	HILTI HIT HY 70	POWERS AC 100+ GOLD, ITW AT ACRYLIC, SIMPSON SET
CRACKED/UNCRACKED CONCRETE	HILTI HIT HY 200	POWERS PE 1000+, SIMPSON SET XP

STRUCTURAL STEEL

- REFER TO DRAWINGS FOR DETAIL OF DECK OPENINGS. REFER TO ARCHITECTURAL MECHANICAL, ELECTRICAL DRAWINGS, ETC., FOR EXACT SIZE, LOCATION, AND COUNT OF REQUIRED OPENINGS.
- UNLESS NOTED OTHERWISE ALL WALLS SHALL BE CONTINUOUS 1/4" FILLET WELDS.
- HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". SEE DESIGN CRITERIA FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.
- BOLTS IN SLITTED HOLES SHALL BE LOCATED IN THE CENTER OF THE HOLE AFTER FIELD ASSEMBLY IS COMPLETE, UNLESS DETAILLED OTHERWISE.
- ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY MOMENT FRAMES IN EACH ORTHOGONAL DIRECTION(S) (SEE PLAN SHEETS FOR LOCATIONS) AND REINFORCED MASONRY SHEAR WALLS IN THE BUILDING ELEVATOR SHAFT AND STAIR WELL. THE STEEL DECK AND CONCRETE FLOORS SERVE AS HORIZONTAL DIAPHRAGMS THAT DISTRIBUTE THE LATERAL WIND AND SEISMIC FORCES HORIZONTALLY TO THE VERTICAL LATERAL FRAMES. THE MOMENT FRAMES AND REINFORCED MASONRY SHEAR WALLS CARRY THE APPLIED LATERAL LOADS TO THE BUILDING FOUNDATION.

STEEL JOISTS

- DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STEEL JOIST INSTITUTE (SJI) SPECIFICATION BY A MEMBER OF THE SJI AUTHORITY FOR THE TYPE OF JOIST BEING USED. IN LIEU OF THE ABOVE REQUIREMENTS, THE FABRICATOR MAY PROVIDE A CURRENT INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO) RESEARCH RECOMMENDATION BRIDGING THE TYPE OF JOIST BEING USED.
- PROVIDE BRIDGING PER SJI SPECIFICATIONS. DESIGN AND PROVIDE UPLIFT BRIDGING TO WITHSTAND A NET UPLIFT PRESSURE AS INDICATED WITH DESIGN CRITERIA. WIND BRIDGING INTERFERES WITH MECHANICAL OR OTHER TRADES INSTALLATIONS. THE FABRICATOR SHALL REMOVE THE BRIDGING AFTER THE METAL DECK IS IN PLACE AND REPLACE AS DIRECTED BY THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT.
- ERECTOR SHALL FOLLOW MANUFACTURER'S AND STEEL JOIST INSTITUTES GUIDELINES FOR ERECTIONS STABILITY AND HANDLING.
- ATTACH STEEL JOIST TO SUPPORT PER THE FOLLOWING SCHEDULE. WHERE WELDS ARE INDICATED ON THE DETAILS, WELD TO BE INSTALLED ON BOTH SIDES OF JOIST SEAT.

JOIST SERIES	DETAILS WITH WELD INFORMATION		DETAILS WITH BOLT INFORMATION		MINIMUM END BEARING	
	WELD SIZE	WELD LENGTH	BOLT DIAMETER	BOLT MATERIAL	STEEL	MASONRY
K	1/8"	2'	1/2"	A307	2 1/2"	4"

- DESIGN JOIST SEAT FOR 1650 LBS ROLL-OVER LOAD, UNLESS NOTED OTHERWISE.

STEEL DECK

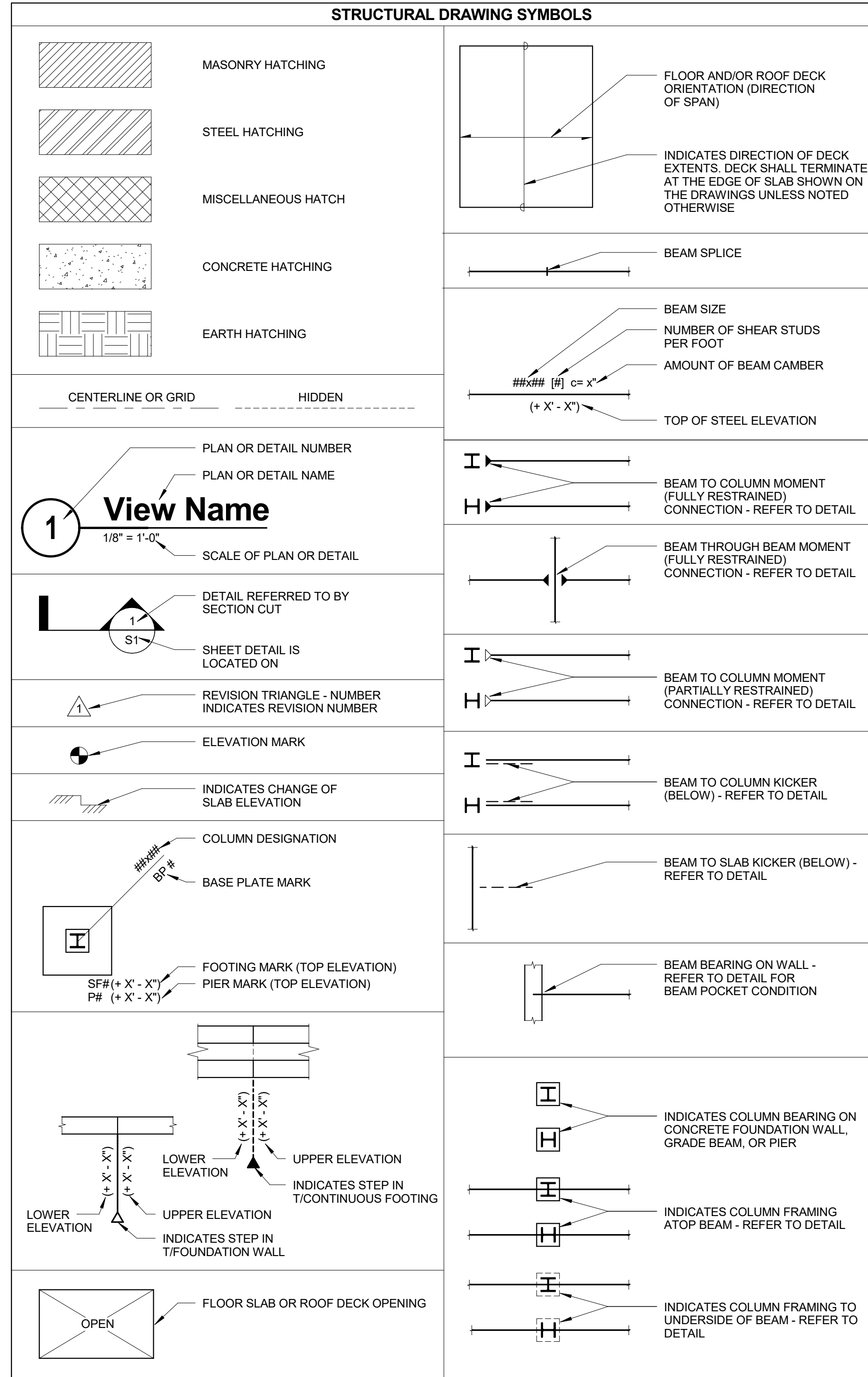
- DECK SIZE AND GAGE INDICATED IN THE DRAWINGS ARE BASED ON THE FOLLOWING:
 - A. VULCRAFT 2008 CATALOG FOR GRAVITY DESIGN LOADS.
 - B. STEEL DECK INSTITUTE (SDI) DIAPHRAGM DESIGN MANUAL 3RD EDITION FOR DIAPHRAGM LOADS.
 - C. VULCRAFT 2008 CATALOG FOR UNSHORED CONSTRUCTION SPANS.
- STEEL ROOF DECK GALVANIZING SHALL CONFORM TO ASTM A653 WITH A MINIMUM COATING OF G60.
- COMPOSITE STEEL FLOOR DECK GALVANIZING SHALL CONFORM TO ASTM A653 WITH A MINIMUM COATING OF G60.
- UNLESS NOTED OTHERWISE, DECK SHALL BE FASTENED WITH 5/8" DIAMETER PUDDLE WELDS AT 12" OC AT ALL SUPPORTS AND EDGES. SIDE LAPS SHALL BE FASTENED WITH #10 TEK SCREWS, MINIMUM ONE AT EACH MIDSPAN. OPENING EDGES SHALL RECEIVE THE SAME WELDING AS REQUIRED AT DECK ENDS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS EXPERIENCED IN COLD-FORMED STEEL DECK WORK.
- DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO STEEL ROOF DECKING (LIMITATION NOT REQUIRED) WITH CONCRETE ON STEEL DECK. THIS 25 LBS LOAD AND 2'-0" SPACING INCLUDES ADJACENT MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS HANGING FROM DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING SUPPORTED OFF STEEL FRAMING WILL NEED TO BE ADDED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATION AND WEIGHT OF ALL THE ELEMENTS BEING HUNG.
- USE SUMP PANS AT ALL ROOF DRAINS. MINIMUM THICKNESS FOR SUMP PANS SHALL BE 1/4 GAGE.

LINTELS

- PROVIDE LINTELS OVER ALL OPENINGS AND RECESSES IN MASONRY CONSTRUCTION.
- PENETRATIONS NOT IDENTIFIED ON THE DOCUMENTS ARE TO BE TREATED IN A MANNER SIMILAR TO THE IDENTIFIED LOCATIONS. LINTELS IN NON-BEARING MASONRY WALL OPENINGS CAN BE SIZED IN ACCORDANCE WITH THE MISCELLANEOUS LINTEL SCHEDULE OR/ THE NOTE BELOW. LINTELS THAT OCCUR IN EXISTING BEARING WALLS ARE TO BE SIZED ACCORDING TO SIMILAR CONDITIONS AND SPANS IN THE NEW CONSTRUCTION AND LINTEL SCHEDULE. BOTTOM PLATE SIZE SHALL BE A MINIMUM OF 3/8" THICK. THE WIDTH OF THE PLATE SHALL BE 3/4" LESS THAN THE FIELD VERIFIED WALL THICKNESS. THE PLATE SHALL BE THE FULL LENGTH OF THE LINTEL MEMBER. LINTELS ARE NOT REQUIRED OVER OPENINGS THAT ARE 12" WIDE OR LESS AND AT LEAST 1' COURSE BELOW THE TOP OF THE WALL.
- ALL LINTELS SHALL HAVE A MINIMUM OF 8" END BEARING.
- ALL LINTELS IN EXTERIOR WALL CONSTRUCTION SHALL BE HOT-DIP GALVANIZED, UNO.
- FOR ALL OPENINGS NOT OTHERWISE DETAILED OR SCHEDULED, MINIMUM LINTELS SHALL BE FOR EACH 4" INCH OF MASONRY WIDTH:
 - 2'-0" TO 4'-0" SPAN L5x5x5/16
 - 9'-0" SPAN L8x8x7/16 (LLV)
- ALL ANGLES THAT ARE BACK TO BACK SHALL BE WELDED TOP AND BOTTOM 3" AT 12" MINIMUM.
- BEARING PLATES NOT REQUIRED FOR LINTELS UNLESS NOTED OTHERWISE.

STRUCTURAL COLD-FORMED STEEL FRAMING (CFSF)

- MATERIAL, DESIGN AND MANUFACTURE SHALL BE IN ACCORDANCE WITH THE "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS" OF THE AMERICAN IRON AND STEEL INSTITUTE CURRENT EDITION.
- STRUCTURAL COLD FORM STEEL FRAMING IS DEFINED AS THE FOLLOWING:
 - A. ANY COLD FORMED FRAMING THICKER THAN 20 GA (33 MIL).
 - B. ANY EXTERIOR COLD FORMED FRAMING.
 - C. ALL OTHER STEEL TUD FRAMING IS NON-STRUCTURAL AND NOT A PART OF THE STRUCTURAL PACKAGE.
- STRUCTURAL CFSF IS PERFORMANCE SPECIFIED. DESIGN INFORMATION INCLUDED IN THESE DOCUMENTS ARE TO BE CONSIDERED GUIDELINES FOR BIDDING PURPOSES ONLY. STUD DEPTH IS REQUIRED TO MEET THOSE INDICATED IN THE PLANS. CONNECTION DETAILS ARE ONLY AN INDICATION OF SUGGESTED SUPPORT AND SLIP JOINT ORIENTATION. GAUGE, SECTION, MATERIAL, BRACING, CONNECTIONS, STIFFENERS, AND SIMILAR DETAILS ARE THE RESPONSIBILITY OF THE MANUFACTURER BASED ON LOADS GIVEN ON THE PLANS AND SPECIFICATIONS.
- CONSTRUCTION SHALL NOT BEGIN UNTIL SHOP DRAWINGS AND CALCULATIONS HAVE BEEN REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD AND THE ARCHITECT.



STRUCTURAL ABBREVIATIONS LIST

#	NUMBER	KISF	KIPS PER SQUARE FOOT
@	AT	LENGTH	LF
°	DEGREES	LF	FOOT
Δ	DIAMETER	LL	LIVE LOAD
AHU	AIR-HANDLING UNIT	LLH	LEGS LEG-HORIZONTAL
ARCH	ARCHITECT - URB - URAL	LLV	LONG LEG VERTICAL
BTM	BOTTOM OF	LSH	LONG SIDE HORIZONTAL
BEAM	BEAM FLANGE WIDTH	LSV	LONG SIDE VERTICAL
BM	BEAM	LONG	LONGITUDINAL
CPSF	COLD FORM STEEL FRAMING	MECH	MECHANICAL/ELECTRICAL
BRG	BEARING	MAX	MAXIMUM
CMU	CONCRETE MASONRY UNIT	MISC	MISCELLANEOUS
CL	CLEAR	MEZ	MEZZANINE
CONC	CONCRETE	MIN	MINIMUM
CONST	CONSTRUCTION	MARK	MARK
CONT	CONTINUOUS	N	NORTH
D	DEPTH	N	LENGTH (AS PLATES)
DBL	DOUBLE	NTS	NOT IN CONTRACT
DEG	DEGREE	NCS	NOT TO SCALE
DIM	DIMENSION	OC	ON CENTER
DL	DEAD LOAD	OPNG	OPENING
DTL	DETAIL	OPNG	OPENING
DWG	DRAWING	PAF	POWER ACTUATED FASTENER
EACH	EACH	PCF	POUNDS PER CUBIC FOOT
EA	EACH FACE	PL	PLATE
EP	EXPANSION JOINT	PSI	POUNDS PER SQUARE FOOT
ELEV	ELEVATION	PSI	POUNDS PER SQUARE INCH

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

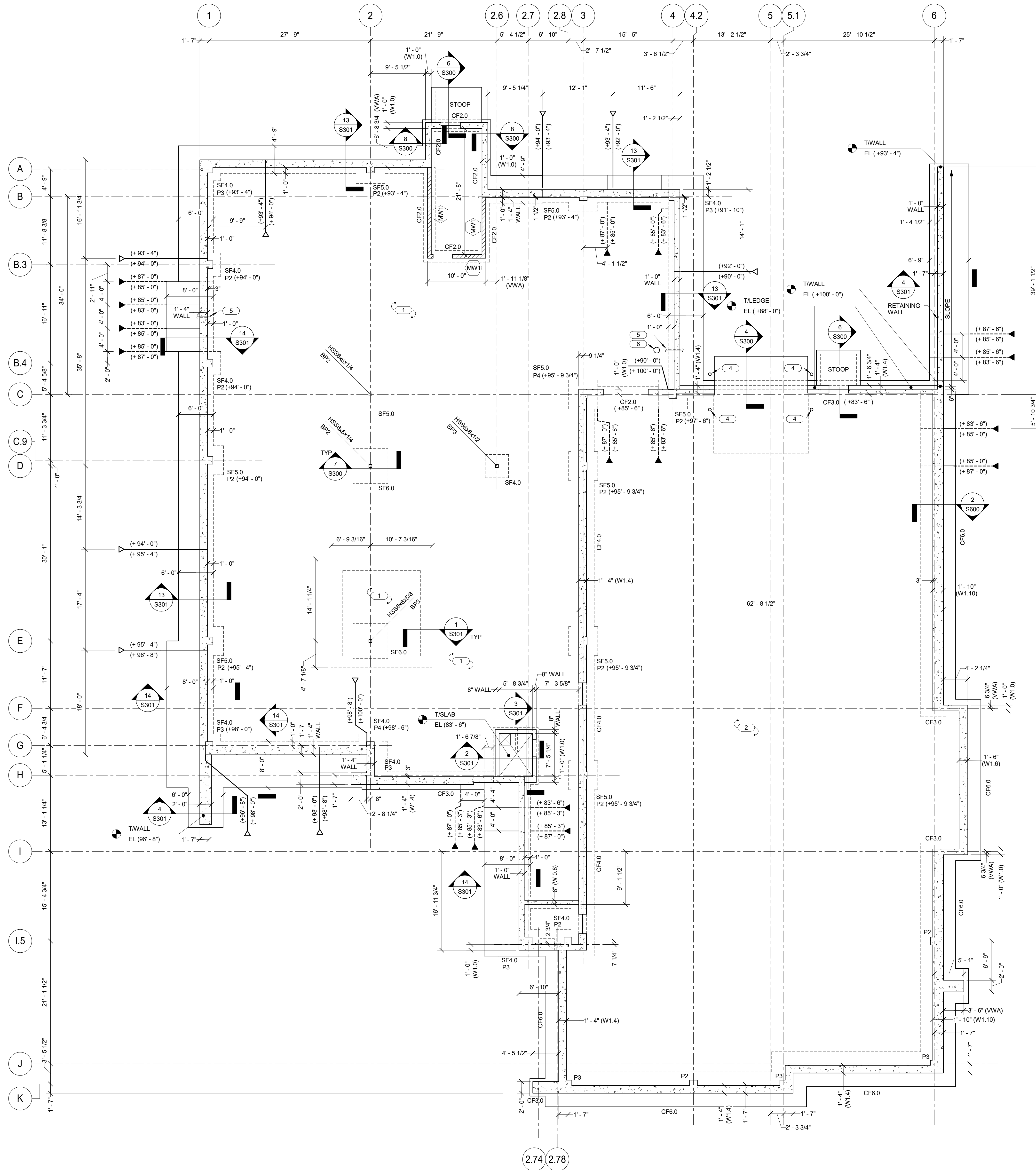
REVISION FOR:
NO. DESCRIPTION DATE

FOUNDATION PLAN

1/8" = 1'-0"

NOTES:

- TOP OF FOOTING ELEVATION (+87'-0") UNO.
 - TOP OF FOUNDATION WALL ELEVATION (+100'-0") UNO. REFER TO S400 AND S600 FOR PRECAST BEARING ELEVATIONS.
 - TOP OF PIER ELEVATION (+99'-4") UNO
 - PRECAST DOUBLE TEE BEARING EL (+95'-9 1/2"). REFER TO SHEET S300 FOR TYPICAL DOUBLE TEE DETAILS.
 - BP# INDICATES BASE PLATE. REFER TO S400 FOR ANCHOR ROD AND BASE PLATE DETAILS.
 - PI# INDICATES CONCRETE PIER. REFER TO S301 FOR DETAILS.
 - SF# AND CF# INDICATE SPREAD AND CONTINUOUS FOOTINGS. REFER TO THIS SHEET FOR SCHEDULES.
 - (MW) INDICATES MASONRY WALL. REFER TO THIS SHEET FOR SCHEDULE. MASONRY WALLS CALLED OUT ON PLAN WILL ACT AS SHEAR WALLS.
 - REFER TO 1,2 AND 3/S300 FOR TYPICAL SLAB ON GRADE CONSTRUCTION DETAILS.
 - PROVIDE CORNER BARS FOR FOOTINGS AND WALLS PER 5 AND 10/S300. BAR SIZE AND QUANTITY TO MATCH LONGITUDINAL AND HORIZONTAL BARS.
 - PROVIDE THICKENED SLAB AT ALL NON-STRUCTURAL MASONRY WALLS PER 1/S301.
 - SLEEVE UTILITIES THROUGH FOUNDATION PER 1/S300. COORDINATE SIZE AND LOCATION WITH MECHANICAL AND PLUMBING CONTRACTORS.
 - PROVIDING ADDITIONAL REINFORCING AROUND OPENINGS IN CONCRETE WALLS PER 10/S301.
- KEYNOTES:
- 4" CONCRETE SLAB ON GRADE WITH 6x6 - W2.1xW2.1 WWR. TOP OF SLAB ELEVATION (+87'-6").
 - 6" CONCRETE SLAB ON GRADE WITH 6x6 W2.9xW2.9 WWR. TOP OF SLAB ELEVATION (+87'-6"). SLOPES TO DRAIN - REF ARCH.
 - THICKENED SLAB AT BASE OF STAIR. REFER TO 1/S301.
 - PIPE BOLLARD. COORDINATE ALL LOCATIONS WITH ARCHITECTURAL DRAWINGS. REFER TO 6/S600.
 - SLEEVE UTILITIES THROUGH FOUNDATION PER 1/S202. COORDINATE SIZE AND LOCATION WITH MECHANICAL AND PLUMBING CONTRACTORS.
 - REFER TO MECHANICAL FOR SUMP PIT DETAIL.



MARK	WIDTH	REINFORCING			
		HORIZONTAL		VERTICAL	
		EXTERIOR FACE	INTERIOR FACE	EXTERIOR FACE	INTERIOR FACE
W0.8	0'-8"	#5 @12" OC	-	#5 @12" OC	#5 @12" OC
W1.0	1'-0"	#5 @18" OC	#5 @18" OC	#6 @18" OC	#6 @12" OC
W1.4	1'-4"	#5 @18" OC	#5 @18" OC	#6 @12" OC	#6 @9" OC
W1.6	1'-6"	#5 @12" OC	#5 @12" OC	#6 @12" OC	#8 @9" OC
W1.10	1'-10"	#5 @12" OC	#5 @12" OC	#6 @12" OC	#8 @9" OC

MARK	WIDTH	THICKNESS	REINFORCING	
			LONG DIRECTION	SHORT DIRECTION
			CF2.0	2'-0"
CF3.0	3'-0"	1'-0"	(3) #5 BARS	WALL DOWELS
CF4.0	4'-0"	1'-0"	(4) #5 BARS	WALL DOWELS
CF6.0	6'-0"	1'-6"	(6) #6 BARS	(6) #6 BARS @12" OC, BOTTOM

MARK	LENGTH	WIDTH	THICKNESS	REINFORCING	
				LONG DIRECTION	SHORT DIRECTION
				SF4.0	4'-0"
SF5.0	5'-0"	5'-0"	1'-0"	(5) #5	(5) #5
SF6.0	6'-0"	6'-0"	1'-3"	(7) #5	(7) #5

MARK	MEMBER BEARING, EACH END	MEMBER SIZE	REFERENCE DETAIL
L1	8"	8" BOND BEAM WITH (2) #5 BARS	1/S500
L2	8"	16" BOND BEAM WITH (2) #5 BARS	1/S500
L3	8"	HSS16x4x1/4 WITH 3/8" PLATE	11/S500

MARK	WALL THICKNESS	VERTICAL WALL REINFORCING SIZE AND SPACING	HORIZONTAL WALL REINFORCING SIZE AND SPACING
(MW1)	8"	#6 @16" OC	TYPICAL @16" OC
(MW2)	8"	#6 @16" OC, GROUT ALL CORES	TYPICAL @16" OC
(MW3)	8"	#5 @24" OC	TYPICAL @16" OC
(MW4)	8"	#5 @8" OC, GROUT ALL CORES	TYPICAL @16" OC

- NOTES:
- TYPICAL HORIZONTAL REINFORCING IS AS PER SPECIFICATIONS. IT IS INTENDED TO BE A 'DURIOWAL - LADDER TYPE' OR EQUIVALENT.
 - 'GROUT ALL CORES' INDICATES EVERY REINFORCED CORE AND UNREINFORCED CORE.
 - REINFORCED CORES ARE ALWAYS GROUTED.
 - REFER TO 9/S500 FOR TYPICAL MASONRY OPENING DETAIL.

DRAWN BY CHRMAR

CHECKED BY Checker

FOUNDATION PLAN

KJW ENGINEERING CONSULTANTS
1805 DENING WAY SUITE 200
MADISON, WISCONSIN 53702
608.223.9600 FAX: 608.836.0415
WWW.KJW.COM
PROJECT # 16.0029.00

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S100

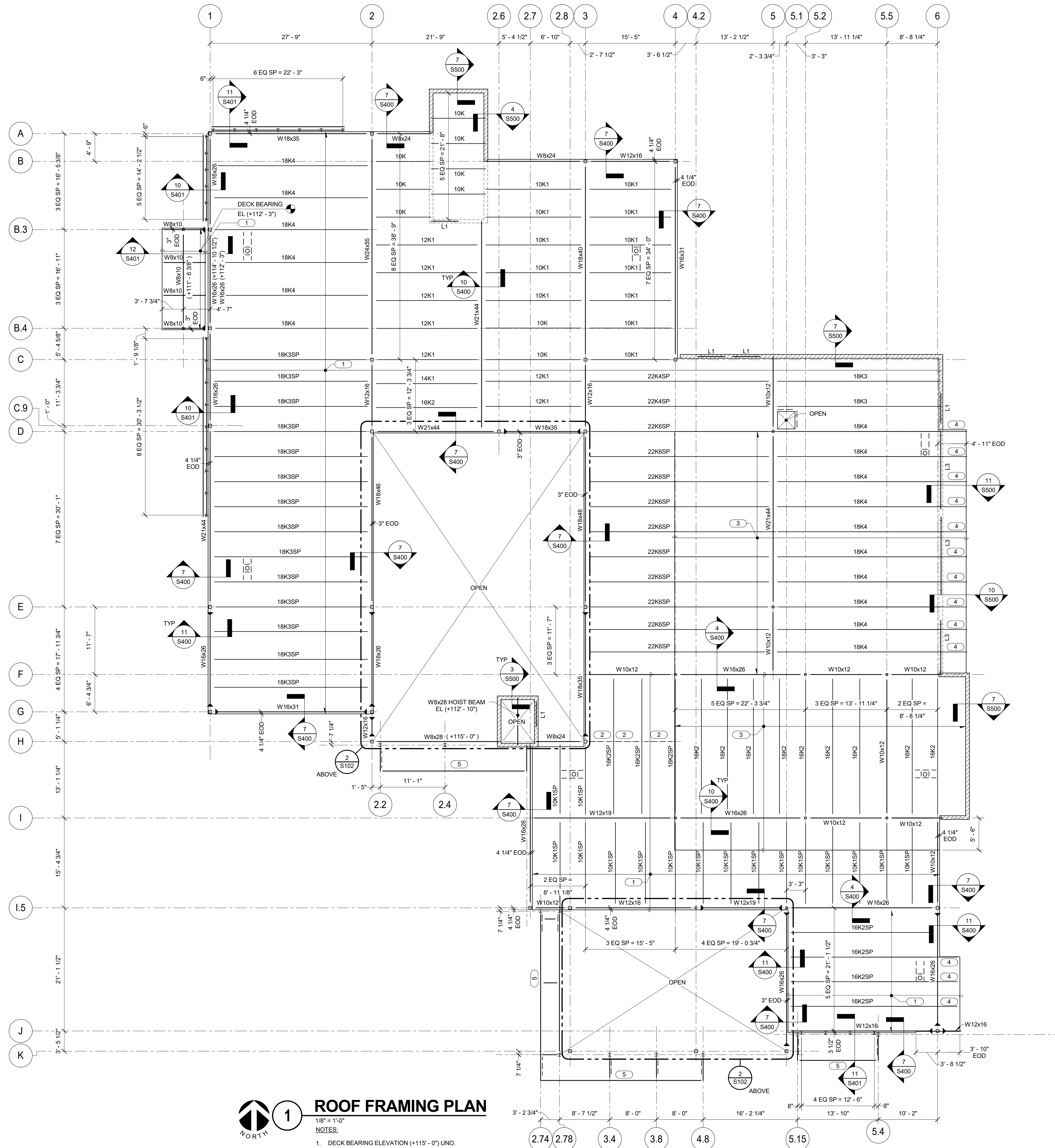
**POLICE
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MIDTOWN DISTRICT**

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211 South Carroll Street
Madison, WI 53703

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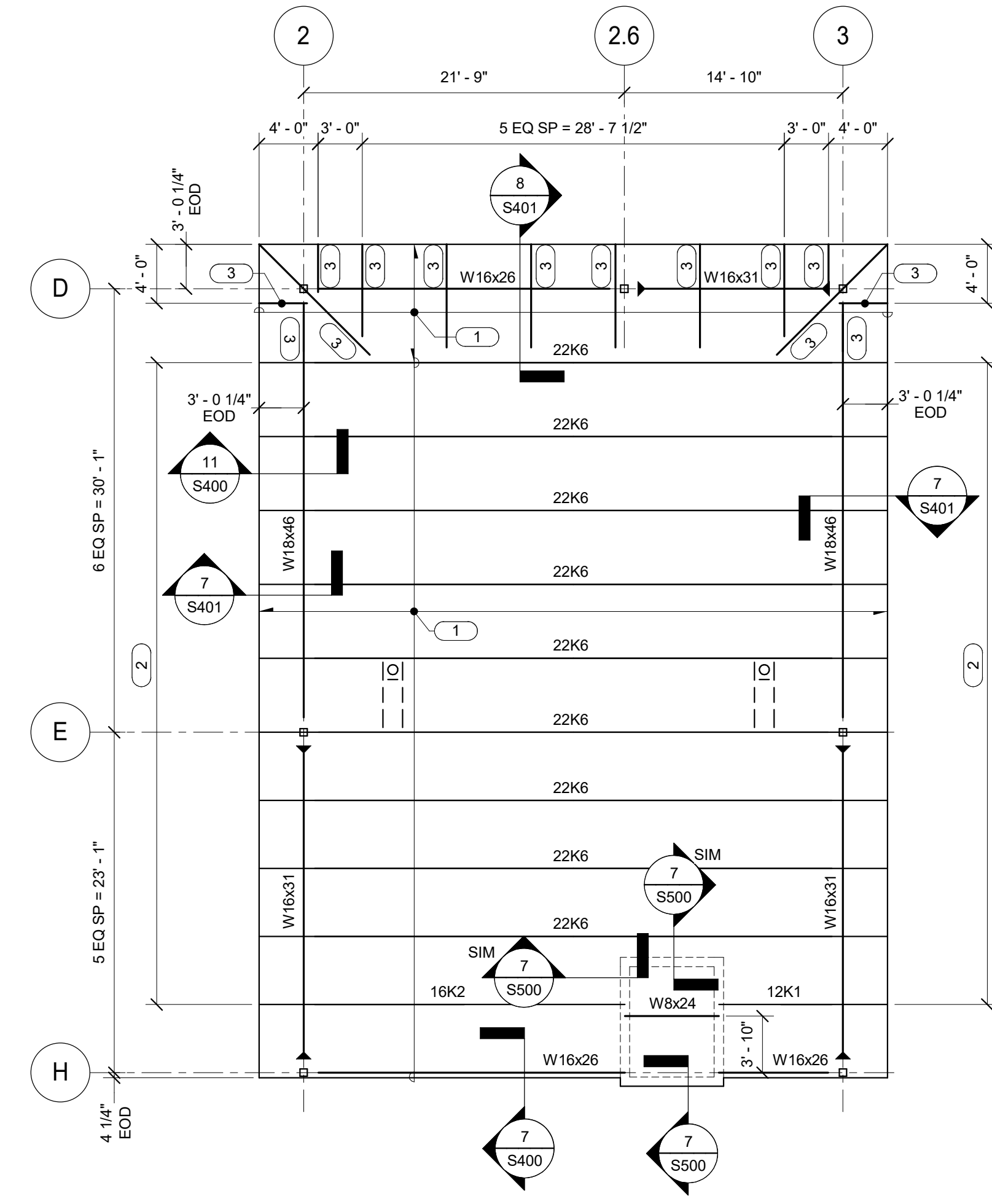
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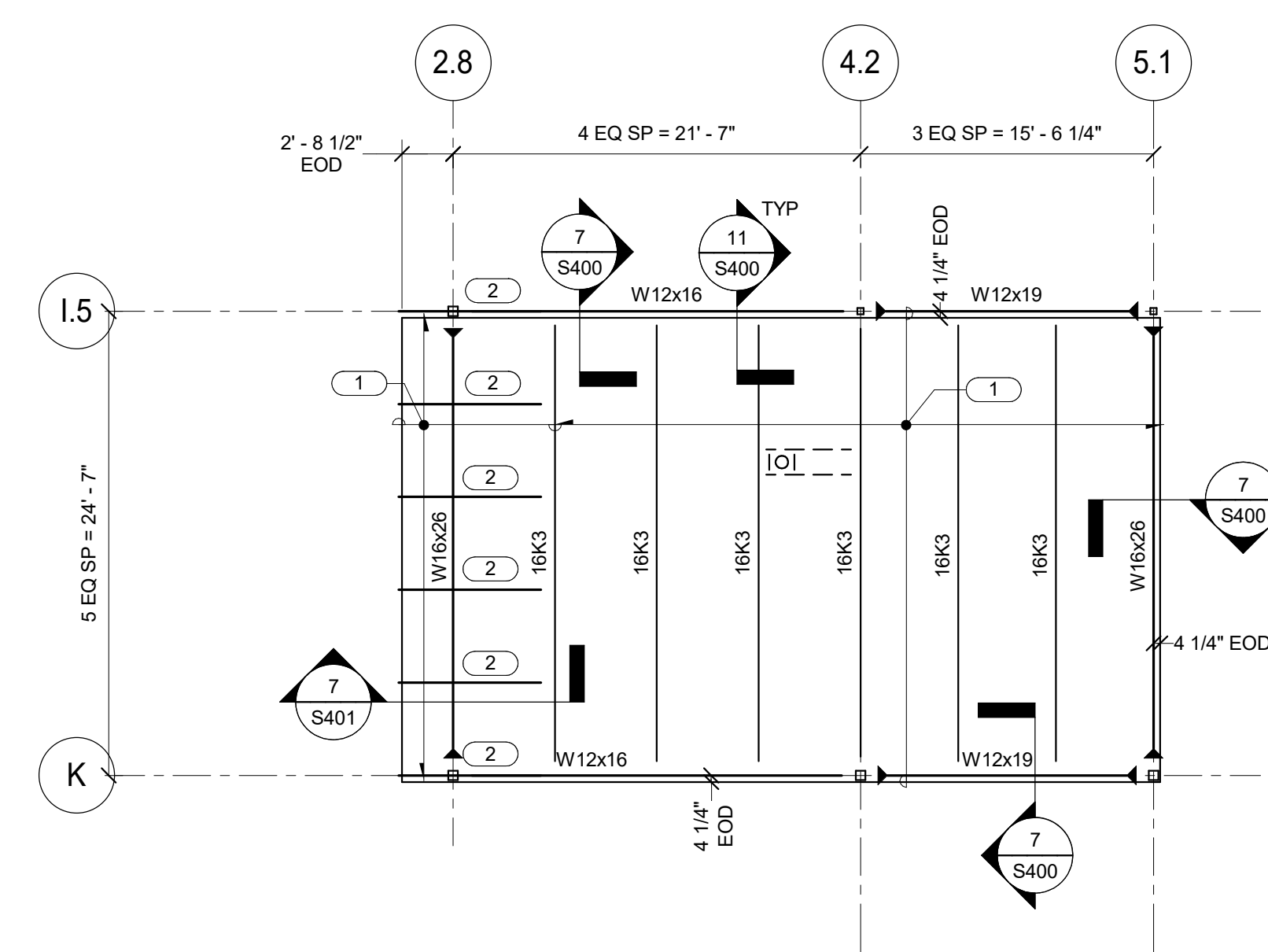
1 ROOF FRAMING PLAN

- 1/8" = 1'-0"
NOTES:
- DECK BEARING ELEVATION (+115'-0") UNO.
 - REFER TO S/S401 FOR TYPICAL SHEAR CONNECTION.
 - INDICATES MOMENT CONNECTION PER 9/S401 AND 13/S500.
 - REFER TO 3/S400 FOR DECK FASTENING REQUIREMENTS.
 - PROVIDE BRACING OF NON-STRUCTURAL MASONRY - REFER TO S100 FOR SCHEDULE.
 - FOR LINTELS IN NON-STRUCTURAL WALLS, REFER TO GENERAL NOTES FOR SCHEDULE.
 - ALL OPENINGS IN ROOF DECKING PER 9/S400.
 - #KSP# INDICATES SPECIAL JOIST, REFER TO SHEET S101 FOR LOADS. REF TO KEYNOTE 3 FOR ADDITIONAL DEAD LOAD DUE TO SOLAR PANELS.
- KEYNOTES:
- 1 1/2"(20 GA) STEEL DECK, 2 SPAN MINIMUM. FASTENING = 36/4 (2) WITH 5/8" PUDDLE WELDS AND #10 SIDELAP SCREWS.
 - L4x4x5/16 COLLECTOR MEMBERS, BUTT WELD MEMBERS AT END CONDITION.
 - ROOF STRUCTURE TO SUPPORT SOLAR ARRAY SYSTEM, APPROX 15 PSF. VERIFY FINAL SOLAR ARRAY SYSTEM SELECTED WITH ENGINEER.
 - R3 TOP CHORD EXTENSION, TYP.
 - EXTERIOR TRELLIS REFER TO ARCH.



2 CLERESTORY FRAMING PLAN

- 1/8" = 1'-0"
NOTES:
- DECK BEARING ELEVATION (+123'-2") UNO.
 - REFER TO S/S401 FOR TYPICAL SHEAR CONNECTION.
 - INDICATES MOMENT CONNECTION PER 13/S500.
 - REFER TO 3/S400 FOR DECK FASTENING REQUIREMENTS.
- KEYNOTES:
- 1 1/2"(20 GA) STEEL DECK, 2 SPAN MINIMUM. FASTENING = 36/4 (2) WITH 5/8" PUDDLE WELDS AND #10 SIDELAP SCREWS.
 - R1 TOP CHORD EXTENSION, TYP.
 - HSS2 1/2x 2 1/2x 1/4" OUTRIGGER, TYP.



3 COMMUNITY ROOM ROOF FRAMING PLAN

- 1/8" = 1'-0"
NOTES:
- DECK BEARING ELEVATION (+117'-7") UNO.
 - REFER TO S/S401 FOR TYPICAL SHEAR CONNECTION.
 - INDICATES MOMENT CONNECTION PER 13/S500.
 - REFER TO 3/S400 FOR DECK FASTENING REQUIREMENTS.
- KEYNOTES:
- 1 1/2"(20 GA) STEEL DECK, 2 SPAN MINIMUM. FASTENING = 36/4 (2) WITH 5/8" PUDDLE WELDS AND #10 SIDELAP SCREWS.
 - HSS2 1/2x 2 1/2x 1/4" OUTRIGGER, TYP.

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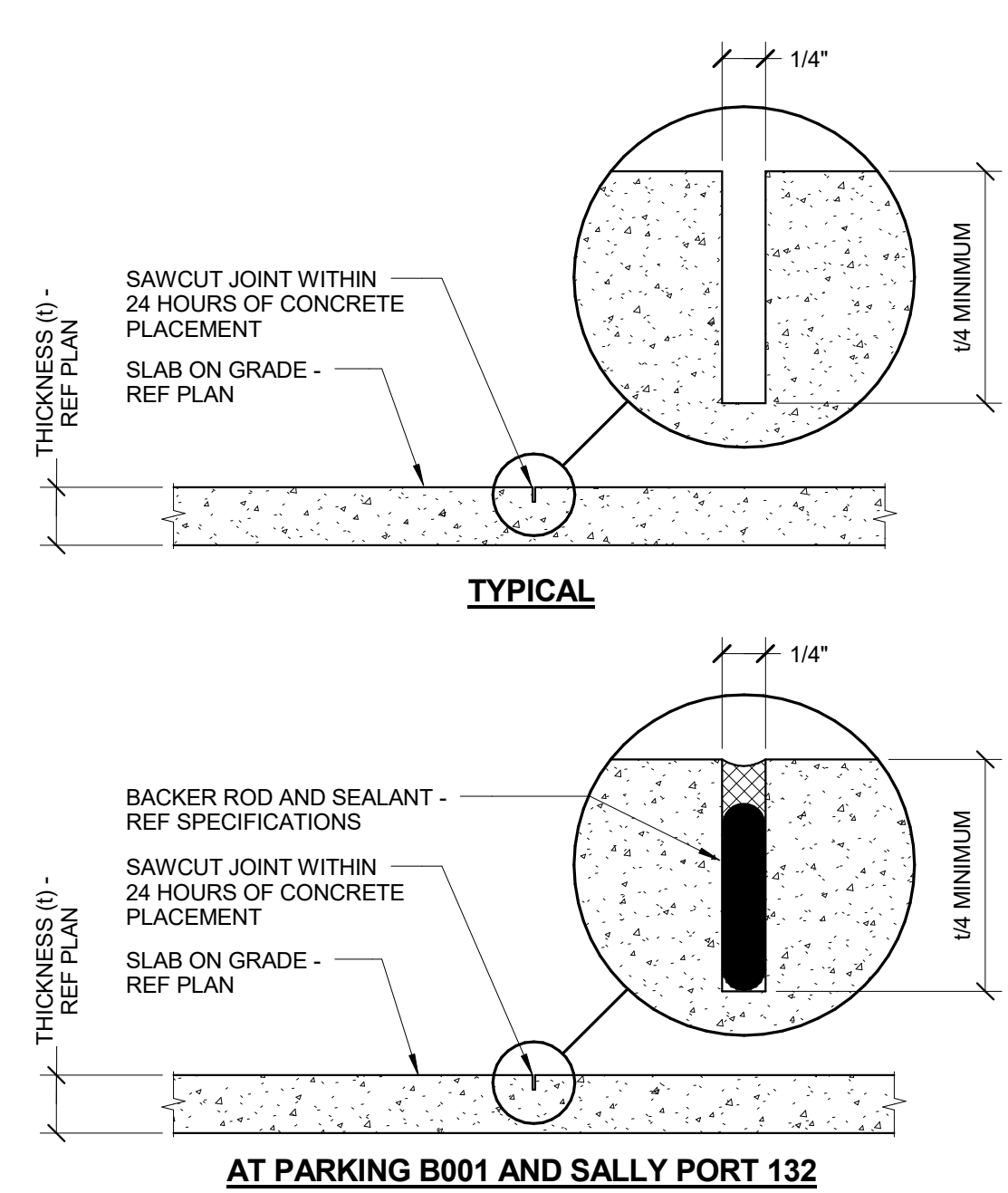
**ROOF FRAMING
PLAN**

KJ ENGINEERING CONSULTANTS
1800 DENING WAY SUITE 200
MILWAUKEE, WISCONSIN 53202
608.221.9600 FAX: 608.836.0415
WWW.KJWC.COM
THE FUTURE.
BUILT SMARTER.
PROJECT # 16.0029.00

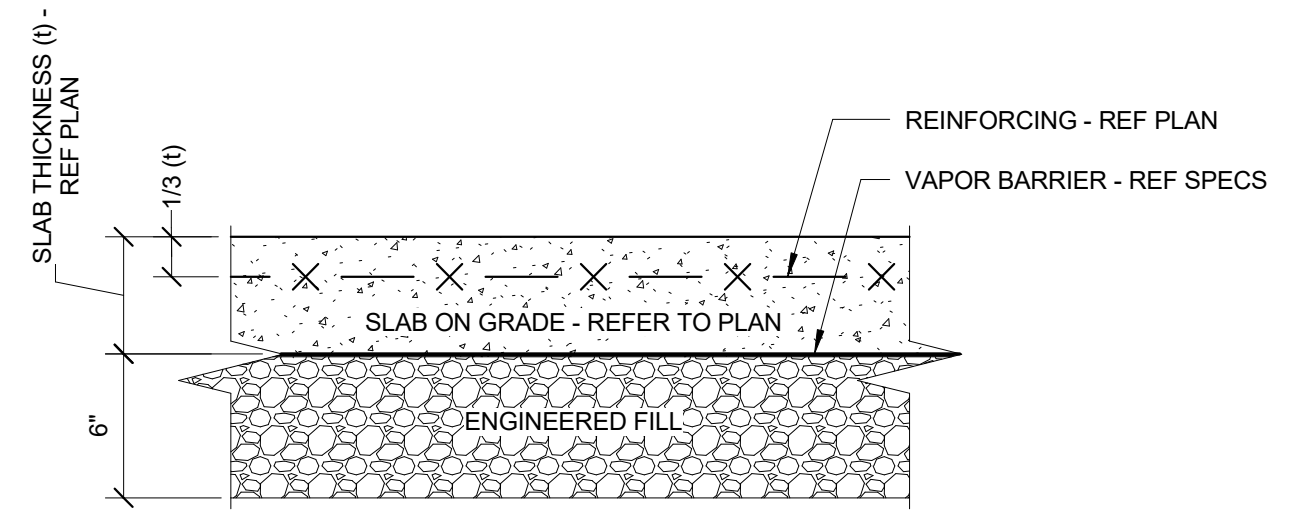
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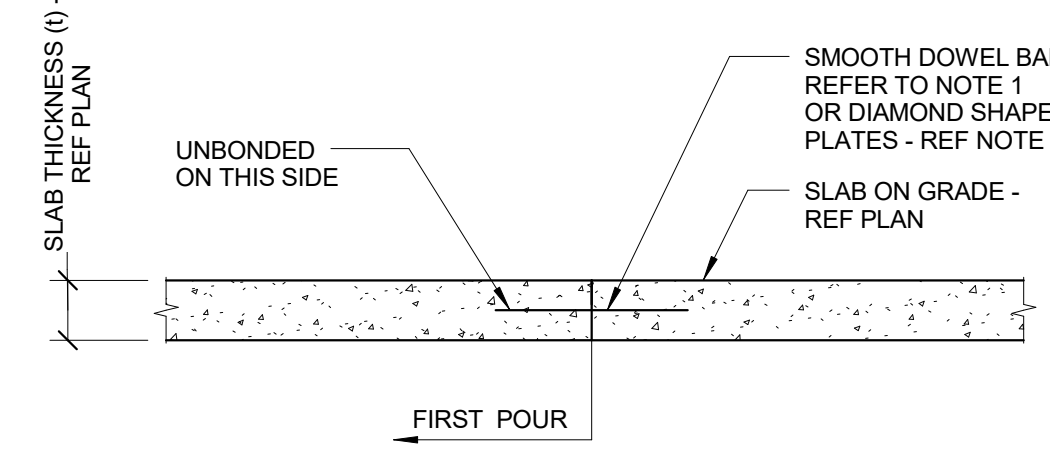
S102



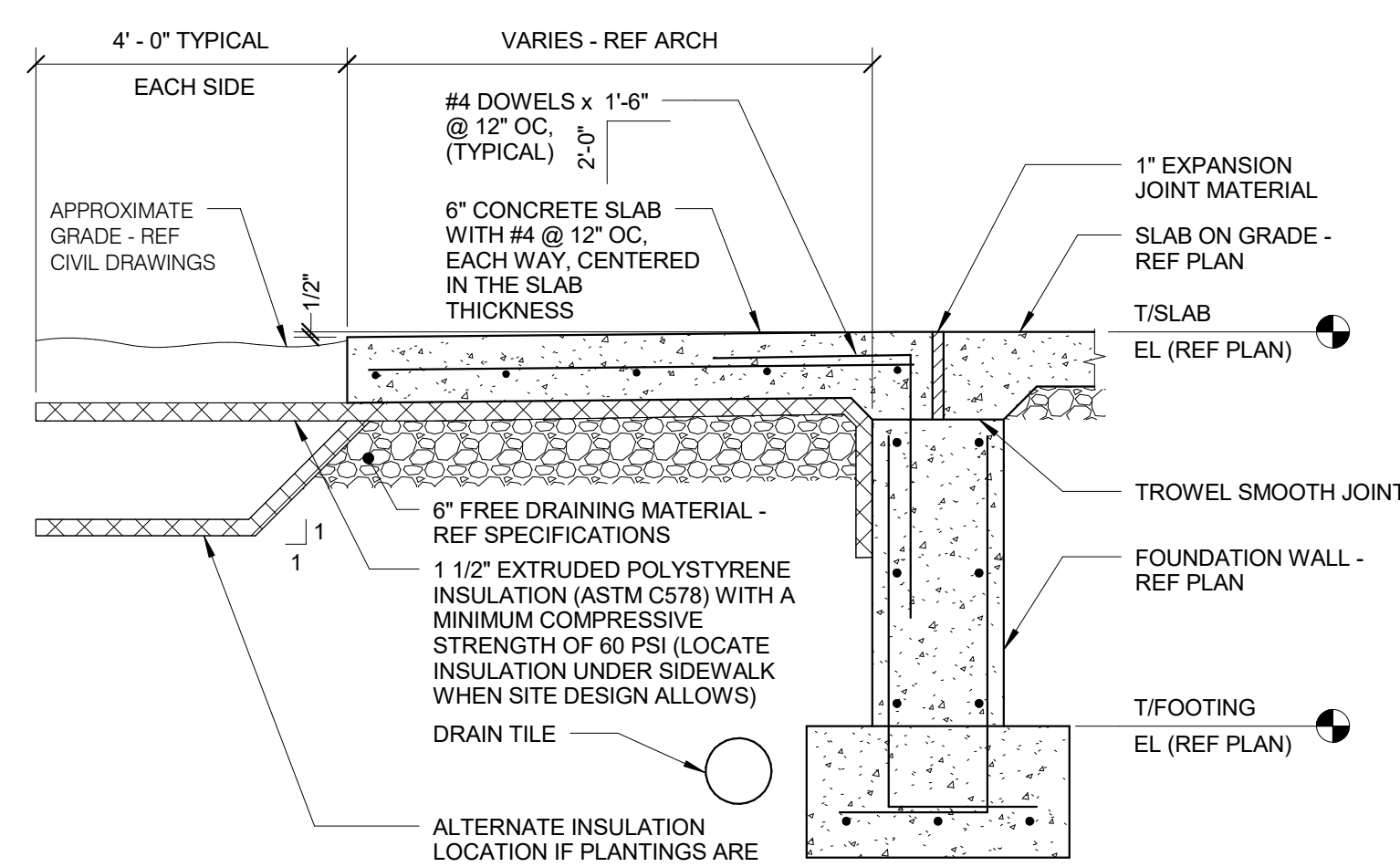
1 TYPICAL SLAB ON GRADE CONTROL JOINT
1" = 1'-0"



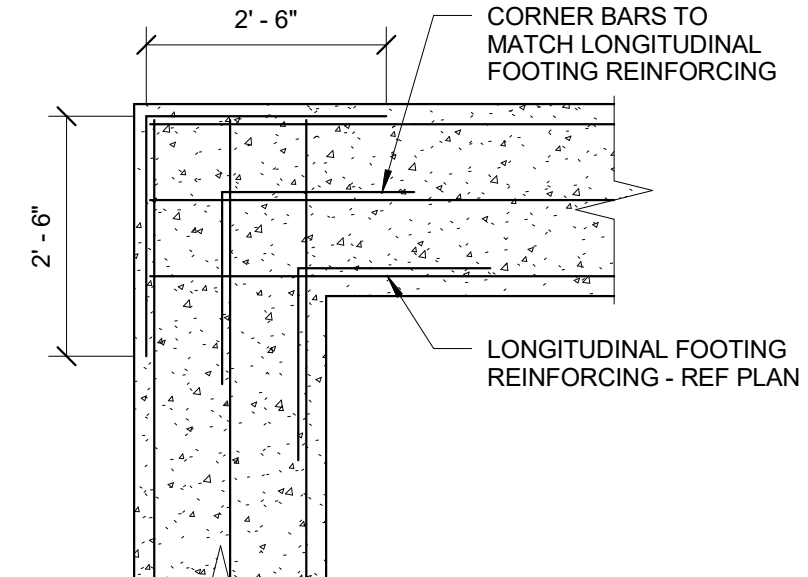
2 TYPICAL SLAB ON GRADE SECTION
1 1/2" = 1'-0"



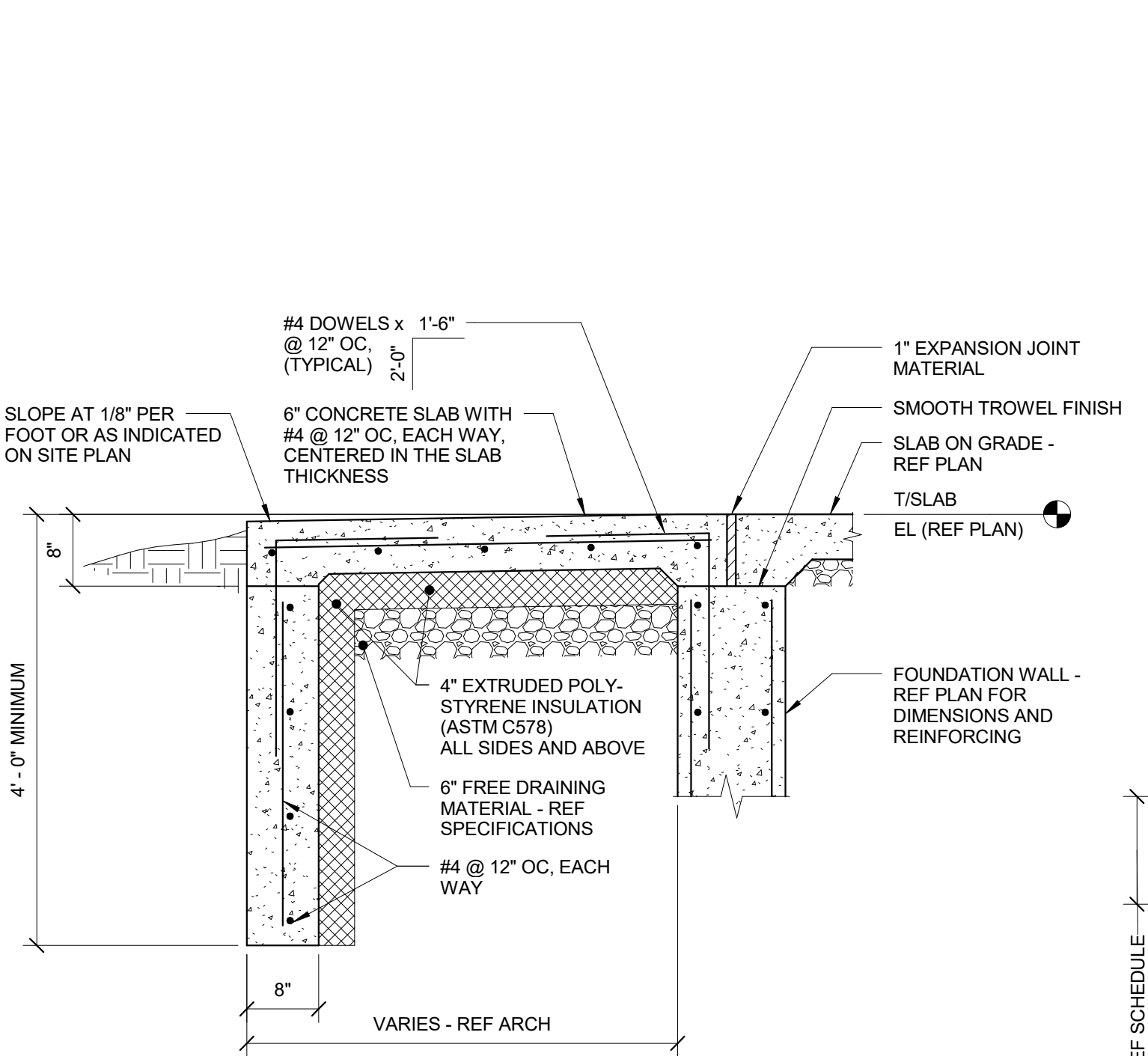
3 TYPICAL SLAB CONSTRUCTION JOINT
3/4" = 1'-0"



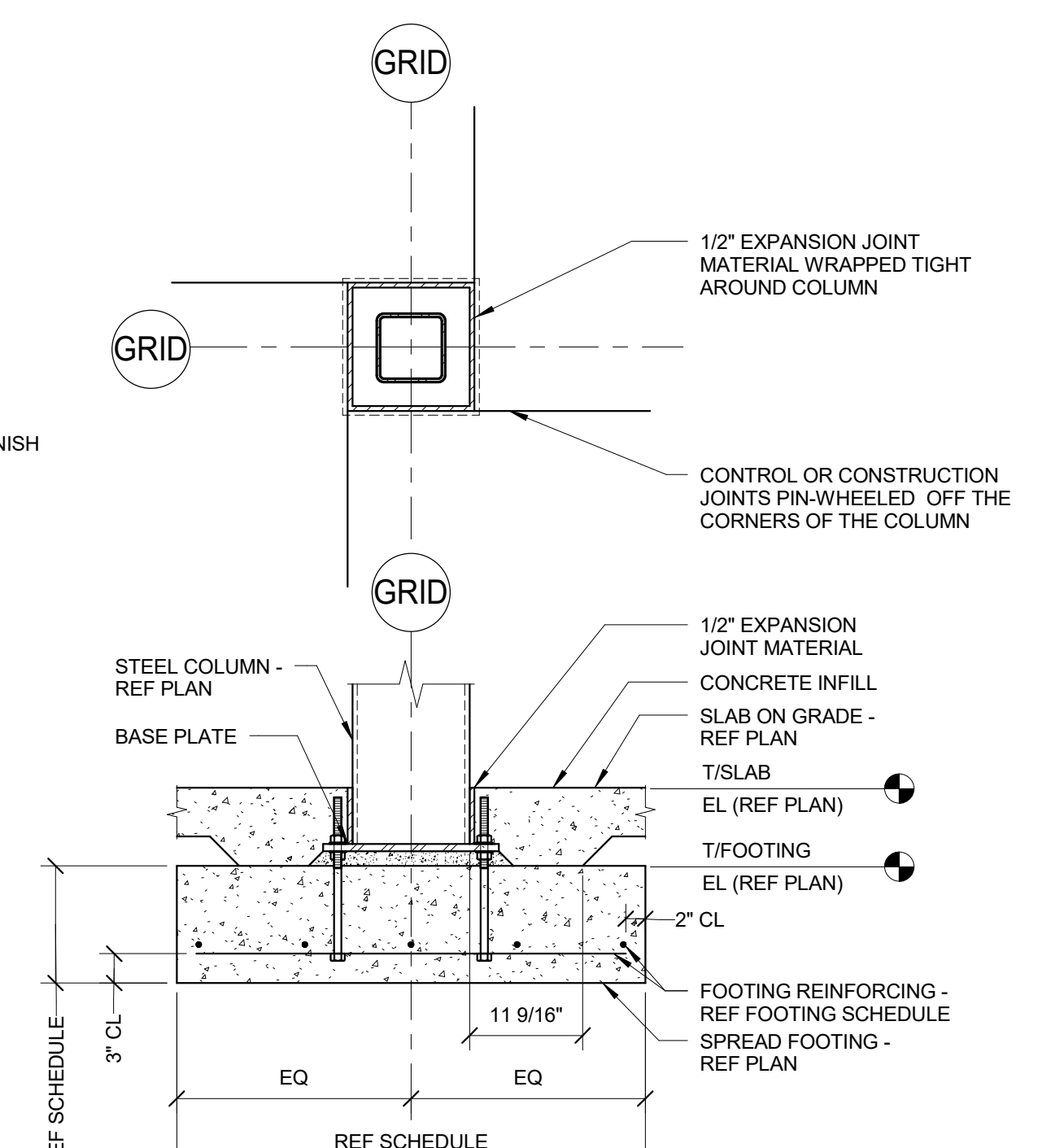
4 TYPICAL INSULATED STOOP SECTION
3/4" = 1'-0"



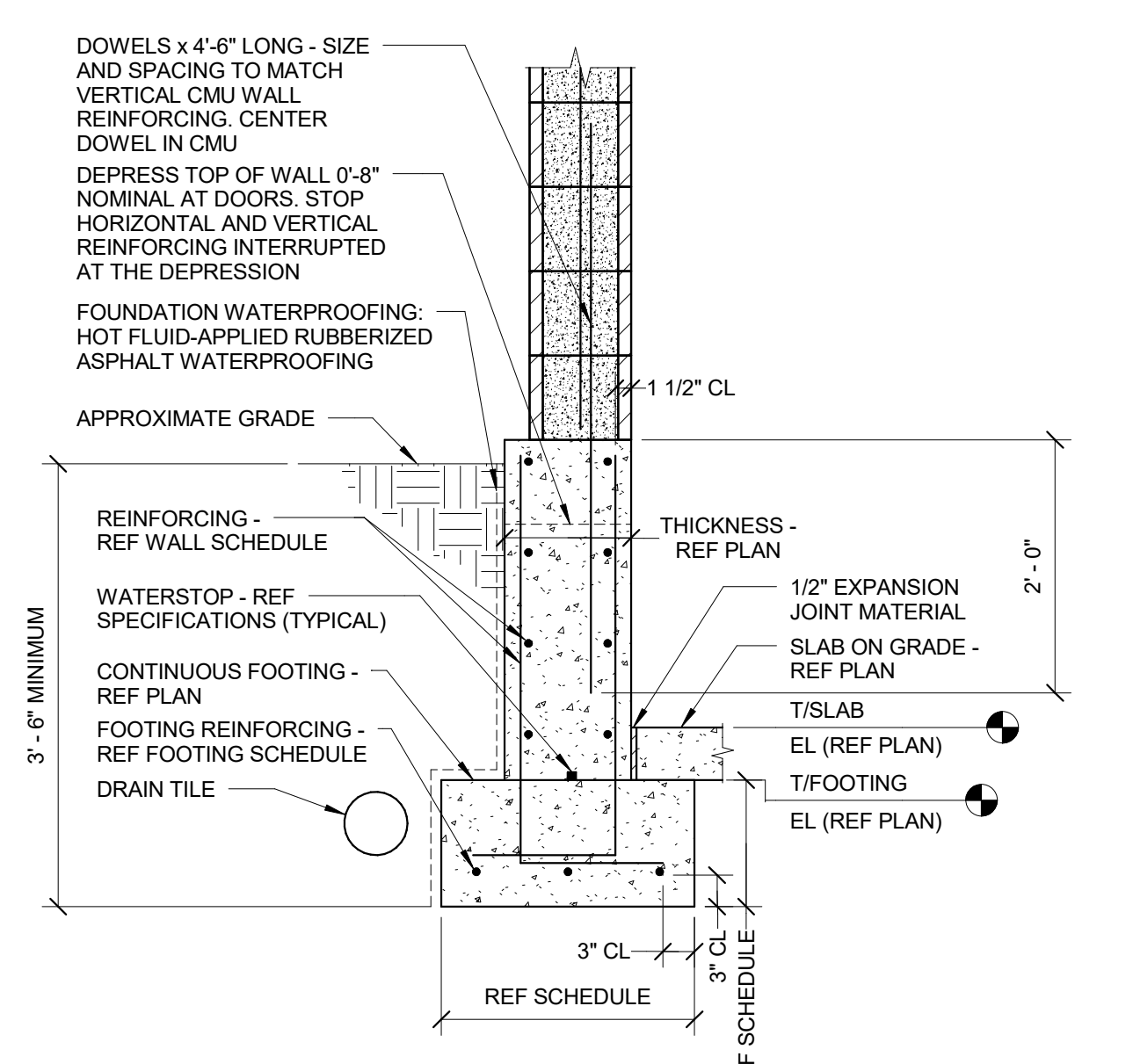
5 TYPICAL FOOTING CORNER BARS
1/2" = 1'-0"



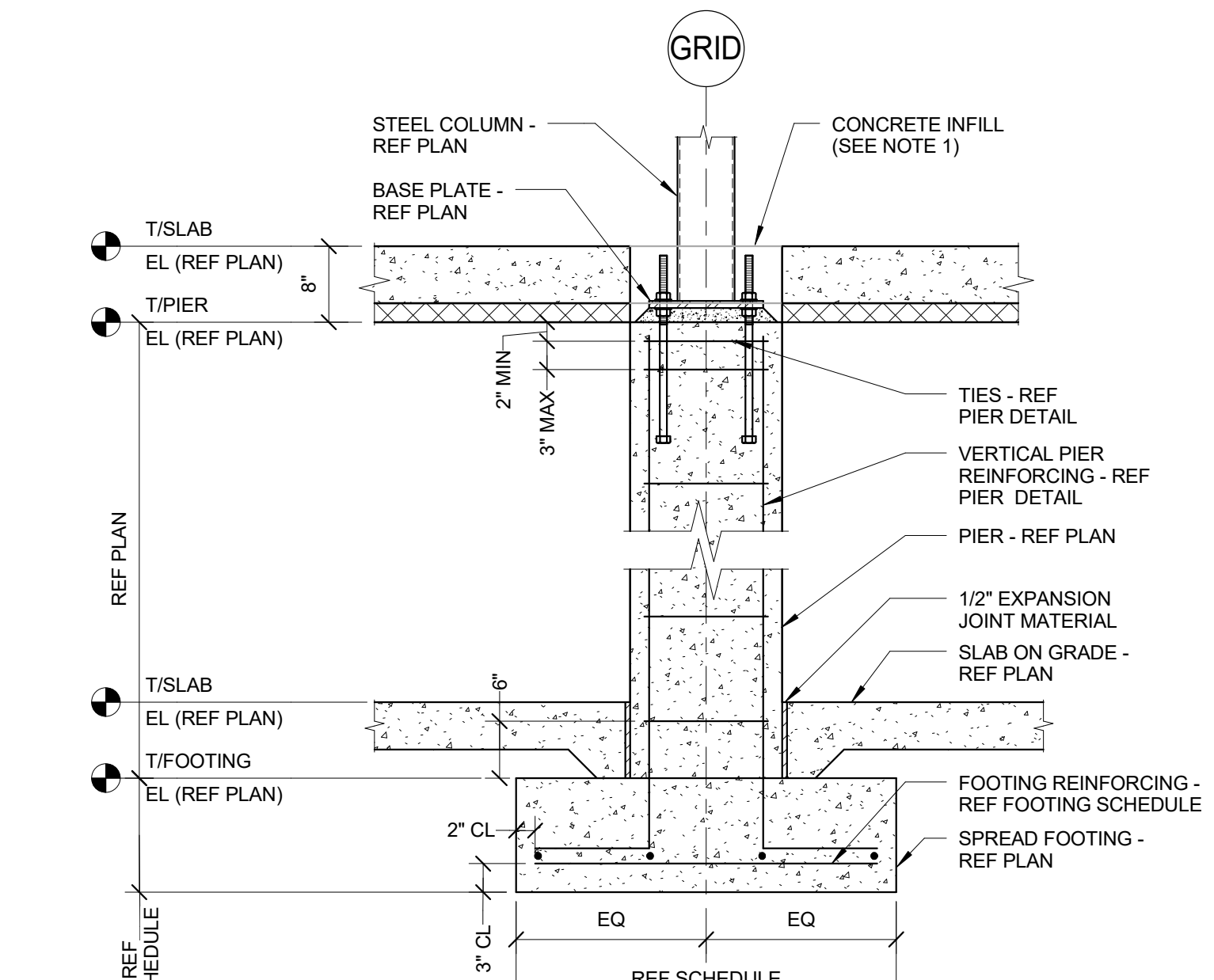
6 TYPICAL STOOP SECTION
3/4" = 1'-0"



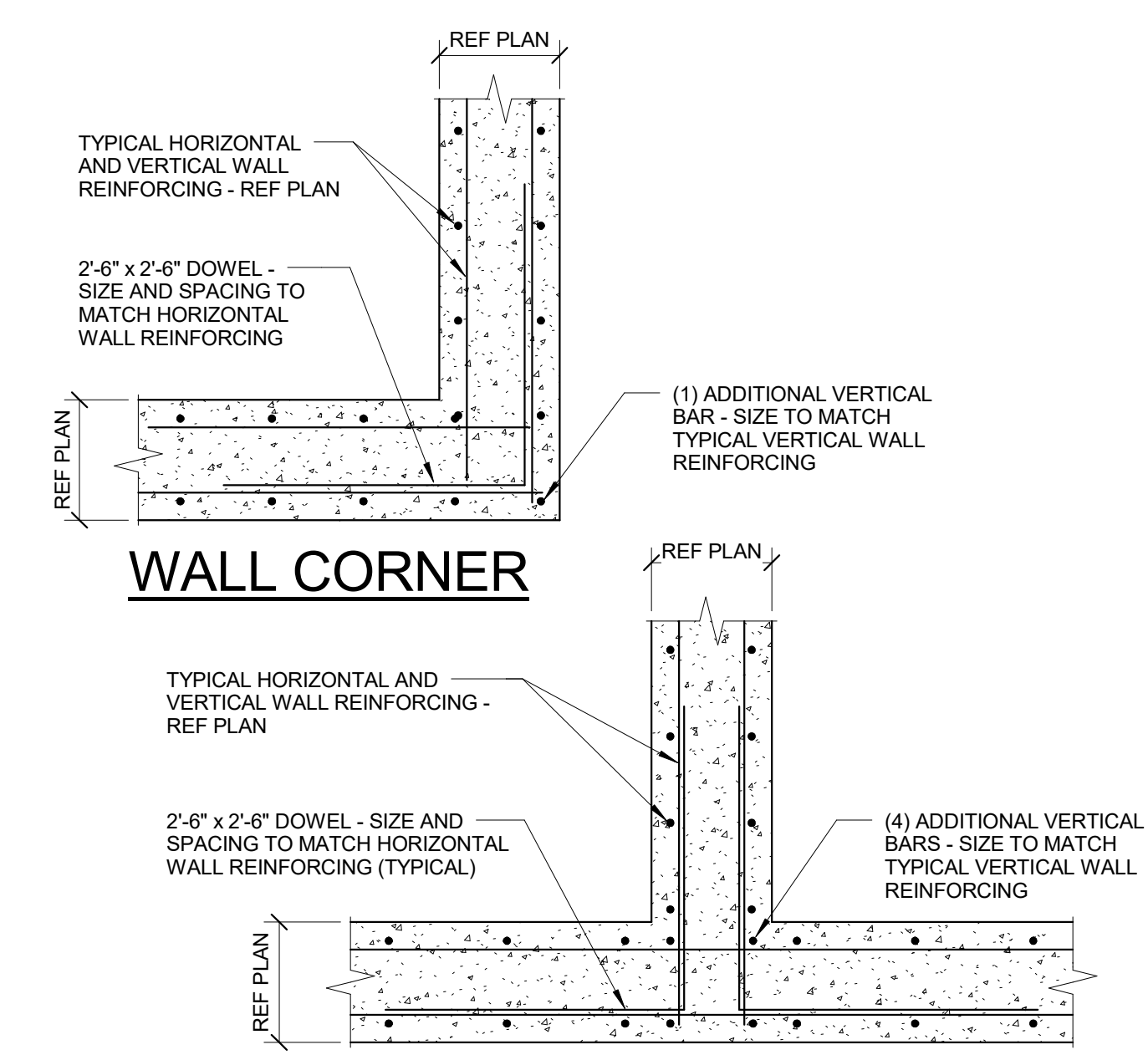
7 TYPICAL SPREAD FOOTING
3/4" = 1'-0"



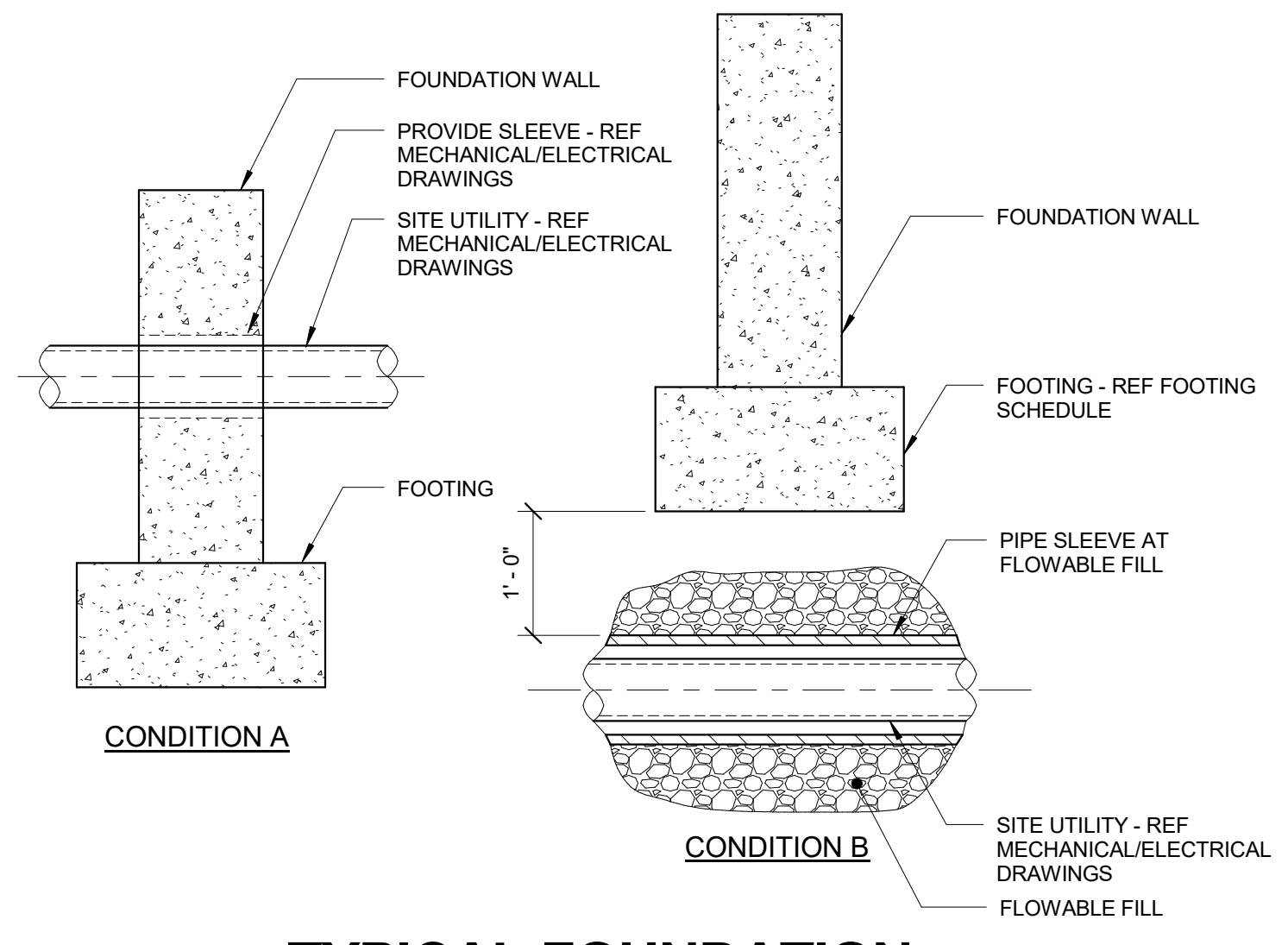
8 FOUNDATION WALL DETAIL
3/4" = 1'-0"



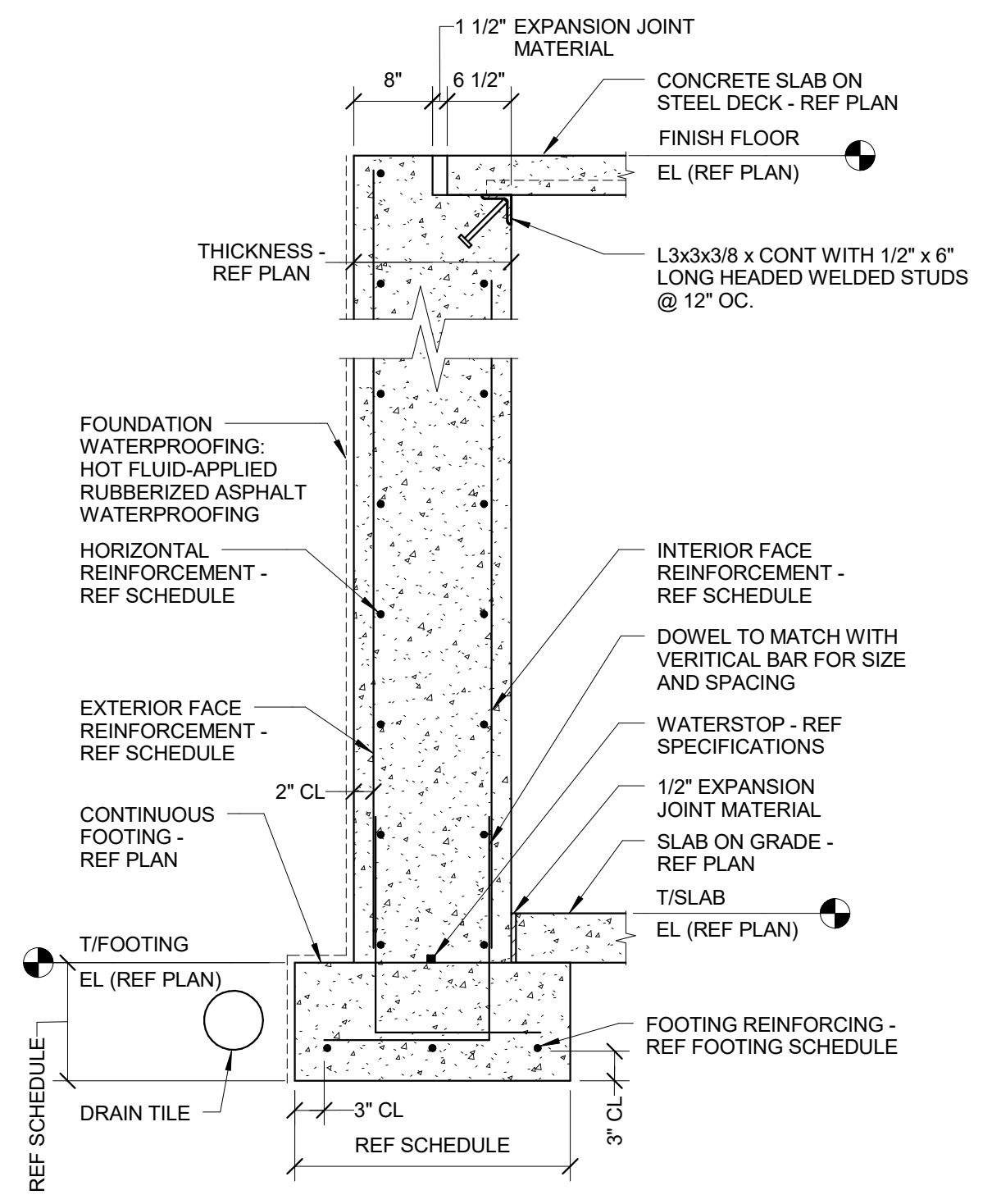
9 FOOTING WITH PIER AT COMMUNITY ROOM
3/4" = 1'-0"



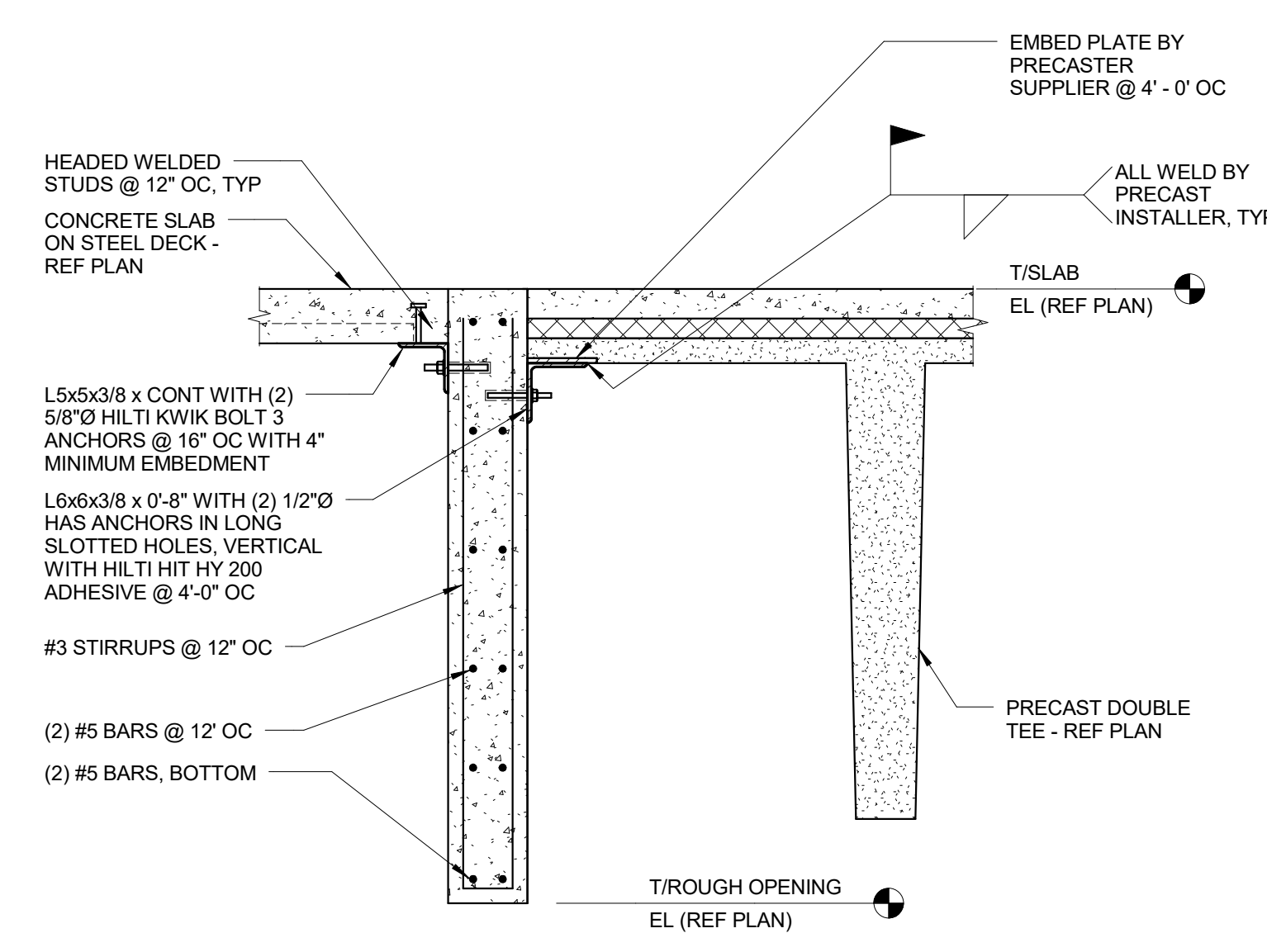
10 TYPICAL CONCRETE WALL DETAIL
3/4" = 1'-0"



11 TYPICAL FOUNDATION DETAILS AT SITE UTILITIES
3/4" = 1'-0"



12 BASEMENT WALL DETAIL
3/4" = 1'-0"



13 LINTEL DETAIL AT DOOR
3/4" = 1'-0"

**POLICE DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

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NO. DESCRIPTION DATE

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CHECKED BY Checker

CONCRETE DETAILS

KJW ENGINEERING CONSULTANTS
1805 DENING WAY SUITE 200
MILWAUKEE, WISCONSIN 53204
608.221.9600 FAX: 608.836.0415
WWW.KJW.COM PROJECT # 16.0029.00

S300

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

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City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

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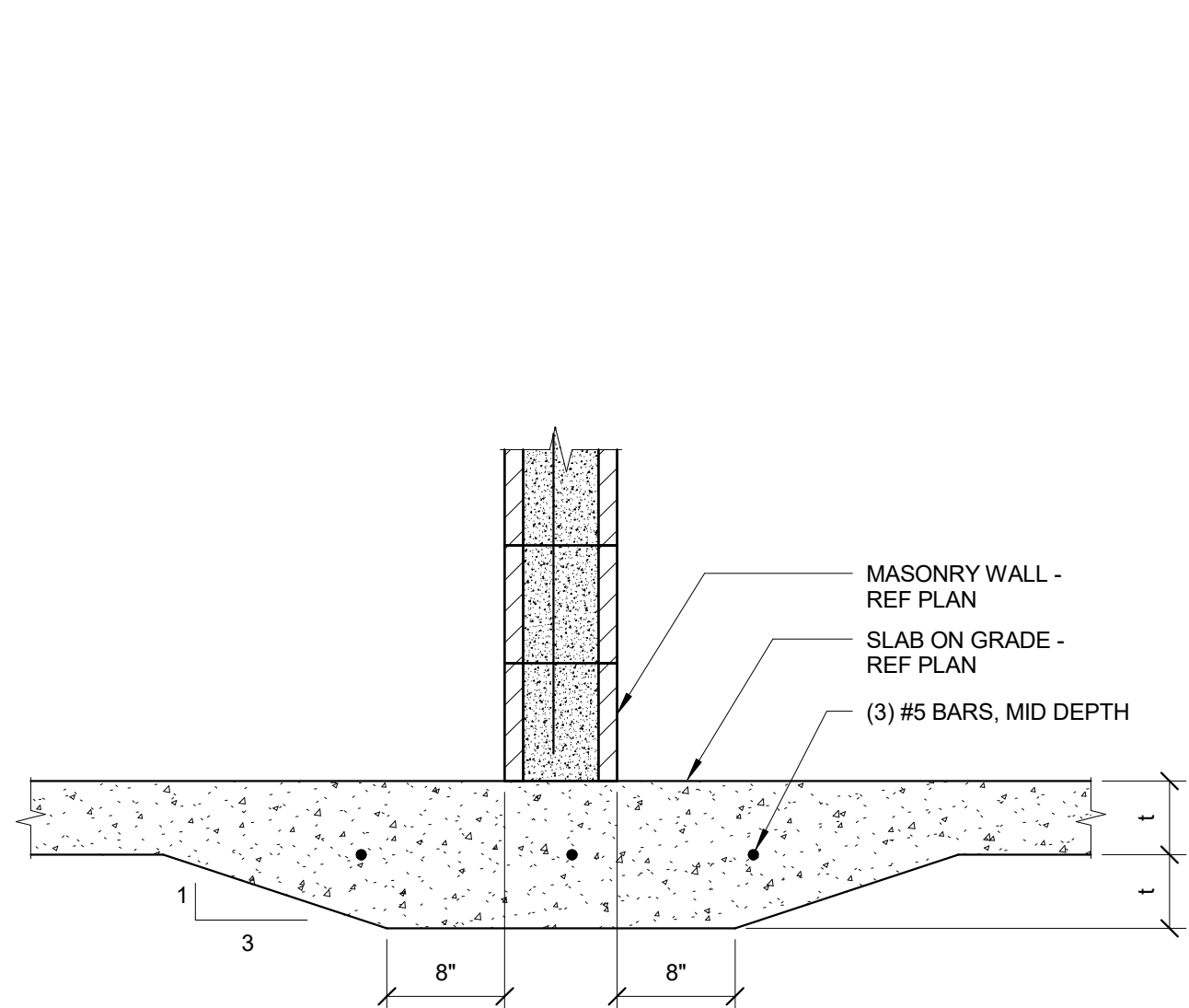
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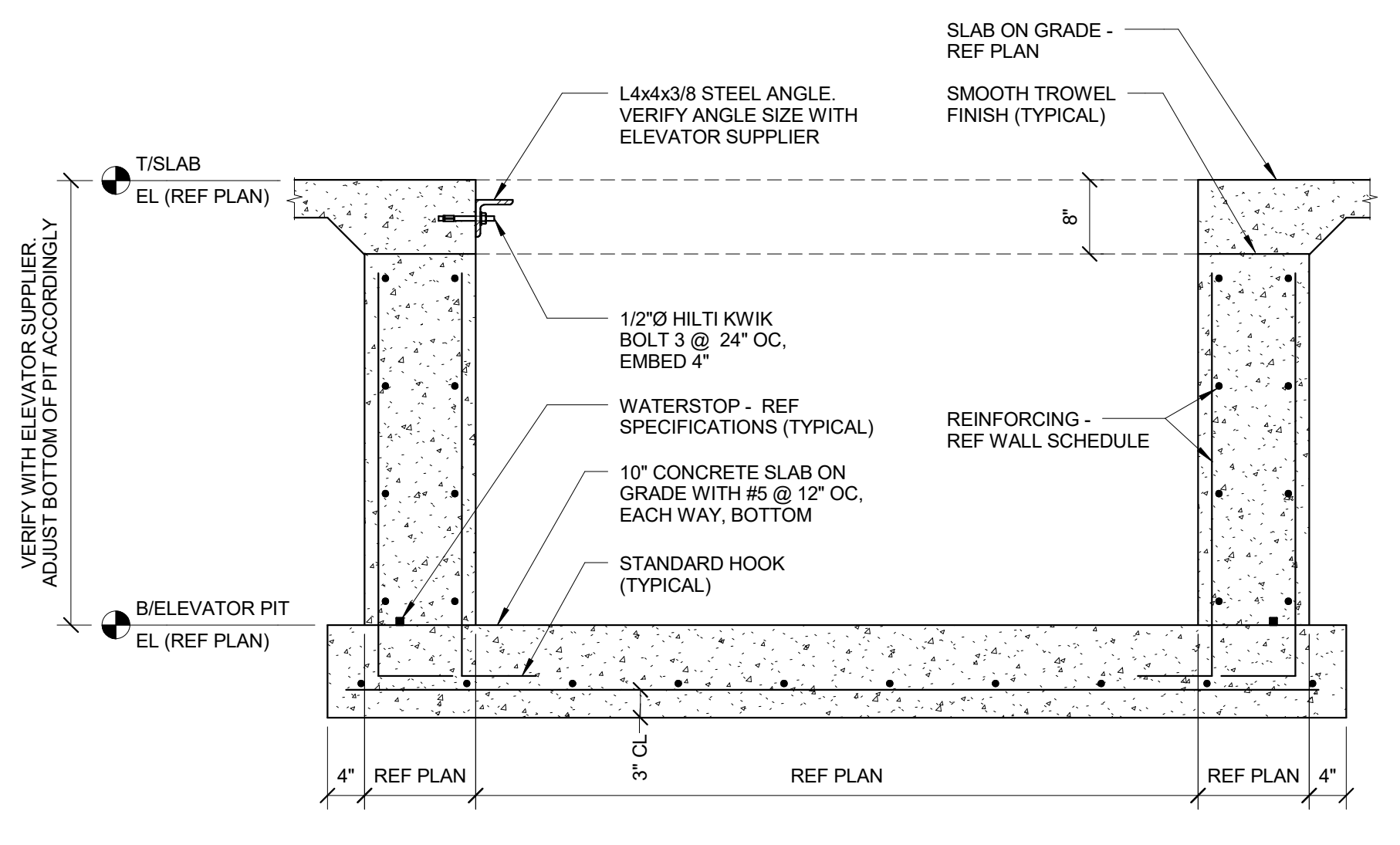
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CONCRETE DETAILS

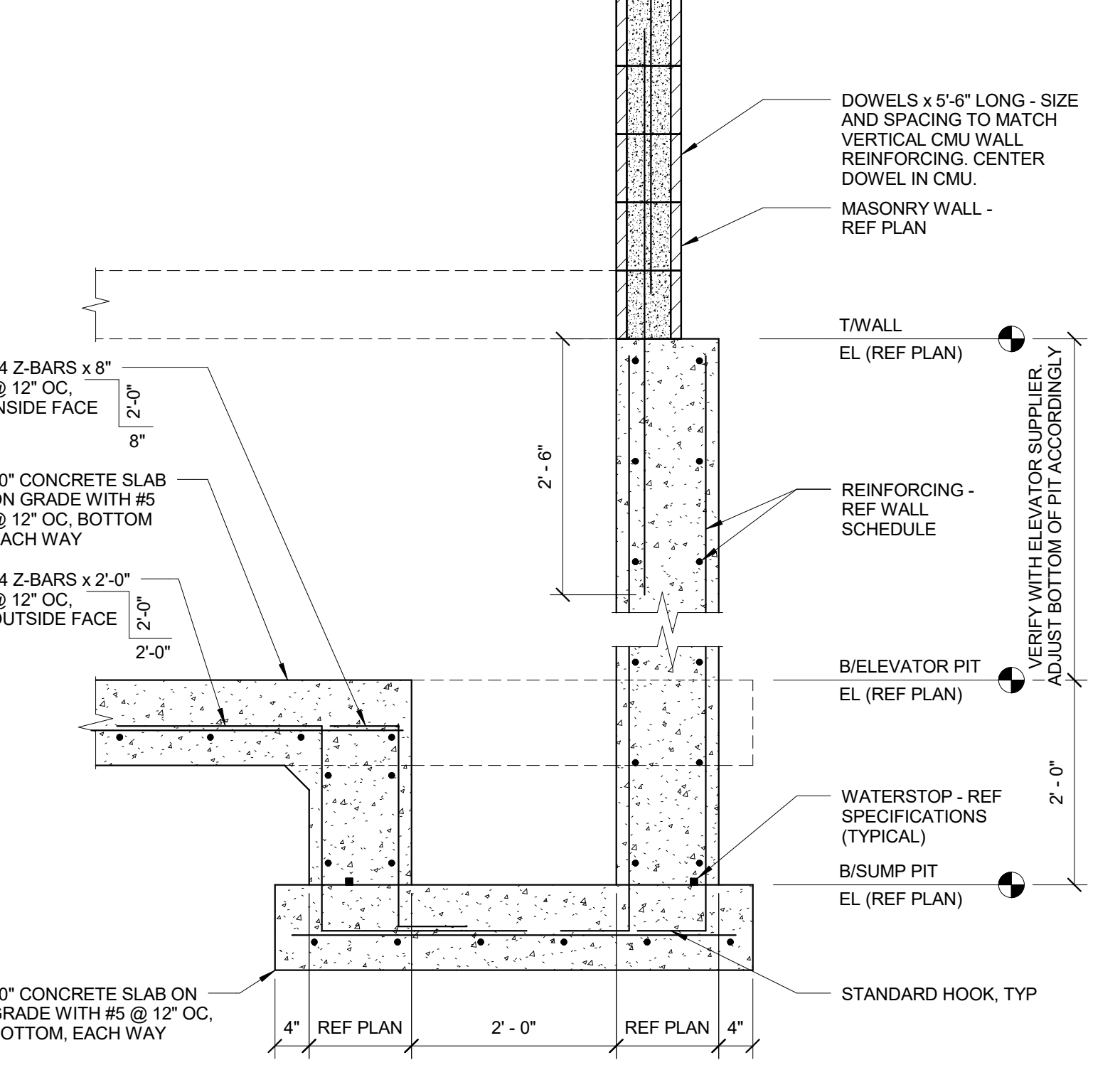
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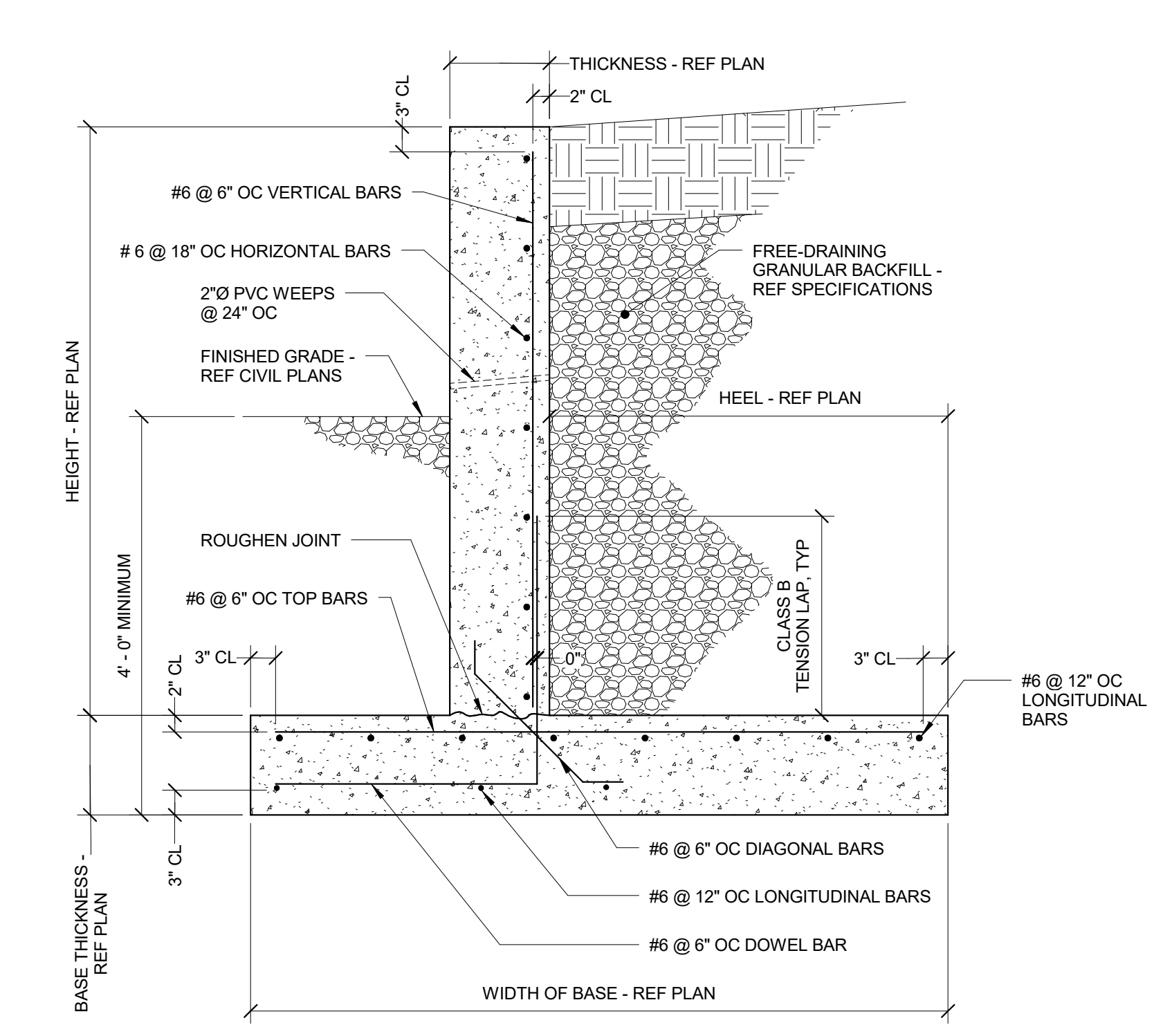
1 NON-BEARING WALL DETAIL
1" = 1'-0"
NOTES:
1. TO BE USED AT INTERIOR, NON-STRUCTURAL WALLS BRACED AT TOP OF THE WALL.



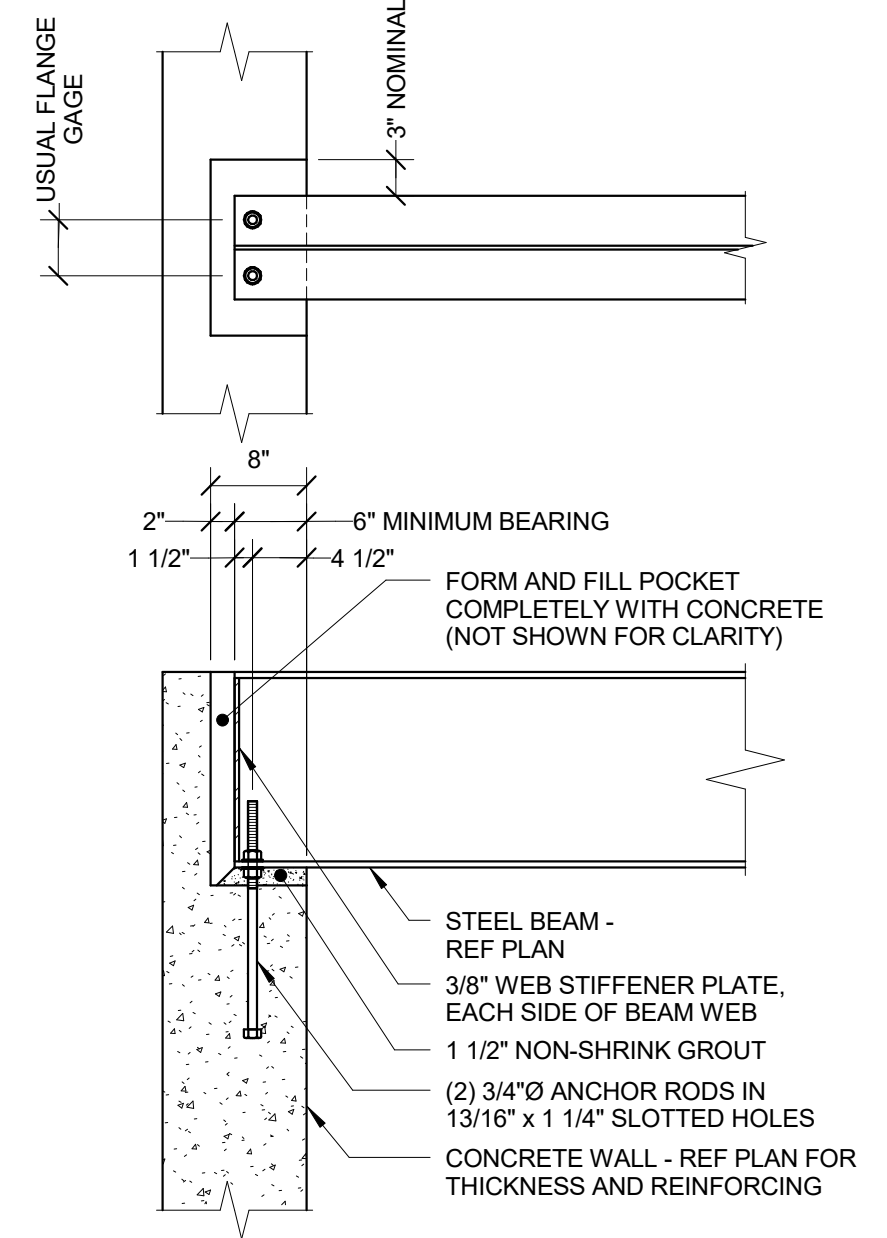
2 ELEVATOR PIT SECTION
3/4" = 1'-0"
NOTES:
1. REFER TO ARCHITECTURAL DRAWINGS FOR PIT LADDER.



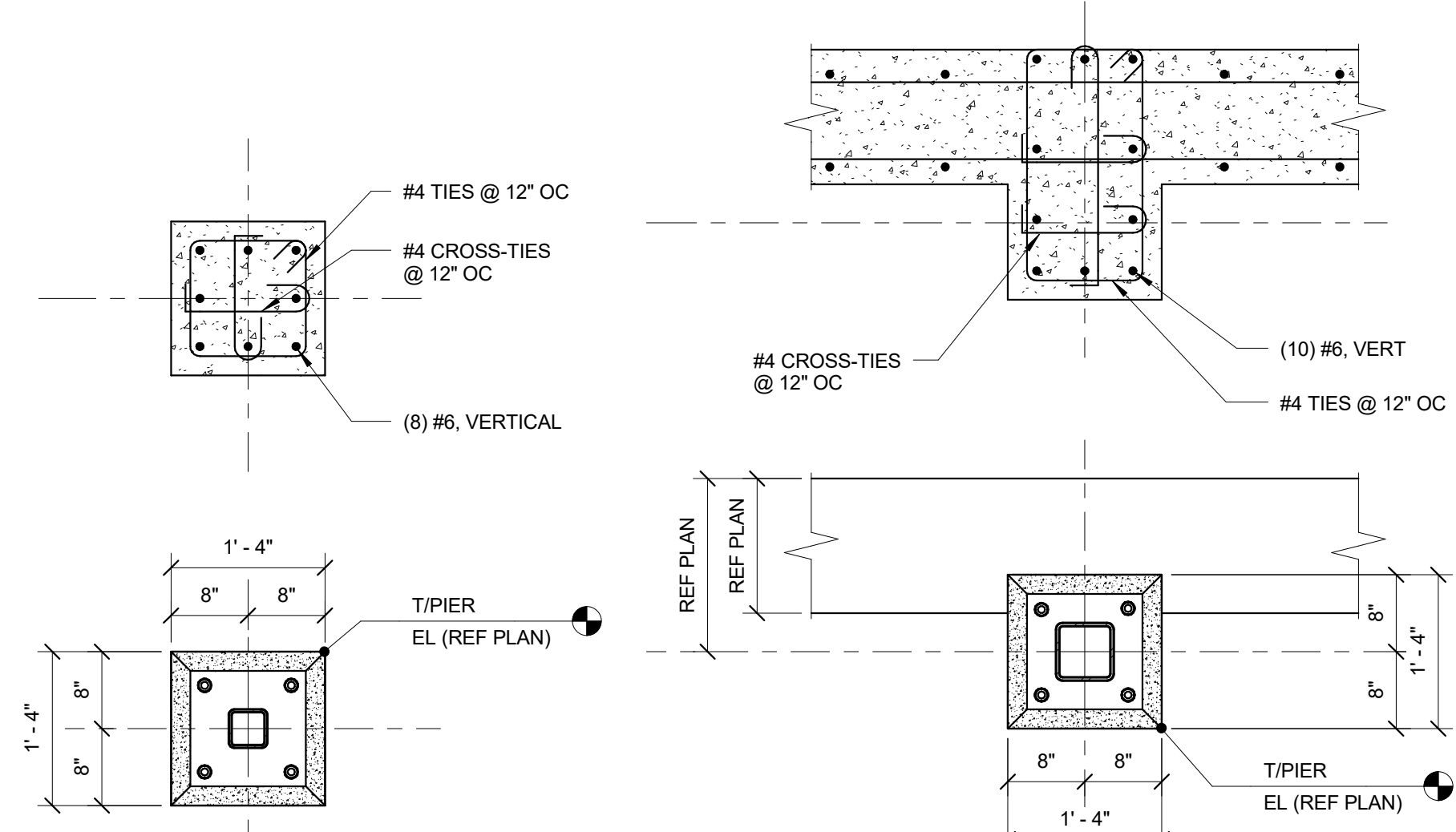
3 SUMP PIT SECTION
3/4" = 1'-0"
NOTES:
1. COORDINATE LOCATION OF SUMP WITH ELEVATOR SUPPLIER TO AVOID ELEVATOR COMPONENTS AND ACCESS AREA.



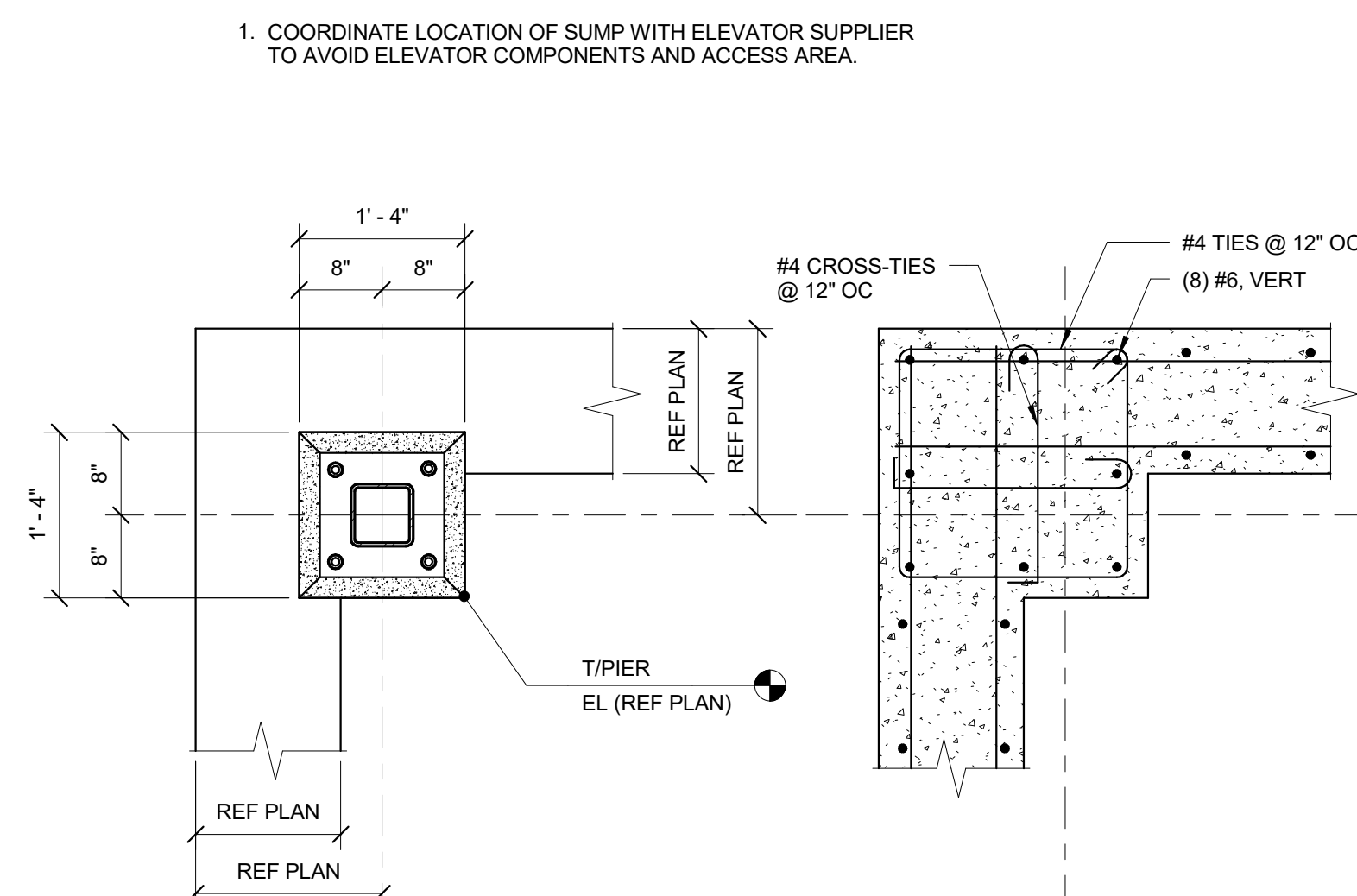
4 TYPICAL CANTILEVER RETAINING WALL
3/4" = 1'-0"



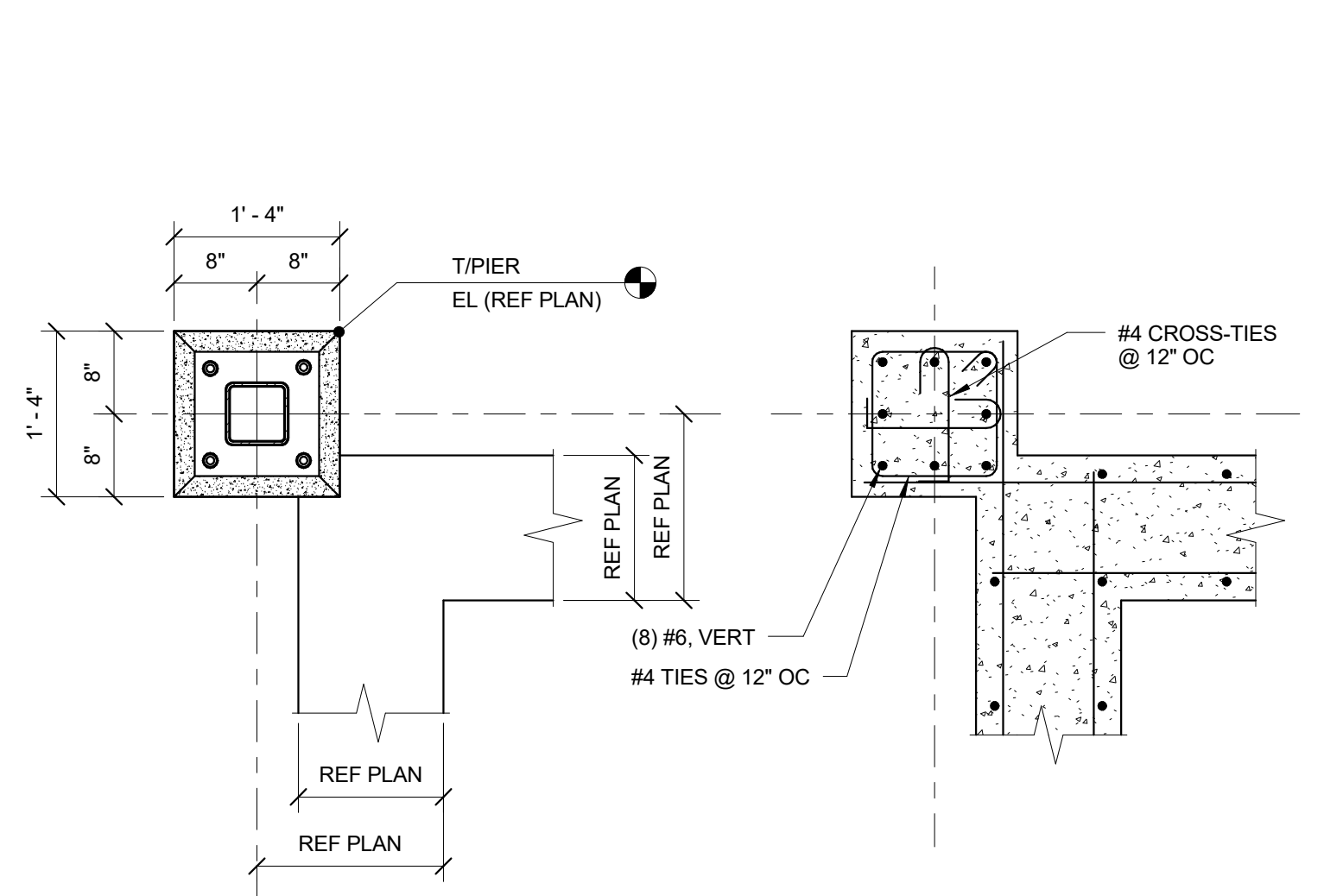
5 TYPICAL BEAM POCKET DETAIL
3/4" = 1'-0"



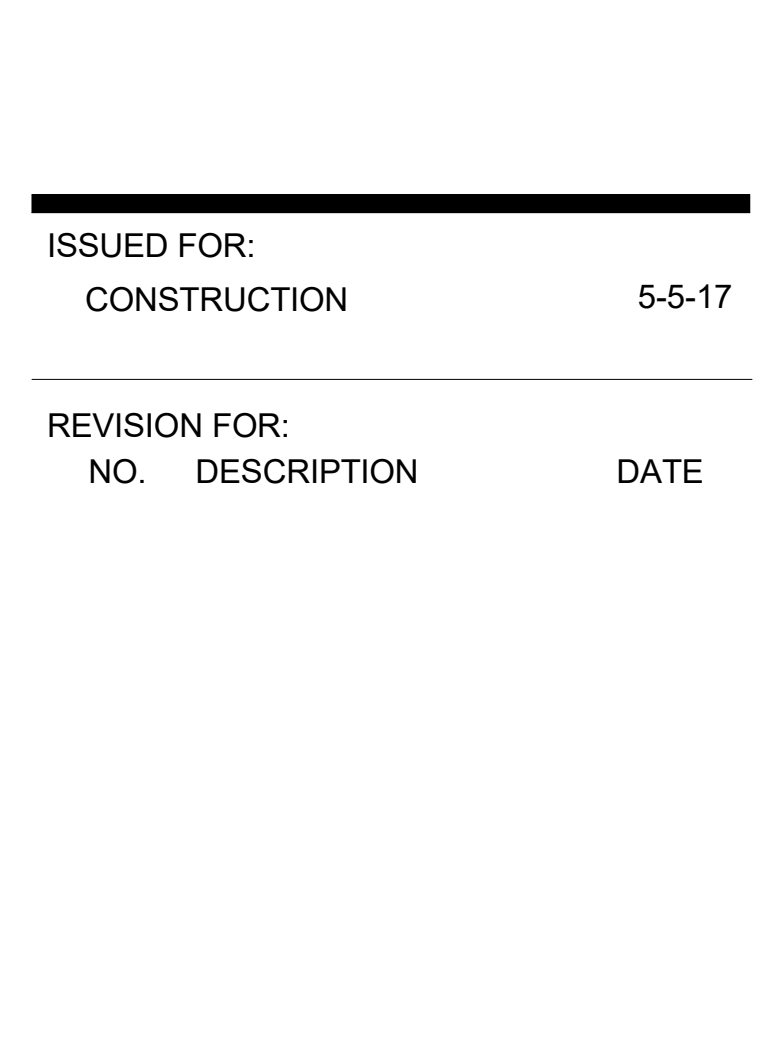
6 PIER (P1) DETAIL
3/4" = 1'-0"



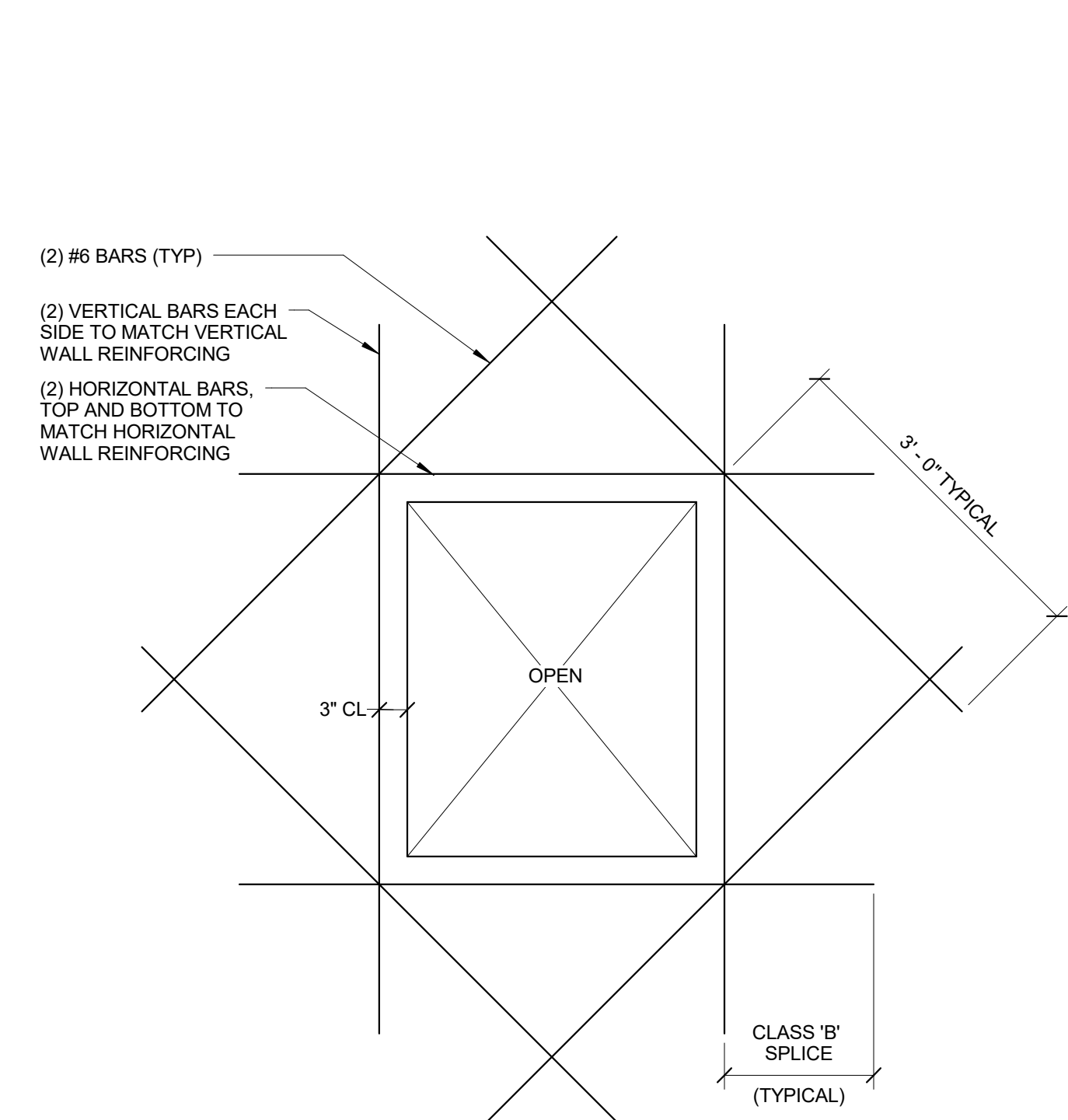
7 PIER (P2) DETAIL
3/4" = 1'-0"



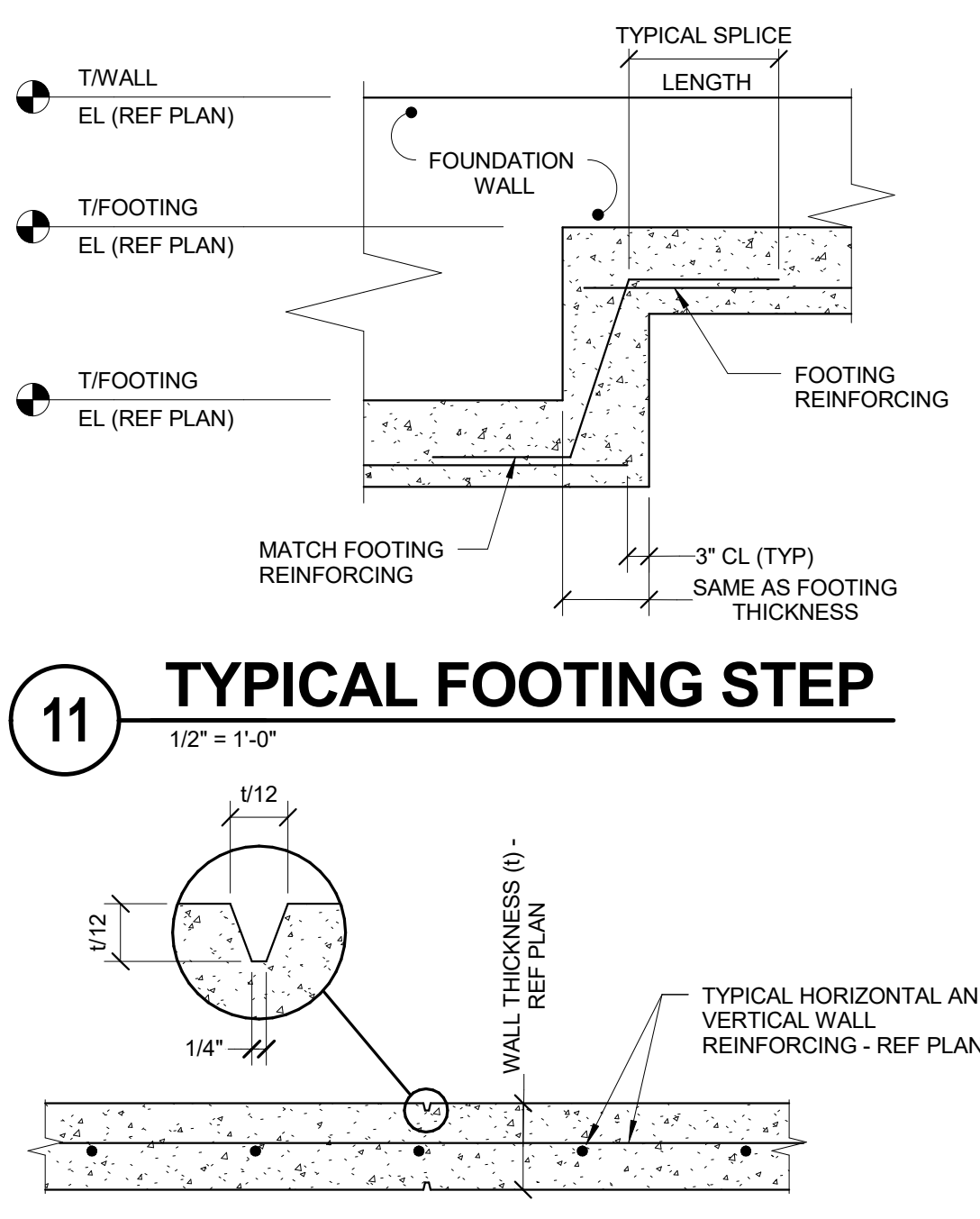
8 PIER (P3) DETAIL
3/4" = 1'-0"



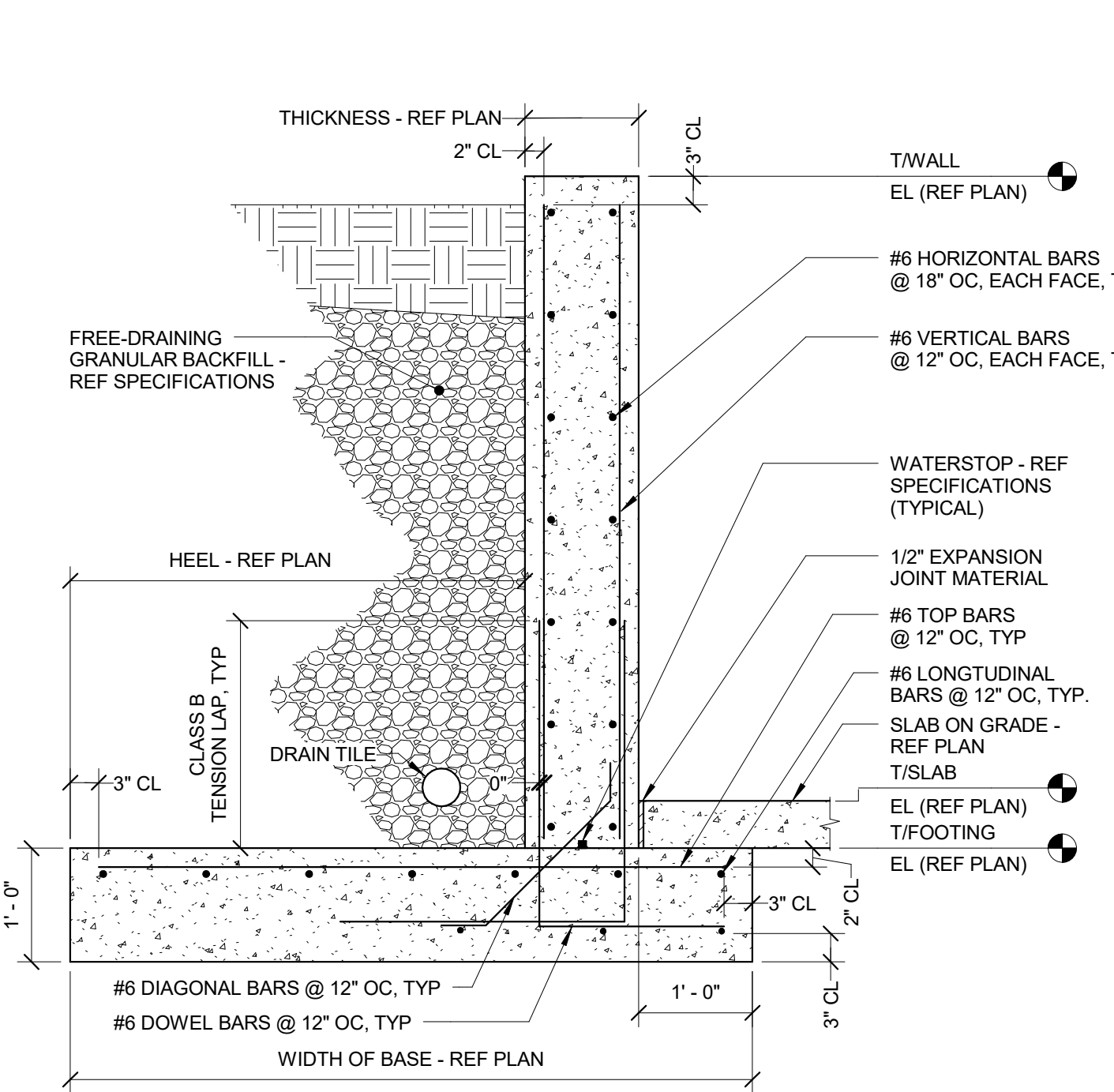
9 PIER (P4) DETAIL
3/4" = 1'-0"



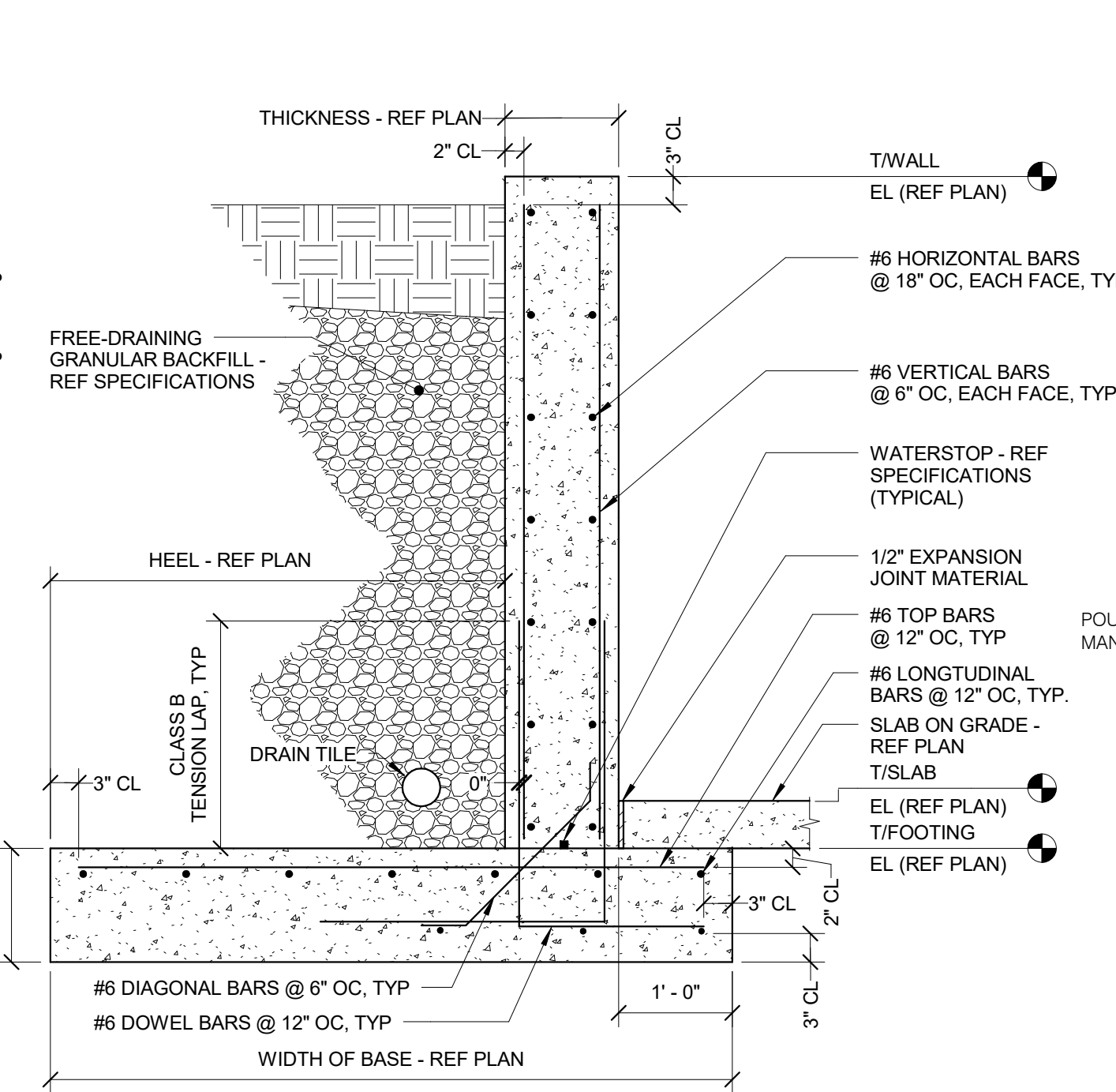
10 TYPICAL CONCRETE WALL OPENING
3/4" = 1'-0"



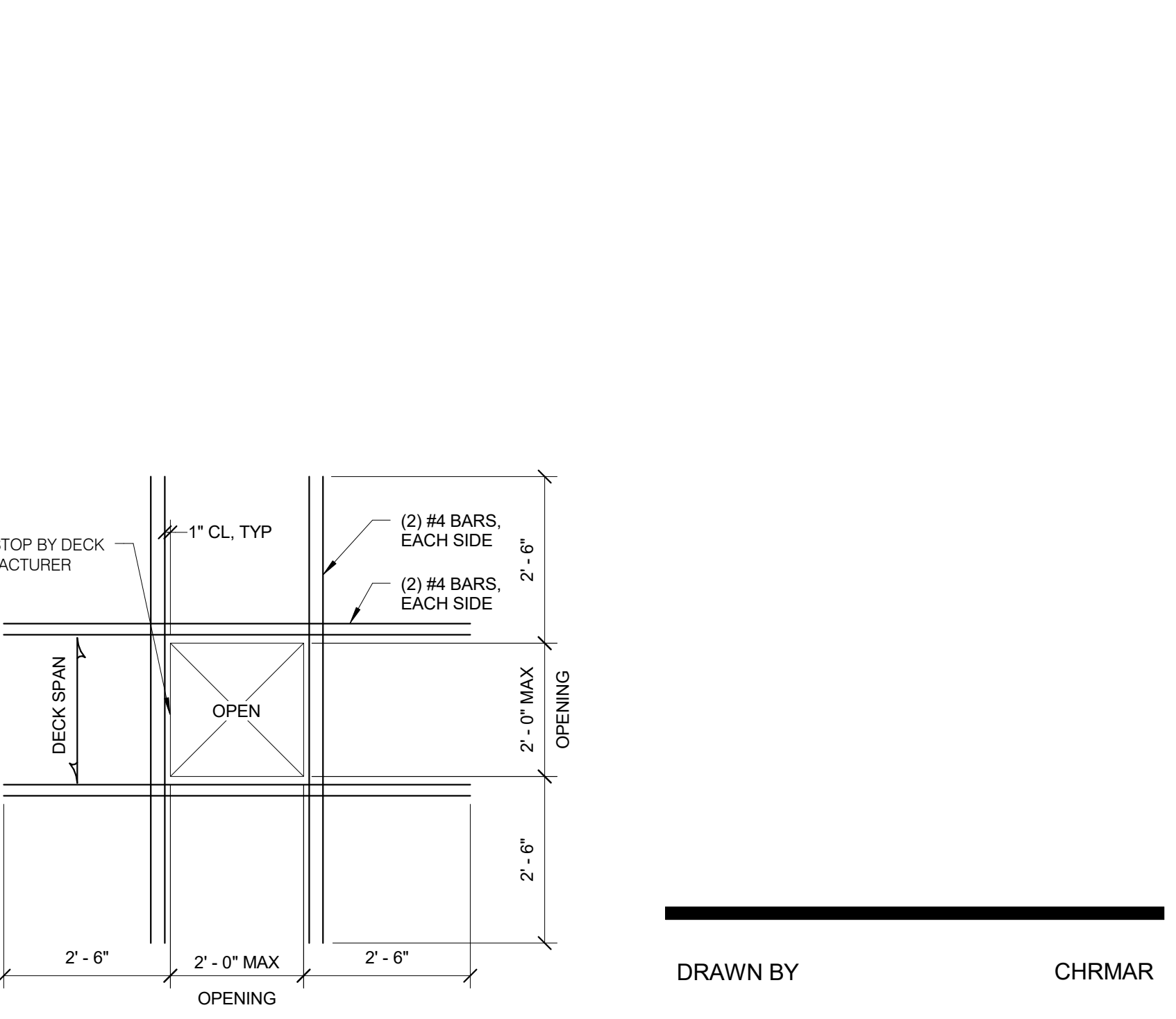
11 TYPICAL FOOTING STEP
1/2" = 1'-0"



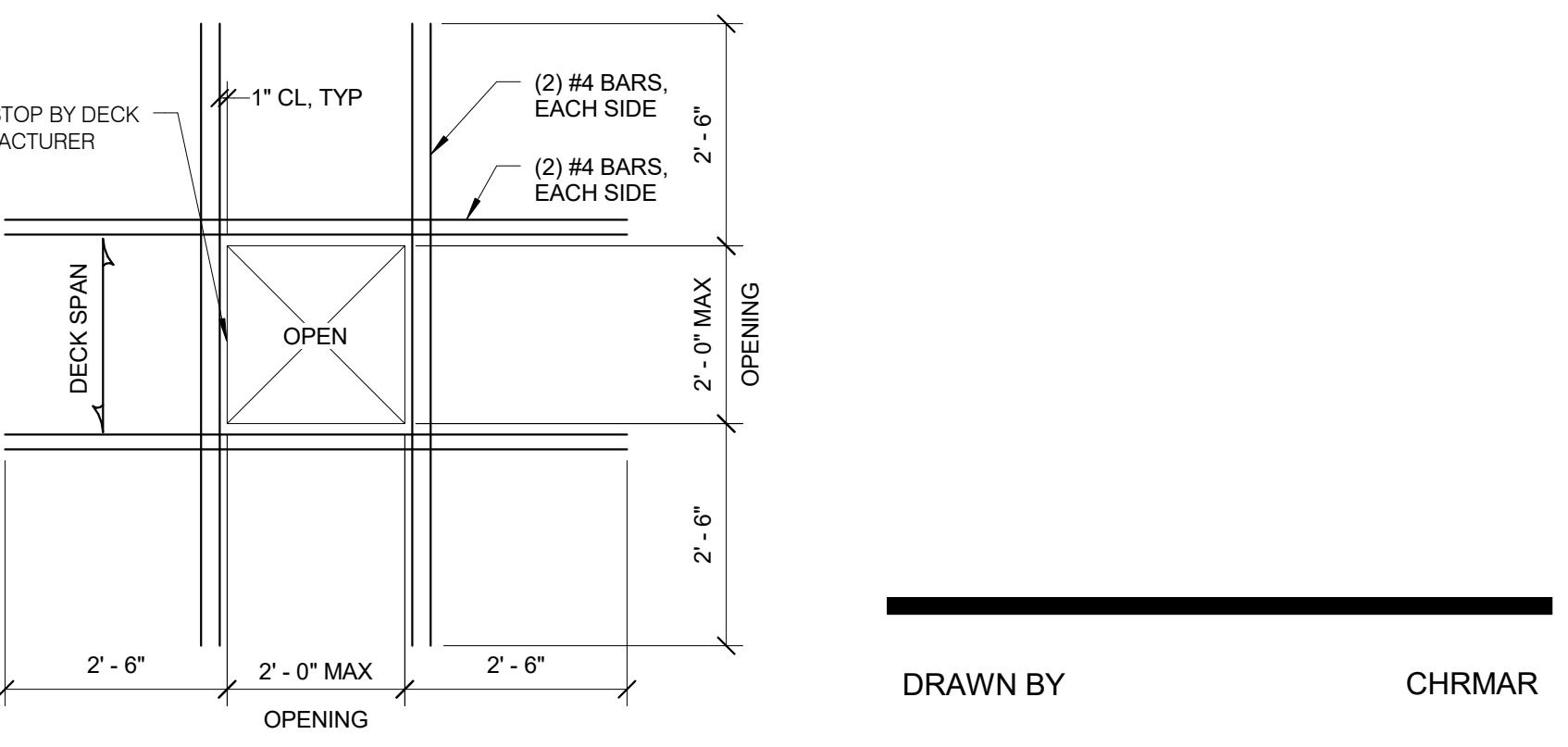
12 TYPICAL CONCRETE WALL CONTROL JOINT
1" = 1'-0"



13 CANTILEVER RETAINING WALL DETAIL
3/4" = 1'-0"



14 CANTILEVER RETAINING WALL DETAIL
3/4" = 1'-0"



15 TYPICAL FLOOR PENETRATION
1/2" = 1'-0"
NOTES:
1. USE ABOVE FRAMING AT ALL OPENINGS EXCEEDING 1'-0" UNO.
2. REFERENCE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS.

KJ ENGINEERING CONSULTANTS
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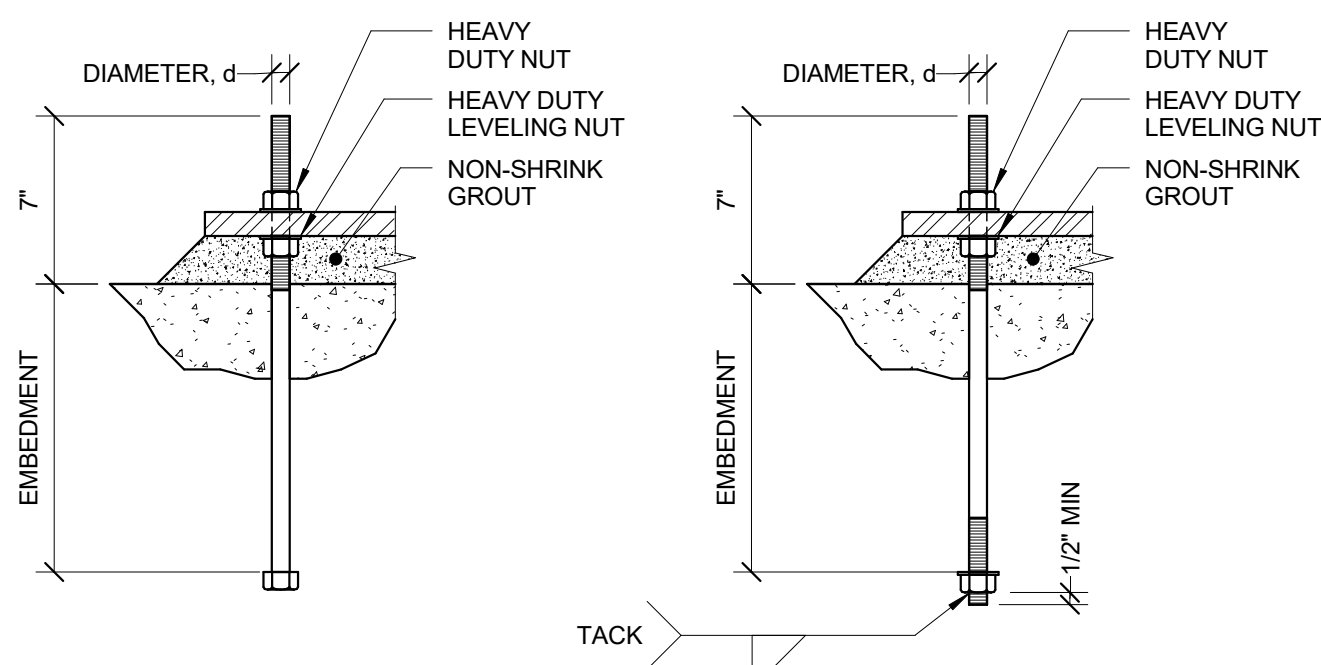
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STEEL DETAILS



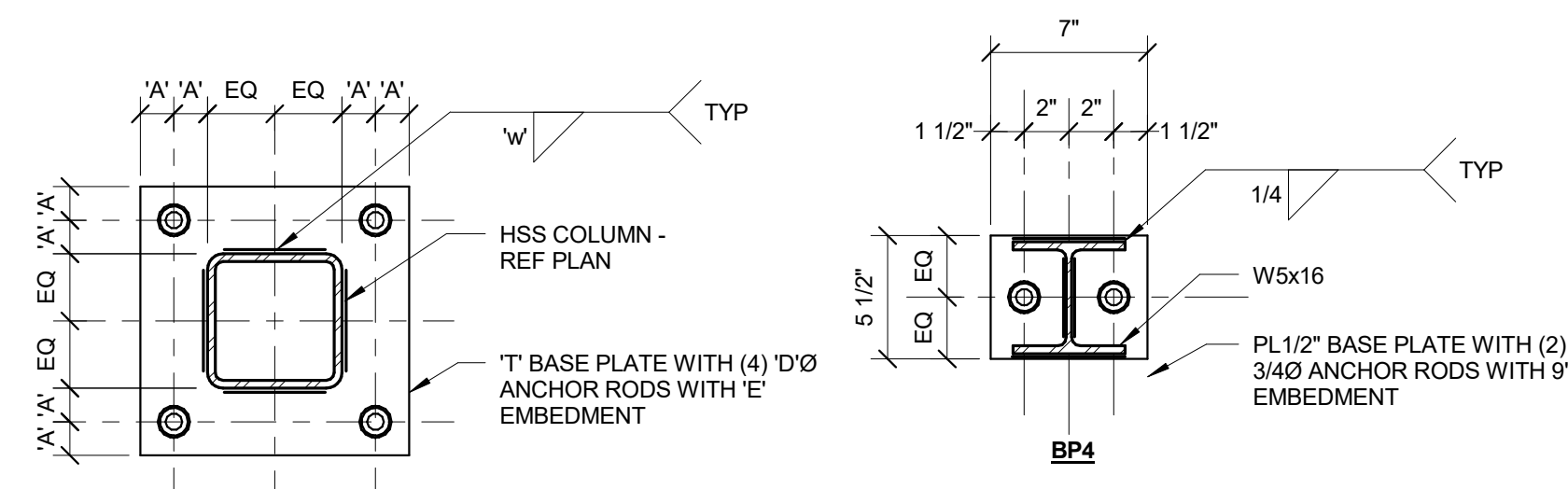
CONTRACTOR'S OPTION

1 TYPICAL ANCHOR ROD

1 1/2" = 1'-0"

NOTES:

- REFERENCE BASE PLATE DETAILS FOR DIAMETER AND EMBEDMENT.
- REFERENCE GENERAL NOTES FOR MATERIAL REQUIREMENTS.
- ANCHOR RODS SHALL BE SET PRIOR TO PLACEMENT OF CONCRETE.
- PROTECT ANCHOR RODS FROM DAMAGE.
- ANCHOR SHALL BE SET SO AS NOT TO VARY FROM THE DIMENSIONS SHOWN ON THE ERECTION DRAWINGS BY MORE THAN THE FOLLOWING:
 - A. 1/8" CENTER TO CENTER OF ANY TWO RODS WITHIN AN ANCHOR ROD GROUP.
 - B. 1/4" CENTER TO CENTER OF ADJACENT ANCHOR ROD GROUPS.
 - C. ELEVATION OF THE TOP OF ANCHOR RODS ± 1/2".
 - D. MAXIMUM ACCUMULATION OF 1/4" PER HUNDRED FEET ALONG THE ESTABLISHED COLUMN LINE.
 - E. 1/4" FROM THE CENTER OF ANY ANCHOR ROD GROUP TO THE ESTABLISHED COLUMN LINE THROUGH THAT GROUP.
 - F. REFERENCE AISC CODE OF STANDARD PRACTICE FOR ADDITIONAL INFORMATION.
- SET ANCHOR RODS PERPENDICULAR TO BEARING SURFACE, UNLESS NOTED OTHERWISE.
- PROVIDE 2" NON-SHRINK GROUT AT ALL BASE PLATES.



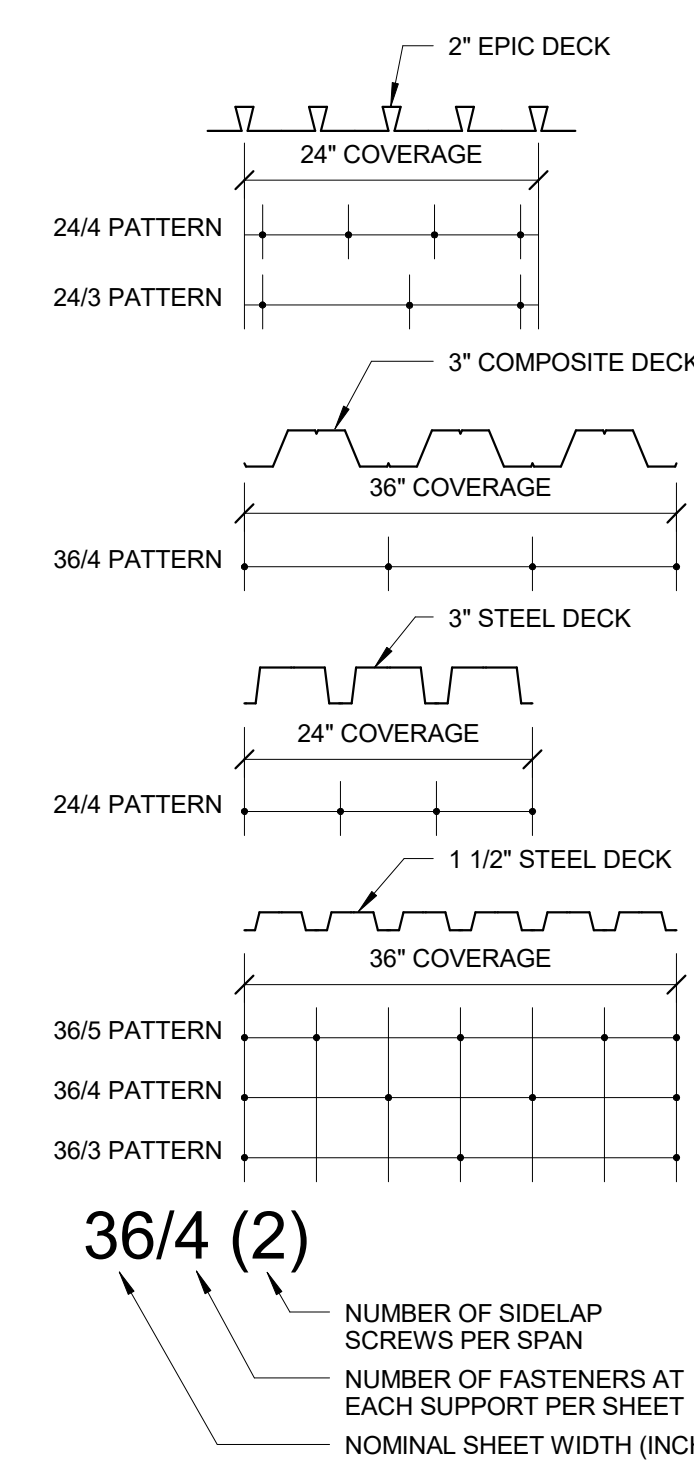
HSS BASE PLATE SCHEDULE							
MARK	COLUMN	T	A	D	E	W	COMMENTS
BP1	HSS4x4	3/4"	1 1/2"	3/4"	9"	1/4"	-
BP2	HSS6x6	3/4"	1 1/2"	3/4"	9"	5/16"	-
BP3	HSS6x6	1"	1 1/2"	3/4"	9"	5/16"	-

2 BASE PLATE DETAIL

1 1/2" = 1'-0"

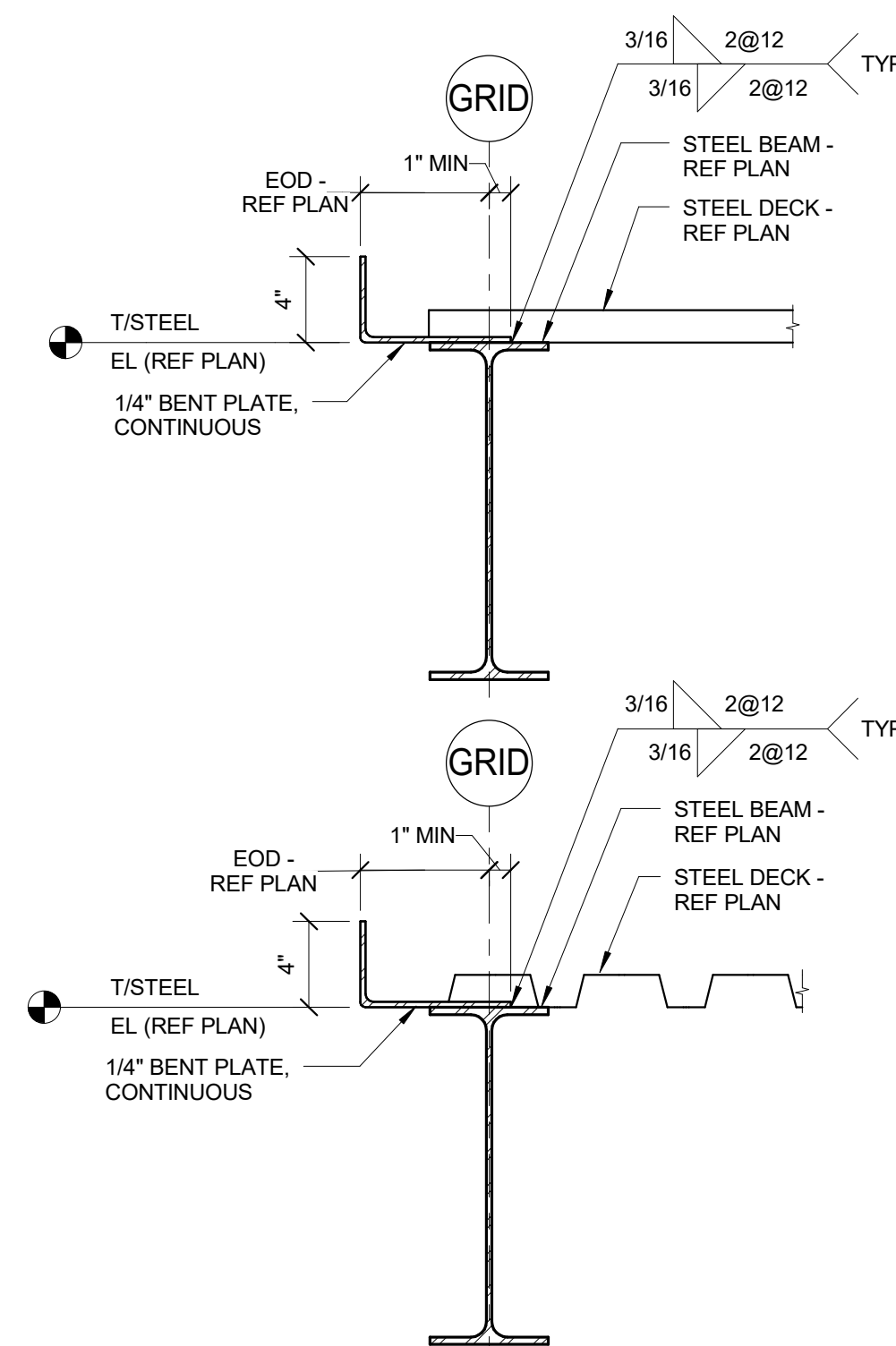
NOTES:

- REFER TO TYPICAL ANCHOR ROD DETAIL FOR ADDITIONAL INFORMATION.
- NO WELDS REQUIRED AT FLANGE TOES AND RADIIUSES.



3 DECK FASTENER LAYOUT

3/4" = 1'-0"

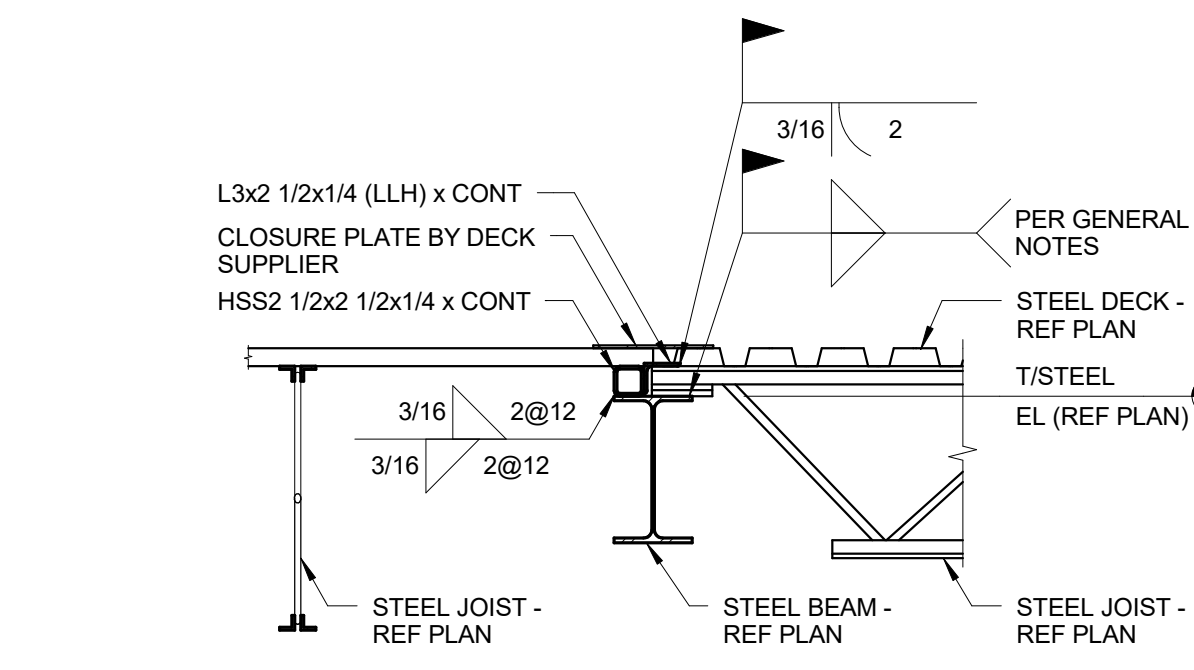


7 TYPICAL CLOSURE PLATE DETAIL

1 1/2" = 1'-0"

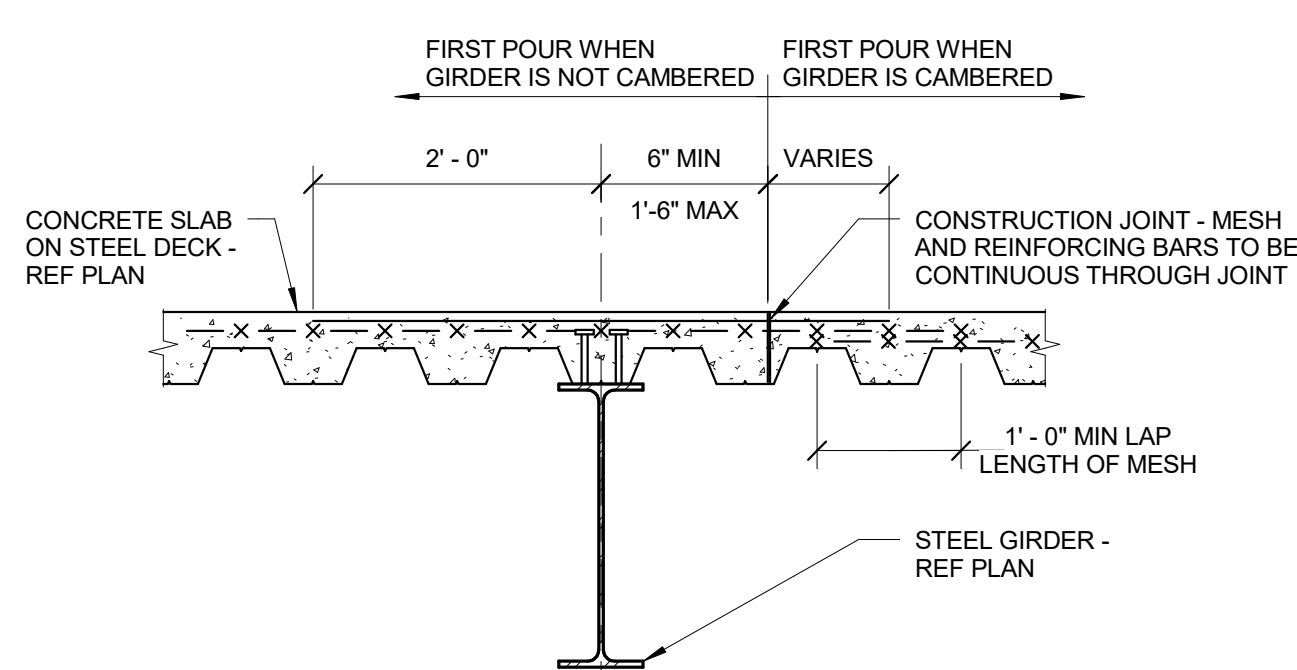
NOTES:

- REFER TO PLAN FOR DECK ORIENTATION.



4 TYPICAL DECK DIRECTION CHANGE

3/4" = 1'-0"

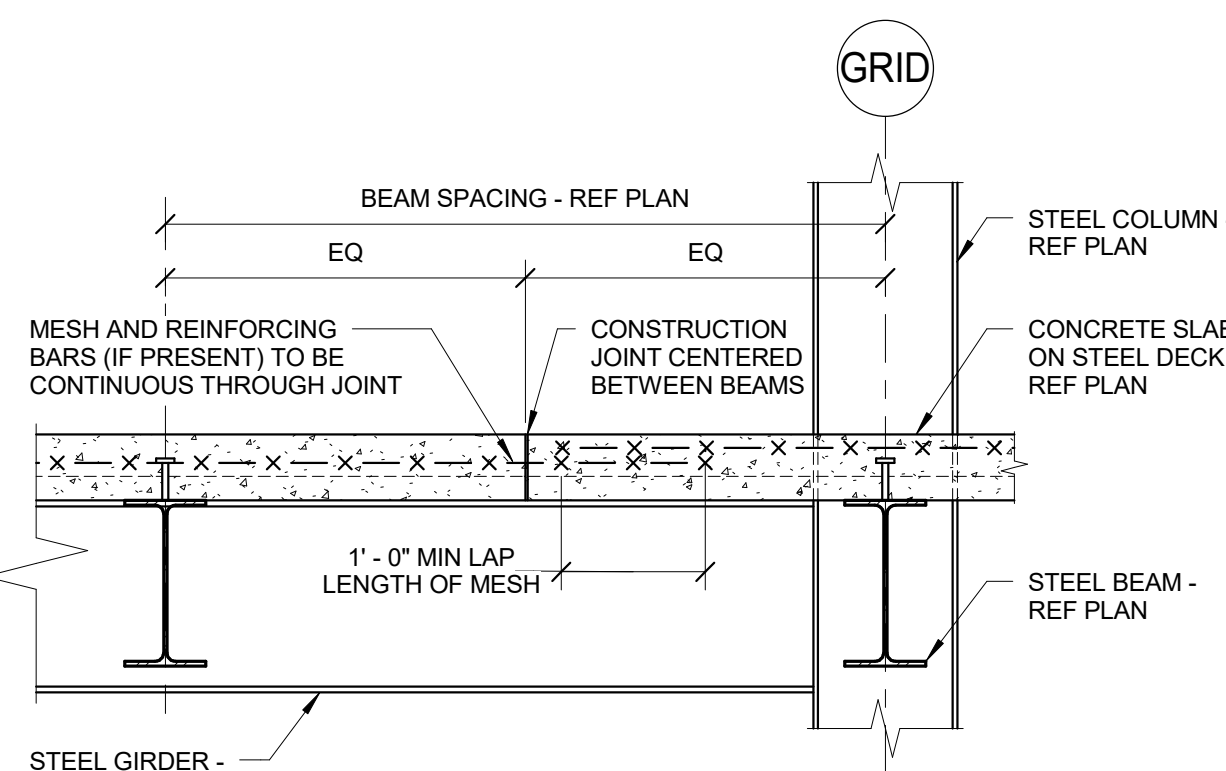


5 TYPICAL CONSTRUCTION JOINT PARALLEL TO GIRDER DETAIL

3/4" = 1'-0"

NOTES:

- A STEEL GIRDER IS DEFINED AS A STEEL BEAM FRAMING BETWEEN COLUMNS AND SUPPORTING OTHER BEAMS.

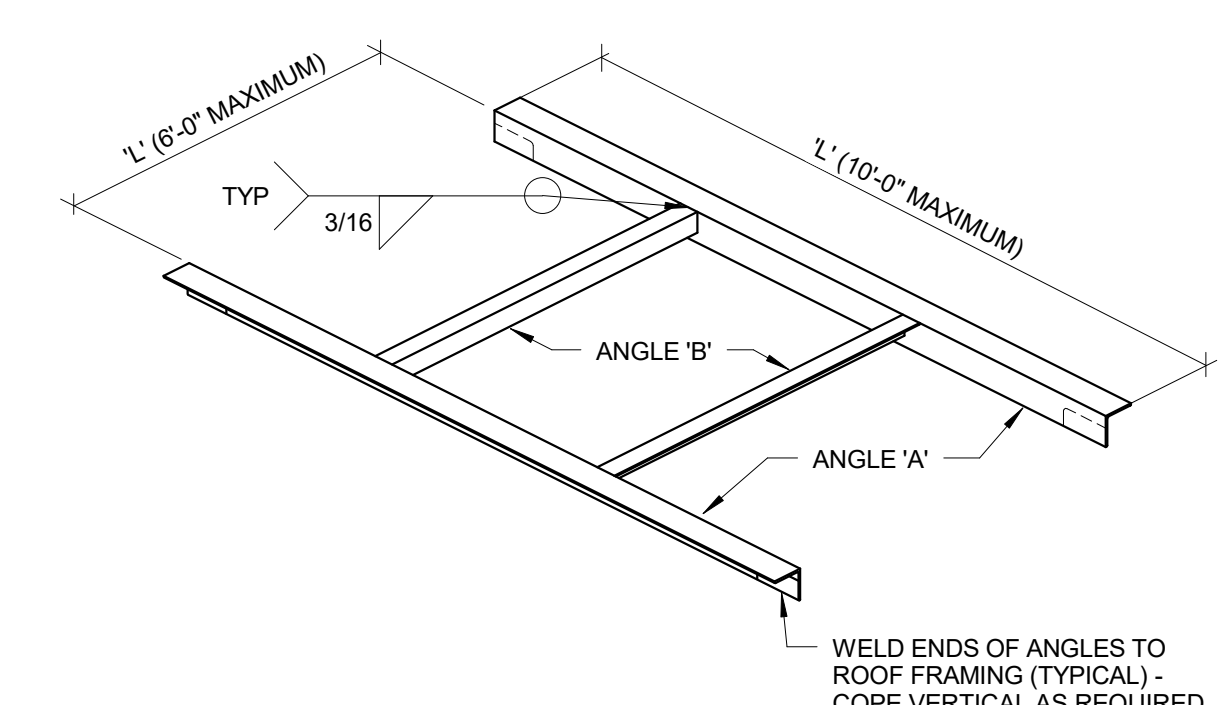


6 TYPICAL CONSTRUCTION JOINT PERPENDICULAR TO GIRDER DETAIL

3/4" = 1'-0"

NOTES:

- A STEEL GIRDER IS DEFINED AS A STEEL BEAM FRAMING BETWEEN COLUMNS AND SUPPORTING OTHER BEAMS.



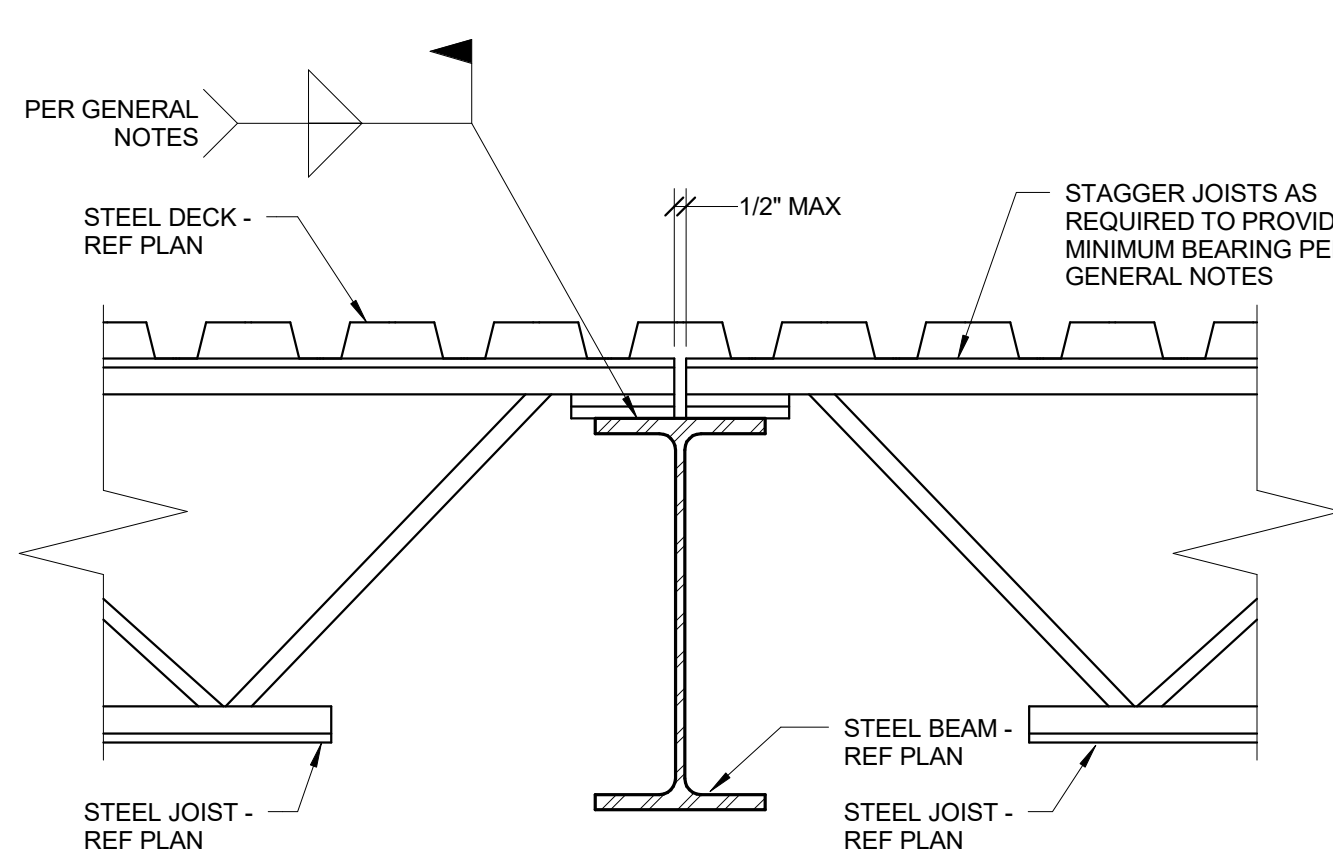
L'	ANGLE 'A'	ANGLE 'B'
UP TO 1'-0"	NONE - SUMP PAN ONLY	NONE - SUMP PAN ONLY
1'-1" TO 4'-6"	L4x4x1/4	L4x4x1/4
4'-7" TO 8'-0"	L4x4x5/16	L4x4x1/4
8'-1" TO 9'-0"	L4x4x3/8	-
8'-1" TO 10'-0"	L6x4x3/8 (LLV)	-

9 DECK OPENING FRAMING DETAIL

3/4" = 1'-0"

NOTES:

- USE ABOVE FRAMING AT ALL OPENINGS EXCEEDING 1'-0" UNO.
- REFERENCE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS.

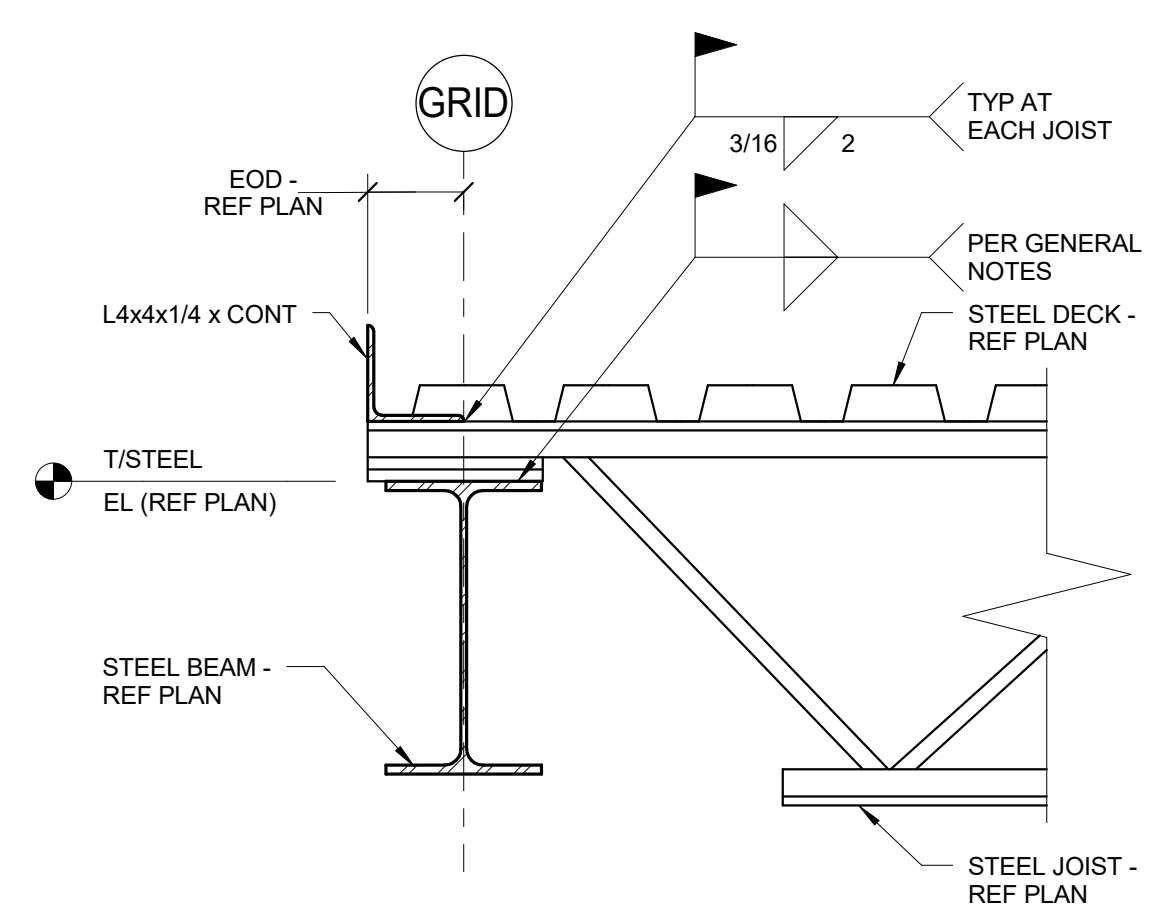


10 TYPICAL JOIST BEARING DETAIL

1 1/2" = 1'-0"

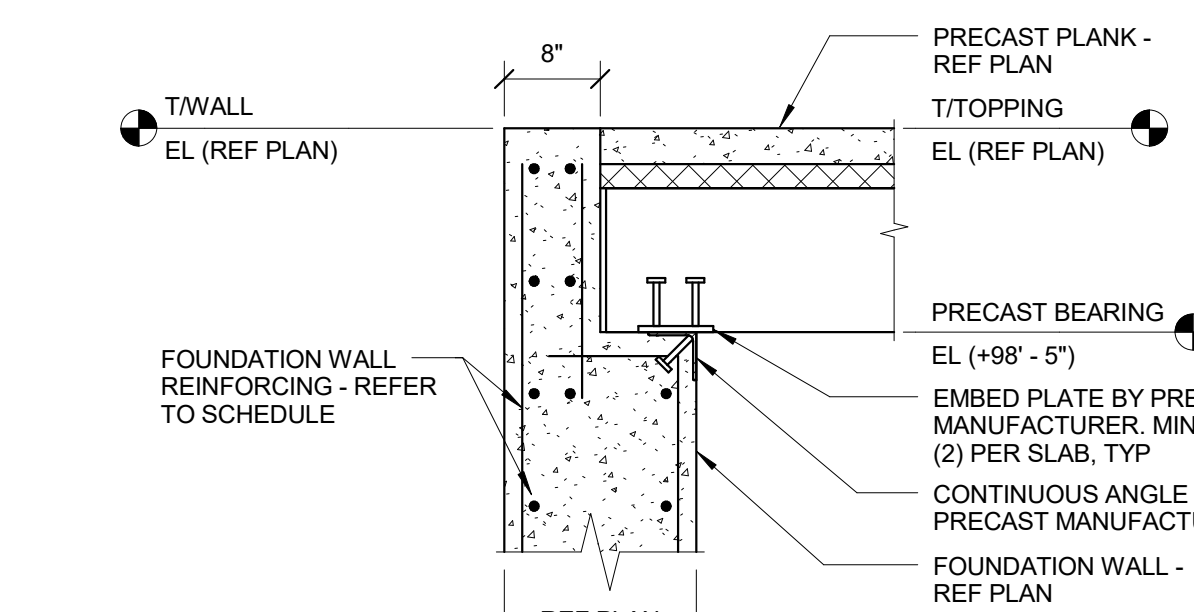
NOTES:

- JOISTS AT OR IMMEDIATELY ADJACENT TO COLUMNS SHALL BE BOLTED WITH (2) BOLTS ON BEAM GAGE. REFER TO GENERAL NOTES FOR BOLT DIAMETER.



11 TYPICAL ROOF EDGE DETAIL

1 1/2" = 1'-0"



12 PRECAST PLANK BEARING AT FOUNDATION WALL

3/4" = 1'-0"

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THE FUTURE IS SMARTER
PROJECT # 16.0029.00

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S400

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

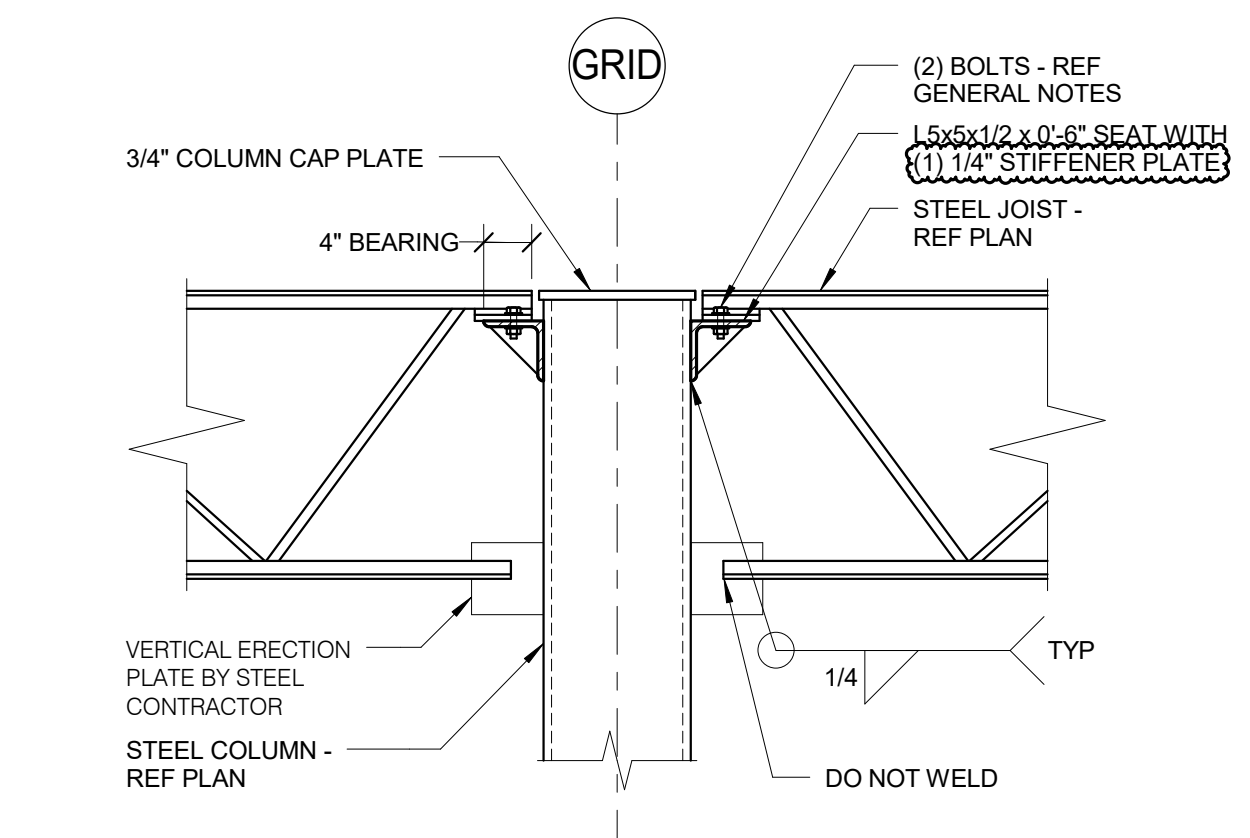
ISSUED FOR:
CONSTRUCTION 5-5-17

REVISION FOR:
NO. DESCRIPTION DATE
1 Revision 1 Date 1

DRAWN BY CHRMAR
CHECKED BY Checker

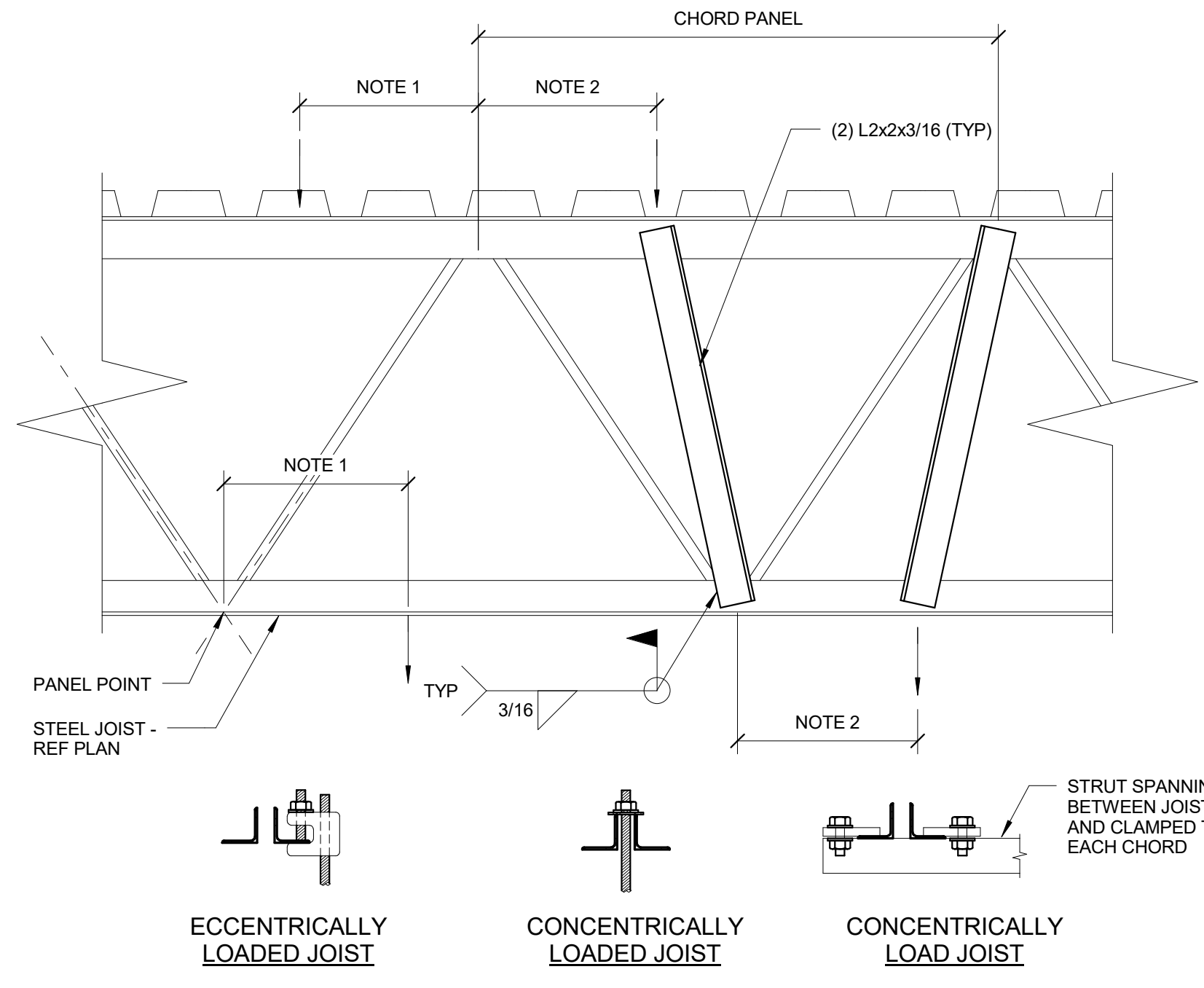
STEEL DETAILS

S401



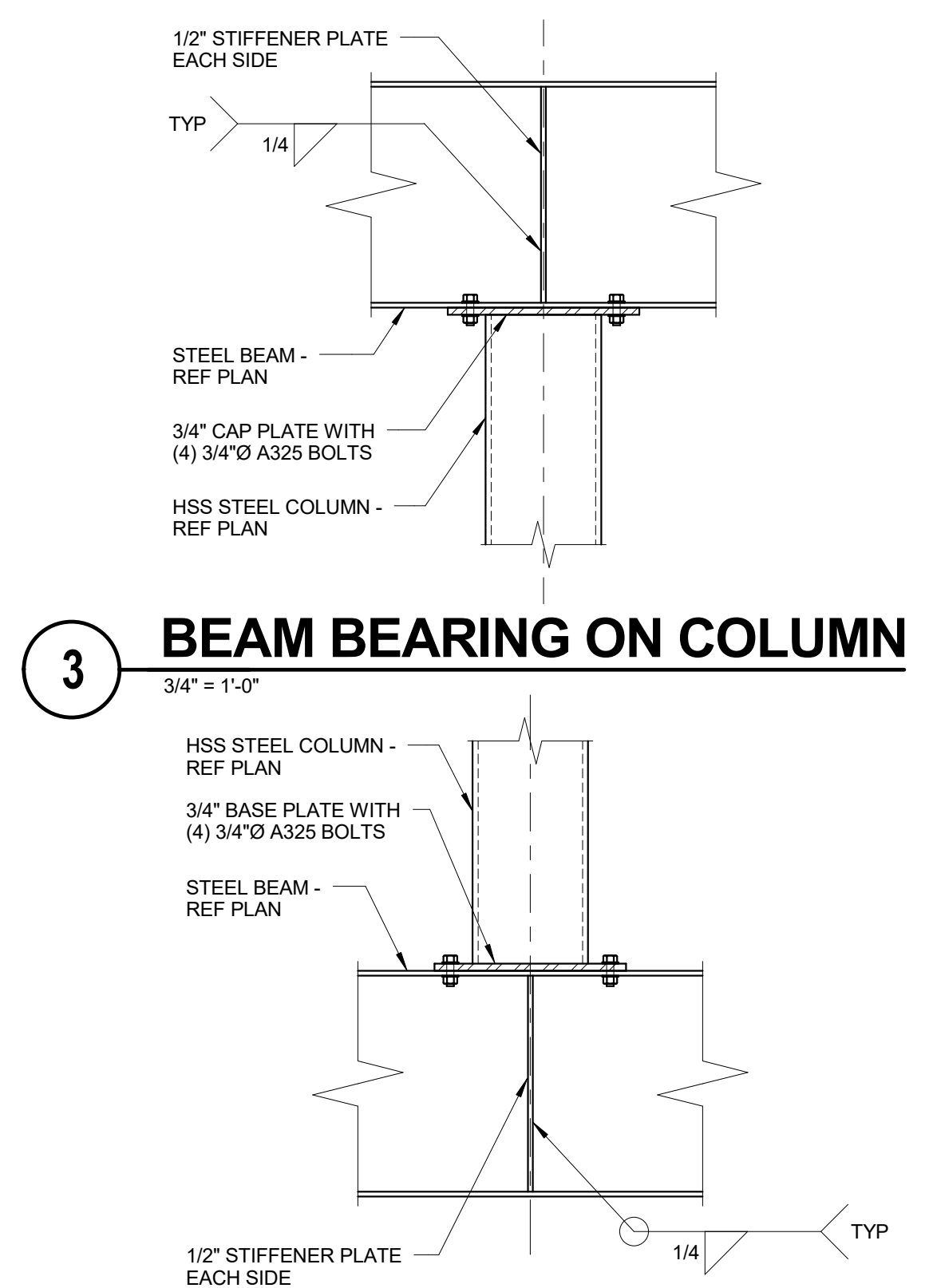
1 TYPICAL STEEL JOIST AT COLUMN
3/4" = 1'-0"

- NOTES:
- GIRDER NOT SHOWN FOR CLARITY.
 - DECK NOT SHOWN FOR CLARITY.
 - CONNECTION SHOWN IS BASED ON STEEL JOIST INSTITUTE REQUIREMENTS FOR K-SERIES BAR JOISTS. CONNECTION DETAIL NOT APPLICABLE FOR LH-SERIES JOISTS OR JOIST GIRDERS.

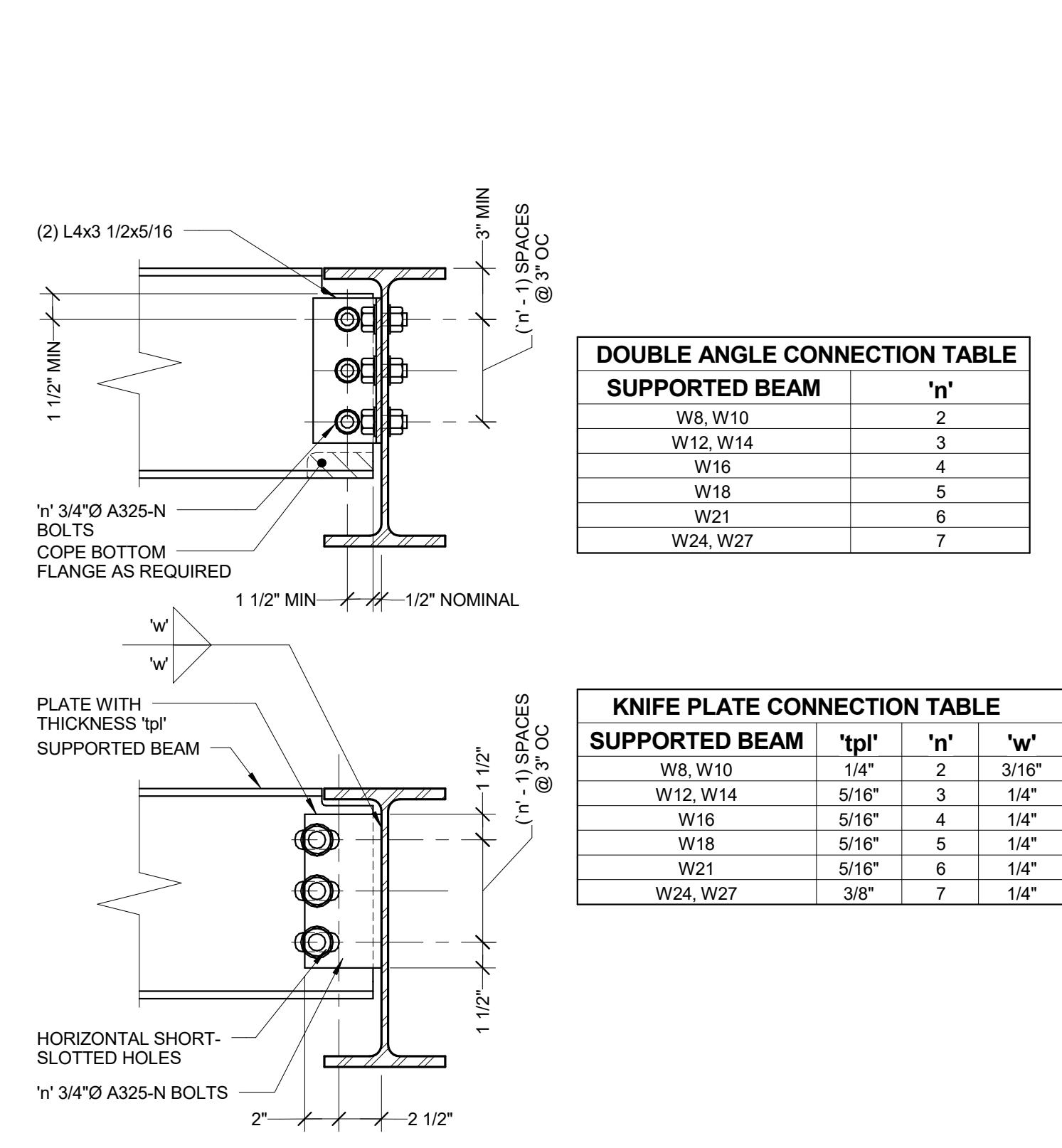


2 JOIST MODIFICATION DETAIL
1 1/2" = 1'-0"

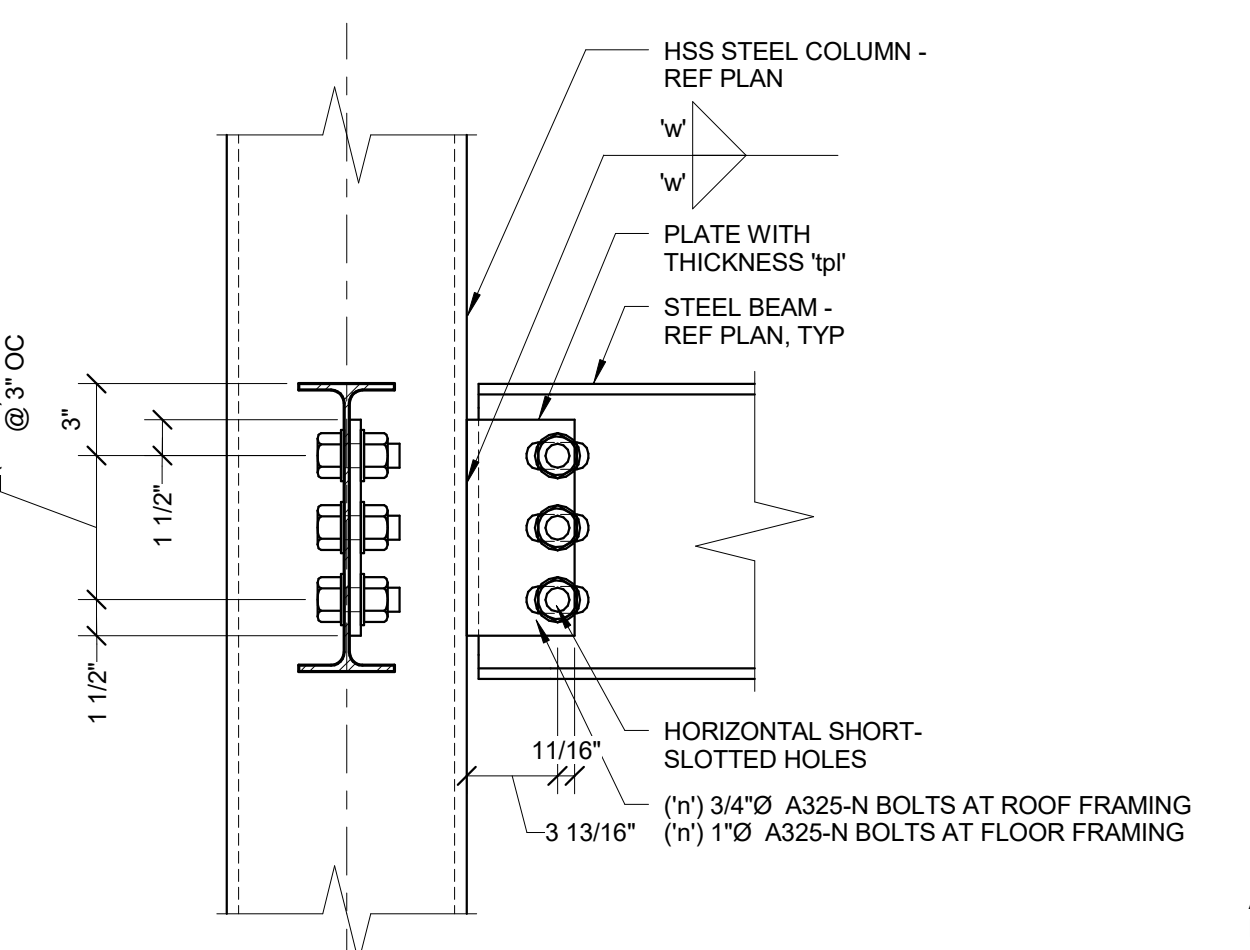
- NOTES:
- FOR ATTACHMENTS TO JOISTS THAT ARE CONCENTRICALLY LOADED ON THE JOIST, A MAXIMUM OF 100 POUNDS MAY BE ATTACHED TO THE JOIST WITHIN A CHORD PANEL WITHOUT AN ADDITIONAL ANGLE. FOR ATTACHMENTS TO JOIST THAT ARE ECCENTRICALLY LOADED, A MAXIMUM OF 25 POUNDS MAY BE ATTACHED TO THE JOIST WITHIN A CHORD PANEL WITHOUT AN ADDITIONAL ANGLE. MULTIPLE ATTACHMENTS ARE ALLOWED IN EACH CHORD PANEL AS LONG AS THE SUM OF THE LOADS DO NOT EXCEED THE MAXIMUM LOAD INDICATED.
 - FOR LOADS BETWEEN 100 POUNDS AND 200 POUNDS, ADDITIONAL ANGLES ARE REQUIRED AND JOIST MUST BE CONCENTRICALLY LOADED.
 - FOR LOADING CONDITIONS IN NOTES 1 AND 2 ABOVE, TOTAL SUM OF LOADS SHALL NOT EXCEED 200 LBS FOR AN 8 FOOT SEGMENT OF JOIST. FOR LOADS GREATER THAN 200 POUNDS AND NOT NOTED ON THE DRAWINGS, CONTACT ENGINEER PRIOR TO INSTALLATION.
 - NO LOADS SHALL BE SUPPORTED FROM JOIST BRIDGING.



3 BEAM BEARING ON COLUMN
3/4" = 1'-0"



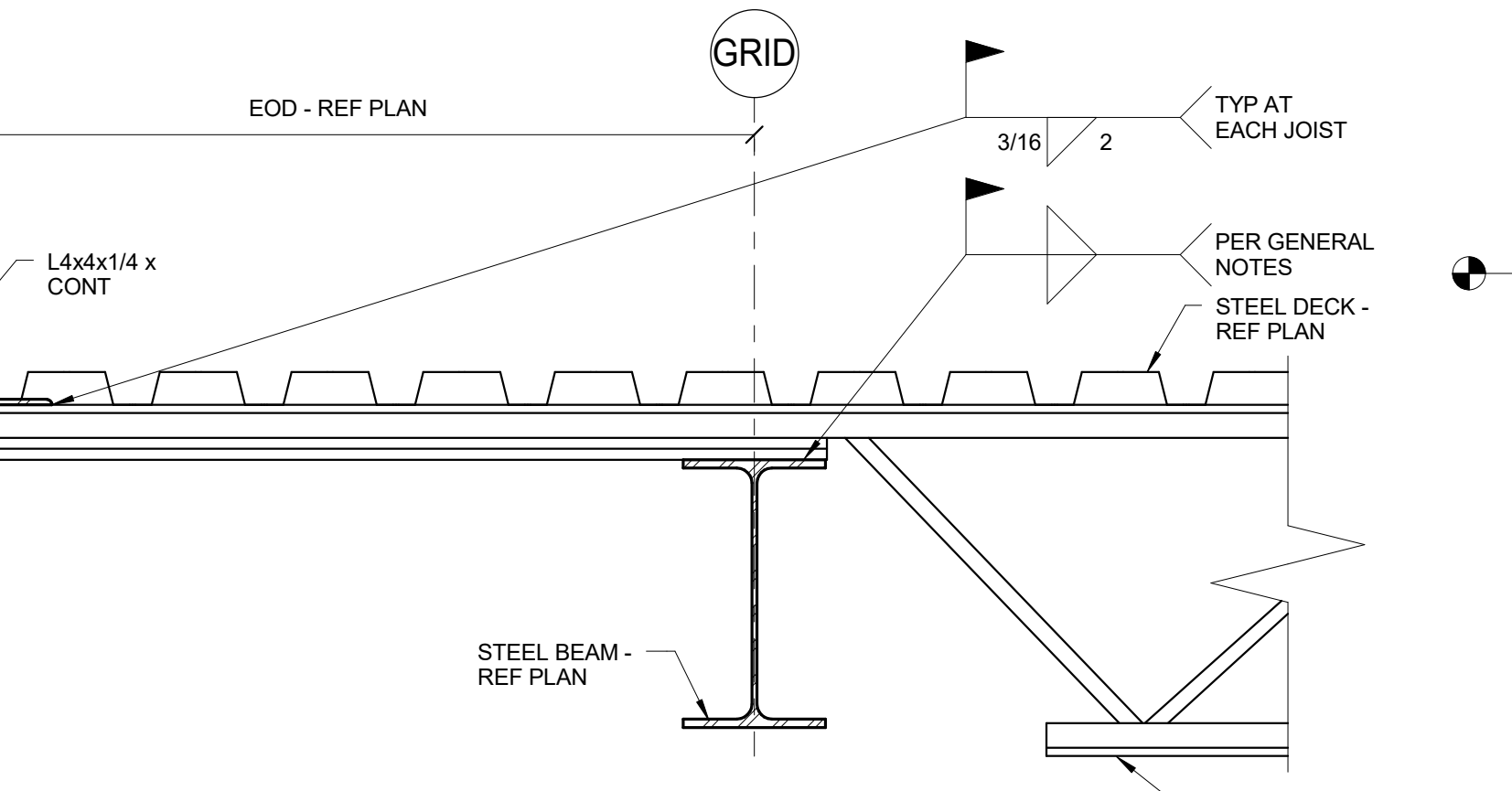
4 COLUMN BEARING ON BEAM
3/4" = 1'-0"



SUPPORTED BEAM	'tp'	'n'	'w'
W8, W10	1/4"	2	3/16"
W12, W14	5/16"	3	1/4"
W16	3/8"	4	1/4"
W18	1/2"	5	5/16"
W21	1/2"	6	5/16"
W24	1/2"	7	5/16"

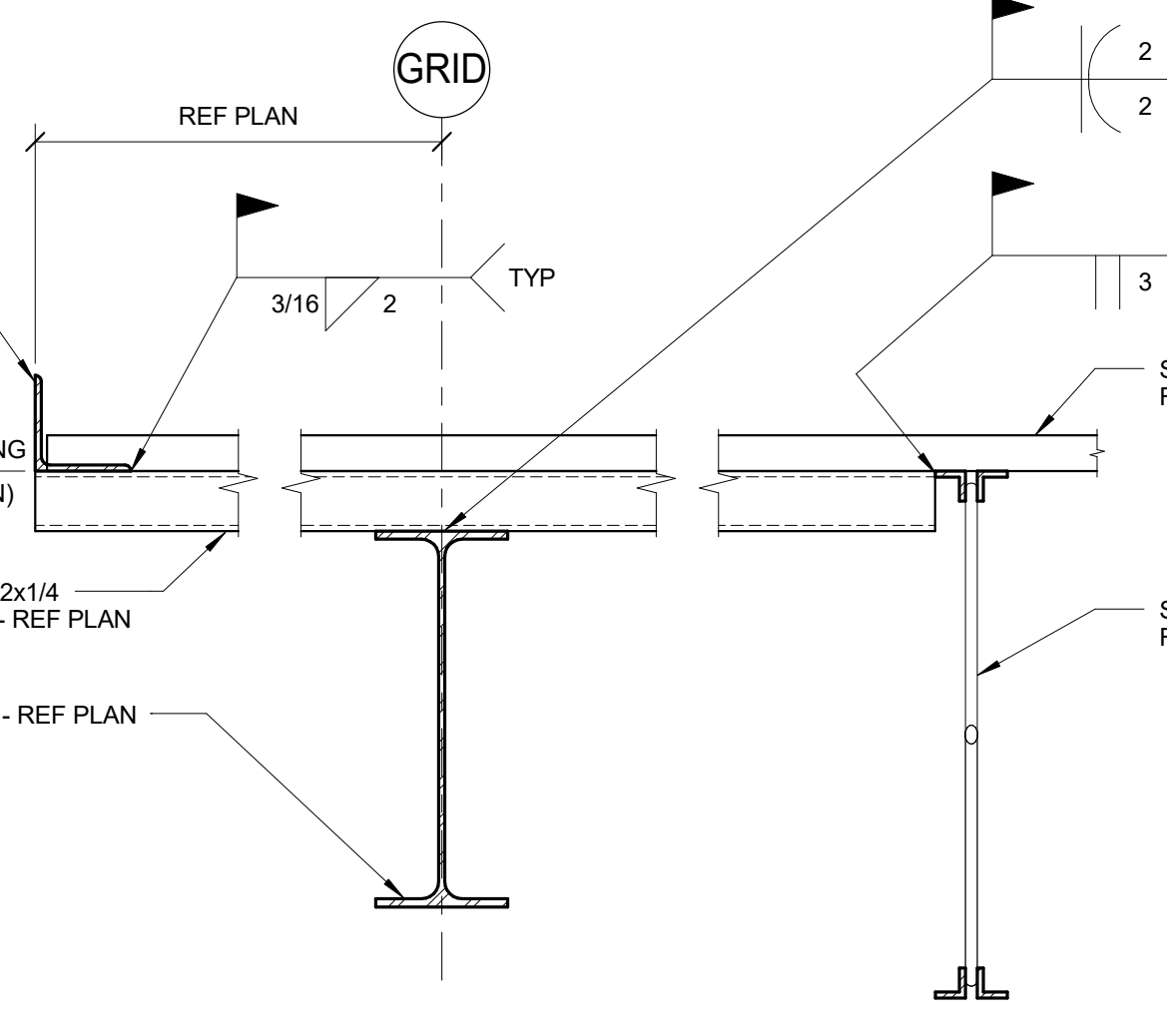
5 TYPICAL SHEAR CONNECTION
1 1/2" = 1'-0"

- NOTES:
- BOTH DOUBLE ANGLE AND KNIFE PLATE CONNECTION CONFIGURATIONS ARE ACCEPTABLE, UNLESS NOTED OTHERWISE. FABRICATOR AND DETAILER SHALL SELECT WHICH OPTION IS BEST SUITED FOR THEIR FABRICATION PROCESS AND THE ANTICIPATED ERECTION PROCEDURES.
 - DETAIL TO BE SIMILAR TO CONNECTIONS TO WIDE FLANGE OR HSS COLUMNS.
 - UNLESS NOTED OTHERWISE, PROVIDE SHEAR CONNECTIONS AS INDICATED BY THIS DETAIL.
 - DETAILER IS RESPONSIBLE FOR FULLY DEVELOPING GEOMETRY AND DIMENSIONAL INFORMATION REQUIRED TO FABRICATE.
 - WHERE TYPICAL SHEAR CONNECTION DETAIL IS NOT APPLICABLE, FABRICATOR SHALL SELECT AND DETAIL ALTERNATE CONNECTION CAPABLE OF DEVELOPING EQUAL STRENGTH. ALTERNATE CONNECTION SHALL BE SELECTED IN ACCORDANCE WITH AISC ASD CONNECTION TABLES.

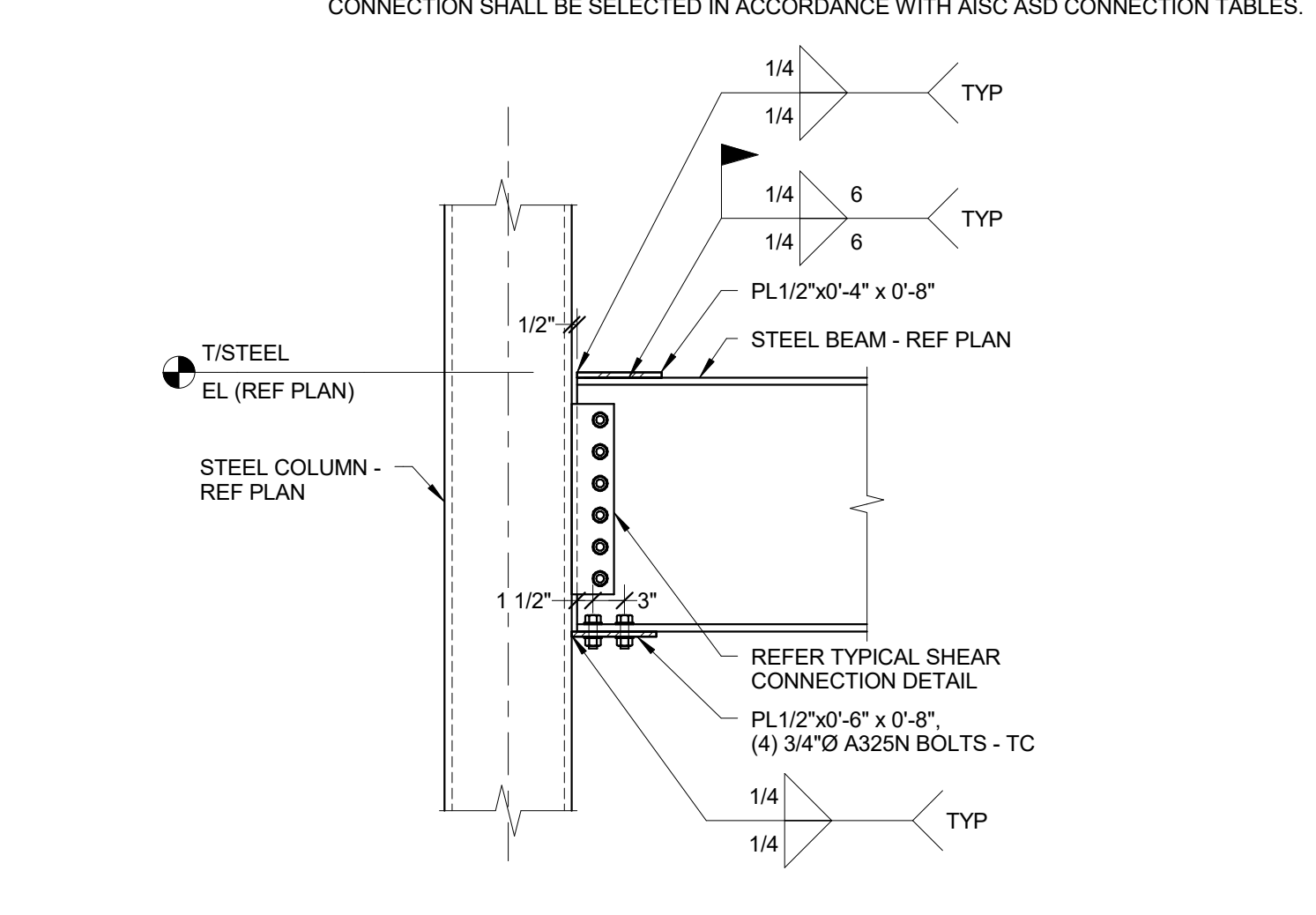


6 TYPICAL BEAM TO TUBE COLUMN SHEAR CONNECTION
1 1/2" = 1'-0"

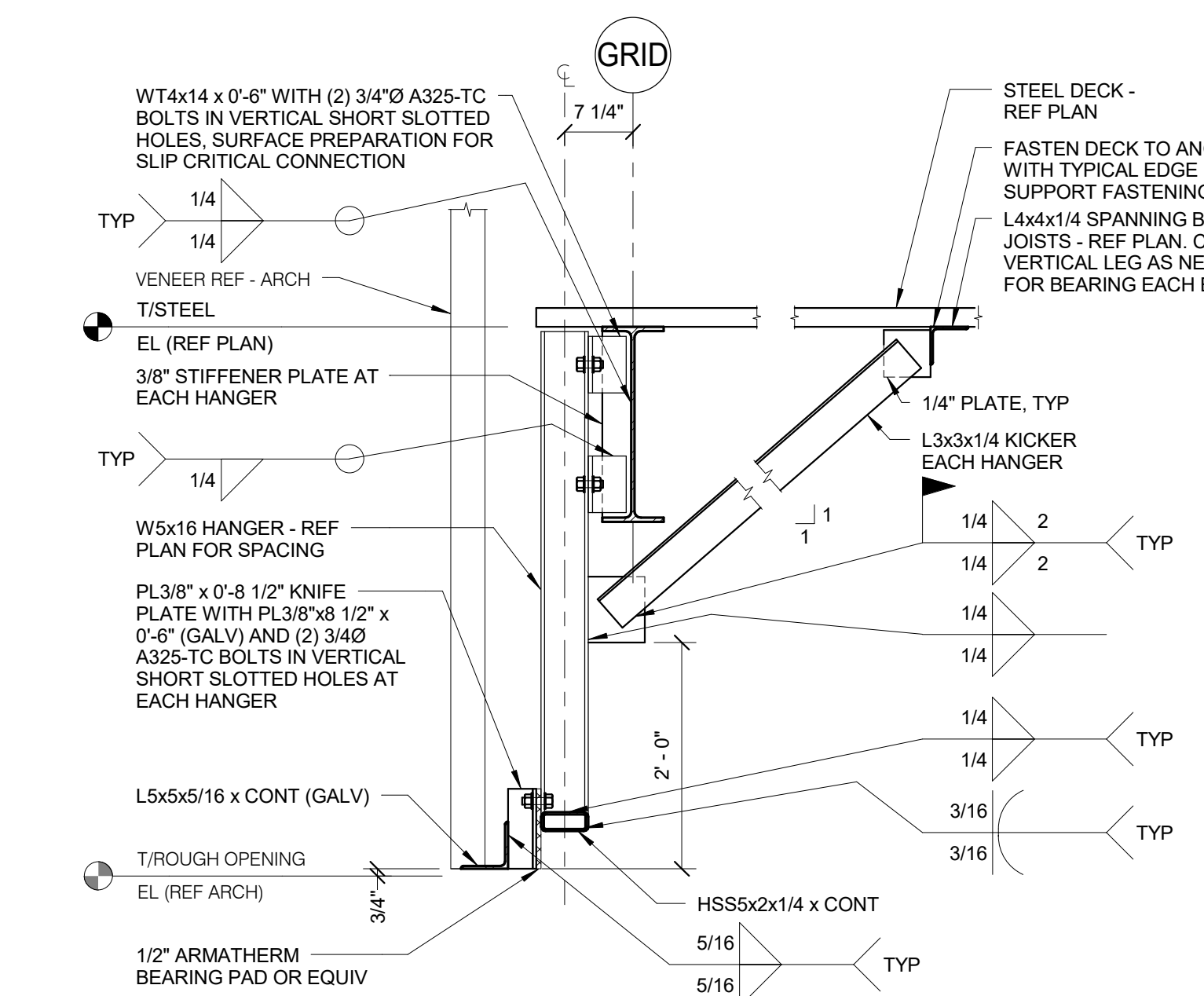
- NOTES:
- WHERE TYPICAL SHEAR CONNECTION DETAIL IS NOT APPLICABLE, FABRICATOR SHALL SELECT AND DETAIL ALTERNATE CONNECTION CAPABLE OF DEVELOPING EQUAL STRENGTH. ALTERNATE CONNECTION SHALL BE SELECTED IN ACCORDANCE WITH AISC ASD CONNECTION TABLES.



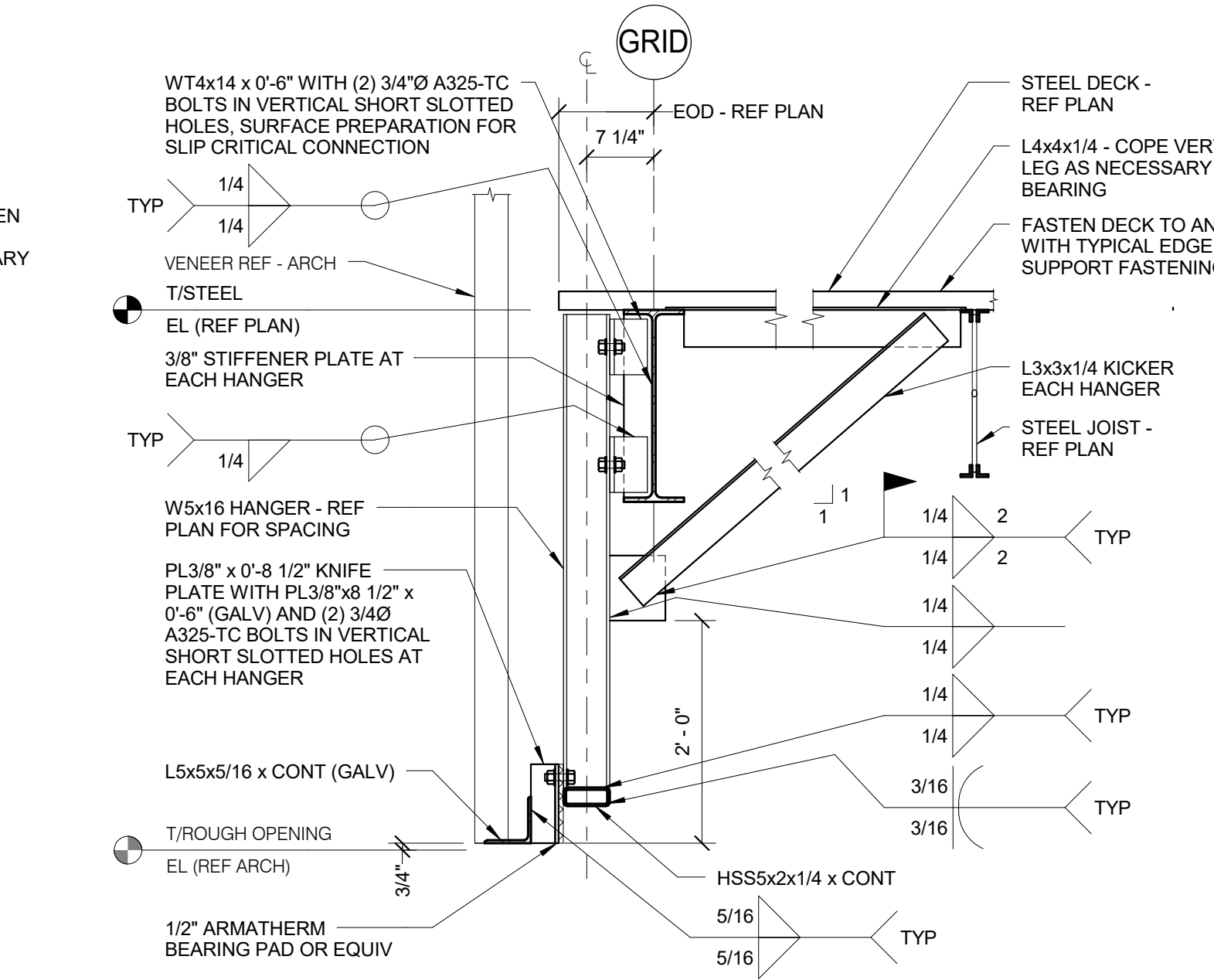
7 ROOF EDGE DETAIL
1 1/2" = 1'-0"



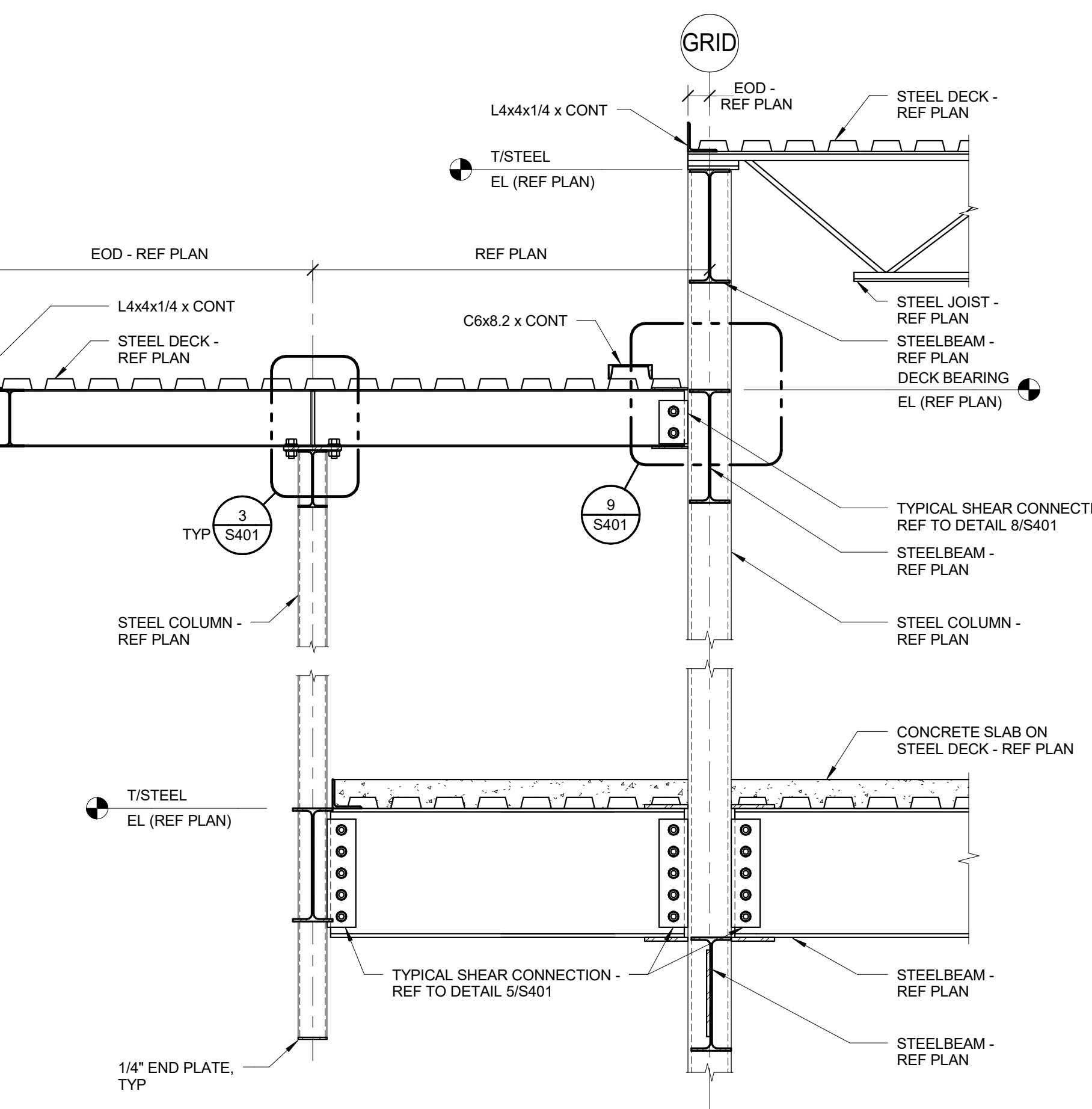
8 OUTRIGGER DETAIL
1 1/2" = 1'-0"



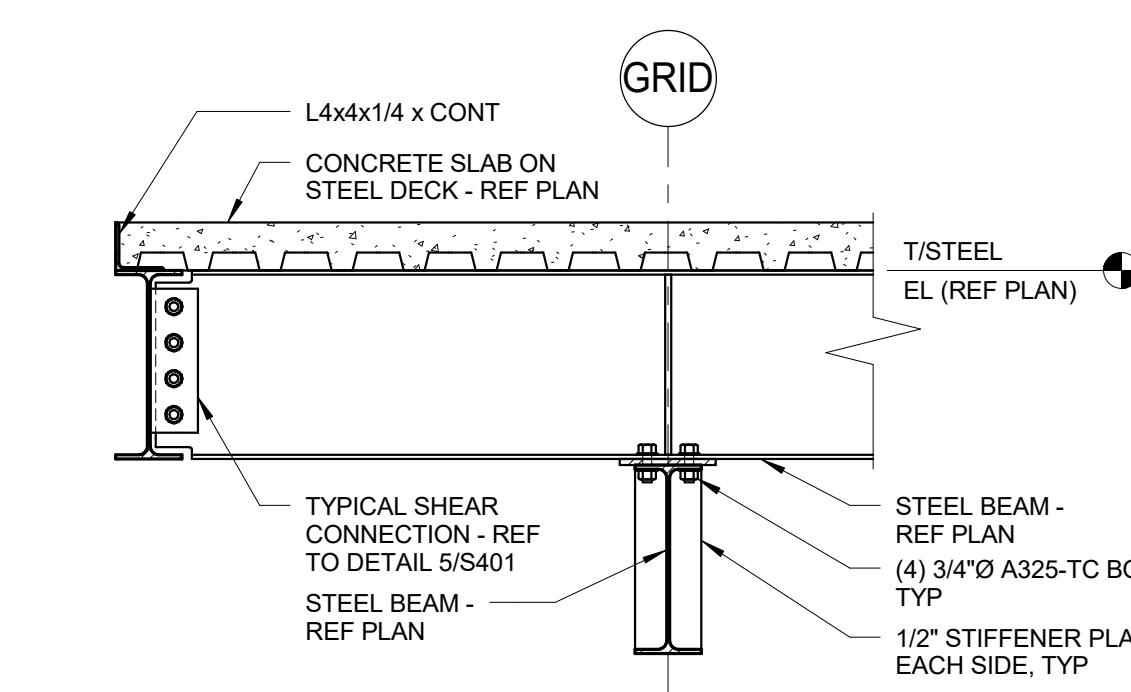
9 TYPICAL MOMENT CONNECTION
3/4" = 1'-0"



10 SUSPENDED LINTEL DETAIL AT ROOF
3/4" = 1'-0"



11 CANTILEVER FLOOR SECTION
3/4" = 1'-0"



12 BEAM BEARING ON BEAM
3/4" = 1'-0"

- NOTES:
- REFER TYPICAL SHEAR CONNECTION DETAIL TO DETAIL S/S401.

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PROJECT # 16.0029.00

DATE: 05/05/17
DRAWN BY: CHRMAR
CHECKED BY: Checker

REFERENCE SCALE IN INCHES
0 1 2 3

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

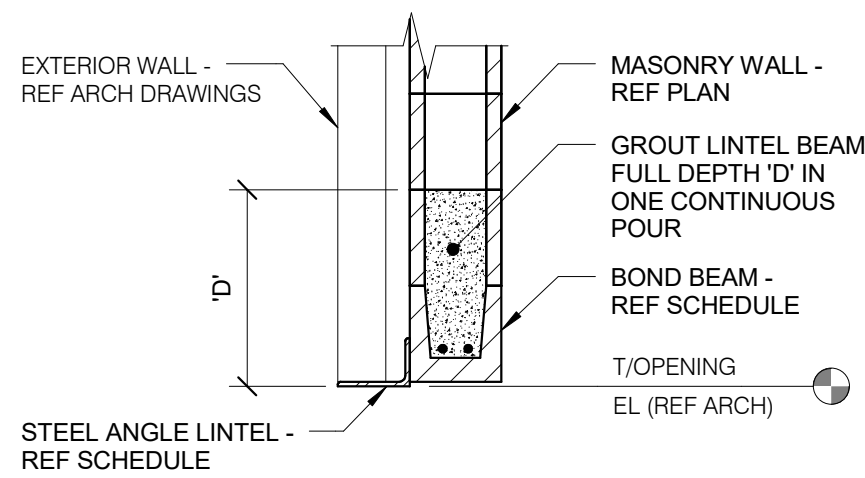
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CHECKED BY Checker

MASONRY DETAILS

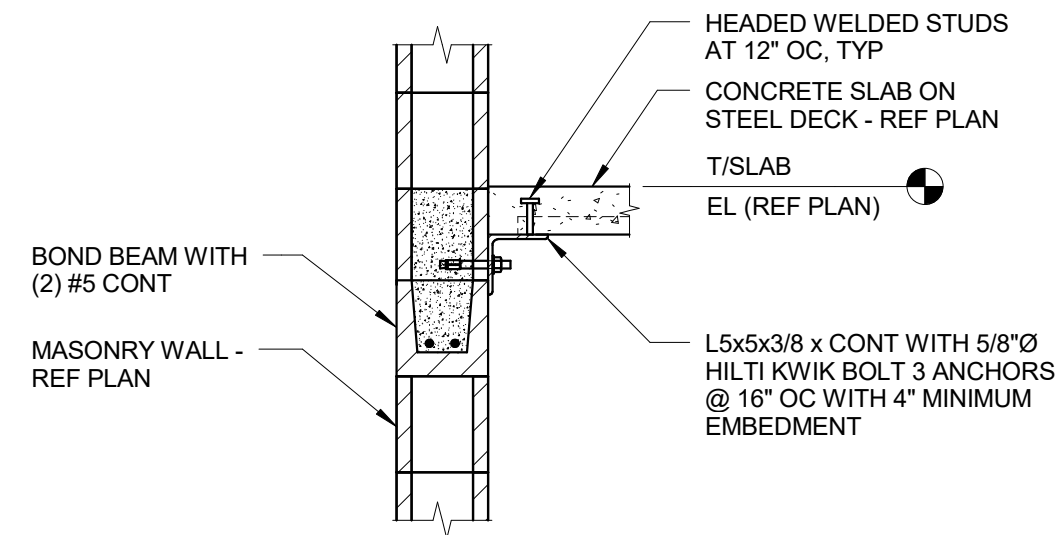


1 LINTEL DETAIL

3/4" = 1'-0"

NOTES:

1. REFERENCE ARCHITECTURAL DRAWINGS FOR INSULATION, THROUGH-WALL FLASHING, AND WEEP HOLES.
2. SHORE MASONRY UNTIL GROUT FOR LINTEL HAS REACHED ITS SPECIFIED STRENGTH.

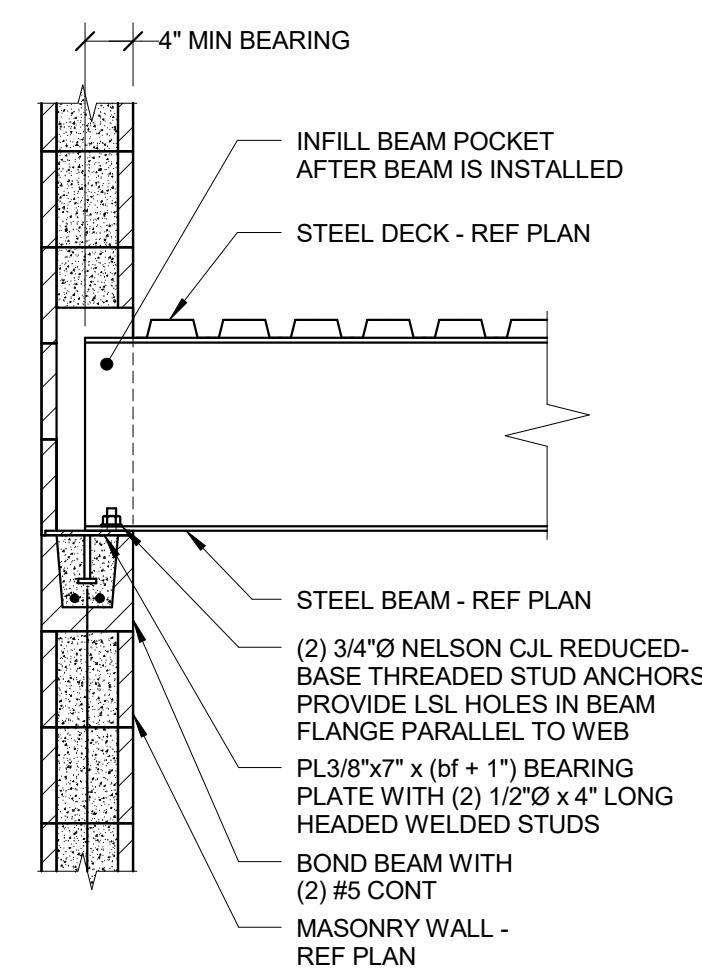


2 TYPICAL DECK SUPPORT AT MASONRY

3/4" = 1'-0"

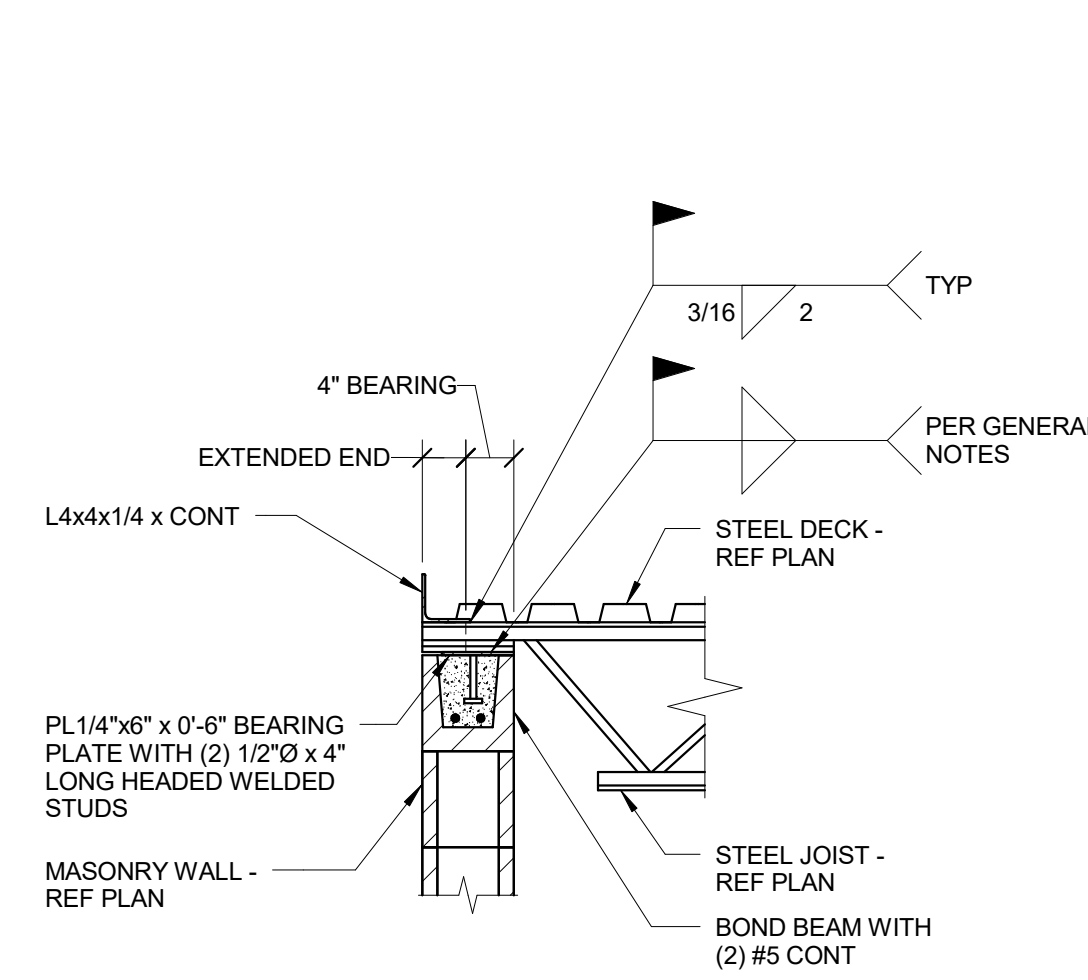
NOTES:

1. ROOF DECK CONTINUOUS AT SIM.



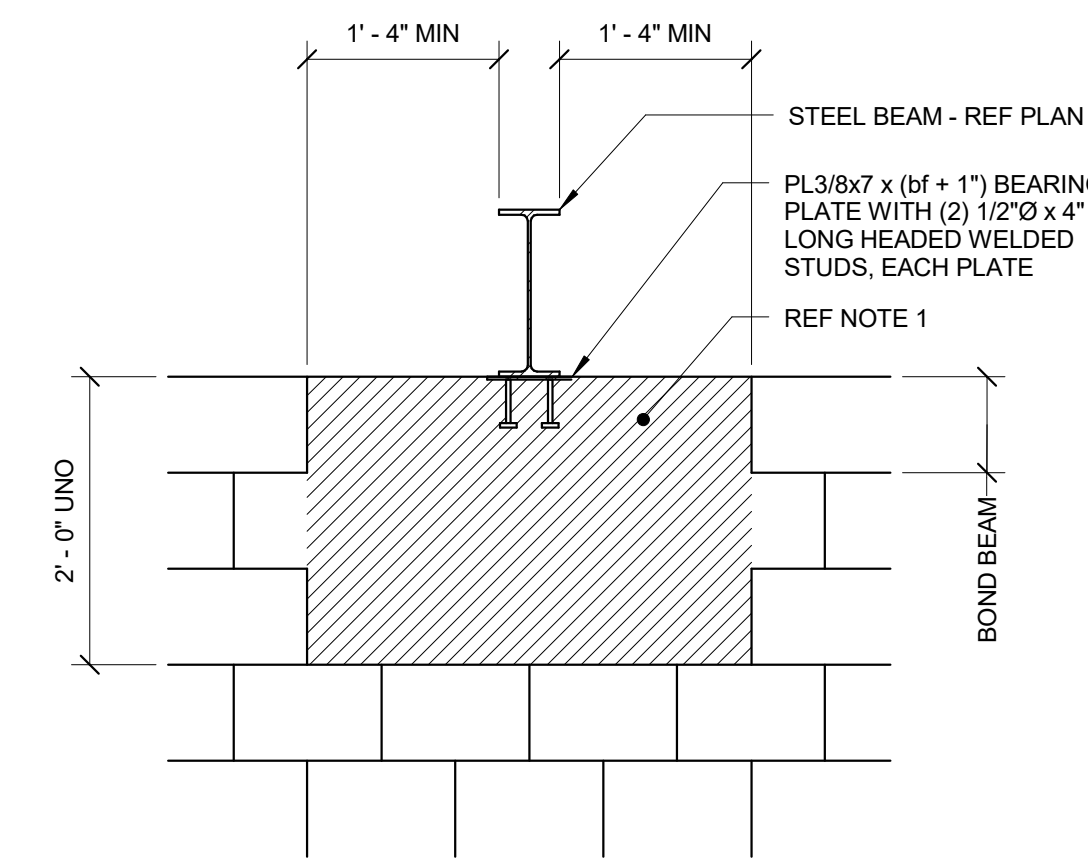
3 TYPICAL BEAM BEARING ON MASONRY

3/4" = 1'-0"



4 TYPICAL ROOF JOIST BEARING ON MASONRY

3/4" = 1'-0"

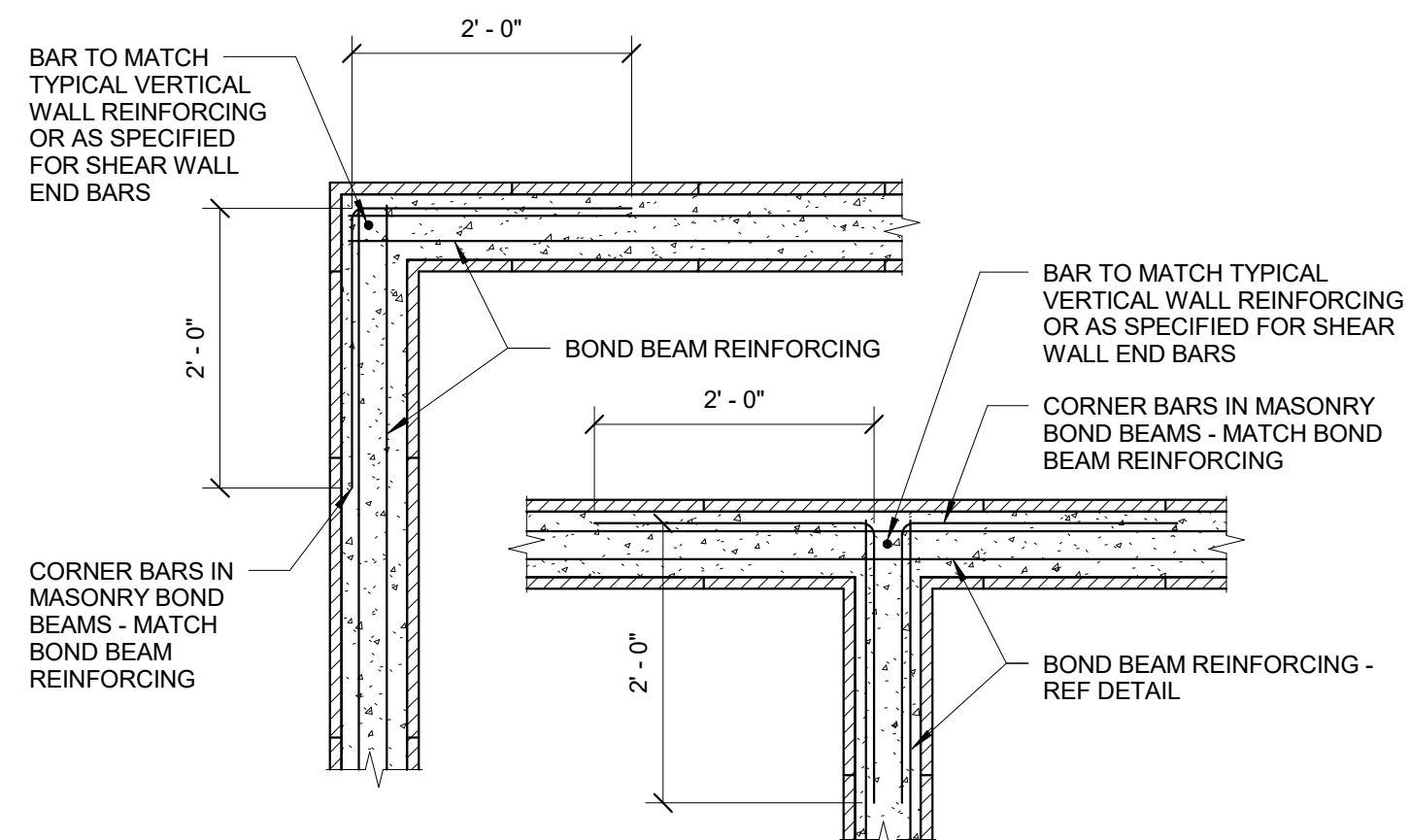


5 TYPICAL BEAM BEARING ON MASONRY

3/4" = 1'-0"

NOTES:

1. IN SHADED AREA, FILL ALL CORES IN WALL WITH GROUT MINIMUM AT CORNER CONDITION: 1'-4\", EACH WAY.

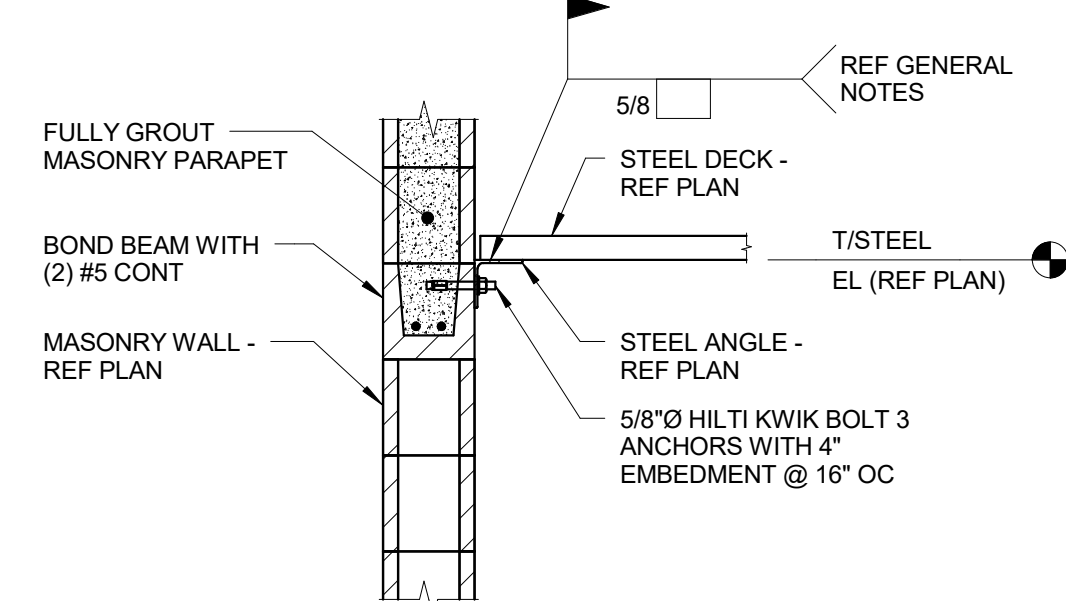


6 TYPICAL CMU WALL CORNER REINFORCING

3/4" = 1'-0"

NOTES:

1. TYPICAL VERTICAL WALL REINFORCING NOT SHOWN FOR CLARITY.

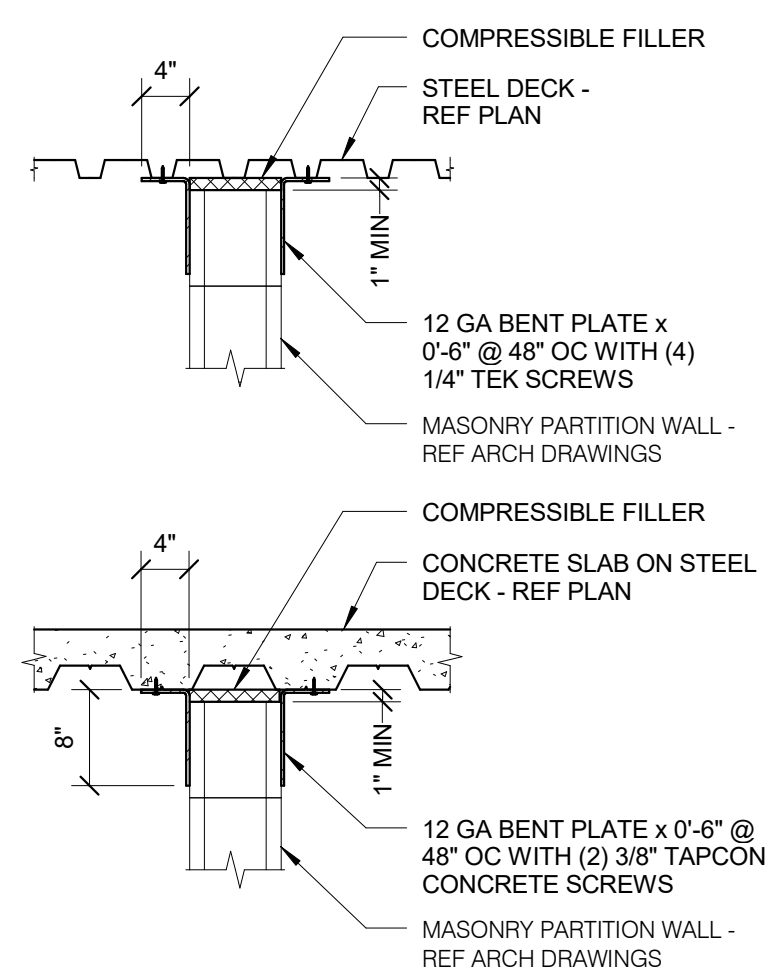


7 ROOF DECK SUPPORT AT MASONRY

3/4" = 1'-0"

NOTES:

1. ROOF DECK SPANS TOP OF MASONRY WALL AT SIM.

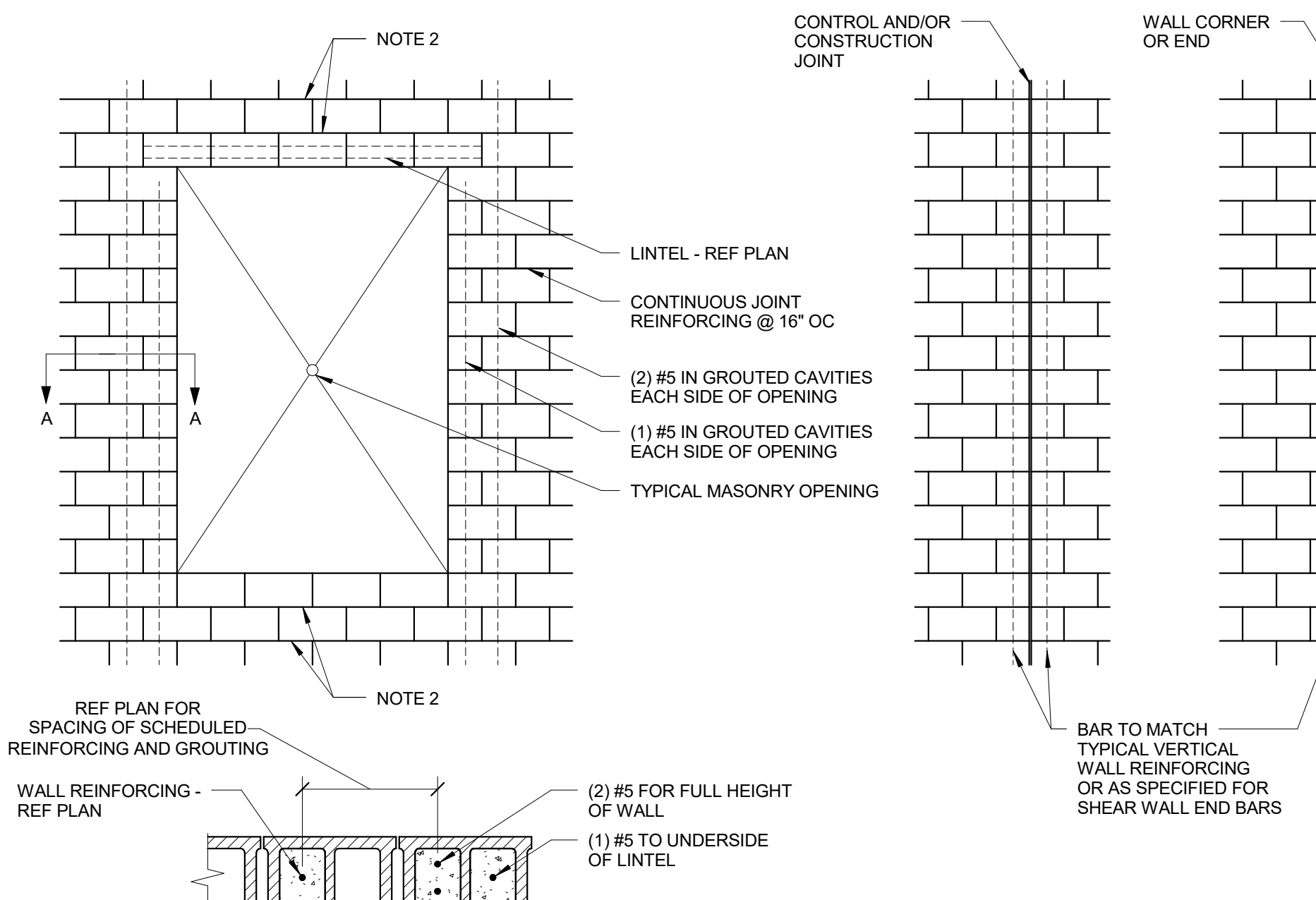


8 MASONRY PARTITION WALL AT STEEL DECK

3/4" = 1'-0"

NOTES:

1. PROVIDE THE BENT PLATE CLIP ANGLES ON ALL INTERIOR NON-LOAD BEARING MASONRY PARTITION WALLS. REFERENCE ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL MASONRY PARTITION WALLS.
2. BENT PLATE CLIPS MAY BE ELIMINATED IF ALL THE FOLLOWING CONDITIONS ARE MET.
 - A. LENGTH OF WALL BETWEEN PERPENDICULAR INTERSECTING WALLS IS LESS THAN THE FOLLOWING:
 - a. 15'-0" FOR 8" CMU
 - b. 20'-0" FOR 8" CMU
 - c. 22'-0" FOR 10" CMU
 - d. 25'-0" FOR 12" CMU
 - B. WALL AND INTERSECTION HAVE PROPERLY INSTALLED (9 GA) TRUSS TYPE HORIZONTAL JOINT REINFORCING @ 16" OC.

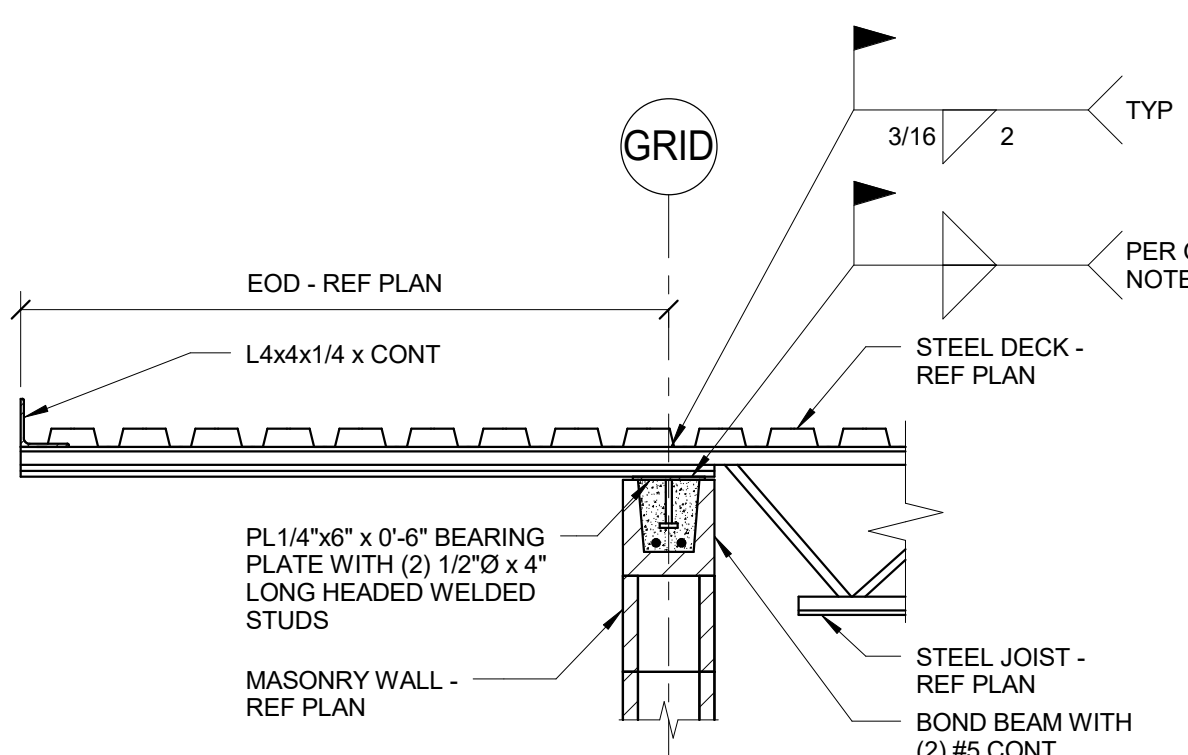


9 TYPICAL MASONRY WALL DETAIL

3/4" = 1'-0"

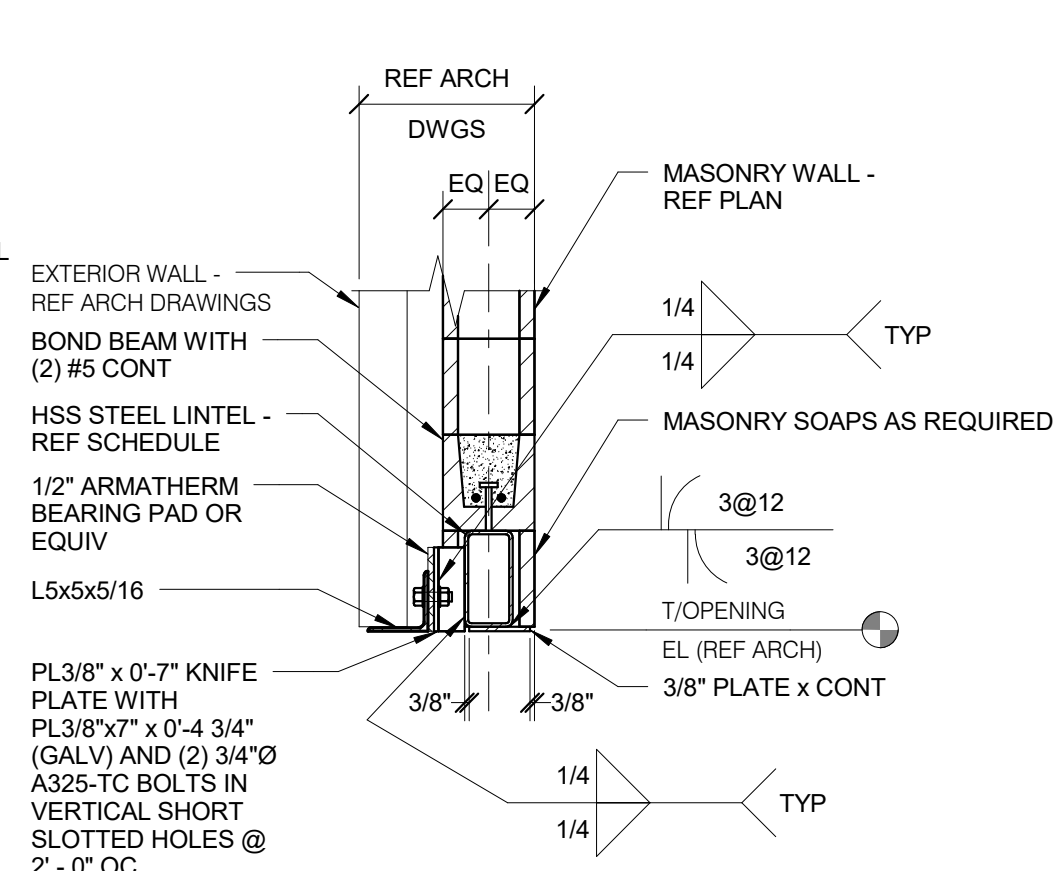
NOTES:

1. REFER TO ARCHITECTURAL ELEVATIONS FOR MASONRY CONTROL JOINT LOCATIONS.
2. TWO COURSES OF JOINT REINFORCING ARE REQUIRED ABOVE THE LINTEL AND BELOW THE SILL AND SHALL EXTEND A MINIMUM OF 24 INCHES PAST THE OPENING.



10 ROOF JOIST WITH JOIST SEAT EXTENSION

3/4" = 1'-0"

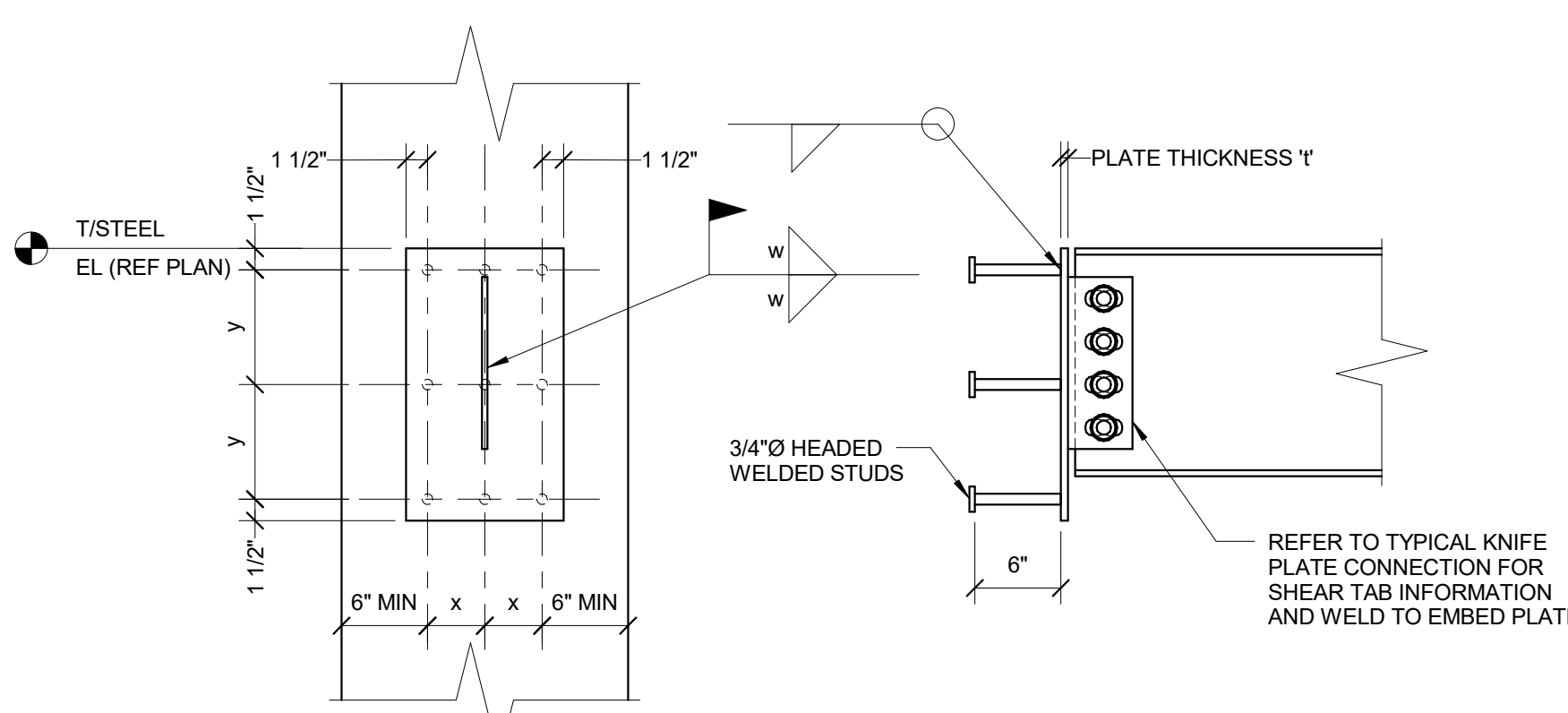


11 LINTEL DETAIL

3/4" = 1'-0"

NOTES:

1. REFERENCE ARCHITECTURAL DRAWINGS FOR INSULATION, THROUGH-WALL FLASHING, AND WEEP HOLES.



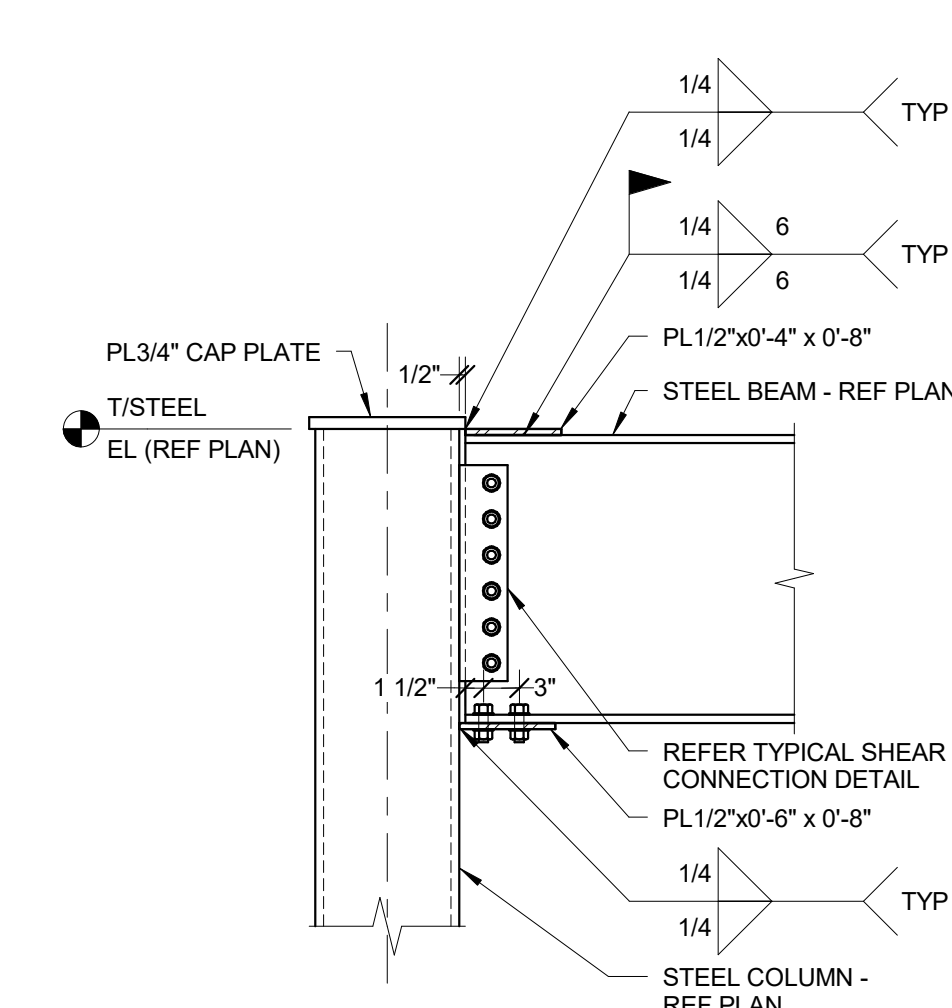
12 TYPICAL EMBED PLATE DETAIL

1" = 1'-0"

NOTES:

1. DETAIL SIMILAR FOR MOMENT CONNECTION OF BEAMS IN OPPOSITE DIRECTION.

EMBED PLATE DIMENSIONS					
SUPPORTED BEAM	PLATE THICKNESS 't'	NUMBER VERTICAL COLUMNS	NUMBER HORIZONTAL ROWS	NUMBER STUDS	'x' 'y'
W8/W10	1/2"	2	2	4	8" 8"
W12/W14	1/2"	2	3	6	8" 8"
W16	1/2"	3	3	9	4" 8"
W18	3/4"	3	3	9	6" 9"



13 TYPICAL ROOF MOMENT CONNECTION

3/4" = 1'-0"

NOTES:

1. DETAIL SIMILAR FOR MOMENT CONNECTION OF BEAMS IN OPPOSITE DIRECTION.

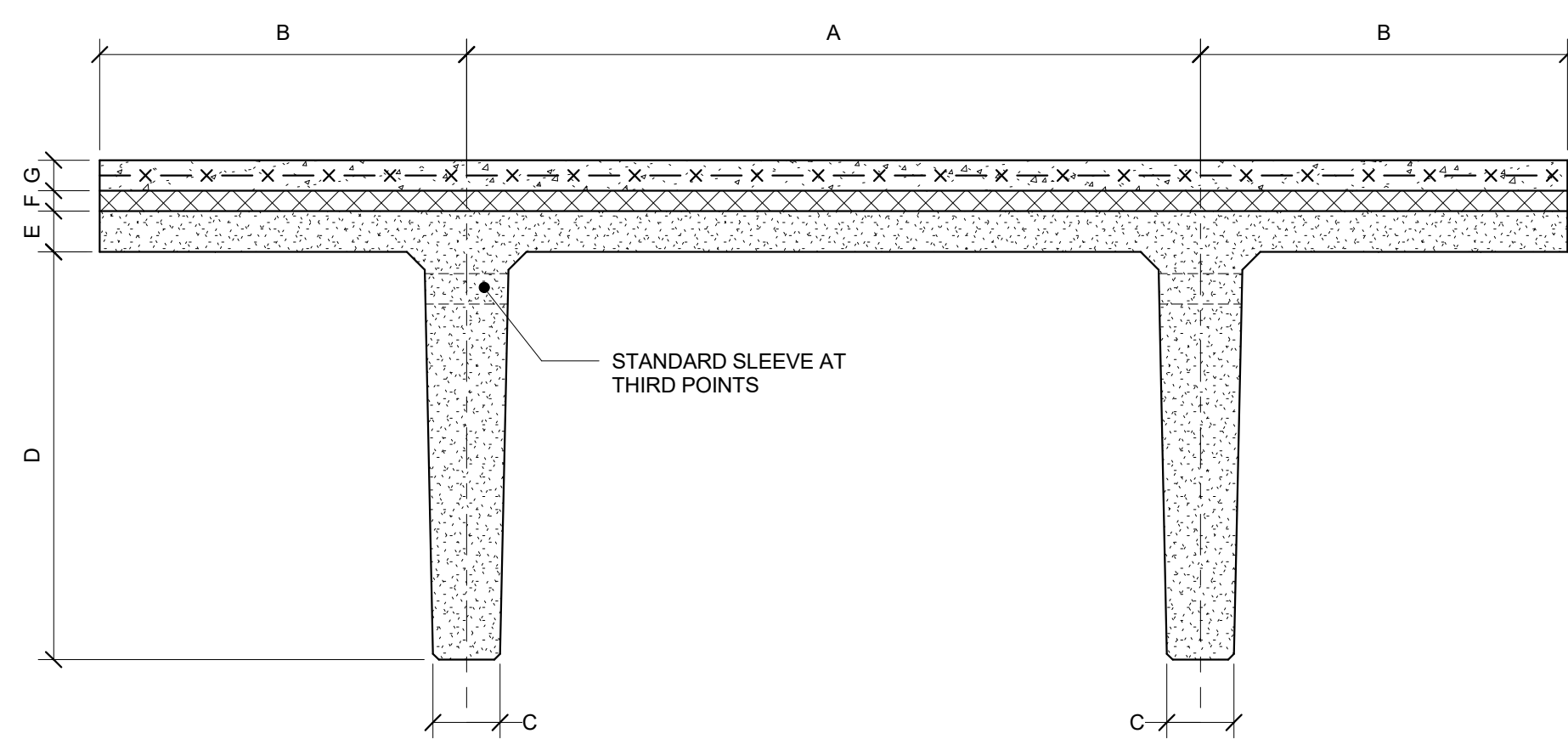
**POLICE
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MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
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PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

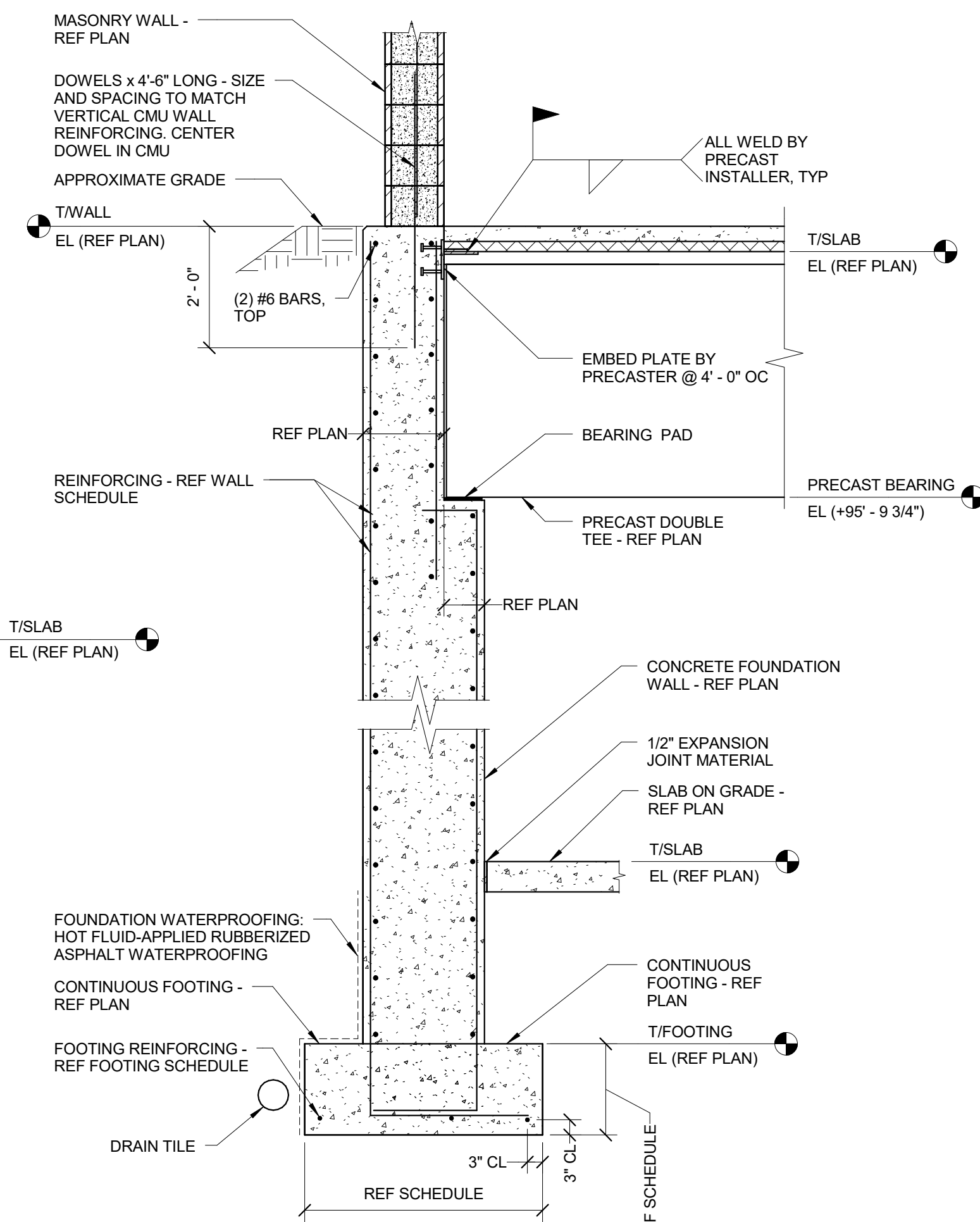
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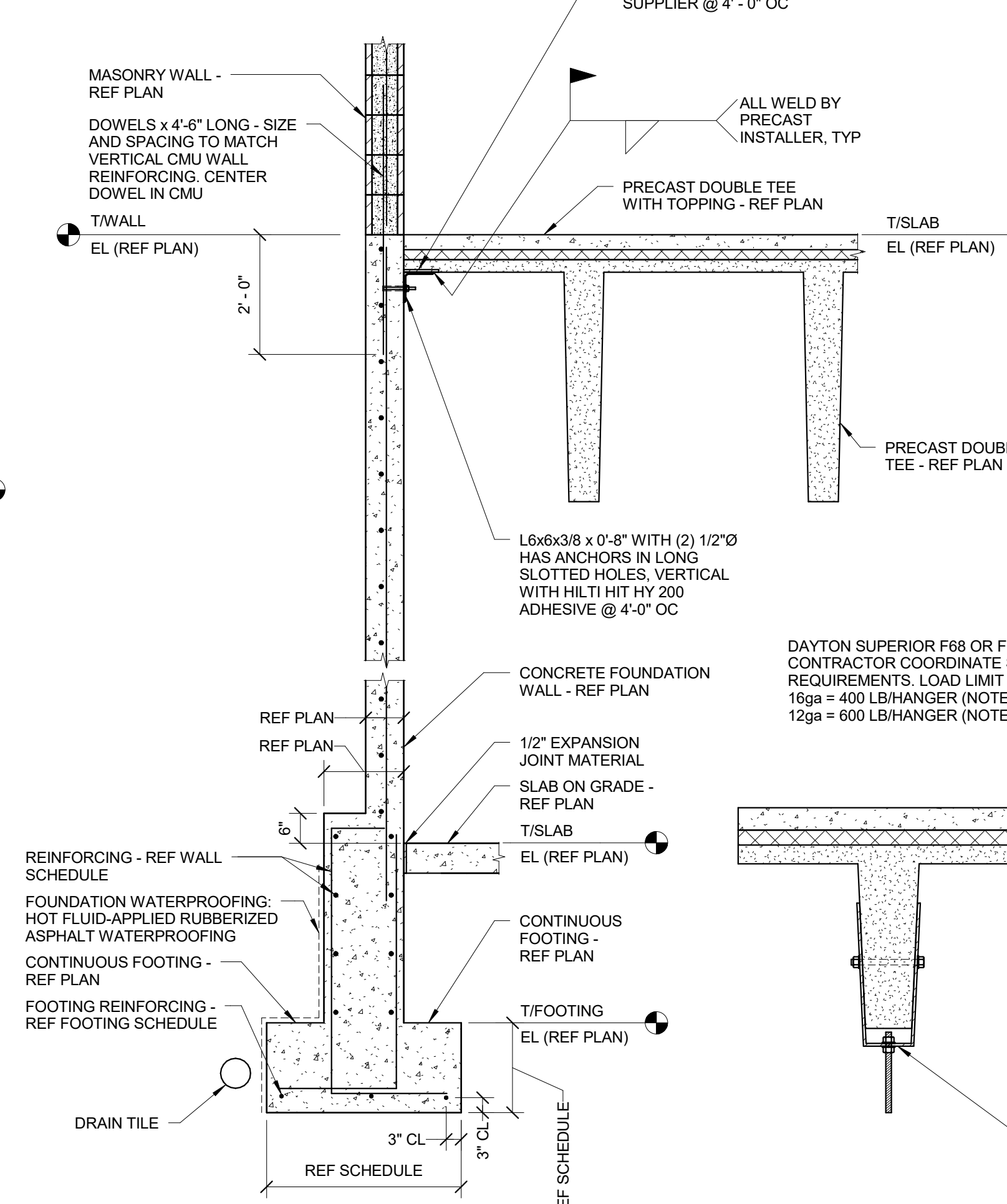
PRECAST SCHEDULE							
MARK	A	B	C	D	E	F	G
(DT1)	6'-0"	3'-0"	6"	3'-4"	3 1/4"	1 1/2"	3" FIELD CAST TOPPING (SEE NOTE 2)

1 PRECAST DIMENSIONS AND SCHEDULE
3/4" = 1'-0"

- NOTES:
- DIMENSIONS GIVEN ARE ESTIMATES. PRECASTER TO VERIFY ALL DIMENSIONS AND NOTIFY STRUCTURAL ENGINEER OF ANY VARIATIONS.
 - FIELD CAST TOPPING 3" MINIMUM THICKNESS AT MIDSPAN OF PRECAST DOUBLE TEE MEMBER.

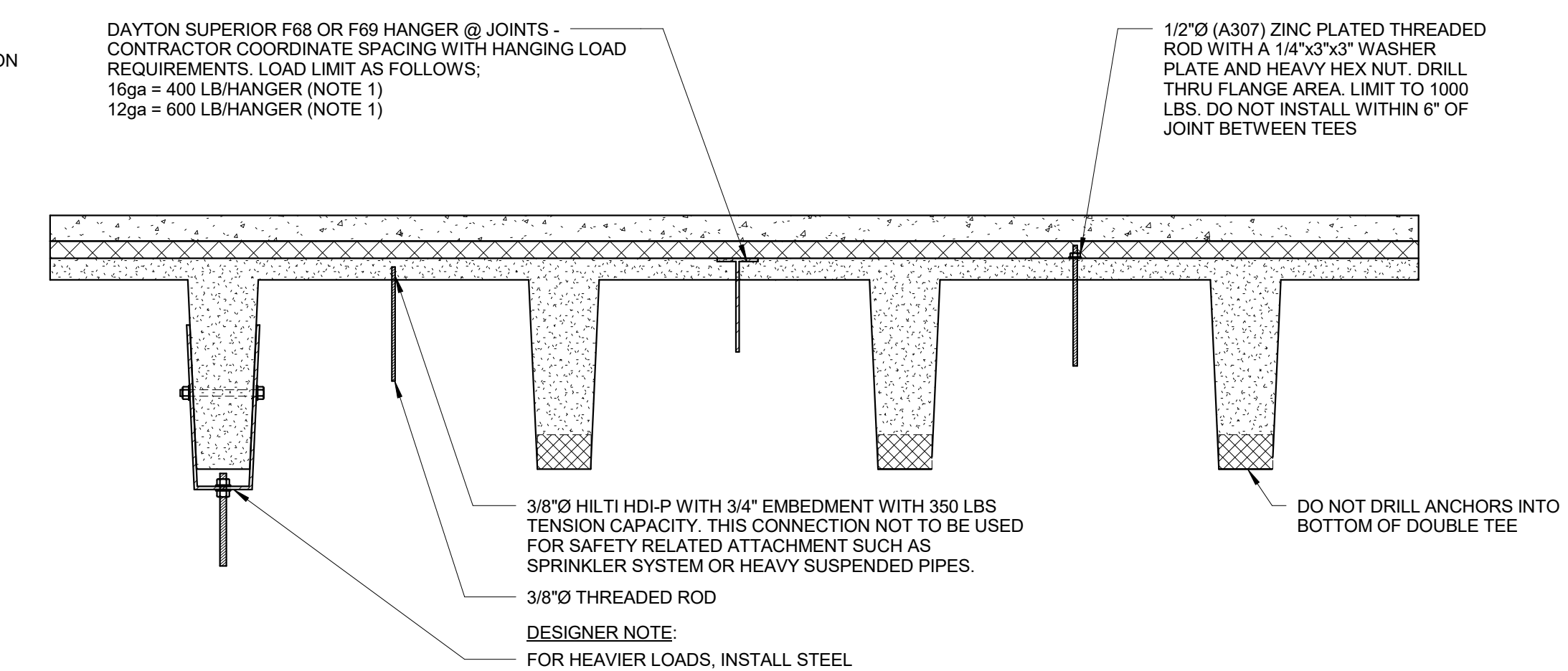


2 DOUBLE TEE BEARING AT CONCRETE WALL PANEL
1/2" = 1'-0"



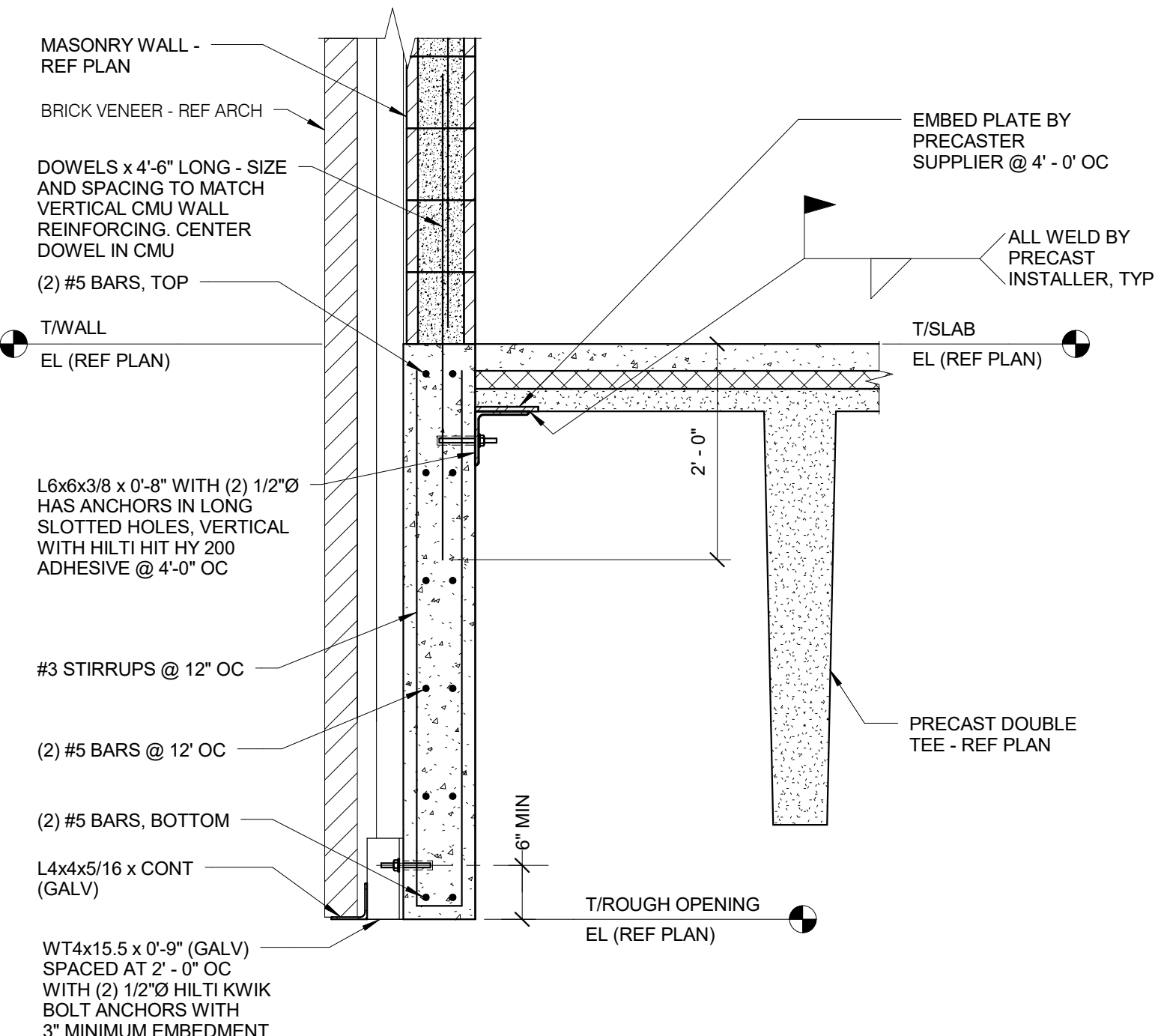
3 DOUBLE TEE PARALLEL TO CONCRETE WALL PANEL
1/2" = 1'-0"

- NOTES:
- NO MASONRY WALL AT SIM.

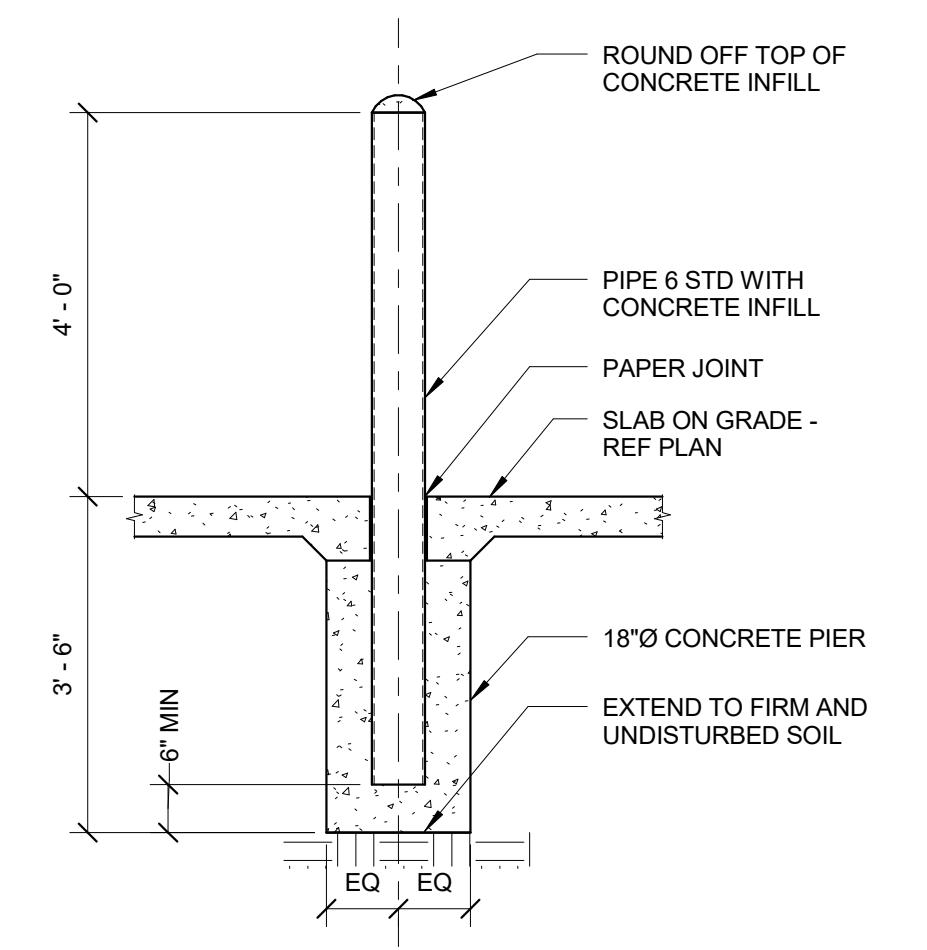


4 DOUBLE TEE ATTACHMENT DETAIL
3/4" = 1'-0"

- NOTES:
- THESE HANGERS REQUIRE A MINIMUM 2" SITE-CAST CONCRETE TOPPING SLAB TO BE IN PLACE AND CURED BEFORE APPLICATION OF LOAD.

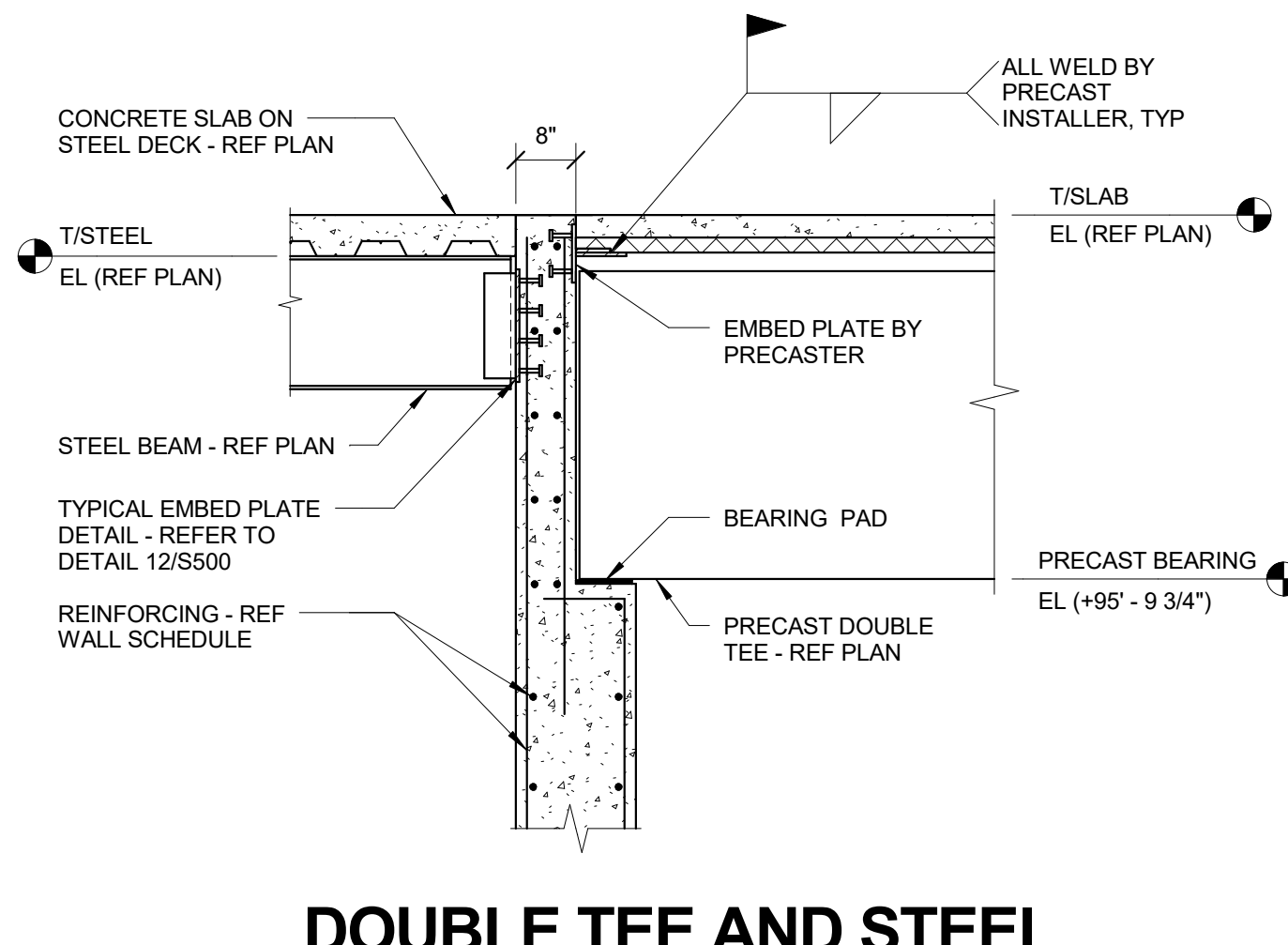


5 GARAGE ENTRY LINTEL
3/4" = 1'-0"

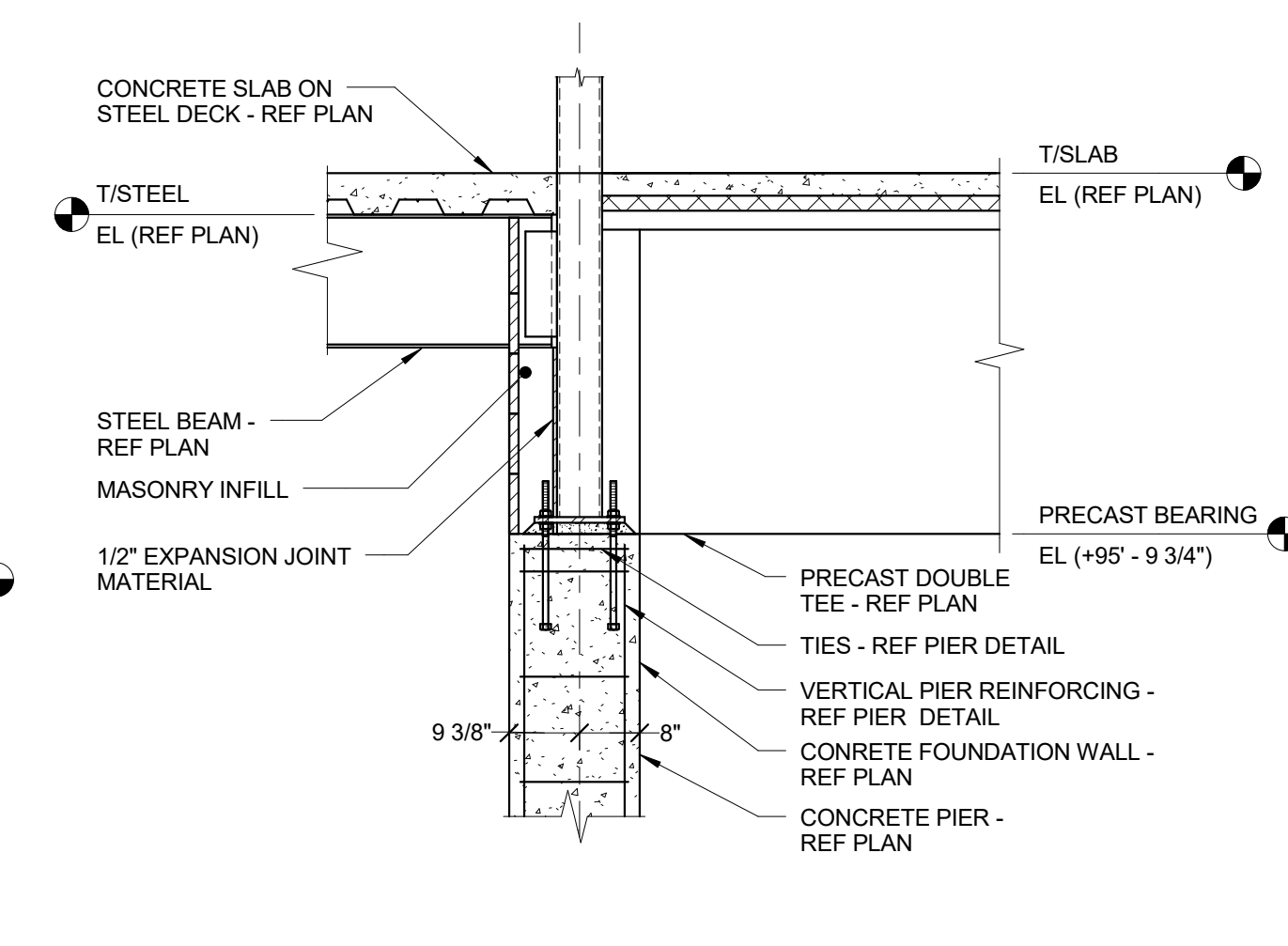


6 TYPICAL BOLLARD DETAIL
1/2" = 1'-0"

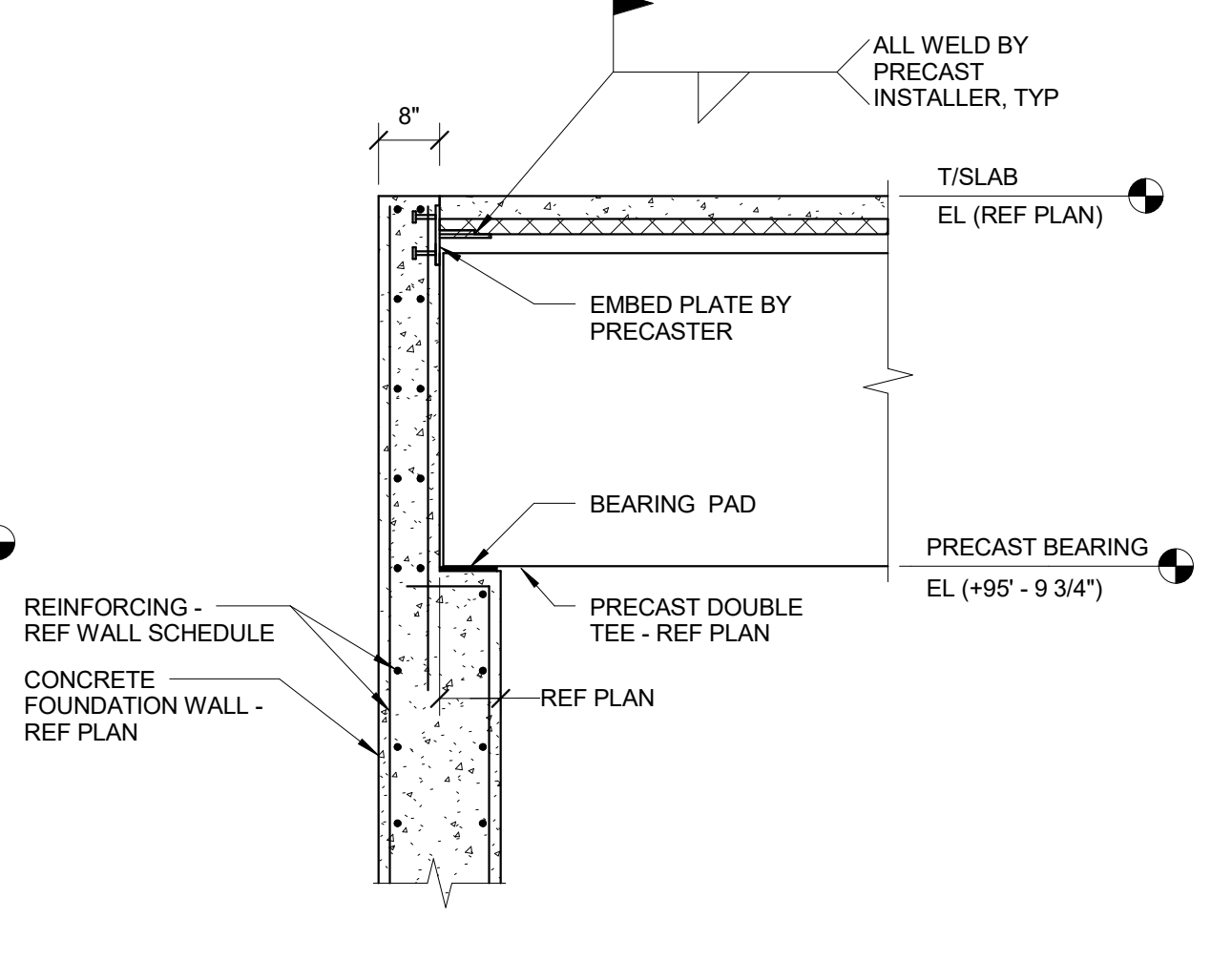
- NOTES:
- REF TO ARCHITECTURAL DRAWINGS FOR EXACT LAYOUT AND COUNT OF BOLLARDS.



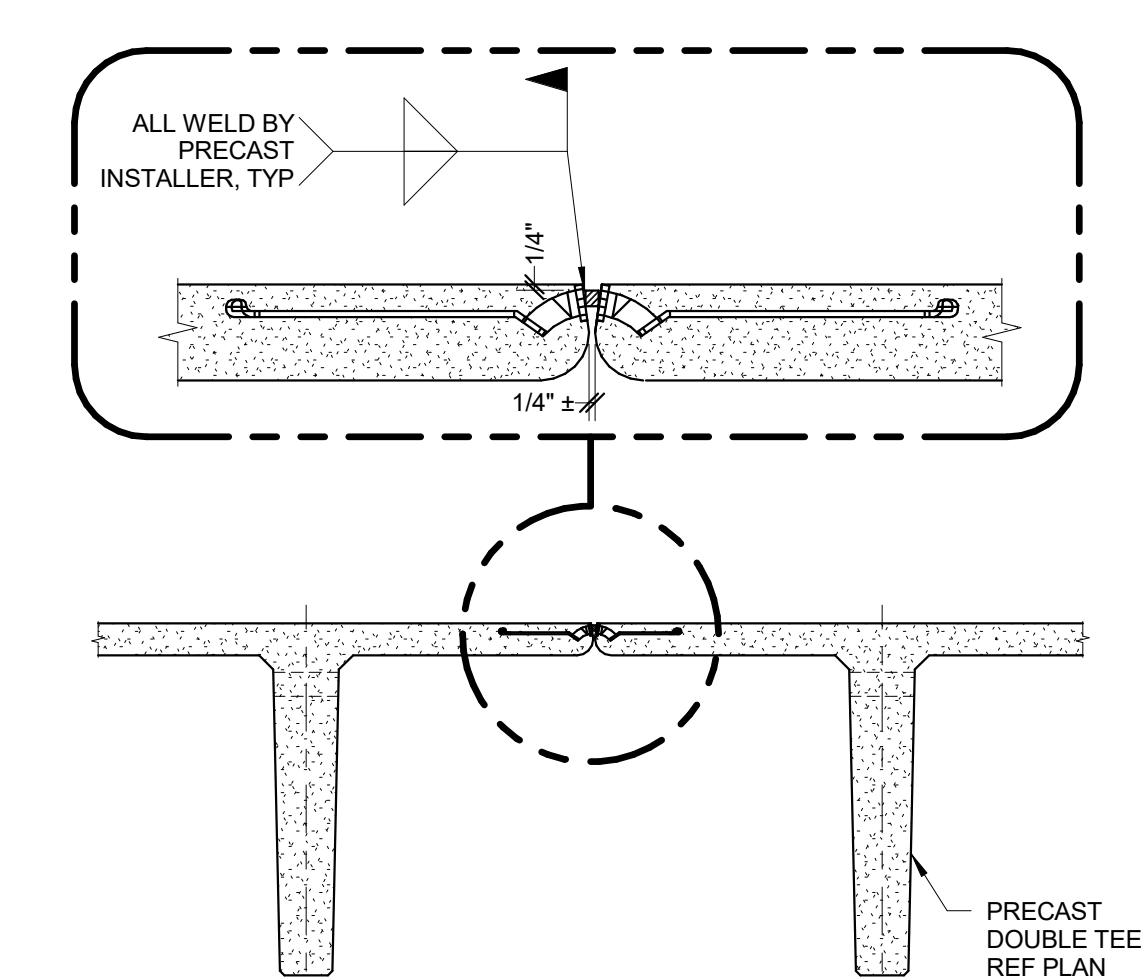
7 DOUBLE TEE AND STEEL BEAM AT CONCRETE WALL
1/2" = 1'-0"



8 STEEL COLUMN AT CONCRETE WALL
1/2" = 1'-0"

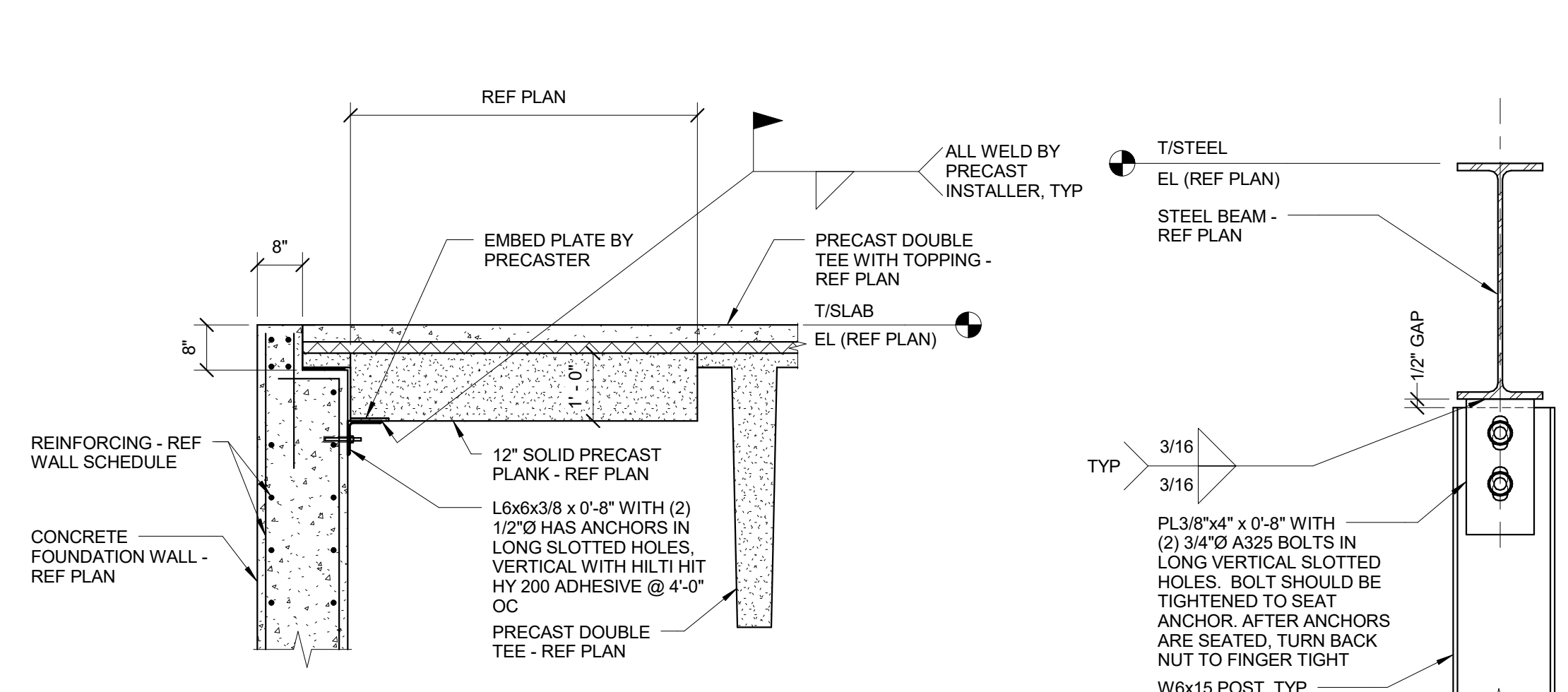


9 DOUBLE TEE AT CONCRETE WALL
1/2" = 1'-0"

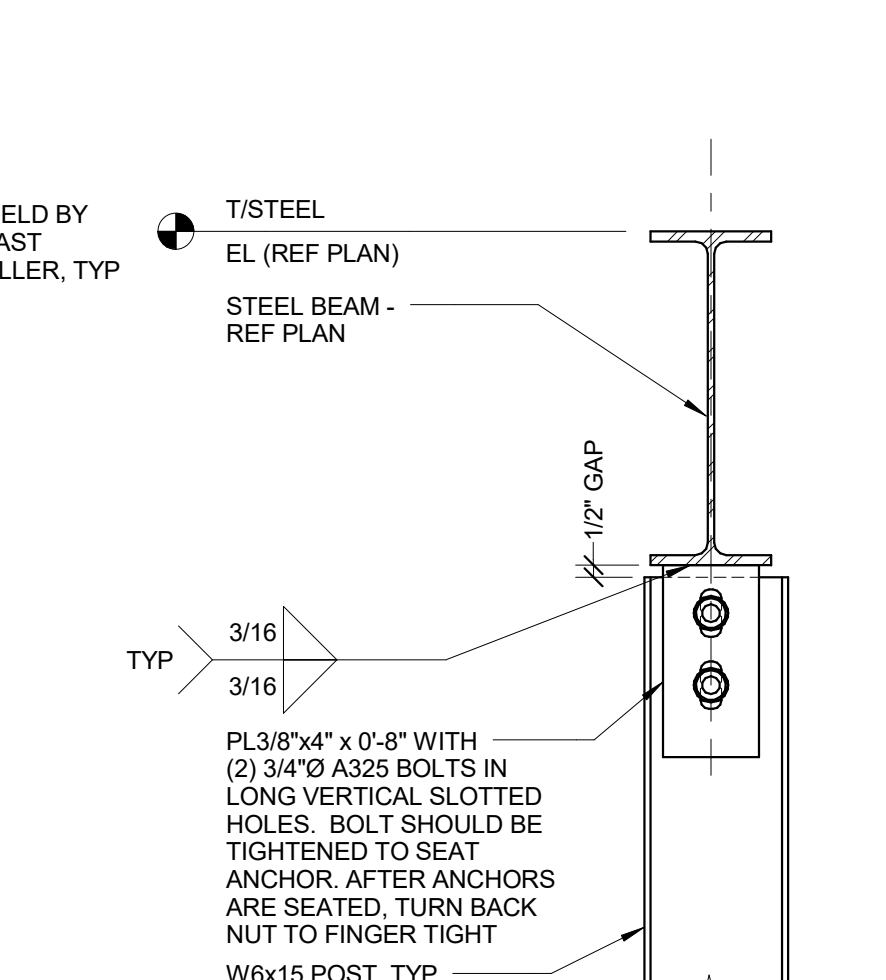


10 TEE TO TEE CONNECTION
1/2" = 1'-0"

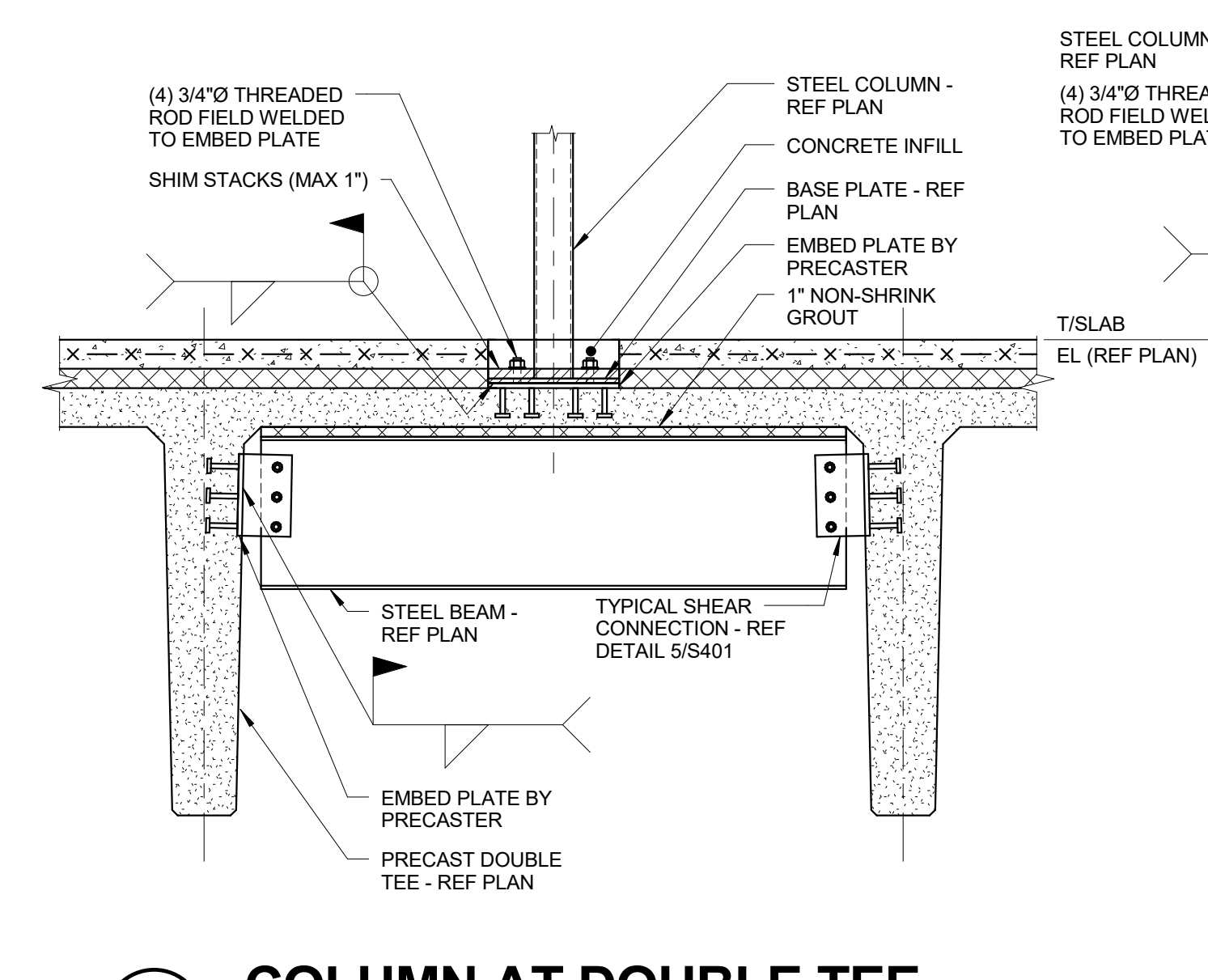
- NOTES:
- REFER TO DETAIL 1/2/S600 FOR DOUBLE TEE DIMENSIONS AND SCHEDULE



11 DOUBLE TEE AT CONCRETE WALL
1/2" = 1'-0"

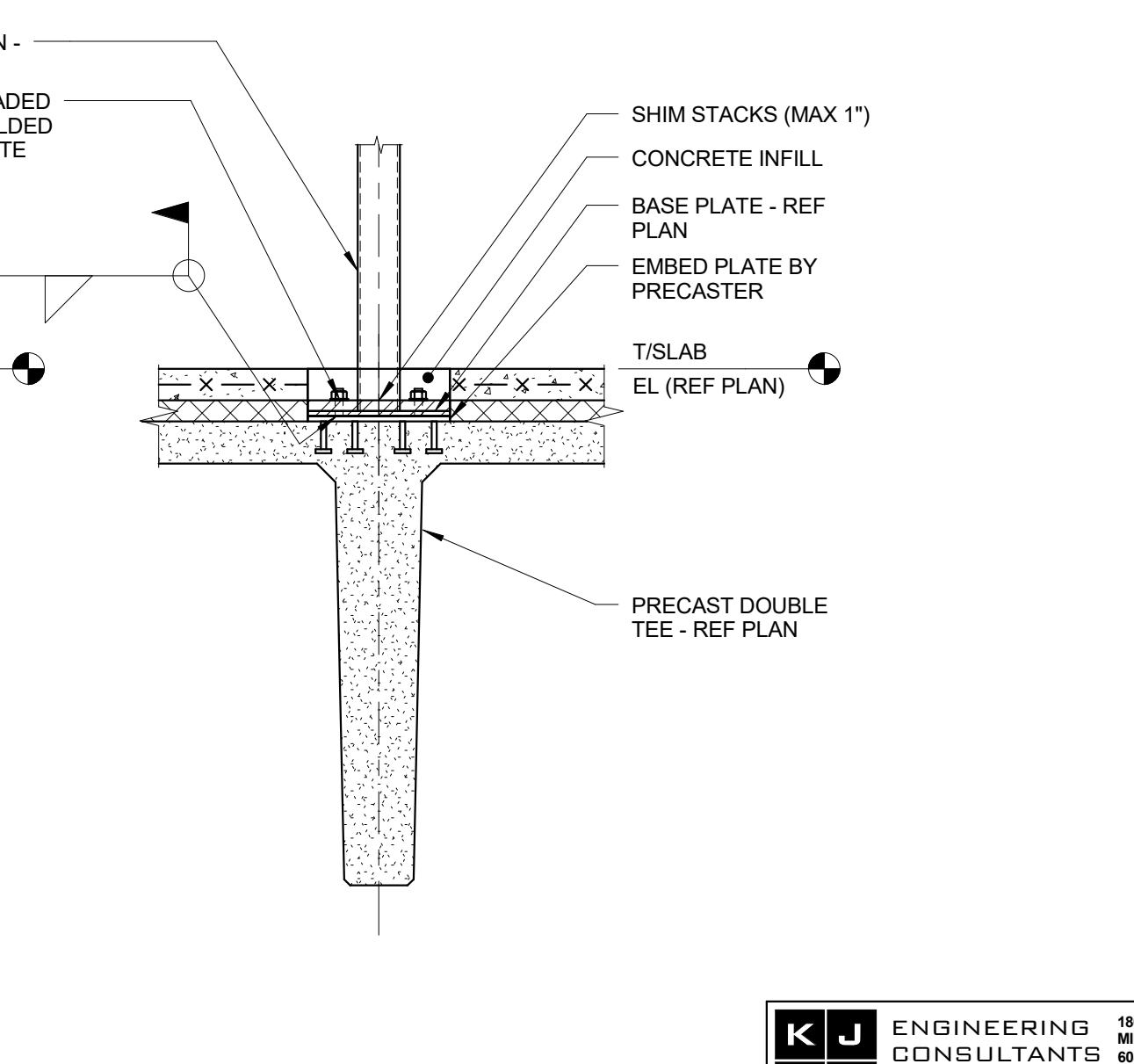


12 TRELLIS POST DETAIL
1 1/2" = 1'-0"



13 COLUMN AT DOUBLE TEE
3/4" = 1'-0"

- NOTES:
- STEEL FABRICATION SHALL ACCOMMODATE UP TO 1" OF CAMBER IN THE DOUBLE TEES. THE THICKNESS OF THE SHIM STACKS SHOULD BE ADJUSTED IN THE FIELD AS REQUIRED TO SET THE COLUMN AT THE PROPER ELEVATION.



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PROJECT # 16.0029.00

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0 1 2 3

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PRECAST DETAILS

S600

**POLICE
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MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

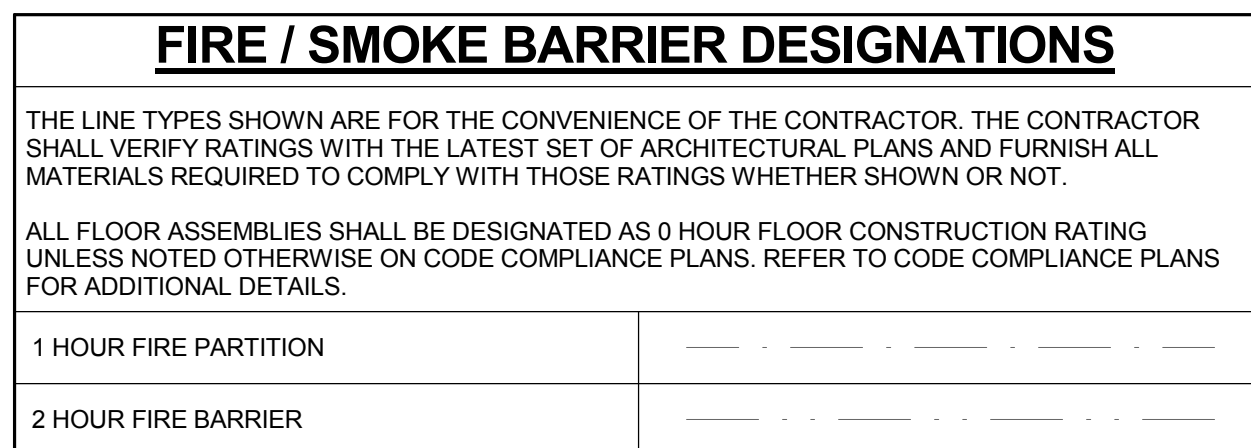
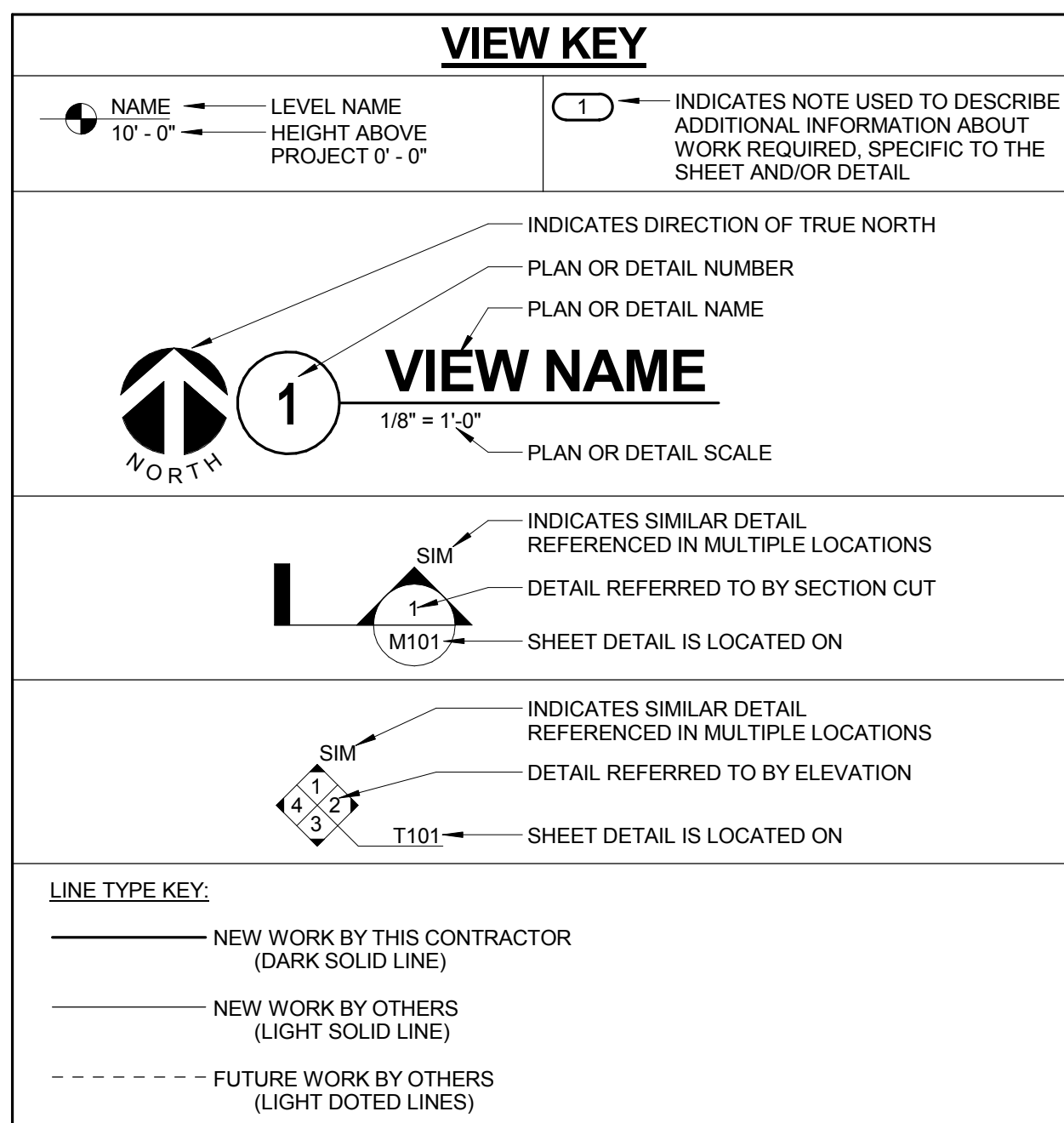
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**COVER SHEET -
MECHANICAL**

M000



CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.T.C.	AUTOMATIC TEMPERATURE CONTROL CONTRACTOR
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

CONTACT PERSONS:

DESCRIPTION:	PERSON:
PROJECT MANAGER	KRIS COTHARN
MECHANICAL ENGINEER	PAUL HANSEN
ELECTRICAL ENGINEER	ALEX WELK
TECHNOLOGY ENGINEER	GWEN BROMME
STRUCTURAL ENGINEER	BRENT BALLWEG

PIPING SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
	DRAIN
	HEATING WATER RETURN
	HEATING WATER SUPPLY
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	NEW CONNECTION
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
	SHUTOFF VALVE NORMALLY CLOSED
	THROTTLING VALVE
	BALANCING VALVE (NUMBER INDICATES GPM)
	AUTOMATIC BALANCING VALVE
	MIXING VALVE
	CONTROL VALVE (THREE-WAY)
	CONTROL VALVE (TWO-WAY)
	SOLENOID VALVE
	CHECK VALVE
	SAFETY/RELIEF VALVE
	PRESSURE REDUCING VALVE (LIQUID/GAS)
	PRESSURE REDUCING VALVE (STEAM)
	TRIPLE DUTY VALVE (ANGLE TYPE)
	TRIPLE DUTY VALVE (IN-LINE TYPE)
	PUMP
	VACUUM BREAKER
	"WYE" - STRAINER
	"WYE" - STRAINER WITH SHUTOFF VALVE AND HOSE CONNECTION WITH CAP
	BASKET STRAINER
	FLEXIBLE CONNECTION
	PRESSURE/TEMPERATURE TEST PLUG
	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC, ECCENTRIC AND FOOT/FOB
	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
	SUCTION DIFFUSER WITH SUPPORT FOOT
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	DRAIN VALVE WITH HOSE CONNECTION AND CAP
	TEMPERATURE SENSOR WITH WELL
	THERMOMETER WITH WELL (DIAL TYPE)
	THERMOMETER WITH WELL (FILLED TYPE)
	FLOW METER
	FLOW SENSOR
	FLOW SWITCH

MECHANICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
C	COMMON
CO	CLEANOUT
DPG (0-2)	DIFFERENTIAL PRESSURE GAUGE (RANGE)
DPS	DIFFERENTIAL PRESSURE SWITCH
EA	EXHAUST/RELIEF AIR
EP	ELECTRICAL TO PNEUMATIC VALVE
ESD	EXISTING SMOKE DAMPER
FD	FIRE DAMPER
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
MA	MIXED AIR
NC	NEW CONNECTION
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OA	OUTSIDE AIR
PS	PRESSURE SWITCH
RA	RETURN AIR
SA	SUPPLY AIR
SD	SMOKE DAMPER
TAB	TERMINAL AIR BOX
TD	TRANSFER DUCT
TYP	TYPICAL
UC-1	DOOR UNDERCUT BY OTHERS (1" TYPICAL)
UNO	UNLESS NOTED OTHERWISE

VENTILATION SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
	DIRECTION OF AIR FLOW
	FLEXIBLE DUCT
	MANUAL VOLUME DAMPER
	RISE IN DIRECTION OF AIR FLOW
	DROP IN DIRECTION OF AIR FLOW
	DUCT CAP
	DUCT DOWN
	DUCT UP
	SUPPLY/OUTSIDE AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	EXHAUST/RELIEF AIR DUCT SECTION
	4-WAY DIFFUSER WITH BLANKOFF IN ONE DIRECTION
	AIR TERMINAL PROPERTIES SYMBOL NECK SIZE/CFM
	TERMINAL AIR BOX (REFER TO SCHEDULE)
	TERMINAL AIR BOX W/REHEAT COIL (REFER TO SCHEDULE)
	VENTURI AIR BOX
	SERIES FAN POWERED TERMINAL AIR BOX W/REHEAT COIL (REFER TO SCHEDULE)
	PARALLEL FAN POWERED TERMINAL AIR BOX W/REHEAT COIL (REFER TO SCHEDULE)
	HUMIDIFIER
	OPPOSED BLADE DAMPER (REFER TO SCHEDULE)
	PARALLEL BLADE DAMPER (REFER TO SCHEDULE)
	DIFFERENTIAL PRESSURE SENSOR
	CARBON MONOXIDE SENSOR
	CARBON DIOXIDE SENSOR
	HUMIDISTAT SENSOR
	HUMIDISTAT/SENSOR (DUCT MOUNTED)
	OCCUPANCY SENSOR
	PRESSURE SENSOR/MONITOR
	PRESSURE SENSOR (DUCT MOUNTED)
	THERMOSTAT/SENSOR
	TEMPERATURE SENSOR (DUCT MOUNTED)
	THERMOSTAT/SENSOR WITH HEAVY DUTY ENCLOSURE
	AIRFLOW MEASUREMENT SYMBOL XX - AHU SYMBOL Y - SEQUENTIAL NUMBER

- ### TEMPERATURE CONTROL GENERAL NOTES:
- REFER TO EQUIPMENT SCHEDULES TO CROSS REFERENCE WHICH CONTROL DIAGRAMS APPLY TO WHICH ITEMS OF EQUIPMENT. REFER TO TERMINAL AIR BOX (TAB) SCHEDULES FOR TEMP SENSOR REQUIREMENTS FOR EACH TAB.
 - EACH D.I., D.O., A.I. AND A.O. POINT SHOWN FOR ALL CONTROL DIAGRAMS SHALL BE DISCRETE FROM ALL OTHER POINTS EXCEPT AS SPECIFICALLY NOTED.
 - ALL WIRING, CONTROL COMPONENTS, DEVICES AND PROGRAMMING SHOWN ON THESE CONTROL DRAWINGS SHALL BE PROVIDED BY THE TCC UNLESS SPECIFICALLY NOTED OTHERWISE.
 - ALL ACTUATORS SHALL BE OF THE ELECTRICAL TYPE FOR THIS PROJECT UNLESS AN ACTUATOR IS SPECIFICALLY NOTED ON THE DRAWINGS OR SPECIFICATIONS TO BE PNEUMATIC.
 - ALL MODULATING DAMPER AND VALVE ACTUATORS SHOWN WITH POSITION FEEDBACK SHALL HAVE THE VALVE POSITION DISPLAYED ON GRAPHICAL SCREEN ADJACENT TO THE DAMPER/VALVE COMMAND SIGNAL. DISPLAYED VALVE POSITION SHALL BE FROM THE FEEDBACK DEVICE/CIRCUIT (OUTPUT SIGNAL FROM THE FMCS TO THE ACTUATOR IS NOT ACCEPTABLE).
 - MODULATING SIGNALS SHALL BE DISPLAYED AS % OPEN (SIGNALS DISPLAYED AS % CLOSED ARE NOT ACCEPTABLE).
 - PRESSURE TRANSMITTERS WHOSE SIGNAL IS UTILIZED FOR MAINTAINING DUCT STATIC PRESSURE SHALL BE WIRED DIRECTLY TO THE CONTROLLER WHICH MODULATES FAN SPEED. SIGNAL SHALL BE COMPLETELY INDEPENDENT OF THE FMCS NETWORK.
 - PRESSURE TRANSMITTERS WHOSE SIGNAL IS UTILIZED FOR MAINTAINING DIFFERENTIAL PRESSURE OF ANY PUMPED WATER SYSTEM (E.G. HEATING HOT WATER, CHILLED WATER AND THE LIKE) SHALL BE WIRED DIRECTLY TO THE CONTROLLER WHICH MODULATES PUMP SPEED. SIGNAL SHALL BE COMPLETELY INDEPENDENT OF THE FMCS NETWORK.
 - ALL CONTROL COMPONENTS SUCH AS RELAYS, SWITCHES, DDC CONTROLLERS, ETC. SHALL BE MOUNTED IN STEEL ENCLOSURES WITH STEEL MOUNTING BACKPLATES PER SPECIFICATION 23 09 00.
 - EACH CONTROL PANEL SHALL HAVE A LAMINATED COPY OF THE APPLICABLE SEQUENCE OF OPERATION AND CONTROL DIAGRAM INDICATING THE POINTS, COMPONENTS AND OPERATION OF EQUIPMENT ASSOCIATED WITH EACH PANEL. REFER TO SECTION 23 09 00 FOR ADDITIONAL REQUIREMENTS.
 - TCC SHALL EXTEND CONTROL SIGNAL FROM ADDRESSABLE RELAY DEVICE SERVING EACH AIR HANDLING UNIT. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS. TCC SHALL EXTEND AND TERMINATE WIRING AS REQUIRED FOR EQUIPMENT SHUTDOWN.
 - TCC SHALL EXTEND 24 VOLT POWER FROM CONTROL POWER SHOWN ON FLOOR PLANS TO ALL TERMINAL AIR BOX CONTROLLERS JUNCTION BOX. TCC SHALL PROVIDE ALL WIRING, SUPPORTS, FUSING SPACE, TOGGLE SWITCHES, AND ALL OTHER ELECTRICAL COMPONENTS REQUIRED FOR COMPLETE INSTALLATION.
 - TCC SHALL PROVIDE WIRING AS REQUIRED FOR OUTDOOR EQUIPMENT AND FOR EQUIPMENT INSTALLED REMOTELY FROM THE MAIN BUILDING THAT IS BEING MONITORED OR CONTROLLED BY THE FMCS.
 - ELEMENT LENGTHS FOR BOTH MIXED AIR TEMP SENSORS AND LOW LIMIT TEMP SWITCHES SHALL BE MINIMUM 1 LINEAR FOOT PER SQUARE FOOT OF COIL SURFACE AREA. PROVIDE MULTIPLE SENSORS AND SWITCHES AS NEEDED TO ACHIEVE REQUIRED ELEMENT LENGTHS. LOCATE RESET SWITCHES MAX 6' 0" ABOVE ADJACENT STANDING SURFACE (I.E. ROOF, PLATFORM OR FLOOR) SO THE RESET SWITCH CAN BE CYCLED WITHOUT THE NEED FOR A LADDER.
 - TO PREVENT GENERATOR OVERLOADING, TCC SHALL PROGRAM A STAGGERED START TIME FOR ALL MECHANICAL EQUIPMENT THAT IS CONTROLLED BY FMCS TO INCLUDE, BUT NOT LIMITED TO, AIR HANDLERS, PUMPS, EXHAUST FANS, AND CHILLERS. THE FIRST EQUIPMENT SHALL START 2 MINUTES (ADJ.) FROM THE TIME THE FMCS RECEIVES THE SIGNAL THAT THE TRANSFER SWITCH CHANGED TO EMERGENCY POWER SOURCE WITH ALL EQUIPMENT BEING ENERGIZED WITHIN A 20 MINUTE (ADJ.) TIME SPAN. COORDINATE ORDER OF EQUIPMENT STAGING WITH OWNER'S REPRESENTATIVE.
 - CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND DO NOT SHOW ALL REQUIRED CONTROL DEVICES AND COMPONENTS. REFER TO FLOOR PLANS, FLOW DIAGRAMS AND DETAILS FOR ADDITIONAL CONTROL DEVICES, COMPONENTS AND REQUIREMENTS NOT SHOWN ON THESE CONTROL DRAWINGS.
 - TCC SHALL PROVIDE ALL CONTROL COMPONENTS AND ACCESSORIES AS REQUIRED FOR EQUIPMENT TO BE CONTROLLED AS DESCRIBED IN THE SEQUENCE OF OPERATION REGARDLESS OF WHETHER ALL CONTROL COMPONENTS OR POINTS ARE SHOWN IN THE ASSOCIATED CONTROL DIAGRAM.

CONTROL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
	THERMOSTAT
	CARBON DIOXIDE SENSOR
	ACTUATOR
	DIFFERENTIAL PRESSURE SWITCH
	CURRENT SWITCH
	FLOW METER
	FAN
	MOTOR
	CONTACTOR
	PUMP
	STATIC SWITCH
	NORMALLY CLOSED CONTACT
	NORMALLY OPEN CONTACT
	OPPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER
	ANALOG INPUT
	ANALOG OUTPUT
	AVERAGING TEMPERATURE SENSOR
	LOW LIMIT TEMPERATURE SWITCH
	PROBE TEMPERATURE SENSOR
	DUCT SMOKE DETECTOR
	HEATING/ COOLING COIL
	AIR BLENDER
	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD
	DIGITAL INPUT
	DIGITAL OUTPUT
	HUMIDITY SENSOR
	DUCT FLOW METER
	HUMIDIFIER
	AIR FLOW SWITCH
	FILTER
	TERMINAL AIR BOX W/REHEAT
	TERMINAL AIR BOX W/REHEAT

- ### PIPING GENERAL NOTES:
- THE SIZE OF BRANCH PIPING TO TERMINAL HEATING DEVICES AND COLLS SHALL BE 3/4" UNLESS NOTED OTHERWISE.
 - PIPE DRAIN LINES FROM EQUIPMENT TO NEAREST FLOOR DRAIN.
 - INSTALL A.D. REFERENTIAL LIQUID AND SUCTION PIPING AND SIZED PER EQUIPMENT MANUFACTURER RECOMMENDATIONS.
- ### MECHANICAL GENERAL NOTES:
- THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PIPING, VENTILATION, PIPING AND TEMPERATURE CONTROL.
- DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
 - DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
 - COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
 - REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
 - ANY CUTBACKS REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
 - REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIOVISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
 - EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
 - IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
 - DUCTS PENETRATE WALLS AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
 - CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
 - WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
 - EQUIPMENT SIZES AND CLEARANCE REQUIREMENTS VARY BETWEEN DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
 - DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
 - MAINTAIN MINIMUM 6" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.
 - PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
 - DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED WITH SPECIFICATIONS.
- ### VENTILATION GENERAL NOTES:
- THE SIZE OF EACH BRANCH DUCT TO A TERMINAL AIR BOX (TAB) SHALL MATCH THE TAB'S INLET SIZE UNLESS THE BRANCH IS GREATER THAN 6 FEET IN LENGTH. THEN THE BRANCH SHOULD BE INCREASED ONE DUCT SIZE, OR NOTED OTHERWISE.
 - ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES AND WHEN IN CLOSE PROXIMITY TO EACH OTHER.
 - PROVIDE ACCESS DOORS AT ALL DUCT MOUNTED EQUIPMENT.
 - EXISTING AIR INLET AND OUTLET CFM SHOWN ON DRAWINGS ARE FROM EXISTING DRAWINGS, AND ARE FOR REFERENCE ONLY. CONTRACTOR SHALL USE PRE-BALANCE VALUES, AND NOT EXISTING CFM SHOWN ON DRAWINGS.
 - CONTRACTOR MAY REUSE PORTIONS OF EXISTING DUCT PROVIDED SIZES AND PRESSURE CLASSES ARE CORRECT, DUCT IS THOROUGHLY CLEANED AND FREE OF DEFECTS, AND ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS, AND DUCT WALL PENETRATIONS ARE SEALED AS SPECIFIED FOR NEW DUCTWORK.

MECHANICAL SHEET INDEX

Sheet Number	Sheet Name
M000	COVER SHEET - MECHANICAL
M100	LOWER LEVEL - VENTILATION
M101	FIRST FLOOR PLAN - VENTILATION
M103	ROOF PLAN - MECHANICAL
M110	LOWER LEVEL - PIPING
M111	FIRST FLOOR PLAN - PIPING
M200	ENLARGED PLANS MECHANICAL
M201	SECTIONS - MECHANICAL
M300	CONTROL DIAGRAMS - MECHANICAL
M301	CONTROL DIAGRAMS - MECHANICAL
M302	CONTROL DIAGRAMS - MECHANICAL
M303	CONTROL DIAGRAMS - MECHANICAL
M304	CONTROL DIAGRAMS - MECHANICAL
M305	CONTROL DIAGRAMS - MECHANICAL
M400	FLOW DIAGRAMS - MECHANICAL
M401	FLOW DIAGRAMS - MECHANICAL
M500	DETAILS - MECHANICAL
M501	DETAILS - MECHANICAL
M502	DETAILS - MECHANICAL
M600	SCHEDULES - MECHANICAL
M601	SCHEDULES - MECHANICAL

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REFERENCE SCALE IN INCHES
1 2 3

KEYNOTES:

- ROUTE 4"x12" EA DOWN EXPOSED IN ROOM TIGHT TO WALL. LOCATE EXHAUST GRILL 3" ABOVE BENCH. PAINT DUCTWORK CO. OR AS COORDINATED WITH ARCHITECTS.
- LIGHTED SWITCH FOR CONTROL OF ROOM EXHAUST. REFER TO 3M305 FOR ADDITIONAL DETAILS.

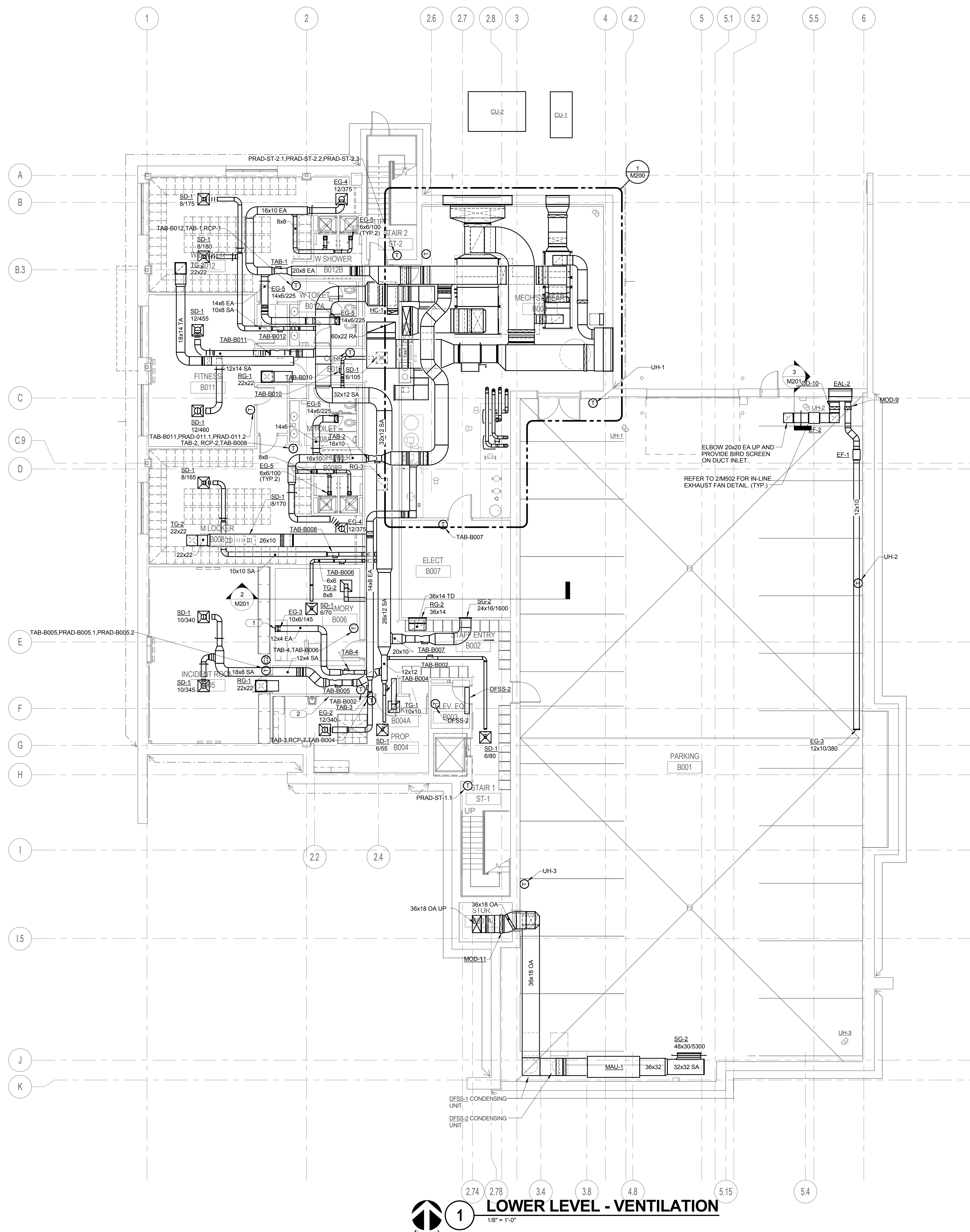
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MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
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**LOWER LEVEL -
VENTILATION**

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REFERENCE SCALE IN INCHES
1 2 3

M100

KEYNOTES:
 1. SEAL FLOOR PENETRATION PER 2009 IMC 607.6.3
 EXCEPTION 2 TO RESIST THE PASSAGE OF FLAME AND THE
 PRODUCTS OF COMBUSTIONS.
 2. PROVIDE ACCESS DOOR IN DUCTWORK TO ALLOW
 INSPECTION OF LOUVER.

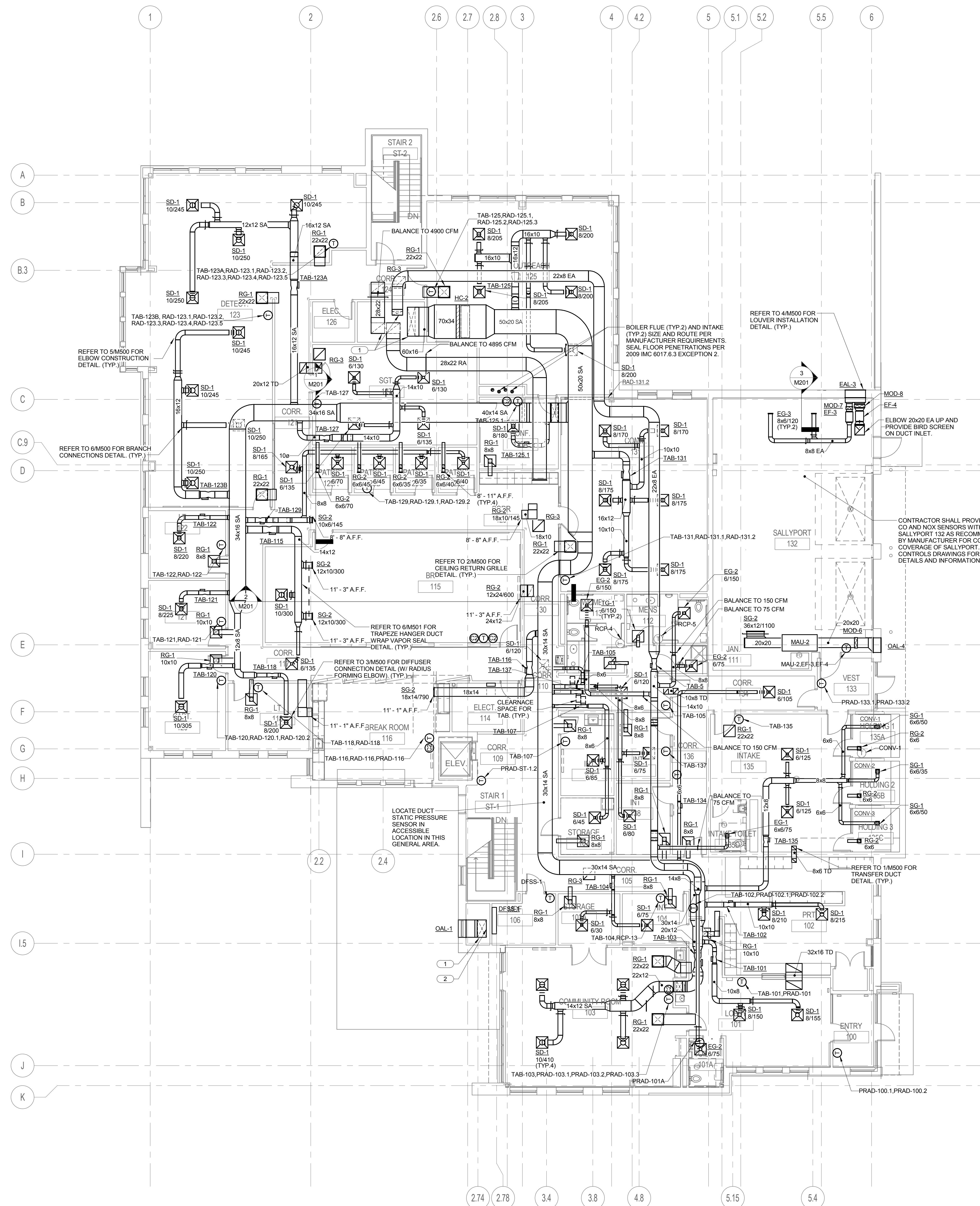
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MIDTOWN DISTRICT**

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 City of Madison Police Department
 211 South Carroll Street
 Madison, WI 53703

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FIRST FLOOR PLAN - VENTILATION

1/8" = 1'-0"

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**FIRST FLOOR PLAN -
VENTILATION**

M101

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

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City of Madison Police Department
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PROJECT NUMBER 152413.01

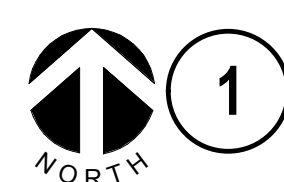
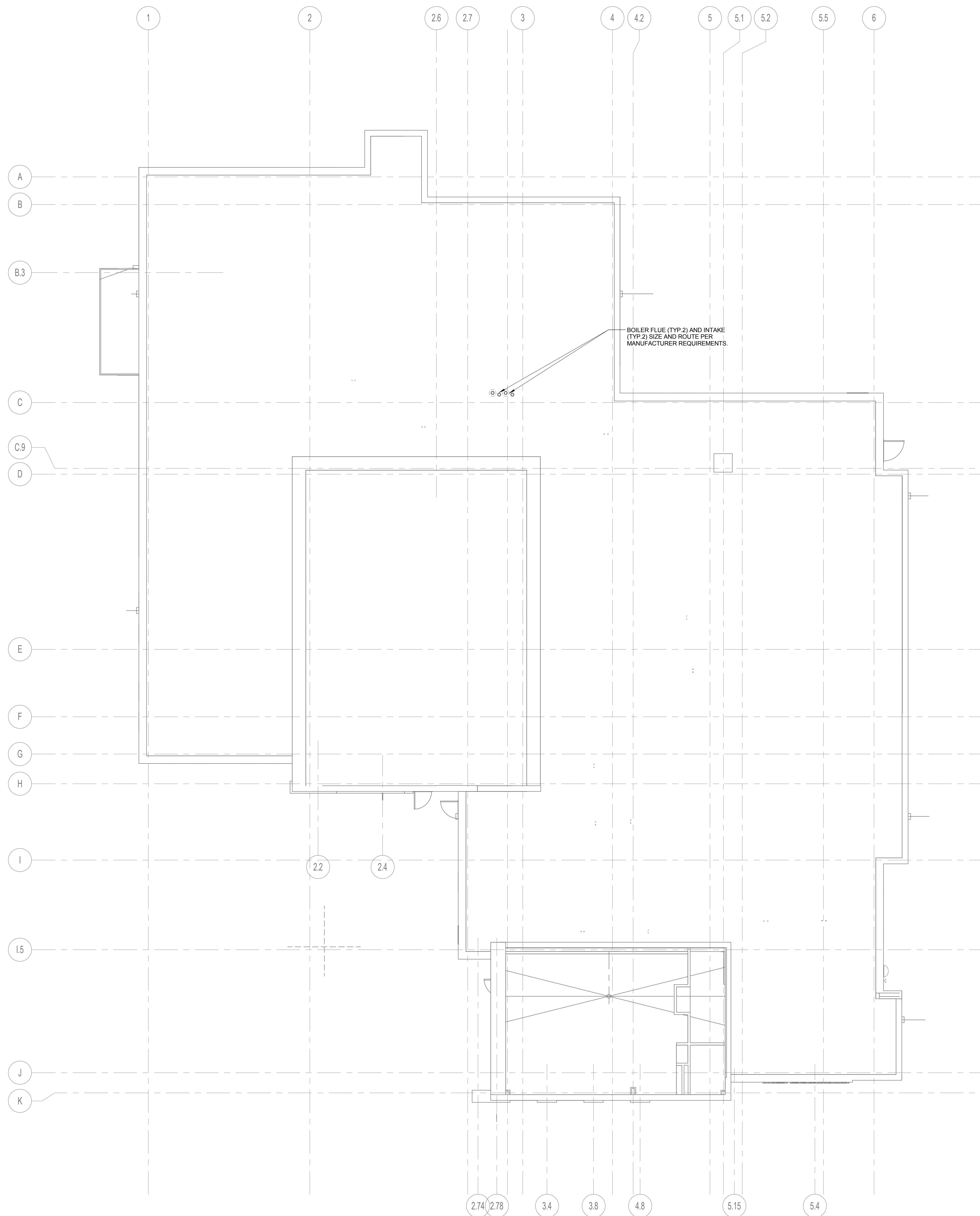
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**ROOF PLAN -
MECHANICAL**



1 ROOF PLAN - MECHANICAL

1/8" = 1'-0"

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REFERENCE SCALE IN INCHES
1 2 3

M103

- KEYNOTES:**
- REFRIGERANT LINES SHALL BE SIZED AND ROUTED PER CONDENSING UNITS REQUIREMENTS. REFER TO 4/M501 FOR COIL CONNECTION DIAGRAM.
 - LOCATE CONTROL VALVE FOR RADIATION ON FIRST FLOOR WITHIN LOWER LEVEL FLENUM AND LOCATE IN ACCESSIBLE LOCATION. REFER TO 4/M502 FOR DETAILS.
 - LOCATE CONTROL VALVE IN ACCESSIBLE LOCATION. REFER TO 5/M502 FOR DETAILS.
 - REFER TO 1/M502 FOR UNIT HEATER PIPING DETAIL. LOCATE ALL ACCESSORIES IN ACCESSIBLE LOCATION.

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

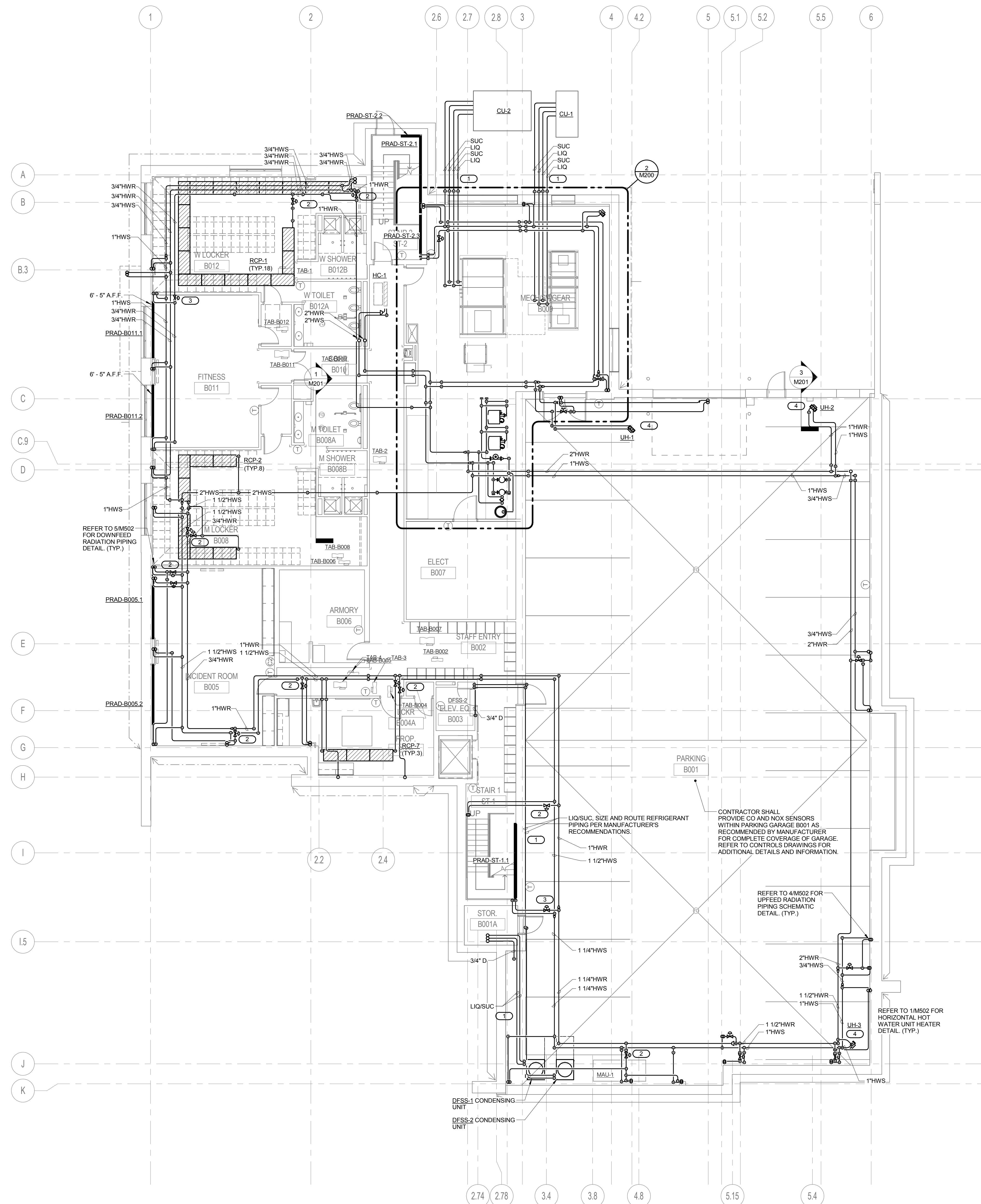
ISSUED FOR:
CONSTRUCTION 5-5-17

REVISION FOR:
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**LOWER LEVEL -
PIPING**



1 LOWER LEVEL - PIPING
1/8" = 1'-0"

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608.223.9600 FAX: 608.836.0415
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**THE FUTURE.
BUILT SMARTER.**

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M110

**POLICE
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MIDTOWN DISTRICT**

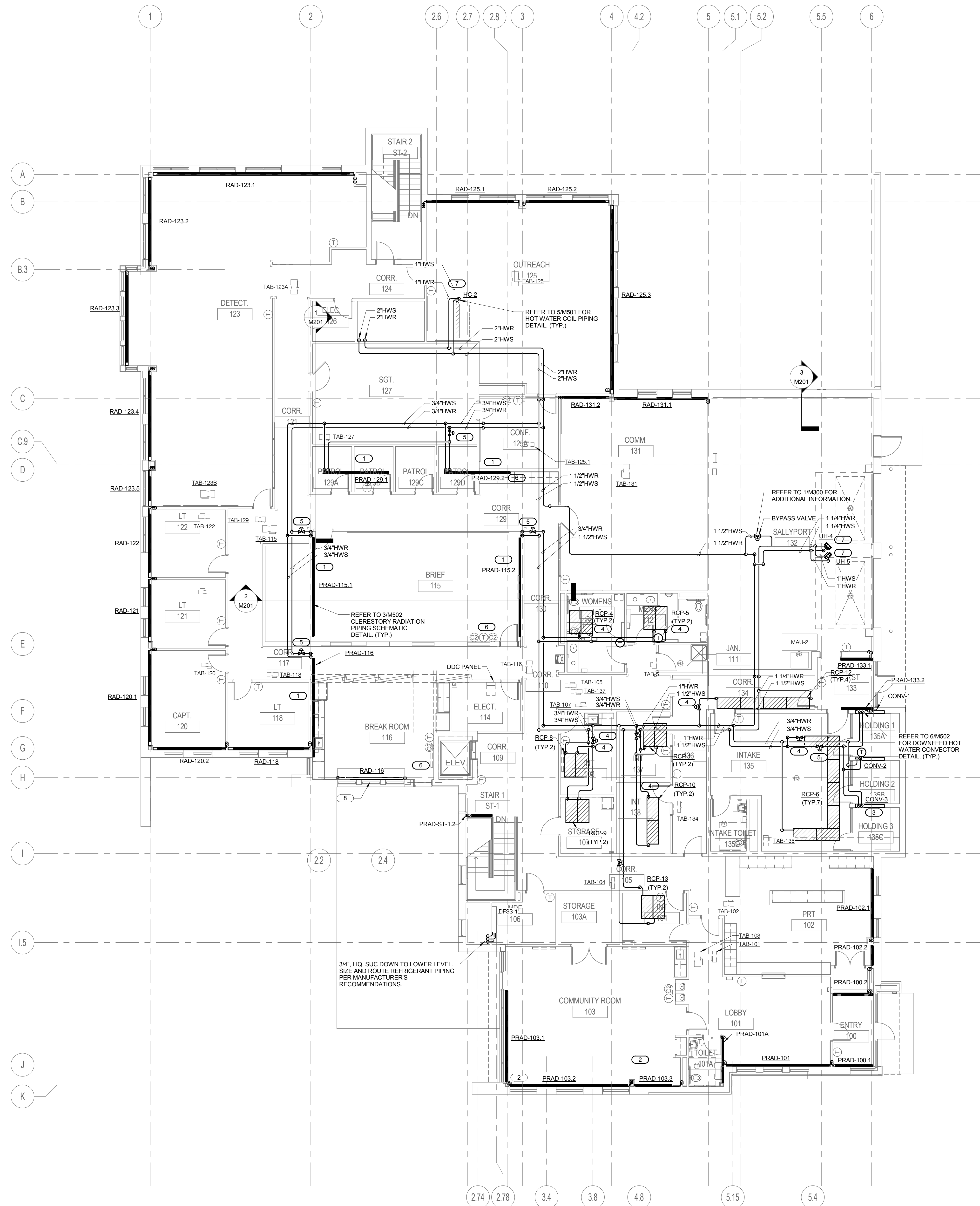
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- KEYNOTES:**
1. RAD INSTALLED AT 13'-0" A.F.F.
 2. CONTRACTOR SHALL PROVIDE TRIM PIECES AS REQUIRED AT COLUMN TO ENCLOSE EXPOSED PIPING FEEDING PANEL RADIATION.
 3. REFER TO 6M502 FOR CONVECTOR PIPING DETAIL, LOCATE CONTROL VALVE IN ACCESSIBLE LOCATION.
 4. REFER TO 5M503 FOR RADIANT CEILING PANEL PIPING DETAIL, LOCATE CONTROL VALVE IN ACCESSIBLE LOCATION.
 5. REFER TO 3M503 FOR CLERESTORY PANEL RADIATION PIPING DETAIL, LOCATE CONTROL VALVE IN ACCESSIBLE LOCATION.
 6. PROVIDE SEVERATE TEMPERATURE SENSOR AND ZONE CONTROL VALVE FOR CLEARSTORY FIN TUBE RADIATION, LOCATE SENSOR 12" A.F.F.
 7. REFER TO 5M502 FOR HEATING COIL PIPE DETAIL, LOCATE CONTROL VALVE AND ACCESSORIES IN ACCESSIBLE LOCATION.
 8. INSTALL BARE FIN IN CUSTOM ENCLOSURE BY G.C. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS.



FIRST FLOOR PLAN - PIPING
1/8" = 1'-0"

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FIRST FLOOR PLAN - PIPING

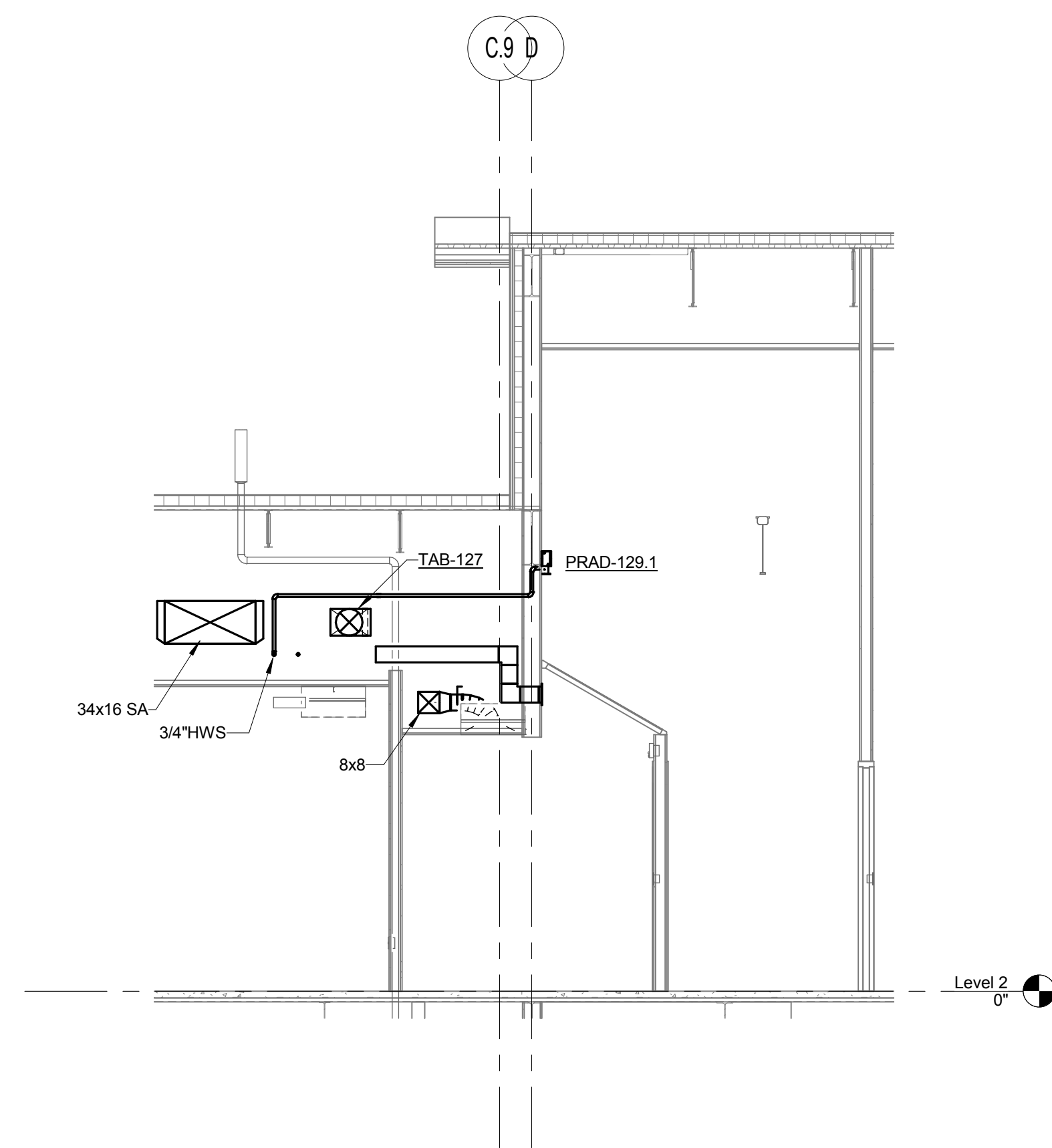
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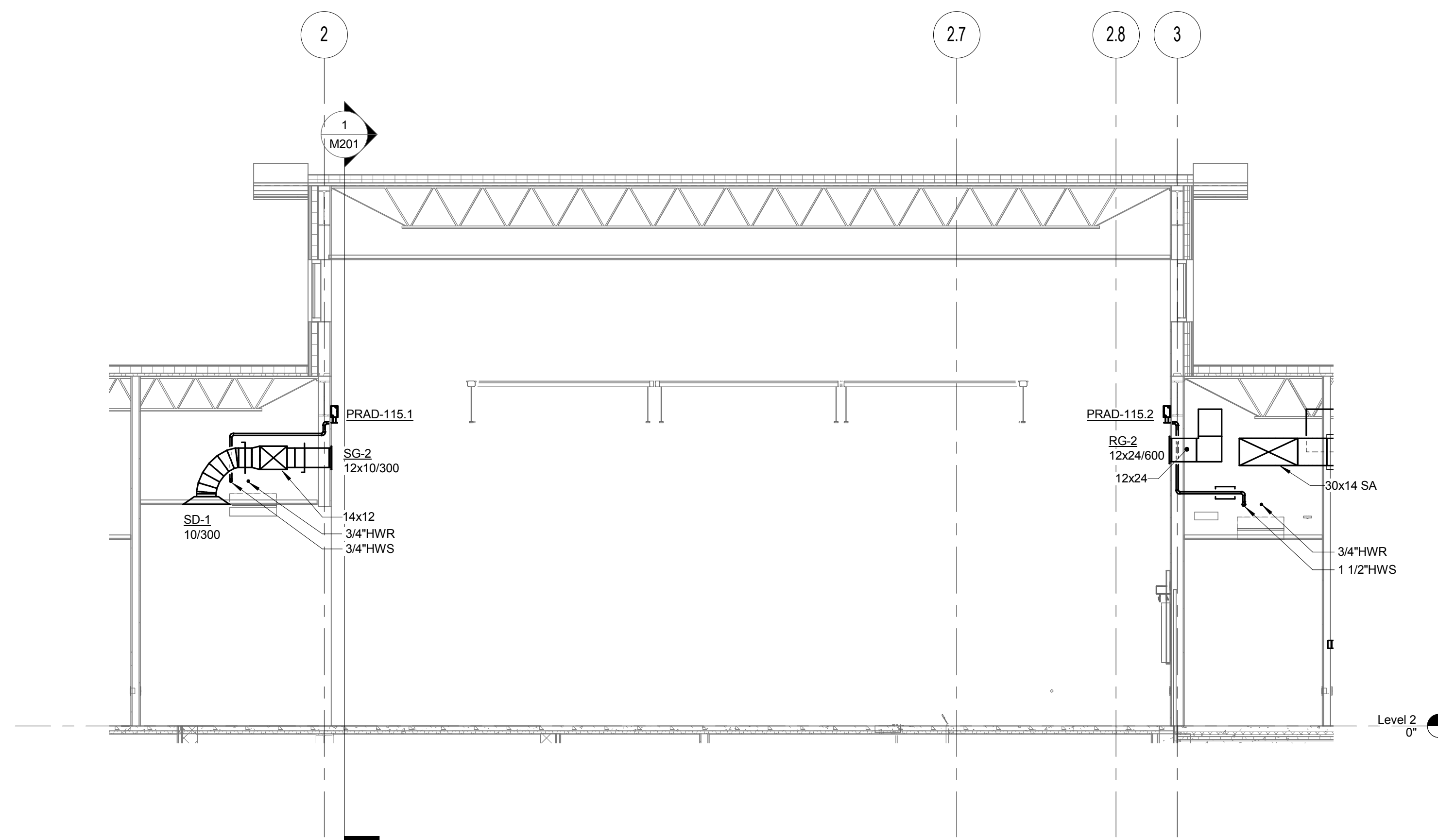
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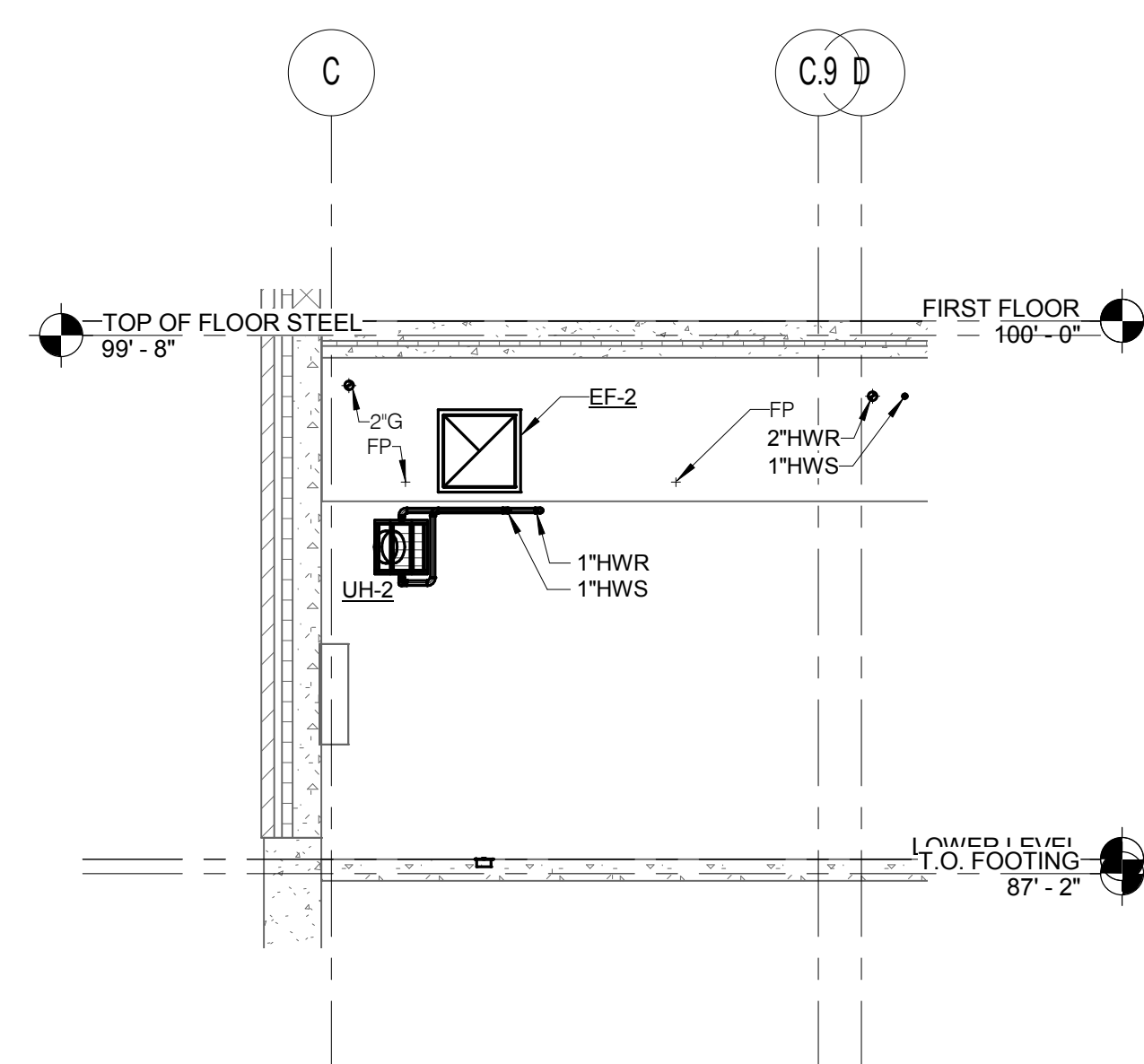
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① SECTION PATROL-129 - MECHANICAL
1/4" = 1'-0"



② SECTION FOR BRIEF-115 - MECHANICAL
1/4" = 1'-0"



③ PARKING-NORTH
1/4" = 1'-0"

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**SECTIONS -
MECHANICAL**

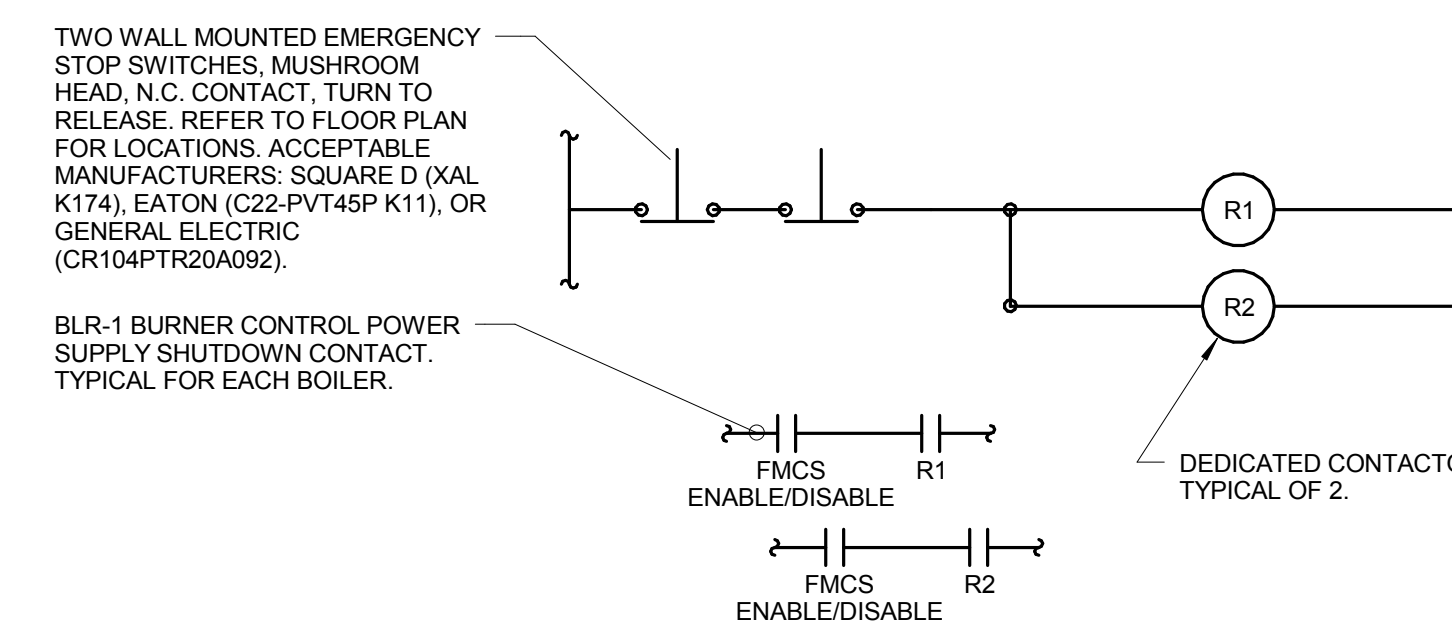
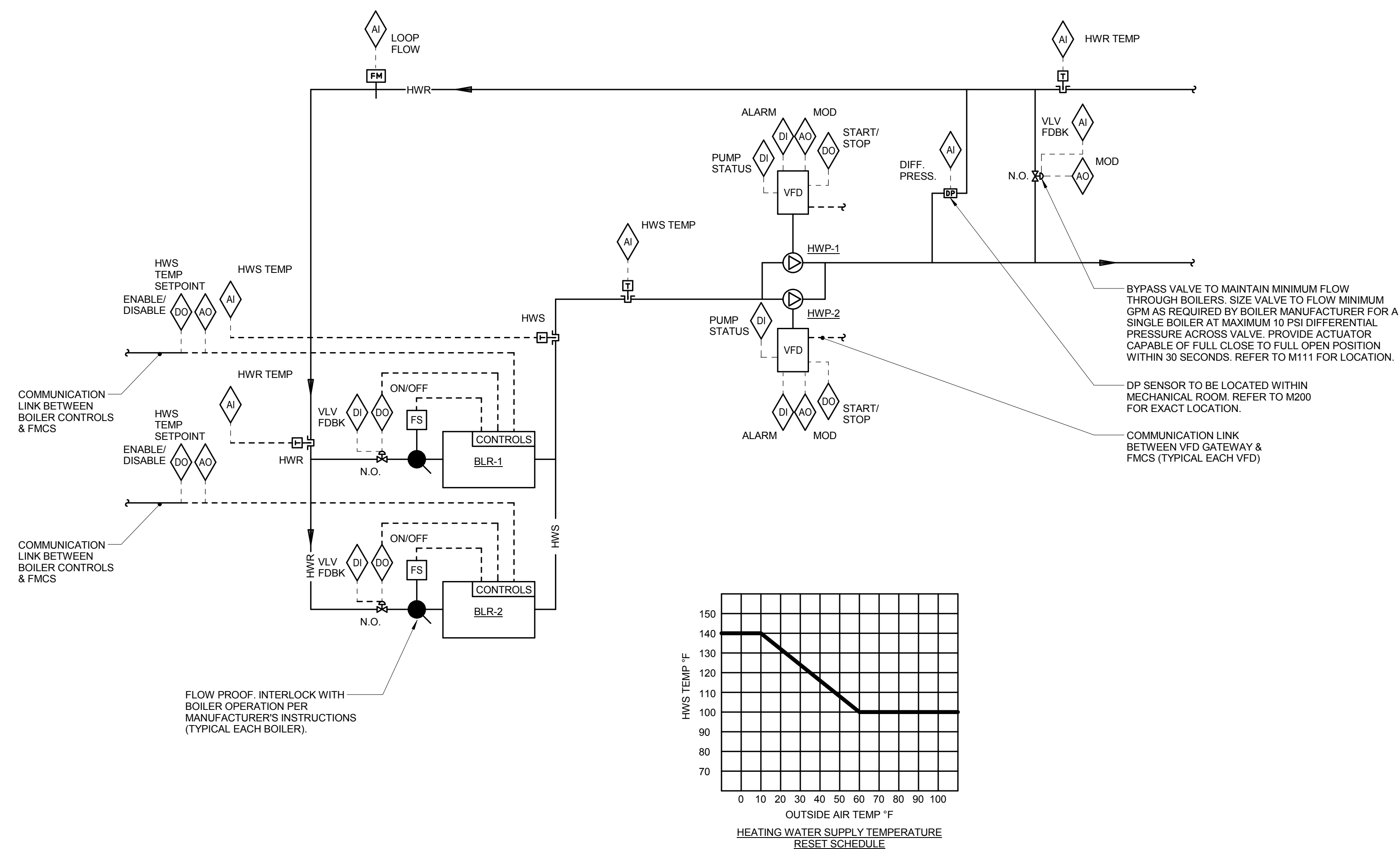
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PROVIDE TWO-COLOR ENGRAVED PHENOLIC LABELS WITH MIN. 1/2" HIGH WHITE LETTERS ON RED BACKGROUND FOR EACH EMERGENCY BOILER SHUTDOWN SWITCH. SECURELY MOUNT TO WALL ABOVE EACH SWITCH.

ALARMS, INTERLOCKS, AND SAFETIES:
TCC SHALL PROVIDE EMERGENCY BOILER SHUTDOWN SWITCH AT EACH BOILER ROOM EXIT MEETING CSD-1 REQUIREMENTS. ACTIVATION OF ANY SWITCH SHALL INTERRUPT POWER TO ALL BOILER CONTROLS VIA BOILER SAFETY SHUTDOWN CONTACTS.

TYPICAL FOR BLR-1 AND BLR-2

EMERGENCY BOILER SHUTDOWN

SEQUENCE OF OPERATION:
HEATING WATER BOILERS SHALL HAVE UNIT MOUNTED CONTROLS PROVIDED BY THE BOILER MANUFACTURER. TCC SHALL INTERFACE WITH BOILER MANUFACTURER CONTROLS AS DESCRIBED IN THIS SEQUENCE OF OPERATION. BOILER MANUFACTURER SHALL PROVIDE A GATEWAY INTERFACE CARD THAT IS COMPATIBLE WITH THE COMMUNICATION PROTOCOL OF THE FMCS NETWORK. SEQUENCES OF OPERATION FOR BOTH BOILER CONTROL SYSTEM AND FMCS SHALL BE AS FOLLOWS:

FMCS SHALL OPERATE HEATING WATER SYSTEM. WHENEVER OUTSIDE AIR TEMPERATURE IS BELOW 60°F AND THERE ARE AT LEAST 3 CALLS FOR HEAT. IF OUTSIDE AIR TEMPERATURE IS BELOW 40°F HEATING SYSTEM SHALL BE ENABLED REGARDLESS OF CALLS FOR HEAT.

HOT WATER PUMPS SEQUENCE OF OPERATION:
ONLY ONE HEATING WATER PUMP SHALL RUN AT TIME. THE SECOND HEATING WATER PUMP IS FULLY REDUNDANT. FMCS SHALL AUTOMATICALLY ROTATE THE LEAD HEATING WATER PUMP ONCE/WEEK (10:00 AM EACH TUESDAY, ADJ.) TO EQUALIZE RUN TIME BETWEEN PUMPS. PROVIDE GRAPHICAL BUTTON ON OPERATOR WORKSTATION GRAPHICAL SCREEN TO ALLOW FMCS OPERATOR TO SWITCH LEAD PUMP TO NEXT ROTATION IN THE EVENT THE CURRENT LEAD PUMP REQUIRES MAINTENANCE.

FMCS SHALL MODULATE SIGNAL TO LEAD PUMP VFD AS REQUIRED TO MAINTAIN HEATING WATER DIFFERENTIAL PRESSURE (DP) SETPOINT. FMCS SHALL RESET HEATING WATER DIFFERENTIAL PRESSURE (DP) SETPOINT AS REQUIRED TO MAINTAIN AT LEAST ONE HEATING WATER VALVE 95% (ADJ.) OPEN. FMCS SHALL UTILIZE COMMAND TO ALL HEATING WATER VALVE POSITIONS TO RESET THE HEATING WATER DIFFERENTIAL PRESSURE. IN NO EVENT SHALL THE FMCS DECREASE THE HEATING WATER (DP) SETPOINT BELOW 4 PSI (ADJ.) OR ABOVE 10 PSI (ADJ.).

BOILER OPERATION SEQUENCE OF OPERATION:
THE FMCS SHALL ENABLE THE LEAD BOILER. THE BOILER INTEGRAL CONTROLS SHALL OPEN THE ASSOCIATED TWO-POSITION ISOLATION VALVE. THE FMCS SHALL ENERGIZE THE LEAD PUMP. THE LEAD BOILER TWO-POSITION ISOLATION VALVE SHALL BE OPEN EVEN IF THE BOILER IS NOT FIRING TO ALLOW CIRCULATION THROUGH THE VARIABLE PRIMARY HEATING WATER SYSTEM.

THE FMCS SHALL STAGE ON THE SECOND BOILER TO MAINTAIN THE SYSTEM HEATING WATER SUPPLY TEMPERATURE PER THE HEATING WATER SUPPLY TEMPERATURE RESET SCHEDULE. FMCS SHALL START/STOP BOILERS ON A FIRST ON/FIRST OFF BASIS TO EQUALIZE RUN TIME BETWEEN BOILERS. TWO-POSITION ISOLATION VALVE OPERATION SHALL BE CONTROLLED BY THE BOILER CONTROL PANEL OF THE RESPECTIVE BOILER THEY SERVE. FMCS SHALL LIMIT SECOND BOILER FROM OPERATING UNLESS PRIMARY BOILER IS AT 100% FIRING RATE (ADJ.) FOR 10 (ADJ.) MINUTES WITH HEATING WATER SUPPLY TEMPERATURE AT LEAST 10°F (ADJ.) BELOW SETPOINT AND HEATING WATER FLOW RATE IS ABOVE MINIMUM FLOW RATE OF BOTH BOILERS. THIS IS TO PREVENT OVERPUMPING OF SYSTEM.

THE FOLLOWING BOILER CONTROL PANEL POINTS (TO INCLUDE BUT NOT LIMITED TO) SHALL BE CONTROLLED BY THE FMCS AND DISPLAYED ON THE OPERATOR WORKSTATION GRAPHICAL SCREEN:

- BOILER STATUS: ENABLE/DISABLE
- BOILER OUTLET WATER TEMPERATURE SETPOINT: [°F]

THE FOLLOWING BOILER CONTROL PANEL POINTS (TO INCLUDE BUT NOT LIMITED TO) SHALL BE MONITORED BY THE FMCS AND DISPLAYED ON THE OPERATOR WORKSTATION GRAPHICAL SCREEN:

- BOILER STATUS: DISABLED/STANDBY/MANUAL OPERATION/REMOTE OPERATION/AUTO/FAULT
- FIRING RATE INPUT: [0 - 100%]
- FIRING RATE OUTPUT: [0 - 100%]
- ACTIVE SETPOINT: [°F]
- SYSTEM HWR TEMP: [°F]
- SYSTEM HWS TEMP: [°F]
- FAULT MESSAGE DISPLAY CODE: [NUMERICAL]
- RUN CYCLES: [NUMERICAL]
- RUN HOURS: [NUMERICAL]

ALARMS, INTERLOCKS & SAFETIES:
BOILER CONTROLS SHALL BE PROGRAMMED TO MAINTAIN CONSTANT SETPOINT (LAST KNOWN VALUE) IN THE EVENT THE FMCS NETWORK COMMUNICATION SIGNAL IS LOST.

ALL CONTROLLED AND MONITORED POINTS LISTED IN THE BOILER CONTROL PANEL SEQUENCE ABOVE SHALL BE DISPLAYED ON THE OPERATOR WORKSTATION GRAPHICAL SCREEN.

MINIMUM HEATING WATER FLOW CONTROL:
FMCS SHALL MODULATE THE HEATING WATER BYPASS CONTROL VALVE AS REQUIRED TO MAINTAIN MINIMUM FLOW THROUGH EACH OPERATIONAL BOILER. TCC SHALL VERIFY THE MINIMUM FLOW LIMIT OF EACH BOILER WITH EQUIPMENT MANUFACTURER. ADEQUATE FLOW THROUGH EACH BOILER SHALL BE DETERMINED BY THE FLOW METER IN THE HEATING WATER RETURN PIPING.

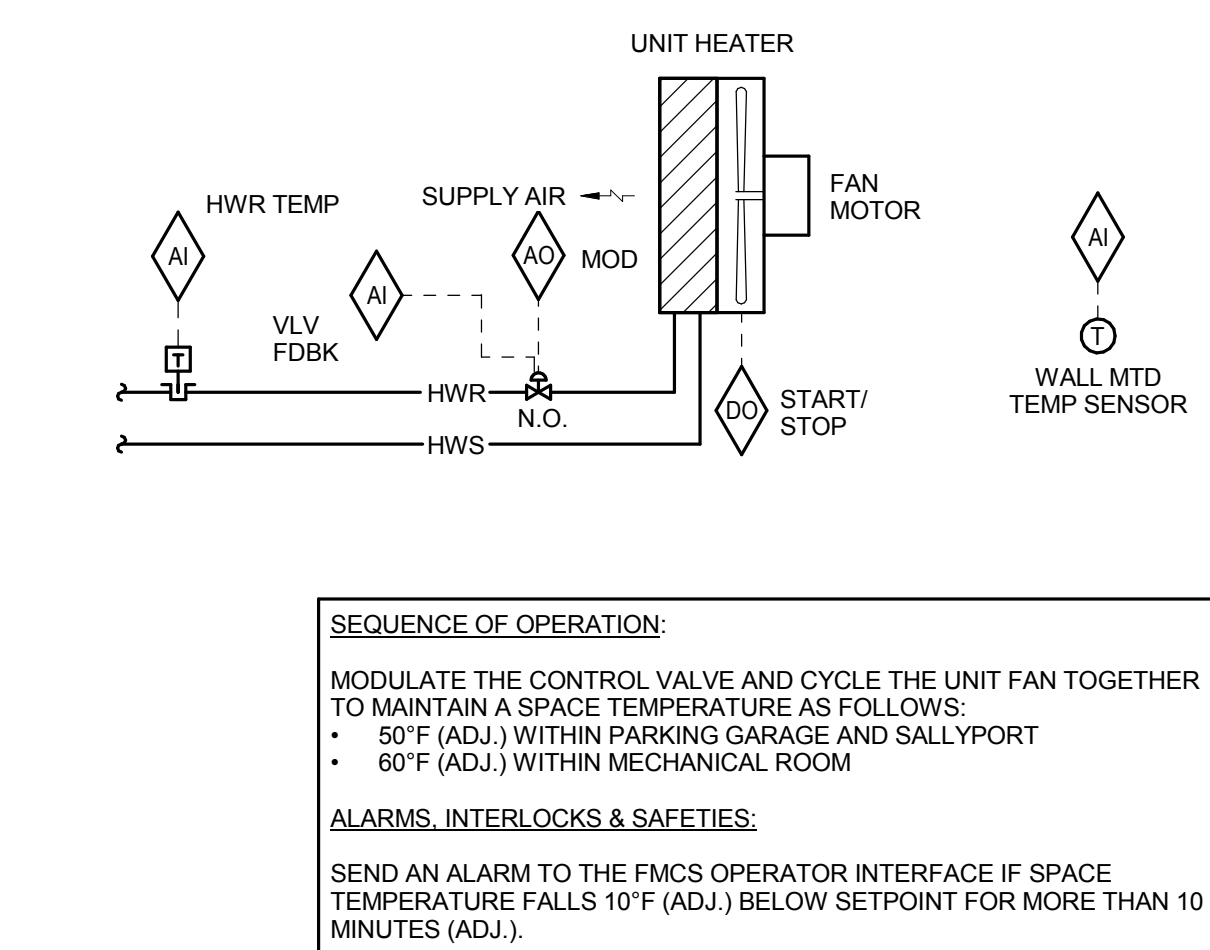
ALARMS, INTERLOCKS & SAFETIES:
TCC SHALL COORDINATE ALL SAFETY AND INTERLOCK REQUIREMENTS WITH BOILER MANUFACTURER. TCC SHALL COORDINATE AND PROVIDE THE INSTALLATION AND WIRING OF BOILER WATER DIFFERENTIAL PRESSURE FLOW SWITCHES AND OTHER COMPONENTS PROVIDED WITH THE BOILER AS REQUIRED FOR PROPER OPERATION. TCC SHALL PROVIDE AND TERMINATE ALL SAFETY AND INTERLOCK WIRING WITH BOILER CONTROL PANELS AS REQUIRED.

FMCS SHALL AUTOMATICALLY ENABLE THE LAG HEATING WATER PUMP TO RUN IN THE EVENT THE LEAD HEATING WATER PUMP FAILS TO OPERATE.

TCC SHALL VERIFY THE ACCEPTABLE TEMPERATURE RANGES THE BOILERS ARE APPROVED TO OPERATE AT AS PUBLISHED IN THE BOILER MANUFACTURER'S LITERATURE. IF THE TEMPERATURE RANGES LISTED IN THE MANUFACTURER'S LITERATURE DIFFER FROM THOSE IN THIS SEQUENCE OF OPERATION, CONTACT PROJECT ARCHITECT/ENGINEER FOR DIRECTION.

AN ALARM SHALL BE INDICATED TO THE FMCS OPERATOR WORKSTATION IN THE EVENT ANY OF THE FOLLOWING OCCUR:

- HWR TEMPERATURE DROPS BELOW 50°F (ADJ.) FOR 5 MINUTES (ADJ.) (AUTO RESET).
- HWS TEMPERATURE RISES MORE THAN 10°F (ADJ.) ABOVE SETPOINT (AUTO RESET).
- HWS TEMPERATURE DROPS MORE THAN 10°F (ADJ.) BELOW SETPOINT (AUTO RESET).
- AN ALARM IS INDICATED AT ANY BOILER ALARM PANEL.
- AN ALARM IS INDICATED AT ANY PUMP VFD.
- SHOULD THE FMCS COMMAND THE LEAD HEATING WATER PUMP TO OPERATE AND THE PUMP FAILS TO DO SO AS DETERMINED BY THE VFD STATUS, AN ALARM SHALL BE INDICATED AT THE FMCS OPERATOR WORKSTATION AND THE LAG HW PUMP SHALL AUTOMATICALLY START.



SEQUENCE OF OPERATION:
MODULATE THE CONTROL VALVE AND CYCLE THE UNIT FAN TOGETHER TO MAINTAIN A SPACE TEMPERATURE AS FOLLOWS:

- 50°F (ADJ.) WITHIN PARKING GARAGE AND SALLYPORT
- 60°F (ADJ.) WITHIN MECHANICAL ROOM

ALARMS, INTERLOCKS & SAFETIES:
SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF SPACE TEMPERATURE FALLS 10°F (ADJ.) BELOW SETPOINT FOR MORE THAN 10 MINUTES (ADJ.).

1 CONDENSING HEATING WATER BOILER CONTROL - VARIABLE PRIMARY
NO SCALE

2 UNIT HEATER CONTROL - HYDRONIC
NO SCALE

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**CONTROL
DIAGRAMS -
MECHANICAL**

M300

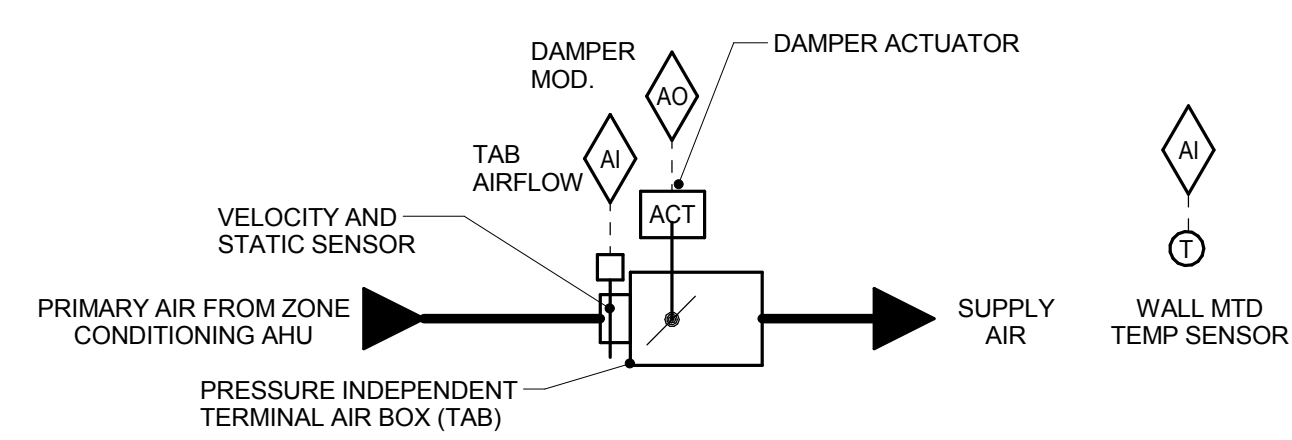
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SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE TAB DAMPER TO MAINTAIN SPACE TEMPERATURE OF 70°F (ADJ.) FOR HEATING AND 74°F (ADJ.) FOR COOLING BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE TAB SHALL BE OPEN TO MAXIMUM CFM POSITION.
- UPON A FALL IN SPACE TEMPERATURE, THE TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

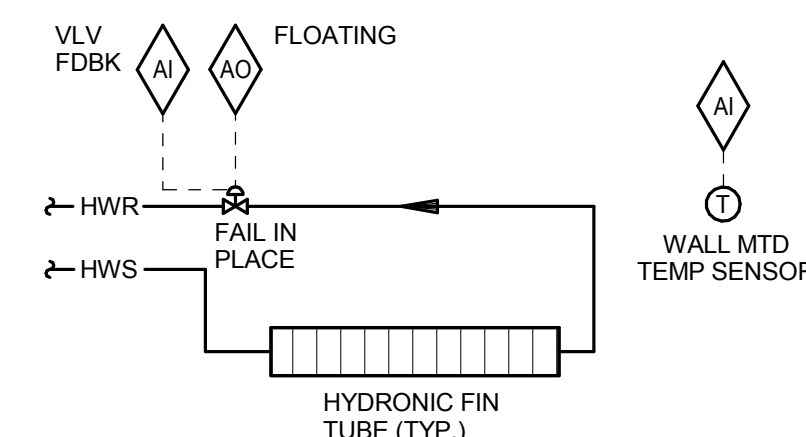
UNOCCUPIED/NIGHT SETBACK CONTROL:

- FMCS TAB CONTROL SHALL FOLLOW OCCUPIED CONTROL WITH THE FOLLOWING EXCEPTIONS:
- THE SPACE TEMPERATURE SETPOINT SHALL BE MAINTAINED AT 70°F(ADJ.) FOR HEATING MODE AND 79°F(ADJ.) FOR COOLING MODE AFTER A 30 MIN. (ADJ.) TIME DELAY ONCE SPACE GOES INTO UNOCCUPIED/NIGHT SETBACK MODE AS DETERMINED BY BUILDING SCHEDULED OCCUPANCY MODE.
- THE TAB MINIMUM CFM SHALL BE RESET TO SCHEDULED NIGHT SETBACK AIRFLOW WHEN IN UNOCCUPIED/NIGHT SETBACK MODE.

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT.

1 TAB CONTROL W/ COOLING ONLY
NO SCALE



SEQUENCE OF OPERATION:

WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 60°F (ADJ.), THE FMCS SHALL MODULATE THE RADIATION CONTROL VALVE TO MAINTAIN A SPACE TEMPERATURE SETPOINT OF 70°F (ADJ.) DURING OCCUPIED HOURS.

WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE 60°F (ADJ.), CONTROL VALVE SHALL BE FULLY CLOSED.

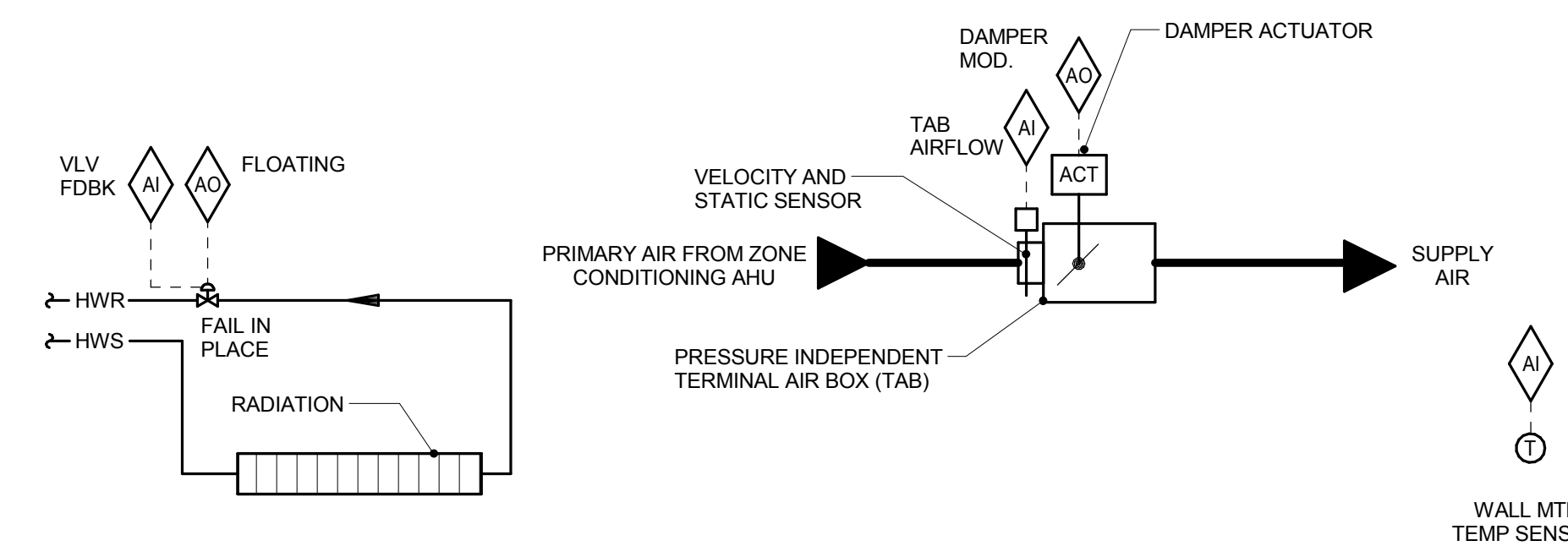
NIGHT SETBACK AND UNOCCUPIED CONTROL:

OCCUPIED/UNOCCUPIED SCHEDULE SHALL BE SET AT THE OPERATOR INTERFACE FOR THIS ZONE. WHEN THE ZONE IS SCHEDULED UNOCCUPIED OR NIGHT SETBACK, THE SPACE TEMPERATURE SETPOINT SHALL BE RESET TO 65°F (ADJ.).

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE FALLS 10°F (ADJ.) BELOW SETPOINT.

2 STAND ALONE RADIATION CONTROL
NO SCALE



SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE TAB DAMPER AND PERIMETER RADIATION CONTROL VALVE TO MAINTAIN A OCCUPIED SPACE TEMPERATURE OF 70°F (ADJ.) IN HEATING MODE AND 74°F(ADJ.) IN COOLING MODE BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE TAB SHALL BE OPEN TO MAXIMUM CFM POSITION. THE PERIMETER RADIATION CONTROL VALVE SHALL BE CLOSED.
- UPON A FALL IN SPACE TEMPERATURE, THE TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE. THE PERIMETER RADIATION CONTROL VALVE SHALL BE CLOSED.
- AS SPACE TEMP DROPS BELOW SETPOINT AND TAB DAMPER IS AT MINIMUM SCHEDULED CFM, TAB CONTROLLER SHALL MODULATE THE PERIMETER RADIATION CONTROL VALVE OPEN AS REQUIRED TO MAINTAIN SPACE TEMP.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

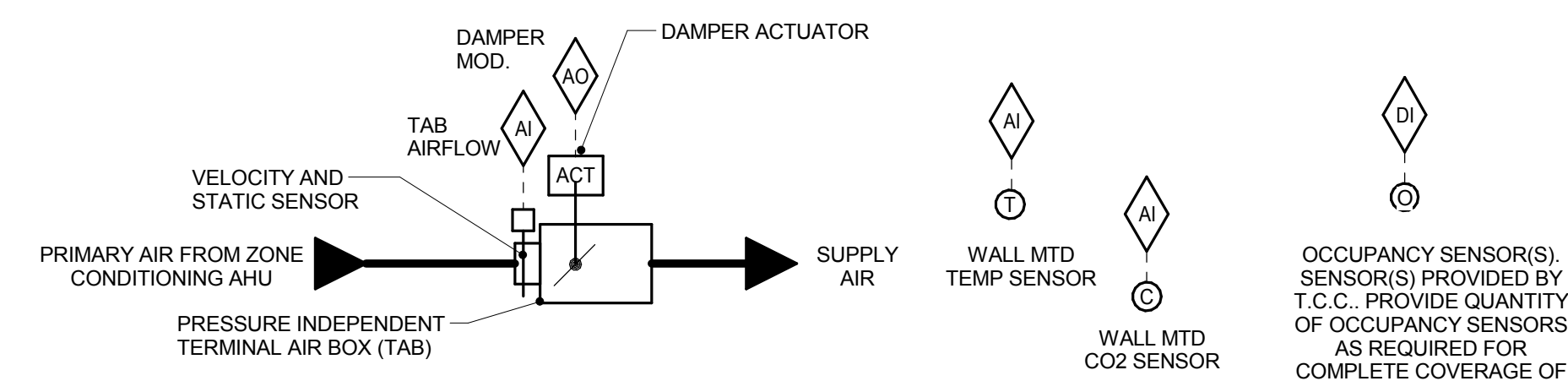
OCCUPANCY SENSOR CONTROL:

- PRIMARY OCCUPANCY SHALL BE SCHEDULED THROUGH THE BUILDING AUTOMATION SYSTEM (FMCS). REFER TO SPECIFICATIONS.
- IF FMCS IS SCHEDULED OCCUPIED AND SENSOR INDICATES OCCUPANCY, THEN THE SPACE TEMPERATURE SETPOINT AND MINIMUM AIRFLOW RATES SHALL BE PER MIN. OCC. SCHEDULED AIRFLOW RATE.
- IF FMCS IS SCHEDULED UNOCCUPIED/NIGHT SETBACK AND SENSOR INDICATES UNOCCUPANCY, THEN THE SPACE TEMPERATURE SETPOINT SHALL BE MAINTAINED AT 65°F(ADJ.) FOR HEATING MODE AND 79°F(ADJ.) FOR COOLING MODE.
- IF FMCS IS SCHEDULED OCCUPIED AND THE SENSOR INDICATES UNOCCUPIED, THEN THE SPACE TEMPERATURE SETPOINT SHALL REMAIN PER OCCUPIED TEMPERATURE SETPOINT, BUT THE MINIMUM AIRFLOW RATES SHALL BE PER THE NIGHT SETBACK SCHEDULED AIRFLOW RATE.
- IF FMCS IS SCHEDULED UNOCCUPIED/NIGHT SETBACK AND THE SENSOR INDICATES OCCUPANCY, THEN THE SETPOINT AND AIRFLOW RATES SHALL BE SET TO THE OCCUPIED VALUE.
- ALL PROGRAMMING FOR THE ABOVE SHALL RESIDE IN THE TERMINAL UNIT CONTROLLED, AND SUPERVISORY CONTROLLER SHALL NOT BE REQUIRED TO RESET ANY FLOW OR TEMPERATURE SETPOINTS BASED ON OCCUPANCY SENSOR STATUS.

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT.

3 TAB CONTROL WITH RADIATION AND OCC SENSOR
NO SCALE



SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE TAB DAMPER TO MAINTAIN SPACE TEMPERATURE OF 70°F (ADJ.) FOR HEATING AND 74°F (ADJ.) FOR COOLING BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE TAB SHALL BE OPEN TO MAXIMUM CFM POSITION.
- UPON A FALL IN SPACE TEMPERATURE, THE TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

OCCUPANCY SENSOR CONTROL:

- PRIMARY OCCUPANCY SHALL BE SCHEDULED THROUGH THE BUILDING AUTOMATION SYSTEM (FMCS). REFER TO SPECIFICATIONS.
- IF FMCS IS SCHEDULED OCCUPIED AND SENSOR INDICATES OCCUPANCY, THEN THE SPACE TEMPERATURE SETPOINT AND MINIMUM AIRFLOW RATES SHALL BE PER MIN. OCC. SCHEDULED AIRFLOW RATE.
- IF FMCS IS SCHEDULED UNOCCUPIED/NIGHT SETBACK AND SENSOR INDICATES UNOCCUPANCY, THEN THE SPACE TEMPERATURE SETPOINT SHALL BE MAINTAINED AT 70°F(ADJ.) FOR HEATING MODE AND 79°F (ADJ.) FOR COOLING MODE.
- IF FMCS IS SCHEDULED OCCUPIED AND THE SENSOR INDICATES UNOCCUPIED, THEN THE SPACE TEMPERATURE SETPOINT SHALL REMAIN PER OCCUPIED TEMPERATURE SETPOINT, BUT THE MINIMUM AIRFLOW RATES SHALL BE PER THE NIGHT SETBACK SCHEDULED AIRFLOW RATE.
- IF FMCS IS SCHEDULED UNOCCUPIED/NIGHT SETBACK AND THE SENSOR INDICATES OCCUPANCY, THEN THE SETPOINT AND AIRFLOW RATES SHALL BE SET TO THE OCCUPIED VALUE.
- ALL PROGRAMMING FOR THE ABOVE SHALL RESIDE IN THE TERMINAL UNIT CONTROLLED, AND SUPERVISORY CONTROLLER SHALL NOT BE REQUIRED TO RESET ANY FLOW OR TEMPERATURE SETPOINTS BASED ON OCCUPANCY SENSOR STATUS.

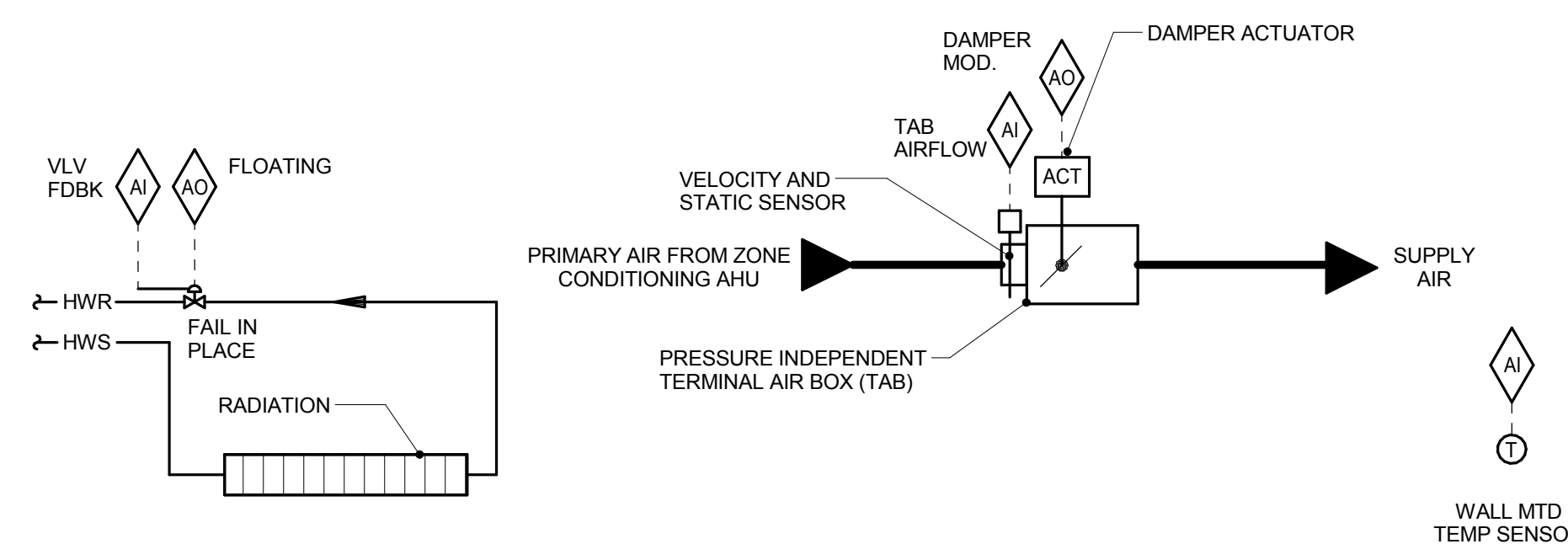
CO2 SENSOR CONTROL:

- CO2 LEVELS SHALL ALTER SEQUENCES ONLY DURING SCHEDULED OCCUPIED HOURS.
- NOMINAL/ SETPOINT CO2 LEVEL IS 1000 (ADJ.) PPM.
- IF CO2 LEVEL IS BELOW SETPOINT, THE TAB SHALL OPERATE NORMALLY.
- IF CO2 LEVEL IS ABOVE SETPOINT, THE TAB MINIMUM AIRFLOW RATE SHALL RESET TO SCHEDULED CO2 RESET AIRFLOW RATE UNTIL CO2 SETPOINT IS MET, AND THEN SHALL MODULATE TO MAINTAIN THE SPACE TEMPERATURE.
- RESET OF THE PRIMARY AIR HANDLING UNIT OUTDOOR AIR AIRFLOW RATE IS NOT REQUIRED FOR LOCAL CO2 CONTROL.

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT.

4 TAB CONTROL W/ COOLING & OC & CO2
NO SCALE



SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE TAB DAMPER AND PERIMETER RADIATION CONTROL VALVE TO MAINTAIN A OCCUPIED SPACE TEMPERATURE OF 70°F (ADJ.) IN HEATING MODE AND 74°F(ADJ.) IN COOLING MODE BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE TAB SHALL BE OPEN TO MAXIMUM CFM POSITION. THE PERIMETER RADIATION CONTROL VALVE SHALL BE CLOSED.
- UPON A FALL IN SPACE TEMPERATURE, THE TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE. THE PERIMETER RADIATION CONTROL VALVE SHALL BE CLOSED.
- AS SPACE TEMP DROPS BELOW SETPOINT AND TAB DAMPER IS AT MINIMUM SCHEDULED CFM, TAB CONTROLLER SHALL MODULATE THE PERIMETER RADIATION CONTROL VALVE OPEN AS REQUIRED TO MAINTAIN SPACE TEMP.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

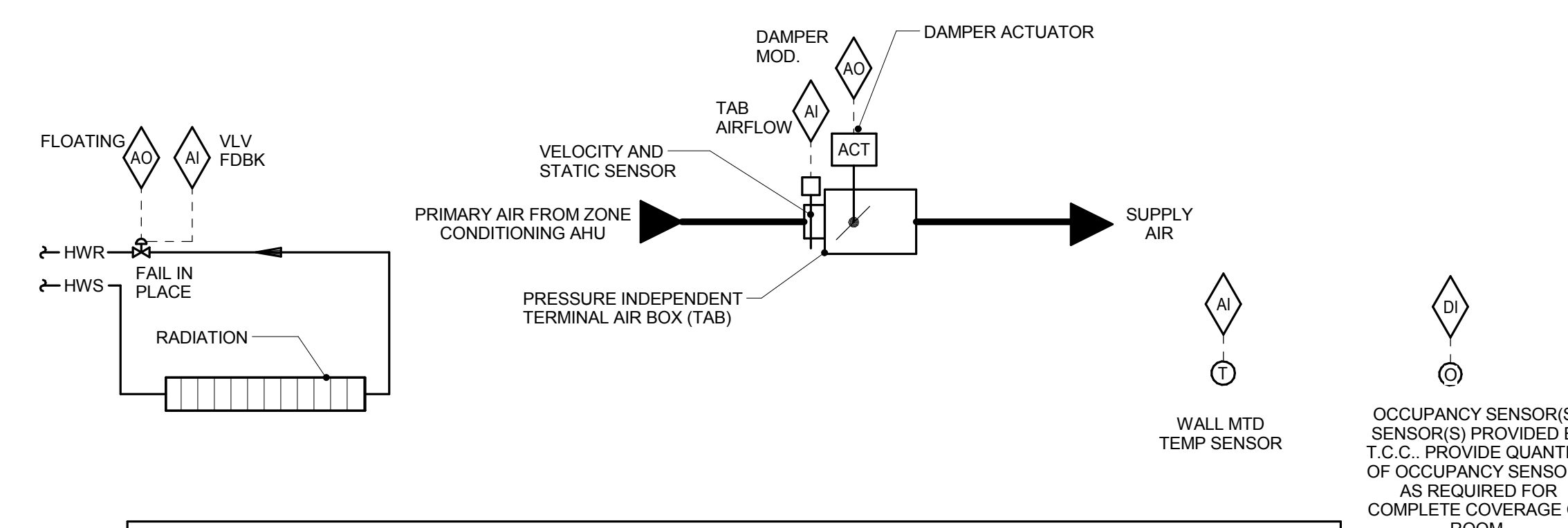
OCCUPANCY CONTROL:

- PRIMARY OCCUPANCY SHALL BE SCHEDULED THROUGH THE BUILDING AUTOMATION SYSTEM (FMCS). REFER TO SPECIFICATIONS.
- IF FMCS IS SCHEDULED UNOCCUPIED/NIGHT SETBACK THEN THE SPACE TEMPERATURE SETPOINT SHALL BE MAINTAINED AT 68°F(ADJ.) FOR HEATING MODE AND 76°F(ADJ.) FOR COOLING MODE AND THE MINIMUM AIRFLOW RATES SHALL BE PER THE NIGHT SETBACK SCHEDULED AIRFLOW RATE.

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT.

5 TAB CONTROL WITH RADIATION
NO SCALE



SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE TAB DAMPER, AND PERIMETER RADIATION CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE OF 70°F (ADJ.) FOR HEATING MODE AND 74°F(ADJ.) IN COOLING MODE BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE TAB SHALL BE OPEN TO MAXIMUM CFM POSITION. THE PERIMETER RADIATION CONTROL VALVE SHALL BE CLOSED.
- UPON A FALL IN SPACE TEMPERATURE, THE TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE. THE PERIMETER RADIATION CONTROL VALVE SHALL BE CLOSED.
- AS SPACE TEMP DROPS BELOW SETPOINT AND TAB DAMPER IS AT MINIMUM SCHEDULED CFM, TAB CONTROLLER SHALL MODULATE THE PERIMETER RADIATION CONTROL VALVE OPEN AS REQUIRED TO MAINTAIN SPACE TEMP.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

OCCUPANCY SENSOR CONTROL:

- PRIMARY OCCUPANCY SHALL BE SCHEDULED THROUGH THE BUILDING AUTOMATION SYSTEM (FMCS). REFER TO SPECIFICATIONS.
- IF FMCS IS SCHEDULED OCCUPIED AND SENSOR INDICATES OCCUPANCY, THEN THE SPACE TEMPERATURE SETPOINT AND MINIMUM AIRFLOW RATES SHALL BE PER MIN. OCC. SCHEDULED AIRFLOW RATE.
- IF FMCS IS SCHEDULED UNOCCUPIED/NIGHT SETBACK AND SENSOR INDICATES UNOCCUPANCY, THEN THE SPACE TEMPERATURE SETPOINT SHALL BE MAINTAINED AT 65°F(ADJ.) FOR HEATING MODE AND 79°F(ADJ.) FOR COOLING MODE.
- IF FMCS IS SCHEDULED OCCUPIED AND THE SENSOR INDICATES UNOCCUPIED, THEN THE SPACE TEMPERATURE SETPOINT SHALL REMAIN PER OCCUPIED TEMPERATURE SETPOINT, BUT THE MINIMUM AIRFLOW RATES SHALL BE PER THE NIGHT SETBACK SCHEDULED AIRFLOW RATE.
- IF FMCS IS SCHEDULED UNOCCUPIED/NIGHT SETBACK AND THE SENSOR INDICATES OCCUPANCY, THEN THE SETPOINT AND AIRFLOW RATES SHALL BE SET TO THE OCCUPIED VALUE.
- ALL PROGRAMMING FOR THE ABOVE SHALL RESIDE IN THE TERMINAL UNIT CONTROLLED, AND SUPERVISORY CONTROLLER SHALL NOT BE REQUIRED TO RESET ANY FLOW OR TEMPERATURE SETPOINTS BASED ON OCCUPANCY SENSOR STATUS.

CO2 SENSOR CONTROL:

- CO2 LEVELS SHALL ALTER SEQUENCES ONLY DURING SCHEDULED OCCUPIED HOURS.
- NOMINAL/ SETPOINT CO2 LEVEL IS 1000 (ADJ.) PPM.
- IF CO2 LEVEL IS BELOW SETPOINT, THE TAB SHALL OPERATE NORMALLY.
- IF CO2 LEVEL IS ABOVE SETPOINT, THE TAB MINIMUM AIRFLOW RATE SHALL RESET TO SCHEDULED CO2 RESET AIRFLOW RATE UNTIL CO2 SETPOINT IS MET, AND THEN SHALL MODULATE TO MAINTAIN THE SPACE TEMPERATURE.
- RESET OF THE PRIMARY AIR HANDLING UNIT OUTDOOR AIR AIRFLOW RATE IS NOT REQUIRED FOR LOCAL CO2 CONTROL.
- SUPPLEMENTAL HEAT (PERIMETER RADIATION) SHALL BE USED TO OFFSET COOLING LOAD IF OVERCOOLING OF SPACE OCCURS.

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT.

6 TAB CONTROL WITH RADIATION, CO2, & OCCUPANCY SENSOR
NO SCALE

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

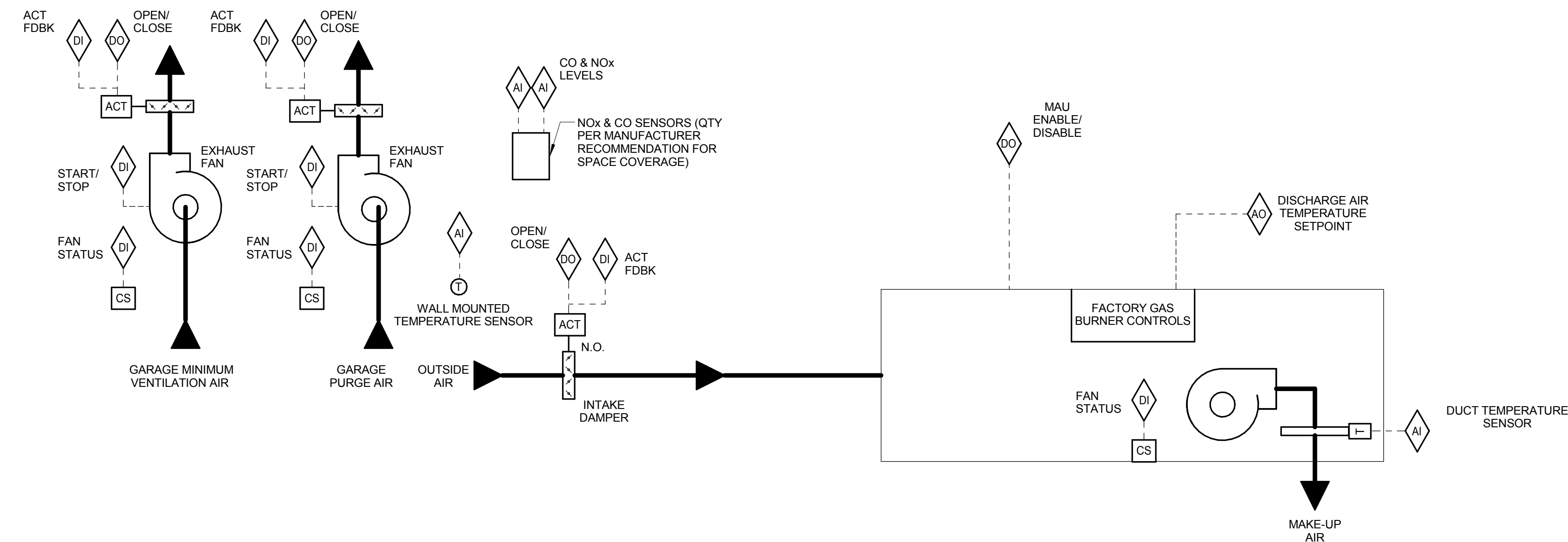
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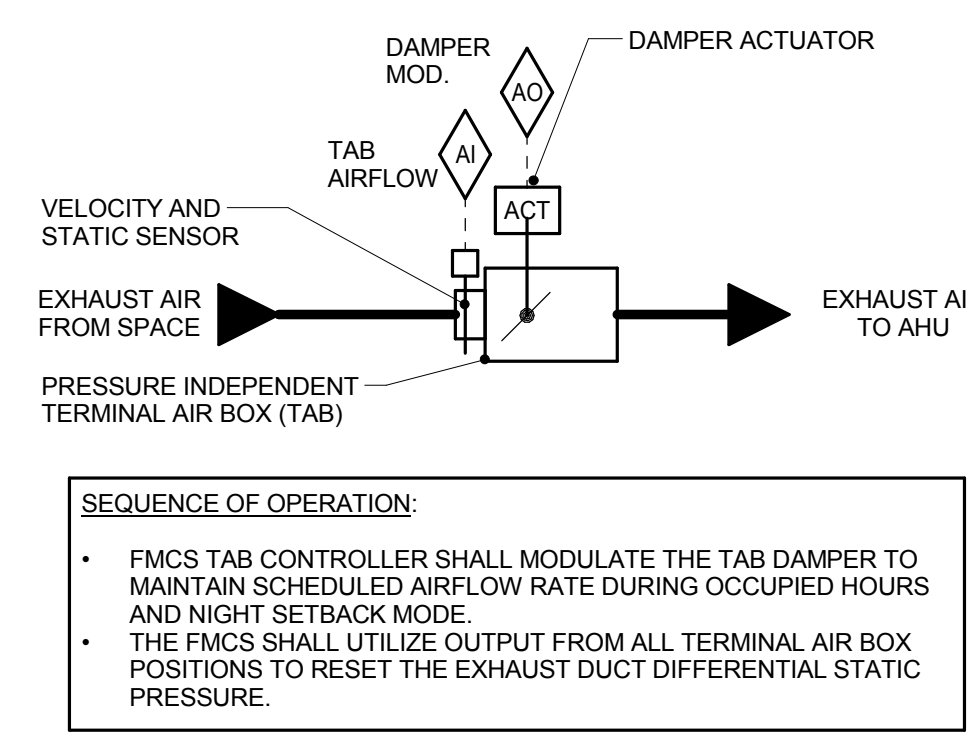
**CONTROL
DIAGRAMS -
MECHANICAL**

M302



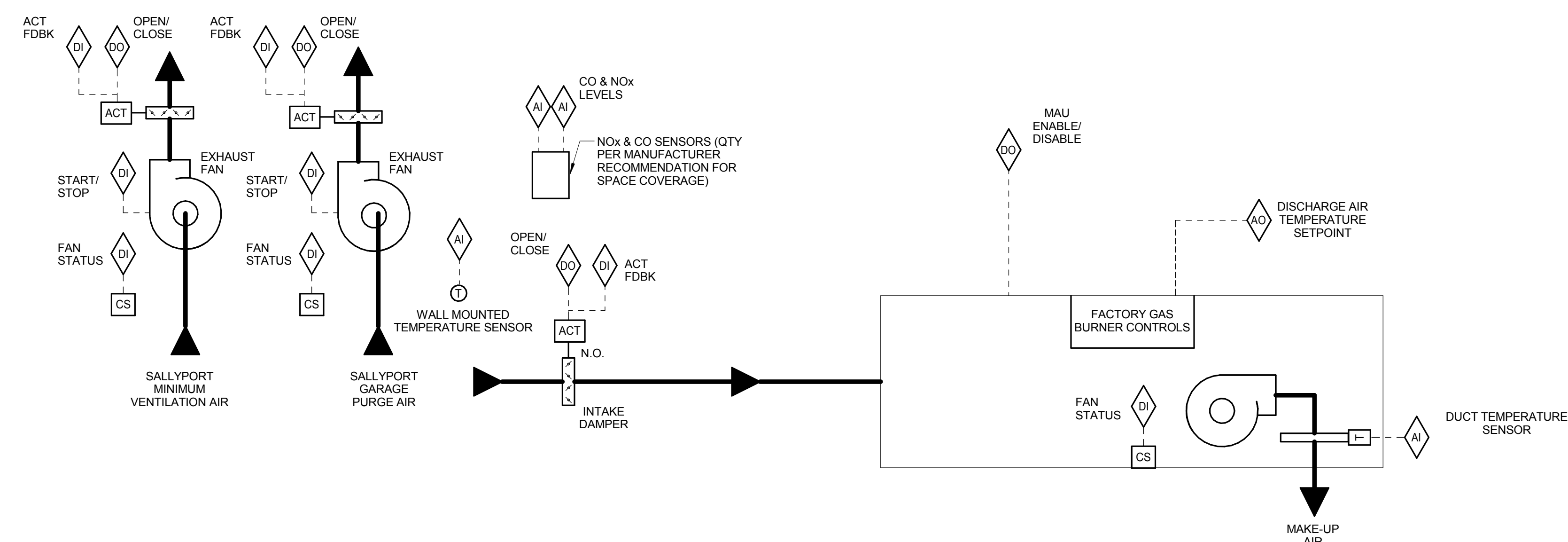
SEQUENCE OF OPERATION:
EXHAUST FAN MINIMUM VENTILATION FAN (EF-1) SHALL BE STARTED AND STOPPED BY THE FMCS THROUGH A CONTACTOR.
EXHAUST FAN PURGE FAN (EF-2) SHALL BE STARTED AND STOPPED THROUGH A HAND-OFF-AUTO SWITCH ON THE FACE OF THE MOTOR STARTER. WHEN PLACED IN THE HAND POSITION THE EXHAUST FAN SHALL RUN CONTINUOUSLY. WHEN PLACED IN THE AUTO POSITION THE FMCS SHALL CONTROL FAN OPERATION. WHEN PLACED IN THE OFF POSITION THE EXHAUST FAN MOTOR SHALL BE DE-ENERGIZED.
EXHAUST MINIMUM VENTILATION FAN (EF-1) SHALL RUN CONTINUOUSLY 24 HOURS/DAY, 7 DAYS/WEEK.
EXHAUST FAN PURGE FAN (EF-2) SHALL BE CONTROLLED AS FOLLOWS:
• WHEN SPACE TEMP RISES ABOVE 76°F (ADJ.) FMCS SHALL COMMAND INTAKE AIR DAMPER AND EXHAUST AIR DAMPER TO FULLY OPEN. MAU AND EXHAUST FAN SHALL BE ENABLED AFTER A 30 SECOND DELAY TO ALLOW FOR OPENING OF THE DAMPERS.
• WHEN SPACE TEMP DROPS BELOW 72°F (ADJ.) MAU AND EXHAUST FAN SHALL BE DISABLED AND THE INTAKE AIR DAMPER AND EXHAUST AIR DAMPER SHALL FULLY CLOSE.
• IN THE EVENT THE CO DETECTORS SENSE THE CONCENTRATION OF CARBON MONOXIDE RISES ABOVE 25 PPM (ADJ.) OR THE CONCENTRATION OF NITROGEN DIOXIDE RISES ABOVE 1 PPM (ADJ.), FMCS SHALL COMMAND THE INTAKE AIR DAMPER AND EXHAUST AIR DAMPER TO FULLY OPEN. AFTER A 30 SECOND DELAY TO ALLOW FOR OPENING OF THE DAMPERS THE MAU AND EXHAUST FAN SHALL BE ENABLED. PURGE FAN OPERATION SHALL CONTINUE UNTIL BOTH CO AND NOx LEVELS FALL BELOW 10 PPM (ADJ.) FOR CO AND 0.4 PPM (ADJ.) FOR NOx.
ONCE ENERGIZED, EXHAUST PURGE FAN AND MAU SHALL CONTINUE TO RUN FOR MIN. 10 MINUTES (ADJ.) TO PREVENT SHORT CYCLING.
MAU SHALL HAVE INTERNAL CONTROLS PER SPECIFICATION 23 74 23.13. FMCS SHALL OUTPUT ENABLE/DISABLE AND DAT SETPOINT TO MAU OF 50°F (ADJ.).

ALARMS, INTERLOCKS AND SAFETIES:
AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE FOLLOWING EVENTS:
• THE GAS DETECTORS SENSE A CONCENTRATION OF CARBON MONOXIDE ABOVE 50 PPM (ADJ.) OR A CONCENTRATION OF NITROGEN DIOXIDE ABOVE 5 PPM (ADJ.)
• THE FMCS COMMANDS THE MINIMUM VENTILATION FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.
• THE FMCS COMMANDS THE EXHAUST PURGE FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.
• THE FMCS COMMANDS THE MAU TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.
• THE FMCS COMMANDS THE MAU TO OPERATE AND THE DAT IS 10°F (ADJ.) BELOW SETPOINT AFTER A 3 MINUTE (ADJ.) DELAY TO ALLOW FOR BURNER WARMUP. IF THIS ALARM OCCURS MAU AND EXHAUST PURGE FAN SHALL BE DISABLED.



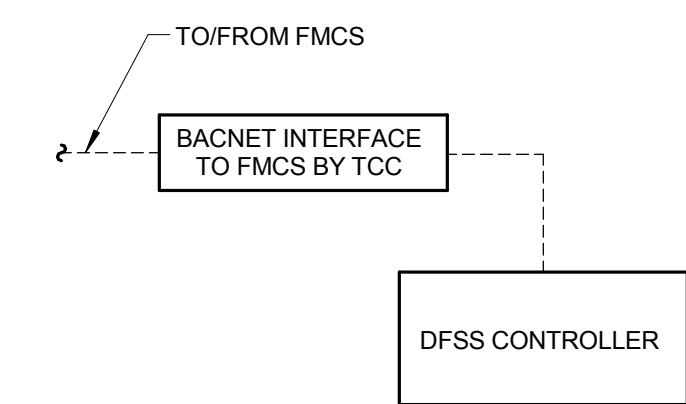
1 TAB CONTROL EXHAUST
NO SCALE

3 EXHAUST FAN CONTROL - GARAGE
NO SCALE



SEQUENCE OF OPERATION:
EXHAUST FAN MINIMUM VENTILATION FAN (EF-3) SHALL BE STARTED AND STOPPED BY THE FMCS THROUGH A CONTACTOR.
EXHAUST FAN PURGE FAN (EF-4) SHALL BE STARTED AND STOPPED THROUGH A HAND-OFF-AUTO SWITCH ON THE FACE OF THE MOTOR STARTER. WHEN PLACED IN THE HAND POSITION THE EXHAUST FAN SHALL RUN CONTINUOUSLY. WHEN PLACED IN THE AUTO POSITION THE FMCS SHALL CONTROL FAN OPERATION. WHEN PLACED IN THE OFF POSITION THE EXHAUST FAN MOTOR SHALL BE DE-ENERGIZED.
EXHAUST FAN MINIMUM VENTILATION FAN (EF-3) SHALL RUN CONTINUOUSLY 24 HOURS/DAY, 7 DAYS/WEEK. WHEN FAN IS ENERGIZED, 2-POSITION DAMPER SHALL FULLY CLOSE. WHEN FAN IS DE-ENERGIZED, 2-POSITION DAMPER SHALL FULLY OPEN.
EXHAUST FAN PURGE FAN (EF-4) SHALL BE CONTROLLED AS FOLLOWS:
• WHEN SPACE TEMP RISES ABOVE 76°F (ADJ.) FMCS SHALL COMMAND INTAKE AIR DAMPER AND EXHAUST AIR DAMPER TO FULLY OPEN. MAU AND EXHAUST FAN SHALL BE ENABLED AFTER A 30 SECOND DELAY TO ALLOW FOR OPENING OF THE DAMPERS.
• WHEN SPACE TEMP DROPS BELOW 72°F (ADJ.) MAU AND EXHAUST FAN SHALL BE DISABLED AND THE INTAKE AIR DAMPER AND EXHAUST AIR DAMPER SHALL FULLY CLOSE.
• IN THE EVENT THE CO DETECTORS SENSE THE CONCENTRATION OF CARBON MONOXIDE RISES ABOVE 25 PPM (ADJ.) OR THE CONCENTRATION OF NITROGEN DIOXIDE RISES ABOVE 1 PPM (ADJ.), FMCS SHALL COMMAND THE INTAKE AIR DAMPER AND EXHAUST AIR DAMPER TO FULLY OPEN. AFTER A 30 SECOND DELAY TO ALLOW FOR OPENING OF THE DAMPERS THE MAU AND EXHAUST FAN SHALL BE ENABLED. PURGE FAN OPERATION SHALL CONTINUE UNTIL BOTH CO AND NOx LEVELS FALL BELOW 10 PPM (ADJ.) FOR CO AND 0.4 PPM (ADJ.) FOR NOx.
ONCE ENERGIZED, EXHAUST PURGE FAN AND MAU SHALL CONTINUE TO RUN FOR MIN. 10 MINUTES (ADJ.) TO PREVENT SHORT CYCLING.
MAU SHALL HAVE INTERNAL CONTROLS PER SPECIFICATION 23 74 23.13. FMCS SHALL OUTPUT ENABLE/DISABLE AND DAT SETPOINT TO MAU OF 50°F (ADJ.).

ALARMS, INTERLOCKS AND SAFETIES:
AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE FOLLOWING EVENTS:
• THE GAS DETECTORS SENSE A CONCENTRATION OF CARBON MONOXIDE ABOVE 50 PPM (ADJ.) OR A CONCENTRATION OF NITROGEN DIOXIDE ABOVE 5 PPM (ADJ.)
• THE FMCS COMMANDS THE MINIMUM VENTILATION FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.
• THE FMCS COMMANDS THE EXHAUST PURGE FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.
• THE FMCS COMMANDS THE MAU TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.
• THE FMCS COMMANDS THE MAU TO OPERATE AND THE DAT IS 10°F (ADJ.) BELOW SETPOINT AFTER A 3 MINUTE (ADJ.) DELAY TO ALLOW FOR BURNER WARMUP. IF THIS ALARM OCCURS MAU AND EXHAUST PURGE FAN SHALL BE DISABLED.



SEQUENCE OF OPERATION:

- MONITOR GENERAL ALARMS FROM DFSS CONTROLLER AND ALARM TO OPERATOR INTERFACE. IF ANY ALARMS OCCUR ON DFSS.
- ALARM TO OPERATOR INTERFACE IF TEMPERATURE IN SPACE EXCEEDS 75°F (ADJ.) OR DROPS BELOW 65°F (ADJ.)

2 DFSS MONITORING
NO SCALE

4 EXHAUST FAN CONTROL - SALLYPORT
NO SCALE

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PROJECT # 16.0029.00

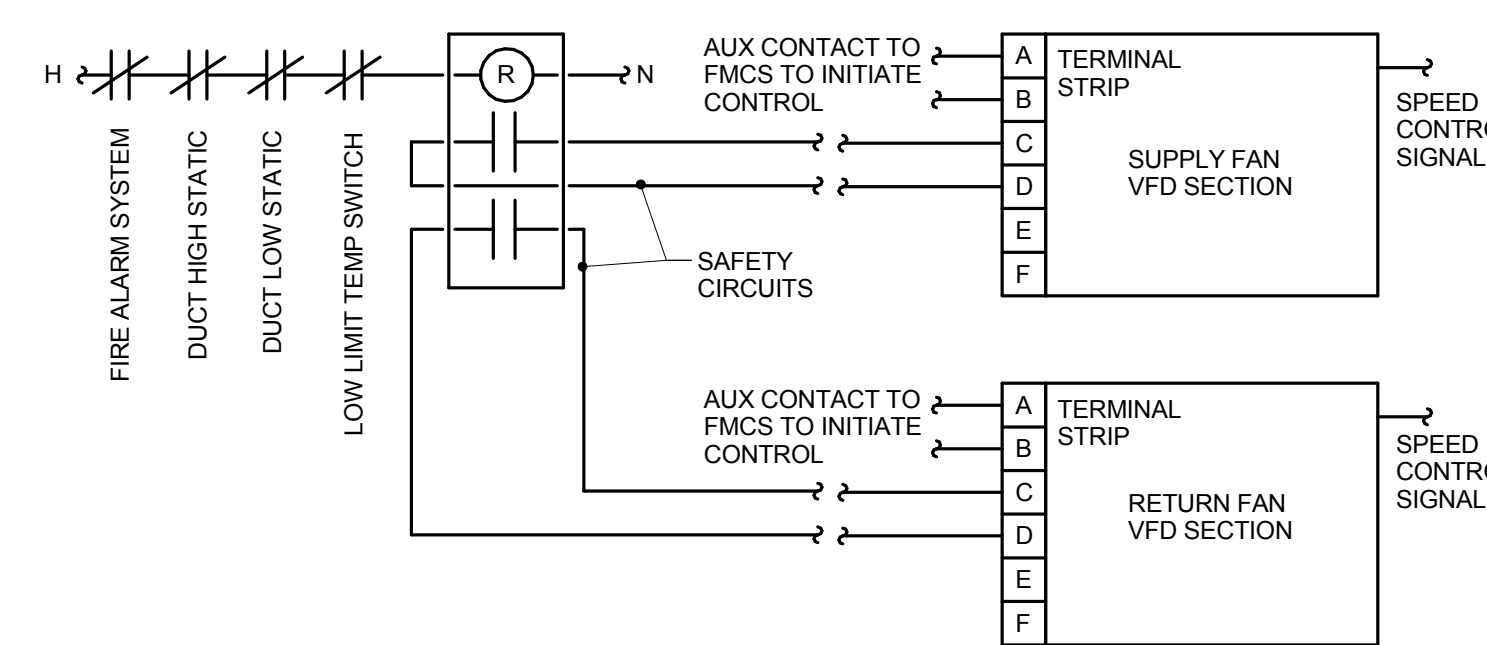
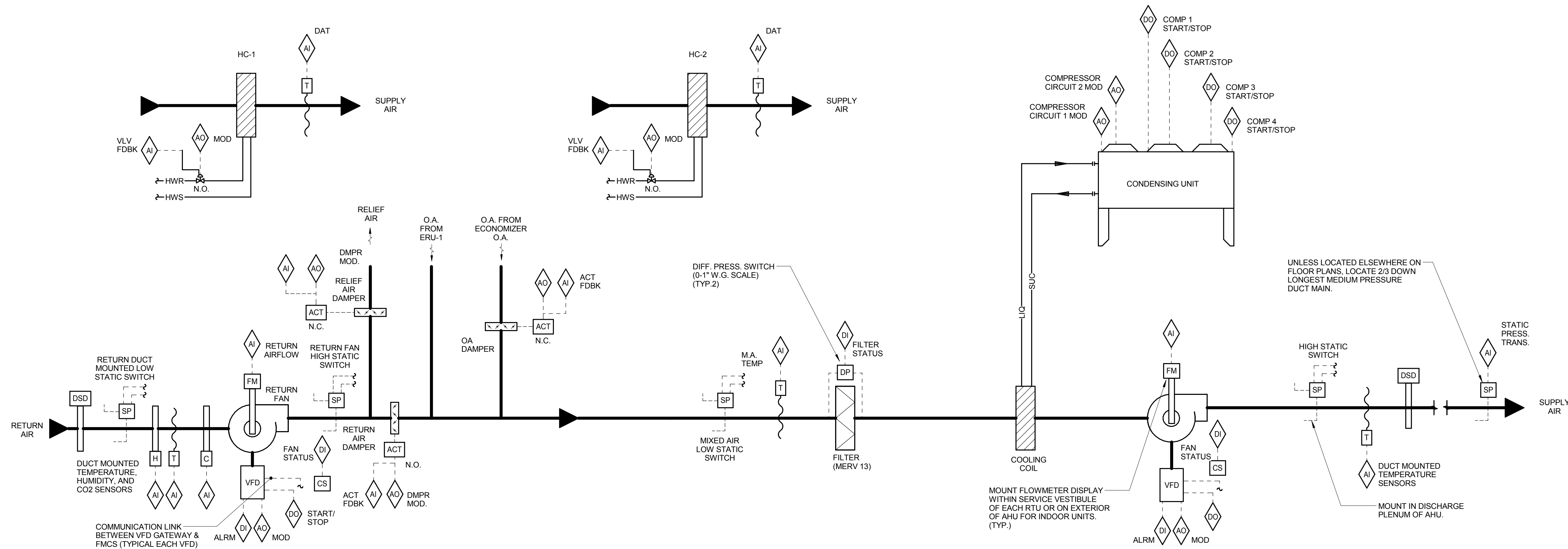
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REFERENCE SCALE IN INCHES
1 2 3

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01



SUPPLY & RETURN FAN VFD CONTROL

SEQUENCE OF OPERATION:
WHEN AHU IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:
• SUPPLY FAN SHALL BE ENERGIZED TO RUN.
• WHEN THE SUPPLY FAN HAS STARTED THE RETURN FAN AND INTERLOCKED EXHAUST FANS SHALL START AS SHOWN IN THE FAN INTERLOCK SCHEDULE.

SUPPLY FAN OPERATION:
FMCS SHALL MODULATE SIGNAL TO SUPPLY FAN VFD TO MAINTAIN DUCT STATIC PRESSURE AS MEASURED BY STATIC PRESSURE TRANSMITTER NEAR THE END OF THE CRITICAL DUCT BRANCH.

RETURN FAN OPERATION:
RETURN FAN SHALL BE INDEXED TO RUN WHENEVER THE SUPPLY FAN IS INDEXED TO RUN. FMCS SHALL MODULATE SIGNAL TO RETURN FAN VFD AS REQUIRED TO MAINTAIN THE AIRFLOW OFFSET BETWEEN AHU SUPPLY FAN AIRFLOW AND AHU RETURN FAN AIRFLOW EQUAL TO THE CALCULATED ERU SUPPLY FAN AIRFLOW RATE.

STATIC PRESSURE RESET:
1. NOMINAL STATIC PRESSURE SETPOINT SHALL BE 1.3" W.C. (ADJ.). FINAL, NOMINAL, SETPOINT SHALL BE CONFIRMED AND SET BY THE BALANCING CONTRACTOR.
2. STATIC PRESSURE SETPOINT SHALL BE RESET USING A TRIM AND RESPONSE LOGIC, WITHIN THE BOUNDS OF 0.7" W.C. (ADJ.) AND 1.7" W.C. (ADJ.). FINAL MAXIMUM AND MINIMUM SETPOINTS SHALL BE CONFIRMED AND SET BY THE BALANCING CONTRACTOR BASED ON A WORST-CASE TEST (I.E. TO SATISFY WORST CASE ZONE WHEN ALL AIR VALVES AT MINIMUM AND AT MAXIMUM DESIGN CONDITION).
3. TRIM AND RESPONSE IS AS FOLLOWS:
A. POLL ALL AIR VALVES. BAS SHALL ALLOW FOR ANY ZONE TO BE REMOVED FROM POLL OR ADDED TO POLL THROUGH INTERFACE OF AIR VALVE PAGE.
B. A ZONE PRESSURE REQUEST IS GENERATED WHEN AN AIR VALVE IS 85% (ADJ.) OPEN OR GREATER THAN MAXIMUM FLOW. THE REQUEST IS ELIMINATED AT 80% (ADJ.) OPEN.
C. FAN SHALL ADJUST SPEED EVERY 10 (ADJ.) MINUTES. IF MORE THAN 3 (ADJ.) ZONES ARE SENDING A PRESSURE REQUEST, THE SETPOINT SHALL BE INCREASED BY 0.04" WC (ADJ.). IF LESS THAN 3 (ADJ.) ZONES ARE SENDING A PRESSURE REQUEST, THE SETPOINT SHALL BE DECREASED BY 0.04" WC (ADJ.). IF 3 (ADJ.) ZONES ARE SENDING A PRESSURE REQUEST, THE SETPOINT SHALL NOT CHANGE.
D. THE CONTROLS CONTRACTOR SHALL TUNE THE RESET AFTER THE BUILDING HAS BEEN OCCUPIED TO ELIMINATE INSTABILITY, AND SHALL PROVIDE A TREND GRAPH TO SHOW STABILITY.

DISCHARGE AIR TEMPERATURE RESET:
RESET DISCHARGE AIR TEMPERATURE BASED ON THE ZONE WITH THE GREATEST CALL FOR COOLING. RESET THE TEMPERATURE AS FOLLOWS:
• WHEN WORST CASE TAB IS LESS THAN 90% (ADJ.) OPEN FOR TEN MINUTES (ADJ.) THEN THE DISCHARGE AIR TEMPERATURE SHALL INCREASE BY 1°F (ADJ.). THIS SHALL CONTINUE UNTIL AHU MAXIMUM DISCHARGE AIR TEMPERATURE OF 60°F (ADJ.) IS ACHIEVED.
• WHEN WORST CASE TAB IS MORE THAN 90% OPEN FOR TEN MINUTES (ADJ.) THEN THE DISCHARGE AIR TEMPERATURE SHALL DROP BY 1°F (ADJ.). THIS SHALL CONTINUE UNTIL AHU MINIMUM DISCHARGE AIR TEMPERATURE OF 55°F (ADJ.) IS ACHIEVED.
• THE MAXIMUM ALLOWABLE RETURN AIR HUMIDITY SETPOINT SHALL BE 60% (ADJ.). IF RETURN AIR HUMIDITY IS GREATER THAN SETPOINT, RESET DISCHARGE AIR TEMPERATURE TO 55°F UNTIL RETURN AIR HUMIDITY IS 5% LESS THAN MAXIMUM SETPOINT FOR 10 MINUTES (ADJ.).

VENTILATION AIR CONTROL:
REFER TO ERU SEQUENCE FOR CONTROL OF VENTILATION AIR.

COOLING COIL OPERATION:
WHEN IN MINIMUM OUTSIDE AIR MODE, FMCS SHALL STAGE ON COMPRESSORS AND MODULATE DIGITAL SCROLL COMPRESSOR CIRCUITS AS REQUIRED TO MAINTAIN DISCHARGE AIR TEMPERATURE SET POINT. COORDINATE WITH CONDENSING UNIT MANUFACTURER TO MAINTAIN MINIMUM RUNTIMES OF COMPRESSORS TO PREVENT SHORT CIRCUITING OF SYSTEM.

IN ECONOMIZER MODE, FMCS SHALL NOT STAGE ON COMPRESSORS UNLESS RETURN AIR DAMPER IS 5% (ADJ.) OPEN AND RELIEF AIR DAMPER IS 95% (ADJ.) OPEN.

ECONOMIZER OPERATION:
WHEN THE OUTSIDE AIR DRY BULB TEMPERATURE IS LESS THAN THE RETURN AIR DRY BULB TEMPERATURE THE FMCS SHALL ENABLE ECONOMIZER CONTROLS. WHEN OUTSIDE AIR DRY BULB TEMPERATURE IS GREATER THAN THE RETURN AIR DRY BULB TEMPERATURE FOR 10 MINUTES THE FMCS SHALL DISABLE ECONOMIZER CONTROLS AND SHALL RETURN THE UNIT TO MINIMUM OUTSIDE AIR MODE. ONCE ECONOMIZER CONTROLS HAVE BEEN ENABLED OR DISABLED, THE UNIT SHALL CONTINUE TO OPERATE IN THAT MODE FOR A MINIMUM OF 10 MINUTES (ADJ.) BEFORE BEING ALLOWED TO SWITCH BACK (TO PREVENT SHORT CYCLING).

IN ECONOMIZER MODE THE FMCS SHALL MODULATE THE RETURN AND RELIEF DAMPERS AS REQUIRED TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT.

DUCT MOUNTED HEATING COIL OPERATION:
TWO DUCT MOUNTED HEATING COILS ARE PROVIDED IN THE SYSTEM TO MAINTAIN A MINIMUM AIR TEMPERATURE TO THE TERMINAL AIR BOXES AND ZONES FOR COMFORT AND DRAFT CONTROL REASONS. HC-1 SERVES ALL TERMINAL AIR BOXES LOCATED ON THE LOWER LEVEL. THIS INCLUDES ALL BOXES WITH THE DESIGNATION "TAB-BHMF". HC-2 SERVES ALL TERMINAL AIR BOXES LOCATED ON THE FIRST FLOOR. THIS INCLUDES ALL BOXES WITH THE DESIGNATION "TAB-1HF". THE DISCHARGE AIR TEMPERATURE RESET SEQUENCE USED ABOVE SHALL ALSO BE USED TO CONTROL THE DUCT MOUNTED HEATING COIL DISCHARGE AIR TEMPERATURE SETPOINT PER FLOOR. THE HEATING COIL CONTROL VALVE SHALL MODULATE AS REQUIRED TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT. IF MECHANICAL COOLING (ECONOMIZER OR AHU-1 CONDENSING UNIT) IS ENABLED THE REHEAT COIL CONTROL SHALL BE DISABLED AND BOTH CONTROL VALVES SHALL BE CLOSED.

ALARMS, INTERLOCKS, AND SAFETIES:
WHEN FIRE ALARM CONTROL PANEL INDICATES AN ALARM CONDITION, AHU SHALL BE SHUTDOWN.

THE FOLLOWING CONDITIONS SHALL SHUTDOWN THE AHU AND SHALL INDICATE AN ALARM CONDITION AT THE FMCS WORKSTATION:
• LOW STATIC PRESSURE SWITCH INDICATES RETURN DUCT PRESSURE LESS THAN THE SPECIFIED DUCT PRESSURE CLASS.
• LOW STATIC PRESSURE SWITCH INDICATES MIXED AIR PRESSURE LESS THAN THE SPECIFIED DUCT PRESSURE CLASS OF THE OUTSIDE AIR DUCTWORK.
• HIGH STATIC PRESSURE SWITCH INDICATES SUPPLY DUCT STATIC PRESSURE GREATER THAN THE SPECIFIED DUCT PRESSURE CLASS.
• SHOULD ANY ONE FOOT SECTION OF THE MANUAL RESET LOW LIMIT TEMPERATURE SWITCH #1 SENSE AIR TEMP <34°F (ADJ.), IF MULTIPLE FREEZE STATS ARE REQUIRED, WIRE ALL TO A COMMON RESET SWITCH.

THE FOLLOWING CONDITIONS SHALL INDICATE AN ALARM AT THE FMCS, HOWEVER AHU SHALL CONTINUE TO OPERATE:
• AN ALARM IS INDICATED AT ANY SUPPLY FAN VFD OR RETURN FAN VFD.
• DIFFERENTIAL PRESSURE SWITCH ACROSS FILTER (MERV 13) BANK EXCEEDS 0.6 INCHES W.G. (ADJ.).
• SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE DISCHARGE AIR TEMPERATURE IS MORE THAN 5°F (ADJ.) ABOVE OR BELOW SETPOINT.

IN THE EVENT SUPPLY FAN IS NOT RUNNING (AS INDICATED BY THE CURRENT SENSING RELAYS) RETURN AIR FAN SHALL BE DE-ENERGIZED.

WHENEVER AHU IS SHUTDOWN THE FOLLOWING SHALL OCCUR:
• THE OUTSIDE AIR DAMPER AND RELIEF AIR DAMPER SHALL FULLY CLOSE.
• RETURN AIR DAMPER SHALL FULLY OPEN.
• CONDENSING UNIT SYSTEM SHALL BE DISABLED.
• SUPPLY FAN AND RETURN FAN VFDs SHALL BE DE-ENERGIZED.
• INTERLOCKED VENTILATION SYSTEM (ERU-1) SHALL BE DE-ENERGIZED.

NIGHT SETBACK MODE:
PROVIDE TIME OF DAY SCHEDULE TO ALLOW AHU TO ENTER A NIGHT SETBACK MODE PER SCHEDULE WITH REDUCED VENTILATION RATES FOR MINIMAL SPACE OCCUPANCY. COORDINATE SCHEDULE WITH OWNER.
• THE UNIT SHALL CONTINUE TO OPERATE IN NORMAL MODE, BUT WITH THE VENTILATION RATES PER THE NIGHT SETBACK MODE. RETURN AIR CO2 LEVELS SHALL BE MONITORED AND IF THE RETURN AIR VENTILATION RATES RISE ABOVE 1100 PPM (ADJ.) THE UNIT SHALL SWITCH INTO NORMAL OCCUPIED VENTILATION RATES FOR 1 HOUR (ADJ.). IF AFTER THE 1 HOUR (ADJ.) PERIOD THE RETURN AIR CO2 LEVELS ARE BELOW 1100 PPM (ADJ.) THE UNIT SHALL RETURN TO THE NIGHT SETBACK VENTILATION RATES UNTIL EITHER THE CO2 LEVELS EXCEED THE 1100 PPM (ADJ.) LEVELS AGAIN OR THE SYSTEM ENTERS NORMAL OCCUPIED HOURS MODE.

UNOCCUPIED MODE:
PROVIDE TIME OF DAY SCHEDULE TO ALLOW AHU AND INTERLOCKED ERU TO ENTER AN UNOCCUPIED MODE PER SCHEDULE. COORDINATE SCHEDULE WITH THE OWNER. THE INTENT IS FOR THIS SCHEDULE TO NOT BE INITIALLY ACTIVE BASED ON PROPOSED FUNCTION OF BUILDING, BUT SEQUENCE SHALL BE PROGRAMMED AND COMMISSIONED IN CASE BUILDING FUNCTION AND OCCUPIED HOURS CHANGE IN THE FUTURE.
• THE UNIT SHALL BE OFF (SUPPLY AND RETURN FANS SHALL SHUT OFF, REMOTE CONDENSING UNIT SHALL SHUT OFF, OUTSIDE AND RELIEF AIR DAMPERS SHALL SHUT, RETURN AIR DAMPER SHALL OPEN) UNLESS 3 (ADJ.) OR MORE ZONES EXCEED THEIR SETPOINT. IF THIS OCCURS THEN THE UNIT SHALL ENTER UNOCCUPIED COOLING MODE. FOR THE PURPOSES OF THIS SEQUENCE ONLY ZONES RECEIVING AIRFLOW FROM THE AIR HANDLING UNIT SHALL BE CONSIDERED. NO ZONES WITH DEDICATED COOLING SYSTEMS OR HEATING ONLY SYSTEMS SHALL BE CONSIDERED.
• IN UNOCCUPIED MODE VENTILATION AIR AND EXHAUST AIR VIA INTERLOCKED ERU SHALL BE OFF/DISABLED UNLESS OVERRIDEN PER SEQUENCE 3M305 AND 4M305.
• IN UNOCCUPIED COOLING MODE, IF CONDITIONS DO NOT ALLOW FOR ECONOMIZER OPERATION, THE RETURN DAMPER SHALL OPEN AND ALL OTHER DAMPERS SHALL BE CLOSED. ERU-1 SHALL REMAIN IN UNOCCUPIED MODE (OFF). THE RETURN FAN OFFSET SHALL GO TO ZERO AND THE SUPPLY FAN SHALL BE LIMITED TO THE MAXIMUM RETURN FAN AIRFLOW. ALL TERMINAL AIR VALVES SHALL BE COMMANDED TO A MINIMUM OF 5% (ADJ.) AIRFLOW, IN ORDER TO ENSURE SUFFICIENT AIRFLOW IN THE SYSTEM FOR PROPER OPERATION. COORDINATE WITH BALANCING CONTRACTOR TO CONFIRM FINAL SETPOINT.
• IN UNOCCUPIED COOLING MODE, IF CONDITIONS ALLOW FOR ECONOMIZER OPERATION, THE UNIT SHALL ENTER ECONOMIZER MODE AS DESCRIBED UNDER THE COOLING COIL OPERATION. DURING ECONOMIZER OPERATION ERU-1 SHALL REMAIN OFF. THE RETURN FAN OFFSET SHALL GO TO ZERO AND THE SUPPLY FAN SHALL BE LIMITED TO THE MAXIMUM RETURN FAN AIRFLOW. ALL TERMINAL AIR VALVES SHALL BE COMMANDED TO A MINIMUM OF 5% (ADJ.) AIRFLOW, IN ORDER TO ENSURE SUFFICIENT AIRFLOW IN THE SYSTEM FOR PROPER OPERATION. COORDINATE WITH BALANCING CONTRACTOR TO CONFIRM FINAL SETPOINT.

HEATING OPTIMUM START-UP:
• THIS CYCLE SHALL OVERRIDE THE UNOCCUPIED CYCLE. IF THE SYSTEM WAS OPERATING AS A RESULT OF THE UNOCCUPIED CYCLE, THE SYSTEM SHALL CONTINUE TO OPERATE. THE DDC SYSTEM SHALL DETERMINE THE MINIMUM RUNTIME TO WARM THE SPACES TO THEIR SETPOINT WHEN THE COMPUTED START TIME IS REACHED. THE FMCS SHALL RESET ALL TERMINAL AIR VALVES TO 50% (ADJ.) OF MAXIMUM AIRFLOW SETPOINT DURING WARMUP PERIOD TO ALLOW RECIRCULATION OF AIR THROUGHOUT THE SPACE. ZONES WITH PERIMETER RADIATION SHALL CONTROL RADIATION TO MEET OCCUPIED TEMPERATURE SETPOINTS. THE AHU SHALL STAY IN THIS MODE UNTIL SPACE BECOMES OCCUPIED PER SCHEDULE. AT THAT TIME THE DDC SYSTEM SHALL SWITCH TO OCCUPIED CONTROL.

COOLING OPTIMUM START-UP:
• THIS CYCLE SHALL OVERRIDE THE UNOCCUPIED CYCLE. IF THE SYSTEM WAS OPERATING AS A RESULT OF THE UNOCCUPIED CYCLE, THE SYSTEM SHALL CONTINUE TO OPERATE. THE DDC SYSTEM SHALL DETERMINE THE MINIMUM RUNTIME TO COOL THE SPACES TO THEIR SETPOINT WHEN THE COMPUTED START TIME IS REACHED. THE AIR HANDLING UNIT DISCHARGE AIR TEMPERATURE SHALL BE MAINTAINED AT A SETPOINT OF 55°F (ADJ.). THE SYSTEM SHALL CONTINUE TO OPERATE IN THIS MODE UNTIL ALL TEMPERATURES ARE LESS THAN A SETPOINT OF 75°F (ADJ.) AT THAT TIME, THE DDC SYSTEM SHALL SWITCH TO OCCUPIED CONTROL.

GRAPHICAL DISPLAY:
DISPLAY THE GLOBAL OUTSIDE AIR TEMPERATURE AND HUMIDITY ON AHU GRAPHIC PAGE.

ISSUED FOR:
CONSTRUCTION 5-5-17

REVISION FOR:
NO. DESCRIPTION DATE

DRAWN BY PAUHAN

CHECKED BY PAUVAN

**CONTROL
DIAGRAMS -
MECHANICAL**

1 AIR HANDLING UNIT CONTROL - AHU-1
NO SCALE

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M304

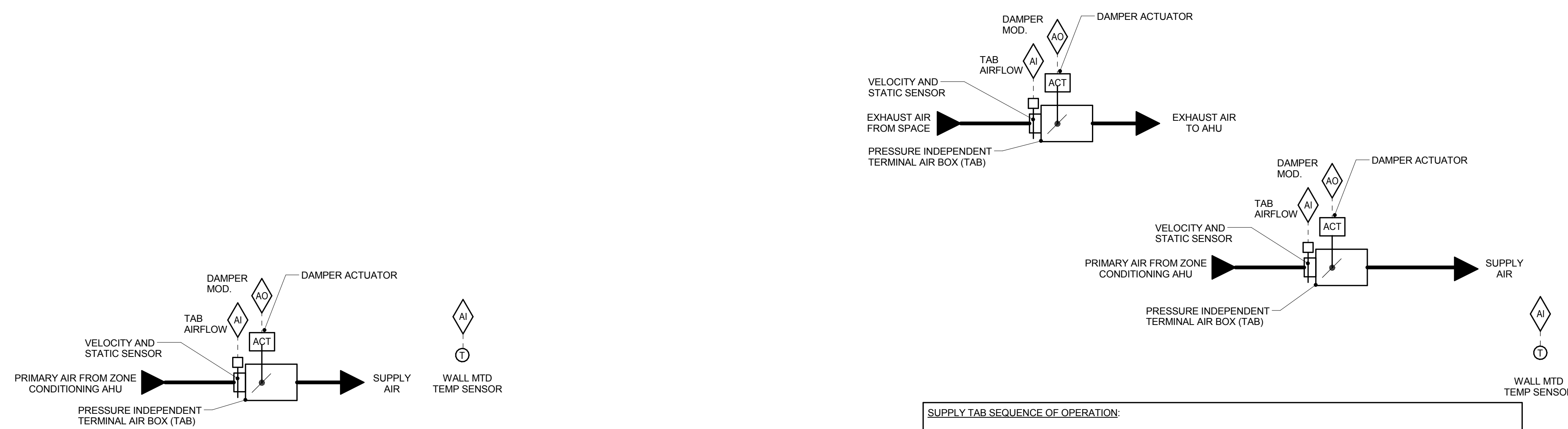
POLICE DEPARTMENT MIDTOWN DISTRICT

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 City of Madison Police Department
 211 South Carroll Street
 Madison, WI 53703

PROJECT NUMBER 152413.01

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SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE TAB DAMPER TO MAINTAIN SPACE TEMPERATURE OF 65°F (ADJ.) FOR COOLING BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE TAB SHALL BE OPEN TO MAXIMUM CFM POSITION.
- UPON A FALL IN SPACE TEMPERATURE, THE TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10° F (ADJ.) ABOVE OR BELOW SETPOINT.

1 TAB CONTROL ELECTRICAL ROOM
 NO SCALE

SUPPLY TAB SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE SUPPLY TAB DAMPER AND RADIATION CONTROL VALVE TO MAINTAIN AN OCCUPIED SPACE TEMPERATURE OF 70°F (ADJ.) IN HEATING MODE AND 74°F (ADJ.) IN COOLING MODE BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE SUPPLY TAB SHALL BE OPEN TO MAXIMUM CFM POSITION.
- UPON A FALL IN SPACE TEMPERATURE, THE SUPPLY TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

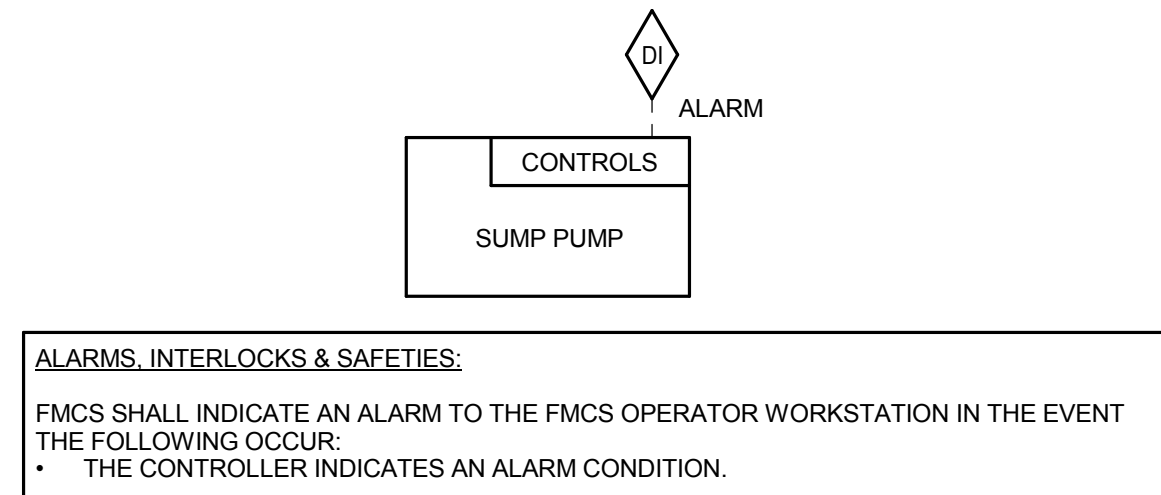
EXHAUST TAB SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE EXHAUST TAB DAMPER PER THE OCCUPIED AND UNOCCUPIED SCHEDULED AIRFLOW RATES BASED ON SCHEDULED BUILDING OCCUPANCY. IF DURING SCHEDULED BUILDING UNOCCUPIED THE SPACE OCCUPANCY SENSOR INDICATES THE SPACE IS OCCUPIED THE EXHAUST DAMPER SHALL OVERRIDE THE SPACE TO OCCUPIED MODE FOR 30 MINUTES (ADJ.).

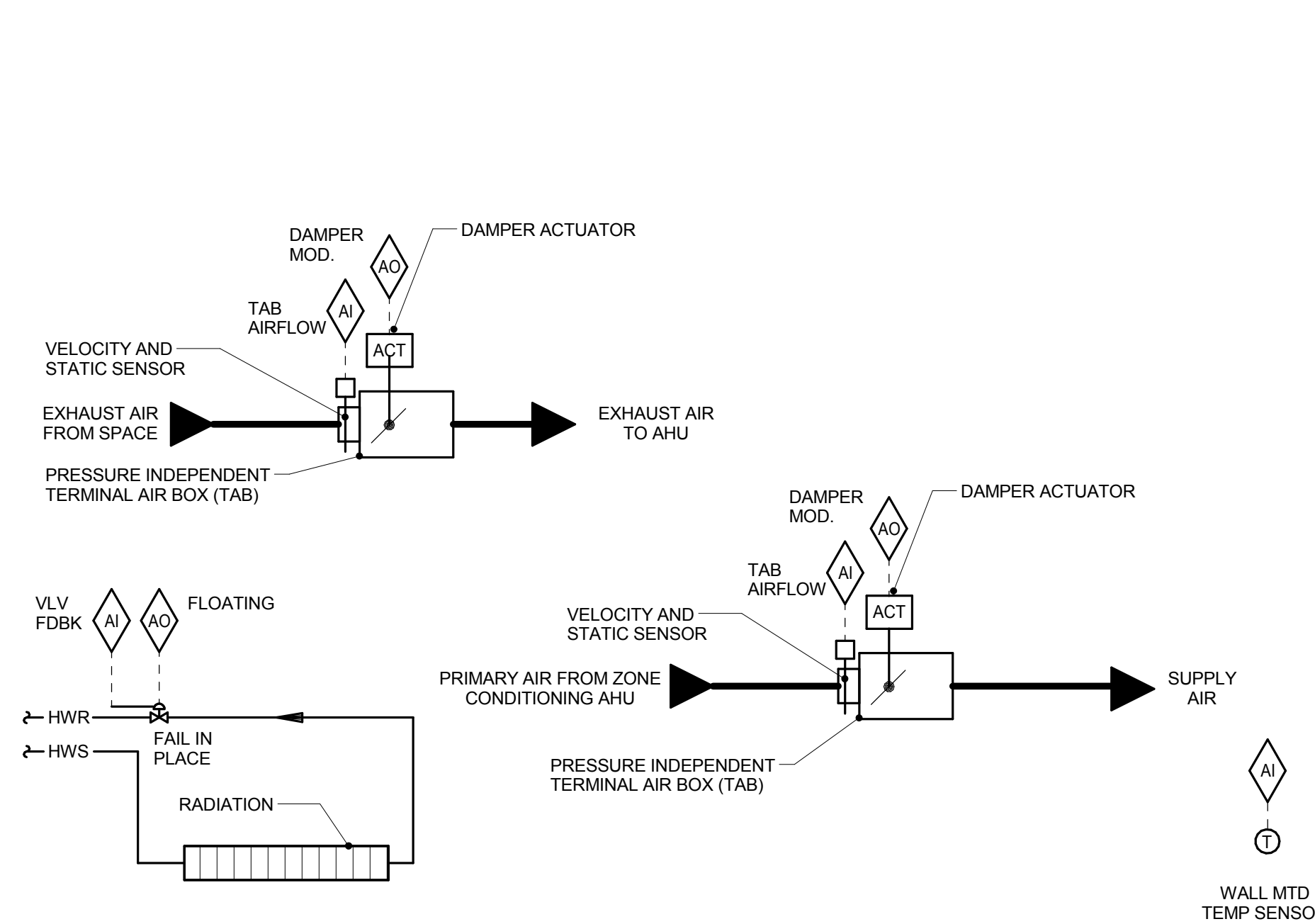
ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10° F (ADJ.) ABOVE OR BELOW SETPOINT.

2 ARMORY ROOM CONTROL
 NO SCALE



3 SUMP PUMP MONITORING - SP-1, SP-2
 NO SCALE



SUPPLY TAB & RADIATION SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE SUPPLY TAB DAMPER AND RADIATION CONTROL VALVE TO MAINTAIN AN OCCUPIED SPACE TEMPERATURE OF 70°F (ADJ.) IN HEATING MODE AND 74°F (ADJ.) IN COOLING MODE BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE SUPPLY TAB SHALL BE OPEN TO MAXIMUM CFM POSITION. THE PERIMETER RADIATION CONTROL VALVE SHALL BE CLOSED.
- UPON A FALL IN SPACE TEMPERATURE, THE SUPPLY TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE. THE RADIATION CONTROL VALVE SHALL BE CLOSED.
- AS SPACE TEMP DROPS BELOW SETPOINT AND SUPPLY TAB DAMPER IS AT MINIMUM SCHEDULED CFM, TAB CONTROLLER SHALL MODULATE THE RADIATION CONTROL VALVE OPEN AS REQUIRED TO MAINTAIN SPACE TEMP.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

EXHAUST TAB SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE EXHAUST TAB DAMPER TO MAINTAIN THE SCHEDULED EXHAUST AIRFLOW AS SCHEDULED AND PER SEQUENCE DESCRIBED BELOW.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE EXHAUST DUCT DIFFERENTIAL STATIC PRESSURE.

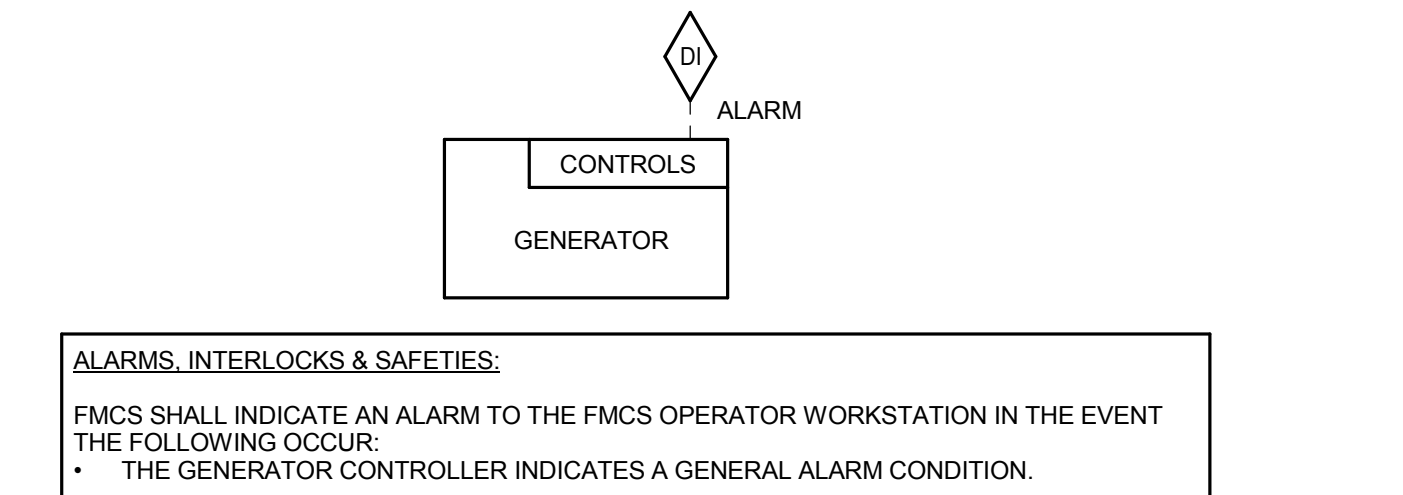
OCCUPANCY CONTROL:

- PRIMARY OCCUPANCY SHALL BE SCHEDULED THROUGH THE BUILDING AUTOMATION SYSTEM (FMCS). REFER TO SPECIFICATIONS.
- IF FMCS IS SCHEDULED OCCUPIED AND SENSOR INDICATES OCCUPANCY, THEN THE SPACE TEMPERATURE SETPOINT AND EXHAUST AIRFLOW RATE SHALL BE PER SCHEDULED AIRFLOW RATE.
- IF FMCS IS SCHEDULED UNOCCUPIED AND SENSOR INDICATES UNOCCUPANCY, THEN THE SPACE TEMPERATURE SETPOINT SHALL BE MAINTAINED AT 70°F (ADJ.) FOR HEATING MODE AND 79°F (ADJ.) FOR COOLING MODE. EXHAUST AIRFLOW RATE SHALL BE RESET TO THE GREATER OF THE SCHEDULED UNOCC. AIRFLOW RATE OR SUPPLY AIRFLOW RATE PLUS 100 CFM (ADJ.).
- IF FMCS IS SCHEDULED OCCUPIED AND THE SENSOR INDICATES UNOCCUPIED, THEN THE SPACE TEMPERATURE SETPOINT SHALL REMAIN PER OCCUPIED TEMPERATURE SETPOINT, BUT THE EXHAUST AIRFLOW RATE SHALL BE RESET TO 550 CFM (ADJ.) TO ALLOW BUILDING VENTILATION AIRFLOW TO BE MAINTAINED.
- IF FMCS IS SCHEDULED UNOCCUPIED AND THE SENSOR INDICATES OCCUPANCY, THEN THE SETPOINT AND AIRFLOW RATES SHALL BE SET TO THE OCCUPIED VALUE.
- ALL PROGRAMMING FOR THE ABOVE SHALL RESIDE IN THE TERMINAL UNIT CONTROLLED, AND SUPERVISORY CONTROLLER SHALL NOT BE REQUIRED TO RESET ANY FLOW OR TEMPERATURE SETPOINTS BASED ON OCCUPANCY SENSOR STATUS.

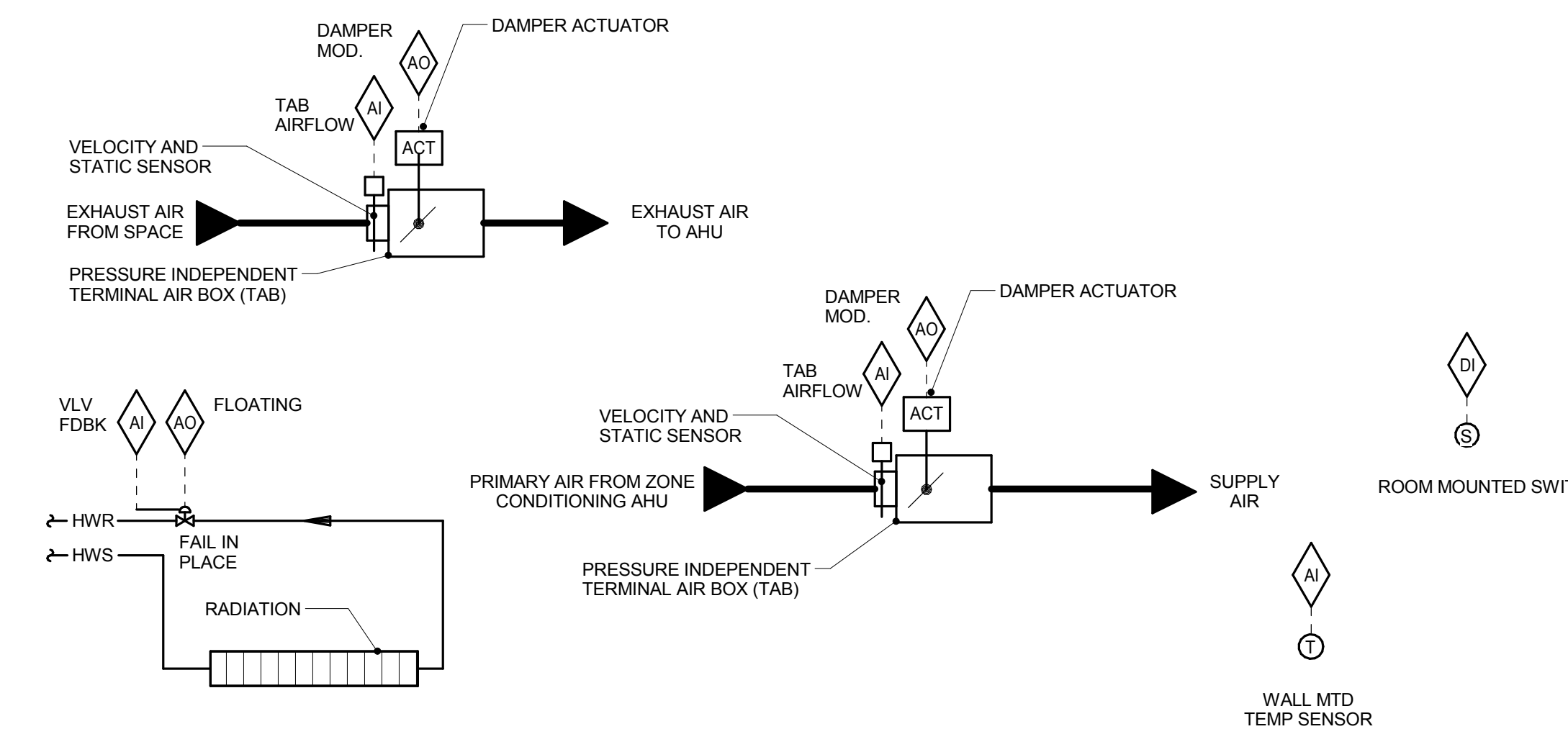
ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10° F (ADJ.) ABOVE OR BELOW SETPOINT.

5 LOCKER ROOM CONTROL
 NO SCALE



6 GENERATOR MONITORING
 12" = 1'-0"



SUPPLY TAB & RADIATION SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE SUPPLY TAB DAMPER AND RADIATION CONTROL VALVE TO MAINTAIN AN OCCUPIED SPACE TEMPERATURE OF 70°F (ADJ.) IN HEATING MODE AND 74°F (ADJ.) IN COOLING MODE BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE SUPPLY TAB SHALL BE OPEN TO MAXIMUM CFM POSITION. THE PERIMETER RADIATION CONTROL VALVE SHALL BE CLOSED.
- UPON A FALL IN SPACE TEMPERATURE, THE SUPPLY TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE. THE RADIATION CONTROL VALVE SHALL BE CLOSED.
- AS SPACE TEMP DROPS BELOW SETPOINT AND SUPPLY TAB DAMPER IS AT MINIMUM SCHEDULED CFM, TAB CONTROLLER SHALL MODULATE THE RADIATION CONTROL VALVE OPEN AS REQUIRED TO MAINTAIN SPACE TEMP.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

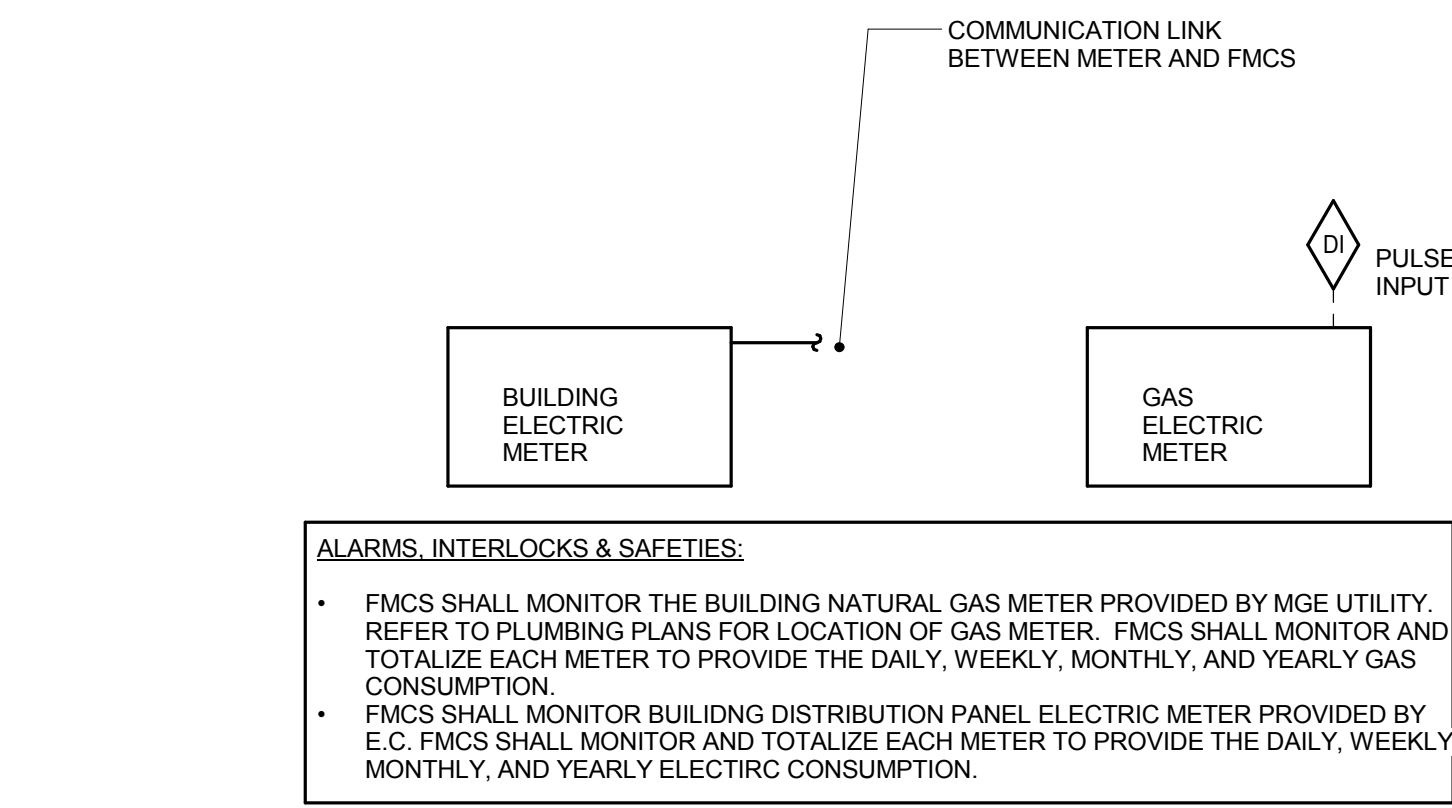
EXHAUST TAB SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE EXHAUST TAB DAMPER AS FOLLOWS:
- WHEN ROOM MOUNTED ON/OFF SWITCH IS ENABLED EXHAUST TAB DAMPER SHALL CONTROL TO 'OCC' SCHEDULED AIRFLOW RATE.
- WHEN ROOM MOUNTED ON/OFF SWITCH IS DISABLED EXHAUST TAB DAMPER SHALL CONTROL TO 'UNOCC' SCHEDULED AIRFLOW RATE.
- ROOM MOUNTED ON/OFF SWITCH SHALL HAVE AN INDICATOR LIGHT THAT IS LIGHTED WHEN THE SWITCH IS ENABLED. PROVIDE LABEL ABOVE SWITCH AS FOLLOWS, "ROOM EXHAUST ENABLED".

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10° F (ADJ.) ABOVE OR BELOW SETPOINT.

4 PROPERTY ROOM CONTROL
 NO SCALE



7 BUILDING UTILITY MONITORING
 12" = 1'-0"

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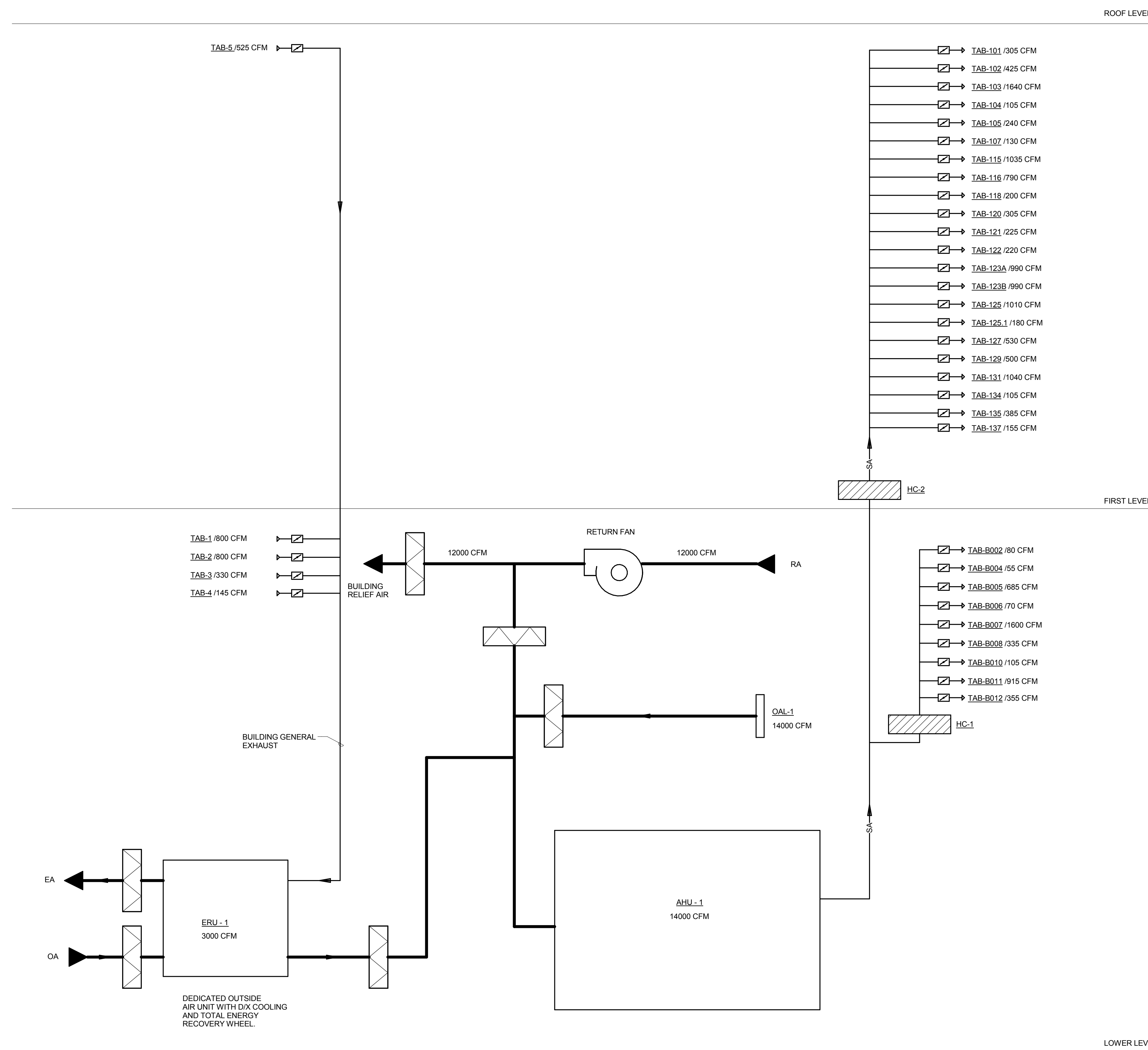
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Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

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NO. DESCRIPTION DATE



1 AIRFLOW DIAGRAM
NO SCALE

DRAWN BY PAUHAN

CHECKED BY PAUVAN

**FLOW DIAGRAMS -
MECHANICAL**

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M401

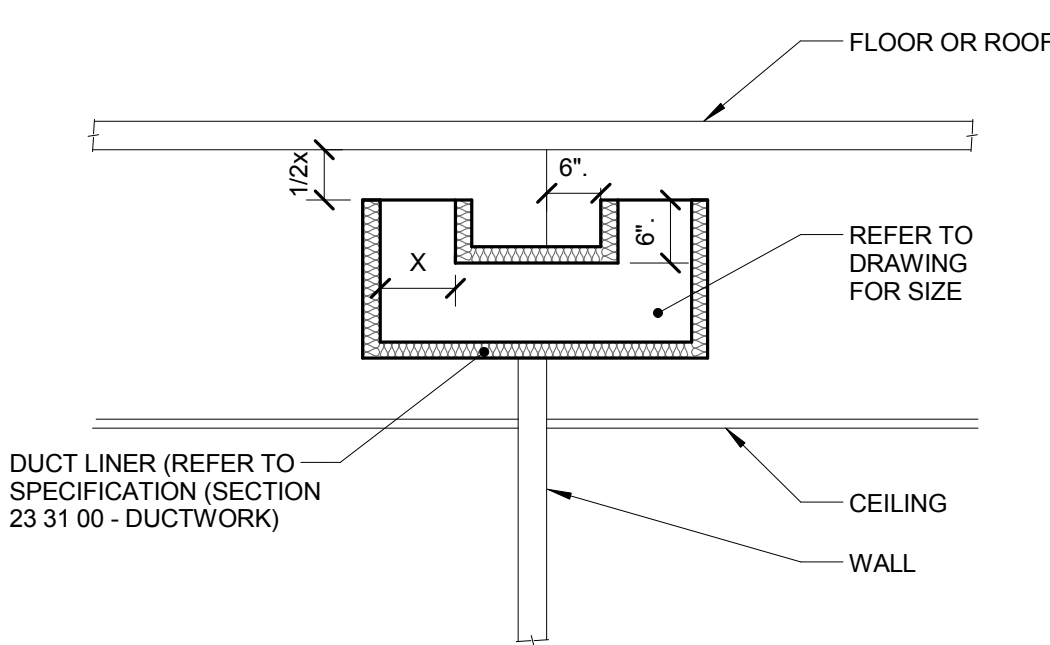
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Madison, WI 53703

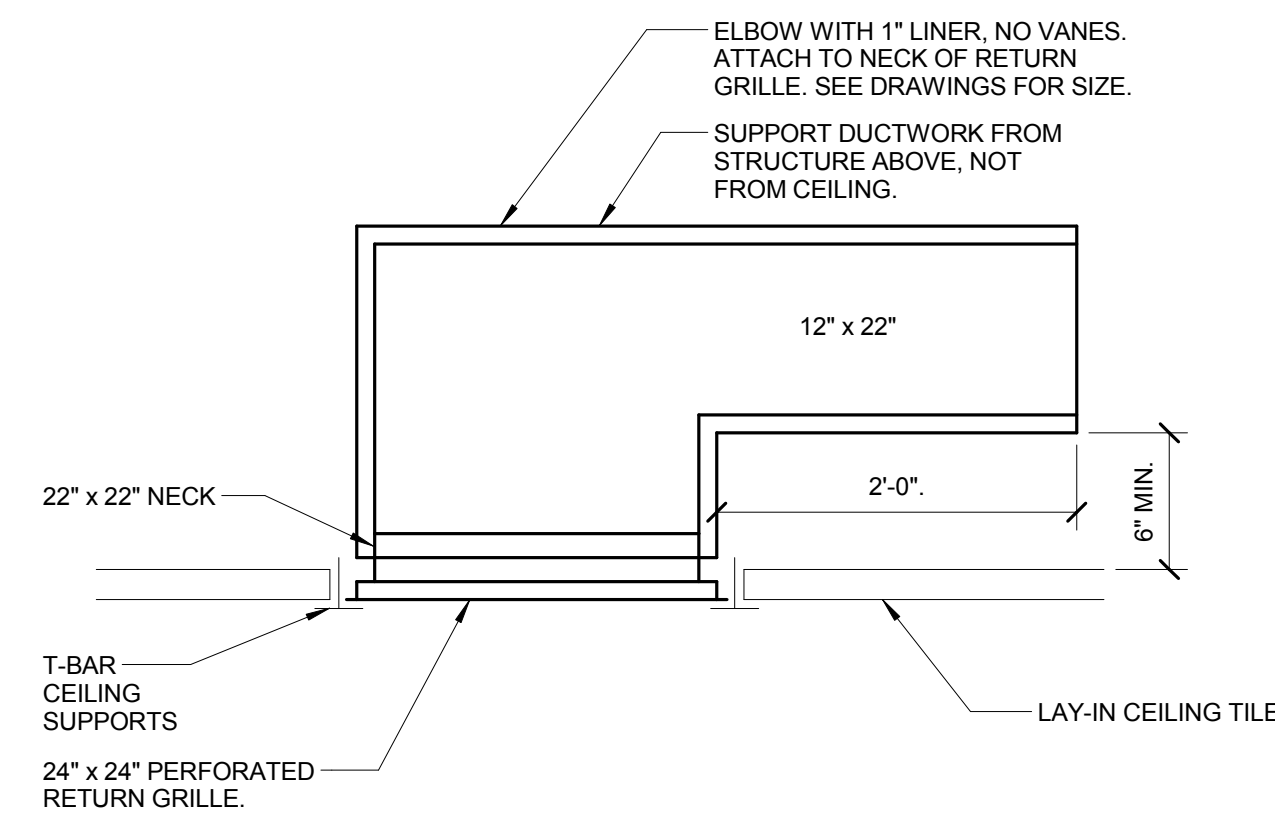
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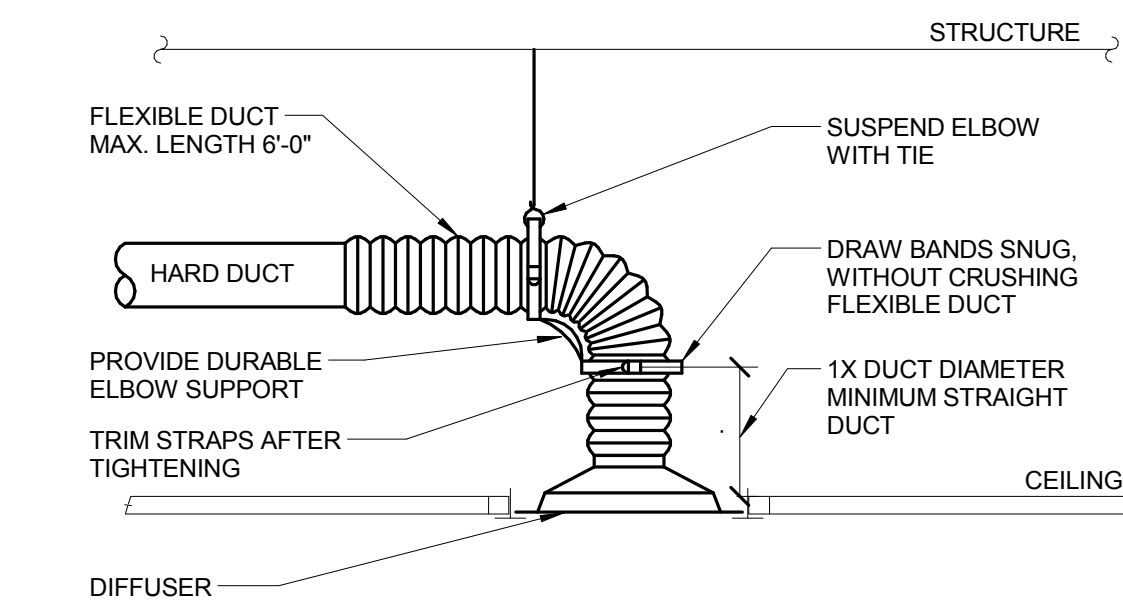
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1 TRANSFER DUCT DETAIL (ENDS UP)
NO SCALE

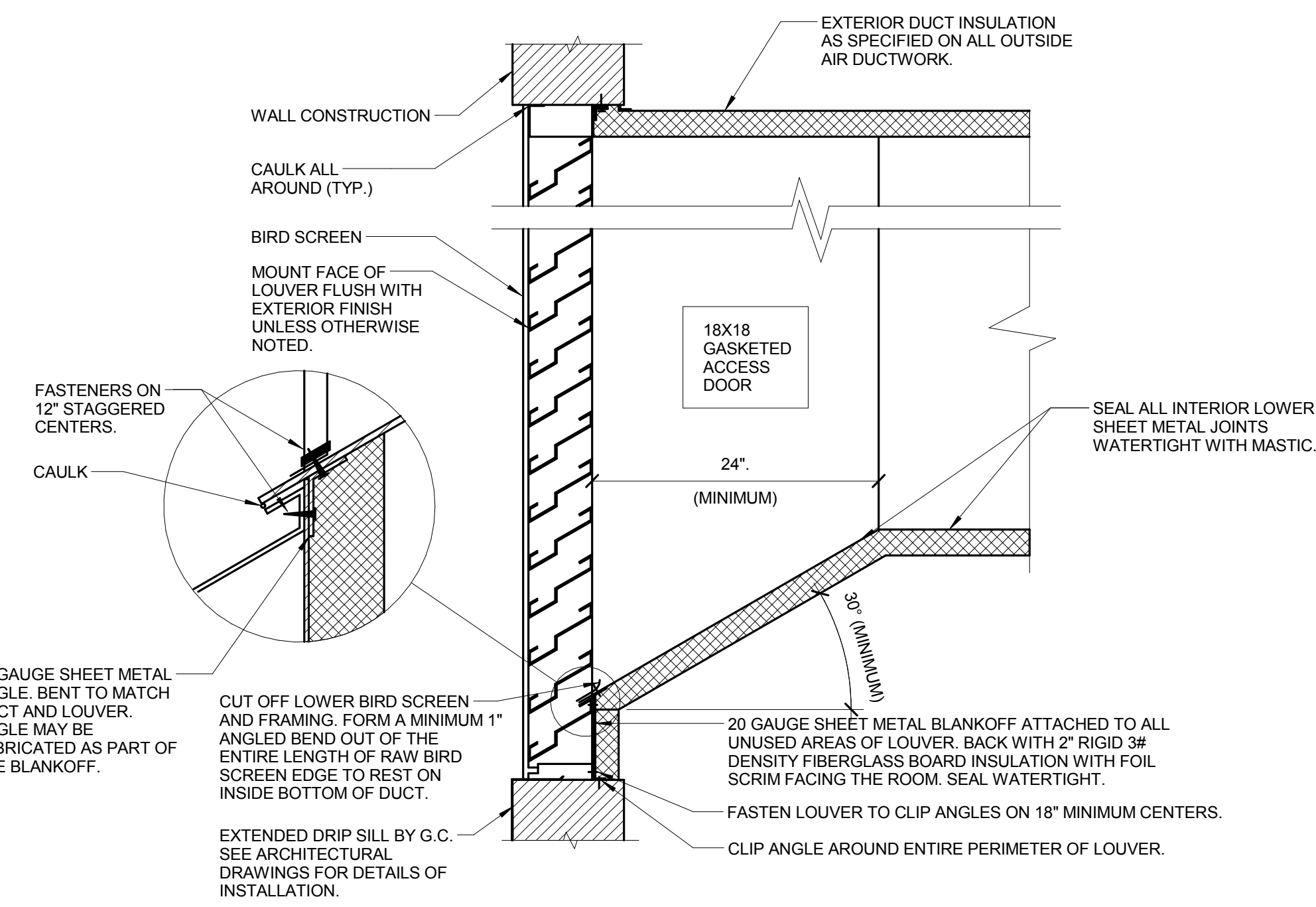


2 CEILING RETURN GRILLE
NO SCALE



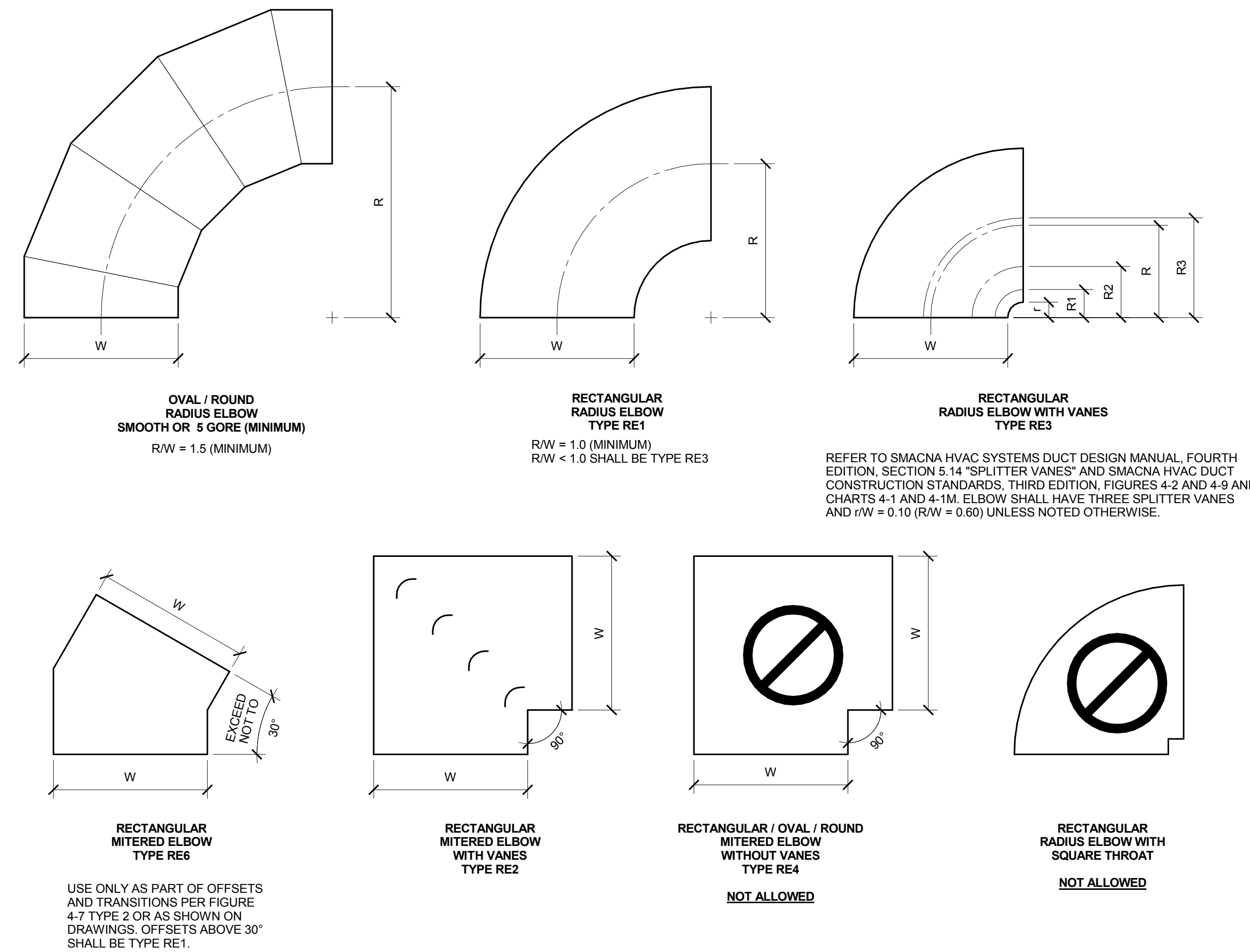
3 DIFFUSER CONNECTION DETAIL (W/ RADIUS FORMING ELBOW)
NO SCALE

- NOTES:
- TO ATTACH FLEX DUCT TO THE HARD DUCT, TAPE THE INNER LINER TO THE HARD DUCT THEN ATTACH WITH TWO NYLON WRAPS, ONE FOR THE INNER LINER AND ONE FOR THE OUTER SHELL. FOLD THE OUTER SHELL INSIDE ITSELF SO IT HAS NEAT EDGES PRIOR TO THE WRAPPING.
 - "SMARTFLOW" ELBOW (WWW.HARTANDCOOLEY.COM), THERMAFLEX "FLEXFLOW" (WWW.THERMAFLEX.NET/FLEXFLOW_ELBOW.PHP?AUD) AND "FLEXRIGHT" (WWW.TITUS-HVAC.COM) ARE ACCEPTABLE PRODUCTS FOR DURABLE ELBOW SUPPORT.



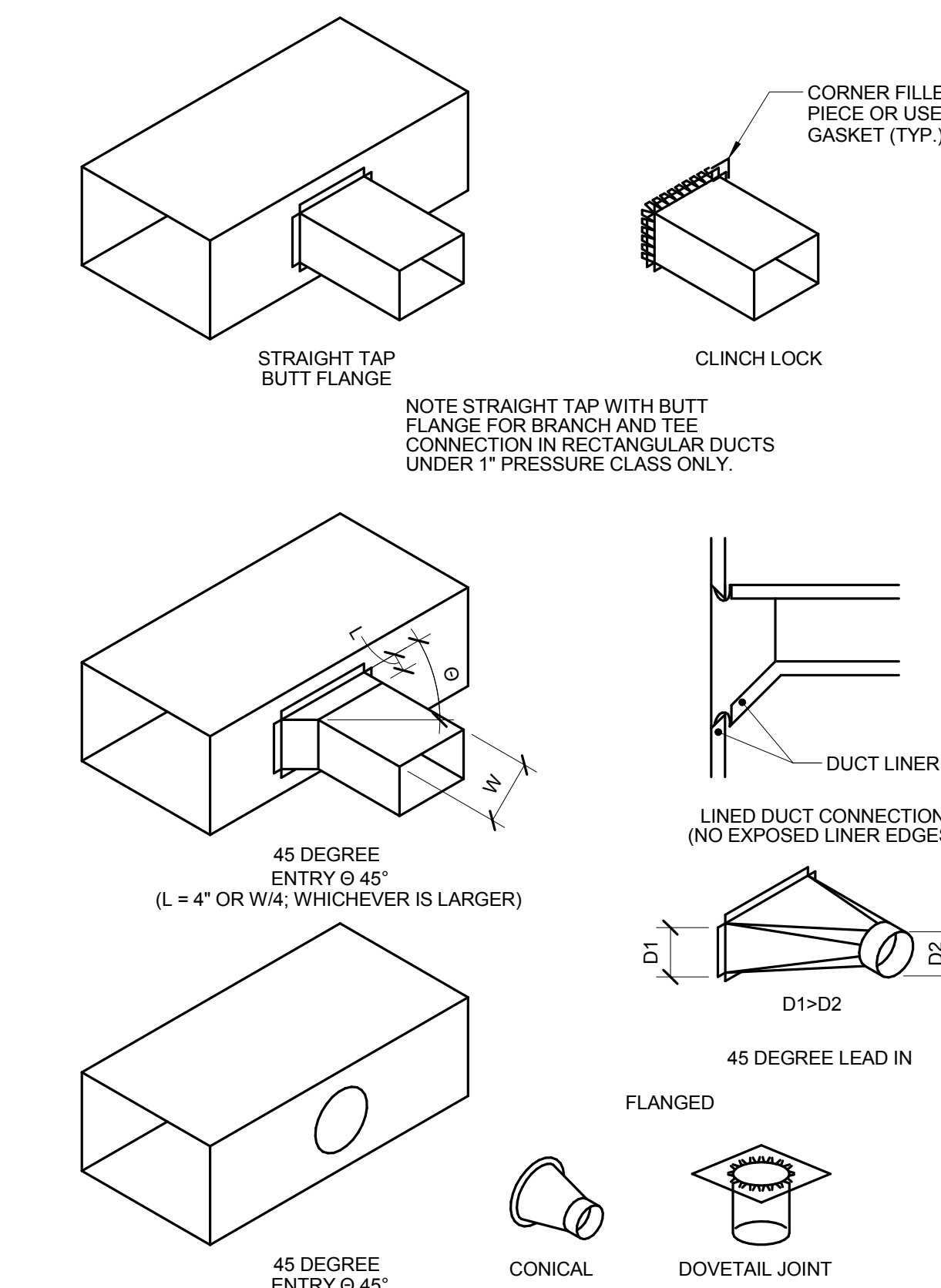
4 LOUVER INSTALLATION DETAIL
NO SCALE

- NOTES:
- SEAL ALL JOINTS ON BOTTOM INTERIOR SURFACE OF DUCT WITHIN 6'-0" OF THE LOUVER WATER TIGHT.
 - MOUNT BOTTOM OF INTAKE LOUVERS AT LEAST 40" ABOVE GRADE OR ROOF ELEVATION TO MINIMIZE CHANCES OF SNOW DRIFTING INTO THE LOUVER.
 - CAULK SHEETMETAL SCREWS WHERE THEY PENETRATE METAL.



5 ELBOW CONSTRUCTION
NO SCALE

- NOTES:
- BEAD, CROSSBREAK, AND REINFORCE FLAT SURFACES AS IN STRAIGHT DUCT.
 - REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - DEFAULT ELBOW SHALL BE TYPE "RE1".
 - ELBOW TYPES SHALL BE INSTALLED AS SHOWN AND NOT BE SUBSTITUTED WITHOUT PERMISSION. EXCEPTION: RE1 OR RE3 MAY BE SUBSTITUTED FOR RE2.



6 BRANCH CONNECTIONS
NO SCALE

- NOTES:
- DO NOT USE CONNECTIONS WITH SCOOPS.
 - FIT ALL CONNECTIONS TO AVOID VISIBLE OPENINGS AND SECURE THEM SUITABLY FOR THE PRESSURE CLASS.
 - ADDITIONAL MECHANICAL FASTENERS ARE REQUIRED FOR 4"V.G. AND OVER.
 - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

DRAWN BY PAUHAN

CHECKED BY PAUHAN

**DETAILS -
MECHANICAL**

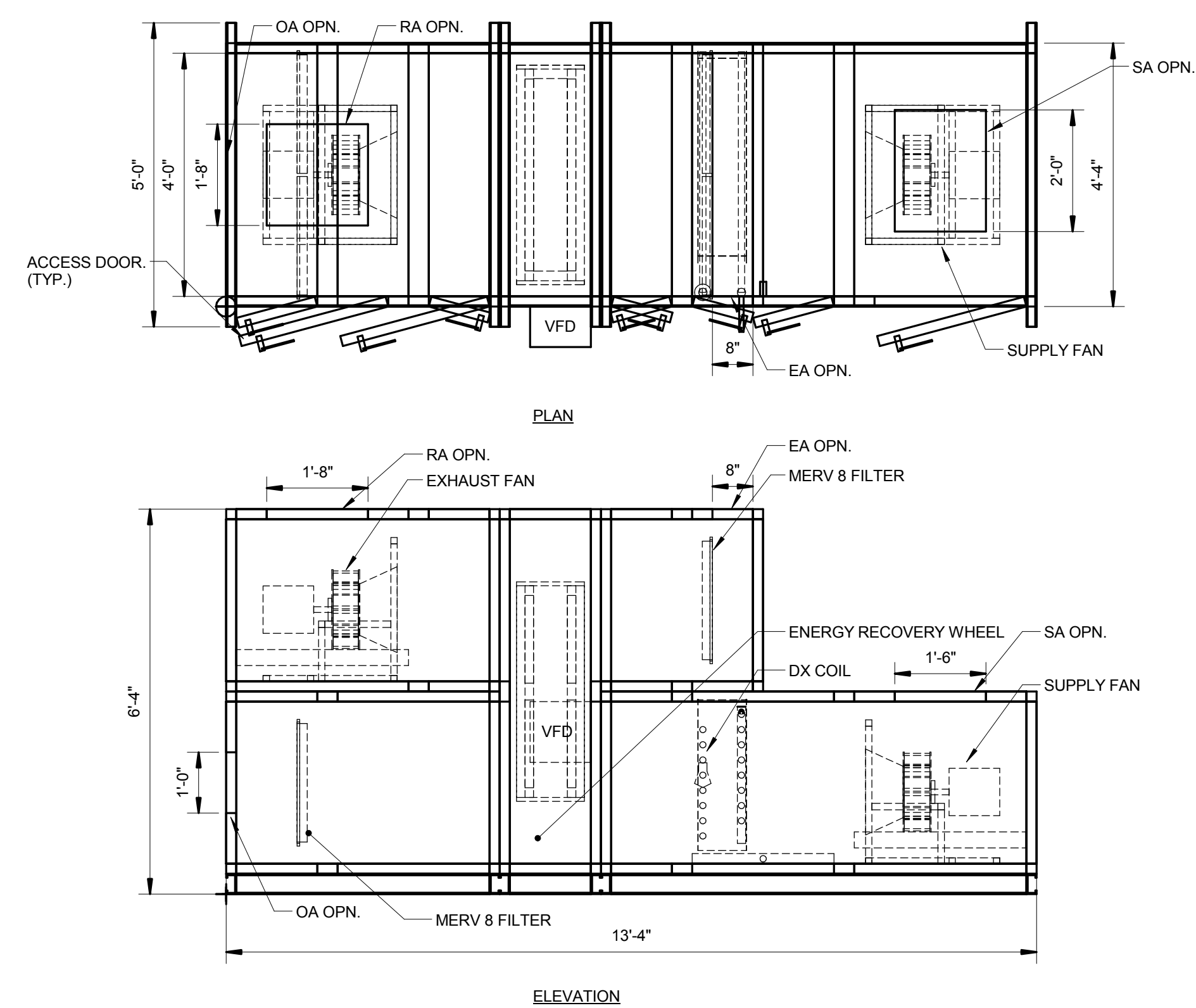
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Madison, WI 53703

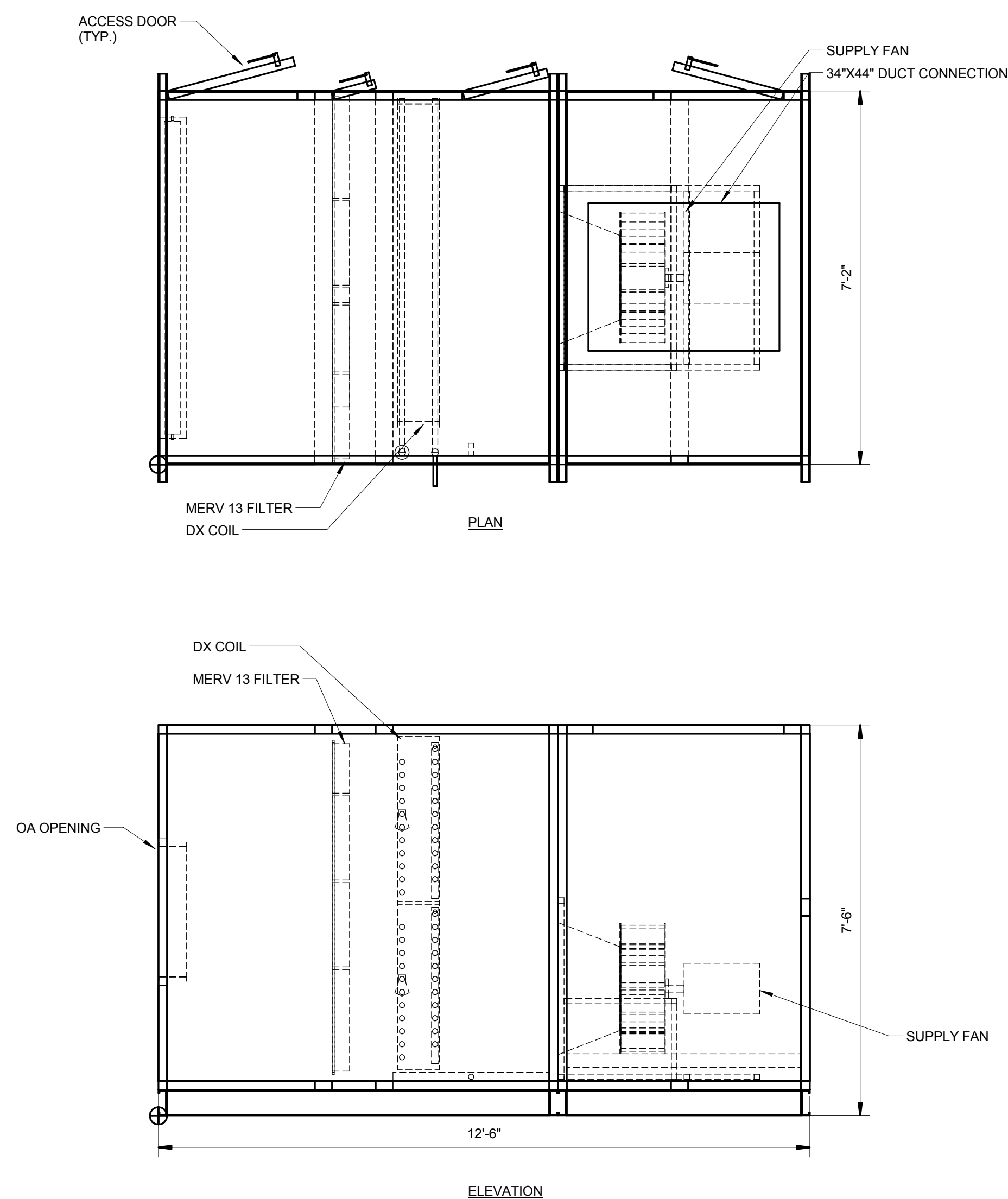
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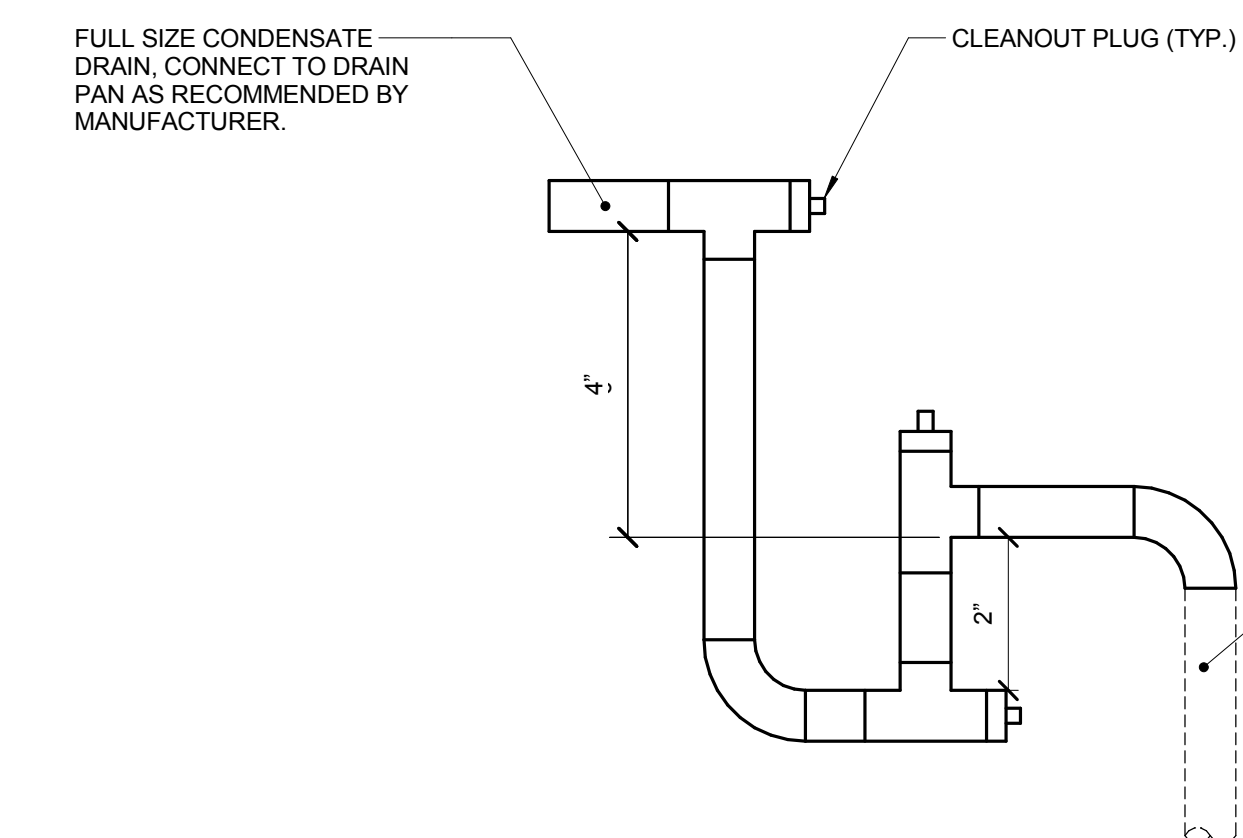
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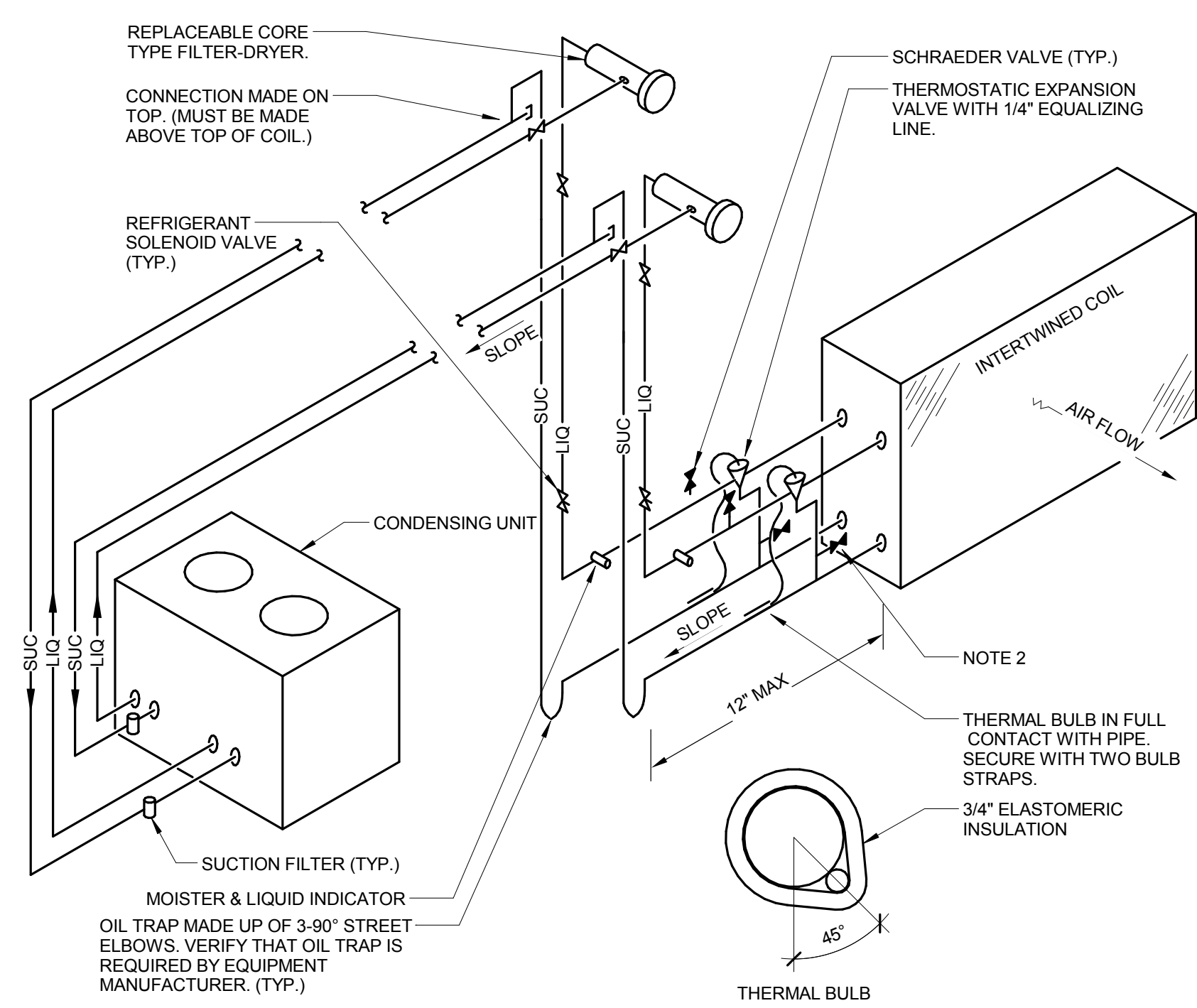
1 ERU-1 DETAIL
NO SCALE



2 AHU-1 DETAIL
NO SCALE

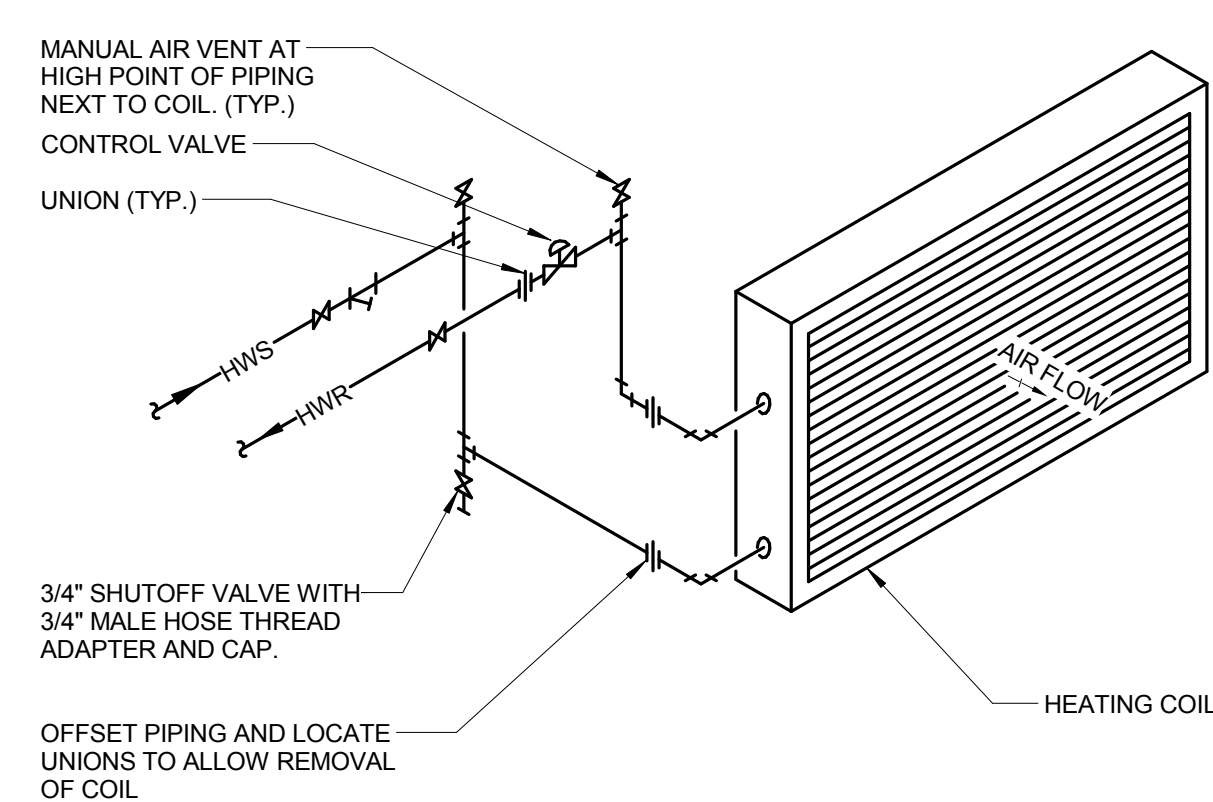


3 CONDENSATE TRAP DETAIL (DRAW-THROUGH)
NO SCALE

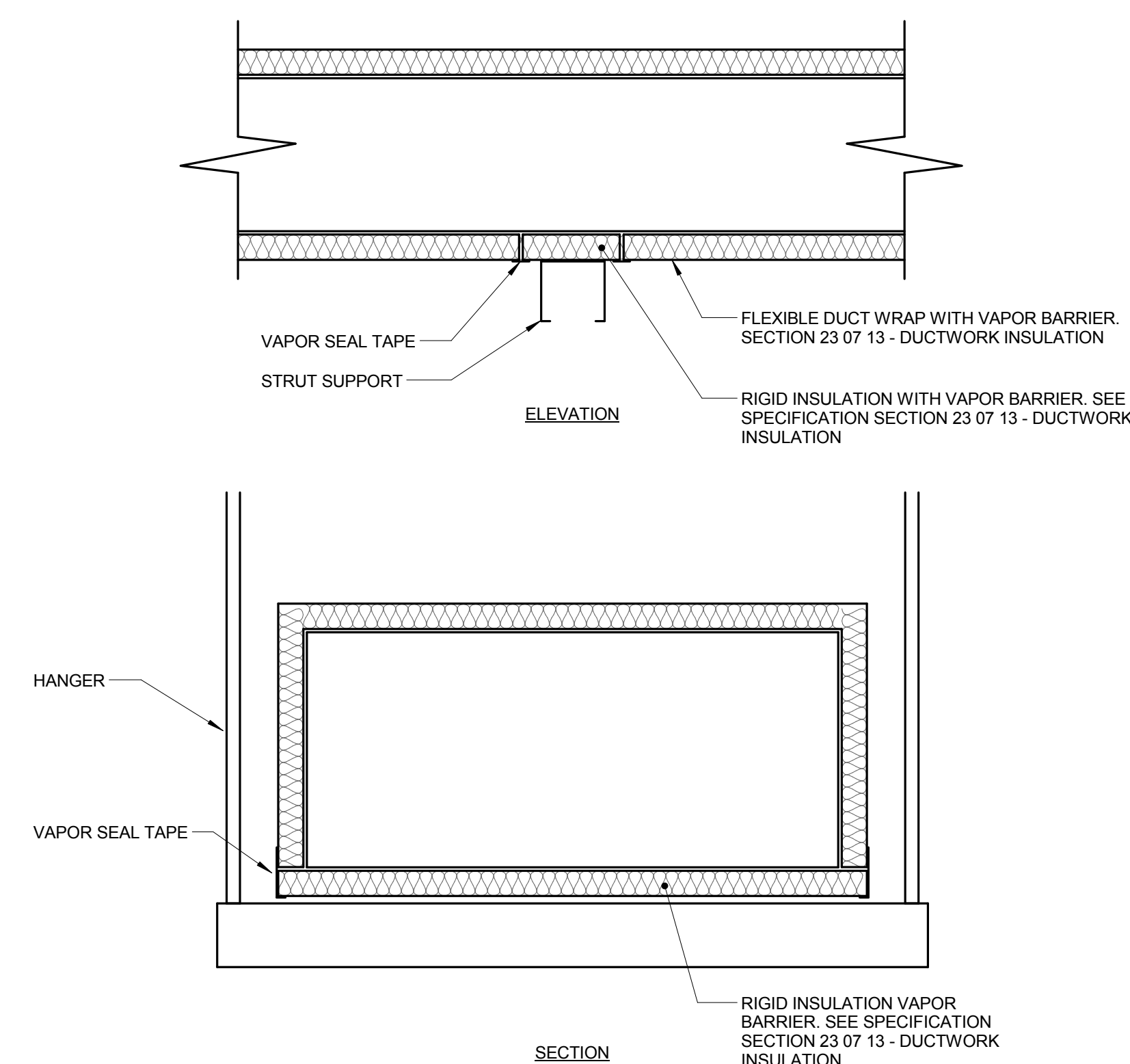


- NOTES:
- THIS DIAGRAM IS SCHEMATIC IN NATURE. UNIT MANUFACTURER SHALL SUBMIT DETAILED PIPING DIAGRAM SHOWING RECOMMENDED PIPING ARRANGEMENT IF DIFFERENT FROM ABOVE.
 - INSTALL 1/4" SCHRAEDER VALVES TO MEASURE REFRIGERANT PRESSURE WITH REFRIGERANT GAUGES.
 - PIPE SIZES, IF SHOWN ON DRAWINGS, ARE ONLY FOR THE CONVENIENCE OF THE BIDDERS. ACTUAL NUMBERS AND SIZES OF PIPES AND ANY ACCESSORIES SUCH AS ACCUMULATORS, RECEIVERS, SEPARATORS AND HEAT TRACING SHALL BE DETERMINED BY THE COIL SUPPLIER AND SUBMITTED AS SHOP DRAWINGS. NO COMPENSATION WILL BE MADE IF ACTUAL NUMBER OR SIZES OF PIPES EXCEED WHAT IS SHOWN.
 - QUANTITY OF COILS VARY PER UNIT. PROVIDE INTERTWINED COIL CONNECTIONS FOR STACKED COILS SO BOTH COILS HAVE EQUAL COOLING AT PART LOAD CONDITIONS.

4 REFRIGERANT PIPING DETAIL (VERT. INTERTWINED)
NO SCALE



5 HOT WATER COIL PIPING
NO SCALE



6 TRAPEZE HANGER DUCT WRAP VAPOR SEAL
NO SCALE

DRAWN BY PAUHAN
CHECKED BY PAUHAN

**DETAILS -
MECHANICAL**

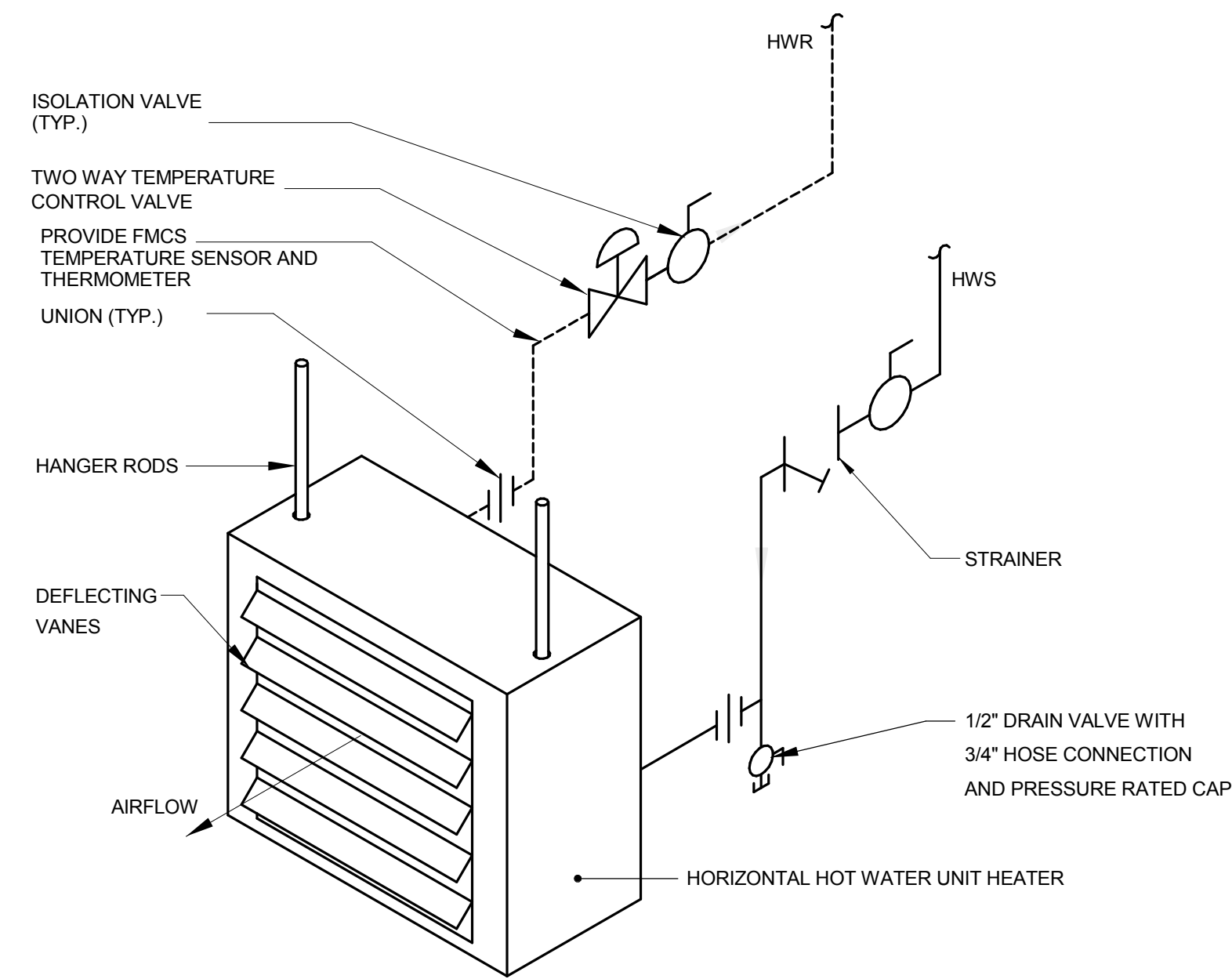
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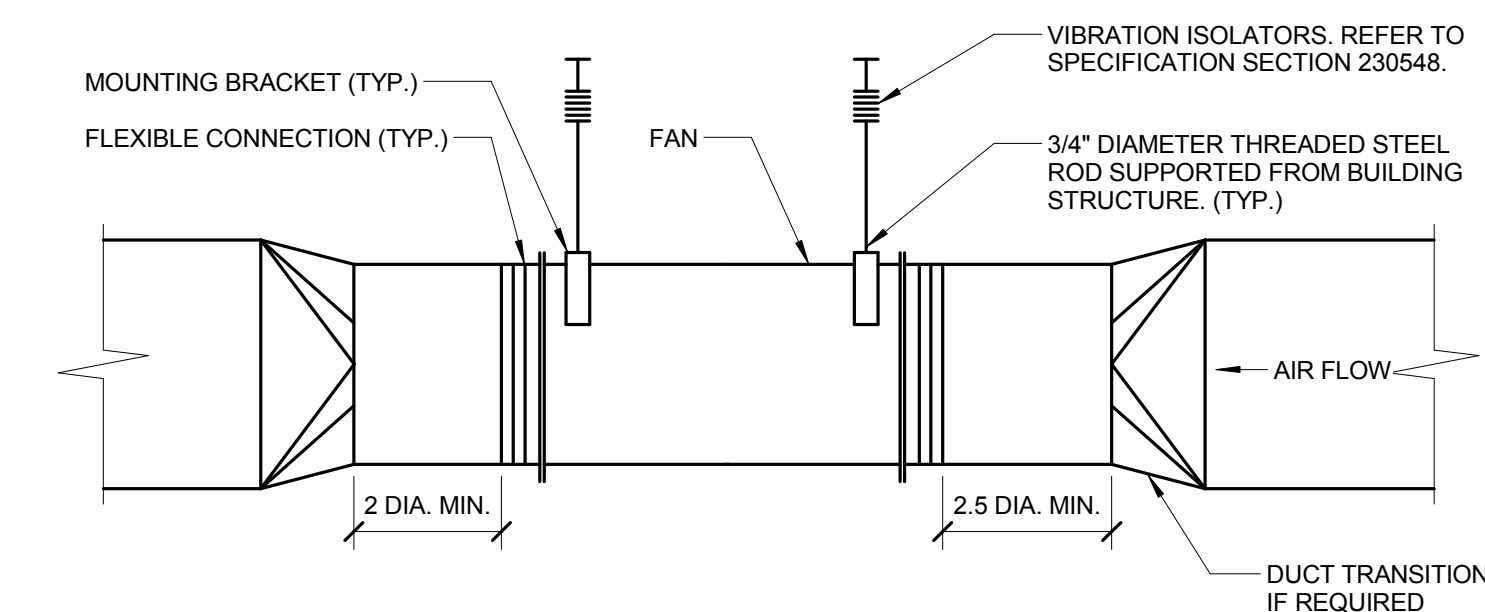
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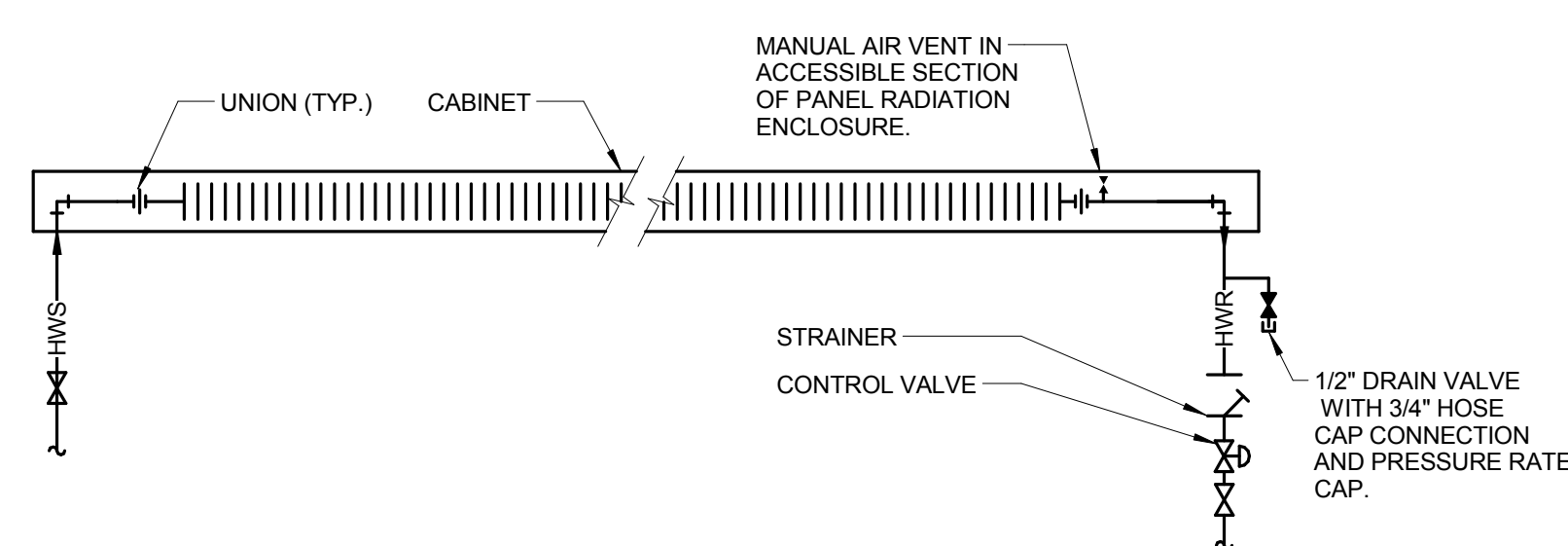
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1 HORIZONTAL HOT WATER UNIT HEATER DETAIL
NO SCALE

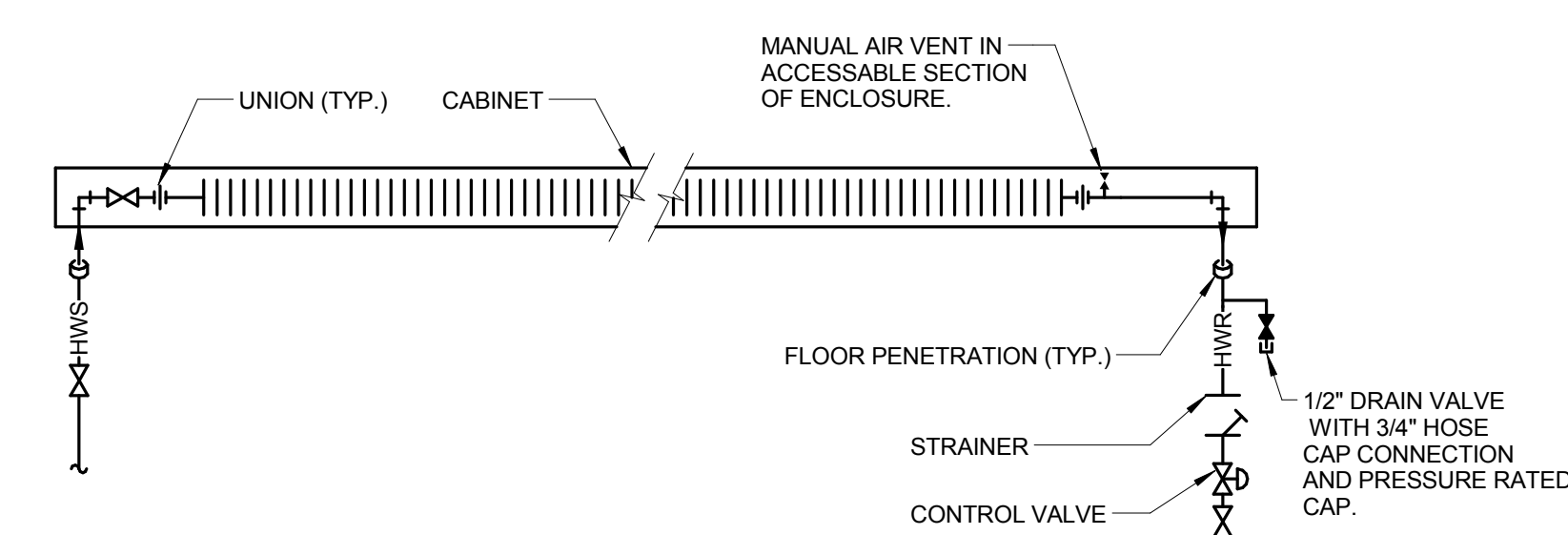


2 IN-LINE EXHAUST FAN
NO SCALE



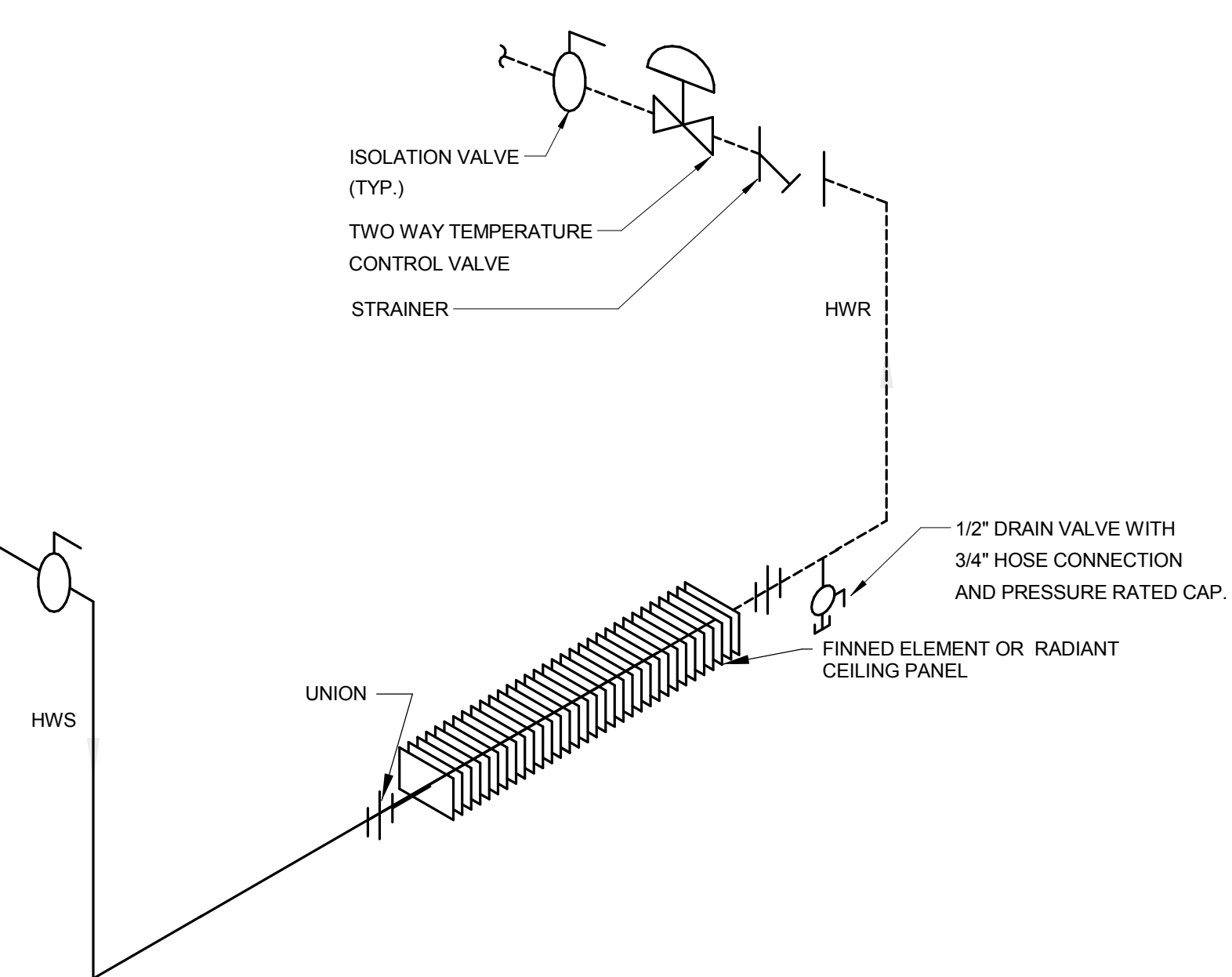
3 CLERESTORY RADIATION PIPING SCHEMATIC
NO SCALE

NOTES:
1. WHERE MULTIPLE RADIATION IS SERVED FROM ONE ZONE ONE CONTROL VALVE MAY BE PROVIDED, BUT INDIVIDUAL BALANCING VALVES SHALL BE PROVIDED FOR EACH RADIATION TO EQUALIZE FLOW IF RADIATION IS PIPED IN PARALLEL.



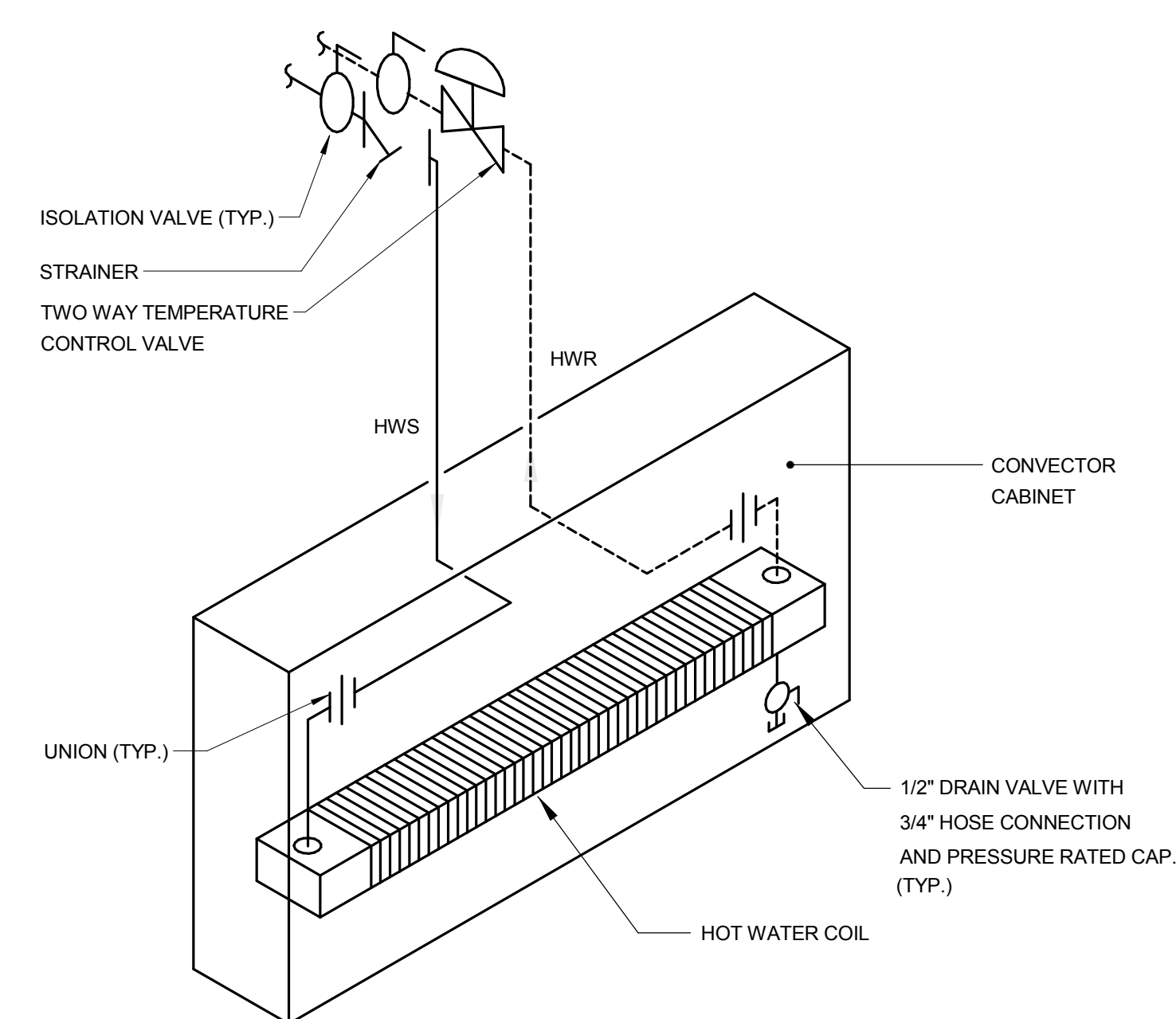
4 UPFEED RADIATION PIPING SCHEMATIC
NO SCALE

NOTES:
1. WHERE MULTIPLE RADIATION IS SERVED FROM ONE ZONE ONE CONTROL VALVE MAY BE PROVIDED, BUT INDIVIDUAL BALANCING VALVES SHALL BE PROVIDED FOR EACH RADIATION TO EQUALIZE FLOW IF RADIATION IS PIPED IN PARALLEL.



5 DOWNFEED RADIATION PIPING DETAIL
NO SCALE

NOTES:
1. WHERE MULTIPLE RADIATION IS SERVED FROM ONE ZONE ONE CONTROL VALVE MAY BE PROVIDED, BUT INDIVIDUAL BALANCING VALVES SHALL BE PROVIDED FOR EACH RADIATION TO EQUALIZE FLOW IF RADIATION IS PIPED IN PARALLEL.



6 DOWNFEED HOT WATER CONVECTECTOR DETAIL
NO SCALE

NOTES:
1. WHERE MULTIPLE CONVECTECTORS IS SERVED FROM ONE ZONE ONE CONTROL VALVE MAY BE PROVIDED, BUT INDIVIDUAL BALANCING VALVES SHALL BE PROVIDED FOR EACH CONVECTECTOR TO EQUALIZE FLOW IF RADIATION IS PIPED IN PARALLEL.

DRAWN BY PAUHAN

CHECKED BY PAUVAN

**DETAILS -
MECHANICAL**

RADIATION SCHEDULE

NOTES:
1. REFER TO TERMINAL AIR BOX SCHEDULE FOR CONTROL INFORMATION.
2. COORDINATE CABINET LENGTH AND END COVERS WITH FINAL ROOM DIMENSIONS.

TAG NAME	AREA SERVED	MBH	GPM	ELEMENT				ELEMENT				CABINET				CONTROL TYPE (NOTE 1)	MANUFACTURER	MODEL	NOTES	
				MAT'L	LENGTH	PIPE SIZE	FIN HEIGHT	FIN WIDTH	NUMBER OF ROWS	FIN PER FOOT	LENGTH	HEIGHT	DEPTH	AVERAGE WATER TEMP °F	EWT					LWT
RAD-116	BREAKROOM 116	8.8	0.6	COPPER	10.5	3/4"	4 1/4"	4 1/4"	3	48	0'-0"	0"	125	140	110	NOTE 1	RITTLING	3/4" C 4 1/4"x4 1/4"-48	BARE FINNED TUBE, NOTE 1, 2	
RAD-118	LT 118	7.7	0.6	COPPER	12	3/4"	4 1/4"	4 1/4"	2	32	14'-0"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-120.1	CAPT 120	8.4	0.6	COPPER	13	3/4"	4 1/4"	4 1/4"	2	32	16'-5"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-120.2	CAPT 120	7.6	0.5	COPPER	11	3/4"	4 1/4"	4 1/4"	2	32	12'-7"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-121	LT 121	6.4	0.5	COPPER	8	3/4"	4 1/4"	4 1/4"	2	48	10'-8"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-122	LT 122	6.4	0.5	COPPER	8	3/4"	4 1/4"	4 1/4"	2	48	11'-10"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-123.1	DETECT 123	28.9	1.9	COPPER	33	3/4"	4 1/4"	4 1/4"	2	48	34'-8"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-123.2	DETECT 123	9.6	0.7	COPPER	11	3/4"	4 1/4"	4 1/4"	2	48	16'-2"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-123.3	DETECT 123	9.6	0.7	COPPER	11	3/4"	4 1/4"	4 1/4"	2	48	16'-3"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-123.4	DETECT 123	9.6	0.7	COPPER	11	3/4"	4 1/4"	4 1/4"	2	48	15'-3"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-123.5	DETECT 123	4.6	0.5	COPPER	5	3/4"	4 1/4"	4 1/4"	2	48	6'-3"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-125.1	OUTREACH 125	9.2	0.7	COPPER	14	3/4"	4 1/4"	4 1/4"	2	32	15'-11"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-125.2	OUTREACH 125	8.3	0.6	COPPER	13	3/4"	4 1/4"	4 1/4"	2	32	14'-1"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-125.3	OUTREACH 125	20	1.4	COPPER	30	3/4"	4 1/4"	4 1/4"	2	32	32'-7"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-131.1	COMM 131	13.2	0.9	COPPER	15	3/4"	4 1/4"	4 1/4"	2	48	16'-1"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2
RAD-131.2	COMM 131	6.2	0.5	COPPER	7	3/4"	4 1/4"	4 1/4"	2	48	8'-4"	20"	5"	125	140	110	NOTE 1	RITTLING	FT5	NOTE 1, 2

SCHEDULE GENERAL NOTES:

A. DISCONNECT AND CONTROLLER STARTER FURNISHED AND INSTALLED BY:
MFR = MANUFACTURER
EC = ELECTRICAL CONTRACTOR
MC = FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.
MFR/EC = FURNISHED LOOSE BY MANUFACTURER INSTALLED BY ELECTRICAL CONTRACTOR....

B. DISCONNECT TYPE:
F = FUSED
NF = NON-FUSED

C. CONTROLLER STARTER TYPE:
FV = FULL VOLTAGE
WYE = WYE-DELTA
SS = SOLID STATE (SOFT START)
MS = MANUAL STARTER
VFD = VARIABLE FREQUENCY DRIVE
VFDB = VARIABLE FREQUENCY DRIVE WITH BYPASS

D. FAN RPM SHALL NOT EXCEED 110% OF SCHEDULED VALUE. WITH THE SCHEDULED WHEEL TYPE. SUBSTITUTION OF BI OR BIA FANS FOR FC IS ACCEPTABLE IF EFFICIENCY IS NOT LOWER.

E. NO EQUIPMENT SHALL BE SELECTED ABOVE 90% OF MOTOR NAME PLATE RATING.

F. MUST BE WITHIN +/- 10% OF SCHEDULED RPM.

G. CURB TYPE:
MFR = STANDARD CURB BY MANUFACTURER
CG = BY GENERAL CONTRACTOR
SAC = SOUND ATTENUATOR CURB

SPLIT SYSTEM UNIT SCHEDULE

NOTES:
1. INDOOR UNIT POWERED FROM OUTDOOR UNIT.
2. REFER TO 23 82 00 SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

TAG NAME	AREA SERVED	LENGTH	WIDTH	HEIGHT	CFM	MCA	MCOIP AMPS	VOLTAGE	PHASE	INDOOR UNIT				OUTDOOR UNIT				ELECTRICAL		NOTES			
										COOLING MBH	HEATING MBH	MANUFACTURER	MODEL	SEER	MCA	MCOIP	VOLTAGE	PHASES	MODEL		DISCONNECT BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)
DFSS-1	MDF 106	35 3/8"	9 13/16"	11 5/8"	425	1.0	15	230	1	18	0	MITSUBISHI	PKA-A18HA	15.3	13.0	15	230	1	PUY-A18NHA3	EC	-	MFR	NOTE 1, 2
DFSS-2	ELEV. EQ. B003	35 3/8"	9 13/16"	11 5/8"	425	1.0	15	230	1	12	0	MITSUBISHI	PKA-A12HA	15.2	13.0	15	230	1	PUY-A12NHA3	EC	-	MFR	NOTE 1, 2

FAN SCHEDULE

NOTES:
1. PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.
2. FAN MOTOR SHALL BE EC-TYPE.

TAG NAME	AREA SERVED	CFM	S.P. IN. W.C.	WHEEL DIA. INCHES	FAN RPM	DRIVE TYPE	MAX. AMCA SONES	BACKDRAFT DAMPER TYPE	BHP	MHP	VOLTAGE	PHASES	ELECTRICAL (NOTE 1)			MANUFACTURER	MODEL	NOTES	
													DISCONNECT BY (NOTE A)	TYPE (NOTE B)	CONTROLLER/STARTER BY (NOTE A) TYPE (NOTE C)				
EF-1	PARKING GARAGE	380	0.30	11.187	1051	DIRECT	7.4	MOD-9	0.06	0.25	115	1	EC	-	MC	FV	GREENHECK	SQ-99-VG	NOTE 2
EF-2	PARKING GARAGE	5100	0.30	24.38	1170	DIRECT	0	MOD-10	0.55	0.75	460	3	EC	-	MC	FV	GREENHECK	AX-63-190-9619	NOTE 2
EF-3	SALLYPORT	290	0.30	11.187	971	DIRECT	6.9	MOD-7	0.04	0.25	115	1	EC	-	MC	FV	GREENHECK	SQ-99-VG	NOTE 2
EF-4	SALLYPORT	1100	0.30	11.187	1491	DIRECT	9	MOD-8	0.15	0.25	115	1	EC	-	MC	FV	GREENHECK	SQ-100-VG	NOTE 2
RF-1	BUILDING RETURN	12000	1.30	27	1770	DIRECT	0	N/A	5.94	7.5	460	3	MC	VFDB	MC	VFDB	GREENHECK	OEID-22-85	NOTE 1

PUMP SCHEDULE

NOTES:
1. PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.

TAG NAME	AREA SERVED	GPM	PUMP FT. HEAD AT DESIGN	MINIMUM PUMP EFFICIENCY	INLET SIZE	IMPELLER SIZE	HP	RPM	VOLTAGE	PHASES	ELECTRICAL (NOTE 1)			MANUFACTURER	MODEL	NOTES
											DISCONNECT BY (NOTE A)	TYPE (NOTE B)	CONTROLLER/STARTER BY (NOTE A) TYPE (NOTE C)			
P-1	LOWER & FIRST LEVEL	50.0	65.00	50	1 1/2"	7.750	2	1750	480	3	MC	VFDB	MC	VFDB	B & G	SERIES 80
P-2	LOWER & FIRST LEVEL	50.0	55.00	50	1 1/2"	7.750	2	1750	460	3	MC	VFDB	MC	VFDB	B & G	SERIES 80

TERMINAL AIR BOXES

NOTES:
1. NEITHER RADIATED NOR DISCHARGE SOUND LEVELS SHALL EXCEED NC 35 AT 1.5' INLET STATIC PRESSURE WHEN TESTED PER AHRI STANDARD 885-2008 USING 5/8" 20-LB DENSITY MINERAL FIBER CEILING TILE.
2. SEE SPECIFICATION SECTION 23 09 00 FOR DESCRIPTION OF CONTROL TYPE.
3. SENSOR TYPES: 1 - SENSOR ONLY; 2 - SENSOR WITH ADJUSTMENT; 3 - SENSOR WITH OVERRIDE; 4 - SENSOR WITH ADJUSTMENT AND OVERRIDE.
4. TAB-103 "CO2 RESET" MINIMUM AIRFLOW RATE SHALL BE 330 CFM.
5. TAB-116 "CO2 RESET" MINIMUM AIRFLOW RATE SHALL BE 300 CFM.
6. TAB-125 "CO2 RESET" MINIMUM AIRFLOW RATE SHALL BE 75 CFM.
7. TAB-B005 "CO2 RESET" MINIMUM AIRFLOW RATE SHALL BE 350 CFM.

TAG NAME	AREA SERVED	CFM		MIN. INLET SIZE (IN. DIA.)	MAXIMUM DROP (IN. W.C.)	CONTROL TYPE (NOTE 2)	SENSOR TYPE (NOTE 3)	MANUFACTURER	MODEL (NOTES 1, 2)	NOTES	
		COOLING MAX.	MIN OCC								
TAB-101	LOBBY 101	305	50	50	8"	0.1	5M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-102	RYT 102	425	150	150	14"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-103	COMMUNITY ROOM 103	1040	200	0	14"	0.2	6M301	2	ACCUTROL	H-AV3100	NOTES 1, 2, 4
TAB-104	INT 104, STORAGE 103A	105	40	0	6"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-105	CORRIDOR 105, 109, 110, 110, 130	240	50	0	8"	0.1	1M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-107	INT 108, ST 107	130	45	0	8"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-115	BRIEF 115, CORR 117	1035	260	260	14"	0.1	4M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-116	BREAK ROOM 116	790	100	0	12"	0.1	6M301	2	ACCUTROL	H-AV3100	NOTES 1, 2, 5
TAB-118	LT 118	200	50	0	8"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-120	CAPT 120	305	50	0	8"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-121	LT 121	225	50	0	8"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-122	LT 122	220	60	0	8"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-123A	DETECT 123	990	250	250	14"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-123B	DETECT 123	990	250	250	14"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-125	OUTREACH 125	1010	250	250	14"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-125.1	CONF 125A	180	60	0	8"	0.1	4M301	2	ACCUTROL	H-AV3100	NOTES 1, 2, 6
TAB-127	SGT 127	530	120	0	10"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-129	PATROL 129, CORR 121, 124	500	125	0	10"	0.1	1M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-131	COMM 131	1040	260	260	14"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-134	CORR 134, 136	105	40	0	6"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-135	INTAKE 135	385	155	0	10"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-137	INT 137, INT 138	155	50	0	8"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-B002	STAFF ENTRY B002	80	30	0	6"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-B004	PROP B004	55	25	0	6"	0.1	3M305	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-B005.1	INCIDENT ROOM B005	605	345	0	12"	0.1	6M301	2	ACCUTROL	H-AV3100	NOTES 1, 2, 7
TAB-B006	ARMORY B006	70	25	0	6"	0.1	4M305	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-B007	ELECTRICAL 007	1600	0	0	14"	0.2	1M305	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-B008	M LOCKER B008	335	0	0	8"	0.1	2M305	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-B010	CORR B010	105	45	0	6"	0.1	1M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-B011	FITNESS B011	915	275	0	14"	0.1	3M301	2	ACCUTROL	H-AV3100	NOTES 1, 2
TAB-B012	F LOCKER B012	355	0	0	8"	0.1	2M305	2	ACCUTROL	H-AV3100	NOTES 1, 2

PANEL RADIATION SCHEDULE

NOTES:
1. SENSOR TYPES: 1 - SENSOR ONLY; 2 - SENSOR WITH ADJUSTMENT; 3 - SENSOR WITH OVERRIDE; 4 - SENSOR WITH ADJUSTMENT AND OVERRIDE.
2. REFER TO TAB SCHEDULE FOR CONTROL INFORMATION.

TAG NAME	AREA SERVED	ENCLOSURE			AVERAGE WATER TEMP °F	EWT	LWT	GPM	CONTROL TYPE (NOTE 1)	SENSOR TYPE (NOTE 1)	MANUFACTURER	MODEL	NOTES	
		CAPACITY (BTU/FT)	LENGTH (FT)	DEPTH (IN)										
PRAD-100.1	VESTIBULE 100	1471	6'-10"	26 1/8"	5"	125	140	110	0.6	2M301	2	RITTLING	PR3F-9	NOTE 1
PRAD-100.2	VESTIBULE 100	1471	6'-10"	26 1/8"	5"	125	140	110	0.6	2M301	2	RITTLING	PR3F-9	NOTE 1
PRAD-101	LOBBY 101	1038	17'-10"	20 1/4"	5"	125	140	110	0.9	NOTE 2	2	RITTLING	PR2F-7	NOTE 1
PRAD-101A	TOILET 101A	835	7'-6"	14 3/8"	5"	125	140</							

ENERGY RECOVERY UNIT SCHEDULE

NOTES:
1. PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.
2. COOLING COIL SHALL BE INTERMINED TYPE COIL.

TAG NAME	CFM	MIN. CFM	EXT. S.P.	TYPE	SUPPLY FAN CHARACTERISTICS (NOTE 1)										EXHAUST FAN CHARACTERISTICS										COOLING COIL										FILTER											
					DISCONNECT					CONTROLLER/STARTER					VOLTAGE	PHASES	CFM	TYPE	EXTERNAL STATIC PRESSURE					DISCONNECT					CONTROLLER/STARTER					SUPPLY AIR STREAM FILTER					EXHAUST AIR STREAM FILTER					MANUFACTURER	MODEL	NOTES
					BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)					BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)						
ERU-1	3000	0	0.6	DIRECT DRIVE PLENUM	2129	1.96	3	MC	VFD/B	MC	VFD/B	460	3	2,600	DIRECT DRIVE PLENUM	1.3	2055	1.83	3	3	460	MC	VFD/B	MC	VFD/B	78.9	67.3	53.7	52.3	137	0.54	42.0	R-410A	2	3000	4" PLEATED MERV 8	395	0.60	0.19	4" PLEATED MERV 8	343	0.60	0.16	DAIKIN	CAH	NOTE 1,2

ENERGY RECOVERY WHEEL SCHEDULE

NOTES:
1. REFER TO SPECIFICATION 23 72 00 FOR REQUIREMENTS. REFER TO ENERGY RECOVERY UNIT SCHEDULE FOR ADDITIONAL UNIT REQUIREMENTS.

AIR HANDLING UNIT TAG NAME	AREA SERVED	MINIMUM EFFICIENCY	OUTSIDE/SUPPLY AIR STREAM										RETURN/EXHAUST AIR STREAM										RECOVERED SUMMER MBH	RECOVERED WINTER MBH	VOLTAGE	PHASE	ELECTRICAL					MANUFACTURER	MODEL	NOTES
			SUMMER					WINTER					SUMMER					WINTER									BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)				
			CFM	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	APD	CFM	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	RECOVERED	RECOVERED	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)							
ERU-1	AHU-1	75.10	3,000	87	75	78.9	67.3	-15	-16	42.3	31	0.9	2,600	75	62.5	84.3	72.3	70	48	3.9	2.5	91	204	115	1	MFR	VFD	MFR	VFD	DAIKIN	SXA-1200-MW	NOTE 1,2		

AIR HANDLING SCHEDULE

NOTES:
1. PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.
2. COOLING COIL SHALL BE INTERMINED TYPE COIL.

TAG NAME	CFM	EXT. S.P.	TYPE	RPM (NOTE D)	BHP (NOTE E)	MHP (NOTE E)	DISCONNECT					CONTROLLER/STARTER					MINIMUM OUTSIDE AIR CFM	VOLTAGE	PHASES	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	TOTAL MBH	MAX. A.P.D. IN. W.C.	SAT SUC °F	REFRIGERANT	CIRCUITING	CFM	FILTER					MANUFACTURER	MODEL	NOTES
							BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)														FACE VELOCITY	DIRTY	CLEAN					
							TYPE	FACE VELOCITY	DIRTY	CLEAN																											
AHU-1	14000	2.0	DIRECT DRIVE PLENUM	1585	11.5	15	MC	VFD/B	MC	VFD/B	3000	460	3	74.0	66.3	54.2	53.3	555	0.5	42.3	R-410A	2	14000	4" PLEATED MERV-13	355	0.60	0.15	DAIKIN	CAH	NOTE 2							

CONDENSING UNIT SCHEDULE

NOTES:
1. REFER TO SPECIFICATION SECTION 23 62 13 FOR ADDITIONAL REQUIREMENTS.
2. UNIT SHALL HAVE 4 COMPRESSORS OF WHICH 2 SHALL BE DIGITAL SCROLL TYPE FOR TURNDOWN PURPOSES. PROVIDE FACTORY INSTALLED COMPRESSOR SOUND BLANKETS FOR NOISE REDUCTION OF THE UNIT.
3. UNIT SHALL HAVE 2 DIGITAL SCROLL COMPRESSORS FOR TURNDOWN PURPOSES. PROVIDE FACTORY INSTALLED COMPRESSOR SOUND BLANKETS FOR NOISE REDUCTION OF THE UNIT.
4. UNIT SHALL INCLUDE MODULATING CONDENSER FAN FOR HEAD PRESSURE CONTROL.

TAG NAME	AREA SERVED	NOMINAL DESIGN TONS	REFRIGERANT	SATURATED SUCTION °F	AMBIENT TEMP °F	MIN. AMBIENT TEMP °F	NUMBER OF COMPRESSORS	NUMBER OF CIRCUITS	NUMBER OF FANS	VOLTAGE	PHASES	FLA	MCA	MOCP	ELECTRICAL					MANUFACTURER	MODEL	NOTES			
															DISCONNECT		CONTROLLER/STARTER		BY (NOTE A)				TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)
															BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)							
CU-1	ERU-1	11	R-410A	42.0	95.0	45.0	2	2	2	460	3	26.0	28	35	EC	-	MFR	AAON	CFA	NOTE 3, 4					
CU-2	AHU-1	46	R-410A	42.3	95.0	45.0	4	2	4	460	3	89.0	93	110	EC	-	MFR	AAON	CFA	NOTES 2, 4					

MAKE-UP AIR UNIT SCHEDULE

NOTES:
1. PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.

TAG NAME	AREA SERVED	MAX. DIMENSIONS			CFM	FAN TYPE	FAN RPM (NOTE D)	EXT. S.P. IN. W.C.	MIN. EFFICIENCY AFUE	MIN. MBH OUTPUT	EAT °F	LAT °F	BHP (NOTE E)	MHP (NOTE E)	VOLTAGE	PHASES	ELECTRICAL					FUEL TYPE	FUEL PRESSURE (IN. W.C.)	MANUFACTURER	MODEL	NOTES			
		LENGTH	WIDTH	HEIGHT													DISCONNECT		CONTROLLER/STARTER		BY (NOTE A)						TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)
		BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)													TYPE (NOTE B)												
MAU-1	PARKING GARAGE	109	44	45	5300	PLENUM	1697	1	92	429	-15.0	60.0	3.07	5	460	3	MFR	VFD	MFR	VFD	NG	8	GREENHECK	DGX-P120-H22					
MAU-2	SALLYPORT	85	34	39	1100	PLENUM	1444	0.4	92	89	-15.0	60.0	0.31	1	460	3	MFR	VFD	MFR	VFD	NG	8	GREENHECK	DGX-P114-H12					

BOILER SCHEDULE - HOT WATER

TAG NAME	MAX. DIMENSIONS			FUEL	INLET FUEL PRESSURE (IN. W.C.)	TURNDOWN RATIO	BOILER MINIMUM FLOW (GPM)	INPUT BTU/HR	EWT °F	LWT °F	OPERATING PRESSURE PSI	MOCP	VOLTAGE	PHASES	ELECTRICAL					MANUFACTURER	MODEL	NOTES			
	LENGTH	WIDTH	HEIGHT												DISCONNECT		CONTROLLER/STARTER		BY (NOTE A)				TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)
	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)												TYPE (NOTE B)										
B-1	35	28	78	NG	8	15:1	18	750000	110	140	160	20	115	1	MFR	F	MFR	LOCHINVAR	CREST 750						
B-2	35	28	78	NG	8	15:1	18	750000	110	140	160	20	115	1	MFR	F	MFR	LOCHINVAR	CREST 750						

UNIT HEATER SCHEDULE - HOT WATER

TAG NAME	AREA SERVED	CONFIGURATION	CFM	MBH	GPM	EWT °F	LWT °F	W.P.D. FT. HEAD	HP	RPM	VOLTAGE	PHASES	ELECTRICAL					MANUFACTURER	MODEL	NOTES				
													DISCONNECT		CONTROLLER/STARTER		CONTROL				BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)
													BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE B)								
UH-1	PARKING GARAGE	HORIZONTAL	2200	76	5.0	140	110	2.0	0.33	1140	115	1	MFR	NF	MC	2/M300	TRANE	UHS						
UH-2	PARKING GARAGE	HORIZONTAL	2200	76	5.0	140	110	2.0	0.30	1140	115	1	MFR	NF	MC	2/M300	TRANE	UHS						
UH-3	PARKING GARAGE	HORIZONTAL	2200	76	5.0	140	110	2.0	0.30	1140	115	1	MFR	NF	MC	2/M300	TRANE	UHS						
UH-4	SALLYPORT	HORIZONTAL	2200	76	5.0	140	110	2.0	0.30	1140	115	1	MFR	NF	MC	2/M300	TRANE	UHS						
UH-5	SALLYPORT	HORIZONTAL	2200	76	5.0	140	110	2.0	0.30	1140	115	1	MFR	NF	MC	2/M300	TRANE	UHS						
UH-6	MECHANICAL ROOM	HORIZONTAL	700	16	2.6	140	110	0.1	0.05	900	115	1	MFR	NF	MC	2/M300	TRANE	S-60						

MOTOR OPERATED DAMPER SCHEDULE

NOTES:
1. COORDINATE DAMPER ACTUATOR LOCATION AND MOUNTING REQUIREMENTS WITH TEMPERATURE CONTROL CONTRACTOR.

TAG NAME	AREA SERVED	SIZE		CFM	BLADE CONFIGURATION	BLADE ORIENTATION	INSULATED	ACTUATOR TYPE (NOTE 1)	ACTUATOR STYLE	POWER FAILURE POSITION	POSITIVE POSITION FEEDBACK REQUIRED	NOTES
		WIDTH	HEIGHT									
		MAX.	MIN.									
MOD-1	AHU-1 OUTSIDE AIR	54	30	15000	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	PROPORTIONAL	NORMALLY CLOSED (NC)	Yes
MOD-2	ERU-1 OUTSIDE AIR	38	12	3000	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes
MOD-3	AHU-1 RETURN	54	28	12000	0	PARALLEL	HORIZONTAL	No	ELECTRIC	PROPORTIONAL	NORMALLY OPEN (NO)	Yes
MOD-4	AHU-1 RELIEF	20	20	3000	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	PROPORTIONAL	NORMALLY CLOSED (NC)	Yes
MOD-5	RELIEF AIR	54	30	15000	0	PARALLEL	HORIZONTAL	Yes	ELECTRIC	PROPORTIONAL	NORMALLY CLOSED (NC)	Yes
MOD-6	MAU-2	20	20	1600	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes
MOD-7	EF-3	12	12	290	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes
MOD-8	EF-4	20	20	1100	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes
MOD-9	EF-1	12	12	380	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes
MOD-10	EF-2	20	20	5100	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes
MOD-11	MAU-1	36	18	5300	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes
MOD-12	ERU-1	18	24	3000	0	OPPOSED	HORIZONTAL	No	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes

LOUVER SCHEDULE

NOTES:
1. LOUVER PROVIDED BY GENERAL CONTRACTOR AND SPECIFIED UNDER ARCHITECTURAL SPECIFICATIONS. PERFORMANCE AND SIZING INFORMATION PROVIDED FOR REFERENCE ONLY.

TAG NAME	AREA SERVED	CFM	SIZE (INCHES)		FREE AREA VELOCITY	S.P. IN. W.C.	NOTES
			WIDTH	HEIGHT			
EAL-1	AHU-1	15000	90	60	710	0.10	NOTE 1
EAL-2	PARKING GARAGE	5880	48	42	805	0.13	NOTE 1
EAL-3	SALLYPORT	1700	42	24	485	0.05	NOTE 1
OAL-1	MAU-1	5300	36	60	690	0.10	NOTE 1
OAL-2	AHU-1	12000	144	36	645	0.10	NOTE 1
OAL-3	ERU-1	3000	48	24	730	0.12	NOTE 1
OAL-4	MAU-2	1600	30	24	655	0.10	NOTE 1

GRILLES REGISTERS & DIFFUSERS SCHEDULE

NOTES:
1. CONTRACTOR SHALL DETERMINE PROPER MARGIN STYLE TO MATCH CEILING CONSTRUCTION.
2. ALL RUN OUT DUCTWORK TO DIFFUSERS SHALL BE NECK SIZE UNLESS OTHERWISE NOTED.
3. ALL ALUMINUM CONSTRUCTION FOR MRI USE. NON FERROUS FASTENERS ARE REQUIRED.
4. MAXIMUM SECURITY, SUICIDE DETERRENT GRILLE. ALL WELDED CONSTRUCTION. 3/16" THICK STEEL FACE WITH 3/16" DIAMETER HOLES ON STAGGERED CENTERS AND SHALL APPLY WITH NATIONAL INSTITUTE OF CORRECTIONS GUIDELINES FOR SUICIDE PREVENTION. FINISH WITH 1 1/2"x1 1/2"x3/16" STEEL ANGLE FRAME. FINISH WITH 3/16" SLEEVE.

TAG NAME	MATERIAL	CONFIGURATION	MARGIN (NOTE 1)	INLET SIZE (IN.) (NOTE 2)	FACE SIZE (IN.)	VOLUME DAMPER REQUIRED	FINISH	MANUFACTURER	MODEL	NOTES
EG-1	STEEL	PERFORATED FACE	1"	SEE DWG.	24x24	NO	WHITE	TITUS	SG-SD	PERFORATED SECURITY GRILLE. NOTE 4.
EG-2	STEEL	PERFORATED FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	PAR	
EG-3	STEEL	35 DEGREE DEFLECTION	1 1/4"	SEE DWG.	INLET +2	NO	WHITE	TITUS	350R	
EG-4	ALUMINUM	PERFORATED FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	PAR	
EG-5	ALUMINUM	35 DEGREE DEFLECTION	1 1/4"	SEE DWG.	INLET +2	NO	WHITE	TITUS	350R	
RG-1	STEEL	PERFORATED FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	PAR	DUCTED RETURN
RG-2	STEEL	35 DEGREE DEFLECTION	1 1/4"	SEE DWG.	INLET +2	NO	WHITE	TITUS	350R	
RG-3	STEEL	PERFORATED FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	PXP	FACE ONLY - NON DUCTED
SD-1	STEEL	LOUVER FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	TMS	STAMPED LOUVER DROP FACE. MINIMUM OF TWO STEPDOWN DIFFUSION CONES
SG-1	STEEL	PERFORATED FACE	1"	SEE DWG.	INLET +2	NO	WHITE	TITUS	SG-SD	PERFORATED SECURITY GRILLE. NOTE 4.
SG-2	STEEL	DOUBLE DEFLECTION	1 1/4"	SEE DWG.	INLET +2	NO	WHITE	TITUS	300R	FRONT BLADES VERTICAL UNLESS NOTED OTHERWISE
TG-1	STEEL	PERFORATED FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	PAR	DUCTED RETURN
TG-2	ALUMINUM	PERFORATED FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	PAR	DUCTED RETURN

DRAWN BY PAUHAN

ELECTRICAL GENERAL NOTES:

1. **###** INDICATES ELECTRICAL EQUIPMENT DEFINED IN ELECTRICAL SCHEDULES OR SPECIFICATION. REFER TO DRAWINGS CONTAINING ELECTRICAL SCHEDULES FOR PERMANENT NAMEPLATE SHALL MATCH FINAL EQUIPMENT Nomenclature, NOT ELECTRICAL EQUIPMENT TAG NAME. REFER TO SPECIFICATIONS.
2. **NL** INDICATES LUMINAIRE IS UNSWITCHED FOR NIGHT LIGHT.
3. **SHADED LUMINAIRE OR DEVICE** INDICATES LUMINAIRE OR DEVICE IS CONNECTED TO AN EMERGENCY CIRCUIT.

LUMINAIRE KEY:
 F1 = FIXTURE TAG
 1 = CIRCUIT NUMBER
LUMINAIRE
 a = SWITCH DESIGNATION
 NL = SUBSCRIPT (IF APPLICABLE)
 *IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: F1 / 1 / a / NL

DEVICE KEY:
 A = MOUNTING (IF APPLICABLE)
 1 = CIRCUIT NUMBER
 *IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: A / 1

ELECTRICAL MOUNTING SUBSCRIPT KEY:
 A MOUNT AT 4" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH
 M MOUNT IN MODULAR FURNITURE

ELECTRICAL INSTALLATION NOTES:

1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATIONS DETAIL ON THIS PAGE FOR ADDITIONAL INFORMATION.
2. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
3. CIRCUITS SERVING EMERGENCY AND EXIT LUMINAIRES WILL BE RUN IN A SEPARATE RACEWAY FROM ALL OTHER CIRCUITS.
4. FLUSH MOUNT ALL LIGHTING CONTROL DEVICES AT +42" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. DEVICES MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
5. FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
6. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPPERS.
7. CONNECTION FOR ELECTRIC WATER COOLERS (EWC) SHALL BE A JUNCTION BOX CONCEALED BEHIND WATER COOLER ACCESS PLATE FED FROM OPI BREAKER IN DISTRIBUTION PANEL. CONTRACTOR SHALL VERIFY TYPE OF EWC TO BE INSTALLED.
8. MOUNT ALL FIRE ALARM PULL STATIONS AT +42" FROM FLOOR (CENTERLINE DIMENSION).
9. MOUNT ALL FIRE ALARM NOTIFICATION DEVICES AT 90° ABOVE FINISHED FLOOR OR 8" BELOW THE CEILING, WHICHEVER IS LOWER, EXCEPT WHERE OTHERWISE NOTED. HEIGHT SHALL BE MEASURED TO THE TOP OF THE DEVICE.
10. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.
11. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS, OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
12. ELECTRICAL AND TECHNOLOGY EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF OPERATION OF, AND/OR ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUDED OR SEALED INTO OPENINGS.
14. CONTRACTOR SHALL REMOVE AND REINSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL, WHERE DAMAGED BY THIS CONTRACTOR.
15. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIOVISUAL, AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.

SUGGESTED MATRIX OF RESPONSIBILITY

ITEM:	SHOWN ON:	FURNISHED BY:	INSTALLED BY:	NOTES:
TECHNOLOGY ROUGH-IN, REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR DEFINITION	T-SERIES	E.C.	E.C.	3, 4.
INFORMATION OUTLET FACELATES, JACKS, AND TERMINATIONS	T-SERIES	T.C.	T.C.	
CONDUIT SLEEVES (WHEN SHOWN ON DRAWINGS)	T-SERIES	E.C.	E.C.	
CONDUIT SLEEVES (NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM)	N/A	T.C.	T.C.	2, 4.
TELECOMMUNICATION SYSTEMS	T-SERIES	T.C.	E.C.	1.
TELECOMMUNICATION EQUIPMENT, CABLEING, AND TERMINATIONS	T-SERIES	T.C.	T.C.	
CABLE TRAY (INCLUDING WIRE BASKET TRAY) REFER TO SPECIFICATION SECTION 27 05 28 FOR DEFINITION	T-SERIES	E.C.	E.C.	
LADDER RACK	T-SERIES	T.C.	T.C.	5.
GROUNDING LUGS ON TECHNOLOGY EQUIPMENT	T-SERIES	T.C.	E.C.	6.
BONDING SYSTEM FOR TECHNOLOGY SYSTEM, REFER TO SPECIFICATION SECTION 27 05 26 FOR DEFINITION	T-SERIES	E.C.	E.C.	7, 8.
CONNECTION OF TECHNOLOGY BONDING SYSTEM TO THE ELECTRICAL GROUND SYSTEM	T-SERIES	E.C.	E.C.	
LINE VOLTAGE POWER (+120V OR GREATER)	E-SERIES	E.C.	E.C.	
LINE VOLTAGE POWER (NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM)	N/A	T.C.	E.C.	2, 4.
LINE VOLTAGE POWER FOR DOOR HARDWARE POWER SUPPLIES	ARCH SPEC	E.C.	E.C.	
LOW VOLTAGE CABLING FOR TECHNOLOGY SYSTEMS	T-SERIES	T.C.	T.C.	
CABLE HANGERS AND SUPPORTS OR OTHER CABLE ROUTING METHODS (OTHER THAN CONDUIT AND CABLE TRAY)	T-SERIES	T.C.	T.C.	5.
TECHNOLOGY SERVICE ENTRANCE CONDUITS, HANDHOLES, AND MANHOLES	T-SERIES	E.C.	E.C.	
FLOOR BOX (ROUGH-IN)	T & E SERIES	E.C.	E.C.	

SUGGESTED MATRIX OF RESPONSIBILITY NOTES

1. LOCATIONS OF TELECOMMUNICATIONS ROUGH-INS SHALL BE INDICATED BY THE INFORMATION OUTLET SYMBOLS ON THE DRAWINGS. REFER TO THE TECHNOLOGY SYMBOL LIST FOR ADDITIONAL INFORMATION.
2. BASED ON THE INHERENT DIFFERENCES IN PRODUCTS FROM VARIOUS MANUFACTURERS, ALL REQUIRED EQUIPMENT MAY NOT BE SHOWN ON THE DRAWINGS FOR ALL ACCEPTABLE MANUFACTURERS.
3. INCLUDES BACKBOXES AND CONDUIT REQUIRED FOR THE TECHNOLOGY SYSTEMS INSTALLATION. THE E.C. SHALL BE THE BID ON THE BASIS OF DESIGN SHOWN ON THE CONTRACT DOCUMENTS.
4. ALL CHANGES TO THE SLEEVES, BACKBOXES, CONDUITS, AND POWER REQUIRED BECAUSE OF THE T.C.'S SELECTION OF AN ALTERNATE ACCEPTABLE MANUFACTURER OR FROM SYSTEM CONFIGURATIONS THAT ARE LEFT TO THE CHOICE OF THE CONTRACTOR SHALL BE INCLUDED IN THE T.C.'S BID. THIS BID SHALL INCLUDE INSTALLATION BY A LICENSED ELECTRICIAN.
5. UNLESS TRADE RULES DICTATE OTHERWISE.
6. FURNISHED AS PART OF THE EQUIPMENT WHEN POSSIBLE, OR FURNISHED TO THE E.C. FOR INSTALLATION IN THE FIELD.
7. INCLUDES ALL CONDUCTORS, GROUND BARS, AND TERMINATIONS FOR THE COMPLETE BONDING SYSTEM REQUIRED BY THE SPECIFICATIONS.
8. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS OF PANELS AND SWITCHBOARDS SHOWN IN THE TECHNOLOGY BONDING RISER DIAGRAM AND TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM.

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.T.C.	AUTOMATIC TEMPERATURE CONTROL CONTRACTOR
A.V.C.	AUDIOVISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

ELECTRICAL SYMBOL LIST

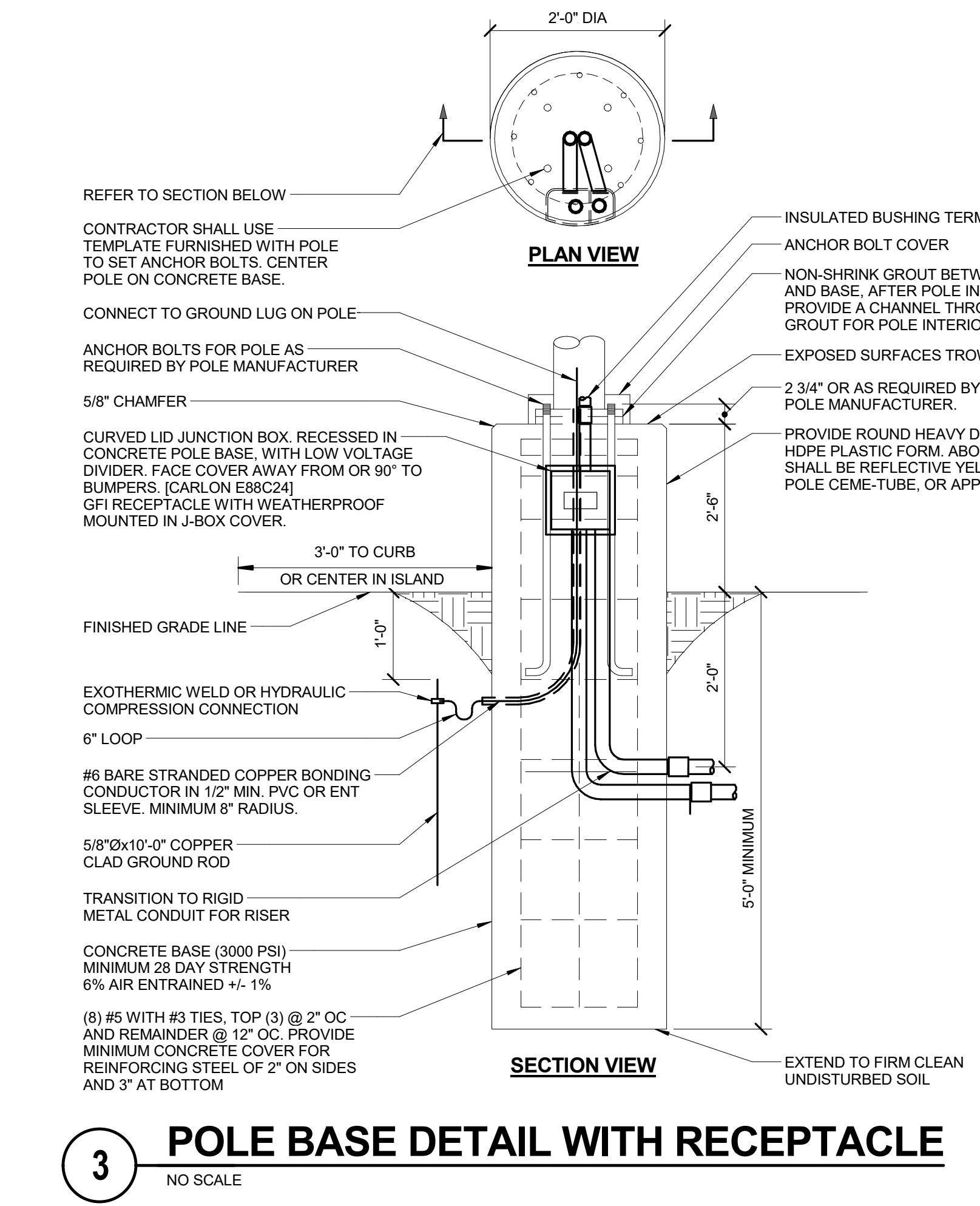
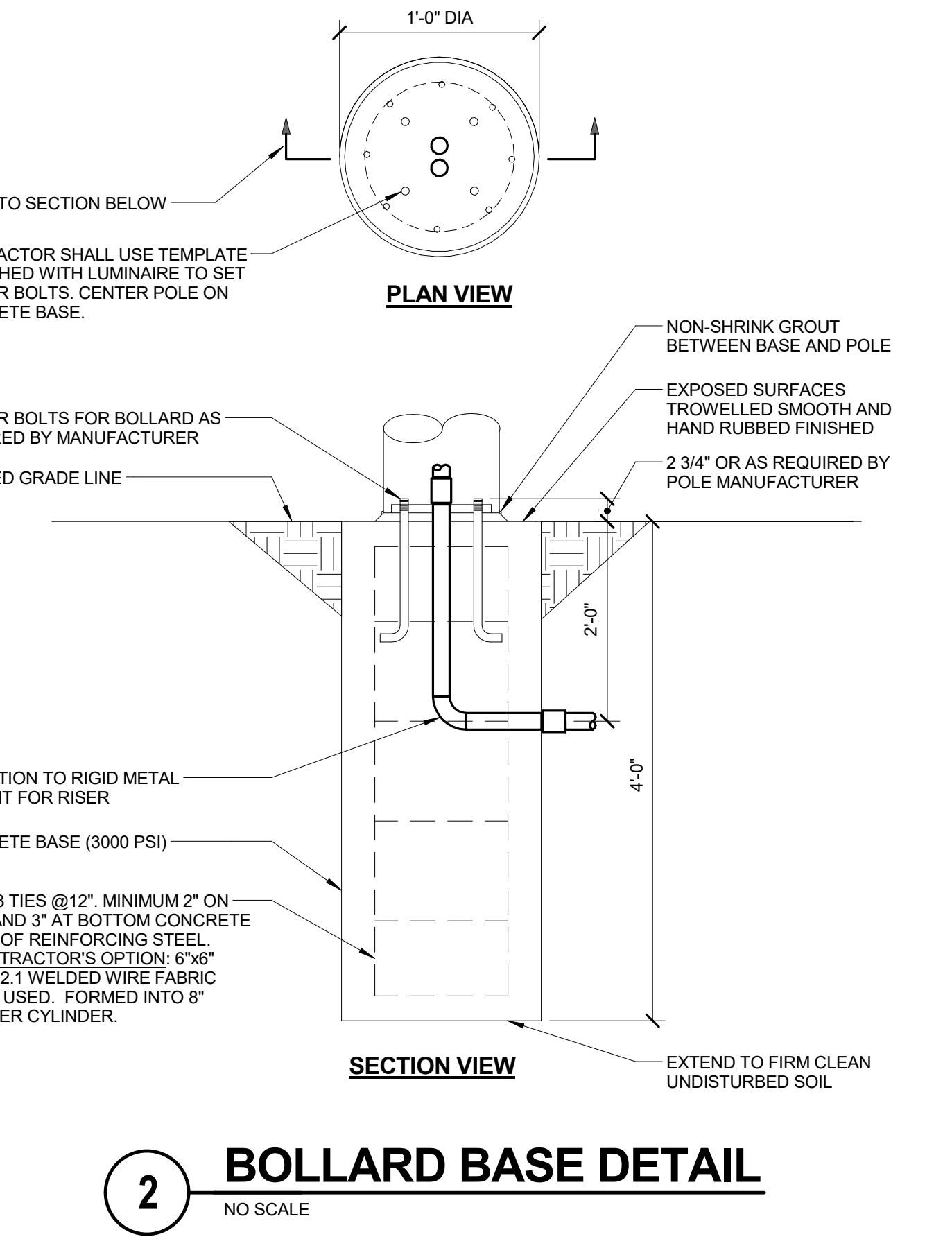
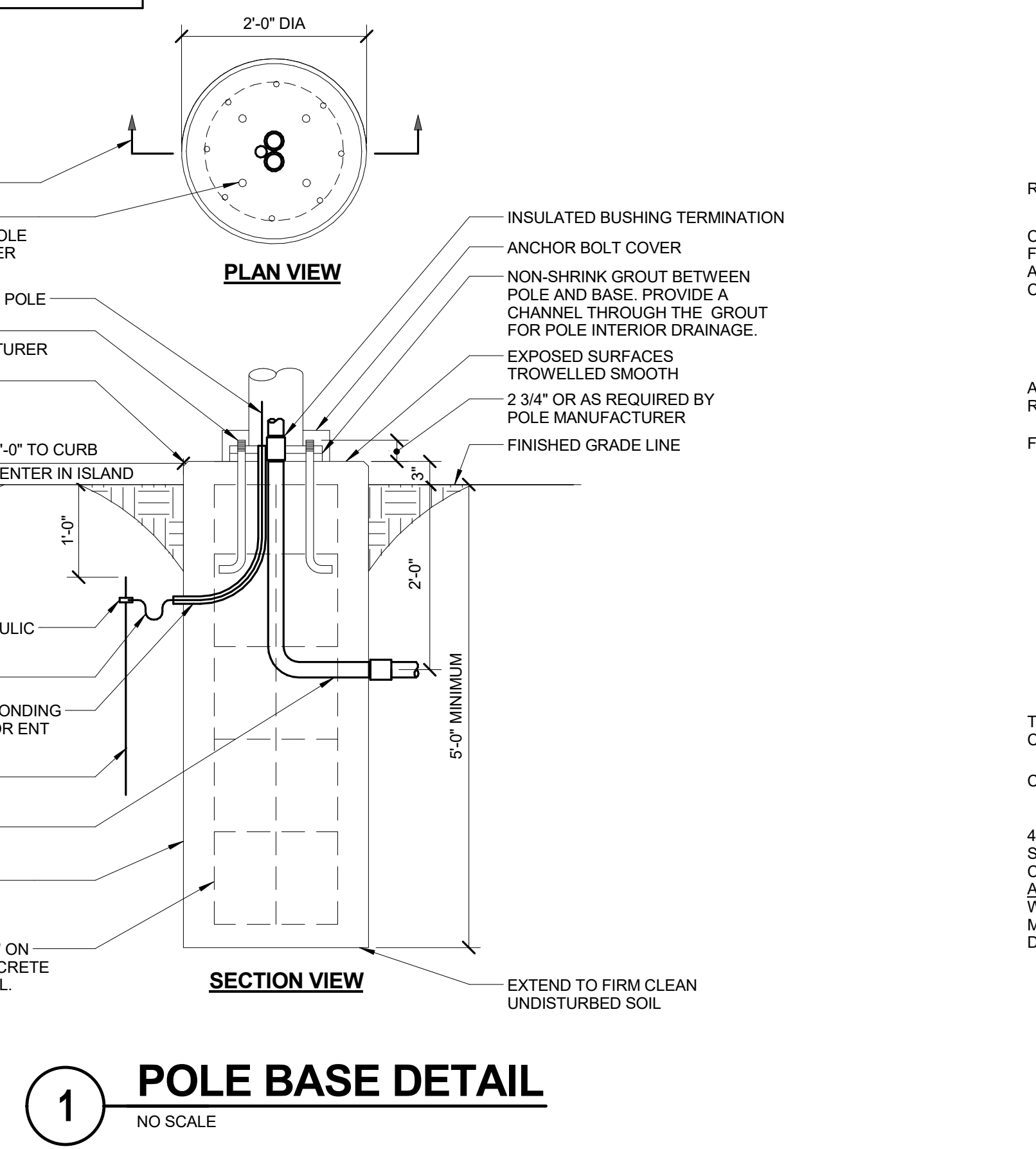
SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
	GB	26 05 26	GROUND BUS
	IBT	26 05 26	INTERSYSTEM BONDING TERMINATION
	ECONN	26 05 33	ELECTRICAL CONNECTION
	JB	26 05 33	JUNCTION BOX
	FB-1	26 27 26	FLOOR BOX
	FB-2	26 27 26	POKE-THROUGH FLOOR BOX
	TC#	26 09 33	TIME SWITCH
	PANEL###	26 24 16	PANELBOARD - RECESS MOUNT
	PANEL###	26 24 16	PANELBOARD - SURFACE MOUNT
	TR#	26 22 00	TRANSFORMER
	REC-DUP	26 27 26	DUPLEX RECEPTACLE, 125V
	REC-DUP-GFI	26 27 26	DUPLEX GFI RECEPTACLE, 125V
	REC-DUP-GFD	26 27 26	GROUND FAULT DEVICE
	REC-DUP-WP	26 27 26	DUPLEX GFI WEATHERPROOF RECEPTACLE 125V
	REC-USB	26 27 26	DUPLEX RECEPTACLE, USB CHARGING
	REC-SIM-520R	26 27 26	SIMPLEX RECEPTACLE, 125V
	REC-TAMP	26 27 26	DUPLEX RECEPTACLE, TAMPERPROOF, 125V
	REC-TAMP-GFI	26 27 26	GFI DUPLEX RECEPTACLE, TAMPERPROOF, 125V
	REC-QUAD	26 27 26	QUAD RECEPTACLE, TAMPERPROOF, 125V
	REC-QUAD-P	26 27 26	QUAD RECEPTACLE, 125V
	REC-QUAD-GFI	26 27 26	QUAD GFI RECEPTACLE, 125V
	REC-FB-P	26 27 26	FLOOR BOX - POKE THRU, 125V
	SW-1P	26 27 26	SWITCH - SINGLE POLE
	SW-3W	26 27 26	SWITCH - THREE WAY
	SW-1P-ADJ	26 27 26	SWITCH - LOCAL TIMER - USER ADJUSTABLE
	SW-D-LED	26 27 26	DIMMER - LED
	SW-D3-LED	26 27 26	DIMMER - LED - 3-WAY
	SW-LS	26 27 26	DAYLIGHT LEVEL SENSOR
	SW-LS-PC	26 27 26	PHOTOCELL
	SW-OC-D	26 27 26	OCCUPANCY SENSOR - DUAL TECHNOLOGY
	SW-OC-P-HA	26 27 26	OCCUPANCY SENSOR - HIGH BAY AISLE COVERAGE
	SW-OC-P-HB	26 27 26	OCCUPANCY SENSOR - HIGH BAY
	SW-OC-P-Q	26 27 26	SWITCH - OCCUPANCY SENSOR WALL SWITCH
	SW-OC-P-Q2	26 27 26	SWITCH - OCCUPANCY SENSOR AND DUAL SWITCH
	SW-OC-P-P	26 27 26	OCCUPANCY SENSOR - PASSIVE INFRARED 360 DEGREE COVERAGE
	SW-OC-U	26 27 26	OCCUPANCY SENSOR - ULTRASONIC 360 DEGREE COVERAGE
	SW-OC-U-A	26 27 26	OCCUPANCY SENSOR - ULTRASONIC TWO SIDED CORRIDOR COVERAGE
	DS-#	26 28 16	DISCONNECT
	LE	26 51 00	LINEAR LUMINAIRES
	TR	26 51 00	TROFFER
	ES	26 51 00	WALL SCONCE LUMINAIRE
	DL	26 51 00	DOWNLIGHT LUMINAIRE
	AW	26 51 00	AIMABLE OR WALL WASH LUMINAIRE
	IE	26 51 00	INDUSTRIAL LUMINAIRE
	EB	26 51 00	WALL BRACKET LUMINAIRE
	EM	26 51 00	POLE MOUNTED LUMINAIRE
	XS	26 51 00	SINGLE FACE EXIT SIGN
	XD	26 51 00	DOUBLE FACE EXIT SIGN
	XM	26 51 00	EMERGENCY UNIT
	YM	26 05 35	MULTI OUTLET SYSTEM
	SW-OC-D-W	26 27 26	OCCUPANCY SENSOR - DUAL TECHNOLOGY - WALL MOUNTED
	SW-OC-P-W	26 27 26	OCCUPANCY SENSOR - PASSIVE INFRARED - WALL MOUNTED

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
	FA-100	28 31 00	FIRE ALARM CONTROL PANEL
	FA-120	28 31 00	FIRE ALARM SMOKE DETECTOR - CEILING MOUNTED
	FA-122	28 31 00	FIRE ALARM DUCT SMOKE DETECTOR
	FA-123	28 31 00	FIRE ALARM IN DUCT SMOKE DETECTOR
	FA-130	28 31 00	FIRE ALARM MANUAL PULL STATION
	FA-131	28 31 00	FIRE ALARM MANUAL PULL STATION W/ COVER
	FA-140	28 31 00	FIRE ALARM HEAT DETECTOR
	FA-180	28 31 00	FIRE ALARM ADDRESSABLE MONITOR MODULE
	FA-181	28 31 00	FIRE ALARM ADDRESSABLE RELAY
	FA-200	28 31 00	FIRE ALARM VISUAL NOTIFICATION DEVICE - WALL MOUNTED
	FA-201	28 31 00	FIRE ALARM VISUAL NOTIFICATION DEVICE - CEILING MOUNTED
	FA-203	28 31 00	FIRE ALARM VISUAL NOTIFICATION DEVICE - WALL MOUNTED - WEATHERPROOF
	FA-210	28 31 00	FIRE ALARM AUDIO NOTIFICATION DEVICE - WALL MOUNTED
	FA-211	28 31 00	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE - WALL MOUNTED
	FA-212	28 31 00	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE - WALL MOUNTED - WEATHERPROOF
	FA-230	28 31 00	FIRE ALARM AUDIO NOTIFICATION DEVICE - CEILING MOUNTED
	FA-231	28 31 00	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE - CEILING MOUNTED
	FA-233	28 31 00	FIRE ALARM AUDIO NOTIFICATION DEVICE - WALL MOUNTED - MINI-HORN
	FA-250	28 31 00	FIRE ALARM SMOKE DAMPER - WALL MOUNTED
	FA-251	28 31 00	SMOKE OR FIRE DAMPER CONTROLLER
	FA-260	28 31 00	FIRE ALARM FLOW SWITCH TO MONITOR FIRE PROTECTION SYSTEM
	FA-261	28 31 00	FIRE ALARM MONITOR SWITCH TO MONITOR FIRE PROTECTION SYSTEM
	FA-262	28 31 00	FIRE ALARM POST INDICATOR VALVE
	FA-263	28 31 00	FIRE ALARM ELECTRONIC BELL FOR SPRINKLER SYSTEM
	FA-270	28 31 00	FIRE ALARM ELECTROMAGNETIC DOOR HOLD DEVICE
	DB	ARCH	ARCH DOOR BELL
	HD	ARCH	ARCH HAND DRYER
	PP	ARCH	ARCH PUSH PAD

ELECTRICAL SHEET INDEX

E000	COVER SHEET - ELECTRICAL
E001	UDC SUBMITTAL
E050	SITE PLAN - ELECTRICAL
E100	LOWER LEVEL - LIGHTING
E101	FIRST FLOOR PLAN - LIGHTING
E103	ROOF PLAN - ELECTRICAL
E110	LOWER LEVEL - POWER
E111	FIRST FLOOR PLAN - POWER
E120	LOWER LEVEL - FIRE ALARM
E121	FIRST FLOOR PLAN - FIRE ALARM
E200	ONE-LINE DIAGRAM - ELECTRICAL
E300	ENLARGED PLANS AND DETAILS - ELECTRICAL
E500	ELECTRICAL SCHEDULES
E501	ELECTRICAL SCHEDULES
E502	ELECTRICAL SCHEDULES



DRAWN BY ANW
 CHECKED BY JBD

COVER SHEET - ELECTRICAL

**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

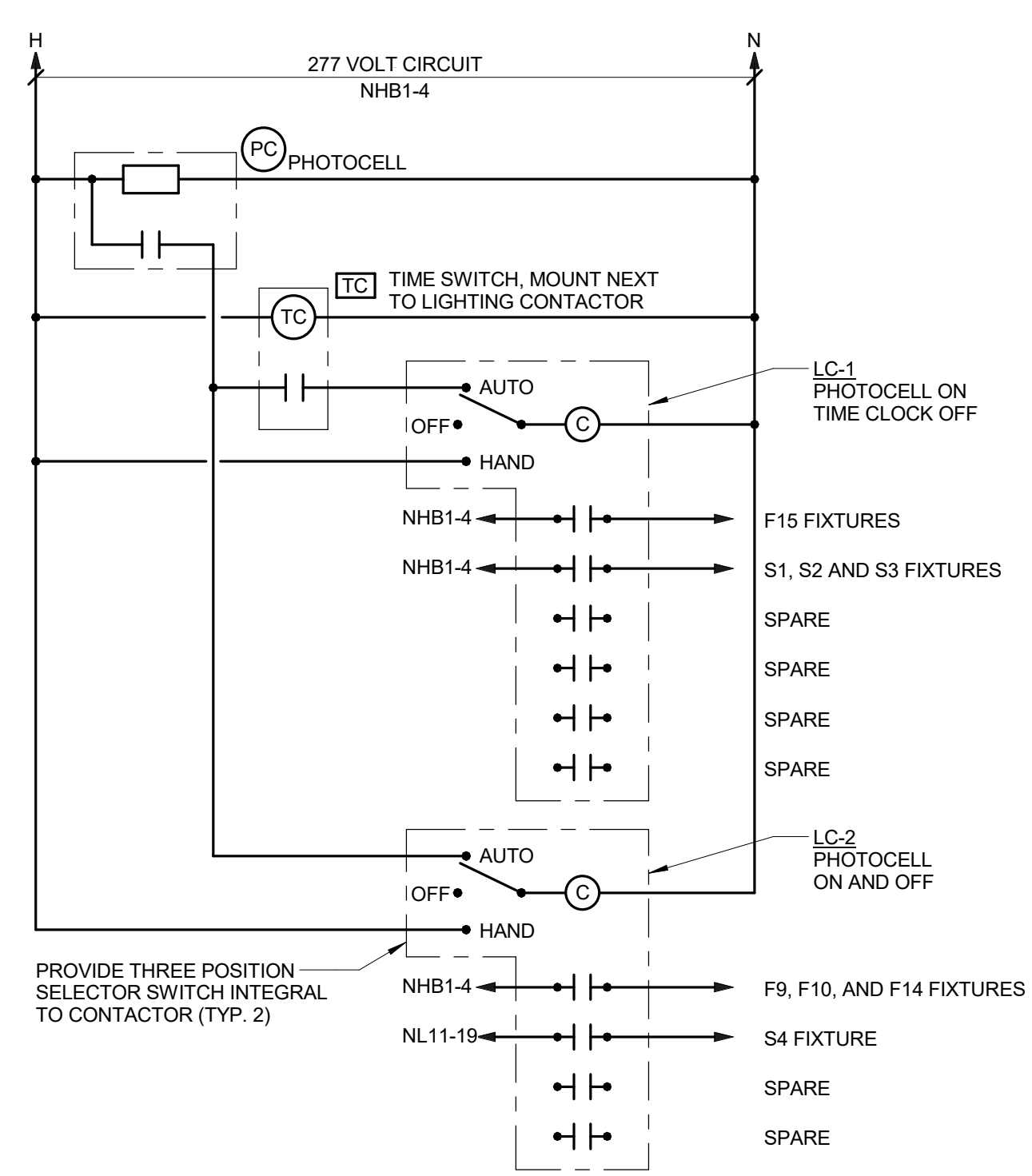
REVISION FOR:
NO. DESCRIPTION DATE

DRAWN BY ANW

CHECKED BY JBD

**SITE PLAN -
ELECTRICAL**

- SHEET NOTES:**
1. PROVIDE CONCRETE BASES FOR S1, S2, S3 AND S4 FIXTURES. REFER TO 1'E000 & 2'E000 FOR GROUND MOUNTED LIGHT FIXTURE MOUNTING DETAILS UNLESS NOTED OTHERWISE.
- KEYNOTES:**
1. POLE-TOP MOUNTED LIGHT TO BE FOCUSED ON FLAG.
 2. CONCRETE PAD BY E.C. COORDINATE PLACEMENT AND CONDUITS WITH UTILITY.
 3. WIRE AND CONDUIT TO BE INSTALLED BY E.C. OUT TO LOCATIONS SHOWN, TERMINATED IN A HANDLE FOR FUTURE CONNECTIONS.
 4. PROVIDE CONCRETE PAD FOR GENERATOR PER 6'E300. COORDINATE ELEVATION AND EXACT LOCATION WITH E.C.
 5. EMERGENCY STOP TO SERVE GENERATOR. LOCATE WITHIN SITE OF GENERATOR. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 6. PROVIDE EXTENDED POLE BASE FOR THIS FIXTURE PER 3'E000.

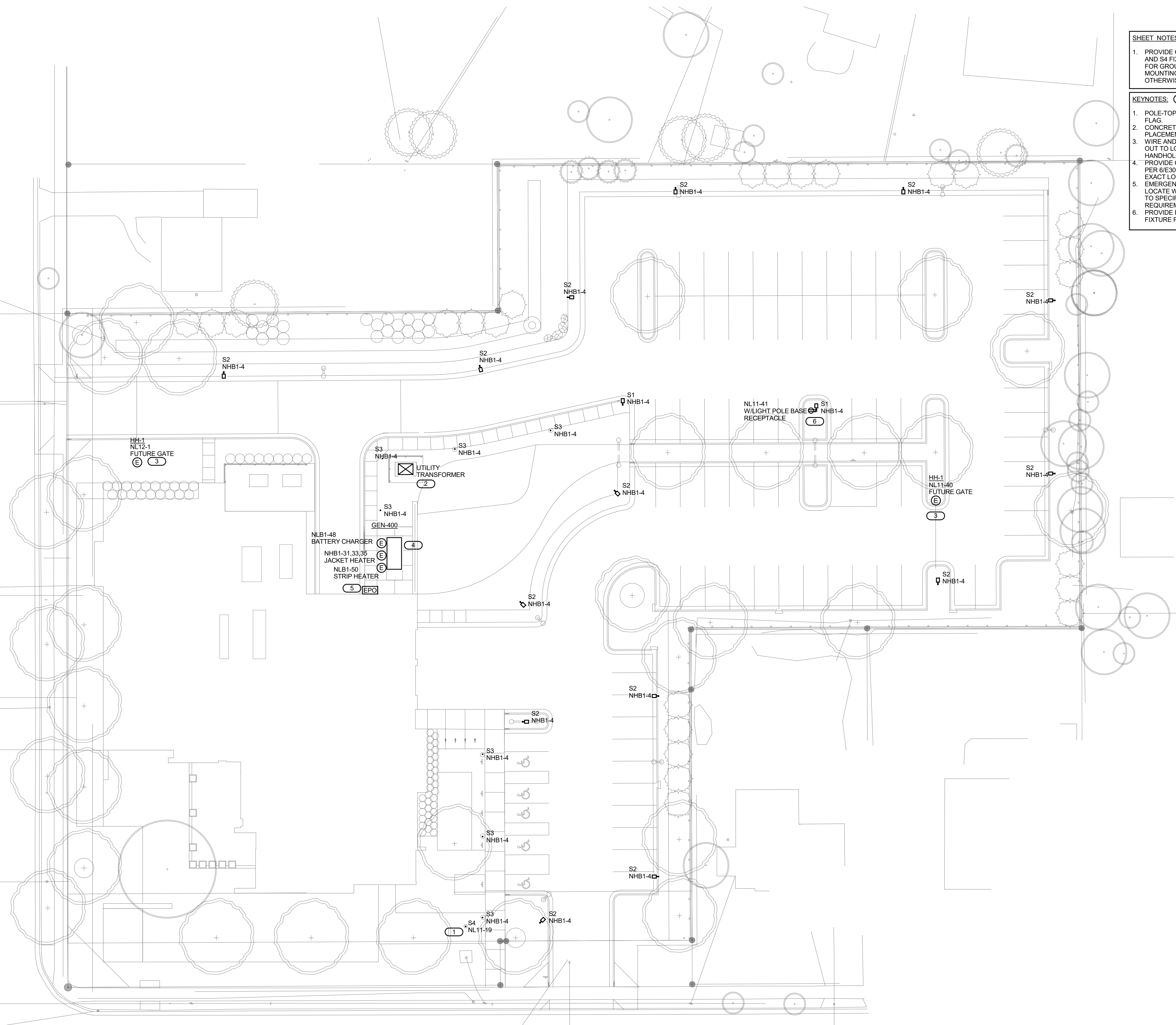


2 EXTERIOR LIGHTING CONTROL DETAIL
NO SCALE

WESTMORLAND BLVD

MINERAL POINT ROAD

1 SITE PLAN - ELECTRICAL
1" = 20'-0"



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E050

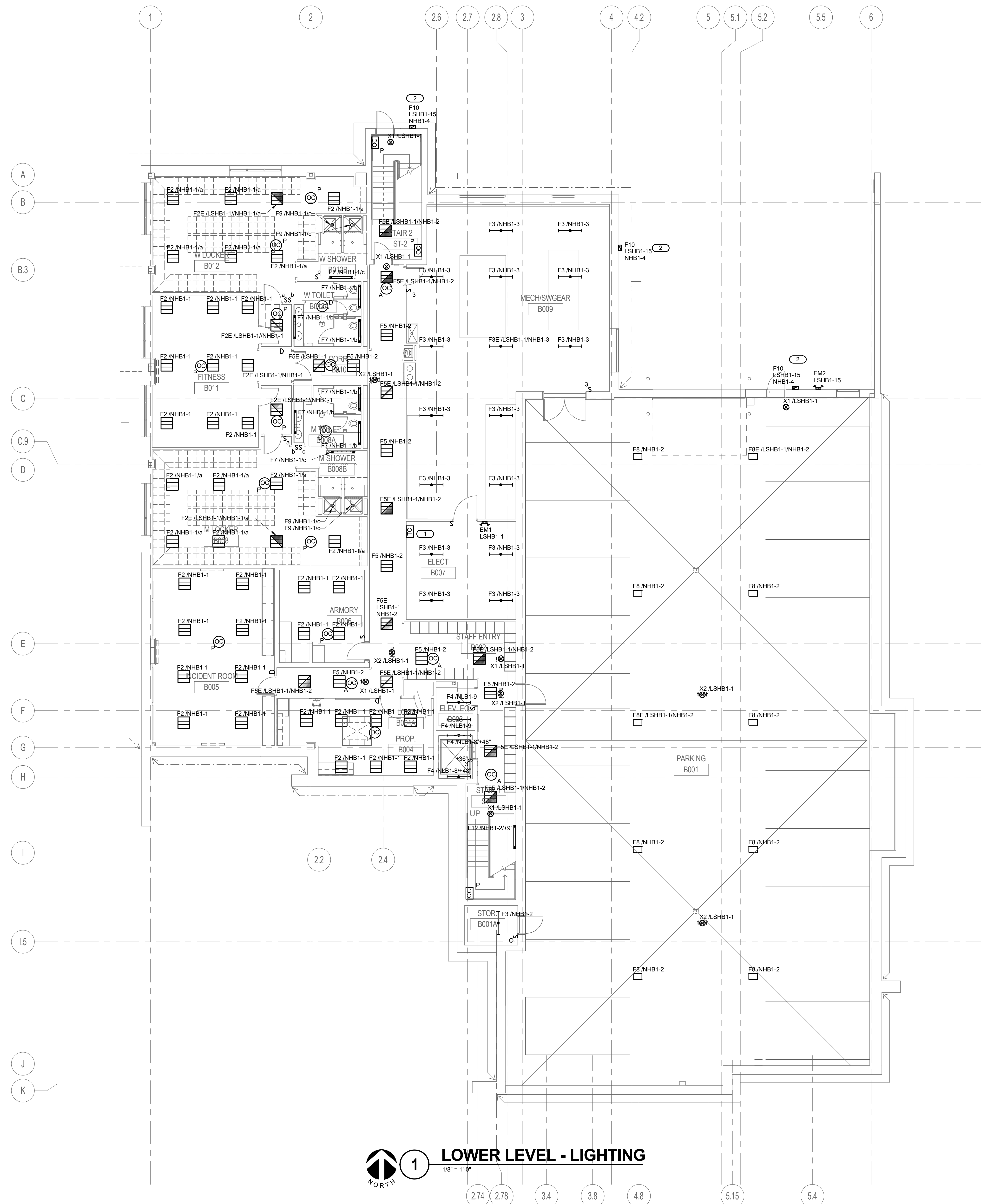
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MIDTOWN DISTRICT**

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City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

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KEYNOTES:

1. TIME SWITCH FOR EXTERIOR LIGHTING CONTROL. REFER TO 2/E050 FOR ADDITIONAL INFORMATION.
2. BUILDING MOUNTED LIGHTING TO BE CONTROLLED BY PHOTOCELL AND/OR TIMECLOCK. SEE 2/E050.

DRAWN BY ANW

CHECKED BY JBD

**LOWER LEVEL -
LIGHTING**

1 LOWER LEVEL - LIGHTING
1/8" = 1'-0"

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1 2 3

E100

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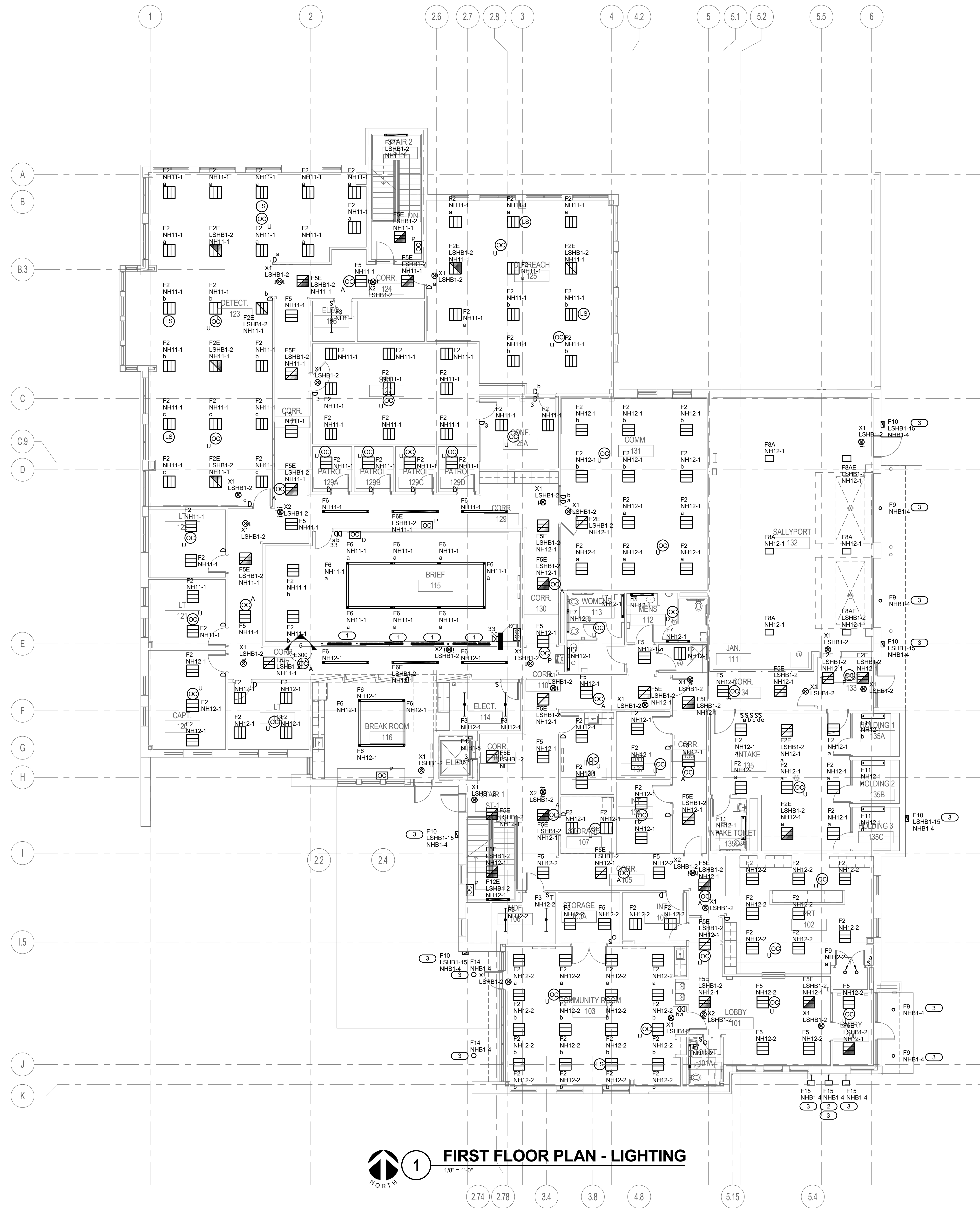
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**FIRST FLOOR PLAN -
LIGHTING**



KEYNOTES:

- LED PANELS TO BE MOUNTED BACK TO BACK WITH 1" AIR GAP WITH ONE REMOTE DRIVER FOR EVERY PAIR OF LED PANELS. PANELS TO BE SLID INTO POSITION THROUGH THE ACCESS PANEL ON TRACKS BETWEEN THE STAINED GLASS PANELS. SEE E300 FOR MORE DETAILS.
- INSTALL GOOSENECK FIXTURES, CENTERED ABOVE SIGN, AIMED TO ILLUMINATE SIGNAGE. COORDINATE EXACT PLACEMENT AND AIMING WITH ARCHITECT AND SIGN MANUFACTURER. ENSURE LIGHTS ARE NOT AIMED TO ILLUMINATE ABOVE PARALLEL TO THE GROUND FROM THE LIGHT.
- BUILDING MOUNTED LIGHTING TO BE CONTROLLED BY PHOTOCELL AND/OR TIMECLOCK. SEE E050 DETAIL 1.

GENERAL NOTES:

- LIGHT LEVEL SENSORS TO DIM/CONTROL FIXTURES WITHIN 15' OF THE SAME WINDOW WALL.

1 FIRST FLOOR PLAN - LIGHTING
1/8" = 1'-0"

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REFERENCE SCALE IN INCHES
1" = 1'-0"

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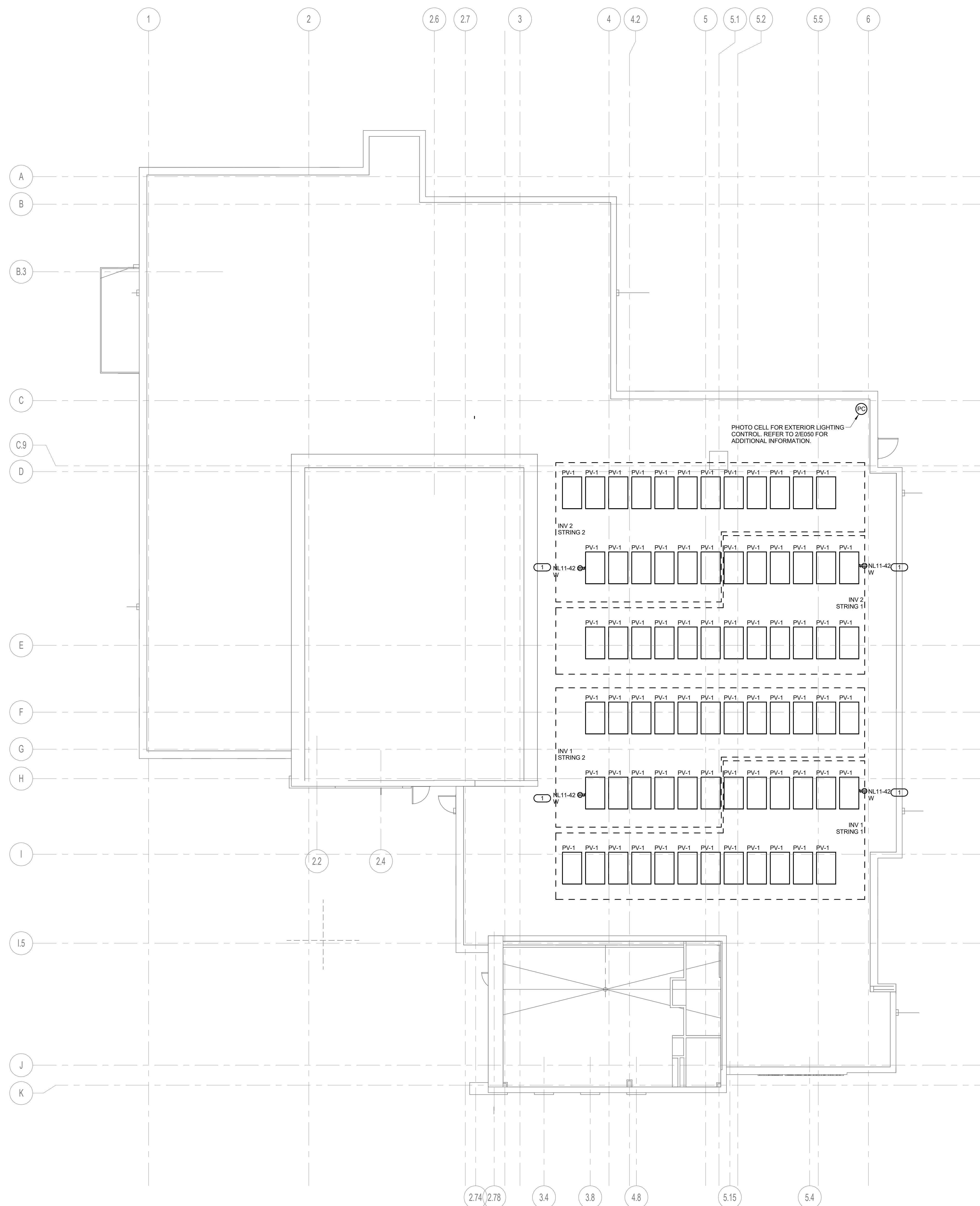
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**ROOF PLAN -
ELECTRICAL**



KEYNOTES: **1**
1. MOUNT RECEPTACLE TO SOLAR PANEL SYSTEM STRUCTURE.

1 ROOF PLAN - ELECTRICAL
1/8" = 1'-0"

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1 2 3

E103

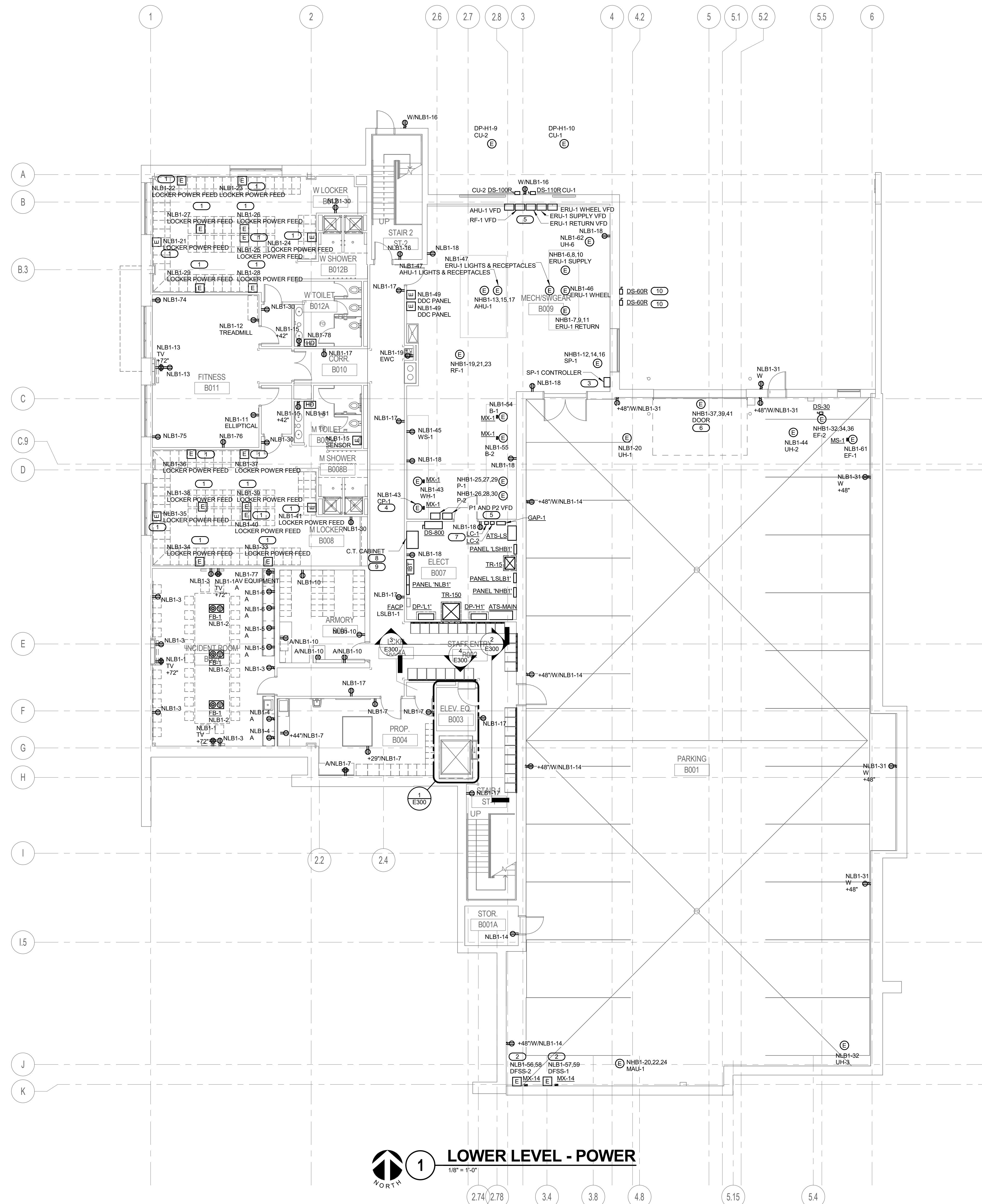
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- KEYNOTES:**
- LOCKER POWER FEED TO SERVE MULTIPLE LOCKERS. EACH LOCKER TO HAVE ONE DUPLEX RECEPTACLE. WITH UP TO SEVEN LOCKERS FED BY THE SAME CIRCUIT.
 - ROUTE POWER AND CONTROL WIRING THROUGH MAIN DFSS UNITS TO SMALLER UNITS LOCATED IN ELEV. EQ. ROOMS AND MDF106.
 - CONNECT TO EQUIPMENT AND ASSOCIATED CONTROLLER. CONTROLLER PROVIDED BY P.C. AND INSTALLED BY E.C. COORDINATE WITH P.C.
 - CONNECT TO CIRCULATION PUMP AND ASSOCIATED AQUASTAT. COORDINATE WITH P.C.
 - VFDS PROVIDED BY OTHERS AND INSTALLED BY E.C. COORDINATE WITH M.C. AND P.C.
 - CONNECT TO OVERHEAD DOOR. PROVIDE CONDUIT AND WIRE FOR DOOR CONTROLS PER MANUFACTURER REQUIREMENTS. DOOR CONTROLS PROVIDED BY OTHERS AND INSTALLED BY E.C.
 - LIGHTING CONTROLLERS FOR EXTERIOR LIGHTING CONTROL. REFER TO 22550 FOR ADDITIONAL INFORMATION.
 - E.C. TO PROVIDE SIGNAGE MOUNTED ON THIS PANEL. THIS BUILDING IS FED FROM MULTIPLE SOURCES INCLUDING A NATURAL GAS GENERATOR AND PHOTOVOLTAIC PANELS.*
 - E.C. TO PROVIDE TWO (2) 4" PVC STUBS TO EXTERIOR WALL AT 3' BELOW FINAL GRADE. COORDINATE REQUIREMENTS WITH UTILITY.
 - DISCONNECT TO PROVIDE EXTERNAL MEANS OF DISCONNECTING SOLAR PANEL POWER FOR UTILITY REQUIREMENTS. E.C. TO PROVIDE SIGNAGE ON THIS PANEL *PHOTOVOLTAIC SHUTDOWN DISCONNECT*. COORDINATE REQUIREMENTS WITH UTILITY.

1 LOWER LEVEL - POWER
1/8" = 1'-0"

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**LOWER LEVEL -
POWER**

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REFERENCE SCALE IN INCHES
1" = 10'-0"

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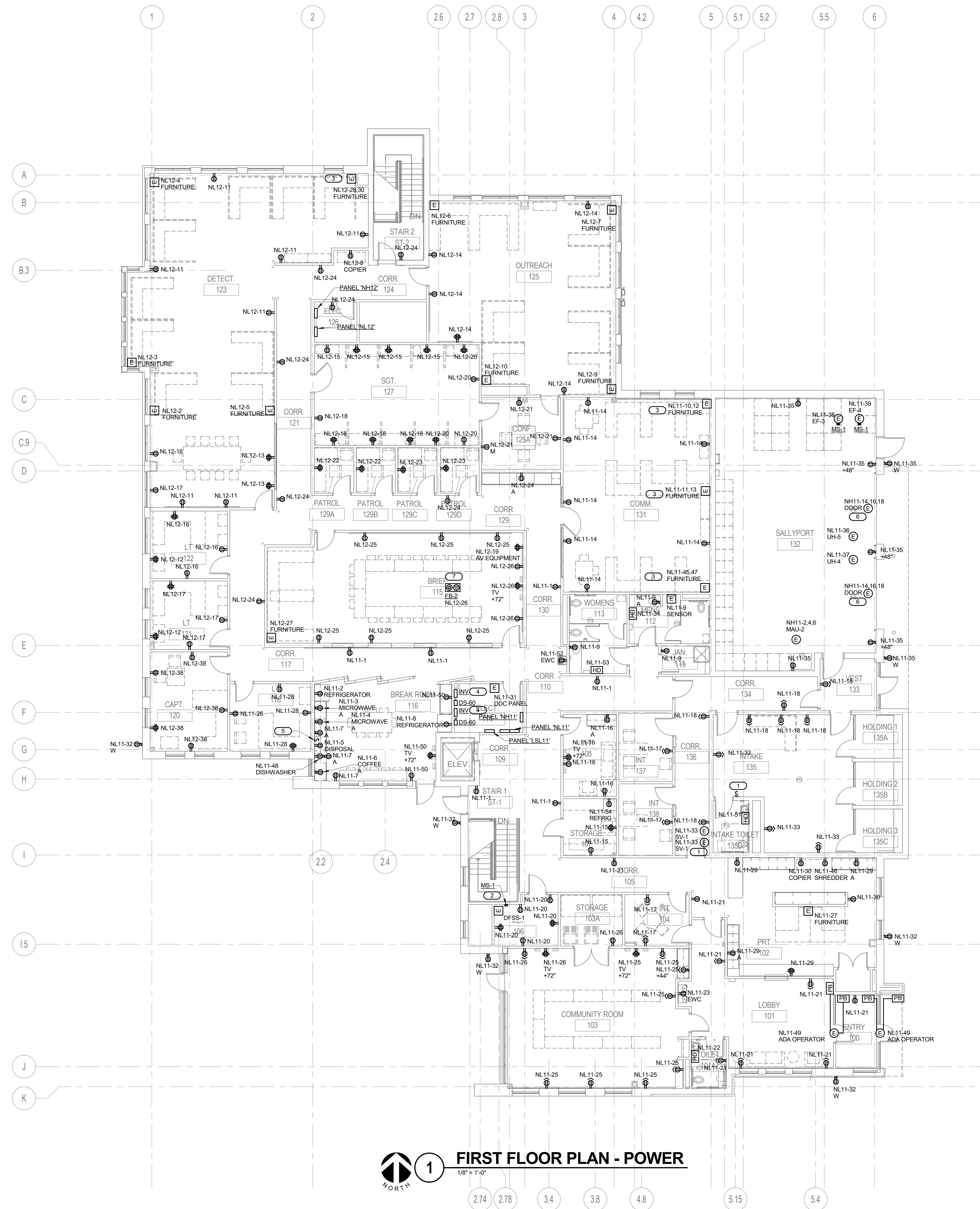
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**FIRST FLOOR PLAN -
POWER**



- KEYNOTES:**
1. NORMALLY CLOSED SOLENOID VALVES TO CONTROL WATER FLOW TO INTAKE TOILET. CONTROLLED BY WALL SWITCH.
 2. ROUTE POWER AND CONTROL WIRING THROUGH MAIN DFSS UNIT IN PARKING BOOTH TO SMALLER UNIT LOCATED IN MDF106.
 3. FURNITURE CONNECTION TO SUPPLY TWO CIRCUITS SHARING A COMMON NEUTRAL.
 4. SOLAR PANEL INVERTERS TO CONNECT TO PV PANELS ON THE ROOF.
 5. LOCATE SWITCH ABOVE COUNTER ADJACENT TO SINK. SWITCH SHALL CONTROL RECEPTACLE SERVING DISPOSAL.
 6. CONNECT TO OVERHEAD DOOR. PROVIDE CONDUIT AND WIRE FOR DOOR CONTROLS PER MANUFACTURER'S REQUIREMENTS. DOOR CONTROLS PROVIDED BY OTHERS AND INSTALLED BY E.C.
 7. LOCATE FLOOR BOX AT THIS APPROXIMATE LOCATION AND A MAXIMUM OF 12' FROM THE EAST WALL OF THIS ROOM.

1 FIRST FLOOR PLAN - POWER
1/8" = 1'-0"

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1" = 1'-0"

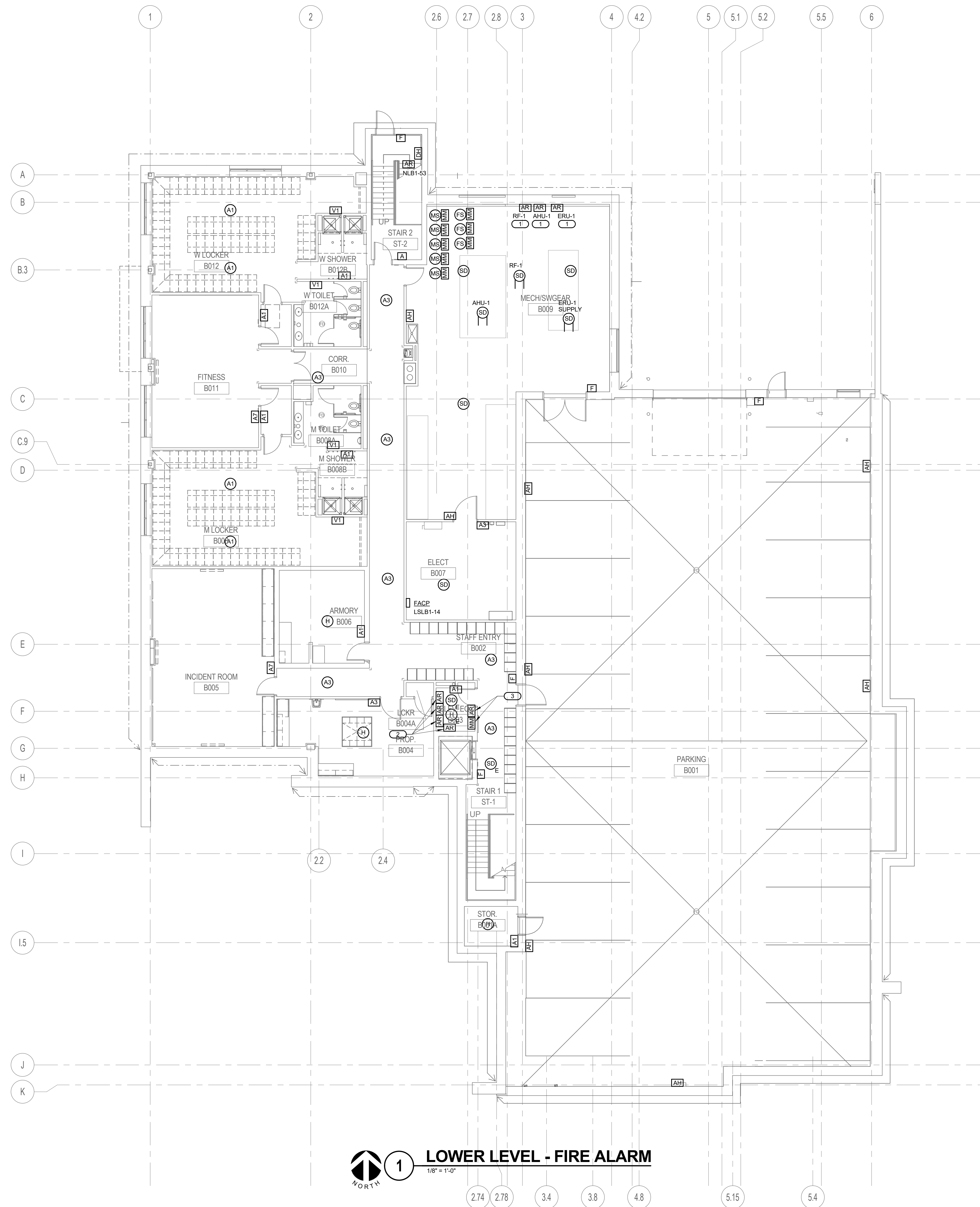
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- KEYNOTES:**
1. ADDRESSABLE RELAY FOR UNIT SHUTDOWN, COORDINATE WITH M.C.
 2. ADDRESSABLE RELAYS FOR ELEVATOR RECALL, ALTERNATE FLOOR RECALL, MACHINE ROOM ALARM, AND BATTERY LOWERING.
 3. ADDRESSABLE RELAY AND MONITOR MODULE FOR SHUNT TRIP CONTROL AND MONITORING, CONNECT TO ELEVATOR DISCONNECT SHUNT TRIP.

1 LOWER LEVEL - FIRE ALARM
1/8" = 1'-0"

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1 2 3

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LOWER LEVEL - FIRE ALARM

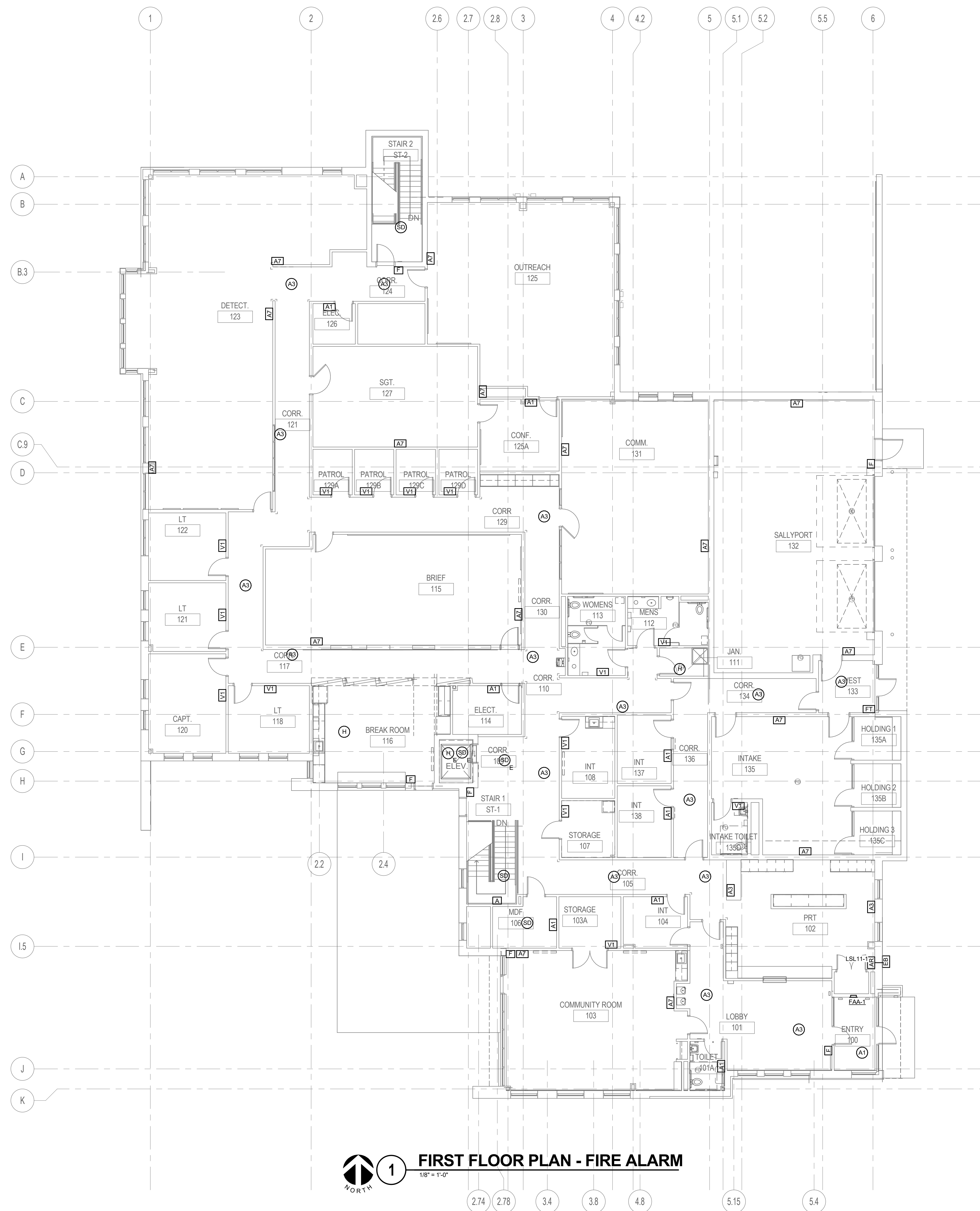
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**FIRST FLOOR PLAN -
FIRE ALARM**

1 FIRST FLOOR PLAN - FIRE ALARM
1/8" = 1'-0"

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REFERENCE SCALE IN INCHES
1 2 3

E121

E - DISCONNECT AND STARTER SCHEDULE									
NOTE: ALL DISCONNECTS (EXCEPT MANUAL STARTERS) SHALL BE HEAVY DUTY TYPE.									
DISCONNECT TYPE:		RATING		CIRCUIT VOLTAGE		STARTER		REMARKS	
ITEM	TYPE	RATING	VOLTS	POLES	NEMA SIZE	TYPE	ENCLOSURE	REMARKS	APPROVED MANUFACTURERS
DS-30	NF	30 A	480 V	3			1		SQUARE D 3110 HJ361 CUTLER-HAMMER TYPE DH GENERAL ELECTRIC TYPE TH SIEMENS TYPE HNF
DS-60	NF	60 A	480 V	3			1		SQUARE D 3110 HJ362 GENERAL ELECTRIC TYPE TH SIEMENS TYPE HNF
DS-60R	NF	60 A	480 V	3			3R		SQUARE D 3110 HJ362RB LAMP CORRELATED COLOR TEMPERATURE 4000K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE
DS-100R	NF	100 A	480 V	3			3R		SQUARE D 3110 HJ363RB GENERAL ELECTRIC TYPE TH SIEMENS TYPE HNF
DS-110R	NF	110 A	480 V	3			3R		SQUARE D 3110 HJ363RB GENERAL ELECTRIC TYPE TH SIEMENS TYPE HNF
DS-800	NF	800 A	480 V	3			1		SQUARE D 3110 HJ367N CUTLER-HAMMER TYPE DH GENERAL ELECTRIC TYPE TH SIEMENS TYPE HNF
FDS-30L	FU	30 A	208 V	2			1	SIN LIGHT DUTY	SQUARE D 3130 L221N GENERAL ELECTRIC SIEMENS
FED-100	FU	100 A	480 V	3			1	ELEVATOR SHUNT TRIP, CT, FUSED PER MAN.	BUSSMANN PS1T48R1F3 MERSEN ES1T48R1F3 LITTLEFUSE LPS1T48R1F3
MS-1		16 A	120 V	2	0	MS	1	RUP TO, HL	SQUARE D 2510 F1P GENERAL ELECTRIC CR101 SIEMENS TYPE SMF
MX-1		30 A	120 V	2	0	MX	1		SQUARE D 2510 K51 GENERAL ELECTRIC TYPE TC SIEMENS TYPE MMS
MX-14		30 A	120 V	2	0	MX	4		SQUARE D 2510 KW1 GENERAL ELECTRIC TYPE TC SIEMENS TYPE MMS

E - TRANSFER SWITCH SCHEDULE									
SWITCH TYPE:		RATING		CIRCUIT VOLTAGE		NEMA ENCLOSURE TYPE		REMARKS	
ITEM	TYPE	RATING	VOLTS	POLES	AMPS	ENCLOSURE TYPE	ACC	REMARKS	APPROVED MANUFACTURERS
ATS-LS	AUTO	480 V	480 V	4	100 A	1	EE, ON	GENERATOR START DELAY: [0.5] SECONDS TRANSFER TO EMERGENCY DELAY: [9] SECONDS TRANSFER TO NORMAL DELAY: [30] SECONDS	ASCO 300 SERIES RUSSEL ELECTRIC RMT SERIES GE ZENITH ZTG SERIES CATERPILLAR CTG SERIES CUMMINS OTPC SERIES GENERAC W SERIES
ATS-MAIN	AUTO	480 V	480 V	4	800 A	1	SE, EE, ON, EL, LS	GENERATOR START DELAY: [0.5] SECONDS TRANSFER TO EMERGENCY DELAY: [30] SECONDS TRANSFER TO NORMAL DELAY: [30] SECONDS	ASCO 300 SERIES RUSSEL ELECTRIC RMT SERIES GE ZENITH ZTG SERIES CATERPILLAR CTG SERIES CUMMINS OTPC SERIES GENERAC W SERIES

E - TRANSFORMER SCHEDULE									
TYPE:		RATING		CIRCUIT VOLTAGE		SECONDARY VOLTAGE		REMARKS	
TAG NAME	KVA RATING	TYPE	MAX. TEMP. RISE C.	PRIMARY VOLTS	PH	SECONDARY VOLTAGE	PH	TAPS % REG	REMARKS
TR-15	15 KVA	DOE 2016	150	480 V	3	208Y/120	3	2.5	2 4
TR-150	150 KVA	DOE 2016	150	480 V	3	208Y/120	3	2.5	2 4

LUMINAIRE SCHEDULE									
(MTG) MOUNTING:		(TYPE) LAMP TECHNOLOGY:		(L/L) LENS / LOUVER:		DIMENSIONS		LUMPS	
ITEM	DESCRIPTION	L	W	H	DIA	MTG	TYPE	QTY	MODEL
EM1	EMERGENCY UNIT, TWO ADJUSTABLE 6 VOLT HEADS, WHITE THERMOPLASTIC HOUSING, SELF TEST & DIAGNOSTICS OF INVERTER AND LAMPS	9"	2 1/2"	0"		WL	LED	2	2 WATT
EM2	EMERGENCY UNIT, TWO ADJUSTABLE 6 VOLT HEADS, WHITE THERMOPLASTIC HOUSING, SELF TEST & DIAGNOSTICS OF INVERTER AND LAMPS, WET LOCATION LISTED, COLD LOCATION.	9"	2 1/2"	0"		WL @ 10"	LED	1	2 WATT
F2	RECESSED INDIRECT/DIRECT, ANGLED DIFFUSER WITH DIFFUSE CENTER.	2'-0"	2'-0"	5 1/2"		RE	LED	1	4400 LUMENS 37 WATTS
F2E	RECESSED INDIRECT/DIRECT, ANGLED DIFFUSER WITH DIFFUSE CENTER, PROVIDE WITH EMERGENCY TRANSFER DEVICE.	2'-0"	2'-0"	5 1/2"		RE	LED	1	4400 LUMENS 37 WATTS
F3	4' INDUSTRIAL WITH NO UPLIGHT, POLYMER REFLECTOR AND HOUSING, AIRCRAFT CABLE HANGER.	4'-0"	1'-0"	4 1/4"		SP @ 8"	LED	1	4000 LUMENS 36 WATTS
F3E	4' INDUSTRIAL WITH NO UPLIGHT, POLYMER REFLECTOR AND HOUSING, AIRCRAFT CABLE HANGER, PROVIDE EMERGENCY TRANSFER DEVICE.	4'-0"	1'-0"	4 1/4"		SP @ 8"	LED	1	4000 LUMENS 36 WATTS
F4	ENCLOSED INDUSTRIAL WITH POLYMER HOUSING, MOLDED IN PLACE GASKET, PEBBLED LENS, UL LISTED WET LOCATION	4'-0"	7"	5"		WLC L	LED	1	4700 LUMENS 50 WATTS
F5	RECESSED INDIRECT/DIRECT, FLAT DIFFUSER WITH DIFFUSE CENTER.	2'-0"	2'-0"	5 1/2"		RE	LED	1	3400 LUMENS 29 WATTS
F5E	RECESSED INDIRECT/DIRECT, FLAT DIFFUSER WITH DIFFUSE CENTER, PROVIDE WITH EMERGENCY TRANSFER DEVICE.	2'-0"	2'-0"	5 1/2"		RE	LED	1	3400 LUMENS 29 WATTS
F6	DIRECT/INDIRECT LINEAR, STEEL, ADJUSTABLE SUPPORTS, CLEAR ACRYLIC DUST COVER, SOFT GLOW UPLIGHT, FLUSH DOWNLIGHT.	8'-0"	4"	3"		SP @ 13"	LED	1	8000 LUMENS 74 WATTS
F6E	DIRECT/INDIRECT LINEAR, STEEL, ADJUSTABLE SUPPORTS, CLEAR ACRYLIC DUST COVER, SOFT GLOW UPLIGHT, FLUSH DOWNLIGHT, PROVIDE EMERGENCY TRANSFER DEVICE.	8'-0"	4"	3"		SP @ 13"	LED	1	8000 LUMENS 74 WATTS
F7	LINEAR WALL MOUNT, CLEAR ACRYLIC CURVED LENS DIFFUSER.	4'-0"	4"	3"		WL @ 7"	LED	1	2700 LUMENS 37 WATTS
F8	SURFACE MOUNTED PARKING STRUCTURE LIGHT, WHITE, WEATHER RESISTANT ALUMINUM HOUSING, INTEGRAL OCCUPANCY SENSOR.	1'-6"	6"	1'-0"		CL	LED	1	11800 LUMENS 133 WATTS
F8A	SURFACE MOUNTED PARKING STRUCTURE LIGHT, WHITE, WEATHER RESISTANT ALUMINUM HOUSING, INTEGRAL OCCUPANCY SENSOR.	1'-6"	6"	1'-0"		CL	LED	1	11400 LUMENS 133 WATTS
F8AE	SURFACE MOUNTED PARKING STRUCTURE LIGHT, WHITE, WEATHER RESISTANT ALUMINUM HOUSING, INTEGRAL OCCUPANCY SENSOR, PROVIDE EMERGENCY TRANSFER DEVICE.	1'-6"	6"	1'-0"		CL	LED	1	11400 LUMENS 133 WATTS
F8E	SURFACE MOUNTED PARKING STRUCTURE LIGHT, WHITE, WEATHER RESISTANT ALUMINUM HOUSING, INTEGRAL OCCUPANCY SENSOR, PROVIDE EMERGENCY TRANSFER DEVICE.	1'-6"	6"	1'-0"		CL	LED	1	11800 LUMENS 133 WATTS
F9	OPEN RECESSED DOWNLIGHT BASE, CLEAR SPECULAR PARABOLIC SELF TRIMMING REFLECTOR DAMP LABEL, RELABELED FOR 100W INCANDESCENT EQUIVALENT A21 LED BULB.			9 1/2"	6"	RE	LED	1	1600 LUMENS 15 WATTS
F10	WALL LUMINAIRE, ALUMINUM HOUSING, POWDER COAT FINISH, COLOR SELECTION BY ARCHITECT FROM STANDARD COLORS, LISTED WET LOCATION, INTEGRAL PHOTOCELL, PROVIDE WITH EMERGENCY TRANSFER DEVICE.	1'-0"	1'-6"	10 1/2"		WL @ 10"	LED	1	3100 LUMENS 46 WATTS
F11	LINEAR CORNER MOUNT, ONE-PIECE, DIE-FORMED STAINLESS STEEL CLAMSHHELL HOUSING, PRISMATIC INNER LENS WITH CLEAR OUTER LENS, HARDENED SECURITY SCREWS AND POWDER COAT FINISH.	4'-0"	9"	9"		WLC L	LED	1	6000 LUMENS 74 WATTS
F12	ALUMINUM WALL MOUNT, ROUNDED END CAPS, HIGH IMPACT POLYCARBONATE LENS.	4'-0"	4"	1'-0"		WL @ 9"	LED	1	5350 LUMENS 49 WATTS
F12E	ALUMINUM WALL MOUNT, ROUNDED END CAPS, HIGH IMPACT POLYCARBONATE LENS, PROVIDE EMERGENCY TRANSFER DEVICE.	4'-0"	4"	1'-0"		WL @ 9"	LED	1	5350 LUMENS 49 WATTS
F13	RECESSED LED PANEL, WHITE EXTRUDED ALUMINUM HOUSING, OPAL POLYCARBONATE LENS, SURFACE MOUNT BACK TO BACK WITH 1" AIR GAP AND REMOTE DRIVER.	2'-0"	2'-0"	9/16"		O	LED	1	4080 LUMENS 40 WATTS
F14	BLACK OPEN RECESSED DOWNLIGHT BASE, CLEAR SPECULAR PARABOLIC SELF TRIMMING REFLECTOR DAMP LABEL, RELABELED FOR 150W INCANDESCENT EQUIVALENT A21 LED BULB.	1'-2 7/8"	9 3/8"			CL	LED	1	2850 LUMENS 15 WATTS
F15	BRONZE ADJUSTABLE, SHADED, WALL MOUNTED GOOSENECK FIXTURE IN ALUMINUM HOUSING, POWDER COAT FINISH, WET LOCATION LISTED.	1'-3"	9"	1'-3"		WL	LED	1	844 LUMENS 26 WATTS
S1	SITE LUMINAIRE, ALUMINUM EXTRUDED HOUSING GASKETED, TEMPERED GLASS LENS, TYPE V DISTRIBUTION WITH BACK SELECTION BY ARCHITECT FROM STANDARD COLORS, LISTED WET LOCATION, LAMP SUPPORT, IN-LINE FUSE(S) SQUARE STRAIGHT 4" ALUMINUM POLE WITH INTERNAL VIBRATION DAMPER, EMBEDDED BASE.	1'-8"	1'-3"	5 1/2"		PL @ 10"	LED	1	11000 LUMENS 86 WATTS
S2	SITE LUMINAIRE, ALUMINUM EXTRUDED HOUSING GASKETED, TEMPERED GLASS LENS, TYPE II DISTRIBUTION WITH BACK LIGHT CONTROL, COLOR SELECTION BY ARCHITECT FROM STANDARD COLORS, LISTED WET LOCATION, LAMP SUPPORT, IN-LINE FUSE(S) SQUARE STRAIGHT 4" ALUMINUM POLE WITH INTERNAL VIBRATION DAMPER, EMBEDDED BASE.	1'-8"	1'-3"	5 1/2"		PL @ 10"	LED	1	9000 LUMENS 86 WATTS
S3	BOLLARD LUMINAIRE, CAST ALUMINUM HOUSING, TYPE V DISTRIBUTION, COLOR SELECTION BY ARCHITECT FROM STANDARD COLORS, LISTED WET LOCATION, INTEGRATED SENSOR CONTROL.		3'-6"	4"		PL @ 42"	LED	1	1700 LUMENS 22 WATTS
S4	FLAG POLE TOP MOUNTED, FLAG TRACKING DOWNLIGHT, WET LOCATION LISTED, SILVER FINISH.		8 13/64"	4"		O	LED	1	6 WATTS 120 V
X1	SINGLE-FACE EXIT SIGN, WHITE THERMOPLASTIC BODY, GREEN LETTERS, UNIVERSAL ARROWS/MOUNTING.	1'-1"	2"	9"		CL	LED	1	L.E.D. 277 V
X2	DOUBLE-FACE EXIT SIGN, WHITE THERMOPLASTIC BODY, GREEN LETTERS, UNIVERSAL ARROWS/MOUNTING.	1'-1"	2"	9"		CL	LED	1	L.E.D. 277 V

CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS FOR DESIGN.

REFER TO SPECIFICATION SECTIONS LIGHTING 26 51 00 AND EMERGENCY LIGHTING 26 52 00 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

ALL LAMPS FOR THIS PROJECT SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. LAMP CORRELATED COLOR TEMPERATURE 4000K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE. OUTDOOR APPLICATIONS SHALL HAVE A CORRELATED COLOR TEMPERATURE 4000K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE.

ITEM	DESCRIPTION	L	W	H	DIA	MTG	TYPE	QTY	MODEL	VOLTS	TYPE	L/L	APPROVED MANUFACTURER
EM1	EMERGENCY UNIT, TWO ADJUSTABLE 6 VOLT HEADS, WHITE THERMOPLASTIC HOUSING, SELF TEST & DIAGNOSTICS OF INVERTER AND LAMPS	9"	2 1/2"	0"		WL	LED	2	2 WATT	277 V	EM	O	DUAL-LITE EV 2 I-02L
EM2	EMERGENCY UNIT, TWO ADJUSTABLE 6 VOLT HEADS, WHITE THERMOPLASTIC HOUSING, SELF TEST & DIAGNOSTICS OF INVERTER AND LAMPS, WET LOCATION LISTED, COLD LOCATION.	9"	2 1/2"	0"		WL @ 10"	LED	1	2 WATT	277 V	EM	O	DUAL-LITE PG Z4HR LITHONIA
F2	RECESSED INDIRECT/DIRECT, ANGLED DIFFUSER WITH DIFFUSE CENTER.	2'-0"	2'-0"	5 1/2"		RE	LED	1	4400 LUMENS 37 WATTS	277 V	DIM10	O	FINELITE HPR LED A 2X2 DCO B 277 SC C1 CREE
F2E	RECESSED INDIRECT/DIRECT, ANGLED DIFFUSER WITH DIFFUSE CENTER, PROVIDE WITH EMERGENCY TRANSFER DEVICE.	2'-0"	2'-0"	5 1/2"		RE	LED	1	4400 LUMENS 37 WATTS	277 V	DIM10	O	FINELITE HPR LED A 2X2 DCO B 277 SC C1 CREE
F3	4' INDUSTRIAL WITH NO UPLIGHT, POLYMER REFLECTOR AND HOUSING, AIRCRAFT CABLE HANGER.	4'-0"	1'-0"	4 1/4"		SP @ 8"	LED	1	4000 LUMENS 36 WATTS	277 V	DIM10	N	CREE CS14 40LHE 40K 10V FINELITE
F3E	4' INDUSTRIAL WITH NO UPLIGHT, POLYMER REFLECTOR AND HOUSING, AIRCRAFT CABLE HANGER, PROVIDE EMERGENCY TRANSFER DEVICE.	4'-0"	1'-0"	4 1/4"		SP @ 8"	LED	1	4000 LUMENS 36 WATTS	277 V	DIM10	N	CREE CS14 40LHE 40K 10V FINELITE
F4	ENCLOSED INDUSTRIAL WITH POLYMER HOUSING, MOLDED IN PLACE GASKET, PEBBLED LENS, UL LISTED WET LOCATION	4'-0"	7"	5"		WLC L	LED	1	4700 LUMENS 50 WATTS	120 V	DIM10	A	CREE WS4 47L 40K 10V FD SSL FINELITE
F5	RECESSED INDIRECT/DIRECT, FLAT DIFFUSER WITH DIFFUSE CENTER.	2'-0"	2'-0"	5 1/2"		RE	LED	1	3400 LUMENS 29 WATTS	277 V	DIM10	O	FINELITE HPR LED F 2X2 DCO S 277 SC C1 CREE
F5E	RECESSED INDIRECT/DIRECT, FLAT DIFFUSER WITH DIFFUSE CENTER, PROVIDE WITH EMERGENCY TRANSFER DEVICE.	2'-0"	2'-0"	5 1/2"		RE	LED	1	3400 LUMENS 29 WATTS	277 V	DIM10	O	FINELITE HPR LED F 2X2 DCO S 277 SC C1 CREE
F6	DIRECT/INDIRECT LINEAR, STEEL, ADJUSTABLE SUPPORTS, CLEAR ACRYLIC DUST COVER, SOFT GLOW UPLIGHT, FLUSH DOWNLIGHT.	8'-0"	4"	3"		SP @ 13"	LED	1	8000 LUMENS 74 WATTS	277 V	DIM10	N	FINELITE HP-4 ID 8 B 8 40 TG F 277 FA SC C1 OBD CREE
F6E	DIRECT/INDIRECT LINEAR, STEEL, ADJUSTABLE SUPPORTS, CLEAR ACRYLIC DUST COVER, SOFT GLOW UPLIGHT, FLUSH DOWNLIGHT, PROVIDE EMERGENCY TRANSFER DEVICE.	8'-0"	4"	3"		SP @ 13"	LED	1	8000 LUMENS 74 WATTS	277 V	DIM10	N	FINELITE HP-4 ID 8 B 8 40 TG F 277 FA SC C1 OBD CREE
F7	LINEAR WALL MOUNT, CLEAR ACRYLIC CURVED LENS DIFFUSER.	4'-0"	4"	3"		WL @ 7"	LED	1	2700 LUMENS 37 WATTS	277 V	DIM10	A	FINELITE S17 LED ACF SF 4 V 8 40 277 SC CREE
F8	SURFACE MOUNTED PARKING STRUCTURE LIGHT, WHITE, WEATHER RESISTANT ALUMINUM HOUSING, INTEGRAL OCCUPANCY SENSOR.	1'-6"	6"	1'-0"		CL	LED	1	11800 LUMENS 133 WATTS	277 V	ML	N	CREE PKG-EDG 5M DM 06 E UL WH 700 ML 40K
F8A	SURFACE MOUNTED PARKING STRUCTURE LIGHT, WHITE, WEATHER RESISTANT ALUMINUM HOUSING, INTEGRAL OCCUPANCY SENSOR.	1'-6"	6"	1'-0"		CL	LED	1	11400 LUMENS 133 WATTS	277 V	ML	N	CREE PKG-EDG 5M DM 06 E UL WH 700 ML 40K
F8AE	SURFACE MOUNTED PARKING STRUCTURE LIGHT, WHITE, WEATHER RESISTANT ALUMINUM HOUSING, INTEGRAL OCCUPANCY SENSOR, PROVIDE EMERGENCY TRANSFER DEVICE.	1'-6"	6"	1'-0"		CL	LED	1	11400 LUMENS 133 WATTS	277 V	ML	N	CREE PKG-EDG 5M DM 06 E UL WH 700 ML 40K
F8E	SURFACE MOUNTED PARKING STRUCTURE LIGHT, WHITE, WEATHER RESISTANT ALUMINUM HOUSING, INTEGRAL OCCUPANCY SENSOR, PROVIDE EMERGENCY TRANSFER DEVICE.	1'-6"	6"	1'-0"		CL	LED	1	11800 LUMENS 133 WATTS	277 V	ML	N	CREE PKG-EDG 5M DM 06 E UL WH 700 ML
F9	OPEN RECESSED DOWNLIGHT BASE, CLEAR SPECULAR PARABOLIC SELF TRIMMING REFLECTOR DAMP LABEL, RELABELED FOR 100W INCANDESCENT EQUIVALENT A21 LED BULB.			9 1/2"	6"	RE	LED	1	1600 LUMENS 15 WATTS	277 V	EB	N	PORTFOLIO HDK8701 C PRESCOLITE 1204-S7362 GOTHAM RP6 AC
F10	WALL LUMINAIRE, ALUMINUM HOUSING, POWDER COAT FINISH, COLOR SELECTION BY ARCHITECT FROM STANDARD COLORS, LISTED WET LOCATION, INTEGRAL PHOTOCELL, PROVIDE WITH EMERGENCY TRANSFER DEVICE.	1'-0"	1'-6"	10 1/2"		WL @ 10"	LED	1	3100 LUMENS 46 WATTS	277 V	ML	N	CREE SEC-EDG 3MB WM 04 E UL BZ 350 P FINELITE
F11	LINEAR CORNER MOUNT, ONE-PIECE, DIE-FORMED STAINLESS STEEL CLAMSHHELL HOUSING, PRISMATIC INNER LENS WITH CLEAR OUTER LENS, HARDENED SECURITY SCREWS AND POWDER COAT FINISH.	4'-0"	9"	9"		WLC L	LED	1	6000 LUMENS 74 WATTS	277 V	DIM10	P/C	KENALL CC 4 3 67L40K DCC 277 9/G 1 DLN
F12	ALUMINUM WALL MOUNT, ROUNDED END CAPS, HIGH IMPACT POLYCARBONATE LENS.	4'-0"	4"	1'-0"		WL @ 9"	LED	1	5350 LUMENS 49 WATTS	277 V	DIM10	P	KENALL MLHA12 48 R MW PP 48L40K DCC 1 277
F12E	ALUMINUM WALL MOUNT, ROUNDED END CAPS, HIGH IMPACT POLYCARBONATE LENS, PROVIDE EMERGENCY TRANSFER DEVICE.	4'-0"	4"	1'-0"		WL @ 9"	LED	1	5350 LUMENS 49 WATTS	277 V	DIM10	P	KENALL MLHA12 48 R MW PP 48L40K DCC 1 277
F13	RECESSED LED PANEL, WHITE EXTRUDED ALUMINUM HOUSING, OPAL POLYCARBONATE LENS, SURFACE MOUNT BACK TO BACK WITH 1" AIR GAP AND REMOTE DRIVER.	2'-0"	2'-0"	9/16"		O	LED	1	4080 LUMENS 40 WATTS	277 V	EB	P	NEWSSTAR AGS 22 OP 27 57
F14	BLACK OPEN RECESSED DOWNLIGHT BASE, CLEAR SPECULAR PARABOLIC SELF TRIMMING REFLECTOR DAMP LABEL, RELABELED FOR 150W INCANDESCENT EQUIVALENT A21 LED BULB.	1'-2 7/8"	9 3/8"			CL	LED	1	2850 LUMENS 15 WATTS	277 V	EB	O	GOTHAM PDPA 8AR LS T73 S B G SM PORTFOLIO PRESCOLITE
F15	BRONZE ADJUSTABLE, SHADED, WALL MOUNTED GOOSENECK FIXTURE IN ALUMINUM HOUSING, POWDER COAT FINISH, WET LOCATION LISTED.	1'-3"	9"	1'-3"		WL	LED	1	844 LUMENS 26 WATTS	277 V	EB	O	RAB LIGHTING GVL12 28Y AC A BK LIGHTING SPEC LIGHT
S1	SITE LUMINAIRE, ALUMINUM EXTRUDED HOUSING GASKETED, TEMPERED GLASS LENS, TYPE V DISTRIBUTION WITH BACK SELECTION BY ARCHITECT FROM STANDARD COLORS, LISTED WET LOCATION, LAMP SUPPORT, IN-LINE FUSE(S) SQUARE STRAIGHT 4" ALUMINUM POLE WITH INTERNAL VIBRATION DAMPER, EMBEDDED BASE.	1'-8"	1'-3"	5 1/2"		PL @ 10"	LED	1	11000 LUMENS 86 WATTS	277 V	HL	N	CREE OSO A NM 5ME B 57K UL BZ ML F R FINELITE
S2	SITE LUMINAIRE, ALUMINUM EXTRUDED HOUSING GASKETED, TEMPERED GLASS LENS, TYPE II DISTRIBUTION WITH BACK LIGHT CONTROL, COLOR SELECTION BY ARCHITECT FROM STANDARD COLORS, LISTED WET LOCATION, LAMP SUPPORT, IN-LINE FUSE(S) SQUARE STRAIGHT 4" ALUMINUM POLE WITH INTERNAL VIBRATION DAMPER, EMBEDDED BASE.	1'-8"	1'-3"	5 1/2"		PL @ 10"	LED	1	9000 LUMENS 86 WATTS	277 V	HL	N	CREE OSO A NM 2ME B 57K UL BZ ML F R OSQ-BLSMF FINELITE
S3	BOLLARD LUMINAIRE, CAST ALUMINUM HOUSING, TYPE V DISTRIBUTION, COLOR SELECTION BY ARCHITECT FROM STANDARD COLORS, LISTED WET LOCATION, INTEGRATED SENSOR CONTROL.		3'-6"	4"		PL @ 42"	LED	1	1700 LUMENS 22 WATTS	277 V	HL	N	CREE PNY-EDG 5M P4 02 E 27 BZ 350 HL FINELITE
S4	FLAG POLE TOP MOUNTED, FLAG TRACKING DOWNLIGHT, WET LOCATION LISTED, SILVER FINISH.		8 13/64"										

POLICE DEPARTMENT MIDTOWN DISTRICT

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

REVISION FOR:
NO. DESCRIPTION DATE

PANEL NAME: NL12 CONNECTED 30.5 KVA
TYPE: BOLT-ON MOUNTING: SURFACE
FED FROM: DP-L1 SOLID NEUTRAL GROUND BUS
SCCR: 42,000A LOCATION: ELEC. 126
MAIN: 225 AMCB VOLTS: 120/208 Wye PHASE: 3 WIRE: 4 DEMAND: 27.28 KVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	A	B	C	OVERCURRENT PROTECTION AMPS	LOAD DESCRIPTION	CKT NO.		
NL12-1	GATE	20 A	1	0.18	1.26	1	20 A POWERED FURNITURE	NL12-2		
NL12-3	POWERED FURNITURE	20 A	1		1.26	1	20 A POWERED FURNITURE	NL12-4		
NL12-5	POWERED FURNITURE	20 A	1		1.26	1	20 A POWERED FURNITURE	NL12-6		
NL12-7	POWERED FURNITURE	20 A	1	1.26	1	1	20 A RECEPTACLES	NL12-8		
NL12-9	POWERED FURNITURE	20 A	1		1.26	1	20 A POWERED FURNITURE	NL12-10		
NL12-11	Receptacles	20 A	1		1.26	0.72	1	20 A RECEPTACLES	NL12-12	
NL12-13	Receptacles	20 A	1	0.72	0.9	1	20 A RECEPTACLES	NL12-14		
NL12-15	Receptacles	20 A	1		1.26	0.9	1	20 A RECEPTACLES	NL12-16	
NL12-17	Receptacles	20 A	1			0.9	1.26	1	20 A RECEPTACLES	NL12-18
NL12-19	Receptacles	20 A	1	0.36	1.08	1	20 A RECEPTACLES	NL12-20		
NL12-21	Receptacles	20 A	1		0.9	0.36	1	20 A RECEPTACLES	NL12-22	
NL12-23	Receptacles	20 A	1			0.36	1.62	1	20 A RECEPTACLES	NL12-24
NL12-25	Receptacles	20 A	1	1.08	0.54	1	20 A RECEPTACLES	NL12-26		
NL12-27	POWERED FURNITURE	20 A	1		1.26	1.26	2	20 A POWERED FURNITURE	NL12-28	
NL12-29	SPARE	20 A	1			0	1.26	1	20 A SPARE	NL12-30
NL12-31	SPARE	20 A	1	0	0	1	20 A SPARE	NL12-32		
NL12-33	SPARE	20 A	1		0	0	1	20 A SPARE	NL12-34	
NL12-35	SPARE	20 A	1			0	0	1	20 A SPARE	NL12-36
NL12-37	SPARE	20 A	1	0	1.26	1	20 A RECEPTACLES	NL12-38		
NL12-39									NL12-40	
NL12-41									NL12-42	
Total Load:				9.64 KVA			10.98 KVA		9.9 KVA	
Total Amps:				80.33			91.83		82.83	

[Key:]

PANEL NAME: LSHB1 CONNECTED 2.2 KVA
TYPE: BOLT-ON MOUNTING: SURFACE
FED FROM: ATS-LS SOLID NEUTRAL GROUND BUS
SCCR: 22,000A LOCATION: ELECT B007
MAIN: 100 AFUSES VOLTS: 480/277 Wye PHASE: 3 WIRE: 4 DEMAND: 2.22 KVA

Panel Notes: FUSIBLE COORDINATION PANELBOARD

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	A	B	C	OVERCURRENT PROTECTION AMPS	LOAD DESCRIPTION	CKT NO.		
LSHB1-1	Lighting	20 A	1	0.74	1.45	1	20 A Lighting	LSHB1-2		
LSHB1-3	TR-15	30 A	3		0.2	0	1	20 A SPARE	LSHB1-4	
LSHB1-5		--	--			0	0	1	20 A SPARE	LSHB1-6
LSHB1-7		--	--	0	0			1	20 A SPARE	LSHB1-8
LSHB1-9	SPARE	20 A	1		0	0	1	20 A SPARE	LSHB1-10	
LSHB1-11	SPARE	20 A	1		0	0	1	20 A SPARE	LSHB1-12	
LSHB1-13	SPARE	20 A	1	0					LSHB1-14	
LSHB1-15	Lighting	20 A	1		0.02				LSHB1-16	
LSHB1-17									LSHB1-18	
LSHB1-19									LSHB1-20	
LSHB1-21									LSHB1-22	
LSHB1-23									LSHB1-24	
LSHB1-25									LSHB1-26	
LSHB1-27									LSHB1-28	
LSHB1-29									LSHB1-30	
LSHB1-31									LSHB1-32	
LSHB1-33									LSHB1-34	
LSHB1-35									LSHB1-36	
LSHB1-37									LSHB1-38	
LSHB1-39									LSHB1-40	
LSHB1-41									LSHB1-42	
Total Load:				2.18 KVA			0.22 KVA		0 KVA	
Total Amps:				8.01			0.9		0	

[Key:]

PANEL NAME: LSL11 CONNECTED 0 KVA
TYPE: BOLT-ON MOUNTING: SURFACE
FED FROM: LSLB1 VIA FEED THRU LUGS SOLID NEUTRAL GROUND BUS
SCCR: 22,000A LOCATION: ELECT. 114
MAIN: 100 AMLO VOLTS: 120/208 Wye PHASE: 3 WIRE: 4 DEMAND: 0 KVA

Panel Notes: FUSIBLE COORDINATION PANELBOARD

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	A	B	C	OVERCURRENT PROTECTION AMPS	LOAD DESCRIPTION	CKT NO.		
LSL11-1	FIRE ALARM BELL	15 A	1	0	0	1	20 A SPARE	LSL11-2		
LSL11-3	SPARE	20 A	1		0	0	1	20 A SPARE	LSL11-4	
LSL11-5	SPARE	20 A	1		0	0	1	20 A SPARE	LSL11-6	
LSL11-7	SPARE	20 A	1	0	0			1	20 A SPARE	LSL11-8
LSL11-9	SPARE	20 A	1		0			1	20 A SPARE	LSL11-10
LSL11-11									LSL11-12	
LSL11-13									LSL11-14	
LSL11-15									LSL11-16	
LSL11-17									LSL11-18	
LSL11-19									LSL11-20	
LSL11-21									LSL11-22	
LSL11-23									LSL11-24	
LSL11-25									LSL11-26	
LSL11-27									LSL11-28	
LSL11-29									LSL11-30	
LSL11-31									LSL11-32	
LSL11-33									LSL11-34	
LSL11-35									LSL11-36	
LSL11-37									LSL11-38	
LSL11-39									LSL11-40	
LSL11-41									LSL11-42	
Total Load:				0 KVA			0 KVA		0 KVA	
Total Amps:				0			0		0	

[Key:]

PANEL NAME: LSLB1 CONNECTED 0 KVA
TYPE: BOLT-ON MOUNTING: SURFACE
FED FROM: LSHB1 SOLID NEUTRAL GROUND BUS
SCCR: 22,000A LOCATION: ELECT B007
MAIN: 60 AFUSES VOLTS: 120/208 Wye PHASE: 3 WIRE: 4 DEMAND: 0 KVA

Panel Notes: FUSIBLE COORDINATION PANELBOARD, FEED THRU LUGS

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	A	B	C	OVERCURRENT PROTECTION AMPS	LOAD DESCRIPTION	CKT NO.		
LSLB1-1	FACP	15 A	1	0.2	0	1	20 A SPARE	LSLB1-2		
LSLB1-3	SPARE	20 A	1		0	0	1	20 A SPARE	LSLB1-4	
LSLB1-5	SPARE	20 A	1		0	0	1	20 A SPARE	LSLB1-6	
LSLB1-7	SPARE	20 A	1	0	0			1	20 A SPARE	LSLB1-8
LSLB1-9	SPARE	20 A	1		0				LSLB1-10	
LSLB1-11									LSLB1-12	
LSLB1-13									LSLB1-14	
LSLB1-15									LSLB1-16	
LSLB1-17									LSLB1-18	
LSLB1-19									LSLB1-20	
LSLB1-21									LSLB1-22	
LSLB1-23									LSLB1-24	
LSLB1-25									LSLB1-26	
LSLB1-27									LSLB1-28	
LSLB1-29									LSLB1-30	
LSLB1-31									LSLB1-32	
LSLB1-33									LSLB1-34	
LSLB1-35									LSLB1-36	
LSLB1-37									LSLB1-38	
LSLB1-39									LSLB1-40	
LSLB1-41									LSLB1-42	
Total Load:				0.2 KVA			0 KVA		0 KVA	
Total Amps:				1.87			0		0	

[Key:]

PANEL NAME: NH11 CONNECTED 7.4 KVA
TYPE: BOLT-ON MOUNTING: SURFACE
FED FROM: DP-H1 SOLID NEUTRAL GROUND BUS
SCCR: 42,000A LOCATION: ELECT. 114
MAIN: 100 AMCB VOLTS: 480/277 Wye PHASE: 3 WIRE: 4 DEMAND: 7.37 KVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	A	B	C	OVERCURRENT PROTECTION AMPS	LOAD DESCRIPTION	CKT NO.		
NH11-1	Lighting	20 A	1	3.31	0.57	3	15 A MAU-2	NH11-2		
NH11-3	Lighting	20 A	1		1.12	0.57	--	--	NH11-4	
NH11-5	SPARE	20 A	1			0	0.57	--	NH11-6	
NH11-7	SPARE	20 A	1	0	0			1	20 A SPARE	NH11-8
NH11-9	SPARE	20 A	1		0	0		1	20 A SPARE	NH11-10
NH11-11	SPARE	20 A	1			0	0	1	20 A SPARE	NH11-12
NH11-13	SPARE	20 A	1	0	0.4			3	15 A SALLYPORT DOOR	NH11-14
NH11-15					0.4			--	--	NH11-16
NH11-17						0.4		--	--	NH11-18
NH11-19										NH11-20
NH11-21										NH11-22
NH11-23										NH11-24
NH11-25										NH11-26
NH11-27										NH11-28
NH11-29										NH11-30
NH11-31										NH11-32
NH11-33										NH11-34
NH11-35										NH11-36
NH11-37										NH11-38
NH11-39										NH11-40
NH11-41										NH11-42
Total Load:				4.28 KVA			2.08 KVA		0.97 KVA	
Total Amps:				16.07			8.14		3.48	

[Key:]

PANEL NAME: NH12 CONNECTED 5.3 KVA
TYPE: BOLT-ON MOUNTING: SURFACE
FED FROM: DP-H1 SOLID NEUTRAL GROUND BUS
SCCR: 42,000A LOCATION: ELEC. 126
MAIN: 100 AMCB VOLTS: 480/277 Wye PHASE: 3 WIRE: 4 DEMAND: 5.34 KVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	A	B	C	OVERCURRENT PROTECTION AMPS	LOAD DESCRIPTION	CKT NO.		
NH12-1	Lighting	20 A	1	3.63	1.66	1	20 A Lighting	NH12-2		
NH12-3	SPARE	20 A	1		0	0	1	20 A SPARE	NH12-4	
NH12-5	SPARE	20 A	1		0	0	1	20 A SPARE	NH12-6	
NH12-7	SPARE	20 A	1	0	0			1	20 A SPARE	NH12-8
NH12-9	SPARE	20 A	1		0	0		1	20 A SPARE	NH12-10
NH12-11									NH12-12	
NH12-13									NH12-14	
NH12-15									NH12-16	
NH12-17									NH12-18	
NH12-19									NH12-20	
NH12-21									NH12-22	
NH12-23									NH12-24	
NH12-25									NH12-26	
NH12-27									NH12-28	
NH12-29									NH12-30	
NH12-31									NH12-32	
NH12-33									NH12-34	
NH12-35									NH12-36	
NH12-37									NH12-38	
NH12-39									NH12-40	
NH12-41									NH12-42	
Total Load:				5.28 KVA			0 KVA		0 KVA	
Total Amps:				19.1			0		0	

[Key:]

DRAWN BY ANW

CHECKED BY JBD

ELECTRICAL SCHEDULES

E501

KJW ENGINEERING CONSULTANTS
1000 DENNING WAY SUITE 200
MIDDLETON, WISCONSIN 53502
608.223.8600 FAX: 608.836.0415
www.kjw.com
PROJECT # 16.0020.00

THE FUTURE. BUILT SMARTER.

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REFERENCE SCALE IN INCHES
1" = 1'

PANEL NAME: NLB1												
TYPE: BOLT-ON MOUNTING: SURFACE FED FROM: DP-1 L SCCR: 42,000A LOCATION: ELECT B007					CONNECTED 60.1 kVA MAIN: 225 A/NCB VOLTS: 120/208 Wye PHASE: 3 WIRE: 4 DEMAND: 57.94 kVA							
Panel Notes:												
CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	A	B	C	OVERCURRENT PROTECTION AMPS	P	LOAD DESCRIPTION	CKT NO.		
NLB1-1	Receptacles	20 A	1	0.54	0		1	20 A	Receptacles	NLB1-2		
NLB1-3	Receptacles	20 A	1		1.08	0.36	1	20 A	Receptacles	NLB1-4		
NLB1-5	Receptacles	20 A	1			0.36	0.36	1	20 A	Receptacles	NLB1-6	
NLB1-7	Receptacles	20 A	1	0.9	0.36		1	20 A	Lighting	NLB1-8		
NLB1-9	Lighting	20 A	1		0.3	0.9	1	20 A	Receptacles	NLB1-10		
NLB1-11	Receptacles	20 A	1			0.4	0.9	1	20 A	Treadmill	NLB1-12	
NLB1-13	Receptacles	20 A	1	0.36	1.08		1	20 A	Receptacles	NLB1-14		
NLB1-15	Receptacles	20 A	1		0.42	0.54	1	20 A	Receptacles	NLB1-16		
NLB1-17	Receptacles	20 A	1			1.26	1.26	1	20 A	Receptacles	NLB1-18	
NLB1-19	EWG *G	20 A	1	0.18	0.83		1	15 A	UH-1	NLB1-20		
NLB1-21	LOCKER POWER FEED	20 A	1		1.26	1.26	1	20 A	LOCKER POWER FEED	NLB1-22		
NLB1-23	LOCKER POWER FEED	20 A	1			1.26	1.26	1	20 A	LOCKER POWER FEED	NLB1-24	
NLB1-25	LOCKER POWER FEED	20 A	1	1.26	1.26		1	20 A	LOCKER POWER FEED	NLB1-26		
NLB1-27	LOCKER POWER FEED	20 A	1		1.26	1.26	1	20 A	LOCKER POWER FEED	NLB1-28		
NLB1-29	LOCKER POWER FEED	20 A	1			1.26	0.72	1	20 A	Receptacles	NLB1-30	
NLB1-31	Receptacles	20 A	1	1.08	0.83		1	15 A	UH-3	NLB1-32		
NLB1-33	LOCKER POWER FEED	20 A	1		1.26	1.26	1	20 A	LOCKER POWER FEED	NLB1-34		
NLB1-35	LOCKER POWER FEED	20 A	1			1.26	1.26	1	20 A	LOCKER POWER FEED	NLB1-36	
NLB1-37	LOCKER POWER FEED	20 A	1	1.26	1.26		1	20 A	LOCKER POWER FEED	NLB1-38		
NLB1-39	LOCKER POWER FEED	20 A	1		1.26	1.26	1	20 A	LOCKER POWER FEED	NLB1-40		
NLB1-41	LOCKER POWER FEED	20 A	1			1.26	0.8	1	20 A	SP-1	NLB1-42	
NLB1-43	CP-1, WH-1	15 A	1	0.7	0.83		1	15 A	UH-2	NLB1-44		
NLB1-45	WS-1 *G	20 A	1		0.5	0.6	1	20 A	ERU-1 WHEEL	NLB1-46		
NLB1-47	ERU-1 120V	15 A	1			0.5	0.18	1	20 A	Power	NLB1-48	
NLB1-49	DDC PANEL	20 A	1	0.36	0.18		1	20 A	Power	NLB1-50		
NLB1-51	SPARE	20 A	1		0	0	1	20 A	SPARE	NLB1-52		
NLB1-53	Other	20 A	1			0.01	0.2	1	20 A	B-1	NLB1-54	
NLB1-55	B-2	20 A	1	0.2	0.92		2	15 A	DFSS-2	NLB1-56		
NLB1-57	DFSS-1	15 A	2		0.92	0.92	--	--	--	NLB1-58		
NLB1-61	EF-1	15 A	1	0.67	0.83		0.92	0	1	20 A	Power	NLB1-62
NLB1-63	Power	20 A	1		1.26	1.26	1	20 A	Power	NLB1-64		
NLB1-65	Power	20 A	1			0.54	0.54	1	20 A	Power	NLB1-66	
NLB1-67	Power	20 A	1	1.26	1.26		1	20 A	Power	NLB1-68		
NLB1-69	Power	20 A	1		0.72	0.72	1	20 A	Power	NLB1-70		
NLB1-71	Power	20 A	1			0.9	0.72	1	20 A	Power	NLB1-72	
NLB1-73	ELEVATOR CAB	20 A	1	0.5	0.18		1	20 A	Receptacles	NLB1-74		
NLB1-75	Receptacles	20 A	1		0.18	0.18	1	20 A	Receptacles	NLB1-76		
NLB1-77	Receptacles	20 A	1			0.36	0	1	20 A	HAND DRYER	NLB1-78	
NLB1-79	Power	20 A	1	0.72	0.9		1	20 A	Power	NLB1-80		
NLB1-81	HAND DRYER	20 A	1		0	0	1	20 A	SPARE	NLB1-82		
NLB1-83	SPARE	20 A	1			0	0	1	20 A	SPARE	NLB1-84	
		Total Load:		20.71 kVA	20.94 kVA	18.49 kVA						
		Total Amps:		175.46	177.37	154.04						
[Key:]												

PANEL NAME: NHB1											
TYPE: BOLT-ON MOUNTING: SURFACE FED FROM: DP-1 H1 SCCR: 42,000A LOCATION: ELECT B007					CONNECTED 75.1 kVA MAIN: 225 A/NCB VOLTS: 480/277 Wye PHASE: 3 WIRE: 4 DEMAND: 75.07 kVA						
Panel Notes:											
CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	A	B	C	OVERCURRENT PROTECTION AMPS	P	LOAD DESCRIPTION	CKT NO.	
NHB1-1	Lighting	20 A	1	3.13	1.42		1	20 A	Lighting	NHB1-2	
NHB1-3	Lighting	20 A	1		1.11	0.96	1	20 A	Lighting	NHB1-4	
NHB1-5	SPARE	20 A	1			0	1.27	3	15 A	ERU-1 SUPPLY	NHB1-6
NHB1-7	ERU-1 RETURN	15 A	3	1.27	1.27		--	--	--	NHB1-8	
NHB1-9	--	--	--		1.27	1.27	--	--	--	NHB1-10	
NHB1-11	--	--	--			1.27	5.87	3	35 A	SP-1, 3#8 & 1#10 GND	NHB1-12
NHB1-15	AHU-1, 3#8 & 1#8 GND	45 A	3	5.57	5.87		--	--	--	NHB1-14	
NHB1-16	--	--	--		5.57	5.87	--	--	--	NHB1-16	
NHB1-17	--	--	--			5.57	0	1	20 A	SPARE	NHB1-18
NHB1-19	RF-1	20 A	3	2.93	2.03		3	15 A	MAU-1	NHB1-20	
NHB1-21	--	--	--		2.93	2.03	--	--	--	NHB1-22	
NHB1-23	--	--	--			2.93	2.03	--	--	NHB1-24	
NHB1-25	P-1	15 A	3	0.9	0.9		3	15 A	P-2	NHB1-26	
NHB1-27	--	--	--		0.9	0.9	--	--	--	NHB1-28	
NHB1-29	--	--	--			0.9	0.9	--	--	NHB1-30	
NHB1-31	Power	20 A	3	1.33	0.53		3	20 A	Power	NHB1-32	
NHB1-33	--	--	--		1.33	0.53	--	--	--	NHB1-34	
NHB1-35	--	--	--			1.33	0.53	--	--	NHB1-36	
NHB1-37	PARKING DOOR	15 A	3	0.2	0		1	20 A	SPARE	NHB1-38	
NHB1-39	--	--	--		0.2	0	1	20 A	SPARE	NHB1-40	
NHB1-41	--	--	--			0.2	0	1	20 A	SPARE	NHB1-42
		Total Load:		27.35 kVA	24.88 kVA	22.8 kVA					
		Total Amps:		99.88	91	82.3					
[Key:]											

PANEL NAME: NL11											
TYPE: BOLT-ON MOUNTING: SURFACE FED FROM: DP-1 L SCCR: 42,000A LOCATION: ELECT. 114					CONNECTED 42.6 kVA MAIN: 225 A/NCB VOLTS: 120/208 Wye PHASE: 3 WIRE: 4 DEMAND: 33.06 kVA						
Panel Notes:											
CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	A	B	C	OVERCURRENT PROTECTION AMPS	P	LOAD DESCRIPTION	CKT NO.	
NL11-1	Receptacles	20 A	1	1.08	1.2		1	20 A	REFRIGERATOR, *G	NL11-2	
NL11-3	MICROWAVE	20 A	1		1.5	1.5	1	20 A	MICROWAVE	NL11-4	
NL11-5	DISPOSAL	20 A	1			1.2	0.9	1	20 A	COFFEE	NL11-6
NL11-7	Receptacles	20 A	1	0.54	1.2		1	20 A	REFRIGERATOR	NL11-8	
NL11-9	Receptacles	20 A	1		0.6	1.26	2	20 A	POWERED FURNITURE	NL11-10	
NL11-11	POWERED FURNITURE	20 A	2			1.26	1.26	--	--	NL11-12	
NL11-13	--	--	--		1.26	1.26	1	20 A	Receptacles	NL11-14	
NL11-15	Receptacles	20 A	1		0.54	0.72	1	20 A	Receptacles	NL11-16	
NL11-17	Receptacles	20 A	1			0.72	1.26	1	20 A	Receptacles	NL11-18
NL11-19	Lighting	20 A	1	0	1.62		1	20 A	Receptacles	NL11-20	
NL11-21	Receptacles	20 A	1		1.44	0	1	20 A	HAND DRYER	NL11-22	
NL11-23	EWG *G	20 A	1			0.18				NL11-24	
NL11-25	Receptacles	20 A	1	1.44	0.54		1	20 A	Receptacles	NL11-26	
NL11-27	POWERED FURNITURE	20 A	1		1.26	0.9	1	20 A	Receptacles	NL11-28	
NL11-29	Receptacles	20 A	1			0.9	0.48	1	20 A	Receptacles	NL11-30
NL11-31	DDC PANEL	20 A	1	0.5	0.9		1	20 A	Receptacles	NL11-32	
NL11-33	Receptacles	20 A	1		0.6	0	1	20 A	HAND DRYER	NL11-34	
NL11-35	Receptacles	20 A	1			1.26	0.83	1	15 A	UH-5	NL11-36
NL11-37	UH-4	15 A	1	0.83	0.67		1	15 A	EF-3	NL11-38	
NL11-39	EF-4	15 A	1		0.67	0.18	1	20 A	GATE	NL11-40	
NL11-41	Receptacles	20 A	1		0.18	0.72	1	20 A	Receptacles	NL11-42	
NL11-43	--	--	--		0.5		1	20 A	FAA PANEL	NL11-44	
NL11-45	POWERED FURNITURE	20 A	2		1.26	0.18	1	20 A	Receptacles	NL11-46	
NL11-47	--	--	--			1.26	1.2	1	20 A	DISHWASHER, *G	NL11-48
NL11-49	AUTO DOOR	20 A	1	0.4	0.54		1	20 A	Receptacles	NL11-50	
NL11-51	Other	20 A	1		0	0.6	1	20 A	EWG *G	NL11-52	
NL11-53	HAND DRYER	20 A	1			0	1.3	1	20 A	Receptacles	NL11-54
NL11-55	SPARE	20 A	1	0	0		1	20 A	SPARE	NL11-56	
NL11-57	SPARE	20 A	1		0	0	1	20 A	SPARE	NL11-58	
NL11-59	SPARE	20 A	1			0	0	1	20 A	SPARE	NL11-60
NL11-61	SPARE	20 A	1	0	0		1	20 A	SPARE	NL11-62	
NL11-63	SPARE	20 A	1		0	0	1	20 A	SPARE	NL11-64	
NL11-65	--	--	--							NL11-66	
NL11-67	--	--	--							NL11-68	
NL11-69	--	--	--							NL11-70	
NL11-71	--	--	--							NL11-72	
NL11-73	--	--	--							NL11-74	
NL11-75	--	--	--							NL11-76	
NL11-77	--	--	--							NL11-78	
NL11-79	--	--	--							NL11-80	
NL11-81	--	--	--							NL11-82	
NL11-83	--	--	--							NL11-84	
		Total Load:		14.48 kVA	13.21 kVA	14.91 kVA					
		Total Amps:		122.29	110.08	125.86					
[Key:]											

POLICE DEPARTMENT MIDTOWN DISTRICT

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

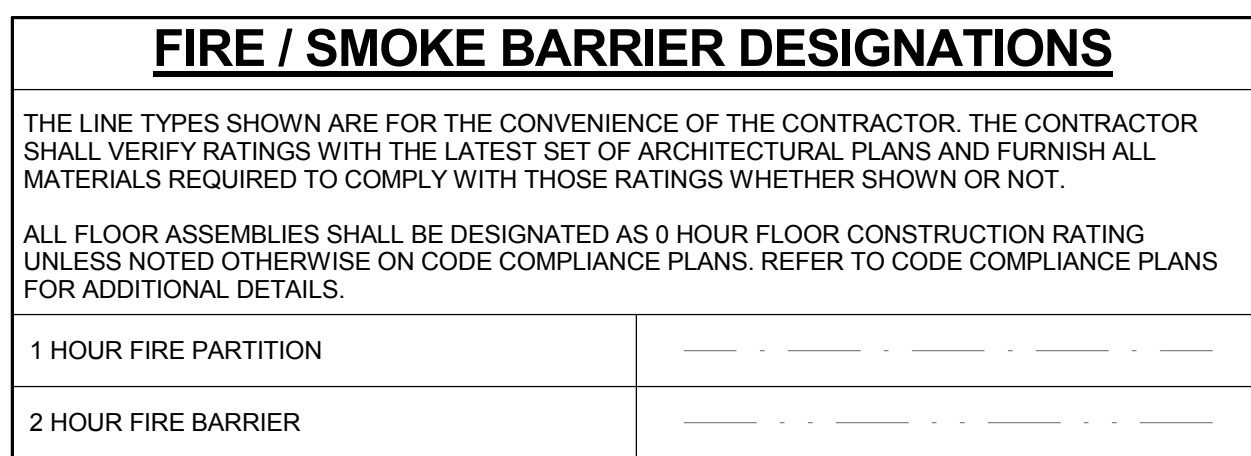
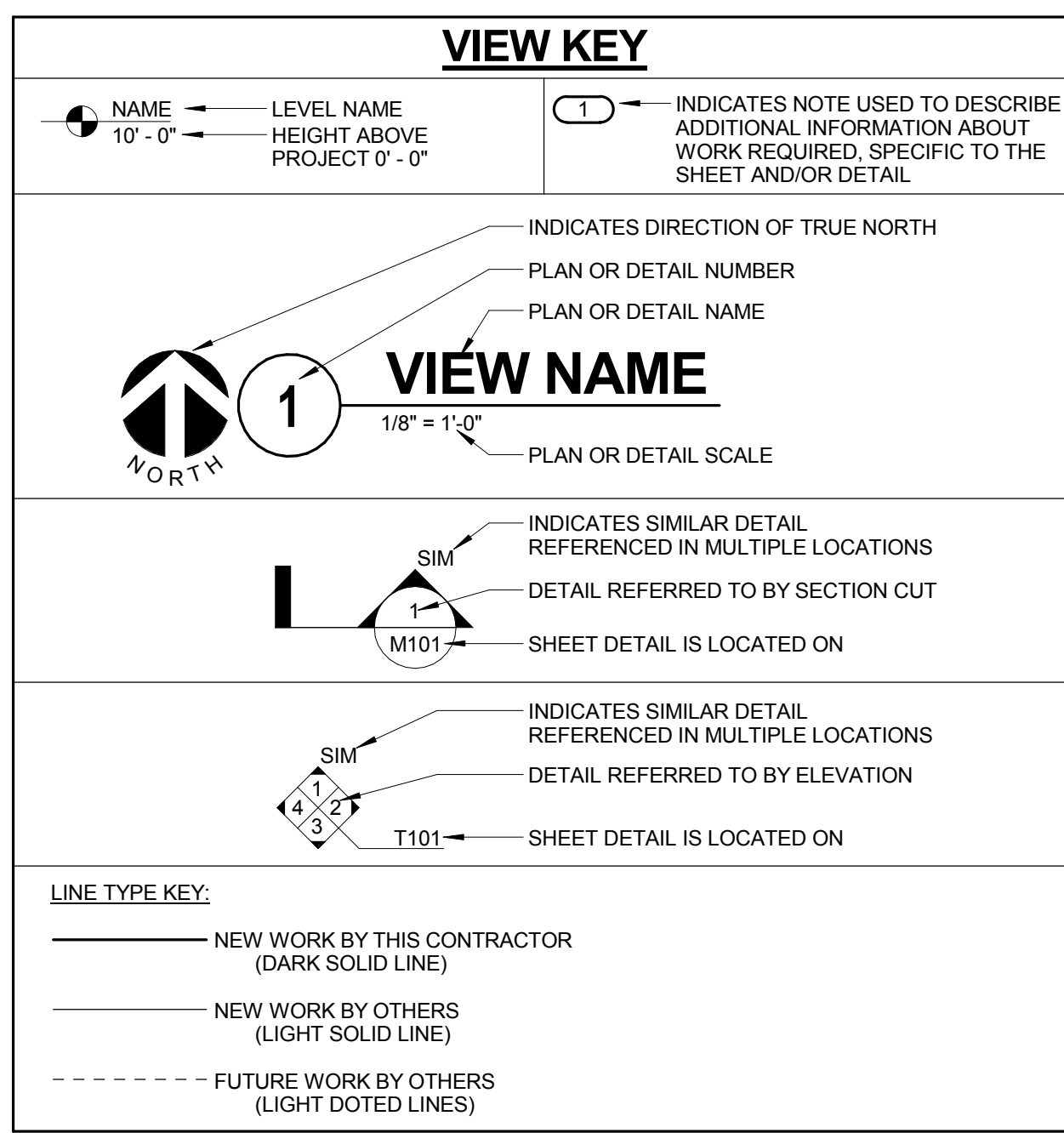
PROJECT NUMBER 152413.01

ISSUED FOR: CONSTRUCTION 5-5-17

REVISION FOR: NO. DESCRIPTION DATE

DRAWN BY ANW

CHECKED BY J



CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.T.C.	AUTOMATIC TEMPERATURE CONTROL CONTRACTOR
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

CONTACT PERSONS:

DESCRIPTION:	PERSON:
PROJECT MANAGER	KRIS COTHARN
MECHANICAL ENGINEER	PAUL HANSEN
ELECTRICAL ENGINEER	ALEX WELK
TECHNOLOGY ENGINEER	GWEN BROMME
STRUCTURAL ENGINEER	BRENT BALLWEG

PLUMBING FIXTURE ROUGH-IN SCHEDULE

NOTES: 1) SANITARY RISER UP IN WALL TO FIXTURE SHALL BE A MINIMUM OF 2". 2) 1/2" CW AND HW APPLIES ONLY TO THE FINAL VERTICAL RISE-DROP TO EACH FIXTURE. BRANCH PIPING TO VERTICAL RISE-DROP SHALL BE A MINIMUM OF 3/4" UNLESS NOTED OTHERWISE. 3) SIZES SHOWN ARE MINIMUMS. SIZES SHOWN ON THE DRAWING THAT ARE LARGER THAN THE SIZES LISTED IN THE SCHEDULE SHALL DICTATE THE ROUGH-IN SIZE.

FIXTURE DESCRIPTION	DOMESTIC CW (NOTE 3)	DOMESTIC HW (NOTE 3)	SANITARY (NOTE 3)	VENT (NOTE 3)	REMARKS
ELECTRIC WATER COOLER	1/2"	-	1 1/2"	1 1/4"	NOTE 1 & 2
FLOOR DRAIN/FLOOR SINK	-	-	2"	1 1/2"	-
FLOOR DRAIN/FLOOR SINK	-	-	3"	1 1/2"	-
FLOOR DRAIN/FLOOR SINK	-	-	4"	2"	-
HOSE BIBB	3/4"	-	-	-	-
LAVATORY	1/2"	1/2"	1 1/4"	1 1/4"	NOTE 1 & 2
MOP BASIN	3/4"	3/4"	3"	1 1/2"	-
SERVICE SINK - LAUNDRY TUB	3/4"	3/4"	1 1/2"	1 1/2"	-
SHOWER	3/4"	3/4"	2"	1 1/2"	NOTE 2
SINK	1/2"	1/2"	1 1/2"	1 1/2"	NOTES 1 & 2
URINAL	3/4"	-	2"	1 1/2"	-
UTILITY BOX - COLD WATER	1/2"	-	-	-	-
WATER CLOSET	1 1/2"	-	4"	2"	-

PLUMBING SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
CWV	CLEAR WATER VENT
CW	COLD WATER - POTABLE
D	DRAIN
DT	DRAIN TILE
G	NATURAL GAS
HW	HOT WATER - POTABLE
HWC	HOT WATER CIRCULATING - POTABLE
SAN	SANITARY DRAINAGE
SCW	SOFT COLD WATER
ST(1,000)	STORM DRAINAGE (ROOF SQUARE FOOTAGE)
STS	STORM DRAINAGE (SECONDARY)
V	VENT
W	SERVICE WATER - POTABLE
PCAP	PIPE CAP
PD	PIPE DOWN
PU/D	PIPE UP OR UP/DOWN
PF	PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: F3 = FLOOR DRAIN)
PI	PITCH PIPE IN DIRECTION
DF	DIRECTION OF FLOW IN PIPE
RD-1 (1,000)	ROOF DRAIN PROPERTIES SYMBOL SIZE (GALLONS PER MINUTE)
NC	NEW CONNECTION
DC	DI-ELECTRIC CONNECTION
UJ	UNION/FLANGE
SO	SHUTOFF VALVE NORMALLY OPEN
SC	SHUTOFF VALVE NORMALLY CLOSED
BV	BALANCING VALVE (NUMBER INDICATES GPM)
CV	CHECK VALVE
SV	SOLENOID VALVE
SRV	SAFETY/RELIEF VALVE
R	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB
PRV	PRESSURE REDUCING VALVE (LIQUID/GAS)
P	PUMP
M	METER
VB	VACUUM BREAKER
PG	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
TS	TEMPERATURE SENSOR WITH WELL
TD	THERMOMETER WITH WELL (DIAL TYPE)
TF	THERMOMETER WITH WELL (FILLED TYPE)
PT	PRESSURE/TEMPERATURE TEST PLUG

PLUMBING ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
CB	CATCH BASIN
CI	CAST IRON
CO	CLEANOUT
EE	EMERGENCY EYEWASH
ESE	EMERGENCY SHOWER/EYEWASH
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FM	FLOW METER
FS	FLOOR SINK
GD	GARBAGE DISPOSER
GI	GREASE INTERCEPTOR
HB	HOSE BIBB
I.E.	INVERT ELEVATION (FOR REFERENCE ONLY)
LAV	LAVATORY
MV	MOP BASIN
MB	MIXING VALVE
NC	NEW CONNECTION
NIC	NOT IN CONTRACT
OS	OIL SEPARATOR
RD	ROOF DRAIN
SH	SHOWER
SK	SINK
SS	SERVICE SINK
TD	TRENCH DRAIN
TP	TRAP PRIMER
TYP	TYPICAL
UR	URINAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WMF	WASHING MACHINE FIXTURE
WM	WATER METER
WS	WATER SOFTENER
UB	UTILITY BOX
UNO	UNLESS NOTED OTHERWISE
YCO	YARD CLEANOUT

MECHANICAL GENERAL NOTES:

- THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
- CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.
- CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.
- ALL FIXTURES SHALL CONFORM TO FEDERAL ACT S.3874
- INVERT ELEVATIONS ARE FROM EXISTING DRAWINGS AND MAY NOT BE ACCURATE. VERIFY ALL ELEVATIONS BEFORE BEGINNING WORK.
- VERIFY UNDERGROUND PIPE SIZES, INVERT ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING ANY WORK.
- REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURES.
- EXISTING CONDITIONS ON DEMOLITION PLANS ARE PROVIDED TO INDICATE THE GENERAL SCOPE OF ITEMS TO BE REMOVED. SEE SPECIFICATION SECTION 22.05.05 FOR ADDITIONAL DEMOLITION INFORMATION.
- P.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW OR DEMOLITION WORK UNLESS NOTED OTHERWISE. SEE SPECIFICATION SECTION 22.05.05 FOR ADDITIONAL INFORMATION.

PLUMBING SHEET INDEX

Sheet Number	Sheet Name
P000	COVER SHEET - PLUMBING
P100	UNDERFLOOR PLAN - PLUMBING
P101	LOWER LEVEL - PLUMBING
P102	FIRST FLOOR PLAN - PLUMBING
P103	ROOF PLAN - PLUMBING
P200	RISER DIAGRAM - PLUMBING
P201	RISER DIAGRAM - PLUMBING
P202	RISER DIAGRAM - PLUMBING
P203	RISER DIAGRAM - PLUMBING
P300	FLOW DIAGRAM - PLUMBING
P301	DETAILS - PLUMBING
P400	PLUMBING MATERIAL LIST - PLUMBING
P401	PLUMBING MATERIAL LIST - PLUMBING

- ### MECHANICAL GENERAL NOTES:
- THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.
- DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
 - DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
 - COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
 - REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
 - ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
 - EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
 - REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
 - EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
 - IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
 - SEAL ALL FLOOR WALL AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
 - CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
 - WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
 - EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY BETWEEN DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
 - DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
 - MAINTAIN MINIMUM 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.
 - PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
 - DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

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PROJECT NUMBER 152413.01

ISSUED FOR:
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WATER CALCULATION WORKSHEET - SOFTENED COLD WATER

INFORMATION REQUIRED TO SIZE WATER SERVICE AND WATER DISTRIBUTION (CW):

1. DEMAND OF BUILDING IN WATER SUPPLY FIXTURE UNITS (WSFU):	150.5 WSFU
1A. DEMAND OF BUILDING IN WSFU CONVERTED TO GALLONS PER MINUTE:	80 GPM
2. ELEVATION DIFFERENCE FROM MAIN OR EXTERNAL PRESSURE TANK TO BUILDING CONTROL VALVE:	-6 FEET
3. SIZE OF WATER METER:	1.5 INCHES
4. DEVELOPED LENGTH FROM MAIN OR EXTERNAL PRESSURE TANK TO BUILDING CONTROL VALVE:	200 FEET
5. LOW PRESSURE AT MAIN IN STREET OR EXTERNAL PRESSURE TANK:	59.0 PSI
CALCULATE WATER PRESSURE LOSS	
6. LOW PRESSURE AT MAIN IN STREET OR EXTERNAL PRESSURE TANK (VALUE OF #5 ABOVE):	59.0
7. DETERMINE PRESSURE LOSS DUE TO FRICTION IN 6" DIAMETER WATER SERVICE. WATER SERVICE PIPING MATERIAL IS: DUCTILE IRON	0.1
PRESSURE LOSS PER 100 FEET:	0.1
SUBTRACT VALUE OF "7"	
SUBTOTAL	
8. DETERMINE PRESSURE LOSS OR GAIN DUE TO ELEVATION, (MULTIPLY THE VALUE OF #2 ABOVE BY 0.434):	SUBTRACT VALUE OF "8"
9. AVAILABLE PRESSURE AFTER THE BUILDING CONTROL VALVE:	SUBTOTAL
CALCULATE THE PRESSURE AVAILABLE FOR UNIFORM LOSS (VALUE OF "A")	
B. PRESSURE AVAILABLE AFTER THE BUILDING CONTROL VALVE (FROM #9 ABOVE):	VALUE OF "B"
C. PRESSURE LOSS OF WATER METER (WHEN METER IS REQUIRED):	SUBTRACT VALUE OF "C"
D. PRESSURE AT CONTROLLING FIXTURE:	SUBTOTAL
CONTROLLING FIXTURE IS: EMERGENCY EYEWASH & ASSOCIATED MIXING VALVE	SUBTRACT VALUE OF "D"
SUBTOTAL	
E. DIFFERENCE IN ELEVATION BETWEEN BUILDING CONTROL VALVE AND THE CONTROLLING FIXTURE IN FEET: 14x0.434 PSIFt	SUBTRACT VALUE OF "E"
SUBTOTAL	
F. PRESSURE LOSS DUE TO WATER TREATMENT DEVICES AND BACKFLOW PREVENTERS WHICH SERVE THE CONTROLLING FIXTURE (WATER SOFTENERS, FILTERS, ETC.) PRESSURE LOSS DUE TO WATER SOFTENER	0.1
F1. WSFU DOWNSTREAM OF WATER TREATMENT DEVICE:	100 WSFU
F2. CONVERT WSFU TO GPM USING TABLE 382.40-3:	68 GPM
F3. CONVERT WSFU TO GPM USING TABLE 382.40-3E* (FOR INDIVIDUAL DWELLING UNITS ONLY)	0 GPM
(FOR INDIVIDUAL DWELLING UNITS ONLY)	
F4. REFER TO MANUF. GRAPH TO OBTAIN PRESSURE LOSS:	SUBTRACT VALUE OF "F4"
SUBTOTAL	
G. PRESSURE LOSS FOR FUTURE ALLOWANCE:	SUBTRACT VALUE OF "G"
SUBTOTAL	
H. DEVELOPED LENGTH FROM BUILDING CONTROL VALVE TO CONTROLLING FIXTURE IN FEET: FEET X 1.5: 150	DIVIDE BY VALUE OF "H"
SUBTOTAL	
A. PRESSURE AVAILABLE FOR UNIFORM LOSS	MULTIPLY BY:
WATER DISTRIBUTION PIPING IS: COPPER, TYPE L	A (PSI/100 FT)
SUBTOTAL	

WATER CALCULATION WORKSHEET - HOT WATER

CALCULATE THE PRESSURE AVAILABLE FOR UNIFORM LOSS (VALUE OF "A")

B. PRESSURE AVAILABLE AFTER THE BUILDING CONTROL VALVE (FROM #9 ABOVE):	VALUE OF "B"	61.5
C. PRESSURE LOSS OF WATER METER (WHEN METER IS REQUIRED):	SUBTRACT VALUE OF "C"	5.0
D. PRESSURE AT CONTROLLING FIXTURE:	SUBTOTAL	56.5
CONTROLLING FIXTURE IS: EMERGENCY EYEWASH & ASSOCIATED MIXING VALVE	SUBTRACT VALUE OF "D"	35.0
SUBTOTAL		21.5
E. DIFFERENCE IN ELEVATION BETWEEN BUILDING CONTROL VALVE AND THE CONTROLLING FIXTURE IN FEET: 14 X 0.434 PSIFt	SUBTRACT VALUE OF "E"	5.9
SUBTOTAL		15.6
F. PRESSURE LOSS DUE TO WATER TREATMENT DEVICES AND BACKFLOW PREVENTERS WHICH SERVE THE CONTROLLING FIXTURE (WATER SOFTENERS, FILTERS, ETC.) PRESSURE LOSS DUE TO WATER SOFTENER		
F1. WSFU DOWNSTREAM OF WATER TREATMENT DEVICE:		108 WSFU
F2. CONVERT WSFU TO GPM USING TABLE 382.40-3:		70 GPM
F3. CONVERT WSFU TO GPM USING TABLE 382.40-3E* (FOR INDIVIDUAL DWELLING UNITS ONLY)		0 GPM
F4. REFER TO MANUF. GRAPH TO OBTAIN PRESSURE LOSS:	SUBTRACT VALUE OF "F4"	8.0
SUBTOTAL		7.6
G. PRESSURE LOSS FOR FUTURE ALLOWANCE:	SUBTRACT VALUE OF "G"	0.0
SUBTOTAL		7.6
H. PRESSURE LOSS THROUGH TANKLESS WATER HEATERS, COMBINATION BOILER/WATER HEATERS, HEAT EXCHANGERS WHICH SERVE THE CONTROLLING FIXTURE:	SUBTRACT VALUE OF "H"	0.0
SUBTOTAL		7.6
I. DEVELOPED LENGTH FROM BUILDING CONTROL VALVE TO CONTROLLING FIXTURE IN FEET: FEET X 1.5: 150	DIVIDE BY VALUE OF "I"	225
SUBTOTAL		0.034
A. PRESSURE AVAILABLE FOR UNIFORM LOSS	MULTIPLY BY:	100
WATER DISTRIBUTION PIPING IS: COPPER, TYPE L	A (PSI/100 FT)	3.4

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COVER SHEET - PLUMBING

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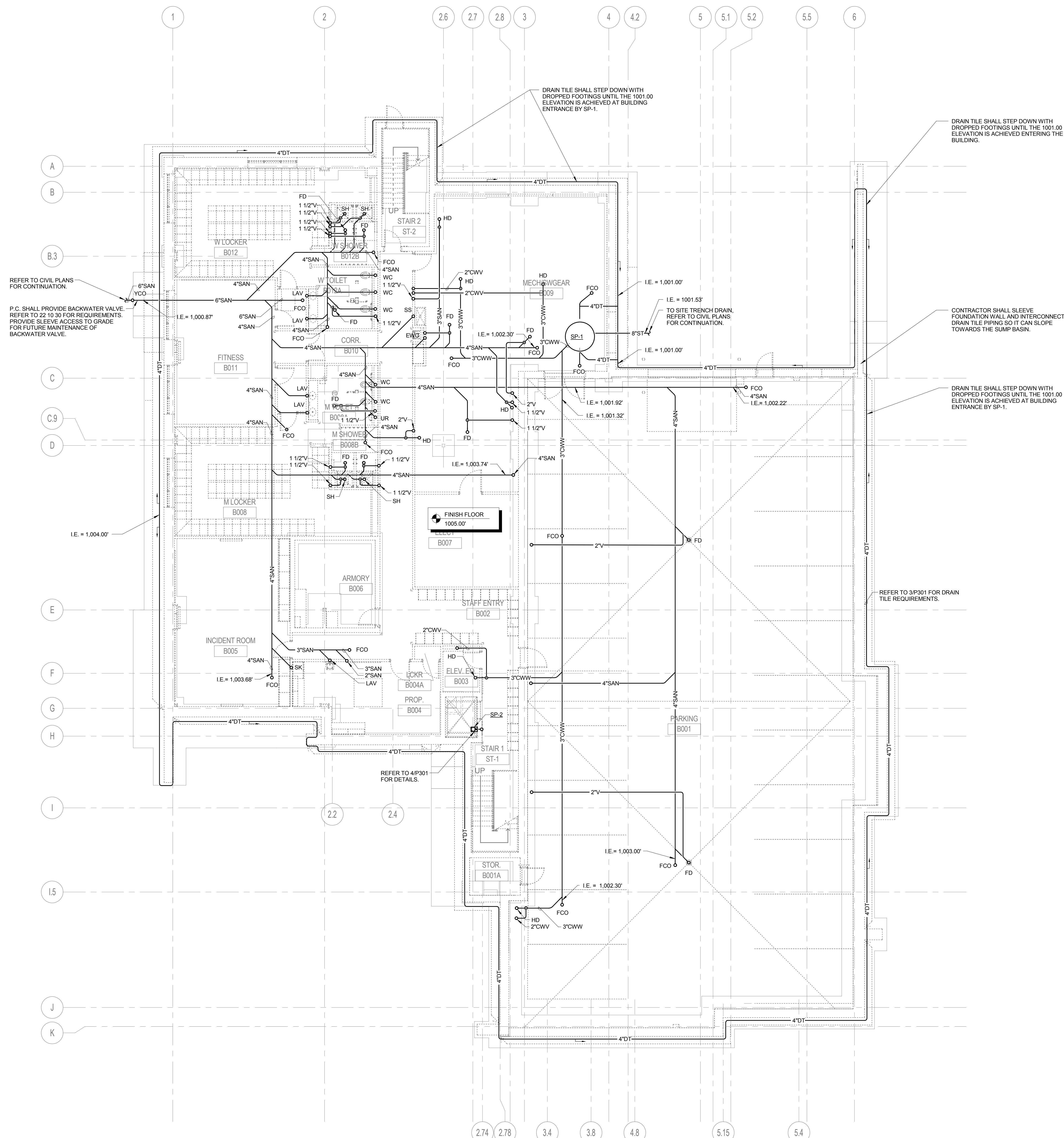
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**UNDERFLOOR PLAN
- PLUMBING**



1 UNDERFLOOR PLAN - PLUMBING
1/8" = 1'-0"

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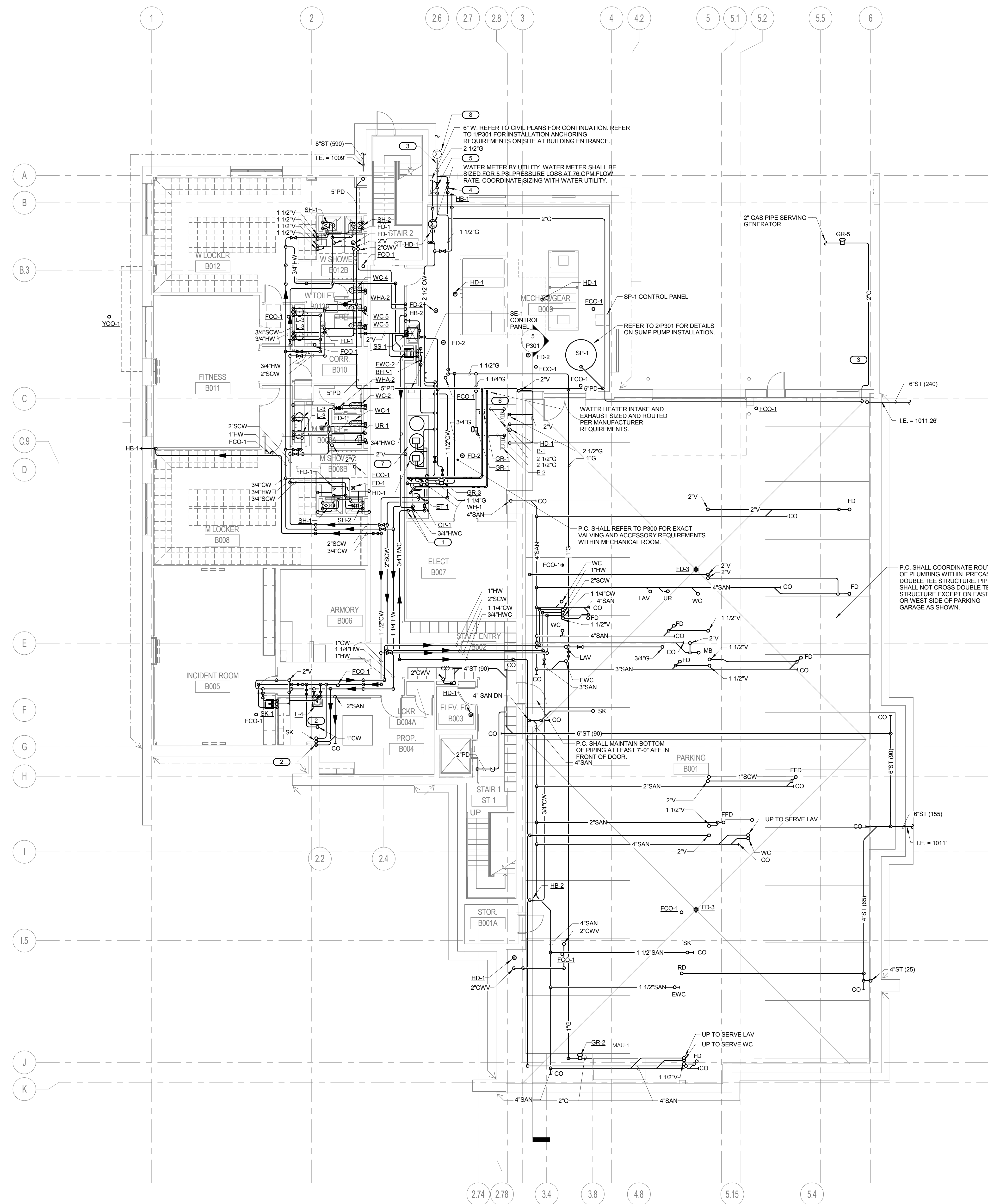
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**LOWER LEVEL -
PLUMBING**

- KEYNOTES:**
1. PROVIDE ISOLATION VALVES, CHECK VALVE, AND MANUAL BALANCING VALVE IN HWC BRANCH PIPING WITHIN MECHANICAL ROOM. REFER TO P300 FOR VALVE ARRANGEMENT.
 2. PIPING SHALL OFFSET AROUND STRUCTURAL BEAM AND ROUTE WITHIN TOE KICK OF CABINET. REFER TO P102 FOR ADDITIONAL INFORMATION. PRIME AND PAINT ALL EXTERIOR GAS PIPING A COLOR AS SELECTED BY ARCHITECT. SUPPORT PIPING FROM BUILDING WALL WITH PAINTED WALL SUPPORTS AS NEEDED.
 3. PROVIDE NAMEPLATE AT VALVE STATING, "EMERGENCY POWER SUPPLY GAS SHUTOFF VALVE".
 4. PROVIDE NAMEPLATE AT VALVE STATING, "BUILDING MAIN GAS SHUTOFF VALVE".
 5. HOUSEKEEPING PAD PROVIDE BY DIVISION 23 CONTRACTOR. REFER TO 23 05 29 FOR REQUIREMENTS.
 6. HOUSEKEEPING PAD PROVIDE BY DIVISION 22 CONTRACTOR. REFER TO 22 05 29 FOR REQUIREMENTS.
 7. GAS METER BY MGE. COORDINATE METER INSTALLATION WITH MGE. P.C. RESPONSIBLE FOR ALL PIPING DOWNSTREAM OF GAS METER. GAS METER SHALL BE SIZED FOR 7200 CFH WITH 2 PSI OUTLET GAS PRESSURE. GAS METER SHALL HAVE PULSE SIGNAL CAPABILITY TO OUTPUT GAS CONSUMPTION TO BUILDING'S FMCS. P.C. SHALL PAY ANY ADDITIONAL COST FOR UPGRADED GAS METER WITH PULSE SIGNAL CAPABILITY. MAINTAIN AT LEAST 10" SEPARATION BETWEEN GAS METER REGULATOR VENT AND OUTSIDE AIR INTAKES. IF REQUIRED ROUTE RELIEF VENT TO THE NORTH TO MAINTAIN CLEARANCE REQUIREMENTS. PAINT RELIEF VENT COLOR AS SELECTED BY ARCHITECT.



LOWER LEVEL - PLUMBING
1/8" = 1'-0"

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P101

KEYNOTES:

1. LOCATE RECESSED REMOTE FLUSHING VALVE WITHIN WALL. AND ROUTE SCW TO FLUSHING FLOOR DRAIN. FLUSH VALVE CONTROL SHALL BE LOCATED ON INTAKE SIDE OF WALL SO NOT ACCESSIBLE FROM TOILET ROOM.
2. PIPING SHALL OFFSET AROUND STRUCTURAL BEAM ON FLOOR BELOW AND ROUTE THROUGH CABINET TOE/KICK TO GET INTO WALL.

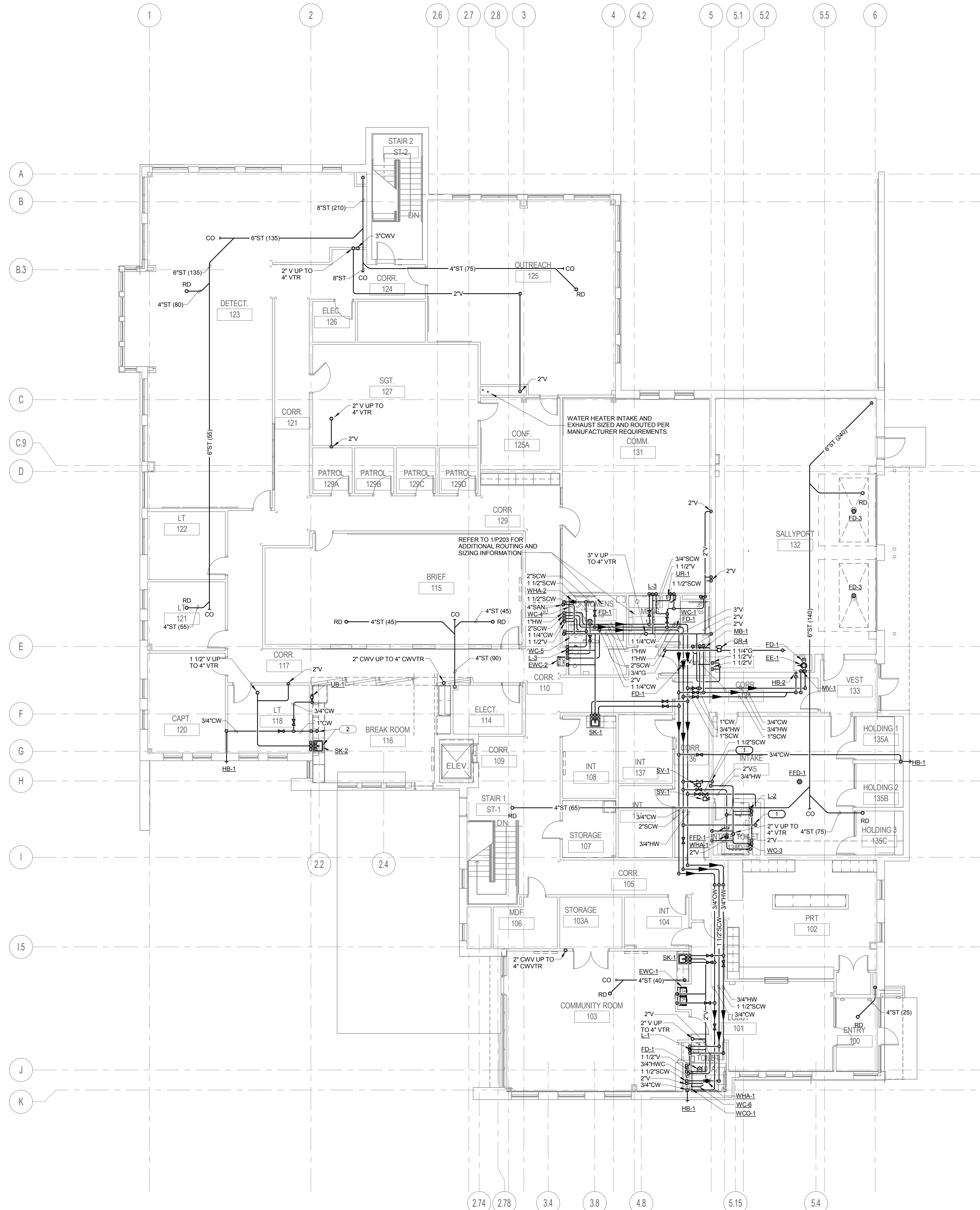
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FIRST FLOOR PLAN - PLUMBING
1/8" = 1'-0"

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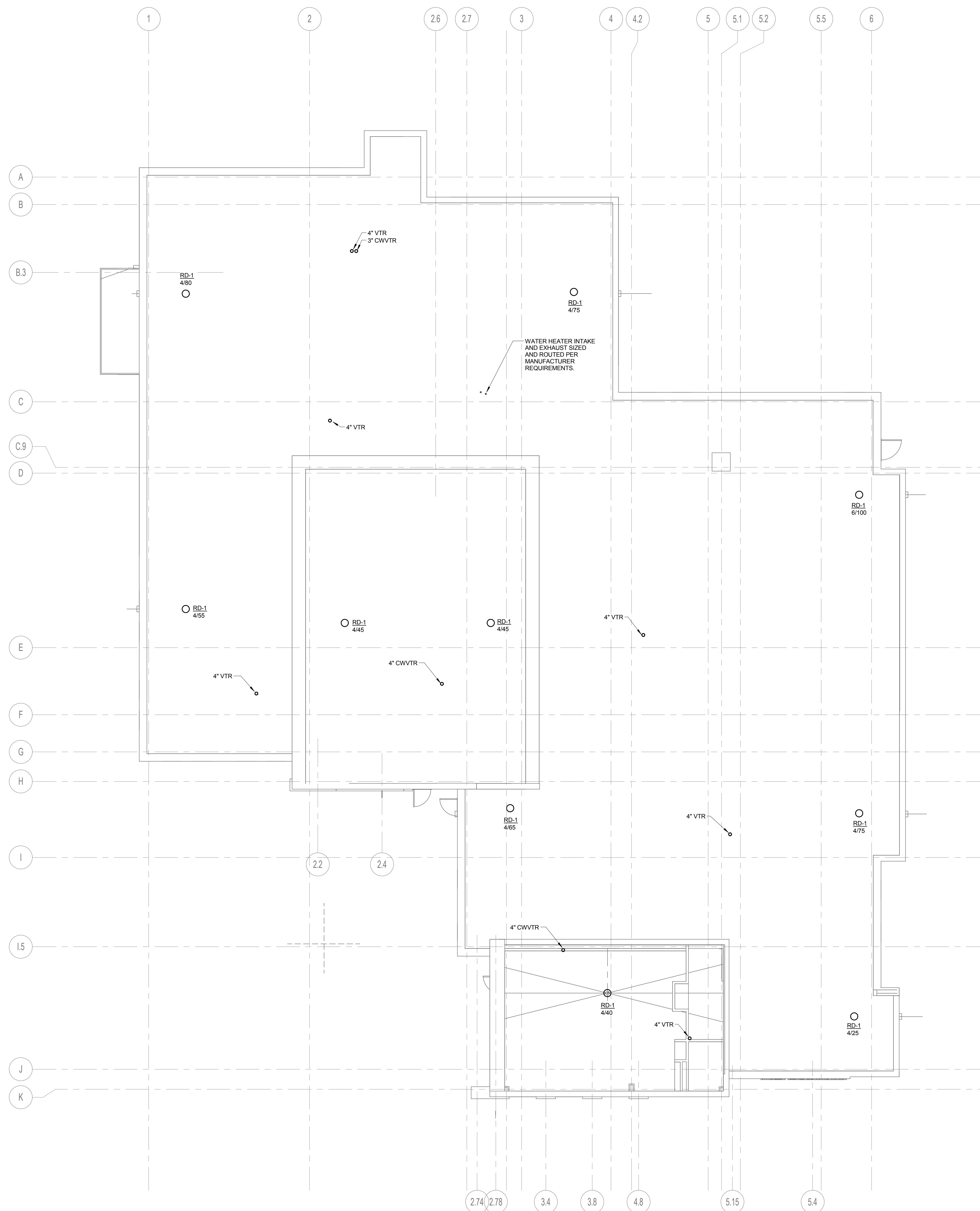
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**ROOF PLAN -
PLUMBING**



1 ROOF PLAN - PLUMBING
1/8" = 1'-0"

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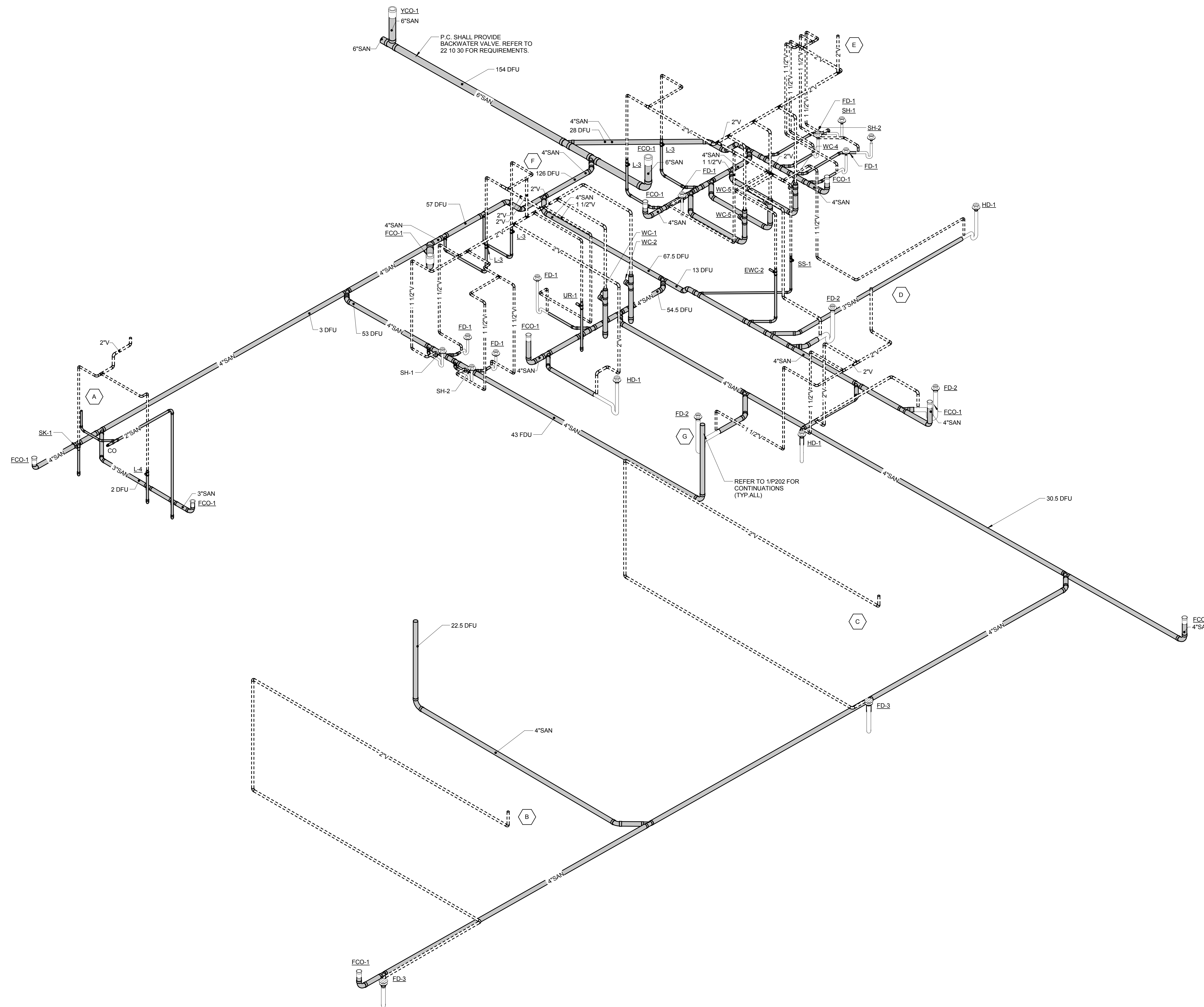
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**RISER DIAGRAM -
PLUMBING**

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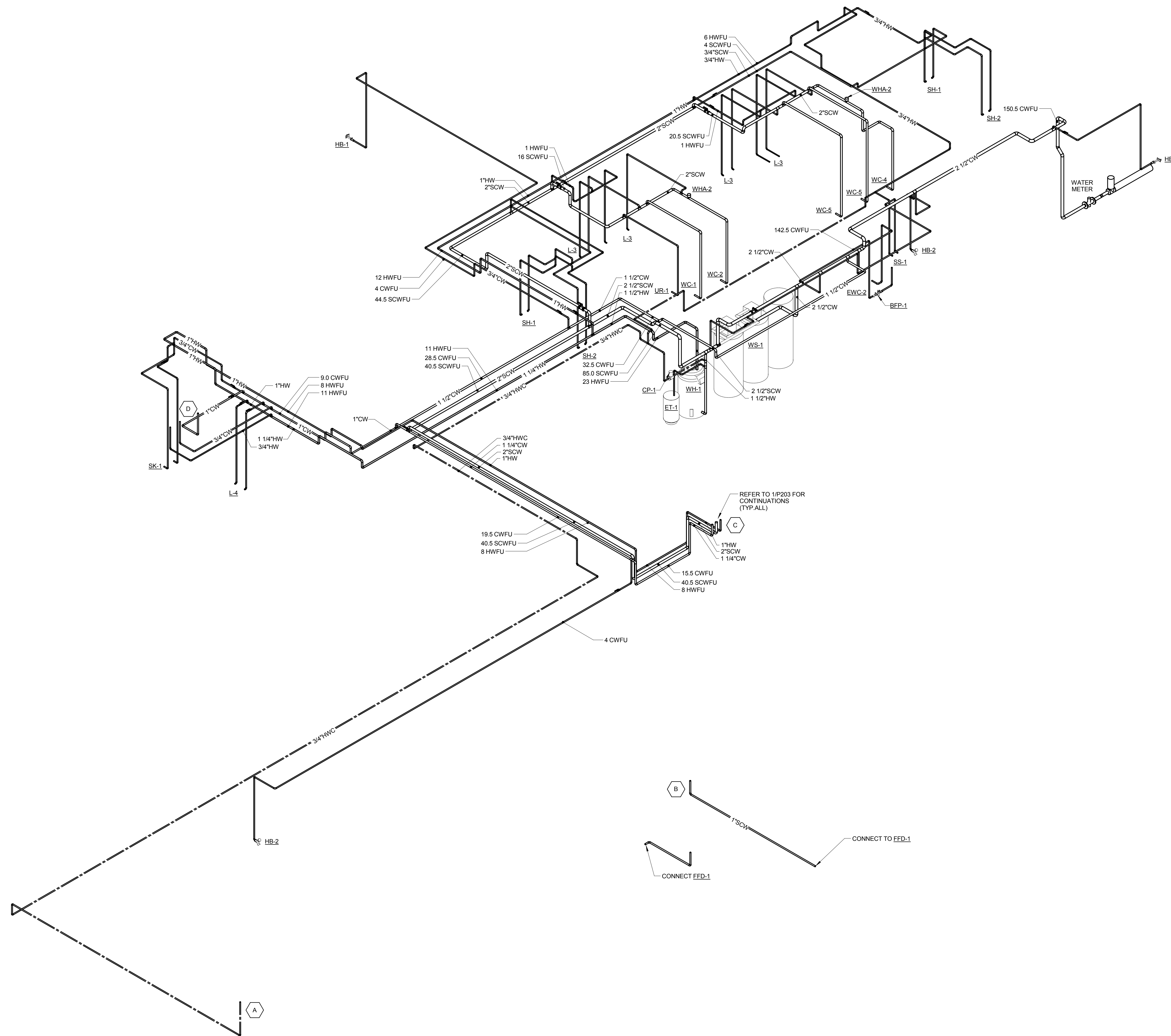
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1 DOMESTIC RISER DIAGRAM - LOWER
LEVEL - PLUMBING
NO SCALE

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**RISER DIAGRAM -
PLUMBING**

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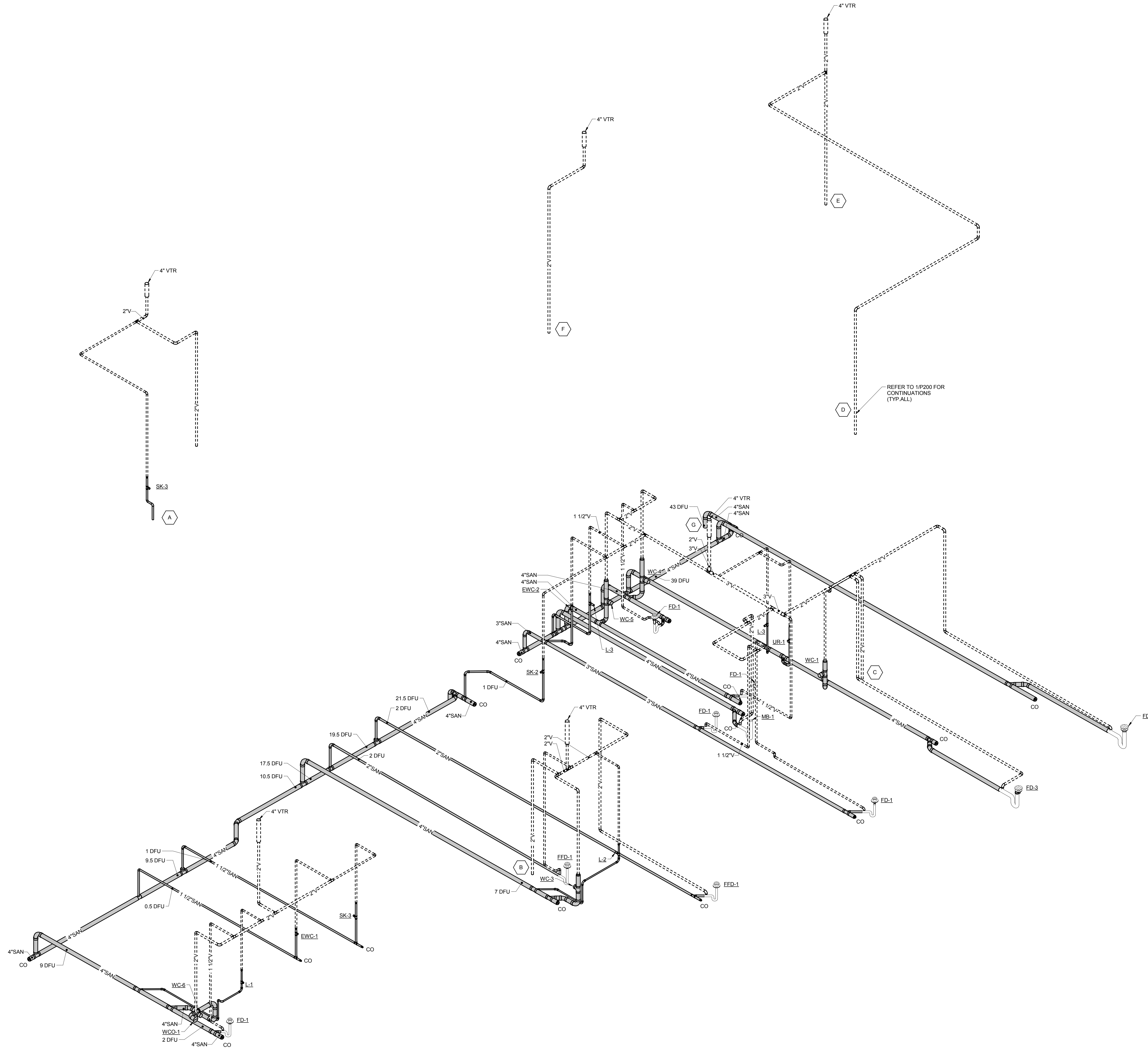
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**SAN-VENT RISER DIAGRAM - FIRST
FLOOR - PLUMBING**

1

NO SCALE

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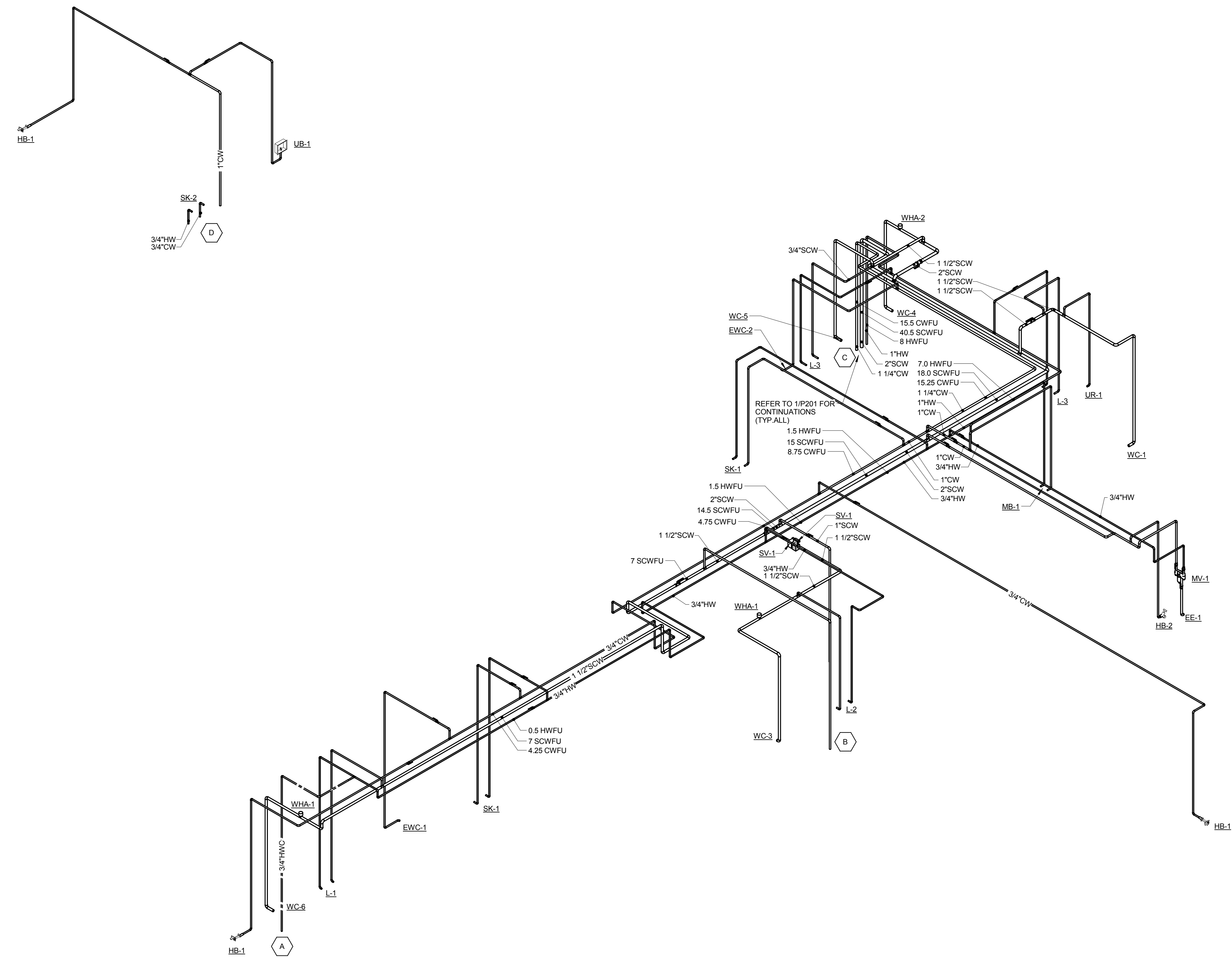
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1 DOMESTIC RISER DIAGRAM - FIRST FLOOR - PLUMBING
NO SCALE

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**RISER DIAGRAM -
PLUMBING**

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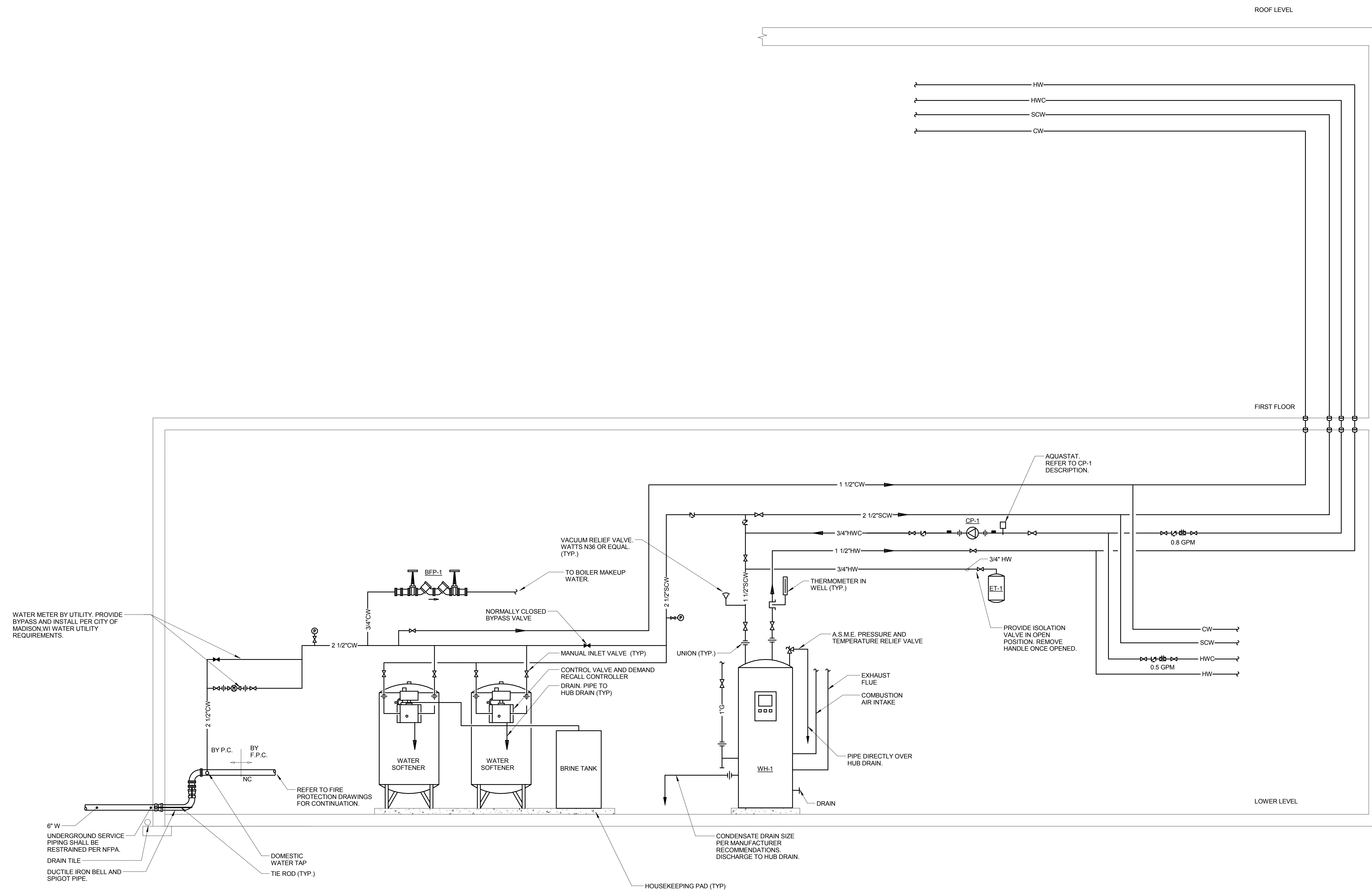
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1 PLUMBING FLOW DIAGRAM
NO SCALE

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**FLOW DIAGRAM -
PLUMBING**

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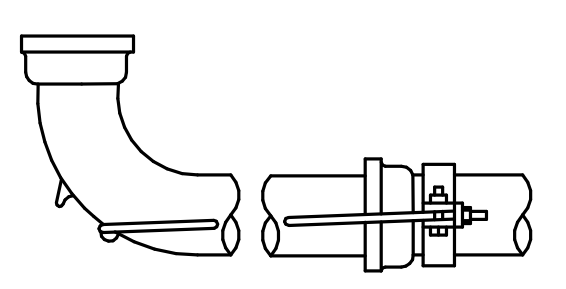
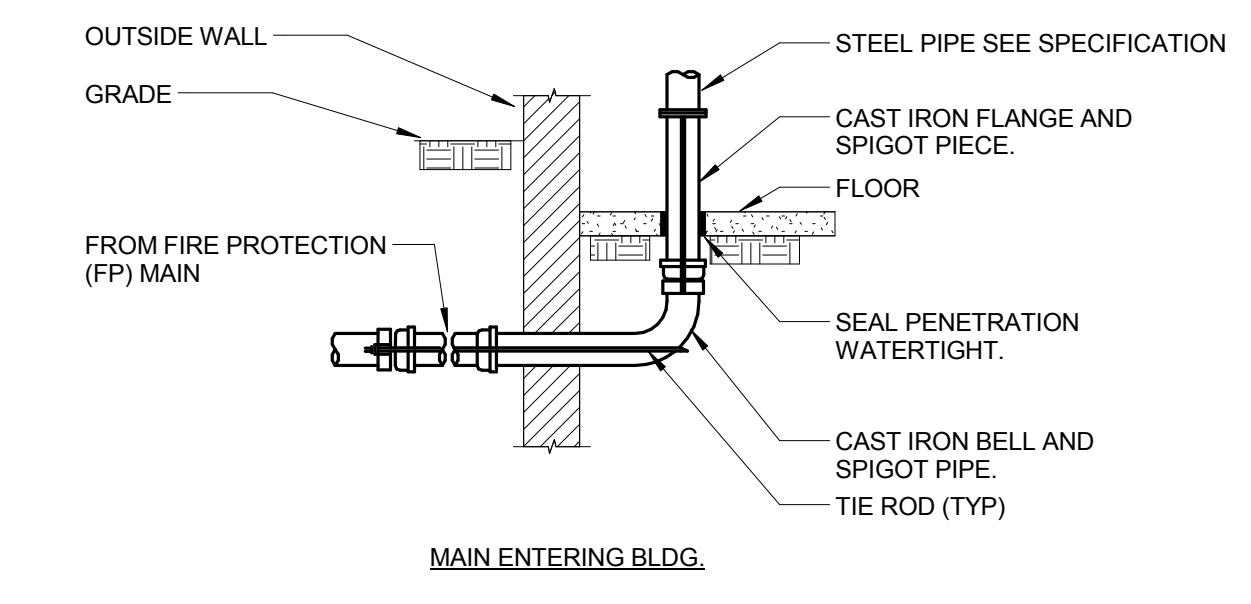
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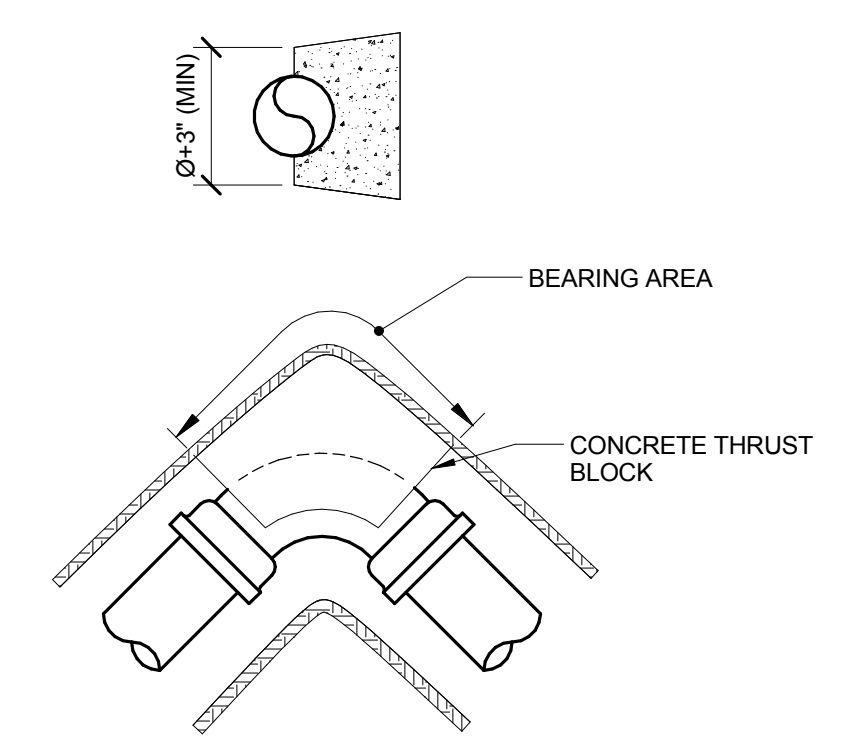
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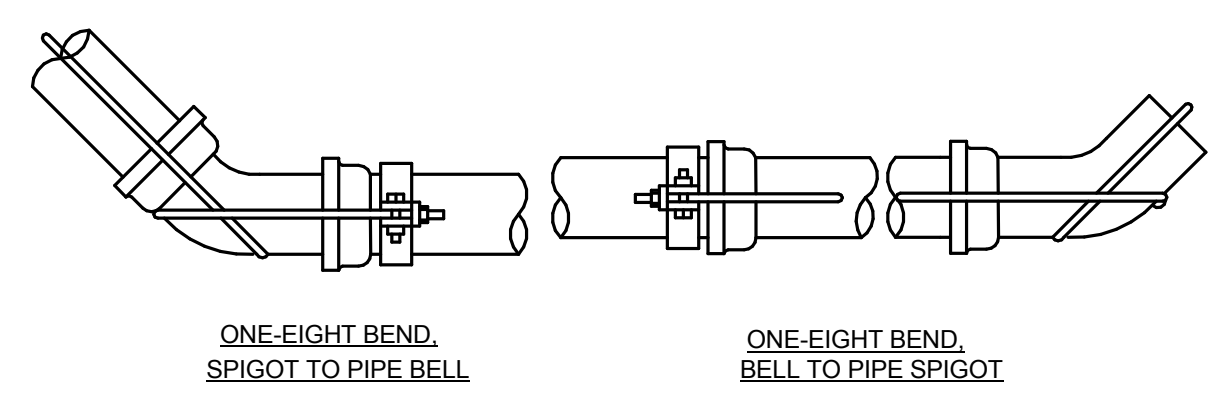
DETAILS - PLUMBING



ANCHOR FOR LONG SPIGOT 1/4 BEND.



ONE-QUARTER BEND



ONE-EIGHT BEND, SPIGOT TO PIPE BELL
ONE-EIGHT BEND, BELL TO PIPE SPIGOT

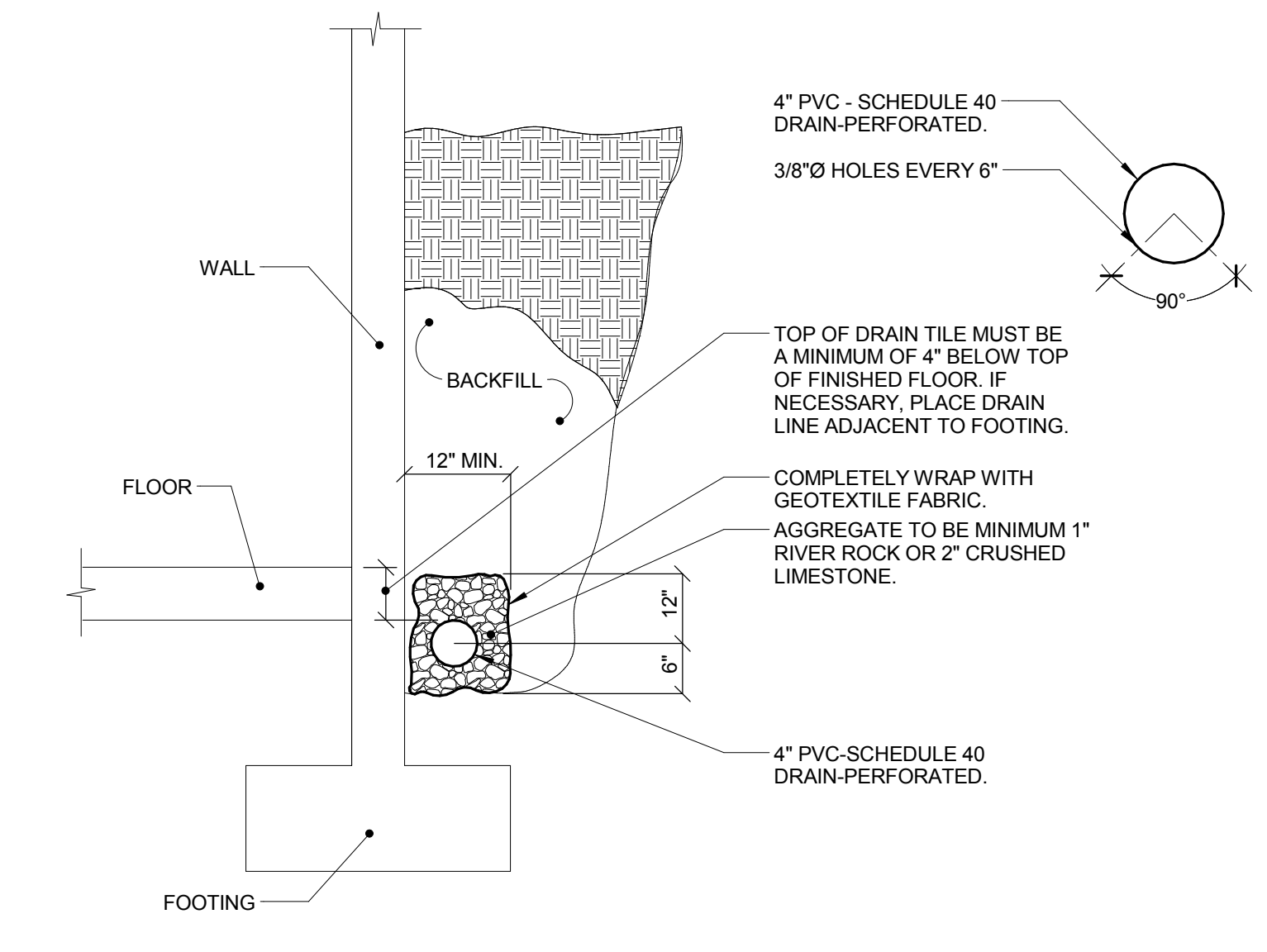
ANCHOR RODS

PIPING NOMINAL SIZE (IN.)	CLAMP SIZE (IN.)	BOLT SIZE (IN.)	WASHER (IN.)	NUMBER OF RODS AND ROD SIZE (IN.) FOR ROD AND CLAMP ANCHORAGE						
				MECHANICAL JOINT			PUSH ON JOINT			
				90° 1/4 BEND	45° 1/8 BEND	TEE, HYDRANT CAP, PLUG	90° 1/4 BEND	45° 1/8 BEND	TEE, HYDRANT CAP, PLUG	
4	1/2x2	5/8	5/8x3	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
6	5/8x	7/8	5/8x3	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
8	5/8x	7/8	5/8x3	4 3/4	2 3/4	4 3/4	4 3/4	2 3/4	4 3/4	4 3/4
10	5/8x	7/8	5/8x3	6 3/4	4 3/4	4 3/4	4 3/4	4 3/4	4 3/4	4 3/4
12	5/8x3	1	5/8x3	8 3/4	6 3/4	6 3/4	4 3/4	4 3/4	4 3/4	4 3/4

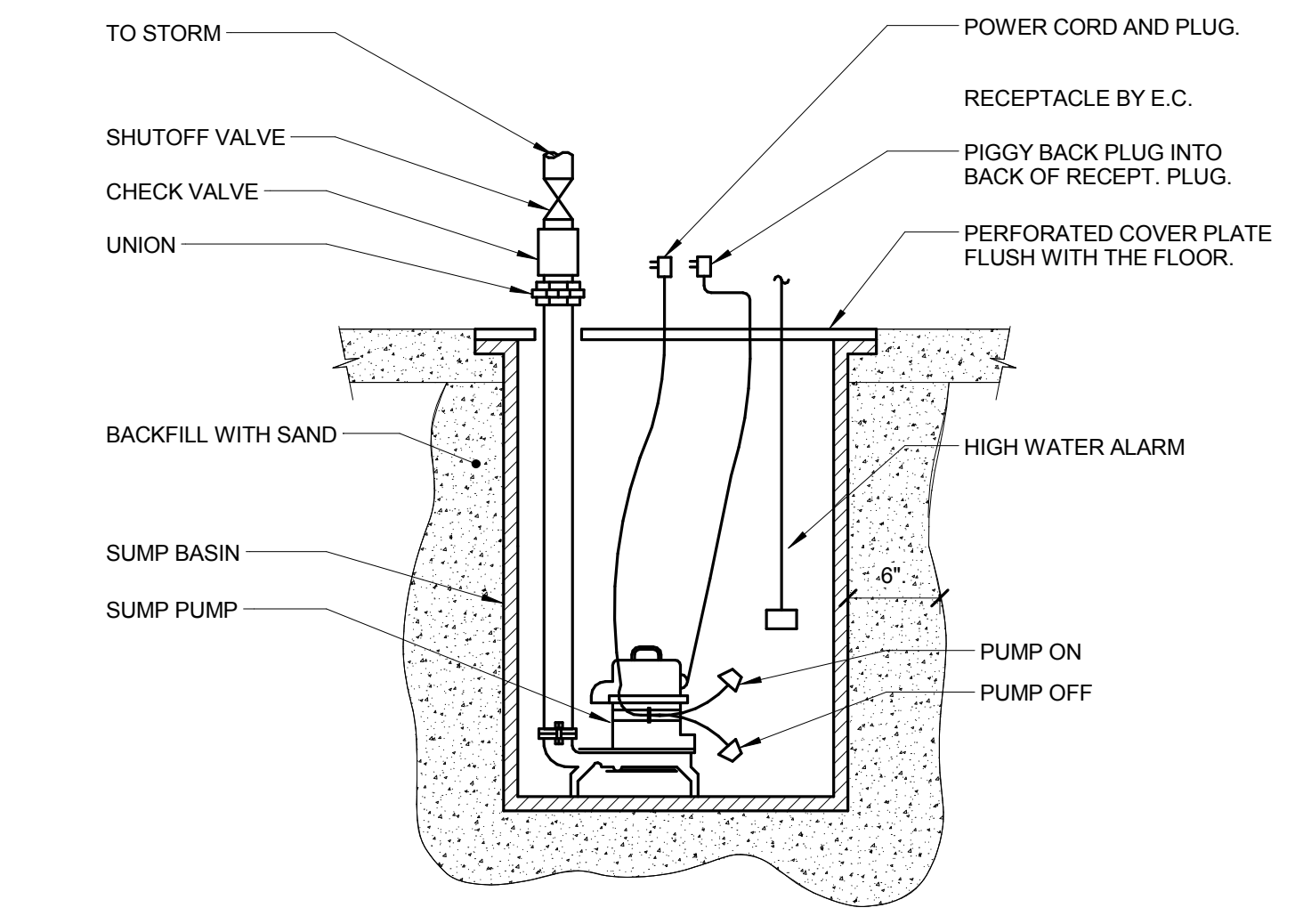
NOTES:
1. AFTER INSTALLATION, PROTECT THE RODS, BOLTS, NUTS, WASHERS AND CLAMPS AGAINST CORROSION WITH A HEAVY COAT OF ASPHALT MATERIAL.
2. THE LENGTH OF THE ROD REQUIRED WILL VARY WITH THE PIPE FITTING, AND MUST BE DETERMINED BY FIELD MEASUREMENT. IF THE DISTANCE BETWEEN THE JOINTS IS LESS THAN 12 FEET, EXTEND THE ANCHORAGE TO THE SECOND BELL.

PIPING NOMINAL SIZE (IN.)	MIN. SQ. FT. AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS		
	1/4 BEND	1/8 BEND	TEES, PLUGS, CAPS, HYDRANTS
4	3	2	3
6	7	4	5
8	11	6	8
10	17	9	12
12	24	13	17

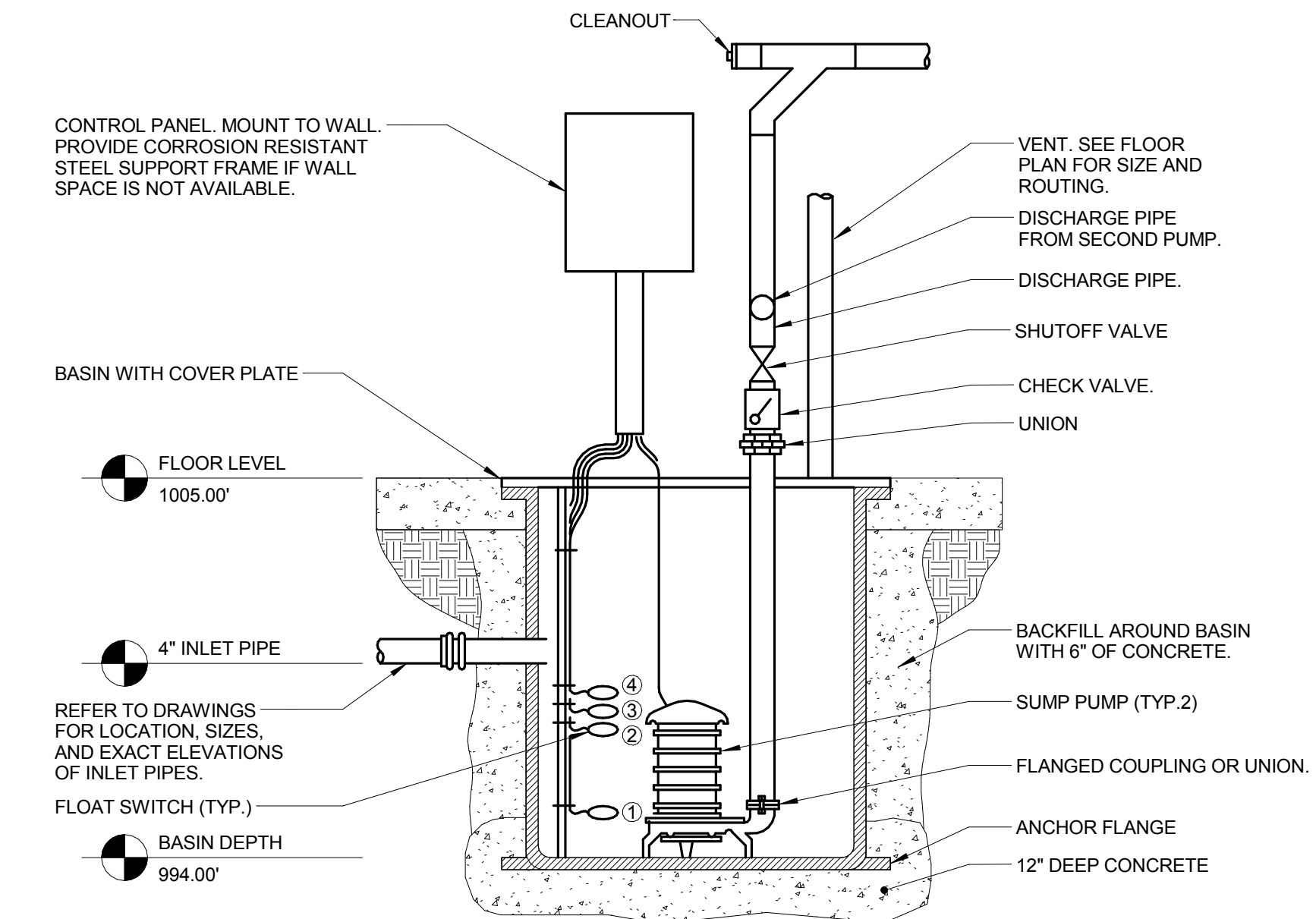
NOTES:
BASIS: 2,000 LB/SQ. FT. SOIL RESISTANCE, 250 PSI WATER PRESSURE.
CORRECTION FACTORS FOR OTHER SOILS:
SOFT CLAY.....4
SAND.....2
SAND&GRAVEL.....1.33
SHALE.....0.4



3 DRAIN TILE DETAIL
NO SCALE



4 ELEVATOR SUMP PUMP DETAIL
NO SCALE

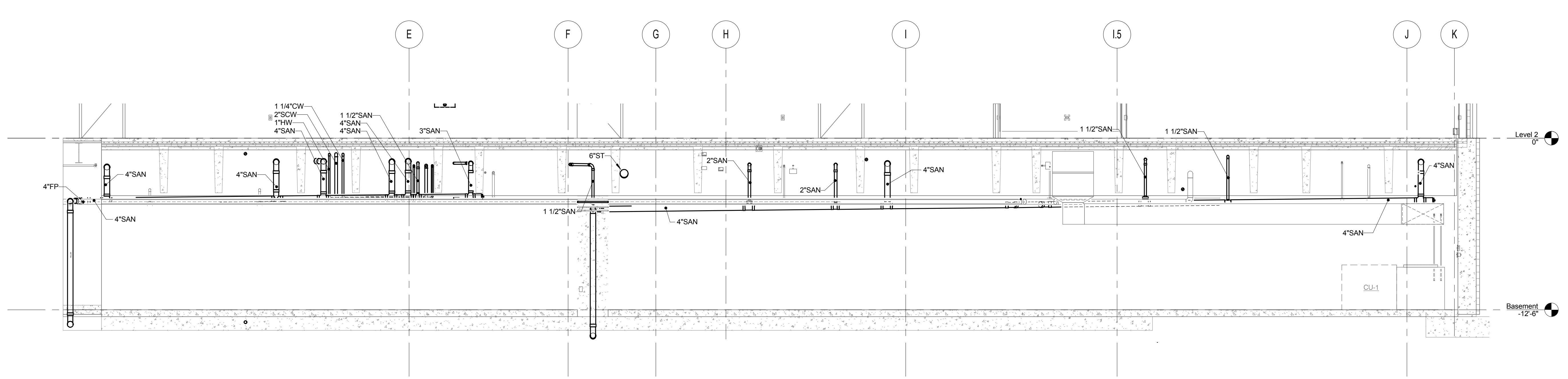


2 SUMP PUMP DETAIL (DUPLEX)
NO SCALE

NOTES:
1. PUMP OFF. MAINTAIN WATER ABOVE INLET AS REQUIRED PER PUMP MANUFACTURER.
2. START PUMP WHEN WATER LEVEL IS 2\"/>

1 UNDERGROUND WATER MAIN ANCHORING DETAIL
NO SCALE

NOTES:
1. BOTH THRUST BLOCKING AND ANCHOR RODS ARE REQUIRED.
2. REFER TO THE GOVERNING CODE AND NFPA 24 FOR ADDITIONAL REQUIREMENTS.



5 SECTION FOR PARKING-001 - PLUMBING
1/4\"/>

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THE FUTURE. BUILT SMARTER.

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REFERENCE SCALE IN INCHES
1" = 1'-0"

PLUMBING FIXTURE SCHEDULE		
TAG NAME	DESCRIPTION	MANF. & MODEL
BFP-1	BACK FLOW PREVENTER - REDUCED PRESSURE ZONE, LEAD FREE BRONZE OR STAINLESS STEEL CONSTRUCTION, SIZE SAME AS PIPE, NON-CORROSIVE INTERNAL PARTS, STAINLESS STEEL DIFFERENTIAL PRESSURE SET POINTS WITH RELIEF VALVE BETWEEN SPRING-LOADED CHECK VALVES, SHUT-OFF VALVES ON INLET AND OUTLET OF UNIT, BALL STYLE SHUT-OFF VALVES FOR 3/4" 2" AND GATE STYLE VALVES FOR 2" AND 4" INLET AND OUTLET, 15 PSI (MAXIMUM) PRESSURE DROP AT 10 FPS, FACTORY TESTED, ALL PARTS TO BE SERVICEABLE WITHOUT REMOVING UNIT FROM LINE, APPROVED BY USF FCCC & HR, AWWA C511-92, ASSE 1013, IAPMO AND SBCCI LISTED.	WATTS (L919 / 994), WILKINS (97X12 / 2) INTERNAL PARTS, CONBRACO (RPLF4A)
CP-1	CIRCULATING PUMP - VARIABLE SPEED CONTROLLER WITH SETTINGS TO ADJUST AND MAINTAIN A CONSTANT SPEED, FIXED PRESSURE, OR PROPORTIONAL PRESSURE, LEAD FREE BRONZE OR STAINLESS STEEL CONSTRUCTION, PERMANENTLY LUBRICATED SEALED BEARINGS, MECHANICAL SEAL, OIL LUBRICATED, ECM MOTOR WITH INTEGRATED VARIABLE SPEED CONTROL, FLANGED CONNECTIONS, RATED FOR 125 PSIG AT 22FT, UL LISTED 4 GPM @ 10 FEET OF HEAD, MOTOR SHALL BE 0.65 AMPS.	PUMP - GRUNDFOS (ALPHA SERIES), B&G (CONCOMPASS 20) SS ARMSTRONG (COMPASS 20) SS
EE-1	EMERGENCY EYEWASH - ACCESSIBLE, WALL MOUNTED, STAINLESS STEEL BOWL WITH HINGED DUST COVER, TWIN SPRAY HEADS WITH CAPS AND RETAINING CHAINS/STRAPS, BRASS SUPPLY ARMS, INTEGRAL FLOW CONTROL FITTING, BRASS PIPING AND FITTINGS WITH BRASS/BRONZE STAY OPEN BALL VALVE, 1-1/4" DRAIN OUTLET WITH CHROME PLATED BRASS TAILPIECE & TRAP UNIVERSAL IDENTIFICATION SIGN, ANSI Z358.1-2004 COMPLIANT.	AQUASTAT - HONEYWELL, WHITE-RODGERS, JOHNSON CONTROLS, SAME AS PUMP MANUFACTURER
ET-1	EXPANSION TANK - WELDED BLACK STEEL CONSTRUCTION, GUARANTEED AIRTIGHT AND LEAKPROOF, STAINLESS STEEL SYSTEM CONNECTION, HEAVY DUTY BUTYL DIAPHRAGM AND RIGID POLYPROPYLENE LINER MECHANICALLY BONDED TO TANK TO PROVIDE A 100% NON-CORROSIVE WATER RESERVOIR, DIAPHRAGM AND LINER SHALL BE APPROVED FOR USE IN POTABLE WATER SYSTEMS, ALL WETTED COMPONENTS OF FDA APPROVED MATERIALS, PROVIDE STANDARD SCHRADER AIR VALVE FOR FIELD CHARGING, TANK SHALL COMPLY WITH FEDERAL ACT S.3874.	BRADLEY (S19-220T), ACORN SAFETY (S0420), ENCON (S1045501), GUARDIAN (S1750), SPEAKMAN (SE-490)
EWC-1	ELECTRIC WATER COOLER - WALL HUNG, 8.5 GALLON PER HOUR, ADA COMPLIANT WITH MATCHING STAINLESS STEEL, ADA COMPLIANT WITH MATCHING STAINLESS STEEL CABINETS AND NON-SPLASH BASINS WITH STAINLESS STEEL FINISH, STREAM PROJECTORS WITH PROTECTIVE HOODS, PUSH BAR OR LEVER OPERATING CONTROLS ON FRONT AND BOTH SIDES, BUILT-IN FLOW REGULATOR, PLASTIC P-TRAP ASSEMBLY, ADJUSTABLE THERMOSTAT, MOUNTING ACCESSORIES, TANK DRAIN AND ANGLE STOPS, HERMETIC COMPRESSOR TO OPERATE ON HFC-134a REFRIGERANT, COMPLIANT TO LATEST ANSI A117.1 AND ADA STANDARDS, UNIT SHALL COMPLY WITH FEDERAL ACT S.3874.	AMTROL (THERM-X-TROL), B&G (PT), ELBI (DT), TACO (PAX SERIES), WATTS (DETA), WESSELS (TX)
EWC-2	ELECTRIC WATER COOLER - WALL HUNG, 18 GALLON PER HOUR, ADA COMPLIANT WITH MATCHING STAINLESS STEEL, ADA COMPLIANT WITH MATCHING STAINLESS STEEL CABINETS AND NON-SPLASH BASINS WITH STAINLESS STEEL FINISH, STREAM PROJECTORS WITH PROTECTIVE HOODS, PUSH BAR OR LEVER OPERATING CONTROLS ON FRONT AND BOTH SIDES, BUILT-IN FLOW REGULATOR, PLASTIC P-TRAP ASSEMBLY, ADJUSTABLE THERMOSTAT, MOUNTING ACCESSORIES, TANK DRAIN AND ANGLE STOPS, HERMETIC COMPRESSOR TO OPERATE ON HFC-134a REFRIGERANT, COMPLIANT TO LATEST ANSI A117.1 AND ADA STANDARDS, UNIT SHALL COMPLY WITH FEDERAL ACT S.3874.	ELKAY (EZSTLBC), ACORN (A112), HALSEY TAYLOR (HAC), HAWES (HWUJACP8LS), OASIS (P8ACSL)
EWC-3	ELECTRIC WATER COOLER - WALL HUNG, 18 GALLON PER HOUR, ADA COMPLIANT WITH MATCHING STAINLESS STEEL, ADA COMPLIANT WITH MATCHING STAINLESS STEEL CABINETS AND NON-SPLASH BASINS WITH STAINLESS STEEL FINISH, STREAM PROJECTORS WITH PROTECTIVE HOODS, PUSH BAR OR LEVER OPERATING CONTROLS ON FRONT AND BOTH SIDES, BUILT-IN FLOW REGULATOR, PLASTIC P-TRAP ASSEMBLY, ADJUSTABLE THERMOSTAT, MOUNTING ACCESSORIES, TANK DRAIN AND ANGLE STOPS, HERMETIC COMPRESSOR TO OPERATE ON HFC-134a REFRIGERANT, COMPLIANT TO LATEST ANSI A117.1 AND ADA STANDARDS, UNIT SHALL COMPLY WITH FEDERAL ACT S.3874.	ELKAY (LZ58), HALSEY TAYLOR (HAC), HAWES (HWUJACP8LS), OASIS (P8ACSL)
FCO-1	FLOOR CLEANOUT - ADJUSTABLE, CAST IRON HOUSING, ANCHOR FLANGE, TAPERED THREAD PLUG, SECURED NICKEL BRONZE TOP, TOP STYLE SHALL MATCH FLOOR FINISH AS FOLLOWS: UNFINISHED FLOOR - ROUND SLO SCORATED TOP TILE OR TERRAZZO - SQUARE ANTI-SLIP FINISH CARPET - ROUND TOP WITH CARPET MARKER	AMTROL (THERM-X-TROL), B&G (PT), ELBI (DT), TACO (PAX SERIES), WATTS (DETA), WESSELS (TX)
FD-1	FLOOR DRAIN - CAST IRON BODY, NICKEL BRONZE ADJUSTABLE TOP, 5" ROUND, 3" BOTTOM OUTLET, FLASHING COLLAR, SURFACE MEMBRANE CLAMP, DEEP SEAL TRAP TRAP SEAL - 3" PLASTIC HOUSING WITH FLEXIBLE DIAPHRAGM, SEALING GASKETS, RECLOSES AND SEALS WHEN DISCHARGE IS COMPLETED, ASSE 1072.	BRADLEY (S19-220T), ACORN SAFETY (S0420), ENCON (S1045501), GUARDIAN (S1750), SPEAKMAN (SE-490)
FD-2	FLOOR DRAIN - CAST IRON BODY, NICKEL BRONZE ADJUSTABLE TOP, 7" ROUND, 4" BOTTOM OUTLET, FLASHING COLLAR, SURFACE MEMBRANE CLAMP, DEEP SEAL TRAP TRAP SEAL - 3" PLASTIC HOUSING WITH FLEXIBLE DIAPHRAGM, SEALING GASKETS, RECLOSES AND SEALS WHEN DISCHARGE IS COMPLETED, ASSE 1072.	ELKAY (LZ58), HALSEY TAYLOR (HAC), HAWES (HWUJACP8LS), OASIS (P8ACSL)
FD-3	FLOOR DRAIN - EPOXY COATED CAST IRON BODY, HEAVY DUTY CAST IRON SELF CLOSING HINGED GRATE, 12" SQUARE ANTI-SLIP FINISH, 4" BOTTOM OUTLET, SUSPENDED PERFORATED SEDIMENT BUCKET, DRAIN SHALL BE MEANT FOR PARKING STRUCTURES	AMTROL (THERM-X-TROL), B&G (PT), ELBI (DT), TACO (PAX SERIES), WATTS (DETA), WESSELS (TX)
FFD-1	FLUSHING FLOOR DRAIN - IN FLOOR FLUSHING DETOX TOILET, 14 GAGE STAINLESS STEEL CONSTRUCTION, CONTINUOUS FLUSHING RIM, DEEP SEAL TRAP RECESSED REMOTE FLUSH VALVE - 4-1/2" DEEP STAINLESS STEEL RECESSED WALL BOX WITH FLUSH VALVE, COVER SHALL BE FABRICATED FROM 1/4 GUAGE PRESSURE STEEL, WALL BOX SHALL BE FABRICATED FROM HIGHER GAGE STAINLESS STEEL, FLUSH VALVE SHALL BE PUSH BUTTON OPERATED. FLUSH VALVE - HYDRAULICALLY ACTIVATED, NON-HOLD OPEN PUSH BUTTON, CHROME PLATED 1" IPS, SCREW DRIVER STOP-CHECK VALVE, CHEMICAL RESISTANT MATERIAL, VACUUM BREAKER, WALL AND SPUD FLANGES, 1.6 GALLONS PER FLUSH, 3 YEAR WARRANTY	ZURN (Z1400), JOSAM (55000), MIFAB (C1100), SMITH (4000), WADE (9000), WATTS (CO-300)
GR-1	GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, TIGHT SHUTOFF 2 PSI INLET PRESSURE, 8" W.C. OUTLET PRESSURE, 750 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 75 CFH	FLOOR DRAIN - ZURN (Z-419), SMITH (2005), WADE (1100), JOSAM (3000), WATTS (FD-100), MIFAB (F1100)
GR-2	GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, TIGHT SHUTOFF 2 PSI INLET PRESSURE, 8" W.C. OUTLET PRESSURE, 600 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 30 CFH	FLOOR DRAIN - ZURN (Z-550), SMITH (2110), WADE (1310), JOSAM (3210), WATTS (FD-300), MIFAB (F1320)
GR-3	GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, TIGHT SHUTOFF 2 PSI INLET PRESSURE, 8" W.C. OUTLET PRESSURE, 130 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 15 CFH	FLOOR DRAIN - WATTS (FD-400-F), ZURN (535), SMITH, WADE, JOSAM, MIFAB
GR-4	GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, TIGHT SHUTOFF 2 PSI INLET PRESSURE, 8" W.C. OUTLET PRESSURE, 100 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 10 CFH	FLUSHING FLOOR DRAIN - ACORN 1699, WILLOUGHBY, METCRAFT
GR-5	GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, TIGHT SHUTOFF 2 PSI INLET PRESSURE, 13" W.C. OUTLET PRESSURE, 5000 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 500 CFH CONTRACTOR TO CONFIRM EXACT PRESSURE AND FLOW REQUIREMENTS OF GENERATOR BEFORE SUBMITTAL OF GAS REGULAR.	FLOOR DRAIN - WATTS (FD-400-F), ZURN (535), SMITH, WADE, JOSAM, MIFAB

PLUMBING FIXTURE SCHEDULE		
TAG NAME	DESCRIPTION	MANF. & MODEL
HB-1	HOSE BIBB - FREEZELESS WALL HYDRANT, BRASS VALVE BODY AND SEAT, STANDARD FINISH, NON-FERROUS METAL STEM, AUTOMATIC DRAINING, VACUUM BREAKER, 3/4" MALE HOSE THREAD, WALL CLAMP CONCEALED IN FLUSH MOUNTED LOCKABLE WALL BOX, KEY OPERATED, ASSE 1019 OR 1052 LISTED AND APPROVED. VERIFY NUMBER OF KEY OPERATORS TO BE PROVIDED WITH OWNER, BOX COVER AND HYDRANT SHALL USE A COMMON KEY, MOUNT AT 18" ABOVE GRADE UNLESS NOTED OTHERWISE ON DRAWINGS.	PRIER (C-634), WOODFORD (67), WATTS (HS-240), MIFAB (MHY-10), SMITH (5619), WADE (8600), ZURN (Z1310)
HB-2	WALL HYDRANT, MODERATE CLIMATE WALL HYDRANT, BRASS VALVE BODY AND SEAT, STANDARD FINISH, NON-FERROUS METAL STEM, AUTOMATIC DRAINING, VACUUM BREAKER, 3/4" MALE HOSE THREAD, WALL CLAMP CONCEALED IN FLUSH MOUNTED LOCKABLE WALL BOX, KEY OPERATED, ASSE 1019 OR 1052 LISTED AND APPROVED. VERIFY NUMBER OF KEY OPERATORS TO BE PROVIDED WITH OWNER.	ZURN (Z1333XL), WOODFORD, WATTS, MIFAB
HD-1	HUB DRAIN - OPEN SITE HUB DRAIN, PVC TRAP AND STANDPIPE EXTENDED 2" AFF, 3" BOTTOM OUTLET, DEEP SEAL TRAP	NOT APPLICABLE
L-1	LAVATORY - ACCESSIBLE, WALL MOUNTED, WHITE VITREOUS CHINA, 20"x18", 4" HIGH CONTOURED BACKSPASH, SINGLE FAUCET HOLE, DRILLED FOR CONCEALED ARM CARRIER. LAVATORY TRIM - SINGLE HANDLE MIXING FAUCET, SELF CLOSING, BRASS CONSTRUCTION, CHROME-PLATED FINISH, CONVENTIONAL, SPOUT WITH AERATOR, WASHERS/LEVER HANDLE WITH SUPPLIES AT 4" CENTERS, OPERATING FORCE OF 5.0 LBS. (MAXIMUM), PERFORATED GRID STRAINER WITH 1-1/4" 17 GAUGE TAILPIECE, ADJUSTABLE TEMPERATURE LIMIT STOP. MAXIMUM FLOW SHALL BE 0.175 GALLONS PER CYCLE IN COMPLIANCE WITH ENERGY POLICY ACT OF 2008 AND ASME/ANSI STANDARD A112.18.1M, FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. MINIMUM FLOW TIME SHALL BE 15 SECONDS. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP, STOP VALVES AND SUPPLY LINES. ACCESSORIES - QUARTER-TURN 3/8" CHROME PLATED HEAVY BRASS ANGLE SUPPLY LOOSE KEY STOPS, CHROME PLATED SOFT COPPER SUPPLY LINES, DRAIN AND OFFSET TAILPIECE, 1-1/4" 20 GAGE CAST BRASS P-TRAP, SUPPORT CARRIER. MOUNT LAVATORY WITH SUPPORT CARRIER BOLT SECURELY TO FLOOR, TOP OF RIM SHALL BE AT 34" ABOVE FLOOR IN COMPLIANCE WITH LATEST ADA STANDARD, PROVIDE 2" MINIMUM CLEARANCE FROM FLOOR TO BOTTOM OF APRON IN COMPLIANCE WITH LATEST ANSI A117.1 AND ADA STANDARDS, ARMAFLEX WITH TAPE IS NOT ACCEPTABLE IN LIEU OF INSULATION KIT.	LAVATORY - AMERICAN STANDARD (G356 421), KOHLER (K-2007), SLOAN (SS-3103), TOTO (LT307), ZURN (Z5361)
L-2	LAVATORY (ADA INSTITUTIONAL WALL MOUNT) ACCESSIBLE CORRECTIONS STYLE LAVATORY - WALL MOUNTED, 14 GAGE TYPE, 304 STAINLESS STEEL, SEAMLESS WELDED CONSTRUCTION, SATIN FINISH EXPOSED SURFACES, 18" RECTANGULAR BOWL, MECHANICALLY OPERATED, METERING NON-HOLD OPEN PUSH BUTTON VALVE FOR BOTH HOT AND COLD, FRONT ACCESS, FIXTURE SHALL BE ADA COMPLIANT. LAVATORY TRIM - PROVIDED AND INSTALLED BY OTHERS - STRAINER AND TAILPIECE PROVIDED BY PLUMBING CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR. LAVATORY TRIM - SINGLE HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, CONVENTIONAL, SPOUT WITH AERATOR, WASHERS/LEVER HANDLE WITH SUPPLIES AT 4" CENTERS, CERAMIC DISC CARTRIDGE, PERFORATED GRID STRAINER WITH 1-1/4" 17 GAUGE TAILPIECE. MAXIMUM FLOW TO BE 0.35 GPM IN COMPLIANCE WITH PROJECT WATER CONSERVATION REQUIREMENTS (LEED), FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. PROVIDE RESTRICTIVE DEVICE AS REQUIRED. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP, STOP VALVES, AND SUPPLY LINES. ACCESSORIES - QUARTER-TURN 3/8" CHROME PLATED HEAVY BRASS ANGLE SUPPLY LOOSE KEY STOPS, CHROME PLATED SOFT COPPER SUPPLY LINES, DRAIN AND OFFSET TAILPIECE, 1-1/4" 20 GAGE CAST BRASS P-TRAP, SUPPORT CARRIER. COORDINATE OPENINGS REQUIRED IN COUNTERTOP WITH GENERAL CONTRACTOR, FIELD CUT OPENINGS WILL NOT BE ACCEPTABLE, ARMAFLEX WITH TAPE IS NOT ACCEPTABLE IN LIEU OF INSULATION KIT.	LAVATORY - AMERICAN STANDARD (G356 421), KOHLER (K-2007), SLOAN (SS-3103), TOTO (LT307), ZURN (Z5361)
L-3	LAVATORY - PROVIDED AND INSTALLED BY OTHERS - STRAINER AND TAILPIECE PROVIDED BY PLUMBING CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR. LAVATORY TRIM - SINGLE HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, CONVENTIONAL, SPOUT WITH AERATOR, WASHERS/LEVER HANDLE WITH SUPPLIES AT 4" CENTERS, CERAMIC DISC CARTRIDGE, PERFORATED GRID STRAINER WITH 1-1/4" 17 GAUGE TAILPIECE. MAXIMUM FLOW TO BE 0.35 GPM IN COMPLIANCE WITH PROJECT WATER CONSERVATION REQUIREMENTS (LEED), FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. PROVIDE RESTRICTIVE DEVICE AS REQUIRED. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP, STOP VALVES, AND SUPPLY LINES. ACCESSORIES - QUARTER-TURN 3/8" CHROME PLATED HEAVY BRASS ANGLE SUPPLY LOOSE KEY STOPS, CHROME PLATED SOFT COPPER SUPPLY LINES, DRAIN AND OFFSET TAILPIECE, 1-1/4" 20 GAGE CAST BRASS P-TRAP, SUPPORT CARRIER. COORDINATE OPENINGS REQUIRED IN COUNTERTOP WITH GENERAL CONTRACTOR, FIELD CUT OPENINGS WILL NOT BE ACCEPTABLE, ARMAFLEX WITH TAPE IS NOT ACCEPTABLE IN LIEU OF INSULATION KIT.	LAVATORY TRIM - CHICAGO FAUCET (2200-E2805ABC), DELTA (Z2C2631), AMERICAN STANDARD (6114-116-002), MOEN (8411), ZURN (Z822200-XL)
L-4	LAVATORY - ACCESSIBLE, WALL MOUNTED, WHITE VITREOUS CHINA, 20"x18", 4" HIGH CONTOURED BACKSPASH, SINGLE FAUCET HOLE, DRILLED FOR CONCEALED ARM CARRIER. LAVATORY TRIM - SINGLE HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, CONVENTIONAL, SPOUT WITH AERATOR, WASHERS/LEVER HANDLE WITH SUPPLIES AT 4" CENTERS, CERAMIC DISC CARTRIDGE, PERFORATED GRID STRAINER WITH 1-1/4" 17 GAUGE TAILPIECE. MAXIMUM FLOW TO BE 0.35 GPM IN COMPLIANCE WITH PROJECT WATER CONSERVATION REQUIREMENTS (LEED), FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. PROVIDE RESTRICTIVE DEVICE AS REQUIRED. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP, STOP VALVES, AND SUPPLY LINES. ACCESSORIES - QUARTER-TURN 3/8" CHROME PLATED HEAVY BRASS ANGLE SUPPLY LOOSE KEY STOPS, CHROME PLATED SOFT COPPER SUPPLY LINES, DRAIN AND OFFSET TAILPIECE, 1-1/4" 20 GAGE CAST BRASS P-TRAP, SUPPORT CARRIER. COORDINATE OPENINGS REQUIRED IN COUNTERTOP WITH GENERAL CONTRACTOR, FIELD CUT OPENINGS WILL NOT BE ACCEPTABLE, ARMAFLEX WITH TAPE IS NOT ACCEPTABLE IN LIEU OF INSULATION KIT.	LAVATORY - AMERICAN STANDARD (G356 421), KOHLER (K-2007), SLOAN (SS-3103), TOTO (LT307), ZURN (Z5361)
MB-1	MOP BASIN - MOLDED STONE, WHITE WITH BLACK ACCENTS, 36"x24"x10", STAINLESS STEEL DRAIN WITH COMBINATION DOME STRAINER AND LINT BASKET, 3" OUTLET, VINYL BUMPER GUARD ON EXPOSED SIDES. TRIM - EXPOSED TWO HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, SINGLE WING HANDLE, 1/4 TURN CERAMIC DISC CARTRIDGE, 3/4" HOSE THREAD SPOUT WITH ASSE 1033 RATED INTEGRAL VACUUM BREAKER, WALL BRACE, PAI HOOK, CHECK STOPS OR INLINE CHECK VALVES TO PREVENT THERMAL CROSSOVER, FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. ACCESSORIES - MOP HANGER, HOSE AND HOSE BRACKET, DEEP SEAL TRAP	MOP BASIN - FIAT (MSB), WILLIAMS (MTB), SWAN (MS), ZURN (Z-1995), MUSTER (63M)
MV-1	MIXING VALVE - THERMOSTATIC MIXING VALVE FOR EMERGENCY EYEWASH OR COMBINATION EYEWASH/EYEWASH FIXTURE, BRONZE BODY CONSTRUCTION, COLD WATER BYPASS, OUTLET THERMOMETER, COMBINATION CHECK STOPS OR SEPARATE SUPPLY CHECK VALVES AND SHUT OFF VALVES, OUTLET ISOLATION VALVE, MOUNTING BRACKET. CABINET SHALL BE SURFACE MOUNTED 18 GAGE STAINLESS STEEL WITH 16 GAGE LOCKING DOOR TO ENCLOSE VALVE, INLET CHECK STOPS, OUTLET THERMOMETER, AND OUTLET VALVE. THERMOSTATIC MIXING AND PRESSURE REGULATING VALVE TO DELIVER 3 GPM OF TEMPERED WATER (60-100 DEGREE F) WITH 5 PSI PRESSURE DIFFERENTIAL. UNIT SHALL BE ASSE 1071 LISTED AND APPROVED, VALVE SHALL COMPLY WITH FEDERAL ACT S.3874.	TRIM - DELTA (Z82283), AMERICAN STANDARD (6344 012), CHICAGO FAUCETS (897-CP), MOEN (8124), SPEAKMAN (SC-5812), SYMMONS (S-2490), ZURN (Z841M1-XL)
RD-1	ROOF DRAIN - CAST IRON BODY, SECURED CAST IRON DOME, 15" ROUND, BOTTOM OUTLET, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP BEARING PAN, ADJUSTABLE EXTENSION TO MATCH INSULATION THICKNESS, OUTLET SIZE AS LISTED ON DRAWINGS.	LEONARD (TALF), ACORN CONTROLS (ET171 SERIES), ARMSTRONGS (Z358), APOLLO (94ELF), BRADLEY (S19 SERIES), HAWES (T855 EIVE), LAWLER (911EF), POWERS (ES)
SH-1	SHOWER BASE - ONE PIECE, PRECAST TERRAZZO, 36"x36" (NOMINAL), 2" DRAIN, STAINLESS STEEL REMOVABLE STRAINER. INSTALL UNIT IN PIT TO ALL ADA ACCESS WITH MAXIMUM 1/2" LIP. SHOWER VALVE - ACCESSIBLE, SINGLE HANDLE PRESSURE BALANCED MIXING FAUCET, BRASS OR BRONZE CONSTRUCTION, WASHHERLESS DESIGN, OFF-COLD-HOT TEMPERATURE RANGE INDICATOR DIAL, POLISHED CHROME CAST METAL LEVER HANDLE, INTEGRAL CHECK STOPS, ADJUSTABLE TEMPERATURE LIMIT STOP, ASSE 1016 LISTED. ACCESSORIES - CHROME-PLATED BRASS SHOWERHEAD WITH SWIVEL BALL JOINT, CHROME-PLATED BRASS ARM AND FLANGE, HAND HOLD SHOWER WITH 60" CHROME-PLATED METAL HOSE AND TRUCK DISCONNECT, CHROME-PLATED BRASS SWIVEL CONNECT ORN, 30" CHROME-PLATED MOUNTING RAIL, CHROME-PLATED BRASS SUPPLY ELBOW FLANGE, CHROME-PLATED ELEVATED VACUUM BREAKER WITH CHROME-PLATED PIPING AND FLANGES, CHROME-PLATED BRASS 2 FUNCTION TRANSFER VALVE. INSTALL ALL CONTROLS BETWEEN 38" AND 48" ABOVE FINISHED FLOOR IN COMPLIANCE WITH LATEST ADA STANDARDS, MAXIMUM FLOW TO BE 1.5 GPM IN COMPLIANCE WITH PROJECT WATER CONSERVATION REQUIREMENTS (LEED), SET SAFETY LIMIT STOP TO 110 DEGREE F DISCHARGE.	ZURN (Z-100), SMITH (1010), WADE (3000), JOSAM (2150), WATTS (RD-300), MIFAB (R1200)
SV-1	SOLENOID VALVE - NORMALLY CLOSED GENERAL SERVICE, BRASS BODY CONSTRUCTION, NPT PIPE CONNECTIONS SAME AS PIPE SIZE, TWO WAY PILOT OPERATED, METAL SOLENOID ENCLOSURE, CONTINUOUS DUTY MOLDED CLASS F COIL, SUITABLE FOR USE WITH WATER. MINIMUM OPERATING PRESSURE DIFFERENTIAL OF 0 PSI ELECTRICAL REQUIREMENTS - 120 VAC, HARD-WIRED SWITCH FOR CONTROL OF SOLENOID VALVE PROVIDED AND INSTALLED BY E.C. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.	TERRAZZO SHOWER BASE - FIAT (MFT), CREATIVE INDUSTRIES (74832), WILLIAMS (66), FLORESTONE SHOWER VALVE - MOEN COMMERCIAL (6346), SYMMONS (1-25-FS8), AMERICAN STANDARD (1660-221), DELTA (R10000-UNNVS/134H152-20), LEONARD (PAM-II), POWERS (PH413-K1)
TO-1	TRENCH DRAIN - MODULAR, PRE-SLOPED, HEAVY DUTY PRECAST POLYMER CONCRETE, 4" WIDE CHANNEL, 0.6% SLOPE, EXTRA HEAVY DUTY LOCKING DUCTILE IRON GRATE, CLASS E RATED, INTEGRAL CATCH BASINS WITH SEDIMENT BUCKETS, 4" OUTLETS, LENGTH AS SHOWN ON DRAWINGS.	SMITH (9814), ABT (CONCRETE), WATTS (600 SERIES), ACC (100K)
UB-1	UTILITY BOX - POLYSTYRENE CONSTRUCTION, 6" W BY 6" BOX DIMENSIONS, LOW LEAD 1/4 TURN SHUT OFF VALVE WITH INTEGRAL WATER HAMMER ARRESTOR, 6 FOOT STAINLESS STEEL FLEXIBLE HOSE FOR CONNECTION TO EQUIPMENT.	ASC0 (8210)

PLUMBING FIXTURE SCHEDULE		
TAG NAME	DESCRIPTION	MANF. & MODEL
SH-2	SHOWER BASE - ONE PIECE, PRECAST TERRAZZO, 36"x36" (NOMINAL), 2" DRAIN, STAINLESS STEEL REMOVABLE STRAINER. SHOWER VALVE - SINGLE HANDLE PRESSURE BALANCED MIXING FAUCET, BRASS OR BRONZE CONSTRUCTION, POLISHED CHROME CAST METAL LEVER HANDLE, WASHHERLESS DESIGN, OFF-COLD-HOT TEMPERATURE RANGE INDICATOR DIAL, INTEGRAL CHECK STOPS, ADJUSTABLE TEMPERATURE LIMIT STOP, ASSE 1016 LISTED. ACCESSORIES - CHROME-PLATED PLASTIC SHOWERHEAD WITH SWIVEL BALL JOINT, ADJUSTABLE SPRAY, CHROME-PLATED BRASS ARM AND FLANGE. INSTALL BOTTOM OF SHOWERHEAD AT 72" ABOVE FINISHED FLOOR, MAXIMUM FLOW TO BE 1.5 GPM IN COMPLIANCE WITH PROJECT WATER CONSERVATION REQUIREMENTS (LEED), SET SAFETY LIMIT STOP TO 110 DEGREE F DISCHARGE.	TERRAZZO SHOWER BASE - FIAT (MFT), CREATIVE INDUSTRIES (74832), WILLIAMS (66), FLORESTONE SHOWER VALVE - (87575P15), SYMMONS (1-100), AMERICAN STANDARD (1875.501), (R10000-UNNVS/131H122), LEONARD (PAM-II), POWERS (PH413-K1)
SK-1	SINK - ACCESSIBLE, SELF-RIMMING SINGLE COMPARTMENT WITH FAUCET DECK AND OVERFLOW, 18 GAUGE TYPE 304 STAINLESS STEEL, 22" (SIDE-TO-SIDE) X 19" (FRONT-TO-BACK) OVERALL SIZE, 18" X 14" X 6" DEEP BOWL, COMPLETELY UNDERCOATED, 3-1/2" DIAMETER DRAIN OUTLET LOCATION OFF-CENTERED REAR IN BOWL, PERFORATED TYPE 304 STAINLESS STEEL GRID STRAINER. SINK TRIM - TWO HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, GOOSENECK RIGID SPOUT, NOMINAL 8" REACH, AERATOR, 4" WRISTBLADE HANDLES AT 8" CENTERS, 1/4-TURN OPERATION CERAMIC DISC CARTRIDGE. MAXIMUM FLOW TO BE 1.5 GPM IN COMPLIANCE WITH PROJECT WATER CONSERVATION REQUIREMENTS (LEED), FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. PROVIDE RESTRICTIVE DEVICE AND ESCUTCHEON PLATE AS REQUIRED. ACCESSORIES - OFFSET 1-1/2" 17 GAUGE CHROME-PLATED BRASS TAILPIECE AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES.	SINK - ELKAY (LRAADKAD18), JUST (SL-ADAJADA-35-FS-A DA-35, FRANKIE (ALBS) DELTA (Z2C2631), AMERICAN STANDARD (7230.000), MOEN (8225), SPEAKMAN (SC-3000 SERIES), ZURN (Z831-XL)
SK-2	SINK - SELF-RIMMING SINGLE COMPARTMENT WITH FAUCET DECK AND OVERFLOW, 18 GAUGE TYPE 304 STAINLESS STEEL, 22" (SIDE-TO-SIDE) X 19" (FRONT-TO-BACK) OVERALL SIZE, 18" X 14" X 6" DEEP BOWL, COMPLETELY UNDERCOATED, 3-1/2" DIAMETER DRAIN OUTLET LOCATION OFF-CENTERED REAR IN BOWL, PERFORATED TYPE 304 STAINLESS STEEL GRID STRAINER. SINK TRIM - TWO HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, GOOSENECK RIGID SPOUT, NOMINAL 8" REACH, AERATOR, 4" WRISTBLADE HANDLES AT 8" CENTERS, 1/4-TURN OPERATION CERAMIC DISC CARTRIDGE. MAXIMUM FLOW TO BE 1.5 GPM IN COMPLIANCE WITH PROJECT WATER CONSERVATION REQUIREMENTS (LEED), FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. PROVIDE RESTRICTIVE DEVICE AND ESCUTCHEON PLATE AS REQUIRED. ACCESSORIES - QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES. GARBAGE DISPOSER - CONTINUOUS FEED, SINGLE DIRECTION, CORROSION PROTECTION REQUIREMENTS (LEED), FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. PROVIDE RESTRICTIVE DEVICE AND ESCUTCHEON PLATE AS REQUIRED. ELECTRICAL REQUIREMENTS - 115V-1 PHASE, HARD WIRED, 3/4 HP MOTOR, 15 AMPS.	SINK - ELKAY (LRAADKAD18), JUST (SL-ADAJADA-35-FS-A DA-35, FRANKIE (ALBS) DELTA (Z2C2631), AMERICAN STANDARD (7230.000), MOEN (8225), SPEAKMAN (SC-3000 SERIES), ZURN (Z831-XL)
SP-1	SUMP PUMP - DUPLEX SUBMERSIBLE, SINGLE-STAGE, SINGLE SEAL, CENTRIFUGAL, END-SUCTION PUMPS, STAINLESS STEEL FASTENERS, GUARDS AND HANDLES, UL LISTED. CASING - CAST IRON, INTEGRAL SUPPORT FEET, MINIMUM 4" VERTICAL DISCHARGE IMPELLER - CAST IRON STATICALLY AND DYNAMICALLY BALANCED, SEMIOPEN NONCLOG DESIGN, KEYS AND SECURED TO SHAFT, PASSES 1/2" SOLIDS MINIMUM SHAFT - STEEL OR STAINLESS STEEL WITH FACTORY SEALED, GREASE-LUBRICATED SLEEVE OR BALL BEARINGS, CARBON AND CERAMIC SEAL MOTOR - 1750 RPM, OIL OR AIR-FILLED, HERMETICALLY SEALED WITH AUTO THERMAL OVERLOAD PROTECTION, THREE CONDUCTOR WATERPROOF POWER CABLE OF SUFFICIENT LENGTH WITH GROUNDING PLUG. CAPACITY: 380 GPM, 33 FEET OF HEAD. ELECTRICAL REQUIREMENTS - 7.5 HP, 460V, 3 PHASE CONTROLS - WALL MOUNTED NEMA 1 ENCLOSURE, DUPLEX (X) FLOAT WITH AUTOMATIC ALTERNATOR TO LEAD-LAG PUMPS AND ALSO ALLOW BOTH PUMPS TO RUN DURING HIGH LOAD, RUN LIGHT, TEST-OFF-AUTO AND DISCONNECTING MEANS FOR EACH PUMP, HIGH WATER ALARM WITH HORN, STROBE, SILENCING BUTTON AND DRY CONTACTS FOR ALARM AND PUMP STATUS, UL LISTED, FLOATS SHALL BE MERCURY-FREE. BASIN - FIBERGLASS CONSTRUCTION, 60" DIAMETER X 132" DEEP ANCHOR FLANGE, PIPE INLETS AS SHOWN ON DRAWINGS, HIGH WATER FLOATCONTACT SWITCH WITH GASKETED SOLID COVER WITH OPENINGS FOR PUMP ACCESS, 4" DISCHARGE PIPE FLANGES), CONTROL AND POWER CORDS, INSPECTION PORT. GALVANIZED STEEL GUIDED RAIL, SUPPORTS ANCHORED TO BASIN BASE AND COVER OR SIDEWALL WITH DISCHARGE ELBOW, SEALING PLATE AND STAINLESS STEEL LIFTING CABLE.	PUMP - WEIL (2519), ZOELLER, BARNES (SE), GOULDS (WE), STANCOR (SE) BASIN - AK INDUSTRIES, FIBER BASIN INC., SAME AS PUMP MANUFACTURER
SP-2	SUMP PUMP - SIMPLEX SUBMERSIBLE, SINGLE-STAGE, SINGLE SEAL, CENTRIFUGAL, END-SUCTION PUMPS, STAINLESS STEEL FASTENERS, GUARDS AND HANDLES, UL LISTED. CASING - CAST IRON, INTEGRAL SUPPORT FEET, MINIMUM 1 1/4" VERTICAL DISCHARGE IMPELLER - CAST IRON STATICALLY AND DYNAMICALLY BALANCED, SEMIOPEN NONCLOG DESIGN, KEYS AND SECURED TO SHAFT, PASSES 1/2" SOLIDS MINIMUM SHAFT - STEEL OR STAINLESS STEEL WITH FACTORY SEALED, GREASE-LUBRICATED SLEEVE OR BALL BEARINGS, CARBON AND CERAMIC SEAL MOTOR - 1750 RPM, OIL OR AIR-FILLED, HERMETICALLY SEALED WITH AUTO THERMAL OVERLOAD PROTECTION, THREE CONDUCTOR WATERPROOF POWER CABLE OF SUFFICIENT LENGTH WITH GROUNDING PLUG. CAPACITY: 35 GPM, 15 FEET OF HEAD. ELECTRICAL REQUIREMENTS - 1/3 HP, 115V, 1 PHASE CONTROLS - HYDROCARBON SENSING PUMP SWITCH WITH HIGH WATER ALARM, NEMA 4X ENCLOSURE, HIGH WATER FLOATCONTACT SWITCH WITH WATER PROOF CABLE OF SUFFICIENT LENGTH, HORN, STROBE, SILENCING BUTTON AND DRY CONTACTS FOR ALARM AND PUMP STATUS, 6 FOOT 115V POWER CORD, UL LISTED, FLOATS SHALL BE MERCURY-FREE. ELECTRICAL REQUIREMENTS - 115V RECEPTACLE BASIN - 24" x 24" x 24" DEEP FORMED CONCRETE PIT BY OTHERS, PROVIDE CAST IRON OR STEEL PERFORATED COVER WITH MOUNTING FRAME AND OPENINGS FOR PIPING AND ACCESSORIES. COVER SHALL BE SECURED AND FLUSH TO FLOOR, COORDINATE COVER MOUNTING AND SECURING METHOD WITH GENERAL CONTRACTOR.	PUMP - WEIL (1409), ZOELLER (SERIES 137), BARNES (SE), GOULDS (WE), STANCOR (SE) ALARM - SEEWATER OSS (SERIES/OSA.05), STANCOR (OIL MINDER), ZOELLER (940 SERIES), FIBER BASIN INC., SAME AS PUMP MANUFACTURER
SS-1	SERVICE SINK - WALL MOUNTED, 14 GAUGE TYPE 304 STAINLESS STEEL CONSTRUCTION, 25"x20", 12" DEEP BOWL, MOUNTING BRACKETS, 3" CAST IRON FLOOR SUPPORTED P-TRAP. SINK TRIM - TWO HANDLE EXPOSED MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, SINGLE WING HANDLES, 1/4 TURN CERAMIC DISC CARTRIDGE, 3/4" HOSE THREAD SPOUT, INTEGRAL VACUUM BREAKER, WALL BRACE, PAI HOOK, CHECK STOPS ON INLINE CHECK VALVES TO PREVENT THERMAL CROSSOVER, FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874.	SINK - JUST (A-18665), ELKAY (ESS) TRIM - DELTA (2822), AMERICAN STANDARD (8344 012), MOEN (8124), SPEAKMAN (SC-5812), ZURN (Z-841M1-XL)
TO-1	TRENCH DRAIN - MODULAR, PRE-SLOPED, HEAVY DUTY PRECAST POLYMER CONCRETE, 4" WIDE CHANNEL, 0.6% SLOPE, EXTRA HEAVY DUTY LOCKING DUCTILE IRON GRATE, CLASS E RATED, INTEGRAL CATCH BASINS WITH SEDIMENT BUCKETS, 4" OUTLETS, LENGTH AS SHOWN ON DRAWINGS.	SMITH (9814), ABT (CONCRETE), WATTS (600 SERIES), ACC (100K)
UB-1	UTILITY BOX - POLYSTYRENE CONSTRUCTION, 6" W BY 6" BOX DIMENSIONS, LOW LEAD 1/4 TURN SHUT OFF VALVE WITH INTEGRAL WATER HAMMER ARRESTOR, 6 FOOT STAINLESS STEEL FLEXIBLE HOSE FOR CONNECTION TO EQUIPMENT.	CATLEY (30142), WATER-TITE

PLUMBING FIXTURE SCHEDULE		
TAG NAME	DESCRIPTION	MANF. & MODEL
UR-1	URINAL - ACCESSIBLE, WALL MOUNTED, WHITE VITREOUS CHINA, FLUSH VALVE TYPE, WASHOUT ACTION, ELONGATED RIM, EXTENDED SIDE SHIELDS, 3/4" TOP SPUD, 2" OUTLET. FLUSH VALVE - EXPOSED, SENSOR OPERATION, HARD WIRED, 0.5 GALLON PER FLUSH, 1-1/2" ROUGH-IN, CHROME-PLATED, 3/4" I.P.S. SCREWDRIVE, 3/4" TOP STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, NON-HOLD-OPEN HANDLE, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, MANUAL OVER-RIDE RANGE ADJUSTMENT SCREW, BEAM DEFLECTOR, CHROME-PLATED COVER PLATE WITH TAMPER-PROOF SCREWS, TRANSFORMER AND LOW VOLTAGE WIRING, CHLORAMINE RESISTANT MATERIALS, 3-YEAR WARRANTY. ELECTRICAL REQUIREMENTS - 120VAC INPUT CONTRACTOR OPTION - COMBINATION URINAL/FLUSH VALVE PACKAGED SYSTEM BY AMERICAN STANDARD, KOHLER, SLOAN OR ZURN ACCESSORIES - SUPPORT CARRIER WITH TOP AND BOTTOM BEARING PLATES, MOUNT WITH CARRIER BOLTED SECURELY TO FLOOR, TOP OF BOWL RIM SHALL BE AT 17" (MAXIMUM) ABOVE FLOOR IN COMPLIANCE WITH LATEST ADA STANDARDS, VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS.	URINAL - AMERICAN STANDARD (6590.001), KOHLER (K-4991-ET), SLOAN (SU-1006SU-1005), GENSER (27-780), TOTO (UT447), ZURN (Z3750) (ZEM5003AV), SLOAN (ROYAL 186 ES-S), AMERICAN STANDARD (6062.051), HYDROTEK (H6-81-05), MOEN (8315AC05)

POLICE DEPARTMENT MIDTOWN DISTRICT

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR: CONSTRUCTION 5-5-17

REVISION FOR: NO. DESCRIPTION DATE

DRAWN BY PAUHAN

CHECKED BY PAUVAN

PLUMBING MATERIAL LIST - PLUMBING

1000 DENVER WAY SUITE 200
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REFERENCE SCALE IN INCHES
1" = 1'-0"

**POLICE DEPARTMENT
MIDTOWN DISTRICT**

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211 South Carroll Street
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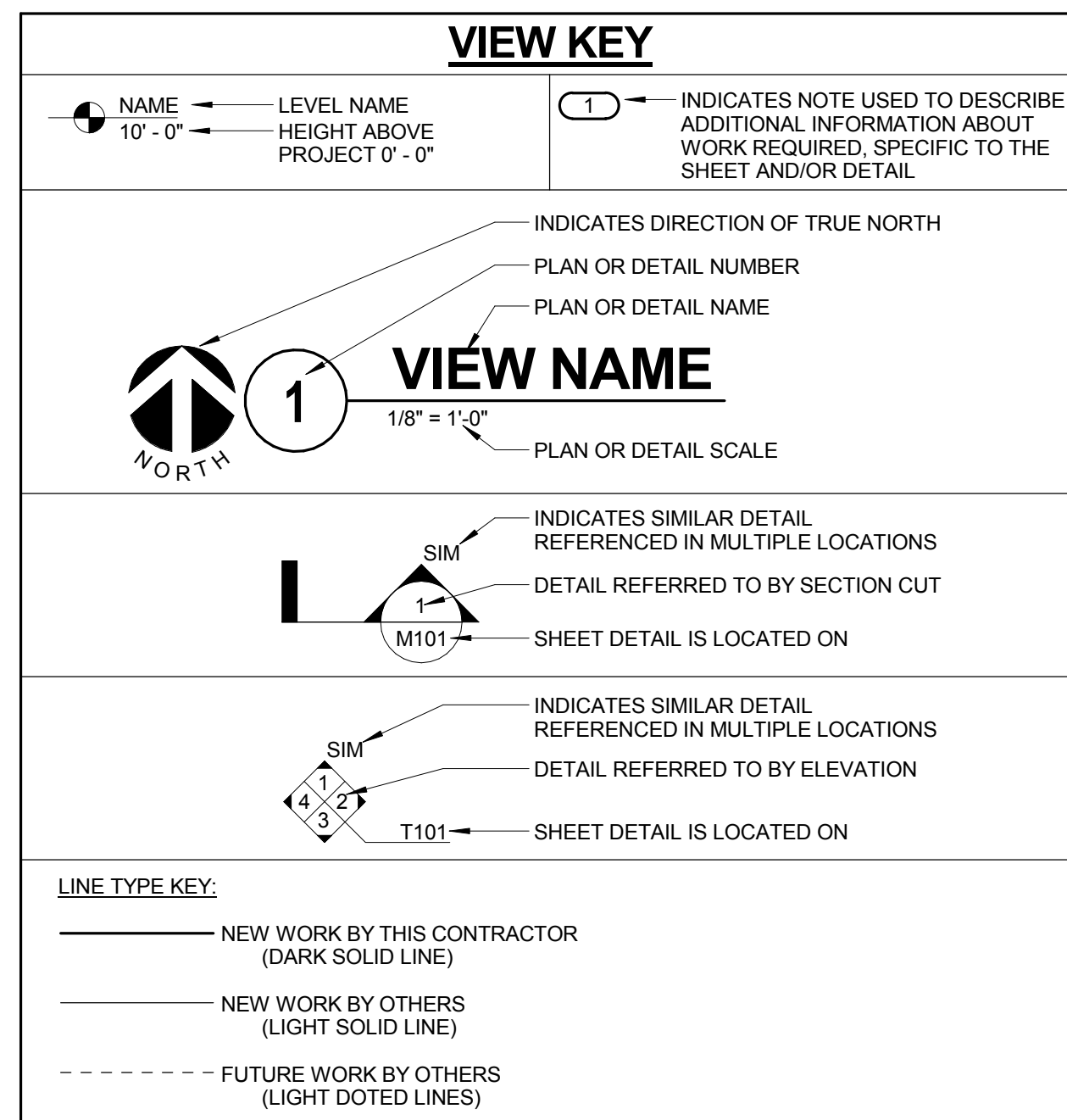
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CHECKED BY PAUVAN

**PLUMBING MATERIAL LIST -
PLUMBING**

PLUMBING FIXTURE SCHEDULE		
TAG NAME	DESCRIPTION	MANF. & MODEL
WC-1	<p>WATER CLOSET - ACCESSIBLE, WALL HUNG, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, SIPHON JET, HIGH EFFICIENCY RATED FOR 1.28 GPF, ELONGATED BOWL, 1-1/2" TOP SPUD.</p> <p>FLUSH VALVE - EXPOSED, MANUAL OPERATION, 1.28 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED, 1" I.P.S. SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, NON-HOLD-OPEN HANDLE, ADJUSTABLE TAILPIECE, ADA COMPLIANT, 3 YEAR WARRANTY.</p> <p>SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, SELF-SUSTAINING HINGE, PLATED STEEL POSTS AND NUTS.</p> <p>CONTRACTOR OPTION: COMBINATION WATER CLOSET/FLUSH VALVE PACKAGED SYSTEM BY AMERICAN STANDARD, KOHLER, SLOAN, OR ZURN</p> <p>ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 500 LBS.</p> <p>MOUNT WATER CLOSET WITH CARRIER BOLTED SECURELY TO FLOOR. TOP OF SEAT SHALL BE AT 17"-19" ABOVE FINISHED FLOOR (VERIFY EXACT MOUNTING HEIGHT WITH MANUFACTURER). FLUSH HANDLE SHALL BE LOCATED ON THE WIDE SIDE OF THE TOILET STALL AND BE AT 12" (MAXIMUM) ABOVE BOWL RIM AND OPERATE WITH NO GREATER THAN 5 LB FORCE IN COMPLIANCE WITH LATEST ADA STANDARDS. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS.</p>	<p>WATER CLOSET - AMERICAN STANDARD (2257.001), SLOAN (ST-2050), ZURN (Z5615), KOHLER (K-4325), TOTO (CT708E)</p> <p>FLUSH VALVE - ZURN (Z6000AV-HET), SLOAN (111-1-28), AMERICAN STANDARD (6047.121), KOHLER (K-13517-CP)</p> <p>SEAT - BEMIS (3155C), CHURCH (3155C), BENEKE (533PC), OLSONITE (95), SAME AS WATER CLOSET MANUFACTURER</p>
WC-2	<p>WATER CLOSET - WALL HUNG, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, SIPHON JET, HIGH EFFICIENCY RATED FOR 1.28 GPF, ELONGATED BOWL, 1-1/2" TOP SPUD.</p> <p>FLUSH VALVE - EXPOSED, MANUAL OPERATION, 1.28 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED, 1" I.P.S. SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, NON-HOLD-OPEN HANDLE, ADJUSTABLE TAILPIECE, ADA COMPLIANT, 3 YEAR WARRANTY.</p> <p>SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, SELF-SUSTAINING HINGE, PLATED STEEL POSTS AND NUTS.</p> <p>CONTRACTOR OPTION: COMBINATION WATER CLOSET/FLUSH VALVE PACKAGED SYSTEM BY AMERICAN STANDARD, KOHLER, SLOAN, OR ZURN</p> <p>ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 500 LBS.</p> <p>MOUNT WATER CLOSET WITH CARRIER BOLTED SECURELY TO FLOOR. TOP OF SEAT SHALL BE AT 17"-19" ABOVE FINISHED FLOOR (VERIFY EXACT MOUNTING HEIGHT WITH MANUFACTURER). FLUSH HANDLE SHALL BE LOCATED ON THE WIDE SIDE OF THE TOILET STALL AND BE AT 12" (MAXIMUM) ABOVE BOWL RIM AND OPERATE WITH NO GREATER THAN 5 LB FORCE IN COMPLIANCE WITH LATEST ADA STANDARDS. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS.</p>	<p>WATER CLOSET - AMERICAN STANDARD (2257.001), SLOAN (ST-2050), ZURN (Z5615), KOHLER (K-4325), TOTO (CT708E)</p> <p>FLUSH VALVE - ZURN (Z6000AV-HET), SLOAN (111-1-28), AMERICAN STANDARD (6047.121), KOHLER (K-13517-CP)</p> <p>SEAT - BEMIS (3155C), CHURCH (3155C), BENEKE (533PC), OLSONITE (95), SAME AS WATER CLOSET MANUFACTURER</p>
WC-3	<p>WATER CLOSET - ACCESSIBLE, WALL MOUNTED SECURITY GRADE, WALL OUTLET, 14 GAGE STAINLESS STEEL, SEAMLESS WELDED CONSTRUCTION, SATIN FINISH EXPOSED SURFACES, SIPHON JET TYPE, ELONGATED BOWL WITH SELF-DRAINING RIM, CONTINUOUS INTEGRAL SEAT.</p> <p>FLUSH VALVE - CONCEALED SUPPLY WITH 1.6 GPF FLUSH VALVE WITH ADA LEVER HANDLE.</p> <p>ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 500 LBS. FLOOD-TROL WHIT MANUAL RESET.</p> <p>MOUNT WATER CLOSET WITH CARRIER BOLTED SECURELY TO FLOOR. TOP OF SEAT SHALL BE AT 17"-19" ABOVE FINISHED FLOOR (VERIFY EXACT MOUNTING HEIGHT WITH MANUFACTURER). FLUSH HANDLE SHALL BE LOCATED ON THE WIDE SIDE OF THE TOILET STALL AND BE AT 12" (MAXIMUM) ABOVE BOWL RIM AND OPERATE WITH NO GREATER THAN 5 LB FORCE IN COMPLIANCE WITH LATEST ADA STANDARDS. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS.</p>	<p>WATER CLOSET - ACORN 2105, BRADLEY</p> <p>FLUSH VALVE - ACORN, WILLOUGHBY, METOCRAFT</p>
WC-4	<p>WATER CLOSET - ACCESSIBLE, WALL HUNG, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, SIPHON JET, WATER SAVING, ELONGATED BOWL, 1-1/2" TOP SPUD.</p> <p>FLUSH VALVE - EXPOSED, MANUAL OPERATION, DUAL FLOW 1.1/1.6 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED, 1" I.P.S. SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, NON-HOLD-OPEN HANDLE, ADJUSTABLE TAILPIECE, ADA COMPLIANT, 3 YEAR WARRANTY.</p> <p>SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, SELF-SUSTAINING HINGE, PLATED STEEL POSTS AND NUTS.</p> <p>CONTRACTOR OPTION: COMBINATION WATER CLOSET/FLUSH VALVE PACKAGED SYSTEM BY AMERICAN STANDARD, KOHLER, SLOAN, OR ZURN</p> <p>ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 500 LBS.</p> <p>MOUNT WATER CLOSET WITH CARRIER BOLTED SECURELY TO FLOOR. TOP OF SEAT SHALL BE AT 17"-19" ABOVE FINISHED FLOOR (VERIFY EXACT MOUNTING HEIGHT WITH MANUFACTURER). FLUSH HANDLE SHALL BE LOCATED ON THE WIDE SIDE OF THE TOILET STALL AND BE AT 12" (MAXIMUM) ABOVE BOWL RIM AND OPERATE WITH NO GREATER THAN 5 LB FORCE IN COMPLIANCE WITH LATEST ADA STANDARDS. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS.</p>	<p>WATER CLOSET - AMERICAN STANDARD (2257.101), SLOAN (ST-2052), ZURN (Z5610), GERBER (26-030), KOHLER (K-4325), TOTO (CT708)</p> <p>FLUSH VALVE - ZURN (Z6000AV-DF), SLOAN (WES-111)</p> <p>SEAT - BEMIS (3155C), CHURCH (3155C), BENEKE (533PC), OLSONITE (95), SAME AS WATER CLOSET MANUFACTURER</p>
WC-5	<p>WATER CLOSET - WALL HUNG, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, SIPHON JET, WATER SAVING, ELONGATED BOWL, 1-1/2" TOP SPUD.</p> <p>FLUSH VALVE - EXPOSED, MANUAL OPERATION, DUAL FLOW 1.1/1.6 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED, 1" I.P.S. SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, NON-HOLD-OPEN HANDLE, ADJUSTABLE TAILPIECE, ADA COMPLIANT, 3 YEAR WARRANTY.</p> <p>SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, SELF-SUSTAINING HINGE, PLATED STEEL POSTS AND NUTS.</p> <p>CONTRACTOR OPTION: COMBINATION WATER CLOSET/FLUSH VALVE PACKAGED SYSTEM BY AMERICAN STANDARD, KOHLER, SLOAN, OR ZURN</p> <p>ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 500 LBS.</p> <p>MOUNT WATER CLOSET WITH CARRIER BOLTED SECURELY TO FLOOR. TOP OF SEAT SHALL BE AT 17"-19" ABOVE FINISHED FLOOR (VERIFY EXACT MOUNTING HEIGHT WITH MANUFACTURER). FLUSH HANDLE SHALL BE LOCATED ON THE WIDE SIDE OF THE TOILET STALL AND BE AT 12" (MAXIMUM) ABOVE BOWL RIM AND OPERATE WITH NO GREATER THAN 5 LB FORCE IN COMPLIANCE WITH LATEST ADA STANDARDS. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS.</p>	<p>WATER CLOSET - AMERICAN STANDARD (2257.101), SLOAN (ST-2052), ZURN (Z5610), GERBER (26-030), KOHLER (K-4325), TOTO (CT708)</p> <p>FLUSH VALVE - ZURN (Z6000AV-DF), SLOAN (WES-111)</p> <p>SEAT - BEMIS (3155C), CHURCH (3155C), BENEKE (533PC), OLSONITE (95), SAME AS WATER CLOSET MANUFACTURER</p>
WC-6	<p>WATER CLOSET - ACCESSIBLE, WALL HUNG, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, SIPHON JET, HIGH EFFICIENCY RATED FOR 1.28 GPF, ELONGATED BOWL, 1-1/2" TOP SPUD.</p> <p>FLUSH VALVE - EXPOSED, WALL MOUNTED SENSOR OPERATION, HARDWIRED, 1.28 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED 1" I.P.S. SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, MECHANICAL OVER-RIDE BUTTON, RANGE ADJUSTMENT SCREW, CHLORAMINE RESISTANT MATERIALS, CHROME PLATED COVER PLATE WITH TAMPER-PROOF SCREWS, TRANSFORMER AND LOW VOLTAGE WIRING, ADA COMPLIANT, 3 YEAR WARRANTY.</p> <p>ELECTRICAL REQUIREMENTS - 120VAC INPUT</p> <p>SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, SELF-SUSTAINING HINGE, PLATED STEEL POSTS AND NUTS.</p> <p>CONTRACTOR OPTION: COMBINATION WATER CLOSET/FLUSH VALVE PACKAGED SYSTEM BY AMERICAN STANDARD, KOHLER, SLOAN, OR ZURN</p> <p>ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 500 LBS.</p> <p>MOUNT WATER CLOSET WITH CARRIER BOLTED SECURELY TO FLOOR. TOP OF SEAT SHALL BE AT 17"-19" ABOVE FINISHED FLOOR (VERIFY EXACT MOUNTING HEIGHT WITH MANUFACTURER). FLUSH HANDLE SHALL BE LOCATED ON THE WIDE SIDE OF THE TOILET STALL AND BE AT 12" (MAXIMUM) ABOVE BOWL RIM AND OPERATE WITH NO GREATER THAN 5 LB FORCE IN COMPLIANCE WITH LATEST ADA STANDARDS. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS.</p>	<p>WATER CLOSET - AMERICAN STANDARD (2257.011), SLOAN (ST-2050), ZURN (Z5615), KOHLER (K-4325), TOTO (CT708E)</p> <p>FLUSH VALVE - ZURN (Z6000AV-HET), SLOAN (111-1-28 ESS), AMERICAN STANDARD (6067.121), HYDROTEK (H8-128), MOEN (6311AC12), TOTO</p> <p>SEAT - BEMIS (3155C), CHURCH (3155C), BENEKE (533PC), OLSONITE (95), SAME AS WATER CLOSET MANUFACTURER</p>
WCO-1	<p>WALL CLEANOUT - END CAP, CAST IRON ACCESS BODY, GAS AND WATERTIGHT BRONZE OR BRASS THREADED PLUG, ROUND STAINLESS STEEL ACCESS COVER, EXTENDED MACHINE SCREW.</p>	<p>ZURN (Z-1441), SMITH (4422), WADE (W-8480-R8550), JOSAM (58500-CO), WATTS (CO-380-RD)</p>

PLUMBING FIXTURE SCHEDULE		
TAG NAME	DESCRIPTION	MANF. & MODEL
WH-1	<p>WATER HEATER - GAS FIRED, VERTICAL, MINIMUM 94% EFFICIENT, SEALED COMBUSTION METAL CABINET, BAKED ENAMEL FINISH, GLASS-LINED ASMIE STAMPED WELDED STEEL TANK, 160 PSI WORKING PRESSURE, FIBERGLASS OR FOAM INSULATION, BRASS WATER CONNECTIONS AND DRAIN VALVE, ASMIE APPROVED TOP RELIEF VALVE, MULTIPLE MAGNESIUM ANODE RODS, VENT PIPING KIT, HIGH TEMPERATURE GAS SHUT OFF, AUTOMATIC WATER THERMOSTAT, BUILT-IN GAS REGULATING VALVE, ADJUSTABLE TEMPERATURE RANGE, CONDENSATE DRAIN NEUTRALIZATION KIT, 3-YEAR WARRANTY, UL LISTED, COMPLIANT TO NAECA, ASHRAE 90.1 AND ASHRAE 90A.</p> <p>60 GALLON CAPACITY, 120,000 BTUH INPUT NATURAL GAS, 172 GPH RECOVERY AT 80°F RISE.</p> <p>ELECTRICAL REQUIREMENTS - 120V CIRCUIT FOR BLOWER AND CONTROLS, HARD-WIRED</p> <p>SET WATER TEMPERATURE AT 120°F. SET SUPPLY GAS PRESSURE AT 7" W. C.</p>	<p>BOCK (OT SERIES), BRADFORD WHITE (EF SERIES), HTP (PHOENIX PLUS)</p>
WHA-1	<p>WATER HAMMER ARRESTER - BELLOWS TYPE, PRE-CHARGED, ALL LEAD FREE STAINLESS STEEL CONSTRUCTION, ASSE 1010 APPROVED, PDI CERTIFIED, RATED FOR 1-11 FIXTURE UNITS.</p> <p>INSTALL PER MANUFACTURER'S RECOMMENDATIONS.</p>	<p>ZURN (Z1700), JR SMITH (5005-5050), WADE (WS-100), JOSAM (75000 SERIES), WATTS (SS), MIFAB (WHB)</p>
WHA-2	<p>WATER HAMMER ARRESTER - BELLOWS TYPE, PRE-CHARGED, ALL LEAD FREE STAINLESS STEEL CONSTRUCTION, ASSE 1010 APPROVED, PDI CERTIFIED, RATED FOR 12-32 FIXTURE UNITS.</p> <p>INSTALL PER MANUFACTURER'S RECOMMENDATIONS.</p>	<p>ZURN (Z1700), JR SMITH (5005-5050), WADE (WS-100), JOSAM (75000 SERIES), WATTS (SS), MIFAB (WHB)</p>
WS-1	<p>WATER SOFTENER - AUTOMATIC REGENERATION TYPE, DUPLEX SOFTENER TANKS, DEMAND RECALL CONTROLS, POWER SUPPLY WITH CORD AND PLUG.</p> <p>CONTINUOUS FLOW RATE OF 34 GPM AT 8 PSI PRESSURE DROP PER TANK. MAXIMUM FLOW RATE OF 68 GPM AT 8 PSI PRESSURE DROP FOR THE SYSTEM. CONTINUATION FLOW RATE OF 47 GPM AT 15 PSI PER TANK AND 94 GPM AT 15 PSI PER SYSTEM. MINIMUM CAPACITY OF 112,000 GRAINS PER 40 LBS SALT PER TANK.</p> <p>ELECTRICAL REQUIREMENTS - 120V-1 PHASE RECEPTACLE</p> <p>REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.</p>	<p>REFER TO SPECIFICATIONS</p>
YCO-1	<p>YARD CLEANOUT - ROUND, DURA-COATED CAST IRON, SIZE AS LISTED ON DRAWINGS, DOUBLE FLANGED HOUSING, HEAVY DUTY SECURED SCORRATED DURA-COATED CAST IRON COVER, LIFTING DEVICE, BRONZE CLEANOUT PLUG WITH GASWATER-TIGHT SEAL.</p>	<p>ZURN (Z1474), SMITH (4251), WADE (8401), JOSAM (58680), WATTS (CO-300-MF)</p>



CONTRACTOR ABBREVIATION KEY

ABBR.	DESCRIPTION:
A.T.C.	AUTOMATIC TEMPERATURE CONTROL CONTRACTOR
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

FIRE / SMOKE BARRIER DESIGNATIONS

THE LINE TYPES SHOWN ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY RATINGS WITH THE LATEST SET OF ARCHITECTURAL PLANS AND FURNISH ALL MATERIALS REQUIRED TO COMPLY WITH THOSE RATINGS WHETHER SHOWN OR NOT.

ALL FLOOR ASSEMBLIES SHALL BE DESIGNATED AS 0 HOUR FLOOR CONSTRUCTION RATING UNLESS NOTED OTHERWISE ON CODE COMPLIANCE PLANS. REFER TO CODE COMPLIANCE PLANS FOR ADDITIONAL DETAILS.

1 HOUR FIRE PARTITION	---
2 HOUR FIRE BARRIER	----

CONTACT PERSONS:

DESCRIPTION:	PERSON:
PROJECT MANAGER	KRIS COTHARN
MECHANICAL ENGINEER	PAUL HANSEN
ELECTRICAL ENGINEER	ALEX WELK
TECHNOLOGY ENGINEER	GWEN BROMME
STRUCTURAL ENGINEER	BRENT BALLWEG

FIRE PROTECTION SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
D	DRAIN
FP	FIRE PROTECTION
W	SERVICE WATER - POTABLE
B	PIPE CAP
D	PIPE DOWN
U	PIPE UP OR UP/DOWN
NC	NEW CONNECTION
U	UNION/FLANGE
→	DIRECTION OF FLOW IN PIPE
⊥	SHUTOFF VALVE NORMALLY OPEN
⊥	ANGLE VALVE
⊥	BUTTERFLY VALVE WITH MONITOR SWITCH
⊥	CHECK VALVE
⊥	INSPECTOR TEST AND DRAIN VALVE
⊥	OS&Y GATE VALVE
⊥	OS&Y GATE VALVE WITH MONITOR SWITCH
⊥	PRESSURE SWITCH
⊥	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
⊥	MONITOR SWITCH
⊥	LIGHT HAZARD
⊥	ORDINARY GROUP 1

FIRE PROTECTION ABBREVIATION KEY

ABBR.	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
I.E.	INVERT ELEVATION
NC	NEW CONNECTION
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

FP-FIRE PROTECTION MATERIAL LIST

TAG NAME	DESCRIPTION	MANF. & MODEL
ADV-1	AUTOMATIC DRIP VALVE, 175 PSI WP, BRASS BAR, BERYLLIUM COPPER SPRING AND RETAINING RING, CLOSING PRESSURE 1 PSI WITH INCREASING PRESSURE, OPENING PRESSURE 5 PSI WITH DECREASING PRESSURE, 1/2" NPT INLET AND 1/4" NPT DRAIN OUTLET.	VIKING B-1 TYCO AD-1 RELIABLE C
AV-1	ANGLE VALVE, 1/2" TO 2", 175 PSI, BRONZE BODY, INTEGRAL SEAT, SOFT DISC, HANDWHEEL, THREADED UL.	UNITED 1265 UL NIBCO K7-67 UL / T-301-W KENNEDY 98 SD, FPPI
BF-1	2" TO 12" BUTTERFLY VALVE, 175 PSI WP, LUGGED OR GROOVED TYPE, IRON BODY, ALUMINUM BRONZE OR EPDM COATED IRON DISC, STAINLESS STEEL STEM AND SCREWS, EPDM SEAT, INTEGRAL MONITOR SWITCH, RATED FOR DEAD END SERVICE, UL/FM.	2" TO 12": GEM, TYCO, KENNEDY, NIBCO, VICTAULIC, KENNEDY, ANULSTAR 1" TO 2-1/2": MILWAUKEE BB-SCS OR APPROVED EQUAL.
BFP-1	1" TO 2-1/2" SLOW CLOSE BUTTERFLY VALVE, 175 PSI WP, BRONZE BODY, TYPE 304 STAINLESS STEEL ELASTOMER COATED DISK, SLOW CLOSE MANUAL OPERATOR WITH INTEGRAL TAMPER SWITCH, GROOVED OR THREADED ENDS, UL/FM.	WATTS SERIES 007 & 709 CONBRACO SERIES 40-100 FERCO 850 WILKINS 950XL & 350
BFP-1	DOUBLE CHECK BACKFLOW PREVENTER WITH SPRING LOADED CHECK VALVES, CAST IRON CONSTRUCTION, WITH BRONZE, PLASTIC OR STAINLESS STEEL INTERNAL PARTS AND STAINLESS STEEL SPRINGS, OS&Y RISING STEM SHUTOFF GATE VALVES ON BOTH SIDES OF CHECK VALVES, UNITS SHALL INCLUDE FOUR TEST COCKS WITH SHUT-OFF VALVES AND SHALL BE BACKFLOW TESTED AT THE FACTORY, RATED FOR 175 PSI AT 30 DEGREES F. TO 140 DEGREES F. MAXIMUM PRESSURE DROP 8 PSI AT 10 FPS REGARDLESS OF SIZE. FLOW PRESSURE DROP CURVES SHALL BE SUBMITTED. ALL PARTS TO BE SERVICEABLE WITHOUT REMOVING UNIT FROM LINE. APPROVED BY USC FCCC & HR, AWWA C510-92, ASSE 1015, IAPMO AND SECC LISTED, UL/FM.	
CK-16	2-1/2" TO 12" SWING CHECK VALVE, 175 PSI WP, FLANGED OR GROOVED, IRON BODY, BRONZE MOUNTED, BRONZE SEAT RING AND RUBBER CLAPPER FACING, SWING TYPE, UL/FM.	VIKING D-1/1G-1 TYCO CV-2 RELIABLE D OR G KENNEDY 126A OR 426
FDC-1	EXPOSED FIRE DEPT. INLET CONNECTION, POLISHED CHROME PLATED TWO-WAY INLET BODY WITH DROP CLIPPERS, PIN LUG SWIVELS, KNOX STAINLESS STEEL LOCKING FDC CAPS WITH MATCHING THREADS AND CHROME FINISH, POLISHED CHROME PLATED WALL PLATE LABELED 'AUTO. SPR. 4" X 2-1/2" X 2-1/2" UL THREADS TO MATCH LOCAL FIRE DEPARTMENT CONTRACTOR TO COORDINATE PURCHASE OF KNOX LOCKING CAP WITH LOCAL FIRE DEPARTMENT.	POTTER-ROEMER 5750 SERIES, CROKER 6430 SERIES, GUARDIAN 6124, ELKHART 156.
FS-1	FLOW SWITCH - VANE TYPE FOR USE ON WET PIPE SPRINKLER SYSTEM TO DETECT A MINIMUM FLOW OF 10 GPM, TWO SINGLE POLE DOUBLE THROW SWITCHES WITH PNEUMATIC RETARD-ADJUSTABLE FROM 0-90 SECONDS WITH AUTOMATIC RESET, TAMPER RESISTANT METAL HOUSING, UL/FM.	SYSTEM SENSOR WFD SERIES, POTTER ELECTRIC VSR-F
HS-1	WEATHERPROOF FIRE PROTECTION AUDIOVISUAL NOTIFICATION APPLIANCE, ELECTRONIC HORN WITH HIGH-INTENSITY STROBE, SQUARE HOUSING, SEMI FLUSH WALL MOUNT, RED WITH WHITE LETTERING, 75 CANDELA RATING AT -31 DEGREES FAHRENHEIT, 120 VAC, UL LISTED FOR WET LOCATIONS, PROVIDE WITH WEATHERPROOF BACK BOX.	POTTER FHS-120 OR APPROVED EQUAL
IT-1	1" INSPECTOR'S TEST AND DRAIN VALVE WITH INTEGRAL SIGHT GLASS, BALL VALVE WITH INTEGRAL LABELED PLATE SHOWING OFF-TEST-DRAIN POSITIONS, FURNISHED WITH TEST ORIFICE GIVING FLOW EQUIVALENT TO ONE SPRINKLER OF A TYPE HAVING THE SMALLEST ORIFICE INSTALLED ON THE SYSTEM, UL.	RELIABLE B W11" BALL VALVE TYCO F350 AGF MODEL 1000
MS-1	MONITOR SWITCH - ELECTRIC, ONE SINGLE POLE, DOUBLE THROW CONTACT, CAST ALUMINUM HOUSING WITH CORROSION RESISTANT PARTS, WITH J-BOLTS FOR MOUNTING, UL/FM, VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL CONTRACTOR PRIOR TO PURCHASE.	POTTER ELECTRIC OSYSU-1 SYSTEM SENSOR OSY2

FIRE SPRINKLER USAGE SCHEDULE

NOTES:

- SEE FLOOR PLANS FOR ZONING REQUIREMENTS.
- SPRINKLER SHALL HAVE COLOR CODED BULB THERMAL ELEMENT.
- ALL SPRINKLERS SHALL BE UL LISTED.
- CONTRACTOR TO VERIFY SPRINKLER REQUIREMENTS BASED ON ACTUAL INSTALLATION, USAGE, ARCHITECTURAL CEILING PLAN AND NFPA 13 REQUIREMENTS.
- TAG NAME IS PRIMARILY FOR IDENTIFYING SPRINKLERS IN SUBMITTALS. IT MAY OR MAY NOT BE FOUND ELSEWHERE ON THE DRAWINGS.
- CONTRACTOR TO SUBMIT ALL SPRINKLER TYPES TO BE USED.
- AREAS ARE GENERAL IN NATURE. CONTRACTOR TO MATCH UNSCHEDULED AREAS TO SIMILAR SPACES.

AREA TYPE (NOTE 1 & 6)	AREA HAZARD	TAG NAME (NOTE 4 & 5)	SPRINKLER TYPE	RESPONSE CATEGORY	FINISH	TEMPERATURE RATING	MANUFACTURER & MODEL	NOTES
AREAS WITH CEILING UNLESS NOTED OTHERWISE		SPR-1	RECESSED PENDENT	QUICK	CHROME PLATED	155	VIKING VK, RELIABLE F1FR, TYCO TY-FRB, VICTAULIC V2708	NOTE 2, 3
MECHANICAL ROOMS, STORAGE, CLOSET, PARKING GARAGE, SALLY PORT, JANITOR CLOSETS AND OTHER AREAS WITHOUT CEILING	SEE PLANS	SPR-2	UPRIGHT	QUICK	ROUGH BRASS	155	VIKING VK, RELIABLE F1FR, TYCO TY-FRB, VICTAULIC V2704	NOTE 3
GARAGE DOORS	SEE PLANS	SPR-3	EXTENDED COVERAGE SIDEWALL	QUICK	ROUGH BRASS	155	VIKING VK, RELIABLE F1FR, TYCO VICTAULIC	NOTE 3
SECURE AREAS WITH CEILINGS	SEE PLANS	SPR-4	INSTITUTIONAL FLUSH PENDANT	QUICK	CHROME PLATED	155	VIKING VK410, TYCO RAVEN	NOTE 3
CLEARSTORY AREAS	SEE PLANS	SPR-5	RECESSED PENDENT	QUICK	CHROME PLATED	200	VIKING VK, RELIABLE, TYCO, VICTAULIC	NOTE 3
STORAGE B001A	SEE PLANS	SPR-6	DRY SIDEWALL	QUICK	ROUGH BRASS	155	VIKING VK, RELIABLE, TYCO, VICTAULIC	NOTE 3

FIRE PROTECTION GENERAL NOTES:

- THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
- CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR COMPLETE DESCRIPTION OF MATERIAL, ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER IS THE BASIS OF DESIGN.
- FIRE PROTECTION PIPE ROUTING IS SHOWN FOR GENERAL LAYOUT. DETERMINE EXACT NUMBER OF SPRINKLERS, PIPE SIZING, AND PIPE ROUTING.
- CENTER SPRINKLERS IN CEILING TILES IN BOTH DIRECTIONS IN ALL AREAS. IN AREAS WITH 2'X4' CEILING TILES CENTERING USING A 2'X2' CEILING PATTERN IS ACCEPTABLE.
- NEW SPRINKLERS SHALL BE QUICK RESPONSE TYPE, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL NOT MIX STANDARD RESPONSE SPRINKLERS WITH QUICK RESPONSE SPRINKLERS IN UNPARTITIONED SPACES.
- PROVIDE COVERAGE ABOVE AND BELOW ALL DUCTWORK GREATER THAN 48" WIDE.
- PROVIDE COVERAGE ABOVE AND BELOW FLOATING CEILINGS, REFER TO ARCHITECTURAL PLANS.

MECHANICAL GENERAL NOTES:

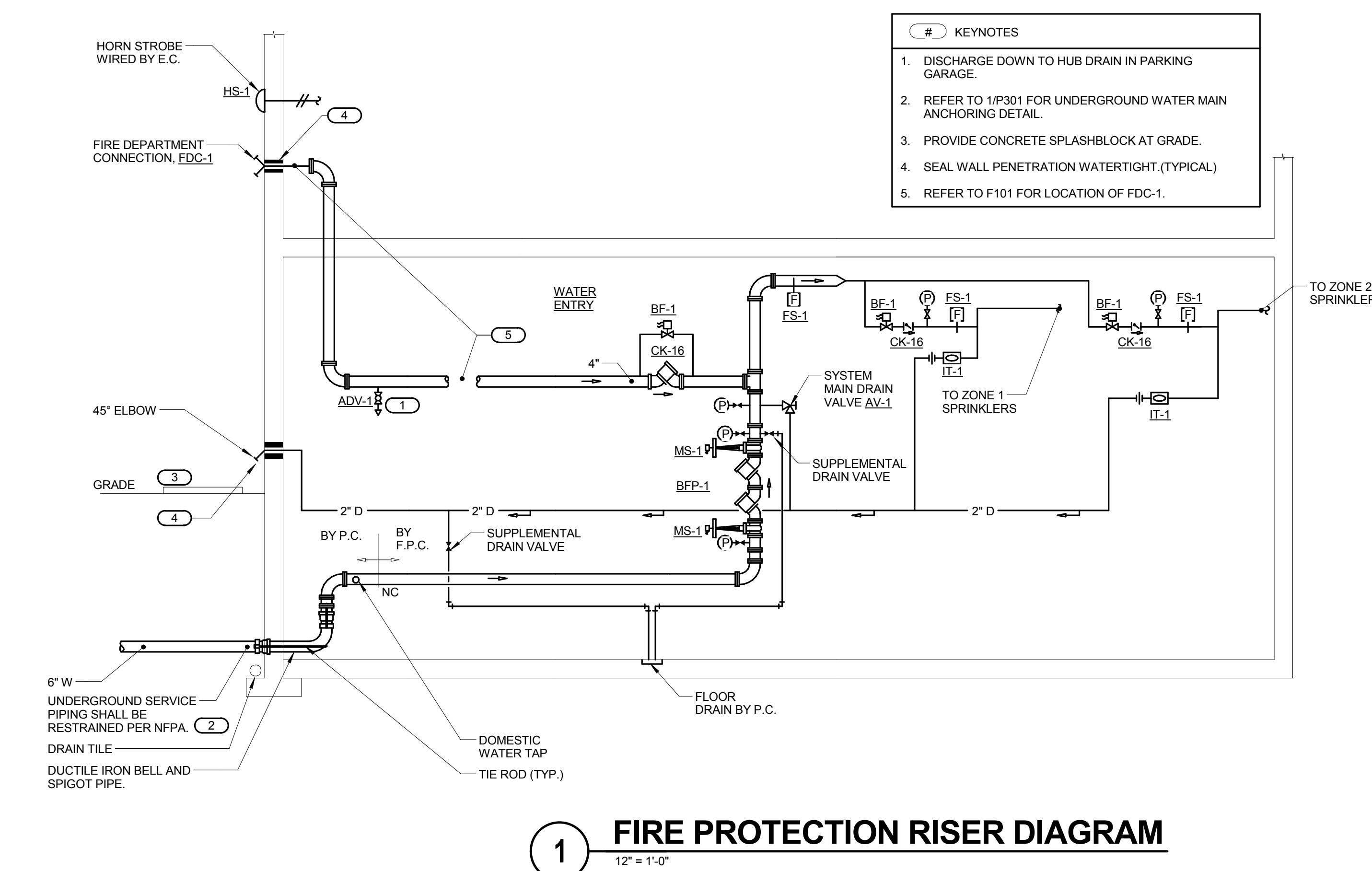
- THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.
- DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
 - DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. OVERLAP ALL DIMENSIONS WITH OTHER TRADES.
 - COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
 - REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
 - ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
 - EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
 - REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIOVISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
 - EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
 - IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COATS WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
 - SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
 - CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
 - WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
 - EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY BETWEEN DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
 - DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
 - MAINTAIN MINIMUM 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.
 - PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
 - DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

FIRE HYDRANT FLOW TEST DATA

TEST DATE:	11/18/2016
HYDRANT ELEVATION:	1013
LOCATION:	CORNER OF WESTMORELAND AND MINERAL POINT RD
STATIC PRESSURE:	60 PSI
RESIDUAL PRESSURE:	55 PSI
TOTAL FLOW:	1250 GPM
SIZE OF MAIN:	6"

FIRE PROTECTION SHEET INDEX

Sheet Number	Sheet Name
F000	COVER SHEET - FIRE PROTECTION
F100	LOWER LEVEL - FIRE PROTECTION
F101	FIRST FLOOR PLAN - FIRE PROTECTION



1 FIRE PROTECTION RISER DIAGRAM
12" = 1'-0"

POLICE DEPARTMENT MIDTOWN DISTRICT

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

REVISION FOR:
NO. DESCRIPTION DATE

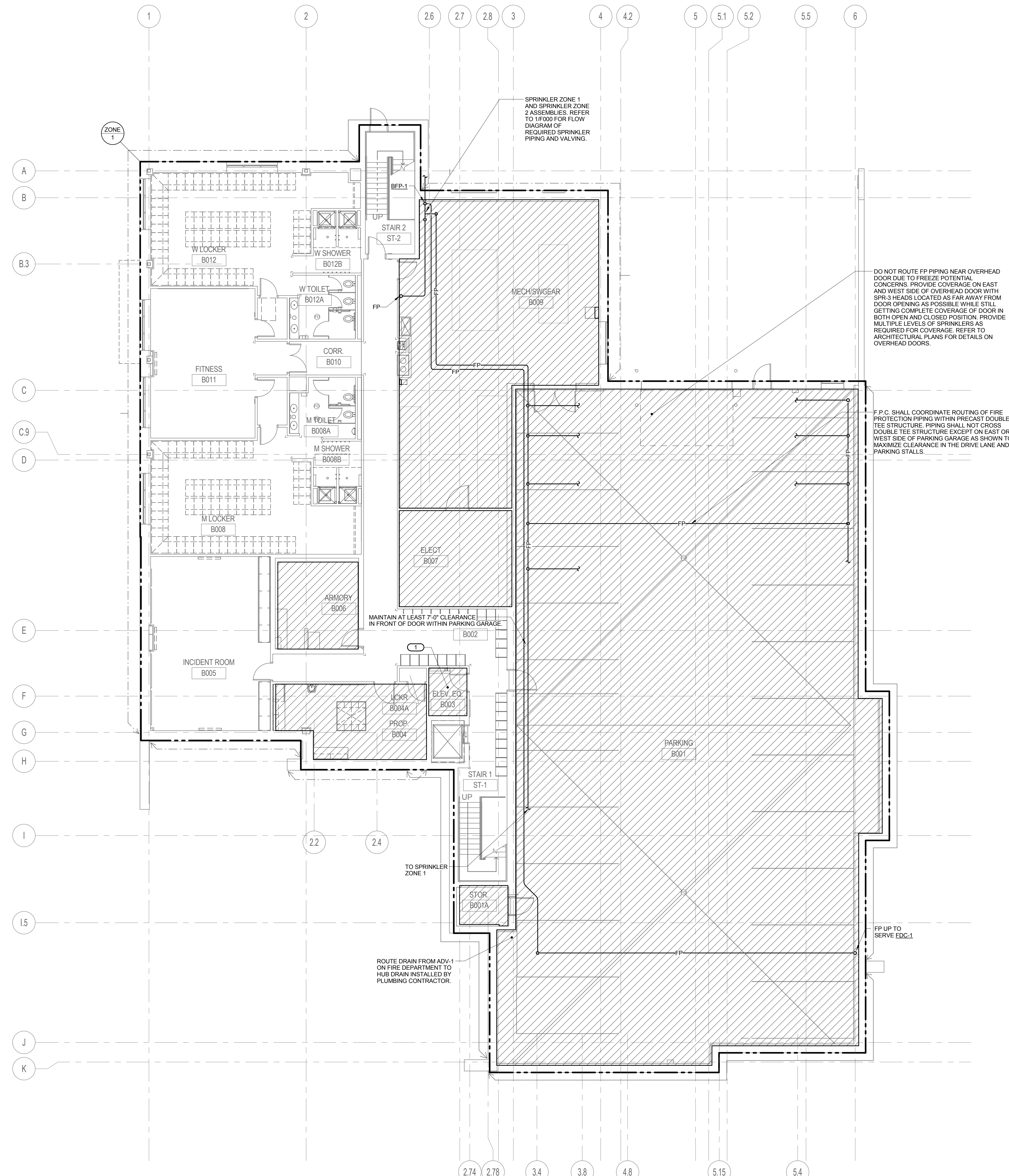
DRAWN BY PAUHAN

CHECKED BY PAUVAN

COVER SHEET - FIRE PROTECTION

F000

KEYNOTES: **C#**
1. PROVIDE SIDEWALL SPRINKLER AT BOTTOM OF SHAFT PER NFPA 13 REQUIREMENTS.



SPRINKLER ZONE 1 AND SPRINKLER ZONE 2 ASSEMBLIES. REFER TO 1/FLOOR FOR FLOW DIAGRAM OF REQUIRED SPRINKLER PIPING AND VALVING.

DO NOT ROUTE FP PIPING NEAR OVERHEAD DOOR DUE TO FREEZE POTENTIAL CONCERNS. PROVIDE COVERAGE ON EAST AND WEST SIDE OF OVERHEAD DOOR WITH SPR-3 HEADS LOCATED AS FAR AWAY FROM DOOR OPENING AS POSSIBLE WHILE STILL GETTING COMPLETE COVERAGE OF DOOR IN BOTH OPEN AND CLOSED POSITION. PROVIDE MULTIPLE LEVELS OF SPRINKLERS AS REQUIRED FOR COVERAGE. REFER TO ARCHITECTURAL PLANS FOR DETAILS ON OVERHEAD DOORS.

F.P.C. SHALL COORDINATE ROUTING OF FIRE PROTECTION PIPING WITHIN PRECAST DOUBLE TEE STRUCTURE. PIPING SHALL NOT CROSS DOUBLE TEE STRUCTURE EXCEPT ON EAST OR WEST SIDE OF PARKING GARAGE AS SHOWN TO MAXIMIZE CLEARANCE IN THE DRIVE LANE AND PARKING STALLS.

MAINTAIN AT LEAST 7'-0" CLEARANCE IN FRONT OF DOOR WITHIN PARKING GARAGE.

ROUTE DRAIN FROM ADV-1 ON FIRE DEPARTMENT TO HUB DRAIN INSTALLED BY PLUMBING CONTRACTOR.

LOWER LEVEL - FIRE PROTECTION
1/8" = 1'-0"

**POLICE DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

REVISION FOR:
NO. DESCRIPTION DATE

DRAWN BY PAUVAN

CHECKED BY PAUVAN

LOWER LEVEL - FIRE PROTECTION

KJW ENGINEERING CONSULTANTS
1000 DENNING WAY SUITE 200
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PROJECT # 16.0029.00

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REFERENCE SCALE IN INCHES
1 2 3

F100

KEYNOTES: C#
 1. AREA SHALL HAVE INSTITUTIONAL TYPE SPRINKLERS (SPR-4).
 2. PROVIDE SPRINKLER COVERAGE IN ELEVATOR PER NFPA 13 REQUIREMENTS.

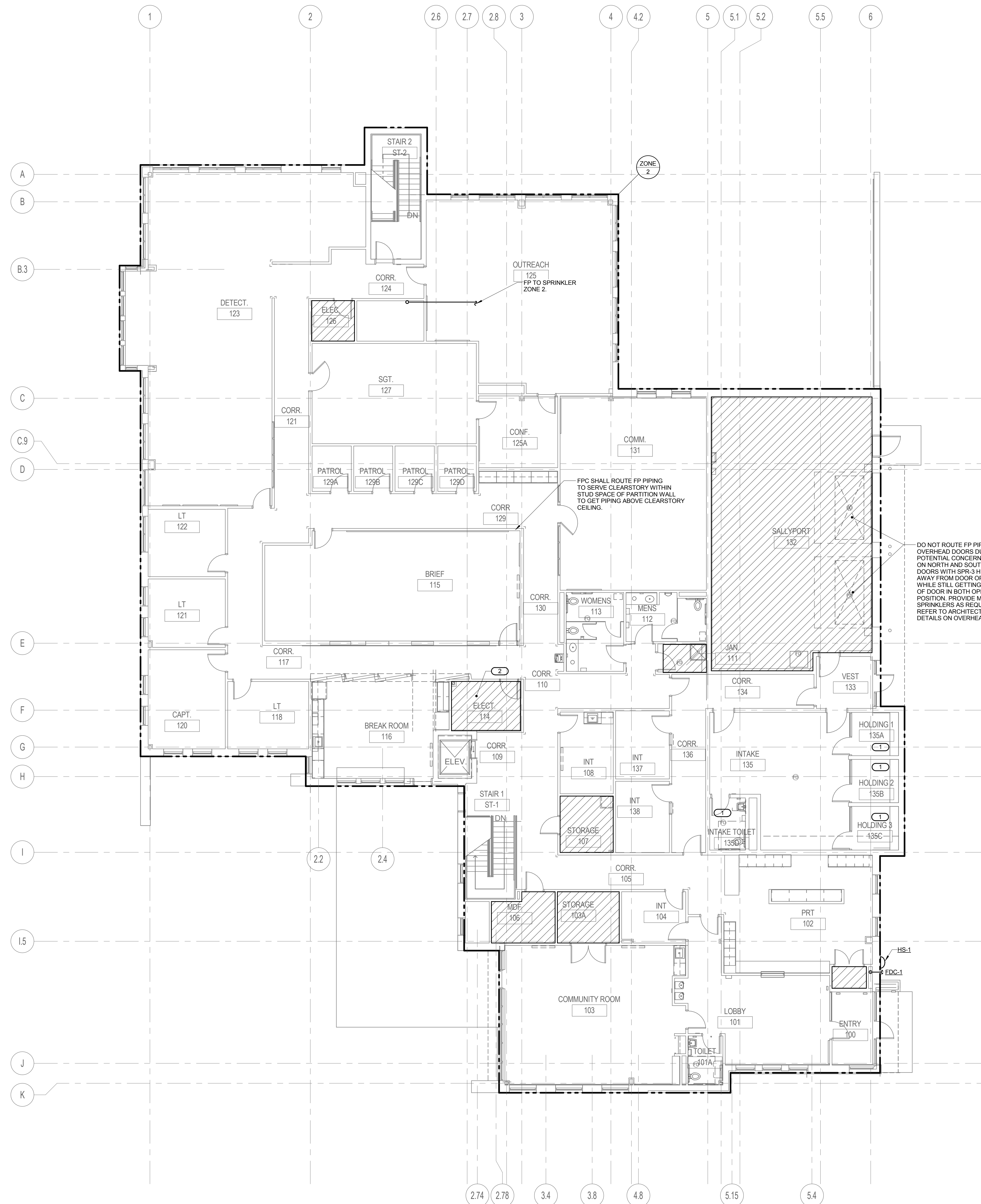
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FIRST FLOOR PLAN - FIRE PROTECTION
 1/8" = 1'-0"

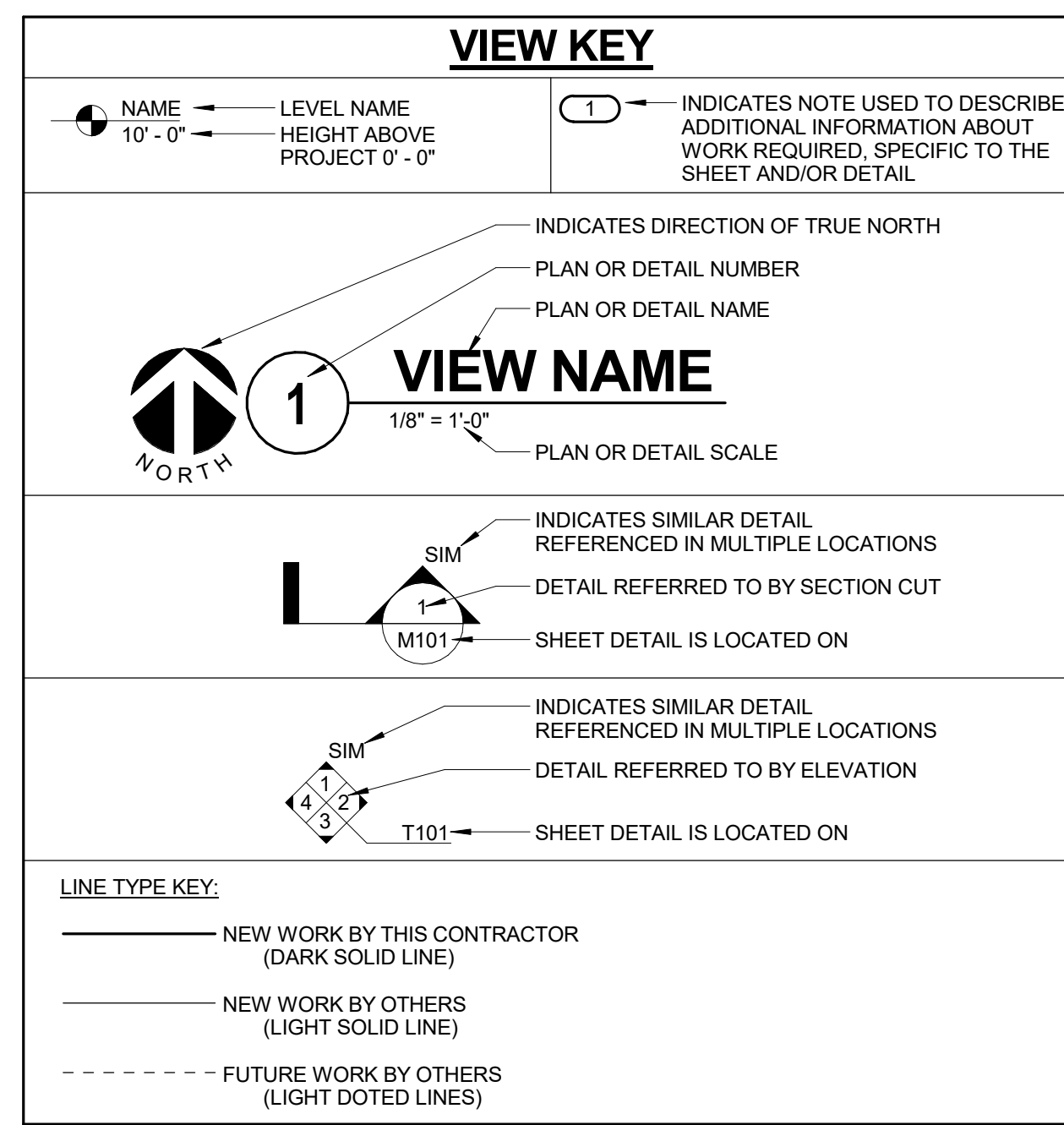
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REFERENCE SCALE IN INCHES
 1 2 3

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**FIRST FLOOR PLAN -
FIRE PROTECTION**

F101



CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.T.C.	AUTOMATIC TEMPERATURE CONTROL CONTRACTOR
A.V.C.	AUDIOVISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
J-BOX	JUNCTION BOX
SIM	SIMILAR
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#F	MOUNTING HEIGHT ABOVE FINISHED FLOOR
EF-#	ENTRANCE FACILITY
MC-#	MAIN CROSS-CONNECT
TR-#	TELECOMMUNICATIONS ROOM

TECHNOLOGY SYMBOL LIST

SYMBOL:	EQUIPMENT TAG:	DESCRIPTION:	NOTE:
	SC-IO-CWAP	WIRELESS ACCESS POINT INFORMATION OUTLET (CEILING)	1.
	SC-IO-C	INFORMATION OUTLET (CEILING)	.
	SC-IO-W	INFORMATION OUTLET (WALL)	1.
	SC-HH	HANDHOLE	.
	SC-IO-F	INFORMATION OUTLET (FLOOR)	1, 5.
	SC-IS-1	SIP EMERGENCY INTERCOM	.
	VS-CAM-W	CLOSED CIRCUIT TELEVISION (CCTV) SURFACE CAMERA	2, 4.
	VS-CAM-C	CLOSED CIRCUIT TELEVISION (CCTV) CEILING CAMERA	2, 4.
	AC-CR1-W	ACCESS CONTROL CREDENTIAL READER - TYPE 1	3.
	AC-CR2-W	FUTURE ACCESS CONTROL CREDENTIAL READER - TYPE 2	3.
	AC-CR3-W	ACCESS CONTROL CREDENTIAL READER - TYPE 3	3.
	N/A	CONTROLLED SECURITY SCHEME SCHEDULE IDENTIFIER	3.
	AC-DR-W	EMERGENCY LOCK DOWN BUTTON (WALL)	3.
	AC-EDR-W	ELECTRONIC DOOR RELEASE (WALL)	.
	AV-MP1-S	MICROPHONE (SURFACE) TYPE 1 - CEILING MOUNTED, FIXED	.
	AV-MP2-S	MICROPHONE (SURFACE) TYPE 2 - TABLE MOUNTED, PORTABLE	.
	AV-SP1-C	AUDIO/VIDEO SPEAKER (CEILING) - TYPE 1	.
	EC-PSN-AMP	PUBLIC SAFETY NETWORK DONOR ANTENNA (WALL)	6.
	EC-PSN-A	PUBLIC SAFETY NETWORK BI-DIRECTIONAL AMPLIFIER	.
	EC-PSN-A	PUBLIC SAFETY NETWORK RADIO ANTENNA (CEILING)	.
	AV-CAM-1	AUDIO/VIDEO CAMERA (POLYCOM) - TYPE 1	.
	AV-CD-1	AUDIO/VIDEO CODEC (POLYCOM)	.
	AV-AMP-1	POWER AMPLIFIER	.
	AV-AIRM-1	AUDIO/VIDEO AIR MEDIA COMPONENT (FUTURE ITEM)	.
	SC-FE-W	FURNITURE FEED CONNECTION - WALL	7.
	PL-R1-C	POLICE INTERVIEW SYSTEM CEILING ROUGH-IN	.
	PL-R1-W	POLICE INTERVIEW SYSTEM WALL ROUGH-IN	.

GENERAL NOTES:

- ALL SYMBOLS AND EQUIPMENT TAG LISTED MAY NOT BE APPLICABLE TO THIS PROJECT. REFER TO THE GENERAL TECHNOLOGY EQUIPMENT SCHEDULE FOR MORE COMPLETE DESCRIPTION AND ITEMS.
- ALL SYMBOLS AND EQUIPMENT TAG REFER TO TECHNOLOGY SHEETS ONLY AS DEFINED ON THE SHEET INDEX. REFER TO THE GENERAL TECHNOLOGY NOTES FOR ADDITIONAL INFORMATION.
- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION.

TECHNOLOGY SYMBOL NOTES:

- *"C#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON T500 FOR ADDITIONAL INFORMATION.
- SYMBOL SUBSCRIPT INDICATES DEVICE TYPE. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE ON T001 FOR ADDITIONAL INFORMATION.
- REFER TO CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE ON SHEET T501 FOR ADDITIONAL INFORMATION.
- REFER TO CLOSED CIRCUIT (CCTV) INDIVIDUAL CAMERA REQUIREMENTS SCHEDULE ON T501 AND CAMERA TYPE SCHEDULE ON T501 FOR ADDITIONAL INFORMATION. SYMBOL SUBSCRIPT INDICATES FLOOR NUMBER-CAMERA NUMBER. A CAMERA HEIGHT IDENTIFIES THE HEIGHT FROM THE FLOOR TO THE CENTER OF THE CAMERA LENS. NO HEIGHT REFERS TO MOUNTING THE CAMERA ON THE CEILING. REFER TO THE INDIVIDUAL CAMERA SCHEDULE AND THE INDIVIDUAL CAMERA TYPE SCHEDULE FOR ADDITIONAL INFORMATION.
- INFORMATION OUTLET INSTALLED IN E.C. PROVIDED FLOOR BOX. "C#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON T500 FOR ADDITIONAL INFORMATION. REFER TO THE ELECTRICAL FLOOR PLANS AND ELECTRICAL EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
- THIS SYMBOL IS TO INDICATE THE EXTERIOR ANTENNA THAT IS TO BE MOUNTED TO THE SIDE OF THE BUILDING, OR AN ANTENNA MOUNTED IN THE MECHANICAL ROOM FOR TRANSMISSION OF SIGNAL INSIDE THE BUILDING. SEE DESCRIPTIONS ON PAGE T100.
- FURNITURE CONNECTION FOR DATA JACKS. SEE FLOOR PLANS FOR QUANTITIES. EACH FURNITURE CONNECTION WILL HAVE A DIFFERENT QUANTITY OF DATA JACKS IT FEEDS, DEPENDING ON FURNITURE MODULES AS INDICATED. REFER TO FLOOR PLANS FOR FURTHER DETAILS.

TELECOM ROOM REFERENCES

TELECOM ROOM	DETAIL / SHEET REFERENCE	FLOOR PLAN REFERENCE	ARCH ROOM NUMBER
MC-1	1/T300	1/T101	106

SUGGESTED MATRIX OF RESPONSIBILITY

ITEM:	SHOWN ON:	FURNISHED BY:	INSTALLED BY:	NOTES:
TECHNOLOGY ROUGH-IN. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR DEFINITION.	T-SERIES	E.C.	E.C.	3, 4.
INFORMATION OUTLET FACEPLATES, JACKS, AND TERMINATIONS	T-SERIES	T.C.	T.C.	
CONDUIT SLEEVES (WHEN SHOWN ON DRAWINGS)	T-SERIES	E.C.	E.C.	
CONDUIT SLEEVES (NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM)	N/A	T.C.	T.C.	2, 4.
TELECOMMUNICATION SYSTEMS ROUGH-IN	T-SERIES	T.C.	E.C.	1.
TELECOMMUNICATION EQUIPMENT, CABLING, AND TERMINATIONS	T-SERIES	T.C.	T.C.	
CABLE TRAY (INCLUDING WIRE BASKET TRAY) REFER TO SPECIFICATION SECTION 27 05 26 FOR DEFINITION	T-SERIES	E.C.	E.C.	
LADDER RACK	T-SERIES	T.C.	T.C.	5.
GROUNDING LUGS ON TECHNOLOGY EQUIPMENT	T-SERIES	T.C.	E.C.	6.
BONDING SYSTEM FOR TECHNOLOGY SYSTEM. REFER TO SPECIFICATION SECTION 27 05 26 FOR DEFINITION	T-SERIES	E.C.	E.C.	7, 8.
CONNECTION OF TECHNOLOGY BONDING SYSTEM TO THE ELECTRICAL GROUND SYSTEM	T-SERIES	E.C.	E.C.	
LINE VOLTAGE POWER (+120V OR GREATER)	E-SERIES	E.C.	E.C.	
LINE VOLTAGE POWER (NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM)	N/A	T.C.	E.C.	2, 4.
LINE VOLTAGE POWER FOR DOOR HARDWARE POWER SUPPLIES	ARCH SPEC	E.C.	E.C.	
LOW VOLTAGE CABLING FOR TECHNOLOGY SYSTEMS	T-SERIES	T.C.	T.C.	
CABLE HANGERS AND SUPPORTS OR OTHER CABLE ROUTING METHODS (OTHER THAN CONDUIT AND CABLE TRAY)	T-SERIES	T.C.	T.C.	5.
TECHNOLOGY SERVICE ENTRANCE CONDUITS, HANDHOLES, AND MANHOLES	T-SERIES	E.C.	E.C.	
FLOOR BOX (ROUGH-IN)	T & E SERIES	E.C.	E.C.	

SUGGESTED MATRIX OF RESPONSIBILITY NOTES

- LOCATIONS OF TELECOMMUNICATIONS ROUGH-INS SHALL BE INDICATED BY THE INFORMATION OUTLET SYMBOLS ON THE DRAWINGS. REFER TO THE TECHNOLOGY SYMBOL LIST FOR ADDITIONAL INFORMATION.
- BASED ON THE INHERENT DIFFERENCES IN PRODUCTS FROM VARIOUS MANUFACTURERS, ALL REQUIRED EQUIPMENT MAY NOT BE SHOWN ON THE DRAWINGS FOR ALL ACCEPTABLE MANUFACTURERS.
- INCLUDES BACKBOXES AND CONDUIT REQUIRED FOR THE TECHNOLOGY SYSTEMS INSTALLATION. THE E.C. SHALL BASE THE BID ON THE BASIS OF DESIGN SHOWN ON THE CONTRACT DOCUMENTS.
- ALL CHANGES TO THE SLEEVES, BACKBOXES, CONDUITS, AND POWER REQUIRED BECAUSE OF THE T.C.'S SELECTION OF AN ALTERNATE ACCEPTABLE MANUFACTURER OR FROM SYSTEM CONFIGURATIONS THAT ARE LEFT TO THE CHOICE OF THE CONTRACTOR SHALL BE INCLUDED IN THE T.C.'S BID. THIS BID SHALL INCLUDE INSTALLATION BY A LICENSED ELECTRICIAN.
- UNLESS TRADE RULES DICTATE OTHERWISE.
- FURNISHED AS PART OF THE EQUIPMENT WHEN POSSIBLE, OR FURNISHED TO THE E.C. FOR INSTALLATION IN THE FIELD.
- INCLUDES ALL CONDUCTORS, GROUND BARS, AND TERMINATIONS FOR THE COMPLETE BONDING SYSTEM REQUIRED BY THE SPECIFICATIONS.
- REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS OF PANELS AND SWITCHBOARDS SHOWN IN THE TECHNOLOGY BONDING RISER DIAGRAM AND TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM.

TELECOM ROOM REFERENCES

TELECOM ROOM	DETAIL / SHEET REFERENCE	FLOOR PLAN REFERENCE	ARCH ROOM NUMBER
MC-1	1/T300	1/T101	106

TECHNOLOGY GENERAL NOTES:

- T001 INDICATES GENERAL TECHNOLOGY EQUIPMENT SCHEDULE ITEM LABELED AS "EQUIPMENT TAG"
 - REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.
- TECHNOLOGY MOUNTING SUBSCRIPT KEY:
- A MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH
 - H MOUNT ORIENTED HORIZONTALLY
 - L MOUNT IN CASEWORK
 - M MOUNT IN MODULAR FURNITURE
 - S MOUNT IN SURFACE RACEWAY
- A SLASH IS USED BETWEEN TWO SUBSCRIPTS, e.g., A/H.

TECHNOLOGY INSTALLATION NOTES:

- THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATIONS DETAIL ON THIS PAGE FOR ADDITIONAL INFORMATION.
- CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, IN FLOOR SLAB, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS AND STORAGE ROOMS WITHOUT CEILINGS MAY BE EXPOSED ON BUILDING STRUCTURE.
- BOXES LOCATED ON OPPOSITE SIDES OF NON-RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. "THRU-THE-WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
- VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL TELECOMMUNICATIONS INSTALLATION, ADJUST OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
- TELECOMMUNICATIONS EQUIPMENT SHALL BE MOUNTED TO ALLOW ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF TELECOMMUNICATION DEVICES ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUDED OR SEALED INTO OPENINGS.
- ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO DIVISION 7 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
- REMOVE AND REINSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF TELECOMMUNICATIONS WORK THAT IS OUTSIDE THE CONTRACT LIMITS OF CONSTRUCTION. REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR.
- LADDER RACK AND CABLE TRAY SIZES ARE AS DEFINED ON THE DRAWINGS. REFER TO SPECIFICATION SECTION 27 05 05 FOR APPROVED MANUFACTURERS AND INSTALLATION REQUIREMENTS.
- FLUSH MOUNT ALL TELECOMMUNICATION OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.

TECHNOLOGY OUTSIDE PLANT NOTES

- THE LOCATION OF THE CONDUIT, HAND HOLES AND MAINTENANCE HOLES SHOWN ARE APPROXIMATE LOCATIONS. FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIVATE AND/OR PUBLIC PRIOR TO THE INSTALLATION OF THE COMPONENT. FIELD COORDINATE THE FINAL LOCATION WITH THE OWNER AND ENGINEER PRIOR TO INSTALLATION.
- POTHOLES TO LOCATE EXISTING UNDERGROUND UTILITIES, IF APPLICABLE, SHALL BE INCLUDED WITHIN THE CONTRACTOR'S BID. CONTRACTOR IS RESPONSIBLE FOR FINAL PLACEMENT OF HANDHOLES MAINTENANCE HOLES AND SHALL NOTIFY THE ENGINEER OF FINAL LOCATIONS PRIOR TO INSTALLATION.
- HAND HOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE FRAME WILL BE FLUSH WITH THE GROUND LINE.
- REMOVAL AND REPLACEMENT OF THE EXISTING UNDERGROUND UTILITIES THAT ARE REQUIRED TO COMPLETE THE INSTALLATION SHALL BE INCLUDED WITHIN THE CONTRACTOR'S BID.
- CONTRACTOR SHALL INCLUDE WITHIN THEIR BID ANY REMOVAL AND REPLACEMENT OF EXISTING SIDEWALK, PAVEMENT, GRASS, SHRUBS, TREES, ETC. THAT WILL BE IMPACTED BY THE INSTALLATION OF THE NEW CONDUITS SHOWN ON THE DRAWINGS. IF TREES ARE REQUIRED TO BE REMOVED THE CONTRACTOR SHALL CONTACT THE OWNER AND DISCUSS OPTIONS PRIOR TO CUTTING DOWN ANY TREE OR SHRUB OVER 5' IN HEIGHT. NO ADDITIONAL COST SHALL BE APPROVED FOR PLACING CONDUITS DEEPER THAN REQUIRED MINIMUM DEPTH TO AVOID EXISTING UNDERGROUND UTILITIES.

TECHNOLOGY SHEET INDEX

T000	COVER SHEET - TECHNOLOGY
T001	GENERAL TECHNOLOGY EQUIPMENT SCHEDULE
T050	SITE PLAN - TECHNOLOGY
T100	LOWER LEVEL - TECHNOLOGY
T101	FIRST FLOOR PLAN - TECHNOLOGY
T300	ENLARGED PLANS - TECHNOLOGY
T400	RISER DIAGRAMS - TECHNOLOGY
T401	RISER DIAGRAMS - TECHNOLOGY
T500	DETAILS AND SCHEDULES - TECHNOLOGY
T501	DETAILS AND SCHEDULES - TECHNOLOGY

DRAWN BY: Author

CHECKED BY: Checker

**COVER SHEET -
TECHNOLOGY**

GENERAL TECHNOLOGY EQUIPMENT SCHEDULE			
THE EQUIPMENT TAGS AND THE GENERAL TECHNOLOGY EQUIPMENT SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF QUANTITIES AND SHALL FURNISH ALL MATERIAL REQUIRED, WHETHER SPECIFIED OR NOT, TO PRODUCE A SATISFACTORY WORKING SYSTEM.			
CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN ONLY TO AID THE CONTRACTOR IN THE SEARCH FOR MATERIAL. NO MATERIAL SHALL BE ORDERED BY MANUFACTURER OR CATALOG NUMBER ONLY. EACH CONTRACTOR SHALL FIRST READ THE COMPLETE DESCRIPTION OF THE MATERIAL AND EQUIPMENT ON THESE DRAWINGS AND SPECIFICATIONS. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN. "STANDARD COLOR" INDICATES FACTORY FINISH AVAILABLE AT NO ADDITIONAL CHARGE.			
ITEM NO.	EQUIPMENT TAG	DESCRIPTION	APPROVED MANUFACTURERS
1	SC-IO-W	INFORMATION OUTLET, WALL MOUNT, 2 OR 4-PORT FACEPLATE AS INDICATED IN INFORMATION OUTLET SCHEDULE ON DRAWING T500. "W" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE FLOOR PLANS. REFER TO INFORMATION OUTLET SCHEDULE ON DRAWING T500 FOR DESCRIPTION OF EACH CONFIGURATION AND FOR PIN CONFIGURATION OF JACKS. "W" INDICATES INFORMATION OUTLET FOR WALL PHONE. PROVIDE (1) RJ-45 JACK IN STAINLESS STEEL FACEPLATE WITH WALL PHONE MATING LUGS AT 48" AFF FOR WALL HUNG TELEPHONE. TELEPHONE BY OWNER. INSTALL INFORMATION OUTLET IN A 4" SQUARE 2-1/8" DEEP BACK BOX WITH A SINGLE GANG PLASTER RING AND A 1" EMT CONDUIT STUBBED TO NON-CONTINUOUS CABLE SUPPORT ROUTE OR CABLE TRAY ABOVE NEAREST ACCESSIBLE CEILING. REFER TO T17500 FOR TECHNOLOGY ROUGH-IN MOUNTING DETAIL. REFER TO SUGGESTED MATRIX OF SCOPE RESPONSIBILITY ON DRAWING T000 FOR ADDITIONAL INFORMATION. ALL WALL MOUNT OUTLETS WILL BE AT 18" AFF UNLESS NOTED OTHERWISE. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED FACEPLATE PORTS.	FACEPLATE: HUBBELL IFF14EI CAT6 JACK: HUBBELL HXJ6EI BLANK: HUBBELL SFB10
2	SC-IO-CWAP	WIRELESS ACCESS POINT EQUIPMENT OUTLET, CEILING MOUNT, 2 PORT FACEPLATE AS INDICATED IN INFORMATION OUTLET SCHEDULE ON DRAWING T500. "W" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE FLOOR PLANS. REFER TO INFORMATION OUTLET SCHEDULE ON DRAWING T500 FOR DESCRIPTION OF EACH CONFIGURATION AND FOR PIN CONFIGURATION OF JACKS. INSTALL INFORMATION OUTLET IN A 4" SQUARE 2-1/8" DEEP BACK BOX WITH A SINGLE GANG PLASTER RING AND A 1" EMT CONDUIT STUBBED TO NON-CONTINUOUS CABLE SUPPORT ROUTE OR CABLE TRAY ABOVE NEAREST ACCESSIBLE CEILING (MINIMUM 6" BEYOND BACK BOX). REFER TO SUGGESTED MATRIX OF SCOPE RESPONSIBILITY ON DRAWING T000 FOR ADDITIONAL INFORMATION. PROVIDE (2) TWO CATEGORY 6 CABLES AND JACKS PER WAP.	FACEPLATE: HUBBELL IFF14EI CAT6 JACK: HUBBELL HXJ6EI BLANK: HUBBELL SFB10
3	SC-IO-C	INFORMATION OUTLET, CEILING MOUNT, 2 PORT FACEPLATE AS INDICATED IN INFORMATION OUTLET SCHEDULE ON DRAWING T500. "W" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE FLOOR PLANS. REFER TO INFORMATION OUTLET SCHEDULE ON DRAWING T500 FOR DESCRIPTION OF EACH CONFIGURATION AND FOR PIN CONFIGURATION OF JACKS. INSTALL INFORMATION OUTLET IN A 4" SQUARE 2-1/8" DEEP BACK BOX WITH A SINGLE GANG PLASTER RING AND A 1" EMT CONDUIT STUBBED TO NON-CONTINUOUS CABLE SUPPORT ROUTE OR CABLE TRAY ABOVE NEAREST ACCESSIBLE CEILING (MINIMUM 6" BEYOND BACK BOX). REFER TO SUGGESTED MATRIX OF SCOPE RESPONSIBILITY ON DRAWING T000 FOR ADDITIONAL INFORMATION.	FACEPLATE: HUBBELL IFF14EI CAT6 JACK: HUBBELL HXJ6EI BLANK: HUBBELL SFB10
4	SC-IO-F	INFORMATION OUTLET, FLOOR BOX, 2 OR 4-PORT FACEPLATE AS INDICATED IN INFORMATION OUTLET SCHEDULE ON DRAWING T500. "C" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE FLOOR PLANS. REFER TO INFORMATION OUTLET SCHEDULE ON DRAWING T500 FOR DESCRIPTION OF EACH CONFIGURATION AND FOR PIN CONFIGURATION OF JACKS. ADDITIONAL INFORMATION AND REQUIREMENTS. POWER/DATA RECESSED FLOOR BOX WITH HINGED COVER AND DIVIDED COMPARTMENT FOR AC POWER. BOX IS BY ELECTRICAL CONTRACTOR. FIELD COORDINATE EXACT LOCATIONS FOR CABLE LENGTHS. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION ABOUT BOXES AND CONDUITS.	FACEPLATE: HUBBELL IFF14EI CAT6 JACK: HUBBELL HXJ6EI BLANK: HUBBELL SFB10
5	SC-TTB-1	TELECOMMUNICATIONS TERMINAL BOARD, 4" X 8" X 3/4" A-C GRADE FIRE-RATED PLYWOOD. EXPOSED SIDE SHALL BE SMOOTH. MOUNT ORIENTED VERTICALLY WITH TOP OF PLYWOOD AT 89" A.F.F. RATING STAMP MUST REMAIN VISIBLE.	
6	SC-LR-1	LADDER RACK, 18" WIDE TUBULAR STEEL CONSTRUCTION, RUST RESISTANT BLACK ENAMEL FINISH, UL LISTED. PROVIDE COMPLETE WITH ALL NECESSARY ADAPTERS, SUPPORT HARDWARE, AND FITTINGS. TO INCLUDE RADIUS DROPS. REMOVE SHARP BURRS FROM LADDER RACK AND REPAINT ALL AREAS THAT HAVE BEEN FIELD MODIFIED, CUT OR EXPOSED.	CHATSWORTH PRODUCTS 11275-718 B-LINE HOFFMAN
7	SC-CT-1	CABLE TRAY, MESH TYPE, 4" LOADING DEPTH, 18" WIDTH, COMPLETE WITH ALL FITTINGS AND MOUNTING HARDWARE. PROVIDE TRAPEZE SUPPORT WITH PLASTIC RETAINER. CUTTING OF THE MESH CABLE TRAY SHALL BE DONE WITH OFFSET BOLT CUTTERS ONLY. 10" MAXIMUM SUPPORT SPAN. EITHER SPLICE WASHERS OR TERMINAL GROUND SUPPORT AND JUMPER WIRE SHALL BE USED TO ATTAIN GROUNDING CONTINUITY THROUGHOUT.	CABLOFIL 000981
8	SC-GND-1	WALL MOUNT GROUND BAR, MINIMUM 4" H X 1/2" L X 1/4" D COPPER, ELECTRICALLY ISOLATED BY INSULATORS INTEGRAL TO MOUNTING BRACKETS. PROVIDE UNIT CONFIGURED WITH SIXTEEN (16) SETS OF 5/16" HOLES SPACED 3/8" ON CENTER TO ACCOMMODATE "A" SPACED TWO-HOLE COMPRESSION LUGS AND THREE (3) SETS OF 7/16" HOLES SPACED 1" ON CENTER TO ACCOMMODATE "C" SPACED TWO-HOLE COMPRESSION LUGS. ANSIA/EIA/TIA-607 AND BICSI COMPLIANT. UL LISTED. REFER TO 2/T500 FOR ADDITIONAL INFORMATION.	CHATSWORTH PRODUCTS 40153-012 ERICO HARGER
9	SC-GND-2	RACK MOUNT GROUND BAR, MINIMUM 3/16" D X 3/4" H X 19" W COPPER, CONFIGURED WITH MINIMUM EIGHT (8) #6-32 TAPPED HOLES AND MINIMUM FOUR (4) 5/16" UNTAPPED HOLES. UL LISTED AND ANSIA/EIA/TIA-607 AND BICSI COMPLIANT. REQUIRES ONE (1) 1.75" RACK MOUNTING SPACE.	
10	SC-ER-1	EQUIPMENT RACK, 84" H X 20.25" W X 15" D TWO-POST CONFIGURATION. PROVIDE COMPLETE WITH TWO (2) TWO-SIDED VERTICAL WIRE MANAGERS PER RACK, EACH WITH MINIMUM 6" X 6" CAPACITY FRONT AND REAR, AND WITH LADDER RACK CONNECTION HARDWARE ACCESSORIES AND RADIUS DROP LADDER RACK.	HUBBELL HP294RR-20
11	SC-HWM-1	HORIZONTAL CABLE MANAGEMENT, FINGER DUCT STYLE, 3" X 3" CAPACITY FRONT, 2" X 5" CAPACITY REAR. REMOVABLE FRONT AND REAR COVERS. PASS THROUGH HOLES TO FACILITATE FRONT TO REAR CABLING. REQUIRES (2) 1.75" MOUNTING SPACES.	HUBBELL HC219CC3P NO EQUALS
12	SC-FE-W	FURNITURE FEED FOR SYSTEMS FURNITURE, WALL MOUNTED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.	

GENERAL TECHNOLOGY EQUIPMENT SCHEDULE (CONTINUED)			
ITEM NO.	EQUIPMENT TAG	DESCRIPTION	APPROVED MANUFACTURERS
13	SC-FDC-1	OPTICAL FIBER DISTRIBUTION CABINET, COMBINATION SHELF, 24 FIBER CAPACITY, SLIDE OUT RAILS TO FACILITATE FRONT ACCESS. JUMPER TROUGHS IN CONNECTOR PANELS TO REDUCE MOUNTING SPACE. PROVIDE WITH CLAMP AND GROUNDING KIT, COUPLING PANELS, [S]T[S]C[MT-RJ] CONNECTORS, COUPLINGS AND JUMPERS. REQUIRES (2) 1.75" MOUNTING SPACES.	HUBBELL FOR SERIES NO EQUALS
14	SC-MPP-1	MODULAR PATCH PANEL, FORTY EIGHT (48) MODULAR RJ-45 SNAP-IN JACKS. WELDED STEEL CONSTRUCTION, BLACK POWDER COAT FINISH. MOUNTS DIRECTLY TO EIA/TIA STANDARD 19" RELAY RACK. REQUIRES (2) 1.75" MOUNTING SPACES. PROVIDE COMPLETE FULLY POPULATED WITH JACKS.	HUBBELL CAT 6 PBE48U NO EQUALS
15	SC-HH	TELECOMMUNICATIONS HAND HOLE, IN GROUND HAND HOLE.	PENCELL PE800
16	SC-IS-1	SIP EMERGENCY INTERCOM, TYPE-1, WALL MOUNTED. PROVIDE TWO GANG BOX AND USE 1" EMT CONDUIT STUBBED UP TO NON-CONTINUOUS CABLE SUPPORT ROUTE OR CABLE TRAY ABOVE NEAREST ACCESSIBLE CEILING. MOUNT AT 36" TO CENTER OF DEVICE BOX OR AS DIRECTED BY ARCHITECT/OWNER. THIS DEVICE IS TO RING DIRECTLY TO THE 911 EMERGENCY CALL CENTER.	CYBERDATA SIP EMERGENCY INTERCOM 011209
17	AC-CR1-W	CARD READER, CARD SWIPE TYPE, WALL MOUNTED. PROVIDED AS INTEGRAL PART OF SECURITY MANAGEMENT SYSTEM. CARD READERS SHOWN ON PLANS TO IDENTIFY INTENDED MOUNTING LOCATION. REFER TO SPECIFICATION SECTION 28 13 00 FOR COMPLETE INFORMATION. MOUNT AT 36" AFF TO CENTER OF DEVICE.	KEYSCAN REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION
18	AC-CR2-W	FUTURE CARD READER, GATE MOUNTED - SEE PLANS FOR LOCATIONS. PROVIDED AS INTEGRAL PART OF SECURITY MANAGEMENT SYSTEM. CARD READERS SHOWN ON PLANS TO IDENTIFY INTENDED MOUNTING LOCATION. REFER TO SPECIFICATION SECTION 28 13 00 FOR COMPLETE INFORMATION.	KEYSCAN REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION
19	AC-CR3-W	CARD READER, MOUNT RECEIVER ABOVE EACH DOOR UNDER THE SOFFIT OVERHANG (IF THERE IS AN OVERHANG) SEE PLANS FOR LOCATIONS. PROVIDED AS INTEGRAL PART OF SECURITY MANAGEMENT SYSTEM. CARD READERS SHOWN ON PLANS TO IDENTIFY INTENDED MOUNTING LOCATION.	NEDAP UPASS REACH MICROWAVE RFID DEVICE. MOUNT TO JUNCTION BOX AT AN ANGLED BRACKET FOR ABILITY OF UHF WINDSHIELD TAG TO BE VIEWED. RECEIVER
20	AC-DR-W	ACCESS CONTROL TYPE LOCKDOWN BUTTON. INSTALL A 4" SQUARE 2 1/8" DEEP BACK BOX AND A 1" EMT CONDUIT TO CONTROL FUNCTION AT DOOR. WHEN BUTTON IS PUSHED DOOR SHALL AUTOMATICALLY LOCK. PROVIDE FACEPLATE TO READ "IN AN EMERGENCY - PRESS FOR FRONT DOOR TO LOCK" AND PROVIDE KEY RESET FUNCTION. BUTTON TO BE A MINIMUM OF 1-1/2" DIAMETER.	EDWARDS SIGNALING SERIES 147
21	AC-SEC-1	ACCESS CONTROL SECURITY CONTROL PANEL. REFER TO SPECIFICATION 28 13 00 FOR COMPLETE INFORMATION AND MODEL NUMBER.	
22	AC-EDR-W	ACCESS CONTROL DOOR RELEASE BUTTON, DESK MOUNT, DPDT, HARD-WIRE, MOMENTARY. INSTALL IN A 4" SQUARE 2-1/8" DEEP BACKBOX WITH A SINGLE GANG PLASTER RING AND 3/4" CONDUIT STUBBED TO NON-CONTINUOUS CABLE SUPPORT ROUTE OR CABLE TRAY ABOVE NEAREST ACCESSIBLE CEILING (MINIMUM 6" BEYOND BOX). REFER TO SUGGESTED MATRIX OF SCOPE RESPONSIBILITY DRAWING ON T000 FOR ADDITIONAL INFORMATION.	
23	AV-AIRM-1	OWNER PROVIDED CRESTRON AIR MEDIA DEVICE (FUTURE ITEM). REFER TO 4/T400 AND 4/T401 FOR CABLING INFORMATION.	
24	AV-CAM-1	AUDIO VIDEO CAMERA (POLYCOM) PROVIDED BY OWNER, INSTALLED BY CONTRACTOR. FIELD COORDINATE LOCATION IN CONFERENCE ROOM. MOUNT ON CASEWORK FACING TABLES. REFER TO 4/T400 AND 4/T401 FOR CABLING INFORMATION.	
25	VS-CAM-C	CLOSED CIRCUIT TELEVISION (CCTV) CAMERA, CEILING MOUNTED. REFER TO DETAILS ON SHEET T501 FOR ADDITIONAL INFORMATION.	
26	VS-CAM-W	CLOSED CIRCUIT TELEVISION (CCTV) CAMERA, WALL MOUNTED. REFER TO DETAILS ON SHEET T501 FOR ADDITIONAL INFORMATION.	
27	PL-RLC	OWNER PROVIDED POLICE INTERVIEW CEILING MOUNTED DEVICE. REFER TO SHEET T101 FOR LOCATION OF DEVICE. INSTALL A 4" SQUARE 2-1/8" DEEP BACK BOX WITH A 1" EMT CONDUIT STUBBED TO NON-CONTINUOUS CABLE SUPPORT ROUTE.	OWNER PROVIDED
28	PL-RLW	OWNER PROVIDED POLICE INTERVIEW WALL MOUNTED DEVICE. REFER TO SHEET T101 FOR LOCATION OF DEVICE. INSTALL A 4" SQUARE 2-1/8" DEEP BACK BOX WITH A 1" EMT CONDUIT STUBBED TO NON-CONTINUOUS CABLE SUPPORT ROUTE.	OWNER PROVIDED
29	AV-MON-1	VIDEO DISPLAY, 60" DIAGONAL LED VIDEO DISPLAY, 16:9 FORMAT, 1920X1080 RESOLUTION WITH HDMI INPUTS MINIMUM. PROVIDE AND INSTALL WITH WALL MOUNT. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION. MONITOR AND MOUNT BY OWNER. REFER TO 4/T400 AND 4/T401 FOR CABLING INFORMATION.	
30	AV-CD-1	AUDIO VIDEO POLYCOM CODEC. PROVIDED BY OWNER, INSTALLED BY CONTRACTOR. FIELD COORDINATE LOCATION IN CONFERENCE ROOM. MOUNT ON COUNTERTOP OR IN CABINET IN INCIDENT COMMAND ROOM. OWNER TO PROVIDE MOUNTING SHELF ON MONITOR MOUNTING BRACKET IN BRIEFING ROOM. REFER TO 4/T400 AND 4/T401 FOR CABLING INFORMATION.	
31	AV-SPL-C	OVERHEAD PAGING SYSTEM SPEAKER, CEILING MOUNTED. PRE-ASSEMBLED BAFFLE WITH PERFORATED STEEL GRILLE AND SPEAKER ASSEMBLY EQUIPPED WITH 8" LOUDSPEAKER WITH 10-OUNCE MAGNET, UNIVERSAL MATCHING TRANSFORMER FOR 25 VOLT SYSTEMS WITH A MINIMUM OF FIVE SECONDARY TRANSFORMER TAPS, 90-17000 HZ FREQUENCY RANGE. PROVIDE COMPLETE WITH MATCHING BACKBOX AND TILE BRIDGE. FLUSH MOUNT IN FINISHED CEILING. REFER TO 4/T400 AND 4/T401 FOR CABLING INFORMATION.	

GENERAL TECHNOLOGY EQUIPMENT SCHEDULE (CONTINUED)			
ITEM NO.	EQUIPMENT TAG	DESCRIPTION	APPROVED MANUFACTURERS
32	AV-MP1-S	AUDIO RECESSED CEILING MICROPHONE TYPE-1, BY OWNER. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.	
33	AV-MP2-S	AUDIO MICROPHONE TYPE-2, BY OWNER. MOUNT ON TABLE TOP. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.	
34	AV-AMP-1	AUDIO AMPLIFIER, BY CONTRACTOR. MOUNT IN CASEWORK. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.	
35	EC-PSN-A	EMERGENCY COMMUNICATIONS - PUBLIC SAFETY NETWORK CEILING MOUNTED ANTENNA. DEVICE FURNISHED BY CONTRACTOR. INSTALL INFORMATION OUTLET IN A 4" SQUARE 2-1/8" DEEP BACKBOX WITH A SINGLE GANG PLASTER RING AND A 1" EMT CONDUIT STUBBED TO NON-CONTINUOUS CABLE SUPPORT ROUTE OR CABLE TRAY ABOVE NEAREST ACCESSIBLE (MINIMUM 6" BEYOND BACK-BOX). REFER TO SUGGESTED MATRIX OF SCOPE RESPONSIBILITY ON DRAWING T000 FOR ADDITIONAL INFORMATION. FURNISH AND INSTALL ONE (1) COAXIAL OR CATEGORY 6 CABLE IN ROUGH-IN AND TERMINATE AS DIRECTED BY SYSTEM MANUFACTURER. REFER TO SPECIFICATION 27 53 19 FOR CABLING REQUIREMENTS.	698-2500 MHz 1.5/5 dbi GAIN INDOOR CEILING MOUNTED OMNI ANTENNA (USED INSIDE THE BUILDING). 698-2700 MHz CEILING MOUNTED ANTENNA. CAN STYLE (USED IN THE GARAGE/PARKING SPACES).
35	EC-PSN-AT	EMERGENCY COMMUNICATIONS - PUBLIC SAFETY NETWORK DONOR ANTENNA. DEVICE FURNISHED BY CONTRACTOR/VENDOR. MOUNTING OF THIS DEVICE REQUIRES FIELD COORDINATION BETWEEN VENDOR, STRUCTURAL ENGINEER AND CABLING CONTRACTOR FOR EXACT LOCATION AND ROOF PENETRATION. FURNISH AND INSTALL A MINIMUM OF A 5 FOOT MAST PIPE, LIGHTNING PROTECTION CABLING AS DIRECTED BY SYSTEM MANUFACTURER. REFER TO SPECIFICATION 27 53 19 FOR ADDITIONAL REQUIREMENTS.	ROOF MOUNTED NON-PENETRATING FLAT MOUNTED 5 FT MAST PIPE, SIMILAR TO NELLO CORP 102489 FOR THE PCTEL MAXRAD YAGI MYA SERIES INFRASTRUCTURE ANTENNA. PROVIDE (1) POLYPHASED LIGHTING PROTECTOR.
36	EC-PSN-AMP	EMERGENCY COMMUNICATIONS - PUBLIC SAFETY NETWORK 800 MHz BI-DIRECTIONAL AMPLIFIER. MOUNTING OF THIS DEVICE REQUIRES FIELD COORDINATION BETWEEN VENDOR AND OTHER CONTRACTORS. MUST HAVE DEDICATED 120 VOLT 15 AMP RECEPTACLE FOR AMPLIFIER.	REFER TO SPECIFICATION SECTION 27 53 19 FOR ADDITIONAL INFORMATION.

POLICE DEPARTMENT MIDTOWN DISTRICT

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

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GENERAL TECHNOLOGY EQUIPMENT SCHEDULE

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1" = 1'-0"

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**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

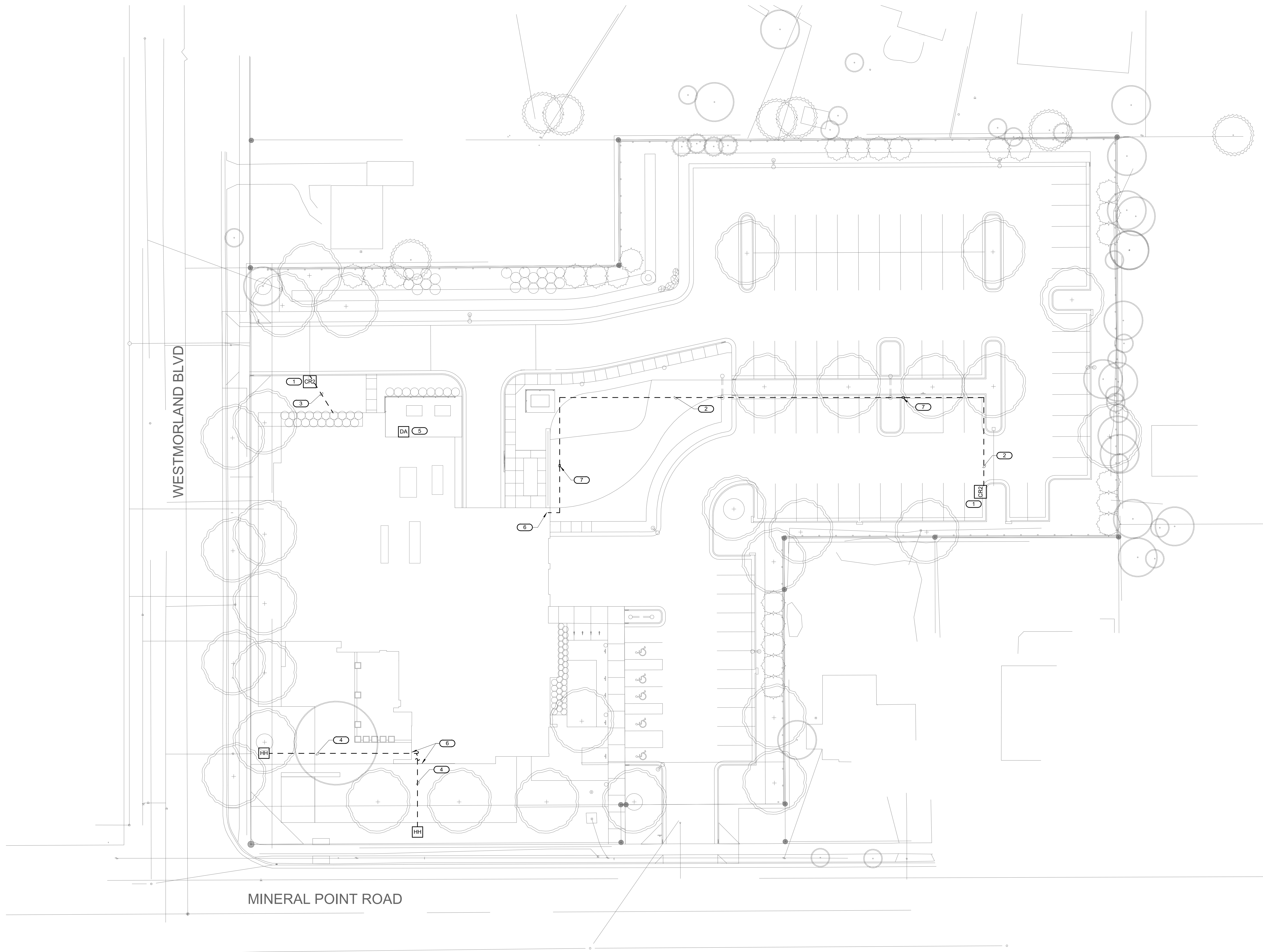
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- KEYNOTES:**
1. FUTURE CREDENTIAL READER.
 2. CONTRACTOR TO PROVIDE UNDERGROUND 1" (MINIMUM) PVC SCHEDULE 40 CONDUIT WITH PULL STRING FROM BUILDING TO THIS APPROXIMATE LOCATION FOR CREDENTIAL READER TO BE INSTALLED AT A LATER DATE. LOCATE CONDUIT AT LEAST 48 INCHES BELOW GRADE WITH METALLIC STRIP ABOVE CONDUIT SO IT CAN BE LOCATED AT A LATER DATE. STUB CONDUIT ABOVE FLOOR AT LEAST 1 INCH AND PROVIDE WATER TIGHT CAP BOTH INSIDE AND OUTSIDE THE BUILDING WHERE THE CONDUIT STUBS UP. REFER TO SHEET T100 FOR CONTINUATION.
 3. CONTRACTOR TO PROVIDE UNDERGROUND 1" (MINIMUM) PVC SCHEDULE 40 CONDUIT WITH PULL STRINGS FROM BUILDING TO THIS APPROXIMATE LOCATION FOR CREDENTIAL READER TO BE INSTALLED AT A LATER DATE. COORDINATE LOCATION OF STUB UP IN BUILDING WITH LOCKERS THAT ARE TO BE FURNISHED AND INSTALLED BY OWNER SO THAT CONDUIT CAN BE ACCESSED AT A LATER DATE. REFER TO SHEET T100 FOR CONTINUATION.
 4. CONTRACTOR TO PROVIDE A HAND HOLE AND (1) 4 INCH PVC CONDUIT FROM HAND HOLE TO UNDER THE LOWER LEVEL. STUB CONDUIT(S) UP AND INTO THE MAIN TELECOM ROOM MC-1 LOCATED ON FIRST FLOOR ROOM 106. REFER TO SHEET 2T300 FOR CONTINUATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION FOR HANDHOLES. THESE ARE FOR OPTICAL FIBER CABLING BEING INSTALLED BY A DIFFERENT CONTRACTOR.
 5. WORK WITH OWNER'S VENDOR TO PROVIDE A ROOF MOUNTED DONOR ANTENNA FOR THE PUBLIC SAFETY NETWORK SYSTEM FOR THIS BUILDING. CONDUIT SHOULD STUB THROUGH ROOF AND DOWN TO LOWER LEVEL FOR BI-DIRECTIONAL ANTENNA CABLING.
 6. EXTERIOR WALL PENETRATION.
 7. PROVIDE A 4" X 16" X 3" PULLBOX EVERY 180 DEGREE BEND AND EVERY 100'.



1 SITE PLAN - TECHNOLOGY
1" = 20'-0"

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211 South Carroll Street
Madison, WI 53703

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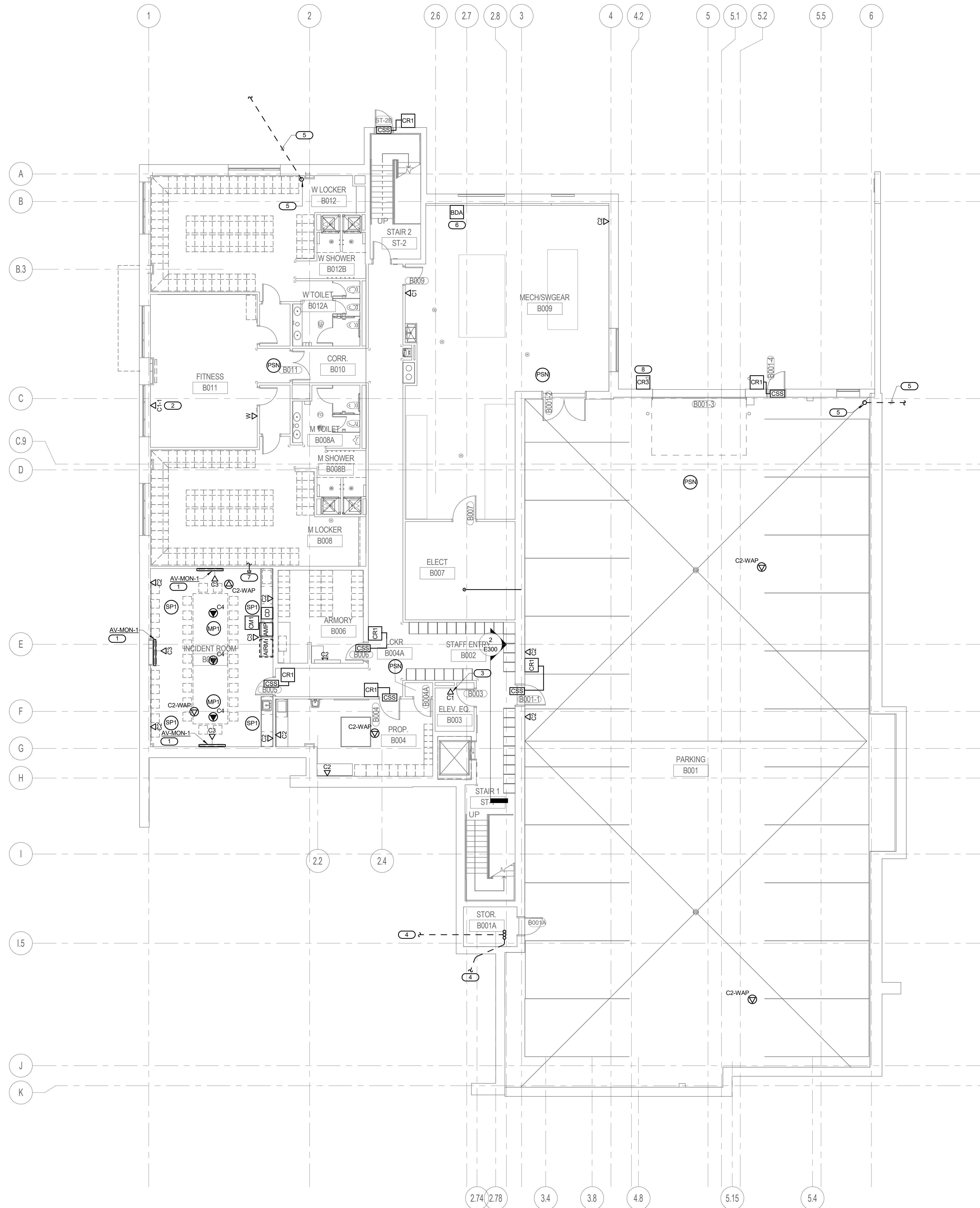
**LOWER LEVEL -
TECHNOLOGY**

GENERAL NOTES:

1. ALL INFORMATION OUTLETS THIS SHEET ARE FED FROM MC-1 UNLESS NOTED OTHERWISE. REFER TO SHEET T101 FOR LOCATION OF MC-1.
2. ALL WIRELESS ACCESS POINTS ARE TO HAVE (2) TWO DATA JACKS TO EACH LOCATION.
3. REFER TO CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE ON SHEET T501.
4. REFER TO 1/7400 FOR FIBER AND COPPER RISER DIAGRAM.
5. REFER TO SHEET T500 FOR INFORMATION OUTLET SCHEDULE.
6. REFER TO 4/7400 FOR INCIDENT ROOM B005 AUDIO/VIDEO CONNECTIVITY DIAGRAM.
7. REFER TO DETAIL 1/7500 FOR ROUGH-IN MOUNTING DETAIL.

KEYNOTES: #

1. HEIGHT OF OUTLET TO BE DETERMINED BY DIMENSION OF MONITOR BEING PROVIDED. FOR BIDDING PURPOSES ASSUME HEIGHT OF 6'-0" TO CENTER OF OUTLET.
2. FIELD CONFIRM EXACT LOCATION OF IPTV CONNECTION BEFORE ROUGH-IN. FOR BIDDING PURPOSES ASSUME HEIGHT OF 6'-0" TO CENTER OF OUTLET.
3. THIS CONTRACTOR AND ELEVATOR CONTRACTOR TO COORDINATE REQUIREMENTS FOR VOICE CONNECTION IN ELEVATOR MACHINE ROOM.
4. REFER TO SHEET T050 FOR CONTINUATION OF 1/4" CONDUIT FOR OPTICAL FIBER (FIBER NOT IN THIS CONTRACT) SERVICE FROM HAND HOLE.
5. REFER TO SHEET T050 FOR CONTINUATION OF 1/2" CONDUIT FOR FUTURE CARD READER.
6. PROVIDE A 800 MHz BI-DIRECTIONAL AMPLIFIER WITH (1) 2" CONDUIT STUBBED OUT 3' OFF ROOF FOR WEATHER HEAD OF DONOR ANTENNA. COORDINATE LOCATION IN ROOM WITH OWNER'S VENDOR FOR BEST COVERAGE.
7. FOR BIDDING PURPOSES ASSUME A ROUTE OF 1" EMT CONDUIT FOR ANTENNA CABLING FROM AMPLIFIER LOCATED IN MECHANICAL ROOM LOCATED ON FIRST FLOOR TO THIS ROOM IN APPROXIMATE LOCATION AS INDICATED ON PLAN. FIELD COORDINATE FINAL LOCATION IN FIELD WITH OWNER. (STUB CONDUIT AT 18" AFF IN LOCATION INDICATED).
8. MOUNT CRG AT LEAST 6" ABOVE THE DOOR OPENING SO THERE ARE NO CONFLICTS WITH ANY OTHER DEVICES.



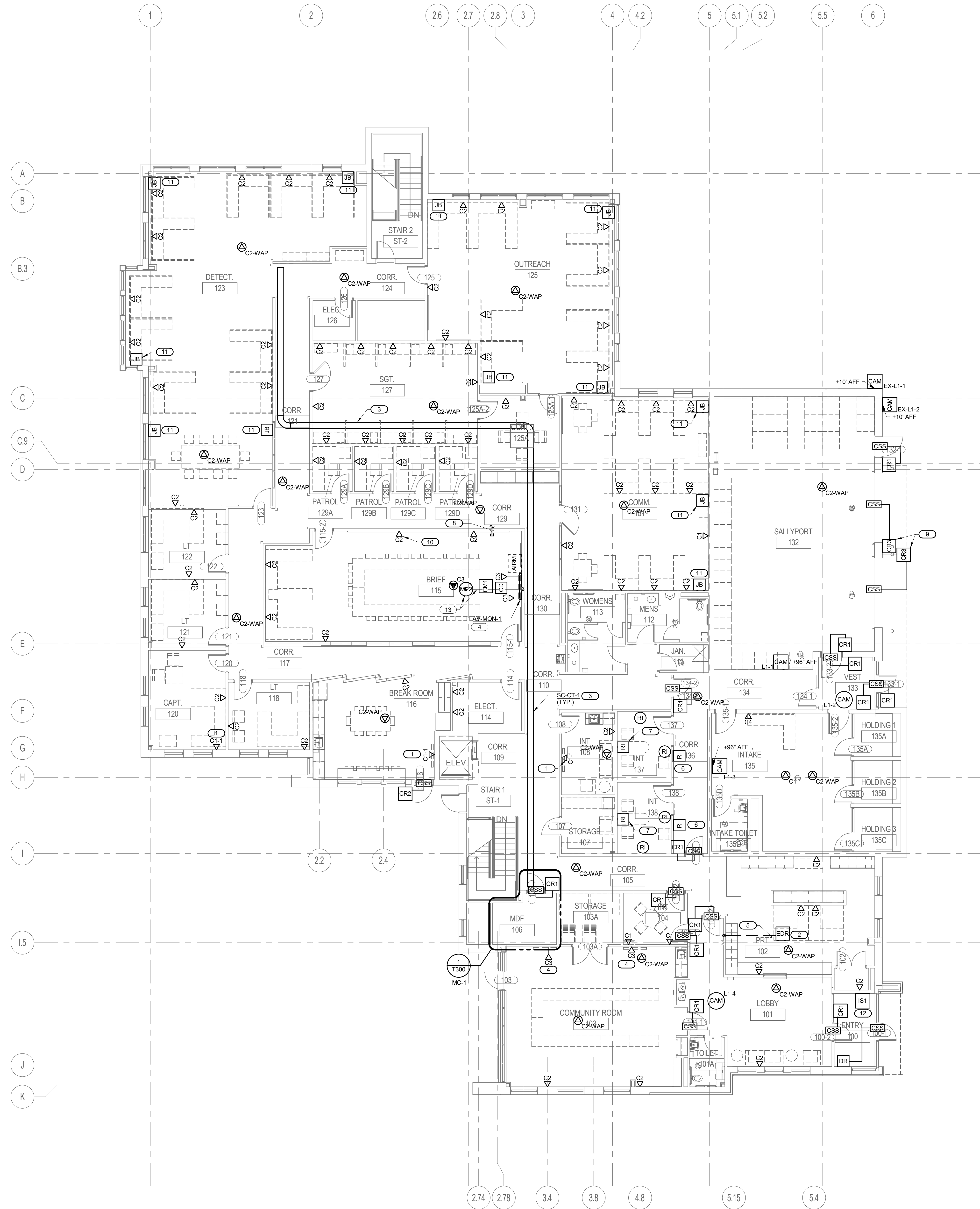
**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

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City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

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- GENERAL NOTES:**
1. ALL INFORMATION OUTLETS THIS SHEET ARE FED FROM MC-1 UNLESS NOTED OTHERWISE. REFER TO SHEET T500 FOR INFORMATION OUTLET SCHEDULE
 2. ALL SURVEILLANCE CAMERAS ARE TO HAVE (1) ONE DATA JACK AT EACH LOCATION FOR POE CAMERAS.
 3. ALL WIRELESS ACCESS POINTS ARE TO HAVE (2) TWO DATA JACKS TO EACH LOCATION. PROVIDE DATA OUTLETS AND ALL CABLING WITHIN ALL SYSTEMS FURNITURE AT APPROXIMATE LOCATIONS AS INDICATED. CABLING TO BE PULLED TO CENTRAL POINT AND DISTRIBUTED TO EACH SET OF SYSTEMS FURNITURE IN LOCATIONS ADJACENT TO ELECTRICAL CONNECTION. REFER TO THE E-SERIES AND FURNITURE VENDOR INSTALLATION DOCUMENTS FOR LOCATIONS OF THESE ELECTRICAL CONNECTIONS.
 4. REFER TO SHEET T501 FOR CCTV CAMERA TYPE AND INDIVIDUAL CAMERA REQUIREMENT SCHEDULE.
 5. REFER TO 47401 FOR BRIEF ROOM 115 AUDIO/VIDEO CONNECTIVITY DIAGRAM.
 6. REFER TO SHEET T501 FOR CONTROL SECURITY TYPE (CSS) SCHEDULE.
 7. REFER TO DETAIL T1700 FOR ROUGH-IN MOUNTING DETAIL.

- KEYNOTES:**
1. FIELD CONFIRM EXACT LOCATION OF IPTV CONNECTION BEFORE ROUGH-IN FOR BIDDING PURPOSES. ASSUME HEIGHT OF 6'-0" TO CENTER OF OUTLET.
 2. PROVIDE A DOOR RELEASE AT THIS DESK AREA FOR DOOR 101-2.
 3. LOCATION AND HEIGHT OF THE CABLE TRAY TO PROVIDE 8 INCHES OF SIDE ACCESS AND 12 INCHES OF TOP ACCESS AROUND THE TRAY.
 4. HEIGHT OF OUTLET TO BE DETERMINED BY DIMENSION OF MONITOR BEING PROVIDED. FOR BIDDING PURPOSES ASSUME HEIGHT OF 6'-0" TO CENTER OF OUTLET.
 5. CONNECT THIS RELEASE TO THE KEYSKAN SYSTEM TO OVER RIDE THE LOCK FUNCTION AND SHUNT THE ALARM FOR THIS DOOR. ROUTE (1) 1" CONDUIT UNDER THE FLOOR AND UP TO THE DOOR CONTROLLER THROUGH THE WALL SYSTEMS. COORDINATE LOCATION OF WHERE THE CONDUIT STUBS UP TO DESK WITH THE FURNITURE CONTRACTOR BEFORE ROUGH-IN.
 6. LOCATE THIS BOX AT 30" AFF. ROUTE 1" CONDUIT FROM THIS BOX TO ABOVE ACCESSIBLE CEILING SPACE.
 7. LOCATE THIS BOX AT 30" AFF. ROUTE 1" CONDUIT FROM THIS BOX TO ABOVE ACCESSIBLE CEILING SPACE.
 8. FOR BIDDING PURPOSES ASSUME A ROUTE OF 1" CONDUIT FOR ANTENNA CABLING FROM BI-DIRECTIONAL PUBLIC SAFETY NETWORK AMPLIFIER LOCATED IN MECHANICAL ROOM TO THIS ROOM IN APPROXIMATE LOCATION AS INDICATED ON PLAN. FIELD COORDINATE FINAL LOCATION IN FIELD WITH OWNER (STUB CONDUIT AT 18" AFF IN LOCATION INDICATED).
 9. MOUNT CR3 AT LEAST 6" ABOVE THE DOOR OPENING SO THERE ARE NO CONFLICTS WITH ANY OTHER DEVICES.
 10. THIS DEVICE IS FOR WALL MOUNTED WIRELESS ACCESS POINT. WAP INSTALLED BY OWNER. JACK AND CABLING BY THIS CONTRACTOR. CONFIRM HEIGHT IN FIELD WITH OWNER AND OTHER CONTRACTORS.
 11. THIS IS THE WALL CONNECTION POINT TO THE SYSTEMS FURNITURE. THE SYSTEM'S FURNITURE IS BEING PROVIDED BY THE OWNER'S VENDOR. FIELD COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL CONDUIT ROUTES FROM THIS FURNITURE CONNECTION TO THE WALLS AND UP TO ABOVE THE ACCESSIBLE CEILING THEN BACK TO THE MAIN COMMUNICATIONS ROOM MC-1. SIZE CONDUITS PER CONNECTION POINTS AT 40% FILL RATE, MINIMUM SIZE OF 1".
 12. THIS DEVICE SHOULD HAVE A SINGLE DATA JACK.
 13. THIS MICROPHONE CAN BE LOCATED NO LONGER THAN 20' AWAY FROM THE CODEC. OWNERS VENDOR NEEDS TO PROVIDE CABLING IN WALL THROUGH CONDUIT IN FLOOR AND UP TO MICROPHONE AS INDICATED. COORDINATE LOCATION OF CONDUIT IN WALL AND IN FLOOR WITH VENDOR BEFORE INSTALLATION.

FIRST FLOOR PLAN - TECHNOLOGY
1
1/8" = 1'-0"

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Madison, WI 53703

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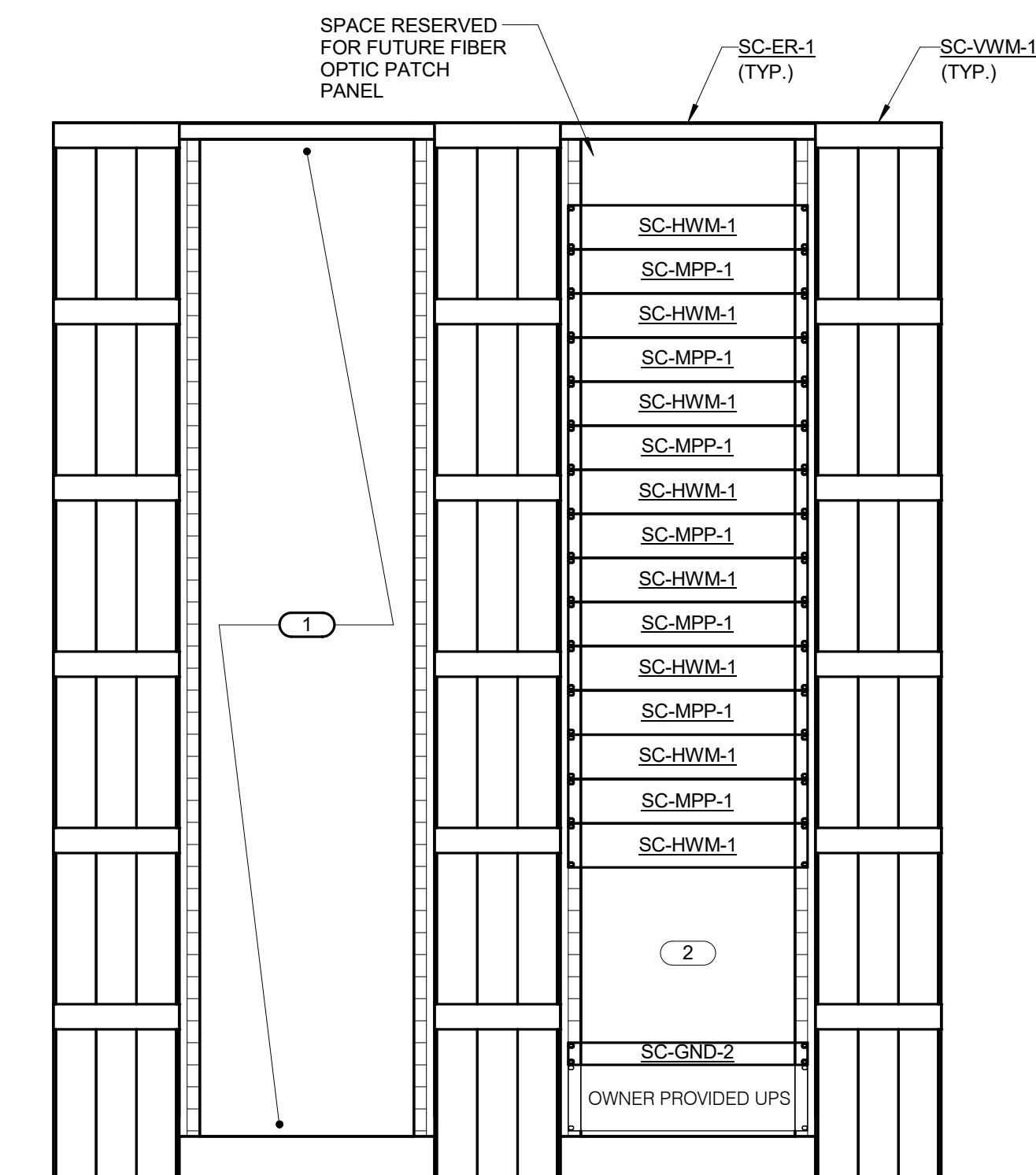
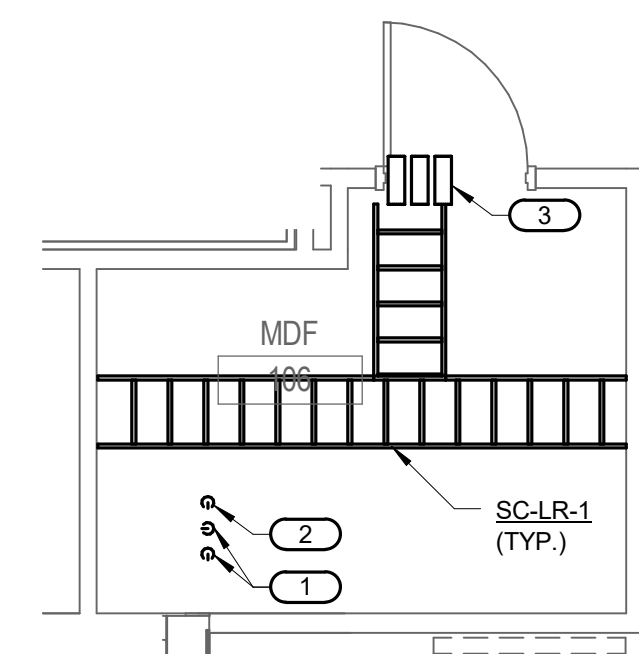
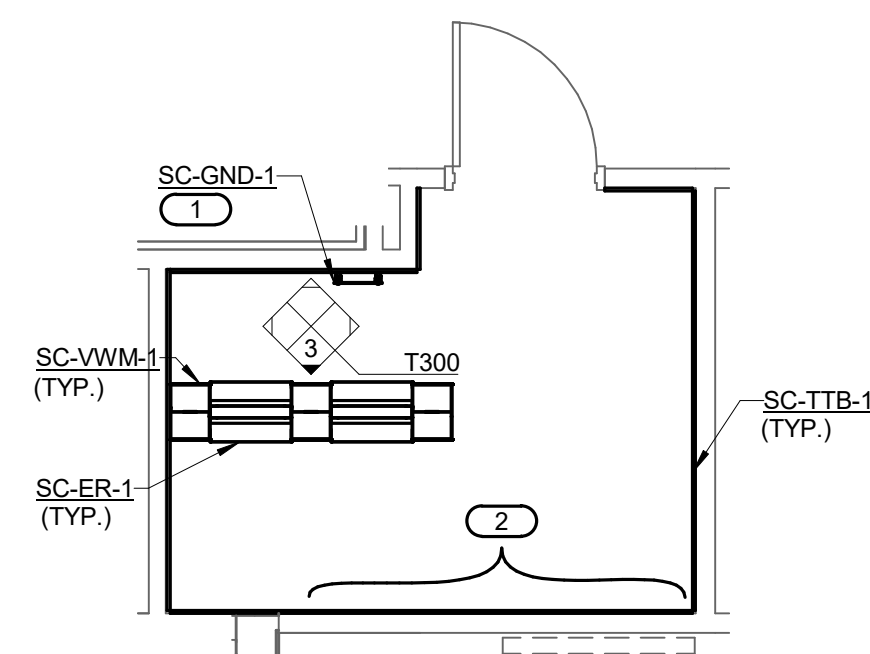
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**ENLARGED PLANS -
TECHNOLOGY**



1 TELECOM ROOM 106 MC-1 ENLARGED PLAN

1/4" = 1'-0"

NOTES:

- COORDINATE ALL DEVICE LOCATIONS AND MOUNTING LOCATIONS IN TELECOM ROOM 106 MC-1 ON SITE WITH OWNER'S IT STAFF PRIOR TO INSTALLATION.
- COORDINATE INSTALLATION SCHEDULE FOR UTILITY/SERVICE POWER OUTLETS AND ANY EQUIPMENT POWER CONNECTION REQUIRED FOR CONTRACTOR FURNISHED AND INSTALLED EQUIPMENT IN TELECOM ROOM 106 MC-1 WITH ON SITE DIVISION 26 CONTRACTOR PRIOR TO ROUGH-IN.
- REFER TO 2/7300 FOR TELECOM ROOM 106 MC-1 PATHWAY LAYOUT.
- REFER TO 2/7400 FOR TECHNOLOGY BONDING RISER DIAGRAM.

KEYNOTES:

- REFER TO 2/7500 FOR ADDITIONAL INFORMATION. INSTALL AT A HEIGHT OF 60" AFF TO THE TOP OF THE GROUND BAR.
- WALL SPACE RESERVED FOR ELECTRONIC ACCESS CONTROL EQUIPMENT, TERMINATIONS, AND CONNECTIONS (CONTROL PANELS, POWER SUPPLIES, ETC.)



2 TELECOM ROOM 106 MC-1 PATHWAY LAYOUT

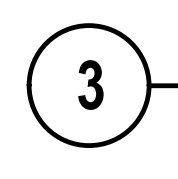
1/4" = 1'-0"

NOTES:

- COORDINATE ALL DEVICE LOCATIONS AND MOUNTING LOCATIONS IN TELECOM ROOM 106 MC-1 ON SITE WITH OWNER'S IT STAFF PRIOR TO INSTALLATION.
- FURNISH AND INSTALL CABLE RUNWAY RADIUS DROPS AT ALL AREAS WHERE CABLE TRANSITIONS ON TO OR OFF OF HORIZONTAL CABLE RUNWAY. REFER TO 3/7500 AND 4/7500 FOR ADDITION INFORMATION.
- PROVIDE CABLE MANAGEMENT AND COORDINATE AC POWER AND VENTILATION REQUIREMENTS.

KEYNOTES:

- (2) 4" CONDUIT STUBBED UP INTO MC-1 FOR OPTICAL FIBER CABLE BEING PROVIDED BY OTHERS. REFER TO SHEET T300 FOR CONTINUATION.
- (1) 4" CONDUIT STUBBED BETWEEN FLOORS FOR HORIZONTAL PATHWAY CABLING BETWEEN FLOORS.
- (3) 4" CONDUITS.



3 TELECOM ROOM 106 MC-1 RACK ELEVATION

1" = 1'-0"

NOTES:

- COORDINATE ALL DEVICE LOCATIONS AND MOUNTING LOCATIONS IN TELECOM ROOM 106 M-1 ON SITE WITH OWNER'S IT STAFF PRIOR TO INSTALLATION.
- FURNISH AND INSTALL CABLE RUNWAY RADIUS DROPS AT ALL AREAS WHERE CABLE TRANSITIONS ON TO OR OFF OF HORIZONTAL CABLE RUNWAY. REFER TO 3/7500 FOR ADDITION INFORMATION.
- PROVIDE CABLE MANAGEMENT AND COORDINATE AC POWER AND VENTILATION REQUIREMENTS.
- ALLOW AT LEAST 3 RACK UNIT AT TOP OF THE MAIN RACK FOR NEW OPTICAL FIBER CABLE PATCH PANEL THAT WILL BE INSTALLED BY ANOTHER PROJECT. DO NOT INSTALL HORIZONTAL WIRE MANAGER AT THE VERY TOP OF THE RACK.

KEYNOTES:

- SPACE FOR OWNER PROVIDED EQUIPMENT (ETHERNET SWITCHES, ETC.). REFER TO SHEET 1/7400 FOR RISER DIAGRAM.
- REFER TO 1/7400 FIBER AND COPPER RISER DIAGRAM FOR ADDITIONAL INFORMATION.

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REFERENCE SCALE IN INCHES
1" = 1'-0"

T300

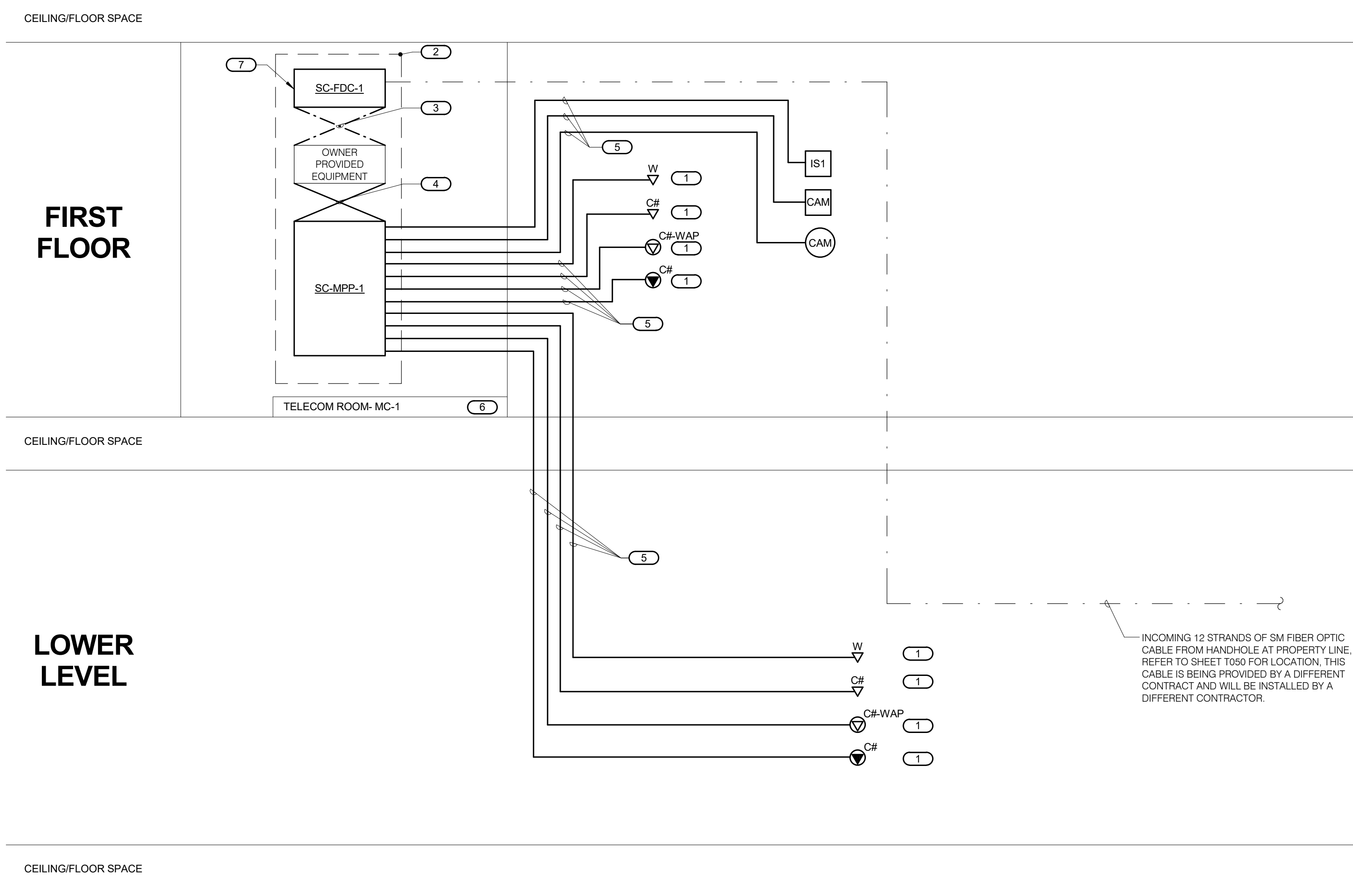
**POLICE
DEPARTMENT
MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

ISSUED FOR:
CONSTRUCTION 5-5-17

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NO. DESCRIPTION DATE



1 FIBER AND COPPER RISER DIAGRAM

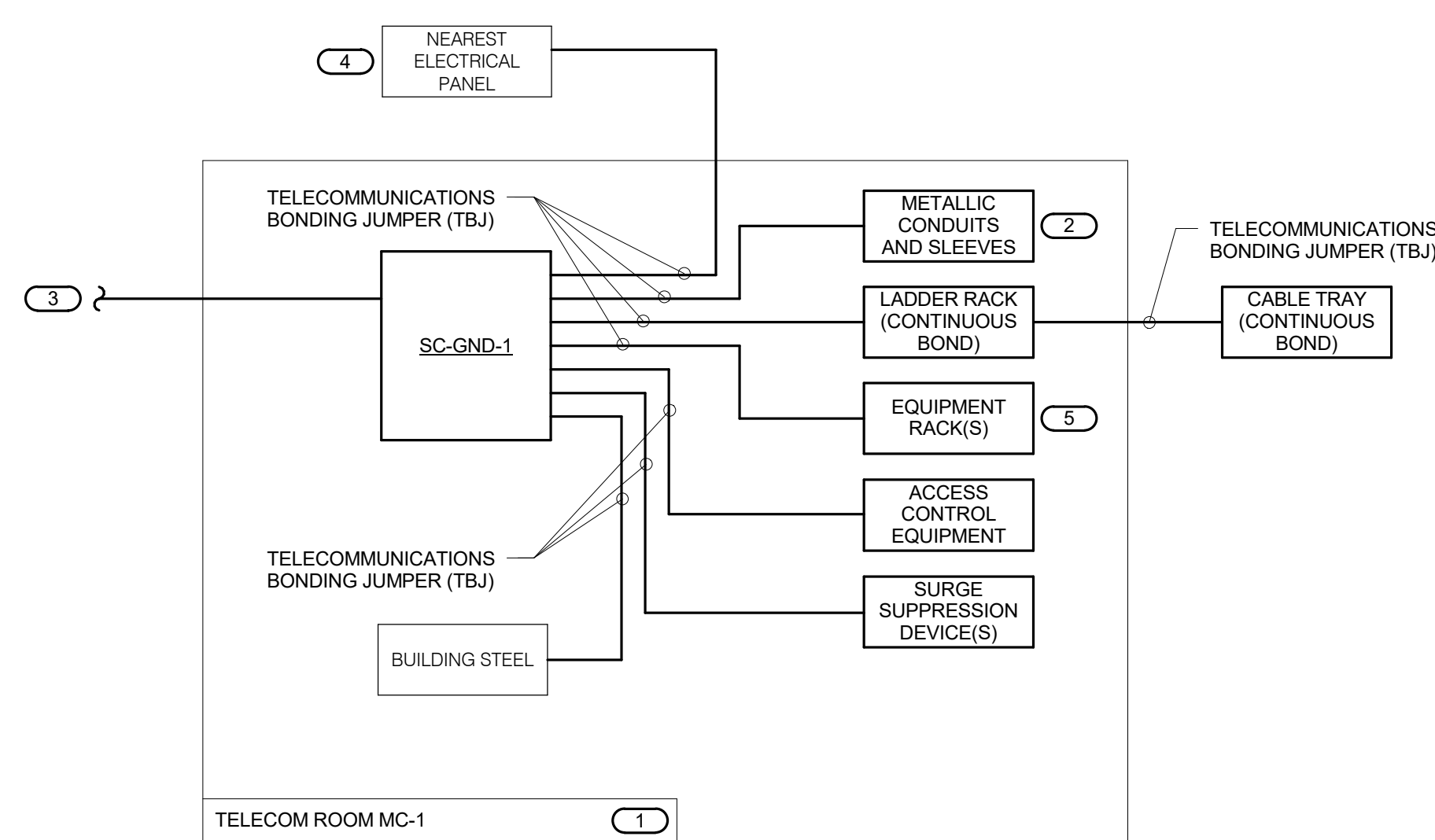
NO SCALE

NOTES:

- THIS RISER IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION(S), LOCATIONS AND CABLE TYPE. ALL INFORMATION OUTLETS ARE TYPICAL OF THE OUTLETS IN THE AREA SHOWN. REFER TO FLOOR PLANS FOR MORE SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- REFER TO FLOOR PLANS FOR QUANTITY OF CABLES AND JACKS TO BE INSTALLED AT EACH INFORMATION OUTLET. REFER TO SHEET T500 FOR INFORMATION OUTLET SCHEDULE. REFER TO SHEET 3/T300 FOR RACK ELEVATION.

KEYNOTES:

- CF INDICATES DATA FACEPLATE CONFIGURATION. REFER TO THE INFORMATION OUTLET SCHEDULE ON T500 FOR ADDITIONAL INFORMATION. REFER TO TECHNOLOGY FLOOR PLANS AND GENERAL TECHNOLOGY EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
- RACK AS DEFINED ON THE TELECOM ROOM LAYOUT. REFER TO THE TELECOM ROOM REFERENCES MATRIX ON THE COVER PAGE FOR LOCATION.
- REFER TO SPECIFICATIONS FOR FIBER PATCH CORD REQUIREMENTS.
- RJ-45 TO RJ-45 CATEGORY 6 UTP PATCH CORDS. REFER TO SPECIFICATIONS.
- 23 GAUGE 4-PAIR, CATEGORY 6, UNSHIELDED TWISTED PAIR CABLE. REFER TO SPECIFICATIONS. ROUTE THROUGH (1) 4" CONDUIT LABELED FOR ROUTE TO LOWER LEVEL IN MC-1. REFER TO SHEET 2/T300 FOR ADDITIONAL INFORMATION.
- REFER TO COVER PAGE AND FLOOR PLANS FOR TELECOM ROOM LOCATIONS.
- FUTURE BY A DIFFERENT PROJECT.



3 TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM

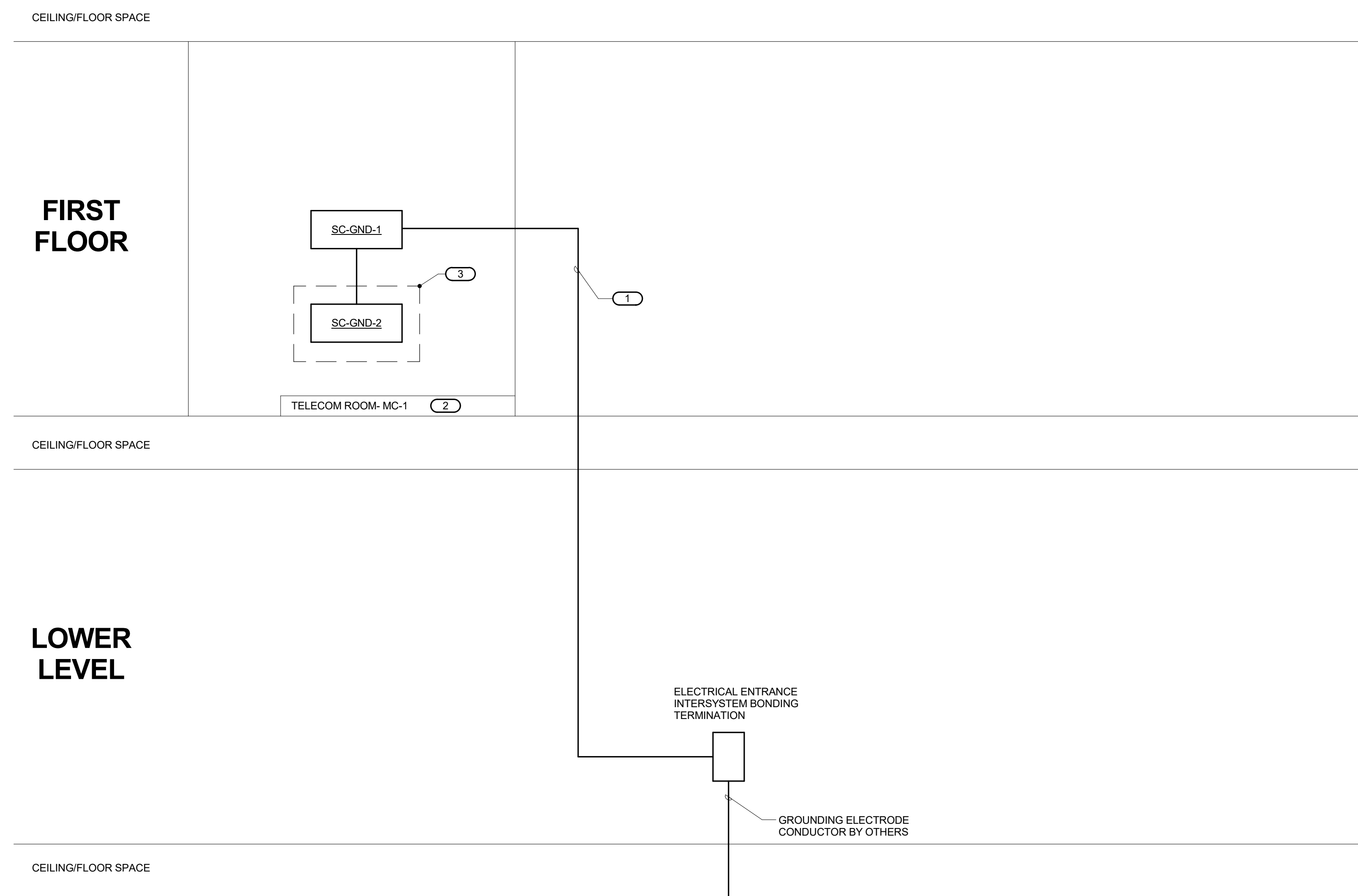
NO SCALE

NOTES:

- THIS FLOW DIAGRAM IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS. THIS FLOW DIAGRAM IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CONDUCTOR TYPE. ALL CONNECTIONS AND SYSTEM DEVICES SHOWN ARE TYPICAL AND NOT REPRESENTATIVE OF ACTUAL PROJECT QUANTITIES. REFER TO FLOOR PLANS AND ENLARGED FLOOR PLANS FOR ACTUAL QUANTITIES AND LOCATIONS OF DEVICES AND MORE SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ALL CONDUCTORS IN THE TECHNOLOGY BONDING SYSTEM SHALL BE MINIMUM SIZE OF 3/0 AWG PLENUM RATED COPPER (GREEN OR MARKED WITH A DISTINCTIVE GREEN COLOR) UNLESS CONDUCTOR LENGTH IS LESS THAN 66 FEET. REFER TO BONDING CONDUCTOR SIZING SCHEDULE FOR SIZING CRITERIA FOR CONDUCTORS LESS THAN 66 FEET IN LENGTH. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ALL BONDING CONDUCTORS AND BONDING JUMPERS SHALL BE CONNECTED BY COMPRESSION LUGS, EXOTHERMIC WELDING, OR IRREVERSIBLE COMPRESSION CONNECTORS. SOLDER IS NOT AN ACCEPTABLE MEANS OF CONNECTION. SHEET METAL SCREWS SHALL NOT BE USED TO CONNECT COMMUNICATIONS BONDING CONDUCTORS TO EQUIPMENT. WHERE NECESSARY, REMOVE PAINT AND/OR USE PAINT-PIERCING WASHERS TO PROVIDE PROPER ELECTRICAL BOND AT ALL CONNECTIONS.
- REFER TO 2/T500 FOR BONDING BUS BAR DETAIL AND ADDITIONAL INFORMATION AND REQUIREMENTS FOR SC-GND-1.

KEYNOTES:

- REFER TO TELECOM ROOM REFERENCES SCHEDULE ON DRAWING T000 FOR TELECOM ROOM NUMBER AND LOCATION INFORMATION.
- INCLUDES HORIZONTAL AND VERTICAL CONDUIT SLEEVES FOR TECHNOLOGY CABLING.
- BONDING CONDUCTOR FOR TELECOMMUNICATIONS (BCT), TO ELECTRICAL ENTRANCE INTERSYSTEM BONDING TERMINATION. REFER TO 2/T400 FOR TELECOMMUNICATIONS BONDING RISER DIAGRAM FOR CONTINUATION AND ADDITIONAL INFORMATION AND REQUIREMENTS.
- REFER TO THE ELECTRICAL DRAWINGS FOR LOCATION.
- PROVIDE SC-GND-2 RACK MOUNT TELECOMMUNICATIONS BONDING BUSBAR AT EACH EQUIPMENT RACK.



2 TECHNOLOGY BONDING RISER DIAGRAM

NO SCALE

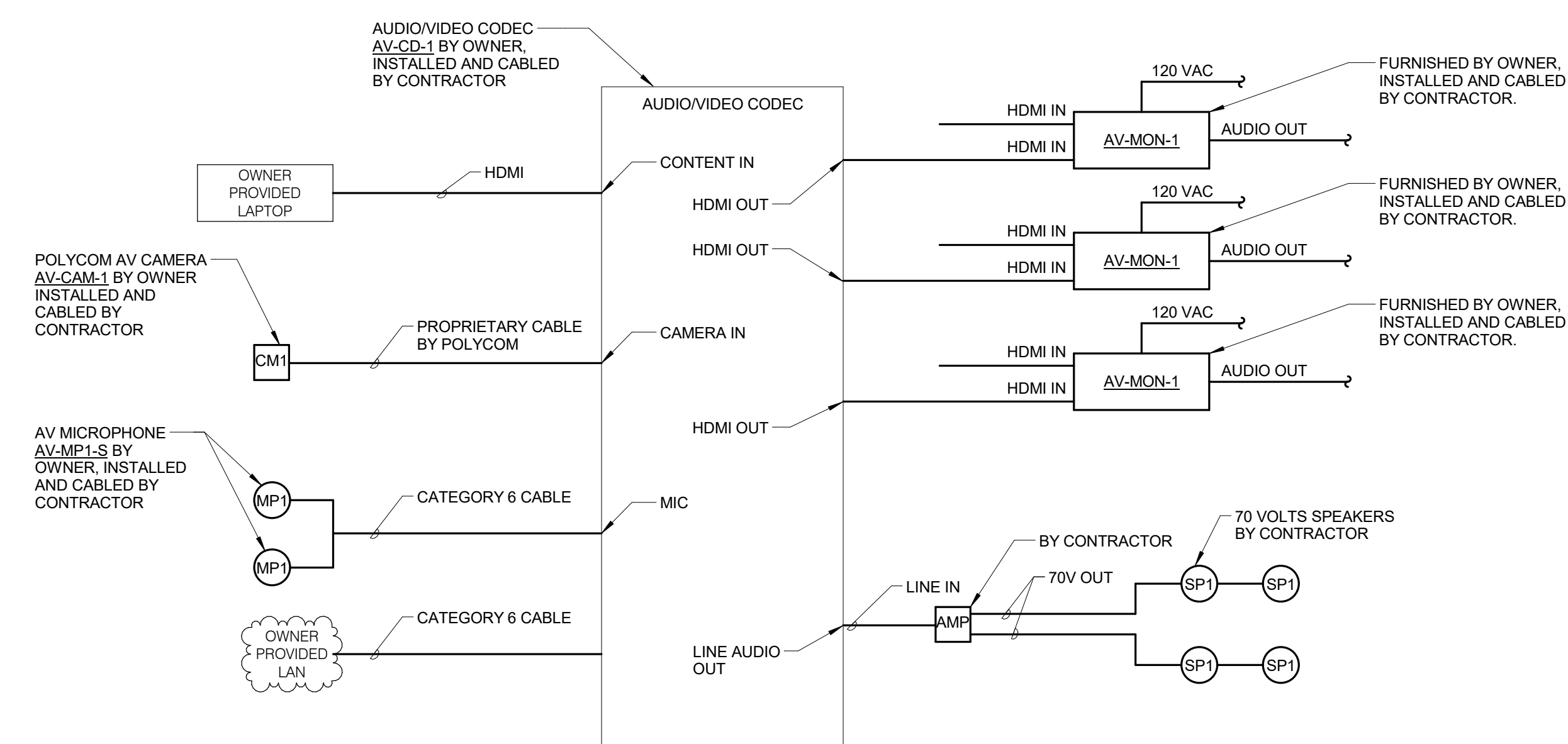
NOTES:

- THIS RISER IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CONDUCTOR TYPE. ALL CONNECTIONS AND SYSTEM DEVICES SHOWN ARE TYPICAL AND NOT REPRESENTATIVE OF ACTUAL PROJECT QUANTITIES. REFER TO FLOOR PLANS AND ENLARGED FLOOR PLANS FOR ACTUAL QUANTITIES AND LOCATIONS OF DEVICES AND MORE SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ALL CONDUCTORS IN THE TECHNOLOGY BONDING SYSTEM SHALL BE MINIMUM SIZE OF 3/0 AWG PLENUM RATED COPPER (GREEN OR MARKED WITH A DISTINCTIVE GREEN COLOR) UNLESS CONDUCTOR LENGTH IS LESS THAN 66 FEET. REFER TO BONDING CONDUCTOR SIZING SCHEDULE FOR SIZING CRITERIA FOR CONDUCTORS LESS THAN 66 FEET IN LENGTH. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ALL BONDING CONDUCTORS AND BONDING JUMPERS SHALL BE CONNECTED BY COMPRESSION LUGS, EXOTHERMIC WELDING, OR IRREVERSIBLE COMPRESSION CONNECTORS. SOLDER IS NOT AN ACCEPTABLE MEANS OF CONNECTION. SHEET METAL SCREWS SHALL NOT BE USED TO CONNECT COMMUNICATIONS BONDING CONDUCTORS TO EQUIPMENT. WHERE NECESSARY, REMOVE PAINT AND/OR USE PAINT-PIERCING WASHERS TO PROVIDE PROPER ELECTRICAL BOND AT ALL CONNECTIONS.
- REFER TO 3/T400 FOR TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM.
- REFER TO TELECOM ROOM REFERENCES SCHEDULE ON DRAWING T000 FOR TELECOM ROOM NUMBER AND LOCATION INFORMATION.

KEYNOTES:

- BONDING CONDUCTOR FOR TELECOMMUNICATIONS (BCT). BCT SHALL BE THE SAME SIZE AS THE TTB OR LARGER. REFER TO BONDING CONDUCTOR SIZING SCHEDULE FOR SIZING REQUIREMENTS.
- REFER TO COVER PAGE AND FLOOR PLANS FOR TELECOM ROOM LOCATIONS.
- RACK AS DEFINED ON THE TELECOM ROOM LAYOUT. REFER TO THE TELECOM ROOM REFERENCES MATRIX ON THE COVER PAGE FOR LOCATION.

BONDING CONDUCTOR SIZING SCHEDULE	
CONDUCTOR LENGTH IN FEET	MINIMUM ACCEPTABLE SIZE - AWG
LESS THAN 13'	6
14' - 20'	4
21' - 26'	3
27' - 33'	2
34' - 41'	1
42' - 52'	1/0
53' - 66'	2/0
GREATER THAN 66'	3/0



4 INCIDENT ROOM B005 AUDIO/VIDEO CONNECTIVITY DIAGRAM

NO SCALE

NOTES:

- ALL CABLING TO BE BY CONTRACTOR UNLESS NOTED OTHERWISE.

DRAWN BY Author

CHECKED BY Checker

**RISER DIAGRAMS -
TECHNNLOGY**

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REFERENCE SCALE IN INCHES
1 2 3

T400

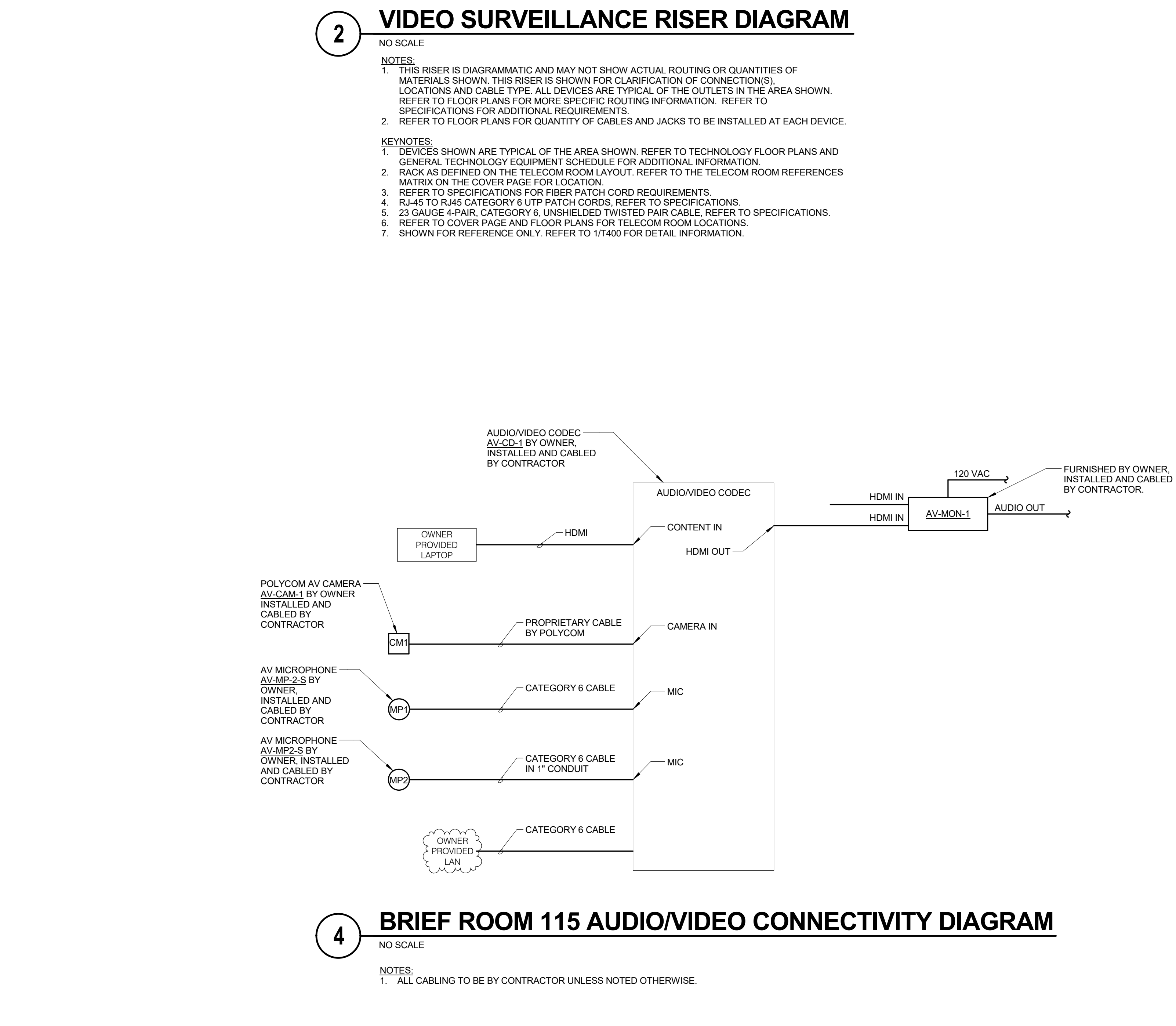
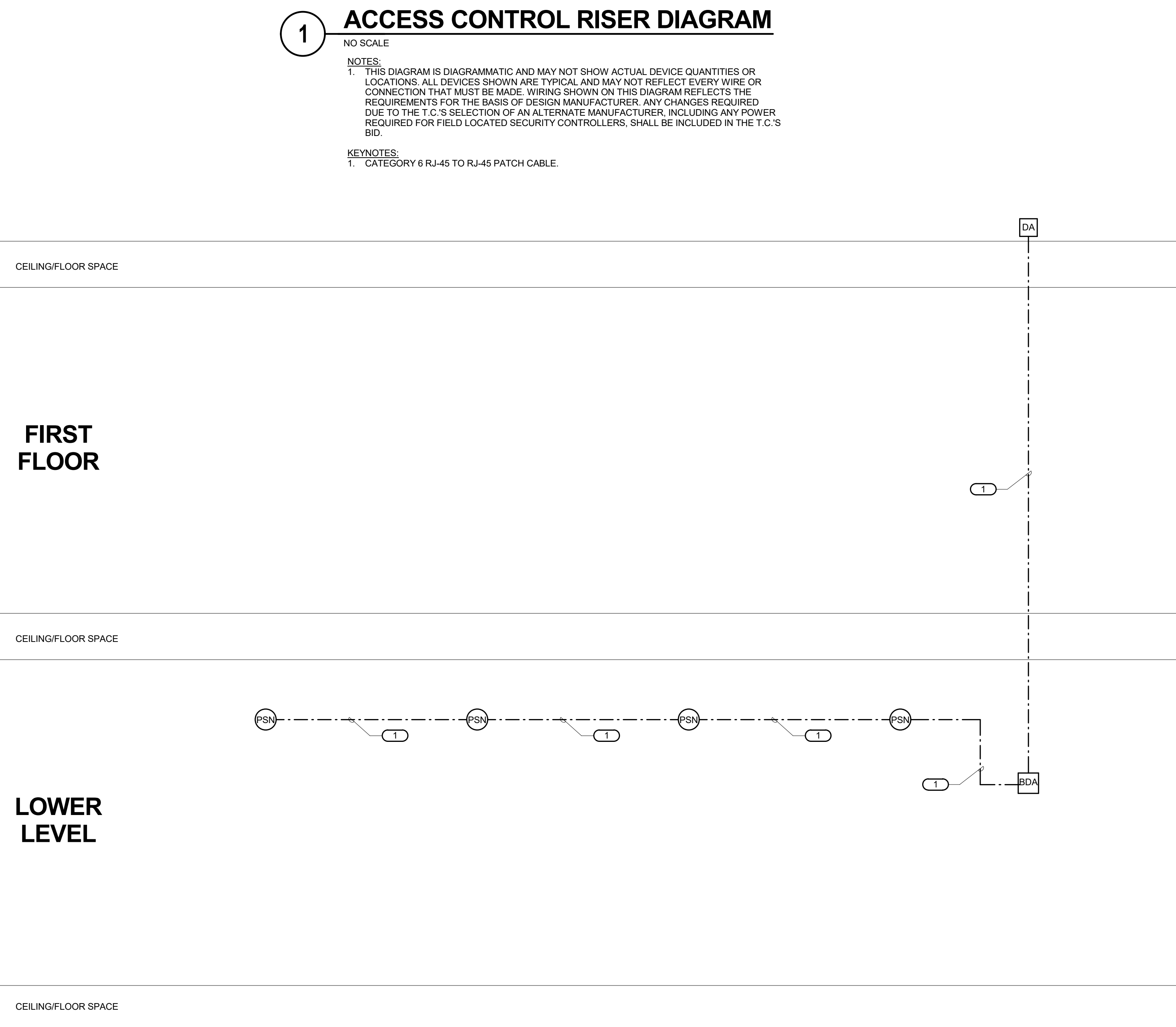
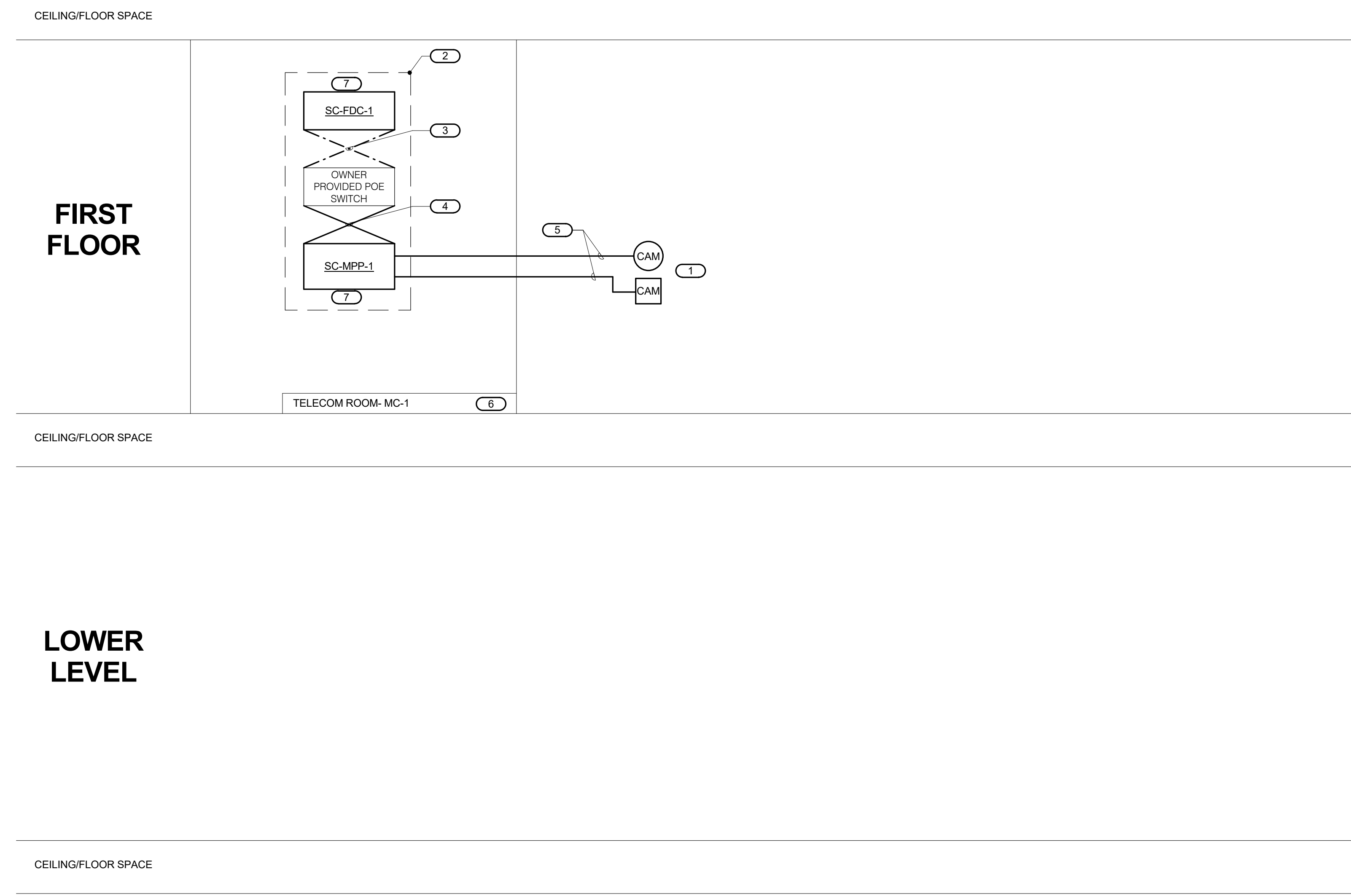
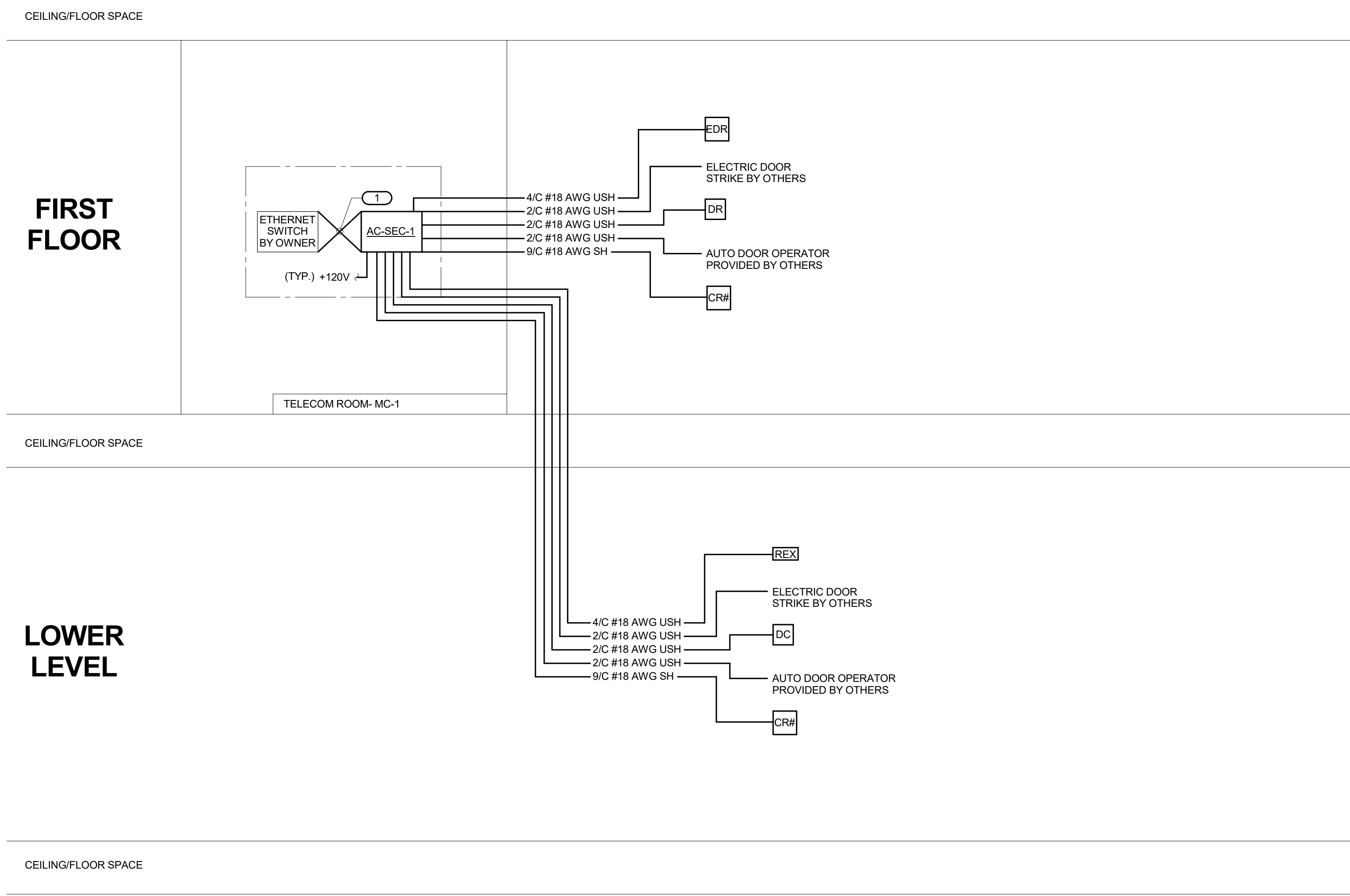
**POLICE
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MIDTOWN DISTRICT**

4020 Mineral Point Road, Madison, WI
City of Madison Police Department
211 South Carroll Street
Madison, WI 53703

PROJECT NUMBER 152413.01

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**RISER DIAGRAMS -
TECHNNLOGY**

T401

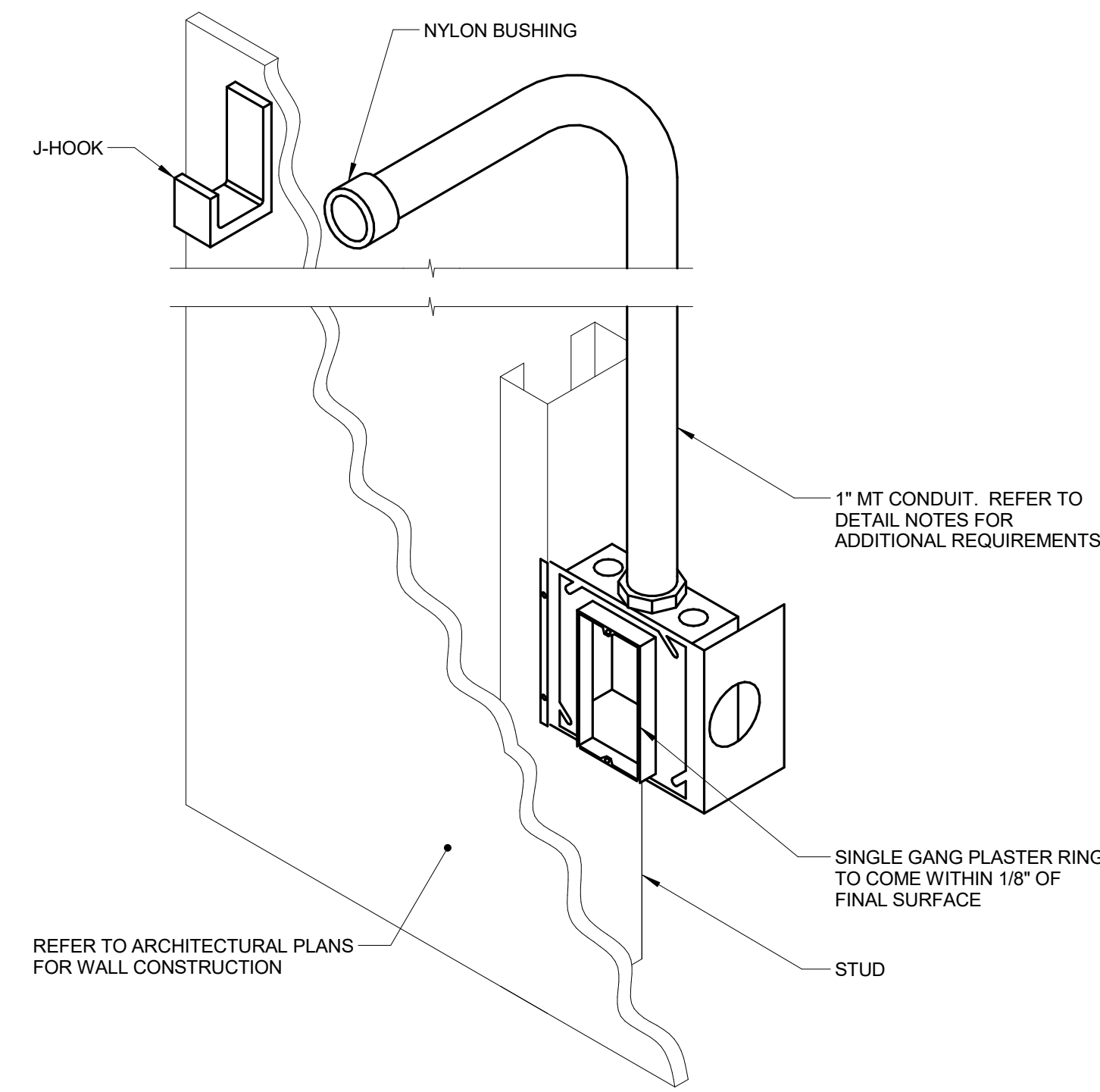
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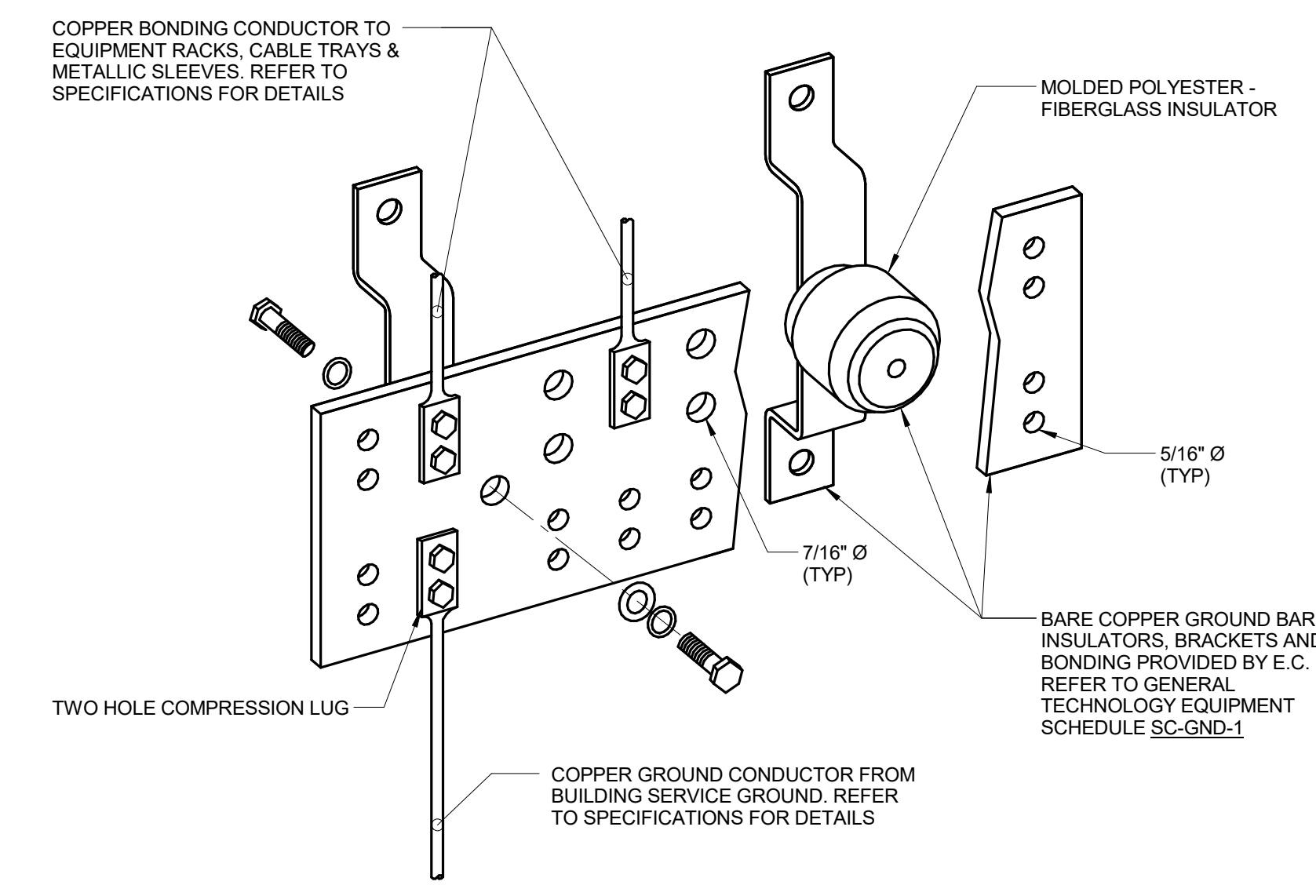
REFERENCE SCALE IN INCHES
1 2 3

INFORMATION OUTLET DETAILS																			
SINGLE GANG WALLPLATES																			
2-Port Faceplate			4-Port Faceplate			ANSITIA/IEIA T568B PINPAIR ASSIGNMENT			INFORMATION OUTLET SCHEDULE LEGEND										
									<table border="1"> <thead> <tr> <th>INSERT TYPE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>BL</td> <td>BLANK FILLER MODULE</td> </tr> <tr> <td>DATA</td> <td>CAT 6 RJ-45 JACK</td> </tr> <tr> <td>HDMI</td> <td>HDMI COUPLER MODULE</td> </tr> </tbody> </table>			INSERT TYPE	DESCRIPTION	BL	BLANK FILLER MODULE	DATA	CAT 6 RJ-45 JACK	HDMI	HDMI COUPLER MODULE
INSERT TYPE	DESCRIPTION																		
BL	BLANK FILLER MODULE																		
DATA	CAT 6 RJ-45 JACK																		
HDMI	HDMI COUPLER MODULE																		
INFORMATION OUTLET SCHEDULE																			
FACEPLATE FEATURES																			
CONFIGURATION	FACEPLATE PORTS	PORT 1 INSERT TYPE	PORT 2 INSERT TYPE	PORT 3 INSERT TYPE	PORT 4 INSERT TYPE	PORT 5 INSERT TYPE	PORT 6 INSERT TYPE	PORT 7 INSERT TYPE	PORT 8 INSERT TYPE	PORT 9 INSERT TYPE	PORT 10 INSERT TYPE	PORT 11 INSERT TYPE	PORT 12 INSERT TYPE	SCHEDULE NOTES					
C1	2	DATA	BL											FOR IPTV					
C1-1	2	DATA	BL																
C2	2	DATA	DATA																
C2-WAP	2	DATA	DATA																
C3	4	DATA	DATA	HDMI	BL														
C4	4	DATA	DATA	DATA	DATA														
W	1	DATA																	



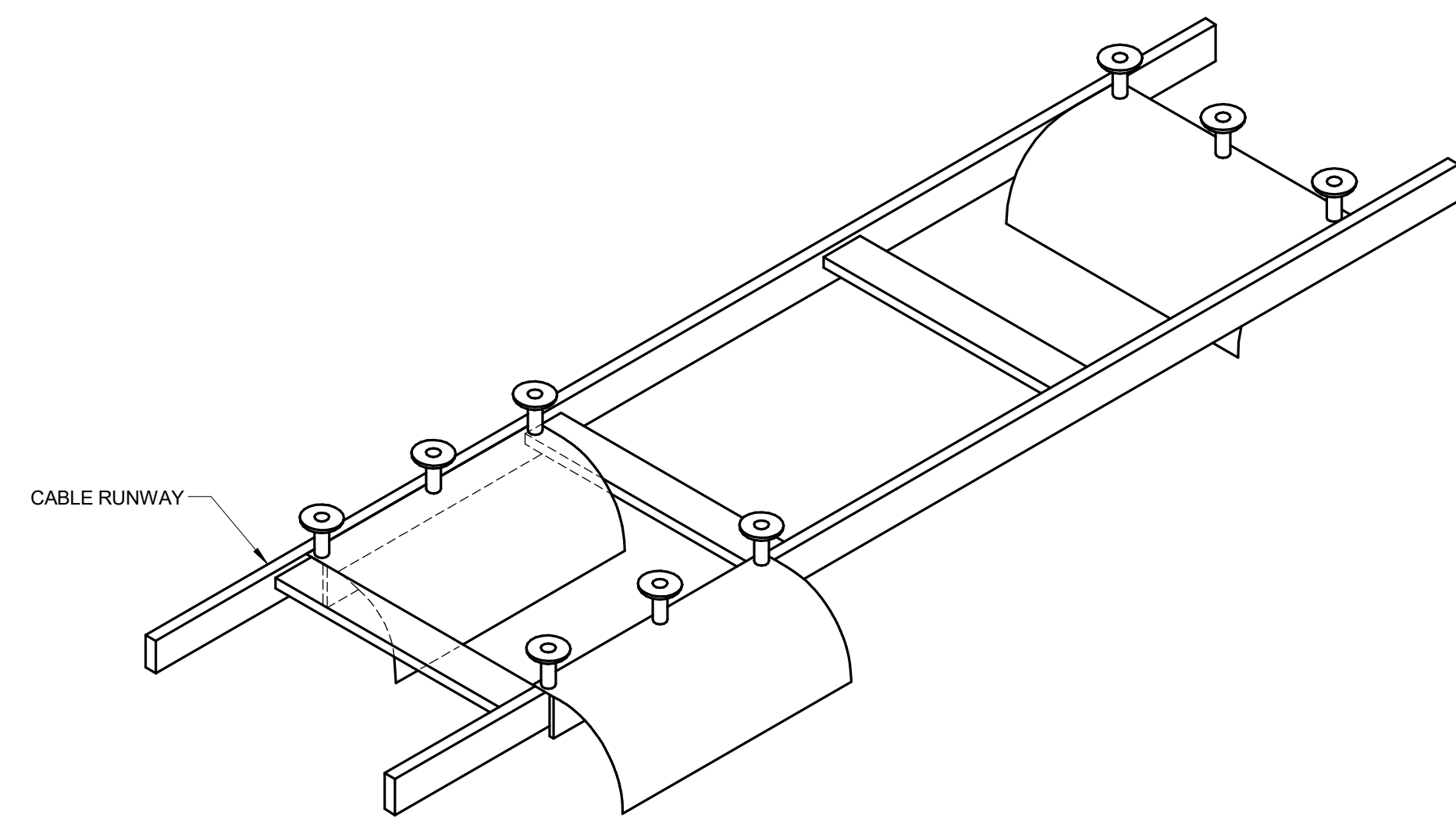
1 TECHNOLOGY ROUGH-IN MOUNTING DETAIL
NO SCALE

- NOTES:
1. 1" EMT CONDUIT SHALL STUB UP TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT.
 2. WHERE CONDUIT STUB IS LOCATED IN A ROOM WITH AN ACCESSIBLE CEILING AND IS NOT REQUIRED TO RUN TO CABLE ROUTE LOCATED OUTSIDE THE ROOM, STUB MUST TERMINATE ABOVE THE ACCESSIBLE CEILING WITH A 90-DEGREE BEND AT THE TOP ORIENTED IN TO THE ROOM AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE IN THE ROOM.
 3. ALL STUBS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
 4. INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR TECHNOLOGY ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.

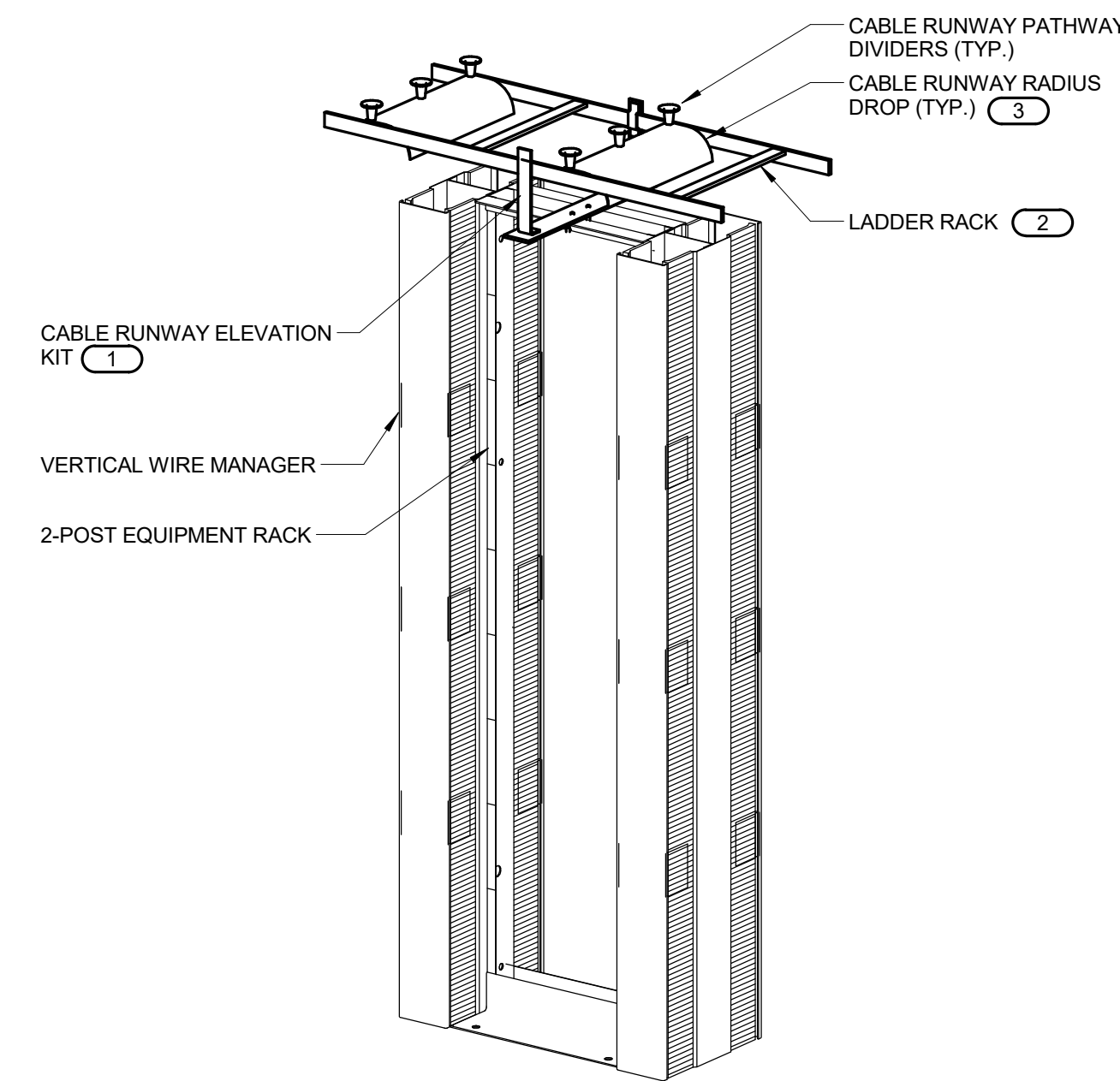


2 BONDING BUS BAR DETAIL
NO SCALE

- NOTES:
1. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE SC-GND-1 FOR WIDTH REQUIREMENTS.
 2. REFER TO 317400 FOR TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM.



3 CABLE RUNWAY RADIUS DROP
NO SCALE



4 LADDER RACK MOUNTING DETAIL
NO SCALE

- NOTES:
1. ALL LADDER RACK AND ACCESSORIES TO BE INSTALLED FOR A COMPLETE INSTALLATION SHALL BE FROM THE SAME MANUFACTURER.
- KEYNOTES:
1. MOUNT THE LADDER RACK NO MORE THAN 4" ABOVE THE FLOOR MOUNTED RACK. ADJUST THE CABLE RUNWAY ELEVATION KIT AS REQUIRED.
 2. REFER TO THE INDIVIDUAL PATHWAY DRAWINGS FOR THE LADDER RACK SIZE.
 3. A MINIMUM OF (1) RADIUS DROP INTO EACH VERTICAL WIRE MANAGER. REFER TO THE INDIVIDUAL TELECOM ROOM LAYOUTS, PATHWAY LAYOUTS, AND RACK ELEVATIONS FOR QUANTITY OF WIRE MANAGERS AND ADDITIONAL INFORMATION.

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**DETAILS AND
SCHEDULES -
TECHNOLOGY**

**POLICE DEPARTMENT
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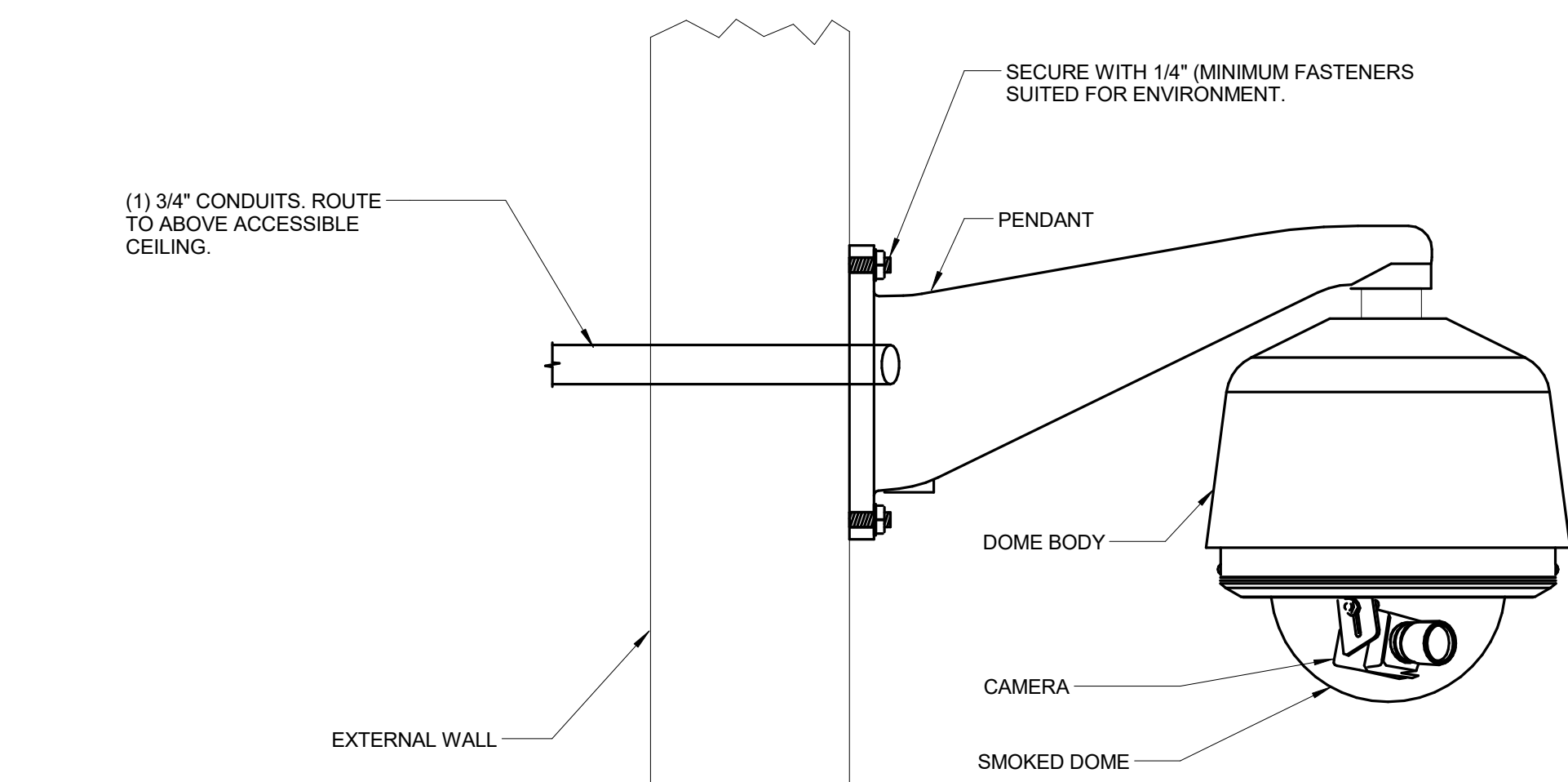
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CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE												
ELECTRONIC DOOR HARDWARE SUCH AS ELECTRIC STRIKES, ELECTRIC LATCH RETRACTION, ETC. SHALL BE PROVIDED AND INSTALLED BY OTHERS. REFER TO THE GENERAL TECHNOLOGY EQUIPMENT SCHEDULE ON XXXX FOR CREDENTIAL READER TYPE INFORMATION.												
DOOR #	CREDENTIAL READER	CREDENTIAL READER TYPE	MULTIPLE CREDENTIAL READERS OPERATES SINGLE DOOR	AUTOMATIC DOOR OPERATOR	LOCKED BY EMERGENCY DURESS SEQUENCE	REMOTE UNLOCK VIA INTERCOM MASTER	REMOTE UNLOCK VIA PUSHBUTTON	VIDEO SURVEILLANCE	INTERNAL ELECTRIFIED HARDWARE CONNECTION	ELECTRIC STRIKE	DELAYED EGRESS	OTHER (REFER TO NOTES)
100-1	CR1											
100-2	DR											
101-1	CR1											
101-2	CR1											
104-1	CR1											
104-2	CR1											
106	CR1											
116	CR1											
132-1	CR1											
132-2	CR3											
132-3	CR3											
133-1	CR1											
133-2	CR1											
134-2	CR1											
136	CR1											
B001-1	CR1											
B001-4	CR1											
B004	CR1											
B005	CR1											
B006	CR1											
ST-2B	CR1											

NOTES:
1. REFER TO 1/T501 FOR CONTROLLED SECURITY SCHEME DOOR ROUGH-IN DETAIL.

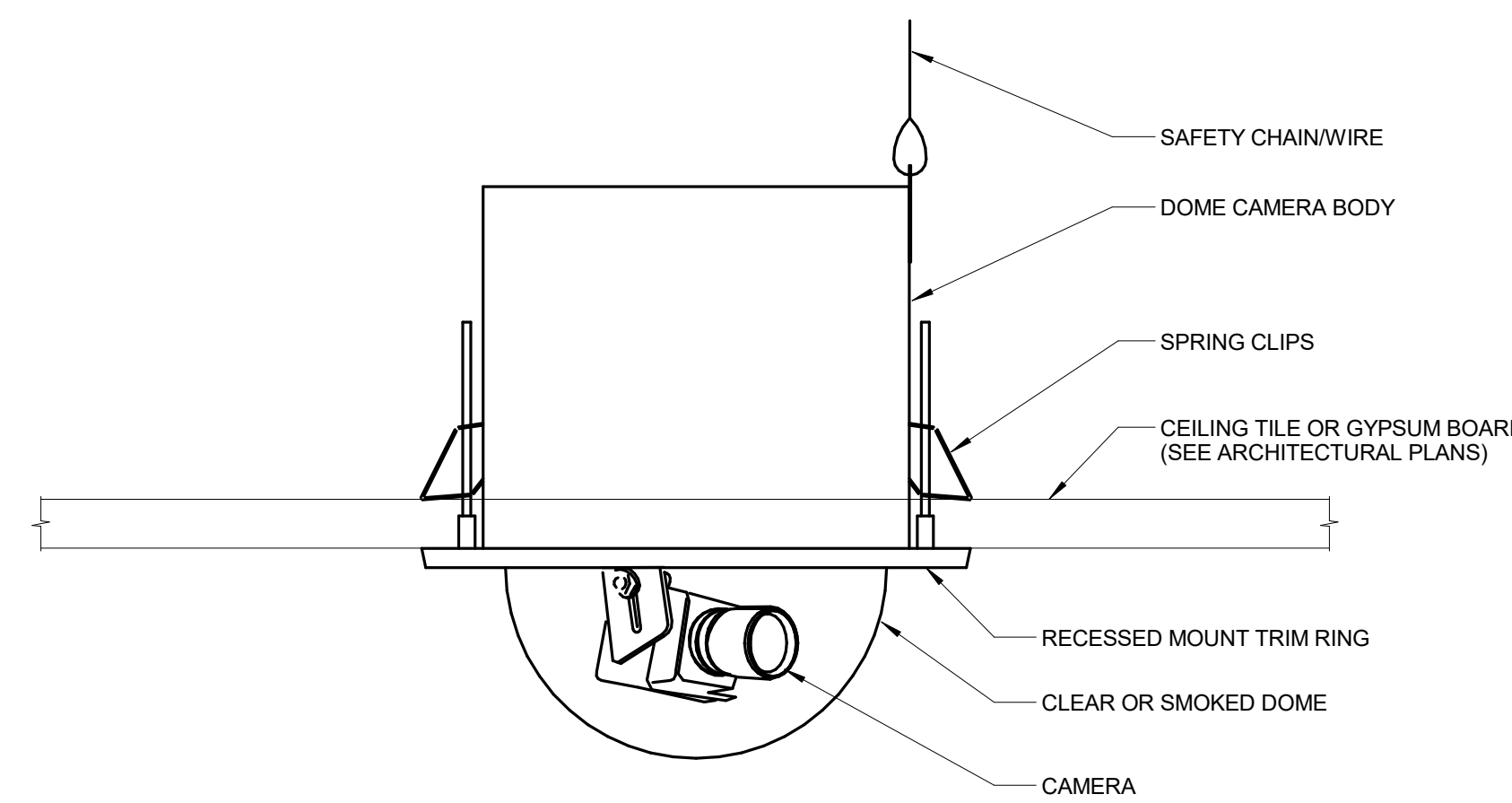
CAMERA TYPE CODE	SENSOR SIZE	SENSITIVITY TYPE	CAMERA		COMPRESSION CODEC	SHUTTER SPEED	MAXIMUM FRAME RATE	FEATURES	LENS	FEATURES	MOUNT	ENCLOSURE	FEATURES	BASIS OF DESIGN	NOTES:					
			FIXED CAMERA	WIDE DYNAMIC RANGE												MINIMUM ILLUMINATION	DAY/NIGHT	INFRARED	UTP	DIGITAL ZOOM
C504	1/4"	1/2"	•	•	0.7 LUX @ F1.2	18000 - 120n	H.264, MPEG-4, MOTION JPEG	30	•	3.8-42.8mm	•	WHITE	•	AXIS P2514-E						
CAM2	1/3"	1/2"	•	•	0.1 LUX @ F1.2	1/66500s - 1s	H.264, MPEG-4, MOTION JPEG	30	•	3.0-10.5mm	•	WHITE	•	AXIS P3225-V						
CAM3	1/2"	1/2"	•	•	0.1 LUX @ F1.2	1/29500s - 2s	H.264, MPEG-4, MOTION JPEG	30	•	2.5-6mm	•	WHITE	•	AXIS P3354						

INDIVIDUAL CAMERA (CCTV) REQUIREMENTS SCHEDULE				
CAMERA #	CAMERA TYPE CODE	FIELD OF VIEW	DETAIL REFERENCE	PLAN REFERENCE
EX-L1-1	CAM1	VIEW OF PARKING ON NORTH OF BUILDING	2/T501	1/T101
EX-L1-2	CAM1	VIEW OF SIDEWALK ON EAST OF BUILDING	2/T501	1/T101
L1-1	CAM2	SALLYPORT ENTRY INTO VESTIBULE	4/T501	1/T101
L1-2	CAM3	ENTRY VESTIBULE	3/T501	1/T101
L1-3	CAM2	INTAKE	4/T501	1/T101
L1-4	CAM3	ENTRY TO MAIN LOBBY	3/T501	1/T101



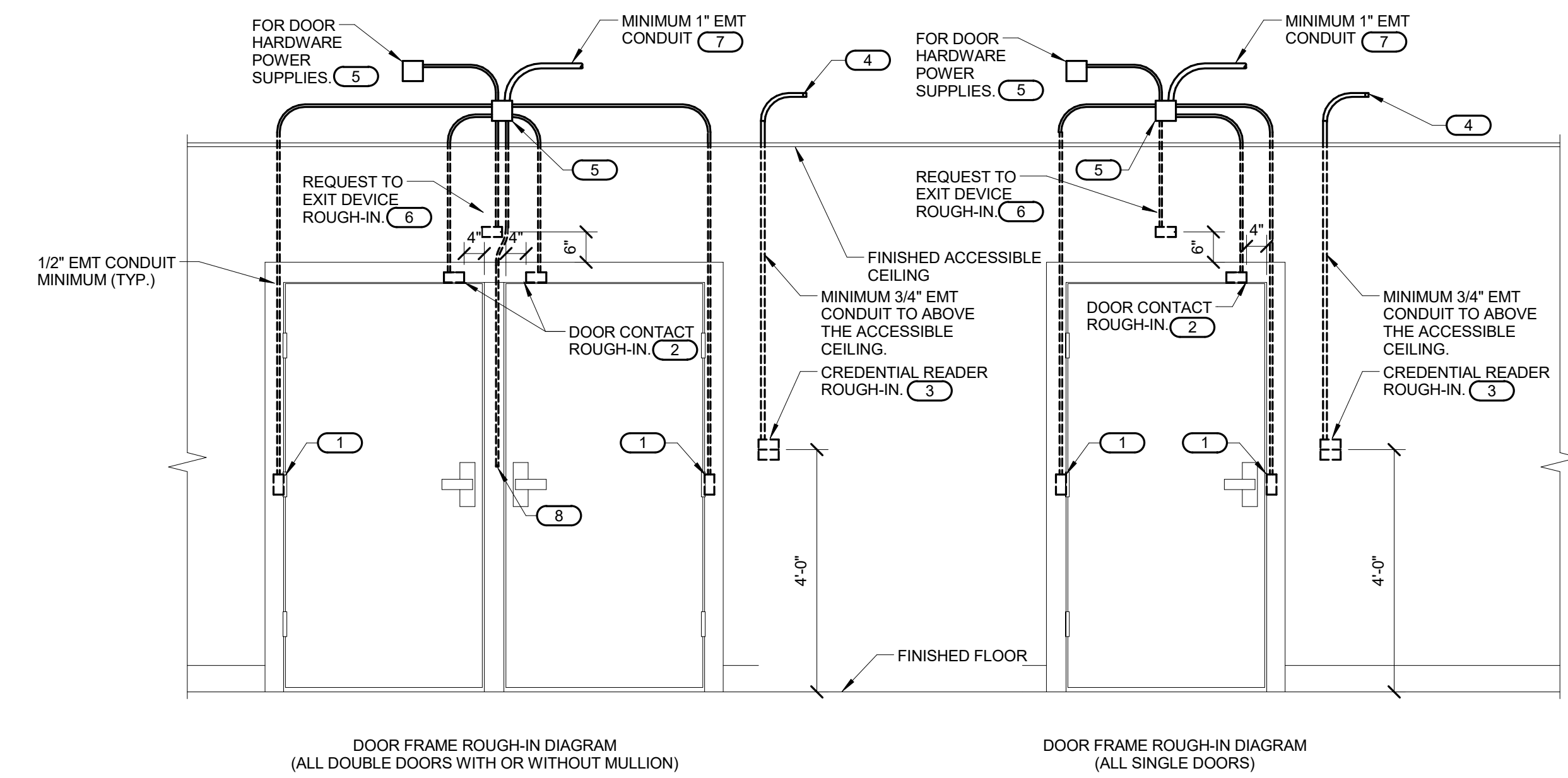
2 INTERIOR/EXTERIOR WALL MOUNTED CAMERA DETAIL

NO SCALE
NOTES:
1. SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONRY FASTENERS. DO NOT ANCHOR TO FACE BRICK.
2. SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
3. REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.



3 INTERIOR RECESSED CAMERA CEILING MOUNTING DETAIL

NO SCALE
NOTES:
1. COORDINATE INSTALLATION WITH CEILING INSTALLATION.
2. REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.



1 CONTROLLED SECURITY SCHEME DOOR ROUGH-IN DETAIL

NO SCALE
NOTES:
1. CONFIGURATIONS SHOWN IN THE DETAIL ABOVE ARE DIAGRAMMATIC. INTENDED TO DESCRIBE THE CONTROLLED SECURITY SCHEME ROUGH-IN REQUIREMENTS OF THE DOORS. DETAILS ABOVE MAY NOT ACCURATELY REPRESENT DOOR SIZE, DOOR SWING, DOOR HARDWARE, OR DOOR FUNCTIONALITY. REFER TO ARCHITECTURAL DOOR HARDWARE SCHEDULE, DOOR HARDWARE GROUPS AND DOOR HARDWARE SPECIFICATIONS FOR COMPLETE INFORMATION. MIRROR THE DETAIL AS REQUIRED.
2. ROUGH-IN SHOWN IN THE DETAIL ABOVE REPRESENTS THE MINIMUM REQUIREMENTS FOR ALL CONTROLLED SECURITY SYSTEM DEVICES AND CABLING UNLESS OTHERWISE NOTED. COORDINATE EXACT REQUIREMENTS WITH SELECTED DOOR MATERIALS, DOOR HARDWARE, AND CONTROLLED SECURITY DEVICES AND CABLING PRIOR TO INSTALLATION.
3. ALL CABLING IN WALLS AND WHERE EXPOSED ON VERTICAL SURFACES SHALL BE INSTALLED IN EMT CONDUIT OR SURFACE MOUNT RACEWAY. CABLING Routed horizontally above the accessible ceiling may be installed free-air cabling properly rated for the ceiling environment.
4. THE ELECTRICAL OR SECURITY CONTRACTOR SHALL NOT MODIFY ANY FIRE RATED DOOR AND/OR DOOR FRAME. REFER TO THE ARCHITECTURAL DOOR SCHEDULE, DOOR HARDWARE SCHEDULE, AND DOOR HARDWARE SPECIFICATION FOR ADDITIONAL INFORMATION. MODIFICATION TO ANY FIRE RATED DOOR AND/OR FRAME WILL REQUIRE A RE-CERTIFICATION OF THE DOOR AND FRAME WITH THE LOCAL AUTHORITY HAVING JURISDICTION (LAJ).
5. INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR ALL CONTROLLED SECURITY SCHEME ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
6. REFER TO THE CONTROLLED SECURITY SCHEME WIRING DIAGRAM ON (XXXX) FOR CABLING REQUIREMENTS AND THE CONTROLLED SECURITY SCHEME TYPE SCHEDULE ON 501 FOR ADDITIONAL INFORMATION.
7. INSTALLATION SHALL INCLUDE ALL POWER REQUIRED FOR SYSTEM OPERATION INCLUDING +120VAC. REFER TO THE SUGGESTED MATRIX OF SCOPE RESPONSIBILITY FOR ADDITIONAL INFORMATION.

KEYNOTES:
1. PROVIDE JUNCTION BOXES IN THE DOOR FRAME WHERE SHOWN ON THIS DETAIL. ROUGH-IN SHALL BE PROVIDED WHETHER THE CURRENT SECURITY SCHEME UTILIZES THEM OR NOT. ALL CONDUITS SHALL BE EMT CONDUIT UNLESS OTHERWISE NOTED. FLEXIBLE CONDUIT OF ANY TYPE WILL NOT BE ACCEPTED. COORDINATE INSTALLATION WITH ON-SITE DOOR FRAME INSTALLATION CONTRACTOR.
2. ALL DOOR POSITION SWITCHES ARE REQUIRED TO BE RECESSED UNLESS OTHERWISE NOTED. ELECTRIC HINGE MONITORS ARE NOT AN ACCEPTABLE REPLACEMENT FOR THE RECESSED DOOR POSITION SWITCH.
3. DOUBLE GANG BACKBOX WITH SINGLE GANG PLASTER RING. REFER TO FLOOR PLAN(S) FOR ACTUAL CREDENTIAL READER TYPE AND ROUGH-IN LOCATIONS.
4. CONDUIT SHALL ROUTE FROM THE CREDENTIAL READER TO THE SECURE SIDE OF THE DOOR. CONDUIT SHALL ROUTE [A MINIMUM OF 12" FROM THE JUNCTION BOX] TO THE NEAREST TELECOM ROOM [TO THE NEAREST CABLE TRAY] TO THE NEAREST SECURITY PANEL [TO THE MAIN TELECOM ROOM] [PROVIDE A NYLON BUSHING ON CONDUIT END].
5. MOUNT A MINIMUM 4" SQUARE 2-1/8" DEEP JUNCTION BOX WITH BLANK COVER PLATE ON THE SECURE SIDE OF THE DOOR ABOVE ACCESSIBLE CEILING. INSTALLING CONTRACTOR SHALL SIZE THE JUNCTION BOXES PER SYSTEM INSTALLATION REQUIREMENTS AND APPLICABLE CODES. MAINTAIN ACCESS TO THE JUNCTION BOX.
6. PROVIDE A HORIZONTALLY MOUNTED SINGLE GANG BACKBOX FOR THE REQUEST TO EXIT SENSOR. REFER TO THE CONTROLLED SECURITY SCHEME TYPE SCHEDULE ON T501 FOR DOORS THAT REQUIRE THIS ROUGH-IN.
7. CONDUIT SHALL ROUTE [A MINIMUM OF 12" FROM THE JUNCTION BOX] TO THE NEAREST TELECOM ROOM [TO THE NEAREST CABLE TRAY] TO THE NEAREST SECURITY PANEL [TO THE MAIN TELECOM ROOM] [PROVIDE A NYLON BUSHING ON CONDUIT END].
8. CONDUIT INSTALLED IN PERMANENT MULLIONS ONLY. REFER TO THE ARCHITECTURAL DOOR SCHEDULE AND DOOR HARDWARE GROUPS FOR LOCATIONS THAT REQUIRE THIS ROUGH-IN. PROVIDE A NYLON BUSHING ON THE CONDUIT END.

4 INTERIOR SURFACE WALL CAMERA MOUNTING DETAIL

NO SCALE
NOTES:
1. COORDINATE EXACT LOCATION OF CAMERA ON SITE WITH WORK BY OTHER TRADES TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
2. CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL INTO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD ONLY EXTEND 4 INCHES TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.

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