



State College Area School District

Mike Fisher

Director of Physical Plant

240 VILLA CREST DRIVE • STATE COLLEGE, PENNSYLVANIA • 16801

TELEPHONE: 814-231-1026

To: Curtis Johnson

From: Mike Fisher

RE: **Physical Plant Building Update**

Date: January 23, 2023

This memo serves as a follow up from multiple public and board of directors' meetings regarding the new Physical Plant building. Attached are 60% complete construction drawings for review. Not shown is a solar array for which Physical Plant is examining costs and design options.



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SUBMISSIONS

30% PROGRESS	2022.12.16
60% PROGRESS	2023.01.13
100% PROGRESS	2023.02.17

**BID/CODE
DOCUMENTS**
XX.XX.2023

SEAL

**22-17 NTH - PHYSICAL
PLANT**

SCASD PHYSICAL PLANT BUILDING
WESTERLY PARKWAY
STATE COLLEGE, PA 16801



STATE COLLEGE AREA SCHOOL DISTRICT
131 WEST NITTANY AVENUE
STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

COVERSHEET

CS



PROJECT:

22-17 NTH-PHYSICAL PLANT BUILDING

SCASD PHYSICAL PLANT BUILDING
WESTERLY PARKWAY
STATE COLLEGE, PA 16801

SCASD PROJECT NUMBER: 22-17

PREPARED FOR:
STATE COLLEGE AREA SCHOOL DISTRICT
131 WEST NITTANY AVENUE
STATE COLLEGE, PENNSYLVANIA 16801

SYMBOLS LEGEND:

	BREAK LINE		ELEVATION IDENTIFIER		SPOT ELEVATION IDENTIFIER		DETAIL IDENTIFIER		INTERIOR ELEVATION IDENTIFIER
	CENTER LINE		LIMIT OF CONTRACT		PLYWOOD		FIBERGLASS BATT INSULATION		RIGID INSULATION
	CONCRETE		METAL		WOOD		CONCRETE MASONRY UNIT		BRICK
	DOOR TAG		WINDOW TAG		MATERIAL TAG		WALL TYPE TAG		EQUIPMENT TAG
	REVISION SYMBOL		EMERGENCY LIGHTING		EXIT SIGN (SHOWN w/ DIRECTIONAL SIGN NUMBER)		WALL MOUNTED FIRE EXTINGUISHER		CABINET FIRE EXTINGUISHER
			RECESSED LIGHT FIXTURE		PENDANT LIGHT FIXTURE		FLUORESCENT LIGHT FIXTURE		PARABOLIC LIGHT FIXTURE
			SUPPLY AIR GRILLE		RETURN AIR GRILLE				

ABBREVIATIONS:

A.C.T.	= ACOUSTICAL CEILING TILE	MECH.	= MECHANICAL
ADJ.	= ADJUSTABLE	MIN.	= MINIMUM
A.F.F.	= ABOVE FINISHED FLOOR	M.O.	= MASONRY OPENING
ALUM.	= ALUMINUM	MPE	= MECHANICAL, PLUMBING, ELECTRICAL
B.O.	= BOTTOM OF	M.R.	= MOISTURE RESISTANT
C.L.	= CENTER LINE	M.T.	= METAL THRESHOLD
C.G.	= CORNER GUARD	MTL.	= MATERIAL
C.H.	= COAT HOOK	N.I.C.	= NOT IN CONTRACT
C.J.	= CONTROL JOINT	NTS	= NOT TO SCALE
CMU	= CONCRETE MASONRY UNIT	O.C.	= ON CENTER
COL.	= COLUMN	O.D.	= OUTSIDE DIAMETER
CONC.	= CONCRETE	P.LAM	= PLASTIC LAMINATE
CONT.	= CONTINUOUS	PSI	= POUNDS PER SQUARE INCH
C.R.	= CARD READER	P.T.	= PRESSURE TREATED
DBL.	= DOUBLE	PVC	= POLY VINYL CHLORIDE
D.F.	= DRINKING FOUNTAIN	RAD.	= RADIUS
D.H.	= DOUBLE HUNG	RCP	= REFLECTED CEILING PLAN
DIA.	= DIAMETER	REFR.	= REFRIGERATOR
DIM.	= DIMENSION	R.E.S.	= RUBBER EDGE STRIP
D.S.	= DOWN SPOUT	R.O.	= ROUGH OPENING
ELEC.	= ELECTRIC	S.C.	= SOLID CORE
ELEV.	= ELEVATION	S.I.	= SIMILAR
EQ.	= EQUAL	S.F.	= SQUARE FOOT
E.J.	= EXPANSION JOINT	S.S.	= SECURITY SCREEN
F.E.	= FIRE EXTINGUISHER	ST.C.	= SITE CONTRACTOR
FIN.	= FINISH	STL.	= STEEL
F.F.	= FINISH FLOOR	T&G	= TONGUE AND GROOVE
F.G.	= FROSTED GLASS	TEMP.	= TEMPERED
F.D.	= FLOOR DRAIN	THI	= THRESHOLD "I"
F.R.T.	= FIRE RETARDANT TREATED	T.O.	= TOP OF
G.F.C.I.	= GROUND FAULT CIRCUIT	TYP.	= TYPICAL
GALV.	= GALVANIZED	UN.O.	= UNLESS NOTED OTHERWISE
G.C.	= GENERAL CONTRACTOR	V.B.	= VAPOR BARRIER
GWB.	= GYPSUM WALL BOARD	V.C.T.	= VINYL COMPOSITION TILE
H.C.	= HOLLOW CORE	VERT.	= VERTICAL
H.M.	= HOLLOW METAL	V.E.S.	= VINYL EDGE STRIP
HORIZ.	= HORIZONTAL	V.I.F.	= VERIFY IN FIELD
H.B.	= HORIZONTAL BLINDS	V.T.S.	= VINYL TRANSITION STRIP
L.O.C.	= LIMIT OF CONTRACT	W.W.M.	= WELDED WIRE MESH
		W.T.	= WINDOW TREATMENT

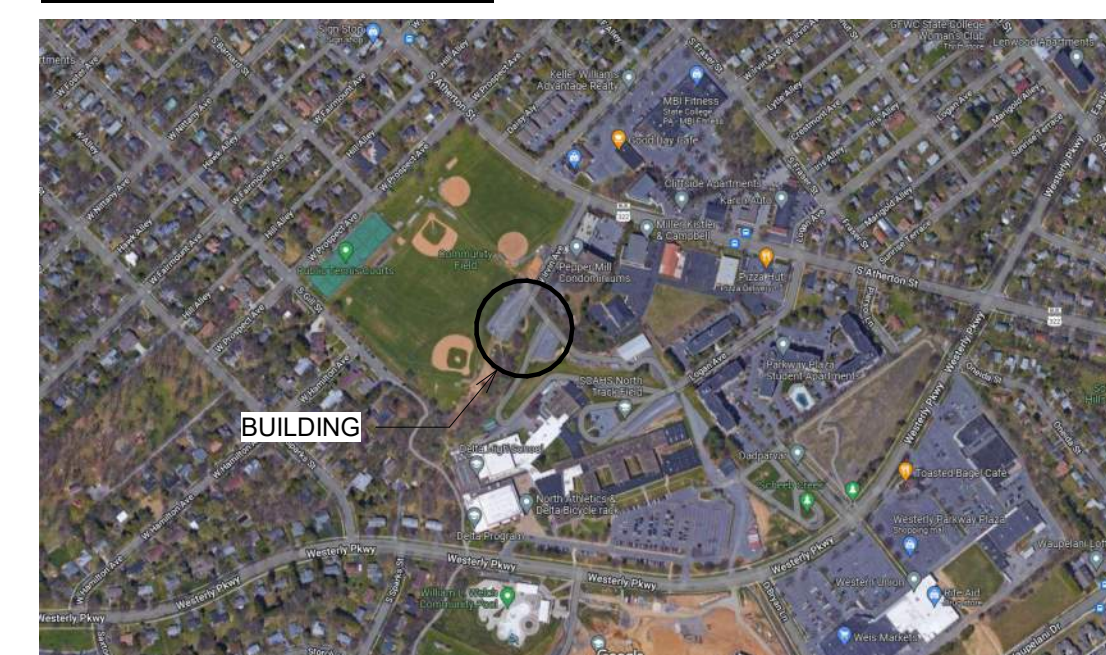
GENERAL NOTES:

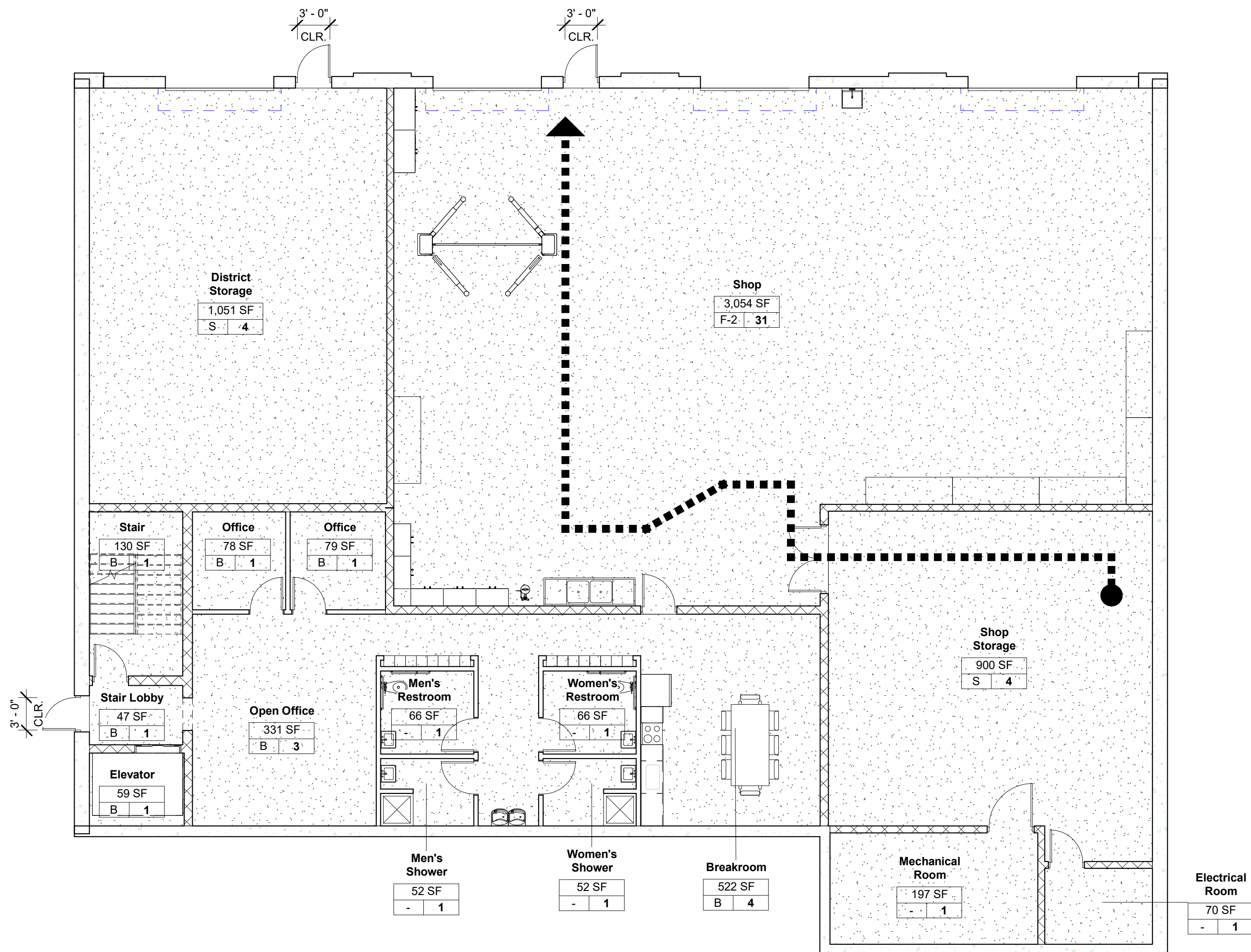
- EXISTING WORK SHALL BE LABELED "EXISTING"; NEW WORK WILL HAVE NO LABEL OR BE LABELED "NEW" OR "PROPOSED".
- ALL DIMENSIONS ARE SHOWN TO THE FACE OF ROUGH FRAMING, UNLESS NOTED OTHERWISE.
- ALL MASONRY DIMENSIONS ARE SHOWN NOMINAL, UNLESS NOTED OTHERWISE.
- THE TERM "PROVIDE" SHALL BE UNDERSTOOD TO MEAN FURNISH AND INSTALL COMPLETE AND READY FOR USE.
- REVIEW ALL CONTRACT DOCUMENTS FOR ERRORS AND INCONSISTENCIES. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING FIELD REQUIREMENTS BEFORE ORDERING MATERIALS AND PREFABRICATED ITEMS. ANY NECESSARY ADJUSTMENTS BETWEEN FIELD MEASUREMENTS OR BETWEEN FIELD MEASUREMENTS AND DRAWINGS SHALL BE MADE IN ACCORDANCE WITH THE DESIGN OF THE ARCHITECT.
- ALL QUESTIONS OR CLARIFICATIONS NECESSARY DURING THE COURSE OF THE PROJECT SHALL BE DIRECTED TO THE ARCHITECT IN WRITING.
- ALL DEVIATIONS FROM THE ORIGINAL CONTRACT DRAWINGS SHALL BE NOTED ON RECORD DRAWINGS AT THE TIME MODIFICATIONS OCCUR AND SHALL BE AVAILABLE TO THE ARCHITECT.
- DO NOT SCALE DRAWINGS.

DRAWING LIST:

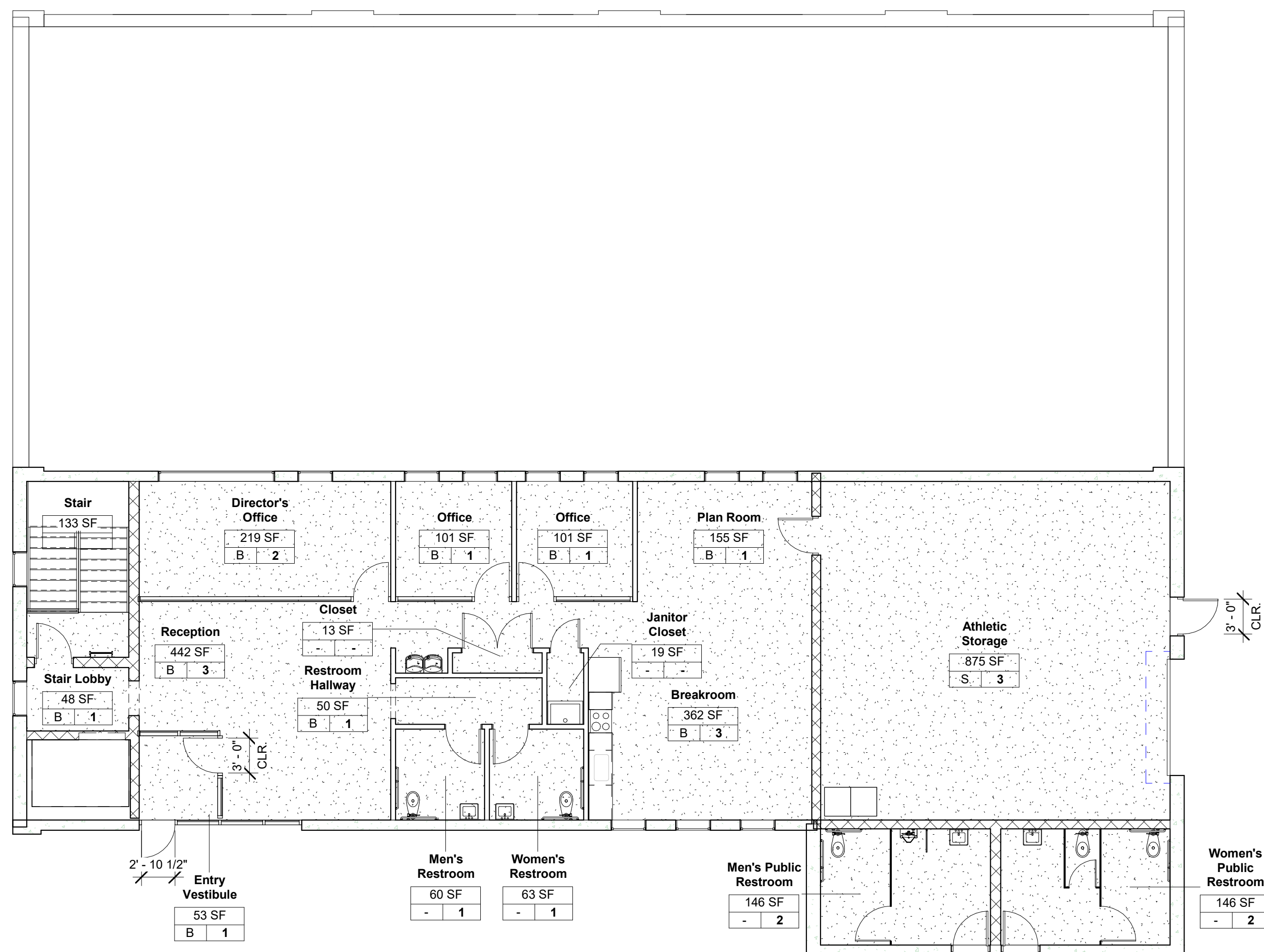
GENERAL	CS	COVERSHEET	ARCHITECTURAL (GENERAL)	A1.0	GROUND FLOOR PLAN
G1.0	CODE REVIEW & LIFE SAFETY PLANS	A1.1	SECOND FLOOR PLAN	A1.2	GROUND FLOOR REFLECTED CEILING PLAN
G1.1	GENERAL INFO	A1.3	SECOND FLOOR REFLECTED CEILING PLAN	A1.4	GROUND FLOOR FINISH PLAN
		A1.5	SECOND FLOOR FINISH PLAN	A1.6	ROOF PLAN
CIVIL/SITE (GENERAL)	S001	OVERALL EXISTING CONDITIONS PLAN	A2.0	EXTERIOR ELEVATIONS	
	S002	EXISTING CONDITIONS PLAN	A3.0	BUILDING SECTIONS	
	S003	SITE PLAN	A4.0	GROUND FLOOR ENLARGED PLAN	
	S004	GRADING & DRAINAGE PLAN	A4.1	SECOND FLOOR ENLARGED PLAN	
	S005	UTILITY PLAN	A4.2	INTERIOR ELEVATIONS	
	S006	LANDSCAPING & LIGHTING PLAN	A4.3	INTERIOR ELEVATIONS	
	S007	STORM WATER PLAN & PROFILES	A4.4	INTERIOR ELEVATIONS	
	S008	STORM WATER PLAN & PROFILES	A6.0	DOOR AND WINDOW SCHEDULES	
	S009	SANITARY SEWER PLAN & PROFILE			
	S010	DETAILS			
	S011	DETAILS			
	S012	DETAILS			
	S013	DETAILS			
STRUCTURAL (GENERAL)	S201	GENERAL NOTES	MECHANICAL (HVAC)	M0.1	MECHANICAL LEGEND AND GENERAL NOTES
S202	GENERAL NOTES	M3.0	FIRST & SECOND FLOOR MECHANICAL PLANS	M3.1	ROOF MECHANICAL PLAN
S203	FOUNDATION LEVEL	M7.0	MECHANICAL SCHEDULES	M8.0	MECHANICAL DETAILS
S204	LEVEL 2 AND LOW ROOF FRAMING	M8.1	MECHANICAL DETAILS		
S205	UPPER ROOF FRAMING				
S206	TYPICAL DETAILS	MECHANICAL (PLUMBING/SPRINKLER)	P0.1	PLUMBING LEGEND AND GENERAL NOTES	
S207	TYPICAL DETAILS	P3.0	FIRST & SECOND FLOOR PLUMBING PLANS	P5.0	ENLARGED PLUMBING PLANS
S208	TYPICAL DETAILS	P6.0	PLUMBING ISOMETRIC DIAGRAMS	P7.0	PLUMBING SCHEDULES
S209	TYPICAL DETAILS	P8.0	PLUMBING SCHEDULES		
S210	FOUNDATION SECTIONS				
S211	FRAMING SECTIONS				
S212	FRAMING SECTIONS				
S213	ELEVATIONS				

LOCATION MAP:





1 Ground Floor Life Safety Plan
1/8" = 1'-0"



2 Second Floor Life Safety
1/8" = 1'-0"

APPLICABLE CODES:

2018 International Building Code (IBC)
2018 International Plumbing Code (IPC)
2018 International Mechanical Code (IMC)
2018 International Fuel Gas Code (IFGC)
2009 International Fire Code (IFC)
2018 International Energy Conservation Code (IECC)
2017 National Electrical Code
2017 ICC/ANSI A117.1

BUILDING SUMMARY:

10,891 GSF BUILDING
TYPE IIB
FULLY SPRINKLERED
SECTION C301 CLIMATE ZONES:
CENTRE COUNTY = CLIMATE ZONE 5A
ROOF R30ci
WALLS R13 + 7.5ci
BELOW GRADE WALLS R7.5ci

TABLE 1004.5 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR
ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 gross
BUSINESS AREAS	150 gross
INDUSTRIAL AREAS	100 gross

FLOOR AREA, GROSS: The floor area within the inside perimeter of the exterior walls of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, ramps, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include shafts with no openings or interior courts.

FLOOR AREA, NET: The actual occupied area not including unoccupied accessory areas such as corridors, stairways, ramps, toilet rooms, mechanical rooms and closets.

Plumbing Fixtures Required by Use Per IBC/ IPC:

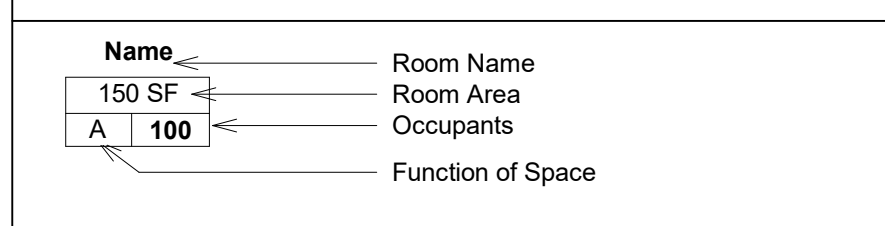
Classification: B Business					Occupancy: 68 (34 M/F)	
Water Closets		Lavatories		Drinking Fountain	Service Sink	Bathtubs/ Showers
Male	Female	Male	Female			
1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80		1 per 100	1 required	----

Per IPC Table 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES

Plumbing Fixtures:

Classification Use Group	Required Per IBC Occupancy		Proposed			
	Men	Women	Men	Women	Total	
Toilets/ Urinals	2	2	4	2	2	4
Lavatories	1	1	2	2	2	4
Bathtubs/Showers	-	-	-	2	2	2
Service Sink	1	1	1	1	1	1
Drinking Fountains	1 (2 - hi/low)		2	2	2	2

Code Review Room Tag Legend:



Code Review:

Sec.	Description	Section	Conclusion
3	Use and Occupancy	304.1	Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts.
5	Height / Area Limitations	503-506	Construction Type: IIB/ B Occupancy Allowable Height/Area: 4 stories Fully Sprinklered (Per TABLE 504.4) 69,000 SF (Per TABLE 503.2) 75' Height (Per TABLE 504.3) Actual Height / Area: 2 stories 10,891 SF
	Unlimited Area Buildings	507	Not Implemented.
	Nonseparated Occupancies	508.3	
	Fire Separations between Occupancies	Table 508.4	No separation requirement
6	Fire Resistance Ratings	Table 601	Type IIB: Structural Frame: 0 hour Bearing Walls: 0 hour Non-bearing Walls: 0 hour Floor Construction: 0 hour Roof Construction: 0 hour
7	Fire Walls	706	Not Applicable.
	Fire Barriers	707	Not Applicable.
	Fire Partitions	708	
	Smoke Barriers	709	
	Smoke Partitions	710	
	Horizontal Assemblies	711	
	Shaft Enclosures	713	
	Opening Protectives	716	
9	Automatic Sprinkler Systems	903	Automatic Sprinkler System: Provided
	Portable Fire Extinguishers	906.3	Max. Floor Area per Extinguisher: xx SF Max. Travel Distance to Extinguisher: xxfeet
	Fire Alarm and Detection	907.2	A min. of one manual fire alarm box shall be provided in an approved location... where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.
	Occupant Notification Systems	907.5	A fire alarm system shall annunciate at the panel & shall initiate occupant notification upon activation in accordance w/ 907.5.1 through 907.5.2.3.3.
10	Occupant Load	1004	Shop: 31 occupants Storage & Mechanical: 13 occupants Office: 24 occupants TOTAL OCCUPANT LOAD: 68 occupants
	Egress Width	1005	Stairways: 0.3' per Occupant = 120 occupants per 36" width Exception: 0.2' per Occupant for fully-sprinklered Gen. Egress: 0.2' per Occupant = 180 occupants per 36" width Exception: 0.15' per Occupant for fully-sprinklered
	Minimum Number of Exits	1006.3.1	Occupancy Load 1 - 500: 2 500 - 1,000: 3 > 1,000: 4
	Exit & Exit Access Doorways	1006.3.2(2)	Occupancy: B Maximum Occupant Load for 1 Exit: 49
	Accessible Means of Egress	1009	Accessible spaces shall be provided with not less than one accessible means of egress. Exception: Accessible means of egress are not required in alterations to existing buildings.
	Stairway Width	1011	The width of stairways shall be determined as specified in Section 1005.1, but such width shall not be less than 44 inches, or less than 36 inches if the occupant load is less than 50.
	Exit Access Travel Distance	1017	Occupancy B with Sprinklers: 300 feet

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SUBMISSIONS

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60% PROGRESS 2023.01.13
100% PROGRESS 2023.02.17

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XX.XX.2023

SEAL

22-17 NTH - PHYSICAL
PLANT

SCASD PHYSICAL PLANT BUILDING
WESTERLY PARKWAY
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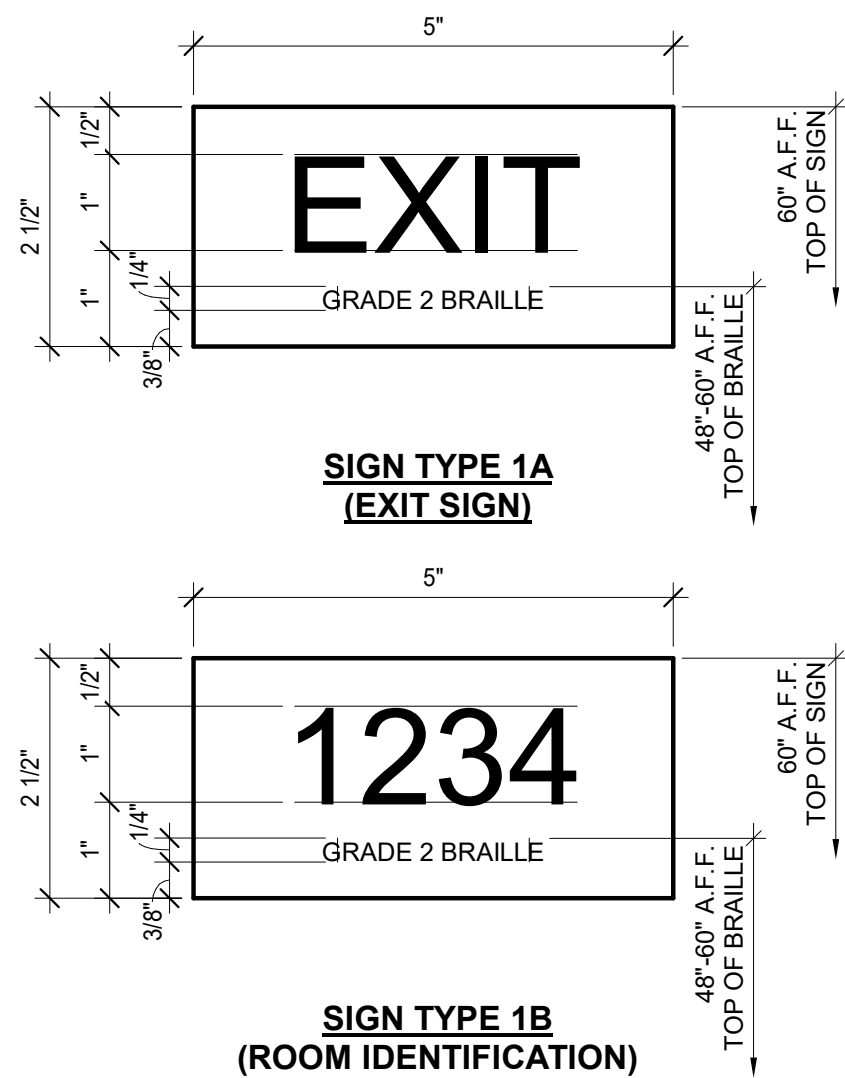
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CODE REVIEW &
LIFE SAFETY
PLANS

G1.0

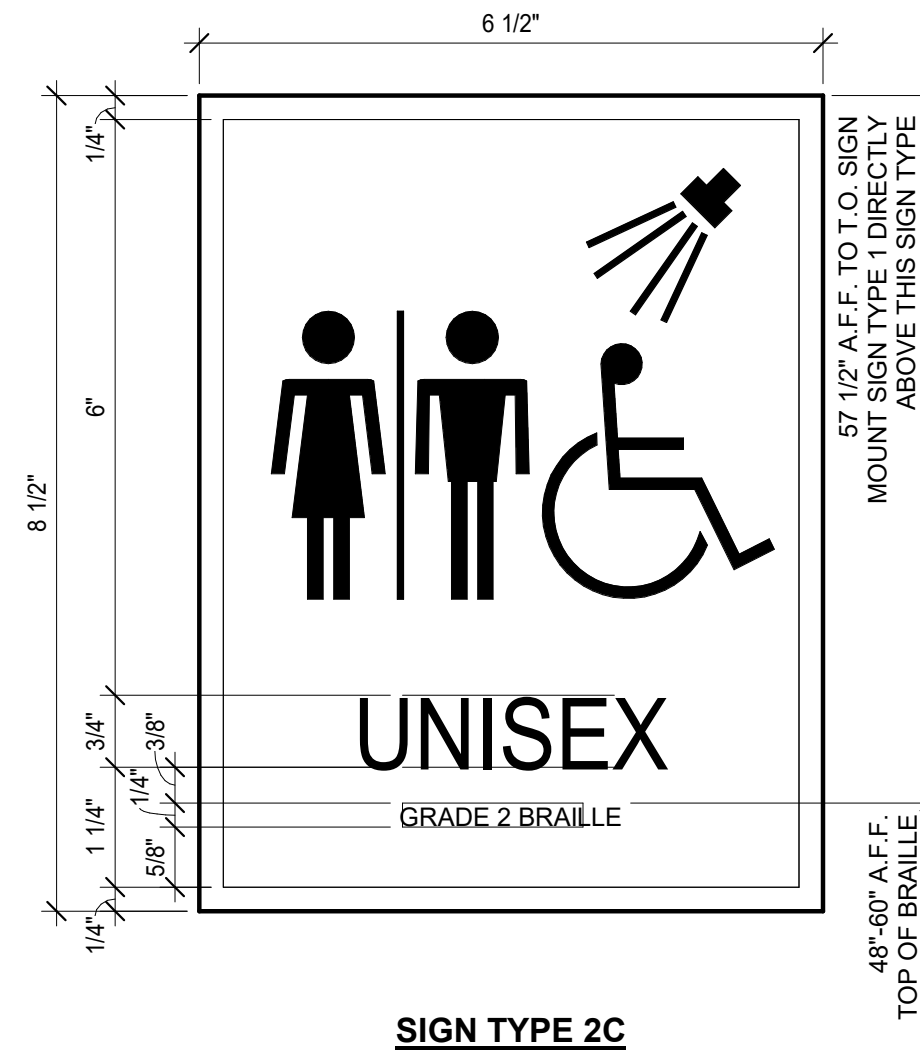
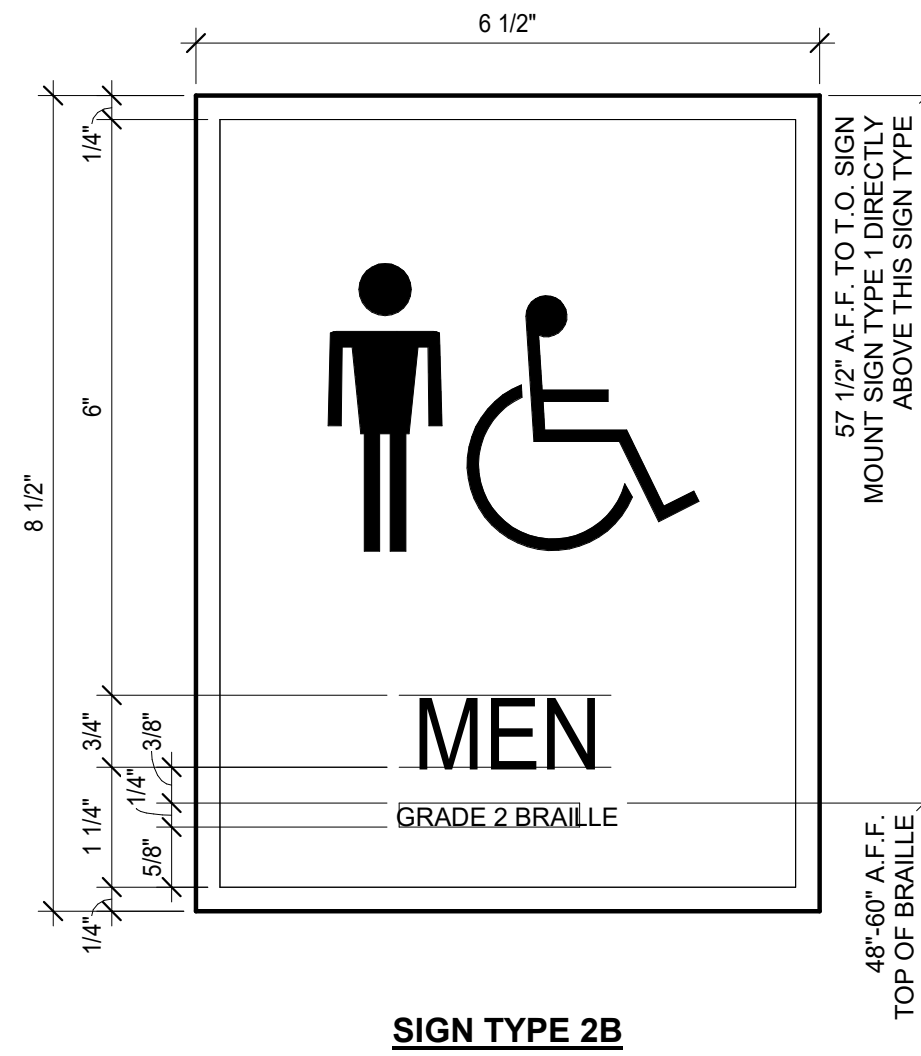
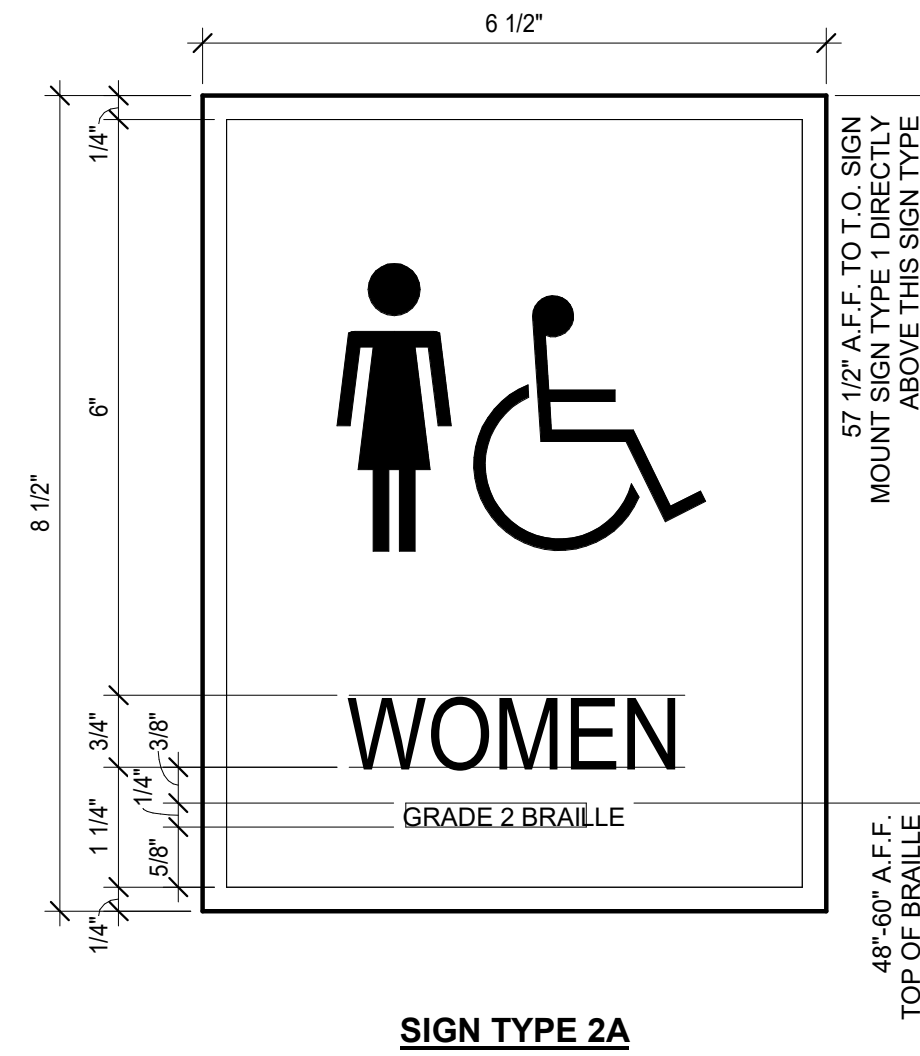
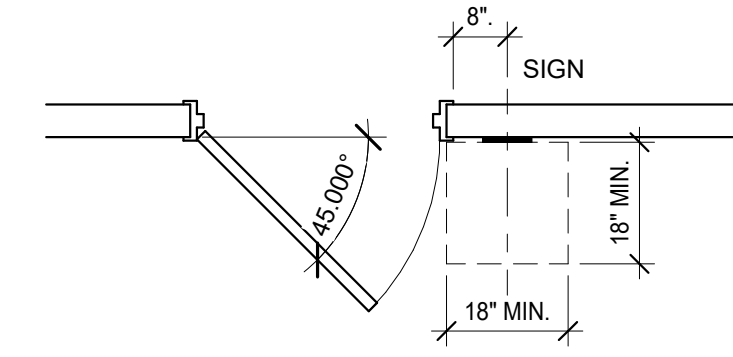
G:\Current Jobs\21-SC ASD\Projects\22-17-NTH-Physical Plant\Arch\Compos_Veef\22-17_TBlock - 35x24.dwg, 3/27/2023, Robert Miller



NOTES:

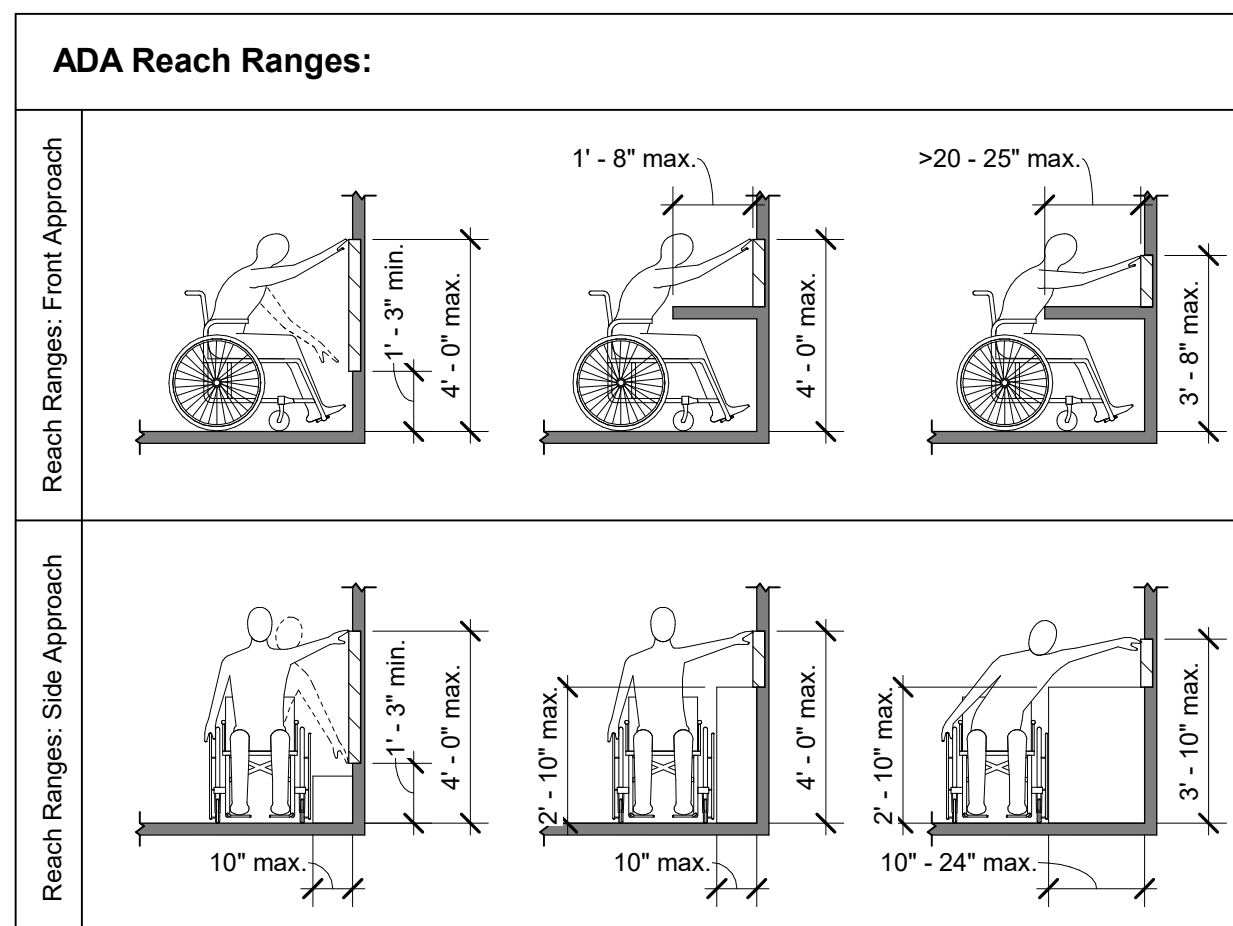
- HORIZONTAL SIGN LOCATION PER DETAIL ABOVE MEETS OR EXCEEDS MINIMUM REQUIREMENTS OF ANSI A117.1 TO ALLOW FOR 18"x18" MINIMUM CLEAR FLOOR SPACE BEYOND DOOR SWING
- VERTICAL SIGN LOCATION IS SET BY THE HEIGHT ABOVE FINISH FLOOR TO TOP OF SIGN AS INDICATED ON EACH SIGN TYPE. EACH SIGN TYPE VERTICAL LOCATION ASSURES THAT THE BRAILLE MEETS THE REQUIREMENTS OF ANSI A117.1 WHICH REQUIRES THE HEIGHT OF THE BOTTOM OF THE BRAILLE ABOVE FINISH FLOOR TO BE BETWEEN 48" TO 60".
- WHERE SIGN TYPES ARE APPLIED TO GLASS, PROVIDE A BLANK BACKER SIGN OF MATCHING SIZE AND PROFILE ON OPPOSING SIDE OF GLASS. NEW SIGNAGE TO MATCH EXISTING BUILDING SIGNS.

HORIZONTAL SIGN LOCATION

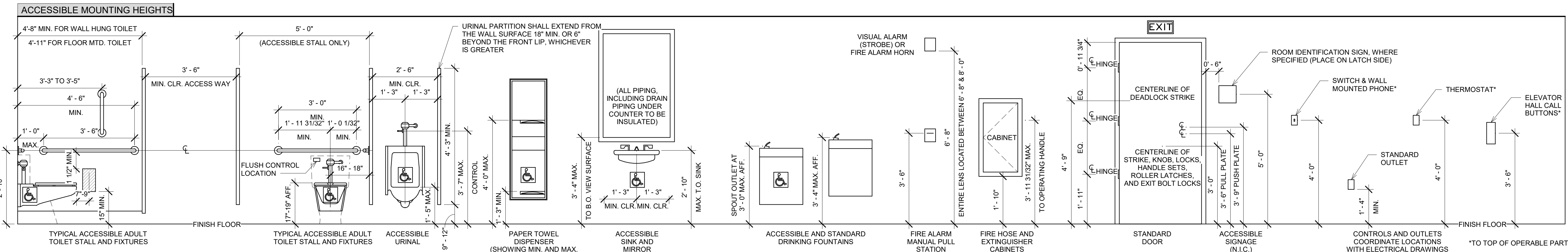


○ RESTROOM SIGNAGE
6" = 1'-0"

○ EXIT SIGNAGE
6" = 1'-0"



○ ADA REACHES
1/4" = 1'-0"



○ DESIGNATES FIXTURES THAT ARE TO MEET THE ACCESSIBILITY REQUIREMENTS OF PERSONS WITH PHYSICAL DISABILITIES

NOTES:

- USE THESE DIMENSIONS UNLESS DIMENSIONED OTHERWISE ON FLOOR PLANS OR TOILET ELEVATIONS
- COORDINATE INSTALLATION OF BLOCKING BEHIND ALL GRAB BARS, FIXTURES, AND EQUIPMENT AS REQUIRED.
- ANY DISCREPANCIES WITH OTHER DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
- DIMENSIONS SHALL FOLLOW ICC/ANSI A117.1

○ ACCESSIBLE MOUNTING HEIGHTS
1/2" = 1'-0"

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GENERAL INFO

G1.1



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SUBMISSIONS

60%

**FINAL LAND
DEVELOPMENT**
1.13.2023

22-17
NTH - PHYSICAL PLANT

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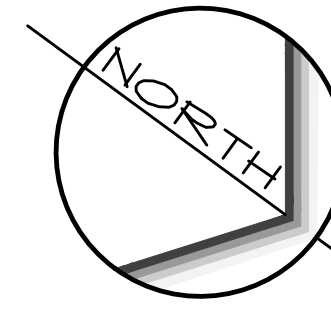


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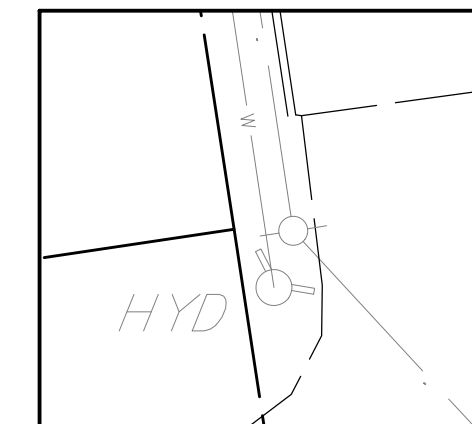
OVERALL EXISTING
CONDITIONS PLAN

LOT CURVE DATA						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	BEARING	DISTANCE
C1	1016.54	443.94'	225.57'	25°01'19"	N85°26'40"E	440.42'
C2	650.70	195.92'	98.71'	17°15'04"	N78°55'54"W	195.18'
C3	1462.36	507.93'	256.55'	19°54'03"	S54°35'28"E	505.39'
C4	886.01	36.07'	18.04'	2°19'58"	S28°37'56"W	36.07'
C5	926.54	795.44'	424.09'	49°11'19"	S73°21'40"W	771.23'

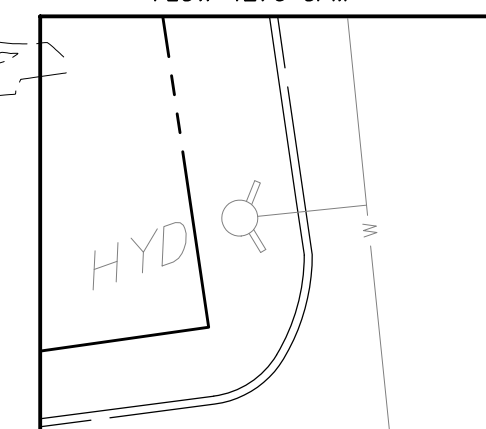


SCALE IN FEET:
1" = 100'

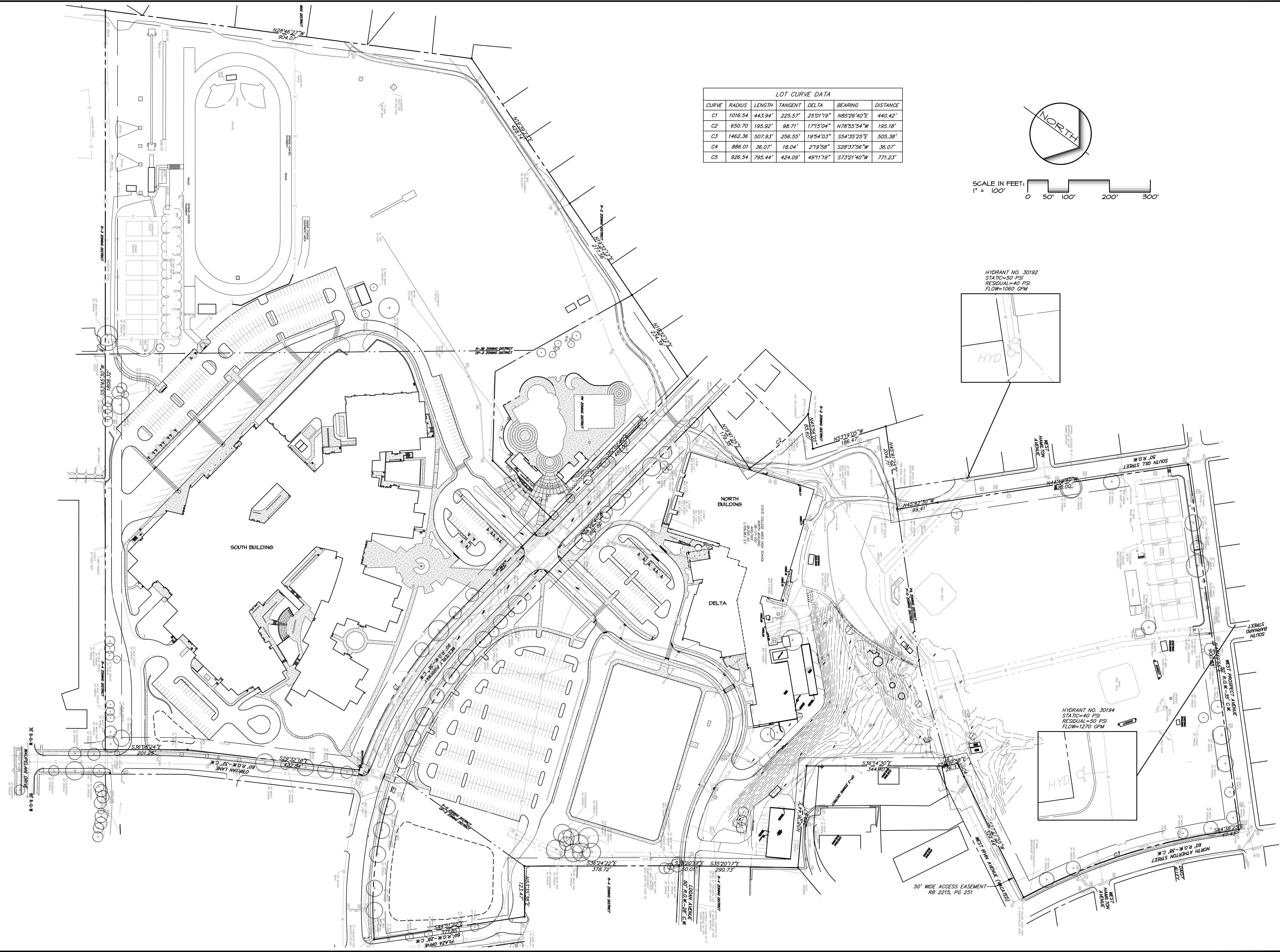
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STATIC=50 PSI
RESIDUAL=40 PSI
FLOW=1060 GPM

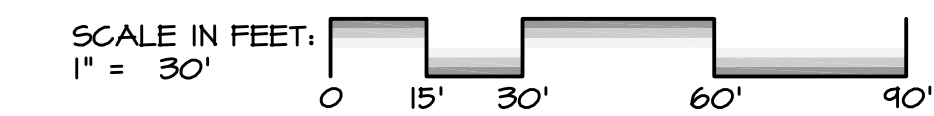
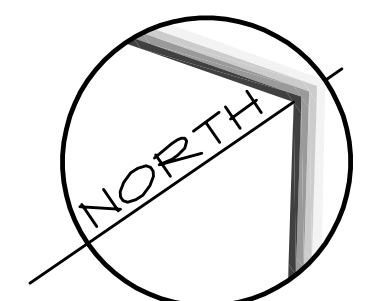
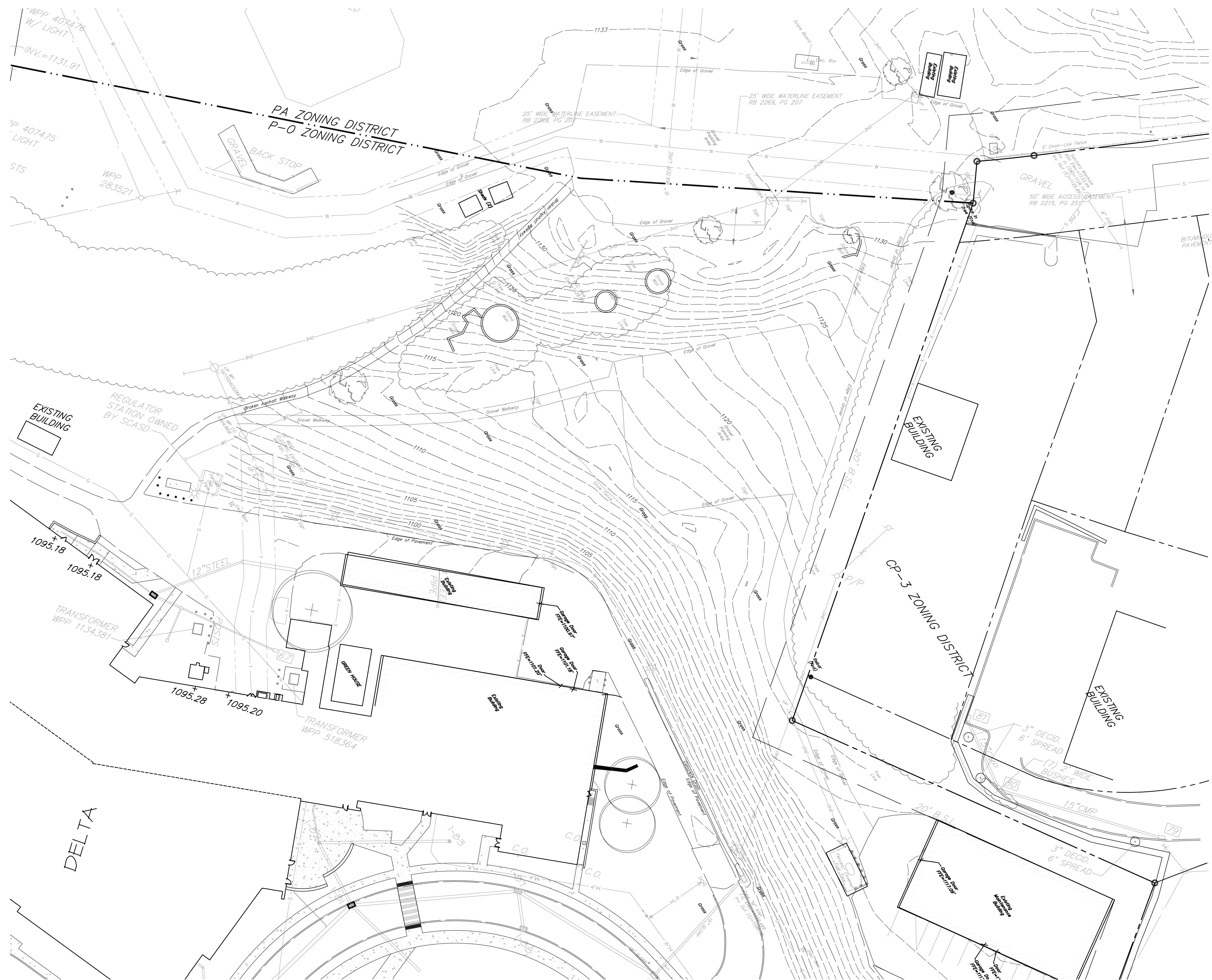


HYDRANT NO. 30194
STATIC=40 PSI
RESIDUAL=50 PSI
FLOW=1270 GPM



50' WIDE ACCESS EASEMENT
RB 2215, PG 251





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SUBMISSIONS
 60%

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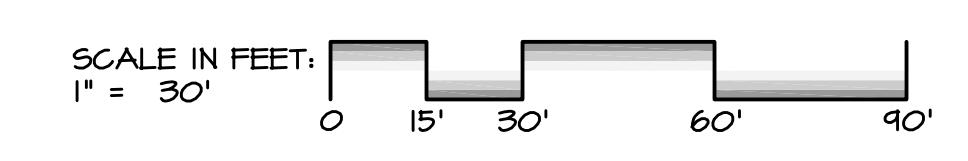
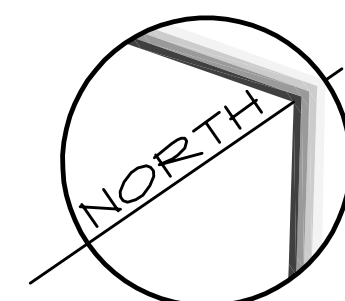
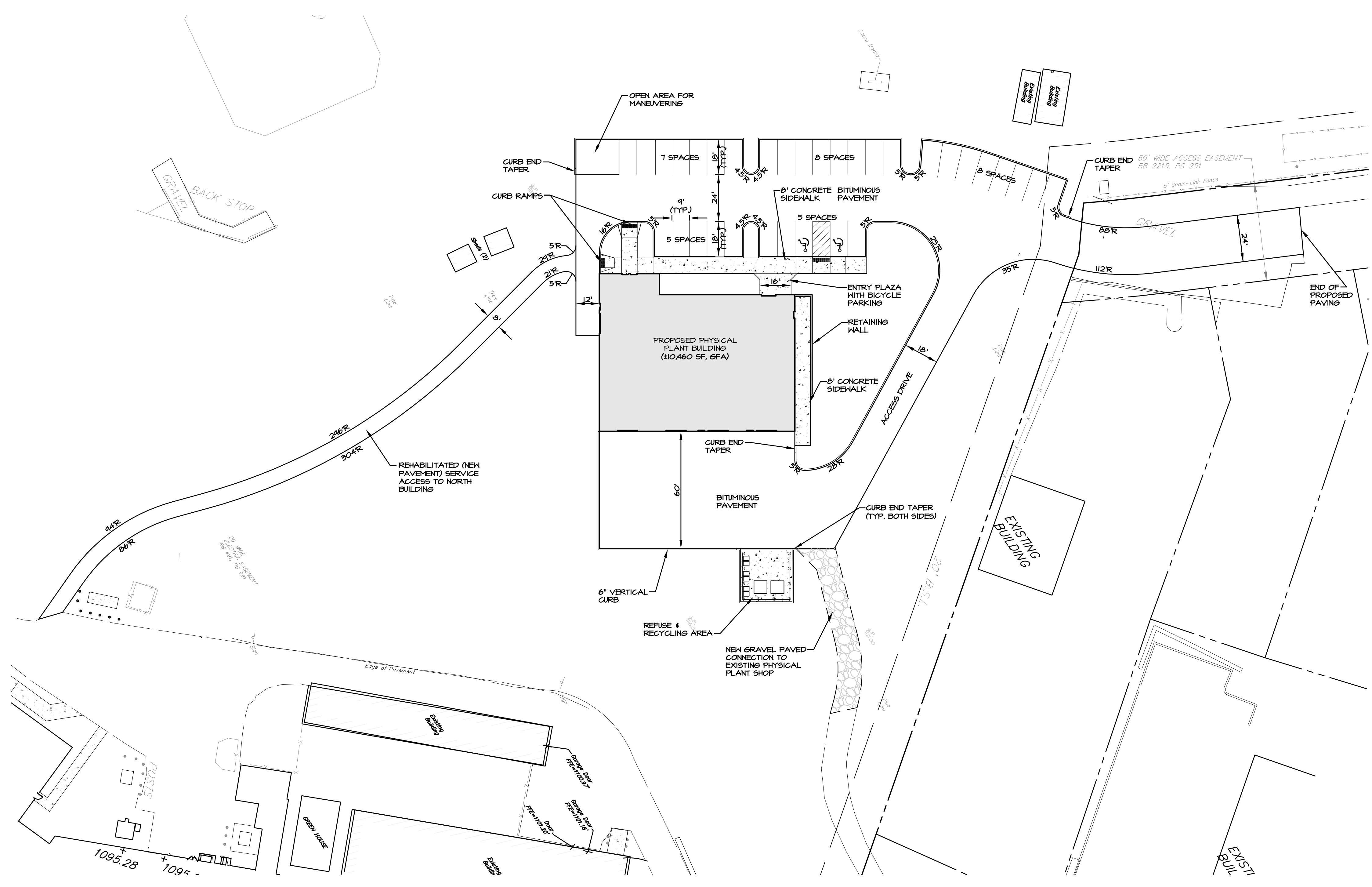
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SCASD JOB #: 22-17

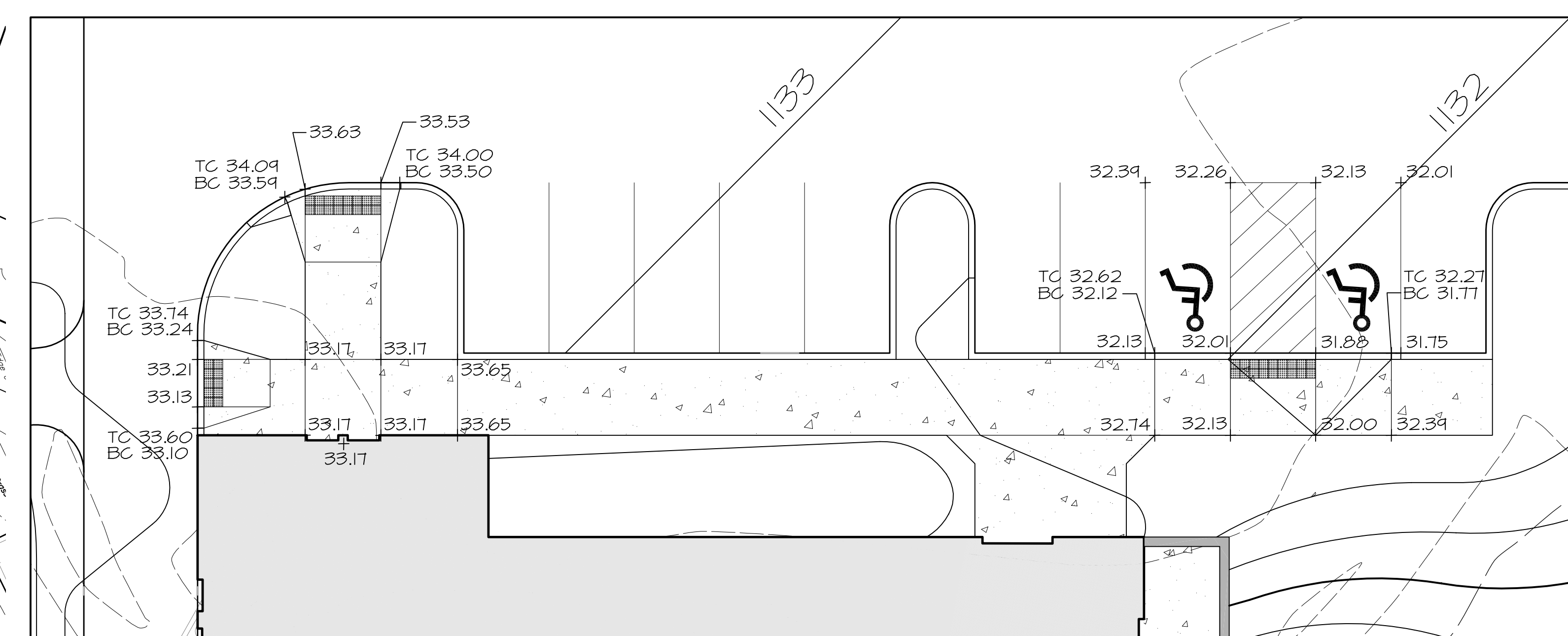
EXISTING
 CONDITIONS PLAN



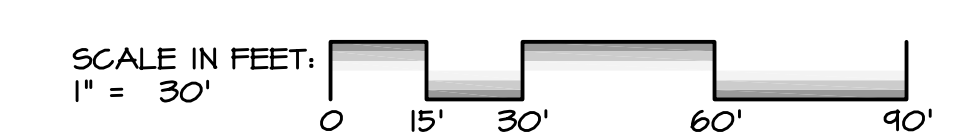
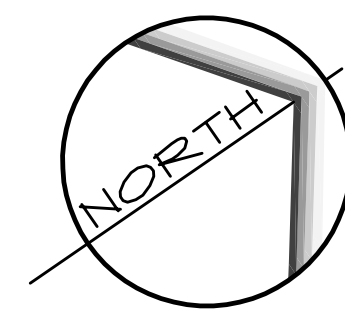


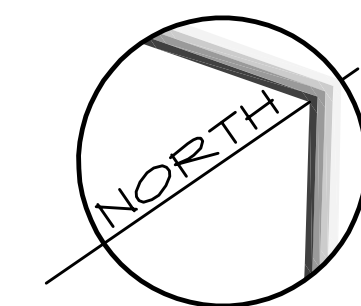
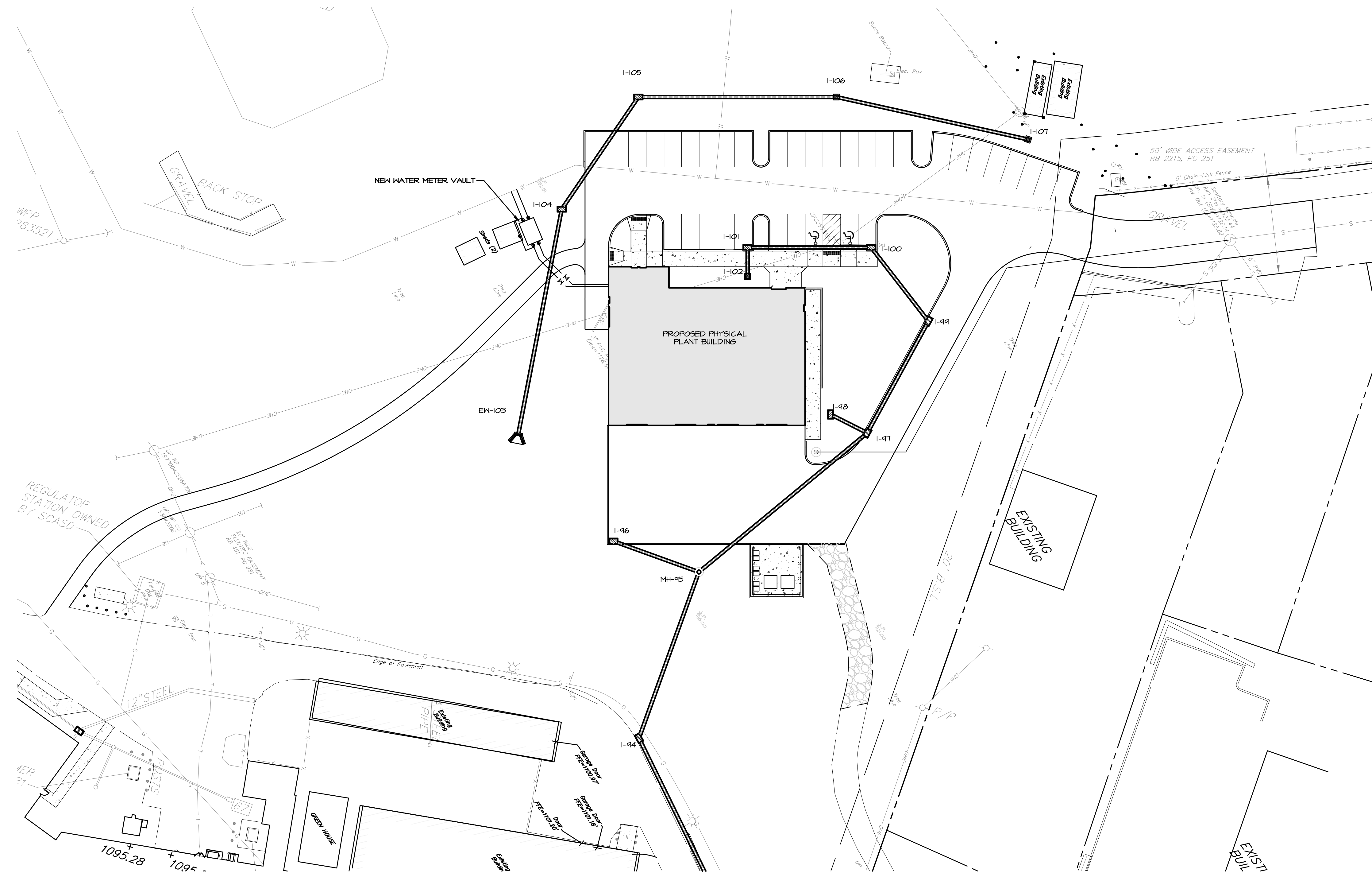
LINE AND SYMBOL LEGEND

EXISTING		PROPOSED	
---	PROPERTY LINE	---	PROPERTY LINE
---	EASEMENT LINE	---	REQUIRED RIGHT-OF-WAY LINE
---	EDGE OF PAVEMENT	---	EASEMENT LINE
---	ROAD CURB	---	BUILDING SETBACK
---	BUILDING SETBACK	---	EDGE OF PAVEMENT
---	STORM SEWER	---	MINOR CONTOUR (C.I.=1)
---	VEGETATION LINE	---	MAJOR CONTOUR (C.I.=5)
---	MINOR CONTOUR (C.I.=1)	---	STORM SEWER
---	MAJOR CONTOUR (C.I.=5)	---	ROAD CURB
---	FENCE	---	FENCE
---	DUMPSTER SCREEN	---	VEGETATION LINE
---	CONCRETE SIDEWALK	---	STORM WATER INLET
---	SPOT ELEVATION	---	HEADWALL/ENDWALL
---	WATER VALVE	---	EROSION PROTECTION
---	GAS VALVE	---	RIP-RAP
---	WATER METER BOX	---	BOLLARD LIGHT
---	HEADWALL/ENDWALL	---	PROPERTY PIN SET
---	STORM WATER INLET	---	CONCRETE MONUMENT
---	STRUCTURE	---	END OF LINE SEGMENT
---	MANHOLE	---	SANITARY CLEANOUT
---	LIGHT POLE	---	MANHOLE
---	FIRE HYDRANT	---	FIRE HYDRANT
---	PROPERTY PIN SET	---	BOLLARD
---	PROPERTY PIN FOUND	---	SPOT GRADE
---	END OF LINE SEGMENT	---	SIGNAGE
---	SIGN	---	ACCESSIBLE PARKING
---	UTILITY POLE	---	CONCRETE PAVING
---	EVERGREEN TREE	---	POLE LIGHT
---	DECIDUOUS TREE	---	BITUMINOUS PAVING
---	RIP-RAP	---	STONE DUST TRAIL
---		---	DECIDUOUS TREE
---		---	EVERGREEN SHRUB
---		---	EVERGREEN TREE



CURB RAMP ENLARGEMENT
SCALE: 1" = 10'





SCALE IN FEET:
1" = 30'

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1.13.2023

22-17
NTH - PHYSICAL PLANT

SCASD PHYSICAL PLANT BUILDING
WESTERLY PARKWAY
STATE COLLEGE, PA 16801

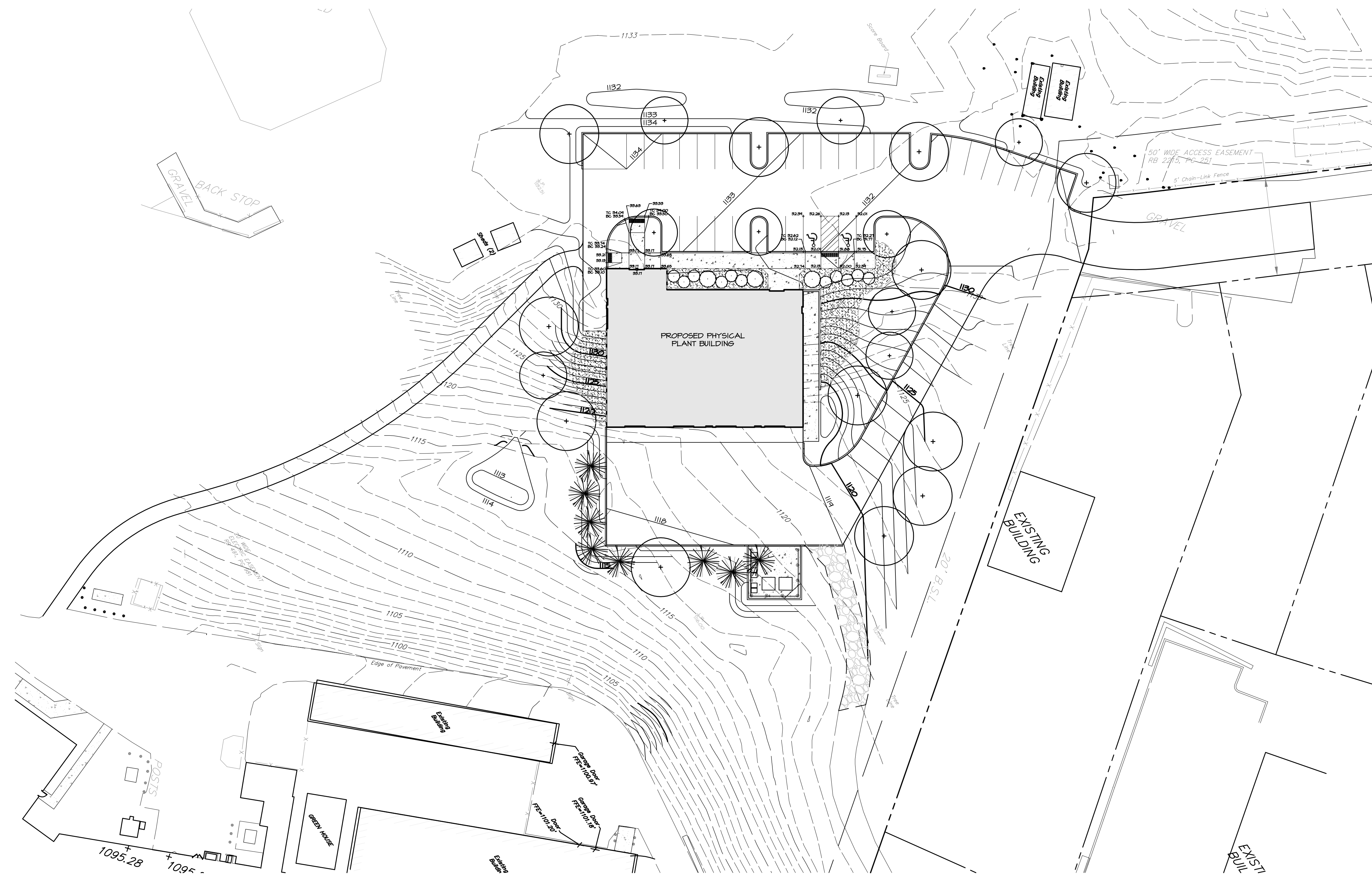


STATE COLLEGE AREA SCHOOL DISTRICT
131 WEST NITTANY AVENUE
STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

UTILITY PLAN

6 of 14



PLANT MENU

LARGE SHADE TREES

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONTAINER	COMMENTS
-	<i>Platanus x acerifolia</i> 'Bloodgood'	Bloodgood Planetree	2-1/2" - 3"	B4B	
-	<i>Quercus imbricaria</i>	Shingle Oak	2-1/2" - 3"	B4B	
-	<i>Quercus phellos</i>	Willow Oak	2-1/2" - 3"	B4B	
-	<i>Sophora japonica</i>	Japanese Pagodatree	2-1/2" - 3"	B4B	

SMALL/MEDIUM TREES

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONTAINER	COMMENTS
-	<i>Acer griseum</i>	Paperbark Maple	2" - 2-1/2"	B4B	
-	<i>Carpinus caroliniana</i>	American Hornbeam	2" - 2-1/2"	B4B	
-	<i>Phellodendron amurense</i> 'Shademaster'	Amur Corktree	2" - 2-1/2"	B4B	Male

ORNAMENTAL TREES

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONTAINER	COMMENTS
-	<i>Amelanchier laevis</i> 'Cumulus'	Cumulus Serviceberry	8 - 10'	B4B	Single Stem
-	<i>Cercis canadensis</i>	Redbud	8 - 10'	B4B	Single Stem
-	<i>Cornus florida</i> 'Cherokee Sunset'	Cherokee Sunset Dogwood	8 - 10'	B4B	

NATIVE SPECIMEN TREES

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONTAINER	COMMENTS
-	<i>Carya ovata</i>	Shagbark Hickory	2-1/2" - 3"	B4B	
-	<i>Fagus grandifolia</i>	American Beech	2-1/2" - 3"	B4B	
-	<i>Liriodendron tulipifera</i>	Tulip Tree	2-1/2" - 3"	B4B	
-	<i>Nyssa sylvatica</i>	Black Gum	2-1/2" - 3"	B4B	

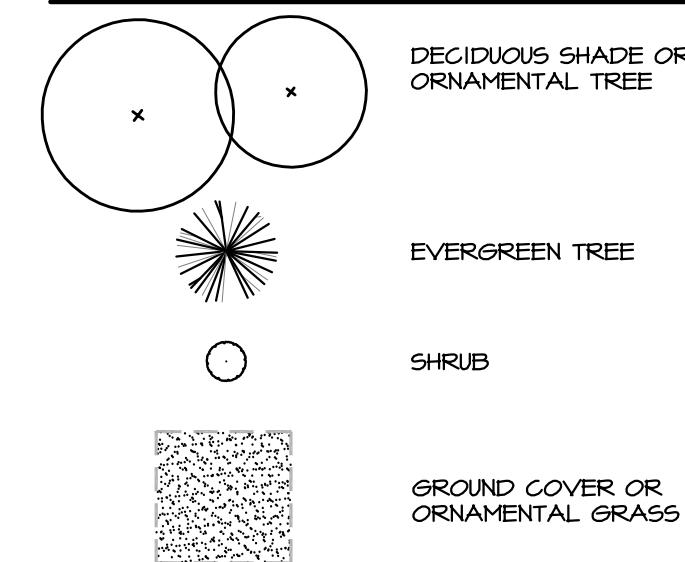
EVERGREEN TREES

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONTAINER	COMMENTS
-	<i>Abies concolor</i>	White Fir	7 - 8'	B4B	
-	<i>Pinus strobus</i>	Eastern White Pine	7 - 8'	B4B	

SHRUBS

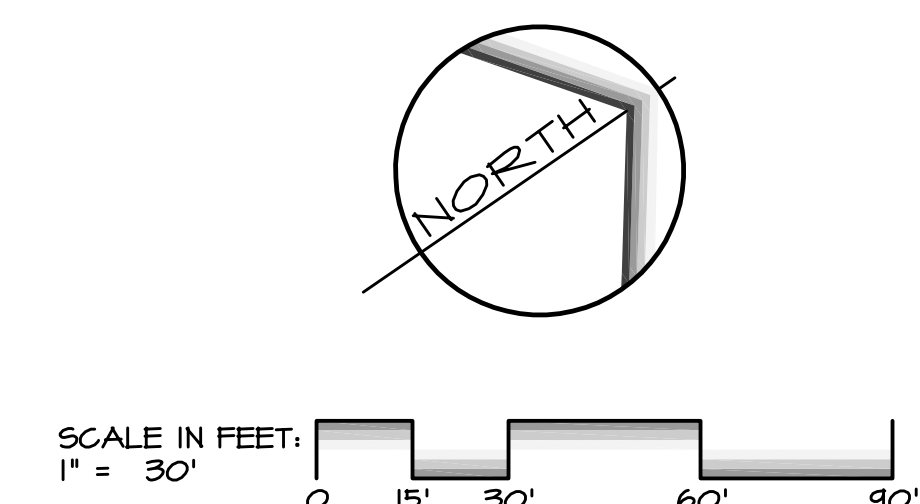
KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONTAINER	COMMENTS
-	<i>Cornus alba</i> 'Bloodgood'	Red Twig Dogwood	24 - 30"	B4B	
-	<i>Cornus alba</i> 'Bud's Yellow'	Yellow Twig Dogwood	24 - 30"	B4B	
-	<i>Ilex verticillata</i> 'Apollo'	Apollo Winterberry	30 - 36"	B4B	MALE
-	<i>Myrica pensylvanica</i>	Northern Bayberry	30 - 36"	B4B	
-	<i>Photinia pyrifolia</i> 'Brilliantissima'	Red Chokeberry	24 - 30"	3 GAL.	
-	<i>Viburnum dentatum</i>	Arrowwood Viburnum	30"	B4B	

LEGEND



NOTES

- THIS PLAN ILLUSTRATES THE MAJOR LANDSCAPING ELEMENTS AND AMENITIES PROPOSED TO MEET THE BOROUGH'S ORDINANCE REQUIREMENTS FOR PARKING LOT PERIMETER, INTERIOR AND SCREEN PLANTINGS. OTHER MINOR LANDSCAPING ELEMENTS SUCH AS SHRUBBERY AND NON-WOODY PLAN MATERIALS MAY BE PROPOSED DEPENDING ON THE PROJECT LANDSCAPING BUDGET.
 - NOT MORE THAN TWENTY-FIVE PERCENT (25%) OF ANY ONE SPECIES OF TREE OR SHRUB SHALL BE USED WITHIN ANY LANDSCAPE MASSING.
- ORDINANCE LANDSCAPING REQUIREMENTS:
- ONE (1) SHADE TREE PER 45' OF PERIMETER PARKING LENGTH, ONE (1) TREE PER PARKING ISLAND, AND ONE (1) TREE PER 100' OF INTERIOR MEDIAN STRIP.





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NTH - PHYSICAL PLANT

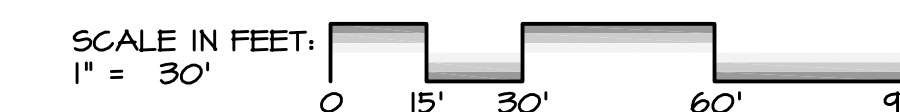
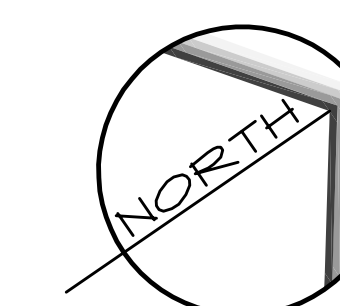
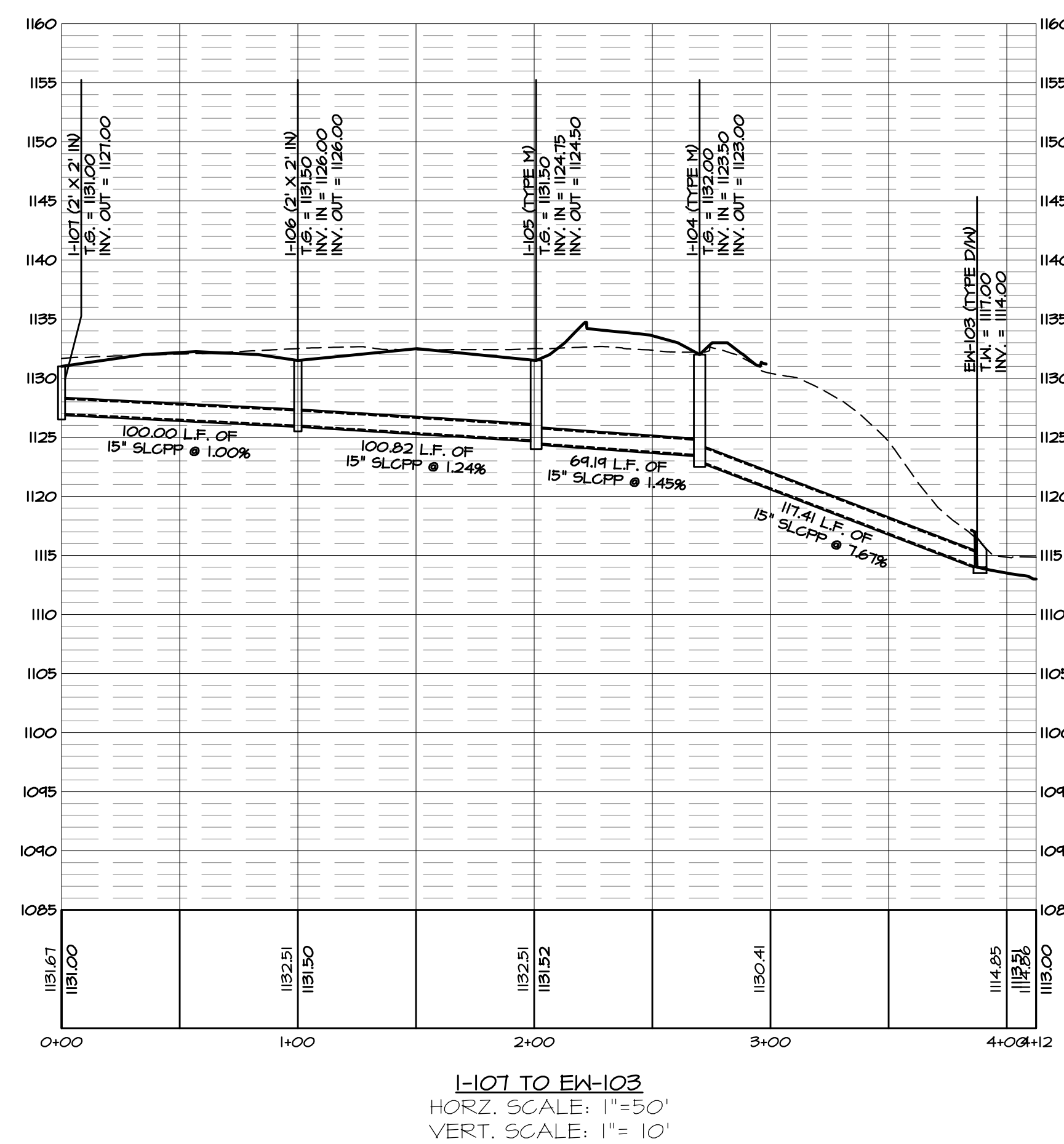
SCASD PHYSICAL PLANT BUILDING
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STATE COLLEGE, PA 16801

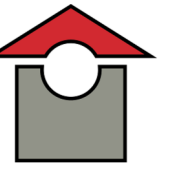


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SCASD JOB #: 22-17

STORM WATER
PLAN & PROFILES





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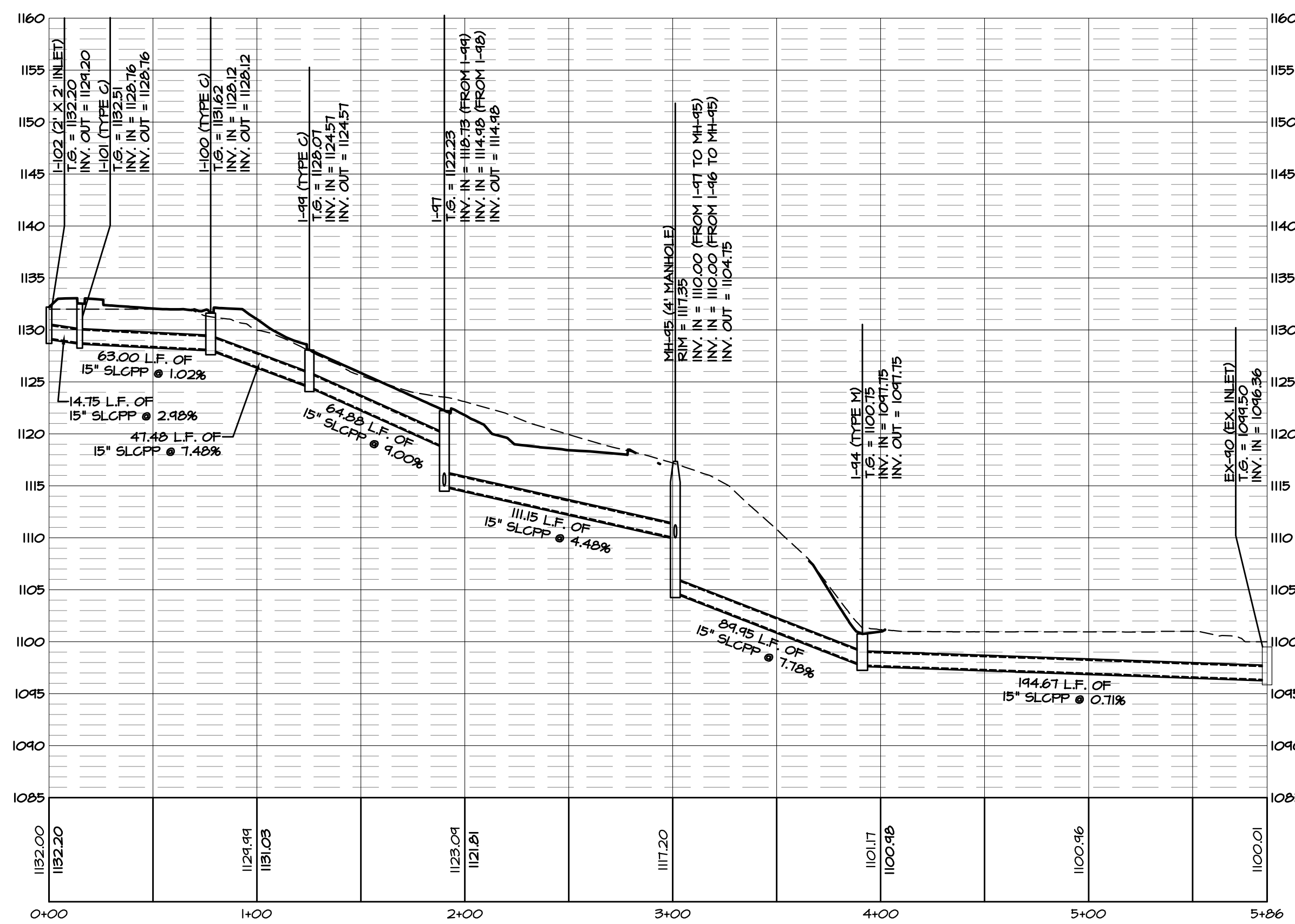
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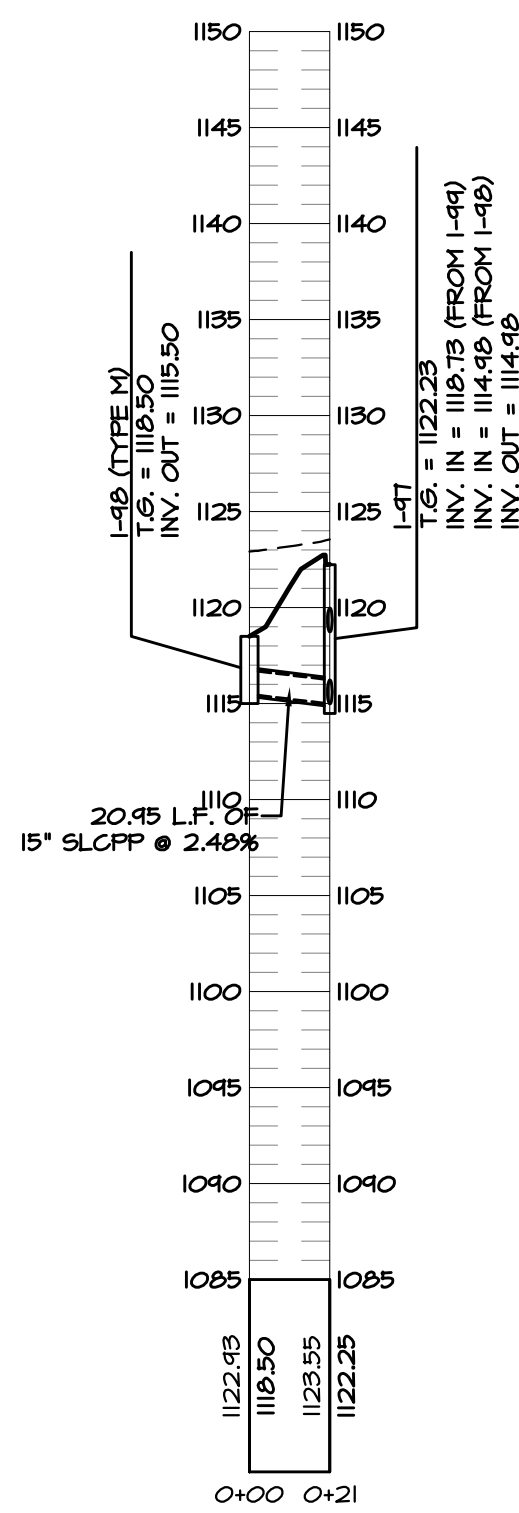
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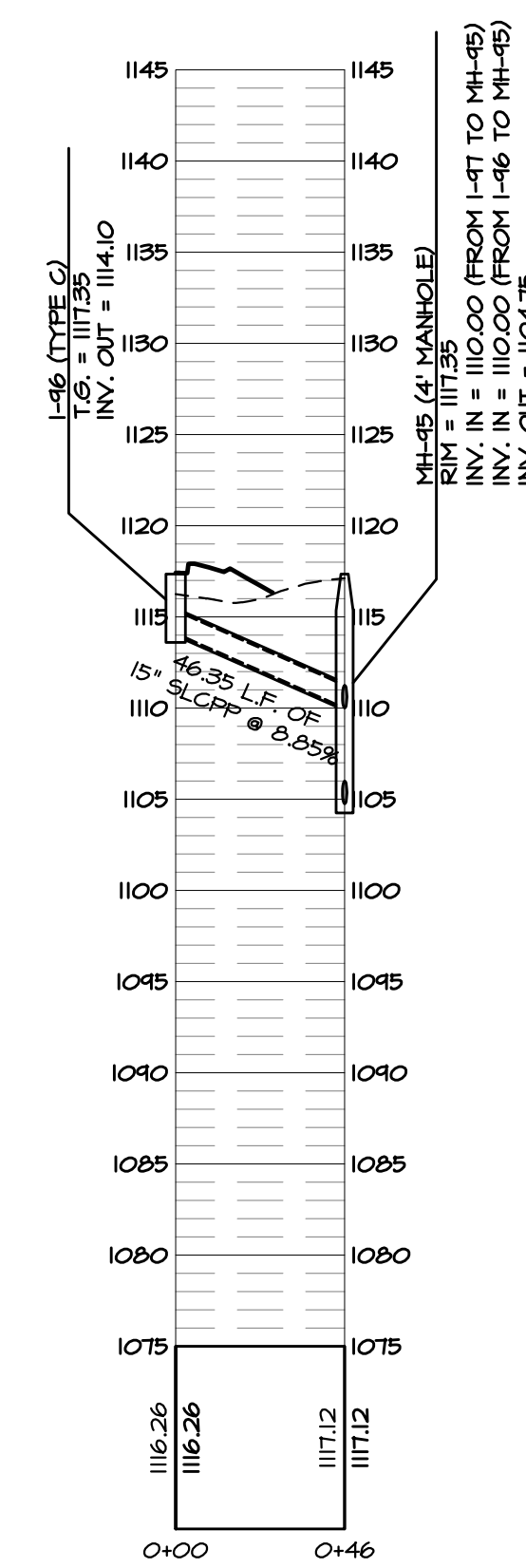
STORM WATER
PLAN & PROFILES



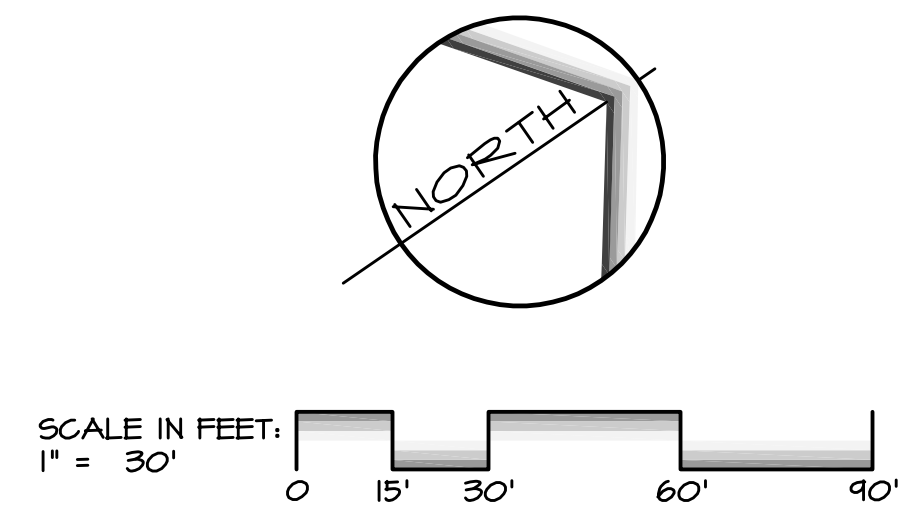
I-92 TO EX-90
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 10'



I-98 TO I-97
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 10'



I-96 TO MH-95
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 10'



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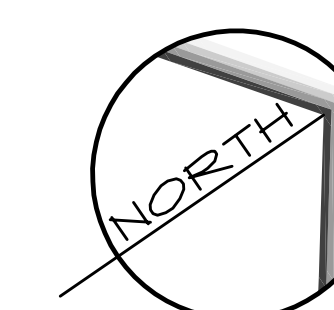
SCASD PHYSICAL PLANT BUILDING
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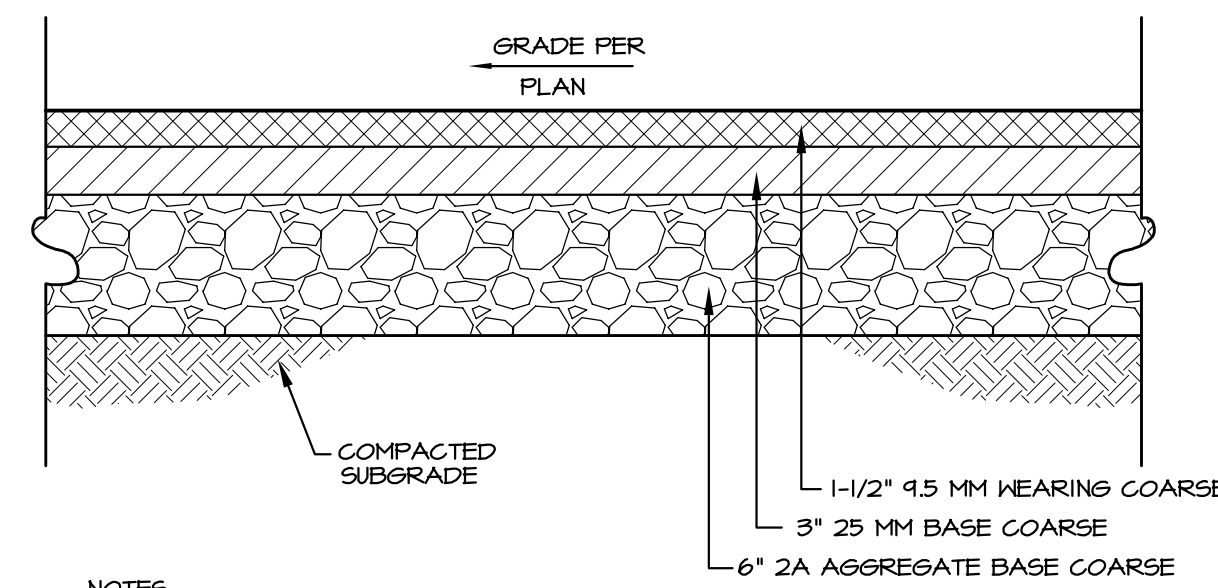
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SCASD JOB #: 22-17

SANITARY SEWER
PLAN & PROFILE

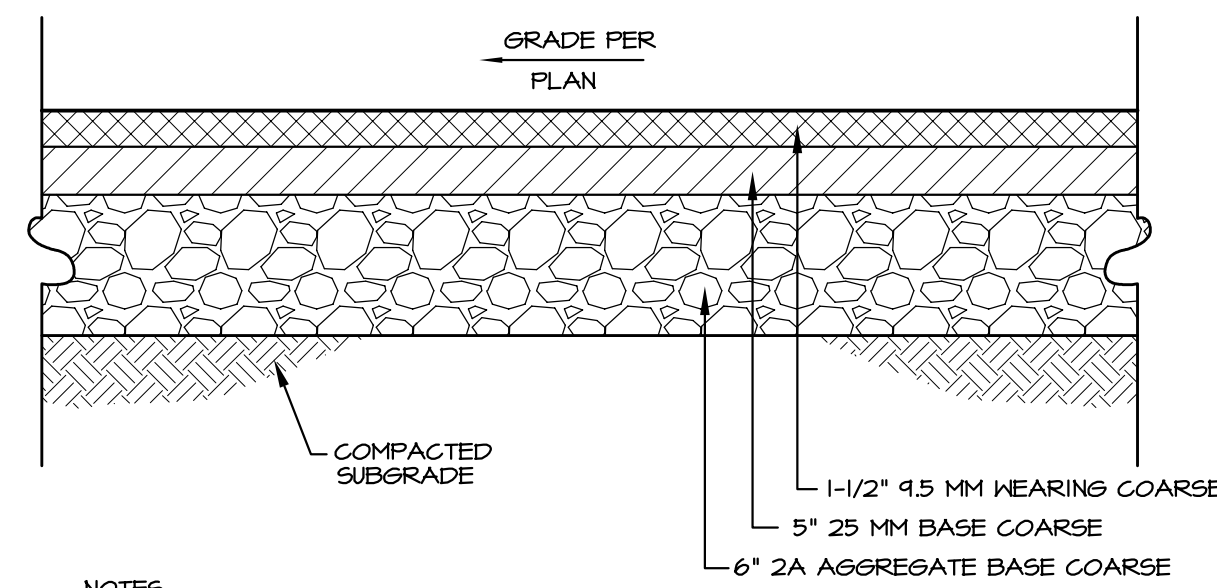


SCALE IN FEET:
1" = 30'



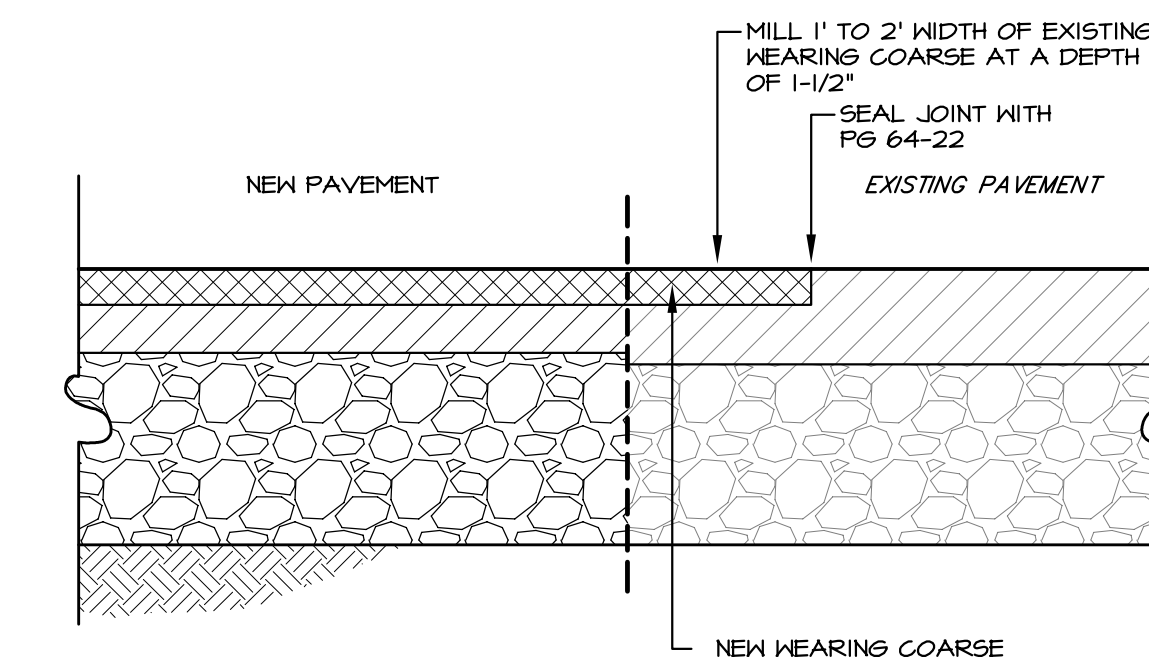
- NOTES:
- "SUPERPAVE" ASPHALT DESIGN, LESS THAN 0.3 MILLION ESALS, 50 GYRATIONS. ASPHALT TO BE PG 64-22.
 - ALL BITUMINOUS PAVING SUBGRADE AND AGGREGATE BASE COURSE COMPACTED TO 100% STANDARD PROCTOR (ASTM D698).

BITUMINOUS PAVING SECTION (STANDARD DUTY)
NO SCALE

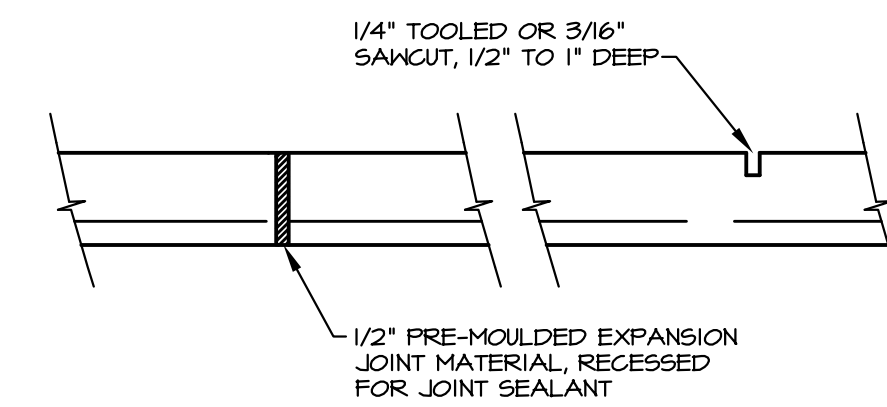


- NOTES:
- "SUPERPAVE" ASPHALT DESIGN, LESS THAN 0.3 MILLION ESALS, 50 GYRATIONS. ASPHALT TO BE PG 64-22.
 - ALL BITUMINOUS PAVING SUBGRADE AND AGGREGATE BASE COURSE COMPACTED TO 100% STANDARD PROCTOR (ASTM D698).

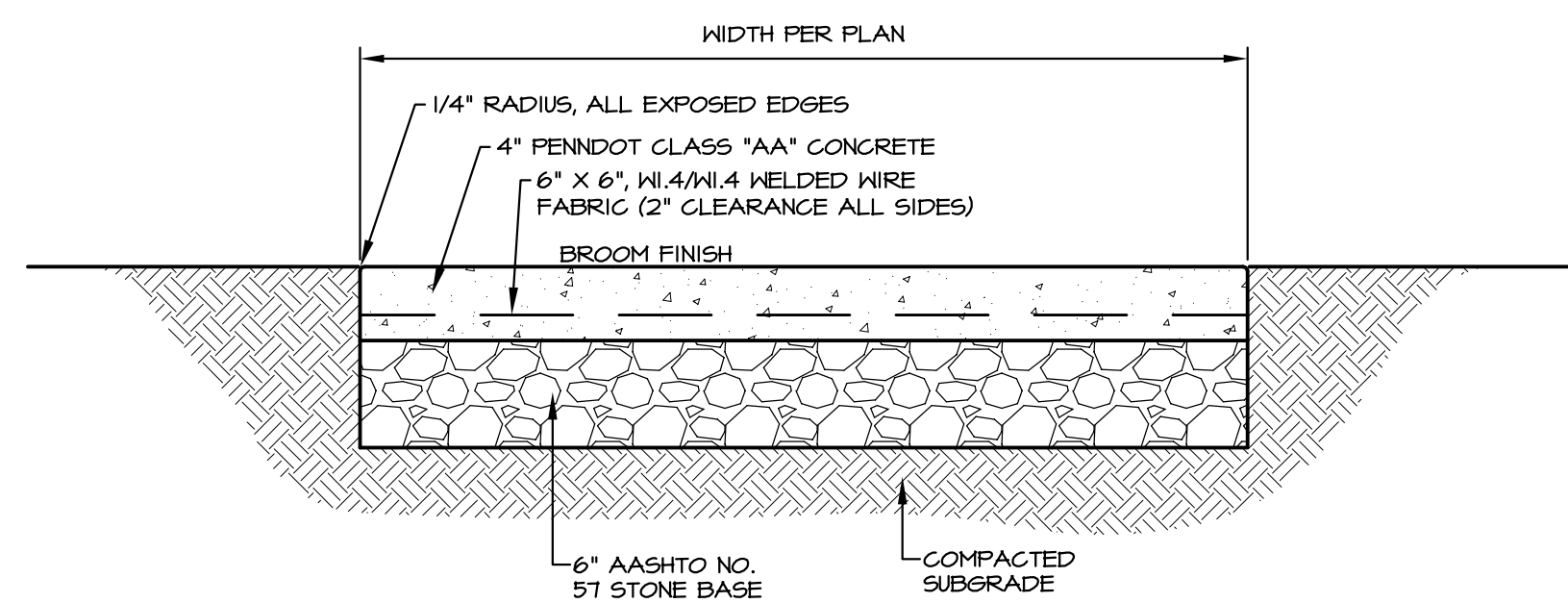
BITUMINOUS PAVING SECTION (HEAVY DUTY)
NO SCALE



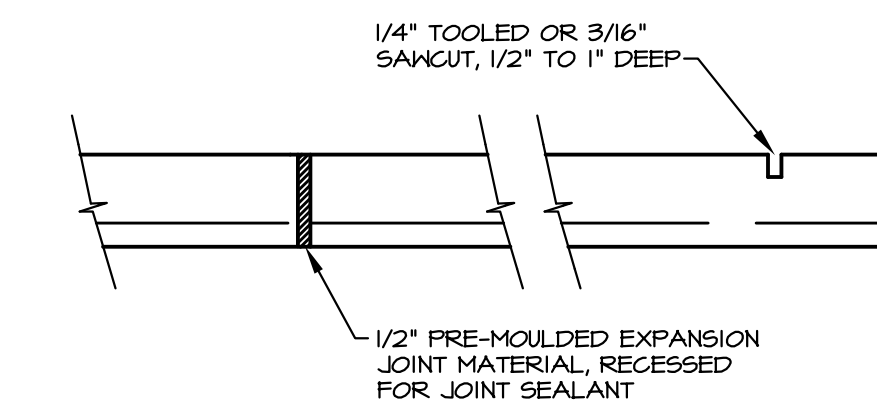
PAVEMENT NOTCH DETAIL
NO SCALE



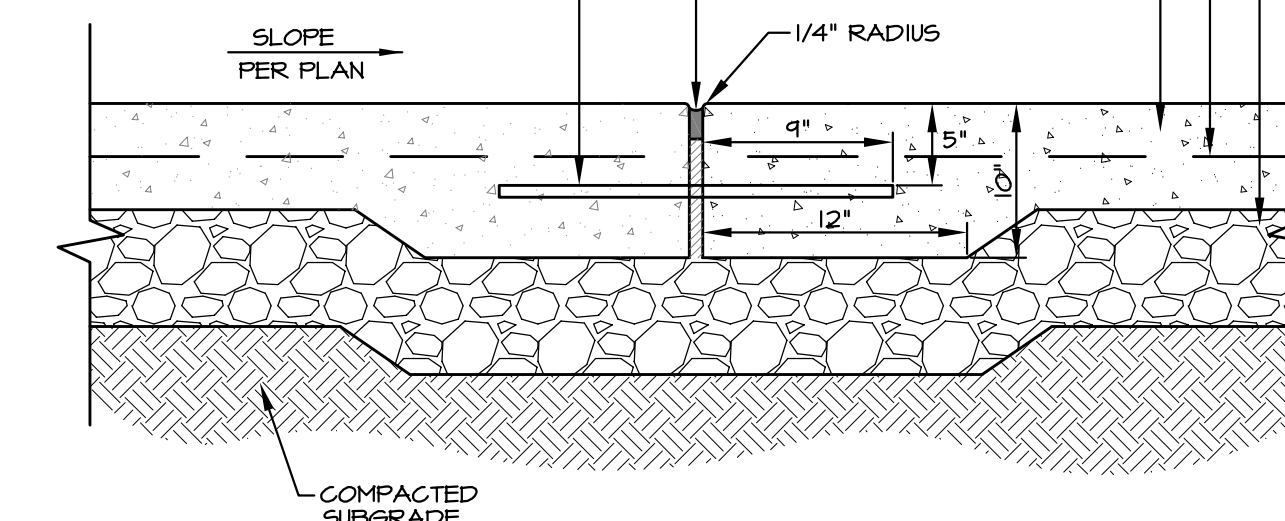
NOTE:
TOOLED / SAWCUT JOINTS SHALL BE SPACED IN EVEN INCREMENTS, GENERALLY AT THE SAME INTERVAL AS THE SIDEWALK, NOT EXCEEDING 10'; EXPANSION JOINTS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 25'.



CONCRETE PAVING
NO SCALE



- NO. 4 BARS, 18" LONG, SMOOTH FINISH, PROVIDE A BOND BREAK ON ONE SIDE. PLACE AT 2' O.C. INTERVALS.
- 1/2" PRE-MOULDED EXPANSION JOINT MATERIAL, RECESSED FOR JOINT SEALANT
- 8" CLASS AA CEMENT CONCRETE, FINISH PER PLAN
- 6" X 6" W2.1 / 2.1 WELDED WIRE FABRIC, 2" CLEARANCE ALL SIDES
- 8" MIN. AASHTO NO. 57 AGGREGATE (COMPACTED TO 95% STANDARD PROCTOR)



HEAVY DUTY CONCRETE PAVING SECTION AND JOINT
NO SCALE



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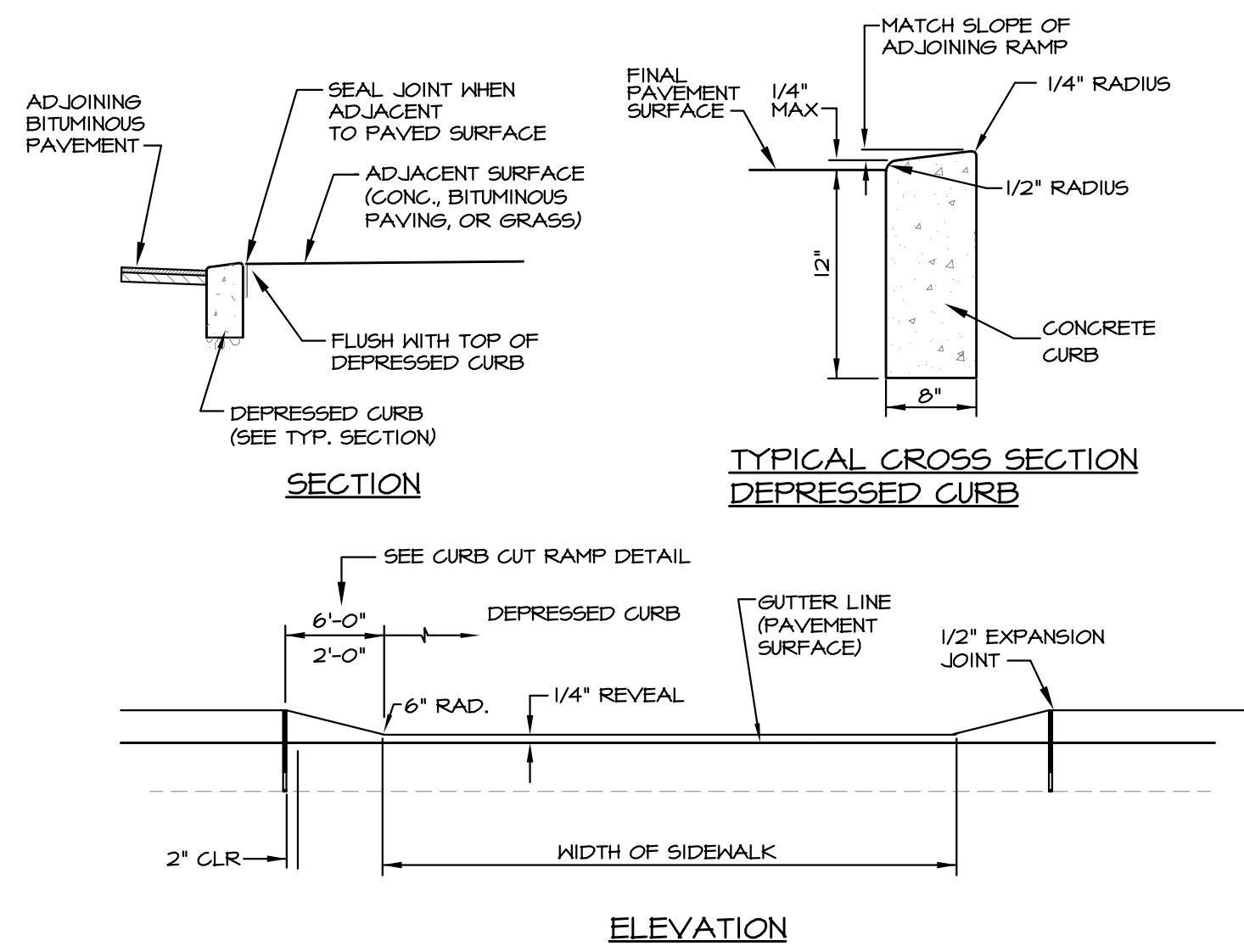
22-17
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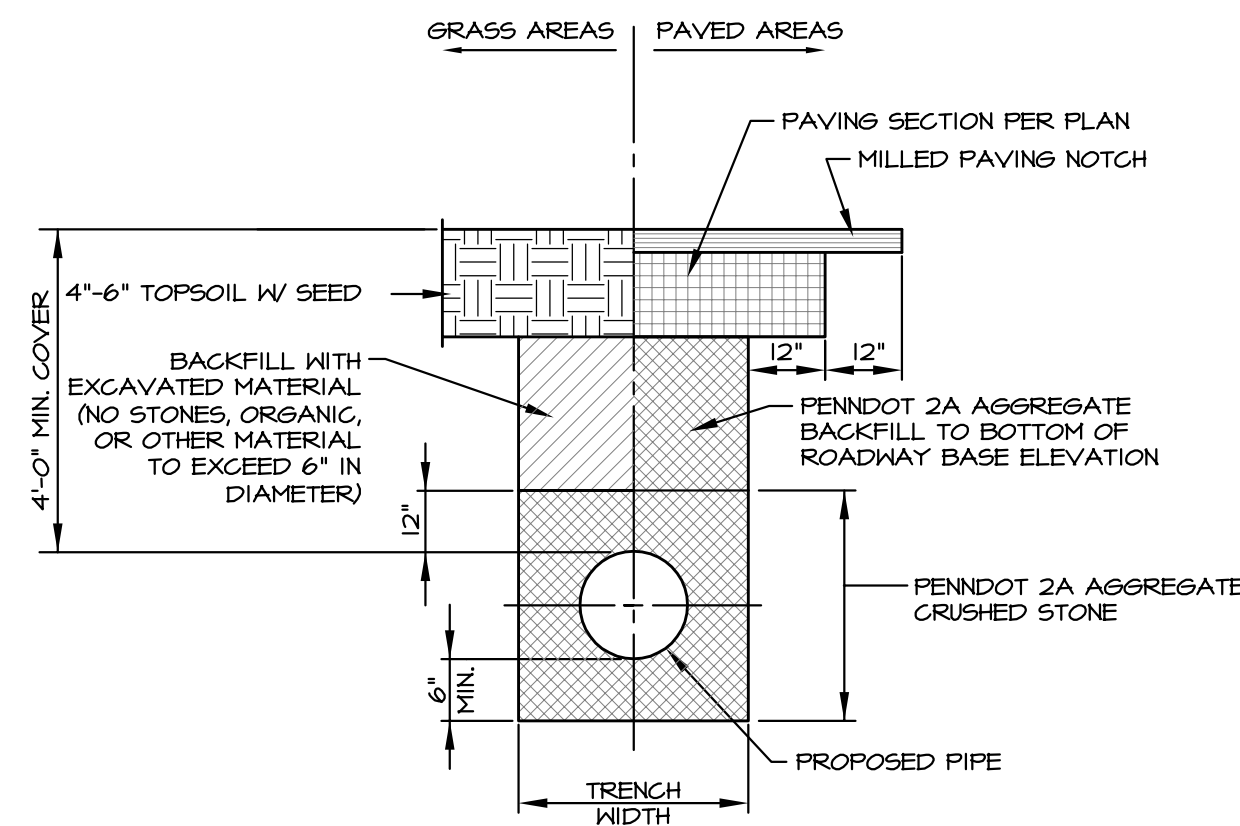
SCASD JOB #: 22-17

DETAILS



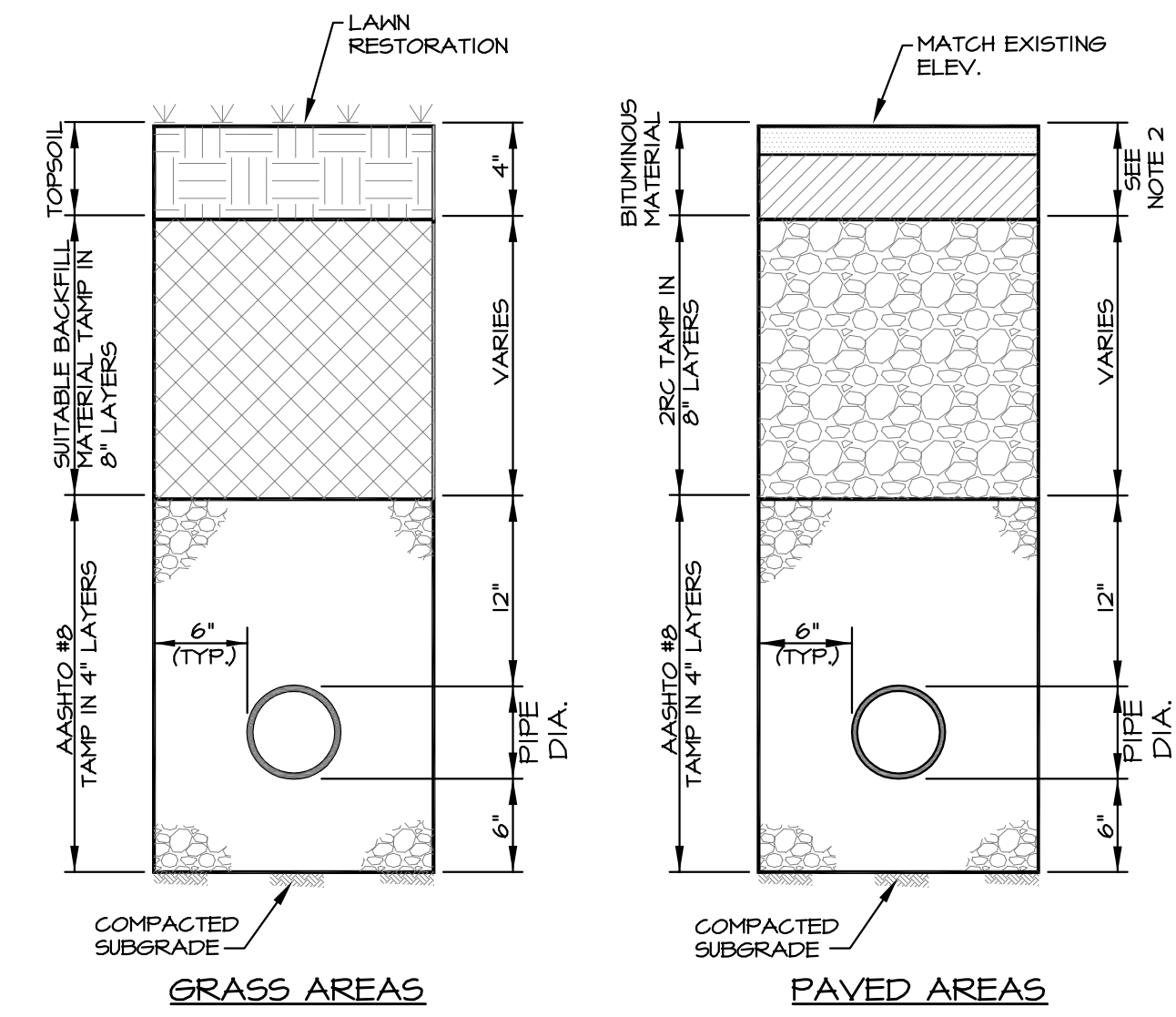
DEPRESSED CURB (SIDEWALKS)

NO SCALE



TRENCH RESTORATION FOR WATER

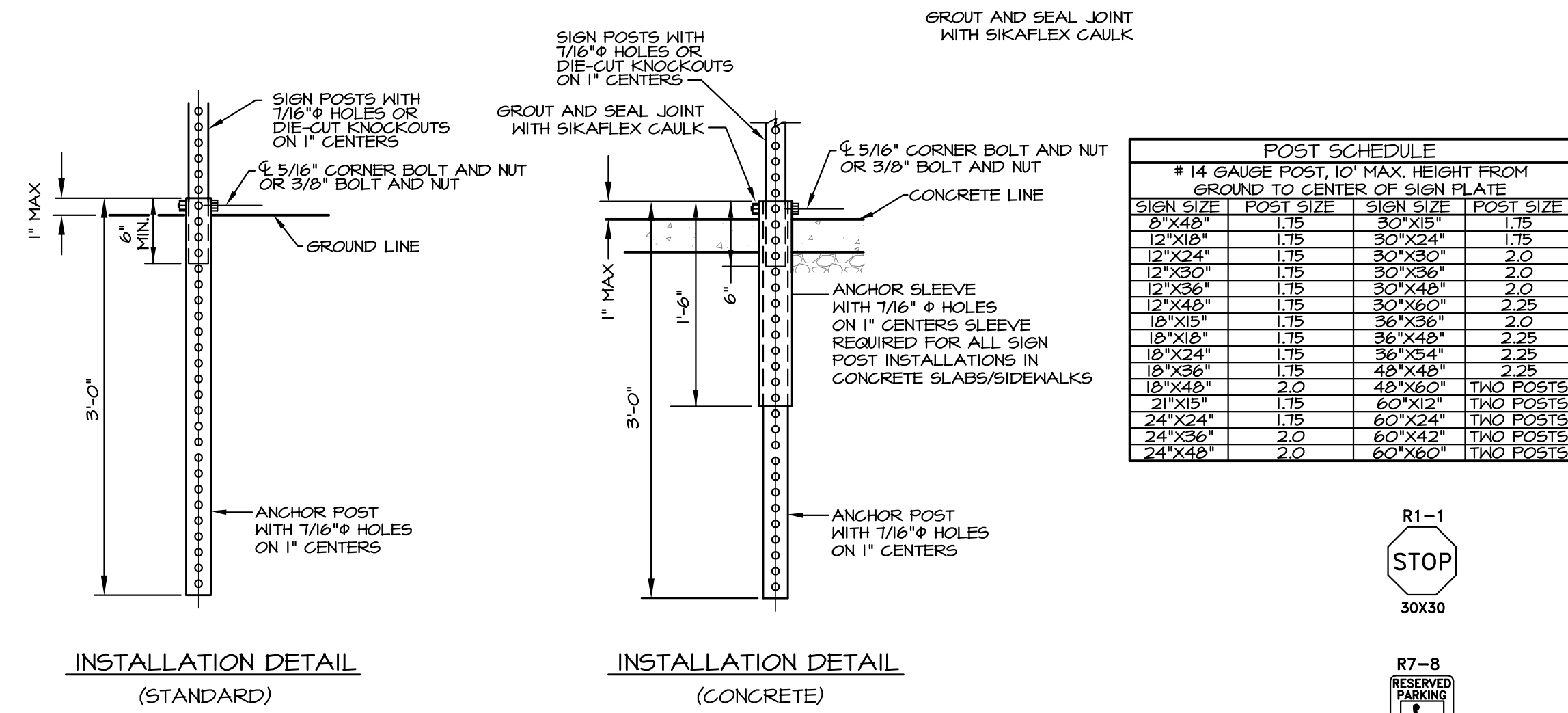
NO SCALE



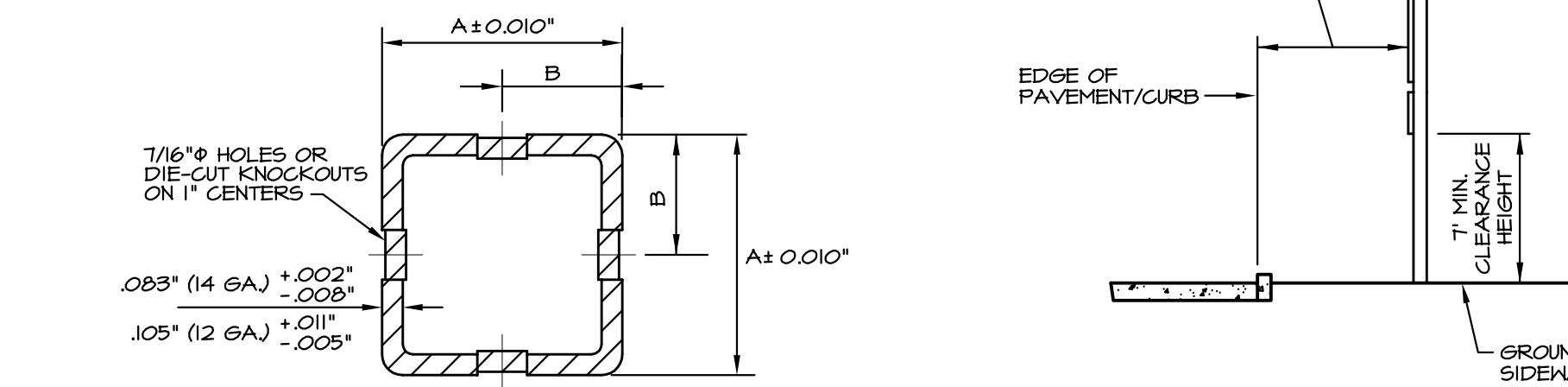
STORM AND SANITARY SEWER TRENCH DETAIL

NO SCALE

NOTES:
 1. MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO PENNDOT PUBLICATION 408, LATEST EDITION UNLESS OTHERWISE STATED IN BOROUGH SPECIFICATIONS.
 2. SEE BITUMINOUS PAVING CROSS SECTIONS FOR PAVEMENT STRUCTURE.



POST SCHEDULE			
# 14 GAUGE POST, 10' MAX HEIGHT FROM GROUND TO CENTER OF SIGN PLATE			
POST SIZE	POST SIZE	POST SIZE	POST SIZE
8\"/>			

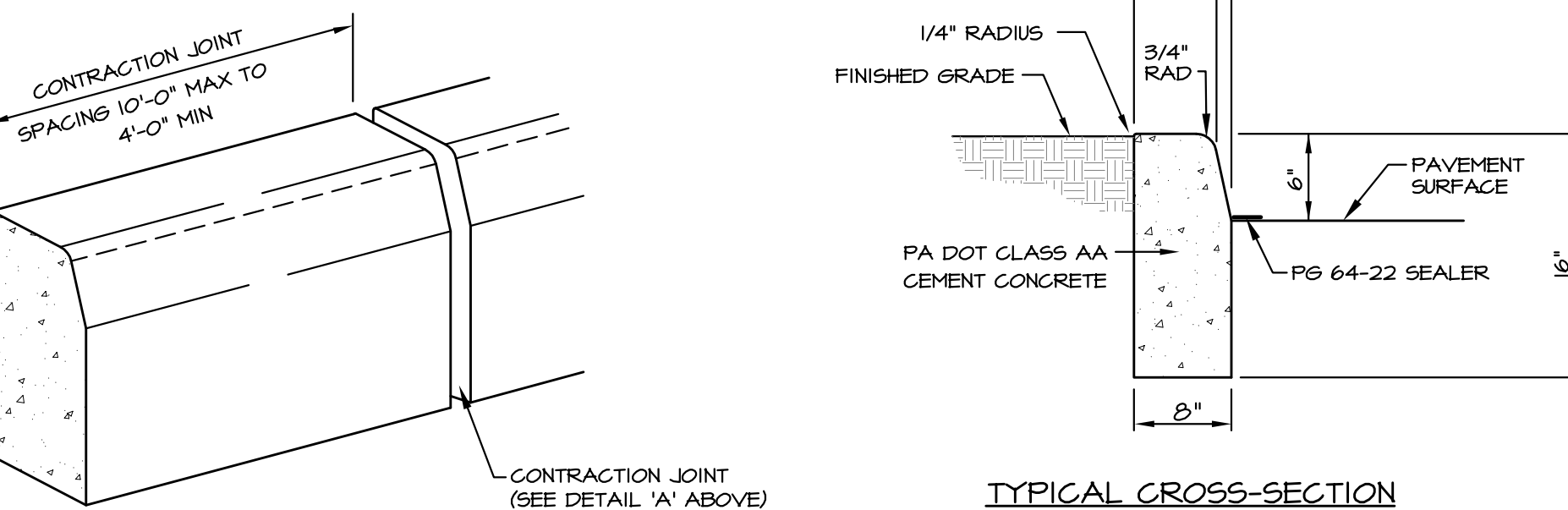
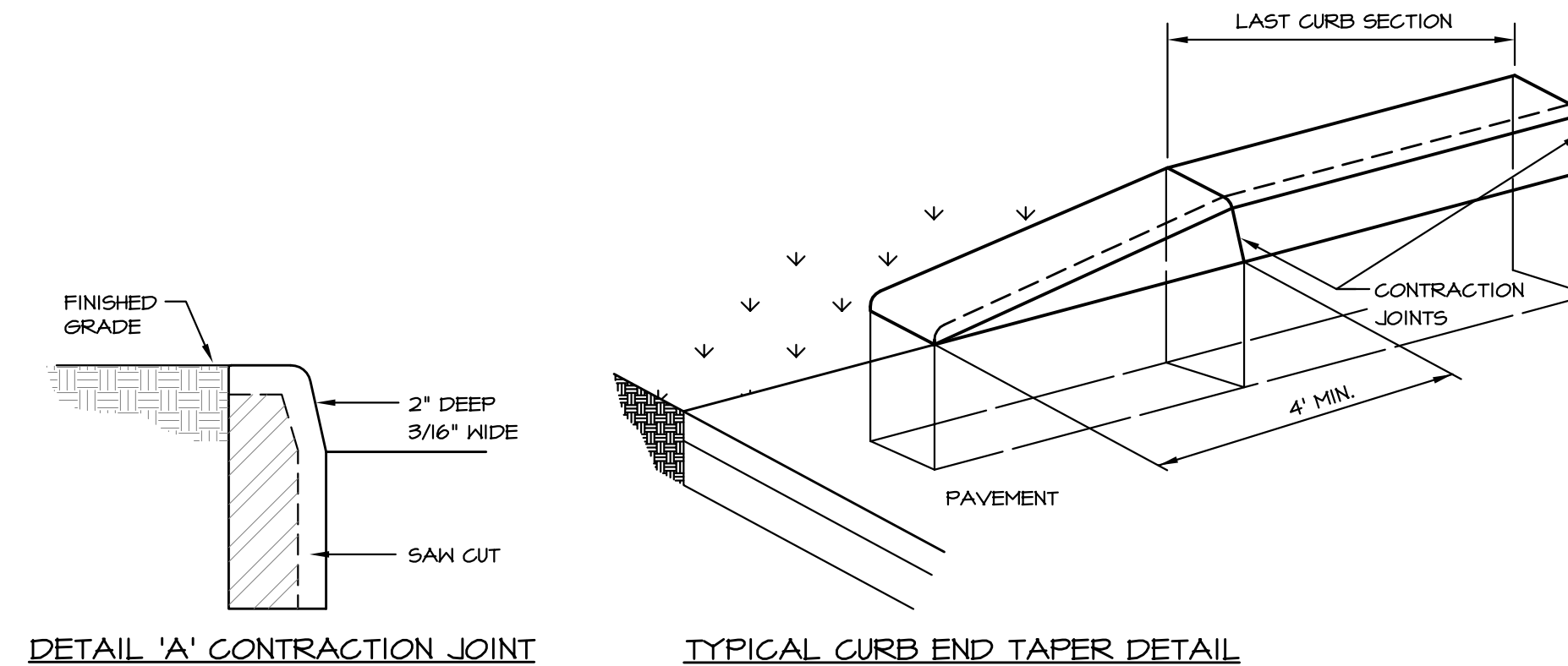


SIGN POST		ANCHOR POST		ANCHOR SLEEVE*		SPICE SLEEVE	
SIZE	DIMENSION GAUGE	SIZE	DIMENSION GAUGE	SIZE	DIMENSION GAUGE	SIZE	DIMENSION GAUGE
1.75"	1.341 1/8"	1.75"	2.2"	1"	1.2"	1.50"	1.121 3/4"
2.0"	1.5"	2.25"	2 1/4 1/8"	1.2"	2.25"	1.75"	1.341 1/8"
2.25"	2 1/4 1/8"	2.50"	2 1/2 1/4"	1.4"	3.00"	2"	1.5"

SQUARE STEEL POSTS
 12 AND 14 GAGE - 60 KSI

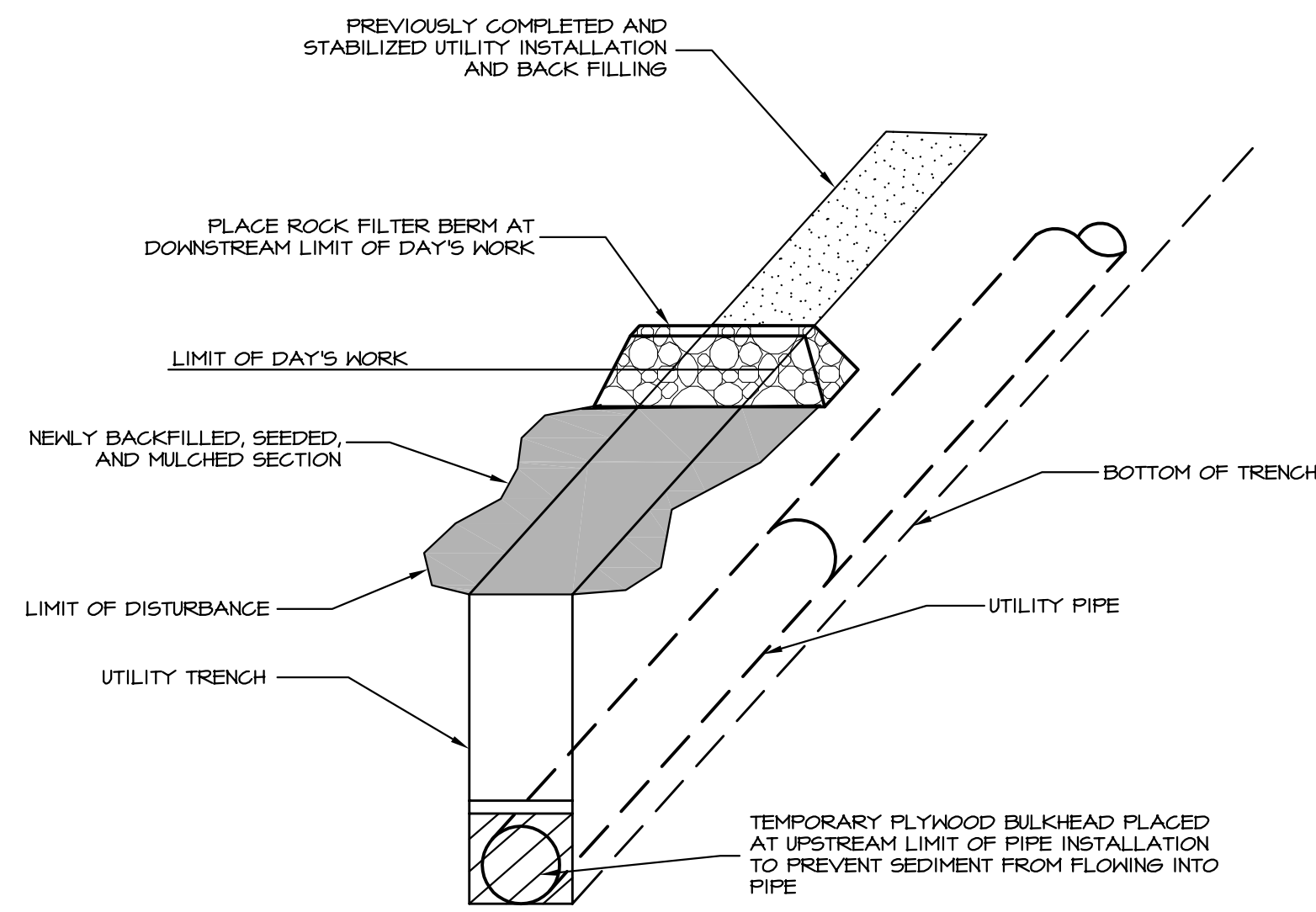
PADOT TRAFFIC CONTROL SIGN POSTS/INSTALLATION ON SITE

NO SCALE



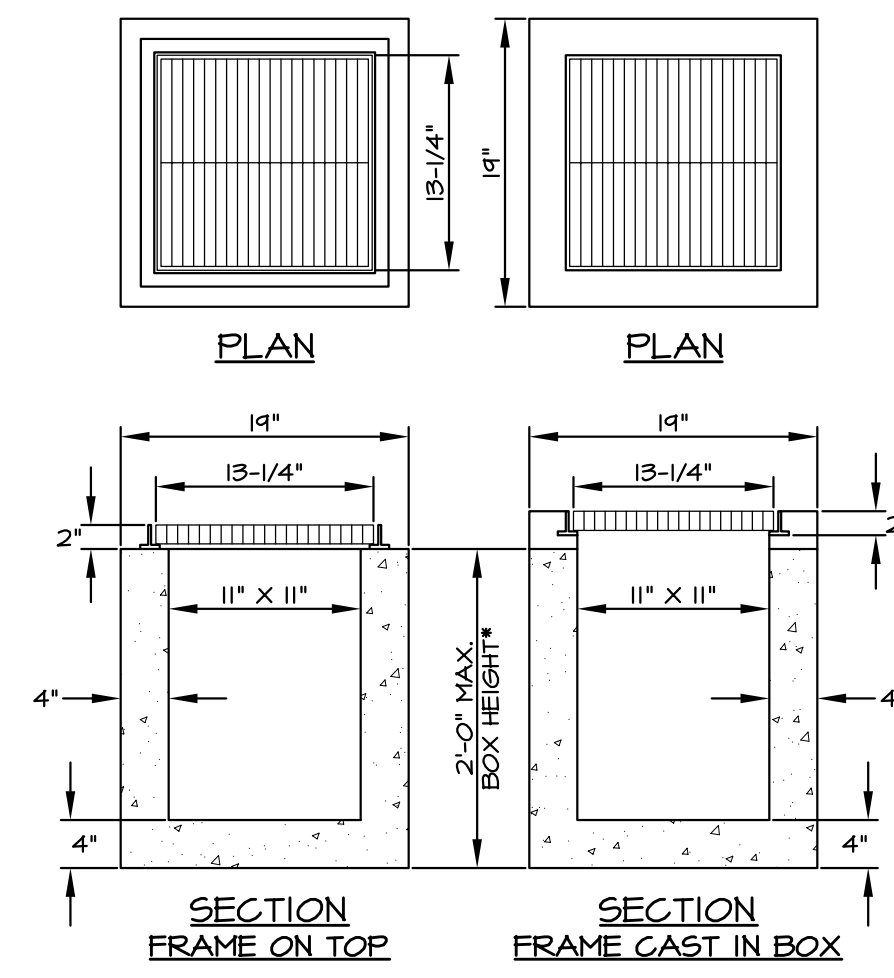
TYPICAL VERTICAL CURB DETAILS

NO SCALE



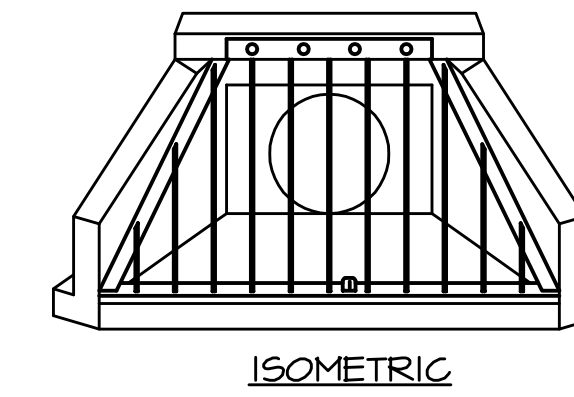
UTILITY TRENCH EXCAVATION/RESTORATION

NO SCALE



12" X 12" PRECAST YARD INLET

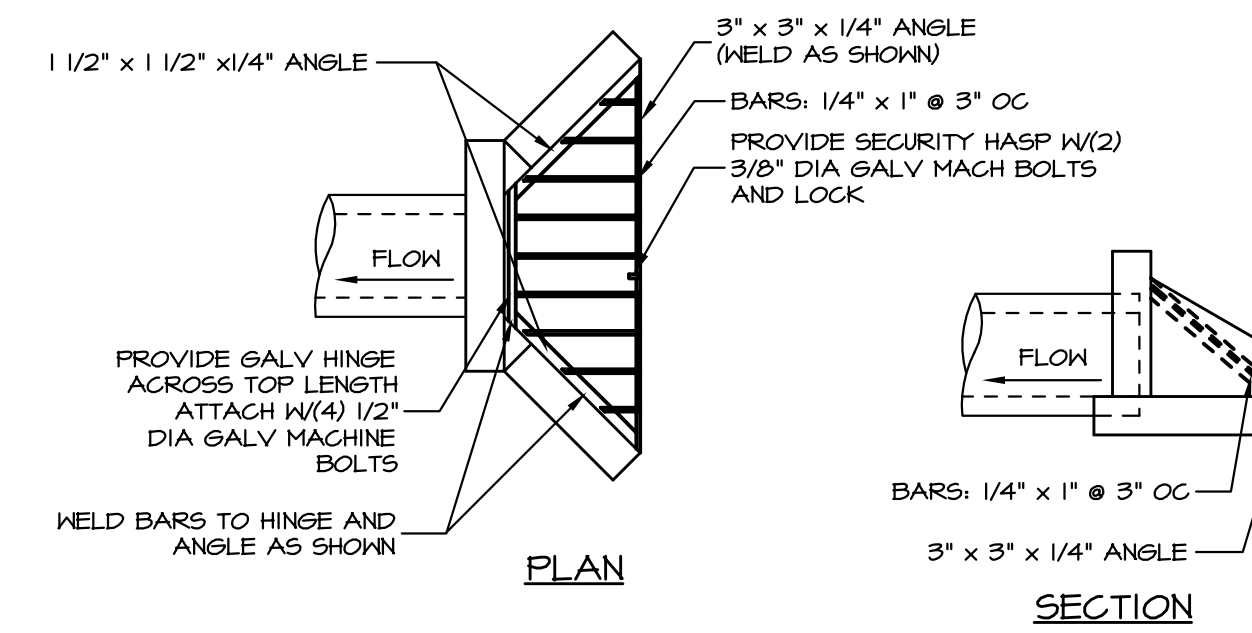
NO SCALE



ISOMETRIC

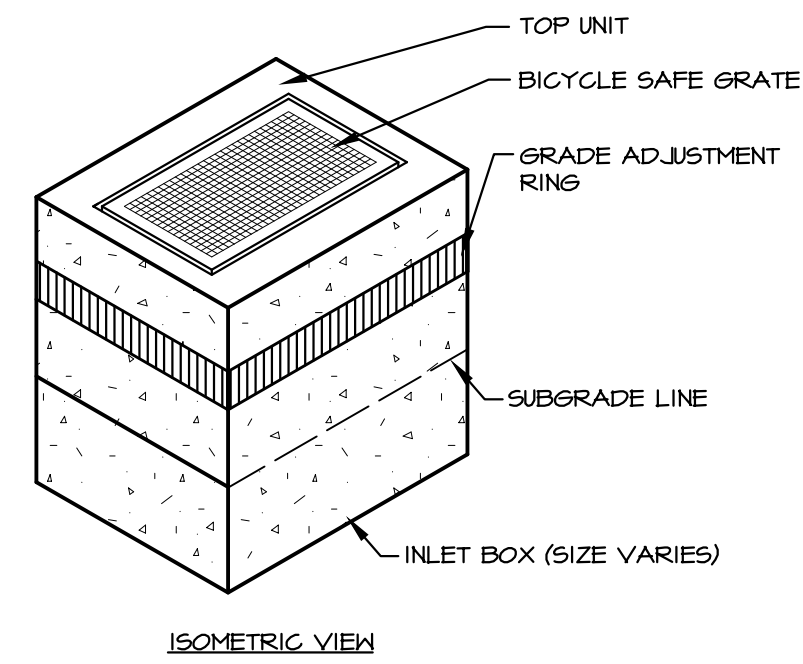
NOTES:

1. MATERIAL TO BE GALVANIZED STEEL W/ RUST INHIBITOR OR ALUMINUM
2. IF STEEL IS UTILIZED, THE UNIT SHALL BE FABRICATED, CLEANED AND THEN HOT DIP GALVANIZED AFTER FABRICATION
3. DIMENSION APPROPRIATELY FOR HEADWALL UTILIZED



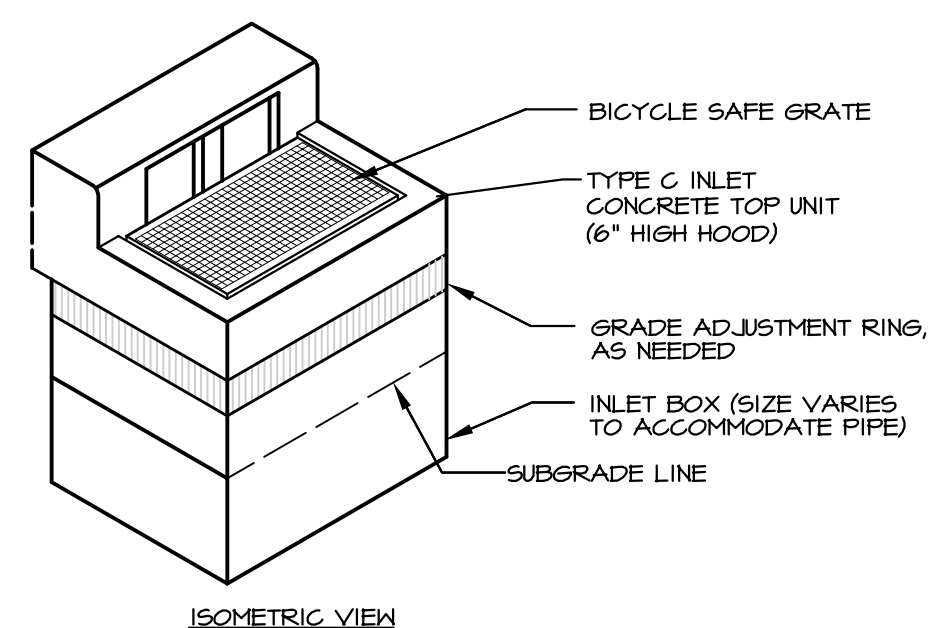
TRASH RACK DETAIL (ALL HEADWALLS/ENDWALLS)

NO SCALE



ISOMETRIC VIEW

MODIFIED TYPE "M" INLET



ISOMETRIC VIEW

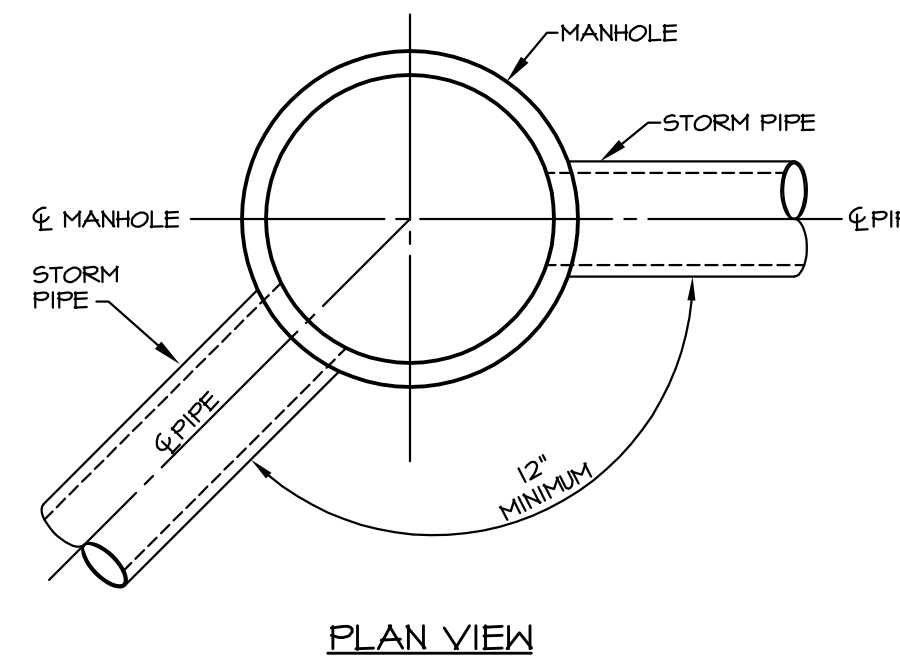
MODIFIED TYPE "C" INLET

NOTES:

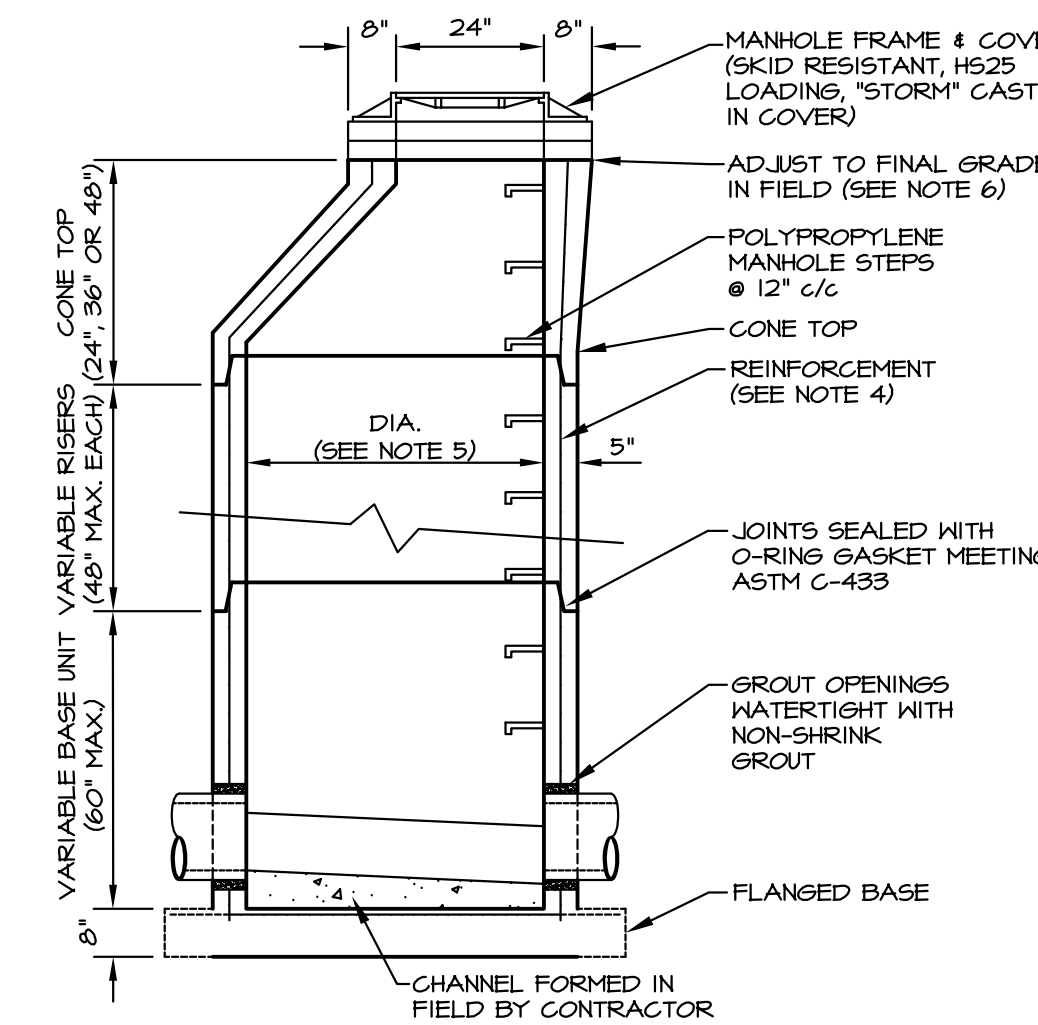
1. ALL CAST-IN-PLACE INLET TOPS SHALL CONFORM TO THE SHAPE AND DIMENSIONS PER PENNDOT RC STANDARDS (WITH EXCEPTION OF 6" HIGH HOOD).
2. CONCRETE TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT SHALL UTILIZE 1-1/4" X 1-1/4" ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE.
3. THIS STANDARD DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT INTENDED TO SHOW THE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED IN PA BULLETIN NO. 15 WILL BE PERMITTED.
4. THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET TYPE IS THE CONTRACTOR'S RESPONSIBILITY.
5. PIPES SHALL BE LOCATED AS REQUIRED.
6. WEEP HOLES SHALL BE INSTALLED AS REQUIRED BY SECTION 605, PA DOT FORM 40B.
7. GRADE ADJUSTMENT RINGS MAY BE OF PRECAST CONCRETE CONSTRUCTION, AS APPROVED.
8. INLET BOX SHALL BE EITHER CAST -IN-PLACE CONCRETE, OR PRECAST CONCRETE.
9. REFER TO PA DOT BUREAU OF DESIGN STANDARDS RC-34.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PADOT PUBLICATION 40B, SECTION 605 & STANDARDS FOR ROADWAY CONSTRUCTION, RC-34, AND ALSO IN ACCORDANCE WITH TOWNSHIP STANDARDS, CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.
11. ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOMS.
12. FLOWABLE FILL FOR BACKFILL OF INLETS I-13, I-15 AND I-17 IS REQUIRED PER FERGUSON TOWNSHIP ROAD CONSTRUCTION STANDARDS, SECTION 11K.4.

TYPE "M" AND MODIFIED TYPE "C" INLET

NO SCALE



PLAN VIEW



SECTION VIEW

NOTES:

1. MANHOLE BASED UPON TERRE HILL CONCRETE PRODUCTS, TERRE HILL, PA (800-242-1504). USE ONLY TOWNSHIP MANHOLES CONSTRUCTED IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-39 STANDARD, WHERE PERFORMING WORK IN TOWNSHIP RIGHTS-OF-WAY.
2. ALL PRECAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM-C47B.
3. ALL CONCRETE SHALL CONFORM TO PADOT PUBLICATION 40B, SECTION 714, CLASS AA.
4. PROVIDE REINFORCEMENT IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-39 STANDARD.
5. THE DIAMETER OF THE MANHOLES PROVIDED SHALL BE BASED UPON PROVIDING A MINIMUM OF 12-INCHES OF HORIZONTAL SEPARATION BETWEEN OPENINGS LOCATED AT THE SAME DEPTH. PIPES NOT LOCATED AT THE SAME DEPTH MUST BE LOCATED VERTICALLY AT LEAST ONE TIME THE MAXIMUM OPENING DIAMETER APART WHERE THE HORIZONTAL SEPARATION IS NOT PROVIDED. IN ALL CASES, THE MAXIMUM PIPE SIZE AND OPENING IN PRECAST MANHOLES SHALL BE AS FOLLOWS:

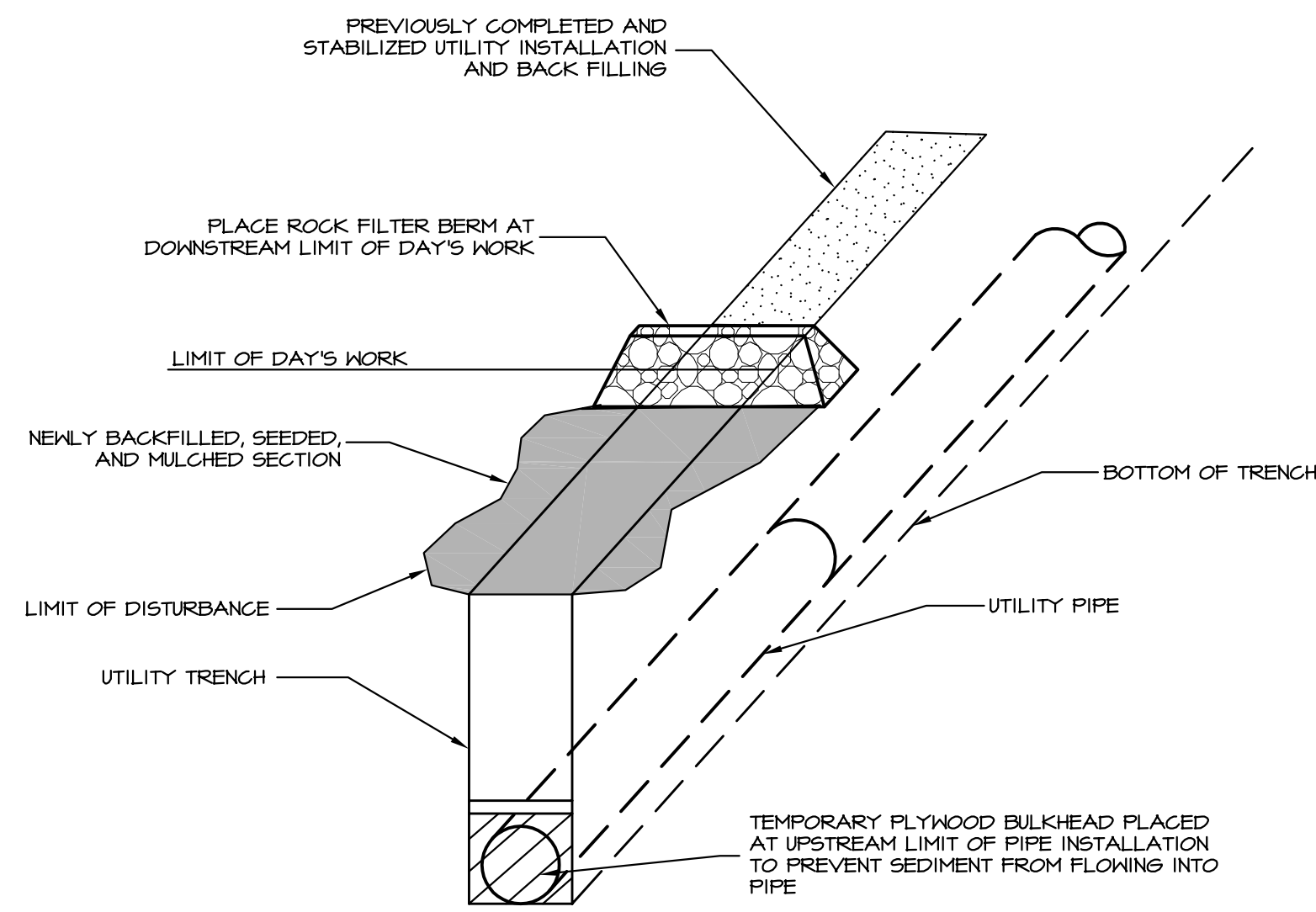
MANHOLE DIA.	MAXIMUM PIPE SIZE	MAXIMUM OPENING
4'-0"	30"	30"
5'-0"	42"	50"
6'-0"	54"	62"
8'-0"	72"	80"

6. ADJUST MANHOLE TO FINAL GRADE WITH PRE-CAST CONCRETE GRADING RINGS. MAXIMUM ADJUSTMENT IS 12-INCHES. PROVIDE GRADE ADJUSTMENT RISERS OF ADJUSTABLE INSERTS IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-39 STANDARD. LOCATE TOP OF FRAME OF ADJUSTMENT RISER 1/8" BELOW THE TOP OF THE ROADWAY SURFACE.
7. FRAME AND/OR PRECAST CONCRETE GRADE RINGS TO BE ATTACHED RIGIDLY TO THE TOP OF THE MANHOLE WITH THREADED STUDS IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-39 STANDARD. THE BASE OF THE FRAME AND/OR PRECAST CONCRETE GRADE RINGS TO BE SET IN A BED OF NON-SHRINK GROUT.

PRECAST STORM SEWER MANHOLE

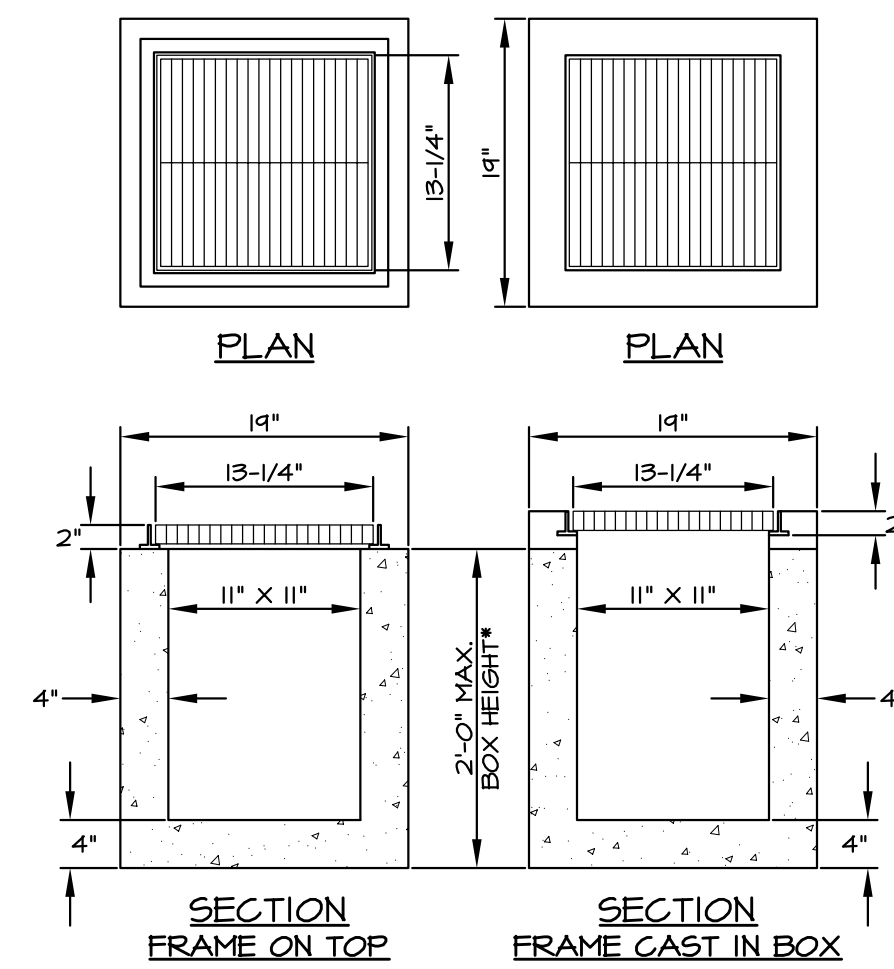
NO SCALE





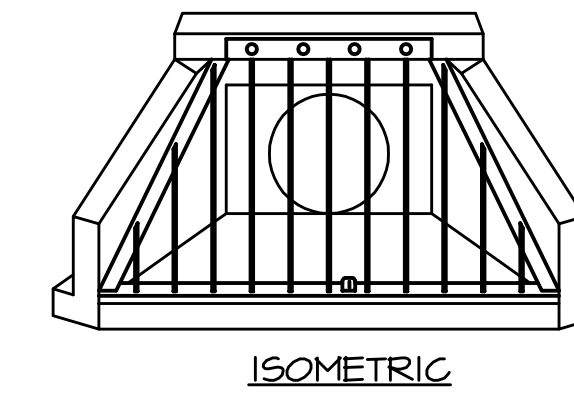
UTILITY TRENCH EXCAVATION/RESTORATION

NO SCALE



12" X 12" PRECAST YARD INLET

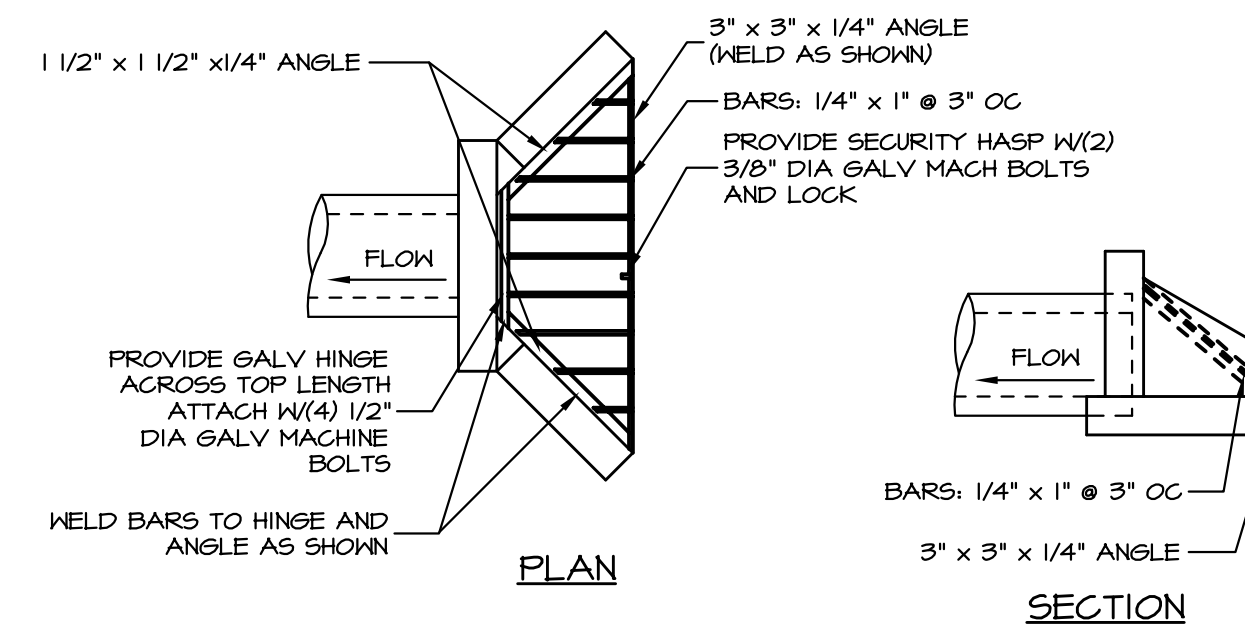
NO SCALE



ISOMETRIC

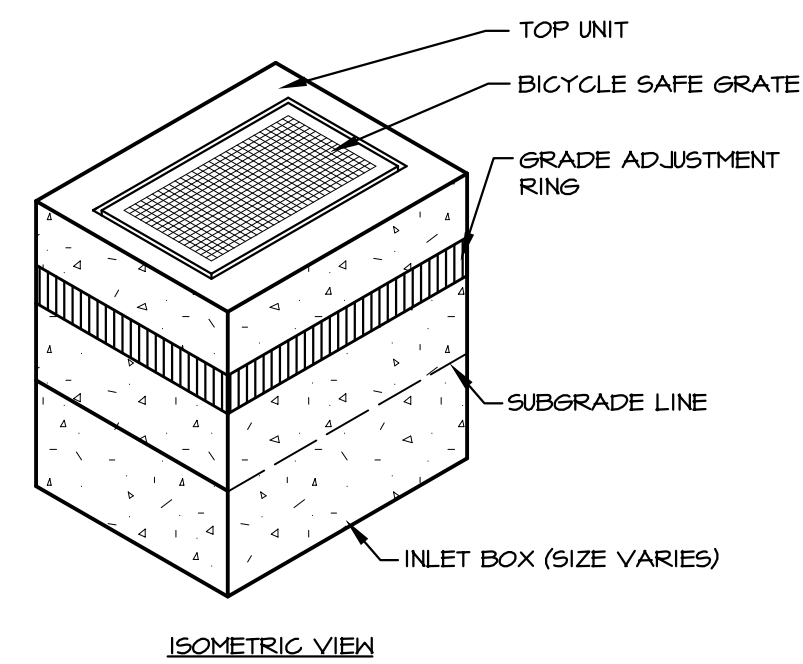
NOTES:

1. MATERIAL TO BE GALVANIZED STEEL W/ RUST INHIBITOR OR ALUMINUM
2. IF STEEL IS UTILIZED, THE UNIT SHALL BE FABRICATED, CLEANED AND THEN HOT DIP GALVANIZED AFTER FABRICATION
3. DIMENSION APPROPRIATELY FOR HEADWALL UTILIZED



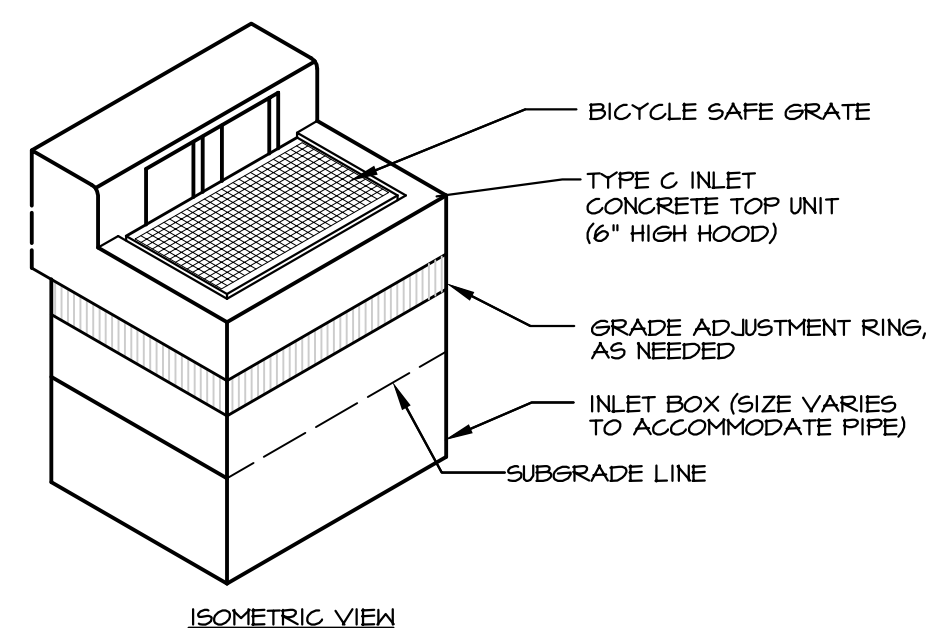
TRASH RACK DETAIL (ALL HEADWALLS/ENDWALLS)

NO SCALE



ISOMETRIC VIEW

MODIFIED TYPE "M" INLET



ISOMETRIC VIEW

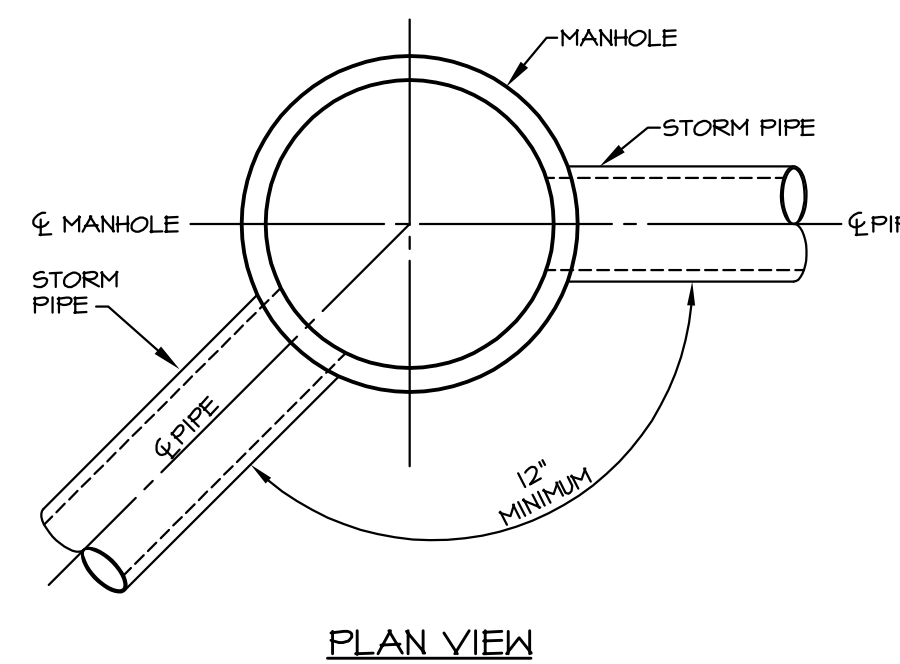
MODIFIED TYPE "C" INLET

NOTES:

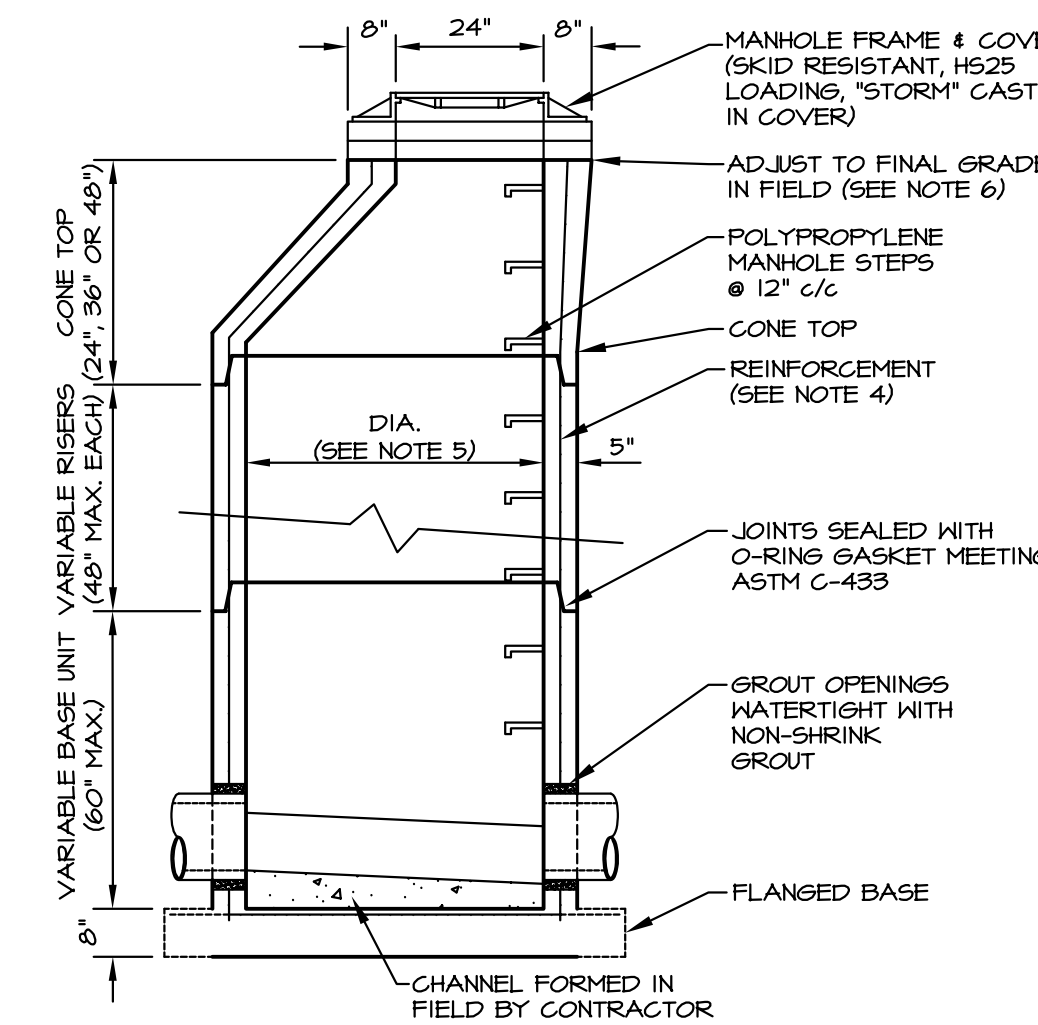
1. ALL CAST-IN-PLACE INLET TOPS SHALL CONFORM TO THE SHAPE AND DIMENSIONS PER PENNDOT RC STANDARDS (WITH EXCEPTION OF 6" HIGH HOOD).
2. CONCRETE TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT SHALL UTILIZE 1-1/4" X 1-1/4" ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE.
3. THIS STANDARD DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT INTENDED TO SHOW THE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED IN PA BULLETIN NO. 15 WILL BE PERMITTED.
4. THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET TYPE IS THE CONTRACTOR'S RESPONSIBILITY.
5. PIPES SHALL BE LOCATED AS REQUIRED.
6. WEEP HOLES SHALL BE INSTALLED AS REQUIRED BY SECTION 605, PA DOT FORM 40B.
7. GRADE ADJUSTMENT RINGS MAY BE OF PRECAST CONCRETE CONSTRUCTION, AS APPROVED.
8. INLET BOX SHALL BE EITHER CAST -IN-PLACE CONCRETE, OR PRECAST CONCRETE.
9. REFER TO PA DOT BUREAU OF DESIGN STANDARDS RC-34.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PADOT PUBLICATION 40B, SECTION 605 & STANDARDS FOR ROADWAY CONSTRUCTION, RC-34, AND ALSO IN ACCORDANCE WITH TOWNSHIP STANDARDS, CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.
11. ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOMS.
12. FLOWABLE FILL FOR BACKFILL OF INLETS I-13, I-15 AND I-17 IS REQUIRED PER FERGUSON TOWNSHIP ROAD CONSTRUCTION STANDARDS, SECTION 11K.4.

TYPE "M" AND MODIFIED TYPE "C" INLET

NO SCALE



PLAN VIEW



SECTION VIEW

NOTES:

1. MANHOLE BASED UPON TERRE HILL CONCRETE PRODUCTS, TERRE HILL, PA (800-242-1504). USE ONLY TOWNSHIP MANHOLES CONSTRUCTED IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-39 STANDARD, WHERE PERFORMING WORK IN TOWNSHIP RIGHTS-OF-WAY.
2. ALL PRECAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM-C478.
3. ALL CONCRETE SHALL CONFORM TO PADOT PUBLICATION 40B, SECTION 714, CLASS AA.
4. PROVIDE REINFORCEMENT IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-39 STANDARD.
5. THE DIAMETER OF THE MANHOLES PROVIDED SHALL BE BASED UPON PROVIDING A MINIMUM OF 12-INCHES OF HORIZONTAL SEPARATION BETWEEN OPENINGS LOCATED AT THE SAME DEPTH. PIPES NOT LOCATED AT THE SAME DEPTH MUST BE LOCATED VERTICALLY AT LEAST ONE TIME THE MAXIMUM OPENING DIAMETER APART WHERE THE HORIZONTAL SEPARATION IS NOT PROVIDED. IN ALL CASES, THE MAXIMUM PIPE SIZE AND OPENING IN PRECAST MANHOLES SHALL BE AS FOLLOWS:

MANHOLE DIA.	MAXIMUM PIPE SIZE	MAXIMUM OPENING
4'-0"	30"	30"
5'-0"	42"	50"
6'-0"	54"	62"
8'-0"	72"	80"

6. ADJUST MANHOLE TO FINAL GRADE WITH PRE-CAST CONCRETE GRADING RINGS. MAXIMUM ADJUSTMENT IS 12-INCHES. PROVIDE GRADE ADJUSTMENT RISERS OF ADJUSTABLE INSERTS IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-39 STANDARD. LOCATE TOP OF FRAME OF ADJUSTMENT RISER 1/8" BELOW THE TOP OF THE ROADWAY SURFACE.
7. FRAME AND/OR PRECAST CONCRETE GRADE RINGS TO BE ATTACHED RIGIDLY TO THE TOP OF THE MANHOLE WITH THREADED STUDS IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-39 STANDARD. THE BASE OF THE FRAME AND/OR PRECAST CONCRETE GRADE RINGS TO BE SET IN A BED OF NON-SHRINK GROUT.

PRECAST STORM SEWER MANHOLE

NO SCALE



GENERAL

- 1. THESE NOTES SERVE AS PART OF THE SPECIFICATIONS FOR THE WORK AND SERVE AS THE BASIS OF WORK UNLESS A MORE STRINGENT REQUIREMENT IS SET FORTH IN THE PROJECT SPECIFICATIONS MANUAL.
2. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
A. COMMONWEALTH OF PENNSYLVANIA'S UNIFORM CONSTRUCTION CODE, BASED ON THE INTERNATIONAL BUILDING CODE, 2018 EDITION.
B. REQUIREMENTS SET FORTH BY THE AUTHORITY HAVING JURISDICTION.
C. ALL DESIGN AND CONSTRUCTION CODES AND STANDARDS AS REFERENCED BY THE GOVERNING BUILDING CODE.
3. DESIGN LOADS: IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE AS FOLLOWS:

Table with 2 columns: Item description and Value. Includes sections for FLOOR LIVE LOADS, ROOF LIVE LOAD, ROOF SNOW LOAD DATA, WIND DESIGN DATA, EARTHQUAKE DESIGN DATA, and GEOTECHNICAL INFORMATION.

- 1. ALL SAFETY REGULATIONS, METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIAL SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE STRUCTURE IS STABLE ONLY IN ITS COMPLETED FORM AND UPON ACHIEVING ADEQUATE MATERIAL STRENGTH FOR CONSTRUCTION LOADS.
2. THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, THE SIZE AND LOCATION OF ALL SLEEVES, PADS, DEPRESSIONS, OPENINGS, ETC.
3. DIMENSIONS ARE NOT TO BE DERIVED BY SCALING THESE DRAWINGS FOR LOCATIONS, QUANTITY TAKEOFFS, MATERIAL SIZES, ETC.
4. IF ANY BIDDER OR CONTRACTOR IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE DOCUMENTS, THEY SHALL REQUEST AN INTERPRETATION FROM THE ARCHITECT AND ENGINEER IN WRITING.

SUBMITTALS

- 1. THE CONTRACT DOCUMENTS ARE THE STRUCTURAL ENGINEER'S INSTRUMENTS OF SERVICE TO CONVEY DESIGN INTENT. THEY ARE NOT TO BE CONSIDERED FABRICATION OR LAYOUT DRAWINGS.
2. THE FOLLOWING ARE REQUIRED SUBMITTALS:
A. CONTRACTOR'S SCHEDULE OF STRUCTURAL SUBMITTALS (SEE NOTE #4 BELOW)
B. CONCRETE MIX DESIGN(S)
C. REINFORCING BAR DRAWINGS
D. MASONRY MATERIAL CERTIFICATES, ACCESSORIES, AND GROUT MIX DESIGN
E. STRUCTURAL STEEL
F. METAL DECK
G. STEEL JOISTS
H. LIGHT GAGE METAL FRAMING.
I. OTHER SUBMITTALS AS NOTED ON THE DRAWINGS AND SPECIFICATIONS.
3. SHOP DRAWINGS SHALL INCLUDE COMPLETE DETAILS AND SCHEDULES FOR FABRICATION AND ASSEMBLY OF MEMBERS, ACCESSORIES AND PROCEDURES AS REQUIRED TO CONSTRUCT PER THE CONTRACT DOCUMENTS.
4. FOR REVIEW OF EACH SUBMITTAL, THE SCHEDULE SHALL ALLOW FOR TEN BUSINESS DAYS FOLLOWING ENGINEER'S RECEIPT.
5. THE CONTRACTOR IS RESPONSIBLE FOR ASSURING THAT SUBMITTALS COMPLY WITH THE LATEST PROJECT PLANS SPECIFICATIONS, GOVERNING CODES AND REGULATIONS, AND IS SOLELY RESPONSIBLE FOR CONFIRMING ALL QUANTITIES, DIMENSIONS, FABRICATION TECHNIQUES AND COORDINATING WORK WITH OTHER TRADES.
6. SUBMITTALS SHALL BE SUPPLIED ELECTRONICALLY (PDF OR TIF FORMAT) FOR THE STRUCTURAL ENGINEER'S REVIEW.
7. SUBMITTALS NOT TO SCALE MAY BE RETURNED WITHOUT REVIEW, AT THE ENGINEER'S DISCRETION.
8. SUBMITTALS MADE AFTER FABRICATION WILL NOT BE REVIEWED.
9. ANY DEVIATION IN DESIGN, DETAILS, DIMENSIONS, ETC. FROM THE CONSTRUCTION DOCUMENTS SHALL BE CLOUDED ON THE SUBMITTAL AND VERIFICATION OF THE CHANGE SHALL BE REQUESTED.
10. THE ENGINEER WILL NOT REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
11. CHANGES AND ADDITIONS MADE ON RE-SUBMITTALS MUST BE CLEARLY FLAGGED AND NOTED.
12. FOR CRITERIA APPLICABLE TO SHOP DRAWINGS REQUIRING ENGINEERING BY A SPECIALTY ENGINEER, SEE THE FOLLOWING NOTES FOR DELEGATED DESIGN SUBMITTALS AND THE NOTES FOR THE INDIVIDUAL COMPONENTS AND SYSTEMS.

DELEGATED DESIGN SUBMITTALS

- 1. SHOP DRAWINGS AND CALCULATIONS ARE REQUIRED TO BE PREPARED BY THE SPECIALTY ENGINEER (NOT THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD) RESPONSIBLE FOR THE DESIGN OF STRUCTURAL COMPONENTS OR STRUCTURAL SYSTEMS IDENTIFIED BELOW AS A DELEGATED DESIGN SYSTEM.
A. AN EMPLOYEE OR OFFICER OF A FABRICATOR.
B. AN EMPLOYEE OR OFFICER OF AN ENTITY SUPPLYING COMPONENTS TO FABRICATOR.
C. AN INDEPENDENT CONSULTANT RETAINED BY THE FABRICATOR OR HIS SUPPLIER.
D. LICENSED AS A PROFESSIONAL ENGINEER TO PRACTICE IN THE PROJECT JURISDICTION.
2. SUBMISSIONS SHALL BE SUFFICIENT TO CONVEY THE DESIGN INTENT AND ASSUMPTIONS AS DETERMINED BY THE SPECIALTY ENGINEER.
3. DELEGATED DESIGN SYSTEMS SHALL MEET THE REQUIREMENTS OF THE CONSTRUCT DOCUMENTS AS ESTABLISHED BY THE ENGINEER OF RECORD AND/OR THE REFERENCED BUILDING CODES AND DESIGN STANDARDS.
4. CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCTS UTILIZED.
5. COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS.
6. CATALOG INFORMATION ON STANDARD PRODUCTS DOES NOT REQUIRE THE SEAL OF A SPECIALTY ENGINEER.
7. REVIEW BY ARCHITECT/STRUCTURAL ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO VERIFYING THE FOLLOWING:
A. SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
B. STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE SPECIALTY ENGINEER.
C. SPECIALTY ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA.
D. THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS.

FOUNDATIONS & EXCAVATIONS

- 1. ALLOWABLE SOIL BEARING PRESSURE IS 2000 PSF MINIMUM, PER GEOTECHNICAL REPORT BY CMT LABORATORIES, INC., PROJECT NUMBER 2223000, DATED DECEMBER 5, 2022.
2. EXTERIOR FOOTINGS SHALL BEAR A MINIMUM 3'-6" BELOW FINISH GRADE, STEPPED DOWN AS NECESSARY TO AVOID UTILITY INTERFERENCE.
3. A REGISTERED GEOTECHNICAL ENGINEER REPRESENTING THE OWNER SHALL BE PRESENT TO MONITOR COMPACTION AND SETTLEMENT AND VERIFY THE BEARING CAPACITY.
4. BACKFILL MATERIAL FOR STRUCTURES SHALL BE PER THE GEOTECHNICAL REPORT AND RECOMMENDATIONS OF THE ON-SITE GEOTECHNICAL ENGINEER.
5. BACKFILLING SHALL BE PERFORMED IN EQUAL LIFTS AROUND THE BUILDING PERIMETER TO BALANCE LATERAL EARTH PRESSURE ON THE BUILDING.
6. BACKFILL LIFT HEIGHT SHALL NOT EXCEED 8" LOOSE THICKNESS FOR HEAVY MECHANICAL COMPACTION AND 4" FOR MECHANICAL HAND METHODS.
7. BACKFILL AGAINST STRUCTURAL WALLS SHALL NOT BE PERFORMED UNTIL WALL AND SLAB ON GRADE HAS OBTAINED SPECIFIED STRENGTH.
8. IF REQUIRED BY THE GEOTECHNICAL REPORT OR THE ON-SITE GEOTECHNICAL ENGINEER, THE GROUND WATER TABLE SHALL BE LOWERED.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES AND TRENCHES.
10. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL IN WRITING.
11. PRIOR TO EXCAVATION OR DEMOLITION, NOTIFY THE LOCAL ONE-CALL SYSTEM TO LOCATE AND IDENTIFY UNDERGROUND UTILITIES AND FACILITIES.
12. INSPECTIONS ARE REQUIRED FOR EXISTING SOILS CONDITIONS, FILL PLACEMENT, AND LOAD BEARING REQUIREMENTS.

CONCRETE

- 1. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE CODE REFERENCED EDITION OF ACI-318: "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
2. CONCRETE MIX DESIGN REQUIREMENTS AND COMPRESSIVE STRENGTH AT 28 DAYS:

Table with 7 columns: DESCRIPTION, 28 DAY STRENGTH (PSI), WEIGHT PER CUBIC FOOT (PCF), SLUMP AT POINT OF PLACEMENT, AGGREGATE, AIR ENTRAINMENT, EXPOSURE. Rows include FOOTINGS AND FOUNDATION WALLS, SLAB ON GRADE, SIDEWALKS, COMPOSITE FLOOR TOPPING (NORMAL WEIGHT), and COMPOSITE FLOOR TOPPING (LIGHT WEIGHT).

- A. EXPOSURE CATEGORY PER ACI318 REQUIREMENTS FOR SPECIFIC EXPOSURE CATEGORY.
B. USE REGULAR WEIGHT CONCRETE WITH TYPE 1 OR TYPE 2 CEMENT PER ASTM C150.
C. CEMENTITIOUS MATERIAL CONTENT SHALL BE PROPORTIONED TO MEET ACI REQUIREMENTS FOR EXPOSURE.
D. WATER SHALL BE POTABLE PER ASTM C94.
E. AIR-ENTRAINED CONCRETE SHALL NOT RECEIVE A STEEL TROWEL FINISH.
F. CONCRETE ADMIXTURES TO ACHIEVE SPECIFIED PERFORMANCE REQUIREMENTS WILL BE REVIEWED WHEN INCLUDED AS PART OF THE CONCRETE MIX DESIGN SUBMITTAL.
G. CONCRETE MIX SUBMITTAL SHALL INCLUDE TEST DATA FOR EACH SUBMITTED MIX DESIGN TO MEET THE ACI 318 REQUIREMENTS FOR MIX PROPORTIONING BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES.
H. WITHOUT WRITTEN APPROVAL FROM THE ENGINEER OF RECORD, CHLORIDES OR ADMIXTURES CONTAINING CHLORIDES SHALL NOT BE INCLUDED AS PART OF THE CONCRETE MIX DESIGN.
3. LOCATION OF ALL CONSTRUCTION AND CONTROL JOINTS SHALL BE SUBMITTED FOR REVIEW PRIOR TO PLACEMENT OF REINFORCEMENT AND CONCRETE.
4. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/4" CHAMFER, UNLESS NOTED OTHERWISE WITHIN THE DRAWING PACKAGE.
5. COORDINATE EMBEDDED ITEMS WITH OTHER TRADES PRIOR TO CONCRETE POUR.
6. SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER SHOWING PROPOSED LOCATIONS OF ANY MATERIAL SUCH AS BUT NOT LIMITED TO CONDUITS, EMBEDMENTS, OR FIXTURES TO BE PLACED INSIDE ANY STRUCTURAL CONCRETE MEMBER.
7. CONCRETE SLAB FLATNESS AND LEVELNESS TOLERANCES SHALL BE IN CONFORMANCE WITH ACI 117, AND SHALL BE SPECIFIED BY THE OWNER.

Table with 3 columns: Item, TOTAL AREA, MINIMUM LOCAL F NUMBER. Rows include SLAB ON GRADE and ELEVATED SLAB.

- ELEVATED SLABS SHALL BE POURED TO THICKNESS AS INDICATED ON THE DRAWINGS.
8. PROVIDE VERTICAL DOVETAIL SLOTS @ 24" ON CENTER IN ALL CONCRETE WALLS WITH MASONRY VENEER.
9. IN ADDITION TO ACI 318 THE FOLLOWING PROCEDURES FOR CONCRETE CONSTRUCTION INCLUDING REINFORCING AND EMBEDDED ITEMS SHALL MEET THE REQUIREMENTS OF THE REFERENCED CODE SECTIONS.
PROCEDURE REFERENCE SECTION
PREPARATION ACI 304 - "GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
CONVEYING ASTM C685 - STANDARD SPEC FOR CONCRETE MADE BY VOLUMETRIC BATCHING
DEPOSITING ASTM C94 - STANDARD SPEC FOR READY-MIXED CONCRETE
CONSOLIDATION ACI 309 - "GUIDE FOR CONSOLIDATION OF CONCRETE"
CURING ACI 308 - "STANDARD PRACTICE FOR CURING CONCRETE"
HOT WEATHER CONCRETING ACI 305 - "HOT WEATHER CONCRETING"
COLD WEATHER CONCRETING ACI 306 - "COLD WEATHER CONCRETING"
CONSTRUCTION TOLERANCES ACI 117 - "TOLERANCES FOR CONCRETE CONSTRUCTION & MATERIALS"
FOR CONCRETE WITH FIBER REINFORCING ACI 544.3R - "GUIDE FOR SPECIFYING, PROPORTIONING, AND PRODUCTION OF FIBER-REINFORCED CONCRETE"

- 10. ADMIXTURES SHALL CONFORM TO THE FOLLOWING:
A. WATER REDUCTION AND SETTING TIME MODIFICATION: ASTM C494
B. PRODUCING FLOWING CONCRETE: ASTM C1017
C. AIR ENTRAINMENT: ASTM C260
D. INHIBITING CHLORIDE-INDUCED CORROSION: ASTM C1582
11. NOMINAL MAXIMUM SIZE OF COARSE AGGREGATE NOT TO EXCEED THE LEAST OF:
A. ONE-FIFTH THE NARROWEST DIMENSION BETWEEN SIDES OF FORMS
B. ONE-THIRD THE DEPTH OF SLABS
C. THREE-FOURTHS THE MINIMUM SPECIFIED CLEAR SPACING BETWEEN INDIVIDUAL BARS
12. CONCRETE MIXTURE PROPORTIONS SHALL BE ESTABLISHED IN ACCORDANCE WITH ARTICLE 4.2.3 OF ACI 301.
THE CONCRETE MATERIALS USED TO DEVELOP THE CONCRETE MIXTURE PROPORTIONS SHALL CORRESPOND TO THOSE SPECIFIED HEREIN.
DOCUMENTATION OF CONCRETE MIXTURE CHARACTERISTICS SHALL BE SUBMITTED FOR REVIEW BEFORE THE MIXTURE IS USED AND BEFORE MAKING CHANGES TO MIXTURES IN USE.
EVIDENCE OF THE PROPOSED MIXTURE TO COMPLY WITH THE CONCRETE MIXTURE REQUIREMENTS IN THE CONSTRUCTION DOCUMENTS SHALL BE INCLUDED IN THE SUBMITTAL.
THE PROPOSED MIXTURE DESIGN SHALL BE BASED ON LABORATORY TRIAL BATCH OR FIELD TEST RECORDS THAT REPRESENT CONDITIONS SIMILAR TO THEIR USE IN THE PROJECT.
13. FORMWORK CONSTRUCTION SHALL CONSIDER METHOD AND RATE OF CONCRETE PLACEMENT, CONSTRUCTION LOADS, INCLUDING VERTICAL, HORIZONTAL AND IMPACT, AND AVOIDANCE OF DAMAGE TO PREVIOUSLY CONSTRUCTED MEMBERS.
FORMWORK FABRICATION AND INSTALLATION SHALL RESULT IN A FINAL STRUCTURE THAT CONFORMS TO SHAPED, LINES, AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS.
FORMWORK SHALL BE SUFFICIENTLY TIGHT TO INHIBIT LEAKAGE OF PASTE OR MORTAR.
FORMWORK SHALL BE BRACED OR TIED TOGETHER TO MAINTAIN POSITIVE AND SHAPE.
14. CAST IN ANCHORS SHALL BE SECURELY POSITIONED IN THE FORMWORK AND ORIENTED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.

HLA HOFFMAN LEAKEY ARCHITECTS LLC

101 NORTH SPRING STREET BELLEFONTE, PA 16823 PH: 814.466.7811



REESE HACKMAN

Architectural Engineering Technology Solutions Lighting Design

2021 Pine Hall Road, State College, PA 814.234.2548 reesehackman.com

STAHL SHEAFFER ENGINEERING



SUBMISSIONS

60% CONSTRUCTION DOCUMENTS 01.13.2023

SEAL

22-17 NTH - PHYSICAL PLANT

SCASD PHYSICAL PLANT BUILDING WESTERLY PARKWAY STATE COLLEGE, PA 16801



STATE COLLEGE AREA SCHOOL DISTRICT 131 WEST NITTANY AVENUE STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

GENERAL NOTES

S001



RESE
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ENGINEERING



SUBMISSIONS

60%
CONSTRUCTION
DOCUMENTS
01.13.2023

SEAL

22-17 NTH - PHYSICAL
PLANT

SCASD PHYSICAL PLANT
BUILDING
WESTERLY PARKWAY
STATE COLLEGE, PA 16801

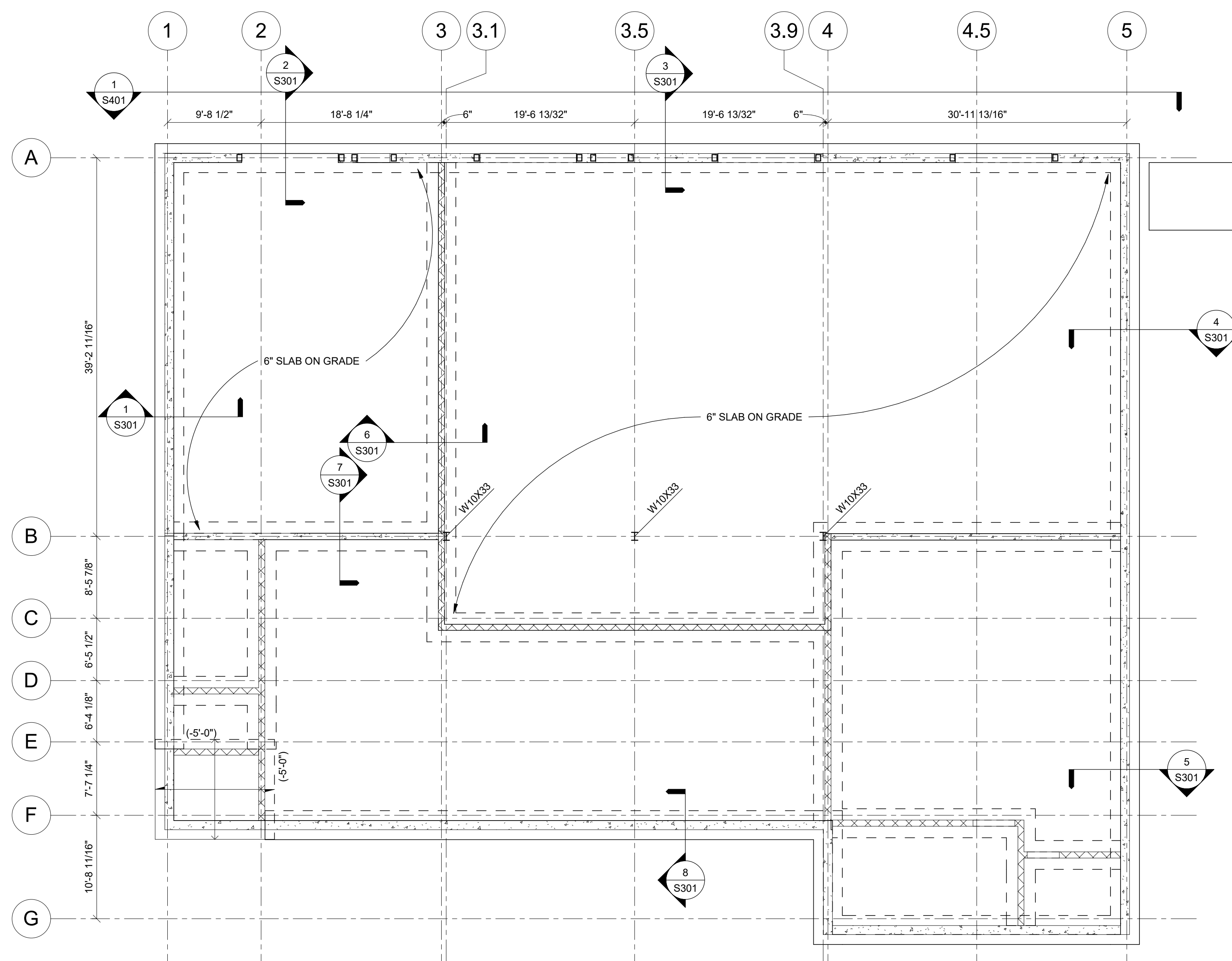


STATE COLLEGE AREA SCHOOL
DISTRICT
131 WEST NITTANY AVENUE
STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

FOUNDATION
LEVEL

S101



FOUNDATION AND GROUND FLOOR SLAB-ON-GRADE PLAN NOTES:

- TYPICAL SLAB-ON-GRADE CONSTRUCTION:** 4" THICK NORMAL WEIGHT CONCRETE REINFORCED WITH SYNTHETIC MICRO-FIBER AND MACRO-FIBER REINFORCEMENT, TYPICAL UNLESS NOTED OTHERWISE ON PLAN.
ALL SLABS SHALL BE ON VAPOR BARRIER OVER 6" MINIMUM COMPACTED FREE DRAINING GRANULAR BASE COURSE COMPLYING WITH #57 STONE OR ENGINEER APPROVED EQUIVALENT.
PROVIDE 10 MIL ASTM E1745 CLASS A VAPOR BARRIER (TAPE ALL SEAMS AND SEAL TO FOUNDATION WALL USING TERMINATION BAR AND TAPE) BELOW SLAB.
PROVIDE SAWED CONTRACTION OR CONSTRUCTION JOINTS IN SLABS ON GRADE SPACED AT 12' OC MAXIMUM EACH DIRECTION AND REFER TO TYPICAL DETAIL - SLAB-ON-GRADE FOR ADDITIONAL INFORMATION.
- TOP OF SLAB = 0'-0" (REFERENCE, ACTUAL = 1123'-2", REFER TO SITE/CIVIL). TYPICAL UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR SLAB SLOPES TO DRAINS, AS REQUIRED.
- ALL ELEVATIONS SHOWN ON PLAN AND IN SECTIONS OR DETAILS REFERENCE THE TOP OF SLAB ELEVATION OF 0'-0".
- ELEVATIONS SHOWN ON PLAN THUS (± xx'-x") ARE TOP OF FOOTING AND ELEVATIONS RELATIVE TO THE REFERENCE ELEVATION OF 0'-0".
TOP OF EXTERIOR FOOTINGS = -3'-4", UNLESS NOTED OTHERWISE.
TOP OF INTERIOR FOOTINGS = -1'-4", UNLESS NOTED OTHERWISE.
- ALL FOOTINGS SHALL BEAR MINIMUM AT OR BELOW FROST DEPTH (REFER TO STRUCTURAL NOTES) RELATIVE TO FINISH GRADE. CONTRACTOR SHALL COORDINATE THE LOCATIONS OF STEPPED FOOTINGS OR WALL PENETRATIONS AT BELOW GRADE UTILITIES WITH SITE/CIVIL, PLUMBING, MECHANICAL, AND ELECTRICAL CONTRACTORS. COORDINATE CONSTRUCTION OF FOUNDATIONS AND ASSOCIATED FOOTING STEPS WITH THE TYPICAL DETAIL - FOOTING STEP, AS REQUIRED, FOR LOCATIONS SHOWN OR NOT SHOWN ON DRAWINGS.
- REFER TO SCHEDULES FOR MASONRY WALLS, CONCRETE PIERS (SHOWN AS Px ON PLAN), SPREAD FOOTINGS (SHOWN AS Ex ON PLAN). REFER TO TYPICAL DETAILS, STRUCTURAL NOTES, AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- PROVIDE ACI CLASS B LAP SPLICE FOR ALL STEEL REINFORCING BARS IN CONCRETE. REFER TO GENERAL NOTES FOR REINFORCEMENT LAP IN STRUCTURAL MASONRY.
- PROVIDE #4 @ 24" OC REINFORCING BARS IN ALL INTERIOR AND EXTERIOR CMU WALLS SHOWN ON THE STRUCTURAL DRAWINGS UNLESS A GREATER AMOUNT IS INDICATED ON PLAN OR IN SECTIONS. REFER TO STRUCTURAL NOTES AND DETAILS FOR ADDITIONAL WALL REINFORCEMENT REQUIREMENTS.
- PROVIDE SLEEVES FOR ALL PIPES THROUGH FOUNDATION WALLS AND FOR ALL PIPES 12 INCHES OR LESS BELOW WALL FOOTINGS AS INDICATED IN THE TYPICAL DETAIL - PIPE THROUGH FOUNDATION WALL AND TYPICAL DETAIL - PIPE UNDER FOOTING.
- PROVIDE ADDITIONAL REINFORCING BARS IN SLAB AT ALL DISCONTINUOUS JOINTS AND RE-ENTRANT CORNERS PER THE TYPICAL DETAIL - RE-ENTRANT CORNER AND DISCONTINUOUS JOINTS IN SLAB-ON-GRADE.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR INTERIOR WALLS NOT SHOWN, FOR INTERIOR AND EXTERIOR WALL OPENINGS, FOR RECESSED SLAB AREAS, AND FOR ADDITIONAL INFORMATION NOT SHOWN.
- COORDINATE ALL INTERIOR CONCRETE EQUIPMENT HOUSEKEEPING PADS, WHICH MAY BE REQUIRED, WITH EQUIPMENT SUPPLIERS PER TYPICAL DETAIL - EQUIPMENT BASE AT SLAB-ON-GRADE. REFER TO THE CIVIL FOR EXTERIOR EQUIPMENT PADS NOT SHOWN.
- PROVIDE FROST PROTECTION AT ALL EXTERIOR MAN DOORS PER THE TYPICAL DETAIL - FROST SLAB AND WALLS. REFER TO THE ARCHITECTURAL AND SITE DRAWINGS FOR THE NUMBER, SIZES, AND LOCATIONS.
- REFER TO THE ARCHITECTURAL, AND MEP DRAWINGS FOR BELOW GRADE ITEMS, EMBEDMENT ITEMS, AND FOR ADDITIONAL INFORMATION NOT SHOWN. REFER TO THE ARCHITECTURAL DRAWINGS FOR INTERIOR WALLS NOT SHOWN, FOR INTERIOR AND EXTERIOR WALL OPENINGS, FOR STEPPED OR RECESSED SLAB AREAS, AND FOR ADDITIONAL INFORMATION NOT SHOWN.

FLOOR FRAMING PLAN NOTES:

1. **FLOOR CONSTRUCTION:** 3" NORMAL WEIGHT CONCRETE SLAB REINFORCED WITH 6x6-W1.4xW1.4 WIRE MESH REINFORCEMENT ON 2" (20 GAGE, 50 KSI) GALVANIZED WIDE RIB TYPE COMPOSITE STEEL FLOOR DECK (5" TOTAL THICKNESS) TYPICAL, UNLESS NOTED OTHERWISE.

ALL DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS UNLESS SHOWN OTHERWISE.

2. THE TOP OF STEEL OR DECK BEARING ELEVATION SHALL REFERENCE THE TYPICAL TOP OF SLAB-ON-GRADE ELEVATION OF 0'-0" (REFERENCE, SEE FOUNDATION AND SLAB-ON-GRADE PLAN FOR ACTUAL)

TOP OF STEEL / DECK BEARING = 9'-7", TYPICAL UNO
TOP OF CONCRETE WALLS = 10'-0", UNLESS NOTED OTHERWISE.

3. ELEVATIONS SHOWN ON PLAN THUS (± xx'-x") ARE TOP OF STEEL ELEVATIONS FROM THE TYPICAL TOP OF STEEL (DECK BEARING) ELEVATION OF 9'-7".

4. ALL FRAMING MEMBERS SHALL BE EQUALLY SPACED BETWEEN GRID LINES OR AS INDICATED ON PLANS.

5. PROVIDE ADDITIONAL #3 x 8'-0" LONG TOP BARS AT 12" ON CENTER (3/4" CLEAR FROM TOP OF SLAB) CENTERED OVER ALL GIRDERS AND BEAMS ON COLUMN LINES.

6. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR NUMBER, SIZES AND LOCATIONS OF ALL FLOOR OPENINGS SHOWN AND NOT SHOWN. CONTRACTOR SHALL COORDINATE OPENINGS, MEP UNIT SUPPORT FRAMING, AND OPENING FRAMING WITH EQUIPMENT SUPPLIERS AND TYPICAL DETAILS. ALL OPENINGS SHALL BE COORDINATED PRIOR TO CONCRETING SLAB AND SHALL BE PROVIDED WITH ADDITIONAL FRAMING AND POUR STOPS AS NOTED BELOW.

FLOOR OPENINGS LESS THAN 6" IN ANY DIRECTION REQUIRE NO REINFORCEMENT, DECK SUPPLIER SHALL PROVIDE DECK ACCESSORIES AS REQUIRED.

REINFORCE OPENINGS 6" TO 12" IN SIZE WITH LOOSE L2x2x3/16 STEEL ANGLES PLACED TO UNDERSIDE OF DECK, PERPENDICULAR TO THE FLUTES, EXTENDED A MINIMUM OF 12" BEYOND EACH SIDE OF OPENING. WELD OR SCREW EACH END OF ANGLES TO UNDERSIDE OF DECK WITH 1/8" FILLET WELD ALL AROUND OR MINIMUM (3)-#12 SELF-TAPPING METAL SCREWS.

FOR FLOOR OPENINGS LARGER THAN 12" IN ANY DIRECTION: PROVIDE W10x12 MEMBERS BOLTED TO BEAMS OR GIRDERS 4 SIDES OF OPENING, UNLESS NOTED OTHERWISE. FLOOR OPENING BEAMS SHALL BE SET BACK 6" FROM OPENING EDGE. PENETRATIONS SHALL BE COORDINATED WITH MECHANICAL AND STEEL CONTRACTORS AND OPENINGS BLOCKED OUT PRIOR TO POURING CONCRETE PER TYPICAL DETAIL - EDGE OF FLOOR SLAB; CUTTING IN OPENINGS AFTER CONCRETE PLACEMENT IS NOT PERMITTED.

7. REFER TO FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

8. REFER TO SCHEDULE FOR MASONRY WALLS AND REFER TO TYPICAL DETAILS, STRUCTURAL NOTES, AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

LOW ROOF FRAMING PLAN NOTES:

1. **ROOF CONSTRUCTION:** 1 1/2" (20 GAGE, 33 KSI), TYPE B, GALVANIZED WIDE-RIB STEEL ROOF DECK.

ALL DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS UNLESS SHOWN OTHERWISE.

2. THE TOP OF STEEL OR DECK BEARING ELEVATION SHALL REFERENCE THE TYPICAL TOP OF SLAB-ON-GRADE ELEVATION OF 0'-0" (REFERENCE, SEE FOUNDATION AND SLAB-ON-GRADE PLAN FOR ACTUAL),

TOP OF STEEL / DECK BEARING = 13'-10 1/2", TYPICAL UNO

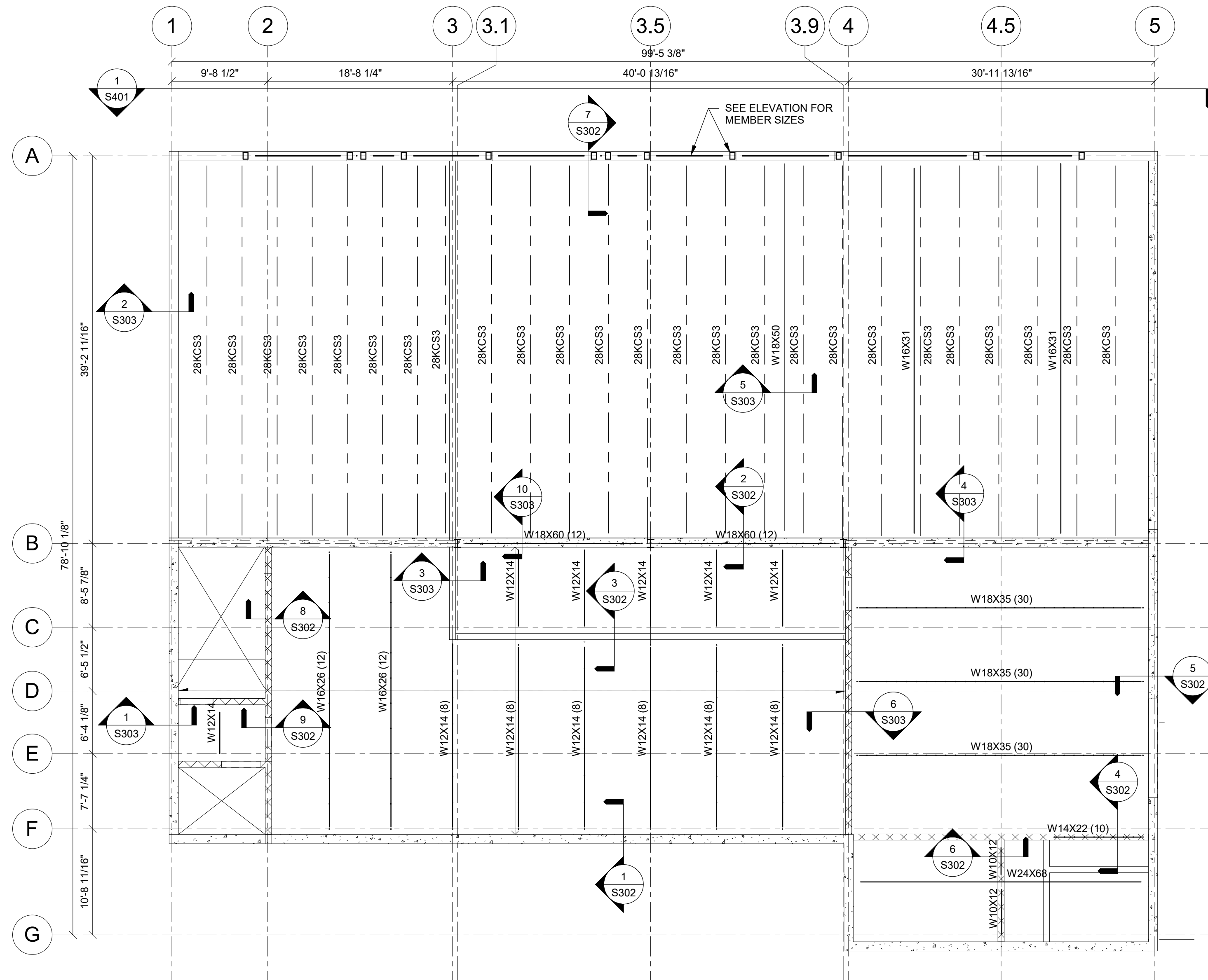
3. ELEVATIONS SHOWN ON PLAN THUS (± xx'-x") ARE TOP OF STEEL ELEVATIONS FROM THE TYPICAL TOP OF STEEL (DECK BEARING) ELEVATION OF 13'-10 1/2".

4. ALL FRAMING MEMBERS SHALL BE EQUALLY SPACED BETWEEN GRID LINES OR AS INDICATED ON PLANS.

5. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR NUMBER, SIZES AND LOCATIONS OF ALL ROOF OPENINGS SHOWN AND NOT SHOWN. CONTRACTOR SHALL COORDINATE OPENINGS, MEP UNIT SUPPORT FRAMING, AND OPENING FRAMING WITH EQUIPMENT SUPPLIERS AND TYPICAL DETAILS.

6. REFER TO FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

7. REFER TO TYPICAL DETAILS, STRUCTURAL NOTES, AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.





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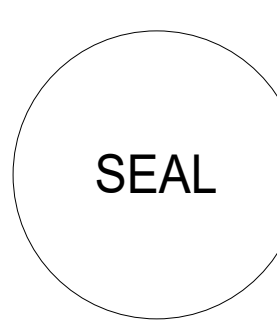
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22-17 NTH - PHYSICAL
PLANT

SCASD PHYSICAL PLANT
BUILDING
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STATE COLLEGE, PA 16801

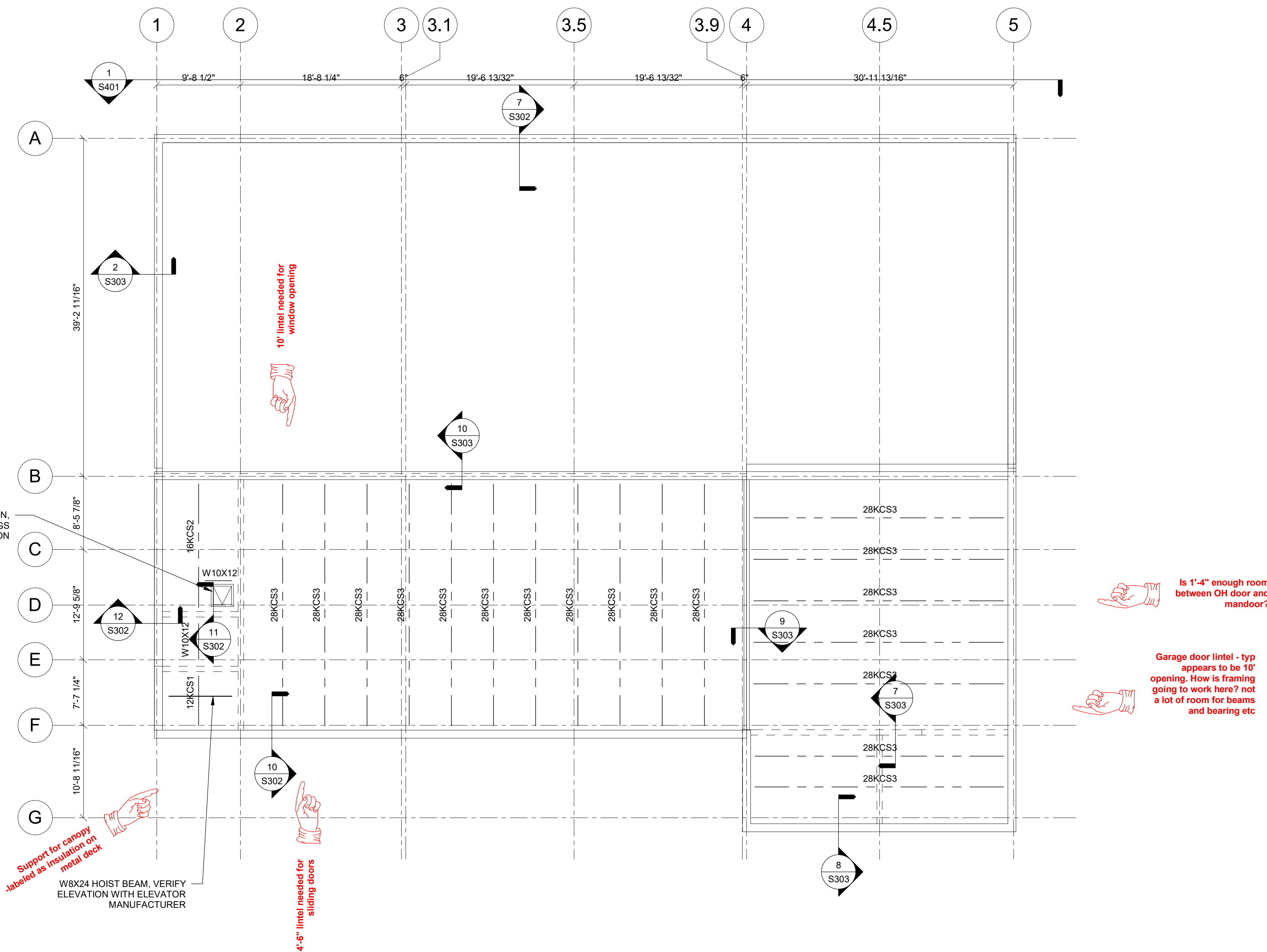


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STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

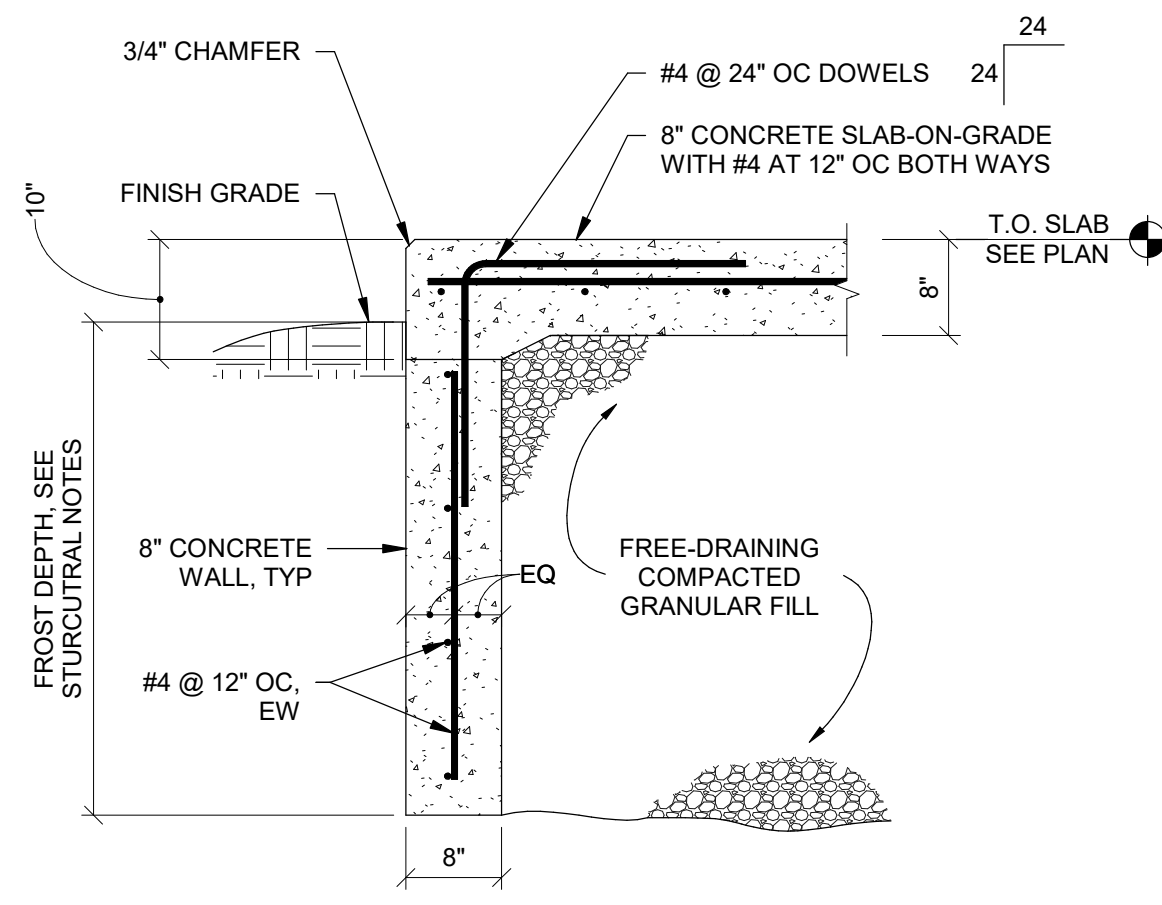
**UPPER ROOF
FRAMING**

S103

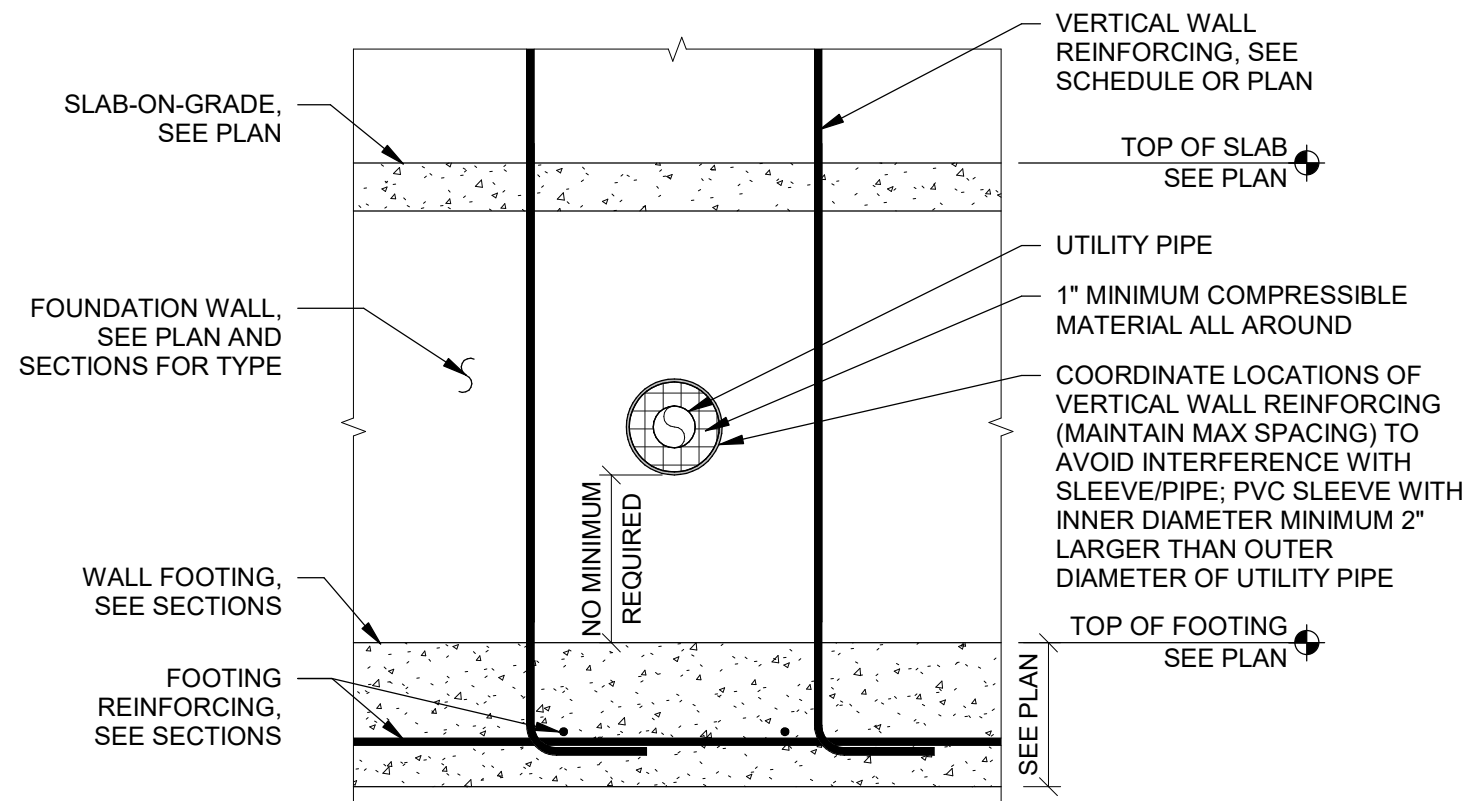


- HIGH ROOF FRAMING PLAN NOTES:**
- ROOF CONSTRUCTION:** 1 1/2" (20 GAGE, 33 KSI), TYPE B, GALVANIZED WIDE-RIB STEEL ROOF DECK.
ALL DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS UNLESS SHOWN OTHERWISE.
 - THE TOP OF STEEL OR DECK BEARING ELEVATION SHALL REFERENCE THE TYPICAL TOP OF SLAB-ON-GRADE ELEVATION OF 0'-0" (REFERENCE, SEE FOUNDATION AND SLAB-ON-GRADE PLAN FOR ACTUAL).
TOP OF STEEL / DECK BEARING = 19'-10 1/2", TYPICAL UNO
 - ELEVATIONS SHOWN ON PLAN THUS (+ xx'-x") ARE TOP OF STEEL ELEVATIONS FROM THE TYPICAL TOP OF STEEL (DECK BEARING) ELEVATION OF 19'-10 1/2".
 - ALL FRAMING MEMBERS SHALL BE EQUALLY SPACED BETWEEN GRID LINES OR AS INDICATED ON PLANS.
 - REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR NUMBER, SIZES AND LOCATIONS OF ALL ROOF OPENINGS SHOWN AND NOT SHOWN. CONTRACTOR SHALL COORDINATE OPENINGS, MEP UNIT SUPPORT FRAMING, AND OPENING FRAMING WITH EQUIPMENT SUPPLIERS AND TYPICAL DETAILS.
 - REFER TO FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
 - REFER TO, TYPICAL DETAILS, STRUCTURAL NOTES, AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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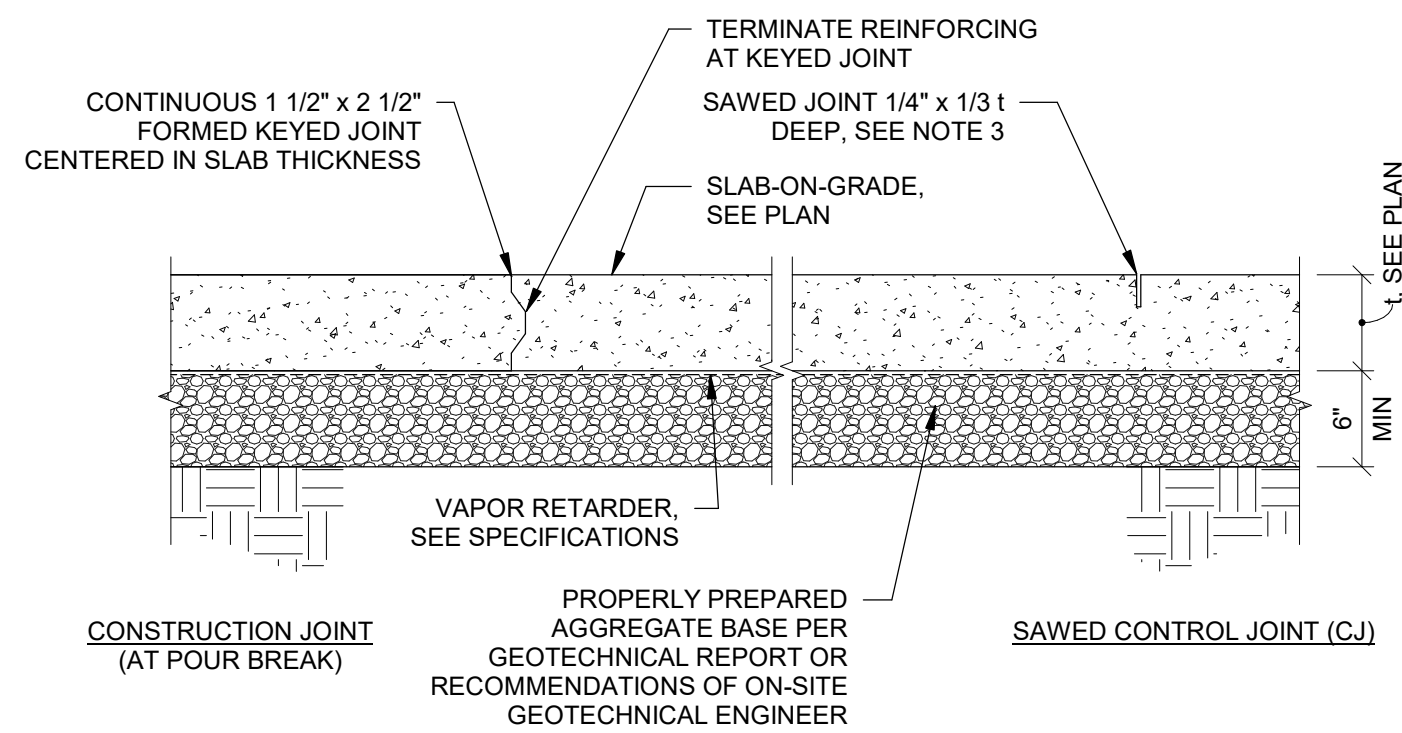


8 TYPICAL DETAIL - EXTERIOR EQUIPMENT FROST SLAB
S201



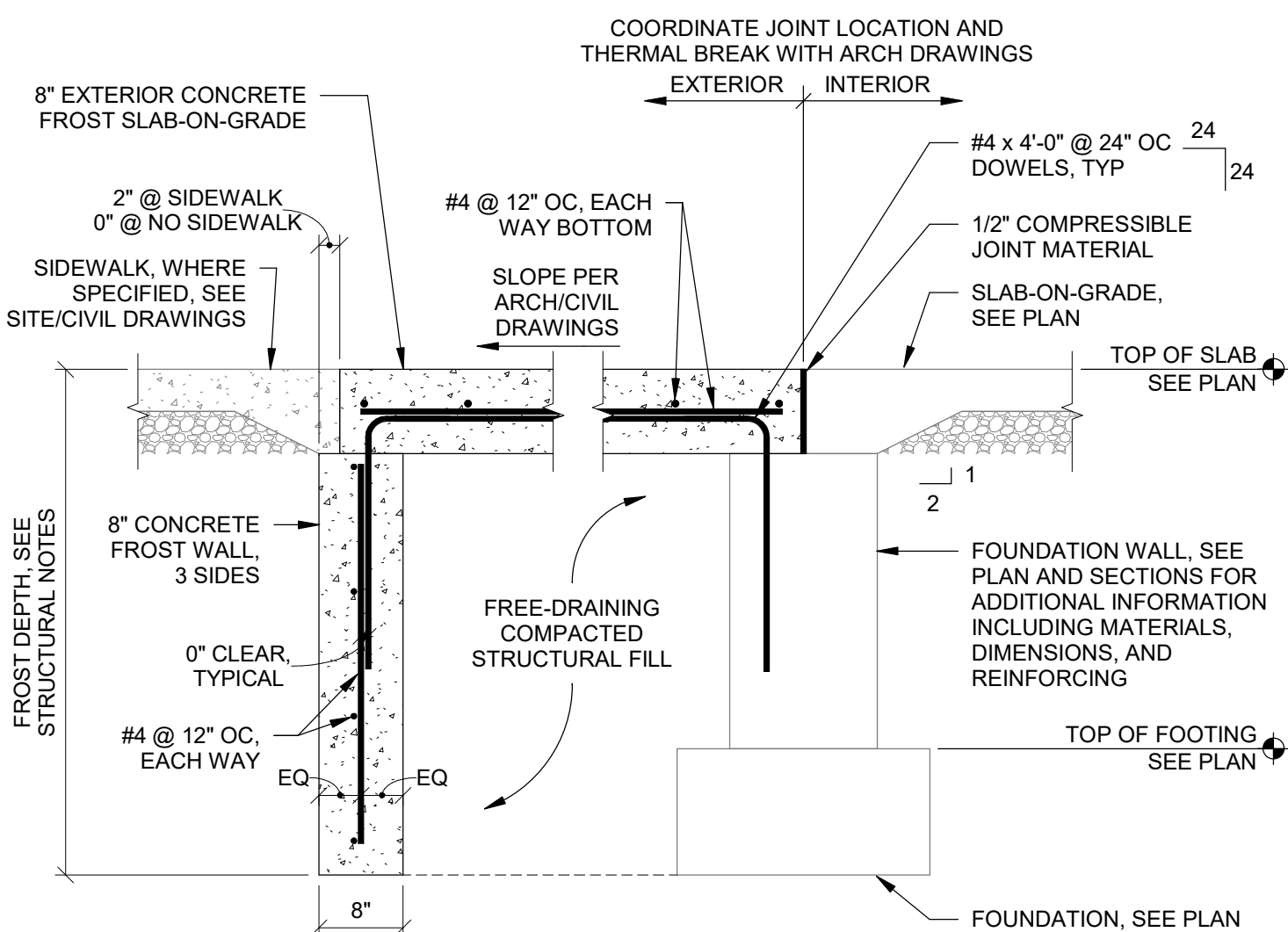
NOTE: WHERE MULTIPLE PIPES ARE PRESENT, CLEAR DISTANCE BETWEEN SLEEVES SHALL BE MINIMUM 2x THE LARGER SLEEVE DIAMETER UNLESS OTHERWISE APPROVED BY ENGINEER. COORDINATE WALL REINFORCING AS REQUIRED.

5 TYPICAL DETAIL - PIPE THROUGH FOUNDATION WALL
S201



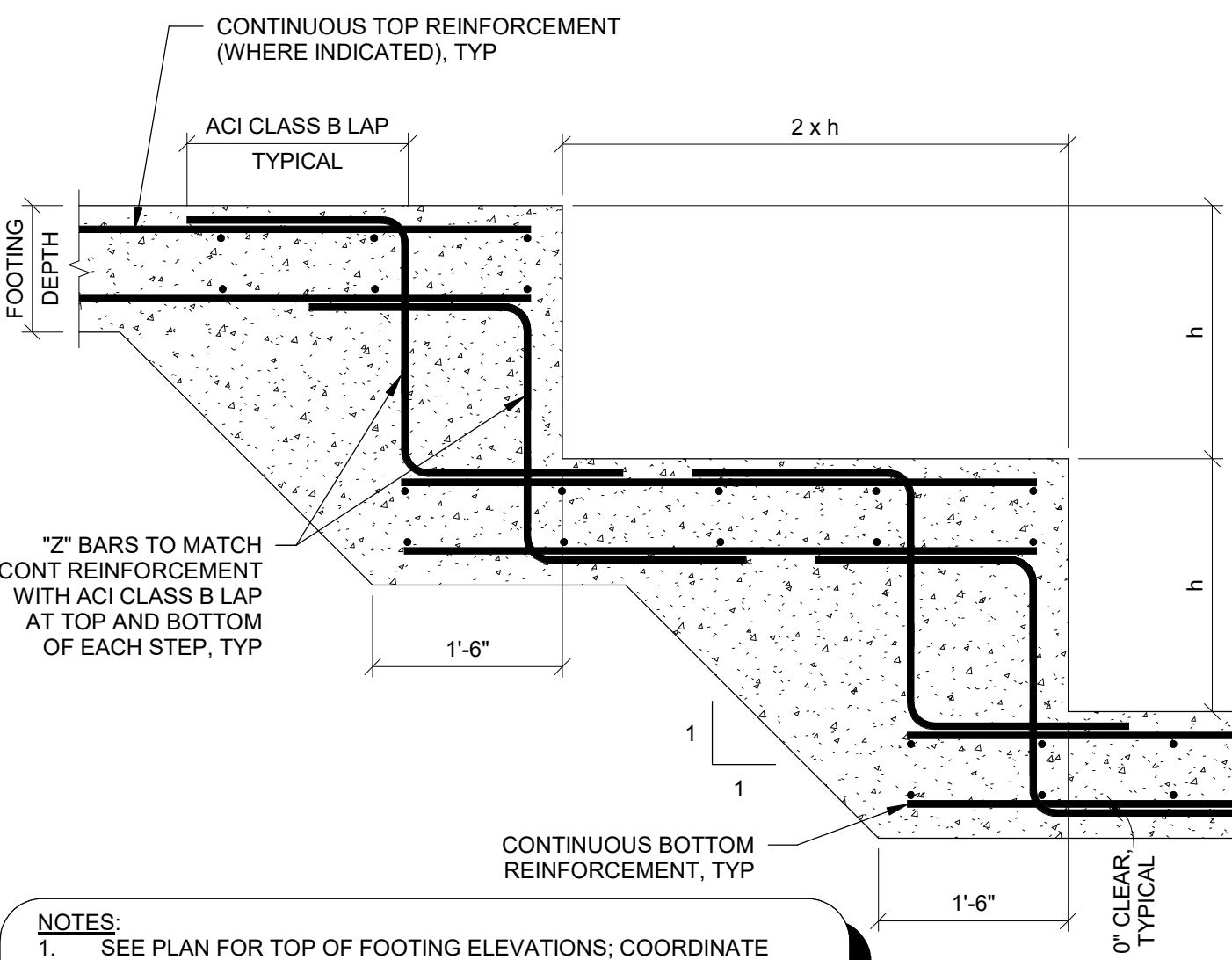
NOTES:
1. 'T' DENOTES SLAB THICKNESS, SEE PLAN NOTES
2. LOCATION OF CONSTRUCTION JOINTS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLAN NOTES AND APPROVED BY THE ENGINEER.
3. MAXIMUM SPACING OF CONSTRUCTION AND/OR CONTROL JOINTS SHALL BE AS INDICATED IN PLAN NOTES. COORDINATE JOINT PATTERNS WITH ARCHITECT WHERE EXPOSED IN FINAL CONSTRUCTION.
4. AFTER FINISHING, SAW CUT CONTROL JOINTS AS SOON AS THE CONCRETE SURFACE IS FIRM ENOUGH NOT TO BE TORN OR DAMAGED BY THE BLADE. REINFORCE SLAB ON GRADE PER PLAN NOTES. REFER TO SECTIONS AND DETAILS FOR ADDITIONAL REINFORCING INCLUDING AT RE-ENTRANT CORNER AND DISCONTINUOUS JOINTS IN SLAB-ON-GRADE.
5. CONTRACTOR OPTION TO USE 1/4" DIAMOND DOWELS @ 18" OC AT CONSTRUCTION JOINTS IN LIEU OF FORMED KEYED JOINT.

2 TYPICAL DETAIL - SLAB-ON-GRADE
S201



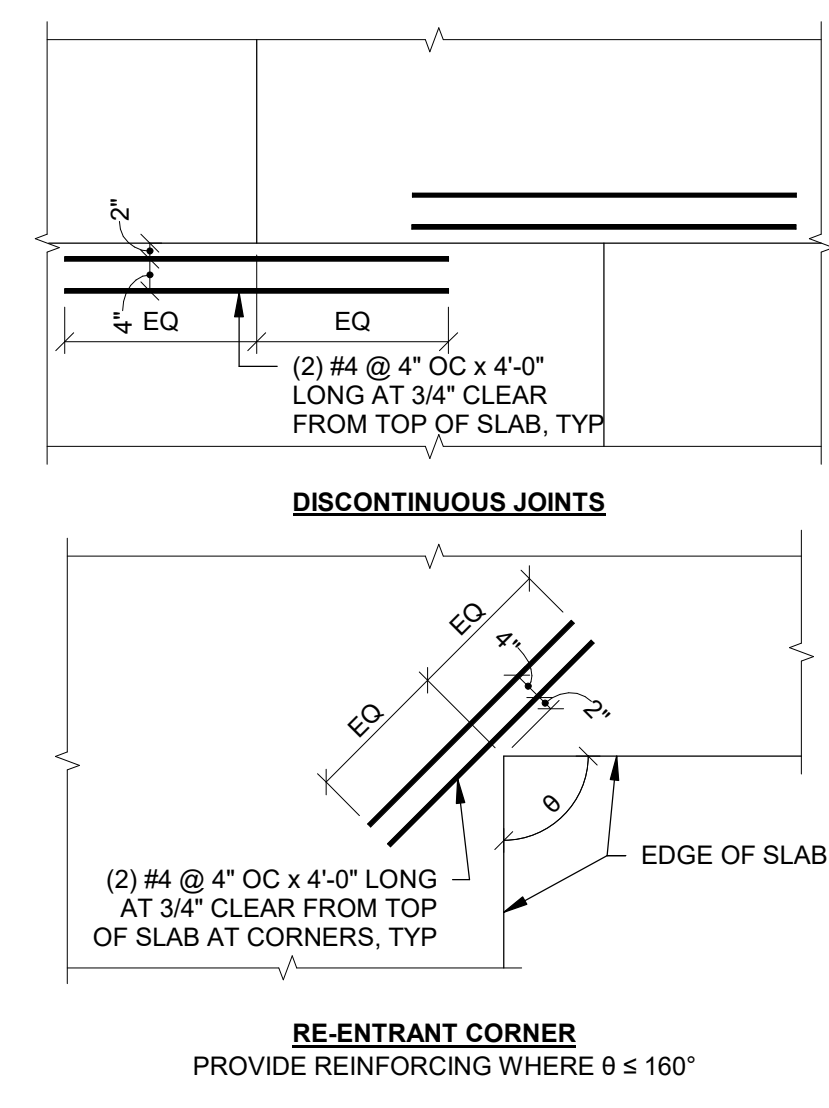
NOTES:
1. SEE CIVIL AND/OR ARCH DRAWINGS FOR REQUIRED PLAN DIMENSIONS NOT SHOWN ON STRUCTURAL FOUNDATION PLANS.
2. ALL REBAR ON EXTERIOR SIDE OF DETAIL SHALL BE EPOXY COATED OR HOT DIPPED GALVANIZED.

6 TYPICAL DETAIL - FROST SLAB AND WALLS
S201

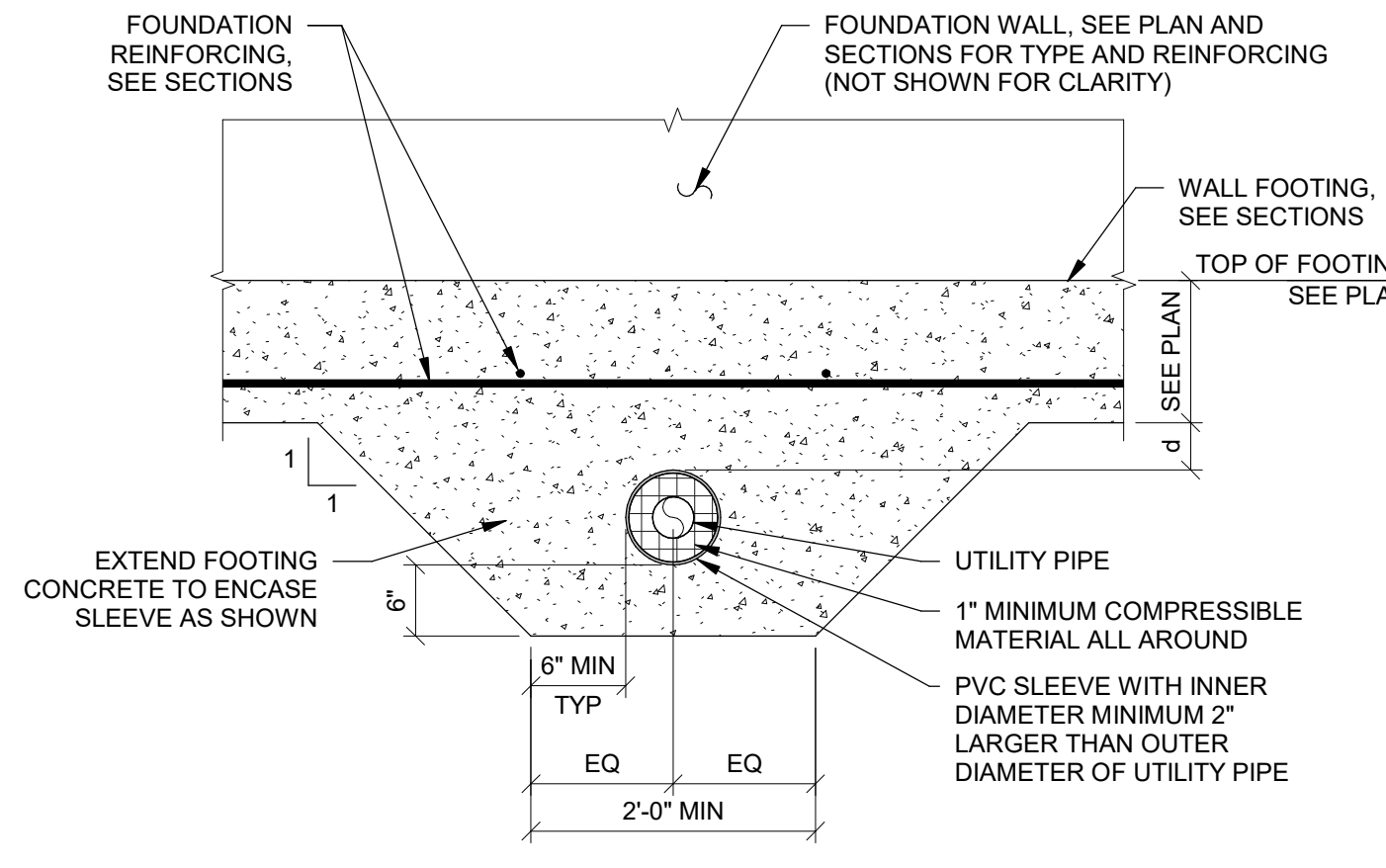


NOTES:
1. SEE PLAN FOR TOP OF FOOTING ELEVATIONS; COORDINATE ADDITIONAL FOOTING STEPS, AS REQUIRED, AT BELOW GRADE UTILITIES OR TO MAINTAIN FROST DEPTH BELOW FINISHED GRADE h = 2'-0" MAX
2. COORDINATE STEP LENGTHS AND DEPTHS, h, IN MASONRY COURSING INCREMENTS IF FOUNDATION WALL IS MASONRY
3. SEE SCHEDULE OR SECTIONS AND DETAILS FOR REINFORCING

3 TYPICAL DETAIL - FOOTING STEP
S201

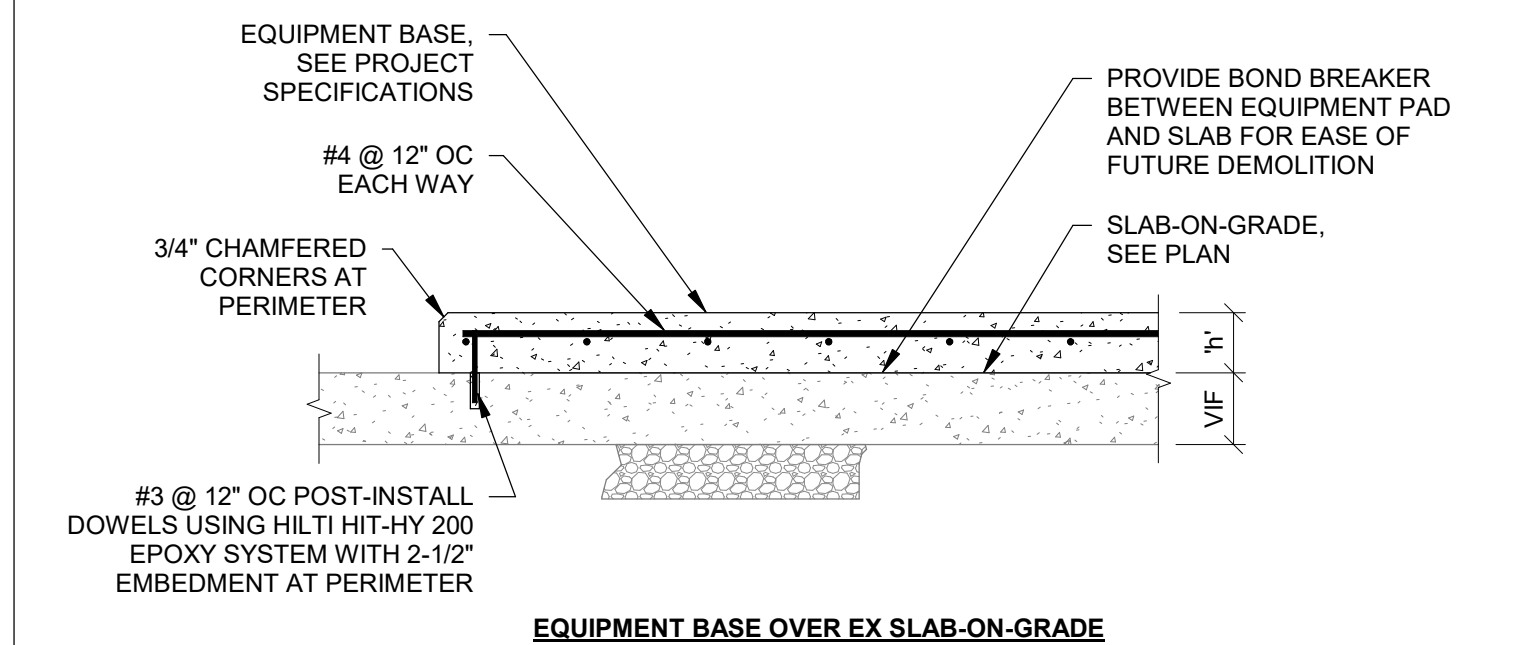
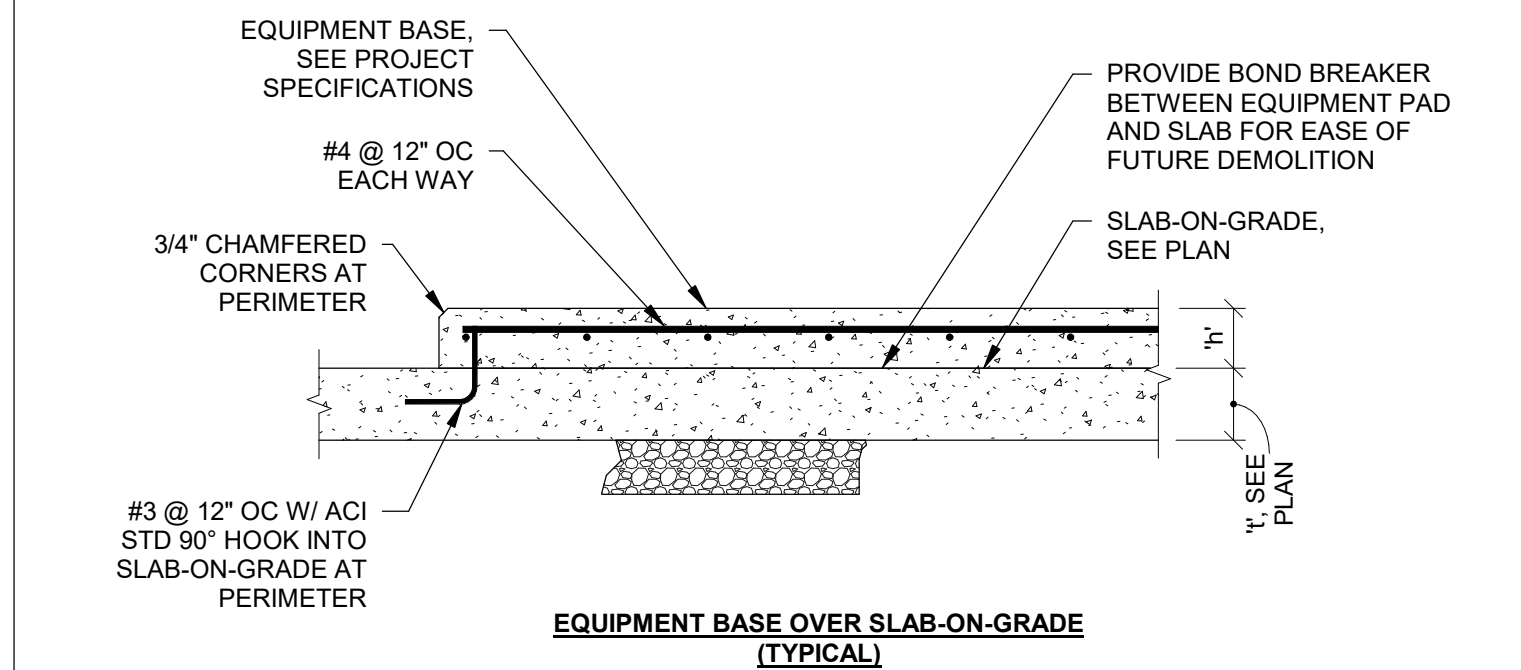
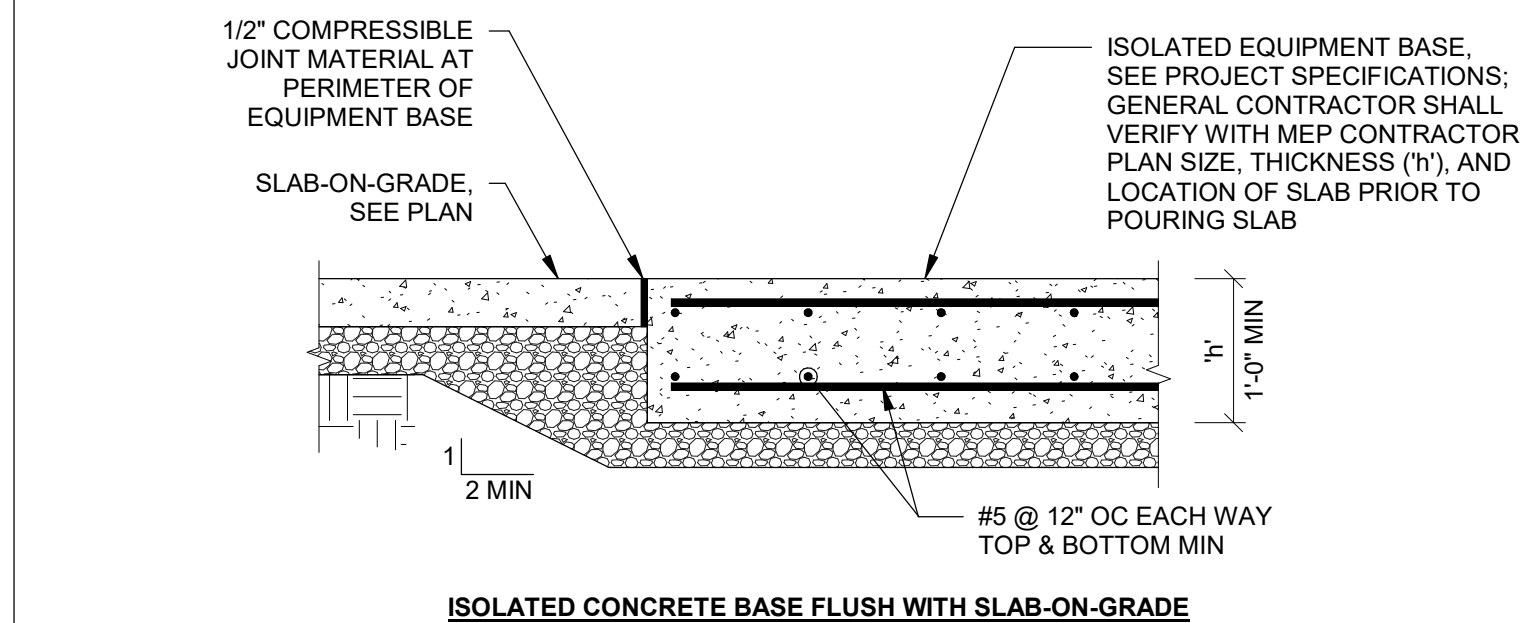
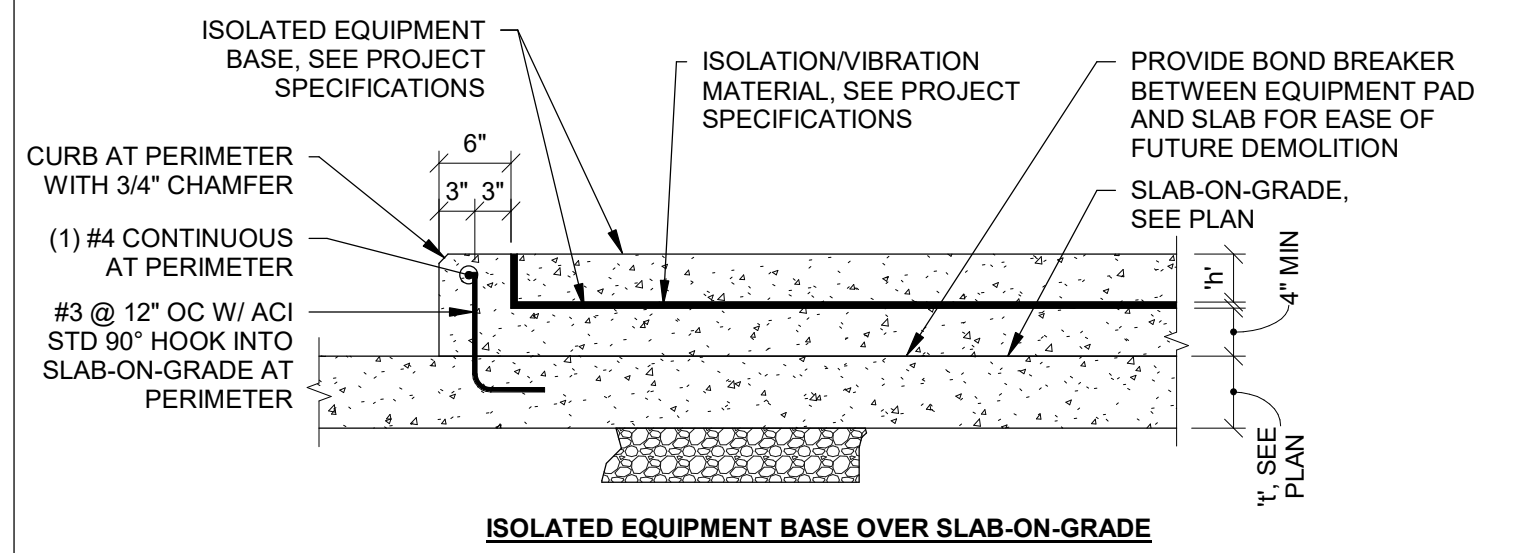


7 TYPICAL DETAIL - RE-ENTRANT CORNER AND DISCONTINUOUS JOINTS IN SLAB-ON-GRADE
S201



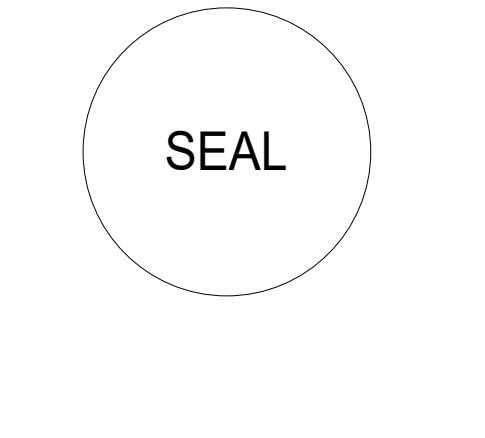
NOTES:
1. PROVIDE DETAIL WHERE 0 INCHES < d ≤ 12 INCHES.
2. WHERE d ≤ 0 INCHES, STEP FOOTING PER TYPICAL DETAIL - FOOTING STEP BELOW PIPE AND SLEEVE PIPE THROUGH WALL PER TYPICAL DETAIL - PIPE THROUGH FOUNDATION WALL
3. WHERE d > 12 INCHES, NO ACTION REQUIRED.
4. WHERE MULTIPLE PIPES ARE PRESENT, CLEAR DISTANCE BETWEEN SLEEVES SHALL BE MINIMUM 2x THE LARGER SLEEVE DIAMETER UNLESS OTHERWISE APPROVED BY ENGINEER.

4 TYPICAL DETAIL - PIPE UNDER FOOTING
S201

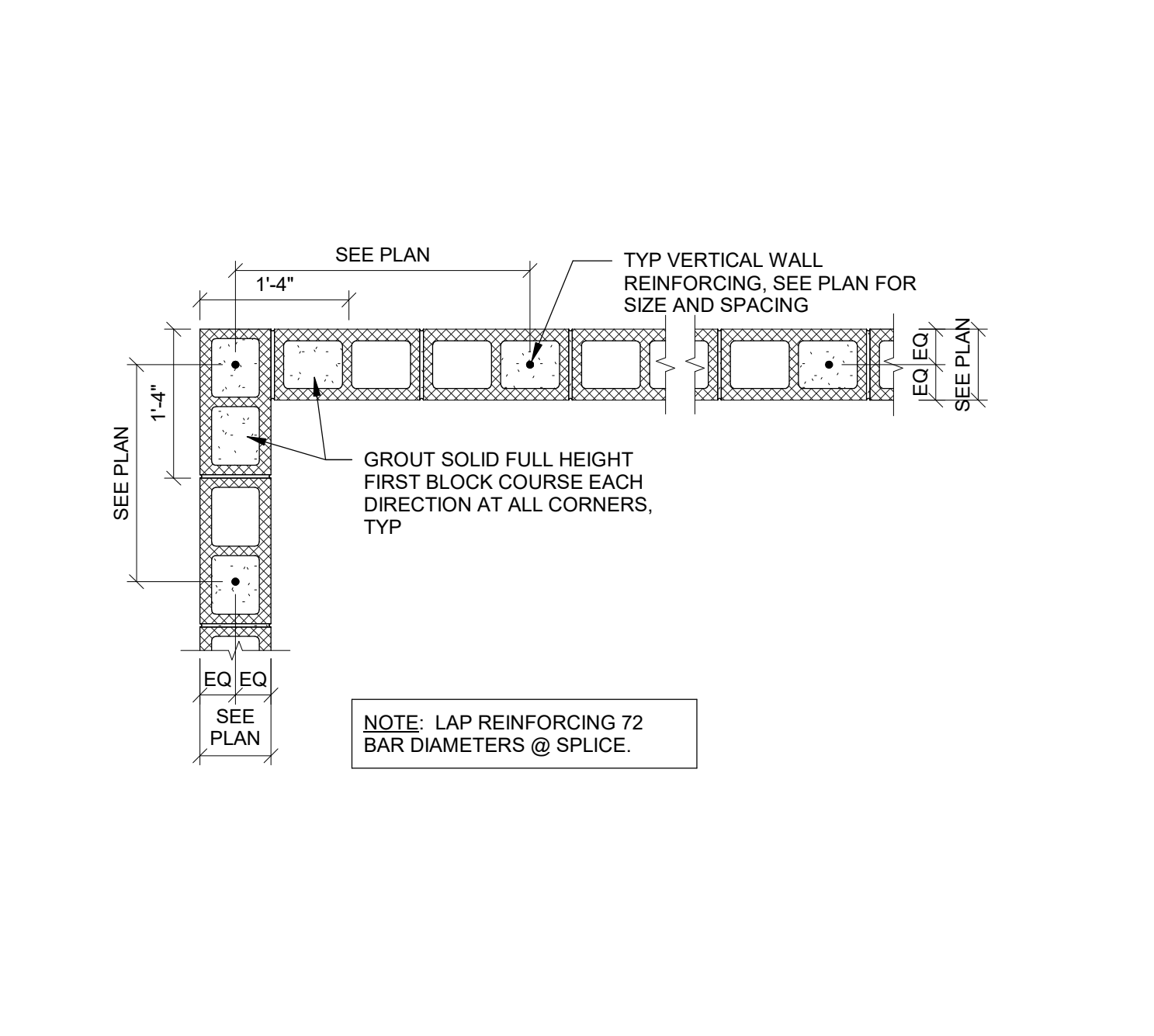
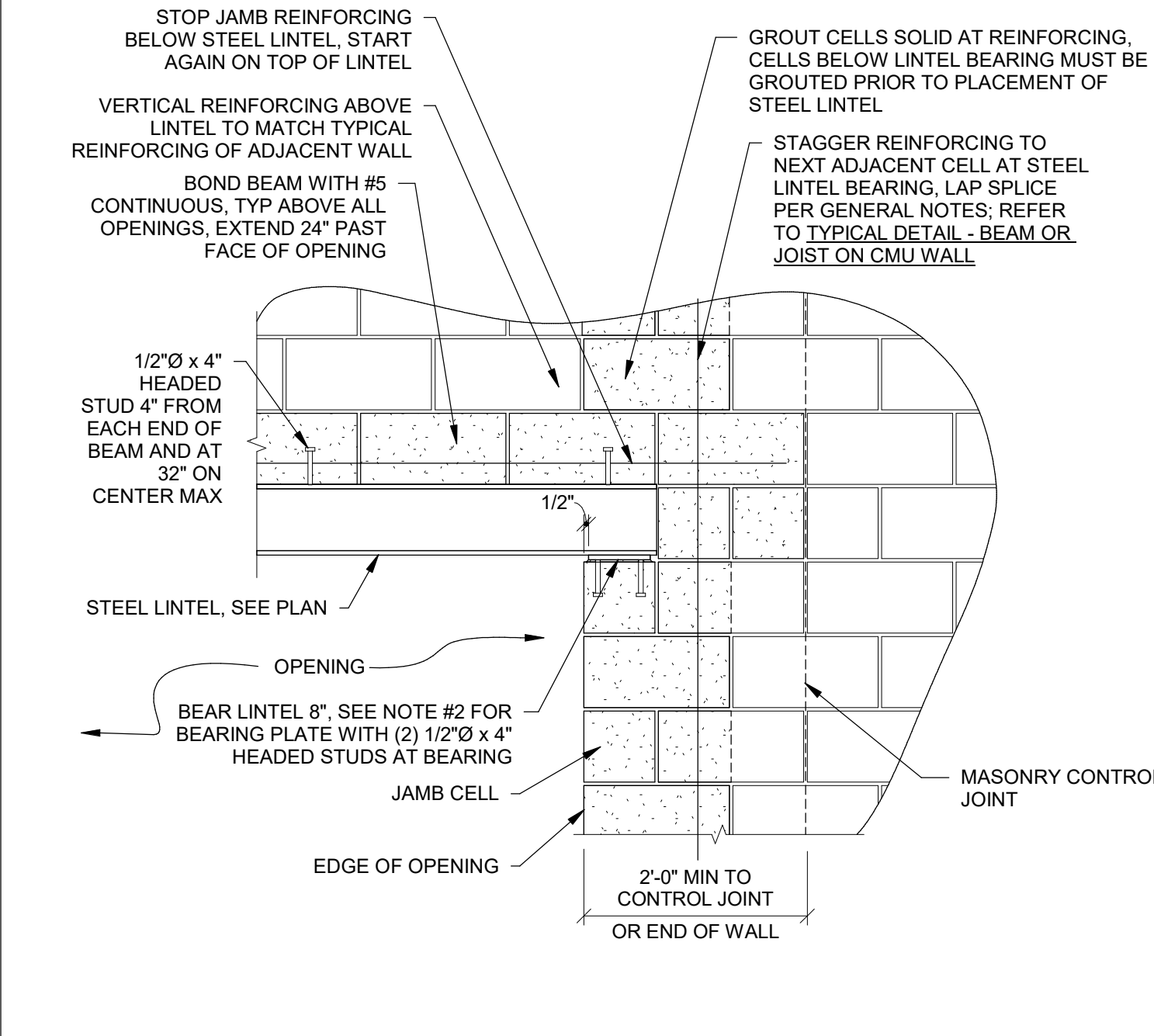
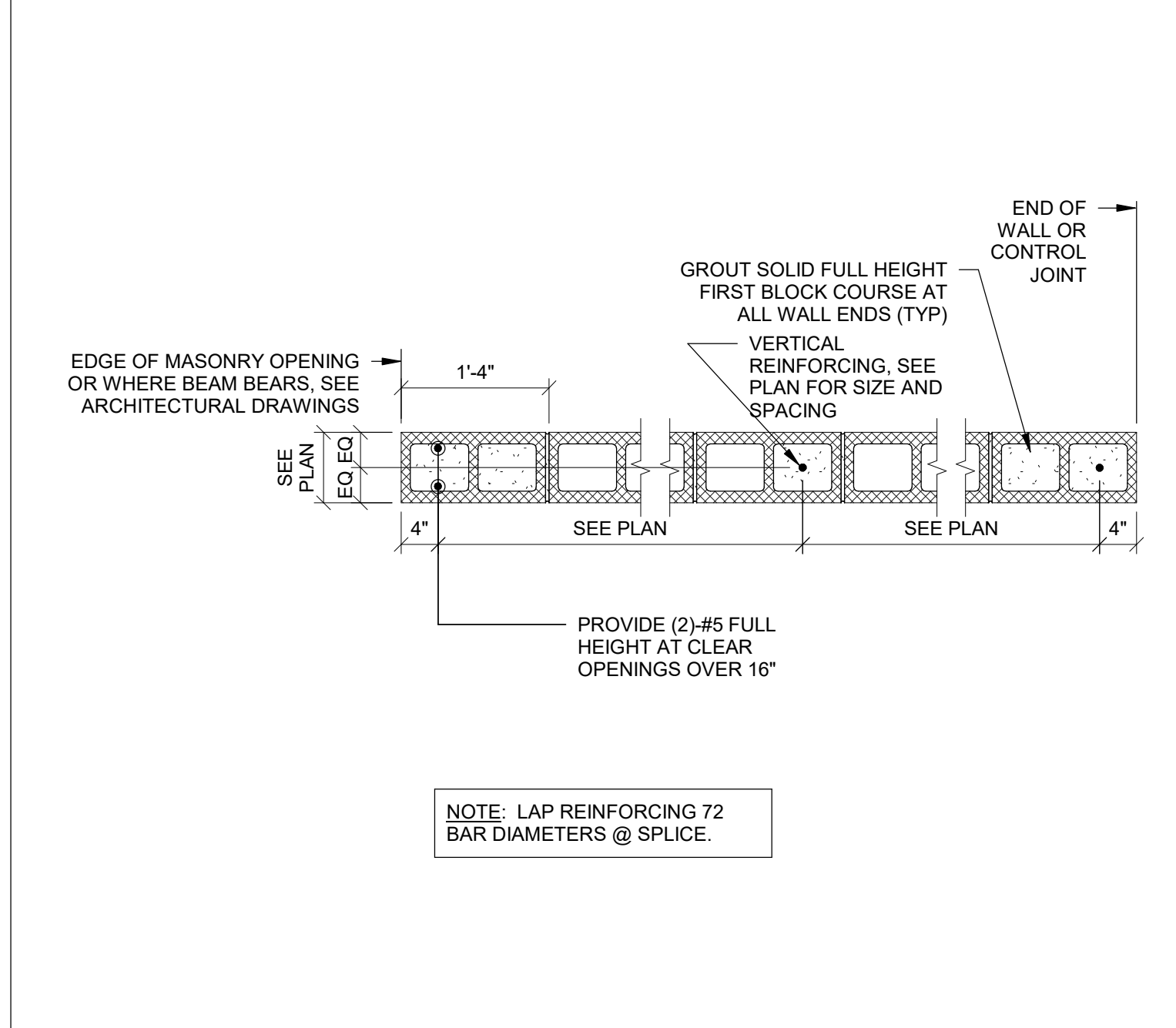
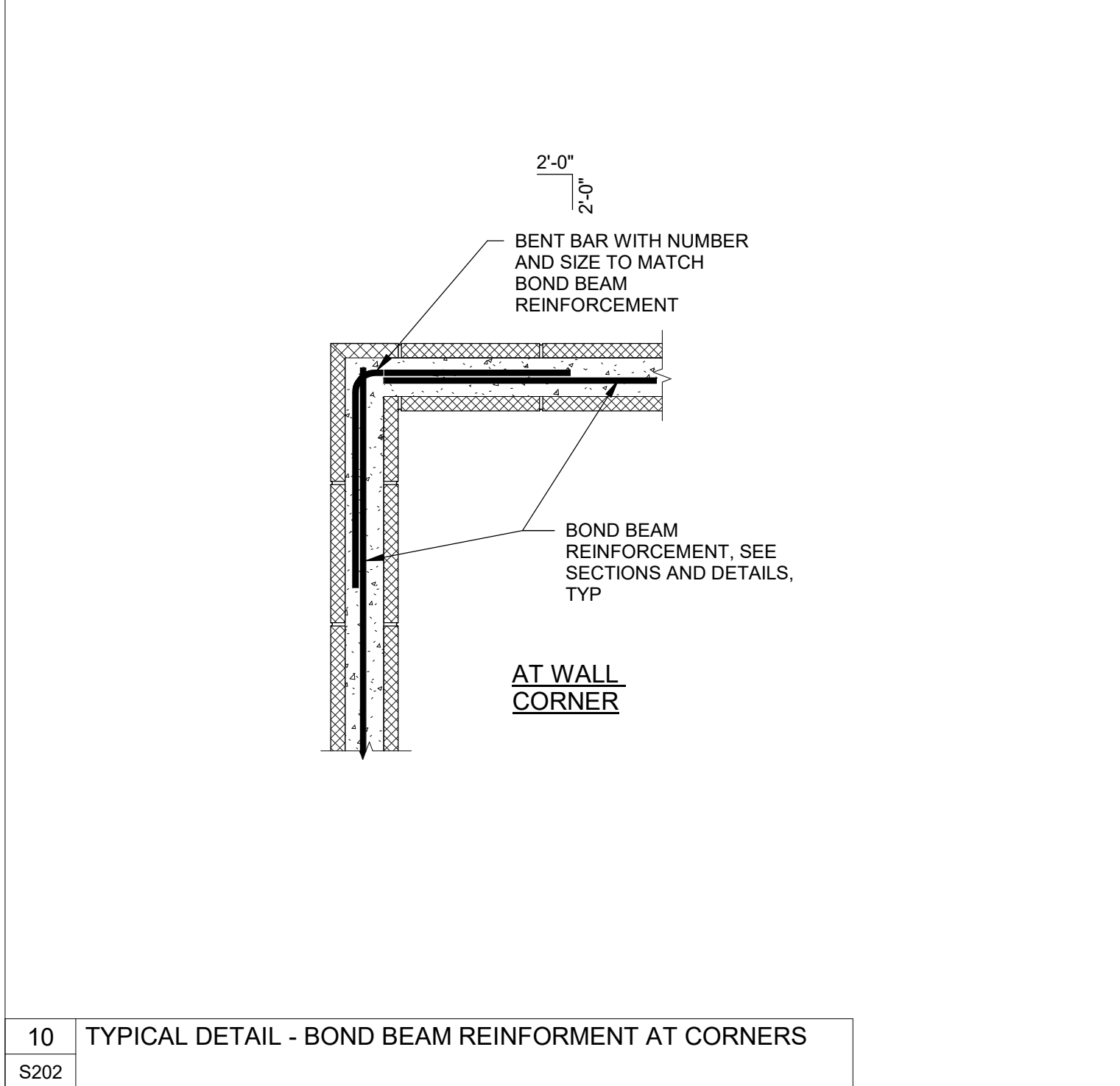
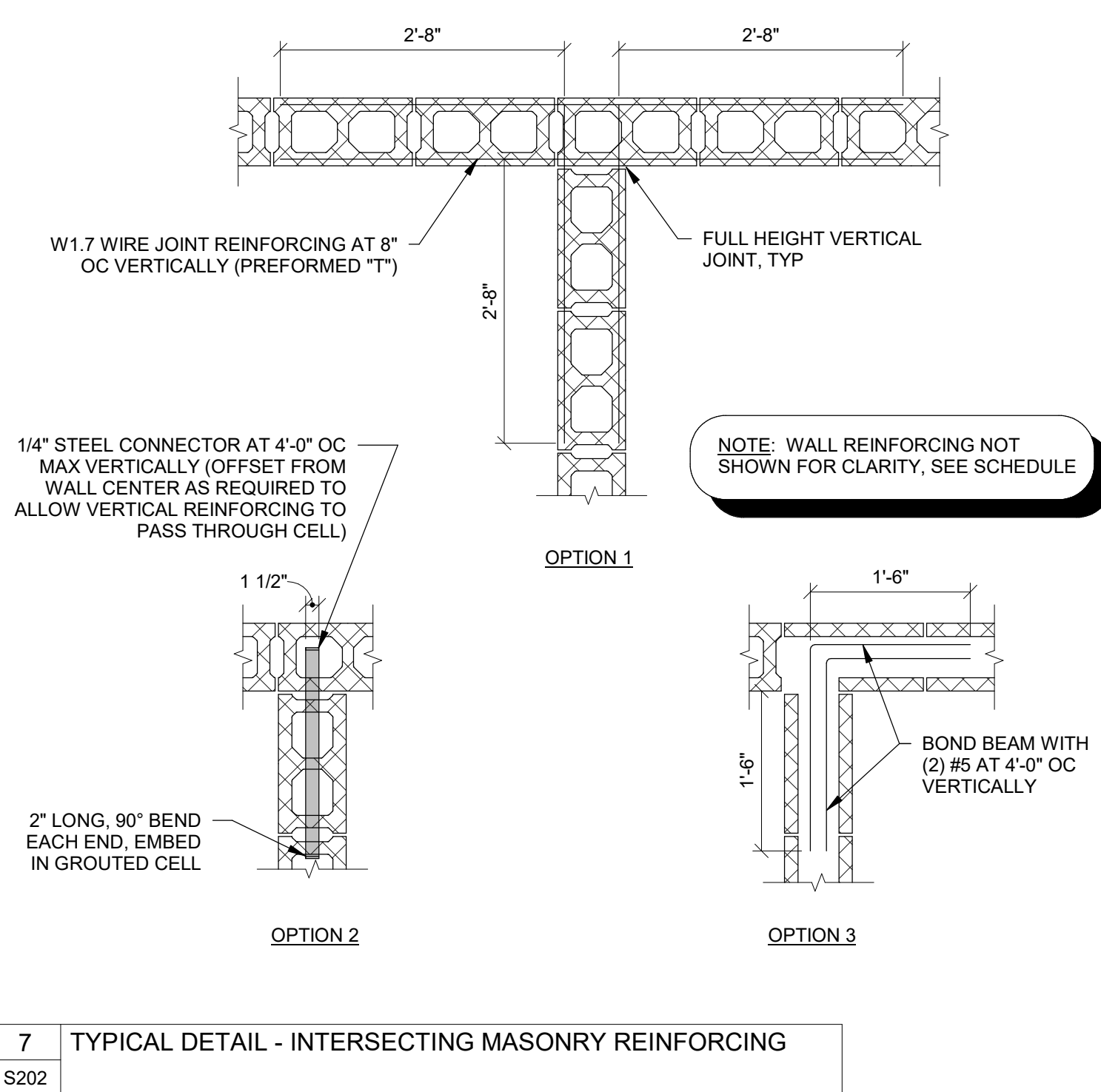
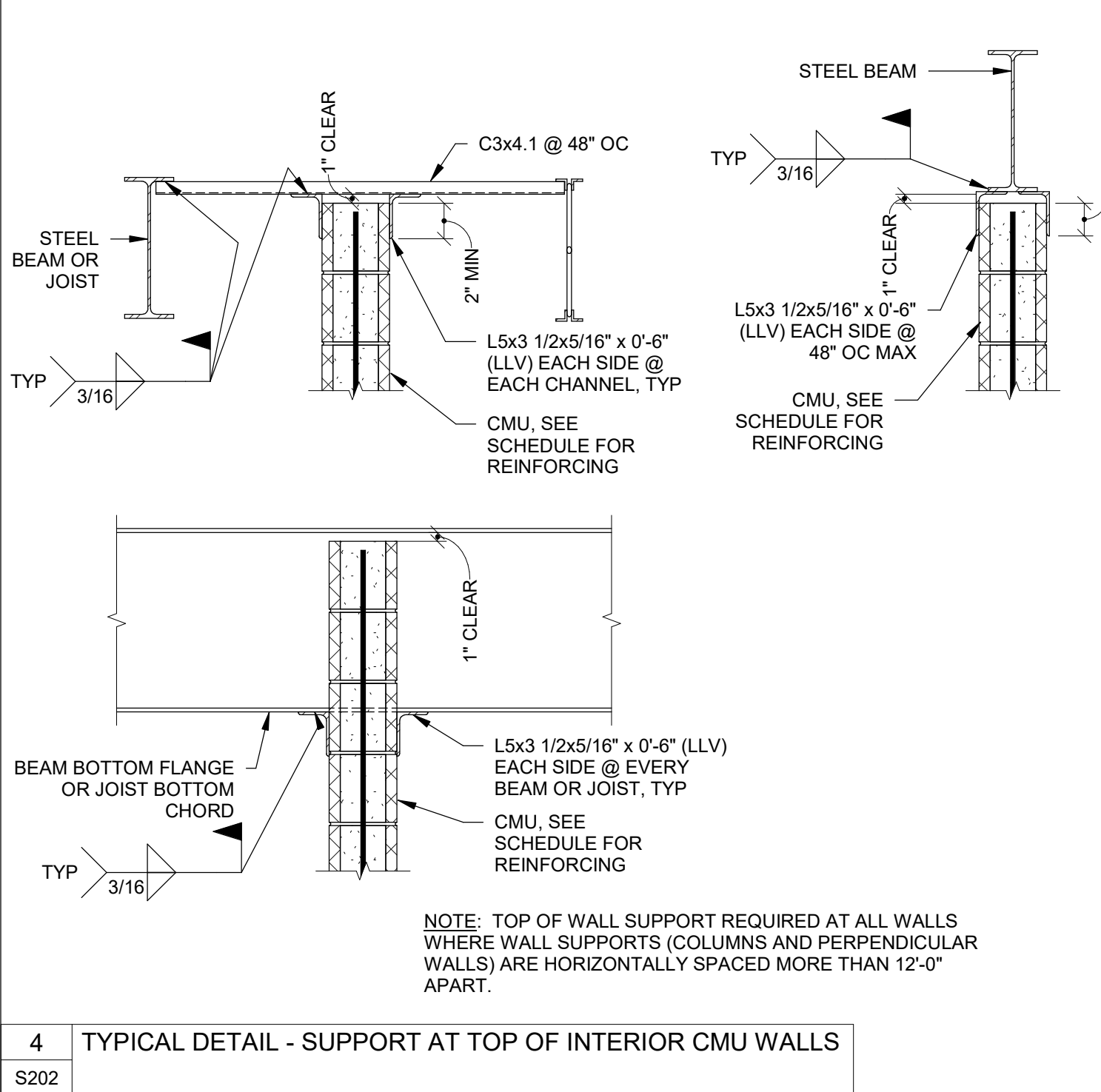
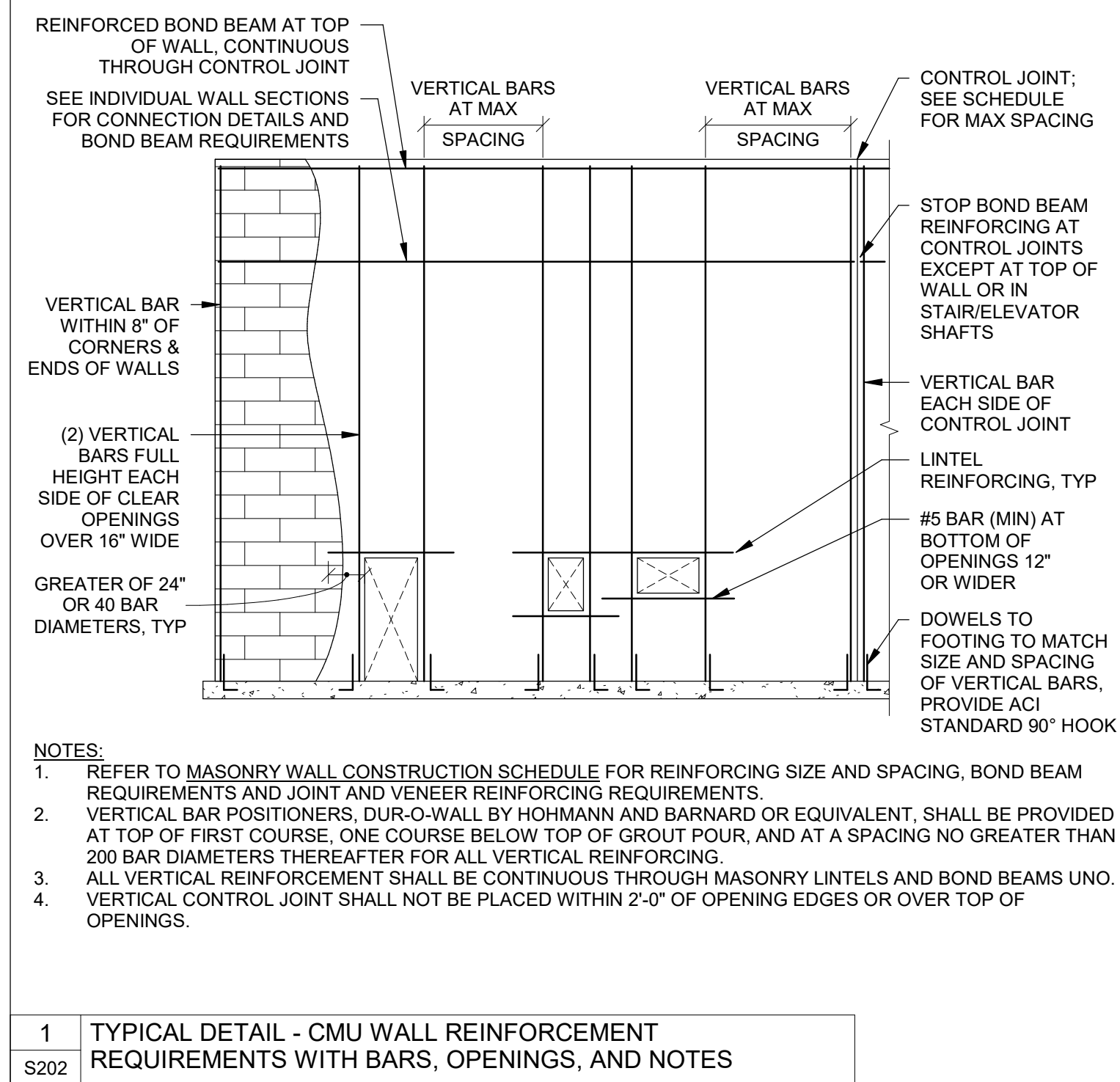


NOTES:
1. THIS DETAIL APPLIES TO SLAB-ON-GRADE ONLY
2. THE CONTRACTOR SHALL PROVIDE CONCRETE EQUIPMENT BASE ADEQUATE FOR THE SUPPORT OF THE MEP EQUIPMENT, AS FOLLOWS:
A. PROVIDE THICKNESS, 't', AS REQUIRED FOR ANCHORAGE BASED ON REQUIREMENTS FROM PROJECT SPECIFICATIONS AND BY EQUIPMENT SUPPLIER.
B. PROVIDE PLAN EXTENT NOT LESS THAN 6" IN EACH DIRECTION BEYOND THE MAXIMUM DIMENSIONS OF SUPPORTED EQUIPMENT UNLESS INDICATED OTHERWISE.
3. EXACT SIZES, LOCATIONS, HEIGHT, AND ANY SPECIAL DETAILS FOR THE BASE SHALL BE OBTAINED FROM THE EQUIPMENT SUPPLIER BEFORE INSTALLATION OF THE BASE.
4. ALL EMBEDDED ITEMS, INCLUDING ANCHORAGE FOR EQUIPMENT (BY SUPPLIER), SHALL BE COORDINATED WITH THE EQUIPMENT SUPPLIER PRIOR TO POURING BASE.
5. COORDINATE WITH MEP FOR EQUIPMENT REQUIRING ISOLATED CONCRETE BASE.
6. CONTRACTOR OPTION TO POST-INSTALL #3 DOWELS USING HILTI HIT-HY 200 EPOXY SYSTEM WITH 2-1/2" EMBEDMENT.

1 TYPICAL DETAIL - EQUIPMENT BASE AT SLAB-ON-GRADE
S201



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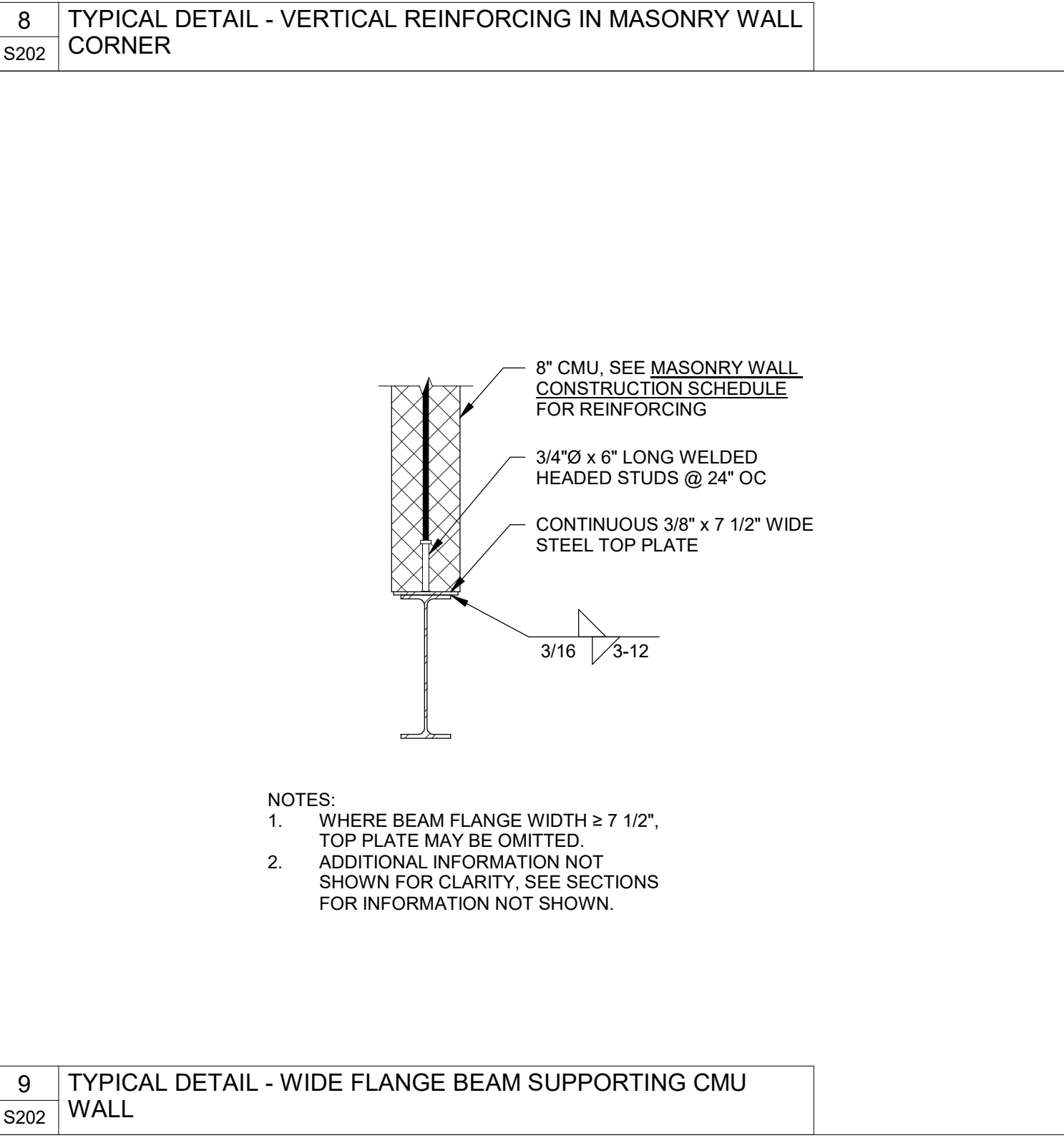
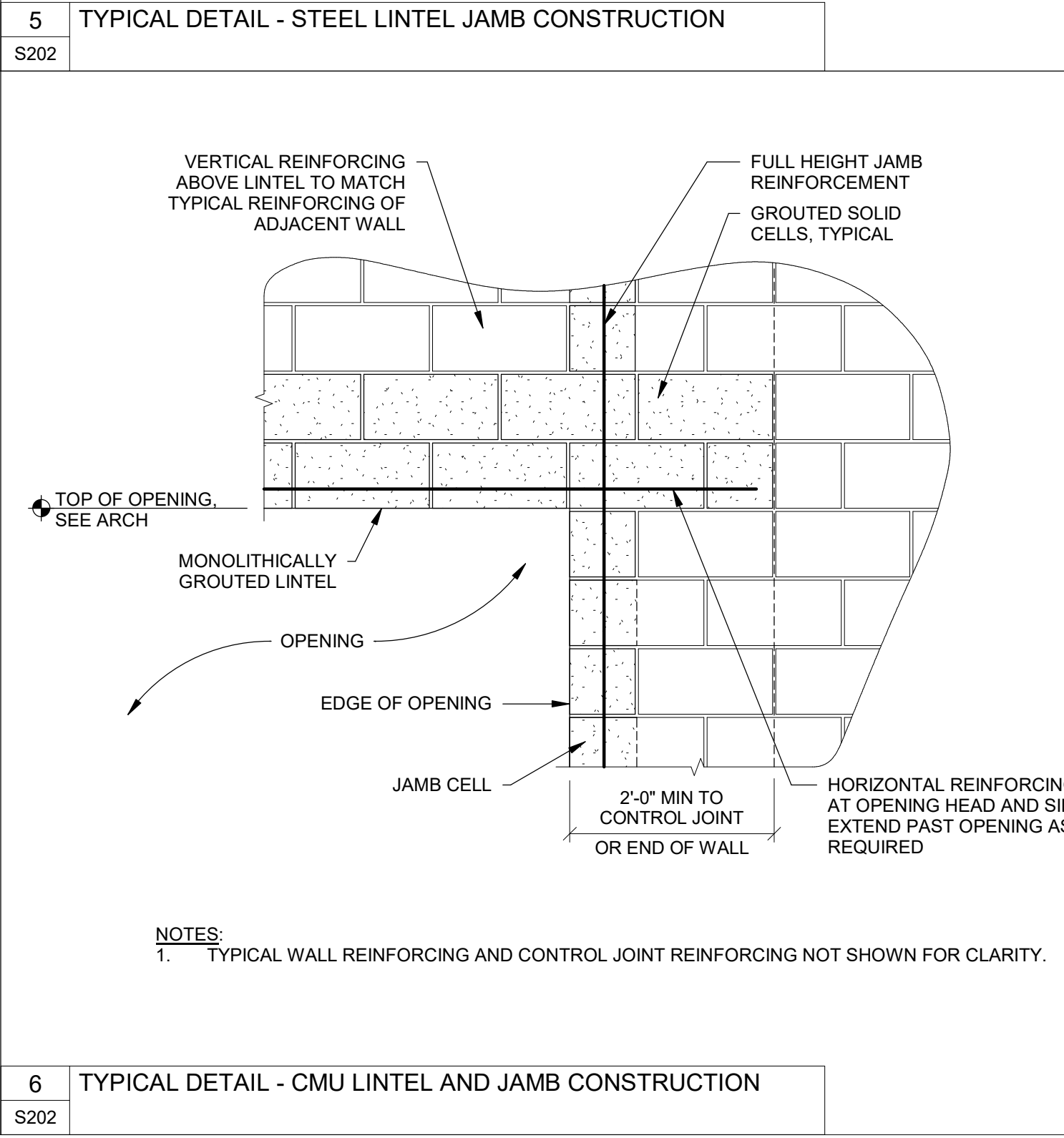
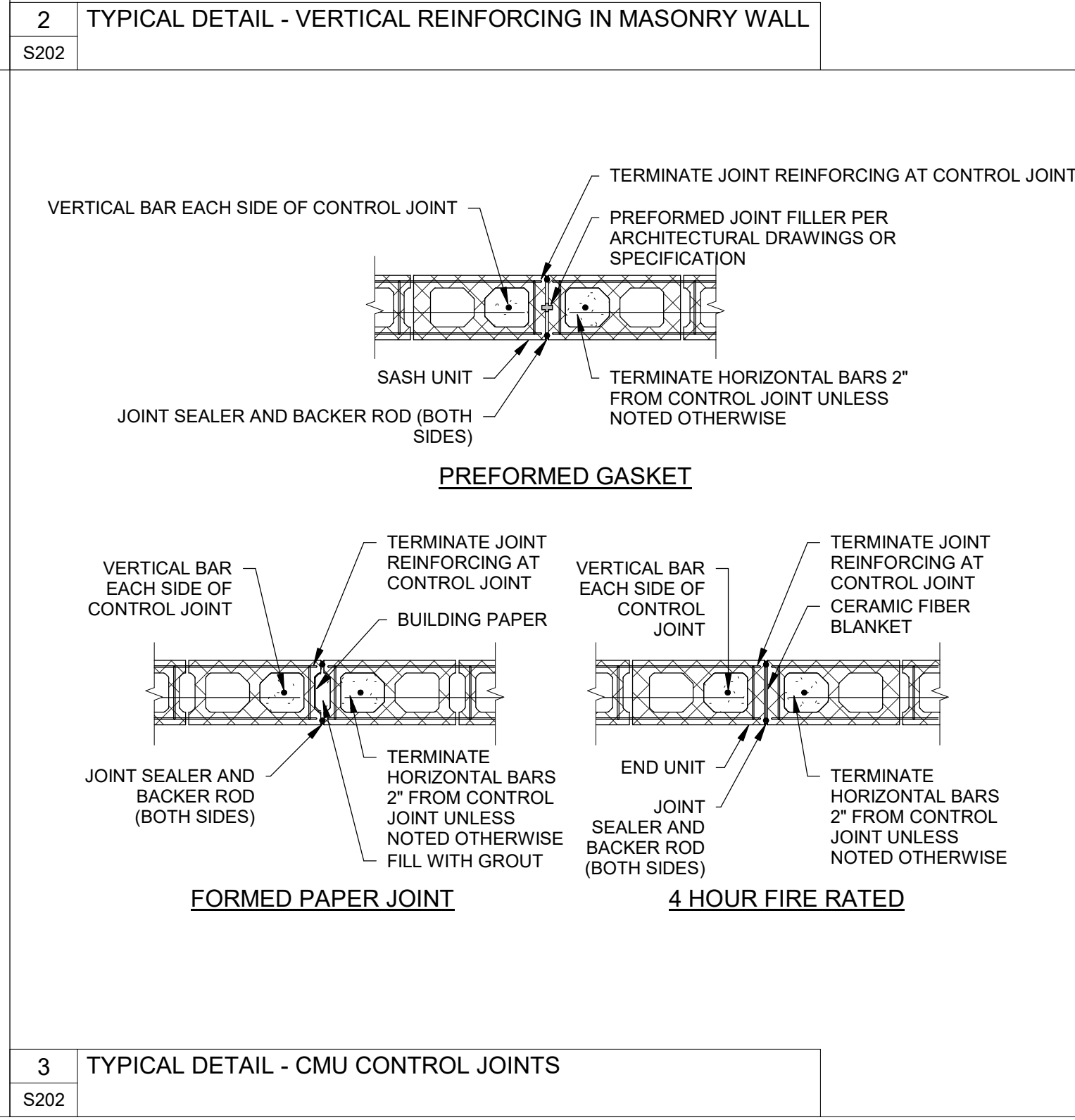


11 TYPICAL DETAIL - MASONRY WALL CONSTRUCTION SCHEDULE

MASONRY WALL CONSTRUCTION SCHEDULE			
REQUIREMENT	SIZE	TYPICAL	REFERENCE DETAIL
VERTICAL REINFORCING BAR IN 8" CMU	SPACING	#5 (CENTERED) 24"	CMU WALL REINFORCING REQUIREMENTS
VERTICAL REINFORCING BAR IN 10" CMU	SPACING	#5 (CENTERED) 24"	CMU WALL REINFORCING REQUIREMENTS
CMU JOINT REINFORCING	SPACING	(2) W1.7 (9 GAGE) WIRES 16"	HORIZONTAL MASONRY REINFORCING
BOND BEAM	SIZE	AS NOTED IN SECTIONS	CMU WALL REINFORCING REQUIREMENTS
	SPACING	TOP OF WALL AND JOIST BEARING	
CONTROL JOINT	SPACING	25 FEET MAX	CMU CONTROL JOINT
VENEER REINFORCING	SIZE	NOT REQUIRED	HORIZONTAL MASONRY REINFORCING
	SPACING	NOT REQUIRED	
	TIE SPACING	24" HORIZONTAL x 16" VERTICAL	

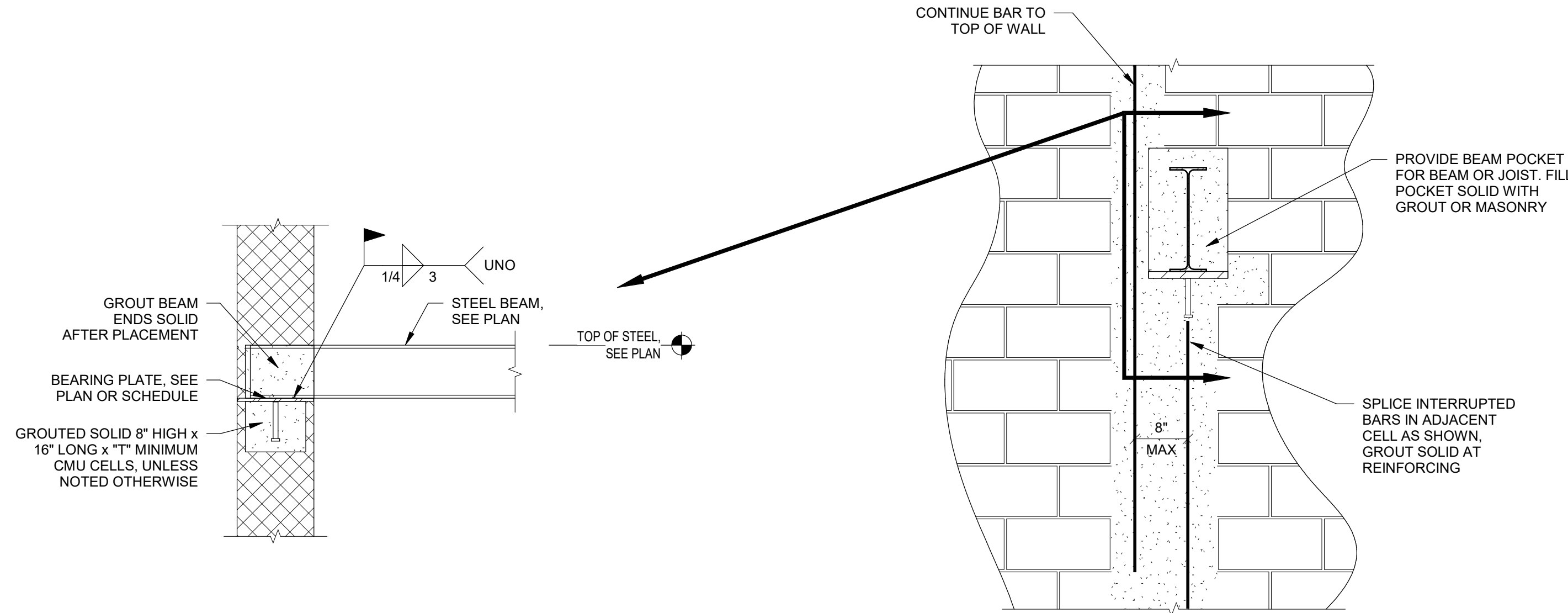
NOTES:

- FOR ADDITIONAL REQUIREMENTS, SEE GENERAL NOTES, TYPICAL DETAILS INCLUDING THOSE NOT LISTED IN SCHEDULE, AND PROJECT SPECIFICATIONS.
- AT INTERIOR PARTITION LOCATIONS, PROVIDE #5 @ 40" IN LIEU OF VERTICAL REINFORCING BAR PER SCHEDULE.

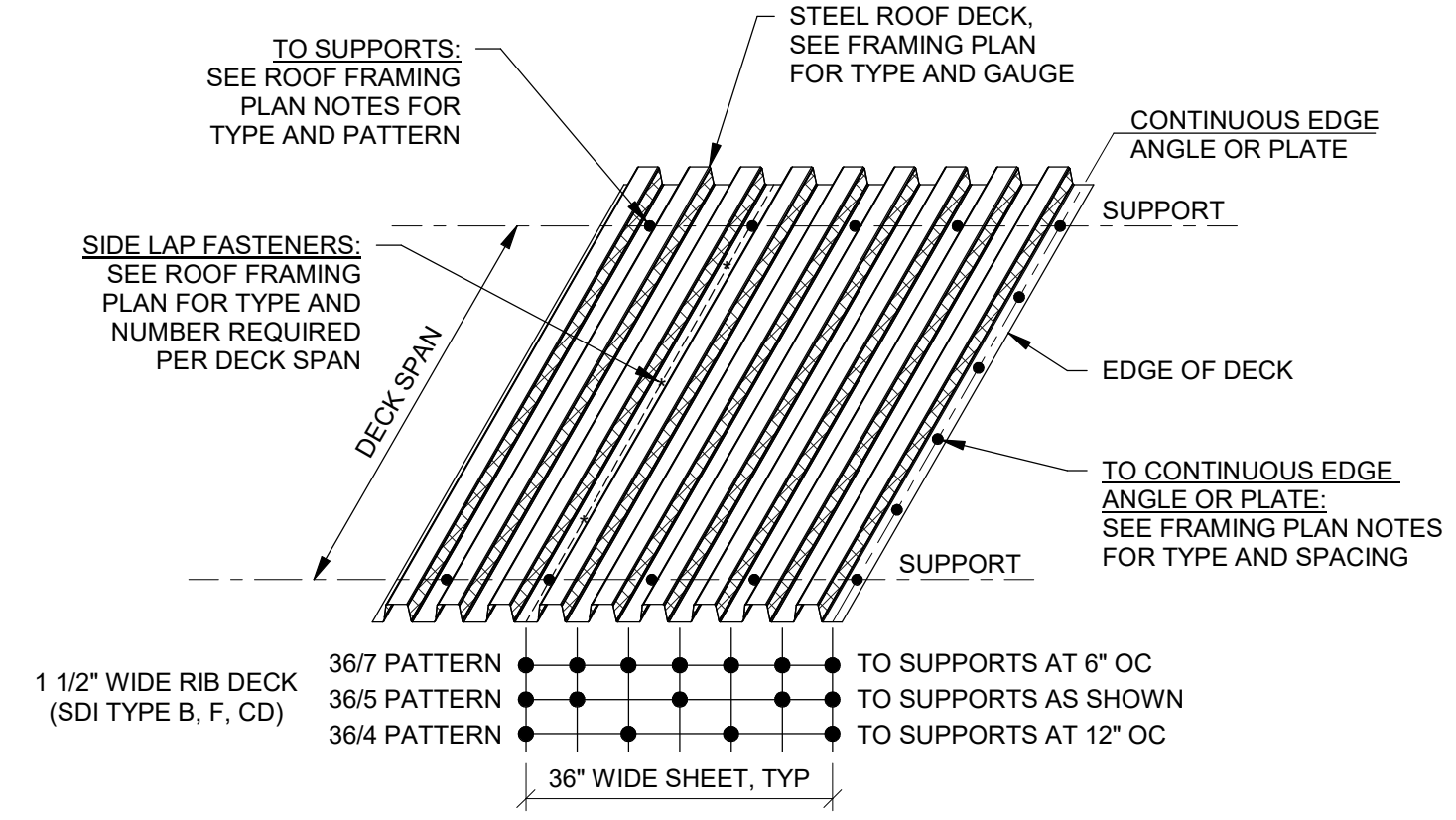


1 TYPICAL DETAIL - MASONRY WALL CONSTRUCTION SCHEDULE

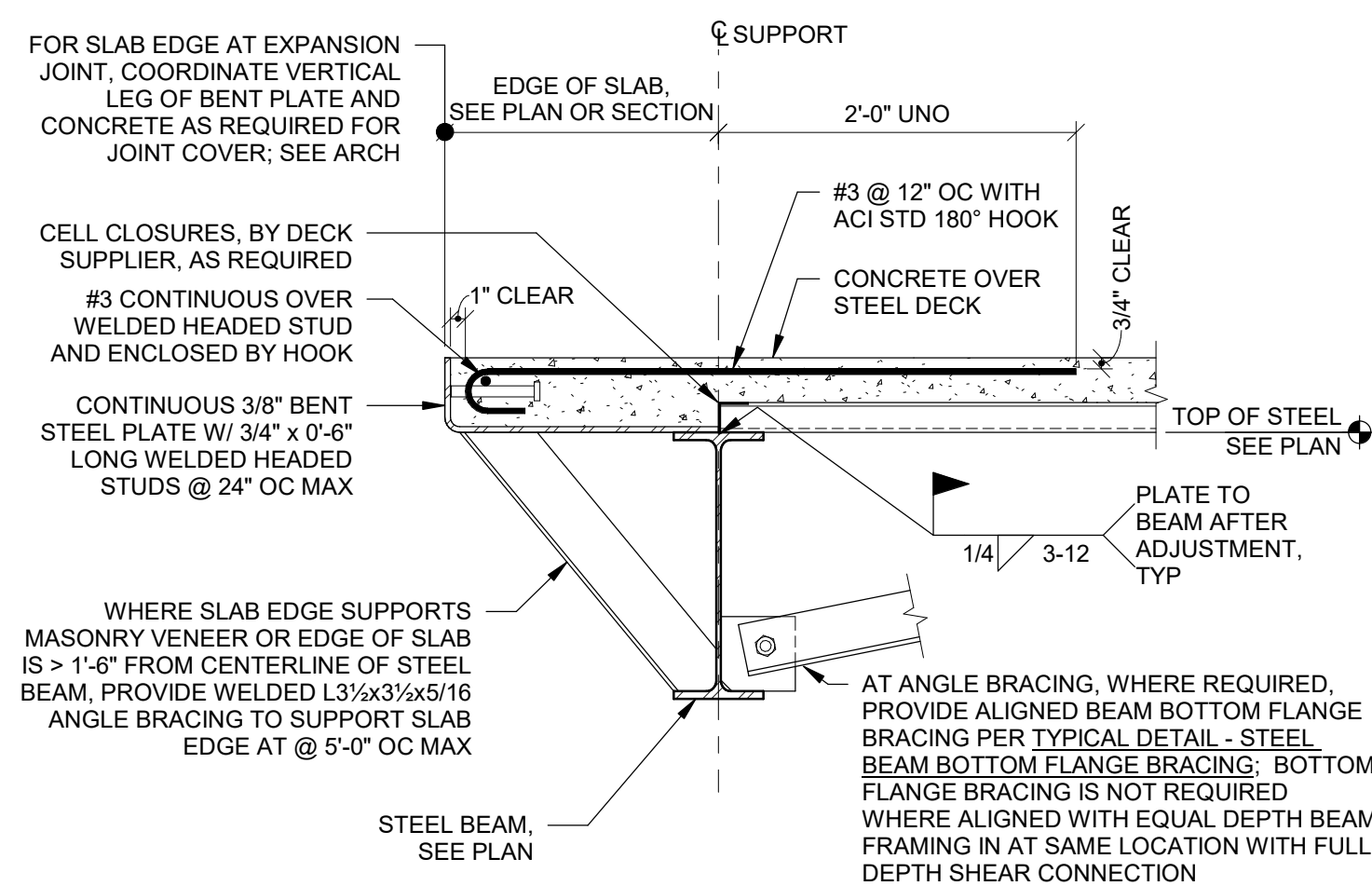
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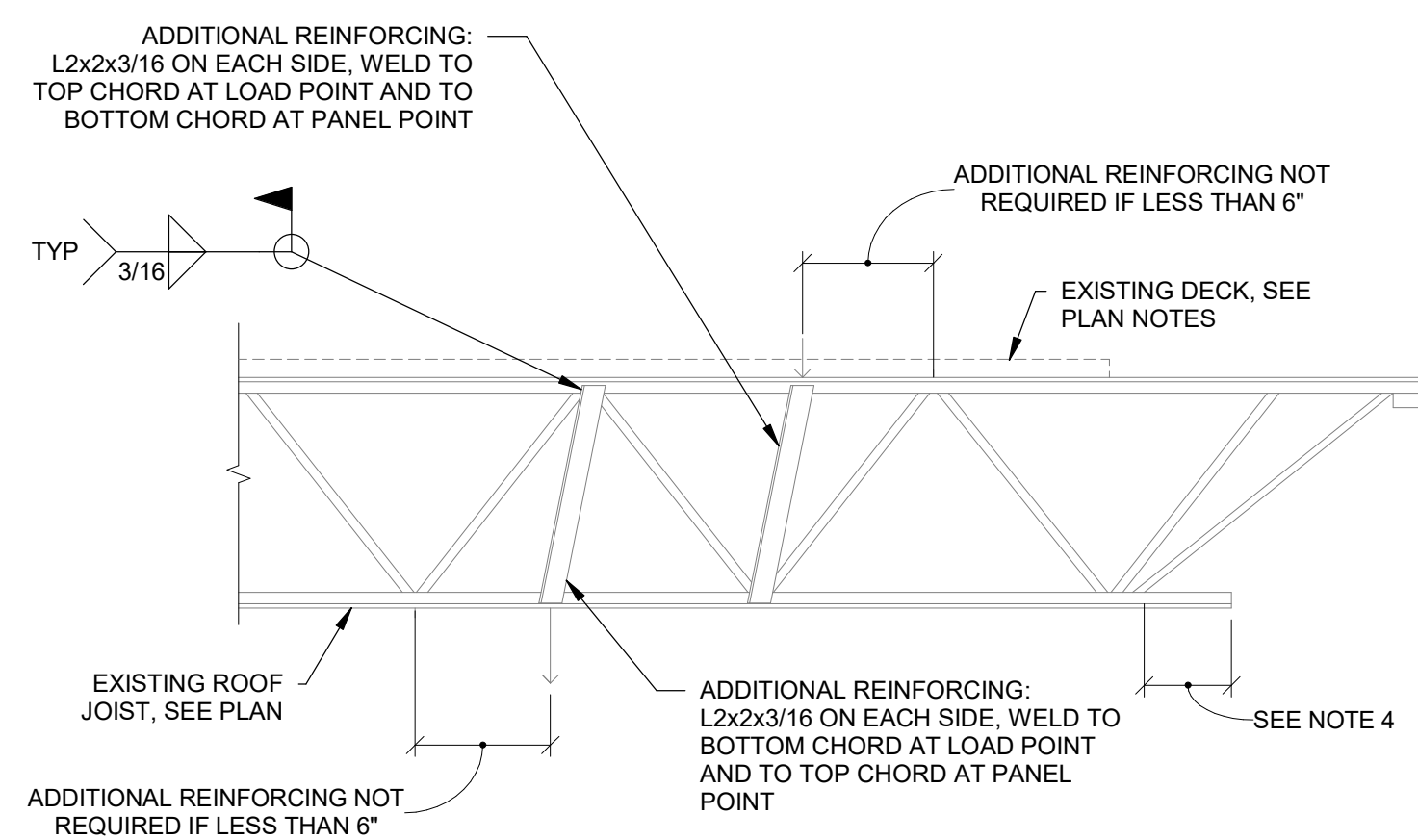
3 TYPICAL DETAIL - BEAM OR JOIST ON CMU WALL (REINFORCING STEP AROUND)
S203



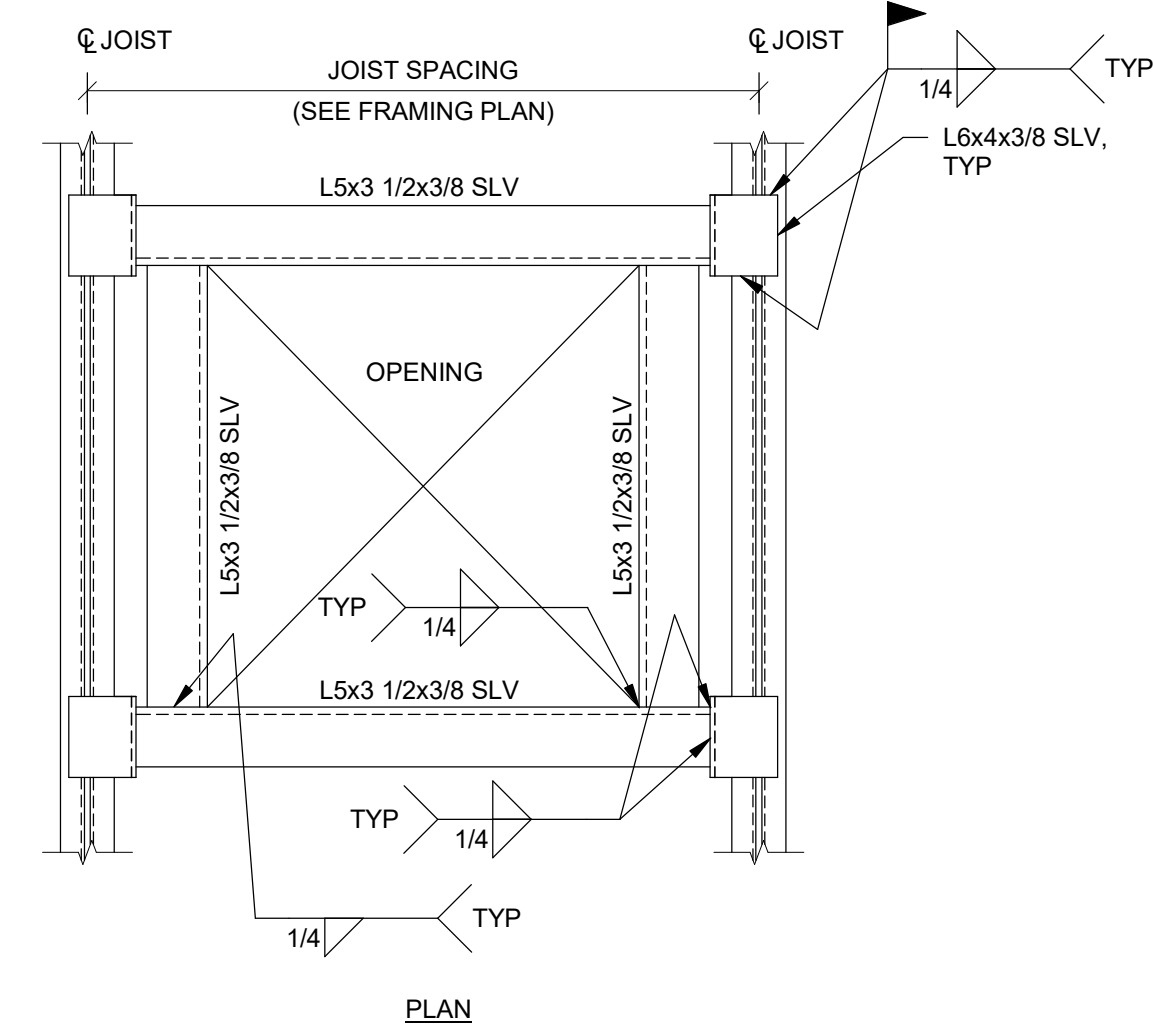
1 TYPICAL DETAIL - ROOF DECK ATTACHMENT
S203



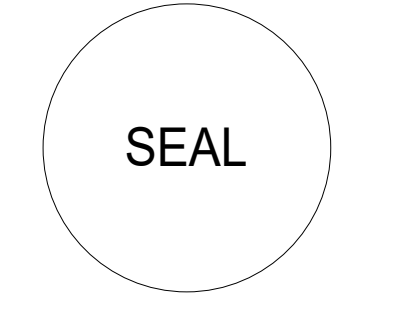
4 TYPICAL DETAIL - EDGE OF FLOOR SLAB (SIMILAR AT ROOF WITH CONCRETE)
S203



5 TYPICAL DETAIL - JOIST CHORD REINFORCING
S203



2 TYPICAL DETAIL - ROOF OPENING FRAME
S203



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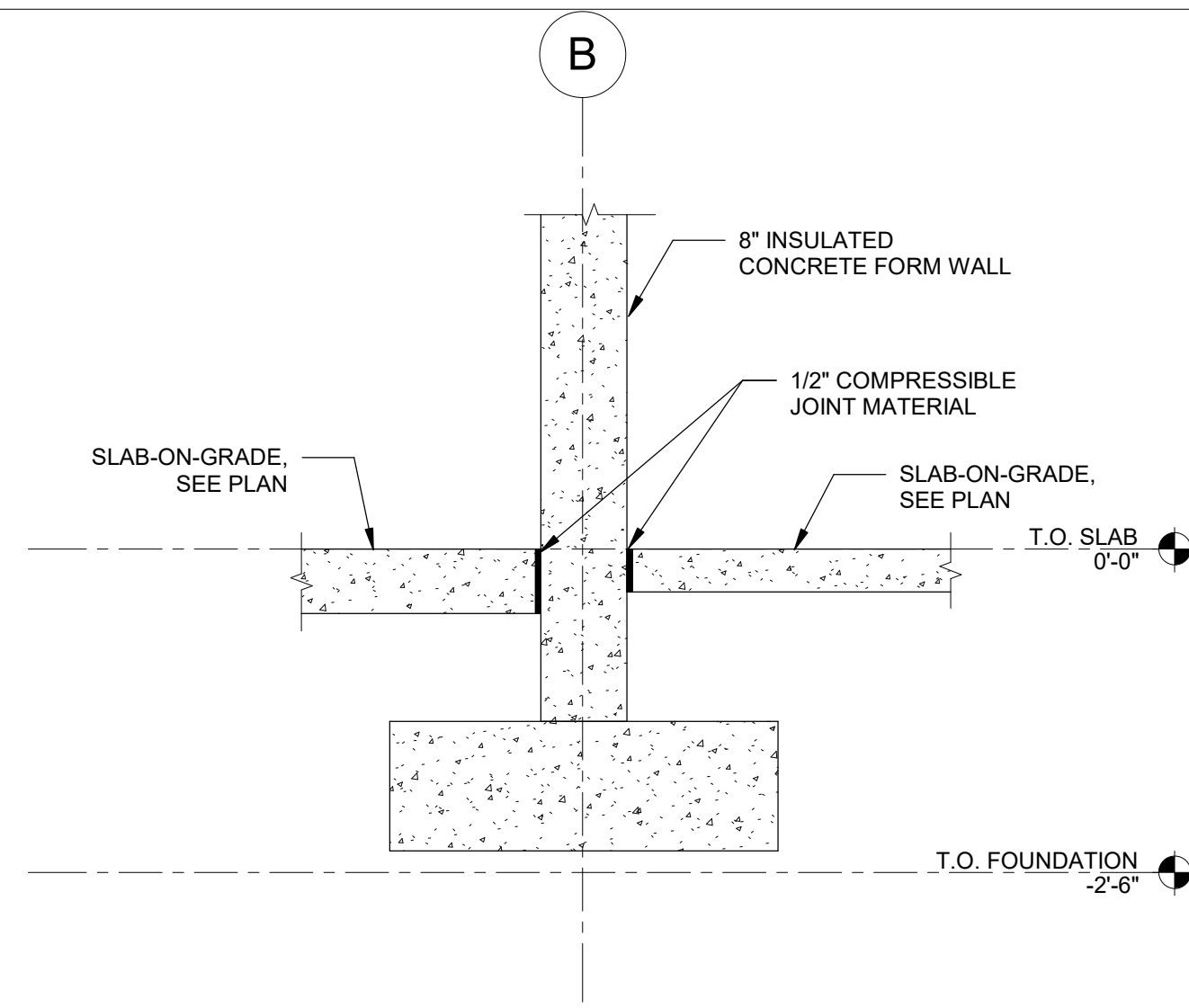


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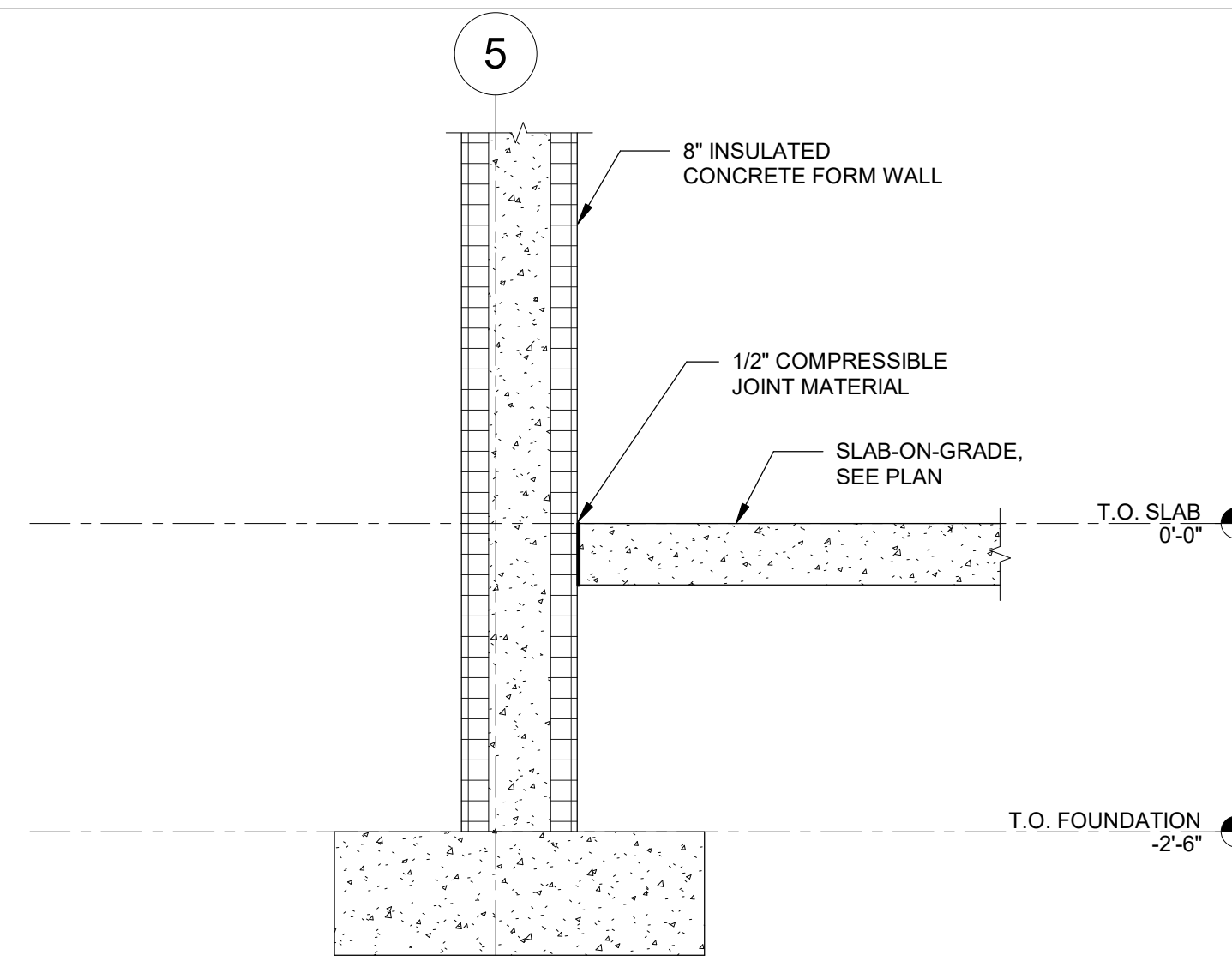
SCASD JOB #: 22-17

FOUNDATION
SECTIONS

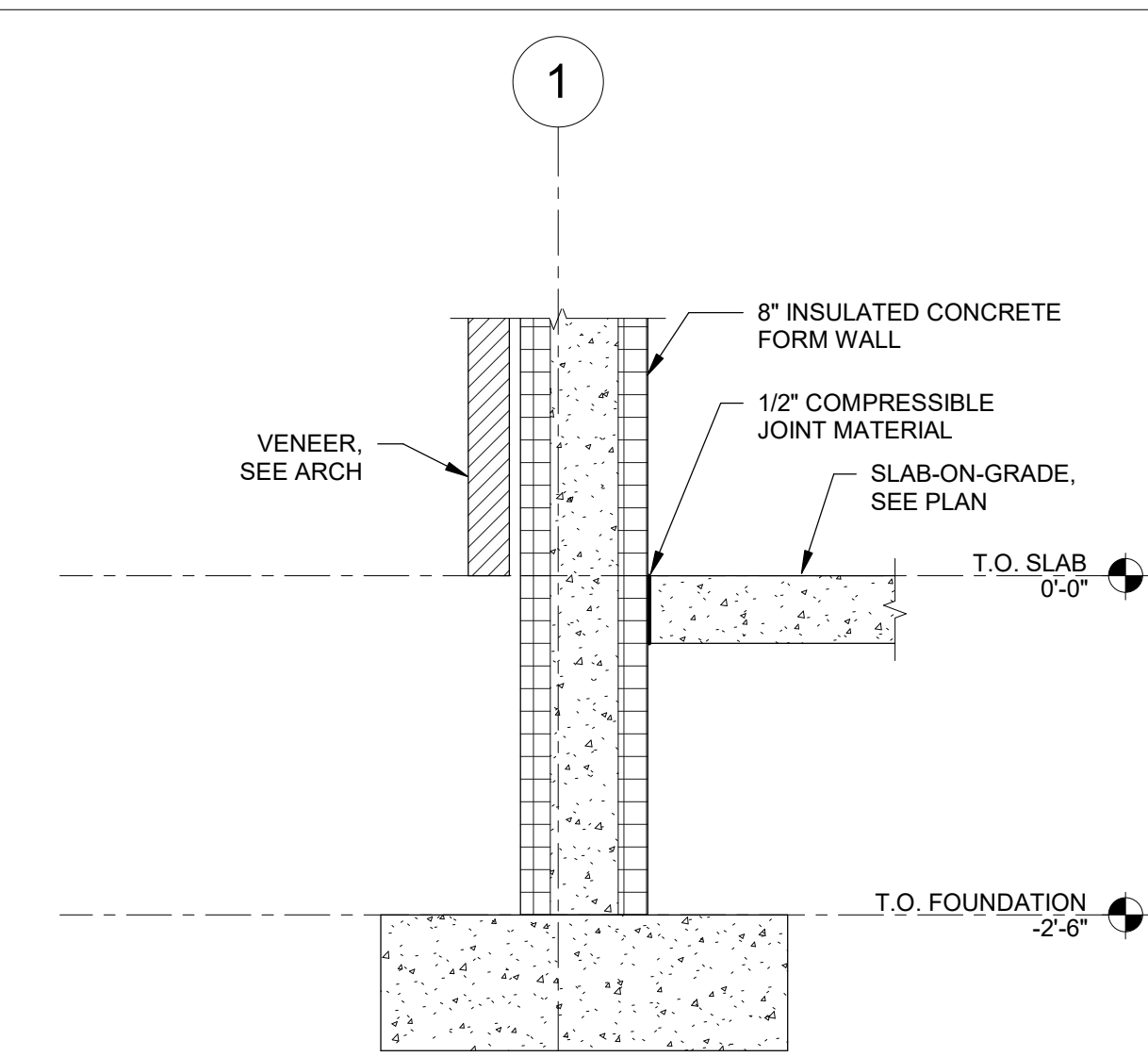
S301



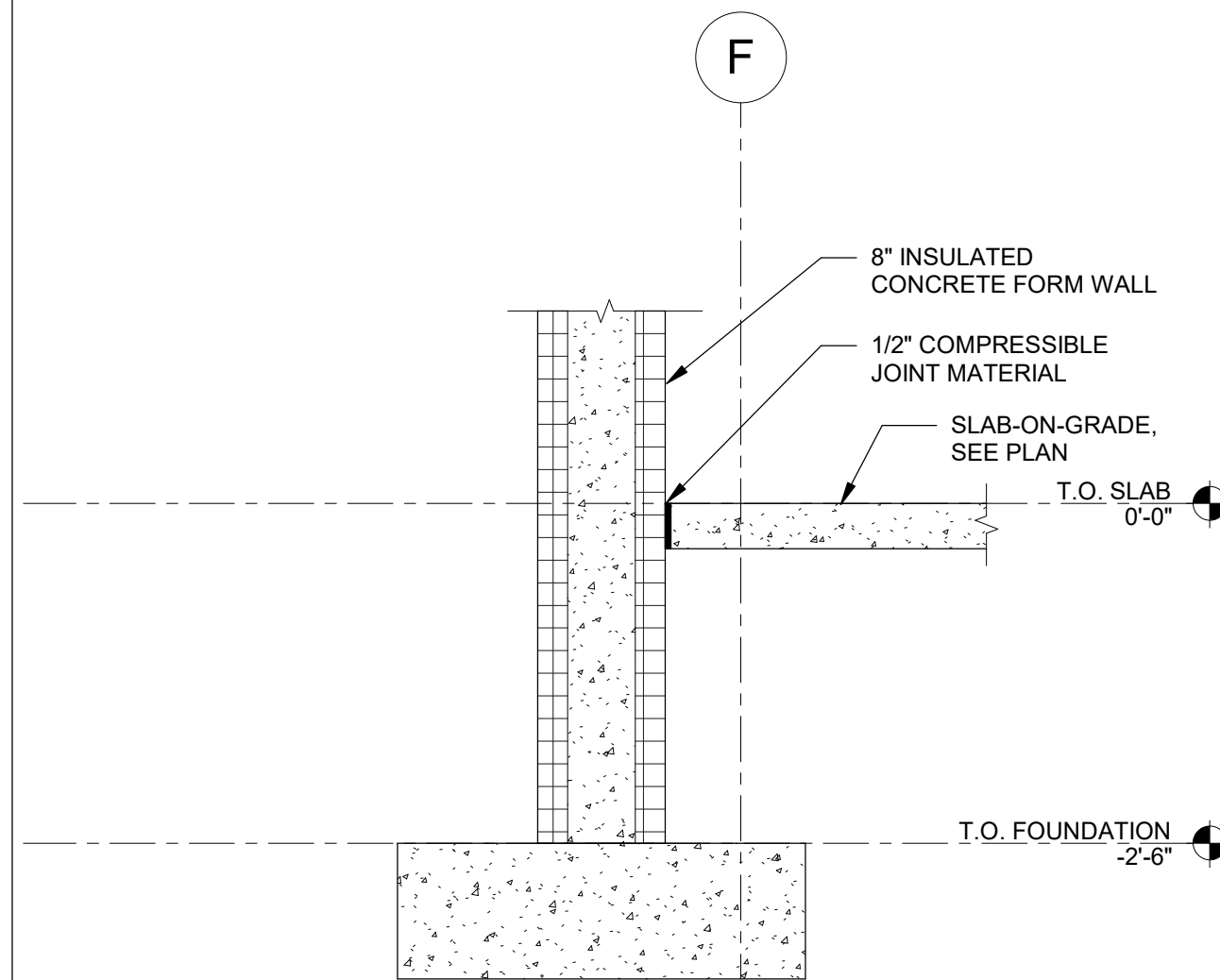
7 SECTION - Section 24
S301 3/4" = 1'-0"



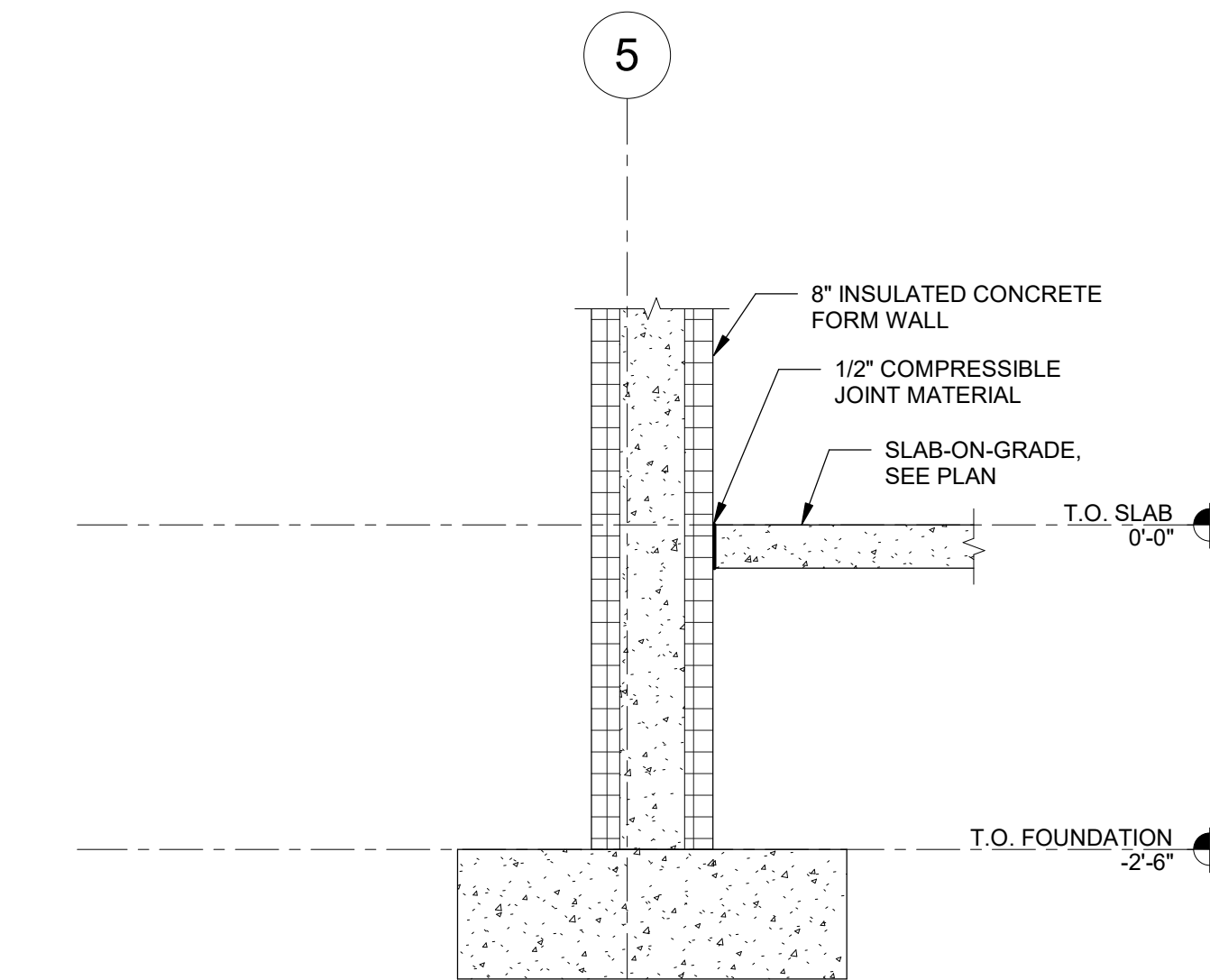
4 SECTION - EXTERIOR RETAINING WALL
S301 3/4" = 1'-0"



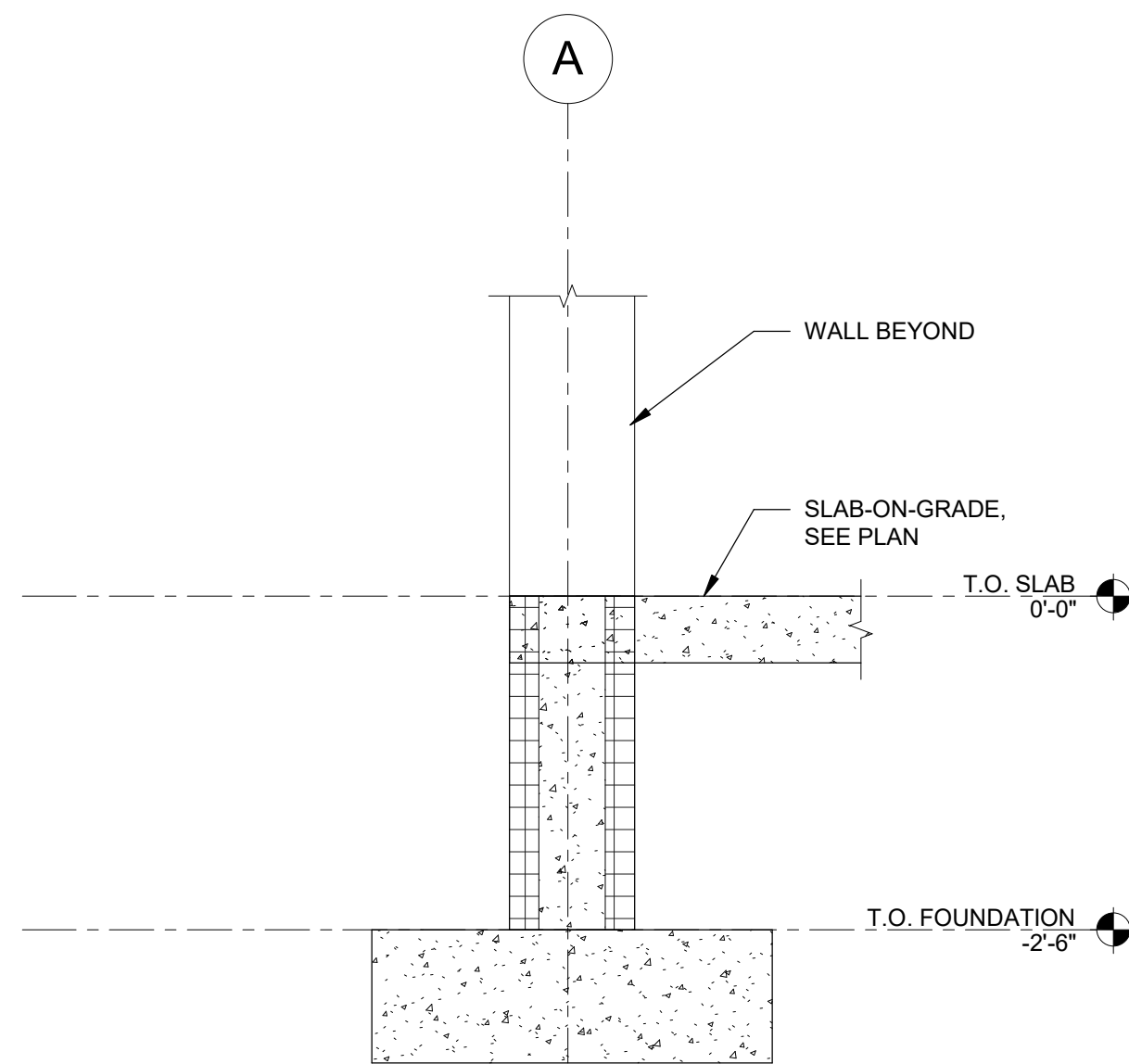
1 SECTION - EXTERIOR WALL WITH VENEER
S301 3/4" = 1'-0"



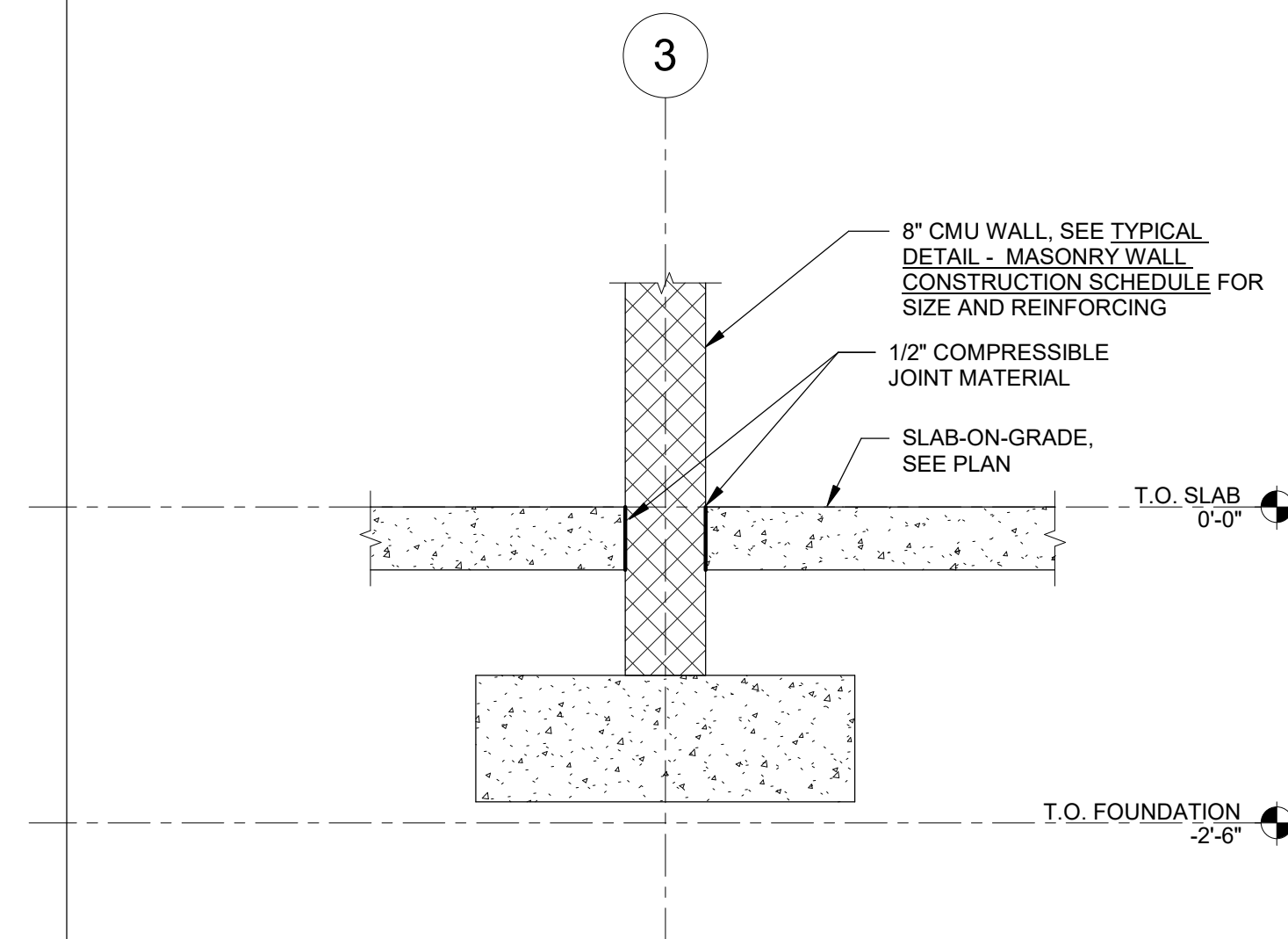
8 SECTION - Section 25
S301 3/4" = 1'-0"



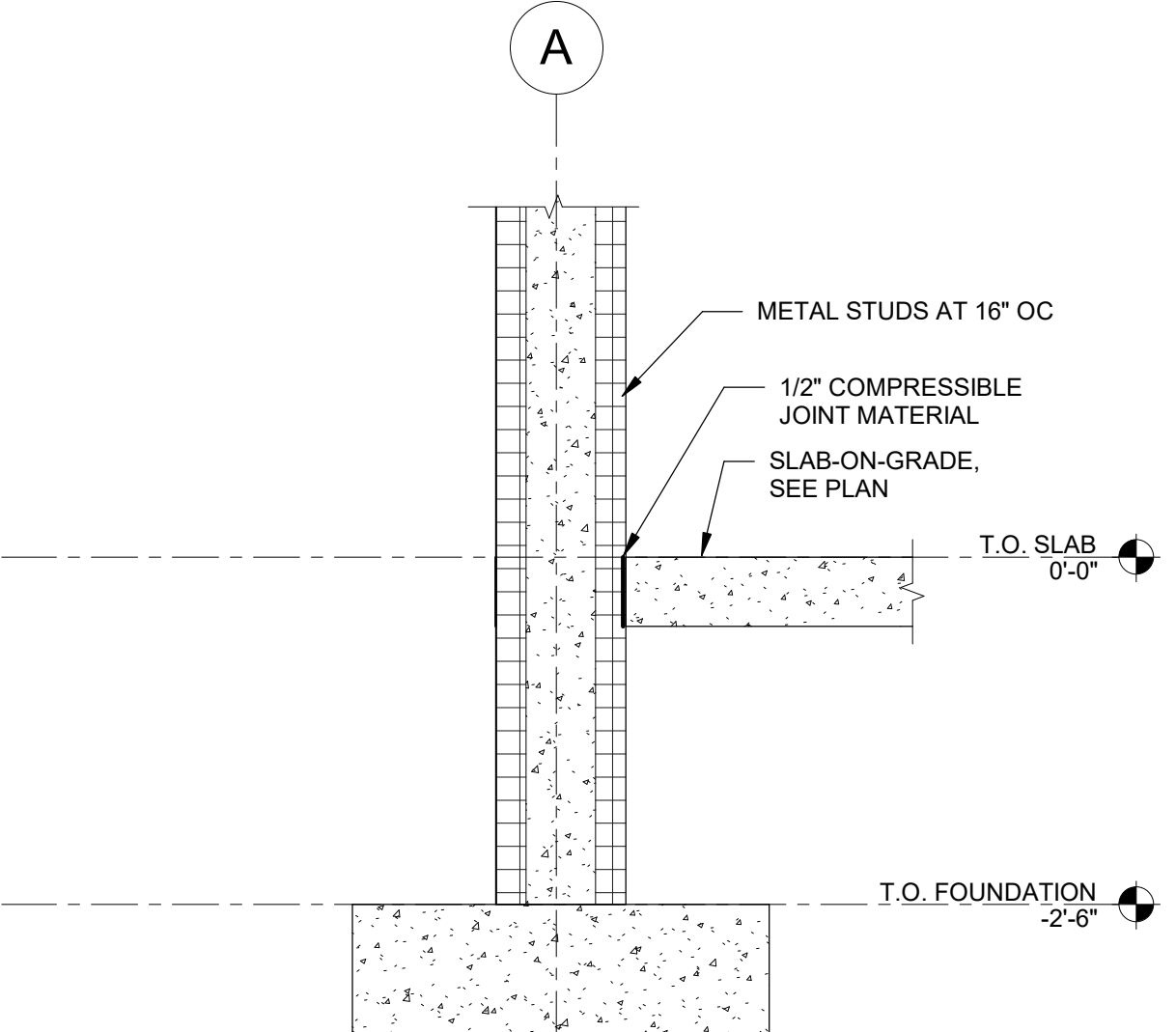
5 SECTION - EXTERIOR BASEMENT WALL
S301 3/4" = 1'-0"



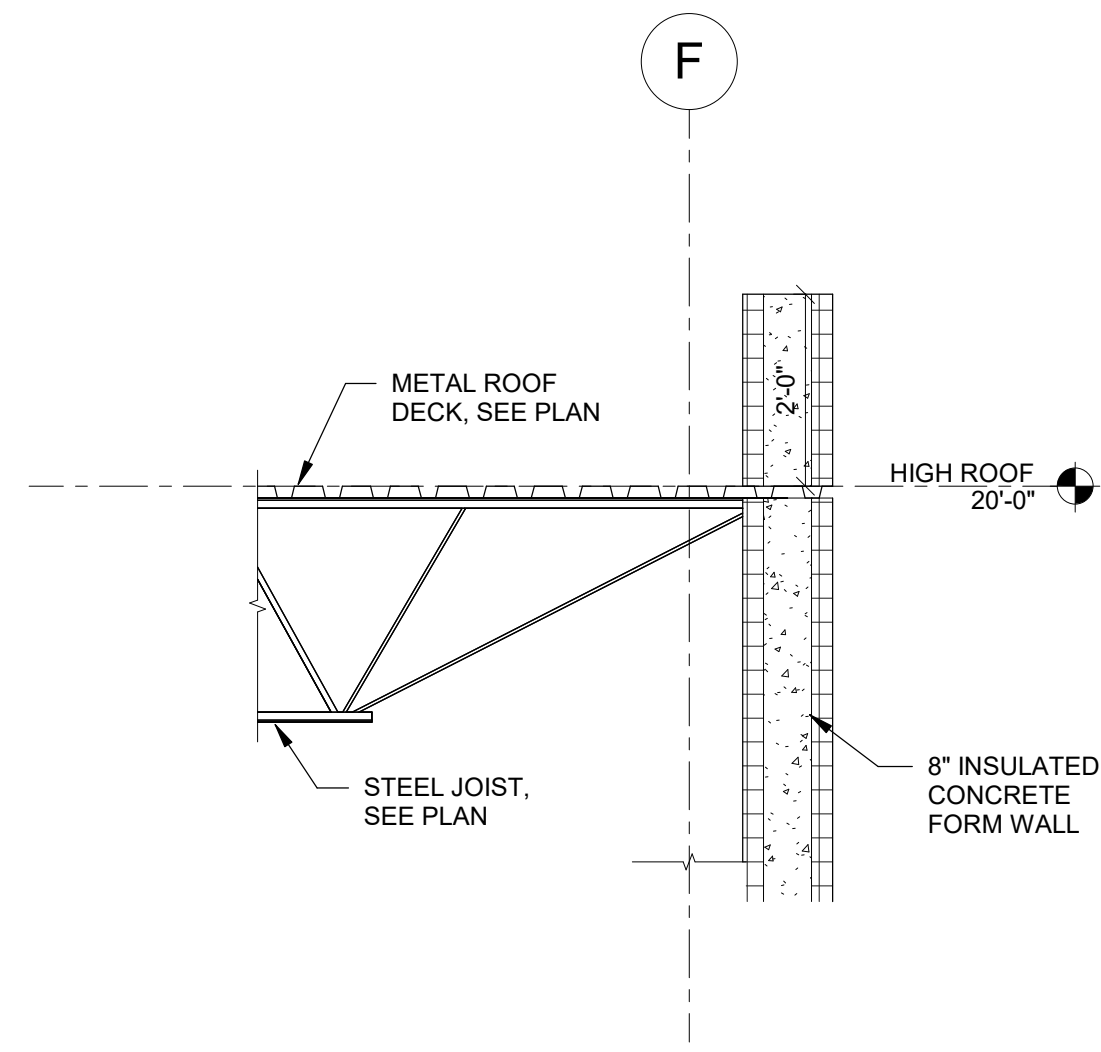
2 SECTION - OVERHEAD DOOR
S301 3/4" = 1'-0"



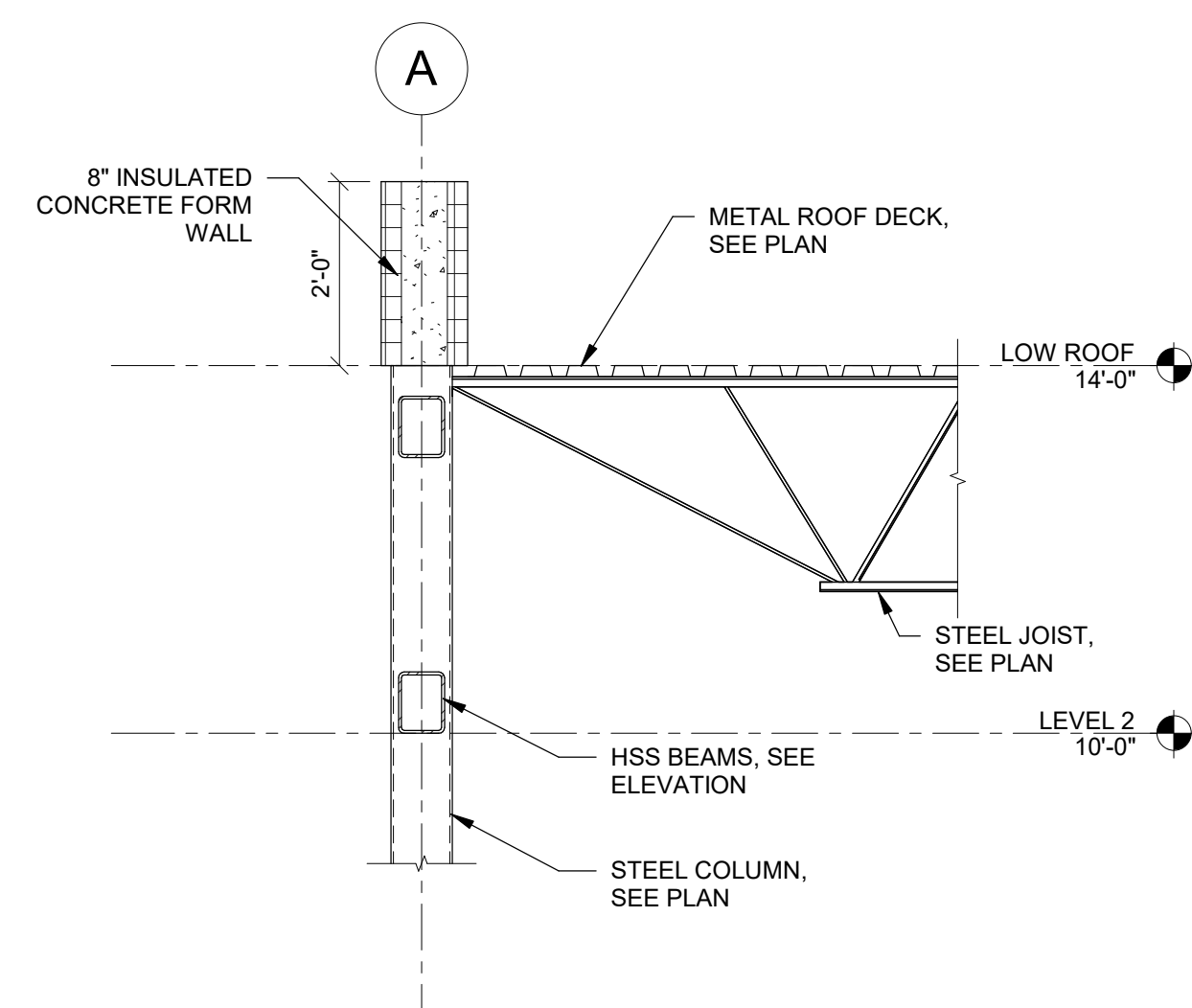
6 SECTION - Section 23
S301 3/4" = 1'-0"



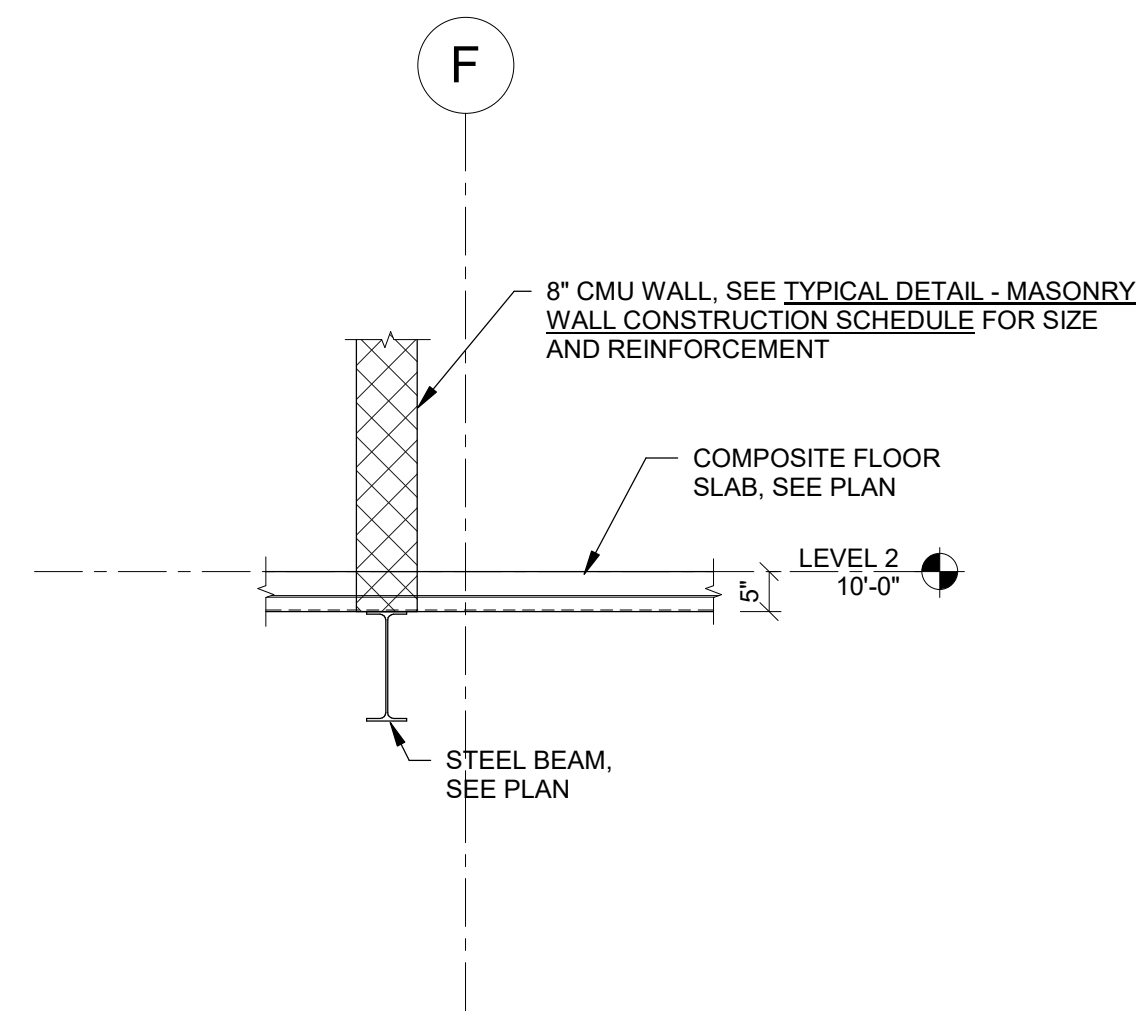
3 SECTION - EXTERIOR METAL STUD WALL
S301 3/4" = 1'-0"



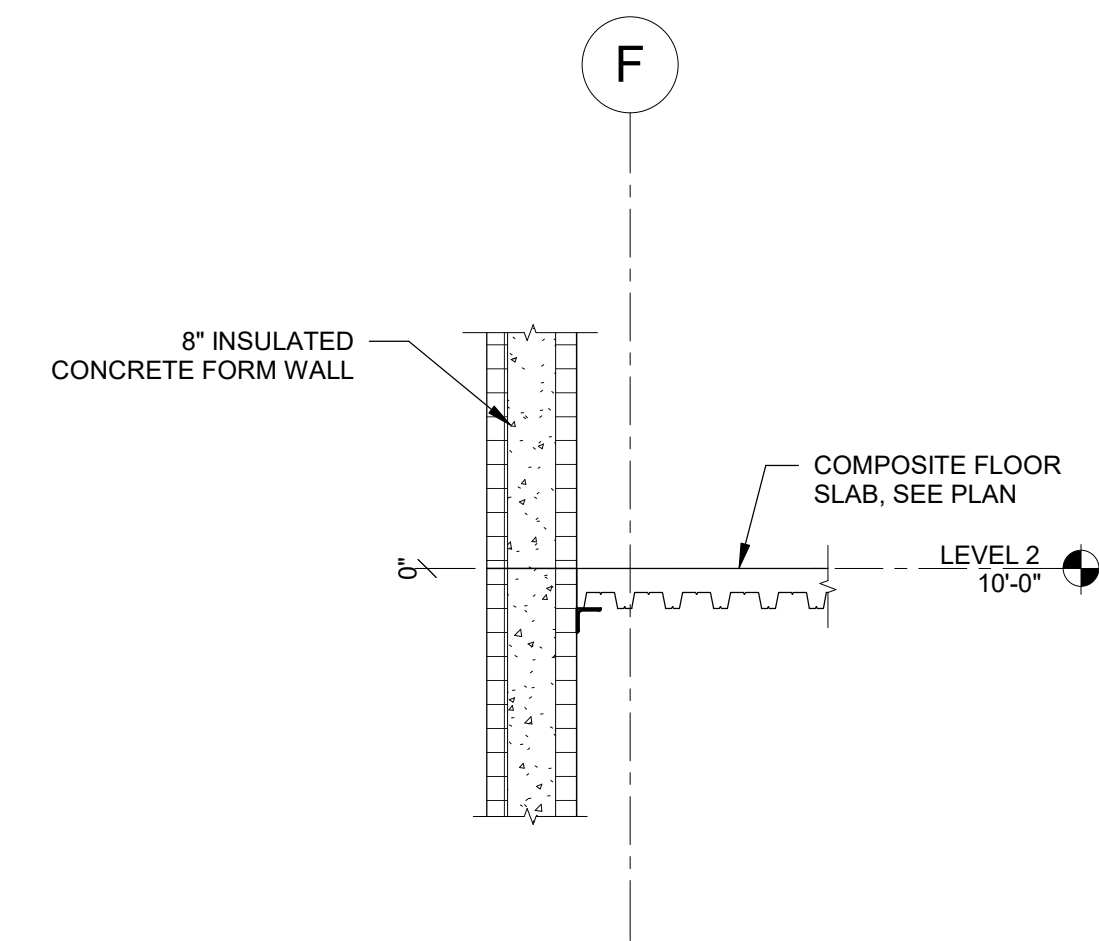
10 SECTION - HIGH ROOF JOIST BEARING AT EXTERIOR WALL
S302 1/2" = 1'-0"



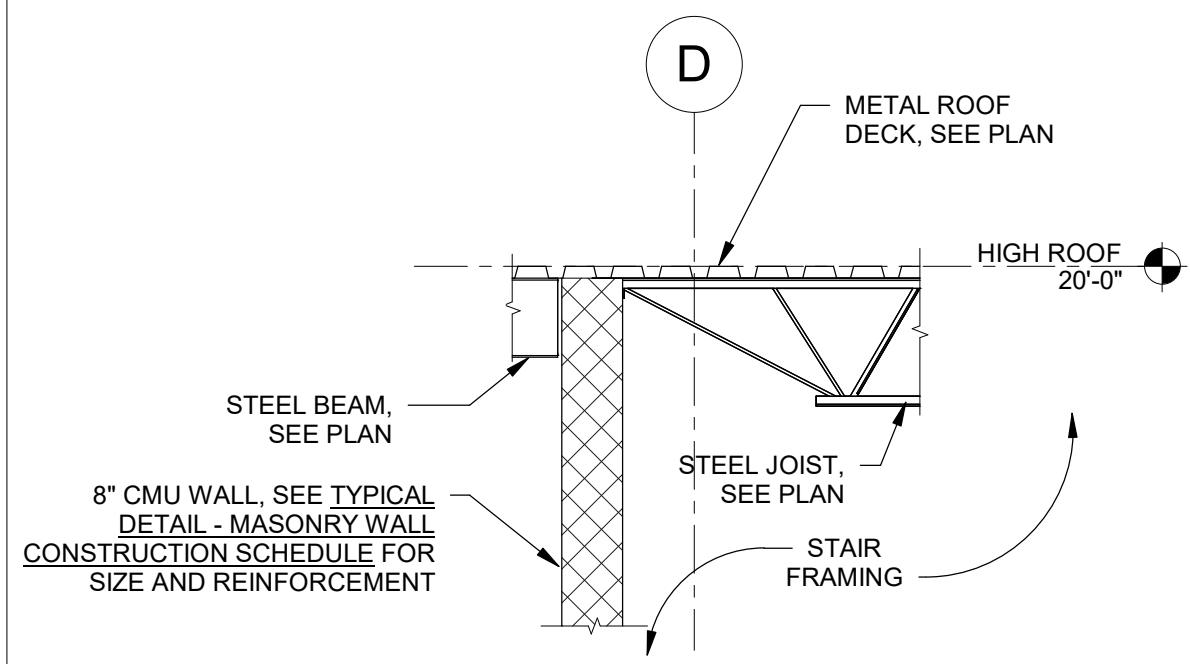
7 TYPICAL DETAIL - LOW ROOF JOIST BEARING AT EXTERIOR WALL
S302



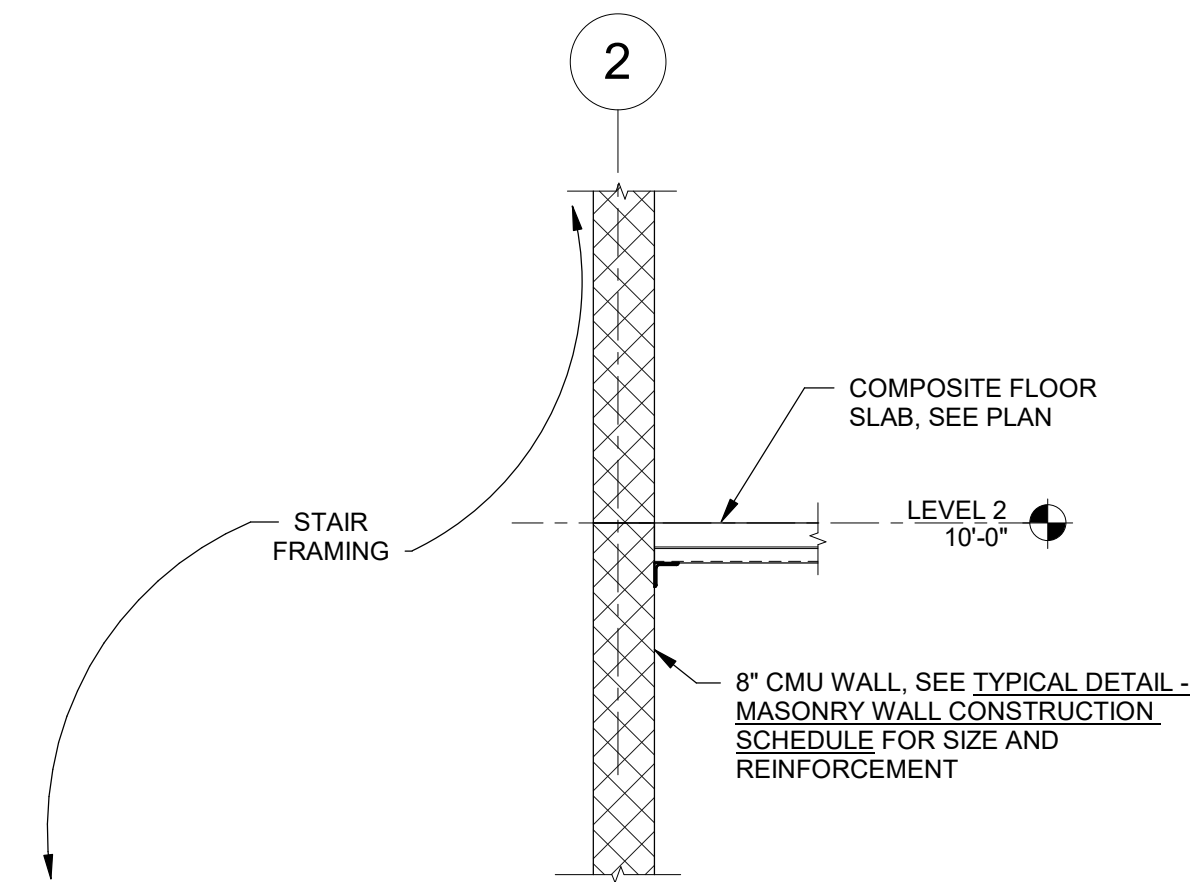
4 SECTION - BEAM SUPPORTING CMU WALL ALONG GRID F
S302 1/2" = 1'-0"



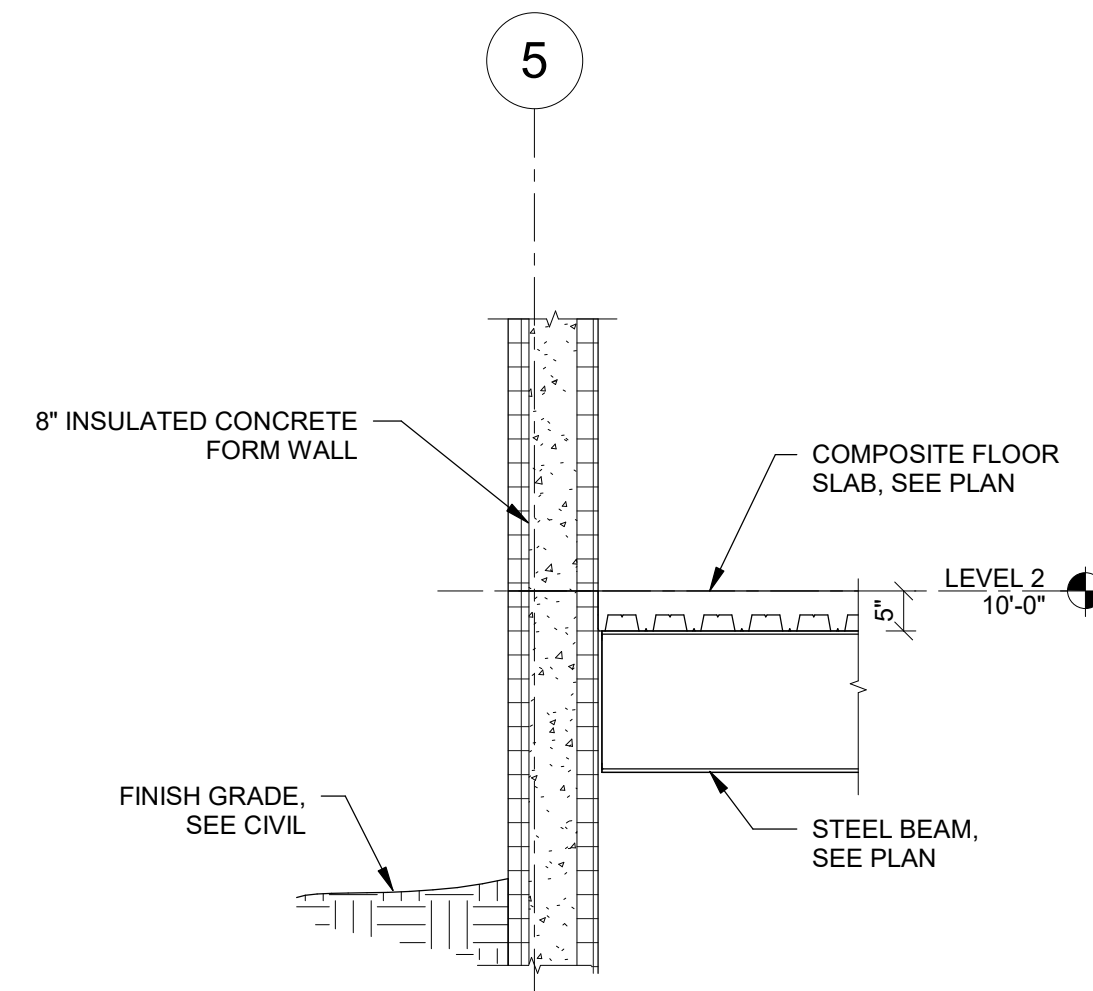
1 SECTION - CONCRETE RETAINING WALL ALONG GRID F
S302 1/2" = 1'-0"



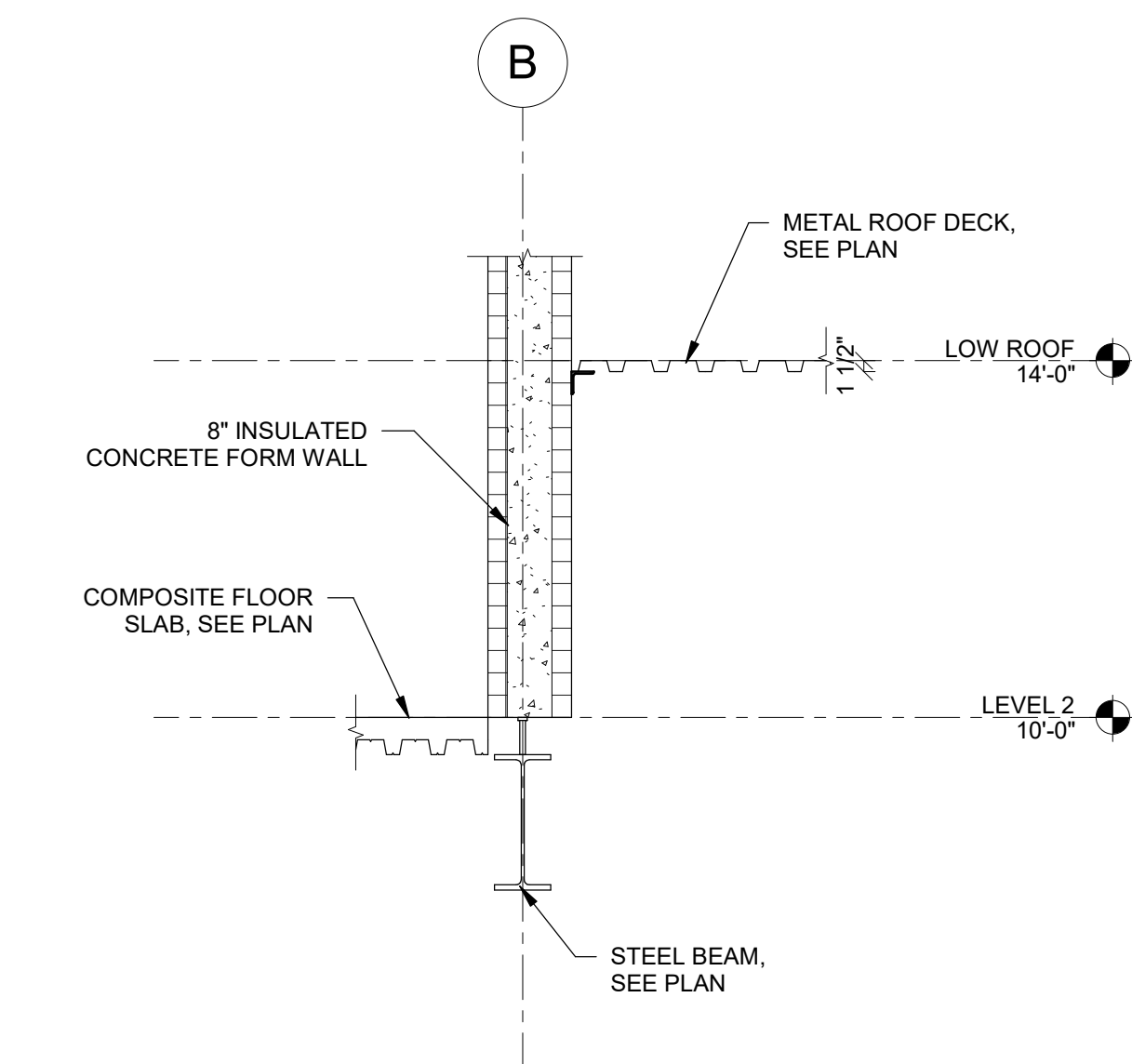
11 SECTION - HIGH ROOF FRAMING AT STAIR
S302 1/2" = 1'-0"



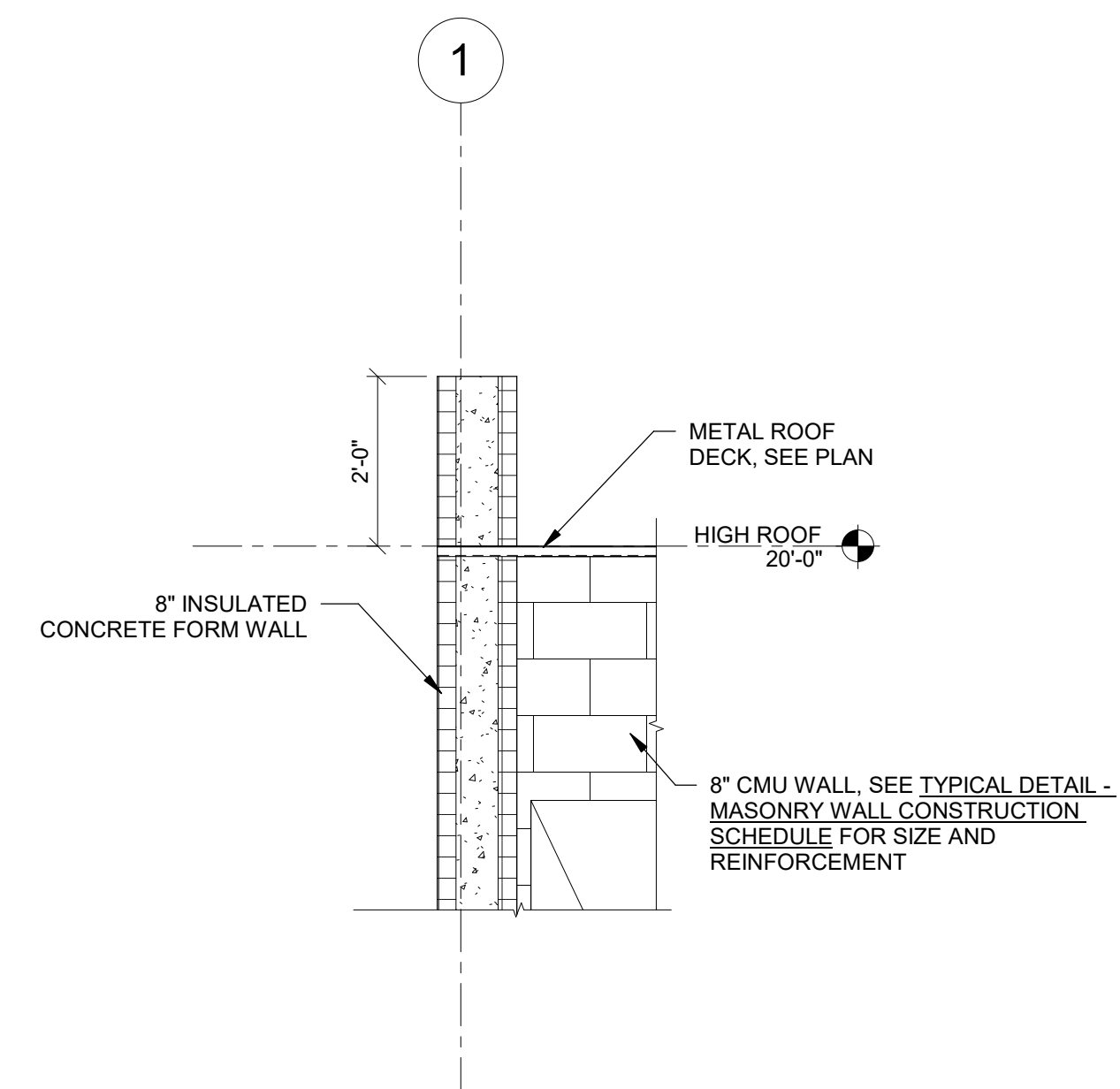
8 TYPICAL DETAIL - FLOOR FRAMING AT STAIR
S302



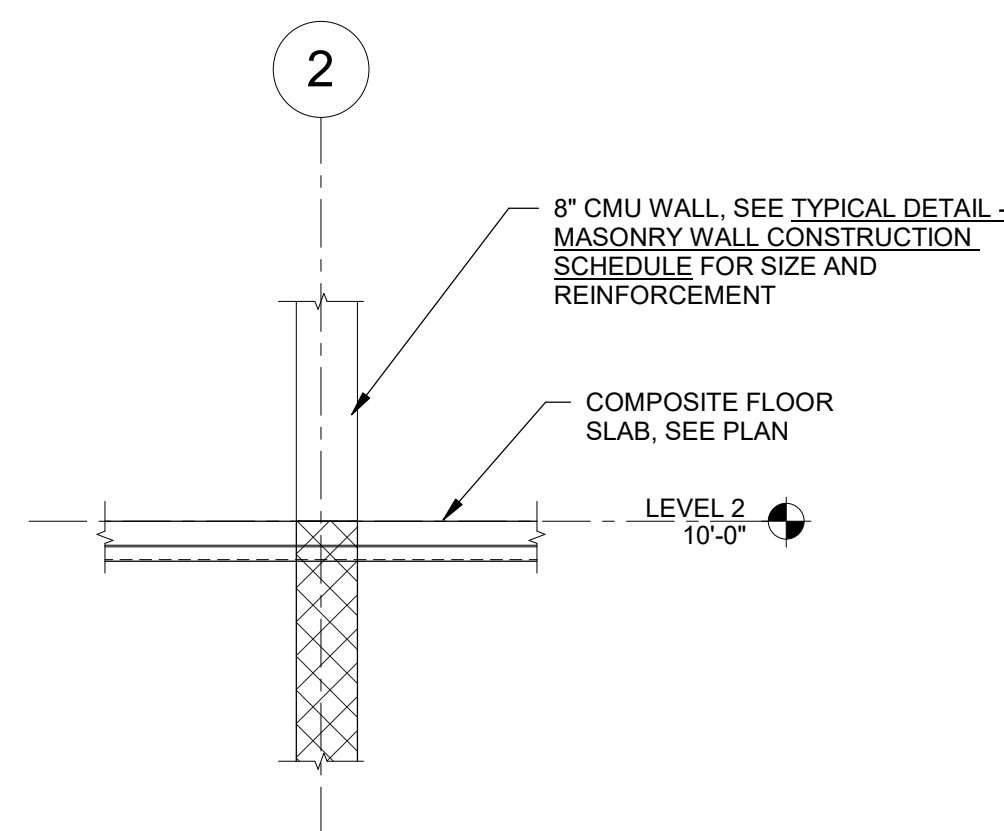
5 SECTION - FLOOR BEAM BEARING AT EXTERIOR WALL
S302 1/2" = 1'-0"



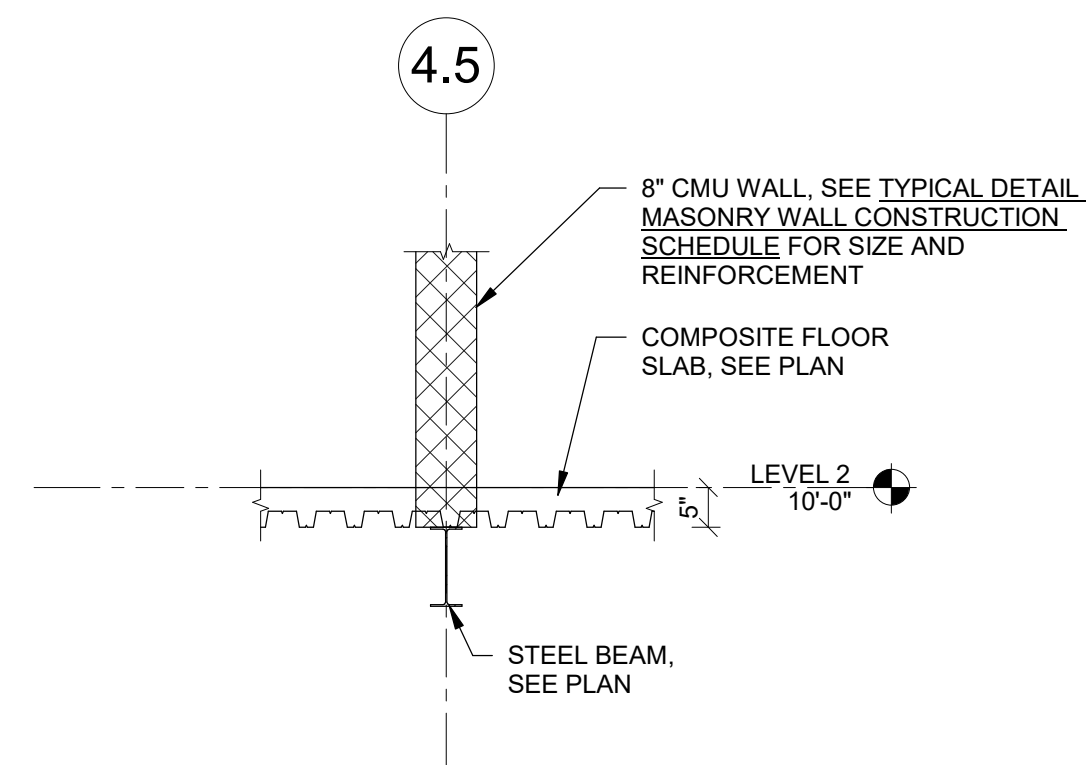
2 SECTION - BEAM SUPPORTING CMU WALL ALONG GRID B
S302 1/2" = 1'-0"



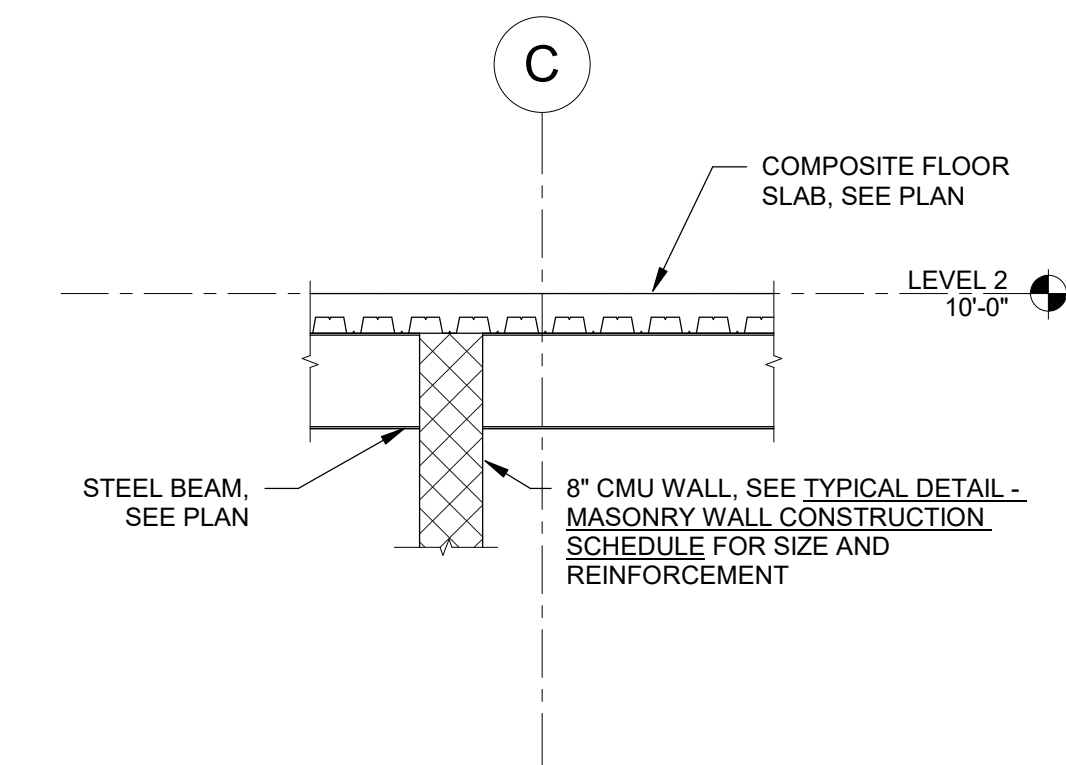
12 SECTION - HIGH ROOF FRAMING AT EXTERIOR WALL
S302 1/2" = 1'-0"



9 SECTION - Section 11
S302 1/2" = 1'-0"



6 SECTION - BEAM SUPPORTING CMU WALL ALONG GRID 4.5
S302 1/2" = 1'-0"



3 SECTION - BEAM BEARING AT INTERIOR CMU WALL
S302 1/2" = 1'-0"

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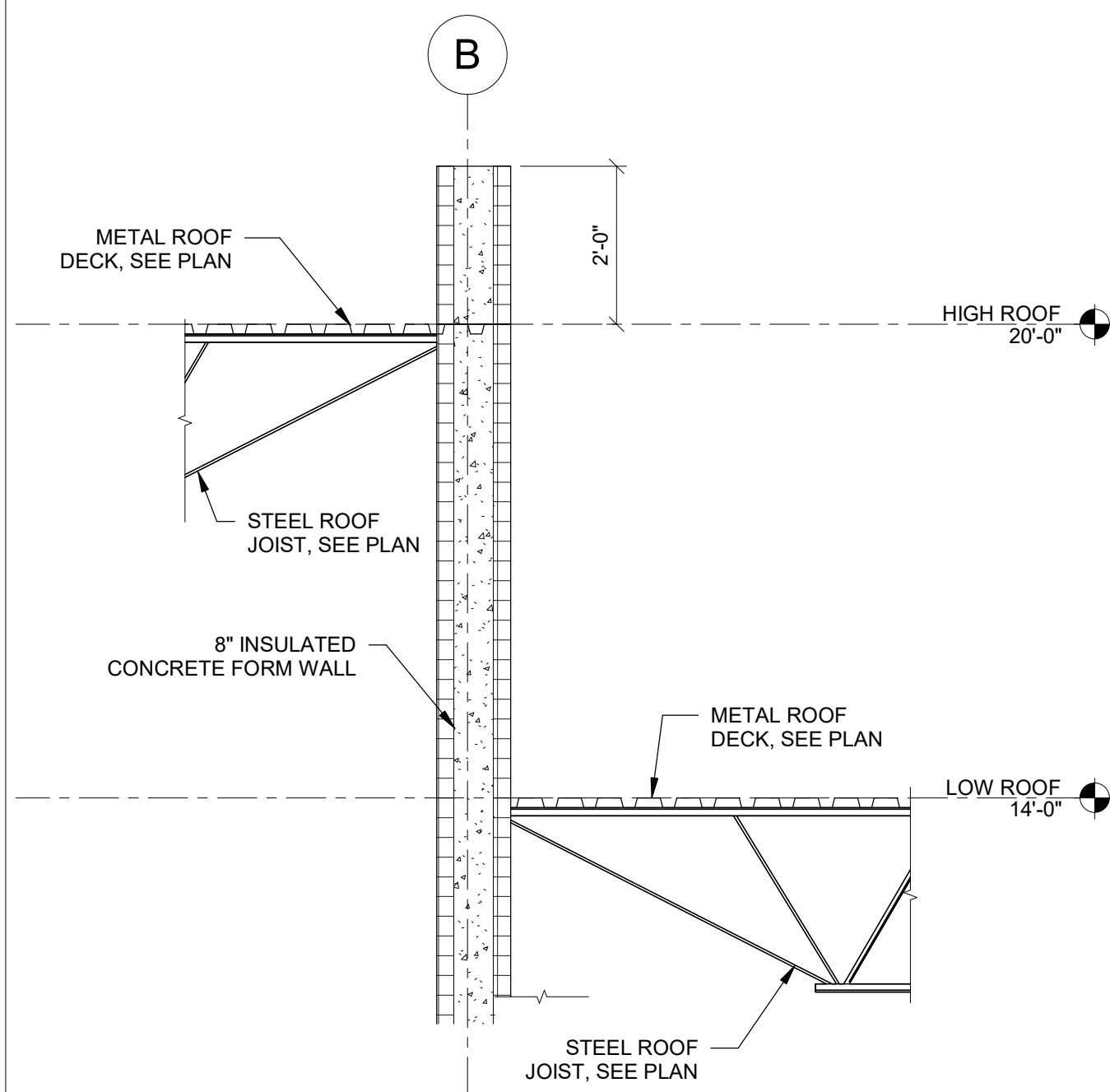


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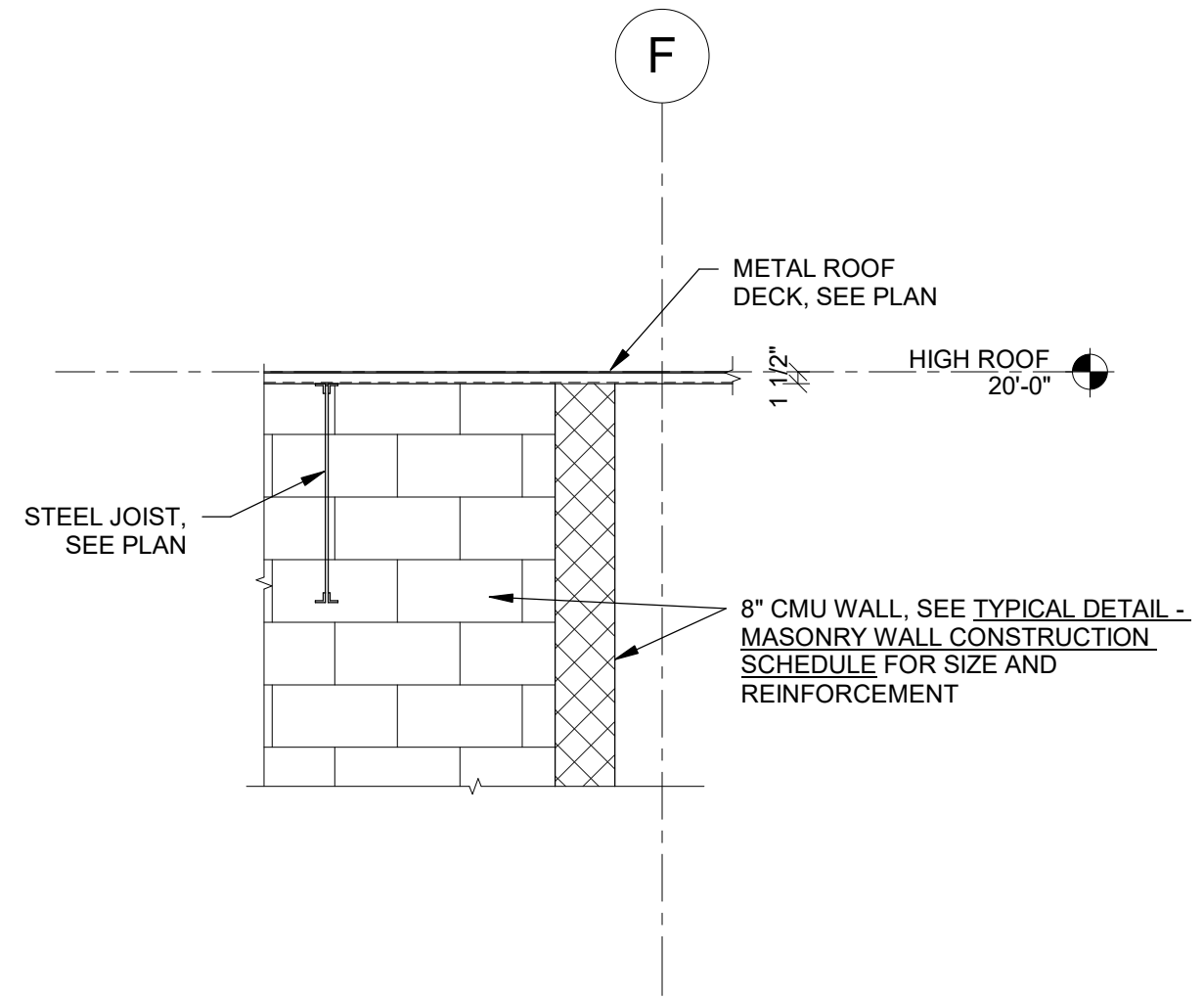
FRAMING
SECTIONS

S303



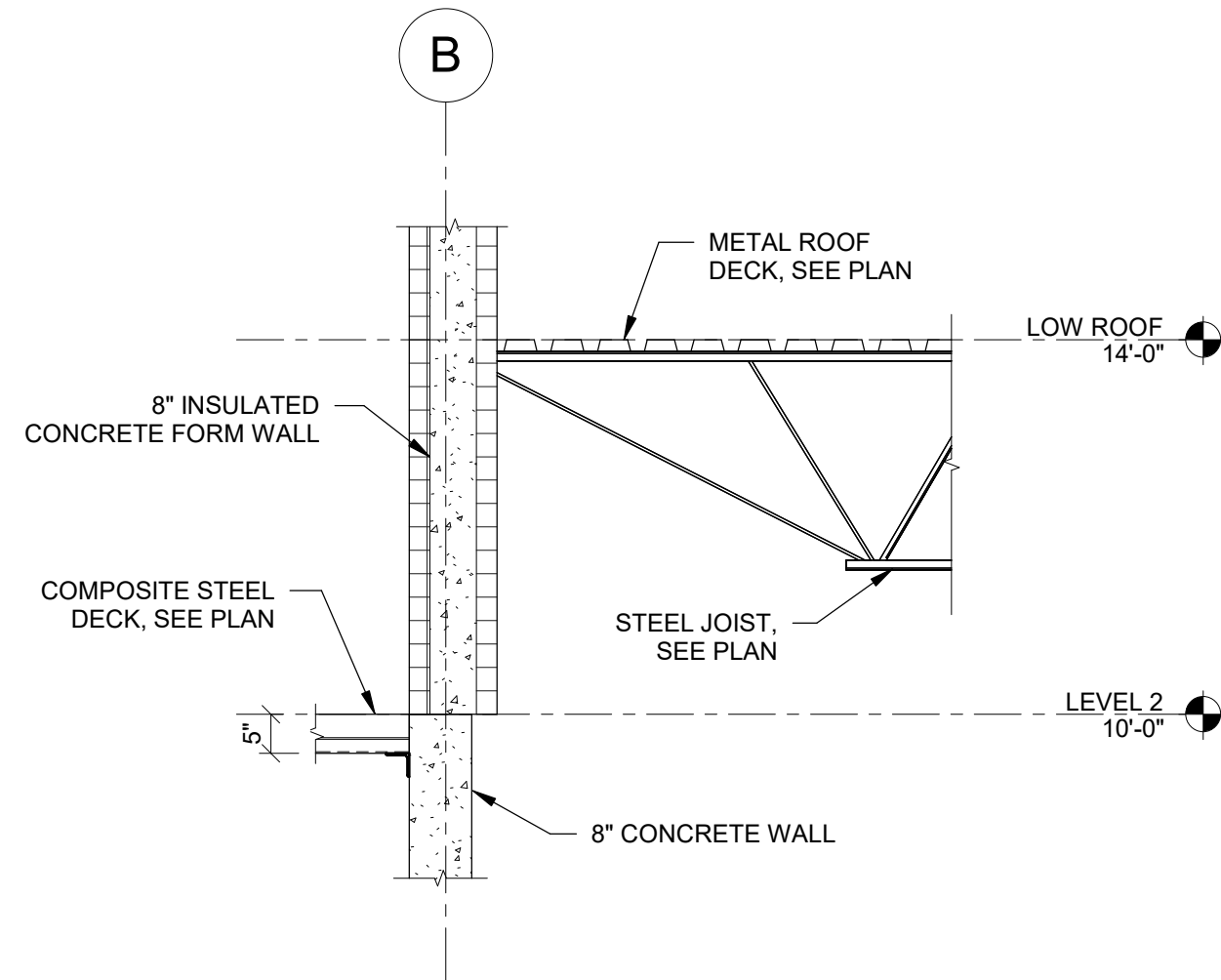
10 SECTION - HIGH ROOF AND LOW ROOF FRAMING

S303 1/2" = 1'-0"



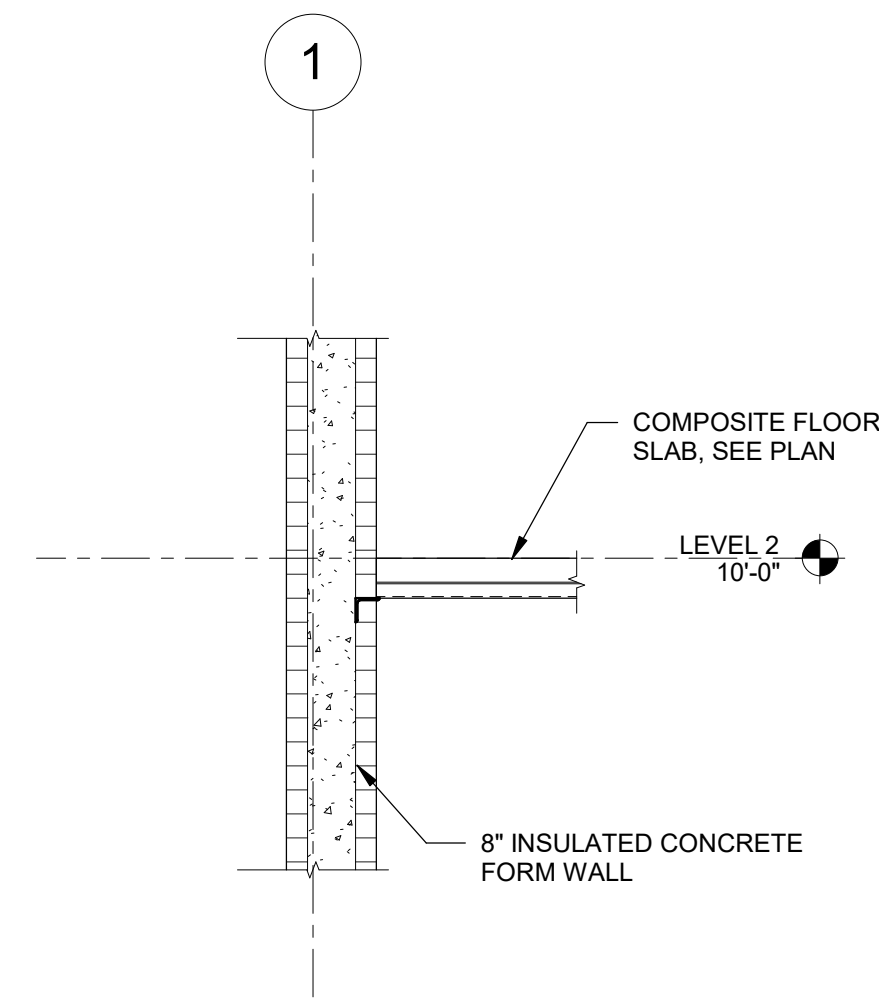
7 SECTION - HIGH ROOF FRAMING AT INTERIOR CMU WALL

S303 1/2" = 1'-0"



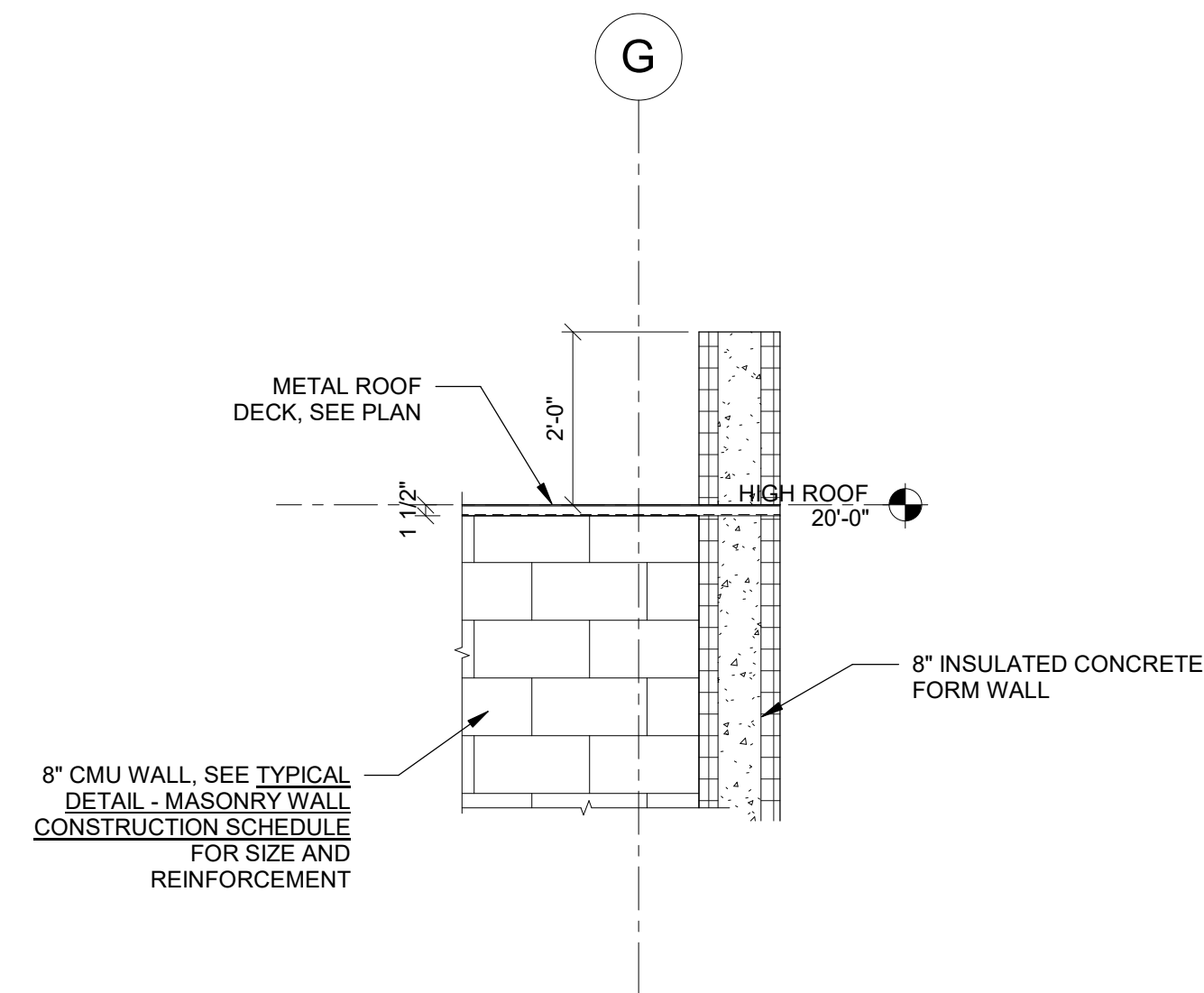
4 SECTION - FLOOR AND LOW ROOF FRAMING ALONG GRID B

S303 1/2" = 1'-0"



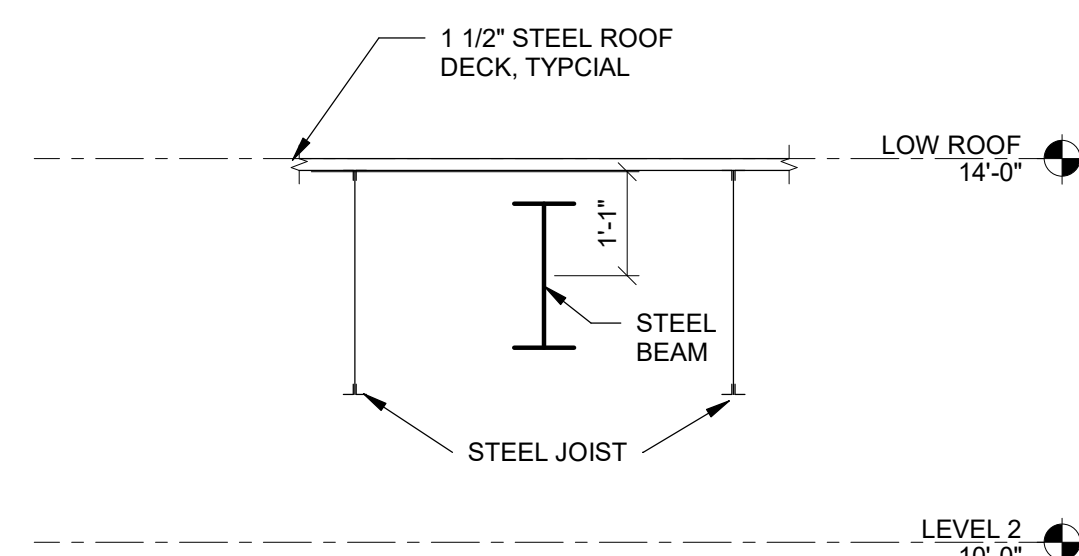
1 SECTION - FLOOR DECK BEARING AT EXTERIOR WALL

S303 1/2" = 1'-0"



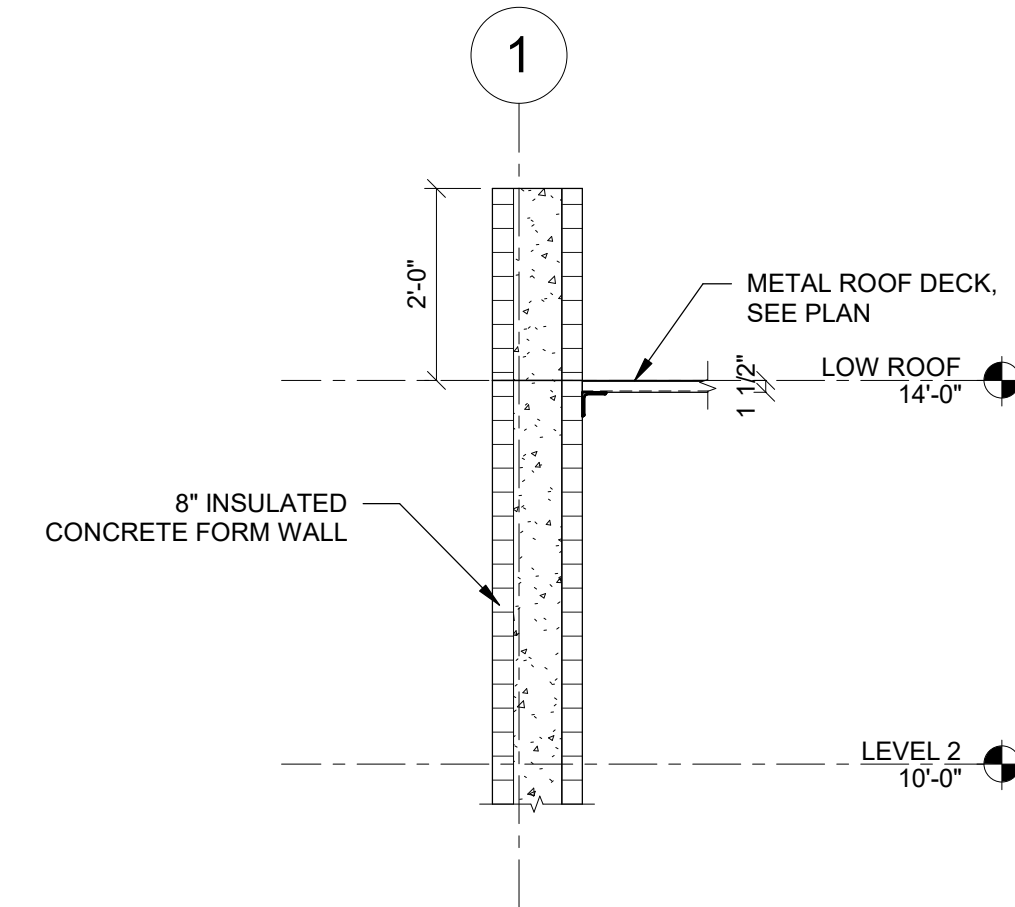
8 SECTION - HIGH ROOF DECK BEARING AT EXTERIOR WALL

S303 1/2" = 1'-0"



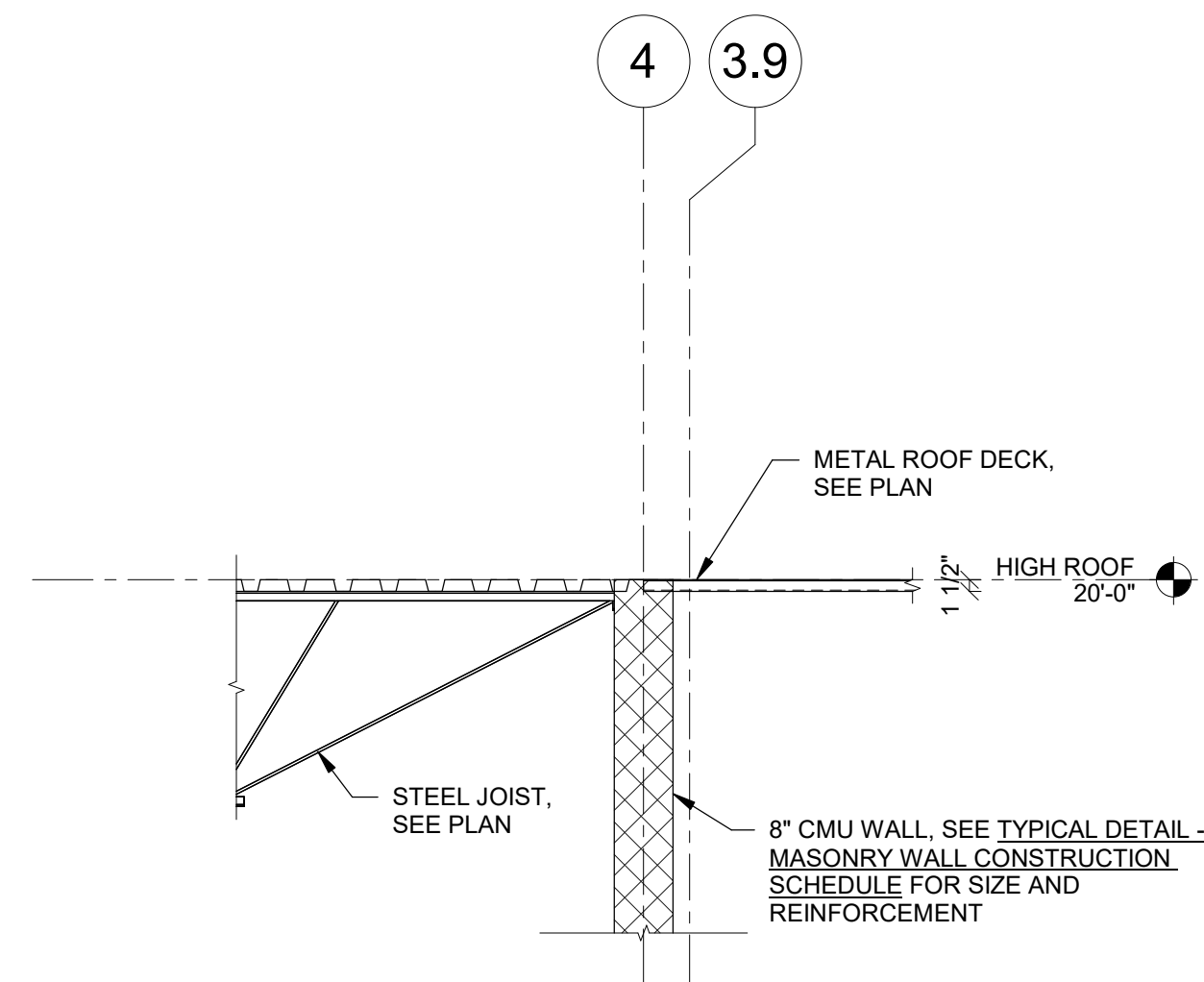
5 SECTION - CRANE RAIL BEAM AT LOW ROOF FRAMING

S303 1/2" = 1'-0"



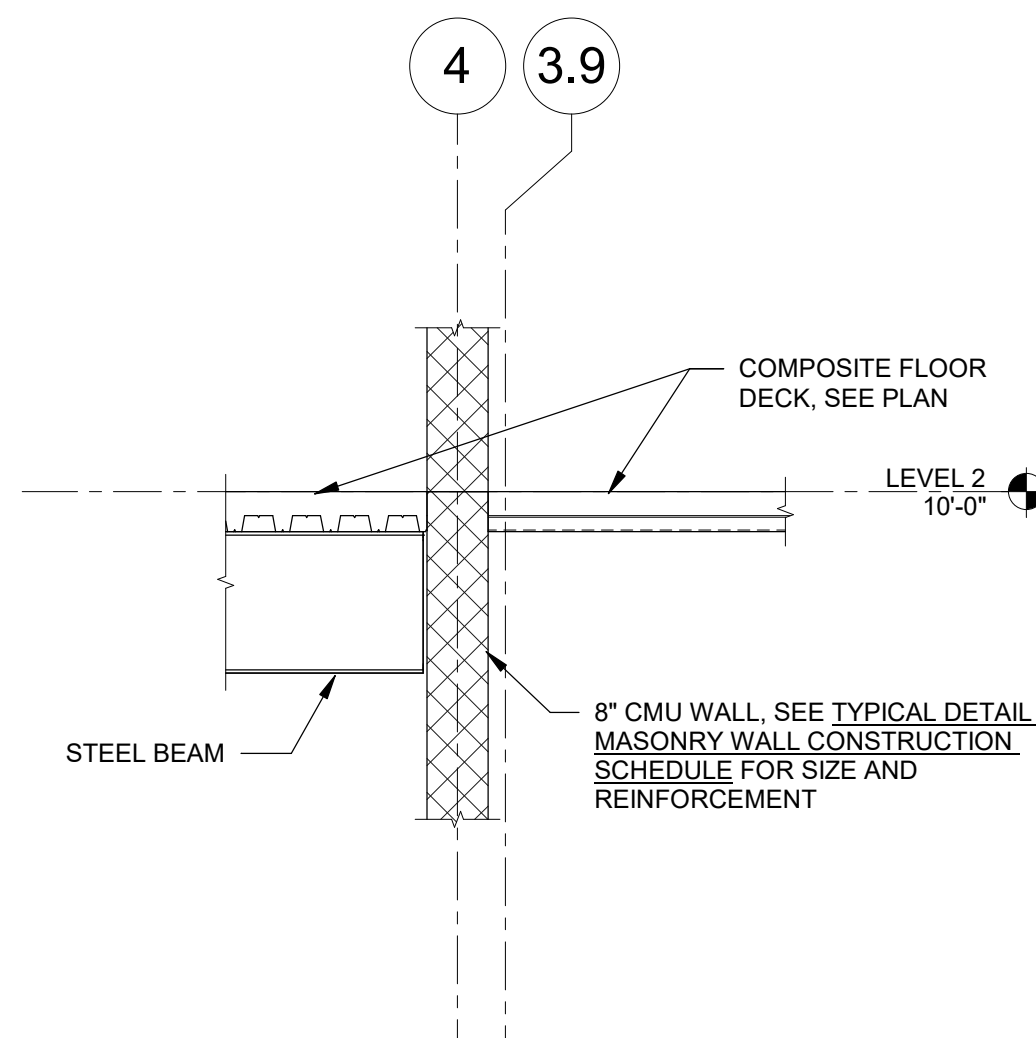
2 SECTION - LOW ROOF DECK BEARING AT EXTERIOR WALL

S303 1/2" = 1'-0"



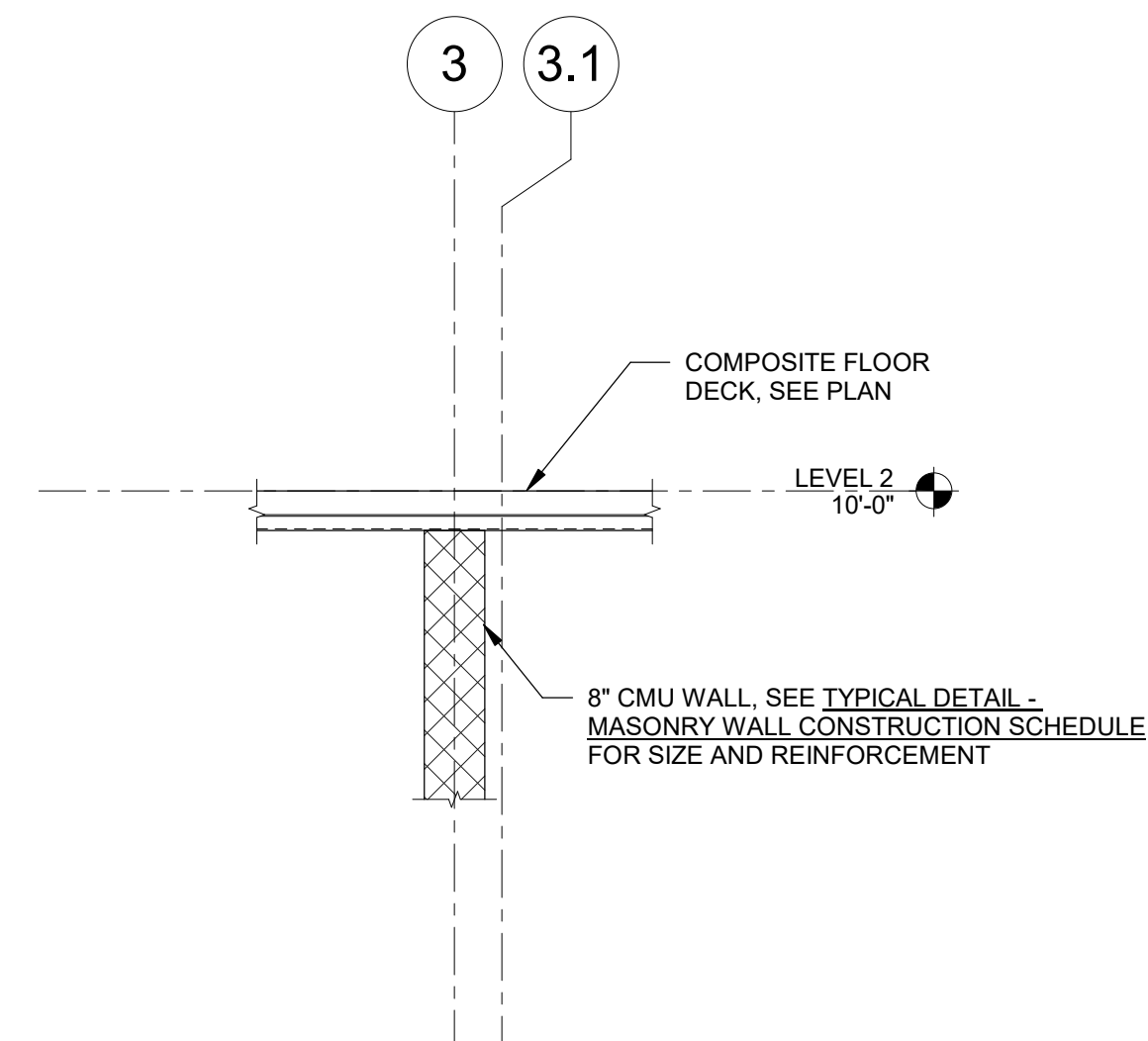
9 SECTION - HIGH ROOF JOIST BEARING AT INTERIOR CMU WALL

S303 1/2" = 1'-0"



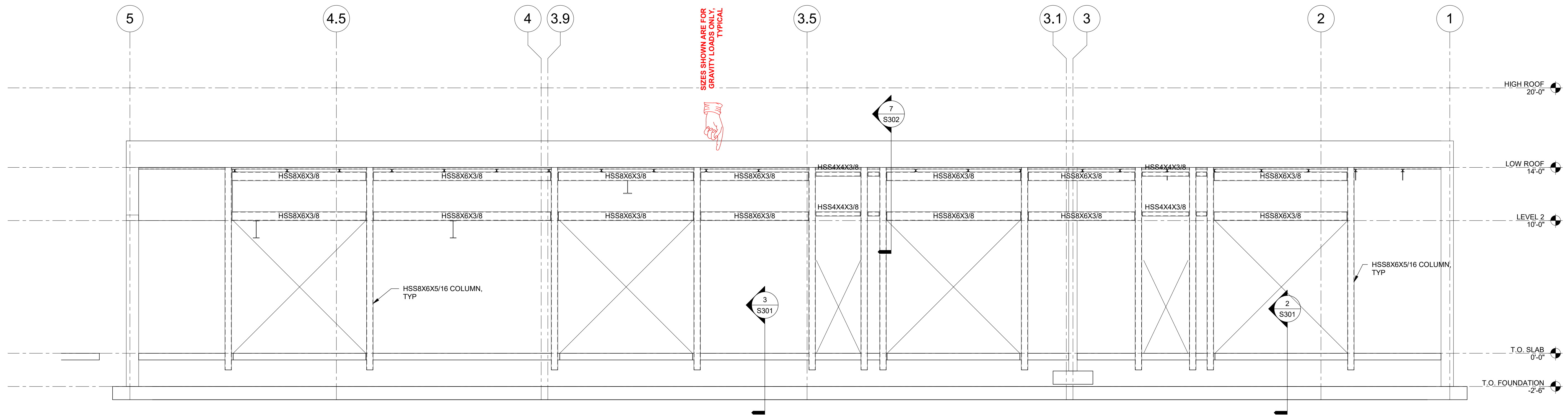
6 SECTION - FLOOR FRAMING AT CMU WALL ALONG GRID 4

S303 1/2" = 1'-0"

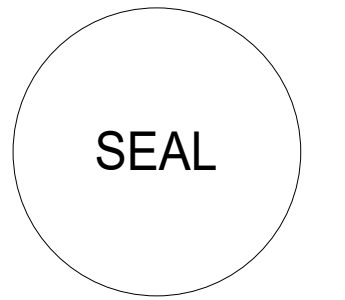


3 SECTION - FLOOR DECK BEARING ON INTERIOR CMU WALL

S303 1/2" = 1'-0"



1 ELEVATION - ELEVATION ALONG GRID A
 S401 1/4" = 1'-0"



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60% PROGRESS	2023.01.13
100% PROGRESS	2023.02.17

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**22-17 NTH - PHYSICAL
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STATE COLLEGE AREA SCHOOL DISTRICT
131 WEST NITTANY AVENUE
STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

**GROUND
FLOOR PLAN**

A1.0

GENERAL NOTES

- EXISTING WORK SHALL BE LABELED "EXISTING"; NEW WORK WILL HAVE NO LABEL OR BE LABELED "NEW" OR "PROPOSED".
- ALL DIMENSIONS ARE SHOWN TO THE FACE OF ROUGH FRAMING, UNLESS NOTED OTHERWISE.
- ALL MASONRY DIMENSIONS ARE SHOWN NOMINAL, UNLESS NOTED OTHERWISE.
- THE TERM "PROVIDE" SHALL BE UNDERSTOOD TO MEAN FURNISH AND INSTALL COMPLETE AND READY FOR USE.
- REVIEW ALL CONTRACT DOCUMENTS FOR ERRORS AND INCONSISTENCIES. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING FIELD REQUIREMENTS BEFORE ORDERING MATERIALS AND PREFABRICATED ITEMS. ANY NECESSARY ADJUSTMENTS BETWEEN FIELD MEASUREMENTS OR BETWEEN FIELD MEASUREMENTS AND DRAWINGS SHALL BE MADE IN ACCORDANCE WITH THE DESIGN OF THE ARCHITECT.
- ALL QUESTIONS OR CLARIFICATIONS NECESSARY DURING THE COURSE OF THE PROJECT SHALL BE DIRECTED TO THE ARCHITECT IN WRITING.
- ALL DEVIATIONS FROM THE ORIGINAL CONTRACT DRAWINGS SHALL BE NOTED ON RECORD DRAWINGS AT THE TIME MODIFICATIONS OCCUR AND SHALL BE AVAILABLE TO THE ARCHITECT.
- DO NOT SCALE DRAWINGS.

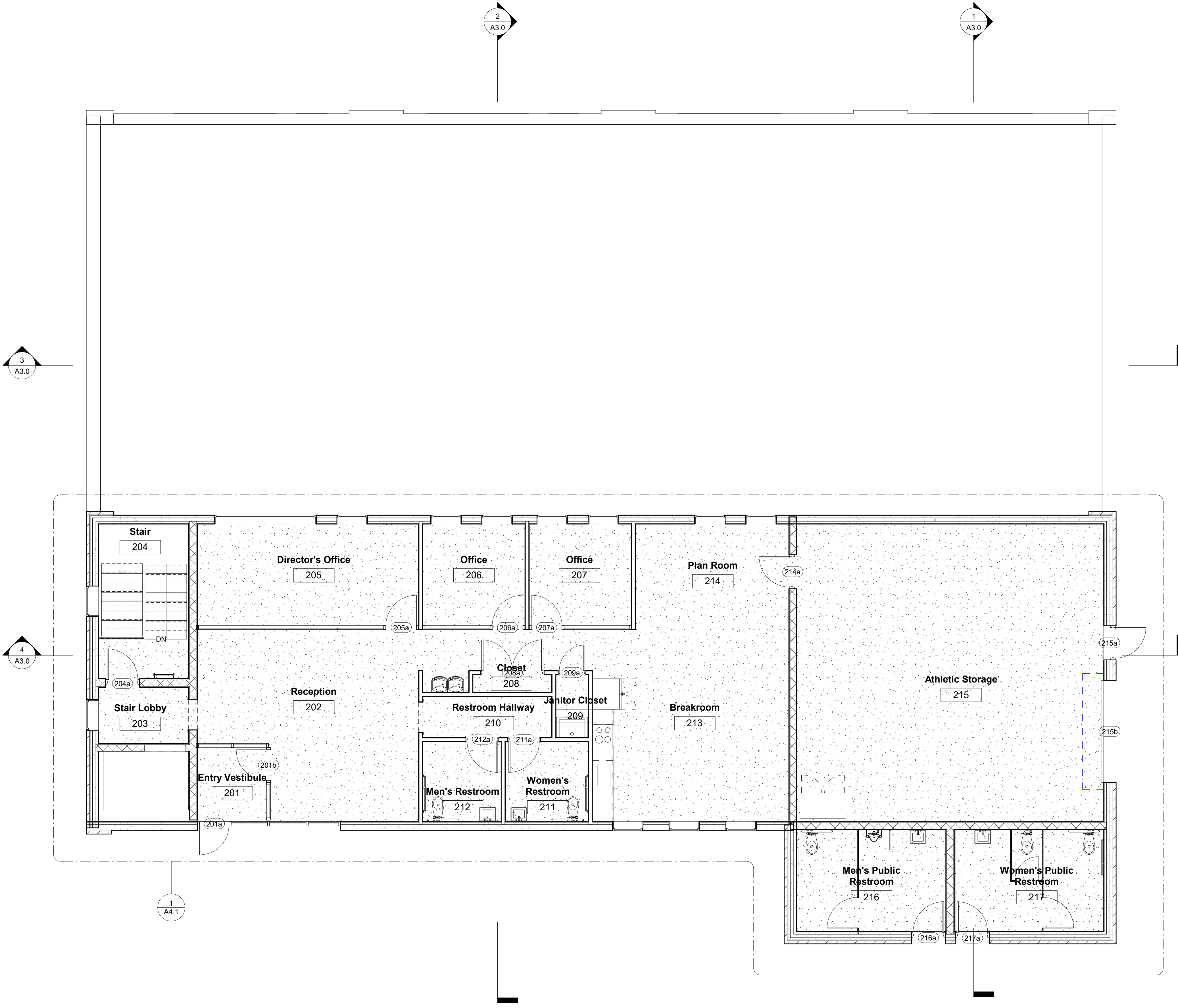
Keynote Legend

Key Value	Keynote Text
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1 Ground Floor Plan
3/16" = 1'-0"

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- GENERAL NOTES**
- EXISTING WORK SHALL BE LABELED "EXISTING"; NEW WORK WILL HAVE NO LABEL OR BE LABELED "NEW" OR "PROPOSED".
 - ALL DIMENSIONS ARE SHOWN TO THE FACE OF ROUGH FRAMING, UNLESS NOTED OTHERWISE.
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 - DO NOT SCALE DRAWINGS.

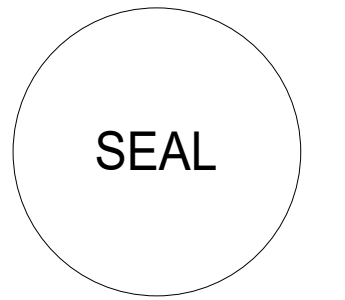
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Key Value	Keynote Text

1 Second Floor Plan
3/16" = 1'-0"

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22-17 NTH - PHYSICAL PLANT
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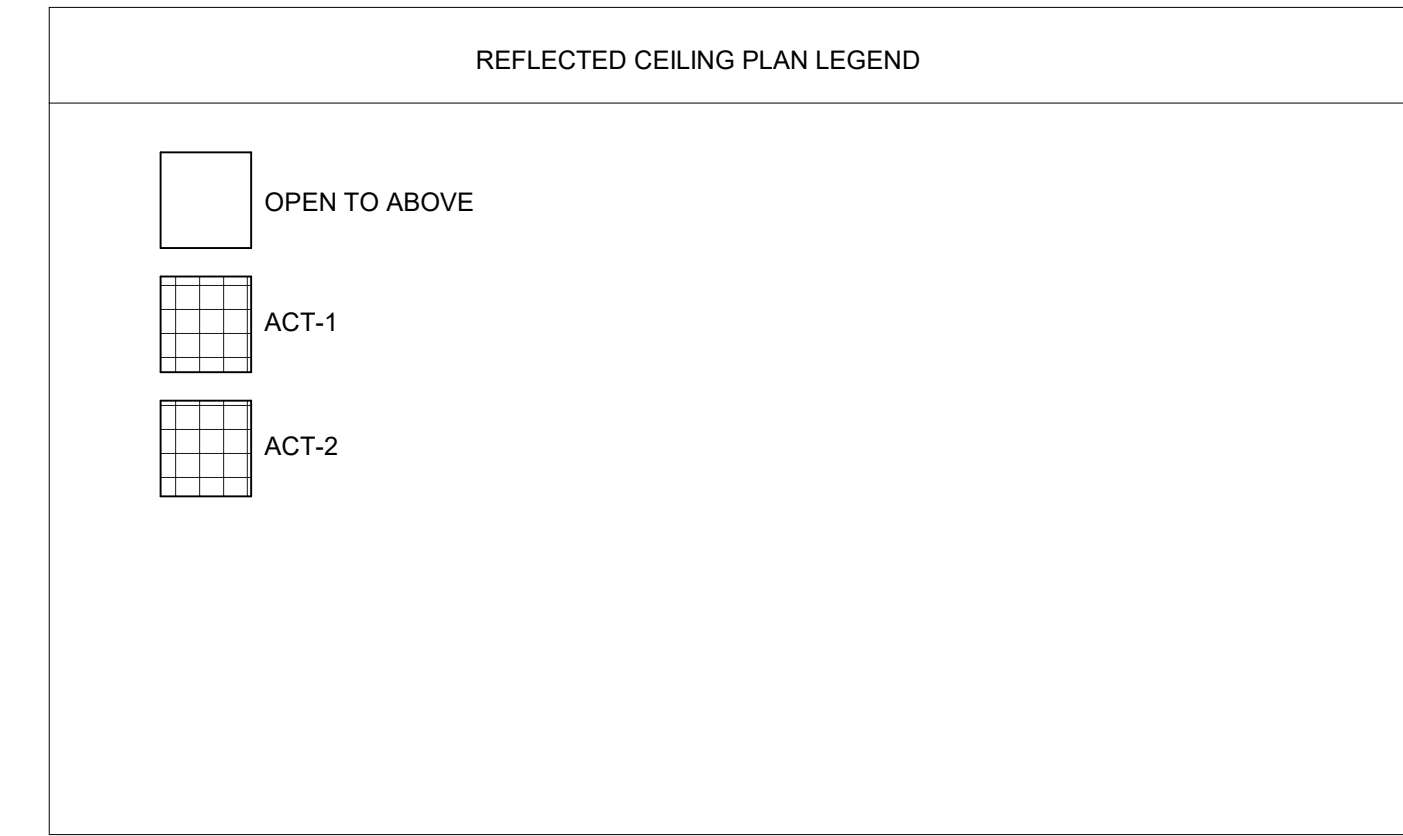
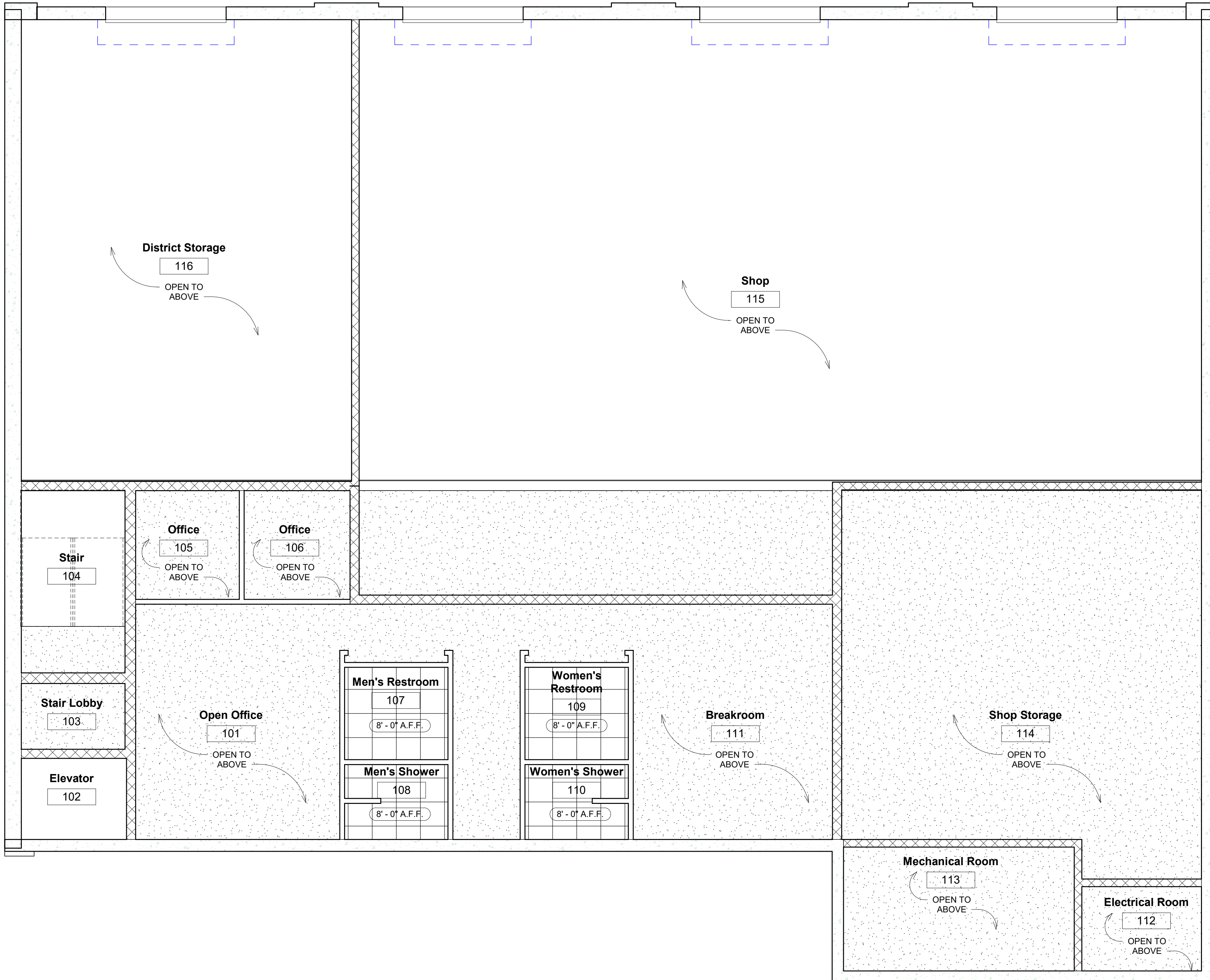
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SCASD JOB #: 22-17

SECOND FLOOR PLAN

A1.1

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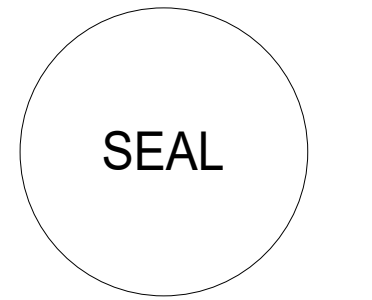


1 Ground Floor Reflected Ceiling Plan
3/16" = 1'-0"



SUBMISSIONS

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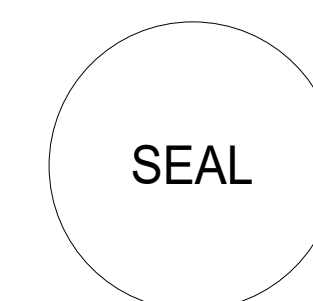
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100% PROGRESS	2023.02.17

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**22-17 NTH - PHYSICAL
PLANT**

SCASD PHYSICAL PLANT BUILDING
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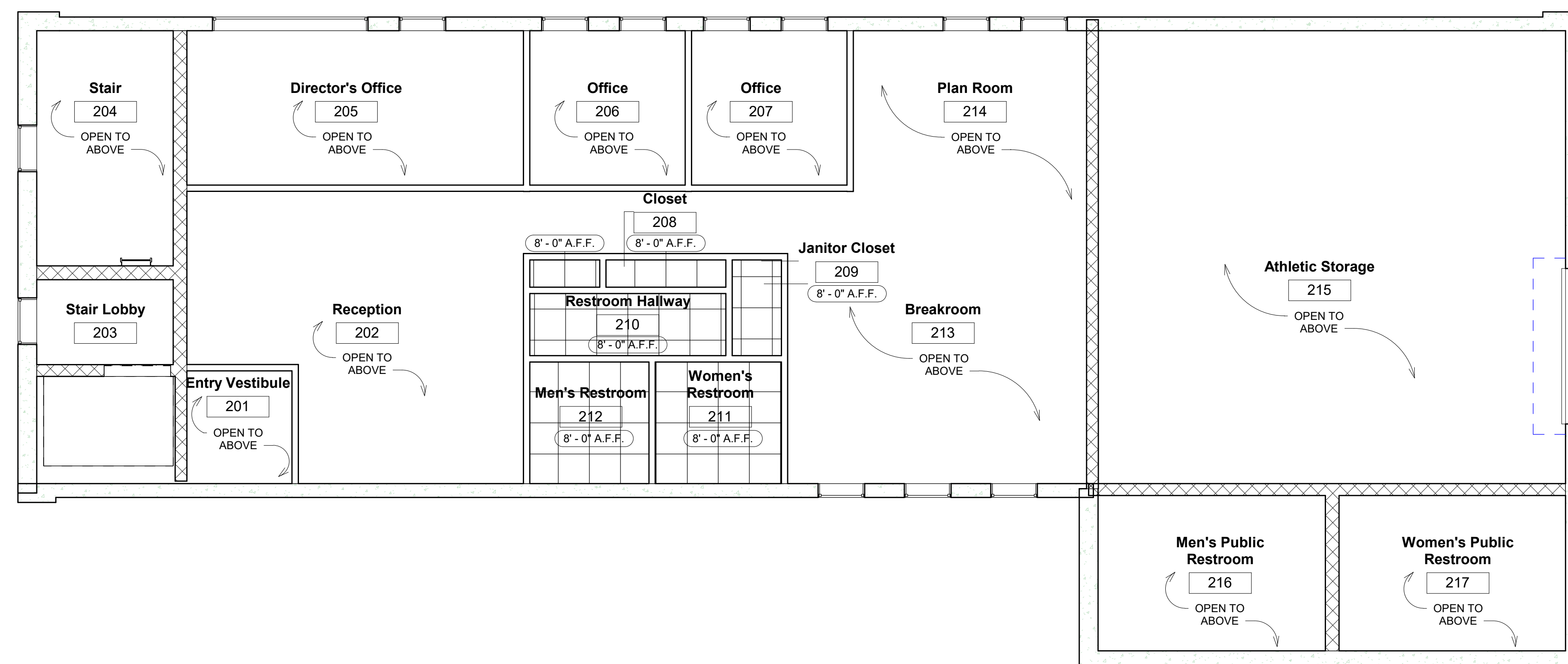
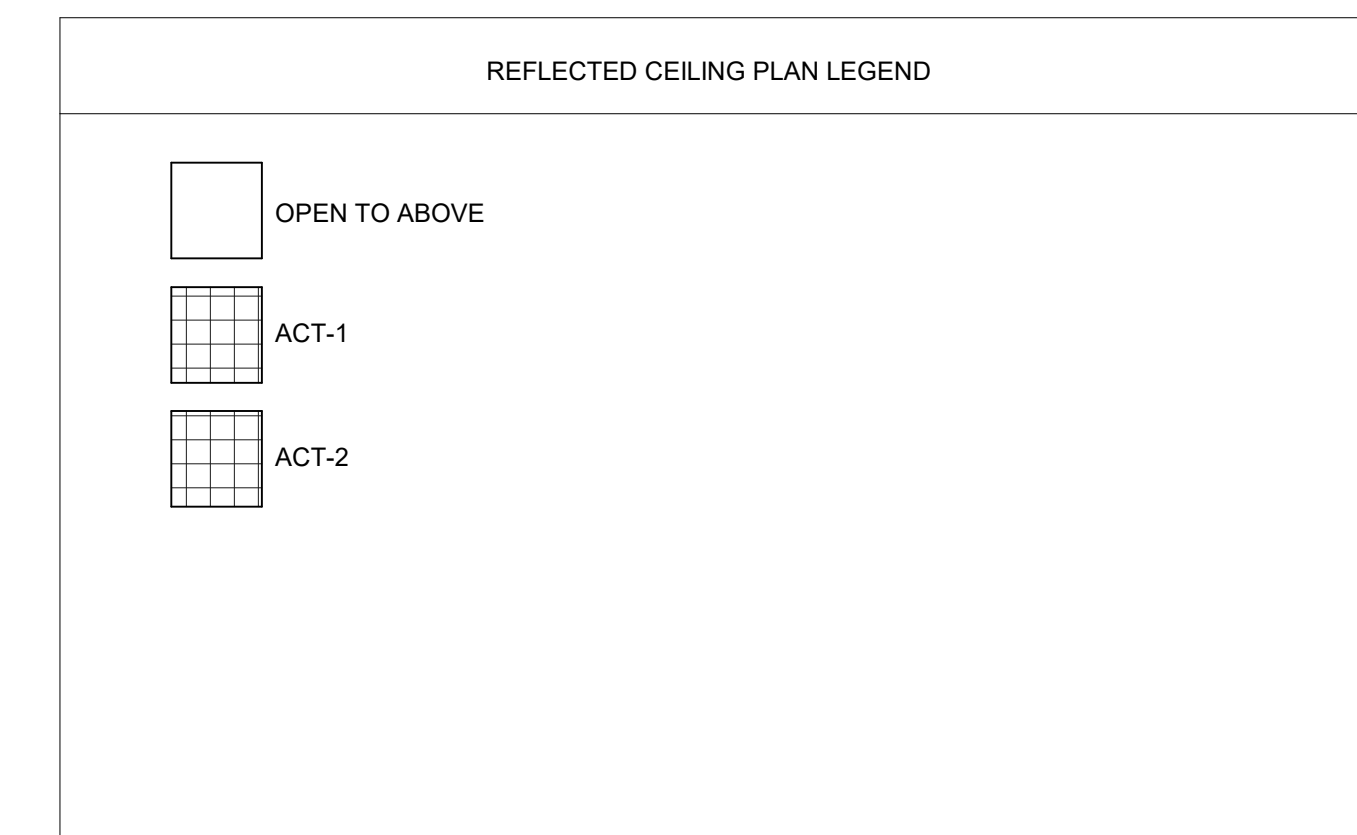


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**SECOND FLOOR
REFLECTED
CEILING PLAN**

A1.3



1 Second Floor Reflected Ceiling Plan
3/16" = 1'-0"

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**22-17 NTH - PHYSICAL
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SCASD PHYSICAL PLANT BUILDING
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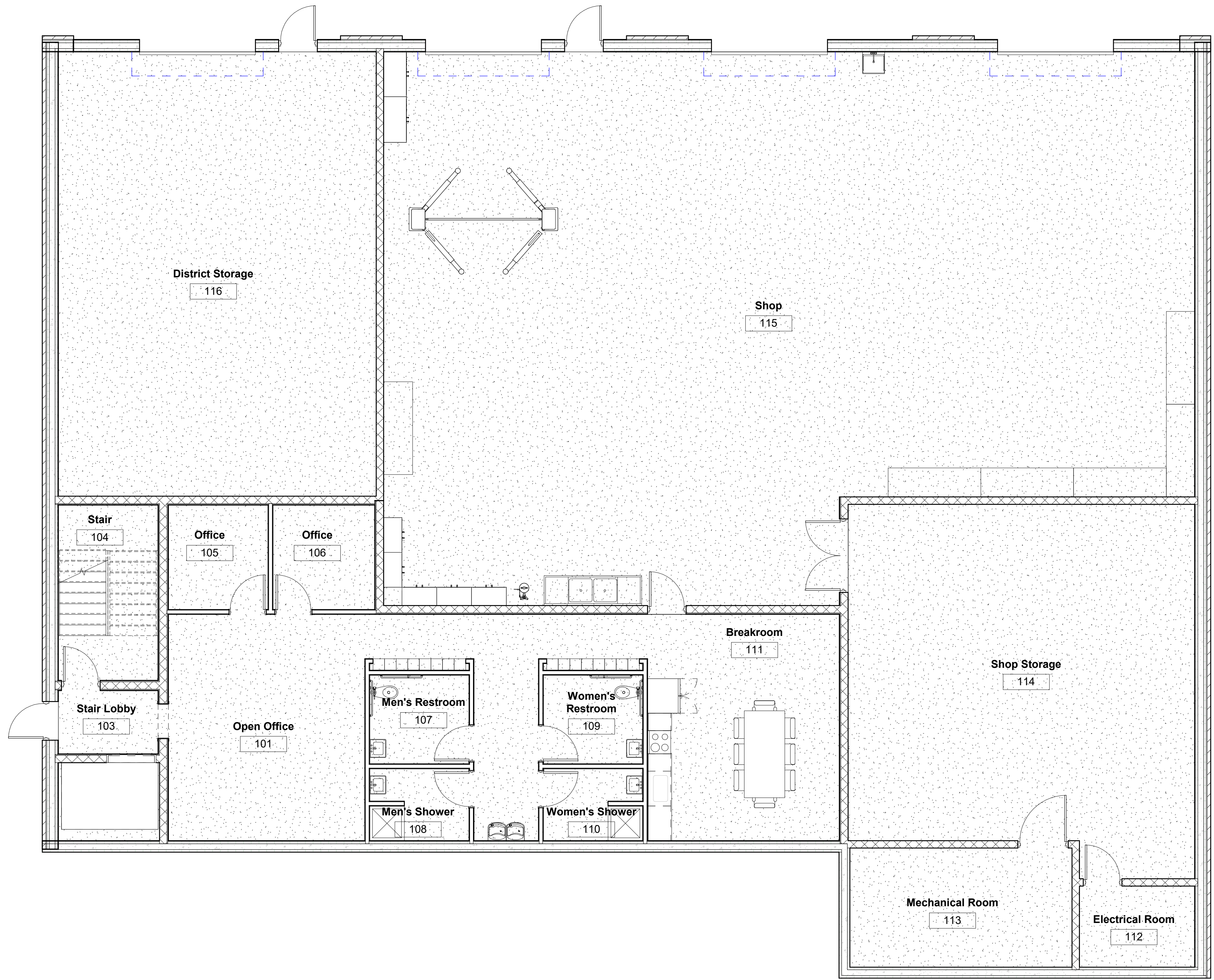


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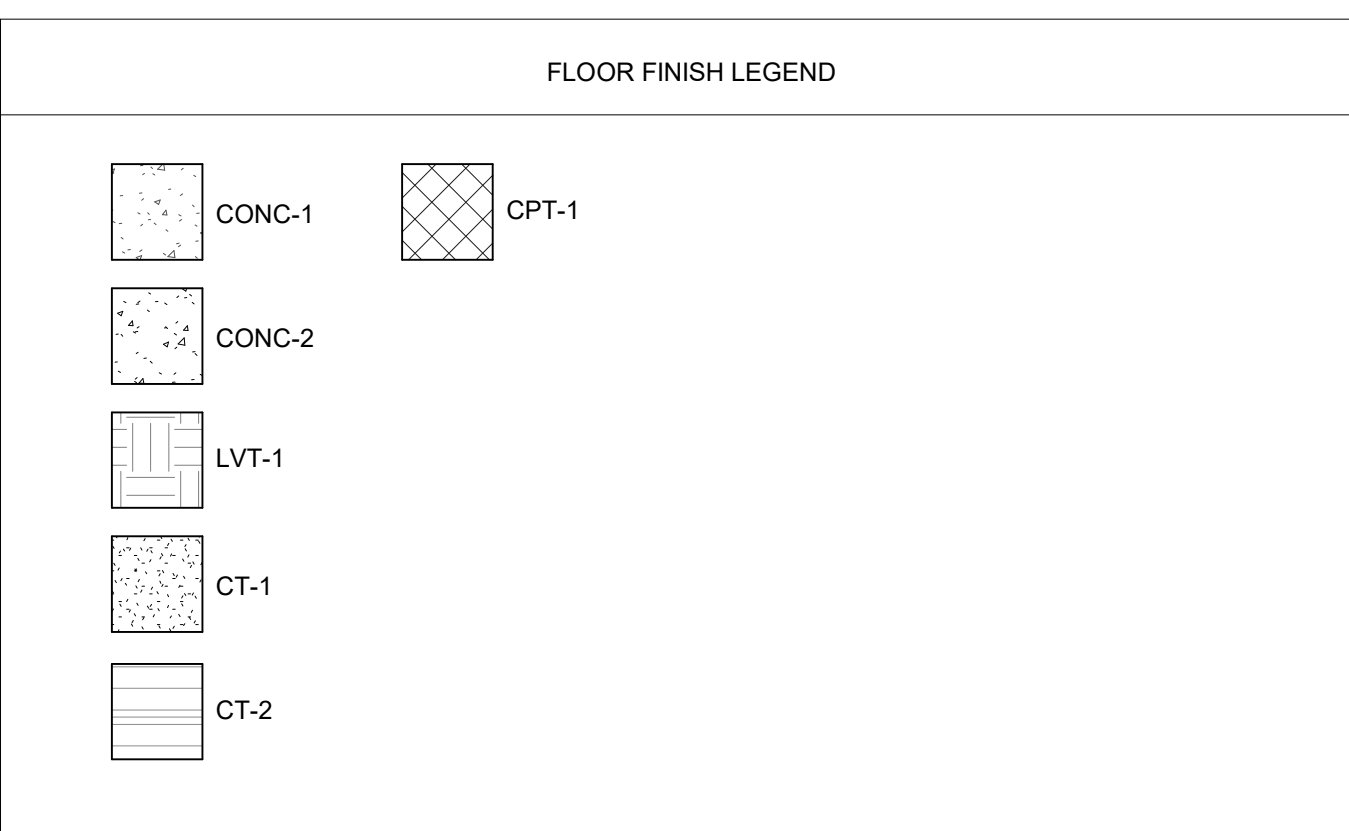
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**GROUND
FLOOR FINISH
PLAN**

A1.4



Room Number	Room Name	Floor Finish	Base Finish	Walls				Ceiling Finish	Comments
				North	South	East	West		
101	Open Office	LVT-1							
102	Elevator								
103	Stair Lobby	LVT-1							
104	Stair	LVT-1							
105	Office	LVT-1							
106	Office	LVT-1							
107	Men's Restroom	CT-1							
108	Men's Shower	CT-1							
109	Women's Restroom	CT-1							
110	Women's Shower	CT-1							
111	Breakroom	LVT-1							
112	Electrical Room	CONC-2							
113	Mechanical Room	CONC-2							
114	Shop Storage	CONC-2							
115	Shop	CONC-1							
116	District Storage	CONC-1							
201	Entry Vestibule								
202	Reception	LVT-1							
203	Stair Lobby	LVT-1							
204	Stair	LVT-1							
205	Director's Office	CPT-1							
206	Office	CPT-1							
207	Office	CPT-1							
208	Closet	LVT-1							
209	Janitor Closet	LVT-1							
210	Restroom Hallway	LVT-1							
211	Women's Restroom	CT-1							
212	Men's Restroom	CT-1							
213	Breakroom	LVT-1							
214	Plan Room	LVT-1							
215	Athletic Storage	CONC-2							
216	Men's Public Restroom	CT-2							
217	Women's Public Restroom	CT-2							



1 Ground Floor Finish Plan
3/16" = 1'-0"

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22-17 NTH - PHYSICAL PLANT

SCASD PHYSICAL PLANT BUILDING
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STATE COLLEGE, PA 16801

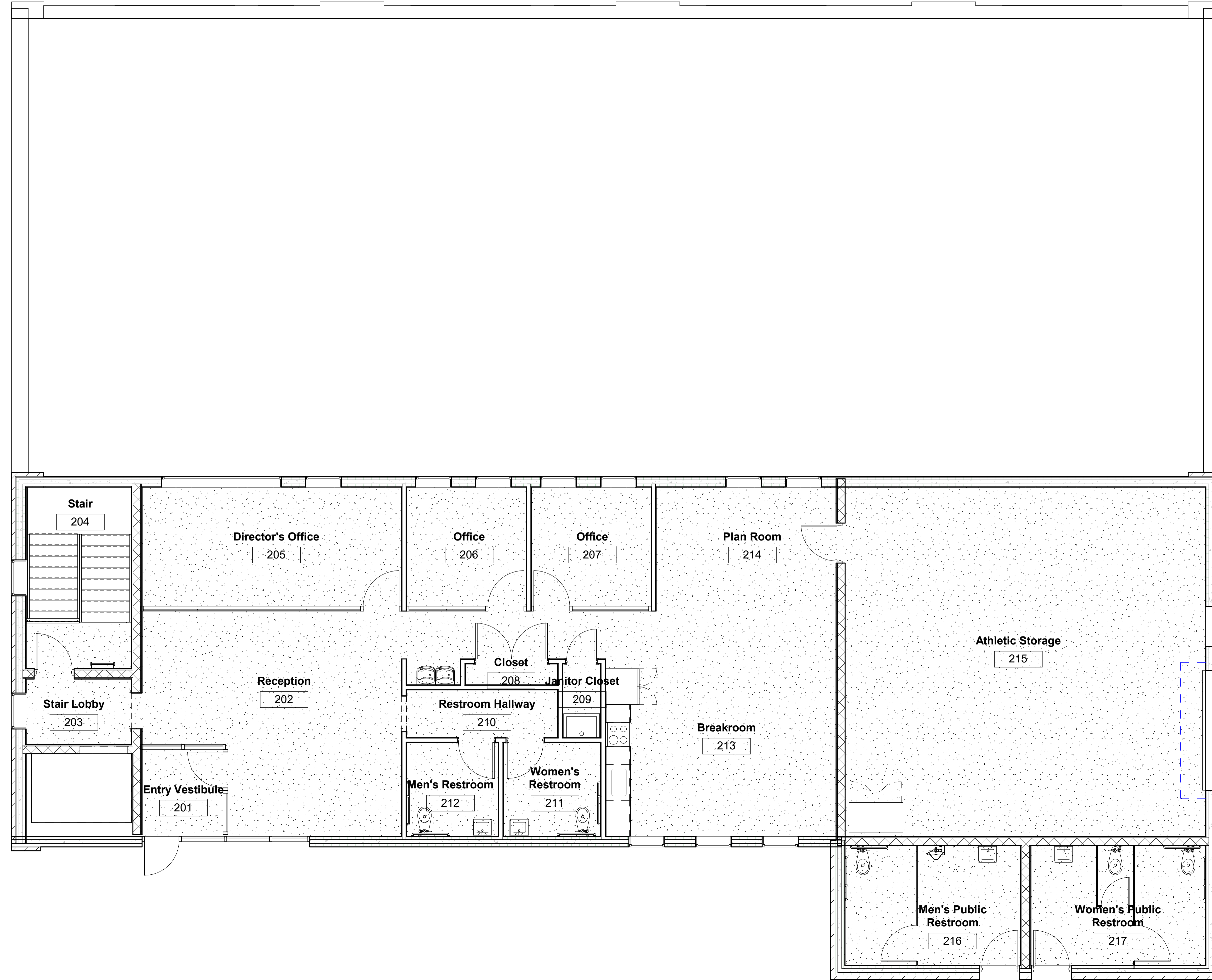


STATE COLLEGE AREA SCHOOL DISTRICT
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STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

SECOND FLOOR FINISH PLAN

A1.5



Room Number	Room Name	Floor Finish	Base Finish	Walls				Ceiling Finish	Comments
				North	South	East	West		
101	Open Office	LVT-1							
102	Elevator								
103	Stair Lobby	LVT-1							
104	Stair	LVT-1							
105	Office	LVT-1							
106	Office	LVT-1							
107	Men's Restroom	CT-1							
108	Men's Shower	CT-1							
109	Women's Restroom	CT-1							
110	Women's Shower	CT-1							
111	Breakroom	LVT-1							
112	Electrical Room	CONC-2							
113	Mechanical Room	CONC-2							
114	Shop Storage	CONC-2							
115	Shop	CONC-1							
116	District Storage	CONC-1							
201	Entry Vestibule								
202	Reception	LVT-1							
203	Stair Lobby	LVT-1							
204	Stair	LVT-1							
205	Director's Office	CPT-1							
206	Office	CPT-1							
207	Office	CPT-1							
208	Closet	LVT-1							
209	Janitor Closet	LVT-1							
210	Restroom Hallway	LVT-1							
211	Women's Restroom	CT-1							
212	Men's Restroom	CT-1							
213	Breakroom	LVT-1							
214	Plan Room	LVT-1							
215	Athletic Storage	CONC-2							
216	Men's Public Restroom	CT-2							
217	Women's Public Restroom	CT-2							

	CONC-1		CPT-1
	CONC-2		LVT-1
	CT-1		CT-2

① Second Floor Finish Plan
3/16" = 1'-0"

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SCASD JOB #: 22-17

ROOF PLAN

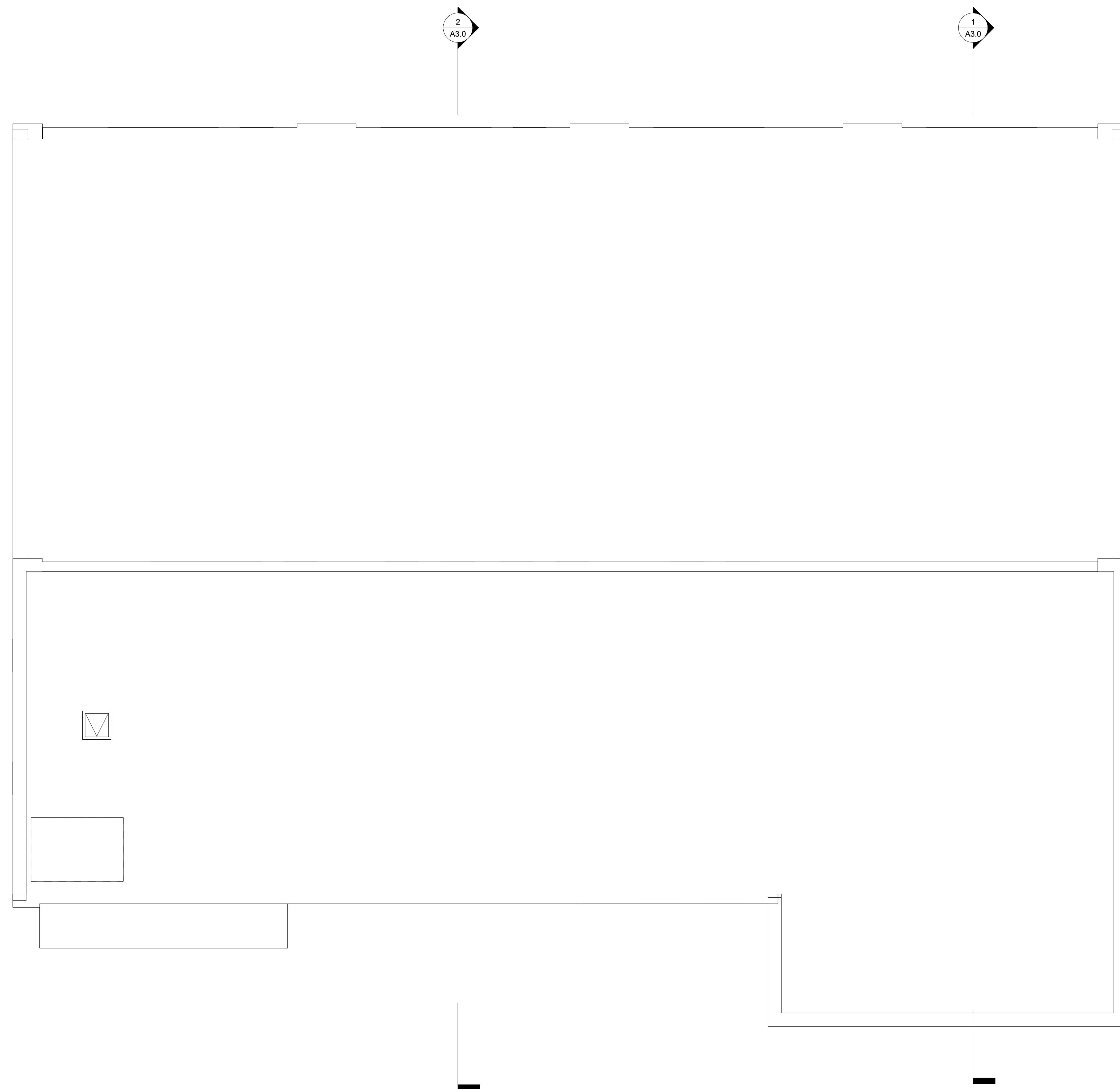
A1.6

GENERAL NOTES

- EXISTING WORK SHALL BE LABELED "EXISTING". NEW WORK WILL HAVE NO LABEL OR BE LABELED "NEW" OR "PROPOSED".
- ALL DIMENSIONS ARE SHOWN TO THE FACE OF ROUGH FRAMING, UNLESS NOTED OTHERWISE.
- ALL MASONRY DIMENSIONS ARE SHOWN NOMINAL, UNLESS NOTED OTHERWISE.
- THE TERM "PROVIDE" SHALL BE UNDERSTOOD TO MEAN FURNISH AND INSTALL COMPLETE AND READY FOR USE.
- REVIEW ALL CONTRACT DOCUMENTS FOR ERRORS AND INCONSISTENCIES. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING FIELD REQUIREMENTS BEFORE ORDERING MATERIALS AND PREFABRICATED ITEMS. ANY NECESSARY ADJUSTMENTS BETWEEN FIELD MEASUREMENTS OR BETWEEN FIELD MEASUREMENTS AND DRAWINGS SHALL BE MADE IN ACCORDANCE WITH THE DESIGN OF THE ARCHITECT.
- ALL QUESTIONS OR CLARIFICATIONS NECESSARY DURING THE COURSE OF THE PROJECT SHALL BE DIRECTED TO THE ARCHITECT IN WRITING.
- ALL DEVIATIONS FROM THE ORIGINAL CONTRACT DRAWINGS SHALL BE NOTED ON RECORD DRAWINGS AT THE TIME MODIFICATIONS OCCUR AND SHALL BE AVAILABLE TO THE ARCHITECT.
- DO NOT SCALE DRAWINGS.

Keynote Legend

Key Value	Keynote Text
-----------	--------------



1 Roof Plan
3/16" = 1'-0"

G:\Current Jobs\21_SC ASD\Projects\22-17-Nth-Physical Plant\Arch\Compos\Verf\22-17_TBlock - 3/27/2023 - Robert Miller



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60% PROGRESS	2023.01.13
100% PROGRESS	2023.02.17

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DOCUMENTS**
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SEAL

**22-17 NTH - PHYSICAL
PLANT**

SCASD PHYSICAL PLANT BUILDING
WESTERLY PARKWAY
STATE COLLEGE, PA 16801





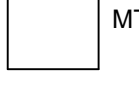
STATE COLLEGE AREA SCHOOL DISTRICT
131 WEST NITTANY AVENUE
STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

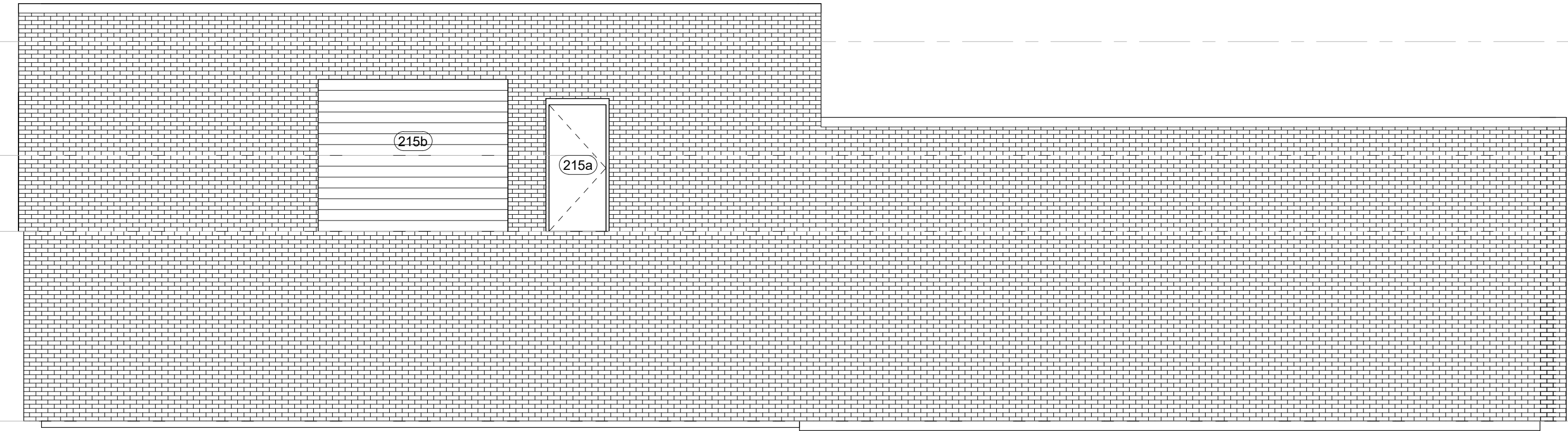
**EXTERIOR
ELEVATIONS**

A2.0

EXTERIOR ELEVATION FINISH LEGEND

-  BRK-1
-  MTL-1
-  MTL-2

- Roof Plan 20' - 0"
- Lower Roof 14' - 0"
- Second Floor 10' - 0"
- Ground Floor 0' - 0"



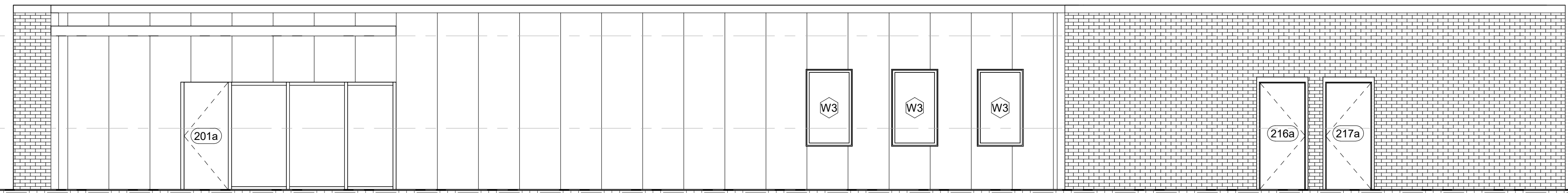
1 South Elevation
3/16" = 1'-0"

- Roof Plan 20' - 0"
- Lower Roof 14' - 0"
- Second Floor 10' - 0"
- Ground Floor 0' - 0"



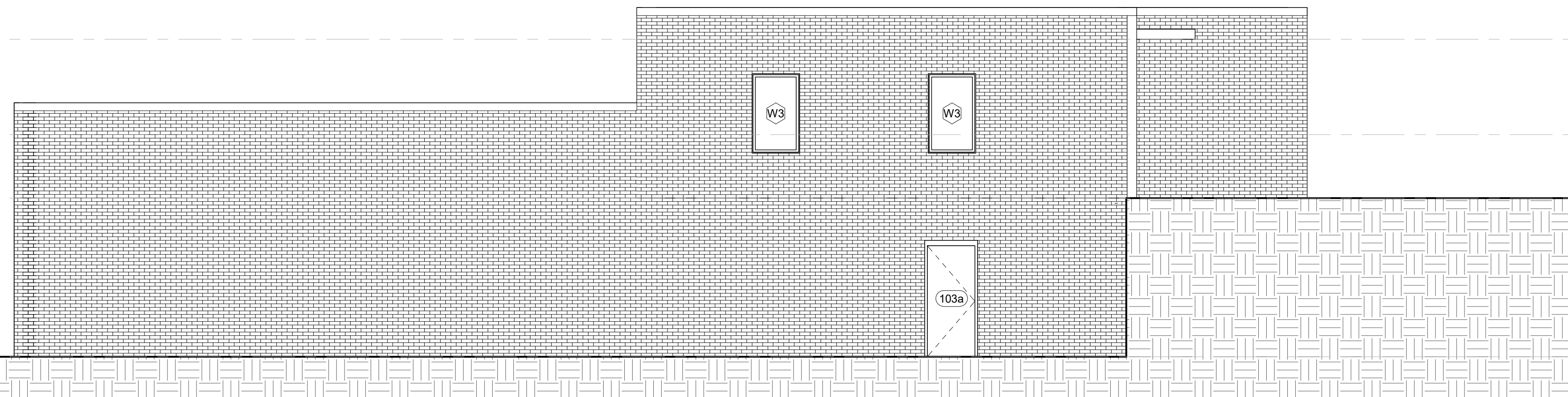
2 East Elevation
3/16" = 1'-0"

- Roof Plan 20' - 0"
- Lower Roof 14' - 0"
- Second Floor 10' - 0"

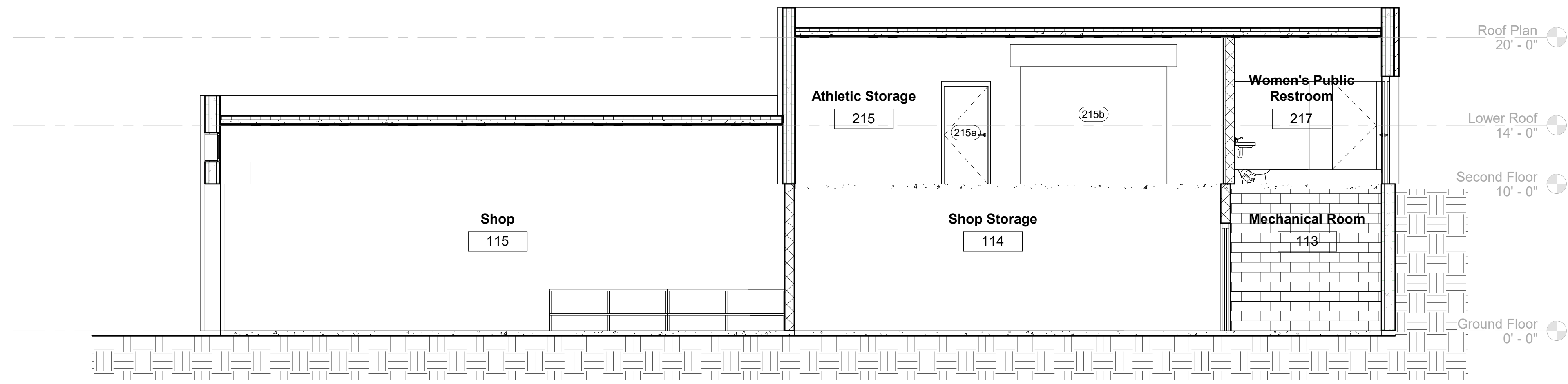


3 West Elevation
3/16" = 1'-0"

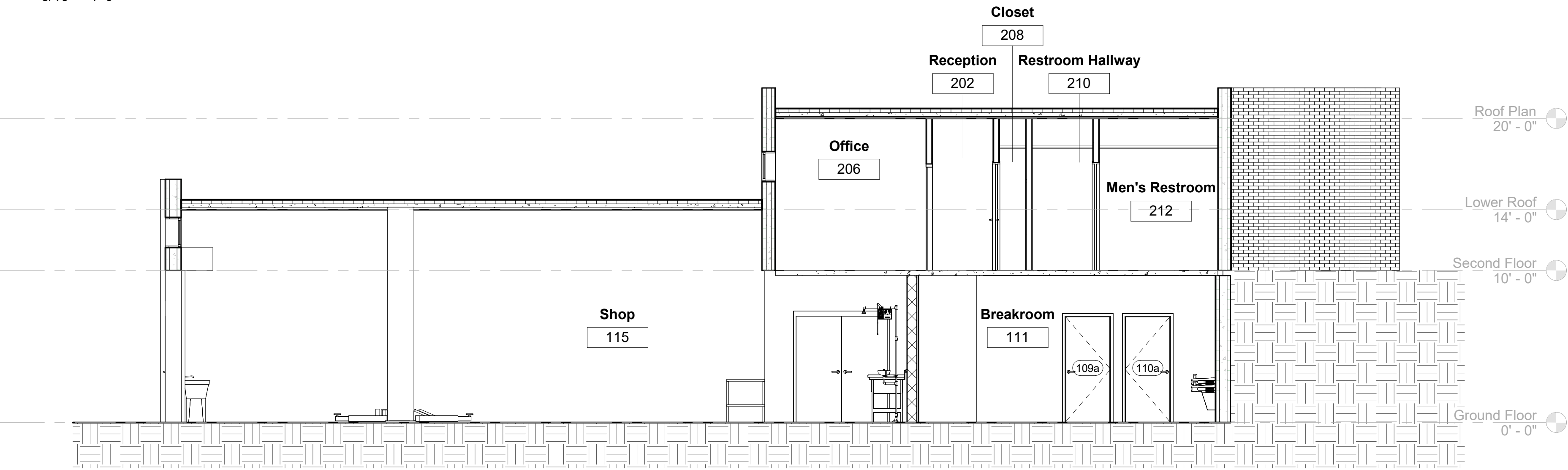
- Roof Plan 20' - 0"
- Lower Roof 14' - 0"
- Second Floor 10' - 0"
- Ground Floor 0' - 0"



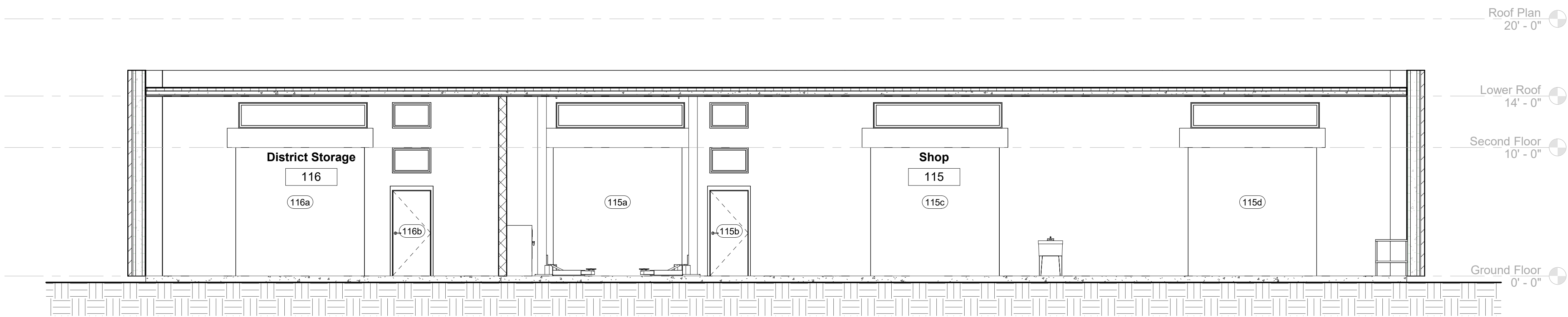
4 North Elevation
3/16" = 1'-0"



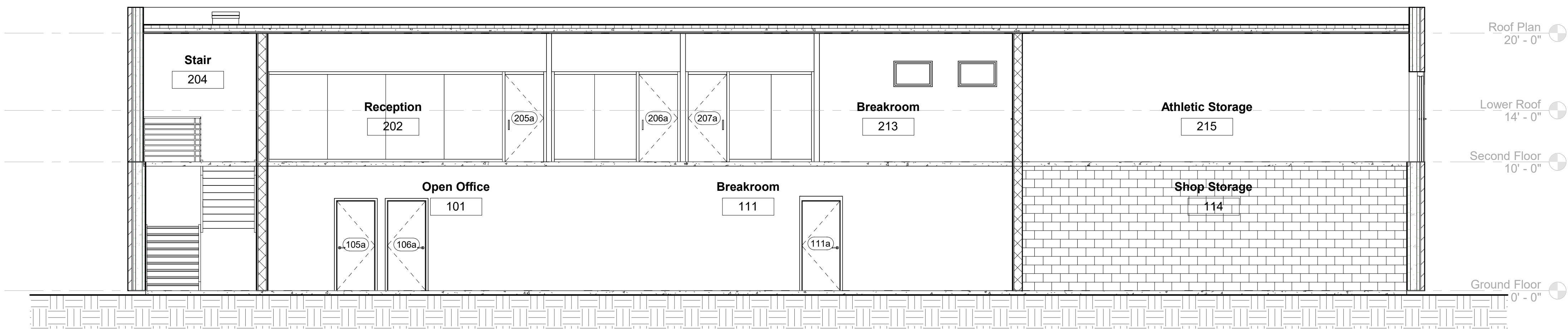
1 Section 1
3/16" = 1'-0"



2 Section 2
3/16" = 1'-0"



3 Section 3
3/16" = 1'-0"



4 Section 4
3/16" = 1'-0"

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**22-17 NTH - PHYSICAL
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SCASD PHYSICAL PLANT BUILDING
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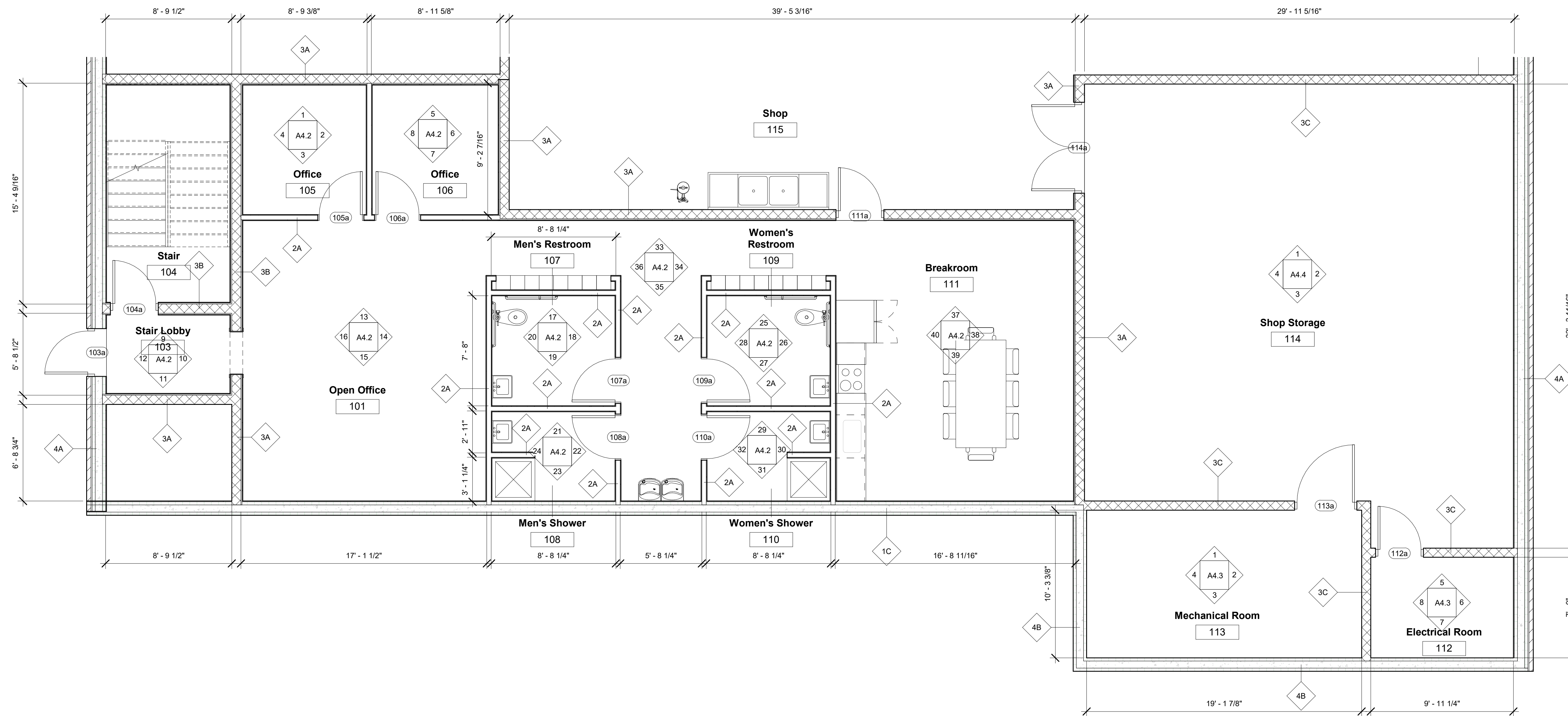


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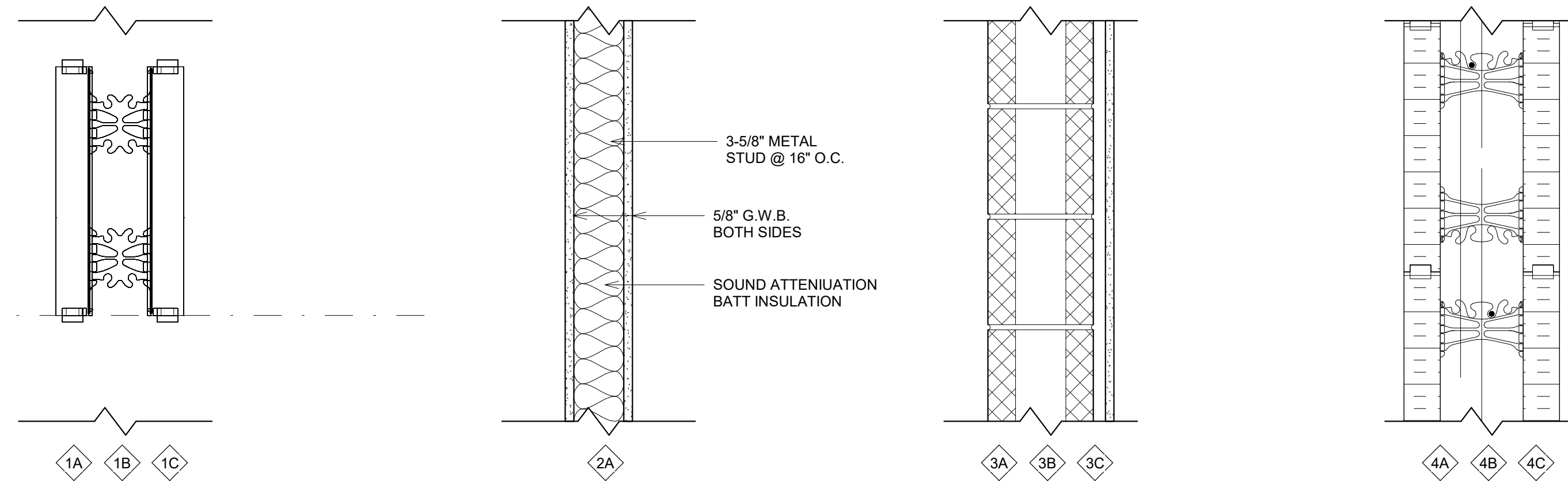
SCASD JOB #: 22-17

**BUILDING
SECTIONS**

A3.0



1 Ground Floor Enlarged Plan
1/4" = 1'-0"



NOTE: WALL ASSEMBLIES SHALL EXTEND TO UNDERSIDE OF FLOOR DECK ON APPARATUS BAY SIDE AND UP TO BOTTOM CHORD TRUSS ON COMMON AREA SIDE UNLESS NOTED OTHERWISE

2 WALL TYPES
1 1/2" = 1'-0"



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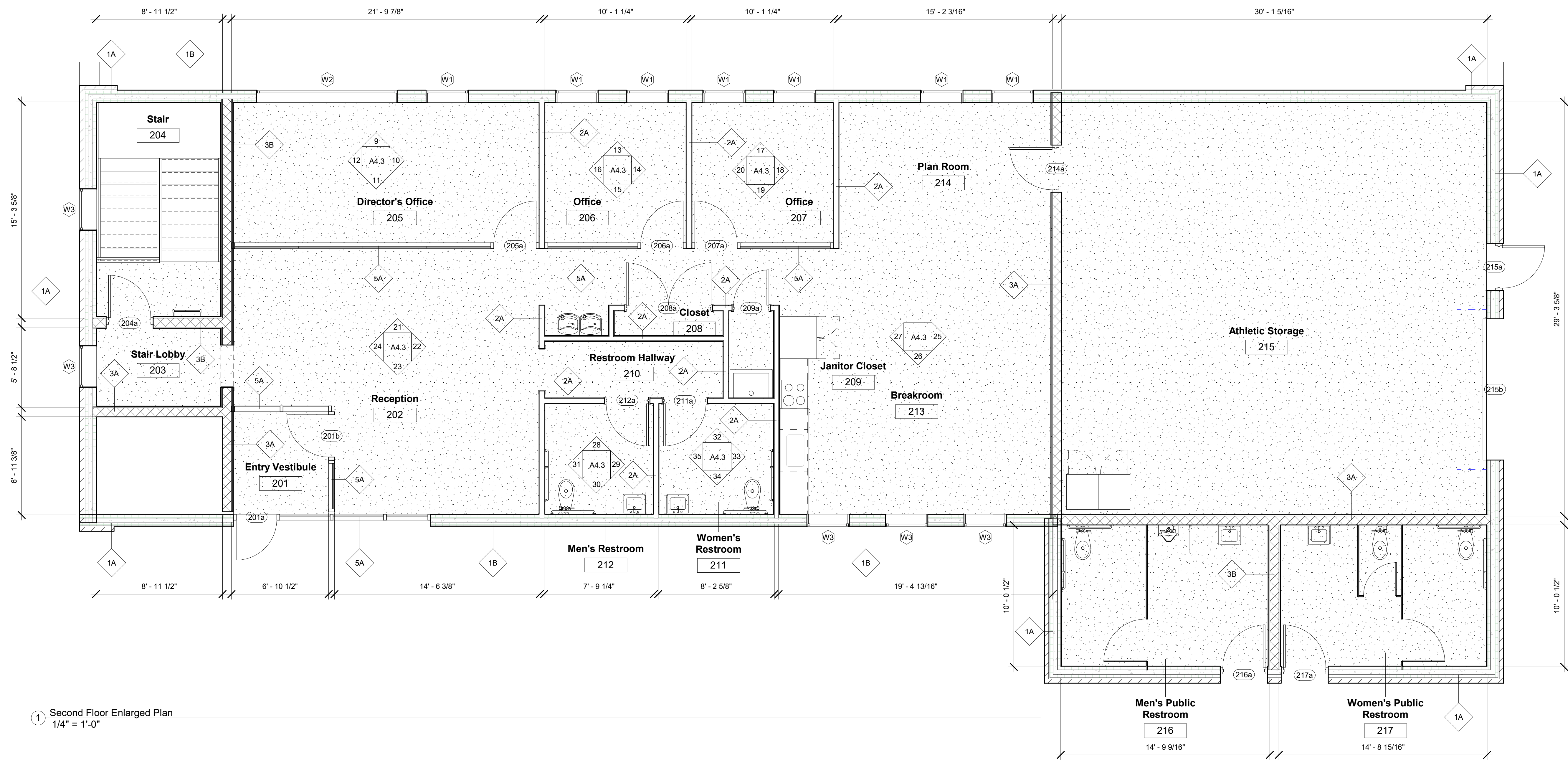
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**ENLARGED
PLAN**

A4.0

G:\Current Jobs\22-17-NTH-Physical Plant\Arch\Compos\Vref\22-17_NTH_Plan\22-17_NTH_Plan.dwg, 3/27/2023, Robert Miller

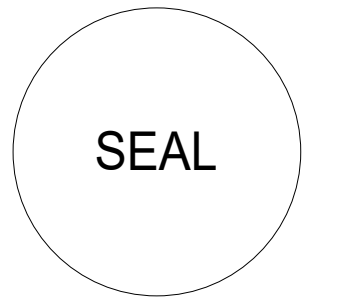


1 Second Floor Enlarged Plan
1/4" = 1'-0"

SUBMISSIONS

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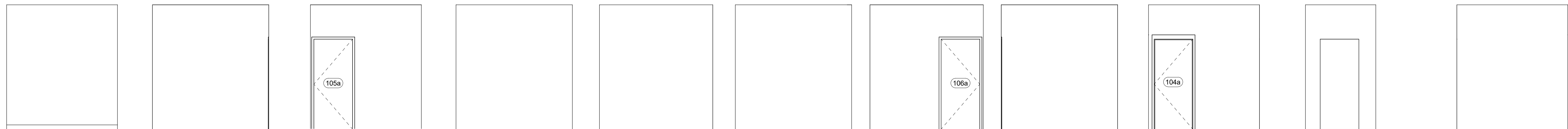
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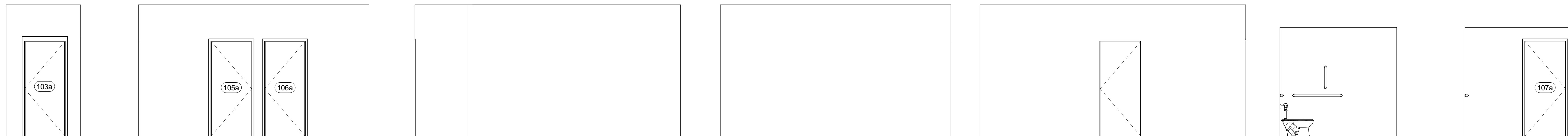
ENLARGED PLANS

A4.1

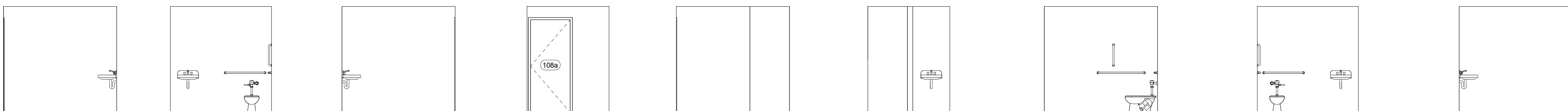
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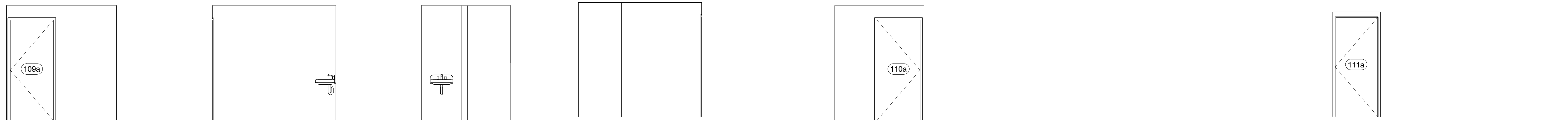
① OFFICE 105 ELEVATION 1/4" = 1'-0" ② OFFICE 105 ELEVATION 1/4" = 1'-0" ③ OFFICE 105 ELEVATION 1/4" = 1'-0" ④ OFFICE 105 ELEVATION 1/4" = 1'-0" ⑤ OFFICE 106 ELEVATION 1/4" = 1'-0" ⑥ OFFICE 106 ELEVATION 1/4" = 1'-0" ⑦ OFFICE 106 ELEVATION 1/4" = 1'-0" ⑧ OFFICE 106 ELEVATION 1/4" = 1'-0" ⑨ STAIR LOBBY 103 ELEVATION 1/4" = 1'-0" ⑩ STAIR LOBBY 103 ELEVATION 1/4" = 1'-0" ⑪ STAIR LOBBY 103 ELEVATION 1/4" = 1'-0"



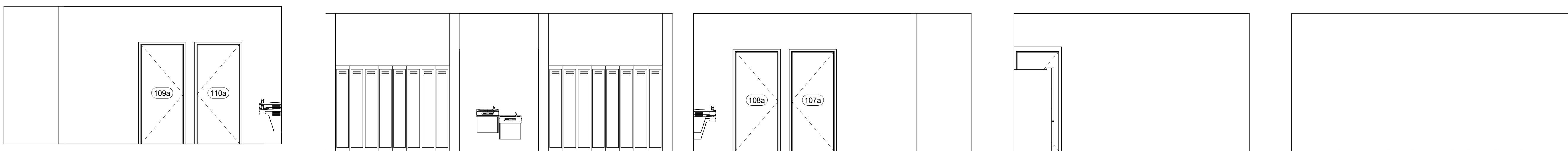
⑫ STAIR LOBBY 103 ELEVATION 1/4" = 1'-0" ⑬ OPEN OFFICE 101 ELEVATION 1/4" = 1'-0" ⑭ OPEN OFFICE 101 ELEVATION 1/4" = 1'-0" ⑮ OPEN OFFICE 101 ELEVATION 1/4" = 1'-0" ⑯ OPEN OFFICE 101 ELEVATION 1/4" = 1'-0" ⑰ MEN'S RESTROOM 107 ELEVATION 1/4" = 1'-0" ⑱ MEN'S RESTROOM 107 ELEVATION 1/4" = 1'-0"



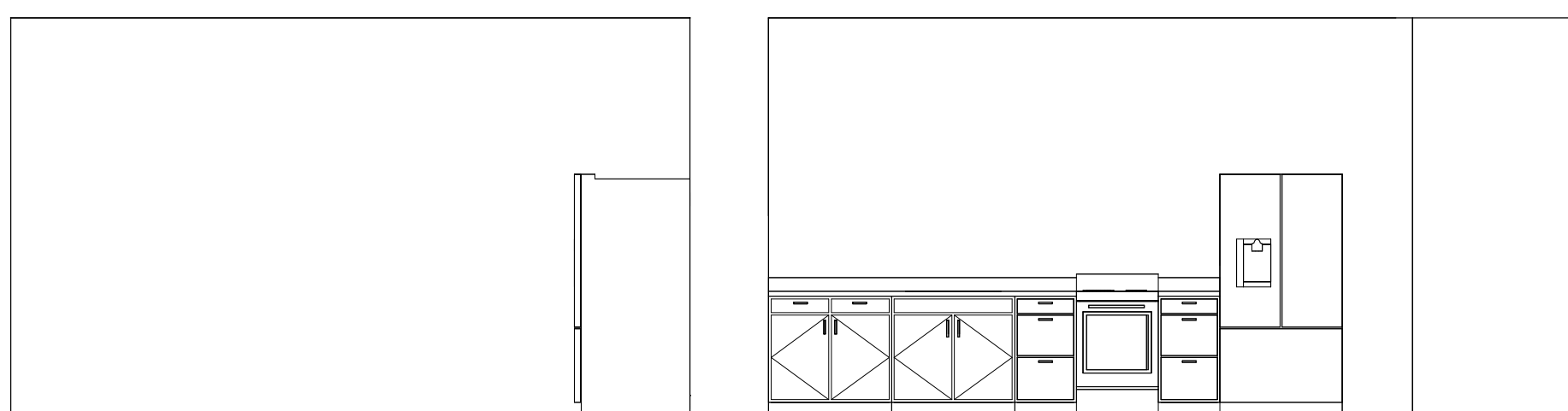
⑲ MEN'S RESTROOM 107 ELEVATION 1/4" = 1'-0" ⑳ MEN'S RESTROOM 107 ELEVATION 1/4" = 1'-0" ㉑ MEN'S SHOWER 108 ELEVATION 1/4" = 1'-0" ㉒ MEN'S SHOWER 108 ELEVATION 1/4" = 1'-0" ㉓ MEN'S SHOWER 108 ELEVATION 1/4" = 1'-0" ㉔ MEN'S SHOWER 108 ELEVATION 1/4" = 1'-0" ㉕ WOMEN'S RESTROOM 109 ELEVATION 1/4" = 1'-0" ㉖ WOMEN'S RESTROOM 109 ELEVATION 1/4" = 1'-0" ㉗ WOMEN'S RESTROOM 109 ELEVATION 1/4" = 1'-0"



⑳ WOMEN'S RESTROOM 109 ELEVATION 1/4" = 1'-0" ㉑ WOMEN'S SHOWER 110 ELEVATION 1/4" = 1'-0" ㉒ WOMEN'S SHOWER 110 ELEVATION 1/4" = 1'-0" ㉓ WOMEN'S SHOWER 110 ELEVATION 1/4" = 1'-0" ㉔ WOMEN'S SHOWER 110 ELEVATION 1/4" = 1'-0" ㉕ BREAKROOM 111 ELEVATION 1/4" = 1'-0"



⑳ BREAKROOM 111 ELEVATION 1/4" = 1'-0" ㉑ BREAKROOM 111 ELEVATION 1/4" = 1'-0" ㉒ BREAKROOM 111 ELEVATION 1/4" = 1'-0" ㉓ BREAKROOM 111 ELEVATION 1/4" = 1'-0" ㉔ BREAKROOM 111 ELEVATION 1/4" = 1'-0"



㉑ BREAKROOM 111 ELEVATION 1/4" = 1'-0" ㉒ BREAKROOM 111 ELEVATION 1/4" = 1'-0"

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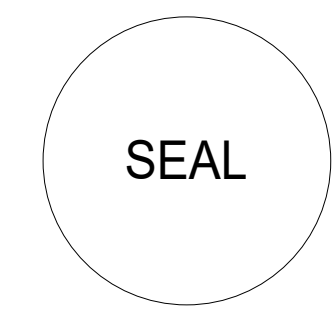


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**22-17 NTH - PHYSICAL
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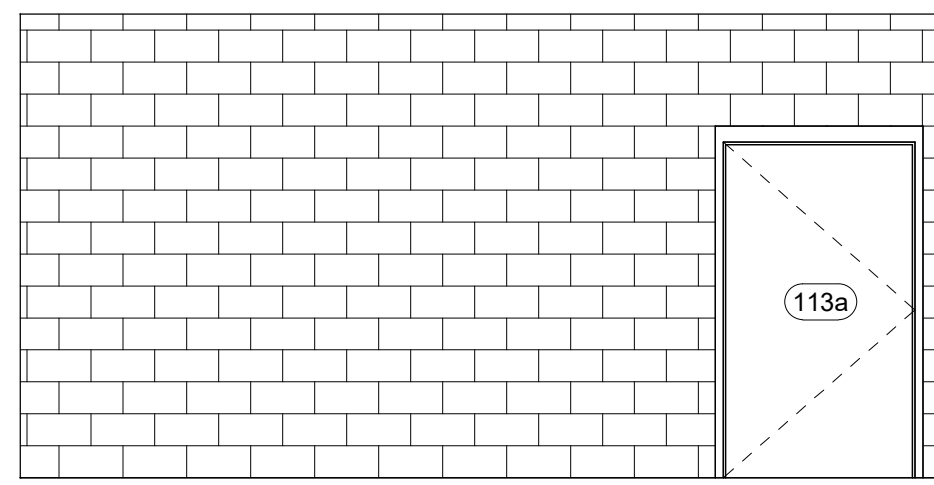


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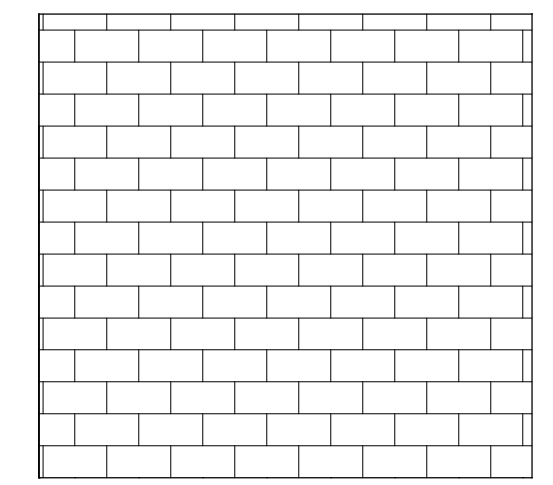
SCASD JOB #: 22-17

**INTERIOR
ELEVATIONS**

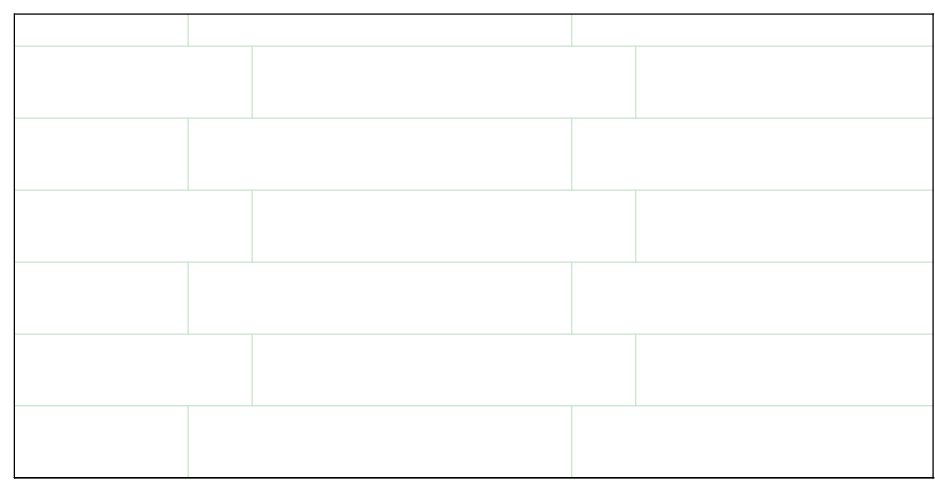
A4.2



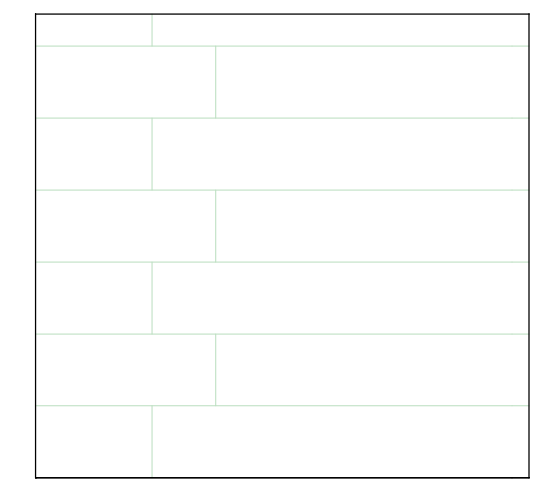
1 MECHANICAL ROOM 113 ELEVATION
1/4" = 1'-0"



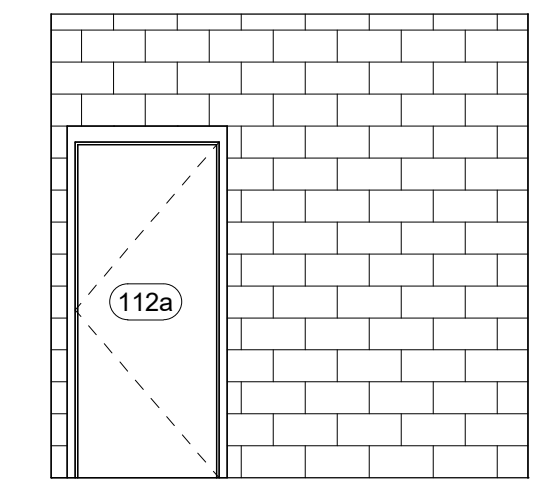
2 MECHANICAL ROOM 113 ELEVATION
1/4" = 1'-0"



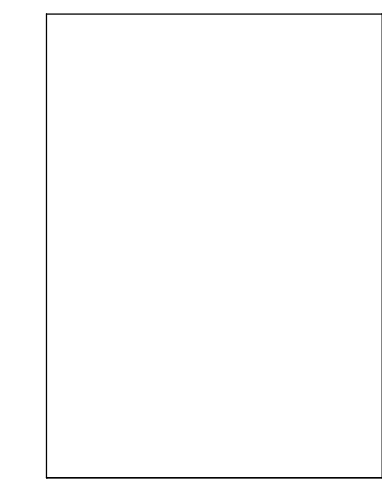
3 MECHANICAL ROOM 113 ELEVATION
1/4" = 1'-0"



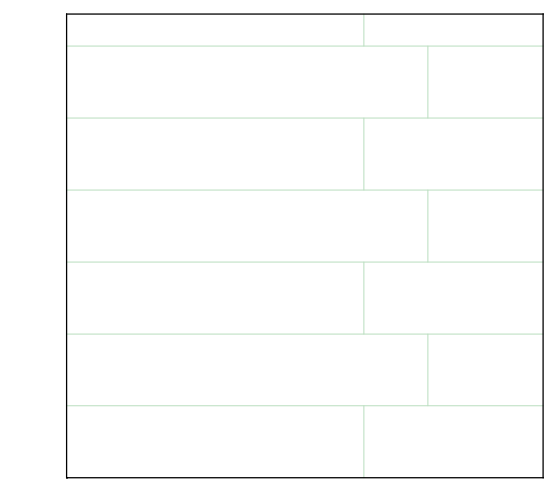
4 MECHANICAL ROOM 113 ELEVATION
1/4" = 1'-0"



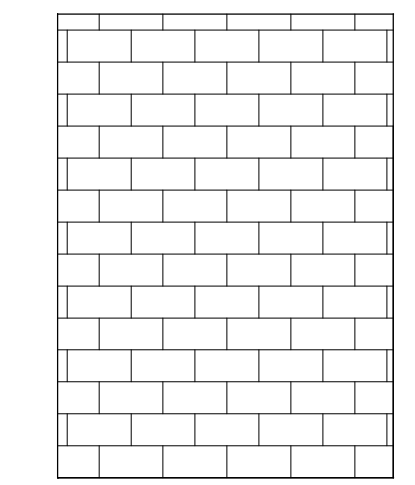
5 ELECTRICAL ROOM 112 ELEVATION
1/4" = 1'-0"



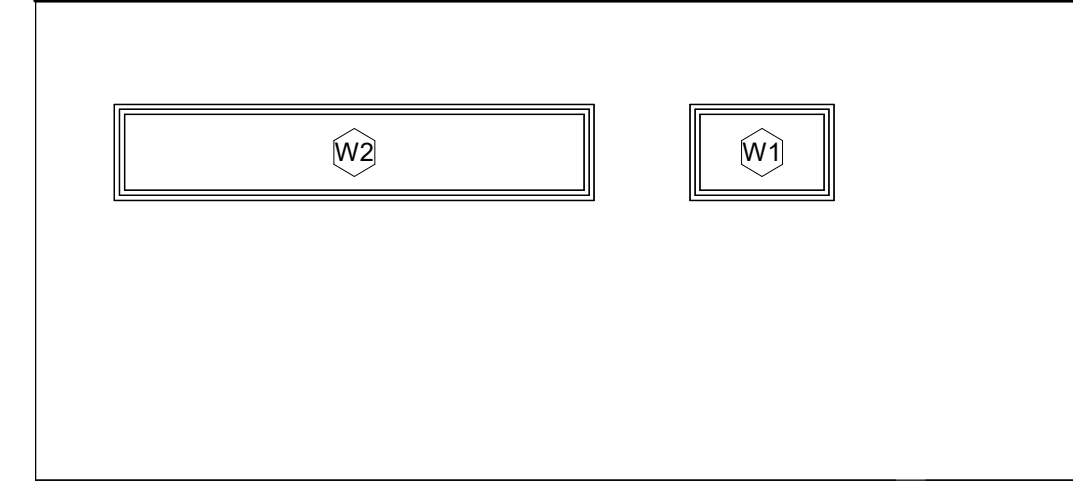
6 ELECTRICAL ROOM 112 ELEVATION
1/4" = 1'-0"



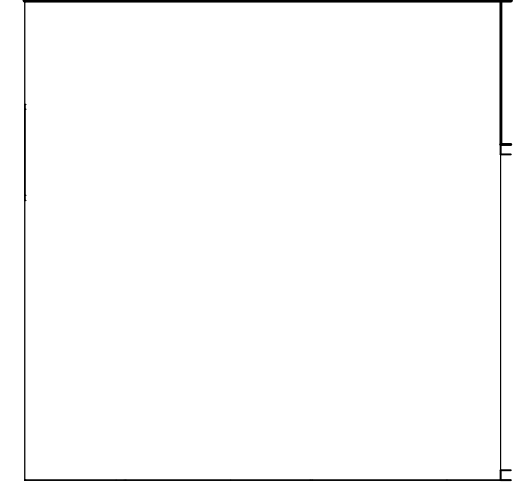
7 ELECTRICAL ROOM 112 ELEVATION
1/4" = 1'-0"



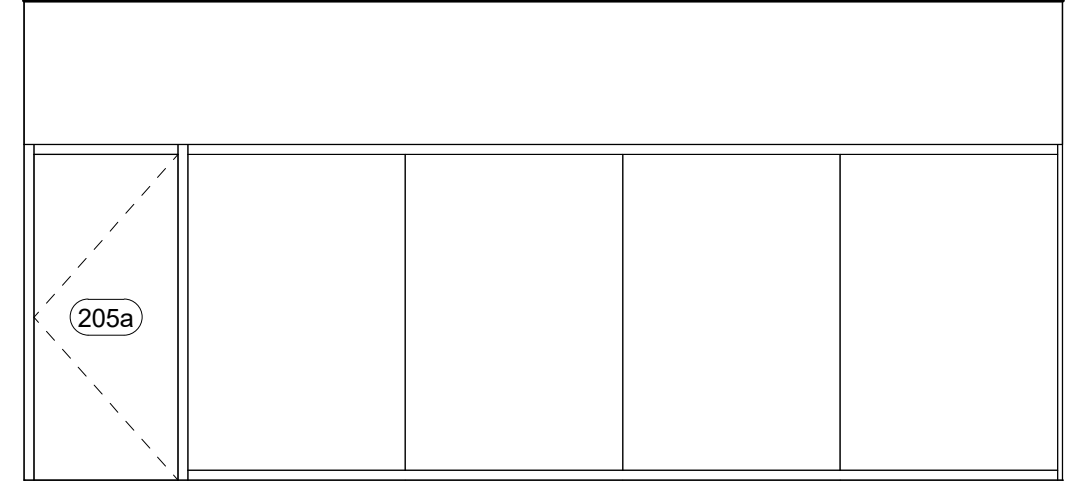
8 ELECTRICAL ROOM 112 ELEVATION
1/4" = 1'-0"



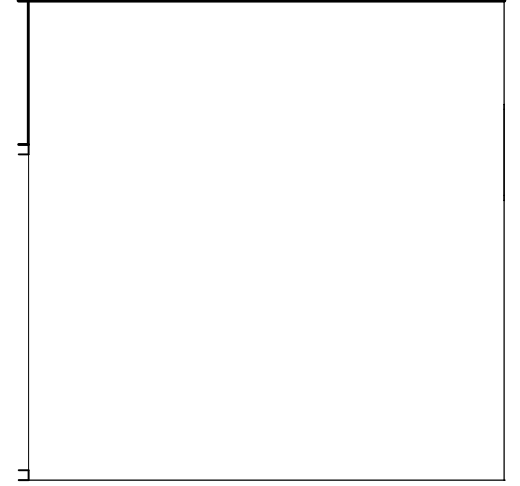
9 DIRECTOR'S OFFICE 205 ELEVATION
1/4" = 1'-0"



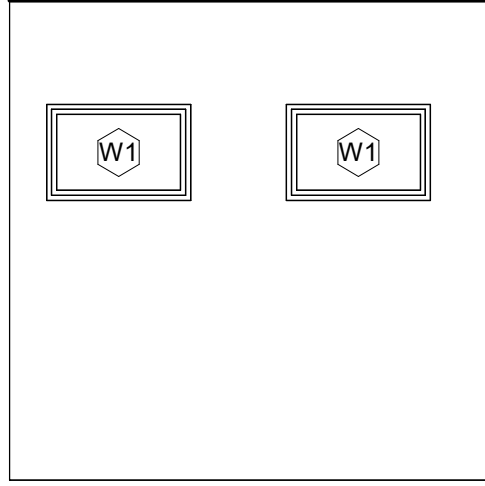
10 DIRECTOR'S OFFICE 205 ELEVATION
1/4" = 1'-0"



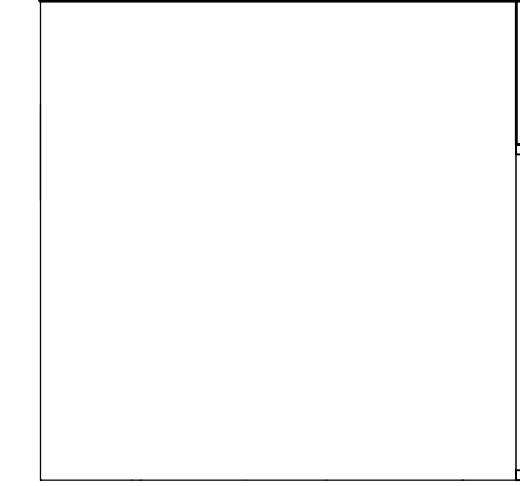
11 DIRECTOR'S OFFICE 205 ELEVATION
1/4" = 1'-0"



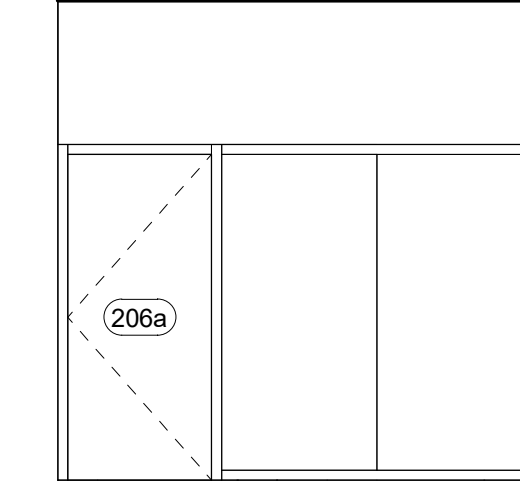
12 DIRECTOR'S OFFICE 205 ELEVATION
1/4" = 1'-0"



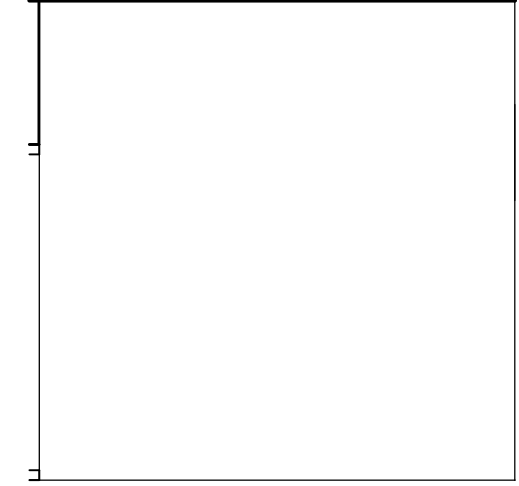
13 OFFICE 206 ELEVATION
1/4" = 1'-0"



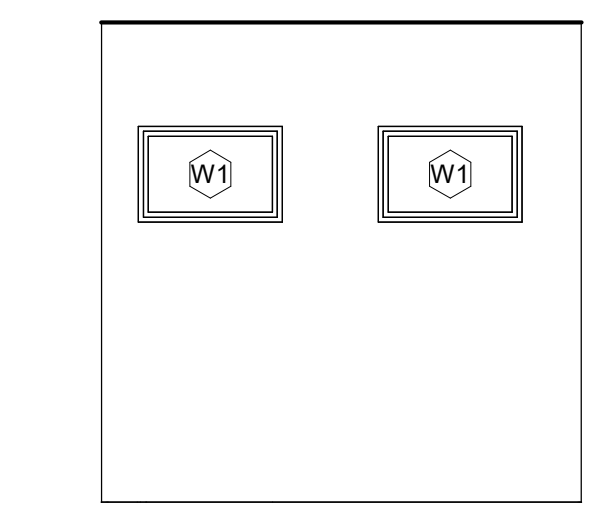
14 OFFICE 206 ELEVATION
1/4" = 1'-0"



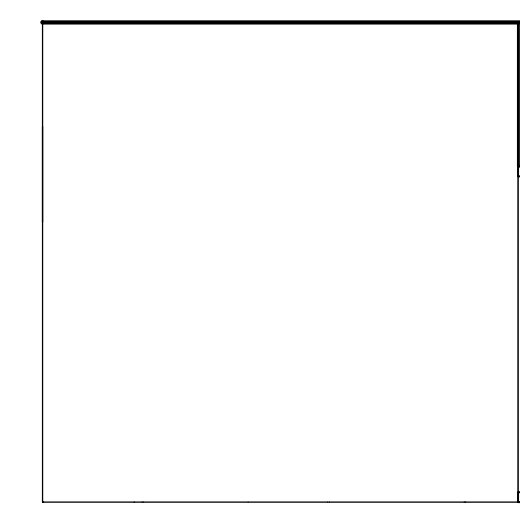
15 OFFICE 206 ELEVATION
1/4" = 1'-0"



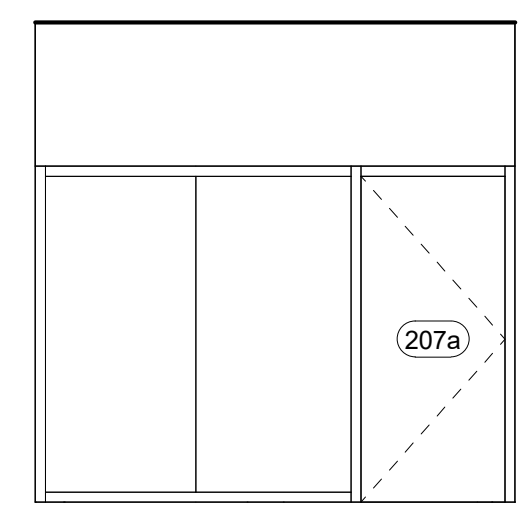
16 OFFICE 206 ELEVATION
1/4" = 1'-0"



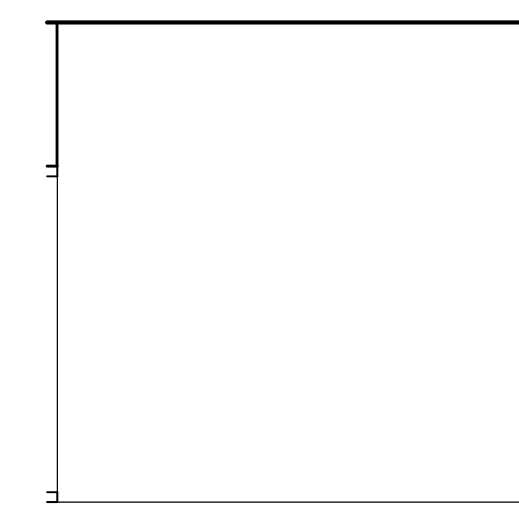
17 OFFICE 207 ELEVATION
1/4" = 1'-0"



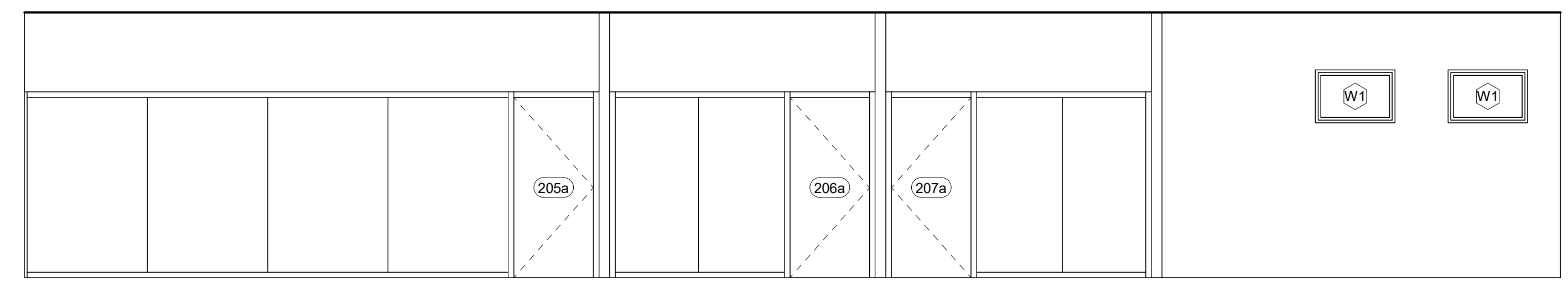
18 OFFICE 207 ELEVATION
1/4" = 1'-0"



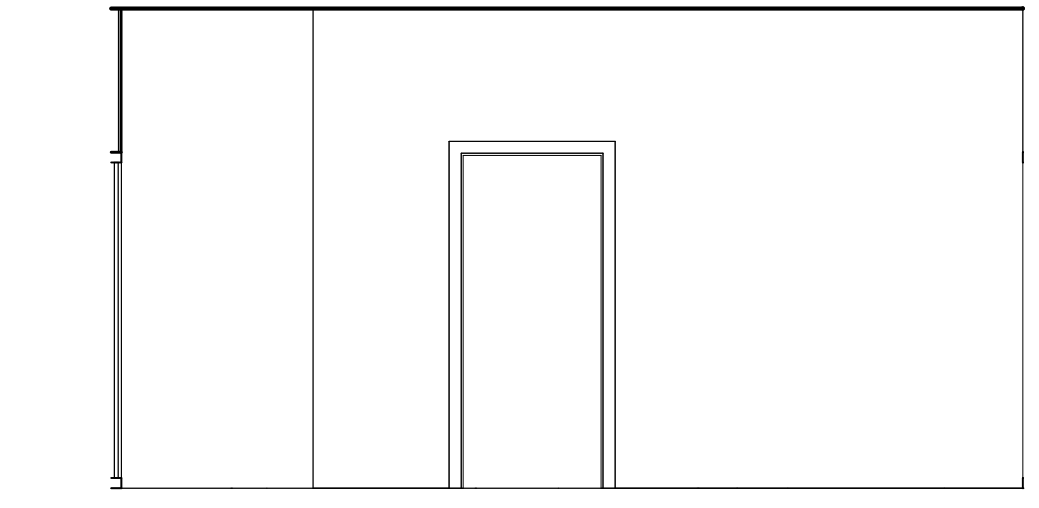
19 OFFICE 207 ELEVATION
1/4" = 1'-0"



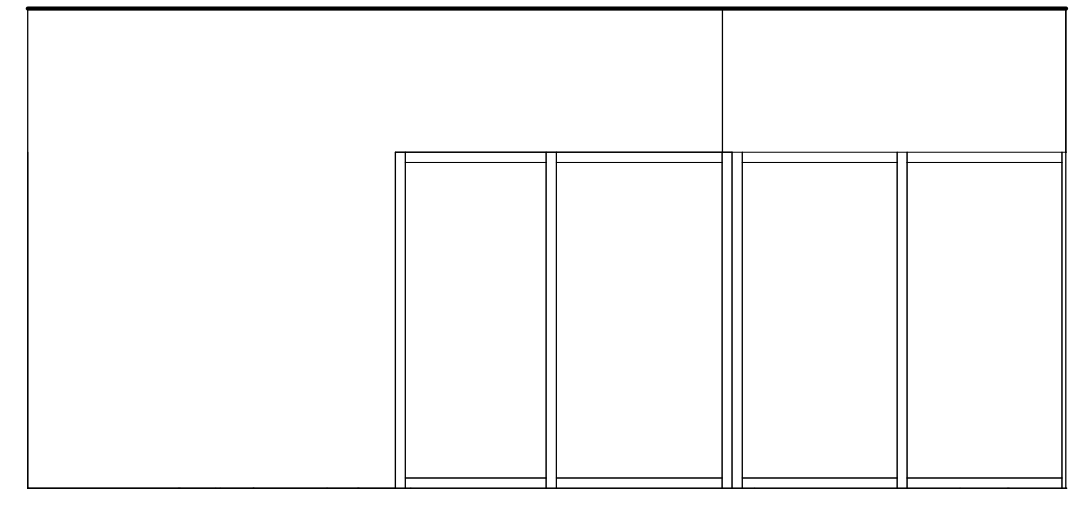
20 OFFICE 207 ELEVATION
1/4" = 1'-0"



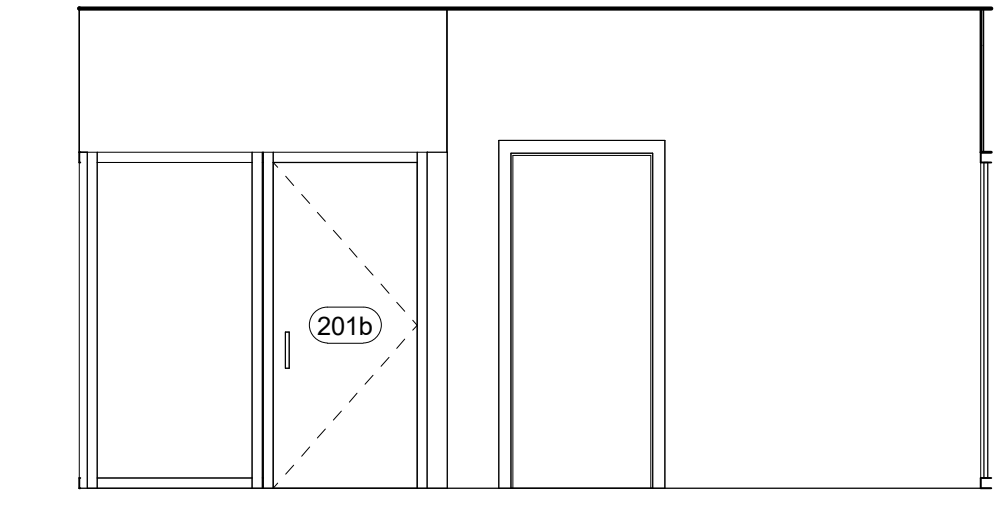
21 RECEPTION 202 ELEVATION
1/4" = 1'-0"



22 RECEPTION 202 ELEVATION
1/4" = 1'-0"



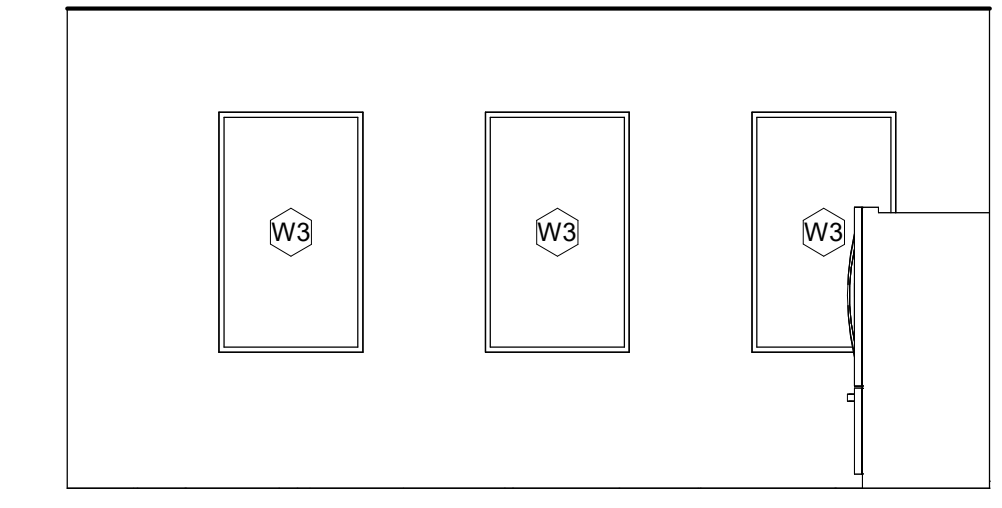
23 RECEPTION 202 ELEVATION
1/4" = 1'-0"



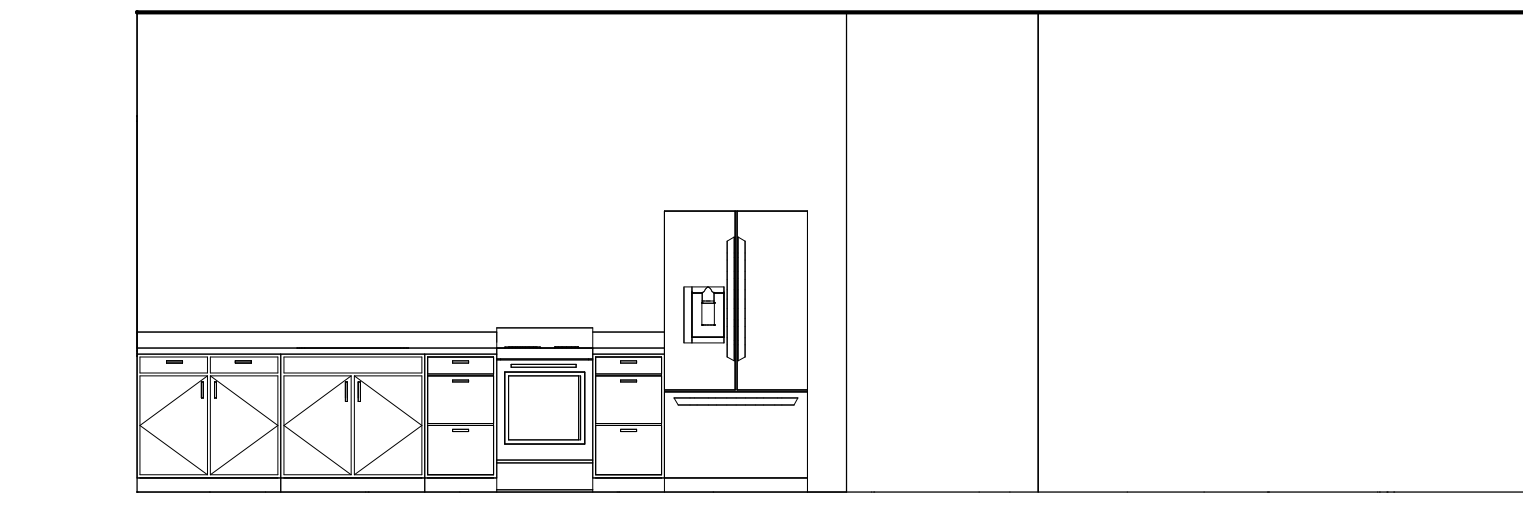
24 RECEPTION 202 ELEVATION
1/4" = 1'-0"



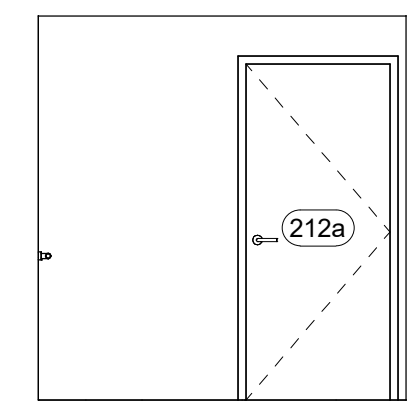
25 BREAKROOM 213 ELEVATION
1/4" = 1'-0"



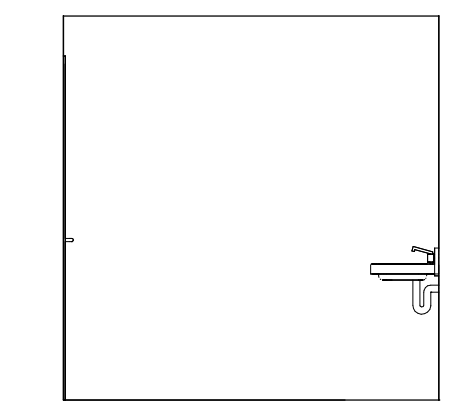
26 BREAKROOM 213 ELEVATION
1/4" = 1'-0"



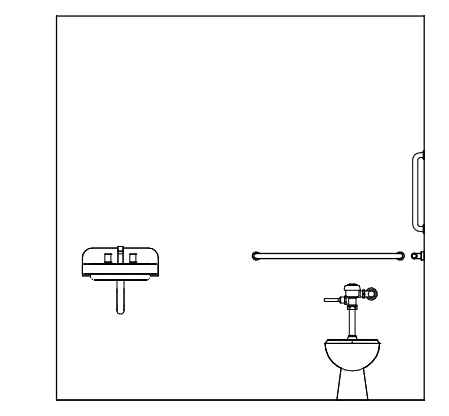
27 BREAKROOM 213 ELEVATION
1/4" = 1'-0"



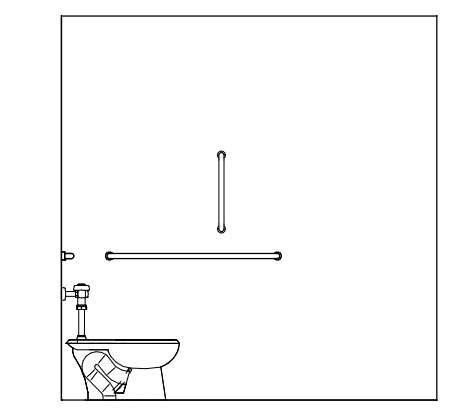
28 MEN'S RESTROOM 212 ELEVATION
1/4" = 1'-0"



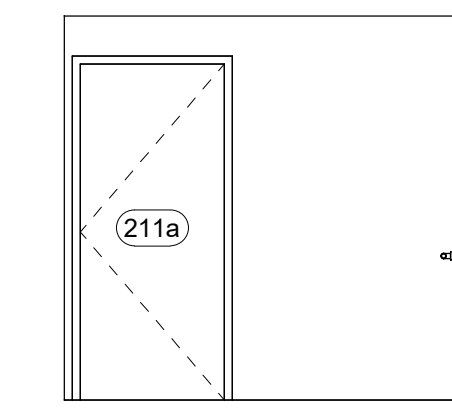
29 MEN'S RESTROOM 212 ELEVATION
1/4" = 1'-0"



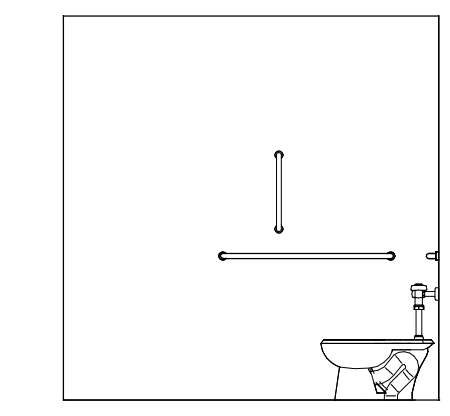
30 MEN'S RESTROOM 212 ELEVATION
1/4" = 1'-0"



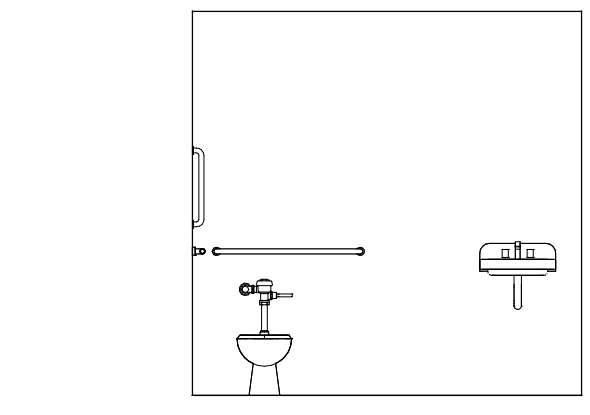
31 MEN'S RESTROOM 212 ELEVATION
1/4" = 1'-0"



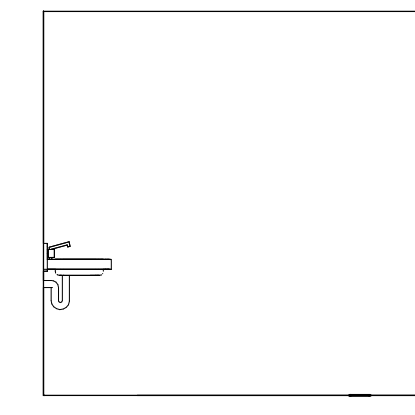
32 WOMEN'S RESTROOM 211 ELEVATION
1/4" = 1'-0"



33 WOMEN'S RESTROOM 211 ELEVATION
1/4" = 1'-0"



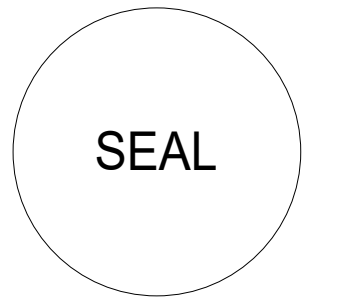
34 WOMEN'S RESTROOM 211 ELEVATION
1/4" = 1'-0"



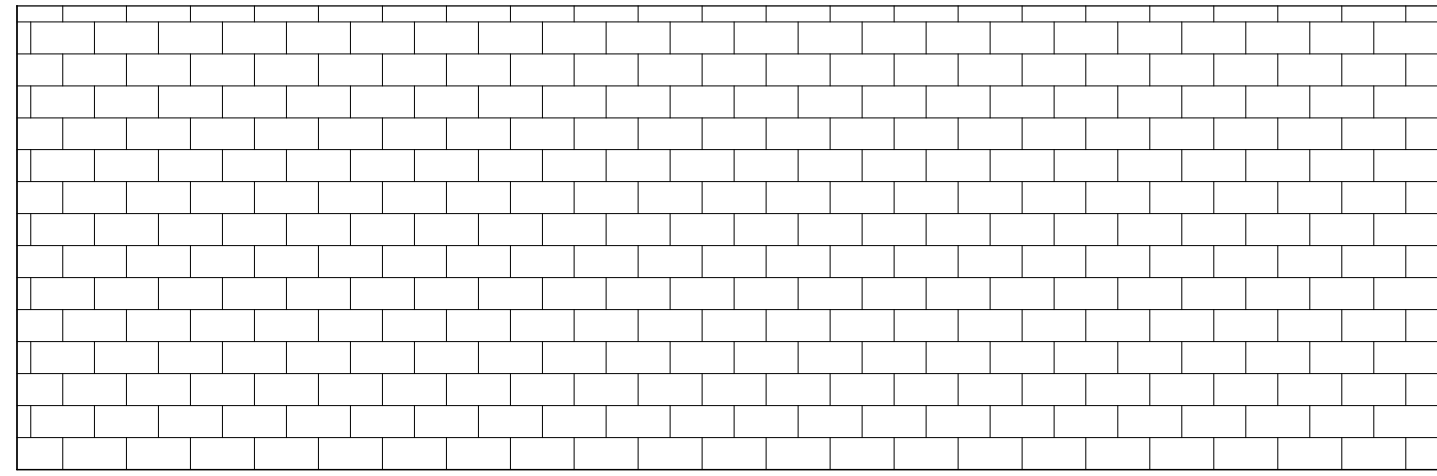
35 WOMEN'S RESTROOM 211 ELEVATION
1/4" = 1'-0"

SUBMISSIONS

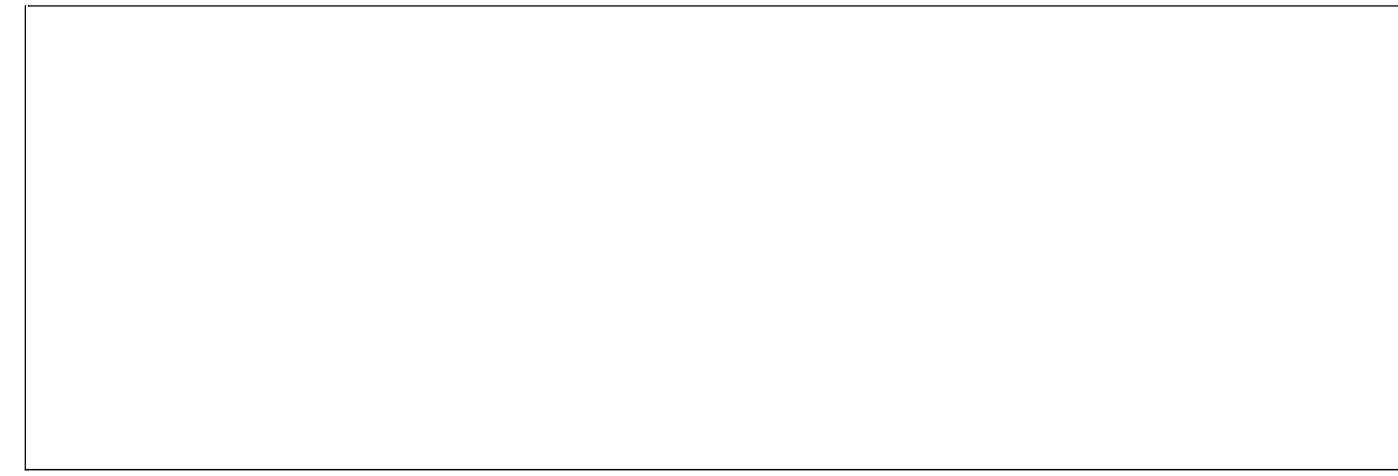
30% PROGRESS	2022.12.16
60% PROGRESS	2023.01.13
100% PROGRESS	2023.02.17



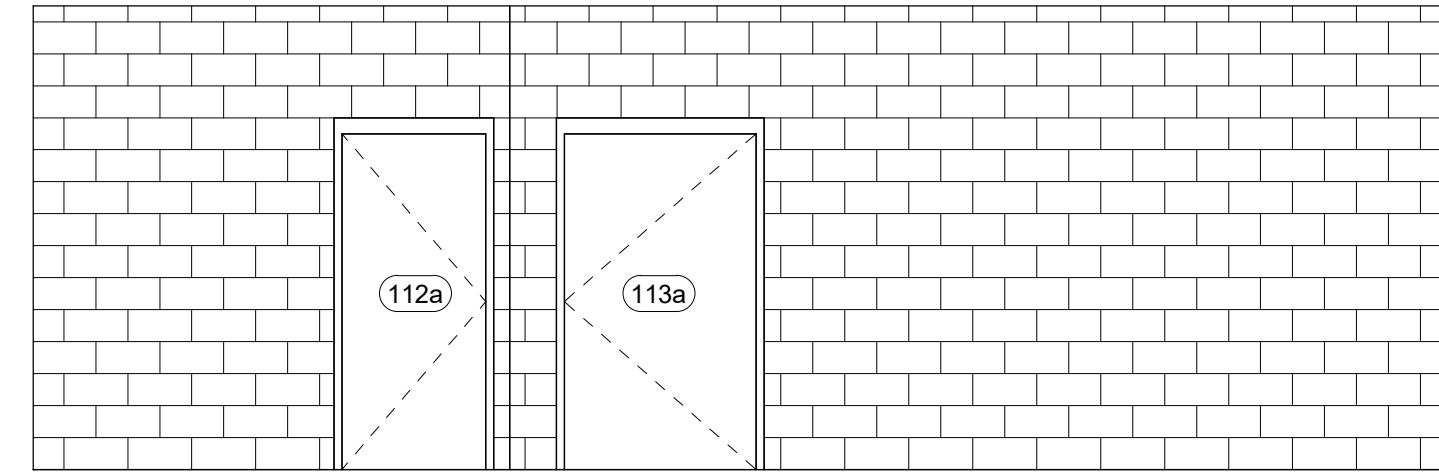
G:\Current Jobs\22-17-NTH-Physical Plant\Arch\Compos\Vef\22-17-NTH-Block - 3/27/2023 - Robert Miller



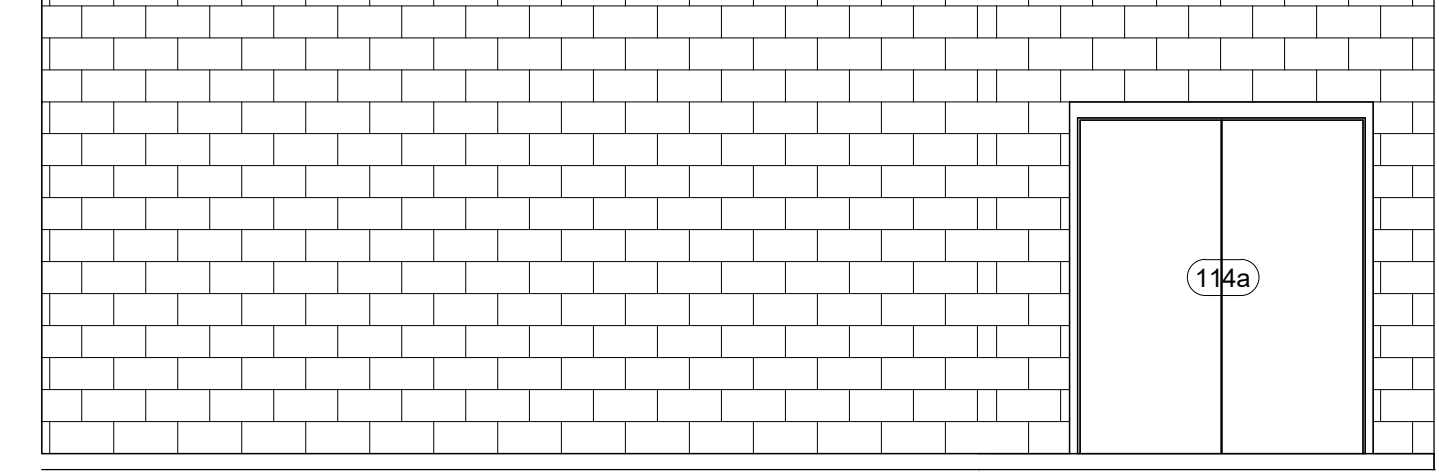
① SHOP STORAGE 114 ELEVATION
1/4" = 1'-0"



② SHOP STORAGE 114 ELEVATION
1/4" = 1'-0"



③ SHOP STORAGE 114 ELEVATION
1/4" = 1'-0"



④ SHOP STORAGE 114 ELEVATION
1/4" = 1'-0"

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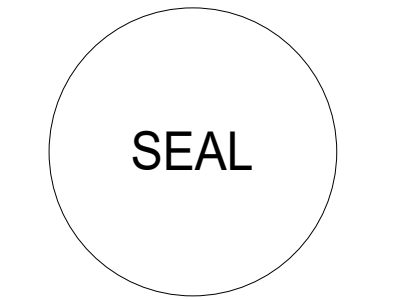


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60% PROGRESS	2023.01.13
100% PROGRESS	2023.02.17

**BID/CODE
DOCUMENTS**
XX.XX.2023



22-17 NTH - PHYSICAL PLANT

SCASD PHYSICAL PLANT BUILDING
WESTERLY PARKWAY
STATE COLLEGE, PA 16801



STATE COLLEGE AREA SCHOOL DISTRICT
131 WEST NITTANY AVENUE
STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

**INTERIOR
ELEVATIONS**

A4.4

G:\Current Jobs\21_SCASD\Projects\22-17-NTH-Physical Plant\Arch\Compos\Verf\22-17_TBlock - 3/24/23.dwg, 3/27/2019, Robert Miller



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60% PROGRESS	2023.01.13
100% PROGRESS	2023.02.17

**BID/CODE
DOCUMENTS
XX.XX.2023**

SEAL

**22-17 NTH - PHYSICAL
PLANT**

SCASD PHYSICAL PLANT BUILDING
WESTERLY PARKWAY
STATE COLLEGE, PA 16801

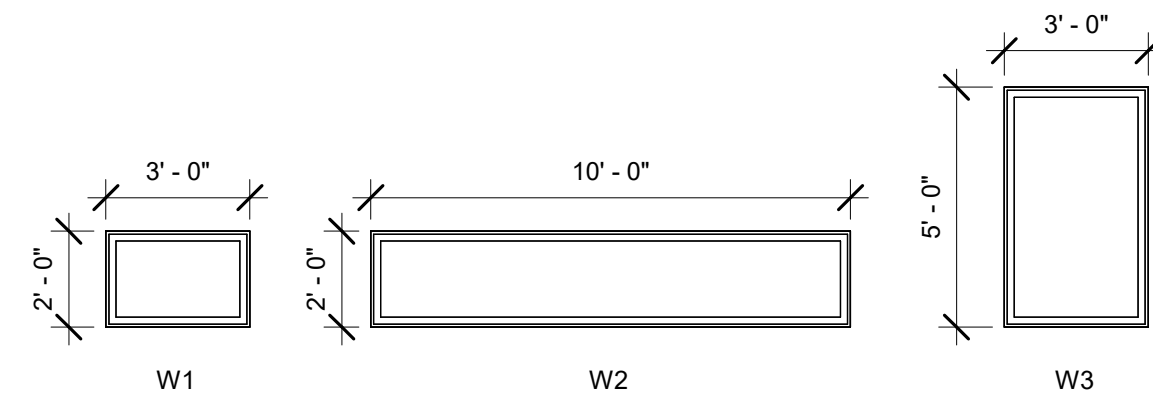
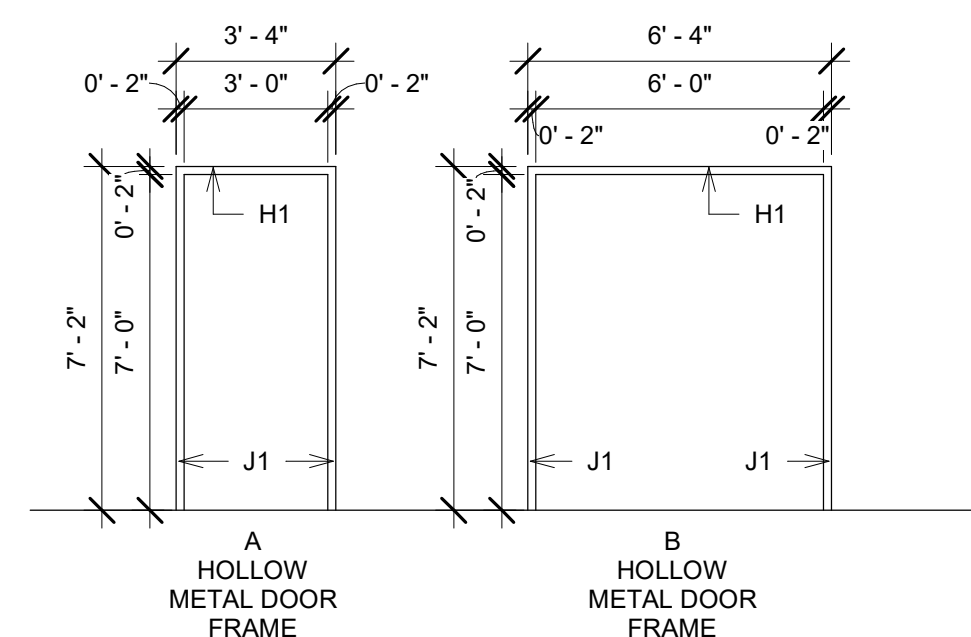
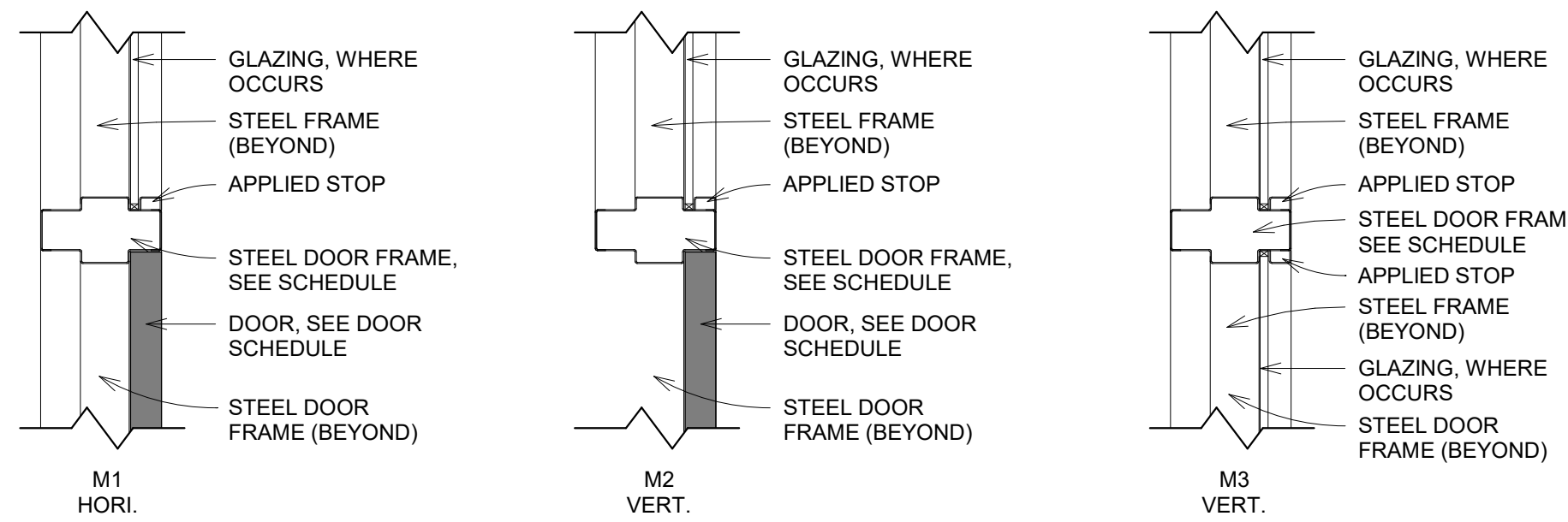
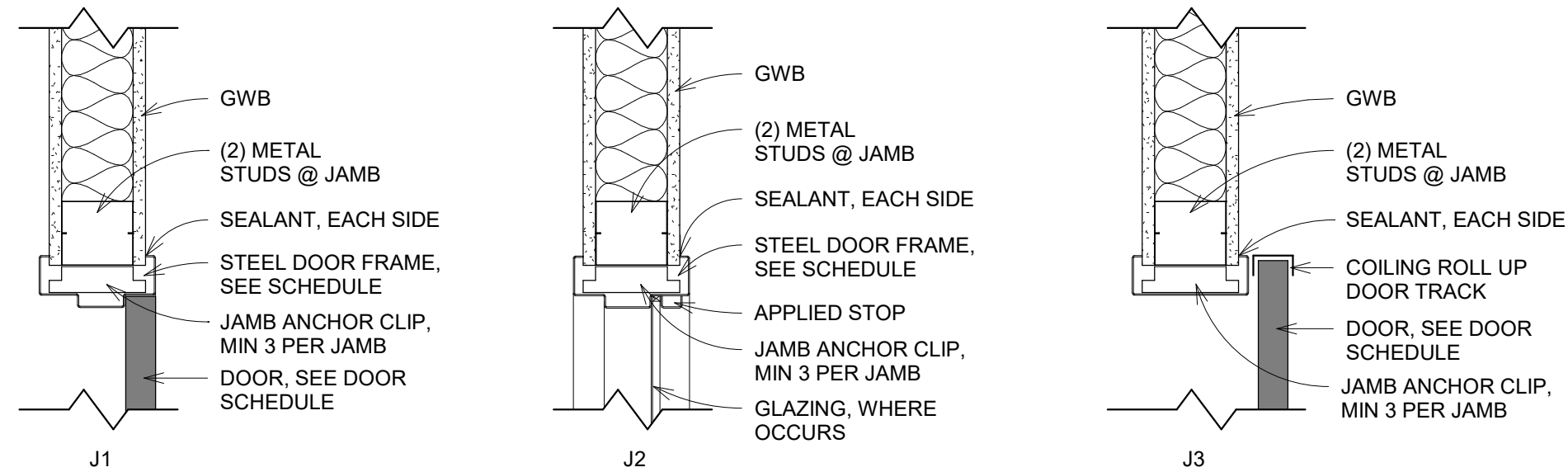
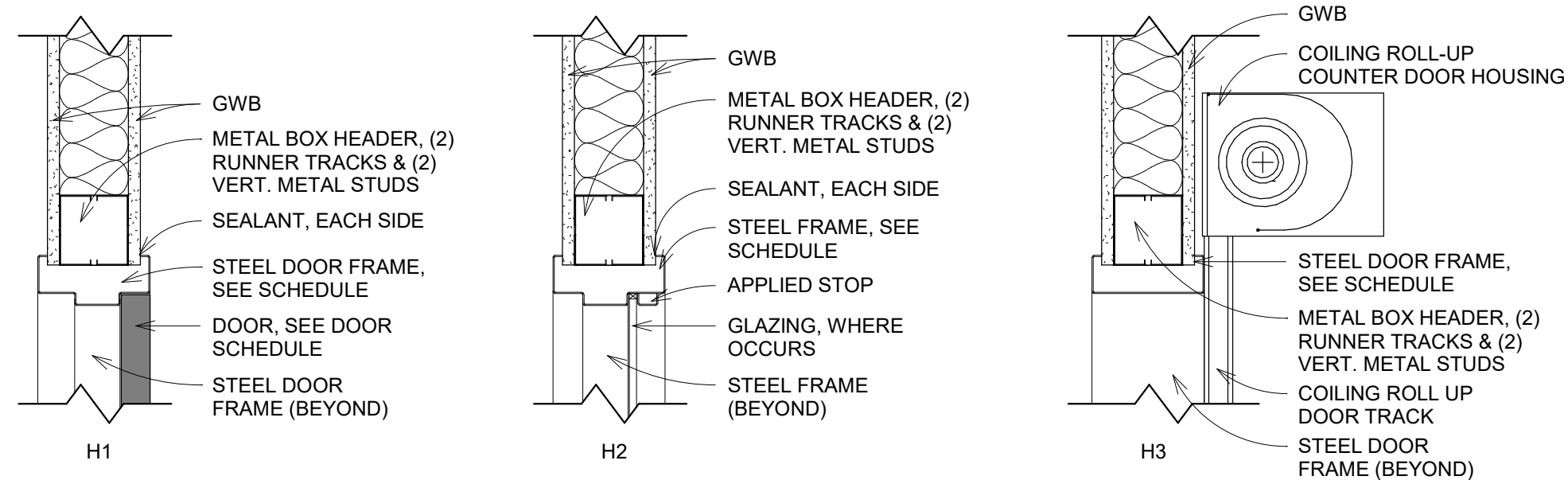


STATE COLLEGE AREA SCHOOL DISTRICT
131 WEST NITTANY AVENUE
STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

**DOOR AND
WINDOW
SCHEDULE**

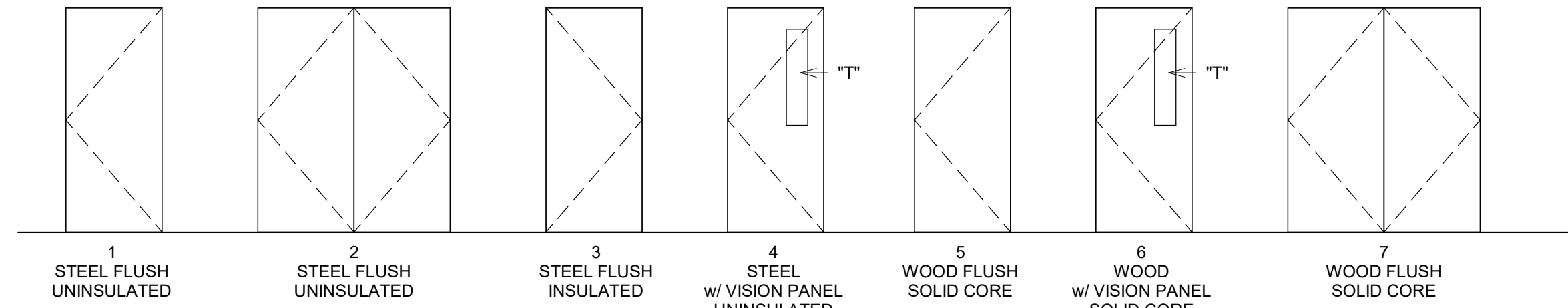
A6.0



WINDOW TYPES
1/4" = 1'-0"

TYPICAL FRAME HEAD/JAMB DETAILS
1 1/2" = 1'-0"

FRAME TYPES
1/4" = 1'-0"



DOOR TYPES
1/4" = 1'-0"

LOCATION	MARK	TYPE	DOOR				FRAME				COMMENTS						
			WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	RATING	HARDWARE SET	TYPE		MATERIAL	FINISH	HEAD	JAMB	SILL	
	103a		3'-0"	7'-0"	0'-1 3/4"												
	104a		3'-0"	7'-0"	0'-1 3/4"												
	105a		3'-0"	7'-0"	0'-1 3/4"												
	106a		3'-0"	7'-0"	0'-1 3/4"												
	107a		3'-0"	7'-0"	0'-1 3/4"												
	108a		3'-0"	7'-0"	0'-1 3/4"												
	109a		3'-0"	7'-0"	0'-1 3/4"												
	110a		3'-0"	7'-0"	0'-1 3/4"												
	111a		3'-0"	7'-0"	0'-1 3/4"												
	112a		3'-0"	7'-0"	0'-1 3/4"												
	113a		4'-0"	7'-0"	0'-1 3/4"												
	113b		3'-0"	6'-0"	0'-1"												
	113c		3'-0"	6'-0"	0'-1"												
	113e		2'-4"	6'-0"	0'-1"												
	114a		6'-0"	7'-0"	0'-1 3/4"												
	115a		10'-0"	10'-0"	0'-3"												
	115b		3'-0"	6'-8"	0'-1 3/4"												
	115c		10'-0"	10'-0"	0'-3"												
	115d		10'-0"	10'-0"	0'-3"												
	116a		10'-0"	10'-0"	0'-3"												
	116b		3'-0"	6'-8"	0'-1 3/4"												
	201a		2'-10 1/2"	7'-0"													
	201b		3'-0"	6'-9 1/2"													
	204a		3'-0"	7'-0"	0'-1 3/4"												
	205a		3'-0"	6'-9 1/2"													
	206a		3'-0"	6'-9 1/2"													
	207a		3'-0"	6'-9 1/2"													
	208a		6'-0"	7'-0"	0'-1 3/4"												
	209a		2'-6"	7'-0"	0'-1 3/4"												
	211a		3'-0"	7'-0"	0'-1 3/4"												
	212a		3'-0"	7'-0"	0'-1 3/4"												
	214a		3'-0"	7'-0"	0'-1 3/4"												
	215a		3'-0"	6'-8"	0'-1 3/4"												
	215b		10'-0"	8'-0"	0'-3"												
	216a		3'-0"	7'-0"	0'-1 3/4"												
	217a		3'-0"	7'-0"	0'-1 3/4"												

MECHANICAL LEGEND AND ABBREVIATIONS

ABBREVIATIONS	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A.D.		ACCESS DOOR		DIRECTION OF FLOW
AFF		ABOVE FINISHED FLOOR		FLEXIBLE DUCTWORK
AHU		AIR HANDLING UNIT		FIRE DAMPER
AP		ACCESS PANEL		SMOKE DAMPER
AV		AUTOMATIC AIR VENT		COMBINATION FIRE & SMOKE DAMPER
BDD		BACKDRAFT DAMPER		RADIATION DAMPER
CFM		CUBIC FEET PER MINUTE		DUCT MOUNTED SMOKE DETECTOR
CO		CLEANOUT		TEMPERATURE SENSOR
CD		CONDENSATE DRAIN		THERMOSTAT
DB		DRY BULB		HUMIDISTAT
DN		DOWN		RECTANGULAR ELBOW WITH TURNING VANES
DWG(S)		DRAWING(S)		RECTANGULAR ELBOW WITHOUT TURNING VANES
(E)		EXISTING		ROUND ELBOW
EA		EXHAUST AIR		SUPPLY AIR DUCT UP
EAT		ENTERING AIR TEMPERATURE		RETURN AIR DUCT UP
EC		ELECTRICAL CONTRACTOR		EXHAUST AIR DUCT UP
EF		EXHAUST FAN		SUPPLY AIR DUCT DOWN
EWT		ENTERING WATER TEMPERATURE		RETURN AIR DUCT DOWN
FC		FLEXIBLE CONNECTION		EXHAUST AIR DUCT DOWN
FCU		FAN COIL UNIT		TRANSITION (RISE OR DROP) IN DUCT ELEVATION IN DIRECTION OF AIR FLOW
FD		FIRE DAMPER		RECTANGULAR BRANCH FROM RECTANGULAR DUCT
FLEX		FLEXIBLE DUCTWORK		MANUAL VOLUME DAMPER
FLR		FLOOR		SPIN-IN FITTING
FOB		FLAT ON BOTTOM TRANSITION		SPIN-IN FITTING W/ MVD
FOT		FLAT ON TOP TRANSITION		MOTORIZED DAMPER
FS		FLOW SWITCH		BACKDRAFT DAMPER
FSD		COMBINATION FIRE & SMOKE DAMPER		DOOR UNDERCUT WITH HEIGHT
GC		GAS COCK OR GENERAL CONTRACTOR		SUPPLY AIR DIFFUSER
GPM		GALLONS PER MINUTE		RETURN AIR GRILLE/REGISTER
HP		HEAT PUMP		EXHAUST AIR GRILLE/REGISTER
HSTAT		HUMIDISTAT		ACCESS PANEL
LAT		LEAVING AIR TEMPERATURE		FLEXIBLE CONNECTION
LWT		LEAVING WATER TEMPERATURE		LINEAR DIFFUSER
MAU		MAKE-UP AIR UNIT		SUPPLY AIR
MA		MIXED AIR		RETURN AIR
MAT		MIXED AIR TEMPERATURE		AIR DEVICE DESIGNATION
MBH		THOUSAND BRITISH THERMAL UNITS		EQUIPMENT DESIGNATION
MC		MECHANICAL CONTRACTOR		BASEBOARD RADIATION TAG / PLENUM LENGTH TAG
MD		MOTORIZED DAMPER		REVISION DESIGNATION
MV		MANUAL AIR VENT		KEY NOTE DESIGNATION
MVD/VD		MANUAL VOLUME DAMPER		POINT OF CONNECTION OF NEW TO EXISTING
(N)		NEW		DUCT RISER DESIGNATION
N.C.		NORMALLY CLOSED		WATER RISER DESIGNATION
N.O.		NORMALLY OPEN		ENLARGED PLAN DESIGNATION
NTS		NOT TO SCALE		NORTH ARROW
OA, OSA		OUTSIDE AIR		
OAT		OUTSIDE AIR TEMPERATURE		
OBD		OPPOSED BLADE DAMPER		
PC		PLUMBING CONTRACTOR		
PG		PRESSURE GAUGE W/ GAUGE COCK		
P.O.C.		POINT OF CONNECTION OF NEW TO EXISTING		
P.O.D.		POINT OF DISCONNECT		
PRV		PRESSURE REDUCING VALVE		
PS		PRESSURE SWITCH		
RA		RETURN AIR		
%RH		PERCENT RELATIVE HUMIDITY		
SA		SUPPLY AIR		
SD		SMOKE DAMPER		
SP		STATIC PRESSURE		
TA		TRANSFER AIR		
T&P		T&P RELIEF VALVE		
TP		TEMPERATURE & PRESSURE TEST PLUG		
TSTAT		THERMOSTAT		
TYP		TYPICAL		
U		UNION		
UC		DOOR UNDERCUT WITH HEIGHT		
WB		WET BULB		

MECHANICAL GENERAL NOTES

- ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED STATE AND LOCAL CODES, AS WELL AS FEDERAL, STATE, AND MUNICIPAL REGULATIONS.
- THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK UNDER THIS CONTRACT WITH ALL OTHER BUILDING TRADES INCLUDING ARCHITECTURAL. NOTIFY THE ARCHITECT OF ALL DISCREPANCIES OR QUESTIONS PERTAINING TO EXTENT OF WORK PRIOR TO BIDDING.
- THE WORK REQUIRED CONSISTS OF PERFORMING ALL LABOR AND FURNISHING ALL MATERIALS, DEVICES AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION OF ALL MECHANICAL SYSTEMS AS INDICATED IN THE CONTRACT DOCUMENTS. IT SHALL FURTHER INCLUDE FURNISHING AND INSTALLING ALL ASSOCIATED ITEMS REQUIRED FOR THE PROPER OPERATION OF ALL MECHANICAL SYSTEMS.
- THE INFORMATION INDICATED WITHIN THESE DRAWINGS IS DIAGRAMMATIC IN NATURE, CONTAINING INFORMATION TO A DEGREE OF DETAIL CONSISTENT WITH THEIR SCALE, ADEQUATE TO CONVEY THE DESIGN INTENT AND THEREFORE DOES NOT INDICATE EVERY REQUIRED OFFSET, FITTING OR SLOPE. PROVIDE EQUIPMENT, MATERIALS AND METHODS NOT SHOWN OR SPECIFIED BUT REQUIRED TO PROVIDE A COMPLETE AND COORDINATED INSTALLATION.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL FIELD DIMENSIONS, LOCATIONS AND CONDITIONS PRIOR TO THE INSTALLATION OF ANY MATERIALS AND COMMENCEMENT OF WORK. NOTIFY THE ARCHITECT OF ALL DISCREPANCIES THAT WILL AFFECT THE WORK FOR RESOLUTION.
- EQUIPMENT, DEVICES AND MATERIALS SHOWN ON DRAWINGS ARE BASED ON MANUFACTURER'S PUBLISHED DATA, AND ARE, IN THE DESIGNER'S PROFESSIONAL OPINION, REPRESENTATIVE OF TYPICAL SIZES. ALL EQUIPMENT, DEVICES AND MATERIALS PROVIDED SHALL FIT WITHIN THE SPACE PROVIDED.
- ALL EQUIPMENT AND SERVICEABLE DEVICES SHALL BE INSTALLED WITH ACCESS AND CLEARANCE FOR MAINTENANCE, REPLACEMENT AND/OR USE. COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES TO PROVIDE THIS ACCESS AND CLEARANCE. INSTALL ALL EQUIPMENT, DEVICES AND MATERIALS PER MANUFACTURER'S INSTRUCTIONS.
- IF EQUIPMENT, DEVICES AND MATERIALS, OTHER THAN THOSE SCHEDULED OR SPECIFIED, ARE APPROVED AND PROVIDED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE AND PROVIDE REVISED UTILITIES AND SERVICE CONNECTIONS AND VERIFY THE SPACE ALLOTTED IS ADEQUATE TO MAINTAIN THE CLEARANCE REQUIREMENTS REQUIRED BY THE MANUFACTURER AND FOR ACCESS AND MAINTAINABILITY AS INDICATED ON THE CONSTRUCTION DOCUMENTS.
- PROVIDE STARTERS FOR EQUIPMENT UNLESS SPECIFICALLY IDENTIFIED AS BEING PROVIDED BY THE ELECTRICAL CONTRACTOR. PROVIDE ALL INTERNAL OVER CURRENT PROTECTION DEVICES AND INTERNAL TRANSFORMERS FOR PACKAGED EQUIPMENT.
- COORDINATE ALL DUCTWORK, DEVICE, PIPING AND EQUIPMENT LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO STARTING ANY WORK. COORDINATE WITH GENERAL CONTRACTOR, AND ALL TRADES, ALL REQUIREMENTS FOR INSTALLATION, INCLUDING SERVICE UTILITY CONNECTIONS, POINT LOADS, SLEEVES, SUPPORTING DEVICES, OPENINGS AND CUT-OUTS, AND PENETRATIONS OF WALLS, CEILING OR SHAFTS. WHERE DUCTS AND PIPES PASS THROUGH FIRE-RATED CONSTRUCTION, SEAL WITH CODE REQUIRED MATERIALS.
- ACCESS DOORS AND/OR PANELS SHALL BE PROVIDED AT ALL MAINTENANCE AND SERVICE LOCATIONS FOR CONCEALED EQUIPMENT, VALVES, DAMPERS AND DEVICES. UNLESS A SIZE IS SPECIFICALLY NOTED, PANELS SHALL BE SIZED TO SERVICE EQUIPMENT/DEVICE BUT SHALL NOT BE LESS THAN 12" x 12". DOORS AND PANELS SHALL HAVE THE SAME FIRE RATING AS THE WALL OR CEILING IN WHICH THEY ARE INSTALLED. ACCESS DOORS AND/OR PANELS ARE NOT REQUIRED WHERE ADJUSTMENT, MAINTENANCE AND REPLACEMENT ARE POSSIBLE THROUGH LAY-IN SUSPENDED CEILING.
- INSULATION AND VAPOR BARRIER SHALL BE PROVIDED ON ALL PIPING AND EQUIPMENT SUBJECT TO HEAT LOSS, CONDENSATION, OR CONSTITUTING A POTENTIAL BURN HAZARD.
- PIPE, DUCT AND EQUIPMENT INSULATION SHALL NOT BE CRUSHED OR COMPRESSED THROUGH INTERFERENCE WITH SYSTEMS INSTALLED BY OTHER TRADES OR BUILDING CONSTRUCTION.
- ALL PIPING SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID FREEZING. NO PIPING SHALL BE INSTALLED WITHIN EXTERIOR WALLS EXCEPT AT CONDENSATE TERMINATION POINTS. ALL CONDENSATE PIPING SHALL BE LOCATED ON THE HEATED SIDE OF THE INSULATION EXCEPT THE TERMINATION POINT.
- ALL FINISHED CONSTRUCTION AND/OR EXISTING BUILDING AND SITE FEATURES NOT BEING ALTERED BY THIS PROJECT ARE TO BE PROTECTED FROM DAMAGE. CONTRACTOR SHALL REPAIR ALL DAMAGE TO FINISHED AND/OR EXISTING CONSTRUCTION CAUSED BY THE CONTRACTOR'S OPERATIONS AT CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE OWNER.
- ALL DUCTWORK SIZES ARE CLEAR INSIDE DIMENSIONS. INCREASE DUCTWORK SIZE FOR ACOUSTICAL LINER WHERE SPECIFIED.
- ALL SPIN-IN FITTINGS SHOWN ARE TO BE INSTALLED PER SMACNA AND MANUFACTURER'S RECOMMENDATIONS. ALL DUCTWORK IS TO BE OF SHEETMETAL CONSTRUCTION PER SMACNA STANDARDS FOR LOW AND MEDIUM PRESSURE DISTRIBUTION.
- ALL MECHANICAL SYSTEMS SHALL BE TESTED, BALANCED, AND ADJUSTED. COORDINATE AND PROVIDE BALANCING DEVICE REQUIREMENTS WITH TEST AND BALANCE SERVICE TO ASSURE ADEQUATE DAMPERS AND VALVES ARE PROVIDED FOR FLOW CONTROL. MECHANICAL CONTRACTOR TO PROVIDE ALL MANUAL VOLUME DAMPERS WHERE SHOWN ON DRAWINGS AND WHERE REQUESTED BY BALANCING CONTRACTOR TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.
- ALL ELBOWS IN RECTANGULAR SUPPLY DUCTS SHALL HAVE TURNING VANES OR SHALL BE RADIUS STYLE.
- DUCT CONNECTION TO EQUIPMENT SHALL BE FABRICATED AFTER EQUIPMENT HAS BEEN SET IN PLACE AND DIMENSIONS VERIFIED.
- ALL BRANCH DUCTWORK AND FLEX TO INDIVIDUAL DIFFUSERS SHALL BE THE SAME SIZE AS THE NECK OF THE DIFFUSER UNLESS OTHERWISE NOTED.
- COORDINATED DIFFUSER AND GRILLE PLACEMENT IS SHOWN ON THE P400 SERIES DRAWINGS. COORDINATE DIFFUSER AND GRILLE PLACEMENT WITH LIGHTING AND OTHER CEILING DEVICE INSTALLATIONS FOR A CONSISTENT, FUNCTIONAL AND SYMMETRICAL PATTERN.
- MOUNT ALL THERMOSTATS WITH TOP OF THERMOSTAT AT 48 INCHES ABOVE FINISH FLOOR.
- MAINTAIN ONE SET OF RED-LINED AS-BUILT DRAWINGS ON JOB SITE. SUBMIT TO ARCHITECT AT THE COMPLETION OF ALL WORK.
- FLEXIBLE DUCTWORK MAXIMUM LENGTH SHALL NOT EXCEED 8'-0".
- BALANCING CONTRACTOR SHALL CALIBRATE ALL THERMOSTATS AND SENSORS AT THE COMPLETION OF THE PROJECT.
- PROVIDE NOISE AND VIBRATION ISOLATION FOR ALL EQUIPMENT. PROVIDE FLEX CONNECTIONS AT ALL INLET AND OUTLET DUCT CONNECTIONS.
- ALL INSULATION SHALL MEET THE TEMPERATURE AND SMOKE RATINGS AS REQUIRED BY NFPA FOR THE INTENDED USE.

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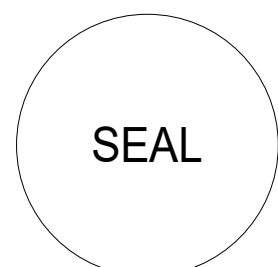
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DISTRICT
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STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

**MECHANICAL
LEGEND AND
GENERAL NOTES**

M0.1

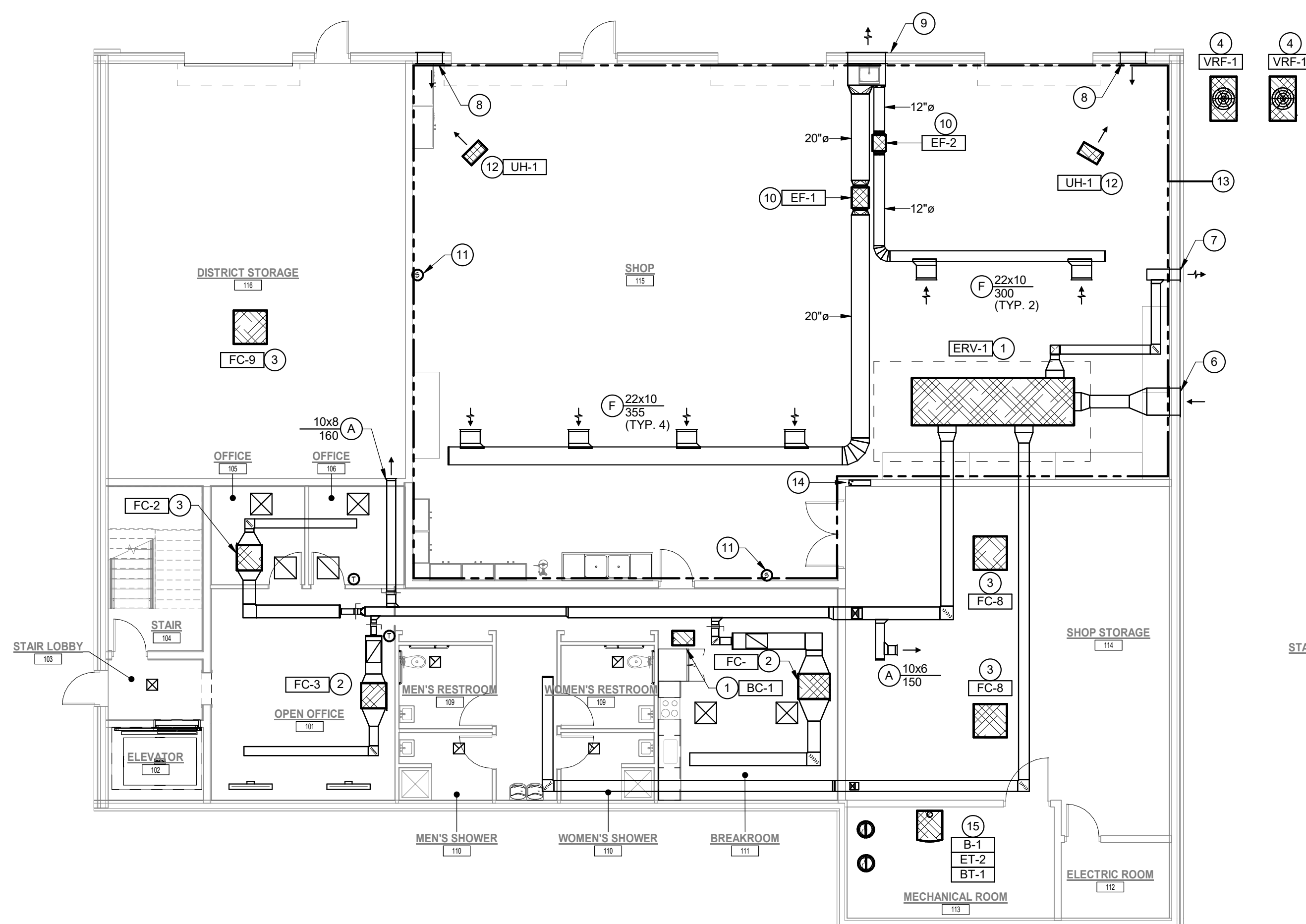
KEY NOTES

- 1 BRANCH CONTROLLER MOUNTED ABOVE ACCESSIBLE CEILING. PROVIDE SERVICE AND CODE CLEARANCE TO CONTROL PANEL AND REFRIGERANT CONNECTIONS.
- 2 HORIZONTAL DUCTED VRF FAN COIL UNIT MOUNTED ABOVE ACCESSIBLE CEILING. SUSPEND UNIT FROM STRUCTURE WITH VIBRATION ISOLATION. PROVIDE SERVICE AND CODE CLEARANCE TO CONTROL PANEL AND REFRIGERANT CONNECTIONS.
- 3 CEILING CASSETTE MOUNTED IN CEILING. SUSPEND UNIT FROM STRUCTURE WITH VIBRATION ISOLATION. PROVIDE SERVICE AND CODE CLEARANCE TO CONTROL PANEL AND REFRIGERANT CONNECTIONS.
- 4 VRF OUTDOOR UNIT MOUNTED ON HOUSEKEEPING PAD. EXTEND INSULATED REFRIGERANT PIPING THROUGH WALL TO CONNECTIONS AT INDOOR BRANCH CONTROLLER.
- 5 ENERGY RECOVERY VENTILATOR SUSPENDED WITH VIBRATION ISOLATION. RE: DETAIL M8.0. MAINTAIN A MINIMUM OF 48" CLEAR ON ACCESS SIDE AND ADDITIONAL MANUFACTURER'S CLEARANCES.
- 6 ARCHITECTURAL INTAKE LOUVER WITH A MINIMUM TOTAL FREE AREA OF 2.18 S.F. EXTEND 24" DEEP PLENUM OFF OF LOUVER HEIGHT AND WIDTH TO BE FULL SIZE OF LOUVER. RE: DETAIL 7M8.0.
- 7 ARCHITECTURAL EXHAUST LOUVER WITH A MINIMUM TOTAL FREE AREA OF 0.77 S.F. EXTEND 24" DEEP PLENUM OFF OF LOUVER HEIGHT AND WIDTH TO BE FULL SIZE OF LOUVER. RE: DETAIL 7M8.0.
- 8 ARCHITECTURAL INTAKE LOUVER WITH A MINIMUM TOTAL FREE AREA OF 2.0 S.F. EXTEND 24" DEEP PLENUM OFF OF LOUVER HEIGHT AND WIDTH TO BE FULL SIZE OF LOUVER. RE: DETAIL 7M8.0.
- 9 ARCHITECTURAL EXHAUST LOUVER WITH A MINIMUM TOTAL FREE AREA OF 3.1 S.F. EXTEND 24" DEEP PLENUM OFF OF LOUVER HEIGHT AND WIDTH TO BE FULL SIZE OF LOUVER. RE: DETAIL 7M8.0.
- 10 INLINE FAN SUSPENDED AT 12'-0" A.F.F. WITH VIBRATION ISOLATORS. CONNECT FAN TO PLENUM. RE: DETAIL 6M8.0.
- 11 CO/NO2 SENSOR MOUNTED 48" A.F.F.
- 12 HOT WATER COIL UNIT HEATER SUSPENDED 11'-0" A.F.F. WITH VIBRATION ISOLATORS. RE: DETAIL 9M8.0.
- 13 PROVIDE 6 BTU/H S.F. HYDRONIC IN-FLOOR RADIANT HEAT SYSTEM FOR 115 SHOP. PIPING SHALL BE 3/4" PEX WITH OXYGEN DIFFUSION BARRIER WITH MAXIMUM LOOP LENGTHS OF 300 FEET. MANIFOLDS SHALL BE LOCATED IN 114 SHOP STORAGE. RE: DETAILS 3M8.1 AND 4M8.1. PROVIDE RADIANT IN-FLOOR HEATING SYSTEM CONTROLS, CIRCULATING PUMP, 2-WAY CONTROL VALVE AND 3-WAY MIXING VALVE IN MECHANICAL ROOM 113.
- 14 MANIFOLD FOR IN-FLOOR RADIANT HEAT SYSTEM SERVING 115 SHOP, MOUNTED IN WALL BEHIND 24"x24" ACCESS PANEL. RE: DETAIL 2M8.1.
- 15 LOW TEMPERATURE HYDRONIC HEATING SYSTEM INCLUDING: CONDENSING TYPE BOILER, WALL MOUNTED INLINE CIRCULATING PUMPS, EXPANSION TANK AND BUFFER TANK. RE: PIPING SCHEMATICS ON 1/M8.1 AND ASSOCIATED DETAILS.

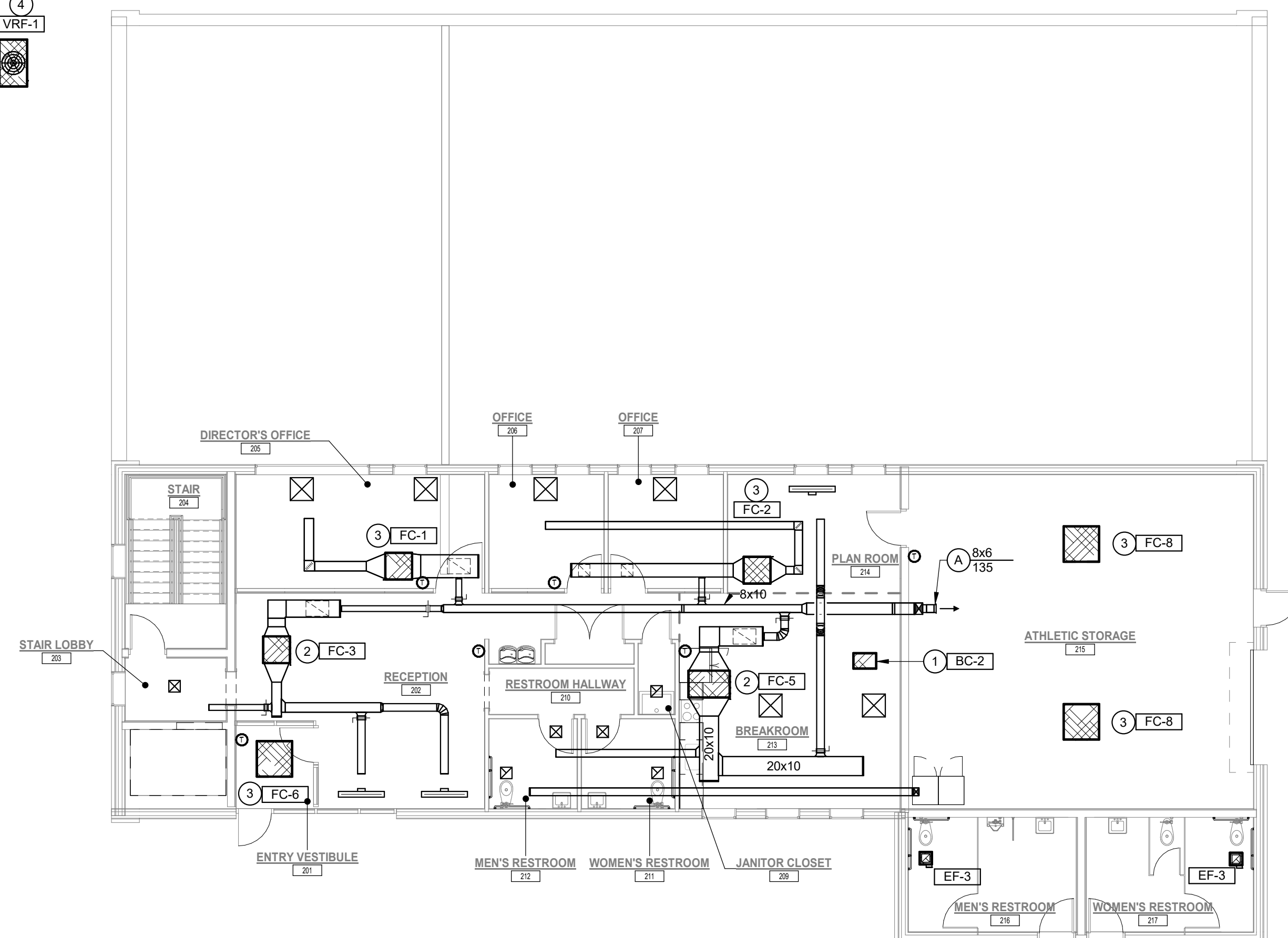
GENERAL NOTES

(THIS SHEET ONLY)

- A. REFRIGERANT PIPING SIZE BETWEEN OUTDOOR UNITS, INDOOR UNITS, AND BRANCH SELECTORS SHALL BE DETERMINED BY THE UNIT MANUFACTURER AND SHALL TAKE INTO ACCOUNT THE FIELD INSTALLATION CONDITIONS.
- B. ALL REFRIGERANT PIPING SHALL BE RUN IN A STRAIGHT AND NEAT MANNER, FOLLOWING ORTHOGONAL ROUTES THROUGH THE CEILING PLENUM. PIPING SHALL NOT BLOCK ACCESS TO OTHER PLENUM MOUNTED EQUIPMENT AND DEVICES.
- C. UNLESS OTHERWISE INDICATED, SUPPLY AIR DUCT RUN-OUTS TO AIR DEVICES SHALL BE THE SAME SIZE AS AIR DEVICE NECK SIZE.
- D. UNLESS OTHERWISE INDICATED, CO RUN-OUT FROM FAN COIL / CEILING CASSETTES SHALL BE 3/4"



1 FIRST FLOOR MECHANICAL PLAN
M3.0 SCALE: 1/8" = 1'-0"



2 SECOND FLOOR MECHANICAL PLAN
M3.0 SCALE: 1/8" = 1'-0"

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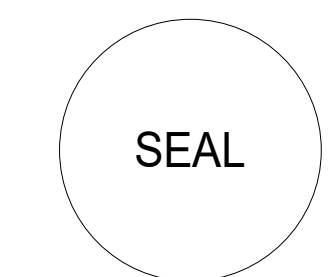
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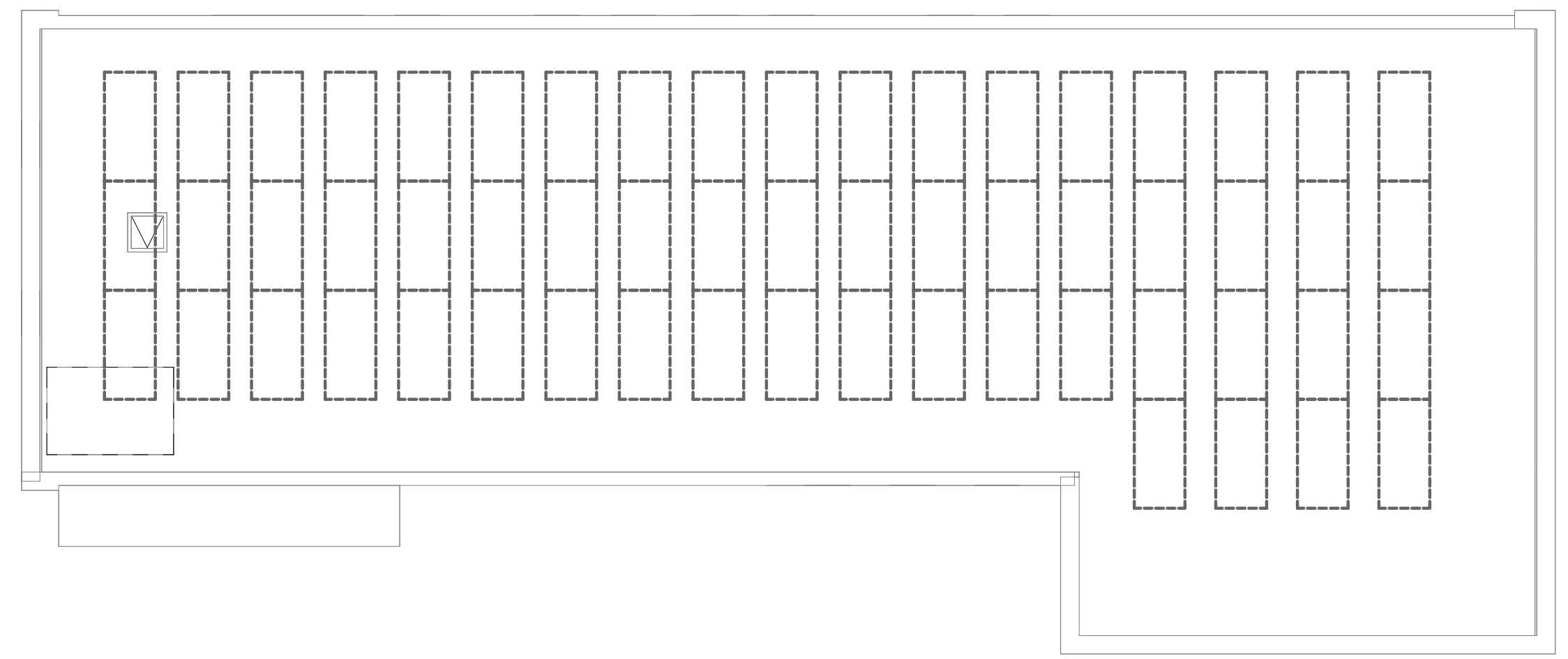
FIRST & SECOND
FLOOR
MECHANICAL PLANS

M3.0

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KEY NOTES

- ①
- ②



① **ROOF MECHANICAL PLAN**
 M3.1 SCALE: 1/8" = 1'-0"

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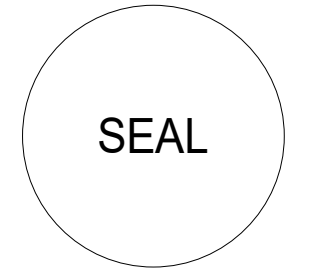
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ROOF MECHANICAL PLAN

M3.1

ENERGY RECOVERY VENTILATOR SCHEDULE

NOTES:

- PROVIDE VFD FOR EACH FAN.
- PROVIDE MERV 8 FILTERS ON ALL FOUR AIRSTREAMS.
- PROVIDE MOTORIZED DAMPERS FOR OA AND EA CONNECTIONS.

PLAN CODE	SUPPLY FAN			EXHAUST FAN			HEAT EXCHANGER						ELECTRICAL				SIZE (IN)			OPERATING WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES		
	CFM	EXT. SP (IN WG)	HP	CFM	EXT. SP (IN WG)	HP	SUMMER			WINTER			VOLTS	Ø	HZ	MCA	MOCP (AMPS)	L	W					H	
							OA DB/WB (°F)	SUPPLY DB/WB (°F)	RETURN DB/WB (°F)	EXHAUST DB/WB (°F)	OA DB (°F)	SUPPLY DB/WB (°F)													RETURN DB/WB (°F)
ERV-1	1090	1	1	500	0.75	1								208	3	60	50.8	60	180	53	60	2394	GREENHECK	RVE-40-30C-0-1-D1	

VRF OUTDOOR UNIT SCHEDULE

NOTES:

- PROVIDE REFRIGERANT PIPING SIZE AND CHARGE AS RECOMMENDED BY MANUFACTURER.
- OUTDOOR UNIT SHALL BE BY SAME MANUFACTURER AS THE UNIT(S) IT SERVES AND SHALL BE SELECTED SPECIFICALLY TO MATCH THE CAPACITY OF THOSE UNITS.

PLAN CODE	SERVICE	LOCATION	EER	COP	NOM. COOLING CAPACITY @ S.L. (MBH)	CORRECTED COOLING CAPACITY @ S.L. (MBH)	NOM. HEATING CAPACITY @ S.L. (MBH)	CORRECTED HEATING CAPACITY @ S.L. (MBH)	SUMMER AAT DB/WB (°F)	WINTER AAT (°F)	SOUND DATA (dB)	ELECTRICAL						SIZE (IN)			OPERATING WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES				
												VOLTS	Ø	HZ	MCA_1	MCA_2	MCA_3	MOCP 1 (AMPS)	MOCP 2 (AMPS)	MOCP 3 (AMPS)					L	W	H	
VRF-1	VARIES											208	1	60	0				0			49	29	72		TRANE	TURYH	

VRF INDOOR UNIT SCHEDULE

NOTES:

- DISCONNECTS SHALL BE PROVIDED BY E.C.
- CONTROL WIRING BETWEEN UNITS BY UNIT INSTALLER.
- REFRIGERANT PIPING SIZE BETWEEN OUTDOOR UNITS, INDOOR UNITS AND BRANCH CONTROLLERS SHALL BE DETERMINED BY THE UNIT MANUFACTURER AND SHALL TAKE INTO ACCOUNT THE FIELD INSTALLATION CONDITIONS.
- CONTRACTOR TO PROVIDE CONDENSATE OVERFLOW SWITCH CONFORMING TO UL508.
- PROVIDE WITH MERV 8 FILTERS.
- PROVIDE THERMOSTAT BRC1E73. FACE PLATE SHALL BE BRC1E72RM.
- PROVIDE INDOOR UNIT WITH INTEGRAL CONDENSATE PUMP.
- DO NOT PROVIDE WITH MANUFACTURER'S BOTTOM ACCESSIBLE FILTER RACKHOLDER WHERE FILTER GRILLES ARE USED.

PLAN CODE	UNIT TYPE	REFRIGERANT	TOTAL AIRFLOW (CFM)	TOTAL COOLING CAPACITY (MBH)	SENS. COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	MAX E.S.P. (IN WG)	SOUND DATA (dB)	SUMMER EAT DB/WB (°F)	WINTER EAT DB/WB (°F)	HEATING LAT (°F)	ELECTRICAL					SIZE (IN)			OPERATING WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES	
												VOLTS	Ø	HZ	MCA	MOCP (AMPS)	L	W	H					
FC	HORIZONTAL	R410A	600	17.1	13.4	20.0	0.60		75/63	70/58		208	1	60				28	35	10	58	MITSUBISHI TRANE	TPEFY018	
FC-1	HORIZONTAL	R410A	370	5.7	5.6	6.7	0.60		75/63	70/58	90.7	208	1	60				28	28	10	47	MITSUBISHI TRANE	TPEFY008	
FC-2	HORIZONTAL	R410A	370	7.6	6.3	9.0	0.60		75/63	70/58	97.8	208	1	60				28	28	10	47	MITSUBISHI TRANE	TPEFY008	
FC-3	HORIZONTAL	R410A	370	11.4	8.2	13.5	0.60		75/63	70/58	103.7	208	1	60				28	28	10	47	MITSUBISHI TRANE	TPEFY012	
FC-5	HORIZONTAL	R410A	880	22.8	18.8	27.0	0.60		75/63	70/58	98.3	208	1	60				28	43	10	67	MITSUBISHI TRANE	TPEFY024	
FC-6	CEILING	R410A	500	5.7	4.9	6.7	0.00		75/63	70/58	82.6	208	1	60	0.2	15	37	37	10	46	MITSUBISHI TRANE	TPLFY006		
FC-8	CEILING	R410A	600	11.3	9.4	13.5	0.00		75/63	70/58	90.8	208	1	60	0.4	15	37	37	10	46	MITSUBISHI TRANE	TPLFY012		
FC-9	CEILING	R410A	600	11.3	9.4	13.5	0.00		75/63	70/58	90.8	208	1	60	0.4	15	37	37	10	55	MITSUBISHI TRANE	TPLFY018		

VRF BRANCH CONTROLLER SCHEDULE

NOTES:

- ALL PORTS AND TAPS TO MAIN SHALL INCLUDE REFRIGERANT RATED, FULL PORT BALL VALVES.
- REFER TO PLANS FOR NUMBER OF USED PORTS. CAP UN-USED PORTS.
- DISCONNECTS BY E.C.

PLAN CODE	SERVICE	NO. PORTS	ELECTRICAL					SIZE (IN)			OPERATING WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
			VOLTS	Ø	HZ	MCA	MOCP (AMPS)	L	W	H				
BC-1	FIRST FLOOR		208	1	60	0	0	24	16	10	133	MITSUBISHI TRANE	TCMBM	
BC-2	SECOND FLOOR		208	1	60	0	0	24	16	10	133	MITSUBISHI TRANE	TCMBM	

FAN SCHEDULE

NOTES:

- PROVIDE WITH FACTORY DISCONNECT SWITCH.
- PROVIDE WITH MOTORIZED DAMPER.
- PROVIDE WITH FACTORY INSULATED ROOF CURB AND BIRDSCREEN.
- PROVIDE WITH INVERTER DUTY MOTOR AND SHAFT GROUNDING RINGS.
- FAN CONTROLLED BY WALL MOUNTED THERMOSTAT.
- PROVIDE WITH VARIGREEN MOTOR AND SPEED CONTROLLER.

PLAN CODE	SERVICE	TYPE	AIR FLOW (CFM)	SP (IN WG)	MOTOR			FAN RPM	OPERATING WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES	
					HP / WATTS	VOLTS	Ø						
EF-1	SHOP	INLINE	1,420	0.20	1/2	120	1	60	1725	1440	63	GREENHECK	SQ-120-VG
EF-2	WOOD SHOP	INLINE	595	0.20	1/10	120	1	60	1725	1451	50	GREENHECK	SQ-90-VG
EF-3	OUTDOOR RESTROOMS	CEILING	150	0.15	17.9	120	1	60	1725	1083	10	PANASONIC	FV-1115VK2

UNIT HEATER SCHEDULE

NOTES:

- XX.

PLAN CODE	SERVICE	AIR FLOW (CFM)	HEATING CAPACITY (MBH)	EWT (°F)	LWT (°F)	FLOW (GPM)	WPD (FT WG)	MOTOR QUANTITY & HP	ELECTRICAL			SIZE (IN)			OPERATING WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
									VOLTS	Ø	HZ	L	W	H				
UH-1	115 SHOP	2200		120	100	11.8	0.6	1/3	208	1	60	25	14	29	120	TRANE	S-180	

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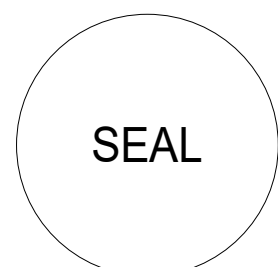
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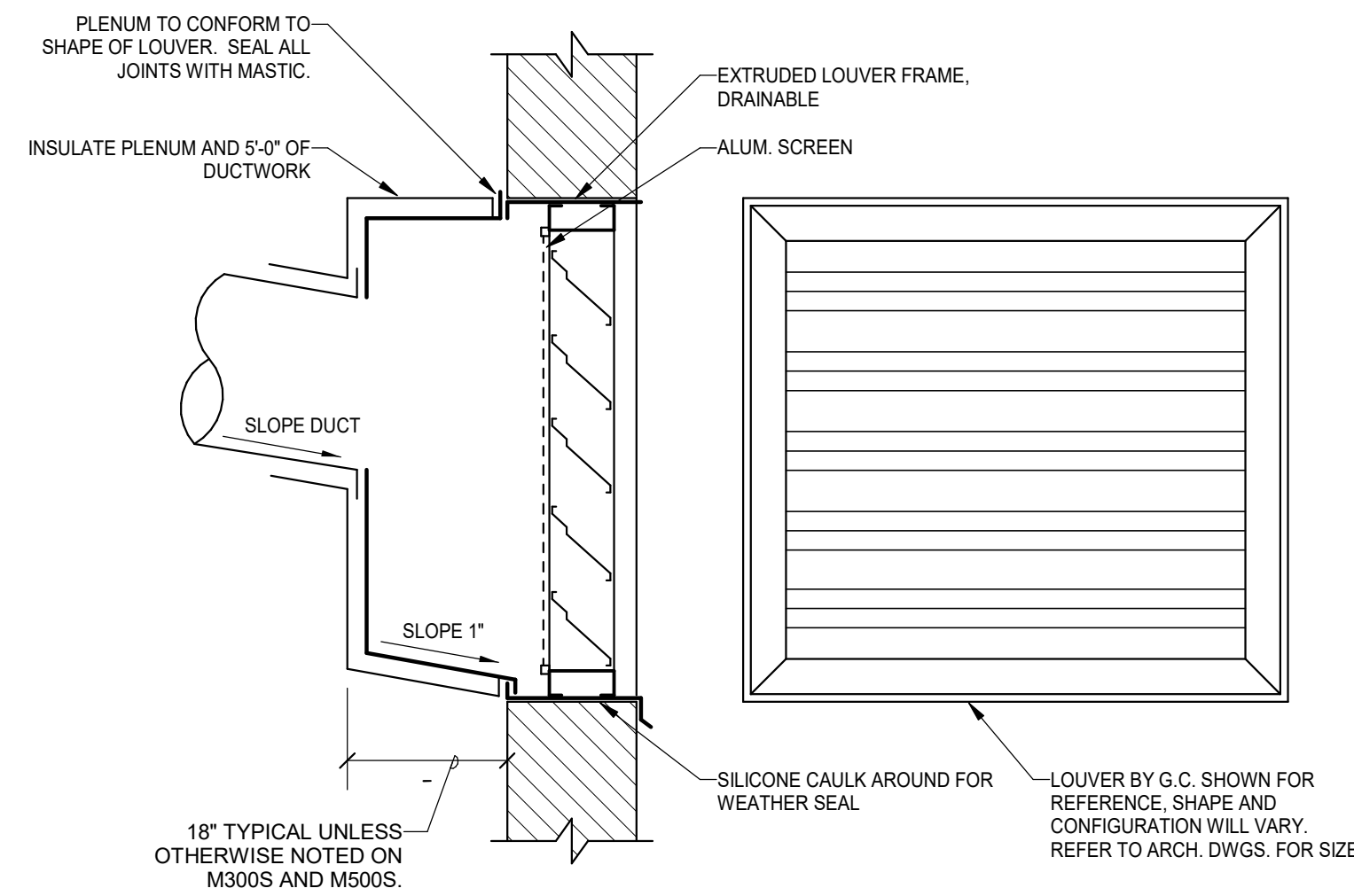


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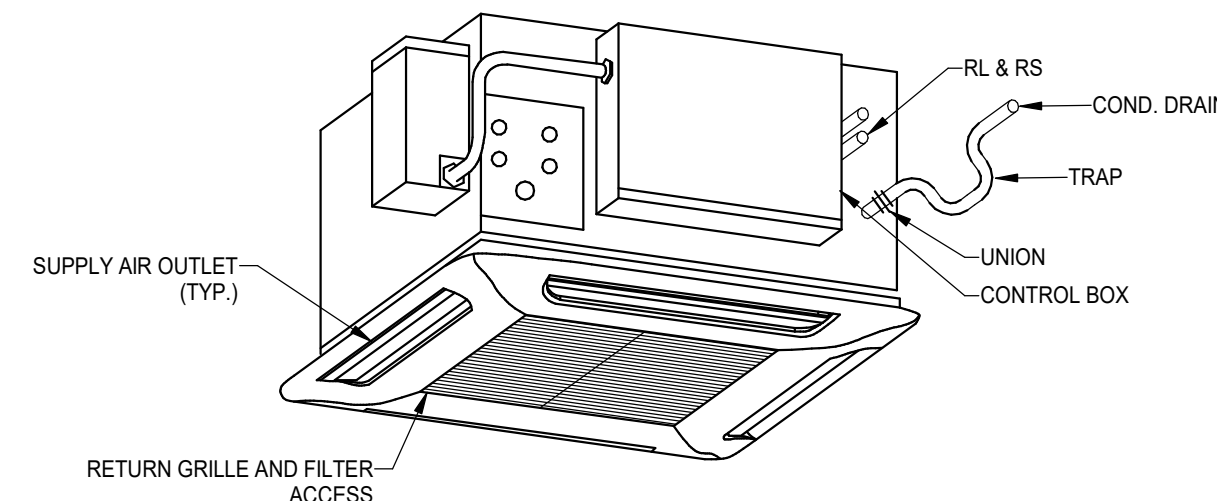
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MECHANICAL
SCHEDULES

M7.0

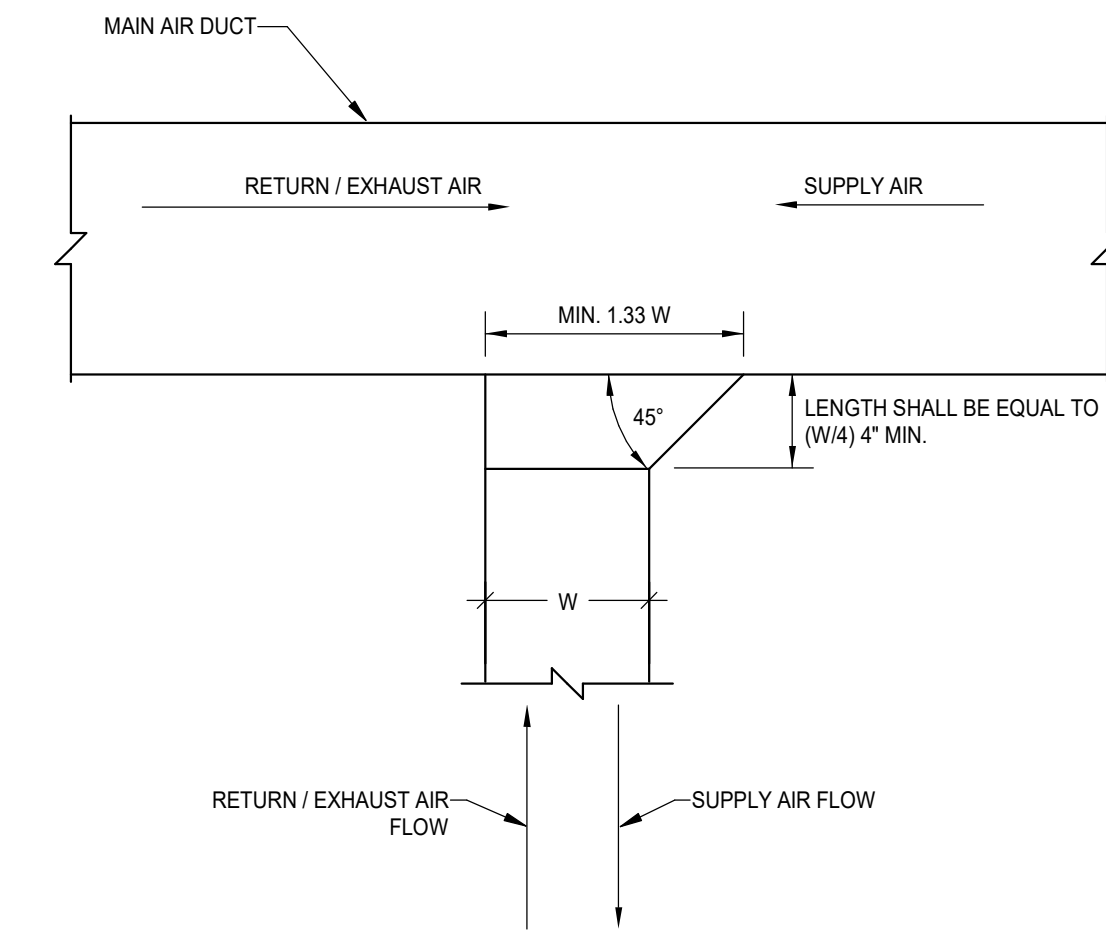


7 INTAKE AND EXHAUST LOUVER DETAIL
M8.0 SCALE: NONE

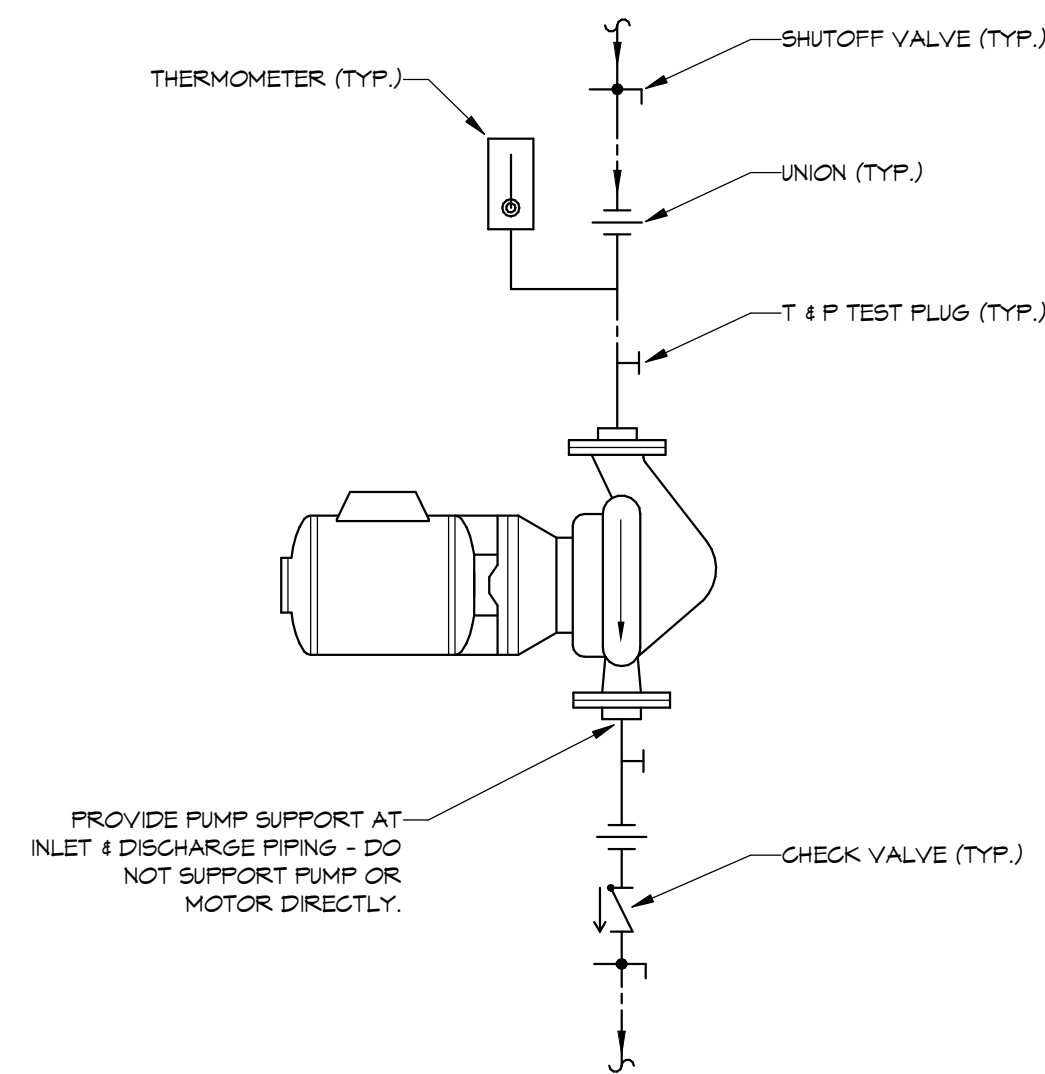


- NOTE:**
1. PROVIDE UL LISTED CONDENSATE OVERFLOW SWITCH.
 2. PROVIDE VIBRATION ISOLATION AS REQUIRED PER SPECIFICATIONS.
 3. MAINTAIN CODE CLEARANCE ON CONTROL SIDE OF UNIT.
 4. INSTALL ACCESS PANEL ON CONTROL SIDE OF UNIT IN INACCESSIBLE CEILINGS.

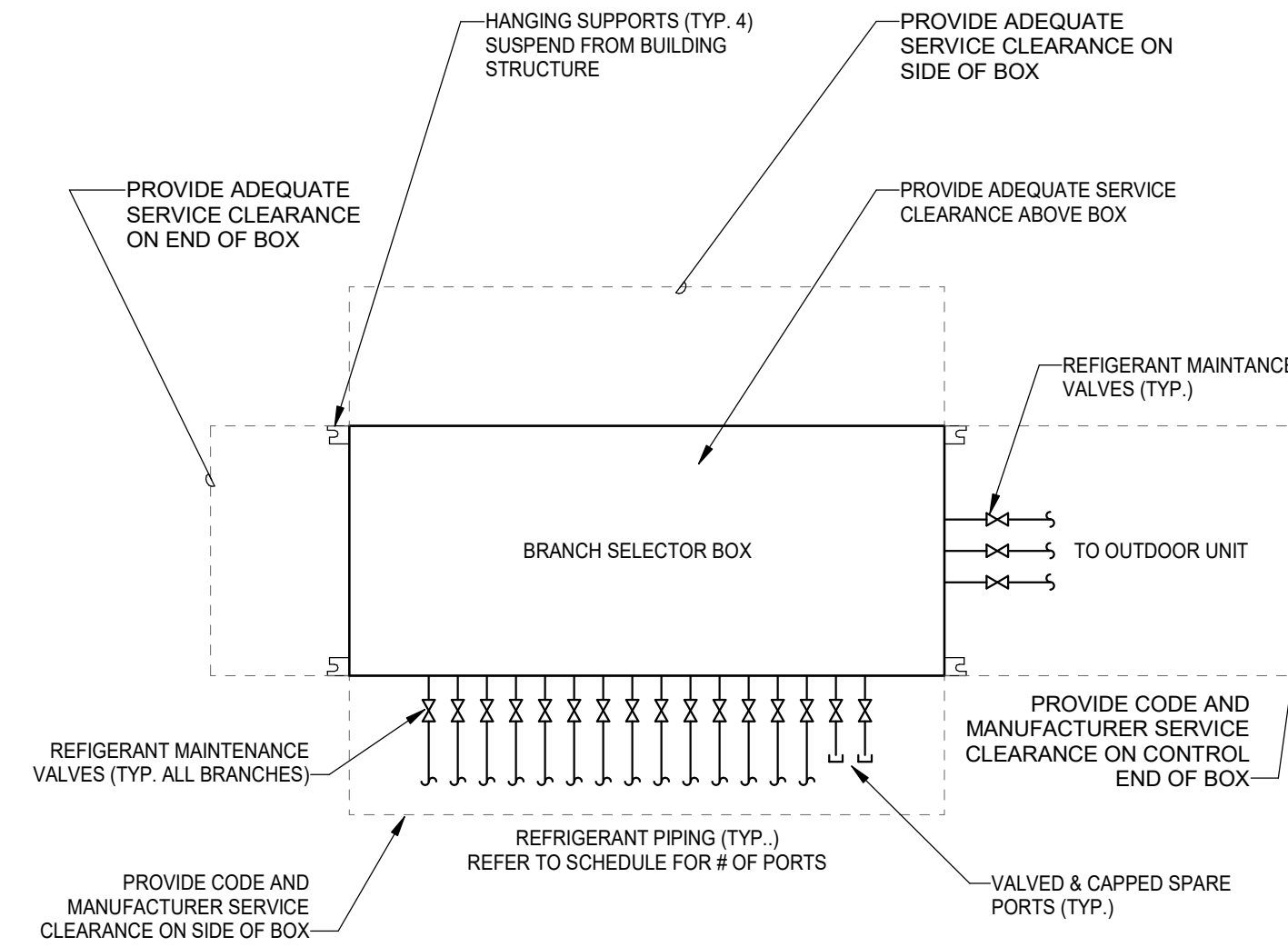
4 CEILING CASSETTE FAN COIL DETAIL
M8.0 SCALE: NONE



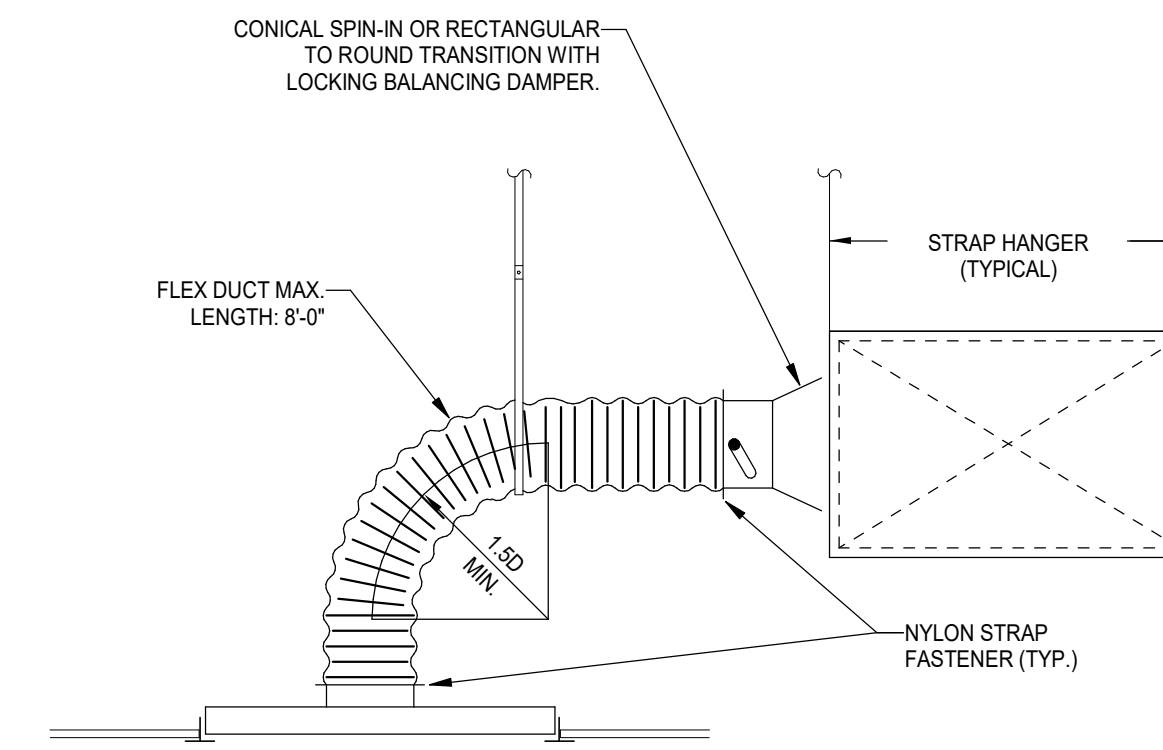
1 BRANCH DUCT TAKE-OFF DETAIL
M8.0 SCALE: NONE



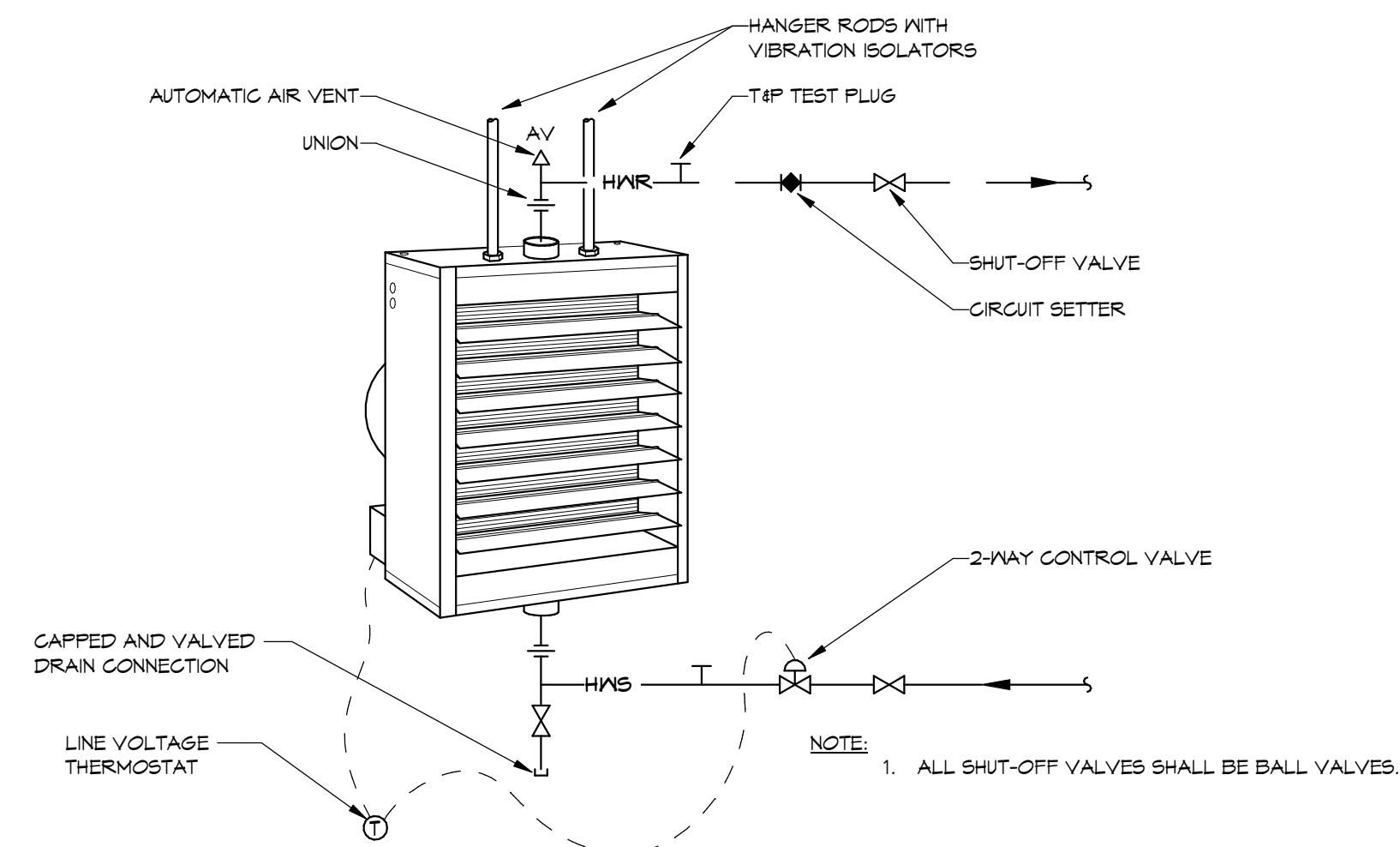
8 IN-LINE CIRCULATING PUMP DETAIL 1
M8.0 SCALE: 1/8" = 1'-0"



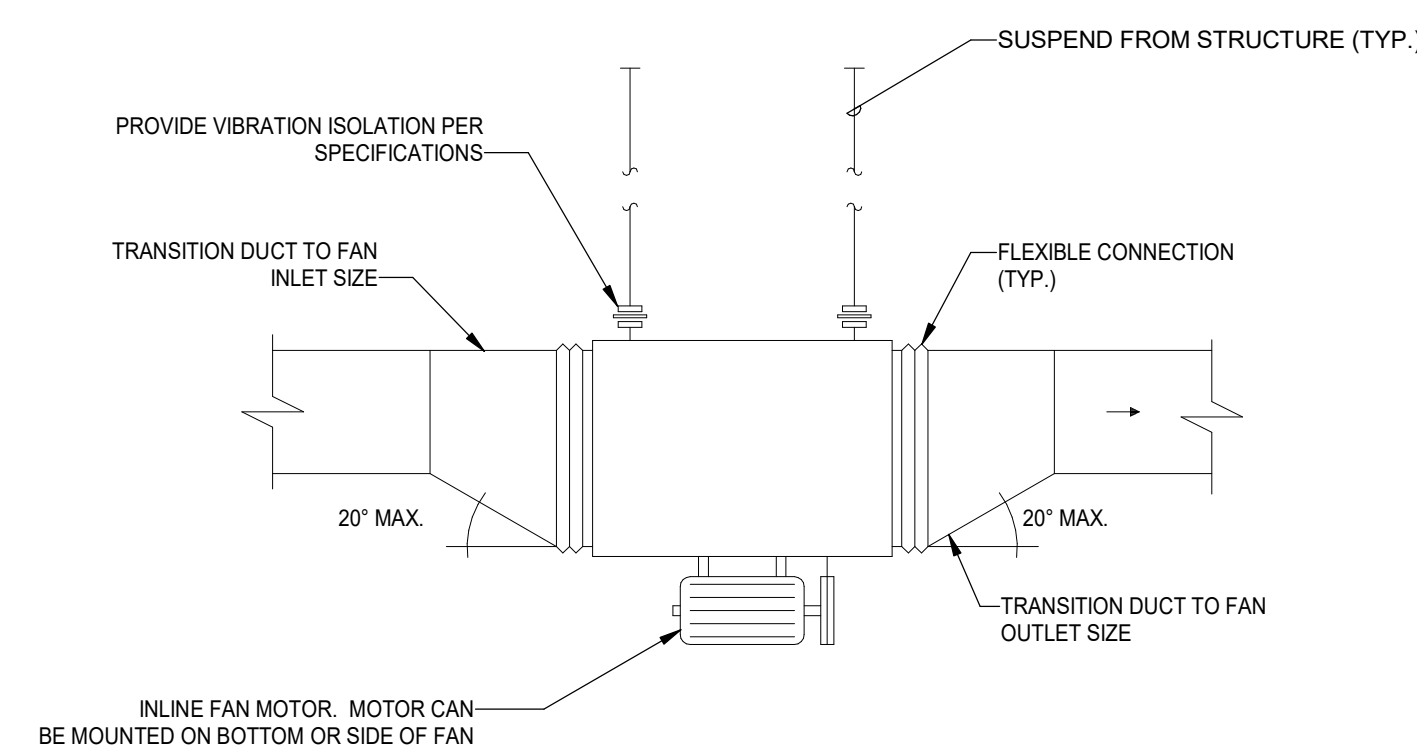
5 BRANCH CONTROLLER DETAIL
M8.0 SCALE: NONE



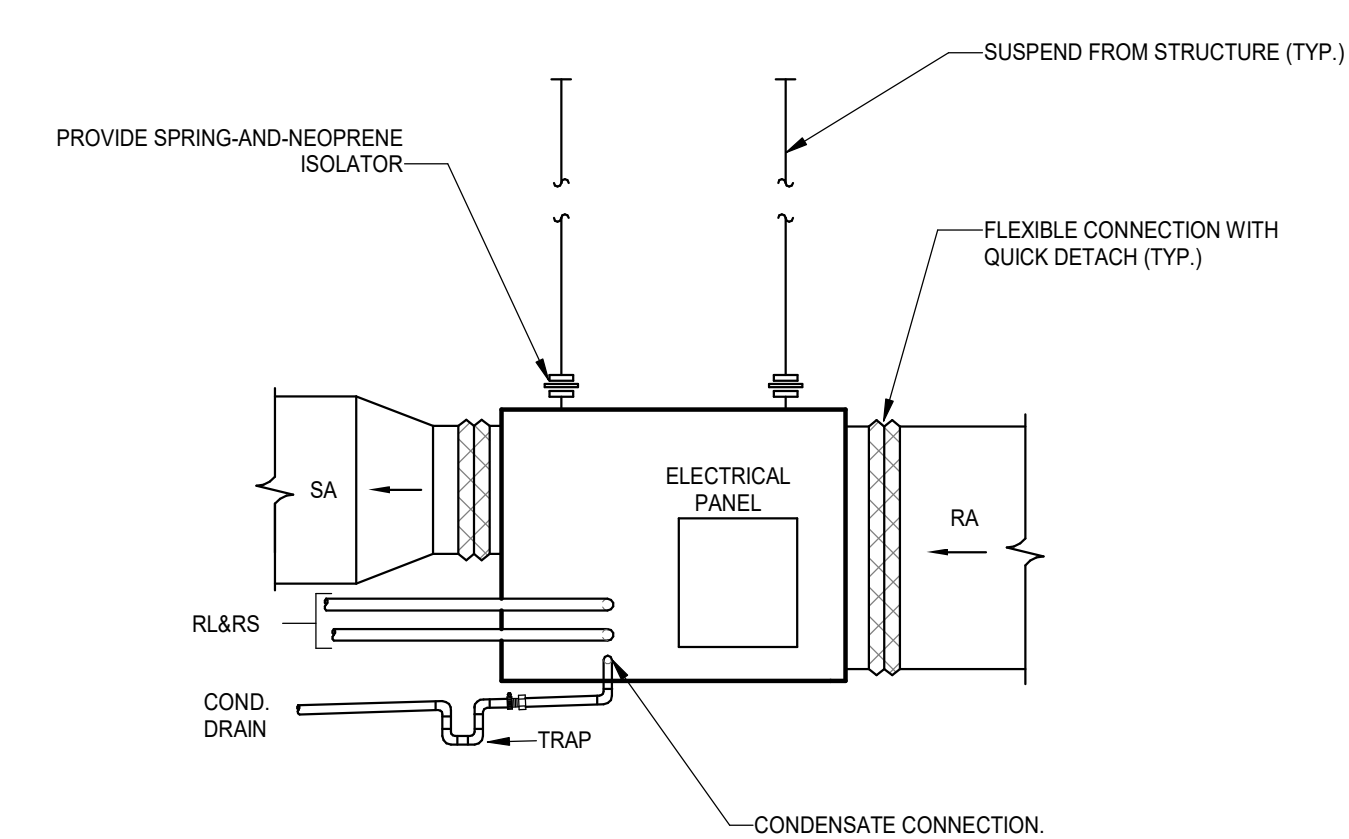
2 FLEXIBLE DUCT INSTALLATION DETAIL
M8.0 SCALE: NONE



9 HORIZONTAL UNIT HEATER DETAIL
M8.0 SCALE: 1/8" = 1'-0"

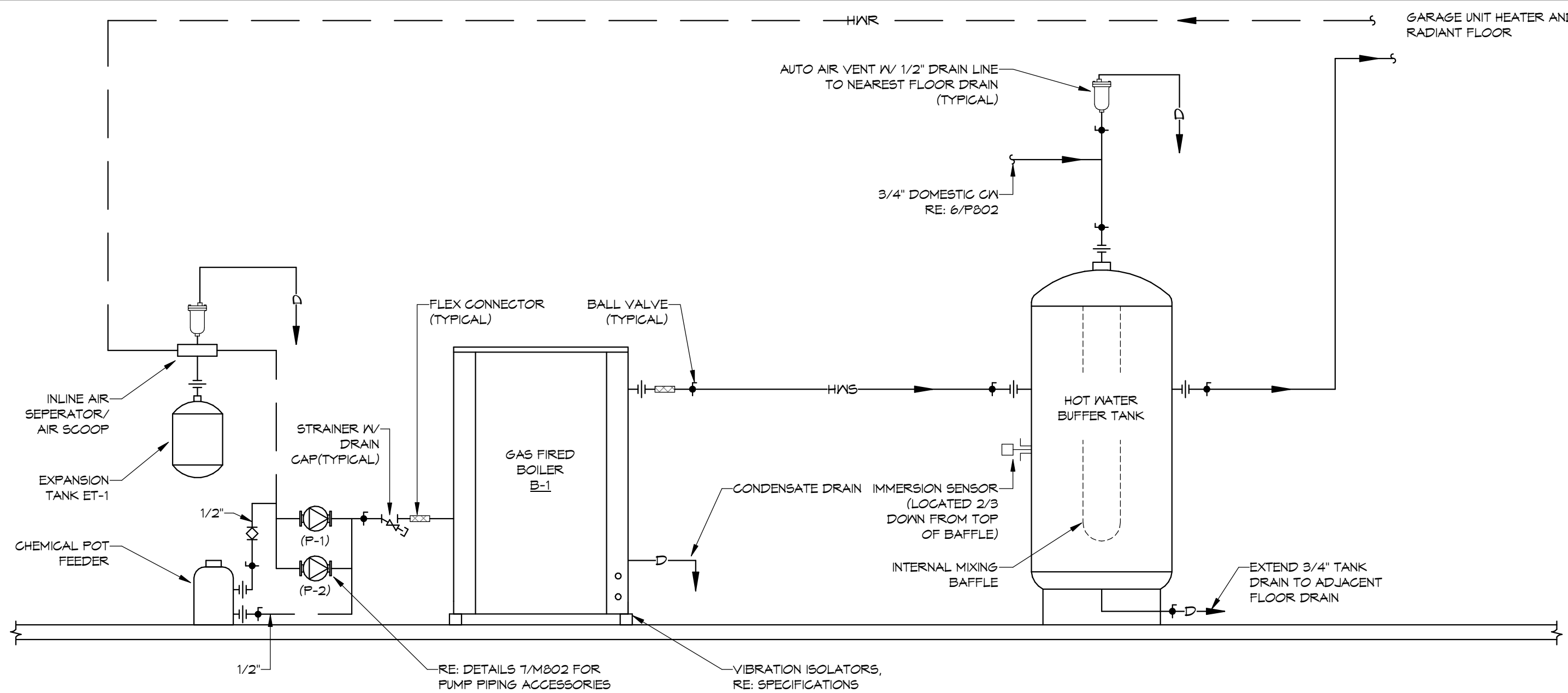


6 IN-LINE FAN DETAIL
M8.0 SCALE: NONE

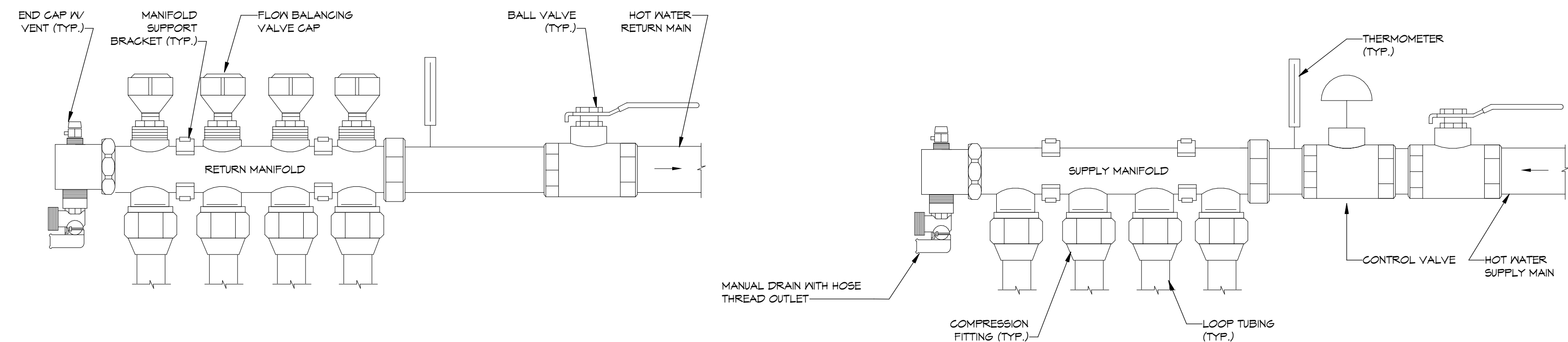


- NOTE:**
1. MAINTAIN CODE AND MANUFACTURER CLEARANCES AT ALL ACCESS POINTS AND IN FRONT OF CONTROL/POWER PANEL.

3 HORIZONTAL VRF UNIT DETAIL
M8.0 SCALE: NONE

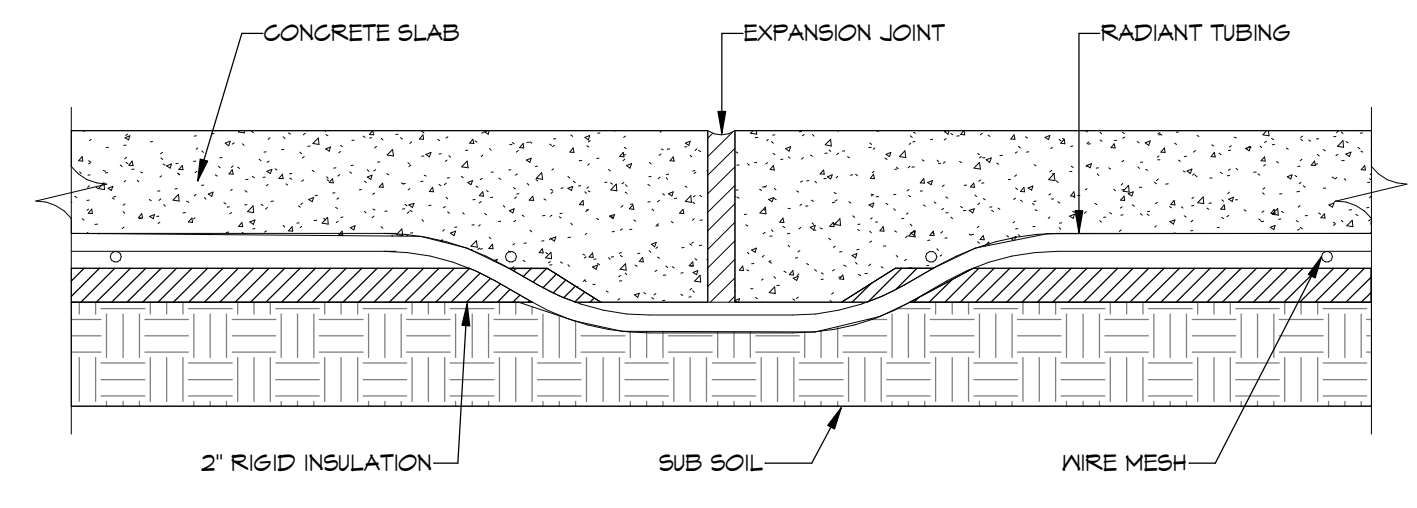


1 HEATING WATER SYSTEM PIPING SCHEMATIC
SCALE: NONE



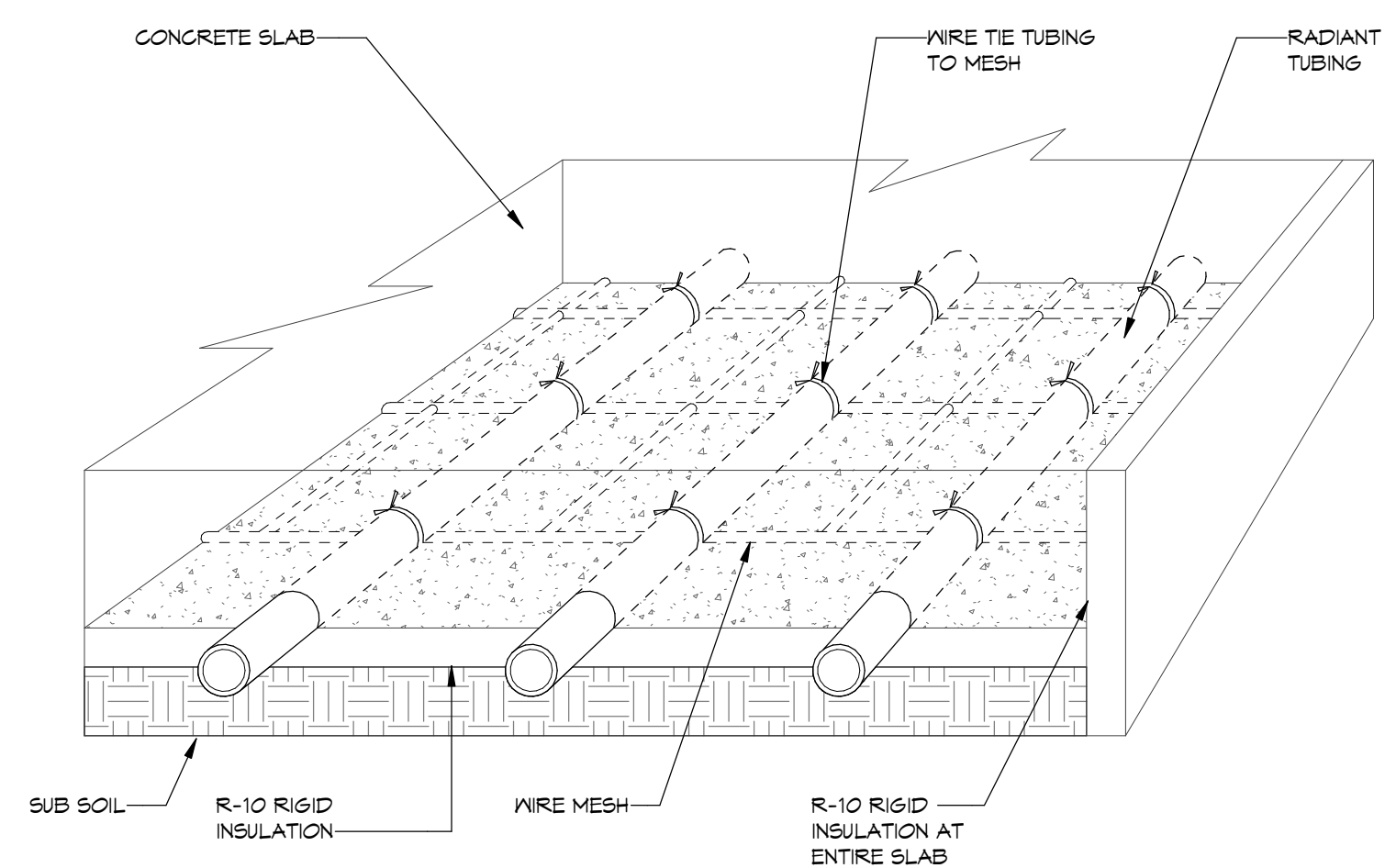
NOTE:
1. REFER TO SCHEDULE FOR QUANTITY OF MANIFOLDS AND NUMBER OF LOOP CONNECTIONS PER HEAT ZONE.

2 IN-FLOOR RADIANT HEAT MANIFOLD DETAIL
SCALE: 1/8" = 1'-0"



NOTE:
1. INSULATE ALL PEX TUBING OFFSET BELOW EXPANSION JOINTS WITH MINIMUM 1-1/2\"/>

4 IN-FLOOR RADIANT HEAT EXPANSION JOINT DETAIL
SCALE: 1/8" = 1'-0"



3 IN-FLOOR RADIANT TUBING INSTALLATION DETAIL
SCALE: 1/8" = 1'-0"

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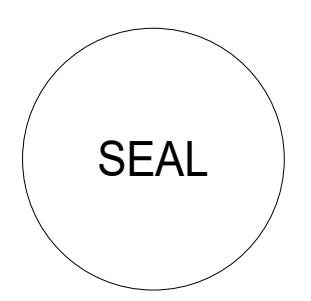
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SCASD JOB #: 22-17

MECHANICAL
DETAILS

M8.1

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PLUMBING LEGEND AND ABBREVIATIONS

ABBREVIATIONS

AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BACKFLOW PREVENTER
CA	COMPRESSED AIR
CD	CONDENSATE DRAIN
CO	CLEANOUT
CW	COLD WATER
DCBFP	DOUBLE CHECK BACKFLOW PREVENTER
DWG(S)	DRAWING(S)
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
EWT	ENTERING WATER TEMPERATURE
EWC	ELECTRIC WATER COOLER
F	FIRE
FD	FLOOR DRAIN
FLR	FLOOR
FM	FORCED MAIN
FO	FUEL OIL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
G	GAS
GC	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HW	HOT WATER
HWC	HOT WATER RECIRC.
IG	INTERRUPTIBLE GAS
IW	INDIRECT WASTE
LAV	LAVATORY
LWT	LEAVING WATER TEMPERATURE
MC	MECHANICAL CONTRACTOR
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED
PC	PLUMBING CONTRACTOR
PRV	PRESSURE REDUCING VALVE
RD	ROOF DRAIN
RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
RWC	RAIN WATER CONDUCTOR
SOG	SAND/OIL/GAS WASTE
SS	SERVICE SINK
ST	STORM SEWER
TW	TEMPERED WATER (TEPID WATER)
TYP	TYPICAL
U	URINAL
UG	UN-INTERRUPTIBLE GAS
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE (SANITARY SEWER)
WC	WATER CLOSET
WCO	WALL CLEANOUT

PLUMBING PIPE DESIGNATIONS

	FIRE PROTECTION PIPING
	POTABLE COLD WATER PIPING
	POTABLE HOT WATER 110°F PIPING
	POTABLE HOT WATER 120°F PIPING
	POTABLE HOT WATER 140°F PIPING
	POTABLE HOT WATER RECIRC. 110°F PIPING
	POTABLE HOT WATER RECIRC. 120°F PIPING
	POTABLE HOT WATER RECIRC. 140°F PIPING
	NATURAL GAS PIPING
	SANITARY SEWER PIPING (ABOVE GRADE FLOOR/GRADE)
	SANITARY SEWER PIPING (BELOW GRADE FLOOR/GRADE)
	STORM SEWER PIPING (ABOVE GRADE FLOOR/GRADE)
	STORM SEWER PIPING (BELOW GRADE FLOOR/GRADE)
	ROOF DRAIN PIPING (ABOVE GRADE FLOOR/GRADE)
	ROOF DRAIN PIPING (BELOW GRADE FLOOR/GRADE)
	GREASE WASTE PIPING
	SANITARY VENT PIPING
	CONDENSATE DRAIN PIPING
	SAND/OIL/GAS WASTE PIPING
	FUEL OIL SUPPLY PIPING
	FUEL OIL RETURN PIPING
	FUEL OIL VENT PIPING
	UN-INTERRUPTIBLE GAS PIPING
	INTERRUPTIBLE GAS PIPING
	COMPRESSED AIR PIPING
	ELECTRIC WATER COOLER CHILLED WATER PIPING

REFERENCE SYMBOLS

	EQUIPMENT DESIGNATION
	REVISION DESIGNATION
	KEY NOTE DESIGNATION
	POINT OF CONNECTION OF NEW TO EXISTING
	WATER RISER DESIGNATION
	WASTE AND VENT STACK DESIGNATION
	ENLARGED PLAN DESIGNATION
	NORTH ARROW

PLUMBING / PIPING SYMBOLS

	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	OS & Y PATTERN GATE VALVE
	BALL VALVE
	BALANCING VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	GAS COCK
	HOSE BIBB
	HOSE BIBB
	SILLCOCK
	PRESSURE REDUCING VALVE
	TEMPERATURE CONTROL VALVE 2-WAY
	TEMPERATURE CONTROL VALVE 3-WAY
	T&P RELIEF VALVE
	SOLENOID VALVE
	AUTOMATIC AIR VENT
	BACKFLOW PREVENTER
	IN-LINE PUMP
	STRAINER W/ BLOWOFF VALVE
	TEMPERATURE & PRESSURE TEST PLUG
	THERMOMETER
	PRESSURE SWITCH
	FLOW SWITCH
	PRESSURE GAUGE W/ GAUGE COCK
	FLEXIBLE PIPE CONNECTION
	PIPING RISER
	PIPE DROP
	PIPE ANCHOR
	PIPE GUIDE
	PIPE SLEEVE
	UNION
	PIPE CAP
	DIRECTION OF FLOW
	TRANSITION (RISE OR DROP) IN PIPE ELEVATION IN DIRECTION OF AIR FLOW
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	CLEANOUT PLUG
	FLOOR DRAIN
	FLOOR SINK
	FLOOR CLEANOUT
	VENT THROUGH ROOF
	HEAT TRACE
	ROOF DRAIN / OVERFLOW DRAIN
	SHOCK ABSORBER
	TERRACE / AREA DRAIN
	LINE / EQUIPMENT TO BE DEMOLISHED
	DOWNSPOUT NOZZLE
	RECESSED PENDANT-MOUNTED SPRINKLER
	RECESSED SIDEWALL-SPRAY SPRINKLER
	FIRE DEPARTMENT ALARM LIGHT AND HORN
	FIRE DEPARTMENT CONNECTION
	SPRINKLER (EXISTING TO REMAIN)
	SPRINKLER (EXISTING)
	SPRINKLER (EXISTING TO BE RELOCATED)

PLUMBING GENERAL NOTES

- ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED STATE AND LOCAL CODES, AS WELL AS FEDERAL, STATE, AND MUNICIPAL REGULATIONS.
- THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK UNDER THIS CONTRACT WITH ALL OTHER BUILDING TRADES. NOTIFY THE ARCHITECT OF ALL DISCREPANCIES OR QUESTIONS PERTAINING TO EXTENT OF WORK PRIOR TO BIDDING.
- THE WORK REQUIRED CONSISTS OF PERFORMING ALL LABOR AND FURNISHING ALL MATERIALS, FIXTURES AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION OF ALL PLUMBING SYSTEMS AS INDICATED IN THE CONTRACT DOCUMENTS. IT SHALL FURTHER INCLUDE FURNISHING AND INSTALLING ALL ASSOCIATED ITEMS REQUIRED FOR THE PROPER OPERATION OF ALL PLUMBING SYSTEMS.
- THE INFORMATION INDICATED WITHIN THESE DRAWINGS IS DIAGRAMMATIC IN NATURE, CONTAINING INFORMATION TO A DEGREE OF DETAIL CONSISTENT WITH THEIR SCALE. ADEQUATE TO CONVEY THE DESIGN INTENT AND THEREFORE DOES NOT INDICATE EVERY REQUIRED OFFSET, FITTING OR SLOPE. PROVIDE EQUIPMENT, MATERIALS AND METHODS NOT SHOWN OR SPECIFIED BUT REQUIRED TO PROVIDE A COMPLETE AND COORDINATED INSTALLATION.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL FIELD DIMENSIONS, LOCATIONS AND CONDITIONS PRIOR TO THE INSTALLATION OF ANY MATERIALS AND COMMENCEMENT OF WORK. NOTIFY THE ARCHITECT OF ALL DISCREPANCIES THAT WILL AFFECT THE WORK FOR RESOLUTION.
- EQUIPMENT, DEVICES AND MATERIALS SHOWN ON DRAWINGS ARE BASED ON MANUFACTURER'S PUBLISHED DATA, AND ARE, IN THE DESIGNER'S PROFESSIONAL OPINION, REPRESENTATIVE OF TYPICAL SIZES. ALL EQUIPMENT, DEVICES AND MATERIALS PROVIDED SHALL FIT WITHIN THE SPACE PROVIDED.
- ALL EQUIPMENT, FIXTURES, AND SERVICEABLE DEVICES SHALL BE INSTALLED WITH ACCESS AND CLEARANCE FOR MAINTENANCE, REPLACEMENT AND OPERATION. COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES TO PROVIDE THIS ACCESS AND CLEARANCE. INSTALL ALL EQUIPMENT, DEVICES AND MATERIALS PER MANUFACTURER'S INSTRUCTIONS.
- IF EQUIPMENT, FIXTURES, AND MATERIAL, OTHER THAN THAT SCHEDULED OR SPECIFIED, ARE APPROVED AND PROVIDED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE AND PROVIDE REVISED UTILITIES AND SERVICE CONNECTIONS AND VERIFY THE SPACE ALLOTTED FOR ADEQUACY AND CLEARANCE REQUIREMENTS.
- PROVIDE STARTERS FOR EQUIPMENT UNLESS SPECIFICALLY IDENTIFIED AS BEING PROVIDED BY THE ELECTRICAL CONTRACTOR. PROVIDE ALL INTERNAL OVER CURRENT PROTECTION DEVICES AND INTERNAL TRANSFORMERS FOR PACKAGED EQUIPMENT.
- COORDINATE ALL DEVICE, PIPING, FIXTURE AND EQUIPMENT LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO STARTING ANY WORK. COORDINATE WITH GENERAL CONTRACTOR, AND ALL TRADES, ALL REQUIREMENTS FOR INSTALLATION, INCLUDING SERVICE UTILITY CONNECTIONS, POINT LOADS, CHASES, SLEEVES, SUPPORTING DEVICES, OPENINGS AND CUT-OUTS, AND PENETRATIONS OF WALLS, CEILINGS OR SHAFTS.
- COORDINATE ALL LOCATIONS AND SIZES OF STRUCTURAL FLOOR AND WALL PENETRATIONS WITH THE GENERAL CONTRACTOR AND PROVIDE CODE REQUIRED SEALS AT ALL FIRE-RATED WALL, CEILING, ROOF AND FLOOR PENETRATIONS.
- ACCESS DOORS AND/OR PANELS SHALL BE PROVIDED AT ALL MAINTENANCE AND SERVICE LOCATIONS FOR CONCEALED EQUIPMENT, VALVES AND DEVICES. UNLESS A SIZE IS SPECIFICALLY NOTED, PANELS SHALL BE SIZED TO SERVICE EQUIPMENT/DEVICE BUT SHALL NOT BE LESS THAN 12" X 12". DOORS AND PANELS SHALL HAVE THE SAME FIRE RATING AS THE WALL OR CEILING IN WHICH THEY ARE INSTALLED. ACCESS DOORS AND/OR PANELS ARE NOT REQUIRED WHERE ADJUSTMENT, MAINTENANCE AND REPLACEMENT ARE POSSIBLE THROUGH LAY-IN SUSPENDED CEILING.
- INSULATION AND VAPOR BARRIER SHALL BE PROVIDED ON ALL PIPING AND EQUIPMENT SUBJECT TO HEAT LOSS, CONDENSATION, OR CONSTITUTING A POTENTIAL BURN HAZARD.
- PIPE AND EQUIPMENT INSULATION SHALL NOT BE CRUSHED OR COMPRESSED THROUGH INTERFERENCE WITH SYSTEMS INSTALLED BY OTHER TRADES OR BUILDING CONSTRUCTION.
- ALL PIPING SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID FREEZING. NO PIPING SHALL BE INSTALLED WITHIN EXTERIOR WALLS. ALL WATER PIPING SHALL BE INSTALLED BELOW ATTIC INSULATION AND NO PIPING SHALL BE INSTALLED WITHIN EXTERIOR WALLS. THE INSTALLATION OF PLUMBING SYSTEMS SHALL IN NO WAY CRUSH OR COMPROMISE BUILDING INSULATION AND ALL BELOW GRADE WATER PIPING SHALL BE INSTALLED NO LESS THAN 6" BELOW FROST DEPTH.
- ALL SLOPED PLUMBING SYSTEMS SHALL HAVE RIGHT OF WAY OVER ALL OTHER BUILDING SYSTEM COMPONENTS. INSTALL PLUMBING AND PIPING HIGH POINTS AS TIGHT AS POSSIBLE TO THE BUILDING STRUCTURE TO ALLOW PROPER PITCH AND MAXIMIZE CEILING HEIGHT. ELEVATIONS LISTED FOR ALL PLUMBING SYSTEM PIPING IN THE CONTRACT DOCUMENTS ARE TO BE VERIFIED PRIOR TO CONSTRUCTION AGAINST EXISTING CONDITIONS, UTILITIES AND NEW CONSTRUCTION.
- ALL FINISHED CONSTRUCTION AND/OR EXISTING BUILDING AND SITE FEATURES NOT BEING ALTERED BY THIS PROJECT ARE TO BE PROTECTED FROM DAMAGE. CONTRACTOR SHALL REPAIR ALL DAMAGE OCCURRING TO FINISHED AND/OR EXISTING CONSTRUCTION CAUSED BY THE CONTRACTOR'S OPERATIONS AT THE CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE OWNER.
- PROVIDE AIR VENTS AT PIPING HIGH POINTS AND DRAINS AT LOW POINTS IN MAINS.
- EXPOSED PIPING IN FINISHED SPACES SHALL BE CHROME PLATED WITH A CHROME PLATED ESCUTCHEON AT EACH FINISHED ENTRY/EXIT.
- ALL HOT WATER RECIRCULATION SYSTEMS SHALL BE PROPERLY BALANCED PER THE PLUMBING DRAWINGS AND ALL PLUMBING SYSTEMS SHALL BE PRESSURE TESTED PER THE SPECIFICATIONS. DOMESTIC WATER PIPING SHALL BE DISINFECTED.
- MAINTAIN ONE SET OF RED-LINED AS-BUILT DRAWINGS ON JOB SITE. SUBMIT TO ARCHITECT AT THE COMPLETION OF ALL WORK.
- PROVIDE APPROVED SLEEVES AT ALL MASONRY WALL PENETRATIONS.
- INSTALL SHUT-OFF VALVES AT EACH FIXTURE. LOCATE AND ORIENT VALVE OPERATORS FOR EASE OF ACCESS AND FULL LIMITS OF OPERATION.
- INSULATION SHALL BE FIRMLY SECURED TO SUBSTRATE WITH ENDS SEALED TO MAINTAIN THE INTEGRITY OF THE VAPOR BARRIER. INSULATION SHALL NOT BE CRUSHED OR COMPRESSED AT HANGERS OR THROUGH INTERFERENCE WITH EQUIPMENT INSTALLED BY OTHER TRADES.
- AT THE COMPLETION OF THE WORK AND PRIOR TO THE FINAL ACCEPTANCE, ALL PARTS OF THE WORK SHALL BE THOROUGHLY CLEANED.
- ALL PIPING SHALL BE CONCEALED IN WALLS AND BEHIND FIXED FURNISHINGS UNLESS OTHERWISE INDICATED. EXPOSED PIPING IN FINISHED AREAS SHALL BE CHROME PLATED WITH A CHROME PLATED ESCUTCHEON AT EACH FINISHED ENTRY/EXIT.
- ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND BE SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK INCLUDING DUCTS AND ELECTRICAL CONDUIT. ALL PIPING EXPOSED TO VIEW SHALL BE ROUTED AS HIGH AS POSSIBLE AND TO THE UNDERSIDE OF STRUCTURE.

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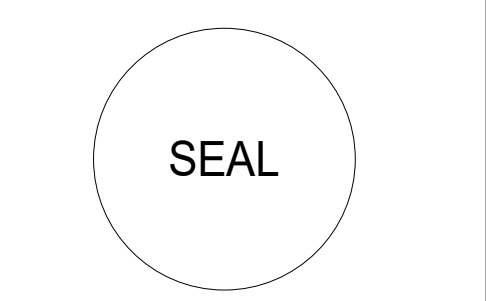
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PLUMBING LEGEND
AND GENERAL
NOTES

P0.1

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KEY NOTES

1 xx.

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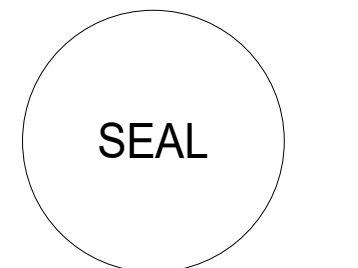
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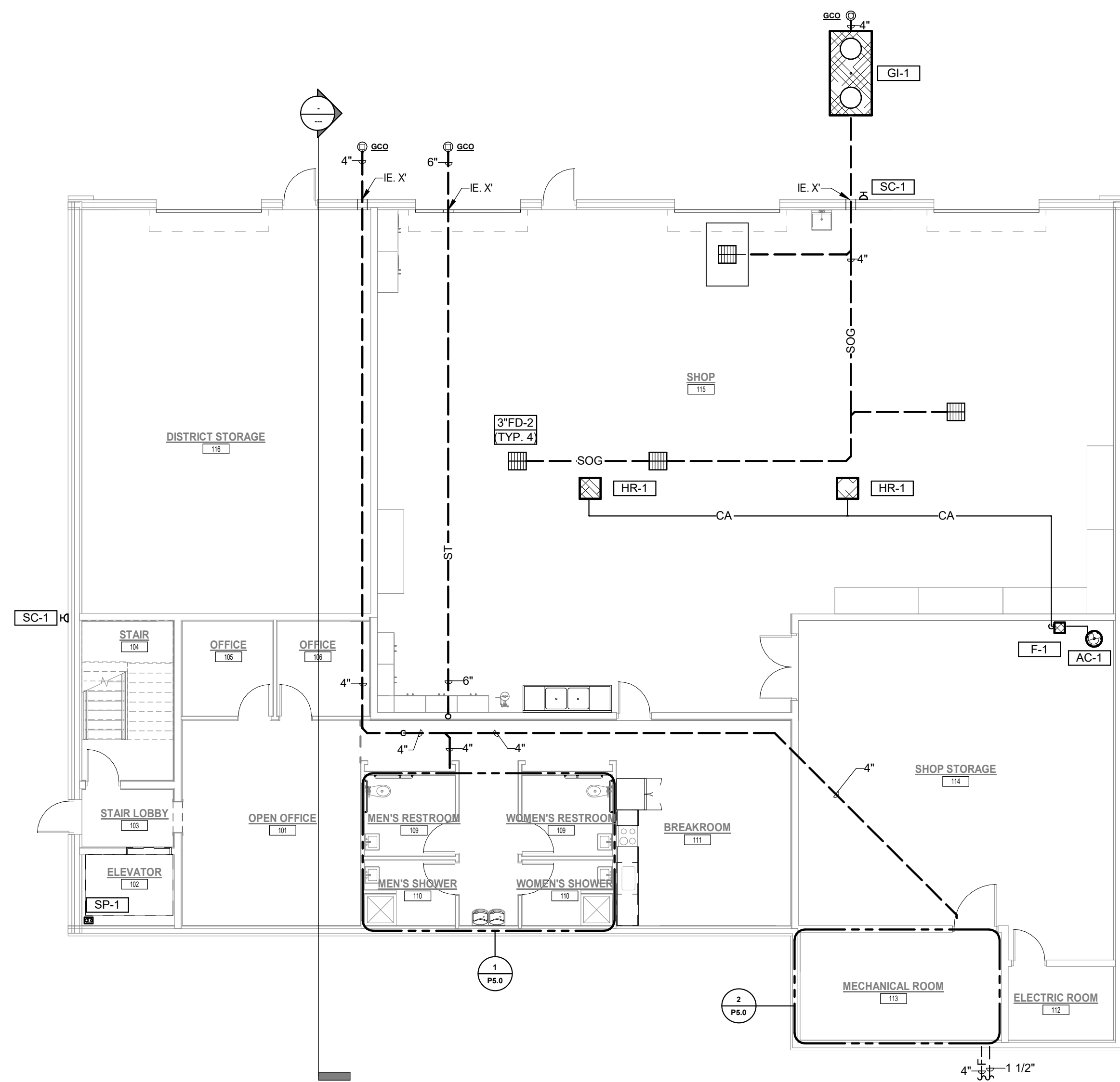


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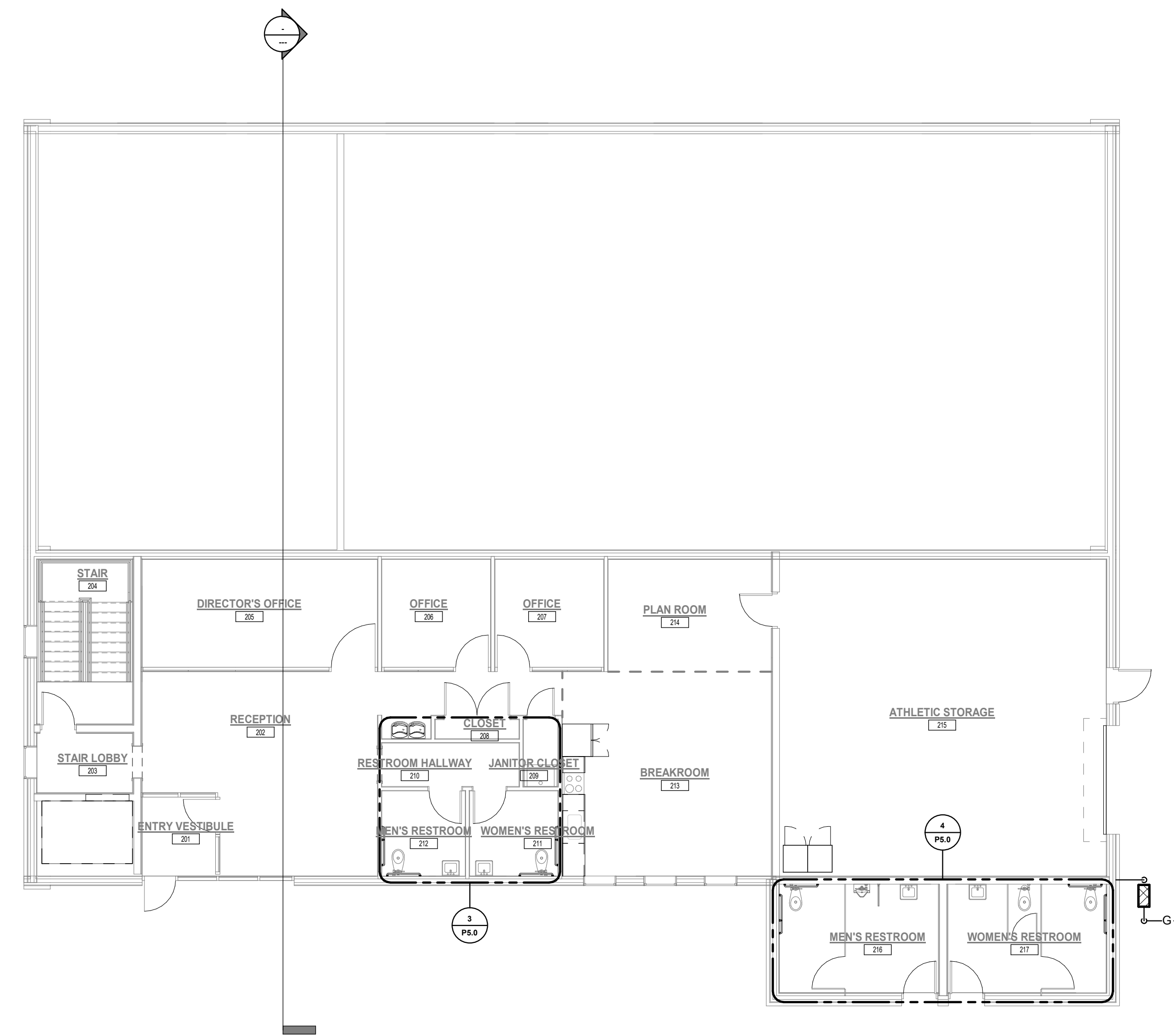
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**FIRST & SECOND
 FLOOR PLUMBING
 PLANS**

P3.0

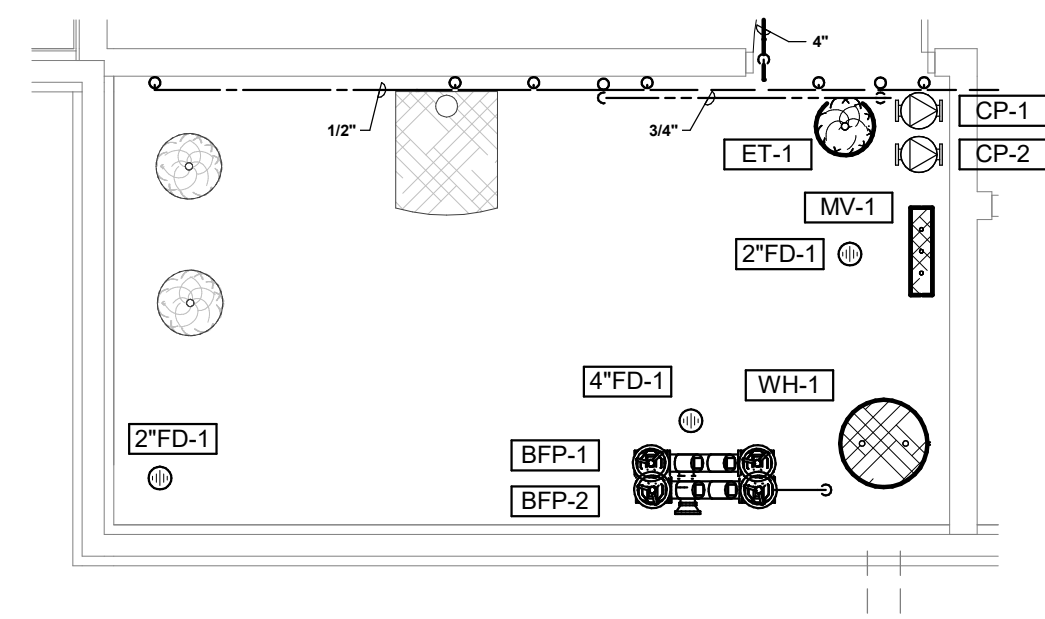


1 FIRST FLOOR PLUMBING PLAN
 P3.0 SCALE: 1/8" = 1'-0"



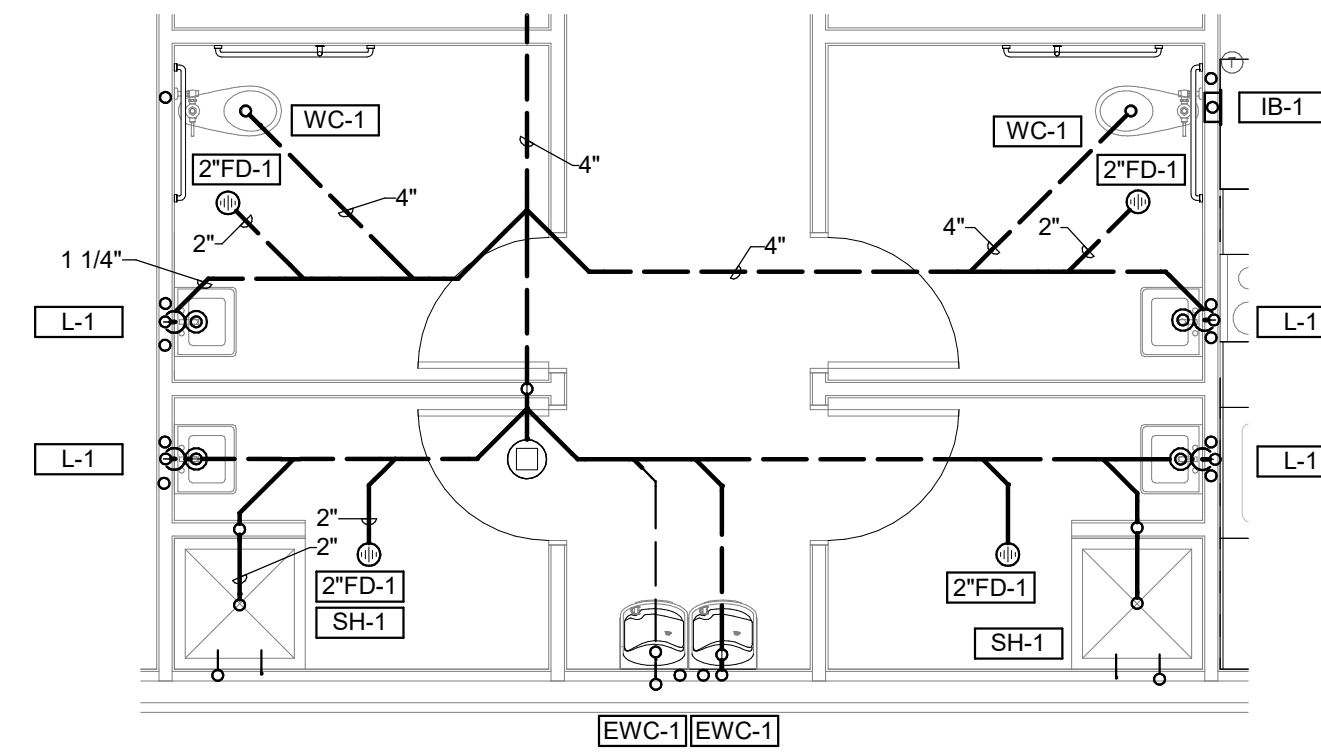
2 SECOND FLOOR PLUMBING PLAN
 P3.0 SCALE: 1/8" = 1'-0"

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**ENLARGED MECHANICAL ROOM
PLUMBING PLAN**

2
P5.0
SCALE: 1/4" = 1'-0"

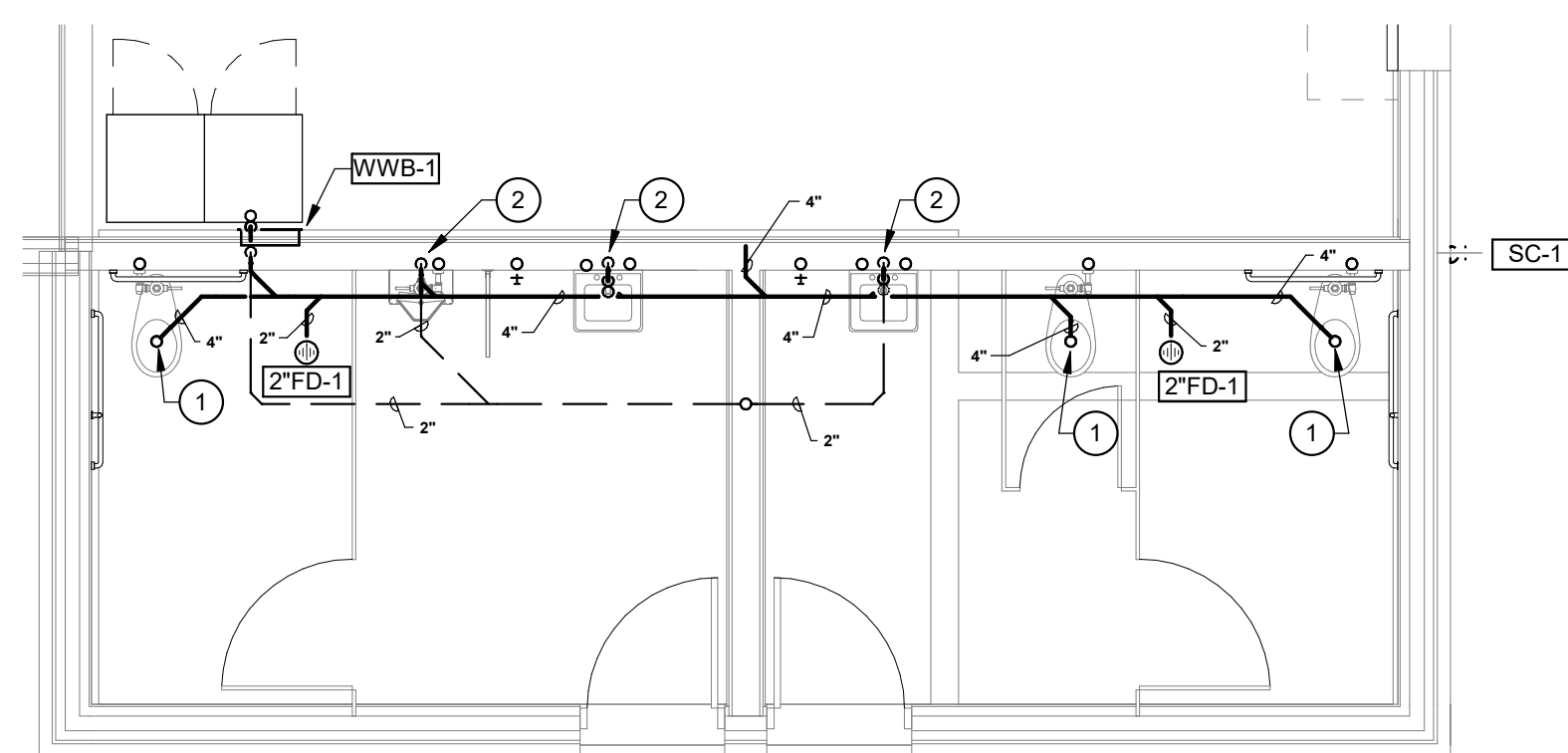


**ENLARGED FIRST FLOOR RESTROOM
PLUMBING PLAN**

1
P5.0
SCALE: 1/4" = 1'-0"

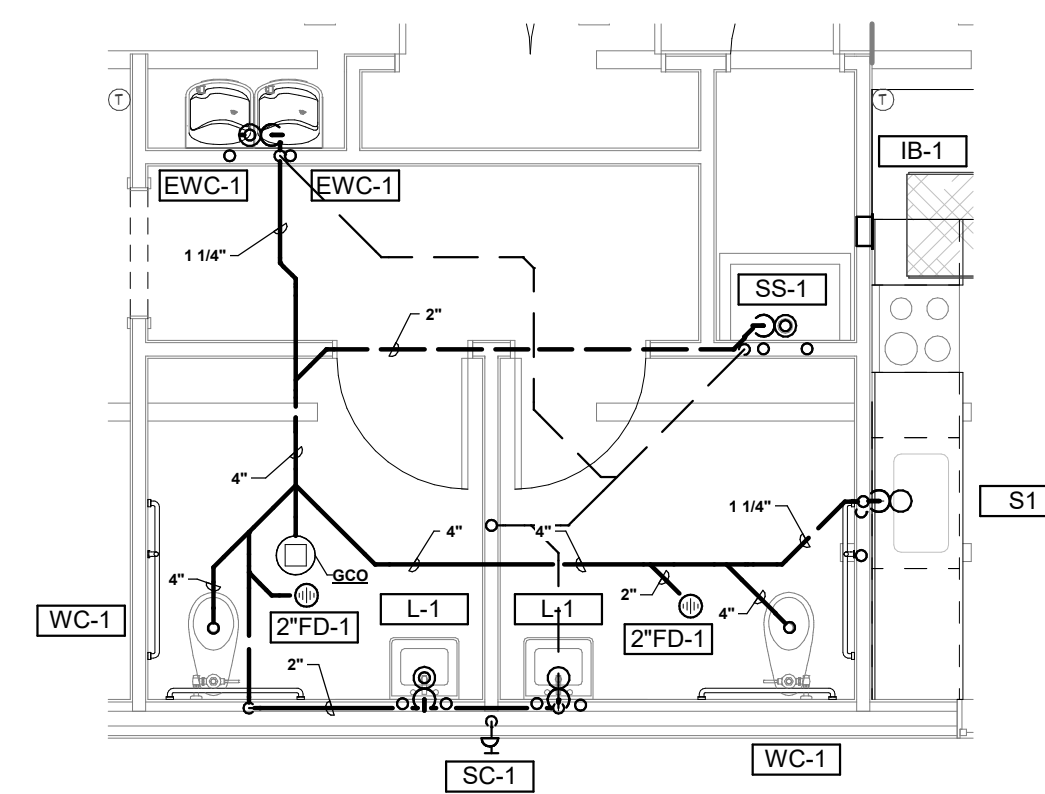
KEY NOTES

- 1 PROVIDE 4"W ROUGH IN FOR FUTURE WATER CLOSET WITH THREADED CAP FOR FUTURE CONNECTION TO CLOSET FLANGE.
- 2 PROVIDE 2"W CAPPED AT 12" AFF. FOR FUTURE LAVATORY / URINAL.



ENLARGED FUTURE SECOND FLOOR RESTROOM PLUMBING PLAN

4
P5.0
SCALE: 1/4" = 1'-0"



**ENLARGED SECOND FLOOR
RESTROOM PLUMBING PLAN**

3
P5.0
SCALE: 1/4" = 1'-0"

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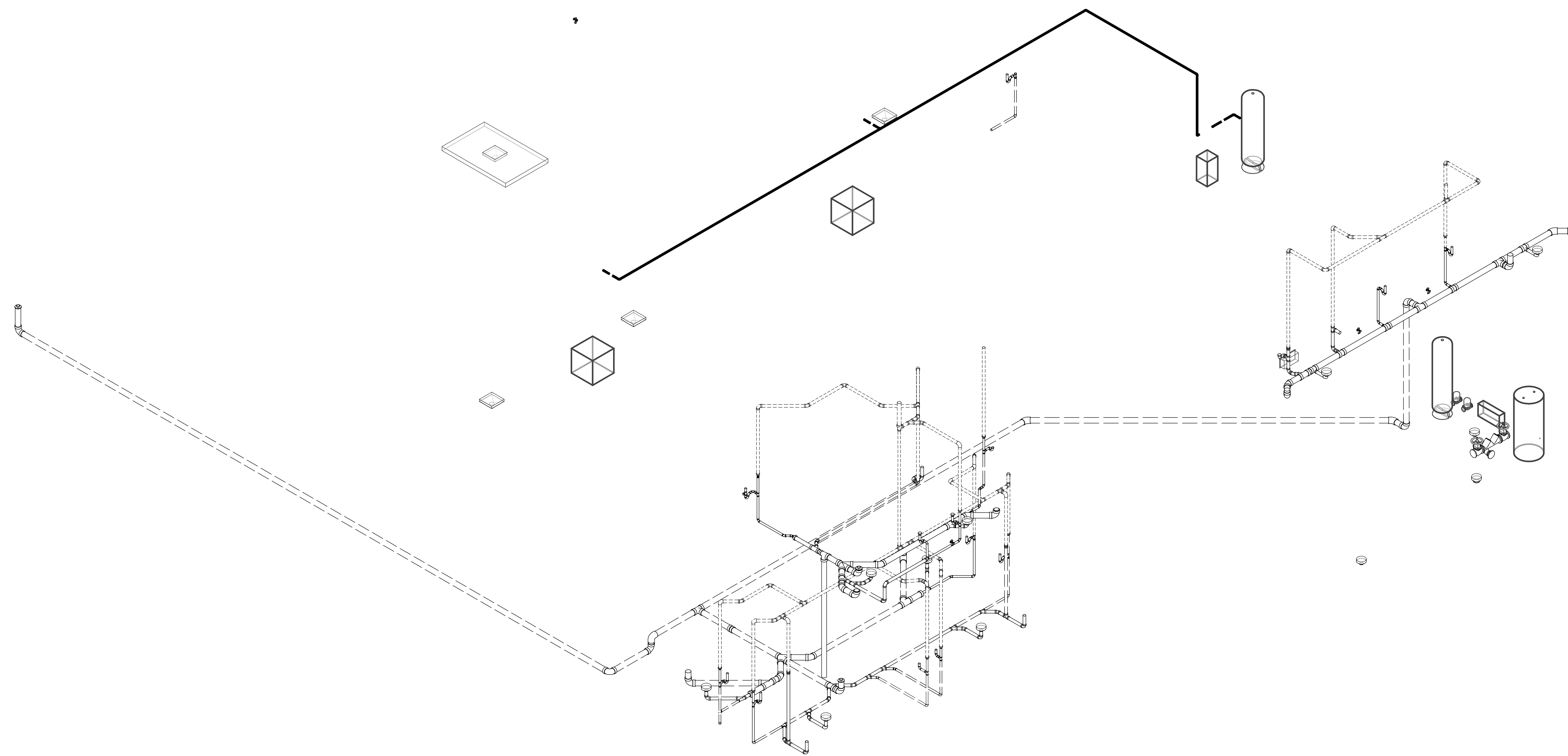


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ENLARGED
PLUMBING PLANS

P5.0



1 **PLUMBING ISOMETRIC**
 P6.0 SCALE:

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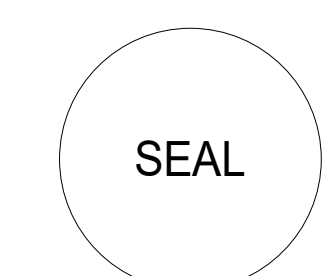
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PLUMBING
 ISOMETRIC
 DIAGRAMS

P6.0

FIXTURE CONNECTION SCHEDULE

FIXTURE	COLD WATER	HOT WATER (120°)	HOT WATER (140°)	WASTE	VENT
PUBLIC FIXTURES					
ELECTRIC WATER COOLER	1/2"			2"	1 1/2"
F.T. WATER CLOSET	1/2"			4"	2"
F.V. WATER CLOSET	1"			4"	2"
FLOOR DRAIN				<varies>	2"
HOSE BIBB	3/4"				
LAVATORY	1/2"	1/2"		2"	2"
SERVICE SINK	1/2"	1/2"		3"	2"
SHOWER	1/2"	1/2"		2"	2"
SILL COCK	3/4"				
SINK	1/2"	1/2"		2"	2"
URINAL	3/4"			2"	2"
WASHER WALL BOX	1/2"	1/2"		2"	2"
LIVING UNIT FIXTURES					
ICE MAKER BOX	1/2"				

PLUMBING EQUIPMENT SCHEDULE

NOTES:
 1. OPERATING TEMPERATURE SET AT 110 DEGREES FAHRENHEIT MAXIMUM. (TYP. MIXING VALVE)
 2. PROVIDE WITH SIOUX CHIEF MINIRESTERS ON CW & HW SUPPLIES. (TYP. WASHER WALL BOX)

PLAN CODE	TYPE	MANUFACTURER	MODEL	NOTES
AAV-1	AIR ADMITTANCE VALVE			
DSN-1	DOWNSPOUT NOZZLE			
HB-1	HOSE BIBB			
IB-1	ICE MAKER BOX			
MV-1	MIXING VALVE			1
SC-1	SILL COCK			
WWB-1	WASHER WALL BOX	GUY GRAY	WB200HA	2

GREASE INTERCEPTOR SCHEDULE

PLAN CODE	DIMENSIONS				
	A	B	C	D	E
GI-1	AG	SGDHF			

DRAIN SCHEDULE

NOTES:
 1. NONE

PLAN CODE	FIXTURE	MANUFACTURER	MODEL	NOTES
FD-1				
FD-2				

WATER HEATER SCHEDULE

NOTES:
 1. SET OPERATING TEMPERATURE AT 140° FAHRENHEIT.

PLAN CODE	SERVICE	ELECTRICAL			STORAGE VOLUME (GAL)	WATTAGE	EFFICIENCY (%)	SIZE (IN)		OPERATING WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
		VOLTS	Ø	HZ				DIA	H				
WH-1	MISC	208	3	60	55	5000		24	57		LOCHINVAR	LDT-50	

SINK SCHEDULE

NOTES:
 1. PROVIDE 1/2" x 3/8" WHEEL HANDLE ANGLE VALVE WITH 20" RISERS; 1-1/2" CHROME PLATED BRASS TRAP, ONE PIECE CHROME ESCUTCHEONS.
 2. PROVIDE 832-AA HOSE AND BRACKET. (TYP. SERVICE SINK) CONFIRM MODEL #
 3. PROVIDE IN-LINE CHECK VALVES ON THE HOT AND COLD WATER SUPPLY CONNECTIONS. (TYP. SERVICE SINK)

PLAN CODE	FIXTURE	MANUFACTURER	MODEL	ADA COMPLIANT	CONSTRUCTION	GAUGE	HOLE DRILLINGS	SIZE	FAUCET	DRAIN	NOTES
S1	DECK MOUNT-1-CT	ELKAY	LRAD222-6	YES	304 STST	18	4 @ 4" CENTERS	22" X 22" X 6"	MOEN 822SSM	LK-35	
SS-1	SERVICE SINK	ELKAY	TSB-3010	NO	TERRAZO	-	-	24" X 24" X 12"	FIAT #830-AA	145-BB	

LAVATORY SCHEDULE

NOTES:
 1. PROVIDE 1/2" x 3/8" WHEEL HANDLE ANGLE VALVES WITH 12" CHROME RISERS; 1-1/4" CHROME PLATED 17 ga. BRASS TRAP, ONE PIECE CHROME ESCUTCHEONS.
 2. PROVIDE ELKAY #LKAD174 DRAIN AND STRAINER. (TYP. PUBLIC LAV.) CONFIRM MODEL #
 3. PROVIDE POWERS LFLM495 MIXING VALVE, BENEATH LAVATORY TO REGULATE HOT WATER SUPPLY TEMPERATURE OF 105° F.
 4. PROVIDE TRUEBRO #103 E-Z TRAP & SUPPLY INSULATION PACKAGE.

PLAN CODE	FIXTURE	MANUFACTURER	MODEL	ADA COMPLIANT	COLOR	HOLE DRILLINGS	SIZE	FAUCET	NOTES
L-1	UNDERMOUNT	KOHLER	K-200000	YES	WHITE	1, CENTERED	17" X 14" 5-3/4"	DELTA 559HA-BL-DST	
L-2	WALL HUNG	KOHLER	K-2005	YES	WHITE	3 @ 8" CENTERS	21" X 18"	MOEN T6905BN W/ 9000 VALVE	

SHOWER SCHEDULE

NOTES:
 1. REFER TO FLOOR PLANS FOR INDIVIDUAL UNIT ORIENTATION. PROVIDE LEFT OR RIGHT HAND ORIENTATION. (TYP. RESIDENT UNIT SHOWER)
 2. PROVIDE SYMMONS MODEL EF-101-1.5 HAND SHOWER. (TYP. RESIDENT UNIT W/ HANDHELD) CONFIRM MODEL #

PLAN CODE	FIXTURE	MANUFACTURER	MODEL	ADA COMPLIANT	COLOR	SIZE	SHOWER HEAD AND VALVE	NOTES
SH-1	BUILT-IN-FIELD	-	-	-	-	-	SYMMONS 3505-H321-VMB-1.5-TRM	

URINAL SCHEDULE

NOTES:
 1. XX.

PLAN CODE	FIXTURE	MANUFACTURER	MODEL	ADA COMPLIANT	COLOR	FLOOR TO RIM HEIGHT	CARRIER	FLUSH VALVE
U-1	WALL HUNG	KOHLER	K5452-ET	YES	WHITE	BY ARCH	JOSAM 17560-UR	

PUMP SCHEDULE

NOTES:
 1. ALL BRONZE CONSTRUCTION. CONTINUOUSLY CIRCULATING OPERATION. MOTOR HP HALL NO EXCEED NOL BHP. (TYP. RE-CIRC PUMP)
 2. FURNISH COMBINATION STARTER/DISCONNECT SWITCH. (TYP. RE-CIRC PUMP)
 3. SYSTEM COMPONENTS SHALL INCLUDE BUT NOT BE LIMITED TO, AUDIBLE LIGHT & ALARM, 20 FT. PIGGYBACK ELECTRICAL SUPPLY CORD, 20 AMP RELAY, NEMA 3R ENCLOSURE, UL 508 APPROVED SWITCH AND HIGHWATER ALARM. RE: SPECIFICATIONS. (TYP. ELEVATOR SUMP PUMP)

PLAN CODE	SERVICE	GPM	TDH (FT)	RPM	HP	ELECTRICAL			MANUFACTURER	MODEL	NOTES
						VOLTS	Ø	HZ			
CP-1		0				0	0	60			
CP-2		0				0	0	60			
SP-1		0				0	0	60			

WATER CLOSET SCHEDULE

NOTES:
 1. HANDLE TO BE PROVIDED ON OPEN SIDE OF WATER CLOSET.
 2. PROVIDE 1/2" x 3/8" WHEEL HANDLE ANGLE VALVE WITH 12" CHROME RISER AND ONE PIECE ESCUTCHEON.

PLAN CODE	FIXTURE	MANUFACTURER	MODEL	ADA COMPLIANT	COLOR	FLOOR TO RIM HEIGHT	SEAT	NOTES
WC-1								
WC-2								
WC-3								

WATER COOLER SCHEDULE

NOTES:
 1. PROVIDE 1/2" x 3/8" WHEEL HANDLE ANGLE VALVE WITH 12" CHROME RISER AND ONE PIECE ESCUTCHEON, AND 1-1/2" CHROME PLATED BRASS TRAPS.

PLAN CODE	MANUFACTURER	MODEL	ADA COMPLIANT	COLOR	FLOOR TO RIM HEIGHT	ELECTRICAL			NOTES	
						VOLTS	Ø	HZ		
EWC-1	HALSEY TAYLOR	HTHB-HVRGRN8BL-NF	YES	BY ARCHITECT	BY ARCH.	115	1	60	4	

EXPANSION TANK SCHEDULE

NOTES:
 1. ASME CERTIFIED TANK.

PLAN CODE	SERVICE	WATER TEMP. (°F)	TANK VOL. (GAL)	ACCEPT VOL. (GAL)	SIZE (IN)		MANUFACTURER	MODEL	NOTES
					DIA	H			
AC-1					18	72			
ET-1					16	72			

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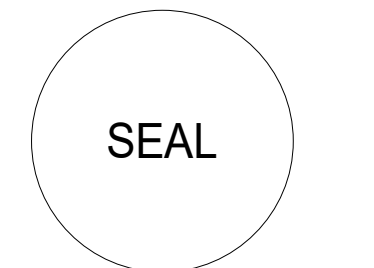
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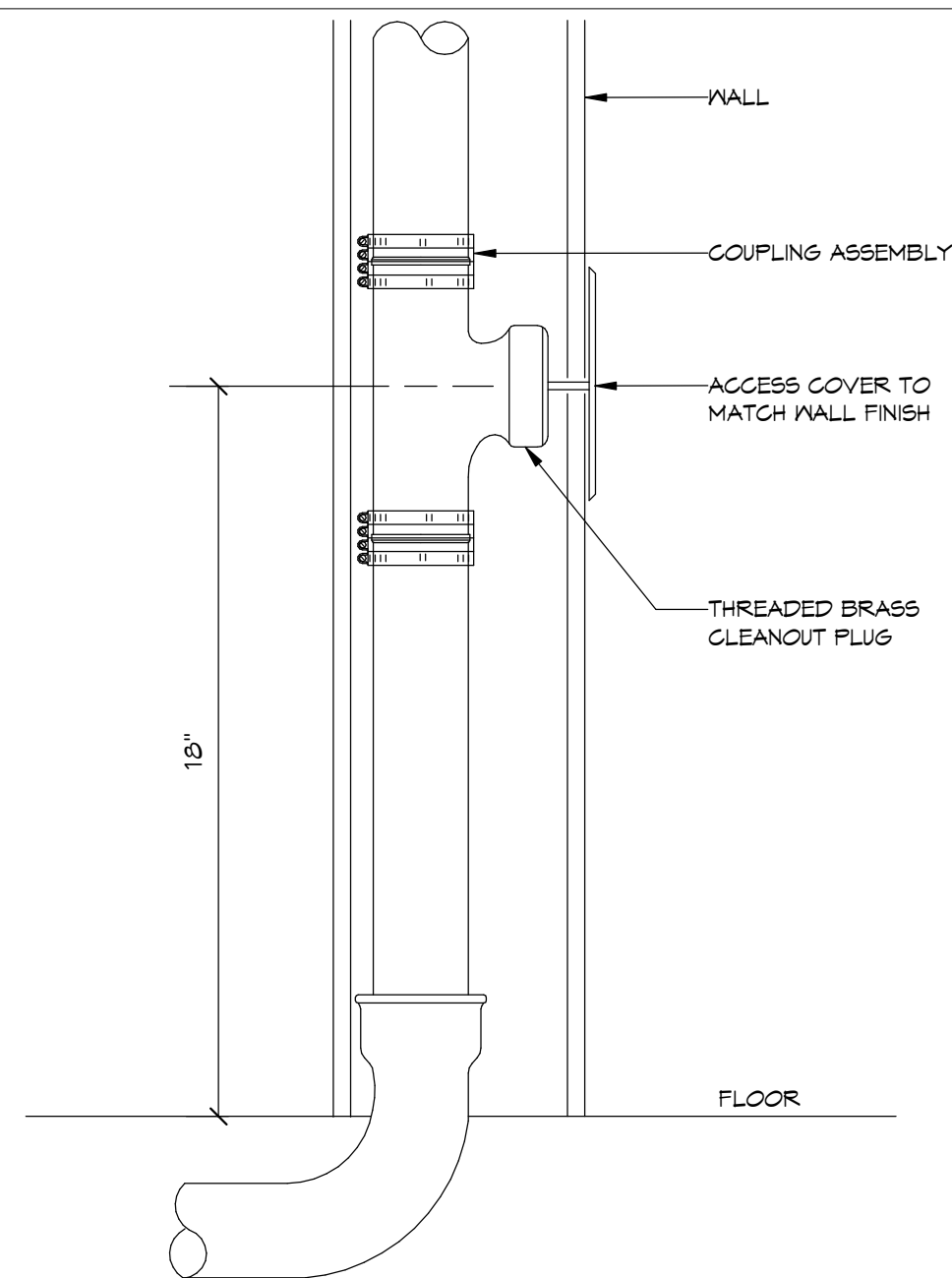


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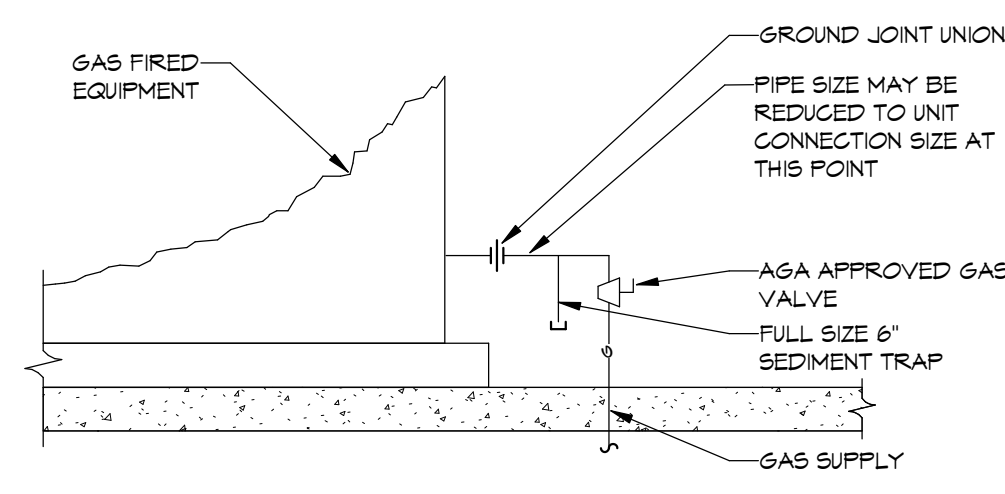
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PLUMBING SCHEDULES

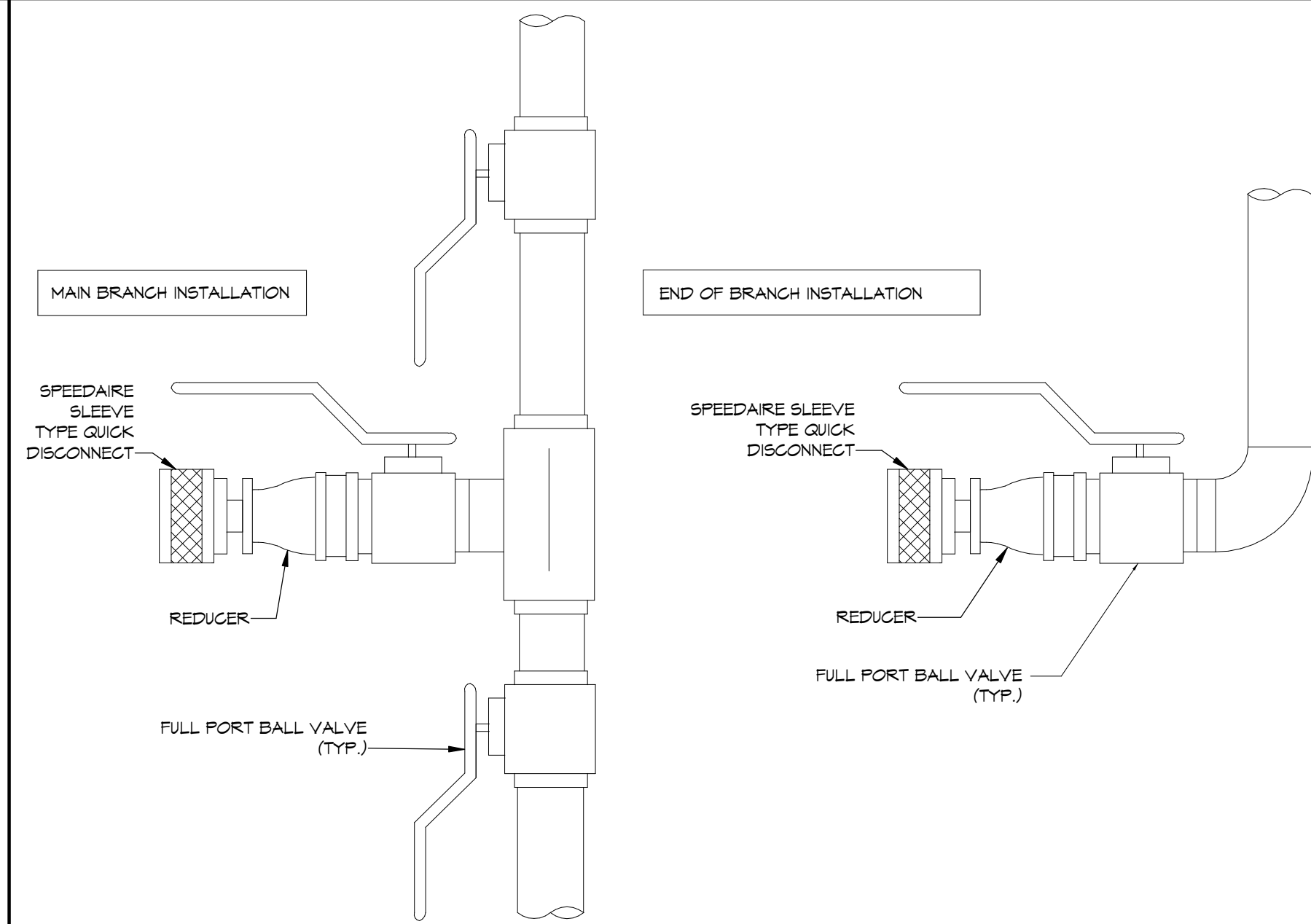
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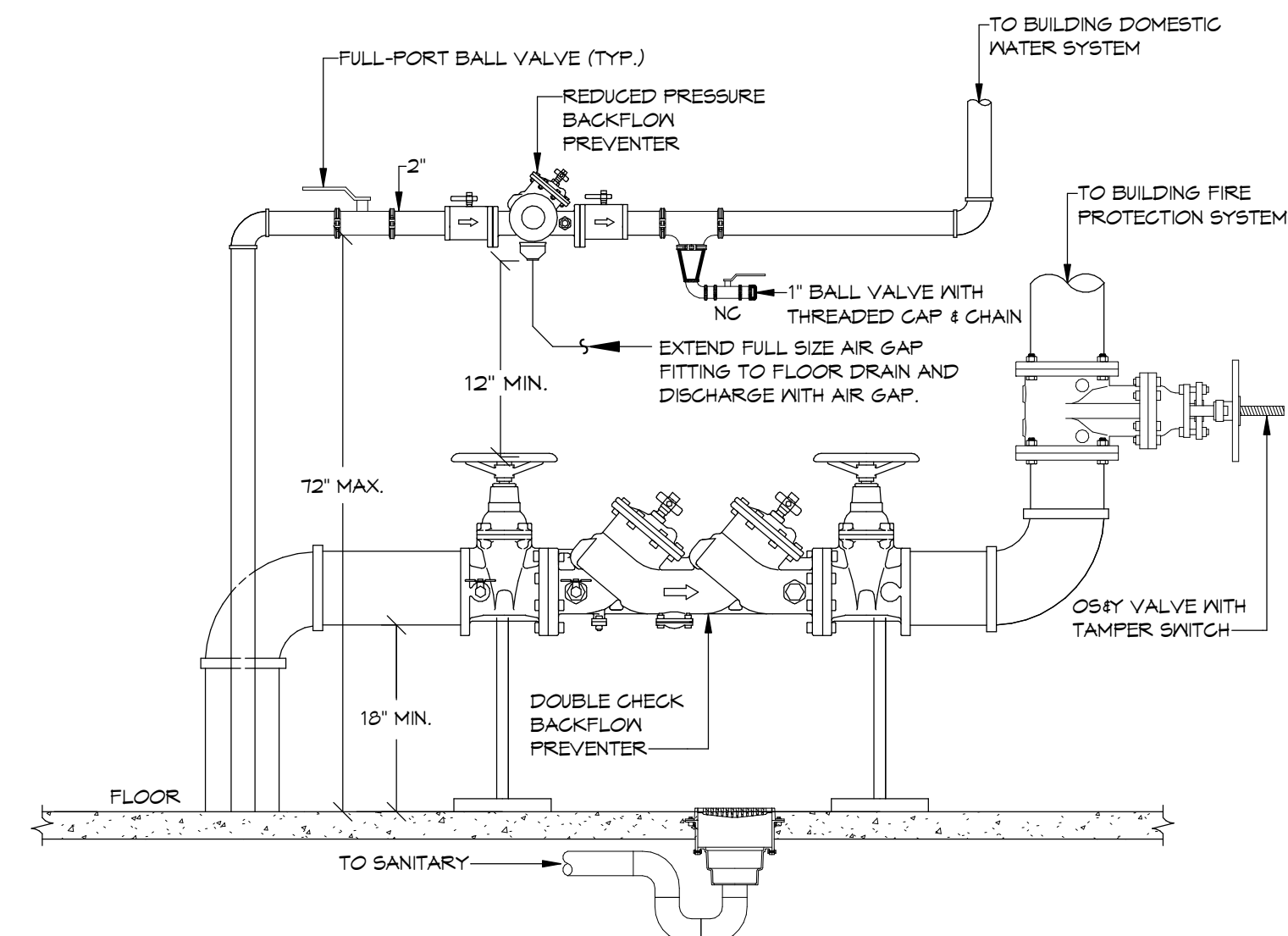
7 WALL CLEANOUT DETAIL
SCALE: NONE



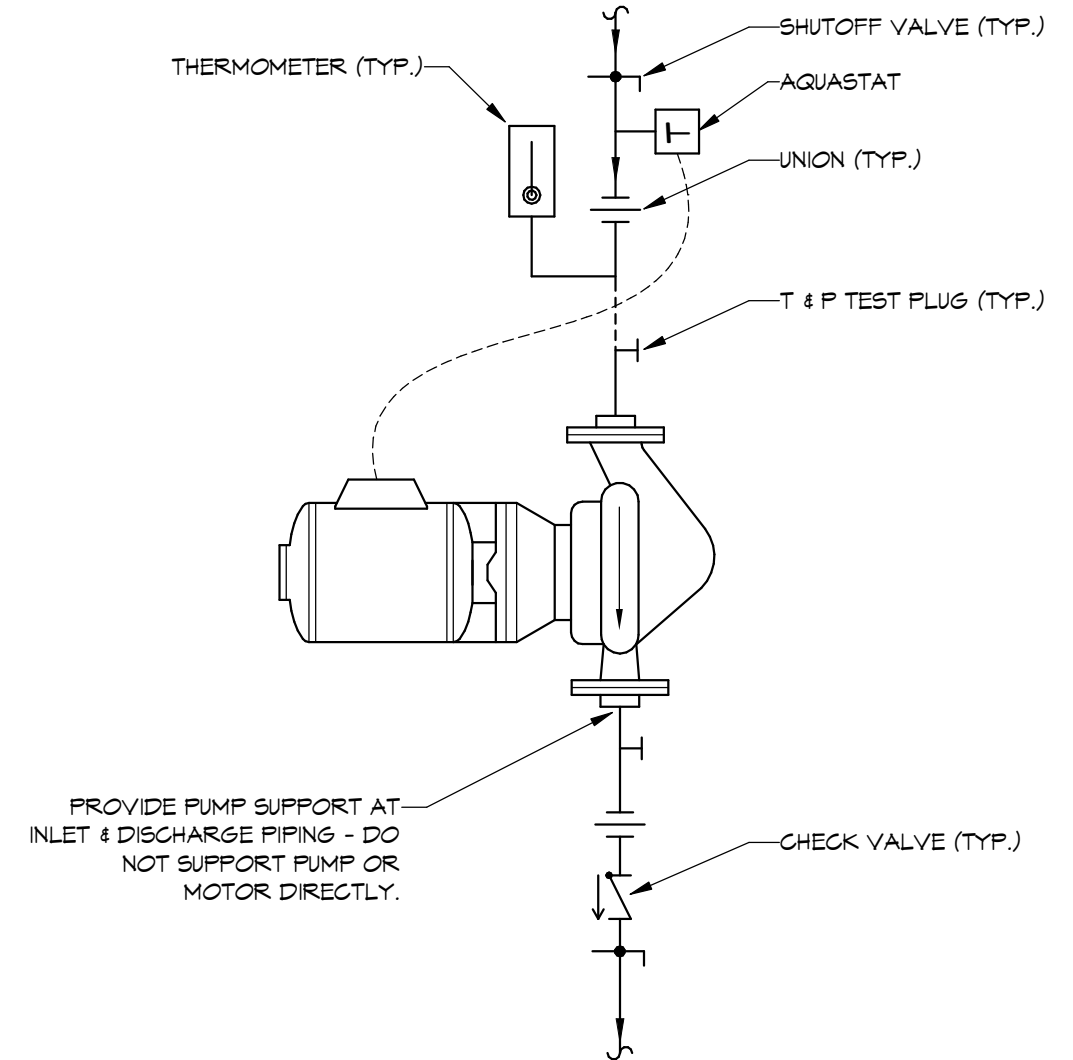
4 GAS CONNECTION DETAIL
SCALE: NONE



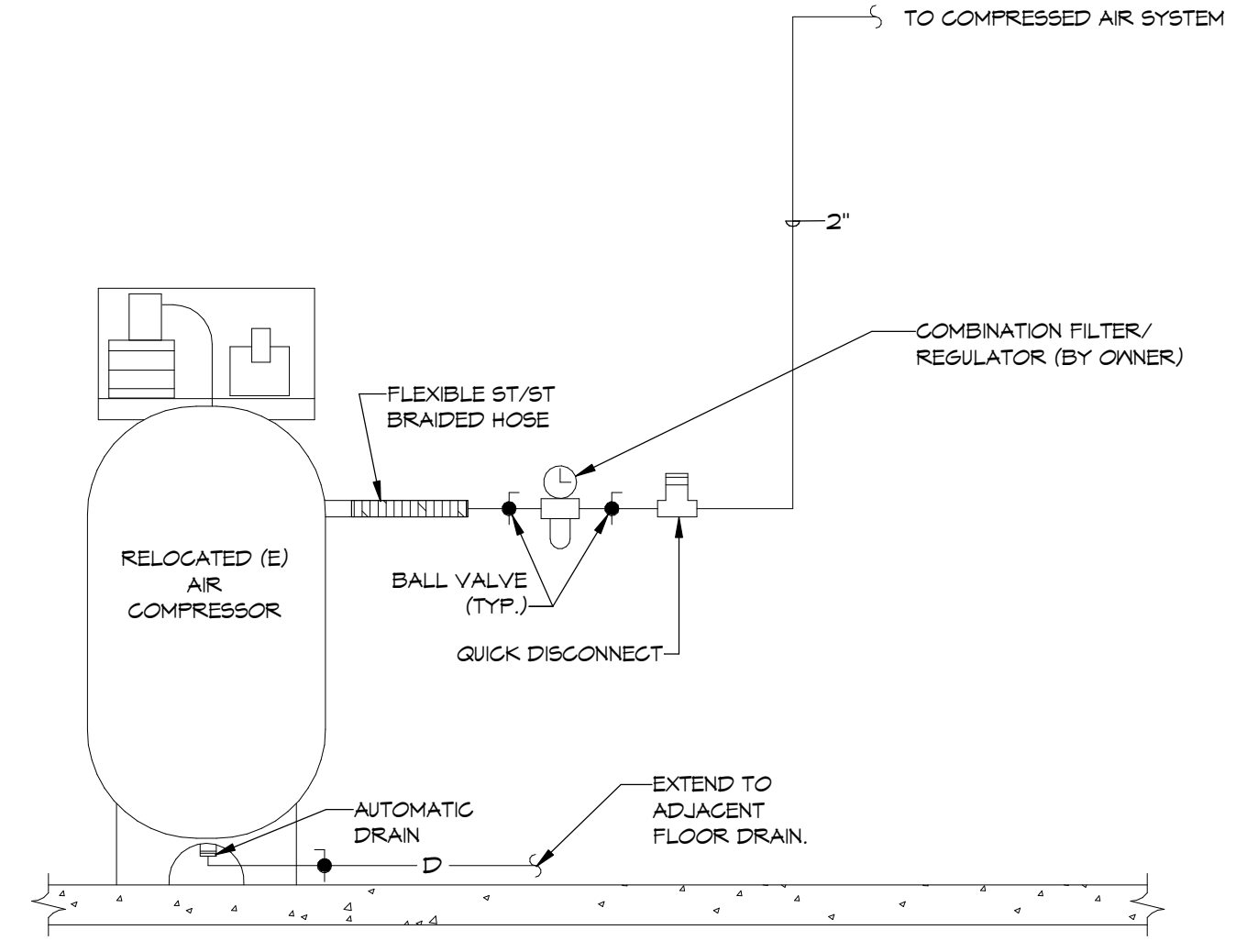
1 COMPRESSED AIR QUICK DISCONNECT DETAIL
SCALE: NONE



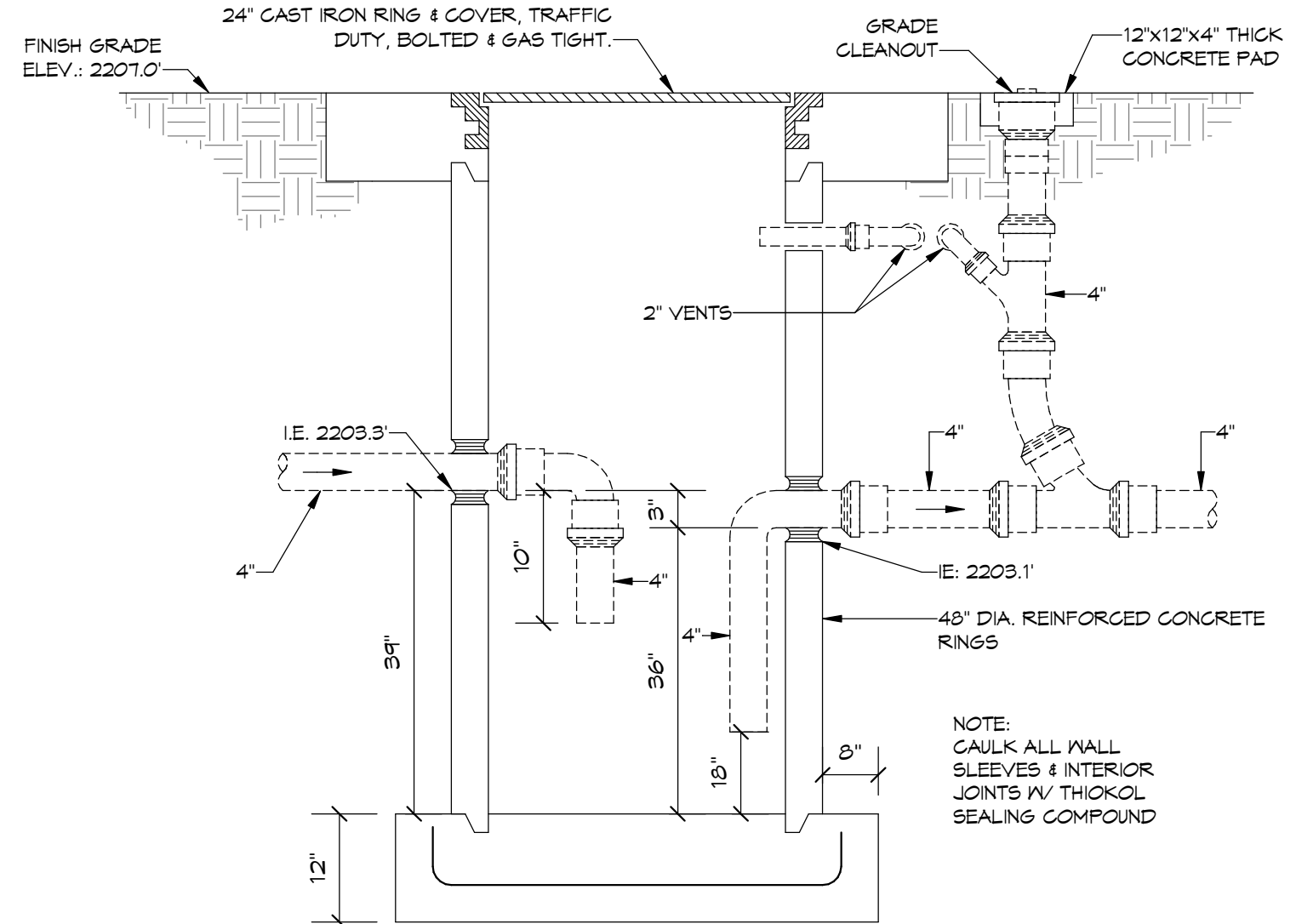
8 WATER SERVICE ENTRY DETAIL
SCALE: NONE



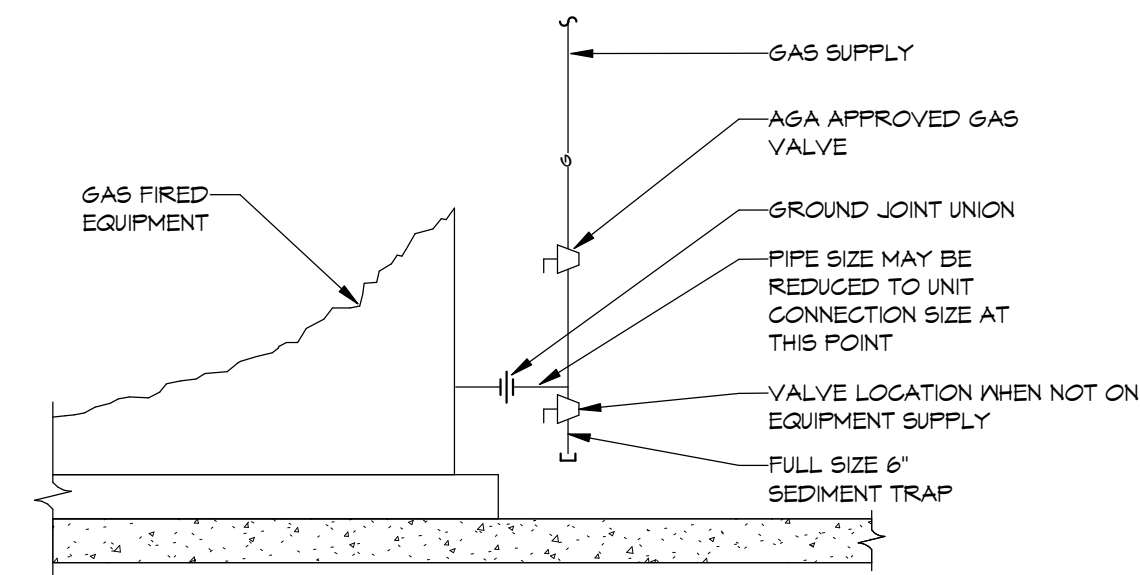
5 IN-LINE CIRCULATING PUMP DETAIL
SCALE: NONE



2 COMPRESSED AIR SYSTEM DETAIL
SCALE: NONE



6 SAND, OIL AND GAS INTERCEPTOR DETAIL
SCALE: NONE



3 GAS CONNECTION DETAIL
SCALE: NONE

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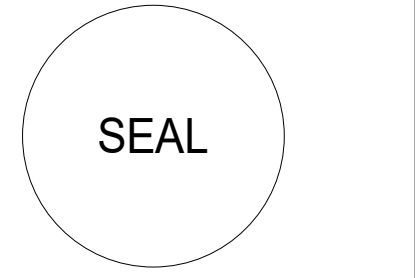
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PLUMBING DETAILS

P8.0

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ELECTRICAL LEGEND AND ABBREVIATIONS

ABBREVIATIONS	COMMUNICATIONS SYMBOLS	LIGHTING SYMBOLS	POWER SYMBOLS	
A AMPERE(S)	TELECOMMUNICATIONS OUTLET A - (1) VOICE B - (1) DATA / (1) COAX / (1) VOICE C - (1) VOICE / (1) DATA D - (1) VOICE / (2) DATA E - (2) VOICE / (2) DATA W - (1) VOICE, WITH WALL MOUNT COVER	CEILING LUMINAIRE - SURFACE MOUNT CEILING LUMINAIRE - RECESS MOUNT CEILING LUMINAIRE - RECESS MOUNT WALL MOUNT LUMINAIRE PENDANT MOUNT LUMINAIRE TROFFER LUMINAIRE - SURFACE MOUNT TROFFER LUMINAIRE - RECESS MOUNT LINEAR PENDANT LUMINAIRE - FILLED CIRCLE INDICATES POWER FEED END (LENGTH AS SHOWN ON DRAWINGS) STRIP LUMINAIRE / UNDER CABINET LUMINAIRE (LENGTH AS SHOWN ON DRAWINGS) COVE OR SLOT LUMINAIRE (LENGTH AS SHOWN ON DRAWINGS) SINGLE FACE EXIT LUMINAIRE - CEILING MOUNTED DUAL FACE EXIT LUMINAIRE - CEILING MOUNTED SINGLE FACE EXIT LUMINAIRE - WALL MOUNTED DUAL FACE EXIT LUMINAIRE - WALL MOUNTED EGRESS ARROWS TRACK LIGHTING (NUMBER OF HEADS AS SHOWN ON DRAWING) EMERGENCY LUMINAIRE WITH INTEGRAL BATTERY PACK REMOTE EMERGENCY LIGHTING HEAD POLE MOUNTED LUMINAIRE POST-TOP LUMINAIRE POST-TOP TWIN HEAD LUMINAIRE BOLLARD LUMINAIRE SHADING DENOTES EMERGENCY FIXTURE, UON	CIRCUIT BREAKER FUSE SWITCH DRAW-OUT CIRCUIT BREAKER CIRCUIT BREAKER WITH GROUND FAULT PROTECTION FUSED SWITCH WITH GROUND FAULT PROTECTION METER AMMETER VOLTMETER CURRENT TRANSFORMER (CT) POTENTIAL TRANSFORMER (PT) ENGINE GENERATOR SET AUTOMATIC TRANSFER SWITCH ENCLOSED CIRCUIT BREAKER DISCONNECT SWITCH FUSED DISCONNECT SWITCH MOTOR STARTER COMBINATION MOTOR STARTER / DISCONNECT SWITCH DRY TYPE TRANSFORMER CURRENT TRANSFORMER (CT) UTILITY POLE GROUNDING ELECTRODE GROUND BUSS GROUND ROD MAN HOLE HAND HOLE FEEDER SIZE TAG, SEE FEEDER SCHEDULE PANELBOARD LOAD CENTER SURFACE MOUNTED PANELBOARD OR LOAD CENTER FLUSH MOUNTED PANELBOARD OR LOAD CENTER SINGLE RECEPTACLE DUPLEX RECEPTACLE (T = TVSS) GFCI PROTECTED DUPLEX RECEPTACLE DOUBLE DUPLEX RECEPTACLE GFCI PROTECTED DOUBLE DUPLEX RECEPTACLE SPLIT WIRED AND/OR SWITCHED RECEPTACLE CEILING MOUNTED RECEPTACLE (CR = CORD REEL DEVICE) IN-FLOOR DUPLEX RECEPTACLE IN-FLOOR DOUBLE DUPLEX RECEPTACLE IN-FLOOR COMBINATION RECEPTACLE/COMMUNICATIONS DEVICE SPECIAL PURPOSE RECEPTACLE JUNCTION BOX WALL MOUNTED JUNCTION BOX TOGGLE SWITCH WITH INTEGRAL THERMAL OVERLOADS PUSH BUTTON, TYPE AS NOTED GENERATOR ANNUNCIATOR PLUGMOLD (LENGTH AS SHOWN ON DRAWING) SURFACE RACEWAY CABLE TRAY (LENGTH AS SHOWN ON DRAWING) CONDUIT END BUSHING CONDUIT UP CONDUIT DOWN CONDUIT BREAK SYMBOL	
AC ABOVE COUNTER	IN-FLOOR TELECOMMUNICATIONS OUTLET (VOICE/DATA/OTHER AS DEFINED ABOVE) CEILING SPEAKER WALL MOUNTED SPEAKER INTERCOM STATION VOLUME CONTROL STATION MICROPHONE JACK AMPLIFIER CLOSED-CIRCUIT TELEVISION CAMERA CENTRALLY ACCESS CONTROLLED DOOR ACCESS CONTROL SYSTEM CARD READER ACCESS CONTROL SYSTEM CARD READER/KEYPAD COMBINATION DEVICE DOOR CONTACT ELECTRIC LOCK KEY PAD MAGNETIC LOCK WIRELESS ACCESS POINT. PROVIDE (1) DATA CABLE TERMINATED ABOVE CEILING (SEE DETAIL)	REVISION SYMBOLS 77-7 EQUIPMENT DESIGNATION REVISION DESIGNATION KEY NOTE DESIGNATION ENLARGED PLAN DESIGNATION NORTH ARROW	REVISION SYMBOLS 77-7 EQUIPMENT DESIGNATION REVISION DESIGNATION KEY NOTE DESIGNATION ENLARGED PLAN DESIGNATION NORTH ARROW	
AFC ABOVE FINISHED CEILING	FIRE ALARM SYSTEM SYMBOLS FIREMAN'S PHONE JACK BEAM DETECTOR TRANSMITTER BEAM DETECTOR RECEIVER REMOTE INDICATOR LIGHT (T = WITH TEST SWITCH) SMOKE DETECTOR WALL MOUNTED SMOKE DETECTOR THERMAL DETECTOR DUCT DETECTOR AUDIBLE/VISUAL NOTIFICATION DEVICE AUDIBLE NOTIFICATION DEVICE VISUAL NOTIFICATION DEVICE MANUAL PULL STATION FLOW SWITCH TAMPER SWITCH PRESSURE SWITCH MAGNETIC DOOR HOLDER SMOKE DAMPER OR FIRE/SMOKE DAMPER FIRE ALARM INTERLOCK FIRE ALARM CONTROL PANEL FIRE ALARM ANNUNCIATOR CEILING MOUNTED AUDIBLE/VISUAL NOTIFICATION DEVICE CEILING MOUNTED VISUAL NOTIFICATION DEVICE CEILING MOUNTED VOICE NOTIFICATION DEVICE CEILING MOUNTED VOICE/VISUAL DEVICE	LIGHTING CONTROL SYMBOLS SWITCH, TYPE AS NOTED BELOW (BLANK) - SINGLE POLE 2 - DOUBLE POLE 3 - THREE-WAY SWITCH 4 - FOUR-WAY SWITCH B - PROVIDE BOX AND BLANK COVER PLATE D - ANALOG DIMMER SWITCH - (LUTRON 'DVA' OR 'MAESTRO' SERIES, OAE. PROVIDE DIMMER TYPE COMPATIBLE WITH LAMP SOURCE PER DIMMER MANUFACTURER COMPATIBILITY TESTING AND RATED FOR CONNECTED LOAD.) F - FAN AND/OR FANLIGHT SWITCH K - KEY OPERATED SWITCH L - SINGLE POLE ILLUMINATED SWITCH - ILLUMINATED WHEN OFF LV - LOW VOLTAGE SWITCH P - SWITCH WITH PILOT LIGHT - ILLUMINATED WHEN ON T - TIMER SWITCH (NUMBER REFERS TO TIMEOUT PER SPECS) ANALOG OCCUPANCY (OS) OR VACANCY SENSOR (VS) SWITCH - (BLANK) - SINGLE POLE 2 - (DUAL RELAY) 3 - (THREE-WAY) V - (0-10V DIM) D - (120V DIM, 150W) LIGHTING CONTACTOR PHOTOELECTRIC CELL ANALOG OCCUPANCY OR VACANCY SENSOR: C - CEILING MOUNT K - CORNER MOUNT WITH MOUNTING ARMATURE. G - GARAGE CEILING, AS NOTED ON PLANS DIGITAL LIGHTING CONTROL WALL STATION: 1 - ZONE DIMMER (ENGRAVE "ON" AND "OFF") UON 2 - (2) BUTTON SCENE (ENGRAVE "▲" AND "▼", UON) 3 - WALL OCC. AND DIM SWITCH (ENGRAVE "▲" AND "▼", UON) 4 - (4) BUTTON SCENE WITH RAISE/LOWER (CUSTOM ENGRAVING) 5 - (4) BUTTON ZONE SWITCH, (2) ON(2) OFF (CUSTOM ENGRAVING) 6 - WALL OCC. SWITCH (ENGRAVE "ON" AND "OFF") 8 - (8) BUTTON ZONE SWITCH, (4) ON(4) OFF (CUSTOM ENGRAVING) DIGITAL LIGHTING CONTROL SYSTEM OCCUPANCY (OS) OR VACANCY (VS) SENSOR, WATTSTOPPER (LM) OR SENSOR OR SENSOR SWITCH (LIGHT) C - CEILING-MOUNT DUAL-TECH #LMDC-100 OR nCM PDT-9 H - HALLWAY PIR K - WALL-CORNER-MOUNT DUAL-TECH (WITH MOUNTING BRACKET) U - CEILING-MOUNT ULTRASONIC TECHNOLOGY (ULM) ONLY	REVISION SYMBOLS 77-7 EQUIPMENT DESIGNATION REVISION DESIGNATION KEY NOTE DESIGNATION ENLARGED PLAN DESIGNATION NORTH ARROW	REVISION SYMBOLS 77-7 EQUIPMENT DESIGNATION REVISION DESIGNATION KEY NOTE DESIGNATION ENLARGED PLAN DESIGNATION NORTH ARROW
AFI ARC FAULT CIRCUIT INTERRUPTER				
AFG ABOVE FINISHED GRADE				
AFV ABOVE FINISHED FLOOR				
AMP AMPERES INTERRUPTING CURRENT				
C CONDUIT				
CATV CABLE TELEVISION				
CB CIRCUIT BREAKER				
CKT CIRCUIT				
DISC DISCONNECT				
DIST DISTRIBUTION				
EC ELECTRICAL CONTRACTOR OR EMPTY CONDUIT				
EF EXHAUST FAN				
EPO EMERGENCY POWER OFF				
EWC ELECTRIC WATER COOLER				
F FUSE				
FLA FULL LOAD AMPS				
G GROUND				
GC GENERAL CONTRACTOR				
GFI GROUND FAULT CIRCUIT INTERRUPTER				
HORIZ HORIZONTAL				
HP HORSEPOWER				
IG ISOLATED GROUND				
KV KILOVOLTS				
KVA KILOVOLT AMPERE(S)				
KW KILOWATT(S)				
LTG LIGHTING				
MC MECHANICAL CONTRACTOR				
MCA MINIMUM CIRCUIT AMPS				
MCB MAIN CIRCUIT BREAKER				
MDC MAIN DISTRIBUTION CENTER				
MDF MAIN DATA FRAME				
MLO MAIN LUGS ONLY				
NL NIGHT LIGHT/SECURITY LIGHT, CONNECT LIGHTS AHEAD OF LOCAL SWITCHING TO OPERATE CONTINUOUSLY				
OAE OR APPROVED EQUAL				
OH OVERHEAD				
P POLE				
PH PHASE				
PNL PANEL				
REC RECEPTACLE				
SW SWITCH				
TBB TELECOMMUNICATIONS BONDING BACKBONE				
TGB TELECOMMUNICATIONS GROUNDING BUSBAR				
TMGB TELECOMMUNICATIONS MAIN GROUNDING BUSBAR				
UC UNDERCOUNTER/CABINET				
UG UNDERGROUND				
UON UNLESS OTHERWISE NOTED				
V VOLT(S)				
VA VOLT AMPERES				
W WATT(S) OR WIRE				
WG WIRE GUARD				
WP WEATHERPROOF				
XFMR TRANSFORMER				

ELECTRICAL GENERAL NOTES

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE PRIOR TO BID TO VERIFY DIMENSIONS AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS. NO EXTRAS WILL BE GIVEN FOR ADDITIONAL WORK WHICH IS REQUIRED RESULTING FROM CONTRACTOR'S FAILURE TO BECOME FAMILIARIZED WITH THE SITE AND FACILITIES.
- COORDINATE LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL PLANS AND MECHANICAL CONTRACTOR PRIOR TO BEGINNING ROUGH-IN. RECEPTACLES THAT INFORMATION FOR MECHANICAL EQUIPMENT ARE SHOWN ADJACENT TO MECHANICAL EQUIPMENT TAGS ON DRAWINGS OR IN THE MECHANICAL EQUIPMENT CONNECTIONS SCHEDULE.
- COORDINATE EXACT LOCATIONS OF ALL OUTLETS WITH ARCHITECTURAL ELEVATIONS, REFLECTED CEILING PLANS (WHERE SHOWN), CASEWORK SHOP DRAWINGS, AND EQUIPMENT INSTALLATION DRAWINGS PRIOR TO BEGINNING ROUGH-IN. RECEPTACLES THAT FEED APPLIANCES SUCH AS REFRIGERATORS, DISHWASHERS, OVENS, ETC. SHALL BE LOCATED BEHIND THE APPLIANCE. UNDER-CABINET MICROWAVE AND RANGE HOODS SHALL HAVE THE RECEPTACLE MOUNTED IN THE CABINET ABOVE THE APPLIANCES.
- THE CONTRACTOR SHALL VERIFY ALL ROUGH-IN REQUIREMENTS FOR ELECTRICALLY OPERATED EQUIPMENT WITH THE EQUIPMENT SUPPLIERS.
- PROVIDE A SET OF CONSTRUCTION DOCUMENTS TO THE OWNER AND SCHEDULE A MEETING WITH THE OWNER FOR VERIFICATION OF ALL ENGRAVED NAMEPLATES (WHETHER EQUIPMENT OR LIGHTING), ROOM NAMES/NUMBERS FOR PANEL DIRECTORIES AND FINAL LOCATION OF ELECTRICAL ITEMS.
- COORDINATE ELECTRICAL DEVICE LOCATIONS WITH CHAIR RAILS, CORNER GUARDS, DOOR TRIMS, ETC. NOTIFY ARCHITECT OF CONFLICTING LOCATIONS.
- GFI 'FEED-THROUGH' DEVICES SHALL NOT BE USED TO PROTECT DOWN-STREAM DEVICES ON THE SAME CIRCUIT. PROVIDE SEPARATE GROUND FAULT RECEPTACLES AT EACH LOCATION INDICATED, UON.
- RECEPTACLES LOCATED WITHIN 6'-0" OF THE EDGE OF A SINK SHALL BE GFCI-TYPE RECEPTACLES, UON, EXCEPT WHERE ALLOWED BY THE NEC.
- WHERE RECEPTACLES ARE SHOWN BELOW OR IN CLOSE PROXIMITY TO LIGHT SWITCHES, THE CENTERLINES OF THE DEVICES SHALL BE ALIGNED VERTICALLY.
- COORDINATE FINAL LIGHT FIXTURE LOCATIONS WITH MECHANICAL AND ELECTRICAL SPACES WITH EQUIPMENT, DUCTWORK, PIPING, CONDUITS, ETC. FOR BEST POSSIBLE LIGHTING UNIFORMITY.
- PROVIDE ARLINGTON UL-LISTED T-BAR CEILING GRID BOX (OAE) WHERE LUMINAIRES ARE INDICATED TO BE SURFACE- OR PENDANT-MOUNTED ON TOP OF GRIDLINES IN A T-BAR CEILING.
- THE LOCATION OF ALL CEILING-MOUNTED OCCUPANCY SENSORS SHALL BE CONSIDERED AS SCHEMATIC ONLY. FINAL OCCUPANCY SENSOR LAYOUT SHALL BE PROVIDED BY THE SUCCESSFUL VENDOR. ALL OCCUPANCY SENSORS SHALL BE PROPERLY SET AND TESTED FOR OPTIMAL OPERATION. A MANUFACTURER'S REPRESENTATIVE SHALL RE-VISIT THE PROJECT SITE TWO WEEKS AND SIX MONTHS AFTER BUILDING/PHASED AREA OCCUPANCY TO PERFORM ANY ADDITIONAL CALIBRATION AND AIMING ADJUSTMENT AS REQUIRED TO SATISFY BUILDING OCCUPANTS.
- UNLESS OTHERWISE NOTED, ALL DUAL TECHNOLOGY OCCUPANCY SENSORS SHALL REQUIRE ONLY ONE OF THE TWO TECHNOLOGIES (ULTRASONIC OR PIR) TO SENSE MOTION FOR THE LIGHTING TO TURN 'ON'. CONTRACTOR SHALL VERIFY WITH THE OWNER THE TIME OUT SETTINGS (MAXIMUM OF 30 MINUTES) FOR EACH TYPE OF ROOM. TIME OUT SHALL BE DEFINED AS THE LENGTH OF THE TIME THIS LIGHTING REMAINS 'ON' AFTER THE LAST MOTION IS SENSED.
- SWITCHES THAT ARE SHOWN AT ROOM ENTRANCES AND ARE NOT SPECIFICALLY IDENTIFIED BY KEY NOTES OR SWITCH-LEG INDICATORS ARE INTENDED TO OPERATE ALL OF THE GENERAL LIGHTING IN THAT ROOM ONLY. COORDINATE AND CONFIRM ALL DOOR SWITCHES WITH THE GENERAL CONTRACTOR PRIOR TO ROUGH-IN OF ANY LIGHT SWITCHES. USE SHALLOW BOXES WHERE NECESSARY TO ACCOMMODATE POCKET DOORS.
- SWITCHES SHALL BE LOCATED ON THE LATCH SIDE OF THE DOOR WHENEVER POSSIBLE. COORDINATE WITH THE LATEST ARCHITECTURAL DRAWINGS AND WITH THE GENERAL CONTRACTOR TO VERIFY DIRECTION OF DOOR SWING PRIOR TO ROUGH-IN. REFER TO THE TYPICAL SWITCH MOUNTING LOCATION DETAIL.
- THE LOCATION OF ALL SMOKE DETECTORS INDICATED ON THE DRAWINGS SHALL BE CONSIDERED TO BE SCHEMATIC ONLY. LOCATE THE DETECTORS CONSIDERING SPACING TO ADJACENT DETECTORS, WALLS, DIFFUSERS, CEILING FANS, ETC. AS REQUIRED TO MEET NFPA 72.
- FIRE ALARM VISUAL DEVICES SHALL BE SPACED NO GREATER THAN 15'-0" AWAY FROM ENDS OF CORRIDORS.
- FIRE ALARM VISUAL AND AUDIBLE/VISUAL DEVICES SHALL BE LOCATED NO MORE THAN 9' AWAY FROM INSIDE OR OUTSIDE WALL CORNERS, OPENINGS, PILASTERS OR COLUMNS AS MUCH AS POSSIBLE SO THAT WALLS ARE KEPT 'CLEAN' AND FIRE ALARM DEVICES WILL NOT CONFLICT WITH POTENTIAL ARTWORK LOCATIONS. WHERE DEVICES ARE SHOWN ABOVE OR IN CLOSE PROXIMITY TO LIGHT SWITCHES, THE CENTERLINES OF THE DEVICES SHALL BE ALIGNED VERTICALLY.
- THE SYSTEM BACKBOARD SHALL CONSIST OF 3/4 INCH FIRE-RETARDANT TREATED PLYWOOD INSTALLED FLOOR TO CEILING FOR THE LENGTH AS SHOWN ON THE DRAWING. ALL OUTLETS IN THE BACKBOARD SHALL BE FLUSH-MOUNTED, UON.
- REFER TO ARCHITECTURAL FINISH SCHEDULE FOR ROOMS REQUIRING METAL PARTS TO BE PRIMED FOR ELECTROSTATIC PAINTING.

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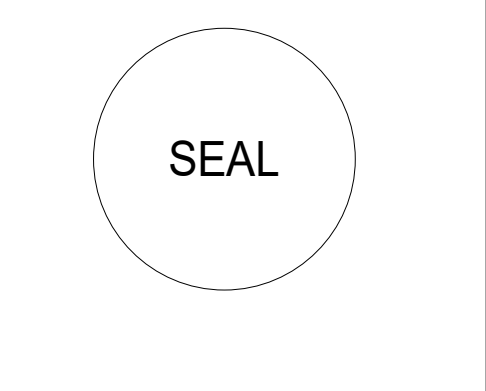
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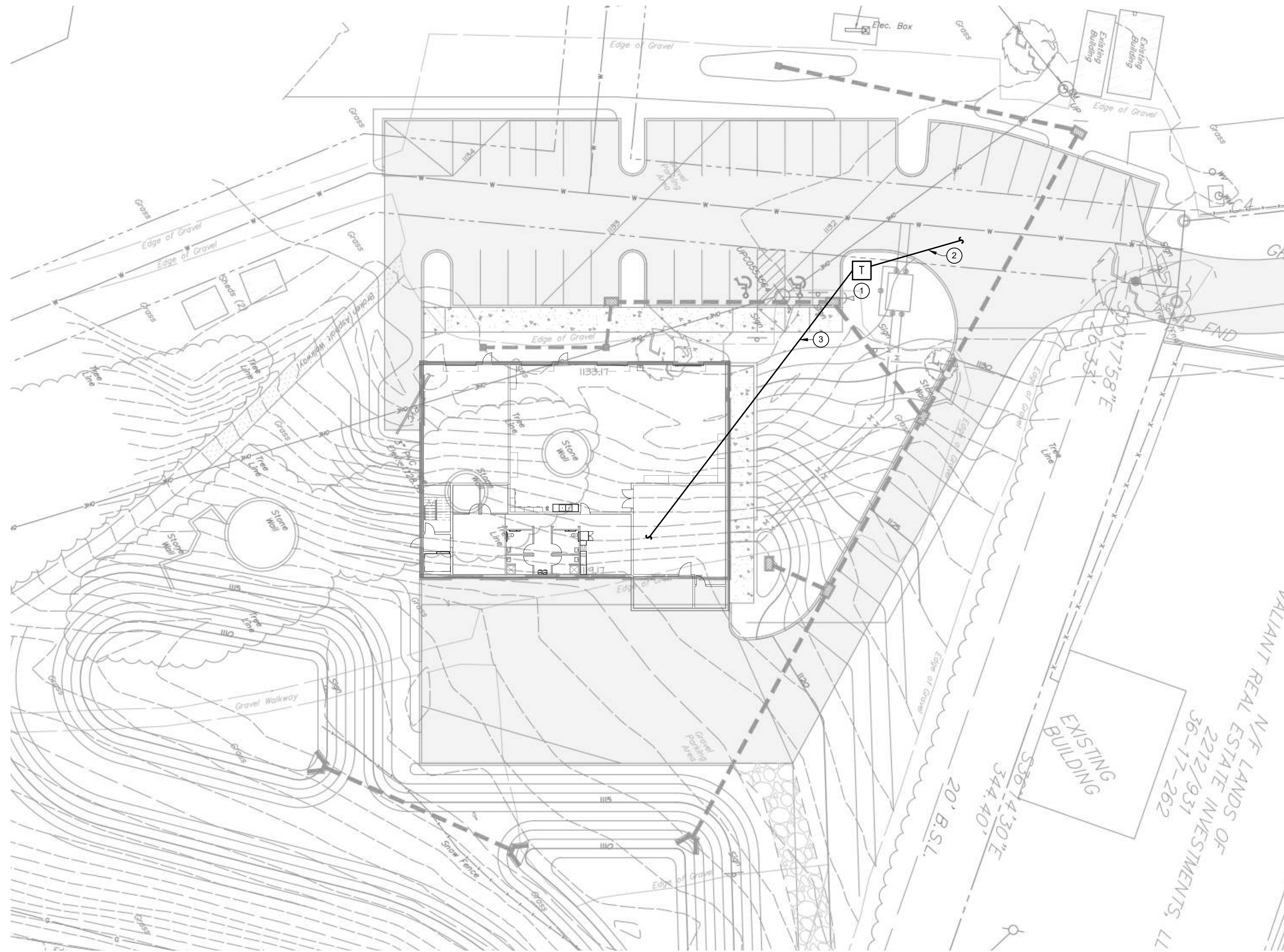


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ELECTRICAL LEGEND AND GENERAL NOTES

E0.1



1 SITE ELECTRICAL PLAN
 E1.1 SCALE: 1" = 20'-0"

GENERAL NOTES (THIS SHEET ONLY)

A. REFER TO E0.1 FOR GENERAL NOTES THAT APPLY TO ALL ELECTRICAL DRAWINGS.

KEY NOTES

- ① WEST PENN POWER PAD MOUNTED TRANSFORMER. PROVIDE CONCRETE PAD PER WEST PENN POWER REQUIREMENTS.
- ② PRIMARY CONDUITS TO NEAREST WEST PENN POWER TERMINATION POINT.
- ③ SECONDARY FEEDERS TO MAIN ELECTRICAL ROOM.

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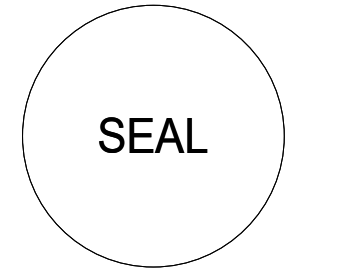
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SITE ELECTRICAL PLAN

E1.1

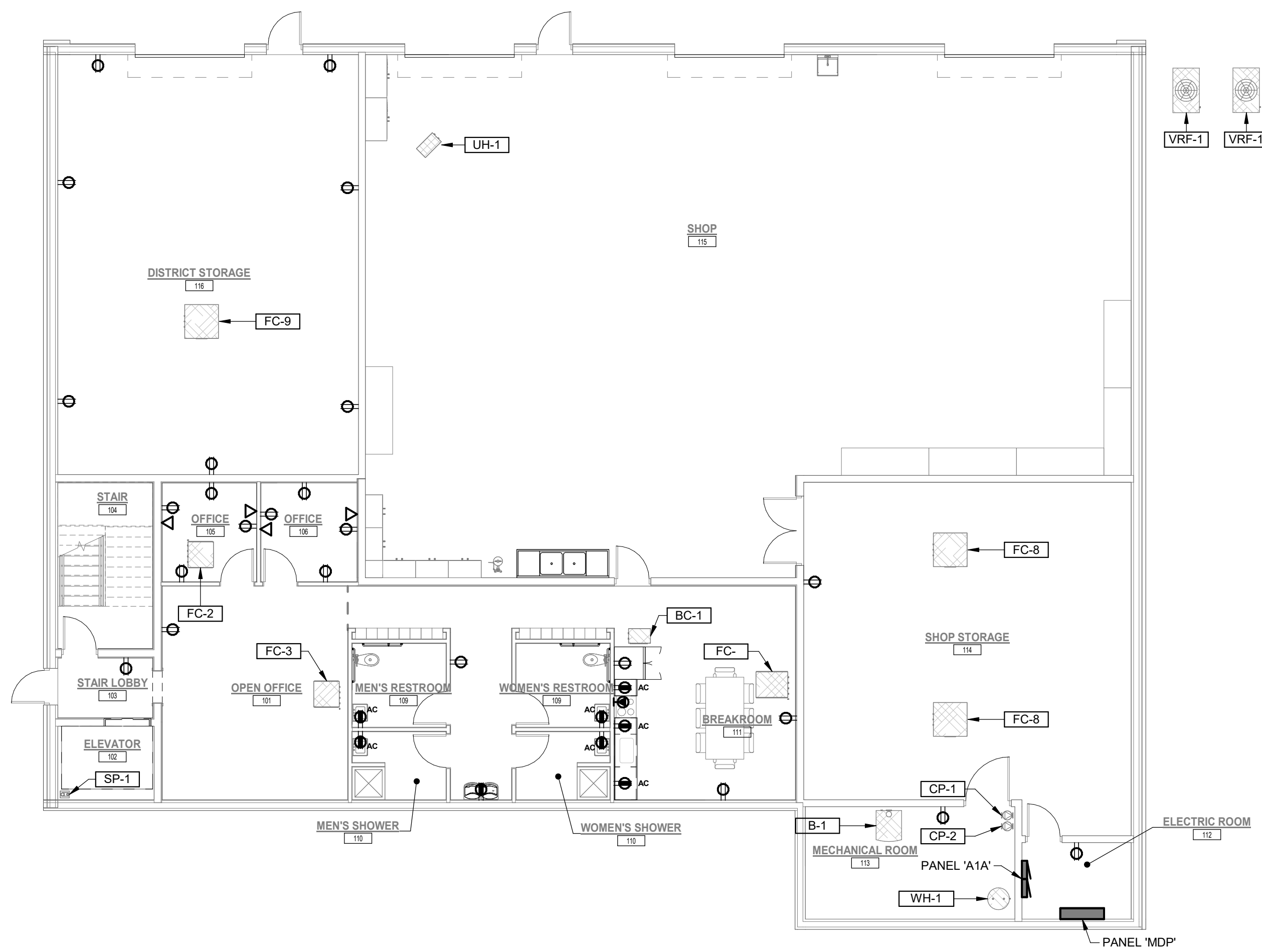
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GENERAL NOTES (THIS SHEET ONLY)

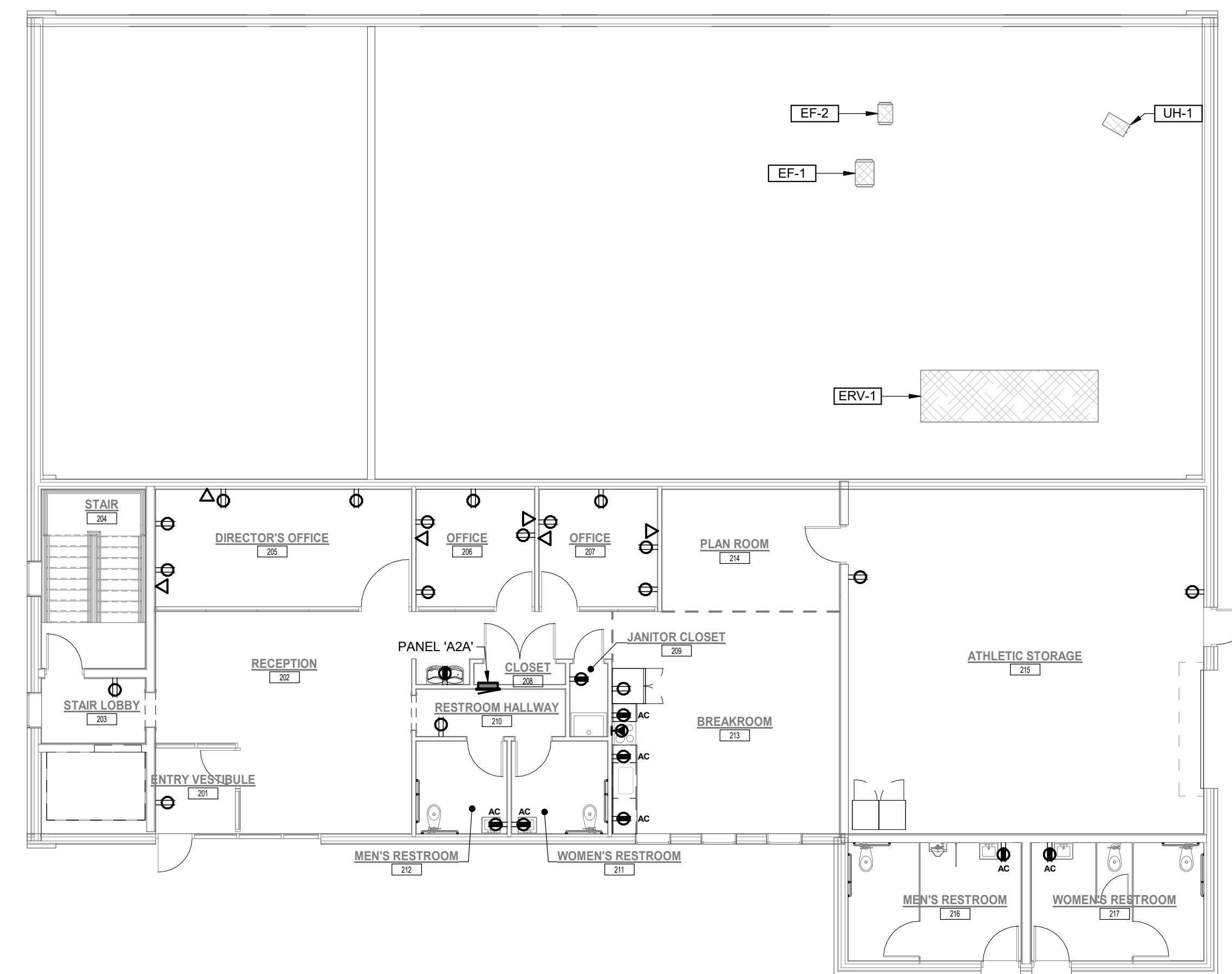
A. REFER TO E0.1 FOR GENERAL NOTES THAT APPLY TO ALL ELECTRICAL DRAWINGS.

KEY NOTES

① 45 FOOT 12/3 RETRACTABLE 120V CEILING-MOUNTED CORD REEL WITH ONE 20 AMP OUTLET. REEL GRABT, OAE. VERIFY LOCATION WITH OWNER PRIOR TO INSTALLATION. PROVIDE GFCI PROTECTION FROM CIRCUIT BREAKER.



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



② **SECOND FLOOR POWER PLAN**
SCALE: 1/8" = 1'-0"

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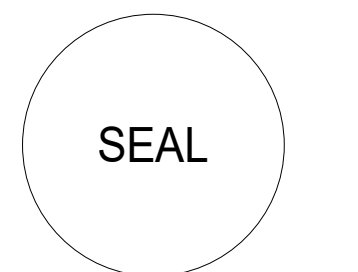
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**FIRST & SECOND
FLOOR POWER
PLANS**

E3.0

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1
E3.1 **ROOF POWER PLAN**
SCALE: 1/8" = 1'-0"

GENERAL NOTES (THIS SHEET ONLY)

A. REFER TO E0.1 FOR GENERAL NOTES THAT APPLY TO ALL ELECTRICAL DRAWINGS.

KEY NOTES

1 xx.

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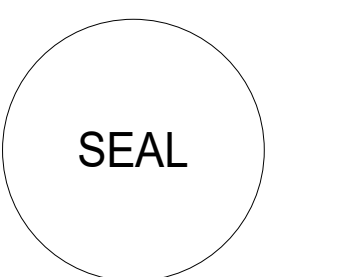
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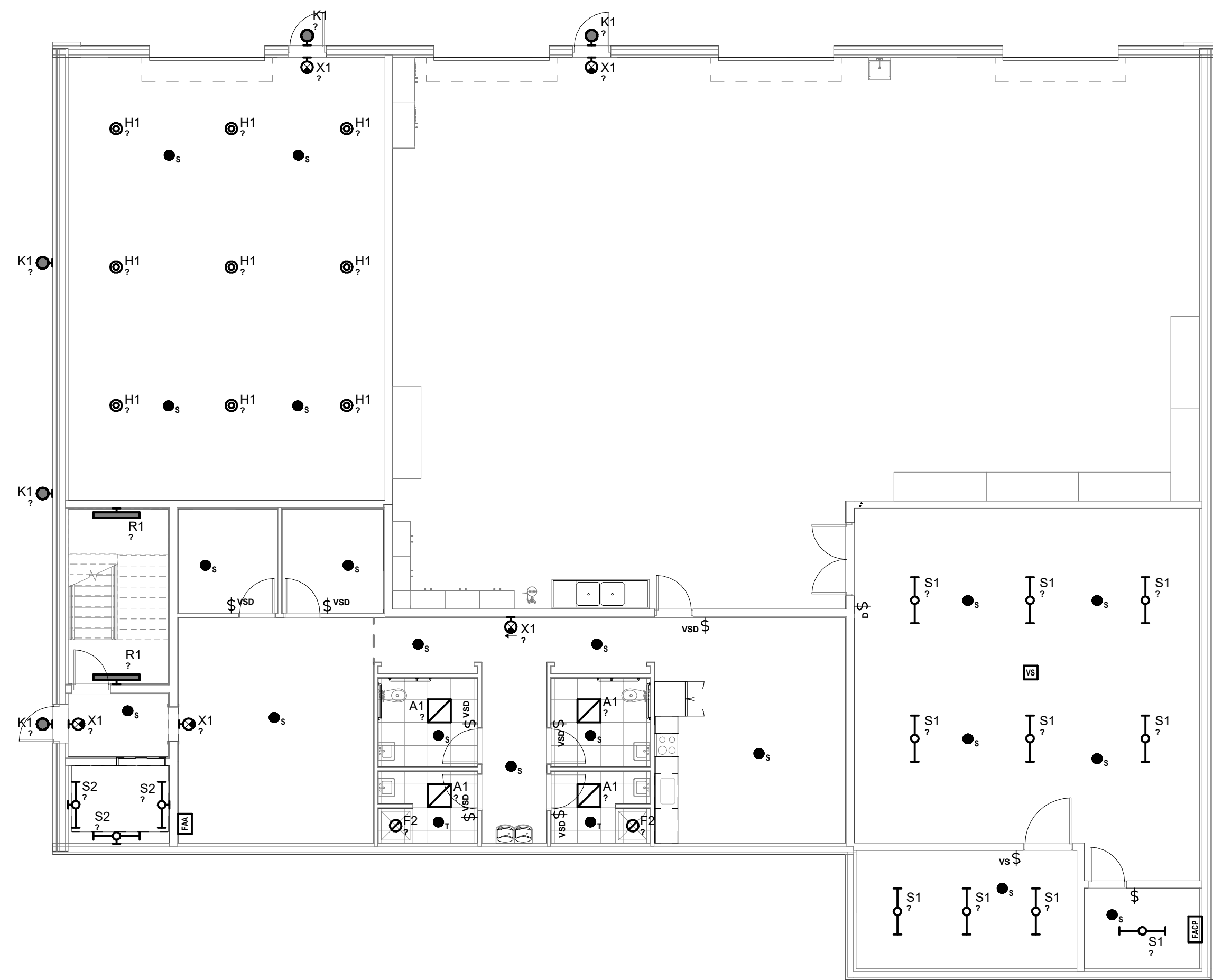
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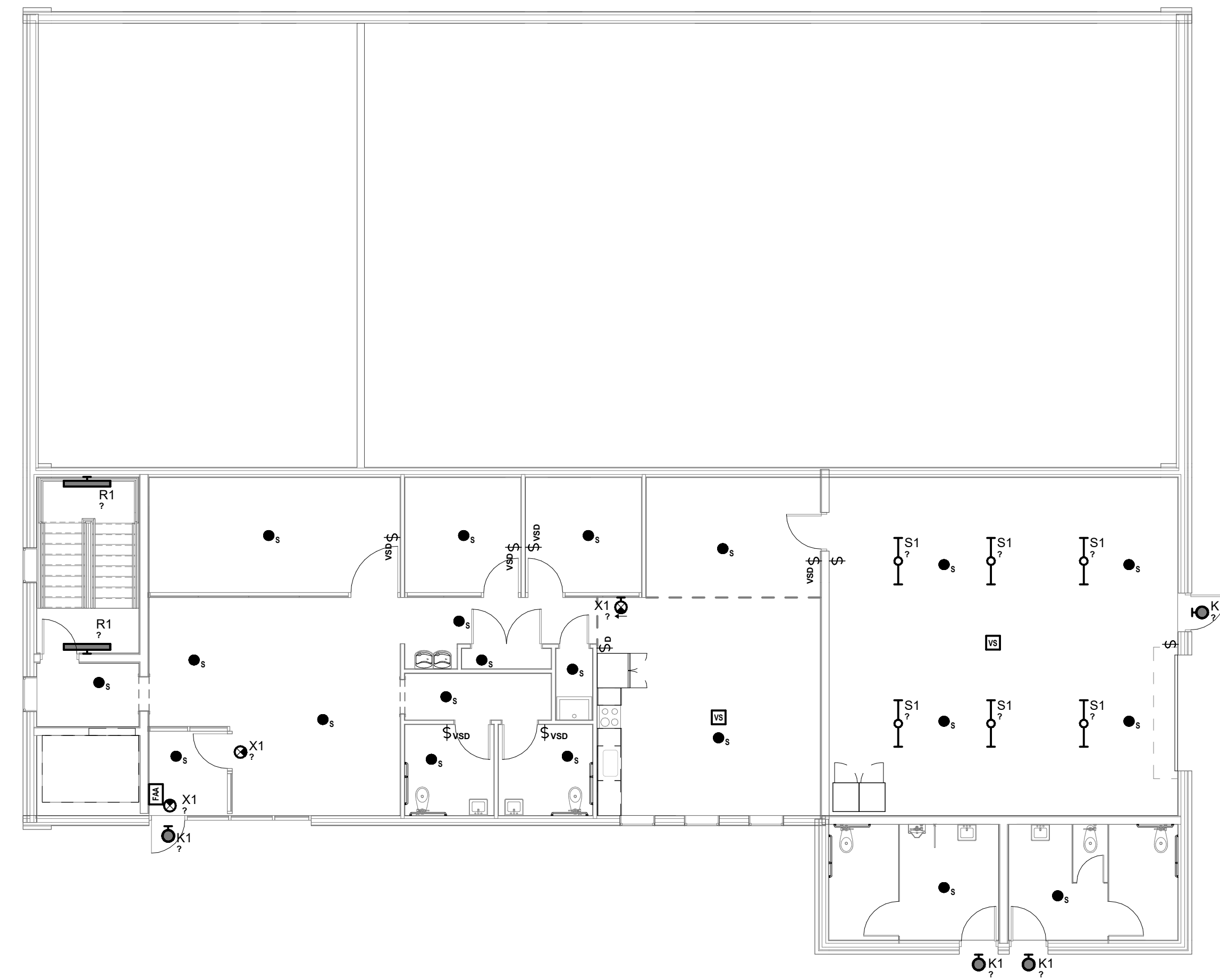
**ROOF ELECTRICAL
PLAN**

E3.1

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1 **FIRST FLOOR LIGHTING PLAN**
E4.0 SCALE: 1/8" = 1'-0"



2 **SECOND FLOOR LIGHTING PLAN**
E4.0 SCALE: 1/8" = 1'-0"

GENERAL NOTES (THIS SHEET ONLY)

A. REFER TO E001 FOR GENERAL NOTES THAT APPLY TO ALL ELECTRICAL DRAWINGS.

KEY NOTES

1 xx.

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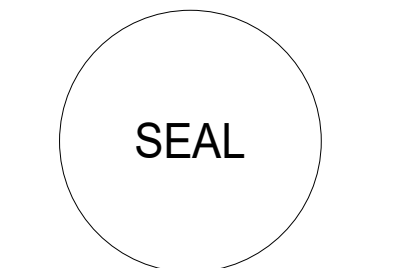
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**FIRST & SECOND
FLOOR LIGHTING
PLANS**

E4.0

CONDUCTOR SCHEDULE

(COPPER CONDUCTORS)

- NOTES:**
- THIS SCHEDULE IS BASED ON THHN/THWN CONDUCTORS IN EMT. WHERE ALTERNATE CONDUCTORS OR RACEWAYS ARE USED, THE PROPER SIZING MUST BE CONFIRMED.
 - THE SIZES INDICATED ON THIS SCHEDULE REPRESENT MINIMUM REQUIREMENTS. INCREASES IN CONDUIT SIZES ARE PERMITTED AT THE CONTRACTOR'S DISCRETION, PROVIDED THAT THEY DO NOT RESULT IN INCREASED COSTS TO THE OWNER.
 - REFER TO DRAWINGS AND SPECIFICATIONS FOR INFORMATION ON CONDUCTORS THAT MAY REQUIRE UP-SIZING TO ACCOMMODATE VOLTAGE DROP.

KEY	NO. SETS	CONDUCTORS (AWG - KCMIL)	°C	KEY	NO. SETS	CONDUCTORS (AWG - KCMIL)	°C	KEY	NO. SETS	CONDUCTORS (AWG - KCMIL)	°C
20.2G	1	2#12, 1#12G	3/4	20.3G	1	3#12, 1#12G	3/4	20.4G	1	4#12, 1#12G	3/4
30.2G	1	2#10, 1#10G	3/4	30.3G	1	3#10, 1#10G	3/4	30.4G	1	4#10, 1#10G	3/4
40.2G	1	2#8, 1#10G	3/4	40.3G	1	3#8, 1#10G	3/4	40.4G	1	4#8, 1#10G	3/4
50.2G	1	2#6, 1#10G	3/4	50.3G	1	3#6, 1#10G	3/4	50.4G	1	4#6, 1#10G	1
60.2G	1	2#4, 1#10G	1	60.3G	1	3#4, 1#10G	1	60.4G	1	4#4, 1#10G	1-1/4
70.2G	1	2#4, 1#8G	1	70.3G	1	3#4, 1#8G	1	70.4G	1	4#4, 1#8G	1-1/4
80.2G	1	2#3, 1#8G	1	80.3G	1	3#3, 1#8G	1-1/4	80.4G	1	4#3, 1#8G	1-1/4
90.2G	1	2#2, 1#8G	1	90.3G	1	3#2, 1#8G	1-1/4	90.4G	1	4#2, 1#8G	1-1/4
100.2G	1	2#1, 1#8G	1-1/4	100.3G	1	3#1, 1#8G	1-1/4	100.4G	1	4#1, 1#8G	1-1/2
110.2G	1	2#1, 1#6G	1-1/4	110.3G	1	3#1, 1#6G	1-1/4	110.4G	1	4#1, 1#6G	1-1/2
125.2G	1	2#1, 1#6G	1-1/4	125.3G	1	3#1, 1#6G	1-1/4	125.4G	1	4#1, 1#6G	1-1/2
150.2G	1	2#1/0, 1#6G	1-1/4	150.3G	1	3#1/0, 1#6G	1-1/2	150.4G	1	4#1/0, 1#6G	2
175.2G	1	2#2/0, 1#6G	1-1/2	175.3G	1	3#2/0, 1#6G	2	175.4G	1	4#2/0, 1#6G	2
200.2G	1	2#3/0, 1#6G	1-1/2	200.3G	1	3#3/0, 1#6G	2	200.4G	1	4#3/0, 1#6G	2
225.2G	1	2#4/0, 1#4G	2	225.3G	1	3#4/0, 1#4G	2	225.4G	1	4#4/0, 1#4G	2-1/2
250.2G	1	2-250, 1#4G	2	250.3G	1	3-250, 1#4G	2-1/2	250.4G	1	4-250, 1#4G	2-1/2
300.2G	1	2-350, 1#4G	2-1/2	300.3G	1	3-350, 1#4G	2-1/2	300.4G	1	4-350, 1#4G	3
350.2G	1	2-500, 1#3G	2-1/2	350.3G	1	3-500, 1#3G	3	350.4G	1	4-500, 1#3G	3
400.2G	2	2#3/0, 1#3G	1-1/2	400.3G	2	3#3/0, 1#3G	2	400.4G	2	4#3/0, 1#3G	2
450.2G	2	2#4/0, 1#2G	2	450.3G	2	3#4/0, 1#2G	2	450.4G	2	4#4/0, 1#2G	2-1/2
500.2G	2	2-250, 1#2G	2	500.3G	2	3-250, 1#2G	2-1/2	500.4G	2	4-250, 1#2G	2-1/2
600.2G	2	2-350, 1#1G	2-1/2	600.3G	2	3-350, 1#1G	2-1/2	600.4G	2	4-350, 1#1G	3
700.2G	2	2-500, 1#1/0G	2-1/2	700.3G	2	3-500, 1#1/0G	3	700.4G	2	4-500, 1#1/0G	3
800.2G	3	2-300, 1#1/0G	2	800.3G	3	3-300, 1#1/0G	2-1/2	800.4G	3	4-300, 1#1/0G	2-1/2
1000.2G	3	2-400, 1#2/0G	2-1/2	1000.3G	3	3-400, 1#2/0G	2-1/2	1000.4G	3	4-400, 1#2/0G	3
1200.2G	4	2-350, 1#3/0G	2-1/2	1200.3G	4	3-350, 1#3/0G	2-1/2	1200.4G	4	4-350, 1#3/0G	3
1600.2G	5	2-400, 1#4/0G	2-1/2	1600.3G	5	3-400, 1#4/0G	2-1/2	1600.4G	5	4-400, 1#4/0G	3
2000.2G	6	2-400, 1-250G	2-1/2	2000.3G	6	3-400, 1-250G	2-1/2	2000.4G	6	4-400, 1-250G	3
2500.2G	7	2-500, 1-350G	2-1/2	2500.3G	7	3-500, 1-350G	3	2500.4G	7	4-500, 1-350G	3
3000.2G	8	2-500, 1-400G	2-1/2	3000.3G	8	3-500, 1-400G	3	3000.4G	8	4-500, 1-400G	3
3500.2G	10	3-500, 1-500G	3	3500.3G	10	3-500, 1-500G	3	3500.4G	10	4-500, 1-500G	3
4000.2G	11	3-500, 1-500G	3	4000.3G	11	3-500, 1-500G	3	4000.4G	11	4-500, 1-500G	3

GROUND SCHEDULE				ABBREVIATIONS					
1G	1	1#8G	3/4	5G	1	1#1/0G	3/4	MECH	SEE MECHANICAL EQUIPMENT SCHEDULE
2G	1	1#6G	3/4	6G	1	1#2/0G	3/4	XFMR	SEE TRANSFORMER SCHEDULE
3G	1	1#4G	3/4	7G	1	1#3/0G	3/4		
4G	1	1#2G	3/4						

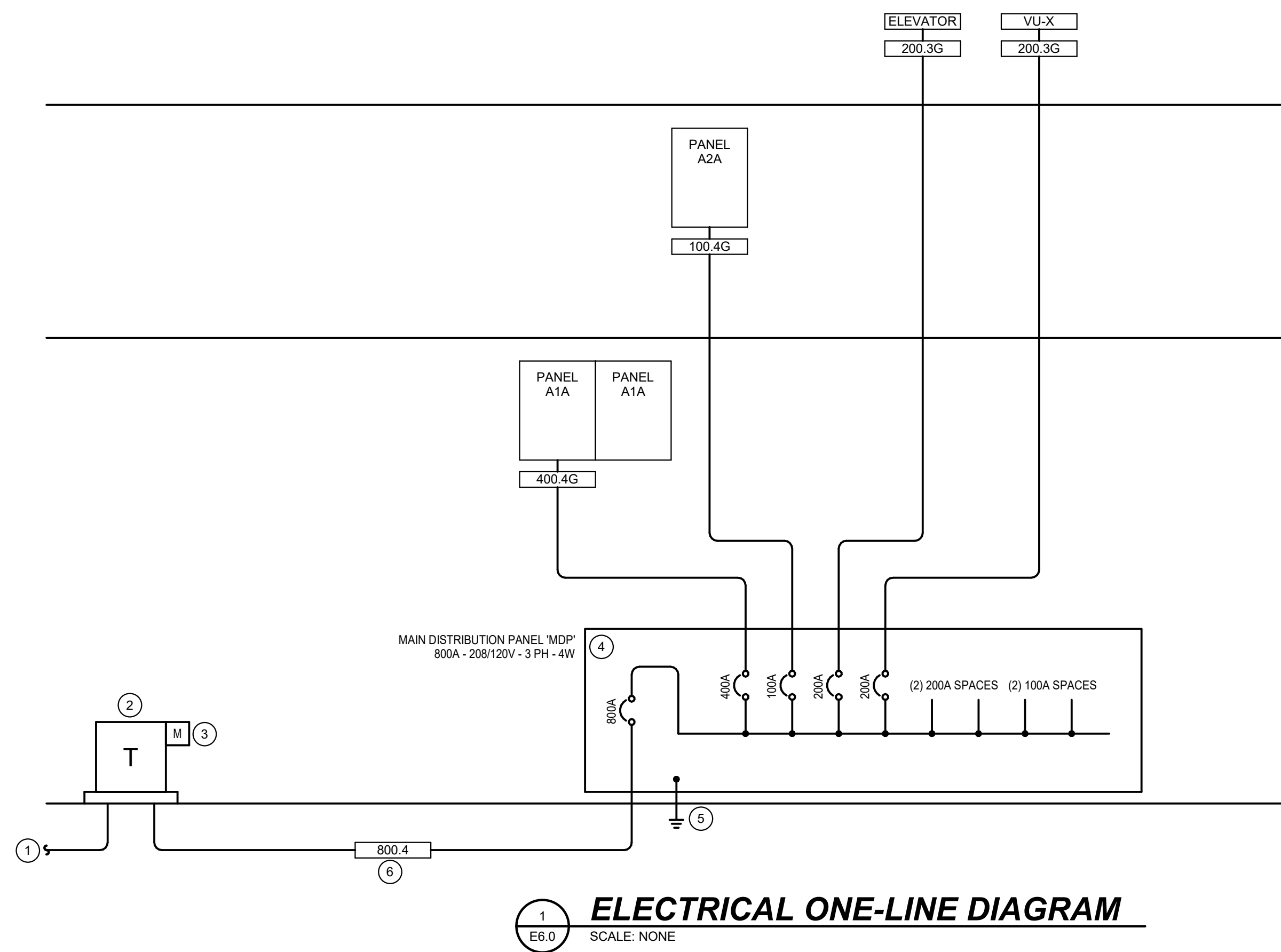
GENERAL NOTES

(THIS SHEET ONLY)

- A. REFER TO E6.1 FOR GENERAL NOTES THAT APPLY TO ALL ELECTRICAL DRAWINGS.

KEY NOTES

- CONDUITS FOR WEST PENN POWER MEDIUM VOLTAGE CABLING. REFER TO WEST PENN POWER REQUIREMENTS FOR ADDITIONAL INFORMATION.
- WEST PENN POWER PAD-MOUNTED TRANSFORMER. REFER TO WEST PENN POWER INSTALLATION REQUIREMENTS FOR ADDITIONAL INFORMATION INCLUDING DELINEATION OF RESPONSIBILITY BETWEEN WEST PENN POWER AND THE CONTRACTOR.
- WEST PENN POWER METER.
- PROVIDE INTEGRAL SURGE SUPPRESSION AND DIGITAL METERING.
- GROUND PER NEC AND GROUNDING DETAIL ON E6.0.
- FEEDERS SHALL BE ENCASED IN CONCRETE.



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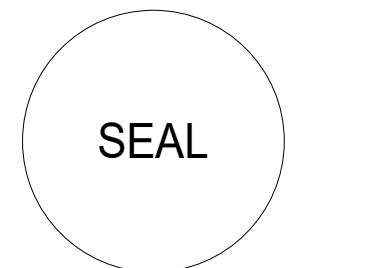
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DISTRICT
131 WEST NITTANY AVENUE
STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

**ELECTRICAL
ONE-LINE DIAGRAM**

E6.0

C:\Current Jobs 21_SCADS\Projects\22-17-NTH-Physical Plant\Arch\Condns\Ver\12-17_11.docx - 3624.rvt, 3/27/2019, Robert Wier

MECHANICAL EQUIPMENT CONNECTIONS SCHEDULE

- GENERAL NOTES:**
- A. REFER TO MECHANICAL FLOOR PLANS FOR EQUIPMENT QUANTITIES.
 - B. REFER TO CONDUCTOR SCHEDULE FOR CONDUCTOR AND CONDUIT SIZES.
 - C. COORDINATE EXACT LOCATION OF EQUIPMENT WITH DIVISIONS 21, 22 AND 23 CONTRACTOR PRIOR TO BEGINNING ANY ELECTRICAL ROUGH-IN.
 - D. COORDINATE OVERCURRENT PROTECTION DEVICE AND FEEDER SIZES WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ANY ELECTRICAL ROUGH-IN.
 - E. WHEN DISCONNECTING MEANS ARE NOT PROVIDED WITH THE EQUIPMENT, PROVIDE WEATHERPROOF DISCONNECT SWITCHES IN NEMA 3R ENCLOSURES FOR ALL EQUIPMENT THAT IS LOCATED ON THE ROOF OR ON THE EXTERIOR OF THE BUILDING.
 - F. BRANCH CIRCUIT SIZES DO NOT ACCOMMODATE FOR VOLTAGE DROP. REFER TO SPECIFICATIONS FOR INFORMATION ON ALLOWABLE VOLTAGE DROP PERMITTED AND UP-SIZE CONDUCTORS AND CONDUITS AS NECESSARY TO COMPLY WITH REQUIREMENTS.
 - G. REFER TO "EQUIPMENT CONNECTIONS AND COORDINATION" SPECIFICATION FOR FURTHER REQUIREMENTS.
 - H. 'STO' INDICATES A MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERLOADS.
 - I. 'C&P' INDICATES A CORD AND PLUG CONNECTION.
 - J. FOR 3-PHASE MECHANICAL EQUIPMENT WITH INTEGRAL 1-PHASE MOTORS, ELECTRICAL CONTRACTOR SHALL ALTERNATE WHICH PHASE MOTORS ARE CONNECTED TO, SO THAT TOTAL PHASE LOADS ON PANELBOARD REMAIN BALANCED.

- KEY NOTES:**
- 1. UNIT AIRFLOW IS GREATER THAN 2000 CFM. PROVIDE DUCT DETECTOR(S) AND CONNECT TO FIRE ALARM SYSTEM. PROVIDE MONITORED SHUT-DOWN SIGNAL FROM THE FIRE ALARM SYSTEM TO THE UNIT. COORDINATE DUCT DETECTOR QUANTITIES AND LOCATION WITH MECHANICAL CONTRACTOR.
 - 2. UNIT IS PROVIDED WITH AN INTEGRAL DISCONNECT SWITCH. WHERE THE DISCONNECT SWITCH IS THE FUSIBLE TYPE, PROVIDE A FUSE SIZED AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
 - 3. EQUIPMENT IS FED ELECTRICALLY FROM OUTDOOR UNIT. PROVIDE LOCAL DISCONNECT SWITCH FOR INDOOR UNIT AS INDICATED.

KEY	ITEM	LISTED LOAD			EQUIV. LOAD (VA)	VOLTS	PH	BRANCH CIRCUIT WIRING AND CONDUIT	DISCONNECT	FUSE	KEY NOTES
		HP	MCA	KW							
B-1	BOILER #1		0		0	208	1				
BC-1	VRF BRANCH CONTROLLER #1		0		125	208	1				
BC-2	VRF BRANCH CONTROLLER #2		0		125	208	1				
CP-1	CONDENSATE PUMP #1				0	0	0				
CP-2	CONDENSATE PUMP #2				0	0	0				
EF-1	EXHAUST FAN #1	0.75			0	120	1				
EF-2	EXHAUST FAN #2				0	120	1				
EF-3	EXHAUST FAN #3				0	120	1				
ERV-1	ENERGY RECOVERY UNIT #1		50.8		18302	208	3				
FC-	FAN COIL UNIT #	-			0	208	1				
FC-1	FAN COIL UNIT #1	-			364	208	1				
FC-2	FAN COIL UNIT #2	-			364	208	1				
FC-3	FAN COIL UNIT #3	-			437	208	1				
FC-5	FAN COIL UNIT #5	-			0	208	1				
FC-6	FAN COIL UNIT #6		0.24		50	208	1				
FC-8	FAN COIL UNIT #8		0.39		81	208	1				
FC-9	FAN COIL UNIT #9		0.39		81	208	1				
SP-1	SUMP PUMP #1				0	0	0				
UH-1	UNIT HEATER #1	-			0	208	1				
VRF-1	VRF OUTDOOR UNIT #1		0		0	208	1				
WH-1	WATER HEATER #1			6.0	6000	208	3				

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 STATE COLLEGE, PA 16801

SCASD JOB #: 22-17

**ELECTRICAL
 SCHEDULES**

E7.0

PANEL SCHEDULE

A2A

PROJECT:	SCASD - NTH PHYSICAL PLANT BUILDING	VOLTAGE L-L / L-N:	208/120
JOB NO.:	2022053	TYPE:	3PH, 4W
LOCATION:	REFER TO ELECTRICAL RISER DIAGRAM	SHORT CIRCUIT RATING:	RECESSED
MINIMUM BUS CAPACITY:	100A	MOUNTING:	SURFACE
MAIN OVERCURRENT DEVICE:	100A	COMMENTS:	
DESIGN CAPACITY:	100A		

CKT NO.	DESCRIPTION	DEVICE AMPS	POLE	A (VA)	B (VA)	C (VA)	POLE	DEVICE AMPS	DESCRIPTION	CKT NO.
1										2
2										4
3										6
4										8
5										10
6										12
7										14
8										16
9										18
10										20
11										22
12										24
13										26
14										28
15										30
16										32
17										34
18										36
19										38
20										40
21										42
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84										

TOTAL LOAD:	0 VA	0 VA	0 VA
TOTAL AMPS:	0 A	0 A	0 A

LOAD CLASSIFICATION	CONNECTED	D.F.	EST. DEMAND	PANEL TOTALS
LIGHTING LOAD:				TOTAL CONN. LOAD: 0 VA
RECEPTACLE LOAD:		FIRST 1000VA AT 100%, REMAINING AT 50%		TOTAL EST. DEMAND: 0 VA
LARGEST MOTOR:		---	---	TOTAL CONN.: 0 A
MOTOR LOAD:		LARGEST AT 125%, REMAINING AT 100%		TOTAL EST. DEMAND: 0 A
KITCHEN EQUIPMENT:				
EQUIPMENT:				
HEATING:				
ELEVATOR:				
SUB-FED PANEL:				
NOTES:				

PANEL SCHEDULE

A1A

PROJECT:	SCASD - NTH PHYSICAL PLANT BUILDING	VOLTAGE L-L / L-N:	208/120
JOB NO.:	2022053	TYPE:	3PH, 4W
LOCATION:	Space 117	SHORT CIRCUIT RATING:	REFER TO ELECTRICAL RISER DIAGRAM
MINIMUM BUS CAPACITY:	400A	MOUNTING:	SURFACE
MAIN OVERCURRENT DEVICE:	400A	COMMENTS:	
DESIGN CAPACITY:	400A		

CKT NO.	DESCRIPTION	DEVICE AMPS	POLE	A (VA)	B (VA)	C (VA)	POLE	DEVICE AMPS	DESCRIPTION	CKT NO.
1	EQUIP - WH-1	20	3	2000	2000					2
2										4
3						2000				6
4										8
5										10
6										12
7										14
8										16
9										18
10										20
11										22
12										24
13										26
14										28
15										30
16										32
17										34
18										36
19										38
20										40
21										42
22										44
23										46
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27										54
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33										66
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TOTAL LOAD:	2000 VA	2000 VA	2000 VA
TOTAL AMPS:	16.667 A	16.667 A	16.667 A

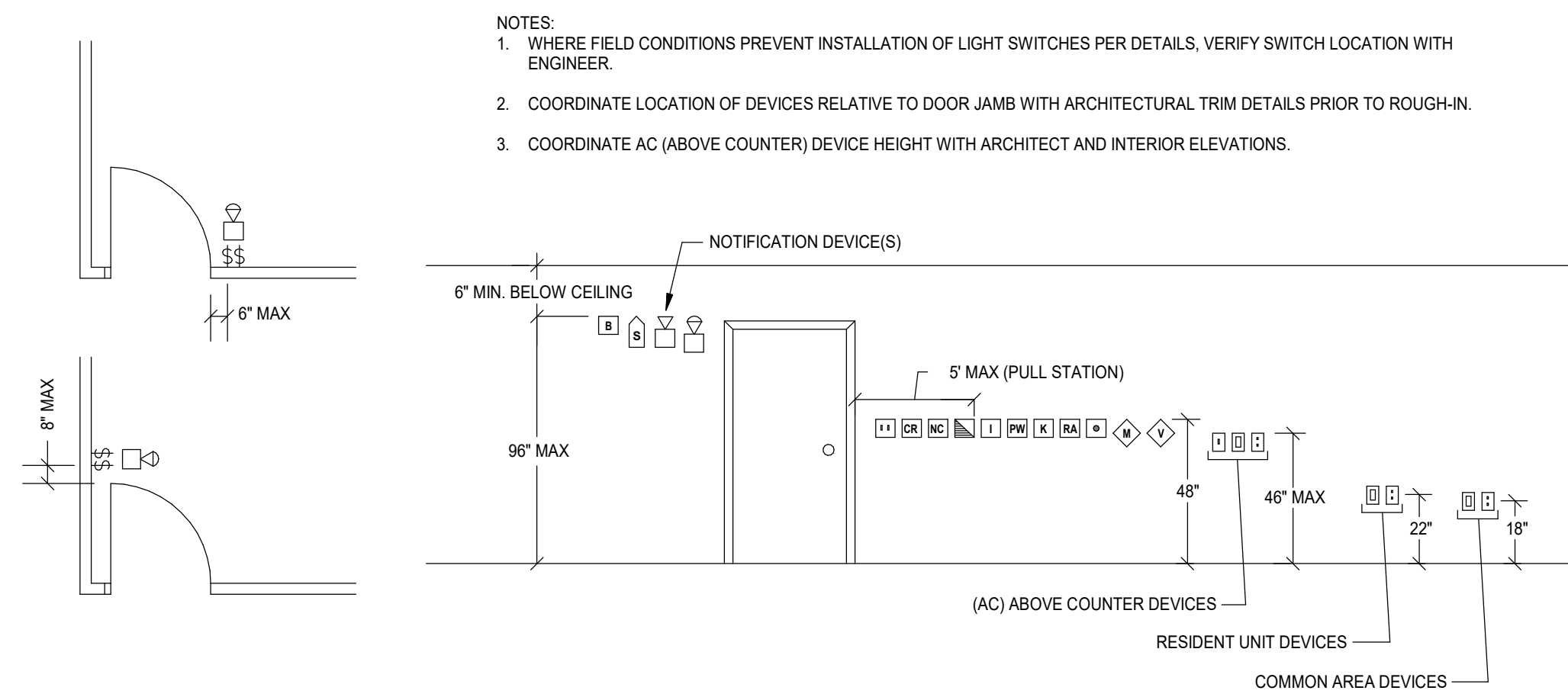
LOAD CLASSIFICATION	CONNECTED	D.F.	EST. DEMAND	PANEL TOTALS
LIGHTING LOAD:				TOTAL CONN. LOAD: 6000 VA
RECEPTACLE LOAD:		FIRST 1000VA AT 100%, REMAINING AT 50%		TOTAL EST. DEMAND: 6000 VA
LARGEST MOTOR:		---	---	TOTAL CONN.: 17 A
MOTOR LOAD:		LARGEST AT 125%, REMAINING AT 100%		TOTAL EST. DEMAND: 17 A
KITCHEN EQUIPMENT:				
EQUIPMENT:	6000 VA	100%	6000 VA	
HEATING:				
ELEVATOR:				
SUB-FED PANEL:				
NOTES:				

PANEL SCHEDULE

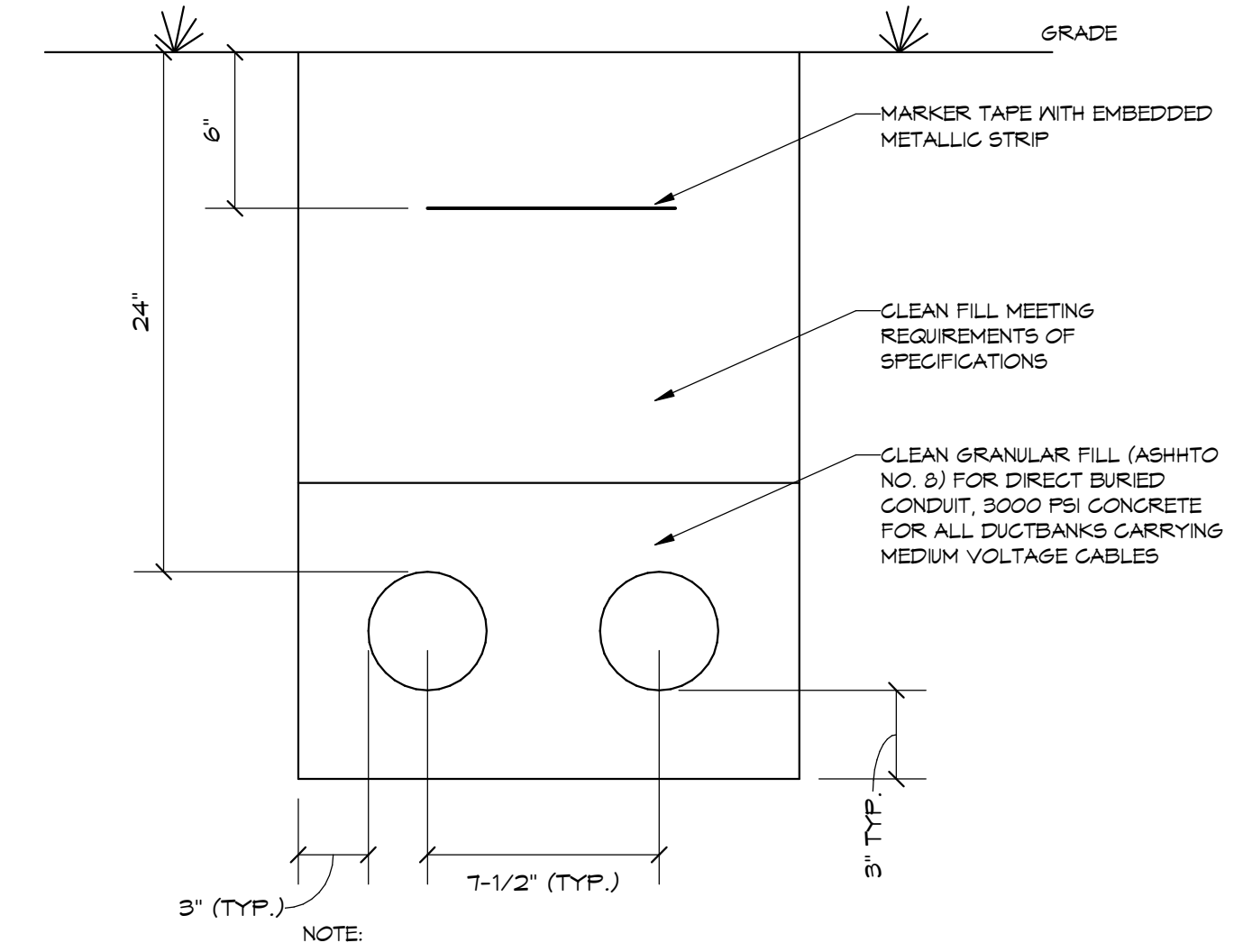
MIP

PROJECT:	SCASD - NTH PHYSICAL PLANT BUILDING	VOLTAGE L-L / L-N:	208/120
JOB NO.:	2022053	TYPE:	3PH, 4W
LOCATION:	Space 117	SHORT CIRCUIT RATING:	REFER TO ELECTRICAL RISER DIAGRAM
MINIMUM BUS CAPACITY:	800A	MOUNTING:	SURFACE
MAIN OVERCURRENT DEVICE:	800A	COMMENTS:	
DESIGN CAPACITY:	800A		

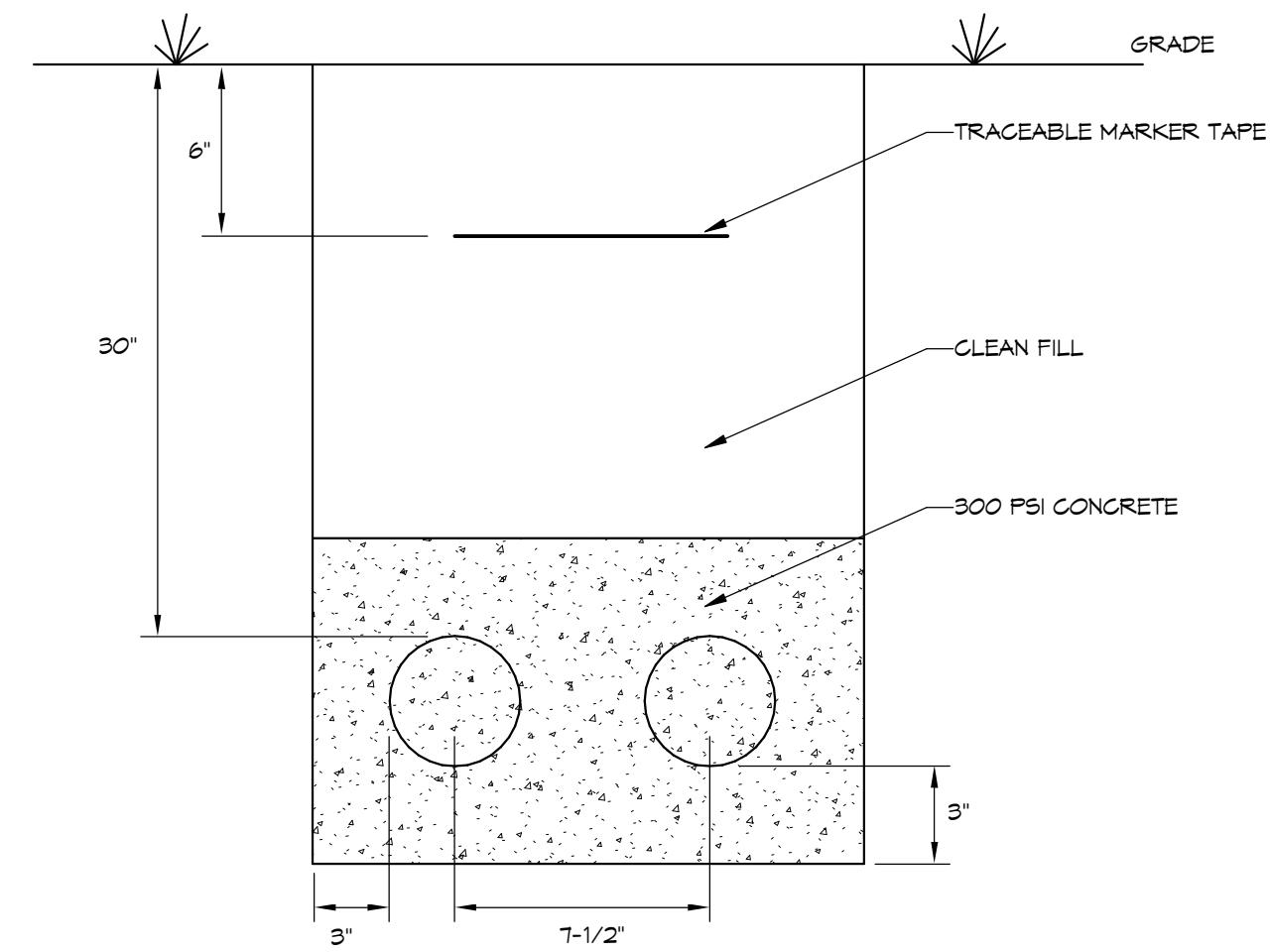
CKT NO.	DESCRIPTION	DEVICE AMPS	POLE	A (VA)	B (VA)	C (VA)	POLE	DEVICE AMPS	DESCRIPTION	CKT NO.	
1	A1A	400	3	2000	0			3	200	ELEVATOR	2
2											4
3						2000	0				6
4											8
5											10
6											12
7	A2A	100	3	0	6101			3	60	ERV-1	14
8											16
9					0	6101					18
10											20
11						0	6101				22
12											24
13	BUSSED SPACE		3					3		BUSSED SPACE	26
14	</										



4 DEVICE MOUNTING LOCATION DETAIL
 E8.0 SCALE: NONE

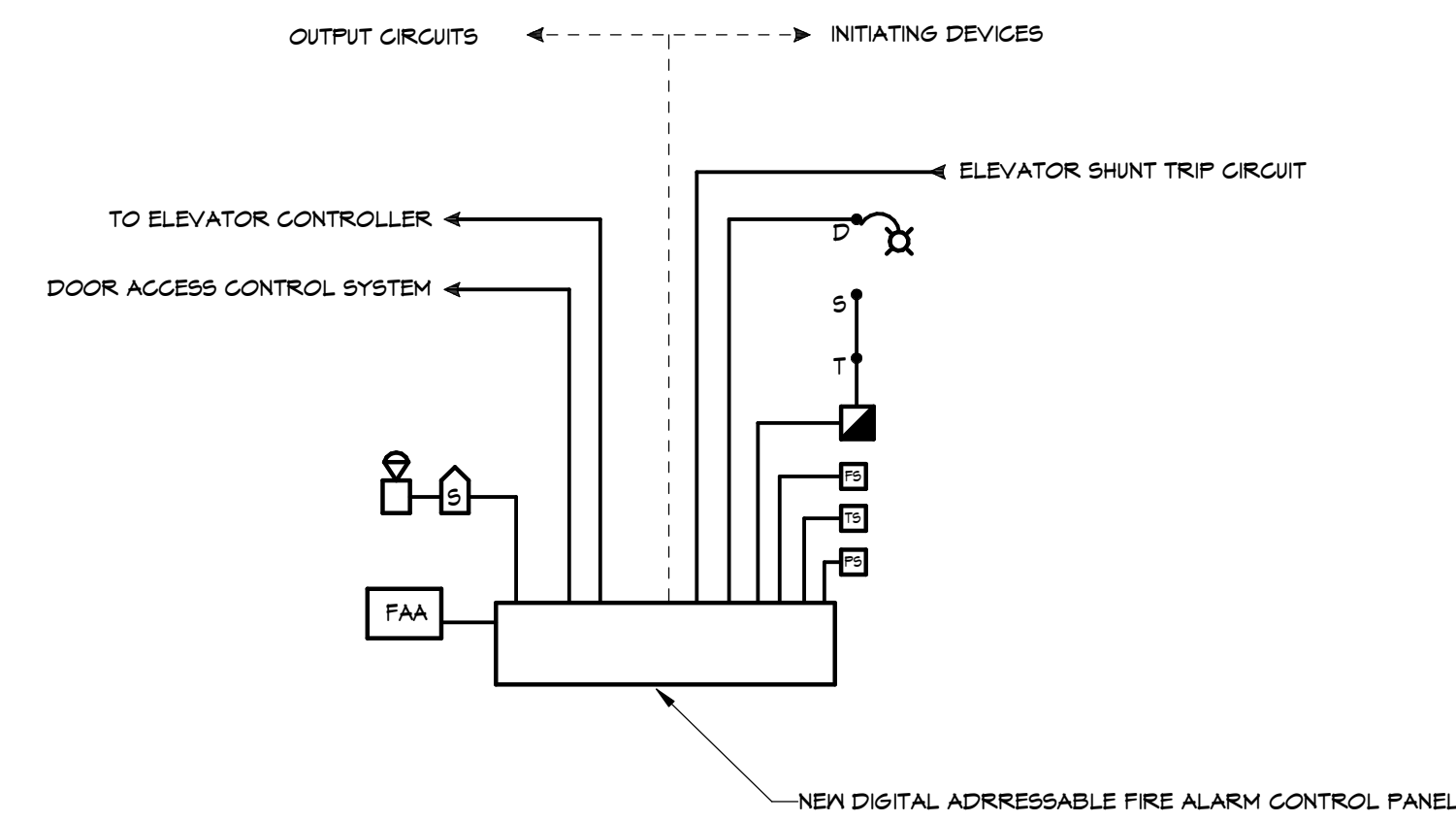


1 CONDUIT DETAIL (DIRECT BURIED)
 E8.0 SCALE: NONE

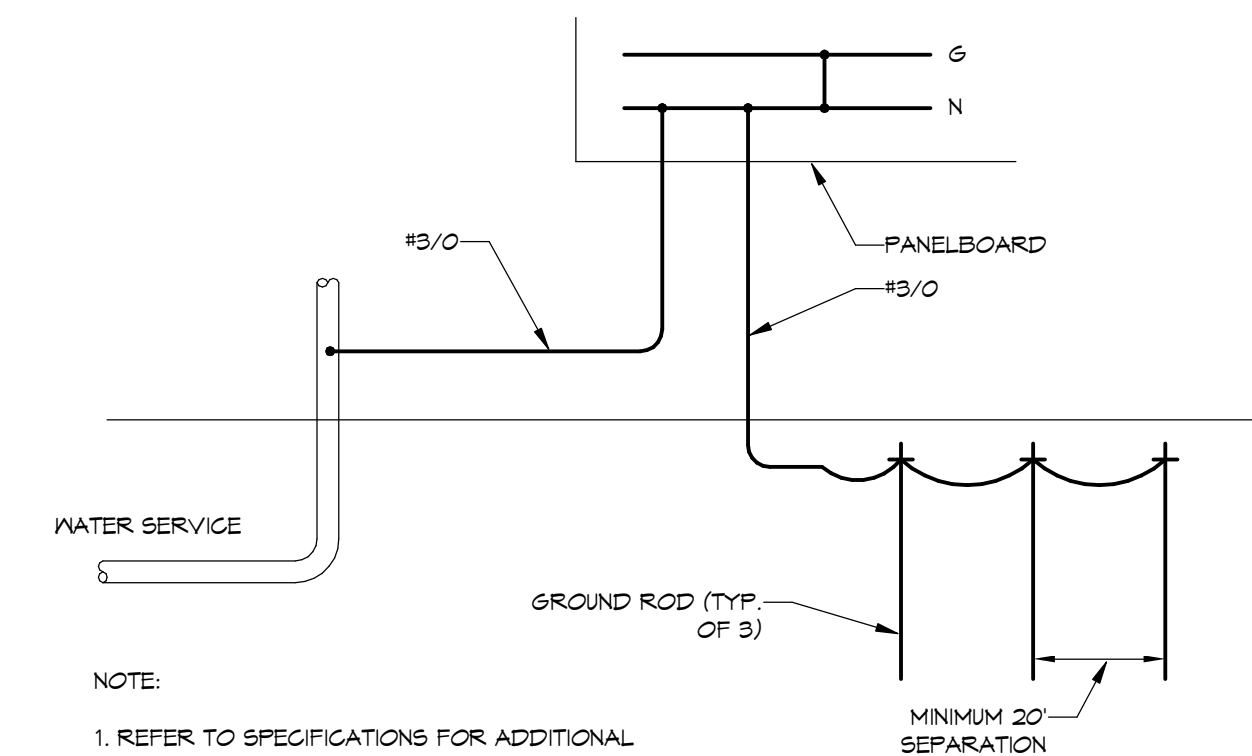


NOTE:
 1. PROVIDE MANUFACTURED SPACERS TO KEEP THE CONDUITS THE REQUIRED DISTANCE APART DURING THE POUR. INSTALL AS RECOMMENDED BY MANUFACTURER.

5 CONDUIT DETAIL (CONCRETE)
 E8.0 SCALE: NONE



2 FIRE ALARM SYSTEM ONE-LINE DIAGRAM
 E8.0 SCALE: NONE



3 GROUNDING ELECTRODE DETAIL
 E8.0 SCALE: NONE

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SCASD JOB #: 22-17

ELECTRICAL
 DETAILS

E8.0