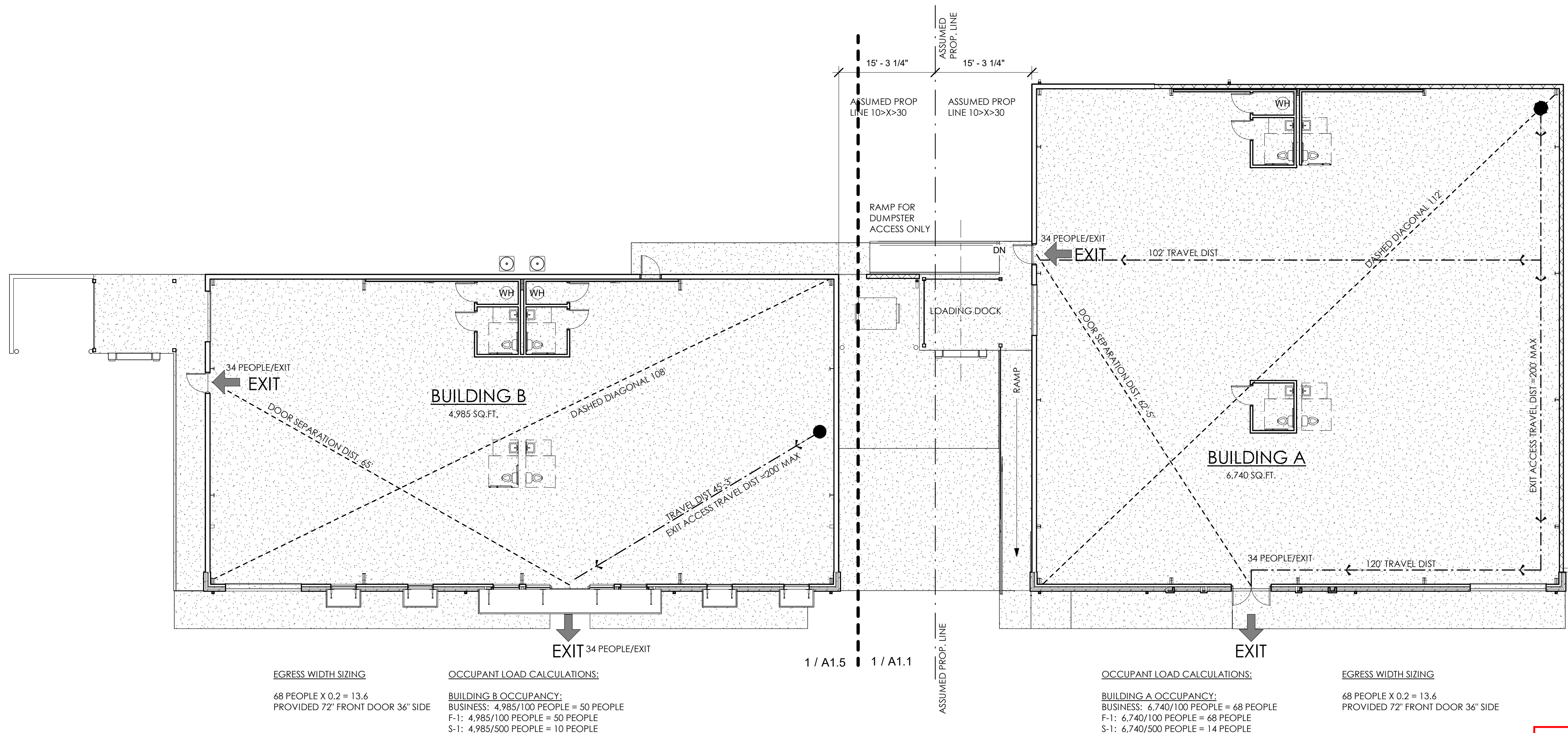


841 Flex Office Park

841 Charlotte Hwy.
841 Charlotte Hwy. Fairview, NC



1 3D View 1

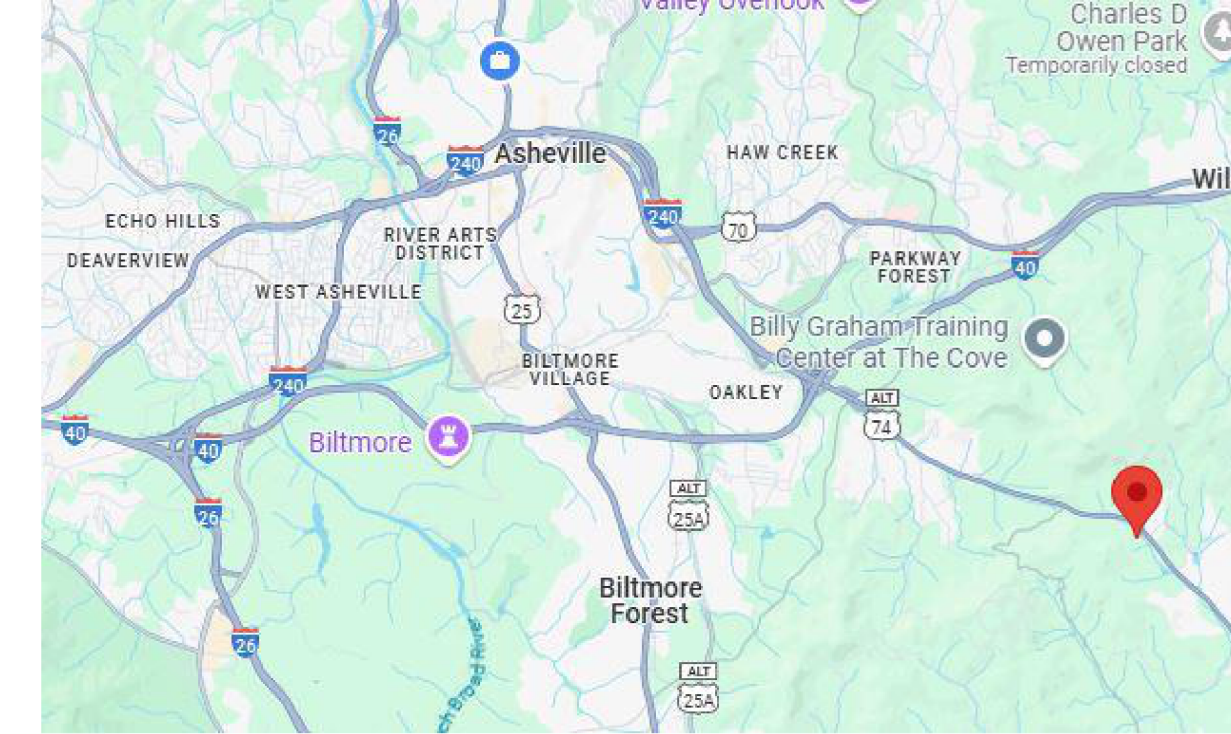


2 Level 1-Overall Plan-Life Safety Plan
3/32" = 1'-0"

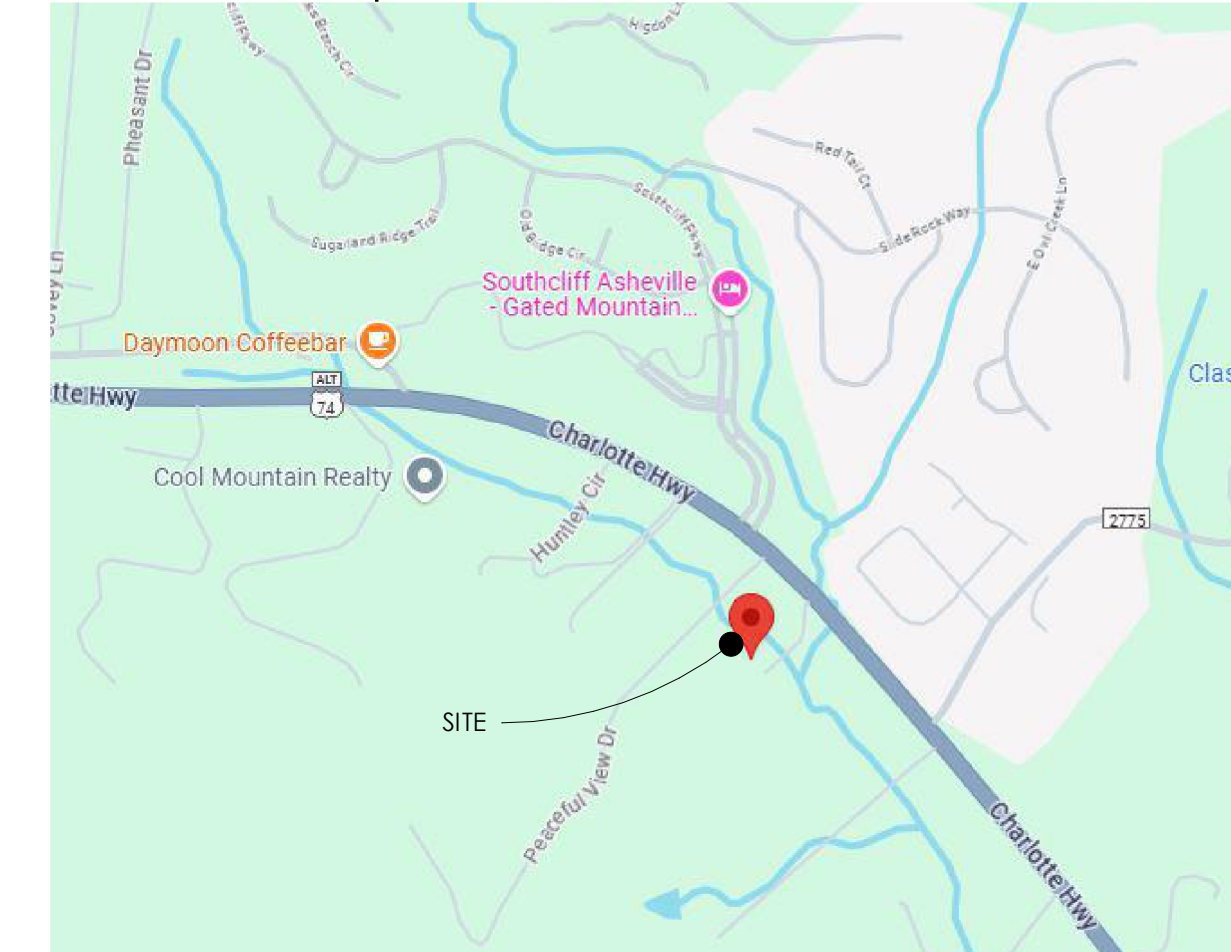
NOTES TO PLANS REVIEWER:

THIS CONSTRUCTION DOCUMENT SET IS FOR TWO FLEX OFFICE BUILDINGS LOCATED AT 841 CHARLOTTE HWY, FAIRVIEW, N.C. BOTH BUILDINGS ARE PRE-ENGINEERED METAL BUILDINGS. THIS CD SET IS FOR SHELL CONSTRUCTION ONLY. BOTH BUILDINGS ARE TO BE CONSTRUCTED SIMULTANEOUSLY. AN ASSUMED PROPERTY LINE DIVIDES THE TWO BUILDINGS. THE BUILDINGS ARE PERMITTED AS TYPE BUSINESS (B) OCCUPANCY W/ THE UNDERSTANDING THAT THEY COMPLY W/ THE REQUIREMENTS FOR F-1 & S-1 OCCUPANCY PER TENANT. THE BUILDING IS NON-SPRINKLED. CIVIL DRAWINGS HAVE BEEN PERMITTED UNDER A SEPARATE COVER.

Vicinity Map

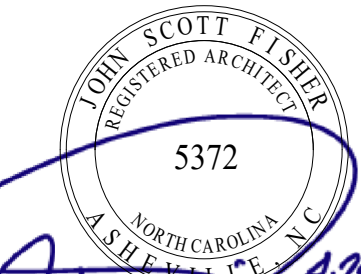


Location Map



REVISIONS

NO.	DATE	DESCRIPTION



John S. Fisher 4-24-25

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841 Flex Office Park
841 Charlotte Hwy.

SHEET TITLE
Title Sheet

DATE
04.26.25

JOB NO.
190770

SHEET
T1.1

Sheet List

Sheet Number	Sheet Name
T1.1	Title Sheet
T1.2	Appendix B
A1.1	Floor Plan-Building A
A2.1	Elevations
A3.1	Building Sections
A1.5	Building B Floor Plan
A2.2	Elevations Building B
A1.0	Overall Plan
A3.2	Building Sections Building A
A4.1	Wall Sections
A4.2	Sections @ Loading Dock
A1.2	Building A Reflected Ceiling Plan
A1.3	Roof Plan
A1.6	Building B Reflected Ceiling Plan
A1.7	Building B Roof Plan
A4.3	Loading Dock Section
S0.1	Structural Notes
S1.1	Overall Foundation Plan
S1.2	Foundation Plan-Building A
S1.3	Foundation Plan-Building B
S2.1	Foundation Sections-Details
S2.2	Foundation Sections-Details
S2.3	Schedules & Misc. Details
P1	Plumbing Notes & Schedules
P2	Plumbing Sanitary Piping Plan
P3	Plumbing Supply Piping Plan
P4	Plumbing Details
M1	Mechanical Notes & Schedules
M2	Mechanical Plan
E1	Electrical Notes & Schedules
E2	Lighting Plan
E3	Power Plan
E4	Riser Diagram & Panel Schedules

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**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)**
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: BUILDING A AND BUILDING B FLEX BUILDINGS
 Address: 841 CHARLOTTE HWY, FAIRVIEW NC Zip Code 28730
 Owner or Authorized Agent: MR. DEAN CLAYTON Phone # 828.290.2847 E-mail dclayton@soonpharmacy.com
 Owned By: Private
 Code Enforcement Jurisdiction: County

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Fisher Architects, PA	John Fisher	5372	(828) 253-8266	jfish@fisher-pa.com
Civil	Tilden White & Associates, PLLC	Tilden White	028953	(828) 255-4327	tilden@tildenwhite.com
Electrical	Tilden White & Associates, PLLC	Tilden White	028953	(828) 255-4327	tilden@tildenwhite.com
Fire Alarm	Tilden White & Associates, PLLC	Tilden White	028953	(828) 255-4327	tilden@tildenwhite.com
Plumbing	Kloesel Engineering, PAc	Benjamin Postle	0294998953	(828) 255-0780/4327	ben@kloesel-engineering.com
Mechanical					
Sprinkler-Standpipe					
Structural					
Retaining Walls > 5' High					
Other					

2018 NC BUILDING CODE: New Building
 2018 NC EXISTING BUILDING CODE:
 CONSTRUCTED (date) _____ CURRENT USE(S) (Ch. 3) _____
 RENOVATED: (date) _____ PROPOSED USE(S)(Ch. 3) _____
 RISK CATEGORY (Table 1604.5) Current: II Proposed: _____

BASIC BUILDING DATA
 Construction Type: V-B
 Sprinklers: No N/A
 Standpipes: N/A
 Primary Fire District: No Flood Hazard Area: No
 Special Inspections Required: No

FLOOR	EXIST SQ FT(BLDG)	EXIST SQ FT(TENANT)	NEW (SQ FT)	SUB TOTAL
3rd Floor				
2nd Floor				
Mezzanine				
1st Floor			BLDG A=6740 BULD B = 4966	
Basement				
TOTAL				

ALLOWABLE AREA

Primary Occupancy Classification(s): BUSINESS OCCUPANCY
Accessory Occupancy Classification(s):

Incidental Uses (Table 509): N/A
Special Uses (Chapter 4 - List Code Sections): N/A
Special Provisions (Chapter 5 - List Code Sections): N/A
Mixed Occupancy: No Separation: _____ Exception: _____
 $\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$
 _____ + _____ = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 506.2 AREA	(C) AREA FOR FRONTAGE INCREASE ^{1,2}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{3,4}
BLDG A	BUSINESS	6,740	9,000	N/A	N/A
BLDG B	BUSINESS	4,966	9,000	N/A	N/A

Frontage area increases from Section 506.3 are computed thus:
 a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
 b. Total Building Perimeter = _____ (P)
 c. Ratio (F/P) = _____ (F/P)
 d. W = Minimum width of public way = _____ (W)
 e. Percent of frontage increase $I = 100 [(F/P - 0.25) \times W/30] =$ _____ %
¹ Unlimited area applicable under conditions of Section 507.
² Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
³ The maximum area of open parking garages must comply with Table 406.5.4.
⁴ Frontage increase is based on the unsprinklered area value in Table 506.2.

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE ¹
Building Height in Feet (Table 504.3)	40	20' HAVT HGT BOTH BLDGS	
Building Height in Stories (Table 504.4)	2	1	

¹ Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4
² The maximum height of air traffic control towers must comply with Table 412.3.1.
³ The maximum height of open parking garages must comply with Table 406.5.4.

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	DETAIL # AND SHEET	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural frame, including columns, girders, trusses	10<X<30	OHR				
Bearing Walls						
Exterior						
North		N/A				
East		N/A				
West		N/A				
South		N/A				
Interior		N/A				
Nonbearing walls and partitions						
Exterior walls						

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)**

DESIGN LOADS:
 Importance Factors: Snow (I) _____
 Seismic(I) _____
 Live Loads: Roof _____ psf
 Mezzanine _____ psf
 Floor _____ psf
 Ground Snow Load: _____ psf
 Wind Load: Basic Wind Speed _____ mph (ASCE-7)
 Exposure Category _____

SEISMIC DESIGN CATEGORY:
 Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) _____
Spectral Response Accelerations S_s _____ %g S_1 _____ %g
Site Classification (ASCE 7) _____
 Data Source: _____
Basic Structural System:
 Bearing Wall Dual w/Special Moment Frame
 Building Frame Dual w/Intermediate R/C or Special Steel
 Moment Frame Inverted Pendulum
 Analysis Procedure _____ Simplified _____ Equivalent Lateral Force _____ Modal
 Architectural, Mechanical, Components anchored? _____

LATERAL DESIGN CONTROL:
SOIL BEARING CAPACITIES:
 Field Test (provide copy of test report) _____ psf
 Presumptive Bearing Capacity _____ psf
 Pile Size, type and capacity _____

North	10<X<30	OHR					
East	X>30	OHR					
West	10<X<30	OHR					
South	X>30	OHR					
Interior walls and partitions		OHR					
Floor Construction Including supporting beams and joists		OHR					
Floor Ceiling Assembly		OHR					
Columns Supporting Floors		N/A					
Roof Construction Including supporting beams and joists		OHR					
Roof Ceiling Assembly		OHR					
Columns Supporting Roof		OHR					
Shaft Enclosures - Exit		N/A					
Shaft Enclosures - Other		N/A					
Corridor Separation		N/A					
Occupancy/Fire Barrier Separation		N/A					
Party/Fire Wall Separation		N/A					
Smoke Barrier Separation		N/A					
Smoke Partition		N/A					
Tenant/Dwelling Unit/Sleeping Unit Separation		N/A					
Incidental Use Separation		N/A					

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
NO OPENINGS			
NORTH, WEST ELEVS			
SOUTH BLDG A	15' TO LESS THAN 20	25%	

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: Yes
 Exit Signs: Yes
 Fire Alarm: No
 Smoke Detection Systems: No
 Carbon Monoxide Detection: Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: _____
 Fire and/or smoke rated wall locations (Chapter 7)
 Assumed and real property line locations (if not on the site plan)
 Exterior wall opening area with respect to distance to assumed property line (705.8)
 Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.2)
 Occupant loads for each area.

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)**

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
 winter dry bulb _____
 summer dry bulb _____

Interior Design Conditions
 winter dry bulb _____
 summer dry bulb _____
 relative humidity _____

Building heating load:
Building cooling load:
Mechanical Spacing Conditioning System
 Unitary description of unit heating efficiency cooling efficiency size category of the unit:
 Boiler Size category. If oversized, state reason
 Chiller Size category. If oversized, state reason

List equipment efficiencies:

- Exit access travel distances (1017)
- Common path of travel distance (1006.2.1 & 1006.3.2(1))
- Dead end lengths (1020.4)
- Clear exit widths for each exit door
- Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- Actual occupant load for each exit door
- A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- Location of doors with panic hardware (1010.1.10)
- Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- Location of doors with electromagnetic egress locks (1010.1.9.9)
- Location of doors equipped with hold-open devices.
- Location of emergency escape windows (1030)
- Square footage of each fire area (202)
- The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- Note any code exceptions or table notes that may have been utilized regarding itmes above

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL # ACCESSIBLE UNITS PROVIDED
	NOT APPLICABLE						

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	8' ACCESS AISLE	
	PERMITTED UNDER SEPARATE COVER					
TOTAL						

USE	WATER CLOSETS			URINALS	LAVATORIES		SHOWERS	DRINKING FOUNTAINS
	MALE	FEMALE	UNISEX	MALE	FEMALE/UNISEX	/TUBS	REGULAR	ACCESSIBLE
SPACE EXISTING								
NEW			2			2		
REQUIRED			2			2		

SPECIAL APPROVALS

Special Approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)**

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT
Method of Compliance:
 Prescriptive Performance Energy Cost Budget

Lighting Schedule
 Lamp type required in fixture
 number of lamps in fixture
 ballast type used in fixture
 number of ballasts in fixture
 total wattage per fixture
 total interior wattage specified vs. allowed (whole building or space by space)
 total exterior wattage specified vs. allowed

**Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)**

- C406.2 More Efficient HVAC Equipment Performance
- C406.3 Reduced Lighting Power Density
- C406.4 Enhanced Digital Lighting Controls
- C406.5 On-Site Renewable Energy
- C406.6 Dedicated Outdoor Air System
- C406.7 Reduced Energy Use in Service Water Heating

ENERGY SUMMARY

ENERGY REQUIREMENTS:
 The following data shall be considered minimum and any special attribute required to meet energy code shall also be provided. Each designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs. annual energy cost for the proposed design.

Existing building envelope complies with code: No Yes (the remainder of this section is not applicable)
Exempt Building: Provide code or statutory reference:
Climate Zone:
Method of Compliance:
 (If "Other" specify source here)

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
 Description of assembly
 U-Value of total assembly
 R-Value of insulation
 Skylights in each assembly
 U-Value of skylight
 total square footage of skylights in each assembly

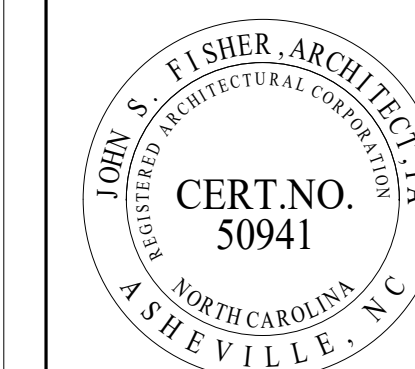
Exterior walls (each assembly) REFERENCE GENERAL NOTE ON PLAN SHEETS
 Description of assembly
 U-Value of total assembly
 R-Value of insulation
 Openings (windows or doors with glazing)
 U-Value of assembly
 Solar heat gain coefficient
 projection factor
 Door R-Values

Walls below grade (each assembly)
 Description of assembly
 U-Value of total assembly
 R-Value of insulation

Floors over unconditioned space (each assembly)
 Description of assembly
 U-Value of total assembly
 R-Value of insulation

Floors slab on grade
 Description of assembly
 U-Value of total assembly
 R-Value of insulation
 Horizontal/vertical requirement
 slab heated

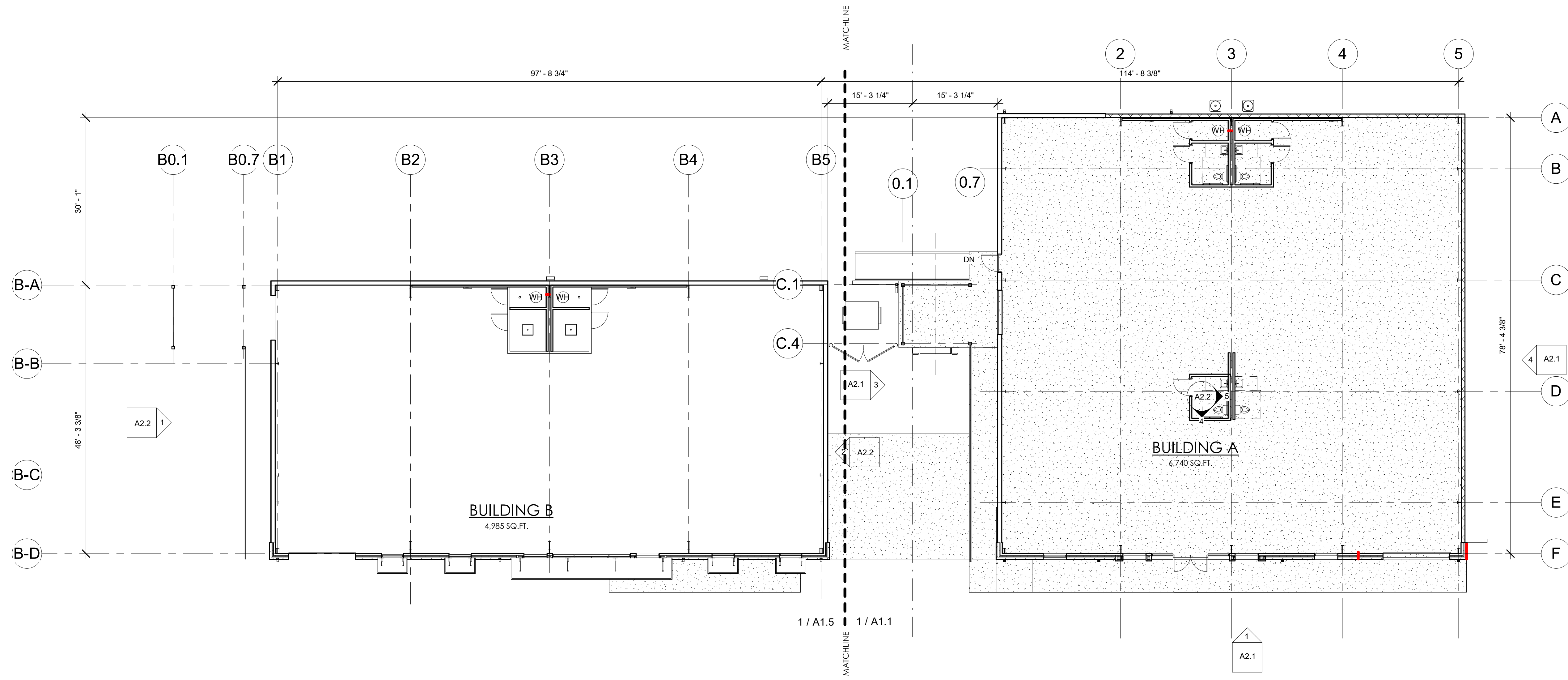
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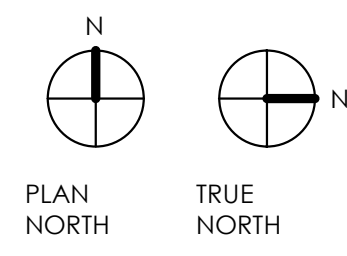
**841 Flex Office Park
841 Charlotte Hwy.**

Appendix B
 SHEET T1.2
 DATE 04.28.25
 JOB NO. 190770



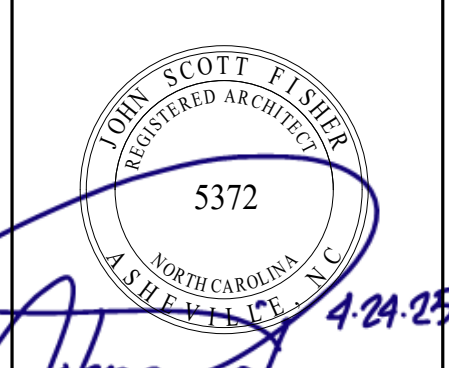
GENERAL NOTES:

1. G.C. TO COORDINATE ALL PLANS WITH CIVIL DRAWINGS ISSUED UNDER SEPARATE COVER. COORDINATE ALL AREAS WHERE FINISHED FLOOR ELEV. IS BELOW GRADE. THIS OCCURS AT RETAINING WALLS, RAMPS.
2. G.C. TO COORDINATE & PROVIDE METAL BUILDING SHOP DRAWINGS TO OWNER & ARCHITECT PRIOR TO BUILDING ORDER. MTL BLDG. LAYOUT BASED UPON TYPICAL MTL BLDG. G.C. TO VERIFY MTL BLDG. LAYOUT UPON PURCHASE OF BUILDING & NOTIFY ARCH. OF ANY LAYOUT DISCREPANCIES. LINER SYSTEM THERMAL BREAK FOAM TAPE ON EXTERIOR FACE OF GIRT UNFACED BATT BETWEEN GIRTS STRAPPING & VAPOR BARRIER @ INTERIOR FACE OF GIRT. R15.8 CI
3. ALL 4" MASONRY FACADE TO EXTEND BELOW FINISHED FLOOR ELEV. @ SIDEWALK RAMP SLOPE VARIANCES; TYP. BOTH BUILDINGS.
4. G.C. TO COORDINATE WITH PLUMBING SHEETS FOR FUTURE STUB-UPS.
5. G.C. TO COORDINATE WITH SITE PLANS FOR ALL EXTERIOR SIDEWALKS, RAMPS, DOCKS.



1 Level 1-Overall Plan
3/32" = 1'-0"

REVISIONS



John S. Fisher
4.24.25

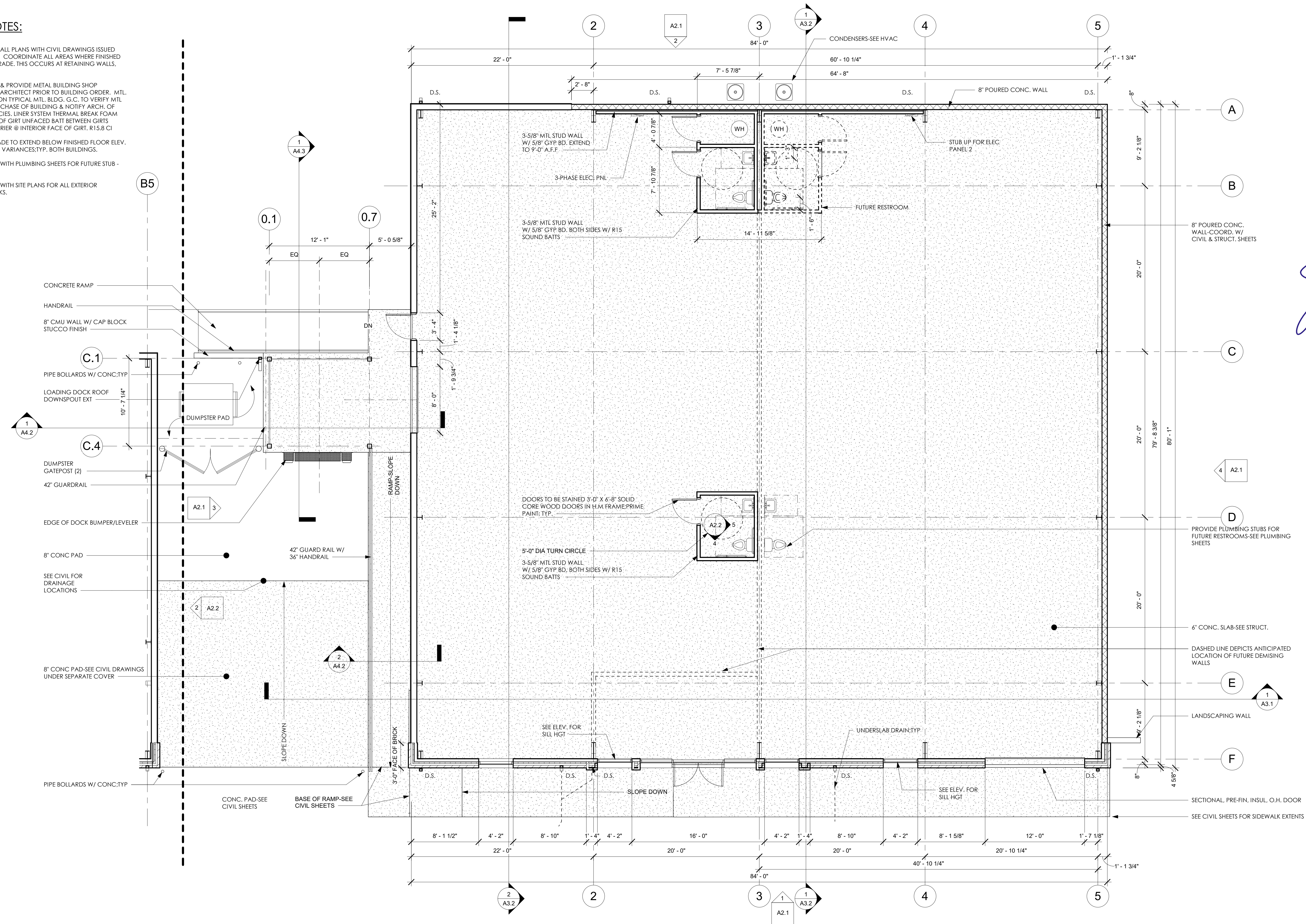
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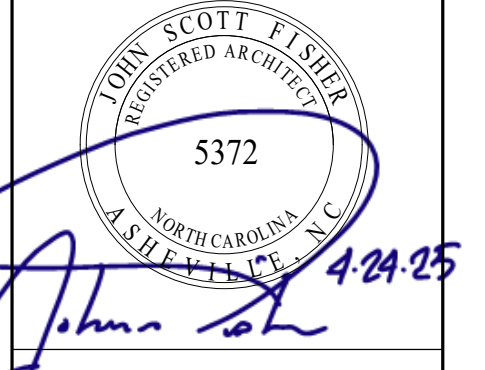
SHEET TITLE Overall Plan	DATE 04.26.25	JOB NO. 190770
	SHEET A1.0	

GENERAL NOTES:

- G.C. TO COORDINATE ALL PLANS WITH CIVIL DRAWINGS ISSUED UNDER SEPARATE COVER. COORDINATE ALL AREAS WHERE FINISHED FLOOR ELEV. IS BELOW GRADE. THIS OCCURS AT RETAINING WALLS, RAMPS.
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- G.C. TO COORDINATE WITH PLUMBING SHEETS FOR FUTURE STUB-UPS.
- G.C. TO COORDINATE WITH SITE PLANS FOR ALL EXTERIOR SIDEWALKS, RAMPS, DOCKS.



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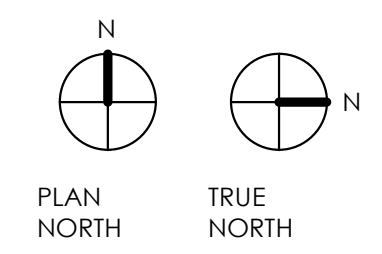
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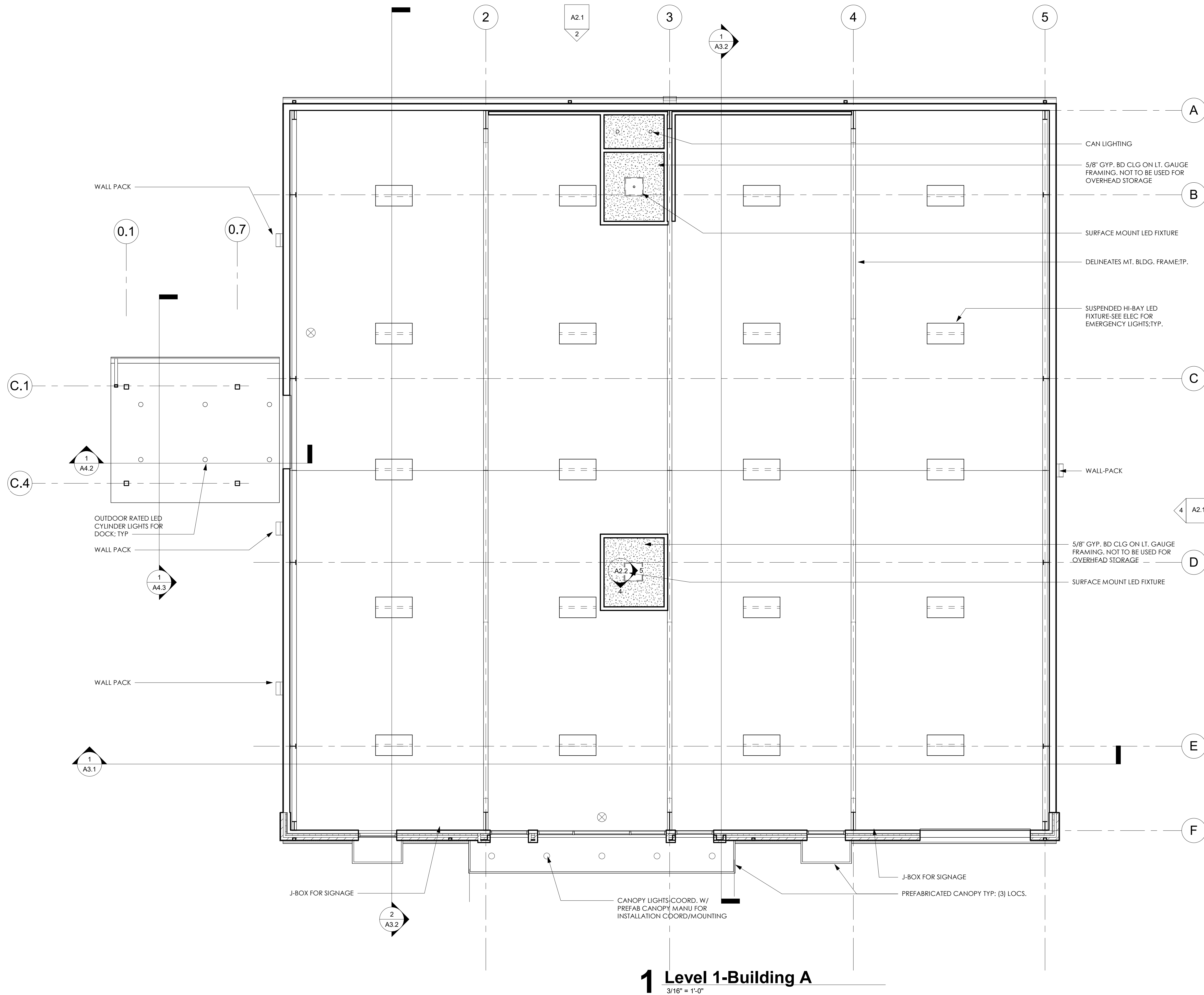
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841 Flex Office Park
841 Charlotte Hwy.

SHEET TITLE Floor Plan-Building A	DATE 04.26.25	JOB NO. 190770
	SHEET A1.1	

1 Level 1-Building A
3/16" = 1'-0"





1 Level 1-Building A
3/16" = 1'-0"

ROOF PLAN NOTES:

1. MTL BLD. CANOPY BASIS OF DESIGN AIRVENT EXTERIORS SERIES 300. OWNER TO SELECT COLOR. G.C. / ELEC. SUB TO COORDINATE LIGHTING INSTALLATION W/ CANOPY.
2. EXTERIOR LIGHTING TO BE CONTROLLED BY HOUSE PNL W/ TIMECLOCK.
- 3.

REVISIONS

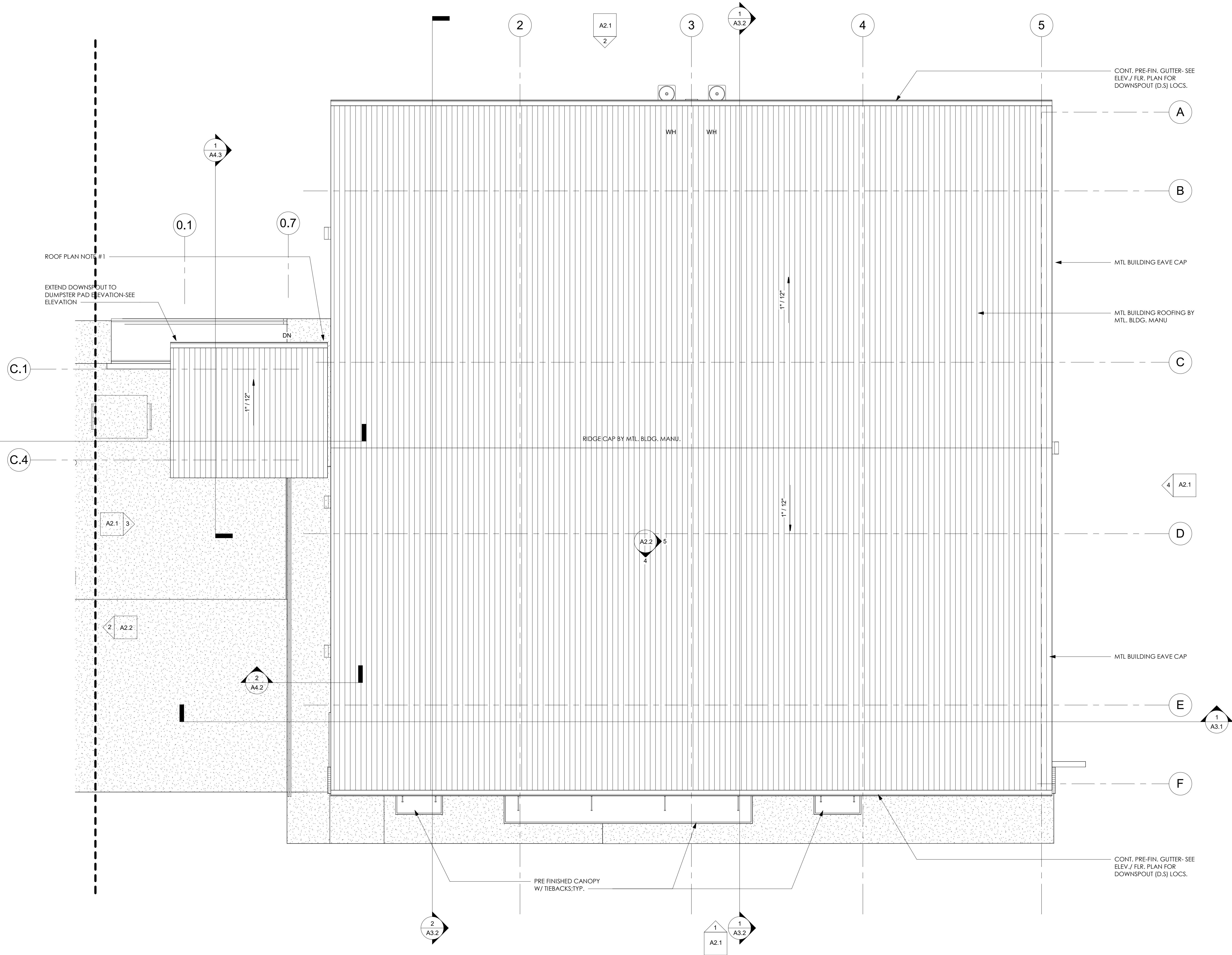


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SHEET TITLE Building A Reflected Ceiling Plan	DATE	04.28.25
	JOB NO.	190770
SHEET A1.2		



- ROOF PLAN NOTES:**
- NOTE: LOADING DOCK CANOPY IS NOT TO CONNECT TO BUILDING. SEE SECTION FOR DISTANCE FROM BUILDING OR GREATER IF NEEDED TO FINISH INSIDE RAKE TRIM.
 - MTL BUILDING PANEL COLORS ELECTED BY OWNER. DOWNSPOUT COLORS SELECTED BY OWNER
 -

NO.	DESCRIPTION

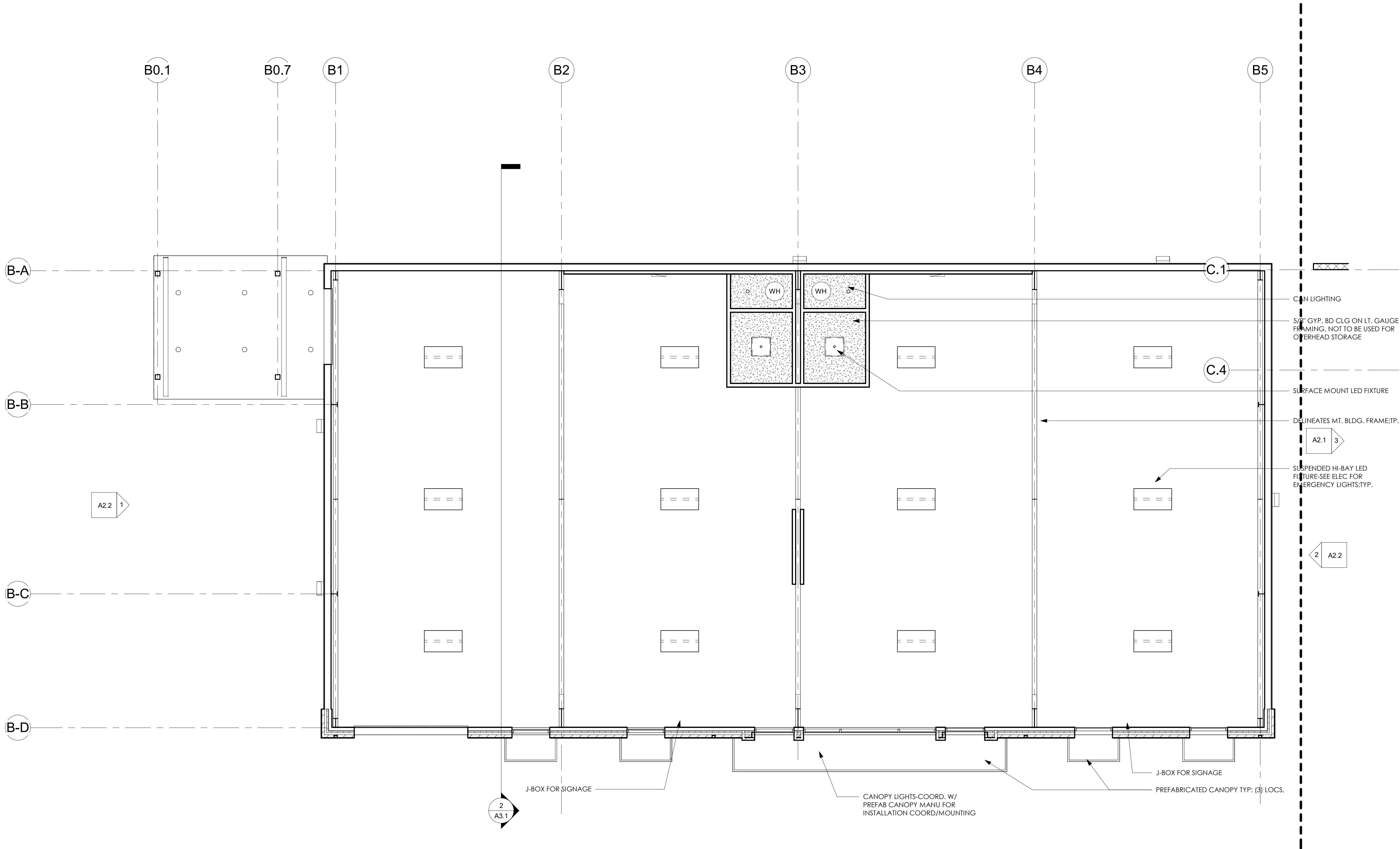


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1 Roof
 3/16" = 1'-0"

SHEET TITLE	Roof Plan	
	SHEET	A1.3
DATE	04.26.25	JOB NO. 190770
JOB NO.		



- CAN LIGHTING
- 5/8" GYP. BD CLG ON LT. GAUGE FRAMING. NOT TO BE USED FOR OVERHEAD STORAGE
- SURFACE MOUNT LED FIXTURE
- DELINEATES MT. BLDG. FRAME/TP.
- SUSPENDED HI-BAY LED FIXTURE-SEE ELEC FOR EMERGENCY LIGHTS:TYP.

1 Level 1-Buidling B
3/16" = 1'-0"

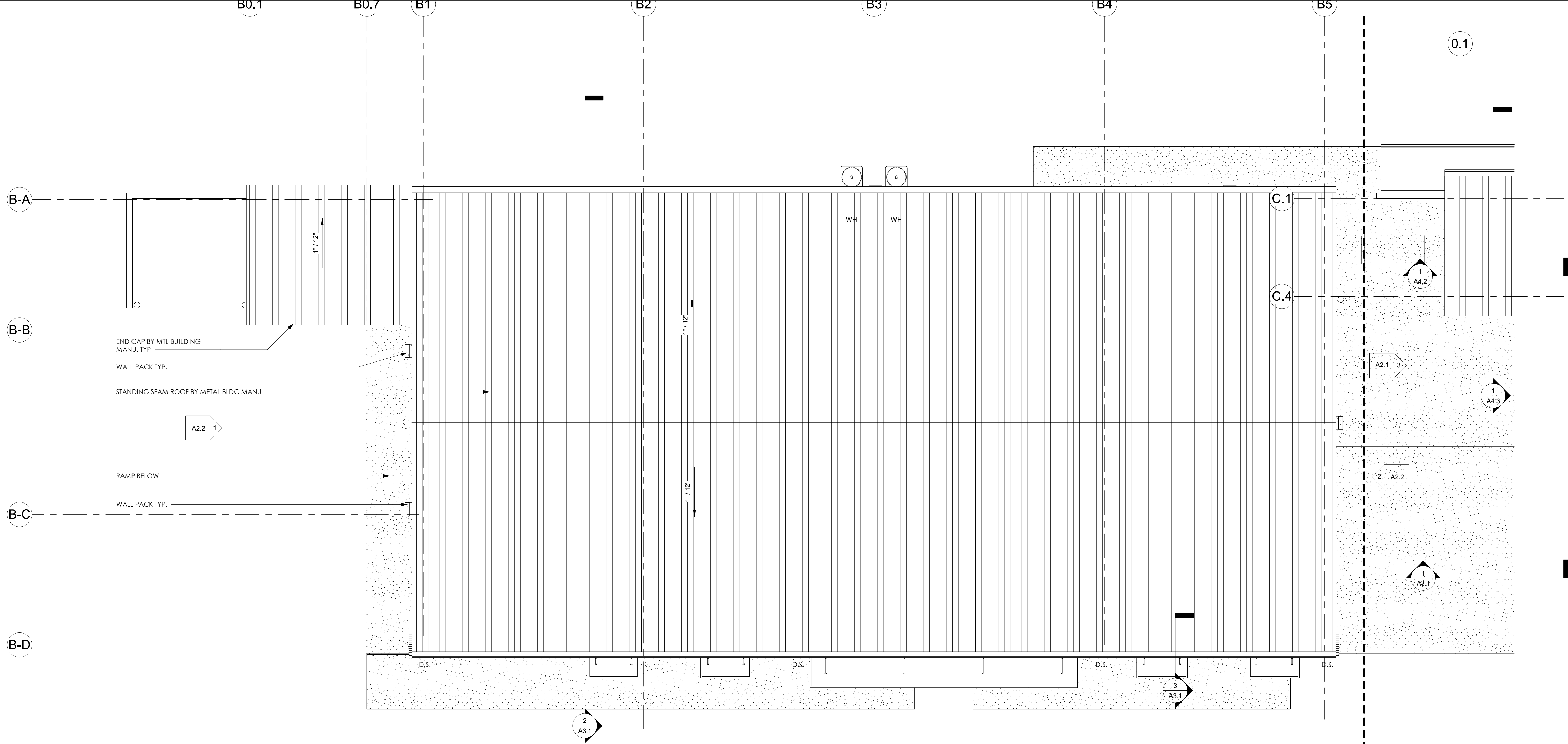
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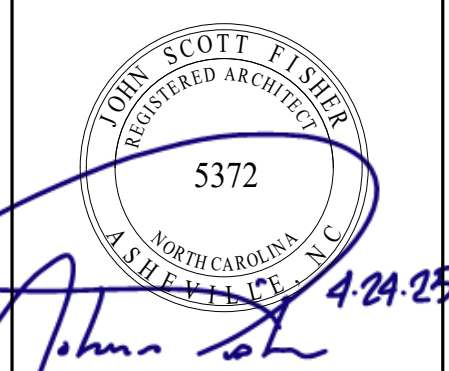
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SHEET TITLE Building B Reflected Ceiling Plan	DATE	04.26.25
	JOB NO.	190770
SHEET A1.6		



1 Roof Building B
3/16" = 1'-0"

NO.	REVISIONS

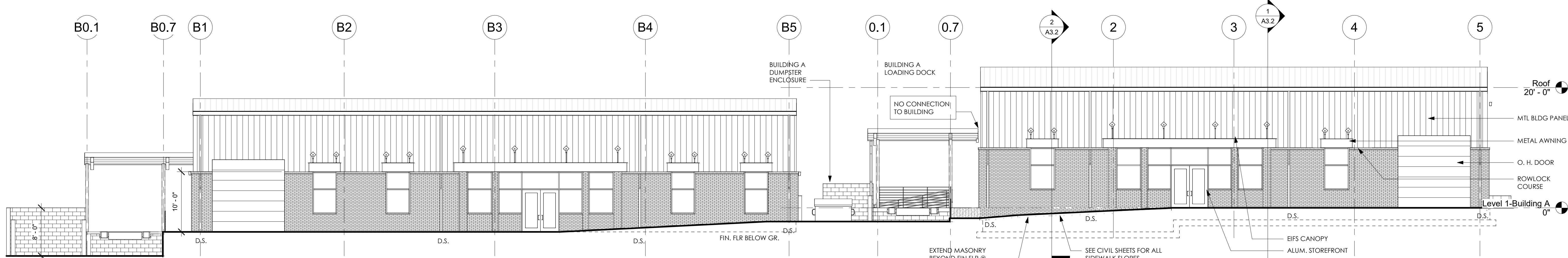


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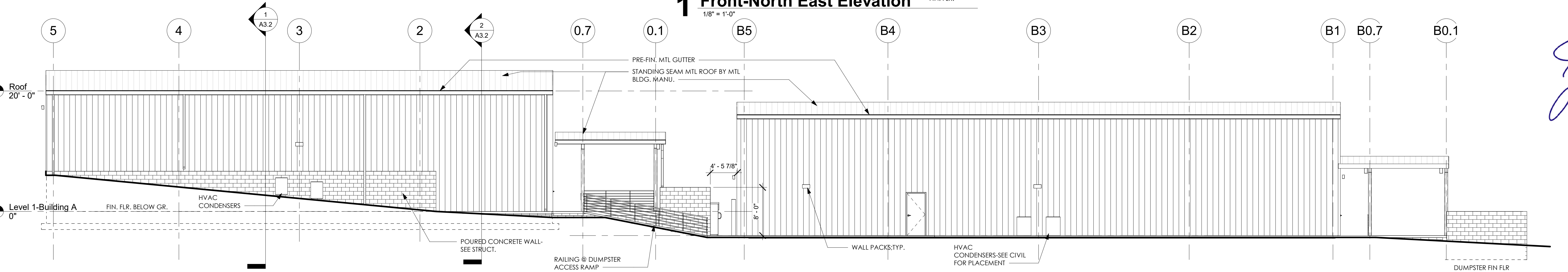
841 Charlotte Hwy, Fairview, NC

841 Flex Office Park
841 Charlotte Hwy.

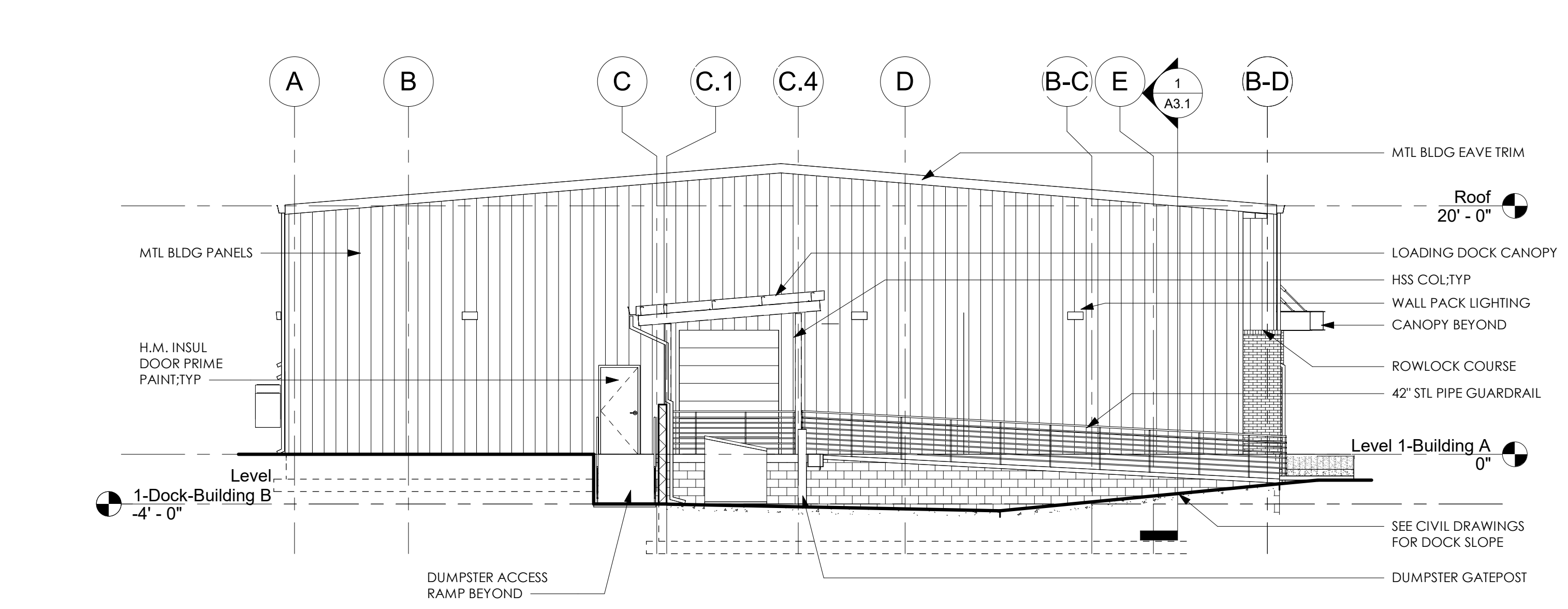
SHEET TITLE Building B Roof Plan	DATE	04.26.25
	JOB NO.	190770
SHEET A1.7		



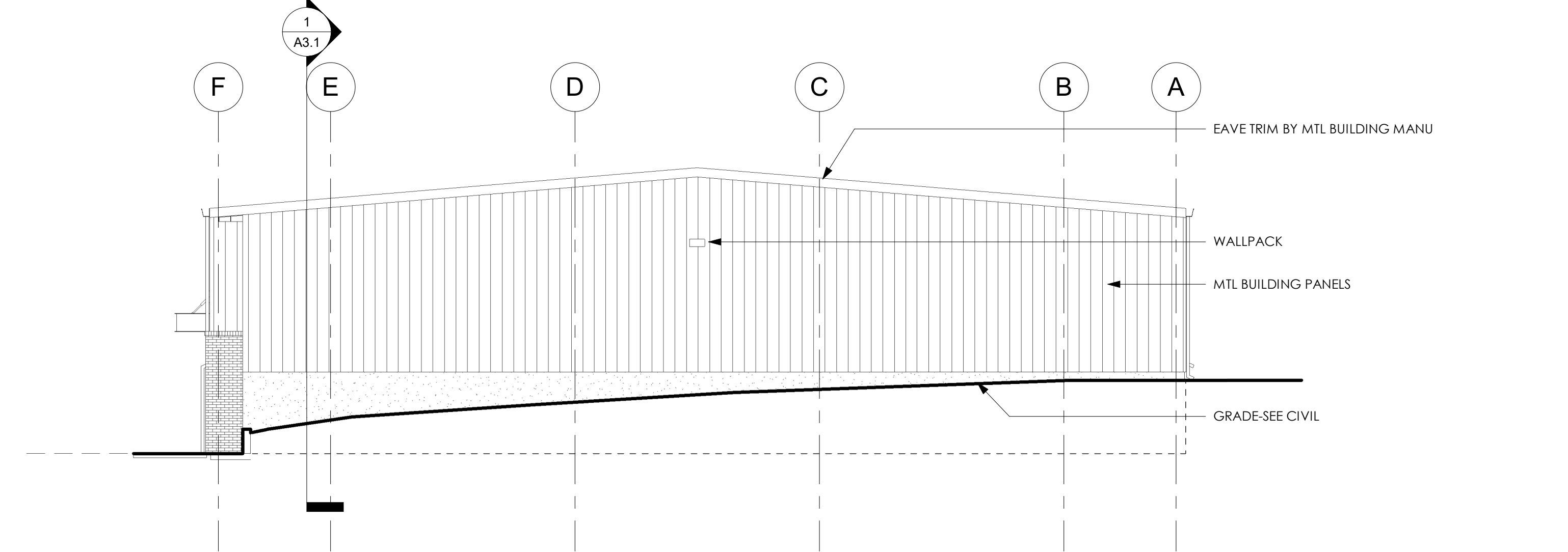
1 Front-North East Elevation
1/8" = 1'-0"



2 Rear- South West Elevation
1/8" = 1'-0"

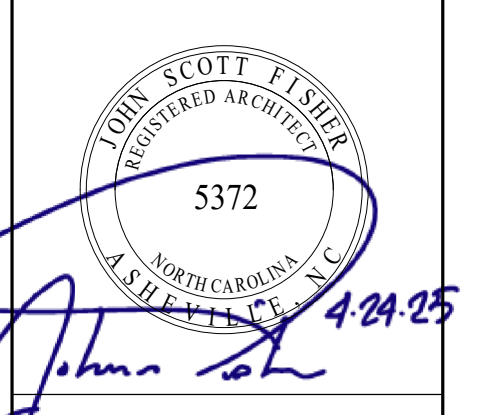


3 Building A South Elevation
1/8" = 1'-0"



4 NorthWest Elev.
1/8" = 1'-0"

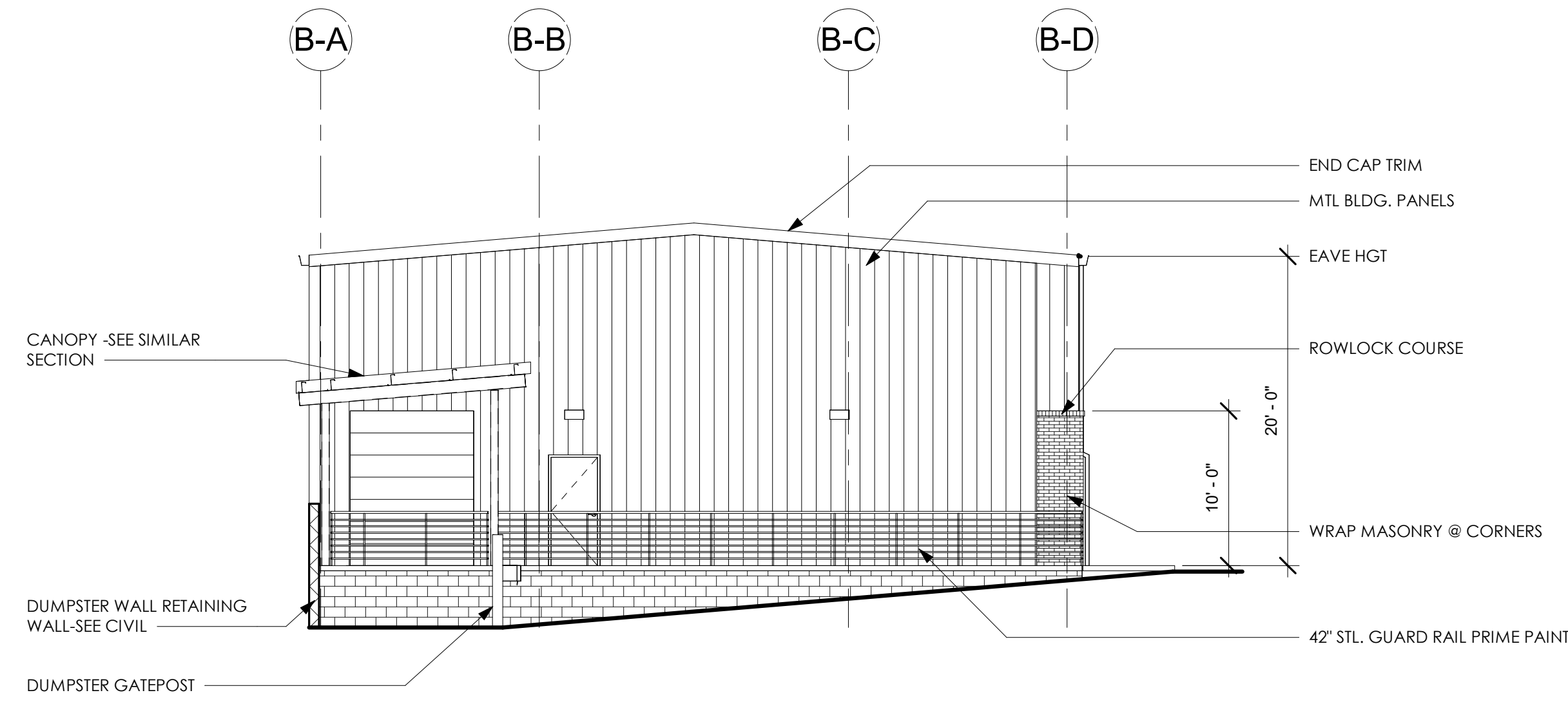
REVISIONS	



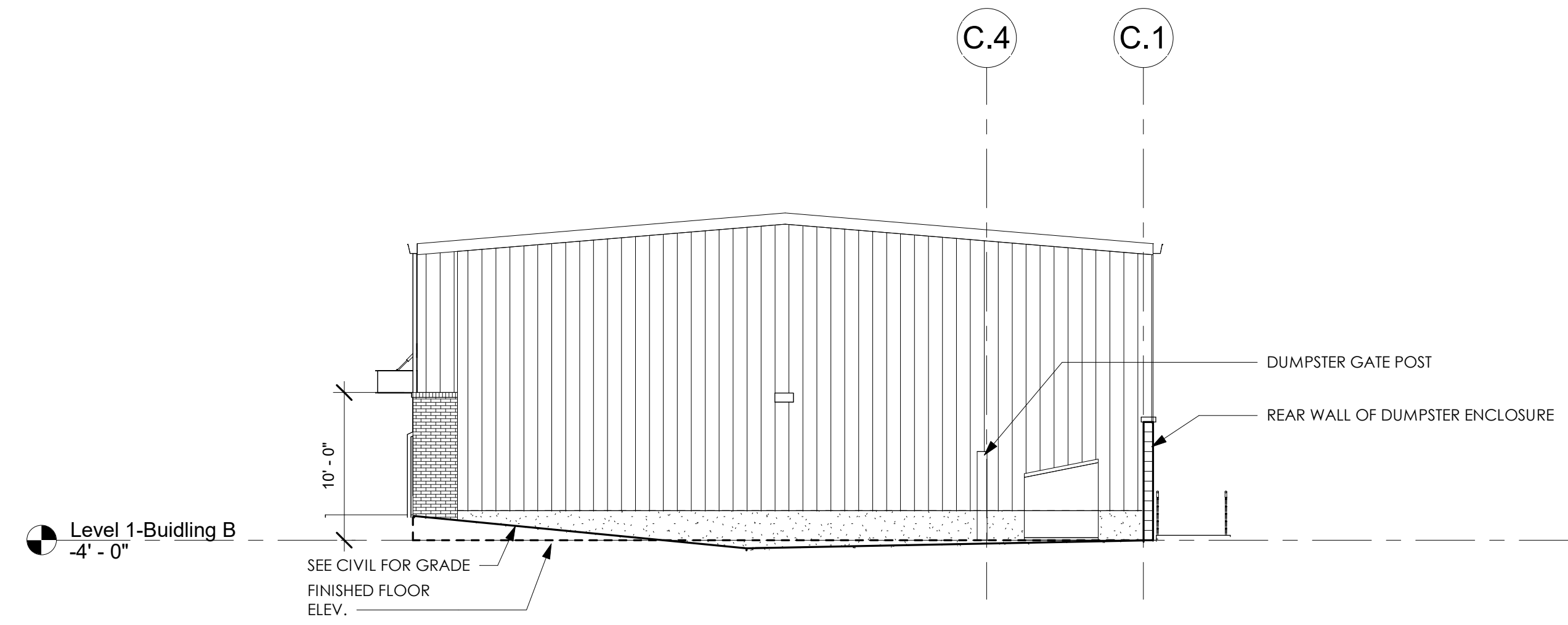
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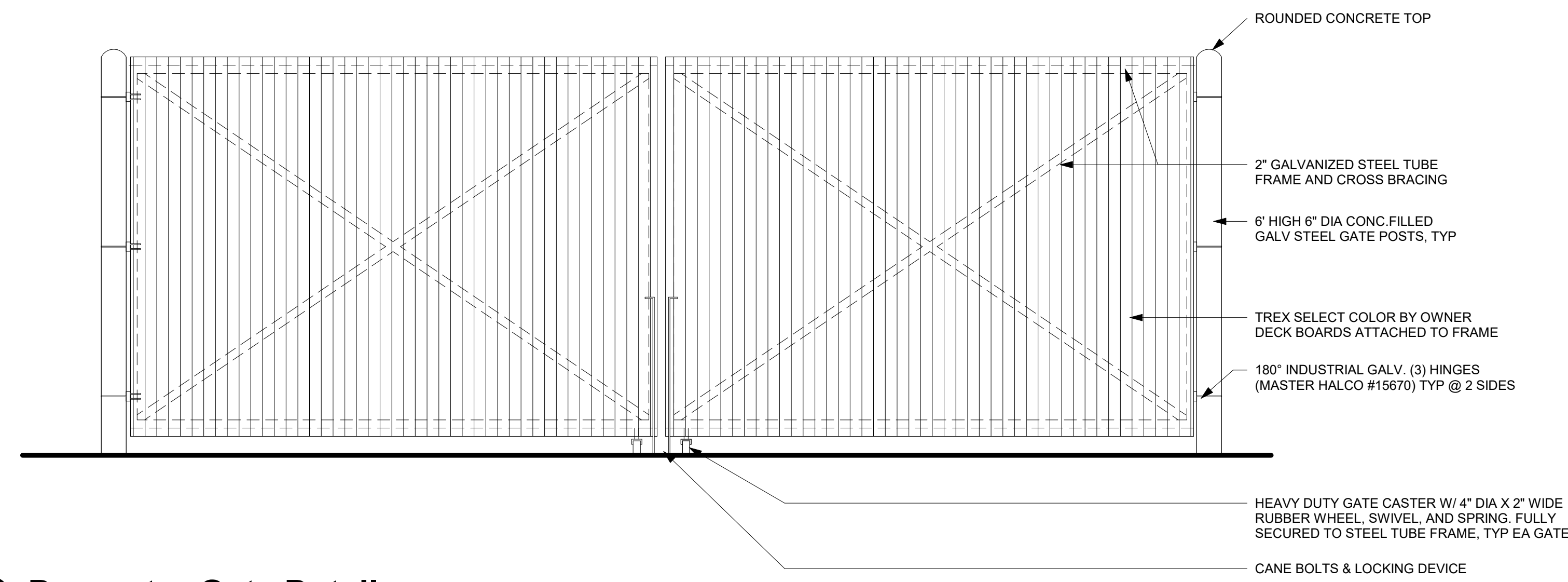
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	JOB NO.	190770
SHEET A2.1		



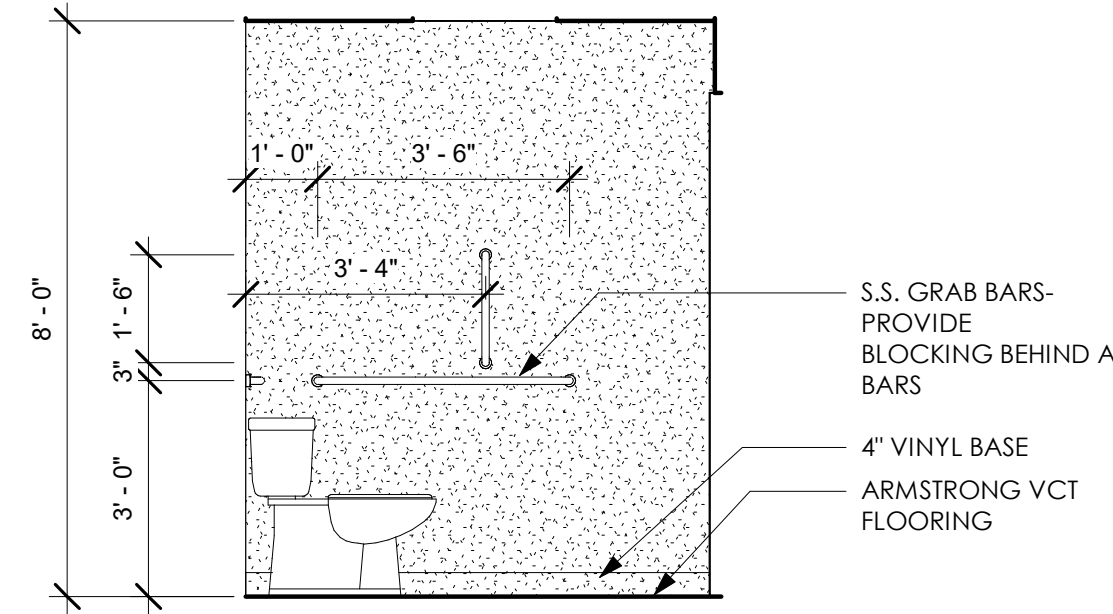
1 Building B South Elevation
1/8" = 1'-0"



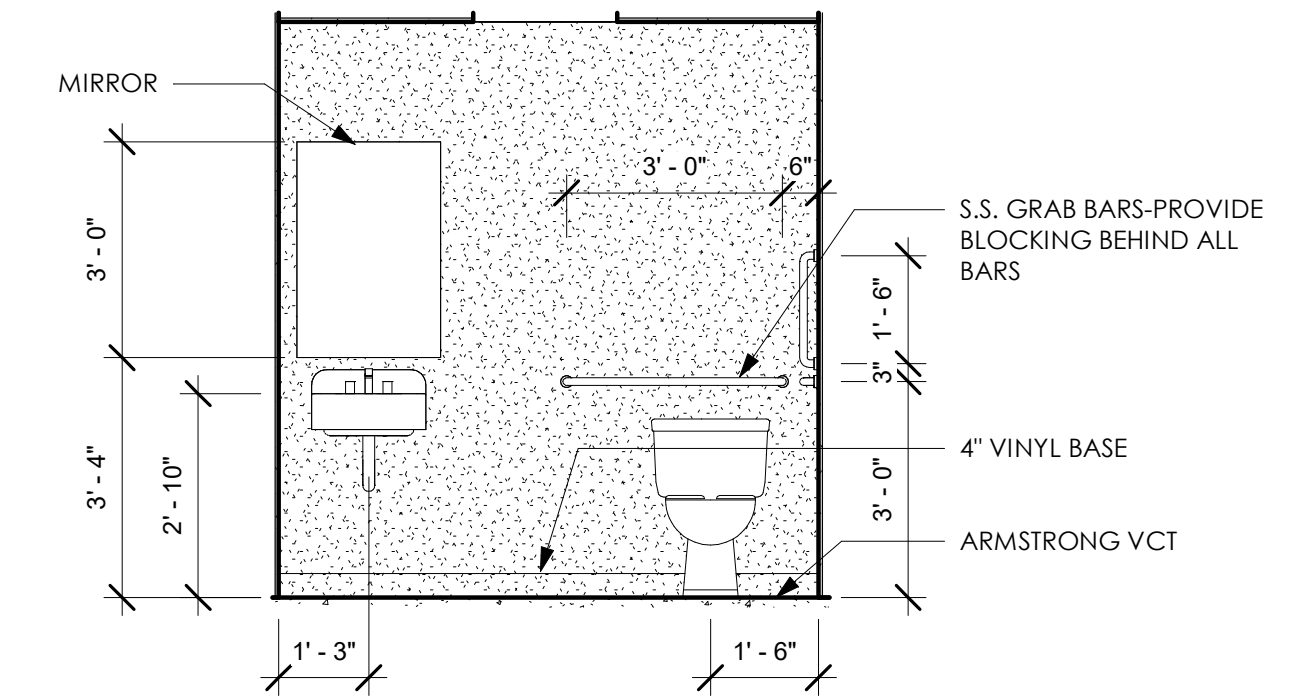
2 Buidling B North elevation
1/8" = 1'-0"



3 Dumpster Gate Detail
1/2" = 1'-0"



4 Typ. Restroom Elev. 1
3/8" = 1'-0"



5 Typ. Restroom Elev. 2
3/8" = 1'-0"

REVISIONS



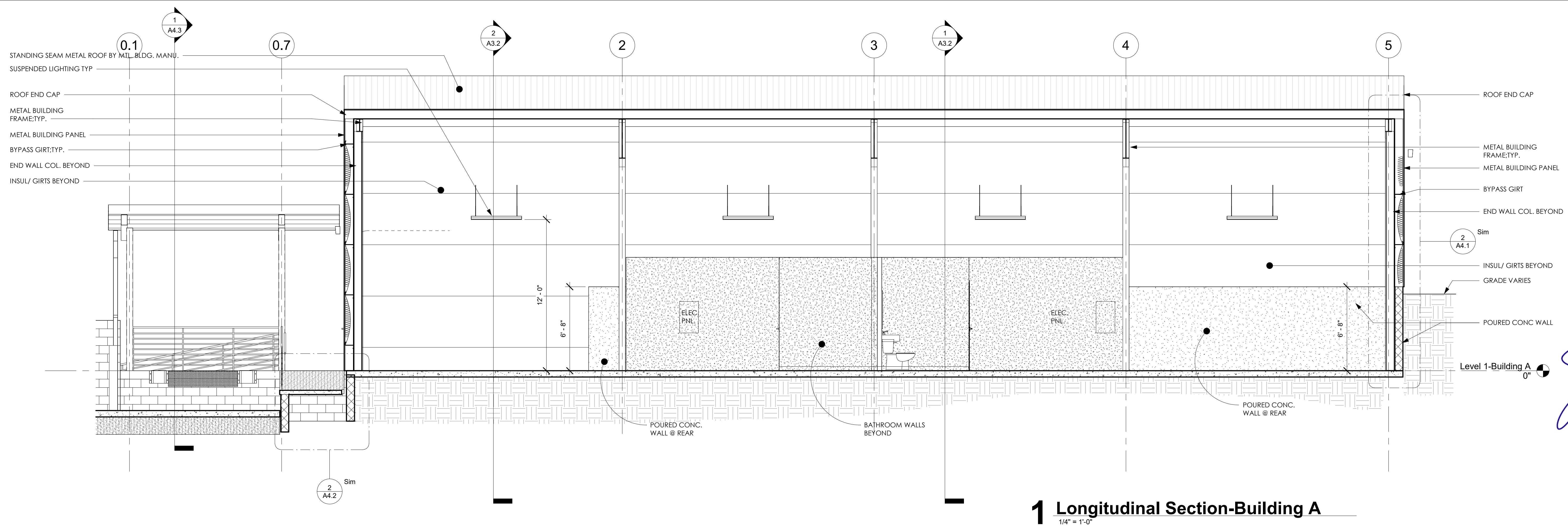
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4-24-25

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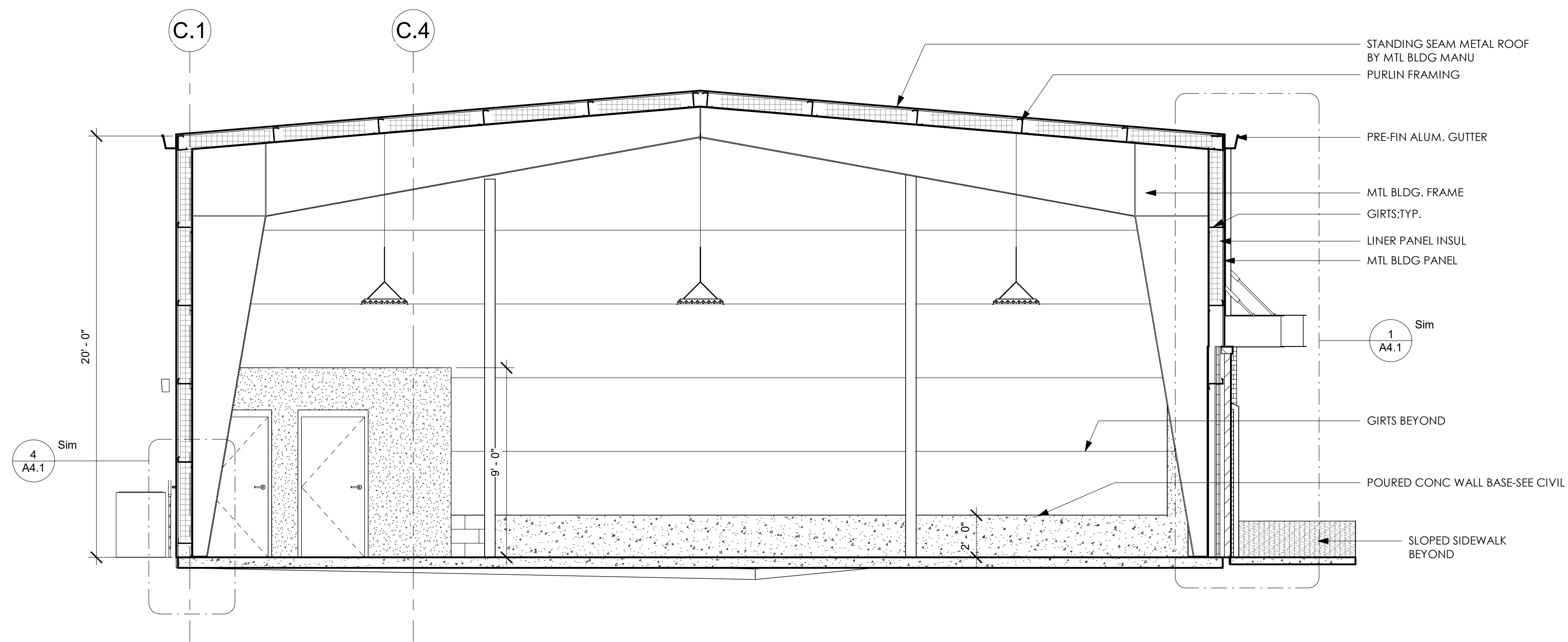
841 Charlotte Hwy, Fairview, NC

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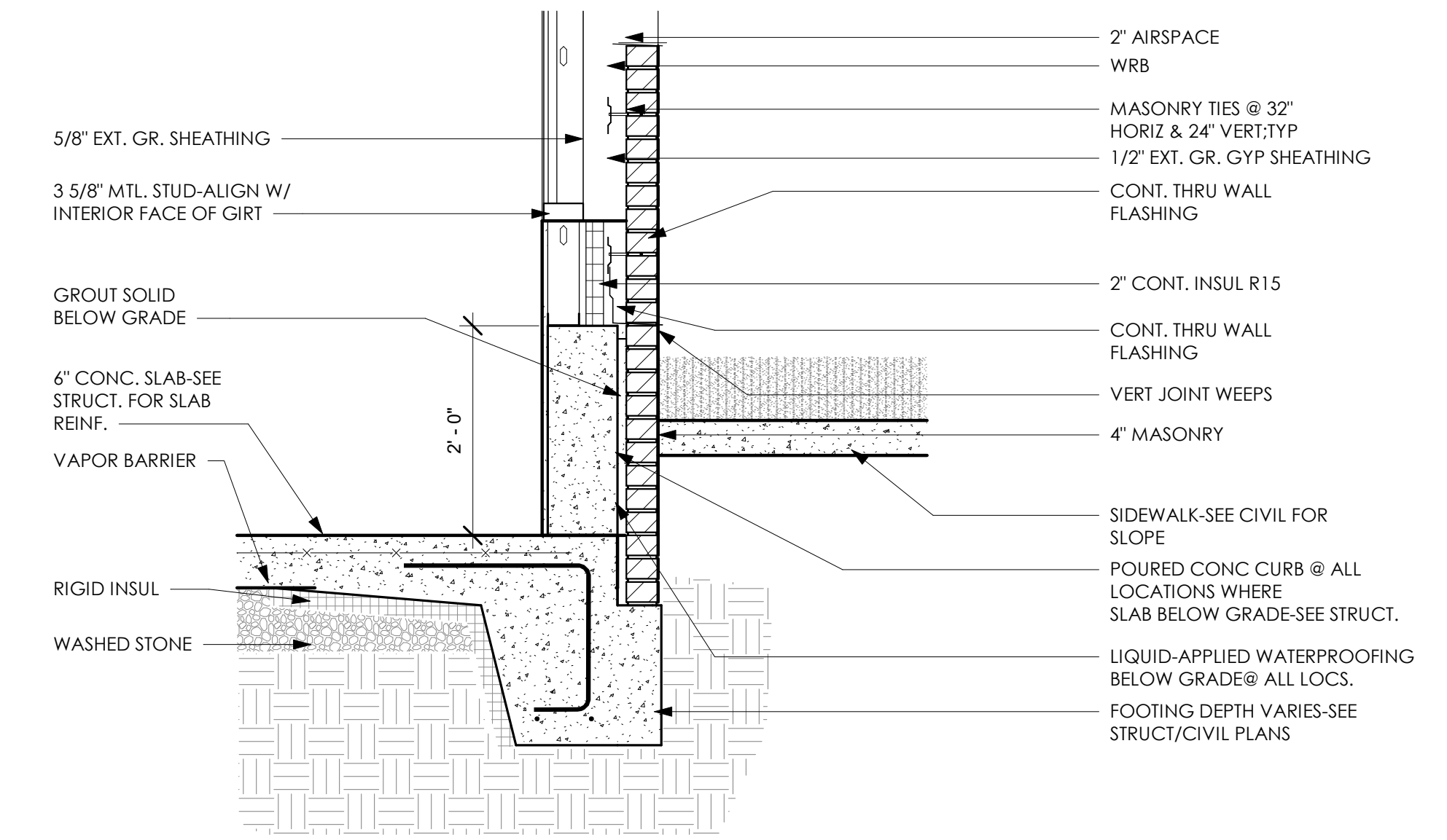
SHEET TITLE Elevations Building B	DATE 04.26.25	JOB NO. 190770
	SHEET A2.2	



1 Longitudinal Section-Building A
1/4" = 1'-0"



2 Transverse Section Building B
1/4" = 1'-0"



3 Typ. Section @ Base of Wall
3/4" = 1'-0"

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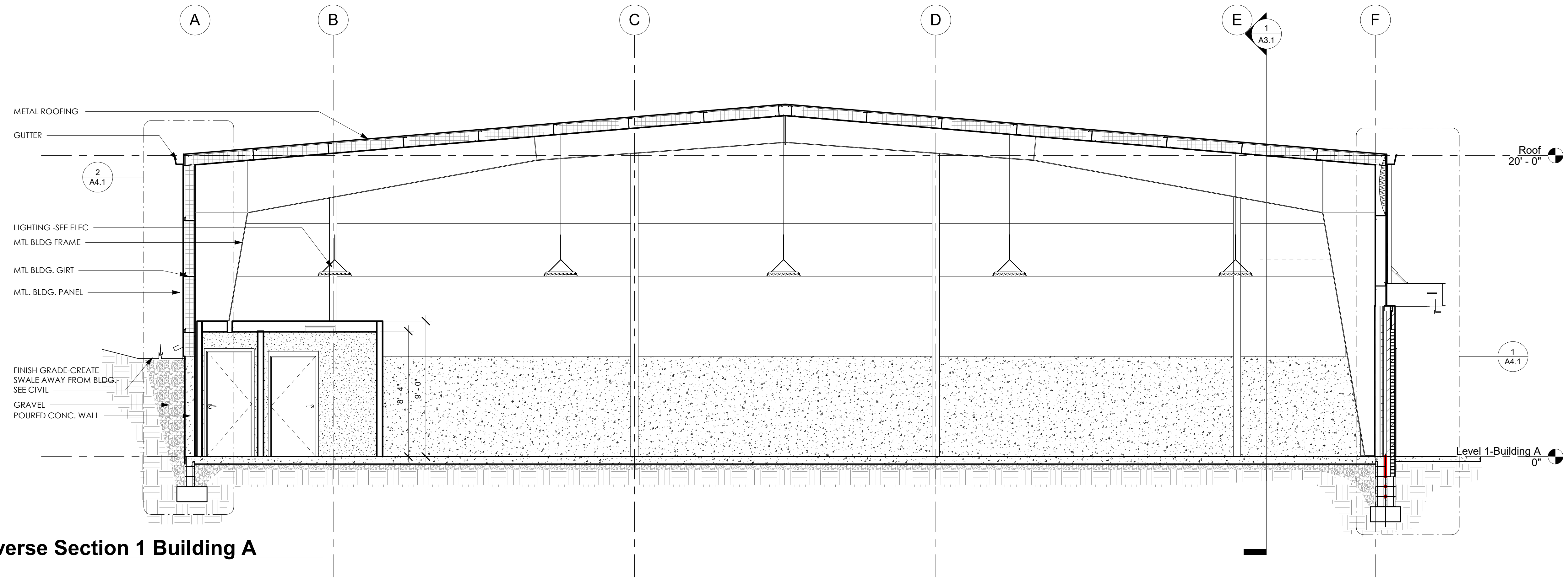
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5372
NORTH CAROLINA
ASHEVILLE, NC
4-04-25

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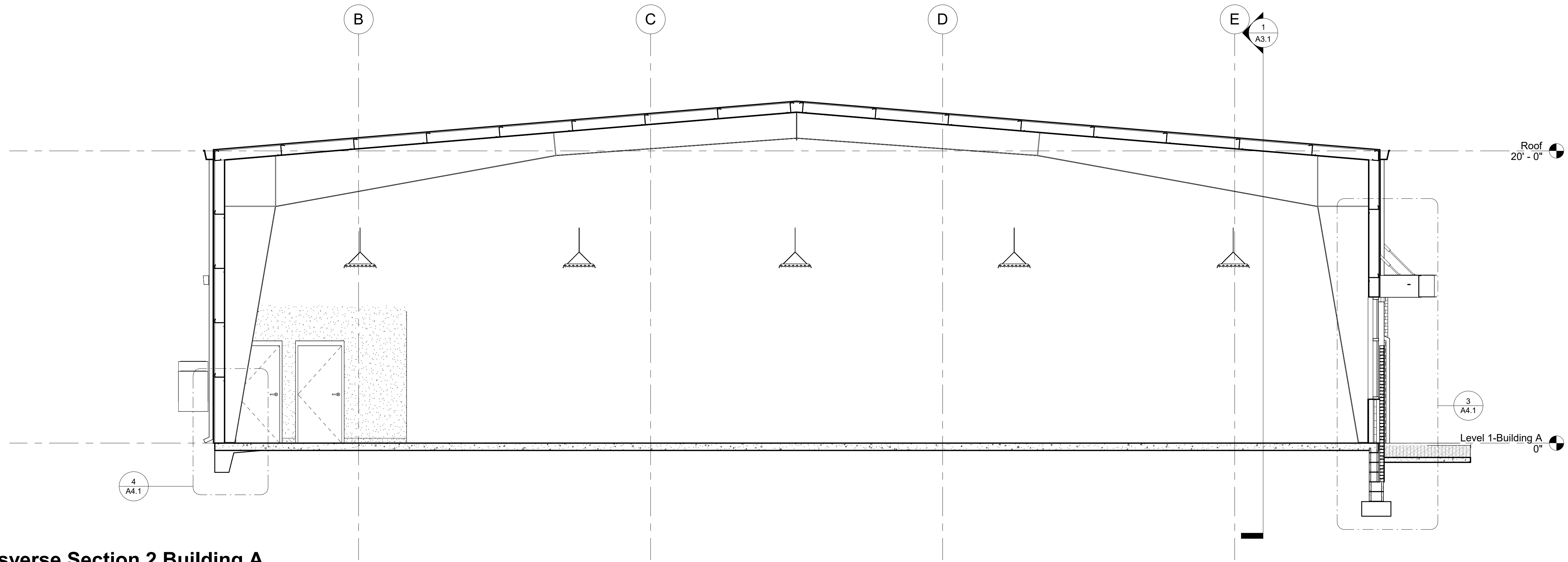
Building Sections

A3.1

SHEET TITLE: Building Sections
SHEET: A3.1
DATE: 04.26.25
JOB NO.: 190770

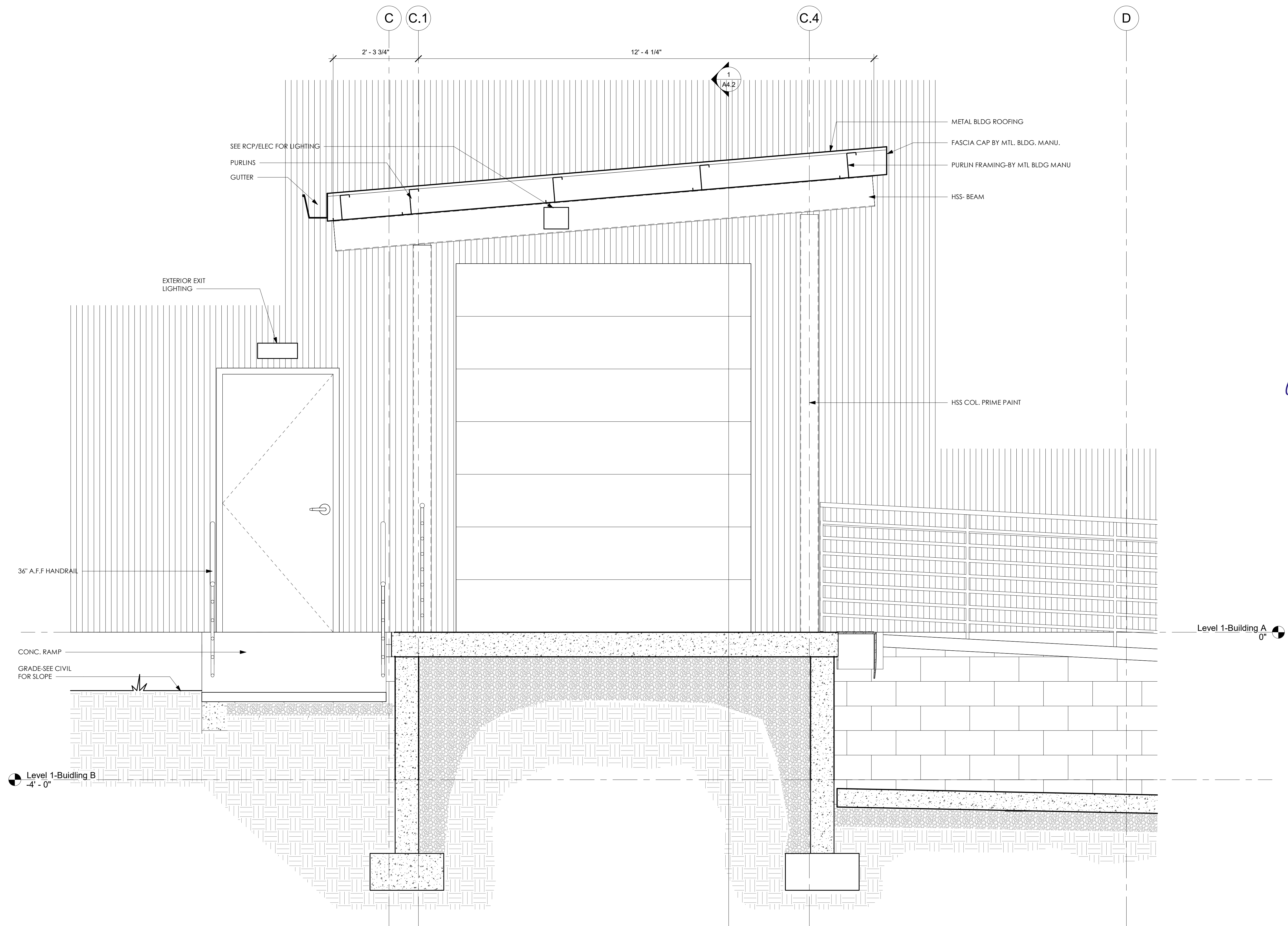


1 Transverse Section 1 Building A
1/4" = 1'-0"



2 Transverse Section 2 Building A
1/4" = 1'-0"

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<p>841 Charlotte Hwy, Fairview, NC</p>	
<p>SHEET TITLE Building Sections Building A</p>	<p>DATE 04.26.25</p>
<p>SHEET A3.2</p>	<p>JOB NO. 190770</p>



1 Section @ Typ. Covered Dock
 3/4" = 1'-0"

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SHEET TITLE Loading Dock Section	DATE	04.26.25
	JOB NO.	190770
SHEET	A4.3	

STRUCTURAL NOTES

GE - GENERAL

- 1. THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE - 2018 EDITION (2015 INTERNATIONAL BUILDING CODE WITH CURRENT NORTH CAROLINA AMENDMENTS).

- 2. THE DESIGN LOADS ARE AS FOLLOWS:

Table with 2 columns: LIVE LOAD, ROOF. Value: 20 PSF.

Table with 2 columns: SNOW LOAD, GROUND SNOW LOAD, FLAT ROOF SNOW LOAD, SNOW EXPOSURE FACTOR, SNOW LOAD IMPORTANCE FACTOR, THERMAL FACTOR. Values: 15 PSF, 15 PSF, 1.0, 1.0, 1.1.

Table with 2 columns: WIND LOAD, BASIC WIND SPEED, RISK CATEGORY, WIND EXPOSURE, INTERNAL PRESSURE COEFFICIENT, COMPONENTS AND CLADDING, DESIGN CODE REFERENCE PUBLICATION. Values: 115 MPH, 90 MPH, II, C, +0.18, PER ASCE 7-10, ASCE 7-10.

Table with 2 columns: SEISMIC LOAD, SEISMIC RISK CATEGORY, SEISMIC DESIGN CATEGORY, SPECTRAL RESPONSE ACCELERATION, SPECTRAL RESPONSE COEFFICIENTS, SITE CLASS, SEISMIC IMPORTANCE FACTOR, BASIC SEISMIC-FORCE-RESISTING SYSTEM, RESPONSE MODIFICATION FACTOR, SEISMIC RESPONSE COEFFICIENT, DESIGN BASE SHEAR, ANALYSIS PROCEDURE, LATERAL DESIGN CONTROL. Values: II, C, 31%G, 11%G, 48%G, 26%G, 32%G, 17%G, D, 1.0, STRUCTURAL STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE, 3.0, 0.11, BY PEMB MANUFACTURER EQUIVALENT LATERAL FORCE PROCEDURE (ELF) PER SECTION 12.8 ASCE 7-10, WIND.

PRE-ENGINEERED SYSTEMS AND COMPONENTS SHALL BE DESIGNED BASED ON THE MINIMUM LOAD REQUIREMENTS PER ASCE-7 AND THE ABOVE BASIC LOAD PARAMETERS.

- 4. THE STRUCTURE HAS BEEN DESIGNED TO WITHSTAND IN-SERVICE LOADS ONLY. METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
5. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS, AND DRAWINGS OF OTHER TRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE WORK OF ALL TRADES IS COORDINATED WITH THE STRUCTURAL WORK.
6. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE TOTAL CONTRACT DOCUMENTS. DO NOT SCALE THE DRAWINGS. FOLLOW WRITTEN DIMENSIONS ONLY.
7. ANYTHING WHICH, IN THE OPINION OF THE CONTRACTOR, APPEARS TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS, OR AMBIGUITIES IN THE PLANS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER. CORRECTIONS OR WRITTEN INTERPRETATIONS SHALL BE ISSUED BEFORE CONSTRUCTION OF THE AFFECTED WORK MAY PROCEED.
8. DETAILS ARE MARKED AT THE SPECIFIC LOCATION WHERE THEY APPLY, BUT ALSO INDICATE GENERAL CONSTRUCTION REQUIREMENTS FOR OTHER LOCATION WITH SIMILAR CONDITIONS. DETAILS NOTED AS "TYPICAL" MAY NOT BE REFERENCED ON THE DRAWINGS. TYPICAL DETAILS APPLY AT ALL LOCATIONS WHERE THE TYPE OF CONSTRUCTION SHOWN IN THE TYPICAL DETAIL OCCURS.
9. WHERE CONFLICTS OCCUR BETWEEN NOTES, DRAWINGS, OR SPECIFICATIONS, THE CONTRACTOR SHALL NOT PROCEED WITH THE AFFECTED WORK UNTIL THE STRUCTURAL ENGINEER ISSUES A CLARIFICATION.
10. UNIFORM LIVE LOADS HAVE BEEN REDUCED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 1607.9 OF THE NC STATE BUILDING CODE.
11. HORIZONTAL AND VERTICAL CLEARANCES FROM THE EXISTING ADJACENT STRUCTURE SHALL BE VERIFIED BEFORE CONSTRUCTION IS BEGUN. VARIATIONS FROM THE DIMENSIONS INDICATED ON THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER.
12. SEVERAL STRUCTURAL ELEMENTS REQUIRE THE CONTRACTOR TO ENGAGE A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA TO PROVIDE DESIGN AND/OR DETAILING. SEE INDIVIDUAL NOTE SECTIONS, STRUCTURAL DRAWINGS, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. DELEGATED DESIGN ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:

- Specialty Foundation System
Post-Tensioned Concrete
Structural Precast Concrete
Architectural Precast Concrete
Structural Steel Connections
Steel Stairs and Railings
Steel Joists & Steel Joist Girders
Prefabricated Metal Building
Roof Anchors
Non-load bearing cold-formed steel
Load bearing cold-formed steel
Light gauge cold-formed steel trusses
Pre-fabricated wood trusses

FO - FOUNDATION

- 1. FOUNDATION DESIGN IS BASED ON A PRESUMPTIVE ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
2. ALL FOOTINGS SHALL BE FOUNDED ON UNDISTURBED SOIL OR A CONTROLLED FILL HAVING A BEARING CAPACITY OF 2000 PSF. AT THE ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEER TO VERIFY ALLOWABLE SOIL BEARING PRESSURE BEFORE FOOTINGS ARE CAST.

CO - CONCRETE

- 1. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE NATURAL SAND FINE AGGREGATE AND NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33, TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150, AND SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH (FCI) AT 28 DAYS: FOOTINGS AND PIERS 3000 PSI w/ NO ENTRAINED AIR (FLY ASH OPTIONAL) INTERIOR SLAB ON GRADE 3000 PSI w/ NO ENTRAINED AIR (FLY ASH OPTIONAL) INTERIOR SLAB ON GRADE TO BE POLISHED 3500 PSI w/ NO ENTRAINED AIR (NO FLY ASH) SITE RETAINING WALLS 4000 PSI w/ 5% ENTRAINED AIR AND FLY ASH EXTERIOR SLABS AND WALKS 4500 PSI w/ 5% ENTRAINED AIR AND FLY ASH
2. ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH APPROVED DESIGN MIXES AS REQUIRED FOR THE JOB.
3. ALL CONCRETE SHALL CONTAIN ENTRAINED AIR IN ACCORDANCE WITH ACI 318, TABLE 4.2.1, U.O.N.
4. CONCRETE THAT ARRIVES AT THE JOBSITE WITH A SLUMP GREATER THAN 5" SHALL BE REJECTED. CONCRETE WITH A SLUMP LESS THAN 3" SHALL HAVE AN APPROVED SUPER-PLASTICIZER ADDED SUCH THAT THE MINIMUM 3" SLUMP MAY BE ACHIEVED. THE ADDITION OF WATER AT THE JOBSITE, BEYOND THAT HELD-BACK AT THE CONCRETE PLANT, FOR THE PURPOSE OF INCREASING THE SLUMP IS PROHIBITED.
5. THE UNDER-SLAB ON GRADE VAPOR RETARDER SHALL BE 10 MILS THICK AND MEET THE REQUIREMENTS OF ASTM E 1745, CLASS B. PROVIDE THE MANUFACTURER'S RECOMMENDED ADHESIVE OR PRESSURE-SENSITIVE TAPE. PRODUCT SHALL BE EQUIVALENT TO STEGO WRAP, 10 MILS, MANUFACTURED BY STEGO INDUSTRIES, LLC.
6. CONCRETE WALL FORM TIES SHALL BE FACTORY-FABRICATED, REMOVABLE OR SNAP-OFF METAL OR GLASS-FIBER-REINFORCED PLASTIC FORM TIES DESIGNED TO RESIST LATERAL PRESSURE OF FRESH CONCRETE ON FORMS AND TO PREVENT SPALLING OF CONCRETE ON REMOVAL. FURNISH UNITS THAT WILL LEAVE NO CORRODIBLE METAL CLOSER THAN 1 INCH (25 MM) TO THE PLANE OF EXPOSED CONCRETE SURFACE. FURNISH TIES THAT, WHEN REMOVED, WILL LEAVE HOLES NO LARGER THAN 1 INCH (25 MM) IN DIAMETER IN CONCRETE SURFACE.
7. AT THE INTERFACE OF THE CONCRETE SLAB ON GRADE AND VERTICAL STRUCTURAL MEMBERS (E.G. WALLS, COLUMNS), APPLY A BOND-BREAKER TO THE VERTICAL MEMBER FOR THE FULL DEPTH OF THE SLAB. SATISFACTORY PRODUCTS INCLUDE CURING COMPOUND, FORM RELEASE, AND OTHER SIMILAR PRODUCTS. DO NOT USE ASPHALT IMPREGNATED FIBERBOARD OR FELT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANCHOR BOLTS, CLIPS, INSERTS, CONNECTION PLATES, SLEEVES, SLOTS, AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS, AND IN COOPERATION WITH OTHER TRADES PRIOR TO PLACING THE CONCRETE.

SCHEDULE OF CONCRETE FINISHES:

Table with 2 columns: INTERIOR SLAB ON GRADE, ELEVATED SLABS, SLABS TO RECEIVE SETTING BEDS, EXTERIOR STEPS AND SIDEWALKS, ALL UNEXPOSED CONCRETE SURFACES, ALL EXPOSED CONCRETE SURFACES, TOPS OF EXPOSED WALL SURFACES. Values: TROWEL FINISH, TROWEL FINISH, SCRATCH FINISH, NON-SLIP BROOM FINISH, ROUGH FORM FINISH, SMOOTH RUBBED FINISH, TROWEL FINISH.

CURING METHOD AND TIME: WET CURE INTERIOR SLABS FOR 7 DAYS USING ULTRACURE NCF CURING BLANKET MANUFACTURED BY MCTECH GROUP, OR APPROVED EQUIVALENT.

CR - CONCRETE REINFORCEMENT

- 1. CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60. REINFORCEMENT DESIGNATED AS CONTINUOUS SHALL LAP 36 BAR DIAMETERS AT SPLICES, UNLESS NOTED OTHERWISE. SEE MASONRY SECTION BELOW FOR LAP REQUIREMENTS IN CMU WALLS.
2. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A185. REINFORCEMENT SHALL BE FURNISHED IN FLAT SHEETS. LAP ONE FULL MESH.
3. ALL CONCRETE REINFORCEMENT BARS AND WWR SHALL BE ACCURATELY AND SECURELY TIED AND ANCHORED IN PLACE TO PREVENT DISLOCATION DURING THE CONCRETE PLACEMENT OPERATION.
4. PROVIDE CORNER REINFORCEMENT, 36 BAR DIAMETERS x 36 BAR DIAMETERS, AT EACH CONTINUOUS FOOTING CHANGE IN DIRECTION.
5. CONCRETE SLAB ON GRADE SHALL BE THE THICKNESS INDICATED ON PLAN OR DETAILS AND REINFORCED WITH A MINIMUM OF 6X6 W2.1XW2.1 W.W.R.
6. PROVIDE (1) #4 REINFORCEMENT BAR x 4'-0" AT RE-ENTRANT CORNERS AND AROUND THE PERIMETER OF RECTANGULAR HOLES IN THE SLAB, UNLESS OTHERWISE NOTED. PLACE BAR DIAGONAL TO THE CORNER WITH 1" CLEARANCE FROM THE TOP AND THE SIDE OF THE SLAB AT THE CORNER.
7. MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE COMMITTEE 318, SECTION 7.7, UNLESS NOTED OTHERWISE.

SS - STRUCTURAL STEEL

- 1. STRUCTURAL STEEL WIDE-FLANGE SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI, U.O.N.
2. STRUCTURAL STEEL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO ASTM A36, Fy = 36 KSI, U.O.N.
3. SQUARE AND RECTANGULAR HSS STRUCTURAL STEEL SHALL CONFORM TO ASTM A500, GRADE B, Fy = 46 KSI.
4. ROUND HSS STRUCTURAL STEEL SHALL CONFORM TO ASTM A500, GRADE B, Fy = 42 KSI.
5. STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B, Fy = 35 KSI.
6. BOLTS FOR CONNECTING STRUCTURAL STEEL SHALL BE 3/4" DIAMETER, CONFORMING TO ASTM A325-N, TYPE 1, U.O.N.
7. ANCHOR BOLTS SHALL BE HEADED AND CONFORM TO ASTM F1554, GRADE 55.
8. HEADED STUDS FOR THE COMPOSITE STEEL BEAMS SHALL BE MANUFACTURED OF COLD DRAWN CARBON STEEL CONFORMING TO ASTM A-108. STUDS SHALL BE 3/4" DIAMETER x 3 1/2" LONG. STUDS SHALL BE ATTACHED TO THE BEAMS USING AUTOMATIC END WELDING EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. THERE SHALL BE NO PAINT ON THE STEEL SURFACE TO WHICH THE STUDS ARE TO BE WELDED.
9. ALL EXTERIOR EXPOSED FERROUS METAL STRUCTURES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION, UNLESS OTHERWISE NOTED, THIS INCLUDES, BUT IS NOT LIMITED TO LINTELS IN EXTERIOR WALLS, EXTERIOR STAIRS, EXTERIOR HANDRAILS, AND EXTERIOR LADDERS.
10. FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT AISC SPECIFICATIONS.
11. ANY CONNECTION NOT DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED AND DETAILED BY THE STRUCTURAL STEEL FABRICATOR. THE CONNECTIONS FOR HOLLOW STRUCTURAL SECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE AISC HOLLOW STRUCTURAL SECTIONS CONNECTION MANUAL, CURRENT EDITION. ALL STEEL-TO-STEEL JOINT CONNECTIONS TYPES SHALL BE "SNUG-TIGHT", U.O.N.
12. WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.1. ELECTRODES FOR SHOP AND FIELD WELDS SHALL CONFORM TO AWS A5.1 OR AWS 5.5, CLASS E70XX, LOW HYDROGEN, UNLESS NOTED OTHERWISE. ONLY WELDERS WHO HAVE BEEN QUALIFIED BY TESTS AS PRESCRIBED IN THE REFERENCED STANDARDS TO PERFORM THE TYPE OF WORK REQUIRED SHALL MAKE WELDS.
13. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED ON THE CONTRACT DOCUMENTS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO THE LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.
14. ENCASE ALL STRUCTURAL STEEL BELOW GRADE WITH CONCRETE WITH A MINIMUM COVERAGE OF 3".
15. ALL STRUCTURAL STEEL ("RED IRON") USED FOR THE SUPPORT OF MECHANICAL/PLUMBING EQUIPMENT, DUCTS AND PIPING SHALL BE FURNISHED BY THE MECHANICAL/PLUMBING CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR. GENERAL CONTRACTOR SHALL PROVIDE RELEVANT INFORMATION OF CONSTRUCTION DOCUMENTS TO MECHANICAL/PLUMBING CONTRACTOR.

CS - COLD-FORMED STEEL FRAMING

- 1. THE COLD-FORMED STEEL FRAMING INDICATED ON THE STRUCTURAL DRAWINGS IS SHOWN FOR BID PURPOSES ONLY. THE GENERAL CONTRACTOR SHALL ENGAGE A QUALIFIED PROFESSIONAL ENGINEER TO DESIGN AND DETAIL ALL COLD-FORMED STEEL FRAMING THAT RESISTS THE LOADING INDICATED IN THE GENERAL SECTION OF THE STRUCTURAL NOTES. SHOP DRAWINGS SHALL BE SUBMITTED THAT CONTAIN THE SEALED CALCULATIONS PERFORMED BY AN ENGINEER LICENSED IN NORTH CAROLINA.
2. STEEL USED IN THE MANUFACTURE SHALL BE HOT-DIPPED GALVANIZED STEEL, G-90/Z275 (G-60/Z180), MINIMUM COATING WEIGHT AND SHALL CONFORM TO ASTM A653/A653M, GRADE D, MINIMUM YIELD POINT OF 50,000 PSI FOR 12, 14 AND 16 GAUGE MEMBERS AND ASTM A446, GRADE A, MINIMUM YIELD POINT OF 33,000 PSI FOR 18 AND 20 GAUGE MEMBERS.
3. ALL METAL STUD WALLS RESISTING DEAD, LIVE, OR WIND LOADS SHALL BE Laterally Braced Before Applying Any Loads To The Top Plates. See "LATERAL BRACING FOR METAL STUD WALLS" DETAIL IN THIS SET OF DRAWINGS.
4. LIGHT-GAUGE STEEL FRAMING MEMBERS AND CONNECTIONS SHALL CONFORM TO THE MOST CURRENT VERSION OF "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL MEMBERS" BY THE AMERICAN IRON AND STEEL INSTITUTE.
5. ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE - SHEET METAL: AWS D.1.3, CURRENT EDITION, OF THE AMERICAN WELDING SOCIETY.
6. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ADJUTING MEMBERS.
7. ALL FIELD-CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH-CUTTING OF COLD-FORMED MEMBERS IS NOT ACCEPTABLE.
8. NO SPLICES IN STRUCTURAL COLD-FORMED MEMBERS MAY BE MADE WITHOUT PRIOR REVIEW BY THE STRUCTURAL ENGINEER, AND SPECIFIC DETAILS FOR ANY SUCH SPLICES).
9. PROVIDE DOUBLE STUDS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS, WHICH EXCEED 24" HORIZONTAL WIDTH, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

MB - PRE-ENGINEERED METAL BUILDINGS

- 1. CONFIGURATION, INCLUDING BRACING, SHALL BE AS SHOWN ON THE DRAWINGS. SHOULD BUILDING MANUFACTURER WISH TO FURNISH A SYSTEM THAT WILL DIFFER FROM THAT SHOWN, WRITTEN APPROVAL SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO BIDDING.
2. BUILDING DESIGN AND LOAD APPLICATION SHALL CONFORM TO THE CURRENT NORTH CAROLINA STATE BUILDING CODE. THE COLLATERAL LOAD SHALL NOT BE USED TO REDUCE THE EFFECTS OF WIND LOADS ON THE BUILDING. ROOF LIVE LOAD AS REQUIRED BY NCSCB COLLATERAL ROOF DEAD LOAD 5 PSF WIND LOAD (ULT) 115 MPH EXPOSURE C ENCLOSURE CLASSIFICATION ENCLOSED IMPORTANCE FACTOR 1.0 REFER TO THE "GENERAL" SECTION OF THE STRUCTURAL NOTES FOR ADDITIONAL LOADING INFORMATION.
3. THE METAL BUILDING FRAMES SHALL BE DESIGNED SUCH THAT THE MAXIMUM HORIZONTAL DRIFT DUE TO WIND AND SEISMIC LOADING SHALL SATISFY AN H /240 CRITERIA. THE MAXIMUM VERTICAL DEFLECTION OF PRIMARY AND SECONDARY FRAMING MEMBERS SHALL BE WITHIN THE TOLERANCES PROSCRIBED BY THE NC STATE BUILDING CODE. MANUFACTURER SHALL VERIFY THAT THE DEFLECTION CRITERIA ARE COMPATIBLE WITH EXTERIOR AND INTERIOR FINISHES SUPPORTED BY THE METAL BUILDING STRUCTURE.
4. THE FOOTING DESIGN IS BASED UPON AN ASSUMED LOADING OF THE METAL BUILDING SUPER-STRUCTURE. THE FOUNDATIONS SHALL NOT BE CONSTRUCTED UNTIL THE STRUCTURAL ENGINEER HAS REVIEWED THE ACTUAL DESIGN REACTIONS SUPPLIED BY THE MANUFACTURER.

TA - TYPICAL ABBREVIATIONS

- 1. THE FOLLOWING ARE TYPICAL ABBREVIATIONS USED IN THE STRUCTURAL DRAWINGS:

Table with 3 columns: Abbreviation, Description, Abbreviation, Description. Includes A.B. -ANCHOR BOLT, H.S. -HEADED STUD, ADDL. -ADDITIONAL, JST. -JOIST, ARCH/L -ARCHITECTURAL, JT. -JOINT, BM -BEAM, LT. -LIGHT, BP -BASE PLATE, MAS. -MASONRY, BRG. -BEARING, MAX. -MAXIMUM, BSMT. -BASEMENT, MECH. -MECHANICAL, C.I.P. -CAST IN PLACE, MFR -MANUFACTURER, C.J. -CONTROL OR CONSTRUCTION JOINT, MN. -MINIMUM, CLR. -CLEAR, NOM. -NOMINAL, CMU -CONCRETE MASONRY UNIT, NTS -NOT TO SCALE, COL. -COLUMN, O.H. -OPPOSITE HAND, CONC. -CONCRETE, O.C. -ON CENTER, CONST. -CONSTRUCTION, PC -PRECAST OR PILE CAP, CONT. -CONTINUOUS, PREFAB. -PREFABRICATED, COORD. -COORDINATE, REF. -REFERENCE, DET. -DETAIL, REINF. -REINFORCEMENT, DIA. -DIAMETER, SECT. -SECTION, DWG. -DRAWING, SIM. -SIMILAR, E.B. -EXPANSION BOLT, STD. -STANDARD, EL. -ELEVATION, STRUCT. -STRUCTURAL, F.F. -FINISHED FLOOR, T.O.S. -TOP OF SLAB OR STEEL, FIN. -FINISHED, TYP. -TYPICAL, FLR. -FLOOR, U.O.N. -UNLESS OTHERWISE NOTED, FOUND. -FOUNDATION, V.I.F. -VERIFY IN FIELD, FTG. -FOOTING, VERT. -VERTICAL, GALV. -GALVANIZE (D) (ING), W.P. -WORK POINT, H.C. -HOLLOW-CORE, WT. -WEIGHT, HORIZ. -HORIZONTAL, W.W.R. -WELDED WIRE REINF.

MI - MISCELLANEOUS ITEMS

- 1. GROUT FOR SETTING BEARING SURFACES SHALL BE NON-SHRINK, EQUAL TO "MASTERFLO 928" AS MANUFACTURED BY BASF.
2. WALLS RETAINING EARTH, OTHER THAN WALLS DESIGNED AS CANTILEVERS, SHALL BE ADEQUATELY BRACED UNTIL CONCRETE FOR THE SUPPORTING SLABS HAS BEEN PLACED AND SUFFICIENTLY CURED.
3. UNLESS SPECIFICALLY SHOWN OR NOTED ON THE DRAWINGS, NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, BORED, OR OTHERWISE WEAKENED WITHOUT THE PERMISSION OF THE STRUCTURAL ENGINEER.
4. CONTRACTOR SHALL VERIFY ALL OPENING SIZES AND LOCATIONS WITH THE MECHANICAL EQUIPMENT SUPPLIER'S DRAWINGS AND ARCHITECTURAL DRAWINGS.

PA - POST-INSTALLED ANCHORS

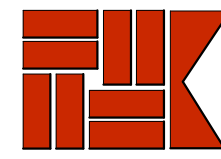
- 1. UNLESS OTHERWISE INDICATED ON PLANS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES, OR APPROVED EQUAL:

Table with 3 columns: BASE MATERIAL, ADHESIVE ANCHOR, MECHANICAL ANCHOR. Rows include SOLID CONCRETE, GROUTED MASONRY, HOLLOW MASONRY.

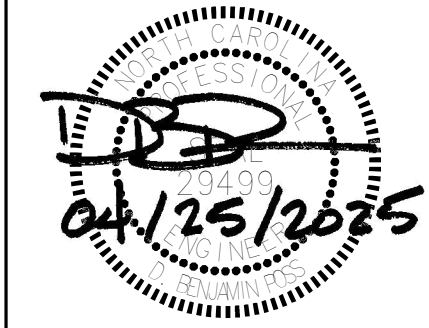
- 2. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR REPORT SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE.
3. INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
4. ANCHOR CAPACITY IS DEPENDANT ON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

REVISIONS

Table with 2 columns: Description, Date/Author.



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STRUCTURAL NOTES

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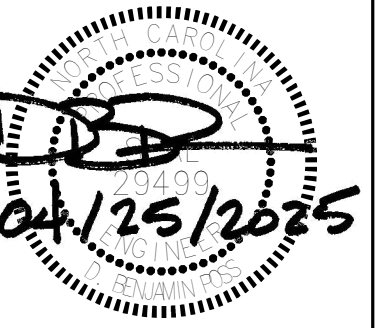
841 Charlotte Hwy.

DATE 2024-04-25

JOB NO. 190770

SHEET S0.1

REVISIONS



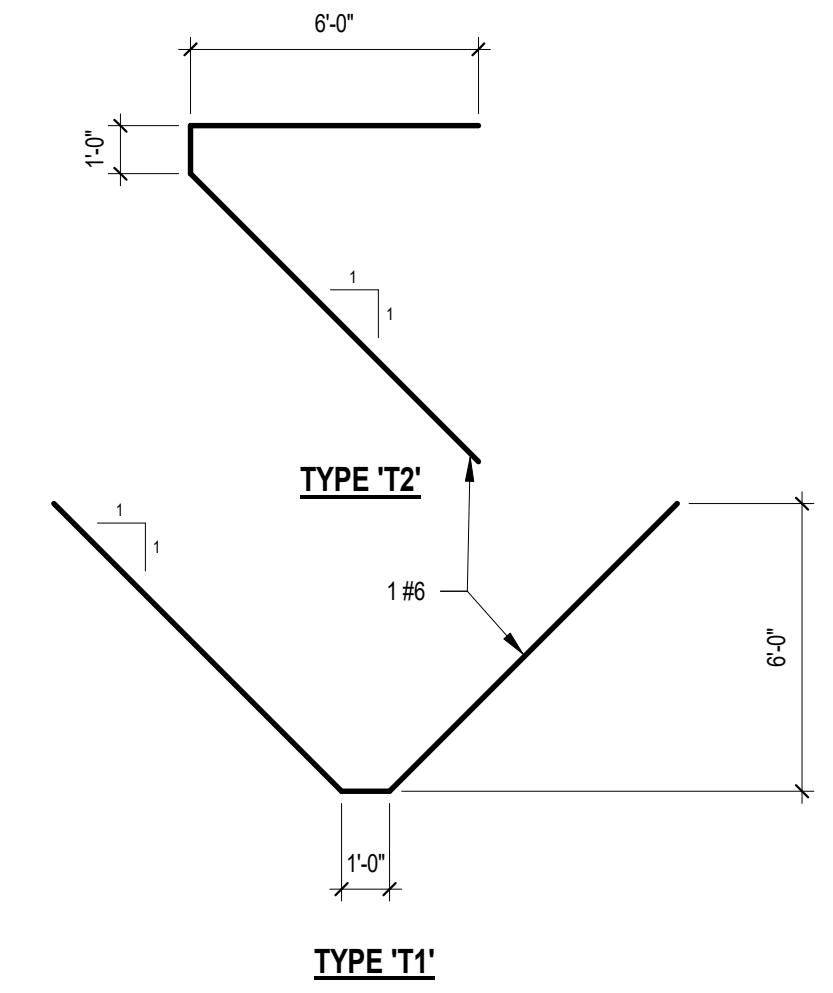
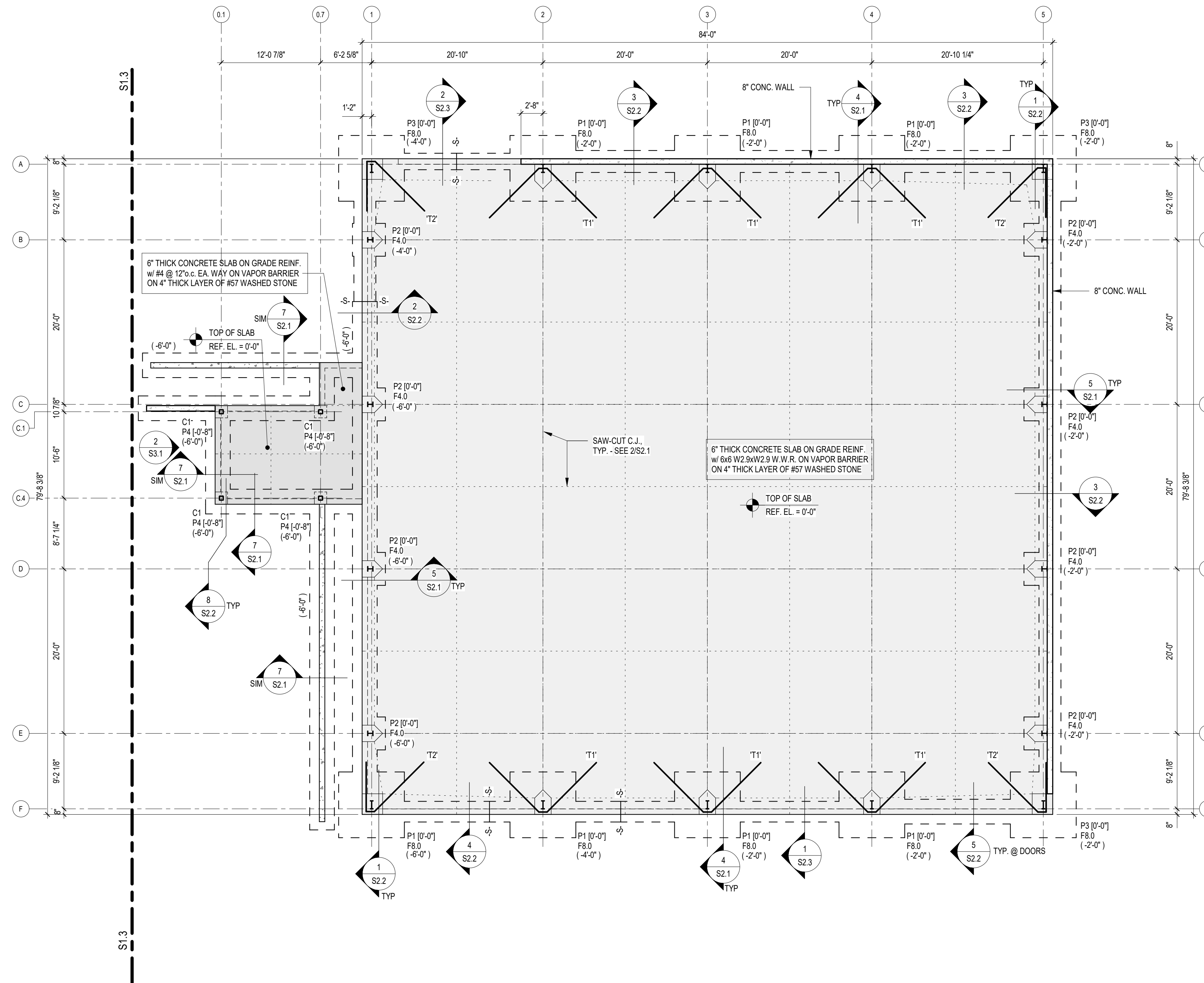
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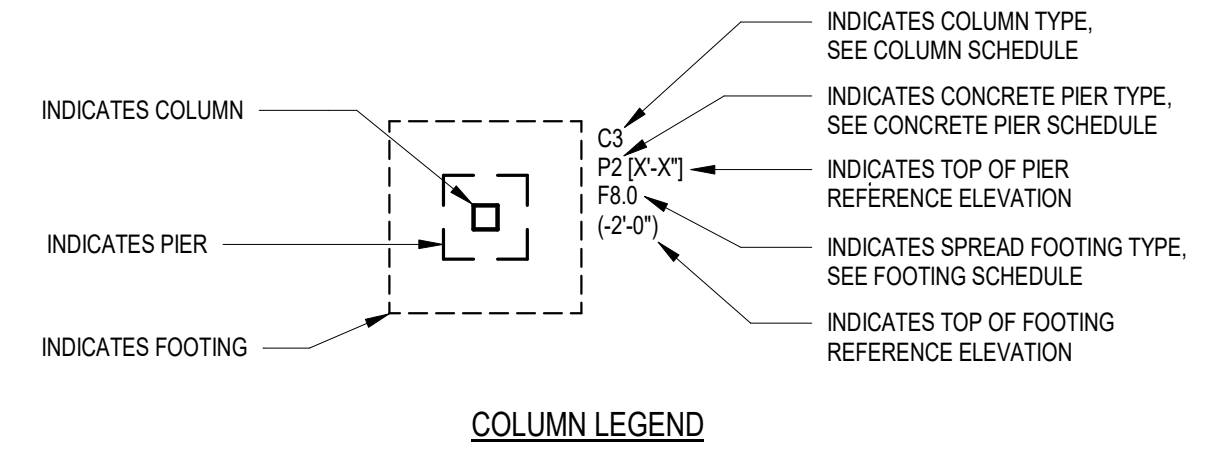
FOUNDATION PLAN
BUILDING - A

DATE: 2024-04-25
JOB NO.: 190770

SHEET
S1.2



1 HAIRPIN TYPES
S1.2 1/4" = 1'-0"

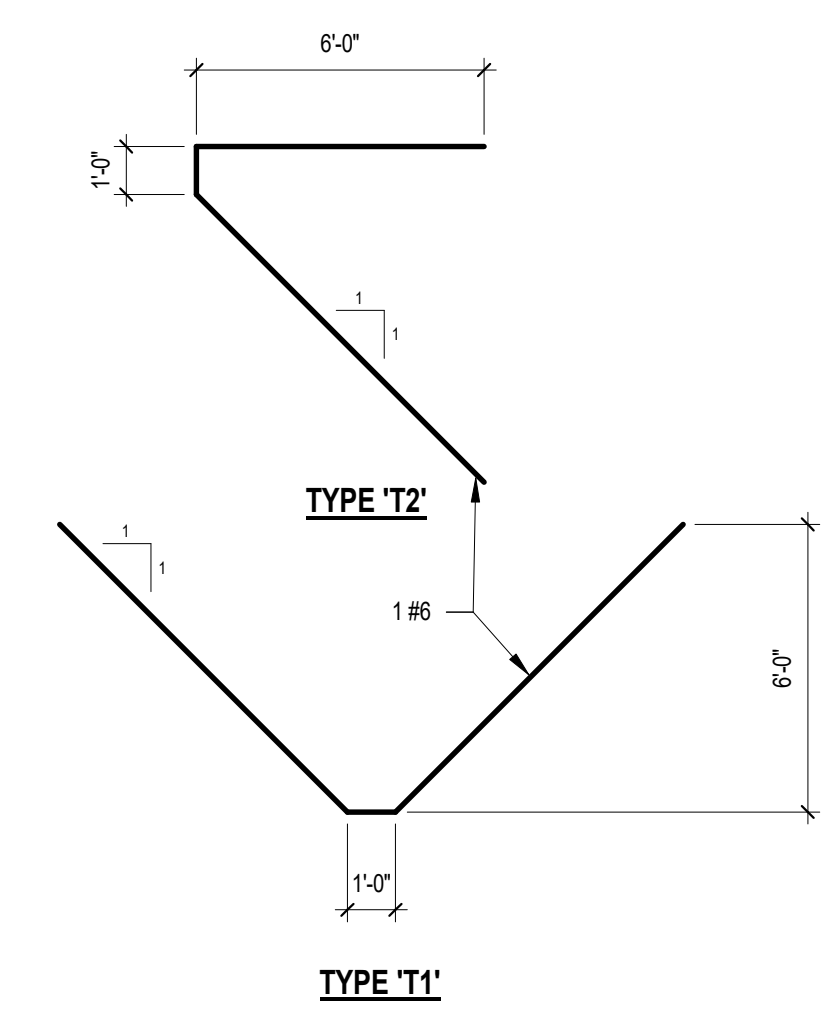
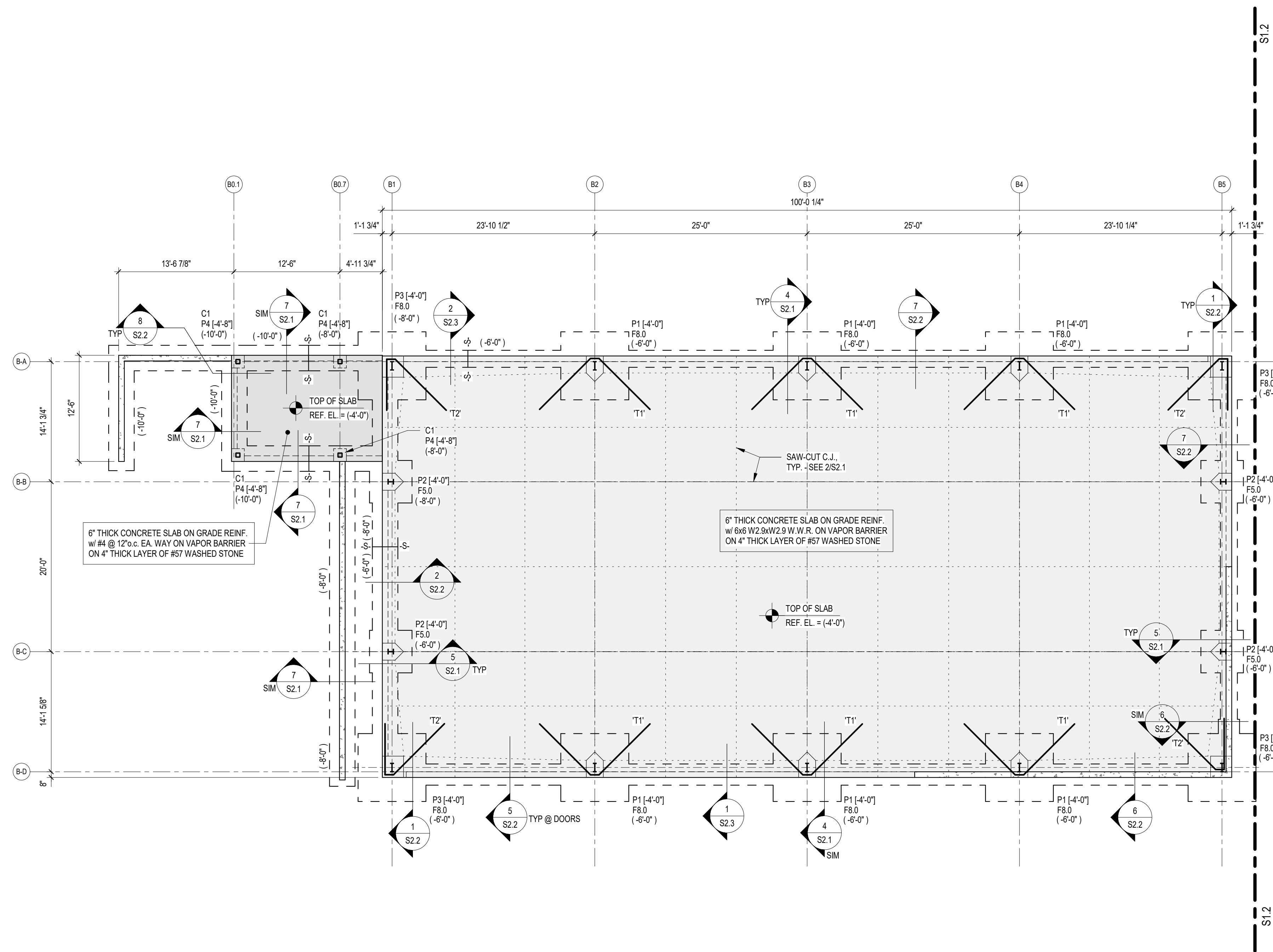


BUILDING 'A' FOUNDATION PLAN

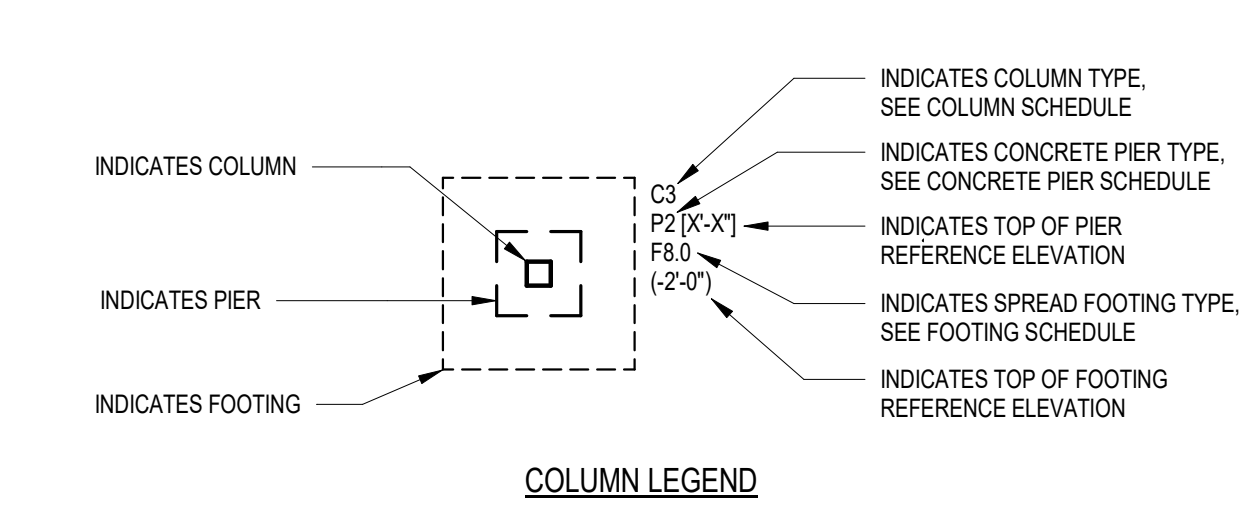
1/8" = 1'-0"

GENERAL PLAN NOTES:

1. LEVEL 1 FINISHED FLOOR REFERENCE ELEVATION = 0'-0".
2. (X-X') DENOTES TOP OF FOOTING REFERENCE ELEVATION.
3. 'S' DENOTES A FOOTING STEP. SEE 1/S2.1.
4. SEE SHEET S0.1 FOR STRUCTURAL NOTES.
5. SEE SHEET S3.1 FOR FOOTING AND COLUMN SCHEDULES.
6. SEE ARCHITECTURAL DRAWINGS FOR THE LOCATIONS AND EXTENT OF DEPRESSED SLABS.
7. SEE ARCHITECTURAL DRAWINGS FOR THE LOCATIONS OF ALL CONSTRUCTION AND CONTROL JOINTS FOR EXTERIOR SLABS AND WALKS.



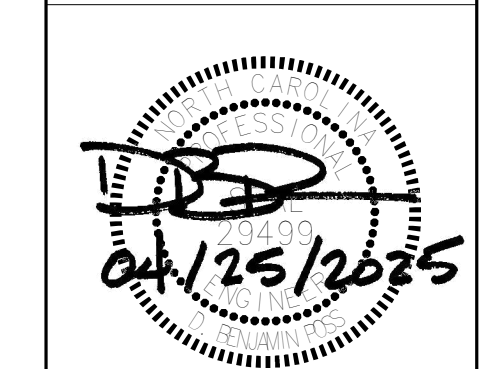
1 HAIRPIN TYPES
S1.3 1/4" = 1'-0"



BUILDING 'B' FOUNDATION PLAN
1/8" = 1'-0"

- GENERAL PLAN NOTES:
- LEVEL 1 FINISHED FLOOR REFERENCE ELEVATION = -4'-0".
 - (X-X) DENOTES TOP OF FOOTING REFERENCE ELEVATION.
 - 'S' DENOTES A FOOTING STEP. SEE 1/S2.1.
 - SEE SHEET S0.1 FOR STRUCTURAL NOTES.
 - SEE SHEET S3.1 FOR FOOTING AND COLUMN SCHEDULES.
 - SEE ARCHITECTURAL DRAWINGS FOR THE LOCATIONS AND EXTENT OF DEPRESSED SLABS.
 - SEE ARCHITECTURAL DRAWINGS FOR THE LOCATIONS OF ALL CONSTRUCTION AND CONTROL JOINTS FOR EXTERIOR SLABS AND WALKS.

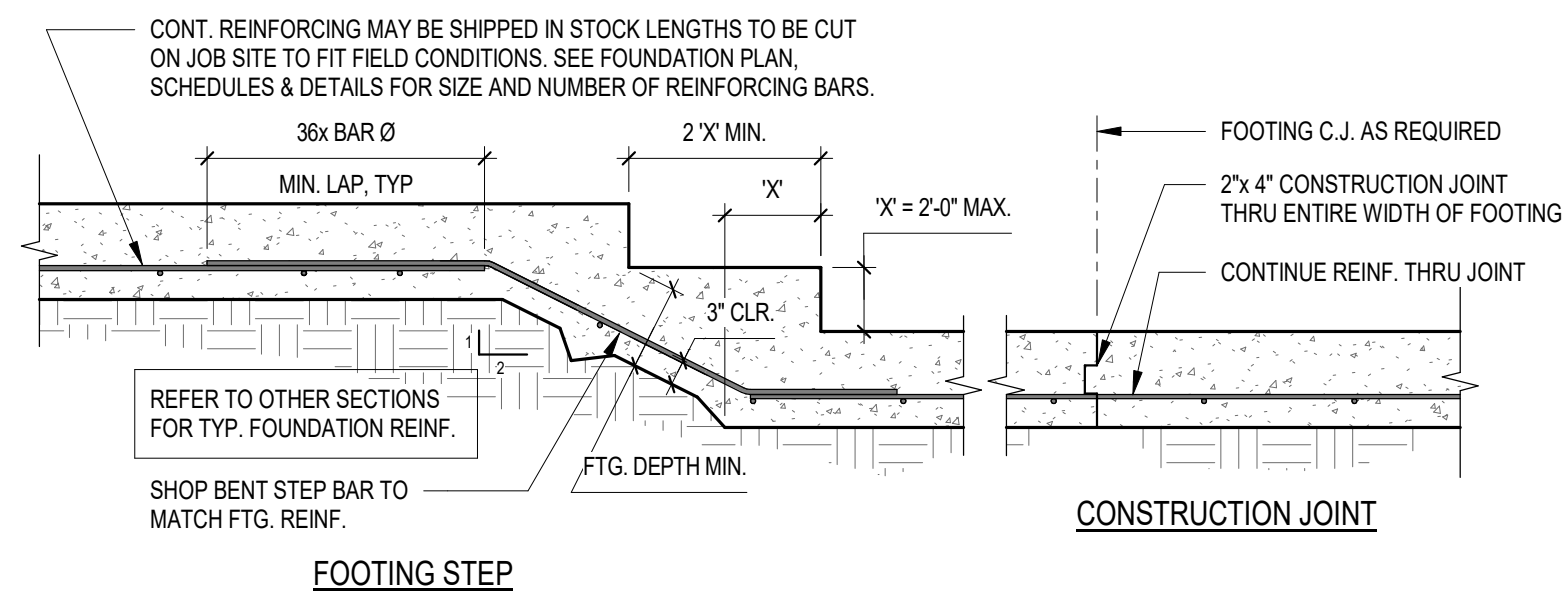
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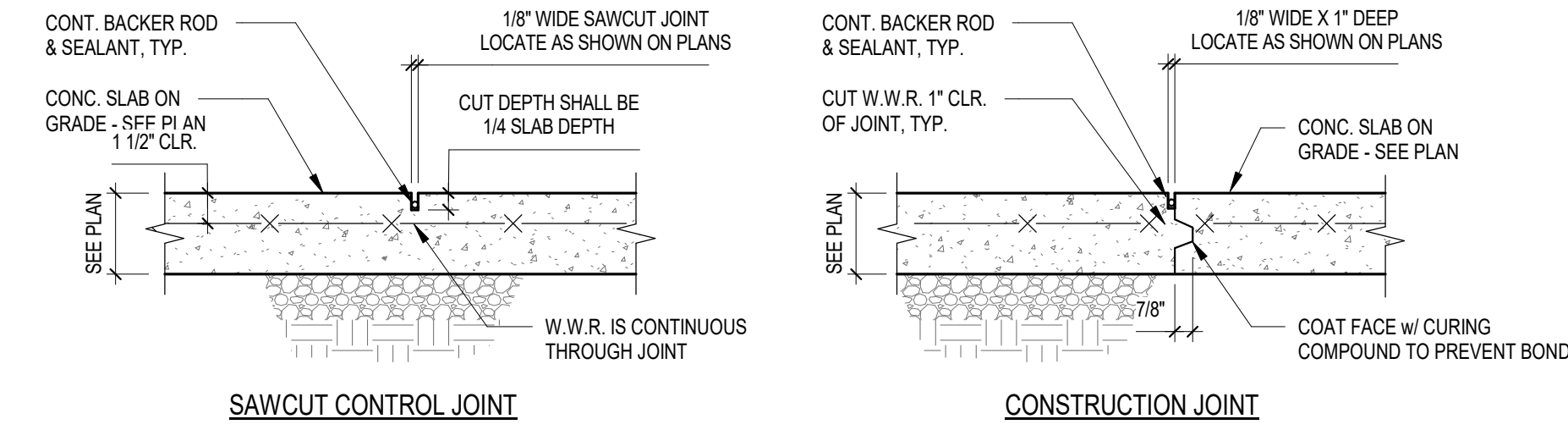
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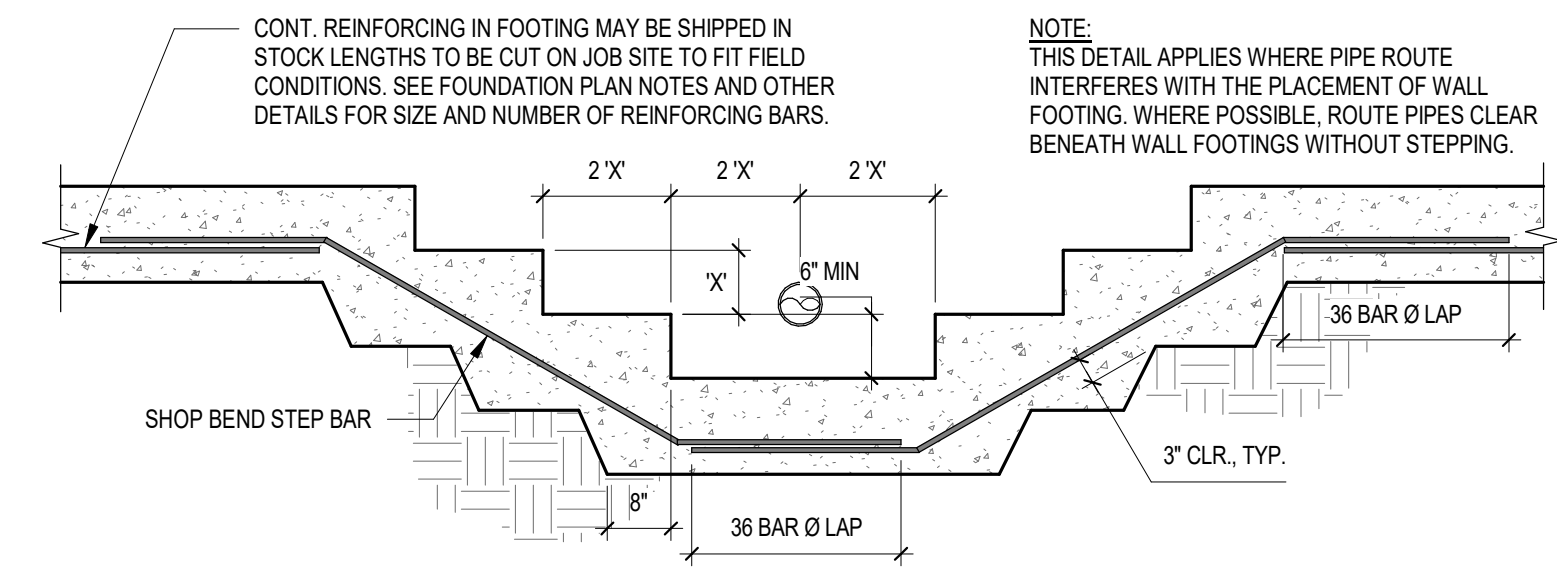
FOUNDATION PLAN BUILDING - B	DATE	2024-04-25	JOB NO.	190770
	SHEET	S1.3		



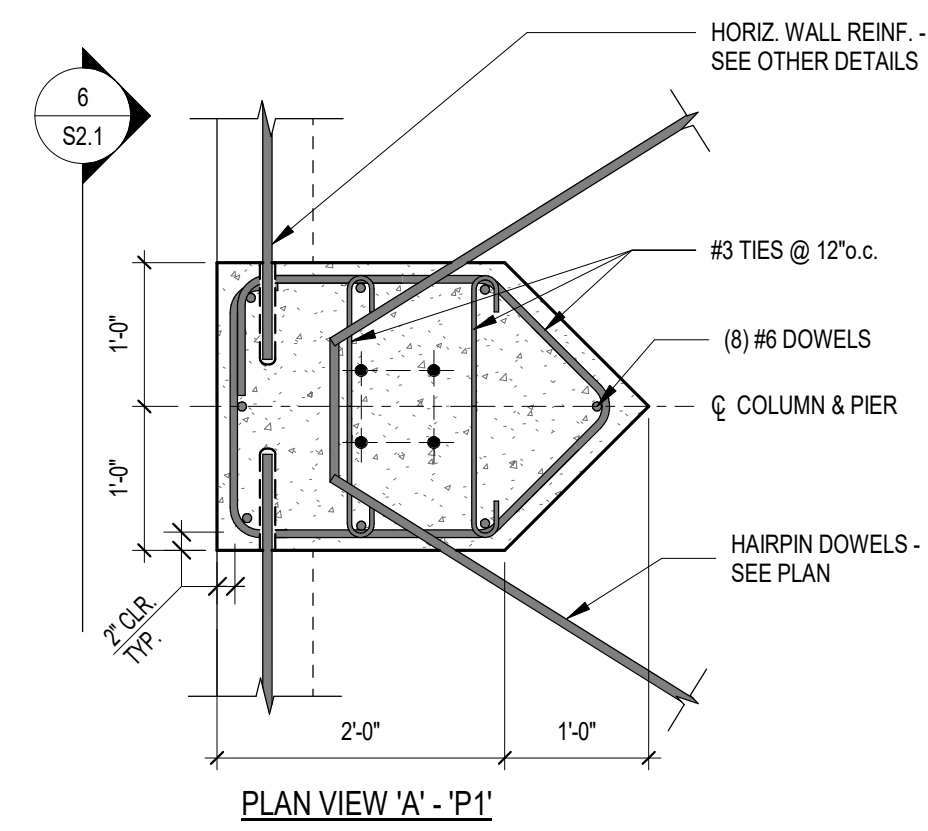
1 TYP. FOOTING STEP & FOOTING CONSTRUCTION JOINT
S2.1 1/2" = 1'-0"



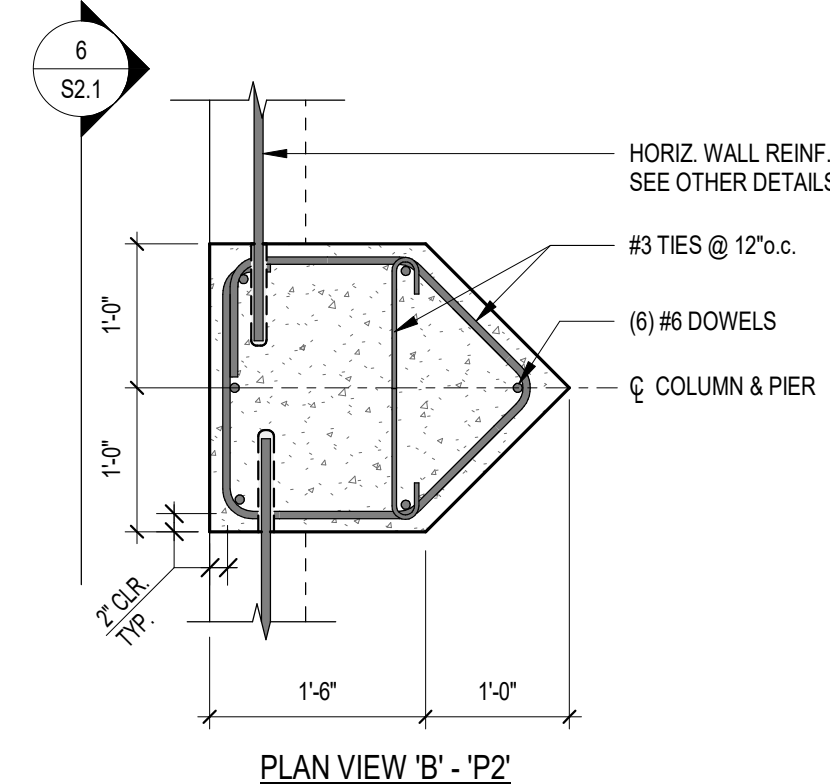
2 SLAB ON GRADE JOINT DETAILS
S2.1 1 1/2" = 1'-0"



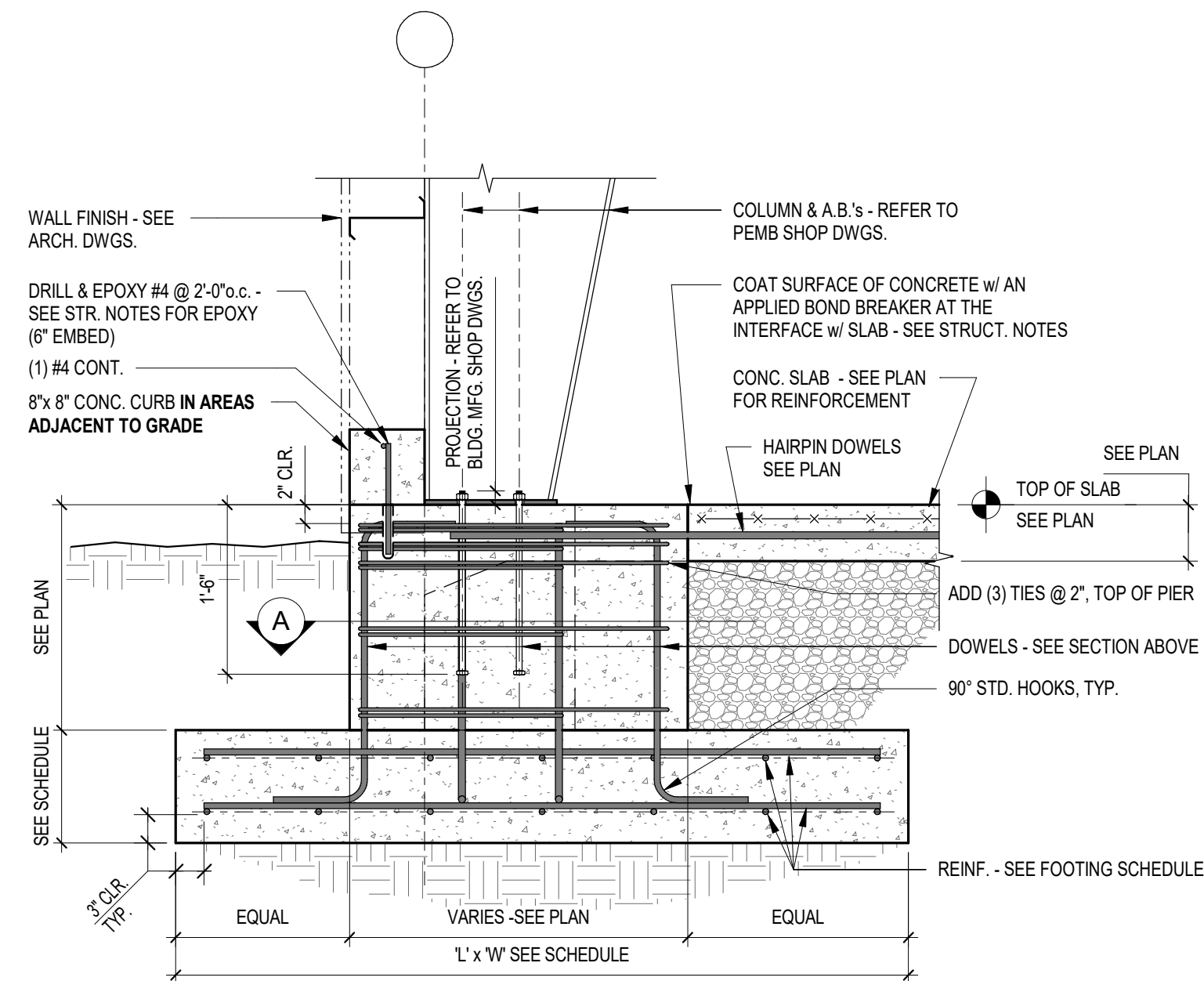
3 STEPPED FOOTING @ UNDERGROUND UTILITIES
S2.1 1/2" = 1'-0"



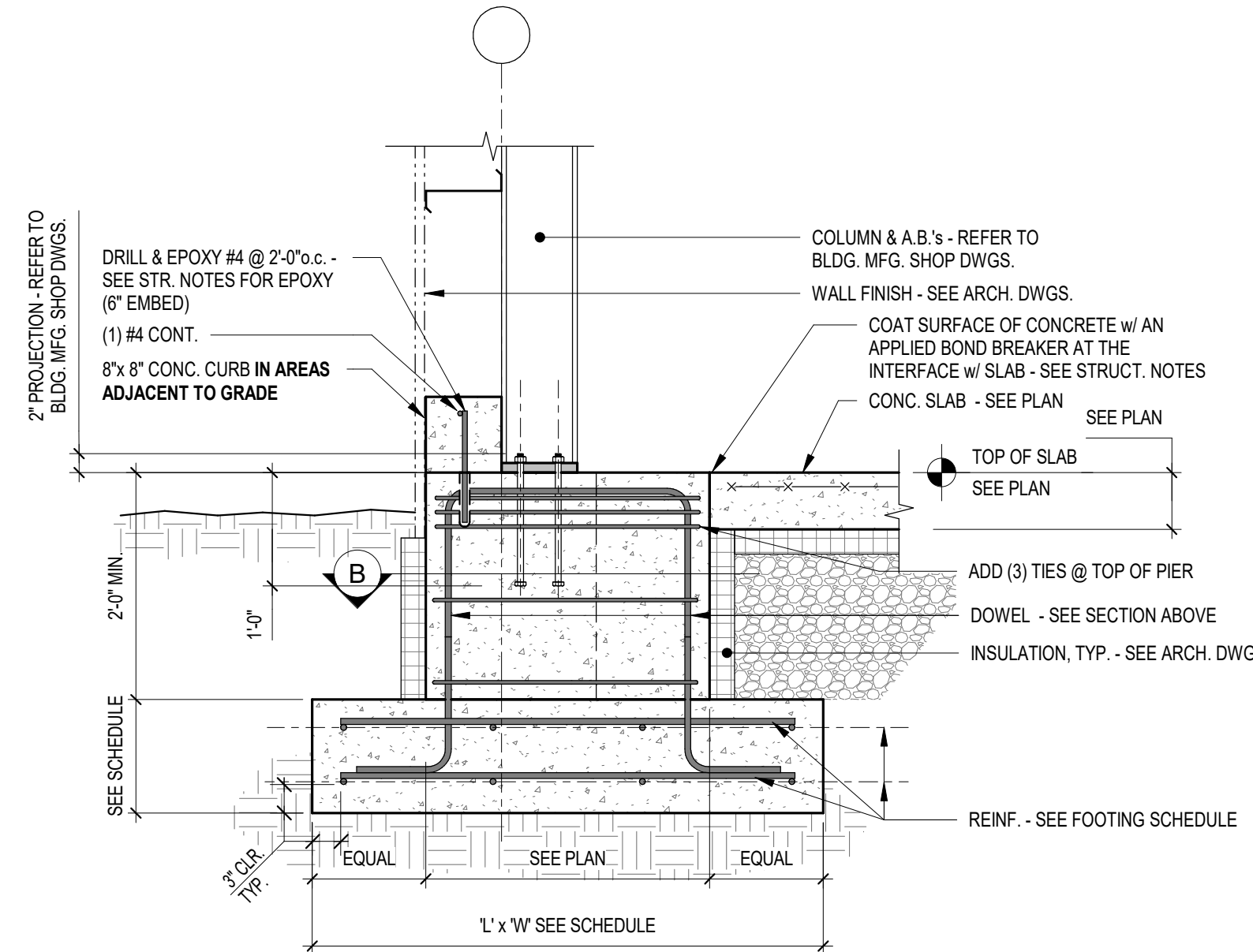
4 SECTION @ SIDE WALL COLUMNS 'A'
S2.1 3/4" = 1'-0"



5 SECTION @ END WALL COLUMNS
S2.1 3/4" = 1'-0"



6 SECTION @ PEMB COLUMNS
S2.1 3/4" = 1'-0"



7 SECTION @ LOADING DOCK
S2.1 3/4" = 1'-0"

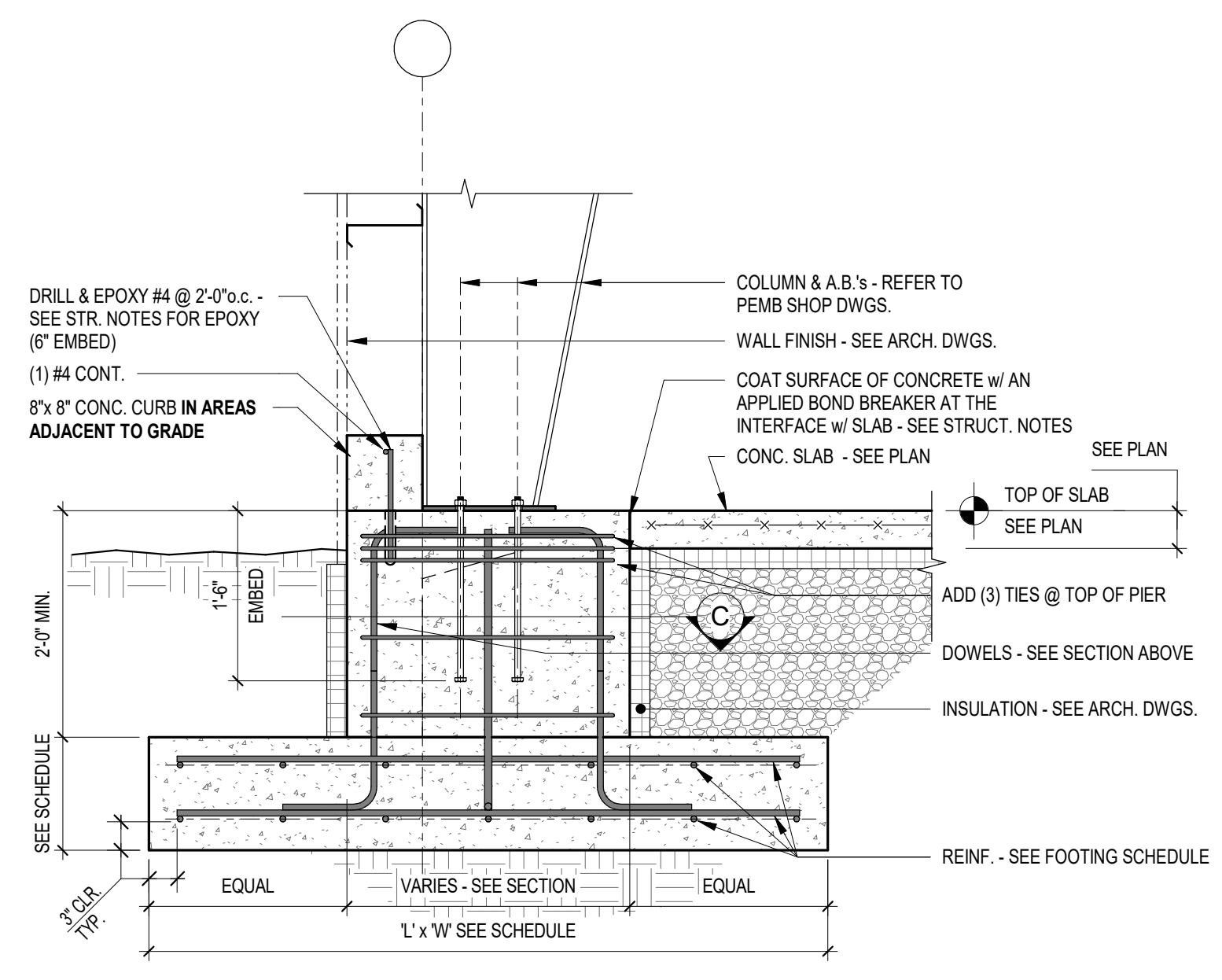
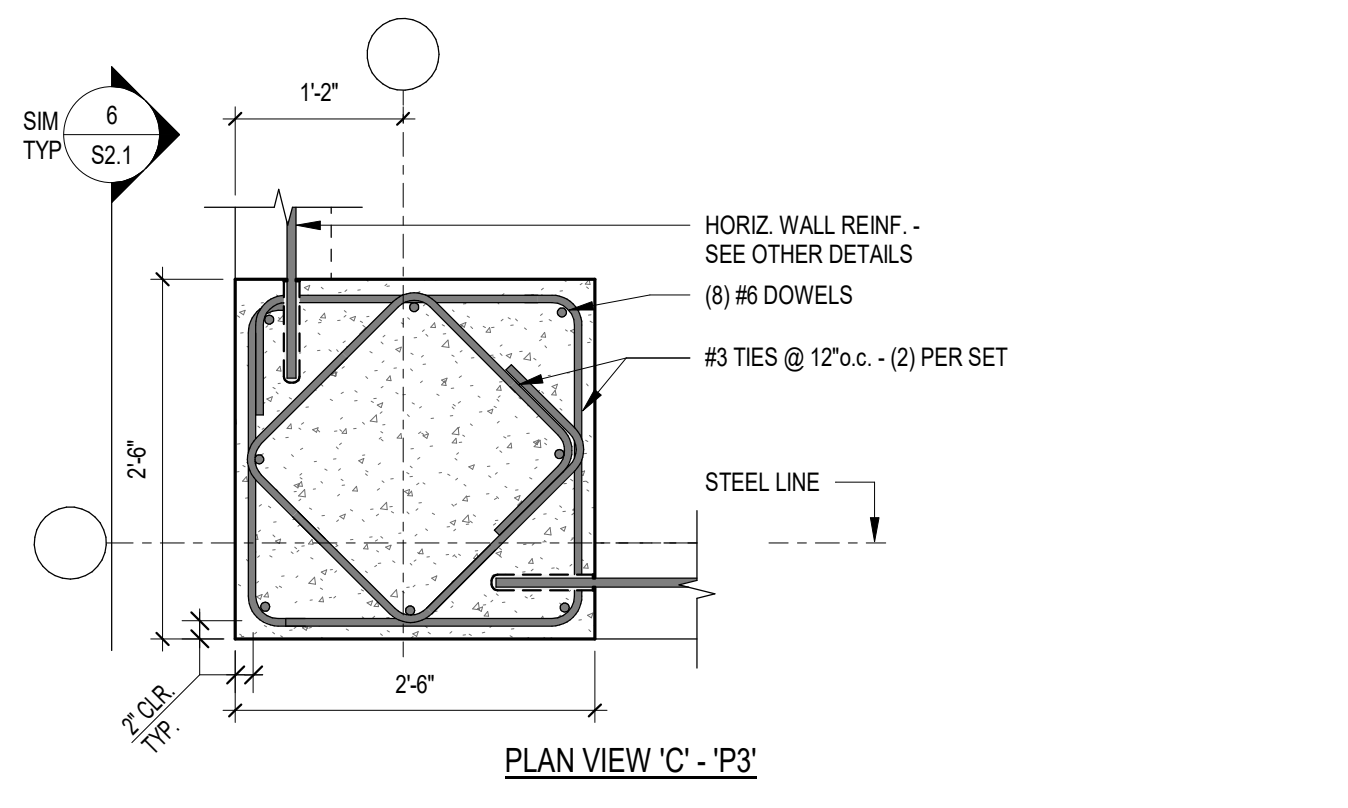
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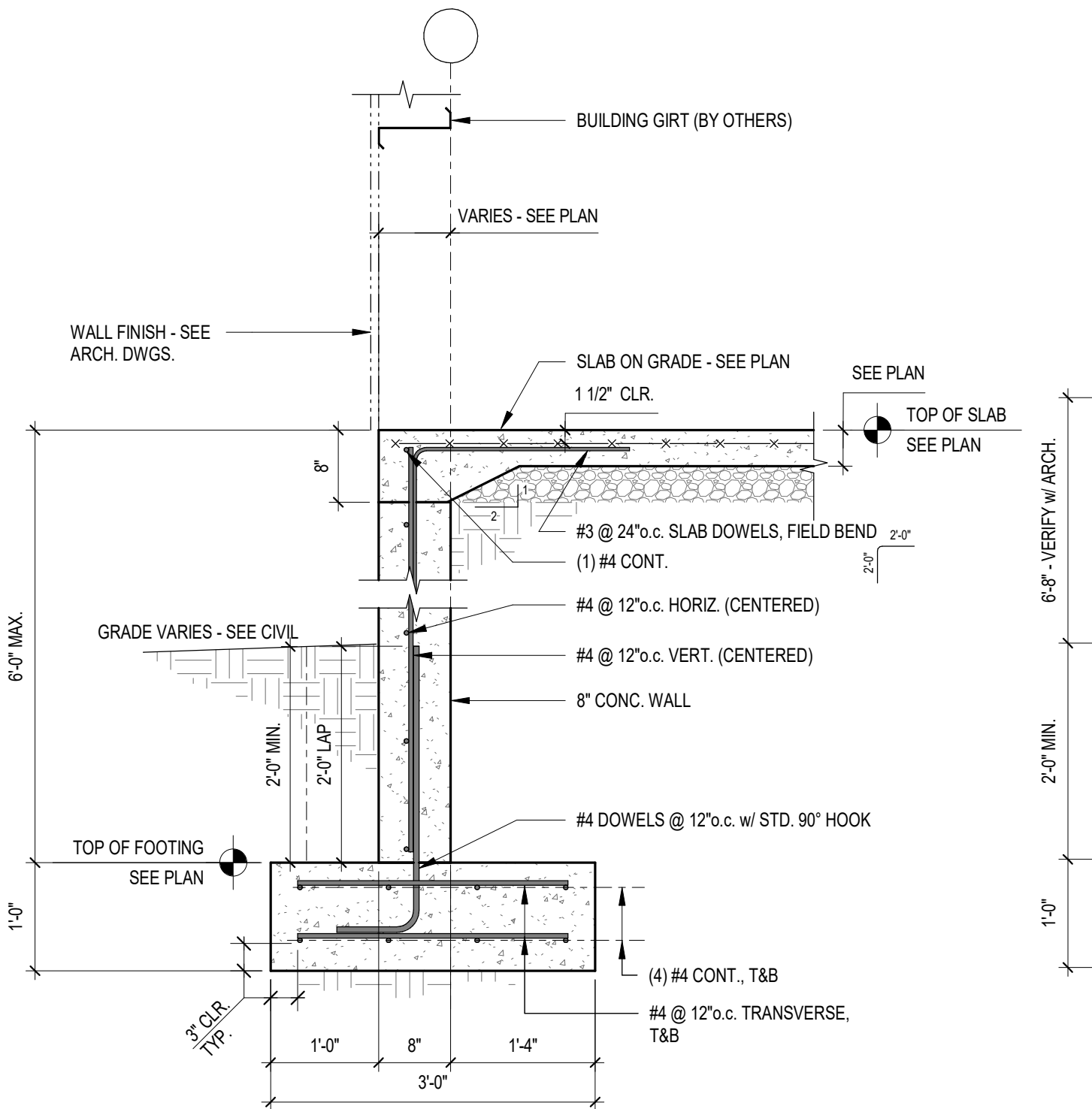
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841 Charlotte Hwy.

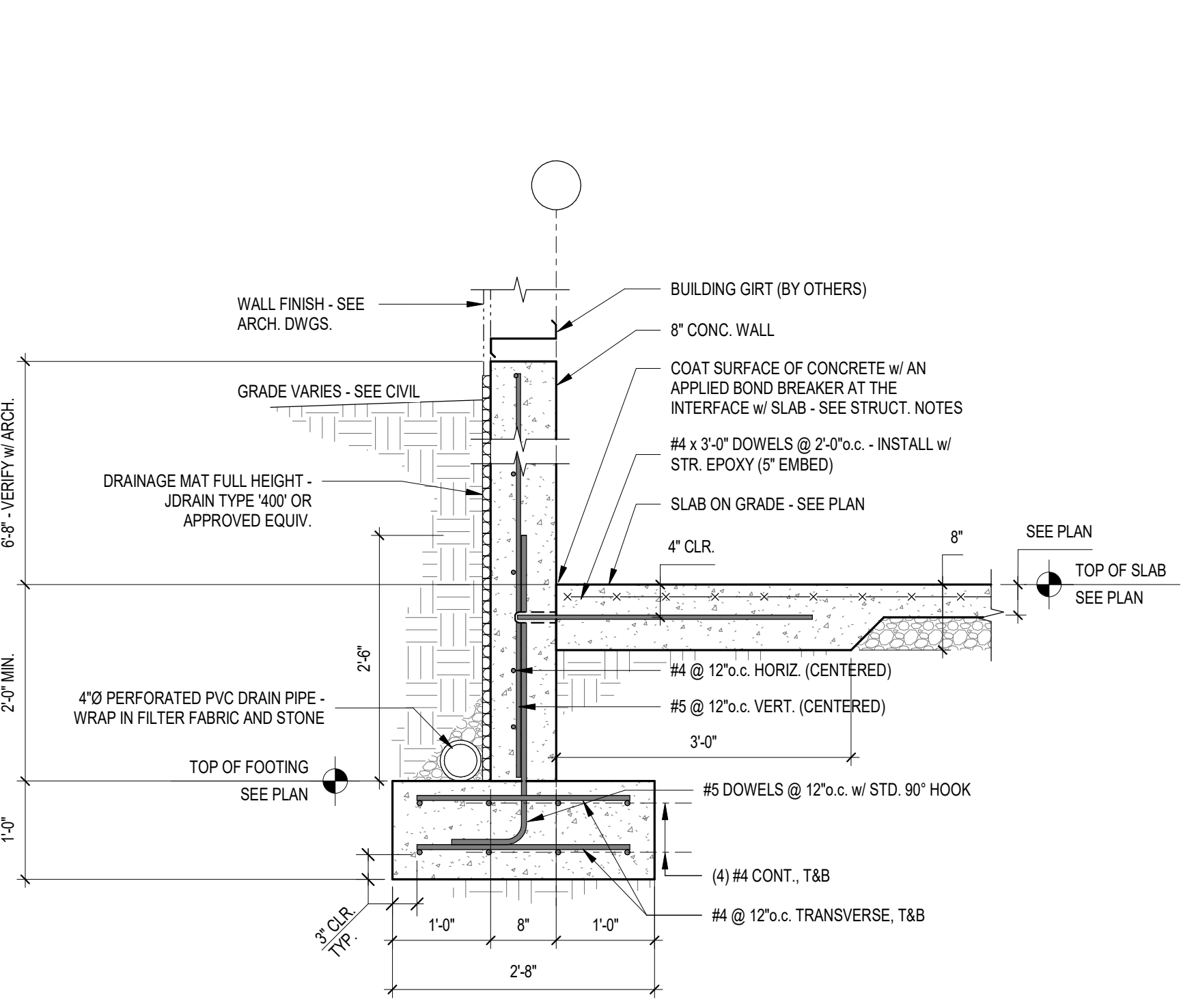
SHEET TITLE FOUNDATION SECTIONS & DETAILS	DATE	2024-04-25
	JOB NO.	190770
SHEET	S2.1	



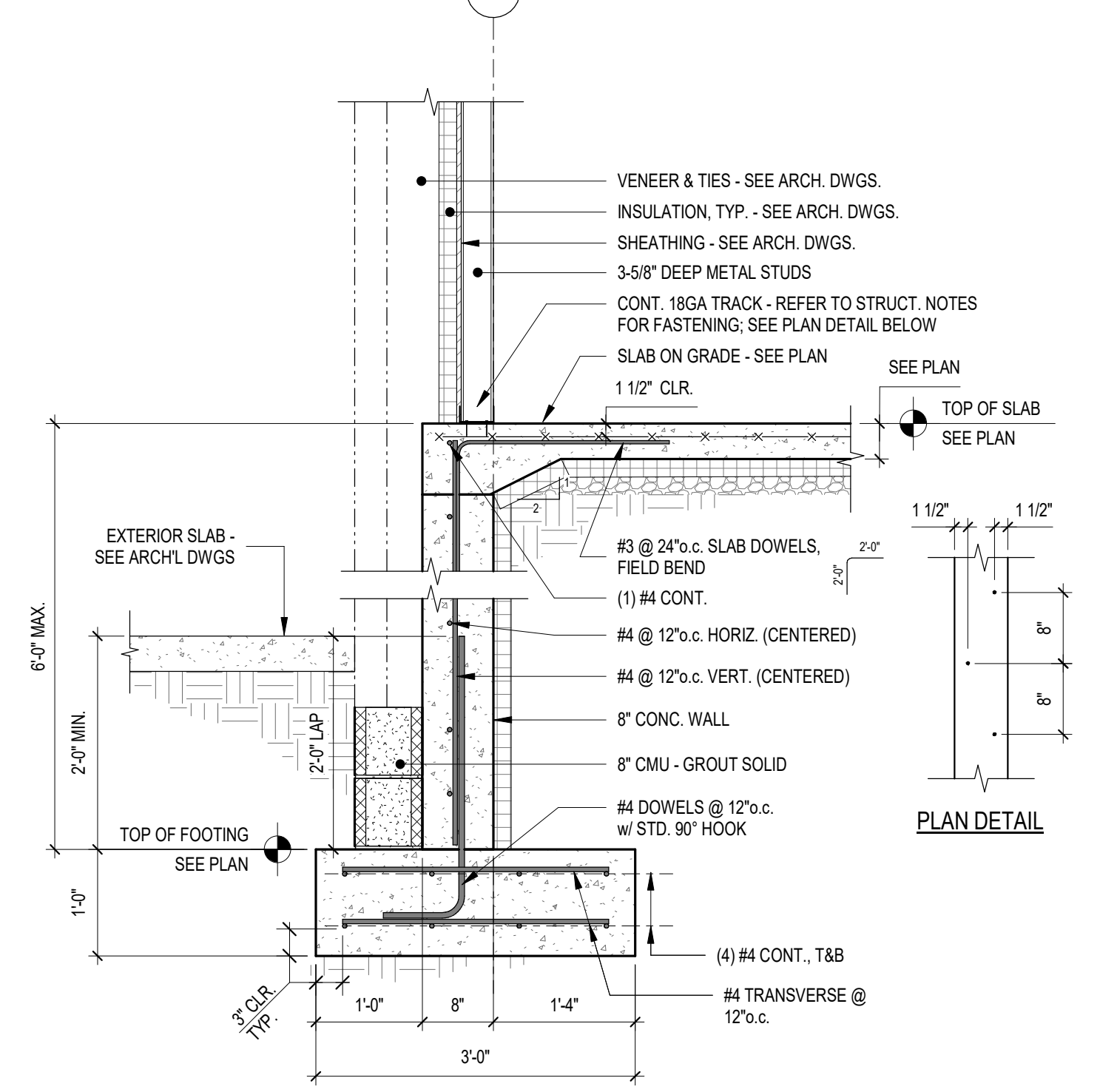
1 SECTION @ CORNER COLUMNS
S2.2 3/4" = 1'-0"



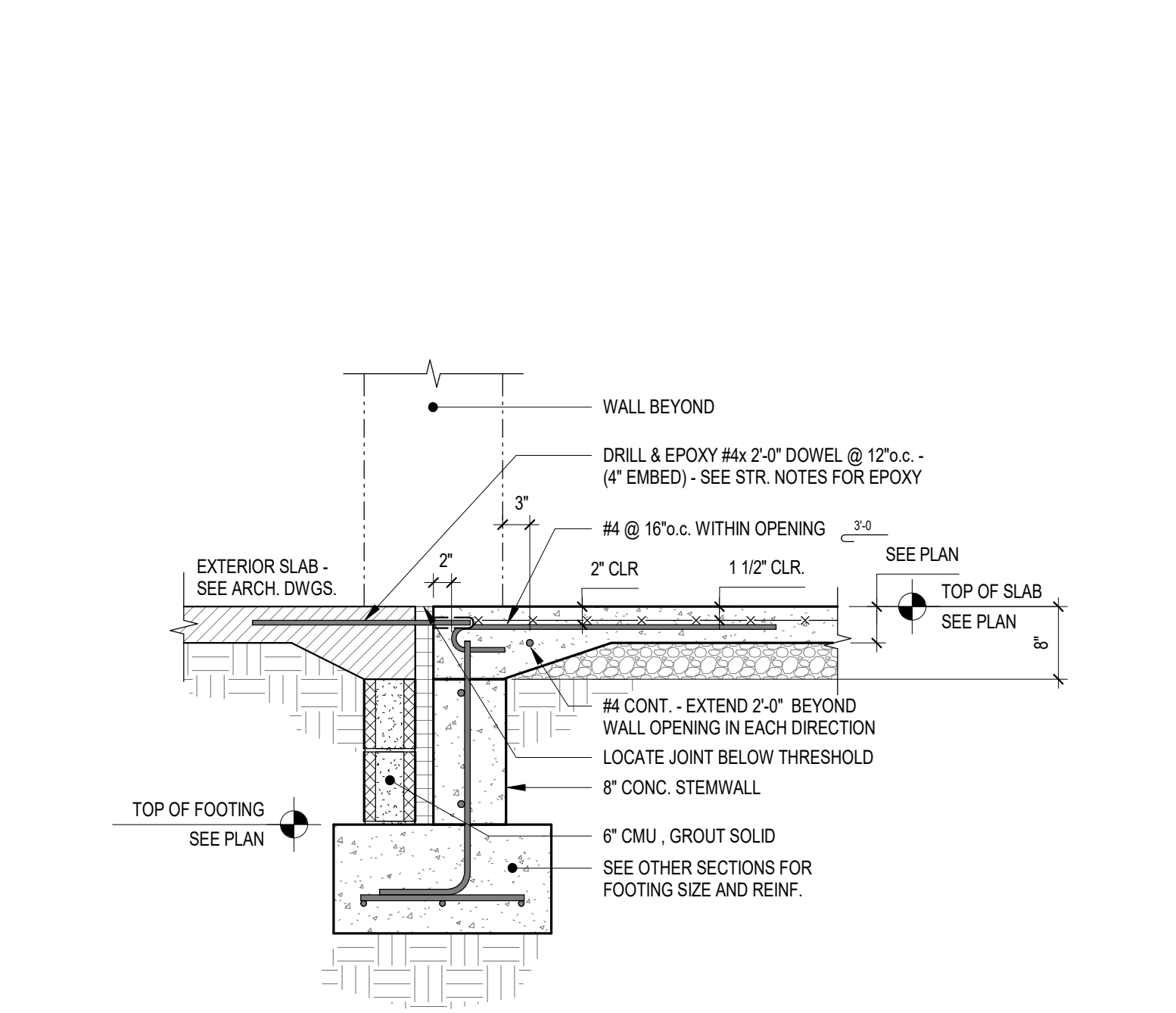
2 EXT. CONC. STEMWALL - A1
S2.2 3/4" = 1'-0"



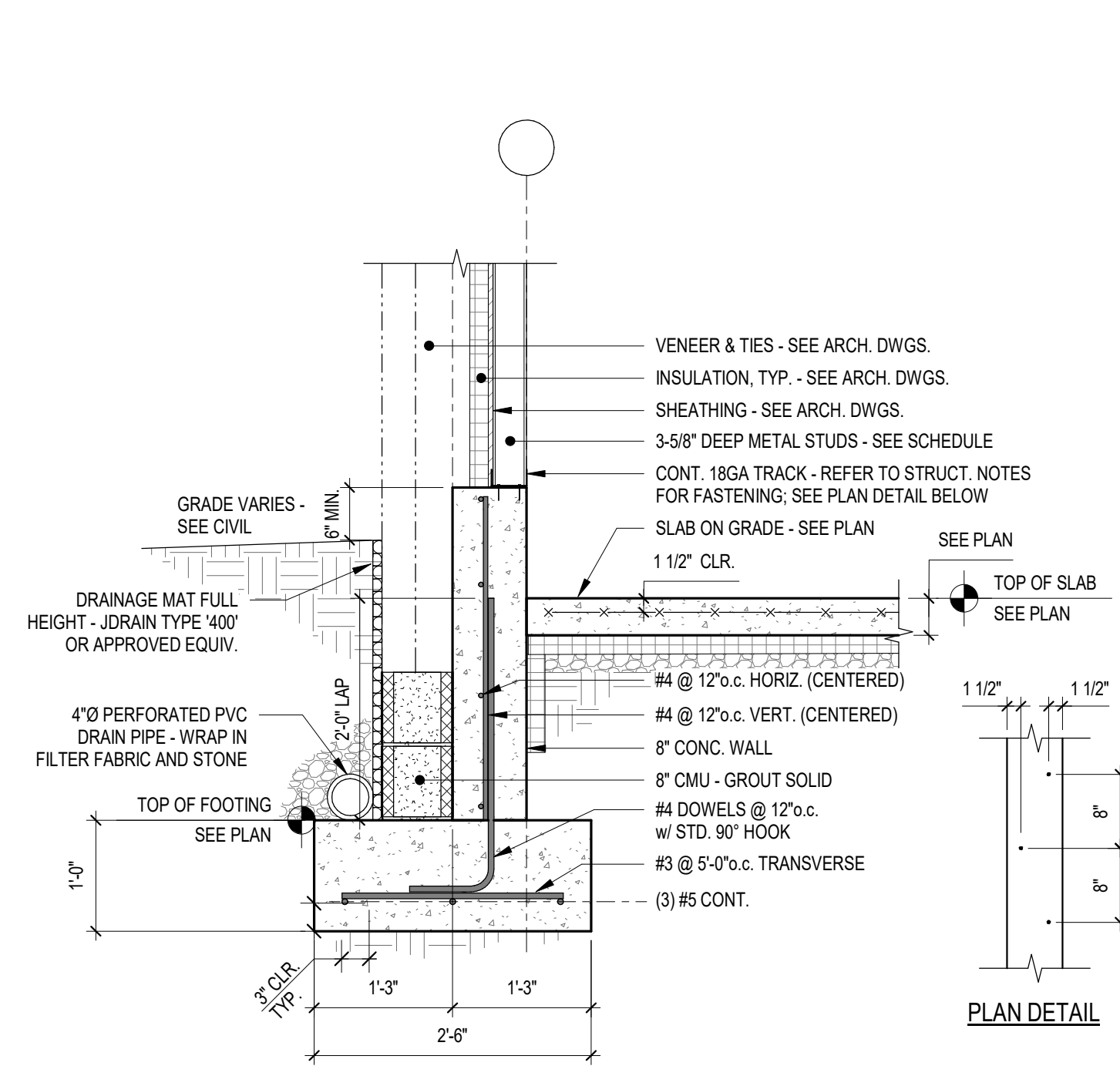
3 EXT. CONC. STEMWALL - B
S2.2 3/4" = 1'-0"



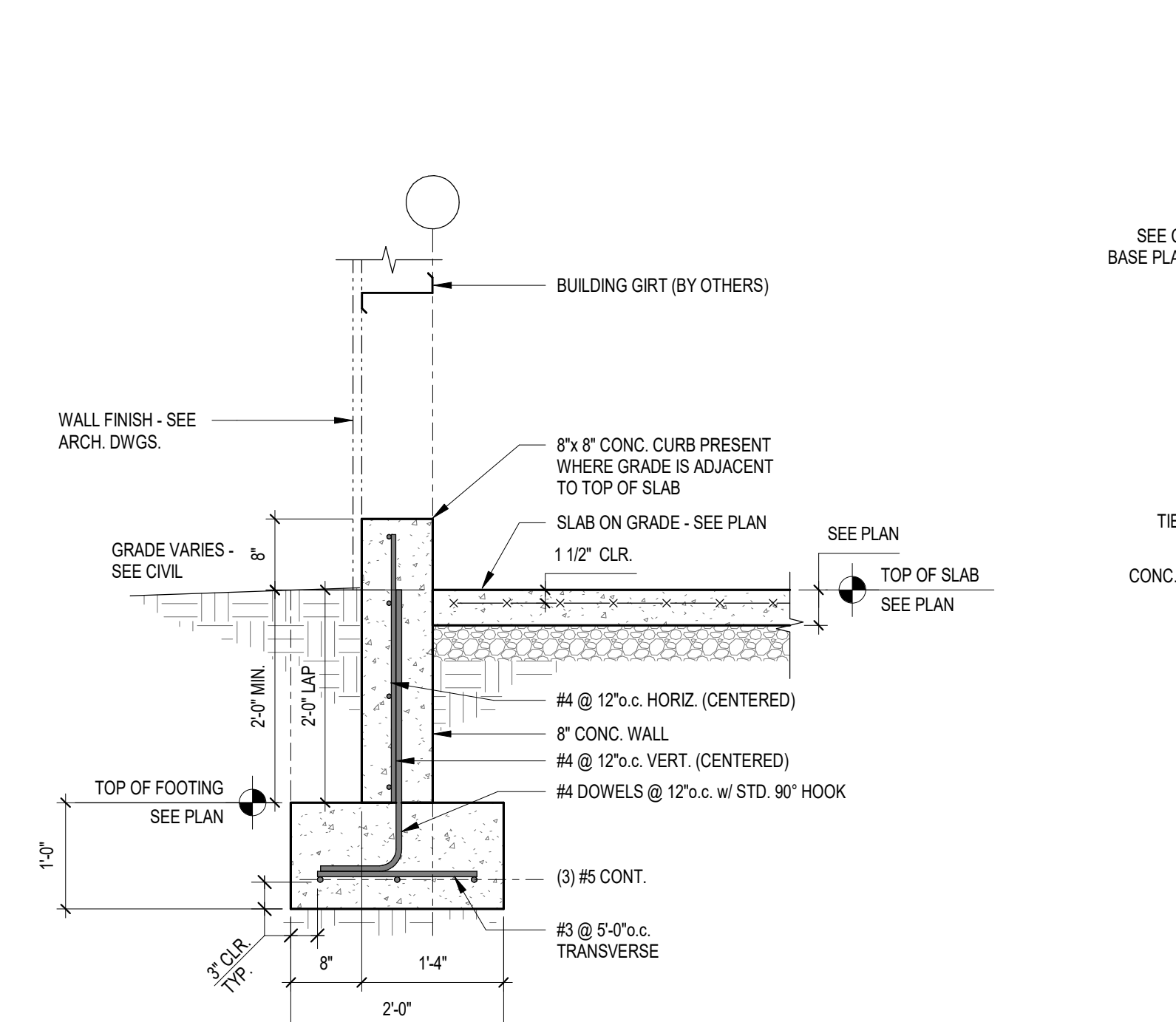
4 EXT. CONC. STEMWALL - C1
S2.2 3/4" = 1'-0"



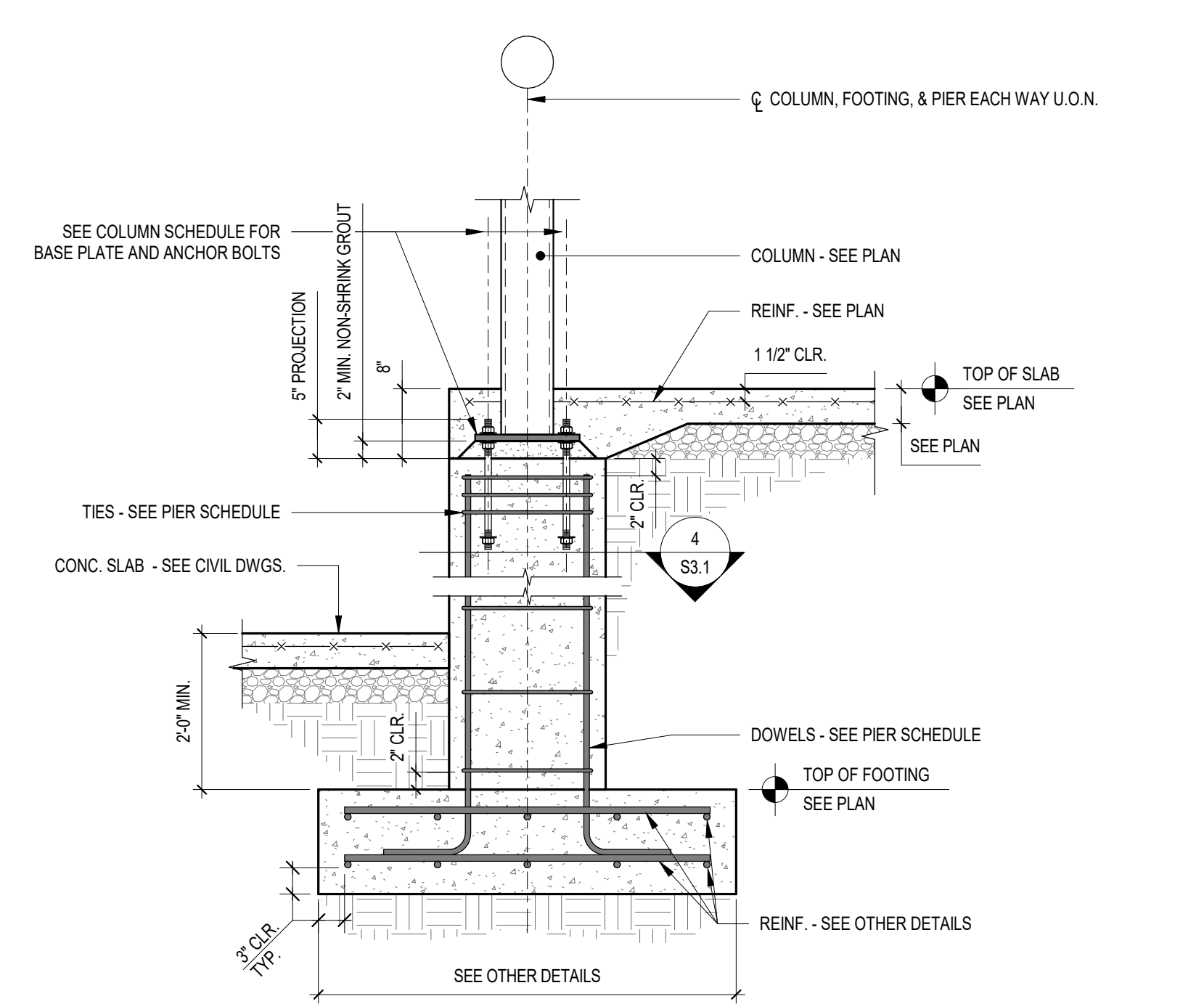
5 EXT. DOOR SECTION
S2.2 3/4" = 1'-0"



6 EXT. CONC. STEMWALL - D
S2.2 3/4" = 1'-0"

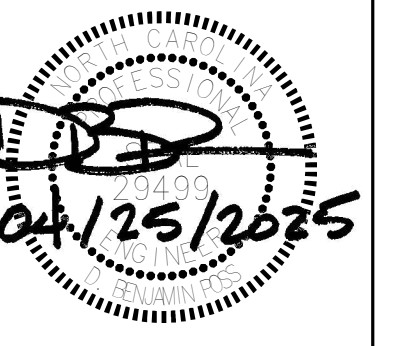
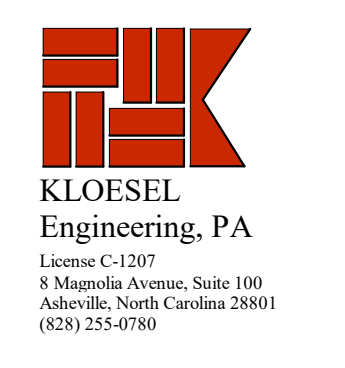


7 EXT. CONC. STEMWALL - E
S2.2 3/4" = 1'-0"



8 TYP. HSS COLUMN PIER ON FOOTING
S2.2 3/4" = 1'-0"

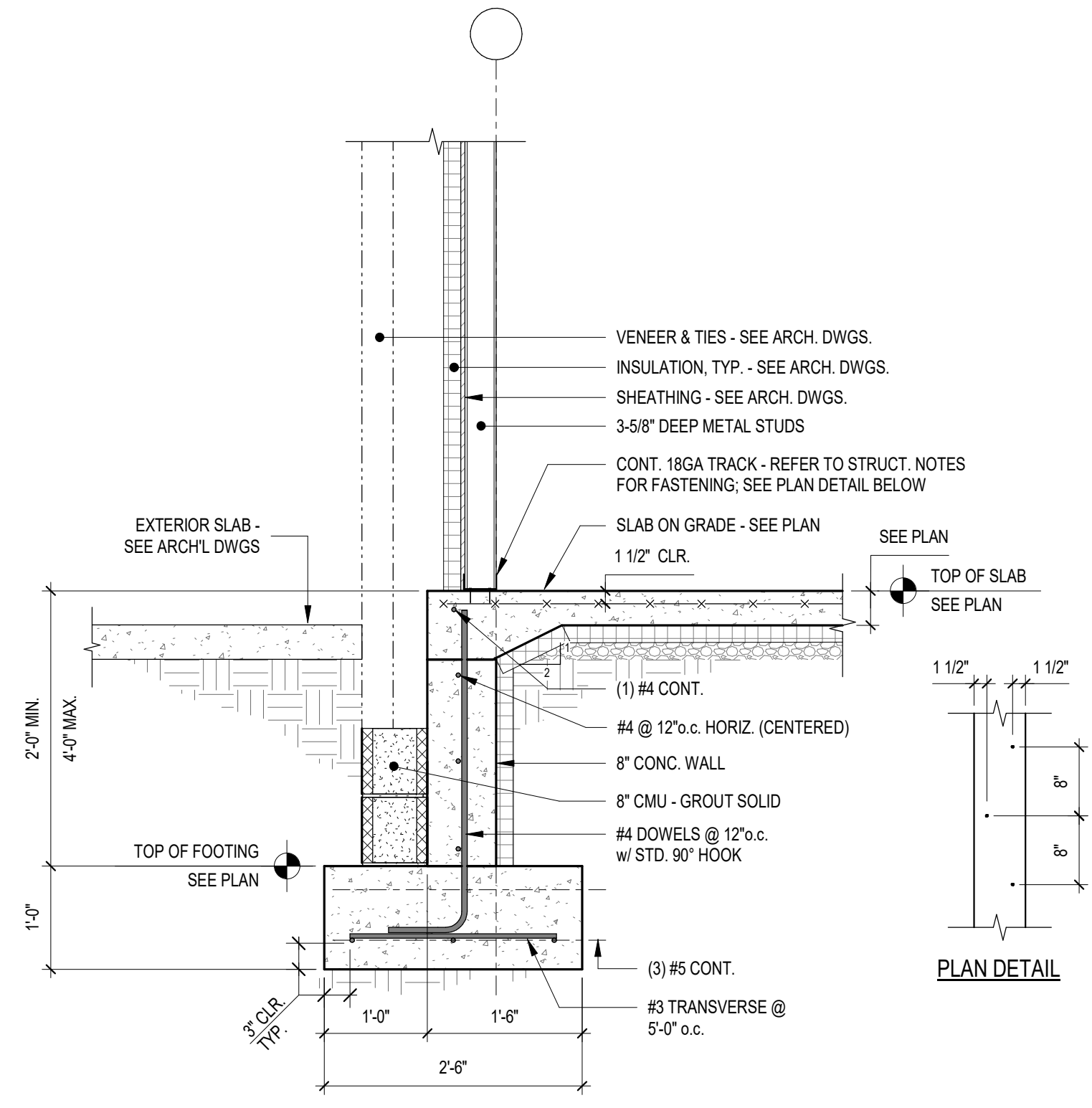
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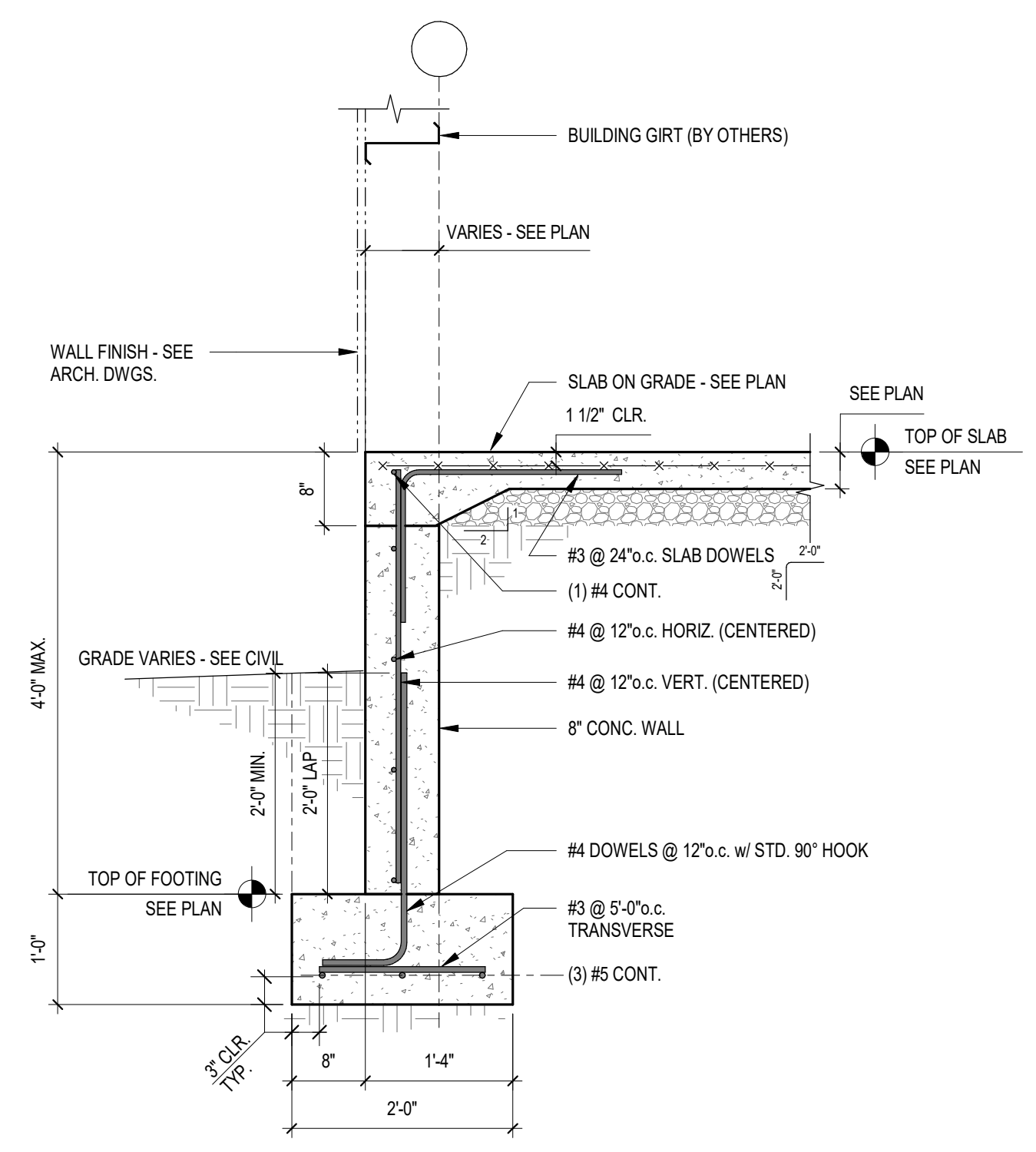
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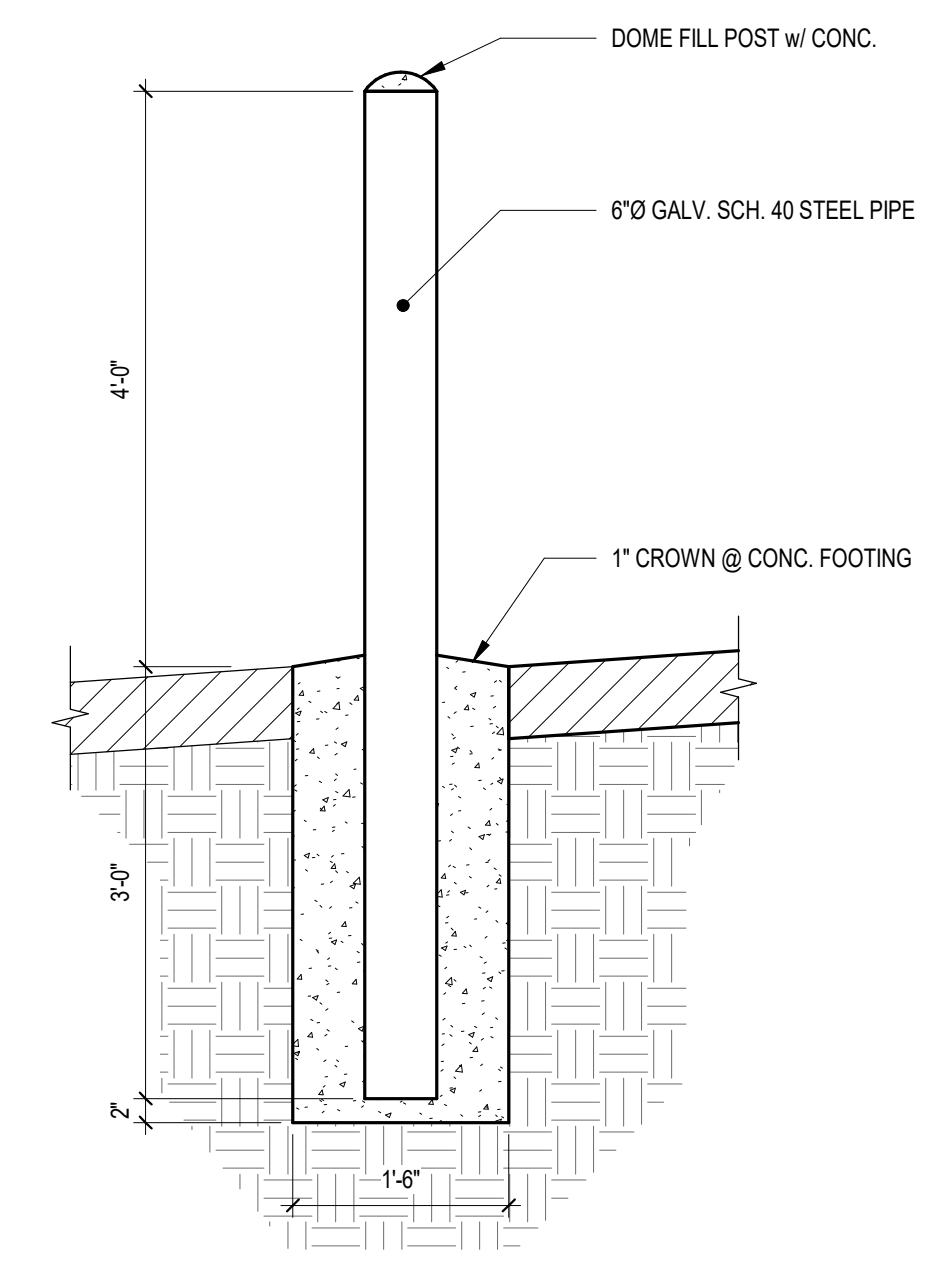
SHEET TITLE FOUNDATION SECTIONS & DETAILS	DATE	2024-04-25
	JOB NO.	190770
SHEET	S2.2	



1 EXT. CONC. STEMWALL - C2
S2.3 3/4" = 1'-0"

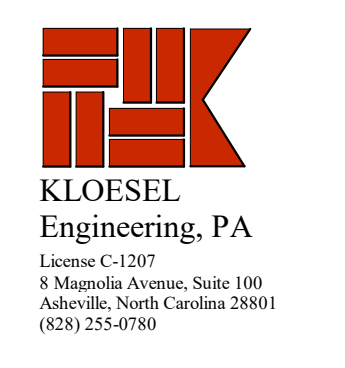


2 EXT. CONC. STEMWALL - A2
S2.3 3/4" = 1'-0"



3 TYPICAL BOLLARD SECTION
S2.3 3/4" = 1'-0"

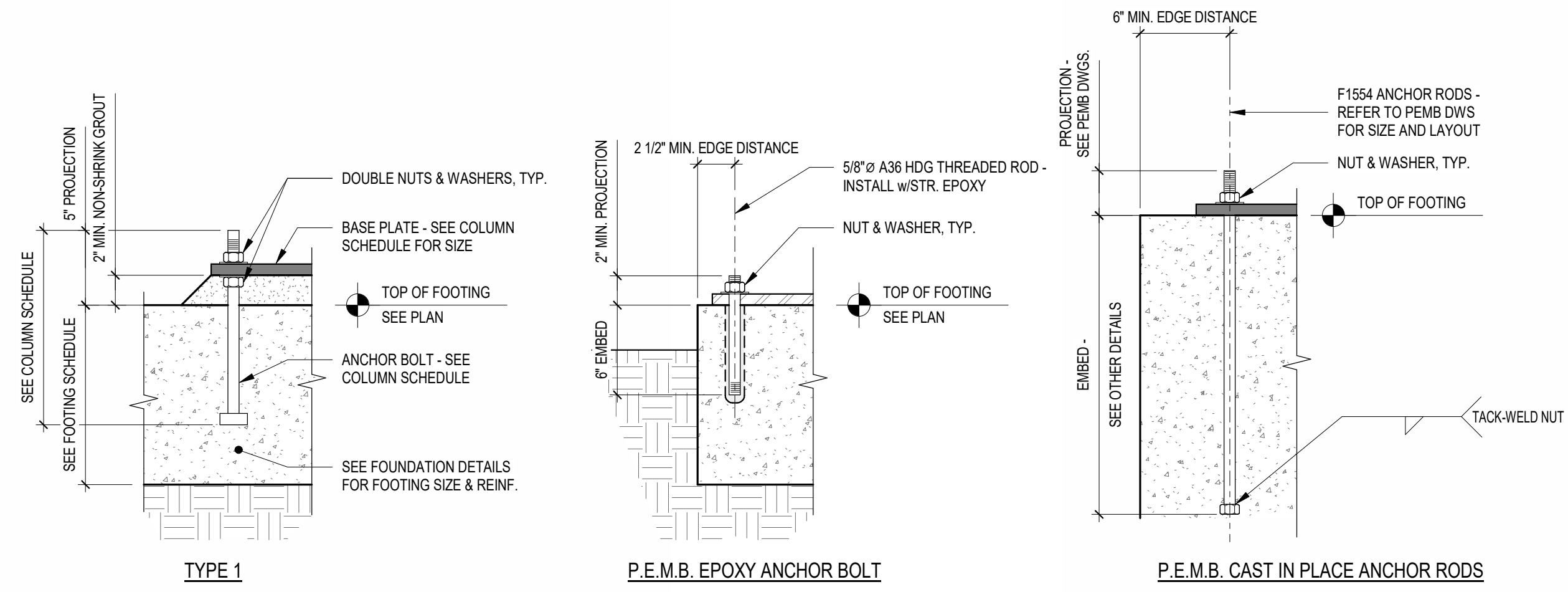
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SHEET TITLE FOUNDATION SECTIONS & DETAILS	DATE	2024-04-25
	JOB NO.	190770
SHEET S2.3		

Fairview, NC



1 P.E.M.B. ANCHOR BOLT TYPES
S3.1 1 1/2" = 1'-0"

COLD FORMED METAL WALL STUD SCHEDULE				
STUD LENGTH	STUD DESIGNATION	STUD SPACING NON-CORNER	STUD SPACING CORNER	COMMENTS
< 10'-0"	362S162-43 (33)	16" o.c.	16" o.c.	

NOTES:
 1. REFER TO WALL SECTIONS FOR STUD DEPTH (6", 8", ETC.)
 2. U.O.N. PROVIDE DEFLECTION TRACK OF SAME GAUGE AS STUDS AT TOP OF WALL.
 3. STUD SIZES ARE FOR ESTIMATING PURPOSES. REFER TO STRUCTURAL NOTES SHEET AND SPECIFICATIONS FOR DELEGATED DESIGN REQUIREMENTS.

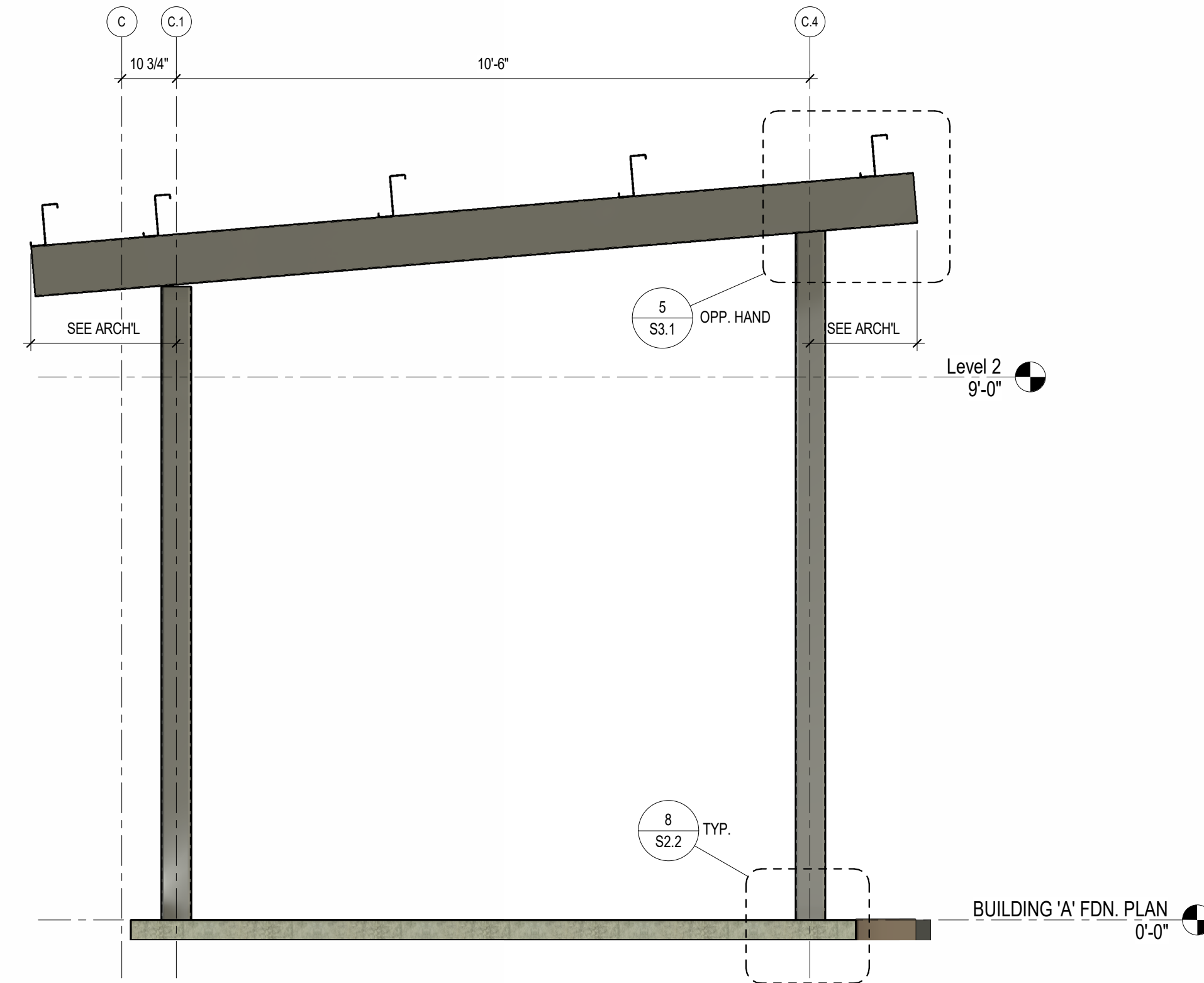
SPREAD FOOTING SCHEDULE		
MARK	SIZE 'L' x 'W' x 'D'	REINFORCING
F2.0	2'-0" x 2'-0" x 1'-0"	(3) #4 EA. WAY BOTTOM
F3.0	3'-0" x 3'-0" x 1'-0"	(4) #4 EA. WAY BOTTOM
F4.0	4'-0" x 4'-0" x 1'-2"	(5) #4 EA. WAY TOP & BOTTOM
F5.0	5'-0" x 5'-0" x 1'-2"	(6) #5 EA. WAY TOP & BOTTOM
F6.0	6'-0" x 6'-0" x 1'-2"	(7) #5 EA. WAY TOP & BOTTOM
F7.0	7'-0" x 7'-0" x 1'-2"	(8) #6 EA. WAY TOP & BOTTOM
F8.0	8'-0" x 8'-0" x 1'-2"	(9) #6 EA. WAY TOP & BOTTOM

PIER SCHEDULE				
MARK	PIER SIZE	PIER TYPE	VERTICAL BARS	TIES
P1	SEE 4/S2.1	--	SEE SECTION	(3) #3 @ 2'o.c. - REMAIN @ 12'o.c.
P2	SEE 5/S2.1	--	SEE SECTION	(3) #3 @ 2'o.c. - REMAIN @ 12'o.c.
P3	SEE 1/S2.2	--	SEE SECTION	(3) #3 @ 2'o.c. - REMAIN @ 12'o.c.
P4	1'-6" x 1'-6"	TYPE 4	(8) #6	(3) #3 @ 2'o.c. - REMAIN @ 12'o.c.

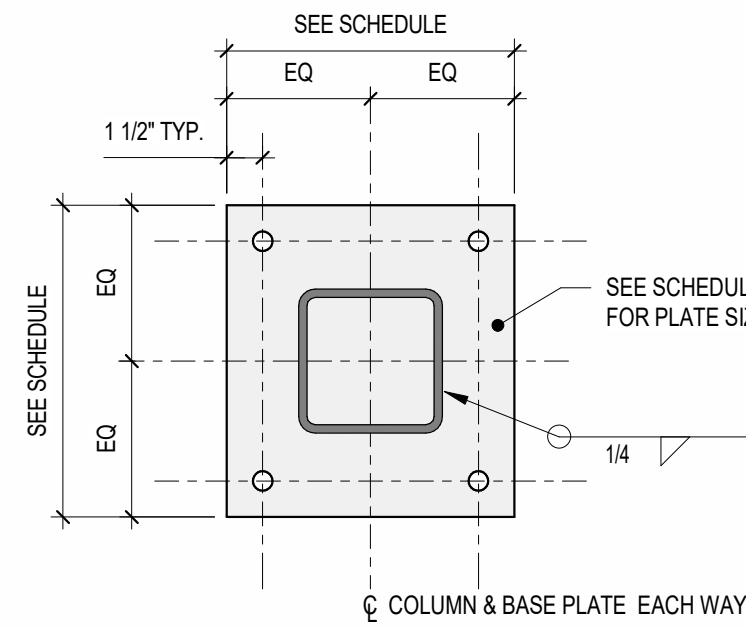
PIER NOTES:
 1. SEE SECTION 3/S3.1 FOR CONCRETE PIER TYPES.

STEEL COLUMN SCHEDULE				
MARK	COLUMN SIZE	BASE PLATE	ANCHOR BOLTS	COMMENTS
C1	HSS 6x6x3/8	1'x 12'x 1'-0" (TYPE 1)	(4) 3/4"Ø x 1'-1" (TYPE 1)	

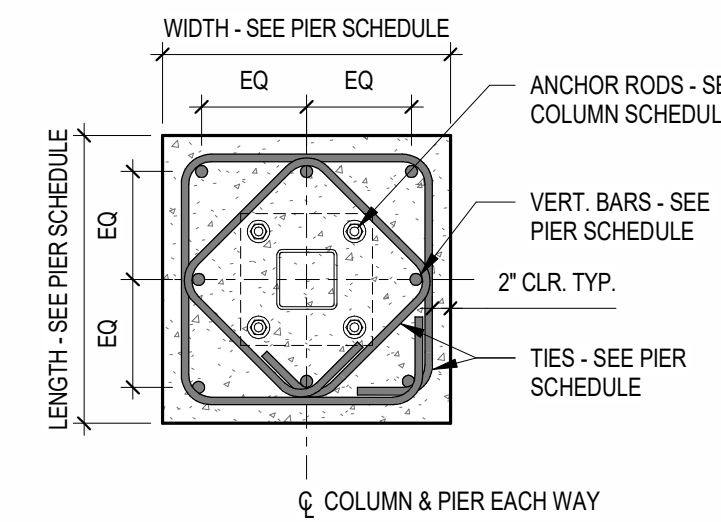
COLUMN NOTES:
 1. SEE SECTION 1/S3.1 FOR BASEPLATE TYPES.
 2. SEE SECTION 2/S3.1 FOR ANCHOR BOLT TYPES.



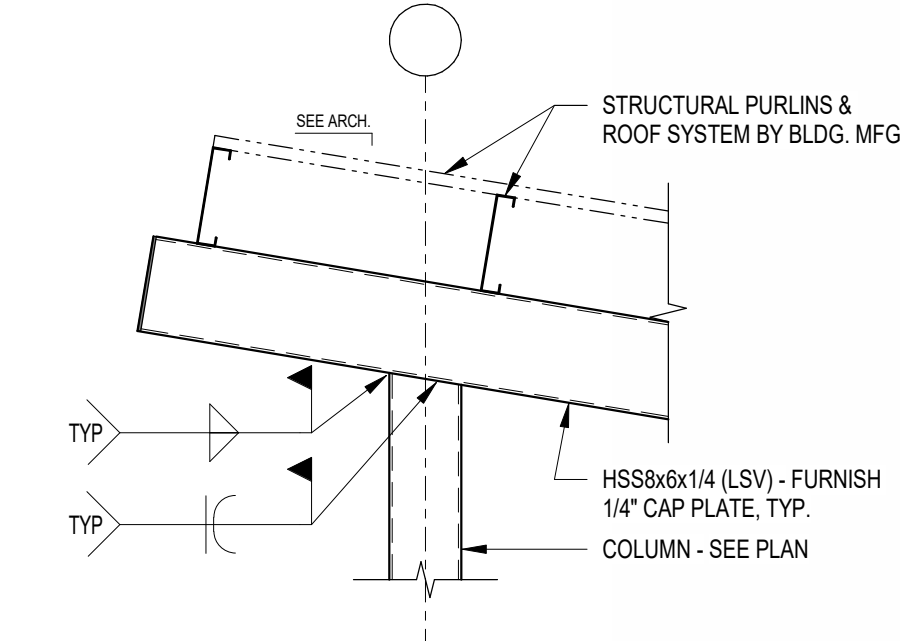
2 TYP. ELEVATION @ LOADING DOCKS
S3.1 1/2" = 1'-0"



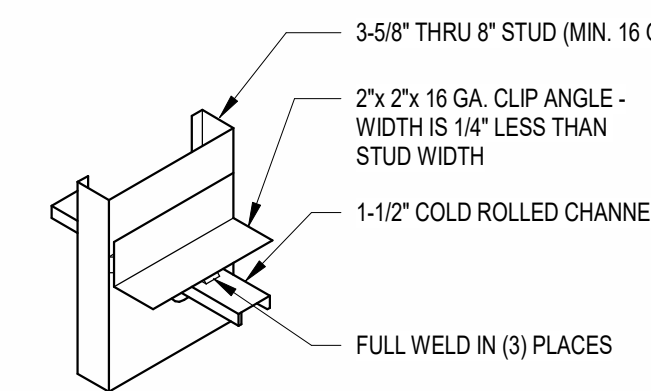
3 BASE PLATE TYPE 1
S3.1 1 1/2" = 1'-0"



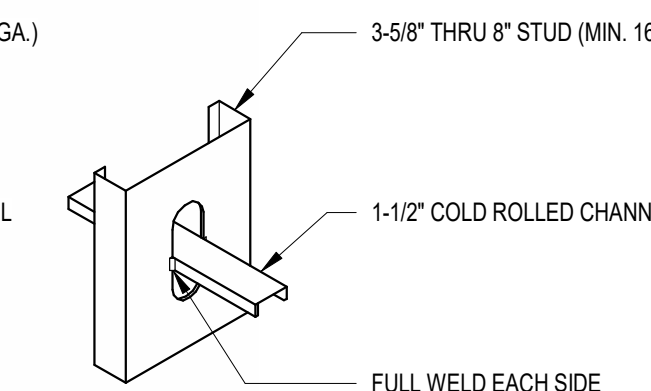
4 PIER TYPE 4
S3.1 3/4" = 1'-0"



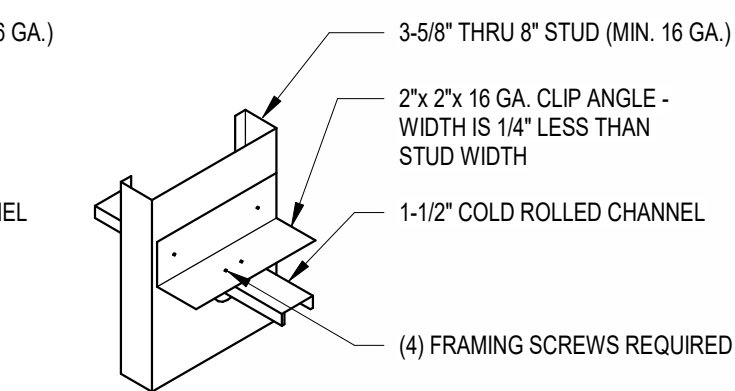
5 ROOF FRAMING SECTION @ LOADING DOCK
S3.1 3/4" = 1'-0"



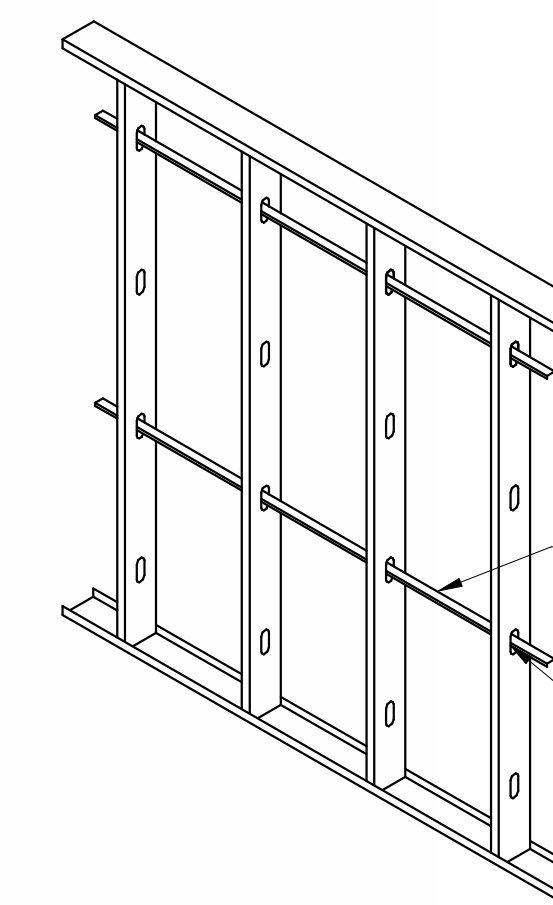
LATERAL BRACING WELD ATTACHMENT



LATERAL BRACING WELD ATTACHMENT



LATERAL BRACING SCREW ATTACHMENT

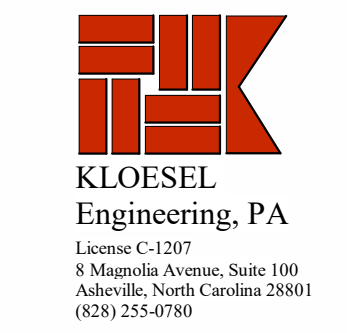


LATERAL BRACING w/ COLD ROLLED CHANNELS

NOTE:
 INSTALL LATERAL BRACING AS INDICATED AT:
 1. ALL EXTERIOR WALLS
 2. INTERIOR PARTITIONS w/ GYPSUM WALL SHEATHING ON (1) SIDE ONLY
 3. INTERIOR PARTITIONS WHERE STUDS w/o SHEATHING EXTEND ABOVE CEILING HEIGHT.

6 LATERAL BRACING FOR METAL STUD WALLS, TYP. U.O.N.
S3.1 1 1/2" = 1'-0"

REVISIONS



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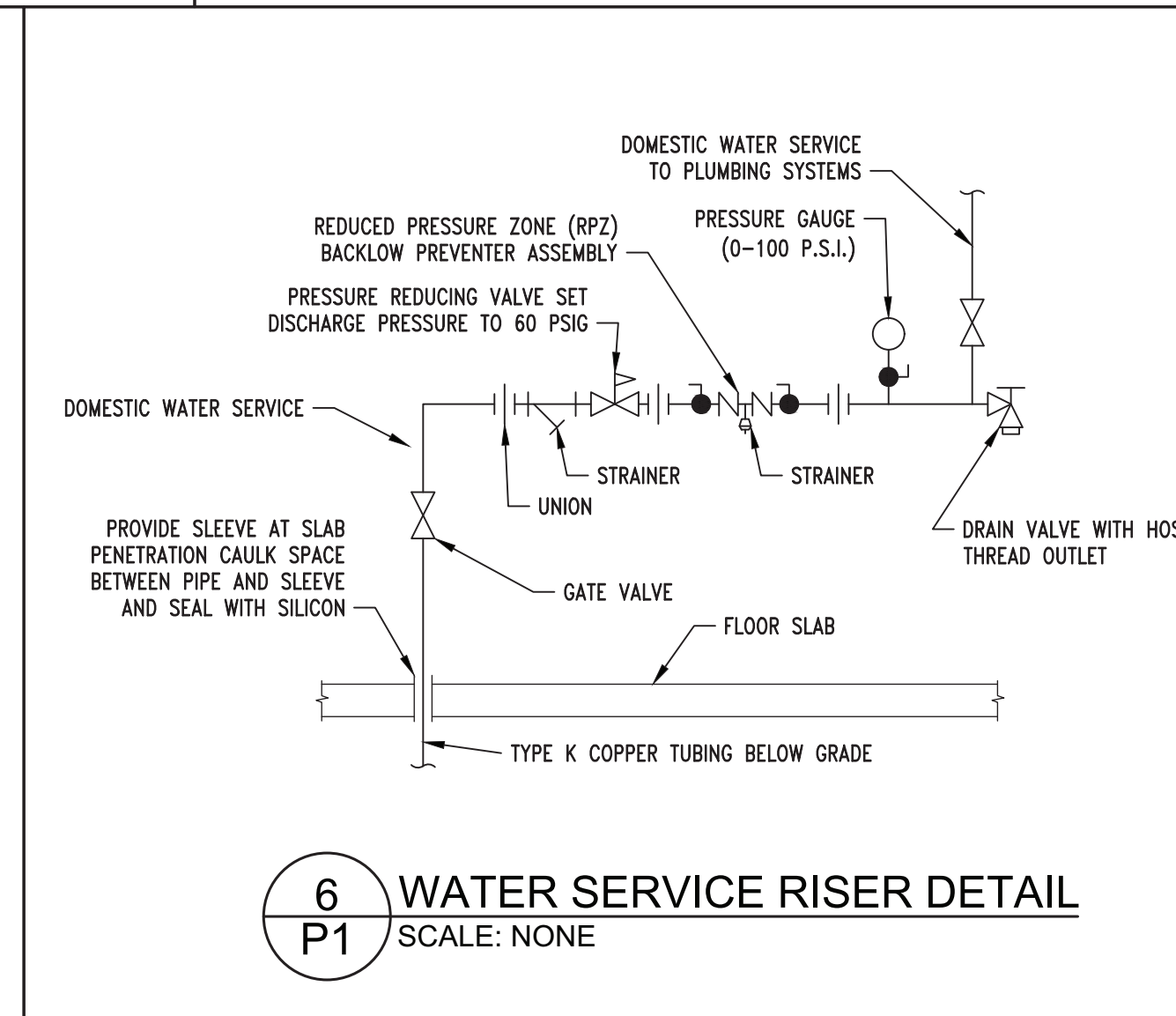
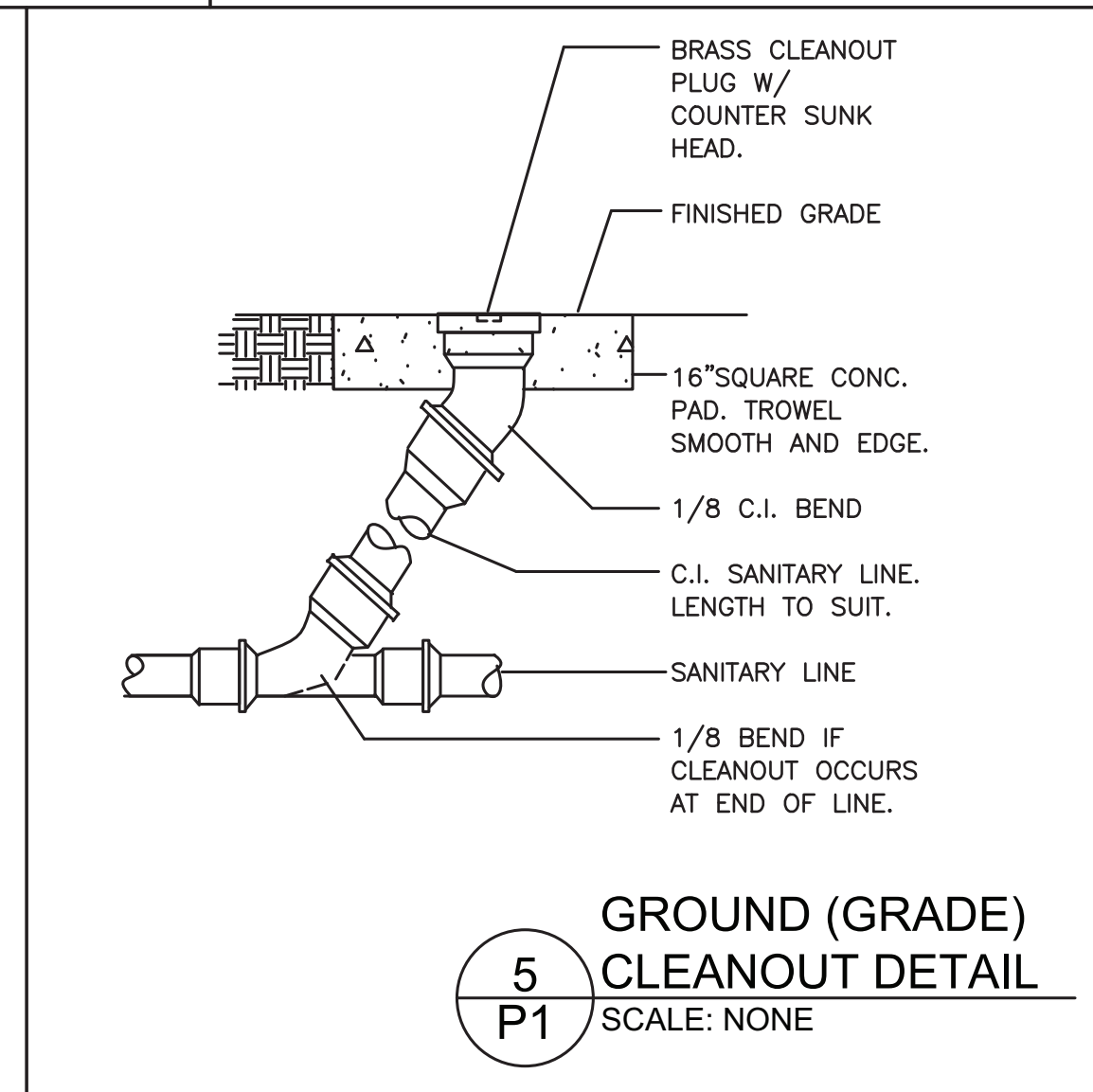
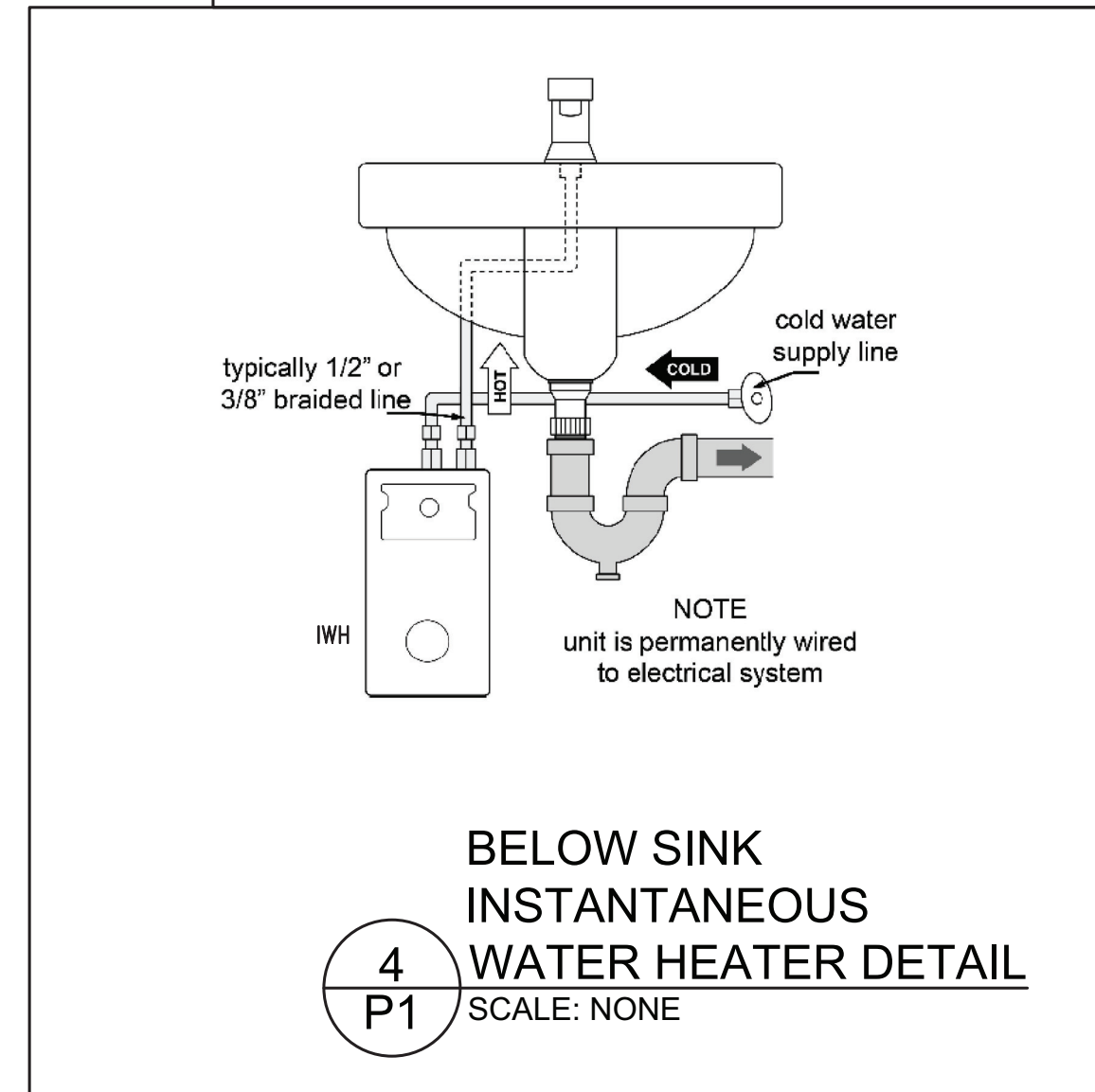
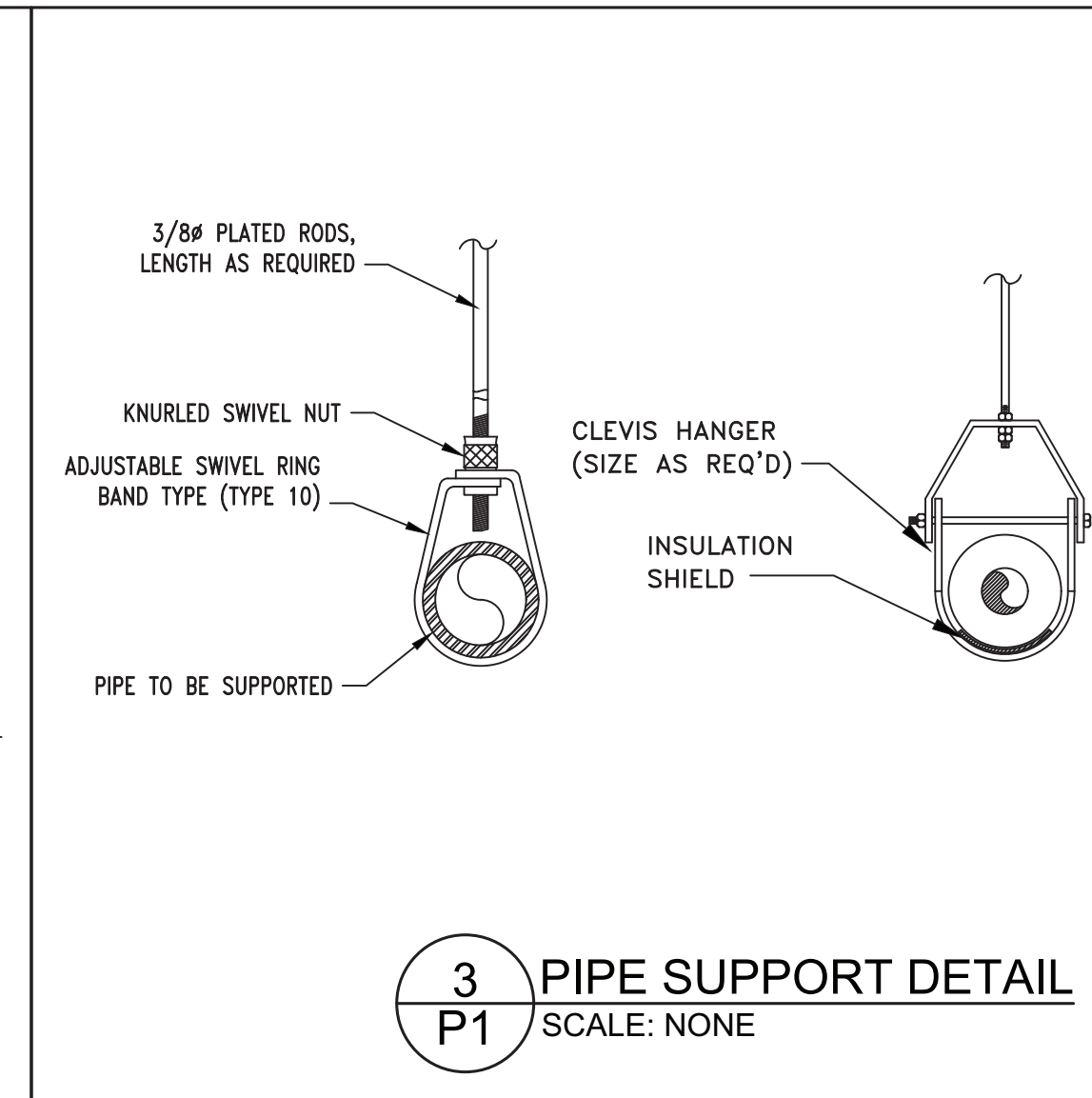
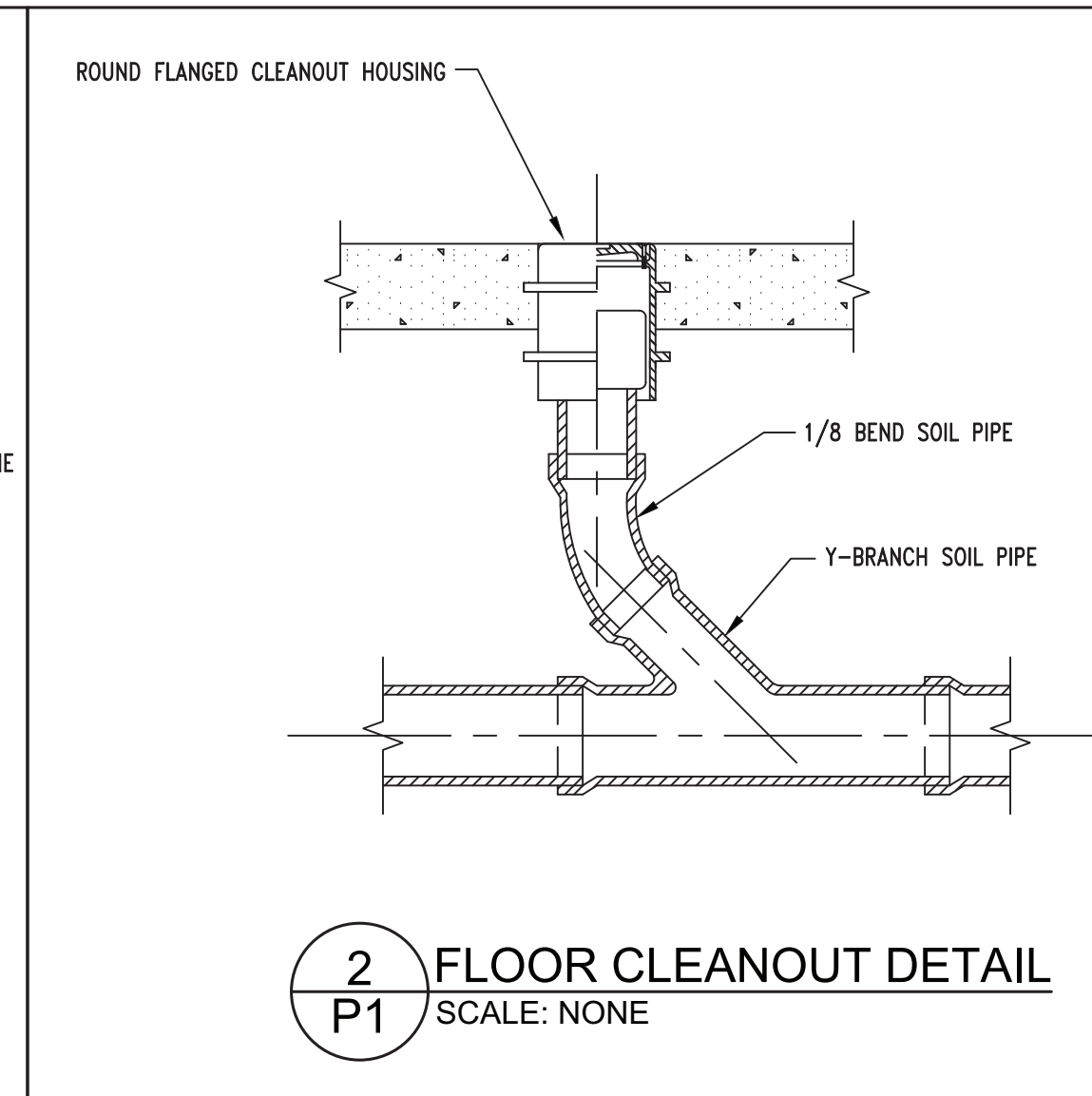
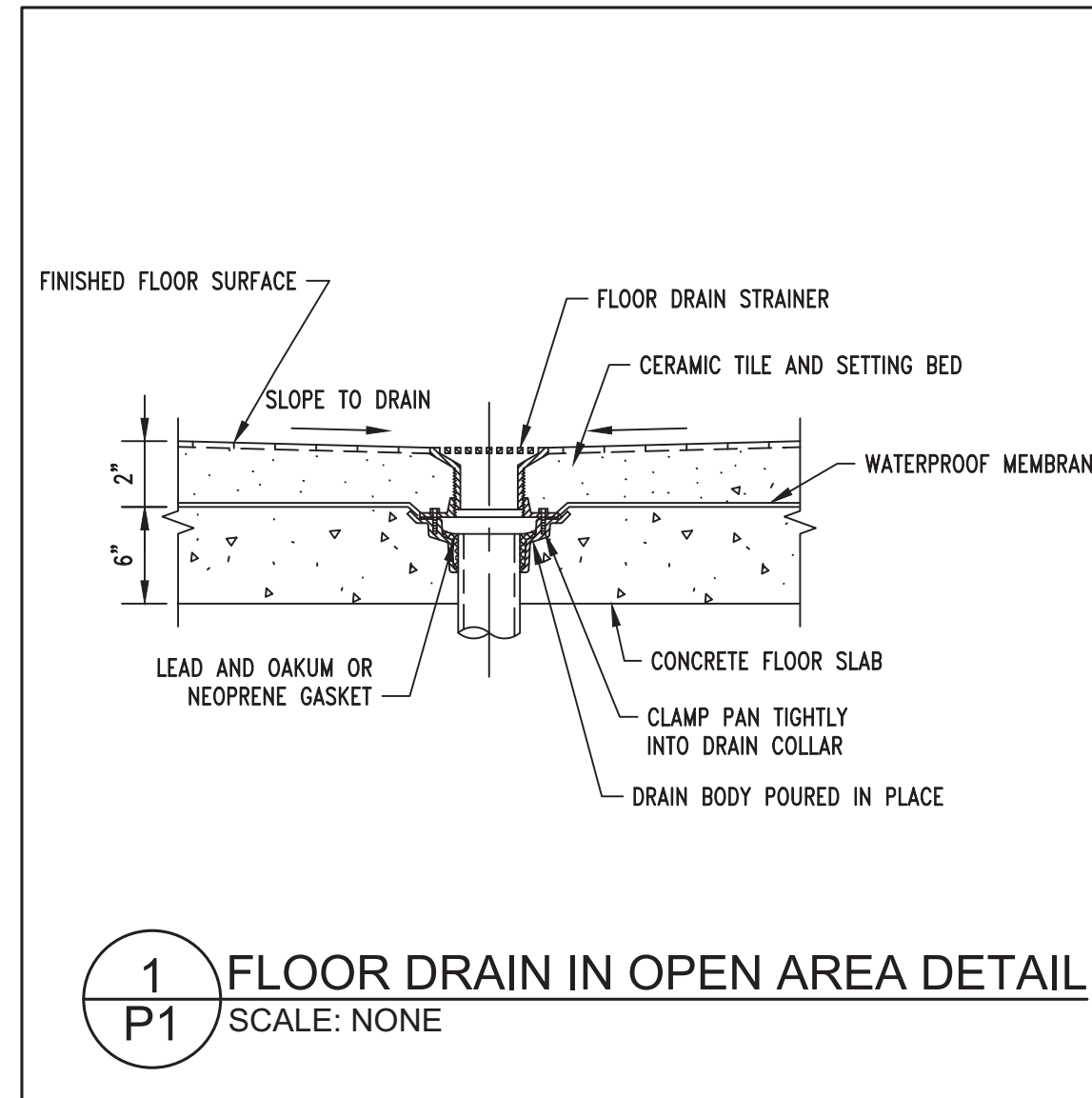
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841 Charlotte Hwy.

SHEET TITLE SCHEDULES & MISC. DETAILS	DATE	2024-04-25
	JOB NO.	190770
SHEET	S3.1	

PLUMBING FIXTURE SCHEDULE										
TAG	Fixture	Fixture manufacturer (or equal)	Fixture model #	Trim manufacturer (or equal)	Trim model #	Sanitary	Vent	Cold water	Hot water	Remarks
P1	Floor mounted water closet. Tank type. HC accessible.	American Standard	Champion Right Height 231AA.104	-	-	3"	2"	1/2"	-	White vitreous china siphon jet, 16 1/2" rim. White open front seat with check hinges. Elongated bowl. 1.28 gallons per flush. Provide flex supply with stop. MAP score of 1000 grams of miso at 1.28 gpf. Install per ADA. Trip lever located on accessible side.
P2	Lavatory. Wall mounted. HC accessible.	American Standard	Lucerne 0355.012	Sloan	EBF-650-BDM	1-1/2"	1-1/2"	1/2"	1/2"	White wall-mounted vitreous china, with backplash, concealed arm carrier, 4" faucet centers. ADA compliant, battery powered, sensor activated, chrome plated brass faucet with 0.5 gpm vandal resistant aerator, below deck thermostatic mixing valve (set at 115°F) and grid drain. Install per ADA.

PLUMBING LEGEND	
Cold Water Piping Below Grade	
Cold Water (CW)	
Sanitary Waste Piping	
Floor Drain (FD)	
Floor Cleanout (FCO)	
Grade Cleanout (GCO)	
Pipe Drop	
Water Service Riser	
Ball Valve	
Gate Valve	
Wall Hydrant (WH)	

PLUMBING EQUIPMENT SCHEDULE	
TAG	EQUIPMENT
BFP	Backflow Preventer: Watts Water Technologies or equal. Model 009M2QT reduced pressure zone type. The assembly shall consist of an internal pressure differential relief valve located in a zone between two positive seating check modules with captured springs and silicone seat discs. Seats and seat discs shall be replaceable in both check modules and the relief valve. There shall be no threads or screws in the waterway exposed to line fluids. Service of all internal components shall be through a single access bronze cover secured with stainless steel bolts. The assembly shall also include two resilient seated isolation valves, four resilient seated test cocks and an air gap drain fitting. The assembly shall meet the requirements of: USC, ASSE Std. 1013; AWWA Std. C511-92; CSA B64.4.
EWH	Electric Water Heater: State Patriot model PCE-40 or equal. 40 gal storage, 4.5 kW @ 208V. See detail.
IEWH	Instantaneous electric thermostatic water heater. EEMAX EX3512T or equal. 120v/1ph, 3.5 kW, 29A. Install on wall beneath lavatory in accordance with manufacturer's installation instructions.
FCO	Floor cleanout: Zurn model ZN-1400 or equal. Dura-coated cast iron, polished nickel bronze top, bronze plug.
FD	Floor drain: Zurn model ZN-415-S or equal. Dura-coated cast iron, polished nickel bronze top. Provide with Sure Seal Inline Trap Sealer or equal.
GCO	Ground cleanout: Zurn Z-1440-BP or equal. Dura-coated cast iron body with bronze plug. Set in 12"x12"x4" concrete pad flush with grade. See detail.
PRV	Pressure Reducing Valve: Watts Model LF25AUB-Z3 or equal. Lead free, copper silicon alloy body, replaceable polymer seat (1/2"-1"), replaceable stainless steel seat (1 1/4" 2"), stainless steel strainer, reinforced EPDM with PTFE wetted surface diaphragm and EPDM valve disc. (1/2"-10gpm) (3/4"-14gpm) (1"-20gpm) (1 1/4"-25gpm) (1 1/2"-32gpm) (2"-45gpm) (flows are at 15psi drop)
WH	Non freeze wall Hydrant: Woodford model B-65 or equal. Automatic draining, anti-siphon vacuum breaker, chrome finished. Provide with extra key for every 5 wall hydrants.



PLUMBING SPECIFICATIONS

- Shop Drawings:** Provide product data for all equipment and materials. Include pertinent dimensions, materials of construction, performance characteristics, weights and factory and field wiring diagrams.
- Operation and Maintenance Manuals:** Provide 3 bound O&M Manuals at the completion of the project. Include approved shop drawings and manufacturer's maintenance manuals.
- Record Drawings:** Contractor shall maintain a set of drawings on the job site to record all differences between the project documents and "As-Built". Contractor shall provide a set of "As-Built" drawings to the Owner at the completion of the project.
- Warranty:** Contractor shall warranty the installation against defects for a period of one year from the date of Owner acceptance. Any defective materials or workmanship shall be replaced at no cost to the Owner.
- Permits and Fees:** Contractor shall obtain and pay for all permits, fees and inspections required under his portion of the work.
- Electrical Coordination:** The plumbing contractor shall be responsible for providing disconnect switches for plumbing equipment not provided with factory mounted disconnect switches and the wiring from plumbing equipment to the disconnect switch. All wiring and devices shall be in accordance with the NEC and electrical specifications. The electrical contractor shall be responsible for wiring and all devices upstream of disconnect device.
- Firestopping:** Contractor shall firestop all pipe penetrations of fire rated walls with a UL approved firestop system. Installation shall strictly follow the firestop system details.
- General Duty Valves:** Valve pressure and temperature ratings shall be not less than indicated and as required for system pressures and temperatures. Valve shall be the same as upstream piping unless otherwise indicated. Valves in insulated piping shall have 2-inch stem extensions on gate valves with rising stem. Ball valves shall be provided with extended operating handle of non-thermal-conductive material, and protective sleeve that allows operation of valve without breaking the vapor seal or disturbing insulation. Brass or bronze ball valves shall be two-piece, full-port, brass trim, MSS SP-110, 150 psig SWP, 600 psig CWP, two piece body, forged brass, threaded or solder ends, PTFE or PTE seats, and chrome plated ball. Bronze gate valves shall be Class 125, MSS SP-80, Type 1, non-rising stem or Type 2, rising stem, with a 200psig CWP, ASTM B 62 bronze body with integral seal, solid wedge bronze disc, asbestos free packing and threaded or solder joint ends. Bronze globe valves shall be Class 125, MSS SP-80, Type 1 with a 200psig CWP, ASTM B 62 bronze body with integral seat, asbestos free packing and threaded solder joint ends.
- Piping Insulation:** Flexible elastomeric insulation shall be closed-cell, sponge- or expanded-rubber materials complying with ASTM C 534. Type I for tubular materials. Mineral-fiber, preformed pipe insulation shall be Type I, 850 Deg F, mineral or glass fibers bonded with a thermosetting resin, complying with ASTM C 547, Type I, Grade A, with factory-applied ASJ or with factory-applied ASJ-SS. Install insulation continuously through non-fire rated walls and partitions. Install insulation continuously through penetrations of fire-rated walls and partitions and seal in accordance with a UL approved through penetration firestop system. Domestic cold, hot and recirculated hot water insulation shall be 1-inch thick. Insulate exposed piping including drain and water supplies under handicapped lavatories and sinks, to meet the requirements of ADA 4.19.4, ADAAG 606.5, ICC/ANSI A117.1 606.6, or GSA & DOD's ABA 606.5 requirement to "protect against contact - no sharp or abrasive surfaces"
- Pipe Hangers and Supports:** Carbon-steel pipe hangers and supports shall be MSS SP-58, Types 1 through 58, factory-fabricated components. Galvanized metallic coatings may be pregalvanized or hot dipped. Hanger rods shall be continuous-thread rod, nuts, and washer made of carbon steel. Copper pipe hangers shall be MSS SP-58, Types 1 through 58, copper-coated-steel, factory-fabricated components. Hanger rods shall be continuous-thread rod, nuts, and washer made of carbon steel. Trapeze pipe hangers shall be MSS SP-69, Type 59, shop- or field-fabricated pipe-support assembly made from structural carbon-steel shapes with MSS SP-58 carbon-steel hanger rods, nuts, saddles, and U-bolts. Thermal-hanger shield inserts for shall be heavy duty with minimum 100psi compressive strength. For trapeze or clamped systems insert and shield shall cover entire circumference of pipe. For clevis or band hanger insert and shield shall cover lower 180 degrees of pipe. Pipe positioning systems shall be IAPMO PS 42, positioning system of metal brackets, clips, and straps for positioning piping in pipe spaces; for plumbing fixtures in commercial applications. Supports for piping installed above a roof shall be B-Line BD Series with 14 gauge galvanized channel and recycled rubber base.
- Domestic Water Piping (Metallic):** Hard copper tube shall be ASTM B 88, Type L water tube, drawn temper. Soft copper tube shall be ASTM B 88, Type K water tube, annealed temper. Fittings shall be cast-copper, solder-joint fittings, ASME B16.18, pressure fittings or wrought-copper, solder-joint fittings, ASME B16.22 pressure fittings. Bronze flanges shall be ASME B16.24, Class 150, with solder-joint ends. Copper unions shall be MSS SP-123 cast-copper-alloy, hexagonal-stock body with ball-and-socket, metal-to-metal seating surfaces and solder-joint or threaded ends. Above grade water piping shall be Type L hard copper. Below grade piping shall be Type K soft copper. Piping shall be tested for leaks in accordance with Chapter 312 of the 2018 NC Plumbing Code. Domestic water piping shall be sanitized in accordance with Chapter 610 of the 2018 NC Plumbing Code.
- Water Pressure Reducing Valves:** Water regulators shall meet the requirements of ASSE 1003 with a pressure rating of 150 psig an outlet pressure setting of 60 psig, bronze body and threaded end connections. Provide pressure gauge with gauge cock in valve discharge piping.
- Non Freeze Wall Hydrants:** Wall hydrants shall meet the requirements of ASME A112.21.3M for concealed and exposed-outlet, self-draining wall hydrants and have a pressure rating of 125 psig. Casing and operating rod shall be of length required to match wall thickness. Inlet shall be NPS 3/4. Outlet shall be concealed, with integral vacuum breaker and garden-hose thread complying with ASME B1.20.7. Box shall be deep, flush mounted with cover with chrome plated finish. Provide two operating keys with each hydrant.
- Trap-Seal Primer Device:** ASSE 1018, 125 psig pressure rating, bronze body, NPS 1/2 inlet, threaded, union, or solder joint, gravity drain outlet connection: NPS 1/2 threaded or solder joint.
- Sanitary Waste and Vent Piping:** PVC pipe and fittings shall be solid-Wall PVC Pipe, ASTM D 2665. PVC socket fittings shall be ASTM D 2665, made to ASTM D 3311, drain, waste, and vent patterns and to fit Schedule 40 pipe. Waste and vent piping shall be pressure tested in accordance with the requirements of the 2018 NC Plumbing Code.
- Below Grade Sanitary Waste, Grease Waste, Storm and Vent Piping:** Hub and Spigot Cast Iron pipe and fittings shall be manufactured from gray cast iron and shall conform to ASTM A 74. All pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute © and listed by NSF® International. Pipe and fittings shall be service (SV) weight. Joints shall be made using a compression gasket manufactured from an elastomer meeting the requirements of ASTM C 564. All pipe and fittings to be produced by a single manufacturer and are to be installed in accordance with manufacturer's recommendations and applicable code requirements. Waste, storm and vent piping shall be pressure tested in accordance with the requirements of the 2018 NC Plumbing Code.
- Plumbing Fixtures:** See Plumbing Fixture Schedule.
- Installation:** Materials, fixtures, equipment, accessories and installation shall comply with the requirements of the 2018 NC Plumbing Code, 2018 NC Energy Code, applicable sections of the 2018 NC Building Code and local ordinances. Equipment and materials shall be installed in compliance with manufacturer's installation recommendations and acceptable industry standards. All pipe shall be substantially supported to prevent sags. Piping shall be run parallel to walls and structure unless indicated otherwise. All water piping and other piping subject to freezing shall be run within the thermal envelope of the building unless noted otherwise. Piping subject to freezing that is noted to be install outside of the thermal envelope shall be heat traced with self limiting heat tape and insulated per the insulation specification. It is the responsibility of the contractor to field verify existing conditions and dimensions prior to beginning work.



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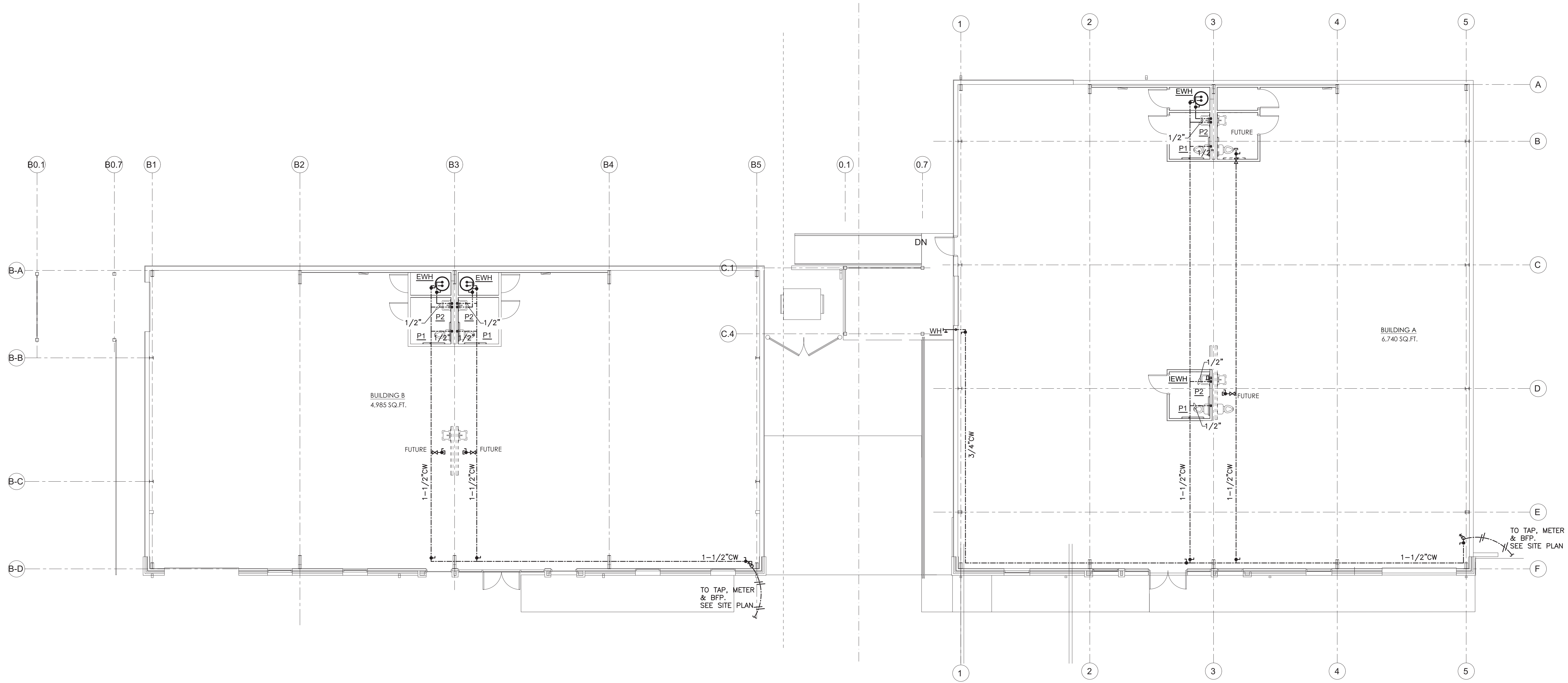
A PME Design for:
841 CHARLOTTE HIGHWAY
 Buncombe County, North Carolina

PLUMBING SUPPLY PIPING PLAN

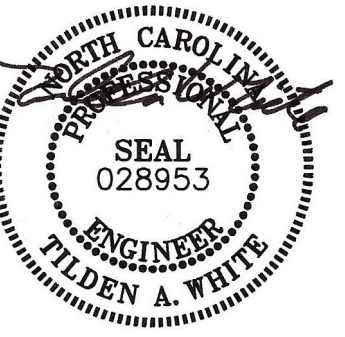
REVISIONS

DATE
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P3



1 PLUMBING SUPPLY PIPING PLAN
P3 SCALE: 1/8" = 1'-0"



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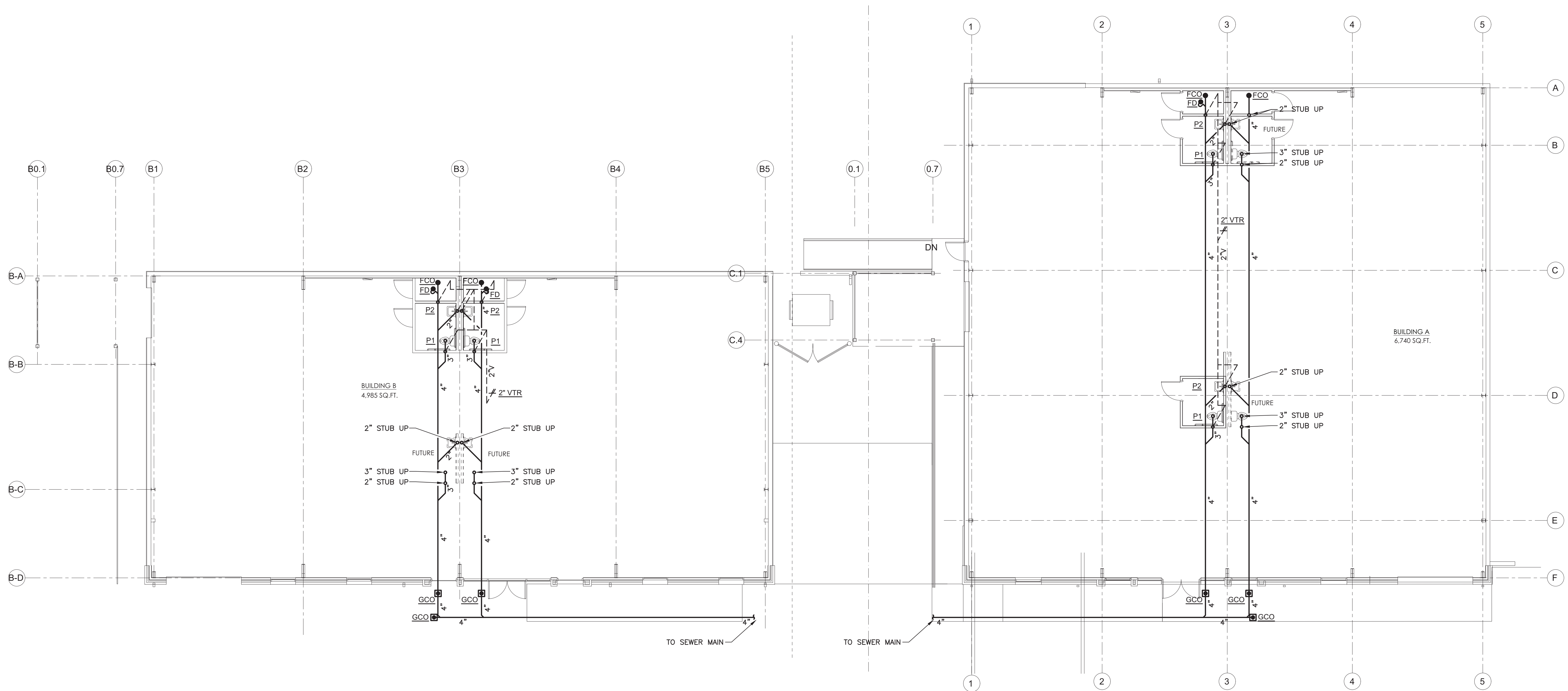
A PME Design for:
841 CHARLOTTE HIGHWAY
 Buncombe County, North Carolina

**PLUMBING
 SANITARY PIPING
 PLAN**

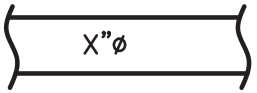

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DATE
 APRIL 25, 2025

P2



1 PLUMBING SANITARY PIPING PLAN
P2 SCALE: 1/8" = 1'-0"

MECHANICAL LEGEND	
Round duct X" Diameter (Inside Clear Dimension)	
Thermostat - Mount 48" AFF	

SPLIT SYSTEM HEAT PUMP SCHEDULE				
indoor unit tag	AH-1	AH-2	AH-3	AH-4
area served	Bldg B Tenant Space	Bldg B Tenant Space	Bldg A Tenant Space	Bldg A Tenant Space
manufacturer (or equal)	Trane	Trane	Trane	Trane
indoor air handler model	TEM6B0C60H51SA	TEM6B0C60H51SA	TEM6B0C60H51SA	TEM6B0C60H51SA
airflow (cfm)	2000	2000	2000	2000
outside air (cfm)	-	-	-	-
aux. heat capacity (kW at 208V)	7.2	7.2	7.2	7.2
indoor unit voltage	208V/1Ø	208V/1Ø	208V/1Ø	208V/1Ø
mca (208V)	52	52	52	52
mocp (208V)	60	60	60	60
weight (lbs)	174	174	174	174
outdoor unit tag	HP-1	HP-2	HP-3	HP-4
outdoor heat pump model number	4TWR5060N1000A	4TWR5060N1000A	4TWR5060N1000A	4TWR5060N1000A
net cooling capacity (mbh)	57.3	57.3	57.3	57.3
net sensible capacity (mbh)	44.2	44.2	44.2	44.2
nominal tonnage	5	5	5	5
no. of compressors	1	1	1	1
refrigerant	R-410A	R-410A	R-410A	R-410A
no. refrigerant circuits	1	1	1	1
outdoor unit voltage	208V/1Ø	208V/1Ø	208V/1Ø	208V/1Ø
mca	32	32	32	32
mocp	50	50	50	50
weight (lbs)	251	251	251	251
applicable notes	1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10
1. Provide outdoor unit with anti-shortcycle timer, evaporator defrost control, rubber isolator kit and crankcase heater.				
2. Provide 7-day programmable thermostat with night setback and alarm display. Mount 48" AFF. Contractor shall program thermostat to Owners schedule. Fan shall be programmed to run continuously during occupied periods and intermittently during unoccupied periods. Outside air damper shall open during occupied periods whenever fan is running. Outside air damper shall remain closed during unoccupied periods. Compressor shall start and stop as needed to maintain cooling set point (76°F adj.). Compressor shall start and stop in heat pump mode to maintain heating set point (70°F, adj.). If temperature drops below set point, electric heat shall be energized. Electric heat shall be disabled until the outside air temperature drops below 40°F.				
3. Provide duct smoke detector in return duct upstream of outside air connection. Interlock with air handler to shut fan off on detection of smoke. Fire alarm interlock by fire alarm system contractor.				
4. Provide single point power connection to indoor air handler.				
5. Provide outside air intake and motor operated damper set to close when unit is off.				
6. Provide service access to unit per code and manufacturer's recommendation.				
7. Provide flexible duct connections to unit at supply and return mains.				
8. Route condensate to floor drain, hub drain or dry well - see plans.				
9. Provide auxiliary drain pan beneath unit extending 6" beyond air handler in all directions. Provide a float switch interlocked with the unit set shut down the unit and signal an alarm on the thermostat display.				
10. Provide humidistat and dehumidification cycle.				

WALL HEATER SCHEDULE		
tag	WH	
manufacturer (or equal)	Markel	
model	E3055T2DWB	
watts	1500	
btu's	5120	
voltage	120V/1Ø	
amps	12.5	
weight (lbs)	6	
applicable notes	1,2,3	
1. Provide with disconnect switch.		
2. Coordinate color with owner.		
3. Mount 12" AFF.		

EXHAUST FAN SCHEDULE		
tag	EF	
serves	bathroom	
manufacturer (or equal)	Greenheck	
model	SP-A90	
type	ceiling	
drive	direct	
rpm	870	
airflow (cfm)	80	
esp (inches H2O)	0.25	
max. sones	0.4	
control	OS w/delay off	
voltage	120V/1Ø	
power (watts)	15.0	
weight (lbs)	12	
applicable notes	1,2,3,4	
1. Provide unit mounted disconnect and backdraft damper.		
2. Provide vibration isolation supports and duct connection. Flexible duct shall not exceed 10'.		
3. Wall switches by E.C.		
4. Provide Greenheck Model WC hooded wall cap with bird screen (6") and damper. (6" round connection)		

MECHANICAL SPECIFICATIONS

- Shop Drawings:** Provide product data for all equipment and materials for approval prior to purchasing. Include pertinent dimensions, materials of construction, performance characteristics, weights and factory and field wiring diagrams for approval prior to ordering.
- Operation and Maintenance Manuals:** Provide 3 bound O&M Manuals at the completion of the project. Include approved shop drawings and manufacturer's maintenance manuals.
- Record Drawings:** Contractor shall maintain a set of drawings on the job site to record all differences between the project documents and "As-Built". Contractor shall provide a set of "As-Built" drawings to the Owner at the completion of the project.
- Warranty:** Contractor shall warrant the installation against defects for a period of one year from the date of Owner acceptance. Any defective materials or workmanship shall be replaced at no cost to the Owner.
- Electrical Coordination:** The mechanical contractor shall be responsible for providing disconnect switches for mechanical equipment not provided with factory mounted disconnect switches and the wiring from mechanical equipment to the disconnect switch. All wiring and devices shall be in accordance with the NEC and electrical specifications.
- Permits and Fees:** Contractor shall obtain and pay for all permits, fees and inspections required under his portion of the work.
- Common Motor Requirements:** Motors shall comply with NEMA MG 1 unless otherwise indicated. Polyphase motors shall be NEMA MG 1, Design B, medium induction motor, energy efficient, as defined in NEMA MG 1, with a service factor of 1.15. Bearings shall be regreasable, shielded, antifriction ball bearings suitable for radial and thrust loading. Motor enclosure shall be cast iron for motor frame sizes 324T and larger; rolled steel for motor frame sizes smaller than 324T. Single phase motors larger than 1/20 hp shall be one of the following, to suit starting torque and requirements of specific motor application: permanent-split capacitor, split phase capacitor start, inductor run or capacitor start, capacitor run. Multispeed motors shall be variable-torque, permanent-split-capacitor type. Bearings shall be prelubricated, antifriction ball bearings or sleeve bearings suitable for radial and thrust loading. Thermal Protection: Internal protection to automatically open power supply circuit to motor when winding temperature exceeds a safe value calibrated to temperature rating of motor insulation. Thermal-protection device shall automatically reset when motor temperature returns to normal range. Motors 1/3hp and smaller shall be 115v/1ph, motors 1/2hp and larger shall be 208-230v/3ph unless noted otherwise.
- Indoor Split System Heat Pumps 5 tons or less:** Indoor concealed evaporator-fan chassis shall be galvanized steel with flanged edges, removable panels for servicing, and faced, glass-fiber duct liner insulation on back of panel. Refrigerant coils shall be copper tube, with mechanically bonded aluminum fins and thermal-expansion valve complying with ARI 206/110. Electric coils shall be helical, nickel-chrome, resistance-wire heating elements; with refractory ceramic support bushings, automatic-reset thermal cutout, built-in magnetic contactors, manual-reset thermal cutout, airflow proving device, and one-time fuses in terminal box for overcurrent protection. Fan shall be forward-curved, double-width wheel of galvanized steel; directly connected to motor. Fan motors shall comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements specified in section "Common Motor Requirements for HVAC Equipment." Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1. Filters shall be factory-fabricated, dry, extended-surface type, 1 inch thick, MERV 7. Condensate drain pans shall be fabricated with two percent slope in at least two planes to collect condensate from cooling coils (including coil piping connections, coil headers, and return bends) and humidifiers, and to direct water toward drain connection. Extend drain pan downstream from leaving face to comply with ASHRAE 62.1. Thermostat shall be low voltage with subbase to control compressor and evaporator fan.
- Installation:** All work and materials shall be in accordance with the applicable sections of the N.C. Building Code and local codes and ordinances. Equipment and materials shall be installed in compliance with manufacturer's installation recommendations and acceptable industry standards. The mechanical contractor is responsible for verifying existing conditions and dimensions before beginning work. Perform all work in a neat workman-like manner and in accordance with industry standards.

2018 APPENDIX B BUILDING CODE SUMMARY: MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT	
Method of Compliance	<input checked="" type="checkbox"/> Prescriptive [] Energy Cost Budget
Thermal Zone	4 Winter Dry Bulb: 16°F Summer Dry Bulb: 85°F
Interior Design Conditions	Winter Dry Bulb: 68°F Summer Dry Bulb: 75°F Relative Humidity: 50%
Building Heating Load:	155 mbh
Building Cooling Load:	200 mbh
Mechanical Spacing Conditioning System	
Unitary	
description of unit:	Split system heat pumps
heating efficiency:	See Schedules
cooling efficiency:	See Schedules
heat output of unit:	See Schedules
cooling output of unit:	See Schedules
Boiler	
total boiler output. If oversized, state reason.	n/a
Chiller	
total chiller capacity. If oversized, state reason.	n/a
List equipment efficiencies:	See Schedules
Equipment schedules with motors (mechanical systems)	
motor horsepower:	- see schedules
number of phases:	- see schedules
minimum efficiency:	- manufacturer's standard meeting ASHRAE 90.1
motor type:	- manufacturer's standard
# of poles:	- manufacturer's standard

TILDEN WHITE
& ASSOCIATES, P.L.L.C.
15 W. Walnut St #202, Asheville, NC 28801
626-265-4327 Project 23019



4-25-2025

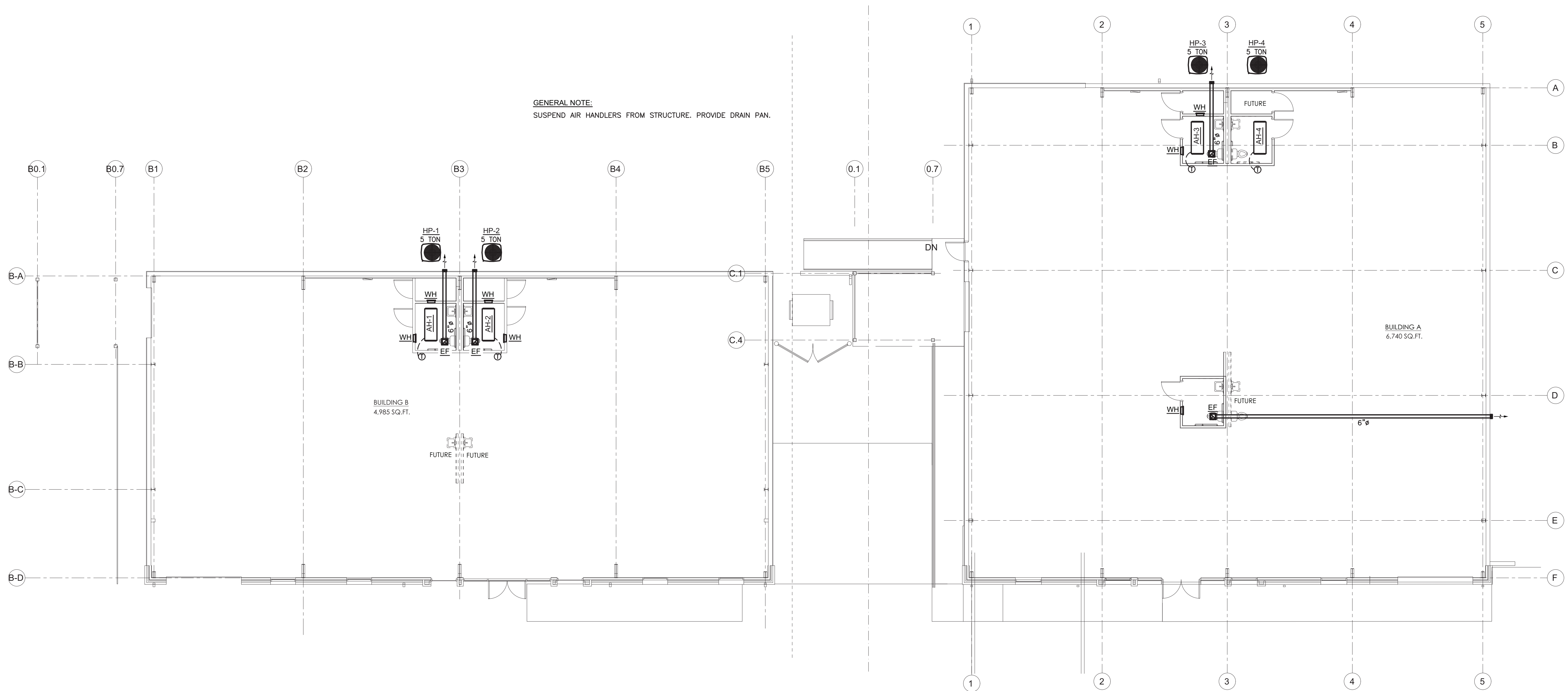
A PME Design for:
**841 CHARLOTTE
HIGHWAY**
Buncombe County, North Carolina

MECHANICAL NOTES
& SCHEDULES

REVISIONS

DATE
APRIL 25, 2025

M1



4-25-2025

A PME Design for:
841 CHARLOTTE HIGHWAY
Buncombe County, North Carolina

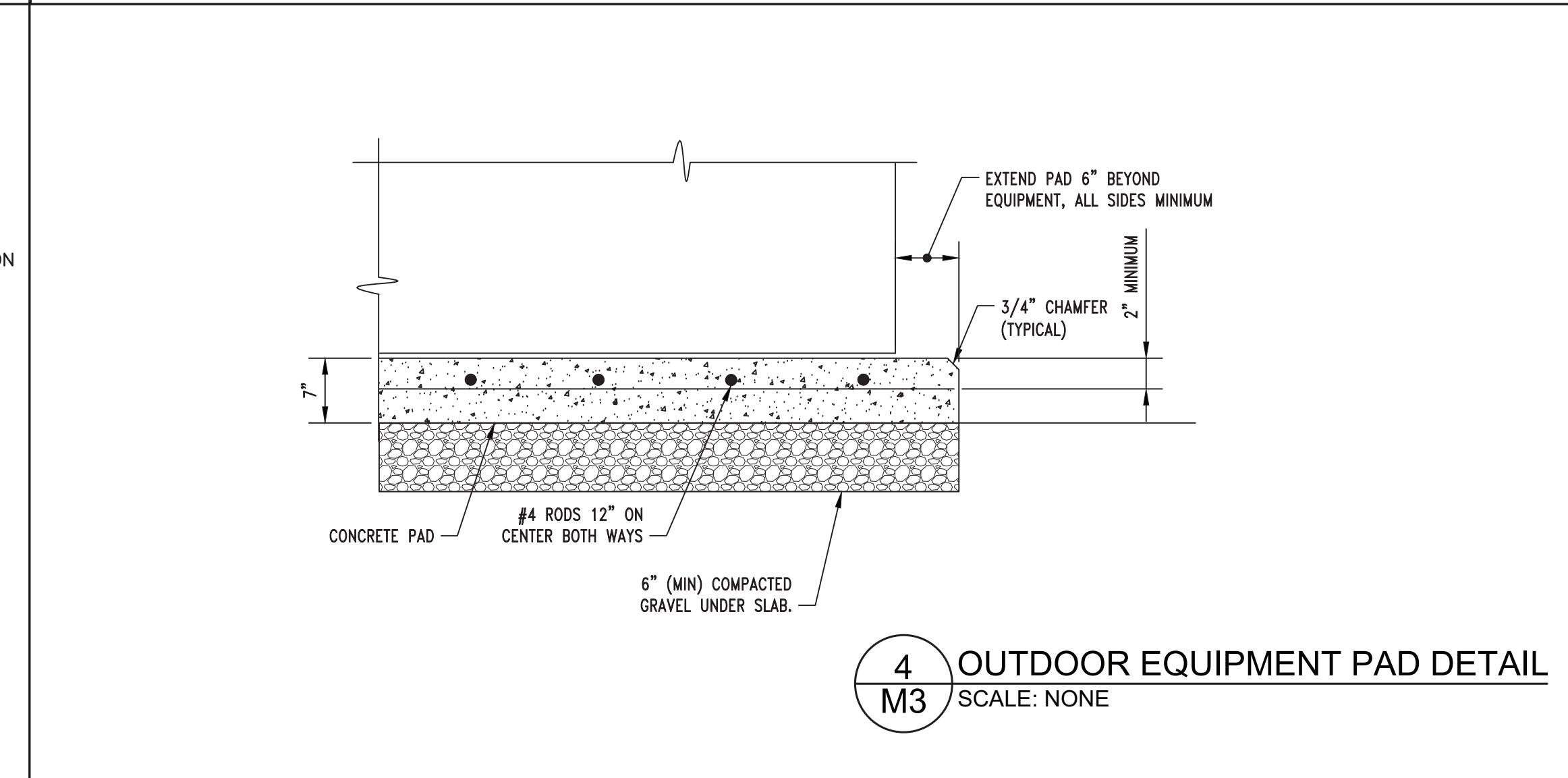
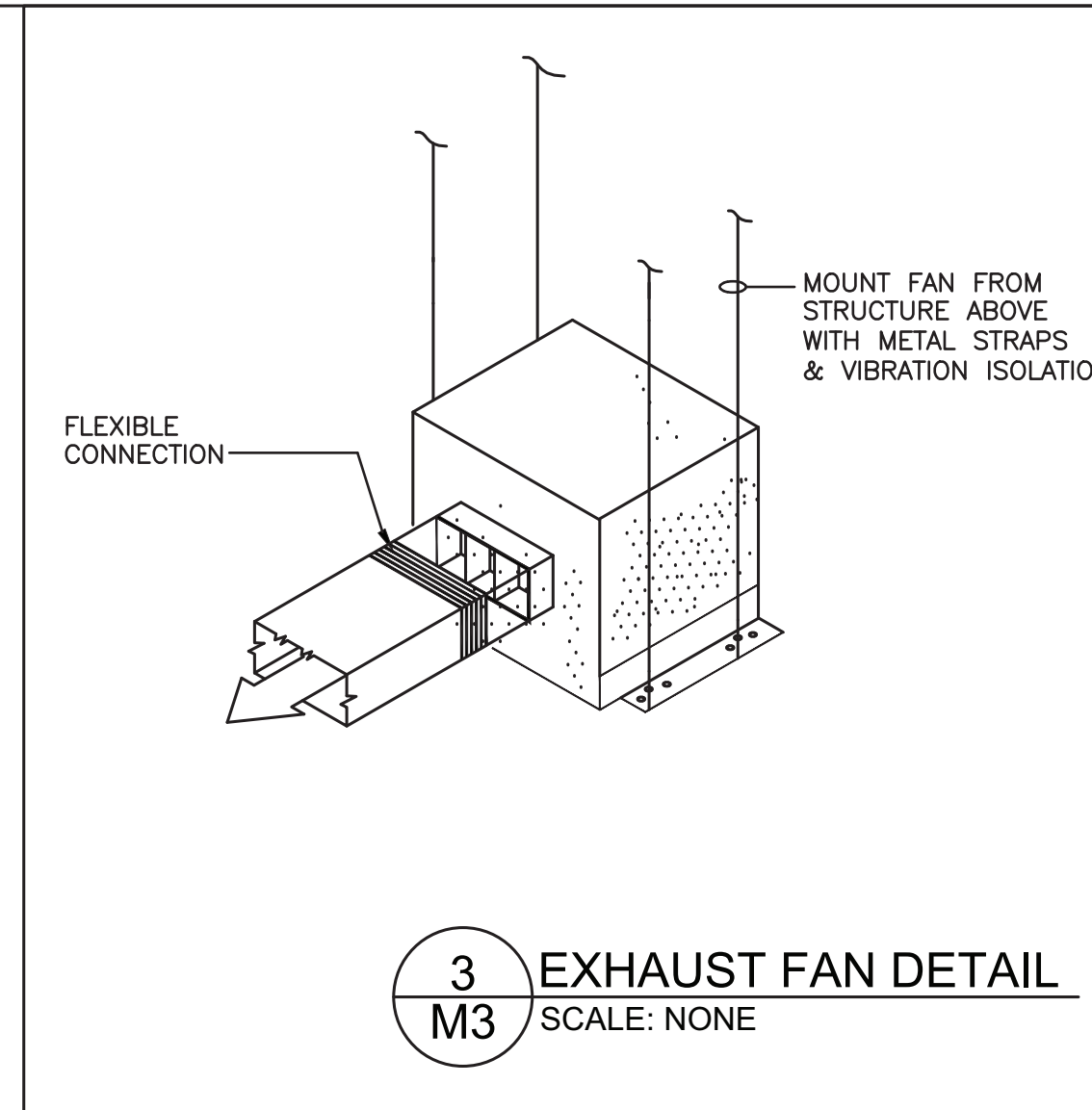
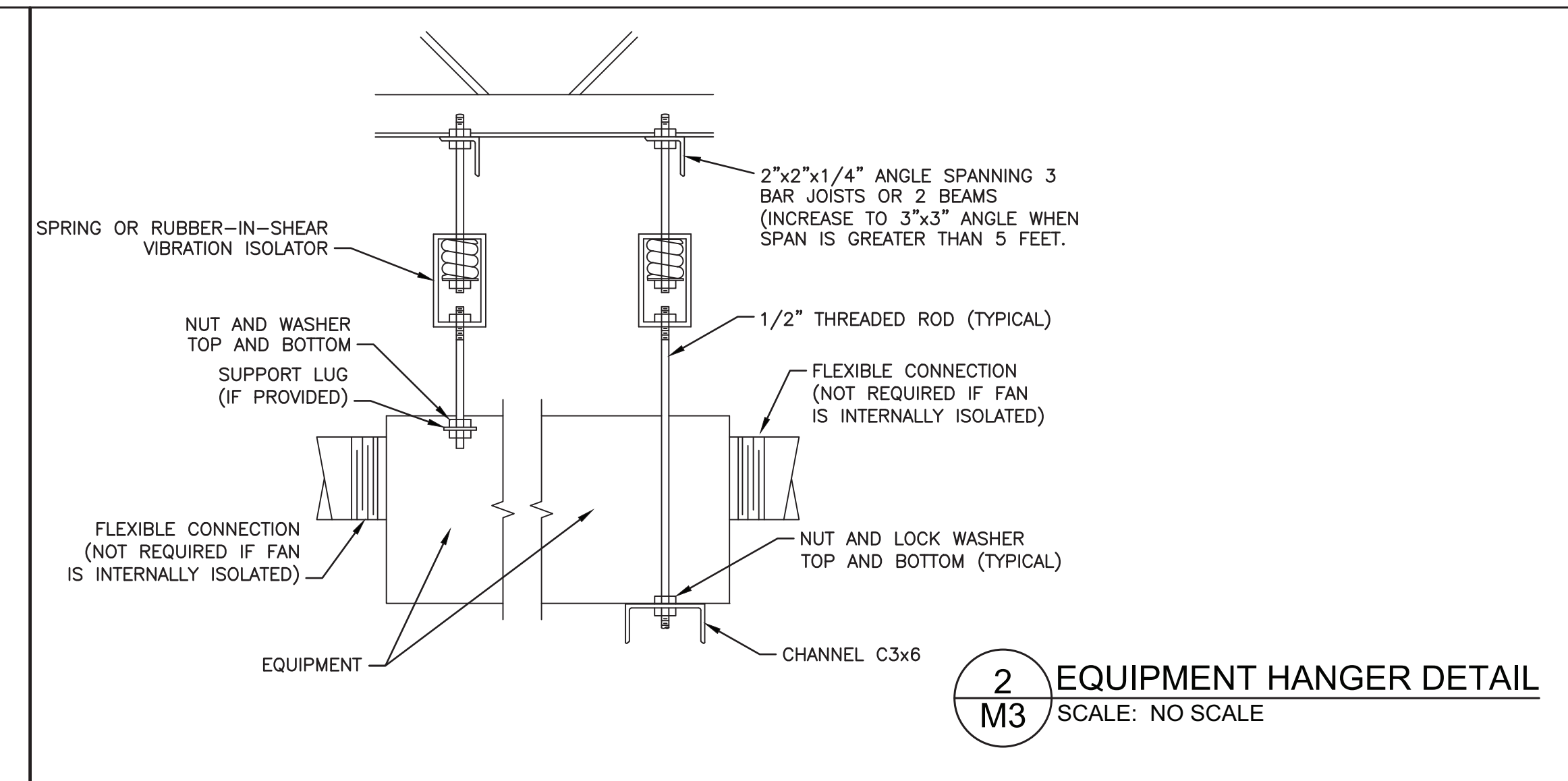
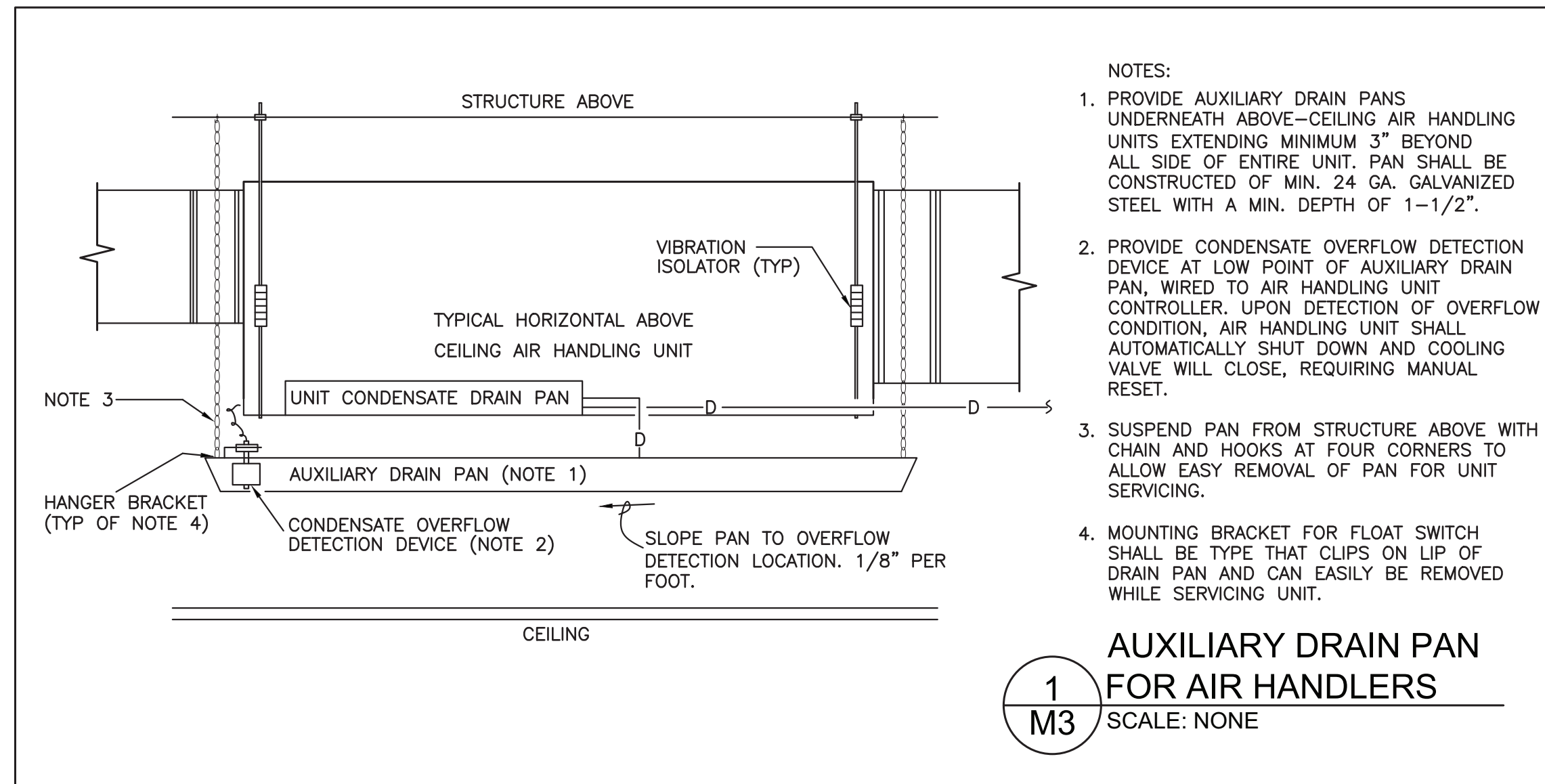
MECHANICAL PLAN

REVISIONS

DATE
APRIL 25, 2025

1
M2 MECHANICAL PLAN
SCALE: 1/8" = 1'-0"

M2






ELECTRICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION
Ⓧ	JUNCTION BOX PER N.E.C.
IPI-2	HOMERUN - PANEL DESIGNATION AND CIRCUIT NUMBER
\$	SINGLE POLE SWITCH - 20A - 120/277V - MOUNT 46" A.F.F. TO BOTTOM
\$ ^D	DIMMER SWITCH
\$ ³	THREE-WAY SWITCH - 20A - 120/277V - MOUNT 46" A.F.F. TO BOTTOM
\$\$\$	INDICATES SWITCHES ARE TO PROVIDE MULTIPLE LIGHT LEVELS (INBOARD, OUTBOARD SWITCHING OF LAMPS)
Ⓜ	115 OR 277 VOLT MOTOR AS NOTED ON PLANS
□	FUSED OR NON-FUSIBLE HEAVY DUTY DISCONNECT SWITCH - BY DIVISION 16
\$ ^M	2-POLE OR 3-POLE MANUAL MOTOR STARTER. PROVIDE WITH OVERLOAD PROTECTION.
O _S	WALL MOUNTED OCCUPANCY SENSOR, SOUND AND MOTION ACTIVATED - SENSOR SWITCH WSX-PDT (WSX-PDT-2P FOR TOILET ROOMS)
Ⓢ	CEILING MOUNTED OCCUPANCY SENSOR WITH DUAL STAGE ILLUMINATION - NLIGHT RCMS-PS150-PDT-10-AR-G2 - VERIFY EXACT WIRING REQUIREMENTS WITH MANUFACTURERS CUT SHEETS BEFORE BEGINNING ANY WORK.
XX P	STANDARD 20A OUTLET - NEMA 5-20R DUPLEX. MOUNT 16" A.F.F. "GFI" DENOTES GROUND FAULT TYPE, NON-FEED THRU, "EWIC" DENOTES OUTLET FOR ELECTRIC WATER COOLER - COORDINATE LOCATION WITH PLUMBING CONTRACTOR - NEMA 5-20R DUPLEX "WP" DENOTES WEATHERPROOF IN USE NEMA 5-20R DUPLEX, "ACT" DENOTES MOUNTED ABOVE COUNTER TOP OR BACKSPLASH, "BB" DENOTES MOUNTED ON THE BACKSIDE OF THE BAR JUST BENEATH THE BARTOP TYPICAL FOR RESTAURANTS AND BARS, "TR" DENOTES TAMPER RESISTANT. "USB" DENOTES LEGRAND TM826USB.
Ⓜ	TWO STANDARD 20A OUTLETS IN A 2-GANG BOX - NEMA 5-20R DUPLEX - COMMON COVER PLATE - MOUNT 16" A.F.F. TO BOTTOM OF DEVICE.
Ⓜ	STANDARD 20A OUTLET IN FLOOR BOX - NEMA 5-20R DUPLEX - LEGRAND WIREMOLD RFB2 FLOOR BOX.
▼	TELEPHONE/DATA OUTLET MTD. 16" AFF TO BOTTOM. PROVIDE 1" CONDUIT WITH PULL CORD FROM OUTLET TO COMMUNICATION BACKBOARD. STUB OUT 6" ABOVE BACKBOARD. PROVIDE NYLON BUSHING ON END OF CONDUIT. OUTLET BOX SHALL BE A 4" SQ. BOX WITH SINGLE GANG PLASTER RING. PROVIDE BLANK COVERPLATE ON OUTLET BOX.
TV	CABLE TV OUTLET MTD. 16" AFF TO BOTTOM OR AS INDICATED. PROVIDE 1" CONDUIT WITH PULL CORD FROM OUTLET TO COMMUNICATION BACKBOARD. STUB OUT 6" ABOVE BACKBOARD. PROVIDE NYLON BUSHING ON END OF CONDUIT. OUTLET BOX SHALL BE A 4" SQ. BOX WITH SINGLE GANG PLASTER RING. PROVIDE BLANK COVERPLATE ON OUTLET BOX.
Ⓜ	GROUNDING FOR SERVICE OR SEPARATELY DERIVED SYSTEM, PER N.E.C.
Ⓜ	SPECIAL POWER OUTLET.

WIRING DEVICE NOTES									
1.	Switches shall be Hubbell CS115 or equivalent and receptacles shall be Hubbell CR20 or equivalent. Devices shall be white or as directed by architect.								
2.	Switches shall be as follows: <table border="0"> <tr> <td>single pole 20 amp</td> <td>CSB20AC1-I</td> </tr> <tr> <td>3 way 20 amp</td> <td>CSB20AC3-I</td> </tr> <tr> <td>4 way 20 amp</td> <td>CSB20AC4-I</td> </tr> <tr> <td>motor starter switch</td> <td>Square D type "K" series</td> </tr> </table>	single pole 20 amp	CSB20AC1-I	3 way 20 amp	CSB20AC3-I	4 way 20 amp	CSB20AC4-I	motor starter switch	Square D type "K" series
single pole 20 amp	CSB20AC1-I								
3 way 20 amp	CSB20AC3-I								
4 way 20 amp	CSB20AC4-I								
motor starter switch	Square D type "K" series								
3.	Duplex receptacle shall be as follows: <table border="0"> <tr> <td>20 amp duplex</td> <td>PSS5362I</td> </tr> <tr> <td>20 amp duplex-GFCI</td> <td>2095IL</td> </tr> <tr> <td>20 amp duplex-Weather GFI</td> <td>2095TRWRI</td> </tr> </table>	20 amp duplex	PSS5362I	20 amp duplex-GFCI	2095IL	20 amp duplex-Weather GFI	2095TRWRI		
20 amp duplex	PSS5362I								
20 amp duplex-GFCI	2095IL								
20 amp duplex-Weather GFI	2095TRWRI								
Note: Duplex receptacles have nylon face and side wire type. Receptacles shall have brass contacts, brass terminal screws and green ground wire screw. GFCI receptacle shall be included with a trip indicator light.									
4.	Coverplates shall be oversized stainless steel SSJX or as directed by architect.								
5.	Outlet boxes shall not be mounted back-to-back.								
6.	Receptacles shall be 20 amp unless 15 amp is required by equipment served.								
7.	Weatherproof in use covers shall be clear equal to Leviton. For horizontal mount covers use part no. "5977-CL". For vertical mount covers use part no. "5977-CL".								
8.	All outlets (including telephone and data) shall have cover plates.								

2018 APPENDIX B BUILDING CODE SUMMARY: ELECTRICAL SYSTEM AND EQUIPMENT	
Method of Compliance:	
Energy Code:	[X] Prescriptive [] Performance
ASHRAE 90.1:	[X] Prescriptive [] Performance
Lighting schedule(each fixture type)	
lamp type required in fixture	(see fixture schedule)
number of lamps in fixture	(see fixture schedule)
ballast type used in the fixture	(see fixture schedule)
number of ballasts in fixture	(see fixture schedule)
total wattage per fixture	(see fixture schedule)
total interior wattage (whole space allowable)	NOT TO EXCEED 11.36KW
total exterior wattage specified vs. allowed	NOT TO EXCEED 2900WATTS
Additional Prescriptive Compliance:	
C406.2 :More Efficient Mechanical Equipment	[X] Prescriptive [] Performance
C406.3 :Reduced Lighting Power Density	[] Prescriptive [] Performance
C406.4 :Energy Recovery Ventilation System	[] Prescriptive [] Performance
C406.5 :Higher Efficiency Service Water Heating	[] Prescriptive [] Performance
C406.6 :On-Site Supply of Renewable Energy	[] Prescriptive [] Performance
C406.7 :Automatic Daylighting Control Systems	[] Prescriptive [] Performance

BRANCH CIRCUIT CONDUCTOR SIZING TABLE			
For circuits with branch circuit protection rated 20 amps or less, copper conductors shall be sized according to the following:			
voltage	distance (ft)	home run (AWG)	remainder (AWG)
120	0 - 50	12	12
	50 - 90	10	12
	90 - 140	8	10
	140 +	6	10
208	0 - 95	12	12
	95 - 160	10	12
	160 - 250	8	10
	250 +	6	10

ELECTRICAL NOTES																			
1.	The intent of these drawings and specifications are to describe the installation of a complete, fully adjusted, and operational system.																		
2.	Provide five sets of electrical equipment submittals to the GC for the architect, engineer, GC and owner to review and approve prior to purchasing.																		
3.	The contractor shall provide all supervision, labor, material, equipment, machinery, and any and all other items necessary to complete the system. All work shall be performed in a neat and workmanlike manner in accordance with industry standards.																		
4.	All work under this section shall be accomplished in strict accordance with state building codes and the National Electric Code. Coordinate with local power company requirements.																		
5.	The contractor shall obtain all necessary approval, obtain all permits and pay all fees required for the installation of their work.																		
6.	The drawings are diagrammatic only. The contractor may need to make field adjustments to accommodate actual field conditions.																		
7.	Devices located in rated walls shall have sufficient separation from other devices to allow proper installation and firestopping.																		
8.	The contractor shall refer to the architectural and structural drawings for the general construction of the building, for floors and ceiling heights, for locations of wall, partitions, beams, etc.																		
9.	Manufacturer's listed are to establish a standard of quality and not intended to limit the selection to these manufacturers. Any substitutions must be approved by the architect and engineer.																		
10.	Contractor shall verify all listed model numbers with manufacturers to insure proper application of equipment.																		
11.	Equipment and materials shall be handled, stored and protected in accordance with the manufacturer's recommendations.																		
12.	The contractor shall perform any and all trenching, excavation and backfilling required for the installation of this work.																		
13.	The contractor shall furnish all necessary scaffolding, staging, rigging and hoisting required for the completion of this work.																		
14.	All work shall be coordinated with the general contractor and other trades involved in the construction project. All work shall be carefully laid out in advance to coordinate architectural, structural, mechanical, plumbing and electrical features of construction.																		
15.	The electrical contractor shall visit the site before submitting his bid so as to be thoroughly familiar with the job conditions and/or peculiarities. No extra payment will be allowed for anything which could have been anticipated from a visit to the site.																		
16.	Equipment shall be installed in accordance with manufacturer's written instructions.																		
17.	Provide grounding for all conduits, motor frames, metal casings, receptacles, system neutral, etc. and as required by NEC as minimum. Resistance to ground shall not exceed 25 OHMS.																		
18.	A green insulated copper ground wire, sized per NEC, shall be installed in all raceways, electric metallic tubing used for feeders, branch circuits, flexible conduit, and as otherwise noted on the drawings.																		
19.	All fixtures shown on the plans shall be furnished and installed, complete with all mounting accessories, lamps and tubes. Fixtures shall be independently supported from structure. Re-use existing fixtures that are in good condition. If additional fixtures need to be supplied, match existing fixtures.																		
20.	All wiring shall be run in conduit. The minimum indoor conduit size shall be 1/2". Indoor conduit shall be electrical metallic tubing or type MC cable may be used for branch circuits where allowed by NEC and not subject to physical damage, moisture or dampness. Connection to equipment shall be flexible metal conduit except in wet or damp locations use liquid tight flexible metal conduit. Indoor boxes and enclosures shall be NEMA type 1, except in damp or wet locations use NEMA type 4, stainless steel. Where nonmetallic conduit is used below the slab, provide a minimum of Schedule 80 PVC conduit to turn up into the building space or at any exterior walls, inside or outside framed walls, exterior landscape poles, or equipment. Use raceway fittings compatible with raceway and suitable for use and location. Run concealed raceways with a minimum of bends in the shortest practical distance considering the type of building construction and obstructions. Raceways shall run parallel to or at right angles to nearby surfaces or structural members, and follow the surface contours as much as practical. Provide grounding connections for raceway, boxes, and components as indicated and instructed by manufacturer. Tighten connections and terminals, including screws and bolts, according to equipment manufacturer's published torque-tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals according to tightening torques specified in UL standard 486A.																		
21.	All underground raceways shall be identified by "underground line marking tape" located directly above the raceway at 6" below finished grade. Tape shall be permanent, bright-colored, continuous, magnetic strip, printed plastic tape compounded for direct burial not less than 6" wide and 4mils thick. Printed legend shall be indicative of the service it is marking. Conduits exposed to different temperatures shall be sealed as required by NEC Article 300.7A.																		
22.	Color for devices shall be coordinated with the general contractor.																		
23.	Receptacles shall comply with UL Standard 498, "electrical attachment plugs and receptacles," heavy-duty grade 20 AMP rated except as otherwise indicated.																		
24.	Ground-fault circuit interrupter (GFI) receptacles shall comply with UL Standard 943, "Ground fault circuit interrupters," with integral NEMA 5-20R duplex receptacle.																		
25.	Single pole and three-four-way toggle type snap switches shall be 20 AMP 120/277 V. AC., rated, quite-type A.C. switches. NRTL listed and labeled as complying with UL Standard 20 "general use snap switches," and with federal specification W-S-896. Wall plates: single and combination types shall be 302 stainless steel that mate and match with corresponding wiring devices. EC shall label all receptacle plates with panel and circuit designation.																		
26.	Conductors shall be color coded in accordance with NEC as follows: <table border="0"> <tr> <td>Phase</td> <td>208/120 Volts</td> <td></td> </tr> <tr> <td>A</td> <td>Black</td> <td></td> </tr> <tr> <td>B</td> <td>Red</td> <td></td> </tr> <tr> <td>C</td> <td>Blue</td> <td></td> </tr> <tr> <td>Neutral</td> <td>White</td> <td></td> </tr> <tr> <td>Ground</td> <td>Green</td> <td></td> </tr> </table>	Phase	208/120 Volts		A	Black		B	Red		C	Blue		Neutral	White		Ground	Green	
Phase	208/120 Volts																		
A	Black																		
B	Red																		
C	Blue																		
Neutral	White																		
Ground	Green																		
27.	Electrical equipment shall be identified with labels of engraved plastic-laminate on each major unit of electrical equipment.																		
28.	Panelboards/loadcenters shall be type, rating, and features as indicated on the schedules. Enclosures shall be NEMA type 1, flush or surface mounted as indicated. Cabinet shall be code gauge, galvanized steel. Fronts shall be sheet steel with gray lacquer finish with hinged locking door. Ground and neutral bus shall be 100% rated. Bus shall be copper or aluminum. Main and neutral lugs shall be plug-on type. Equipment ground bus shall be adequate for feeder and branch-circuit equipment ground conductors bonded to box. Directory frame shall be metal, mounted inside each panel door. At the completion of this installation, type circuit designations on the directory card and leave in the card holder provided inside cabinet doors. Tandem circuit breakers shall not be used. Multi-pole breakers shall have common trip. The minimum interrupting rating for circuit breakers rated at 120/240 volts shall be 22,000 AMPS RMS symmetrical. For flush mounted panels provide a minimum of (4) 1" conduits stubbed to the ceiling space for future use.																		
29.	All wiring for equipment shall be copper with one of the following types of insulation: THW, THHW, THWN with a rating of at least 75 DEG. C. All wiring located above the ceiling shall be plenum-rated.																		
30.	Final locations of all exit and emergency lights shall be verified with the building inspector prior to installation.																		
31.	Branch circuits shall not exceed 80% of overcurrent protection. Devices shall be relocated to another circuit if found to be in excess of 80%.																		
32.	Electrical contractor shall be responsible to supply a coordinated study as described in the NEC or as required by permitting officials with all gear submitted involving generators, elevators, or any life safety equipment.																		



15 W. Walnut St #202, Asheville, NC 28801
626-265-4327 Project 25019



4-25-2025

A PME Design for:

841 CHARLOTTE HIGHWAY

Buncombe County, North Carolina

ELECTRICAL NOTES & SCHEDULES

REVISIONS

DATE
APRIL 25, 2025

E1



4-25-2025

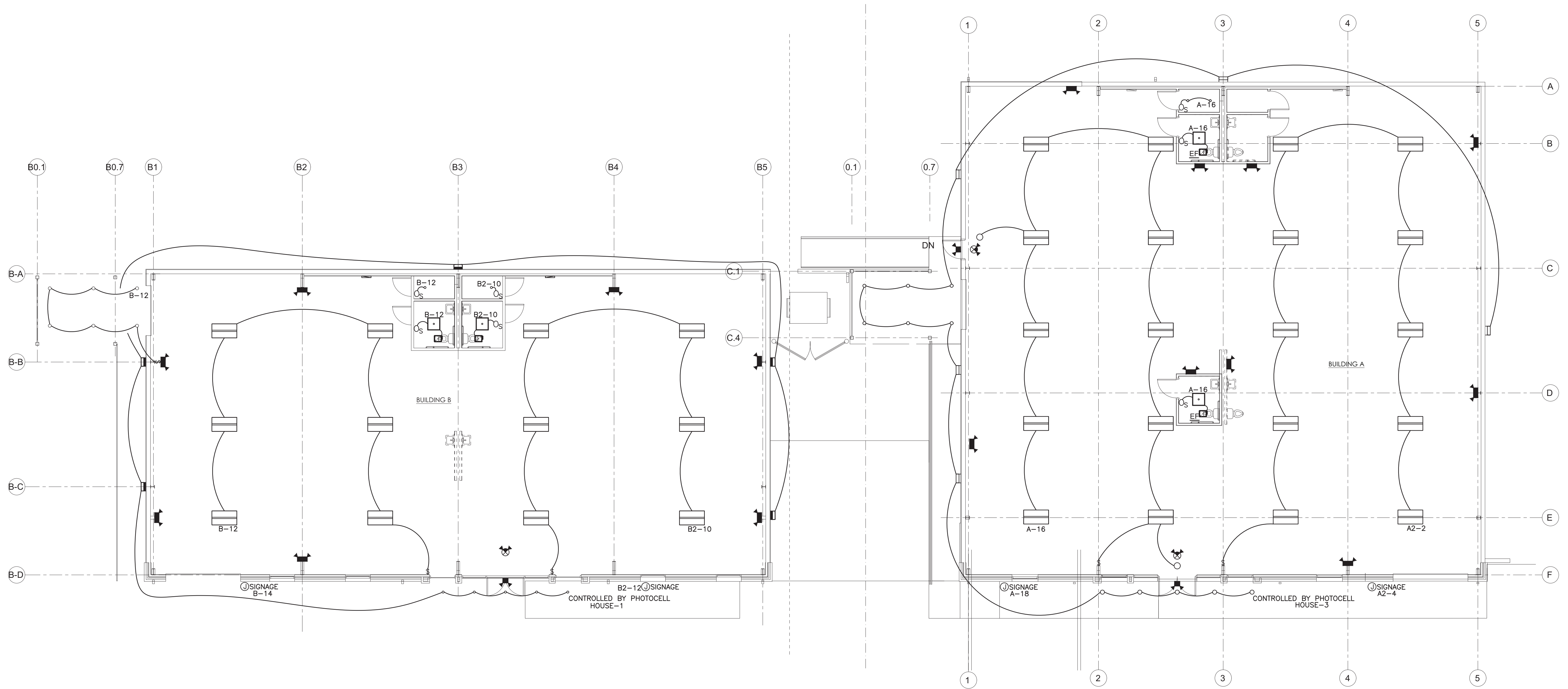
A PME Design for:
841 CHARLOTTE HIGHWAY
 Buncombe County, North Carolina

LIGHTING PLAN

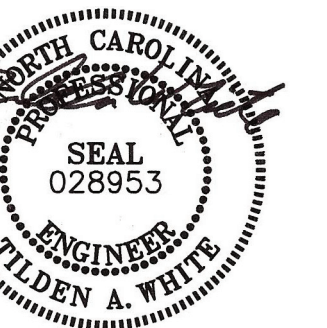
REVISIONS

DATE
 APRIL 25, 2025

E2



1 LIGHTING PLAN
E2 SCALE: 1/8" = 1'-0"



4-25-2025

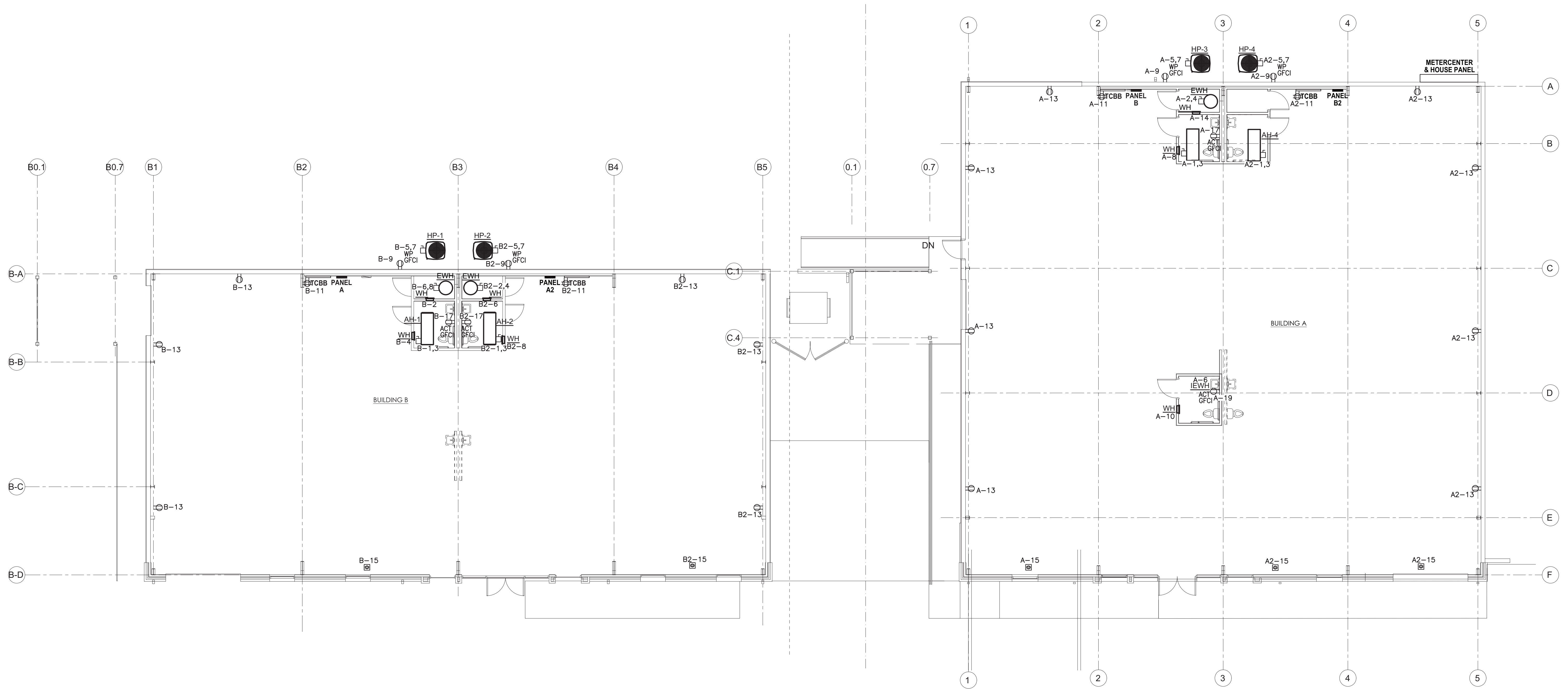
A PME Design for:
841 CHARLOTTE HIGHWAY
 Buncombe County, North Carolina

POWER PLAN

REVISIONS

DATE
 APRIL 25, 2025

E3



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



4-25-2025

A PME Design for:
841 CHARLOTTE HIGHWAY
Buncombe County, North Carolina

RISER DIAGRAM & PANEL SCHEDULES

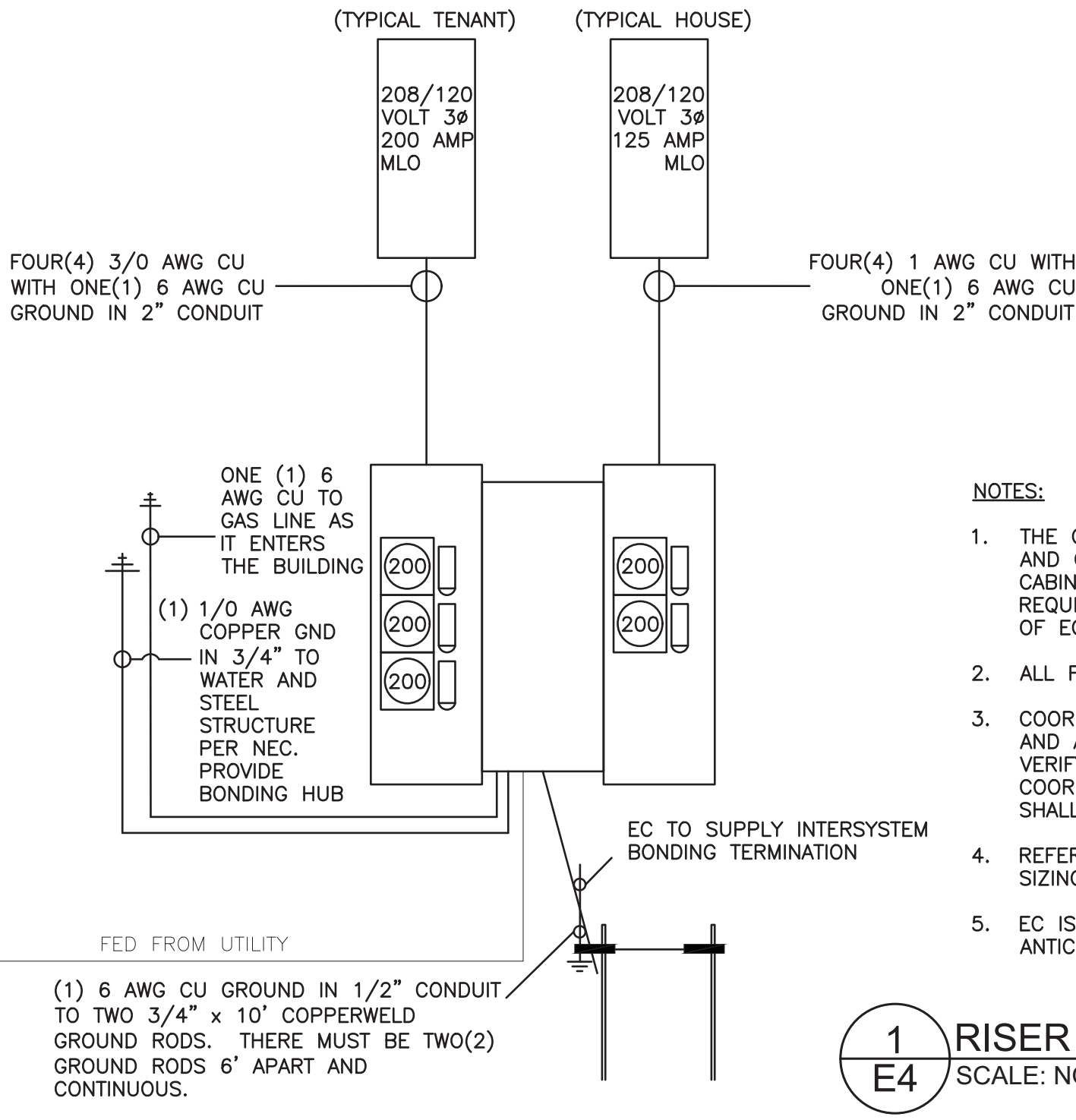
REVISIONS

DATE APRIL 25, 2025

E4

LOCATION: TENANT SPACE														PANEL: HOUSE																
MANUFACT.: EATON														FED FROM: METERCENTER																
MODEL: NEMA 3R AND LOCKABLE														FULLY RATED 65,000 AIC																
MOUNTING: SURFACE														METERCENTER																
														VOLTS																
														208 120																
														Ph 3																
														W 4																
CONN	VA	#	LOAD	Ph	N	G	C	BKR	A	B	C	BKR	Ph	N	G	C	LOAD	#	CONN	VA										
1000	1		LIGHTS	12	12	12	1/2	20											2	0										
1000	3		LIGHTS	12	12	12	1/2	20											4	0										
0	5																		6	0										
0	7																		8	0										
0	9																		10	0										
0	11																		12	0										
0	13																		14	0										
0	15																		16	0										
0	17																		18	0										
0	19																		20	0										
8	SUBTOTAL AMPS Ph A															MAIN BREAKER: AMPS			SUBTOTAL AMPS Ph A			0								
8	SUBTOTAL AMPS Ph B															MAIN LUGS: 125 AMPS (MIN)			SUBTOTAL AMPS Ph B			0								
0	SUBTOTAL AMPS Ph C															BUS AMPACITY: 125 AMPS (MIN)			SUBTOTAL AMPS Ph C			0								
LOAD														CONNECTED		DF		DEMAND		VA ph A		VA ph B		VA ph C		TOTAL				
LIGHTING														2000	125	2500	1000		1000		0		0		0		0		0	
A/C														0	100	0	0		0		0		0		0		0		0	
HEATING														0	100	0	0		0		0		0		0		0		0	
NON-VENT MOTORS														0	100	0	0		0		0		0		0		0		0	
VENTILATION														0	100	0	0		0		0		0		0		0		0	
KITCHEN														0	100	0	0		0		0		0		0		0		0	
RECEPTACLES														0	100	0	0		0		0		0		0		0		0	
MISCELLANEOUS														0	100	0	0		0		0		0		0		0		0	
FUTURE														0	100	0	0		0		0		0		0		0		0	
TOTAL														2000	7	2500	1000		1000		0		0		0		0		0	
																(VA)														
														6		7		(AMPS)												

LOCATION: TENANT SPACE														PANEL: A																
MANUFACT.: EATON														FED FROM: METERCENTER																
MODEL: POWERLINE														FULLY RATED 65,000 AIC																
MOUNTING: SURFACE														METERCENTER																
														VOLTS																
														208 120																
														Ph 3																
														W 4																
CONN	VA	#	LOAD	Ph	N	G	C	BKR	A	B	C	BKR	Ph	N	G	C	LOAD	#	CONN	VA										
6240	1		AH3	6	-	-	3/4	60											2	2250										
6240	3			6	-	-	2P												4	2250										
3840	5		HP4	8	-	-	3/4	50											6	3480										
3840	7			8	-	-	2P												8	1500										
360	9		SERVICE REC	12	12	12	1/2	20											10	1500										
360	11		REC	12	12	12	1/2	20											12	1500										
360	13		REC	12	12	12	1/2	20											14	1500										
360	15		REC	12	12	12	1/2	20											16	1000										
360	17		REC	12	12	12	1/2	20											18	500										
360	19		REC	12	12	12	1/2	20											20	0										
0	21																		22	0										
0	23																		24	0										
0	25																		26	0										
0	27																		28	0										
0	29																		30	0										
0	31																		32	0										
0	33																		34	0										
0	35																		36	0										
0	37																		38	0										
0	39																		40	0										
0	41																		42	0										
90	SUBTOTAL AMPS Ph A															MAIN BREAKER: AMPS			SUBTOTAL AMPS Ph A			44								
58	SUBTOTAL AMPS Ph B															MAIN LUGS: 200 AMPS (MIN)			SUBTOTAL AMPS Ph B			40								
38	SUBTOTAL AMPS Ph C															BUS AMPACITY: 200 AMPS (MIN)			SUBTOTAL AMPS Ph C			46								
LOAD														CONNECTED		DF		DEMAND		VA ph A		VA ph B		VA ph C		TOTAL				
LIGHTING														1500	125	1875	16050		11710		10040		0		0		0		0	
A/C														0	100	0	0		0		0		0		0		0		0	
HEATING														34140	100	34140	0		0		0		0		0		0		0	
NON-VENT MOTORS														0	100	0	0		0		0		0		0		0		0	
VENTILATION														0	100	0	0		0		0		0		0		0		0	
KITCHEN														0	100	0	0		0		0		0		0		0		0	
RECEPTACLES														2160	100	2160	0		0		0		0		0		0		0	
MISCELLANEOUS														0	100	0	0		0		0		0		0		0		0	
FUTURE														0	100	0	0		0		0		0		0		0		0	
TOTAL														37800	105	38175	16050		11710		10040		0		0		0		0	
																(VA)														
														105		106		(AMPS)												



- NOTES:
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND COORDINATING WITH THE LOCAL UTILITY FOR EXACT CT CABINET, AVAILABLE VOLTAGE, AND METERING EQUIPMENT REQUIREMENTS BEFORE THE PURCHASE OF AND ROUGH-IN OF EQUIPMENT.
 - ALL FEEDER WIRING SHALL BE COPPER.
 - COORDINATE WITH THE UTILITY CO. FOR TRANSFORMER SIZE AND AVAILABLE FAULT CURRENT RATING IN ORDER TO VERIFY FAULT CURRENT RATING OF EACH PANEL IS COORDINATED. THE FAULT CURRENT RATING OF EACH PANEL SHALL BE LISTED AS 65KAIC FULLY RATED SYMMETRICAL.
 - REFER TO RISER DIAGRAM FOR ALL WIRE AND CONDUIT SIZING.
 - EC IS RESPONSIBLE TO DESIGN ALL FEEDER ROUTING AND ANTICIPATE CONFLICTS WITH FRAMING.

1 RISER DIAGRAM
E4 SCALE: NOT TO SCALE

LOCATION: TENANT SPACE														PANEL: A2								
MANUFACT.: EATON														FED FROM: METERCENTER								
MODEL: POWERLINE														FULLY RATED 65,000 AIC								
MOUNTING: SURFACE														METERCENTER								
														VOLTS								
														208 120								
														Ph 3								
														W 4								
CONN	VA	#	LOAD	Ph	N	G	C	BKR	A	B	C	BKR	Ph	N	G	C	LOAD	#	CONN	VA		
6240	1		AH4	6	-	-	3/4	60											2	1000		
6240	3			6	-	-	2P												4	600		
3840	5		HP4	8	-	-	3/4	50											6	0		
3840	7			8	-	-	2P												8	0		
360	9		SERVICE REC	12	12	12	1/2	20											10	0		
360	11		REC	12	12	12	1/2	20											12	0		
360	13		REC	12	12	12	1/2	20											14	0		
360	15		REC	12	12	12	1/2	20											16	0		
0	17																		18	0		
0	19																		20	0		
0	21																		22	0		
0	23																		24	0		
0	25																		26	0		
0	27																		28	0		
0	29																		30	0		
0	31																		32	0		
0	33																		34	0		
0	35																		36	0		
0	37																		38	0		
0	39																		40	0		
0	41																		42	0		
87	SUBTOTAL AMPS Ph A															MAIN BREAKER: AMPS			SUBTOTAL AMPS Ph A			8
58</																						