

# ADDENDUM 1

## PENDER COUNTY SCHOOLS K-8 SCHOOL PENDER COUNTY, NC ARCHITECT'S PROJECT NO.: 631310

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**August 16, 2024**



PENDER COUNTY SCHOOLS K8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

1       **GENERAL:**

2       Planholders are requested to insert this Addendum in the front of their Project Manual. Inform  
3       all concerned that the Bidding Documents are modified by this Addendum.

4       The following modifications and clarifications are hereby made a part of the Bidding  
5       Documents and supersede or otherwise modify the provisions of the published *Project Manual*  
6       and *Drawings*, dated August 2, 2024.

7       Refer to the Drawings, Specification Sections, or other Documents, if any, attached to this  
8       Addendum, which are hereby made a part of this Addendum.

9       **MODIFICATIONS TO THE PROJECT MANUAL AND DRAWINGS:**

10       ADD new Documents in their entirety, noted as Addendum No. 1, dated August 16, 2024.

11             SECTION 057500 - DECORATIVE FORMED METAL

12             SECTION 323119 - DECORATIVE METAL FENCES AND GATES

13             DRAWING S6.1.1 – JOINT LOADING DIAGRAMS

14       DELETE the previously issued Documents indicated below in their entirety and  
15       SUBSTITUTE the revised Documents in their entirety, noted as Addendum No. 1, dated  
16       August 16, 2024.

17             000100 – TABLE OF CONTENTS

18             SECTION 012100 – ALLOWANCES

19             SECTION 064100 – ARCHITECTURAL WOODWORK AND CASEWORK

20             SECTION 096476 – DANCE FLOORING ASSEMBLIES

21             SECTION 098430 – SOUND-ABSORBING WALL AND CEILING UNITS

22             SECTION 123583 – MUSIC EQUIPEMENT STORAGE CASEWORK & ACCESSORIES

23             SECTION 233113 – METAL DUCTS

24             SECTION 238219 – FAN COIL UNITS

25             SECTION 274116 – AUDIOVISUAL SYSTEMS

26             DRAWING A0.2 – WALL/PARTITION TYPES, WALL JOINTS AND TERMINATIONS

27             DRAWING A1.1 – ARCHITECTURAL SITE PLAN

28             DRAWING A2.1 - FIELDHOUSE

29             DRAWING A2.1.1 – FIRST FLOOR PLAN PART A

30             DRAWING A2.1.2 – FIRST FLOOR PLAN PART B

31             DRAWING A2.1.8 – FIRST FLOOR PLAN PART H

32             DRAWING A2.1.9 – SECOND FLOOR PLAN PART A

33             DRAWING A2.1.10 – SECOND FLOOR PLAN PART B

34             DRAWING A2.1.12 – SECOND FLOOR PLAN PART D

35             DRAWING A2.1.15 – SECOND FLOOR PLAN PART G

36             DRAWING A2.1.16 – SECOND FLOOR PLAN PART H

PENDER COUNTY SCHOOLS K8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

37	DRAWING A2.1.17 – MECHNAICAL PLATFORM FLOOR PLANS
38	DRAWING A2.2.3 – COLUMN DETAILS
39	DRAWING A2.2.4 – COLUMN DETAILS
40	DRAWING A2.2.5 – COLUMN DETAILS
41	DRAWING A2.2.6 – PORTAL DETAILS
42	DRAWING A3.0.1 – FINISH SCHEDULE
43	DRAWING A3.0.2 – FINISH SCHEDULE
44	DRAWING A3.0.3 – FIRST FLOOR FINISH PLAN – PART A
45	DRAWING A3.0.4 – FIRST FLOOR FINISH PLAN – PART B
46	DRAWING A3.0.5 – FIRST FLOOR FINISH PLAN – PART C
47	DRAWING A3.0.7 – FIRST FLOOR FINISH PLAN – PART E
48	DRAWING A3.0.8 – FIRST FLOOR FINISH PLAN – PART F
49	DRAWING A3.0.11 – SECOND FLOOR FINISH PLAN – PART A
50	DRAWING A3.0.12 – SECOND FLOOR FINISH PLAN – PART B
51	DRAWING A3.0.13 – SECOND FLOOR FINISH PLAN – PART C
52	DRAWING A3.0.15 – SECOND FLOOR FINISH PLAN – PART E
53	DRAWING A3.0.16 – SECOND FLOOR FINISH PLAN – PART F
54	DRAWING A3.1.1 – DOOR AND FRAME SCHEDULE
55	DRAWING A4.1.1 – BUILDING ELEVATIONS
56	DRAWING A4.2.1 – INTERIOR ELEVATIONS
57	DRAWING A4.2.3 – INTERIOR ELEVATIONS
58	DRAWING A4.2.4 – INTERIOR ELEVATIONS
59	DRAWING A5.1.13 – WALL SECTIONS
60	DRAWING A5.1.14 – WALL SECTIONS
61	DRAWING A5.1.15 – WALL SECTIONS
62	DRAWING A5.2.2 – SECTION DETAILS
63	DRAWING A6.1.1 – ENLARGED STAIR & RAMP DETAILS
64	DRAWING A6.1.2 – ENLARGED STAIR & RAMP DETAILS
65	DRAWING A6.1.3 – STAIR SECTIONS AND DETAILS
66	DRAWING A6.1.4 – STAIR SECTIONS AND DETAILS
67	DRAWING A6.1.5 – STAIR SECTIONS AND DETAILS
68	DRAWING A6.1.6 – STAIR SECTIONS AND DETAILS
69	DRAWING A7.1.3 – ENLARGED TOILET PLANS
70	DRAWING A9.1.1 – REFLECTED CEILING PLAN FIRST FLOOR PART A
71	DRAWING A9.1.2 – REFLECTED CEILING PLAN FIRST FLOOR PART B

PENDER COUNTY SCHOOLS K8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

72	DRAWING A9.1.3 – REFLECTED CEILING PLAN FIRST FLOOR PART C
73	DRAWING A9.1.4 – REFLECTED CEILING PLAN FIRST FLOOR PART D
74	DRAWING A9.1.5 – REFLECTED CEILING PLAN FIRST FLOOR PART E
75	DRAWING A9.1.6 – REFLECTED CEILING PLAN FIRST FLOOR PART F
76	DRAWING A9.1.8 – REFLECTED CEILING PLAN FIRST FLOOR PART H
77	DRAWING A9.1.9 – REFLECTED CEILING PLAN SECOND FLOOR PART A
78	DRAWING A9.1.10 – REFLECTED CEILING PLAN SECOND FLOOR PART B
79	DRAWING A9.1.11 – REFLECTED CEILING PLAN SECOND FLOOR PART C
80	DRAWING A9.1.12 – REFLECTED CEILING PLAN SECOND FLOOR PART D
81	DRAWING A9.1.13 – REFLECTED CEILING PLAN SECOND FLOOR PART E
82	DRAWING A9.1.14 – REFLECTED CEILING PLAN SECOND FLOOR PART F
83	DRAWING A9.1.15 – REFLECTED CEILING PLAN SECOND FLOOR PART G
84	DRAWING A9.1.16 – REFLECTED CEILING PLAN SECOND FLOOR PART H
85	DRAWING S0.0.1 – GENERAL NOTES AND LEGENDS
86	DRAWING S0.0.4 – COMPONENTS AND CLADDING ROOF WIND PRESSURE
87	DIAGRAM
88	DRAWING S1.1.1 – FOUNDATION PLAN PART A
89	DRAWING S1.1.2 – FOUNDATION PLAN PART B
90	DRAWING S1.1.3 – FOUNDATION PLAN PART C
91	DRAWING S1.1.4 – FOUNDATION PLAN PART D
92	DRAWING S1.1.5 – FOUNDATION PLAN PART E & PARTIAL PLAN PART B
93	DRAWING S1.1.6 – FOUNDATION PLAN PART F
94	DRAWING S1.1.7 – FOUNDATION PLAN PART G
95	DRAWING S1.1.8 – FOUNDATION PLAN PART H
96	DRAWING S2.1.1 – SECOND FLOOR & LOW ROOF FRAMING PLAN PART A
97	DRAWING S2.1.2 – SECOND FLOOR & LOW ROOF FRAMING PLAN PART B
98	DRAWING S2.1.3 – SECOND FLOOR FRAMING PLAN PART C
99	DRAWING S2.2.1 – ROOF FRAMING PLAN PART A
100	DRAWING S2.2.3 – ROOF FRAMING PLAN PART C
101	DRAWING S2.2.4 – ROOF FRAMING PLAN PART D
102	DRAWING S2.2.5 – ROOF FRAMING PLAN PART E
103	DRAWING S2.2.6 – ROOF FRAMING PLAN PART F
104	DRAWING S2.2.7 – ROOF FRAMING PLAN PART G
105	DRAWING S2.2.8 – ROOF FRAMING PLAN PART H
106	DRAWING S2.2.10 – PENTHOUSE ROOF FRAMING PLAN PART C

PENDER COUNTY SCHOOLS K8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

107	DRAWING S2.2.11 – PENTHOUSE ROOF FRAMING PLAN PART E AND F
108	DRAWING S3.1.1 – FOUNDATION SECTIONS
109	DRAWING S4.0.3 – TYPICAL FRAMING DETAILS AND DECK SCHEDULE
110	DRAWING S4.1.1 – FRAMING SECTIONS
111	DRAWING S4.1.2 – FRAMING SECTIONS
112	DRAWING S4.1.3 – FRAMING SECTIONS
113	DRAWING S4.1.4 – FRAMING SECTIONS
114	DRAWING S4.1.5 – FRAMING SECTIONS
115	DRAWING S4.1.6 – FRAMING SECTIONS
116	DRAWING S4.1.7 – FRAMING SECTIONS
117	DRAWING S5.1.1 – BRACED FRAME ELEVATIONS
118	DRAWING P2.0.7 – FOUNDATION PLAN – PLUMBING AREA G
119	DRAWING P2.0.8 – FOUNDATION PLAN – PLUMBING AREA H
120	DRAWING P2.1.7 – FIRST FLOOR PLAN – SANITARY AREA G
121	DRAWING P2.1.8 – FIRST FLOOR PLAN – SANITARY AREA H
122	DRAWING P2.1.9 – FIRST FLOOR PLAN – DOMESTIC AREA A
123	DRAWING P2.1.16 – FIRST FLOOR PLAN – DOMESTIC AREA H
124	DRAWING P2.2.6 – SECOND FLOOR PLAN – SANITARY AREA G
125	DRAWING P2.2.7 – SECOND FLOOR PLAN – SANITARY AREA H
126	DRAWING P2.2.12 – SECOND FLOOR PLAN – DOMESTIC AREA G
127	DRAWING P2.2.13 – SECOND FLOOR PLAN – DOMESTIC AREA H
128	DRAWING P2.4 – FIELDHOUSE PLANS – PLUMBING
129	DRAWING P4.2 – ENLARGED PLANS
130	DRAWING P4.3 – ENLARGED PLANS
131	DRAWING P4.4 – ENLARGED PLANS
132	DRAWING P4.10 – ENLARGED PLANS
133	DRAWING P4.11 – ENLARGED PLANS
134	DRAWING P6.1 – SCHEDULES
135	DRAWING P9.3 – STORM RISER DIAGRAM – AREA B
136	DRAWING P9.12 – DOMESTIC RISER DIAGRAMS
137	DRAWING P9.13 – DOMESTIC RISER DIAGRAMS
138	DRAWING P9.14 – DOMESTIC RISER DIAGRAMS
139	DRAWING M0.2 – SCHEDULES
140	DRAWING M0.3 – SCHEDULES
141	DRAWING M0.4 – VENTILATION SCHEDULES – FIRST FLOOR

PENDER COUNTY SCHOOLS K8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

142	DRAWING M2.1.1 – FIRST FLOOR PLAN – PART A – DUCTWORK
143	DRAWING M2.2.1 – FIRST FLOOR PLAN – PART B – DUCTWORK
144	DRAWING M2.3.1 – FIRST FLOOR PLAN – PART C – DUCTWORK
145	DRAWING M2.7.1 – FIRST FLOOR PLAN – PART G – DUCTWORK
146	DRAWING M2.8.1 – FIRST FLOOR PLAN – PART H – DUCTWORK
147	DRAWING M2.12.1 – SECOND FLOOR PLAN – PART D – DUCTWORK
148	DRAWING M2.13.1 – SECOND FLOOR PLAN – PART E – DUCTWORK
149	DRAWING M2.14.1 – SECOND FLOOR PLAN – PART F – DUCTWORK
150	DRAWING M2.15.1 – SECOND FLOOR PLAN – PART G – DUCTWORK
151	DRAWING M2.16.1 – SECOND FLOOR PLAN – PART H – DUCTWORK
152	DRAWING M4.1 – SECTIONS
153	DRAWING E0.2 – LIGHTING DETAILS AND FIXTURE SCHEDULE
154	DRAWING E1.1 – SITE PLAN
155	DRAWING E2.1.1.1 – FIRST FLOOR PLAN LIGHTING – PART A
156	DRAWING E2.1.1.2 – FIRST FLOOR PLAN POWER – PART A
157	DRAWING E2.1.2.1 – FIRST FLOOR PLAN LIGHTING – PART B
158	DRAWING E2.1.2.2 – FIRST FLOOR PLAN POWER – PART B
159	DRAWING E2.1.3.3 – FIRST FLOOR PLAN POWER – PART C
160	DRAWING E2.1.7.3 – FIRST FLOOR PLAN COMMUNICATIONS – PART G
161	DRAWING E2.1.8.1 – FIRST FLOOR PLAN LIGHTING – PART H
162	DRAWING E2.1.8.2 – FIRST FLOOR PLAN POWER – PART H
163	DRAWING E2.1.8.3 – FIRST FLOOR PLAN COMMUNICATIONS – PART H
164	DRAWING E2.2.1.1 – SECOND FLOOR PLAN LIGHTING – PART A
165	DRAWING E2.2.2.3 – SECOND FLOOR PLAN POWER – PART C
166	DRAWING E2.2.2.4 – SECOND FLOOR PLAN COMMUNICATIONS – PART C
167	DRAWING E2.2.4.2 – SECOND FLOOR PLAN POWER – PART D
168	DRAWING E2.2.4.3 – SECOND FLOOR PLAN COMMUNICATIONS – PART D
169	DRAWING E2.2.5.2 – SECOND FLOOR PLAN POWER – PART E
170	DRAWING E2.2.7.1 – SECOND FLOOR PLAN LIGHTING – PART G
171	DRAWING E2.2.7.2 – SECOND FLOOR PLAN POWER – PART G
172	DRAWING E2.2.7.3 – SECOND FLOOR PLAN COMMUNICATIONS – PART G
173	DRAWING E2.2.7.4 – SECOND FLOOR PLAN MECHNAICAL POWER – PART G
174	DRAWING E2.2.8.1 – SECOND FLOOR PLAN LIGHTING – PART H
175	DRAWING E2.2.8.2 – SECOND FLOOR PLAN POWER – PART H
176	DRAWING E2.2.8.3 – SECOND FLOOR PLAN COMMUNICATIONS – PART H

PENDER COUNTY SCHOOLS K8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

- 177 DRAWING E4.1 - DETAILS
- 178 DRAWING E5.1 – ONE LINE POWER DIAGRAM
- 179 DRAWING E6.1 – PANELBOARD SCHEDULES
- 180 DRAWING E6.2 – PANELBOARD SCHEDULES
- 181 DRAWING E6.3 – PANELBOARD SCHEDULES
- 182 DRAWING E6.4 – PANELBOARD SCHEDULES
- 183 DRAWING E6.5 – PANELBOARD SCHEDULES
- 184 DRAWING E6.6 – PANELBOARD SCHEDULES
- 185 DRAWING E6.7 – PANELBOARD SCHEDULES
- 186 DRAWING TA0.3 – SCHEDULES
- 187 DRAWING TA1.1.1 – FIRST FLOOR AV PLAN - PART A
- 188 DRAWING TA1.2.1 – SECOND FLOOR AV PLAN - PART A
- 189 DRAWING TA2.2.1 – SECON FLOOR AV CEILING PLAN - PART A
- 190 DRAWING TA3.1 – SECTIONS AND ELEVATIONS
- 191 DRAWING TA3.2 – SECTIONS AND ELEVATIONS
- 192 DRAWING TA4.1 – GYMNASIUM AND DINING FUNCTIONAL
- 193 DRAWING TA5.1 – RACK ELEVATIONS AND DETAILS
- 194
- 195 **REFER TO DRAWINGS ATTACHED TO THE END OF THIS ADDENDUM**
- 196 **REFER TO SPECIFICATION SECTIONSS ATTACHED TO THE END OF THIS ADDENDUM**
- 197
- 198 **END OF ADDENDUM NO 1**

**TABLE OF CONTENTS**

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

Refer to Bordeaux General Inclusions and Bidding and Procurement Documents under separate cover.

**SPECIFICATIONS**

**VOLUME 1**

**DIVISION 1 – GENERAL REQUIREMENTS**

011000	Summary
012100	Allowances
012200	Unit Prices
012300	Alternates
012500	Substitution Procedures
012501	Substitution Request Form (After Receipt of Bids)
014000	Quality Requirements
014200	Definitions and Reference Standards
014520	Testing, Adjusting, and Balancing for HVAC
016000	Product Requirements
017000	Execution and Closeout Requirements
017419	Construction Waste Management and Disposal
017800	Closeout Submittals
017900	Demonstration and Training
018119	Indoor Air Quality Requirements
018316	NFPA 285 Exterior Wall Assembly Requirements
018317	Exterior Building Enclosure Air Barrier Requirements
019113	General Commissioning Requirements

**DIVISION 2 – EXISTING CONDITIONS**

024100	Demolition
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**DIVISION 3 – CONCRETE**

031000	Concrete Forming and Accessories (Site)
032000	Concrete Reinforcing (Site)
033000	Cast-In-Place Concrete
034500	Precast Architectural Concrete

**DIVISION 4 – MASONRY**

042000	Unit Masonry
047200	Cast Stone Masonry

**DIVISION 5 – METALS**

051200	Structural Steel Framing
052100	Steel Joist Framing
053100	Steel Decking
054000	Cold Formed Steel Framing – Structural (CFSF-S)
054003	Continuous Insulation (CI) Framing System, Clipped

PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

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055000	Metal Fabrications
055100	Metal Stairs
055133	Metal Ladders
055213	Pipe and Tube Railings
<b>057500</b>	<b>Decorative Formed Metal (*AD-01)</b>

DIVISION 6 – WOOD PLASTICS AND COMPOSITES

061000	Rough Carpentry
064100	Architectural Woodwork and Casework

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

071300	Sheet Waterproofing
072100	Thermal Insulation
072736	Sprayed Foam (SPF) Air Barrier
074213	Metal Wall Panels
074213.23	Metal Composite Material Wall Panels
075423	TPO Membrane Roofing
076200	Sheet Metal Flashing and Trim
077100	Roof Specialties
077200	Roof Accessories
078400	Firestopping
078426	Thermal Barriers for Plastics
079200	Joint Sealants
079513	Expansion Joint Cover Assemblies

DIVISION 8 – OPENINGS

081113	Steel Doors and Frames
081416	Flush Wood Doors
081613	Fiberglass Doors
083100	Access Doors and Panels
083313	Coiling Counter Doors
083323	Overhead Coiling Doors
084313	Aluminum-Framed Storefronts
084413	Glazed Aluminum Curtain Walls
087100	Door Hardware
088000	Glazing
088300	Mirrors
088733	Decorative Films
088813	Fire-Rated Glazing
089100	Louvers

DIVISION 9 – FINISHES

092216	Cold Formed Steel Framing - Non-Structural (CFSF-NS)
092900	Gypsum Board
093000	Tiling
095100	Acoustical Ceilings
096466	Wood Athletic Flooring
096467	Dance Flooring Assemblies



PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

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096513	Resilient Base and Accessories
096519	Resilient Tile Flooring
096566	Resilient Athletic Flooring
096623	Resinous Matrix Terrazzo Flooring
096700	Fluid-Applied Flooring
096813	Tile Carpeting
098430	Sound-Absorbing Wall and Ceiling Units
099100	Painting

**DIVISION 10 – SPECIALTIES**

101100	Visual Display Units
101200	Display Cases
101400	Signage
102113.19	Plastic Toilet Compartments
102123	Cubicle Curtains and Track
102239	Folding Panel Partitions
102600	Wall and Door Protection
102800	Toilet and Bath Accessories
104400	Fire Protection Specialties
105113	Metal Lockers
105613	Metal Storage Shelving
107500	Flagpoles

**DIVISION 11 – EQUIPMENT**

112300	Commercial Laundry Equipment
113013	Residential Appliances
114000	Foodservice Equipment
115100	Library Furnishings
115213	Projection Screens
116143	Stage Curtains
116613	Ballet Barres
116623	Gymnasium Equipment
116733	Climbing Walls
116843	Exterior Scoreboards

**DIVISION 12 – FURNISHINGS**

122400	Window Shades
123553.19	Wood Laboratory Casework
123583	Music Equipment Storage Casework and Accessories
125600	Metal Worktables - Freestanding
126600	Telescoping Stands

**DIVISION 13 – SPECIAL CONSTRUCTION – Not Used**

**DIVISION 14 – CONVEYING SYSTEMS**

142400	Hydraulic Elevators
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**VOLUME 2**

PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

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DIVISION 21 – FIRE SUPPRESSION

210500	Common Work Results for Fire-Suppression
211000	Water-Based Fire-Suppression Systems

DIVISION 22 – PLUMBING

220500	Common Work Results for Plumbing
220513	Common Motor Requirements for Plumbing Equipment
220516	Expansion Fittings and Loops for Plumbing Piping
220517	Sleeves and Sleeve Seals for Plumbing Piping
220519	Meters and Gages for Plumbing Piping
220523	General-Duty Valves for Plumbing Piping
220529	Hangers and Supports for Plumbing Piping and Equipment
220553	Identification for Plumbing Piping and Equipment
220700	Plumbing Insulation
221113	Facility Natural Gas Piping
221116	Domestic Water Piping
221119	Domestic Water Piping Specialties
221125	Circulating Pumps
221316	Sanitary Waste and Vent Piping
221319	Sanitary Waste Piping Specialties
221413	Facility Storm Drainage Piping
221423	Storm Drainage Piping Specialties
221429	Sump Pumps
223400	Fuel-fired Domestic Water Heaters
224000	Plumbing Fixtures

DIVISION 23 – MECHANICAL

230500	Common Work Results for HVAC
230513	Motors for HVAC Equipment
230514	Variable Speed Drives
230516	Expansion Fittings and Loops for HVAC Piping
230517	Sleeves and Sleeve Seals for HVAC Piping
230519	Meters and Gages for HVAC Piping
230523	General-Duty Valves for HVAC Piping
230529	Hangers and Supports for HVAC Piping and Equipment
230533	Heat Tracing for HVAC Piping
230548	Vibration Control for HVAC
230553	Identification for HVAC Piping and Equipment
230700	HVAC Insulation
230900	Building Automation System
230993	Sequence of Control for HVAC
232113	Hydronic Piping
232123	Hydronic Pumps
232300	Refrigerant Piping
232500	HVAC Water Treatment
233113	Metal Ducts
233300	Air Duct Accessories
233423	HVAC Power Ventilators

PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

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233713	Diffusers, Registers, and Grilles
233723	HVAC Gravity Ventilators
234100	Particulate Air Filtration
235100	Breechings, Chimneys, and Stacks
235216	Condensing Boilers
236426	Air-Cooled Rotary Screw Water Chillers
237219	Air-to-Air Energy Recovery Units
237313	Modular Indoor Central Station Air Handling Units
237433	Makeup Air Units
238126	Ductless Mini-Split Air Conditioning Units
238143	Split System Heat Pumps
238219	Fan Coil Units
238240	Electric Unit Heaters

DIVISION 25 – INTEGRATED AUTOMATION – Not Used

DIVISION 26 – ELECTRICAL

260519	Low-Voltage Electrical Power Conductors
260526	Grounding and Bonding for Electrical Systems
260529	Hangers and Supports for Electrical Systems
260533	Raceway and Boxes for Electrical Systems
260544	Sleeves and Sleeve Seals for Electrical Raceways and Cabling
260553	Identification for Electrical Systems
260572	Overcurrent Protective Device Short-Circuit Study
260573	Overcurrent Protective Device Coordination Study
260574	Overcurrent Protective Device Arc-Flash Study
260923	Lighting Controls
260943	Relay-Based Lighting Controls
262200	Low-Voltage Transformers
262413	Switchboards
262416	Panelboards
262726	Wiring Devices
262813	Fuses
262816	Enclosed Switches and Circuit Breakers
263213	Engine Generators
263600	Transfer Switches
264113	Lightning Protection for Structures
264313	Surge Protection for Low-Voltage Electrical Power Circuits
265119	LED Interior Lighting
265619	LED Exterior Lighting

DIVISION 27 – COMMUNICATIONS

270500	Common Work Results for Communications
270526	Grounding and Bonding for Communication Systems
270528	Pathways for Communications Systems
270536	Cable Trays for Communications Systems
271100	Communications Equipment Room Fittings
271300	Communications Backbone Cabling

PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No: 631310

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271500	Communications Horizontal Cabling
274116	Audiovisual Systems
275227	Two-Way Communication Intercom System
276410	RF BDA-Based Signal Booster System

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

280500	Common Work Results for Electronic Safety and Security
280513	Conductors and Cables for Safety and Security
283111	Emergency Voice Communication System

DIVISION 31 – EARTHWORK

311001	Site Grubbing
312213	Rough Grading
312316	Excavation
312316.13	Trenching
312323	Fill
312500	Erosion and Sedimentation Controls

DIVISION 32 – EXTERIOR IMPROVEMENTS

321123	Aggregate Base Courses
321216	Asphalt Paving
321313	Concrete Paving
321413	Precast Concrete Unit Paving
321723	Pavement Markings
323113	Chain Link Fences and Gates
323119	<u>Ornamental Fence (to be issued by addendum) Decorative Metal Fences and Gates (*AD-01)</u>
329200	Turf and Grasses
329223	Sodding
329300	Exterior Plants

DIVISION 33 – UTILITIES

330110	Disinfection of Water Utility Piping Systems
330505.31	Hydrostatic Testing
330505.43	Mandrel Testing
330507	Boring and Jacking
330533.16	HDPE Drainage Piping
330561	Concrete Manholes
331413	Public Water Utility Distribution Piping
331417	Site Water Service Utility Laterals
331419	Valves and Hydrants for Water Utility Service
334200	Stormwater Conveyance

DIVISION 34 – TRANSPORTATION – Not Used

END OF TABLE OF CONTENTS

**SECTION 012100  
ALLOWANCES**

**PART 1 GENERAL**

**1.01 SUBMITTALS**

- A. Allowance Proposal: Submit initial proposal for purchase of products and materials, on Change Order form.
- B. Supporting Documentation:
  - 1. Products and Material: Provide invoices and other documents as required, for products and materials indicating quantities, prices, taxes, delivery fees, and other costs.
  - 2. Labor and Installation: Provide time sheets and other documents as required, indicating all on-site Subcontractor costs, including hours worked, quantity or amount of product/material installed, hourly wages, and Subcontractor overhead and profit.

**1.02 LUMP-SUM AND QUANTITY ALLOWANCES**

- A. Costs Included in Lump-Sum and Quantity Allowances: All Subcontractor's costs: Cost of products and materials, taxes, freight, delivery, receiving and handling, labor and installation, Subcontractor overhead and profit.
- B. Costs Not Included in Lump-Sum and Quantity Allowances: All General Contractor's costs: General coordination, GC's overhead and profit.
- C. Contractor Responsibilities:
  - 1. Assist Architect in selection of products.
  - 2. Obtain proposals from suppliers and installers and offer recommendations.
  - 3. On notification of which products have been selected, execute purchase agreement with designated supplier and installer.
  - 4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
- D. Differences in costs will be adjusted by Change Order.

**1.03 LUMP SUM ALLOWANCE SCHEDULE**

- A. Lump Sum Allowance No. 1: Include the stipulated sum of \$1,500 per thousand units for face brick type #1, as specified in Division 4, Section "Unit Masonry."
- B. Lump Sum Allowance No. 2: Include the stipulated sum of \$1,500 per thousand units for face brick type #2, as specified in Division 4, Section "Unit Masonry."
- C. Lump Sum Allowance No. 3: Include a stipulated sum of \$5,000 for painted center court logo in gymnasium, as specified in Division 09 Section "Wood Athletic Flooring."
- D. Lump Sum Allowance No. 4: Include the stipulated sum of \$30,000 for interior and exterior panel signage, as specified in Division 10 Section "Signage."
- E. Lump Sum Allowance No. 5: Include the stipulated sum of \$5,000 for foodservice equipment changes, as specified in Division 11, Section "Foodservice Equipment."
- F. **Lump Sum Allowance No. 6: Include the stipulated sum of \$900,000 for 30 foot-candle average sports lighting at the multipurpose field and 50 infield/30 outfield foot-candle average sports lighting at the baseball field, as specified in Division 26. (\*AD-01)**
- G. **Lump Sum Allowance No. 7: Include the stipulated sum of \$30,000 for material and installation of conduit, wire, and connections required to operate NIC lift station, as specified in Division 26. (\*AD-01)**

**H. Lump Sum Allowance No. 8: Include stipulated sum of \$30,000 for material and installation of vape detection equipment, as specified in Division 26. (\*AD-01)**

**1.04 QUANTITY ALLOWANCE SCHEDULE**

- A. Quantity Allowance No. 1: Include 100 cubic yards for unsuitable soils (trench) removal and disposal offsite for building concrete. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- B. Quantity Allowance No. 2: Include 100 cubic yards for replacement of unsuitable soils (trench) with import select fill for building concrete. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- C. Quantity Allowance No. 3: Include 100 cubic yards for replacement of unsuitable soils (trench) with #57 stone for building concrete. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- D. Quantity Allowance No. 4: Include 50 cubic yards of flowable fill for building concrete. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- E. Quantity Allowance No. 5: Include 200 cubic yards of aggregate base course stone (NCDOT CABC). Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- F. Quantity Allowance No. 6: Include removal and restoration of 500 CMU blocks. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- G. Quantity Allowance No. 7: Include 1500 square feet of thermal barrier for SPF insulation (SFRM). Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- H. Quantity Allowance No. 8: Include 1000 square feet of additional floor leveling for hard tile. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- I. Quantity Allowance No. 9: Include 61,250 square feet of moisture vapor treatment (MVT) for resilient flooring. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- J. Quantity Allowance No. 10: Include 74,000 square feet of moisture vapor treatment (MVT) for resin matrix terrazzo. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- K. Quantity Allowance No. 11: Include 5 additional sprinkler heads. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- L. Quantity Allowance No. 12: Include 100 cubic yards for unsuitable soils (trench) removal and disposal offsite for plumbing. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- M. Quantity Allowance No. 13: Include 100 cubic yards for replacement of unsuitable soils (trench) with import select fill for plumbing. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- N. Quantity Allowance No. 14: Include 100 cubic yards for replacement of unsuitable soils (trench) with #57 stone for plumbing. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.

PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No.: 631310

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- O. Quantity Allowance No 15: Include 100 cubic yards for unsuitable soils (trench) removal and disposal offsite for electrical. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- P. Quantity Allowance No. 16: Include 100 cubic yards for replacement of unsuitable soils (trench) with import select fill for electrical. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- Q. Quantity Allowance No. 17: Include 100 cubic yards for replacement of unsuitable soils (trench) with #57 stone for electrical. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- R. Quantity Allowance No. 18: Include furnishing and installation of 5 horn strobes. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- S. Quantity Allowance No. 19: Include furnishing and installation of 5 fire alarm pull stations. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- T. Quantity Allowance No. 20: Include furnishing and installation of 5 exit lights. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- U. Quantity Allowance No. 21: Include furnishing and installation of 5 smoke detectors. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- V. Quantity Allowance No. 22: Include furnishing and installation of 5 duplex receptacles. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- W. Quantity Allowance No. 23: Include furnishing and installation of 5 data outlets. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- X. Quantity Allowance No. 24: Include furnishing and installation of 5 duct detectors. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- Y. Quantity Allowance No. 25: Include furnishing and installation of 5 exterior lights. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- Z. Quantity Allowance No. 26: Include furnishing and installation of 5 wireless access points. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- AA. Quantity Allowance No. 27: Include 200 linear feet of PVC sleeves under pavements and drives. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.
- BB. Quantity Allowance No. 28: Include 1500 square yards of additional sod. Coordinate with Division 1, "Unit Prices" for unit price requirements that will be used to determine allowance adjustments.

PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No.: 631310

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**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION 012100**



**SECTION 057500**  
**DECORATIVE FORMED METAL (\*AD-01)**

**PART 1 GENERAL**

**1.01 REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.
- B. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix).
- C. ASTM A449 - Standard Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use.
- D. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- E. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric).
- F. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- G. ASTM C834 - Standard Specification for Latex Sealants.
- H. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification.
- I. AWS D1.1/D1.1M - Structural Welding Code - Steel.
- J. AWS D1.6/D1.6M - Structural Welding Code - Stainless Steel.
- K. NAAMM AMP 500-06 - Metal Finishes Manual.

**1.02 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data - Sheet Metal Material: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
  - 4. Specimen warranty.
- C. Shop Drawings: Show layout and elevations, dimensions and thickness of panels, connections, details and location of joints, sealants and gaskets, method of anchorage, number of anchors, supports, reinforcement, trim, flashings, and accessories.
  - 1. Show actual field measurements on shop drawings.
  - 2. Differentiate between shop and field fabrication.
  - 3. Indicate substrates and adjacent work with which the fabrications must be coordinated.
  - 4. Include large-scale details of anchorages and connecting elements.
  - 5. Include large-scale details or schematic, exploded or isometric diagrams to fully explain flashing at a scale of not less than 1-1/2 inches per 12 inches.
- D. Selection Samples: For each finish product specified, color chips representing manufacturer's full range of available colors and patterns.
- E. Fabricator's Qualification Statement.

- F. Installer's Qualification Statement.
- G. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.
- H. Maintenance Data: Care of finishes and warranty requirements.
- I. Executed Warranty: Submit warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

### **1.03 QUALITY ASSURANCE**

- A. Fabricator Qualifications: Company specializing in fabricating products specified in this section.
  - 1. With not less than ten years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified in this section.
  - 1. With minimum five years of documented experience.
  - 2. Approved by fabricator.
- C. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and AWS D1.6/D1.6M no more than 12 months before start of scheduled welding work.
- D. Mock-Up: Provide a mock-up for evaluation of fabrication workmanship.
  - 1. Locate where directed.
  - 2. Provide products finished as specified.
  - 3. Mock-up may remain as part of the Work.

### **1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact.
  - 1. Protect finishes by applying heavy duty removable plastic film during production.
  - 2. Package for protection against transportation damage.
  - 3. Provide markings to identify components consistently with drawings.
  - 4. Exercise care in unloading, storing and installing panels to prevent bending, warping, twisting and surface damage.
- B. Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
  - 1. Store in well-ventilated space out of direct sunlight.
  - 2. Protect from moisture and condensation with tarpaulins or other suitable weathertight covering installed to provide ventilation.
  - 3. Store at a slope to ensure positive drainage of accumulated water.
  - 4. Do not store in enclosed space where ambient temperature can exceed 120 degrees F.
  - 5. Avoid contact with other materials that might cause staining, denting, or other surface damage.

### **1.05 WARRANTY**

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Factory Fabricated Column Covers: Basis of Design - Pittcon Industries; Series 9000.
  - 1. ATAS International, Inc.
  - 2. DAMS Incorporated.
  - 3. Nelson Industrial, Inc.
  - 4. SAF Metal Fabrication, a division of Southern Aluminum Finishing Company, Inc.
  - 5. Superior Aluminum Products, Inc.
  - 6. Substitutions: See Section 016000 - Product Requirements.

### **2.02 FORMED METAL FABRICATIONS - GENERAL**

- A. Shop Assembly: Preassemble items to greatest extent possible. Minimize field splices and field assembly. Disassemble only as necessary for transportation and handling. Mark items clearly for assembly and installation.
- B. Coordination: Match dimensions and attachment of formed metal items to adjacent construction. Produce integrated assemblies. Closely fit joints; align edges and flat surfaces unless indicated otherwise.
- C. Forming: Profiles indicated. Maximize lengths. Fold exposed edges to form hem indicated or ease edges to radius indicated with concealed stiffener. Provide flat, flush surfaces without cracking or grain separation at bends.
- D. Reinforcement: Increase metal thickness; use concealed stiffeners, backing materials or both. Provide stretcher leveled standard of flatness and stiffness required to maintain flatness and hold adjacent items in flush alignment.
- E. Anchors: Straps, plates and anchors as required to support and anchor items to adjacent construction.
- F. Supports: Miscellaneous framing, mounting, clips, sleeves, fasteners and accessories required for installation.
- G. Welding and Brazing: Weld or braze joints continuously. Grind, fill or dress to produce smooth, flush, exposed surfaces. Do not discolor metal. Grind smooth, polish, and restore damaged finishes to required condition.
  - 1. Ease exposed edges to small uniform radius.
  - 2. Welded Joints:
    - a. Carbon Steel: Perform welding in accordance with AWS D1.1/D1.1M.
    - b. Stainless Steel: Perform welding in accordance with AWS D1.6/D1.6M.
- H. Performance Requirements:
  - 1. Corrosion: Prevent galvanic action and other forms of corrosion by isolating metals and other materials from direct contact with incompatible materials.

### **2.03 FACTORY FABRICATED COLUMN COVERS**

- A. Factory Fabricated Column Covers: Factory fabricated and factory finished, sheet metal column covers, mechanically fastened to structural support.
  - 1. Material: Aluminum sheet, ASTM B209/B209M alloy 3003 or 5005.
  - 2. Sheet Thickness: 0.125 inch, minimum.
  - 3. Column Section Length: 16 feet, maximum, between horizontal joints.
  - 4. Joint Type: Butt.

5. Fasteners: Self-drilling; ASTM A449 heat treated steel, with manufacturer's standard corrosion resistant coating.
6. Aluminum Finish: Manufacturer's standard manufacturer's standard enamel coating.
7. Color: To be selected by Architect from manufacturer's full range.

#### **2.04 MATERIALS**

- A. General: Provide sheet metal without pitting, seam marks, roller marks, stains, discolorations, or other imperfections exposed to view on finished units.
- B. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.
- C. Aluminum Sheet: ASTM B209/B209M, 5005-H32 minimum; alloy and temper recommended by aluminum producer and finisher for use and finish indicated.
- D. Fasteners, General: Same basic metal and alloy as formed metal sheet unless indicated otherwise. Do not use metals incompatible with the materials joined.
- E. Gaskets: As required to seal joints in decorative formed metal and remain airtight; as recommended in writing by decorative formed metal manufacturer.
- F. Bituminous Coating: Cold-applied asphalt mastic, noncorrosive compound free of asbestos, sulfur, and other deleterious impurities; 15 mil dry film thickness per coat.
- G. Joint Sealer, Interior: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C834; of type and grade required to seal joints in decorative formed metal; as recommended in writing by decorative formed metal manufacturer and with a VOC content of not more than 250 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

#### **2.05 FINISHES**

- A. Finishes, General: Comply with NAAMM AMP 500-06.
  1. Complete mechanical finishes before fabrication. After fabrication, finish joints, bends, abrasions and surface blemishes to match sheet.
  2. Protect mechanical finishes on exposed surfaces from damage.
  3. Apply organic and anodic finishes to formed metal after fabrication unless otherwise indicated.
  4. Appearance: Limit variations in appearance of adjacent pieces to one-half of range represented in approved samples. Noticeable variations in same piece are not acceptable. Install components within range of approved samples to minimize contrast.
- B. Aluminum Finishes:
  1. Pigmented Organic Coatings: AAMA 2603; polyester or acrylic baked enamel finish.
  2. Siliconized Polyester Finish: Silicone modified, polyester enamel topcoat over epoxy primer; coating not less than 1 mil thick.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify dimensions, tolerances, and interfaces with other work.
- B. Verify substrate on-site to determine that conditions are acceptable for product installation in accordance with manufacturer's written instructions.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

- D. Notify Architect in writing of conditions detrimental to proper and timely completion of work. Do not proceed with erection until unsatisfactory conditions have been corrected.

### **3.02 PREPARATION**

- A. Protect adjacent work areas and finish surfaces from damage during installation.
- B. Deliver anchorage items to be cast into concrete or built into masonry to appropriate installer(s) together with setting templates.
- C. Coat concrete and masonry surfaces that will be in contact with metal surfaces with bituminous coating.

### **3.03 INSTALLATION - SHEET METAL AND PLATE FABRICATIONS**

- A. Locate and place decorative formed sheet metal items level and plumb; align with adjacent construction. Cut, drill and fit as required to install.
- B. Do not cut or abrade sheet metal finishes that cannot be completely restored in the field. Return such items to manufacturer or fabricator for required alterations and refinishing or provide new items.
- C. Use concealed anchorages where possible. Provide washers where needed on bolts or screws to protect metal surfaces and make weathertight connection.
- D. Form tight joints with exposed connections accurately fitted together. Provide reveals and openings for sealants and joint fillers indicated.
- E. Install gaskets, joint fillers, insulation, sealants, and flashings as work progresses.
  - 1. Make exterior decorative formed sheet metal items weatherproof.
  - 2. Make interior decorative formed metal items soundproof or lightproof as required.
- F. Corrosion Protection: Apply permanent separation materials on concealed surfaces where metals would otherwise be in direct contact with incompatible substrate materials. Prevent corrosion damage to material and finish.

### **3.04 CLEANING**

- A. Restore finishes damaged during installation and construction period. Return items that cannot be refinished in the field to manufacturer or fabricator. Refinish entire unit or provide new units.
- B. Remove protective film after installation of joint sealers, after cleaning of adjacent materials, and immediately prior to completion of work.
- C. Remove temporary coverings and protection of adjacent work areas.
- D. Clean installed products in accordance with manufacturer's instructions.

### **3.05 PROTECTION**

- A. Protect installed products from damage during construction.

### **END OF SECTION 057500**

**SECTION 064100**  
**ARCHITECTURAL WOODWORK AND CASEWORK (\*AD-01)**

**PART 1 GENERAL**

**1.01 DEFINITIONS**

- A. Exposed: Portions of casework visible when drawers and cabinet doors are closed, including end panels, bottoms of cases more than 42 inches above finished floor, tops of cases less than 72 inches above finished floor and all members visible in open cases or behind glass doors.
- B. Semi-Exposed: Portions of casework and surfaces behind solid doors, tops of cases more than 72 inches above finished floor and bottoms of cabinets more than 30 inches but less than 42 inches above finished floor.
- C. Concealed: Sleepers, web frames, dust panels and other surfaces not generally visible after installation and cabinets less than 30 inches above finished floor.

**1.02 REFERENCE STANDARDS**

- A. ANSI A208.1 - American National Standard for Particleboard.
- B. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications.
- C. ANSI A208.1 - American National Standard for Particleboard.
- D. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- F. AWI (QCP) - Quality Certification Program.
- G. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition.
- H. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards.
- I. BHMA A156.9 - Cabinet Hardware.
- J. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers Version 1.2.
- K. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board.
- L. EPA (TSCA); Title VI - Toxic Substances Control Act, Title VI: Formaldehyde Standards for Composite Wood Products.
- M. ISFA 2-01 - Classification and Standards for Solid Surfacing Material.
- N. NEMA LD 3 - High-Pressure Decorative Laminates.
- O. SCAQMD 1113 - Architectural Coatings.
- P. SCAQMD 1168 - Adhesive and Sealant Applications.

**1.03 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene a preinstallation meeting not less than one week before starting work of this section; require attendance by all affected installers.

**1.04 SUBMITTALS**

- A. Product Data: Component dimensions, configurations, construction details, joint details, attachments.
  - 1. Include product data for each type of hardware and accessory.

- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
  - 1. Include field measurements, and indicate where field measurements differ from documents.
- C. Selection Samples: Submit manufacturer's color charts indicating full range of available colors, for each product requiring color selection.
- D. Fabricator Qualifications: Include evidence of accreditation with quality control program.
- E. Certificate: Submit labels and certificates required by quality assurance and quality control programs.

#### **1.05 QUALITY ASSURANCE**

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with experience on Projects of similar size and scope.
  - 1. Accredited participant in the specified certification program prior to the commencement of fabrication and throughout the duration of the project.
  - 2. Single Source Responsibility: Provide and install this work from single fabricator.
    - a. It is acceptable to subcontract portions of the work to a separate specialty subcontractor (for example, pre-fabricated plastic-laminate-faced casework); however, each fabricator shall be independently accredited; submit accreditation for each fabricator. The primary woodwork contractor shall be responsible for ensuring the work of all Division 06 sections is well coordinated and properly fabricated and installed.
- B. Quality Certification:
  - 1. Comply with AWI (QCP) woodwork association quality certification service/program in accordance with requirements for work specified in this section: [www.awiqcp.org/#sle](http://www.awiqcp.org/#sle).
    - a. This AWI (QCP) project is registered as project number 23.1635.
  - 2. Provide for third-party AWI final inspection of fabricated architectural casework (prior to delivery). AWI program of self-certification in lieu of third-party inspection is not acceptable.
  - 3. Provide for third-party AWI final inspection of field-installed woodwork (after installation). AWI program of self-certification in lieu of third-party inspection is not acceptable.
  - 4. Provide labels or certificates indicating that the installed work complies with AWI/AWMAC/WI (AWS) requirements for grade or grades specified.
  - 5. Provide designated labels on shop drawings as required by certification program.
  - 6. Provide designated labels on installed products as required by certification program.
  - 7. Submit certifications upon completion of installation that verifies this work is in compliance with specified requirements.
  - 8. Replace, repair, or rework all work for which certification is refused.

#### **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Comply with Section 2 of the Architectural Woodwork Standards: "Care & Storage."
- B. Deliver woodwork after finishes are complete, including painting, and HVAC is operating at occupancy conditions in all spaces where woodwork will be installed.
- C. Store in an environmentally controlled location. Protect units from moisture damage.



## 1.07 FIELD CONDITIONS

- A. During and after installation of woodwork, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

## PART 2 PRODUCTS

### 2.01 PERFORMANCE REQUIREMENTS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS), unless noted otherwise.
- B. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84, unless otherwise indicated for specific products.
- C. All countertop surfaces shall be NSF approved for food contact.
- D. Accessibility Requirements: Fabricate and install woodwork and casework in compliance with ICC/ANSI A117.1 and with ADA Standards for Accessible Design.
- E. Low-Emitting Materials:
  - 1. Composite Wood: Any composite wood materials installed inside the weatherproofing system shall meet either EPA (TSCA); Title VI for ultra-low-emitting formaldehyde or no added formaldehyde (ULEF / NAUF).
  - 2. Paints and Coatings: Paints and coatings field-applied inside the weatherproofing system shall be tested and determined compliant in accordance with CAL (CDPH SM) AND shall meet applicable VOC limits of CARB (SCM) or SCAQMD 1113.
  - 3. Adhesives and Sealants: Adhesives and sealants field-applied inside the weatherproofing system shall be tested and determined compliant in accordance with CAL (CDPH SM) AND shall meet the chemical content requirements of SCAQMD 1168.

### 2.02 CABINETS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS), unless noted otherwise.
- B. Plastic-Laminate-Clad Cabinets: Custom grade, except as modified below. Solid wood and wood panel construction; each unit self-contained and not dependent on adjacent units or building structure for rigidity; in sizes necessary to avoid field cutting except for scribes and filler panels. Include adjustable levelers for base cabinets.
  - 1. Style: Reveal overlay. Ease doors and drawer fronts slightly at edges.
  - 2. Cabinet Nominal Dimensions: Unless otherwise indicated, provide cabinets of widths and heights indicated on drawings, and with following front-to-back dimensions:
    - a. Base Cabinets: 24 inches.
    - b. Tall Cabinets: 24 inches.
    - c. Wall Cabinets: 12-1/2 inches. (Minimum clear interior depth shall be 11 inches)
  - 3. Drawer Construction: Provide AWI premium grade for drawer box construction.
  - 4. Base Construction: Provide adjustable levelers for all base cabinets to facilitate load transfer to the floor, isolate cabinet ends from the floor, and permit leveling.
    - a. Provide one of the following two types of base construction:



PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No.: 631310

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- 1) Separate Sub-Base: Cabinet sub-base shall be separate and continuous (no cabinet body sides-to-floor), exterior grade plywood with concealed fastening to cabinet bottom. Sub-base shall be ladder-type construction of individual front, back, and intermediates, to form a secure and level platform to which cabinets attach. Recess sub-base at exposed cabinet end panels 1/4 inch from face of finished end, for flush installation of finished base material by other trades.
- 2) Integral Base: Provide end panels, cabinet bottoms, and horizontal toe kick members integrally joined together for structural strength. Adjustable levelers shall be provided at each corner for each cabinet.
- b. Toe Kick: Toe kick shall be nominal 4 inch height. Reduce as necessary via field modification due to construction tolerances and concrete slab levelness to maintain maximum height dimensions indicated.
5. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline.
  - a. Finish: Matte or suede, gloss rating of 5 to 20.
  - b. Surface Color and Pattern: To be selected by Architect from manufacturer's full range.
    - 1) Linear patterns must all run in the same direction
  - c. Exposed Interior Surfaces: Thermally fused laminate (melamine) is acceptable only at drawer boxes. Provide HPDL, type VGS or CLS, at semi-exposed interiors of cabinets (cabinets with doors). Provide type VGS for exposed interior horizontal shelving surfaces and interiors of open cabinets (no doors).
  - d. Apply undecorated laminate backing sheet to concealed reverse side of plastic laminate finished surfaces.
  - e. Wood Grain Pattern: If wood grain is indicated or selected for plastic laminate color/pattern, provide sequence matched finish across each elevation. Grain shall run vertically across all doors, drawers, fronts, and false fronts; mismatched grain direction is not allowed.
- C. ADA Sink Cabinets: Fabricate a panel of 3/4-inch moisture resistant core material and veneer/cladding material to match adjacent cabinets. Panel shall be removable for service access to undercounter plumbing. Provide with Z-clip attachment system for concealed fastening and with a steel cable retainer, minimum 4 feet long, so that panel can be set aside for service access. Fasten Z-clips and steel cable retainer to panel and to substrate with tamper-resistant fasteners.
  1. Provide an undercounter vertical "apron" piece at front of ADA sink locations as indicated, flush to fronts of adjacent cabinets and finished to match.
- D. ADA Sink Cabinets: Provide casework manufacturer's standard hinged front door panels, with matching veneer/cladding material and toe kick built into door panels, to match appearance of adjacent base cabinets. Front door panels swing open to 160 degrees minimum to allow for ADA-compliant undercounter knee space and for plumbing access to sink.

### 2.03 WOOD-BASED COMPONENTS

- A. Low-Emitting Materials: Provide composite wood products that meet the requirements of EPA (TSCA); Title VI for formaldehyde emissions.
- B. Core Material for Cabinets: ANSI A208.1, Grade M-2 particleboard.
  1. At Contractor's option, cabinet backs may be fabricated of ANSI A208.2, Grade MD fiberboard.
- C. Core Material for Countertops: Manufacturer's standard ANSI A208.1, Grade M-2 particleboard, or ANSI A208.2, Grade MD fiberboard.

1. At countertops containing sinks, provide core material meeting ANSI MR10 for moisture resistance. Available Products:
  - a. Arauco North America; Duraflake VESTA Moisture Resistant ULEF.
  - b. Collins Pine; FreeForm.
  - c. Georgia-Pacific; Ultrastock MR MDF.
  - d. Roseburg Forest Products; SkyBlend MR-10.

#### **2.04 PANEL CORE MATERIALS**

- A. Particleboard: Composite panel composed of cellulosic particles, additives, and bonding system; comply with ANSI A208.1.
- B. Medium Density Fiberboard (MDF): Composite panel composed of cellulosic fibers, additives, and bonding system; cured under heat and pressure; comply with ANSI A208.2.

#### **2.05 THERMALLY FUSED LAMINATE PANELS**

- A. Thermally Fused Laminate (TFL): Melamine- or polyester-resin-saturated decorative papers; for fusion to composite wood substrates under heat and pressure.
  1. Test in accordance with NEMA LD 3 Section 3.
  2. Panel Core Substrate: Particleboard.
  3. Color: White.

#### **2.06 LAMINATE MATERIALS**

- A. Manufacturers:
  1. Formica Corporation; High Pressure Laminate.
  2. Panolam Industries International, Inc; Nevamar Standard HPL.
  3. Panolam Industries International, Inc; Pionite Standard HPL.
  4. Wilsonart LLC; High Pressure Laminate (HPL).
- B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.
- C. Color and Pattern: To be selected by Architect from Manufacturer's full range (standard and premium colors) in standard textured finish (textured gloss, fine textured, or suede finish). High gloss, heavy textured, metallic, or other special surface products (abrasion-resistant, chemical-resistant) will not be required for use in this project.
- D. Provide specific types as follows:
  1. Horizontal Countertop Surfaces: HGS, 0.048 inch (1.2 mm) nominal thickness.
  2. Vertical Surfaces and Non-Countertop Horizontal Surfaces: VGS, 0.028 inch (0.7 mm) nominal thickness.
  3. Cabinet Liner: CLS, 0.020 inch (0.5 mm) nominal thickness.
  4. Laminate Backer: BKL, 0.020 inch nominal thickness, undecorated; for application to concealed backside of panels faced with high pressure decorative laminate.

#### **2.07 SOLID SURFACING MATERIAL**

- A. Solid Surfacing Material: ISFA 2-01.
  1. Products:
    - a. E. I. du Pont de Nemours and Company; Corian.
    - b. Formica Group; Solid Surfacing.
    - c. LG Hausys America; HI-MACS.

- d. Wilsonart LLC; Solid Surface.
- e. Meganite
- 2. Thickness: 1/2-inch.
- 3. Type: Standard Type.
- 4. Color and Pattern: To be selected by Architect from manufacturer's full range.
- 5. Color and Pattern: Provide colors per the following:
  - a. Colors and Patterns for Countertops: As selected by Architect from manufacturer's full range
  - b. Colors and Patterns for Window Stools: As selected by Architect from manufacturer's full range

## 2.08 COUNTERTOPS

- A. Fabricate in accordance with AWI/AWMAC/WI (AWS), Section 11 - Countertops, Custom Grade and with manufacturer's requirements.
- B. Plastic Laminate Countertops: High-pressure decorative laminate (HPDL) sheet bonded to substrate.
  - 1. Laminate Sheet: NEMA LD 3, Grade HGS, 0.048 inch nominal thickness.
  - 2. Core: Particleboard or fiberboard as specified, except provide moisture resistant type at sink locations.
  - 3. Exposed Edge Treatment: Square, substrate built up to 1-1/2 inch thick unless otherwise indicated; covered with 3 mm edge banding with eased ends.
  - 4. Back and End Splashes: 3/4-inch thick core material with Grade HGS face and 0.5 mm edge banding/tape at edges.
- C. Solid Surfacing Countertops and Window Stools: Solid surfacing sheet or plastic resin casting over structural substrate/core material.
  - 1. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
  - 2. Core: Fabricate solid surface countertop core of manufacturer's recommended moisture-resistant MDF. Provide continuous structural substrate at unsupported/overhang conditions; ladder construction acceptable over cabinets. Build up core material for total countertop thickness indicated.
  - 3. Fabricate in accordance with manufacturer's standard requirements, and in one piece to the greatest extent possible.
    - a. Shop-fabricate cutouts and holes in solid surface for plumbing fixtures, deck-mounted soap dispensers, and other items indicated on Drawings.
  - 4. Provide manufacturer's standard configuration for exposed edges, back and end splashes, and per the requirements below:
    - a. Edge and Corner Profiles: Eased.
    - b. Provide built up edges to standard thickness indicated (1-1/2 inches unless otherwise indicated).
    - c. Provide 4 inch high back and end splashes, unless otherwise indicated.
  - 5. Window Stools: Scribe window stools to fit jamb conditions as indicated.

## 2.09 ACCESSORIES & ACCESSORY MATERIALS

- A. Adhesive: Type recommended by fabricator to suit application.
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PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No.: 631310

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- B. Plastic Edge Banding: Extruded PVC, flat shaped; smooth finish; of width to match component thickness.
  - 1. Provide 3 mm edge banding at all door and drawer front edges and laminate countertop edges.
  - 2. Provide 0.5 mm edge banding (tape) at cabinet body edges, shelf edges, and other semi-exposed/exposed interior edges.
  - 3. Color: To be selected by Architect from Manufacturer's full range.
- C. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.
- D. Concealed Joint Fasteners: Threaded steel.
- E. Grommets: Standard plastic grommets for cut-outs, color as selected by Architect from manufacturer's full range.
  - 1. Grommet Size: To fit 2-1/2 inch diameter cut-out, nominal, unless otherwise indicated.
  - 2. Grommets shall have removable caps and slot for wire passage.
- F. Undercounter Wire Management: Provide the following, as indicated:
  - 1. Vinyl J-shaped channel wire manager for undercounter mounting, continuous for full length of countertop.
- G. Mailroom Casework Modules: Modular paper sorting assembly of closed-back, open-front case modules with adjustable horizontal shelves, fabricated of fire-resistant, impact-resistant, high-strength plastic or coated steel. Provide manufacturer's standard module sizes for overall unit dimensions and mail slot quantity required. Provide with metal nameplate at each mail slot.

## 2.10 HARDWARE

- A. Hardware: BHMA A156.9, types as recommended by fabricator for quality grade specified.
- B. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standards or multiple holes for pin supports and coordinated shelf rests, polished chrome finish, for nominal 1 inch spacing adjustments.
- C. Workstation Brackets: Fixed, L-shaped, corner reinforced, face-of-stud mounting. Provide at all countertop/worksurface that is unsupported by cabinetry at 16 inches o.c., unless otherwise indicated.
  - 1. Materials: Formed steel shapes.
    - a. Finish: Manufacturer's standard, factory-applied, textured powder coat.
    - b. Color: To be selected by Architect from manufacturer's full range.
  - 2. Load Capacity: 1000 lbs minimum per pair of brackets, tested at 16 inches o.c. spacing.
  - 3. Size: Provide nominal sizes below. Provide additional sizes as required for other countertop/workstation applications indicated on Drawings.
    - a. Provide 21 inches high by 28 inches deep for standard 30 inch deep countertops.
    - b. Provide 21 inches high by 21 inches deep for standard 25 inch deep countertops.
  - 4. Products:
    - a. A&M Hardware, Inc; Standard Brackets.
    - b. Best Brackets; ADA Workstation Support Standard Steel Bracket.
    - c. FastCap; SpeedBrace.
    - d. Lyman Associates; Counter Top Supports.

PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No.: 631310

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- D. Drawer and Door Pulls: BHMA A156.9, B02011, back-mounted "U" shaped wire pull, steel with chrome finish, 4 inch centers.
- E. Cabinet and Drawer Locks: Keyed cylinder, two keys per lock, master keyed, steel with chrome finish. Provide on all cabinet doors and drawers unless otherwise indicated.
- F. Drawer Slides:
  - 1. Type: Full extension.
  - 2. Static Load Capacity: Heavy Duty grade.
    - a. For standard box drawers under 30 inches wide, provide BHMA Grade 1HD-100 with minimum load capacity of 100 lbf.
    - b. For file drawers and drawers 30 inches wide or larger, provide BHMA Grade 2HD-200 with minimum load capacity of 200 lbf.
    - c. For pencil drawer slides, provide 3/4 extension with minimum load capacity of 45 lbf.
  - 3. Mounting: Side mounted.
  - 4. Stops: Integral type.
  - 5. Features: Provide soft close type.
  - 6. Manufacturers:
    - a. Accuride International, Inc.
    - b. Fulterer USA.
    - c. Grass America Inc.
    - d. Knap & Vogt Manufacturing Company.
- G. Filing Cabinet Suspension System: Provide 14-gauge steel file suspension rails, epoxy powder coated. File followers, or other split bottom hardware, are not acceptable.
- H. Hinges: Butt type, BHMA A156.9, Grade 1, 2-3/4 inch, 5-knuckle steel with nickel-plated finish. Provide with antifriction bearings and rounded hospital tips.
  - 1. Provide two hinges for doors less than 48 inches high, and three hinges for doors more than 48 inches high.
- I. Hooks: Surface-mounted; stainless steel, satin finish.
  - 1. Product:
    - a. Coat Hook Strip
    - b. 36" wide x 2" high
    - c. (6) Slip Resistant Hooks with rounded edges
    - d. Include mounting screws
    - e. Provide submittal for approval
- J. Keyboard Tray: Integral ball-bearing slides; adjustable tilt, palm rest, cable management, and mouse pad.
  - 1. Manufacturers:
    - a. Accuride International, Inc; CBERGO-Tray 200.
    - b. Doug Mockett; #KP7 / M2-90.
    - c. Fulterer; #FR 1602.
    - d. Knap & Vogt; # KD-110.
    - e. WorkRite Ergonomics; Banana Board.
    - f. Substitutions: See Section 016000 - Product Requirements.

**2.11 FLUSH WOOD PANELING (\*AD-01)**

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- A. Grade: Custom
- B. Wood Species and Cut: White Maple, plain sliced
  - 1. Lumber Trim and Edges: At fabricator's option, trim and edges indicated as solid wood (except moldings) may be either lumber or veneered construction compatible with grain and color of veneered panels
- C. Matching of Adjacent Veneer Leaves: Random match
- D. Panel-Matching Method: No matching between panels is required. Select and arrange panels for similarity of grain pattern and color between adjacent panels.
- E. Aluminum Millwork Trim: Extruded accessories of profiles and dimensions indicated.
  - 1. Manufacturers: Subject to compliance with requirement, available manufactures offering products that may be incorporated into the Work, include but are not limited to the following:
    - a. Fry Reglet Corp
    - b. Flannery Inc
    - c. Gordon Inc
    - d. Pittcom Ind.
    - e. Stockton Products
  - 2. Trim Profiles Characteristics: Provide the following trim types, where indicated. Provide profiles in depth required to match wood paneling depth indicated.
    - a. Straight Edge Reveal Channel: ½ inch width reveals between millwork panels.
  - 3. Accessories: Provide manufacturer's factor-fabricated intersection components, including custom fabrications as required for reveal layout indicated.
  - 4. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221, Alloy 6063-T5
  - 5. Finish: As selected by Architect from manufacturer's full range.

## 2.12 FABRICATION

- A. Assembly: Shop assemble casework items for delivery to site in units easily handled and to permit passage through building openings.
- B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.
  - 1. Fittings and Fixture Locations: Cut and drill components for fittings and fixtures.
  - 2. Scribes and Fillers: Panels of matching construction and finish, for locations where cabinets do not fit tight to adjacent construction.
  - 3. Seal or prime paint concealed cut edges of wood and laminate casework.
- D. Hardware Application: Factory-machine casework members for hardware that is not surface applied.
- E. Apron Frames: Construction similar to other cabinets, with modifications.
  - 1. Frames fabricated from panels standard with the manufacturer. Include front and back panels, with drawer suspension framing mechanically fastened to support channels spanning between them.

PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No.: 631310

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- F. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel exposed edges.
- G. Solid Surfacing: Fabricate in one piece to greatest extent possible; join pieces with adhesive sealant and finish joints smooth in accordance with manufacturer's recommendations and instructions.
  - 1. Fabricate with butt-jointed / square edge at all solid surface corners. Mitered solid surface corners are not acceptable.
- H. Countertop Fabrication: Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
  - 1. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall, or as indicated.
  - 2. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
- I. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
  - 1. Height: 4 inches, unless otherwise indicated.
  - 2. Mechanically fasten back and end splashes to countertops with steel brackets at 16 inches on center.
- J. Wall-Mounted Counters (not mounted over cabinets): Provide ADA compliant knee space with brackets, skirts, or aprons, as indicated on Drawings.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Site Verification of Environmental Conditions:
  - 1. Do not deliver woodwork or casework until the following conditions have been met:
    - a. Building has been enclosed (windows and doors sealed and weather-tight).
    - b. An operational HVAC system that maintains temperature and humidity at occupancy levels has been put in place.
    - c. Ceiling, overhead ductwork, piping, and lighting have been installed.
    - d. Installation areas do not require further "wet work" construction.
- B. For Base Cabinets Installation: Examine floor levelness and flatness of installation space. Do not proceed with installation if encountered floor conditions required more than 1/2 inch leveling adjustment. When installation conditions are acceptable, for each space, establish the high point of the floor. Set and make level and plumb first cabinet in relation to this high point, and provide field modifications as required to not exceed maximum height dimensions.
  - 1. Construction tolerances shall not apply to casework maximum height dimensions; maximum indicated dimension shall be maintained at any point along the length of casework, regardless of floor levelness.
  - 2. Field modifications shall be made to the toe kick to account for leveling due to floor levelness.
- C. For Wall Cabinets Installation: Examine wall surfaces in installation space. Do not proceed with installation if the following conditions are encountered:
  - 1. Maximum variation from plane of masonry wall exceeds 1/4 inch in 10 ft and 1/2 inch in 20 ft or more, and/or maximum variation from plumb exceeds 1/4 inch per story.



- 2. Maximum Variation of finished gypsum board surface from true flatness: 1/8 inch in 10 feet in any direction.
- D. Verify adequacy of backing and support framing.
- E. Verify location and sizes of utility rough-in associated with work of this section.

### **3.02 INSTALLATION**

- A. Install work in accordance with AWI/AWMAC/MI (AWS) requirements for grade(s) indicated and in accordance with manufacturer's instructions.
- B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
- C. Use fixture attachments in concealed locations for wall mounted components.
- D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
- E. Secure cabinets to floor using appropriate angles and anchorages.
- F. Fasten together cabinets in continuous runs, with joints flush, uniform and tight. Misalignment of adjacent units not to exceed 1/16 inch. In addition, do not exceed the following tolerances:
  - 1. Variation of Tops of Base Cabinets from Level: 1/16 inch in 10 feet.
  - 2. Variation of Bottoms of Wall Cabinets from Level: 1/8 inch in 10 feet.
  - 3. Variation of Faces of Cabinets from a True Plane: 1/8 inch in 10 feet.
  - 4. Variation of Adjacent Surfaces from a True Plane (Lippage): 1/32 inch.
  - 5. Variation in Alignment of Adjacent Door and Drawer Edges: 1/16 inch.
- G. Secure wall cabinets at top and bottom, at each end and no more than 16 inches on center. Secure directly into metal wall framing, or into FRT wood or metal channel blocking with No. 10 wafer head screws. Wall mounted hanger strips are not acceptable.
- H. Countertops: Install countertops intended and furnished for field installation in one true plane, with ends abutting at hairline joints, and no raised edges.
- I. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

### **3.03 ADJUSTING**

- A. Test installed work for rigidity and ability to support loads.
- B. Adjust moving or operating parts to function smoothly and correctly.

### **3.04 CLEANING**

- A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

### **3.05 PROTECTION**

- A. Do not permit finished casework to be exposed to continued construction activity.
- B. Protect casework and countertops from ongoing construction activities. Prevent workmen from standing on, or storing tools and materials on casework or countertops.
- C. Repair damage, including to finishes, that occurs prior to Date of Substantial Completion, using methods prescribed by manufacturer; replace units that cannot be repaired to like-new condition.

### **END OF SECTION 064100**

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**SECTION 096467  
DANCE FLOORING ASSEMBLIES**

**PART 1 GENERAL**

**1.01 REFERENCE STANDARDS**

- A. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
- B. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- C. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
- D. ~~MFMA (SPEC) - Guide Specifications for Maple Flooring Systems. (\*AD-01)~~

**1.02 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination: Coordinate slab recess depth requirement and floor flatness tolerances for submitted wood flooring system with concrete installer prior to concrete slab installation.

**1.03 SUBMITTALS**

- A. Product Data: Provide data for subflooring, resilient cushion, and floor finish materials.
- B. Shop Drawings: Indicate floor joint pattern and termination details.
  - 1. Indicate provisions for expansion and contraction and wall base.
  - 2. Indicate size and type fasteners and anchors.
  - 3. Indicate location, size, design, and color of game markings.

**1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver materials and store off the floor in a well-ventilated, weather-tight space.

**1.05 FIELD CONDITIONS**

- A. Do not deliver or install flooring until wet construction work is complete and permanent heat and air conditioning is installed and operating.
- B. Maintain room temperature between 55 degrees F and 75 degrees F and relative humidity between 35 to 50 percent for a period of seven days prior to delivery of materials to installation space, during installation, and after installation.
- C. Acclimate flooring components and materials to installation space for a minimum of 48 hours prior to installation.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Dance Flooring System:
  - 1. Gerstung.
  - 2. Stagestep.
  - 3. Harlequin.
  - 4. Substitutions: See Section 016000 - Product Requirements

## 2.02 VINYL DANCE FLOORING ASSEMBLY (\*AD-01)

- A. General: system components provided by single manufacturer.
- B. Application: Dance room.
- C. System Description:
  - 1. Semi-permanent installation.
  - 2. Sprung dance floor system, consisting of cushioned pads with plywood tongue-and-groove joint subfloor panels, and engineered hardwood vinyl dance flooring surface. (\*AD-01)
  - 3. All components of dance floor system shall be provided by the primary dance flooring manufacturer, or by a manufacturer specifically approved in writing by dance flooring manufacturer.
  - 4. Wood-Vinyl performance surface appropriate for all dance types, including tap dance. (\*AD-01)
  - 5. Basis-of-Design System: Harlequin Flexity Sprung Floor System with engineered hardwood surface Reversible Pro vinyl performance surface. (\*AD-01)

## 2.03 COMPONENTS

- A. Engineered Hardwood Flooring (WSF-2):
  - 1. Provide MFMA grade-marked flooring, stamped as manufactured by MFMA member mill.
  - 2. Species: Manufacturer's approved engineered hardwood surface with black stained birch underlayment, kiln dried; tongue and groove edges, end matched.
  - 3. Grade: Second and better.
  - 4. Thickness: Manufacturer's standard.
  - 5. Width: Manufacturer's standard. (\*AD-01)
- B. Subflooring: One layer of 23/32 inch thick plywood, APA rated, exposure 1; with machined anchor pockets for channels and factory applied resilient cushions.
- C. Resilient Cushioning: Manufacturer's standard cushioning pads, factory-applied to bottom side of subflooring.
- D. Vapor Retarder: Polyethylene sheet, 6 mil thick; 2 inch wide tape for sealing sheet seams.
- E. Fasteners and Anchors: Manufacturer's standard type and size to suit application.

## 2.04 FINISHES

- A. Sprung Dance Floor Finishes: Types recommended by flooring manufacturer and complying with MFMA specifications.
  - 1. Sealer: Oil based urethane.
  - 2. Finish Coats: Oil based urethane; high gloss. (\*AD-01)
- A. Vinyl Performance Floor Finish: Black/Gray. (\*AD-01)

## 2.05 ACCESSORIES

- A. Ventilating Base: Molded rubber, 4 inch high with a 3 inch toe, pre-molded outside corners; color as selected by Architect.
- B. Ramp: Provide type compatible with flooring system.
- C. Edge Strip: Angle; anodized aluminum.

- D. Moisture Vapor Treatment: Where dance floor system and accessories are installed over concrete slabs, and where field testing indicates high moisture vapor content through concrete slabs, provide alkaline-resistant product designed to control excessive moisture vapor transmission through concrete slab in accordance with Division 1 MVT allowance and unit price, and per the following:
1. Products: Provide product approved by flooring manufacturer and complying with performance requirements below, equivalent to one of the following:
    - a. Duraamen Engineered Products, Inc.; Perdure MVT.
    - b. Maxxon Corporation; Maxxon MVP.
    - c. Tnemec Company Inc.; Epoxoprime MVT, Series 208.
  2. Performance Requirements:
    - a. Verify with flooring manufacturer that submitted product maintains compliance with all provisions of flooring manufacturer's warranty.
    - b. Low-VOC: Provide product with VOC content less than 15 g/L.
    - c. Bond Strength to Concrete: Minimum 400 psi per ASTM D 4541 (100% concrete failure).
    - d. Permeance: Maximum 0.1 perm per ASTM E 96, and 0.10 grains/hr/ft<sup>2</sup>/in-Hg, per ASTM F3010.
    - e. Applications: Provide MVT for all concrete slabs on-grade and lightweight concrete elevated slabs.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify existing conditions before starting this work.
- B. Verify that concrete subfloor surface is smooth and flat to plus or minus 1/4 inch in 10 feet.
- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for flooring installation by testing for moisture and alkalinity (pH).
  1. Test as Follows: Perform one of each test per 1,000 sf of installation area.
    - a. Alkalinity (pH): ASTM F710.
    - b. Internal Relative Humidity: ASTM F2170.
    - c. Moisture Vapor Emission: ASTM F1869.
  2. If test results are not within limits recommended by flooring manufacturer, apply moisture vapor treatment (MVT) in accordance with manufacturer's requirements. MVT shall be provided per unit price and quantity allowance requirements.
- D. Verify that required floor-mounted utilities are in correct location.

#### **3.02 PREPARATION**

- A. Prepare substrate to receive wood flooring in accordance with manufacturer's **and MFMA** instructions. **(\*AD-01)**
- B. Vacuum clean substrate.

#### **3.03 INSTALLATION**

- A. Place vapor retarder over prepared concrete surface, overlap seams a minimum of 6 inches and seal with tape.
- B. Resilient Underlayment: Install in accordance with manufacturer's instructions.

- C. Channels with Plywood Subfloor:
1. Install subfloor assembly with channel sleepers at 90 degree angle to direction of finished floor. Stagger end joints a minimum of 24 inches.
  2. Anchor subfloor assembles to concrete substrate with steel anchoring pins.
- D. Install solid blocking at doorways, under stacked bleachers, and under locations of heavy equipment, as applicable and in accordance with flooring manufacturer's recommendations.
- E. **Vinyl Flooring:**
1. **Install in accordance with manufacturer's instructions.**
  2. **Lay flooring parallel to length of dance room.**
  3. **Trowel apply adhesive to top layer of plywood subfloor and set vinyl flooring in pattern as indicated.**
  4. **Install edge strips at unprotected or exposed edges and where flooring terminates.**
  5. **Provide 2 inch expansion space at walls and other interruptions. (\*AD-01)**
- F. **Install base at floor perimeter to cover expansion space in accordance with manufacturer's instructions. Miter inside corners. (\*AD-01)**
- G. Install floor sleeves and inserts to a depth sufficient to ensure flush top surface with floor surface.
- H. **Finishing:**
1. **Mask off adjacent surfaces before beginning sanding.**
  2. **Sand flooring to smooth even finish with no evidence of sander marks. Remove dust by vacuum.**
  3. **Apply finishes in accordance with floor finish manufacturer's and MFMA instructions.**
  4. **Apply one sealer coat and two finish coats.**
  5. **Apply first coat, allow to dry, then buff lightly with recommended pad to remove irregularities. Vacuum clean and wipe with damp, lint free cloth before applying succeeding coats.**
  6. **Apply last coat of finish. (\*AD-01)**

### 3.04 CLEANING

- A. Clean floor surfaces in accordance with floor finish manufacturer's instructions.

### 3.05 PROTECTION

- A. Prohibit traffic on finished floor for 72 hours after installation.
- B. Place protective coverings over finished floors; do not remove coverings until Date of Substantial Completion.

**END OF SECTION 096467**

**SECTION 098430**  
**SOUND-ABSORBING WALL AND CEILING UNITS (\*AD-01)**

**PART 1 GENERAL**

**1.01 REFERENCE STANDARDS**

- A. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- B. ASTM C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- D. ASTM E795 - Standard Practices for Mounting Test Specimens During Sound Absorption Tests.

**1.02 SUBMITTALS**

- A. Product Data: Manufacturer's printed data sheets for products specified.
- B. Shop Drawings: Fabrication and installation details, panel layout, fabric orientation, and wood grain orientation.
- C. Selection Samples: Manufacturer's color charts for fabric covering, indicating full range of fabrics, colors, and patterns available.
- D. Verification Samples: Fabricated samples of each type of panel specified; 12 by 12 inch, showing construction, edge details, and fabric covering.
- E. Test Reports: Certified test data from an independent test agency verifying that panels meet specified requirements for acoustical and fire performance.

**1.03 DELIVERY, STORAGE, AND HANDLING**

- A. Protect acoustical units from moisture during shipment, storage, and handling. Deliver in factory-wrapped bundles; do not open bundles until units are needed for installation.
- B. Store units flat, in dry, well-ventilated space; do not stand on end.
- C. Protect edges from damage.

**1.04 WARRANTY**

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a two-year period for failure of materials or workmanship commencing on the Date of Substantial Completion.
  - 1. Failures include but are not limited to acoustic performance, fabric separation from core or fabric sagging, panel distortion or warping.

**PART 2 PRODUCTS**

**3.01 WOOD FIBER SOUND-ABSORBING UNITS AWP-C, AWP-G, AWP-H, AWP-I, AWP-J, AWP-K**

- A. Manufacturers:
  - 1. Armstrong World Industries, Inc; (\*AD-01)
    - a. Tectum Direct-Attach. (AWP-C Basis of design)

- b. Tectum Designart – Lines Direct-Attach Walls (AWP-G, AWP-H, AWP-I, AWP-J, AWP-K Basis of design refer to drawings)
- 2. Cardinal Acoustics; Direct Attached Panel.
- 3. Conwed; Arborcoustic.
- B. Wood Fiber Acoustical Panels for Walls: Cementitious wood fiber.
  - 1. Size: 24 by 24 inches.
  - 2. Thickness: 1 inch.
  - 3. Noise Reduction Coefficient (NRC): 0.80 minimum when tested in accordance with ASTM C423 for Type C-20 mounting, per ASTM E795.
  - 4. Panel Edge: Beveled.
  - 5. Surface Pattern: Coarse.
  - 6. Surface Color: Manufacturer's standard; panels shall be field-painted.
  - 7. Installation Method (Wall): Direct-attached over 1 inch depth furring strips and 3 lb rigid/semi-rigid glass fiber acoustic board.
    - a. Furring Strips: 1 inch depth wood furring.
    - b. Fiberboard Insulation: Rigid/semi-rigid mineral fiber, ASTM C612, unfaced flame spread index of 0 (zero) when tested in accordance with ASTM E84.

### 3.02 FELT PET ACOUSTIC PANELS - AWP-A & AWP-B

- A. Manufacturers:
  - 1. Unika Vaev Basis of Design refer to drawings
  - 2. Kieri
  - 3. FitzFelt
- B. Felt Acoustic Panels: (80% post-consumer recycled content)
  - 1. Size: As indicated on Drawings. Provide shop drawings
  - 2. Thickness & Mounting: Z-Clips 3/4"; Interlock Mounting System 1 1/4"
  - 3. Edge: Manufacturer's coordinating edge trim, at all exposed edges
  - 4. Surface Burning Characteristics: Flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
  - 5. Noise Reduction Coefficient (NRC): 0.65 at 0.53" panel thickness when tested in accordance with ASTM C423 for Type E mounting, per ASTM E795.
  - 6. Color(s): Digital printed. Design, pattern, and colors shall be selected from manufacturer's full range of available digital prints/colorways.
    - a. Pattern: Custom design
  - 7. Color: Solid color as selected from manufacturer's full range of available colors. coordinating with basis of design EVCT colors
  - 8. Color(s): Each individual color to be one dye lot

### 3.03 ROLLED FELT AWP-D

- A. Manufacturers:
  - 1. Unika Vaev Basis of Design refer to drawings
  - 2. Kieri
  - 3. FitzFelt
- B. Felt Acoustic Panels: (80% post-consumer recycled content)
  - 1. Width/Weight: 53" / 10.32 Oz Linear Yard

2. Thickness: 1mm
3. Surface Burning Characteristics: Flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
4. Color: Solid color as selected from manufacturer's full range of available colors. coordinating with basis of design EVCT colors
5. Color(s): Each individual color to be one dye lot

### **3.04 FELT PET ACOUSTIC PANELS - AWP-E**

- A. Manufacturers:
  1. Unika Vaev Basis of Design refer to drawings
- B. Felt Acoustic Panels: (80% post-consumer recycled content)
  1. Size: As indicated on Drawings. Provide shop drawings
  2. Edge: Manufacturer's coordinating edge trim, at all exposed edges
  3. Surface Burning Characteristics: Flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
  4. Noise Reduction Coefficient (NRC): 0.85 at 0.98" panel thickness when tested in accordance with ASTM C423 for Type E mounting, per ASTM E795.
  5. Color: Solid color as selected from manufacturer's full range of available colors. coordinating with basis of design EVCT colors
  6. Color(s): Each individual color to be one dye lot

### **3.05 FABRIC COVERED SOUND ABSORBING/ DIFFUSING UNITS AWP-F**

- A. Manufacturer's
    1. Wenger Convex Diffuser & Absorber Wall Panel, Basis of Design
    2. Acoustical Solutions, Imc AlphaSorb
    3. Armstrong Wall Solutions, SoundSoak
  - B. Provides up to 0.8 seconds of change in reverberation time
  - C. Acoustical Performance: Sound Absorption Coefficients, One-third Octave Band Center Frequency, HZ
    1. 125Hz = 0.36
    2. 250Hz = 0.54
    3. 500Hz = 0.59
    4. 1000Hz = 0.43
    5. 2000Hz = 0.24
    6. 4000Hz = 0.19
  - D. Fabric Facing Material: 100 Percent woven plan weave polyester 2-ply, with the following characteristics:
    1. Light Fastness: AATCC 16, Option 3: 40 Hours
    2. Fastness to Crocking: AATCC 8, #4 Wet & Dry
    3. Flammability: ASTM E 84, Class A or 1
    4. Product to be selected by Architect from manufacturer's full range of fabrics
  - E. Sides constructed of aluminum extrusions
  - F. Five-year warranty
-

### **3.06 ACCESSORIES**

- A. Back-Mounting Accessories: Manufacturer's standard accessories for concealed support, designed to allow panel removal, and as follows:
  - 1. Two-part clip and base-support bracket system; brackets designed to support full weight of panels and clips designed for lateral support, with one part mechanically attached to back of panel and the other attached to substrate.

## **PART 3 EXECUTION**

### **4.01 EXAMINATION**

- A. Examine substrates for conditions detrimental to installation of acoustical units. Proceed with installation only after unsatisfactory conditions have been corrected.

### **4.02 INSTALLATION**

- A. Install acoustical units in locations as indicated, following manufacturer's installation instructions.
- B. Install mounting accessories and supports in accordance with shop drawings.
- C. Align panels accurately, with edges plumb and top edges level. Scribe to fit accurately at adjoining work and penetrations.
- D. Install acoustical units to construction tolerances of plus or minus 1/16 inch for the following:
  - 1. Plumb and level.
  - 2. Flatness.
  - 3. Width of joints between panels; where applicable.

### **4.03 CLEANING**

- A. Clean sound-absorptive panels upon completion of installation from dust and other foreign materials, following manufacturer's instructions.

### **4.04 PROTECTION**

- A. Provide protection of installed acoustical panels until Date of Substantial Completion.
- B. Replace panels that cannot be cleaned and repaired to satisfaction of the Architect.

## **END OF SECTION 098430**



**SECTION 123583**  
**MUSIC EQUIPMENT STORAGE CASEWORK & ACCESSORIES (\*AD-01)**

**PART 1 GENERAL**

**1.01 DEFINITIONS**

- A. Exposed: Portions of casework visible when drawers and cabinet doors are closed, including end panels, bottoms of cases more than 42 inches above finished floor, tops of cases less than 72 inches above finished floor and all members visible in open cases or behind glass doors.
- B. Semi-Exposed: Portions of casework and surfaces behind solid doors, tops of cases more than 72 inches above finished floor and bottoms of cabinets more than 30 inches but less than 42 inches above finished floor.
- C. Concealed: Sleepers, web frames, dust panels and other surfaces not generally visible after installation and cabinets less than 30 inches above finished floor.

**1.02 REFERENCE STANDARDS**

- A. AWI (QCP) - Quality Certification Program.
- B. BHMA A156.9 - Cabinet Hardware.
- C. CARB (ATCM) - Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products; California Air Resources Board.
- D. NEMA LD 3 - High-Pressure Decorative Laminates.

**1.03 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.

**1.04 SUBMITTALS**

- A. Product Data: Component dimensions, configurations, construction details, joint details, attachments.
- B. Shop Drawings: Indicate casework types, sizes, and locations, using large scale plans, elevations, and cross sections. Include rough-in and anchors, reinforcements, and blocking, placement dimensions and tolerances, clearances required, and keying information.
  - 1. Include utility locations and connection requirements.
- C. Maintenance Data: Manufacturer's recommendations for care and cleaning.
- D. Finish touch-up kit for each type and color of materials provided.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with capacity to fabricate either standard or custom music casework to the requirements indicated in this section.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Protect items provided by this section, including finished surfaces and hardware items during handling and installation. For metal surfaces, use polyethylene film or other protective material standard with the manufacturer.
- B. Acceptance at Site:

1. Do not deliver or install casework until the conditions specified under Part 3, Examination Article of this section have been met. Products delivered to sites that are not enclosed and/or improperly conditioned will not be accepted if warping or damage due to unsatisfactory conditions occurs.
- C. Storage:
1. Store casework in the area of installation. If necessary, prior to installation, temporarily store in another area, meeting the environmental requirements specified under Part 3, "Site Verification of Conditions" Article of this section.

### 1.07 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Instrument cabinetry and shelving shall have a ten year factory warranty from Date of Substantial Completion. Cover defects in materials and workmanship. Defects include, but are not limited to:
1. Ruptured, cracked, or stained finish coating.
  2. Discoloration or lack of finish integrity.
  3. Cracking or peeling of finish.
  4. Delamination of components.
  5. Failure of adhesives.
  6. Failure of hardware.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Basis-of-Design Manufacturer: Wenger Corp.; AcoustiCabinets and UltraStor cabinets; models as indicated on Music Casework Schedule.
- B. Subject to conformance with specifications, including features not standard to the manufacturer, the following manufacturers may provide products for this project, subject to submittal and approval by Owner and Architect of samples of materials, construction features, and finishes as stipulated in the Design Requirements paragraph below.
1. Corilam.
  2. Melhart Storage Solutions.
  3. TMI Systems Corporation.
  4. [Stevens Industries \(\\*AD-01\)](#)
- C. Obtain casework from single source and manufacturer, unless otherwise indicated.

### 2.02 THERMALLY FUSED LAMINATE MUSIC CASEWORK

- A. Quality Standard: AWI/AWMAC/WI (AWS), unless noted otherwise.
- B. Thermally Fused Laminate Music Casework: Custom Grade.
- C. Design Requirements:
1. Provide music storage cabinets specifically designed and intended for use with musical instruments. Storage units shall be chip and abrasion resistant under heavy usage and shall protect instruments and cases from damage under normal use.

PENDER COUNTY SCHOOLS K-8 SCHOOL  
PENDER COUNTY, NC  
Architect's Project No.: 631310

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2. Construction, General: Thermally fused laminate panel construction; each unit self-contained and not dependent on adjacent units or building structure for rigidity; in sizes necessary to avoid field cutting except for scribes and filler panels. Include adjustable levelers for base and tall cabinets. Include integral toe-kick, finished to match adjacent paneling.
  - a. Cabinet Nominal Dimensions: Unless otherwise indicated, provide cabinets of widths and heights indicated on Drawings and Music Casework Schedule, and per Basis-of-Design models indicated.
3. Shelving: Provide minimum 3/4-inch thick high strength instrument shelving with scuff-resistant plastic surface, with integral profiled surface for ventilation, with radiused (bullnose) front edge, designed and engineered to withstand continuous use without surface or front edge breakdown.
  - a. Loading: Each shelf shall be able to independently and safely support 200 lbs minimum, uniformly distributed, with maximum deflection of L/144.
  - b. Shelving to be adjustable for flexibility
4. Paneling: Manufacture instrument cabinet with 3/4-inch composite panels finished with thermally-fused laminate (melamine) or polyester laminate, meeting performance requirements of NEMA LD 3 for VGS grade, both faces; and edge banded with 3 mm radiused PVC. Factory jig and drill end panels to accept unit-to-unit through bolting; wood screw attachment is not acceptable.
  - a. Rear Panels: Provide rear panels fabricated of minimum 1/4-inch MDF, fully captured all four sides, or 1/2-inch particleboard full overlay. For all cabinets with wire grille doors or open interior (no doors), provide acoustically absorptive material on inside face of rear panels.
  - b. Panel Colors: Exterior panel colors and edge bandings shall be selected from manufacturer's full range. Interior panel shall be manufacturer's standard white melamine.
5. Wire Grille Doors: Provide inset style, wire grille doors as indicated; reveal or full overlay style doors are not acceptable. All hinges shall be structurally attached to vertical cabinet panels with engineered and tested through-bolt hardware, and integrally welded to wire grille doors. Screw mounted hinges are not acceptable.
  - a. Loading: Wire-grille door hinge welded connections shall be tested and shall resist 400 lbf pull test without visible damage or permanent deformation.
  - b. Doors to include locks
  - c. Heavy-duty 5 knuckle institutional ANSI/BHMA A159.9 Grade 1, through-bolted to cabinet wall

### 2.03 FABRICATION

- A. Assembly: Shop assemble casework items for delivery to site in units easily handled and to permit passage through building openings.
- B. Construction: As required for selected grade.
- C. Hardware Application: Factory-machine casework members for hardware.
- D. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- E. Scribes and Fillers: Panels of matching construction and finish, for locations where cabinets do not fit tight to adjacent construction.
- F. Mobile Cabinets: Same construction as fixed base cabinets, with modifications.
  1. Toe kick space eliminated.

2. Cabinet underside reinforced as is standard with the manufacturer to provide caster mounting points.
3. Four casters, each with a load rating of 165 pounds.

#### **2.04 SPECIAL PURPOSE UNITS**

- A. Music Library (Sheet Music) Storage: Manufacturer's standard, high-density, slide out type. Fabricate with 1-inch tube steel framing, powder-coated black color, with polyester laminate faced front and end panels, and with manufacturer's standard white melamine interior finish. Provide with manufacturer's standard casters. Provide 6-shelf units, with four adjustable shelves and two fixed shelves. Basis-of-Design is Wenger; Music Library System.
- B. Robe/Uniform Storage:
- C. Fixed Folio Cabinet:
- D. Mobile Band/Orchestra Folio:

#### **2.05 CABINET HARDWARE**

- A. Comply with BHMA A156.9 requirements.
- B. Label Holders: Manufacturer's standard, sized to hold standard label cards, bright chromium plated over nickel on base material.
- C. Swinging Doors: Hinges, latches, and joinery.
  1. Hinges: Number as required by manufacturer and by referenced standards for width, height, and weight of door.
    - a. Hinges: BHMA A156.9, Grade 1 butt hinges; powder coated to match grille door.
      - 1) Hinges shall be installed with through-bolts to cabinet side panels; five-knuckle, projecting barrel, minimum 2-1/2 inches long.
      - 2) At wire-grille doors, weld hinges to door panels.
      - 3) At solid composite wood doors, through-bolt hinges to door panels.
  2. Latch and Locks: Provide manufacturer's standard slide or gravity latch, steel construction, with integral padlock eye and powder-coat finish. All doors shall latch securely without padlock; doors with padlock hasp only are not acceptable.
    - a. Padlocks: NIC. Shall be provided by Owner.

#### **2.06 MATERIALS**

- A. Composite Wood: Tested and certified to CARB (ATCM) requirements for ultra-low emitting formaldehyde (ULEF) resins.
- B. Thermally Fused Laminate (TFL): Melamine or polyester resin, NEMA LD 3, Type VGS laminate panels.

#### **2.07 ACCESSORIES**

- A. Plastic Edge Banding: Extruded 3mm PVC, convex shaped; smooth finish; self locking serrated tongue; of width to match component thickness.
  1. Color: Match adjacent laminate.
  2. Use at exposed edges.
- B. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized finish in concealed locations and stainless steel finish in exposed locations.
- C. Concealed Joint Fasteners: Corrosion-resistant, standard with manufacturer.

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. Large Components: Ensure that large components can be moved into final position without damage to other construction.

### **3.02 EXAMINATION**

- A. Site Verification of Environmental Conditions:
  - 1. Do not deliver casework until the following conditions have been met:
    - a. Building has been enclosed (windows and doors sealed and weather-tight).
    - b. An operational HVAC system that maintains temperature and humidity at occupancy levels has been put in place.
    - c. Ceiling, overhead ductwork, piping, and lighting have been installed.
    - d. Installation areas do not require further "wet work" construction.
- B. For Cabinet Installation: Examine floor levelness and flatness of installation space. Do not proceed with installation if encountered floor conditions required more than 1/2 inch leveling adjustment. When installation conditions are acceptable, for each space, establish the high point of the floor. Set and make level and plumb first cabinet in relation to this high point.
- C. Verify adequacy of support framing and anchors.
- D. Verify that service connections are correctly located and of proper characteristics.

### **3.03 INSTALLATION**

- A. Perform installation in accordance with manufacturer's instructions.
- B. Use anchoring devices to suit conditions and substrate materials encountered. Use concealed fasteners to the greatest degree possible. Use exposed fasteners only where allowed by approved shop drawings, or where concealed fasteners are impracticable.
- C. Set casework items plumb and square, securely anchored to building structure.
- D. Align cabinets to adjoining components, install filler and/or scribe panels where necessary to close gaps.
- E. Fasten together cabinets in continuous runs, with joints flush, uniform and tight. Misalignment of adjacent units not to exceed 1/16 inch. In addition, do not exceed the following tolerances:
  - 1. Variation of Tops of Cabinets from Level: 1/16 inch in 10 feet.
  - 2. Variation of Faces of Cabinets from a True Plane: 1/8 inch in 10 feet.
  - 3. Variation of Adjacent Surfaces from a True Plane (Lippage): 1/32 inch.
  - 4. Variation in Alignment of Adjacent Door and Drawer Edges: 1/16 inch.
- F. Secure cabinets to concealed reinforcement and blocking where installed to gypsum board partition assemblies.
- G. Cabinets: Fasten cabinets to service space framing and/or wall substrates, with fasteners spaced not more than 16 inches on center. Bolt adjacent cabinets together with joints flush, tight, and uniform.
  - 1. Where base cabinets are installed away from walls or service space framing, anchor to floor at toe space at not more than 24 inches on center, and at sides of cabinets with not less than two fasteners per side.
- H. Install hardware uniformly and precisely.

- I. Countertops: Install countertops intended and furnished for field installation in one true plane, with ends abutting at hairline joints, and no raised edges.
- J. Replace units that are damaged, including those that have damaged finishes.

**3.04 ADJUSTING**

- A. Adjust operating parts, including doors, drawers, hardware, and fixtures to function smoothly.

**3.05 CLEANING**

- A. Clean casework and other installed surfaces thoroughly.

**3.06 PROTECTION**

- A. Do not permit finished casework to be exposed to continued construction activity.
- B. Protect casework and countertops from ongoing construction activities. Prevent workmen from standing on, or storing tools and materials on casework or countertops.
- C. Repair damage, including to finishes, that occurs prior to Date of Substantial Completion, using methods prescribed by manufacturer; replace units that cannot be repaired to like-new condition.

**END OF SECTION 123583**

**SECTION 233113 - METAL DUCTS (\*AD-01)**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 PERFORMANCE REQUIREMENTS

- A. Seal all ducts to seal class A as defined in SMACNA's HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005:
  - 1. Seal all longitudinal joints.
  - 2. Seal all transverse joints.
  - 3. Seal all penetrations.
- B. Seal Class: A
- C. Duct Construction: Duct construction, including sheet metal thicknesses, seam and joint construction, reinforcements, and hangers and supports, shall comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005" and performance requirements and design criteria indicated in "Duct Schedule" Article.
- D. Liner Airstream Surfaces: Liner surfaces in contact with the airstream shall comply with ASHRAE 62.1-2013, paragraph 5.5.
- E. Cleanliness: All factory fabricated duct shall be cleaned with a non-toxic, biodegradable cleaner/degreaser and shall be shrink wrapped prior to shipment.

1.3 ABBREVIATIONS

- A. BAS Building Automation System
- B. NRTL Nationally Recognized Testing Laboratory
- C. SMACNA Sheet Metal and Air Conditioning Contractors' National Association
- D. WC Water Column

1.4 DEFINITIONS:

- A. Duct System: For the purposes of this section "duct system" shall mean all metal supply, return, and exhaust duct and fittings between the air moving device and the space.
- B. Low Pressure: Plus two (2.0) inches WC to minus one (1.0) inches WC
- C. Medium Pressure: More than two (2.0) inches WC to plus ten (10.0) inches WC or more than minus one (1.0) inch to minus ten (10.0) inches WC
- D. High Pressure: More than plus or minus ten (10.0) inches WC.

## 1.5 SUBMITTALS

- A. Product Data / Documentation: For each of the following:
  - 1. Sheet metal thicknesses.
  - 2. Liners and adhesives.
  - 3. Pre-manufactured ductwork.
  - 4. Sealants and gaskets.
  - 5. VOC content for adhesives and sealants.
  
- B. CAD-generated Shop Drawings:
  - 1. Show fabrication and installation details for metal ducts.
  - 2. 1/4" = 1'-0" scale minimum including duct layout indicating sizes and pressure classes for the following areas:
    - a. Areas indicated on the drawings at 1/4" = 1'-0" scale.
    - b. Areas where sections are cut.
    - c. Auditoriums.
    - d. Gymnasiums.
    - e. Commercial kitchens.
    - f. Finished spaces with exposed ductwork.
      - 1) Exceptions:
        - a) Janitors closets
        - b) Storage Rooms
        - c) Receiving Areas
      - 2) Include:
        - a) Plans, elevations and sections.
        - b) Elevations of top and bottom of ducts.
        - c) Dimensions of main duct runs from building grid lines.
  - 3. 3/4" = 1'-0" scale minimum for the following:
    - a. Hangers and supports, including methods for duct and building attachment, vibration isolation.
    - b. Duct accessories, including access doors and panels.
    - c. Equipment installation based on approved equipment submittals.
    - d. Penetrations through fire-rated and other partitions.
    - e. Fittings.
    - f. Components.
  
- C. Submittals during construction:
  - 1. Duct-Cleaning Test Report: Documentation of work performed for compliance with ASHRAE 62.1-2013, Section 7.2.4 - "Ventilation System Start-Up."

## 1.6 QUALITY ASSURANCE

- A. Provide work in compliance with applicable Building Code requirements.
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
- C. AWS D1.1/D1.1M, "Structural Welding Code - Steel," for hangers and supports.



- D. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum," for aluminum supports.
- E. AWS D9.1M/D9.1, "Sheet Metal Welding Code," for duct joint and seam welding.
- F. ASHRAE Compliance: Comply with applicable requirements in ASHRAE 62.1-2013, Section 5 - "Systems and Equipment" and Section 7 - "Construction and System Start-Up."
- G. ASHRAE/IESNA Compliance: Comply with applicable requirements in ASHRAE/IESNA 90.1-2013, Section 6.4.4 - "HVAC System Construction and Insulation."
- H. Mockups (Contractor's option in lieu of 3"=1'-0" details):
  - 1. Before installing duct systems, build mockups. Build mockups to comply with the following requirements, using materials indicated for the completed Work:
  - 2. Three transverse joints.
  - 3. One Reinforced section with 3 reinforcements.
  - 4. One of each type; attachments to other work.
  - 5. Two typical flexible duct or flexible-connector connections.
  - 6. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 COMMERCIAL KITCHEN GREASE DUCTS

- A. Provide factory-built grease duct or field-built grease duct.
- B. Factory-Built Grease Ducts:
  - 1. Manufacturers:
    - a. Hart & Cooley, Inc. (Commercial Products Group)
    - b. Heat-Fab Inc.
    - c. Metal-Fab, Inc.
    - d. Schebler Co. (The).
    - e. Selkirk Inc.; Selkirk Metalbestos and Air Mate.
    - f. Van-Packer Co.
  - 2. General: Double-wall, factory-fabricated and -insulated grease duct conforming to the requirements of UL 1978.
    - a. Provide hood and fan transitions, pipe supports, guides, fittings, cleanout ports, ports for the introduction of fire suppression and wash-down nozzles, expansion joints, and thimbles for penetration of non-fire rated building members as required to meet applicable building code requirements.
    - b. Provide all components of the grease duct system.
  - 3. Listings:
    - a. Listed and labeled UL-1978 for venting air and grease vapors from commercial cooking operations.

4. Rating:
  - a. Continuous operation at 500°F.
  - b. Intermittent operation (30 minutes) at 2,000°F.
5. Penetration of rated walls and partitions: Listed to penetrate walls and partitions rated for up to two (2) hours. Fire-stop penetrations in accordance with the manufacturer's instructions. Metal-Fab Model PICPPK fire stop kit or approved equivalent.
6. Listed Clearance to combustibles: 0"
7. Materials:
  - a. Inner wall: 0.035" thick type 304 or 316 stainless steel.
  - b. Outer wall: 0.025" thick aluminized steel.
    - 1) Exception: Exposed portions of duct shall be type 304 or type 316 stainless steel finished to match exposed surfaces of grease hood.
  - c. Insulation: 4" high temperature ceramic insulation.
  - d. Mechanical Joints: Integral flanges on adjoining sections of pipe held together with a stainless steel flange band.
  - e. Sealant: Sealed with manufacturer's recommended sealant. Metal-Fab P080 or equivalent.
  - f. Supports and Guides: Anchor with minimum 5/8" diameter FM-Stainless Fasteners, FIX Epoxy Anchoring System or equivalent approved by Local Authority Having Jurisdiction.

C. Field-Built Grease Ducts:

1. General: Grease ducts severing Type I hoods shall be constructed of single wall, 16-gauge black steel or 18-gauge stainless steel.
2. Joints: Joints, seams, and penetrations of grease ducts shall be made with a continuous, liquid-tight, weld or braze made on the external surface of the duct system.
  - a. Joint Types: Duct joints shall be butt joints, welded flange joints with a maximum flange depth of ½ inch or overlapping duct joints installed to prevent accumulation of grease or interference with gravity drainage. The difference in cross-sectional dimensions of overlapping duct sections shall not exceed ¼ inch. The length of overlap shall not exceed 2 inches.
  - b. Duct-to-hood joints shall be made with continuous internal or external liquid-tight welded or brazed joints. Joints shall be smooth, accessible for inspection, and shall not trap grease.
  - c. Duct-to-fan connection shall be flanged and gasketed at the base of the fan for vertical discharge fans; flanged, gasketed, and bolted to the inlet of the fan for side-inlet utility fans; and flanged, gasketed, and bolted to the inlet and outlet of the fan for inline fans. Gasket and sealing materials shall be rated for continuous duty at a temperature of not less than 1500°F.
3. Grease duct bracing and supports shall be noncombustible securely attached to the structure. Bolts, screws, rivets and other fasteners shall not penetrate duct walls.

4. Grease ducts shall be constructed and installed so that grease cannot collect in any portion of the duct system. The duct shall slope toward the hood or an approved reservoir in accordance with the applicable mechanical code.
5. Grease duct cleanouts and openings shall comply with the requirements in the applicable mechanical code.

## 2.2 SINGLE-WALL RECTANGULAR DUCTS AND FITTINGS

- A. General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005" based on indicated static-pressure class unless otherwise indicated.
- B. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 2-1, "Transverse (Girth) Joints," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- C. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 2-2, "Rectangular Duct/Longitudinal Seams" for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- D. Elbows, Transitions, Offsets, Branch Connections, and Other Duct Construction: Select types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Chapter 4, "Fittings and Other Construction," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."

## 2.3 DOUBLE-WALL RECTANGULAR DUCTS AND FITTINGS (PERFORATED LINER)

- A. Manufacturers:
  1. McGill AirFlow LLC.
  2. MKT Metal Manufacturing
  3. Sheet Metal Connectors, Inc.
- B. Rectangular Ducts: Fabricate ducts with indicated dimensions for the inner duct.
- C. Outer Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005" based on indicated static-pressure class unless otherwise indicated.
- D. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 2-1, "Transverse (Girth) Joints," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- E. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 2-2, "Rectangular

Duct/Longitudinal Seams" for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."

- F. Interstitial Insulation: Fibrous-glass liner complying with ASTM C 1071, NFPA 90A, or NFPA 90B; and with NAIMA AH124, "Fibrous Glass Duct Liner Standard."
  - 1. Install spacers that position the inner duct at uniform distance from outer duct without compressing insulation.
  - 2. Coat insulation with antimicrobial coating.
  - 3. Cover insulation with polyester or Mylar film complying with UL 181, Class 1.
- G. Inner Duct: Minimum 22-gauge perforated galvanized sheet steel having 3/32-inch- diameter perforations, with overall open area of 23 percent.
- H. Formed-on Transverse Joints (Flanges): Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 1-4, "Traverse (Girth) Joints," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- I. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 1-5, "Longitudinal Seams - Rectangular Ducts," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."

#### 2.4 LOW PRESSURE SINGLE-WALL ROUND AND FLAT-OVAL DUCTS AND FITTINGS – CONCEALED

- A. General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Chapter 3, "Round, Oval, and Flexible Duct," based on specified static-pressure class unless otherwise indicated.
- B. Snap-Lock Round Pipe
  - 1. Meet SMACNA Class 3 Leakage standards and SMACNA Seal Class A with external, mastic duct sealant. Provide ASTM A653 galvanized steel, 26 gauge, G-60 coating. Product shall meet pressure rating of -1" wg to +2" wg.
  - 2. Available Manufacturers:
    - a. GreenSeam Industries (GreenSeam Plus)
- C. Manufacturers:
  - 1. Eastern Sheet Metal.
  - 2. Hamlin Sheet Metal.
  - 3. Linx Industries - Lindab.
  - 4. McGill AirFlow LLC.
  - 5. MKT Metal Manufacturing
  - 6. Semco, Inc.
  - 7. Sheet Metal Connectors, Inc.
  - 8. Spiral Manufacturing Co., Inc.
- D. Flat-Oval Ducts: Dimensions are the inside duct width (major dimension) and inside diameter of the round sides connecting the flat portions of the duct (minor dimension) of the inner duct.

- E. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-1, "Round Duct Transverse Joints"
  - 1. Transverse Joints in Ducts Equal to or Larger Than 48" in Diameter or Flat Oval with a Major Dimension Greater than 48": Flanged.
  - 2. Gasketed, EPDM, self-sealing Joints such as Eastern Tight or Spiro Safe may be used for ducts smaller than 48" in diameter or Flat Oval with a Major Dimension Less than 48".
  - 3. Flanges may be substituted in ducts smaller than 48" in diameter or Flat Oval with a Major Dimension Greater than 48".
- F. Duct support intervals, and other provisions: In accordance with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- G. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-2, "Seams - Round Duct and Fittings," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- H. Tees and Laterals: Select types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-5, "90° Tees and Laterals," and Figure 3-6, "Conical Tees," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005." Adjustable elbows are not permitted.
- I. All round duct shall not be less than 26-gauge.

## 2.5 MEDIUM PRESSURE SINGLE-WALL ROUND AND FLAT OVAL DUCTS AND FITTINGS –CONCEALED

- A. General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Chapter 3, "Round, Oval, and Flexible Duct," based on indicated static-pressure class unless otherwise indicated.
- B. Manufacturers:
  - 1. Eastern Sheet Metal.
  - 2. Hamlin Sheet Metal.
  - 3. Linx Industries - Lindab.
  - 4. McGill AirFlow LLC.
  - 5. MKT Metal Manufacturing
  - 6. Semco, Inc.
  - 7. Sheet Metal Connectors, Inc.
  - 8. Spiral Manufacturing Co., Inc.
- C. Flat-Oval Ducts: Dimensions are the inside duct width (major dimension) and inside diameter of the round sides connecting the flat portions of the duct (minor dimension) of the inner duct.
- D. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-1, "Round Duct Transverse Joints"

1. Transverse Joints in Ducts Equal to or Larger Than 48" in Diameter: Flanged.
  2. Gasketed, EPDM, self-sealing Joints such as Eastern Tight or Spiro Safe may be used for ducts smaller than 48" in diameter.
  3. Flanges may be substituted in ducts smaller than 48" in diameter.
- E. Duct support intervals, and other provisions: In accordance with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- F. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-1, "Seams - Round Duct and Fittings," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- G. Tees and Laterals: Select types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-5, "90° Tees and Laterals," and Figure 3-6, "Conical Tees," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005." Adjustable elbows are not permitted.
- H. All seam types in Figure 3-2 are acceptable where approved by SMACNA.
- I. All round duct shall not be less than 26-gauge.
- 2.6 LOW PRESSURE SINGLE-WALL ROUND AND FLAT OVAL DUCTS AND FITTINGS - EXPOSED
- A. General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Chapter 3, "Round, Oval, and Flexible Duct," "FIGURE 3-2 ROUND DUCT LONGITUDINAL SEAMS" "SPIRAL SEAM RL-1" to plus-or-minus 10" WC unless otherwise indicated.
- B. Manufacturers:
1. Eastern Sheet Metal.
  2. Hamlin Sheet Metal.
  3. Linx Industries - Lindab.
  4. McGill AirFlow LLC.
  5. MKT Metal Manufacturing
  6. Semco, Inc.
  7. Sheet Metal Connectors, Inc.
  8. Spiral Manufacturing Co., Inc.
- C. Flat-Oval Ducts: Dimensions are the inside duct width (major dimension) and inside diameter of the round sides connecting the flat portions of the duct (minor dimension) of the inner duct.
- D. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-1, "Round Duct Transverse Joints"
- E. Static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005." And the following:

1. Transverse Joints in Ducts Equal to or Larger Than 48" in Diameter or Flat Oval with a Major Dimension Equal to or Larger Than 48": Flanged.
  2. Gasketed, EPDM, self-sealing Joints such as Eastern Tight or Spiro Safe may be used for ducts smaller than 48" in diameter.
  3. Flanges may be substituted in ducts smaller than 48" in diameter.
- F. Longitudinal Seams: Duct shall be spiral according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-2, "Round Duct Longitudinal Seams"
- G. Tees and Laterals: Tees and laterals shall be created with fittings. Fabricate fittings according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005." Adjustable elbows are not permitted.
- H. Static-pressure class: Applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- I. Longitudinal seams shall be spiral type.
- J. All round duct shall not be less than 26-gauge.
- 2.7 MEDIUM PRESSURE SINGLE-WALL ROUND AND FLAT OVAL DUCTS AND FITTINGS -EXPOSED
- A. General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Chapter 3, "Round, Oval, and Flexible Duct," "FIGURE 3-2 ROUND DUCT LONGITUDINAL SEAMS" "SPIRAL SEAM RL-1" to plus-or-minus 10" WC unless otherwise indicated.
- B. Manufacturers:
1. Eastern Sheet Metal.
  2. Hamlin Sheet Metal.
  3. Linx Industries - Lindab.
  4. McGill AirFlow LLC.
  5. MKT Metal Manufacturing
  6. Semco, Inc.
  7. Sheet Metal Connectors, Inc.
  8. Spiral Manufacturing Co., Inc.
- C. Flat-Oval Ducts: Dimensions are the inside duct width (major dimension) and inside diameter of the round sides connecting the flat portions of the duct (minor dimension) of the inner duct.
- D. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-1, "Round Duct Transverse Joints"
- E. Static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005." And the following:
1. Transverse Joints in Ducts Equal to or Larger Than 48" in Diameter or Flat Oval with a Major Dimension Equal to or Larger Than 48": Flanged.



2. Gasketed, EPDM, self-sealing Joints such as Eastern Tight or Spiro Safe may be used for ducts smaller than 48" in diameter.
  3. Flanges may be substituted in ducts smaller than 48" in diameter.
- F. Longitudinal Seams: Duct shall be spiral according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-2, "Round Duct Longitudinal Seams"
- G. Tees and Laterals: Tees and laterals shall be created with fittings. Fabricate fittings according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005." Adjustable elbows are not permitted.
- H. Static-pressure class: Applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- I. Longitudinal seams shall be spiral type.
- J. All round duct shall not be less than 26-gauge.
- 2.8 DOUBLE-WALL ROUND AND FLAT-OVAL DUCTS AND FITTINGS (PERFORATED LINER)
- A. Manufacturers:
1. Eastern Sheet Metal.
  2. Hamlin Sheet Metal.
  3. Linx Industries - Lindab.
  4. McGill AirFlow LLC.
  5. MKT Metal Manufacturing
  6. Semco, Inc.
  7. Sheet Metal Connectors, Inc.
  8. Spiral Manufacturing Co., Inc.
- B. Flat-Oval Ducts: Indicated dimensions are the inside duct width (major dimension) and inside diameter of the round sides connecting the flat portions of the duct (minor dimension) of the inner duct.
- C. Outer Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Chapter 3, "Round, Oval, and Flexible Duct," based on static-pressure class unless otherwise indicated.
- D. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-2, "Transverse Joints - Round Duct," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
1. Transverse Joints in Ducts Equal to or Larger Than 48" in Diameter or Flat Oval with a Major Dimension Equal to or Larger Than 48": Flanged.
  2. Gasketed, EPDM, self-sealing Joints such as Eastern Tight or Spiro Safe may be used for ducts smaller than 48" in diameter.
  3. Flanges may be substituted in ducts smaller than 48" in diameter.



- E. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-2, "Seams - Round Duct and Fittings," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005, Third Edition 2005."
- F. Tees and Laterals: Select types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-5, "90° Tees and Laterals," and Figure 3-6, "Conical Tees," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005."
- G. Inner Duct: Minimum 24-gauge perforated galvanized sheet metal steel having 3/32-inch diameter perforations with overall open area of 23 percent.
- H. Interstitial Insulation: Fibrous-glass liner complying with ASTM C 1071, NFPA 90A, or NFPA 90B; and with NAIMA AH124, "Fibrous Glass Duct Liner Standard."
  - 1. Install spacers that position the inner duct at uniform distance from outer duct without compressing insulation.
  - 2. Coat insulation with antimicrobial coating.
  - 3. Cover insulation with polyester or Mylar film complying with UL 181, Class 1.
- I. All round duct shall not be less than 26-gauge.

## 2.9 SHEET METAL MATERIALS

- A. General Material Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005" for acceptable materials, material thicknesses, and duct construction methods unless otherwise indicated. Sheet metal materials shall be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections.
- B. Galvanized Sheet Steel: Comply with ASTM A 653/A 653M.
  - 1. Galvanized Coating Designation: G90.
  - 2. Finishes for Surfaces Exposed to View: Mill phosphatized.
- C. Carbon-Steel Sheets: Comply with ASTM A 1008/A 1008M.
- D. Stainless-Steel Sheets: Comply with ASTM A 480/A 480M, Type 316, cold rolled, annealed, sheet. Exposed surface finish shall be No. 4.
- E. Aluminum Sheets: Comply with ASTM B 209 Alloy 3003, H14 temper; with mill finish for concealed ducts, and standard, one-side bright finish for duct surfaces exposed to view.
- F. Reinforcement Shapes and Plates: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.
- G. Where black- and galvanized-steel shapes and plates are used to reinforce aluminum ducts, isolate the different metals with butyl rubber, neoprene, or EPDM gasket materials.
- H. Tie Rods: Galvanized steel, 1/4-inch minimum diameter for lengths 36 inches or less; 3/8-inch minimum diameter for lengths longer than 36 inches.

2.10 DUCT LINER

- A. For double wall duct: Not required. All other duct: Provide where indicated.
- B. Flexible Elastomeric Duct Liner: Preformed, cellular, closed-cell, sheet materials complying with ASTM C 534, Type II, Grade 1; and with NFPA 90A or NFPA 90B. Foam shall contain or be coated with EPA-approved or EPA-registered antimicrobial additive or paint.
  - 1. Manufacturers:
    - a. Aeroflex USA, Inc.
    - b. Armacell LLC.
    - c. K-Flex USA.
  - 2. Maximum Thermal Conductivity: 0.25 Btu x in./h x sq. ft. x deg F at 75 deg F mean temperature when tested according to ASTM C 518.
  - 3. Surface-Burning Characteristics: Maximum flame-spread index of 25 and maximum smoke-developed index of 50 when tested according to UL 723 or ASTM E84; certified by an NRTL.
  - 4. Liner Adhesive: As recommended by insulation manufacturer and complying with NFPA 90A or NFPA 90B.
- C. Insulation Pins and Washers:
  - 1. Cupped-Head, Capacitor-Discharge-Weld Pins: Copper- or zinc-coated steel pin, fully annealed for capacitor-discharge welding, 0.106-inch- diameter shank, length to suit depth of insulation indicated with integral 1-1/2-inch galvanized carbon-steel washer.
  - 2. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch-thick galvanized steel; with beveled edge sized as required to hold insulation securely in place but not less than 1-1/2 inches in diameter.
- D. Shop Application of Duct Liner: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 7-11, "Flexible Duct Liner Installation."
  - 1. Adhere a single layer of indicated thickness of duct liner with at least 90 percent adhesive coverage at liner contact surface area. Attaining indicated thickness with multiple layers of duct liner is prohibited.
  - 2. Apply adhesive to transverse edges of liner facing upstream that do not receive metal nosing.
  - 3. Butt transverse joints without gaps, and coat joint with adhesive.
  - 4. Fold and compress liner in corners of rectangular ducts or cut and fit to ensure butted-edge overlapping.
  - 5. Do not apply liner in rectangular ducts with longitudinal joints, except at corners of ducts, unless duct size and dimensions of standard liner make longitudinal joints necessary.
  - 6. Apply adhesive coating on longitudinal seams in ducts with air velocity of 2500 fpm.
  - 7. Secure liner with mechanical fasteners 4 inches from corners and at intervals not exceeding 12 inches transversely; at 3 inches from transverse joints and at intervals not exceeding 18 inches longitudinally.
  - 8. Secure transversely oriented liner edges facing the airstream with metal nosings that have either channel or "Z" profiles or are integrally formed from duct wall. Fabricate edge facings at the following locations:

- a. Fan discharges.
  - b. Intervals of lined duct preceding unlined duct.
  - c. Upstream edges of transverse joints in ducts where air velocities are higher than 2500 fpm or where indicated.
- E. Terminate inner ducts with buildouts attached to fire-damper sleeves, dampers, turning vane assemblies, or other devices. Fabricated buildouts (metal hat sections) or other buildout means are optional; when used, secure buildouts to duct walls with bolts, screws, rivets, or welds.

## 2.11 SEALANT AND GASKETS

- A. General Sealant and Gasket Requirements: Surface-burning characteristics for sealants and gaskets shall be a maximum flame-spread index of 25 and a maximum smoke-developed index of 50 when tested according to UL 723.
- 1. Materials: Certified by a NRTL.
- B. Tape sealing systems are not permitted.
- C. Water-Based Joint and Seam Sealant:
- 1. Application Method: Brush on.
  - 2. Solids Content: Minimum 65 percent.
  - 3. Shore A Hardness: Minimum 20.
  - 4. Water resistant.
  - 5. Mold and mildew resistant.
  - 6. VOC: Maximum 75 g/L (less water).
  - 7. Maximum Static-Pressure Class: 10-inch wg, positive and negative.
  - 8. Service: Indoor or outdoor.
  - 9. Substrate: Compatible with galvanized sheet steel (both PVC coated and bare), stainless steel, or aluminum sheets.
  - 10. Indoor applications: Sealant with VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
  - 11. Maximum Static-Pressure Class: 10-inch wg, positive or negative.
  - 12. Service: Indoor or outdoor.
  - 13. Substrate: Compatible with galvanized sheet steel, stainless steel, or aluminum sheets.
- D. Flanged Joint Sealant: Comply with ASTM C 920.
- 1. General: Single-component, acid-curing, silicone, elastomeric.
  - 2. Type: S.
  - 3. Grade: NS.
  - 4. Class: 25.
  - 5. Use: O.
  - 6. Indoor applications: Sealant with VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- E. Flange Gaskets: Butyl rubber, neoprene, or EPDM polymer with polyisobutylene plasticizer.

## 2.12 HANGERS AND SUPPORTS

- A. Hanger Rods: Galvanized, all-thread.

- B. Strap and Rod Sizes: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Table 5-1, "Rectangular Duct Hangers Minimum Size," and Table 5-2, "Minimum Hanger Sizes for Round Duct."
- C. Steel Cables for Galvanized-Steel Ducts: Galvanized steel complying with ASTM A 603.
- D. Steel Cables for Stainless-Steel Ducts: Stainless steel complying with ASTM A 492.
- E. Steel Cable End Connections: Cadmium-plated steel assemblies with brackets, swivel, and bolts designed for duct hanger service; with an automatic-locking and clamping device.
- F. Duct Attachments: Sheet metal screws, blind rivets, or self-tapping metal screws; compatible with duct materials.
- G. Trapeze and Riser Supports:
  - 1. Supports for Galvanized-Steel Ducts: Galvanized-steel shapes and plates.
  - 2. Supports for Stainless-Steel Ducts: Stainless-steel shapes and plates.
  - 3. Supports for Aluminum Ducts: Aluminum or galvanized steel coated with zinc chromate.

#### 2.13 RESIDENTIAL DRYER VENTING ACCESSORIES

- A. Dryer Vent Wall Box: In-wall receptacle to house dryer transition duct.
  - 1. In-O-Vate Technologies, Inc. – Dryerbox
  - 2. American Aldes – Dryer vent box
  - 3. Lambro Industries, Inc. – Dryer wall box
  - 4. Construction Solutions, LLC. – Dryer vent box.
  - 5. Approved equal.
- B. Dryer Transition Duct: Provide UL 2158A-listed product.
  - 1. In-O-Vate Technologies, Inc.
  - 2. QuietFlex Manufacturing Co, LP
  - 3. Lambro Industries, Inc.
  - 4. Flexible Technologies, Inc. – Thermaflex
  - 5. Approved equal.
- C. Dryer Vent Long Radius Elbows:
  - 1. In-O-Vate Technologies, Inc. – Dryer-Ell
  - 2. Approved equal for long radius elbows for dryer vent.
- D. Roof Vent: Galvanized steel body with backdraft damper.
  - 1. In-O-Vate Technologies, Inc. – Dryer Jack
  - 2. American Aldes - Dryer Roof Cap
  - 3. Approved equal for dryer vent terminations through roofs.

## PART 3 - EXECUTION

### 3.1 DUCT INSTALLATION

- A. Drawing plans, schematics, and diagrams indicate general location and arrangement of duct system. Duct locations, configurations, and arrangements were used to size ducts and calculate friction loss for air-handling equipment sizing and for other design considerations. Install duct systems as indicated unless deviations to layout are approved by Architect in writing.
- B. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005" unless otherwise indicated.
- C. Install ducts with fewest possible joints.
- D. Install factory-fabricated fittings for changes in direction, size, and shape and for branch connections.
- E. Unless otherwise indicated, install ducts vertically or horizontally, and parallel or perpendicular to building lines.
- F. Install ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building. Maintain clearances for equipment maintenance.
- G. Install ducts with a clearance of 1 inch, plus allowance for installation of insulation at specified thickness.
- H. Do not route ducts through transformer vaults, electrical equipment rooms, elevator equipment rooms or electrical enclosures.
- I. Where ducts pass through non-fire-rated interior partitions and exterior walls and are exposed to view, cover the opening between the partition and duct or duct insulation with sheet metal flanges of same metal thickness as the duct. Overlap openings on four sides by at least 1-1/2 inches.
- J. Provide fire dampers where ducts pass through fire-rated interior partitions, fire-rated exterior walls, fire-rated floor assemblies, or fire-rated shaft enclosures.
- K. Protect duct interiors from moisture, construction debris, dust, and other foreign materials. Comply with SMACNA's "Duct Cleanliness for New Construction Guidelines."

### 3.2 PROTECTION OF WALL AND FLOOR PENETRATIONS OF NON-RATED ASSEMBLIES

- A. Where ducts penetrate non-fire-resistance-rated wall or floor assemblies, protect the penetration with one of the following:
  - 1. For a duct that connects not more than two stories vertically, protect the annular space around the penetrating duct with an approved, noncombustible material that resists the free passage of flame and the products of combustion.
  - 2. For a duct that connects not more than three stories, protect the annular space around the penetrating duct with an approved, noncombustible material that resists the free passage of flame and the products of combustion and a fire damper at each floor line.
  - 3. For ducts that penetrate a smoke partition without a smoke damper, protect the annular space around the penetrating duct with an approved, non-combustible materials that resists the free passage of flame and the products of combustion.

4. For ducts that penetrate a non-rated wall, protect the annular space around the penetrating duct with an approved, non-combustible materials that resists the free passage of flame and the products of combustion.

### 3.3 INSTALLATION OF EXPOSED DUCTWORK

- A. Protect ducts exposed in finished spaces from being dented, scratched, or damaged.
- B. Trim duct sealants flush with metal. Create a smooth and uniform exposed bead. Do not use two-part tape sealing system.
- C. Grind welds to provide smooth surface free of burrs, sharp edges, and weld splatter. When welding stainless steel with a No. 3 or 4 finish, grind the welds flush, polish the exposed welds, and treat the welds to remove discoloration caused by welding. Do not weld or grind lined ductwork.
- D. Maintain consistency, symmetry, and uniformity in the arrangement and fabrication of duct, fittings, hangers, supports, accessories, and air outlets.
- E. Repair or replace damaged sections and finished work that does not comply with these requirements.

### 3.4 INSTALLATION OF COMMERCIAL KITCHEN HOOD EXHAUST DUCT

- A. Prior to the use or concealment of any portion of a grease duct system, a leakage test shall be performed. Ducts shall be considered concealed where installed in shafts or covered by coatings or wraps that prevent the ductwork from being visually inspected on all sides.
  1. The Contractor shall provide the necessary equipment and perform a grease duct leakage test. A light test shall be performed to determine that all welded and brazed joints are liquid tight. A light test shall be performed by passing a lamp having a power rating of not less than 100 watts through the entire section of ductwork to be tested.
  2. The lamp shall be open to emit light equally in all directions perpendicular to the duct walls. A test shall be performed for the entire duct system, including the hood-to-duct connection.
  3. The duct work shall be permitted to be tested in sections, provided every joint is tested. For listed, factory-built grease ducts, this test shall be limited to duct joints assembled in the field and shall exclude factory welds.
- B. Grease ducts shall be constructed and installed so that grease cannot collect in any portion thereof, and the system shall slope not less than one-fourth unit vertical in 12 units horizontal toward the hood or toward a grease reservoir designed and installed in accordance with the mechanical code. Where horizontal ducts exceed 75 feet in length, the slope shall be not less than one unit vertical in 12 units horizontal.
- C. Duct Cleanouts and Openings: Sections of grease ducts that are inaccessible from the hood or discharge openings shall be provided with cleanout openings.
  1. Cleanouts and openings shall be equipped with tight-fitting doors constructed of steel having a thickness not less than that required for the duct.
  2. Cleanout doors shall be installed liquid tight.
  3. Door assemblies including any frames and gaskets shall be approved for the application and shall not have fasteners that penetrate the duct.

4. Gasket and sealing materials shall be rated for not less than 1500°F.
  5. Listed door assemblies shall be installed in accordance with the manufacturer's instructions.
- D. Horizontal Cleanouts: Cleanouts serving horizontal sections of grease ducts shall:
1. Be spaced not more than 20 feet apart.
  2. Be located not more than 10 feet from changes in direction that are greater than 45 degrees.
  3. Not be closer than 1 inch from the edges of the duct.
  4. Not be located on the bottom of the duct.
  5. Have opening dimensions of not less than 12 inches by 12 inches. Where such dimensions preclude installation, the opening shall be not less than 12 inches on one side and shall be large enough to provide access for cleaning and maintenance.
  6. Shall be located at grease reservoirs.
- E. Do not penetrate fire-rated assemblies except as allowed by applicable building codes and authorities having jurisdiction.
- F. Install factory-built grease duct in accordance with manufacturer's instructions.
- G. Duct Termination:
1. Termination above the roof: Exhaust outlets that terminate above the roof shall have the discharge opening located not less than 40 inches above the roof surface.
  2. Termination through an exterior wall: Exhaust outlets shall be permitted to terminate through exterior walls where the smoke, grease, gases, vapors and odors in the discharge from such terminations do not create a public nuisance or a fire hazard. Such terminations shall not be located where protected openings are required by the building code. Other exterior openings shall not be located within 3 feet of such terminations.
  3. Termination location: Exhaust outlets shall be located not less than 10 feet horizontally from parts of the same or contiguous buildings, adjacent buildings and adjacent property lines and shall be located not less than 10 feet above the adjoining grade level. Exhaust outlets shall be located not less than 10 feet horizontally from or not less than 3 feet above air intake openings into any building.

### 3.5 DUCT SEALING

- A. Seal all ducts to seal class A as defined in SMACNA's HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005:
1. Seal all longitudinal joints.
  2. Seal all transverse joints.
  3. Seal all penetrations.

### 3.6 HANGER AND SUPPORT INSTALLATION

- A. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Chapter 5, "Hangers and Supports."
- B. Building Attachments: Unless indicated otherwise, provide concrete inserts, powder-actuated fasteners, or structural-steel fasteners appropriate for construction materials to which hangers are being attached.



1. Where practical, install concrete inserts before placing concrete.
  2. Do not use powder-actuated concrete fasteners for lightweight-aggregate concrete or for slabs less than 4 inches thick.
  3. **[Do not use powder-actuated concrete fasteners for seismic restraints.]**
- C. Hanger Spacing: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Table 5-1, "Rectangular Duct Hangers Minimum Size," and Table 5-2, "Minimum Hanger Sizes for Round Duct," for maximum hanger spacing; install hangers and supports within 24 inches of each elbow and within 48 inches of each branch intersection.
- D. Hangers Exposed to View: Threaded rod and channel supports.
- E. Support vertical ducts with channel secured to the sides of the duct with welds, bolts, sheet metal screws, or blind rivets; support at each floor or at a maximum interval of 18 feet.
- F. Install upper attachments to structures. Select and size upper attachments with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.

### 3.7 CONNECTIONS

- A. Make connections to equipment with flexible connectors.
- B. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005" for branch, outlet, inlet, and terminal unit connections unless otherwise indicated.

### 3.8 PAINTING

- A. Paint interior of metal ducts that are visible through registers and grilles and that do not have duct liner. Apply two coats of flat black, latex paint over a compatible galvanized-steel primer.

### 3.9 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Visually inspect, for proper seal application, all ductwork not tested prior to insulation application. Prepare inspection report.
- C. L
- D. Duct System Cleanliness Tests:
  1. Visually inspect duct system to ensure that no visible contaminants are present. If visible contaminants are present, proceed to sub-paragraph 2 below. If not, no further cleaning shall be required.
  2. Test sections of metal duct systems, up to one location per ten thousand (10,000) square feet of building area, or a minimum of two (2) per system, whichever is greater, chosen by the Owner's Representative, for cleanliness according to "Vacuum Test" in NADCA ACR, "Assessment, Cleaning and Restoration of HVAC Systems." Net weight of debris collected on the filter media shall not exceed 0.75 mg/100 sq. cm. Cut hole in duct and install access door at each location selected. Size shall be as indicated in Division 23 Section "Air Duct Accessories."



3. Duct system shall be considered dirty and in need of cleaning if any test location does not pass the cleanliness test. Cleaning shall be performed in accordance with this specification.

E. Prepare and submit test and inspection reports.

### 3.10 DUCT CLEANING

- A. Clean new duct systems before testing, adjusting, and balancing.
- B. Comply with SMACNA "Duct Cleanliness for New Construction Guidelines" dated 2000, for protection, cleaning, and installation methods for all ductwork. Adhere to the requirements for a duct cleanliness level of "C" (advanced level) as detailed in Section 3.11.

### 3.11 START UP

- A. Air Balance: Comply with requirements in Division 23 Section "Testing, Adjusting, and Balancing for HVAC."

### 3.12 DUCT SCHEDULE

- A. Fabricate ducts with galvanized sheet steel except as otherwise indicated and as follows:
- B. Ducts Connected to Commercial Kitchen Hoods: Comply with NFPA 96.
  1. Exposed to View: Type 304, stainless-steel sheet, No. 4 finish.
  2. Concealed: Carbon-steel sheet.
  3. Welded seams and joints.
  4. Pressure Class: Negative – match or exceed fan static pressure.
  5. Seal: Welded seams, joints, and penetrations.
  6. SMACNA Leakage Class: 3.
- C. Ducts Connected to Dishwasher Hoods:
  1. Type 304, stainless-steel sheet.
  2. Exposed to View: No. 4 finish.
  3. Concealed: No. 2D finish.
  4. Welded seams and flanged joints with watertight EPDM gaskets.
  5. Negative – match or exceed fan static pressure.
  6. Seal: Welded seams, joints, and penetrations.
  7. SMACNA Leakage Class: 3.
- D. **Exhaust** Ducts ~~Connected~~ Serving Locker Rooms, Shower Rooms, and **Athletic** Team Rooms (**refer to drawings for extent of aluminum duct**) (\*AD-01):
  1. Aluminum sheet.
  2. Exposed to View: Bright finish.
  3. Concealed: Mill finish.
- E. Double-Wall Duct Interstitial Insulation (where indicated):
  1. Supply Air Ducts: 1" thickness.
- F. Rectangular Duct Liner Thickness (where indicated):

1. Supply Air Ducts: 1-1/2" thickness and minimum R=5.0.
- G. Transfer Duct Liner (where indicated): 1" thickness.
- H. Elbow Configuration:
  1. Rectangular Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 4-2, "Rectangular Elbows."
    - a. Velocity less than 1500 fpm or lower:
      - 1) Radius Type RE 1. Centerline radius =  $3W/2$ .
      - 2) Mitered Type RE 2 with vanes complying with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 4-3, "Vanes and Vane Runners," and Figure 4-4, "Vane Support in Elbows."
      - 3) Transfer ducts indicated with mitered elbows do not require turning vanes.
    - b. Velocity 1500 fpm or Higher:
      - 1) Radius Type RE 3. Centerline radius =  $3w/2$  and three vanes.
      - 2) Mitered Type RE 2 with vanes complying with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 2-3, "Vanes and Vane Runners," and Figure 2-4, "Vane Support in Elbows."
  2. Round Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-4, "Round Duct Elbows."
    - a. Minimum centerline radius-to-diameter ratio shall be 1.5 with a maximum of 5 Elbow Segments. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Table 3-1, "Mitered Elbows." Elbows with less than a 90 degree change of direction shall have segments per Table 3-1 in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005".
    - b. Round Elbows, 12 Inches and Smaller in Diameter: Stamped, segmented, spiral or pleated. Adjustable elbows not acceptable.
    - c. Round Elbows, 14 Inches and Larger in Diameter: Standing seam, segmented, or spiral.
  3. Flat Oval Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-7, "Flat Oval Ducts" for elbows.
- I. Branch Configuration:
  1. Rectangular Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 4-6, "Branch Connections."
    - a. Rectangular Main to Rectangular Branch: 45-degree entry.
    - b. Rectangular Main to Round Branch: Conical or bell mouth. No flanged or spin-in fittings permitted.
  2. Round and Flat Oval: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible, Third Edition 2005," Figure 3-6, "Conical Tees."
    - a. Conical fitting.
    - b. Conical saddle taps.
    - c. No 90 degree taps or 90 degree saddle taps permitted.
- J. Divided Flow Branches:

1. Rectangular Duct: Comply with SMACNA's "HVAC Duct Construction Standards – Metal and Flexible, Third Edition 2005, "Figure 4-5 Divided Flow Branches."

3.13 Duct Pressure Classes:

- A. Supply ducts from air handling units to air terminals: 3 inches WC.
- B. Supply ducts from terminal units to air terminals: 2 inch WC.
- C. Return ducts: -2 inch WC.
- D. Exhaust ducts: -2 inch WC.

END OF SECTION 233113

**SECTION 238219 - FAN COIL UNITS (\*AD-01)**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. This Section includes fan-coil units and accessories.

1.3 DEFINITIONS

- A. BAS: Building automation system.

1.4 SUBMITTALS

- A. Product Data: Include rated capacities, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
  - 1. Wiring Diagrams: Power, signal, and control wiring.
- C. Field quality-control test reports.
- D. Operation and Maintenance Data: For fan-coil units to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Closeout Procedures," include the following:
  - 1. Maintenance schedules and repair part lists for motors, coils, integral controls, and filters.
- E. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

- B. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1-2013, Section 5 - "Systems and Equipment" and Section 7 - "Construction and Startup."
- C. ASHRAE/IESNA 90.1-2010 Compliance: Applicable requirements in ASHRAE/IESNA 90.1-2010, Section 6 - "Heating, Ventilating, and Air-Conditioning."

#### 1.6 COORDINATION

- A. Coordinate layout and installation of fan-coil units and suspension system components with other construction that penetrates or is supported by ceilings, including light fixtures, HVAC equipment, fire-suppression-system components, and partition assemblies.

#### 1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Fan-Coil-Unit Filters: Furnish one spare filter for each unit.
  - 2. Fan Belts: Furnish one spare fan belt for each unit installed.

### PART 2 - PRODUCTS

#### 2.1 DUCTED FAN-COIL UNITS

- A. Available Manufacturers:
  - 1. Carrier
  - 2. Daikin Applied.
  - 3. Titus.
  - 4. Trane.
  - 5. **Enviro-Tec. (\*AD-01)**
- B. Description: Factory-packaged and -tested units rated according to ARI 440, ASHRAE 33, and UL 1995.
- C. Coil Section Insulation: 1-inch thick foil-faced glass fiber complying with ASTM C 1071 and attached with adhesive complying with ASTM C 916.
  - 1. Fire-Hazard Classification: Insulation and adhesive shall have a combined maximum flame-spread index of 25 and smoke-developed index of 50 when tested according to ASTM E 84.
  - 2. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2013.
- D. Drain Pans: Stainless steel. Fabricate pans and drain connections to comply with ASHRAE 62.1-2013.

- E. Chassis: Galvanized steel where exposed to moisture, with baked-enamel finish and removable access panels.
- F. Cabinets: Steel with baked-enamel finish in manufacturer's standard paint color.
- G. Filters: None. Filtration shall occur at filter grille.
- H. Hydronic Coils: Copper tube, with mechanically bonded aluminum fins spaced no closer than 0.1 inch, rated for a minimum working pressure of 200 psig and a maximum entering-water temperature of 220 deg F. Include manual air vent and drain.
- I. Direct-Driven Fans: Double width, forward curved, centrifugal; with permanently lubricated, multispeed motor resiliently mounted in the fan inlet. Aluminum or painted-steel wheels, and painted-steel or galvanized-steel fan scrolls. EC Motors only.
- J. Opening protection: Provide covering over all openings to prevent contamination of the terminal unit during construction.
- K. Control devices and operational sequence are specified in Division 23 Sections "Building Automation System" and "Sequence of Operations."

## 2.2 CEILING RECESSED FAN-COIL UNITS

- A. Available Manufacturers:
  - 1. Carrier
  - 2. Daikin Applied.
  - 3. Titus.
  - 4. Trane.
- B. Description: Factory-packaged and -tested units rated according to ARI 440, ASHRAE 33, and UL 1995.
- C. Coil Section Insulation: 1-inch thick foil-faced glass fiber complying with ASTM C 1071 and attached with adhesive complying with ASTM C 916.
  - 1. Fire-Hazard Classification: Insulation and adhesive shall have a combined maximum flame-spread index of 25 and smoke-developed index of 50 when tested according to ASTM E 84.
  - 2. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2013.
- D. Drain Pans: Stainless steel. Fabricate pans and drain connections to comply with ASHRAE 62.1-2013.
- E. Chassis: Galvanized steel where exposed to moisture, with baked-enamel finish and removable access panels.
- F. Cabinets: Steel with baked-enamel finish in manufacturer's standard paint color.

- G. Filters: One inch thick Merv-8 Filters located in unit accessible through integral access door.
- H. Hydronic Coils: Copper tube, with mechanically bonded aluminum fins spaced no closer than 0.1 inch, rated for a minimum working pressure of 200 psig and a maximum entering-water temperature of 220 deg F. Include manual air vent and drain.
- I. Direct-Driven Fans: Double width, forward curved, centrifugal; with permanently lubricated, multispeed motor resiliently mounted in the fan inlet. Aluminum or painted-steel wheels, and painted-steel or galvanized-steel fan scrolls. EC Motors only.
- J. Opening protection: Provide covering over all openings to prevent contamination of the terminal unit during construction.
- K. Control devices and operational sequence are specified in Division 23 Sections "Building Automation System" and "Sequence of Operations."

### 2.3 DUCTED BLOWER COIL UNITS

- A. Available Manufacturers:
  - 1. Carrier
  - 2. Daikin Applied.
  - 3. Titus.
  - 4. Trane.
- B. Description: Factory-packaged and -tested units rated according to ARI 440, ASHRAE 33, and UL 1995.
- C. Coil Section Insulation: 1-inch thick foil-faced glass fiber complying with ASTM C 1071 and attached with adhesive complying with ASTM C 916.
  - 1. Fire-Hazard Classification: Insulation and adhesive shall have a combined maximum flame-spread index of 25 and smoke-developed index of 50 when tested according to ASTM E 84.
  - 2. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2013.
- D. Drain Pans: Stainless steel. Fabricate pans and drain connections to comply with ASHRAE 62.1-2013.
- E. Chassis: Galvanized steel where exposed to moisture, with baked-enamel finish and removable access panels.
- F. Cabinets: Steel with baked-enamel finish in manufacturer's standard paint color.
- G. Filters: None. Filtration shall occur at filter grille.
- H. Hydronic Coils: Copper tube, with mechanically bonded aluminum fins spaced no closer than 0.1 inch, rated for a minimum working pressure of 200 psig and a maximum entering-water temperature of 220 deg F. Include manual air vent and drain.

- I. Direct-Driven Fans: Double width, forward curved, centrifugal; with permanently lubricated, multispeed motor resiliently mounted in the fan inlet. Aluminum or painted-steel wheels, and painted-steel or galvanized-steel fan scrolls.
  - J. Opening protection: Provide covering over all openings to prevent contamination of the terminal unit during construction.
- 2.4 Control devices and operational sequence are specified in Division 23 Sections "Building Automation System" and "Sequence of Operations."

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine areas to receive fan-coil units for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine roughing-in for piping and electrical connections to verify actual locations before fan-coil-unit installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. Install units level and plumb.
- B. Install units to comply with NFPA 90A.
- C. Suspend units from structure with elastomeric hangers. Vibration isolators are specified in Division 23 Section "Vibration Controls for HVAC Piping and Equipment."
- D. Install new filters in each fan-coil unit within two weeks after Substantial Completion.

#### 3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties. Specific connection requirements are as follows:
  - 1. Install piping adjacent to machine to allow service and maintenance.
  - 2. Connect condensate drain to indirect waste.
    - a. Install condensate trap of adequate depth to seal against the pressure of fan. Install cleanouts in piping at changes of direction.



- B. Connect supply and return ducts to fan-coil units with flexible duct connectors specified in Division 23 Section "Air Duct Accessories." Comply with safety requirements in UL 1995 for duct connections.
- C. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."
- D. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

#### 3.4 FIELD QUALITY CONTROL

- A. Protective coverings over unit openings shall be maintained throughout construction. Contractor shall be responsible for re-sealing openings should the factory coverings become damaged.
- B. Perform the following field tests and inspections and prepare test reports:
  - 1. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
  - 2. Test and adjust controls and safety devices. Replace damaged and malfunctioning controls and equipment.
- C. Remove and replace malfunctioning units and retest as specified above.

#### 3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain fan-coil units. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 238219

## SECTION 274116 – INTEGRATED AUDIOVISUAL SYSTEMS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. See Appendix A for detailed equipment list, to be completed and returned in Bid Proposal Submittals. See section 1.10 for additional information.
- B. The Contractor shall review all documents for additional requirements and information that apply to the work. If conflicts between this section and/or the general requirements and general conditions occur, the more stringent shall apply.
- C. The Contractor shall deliver the complete audiovisual system, including and design-build requirements of this section and the contract drawings.
- D. The Contractor shall comply with all the requirements and terms as stipulated in the main contract. The Contractor shall also comply with the site safety requirements and site management requirements.
- E. All Category cabling, grounding, pathways, conduits, junction boxes, etc. shall comply with Division 26 and 27 specification sections.

#### 1.2 GENERAL REQUIREMENTS

- A. The Audiovisual Contractor responsible for all the work described in the contract drawings and specifications shall be referred to throughout these documents as the “Contractor.”
- B. The Contractor shall provide a complete audiovisual system including all functional and operational criteria described in the Contract Documents. All bidders must include any design limitations or constraints in their response to this specification.
- C. All exceptions to the Contract Documents must be stated within the bid submission. If no exceptions are made, the successful bidder will be bound by all requirements within the Contract Documents. By not stating any exceptions, the Contractor acknowledges a thorough examination of the Contract Documents and takes full responsibility for the complete installation's performance as specified.
- D. The project will include the installation of a video projection system, audio system, wireless microphone system, video distribution system, and other miscellaneous components.
- E. The Contractor may use the Contract Documents for verification of cable footages and routings. However, these documents are intended to be diagrammatic and may not represent field conditions. The Contractor shall be responsible for verifying actual cable footages and the final routings of all cables and/or conduits.
- F. The Contractor shall coordinate with the Electrical Contractor to verify final conduit routings.

#### 1.3 WORK INCLUDED IN THIS SECTION

- A. Middle School Gym and Dining Space
  - 1. A turn-key presentation and audio system shall be furnished and installed by the AV contractor.
  - 2. The system will serve both the Middle School Gym and the Dining space.

3. The system will be used for presentations, assemblies, background music, and sporting event announcements in the Middle School gym.
4. The system will be used for presentations, assemblies, small performances, and background music in the Dining space.
5. The system will have the capability to support simultaneous events in both spaces.

B. Video System

1. Projection systems will be provided for presentation in the Gym and Dining spaces. The projectors will be of appropriate brightness to support presentation content at typical ambient light levels. The projection screens will be the appropriate size to be comfortably viewed by the farthest viewer in each space.
2. The Gym projection system will be a front-projection system. The Dining projection system will be a rear-projection system.
3. HDMI inputs will be provided at the Gym wall, the stage lip, and at the middle of the stage wall for multi-media presentations.
4. All video wall plates will be protected and secured with lockable cover plates.

C. Audio System

1. Loudspeakers
  - a. Left and right full-range loudspeakers will be mounted on the wall on either side of the projection screen in the Gym. These speakers will typically be used to reinforce presentations at the floor seating areas.
  - b. Left and right full-range loudspeakers will be mounted on the wall above the stage opening in the Dining space. These speakers will typically be used to reinforce stage presentations and performances at the floor seating areas.
  - c. Pendant loudspeakers will be suspended from the Gym ceiling. These speakers will typically be used to provide audio coverage of the floor areas for Gym use cases.
  - d. Point source loudspeakers will be suspended from the Gym ceiling and will be used to provide audio coverage of the bleachers.
  - e. Gym ceiling loudspeakers will be grouped in zones to provide flexible coverage and configurability to support all use cases.
  - f. The loudspeakers will provide uniform audio coverage of the audience areas.
2. Audio inputs and outputs will be provided at the Gym wall, various locations around the stage perimeter, the stage lip, and at the score table floor box.
3. All audio wall plates will be protected and secured with lockable cover plates.
4. Bluetooth connectivity and a consumer audio input will be provided at the Gym wall and stage lip for background music use.
5. Wireless microphones will be provided for capture of in-room participants in the Gym and Dining space. The system will be configured to allow multiple simultaneous microphones in use at the same time.
6. Wired microphones will be provided for use at the Gym score table.
7. A portable audio mixing console will be provided for audio mixing of live performances. The console will also provide additional audio inputs and outputs to the system.

8. An RF-based assistive listening system (ALS) will be provided for hearing impaired participants and ADA compliance. Two ALS notification signs will be provided for each space to notify guests that an ALS system is available for use.

D. Control System

1. The system will be controlled by wall mount touch panels.
2. The control system will include system on/off, volume control, video input selection, audio input selection, projection system control, etc.
3. The wall mount touch panels will be protected and secured with lockable cover plates.
4. A portable touch panel will be provided for use at the Gym score table.

E. AV Rack

1. All AV head-end equipment and portable equipment will be stored in a wall mount equipment rack.
2. An uninterruptible power supply (UPS) will be provided to provide backup power to the AV system.
3. A vertical power distribution strip will be provided for power management and control.
4. Appropriate passive and active thermal management will be provided in the rack as necessary for the specified equipment.

1.4 RELATED WORK

- A. The Contractor shall be responsible for reviewing general requirements and other trade Contract Documents that affect the work described in this specification and associated Contract Documents. Including, but not limited to:
  1. Procurement and contract requirements
  2. General requirements
  3. Existing conditions
  4. Openings
  5. Electrical
  6. Telecommunications
- B. The following equipment will be provided by the telecommunications Contractor as defined by the general Contractor:
  1. Category 6A cables and terminations.
  2. Single mode fiber cables and terminations (as applicable).
  3. All telecommunications equipment or infrastructure within telecommunication spaces.
- C. The following items will be provided by the electrical Contractor or others as defined by the general Contractor:
  1. Conduit, sleeves, and pathways
  2. Junction boxes
  3. Electrical power
  4. Grounding busbar, bonding cables, hardware and terminations

1.5 CODES AND STANDARDS

- A. The Contractor shall be responsible for verifying that all equipment furnished and installed has been manufactured and fabricated in accordance with applicable codes and standards.
- B. The Contractor shall be responsible for verifying code, union, and contract requirements to ensure compliance with existing requirements.
- C. All installation procedures shall conform to the applicable codes and standards.
- D. The Contractor shall be responsible for facilitating the inspection of work as required by the Authority Having Jurisdiction (AHJ). All inspection results shall be provided to the Owner.
- E. The Contractor shall be responsible for obtaining all necessary permits for the project pertaining to the Audiovisual scope of work. This includes producing any necessary drawings or other documents as required.
- F. All work performed under the Audiovisual scope of work shall conform to the following codes and standards where applicable. When a conflict occurs, the Contractor shall follow the most stringent requirements. All requirements of the latest published edition, unless otherwise noted, shall apply.
- G. General codes and standards:
  - 1. Applicable country and local laws, regulations, ordinances, and codes
  - 2. National Electric Code (NEC)
  - 3. National Electric Safety Code (NESC)
  - 4. National Electrical Manufacturers Association (NEMA)
  - 5. Underwriters Laboratories (UL)
  - 6. Occupational Safety and Health Act (OSHA)
  - 7. Americans with Disabilities Act (ADA)
  - 8. Architectural Barriers Act (ABA)
  - 9. American National Standards Institute (ANSI)
  - 10. International Organization for Standardization (ISO)
  - 11. Telecommunications Industry Association (TIA)
  - 12. Electronics Industries Alliance (EIA)
  - 13. Electrical Testing Laboratories (ETL)
  - 14. American Society for Testing Materials (ASTM)
  - 15. International Building Code (IBC)
  - 16. National Fire Protection Association (NFPA)
    - a. Article 250 Grounding
    - b. Article 800 Communications Circuits
  - 17. Society of Motion Picture and Television Engineers (SMPTE)
- H. AVIXA standards:
  - 1. ANSI/AVIXA D401.01:2023– Standard Guide for Audiovisual Systems Design and Coordination Process
  - 2. ANSI/INFOCOMM 10:2013 – Audiovisual System Performance Verification

3. ANSI/AVIXA A102.01:2022 – Measurement and Classification of Audio Coverage Uniformity in Listener Areas
4. ANSI/AVIXA A103.01:2022 - Measurement and Classification of Spectral Balance of Sound Systems in Listener Areas
5. ANSI/AVIXA V201.01:2021 - Image System Contrast Ratio
6. ANSI/AVIXA 202.01:2016– Display Image Size for 2D Content in Audiovisual Systems
7. ANSI/AVIXA F501.01:2015 – Cable Labeling for Audiovisual Systems
8. AVIXA S601.01:2021 - Energy Management for Audiovisual Systems
9. AVIXA F502.01:2018 - Rack Building for Audiovisual Systems
10. RP-C303.01:2018 - Recommended Practices for Security in Networked AV Systems

#### 1.6 DEFINITIONS

- A. “Pender County Schools” and their designated appointees and representatives shall be referred to in this document as Owner. The respondent to this scope of work shall be referred to as Contractor.
- B. Final acceptance:
  1. Owner’s written acknowledgement of the successful completion of the scope or a portion of the scope of work.
- C. Fully functional and operational:
  1. Ready for Owner use and providing all functionality and performance characteristics as defined in the specifications and drawings.
- D. Notify in writing:
  1. Use of either paper or electronic documentation for project communication
- E. Where required, additional terms are defined within this specification. Abbreviations are defined after their first use.

#### 1.7 SCOPE OF WORK

- A. The Contractor shall provide a turn-key audiovisual system installation including, but not limited to, all cabling, loudspeakers, electronic equipment, mounting hardware and electrical components including the necessary equipment, interconnections, transducers, labor, and services required to meet the functional requirement outlined in the design documents.
- B. The Contractor shall furnish and install all Category 6A patch cords, wire, and connections to integrate Audiovisual equipment with Not-In-Contract (NIC) equipment or work by others. The Contractor shall coordinate this work with the trade responsible for equipment or work being integrated with.
- C. A single firm shall be responsible for all Audiovisual integration work.
  1. The use of Sub-contractors to the primary Contractor shall require approval by the Owner during the bidding process.
  2. The Sub-contractor shall be required to meet the same qualification requirements identified in this specification.
  3. The Sub-contractor shall be responsible for coordination with other trades, submittals, and project correspondence, and all requirements within this specification.

4. The Contractor shall be directly responsible for the work of all Sub-contractors and shall facilitate coordination among Sub-contractors and/or other trades.
- D. The Contractor will be held responsible to have examined the site and premises and satisfied themselves as to existing conditions under which they will be obligated to operate in performing their part of the work, or that, which will in any manner affect the work under this contract.
- E. The Contractor shall coordinate with other trades to ensure that all required access and clearances to equipment and services are provided and maintained.
- F. The Contractor shall coordinate with the telecommunications Contractor to ensure that all Category 6A or fiber optic cabling is installed and terminated at the appropriate locations.
- G. The Contractor shall coordinate with the Owner IT group to complete all network integration requirements. This includes but is not limited to: network switches and routers, network configuration, assignment of IP addresses, and PoE requirements.
- H. The Contractor shall be responsible for the removal and reinstallation of any ceiling tiles that may be in place during the process of the work. The Contractor is also responsible for the replacement of any damaged ceiling tiles that are removed for the work.
- I. The Contractor shall patch, repair, finish and paint any surfaces that are damaged or demolished for access during this work. Room finishes are to be returned to their initial condition.
- J. The Contractor shall be responsible for reviewing the entire project Contract Documents, and determining trades whose work will affect or be affected by the Audiovisual installation. The Contractor shall be responsible for coordinating with other trades.
- K. The Electrical Contractor shall furnish and install a dedicated conduit pathway system for all Audiovisual devices and related systems.
  1. The Contractor shall verify all conduit and penetrations, wire raceways, back boxes, and cabling connecting system components requirements throughout the project. Notify Owner of any discrepancies that may exist between Contract Documents and existing conditions.
- L. The Electrical Contractor shall furnish and install 120 VAC power as required per the Contract Documents.
  1. The Contractor shall verify AC power requirements for each equipment location. Notify Owner of any discrepancies that may exist between Contract Documents and existing conditions.
  2. The Contractor shall be responsible for the connection and extension of power to the Audiovisual system.
  3. The Contractor shall be responsible for ensuring that the power supplied to all Audiovisual devices and components meets the manufacturer's requirements and recommendations.
- M. The Contractor shall comply with all site policies, procedures, and requirements including safety and health requirements.
- N. The Contractor shall conduct testing and adjustment as specified in Part 3 of this section. Submit documentation required by this section. Participate in approval testing for acceptance by the Owner. Perform final adjustments as required to by this section.
- O. The Contractor shall deliver to the Owner, bound "as built" system documentation. Transfer all warranties and equipment guarantees to the Owner, at the time of acceptance of the work by the Owner.

P. The Contractor shall provide system operation training as specified in Part 3 of this section.

1.8 QUALITY ASSURANCE

A. All materials must be newly manufactured current production models and conform to all applicable codes and the relevant standards listed below:

1. American National Standards Institute (ANSI)
2. Institute of Electrical and Electronic Engineers (IEEE)
3. Electronic Industries Alliance (EIA)
4. Telecommunication Industries Association (TIA)
5. Underwriters Laboratory (UL)

B. Contractor qualifications:

1. The Contractor must be a factory authorized / approved reseller / vendor for all the components and software installed.
2. The Contractor shall have a minimum of five years' experience in the field of audiovisual system installation.
3. The Contractor shall have a minimum of three years' experience of successfully completed Audiovisual projects of similar scope and design.
4. The Contractor shall coordinate with manufacturer staff as needed for assistance, configuration, and programming of Audiovisual systems.
5. The Contractor shall be a licensed Audiovisual systems Contractor in compliance with all local, state, and federal requirements as required for the project.
6. The Contractor shall maintain a facility capable of supporting service calls for the installed systems.
7. The Contractor shall provide continuous management of the installation for the duration of the project. The Project Manager shall be present and an active participant in all project activities including installation, testing, commissioning, and training.
8. At a minimum, the Contractor shall provide the following qualified staff for this project:
  - a. Project Manager: The Project Manager shall be responsible for maintaining adequate staff and adhering to the project schedule. The Project Manager shall have a minimum of 5 years' experience managing audiovisual system installations of similar scope and design.
  - b. Audiovisual Project Engineer: The Audiovisual Project Engineer shall have factory training and certifications for all the components and software installed. The Audiovisual Designer shall have a minimum of 3 years' experience in the design and installation of audiovisual systems of similar scope and design.
  - c. Installation and Service Technicians: Installation and Service Technicians shall be factory trained and proficient in:
    - 1) The installation and maintenance of all major Audiovisual components and software.
    - 2) Wire selection, sizing, and installation.
    - 3) Wire termination methods.
    - 4) Power supply installation.



- d. Programmer: The Programmer shall have factory training and certifications for all software installed.
  - e. These requirements are not all-inclusive. It is the Contractor's responsibility to provide qualified staff to complete the contracted work and adhere to the project schedule.
9. Contractor shall promptly notify the Owner, in writing, of any difficulties that may prevent proper coordination or time of completion of the Work. Failure to do so shall constitute acceptance of work and indicate that the site is suitable in all ways for this Work, except for defects that may develop in the work of others after commencement of system installation.
  10. Insurance: Provide evidence of insurance for the full value of equipment and material located on site. Insurance shall cover losses due to fire, theft and vandalism, until the final acceptance of the system, by the Owner. Maintain additional liability insurance to protect the supplier and/or Owner, Architect, Design Consultant against damage claims for personal injury, including death, which may arise during the performance of this work.
- C. The Owner reserves the right to make use of the system prior to the completion of the Work. Temporary use of the equipment shall not constitute an acceptance of the system or any part. The Owner shall not pay additional cost to the Contractor and the commencement of the warranty period shall not begin for the system, or any device prior to the completion of the punch list and final acceptance of the system, by the Owner.
  - D. Contractor shall promptly notify the Owner, in writing, of any site difficulties that may prevent proper coordination or timely completion of the Work. Failure to do so shall constitute acceptance of Work and indicate that the site is suitable in all ways for this Work, except for defects that may develop in the work of others after commencement of system installation.

#### 1.9 INSTRUCTIONS TO BIDDERS

##### A. General:

1. The Contract Documents are provided to establish a basis of design, functionality, and documentation of the Owner's needs and requirements. All bids shall meet the standards documented in the Contract Documents. All products included in the bid shall meet or exceed the products listed in these specifications.
2. The Bidder shall carefully review all Contract Documents and notify the Owner, Architect, and Design Consultant of any discrepancies in writing prior to their bid submission. The Bidder shall submit any requests for additional information or clarification to the Owner in writing at least three days prior to the bid date.
3. The Bidder shall be responsible for all changes necessary to make the audiovisual installation conform to the field conditions during construction. Reasonable changes shall be included in the Bidder's price and installed without additional cost. Reasonable changes to device locations prior to rough-in shall be included at no additional cost.
4. The Contractor shall furnish all devices, equipment, materials, hardware, cabling, etc. as required for a fully functional and complete audiovisual system.

##### B. Add Alternates:

1. The Contractor may propose substitutions, alternates, and/or deletions with their bid. A separate proposal detailing these proposed changes should be submitted with the bid, to be

considered separately. The Contractor shall provide their justification and reasoning for any add alternates proposed.

C. SubContractors:

1. The use of subContractors to the primary Contractor shall require approval by the Owner during the bidding process.
2. The subContractor shall be required to meet the same qualification requirements identified in this specification.
3. The subContractor shall be responsible for coordination with other trades, submittals, and project correspondence, and all requirements within this specification.
4. The Contractor shall be directly responsible for the work of all subContractors and shall facilitate coordination among subContractors and/or other trades.

D. Support:

1. The Contractor shall be capable of providing service, maintenance, and repair services as required.
2. The Contractor shall submit a separate proposal for an annual maintenance and service agreement with options for service period in years. The proposal shall include all audiovisual systems installed by the Contractor. The cost should be itemized by services provided and year.

#### 1.10 CONSTRUCTION SUBMITTALS

A. One submittal package shall be submitted for each requirement listed below, I.E., product data, shop drawings, RF frequencies, LAN documentation, etc. Piecemeal submittals, I.E., separate audio, video, control submittals will not be accepted.

1. Before ordering equipment, submit catalog data sheets, neatly bound with title page, space for submittal stamps and tabbed dividers between sections. List all proposed equipment with reference to corresponding specification paragraph numbers or equipment title. Denote all approved substitutions. Data sheets may also be delivered in a single flattened PDF format file if physical delivery is not practical.
  - a. Submit samples of engraved labels, cable-marking system, faceplate etching/finishes and loudspeaker grilles.
2. Provide shop drawings and record drawings using the following scales:
  - a. Plans - not less than 1/8" = 1'-0"
  - b. Details - not less than 1/4" = 1'-0"
3. Submit a complete set of shop drawings including, but not limited to the following:
  - a. Submit point-to-point wiring diagrams and typed wire lists identifying every connection. Include electronic devices such as switches, transformers and terminal blocks. Indicate location of all components. Identify cables by types, colors and wire numbers. Diagrams must be original documents, coordinated with other trades. Replication of any bid documents is not acceptable.
  - b. Submit system plans showing all device locations.
  - c. Submit reflected ceiling plans showing distributed loudspeaker layouts with wattage tap settings, projection systems, cameras and other ceiling mounted devices.
  - d. Submit rack layouts indicating the proposed arrangement of mounted equipment including junction boxes and locations of conduit penetrations.

- e. Submit fully dimensioned construction details of all panels, plates and other custom fabricated items or modifications (e.g. installation of audio equipment in lecterns). Include complete parts lists and, as required, schematic diagrams.
  - f. Submit fully dimensioned construction details of all coordination items, such as panel or plate installation in casework or millwork as needed to complete the Work.
  - g. Submit a schedule of finishes indicating proposed materials and color selections for all exposed items subject to Architect's approval.
  - h. Submit mounting and support details for loudspeakers, and all other items mounted overhead, complete with parts lists and dimensions. Include a full plan view, front elevation and side elevation of each item, with corresponding support structure and mounting hardware. Verify load ratings of all hanging components including attachment hardware. A structural engineer registered in the State shall stamp details.
4. Submit a list showing coordination of selected frequencies for all wireless transmitters and receivers.
  5. Submit an Excel list showing all equipment requiring data connections. At a minimum identify the following fields, Location, Description, MAC address, Jack number, IP Address, Subnet Mask, Gateway, DNS. Submit list with first three items completed for submittal review, include jack number as well if available. Include items on client LAN as well as AUDIO LAN. Once approved, provide client LAN list to owner's networking group to obtain IP information. Maintain list throughout project and provide final list with as-built documents.
  6. Submit a key schedule indicating key assignments and groupings for all equipment racks, drawers, and lecterns subject to Owner's approval.
- B. Acceptance Test Submittals: Prior to requesting the completion of the acceptance tests, submit Preliminary Test Report Information required in Part 3 of this Section.

#### 1.11 PROJECT CLOSE OUT

##### A. General

1. Furnish one initial set of Project Close Out Documents including but not limited to manuals, record drawings along with the results of all source quality control tests, and field quality control tests specified in Part 3 of this Section, to the Design Consultant, for use during acceptance testing.
2. If 'as installed' documents are rejected, correct and resubmit in the manner specified.
3. One set of B size drawings showing the components and wiring in each individual rack shall be mounted in a plastic jacket to the rear door of the associated rack.
4. After approval of 'as installed' documents, submit sets of record drawings as follows:
  - a. One set of full size prints
  - b. One set of reduced B size prints
  - c. One set of manuals
  - d. A complete set of all project documentation electronic submittals.
5. At the time of contract closeout, submit sets of the system Operation Manual and the Maintenance Data Manual as follows:

- a. One set hardcopy for owner.
  - b. A complete electronic .PDF package.
- B. Manuals
- 1. Neatly bind each manual with tabbed dividers between sections, include a title pages between sections, binder title covers and spines.
  - 2. Manuals shall be presented in 3 ring – D style binders.
  - 3. The Manuals shall be broken down into the following minimum sections:
  - 4. Operations Manual
    - a. Table of Contents
    - b. Typed description of each system including key features and operational concepts (e.g. remote control features, switching or routing functions, patch points, mixing and linking capabilities).
    - c. Setup diagrams and typed instructions for use in typical situations as directed by the Design Consultant.
    - d. Single-line block diagrams showing all major system components.
    - e. One set of B size drawings showing the components and wiring in each individual rack.
    - f. Manufacturer's operation manuals for equipment intended for operation by system users (e.g. source equipment, communication equipment, etc).
    - g. Manual must be an original document created by the Contractor. Replication of any bid documents is not acceptable.
  - 5. Maintenance Data Manual
    - a. Table of Contents
    - b. Company name, address, telephone number and contact name for system service or maintenance.
    - c. Listing of all equipment and materials with names of manufacturers and model numbers or part numbers.
    - d. Catalog data sheets displaying manufacturer's names, addresses and telephone numbers.
    - e. Product manufacturer's warranties and a typed, one-year system warranty, explicitly covering all materials and labor.
    - f. Manufacturer's service manuals for all major equipment items.
    - g. Test documentation showing results of source quality control tests, field quality control tests, acceptance testing and equalization.
    - h. Document final settings for all non-user devices and controls after completion of acceptance testing and equalization, including raw and equalized house curves.
    - i. Document the physical position of settings as well as input and output signal levels as required by Part 3 of this Section.
    - j. Provide a recommended preventative maintenance schedule for reference to the applicable pages in the manufacturer's maintenance manuals. Where the manufacturer provides inadequate information, develop and provide the information necessary for proper maintenance.

C. Software

1. A properly licensed working copy of any and all software required to operate or configure the systems specified herein, shall be a part of the system supplied, including all software, firmware and hardware required for configuration, adjustment, diagnosis and repair.
2. All software shall be fully documented, and that documentation included.
3. Software shall be included in its 'installable' file format.
4. Where any elements of the software are based on user modifiable source code, both the source code and the compiler shall be provided and documented as stated herein.
  - a. The source code is to be licensed to the Owner for this project; the Contractor maintains the copyright of the source code.
  - b. The Owner has the right to modify the source code.
  - c. If the source code is modified the Owner takes full responsibly for the effects caused by the modification to the source code.

D. Electronic Submittal: In addition to the above listed hard copy submittals, submit all files necessary to produce the above submittals as follows:

1. All project documents shall be provided in .PDF format.
2. Documents and spreadsheets shall be in Microsoft Office .docx/.xlsx format.
3. Manufacturers' service manuals provided by the Manufacturer to the Contractor or documents that are similarly, not otherwise available to the Contractor in electronic format shall be excluded from this requirement.
4. Provide all control system source files and compilers. This should include, but is not limited to, touch panel files, IR code files, DSP configuration files, web-based touch panel pages, or any other files or applications necessary to completely reinstall and configure all system components back to their operable state.

E. Keys: Submit five sets of all keys required for access to and operation of the systems.

1.12 GUARANTEES AND WARRANTIES

- A. Transfer all manufacturer and Contractor's warranties to the Owner at the completion of all Work.
- B. Guarantee all installation work to be free of faulty system-wide workmanship. Guarantee all new components purchased under this Contract and workmanship to be free from defects for a period of 12 months from the final date of acceptance, by the Owner, including solid-state devices.
- C. Guarantee a response window of 2 hours for call-back phone support upon notification from the owner of a system operational issue during the warranty period.
- D. Guarantee the on-site replacement of faulty materials and workmanship within 24 hours of notification at no cost to the Owner if failure occurs during warranty period. Provide loaner equipment as required to keep the system operational if the system cannot be repaired within 24 hours of notification.
- E. Register warranty in the Owner's name for any product with a manufacturer's warranty of more than one year.

1.13 OWNER FURNISHED EQUIPMENT

- A. Certain equipment may be identified as Owner Furnished Equipment (OFE). This OFE may presently be part of the Owner's systems or will be provided by the Owner and will be delivered

to the Contractor's off-site construction facility, delivered to the Contractor's on-site secured storage area or installed on site by others, as appropriate, for incorporation into the system.

- B. Clean and inspect the OFE, and notify the Owner in writing of damage or defect and the extent of repair and/or adjustment required to bring the OFE to original specification. Service OFE only as directed by the Owner under the arrangements of a separate contract.
- C. Incorporate into the system as if provided new, excepting warranty coverage.

#### 1.14 MAINTENANCE

- A. For the first year after acceptance by the owner, provide quarterly assurance visits to clean and confirm operation of all audio systems. Repair and replace any defective items as per the system warranty.

### PART 2 - PRODUCTS

#### 2.1 GENERAL

- A. Components are to operate on standard US voltage outlets. Rack mounted equipment is to be mounted in a standard EIA 19-inch wide rack. The components listed in the equipment schedule are the basis of the audio system design and represent the minimum standards for each of the components. All of the properties of each component or system should be considered listed in full.
- B. Equipment, excepting the Owner Furnished Equipment (OFE), and materials shall be new. The latest version at time of delivery and shall conform to applicable UL, CSA, or ANSI provisions. Take care during installation to prevent scratches, dents, chips, etc.; equipment with significant or disfiguring cosmetic flaws will be rejected.
- C. See Appendix A for all approved basis of design equipment. All substitution requests must meet or exceed the performance, size, and function of the basis of design equipment's performance specifications.
- D. All cabling and miscellaneous hardware shall be included for a complete and operational system. This includes but is not limited to audio/video cables and patch cords.
- E. Where possible, all equipment of a similar type or function shall be from the same manufacturer. Mixing manufacturers for similar AV functions shall not be accepted.

#### 2.2 CABLE

- A. General
  1. Conductor jackets shall be color-coded to enable consistent polarity.
  2. Use plenum rated cable where required by code.
  3. Cables noted are referenced for minimum level of quality.
  4. Use outdoor or wet rated cables where required. Size may vary depending on distance requirements.
  5. Acceptable Manufacturers: West Penn, Canare, Belden, Extron, Covid, Gepco, and Liberty.
- B. Audio Cables

1. Microphone: Shielded, stranded 20 AWG, twisted-pair cable (West Penn 292)
2. Line Level Cable: Shielded, stranded 20 AWG, twisted-pair cable (West Penn 292)
3. Program Loudspeaker Cable: Stranded, twisted-pair 12 AWG cable (West Penn 227)
4. Distributed Loudspeaker Cable: Stranded, twisted-pair 16 AWG cable (West Penn 225)
5. In Bar cable Wireless Antenna Cable: 50 ohm, (RG-58) coaxial cable (RG-58) (Belden 8259)
6. Digital Audio Transport Cable: 4 pair Category 6A Shielded Solid Twisted Pair cable, 24 AWG. (Belden 10GX63F)

C. Data Cables

1. Data cable: 4 pair Category 6A Shielded Solid Twisted Pair cable, 24 AWG. (Belden 10GX63F)

D. Category 6A Copper Patch Cords

1. All patch cords are to be shipped pre-assembled, verified and tested from the factory in sealed packages.
2. All copper patch cords shall have stranded conductors that match the TIA/EIA-568.2-D performance characteristics of the solid conductor category-6A cable specified.

## 2.3 HARDWARE

A. Jacks, Connectors, and Adapters

1. Provide panel mounted isolated ground jacks.
2. Contacts are to be silver-plated, chromate dipped, phosphor bronze, or brass.
3. Install connector and jacks per manufacturer's directions.
4. Panel mounted jacks are to be recessed.
5. Acceptable Manufacturers: Canare, Switchcraft, Neutrik, Amphenol, Pomona, Extron, Covid, L-com, or Liberty.
6. Category 6a Shielded Keystone Style Jacks and plugs

B. Audio System Face Plates: Provide metallic cover plates at all control, switching and jack locations. Etch and ink all system faceplates to indicate function, input/output number, etc. Minimum engraved letter height 1/8 inch. Coordinate finish with the Owner. Center lettering vertically over or horizontally to the right of the appropriate connector. Connector mounting shall allow sufficient finger clearance for connector insertion and removal without interference from adjacent connectors.

C. Electronic Component Face Plate Labels: Provide permanent labels as specified and shown on detail drawings. Engraved plastic labels fastened with epoxy are acceptable. Dymo type labels are not acceptable.

D. Provide a neatly labeled floor plan with as-built locations of all audio jacks. Locate floor plan in front cover of the equipment rack behind a clear Plexiglass cover. Minimum size of chart: 8-1/2 inches x 11 inches.

E. Provide system functional description and operating procedures for each system configuration. Place behind clear Plexiglass near each of the equipment racks. Include basic operating procedures and troubleshooting steps.

- F. Provide a 1-rack unit panel with Consultant's name and web address and Contractor's name, address and phone number in the main equipment rack of each system. Panel shall state: Designed by "Consultant" Installed by "Contractor".

#### 2.4 RACK SYSTEMS

- A. All audiovisual racks on the project are to be welded and from one manufacturer.
- B. Rack construction is to be rated for the Uniform Building Code Seismic zone 4.
- C. Racks and rack accessories are to be black in color.
- D. Rack plates: All custom rack plates are to be fabricated from 16 Gauge Aluminum with flange returns. All rack blanks and vents are to have flanges.
- E. Racks are to have moveable rear rack rails. All rack rails are to be tapped for 10-32 machine screws.
- F. Racks are to have a modular top option with different knockouts and openings as required by the design documents.
- G. Front and rear vented locking doors are required for all racks not directly secured by casework or other architectural door system.
- H. Rack slides shall be provided for all equipment requiring access to side or top panels for routine adjustment or cleaning.
- I. Provide security covers on non-user operated equipment having front panel controls.
- J. Install all rack mounted equipment with black oxide finish 10-32 oval head machine screws with black plastic cup washers protecting equipment panel.

#### 2.5 RACK POWER

- A. Provide switched and constant power strips as specified, divided among the following categories.
- B. Provide constant power UPS for all equipment that requires it. This includes digital audio processors, network switches, and other devices that require a boot process prior to use.
  - 1. Rack systems will each be provided with vertical power strips for constant power distribution. Strips containing signal processing equipment will be run to rack UPS systems specified rather than building power.
  - 2. The remaining outlets are to provide switched power operated by the control system.
  - 3. Multiple amplifiers on the same circuit shall power up with a minimum of a 2 second delay between each.
  - 4. The system is to be free of measurable power transient noise when powering on or off.
  - 5. Equipment with redundant power supplies will have independent building power circuits for each supply.

### PART 3 - EXECUTION

#### 3.1 GENERAL

- A. The following is required for acceptance of the audiovisual system by the Owner:
  - 1. Install complete and functioning audiovisual system.



2. Label equipment and cables corresponding to functional diagram.
3. Conduct adjustments and preliminary testing.
4. Report results of Site Acceptance Testing (SAT) and preliminary testing along with system documentation.
5. Participate in acceptance test and deliver final system and documentation.
6. Conduct any adjustments or re-testing required to meet the performance specifications.
7. Provide training to an individual(s) designated by the Owner/Architect/Consultant.

### 3.2 AUDIO OPERATIONAL REQUIREMENTS

- A. Care shall be taken to eliminate electro-magnetic radio frequency and electro-static interference; the system shall be free of audible hum, rattles, buzzing sounds, distortion and visible hum bars or distortion.

### 3.3 CABLE WIRING STANDARDS

#### A. General

1. Provide proper cable management and support
  - a. Install cables in an organized manner.
  - b. Dress cables neatly.
  - c. Route cables parallel to the product in which they are landed. This should result in cables that are routed plumb and level and change directions in 90° increments.
  - d. Secure cables to wire management products using reusable hook and loop type fasteners. Secure fasteners to the wire management product then wrap fastener around the cable bundle. Provide sufficient length of fastener wrap to extend around the final cable bundle side with at least 75 percent of the bundle circumference overlapped.
  - e. Do not use nylon cable ties or other fasteners that pinch and stress cables. Do not use ties that require tools to remove.
  - f. Do not bend cables to a radius that is less than 8-times the cable diameter, nor less than the cable manufacturer's recommended minimum bend radius.

#### B. Equipment Racks

1. Provide vertical and horizontal wire management products to secure and manage cables.
2. Provide horizontal wire support bars. Secure bars in such locations as to achieve a professional balance between cable support, equipment accessibility, service, and appearance.
3. Install service loops. The length of service loops for each device shall be:
  - a. Long enough that the cable may be relocated to a variety of other compatible ports on the product.
  - b. Long enough to be moved aside without becoming unplugged, being damaged, or stressed while attempting to access another nearby connection.
  - c. Long enough that no stress is applied to the cable itself, a conductor, another cable, or connectors on the equipment.
  - d. Short enough not to hinder serviceability of an adjacent device.

4. Provide security covers on non-user operated equipment having front panel controls. Install security covers at the conclusion of Acceptance Testing. Rack slides shall be provided for all equipment requiring access to side or top panels for routine adjustment or cleaning.
5. Provide rack slides and mounts equal to those of the original manufacturer for the OFE requiring rack mounting. Where no same manufacturer mount is available, Contractor shall supply custom mounts as manufactured by Middle Atlantic Products Inc.

### 3.4 AUDIO DSP (Digital Signal Processing) PROGRAMMING

- A. The Contractor will ensure that:
  1. Each DSP block has a description of its function.
  2. Each DSP block has fully labeled endpoint nodes.
  3. Each DSP block with control dialogs has each channel labeled in a clear and concise manner to allow for simple signal identification.
- B. The values in the audio DSP box shall be set to allow the performance requirements outlined in this document to be met.
- C. Microphone mute shall be at DSP, not at microphone. If wireless microphones are muted at the transmitter the control system will mute the appropriate channel in the DSP. Un-muting the transmitter will un-mute the associated channel as well.
- D. Proper gain structure practices shall be used. Signals will be brought to optimum levels upon entry to the DSP, and care will be taken to minimize level changes within the DSP signal path.

### 3.5 CONTROL SYSTEM PROGRAMMING

- A. Contractor shall provide all touch screen and control system programming to make fully functional and working systems. System functional requirements shall be as described in these documents.
- B. The contractor shall closely collaborate with the owner and designer through a multi-phased interactive process lead by the contractor.
  1. Phase I – Needs Analysis
    - a. This phase shall be used to refine the general expectations of the system(s) functionality from a high-level perspective.
    - b. One or more meetings shall be expected.
    - c. Contractor will provide the Owner with 3 screen layout samples for aesthetics. Owner shall determine which layout will be used.
  2. Phase II – User Interface (UI) Development
    - a. Contractor will create user interfaces for each system based upon the needs analysis.
    - b. User interfaces shall be similar to any existing campus standards to allow for ease of use.
    - c. Contractor will create a software emulation of the interface design that mirrors the final operational and navigational flow, behavior, and general responsiveness.
      - 1) Emulation shall include full system navigation, button feedback, device and system status emulation, working page flips, popups, and messaging.

- d. This phase is complete when the contractor has conducted working hands-on user interface demonstrations with the owner and designer and received acceptance from both.
- 3. Phase III – Programming
  - a. Contractor will write system code based on feedback from the GUI demonstration and system specifications/requirements.
- 4. Phase IV – Final Check Out
  - a. Changes will also be made during system check out. Budget for one 8-hour day of touch screen and system-programming changes during the system check out.

### 3.6 PERFORMANCE SPECIFICATIONS

- A. The sound pressure level spectrum from the program speaker system, in each 1/3 octave band shall be +3 dB (side to side) from 100 Hz to 12 kHz with 3 dB per octave roll off above 12 kHz and below 100 Hz. Total acoustical harmonic distortion shall not exceed 2% at sound levels of 90 dBC (1 kHz reference tone) at four (4) feet above finish floor in the middle of the room.
- B. The sound pressure level spectrum from the distributed speaker system, in each 1/3 octave band shall be +3 dB from 125 Hz to 10 kHz with 6 dB per octave roll off above 10 kHz and below 125 Hz. Total acoustical harmonic distortion shall not exceed 2% at sound levels of 85 dBC (1 kHz reference tone) at four feet above finish floor in the middle of the room.
- C. The gain structure for all audio system components (mixer input to amplifier output) shall be adjusted to achieve the highest signal-to-noise ratio, 75 dB from 50 Hz to 15 kHz minimum.
- D. The audio frequency response of the electronics system with equalizers bypassed shall vary less than +1 dB from 50 Hz to 12 kHz.
- E. The electronic system audio distortion shall be less than 0.5% at 1 kHz at the equipment's rated input signal level.
- F. Control functions: Demonstrate that each of the controlled devices may be controlled either at the individual device or through the use of the remote-control system and that all individual devices and combinations of devices may be utilized in the logical and common formats and that all systems are in proper working order.

### 3.7 CONTRACTOR'S TESTING AND ADJUSTMENTS

- A. Furnish all equipment and personnel including manufacturer's representatives to perform manufacturer's Site Acceptance Test (SAT) and to conduct these tests in accordance with the performance specification requirements.
- B. All timing and gain measurements shall be made while the operator controls of the device under test are set in the center-of-travel, in bypass, nulled out or at the manufacturer's detent position. Any adjustments should be made by modification of cable length or internal adjustments.
- C. The Contractor shall complete all applicable testing procedures included in the following AVIXA standard documents:
  - 1. ANSI/INFOCOMM 10:2013 – Audiovisual System Performance Verification
  - 2. ANSI/AVIXA A102.01:2022 – Measurement and Classification of Audio Coverage Uniformity in Listener Areas
  - 3. Submit results of the testing procedures to the owner, architect, and consultant.

D. Audio Testing

1. Before connecting high impedance (distributed) loudspeaker lines to the power amplifiers, measure and record the impedance curves of all loudspeaker circuits, using a sweep test or impedance bridge for at least six frequencies from 125 Hz through 8,000 Hz.
2. Before connecting low impedance (8-Ohm) loudspeaker lines to the power amplifiers, measure and record the impedance of all loudspeaker circuits, Report the DC resistance reading.
3. Test all low-level audio cables and connections for continuity and ground faults and correct polarity.
4. Apply a sine-wave sweep signal to each loudspeaker system, sweeping from 50 Hz to 5,000 Hz at a sound pressure level, which is 10 dB below the loudspeakers rated electrical input power. Listen for rattles or objectionable noise and correct if apparent.
5. Check for proper polarity of loudspeakers by applying music program or pink noise to each system and walking through the transition areas of coverage from one loudspeaker to the next. Transition should be smooth with no apparent shifting of source, back and forth from one loudspeaker to the next.
6. Coverage Uniformity: Scan the areas served by the system and record sound pressure level in 1/3-octave bands. Perform any necessary adjustments to loudspeaker orientations as required to achieve the specified uniformity.
7. Adjust all system gain controls, both physical and virtual in software, for optimum signal-to-noise ratio. After all adjustments required to meet the performance Specification requirements are made, measure and report the resulting system electrical signal-to-noise ratio at the amplifier outputs from 20-20 kHz in 1/3 octave bands referenced to the voltage required to achieve 85 dBC in the center of the room (1 kHz reference tone) at 4-feet above finish floor.
8. Measure the sound pressure level using a calibrated type 1 precision sound level meter as defined by ANSI S1.4. Measure using the slow time Constant. Report the "raw house curve" with the equalizer controls set to "0." Adjust all gain controls and equalizers to provide the 1/3-octave band sound levels specified.

E. Manufacturer's Site Acceptance Testing (SAT)

1. Testing of every channel of each I/O module with calibrated equipment.
2. Verification of electrical characteristics, depending on the I/O module type and specifications (voltage/current levels, signal-to-noise ratio, etc.)

3.8 DATA CABLE TESTING

- A. The Contractor shall be responsible for all testing and performance parameters required by this section and all applicable TIA/EIA-568.2-D series standards.
- B. Furnish all equipment and personnel to conduct these tests in accordance with the performance section requirements.
- C. Prepare Test Reports Manual as described in this section documenting the results of these tests and readings.
- D. Test results must be submitted to the Owner as part of the project documentation prior to acceptance as required by this section.

- E. Testing of copper wiring shall be performed prior to system cutover (100 percent of the horizontal and riser wiring pairs shall be tested for opens, shorts, polarity reversals, transposition and presence of AC voltage).
- F. Any pairs not meeting the requirements of the standards shall be brought into compliance by the Contractor, at no charge to the Owner.
- G. Category-6A data cable test procedures must comply with and meet the following standards:
  - 1. TIA/EIA-568.2-D
  - 2. NEMA Low Loss extended frequency requirements
  - 3. Any additional Owner standards attached to general conditions
- H. Complete four pair testing must be performed with full sweep frequency measurements from 1 MHz to 500 MHz, and the Power Sum Far End Cross-Talk test. This test will establish each channel's installed performance measurement. This is not a certification or compliance test, rather a measure of available headroom. Any copper cable failing to meet the above-indicated standards must be removed and replaced, at no cost to the Owner, with copper cable that proves in testing to meet the standards.
- I. Test all Category-6A cables with a third party approved by cable system manufacturer. The testing device must be provided by the Contractor and approved by the Owner's representative prior to use. It is the responsibility of the Contractor to get written authorization from the Owner's representative to commence testing with said device.
- J. All cables are to be tested for:
  - 1. Continuity
  - 2. Polarity
  - 3. Insertion Loss
  - 4. Length
- K. Test procedure - Category-6A cables
  - 1. All CAT-6A cables shall comply, must be tested, and meet the following TIA/EIA-568.2-D standards:
    - a. Insertion Loss
    - b. Near End Cross talk (NEXT)
    - c. Power Sum Near-End Cross talk (PSNEXT)
    - d. Attenuation to Crosstalk Ratio – Near End (ACRN)
    - e. Power Sum Attenuation to Crosstalk Ratio – Near End (PSACR-N)
    - f. Far End Crosstalk (FEXT)
    - g. Power Sum Attenuation to Crosstalk Ratio – Far End (PSACRF)
    - h. Return Loss (RL)
    - i. Wire Map
    - j. Propagation Delay
    - k. Delay Skew
    - l. Length
- L. Provide a STATEMENT OF COMPLETION, certifying that the system is installed and is ready for acceptance testing by the Design Consultant.

- M. Schedule a time for the Design Consultant to perform system acceptance testing and adjustment with at least 14 days advance notice.
- N. Qualification for Acceptance: Subsequent to completing preliminary testing, Contractor shall furnish the Owner/Design Consultant with copies of As Built documentation as required in this Specification.
- O. Furnish a technician who is familiar with the system to assist the Design Consultant during the acceptance testing and equalization for the duration it takes to complete the adjustments (regular time or overtime as required). A minimum of 24 hours as required to complete the adjustments.
- P. Acceptance Test: The Owner and Design Consultant shall be present during the acceptance testing and require the assistance and cooperation of the Contractor.
  - 1. Each major component shall be demonstrated to function.
  - 2. Measurements: Electrical and acoustical measurements may be performed at the discretion of the Owner and/or their representatives. The Design Consultant will supply acoustical measuring equipment. Such measurements may include sound pressure levels, uniformity of coverage, distortion, or other pertinent characteristics. Contractor shall provide equipment for performing any necessary electrical test or adjustments.
  - 3. Operating tests may include use of any individual or combination of systems provided and from any control location.
  - 4. Each cable may be inspected for proper termination.
  - 5. Under the direction of the Design Consultant, adjust signal levels and loudspeaker aiming, as required, to achieve the uniform sound distribution required by this Specification.
- Q. Such tests may be performed on any piece of equipment or system. If any test shows the equipment or system is defective or does not comply with the Specifications, Contractor shall perform any remedies, at their expense, and pay the subsequent expenses of any re-testing required.
- R. Contractor shall provide a final report, which will document the final equipment settings and adjusted levels and values.
- S. If the system does not meet criteria or if additional trips to the job site for testing or adjustment are required, the Contractor shall reimburse the Owner for all expenses and professional time encountered by the Design Consultant/Architect.

### 3.9 OWNER PERSONNEL TRAINING

- A. As part of Work of this Section, provide a total of 8 hours of on-the-job training for personnel, designated by the Owner for instruction, in the proper operation and maintenance of the systems. This training shall take place after the installation is operational but before the acceptance testing, in four(4) two-hour blocks.
- B. The Contractor shall record two (2) end user training sessions and provide training recordings and presentation files to the owner and design consultant.
- C. Provide an additional eight hours of training in a minimum of two-hour blocks during the first year after the system has been accepted. These training sessions are at the request of the owner.
- D. Provide one initial set of manuals for the system as described in this specification at the time of training for review and comment by the owner's personnel.

**SECTION 323119**  
**DECORATIVE METAL FENCES AND GATES (\*AD-01)**

**PART 1 GENERAL**

**1.01 REFERENCE STANDARDS**

- A. ASTM A276/A276M - Standard Specification for Stainless Steel Bars and Shapes.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- C. ASTM D2794 - Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- D. ASTM D3359 - Standard Test Methods for Rating Adhesion by Tape Test.
- E. ASTM F2408 - Standard Specification for Ornamental Fences Employing Galvanized Steel Tubular Pickets.

**1.02 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to start of work of this section; require attendance by affected installers.

**1.03 SUBMITTALS**

- A. Product Data: Submit manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- B. Shop Drawings:
  - 1. Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, gates, and schedule of components.
- C. Verification Samples: Provide samples, minimum 12 inch in length, for each type of fence material and color.
- D. Installer's Qualification Statement.
- E. Manufacturer's Warranty: Provide executed warranty completed and registered in Owner's name.

**1.04 QUALITY ASSURANCE**

- A. Installer Qualifications: Experienced with type of construction involved and materials and techniques specified; Installer shall be certified installation representative of fence manufacturer.

**1.05 DELIVERY, STORAGE AND HANDLING**

- A. Store materials in a manner to ensure proper ventilation and drainage. Protect against damage, weather, vandalism and theft.

**1.06 WARRANTY**

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Decorative Metal Fences and Gates:
  - 1. Ameristar Perimeter Security, USA; Montage Plus Majestic 2/3 Rail. (Basis of Design)
  - 2. Fortress Building Products.
  - 3. Iron Eagle Industries, Inc.
  - 4. Master Halco.
  - 5. Substitutions: See Section 016000 - Product Requirements.

### **2.02 FENCES**

- A. Fences: Complete factory-fabricated system of posts and panels, accessories, fittings, and fasteners; finished with electrodeposition coating, and having the following performance characteristics:
- B. Electro-Deposition Coating: Multistage pretreatment/wash with zinc phosphate, followed by epoxy primer and acrylic topcoat.
  - 1. Total Coating Thickness: 2 mils, minimum.
  - 2. Color: As selected by Architect from manufacturer's standard range.
  - 3. Coating Performance: Comply with general requirements of ASTM F2408.
    - a. Adhesion: ASTM D3359 (Method B); Class 3B with 90 percent or more of coating remaining in tested area.
    - b. Impact Resistance: ASTM D2794; 60 inch pounds.
- C. Steel: ASTM A653/A653M; tensile strength 45,000 psi, minimum.
  - 1. Hot-dip galvanized; ASTM A653/A653M, G90.
  - 2. 62 percent recycled steel, minimum.
- D. Fasteners: ASTM A276/A276M, Type 302 stainless steel; finished to match fence components.
  - 1. Provide tamper-proof security bolts.

### **2.03 WELDED STEEL FENCE**

- A. Provide fence meeting requirements for Industrial class as defined by ASTM F2408.
- B. Fence Panels: Fusion welded; 6 feet high by 6 feet long.
  - 1. Panel Style: Two rail.
  - 2. Attach panels to posts with manufacturer's standard panel brackets.
- C. Posts: Steel tube.
  - 1. Size: 2-1/2 inches square by 12 gauge, 0.109 inch, with manufacturer's standard cap.
- D. Rails: Manufacturer's standard, double-wall steel channel 1-3/4 inch square by 12 gauge, 0.1094 inch with prepunched picket holes.
  - 1. Picket Retaining Rods: 0.125 inch galvanized steel.
  - 2. Picket-to-Rail Intersection Seals: PVC grommets.
- E. Pickets: Steel tube.
  - 1. Spacing: 3-3/4 inch clear.
  - 2. Size: 1 inch square by 14 gauge, 0.078 inch.
  - 3. Style: Flush top rail.
- F. Flexibility: Capable of following variable slope of up to 1:2.



### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Do not begin installation until substrates have been properly prepared.

#### **3.02 PREPARATION**

- A. Clean surfaces thoroughly prior to installation.
- B. Excavate post holes in size and depth in accordance with manufacturer's requirements.

#### **3.03 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Set fence posts in accordance with the manufacturer recommended spacing.
- C. Set all posts in concrete footing, with top of concrete 2 inches below final grade.
- D. When cutting rails immediately seal the exposed surfaces by:
  - 1. Removing metal shavings from cut area.
  - 2. Apply zinc-rich primer to thoroughly cover cut edge and drilled hole; allow to dry.
  - 3. Apply two coats of custom finish spray paint matching fence color.
  - 4. Failure to seal exposed surfaces in accordance with manufacturer's instructions will negate manufacturer's warranty.
- E. Space posts according to the manufacturers' drawings, dependent on standard maximum panel dimensions. For gates, space according to gate leaf dimensions, and gate hardware selected.
  - 1. Base type and quantity of gate hinges on the application, weight, height, and number of gate cycles.

#### **3.04 TOLERANCES**

- A. Maximum Variation From Plumb: 1/4 inch.
- B. Maximum Offset From Indicated Position: 1 inch.
- C. Minimum Distance from Property Line: 6 inches.

#### **3.05 CLEANING**

- A. Clean fence with mild household detergent and clean water rinse well.
- B. Touch up scratched surfaces using materials recommended by manufacturer. Match touched-up paint color to factory-applied finish.

#### **3.06 PROTECTION**

- A. Protect installed products until completion of project.
- B. Touch-up, repair, or replace damaged products before Date of Substantial Completion.

### **END OF SECTION 323119**

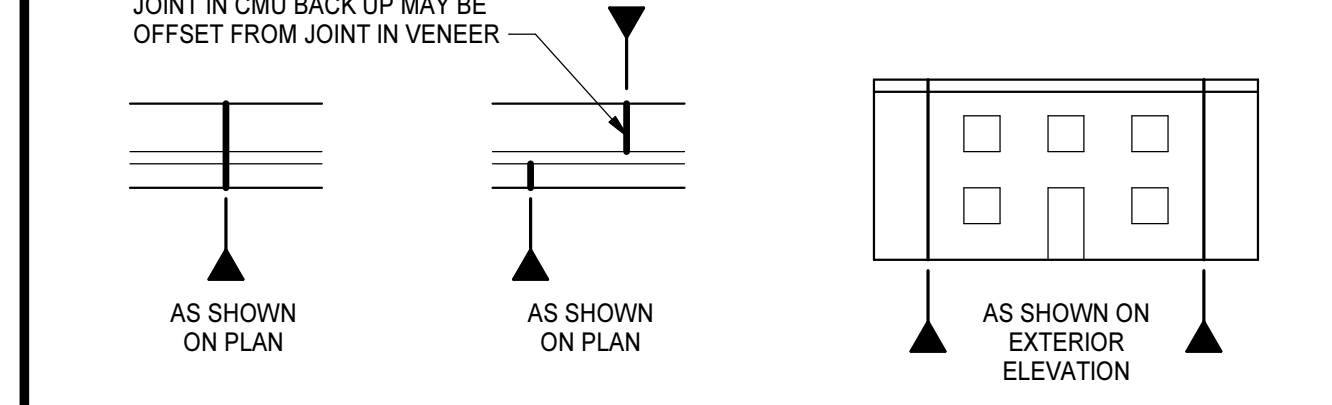


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS:	
DATE:	
DESCRIPTION:	

**WALL/PARTITION TYPE GENERAL NOTES**

- A. PLAN DIMENSIONS ARE TO FACE OF WALL OR PARTITION. WHERE APPLIED FINISHES OCCUR SUCH AS CERAMIC TILE DIMENSIONS ARE TO FACE OF APPLIED FINISH. FOR WAINSCOTS, FLOOR PLAN DIMENSIONS ARE TO FACE OF WAINSCOT MATERIAL. APPLIED FINISHES ARE NOT ALLOWED TO REDUCE CLEAR DIMENSIONS. "APPLIED FINISHES" IN THIS CASE DO NOT INCLUDE TRIM, BASE, AND ACOUSTIC WALL PANELS.
- B. EXTEND WALL/PARTITION ASSEMBLY COMPONENTS FULL HEIGHT OF ASSEMBLY.
- C. ALL INTERIOR MASONRY UNIT PARTITIONS: **M2** UNLESS INDICATED OTHERWISE.
- D. ALL INTERIOR CFSF PANEL PARTITIONS: **P1** UNLESS INDICATED OTHERWISE.
- E. REFER TO STRUCTURAL DRAWINGS AND RELATED SPECIFICATIONS FOR SOLID MASONRY, GROUTING, AND REINFORCEMENT REQUIREMENTS INCLUDING BUT NOT BE LIMITED TO:
  - MASONRY WALLS/PARTITIONS
  - LINTELS
  - LINTEL BEARING CONDITIONS
  - BOND BEAMS
  - SHELF BEARING CONDITIONS
  - STRUCTURAL REINFORCING REQUIREMENTS
  - CHANGES IN WYTHE
- F. THE TERMS "WALL" AND "PARTITION" MAY BE USED INTERCHANGEABLY THROUGHOUT THE CONTRACT DOCUMENTS.
- G. EXTEND ALL FIRE, SMOKE, INCIDENTAL USE, AND ACOUSTICAL-RATED WALLS/PARTITIONS TO UNDERSIDE OF FLOOR DECK, ROOF DECK, STRUCTURAL ELEMENT ENCASUREMENT OR SOLID CAP ABOVE.
  - SEAL AND TERMINATE IN ACCORDANCE WITH JOINT SYSTEM TESTED ASSEMBLIES FOR RESPECTIVE TYPE OF WALLS/PARTITIONS.
- H. PARTITIONS THAT DO NOT EXTEND TO UNDERSIDE OF DECK OR CAP ABOVE:
  - EXTEND 4 INCHES MINIMUM ABOVE HIGHEST ADJACENT FINISH CEILING UNLESS INDICATED OTHERWISE.
- I. DO NOT CONNECT TIES, ANCHORS, OR REINFORCING TO SINGLE CANTILEVERED FIRE WALL OR BETWEEN DOUBLE FIRE WALLS.
- J. SEAL AROUND ALL PENETRATIONS.
- K. COMPLY WITH TERMINATION, WALL JOINT, AND MISCELLANEOUS DETAILS FOR THOSE CONDITIONS WHERE APPLICABLE. COMPLY WITH REFERENCED STANDARDS WHERE DETAILS ARE NOT IDENTIFIED IN THE DRAWINGS.
- L. WALL/PARTITION TYPES DO NOT ADDRESS WALL FINISHES. REFER TO FINISH SCHEDULE.
- M. FINISHED SPACES: PROVIDE CHASES AROUND ALL EXPOSED VERTICAL COMPONENTS, INCLUDING BUT NOT LIMITED TO: DUCTWORK, PIPING, AND CONDUIT, UNLESS COMPONENTS ARE SPECIFICALLY INDICATED TO REMAIN EXPOSED. IF NOT OTHERWISE INDICATED, PROVIDE M1 OR P4 CHASE CONSTRUCTION.
  - HOLD CHASES TIGHT TO COMPONENTS ALLOWING FOR ACCESS, INSULATION, AND TOLERANCES.
  - EXTEND CHASES FROM FLOOR TO 4 INCHES MINIMUM ABOVE FINISH CEILING OR IF NO CEILING IS INDICATED, EXTEND CHASES TO UNDERSIDE OF FLOOR DECK, ROOF DECK, OR SOLID CAP ABOVE AND TERMINATE ACCORDINGLY.
- N. PROVIDE BACKER BOARD/UNIT OF SAME THICKNESS INDICATED IN LIEU OF GYPSUM BOARD PANEL AT PORTIONS OF WALLS/PARTITIONS TO RECEIVE TILE.

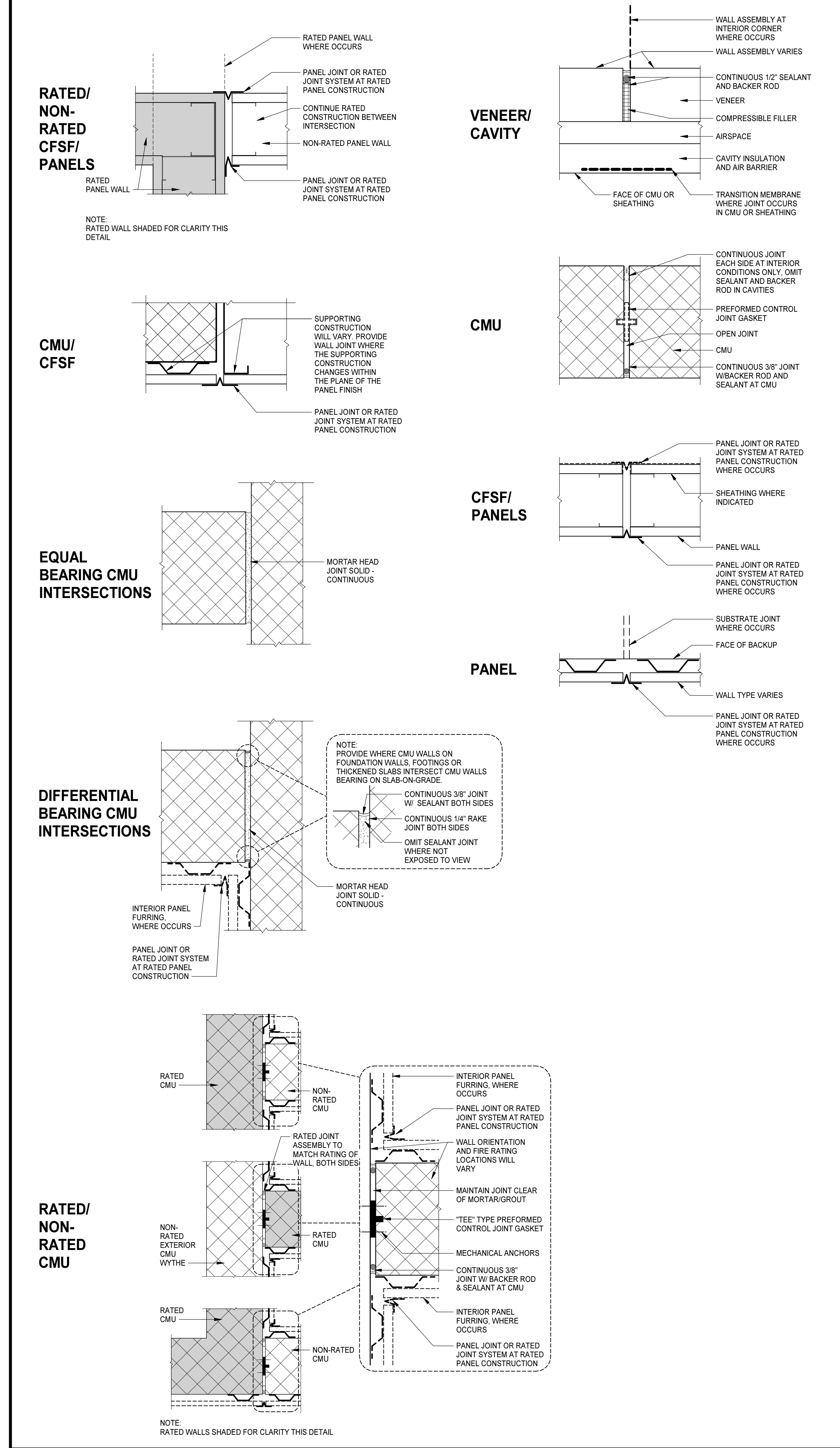
**EXTERIOR WALL JOINT GRAPHICS**



**WALL JOINT GENERAL NOTES**

- A. LOCATE CONTROL JOINTS IN INTERIOR AND EXTERIOR WALLS AS INDICATED ON DRAWINGS.
- B. JOINTS ARE INDICATED THIS ON PLANS AND ELEVATIONS.
- C. WALLS AND JOINT TYPES/DETAILS ARE DIAGRAMMATIC. ADJUST JOINT TYPES/DETAILS IN ACCORDANCE WITH ACTUAL FIELD CONDITIONS.
- D. PROVIDE TESTED JOINT ASSEMBLIES AT FIRE, SMOKE, AND ACOUSTICAL-RATED WALLS.
- E. WHEN USED HEREIN "RATED" MEANS FIRE, SMOKE, AND/OR ACOUSTICAL.
- F. REFER TO SPECIFICATIONS FOR ADDITIONAL WALL JOINT REQUIREMENTS.

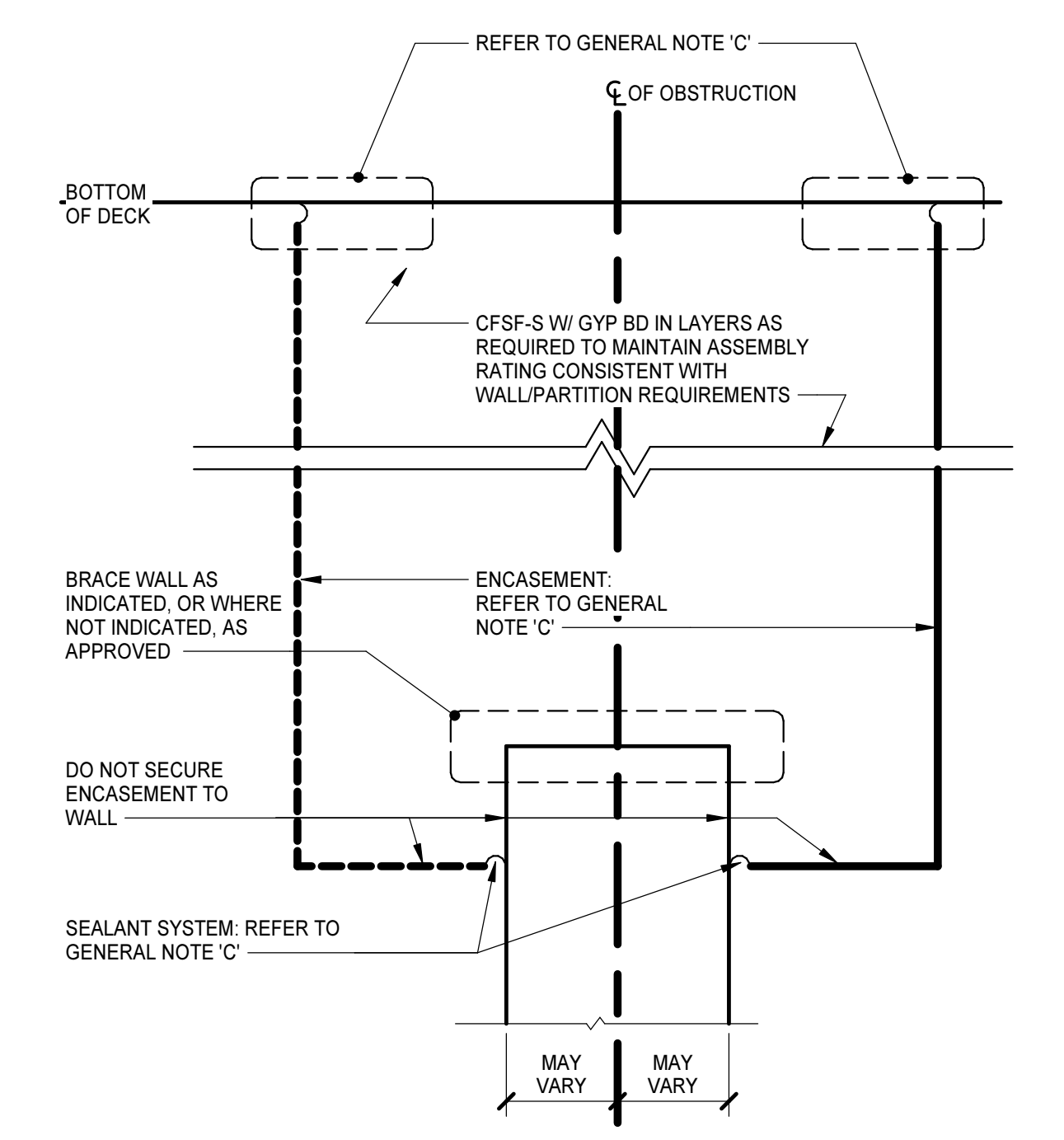
**WALL JOINTS**



**TERMINATION GENERAL NOTES**

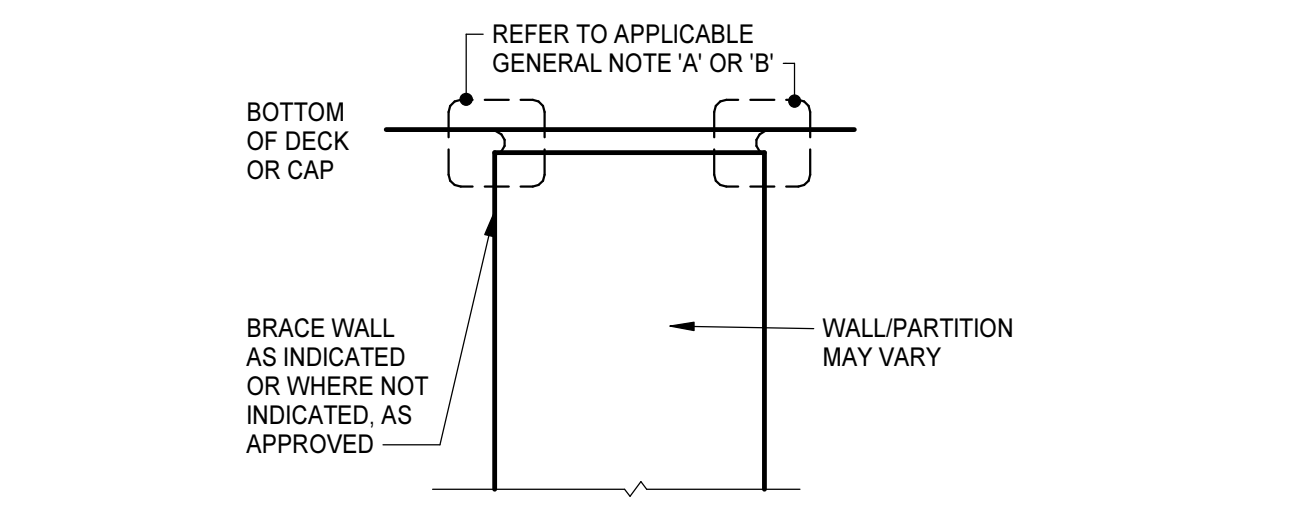
- A. AT FIRE, SMOKE, AND ACOUSTICALLY RATED WALLS: SEAL ALL NON-OBTSTRUCTED HEAD-OF-WALL CONDITIONS IN ACCORDANCE WITH JOINT SYSTEM MANUFACTURER'S RECOMMENDATIONS BASED ON CONDITION ENCOUNTERED (E.G. CMU-TO-DECK (PARALLEL OR PERPENDICULAR TO FLUTES), OR CFSF-TO-DECK (PARALLEL OR PERPENDICULAR TO FLUTES) TO MAINTAIN ASSEMBLY RATING CONSISTENT WITH WALL/PARTITION REQUIREMENTS. BRACE WALL AS INDICATED OR REQUIRED.
- B. AT ALL OTHER WALLS INDICATED TO EXTEND TO UNDERSIDE OF FLOOR/ROOF DECK/CAP: SEAL ALL NON-OBTSTRUCTED HEAD-OF-WALL CONDITIONS IN ACCORDANCE WITH JOINT SYSTEM MANUFACTURER'S RECOMMENDATIONS BASED ON CONDITION ENCOUNTERED (E.G. CMU-TO-DECK (PARALLEL OR PERPENDICULAR TO FLUTES), OR CFSF-TO-DECK (PARALLEL OR PERPENDICULAR TO FLUTES), BRACE WALL AS INDICATED OR REQUIRED.
- C. AT ALL WALLS PREVENTED FROM TERMINATING AT THE UNDERSIDE OF FLOOR/ROOF DECK BY OBSTRUCTIONS, COMPLY WITH THE FOLLOWING:
  - AT FIRE, SMOKE, AND ACOUSTICALLY-RATED WALLS: ENCASE OBSTRUCTION(S) TO MAINTAIN ASSEMBLY RATING CONSISTENT WITH WALL/PARTITION REQUIREMENTS.
  - AT SECURITY WALLS: TERMINATE IN ACCORDANCE WITH SECURITY PARTITION REQUIREMENTS.
  - AT OTHER WALLS: ENCASE OBSTRUCTION(S) ON ONE SIDE.
  - SEAL ENCASUREMENT TO WALL AND SEAL ENCASUREMENT TO DECK IN ACCORDANCE WITH JOINT SYSTEM MANUFACTURER'S RECOMMENDATIONS AND TO MAINTAIN ASSEMBLY RATING CONSISTENT WITH WALL/PARTITION REQUIREMENTS.

**TERMINATIONS**



**HEAD-OF-WALL TERMINATION @ OBSTRUCTION**

OBSTRUCTION MAY VARY (BEAM, JOIST, GIRDER, CHANNEL, DUCTWORK, PIPING)



**HEAD-OF-WALL TERMINATION @ NON-OBSTRUCTION**

**MASONRY UNIT WALL/PARTITION TYPES**

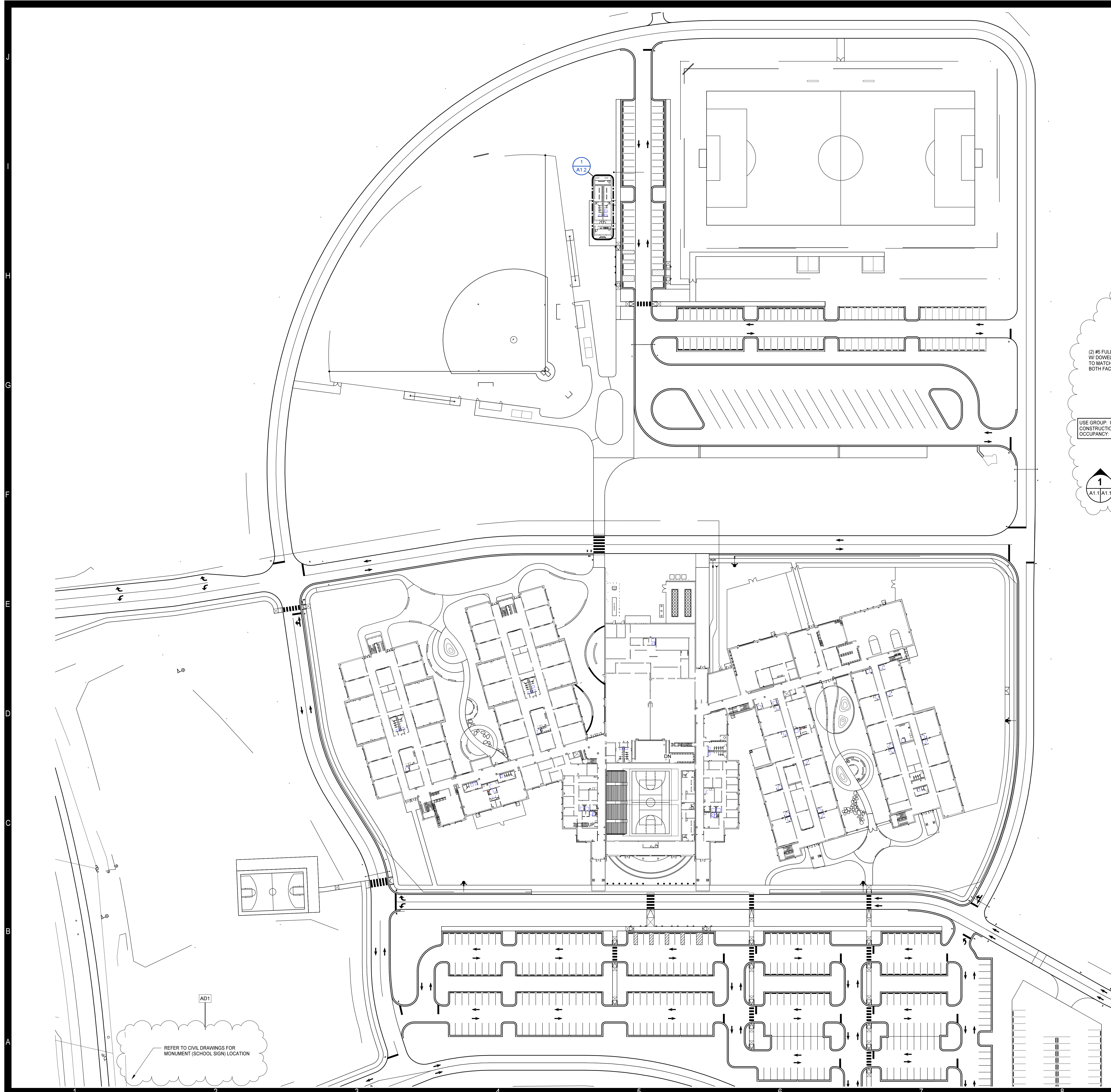
MARK	FIRE RATED ASSEMBLY (REFER TO LS 1.1 FOR LEGEND)	REMARKS	INFORMATION
M1	-	-	3 5/8" 4" CMU
M2	X3	-	5 5/8" 6" CMU
M3	-	-	-
M3-1	X3	-	7 5/8" 8" CMU
M3-2	X2	-	-
M4	-	-	NOT USED
M5	-	-	-
M5-2	X2	-	11 5/8" 12" CMU

**PANEL WALL/PARTITION TYPES**

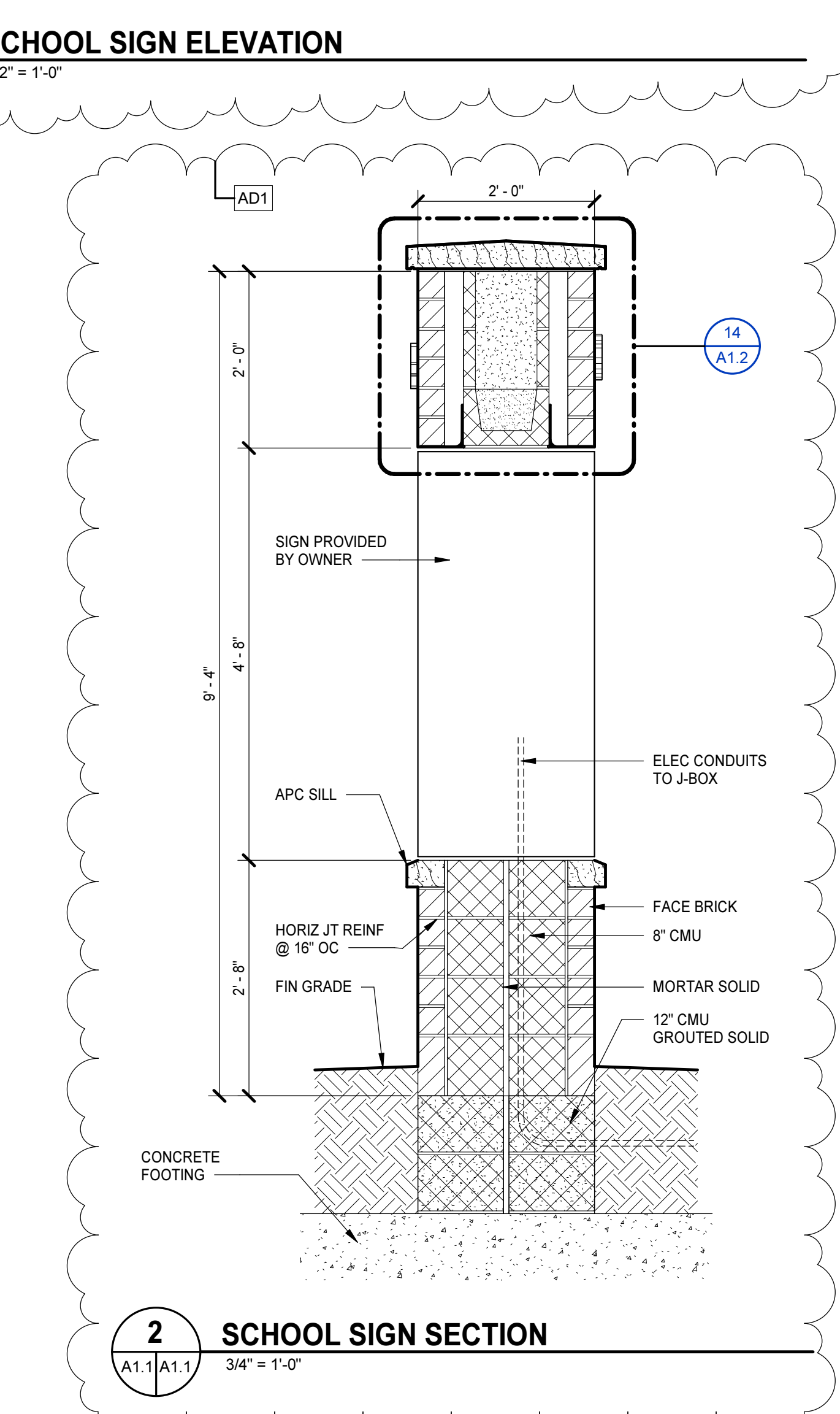
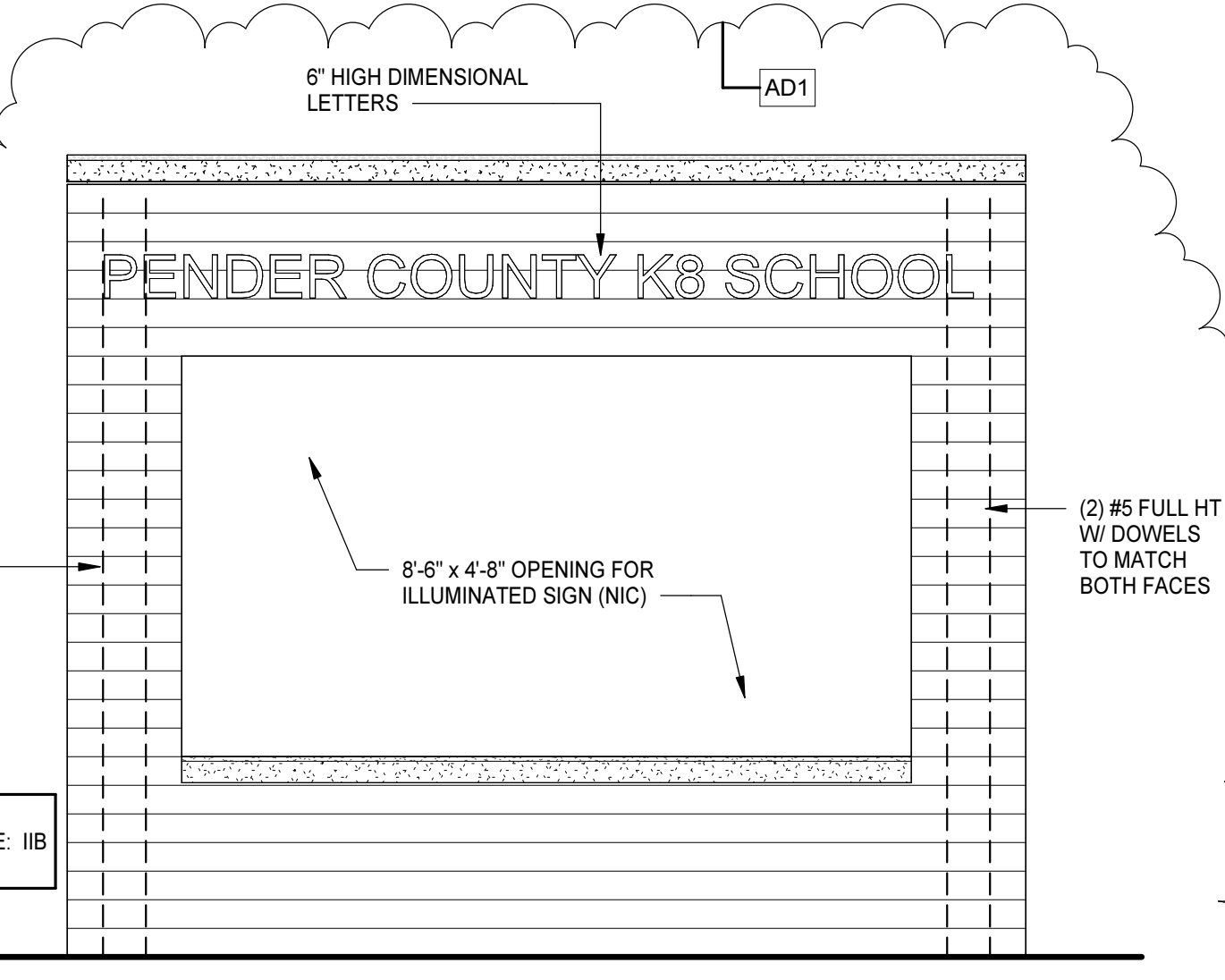
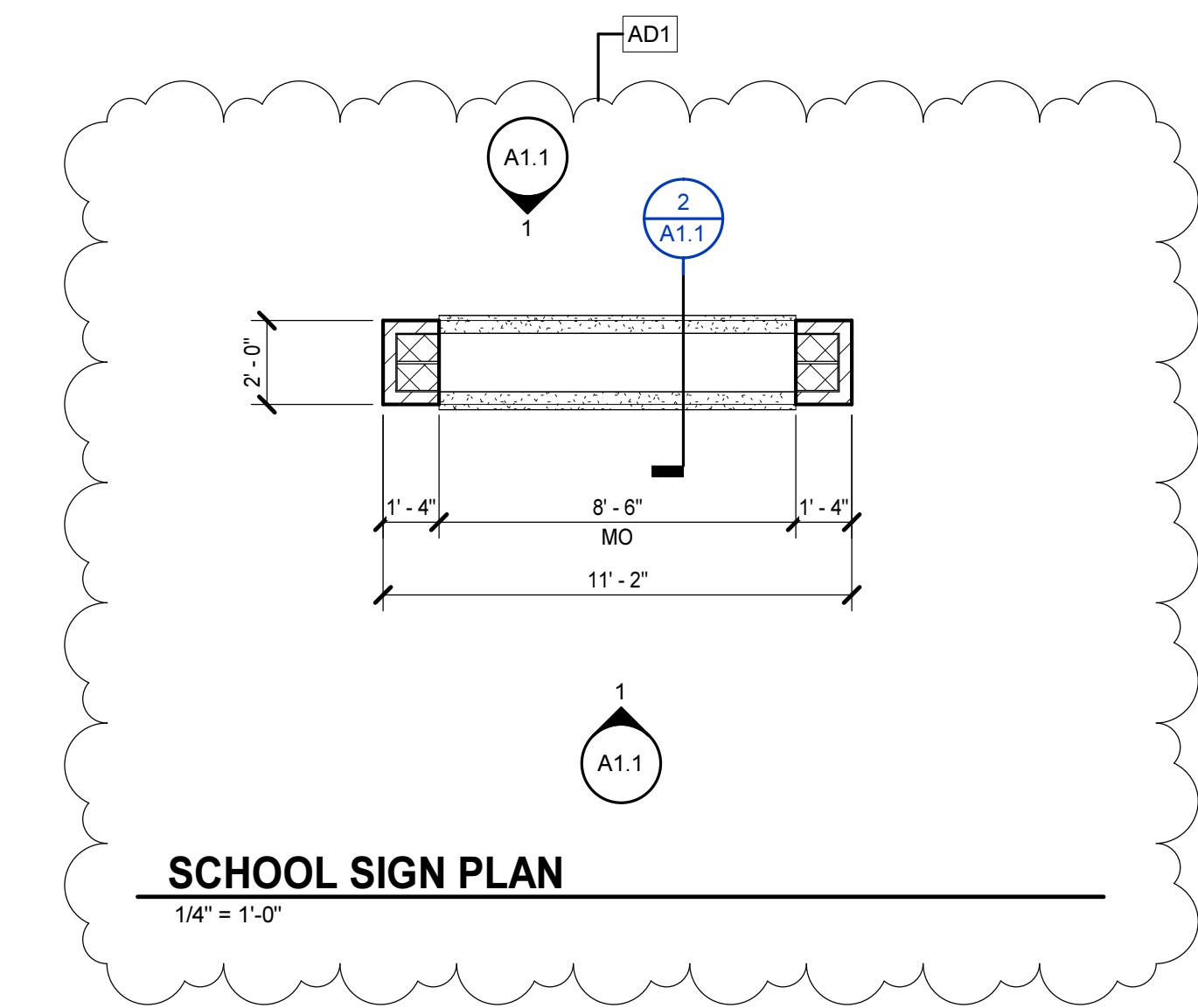
MARK	FIRE RATED ASSEMBLY (REFER TO LS 1.1 FOR LEGEND)	REMARKS	INFORMATION
P1	-	-	7 1/4" 5/8" ABUSE RESISTANT GYP BD, 6" CFSF-NS, 3 1/2" SOUND BATTS
P2	-	-	6 5/8" 5/8" ABUSE RESISTANT GYP BD, 6" CFSF-NS
P3	-	-	4 7/8" 5/8" ABUSE RESISTANT GYP BD, 3 5/8" CFSF-NS, 3 1/2" SOUND BATTS
P4	-	-	4 1/4" 5/8" ABUSE RESISTANT GYP BD, 3 5/8" CFSF-NS
P5	-	-	9 1/4" 5/8" ABUSE RESISTANT GYP BD, 8" CFSF-NS, 3 1/2" SOUND BATTS
P6	-	-	7 3/8" 3/4" HDWD VENEER PANELS, 5/8" GYP BD, 6" CFSF-NS, 2 1/2" CFSF-NS AT P7
P7	-	-	-



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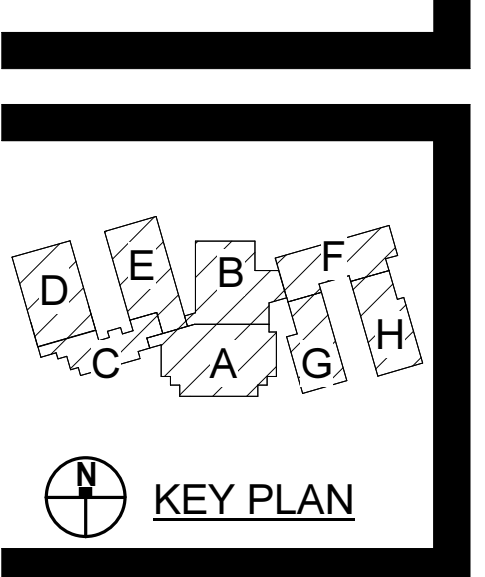
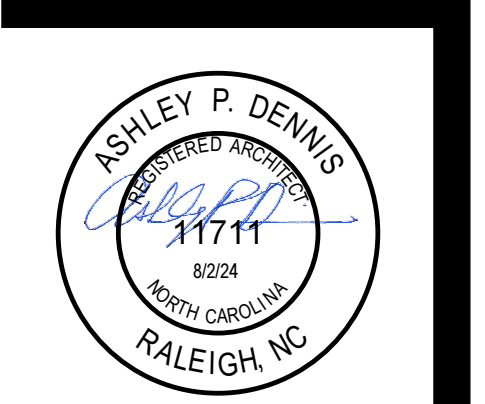


**ARCHITECTURAL SITE PLAN**  
1" = 50'-0"



**MOSELEYARCHITECTS**

911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA, 27603  
PHONE (919) 840-0051  
MOSELEYARCHITECTS.COM



**PENDER COUNTY SCHOOLS K-8 SCHOOL**

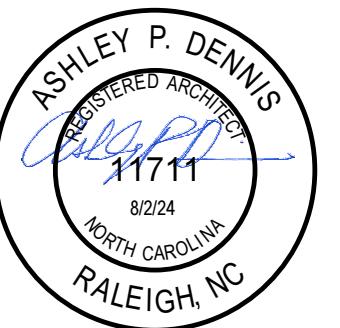
Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	831310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

ARCHITECTURAL SITE PLAN

A1.1

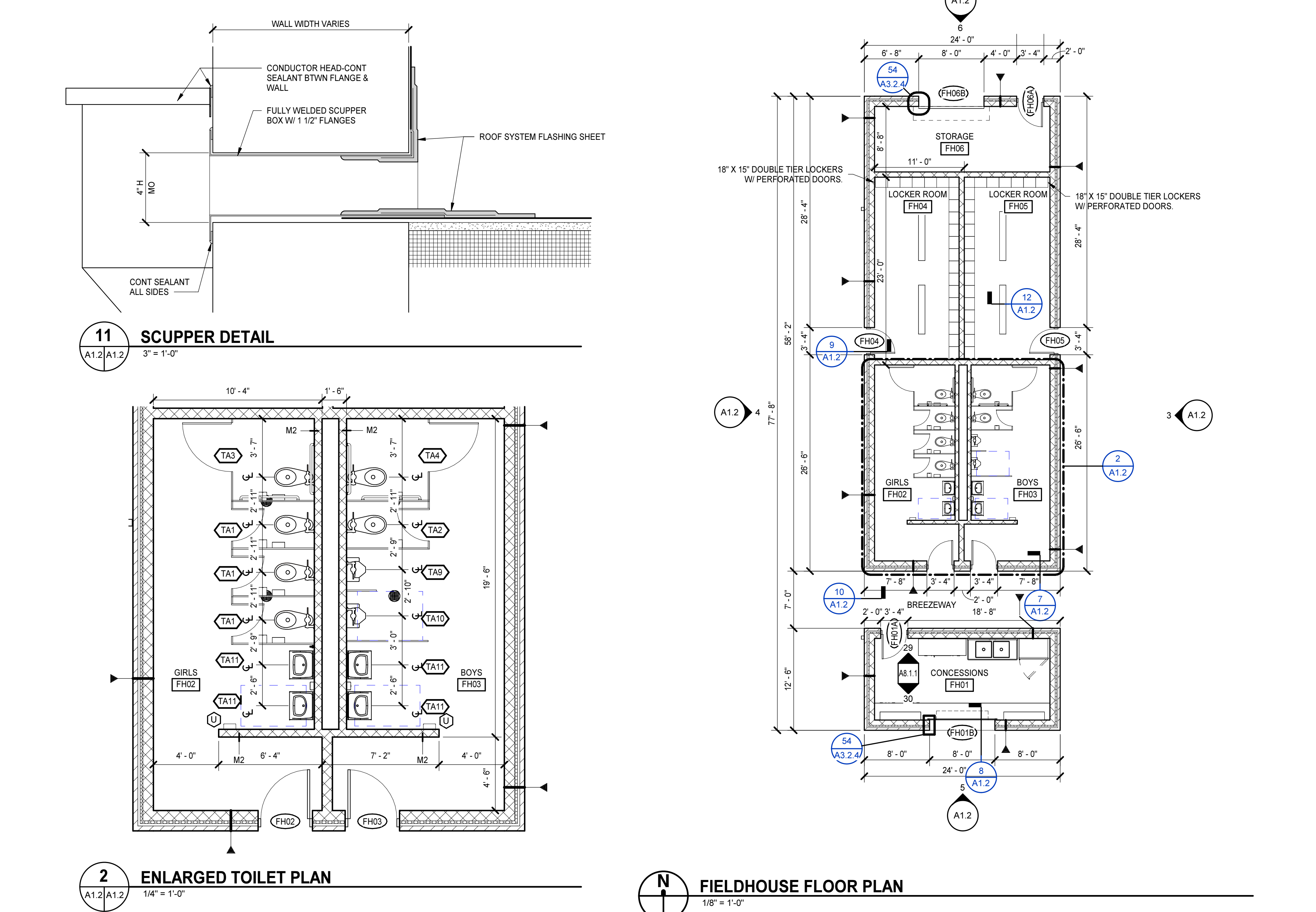
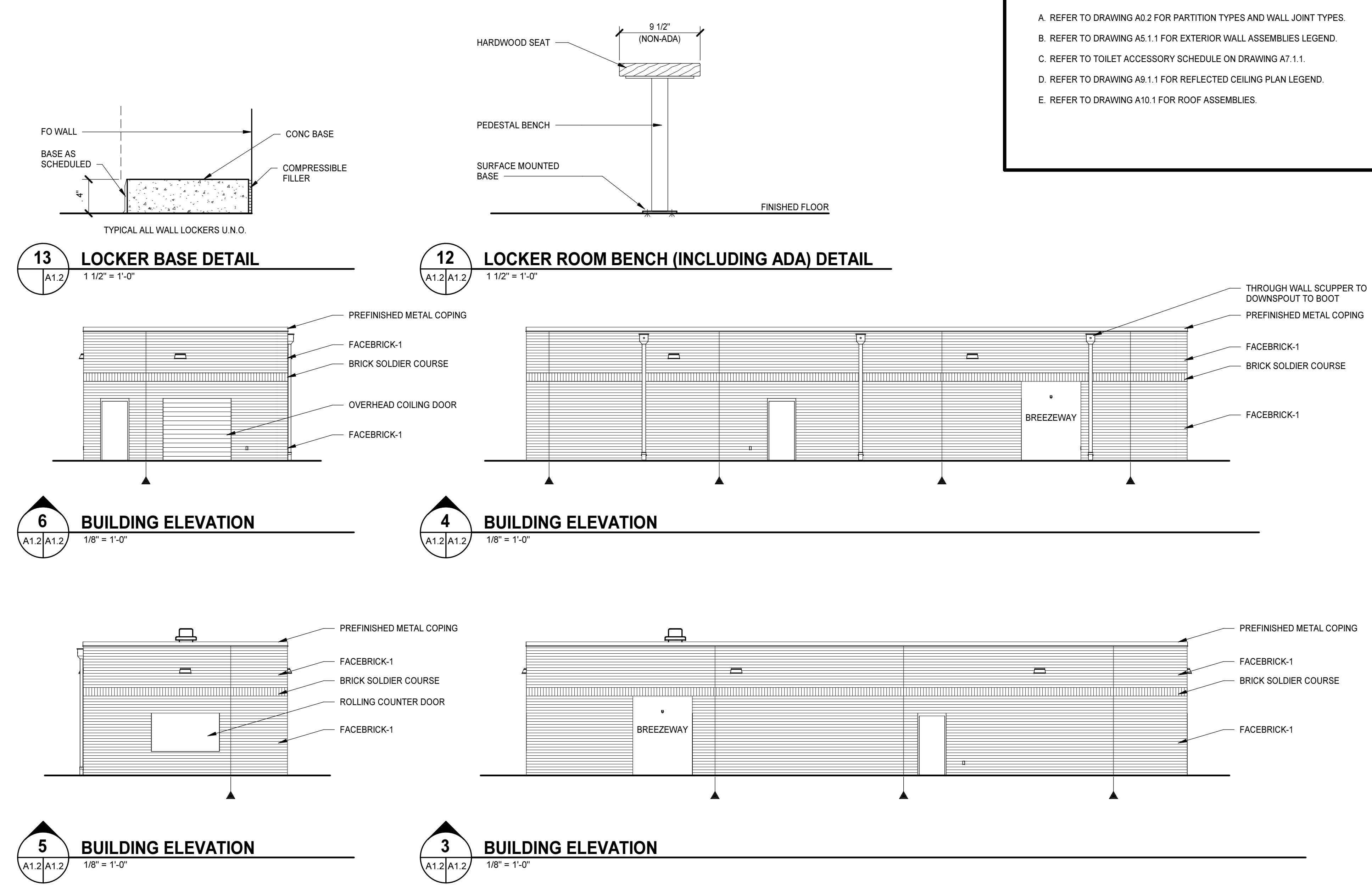
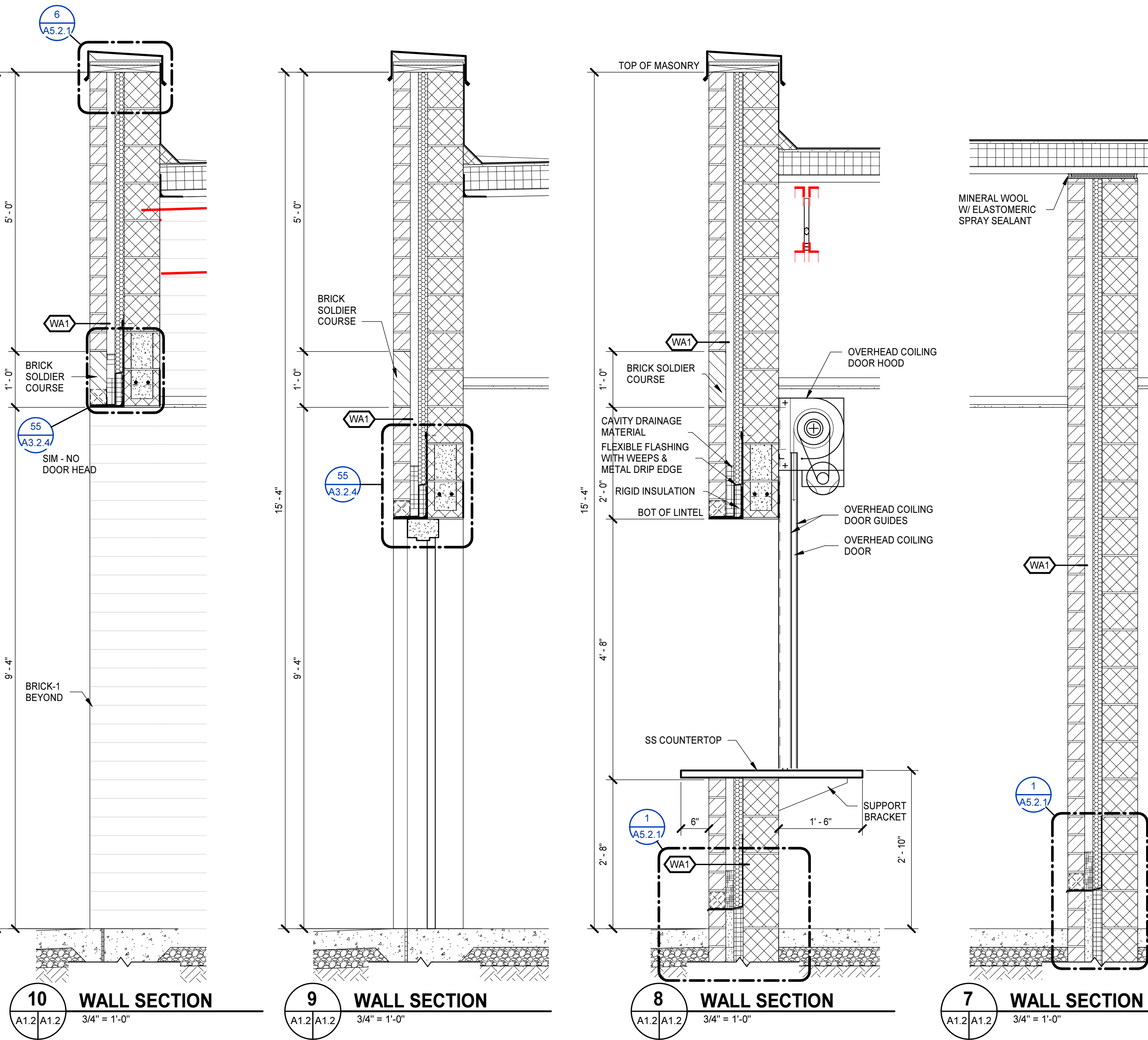
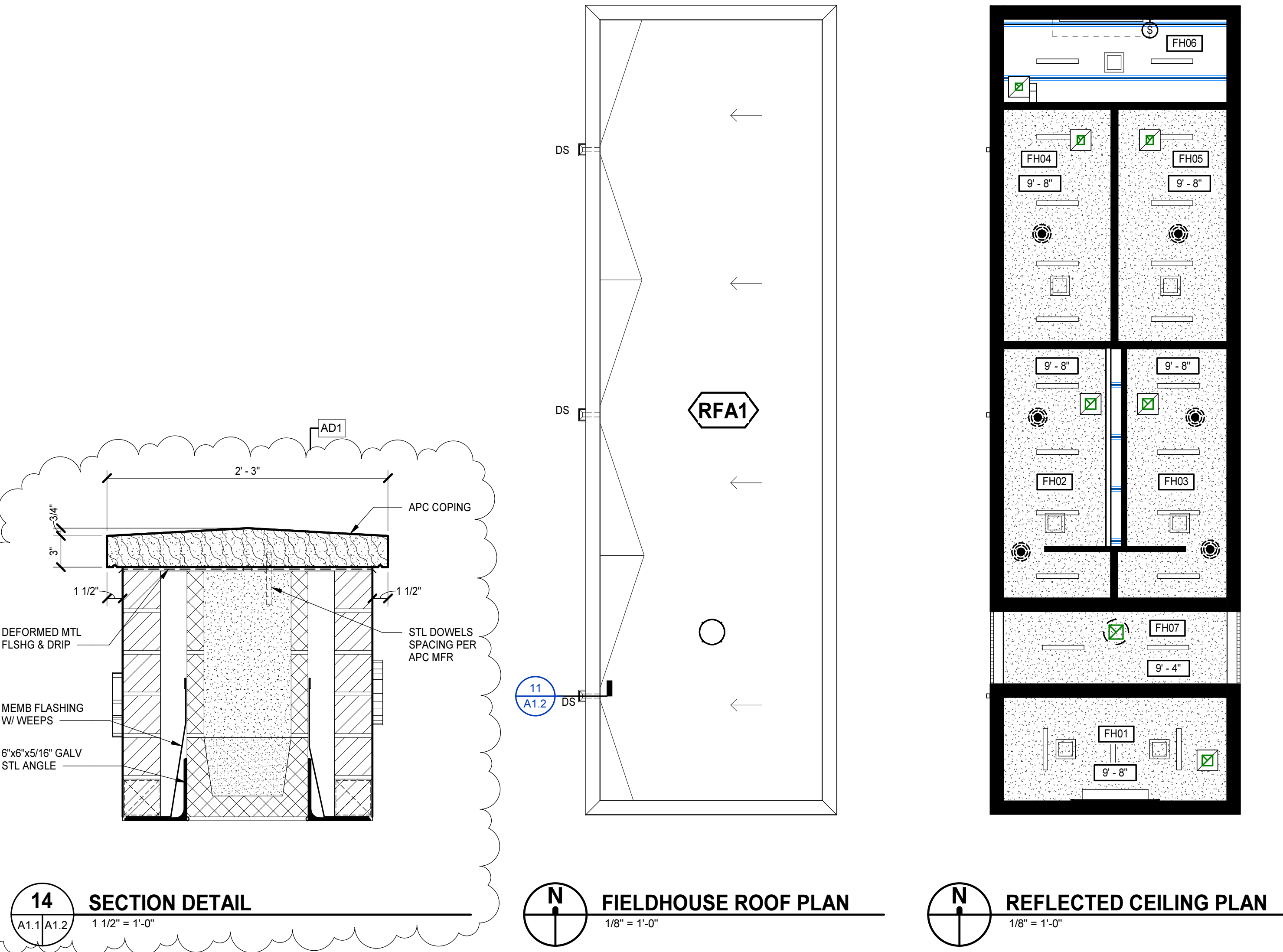




PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

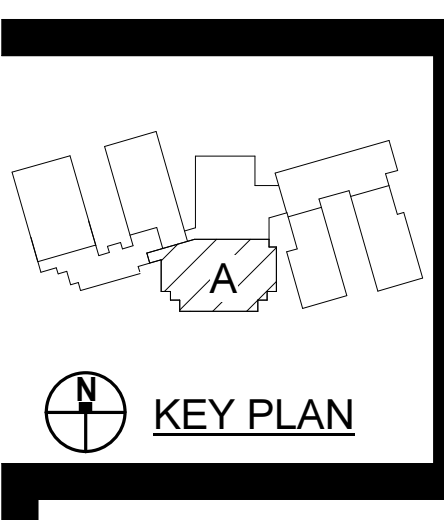
**GENERAL NOTES**

- REFER TO DRAWING A0.2 FOR PARTITION TYPES AND WALL JOINT TYPES.
- REFER TO DRAWING A5.1.1 FOR EXTERIOR WALL ASSEMBLIES LEGEND.
- REFER TO TOILET ACCESSORY SCHEDULE ON DRAWING A7.1.1.
- REFER TO DRAWING A8.1.1 FOR REFLECTED CEILING PLAN LEGEND.
- REFER TO DRAWING A10.1 FOR ROOF ASSEMBLIES.



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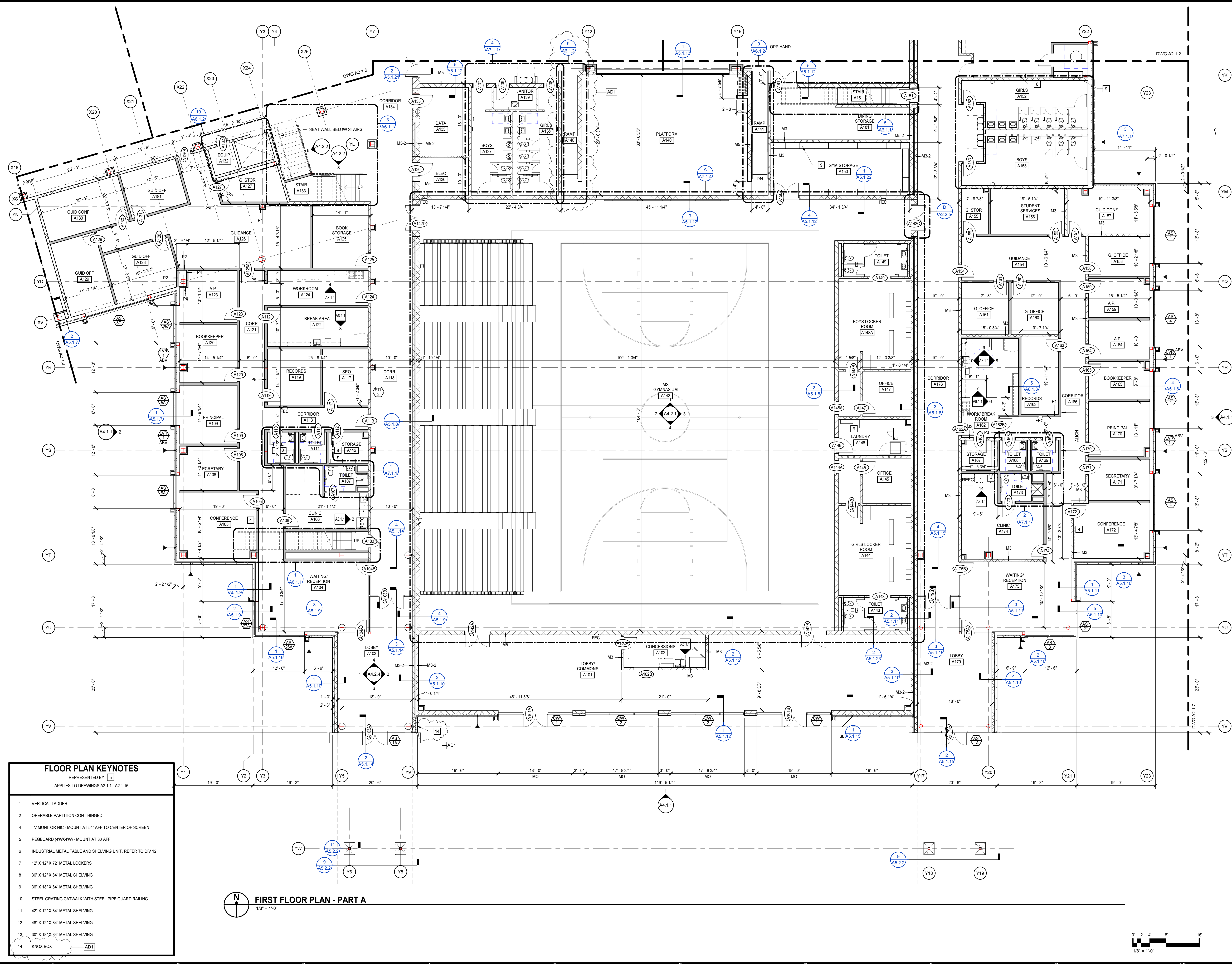
**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	831310
DATE:	AUGUST 2, 2024
REVISIONS:	
DATE:	DESCRIPTION
8/16/24	AD1

FIRST FLOOR PLAN - PART A

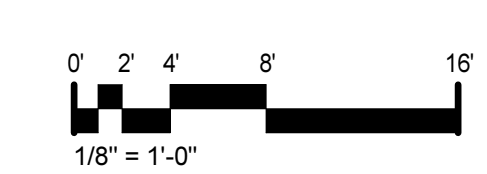
**A2.1.1**



**FLOOR PLAN KEYNOTES**  
 REPRESENTED BY [Symbol]  
 APPLIES TO DRAWINGS A2.1.1 - A2.1.16

- VERTICAL LADDER
- OPERABLE PARTITION CONT HINGED
- TV MONITOR NIC - MOUNT AT 54" AFF TO CENTER OF SCREEN
- PEGBOARD (4"X4") - MOUNT AT 30" AFF
- INDUSTRIAL METAL TABLE AND SHELVING UNIT. REFER TO DIV 12
- 12" X 12" X 72" METAL LOCKERS
- 36" X 12" X 84" METAL SHELVING
- 36" X 18" X 84" METAL SHELVING
- 30" X 18" X 84" METAL SHELVING
- STEEL GRATING CATWALK WITH STEEL PIPE GUARD RAILING
- 42" X 12" X 84" METAL SHELVING
- 48" X 12" X 84" METAL SHELVING
- 30" X 18" X 84" METAL SHELVING
- KNOX BOX

**FIRST FLOOR PLAN - PART A**  
 1/8" = 1'-0"



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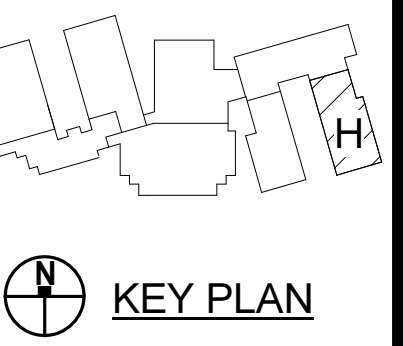
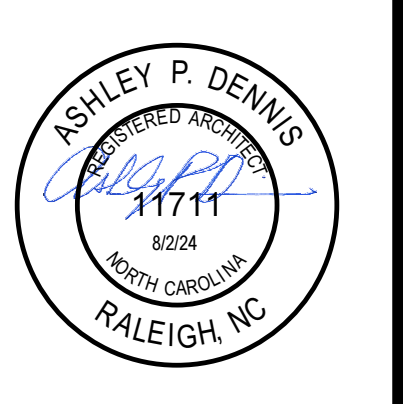








FLOOR PLAN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A2.1.1 - A2.1.16	
1	VERTICAL LADDER
2	OPERABLE PARTITION CONT. HINGED
4	TV MONITOR NIC - MOUNT AT 54" AFF TO CENTER OF SCREEN
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12	48" X 12" X 84" METAL SHELVING
13	30" X 18" X 84" METAL SHELVING
14	KNOX BOX



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

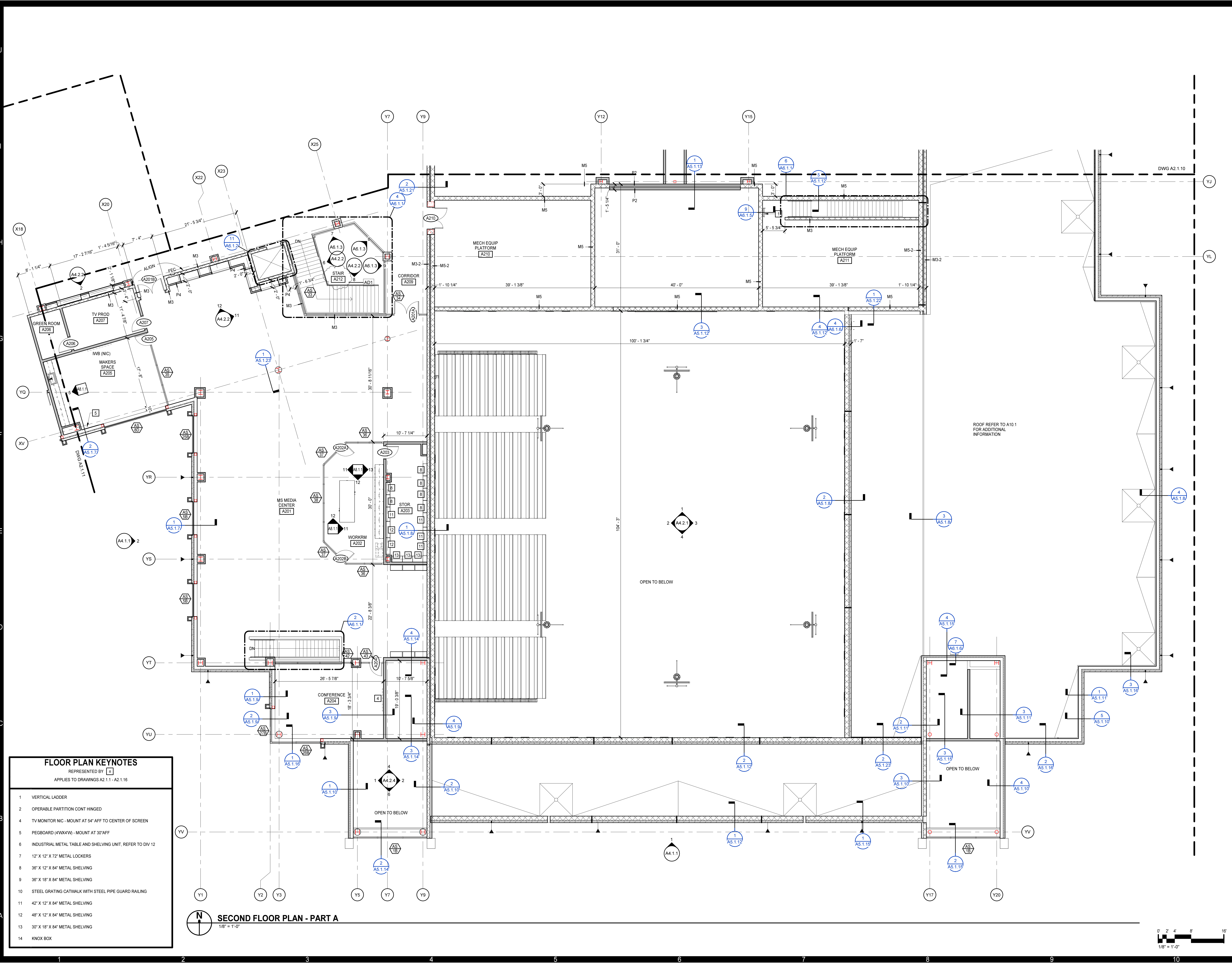
FIRST FLOOR PLAN - PART H

**A2.1.8**

8/16/2024 3:02:05 PM



8/15/2024 3:02:16 PM



**FLOOR PLAN KEYNOTES**

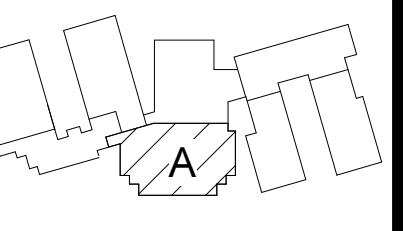
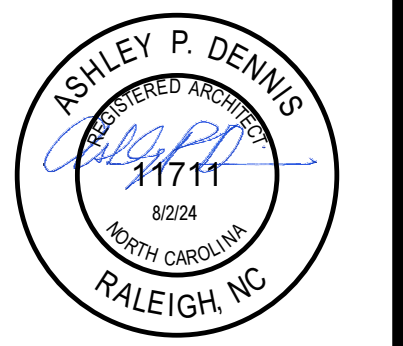
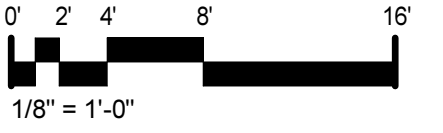
REPRESENTED BY [Symbol]  
APPLIES TO DRAWINGS A2.1.1 - A2.1.16

- 1 VERTICAL LADDER
- 2 OPERABLE PARTITION CONT HINGED
- 4 TV MONITOR NIC - MOUNT AT 54" AFF TO CENTER OF SCREEN
- 5 PEGBOARD (4Wx4W) - MOUNT AT 30" AFF
- 6 INDUSTRIAL METAL TABLE AND SHELVING UNIT, REFER TO DIV 12
- 7 12" X 12" X 72" METAL LOCKERS
- 8 36" X 12" X 84" METAL SHELVING
- 9 36" X 18" X 84" METAL SHELVING
- 10 STEEL GRATING CATWALK WITH STEEL PIPE GUARD RAILING
- 11 42" X 12" X 84" METAL SHELVING
- 12 48" X 12" X 84" METAL SHELVING
- 13 30" X 18" X 84" METAL SHELVING
- 14 KNOX BOX



**SECOND FLOOR PLAN - PART A**

1/8" = 1'-0"



KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

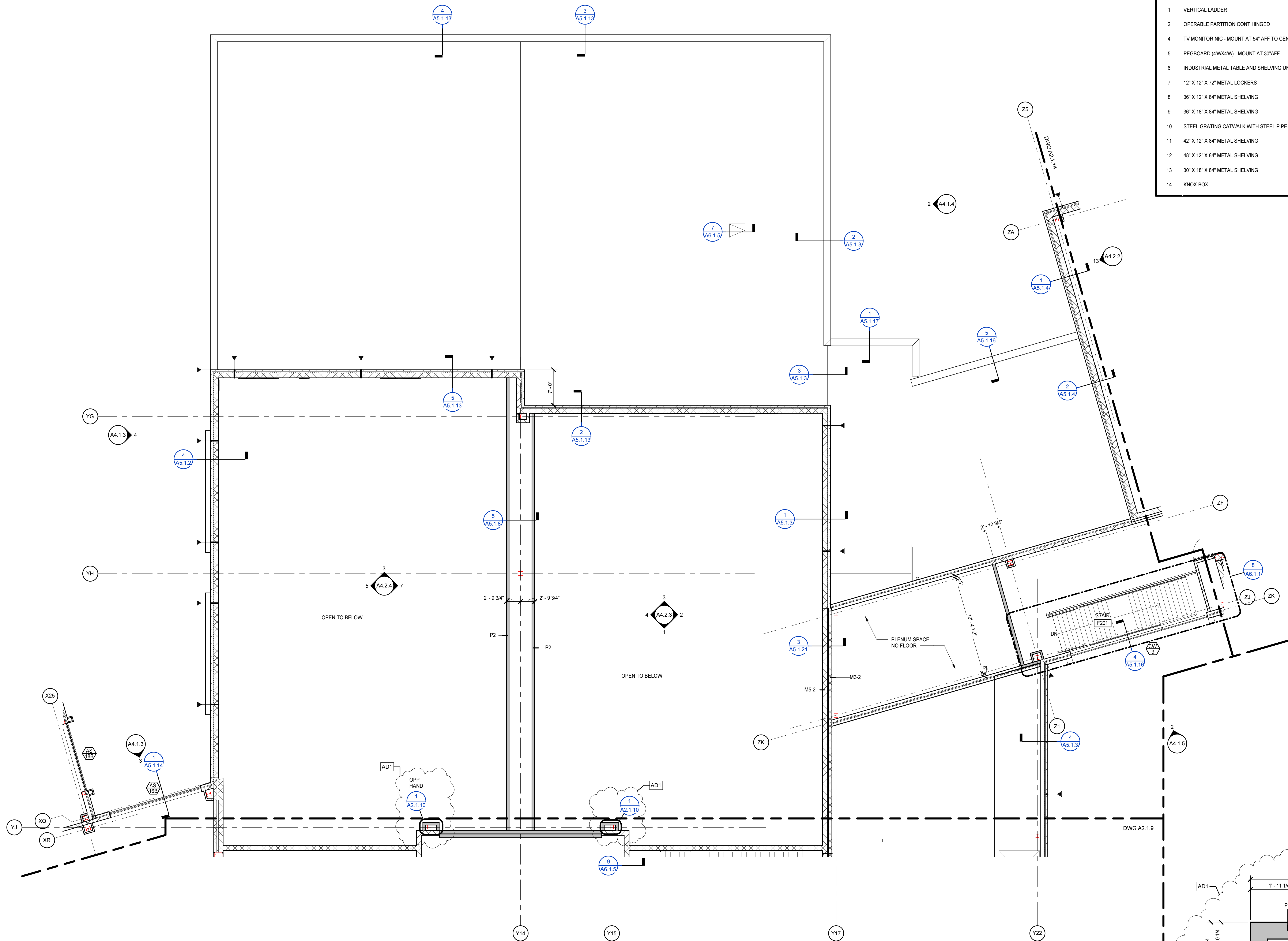
SECOND FLOOR PLAN - PART A

**A2.1.9**

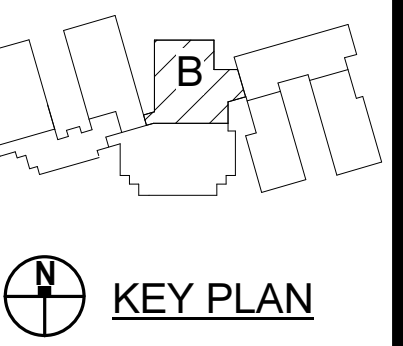
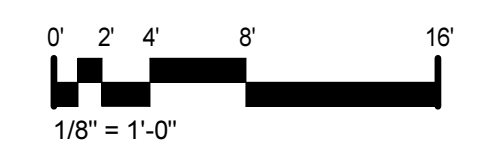
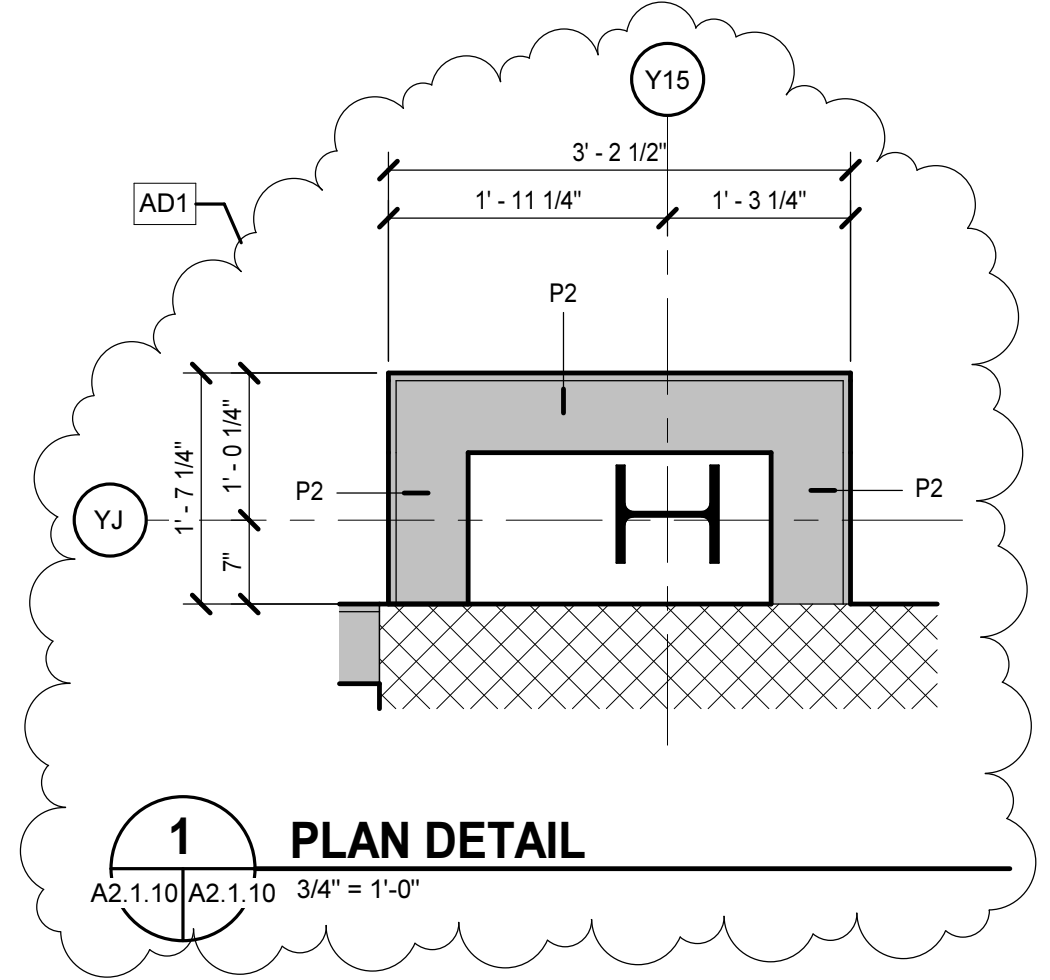


### SECOND FLOOR PLAN - PART B

1/8" = 1'-0"



FLOOR PLAN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A2.1.1 - A2.1.16	
1	VERTICAL LADDER
2	OPERABLE PARTITION CONT HINGED
4	TV MONITOR NIC - MOUNT AT 54" AFF TO CENTER OF SCREEN
5	PEGBOARD (4'WX4'H) - MOUNT AT 30" AFF
6	INDUSTRIAL METAL TABLE AND SHELVING UNIT, REFER TO DIV 12
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8	36" X 12" X 84" METAL SHELVING
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10	STEEL GRATING CATWALK WITH STEEL PIPE GUARD RAILING
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13	30" X 18" X 84" METAL SHELVING
14	KNOX BOX



PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1



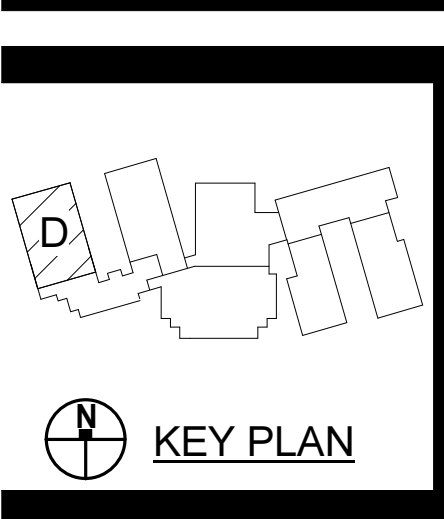
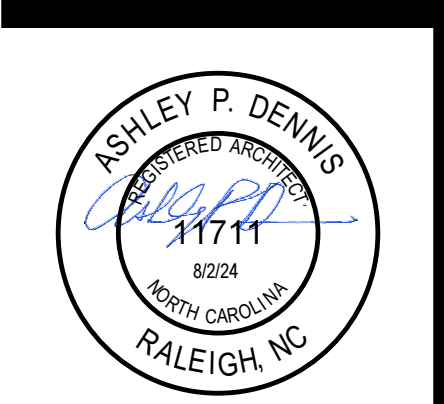
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FLOOR PLAN KEYNOTES	
REPRESENTED BY [N]	
APPLIES TO DRAWINGS A2.1.1 - A2.1.16	
1	VERTICAL LADDER
2	OPERABLE PARTITION CONT HINGED
4	TV MONITOR NIC - MOUNT AT 54" AFF TO CENTER OF SCREEN
5	PEGBOARD (4WX4W) - MOUNT AT 30" AFF
6	INDUSTRIAL METAL TABLE AND SHELVING UNIT. REFER TO DIV 12
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12	48" X 12" X 84" METAL SHELVING
13	30" X 18" X 84" METAL SHELVING
14	KNOX BOX

**MOSELEYARCHITECTS**

911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA 27603  
 PHONE (919) 840-0051  
 MOSELEYARCHITECTS.COM



**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

**SECOND FLOOR PLAN - PART D**

1/8" = 1'-0"

SECOND FLOOR PLAN - PART D

**A2.1.12**

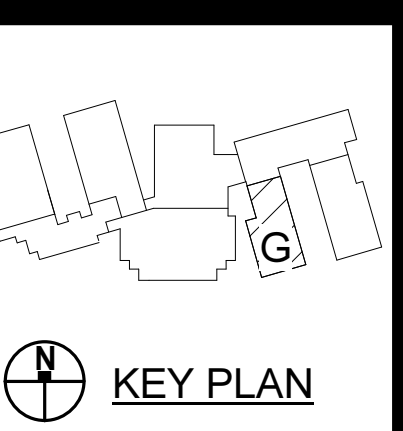
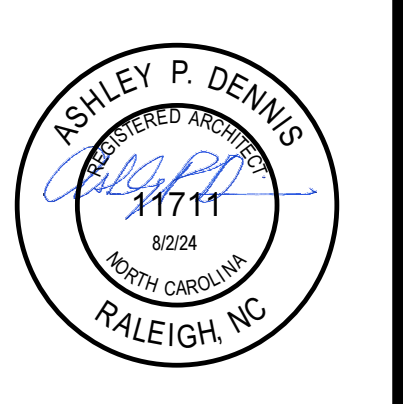


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FLOOR PLAN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A2.1.1 - A2.1.16	
1	VERTICAL LADDER
2	OPERABLE PARTITION CONT HINGED
4	TV MONITOR NIC - MOUNT AT 54" AFF TO CENTER OF SCREEN
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13	30" X 18" X 84" METAL SHELVING
14	KNOX BOX

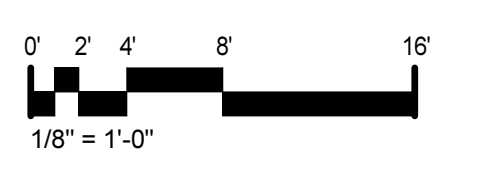
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 911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA, 27603  
 PHONE (919) 840-0951  
 MOSELEYARCHITECTS.COM



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

**SECOND FLOOR PLAN - PART G**  
 1/8" = 1'-0"



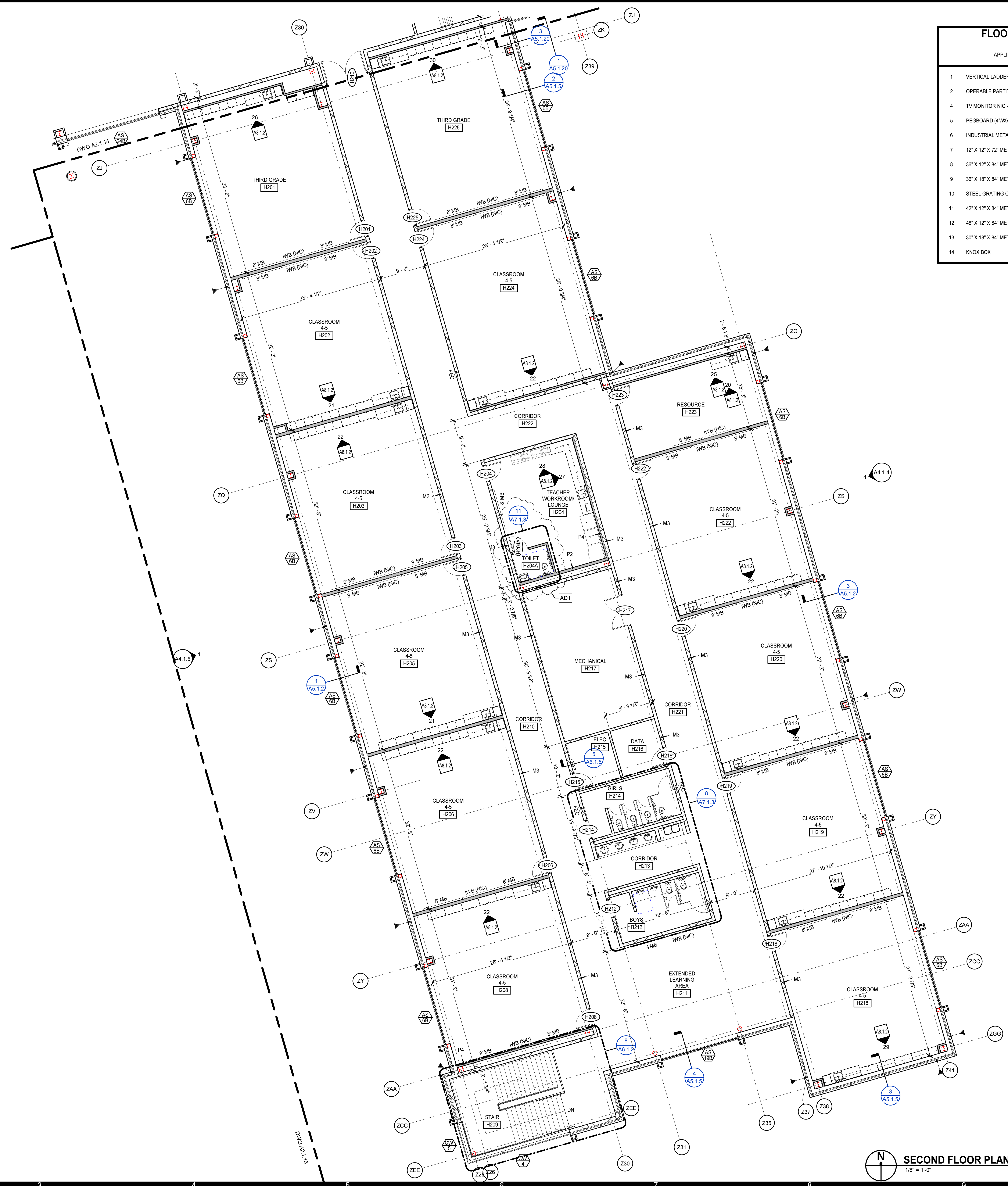
**SECOND FLOOR PLAN - PART G**

**A2.1.15**



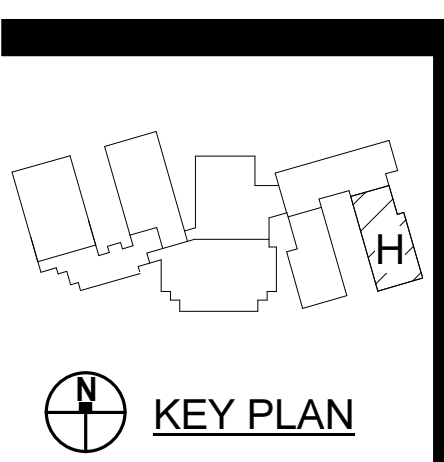
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J  
H  
G  
F  
E  
D  
C  
B  
A



FLOOR PLAN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A2.1.1 - A2.1.16	
1	VERTICAL LADDER
2	OPERABLE PARTITION CONT HINGED
4	TV MONITOR NIC - MOUNT AT 54" AFF TO CENTER OF SCREEN
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12	48" X 12" X 84" METAL SHELVING
13	30" X 18" X 84" METAL SHELVING
14	KNOX BOX

**MOSELEYARCHITECTS**  
 911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA, 27603  
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**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

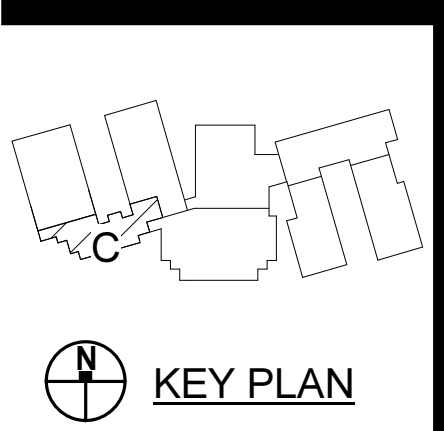
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

SECOND FLOOR PLAN - PART H

**SECOND FLOOR PLAN - PART H**  
 1/8" = 1'-0"

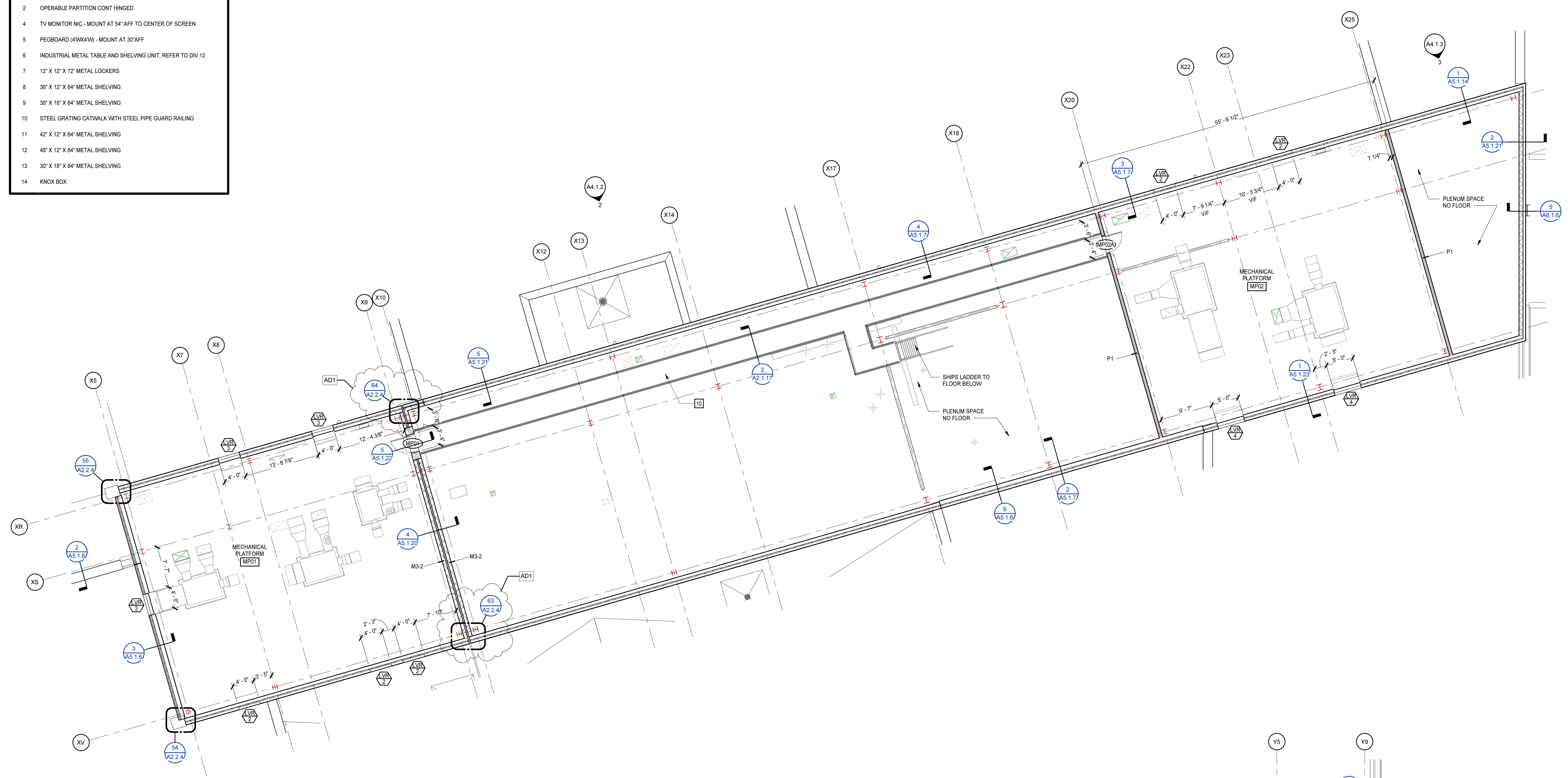
**A2.1.16**



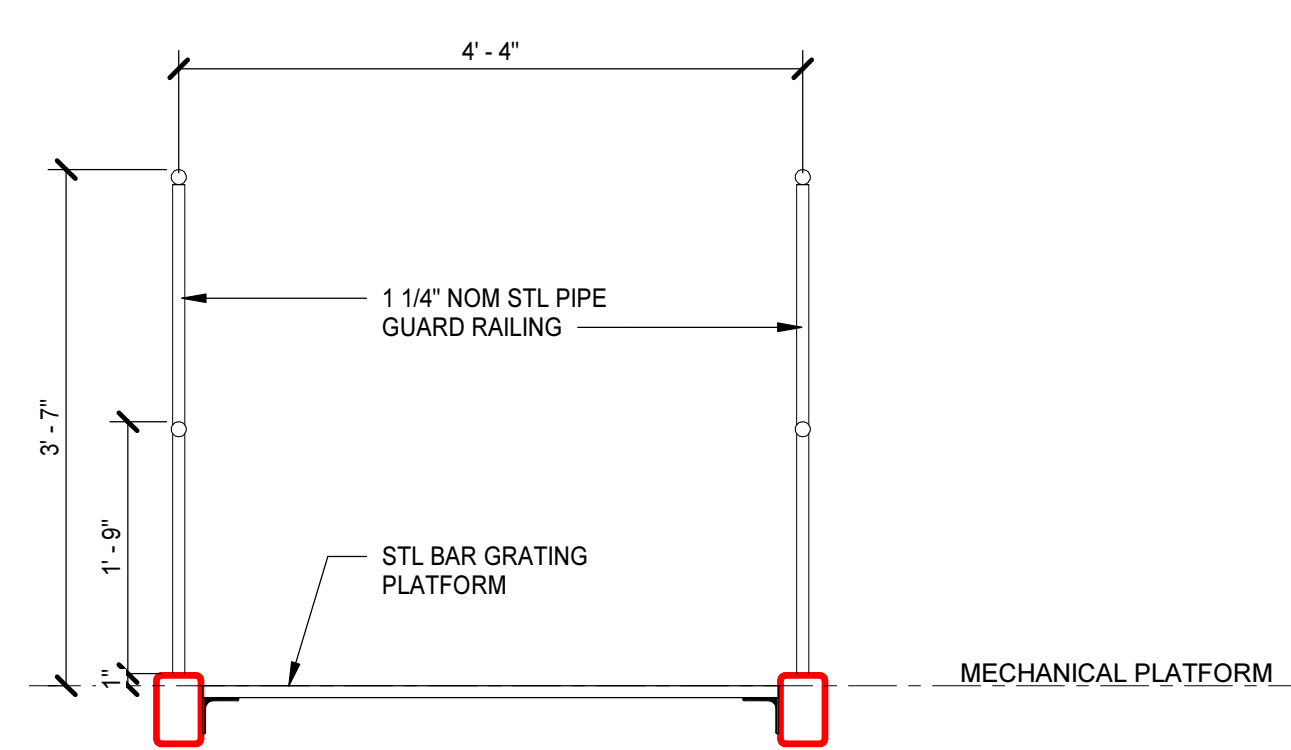


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

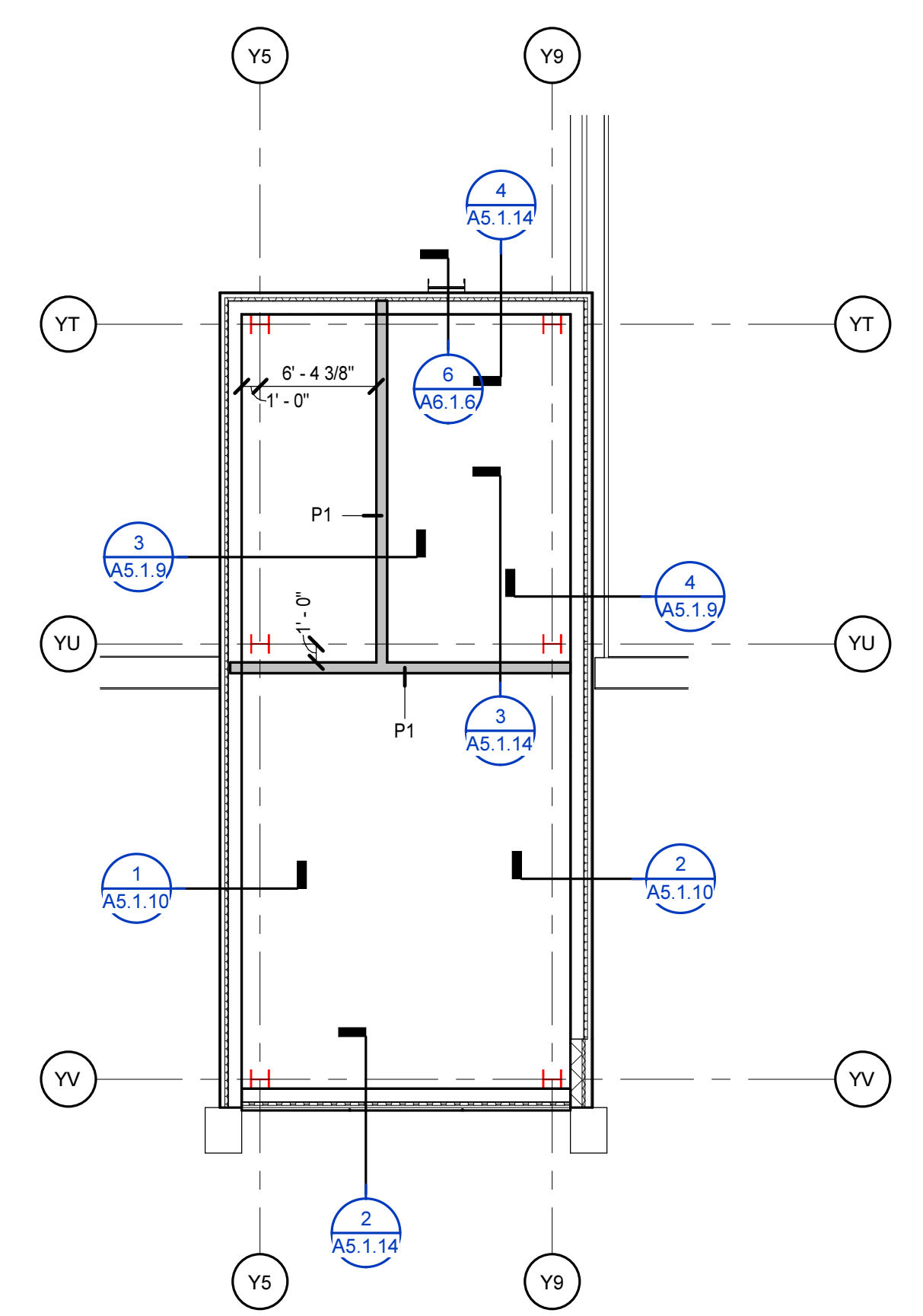
FLOOR PLAN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A2.1.1 - A2.1.16	
1	VERTICAL LADDER
2	OPERABLE PARTITION CONT HINGED
4	TV MONITOR NIC - MOUNT AT 54" AFF TO CENTER OF SCREEN
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14	KNOX BOX



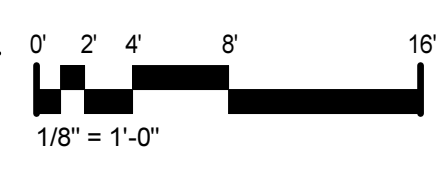
**MECHANICAL PLATFORM PLAN**  
1/8" = 1'-0"



**2 CATWALK SECTION**  
A2.1.17 A2.1.17 3/4" = 1'-0"

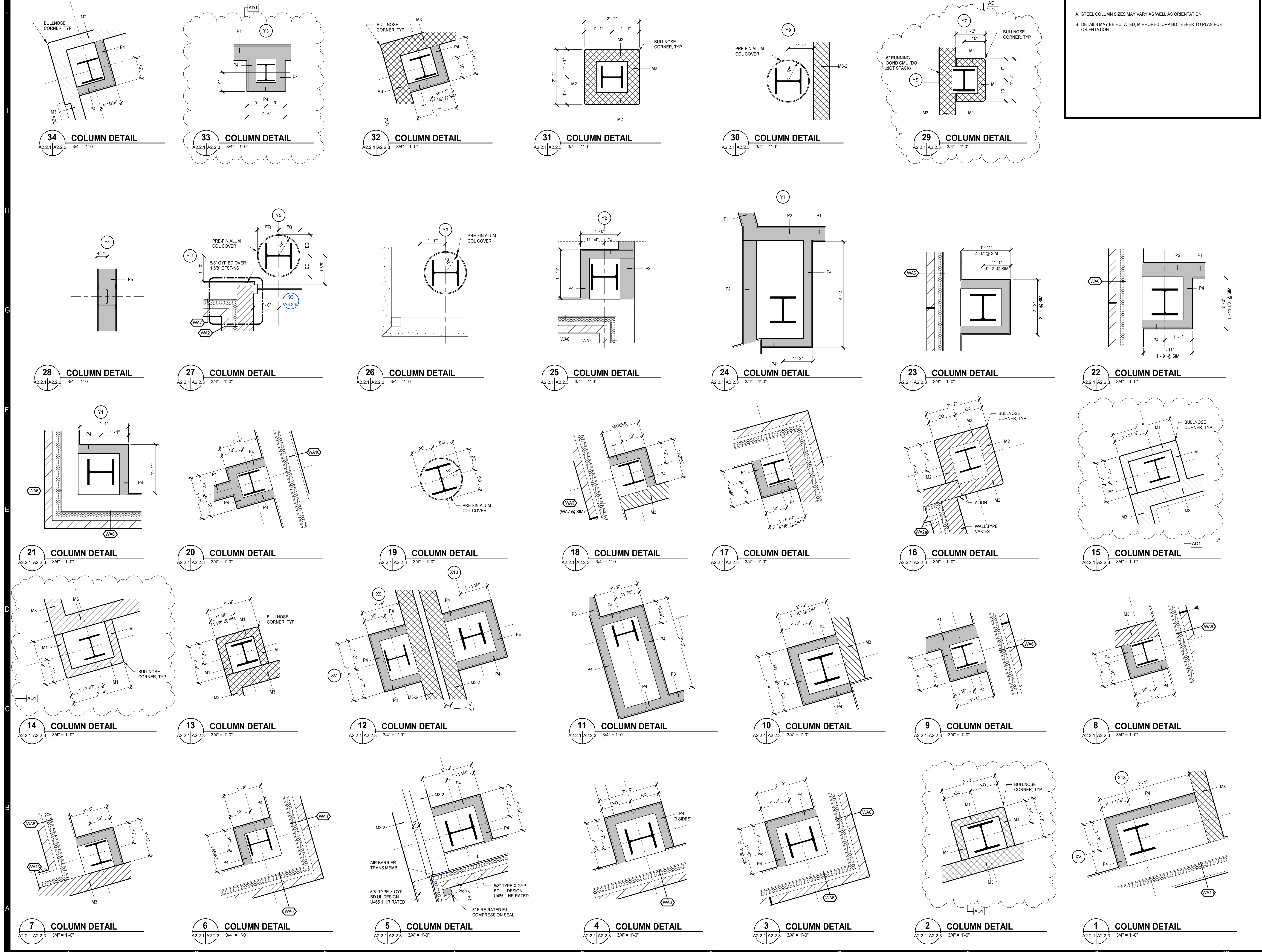


**PART A ENTRANCE HIGH PLAN**  
1/8" = 1'-0"





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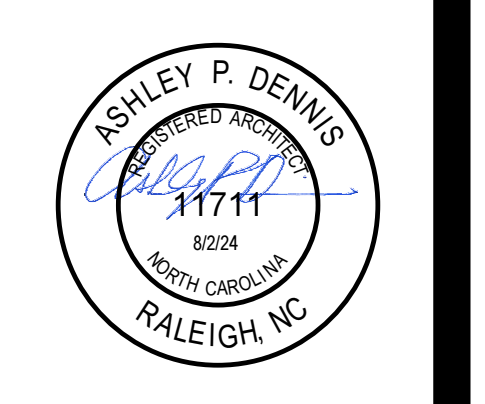
**GENERAL NOTES**

A. STEEL COLUMN SIZES MAY VARY AS WELL AS ORIENTATION.

B. DETAILS MAY BE ROTATED, MIRRORRED, OPP HD. REFER TO PLAN FOR ORIENTATION.

**MOSELEY ARCHITECTS**

911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA 27603  
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**PENDER COUNTY SCHOOLS K-8 SCHOOL**

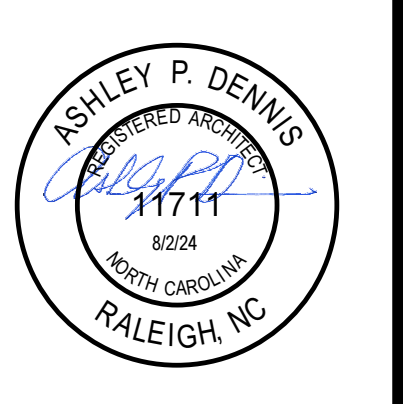
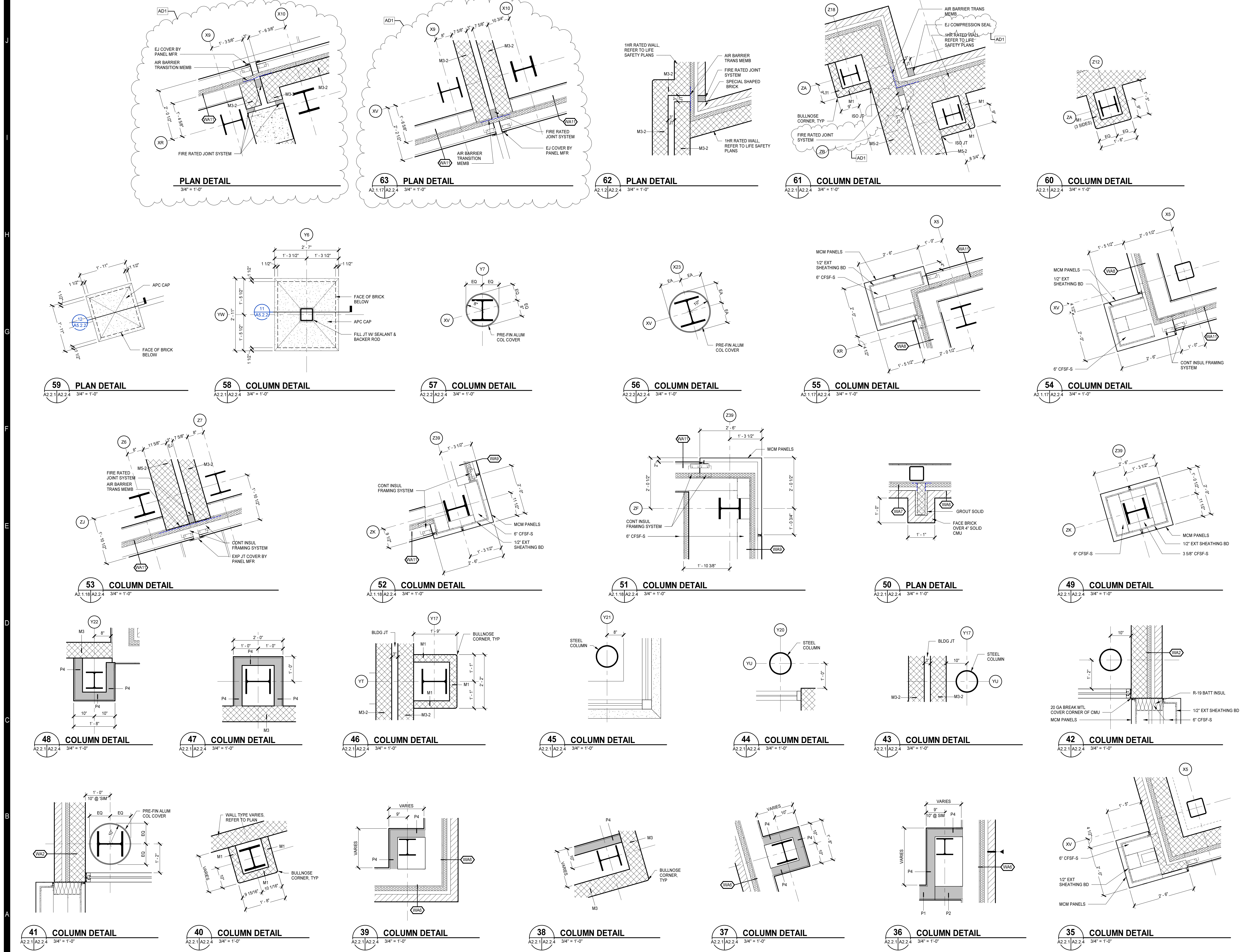
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 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

COLUMN DETAILS

**A2.2.3**





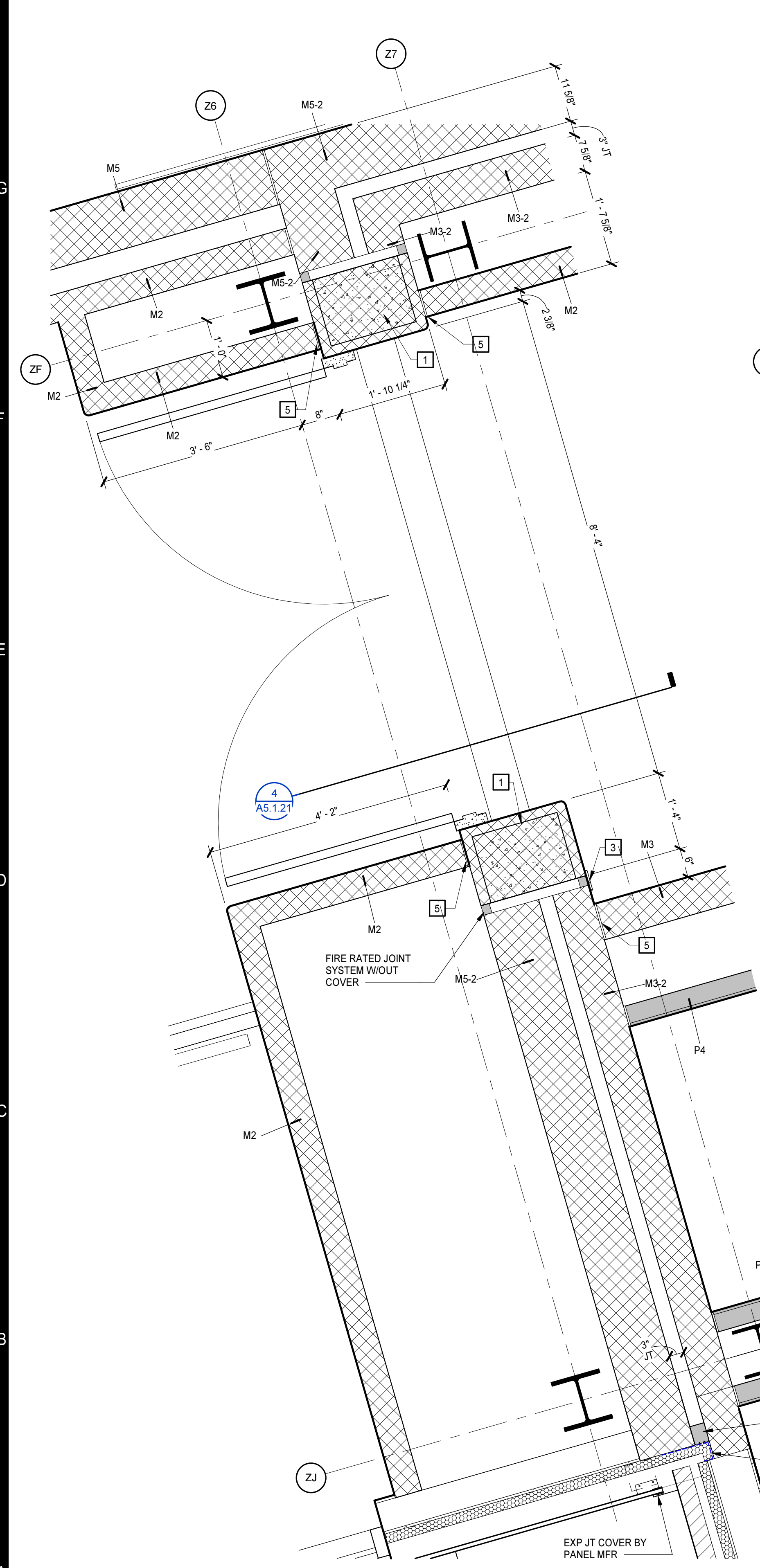
PROJECT NO:	631310
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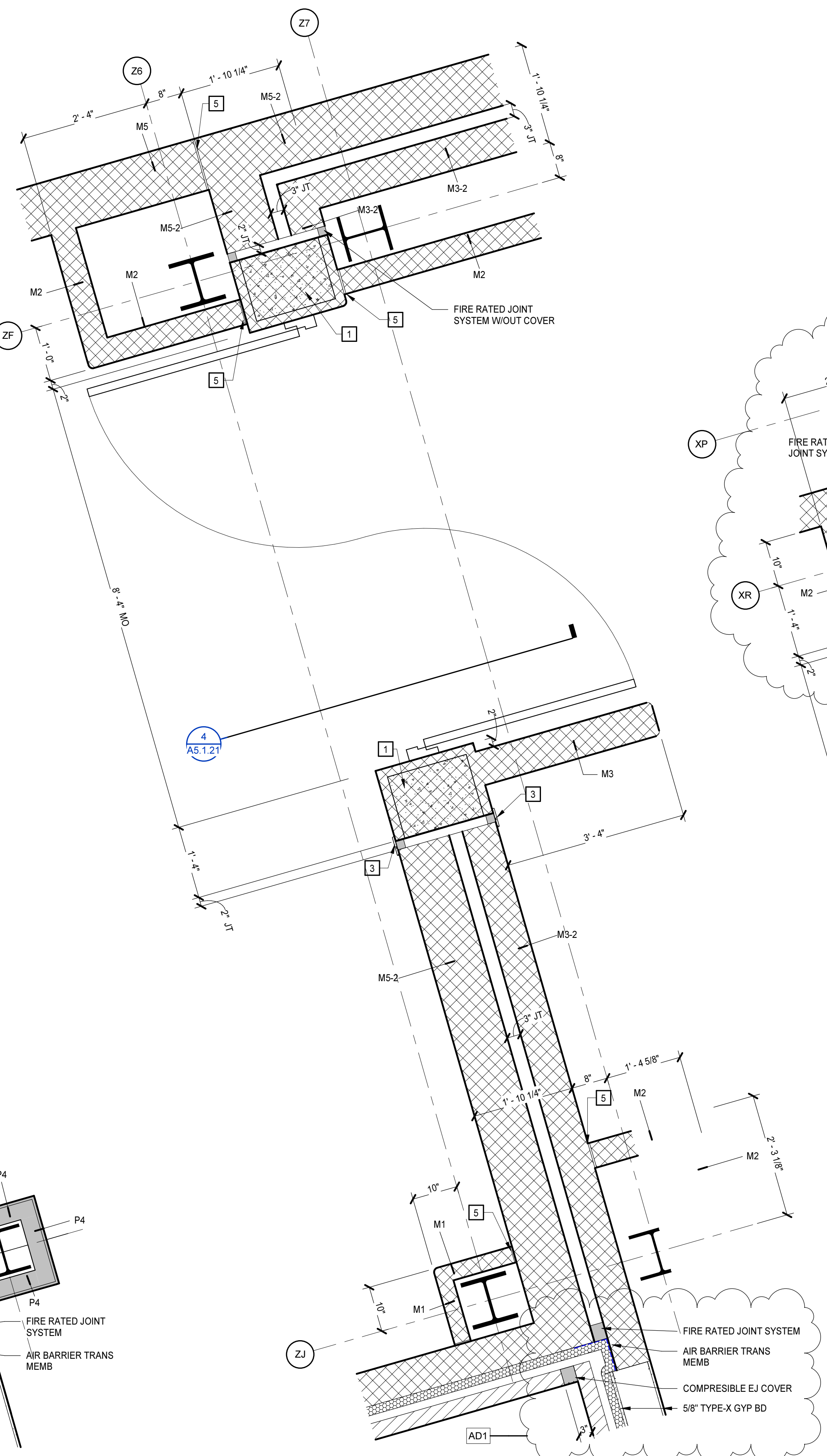




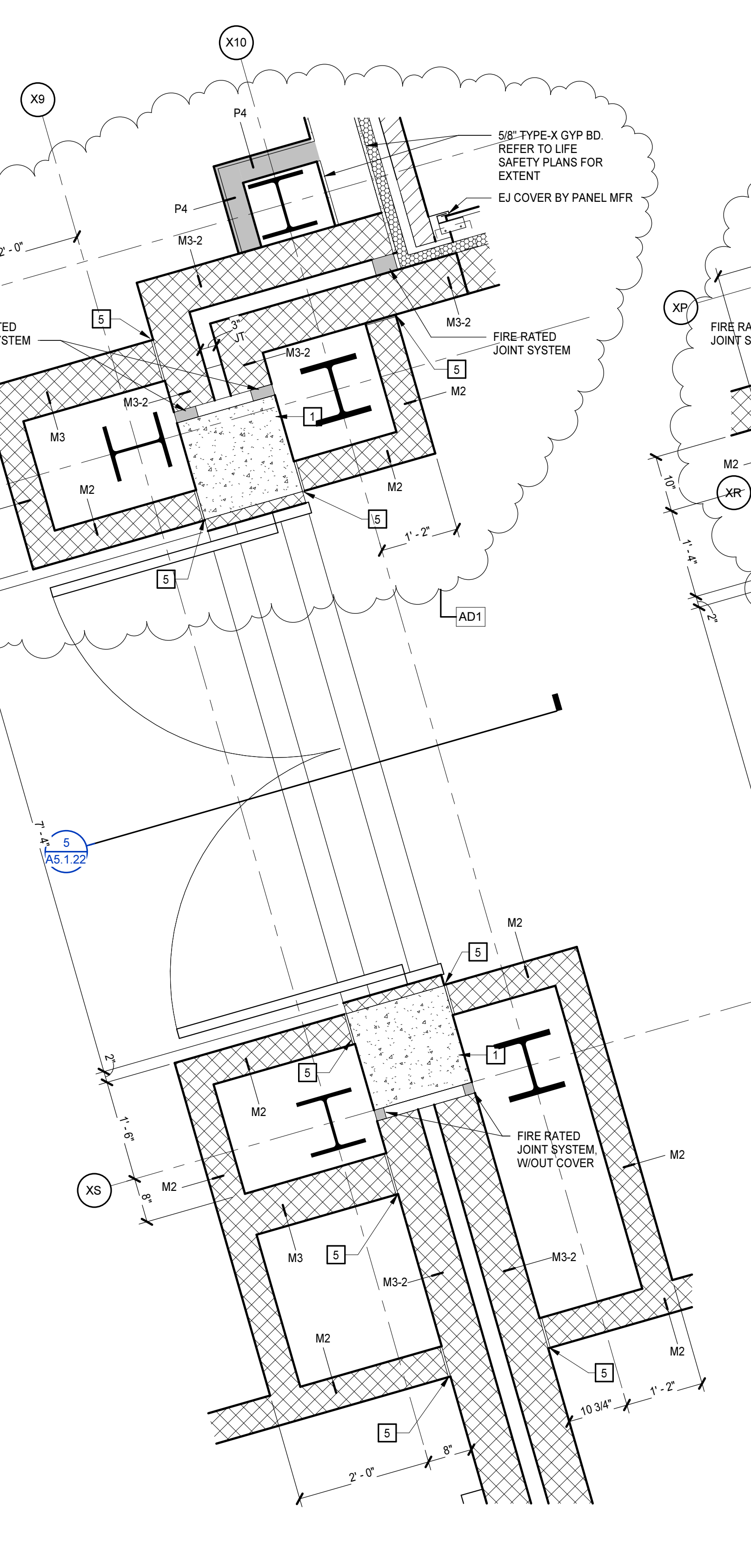
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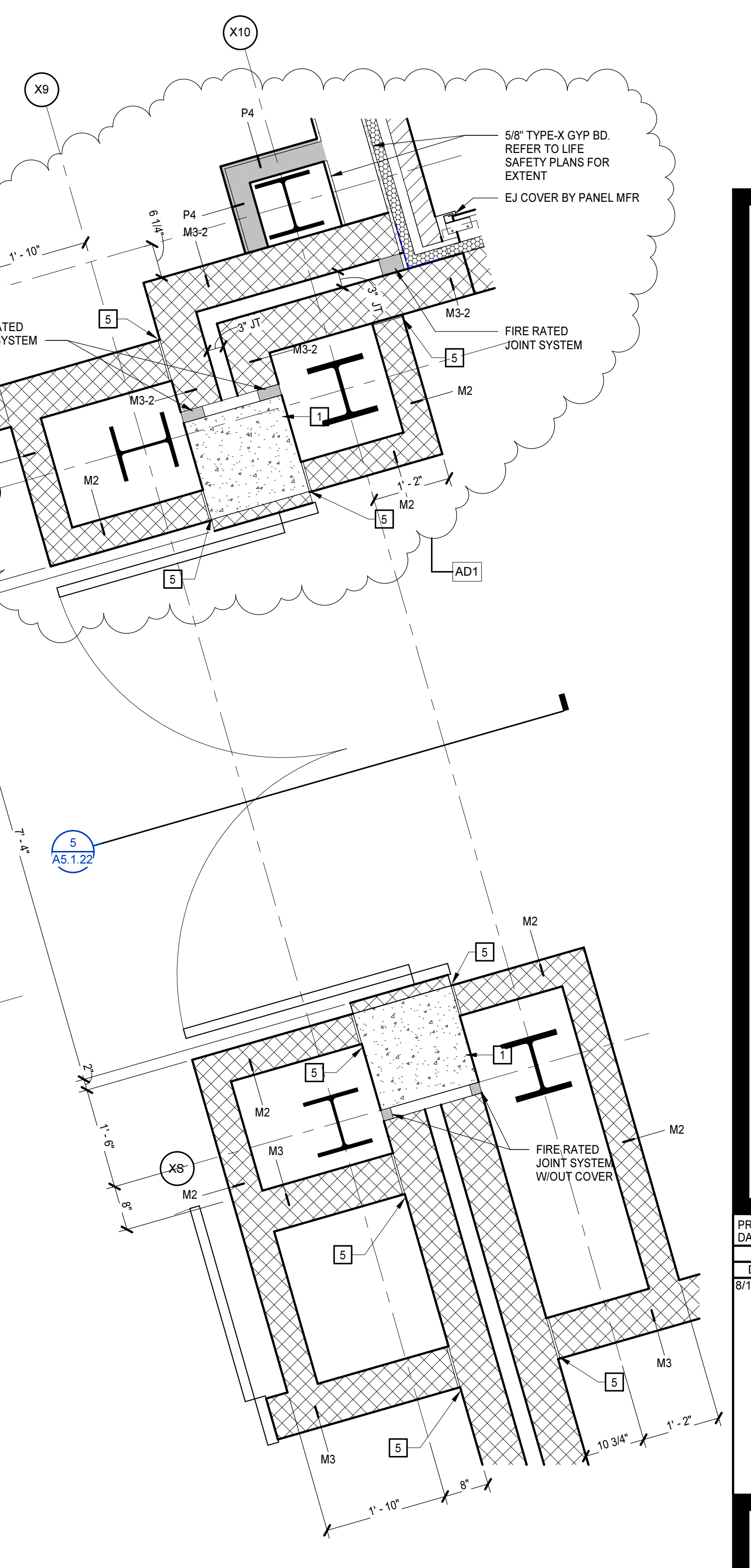
**M** PORTAL F-1 - SECOND FLOOR  
A2.2.2 | A2.2.6 | 3/4" = 1'-0"



**L** PORTAL F-1 - FIRST FLOOR  
A2.2.1 | A2.2.6 | 3/4" = 1'-0"



**K** PORTAL C1 - SECOND FLOOR  
A2.2.2 | A2.2.6 | 3/4" = 1'-0"



**J** PORTAL C1 - FIRST FLOOR  
A2.2.1 | A2.2.6 | 3/4" = 1'-0"

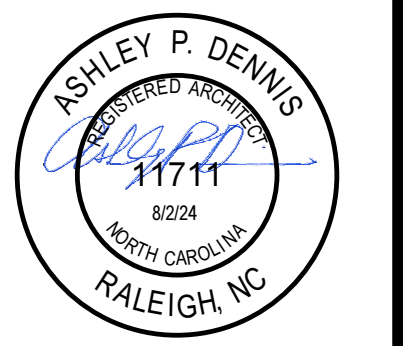
PORTAL DETAILS

# PENDER COUNTY SCHOOLS K-8 SCHOOL

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

# A2.2.6





### FINISH SCHEDULE

NUMBER	NAME	FLOOR	BASE	WALLS				CEILING	NOTES
				NORTH	EAST	SOUTH	WEST		
A101	LOBBY/COMMONS	TERR-E1,E2,E3,E4	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	AC-2/ GB PT	
A102	CONCESSIONS	TERR-E2	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	AC-2/ GB PT	
A103	LOBBY	C-TILE-B/TERR-E1,E2,E3	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	3
A104	WAITING/RECEPTION	C-TILE-A1	RB	A-PT	PT	PT	PT	AC-1/ GB PT	
A105	CONFERENCE	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A106	CLINIC	RES-B	RES-B	EXP PT	EXP PT	EXP PT	EXP PT	AC-1	7
A107	TERRAZZO	RES-B	RES-B	EXP A-PT	EXP PT	EXP PT	EXP PT	AC-1	7
A108	SECRETARY	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A109	PRINCIPAL	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A110	TOILET	P-TILE-1	P-TILE-1	EXP PT	EXP PT	EXP PT	EXP PT	AC-1	8
A111	TOILET	P-TILE-1	P-TILE-1	EXP PT	EXP PT	GWT-1	EXP PT	AC-1	8
A112	STORAGE	EVC-1	RB	PT	PT	PT	PT	AC-1	
A113	CORRIDOR	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A117	SRO	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A118	CORR	TERR-E1,E2,E3	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	AC-2/ GB PT	
A119	RECORDS	EVC-1	RB	PT	PT	PT	PT	AC-1	
A120	BOOKKEEPER	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A121	CORR	C-TILE-A1	RB	PT	PT	PT	PT	AC-1/ GB PT	
A122	BREAK AREA	EVC-1	RB	PT	PT	PT	PT	AC-1	
A123	A.P.	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A124	WORKROOM	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A125	BOOK STORAGE	EVC-1	RB	PT	PT	PT	PT	AC-1	
A126	GUIDANCE	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A127	G. STOR	EVC-1	RB	PT	PT	PT	PT	AC-1	
A128	GUID OFF	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A129	GUID OFF	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A130	GUID CONF	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A131	GUID OFF	C-TILE-A1	RB	PT	PT	PT	PT	AC-1	
A132	EQUIP	CONC-SLR	RB	PT	PT	PT	PT	AC-1	
A133	STAIR	RSTR/SR/SF	RB	EXP A-PT	EXP PT	EXP PT	EXP PT	EXP PT	
A134	CORRIDOR	TERR-E1,E2,E3	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	EXP PT	
A135	DATA	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
A136	ELEC	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
A137	BOYS	RES-B	RES-B	EXP A-PT/EXP PT	EXP A-PT	EXP A-PT/EXP PT	EXP PT	AC-2	7
A138	BOYS	RES-B	RES-B	EXP A-PT/EXP PT	EXP A-PT	EXP A-PT/EXP PT	EXP PT	AC-2	7
A139	JANITOR	CONC-SLR	RB	PT	PT	PT	PT	AC-1	
A140	PLATFORM	EVC-1	RB	PT	PT	PT	PT	EXPC PT	
A140	RAMP	RSF	RB	PT	PT	PT	PT	EXPC PT	
A141	RAMP	RSF	RB	PT	PT	PT	PT	EXPC PT	
A141	MS GYMNASIUM	C-TILE-A1	EXP PT/AWP-G,H,I	EXP PT/AWP-G,H,I	EXP PT/AWP-G,H,I	EXP PT/AWP-G,H,I	EXP PT/AWP-G,H,I	EXP PT/AWP-G,H,I	
A143	TOILET	RES-B	RES-B	EXP A-PT	EXP PT	EXP PT	EXP PT	AC-3	7
A144	GIRLS LOCKER ROOM	RES-B	RES-B	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	7
A145	OFFICE	RES-B	RES-B	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	7
A146	LAUNDRY	CONC-SLR	RB	PT	PT	PT	PT	AC-3	7
A147	OFFICE	RES-B	RES-B	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	7
A148A	BOYS LOCKER ROOM	RES-B	RES-B	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	7
A149	TOILET	RES-B	RES-B	EXP A-PT	EXP PT	EXP PT	EXP PT	AC-3	7
A150	GYM STORAGE	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
A151	STAIR	RSTR/SR/SF	RB	EXP PT	EXP PT	EXP PT	EXP PT	EXP PT	
A152	GIRLS	RES-B	RES-B	EXP A-PT	EXP PT	EXP A-PT/EXP PT	EXP PT	AC-2	7
A153	BOYS	RES-B	RES-B	EXP A-PT	EXP PT	EXP A-PT/EXP PT	EXP PT	AC-2	7
A154	GUIDANCE	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A155	G. STOR	EVC-1	RB	PT	PT	PT	PT	AC-1	
A156	STUDENT SERVICES	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A157	GUID CONF	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A158	G. OFFICE	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A159	A.P.	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A160	G OFFICE	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A161	G OFFICE	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A162	WORK/ BREAK ROOM	EVC-1	RB	PT	PT	PT	PT	AC-1	
A163	RECORDS	EVC-1	RB	PT	PT	PT	PT	AC-1	
A164	A.P.	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A165	BOOKKEEPER	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A166	CORRIDOR	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A167	STORAGE	EVC-1	RB	PT	PT	PT	PT	AC-1	
A168	TOILET	P-TILE-1	P-TILE-1	EXP PT	EXP PT	EXP PT	EXP PT	AC-1	
A169	TOILET	P-TILE-1	P-TILE-1	EXP PT	EXP PT	GWT-1	EXP PT	AC-1	
A170	PRINCIPAL	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A171	SECRETARY	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A172	CONFERENCE	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A173	TOILET	RES-B	RES-B	EXP A-PT	EXP PT	EXP PT	EXP PT	AC-1	7
A174	WAITING	RES-B	RES-B	EXP PT	EXP PT	EXP PT	EXP PT	AC-1	7
A175	CONFERENCE	C-TILE-A2	RB	PT	PT	PT	PT	AC-1	
A176	CORRIDOR	TERR-E1,E2,E4	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	AC-2/ GB PT	
A179	LOBBY	C-TILE-B/TERR-E1,E2,E4	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	3
A180	STAIR	RSTR/SR/SF	RB	EXP PT	EXP PT	EXP PT	EXP PT	EXP PT	
A181	DINING STORAGE	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
A182	MS DINING	EVC-1.4.5,6,7	RES-A	EXP PT/AWP-C,I,J,K	EXP PT/AWP-C,I,J,K	EXP PT/AWP-C,I,J,K	EXP PT/AWP-C,I,J,K	EXP PT/AWP-C,I,J,K	
B102	ES DINING LINES	RES-A	RES-A	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	
B103	DISH ROOM	RES-A	RES-A	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	
B104	KITCHEN	RES-A	RES-A	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	
B105	ES SERVING LINES	RES-A	RES-A	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	
B106	DISH ROOM	RES-A	RES-A	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	
B107	JANITOR	CONC-SLR	RB	PT	PT	PT	PT	AC-3	
B108	DRY STORAGE	RES-A	RES-A	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	
B109	TOILET	RES-B	RES-B	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	7
B110	LOCKER	RES-A	RES-A	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	
B111	OFFICE	RES-A	RES-A	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	
B112	ELECTRICAL	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
B113	EM ELEC	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
B114	CORR	RES-A	RES-A	EXP PT	EXP PT	EXP PT	EXP PT	AC-3	
B115	RECEIVING	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
B116	CORRIDOR	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
B117	ES DINING	EVC-1.4.5,6,7	RES-A	EXP PT/AWP-C,I,J,K	EXP PT/AWP-C,I,J,K	EXP PT/AWP-C,I,J,K	EXP PT/AWP-C,I,J,K	EXP PT/AWP-C,I,J,K	
B118	CORRIDOR	TERR-E1,E2,E4	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	
B119	MECHANICAL ELECTRICAL	CONC-SLR	RB	PT	PT	PT	PT	EXPC PT	
B120	CORRIDOR	TERR-E1,E2,E4	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	AC-2/ GB PT	
B121	STAIR	RSTR/SR/SF	RB	EXP PT	EXP PT	EXP PT	EXP PT	EXP PT	
B122	ES ART	RES-B	RES-B	A-PT	PT	PT	PT	AC-1	
B123	KILN	CONC-SLR	RB	PT	PT	PT	PT	AC-1	
B124	CORRIDOR	TERR-E1,E2,E4	TERR-E1	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	
C101	STAIR	RSTR/SR/SF	RB	EXP PT	EXP PT	EXP PT	EXP PT	EXP PT	
C102	CLASSROOM	EVC-1.4,6,7	RB	A-PT	PT	PT	PT	AC-1	9
C103	CORRIDOR	EVC-1.7	RB	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	
C104	RESOURCE	EVC-1.4	RB	PT	PT	A-PT	PT	AC-1	
C105	BOOK STORAGE	EVC-1	RB	EXP PT	EXP PT	EXP PT	EXP PT	AC-1	
C106	CORRIDOR	EVC-1.7	RB	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	
C107	CLASSROOM	EVC-1.4,6,7	RB	A-PT	PT	PT	PT	AC-1	9
C108	MS MUSIC	EVC-1.4	RB	PT/AWP-F	A-PT	PT/AWP-F	PT/AWP-F	AC-1/ACP-4	5
C109	STORAGE	EVC-1	RB	PT	PT	PT	PT	AC-1	
C110	EXCEPTIONAL S/C	EVC-1.4,6,7	RB	A-PT/PT	PT	PT	PT	AC-1	
C110A	CALM	C-TILE-J	RB	A-PT	PT	PT	PT	AC-1	
C112	BREAK	EVC-1	RB	A-PT	PT	PT	PT	AC-1	
C113	CHANGING	RES-B	RES-B	PT	PT	PT	PT	AC-3	7
C114	TOILET	RES-B	RES-B	EXP A-PT/EXP PT	EXP PT	EXP PT	EXP PT	AC-3	7
C115	EXCEPTIONAL S/C	EVC-1.3,6,7	RB	A-PT/PT	PT	PT	PT	AC-1	
C115A	CALM	C-TILE-J	RB	PT	PT	A-PT	PT	AC-1	
C116	BOYS	RES-B	RES-B	EXP A-PT	EXP A-PT/EXP PT	EXP PT	EXP A-PT/EXP PT	AC-2	7
C117	GIRLS	RES-B	RES-B	EXP A-PT	EXP A-PT/EXP PT	EXP PT	EXP A-PT/EXP PT	AC-2	7
C118	CORRIDOR	TERR-E1,E2,E3	TERR-E1	EXP PT/RWC	EXP PT	EXP PT	EXP PT	AC-2/ GB PT	
C119	MECHANICAL	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
C120	HEALTH CLASSROOM	EVC-1.3,6,7	RB	PT	PT	A-PT	PT	AC-1	9
C121	CLASSROOM	EVC-1.3,6,7	RB	A-PT	PT	PT	PT	AC-1	9
C122	CORR	EVC-1.3	RB	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	
C123	BOOK STORAGE	EVC-1	RB	EXP PT	EXP PT	EXP PT	EXP PT	AC-1	
C124	RESOURCE	EVC-1.7	RB	PT	PT	A-PT	PT	AC-1	
C125	CORR	EVC-1.3	RB	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	
C126	CORRIDOR	TERR-E1,E2,E3	TERR-E1	EXP PT/RWC	EXP PT	EXP PT	EXP PT	AC-2/ GB PT	
C127	TOILET	P-TILE-1	P-TILE-1	EXP PT	EXP PT	GWT-1	EXP PT	AC-2	8
C128	TOILET	P-TILE-1	P-TILE-1	EXP PT	EXP PT	GWT-1	EXP PT	AC-2	8
D101	CLASSROOM	EVC-1.4,6,7	RB	A-PT	PT	PT	PT	AC-1	
D102	CLASSROOM	EVC-1.4,6,7	RB	A-PT	PT	PT	PT	AC-1	
D103	EXTENDED LEARNING AREA	C-TILE-11.2,J,EVCT-1	RB	EXP PT	EXP PT	EXP A-PT/AWP-A	EXP PT	AC-2/ GB PT	9
D104	JAN	CONC-SLR	RB	PT	PT	PT	PT	AC-1	
D105	BOYS	RES-B	RES-B	EXP A-PT/EXP PT	EXP PT	EXP A-PT/EXP PT	EXP A-PT	AC-2	7
D106	GIRLS	RES-B	RES-B	EXP A-PT/EXP PT	EXP A-PT	EXP A-PT/EXP PT	EXP PT	AC-2	7
D107	SCIENCE LAB	EVC-1.4	RB	A-PT	PT	PT	PT	AC-1	9
D108	CORRIDOR	EVC-1.7	RB	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	
D109	SCIENCE LAB	EVC-1.4	RB	PT	PT	A-PT	PT	AC-1	9
D110	PREP ROOM	EVC-1	RB	PT	PT	PT	PT	AC-1	
D111	ELEC	CONC-SLR	RB	PT	PT	PT	PT	EXPC	
D112	DATA	CONC-SLR	RB	PT	PT	PT	PT	AC-1	
D113	CLASSROOM	EVC-1.4,6,7	RB	A-PT	PT	PT	PT	AC-1	9
D114	RESOURCE	EVC-1.4	RB	A-PT	PT	PT	PT	AC-1	9
D115	CLASSROOM	EVC-1.4,6,7	RB	PT	PT	A-PT	PT	AC-1	9
D116	STAIR	RSTR/SR/SF	RB	EXP PT	EXP PT	EXP PT	EXP PT	EXP PT	
D117	EXTENDED LEARNING AREA	C-TILE-11.2,J,EVCT-1	RB	EXP PT	EXP PT	EXP A-PT/AWP-A	EXP PT	AC-2/ GB PT	9
D118	CLASSROOM	EVC-1.4,6,7	RB	PT	PT	A-PT	PT	AC-1	9
D119	CLASSROOM	EVC-1.4,6,7	RB	PT	PT	A-PT	PT	AC-1	9
D120	MECHANICAL	CONC-SLR	RB	PT	PT	PT	PT	EXPC	

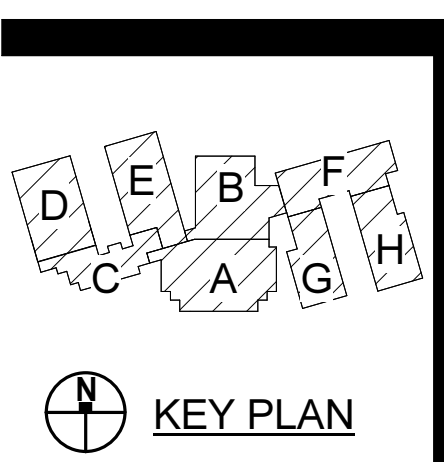
### FINISH SCHEDULE

NUMBER	NAME	FLOOR	BASE	WALLS				CEILING	NOTES
				NORTH	EAST	SOUTH	WEST		
D121	SCIENCE LAB	EVC-1.4	RB	PT	PT	A-PT	PT	AC-1	9
D122	SCIENCE LAB	EVC-1.4	RB	A-PT	PT	PT	PT	AC-1	9
D123	CORRIDOR	EVC-1.7	RB	EXP PT	EXP PT	EXP PT	EXP PT	AC-2	
D124	CLASSROOM	EVC-1.4,6,7	RB	PT	PT	A-PT	PT	AC-1	9
D125	CLASSROOM	EVC-1.4,6,7	RB	PT	PT	PT	PT	AC-1	9
D126	TEACHER WORKROOM/ LOUNGE	C-TILE-A1/EVCT-1	RB	PT	PT	PT	A-PT	AC-1	









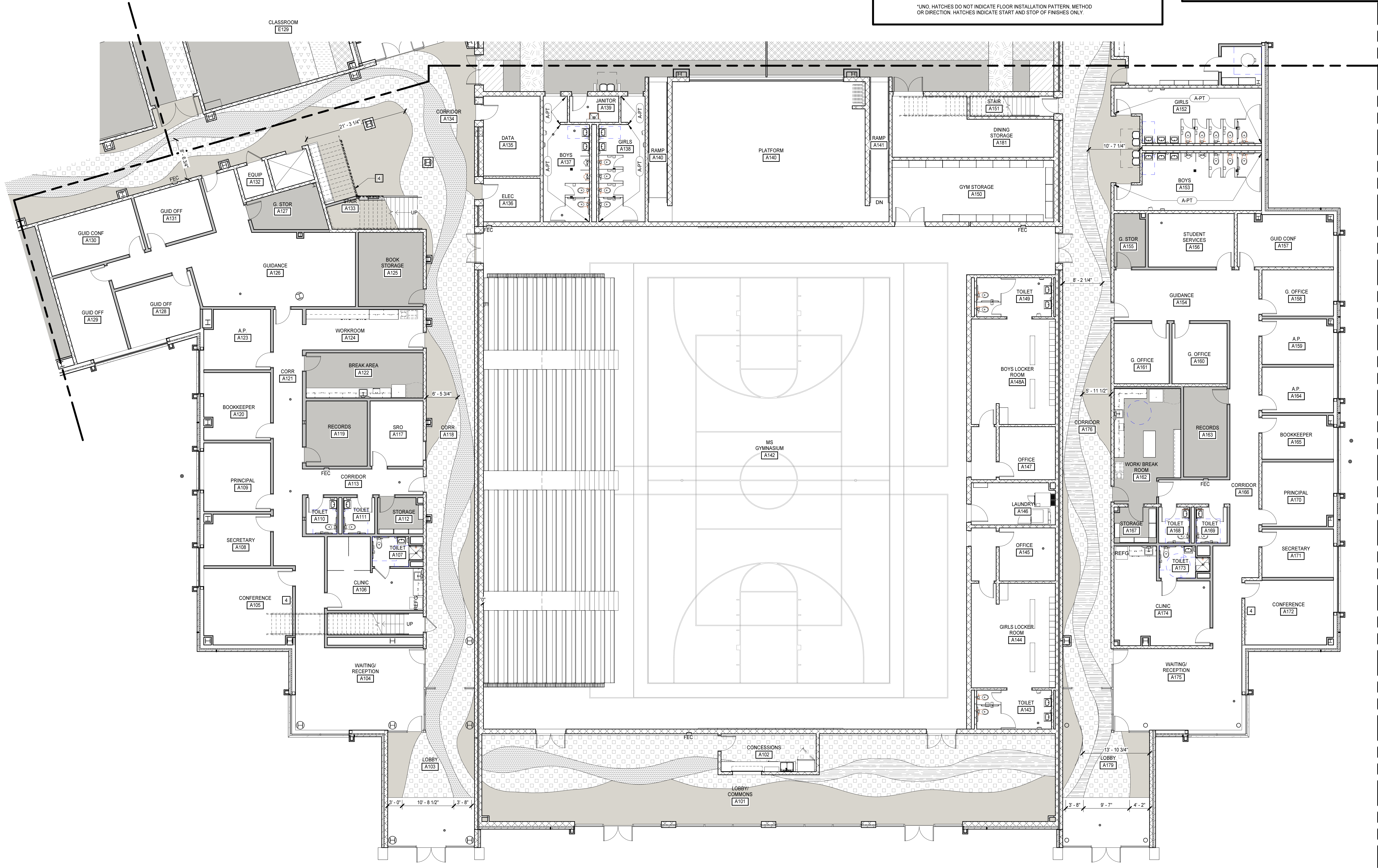
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

FLOOR PATTERN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A3.0.1 - A3.0.n	
1	CUSTOM GRAPHIC PRINTED ON IRVC - 4'-0" AFF, ALIGN TO TOP OF DOOR FRAME
2	ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
3	ACOUSTIC WALL PANEL (6WX4H) - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME, CENTER ON WALL
4	PAINT EXPOSED SURFACES OF STAIR AND RAILING
5	ALIGN EDGE OF FLOORING WITH EDGE OF WALL

FINISH PLAN LEGEND			
[Symbol]	EVCT-1	[Symbol]	C-TILE-41
[Symbol]	EVCT-2	[Symbol]	C-TILE-42
[Symbol]	EVCT-3	[Symbol]	C-TILE-43
[Symbol]	EVCT-4	[Symbol]	C-TILE-44
[Symbol]	EVCT-5	[Symbol]	C-TILE-45
[Symbol]	EVCT-6	[Symbol]	C-TILE-46
[Symbol]	EVCT-7	[Symbol]	C-TILE-J
[Symbol]		[Symbol]	TERR-E1
		[Symbol]	TERR-E2
		[Symbol]	TERR-E3
		[Symbol]	TERR-E4
		[Symbol]	TERR-E5
		[Symbol]	TERR-E6

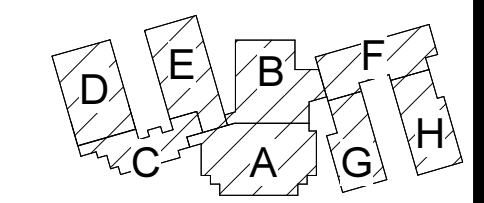
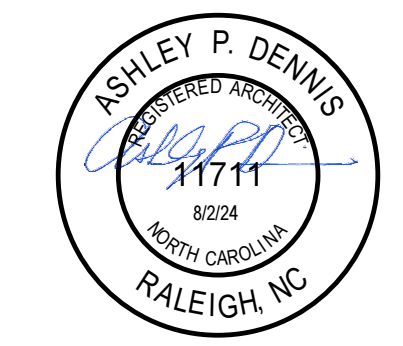
\*UNO. HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN, METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

FLOOR PATTERN GENERAL NOTES	
A.	DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.
B.	DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".
C.	PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/16" AT CRACKS GREATER THAN 1/16".
D.	PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/16" AT CRACKS GREATER THAN 1/16".
E.	WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.
F.	DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.
G.	FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH. PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.
H.	COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS.



**FIRST FLOOR FINISH PATTERN PLAN - PART A**  
 1/8" = 1'-0"





KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

FIRST FLOOR FINISH  
 PLAN - PART B

**A3.0.4**

**FLOOR PATTERN KEYNOTES**

REPRESENTED BY [Symbol]  
 APPLIES TO DRAWINGS A3.0.1 - A3.0.n

- CUSTOM GRAPHIC PRINTED ON IRWC - 4'-0" AFF. ALIGN TO TOP OF DOOR FRAME.
- ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
- ACOUSTIC WALL PANEL (8'WX4') - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME, CENTER ON WALL
- PAINT EXPOSED SURFACES OF STAIR AND RAILING
- ALIGN EDGE OF FLOORING WITH EDGE OF WALL

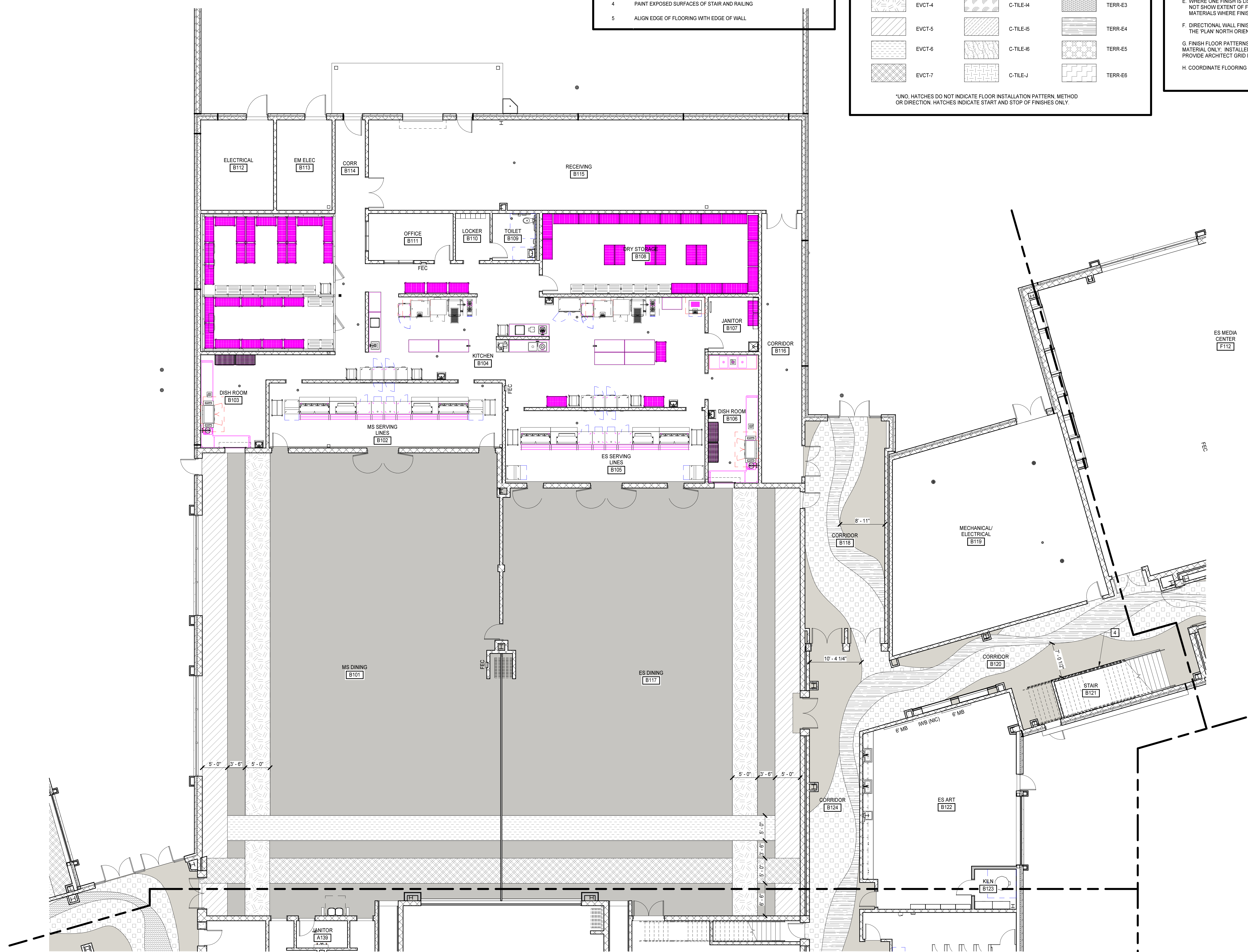
**FINISH PLAN LEGEND**

	EVC1-1		C-TILE-41		CORNER GUARD
	EVC2-2		C-TILE-42		WALL FINISH EXTENTS
	EVC3-3		C-TILE-43		TERR-E1
	EVC4-4		C-TILE-44		TERR-E2
	EVC5-5		C-TILE-45		TERR-E3
	EVC6-6		C-TILE-46		TERR-E4
	EVC7-7		C-TILE-J		TERR-E5
					TERR-E6

\*UNO. HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN, METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

**FLOOR PATTERN GENERAL NOTES**

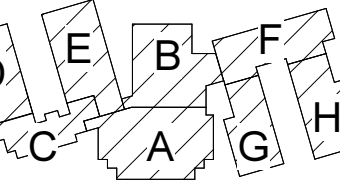
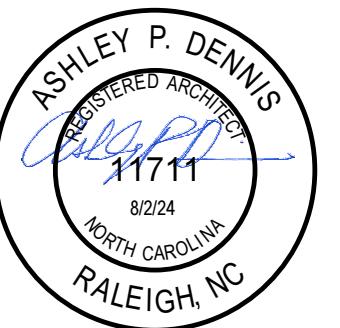
- DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.
- DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".
- PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/A3.0.2 AT CRACKS GREATER THAN 1/16".
- PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/A3.0.2 AT CRACKS GREATER THAN 1/16".
- WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.
- DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.
- FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH. PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.
- COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS



**FIRST FLOOR FINISH PATTERN PLAN - PART B**  
 1/8" = 1'-0"

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KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO: 631310  
DATE: AUGUST 2, 2024

REVISIONS

DATE DESCRIPTION

FIRST FLOOR FINISH  
PLAN - PART C

**A3.0.5**

**FLOOR PATTERN KEYNOTES**

REPRESENTED BY [1]  
APPLIES TO DRAWINGS A3.0.1 - A3.0.n

- 1 CUSTOM GRAPHIC PRINTED ON IRWC - 4'-0" AFF. ALIGN TO TOP OF DOOR FRAME.
- 2 ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
- 3 ACOUSTIC WALL PANEL (8'WX4'H) - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME, CENTER ON WALL
- 4 PAINT EXPOSED SURFACES OF STAIR AND RAILING
- 5 ALIGN EDGE OF FLOORING WITH EDGE OF WALL

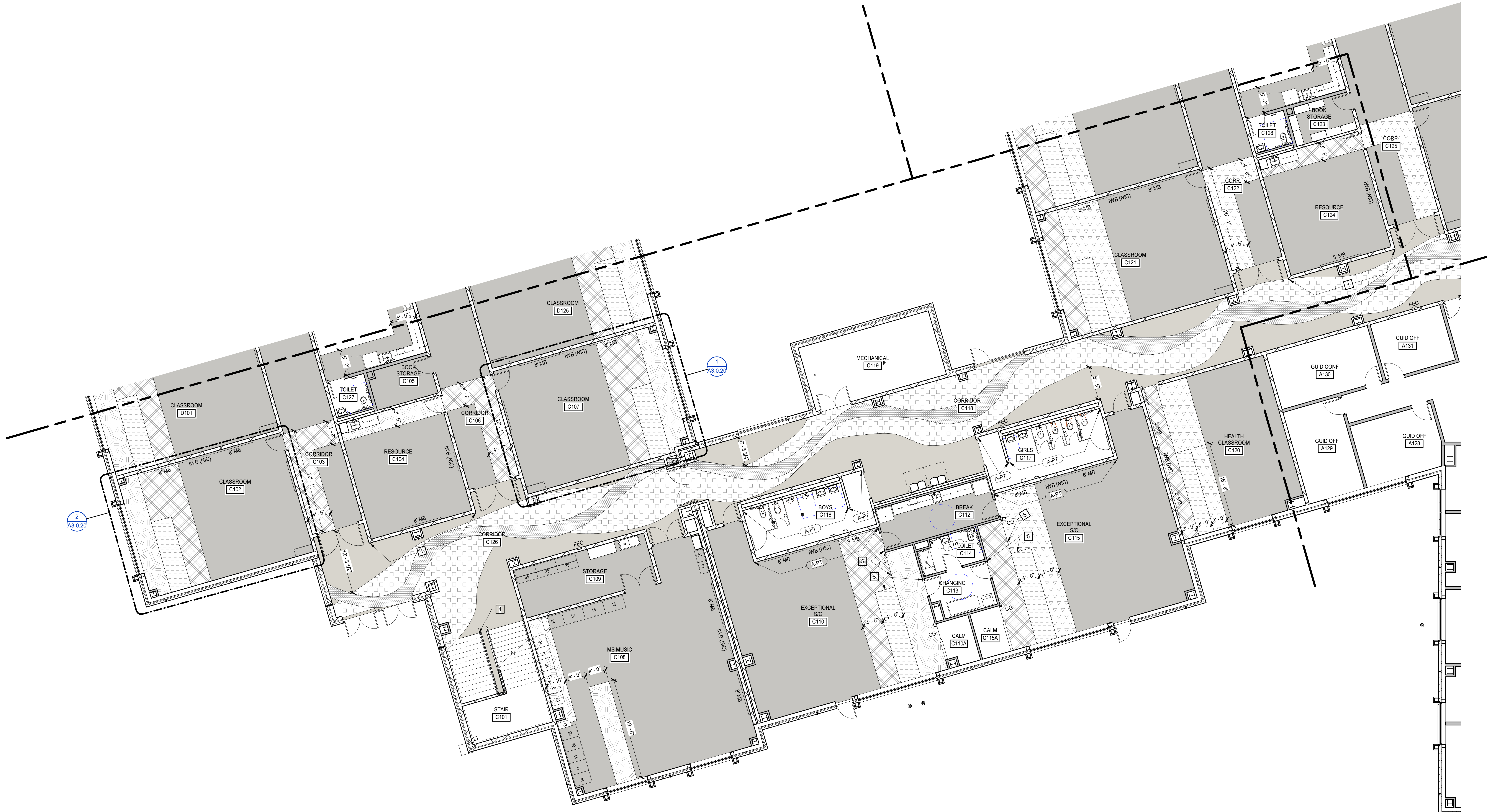
**FINISH PLAN LEGEND**

	EVCT-1		C-TILE-H1		CORNER GUARD
	EVCT-2		C-TILE-H2		WALL FINISH EXTENTS
	EVCT-3		C-TILE-H3		TERR-E1
	EVCT-4		C-TILE-H4		TERR-E2
	EVCT-5		C-TILE-H5		TERR-E3
	EVCT-6		C-TILE-H6		TERR-E4
	EVCT-7		C-TILE-J		TERR-E5
					TERR-E6

\*UNO HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN, METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

**FLOOR PATTERN GENERAL NOTES**

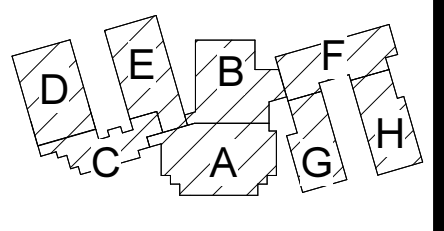
- A. DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.
- B. DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".
- C. PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/4x3.0 AT CRACKS GREATER THAN 1/16".
- D. PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/4x3.0 AT CRACKS GREATER THAN 1/16".
- E. WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.
- F. DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.
- G. FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH. PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.
- H. COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS.



**FIRST FLOOR FINISH PATTERN PLAN - PART C**  
1/8" = 1'-0"

8/15/2024 3:09:55 PM





KEY PLAN

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

FIRST FLOOR FINISH  
 PLAN - PART E

**A3.0.7**

**FLOOR PATTERN GENERAL NOTES**

- A. DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.
- B. DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".
- C. PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/A3.0.2 AT CRACKS GREATER THAN 1/16".
- D. PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/A3.0.2 AT CRACKS GREATER THAN 1/16".
- E. WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.
- F. DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.
- G. FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH. PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.
- H. COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS.

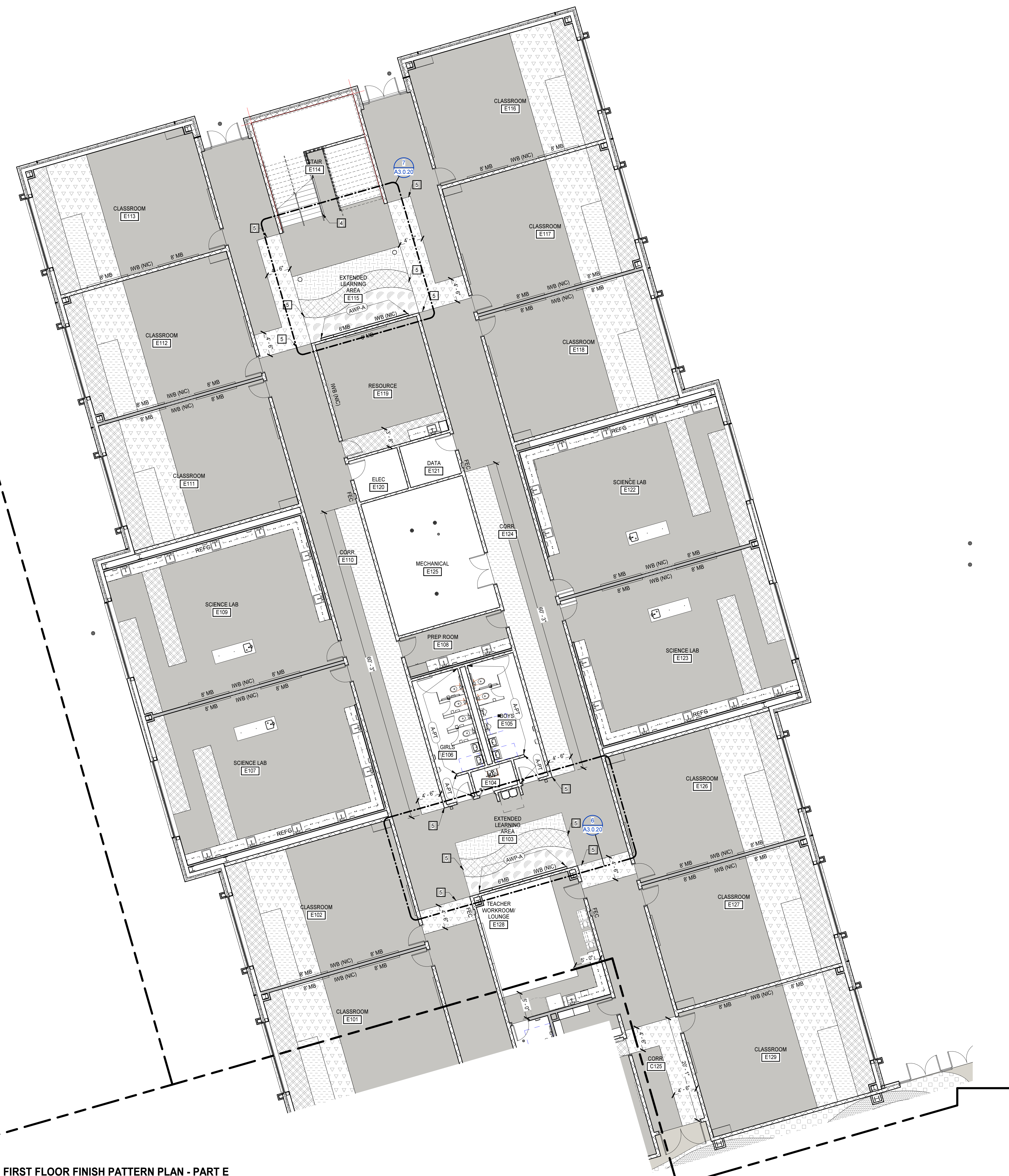
**FINISH PLAN LEGEND**

	EVCT-1		C-TILE-H1		CORNER GUARD
	EVCT-2		C-TILE-I2		TERR-E1
	EVCT-3		C-TILE-I3		TERR-E2
	EVCT-4		C-TILE-I4		TERR-E3
	EVCT-5		C-TILE-I5		TERR-E4
	EVCT-6		C-TILE-I6		TERR-E5
	EVCT-7		C-TILE-J		TERR-E6

\*UNO: HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN, METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

**FLOOR PATTERN KEYNOTES**

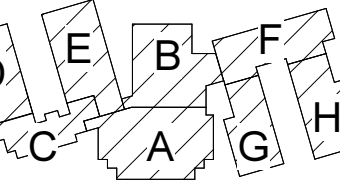
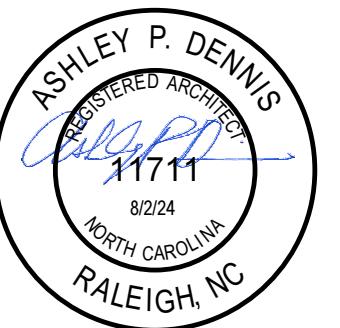
- REPRESENTED BY [Symbol]
- APPLIES TO DRAWINGS A3.0.1 - A3.0.n
- 1 CUSTOM GRAPHIC PRINTED ON IRWC - 4'-0" AFF. ALIGN TO TOP OF DOOR FRAME.
  - 2 ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
  - 3 ACOUSTIC WALL PANEL (6"X4") - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME, CENTER ON WALL.
  - 4 PAINT EXPOSED SURFACES OF STAIR AND RAILING
  - 5 ALIGN EDGE OF FLOORING WITH EDGE OF WALL



**FIRST FLOOR FINISH PATTERN PLAN - PART E**  
 1/8" = 1'-0"

8/19/2024 3:10:01 PM





KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	831310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

FIRST FLOOR FINISH  
 PLAN - PART F

**A3.0.8**

**FLOOR PATTERN GENERAL NOTES**

- A. DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.
- B. DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".
- C. PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/A3.0.2 AT CRACKS GREATER THAN 1/16".
- D. PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/A3.0.2 AT CRACKS GREATER THAN 1/16".
- E. WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.
- F. DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.
- G. FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH. PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.
- H. COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS.

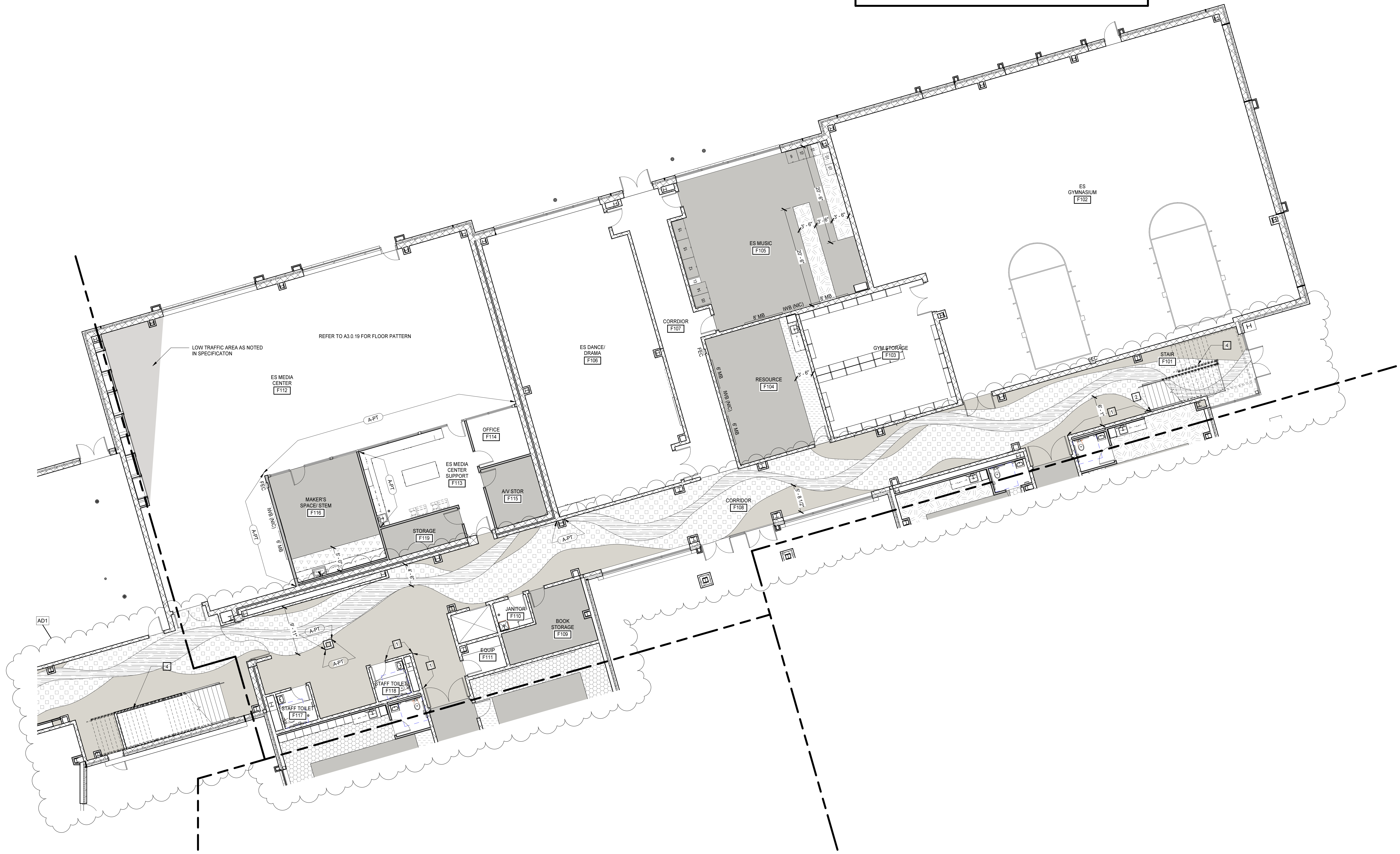
**FINISH PLAN LEGEND**

	EVCT-1		C-TILE-11		CORNER GUARD
	EVCT-2		C-TILE-12		WALL FINISH EXTENTS
	EVCT-3		C-TILE-13		TERR-E1
	EVCT-4		C-TILE-14		TERR-E2
	EVCT-5		C-TILE-15		TERR-E3
	EVCT-6		C-TILE-16		TERR-E4
	EVCT-7		C-TILE-J		TERR-E5
					TERR-E6

\*UNO. HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN, METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

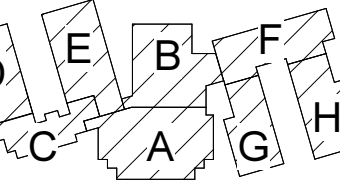
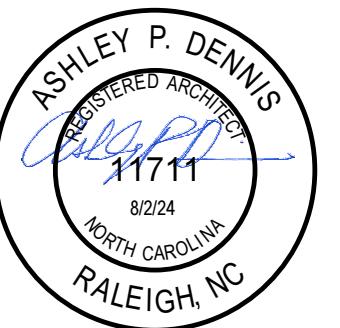
**FLOOR PATTERN KEYNOTES**

- REPRESENTED BY
- APPLIES TO DRAWINGS A3.0.1 - A3.0.n
1. CUSTOM GRAPHIC PRINTED ON IRWC - 4'-0" AFF, ALIGN TO TOP OF DOOR FRAME.
  2. ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
  3. ACOUSTIC WALL PANEL (8'Wx4'H) - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME, CENTER ON WALL
  4. PAINT EXPOSED SURFACES OF STAIR AND RAILING
  5. ALIGN EDGE OF FLOORING WITH EDGE OF WALL



**FIRST FLOOR FINISH PATTERN PLAN - PART F**  
 1/8" = 1'-0"





KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO: 631310  
DATE: AUGUST 2, 2024

REVISIONS

DATE DESCRIPTION

SECOND FLOOR FINISH  
PLAN - PART A

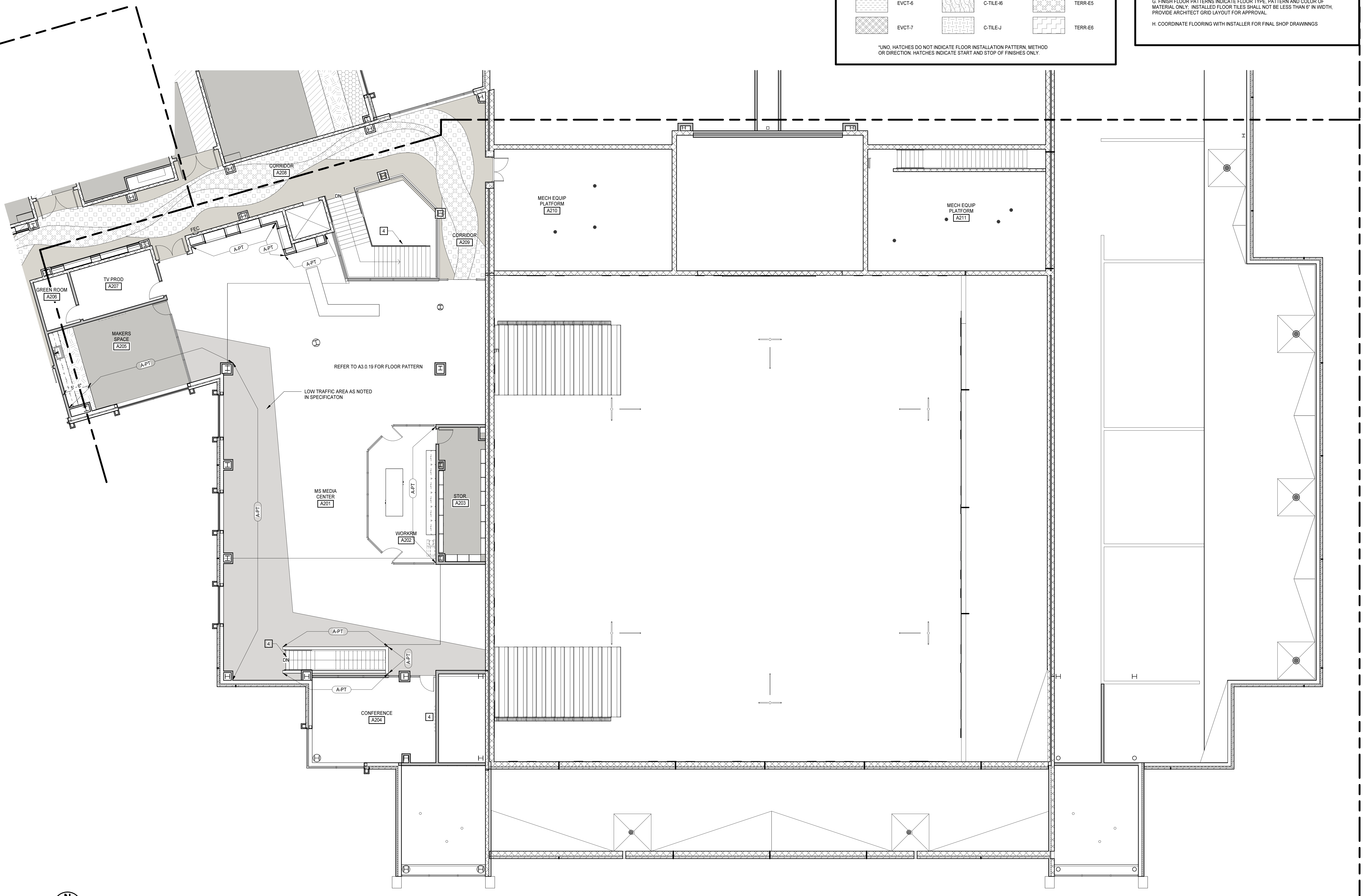
**A3.0.11**

FLOOR PATTERN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A3.0.1 - A3.0.n	
1	CUSTOM GRAPHIC PRINTED ON IRWC - 4'-0" AFF. ALIGN TO TOP OF DOOR FRAME.
2	ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
3	ACOUSTIC WALL PANEL (8'Wx4'H) - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME. CENTER ON WALL.
4	PAINT EXPOSED SURFACES OF STAIR AND RAILING
5	ALIGN EDGE OF FLOORING WITH EDGE OF WALL.

FINISH PLAN LEGEND		
[Symbol]	EVCT-1	C-TILE-11
[Symbol]	EVCT-2	C-TILE-12
[Symbol]	EVCT-3	C-TILE-13
[Symbol]	EVCT-4	C-TILE-14
[Symbol]	EVCT-5	C-TILE-15
[Symbol]	EVCT-6	C-TILE-16
[Symbol]	EVCT-7	C-TILE-J
[Symbol]	TERR-E1	TERR-E2
[Symbol]	TERR-E3	TERR-E4
[Symbol]	TERR-E5	TERR-E6

\*UNO HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN, METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

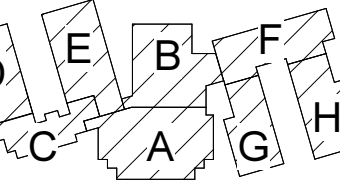
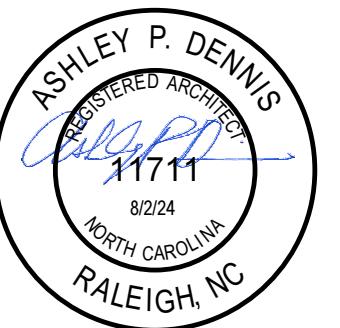
- FLOOR PATTERN GENERAL NOTES**
- DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.
  - DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".
  - PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/A3.0.2 AT CRACKS GREATER THAN 1/16".
  - PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/A3.0.2 AT CRACKS GREATER THAN 1/16".
  - WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.
  - DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.
  - FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH. PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.
  - COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS.



**SECOND FLOOR FINISH PATTERN PLAN - PART A**  
1/8" = 1'-0"

8/19/2024 3:10:22 PM





KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

SECOND FLOOR FINISH  
 PLAN - PART B

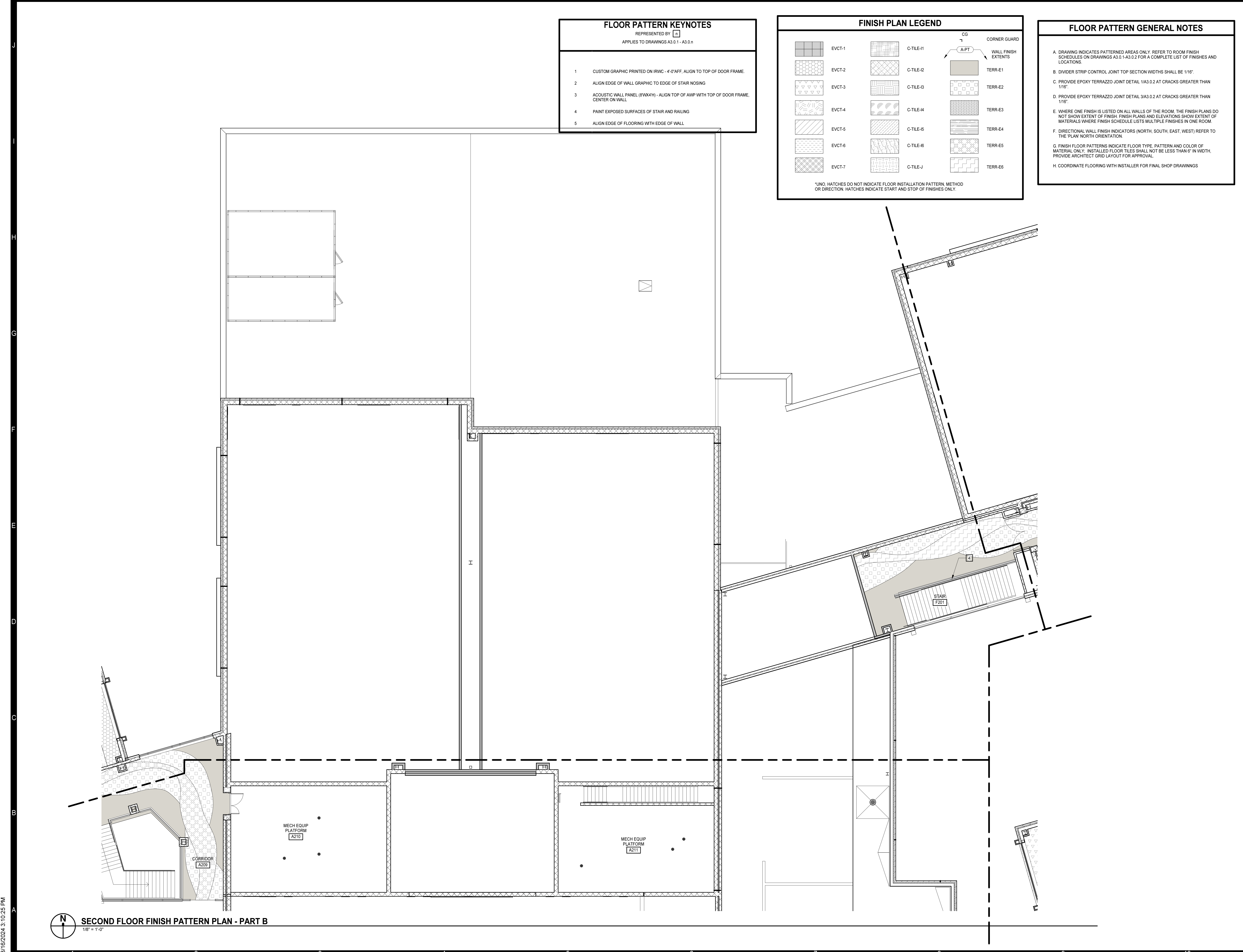
**A3.0.12**

FLOOR PATTERN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A3.0.1 - A3.0.n	
1	CUSTOM GRAPHIC PRINTED ON IRWC - 4'-0" AFF, ALIGN TO TOP OF DOOR FRAME.
2	ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
3	ACOUSTIC WALL PANEL (6"X4") - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME, CENTER ON WALL
4	PAINT EXPOSED SURFACES OF STAIR AND RAILING
5	ALIGN EDGE OF FLOORING WITH EDGE OF WALL

FINISH PLAN LEGEND			
[Pattern]	EVCT-1	[Pattern]	C-TILE-11
[Pattern]	EVCT-2	[Pattern]	C-TILE-12
[Pattern]	EVCT-3	[Pattern]	C-TILE-13
[Pattern]	EVCT-4	[Pattern]	C-TILE-14
[Pattern]	EVCT-5	[Pattern]	C-TILE-15
[Pattern]	EVCT-6	[Pattern]	C-TILE-16
[Pattern]	EVCT-7	[Pattern]	C-TILE-J
[Symbol]	CORNER GUARD	[Symbol]	WALL FINISH EXTENTS
[Symbol]	TERR-E1	[Symbol]	TERR-E2
[Symbol]	TERR-E3	[Symbol]	TERR-E4
[Symbol]	TERR-E5	[Symbol]	TERR-E6

\*UNO, HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN, METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

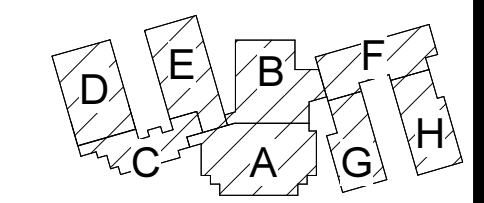
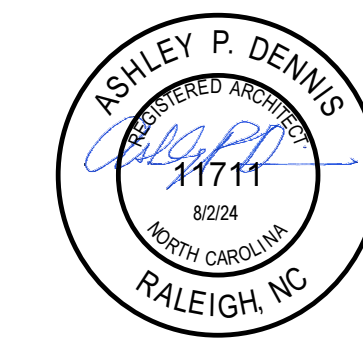
FLOOR PATTERN GENERAL NOTES	
A.	DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.
B.	DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".
C.	PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/A3.0.2 AT CRACKS GREATER THAN 1/16".
D.	PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/A3.0.2 AT CRACKS GREATER THAN 1/16".
E.	WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.
F.	DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.
G.	FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH. PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.
H.	COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS



8/19/2024 3:10:25 PM

**SECOND FLOOR FINISH PATTERN PLAN - PART B**  
 1/8" = 1'-0"





KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

SECOND FLOOR FINISH  
 PLAN - PART C

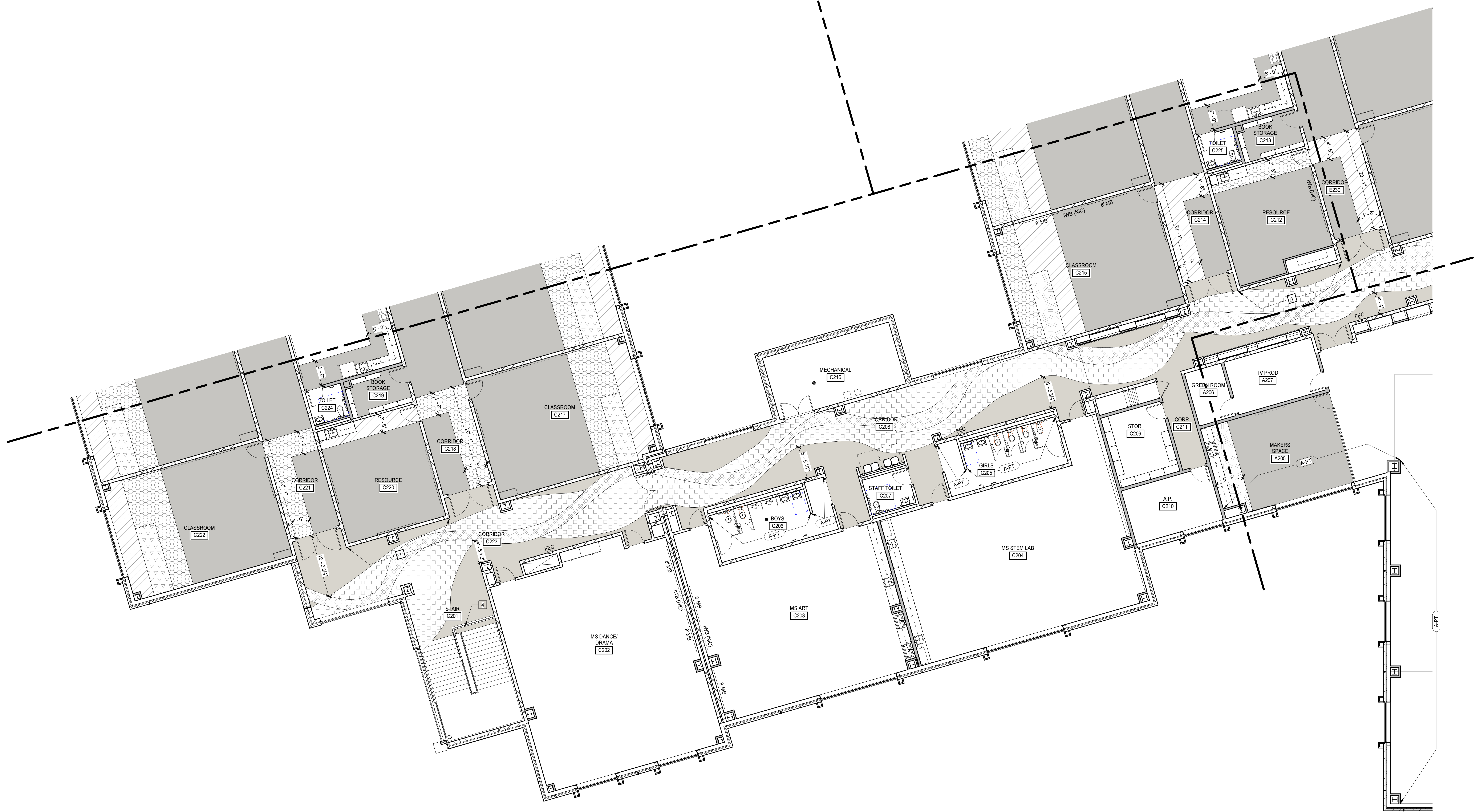
**A3.0.13**

FLOOR PATTERN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A3.0.1 - A3.0.n	
1	CUSTOM GRAPHIC PRINTED ON IRWC - 4'-0" AFF, ALIGN TO TOP OF DOOR FRAME.
2	ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
3	ACOUSTIC WALL PANEL (6Wx4H) - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME, CENTER ON WALL
4	PAINT EXPOSED SURFACES OF STAIR AND RAILING
5	ALIGN EDGE OF FLOORING WITH EDGE OF WALL.

FINISH PLAN LEGEND			
[Pattern]	EVCT-1	[Pattern]	C-TILE-11
[Pattern]	EVCT-2	[Pattern]	C-TILE-12
[Pattern]	EVCT-3	[Pattern]	C-TILE-13
[Pattern]	EVCT-4	[Pattern]	C-TILE-14
[Pattern]	EVCT-5	[Pattern]	C-TILE-15
[Pattern]	EVCT-6	[Pattern]	C-TILE-16
[Pattern]	EVCT-7	[Pattern]	C-TILE-J
[Symbol]	CORNER GUARD	[Symbol]	WALL FINISH EXTENTS
[Symbol]	TERR-E1	[Symbol]	TERR-E2
[Symbol]	TERR-E3	[Symbol]	TERR-E4
[Symbol]	TERR-E5	[Symbol]	TERR-E6

\*UNO. HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

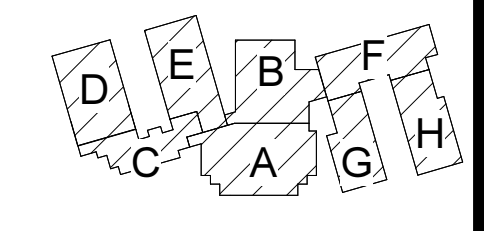
FLOOR PATTERN GENERAL NOTES	
A.	DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.
B.	DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".
C.	PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/16" AT CRACKS GREATER THAN 1/16".
D.	PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/16" AT CRACKS GREATER THAN 1/16".
E.	WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.
F.	DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.
G.	FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH, PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.
H.	COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS



8/19/2024 3:10:35 PM

**SECOND FLOOR FINISH PATTERN PLAN - PART C**  
 1/8" = 1'-0"





KEY PLAN

**FLOOR PATTERN GENERAL NOTES**

A. DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.

B. DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".

C. PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/A3.0.2 AT CRACKS GREATER THAN 1/16".

D. PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/A3.0.2 AT CRACKS GREATER THAN 1/16".

E. WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.

F. DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.

G. FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH. PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.

H. COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS.

**FINISH PLAN LEGEND**

	EVCT-1		C-TILE-I1		CORNER GUARD
	EVCT-2		C-TILE-I2		WALL FINISH EXTENTS
	EVCT-3		C-TILE-I3		TERR-E1
	EVCT-4		C-TILE-I4		TERR-E2
	EVCT-5		C-TILE-I5		TERR-E3
	EVCT-6		C-TILE-I6		TERR-E4
	EVCT-7		C-TILE-J		TERR-E5
					TERR-E6

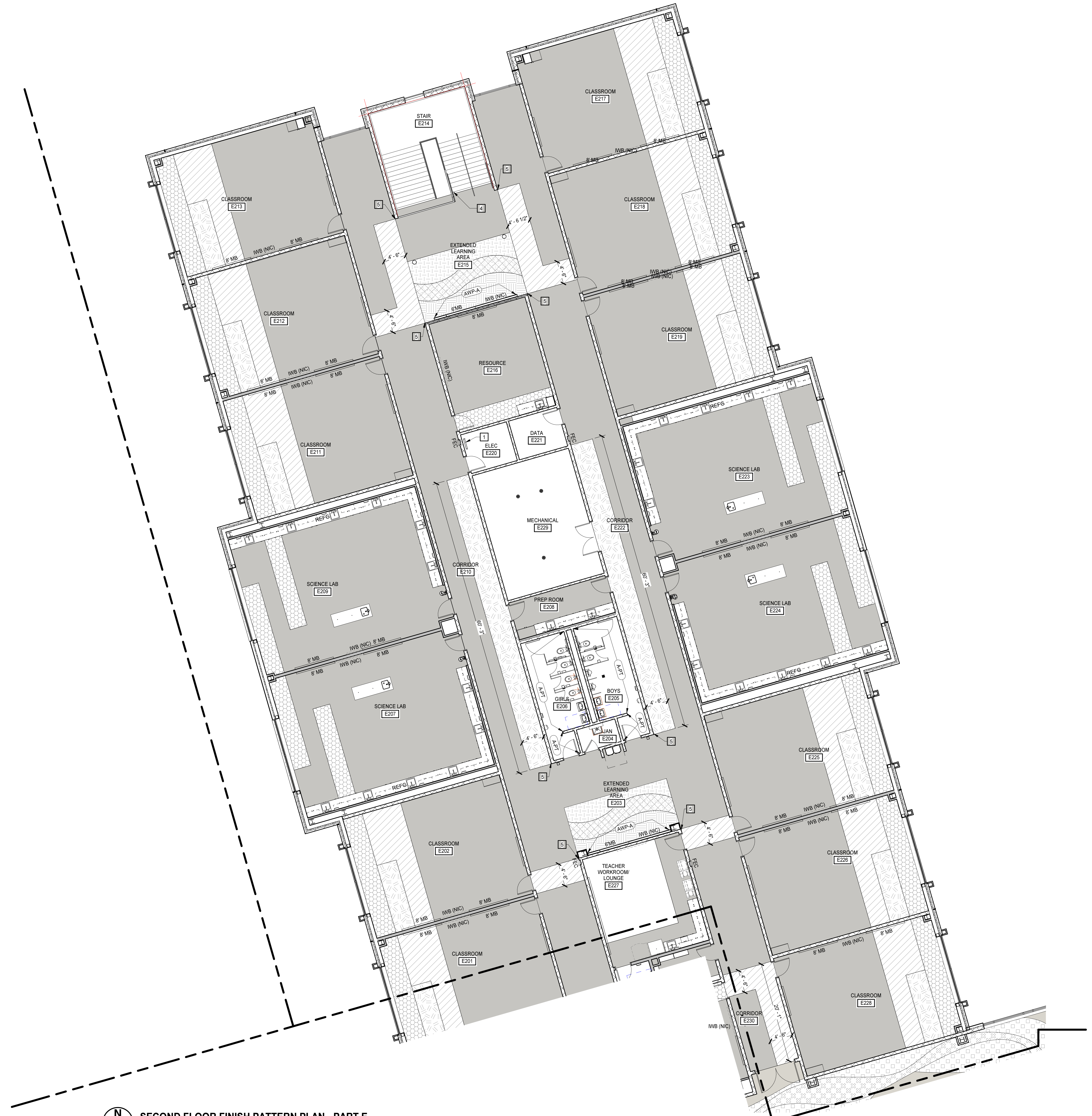
\*UNO. HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN, METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

**FLOOR PATTERN KEYNOTES**

REPRESENTED BY [Symbol]

APPLIES TO DRAWINGS A3.0.1 - A3.0.n

- CUSTOM GRAPHIC PRINTED ON IRWC - 4'-0" AFF. ALIGN TO TOP OF DOOR FRAME.
- ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
- ACOUSTIC WALL PANEL (8'WX4'H) - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME, CENTER ON WALL
- PAINT EXPOSED SURFACES OF STAIR AND RAILING
- ALIGN EDGE OF FLOORING WITH EDGE OF WALL

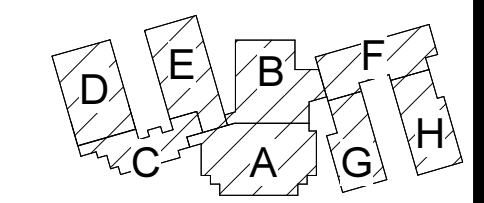
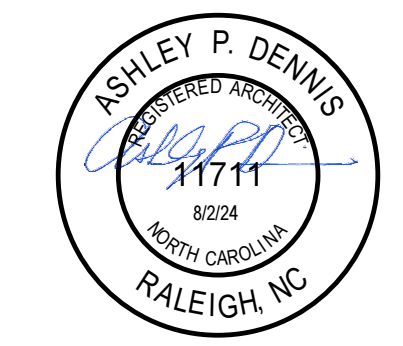


**SECOND FLOOR FINISH PATTERN PLAN - PART E**  
 1/8" = 1'-0"

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

SECOND FLOOR FINISH PLAN - PART E





KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO.	631310
DATE	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

SECOND FLOOR FINISH PLAN - PART F

**A3.0.16**

FLOOR PATTERN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A3.0.1 - A3.0.n	
1	CUSTOM GRAPHIC PRINTED ON IRWC - 4'-0" AFF. ALIGN TO TOP OF DOOR FRAME.
2	ALIGN EDGE OF WALL GRAPHIC TO EDGE OF STAIR NOSING
3	ACOUSTIC WALL PANEL (6"W X 4"H) - ALIGN TOP OF AWP WITH TOP OF DOOR FRAME, CENTER ON WALL
4	PAINT EXPOSED SURFACES OF STAIR AND RAILING
5	ALIGN EDGE OF FLOORING WITH EDGE OF WALL

FINISH PLAN LEGEND			
EVCT-1	C-TILE-11	CG	CORNER GUARD
EVCT-2	C-TILE-12	A.P.T.	WALL FINISH EXTENTS
EVCT-3	C-TILE-13	TERR-E1	
EVCT-4	C-TILE-14	TERR-E2	
EVCT-5	C-TILE-15	TERR-E3	
EVCT-6	C-TILE-16	TERR-E4	
EVCT-7	C-TILE-J	TERR-E5	
		TERR-E6	

\*UNO. HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN, METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

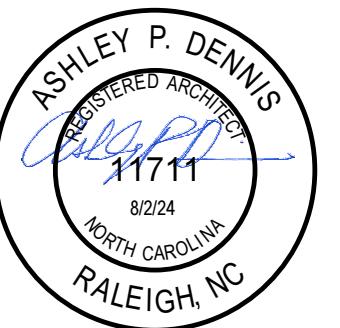
FLOOR PATTERN GENERAL NOTES	
A.	DRAWING INDICATES PATTERNED AREAS ONLY. REFER TO ROOM FINISH SCHEDULES ON DRAWINGS A3.0.1-A3.0.2 FOR A COMPLETE LIST OF FINISHES AND LOCATIONS.
B.	DIVIDER STRIP CONTROL JOINT TOP SECTION WIDTHS SHALL BE 1/16".
C.	PROVIDE EPOXY TERRAZZO JOINT DETAIL 1/4" X 3/8" AT CRACKS GREATER THAN 1/16".
D.	PROVIDE EPOXY TERRAZZO JOINT DETAIL 3/4" X 3/8" AT CRACKS GREATER THAN 1/16".
E.	WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.
F.	DIRECTIONAL WALL FINISH INDICATORS (NORTH, SOUTH, EAST, WEST) REFER TO THE PLAN NORTH ORIENTATION.
G.	FINISH FLOOR PATTERNS INDICATE FLOOR TYPE, PATTERN AND COLOR OF MATERIAL ONLY. INSTALLED FLOOR TILES SHALL NOT BE LESS THAN 6" IN WIDTH. PROVIDE ARCHITECT GRID LAYOUT FOR APPROVAL.
H.	COORDINATE FLOORING WITH INSTALLER FOR FINAL SHOP DRAWINGS.



**SECOND FLOOR FINISH PATTERN PLAN - PART F**  
 1/8" = 1'-0"

8/15/2024 3:10:50 PM





DOOR SCHEDULE											
NUMBER	DOOR TYPE	SIZE (NOMINAL)	DOOR		FRAME		HEAD DETAIL	JAMB DETAIL	SILL DETAIL	FIRE RATING	NOTES
			MATL	LOUVER	UC	TYPE					
A101A	FG2	PR 3'-0" x 7'-0" x 1'3/4"	FRP	CW	1	1					
A101B	FG2	PR 3'-0" x 7'-0" x 1'3/4"	FRP	CW	1	1					
A102A	FG	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A102B	CD	6'-0" x 4'-6" x 1"	STL							108 SIM	
A103A	FG2	PR 3'-0" x 7'-0" x 1'3/4"	FRP	AS	1A	1					
A103B	FG2	PR 3'-0" x 7'-0" x 1'3/4"	FRP	AS	31	1					
A104A	FG	3'-0" x 7'-0" x 2"	ALUM	AS	29	1					
A104B	FG	3'-0" x 7'-0" x 2"	ALUM	AS	30	1					
A105	WD	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A106	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A107	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
A108	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A109	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A110	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
A111	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
A112	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A112	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A113	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A117	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A119	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A120	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A123	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A124	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A125	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A126A	FG	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A126B	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A127	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A128	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A129	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A130	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A131	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A132	FG	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
A134A	FG2	PR 3'-0" x 7'-0" x 1'3/4"	FRP	AS	16A	1					
A134B	FG2	PR 3'-0" x 7'-0" x 1'3/4"	FRP	AS	16A	1					
A135	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
A136	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
A137	-	3'-0" x 7'-0" x 0"	-	STL	1	1					
A138	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A139	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
A142A	N	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A142B	N	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A142C	F	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
A142D	F	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
A143	-	3'-0" x 7'-0" x 0"	-	STL	1	1					
A144A	-	3'-0" x 7'-0" x 0"	-	STL	1	1					
A144B	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A145	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A146	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A147	G	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A148A	-	3'-0" x 7'-0" x 0"	-	STL	1	1					
A148B	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A149	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
A150	F	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A151	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
A152	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A153	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A154	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A155	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A156	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A157	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A158	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A159	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A160	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A161	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A162A	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A162B	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A163	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A164	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A165	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A167	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A168	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
A169	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
A170	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A171	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A172	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A173	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
A174	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A175A	FG	3'-0" x 7'-0" x 2"	ALUM	AS	29	1					
A175B	FG	3'-0" x 7'-0" x 2"	ALUM	AS	30	1					
A179A	FG2	PR 3'-0" x 7'-0" x 1'3/4"	FRP	AS	1A	1					
A179B	FG2	PR 3'-0" x 7'-0" x 1'3/4"	FRP	AS	1A	1					
A180	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A181	F	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A201A	FG2	PR 3'-0" x 7'-0" x 2"	WD	AS	34	1					
A201B	N	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A202A	FG	3'-0" x 7'-0" x 2"	WD	AS	37	1					
A202B	FG	3'-0" x 7'-0" x 2"	WD	AS	37	1					
A203	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A204	FG	3'-0" x 7'-0" x 2"	WD	AS	43	1					
A205	FG	3'-0" x 7'-0" x 2"	WD	AS	35	1					
A206	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A207	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
A210	F	4'-0" x 7'-0" x 1'3/4" / 2'-0" x 7'-0" x 1'3/4"	STL	STL	1	1					90 MIN
B101A	N	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
B101B	N	PR 3'-0" x 7'-0" x 1'3/4"	FRP	STL	1	1					90 MIN
B102A	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B102B	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B102C	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B102D	-	3'-0" x 7'-0" x 0"	-	STL	1	1					
B102E	-	3'-0" x 7'-0" x 0"	-	STL	1	1					
B103	CD	4'-0" x 4'-6" x 1"	STL								1
B105A	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B105B	N	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B105C	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B105D	-	3'-0" x 7'-0" x 0"	-	STL	1	1					
B105E	-	3'-0" x 7'-0" x 0"	-	STL	1	1					
B105A	CD	4'-0" x 4'-6" x 1"	STL								1
B106B	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B107	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
B108	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B109	F	3'-0" x 7'-0" x 1'3/4"	WD	3/4" STL	1	1					
B110	-	3'-0" x 7'-0" x 0"	-	STL	1	1					
B111	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B112	F	4'-0" x 7'-0" x 1'3/4"	FRP	STL	1	1					56
B113	F	4'-0" x 7'-0" x 1'3/4"	FRP	STL	1	1					56
B114	F	3'-6" x 7'-0" x 1'3/4"	FRP	STL	1	1					56
B115A	N	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					56
B115B	CD	6'-0" x 7'-0" x 2"	STL								54
B115C	F	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					4/AS.1.13
B116A	F	PR 3'-0" x 7'-0" x 1'3/4"	STL								
B116B	F	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B117A	N	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
B117B	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B117C	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B118	FG2	PR 3'-0" x 7'-0" x 1'3/4"	FRP	AS	15	1					
B119A	F	3'-0" x 7'-0" x 1'3/4"	STL								
B119B	F	PR 3'-0" x 7'-0" x 1'3/4"	FRP	STL	1	1					56
B121	N	3'-0" x 7'-0" x 1'3/4"	FRP	STL	1	1					56
B122A	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B122B	FG2	3'-0" x 7'-0" x 1'3/4"	FRP	AS	28B	1					
B123	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
B124A	N	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
B124B	N	PR 3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					90 MIN
C102	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
C103	N	PR 4'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					2
C104	N	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
C105	F	3'-0" x 7'-0" x 1'3/4"	WD	STL	1	1					
C106	N	PR 4'-0" x 7'-									

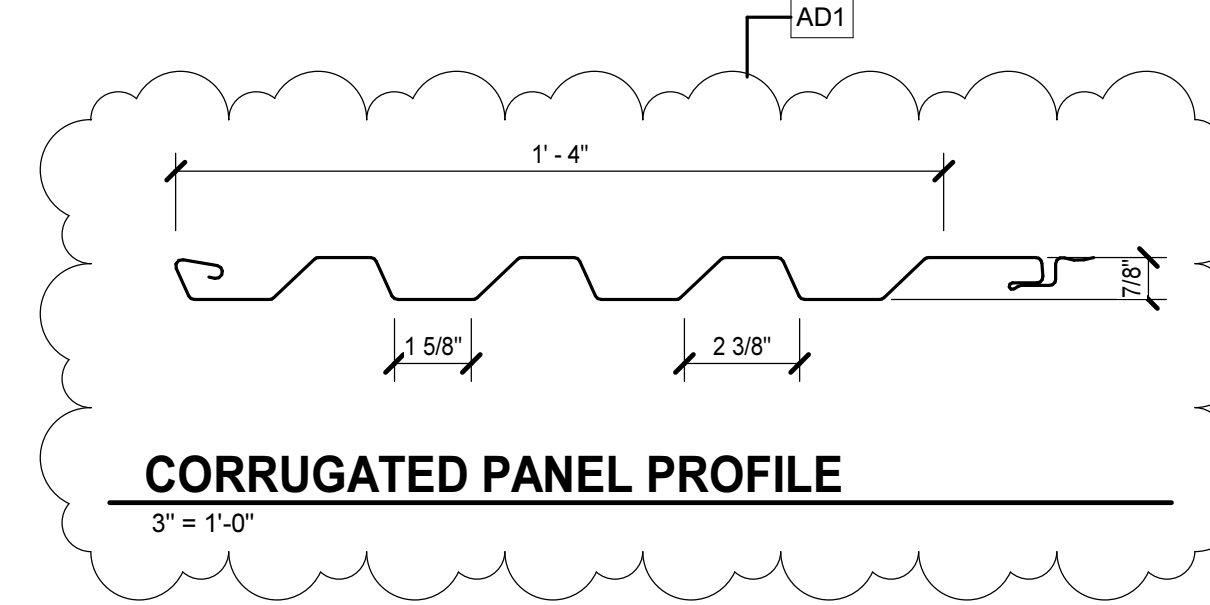




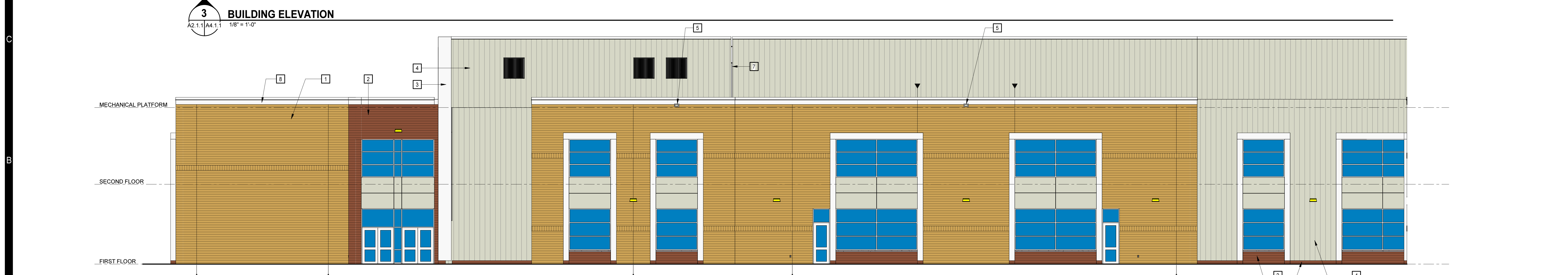
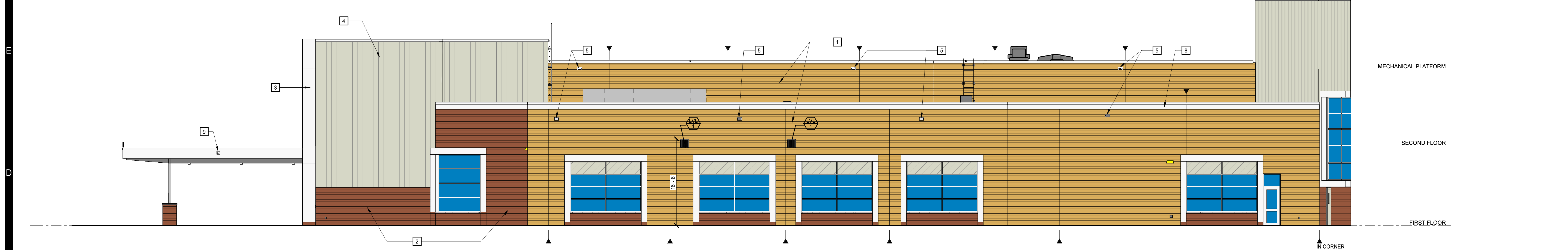
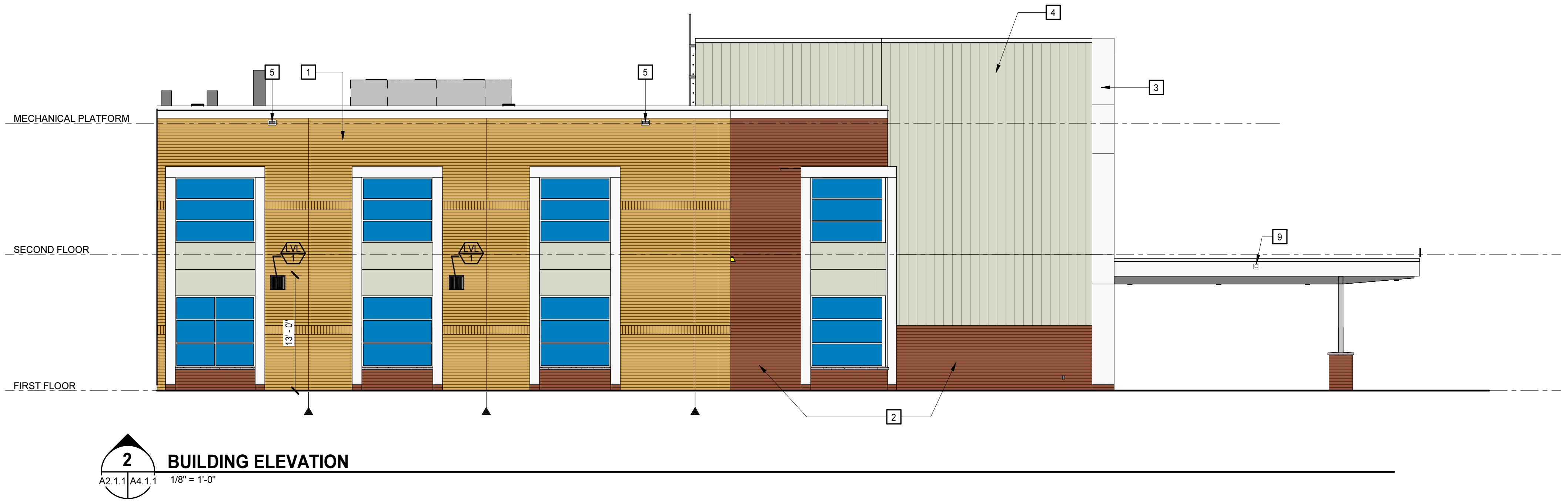
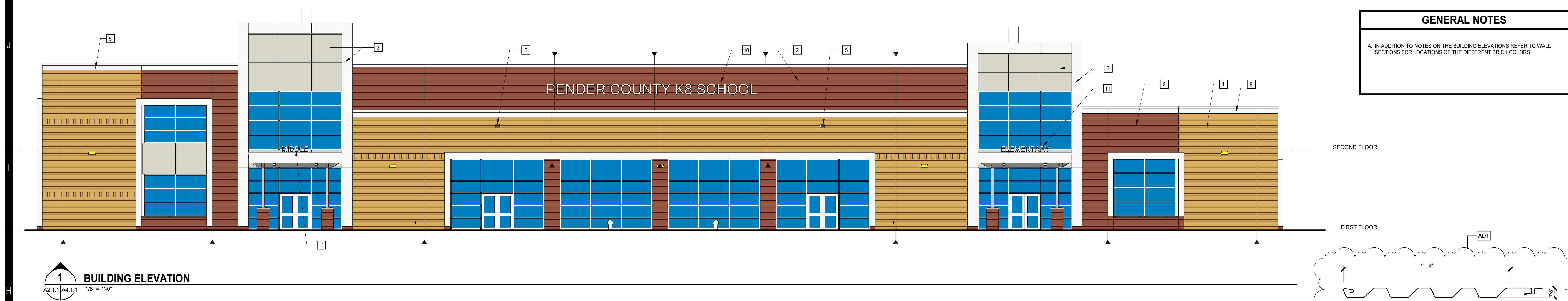
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DATE	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

**GENERAL NOTES**

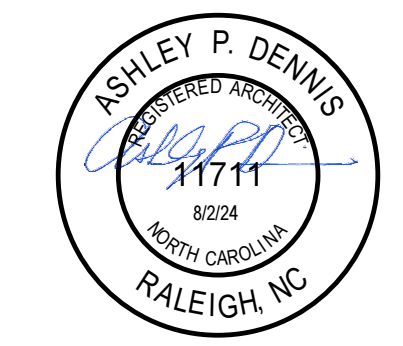
A. IN ADDITION TO NOTES ON THE BUILDING ELEVATIONS REFER TO WALL SECTIONS FOR LOCATIONS OF THE DIFFERENT BRICK COLORS.



- BUILDING ELEVATION KEYNOTES**  
 REPRESENTED BY [n]
- APPLIES TO DRAWINGS A4.1.1 - A4.1.5
- BRICK COLOR 1
  - BRICK COLOR 2
  - MCM PANELS
  - CORRUGATED METAL PANELS
  - OVERFLOW SCUPPER 8" x 4"
  - THRU WALL SCUPPER WITH CONDUCTOR HEAD AND DOWNSPOUT
  - BUILDING EXPANSION JOINT
  - CAST STONE BAND
  - THRU WALL SCUPPER 4" x 4" WITH TONGUE
  - 24" HIGH DIMENSIONAL LETTERS
  - 12" HIGH DIMENSIONAL LETTERS



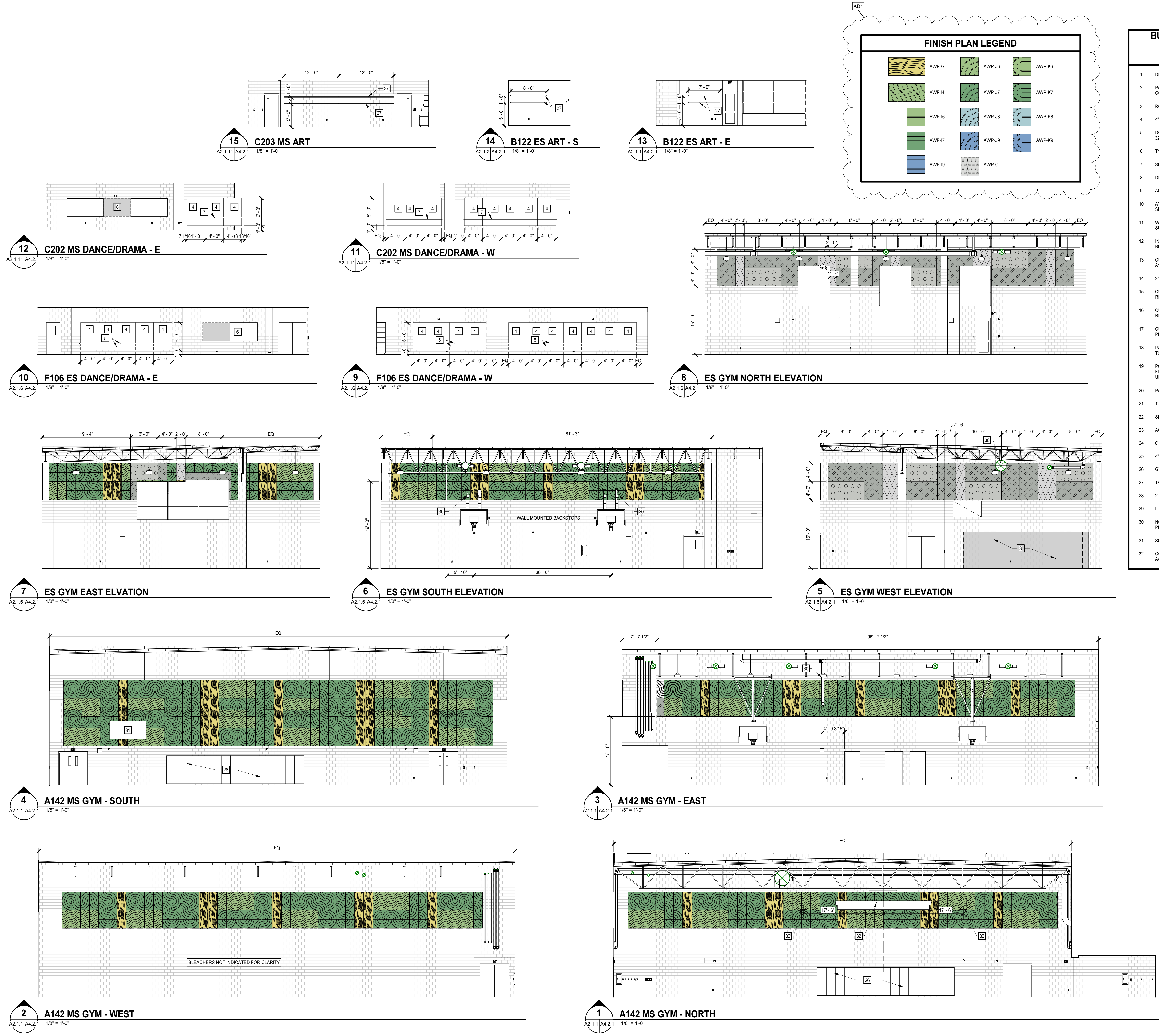




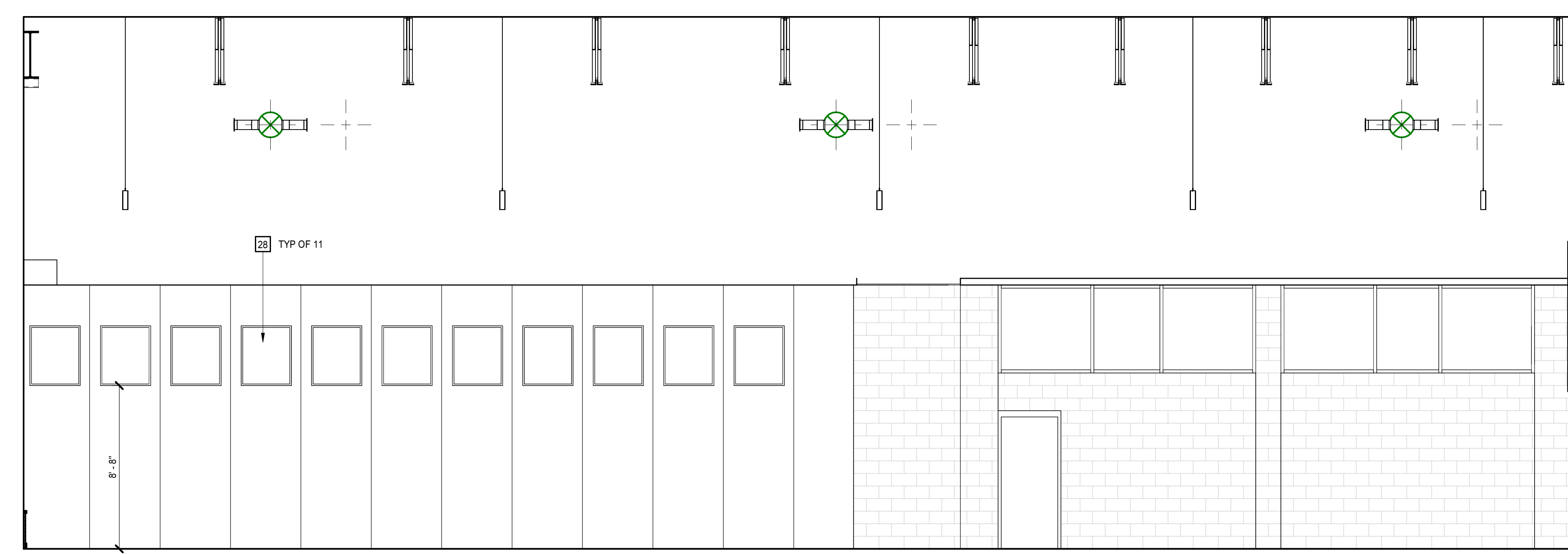
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

BUILDING ELEVATION KEYNOTES	
REPRESENTED BY [n]	
APPLIES TO DRAWINGS A4.2.1 - A4.2.4	
1	DISPLAY CASE (6W X 5H)
2	PAINTED GYP WALL WITH 3/4" MTL REVEALS, REFER TO FINISH PLAN FOR COLOR
3	ROCK CLIMBING WALL (24W X 8H) - REFER TO SPECIFICATION
4	4W X 6H MIRROR, REFER TO SPECIFICATIONS FOR CRITERIA
5	DOUBLE BARRE, MOUNT LOWER BARRE AT 24" AFF AND UPPER BARRE AT 32" AFF, PROVIDE SUPPORTS EVERY 4'
6	TYPICAL TEACHING WALL, REFER TO A8.1.2
7	SINGLE BARRE, MOUNT AT 32" AFF, PROVIDE SUPPORTS EVERY 4'
8	DISPLAY CASE (3W X 5H)
9	ACCENT PAINT ON ALL EXPOSED EXTERIOR SURFACES
10	ATTACHED 2" UPHOLSTERED CUSHION (M) WITH HIGH DENSITY FOAM, SECURE CUSHION TO BENCH WITH HEAVY DUTY SNAPS
11	WOOD BENCH, SPECIES AND FINISH TO MATCH DOORS ON ALL EXPOSED SURFACES
12	INSTALL CUSTOM PRINTED GRAPHIC ON IRVC PRIOR TO INSTALLING BENCH, REFER TO A134 CORRIDOR GRAPHIC
13	CUSTOM PRINTED GRAPHIC ON DECORATIVE WINDOW FILM, REFER TO A134 CORRIDOR GRAPHIC
14	24"D READING NOOK
15	CUSTOM PRINTED GRAPHIC ON IRVC, REFER TO ES MEDIA CENTER - READING WALL GRAPHIC
16	CUSTOM PRINTED GRAPHIC ON AWP-B, REFER TO ES MEDIA CENTER - READING WALL GRAPHIC
17	CUSTOM PRINTED GRAPHIC ON AWP-D, A GEOGRAPHIC IMAGE OF PENDER COUNTY PER NOOK
18	INSTALL FELT AWP-D ON ALL SIDES AND TOP OF READING NOOKS, BACKS TO BE AWP-B
19	POLYESTER RESIN CORNER MOULDING, SIZE 1-1/16"X 1-1/16" PROF. FLEXIBLE FOR THE ES MC SOUTHWATER INDUSTRIES OR EQUAL, UNFINISHED, PAINT COLOR TBD
20	PAINT ANGLED WALL TO MATCH CMU WALL
21	12"D DISPLAY NICHE PAINTED IN AN ACCENT COLOR
22	SECURE READING NOOK WALL TO STRUCTURE ABOVE
23	ACOUSTICAL WALL PANEL AWP-A WITH 3/4" MTL REVEALS
24	6" RWB, PAINT WALL BEHIND TO MATCH AWP-A COLOR
25	4W X 5H WHITEBOARD
26	GYM WALL PADS
27	TACK STRIP
28	2'-8" X 3'-2" OPERABLE PARTITION WINDOW UNIT
29	LIGHT FIXTURES, REFER TO ELECTRICAL DRAWINGS
30	NOTCH TECTUM PANELS AROUND ALL MECHANICAL, ELECTRICAL AND PLUMBING, AS WELL AS GYM EQUIPMENT
31	SCOREBOARD
32	COORDINATE CUT-OUT FOR WALL HUNG SCREEN AND SPEAKERS WITH AV CONSULTANT

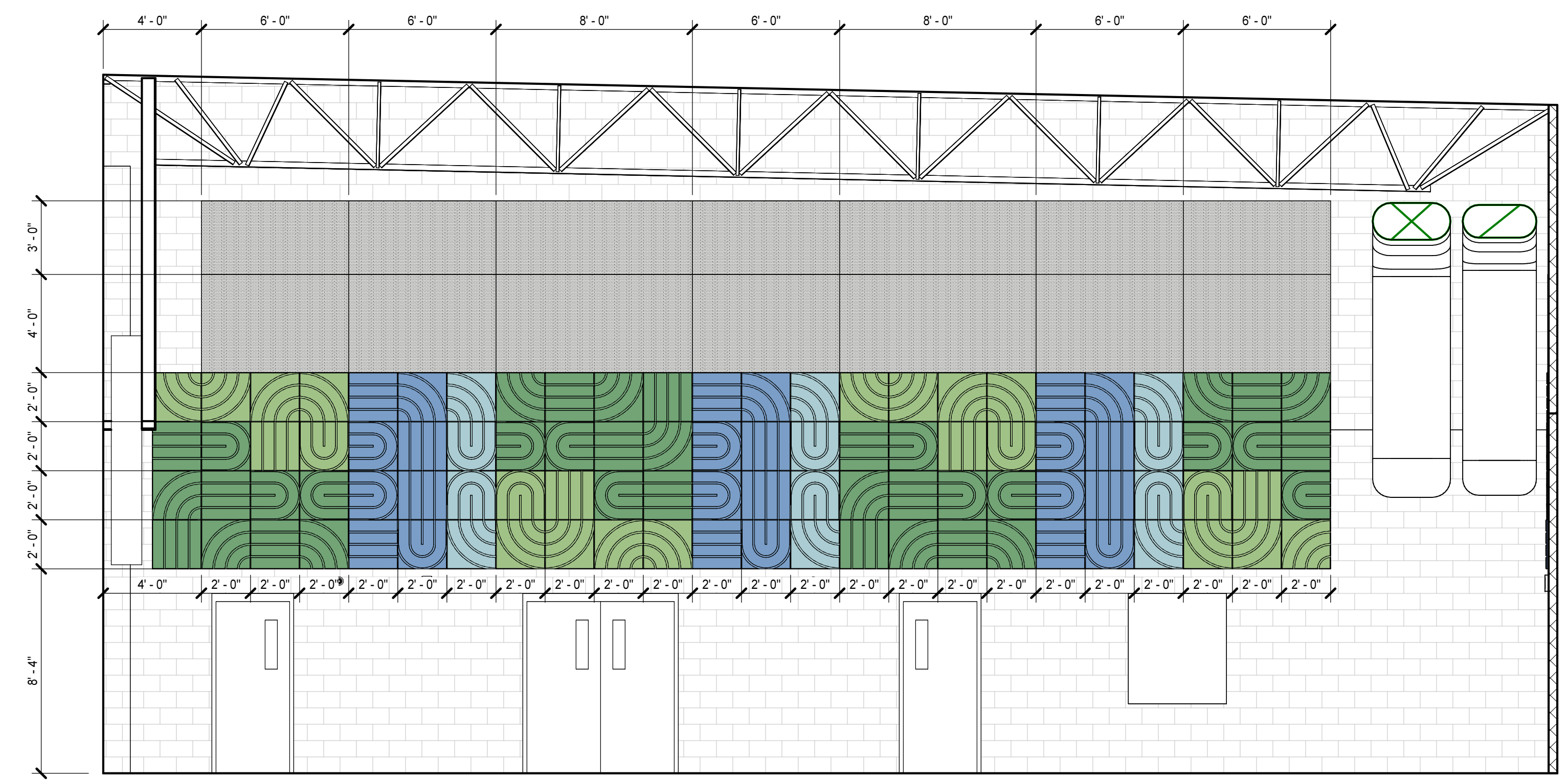
FINISH PLAN LEGEND					
	AWP-G		AWP-J6		AWP-K6
	AWP-H		AWP-J7		AWP-K7
	AWP-I6		AWP-J8		AWP-K8
	AWP-I7		AWP-J9		AWP-K9
	AWP-I9		AWP-C		





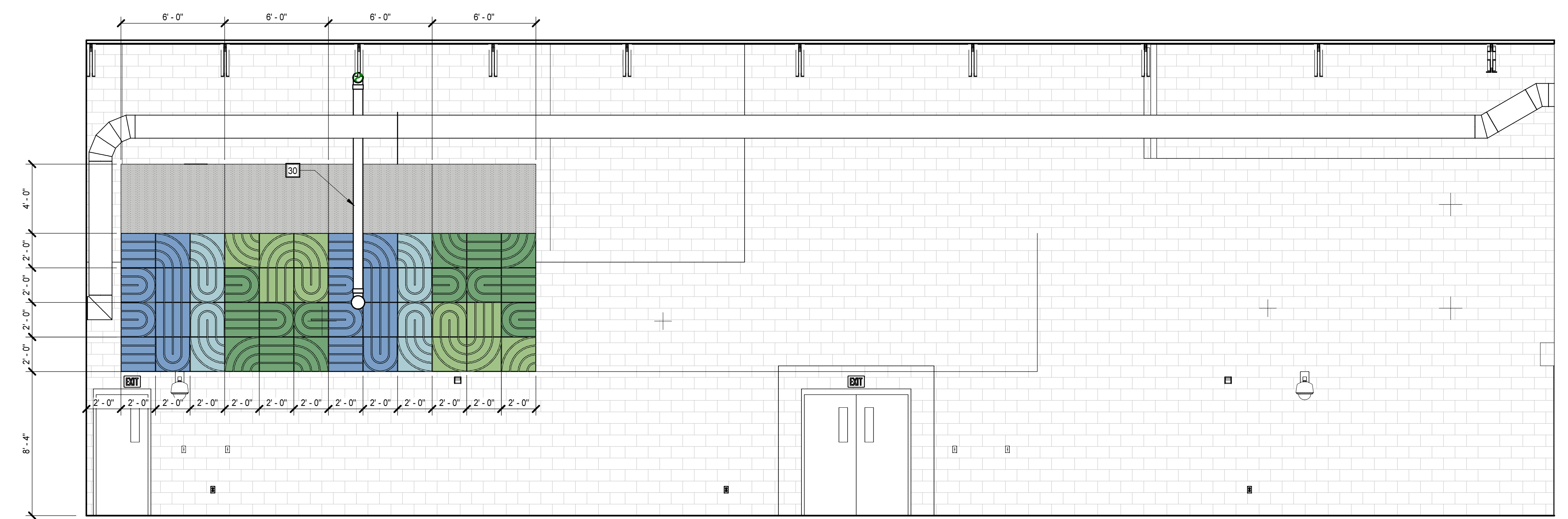
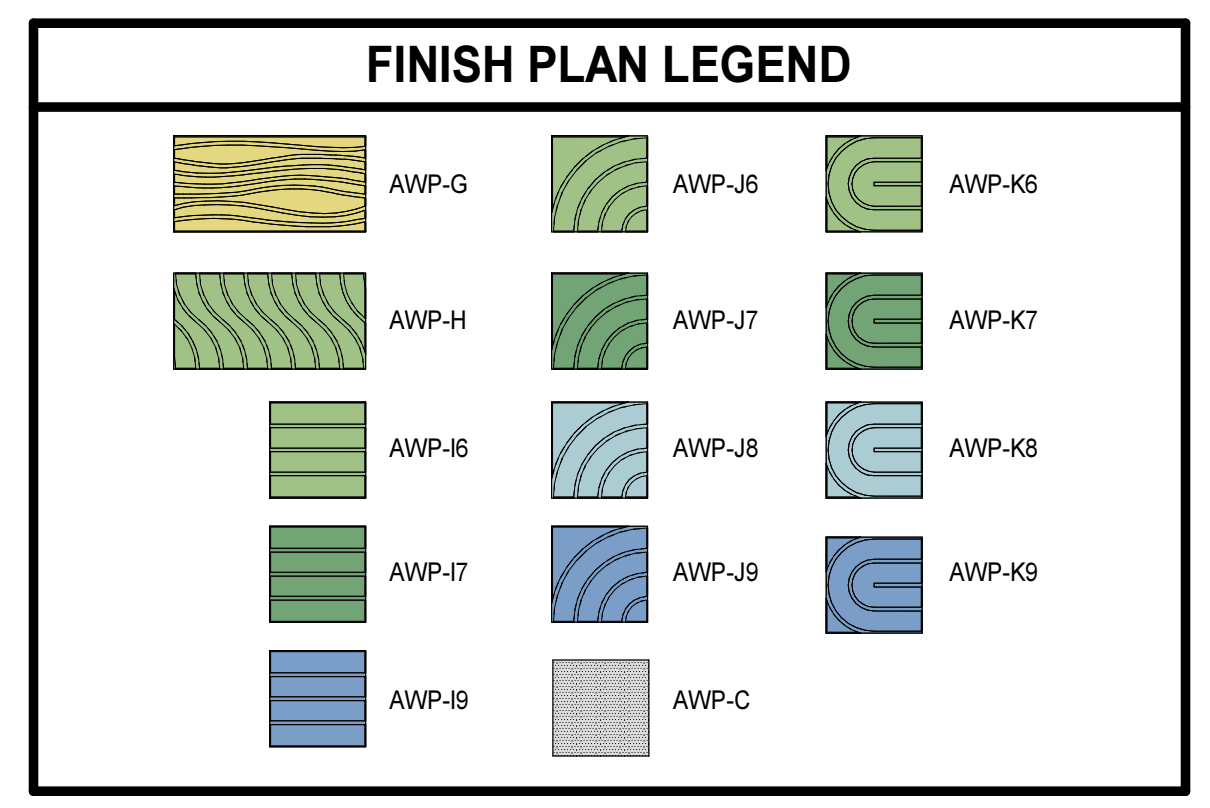


**4 ES DINING INTERIOR ELEVATION - W**  
A2.1.1 | A4.2.3 1/4" = 1'-0"

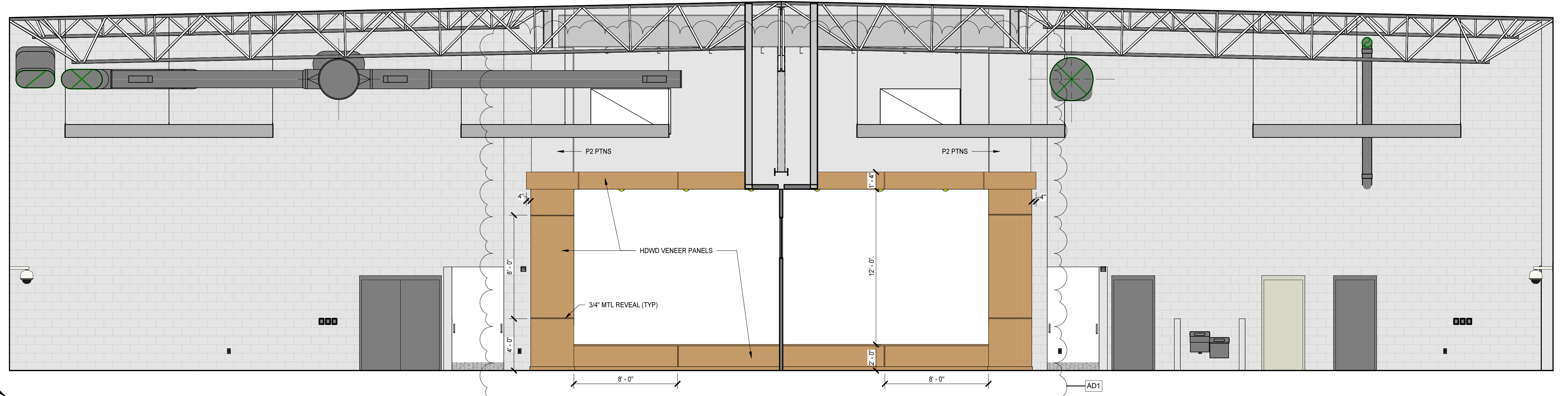


**3 ES DINING INTERIOR ELEVATION - N**  
A2.1.2 | A4.2.3 1/4" = 1'-0"

- BUILDING ELEVATION KEYNOTES**  
REPRESENTED BY [n]  
APPLIES TO DRAWINGS A4.2.1 - A4.2.4
- 1 DISPLAY CASE (6W X 5H)
  - 2 PAINTED GYP WALL WITH 3/4" MTL REVEALS. REFER TO FINISH PLAN FOR COLOR.
  - 3 ROCK CLIMBING WALL (24W X 8H) - REFER TO SPECIFICATION
  - 4 4W X 6H MIRROR, REFER TO SPECIFICATIONS FOR CRITERIA
  - 5 DOUBLE BARRE, MOUNT LOWER BARRE AT 24" AFF AND UPPER BARRE AT 32" AFF. PROVIDE SUPPORTS EVERY 4'
  - 6 TYPICAL TEACHING WALL. REFER TO A8.1.2
  - 7 SINGLE BARRE, MOUNT AT 32" AFF. PROVIDE SUPPORTS EVERY 4'
  - 8 DISPLAY CASE (3W X 5H)
  - 9 ACCENT PAINT ON ALL EXPOSED EXTERIOR SURFACES
  - 10 ATTACHED 2" UPHOLSTERED CUSHION (M1) WITH HIGH DENSITY FOAM. SECURE CUSHION TO BENCH WITH HEAVY DUTY SNAPS
  - 11 WOOD BENCH: SPECIES AND FINISH TO MATCH DOORS ON ALL EXPOSED SURFACES
  - 12 INSTALL CUSTOM PRINTED GRAPHIC ON IRWC PRIOR TO INSTALLING BENCH. REFER TO A134 CORRIDOR GRAPHIC
  - 13 CUSTOM PRINTED GRAPHIC ON DECORATIVE WINDOW FILM. REFER TO A134 CORRIDOR GRAPHIC
  - 14 24"D READING NOOK
  - 15 CUSTOM PRINTED GRAPHIC ON IRWC. REFER TO ES MEDIA CENTER - READING WALL GRAPHIC
  - 16 CUSTOM PRINTED GRAPHIC ON AWP-B. REFER TO ES MEDIA CENTER - READING WALL GRAPHIC
  - 17 CUSTOM PRINTED GRAPHIC ON AWP-B, A GEOGRAPHIC IMAGE OF PENDER COUNTY PER NOOK
  - 18 INSTALL FELT AWP-D ON ALL SIDES AND TOP OF READING NOOKS. BACKS TO BE AWP-B
  - 19 POLYESTER RESIN CORNER MOULDING, SIZE 1-1/16"X 1-1/16" PROJ. FLEXIBLE FOR THE ES MC SOUTHWATER INDUSTRIES OR EQUAL. UNFINISHED, PAINT COLOR TBD
  - 20 PAINT ANGLED WALL TO MATCH CMU WALL
  - 21 12"D DISPLAY NICHE PAINTED IN AN ACCENT COLOR
  - 22 SECURE READING NOOK WALL TO STRUCTURE ABOVE
  - 23 ACOUSTICAL WALL PANEL AWP-A WITH 3/4" MTL REVEALS
  - 24 6" IWB, PAINT WALL BEHIND TO MATCH AWP-A COLOR
  - 25 4W X 5H WHITEBOARD
  - 26 GYM WALL PADS
  - 27 TACK STRIP
  - 28 2'-8" x 3'-2" OPERABLE PARTITION WINDOW UNIT
  - 29 LIGHT FIXTURES. REFER TO ELECTRICAL DRAWINGS
  - 30 NOTCH TECTUM PANELS AROUND ALL MECHANICAL, ELECTRICAL AND PLUMBING, AS WELL AS GYM EQUIPMENT
  - 31 SCOREBOARD
  - 32 COORDINATE CUT-OUT FOR WALL HUNG SCREEN AND SPEAKERS WITH A/V CONSULTANT



**2 ES DINING INTERIOR ELEVATION - E**  
A2.1.1 | A4.2.3 1/4" = 1'-0"



**1 DINING INTERIOR ELEVATION - S**  
A2.1.2 | A4.2.3 1/4" = 1'-0"

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1





PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

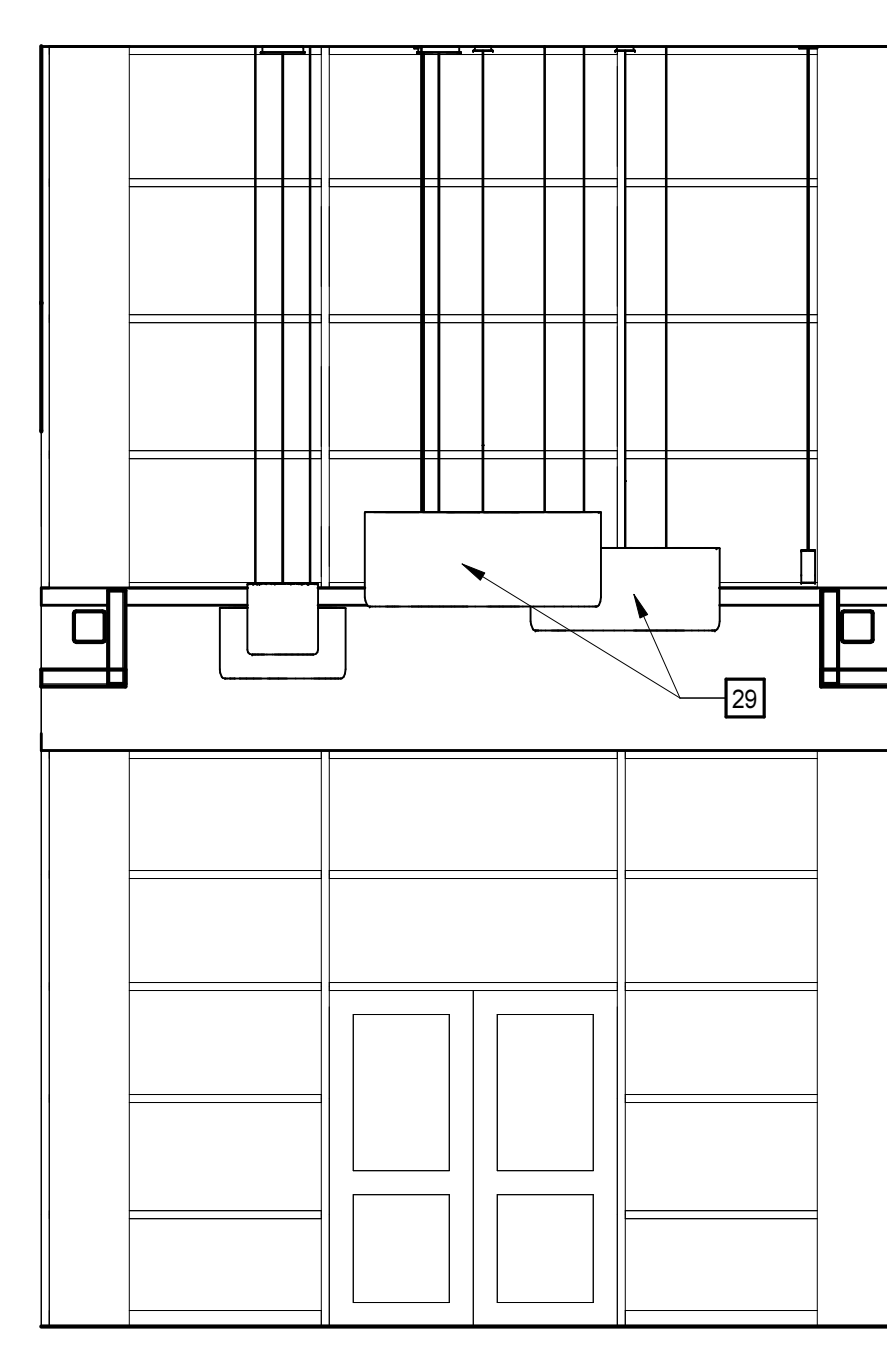
**BUILDING ELEVATION KEYNOTES**

REPRESENTED BY [Signature]  
 APPLIES TO DRAWINGS A4.2.1 - A4.2.4

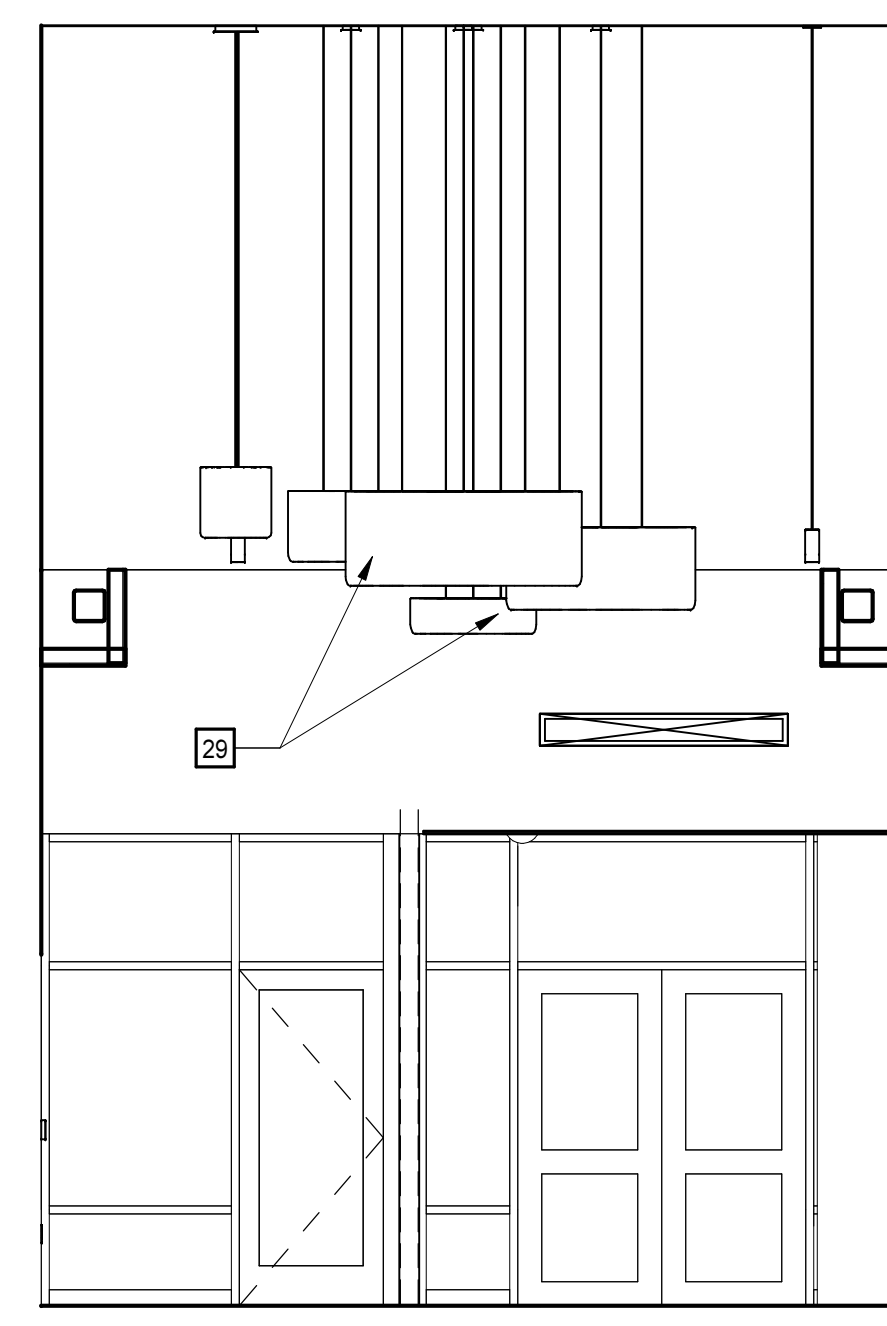
- 1 DISPLAY CASE (6W X 5H)
- 2 PAINTED GYP WALL WITH 3/4" MTL REVEALS. REFER TO FINISH PLAN FOR COLOR
- 3 ROCK CLIMBING WALL (24W X 8H) - REFER TO SPECIFICATION
- 4 4W X 6H MIRROR, REFER TO SPECIFICATIONS FOR CRITERIA
- 5 DOUBLE BARRE, MOUNT LOWER BARRE AT 24" AFF AND UPPER BARRE AT 32" AFF. PROVIDE SUPPORTS EVERY 4'
- 6 TYPICAL TEACHING WALL. REFER TO A8.1.2
- 7 SINGLE BARRE, MOUNT AT 32" AFF. PROVIDE SUPPORTS EVERY 4'
- 8 DISPLAY CASE (3W X 5H)
- 9 ACCENT PAINT ON ALL EXPOSED EXTERIOR SURFACES
- 10 ATTACHED 2" UPHOLSTERED CUSHION (M1) WITH HIGH DENSITY FOAM. SECURE CUSHION TO BENCH WITH HEAVY DUTY SNAPS
- 11 WOOD BENCH. SPECIES AND FINISH TO MATCH DOORS ON ALL EXPOSED SURFACES
- 12 INSTALL CUSTOM PRINTED GRAPHIC ON IRWC PRIOR TO INSTALLING BENCH. REFER TO A134 CORRIDOR GRAPHIC
- 13 CUSTOM PRINTED GRAPHIC ON DECORATIVE WINDOW FILM. REFER TO A134 CORRIDOR GRAPHIC
- 14 24"D READING NOOK
- 15 CUSTOM PRINTED GRAPHIC ON IRWC. REFER TO ES MEDIA CENTER - READING WALL GRAPHIC
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- 31 SCOREBOARD
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**FINISH PLAN LEGEND**

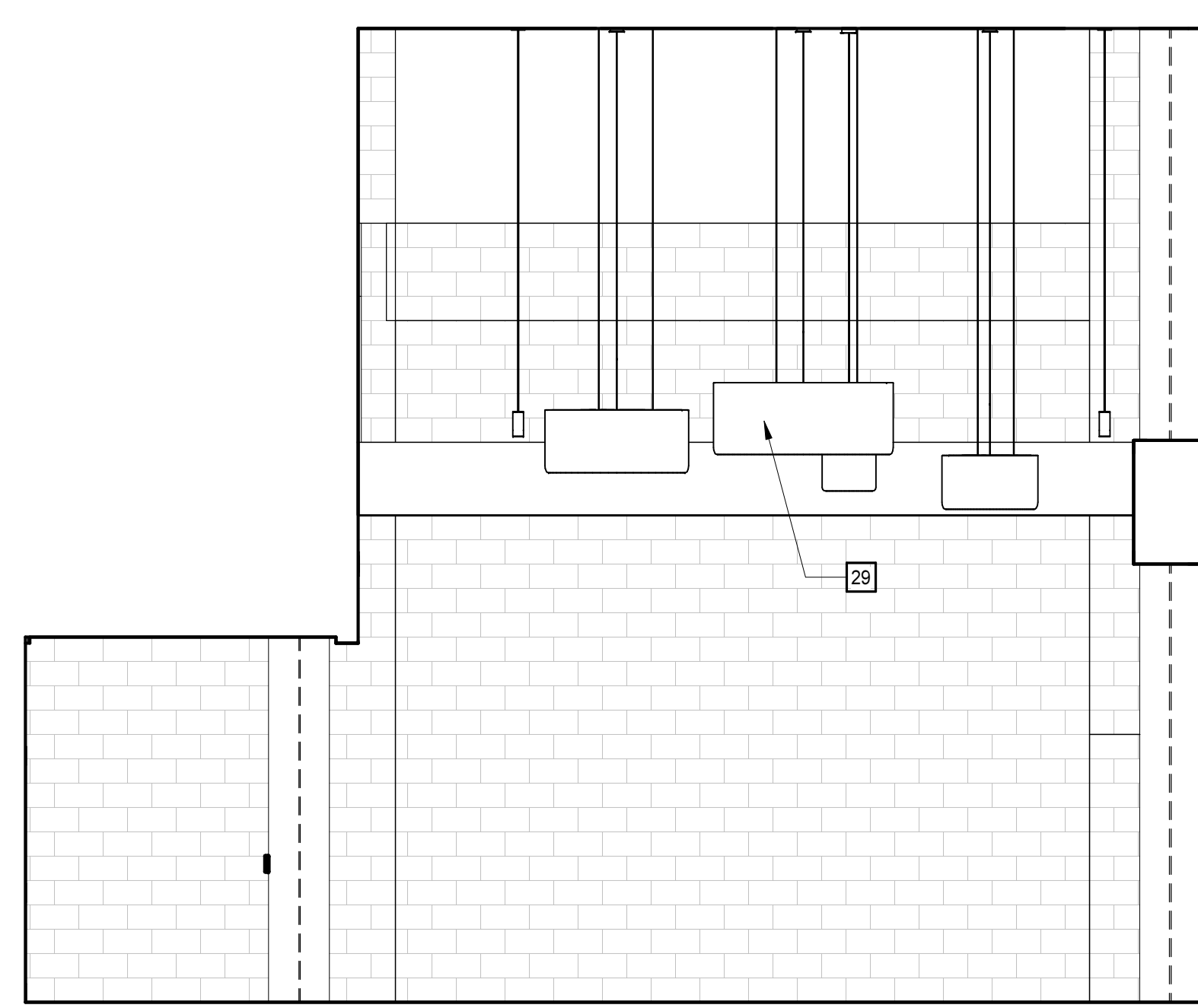
	AWP-G		AWP-J6		AWP-K6
	AWP-H		AWP-J7		AWP-K7
	AWP-I6		AWP-J8		AWP-K8
	AWP-I7		AWP-J9		AWP-K9
	AWP-I9		AWP-C		



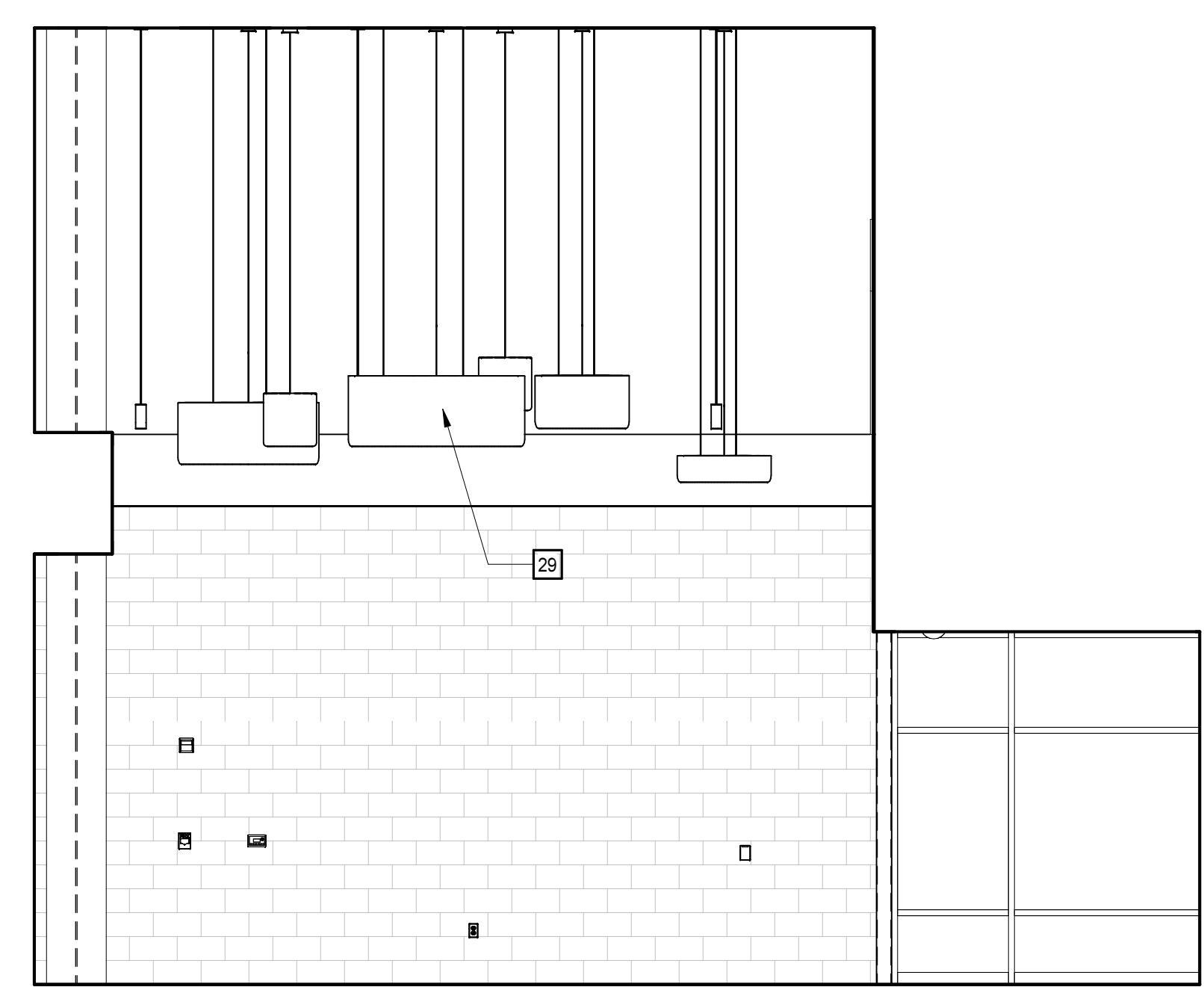
**6 LOBBY INTERIOR ELEVATION - S**  
 A2.1.1/A4.2.4 1/4" = 1'-0"



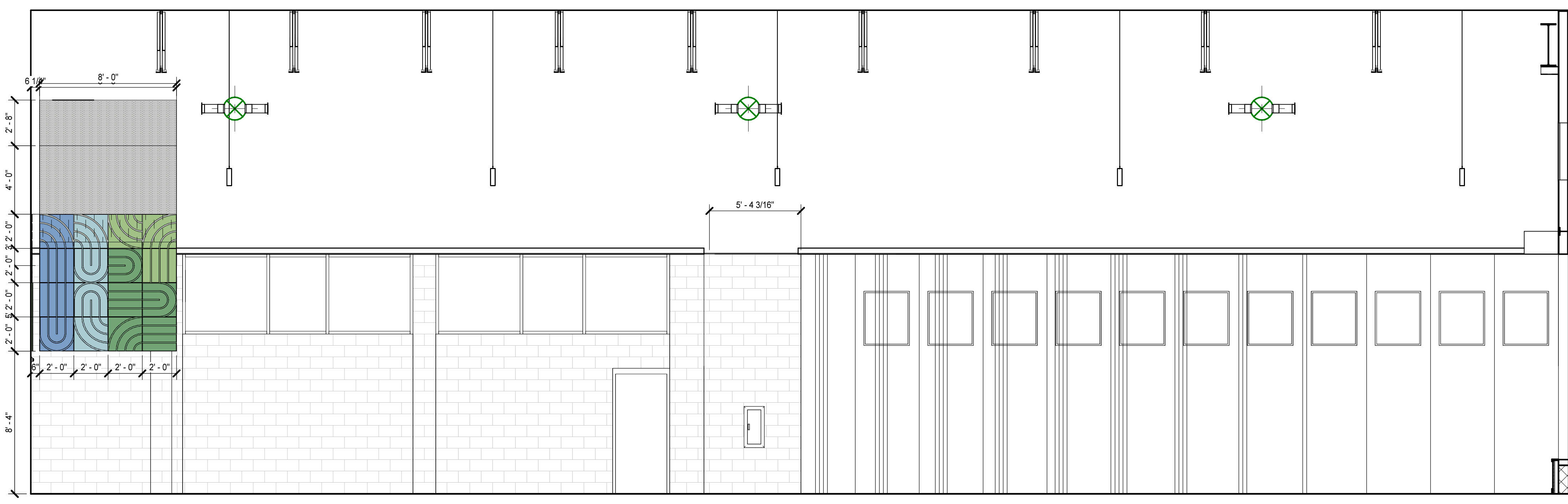
**4 LOBBY INTERIOR ELEVATION - N**  
 A2.1.1/A4.2.4 1/4" = 1'-0"



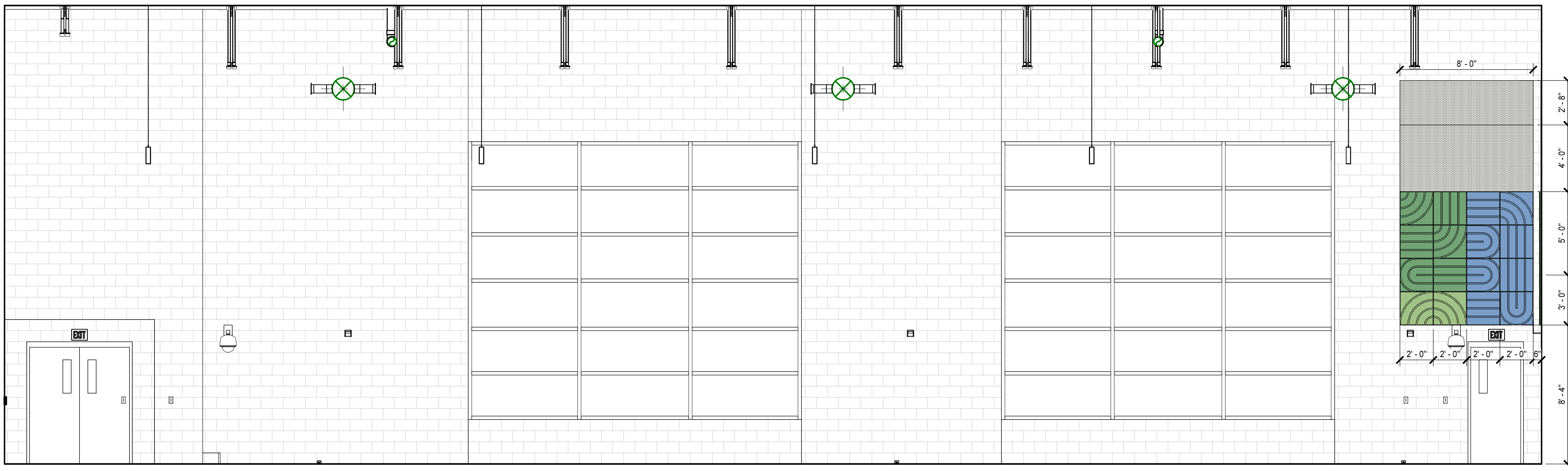
**2 LOBBY INTERIOR ELEVATION - E**  
 A2.1.1/A4.2.4 1/4" = 1'-0"



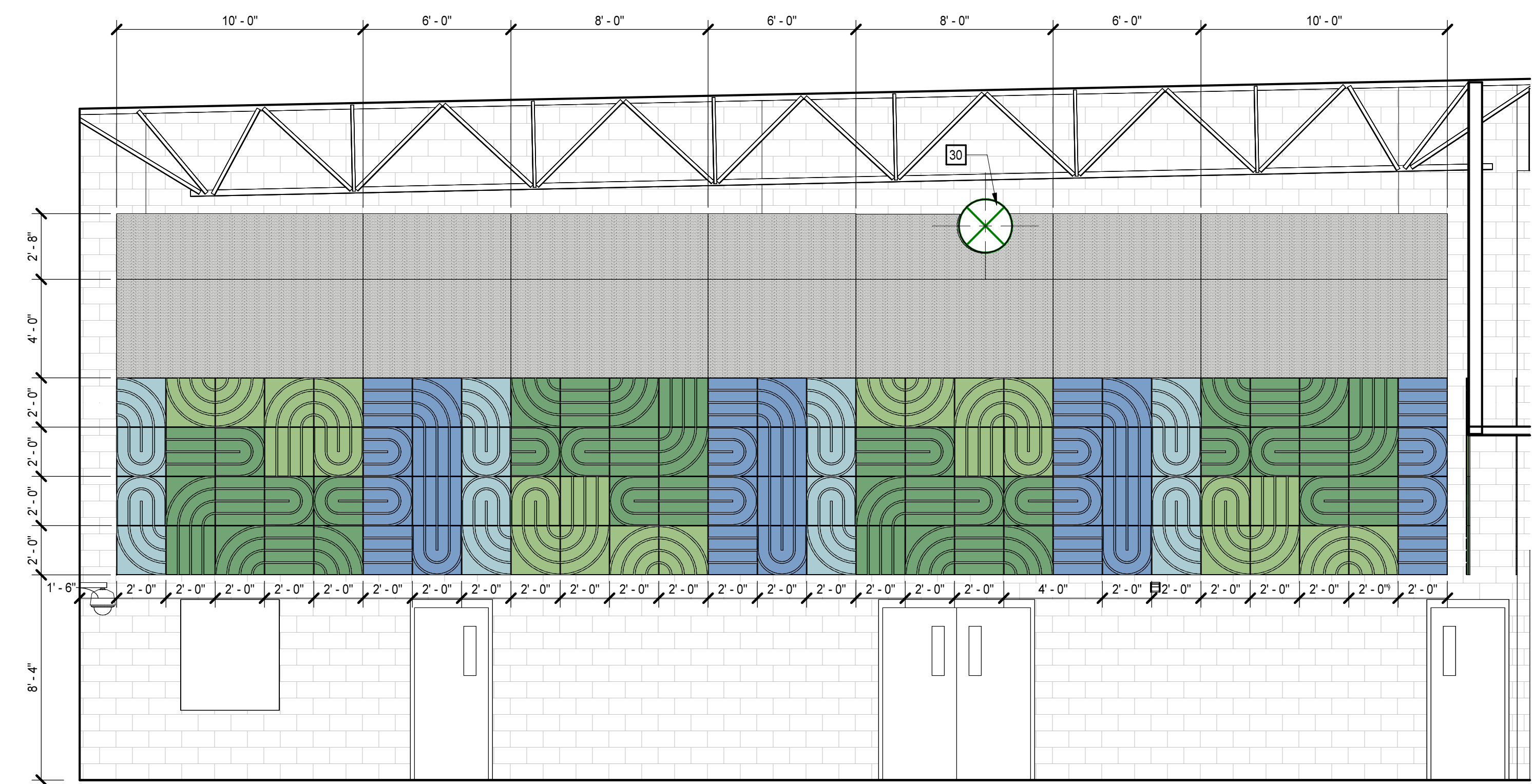
**1 LOBBY INTERIOR ELEVATION - W**  
 A2.1.1/A4.2.4 1/4" = 1'-0"



**7 MS DINING INTERIOR ELEVATION - E**  
 A2.1.1/A4.2.4 1/4" = 1'-0"



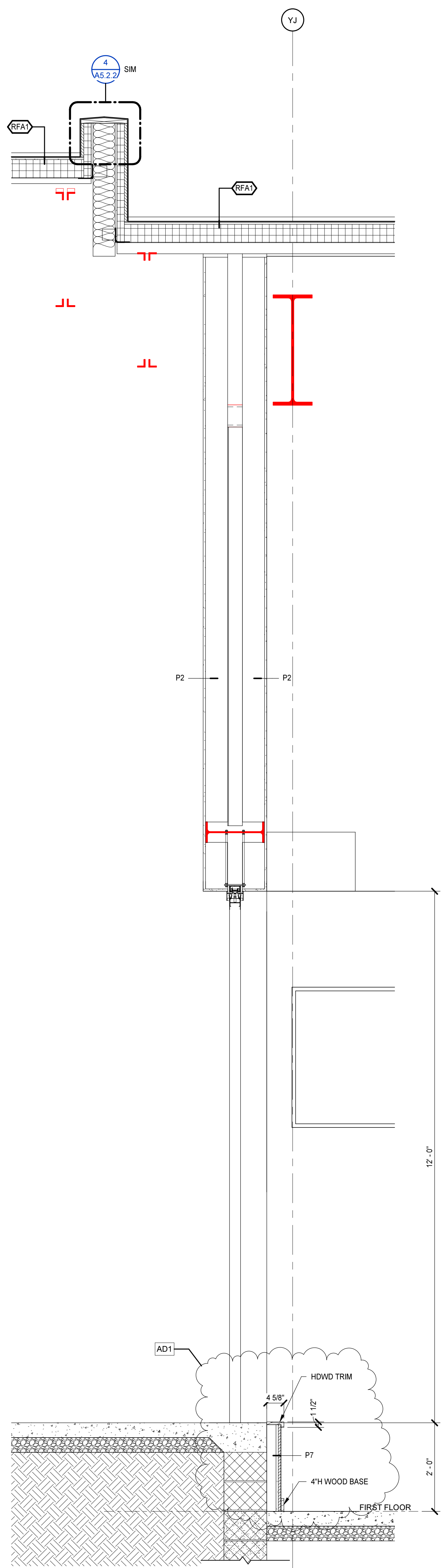
**5 MS DINING INTERIOR ELEVATION - W**  
 A2.1.1/A4.2.4 1/4" = 1'-0"



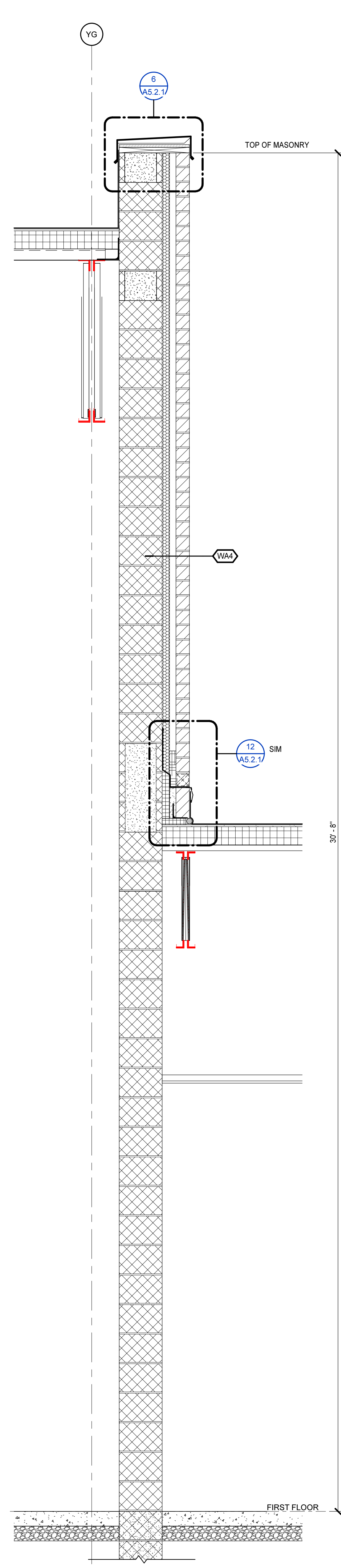
**3 MS DINING INTERIOR ELEVATION - N**  
 A2.1.2/A4.2.4 1/4" = 1'-0"



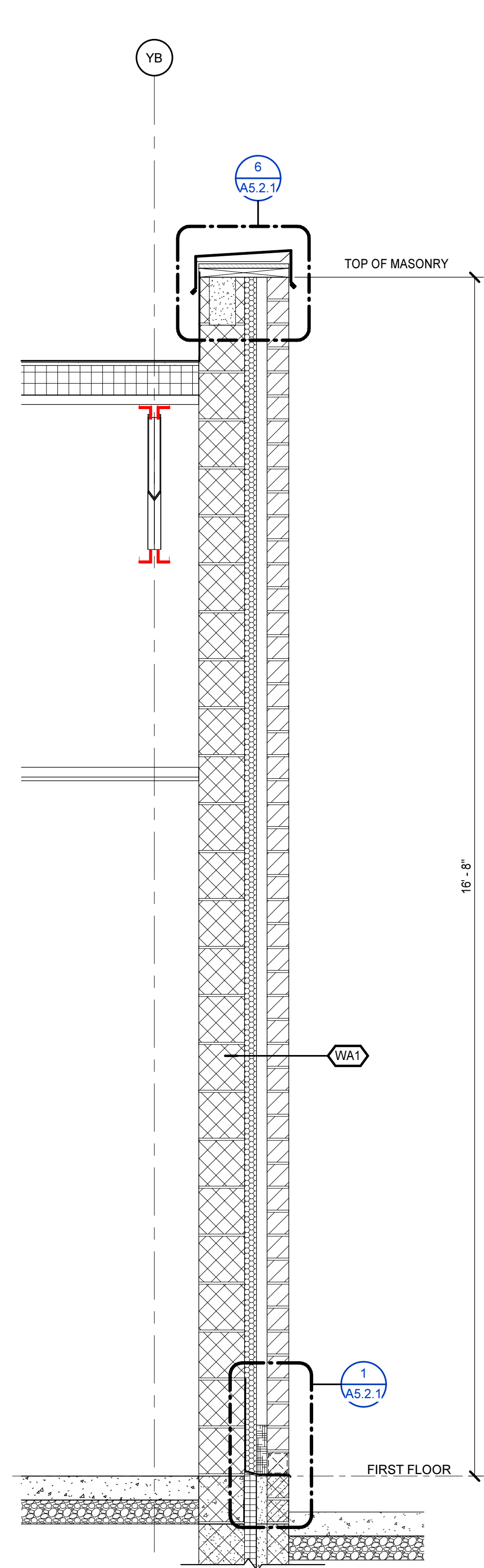
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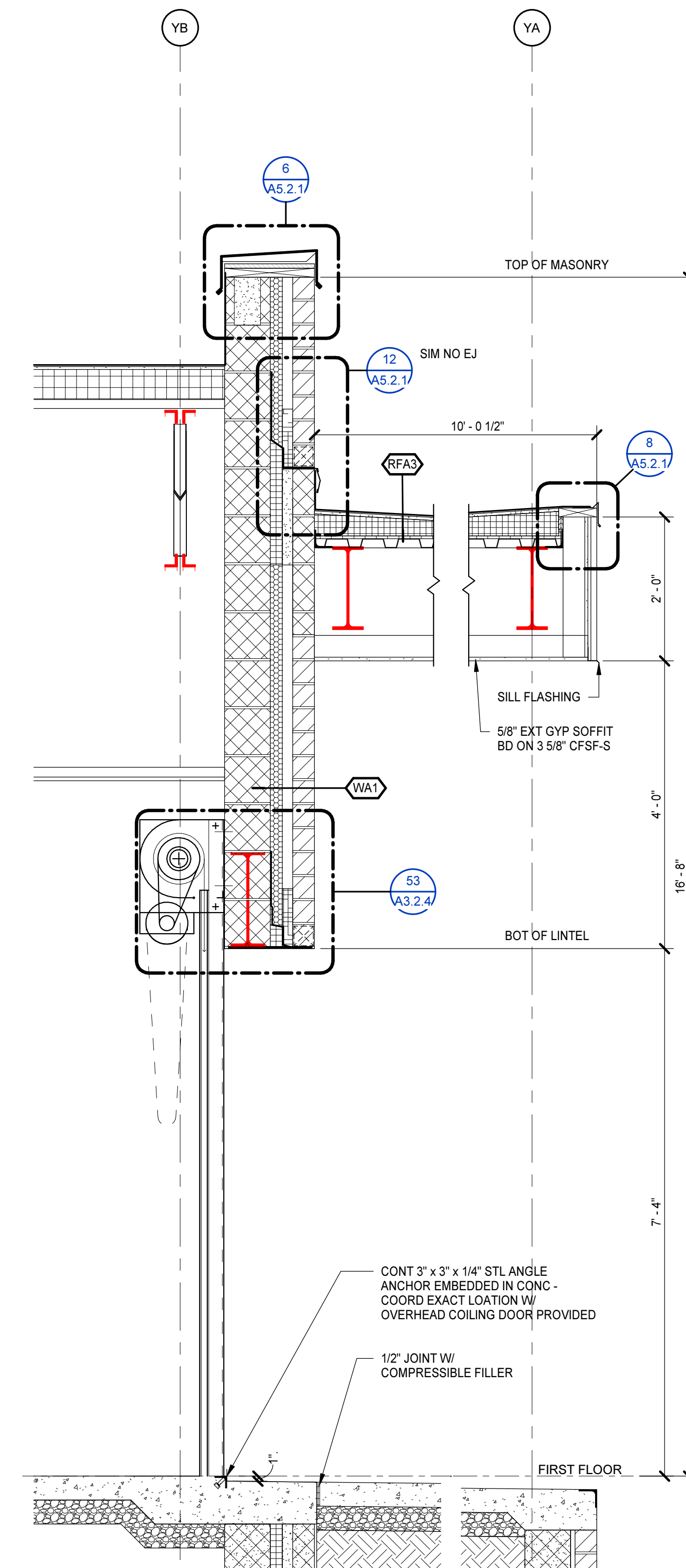
**1 WALL SECTION**  
A2.1.1 AS.1.13 3/4" = 1'-0"



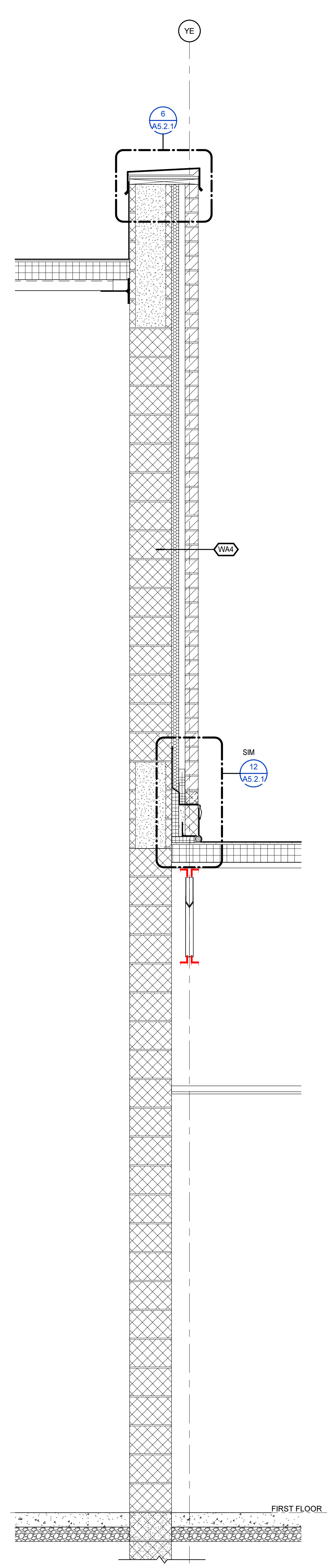
**2 WALL SECTION**  
A2.1.2 AS.1.13 3/4" = 1'-0"



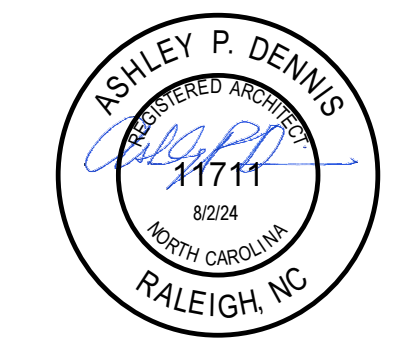
**3 WALL SECTION**  
A2.1.2 AS.1.13 3/4" = 1'-0"



**4 WALL SECTION**  
A2.1.2 AS.1.13 3/4" = 1'-0"



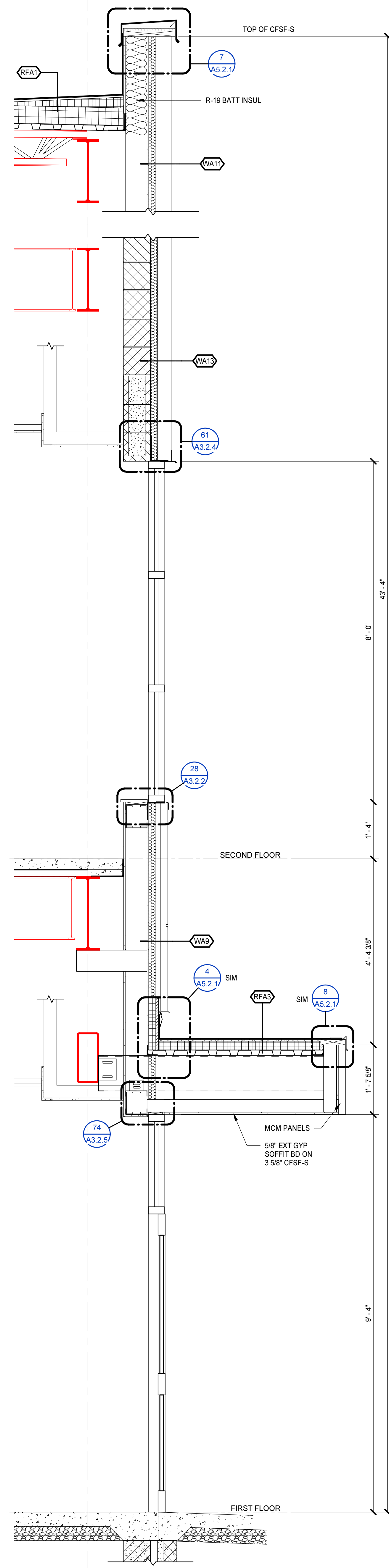
**5 WALL SECTION**  
A2.1.2 AS.1.13 3/4" = 1'-0"



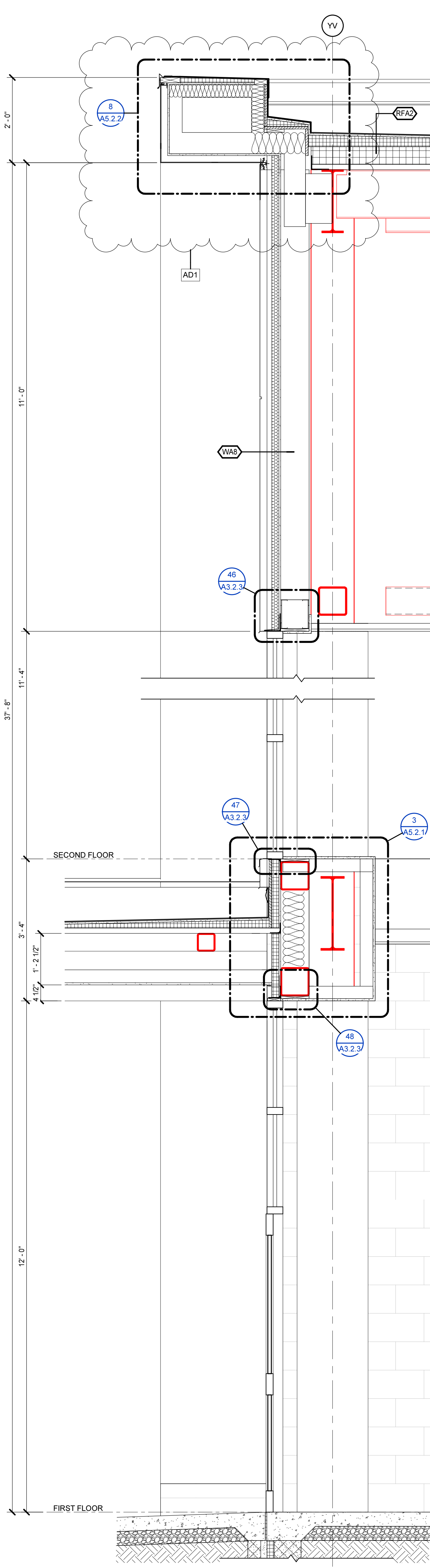
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1



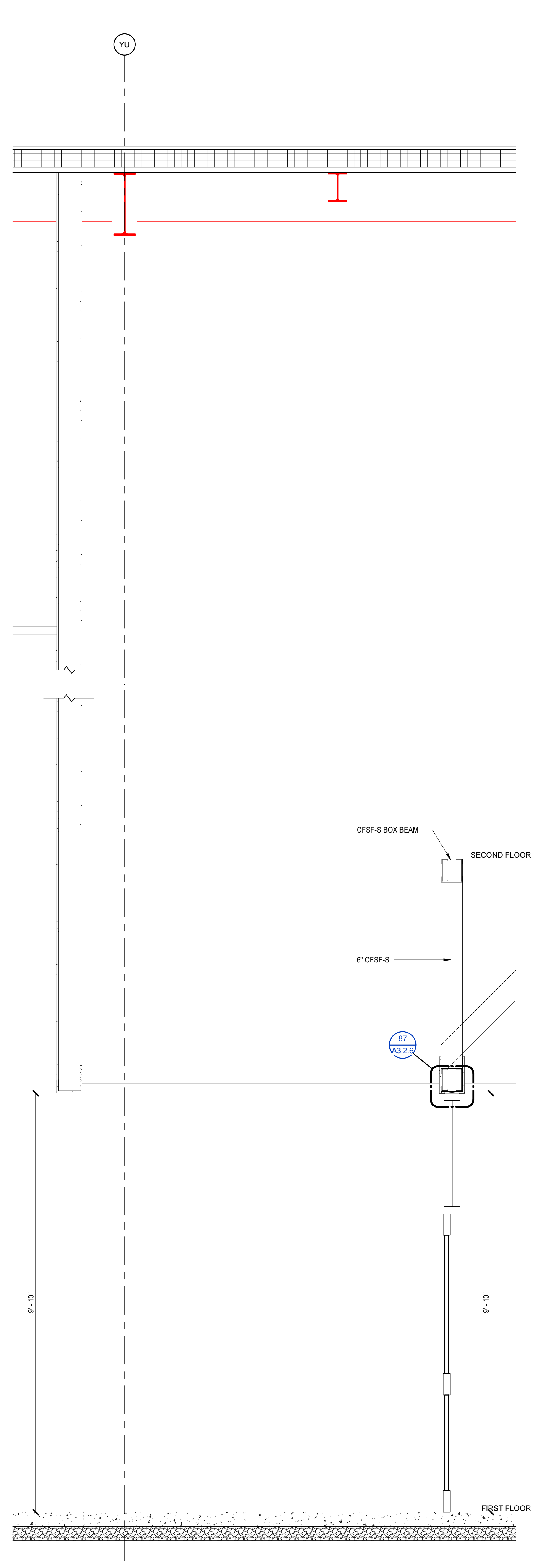
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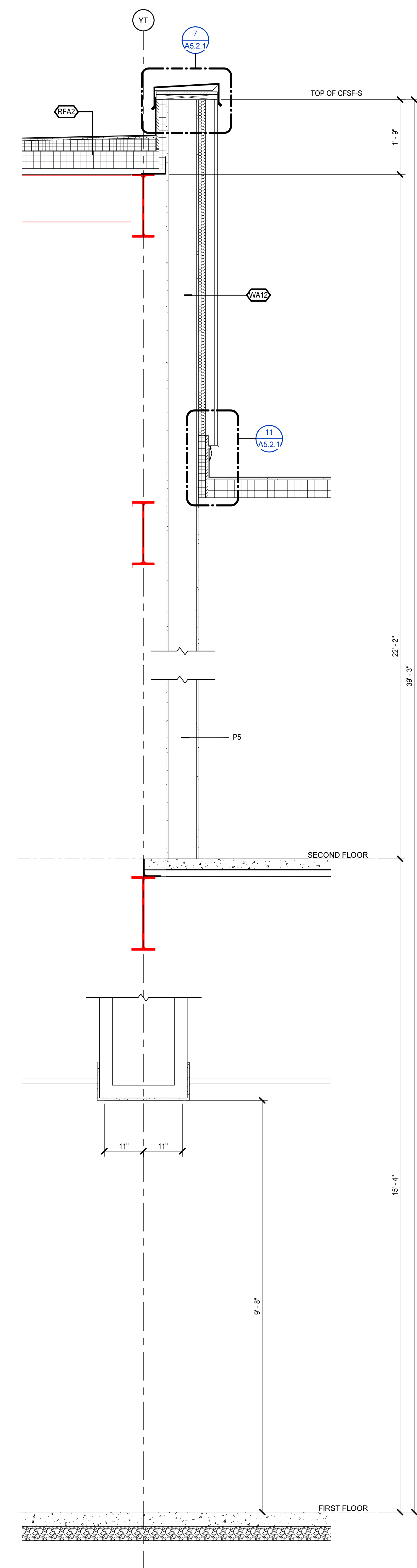
**1 WALL SECTION**  
A2.1.2 | A5.1.14 | 3/4" = 1'-0"



**2 WALL SECTION**  
A2.1.1 | A5.1.14 | 3/4" = 1'-0"

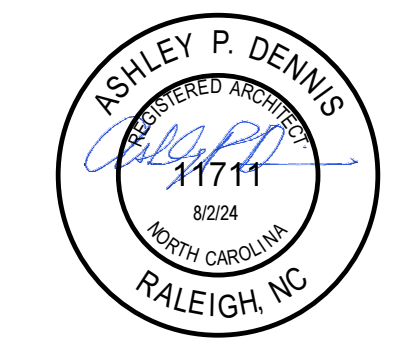


**3 WALL SECTION**  
A2.1.1 | A5.1.14 | 3/4" = 1'-0"



**4 WALL SECTION**  
A2.1.1 | A5.1.14 | 3/4" = 1'-0"

**MOSELEYARCHITECTS**



**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

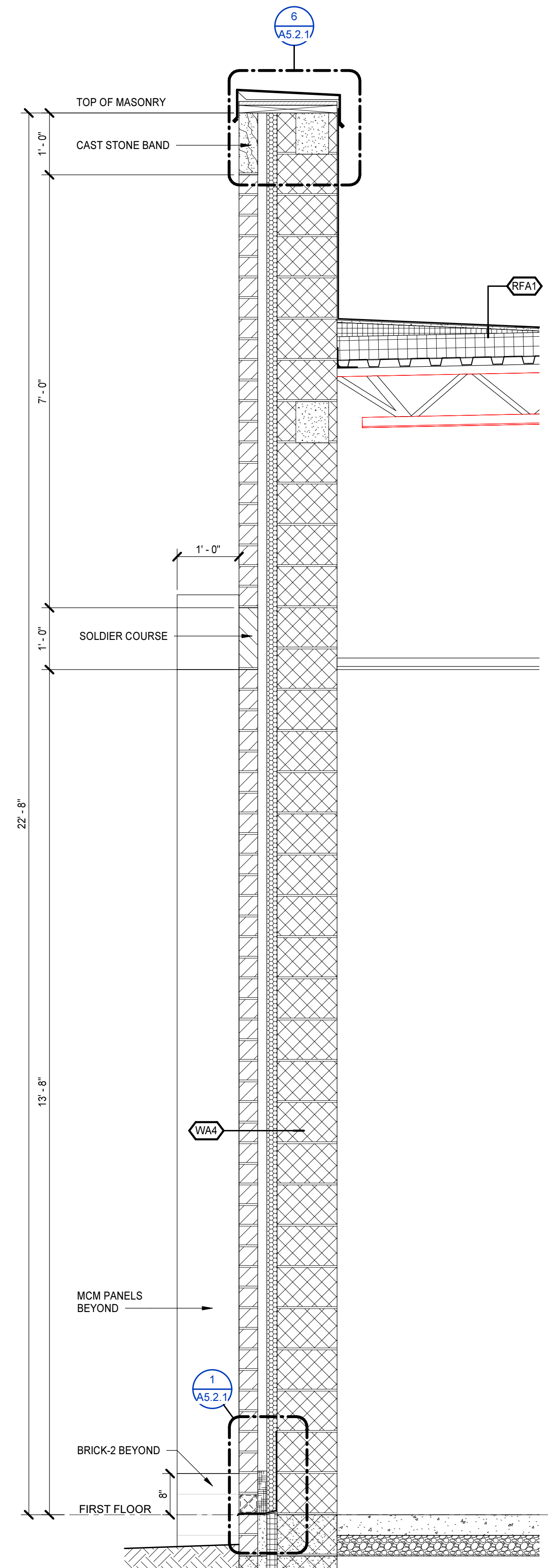
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DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

WALL SECTIONS

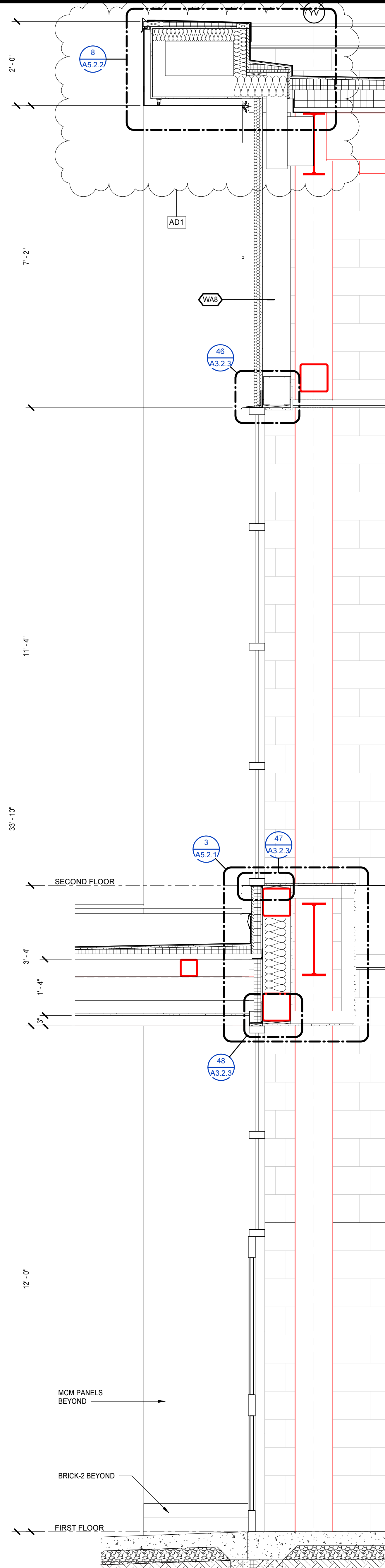
**A5.1.14**

911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA 27603  
PHONE (919) 840-0051  
MOSELEYARCHITECTS.COM

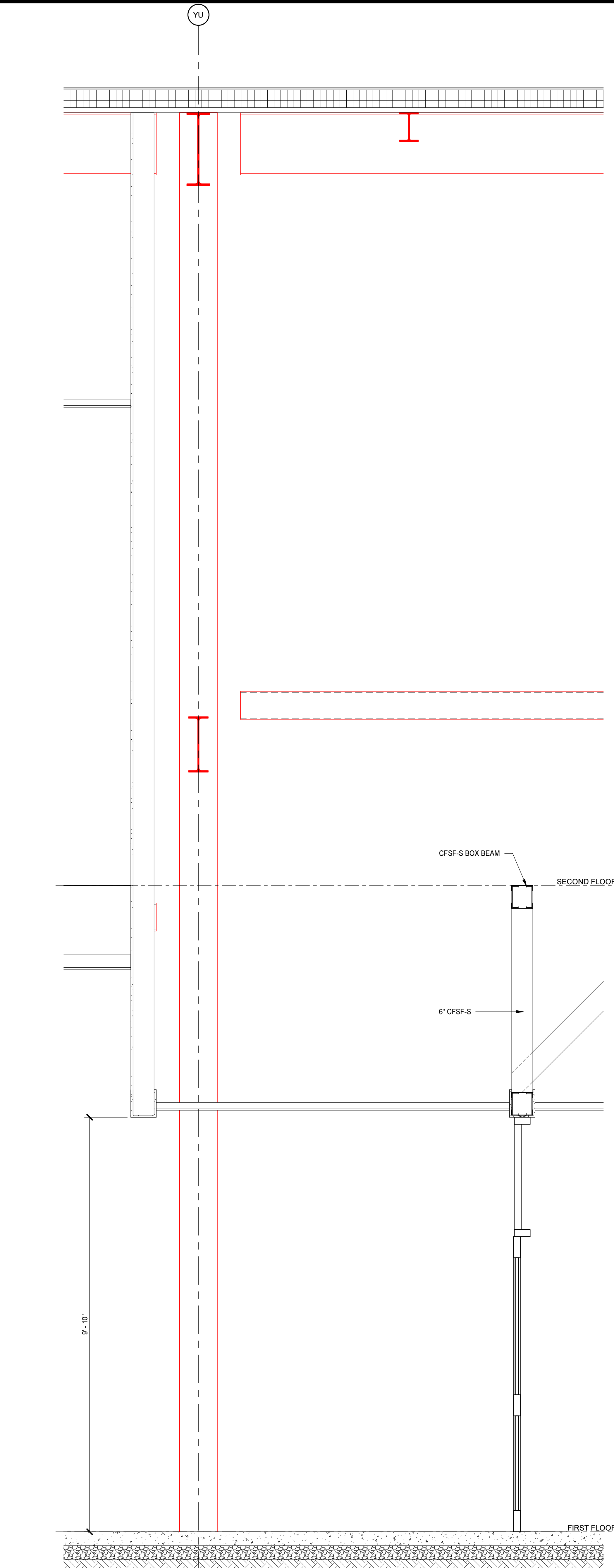
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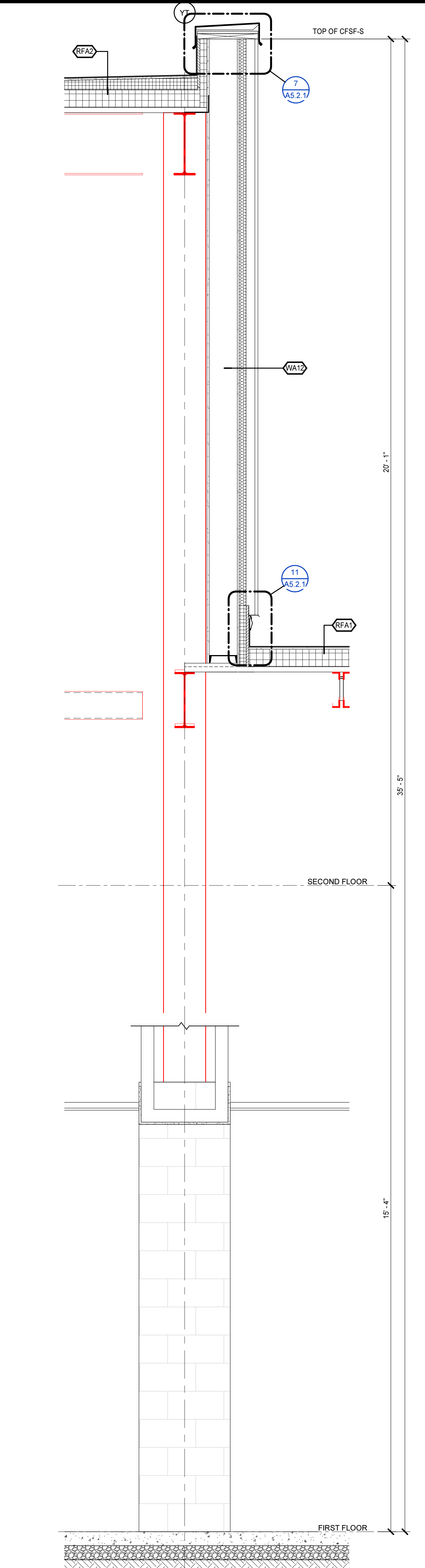
**1 WALL SECTION**  
A2.1.1|A5.1.15 3/4" = 1'-0"



**2 WALL SECTION**  
A2.1.1|A5.1.15 3/4" = 1'-0"



**3 WALL SECTION**  
A2.1.1|A5.1.15 3/4" = 1'-0"



**4 WALL SECTION**  
A2.1.1|A5.1.15 3/4" = 1'-0"

**MOSELEYARCHITECTS**



**PENDER COUNTY SCHOOLS K-8 SCHOOL**

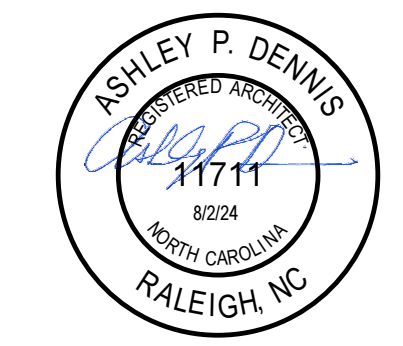
Pender County Schools  
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DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

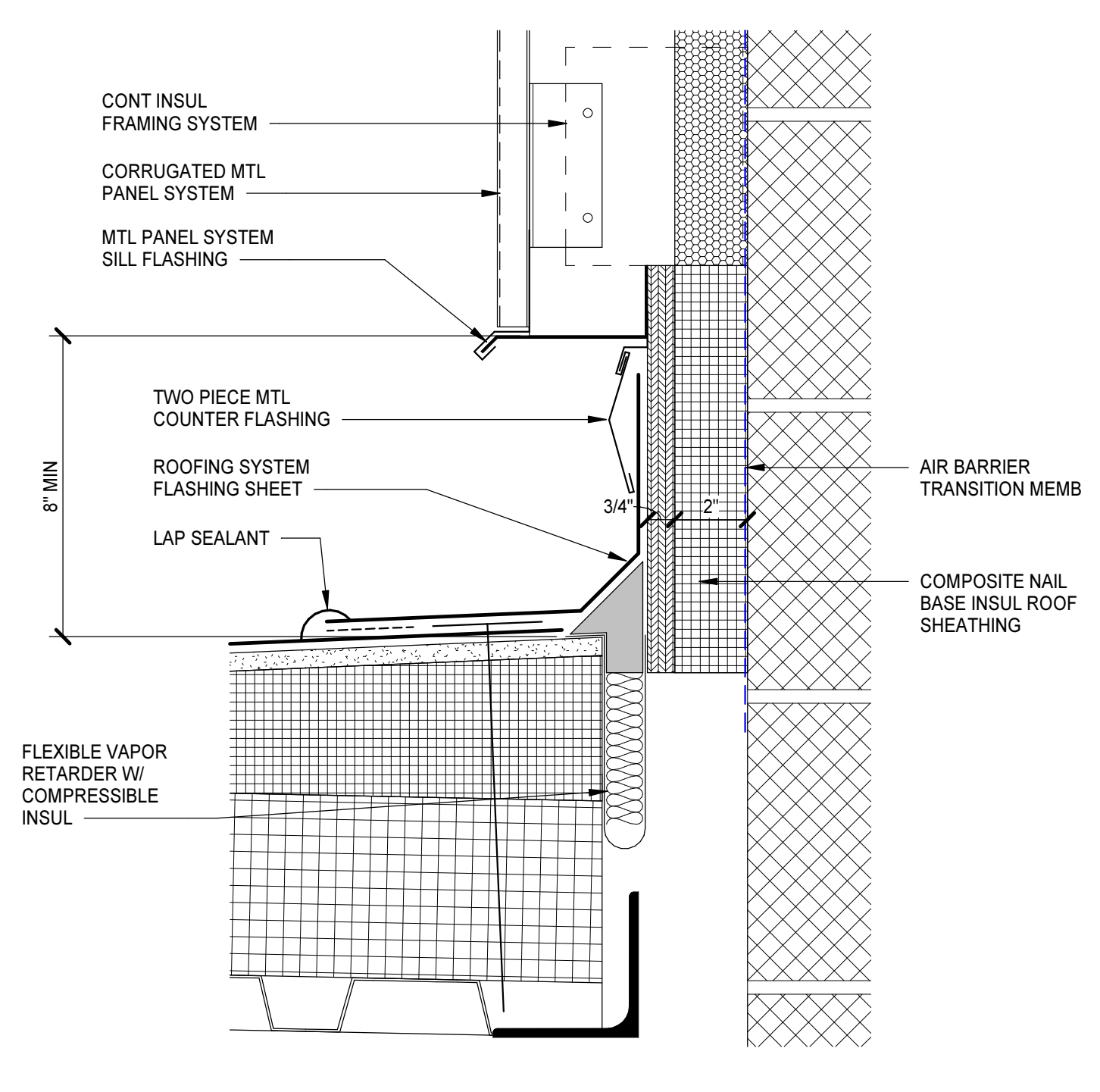
WALL SECTIONS

**A5.1.15**

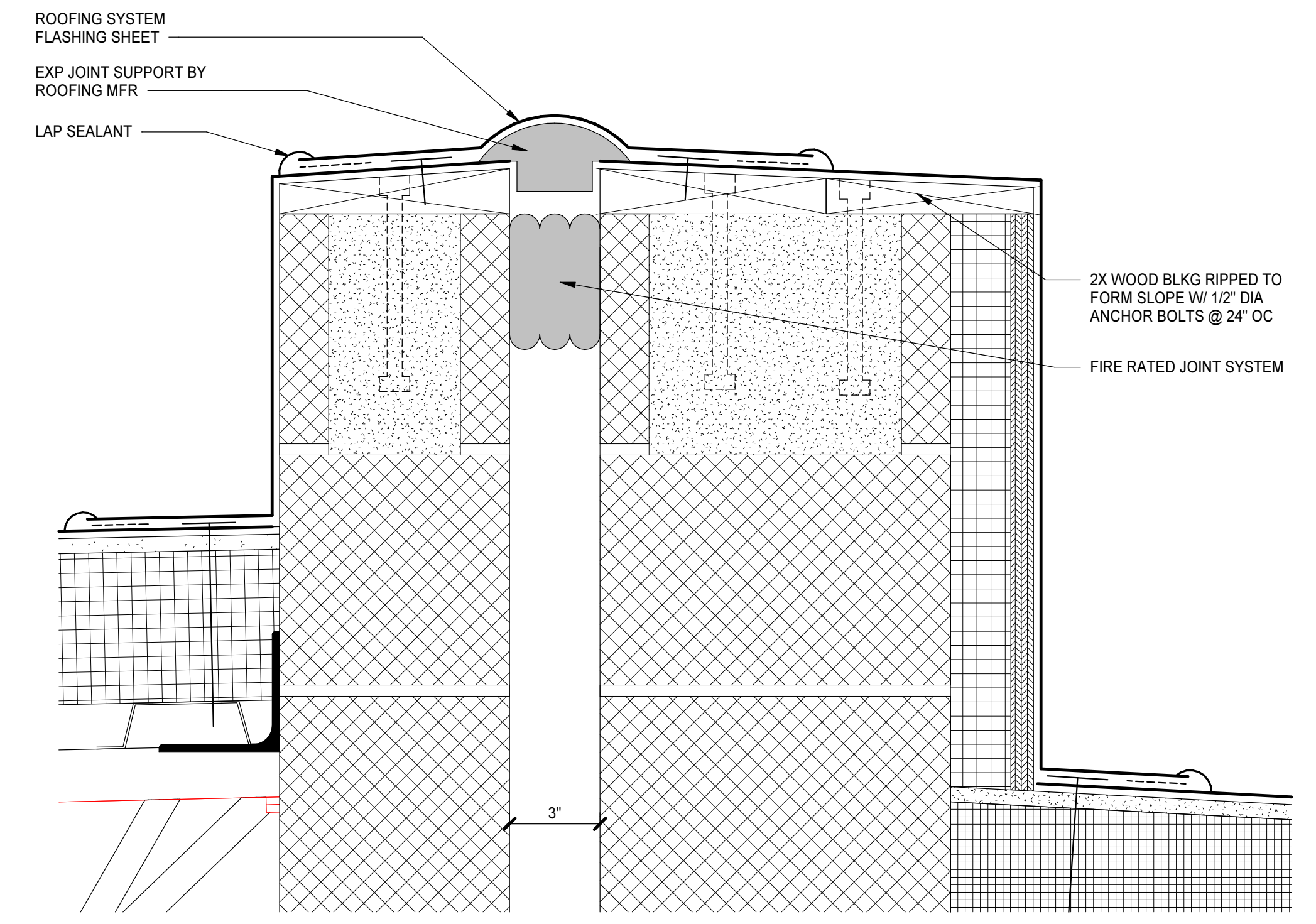




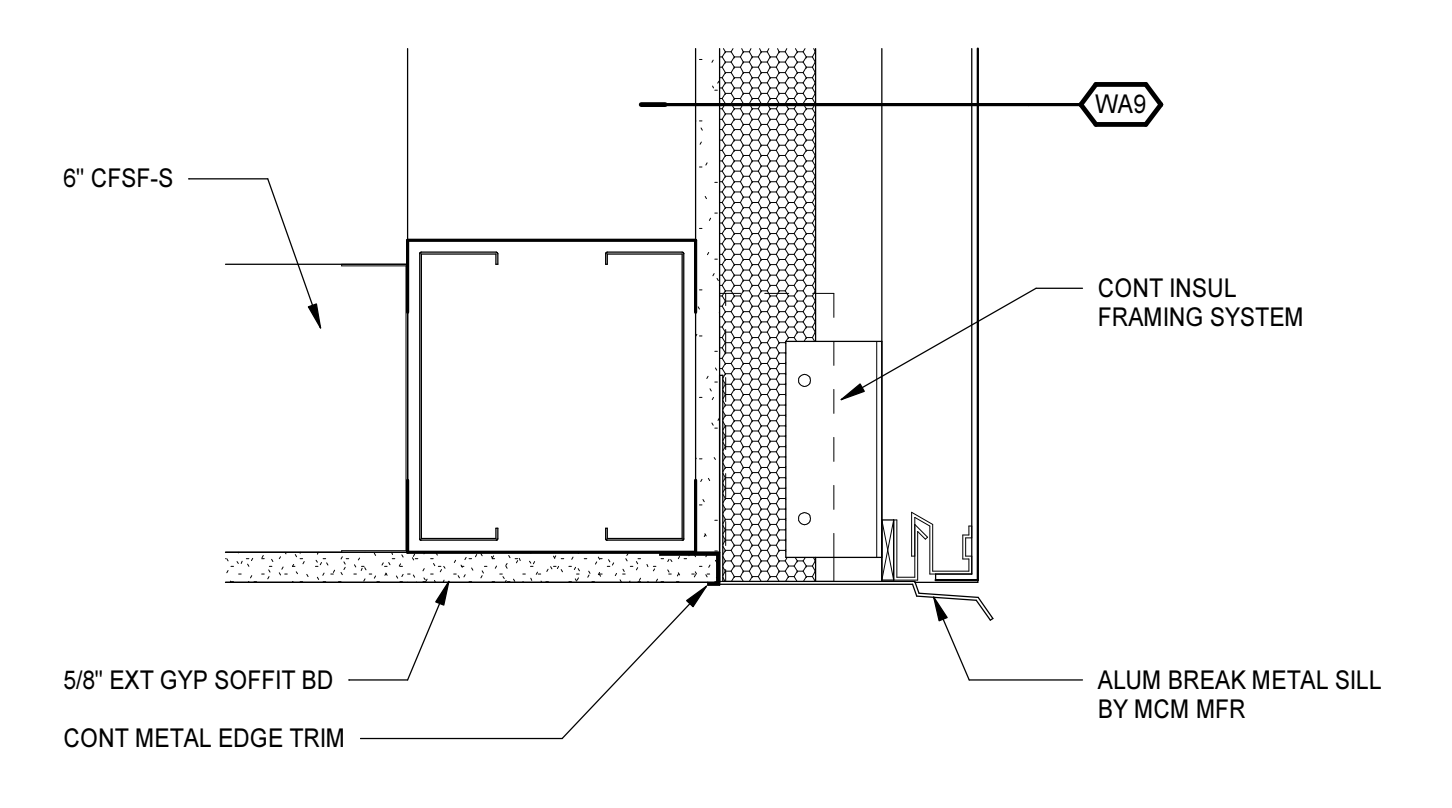
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DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1



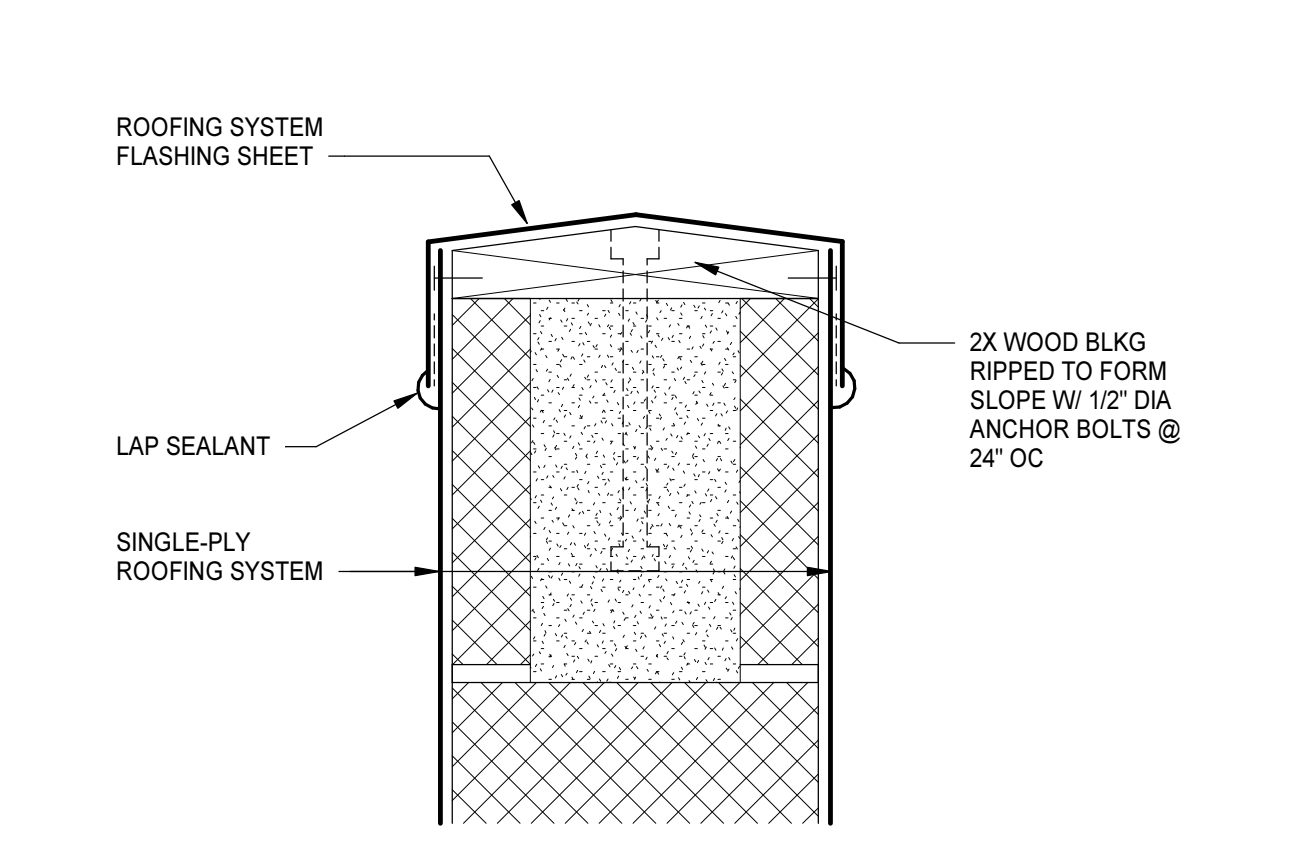
**1 EXPANSION JOINT DETAIL**  
 A5.1.10 | A5.2.2 | 3" = 1'-0"



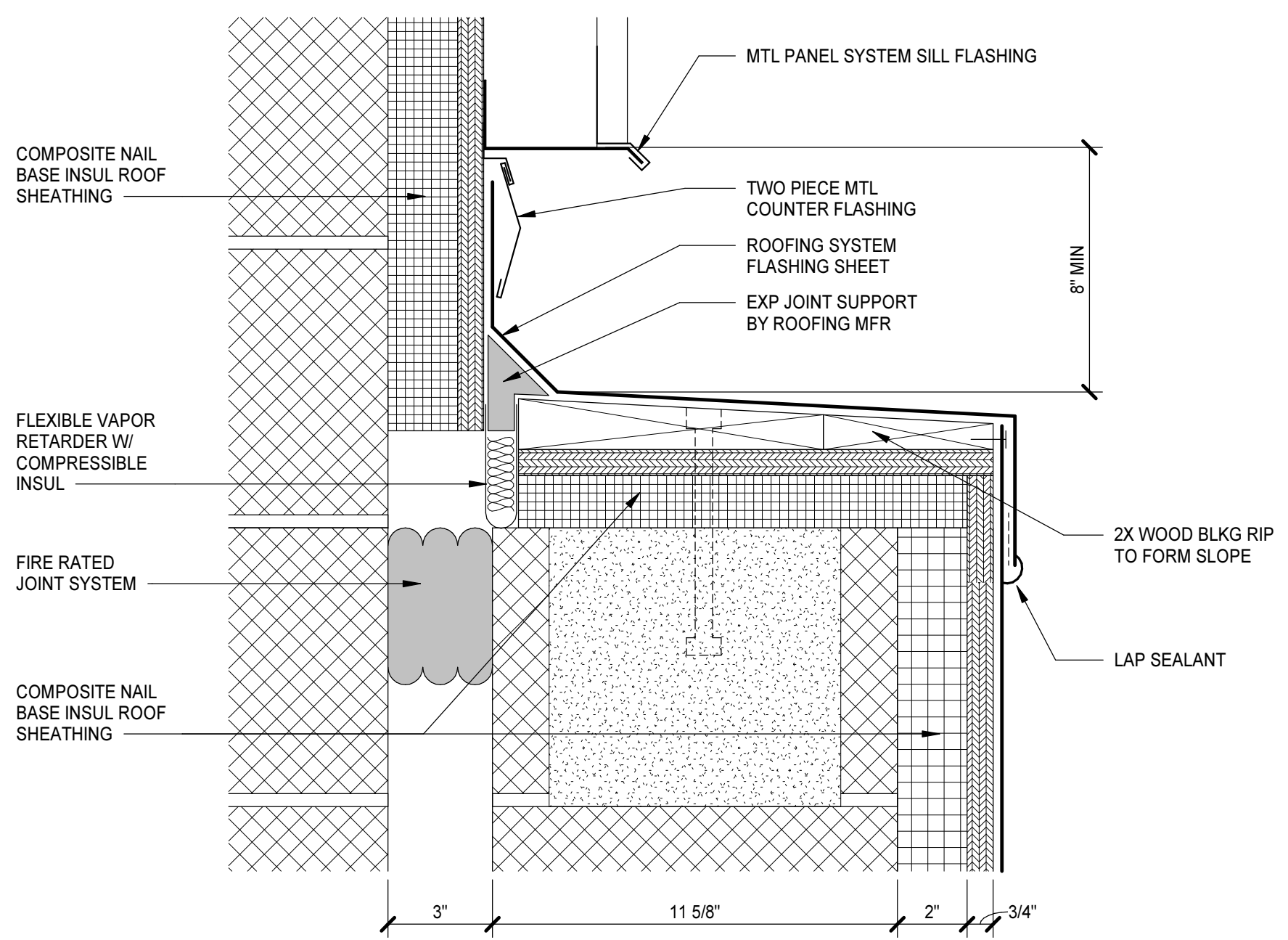
**2 EXPANSION JOINT DETAIL**  
 A5.1.8 | A5.2.2 | 3" = 1'-0"



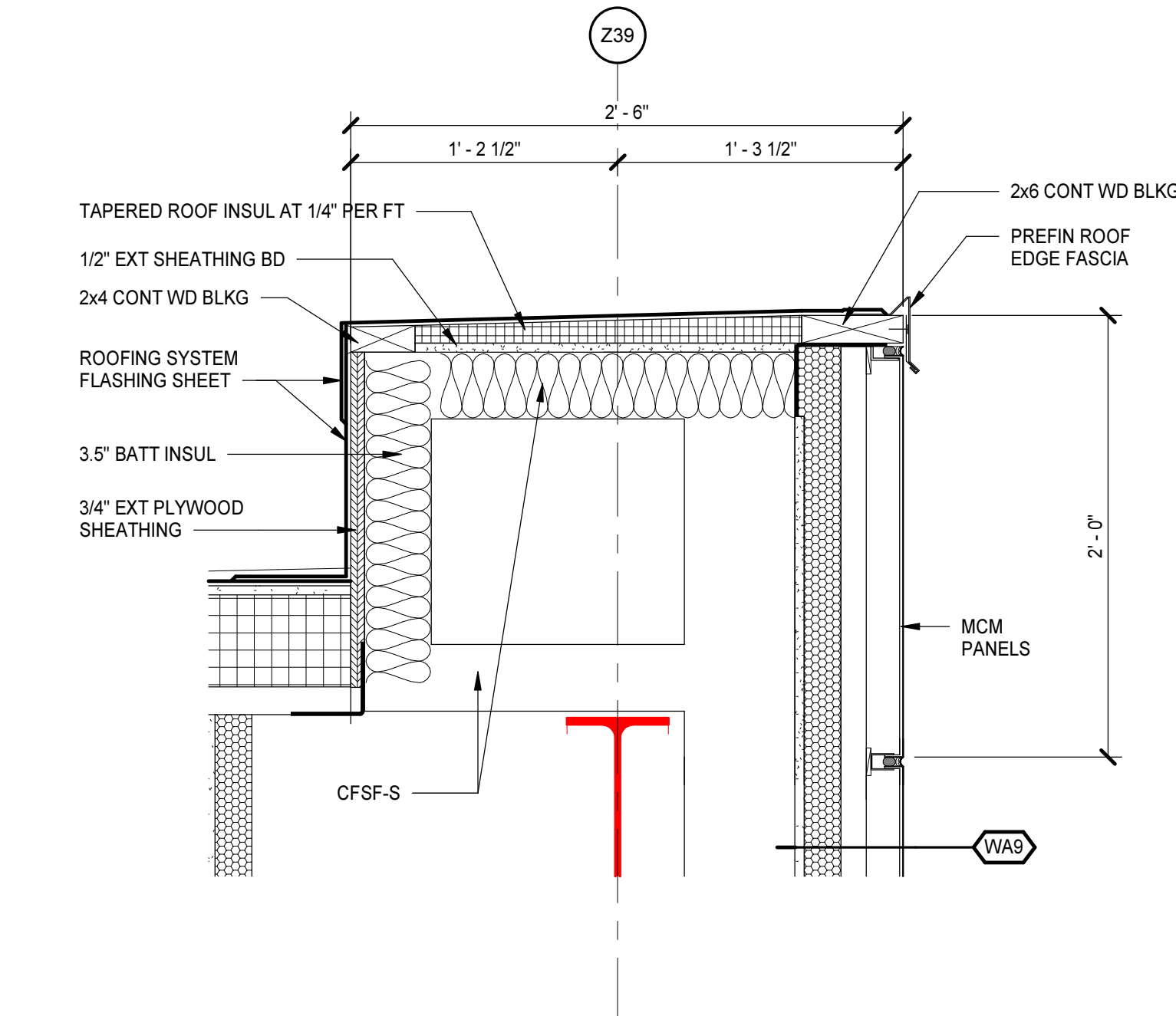
**3 SECTION DETAIL**  
 A5.1.5 | A5.2.2 | 3" = 1'-0"



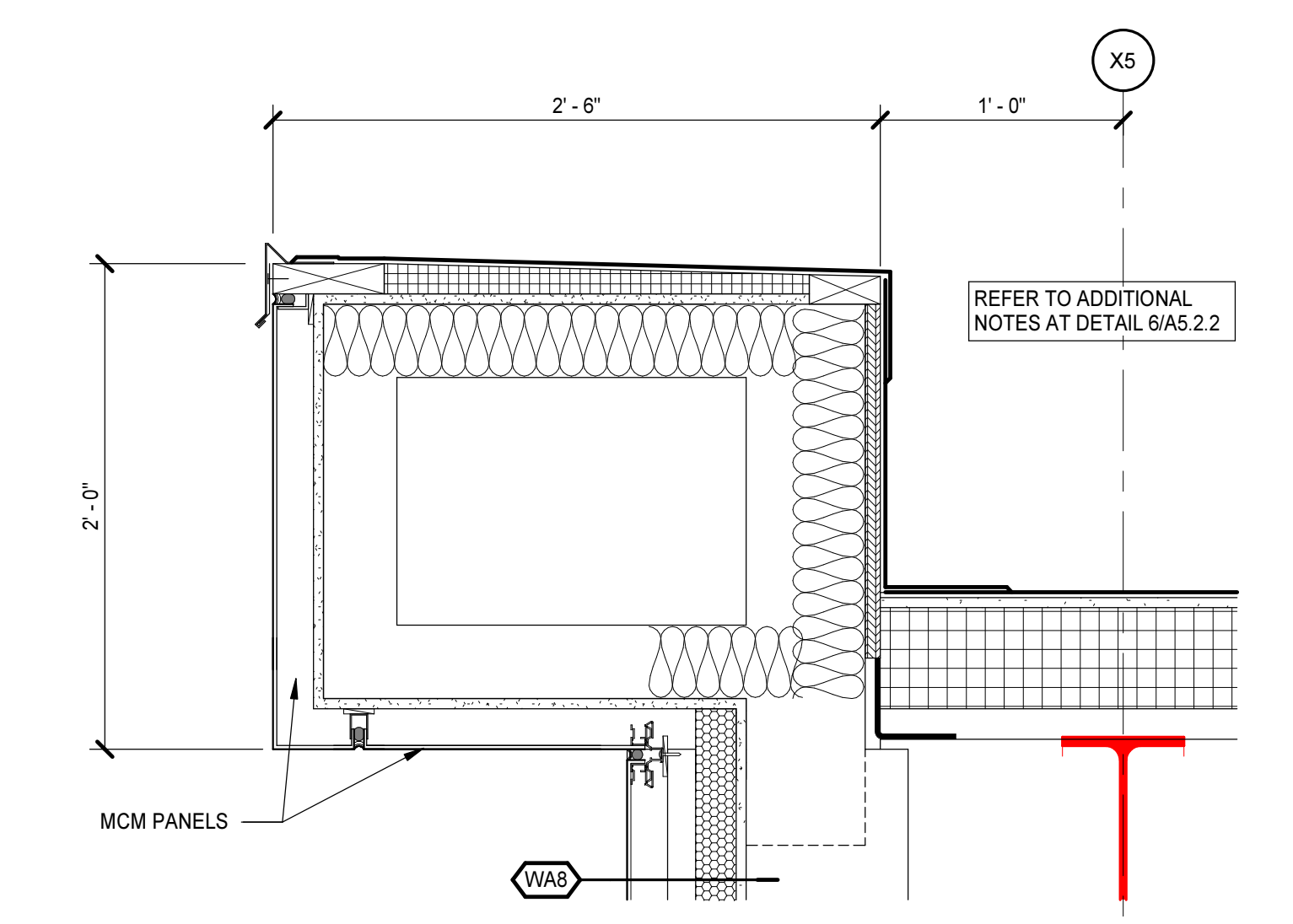
**4 SECTION DETAIL**  
 A5.1.3 | A5.2.2 | 3" = 1'-0"



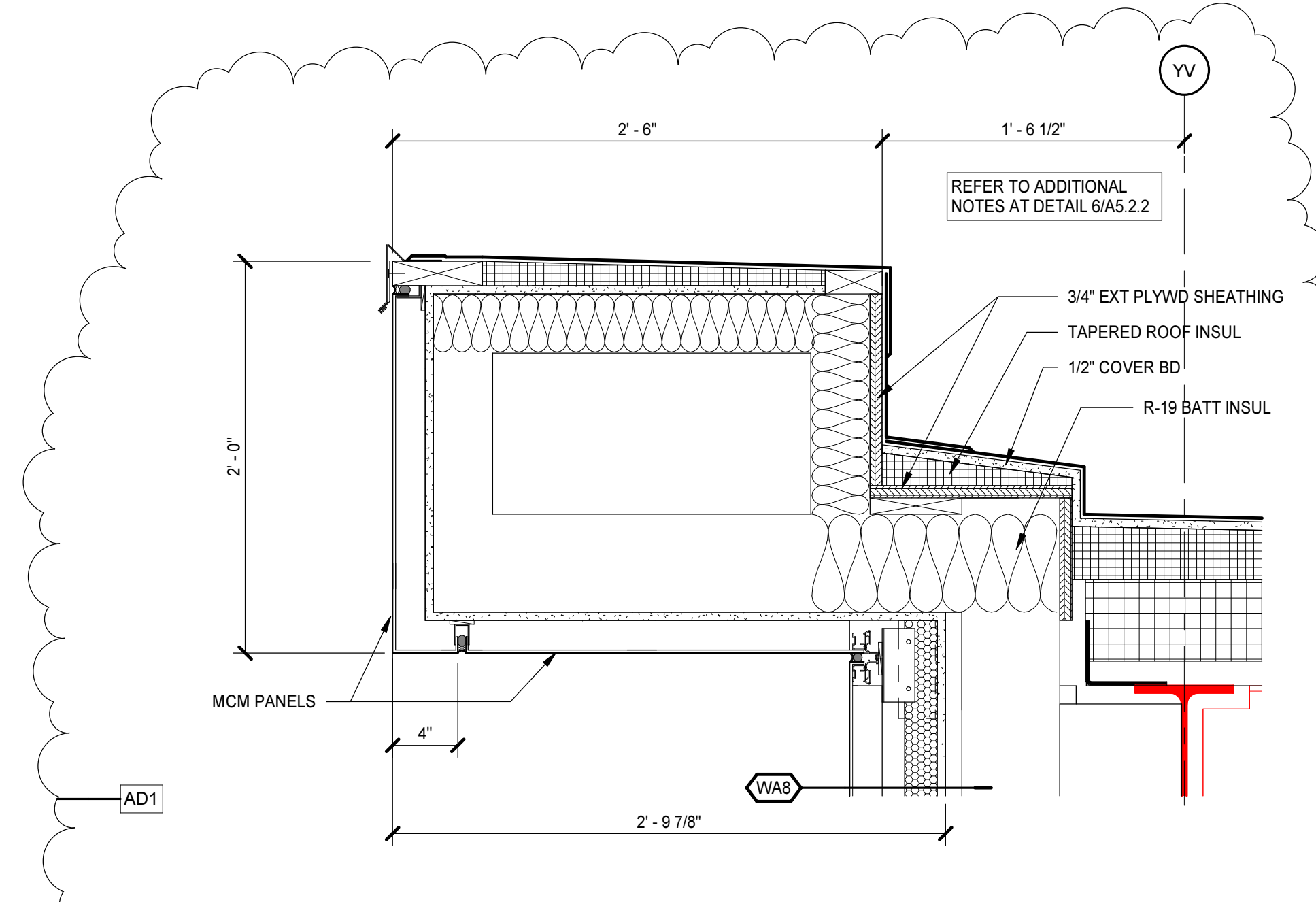
**5 SECTION DETAIL**  
 A5.1.9 | A5.2.2 | 3" = 1'-0"



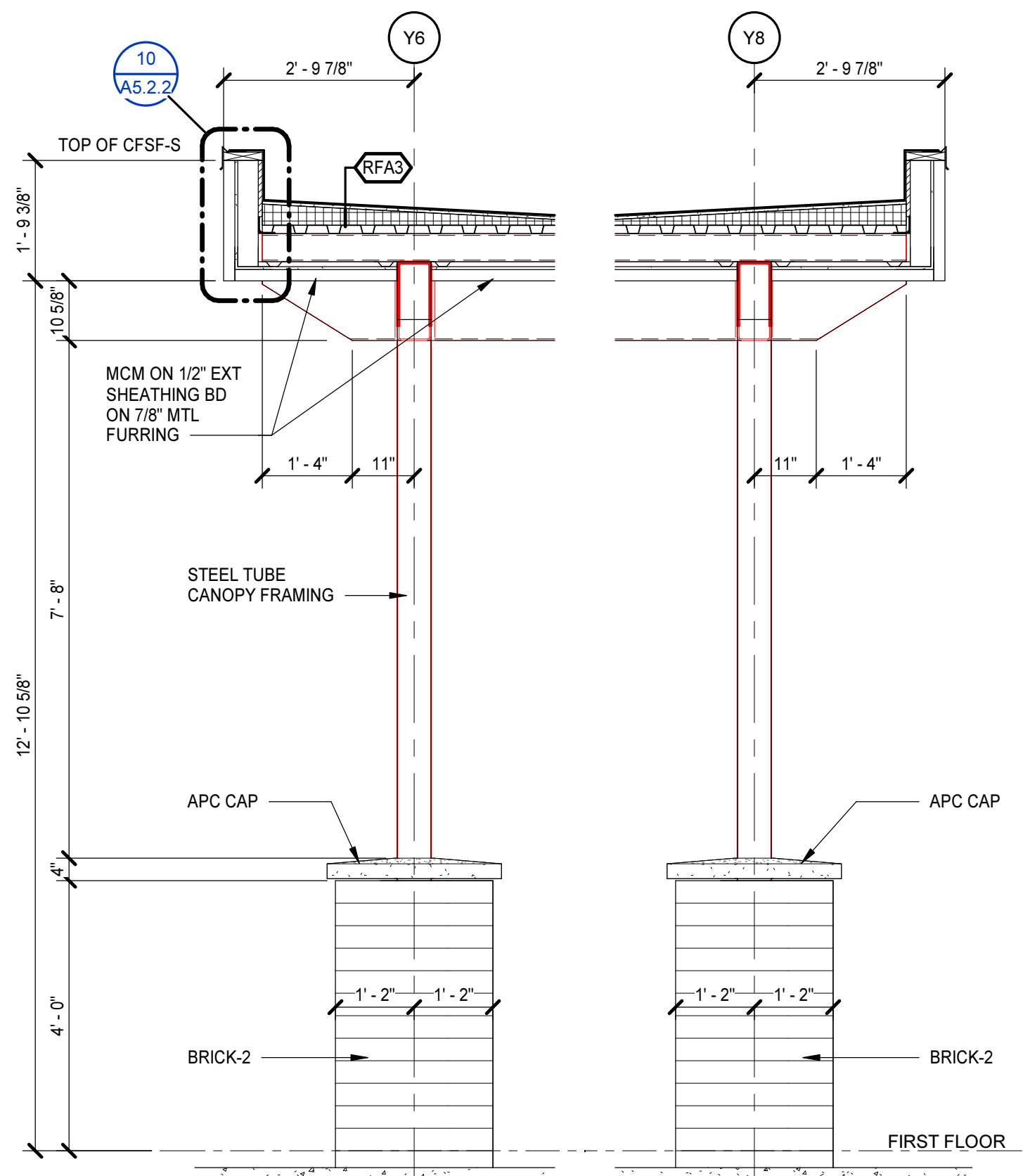
**6 SECTION DETAIL**  
 A5.1.5 | A5.2.2 | 1 1/2" = 1'-0"



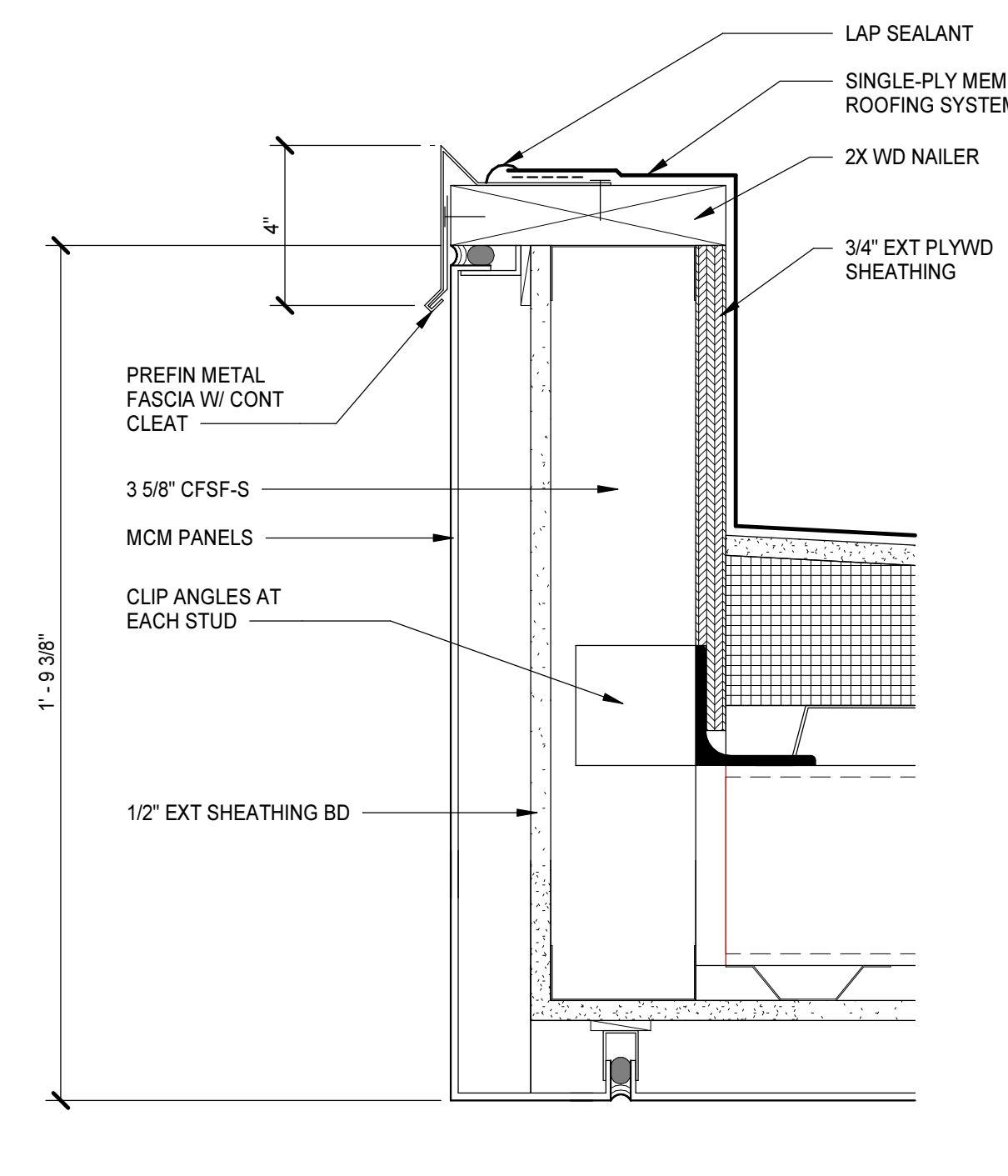
**7 SECTION DETAIL**  
 A5.1.6 | A5.2.2 | 1 1/2" = 1'-0"



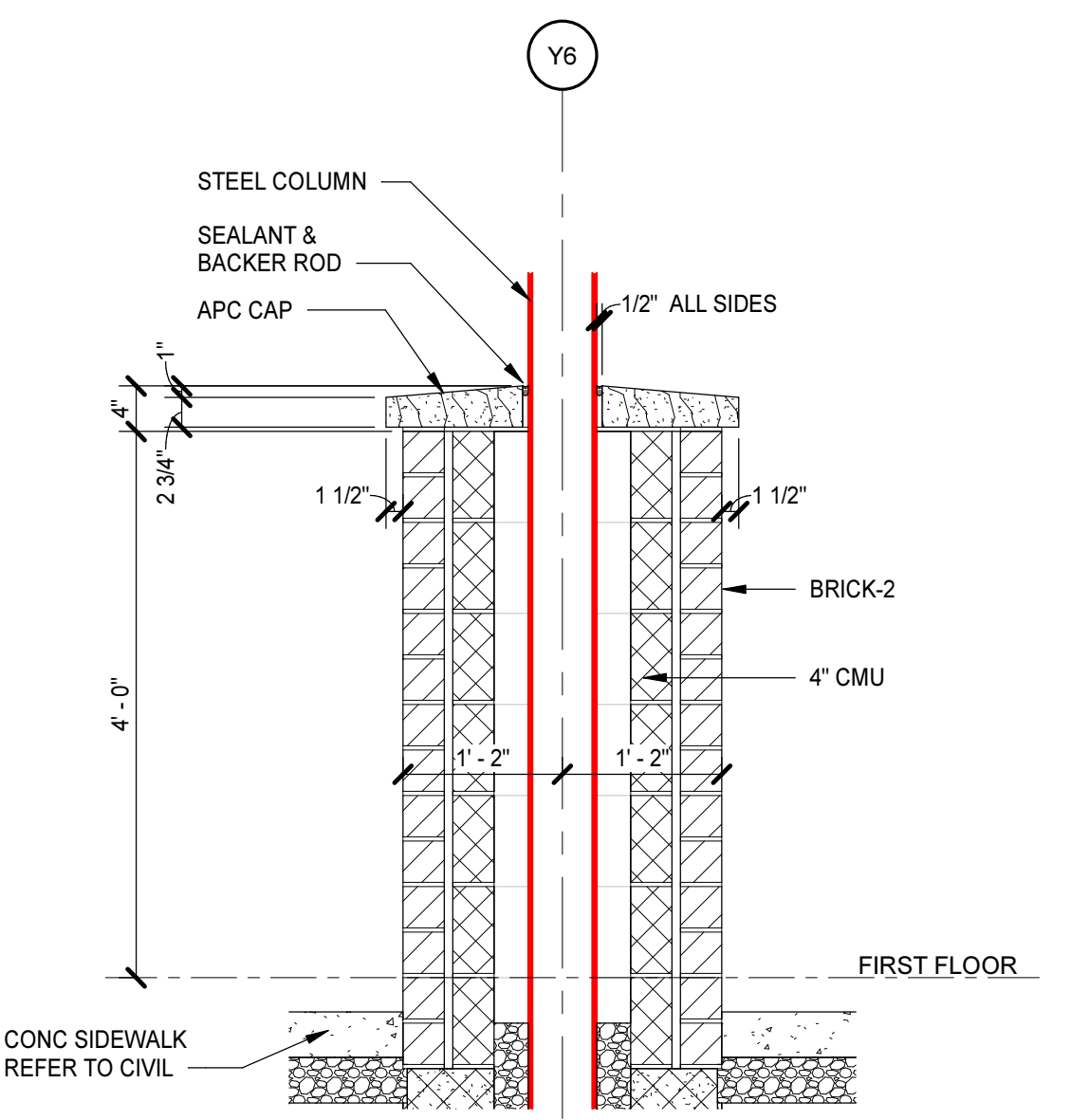
**8 SECTION DETAIL**  
 A5.1.14 | A5.2.2 | 1 1/2" = 1'-0"



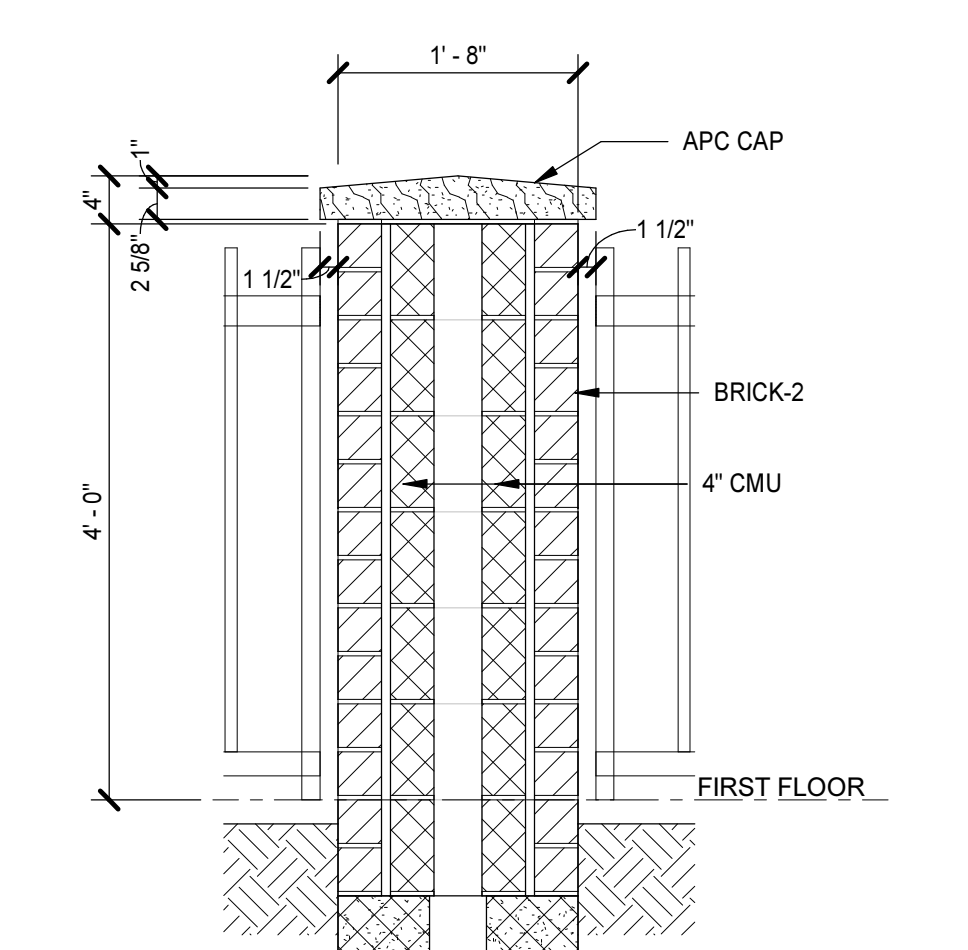
**9 WALL SECTION**  
 A2.1.1 | A5.2.2 | 1/2" = 1'-0"



**10 SECTION DETAIL**  
 A5.1.19 | A5.2.2 | 3" = 1'-0"

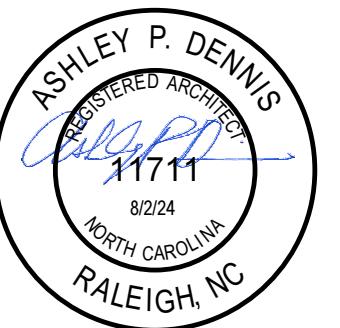


**11 WALL SECTION**  
 A2.1.7 | A5.2.2 | 3/4" = 1'-0"



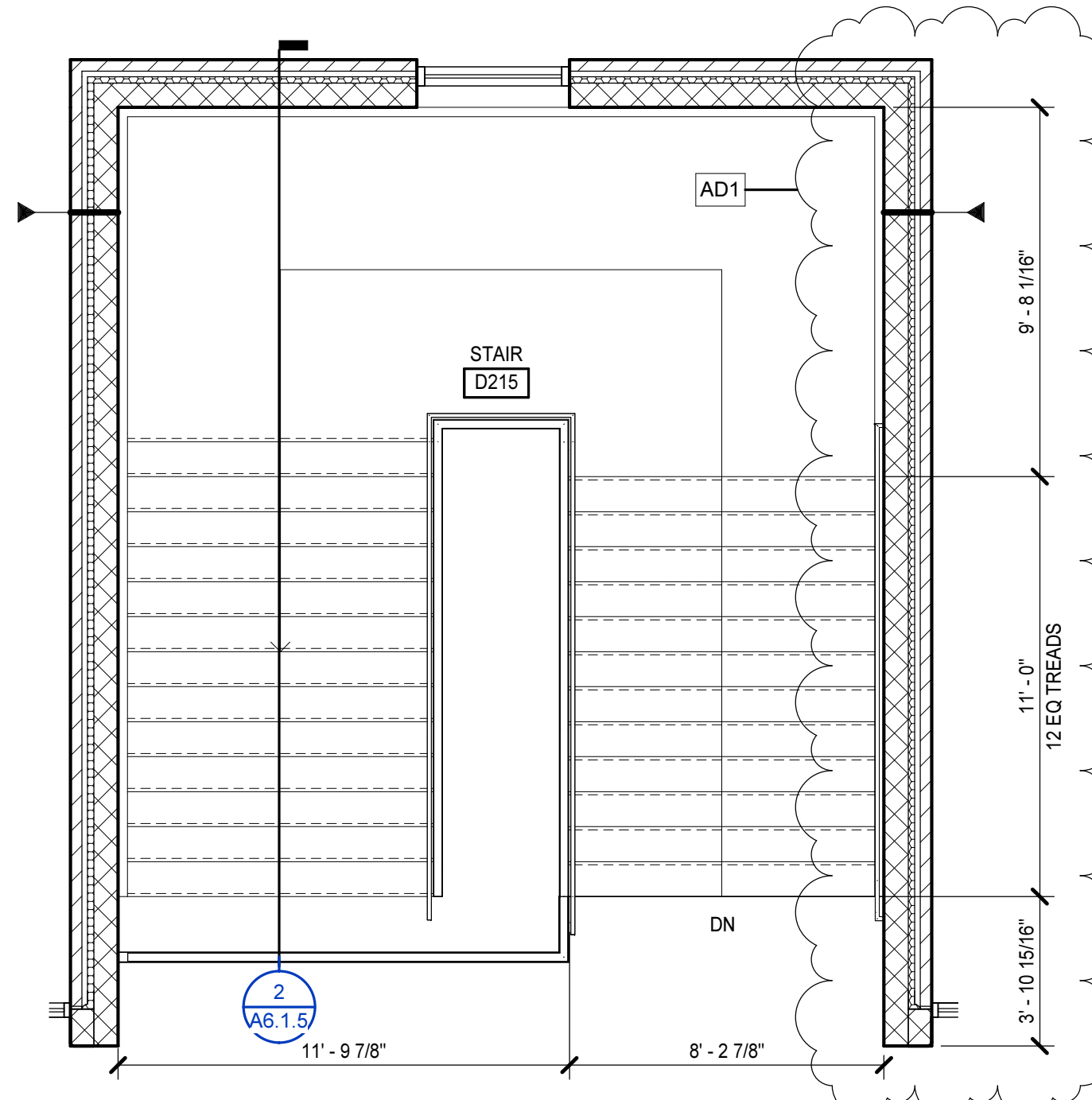
**12 WALL SECTION**  
 A2.1.7 | A5.2.2 | 3/4" = 1'-0"



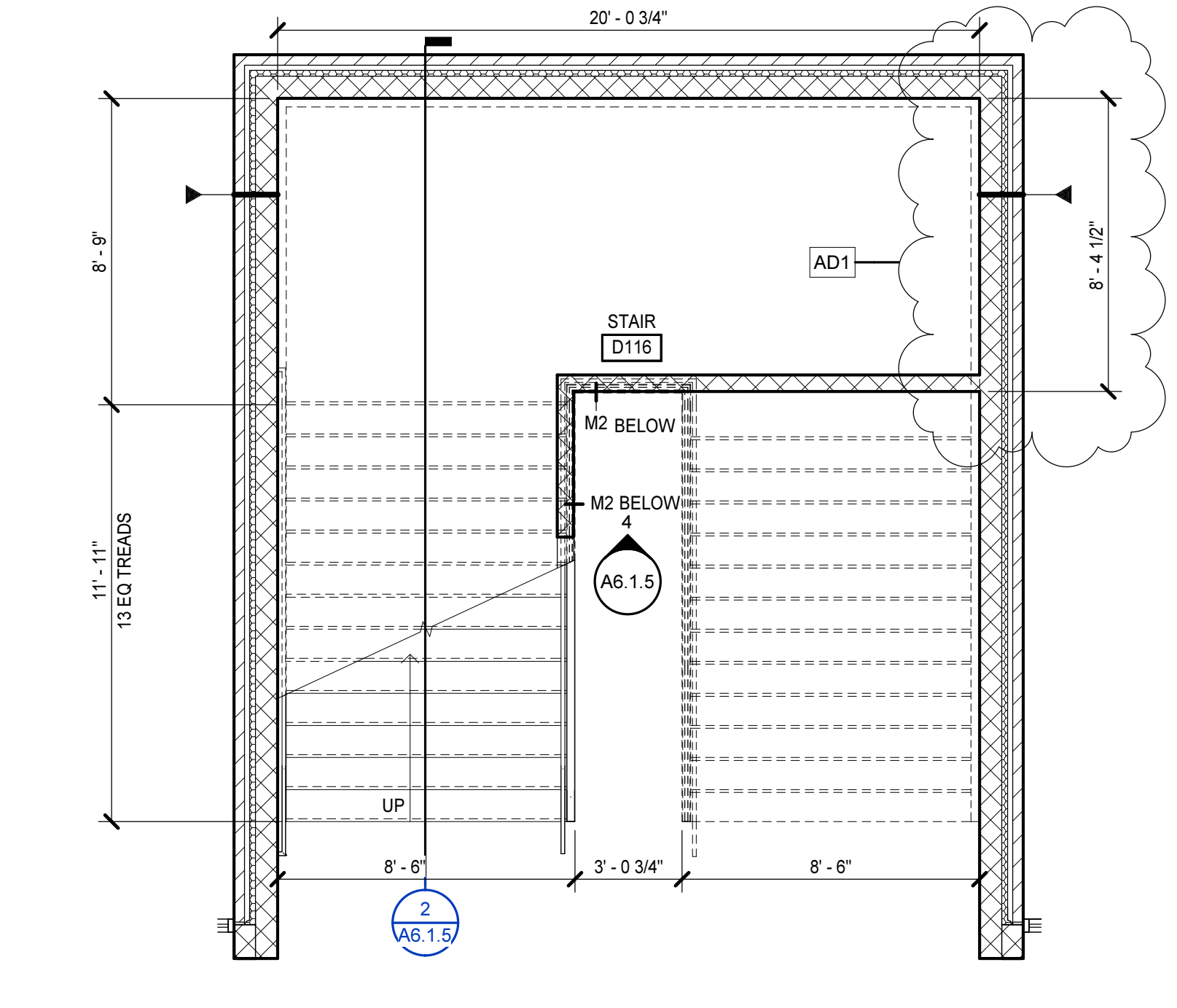


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

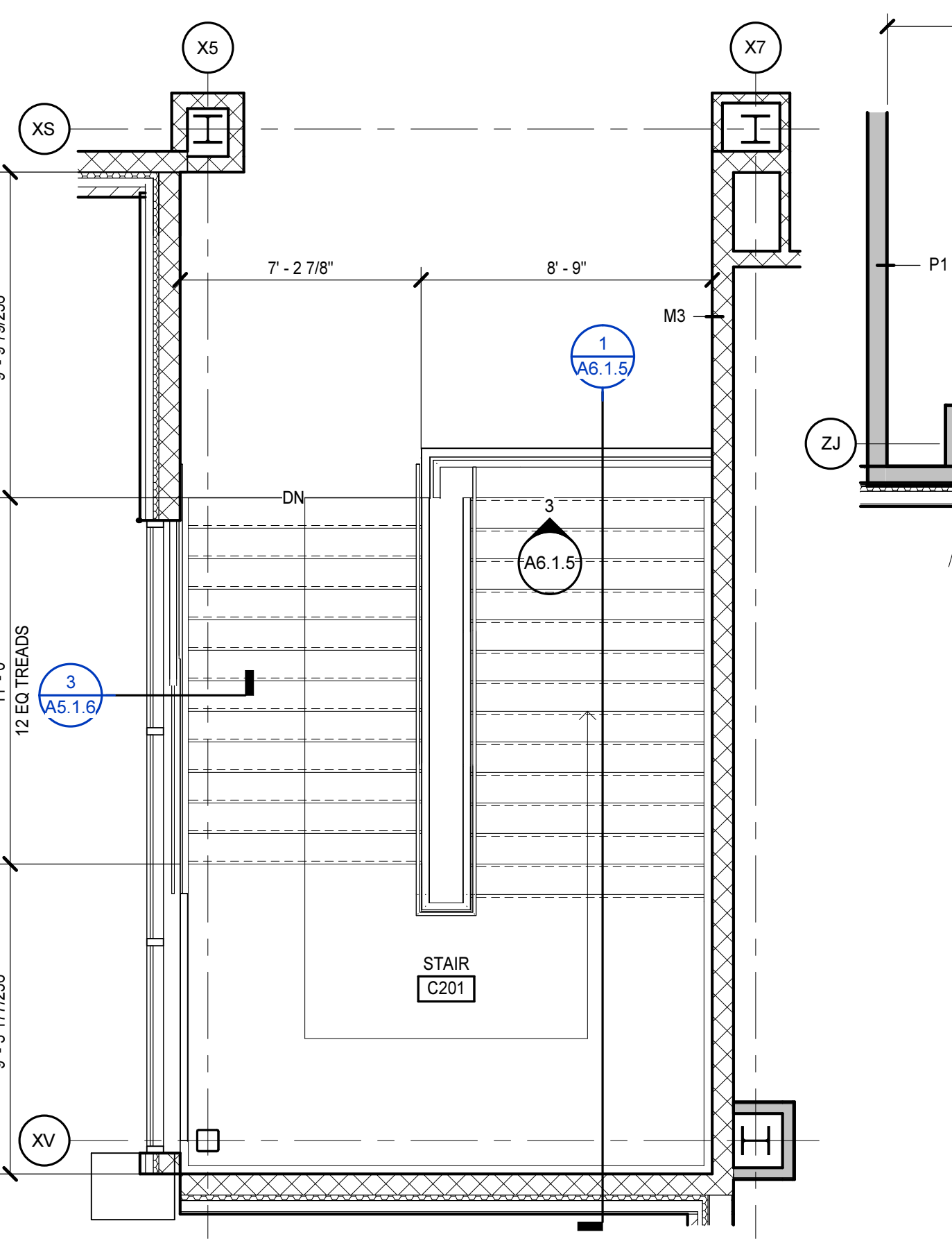
GENERAL NOTES	
A.	ALL RAILING INFILL PANELS: 3/4" X 3/4" STL BARS, UNO
B.	TOP OF HANDRAIL: 3'-0" ABOVE EDGE OF RISERS AND FINISH FLOOR
C.	TOP OF GUARDS: 3'-7" ABOVE EDGE OF RISERS AND FINISH FLOOR
D.	ALL RAILING: 1 1/4" STL PIPE, UNO



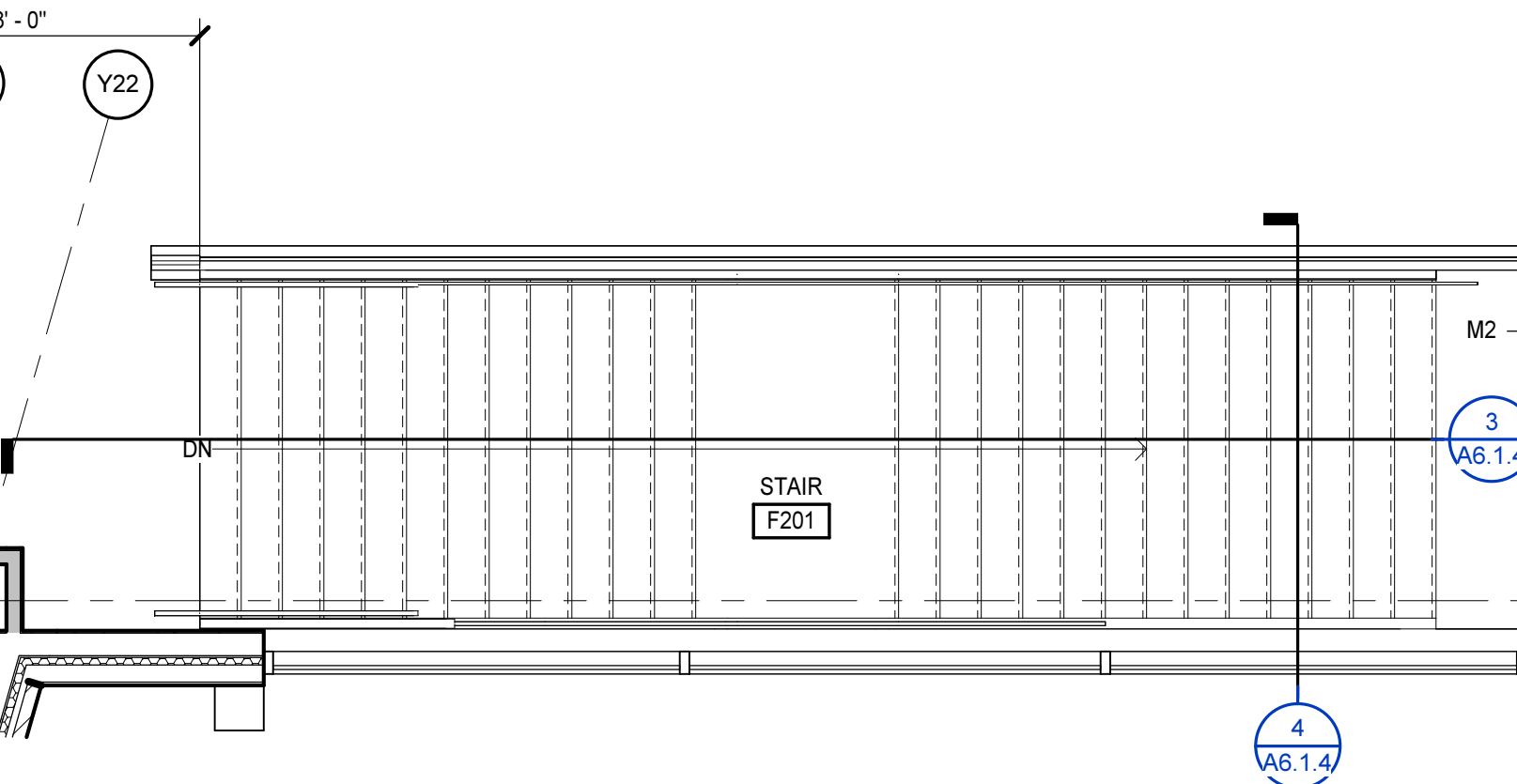
**12 ENLARGED STAIR PLAN - SECOND FLOOR**  
A2.1.12 | A6.1.1 | 1/4" = 1'-0"



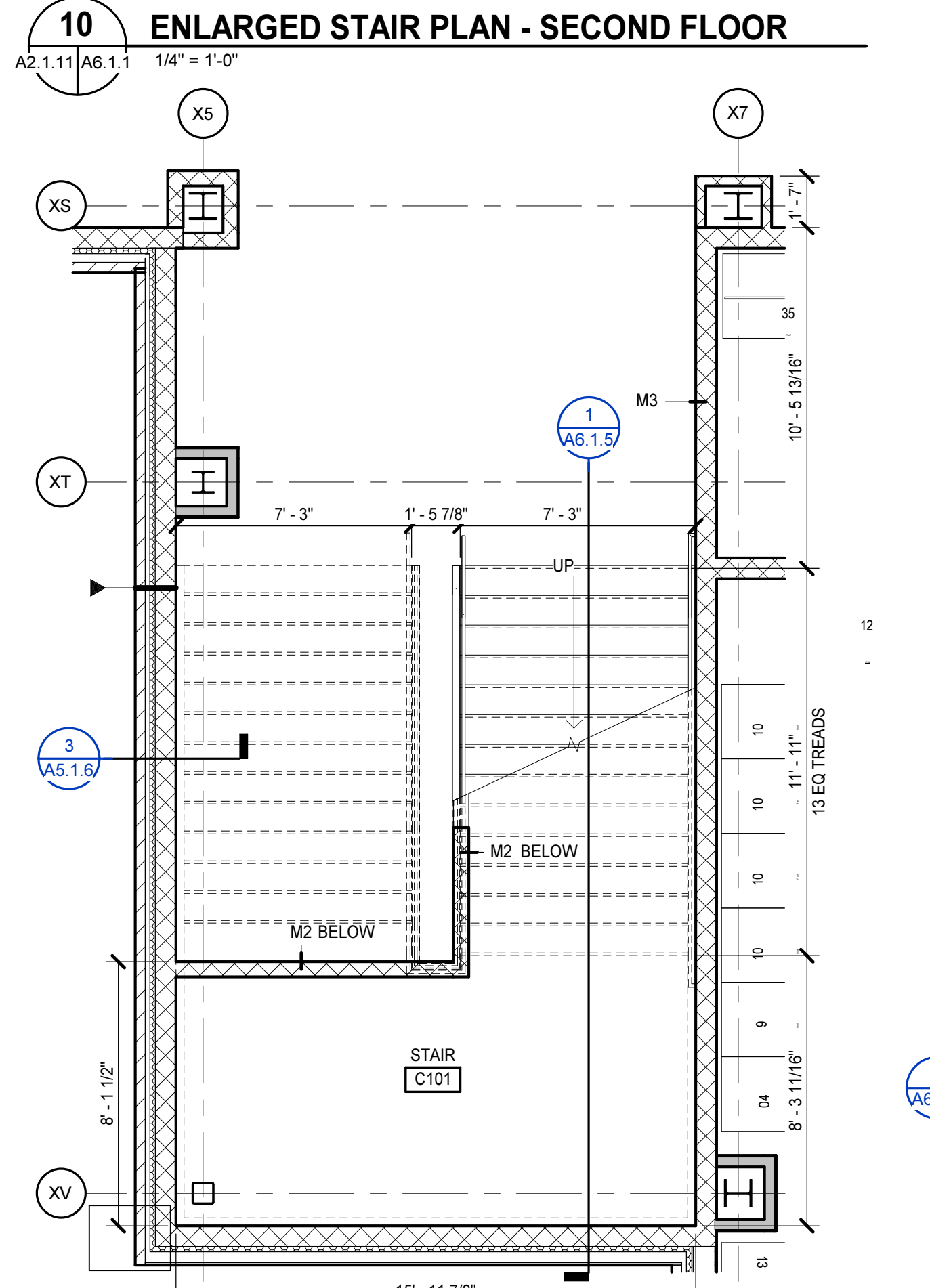
**11 ENLARGED STAIR PLAN - FIRST FLOOR**  
A2.1.4 | A6.1.1 | 1/4" = 1'-0"



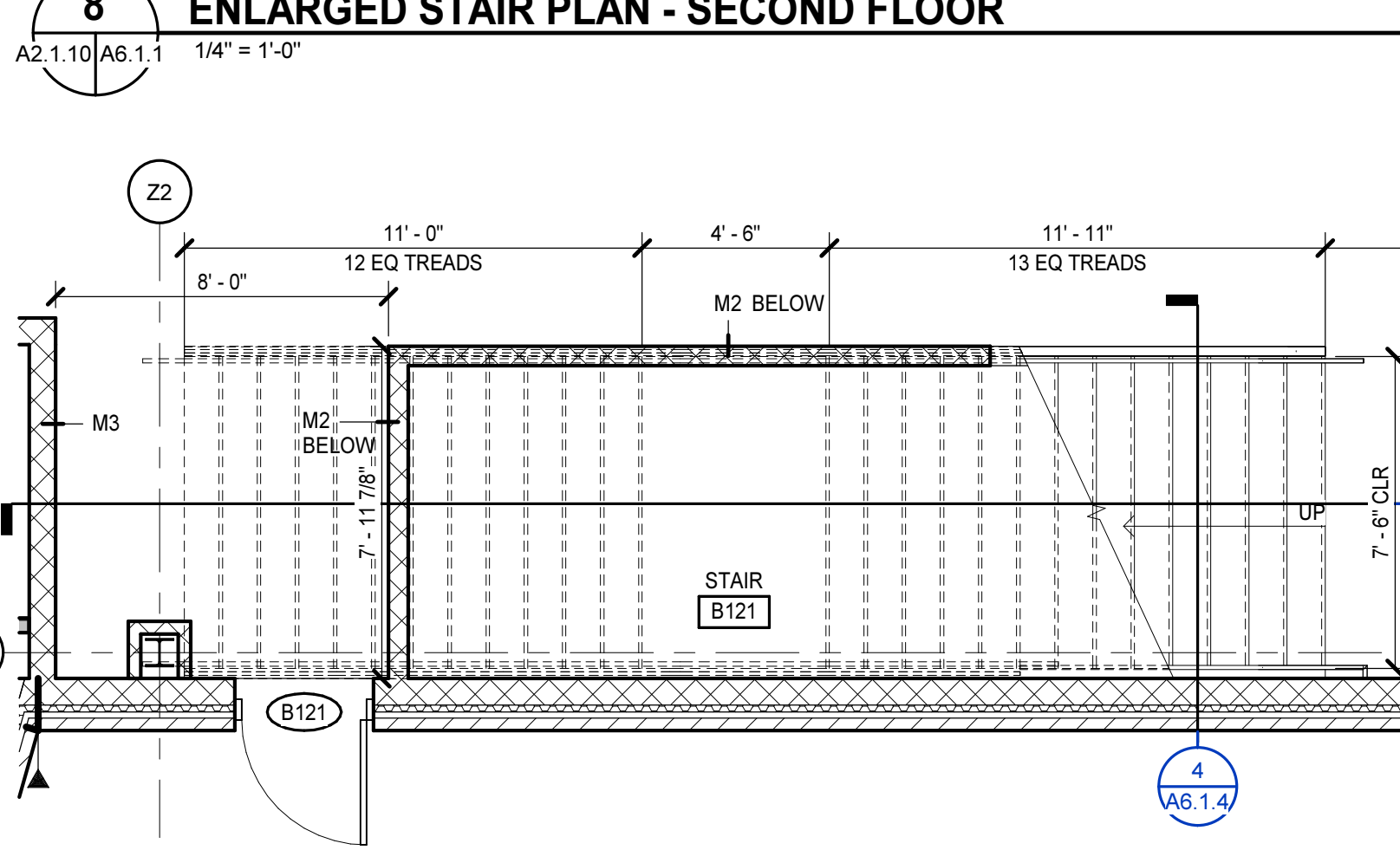
**10 ENLARGED STAIR PLAN - SECOND FLOOR**  
A2.1.11 | A6.1.1 | 1/4" = 1'-0"



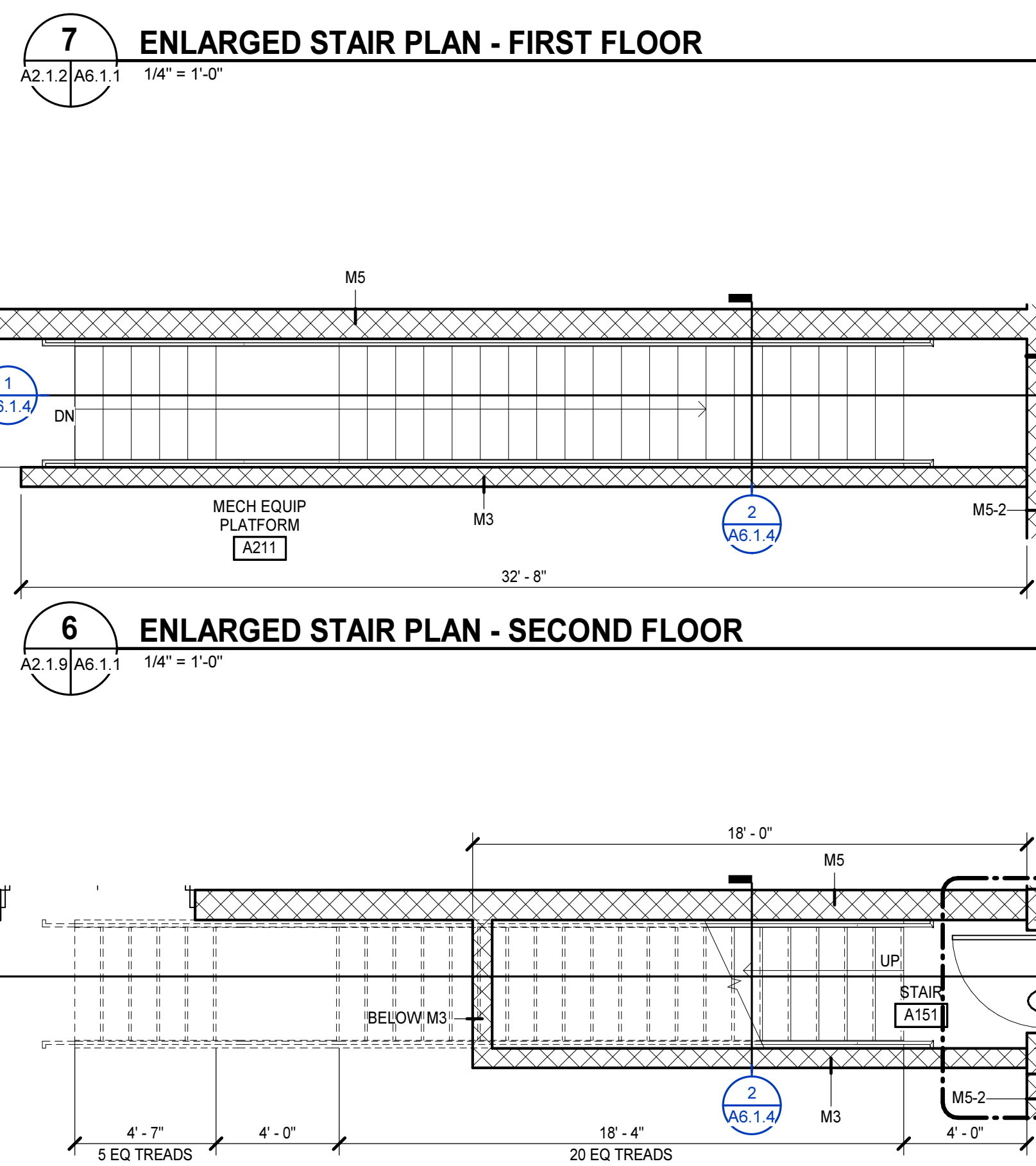
**8 ENLARGED STAIR PLAN - SECOND FLOOR**  
A2.1.10 | A6.1.1 | 1/4" = 1'-0"



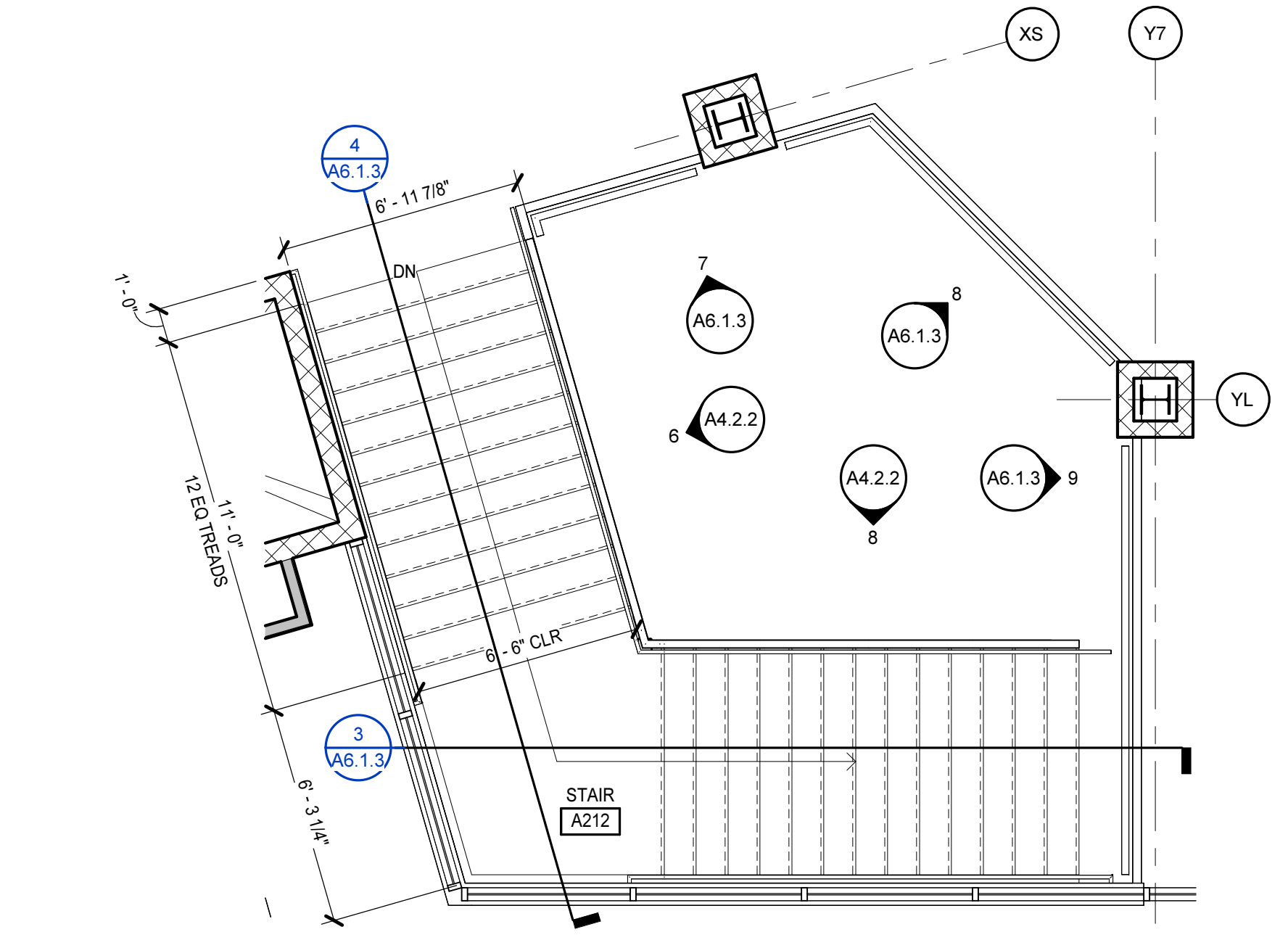
**9 ENLARGED STAIR PLAN - FIRST FLOOR**  
A2.1.3 | A6.1.1 | 1/4" = 1'-0"



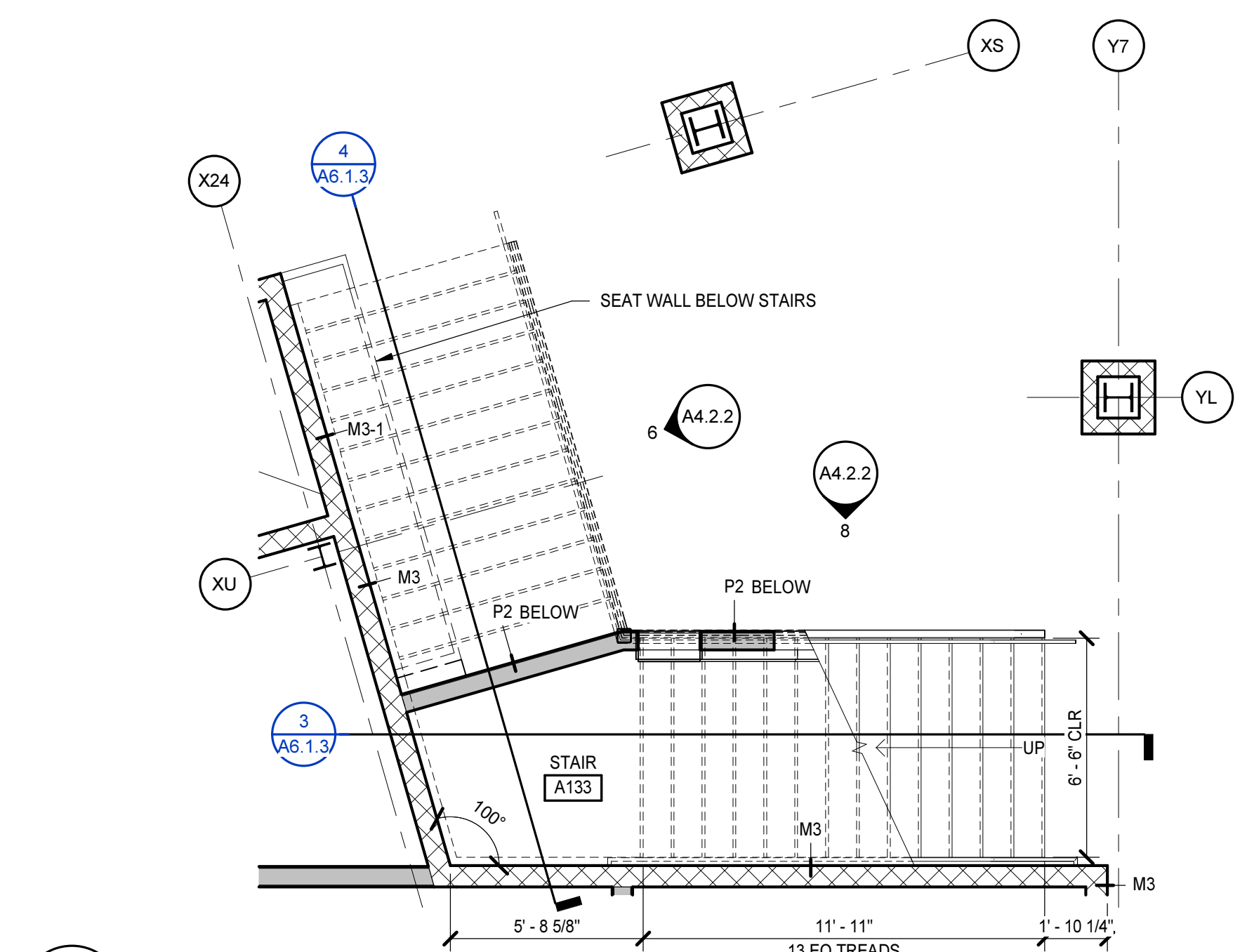
**6 ENLARGED STAIR PLAN - SECOND FLOOR**  
A2.1.9 | A6.1.1 | 1/4" = 1'-0"



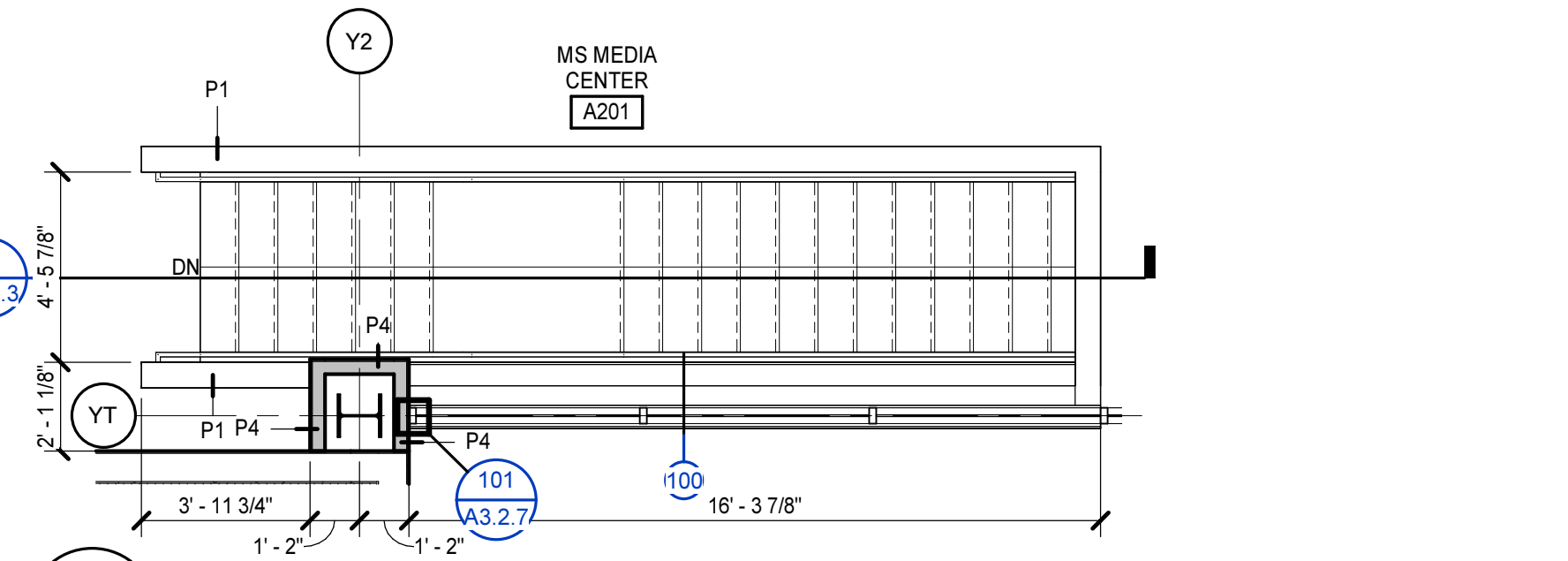
**5 ENLARGED STAIR PLAN - FIRST FLOOR**  
A2.1.1 | A6.1.1 | 1/4" = 1'-0"



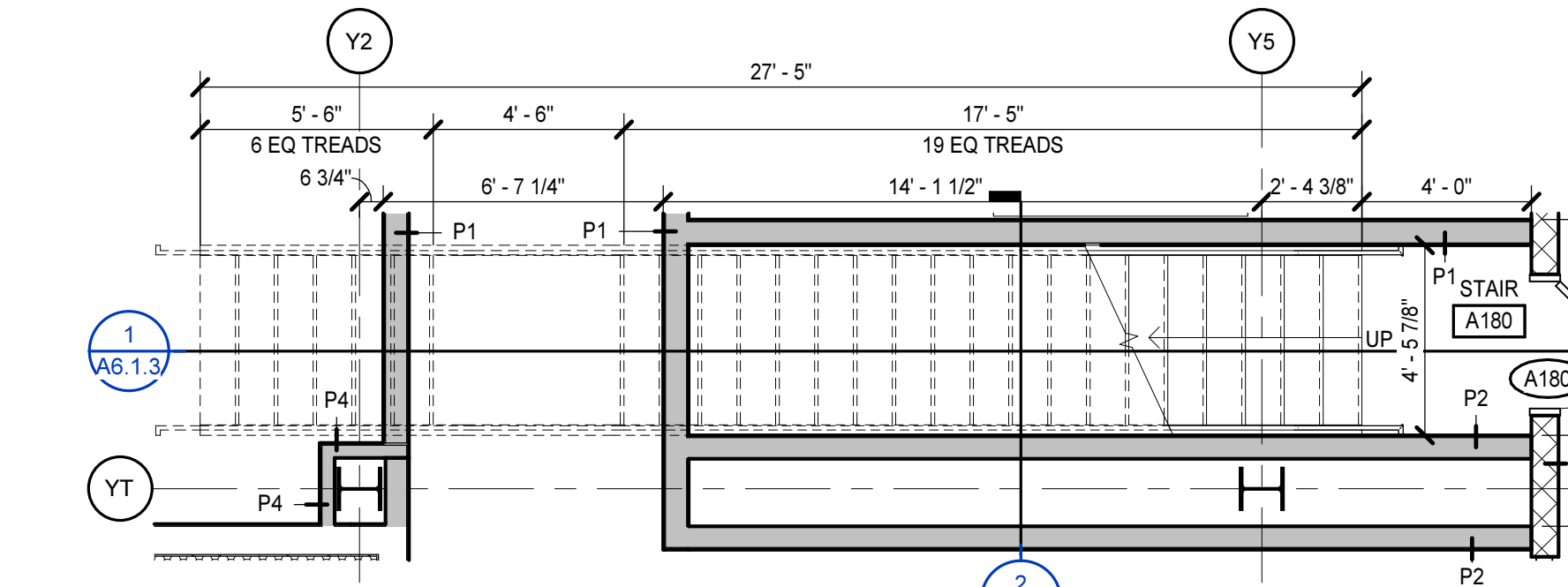
**4 ENLARGED STAIR PLAN - SECOND FLOOR**  
A2.1.9 | A6.1.1 | 1/4" = 1'-0"



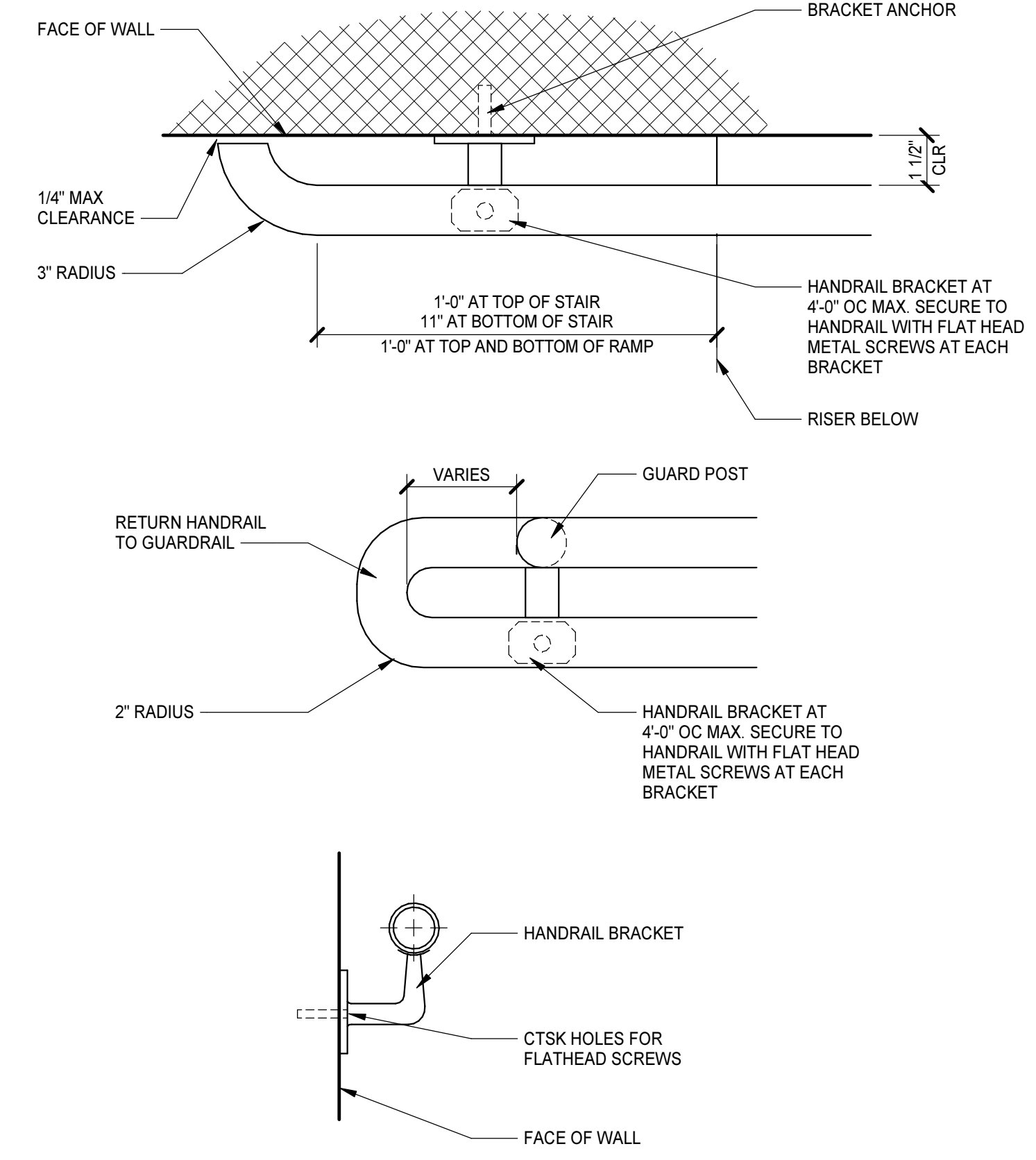
**3 ENLARGED STAIR PLAN - FIRST FLOOR**  
A2.1.1 | A6.1.1 | 1/4" = 1'-0"



**2 ENLARGED STAIR PLAN - SECOND FLOOR**  
A2.1.9 | A6.1.1 | 1/4" = 1'-0"

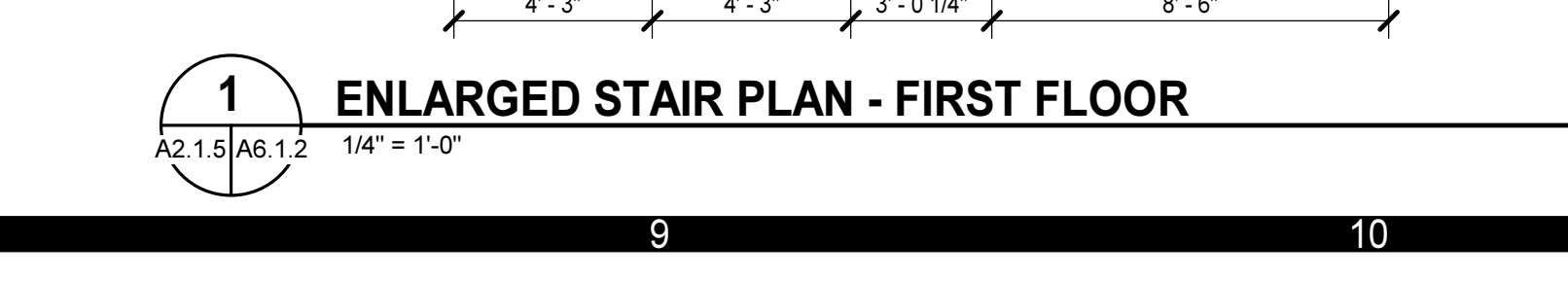
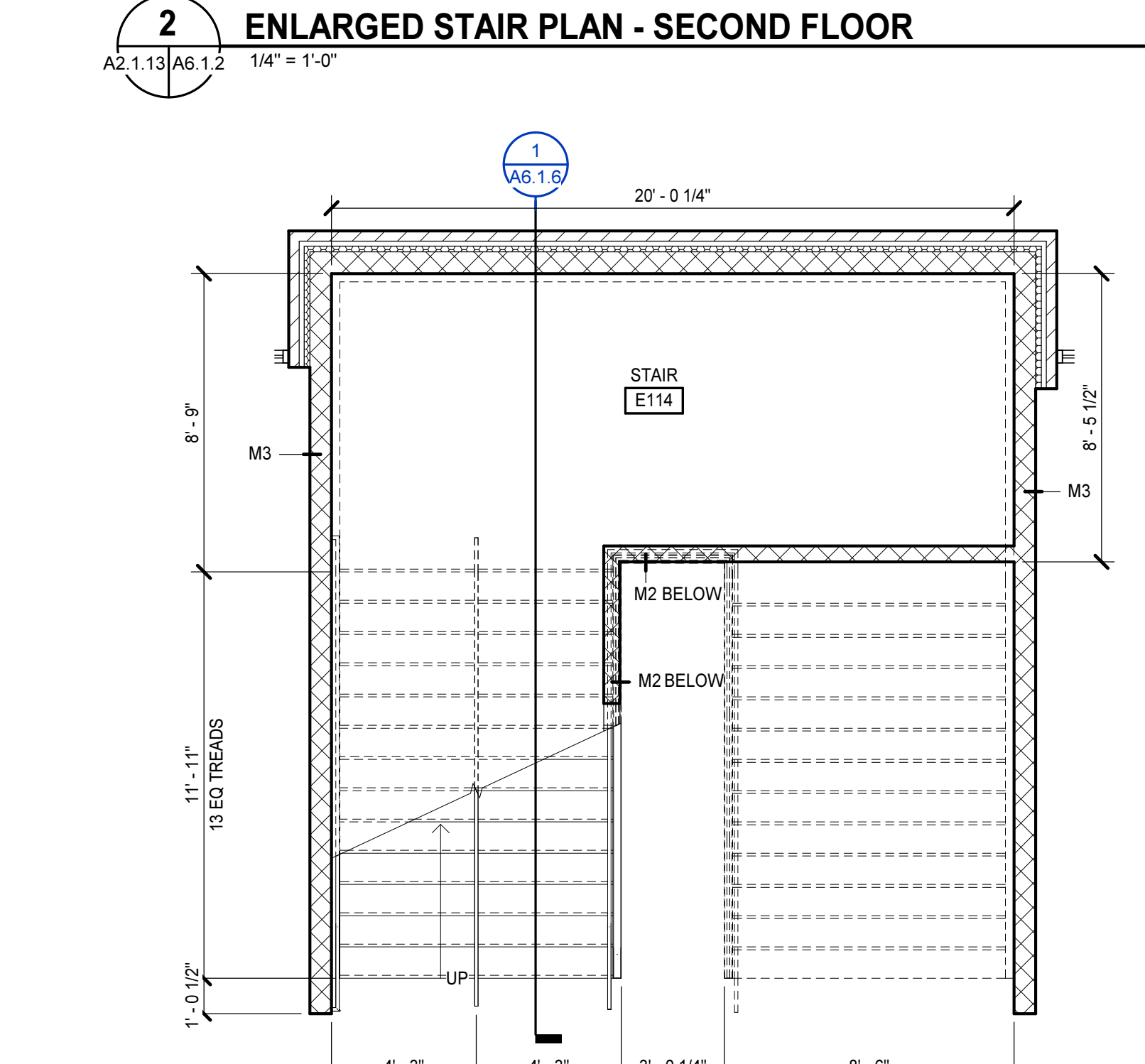
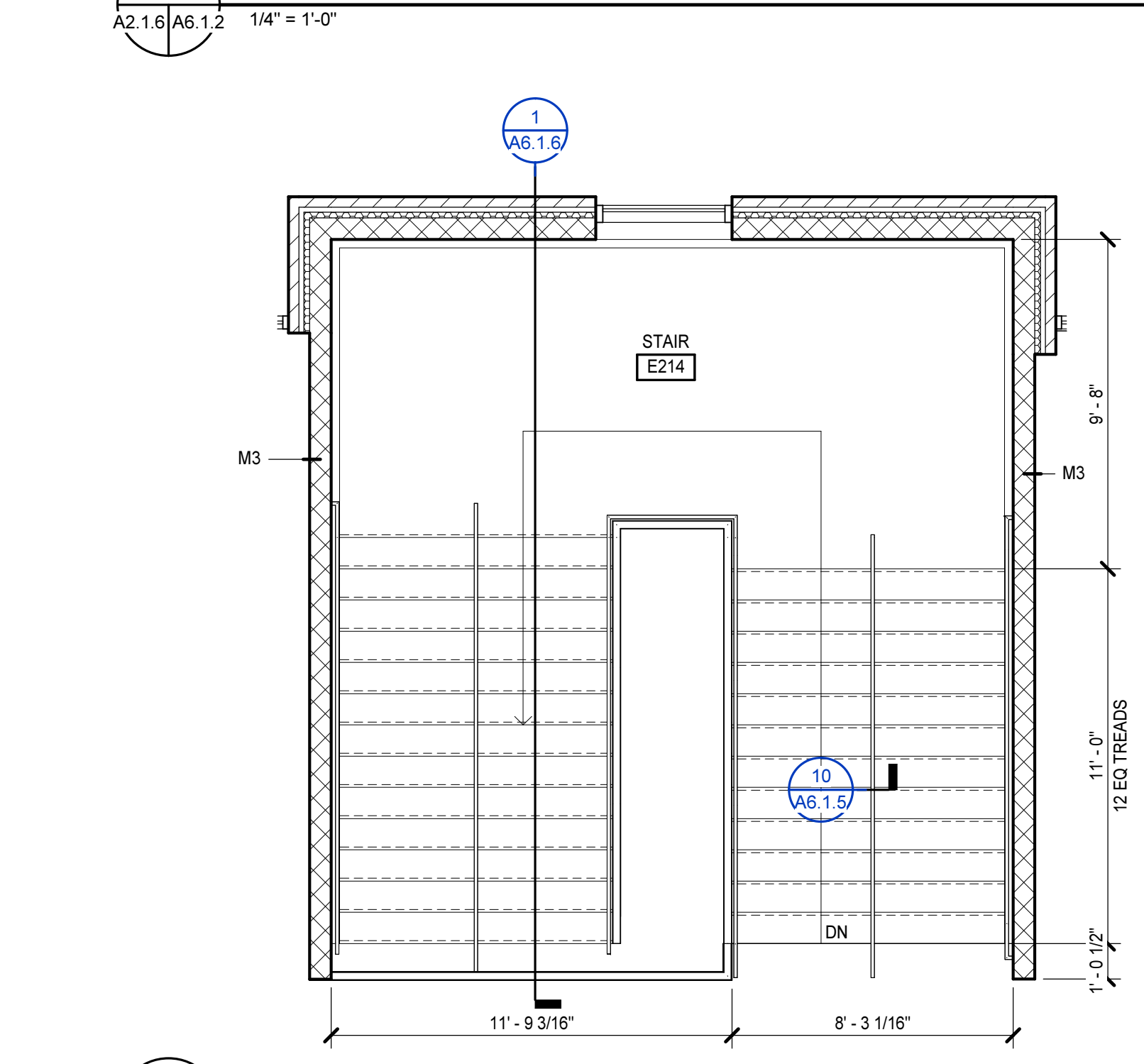
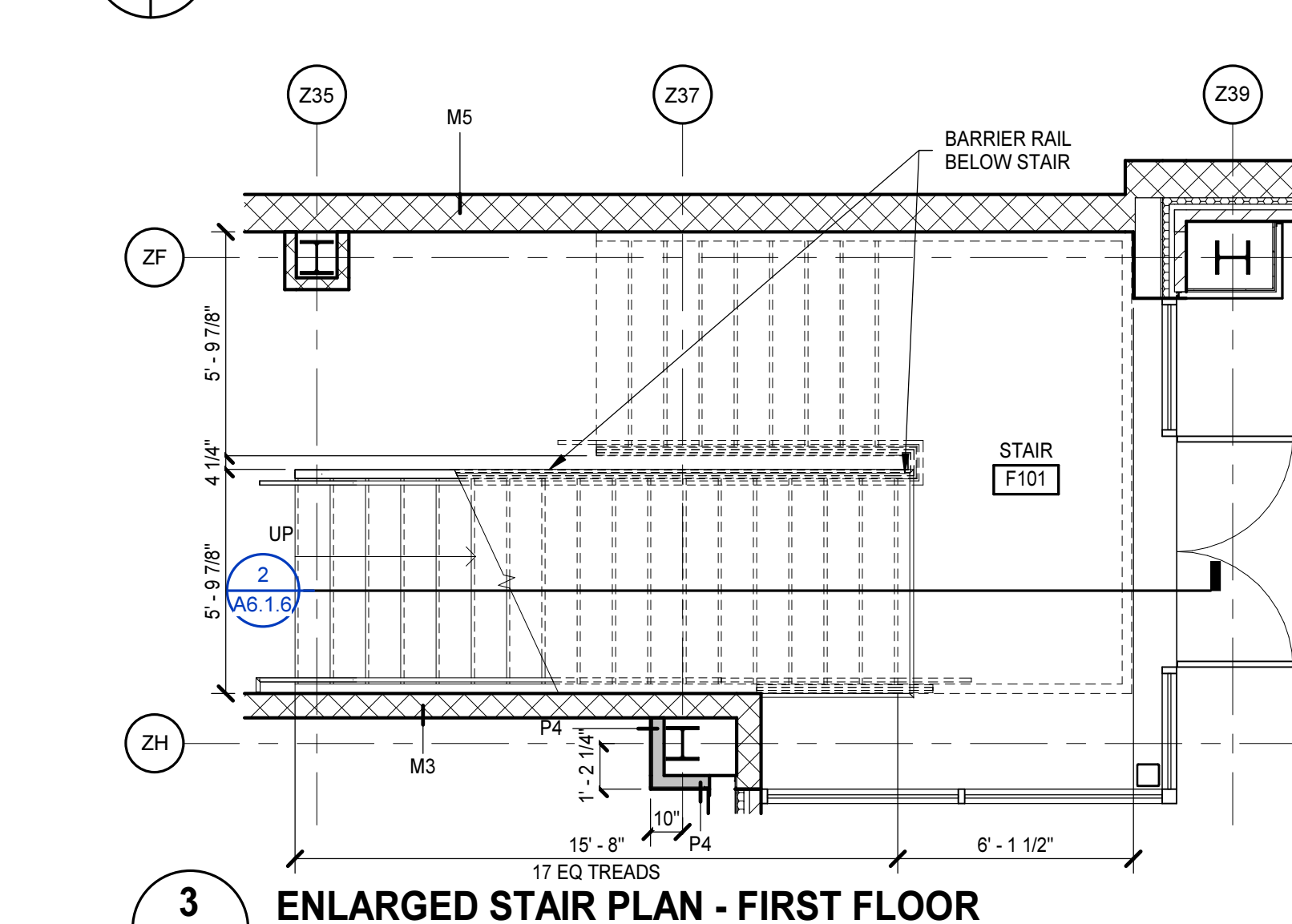
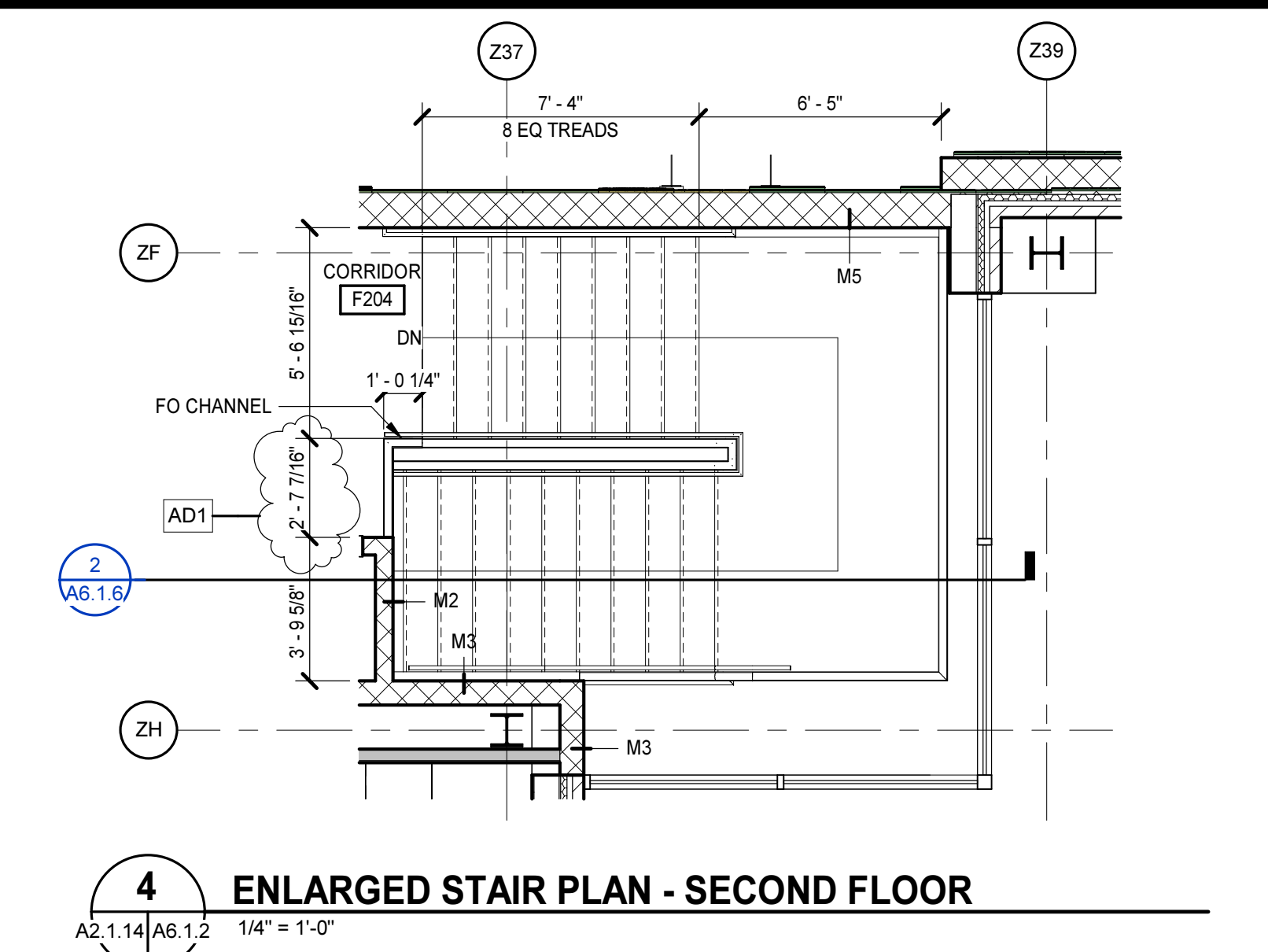
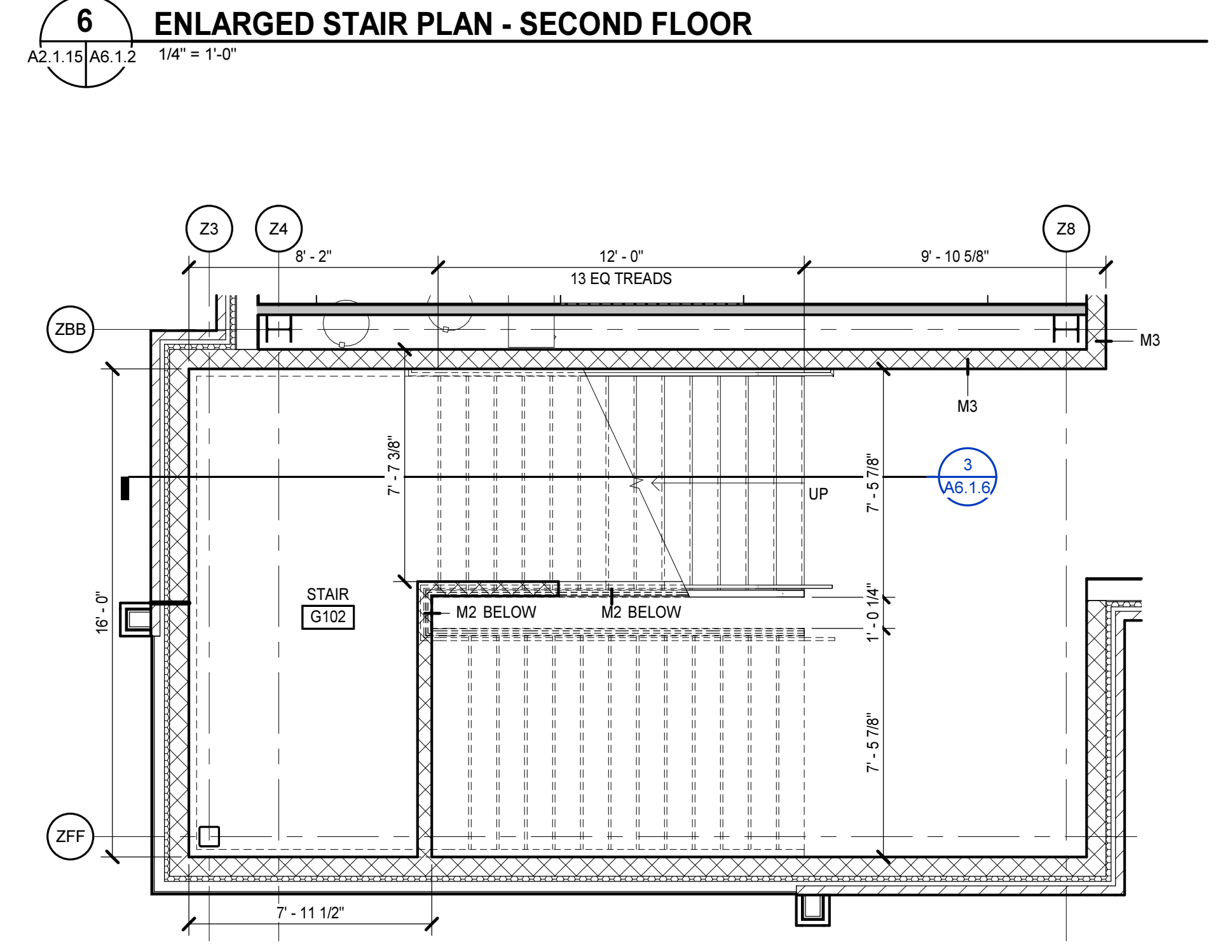
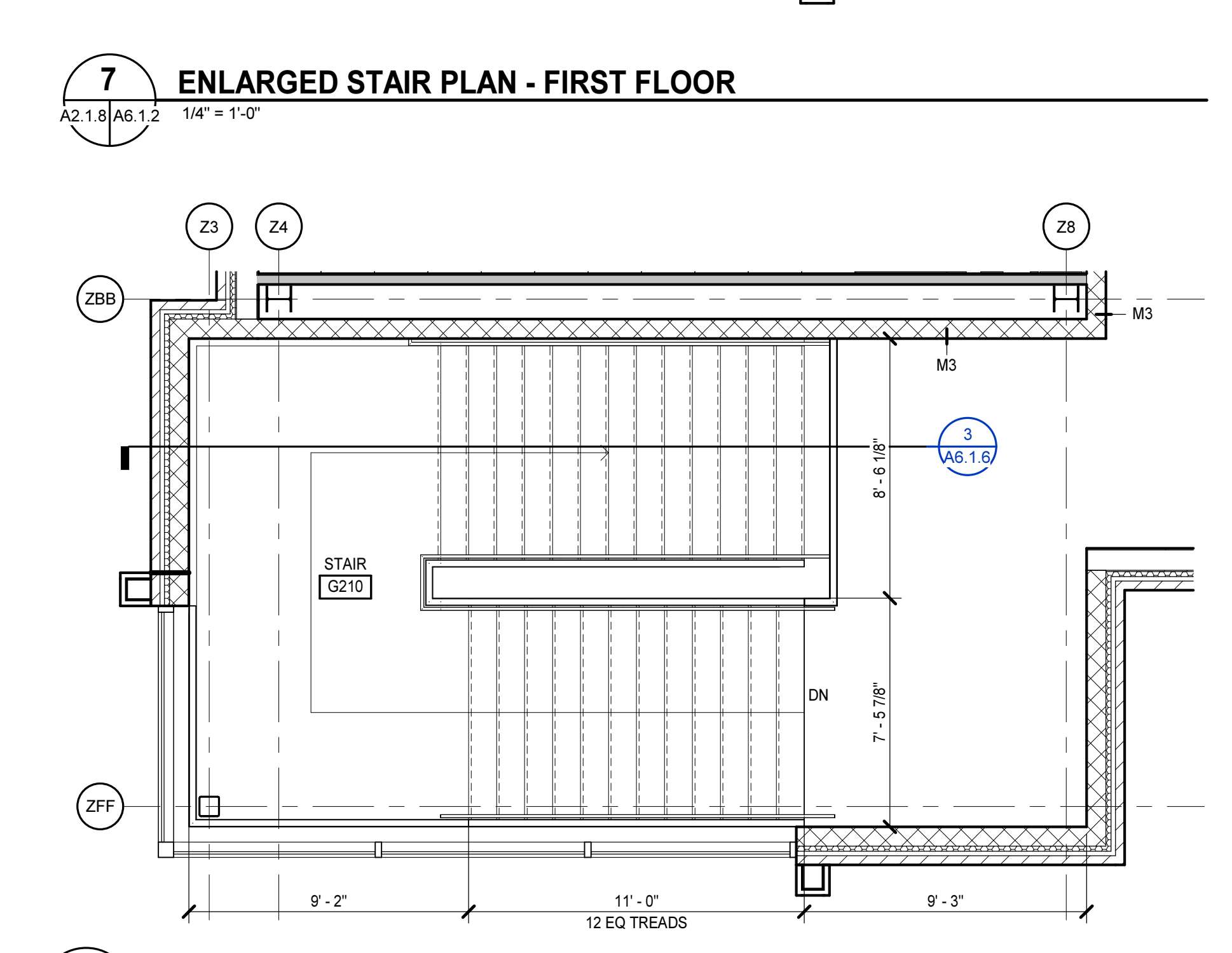
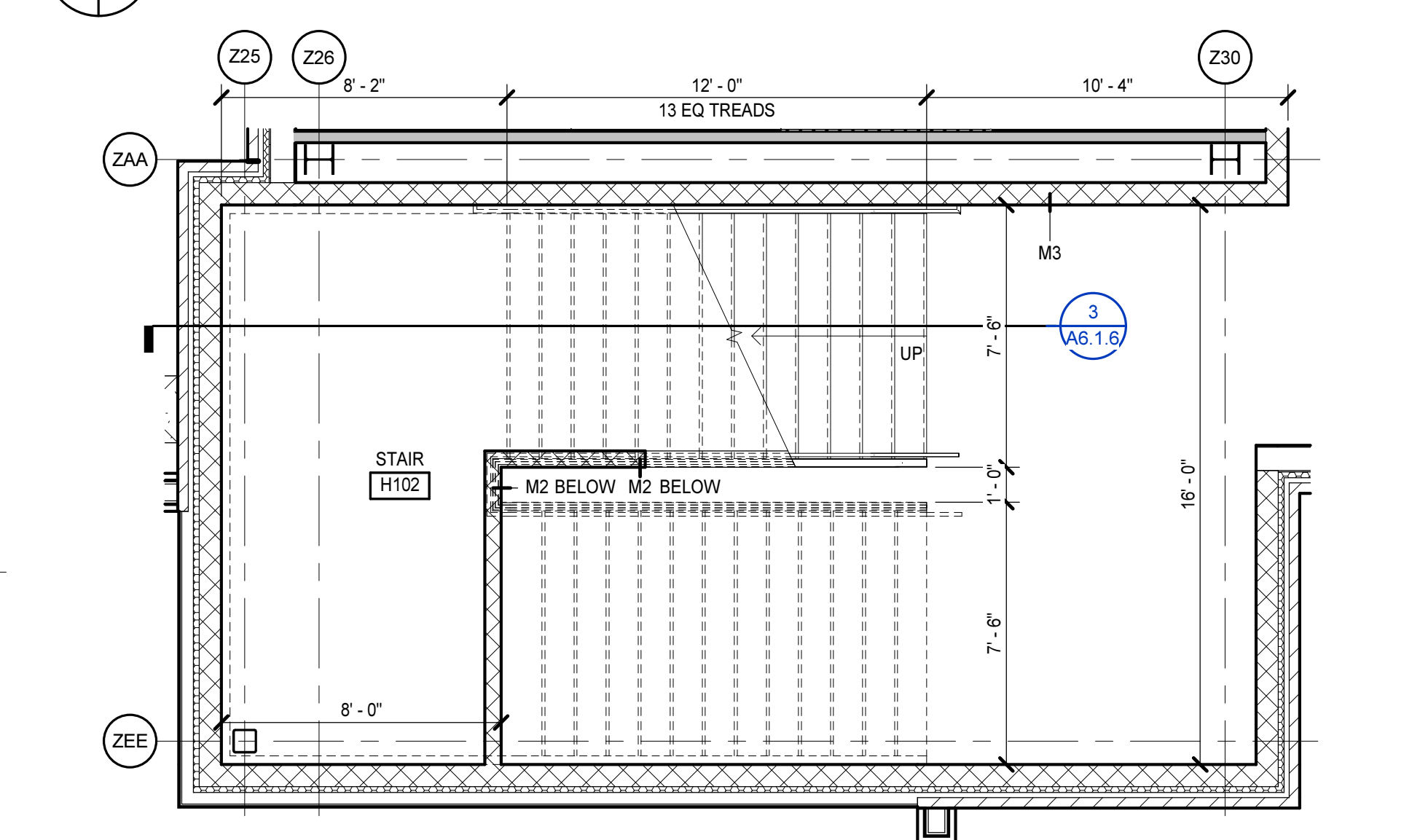
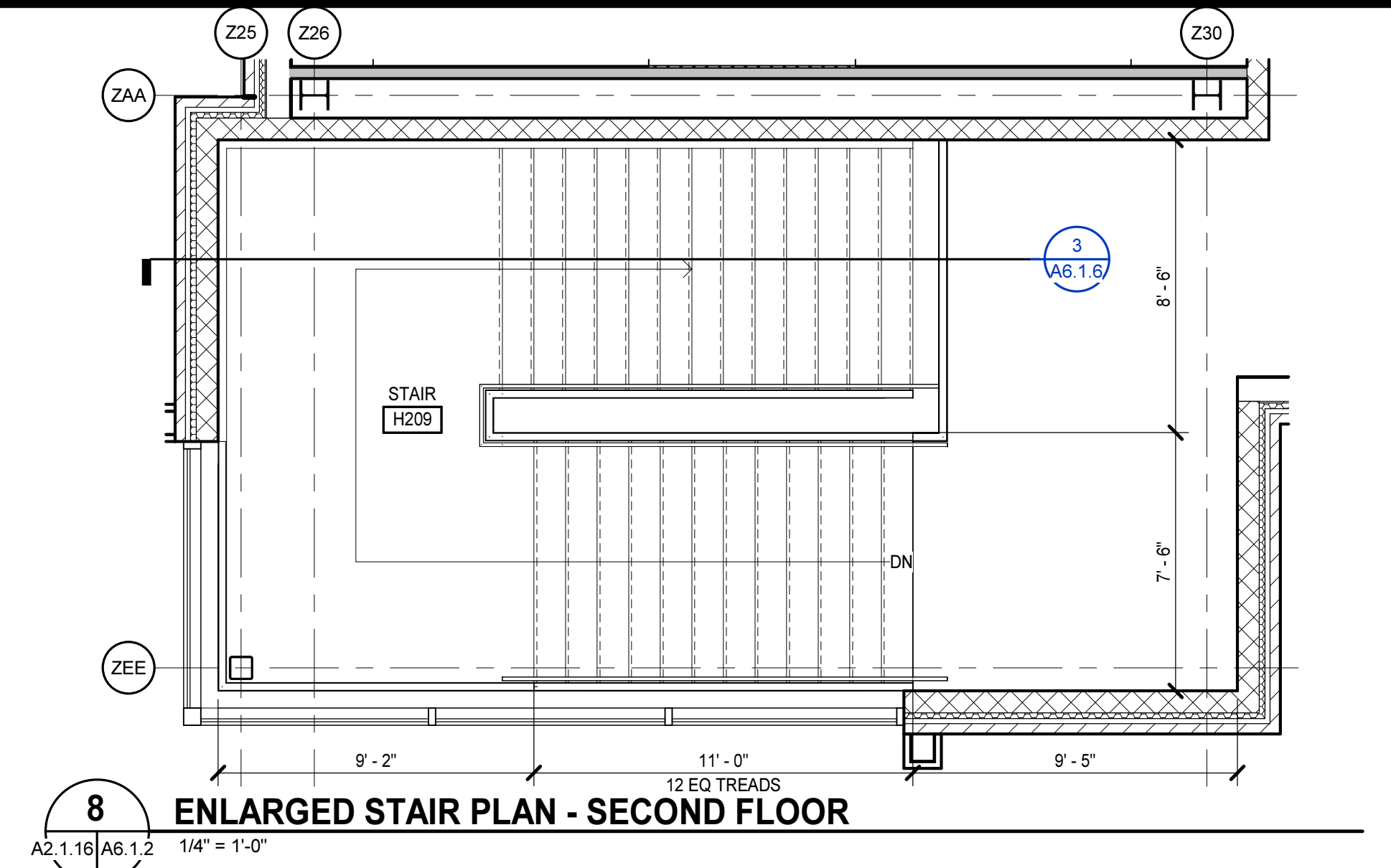
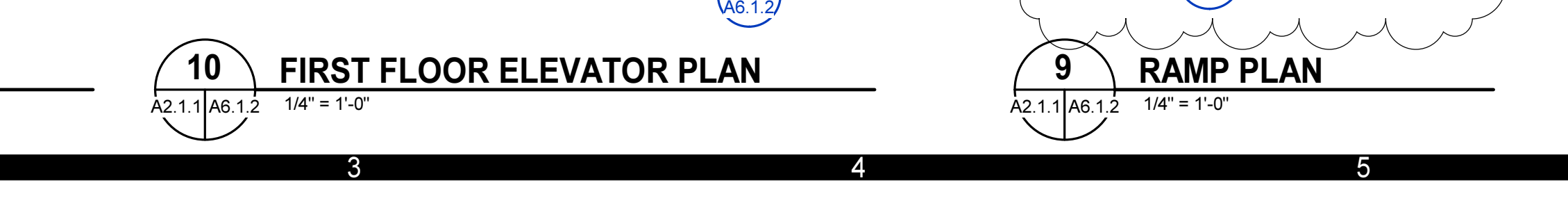
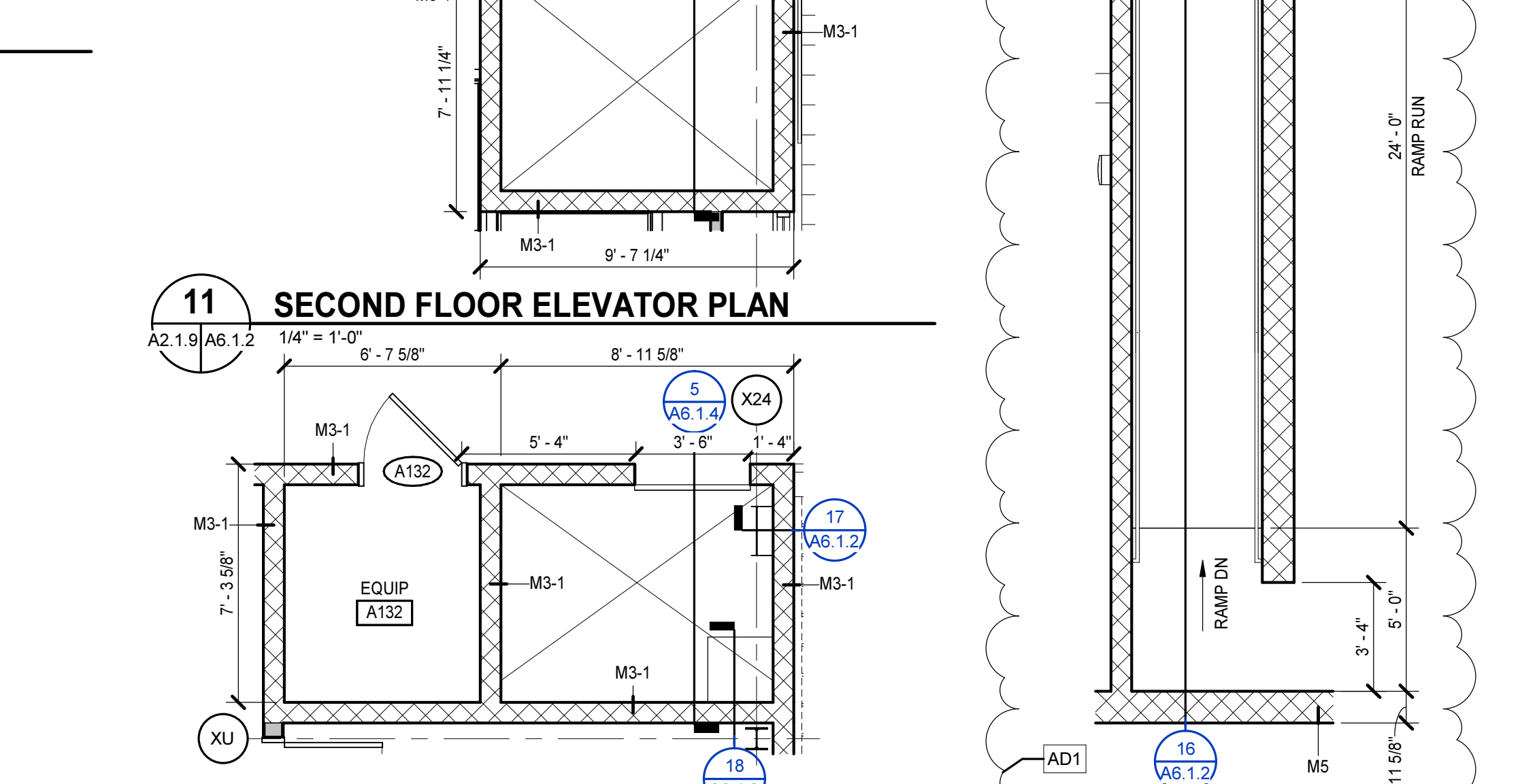
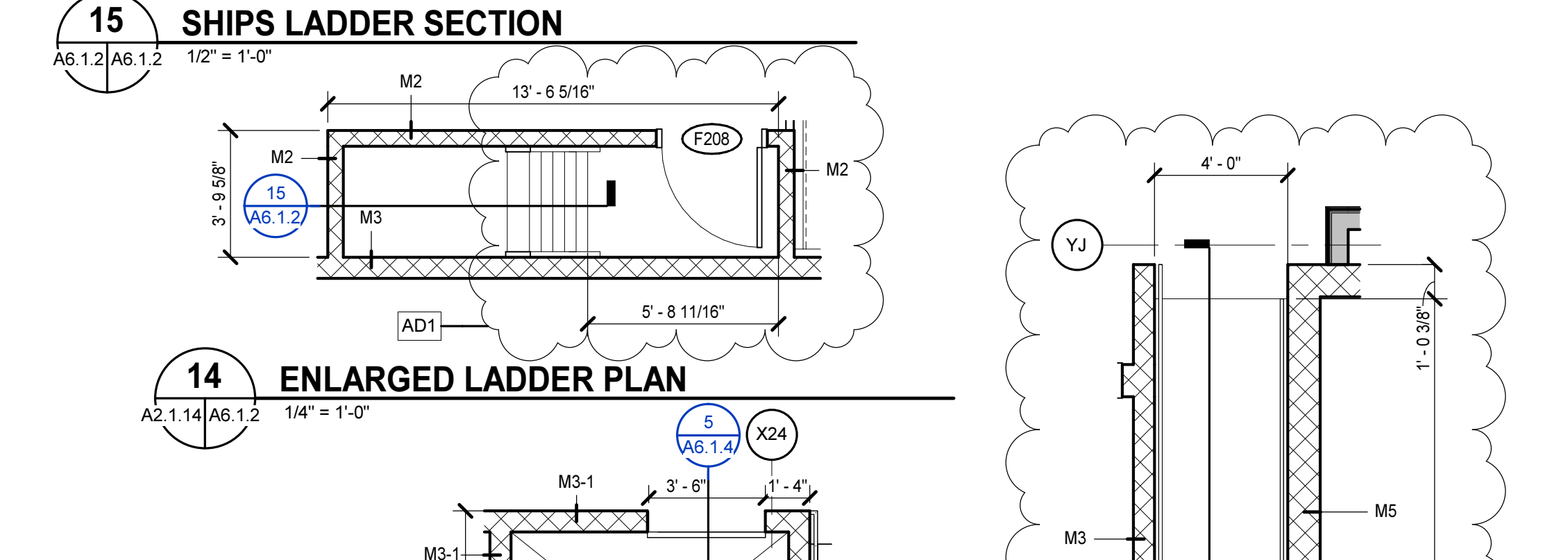
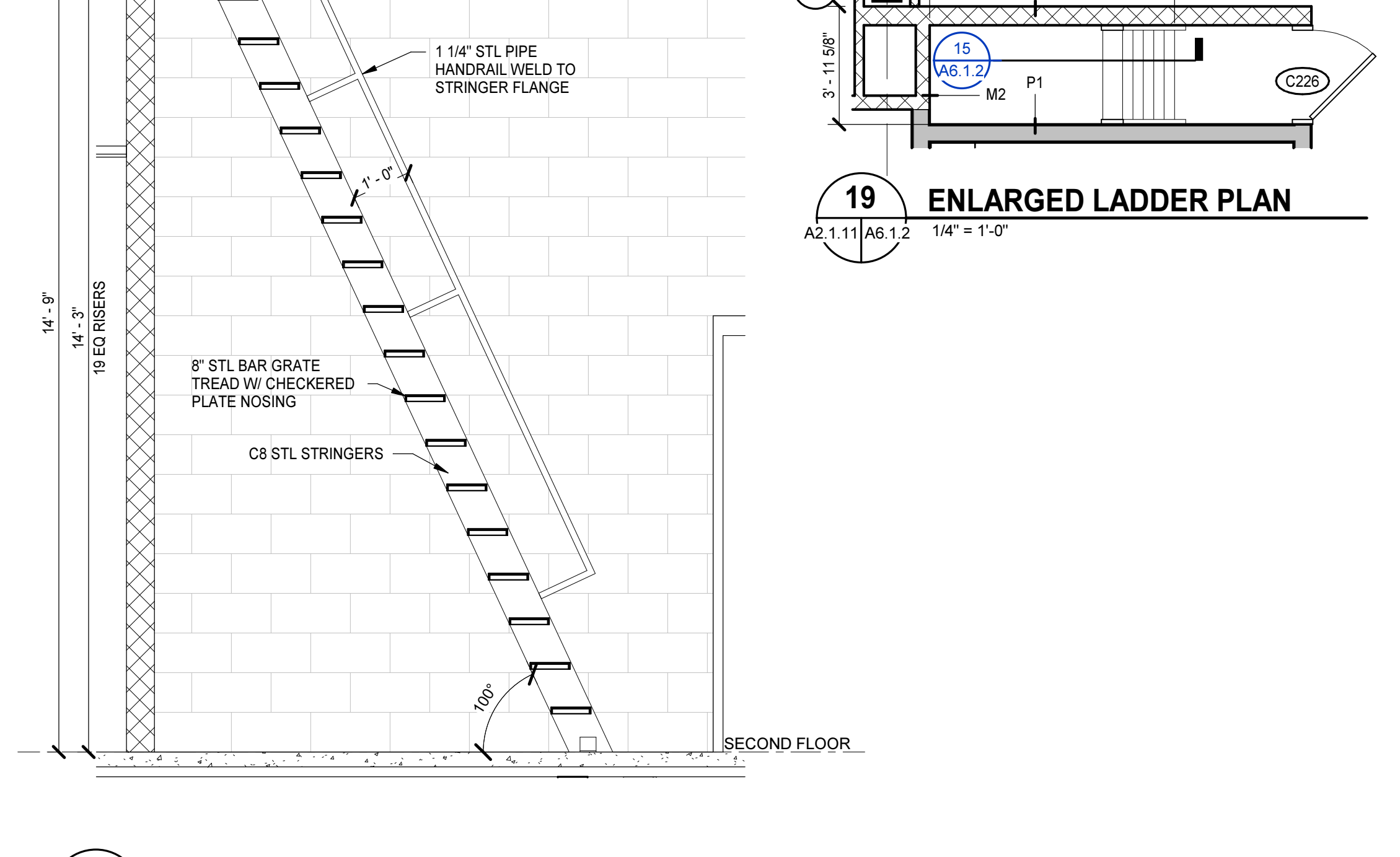
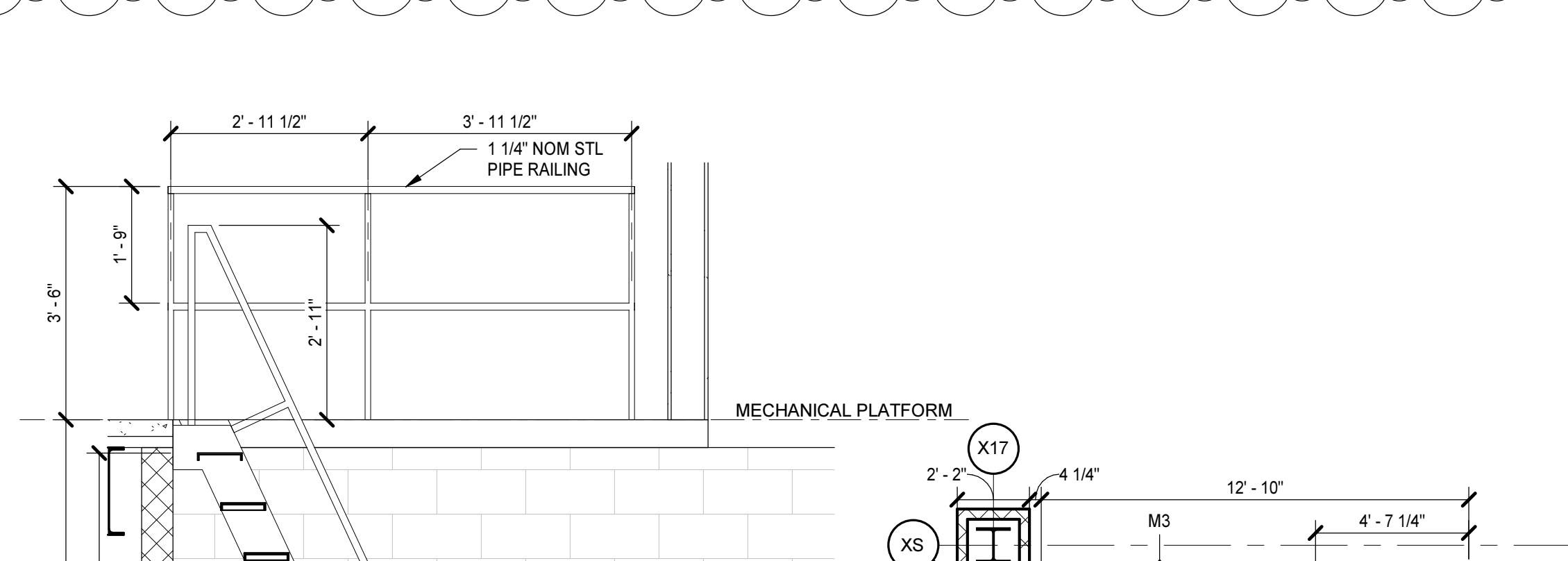
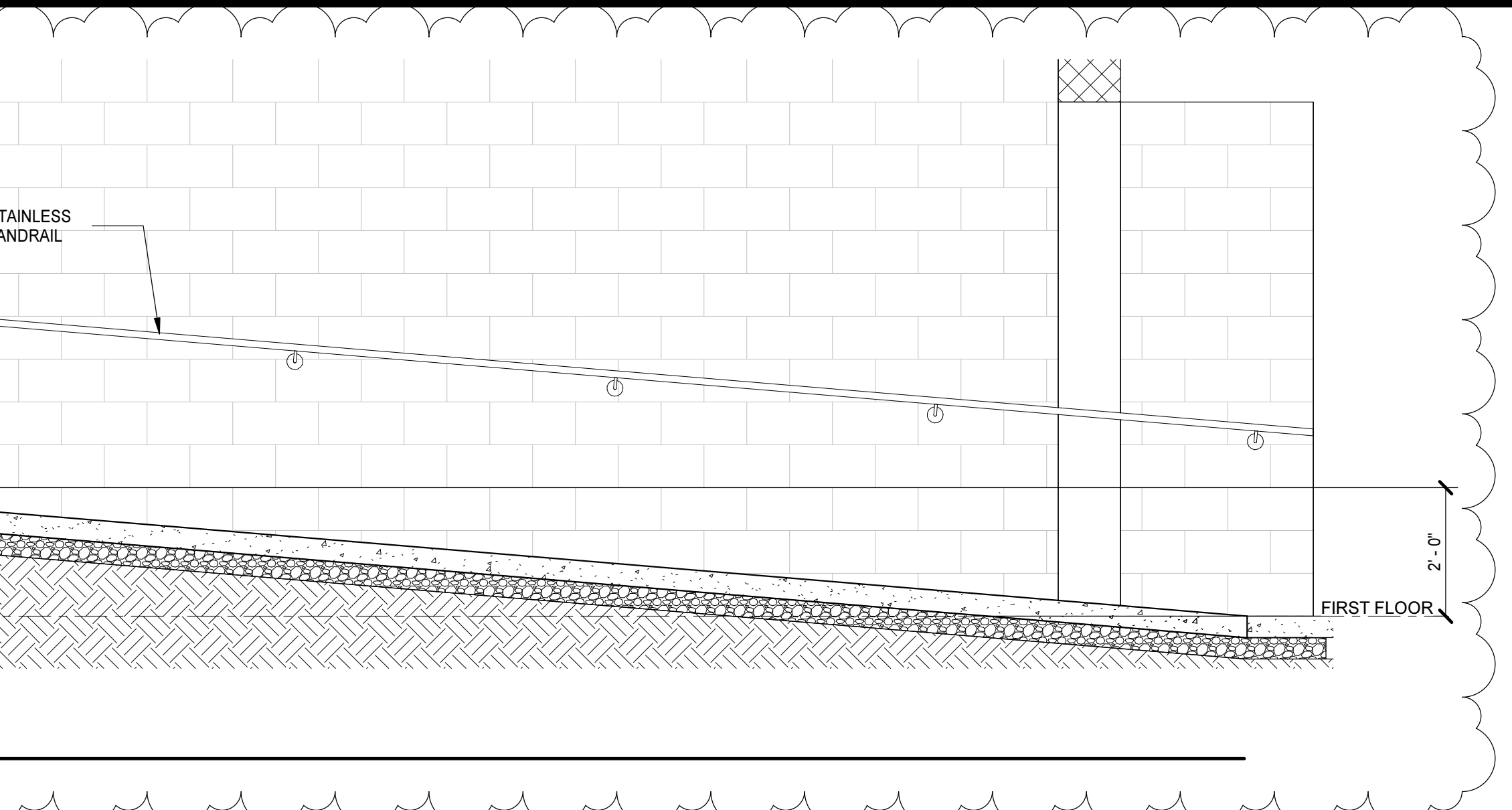
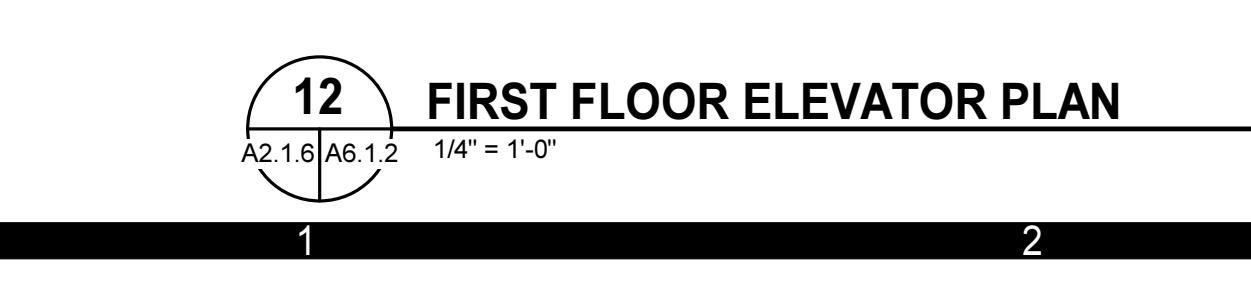
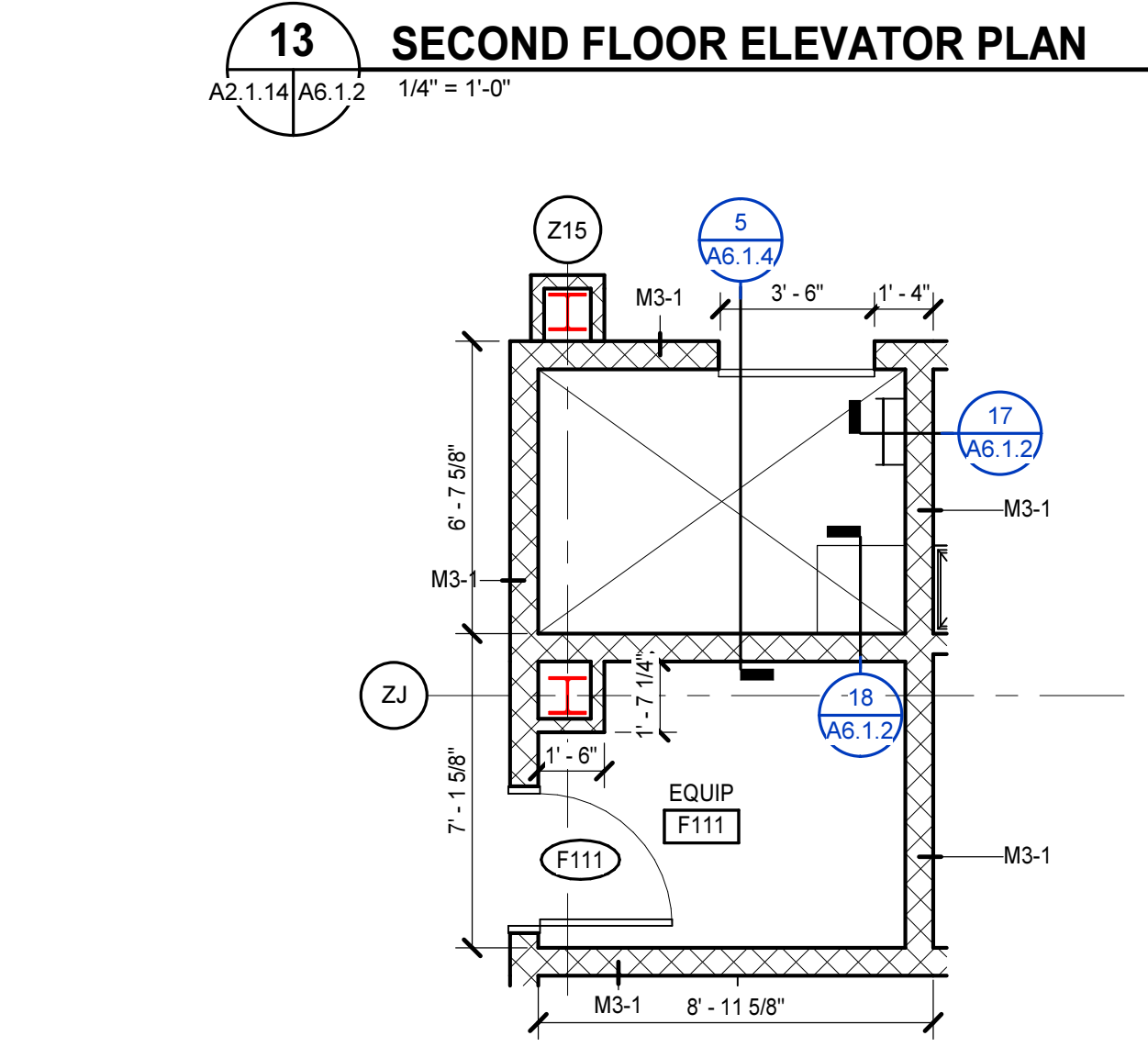
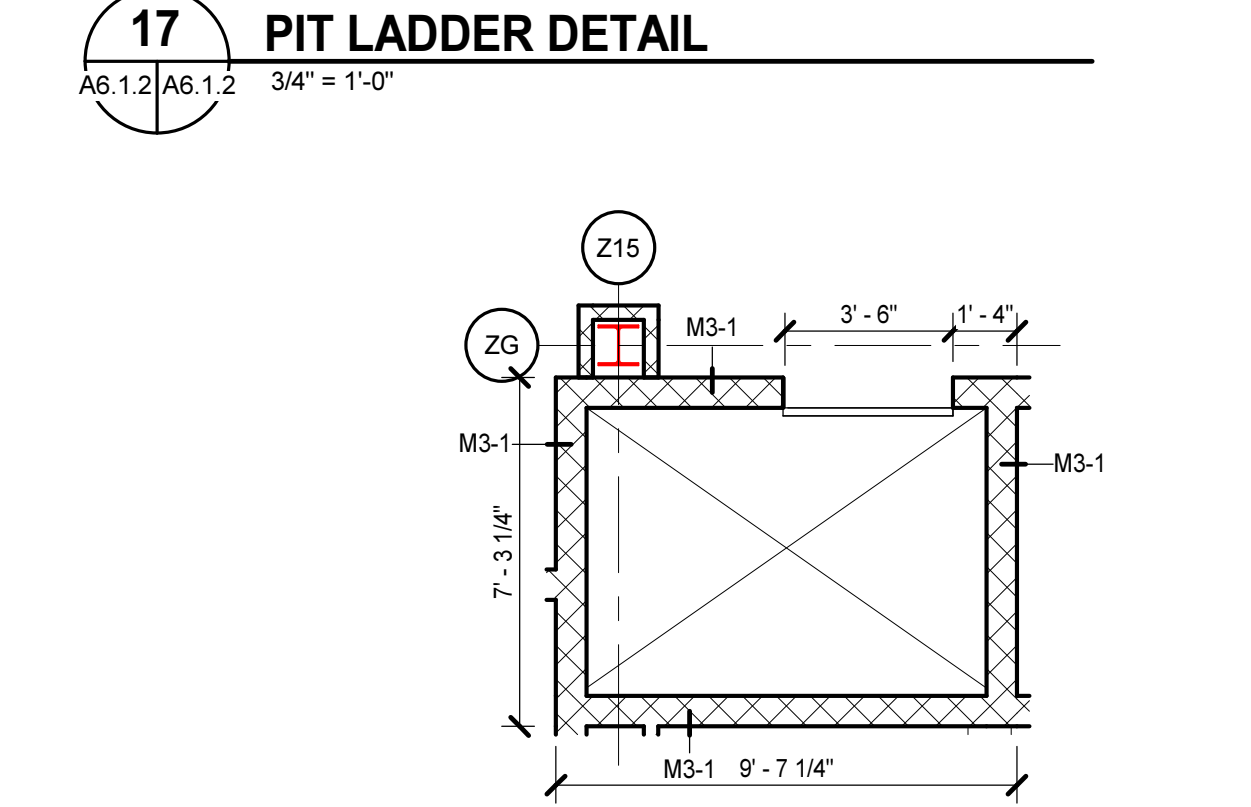
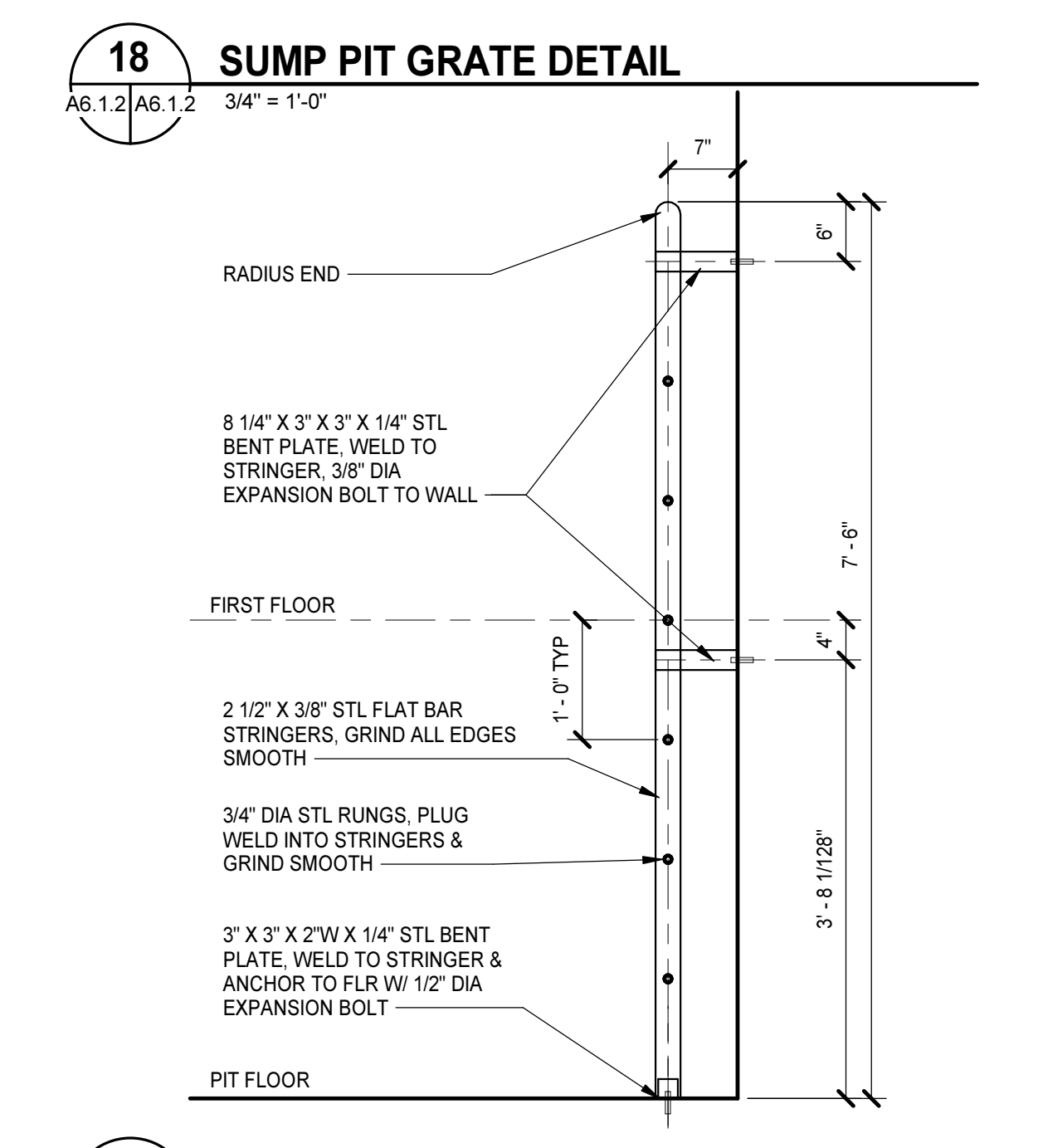
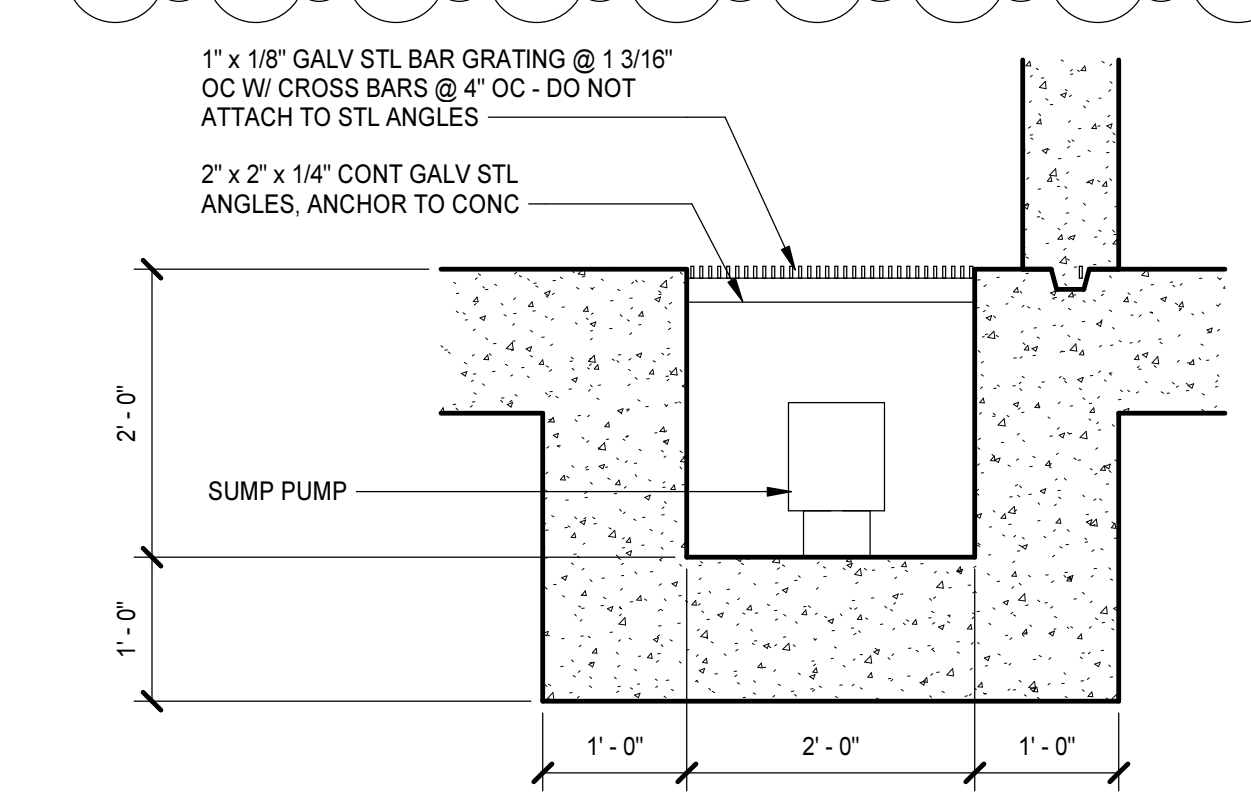
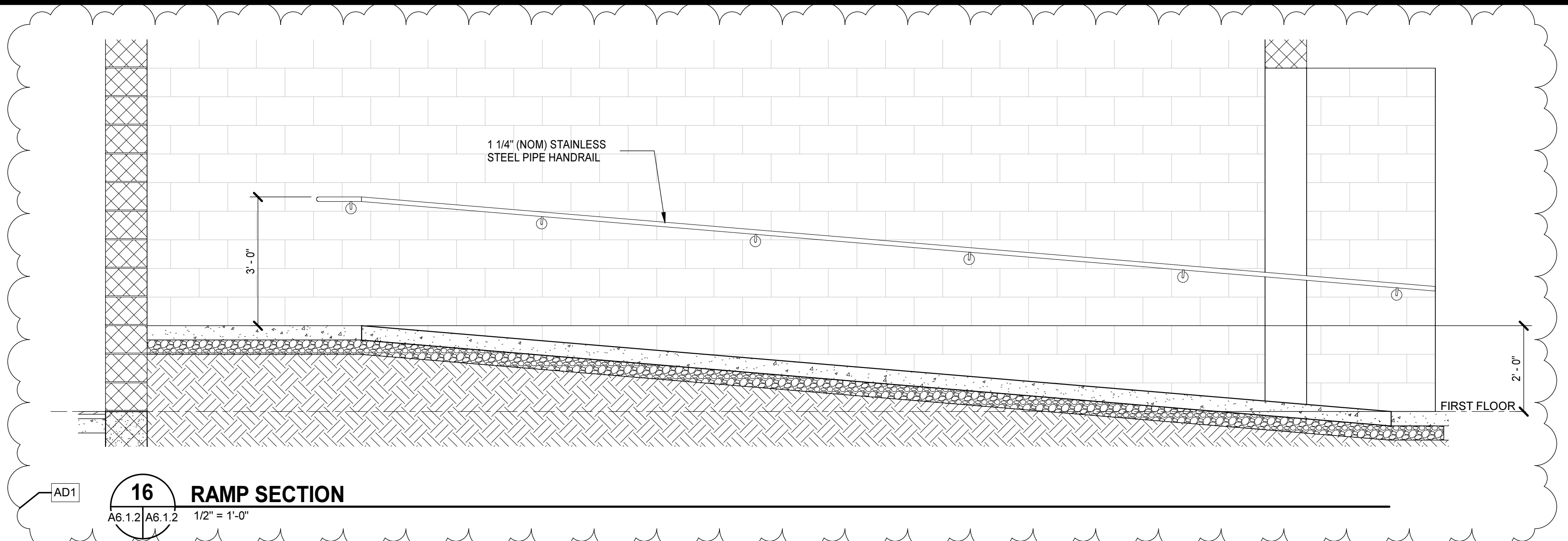


**1 ENLARGED STAIR PLAN - FIRST FLOOR**  
A2.1.1 | A6.1.1 | 1/4" = 1'-0"



**HANDRAIL DETAILS**  
NO SCALE

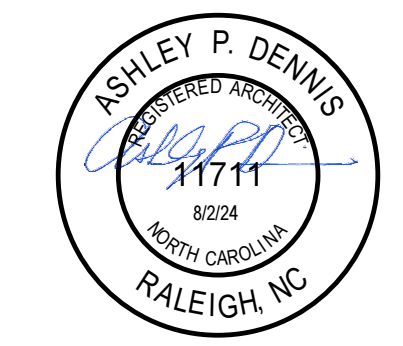




PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

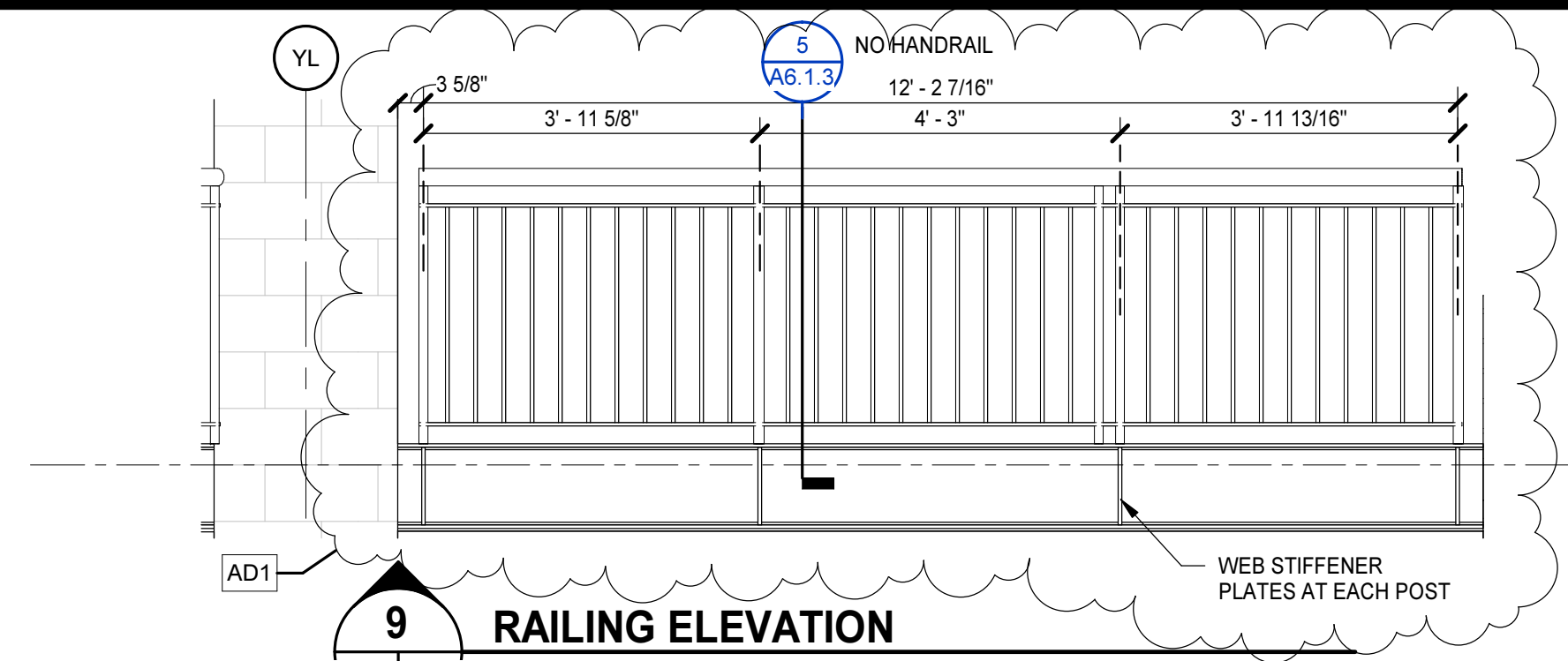
8/16/2024 3:15:56 PM



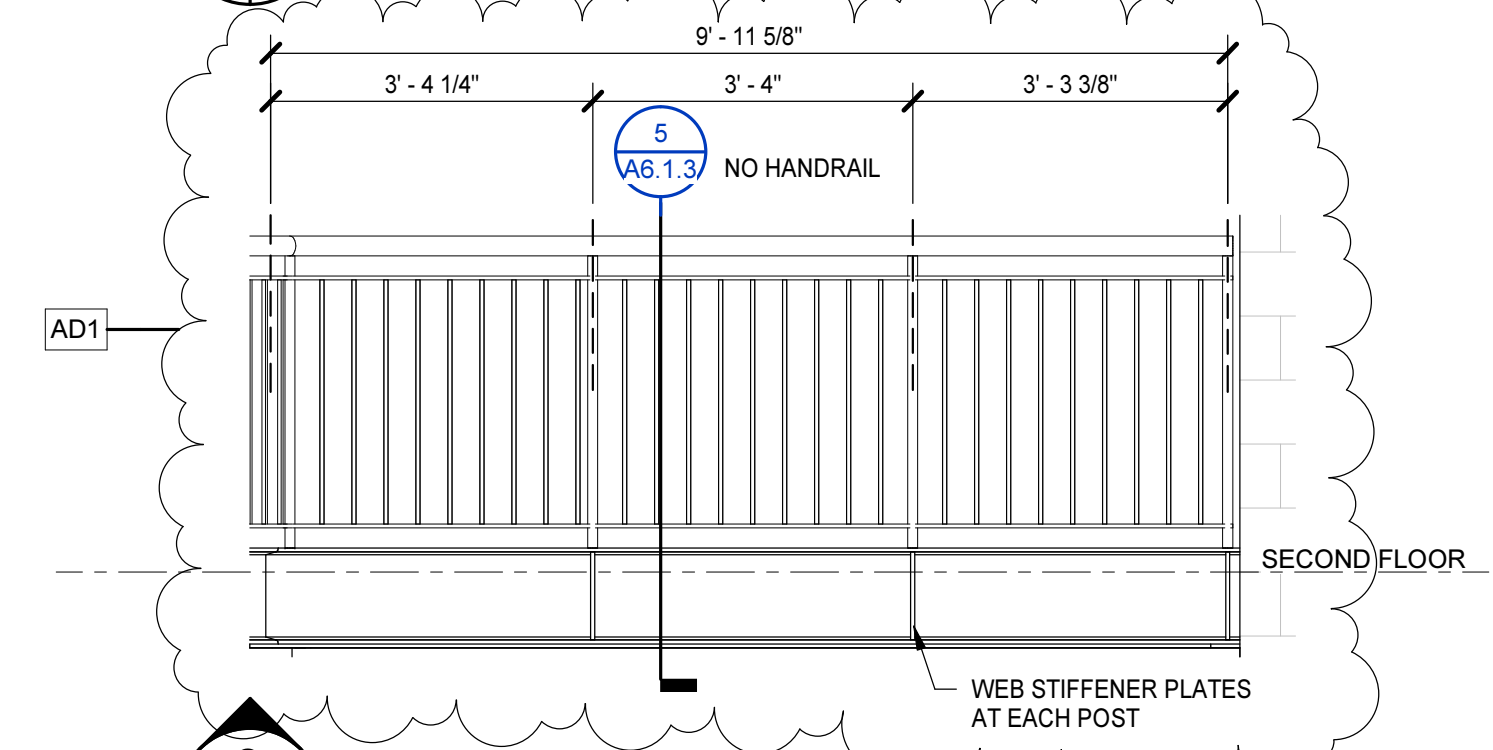


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

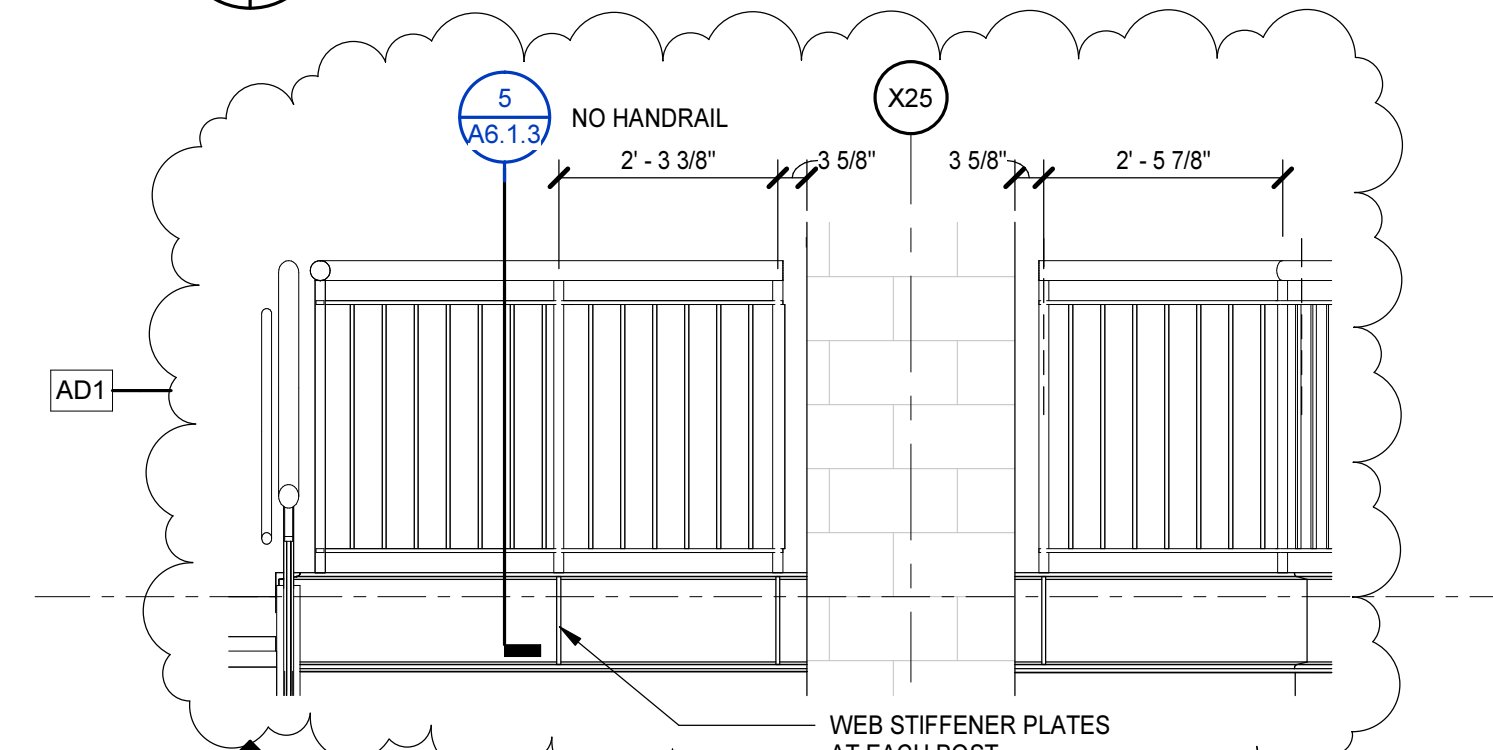
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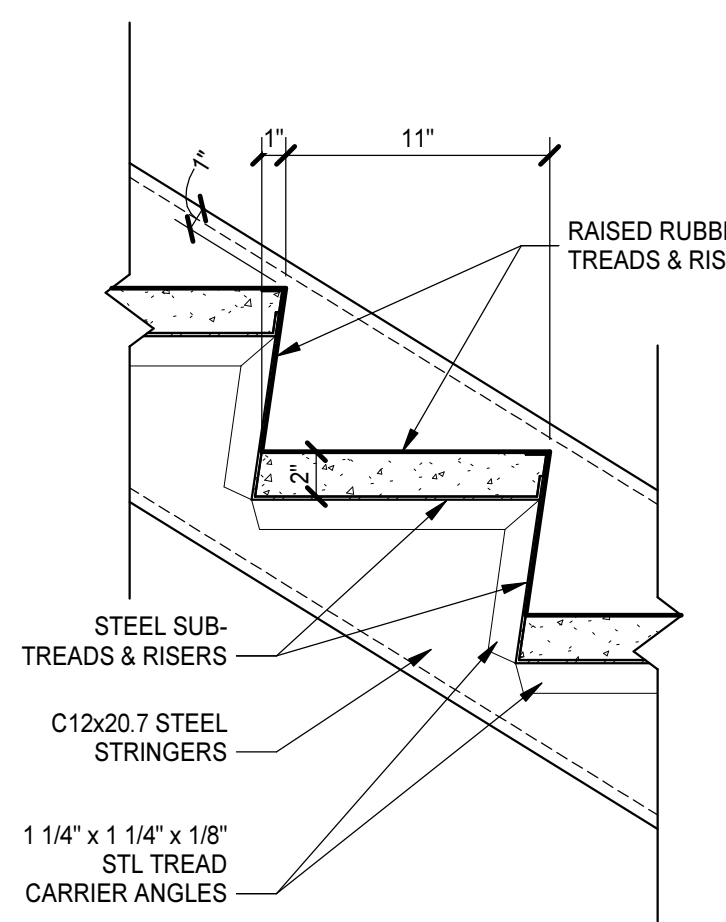
**9 RAILING ELEVATION**  
 A2.1.9 | A6.1.3 | 1/2" = 1'-0"



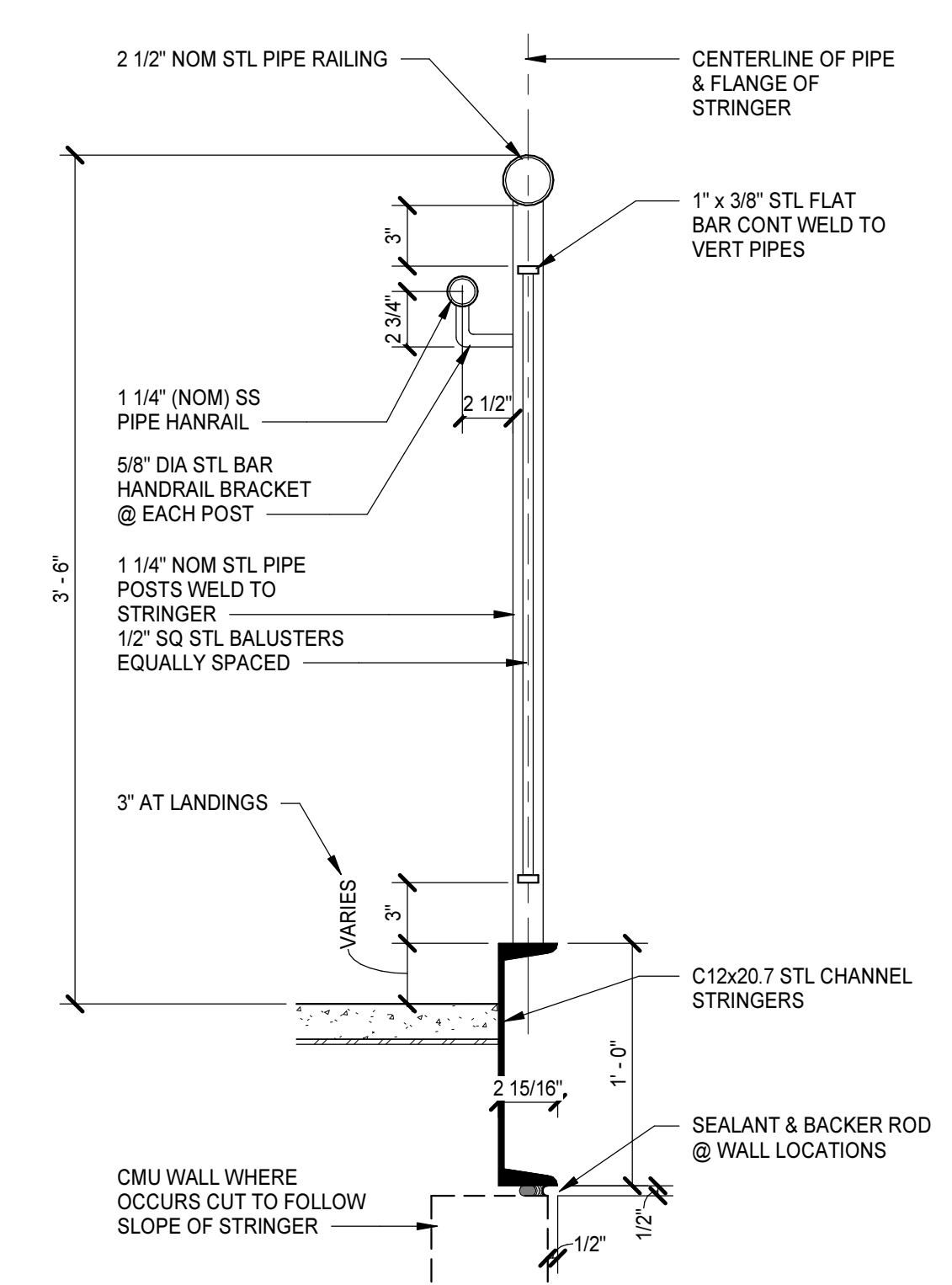
**8 RAILING ELEVATION**  
 A2.1.9 | A6.1.3 | 1/2" = 1'-0"



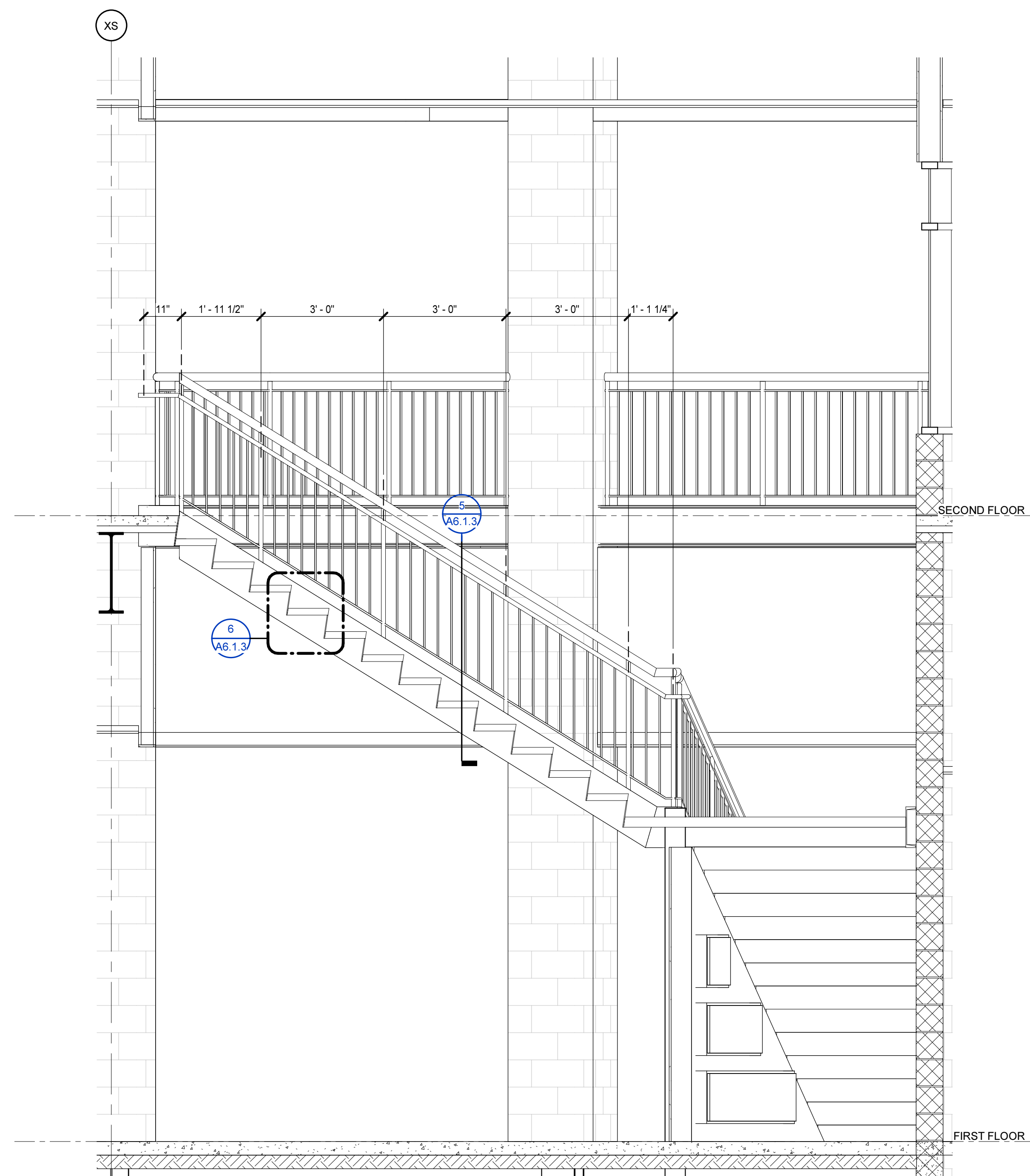
**7 RAILING ELEVATION**  
 A2.1.9 | A6.1.3 | 1/2" = 1'-0"



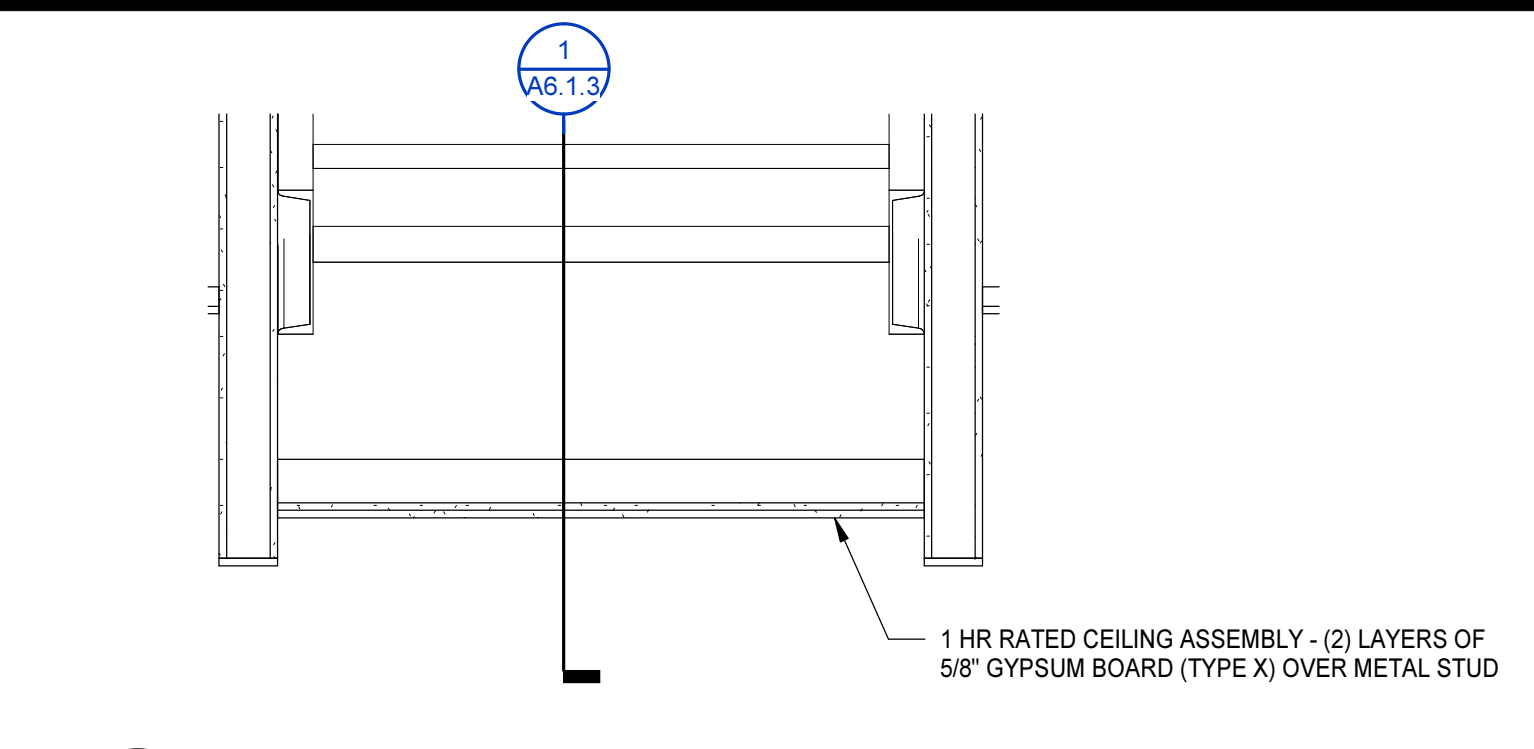
**6 TREAD & RISER DETAIL**  
 A6.1.3 | A6.1.3 | 1 1/2" = 1'-0"



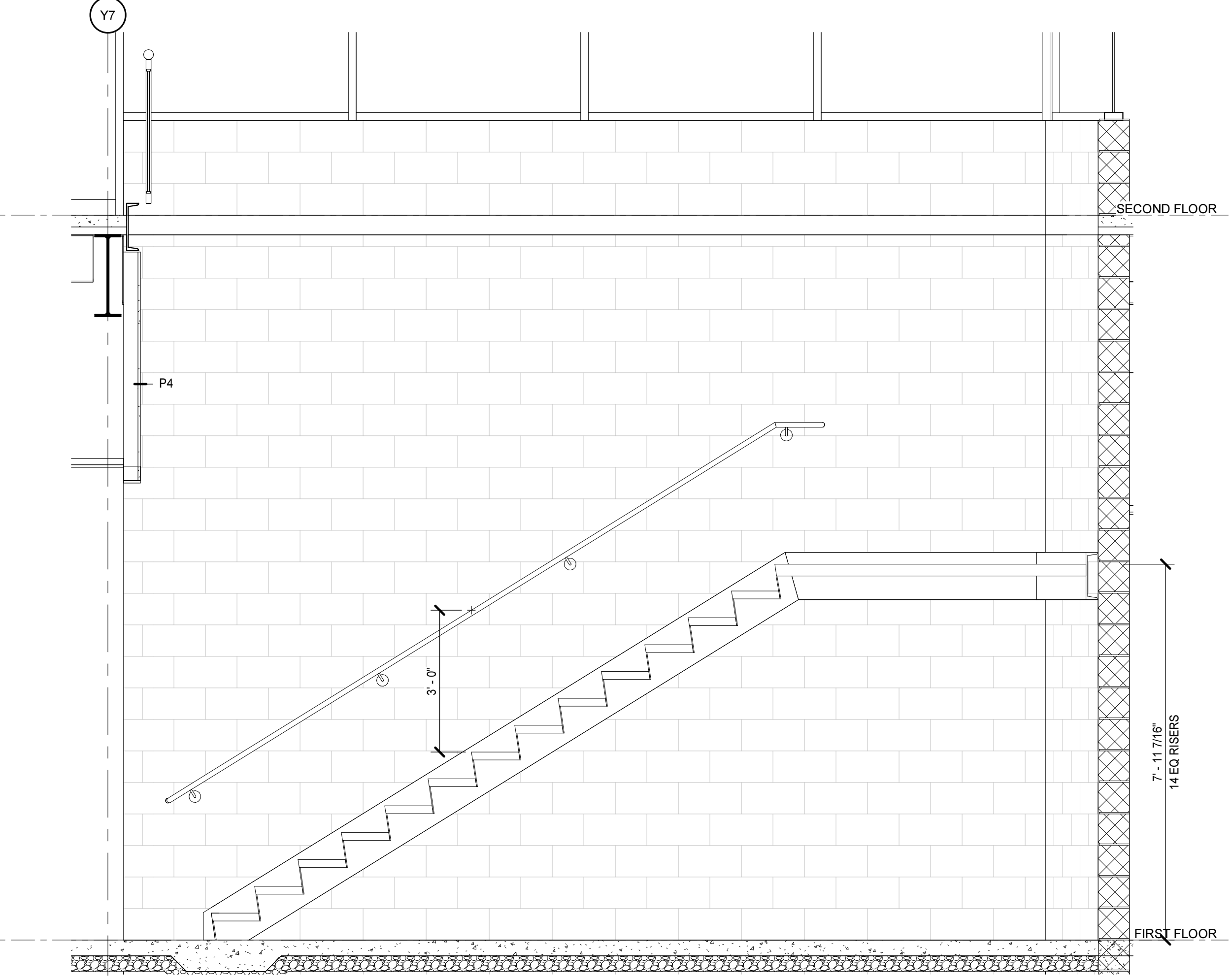
**5 GUARD RAILING SECTION**  
 A6.1.3 | A6.1.3 | 1 1/2" = 1'-0"



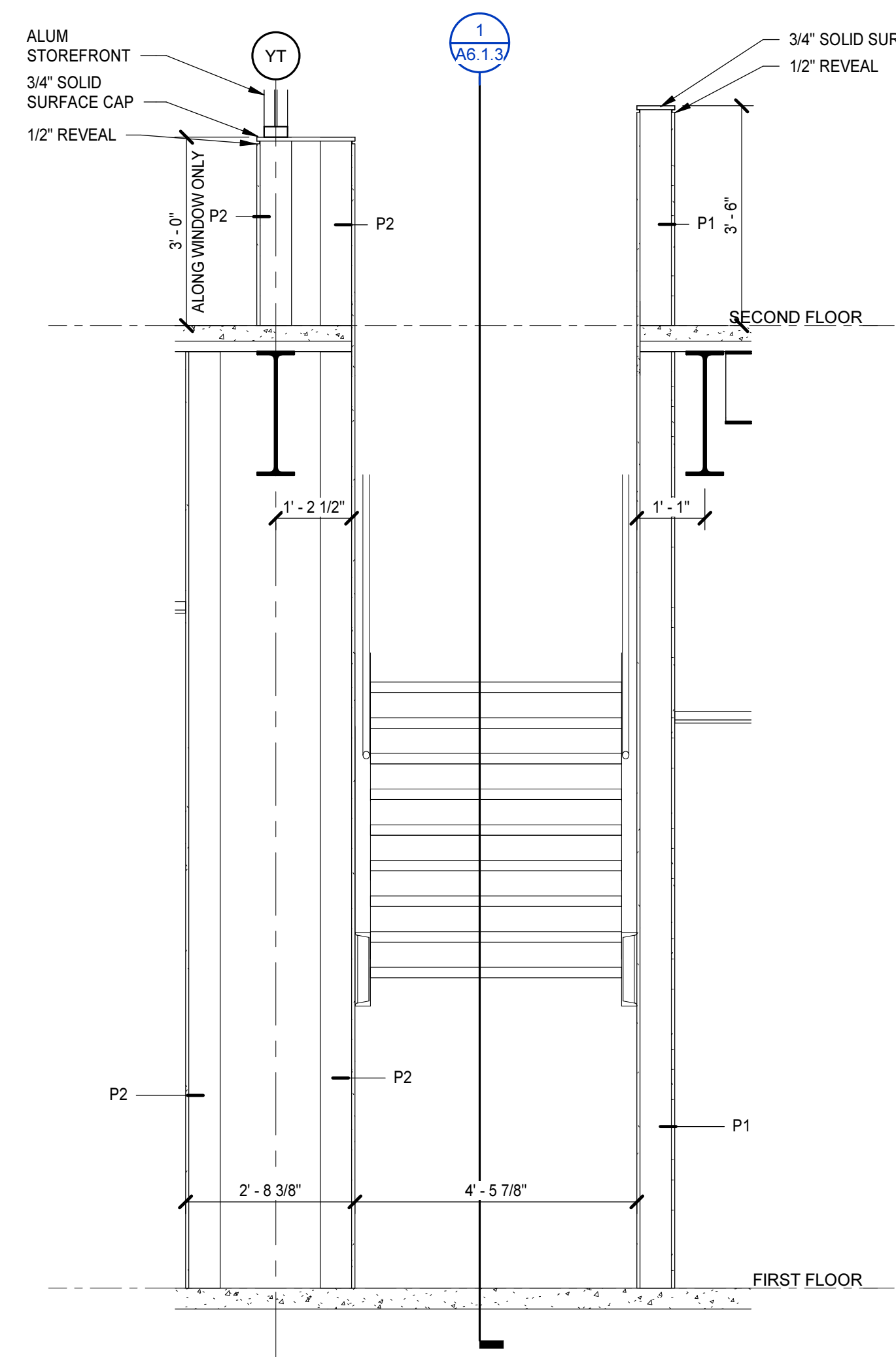
**4 STAIR SECTION**  
 A6.1.1 | A6.1.3 | 1/2" = 1'-0"



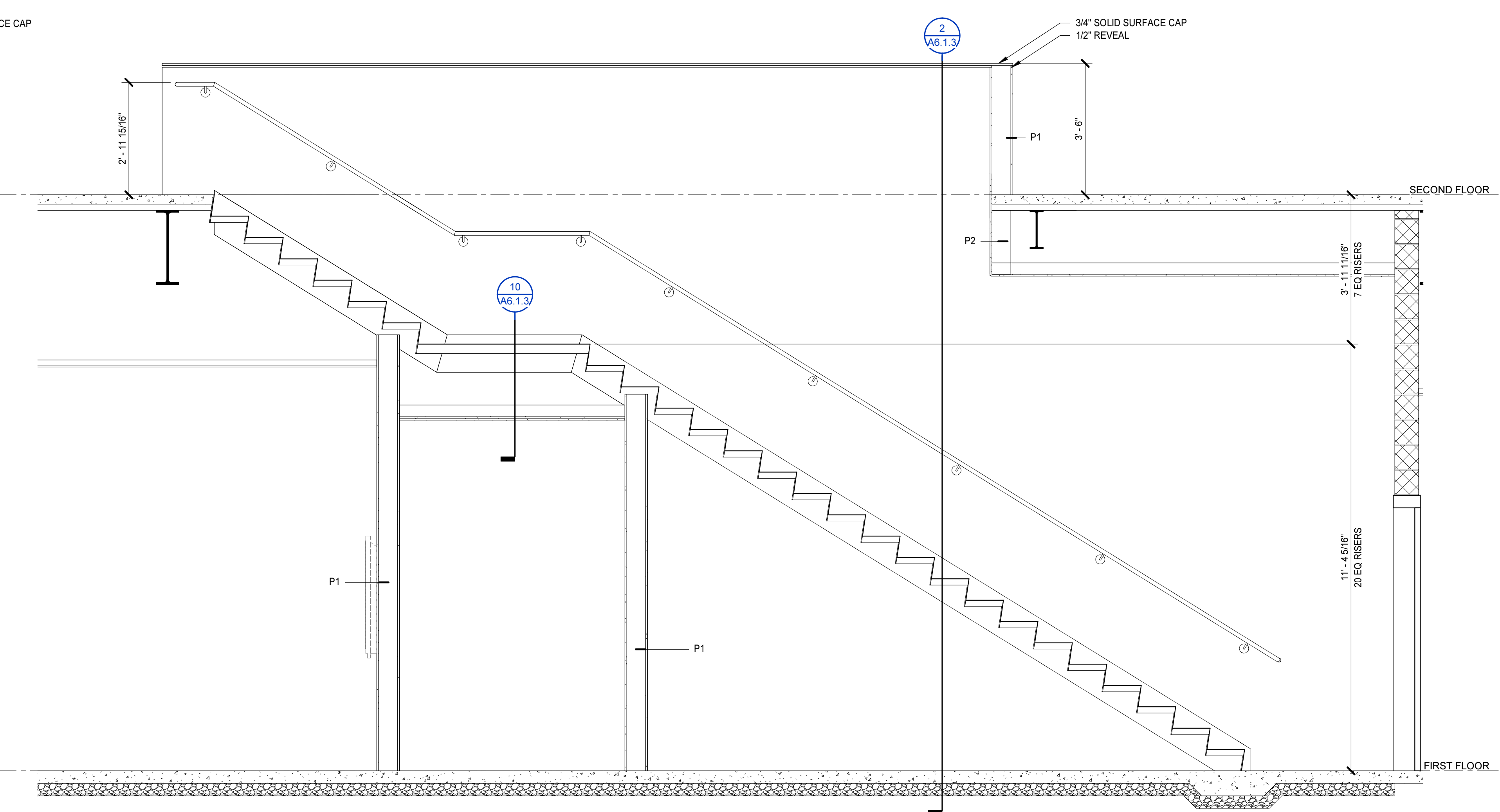
**10 UNDERSTAIR ENCLOSURE**  
 A6.1.3 | A6.1.3 | 3/4" = 1'-0"



**3 STAIR SECTION**  
 A6.1.1 | A6.1.3 | 1/2" = 1'-0"



**2 STAIR SECTION**  
 A6.1.1 | A6.1.3 | 1/2" = 1'-0"

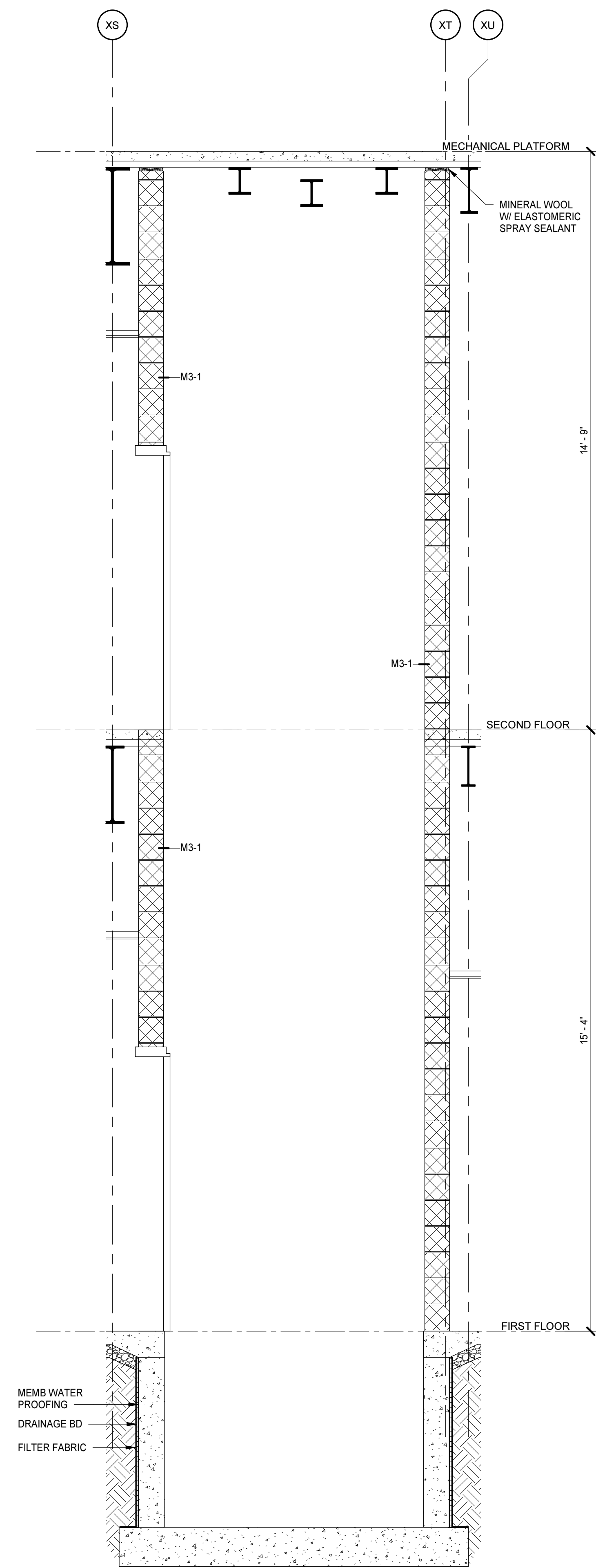


**1 STAIR SECTION**  
 A6.1.1 | A6.1.3 | 1/2" = 1'-0"

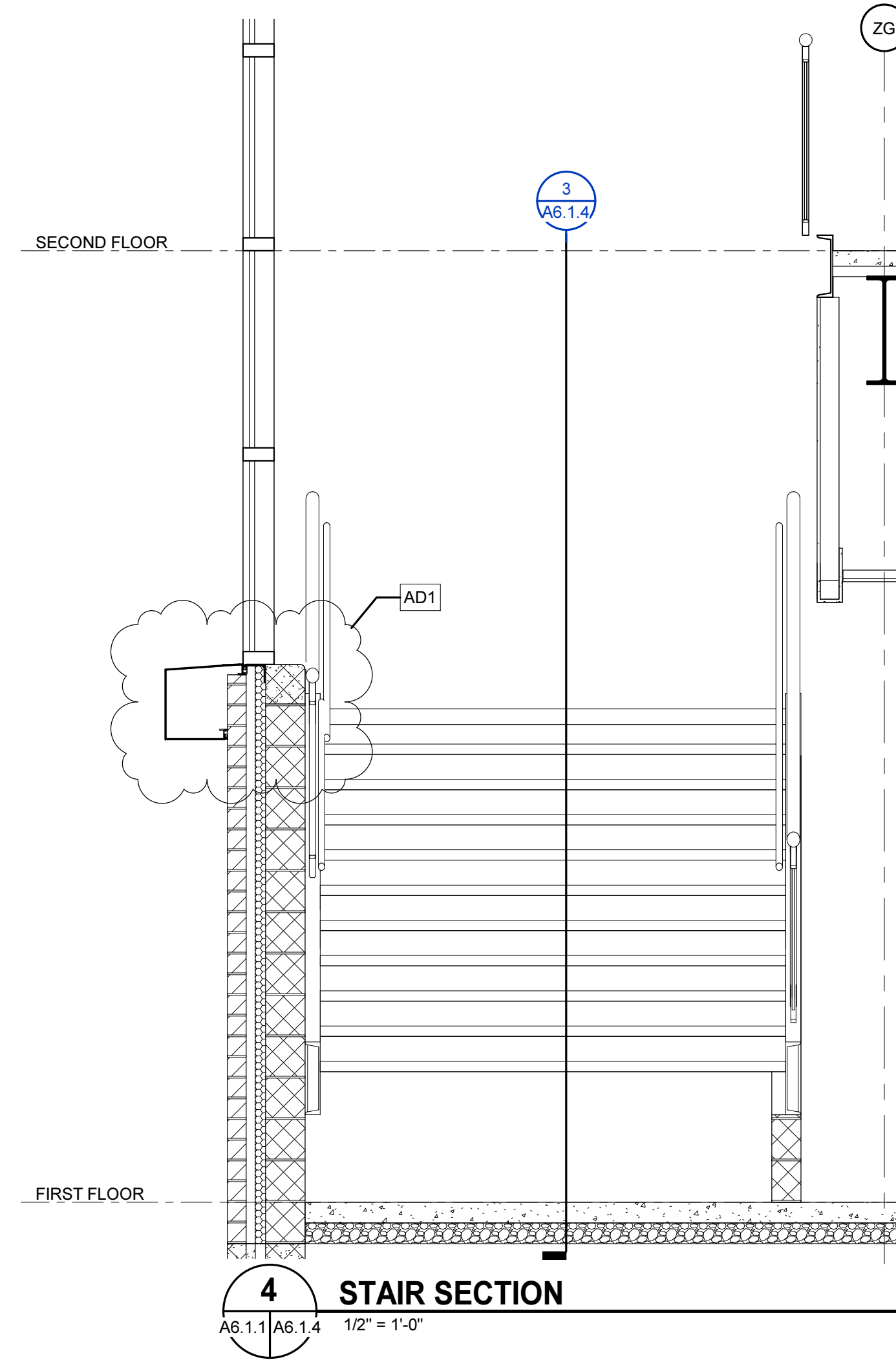


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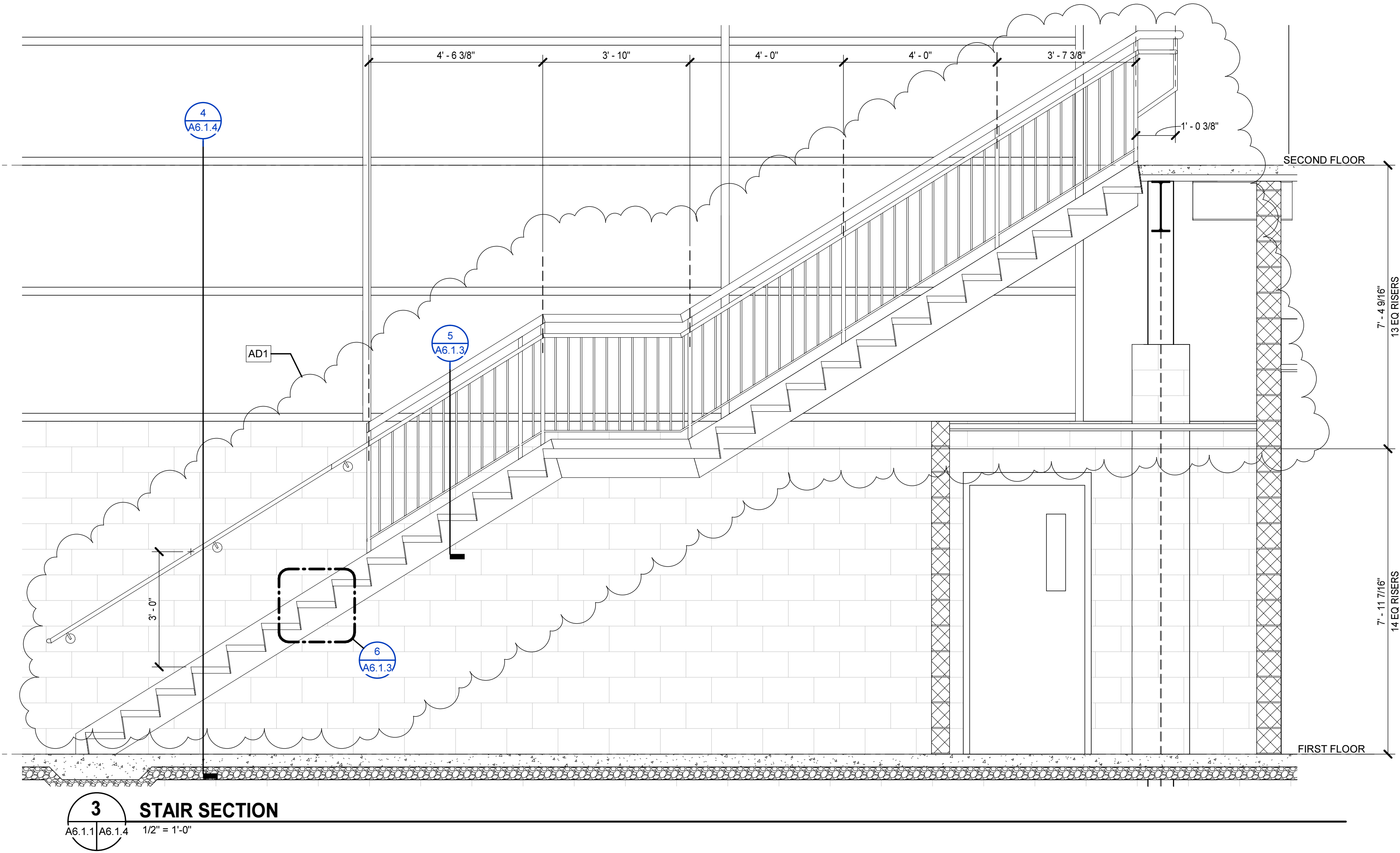
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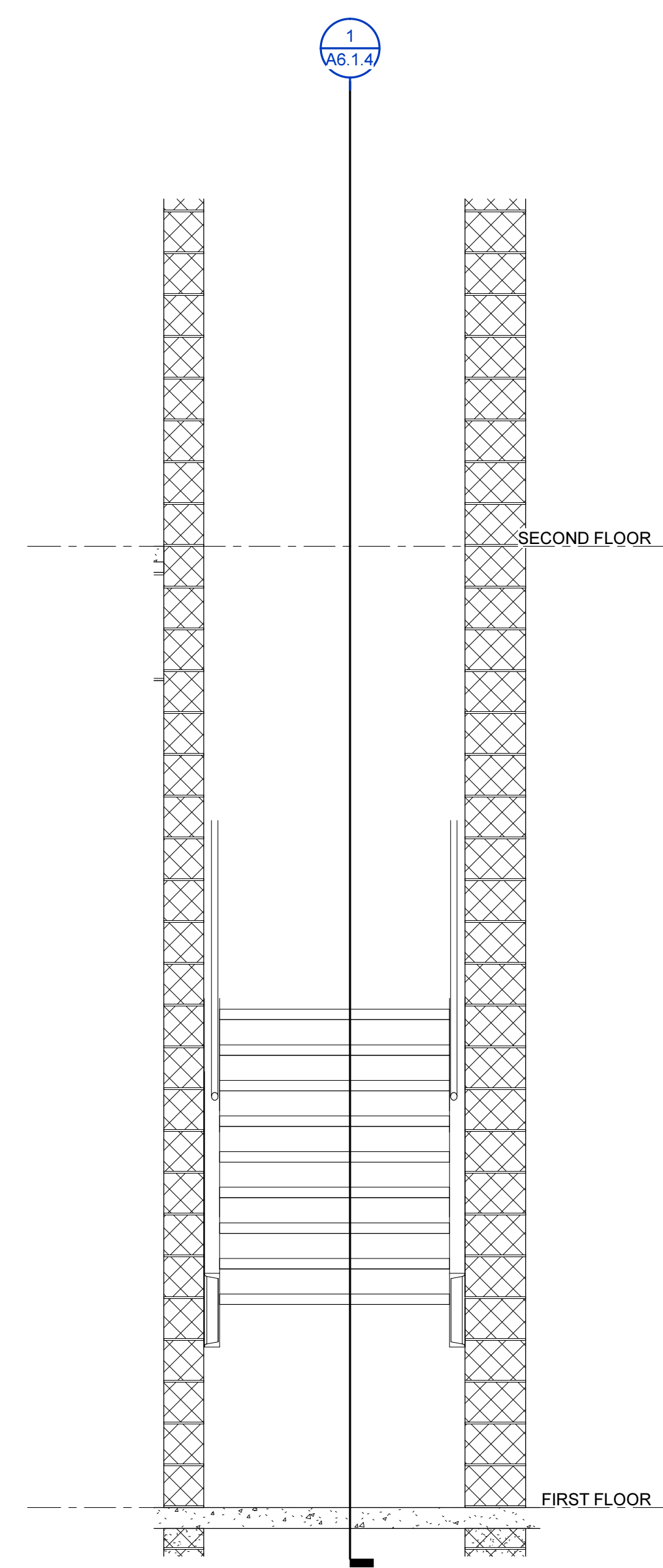
**5 ELEVATOR SECTION**  
A6.1.2 | A6.1.4 1/2" = 1'-0"



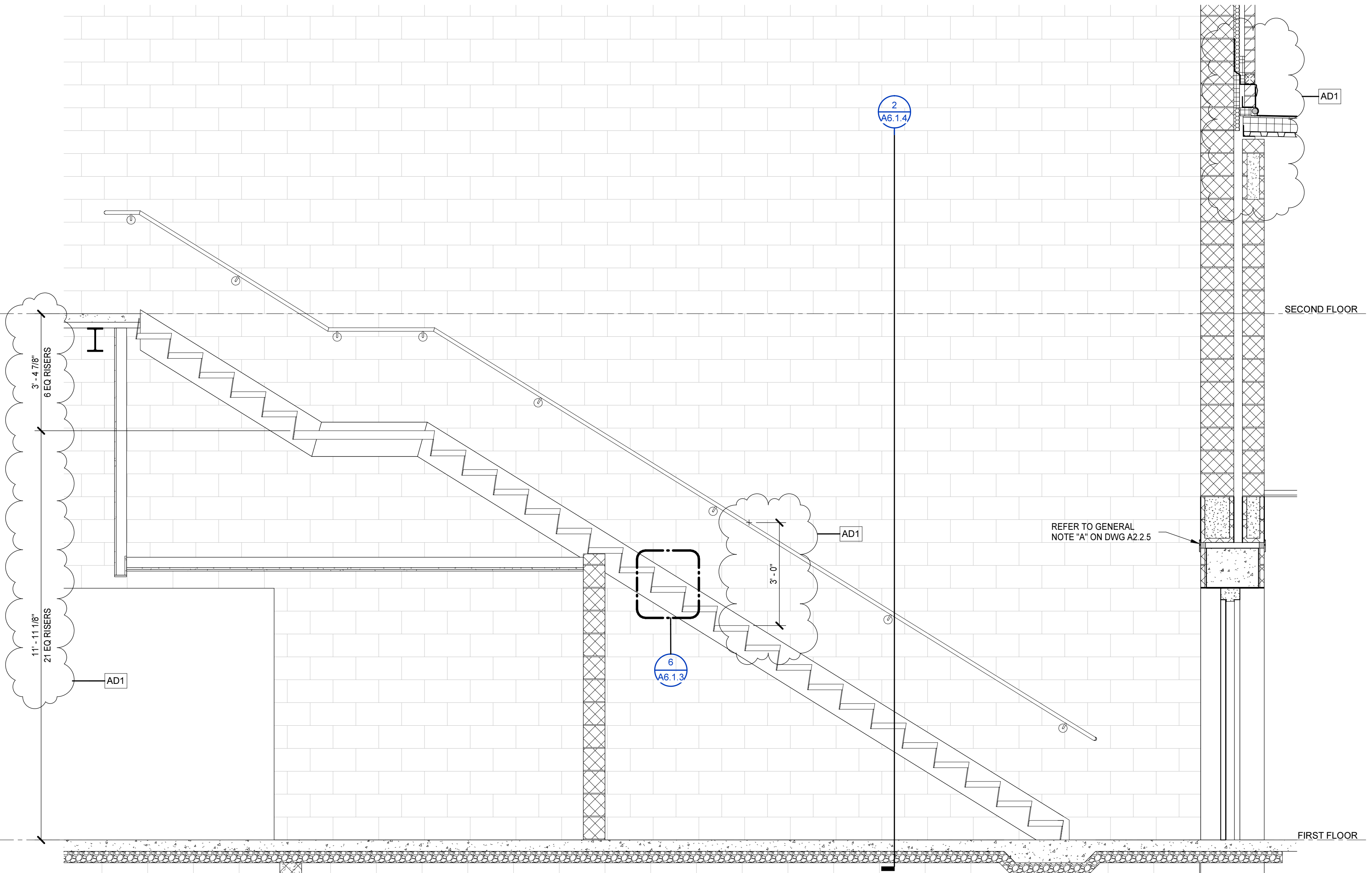
**4 STAIR SECTION**  
A6.1.1 | A6.1.4 1/2" = 1'-0"



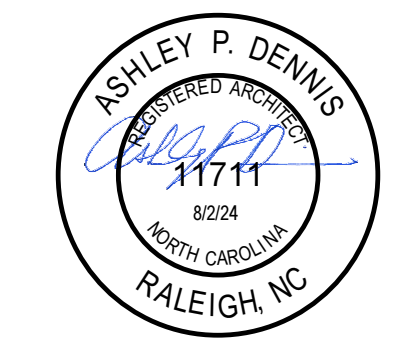
**3 STAIR SECTION**  
A6.1.1 | A6.1.4 1/2" = 1'-0"



**2 STAIR SECTION**  
A6.1.1 | A6.1.4 1/2" = 1'-0"

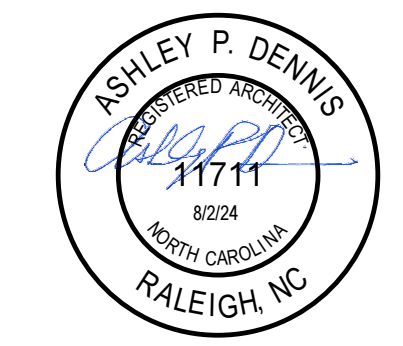


**1 STAIR SECTION**  
A2.2.5 | A6.1.4 1/2" = 1'-0"

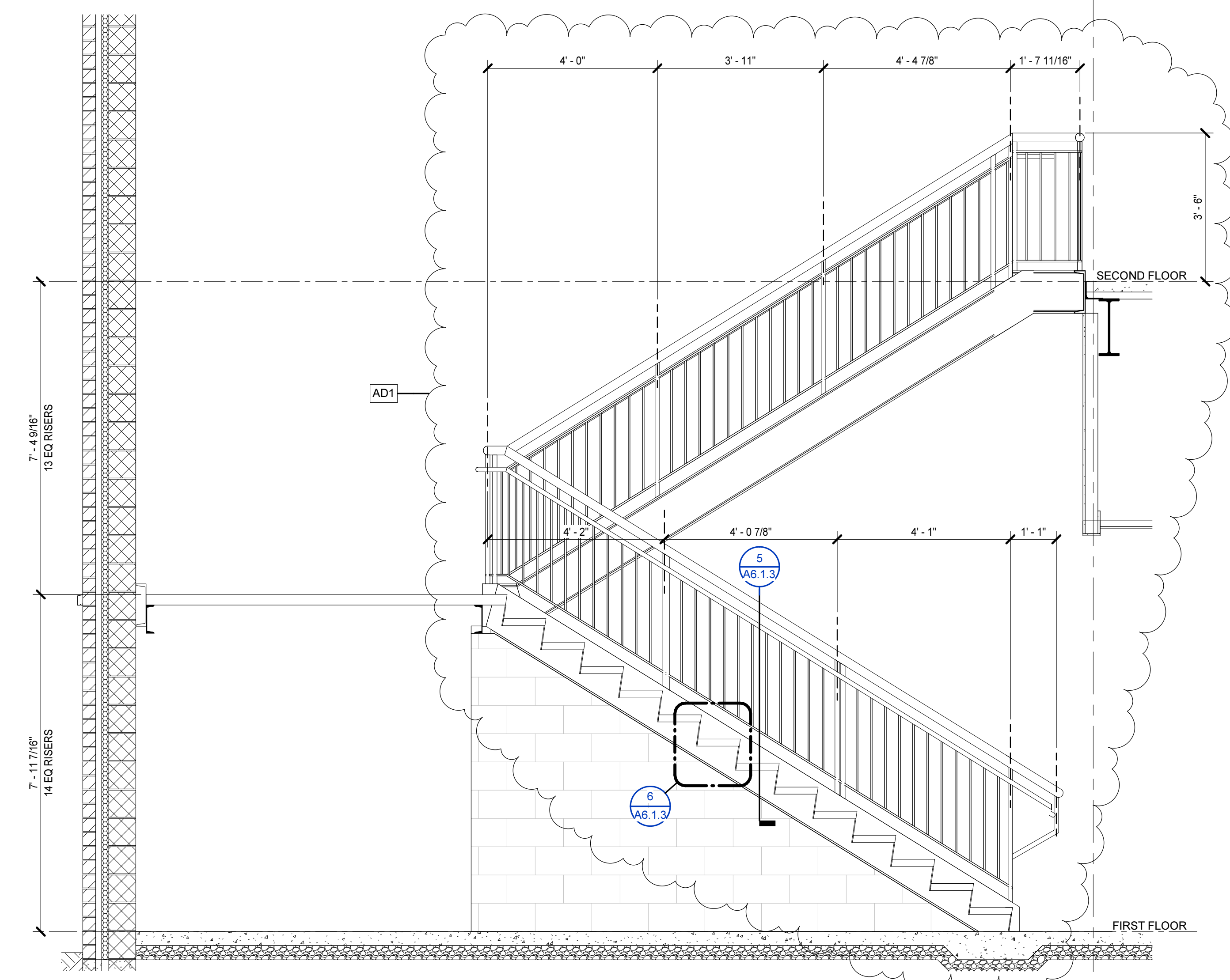


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

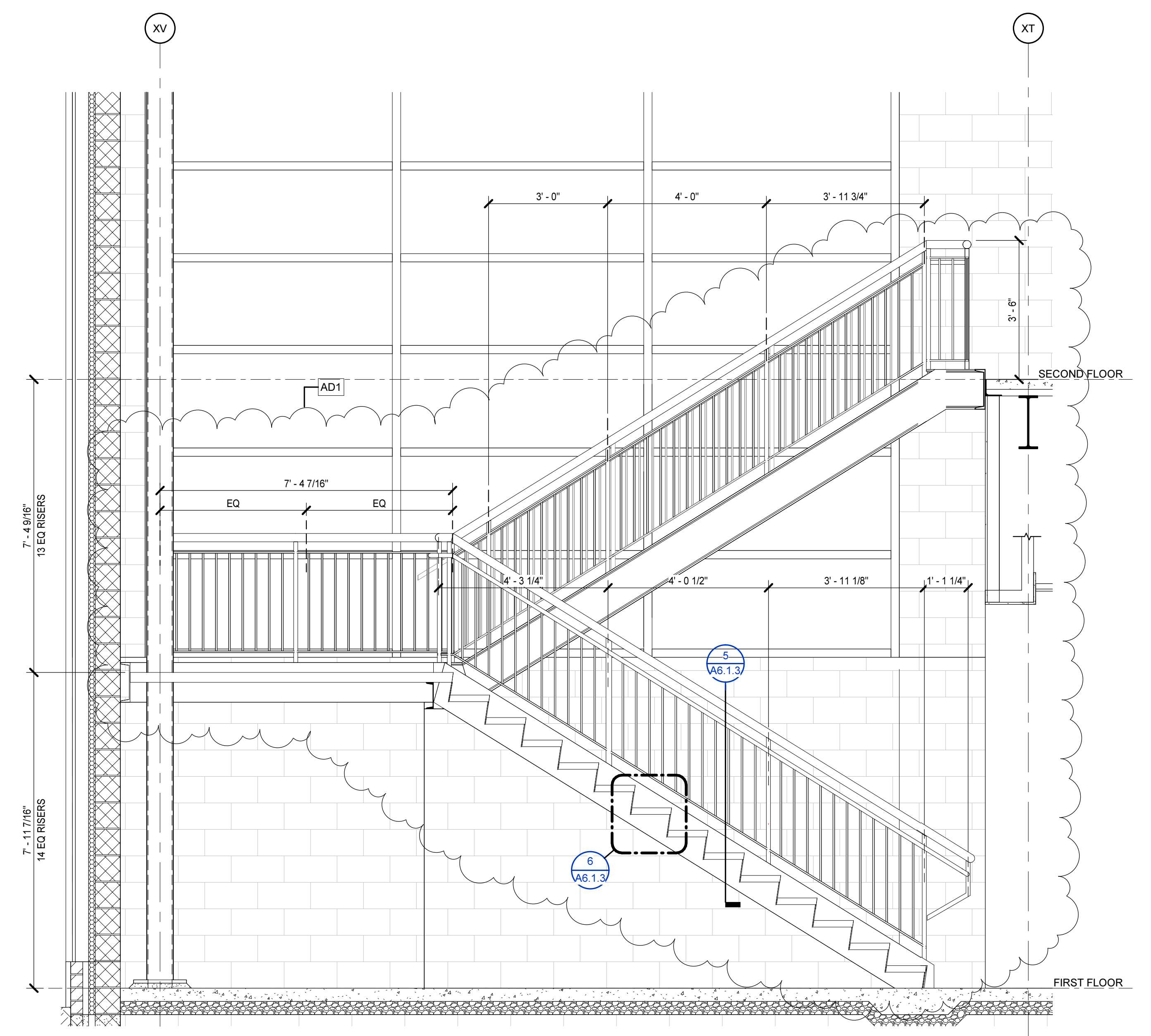




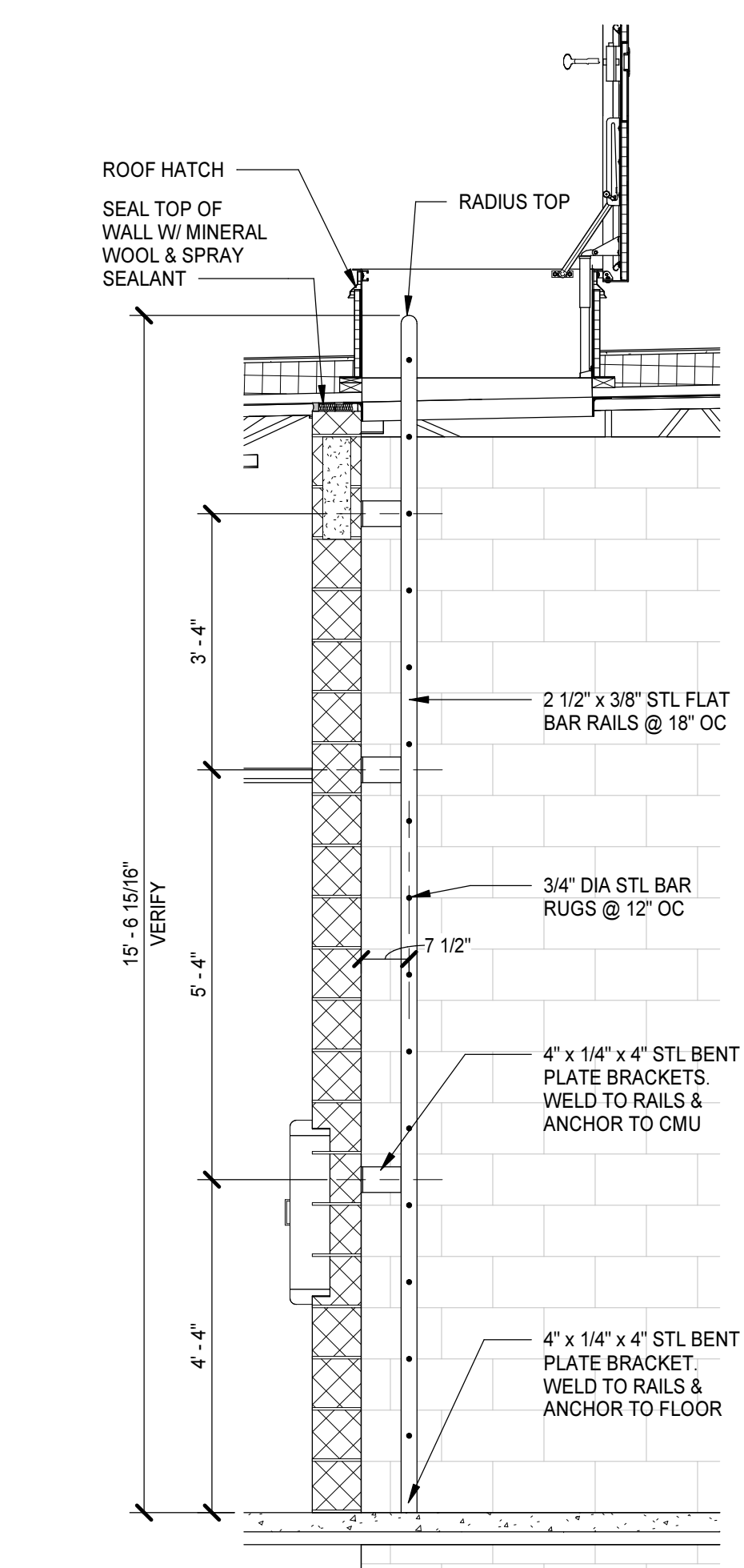
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1



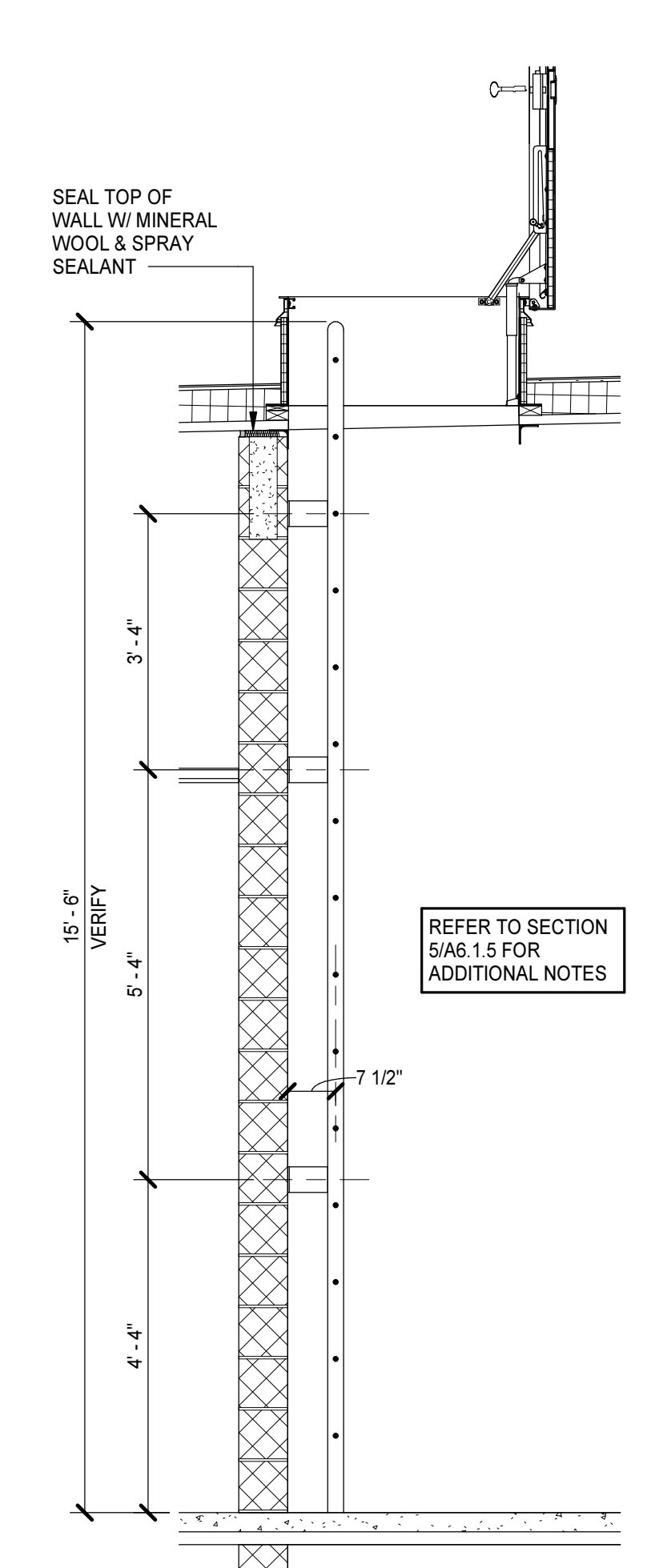
**2 STAIR SECTION**  
 A6.1.1 | A6.1.5 | 1/2" = 1'-0"



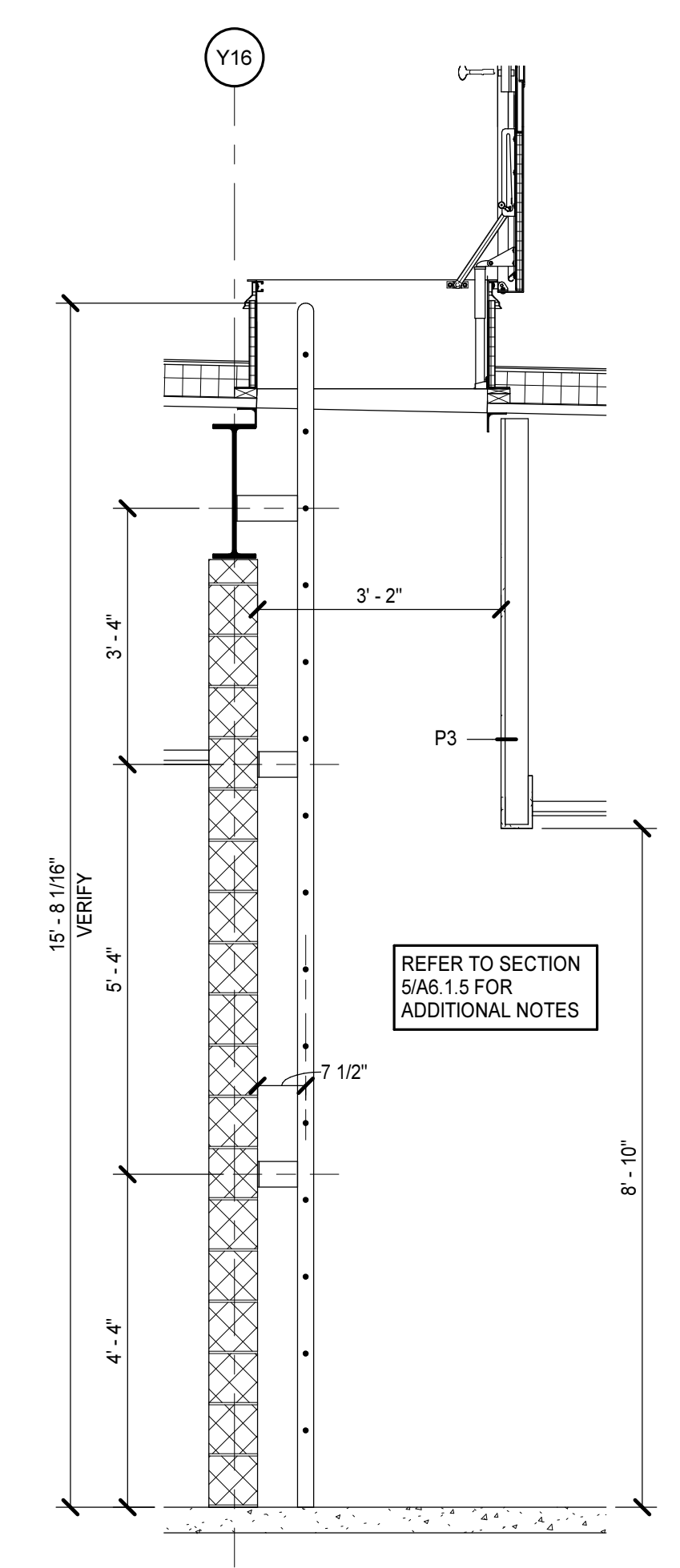
**1 STAIR SECTION**  
 A6.1.1 | A6.1.5 | 1/2" = 1'-0"



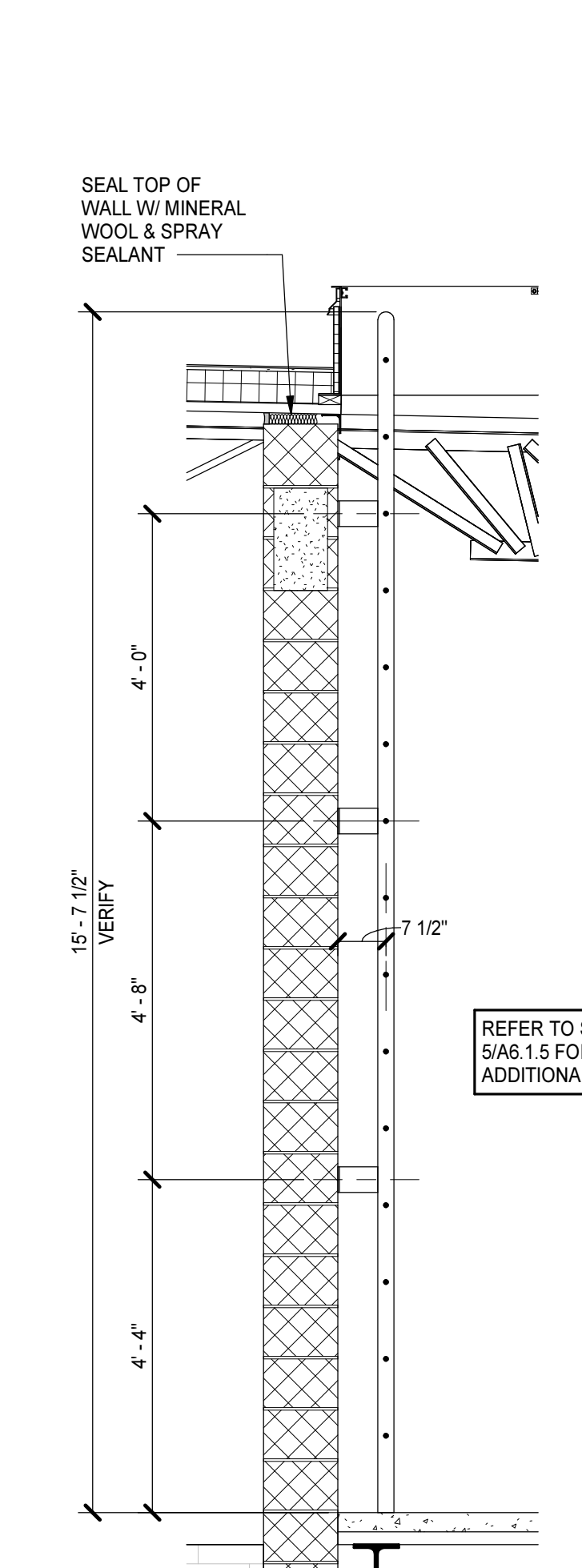
**5 LADDER SECTION D211**  
 A2.1.12 | A6.1.5 | 1/2" = 1'-0"



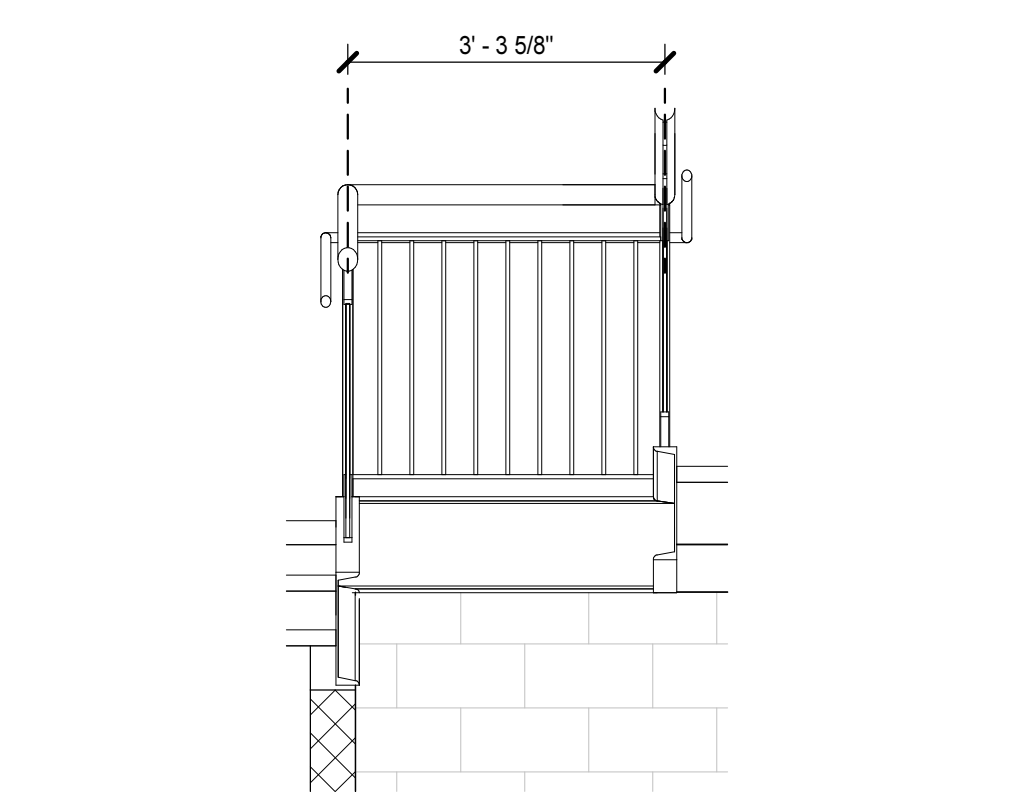
**6 LADDER SECTION G206**  
 A2.1.15 | A6.1.5 | 1/2" = 1'-0"



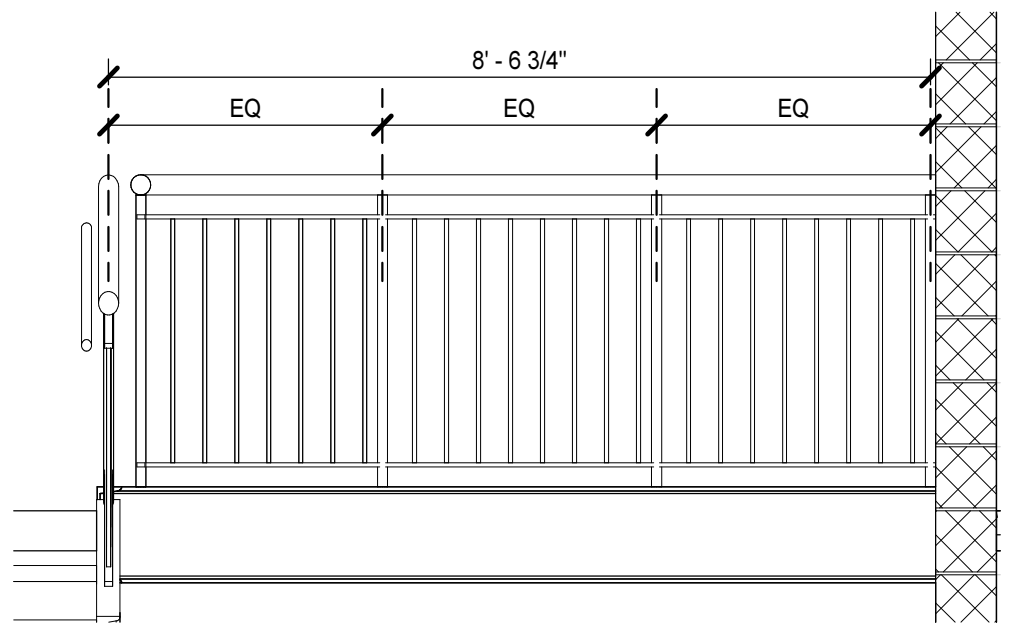
**7 LADDER SECTION B107**  
 A2.1.2 | A6.1.5 | 1/2" = 1'-0"



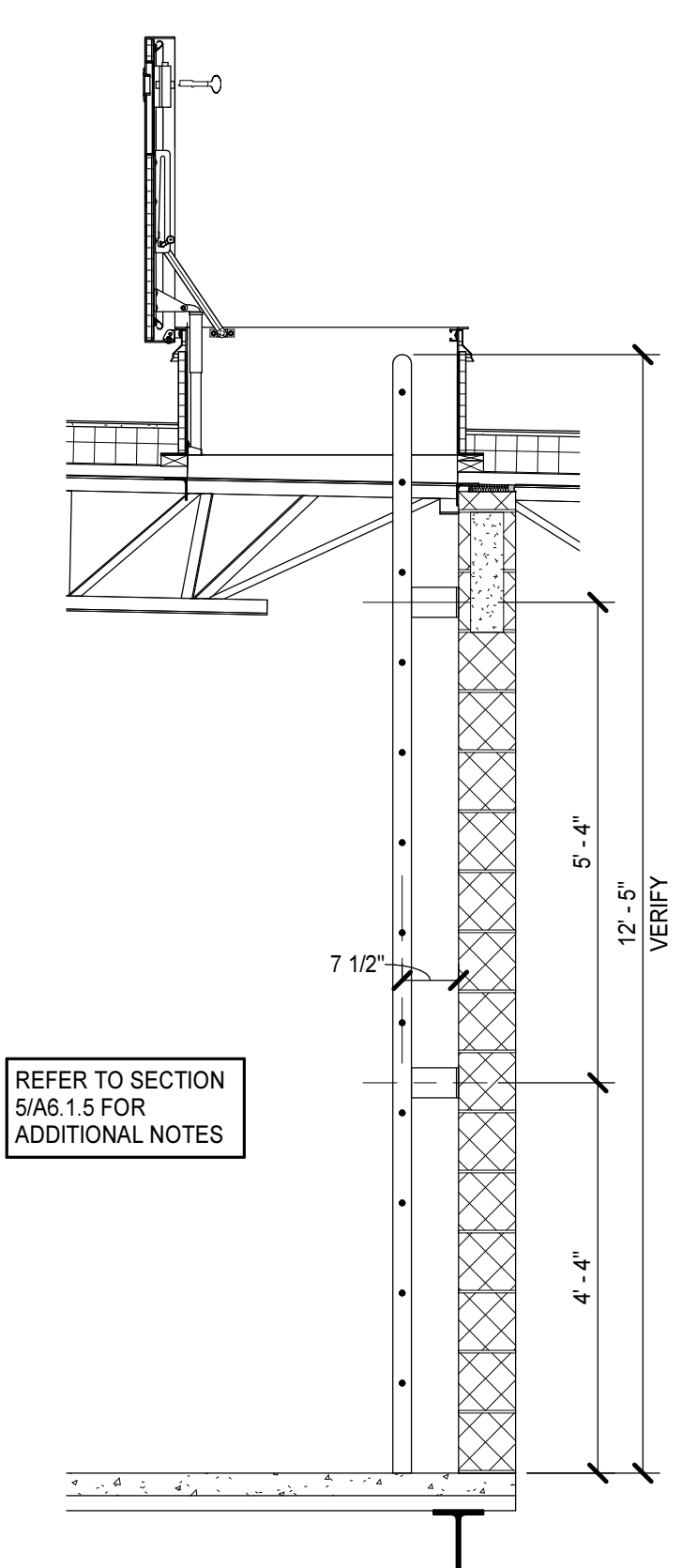
**9 LADDER SECTION A211**  
 A2.1.9 | A6.1.5 | 1/2" = 1'-0"



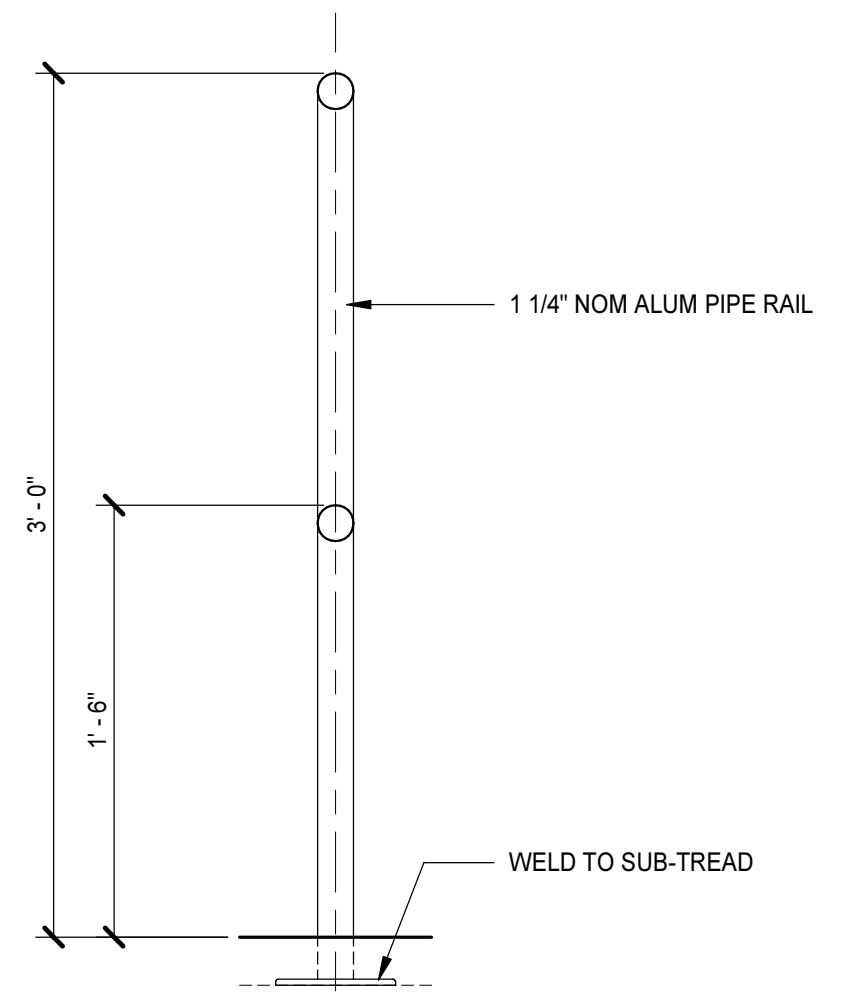
**4 RAILING ELEVATION**  
 A2.1.4 | A6.1.5 | 1/2" = 1'-0"



**3 RAILING ELEVATION**  
 A6.1.1 | A6.1.5 | 1/2" = 1'-0"



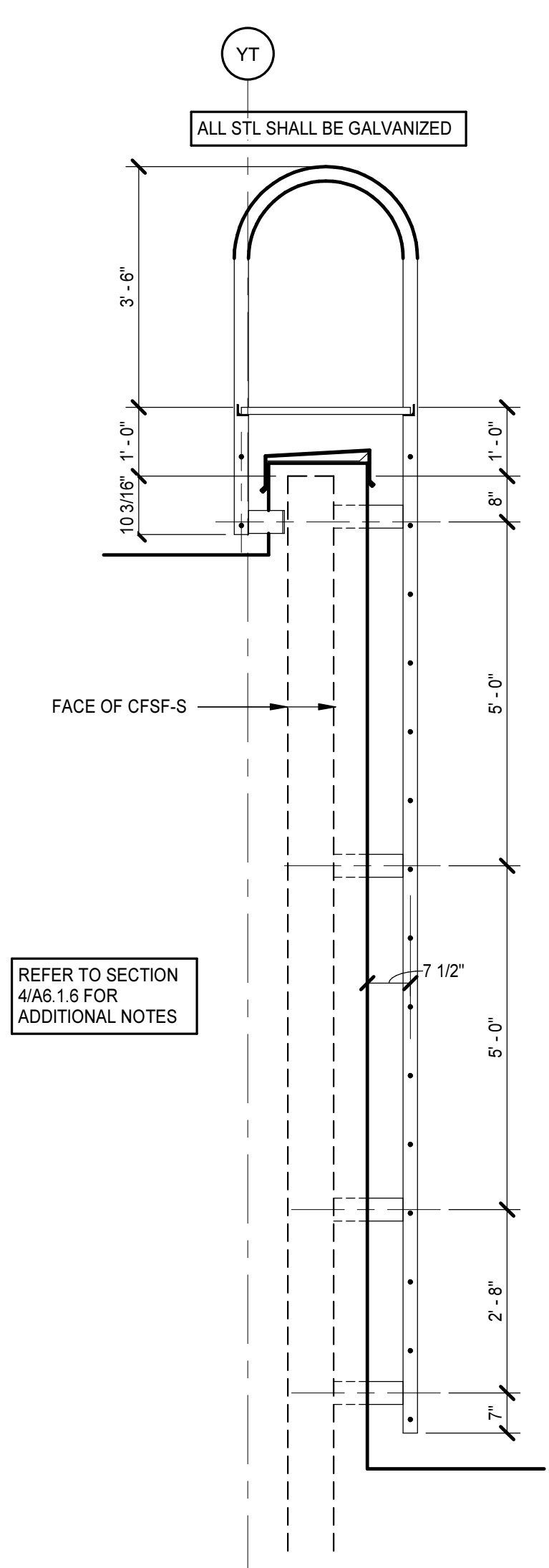
**8 LADDER SECTION F205**  
 A2.1.14 | A6.1.5 | 1/2" = 1'-0"



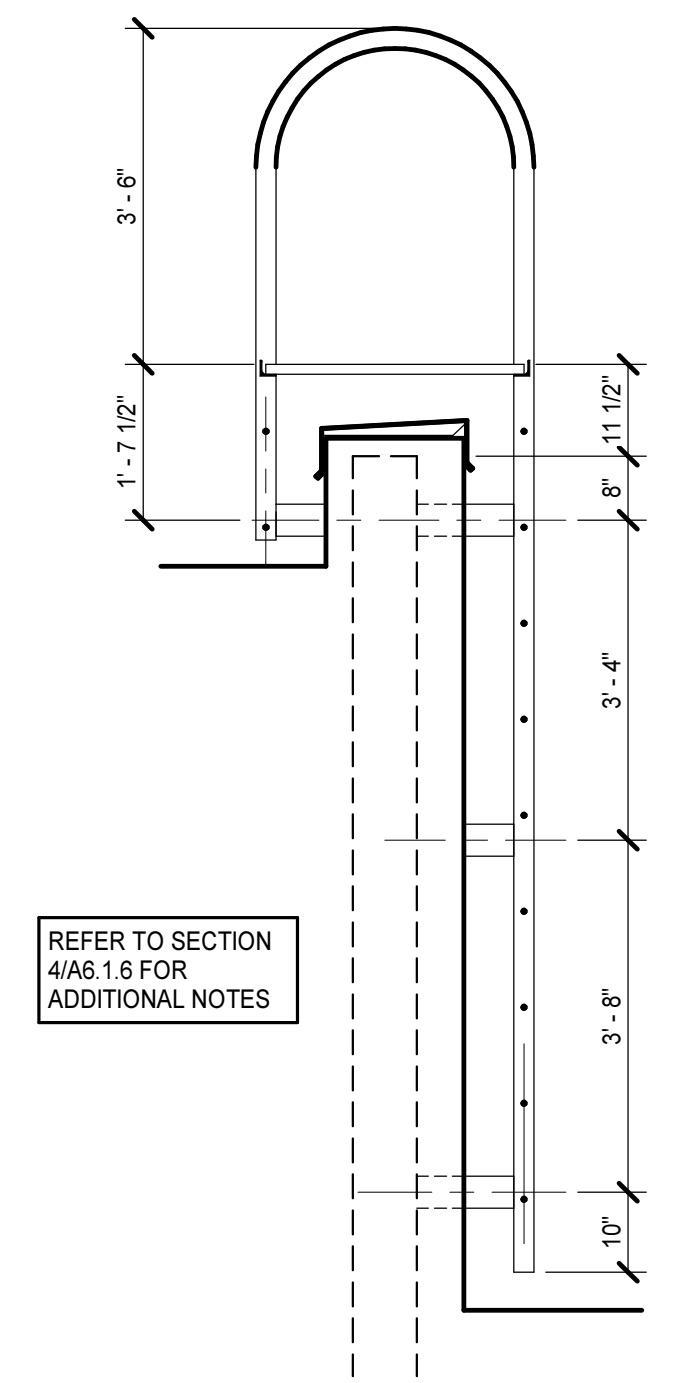
**10 CENTER RAILING SECTION**  
 A6.1.2 | A6.1.5 | 1 1/2" = 1'-0"



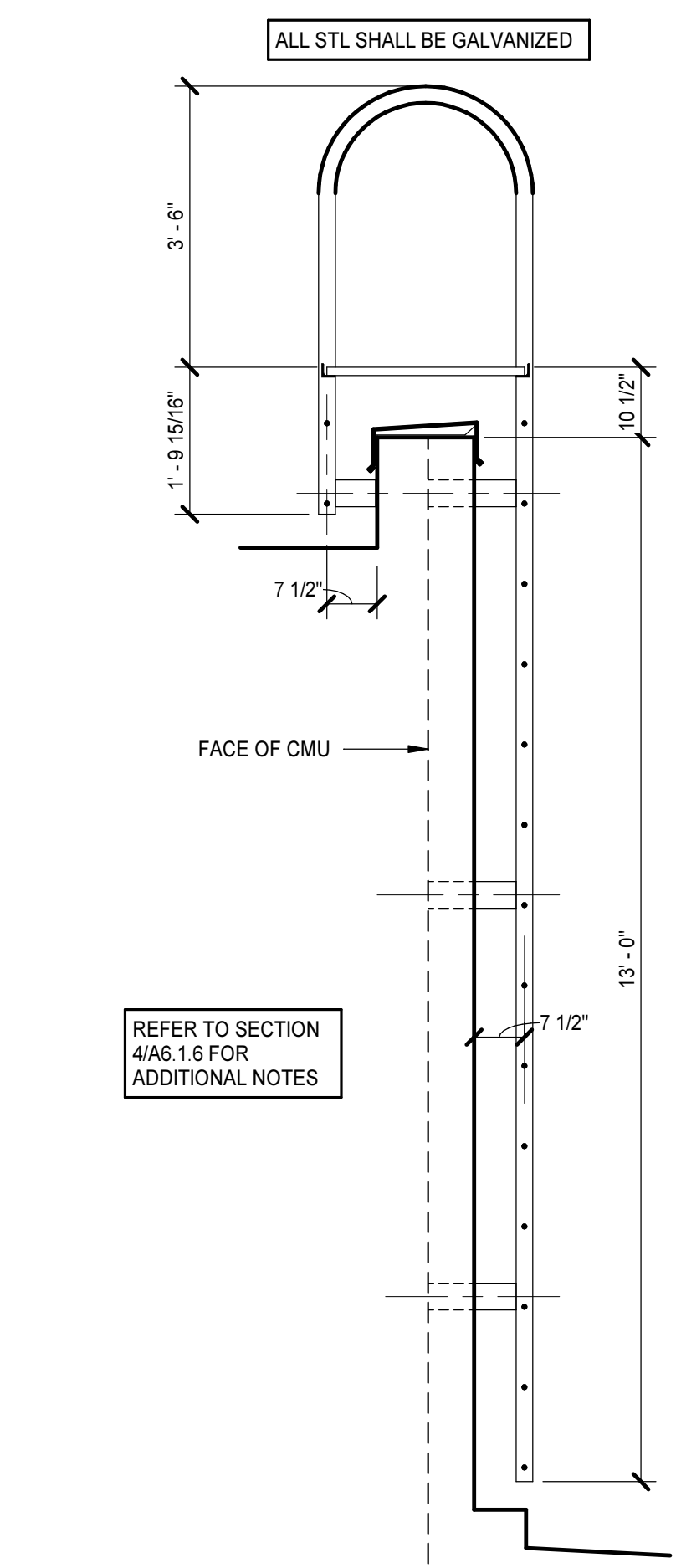
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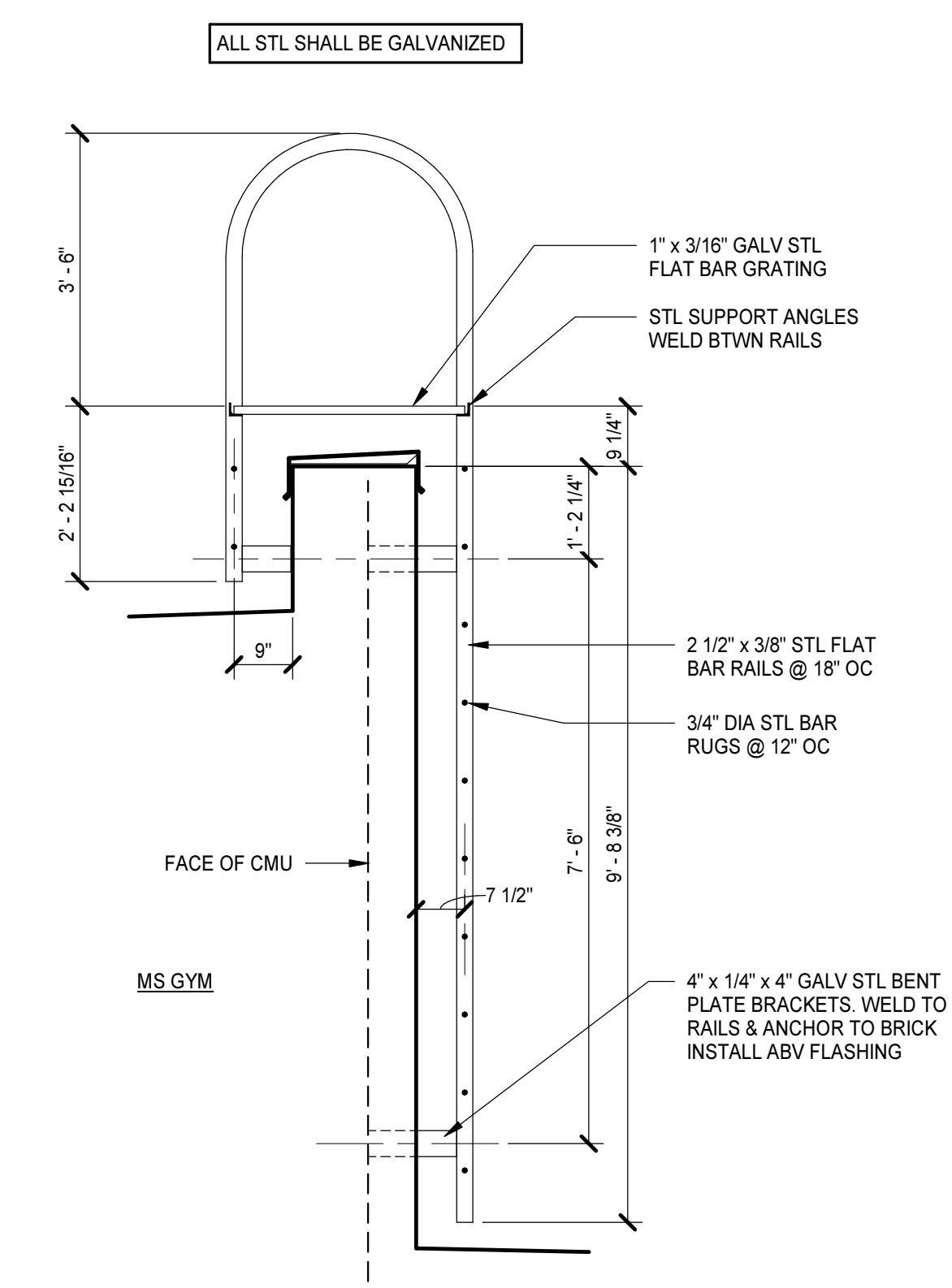
7 LADDER SECTION  
A2.1.9/A6.1.6 1/2" = 1'-0"



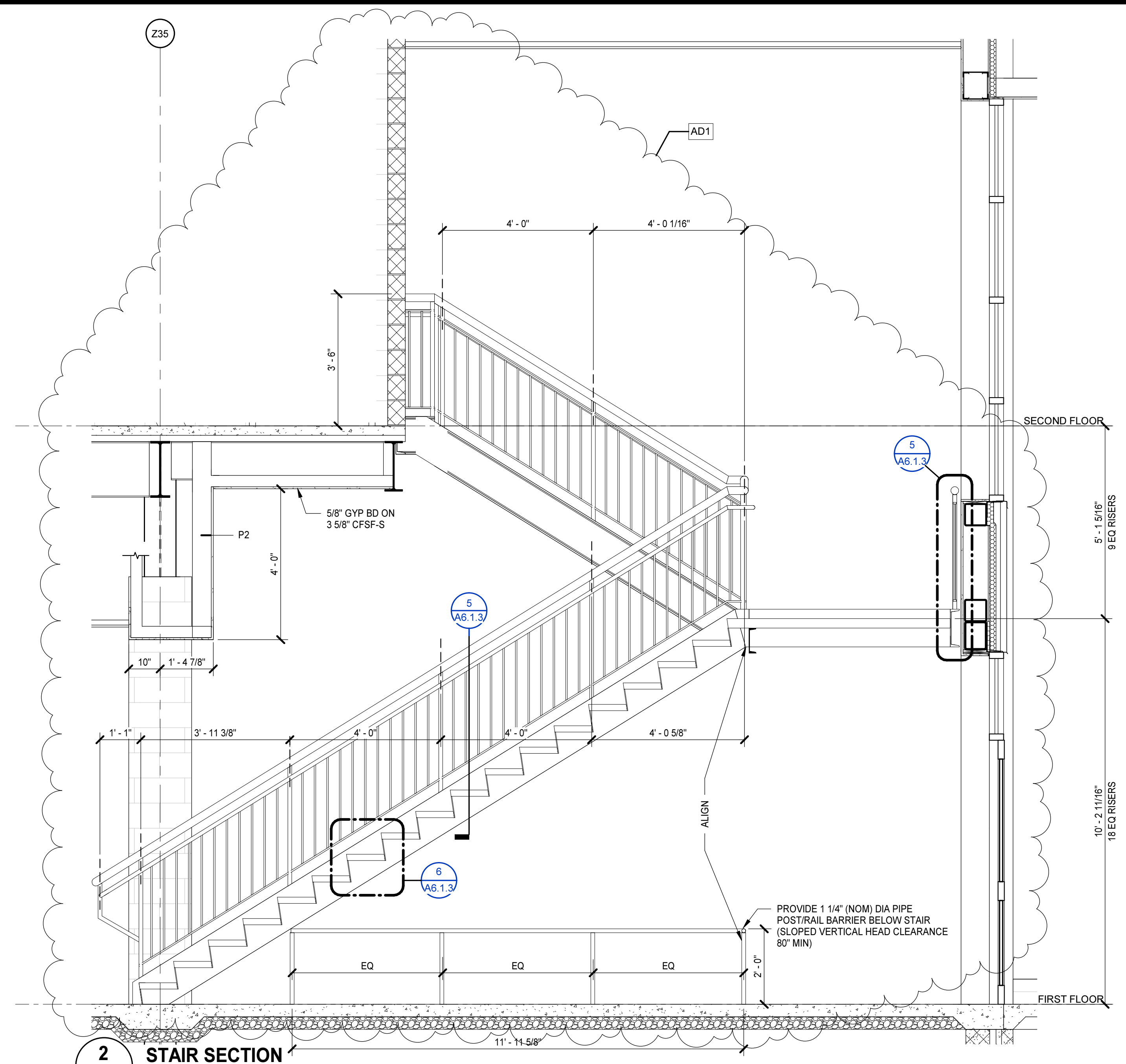
6 LADDER SECTION  
A2.1.17/A6.1.6 1/2" = 1'-0"



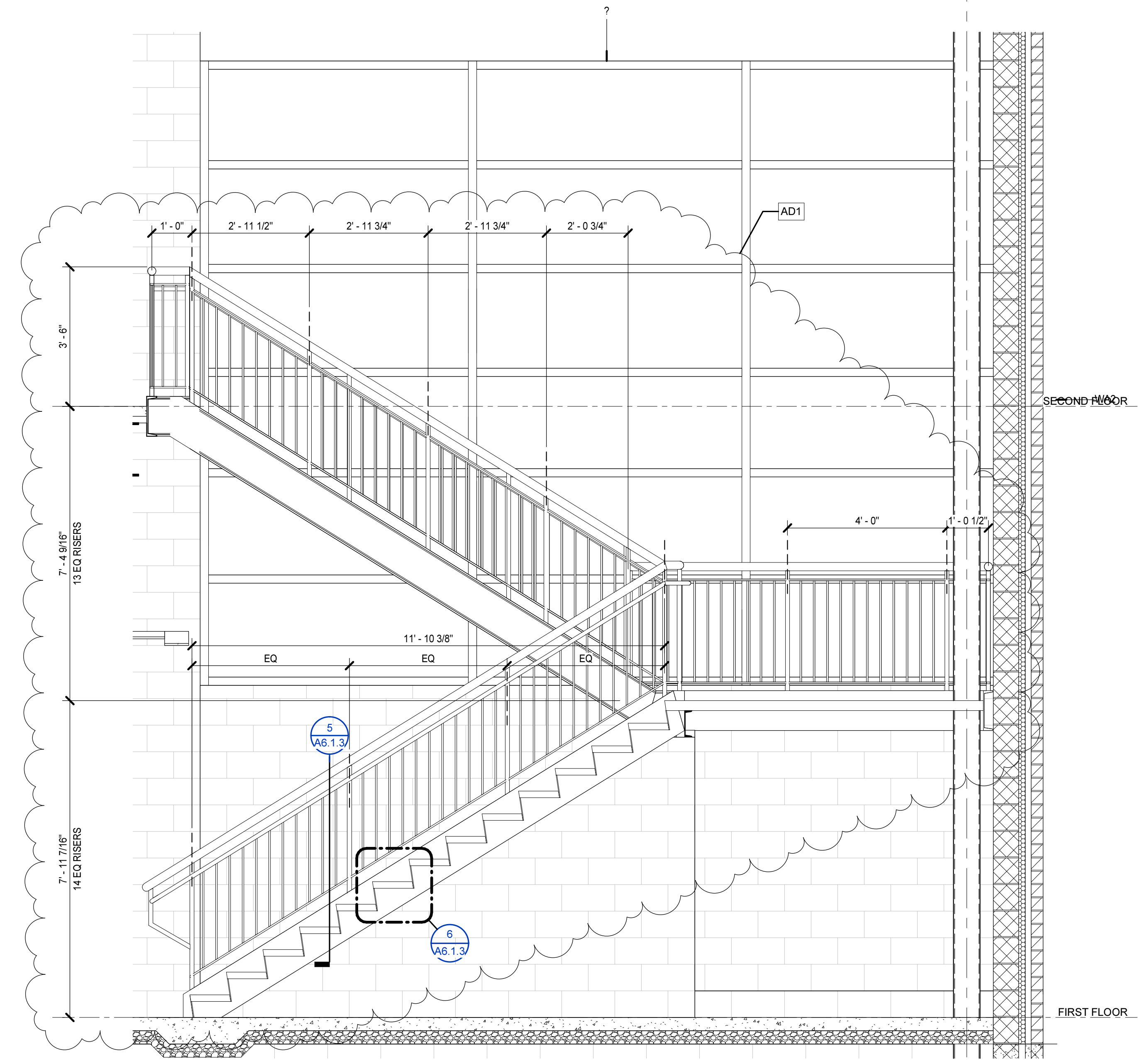
5 LADDER SECTION  
A2.1.17/A6.1.6 1/2" = 1'-0"



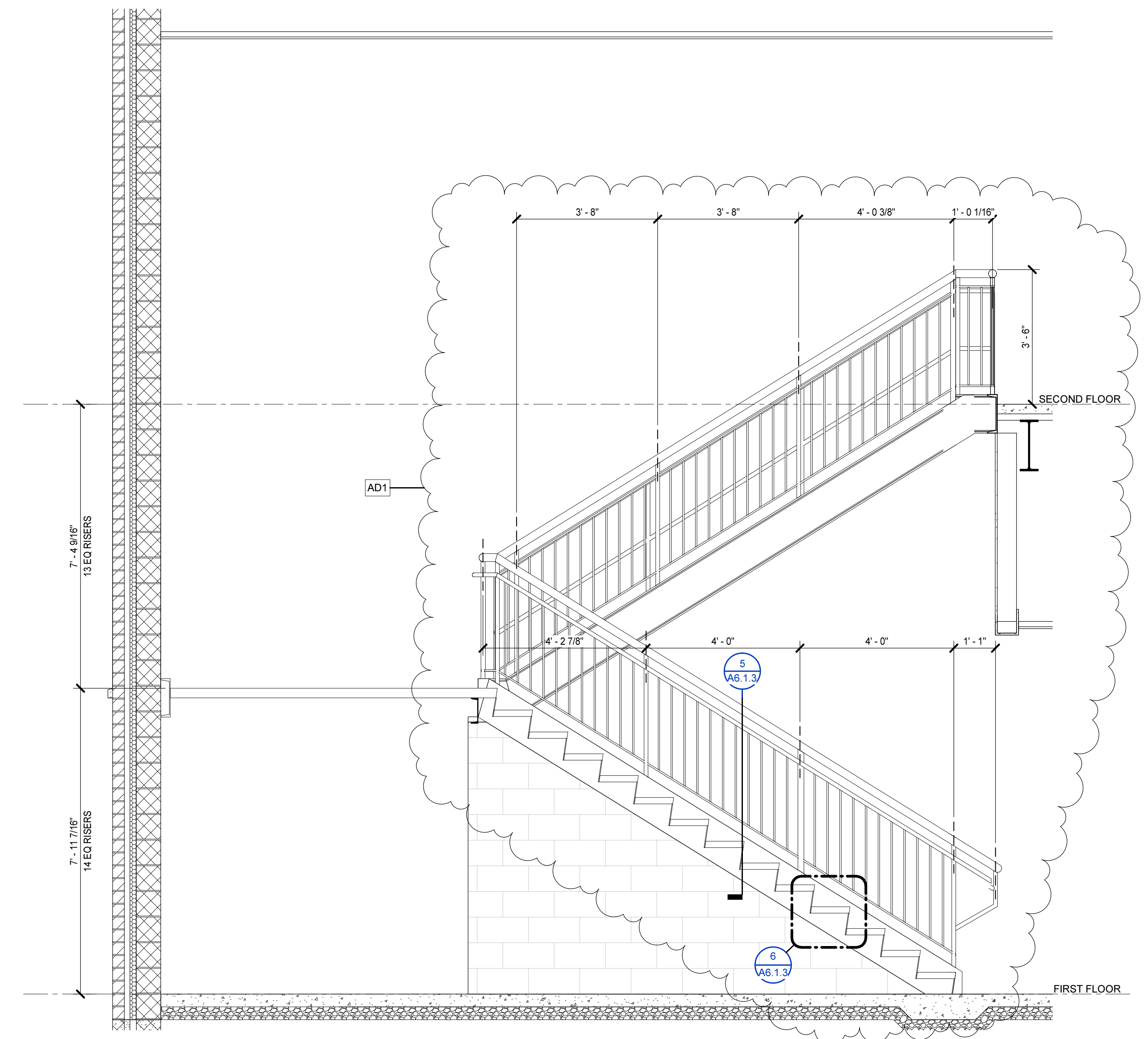
4 LADDER SECTION  
A2.1.9/A6.1.6 1/2" = 1'-0"



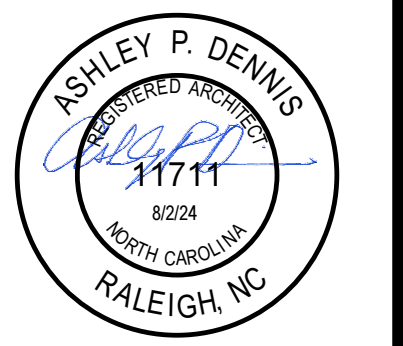
2 STAIR SECTION  
A6.1.2/A6.1.6 1/2" = 1'-0"



3 STAIR SECTION  
A6.1.2/A6.1.6 1/2" = 1'-0"



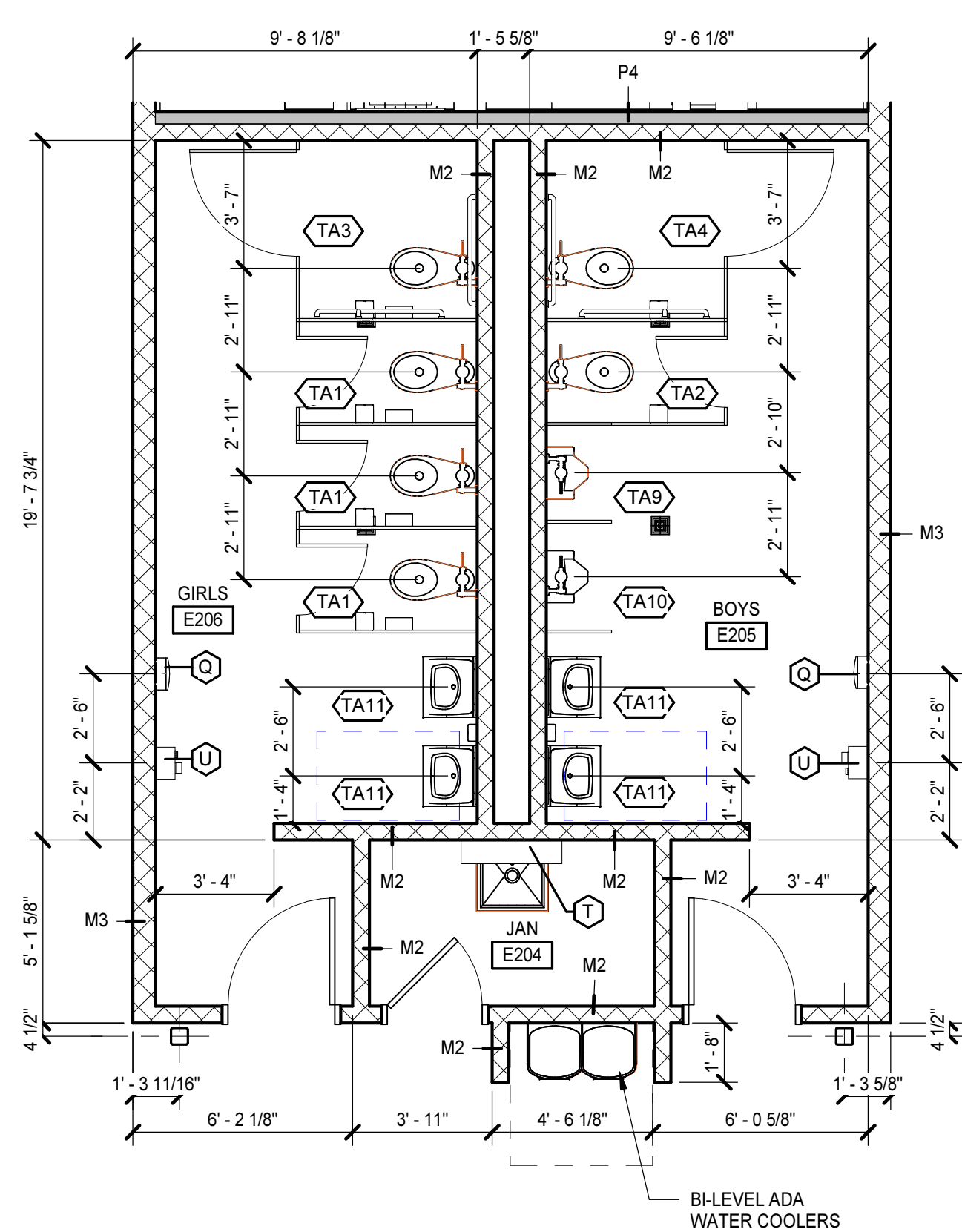
1 STAIR SECTION  
A6.1.2/A6.1.6 1/2" = 1'-0"



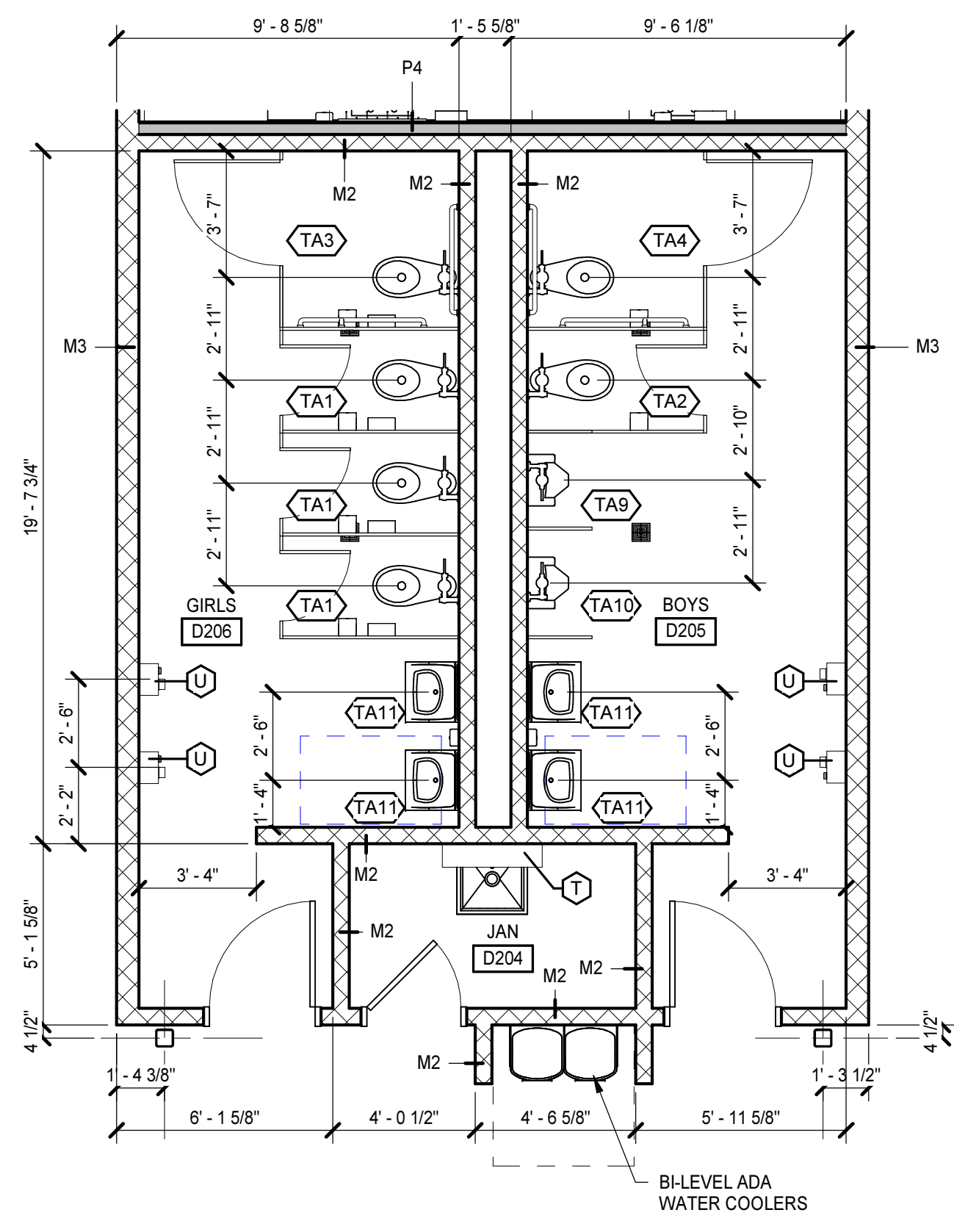
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1



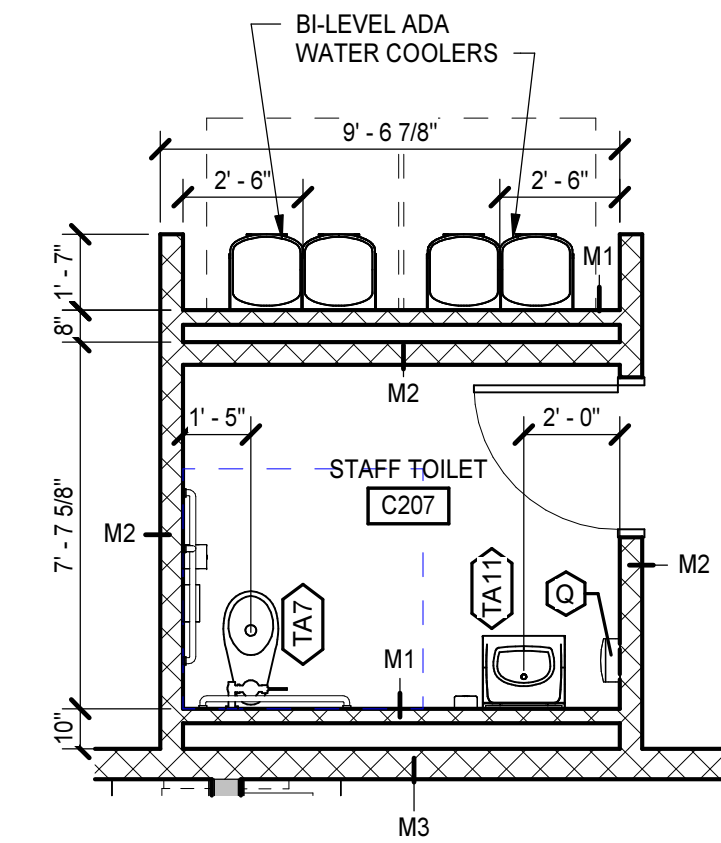
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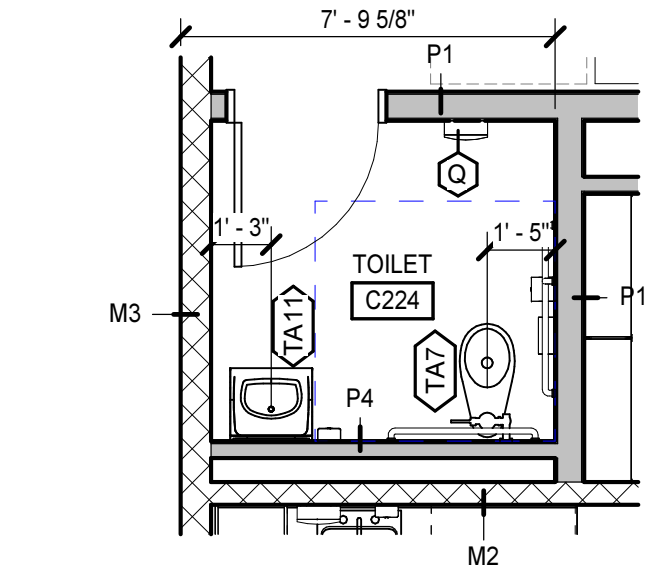
**7 ENLARGED TOILET PLANS**  
A2.1.13|A7.1.3 1/4" = 1'-0"



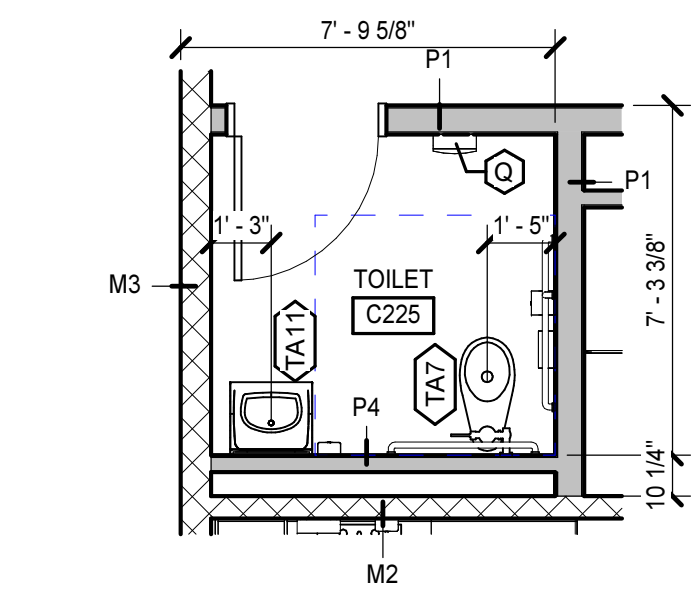
**6 ENLARGED TOILET PLANS**  
A2.1.12|A7.1.3 1/4" = 1'-0"



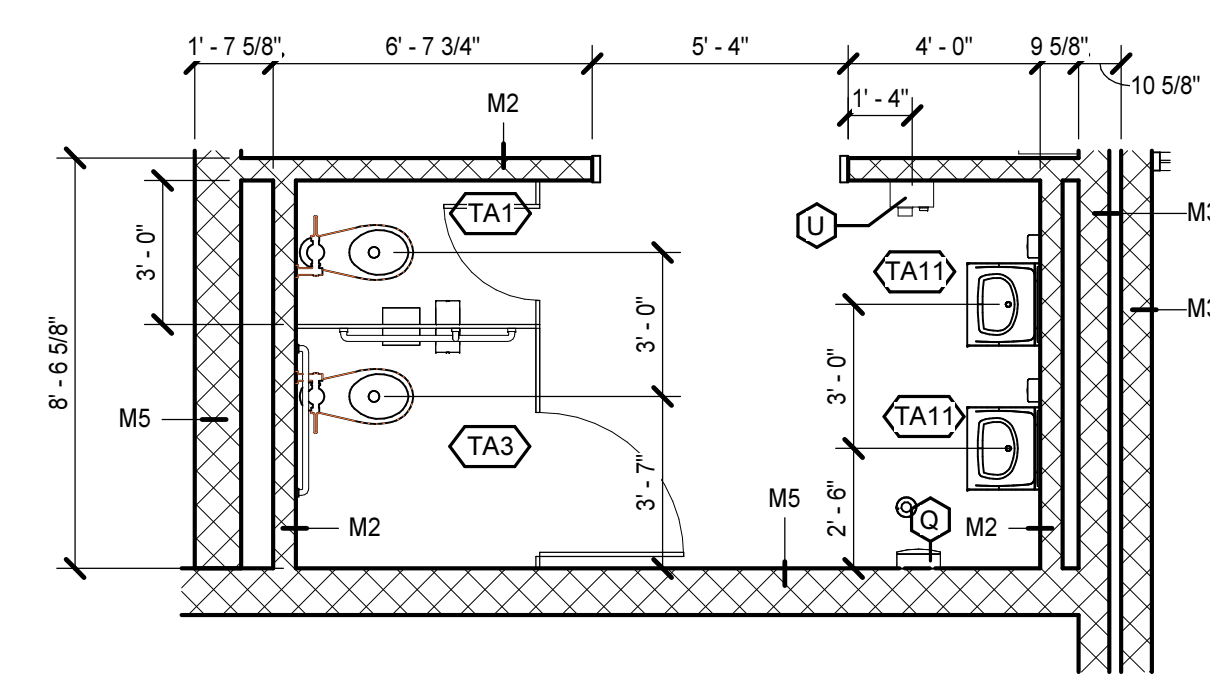
**5 ENLARGED TOILET PLAN**  
A2.1.11|A7.1.3 1/4" = 1'-0"



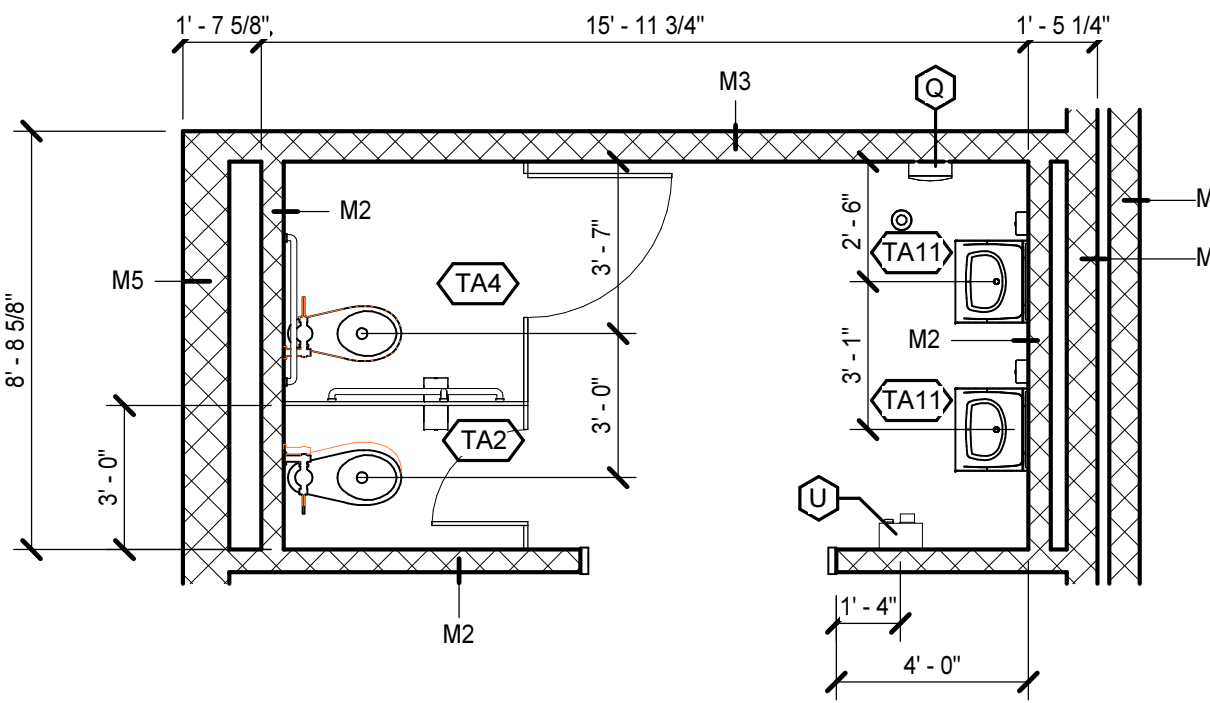
**3 ENLARGED TOILET PLAN**  
A2.1.11|A7.1.3 1/4" = 1'-0"



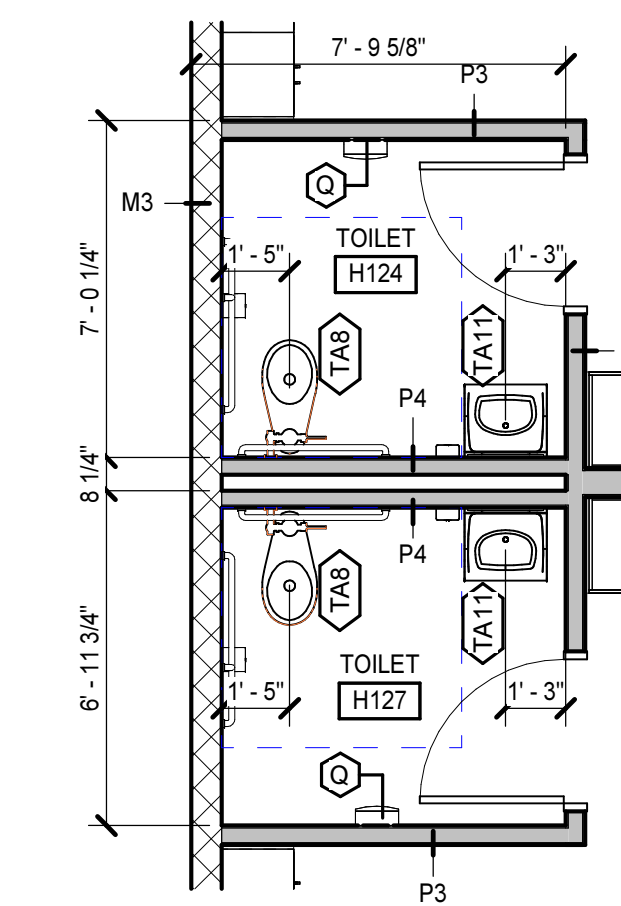
**4 ENLARGED TOILET PLAN**  
A2.1.11|A7.1.3 1/4" = 1'-0"



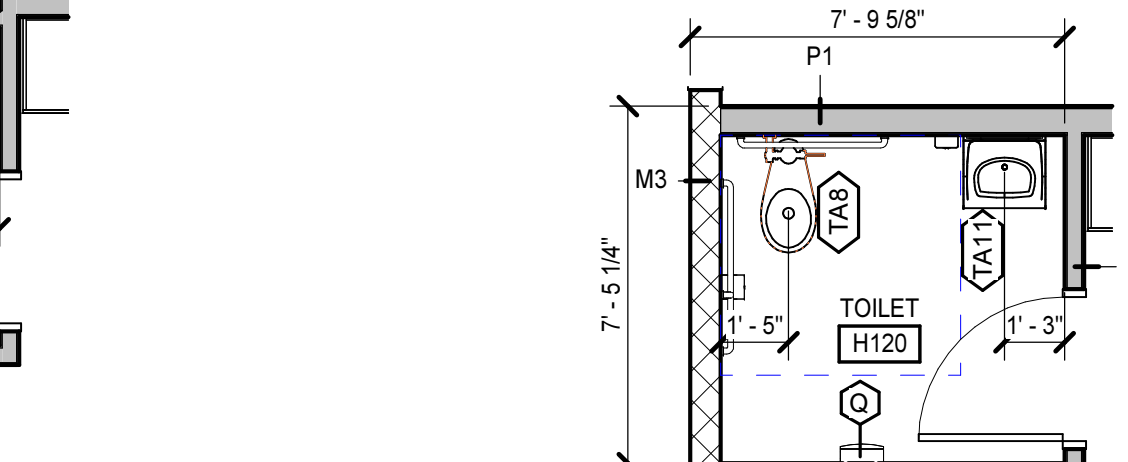
**9 ENLARGED TOILET PLAN**  
A7.1.4|A7.1.3 1/4" = 1'-0"



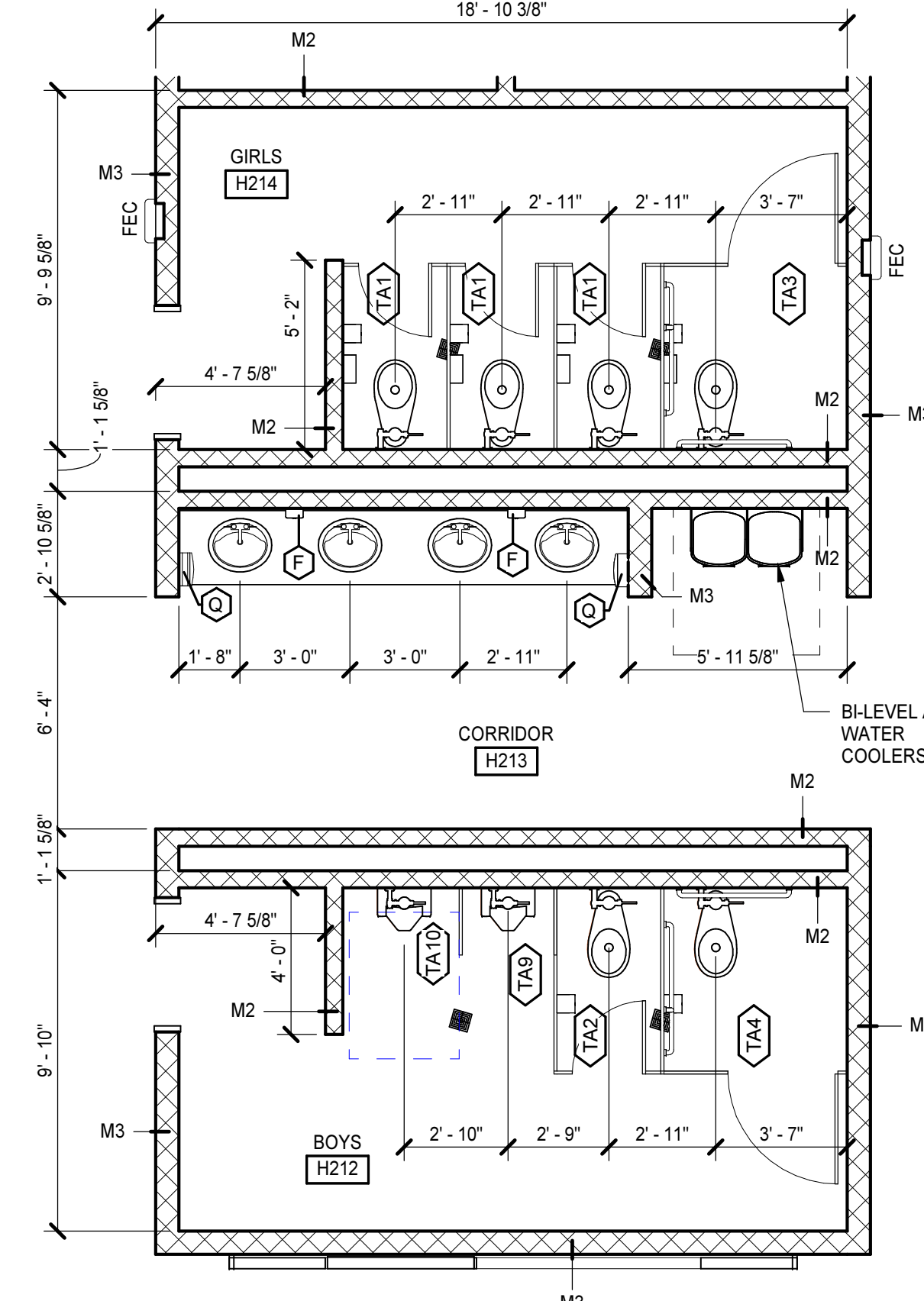
**10 ENLARGED TOILET PLAN**  
A7.1.4|A7.1.3 1/4" = 1'-0"



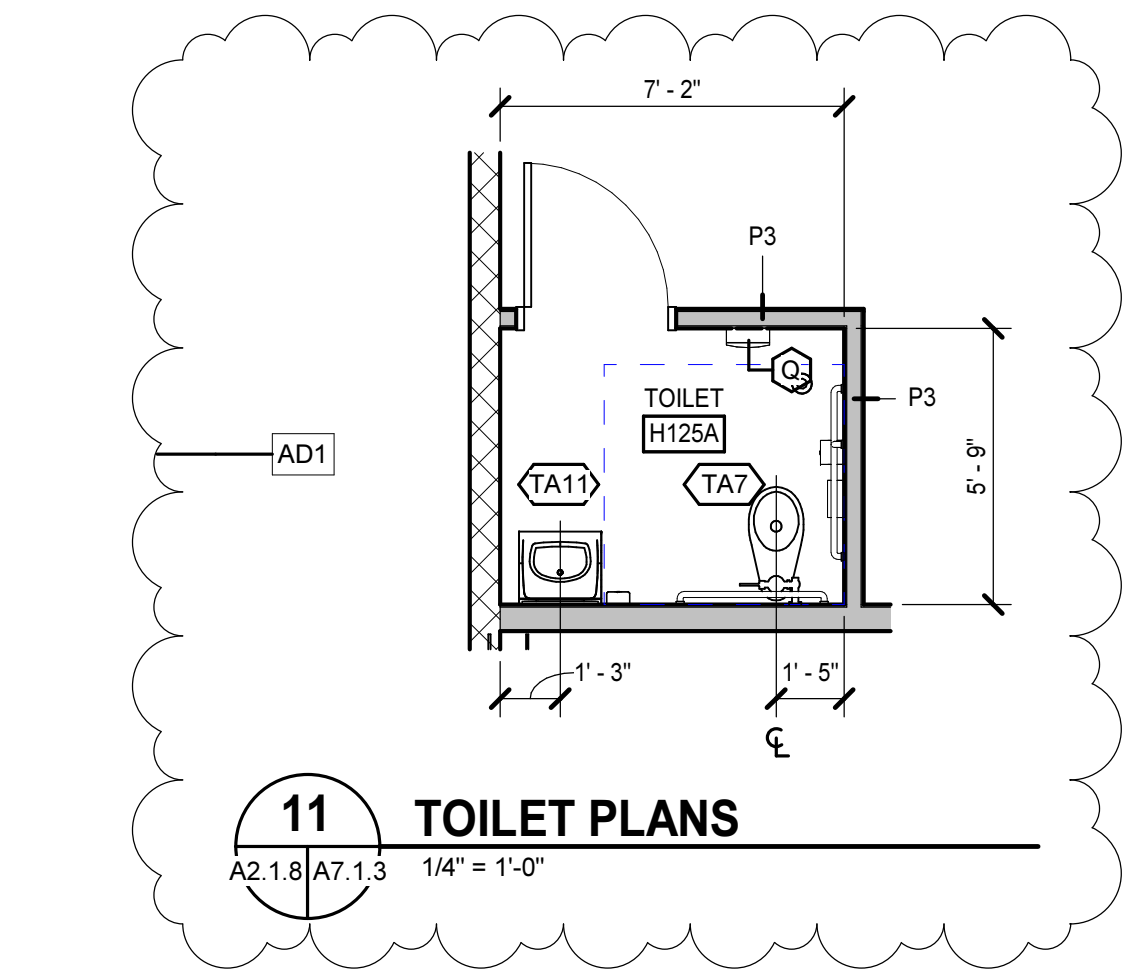
**2 ENLARGED TOILET PLANS**  
A2.1.8|A7.1.3 1/4" = 1'-0"



**1 ENLARGED TOILET PLANS**  
A2.1.8|A7.1.3 1/4" = 1'-0"



**8 ENLARGED TOILET PLANS**  
A2.1.16|A7.1.3 1/4" = 1'-0"



**11 TOILET PLANS**  
A2.1.8|A7.1.3 1/4" = 1'-0"

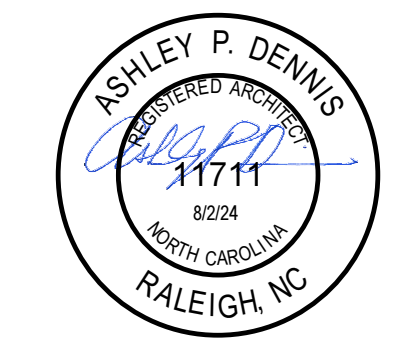
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION

ENLARGED TOILET PLANS

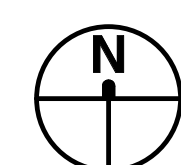
**A7.1.3**

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

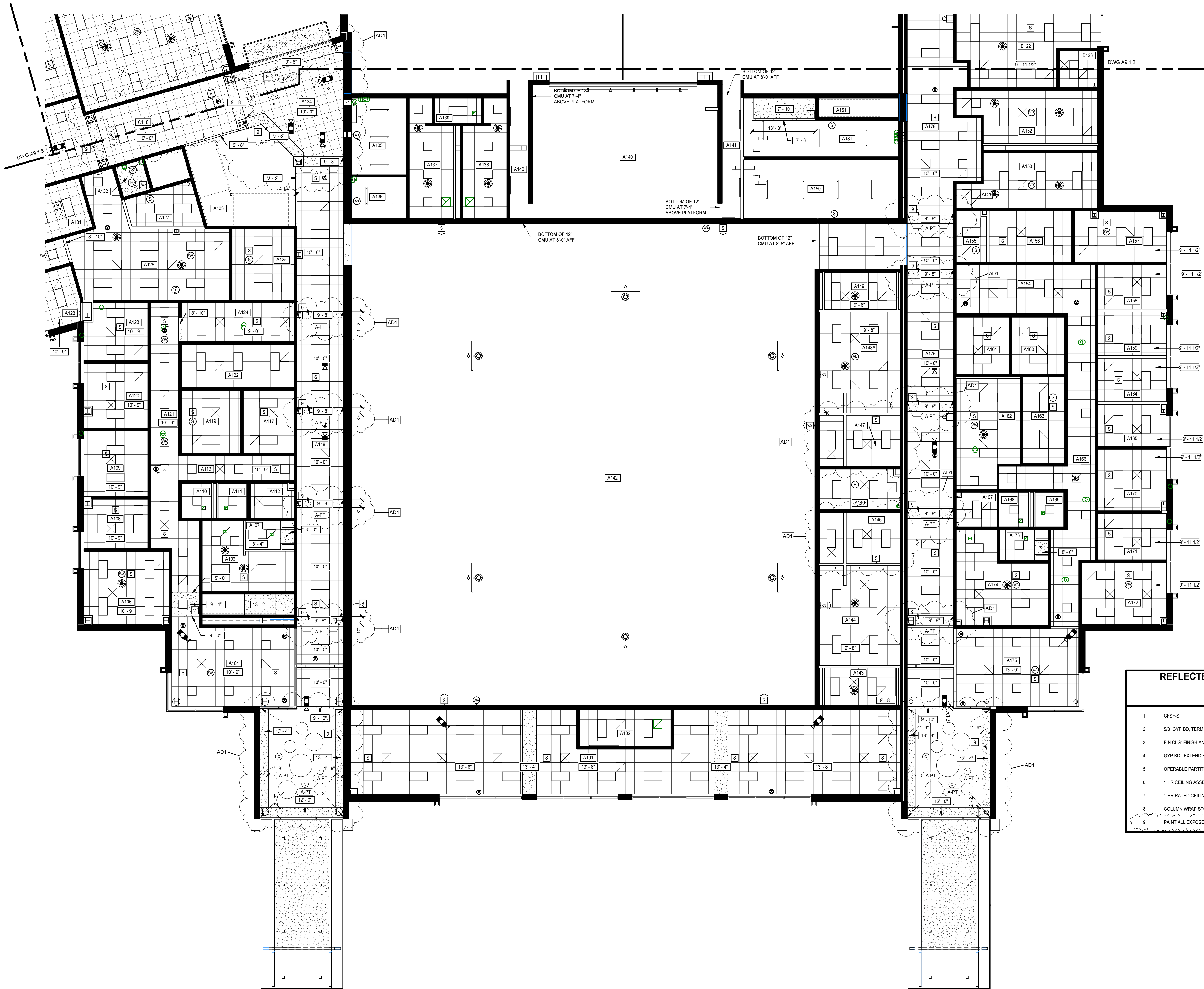
Pender County Schools  
Highway 210, Hampstead, NC 28443







RCP FIRST FLOOR PART A  
1/8" = 1'-0"



REFLECTED CEILING PLAN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A9.1.1 - A9.1.16	
1	CFSP-S
2	5/8" GYP BD, TERMINATE 4" ABV FIN CLG
3	FIN CLG: FINISH AND/OR HEIGHT AFF VARIES
4	GYP BD: EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
5	OPERABLE PARTITION CONT HINGED
6	1 HR CEILING ASSEMBLY - X1
7	1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
8	COLLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
9	PAIN ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED

REFLECTED CEILING  
PLAN FIRST FLOOR  
PART A

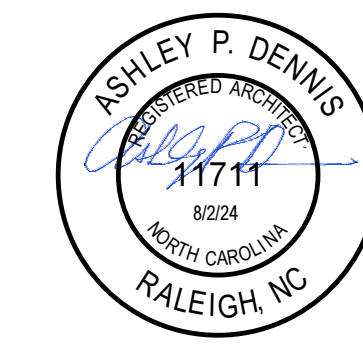
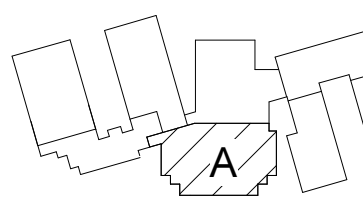
A9.1.1

PENDER COUNTY SCHOOLS K-8 SCHOOL

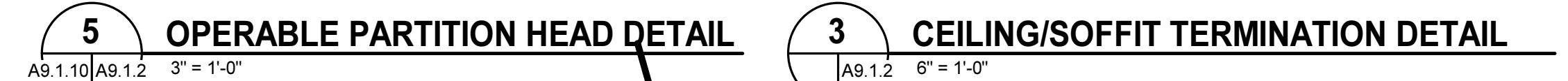
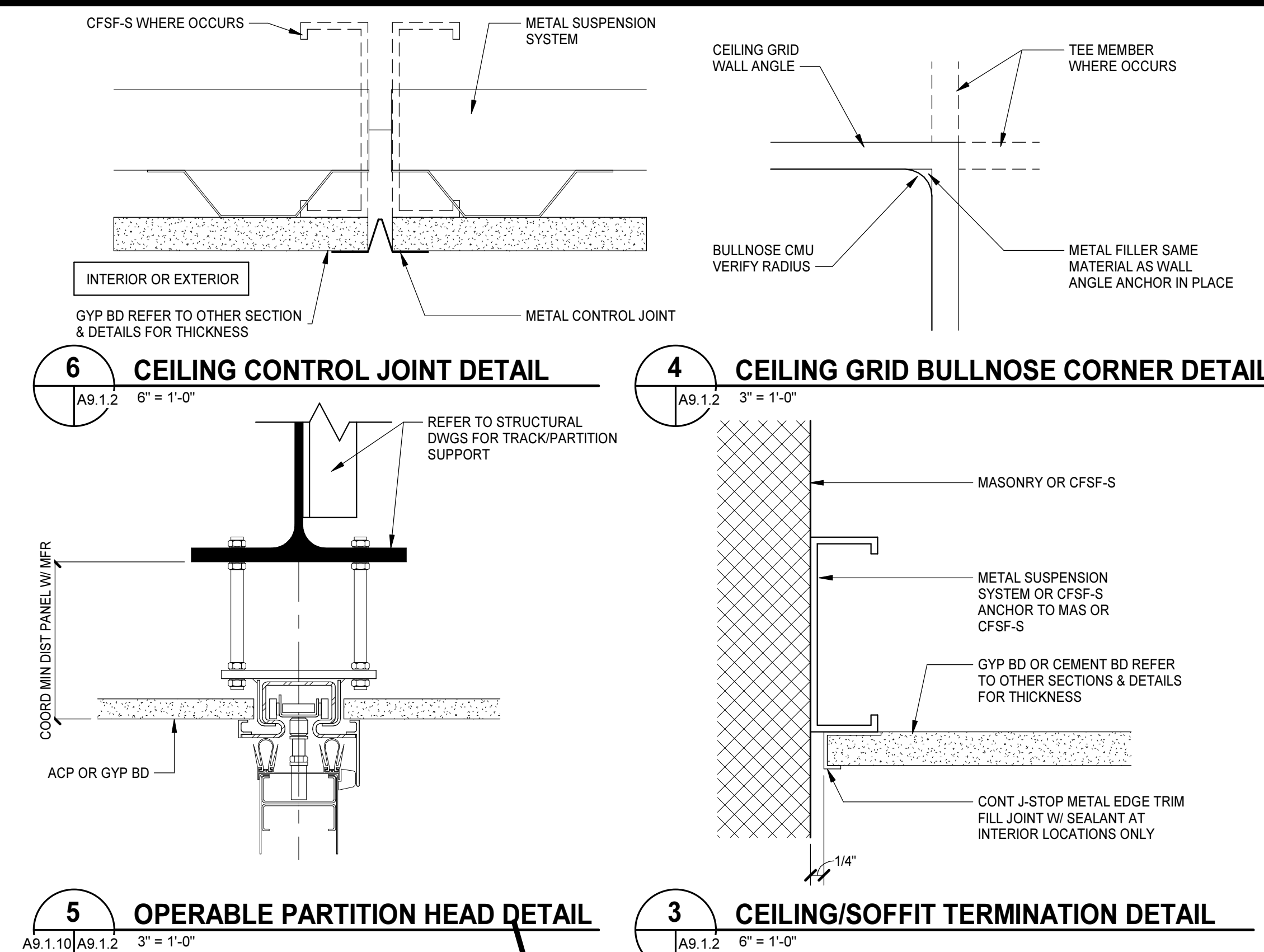
Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

KEY PLAN





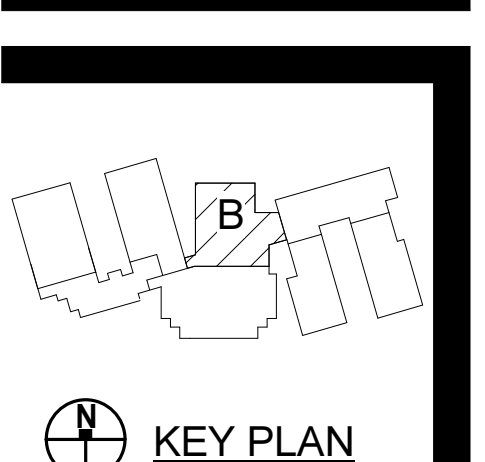
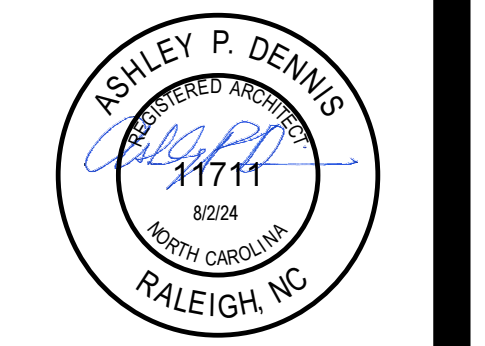
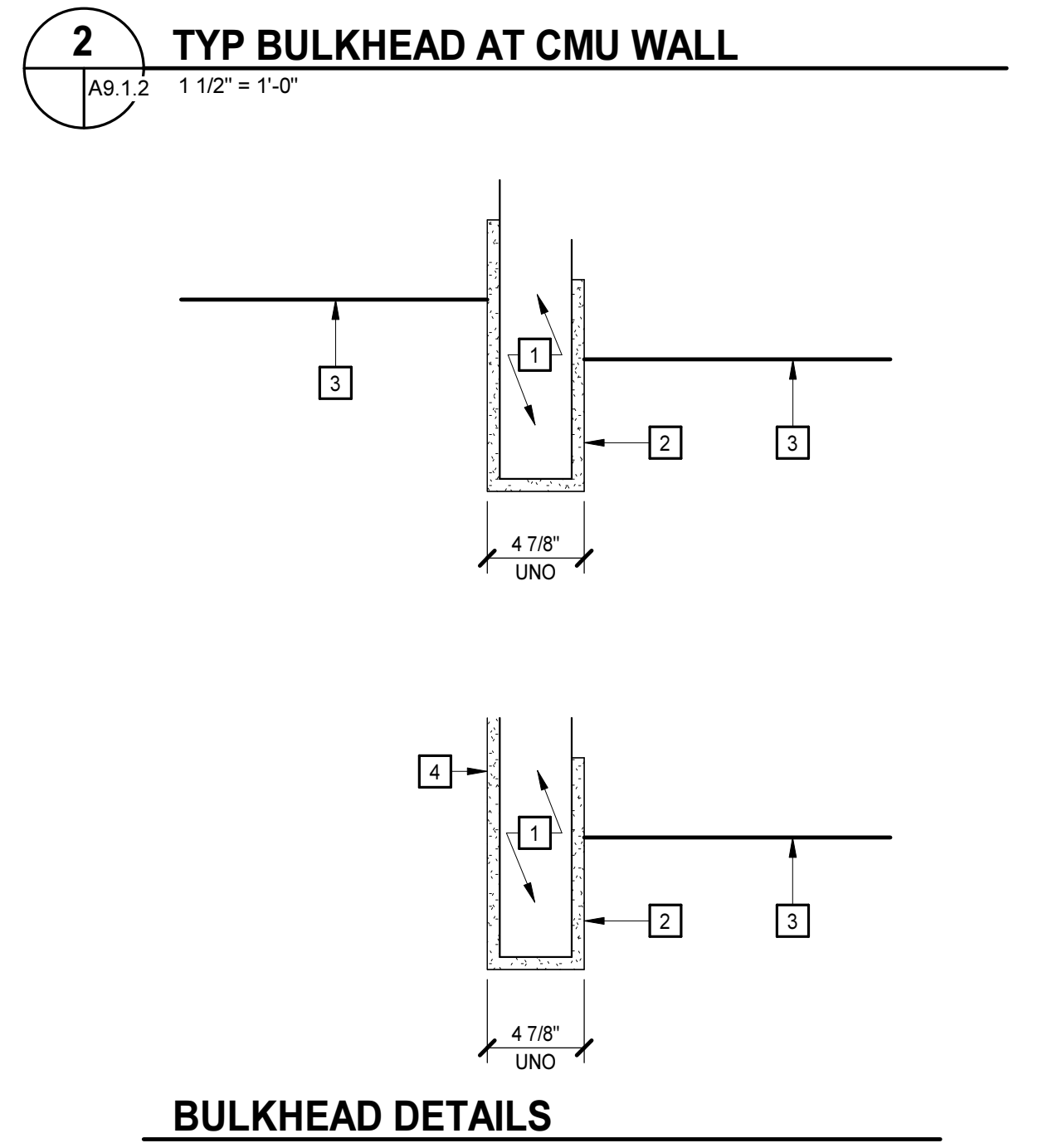
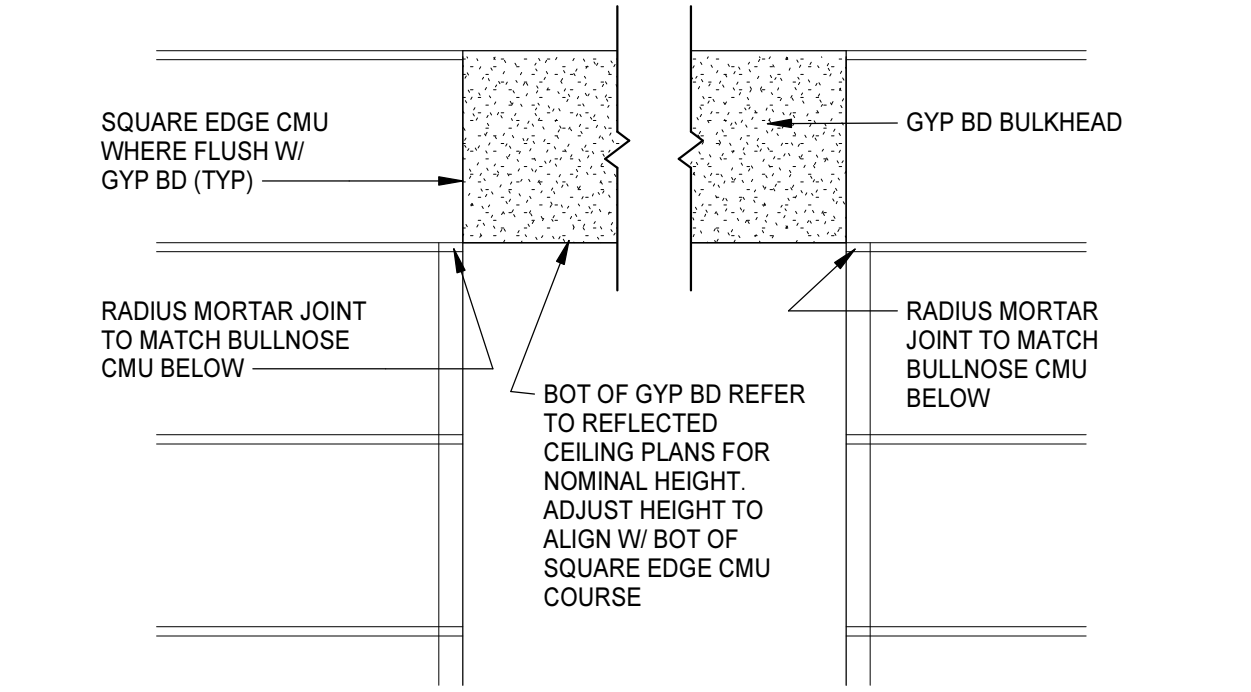


**REFLECTED CEILING PLAN LEGEND**  
APPLIES TO DRAWINGS A9.1.1 - A9.1.15  
REFER TO M, E & FP DRAWINGS FOR REFLECTED CEILING PLAN SYMBOLS NOT INDICATED BELOW

	SPACE NUMBER CEILING HEIGHT, AFF UNO
	INTERIOR APPLICATIONS: GYPSUM BOARD CEILING
	EXTERIOR APPLICATIONS: GYPSUM SOFFIT BOARD OR GYPSUM SHEATHING
	2'-0" x 2'-0" LAY-IN ACOUSTICAL CEILING PANELS IN SUSPENDED GRID
	ACCESS PANEL
	EXTERIOR WALL
	INTERIOR WALL/PARTITION TO UNDERSIDE OF DECK
	INTERIOR WALL/PARTITION TO CAP ABOVE OR TERMINATES ADJACENT TO A RATED HORIZONTAL ASSEMBLY
	INTERIOR WALL/PARTITION 4" MIN ABOVE HIGHEST ADJACENT CEILING IF NECESSARY TO ACHIEVE RESULTS DESIRED. EXTEND WALL HEIGHT SO WALL BRACING IS NOT EXPOSED TO VIEW IN FINISHED SPACES

- REFLECTED CEILING PLAN/DETAIL GENERAL NOTES**
- ALL CEILING HEIGHTS SHALL BE 9'-0" AFF UNLESS INDICATED OTHERWISE.
  - DRAWINGS INDICATE GRID LAYOUT DIAGRAMMATICALLY. REFER TO SPECIFICATIONS FOR SPECIFIC GRID LAYOUT CRITERIA AT PERIMETER CONDITIONS THAT MAY DIFFER FROM GRID LAYOUT INDICATED ON DRAWINGS.
  - CENTER CEILING MOUNTED ITEMS WITHIN CEILING PANELS, UNLESS INDICATED OTHERWISE.
  - IF ADDITIONAL SPRINKLER HEADS ARE REQUIRED TO SATISFY CODE OR COVERAGE DENSITIES (OTHER THAN THOSE THAT MAY BE INDICATED), PROVIDE ADDITIONAL SPRINKLER HEADS AT NO ADDITIONAL COST AND OBTAIN APPROVAL OF ARCHITECT FOR LOCATION OF SUCH HEADS, IF ANY.

- REFLECTED CEILING PLAN KEYNOTES**  
REPRESENTED BY [n]  
APPLIES TO DRAWINGS A9.1.1 - A9.1.16
- CFSF-S
  - 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
  - FIN CLG: FINISH AND/OR HEIGHT AFF VARIES
  - GYP BD: EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
  - OPERABLE PARTITION CONT HINGED
  - 1 HR CEILING ASSEMBLY - X1
  - 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
  - COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
  - PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED



PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1



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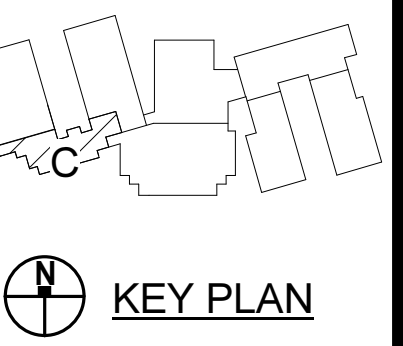
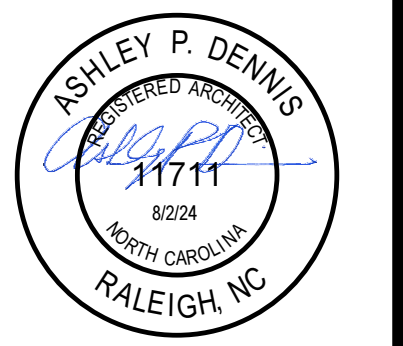
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REFLECTED CEILING PLAN KEYNOTES	
REPRESENTED BY [ n ]	
APPLIES TO DRAWINGS A9.1.1 - A9.1.16	
1	CFSF-S
2	5/8" GYP BD, TERMINATE 4" ABV FIN CLG
3	FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
4	GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
5	OPERABLE PARTITION CONT HINGED
6	1 HR CEILING ASSEMBLY - X1
7	1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
8	COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
9	PAINTE ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED



**RCP FIRST FLOOR PART C**  
1/8" = 1'-0"

**MOSELEY ARCHITECTS**



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

REFLECTED CEILING  
PLAN FIRST FLOOR  
PART C

**A9.1.3**

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DWG A9.1.3



**RCP FIRST FLOOR PART D**  
1/8" = 1'-0"

**REFLECTED CEILING PLAN KEYNOTES**

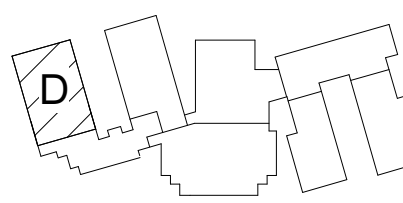
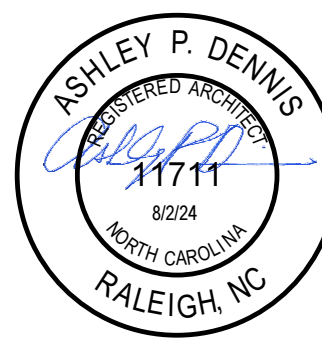
REPRESENTED BY [ n ]  
APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED

AD1

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**PENDER COUNTY SCHOOLS K-8 SCHOOL**

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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

REFLECTED CEILING  
PLAN FIRST PART D

**A9.1.4**



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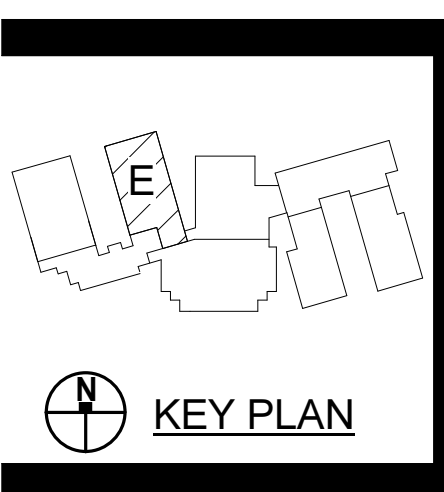


**RCP FIRST FLOOR PART E**  
1/8" = 1'-0"

**REFLECTED CEILING PLAN KEYNOTES**  
REPRESENTED BY [n]  
APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG: FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD: EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED AD1

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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

REFLECTED CEILING  
PLAN FIRST FLOOR  
PART E

**A9.1.5**

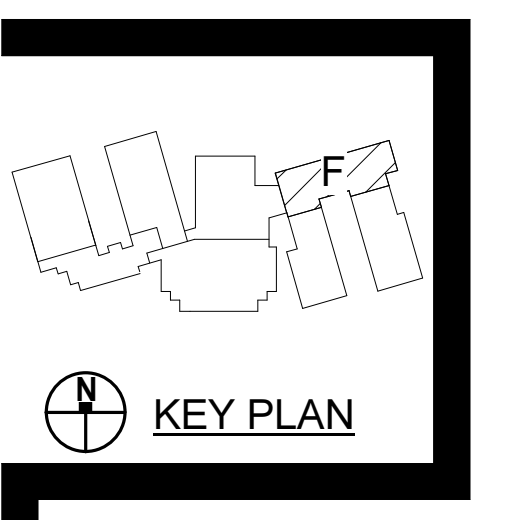
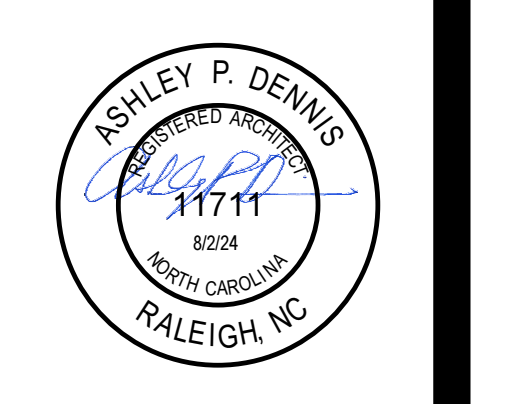


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REFLECTED CEILING PLAN KEYNOTES	
REPRESENTED BY [Symbol]	
APPLIES TO DRAWINGS A9.1.1 - A9.1.16	
1	CFSF-S
2	5/8" GYP BD, TERMINATE 4" ABV FIN CLG
3	FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
4	GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
5	OPERABLE PARTITION CONT HINGED
6	1 HR CEILING ASSEMBLY - X1
7	1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
8	COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
9	PAINTE ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED [Symbol]

**RCP FIRST FLOOR PART F**  
1/8" = 1'-0"

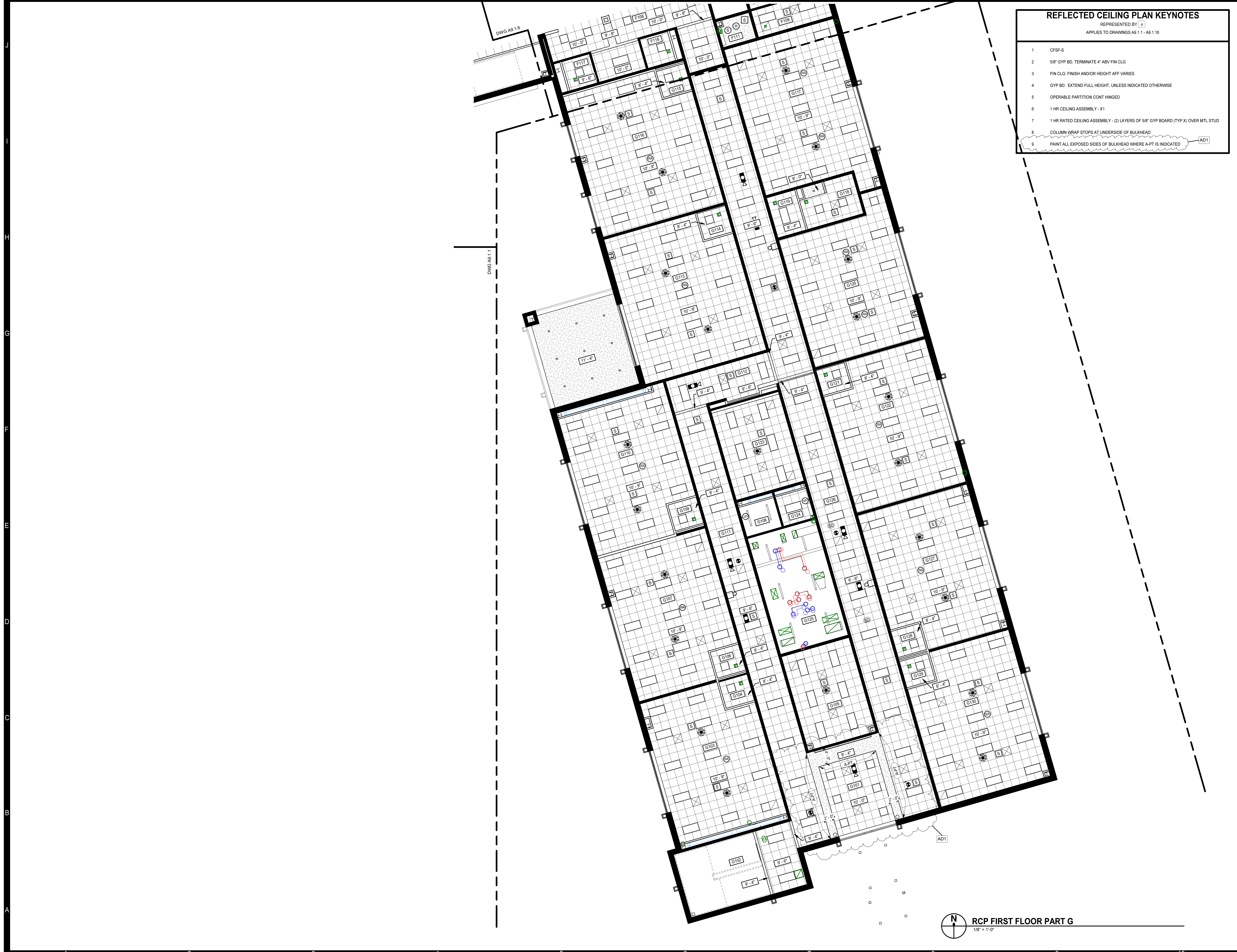


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

REFLECTED CEILING  
PLAN FIRST FLOOR  
PART F



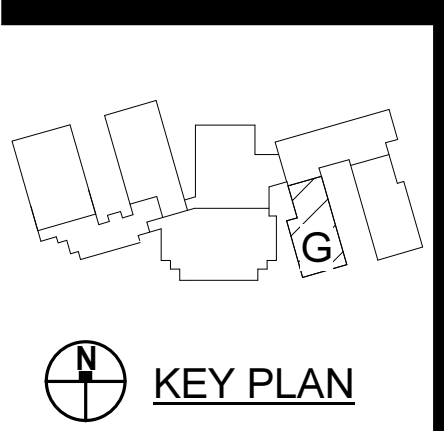
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**REFLECTED CEILING PLAN KEYNOTES**  
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 APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED

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 Pender County Schools  
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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

**RCP FIRST FLOOR PART G**  
 1/8" = 1'-0"

REFLECTED CEILING  
 PLAN FIRST FLOOR  
 PART G

**A9.1.7**



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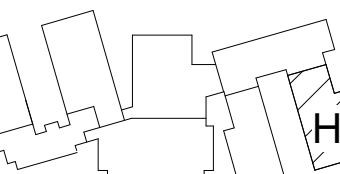
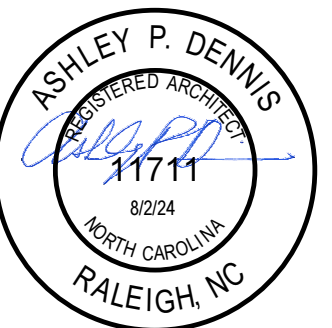


**REFLECTED CEILING PLAN KEYNOTES**  
 REPRESENTED BY [ n ]  
 APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
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- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED

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Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

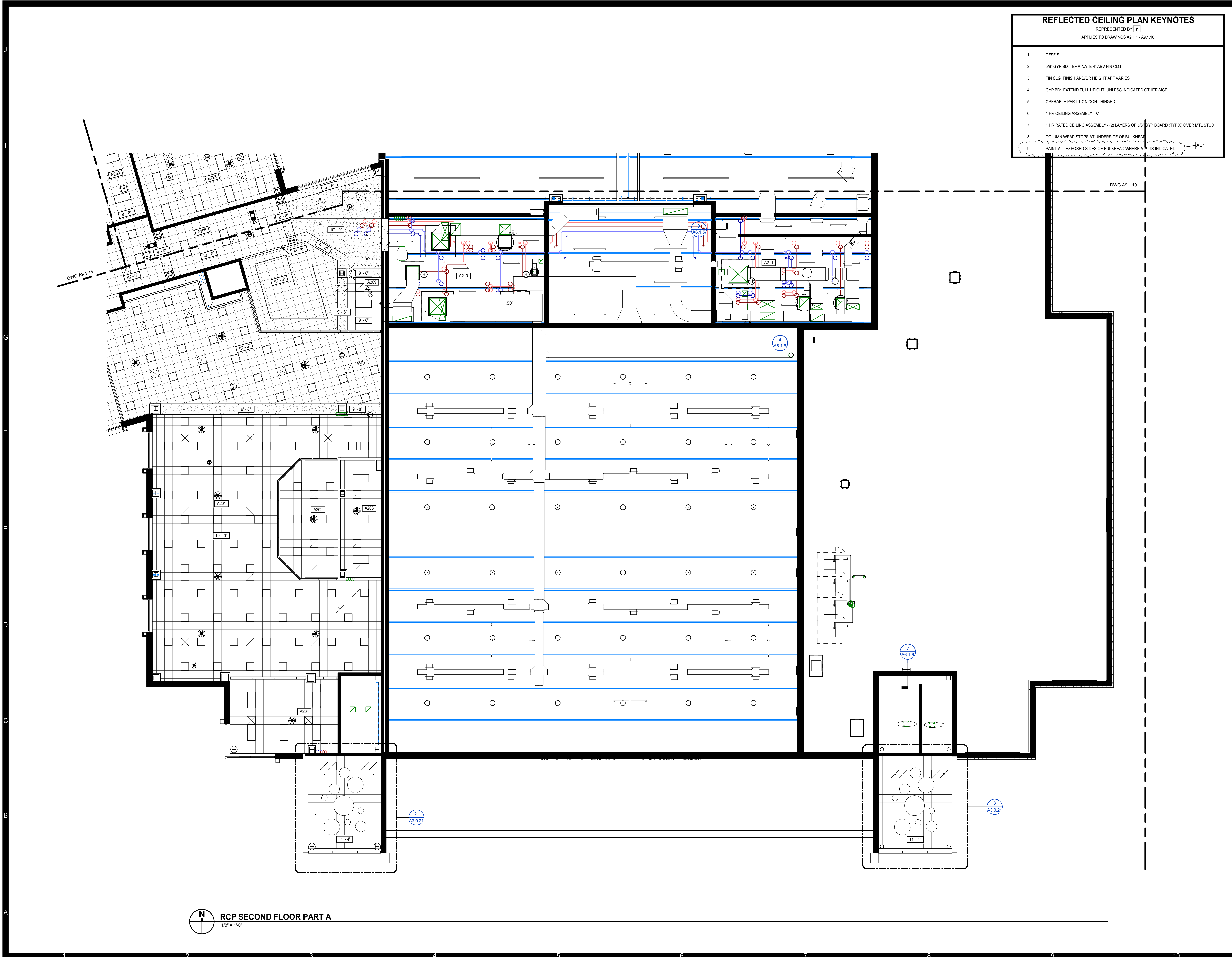
**RCP FIRST FLOOR PART H**  
 1/8" = 1'-0"

REFLECTED CEILING  
 PLAN FIRST FLOOR  
 PART H

**A9.1.8**



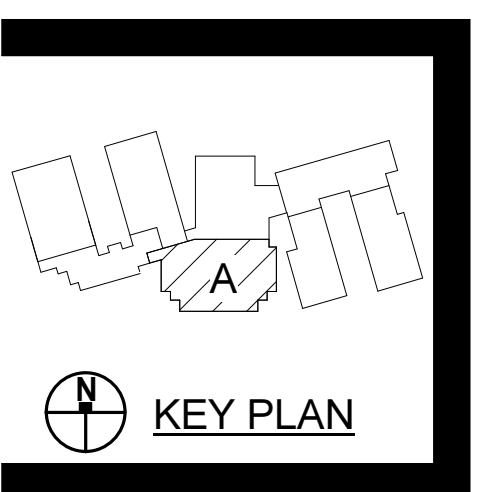
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**REFLECTED CEILING PLAN KEYNOTES**  
 REPRESENTED BY [n]  
 APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE APPT IS INDICATED

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 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

**RCP SECOND FLOOR PART A**  
 1/8" = 1'-0"

**REFLECTED CEILING  
 PLAN SECOND FLOOR  
 PART A**

**A9.1.9**

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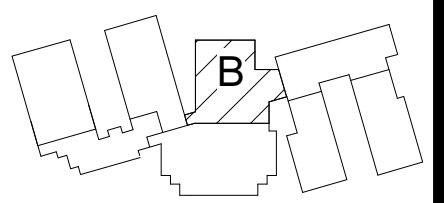
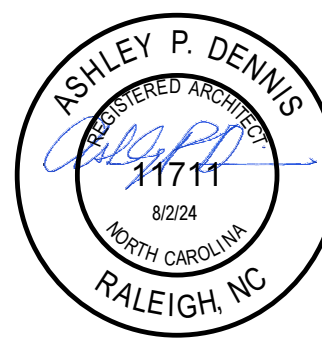
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REPRESENTED BY [n]  
APPLIES TO DRAWINGS A9.1.1 - A9.1.16

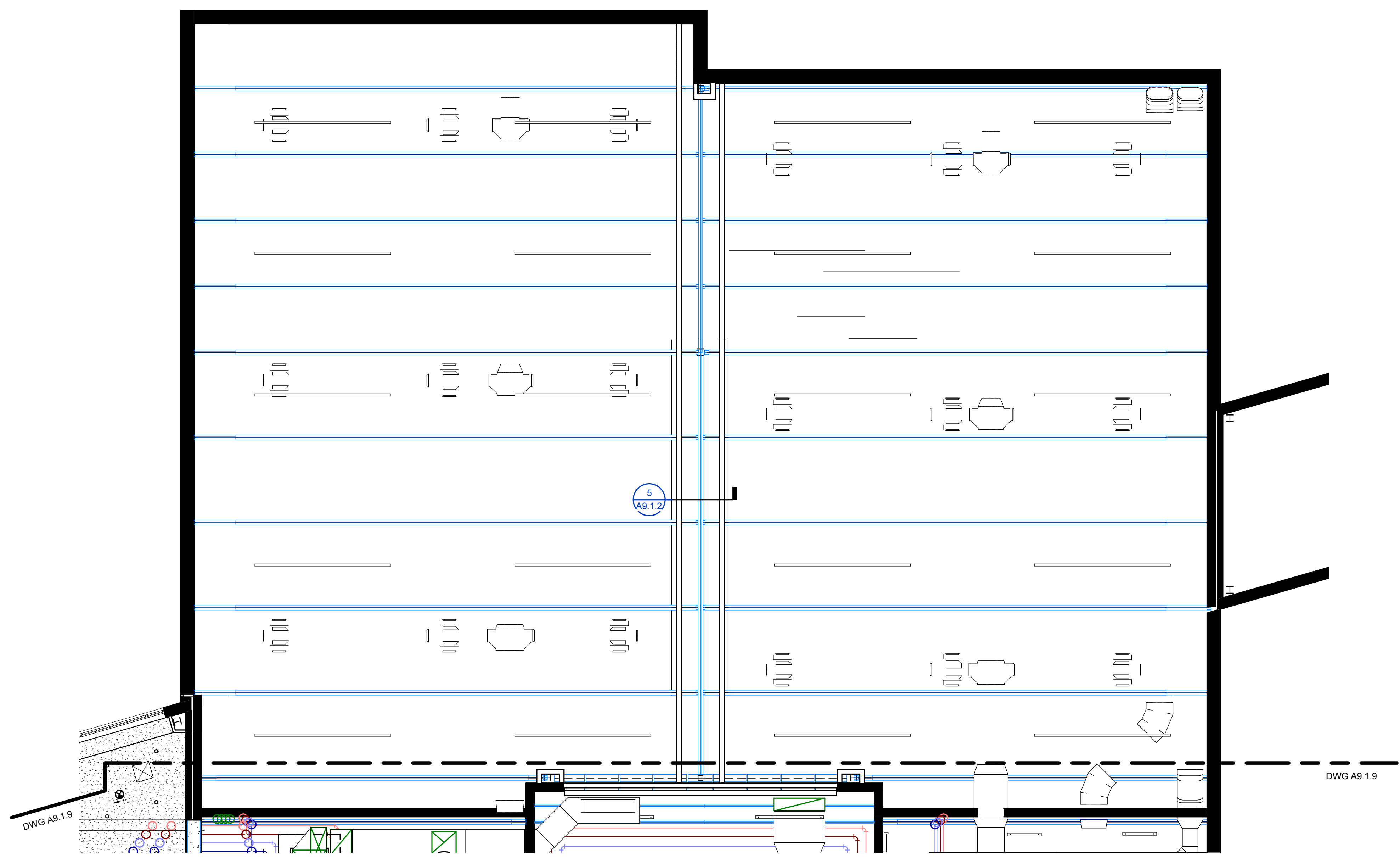
- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED

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KEY PLAN



**RCP SECOND FLOOR PART B**  
1/8" = 1'-0"

## PENDER COUNTY SCHOOLS K-8 SCHOOL

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

REFLECTED CEILING  
PLAN SECOND FLOOR  
PART B

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### REFLECTED CEILING PLAN KEYNOTES

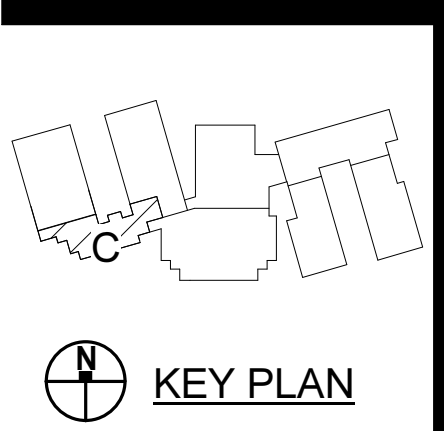
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APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED [AD1]



 **RCP SECOND FLOOR PART C**  
1/8" = 1'-0"

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Pender County Schools  
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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

REFLECTED CEILING  
PLAN SECOND FLOOR  
PART C

**A9.1.11**



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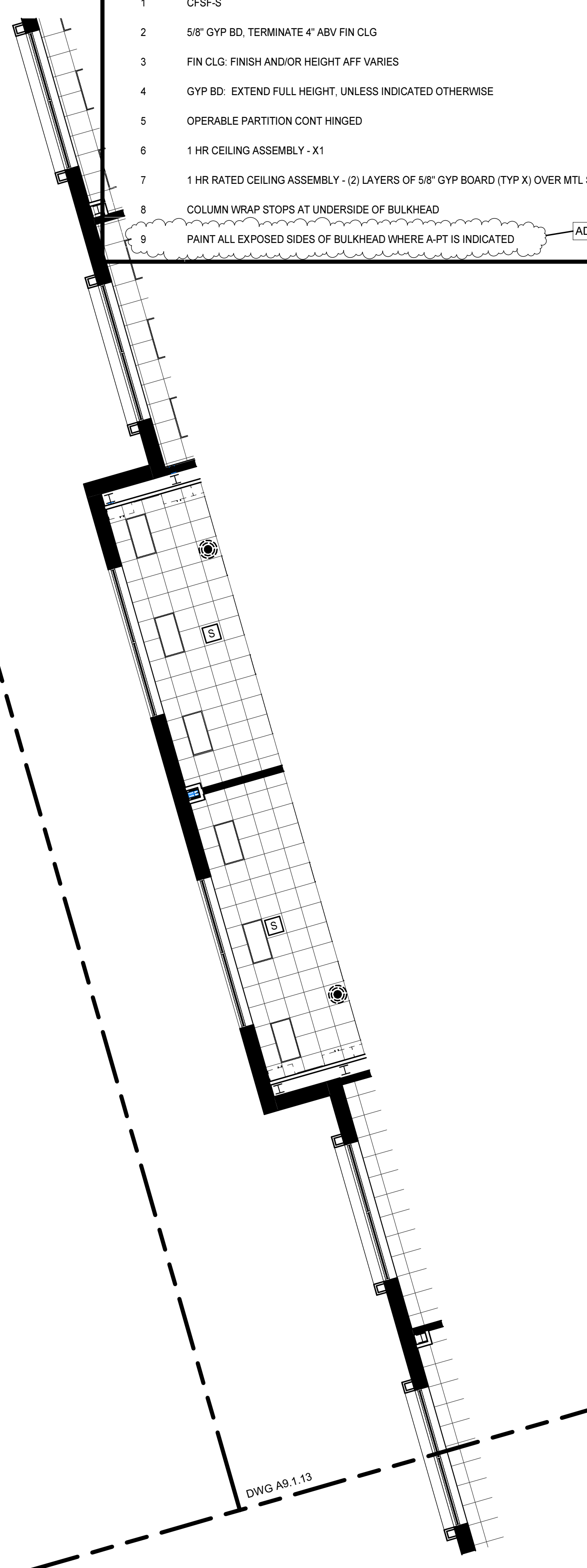
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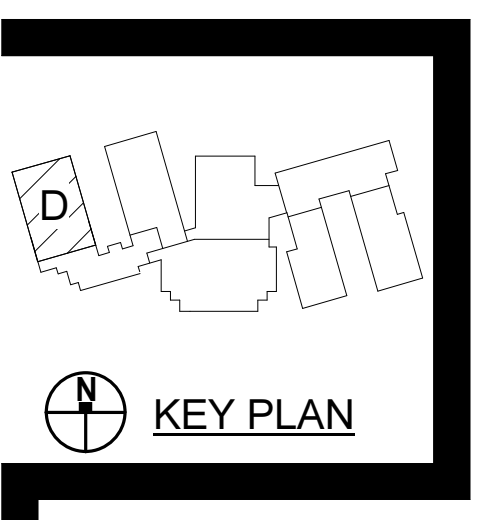
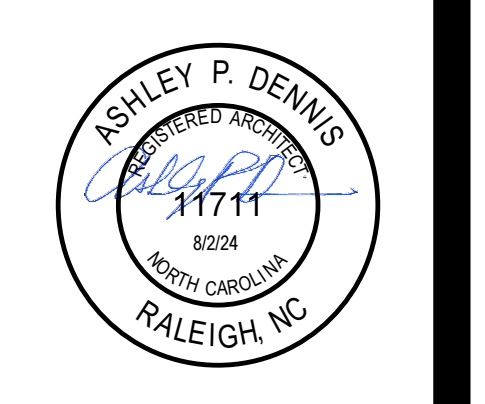


**REFLECTED CEILING PLAN KEYNOTES**  
 REPRESENTED BY [ n ]  
 APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
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- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED



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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

REFLECTED CEILING  
 PLAN SECOND FLOOR  
 PART D

**A9.1.12**

**RCP SECOND FLOOR PART D**  
 1/8" = 1'-0"



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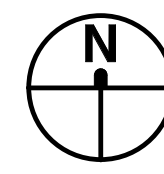
J  
H  
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F  
E  
D  
C  
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A

1 2 3 4 5 6 7 8 9 10



DWG A9.1.11

DWG A9.1.9



RCP SECOND FLOOR PART E  
1/8" = 1'-0"

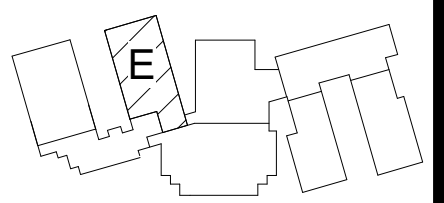
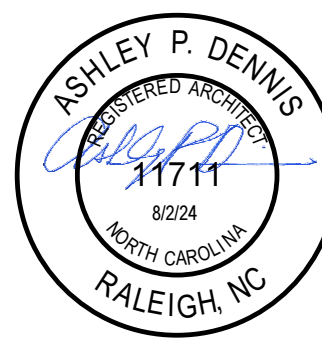
**REFLECTED CEILING PLAN KEYNOTES**

REPRESENTED BY [n]  
APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED

**MOSELEYARCHITECTS**

911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA, 27603  
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KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

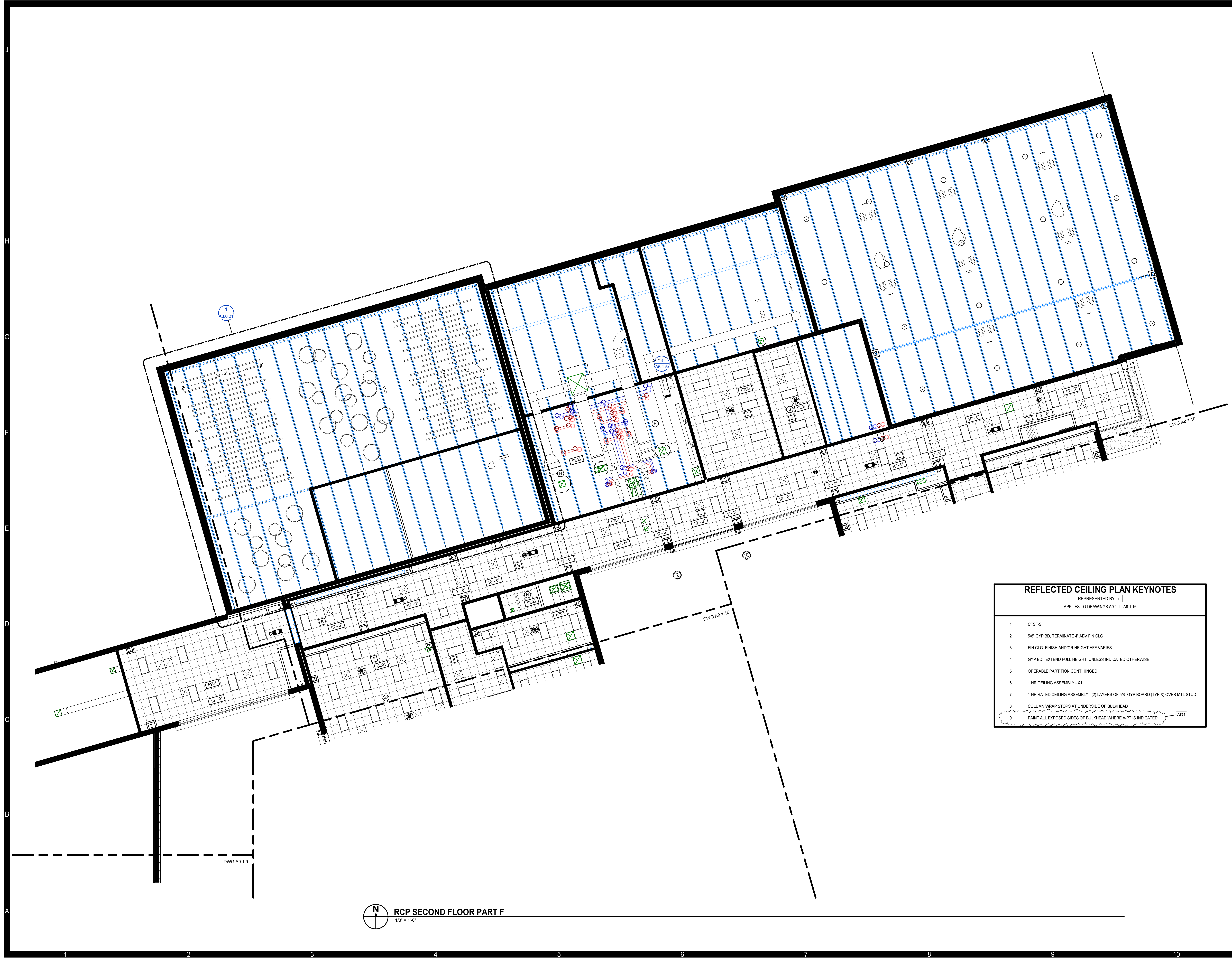
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

REFLECTED CEILING  
PLAN SECOND FLOOR  
PART E

**A9.1.13**



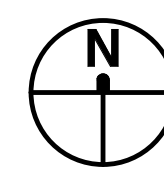
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DWG A9.1.9

DWG A9.1.15

DWG A9.1.16



RCP SECOND FLOOR PART F

1/8" = 1'-0"

**REFLECTED CEILING PLAN KEYNOTES**

REPRESENTED BY [n]  
APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFS-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED

AD1

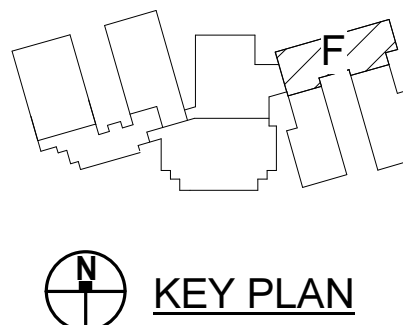
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

REFLECTED CEILING  
PLAN SECOND FLOOR  
PART F

**A9.1.14**

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443



KEY PLAN

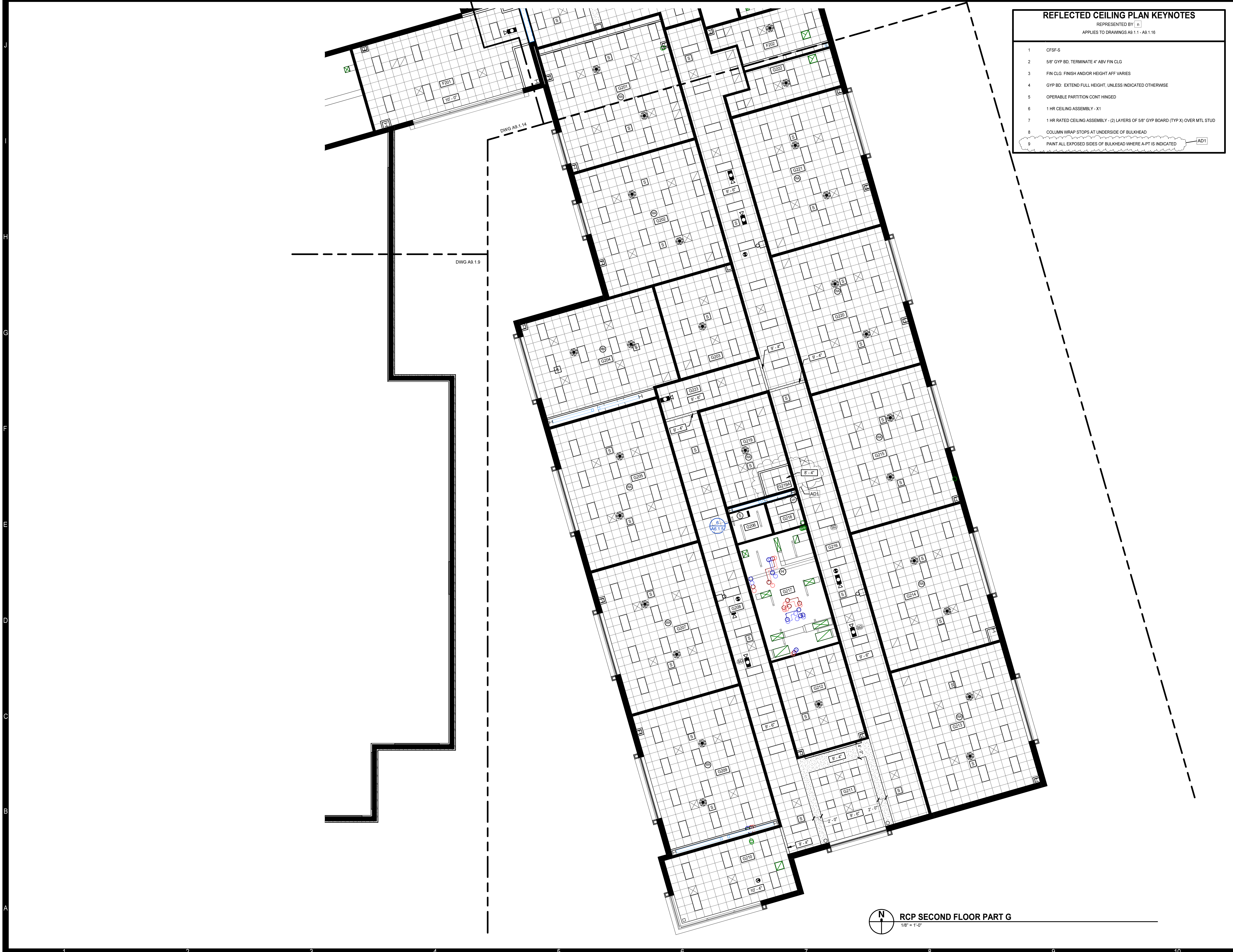


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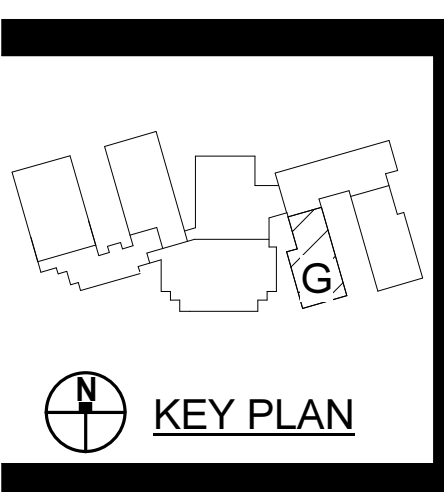
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**REFLECTED CEILING PLAN KEYNOTES**  
 REPRESENTED BY [Symbol]  
 APPLIES TO DRAWINGS A9.1.1 - A9.1.16

- 1 CFSF-S
- 2 5/8" GYP BD, TERMINATE 4" ABV FIN CLG
- 3 FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
- 4 GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
- 5 OPERABLE PARTITION CONT HINGED
- 6 1 HR CEILING ASSEMBLY - X1
- 7 1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
- 8 COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
- 9 PAINT ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED AD1

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**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO: 631310  
 DATE: AUGUST 2, 2024

DATE	REVISIONS	DESCRIPTION
8/16/24	AD1	

**RCP SECOND FLOOR PART G**  
 1/8" = 1'-0"

REFLECTED CEILING  
 PLAN SECOND FLOOR  
 PART G

**A9.1.15**



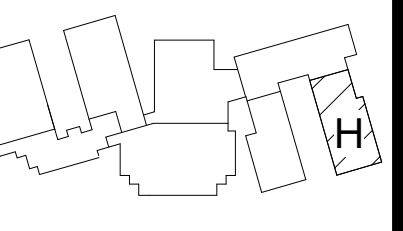
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REFLECTED CEILING PLAN KEYNOTES	
REPRESENTED BY [n]	
APPLIES TO DRAWINGS A9.1.1 - A9.1.16	
1	CFSF-S
2	5/8" GYP BD, TERMINATE 4" ABV FIN CLG
3	FIN CLG. FINISH AND/OR HEIGHT AFF VARIES
4	GYP BD. EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
5	OPERABLE PARTITION CONT HINGED
6	1 HR CEILING ASSEMBLY - X1
7	1 HR RATED CEILING ASSEMBLY - (2) LAYERS OF 5/8" GYP BOARD (TYP X) OVER MTL STUD
8	COLUMN WRAP STOPS AT UNDERSIDE OF BULKHEAD
9	PAINTE ALL EXPOSED SIDES OF BULKHEAD WHERE A-PT IS INDICATED

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 PHONE (919) 840-0081  
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KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	AD1

**RCP SECOND FLOOR PART H**  
 1/8" = 1'-0"

REFLECTED CEILING  
 PLAN SECOND FLOOR  
 PART H

**A9.1.16**



STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE FOLLOWING AISC DOCUMENTS:
- AISC 360 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
- AISC 303 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES
- RCSC'S SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:
- WIDE FLANGE SHAPES, CHANNELS AND MISC CHANNELS
- ANGLES, S-SHAPES AND I-SHAPES
- PLATES & BARS (TO 4" THICK)
- HP SHAPES
- HOLLOW STRUCTURAL SECTIONS (HSS)
- SQUARE & RECTANGLE
- ROUND
- HIGH STRENGTH BOLTS (CONVENTIONAL)
- WASHERS
- HEAVY HEX NUTS
- TWIST OFF TENSION CONTROL BOLTS
- COMPRESSIBLE WASHER DIRECT TENSION INDICATORS
- ANCHOR RODS
- WELDING ELECTRODES
- HEADED SHEAR STUDS
- THREADED ROD
- ASTM A500, GRADE C (FY=50 KSI)
- ASTM A500, GRADE C (FY=50 KSI)
- ASTM F3125, GRADE A325 OR A490 (TYPE 1)
- ASTM F438 (FLAT AND BEVELED)
- ASTM A563
- ASTM F3125, GRADE F182 OR F2280 (TYPE 1)
- ASTM F599 (TYPE 325 OR 480)
- ASTM F1554, GRADE 55 INCLUDE SUPPLEMENT S1
- E70 (LOW HYDROGEN)
- AWS D1.1, CLAUSE 8, TYPE 8 (FY-51 KSI)
- ASTM A36
- AISI C-1035, ASTM A668, CLASS C
- C-1035, ASTM A668, CLASS C
- ASTM A786, COMMERCIAL GRADE
- ASTM A606, A1008 OR A1011
3. UNLESS NOTED OTHERWISE, CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, AS SIMPLE CONNECTIONS USING ALLOWABLE STRENGTH DESIGN (ASD), CONNECTIONS FOR NON-COMPOSITE BEAMS SHALL BE DESIGNED FOR THE UNIFORM LOAD CAPACITY INDICATED IN THE MAXIMUM TOTAL UNIFORM LOAD TABLES, PART 3, OF THE AISC MANUAL. CONNECTIONS FOR COMPOSITE STEEL BEAMS SHALL BE DESIGNED FOR THE REACTION JOINTS ON THE PLANS.
4. UNLESS NOTED OTHERWISE, THE TOP OF ALL STEEL COLUMNS SHALL HAVE A STEEL CAP PLATE WITH A MINIMUM THICKNESS OF 1/2" CAP PLATE DIMENSIONS SHALL MATCH COLUMN WIDTH AND DEPTH MINIMUM, WHERE JOISTS BEAR ON COLUMN. COORDINATE BEARING MEMBERS WITH JOIST MANUFACTURER.
5. BOLTED JOINTS SHALL BE "SNUG TIGHTENED", UNLESS OTHERWISE INDICATED.
6. WHERE INDICATED, BOLTED JOINTS SHALL BE "PRETENSIONED" AND SHALL HAVE THREADS EXCLUDED FROM THE SHEAR PLANE. PRE-INSTALLATION VERIFICATION IS REQUIRED.
7. WHERE INDICATED, BOLTED JOINTS SHALL BE "SLIP CRITICAL". PRE-INSTALLATION VERIFICATION IS REQUIRED.
8. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE - STEEL".
9. WHERE STRUCTURAL STEEL IS EXPOSED BELOW GRADE, PROVIDE MINIMUM 3" CONCRETE COVER OR COAT WITH BUTYRAC MASTIC.
10. STRUCTURAL STEEL EXPOSED TO WEATHER IN THE FINISHED WORK SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
11. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL INDICATED THUS (AESS), SHALL CONFORM TO THE REQUIREMENTS OF SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES. ALL FABRICATION AND CONNECTIONS OF COMPONENTS EXPOSED AND VISIBLE IN THE FINISHED WORK SHALL BE MADE WITH CONTINUOUS WELDS. INTERMITTENT WELDS ARE ACCEPTABLE FOR NON-EXPOSED OR NON-VISIBLE LOCATIONS. WELD SIZE SHALL BE AS REQUIRED FOR STRUCTURAL STRENGTH BUT NOT LESS THAN 1/8" FILLET. HOLES BURNED THROUGH STEEL DECK DURING WELDING SHALL NOT BE ALLOWED. REPLACEMENT OF DECK WILL BE REQUIRED.

CONCRETE MASONRY UNITS (CMU)

- 1. ALL MASONRY WORK SHALL CONFORM TO THE REQUIREMENTS OF TMS 402 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES WITH COMMENTARY" AND TMS 602 "SPECIFICATIONS FOR MASONRY STRUCTURES WITH COMMENTARY".
2. NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY (Fm) SHALL BE 2000 PSI, DETERMINED IN ACCORDANCE WITH THE UNIT STRENGTH METHOD PER TMS 602, UNLESS NOTED OTHERWISE.
3. CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90, AND SHALL BE MADE WITH LIGHTWEIGHT AGGREGATE.
4. MORTAR FOR CMU SHALL CONFORM TO ASTM C270, TYPE S, UNLESS NOTED OTHERWISE.
5. GROUT SHALL CONFORM TO ASTM C476 AND SHALL BE PROPORTIONED TO OBTAIN MINIMUM ULTIMATE 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI.
6. PLACE GROUT IN ACCORDANCE WITH TMS 402. ALLOW A MINIMUM OF 4 HOURS FOR MASONRY TO SET PRIOR TO PLACING GROUT. HIGH LIFT GROUTING IS PERMITTED PROVIDED THE GROUT PLACEMENT REQUIREMENTS OF TMS 602 SECTION 5.5 ARE MET. CONTRACTOR TO REVIEW CLEANOUT LOCATIONS FOR HIGH-LIFT GROUTING WITH ARCHITECT PRIOR TO COMMENCING WORK.
7. FILL COLLAR JOINTS OF COMPOSITE WALLS SOLID WITH MORTAR AS THE WALLS PROGRESS. BOND WYTHES OF COMPOSITE WALLS TOGETHER USING HORIZONTAL JOINT REINFORCING AT 16" ON CENTER, UNLESS NOTED OTHERWISE.
8. PROVIDE VERTICAL REINFORCING STEEL OF SIZE AND SPACING INDICATED. LAP SPICE LENGTHS SHALL BE AS FOLLOWS:
- #4 BAR AND SMALLER 26 INCHES
- #5 BAR 34 INCHES
- #6 BAR 38 INCHES
- #7 BAR 45 INCHES
9. PROVIDE POSITIONERS TO HOLD VERTICAL WALL REINFORCING STEEL IN PROPER ALIGNMENT.
10. REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 60.
11. AVOID PLACING CONDUIT IN CELLS CONTAINING STRUCTURAL REINFORCING, WHERE POSSIBLE.
12. NO SWITCHES OR BOXES WITHIN 20 INCHES OF A DOOR JAMB.
13. MASONRY WALLS OF HOLLOW UNITS WHICH CHANGE THICKNESS SHALL HAVE A CONTINUOUS GROUT FILLED COURSE BELOW THE TRANSITION. IF WALL THICKNESS IS GREATER ABOVE THE TRANSITION, THE COURSE ABOVE THE TRANSITION SHALL ALSO BE GROUTED SOLID.
14. FILL CMU CELLS WITH GROUT FROM TOP OF FOOTING TO TOP OF SLAB-ON-GRADE ELEVATION.
15. MASONRY WALL CONTROL JOINTS ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR JOINT LOCATIONS AND DETAILS. COORDINATE JOINT LOCATIONS TO AVOID BEAM BEARING LOADS. DO NOT BREAK BOND BEAM REINFORCEMENT AT CONTROL JOINTS.

ACI 318 LAP LENGTHS

SPICES IN THE REINFORCING STEEL SHALL BE ONLY AT THE LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS. LAP SPICES SHALL BE IN ACCORDANCE WITH ACI 318 CHAPTER 25 AS INDICATED BELOW. TOP BAR LAPS (HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BAR) SHALL BE MODIFIED BY A MULTIPLICATION OF 1.2 TIMES THE LENGTHS LISTED IN THE TABLE BELOW. LENGTHS INDICATED IN INCHES.

Table with columns for Normal Weight (145 PCF) and Light Weight (110 PCF) concrete, and rows for different bar sizes and spacings.

FIBER REINFORCING

- 1. SYNTHETIC MACRO-FIBER MAY BE SUBSTITUTED FOR WELDED WIRE FABRIC IN SLAB-ON-GRADE AND SHALL CONFORM TO ASTM C1116, TYPE III SYNTHETIC FIBER REINFORCED CONCRETE.
2. FIBER SHALL BE ADDED AT THE CONCRETE BATCH PLANT.
3. FIBER SHALL BE INCLUDED IN THE CONCRETE MIX DESIGNS SUBMITTED FOR REVIEW.

FLOWABLE FILL

- 1. CONTROLLED LOW STRENGTH MATERIAL (CLSM), ALSO REFERRED TO AS FLOWABLE FILL, MAY BE SUBMITTED FOR APPROVAL AS A SUBSTITUTE FOR COMPACTED FILL AT FOUNDATION UNDERCUT LOCATIONS. THE CLSM MIXTURE SHALL BE PROPORTIONED TO PRODUCE AN UNCONFINED COMPRESSIVE STRENGTH OF 100 PSI MINIMUM TO 300 PSI MAXIMUM.

GENERAL

- 1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE (NCBC), 2018 EDITION.
2. THE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND THE DRAWINGS OF THE OTHER ENGINEERING DISCIPLINES.
3. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.
4. VERIFY AND COORDINATE MECHANICAL UNIT SUPPORTS AND OPENINGS WITH EQUIPMENT PURCHASED FOR THE PROJECT. COORDINATE REQUIREMENTS FOR SLEEVES, HANGERS, INSERTS, ANCHORS AND ALL OTHER ITEMS TO BE SET IN STRUCTURAL WORK.
5. SPECIAL INSPECTIONS ARE REQUIRED BY THE NCBC, SECTION 1704. REFER TO THE STATEMENT OF SPECIAL INSPECTIONS PREPARED FOR THIS PROJECT AND THE PROJECT SPECIFICATIONS FOR SPECIFIC INSPECTION REQUIREMENTS. REFER TO SPECIFICATION SECTION 014000 FOR GENERAL INSPECTION REQUIREMENTS. SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS IN COMPLIANCE WITH IBC SECTION 1704.2.4. USE OF "GENERAL CONFORMANCE" OR "GENERAL ACCORDANCE" IS UNACCEPTABLE.
6. CONTRACTOR SHALL CONDUCT PRE-INSTALL MEETINGS ON PROJECT SITE PRIOR TO COMMENCEMENT OF WORK. REFER TO PROJECT SPECIFICATIONS FOR SPECIFIC REQUIREMENTS. GENERAL CONTRACTOR WILL CONDUCT THE MEETING AND SHALL BE RESPONSIBLE FOR THE ATTENDANCE OF ALL REQUIRED TRADES AND SUBCONTRACTORS INCLUDING THE SPECIAL INSPECTOR.

FOUNDATIONS

- 1. FOUNDATIONS ARE DESIGNED TO BEAR ON ORIGINAL UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL THAT HAS BEEN SURCHARGED IN ACCORDANCE WITH GEOTECHNICAL REPORT #23060152, PREPARED BY S&ME AND DATED JANUARY 28, 2024, RESULTING IN AN ALLOWABLE BEARING CAPACITY OF 4000 PSF.
2. THE GEOTECHNICAL ENGINEER FOR THE OWNERS TESTING AGENCY SHALL VERIFY BEARING CAPACITY AND SUITABILITY OF SUBGRADE PRIOR TO PLACING FOUNDATIONS AND GRADE SLABS.
3. SELECT AND PLACE CONTROLLED COMPACTED FILL UNDER DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER FOR THE OWNERS TESTING AGENCY.
4. FOOTING STEPS FOR UNDERSLAB UTILITIES INDICATED ON FOUNDATION PLANS SHALL BE CONSIDERED APPROXIMATE. COORDINATE FOOTINGS WITH ACTUAL LOCATION, SIZE AND INVERT OF ALL UNDERGROUND PIPE (AND CONDUIT). REFER TO "FOOTING STEP" DETAIL TO STEP WALL FOOTING DOWN TO ALLOW UNDERSLAB PIPING TO PASS ABOVE THE FOOTING. ALTERNATELY, REFER TO "FOOTING SLEEVE" AND "PIPE TRENCH BACKFILL AT FOOTING" DETAILS TO ALLOW UNDERSLAB PIPING TO PASS BELOW THE TOP OF THE WALL FOOTING.
5. AVOID INFLUENCE OF PIPE TRENCH PARALLEL TO WALL FOOTING AND / OR ADJACENT TO COLUMN FOOTING. REFER TO "FOOTING EXCAVATION LIMITS".
6. PROTECT FOOTINGS AND GRADE SLABS FROM FROST HEAVE UNTIL BUILDING IS PERMANENTLY ENCLOSED.
7. BRACE WALLS PLUMB WHICH ARE SUBJECTED TO UNBALANCED BACKFILL UNTIL PERMANENTLY STABILIZED BY STRUCTURE.

CONCRETE

- 1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE".
2. CONCRETE SHALL BE NORMAL WEIGHT AND SHALL OBTAIN ULTIMATE 28 DAY COMPRESSIVE STRENGTHS (F'c), AS FOLLOWS:

Table titled 'CONCRETE MATERIAL SCHEDULE (NOTE 11)' with columns for Building Element, Durability Requirements, and various material properties like f'c, Air Entrainment, Unit Weight, etc.

- 3. THE DURABILITY EXPOSURE CLASS IDENTIFIED BY THE ENGINEER OF RECORD, IN ACCORDANCE WITH ACI 318, FOR EACH MIX DESIGN BUILDING ELEMENT AND EXPOSURE CLASS, IS BASED ON ASSUMED SEVERITY OF THE ANTICIPATED EXPOSURE. IF THE CONCRETE IS TO BE INSTALLED IN A LOCATION OR CONDITION THAT IS MORE SEVERE THAN THE EXPOSURE IDENTIFIED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO ADJUST THE CONCRETE MIX REQUIREMENTS AS REQUIRED PER ACI 318.

STEEL JOISTS

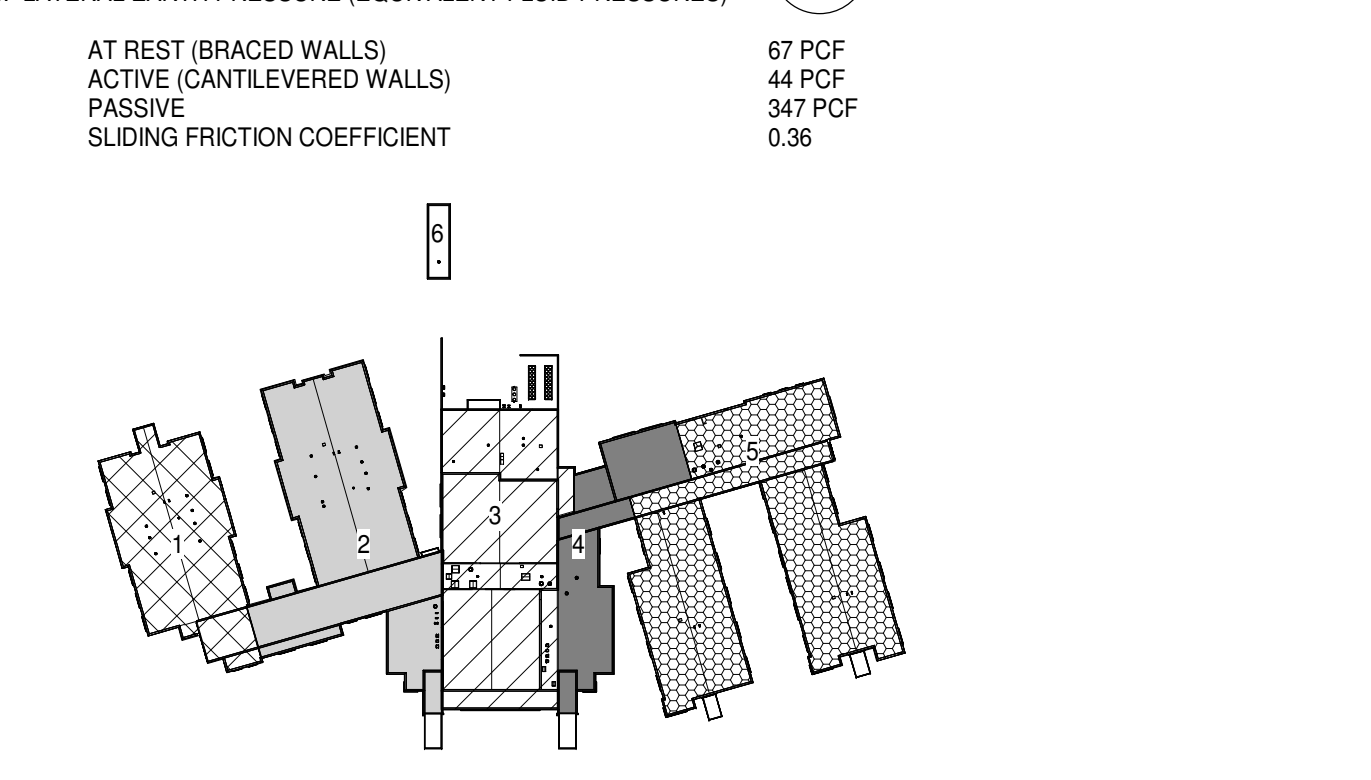
- 1. ALL STEEL JOIST WORK SHALL CONFORM TO THE LATEST EDITION OF THE STEEL JOIST INSTITUTE (SJI) STANDARD SPECIFICATIONS.
2. STEEL JOISTS SHALL BE DESIGNED USING ALLOWABLE STRENGTH DESIGN (ASD), AND SHALL BE MANUFACTURED WITH STEEL HAVING A MINIMUM YIELD STRENGTH OF 50 KSI.
3. PROVIDE JOIST BRIDGING IN ACCORDANCE WITH SJI SPECIFICATIONS, OSHA REQUIREMENTS, AND AS REQUIRED BY JOIST DESIGN.
4. ROOF JOISTS AND BRIDGING SHALL BE DESIGNED FOR A NET UPLIFT PRESSURE SHOWN IN THE ROOF WIND DIAGRAM.
5. SPECIAL JOISTS, INDICATED "SP" ON FRAMING PLANS, SHALL BE DESIGNED FOR CRITERIA INDICATED.
6. DETAILING AND ERECTION OF OPEN WEB STEEL JOISTS SHALL COMPLY WITH OSHA REQUIREMENTS.
7. STEEL ROOF JOISTS SHALL BE PROVIDED WITH NO CAMBER.
8. CONCRETE ALL JOISTS (K, KCS, LH) FOR A 500 POUND CONCENTRATED "ADD-LOAD" AT ANY ONE PANEL POINT ALONG THE JOIST, UNLESS NOTED OTHERWISE.
9. K SERIES JOISTS SHALL BE DESIGNED FOR ADDITIONAL BENDING STRESSES RESULTING FROM A 200 POUND CONCENTRATED "BEND-CHECK" LOAD LOCATED AT ANY LOCATION ALONG TOP AND BOTTOM CHORD IN ADDITION TO ALL OTHER LOADS.
10. KCS AND LH SERIES JOISTS SHALL BE DESIGNED FOR ADDITIONAL BENDING STRESSES RESULTING FROM A 500 POUND CONCENTRATED "BEND-CHECK" LOAD LOCATED AT ANY LOCATION ALONG TOP AND BOTTOM CHORD IN ADDITION TO ALL OTHER LOADS.
11. REFER TO "TYPICAL LOAD SUPPORTED FROM JOIST" DETAIL FOR REQUIREMENTS REGARDING PIPE HANGERS AND OTHER EQUIPMENT LOADS.
12. STEEL JOISTS EXPOSED TO WEATHER IN THE FINISHED WORK SHALL BE PAINTED WITH A ZINC RICH TNEMEC PAINT THAT MEETS THE REQUIREMENTS OF ASTM D 520 TYPE III.
13. COORDINATE SUPPORT OF SPRINKLER PIPING, INCLUDING MAINS, WITH JOIST MANUFACTURER. SPRINKLER MANUFACTURERS SHALL OBTAIN A LETTER FROM THE JOIST MANUFACTURER VERIFYING THAT THE PIPE HANGER LOCATION AND LOADS HAVE BEEN PROVIDED FOR THEIR USE. THIS LETTER SHALL BE SUBMITTED TO THE ARCHITECT WITH THE SPRINKLER SUBMITTAL PACKAGE. IF LOCATIONS OF THE MAINS ARE ALTERED FROM THE INFORMATION PROVIDED BY THE SPRINKLER MANUFACTURER TO THE JOIST MANUFACTURER, ADDITIONAL FRAMING SHALL BE ADDED TO PROVIDE ADEQUATE SUPPORT FOR THE PIPING LOADS AT NO COST TO THE OWNER.

COLD FORMED STEEL FRAMING

- 1. ALL STRUCTURAL COLD FORMED STEEL FRAMING (CFSF) SHALL COMPLY WITH AISI'S "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".
2. CFSF-S (STRUCTURAL) INCLUDES ALL EXTERIOR WALLS, SOFFITS, BULKHEADS, TRUSSES, RAFTERS, JOISTS AND CEILING JOISTS (IF SELF-SUPPORTING). PROVIDE ENGINEERING DESIGN OF ALL CFSF-S, AND SUBMIT DESIGN CALCULATIONS, ERECTION DRAWINGS AND DETAIL DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN NORTH CAROLINA. REFER TO SECTION 054000 FOR ADDITIONAL INFORMATION.
3. CFSF-N (NON-STRUCTURAL) INCLUDES INTERIOR NON-LOAD BEARING STUD WALLS AND SUSPENDED CEILING FRAMING SYSTEM. REFER TO SECTION 092216 FOR ADDITIONAL INFORMATION.
4. ALL FRAMING MEMBERS, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL SHEET HAVING A GALVANIZED COATING IN ACCORDANCE WITH ASTM A653.
5. ALL C - SHAPED FRAMING MEMBERS SHALL HAVE A MINIMUM FLANGE WIDTH OF 1 5/8 INCHES UNO.
6. MINIMUM VERT STRENGTH SHALL BE AS FOLLOWS:
- FY = 33,000 PSI 33 MILS AND 43 MILS
- FY = 50,000 PSI 54 MILS, 68 MILS AND 97 MILS
7. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3, "STRUCTURAL WELDING CODE - SHEET STEEL".
8. PERMANENT LOADS SHALL NOT BE SUSPENDED FROM STEEL ROOF DECK UNLESS APPROVED BY ENGINEER OF RECORD.
9. STEEL DECK UP TO 2" DEEP SHALL BE INSTALLED WITH A MINIMUM OF 3 CONTINUOUS SPANS, UNLESS NOTED OTHERWISE. STEEL DECK 2" DEEP OR GREATER SHALL BE INSTALLED WITH A MINIMUM OF 2 CONTINUOUS SPANS, UNLESS NOTED OTHERWISE. ANY LOCATIONS NOT MEETING THESE CONDITIONS SHALL BE SPECIFICALLY IDENTIFIED ON THE STEEL DECK SHOP DRAWINGS.
10. REFER TO "STEEL DECK SCHEDULE" FOR DECK TYPES AND FASTENING REQUIREMENTS.

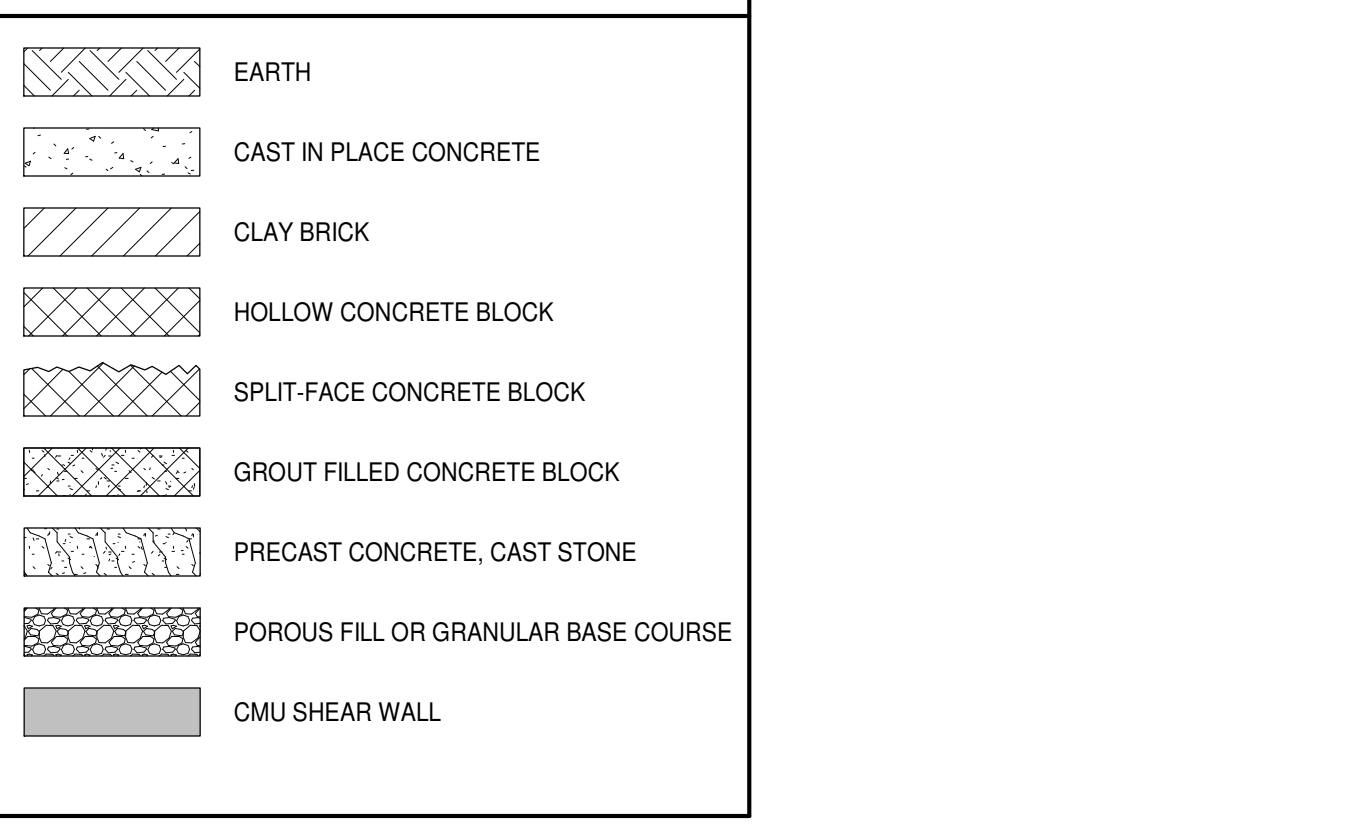
DESIGN LOAD DATA

- 1. CLASSIFICATION OF BUILDING RISK CATEGORY (IBC TABLE 1604.5) III
2. FLOOR LIVE LOADS UNIFORM CONCENTRATED
- OFFICES 50 PSF 2000 LB WHERE UNIFORM LIVE LOAD IS LESS THAN 80 PSF
- PARTITION ALLOWANCE 15 PSF
- CLASSROOMS 50 PSF 1000 LB
- CORRIDORS ABOVE FIRST FLOOR 80 PSF 1000 LB
- LOBBIES AND FIRST FLOOR CORRIDORS 100 PSF 1000 LB
- LIGHT STORAGE 125 PSF
- MECHANICAL ROOMS 150 PSF
- CATWALKS 40 PSF 300 LB
- LIBRARIES 150 PSF 1000 LB
- STACK ROOM 60 PSF 1000 LB
- READING ROOM 100 PSF 1000 LB
- STAIRS 100 PSF
- HANDRAILS AND GUARDS 50 PSF 200 LB
- LOADS ARE NOT CONCURRENT AND ARE TO BE APPLIED IN ANY DIRECTION
CONCENTRATED LOAD APPLIED OVER 2'-6" x 2'-6" AREA.
REDUCTION OF FLOOR LIVE LOAD HAS BEEN UTILIZED FOR:
3. ROOF LIVE LOADS MINIMUM ROOF LIVE LOAD 20 PSF 300 LB
CONCENTRATED LOAD APPLIED OVER 2'-6" x 2'-6" AREA.
REDUCTION OF MINIMUM ROOF LIVE LOAD HAS NOT BEEN UTILIZED.
4. SUPERIMPOSED DEAD LOADS 20 PSF
ROOF PENHOUSE, MECHANICAL AREAS STORAGE, STAIRS ALL FRAMED FLOORS, U.N.O. PHOTOVOLTAIC PANEL SYSTEMS
5. ROOF SNOW LOAD GROUND SNOW LOAD (Pg) 10 PSF IMPORTANCE FACTOR (Ib) 1.1 EXPOSURE FACTOR (Ce) 1.0 THERMAL FACTOR (Ct) 1.0 MINIMUM P FOR Pg = 20 PSF OR LESS P(min) = 1.0 11 PSF ASCE 7 SNOW DRIFTING LOADS
6. WIND DESIGN DATA ULTIMATE DESIGN WIND SPEED (3 SECOND GUST) 154 MPH NOMINAL DESIGN WIND SPEED (3 SECOND GUST) 120 MPH EXPOSURE C 10 (8 ENCLOSED) REFER TO ROOF WIND PRESSURE DIAGRAM
7. SEISMIC DESIGN DATA SEISMIC DESIGN CATEGORY 1.2 SEISMIC IMPORTANCE FACTOR (Ib) C SITE CLASS D MAPPED SPECTRAL RESPONSE ACCELERATIONS (Sa) 0.131 (S1) 0.083 DESIGN SPECTRAL RESPONSE ACCELERATIONS (Sds) 0.204 (Sds) 0.133 BASIC SEISMIC FORCE RESISTING SYSTEM: A. BEARING WALL SYSTEM 8. INTERMEDIATE REINFORCED MASONRY SHEAR WALLS B. BUILDING FRAME SYSTEMS 3. STEEL ORDINARY CONCENTRICALLY BRACED FRAMES C. MOMENT RESISTING FRAME SYSTEMS 1. STEEL SPECIAL MOMENT FRAMES ALL STEEL SYSTEMS ARE: RESPONSE MODIFICATION COEFFICIENT (R) 2.0 SYSTEM OVERSTRENGTH FACTOR 1.0 DEFLECTION AMPLIFICATION FACTOR 1.0 SEISMIC RESPONSE COEFFICIENT (Cs) 0.085 DESIGN BASE SHEAR (V = Cs x W) EQUIVALENT LATERAL FORCE PROCEDURE SEISMIC DESIGN BASE SHEARS BUILDING AREA 1 V = 440 KIPS BUILDING AREA 2 V = 630 KIPS BUILDING AREA 3 V = 370 KIPS BUILDING AREA 4 V = 143 KIPS BUILDING AREA 5 V = 770 KIPS BUILDING AREA 6 V = 7.5 KIPS
8. LATERAL EARTH PRESSURE (EQUIVALENT FLUID PRESSURES) AT REST (BRACED WALLS) 67 PCF ACTIVE (CANTILEVERED WALLS) 44 PCF PASSIVE 347 PCF SLIDING FRICTION COEFFICIENT 0.36



SEISMIC BASE SHEAR BUILDING PLAN MAP 1" = 200'-0"

STRUCTURAL MATERIALS LEGEND



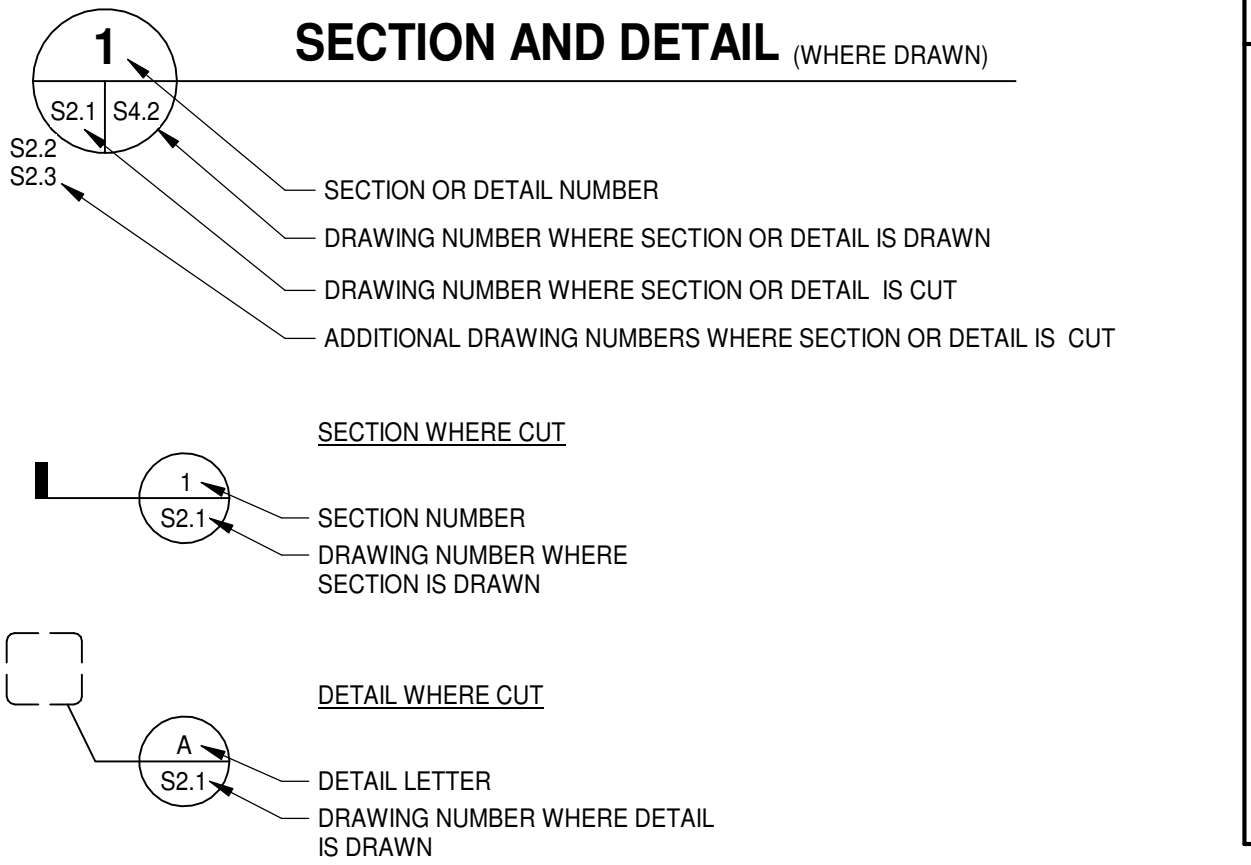
STRUCTURAL ABBREVIATIONS

Table of structural abbreviations with columns for Abbreviation, Description, and Full Name. Includes items like AB (Anchor Bolt), AESS (Architecturally Exposed Steel), AFF (Above Finished Floor), ALUM (Aluminum), etc.

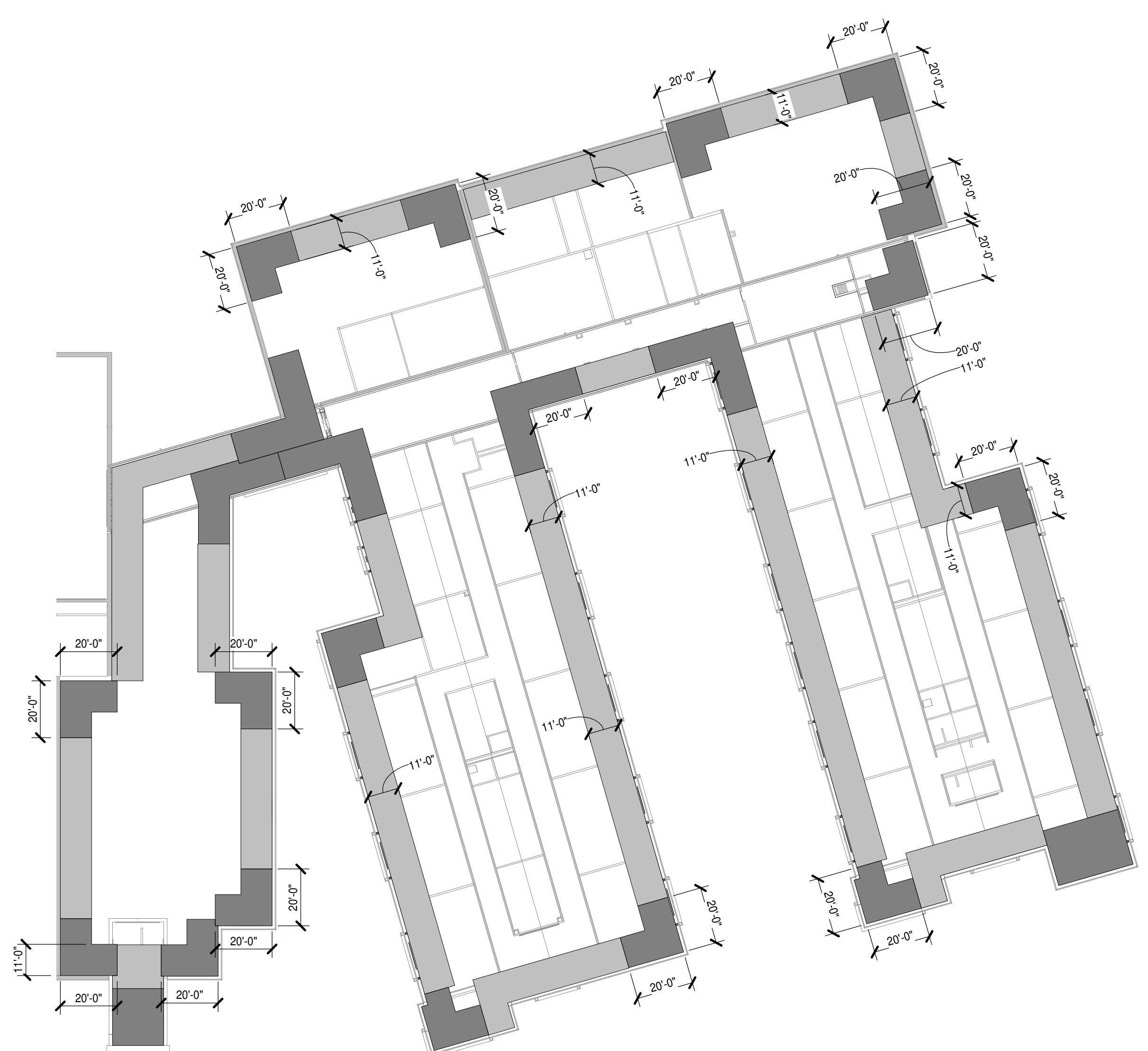
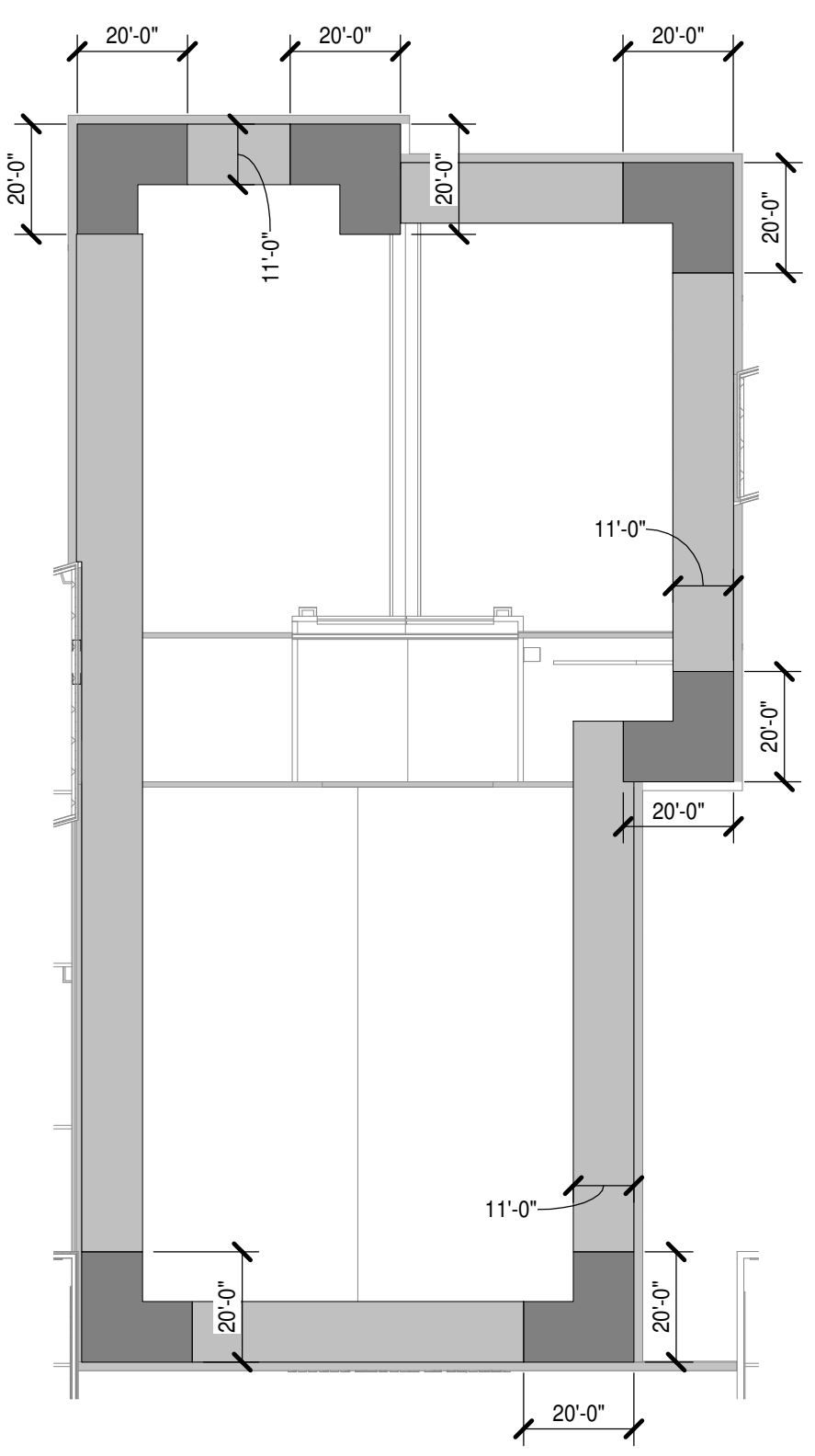
PLAN LEGEND

- CENTERLINE
JOIST BEARING ELEVATION
BEAM BEARING PLATE
COLUMN BASE PLATE
CONCRETE PIER
JOIST SUBSTITUTE
CONSTANT SHEAR JOIST
SPECIAL JOIST
WALL FOOTING STEP
TOP OF FOOTING ELEVATION
WORK POINT
TOP OF SLAB ELEVATION
LINTEL
COLUMN FOOTING
TOP OF STEEL BEAM ELEVATION
INDICATES TOP OF STRUCTURAL MEMBER SHALL BE IN SAME PLANE AS TOP OF JOIST
INDICATES TOP OF STRUCTURAL MEMBER SHALL BE SLOPED
WALL FOOTING
THICKENED SLAB
STEEL JOIST BOTTOM CHORD EXTENSION, WELDED
STEEL BEAM MOMENT CONNECTION
EXISTING
TRANSFER FORCE
CMU WALL REINFORCING SIZE AND SPACING
CHANGE IN SLAB ELEVATION
TOP CHORD EXTENSION

LEGEND FOR SECTION AND DETAIL MARKS







**1** ROOF WIND PRESSURE PLAN - PART 1 & 2  
S0.0.4 1/32" = 1'-0"

ROOF WIND PRESSURE PLAN - PART 3  
1/32" = 1'-0"

ROOF WIND PRESSURE PLAN - PART 4 & 5  
1/32" = 1'-0"

**COMPONENTS AND CLADDING DESIGN WIND PRESSURE (ALL VALUES ULTIMATE PSF)**

ZONE	AREA ≤ 10 FT²	AREA ≤ 25 FT²	AREA ≤ 50 FT²	AREA > 100 FT²
1	14.9 / -36.7	13.7 / -35.4	11.8 / -34.5	11.8 / -33.6
2	14.9 / -61.5	13.7 / -52.9	11.8 / -46.3	11.8 / -39.8
3	14.9 / -92.6	13.7 / -71.6	11.8 / -55.7	11.8 / -39.8

**COMPONENTS AND CLADDING ROOF WIND PRESSURE DIAGRAM NOTES**

- PRESSURES INDICATES ARE FOR ALLOWABLE STRESS DESIGN ASCE 7-10
- EFFECTIVE WIND AREA SHALL BE DETERMINED IN ACCORDANCE WITH ASCE 7-10
- REDUCTION FACTORS FOR EFFECTIVE WIND AREAS ARE ALLOWED AS DEFINED BY TABLE 30.6.2 OF ASCE 7-10
- ROOF ZONE 1 UNLESS NOTED OTHERWISE
- ZONE 2 IS INDICATED BY
- ZONE 3 IS INDICATED BY
- (+) INDICATES PRESSURES ACTING TOWARD ROOF (INWARD)  
(-) INDICATES PRESSURES ACTING AWAY FROM ROOF (OUTWARD)
- ROOF DEAD LOAD SHALL BE 10 PSF FOR UPLIFT CONSIDERATION

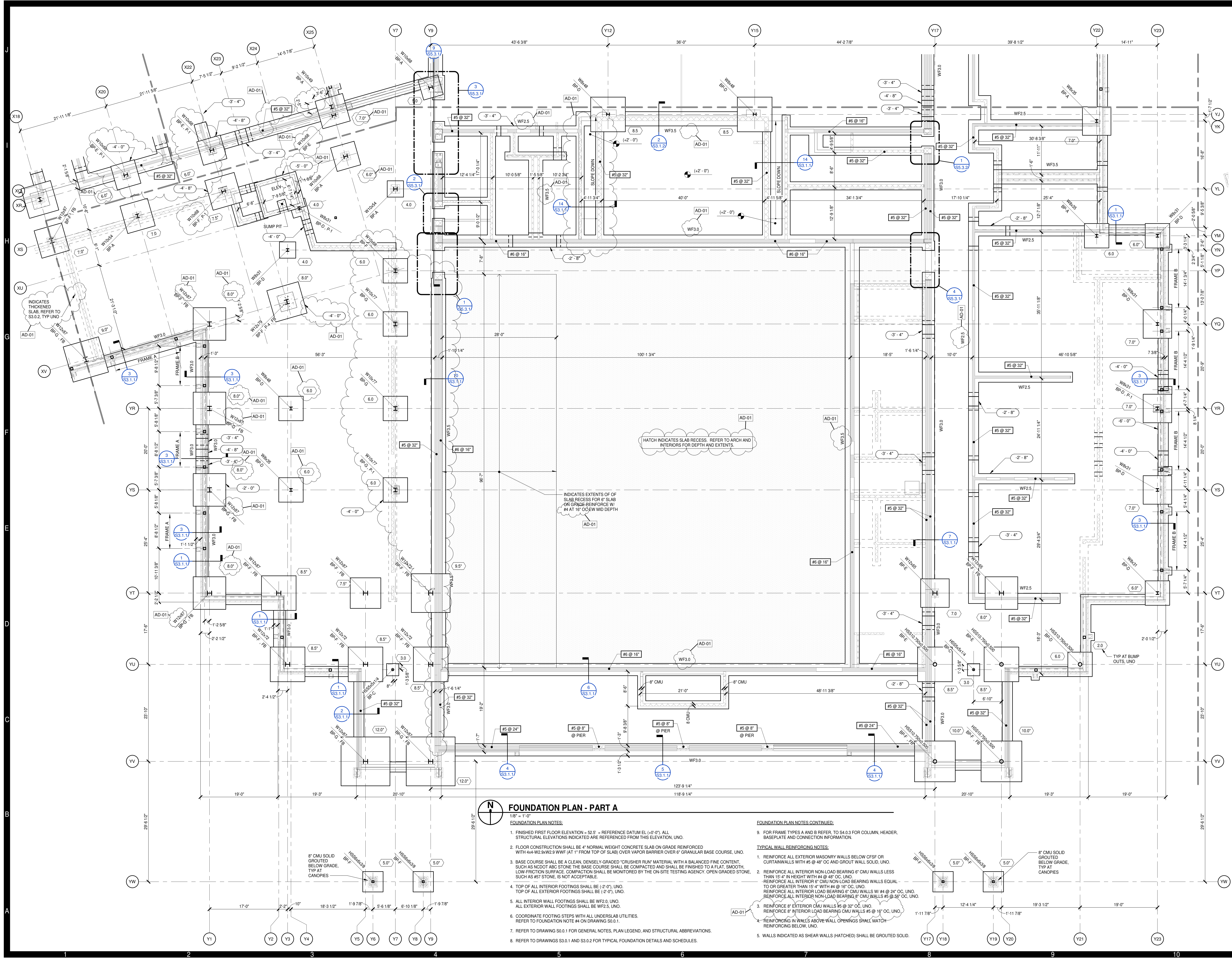
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PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

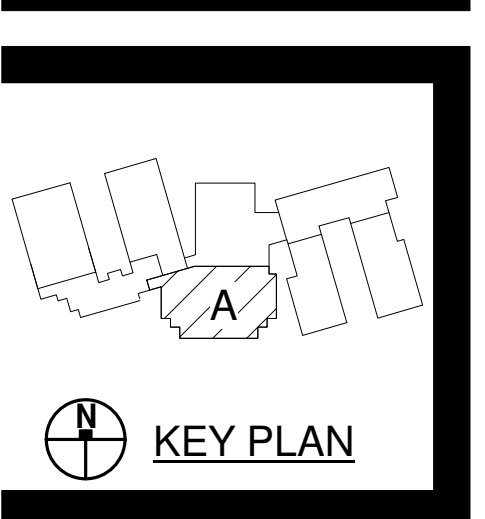




**FOUNDATION PLAN - PART A**

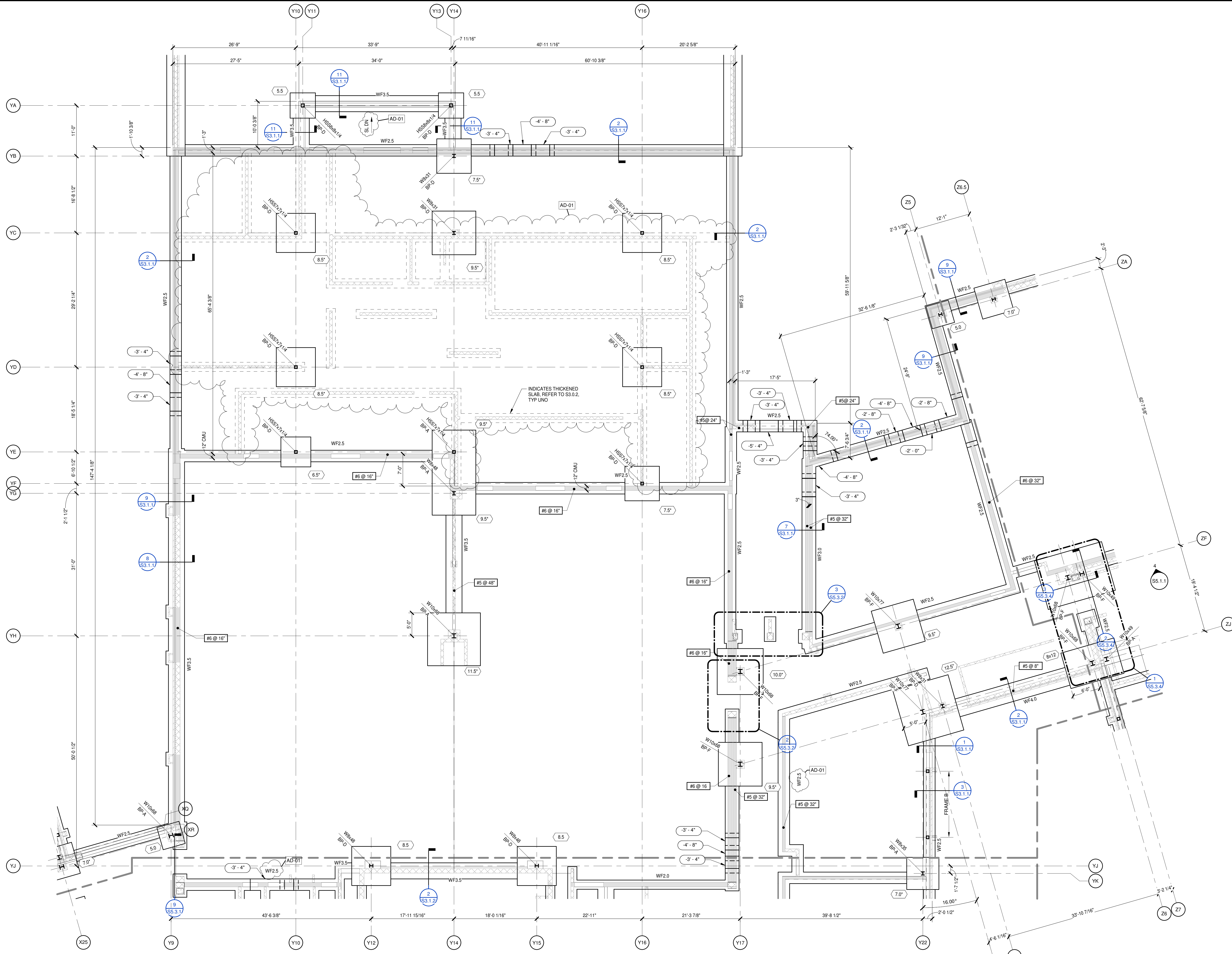
- 1/8" = 1'-0"  
FOUNDATION PLAN NOTES:
1. FINISHED FIRST FLOOR ELEVATION = 52.5' = REFERENCE DATUM EL. (+0'-0"). ALL STRUCTURAL ELEVATIONS INDICATED ARE REFERENCED FROM THIS ELEVATION, UNO.
  2. FLOOR CONSTRUCTION SHALL BE 4" NORMAL WEIGHT CONCRETE SLAB ON GRADE REINFORCED WITH 4x4-W2.9xW2.9 WWF (AT 1" FROM TOP OF SLAB) OVER VAPOR BARRIER OVER 6" GRANULAR BASE COURSE, UNO.
  3. BASE COURSE SHALL BE A CLEAN, DENSELY-GRADED "CRUSHER RUN" MATERIAL WITH A BALANCED FINE CONTENT, SUCH AS NCDOT ABC STONE. THE BASE COURSE SHALL BE COMPACTED AND FINISHED TO A FLAT, SMOOTH, LOW-FRICTION SURFACE. COMPACTION SHALL BE MONITORED BY THE ON-SITE TESTING AGENCY. OPEN GRADED STONE, SUCH AS #57 STONE, IS NOT ACCEPTABLE.
  4. TOP OF ALL INTERIOR FOOTINGS SHALL BE (-2'-0"), UNO. TOP OF ALL EXTERIOR FOOTINGS SHALL BE (-2'-0"), UNO.
  5. ALL INTERIOR WALL FOOTINGS SHALL BE WF2.5, UNO. ALL EXTERIOR WALL FOOTINGS SHALL BE WF2.5, UNO.
  6. COORDINATE FOOTING STEPS WITH ALL UNDERSLAB UTILITIES. REFER TO FOUNDATION NOTE #4 ON DRAWING S0.0.1.
  7. REFER TO DRAWING S0.0.1 FOR GENERAL NOTES, PLAN LEGEND, AND STRUCTURAL ABBREVIATIONS.
  8. REFER TO DRAWINGS S3.0.1 AND S3.0.2 FOR TYPICAL FOUNDATION DETAILS AND SCHEDULES.

- FOUNDATION PLAN NOTES CONTINUED:
9. FOR FRAME TYPES A AND B REFER TO S4.0.3 FOR COLUMN, HEADER, BASEPLATE AND CONNECTION INFORMATION.
- TYPICAL WALL REINFORCING NOTES:
1. REINFORCE ALL EXTERIOR MASONRY WALLS BELOW CFSF OR CURTAINWALLS WITH #5 @ 48" OC AND GROUT WALL SOLID, UNO.
  2. REINFORCE ALL INTERIOR NON-LOAD BEARING 6" CMU WALLS LESS THAN 15'-4" IN HEIGHT WITH #4 @ 48" OC, UNO. REINFORCE ALL INTERIOR 6" CMU NON-LOAD BEARING WALLS EQUAL TO OR GREATER THAN 15'-4" WITH #4 @ 16" OC, UNO. REINFORCE ALL INTERIOR LOAD BEARING 6" CMU WALLS W/ #4 @ 24" OC, UNO. REINFORCE ALL INTERIOR NON-LOAD BEARING 8" CMU WALLS #5 @ 55" OC, UNO.
  3. REINFORCE 8" EXTERIOR CMU WALLS #5 @ 32" OC, UNO. REINFORCE 8" INTERIOR LOAD BEARING CMU WALLS #5 @ 16" OC, UNO.
  4. REINFORCING IN WALLS ABOVE WALL OPENINGS SHALL MATCH REINFORCING BELOW, UNO.
  5. WALLS INDICATED AS SHEAR WALLS (HATCHED) SHALL BE GROUTED SOLID.

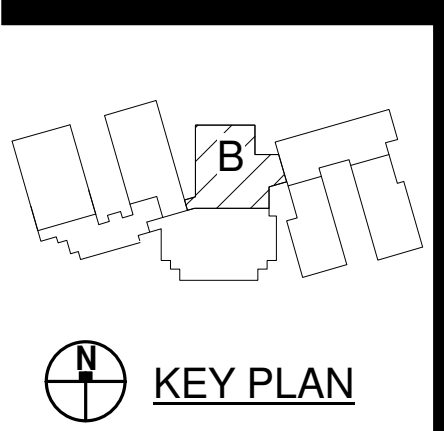


PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS:	
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**FOUNDATION PLAN - PART B**  
 1/8" = 1'-0"  
 NOTES:  
 1. REFER TO S1.1.1 FOR FOUNDATION PLAN NOTES.



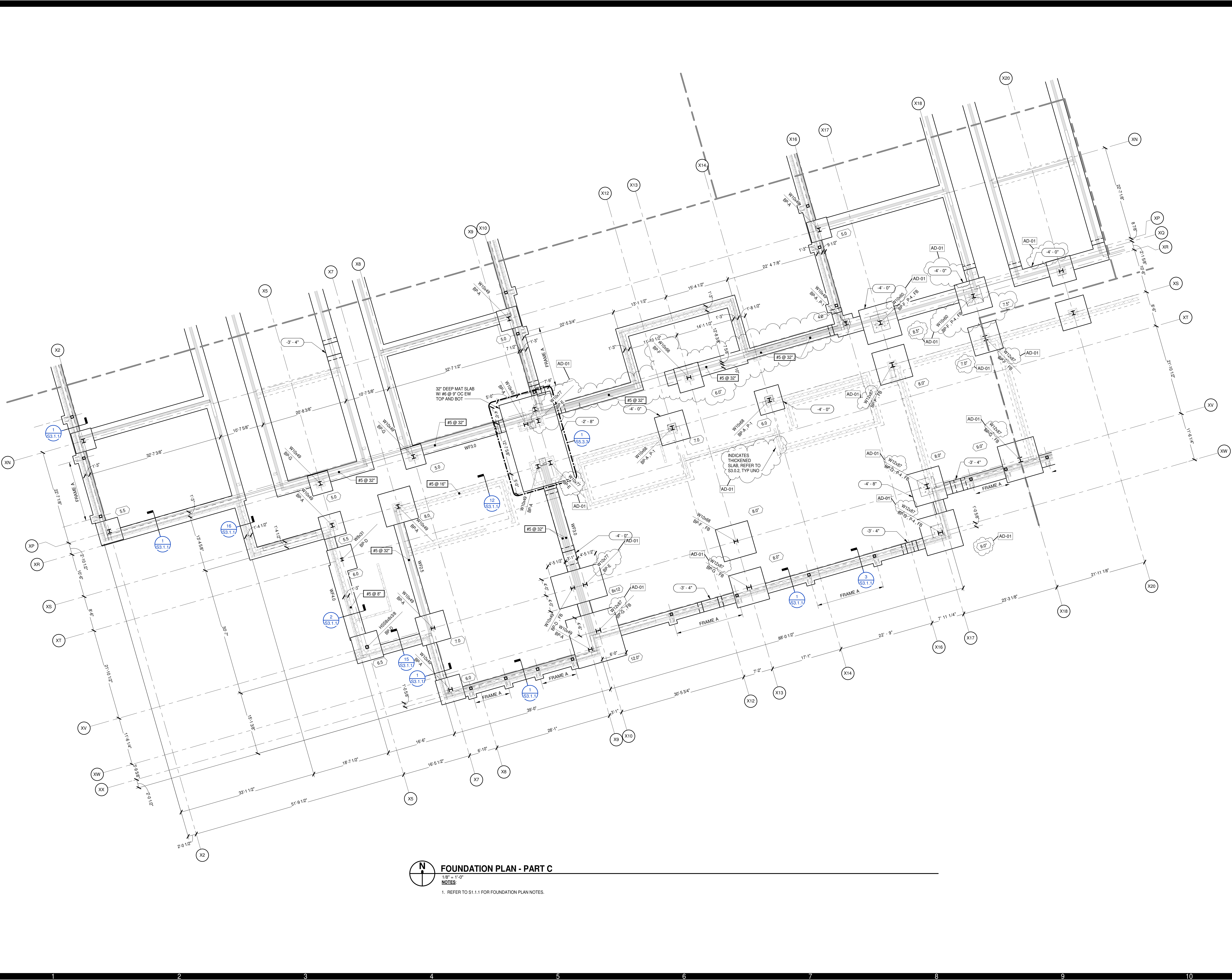
**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

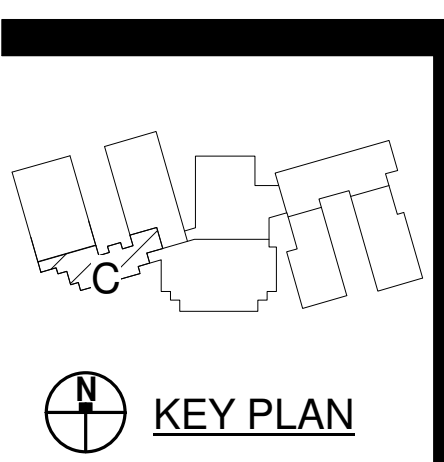
PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01



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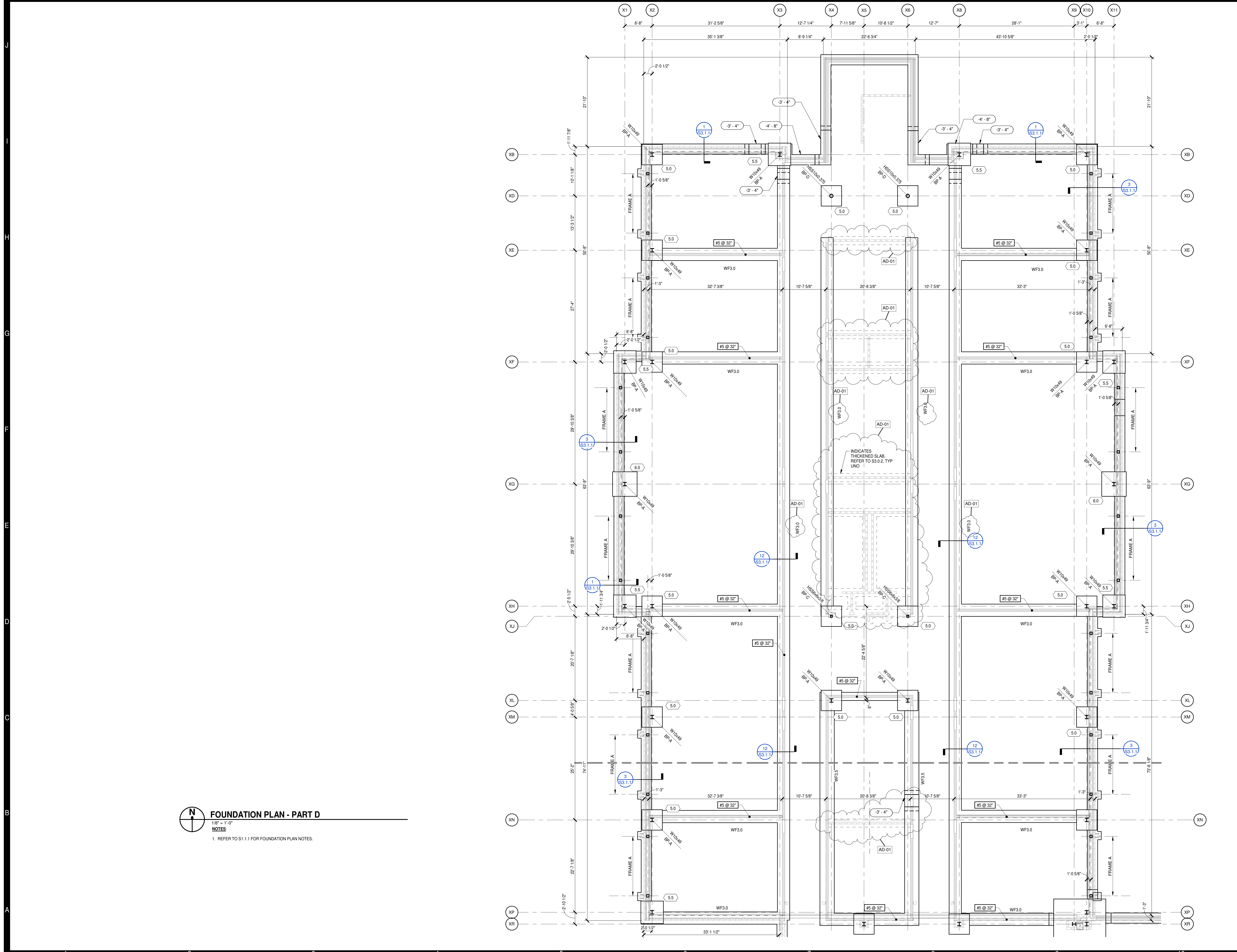
**FOUNDATION PLAN - PART C**  
 1/8" = 1'-0"  
 NOTES  
 1. REFER TO S1.1.1 FOR FOUNDATION PLAN NOTES.



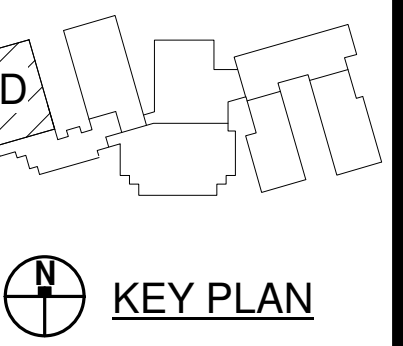
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 Pender County Schools  
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PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01





**FOUNDATION PLAN - PART D**  
 1/8" = 1'-0"  
 NOTES:  
 1. REFER TO S1.1.1 FOR FOUNDATION PLAN NOTES.



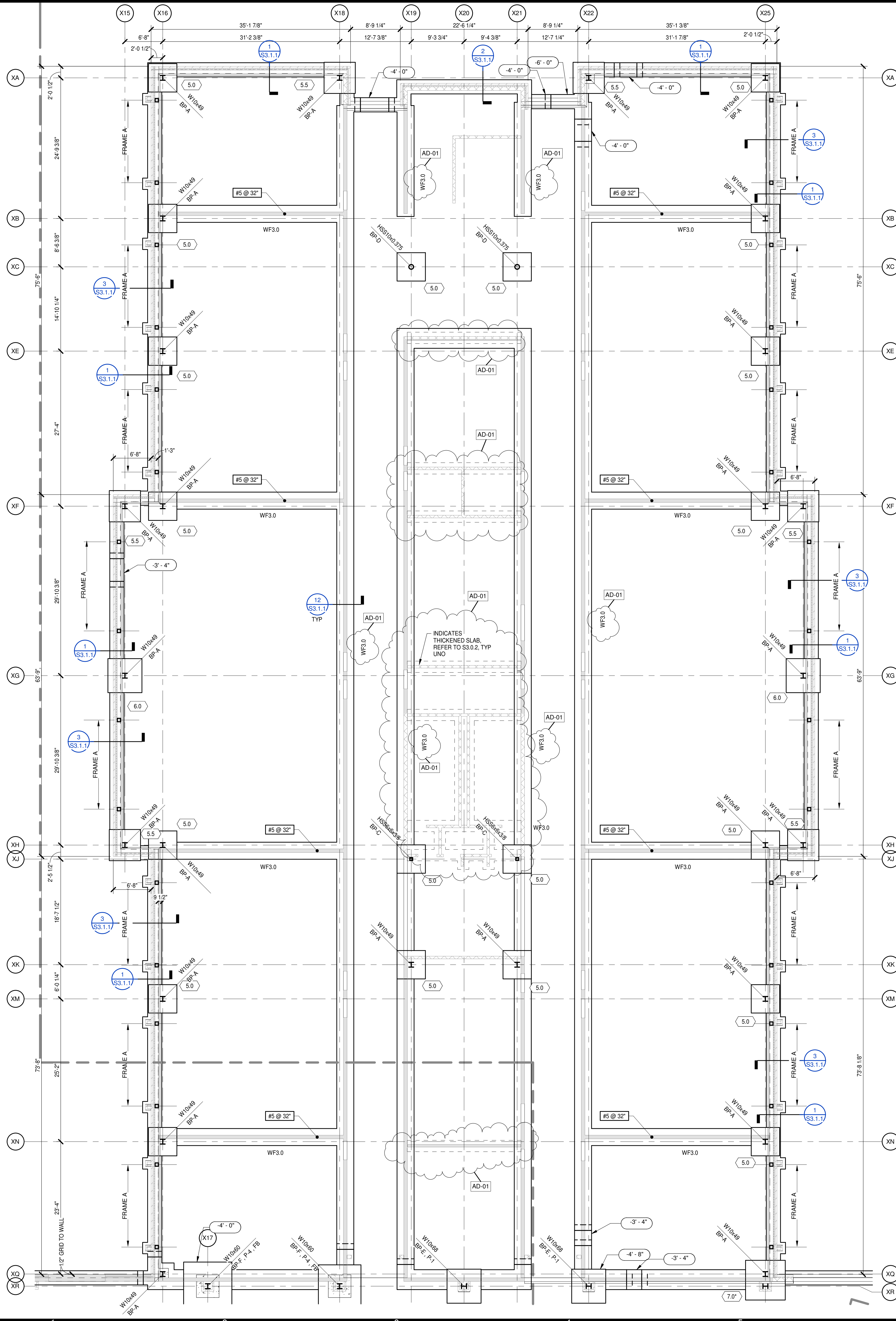
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PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

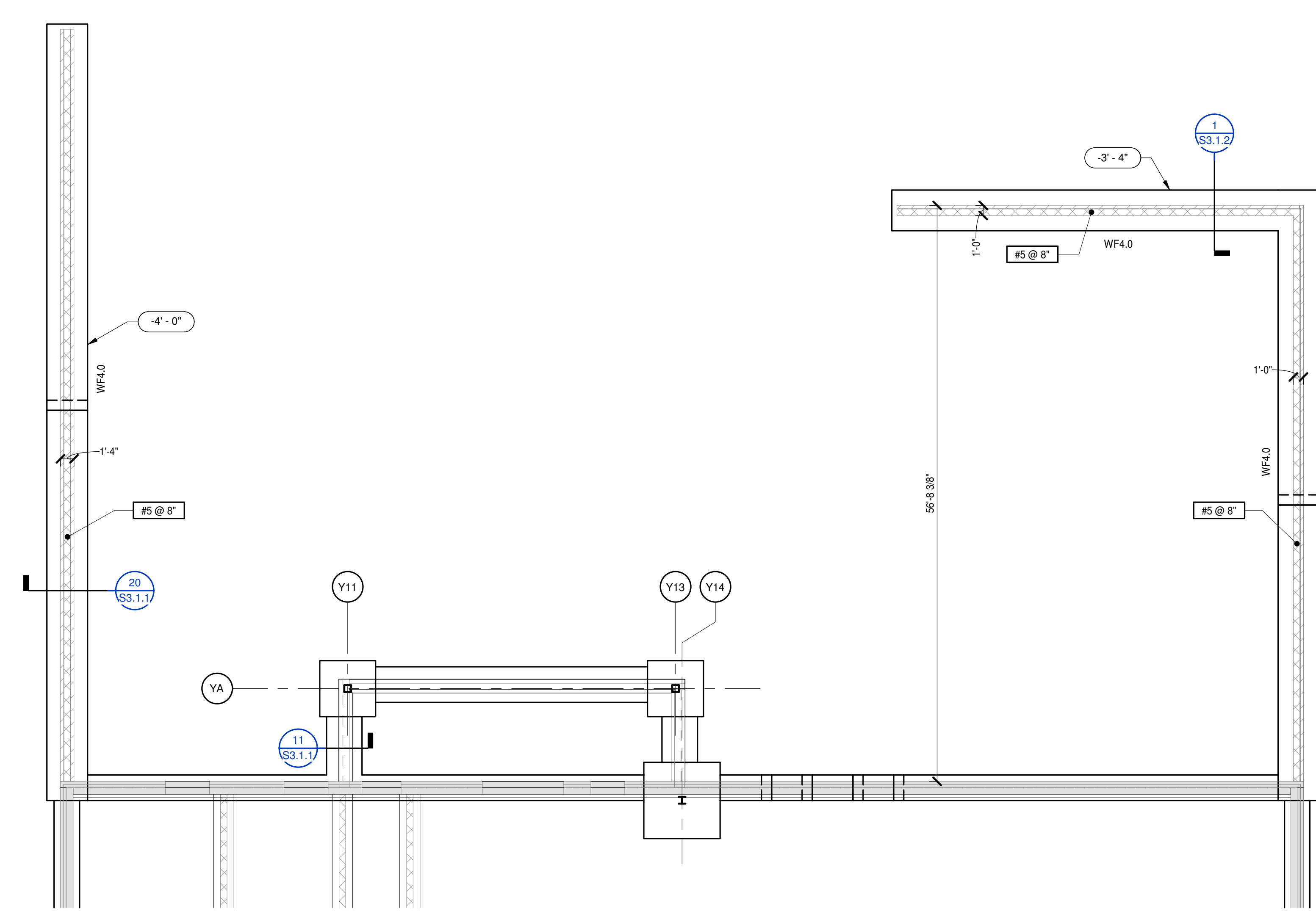
FOUNDATION PLAN - PART D



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**FOUNDATION PLAN - PART E**  
 1/8" = 1'-0"  
 NOTES:  
 1. REFER TO S1.1.1 FOR FOUNDATION PLAN NOTES.



**PARTIAL FOUNDATION PLAN - PART B**  
 1/8" = 1'-0"  
 NOTES:  
 1. REFER TO S1.1.1 FOR FOUNDATION PLAN NOTES.

FOUNDATION PLAN -  
 PART E & PARTIAL  
 PLAN - PART B

PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

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**MOSELEYARCHITECTS**  
 911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA, 27603  
 PHONE (919) 840-0051  
 MOSELEYARCHITECTS.COM

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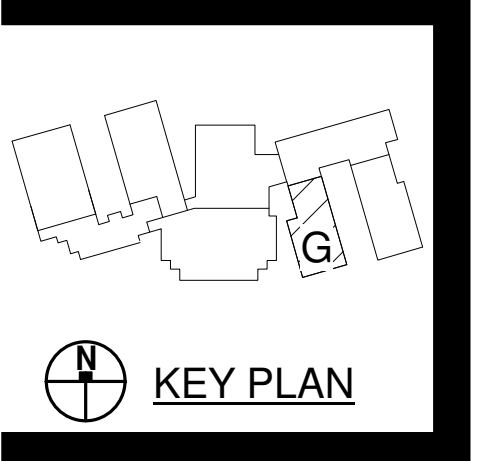
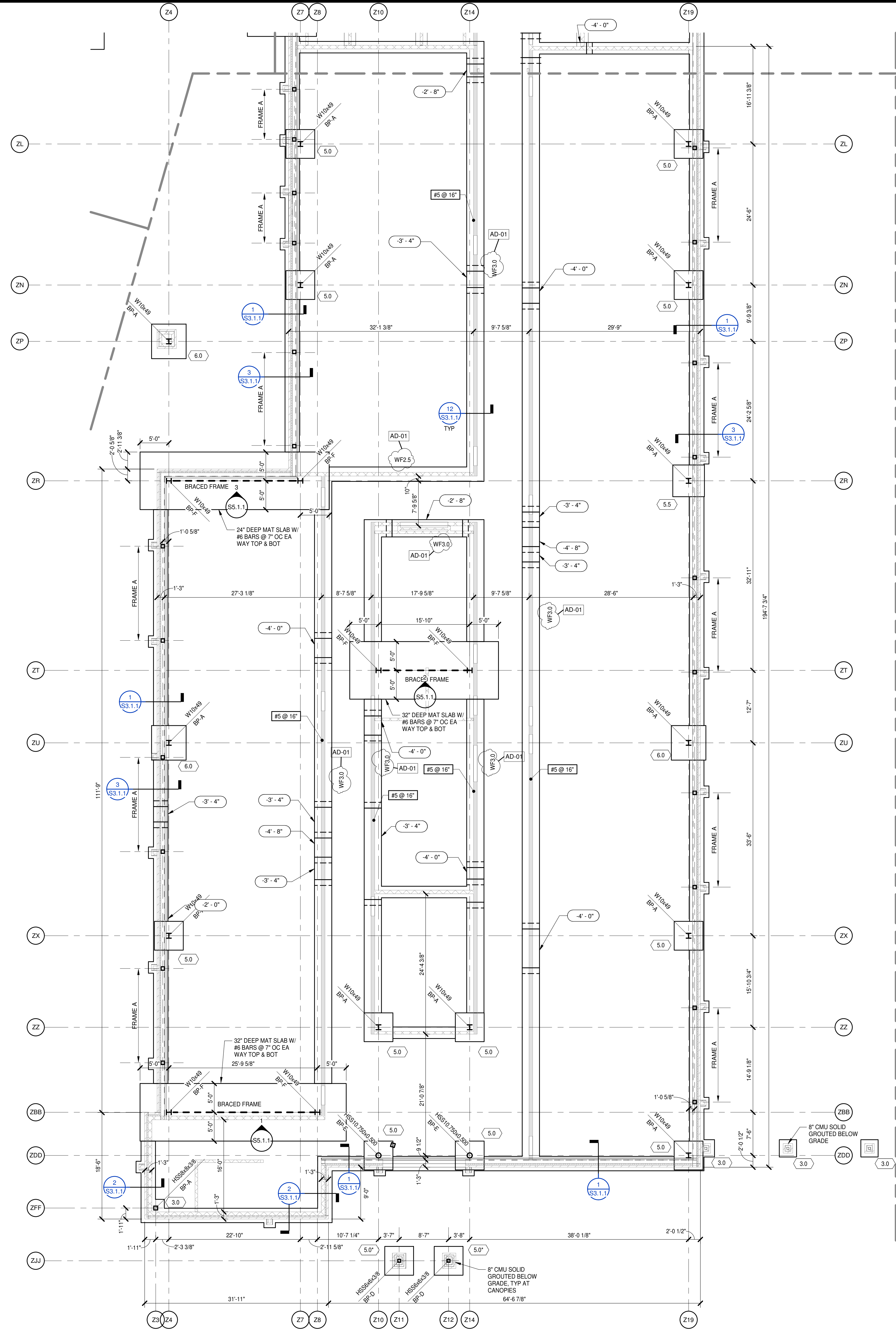




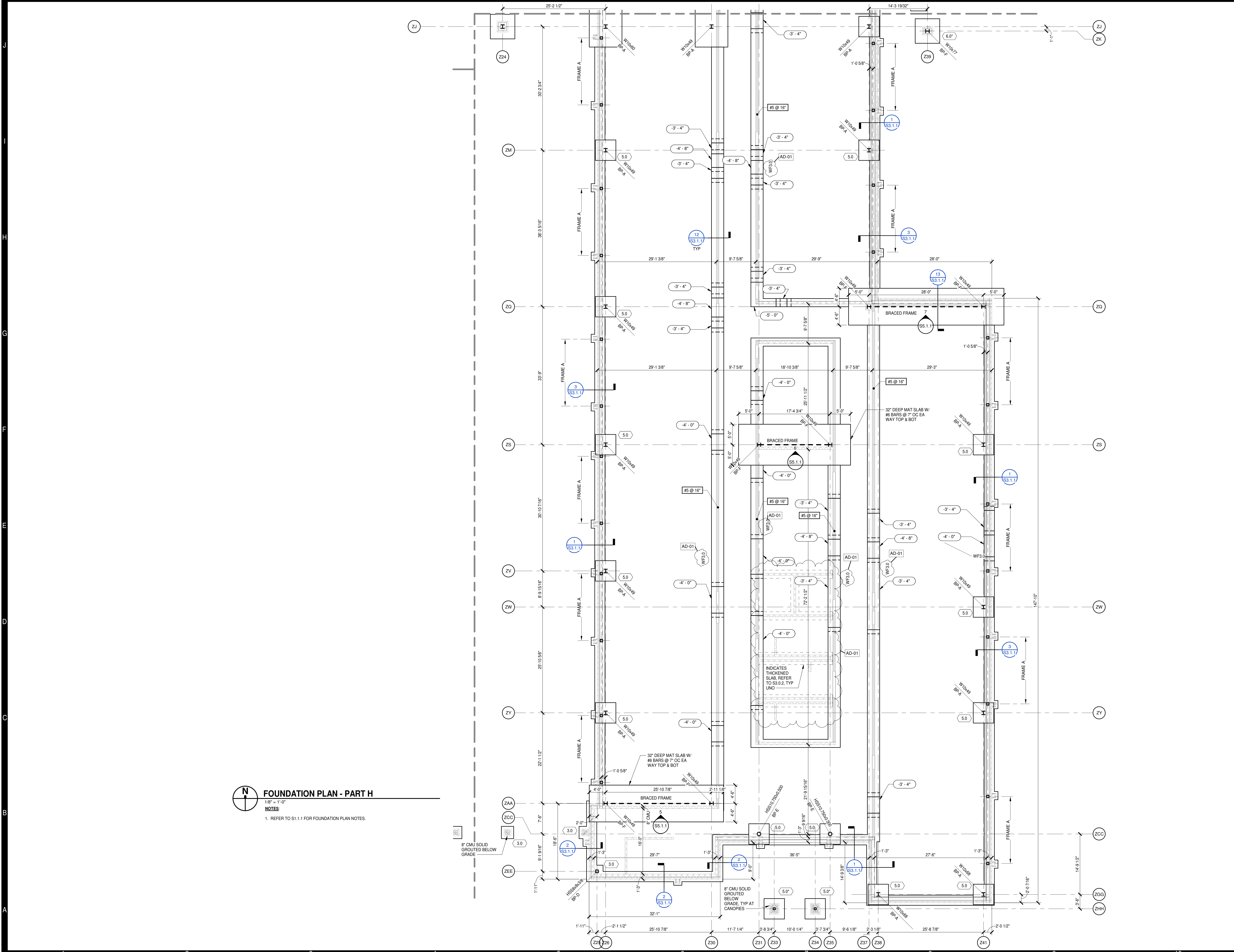


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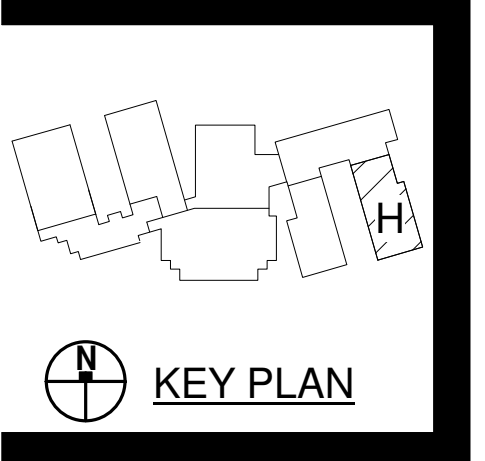
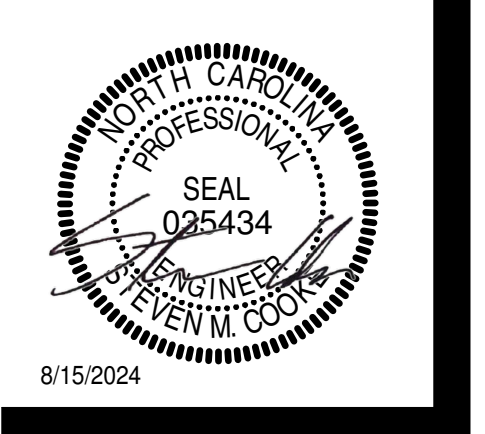
**FOUNDATION PLAN - PART G**  
 1/8" = 1'-0"  
 NOTES:  
 1. REFER TO S1.1.1 FOR FOUNDATION PLAN NOTES.



PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01



**FOUNDATION PLAN - PART H**  
 1/8" = 1'-0"  
 NOTES:  
 1. REFER TO S1.1.1 FOR FOUNDATION PLAN NOTES.

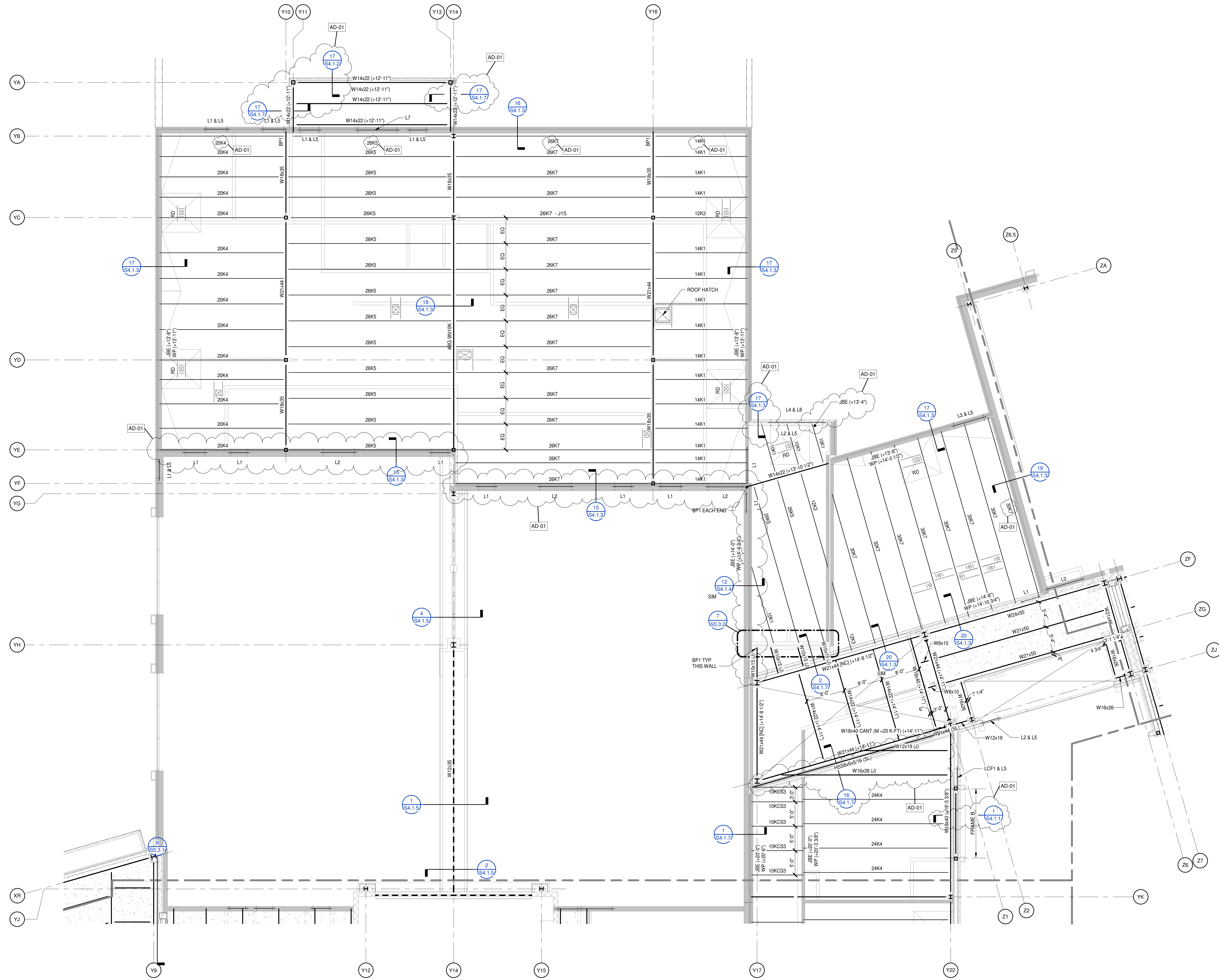


PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

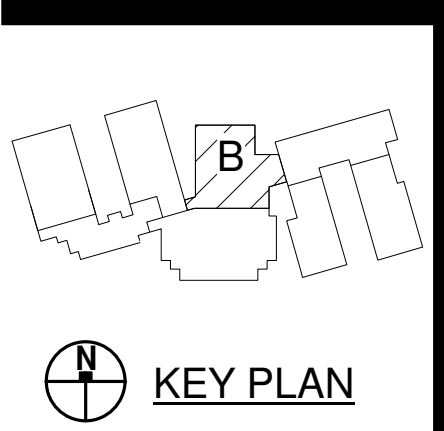








**SECOND FLOOR & LOW ROOF FRAMING PLAN - PART B**  
 1/8" = 1'-0"  
 NOTES:  
 1. REFER TO S2.1.1 FOR FRAMING PLAN NOTES.



**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

SECOND FLOOR & LOW ROOF FRAMING PLAN - PART B

**S2.1.2**

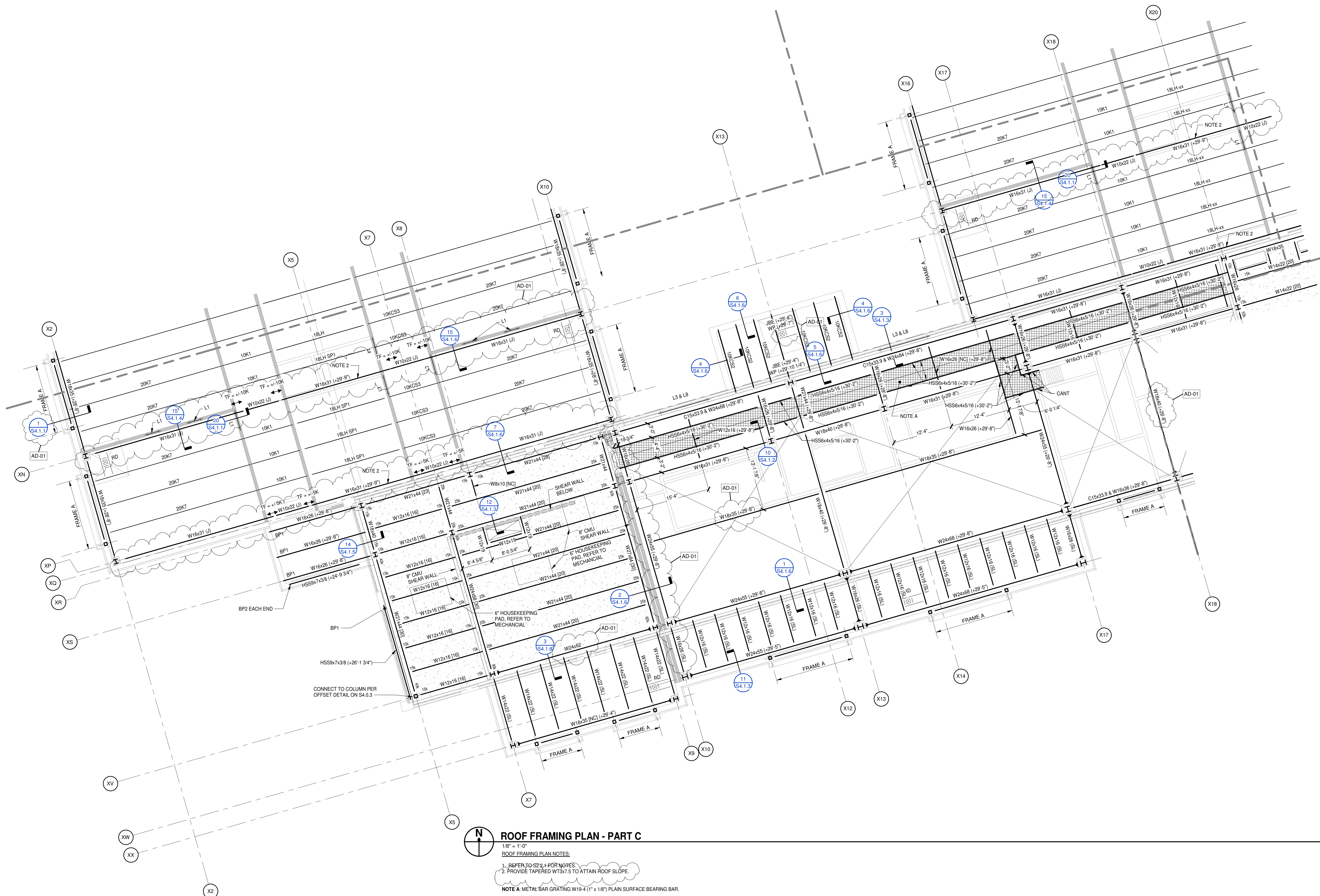




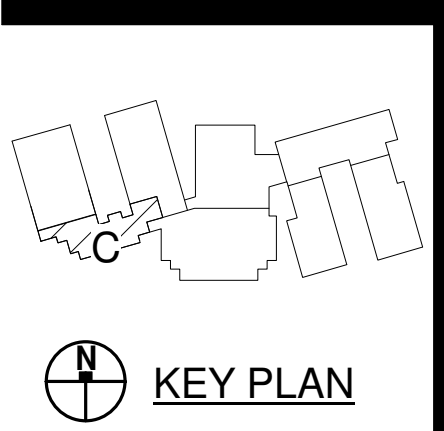








**ROOF FRAMING PLAN - PART C**  
 1/8" = 1'-0"  
 ROOF FRAMING PLAN NOTES:  
 1. REFER TO S2.2 FOR NOTES  
 2. PROVIDE TAPERED W16x31 TO ATTAIN ROOF SLOPE  
 NOTE A: METAL BAR GRATING W16x4 (1" x 18") PLAIN SURFACE BEARING BAR.

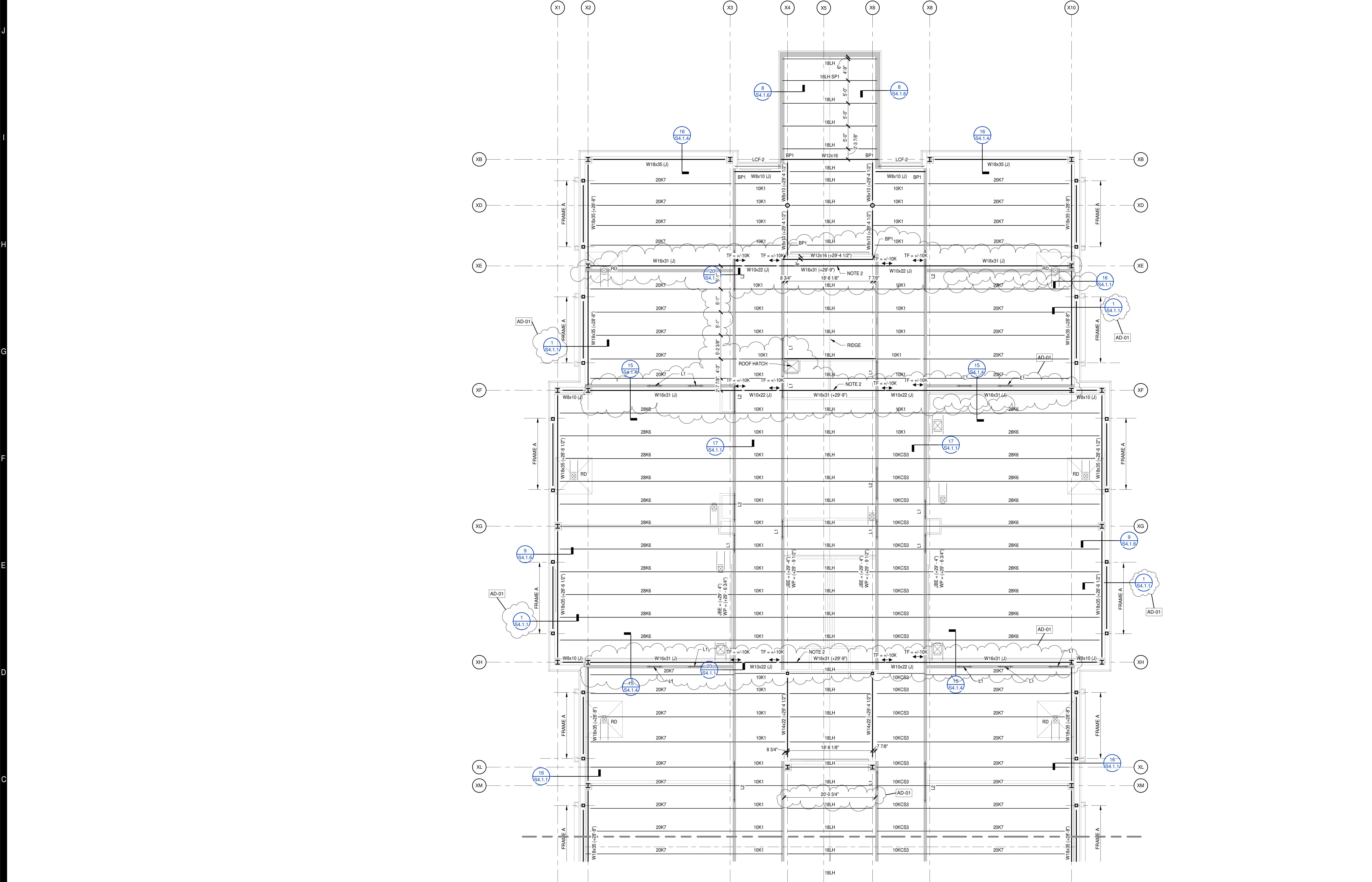


**PENDER COUNTY SCHOOLS K-8 SCHOOL**

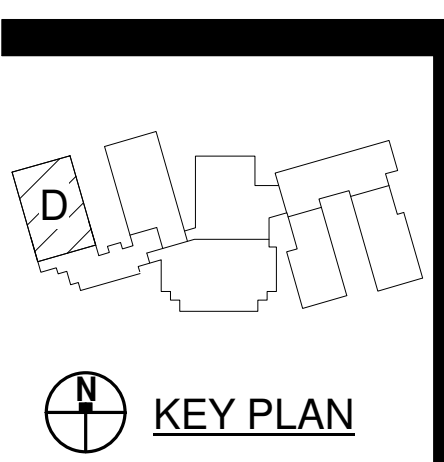
Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01





**ROOF FRAMING PLAN - PART D**  
 1/8" = 1'-0"  
 ROOF FRAMING PLAN NOTES:  
 1. REFER TO S2.2.1 FOR NOTES.  
 2. PROVIDE TAPERED WT3x7.5 TO ATTAIN ROOF SLOPE. AD-01

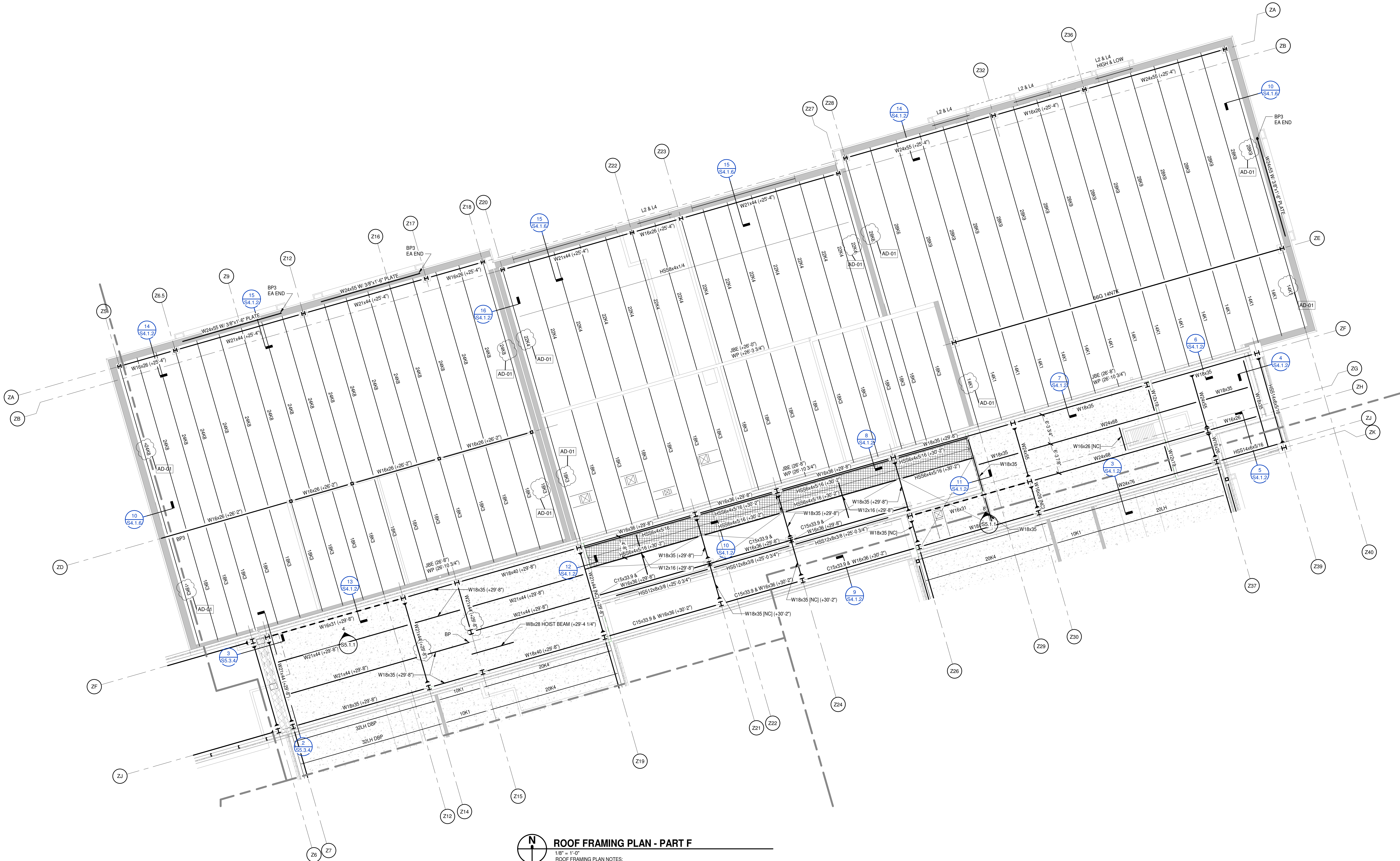


PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

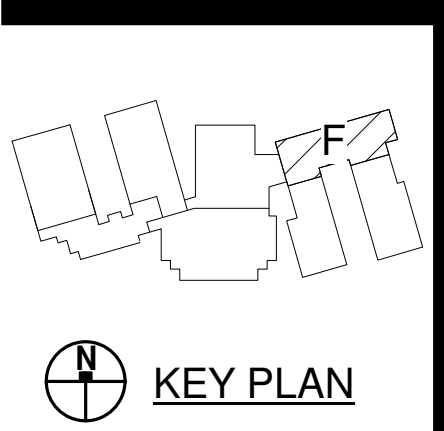








**ROOF FRAMING PLAN - PART F**  
 1/8" = 1'-0"  
 ROOF FRAMING PLAN NOTES:  
 1. REFER TO S2.2.1 FOR NOTES.  
 NOTE A: METAL BAR GRATING W19-4 (1" x 18") PLAIN SURFACE BEARING BAR.



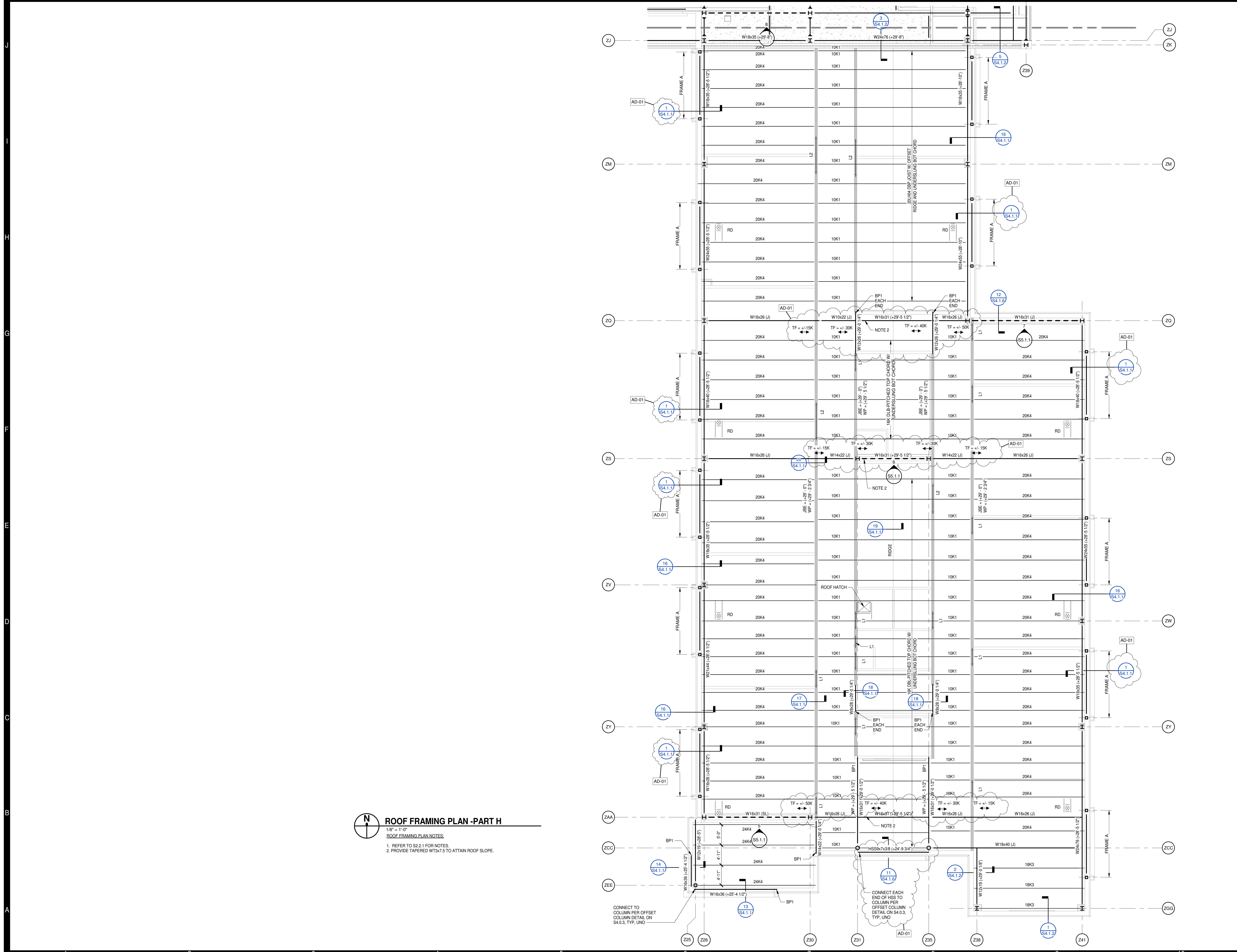
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 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01





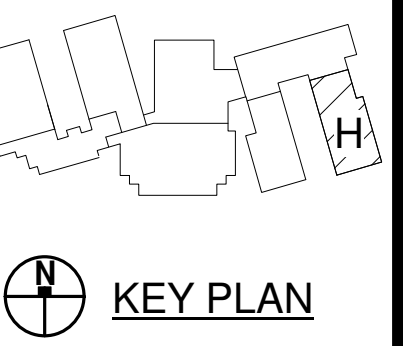
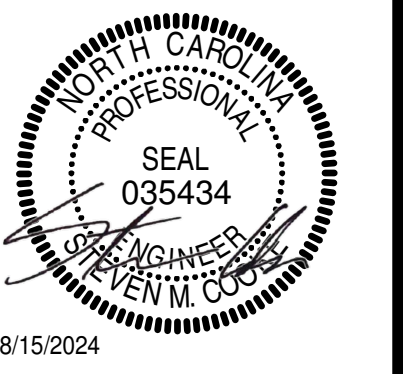
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**ROOF FRAMING PLAN -PART H**  
 1/8" = 1'-0"  
 ROOF FRAMING PLAN NOTES:  
 1. REFER TO S2.2.1 FOR NOTES.  
 2. PROVIDE TAPERED WT3x7.5 TO ATTAIN ROOF SLOPE.

CONNECT TO COLUMN PER OFFSET COLUMN DETAIL ON S4.0.3, TYP, UNO

CONNECT EACH END OF HSS TO COLUMN PER OFFSET COLUMN DETAIL ON S4.0.3, TYP, UNO



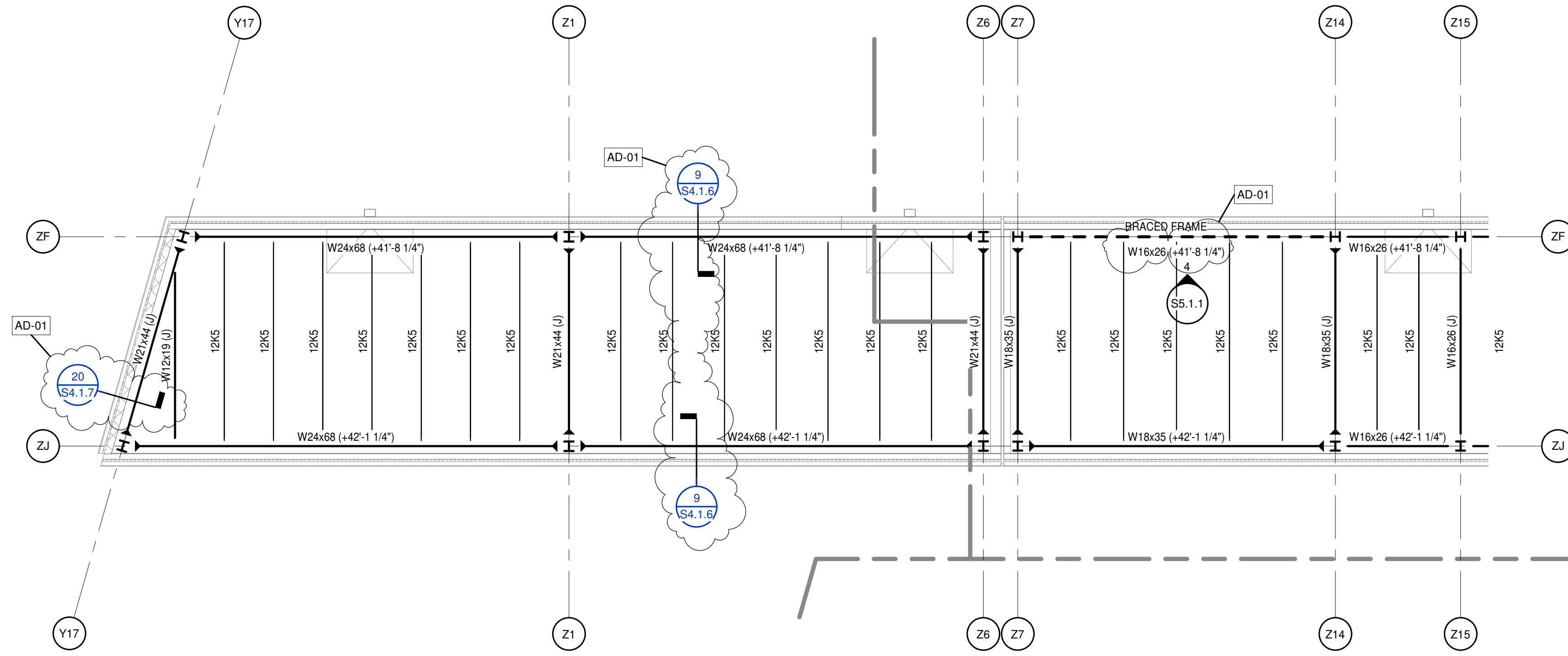
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PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

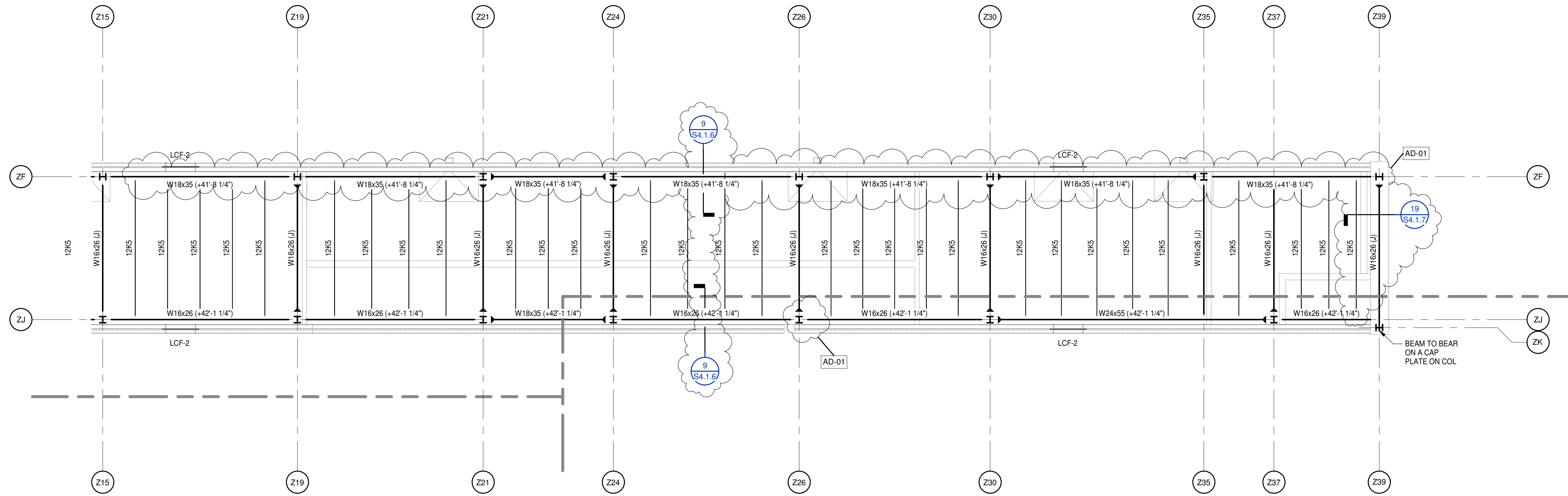




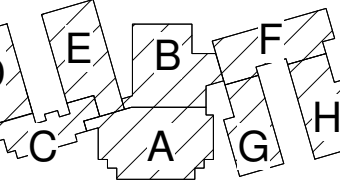
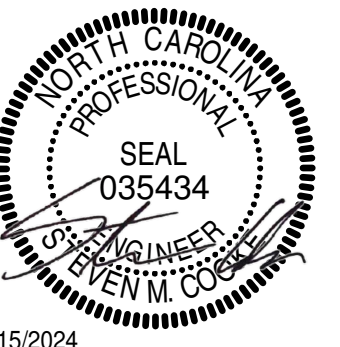
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**PENTHOUSE ROOF FRAMING PLAN - PART E AND F**  
 1/8" = 1'-0"  
 ROOF FRAMING PLAN NOTES:  
 1. REFER TO S2.2.1 FOR NOTES.



**PENTHOUSE ROOF FRAMING PLAN - PART F**  
 1/8" = 1'-0"  
 ROOF FRAMING PLAN NOTES:  
 1. REFER TO S2.2.1 FOR NOTES.



KEY PLAN

PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

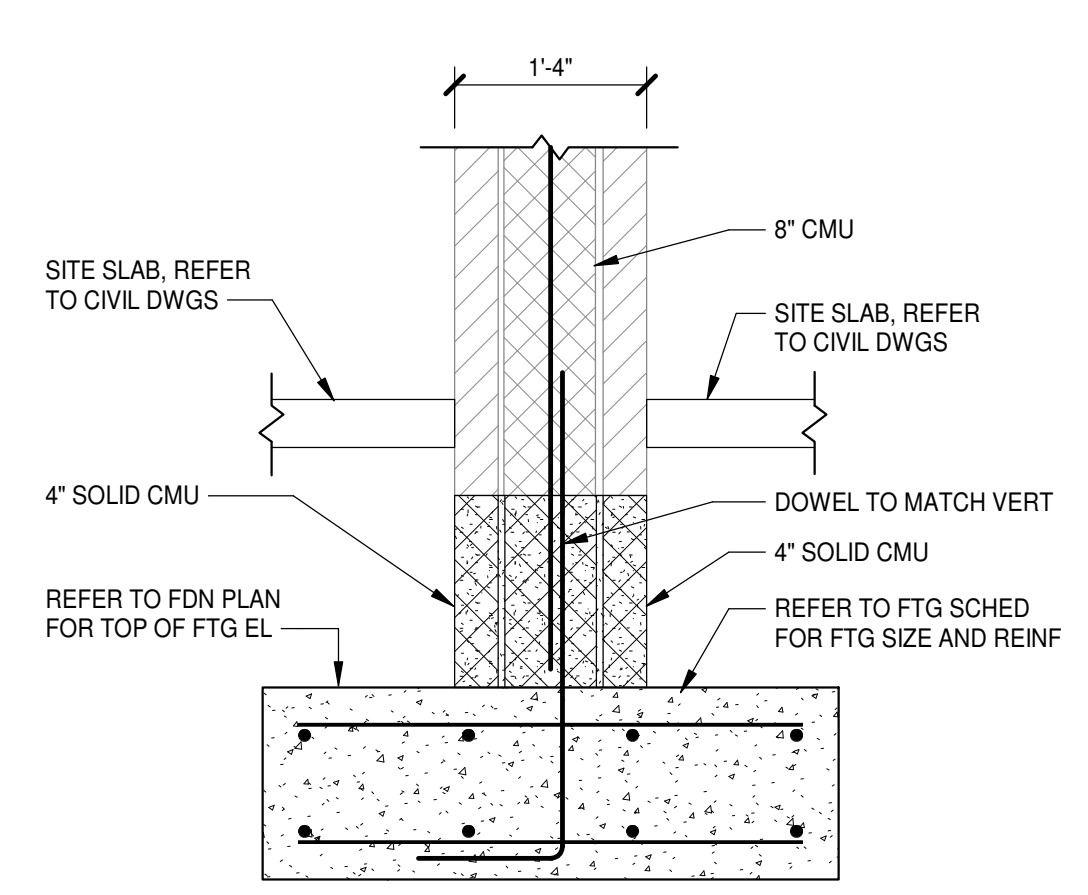




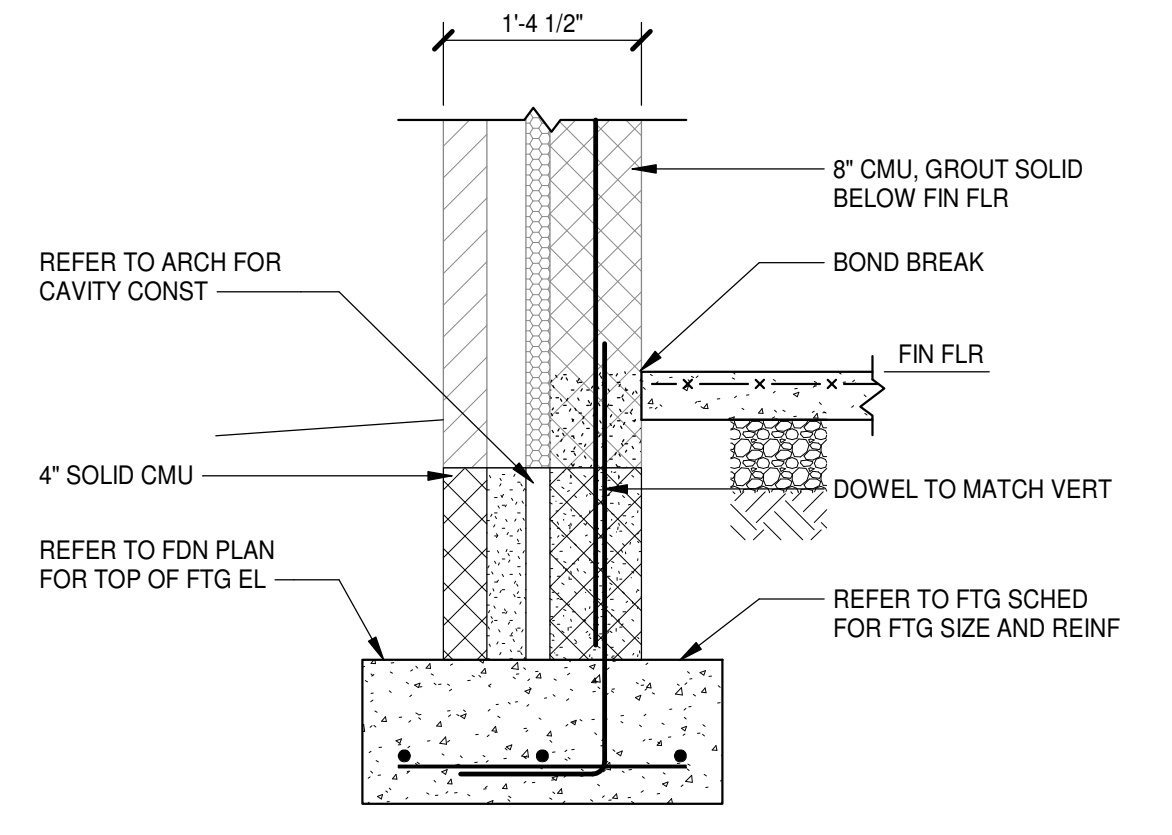
PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

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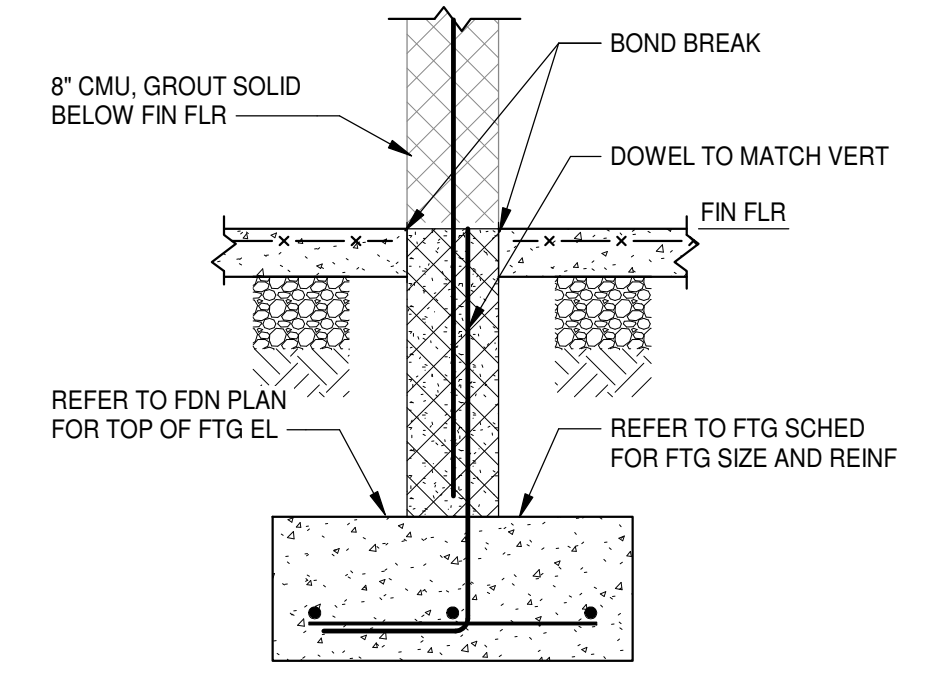
**20 SECTION**  
S1.1.5 | S3.1.1 | 3/4" = 1'-0"



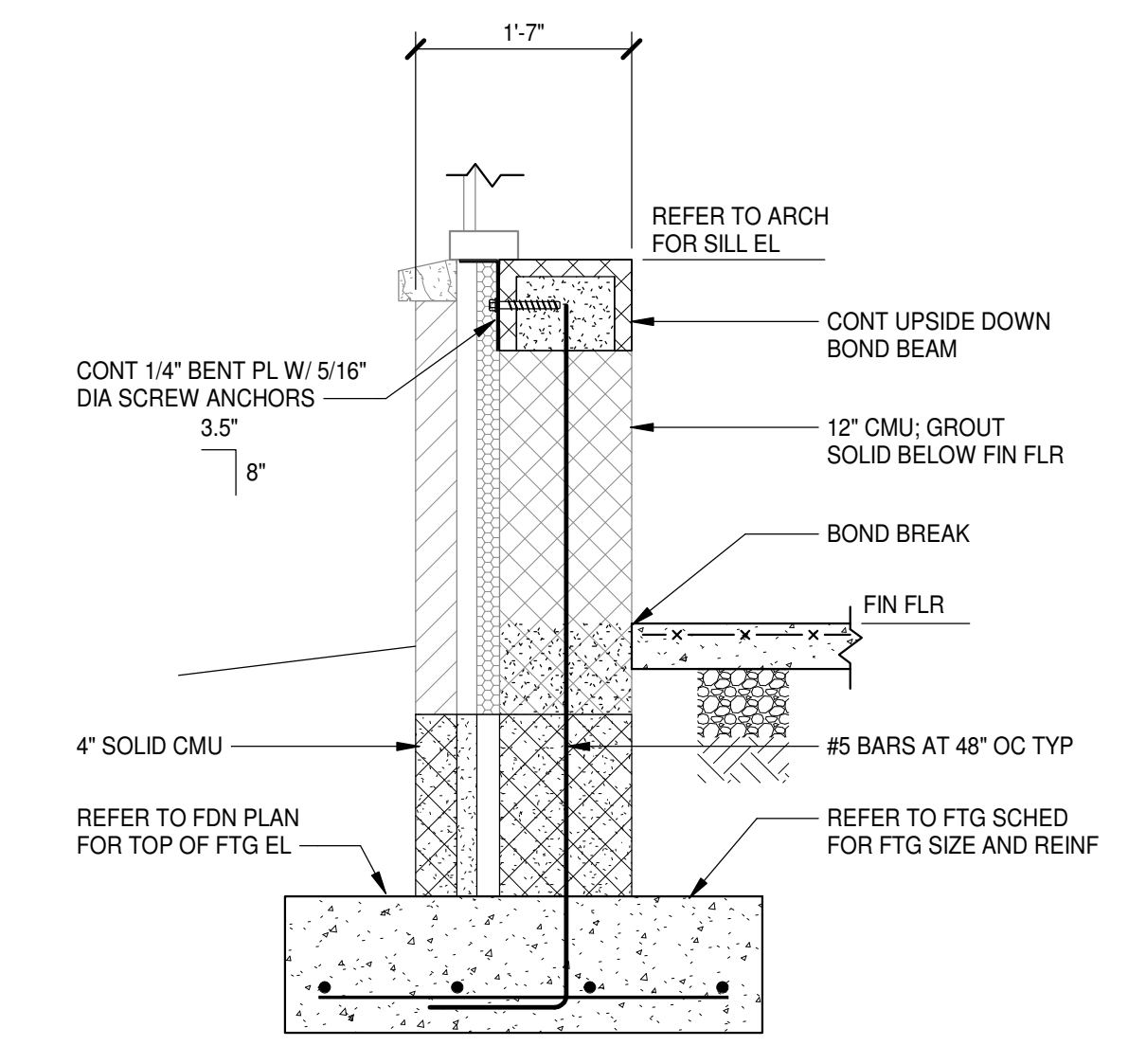
**16 SECTION**  
S1.1.3 | S3.1.1 | 3/4" = 1'-0"



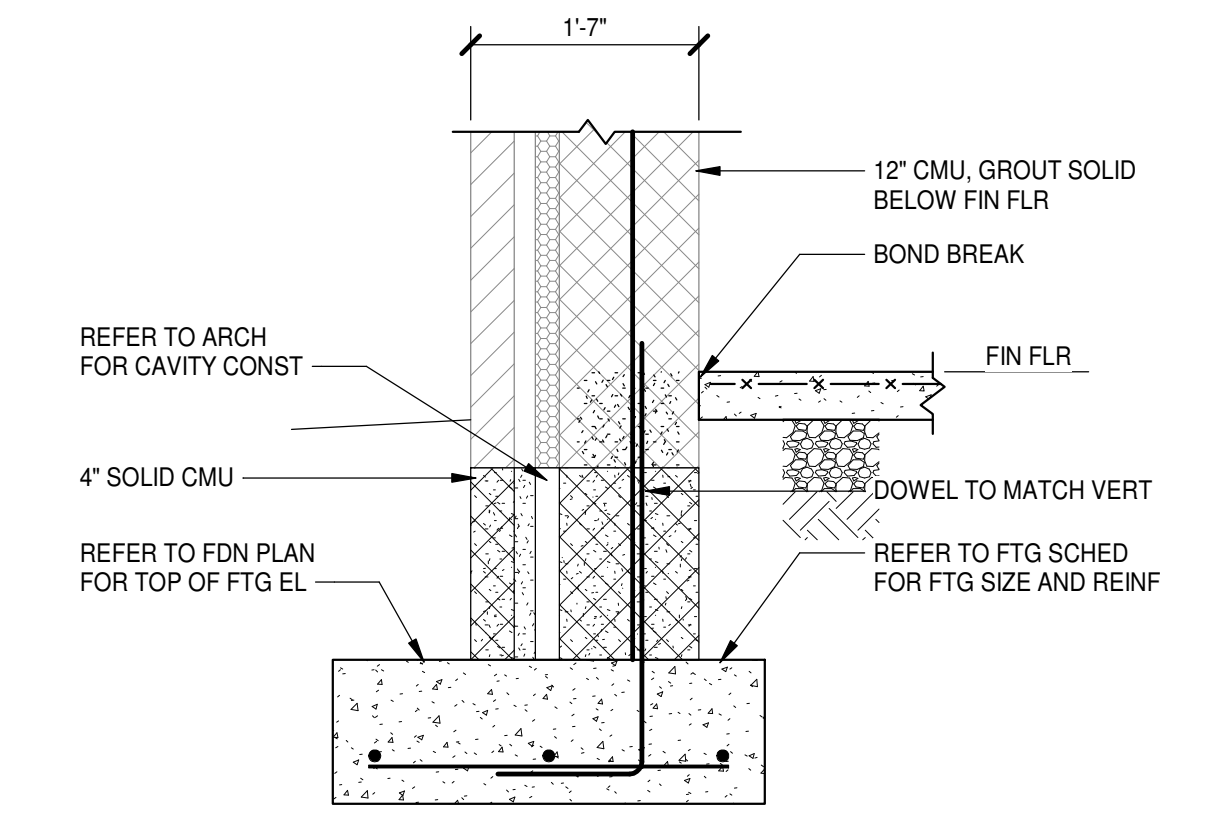
**12 SECTION**  
S1.1.3 | S3.1.1 | 3/4" = 1'-0"



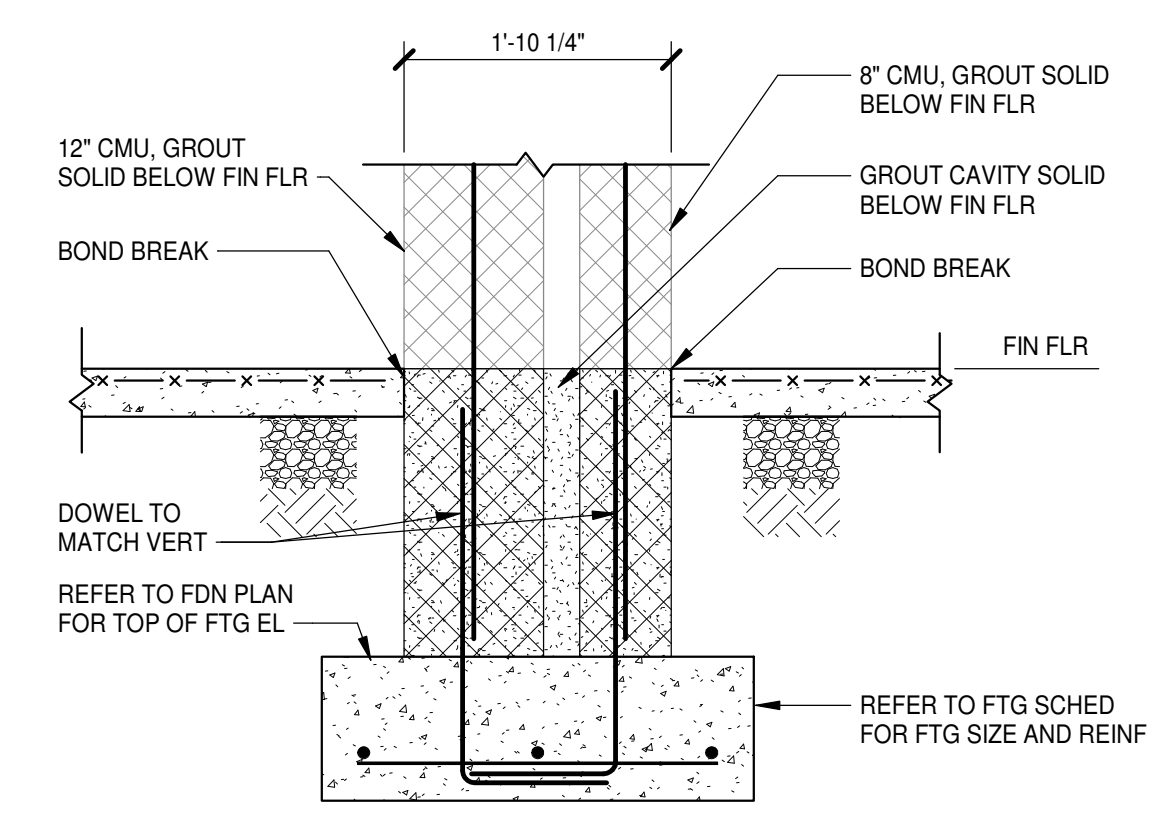
**8 SECTION**  
S1.1.2 | S3.1.1 | 3/4" = 1'-0"



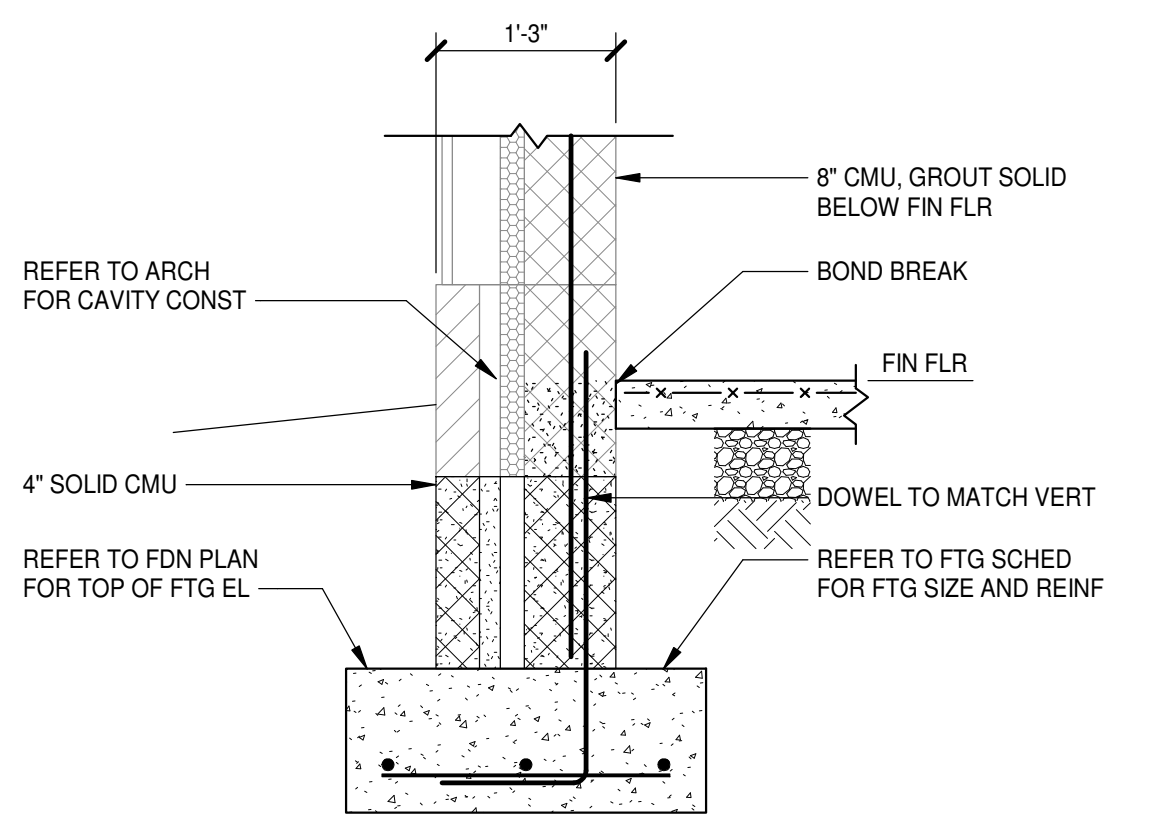
**4 SECTION**  
S1.1.1 | S3.1.1 | 3/4" = 1'-0"



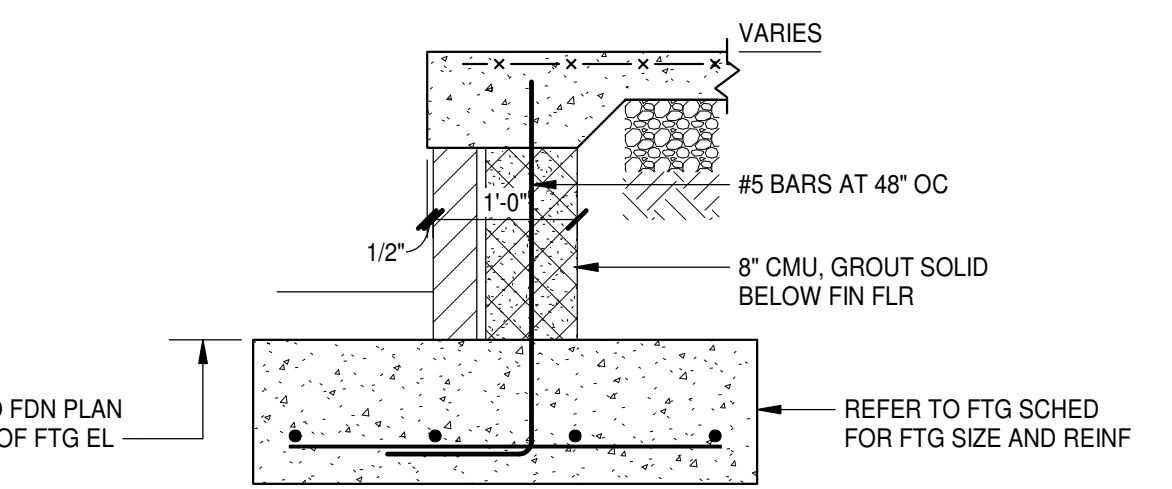
**19 SECTION**  
S1.1.6 | S3.1.1 | 3/4" = 1'-0"



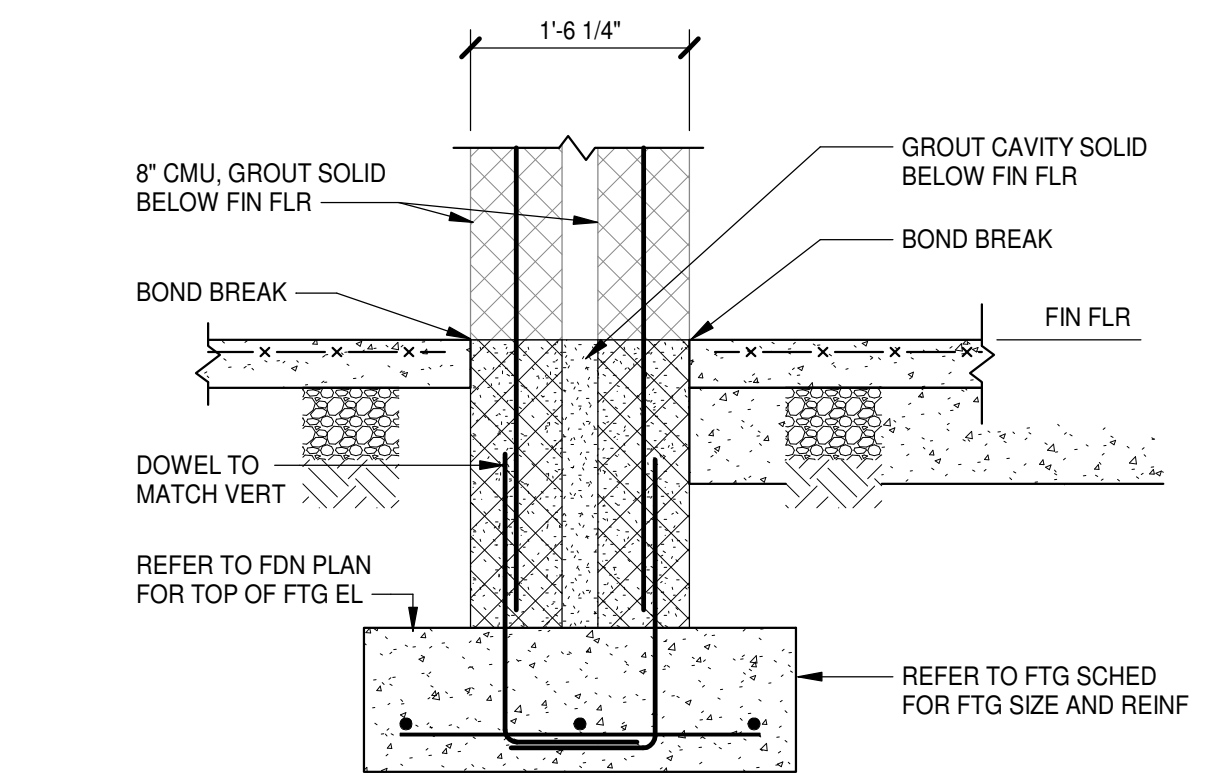
**15 SECTION**  
S1.1.3 | S3.1.1 | 3/4" = 1'-0"



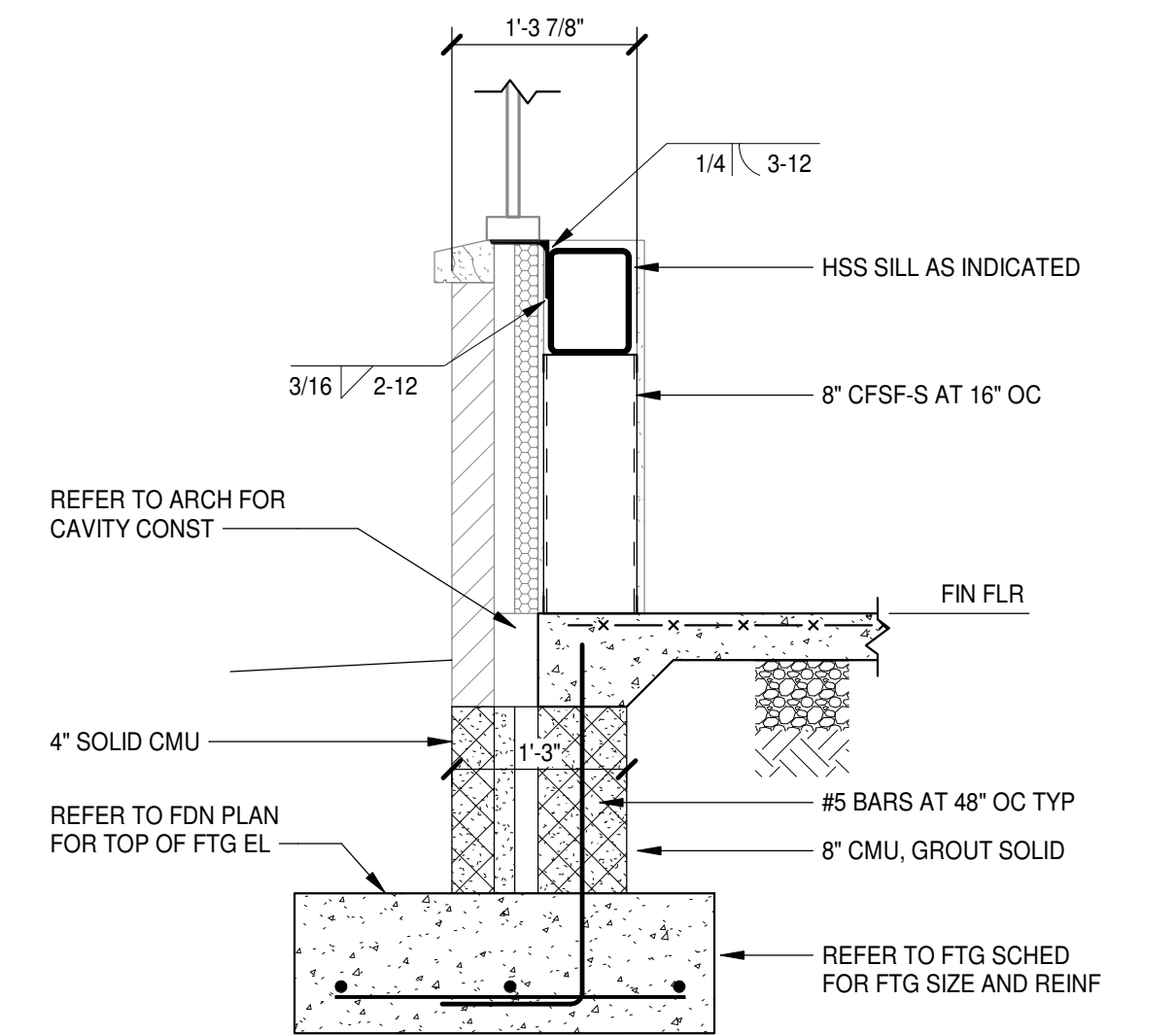
**11 SECTION**  
S1.1.2 | S3.1.1 | 3/4" = 1'-0"



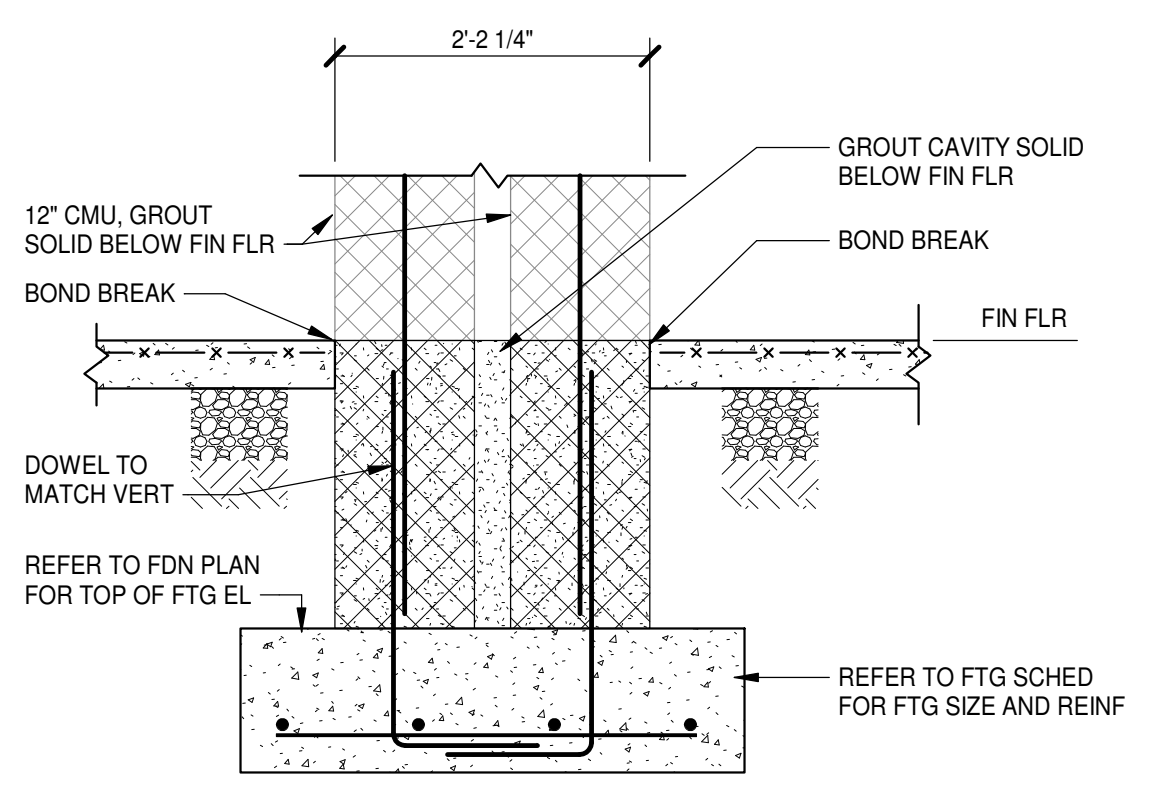
**7 SECTION**  
S1.1.1 | S3.1.1 | 3/4" = 1'-0"



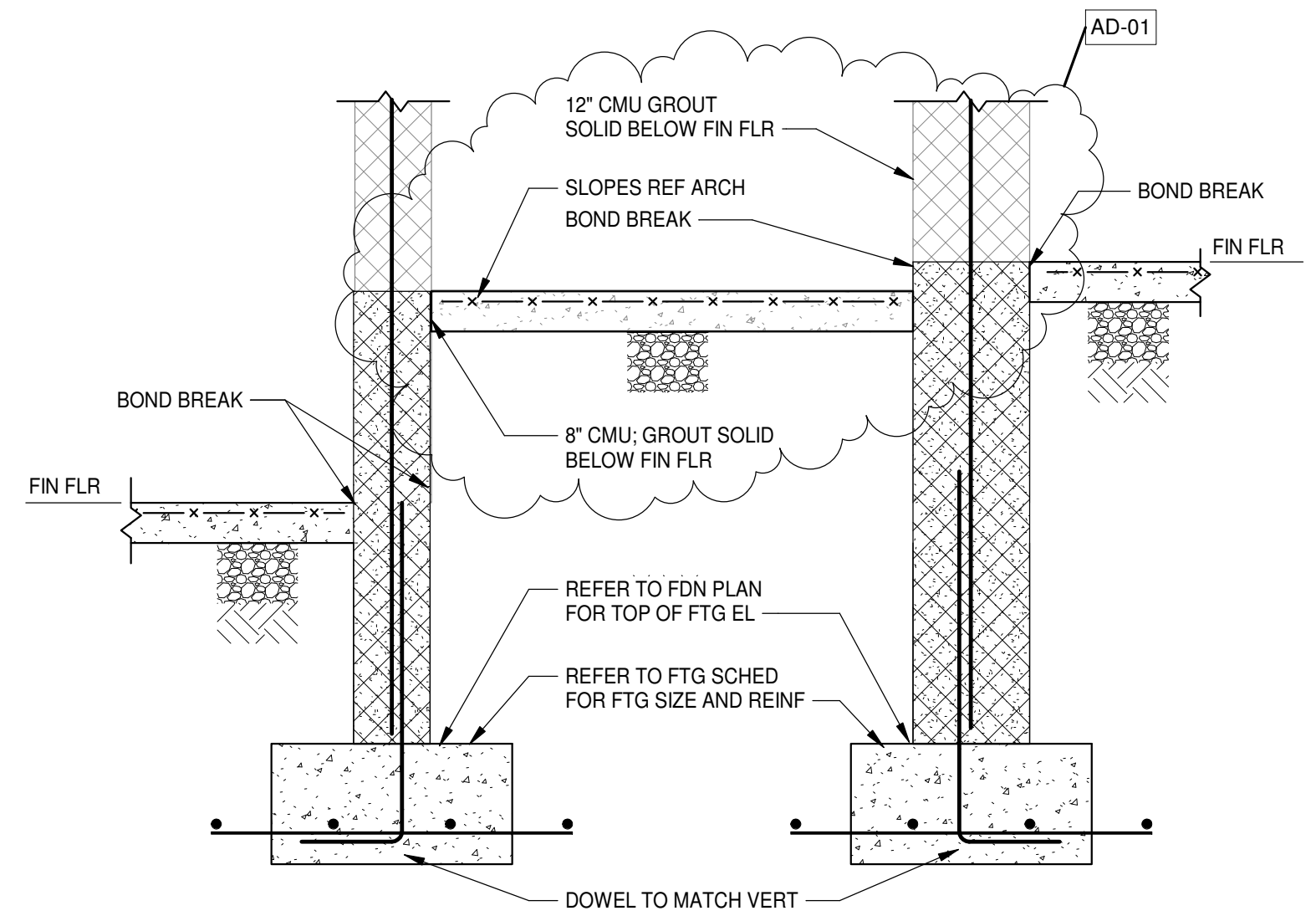
**3 SECTION**  
S1.1.1 | S3.1.1 | 3/4" = 1'-0"



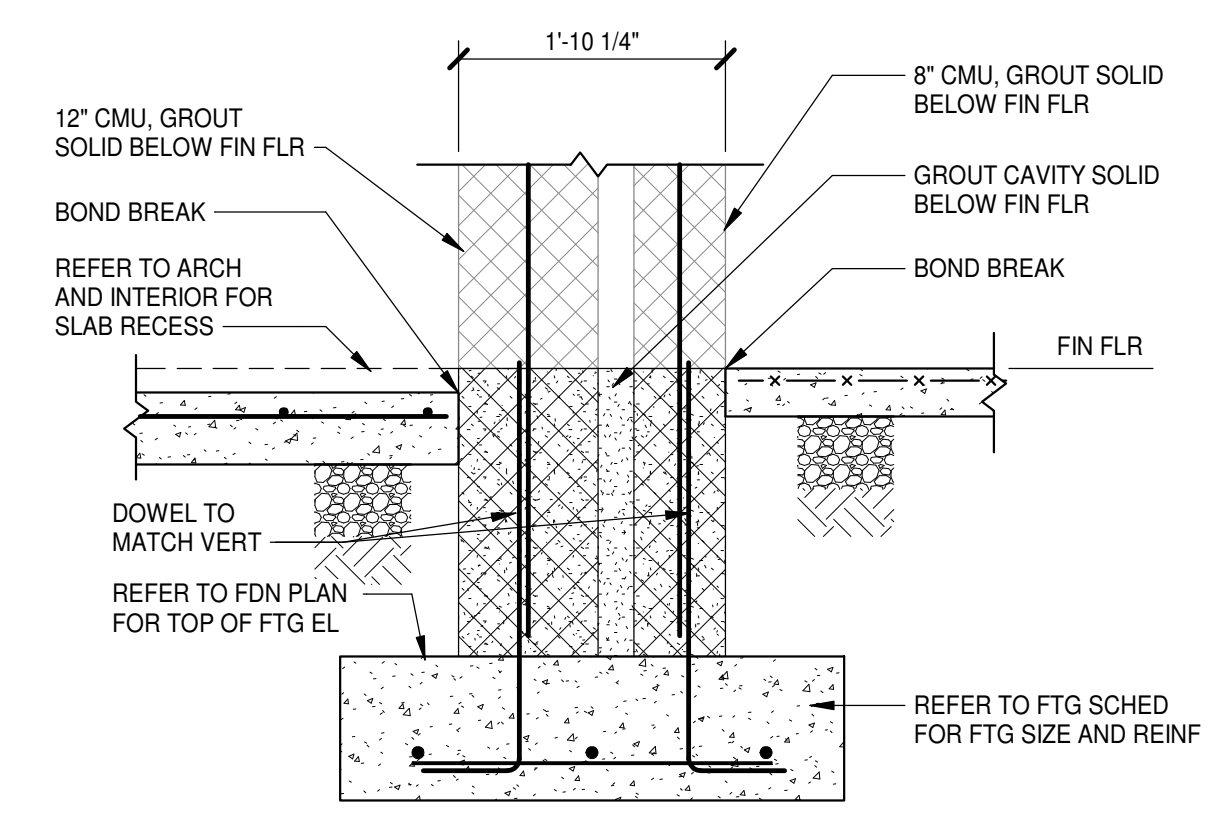
**18 SECTION**  
S1.1.6 | S3.1.1 | 3/4" = 1'-0"



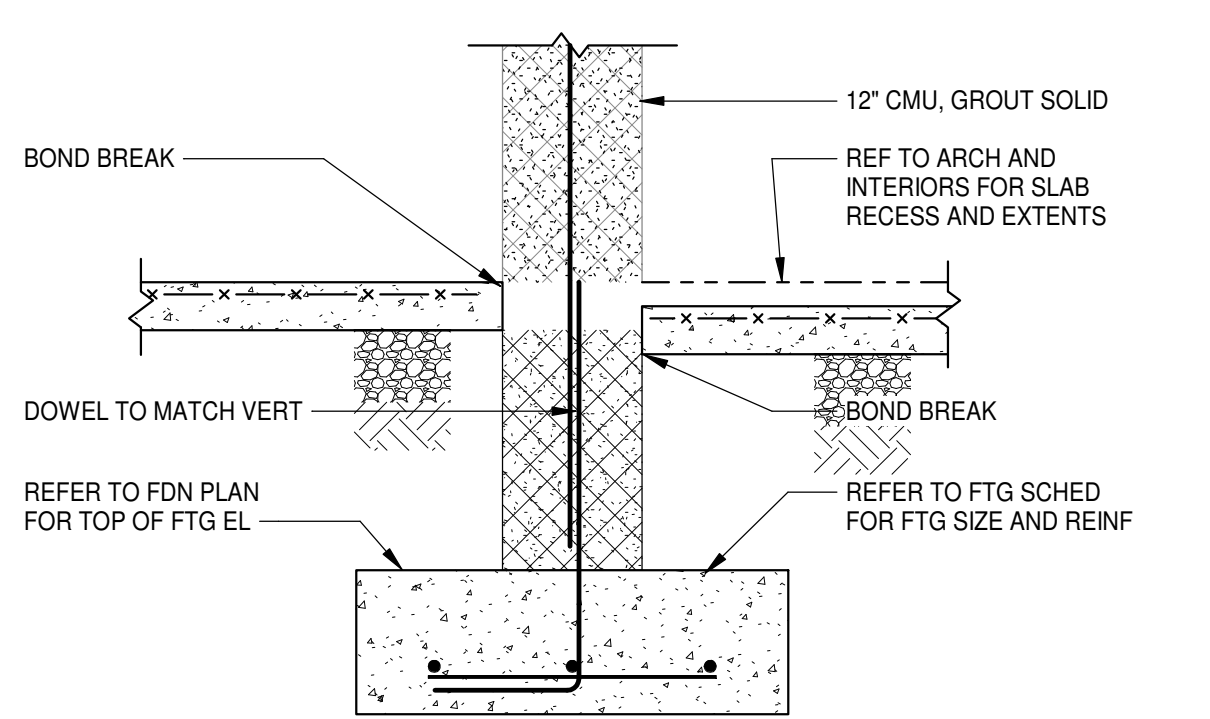
**14 SECTION**  
S1.1.1 | S3.1.1 | 3/4" = 1'-0"



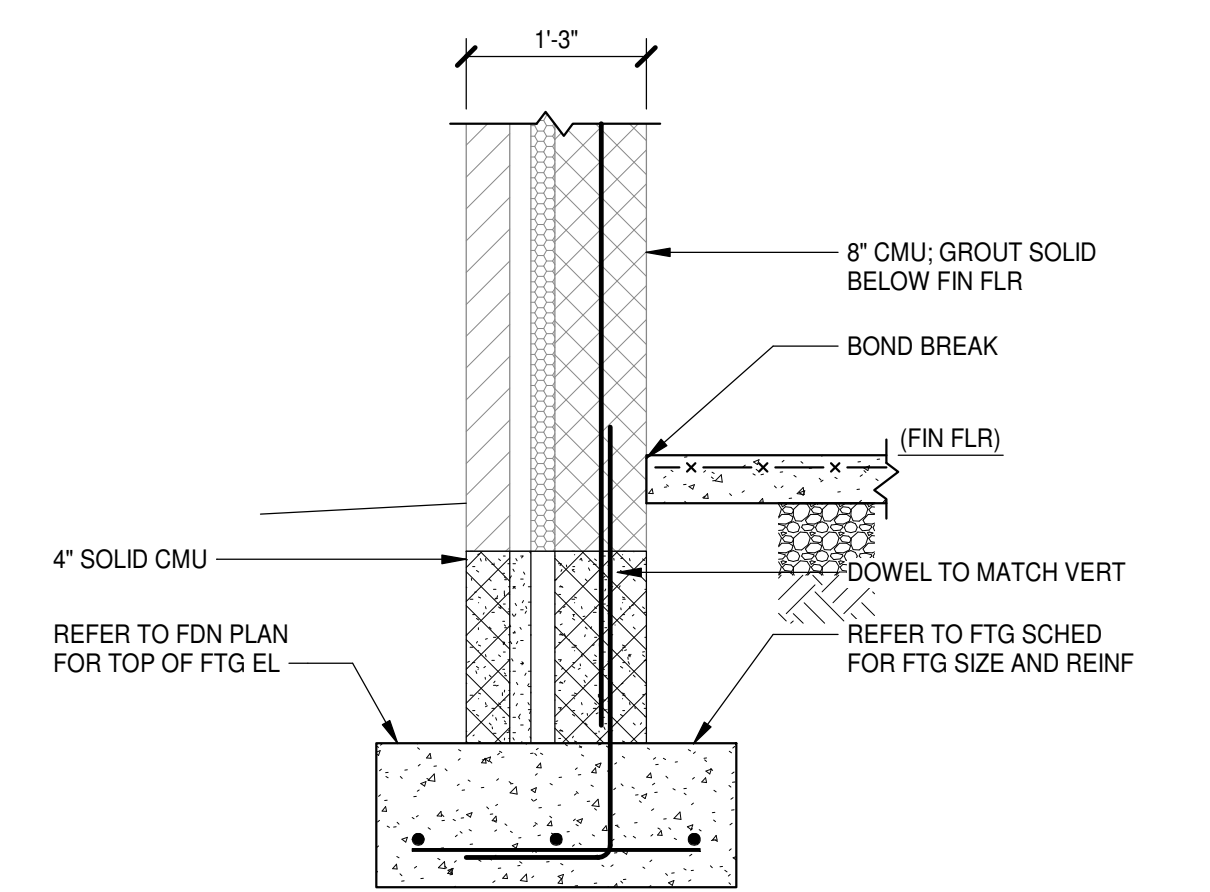
**10 SECTION**  
S1.1.1 | S3.1.1 | 3/4" = 1'-0"



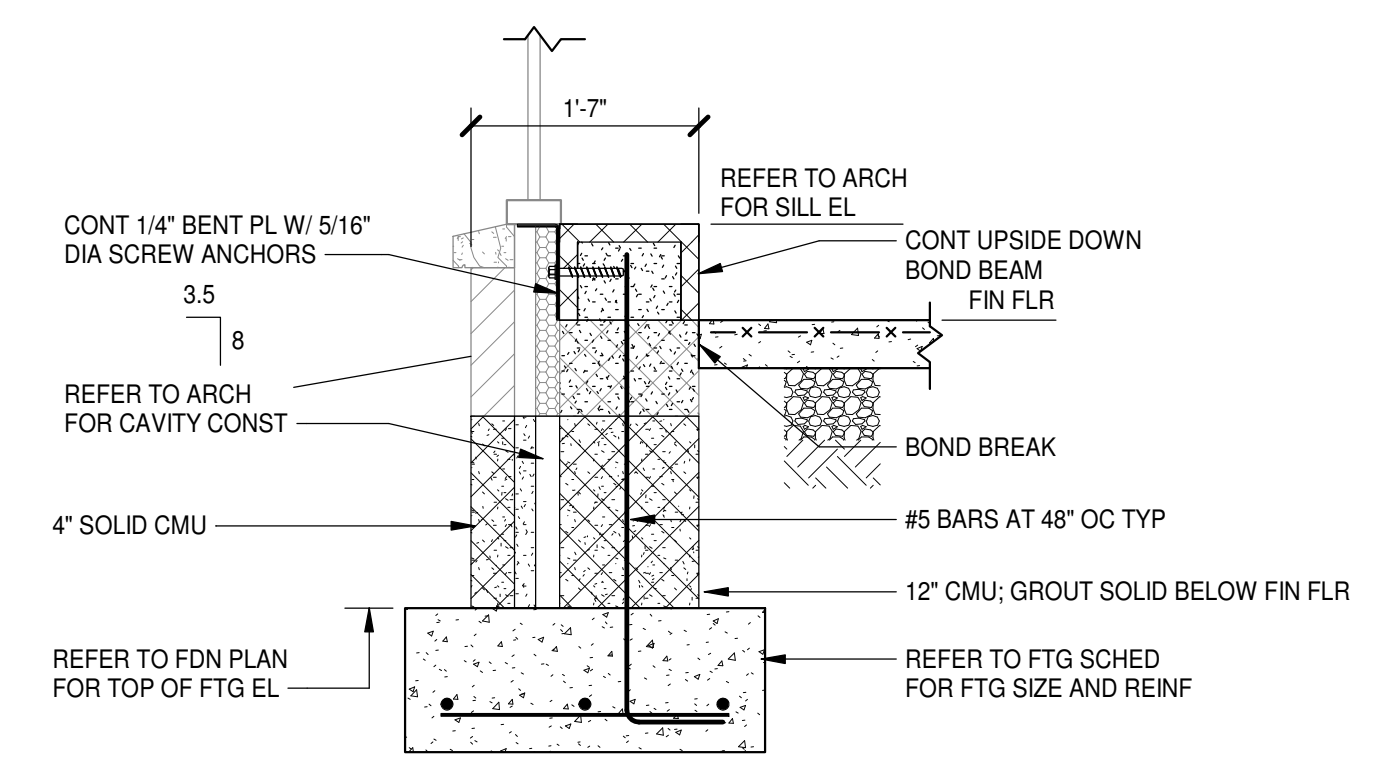
**6 SECTION**  
S1.1.1 | S3.1.1 | 3/4" = 1'-0"



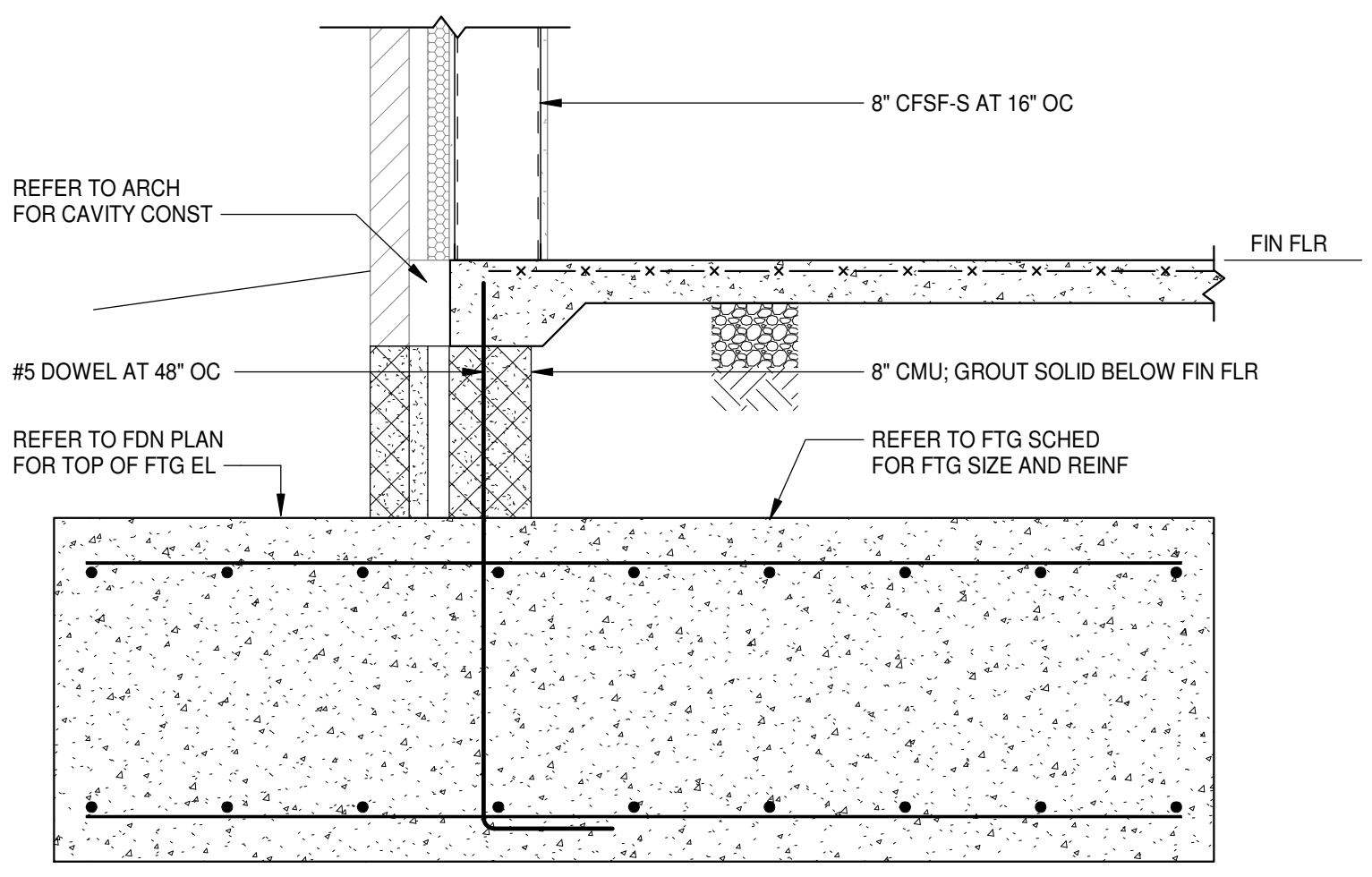
**2 SECTION**  
S1.1.1 | S3.1.1 | 3/4" = 1'-0"



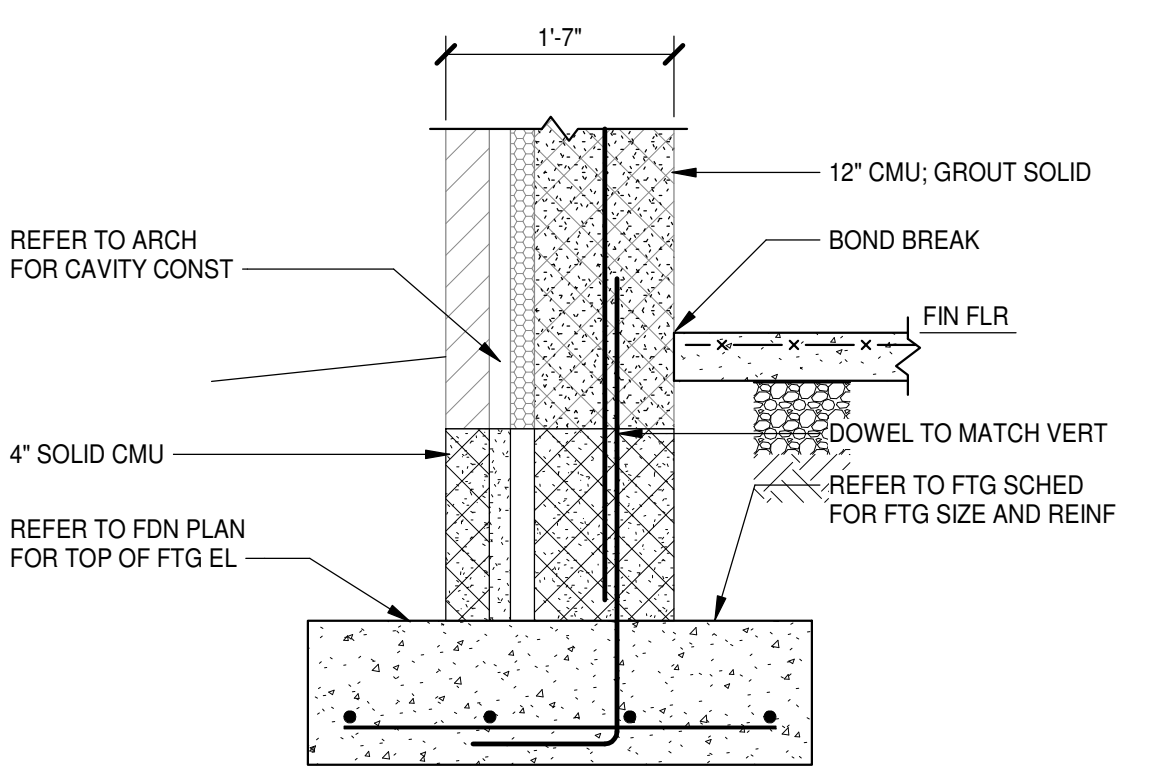
**17 SECTION**  
S1.1.6 | S3.1.1 | 3/4" = 1'-0"



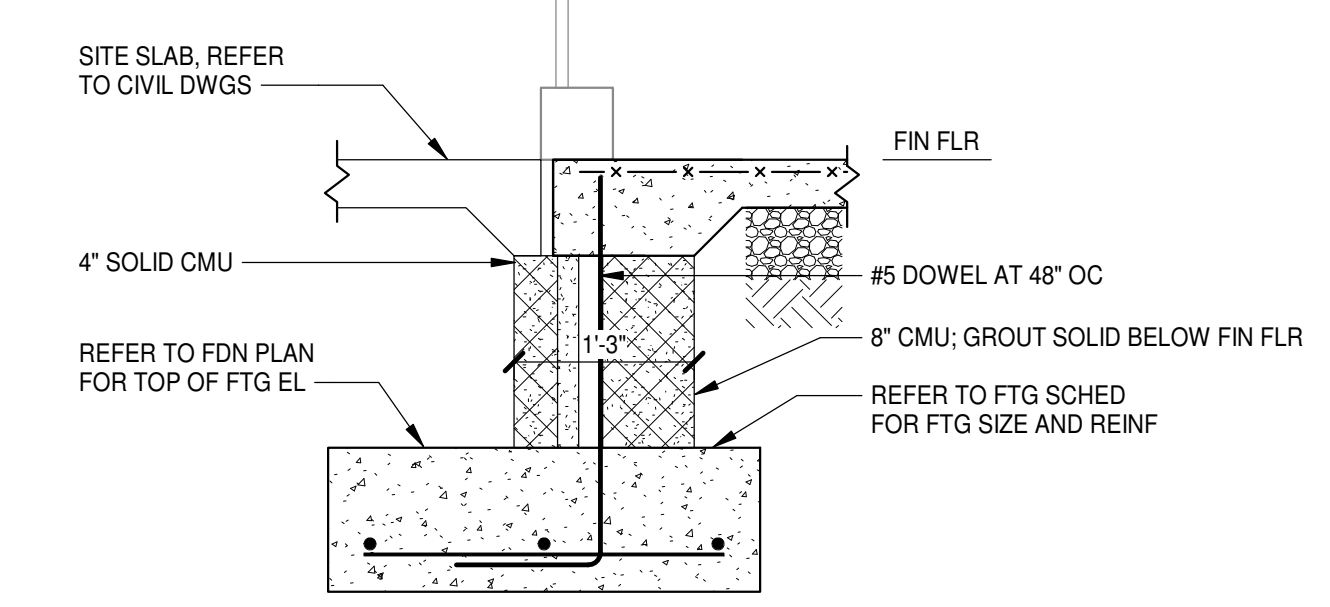
**13 SECTION**  
S1.1.8 | S3.1.1 | 3/4" = 1'-0"



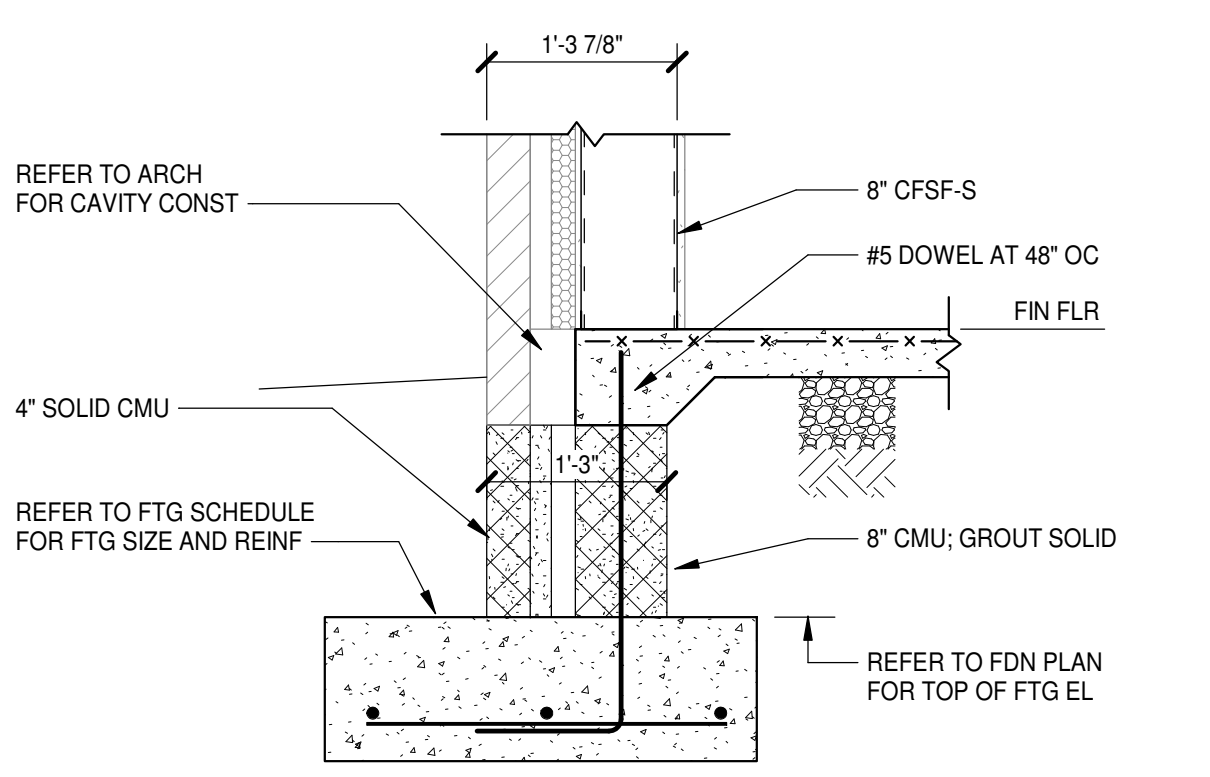
**9 SECTION**  
S1.1.2 | S3.1.1 | 3/4" = 1'-0"



**5 SECTION**  
S1.1.1 | S3.1.1 | 3/4" = 1'-0"



**1 SECTION**  
S1.1.1 | S3.1.1 | 3/4" = 1'-0"



8/15/2024 2:48:25 PM

1

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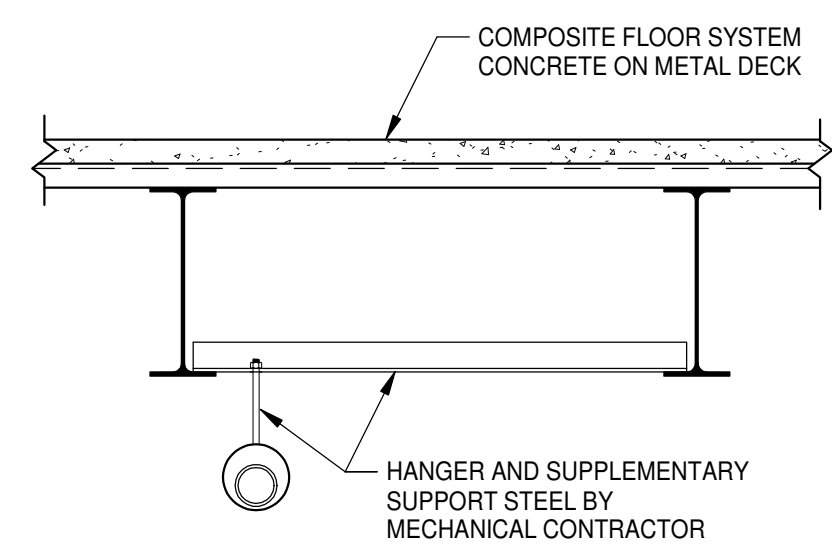
7

8

9

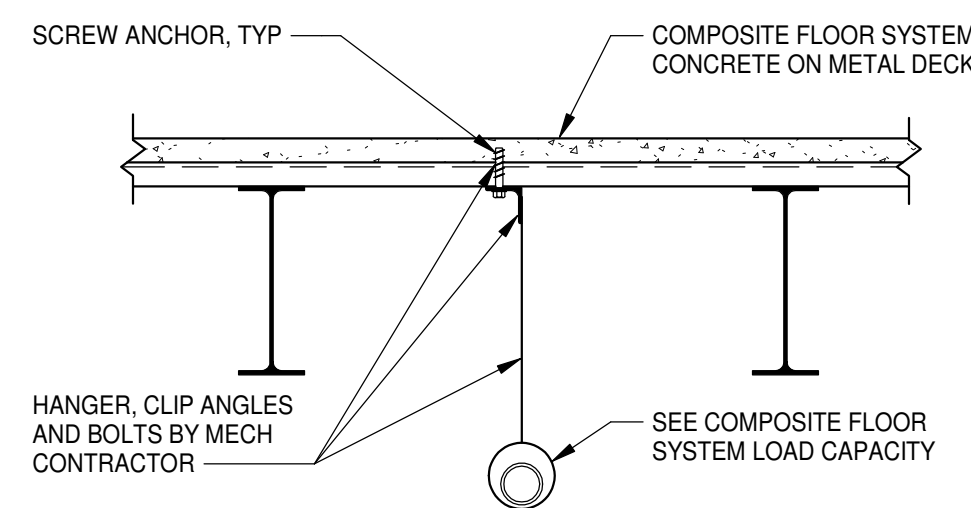
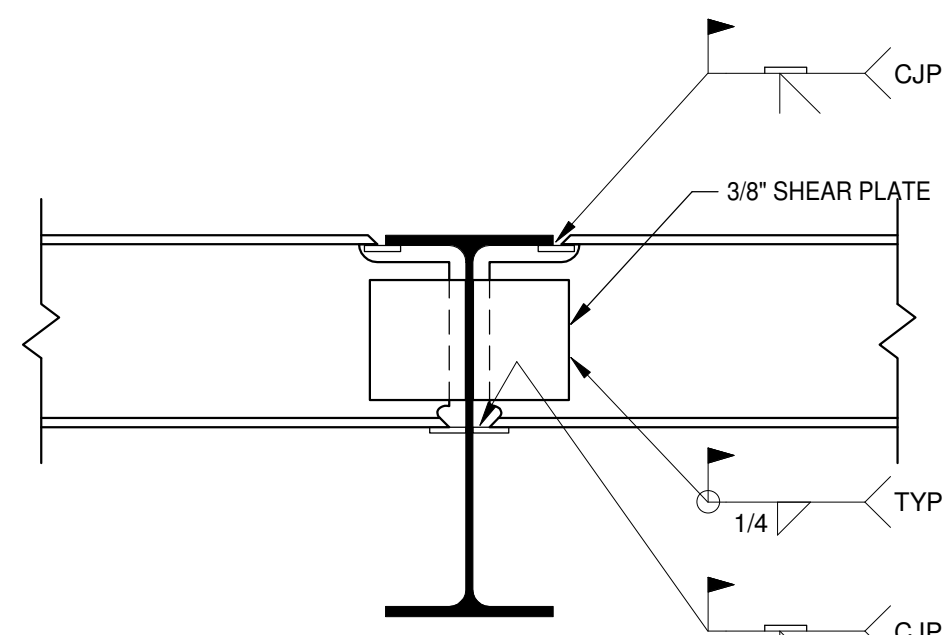
10





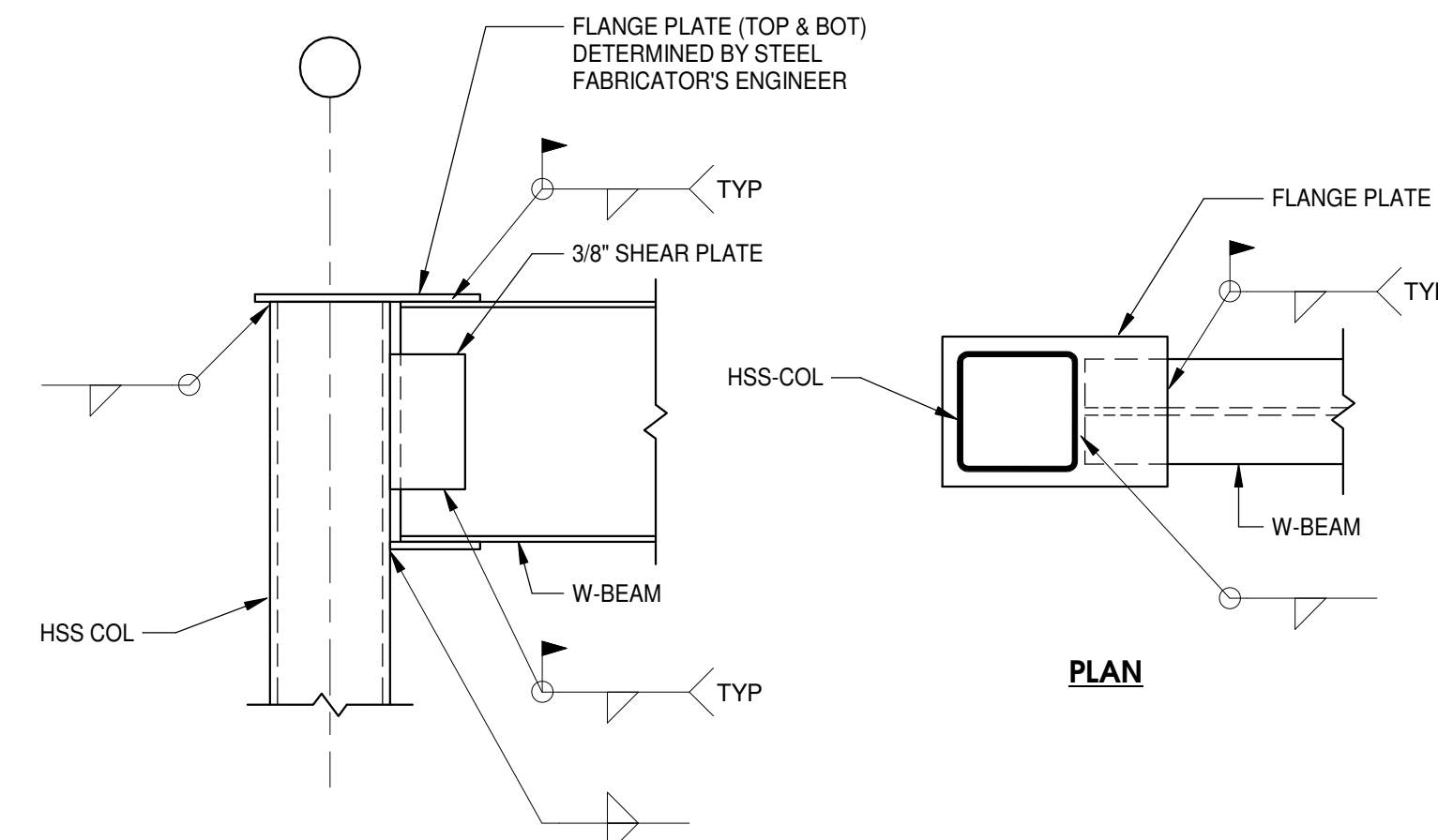
**NOTES:**  
 1. USE SUPPLEMENTAL SUPPORT STEEL FOR 6" DIA PIPE AND LARGER EXCEPT FOR 6" DIA ROOF LEADER.  
 2. IF SUPPLEMENTARY STEEL IS NOT IN PLACE BEFORE SPRAY FIREPROOFING, REPAIR OF DAMAGED FIREPROOFING IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

**BEAM SUPPORTED UTILITY HANGER**  
NO SCALE



**NOTE:**  
 1. ONLY ONE CONNECTION PER RIB IN ONE SPAN OF DECK BETWEEN BEAMS/SUPPORT.

**DECK SUPPORTED UTILITY HANGER**  
NO SCALE

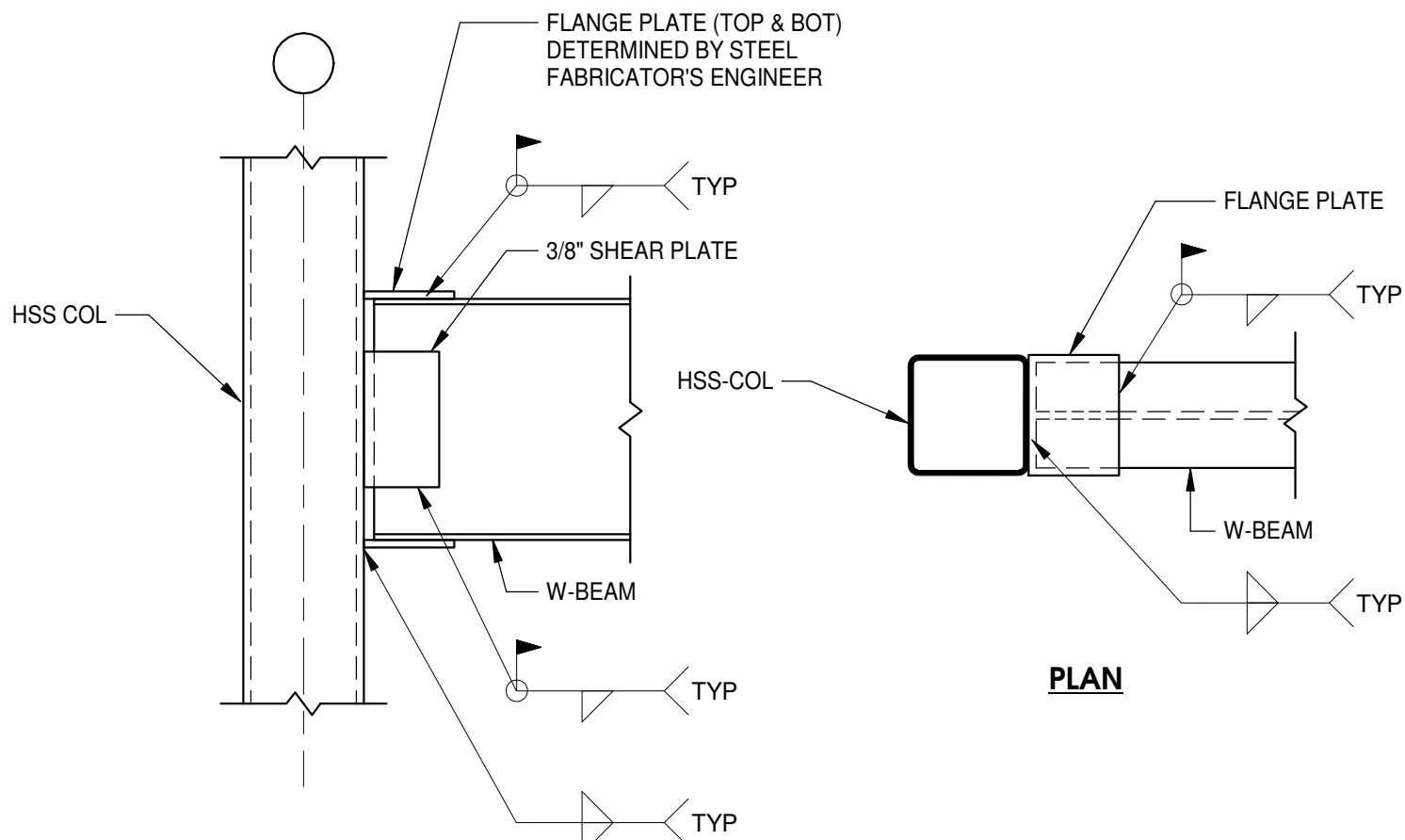


COMPOSITE FLOOR SYSTEM LOAD CAPACITY	
LOAD TO FLOOR SYSTEM	
A	250 lb'
B	100 lb'
C	0

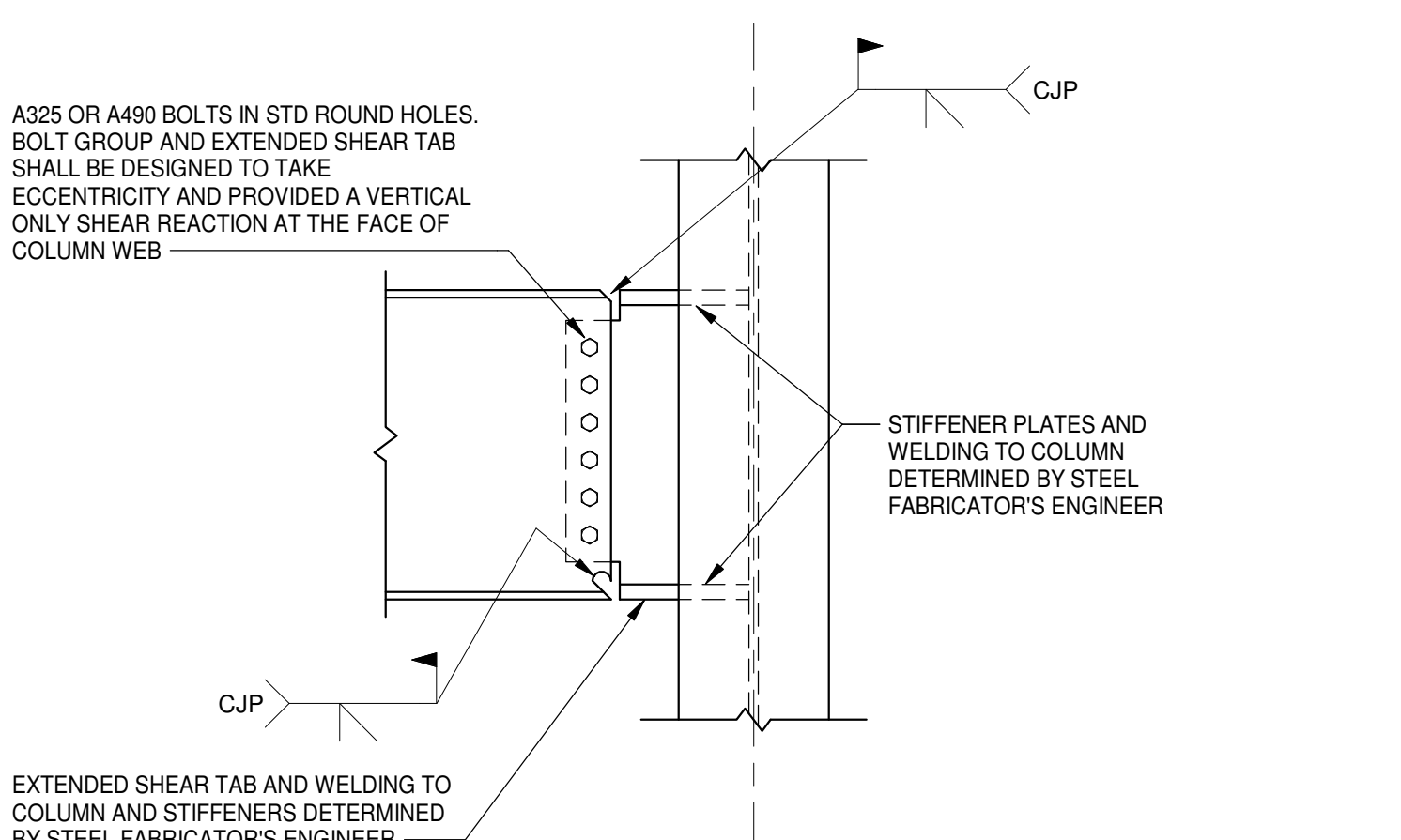
DO NOT HANG FROM THIN PORTION

\* ANCHORAGE INTO CONCRETE, BY OTHERS, FOR MISC COMPONENTS AND HANGERS, SHALL BE DESIGNED FOR THE ACTUAL LOAD AND FURNISHED BY THE MECHANICAL SUB-CONTRACTOR. MECHANICAL SUB-CONTRACTOR SHALL VERIFY SCREW ANCHOR DIAMETER AND EMBEDMENT DEPTH FOR THE REQUIRED LOADING AND AVAILABLE DEPTH OF CONCRETE.

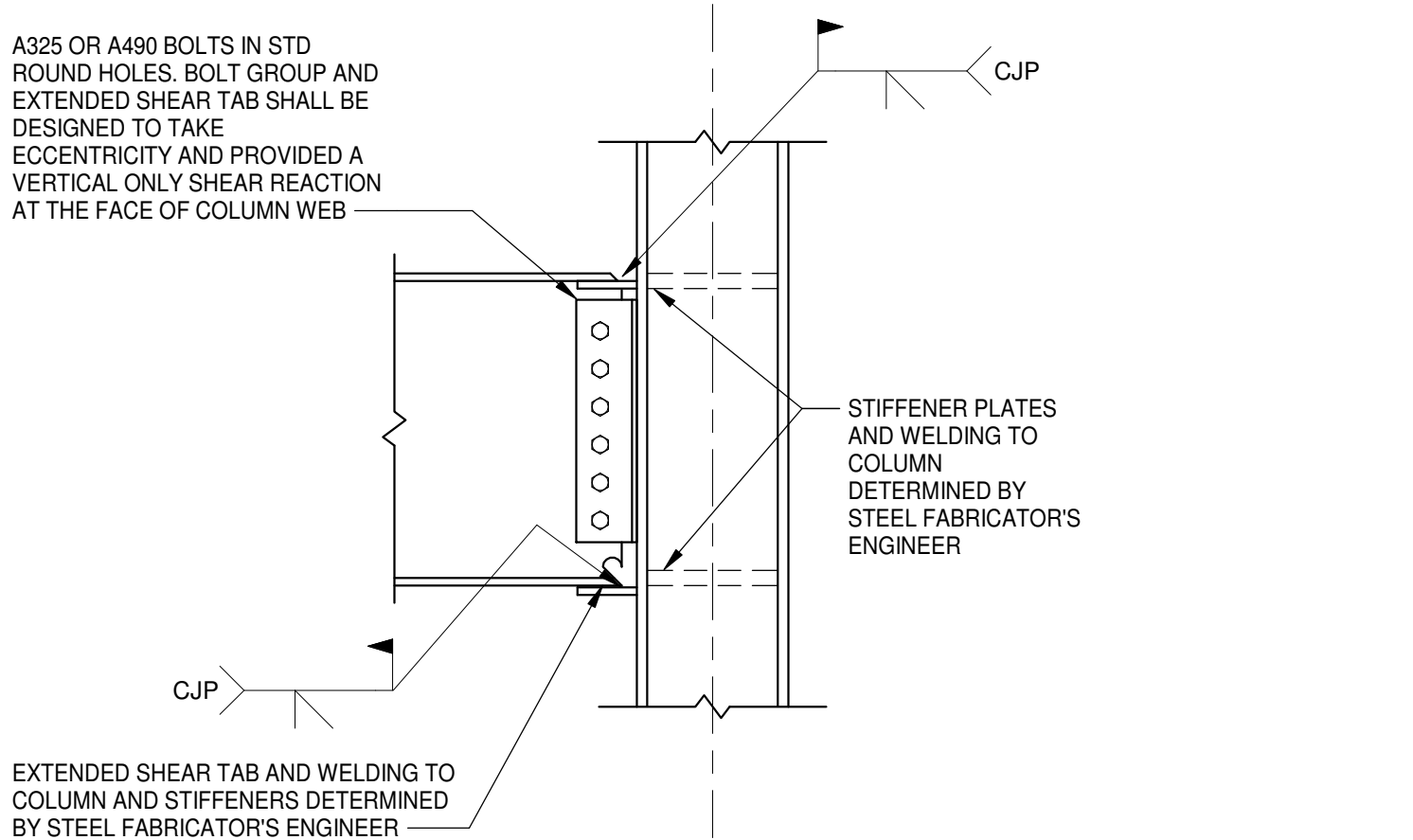
**11 TYPICAL MOMENT CONN (W-BEAM TO TOP OF HSS COL)**  
S4.0.3 1" = 1'-0"



**12 TYPICAL MOMENT CONN (W-BEAM TO HSS COL)**  
S4.0.3 1" = 1'-0"

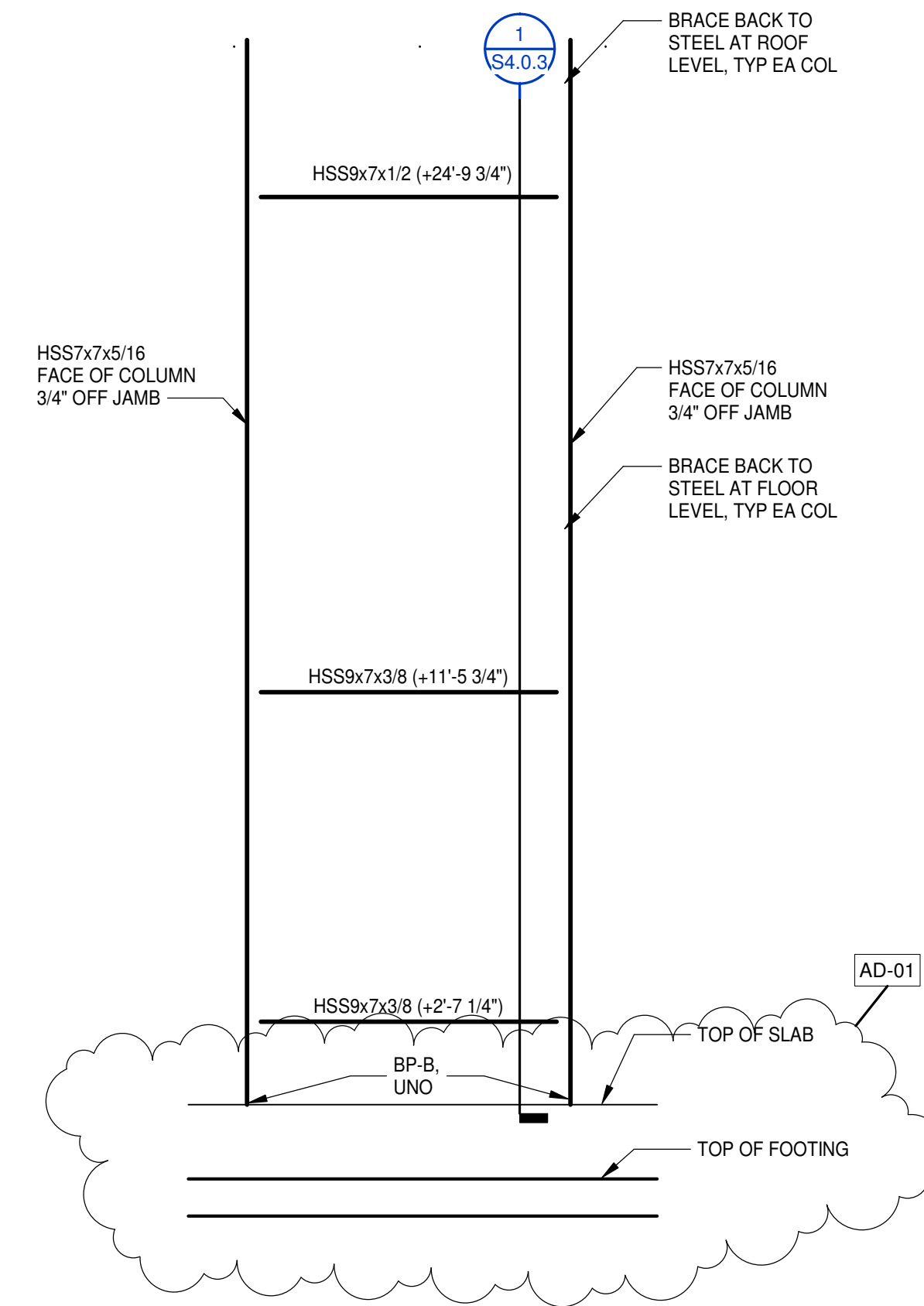
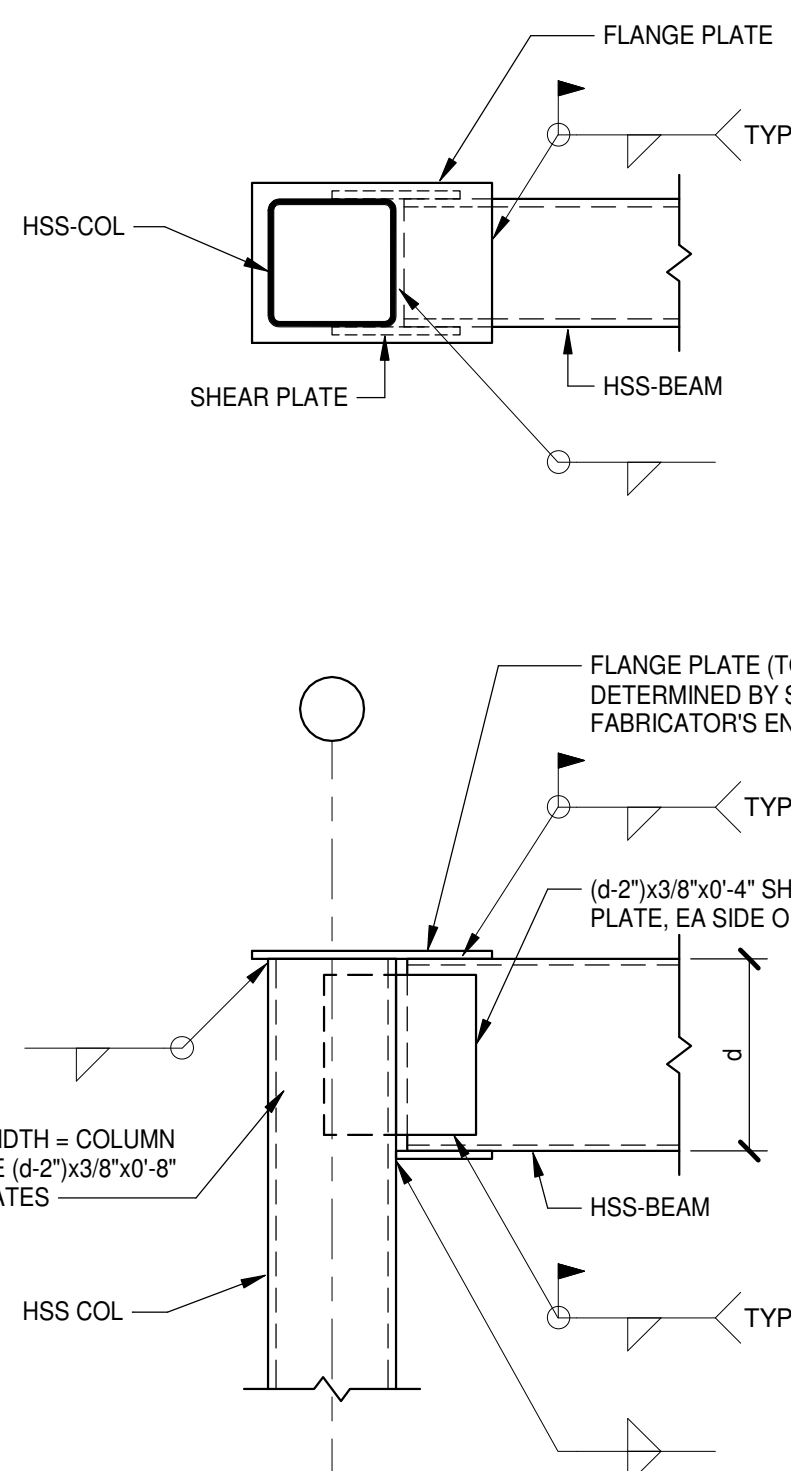


**TYPICAL MOMENT CONN (W-BEAM TO W-COL WEB)**  
1" = 1'-0"

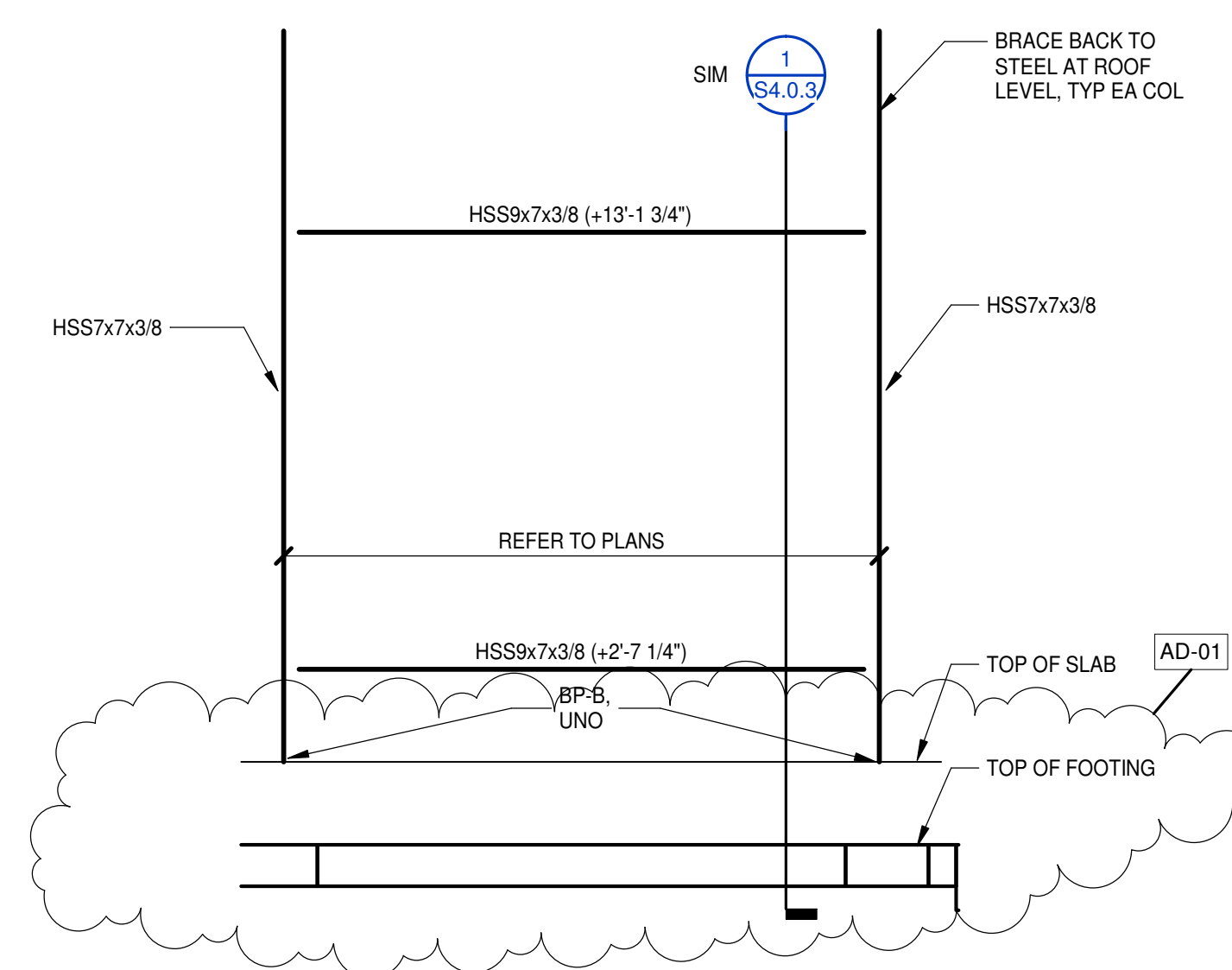


**TYPICAL MOMENT CONN (W-BEAM TO W-COL FLANGE)**  
1" = 1'-0"

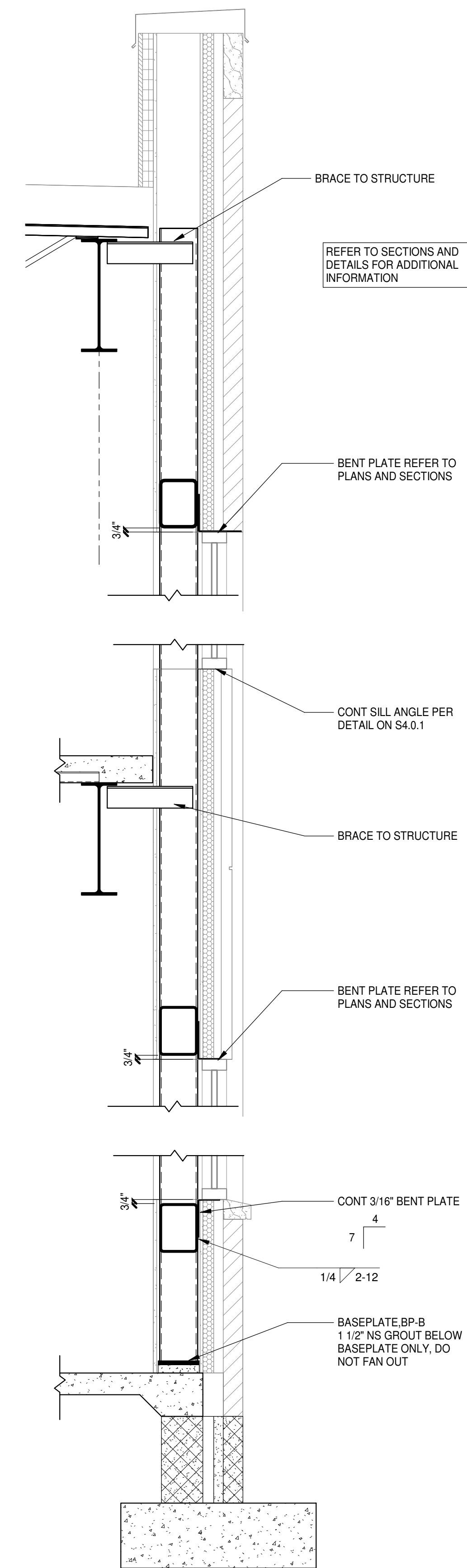
**13 TYPICAL MOMENT CONN (HSS-BEAM TO TOP OF HSS COL)**  
S4.0.3 1" = 1'-0"



**FRAME A**  
1/4" = 1'-0"

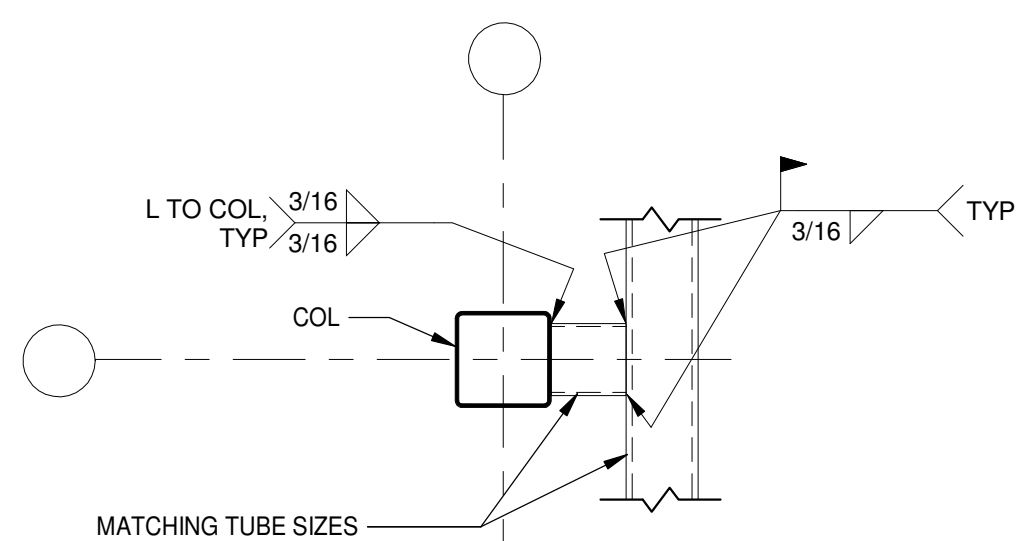
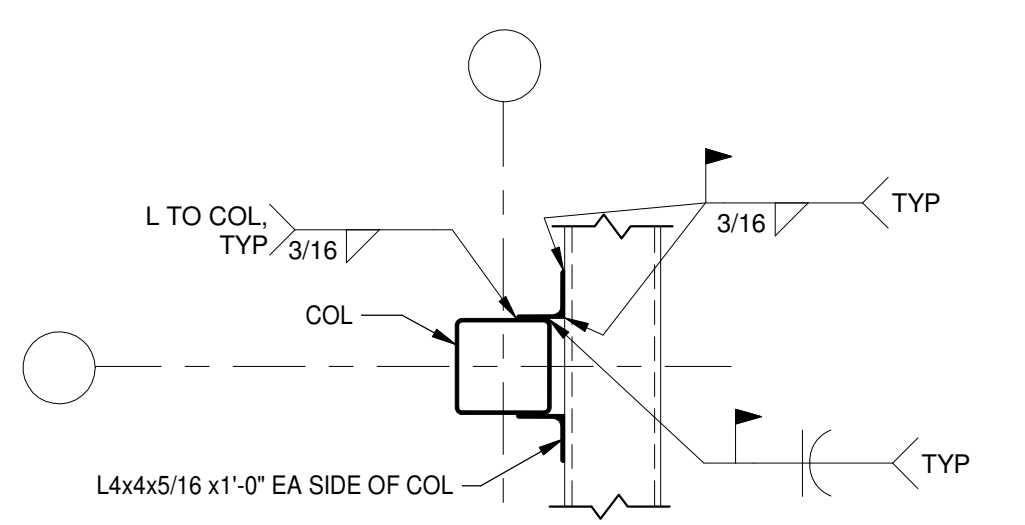
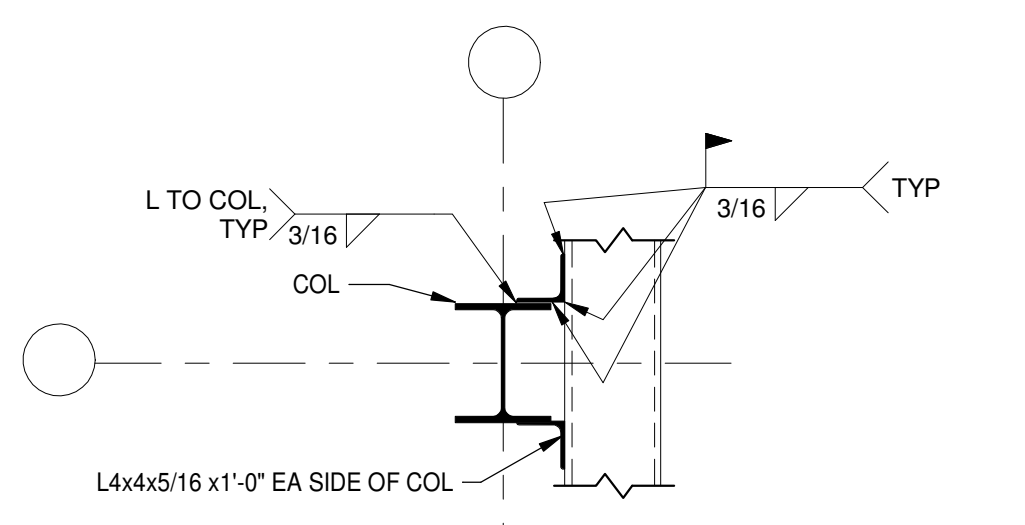
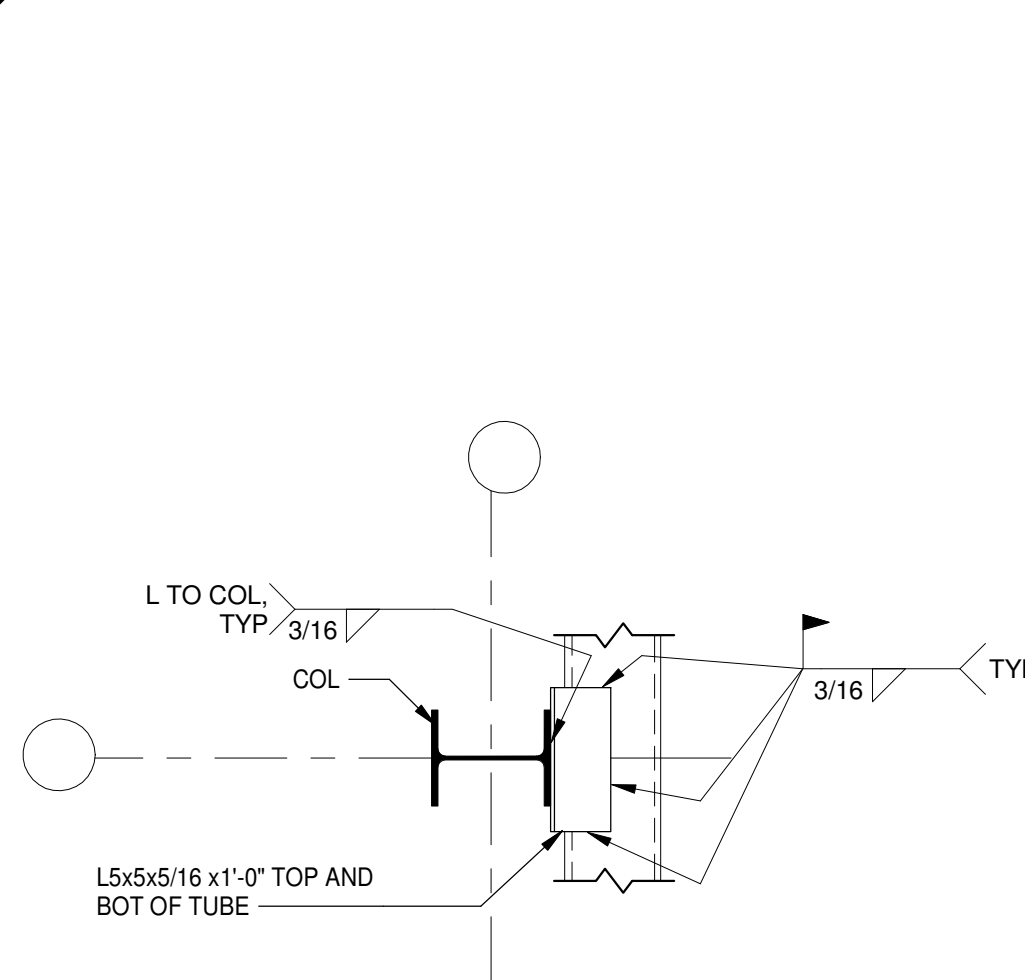


**FRAME B**  
1/4" = 1'-0"



**1 SECTION**  
S4.0.3 S4.0.3 3/4" = 1'-0"

**10 TYPICAL MOMENT CONN (W-BEAM TO W-BEAM)**  
S4.0.3 1 1/2" = 1'-0"



**OFFSET TUBE CONNECTION AT COLUMN**  
3/4" = 1'-0"

STEEL DECK SCHEDULE		
DECK TYPE 1	1 1/2" - 20 GAGE WIDE RIB ROOF DECK, GALVANIZED	FASTEN TO ALL SUPPORTS WITH POWDER ACTUATED FASTENERS AT 36/7" AT THE PERIMETER AND 36/7" PATTERN IN THE FIELD, AND AT 6" OC AT ALL EDGES AND END LAPS. FASTEN SIDELAPS WITH #10 TEK SCREWS AT MID-SPAN AND NOT GREATER THAN 6" OC. (SEISMIC - 769 PLF AND WIND = 774 PLF)
DECK TYPE 2	3" - 20/20 GAGE CELLULAR ACOUSTIC ROOF DECK, GALVANIZED AND SHOP PRIMED	FASTEN TO ALL SUPPORTS WITH POWDER ACTUATED FASTENERS AT 24/8" AT THE PERIMETER AND AT 6" OC AT ALL EDGES AND END LAPS. FASTEN SIDELAPS WITH #10 TEK SCREWS AT MID-SPAN AND NOT GREATER THAN 6" OC. (SEISMIC - 728 PLF AND WIND = 515 PLF)
DECK TYPE 3	2" - 18 GAGE COMPOSITE FLOOR DECK, GALVANIZED	FASTEN TO ALL SUPPORTS AND EDGES WITH 5/8" DIAMETER PUDDLE WELDS AT 12" OC. FASTEN SIDELAPS WITH #10 TEK SCREWS AT 24" OC.



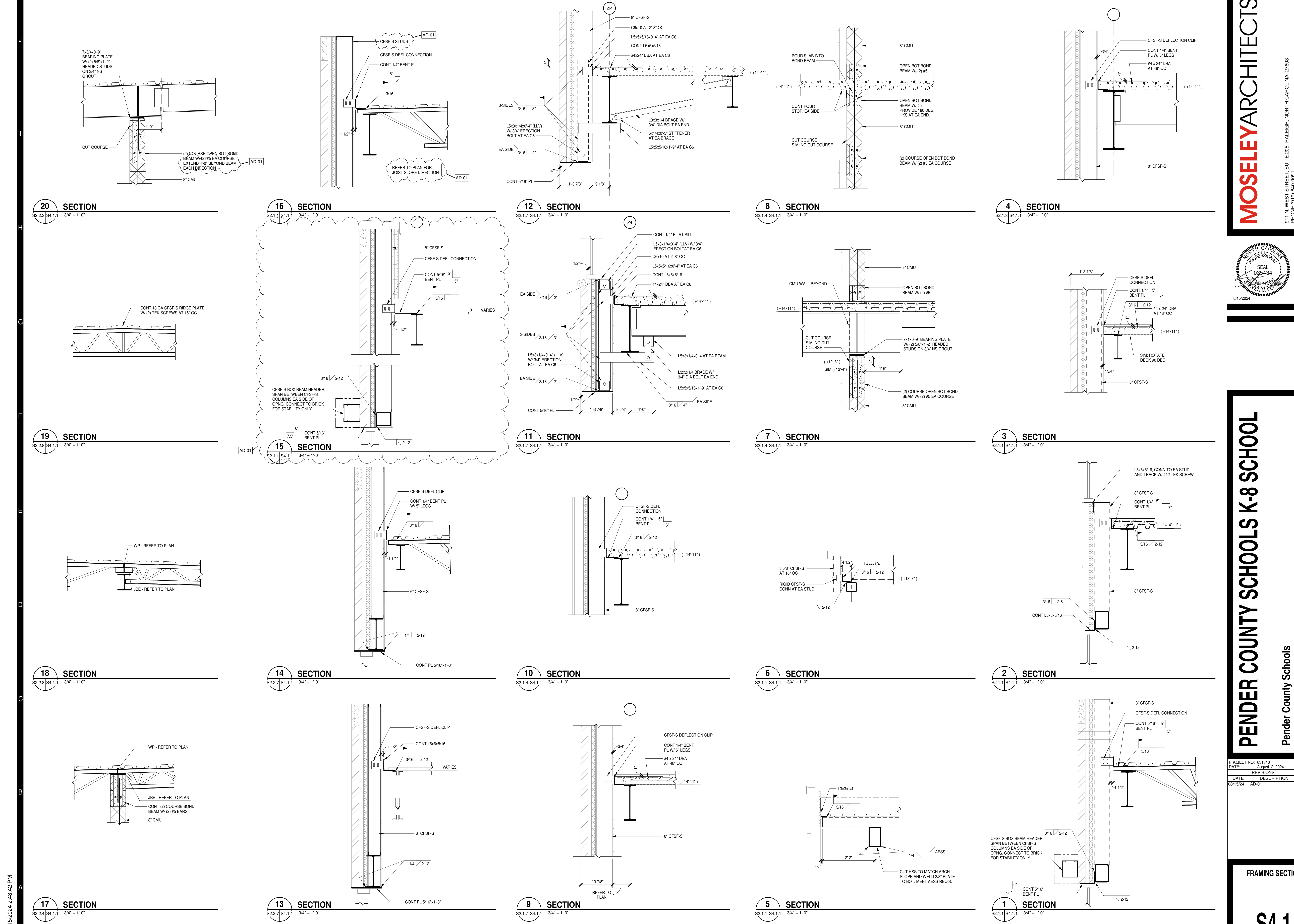
8/15/2024

DATE	REVISIONS	DESCRIPTION
08/15/24	AD-01	





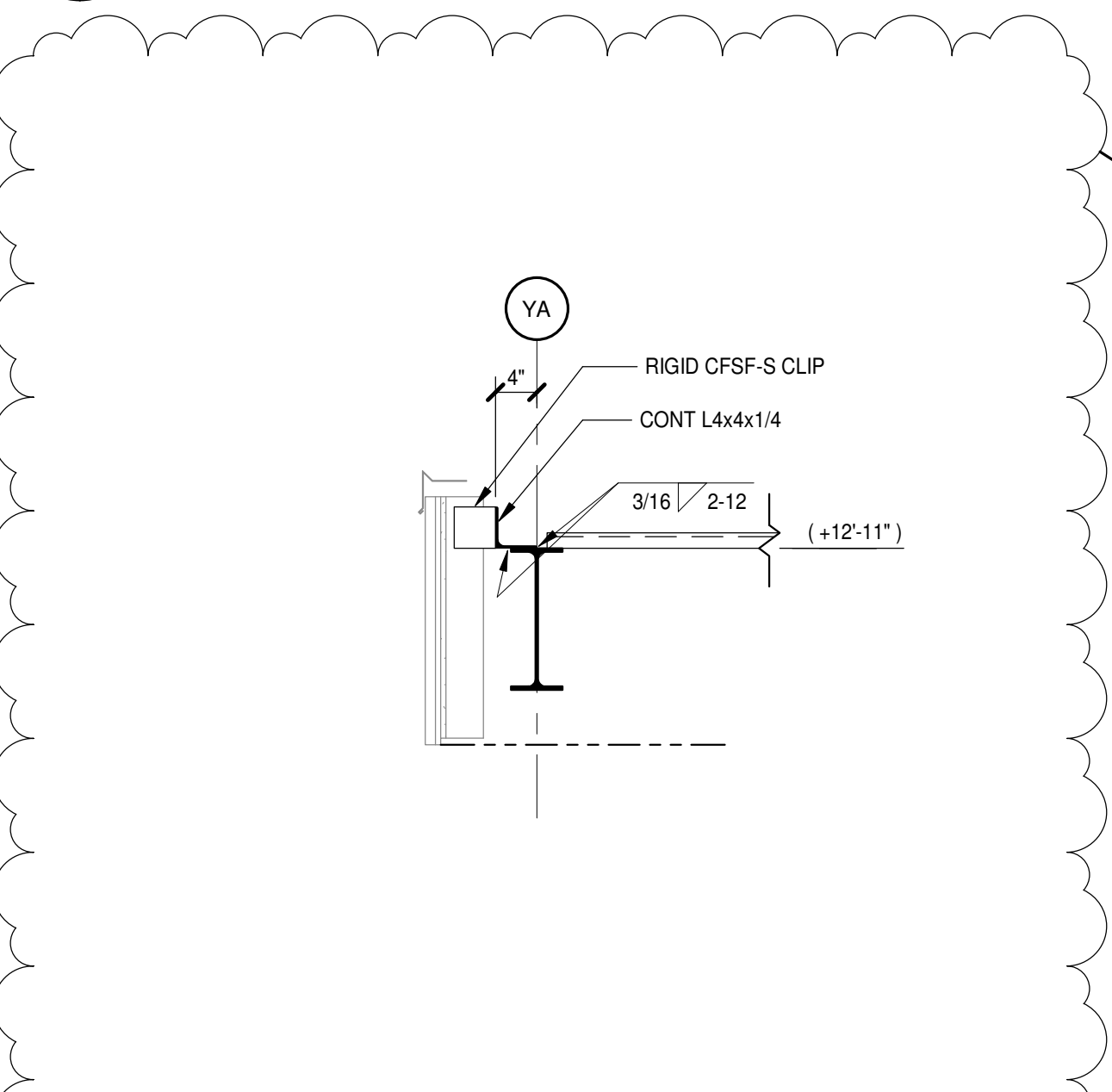
PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01





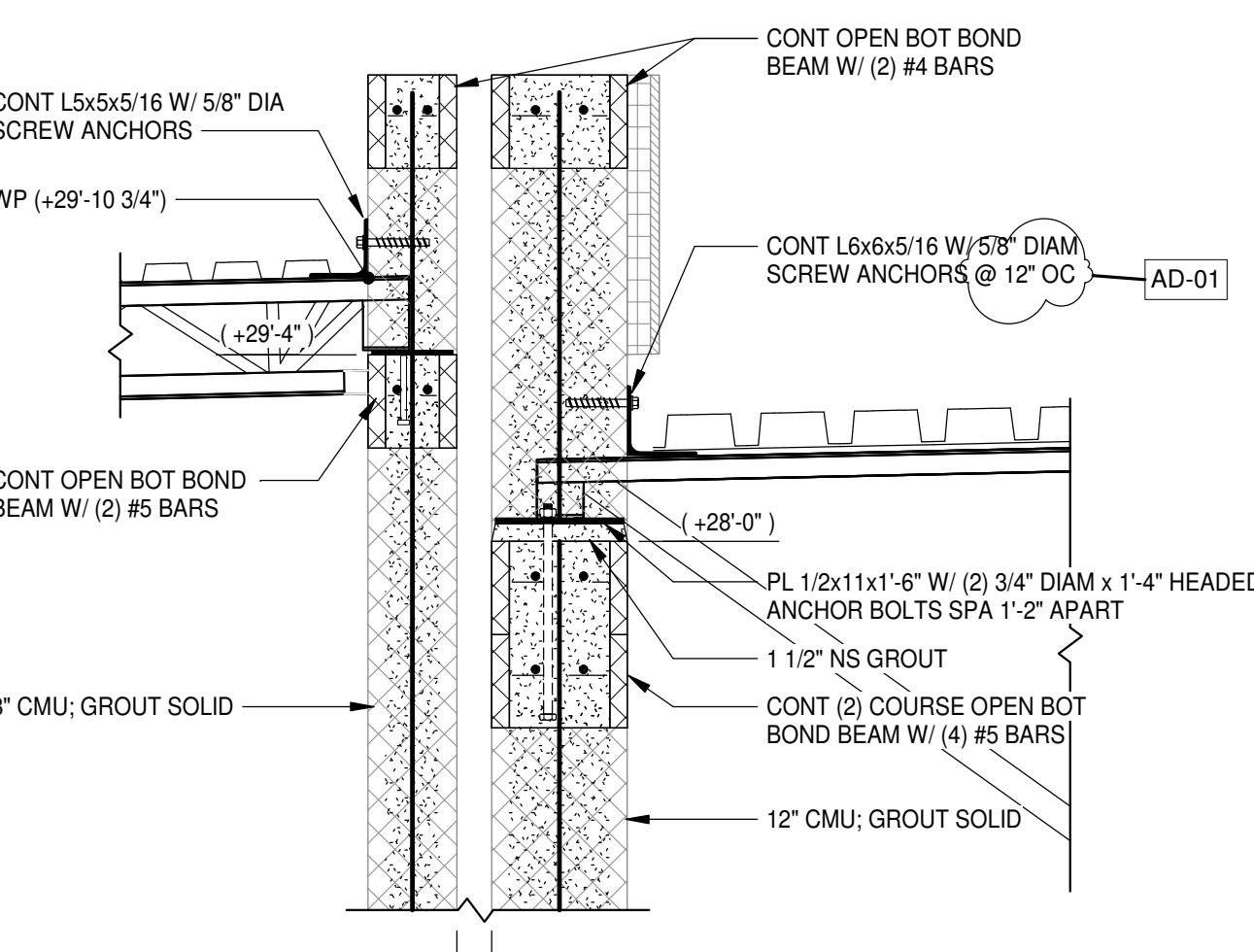
17 SECTION

S2.1.2/S4.1.2 3/4" = 1'-0"



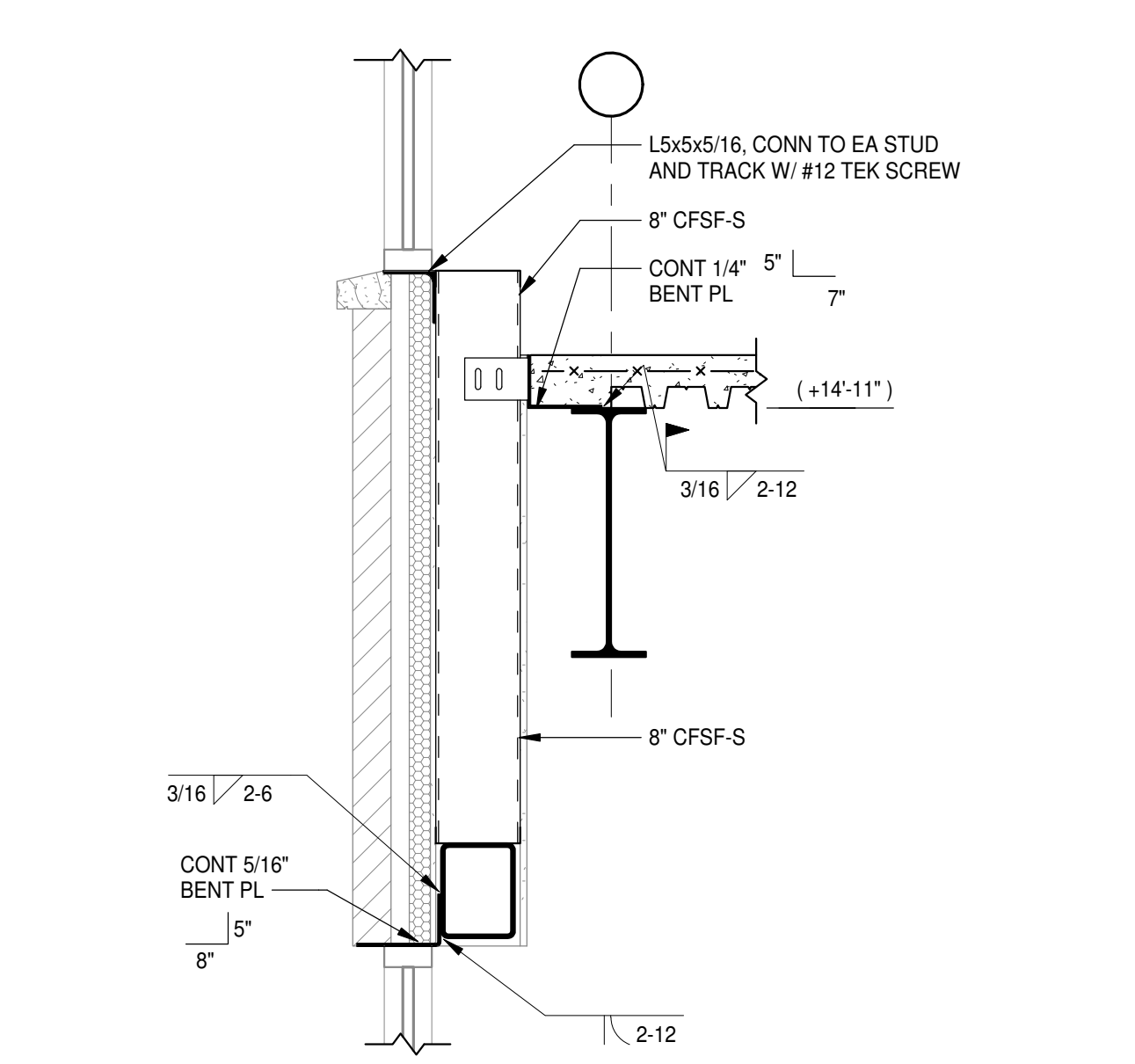
18 SECTION

S2.2.1/S4.1.2 3/4" = 1'-0"



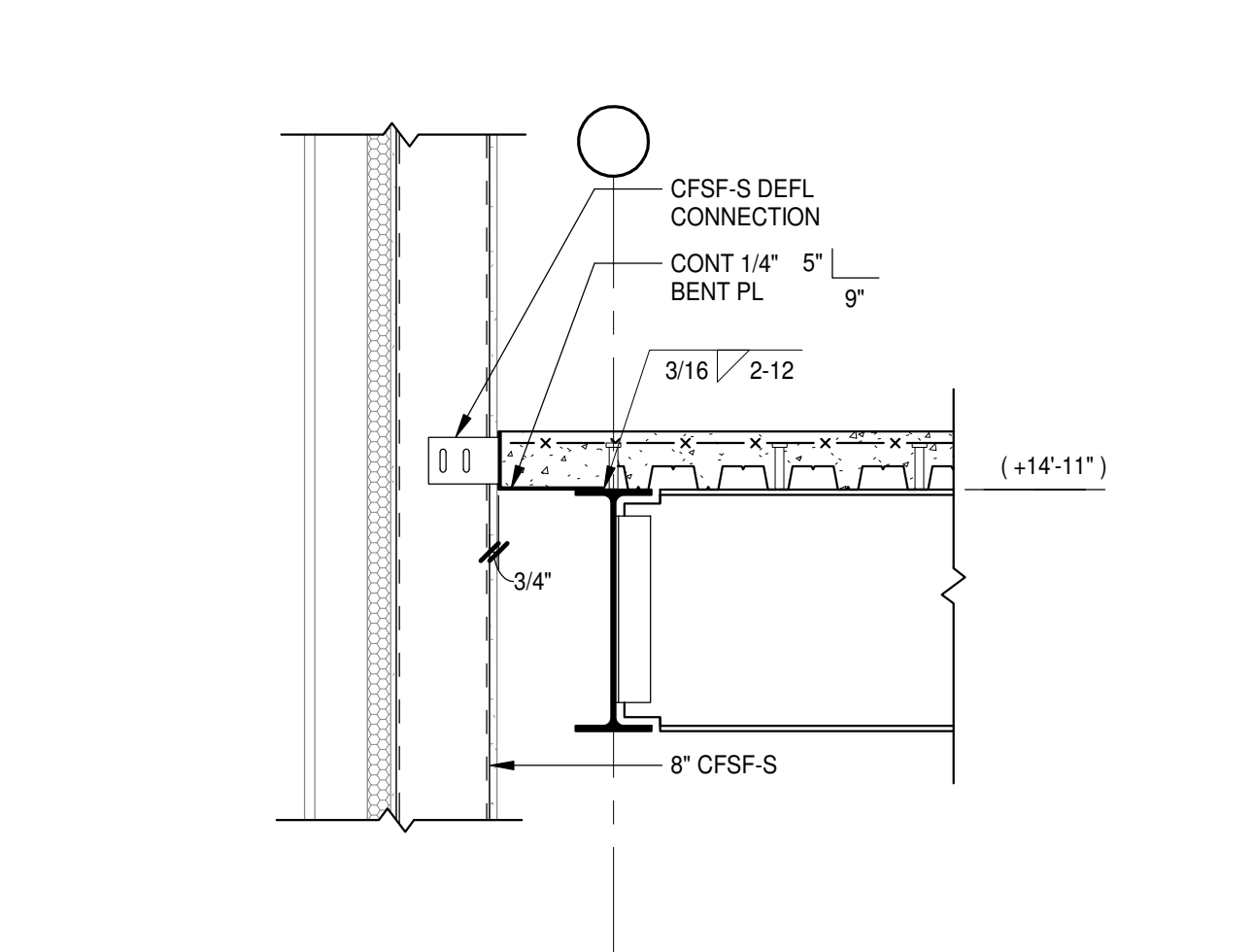
19 SECTION

S2.1.4/S4.1.2 3/4" = 1'-0"



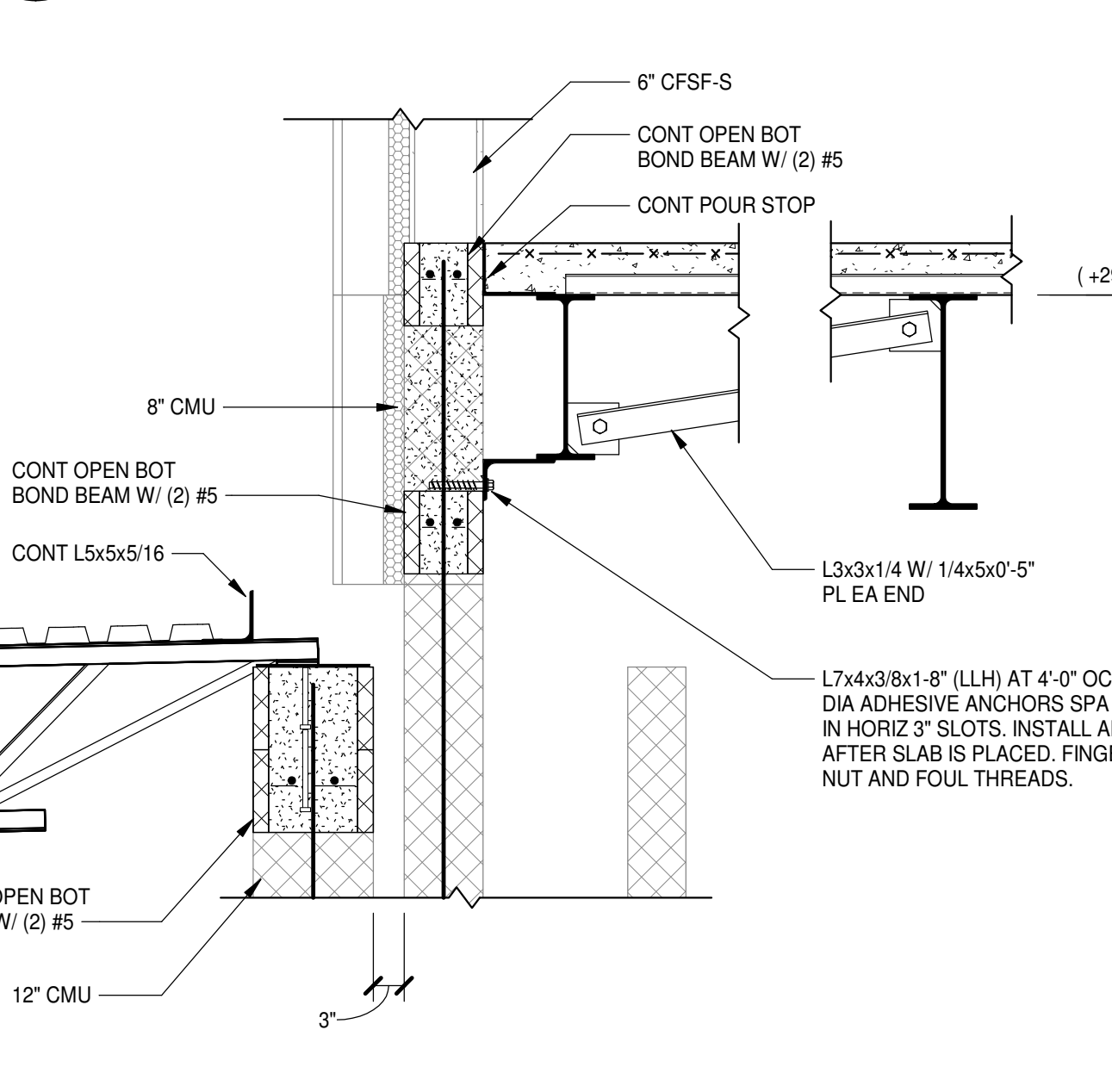
20 SECTION

S2.1.3/S4.1.2 3/4" = 1'-0"



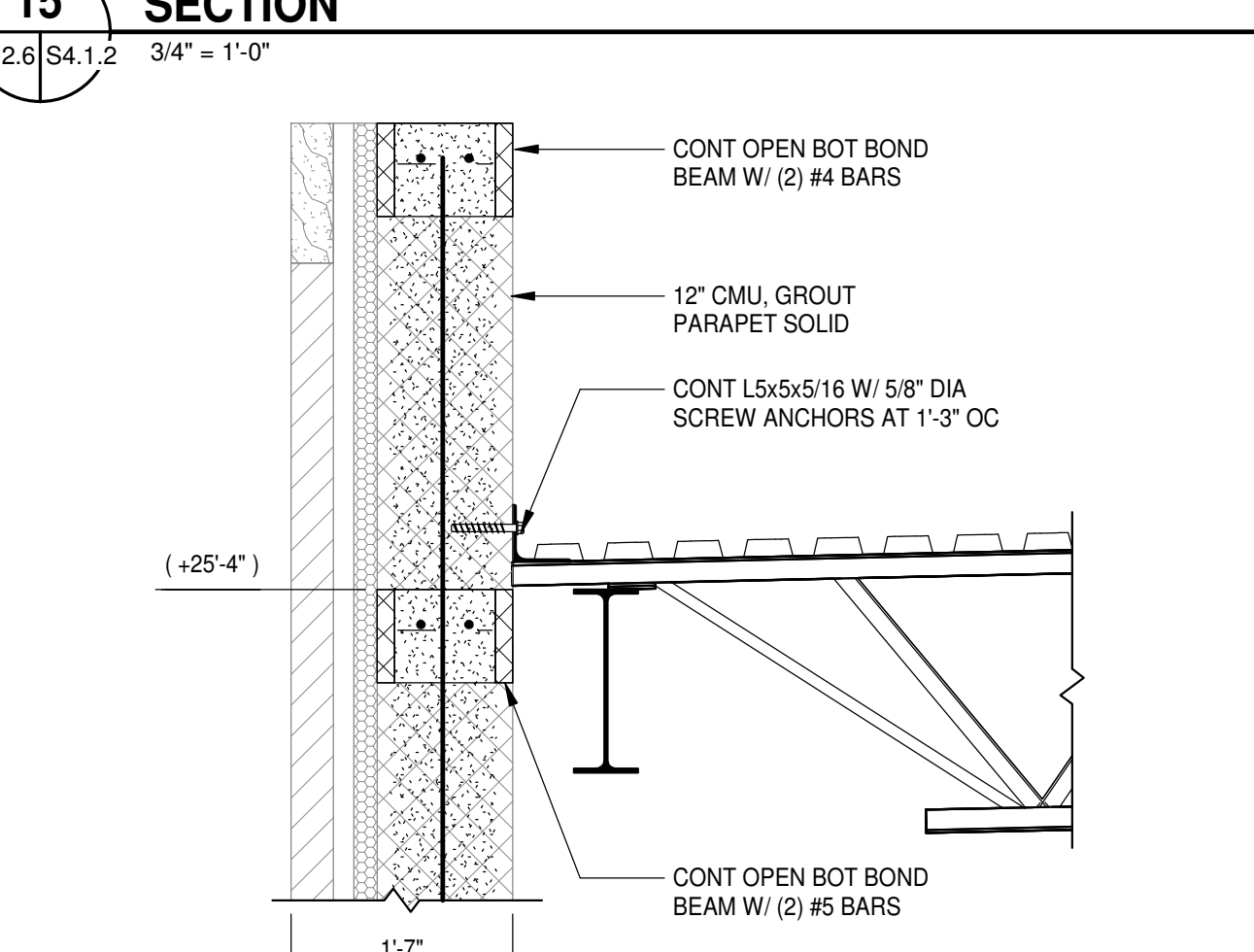
13 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



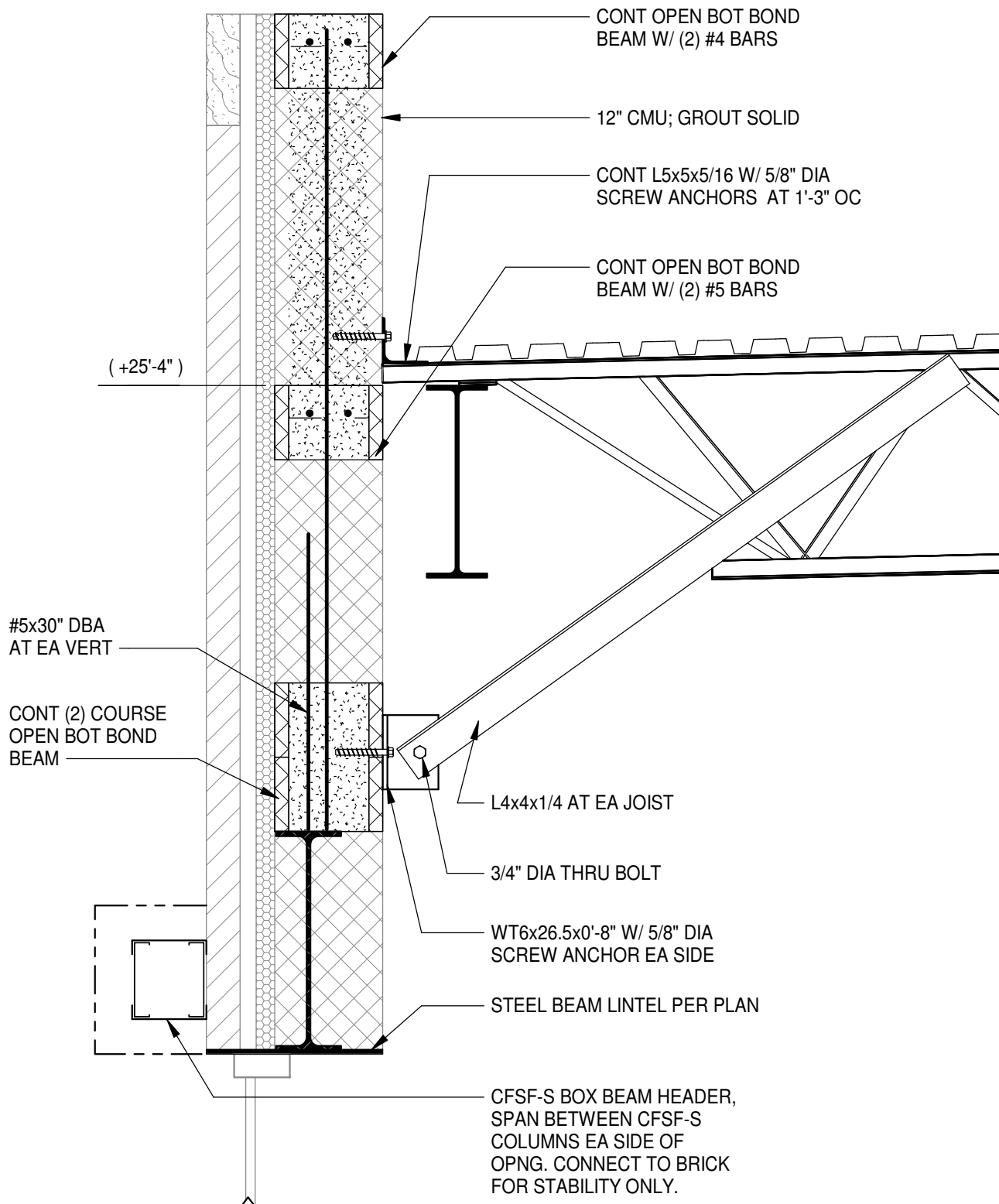
14 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



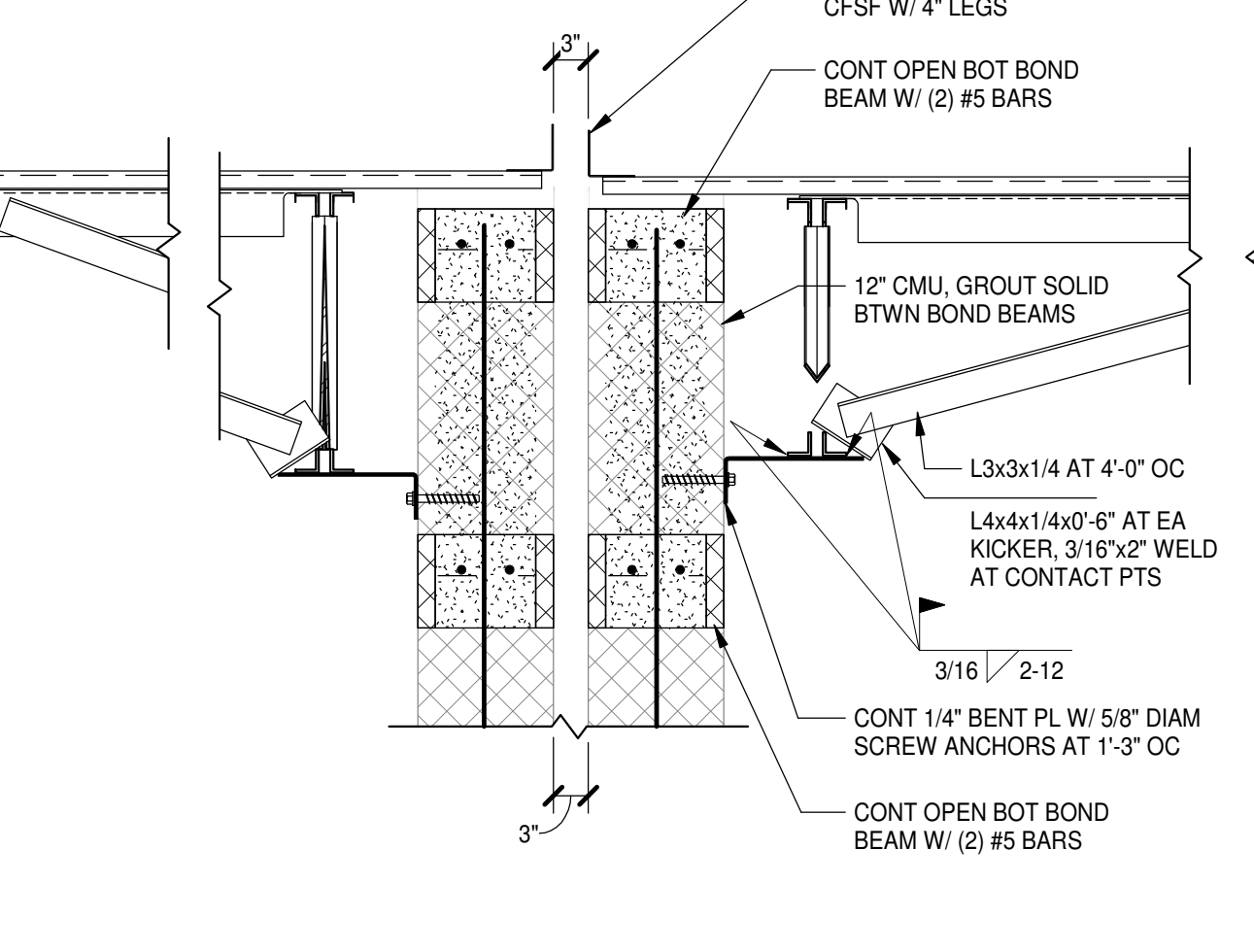
15 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



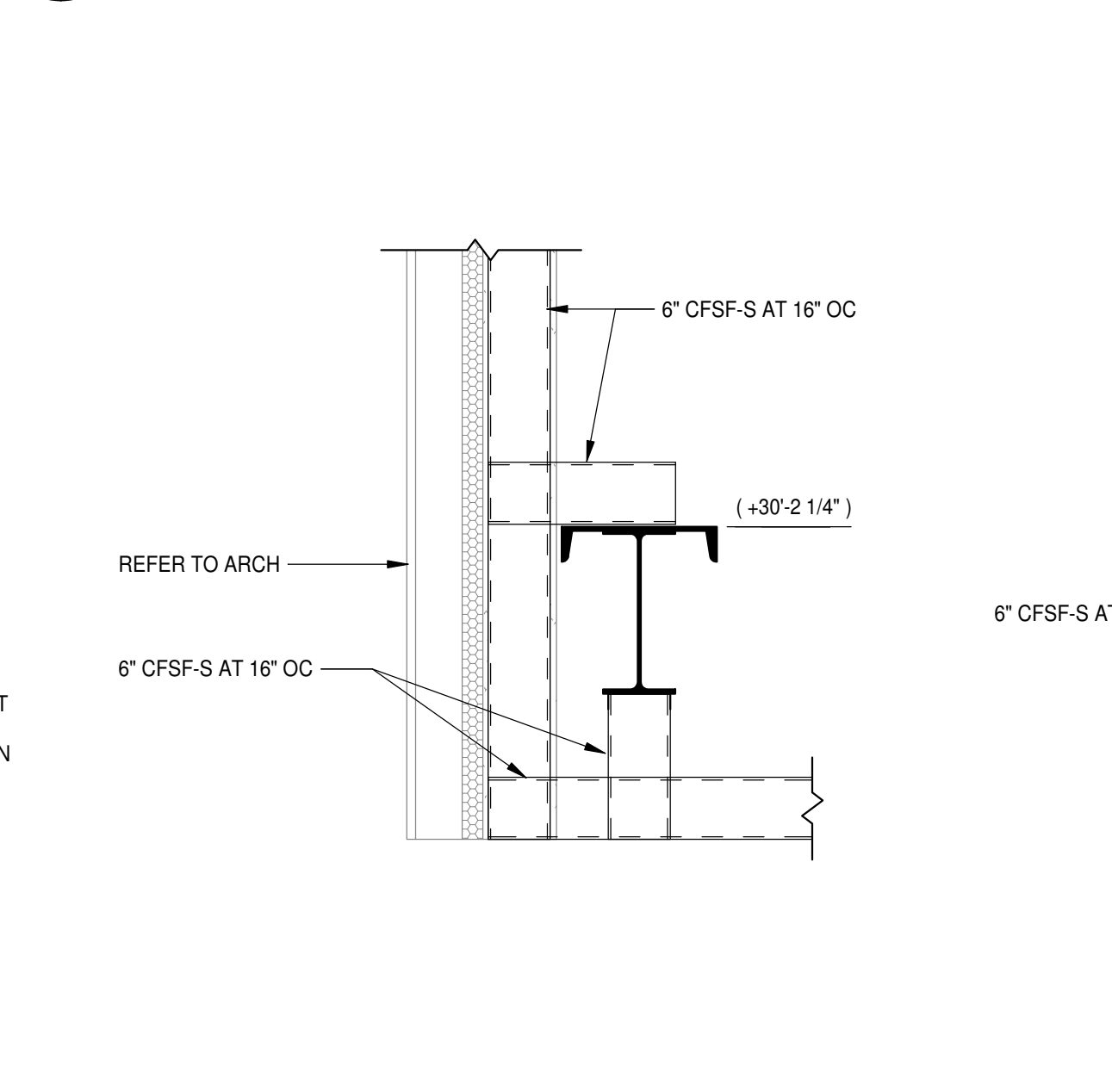
16 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



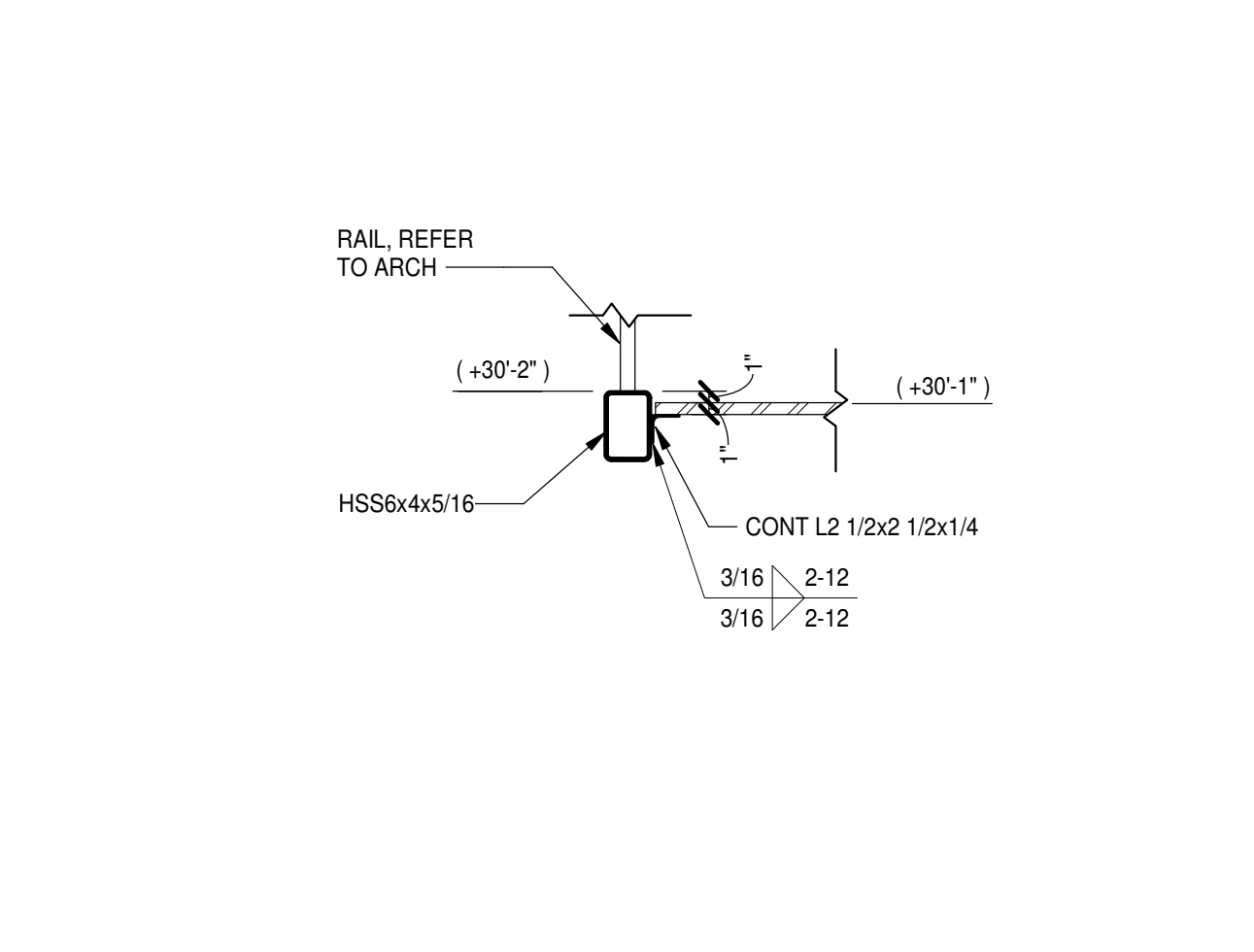
9 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



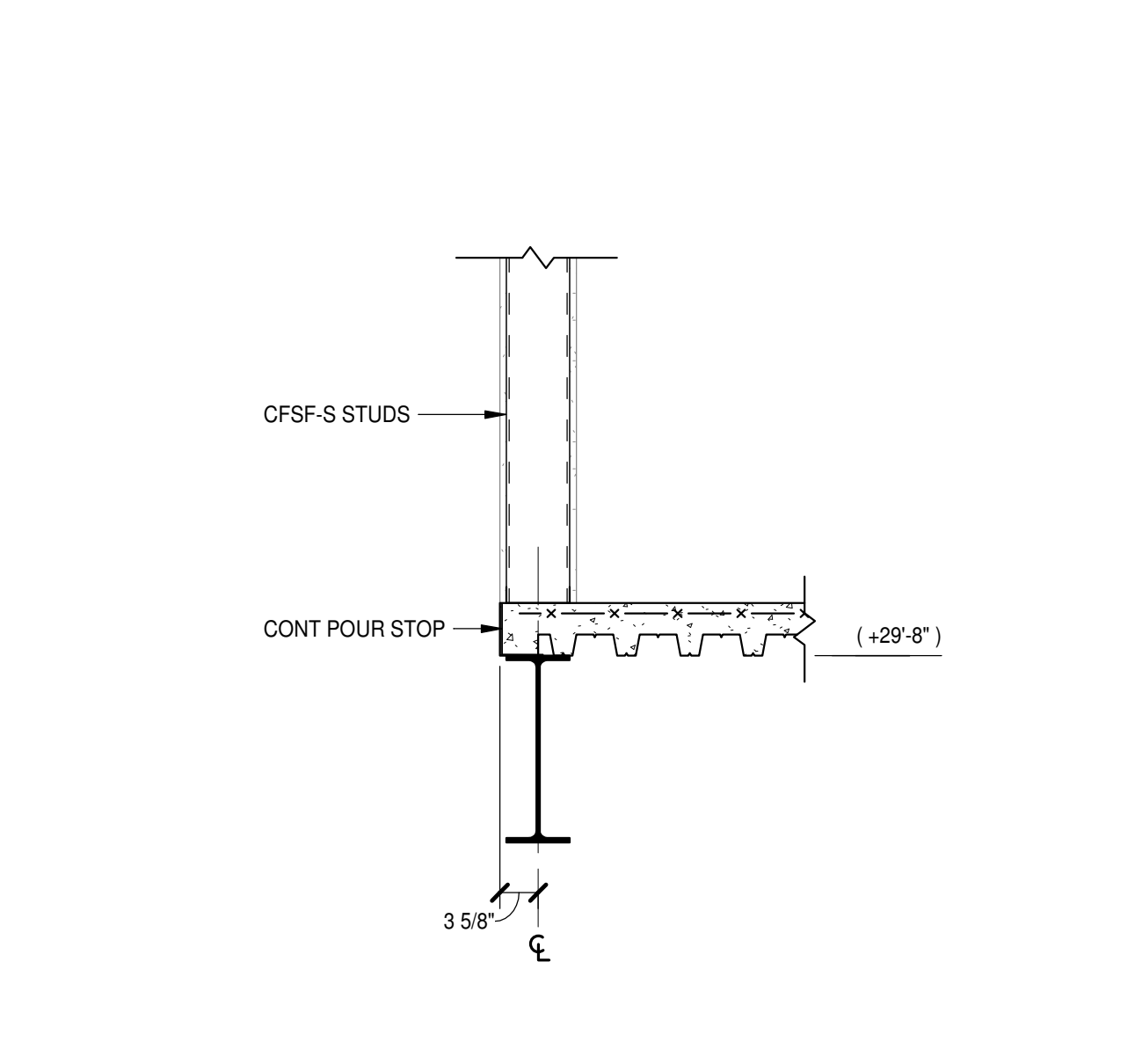
10 SECTION

S2.2.1/S4.1.2 3/4" = 1'-0"



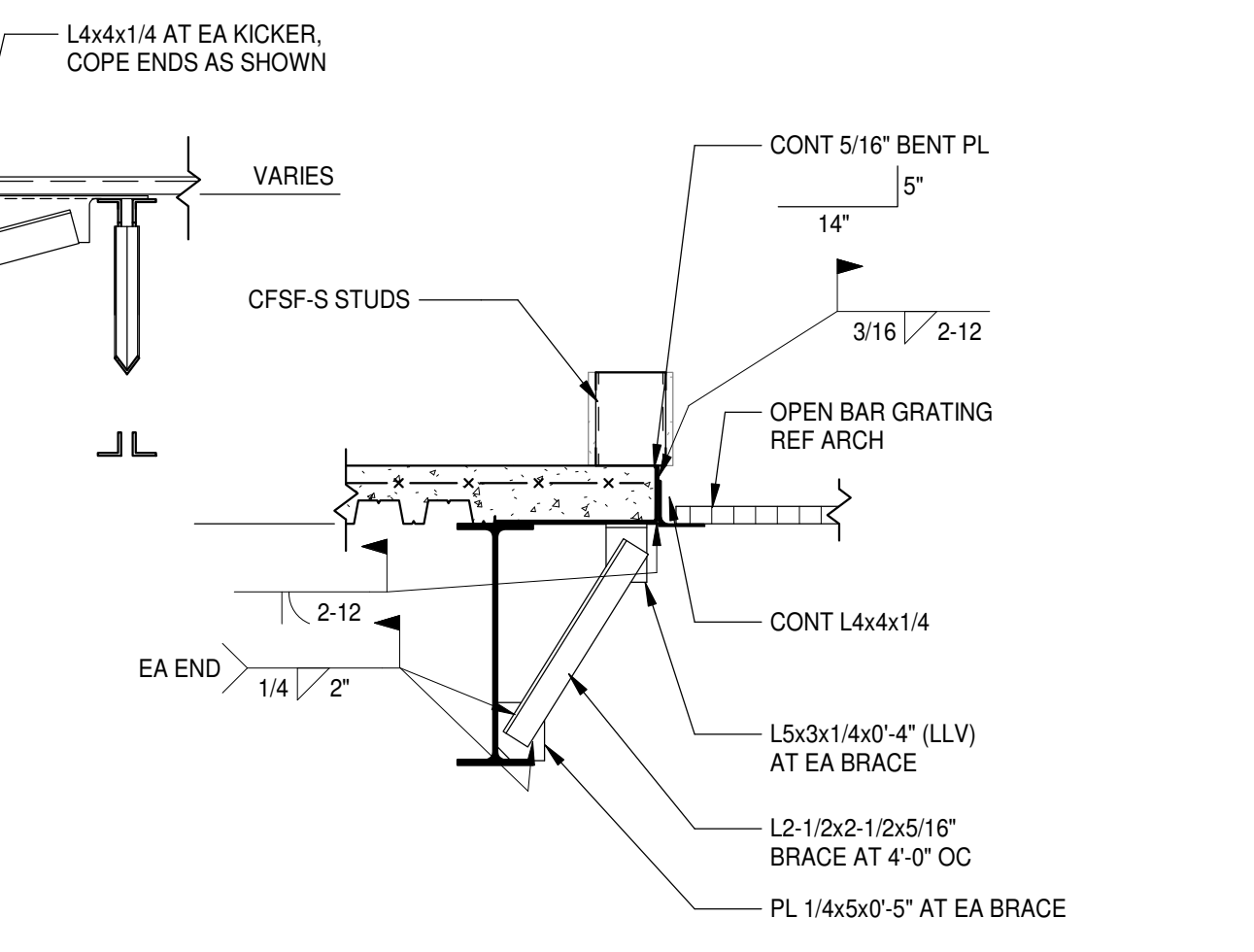
11 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



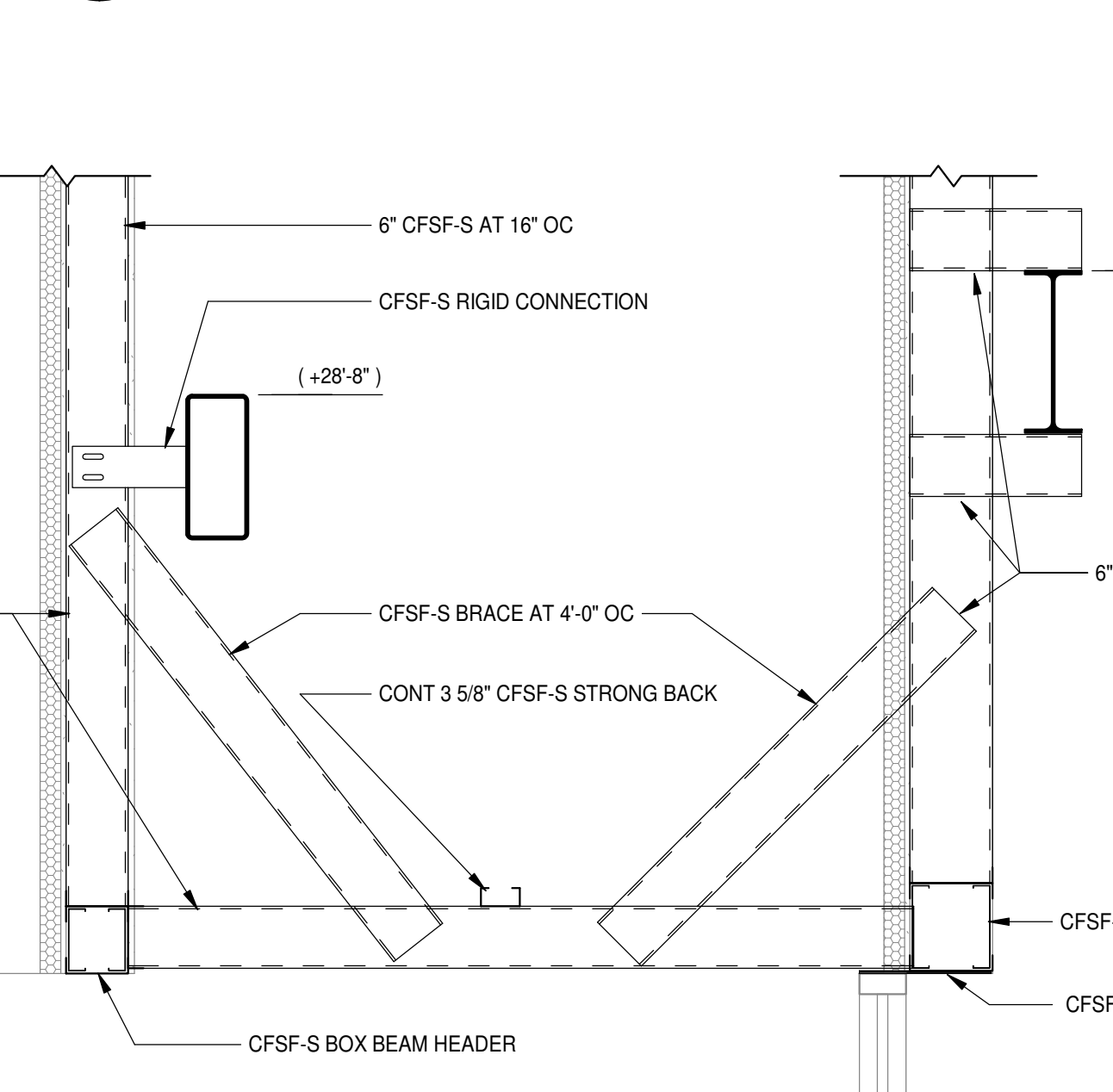
12 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



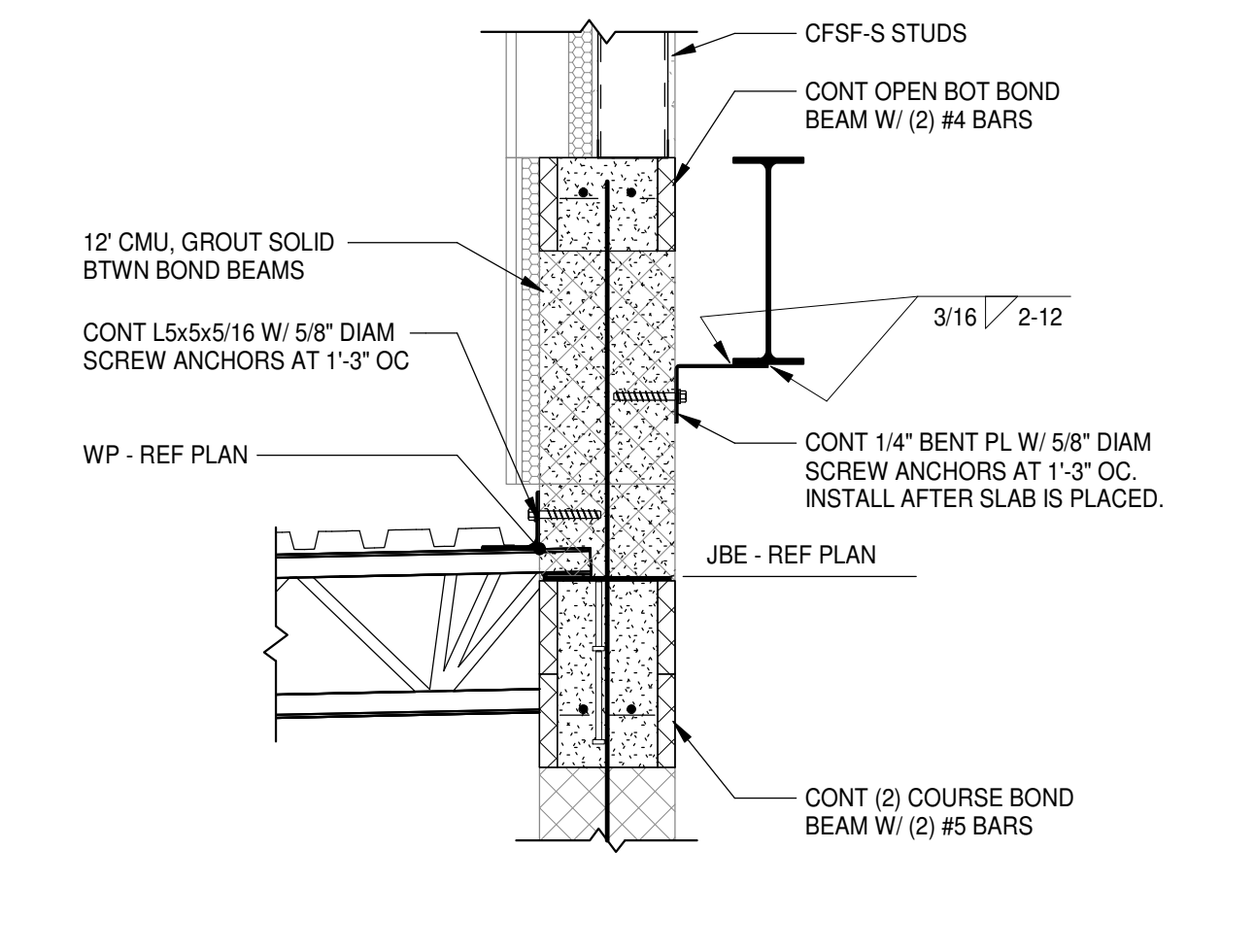
5 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



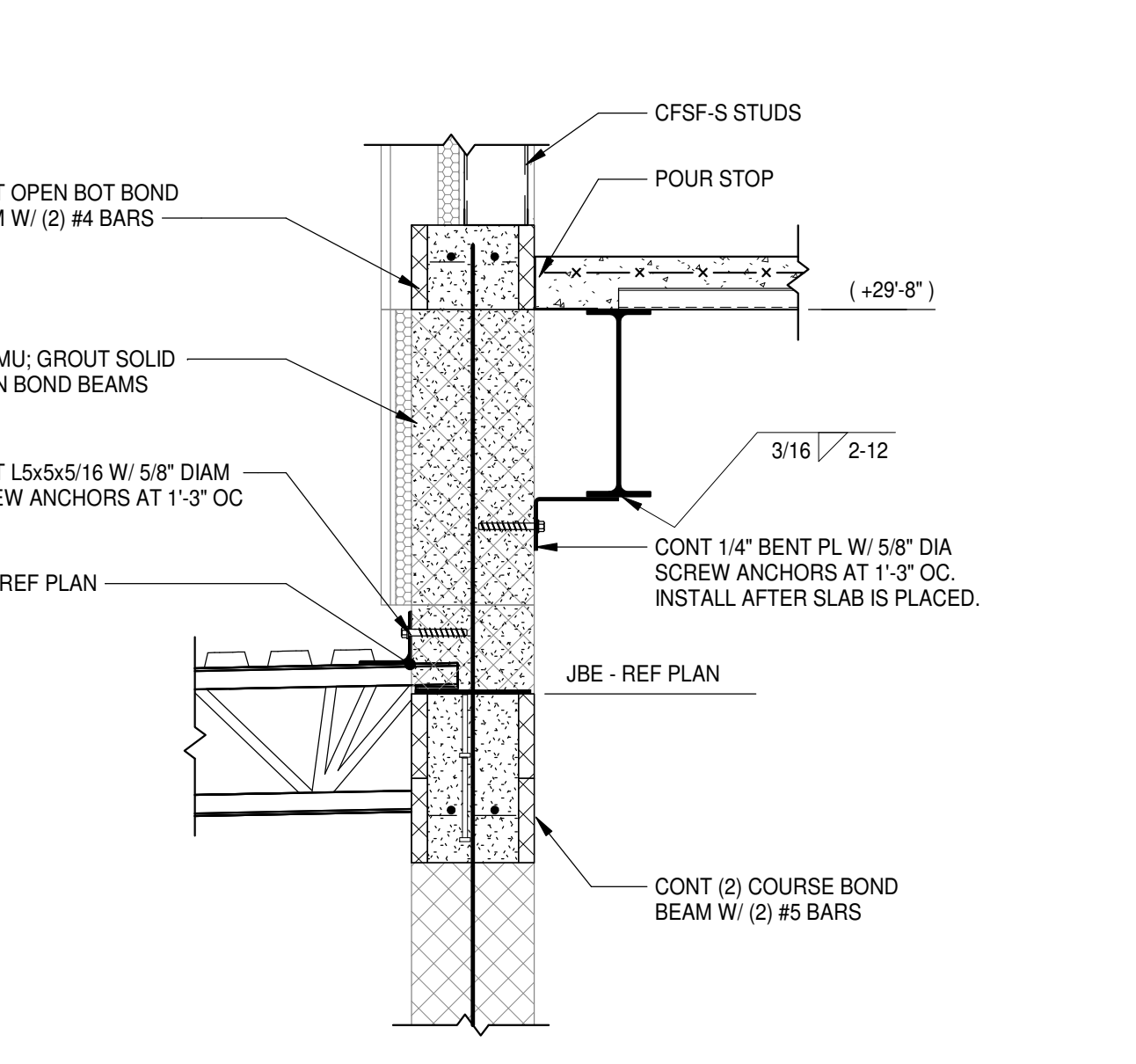
6 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



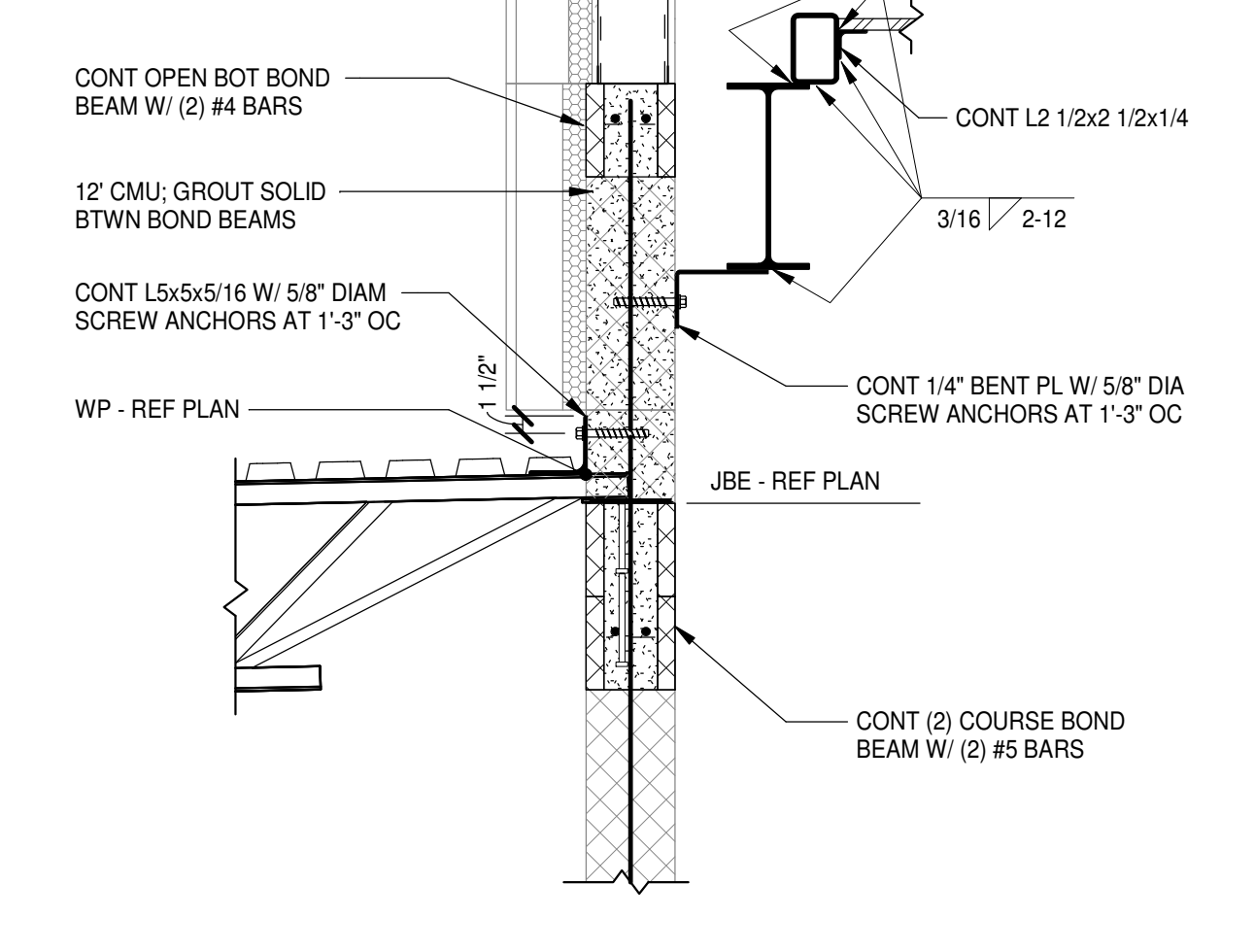
7 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



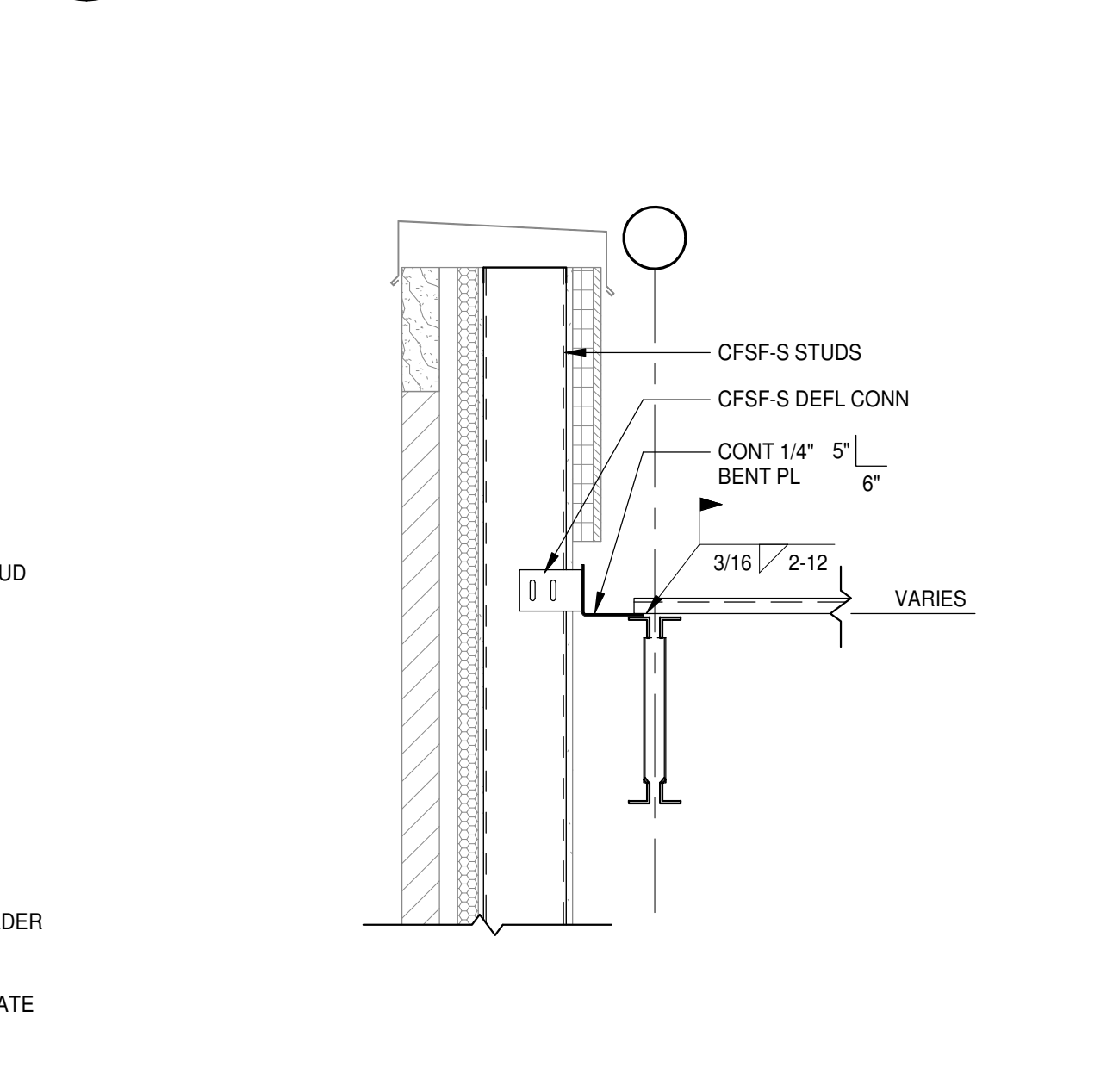
8 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



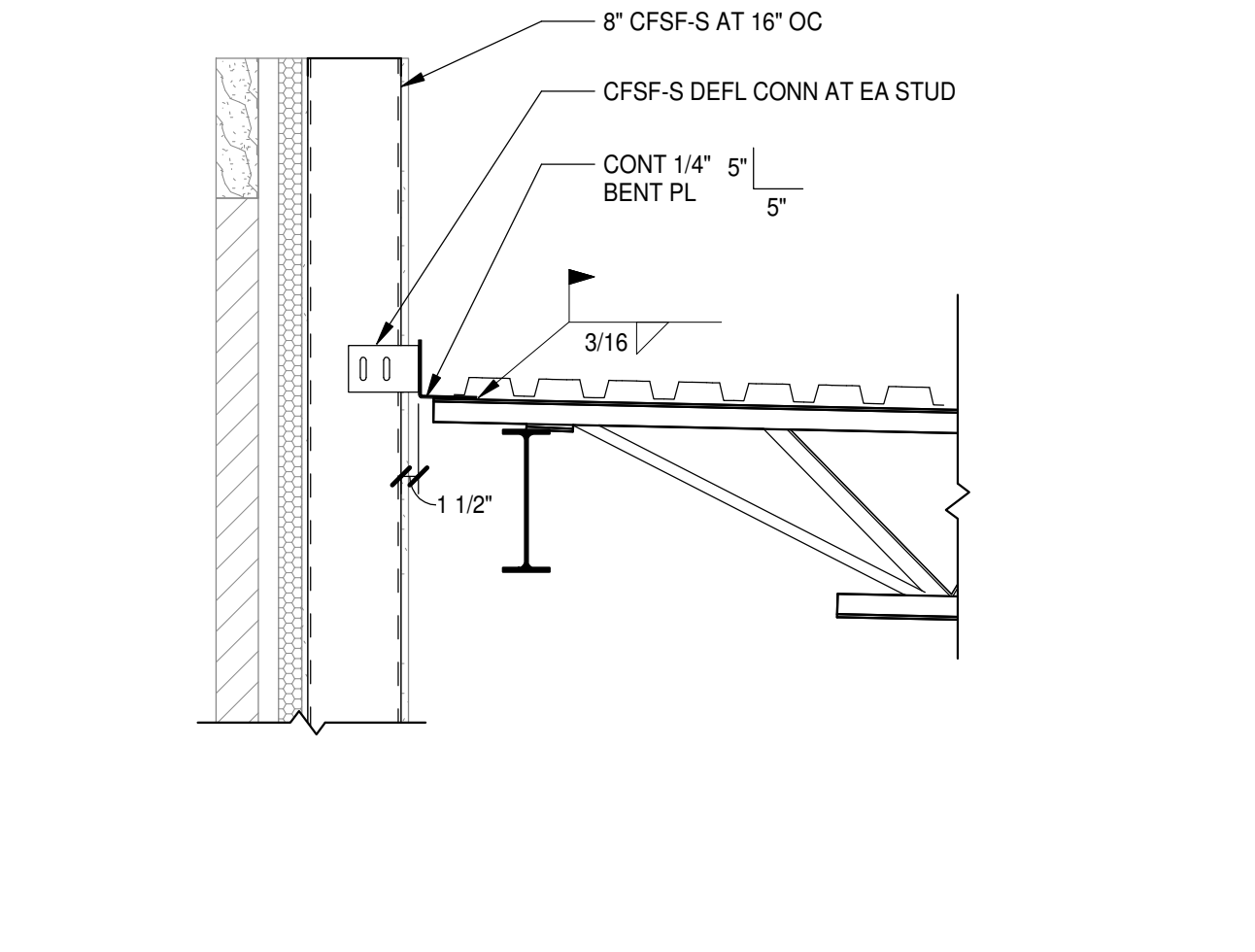
1 SECTION

S2.2.8/S4.1.2 3/4" = 1'-0"



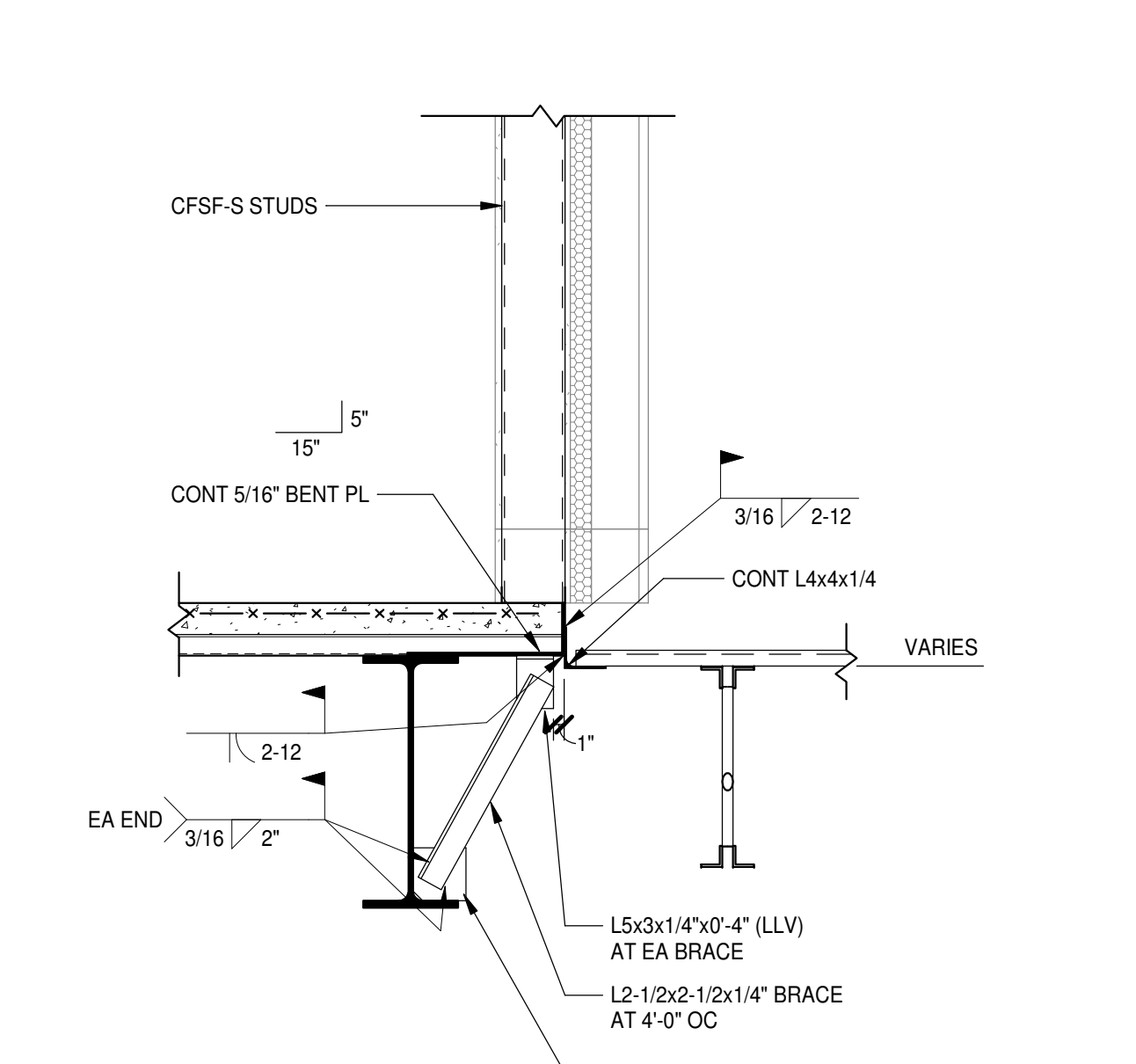
2 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



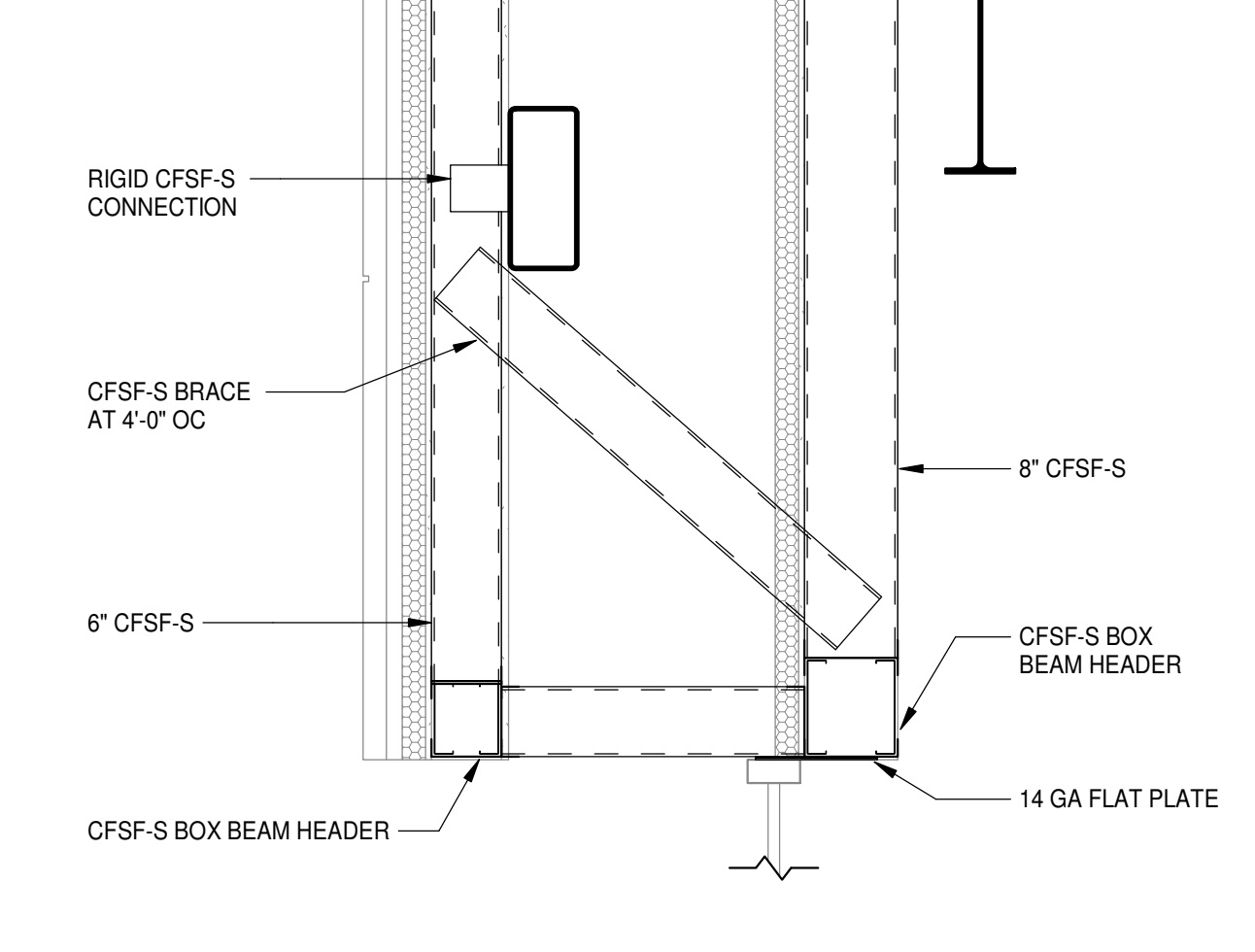
3 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"

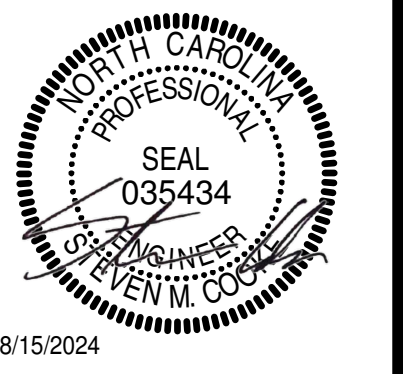


4 SECTION

S2.2.6/S4.1.2 3/4" = 1'-0"



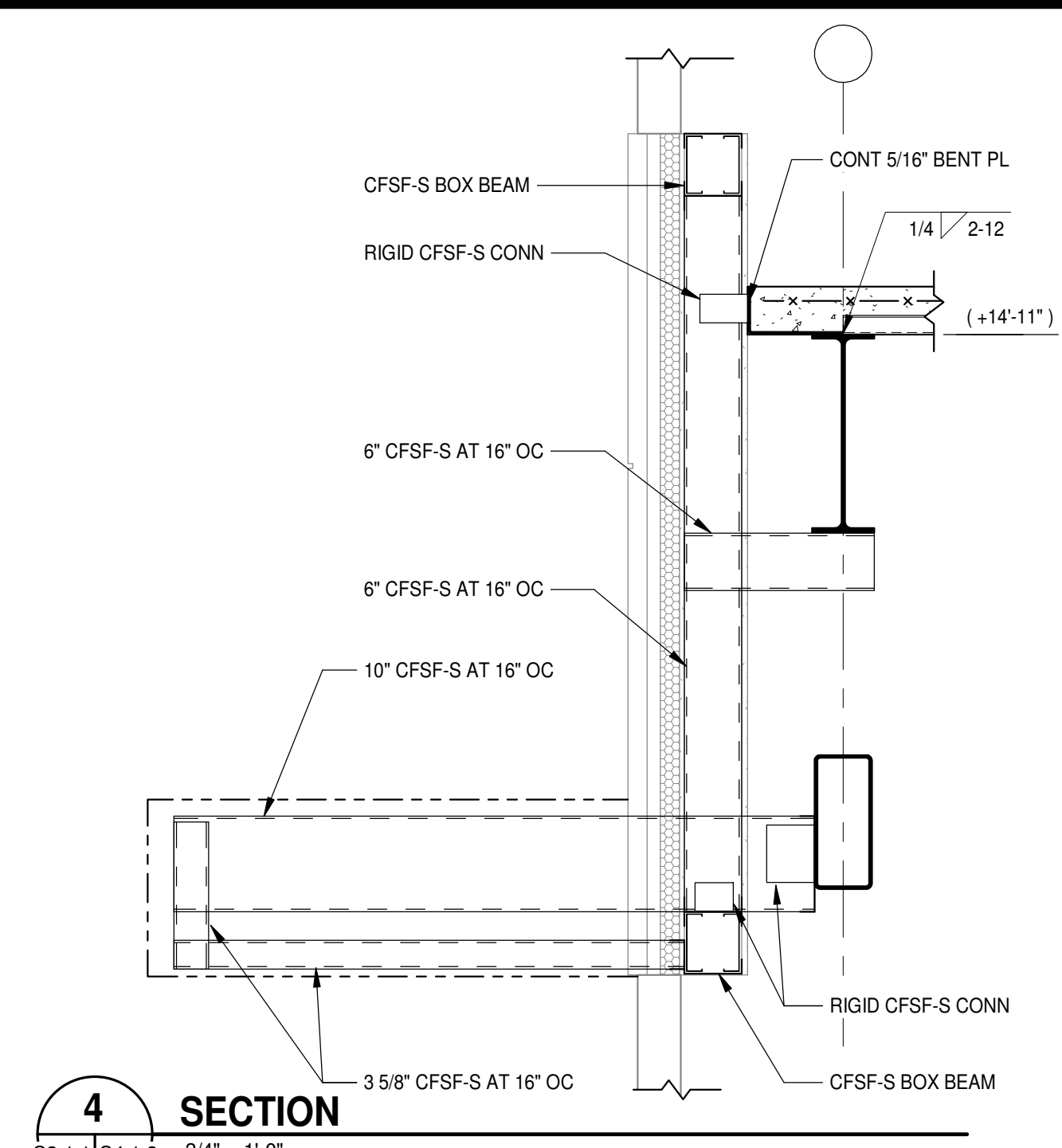
PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01



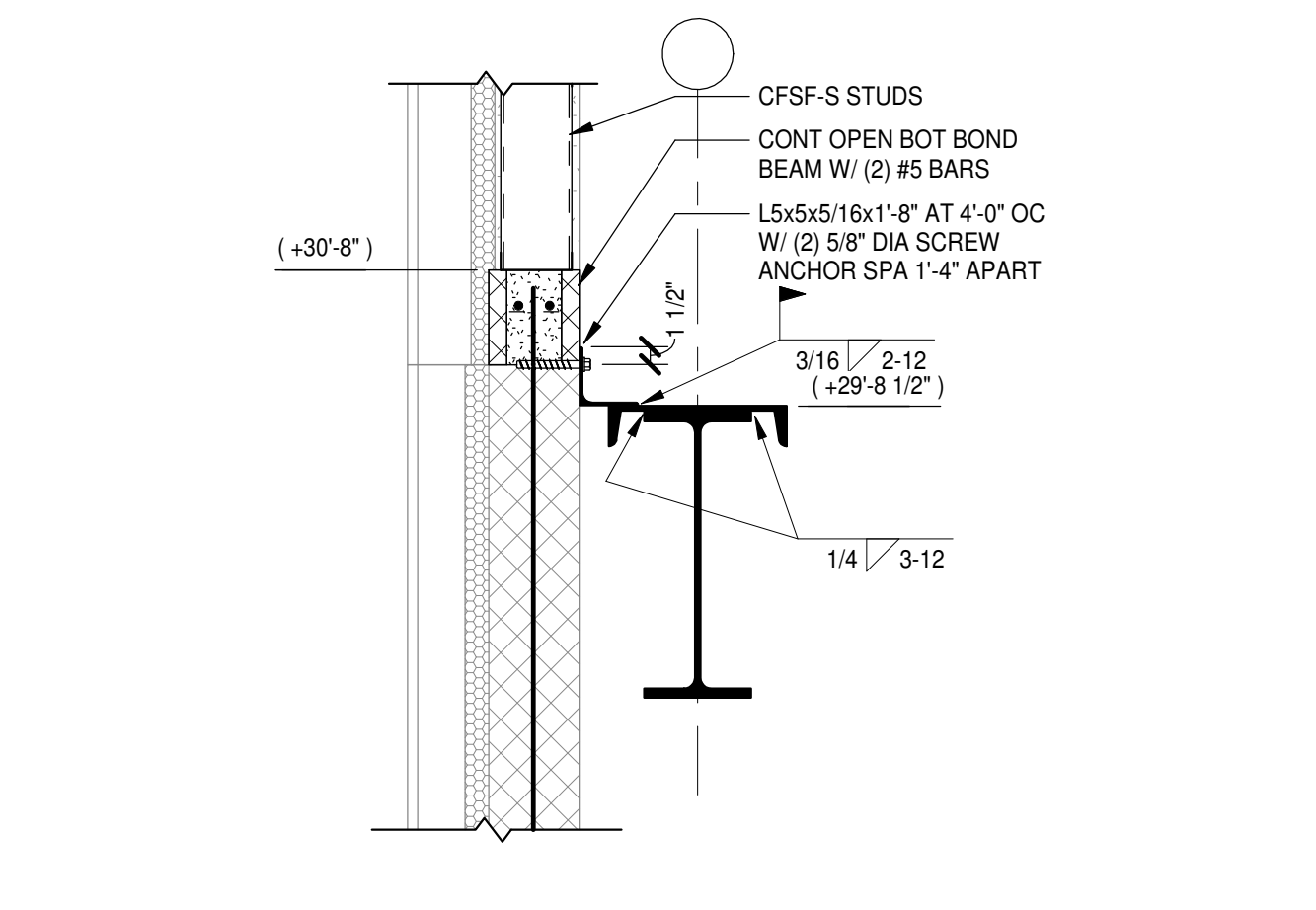




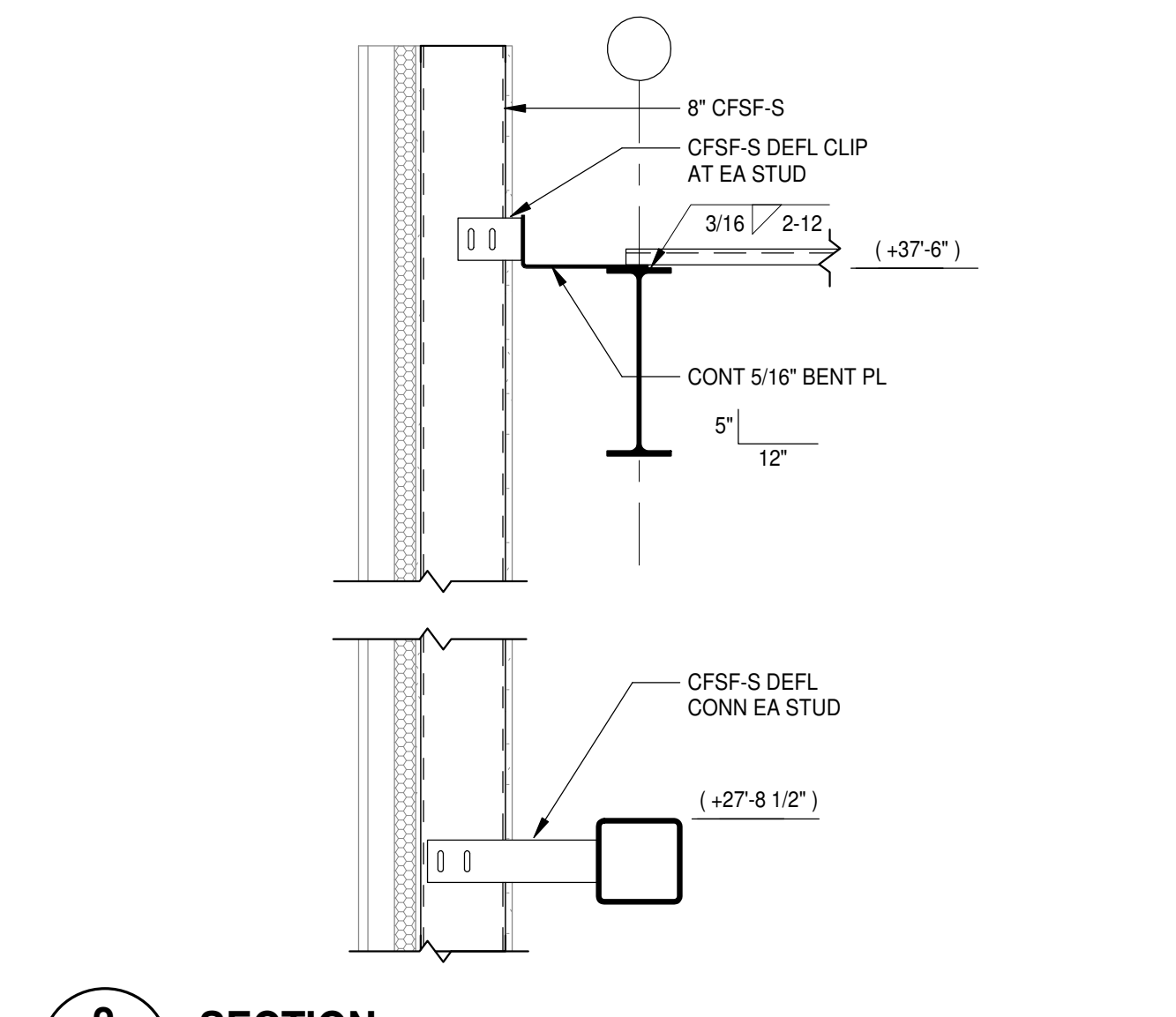
PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01



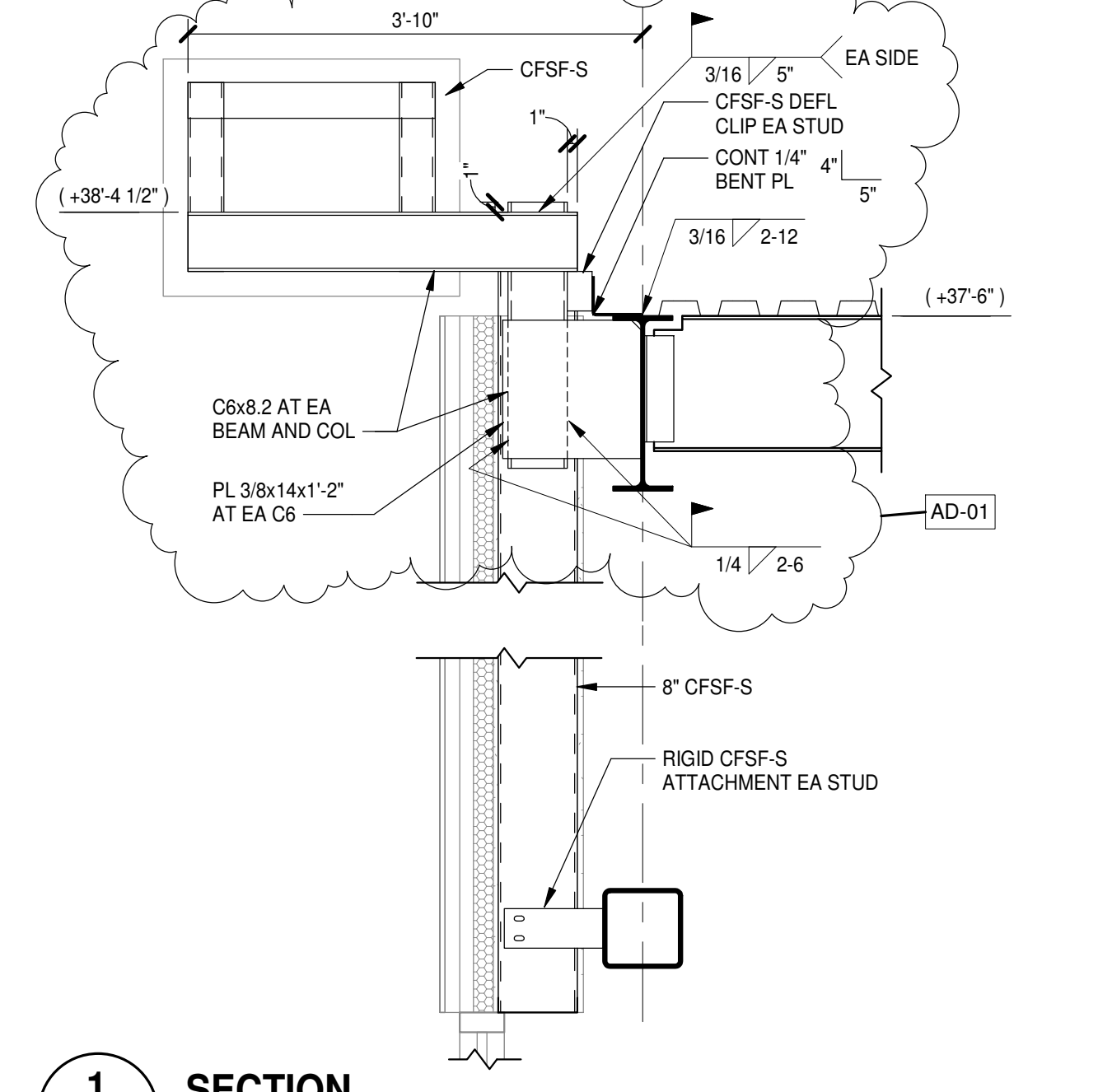
**4 SECTION**  
 S2.1.1 | S4.1.3 | 3/4" = 1'-0"



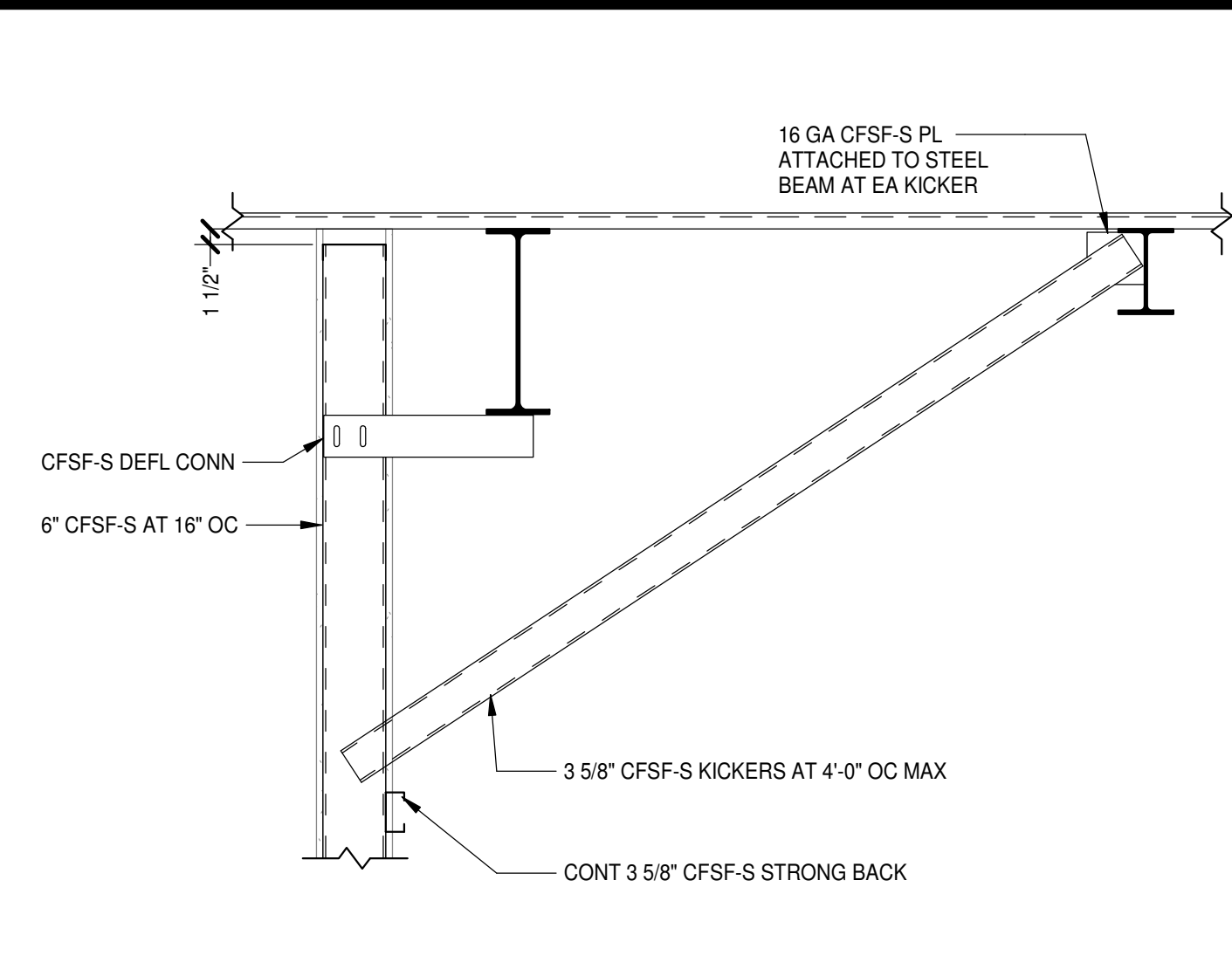
**3 SECTION**  
 S2.2.3 | S4.1.3 | 3/4" = 1'-0"



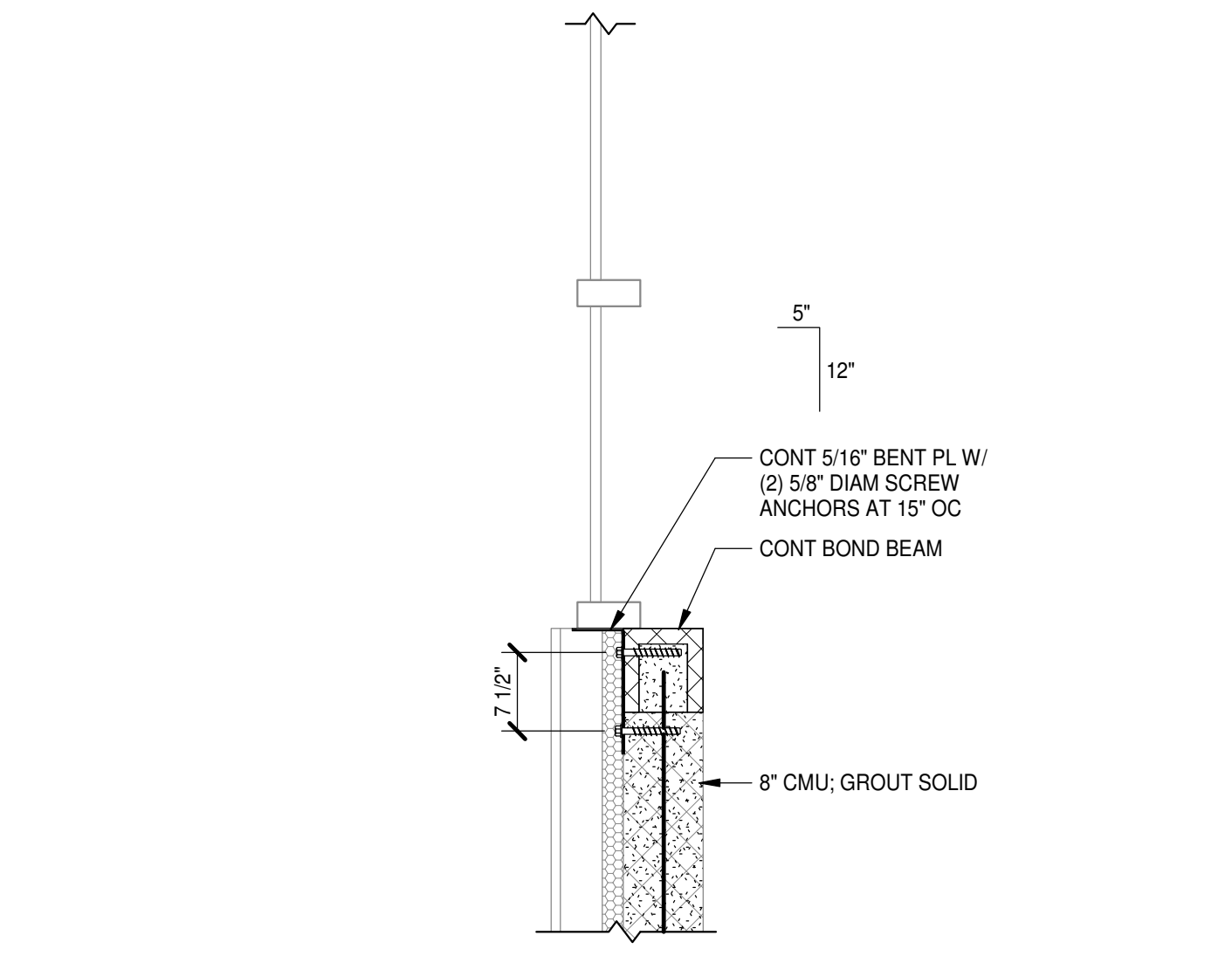
**2 SECTION**  
 S2.2.1 | S4.1.3 | 3/4" = 1'-0"



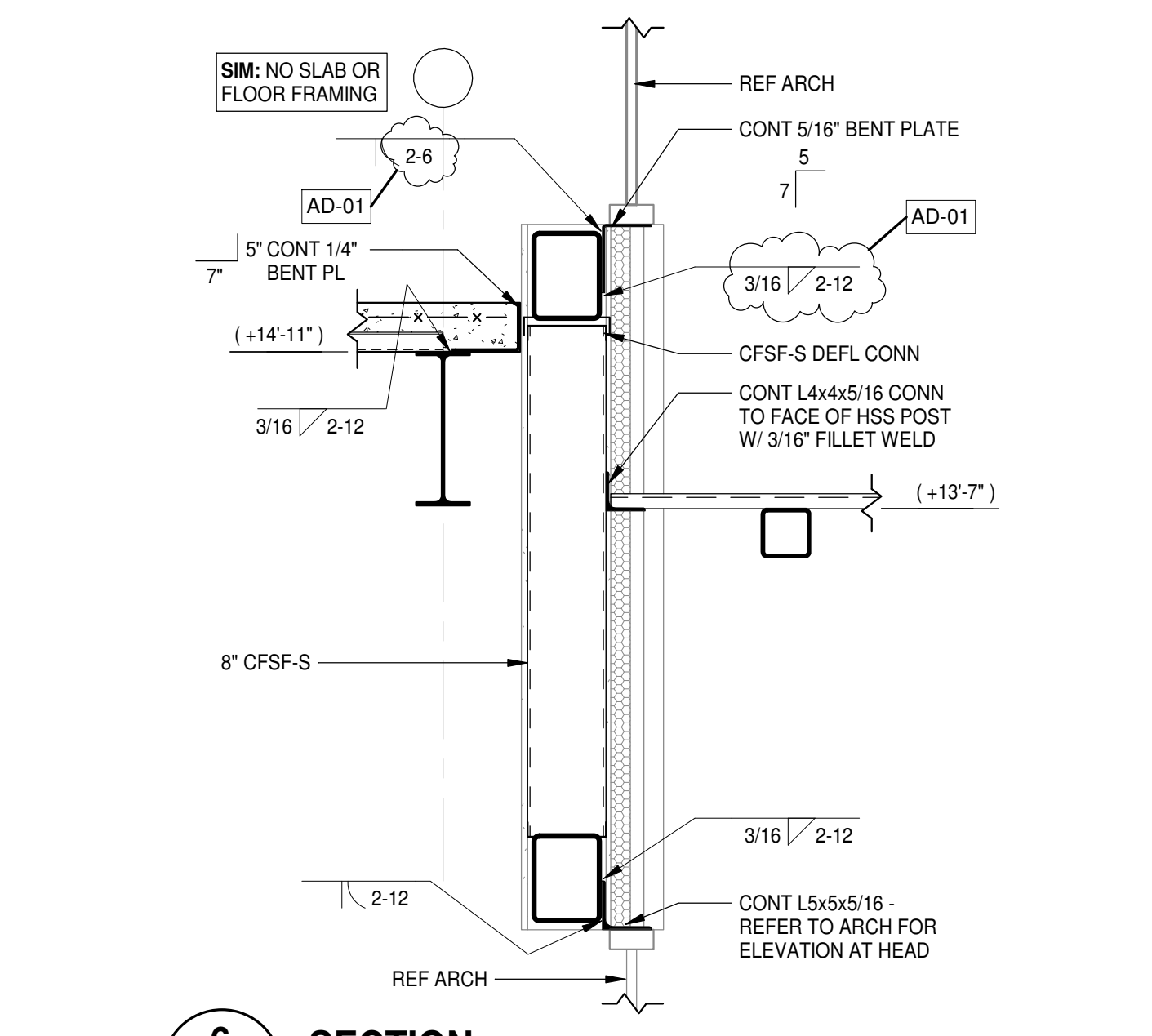
**1 SECTION**  
 S2.2.1 | S4.1.3 | 3/4" = 1'-0"



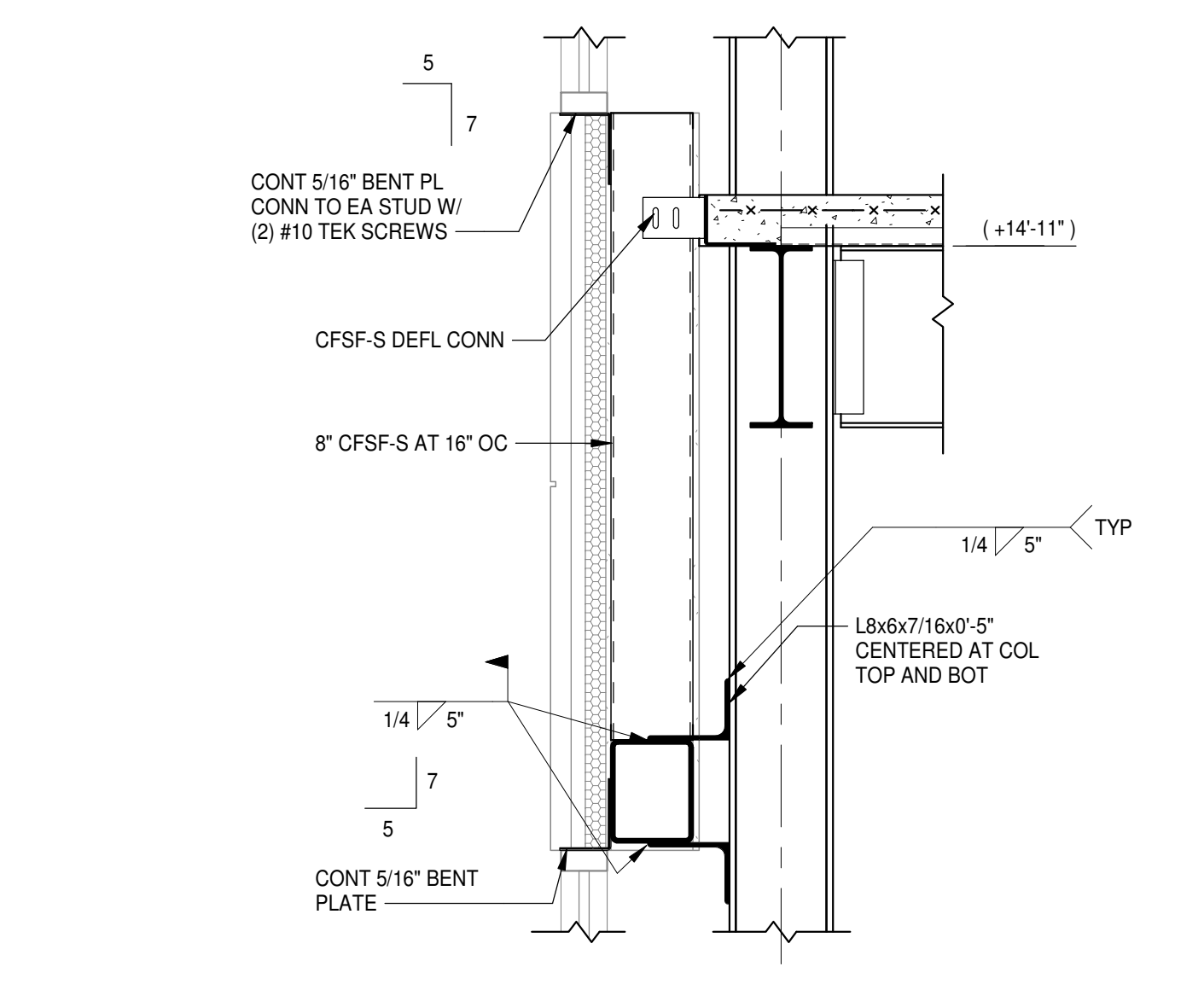
**8 SECTION**  
 S2.2.1 | S4.1.3 | 3/4" = 1'-0"



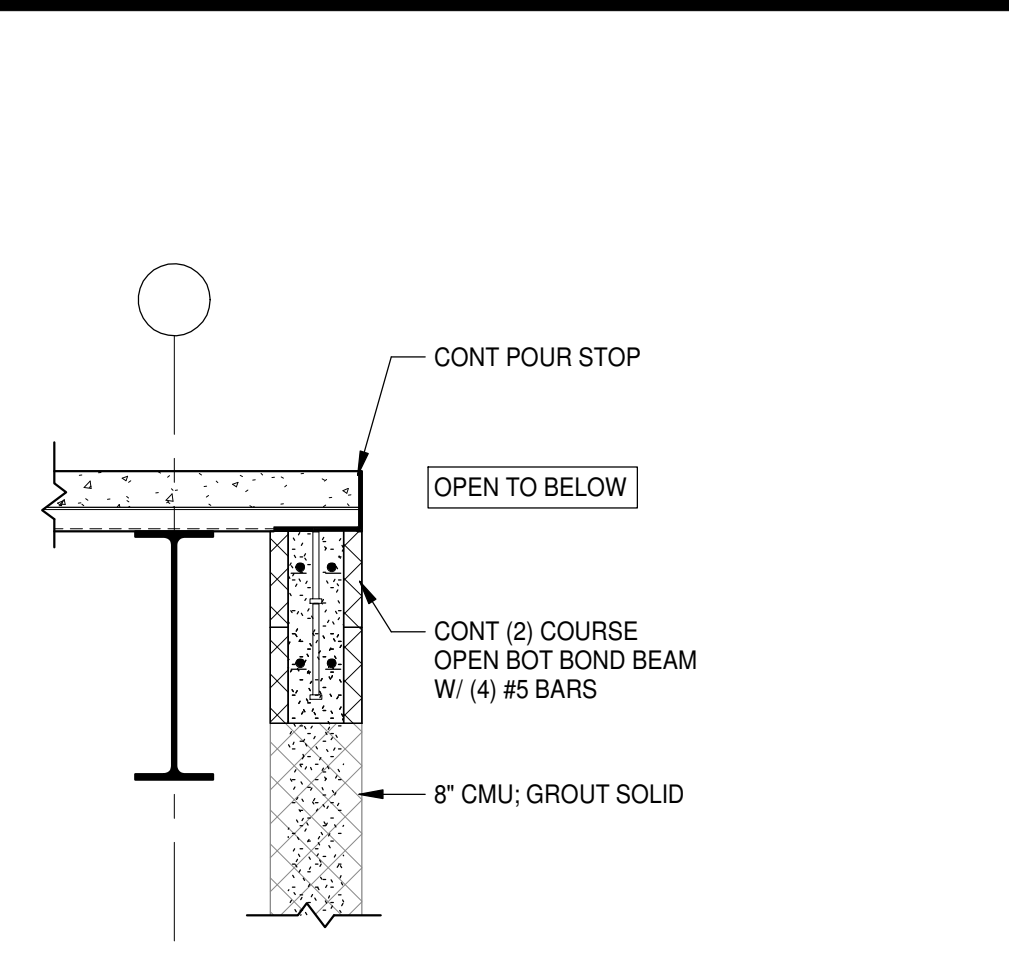
**7 SECTION**  
 S2.1.7 | S4.1.3 | 3/4" = 1'-0"



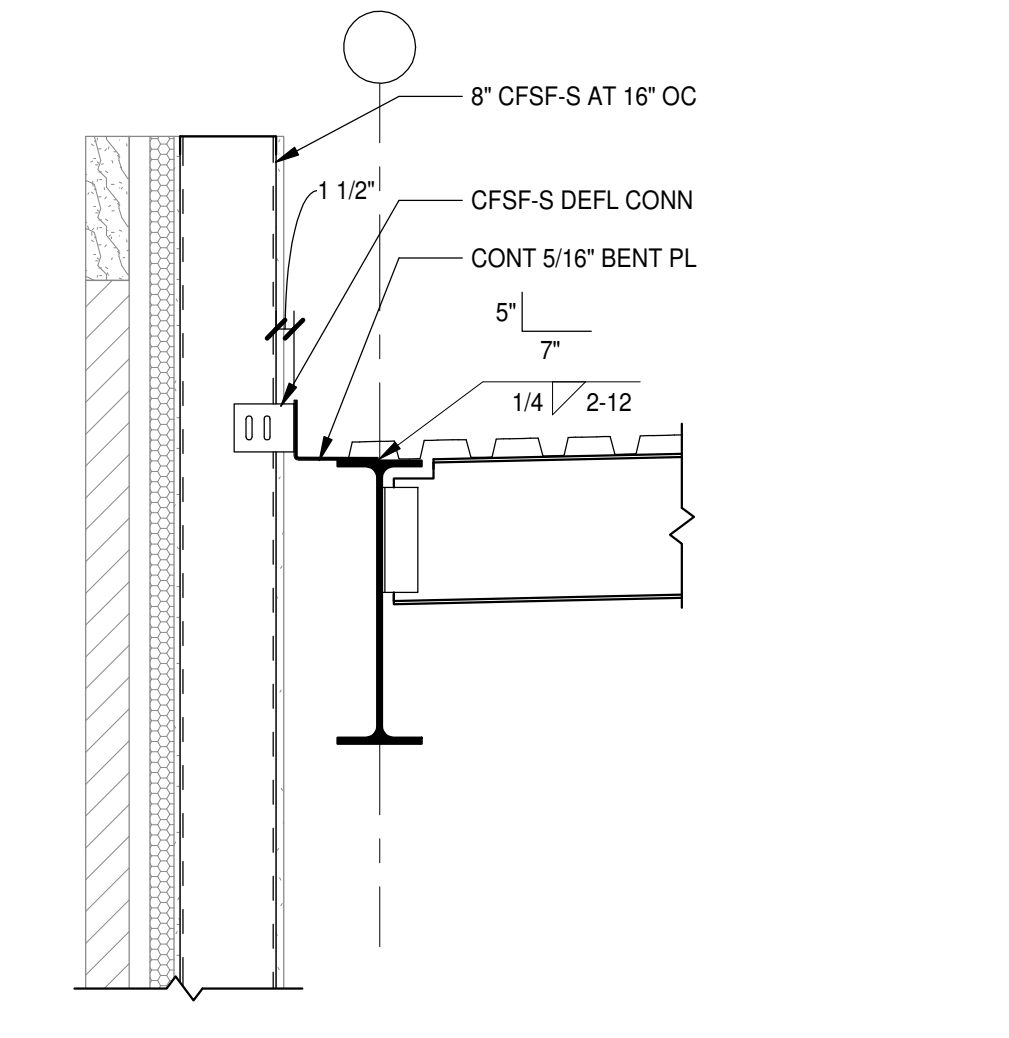
**6 SECTION**  
 S2.1.1 | S4.1.3 | 3/4" = 1'-0"



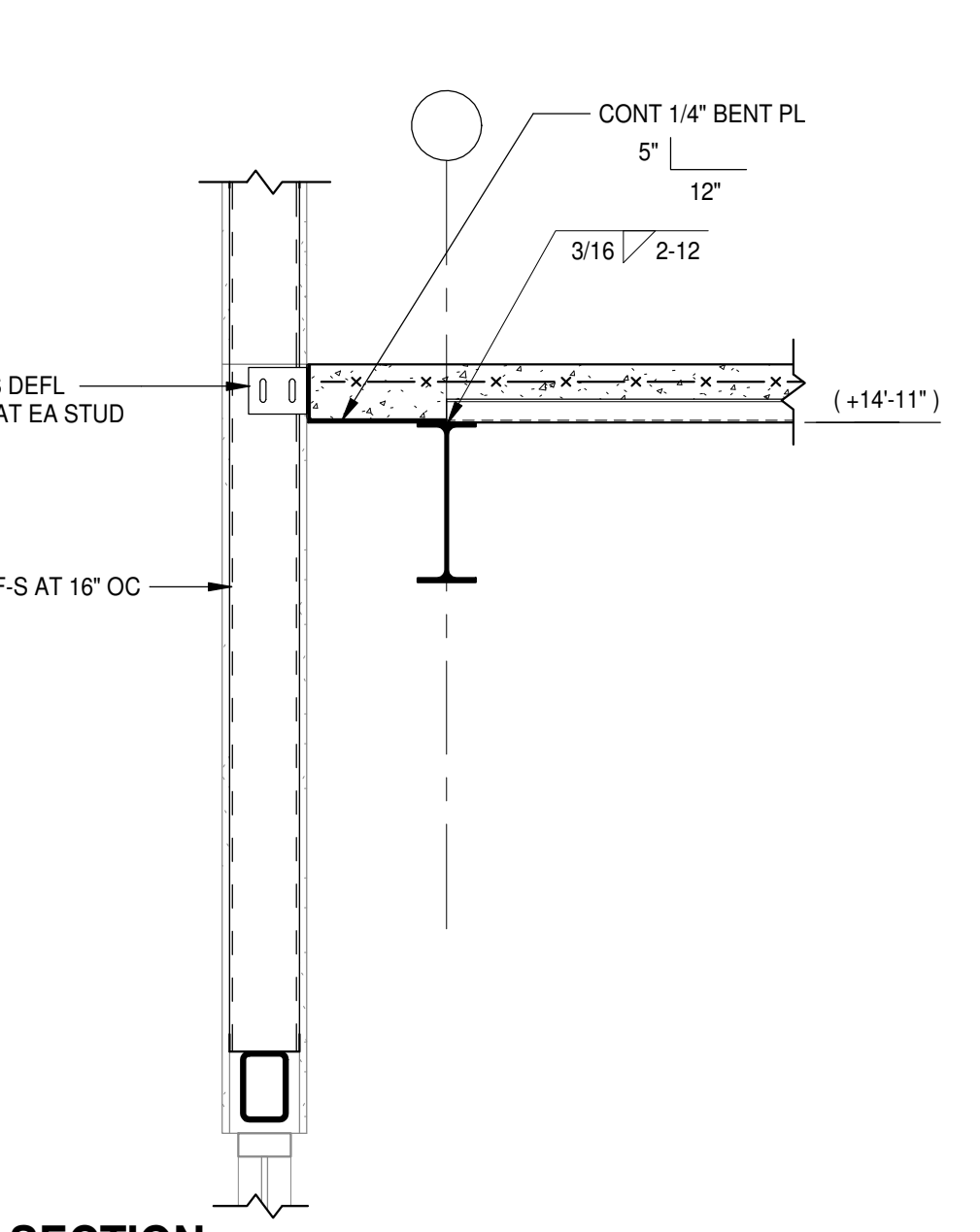
**5 SECTION**  
 S2.1.6 | S4.1.3 | 3/4" = 1'-0"



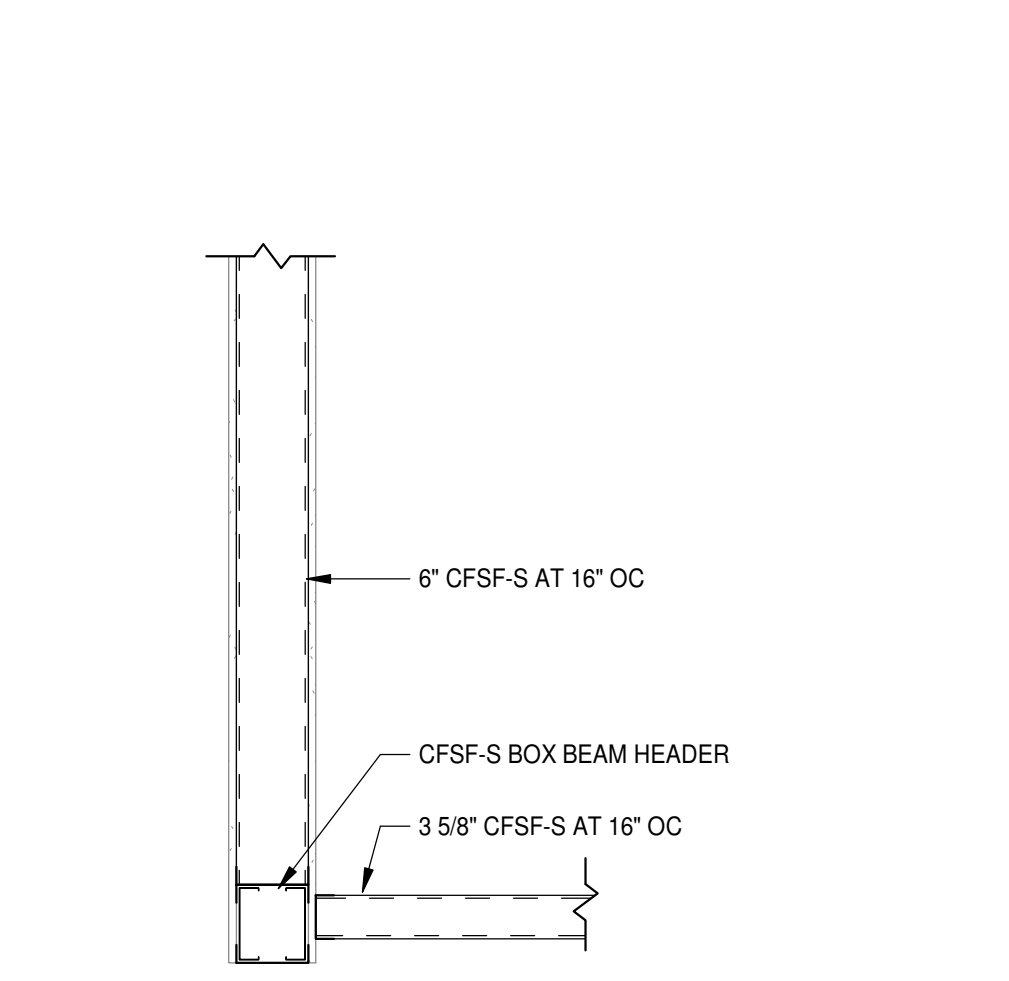
**12 SECTION**  
 S2.2.3 | S4.1.3 | 3/4" = 1'-0"



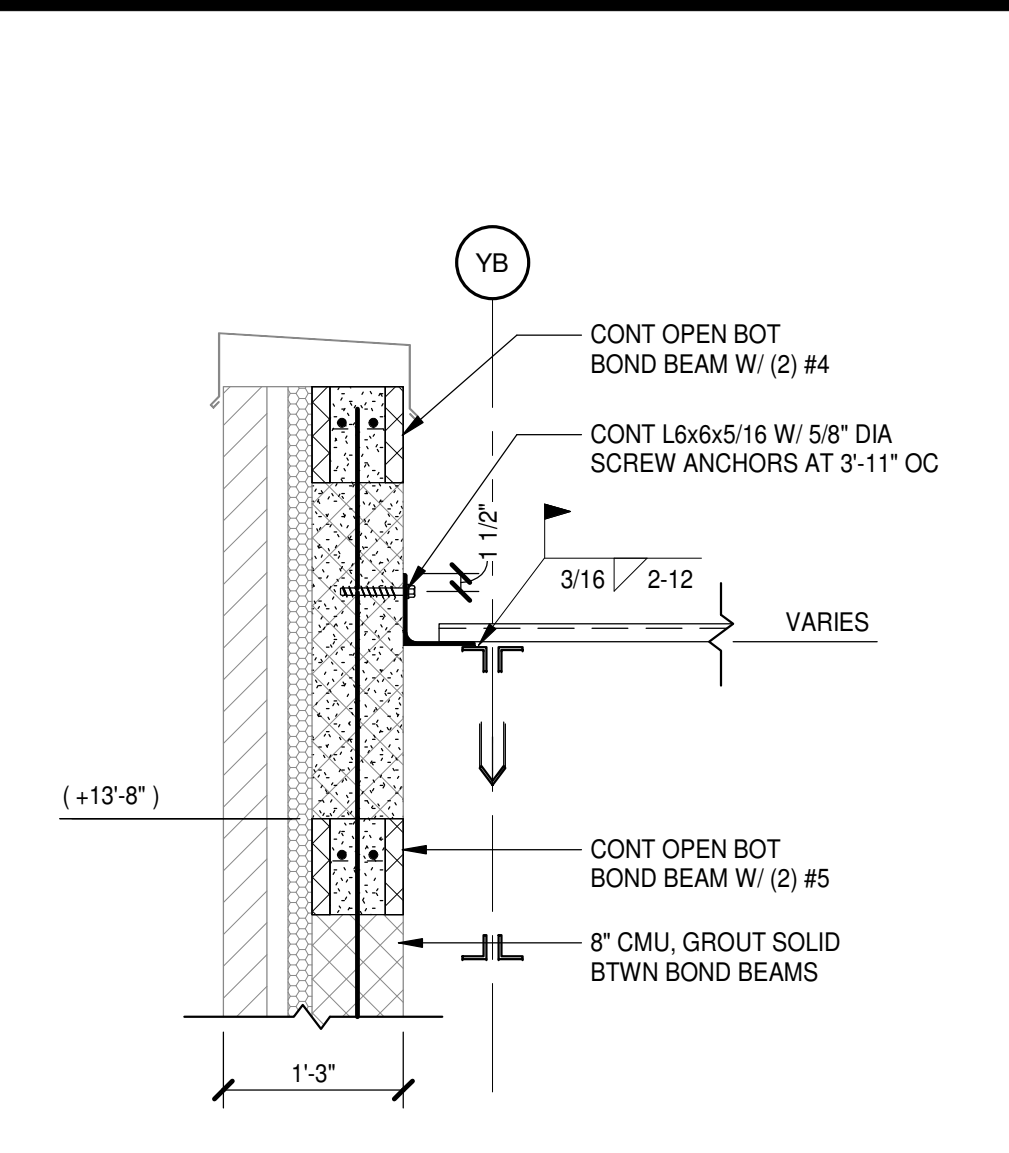
**11 SECTION**  
 S2.2.3 | S4.1.3 | 3/4" = 1'-0"



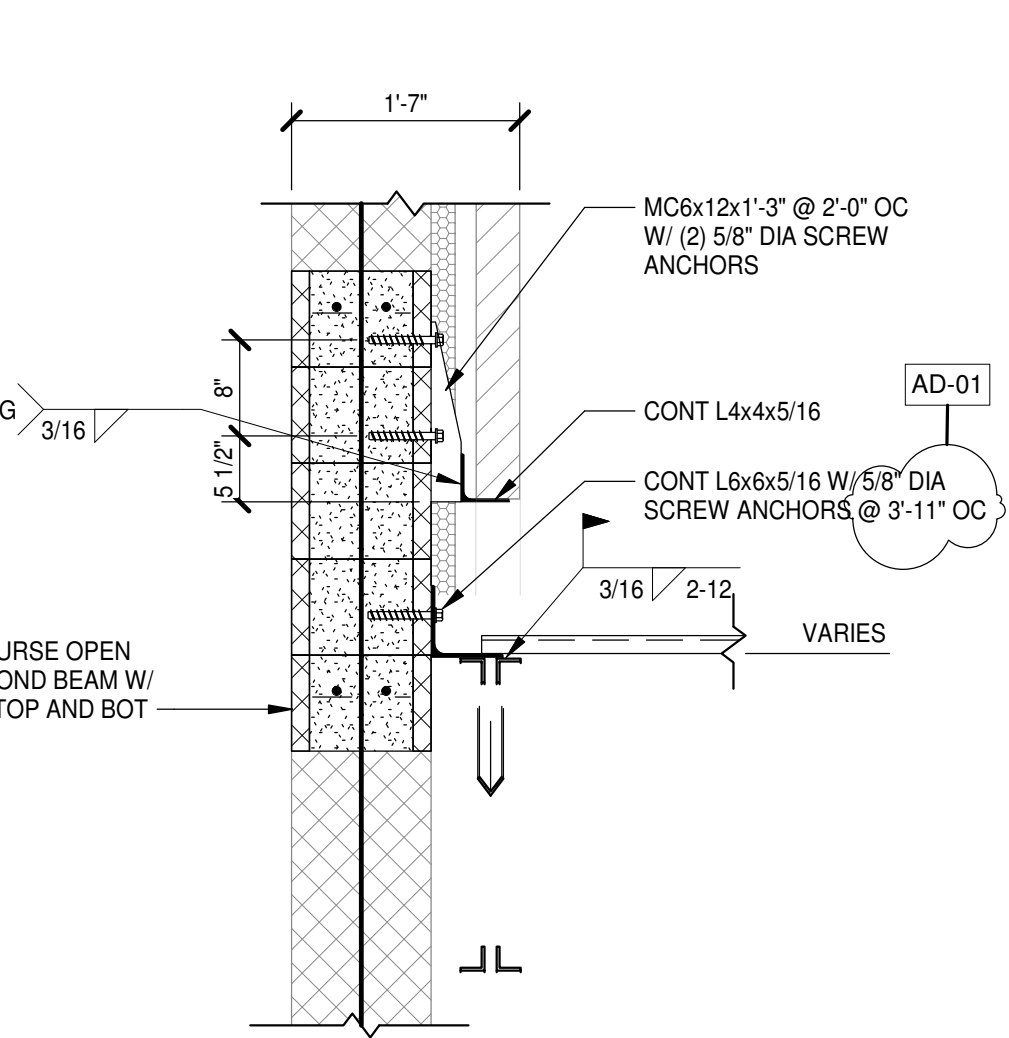
**10 SECTION**  
 S2.2.9 | S4.1.3 | 3/4" = 1'-0"



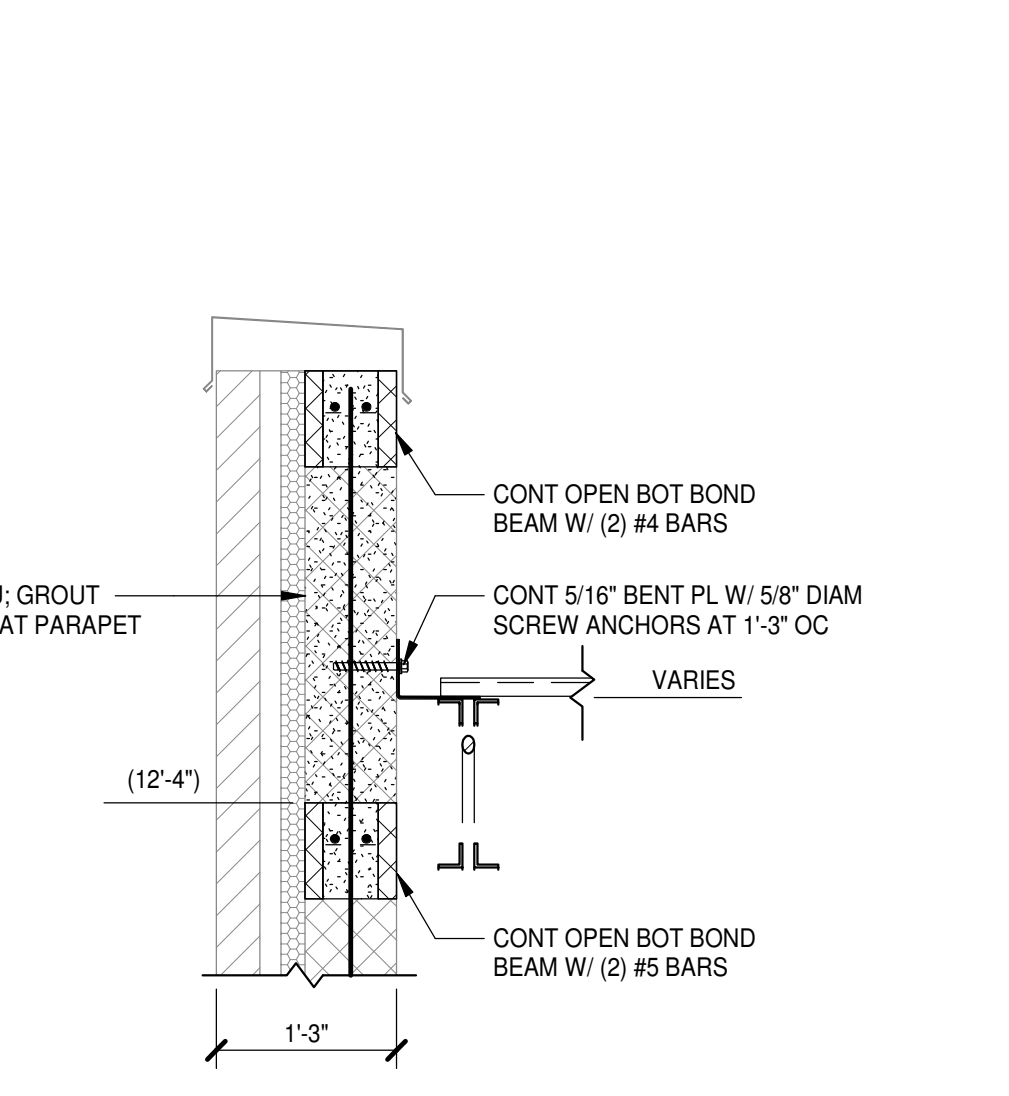
**9 SECTION**  
 S2.1.1 | S4.1.3 | 3/4" = 1'-0"



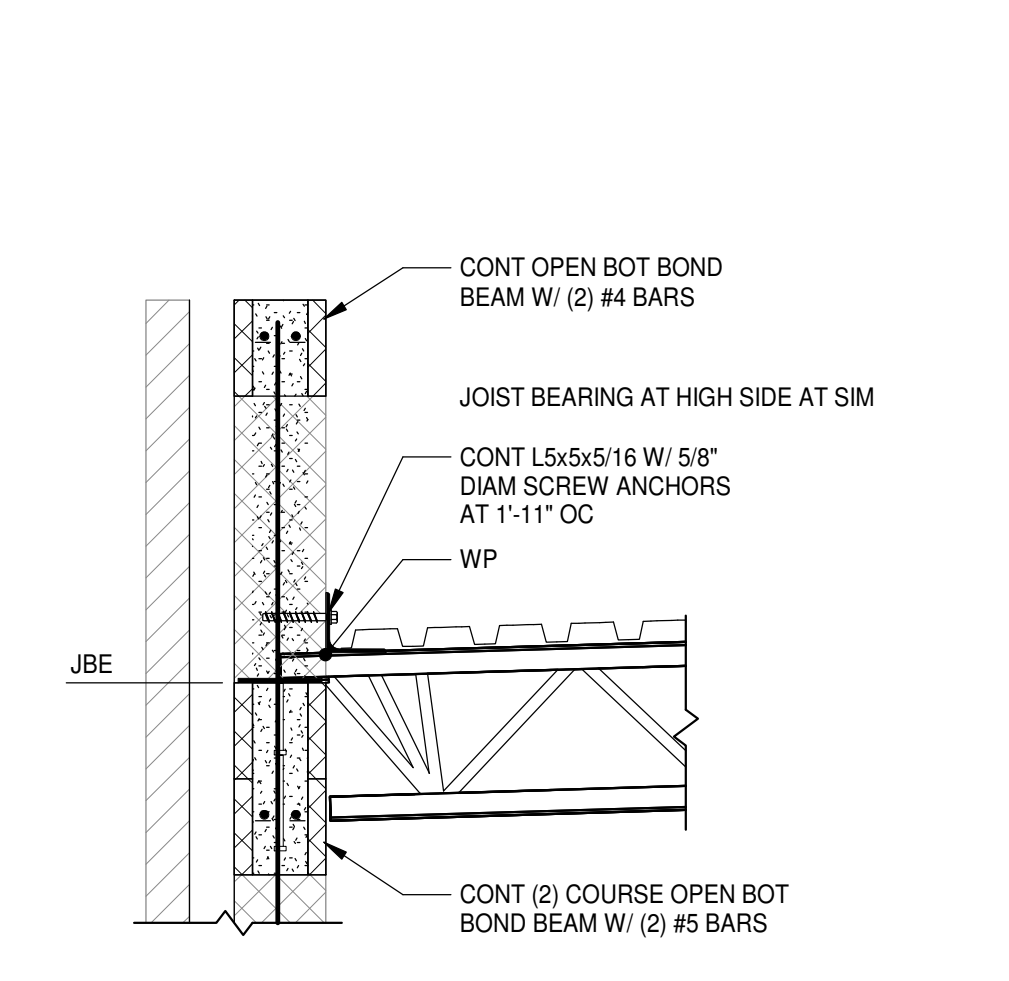
**16 SECTION**  
 S2.1.2 | S4.1.3 | 3/4" = 1'-0"



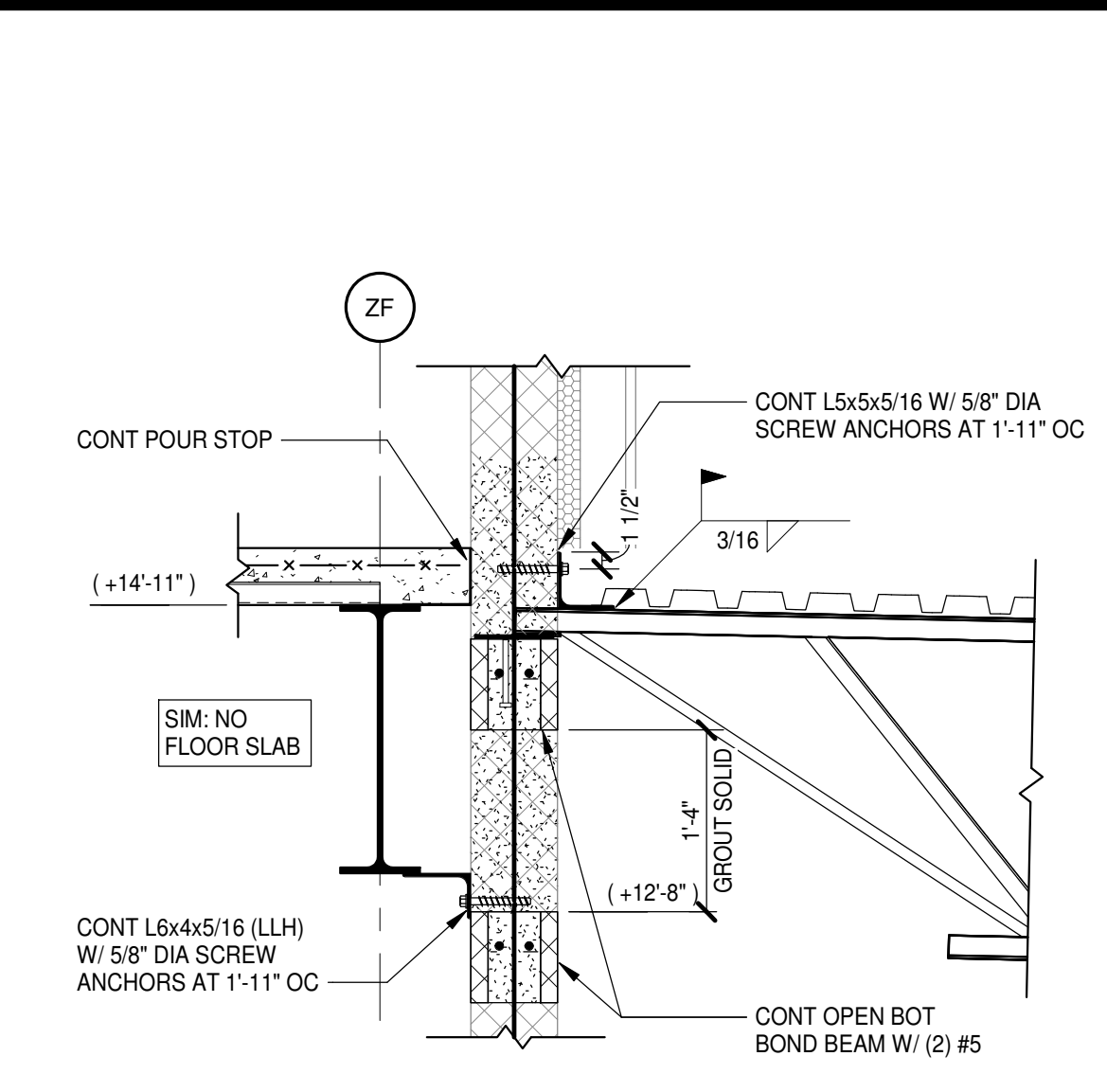
**15 SECTION**  
 S2.1.2 | S4.1.3 | 3/4" = 1'-0"



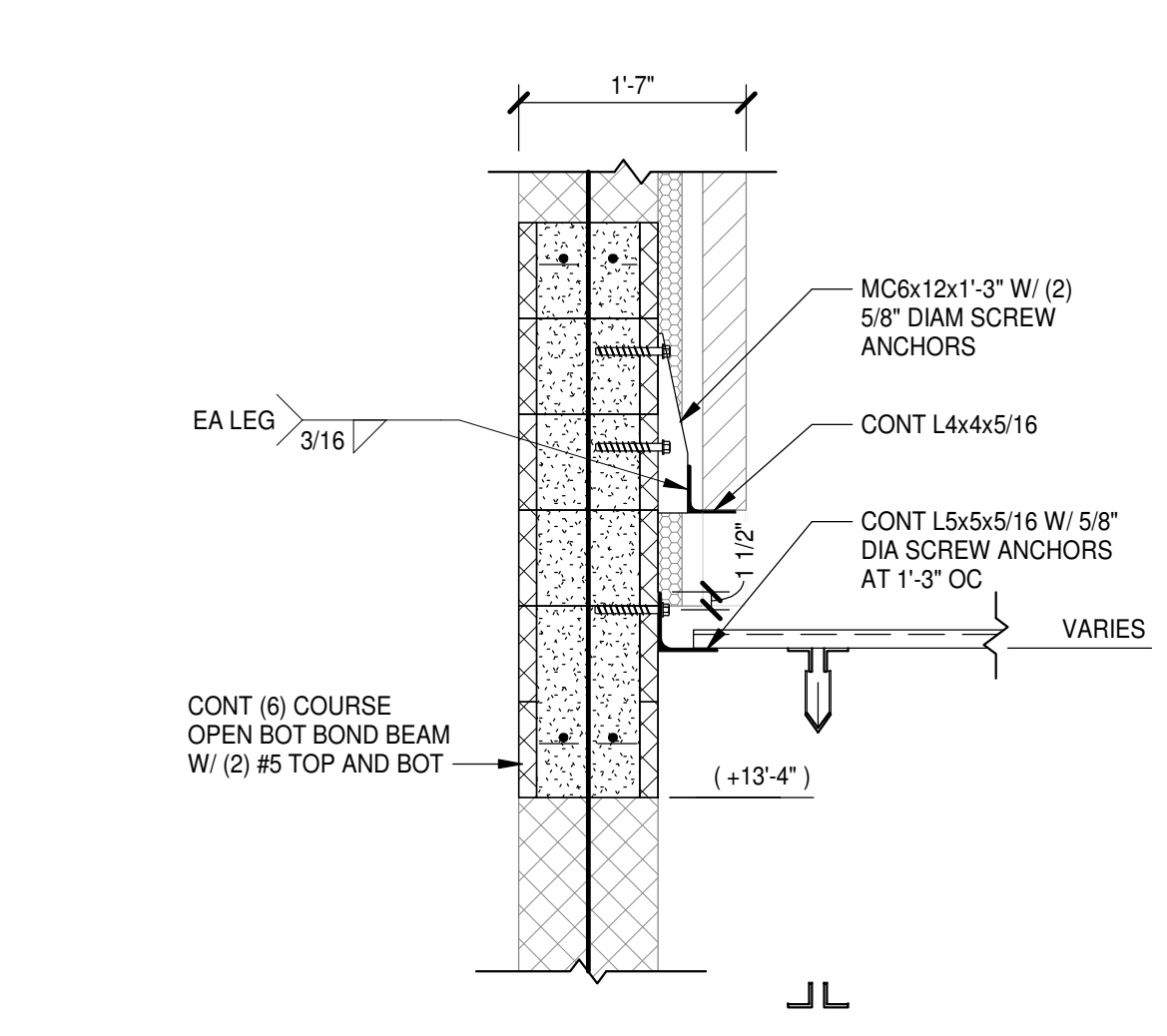
**14 SECTION**  
 S2.2.9 | S4.1.3 | 3/4" = 1'-0"



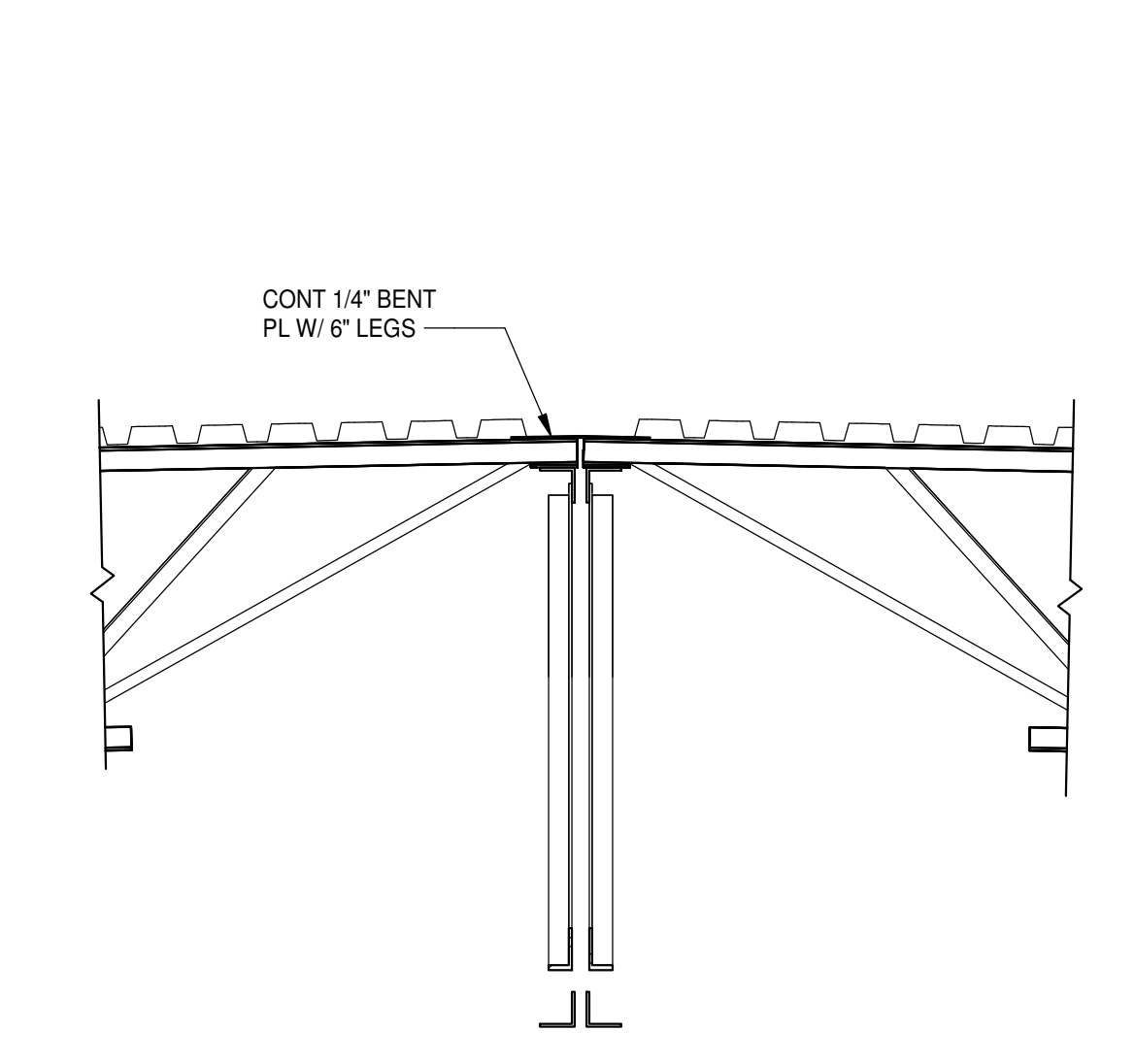
**13 SECTION**  
 S2.2.9 | S4.1.3 | 3/4" = 1'-0"



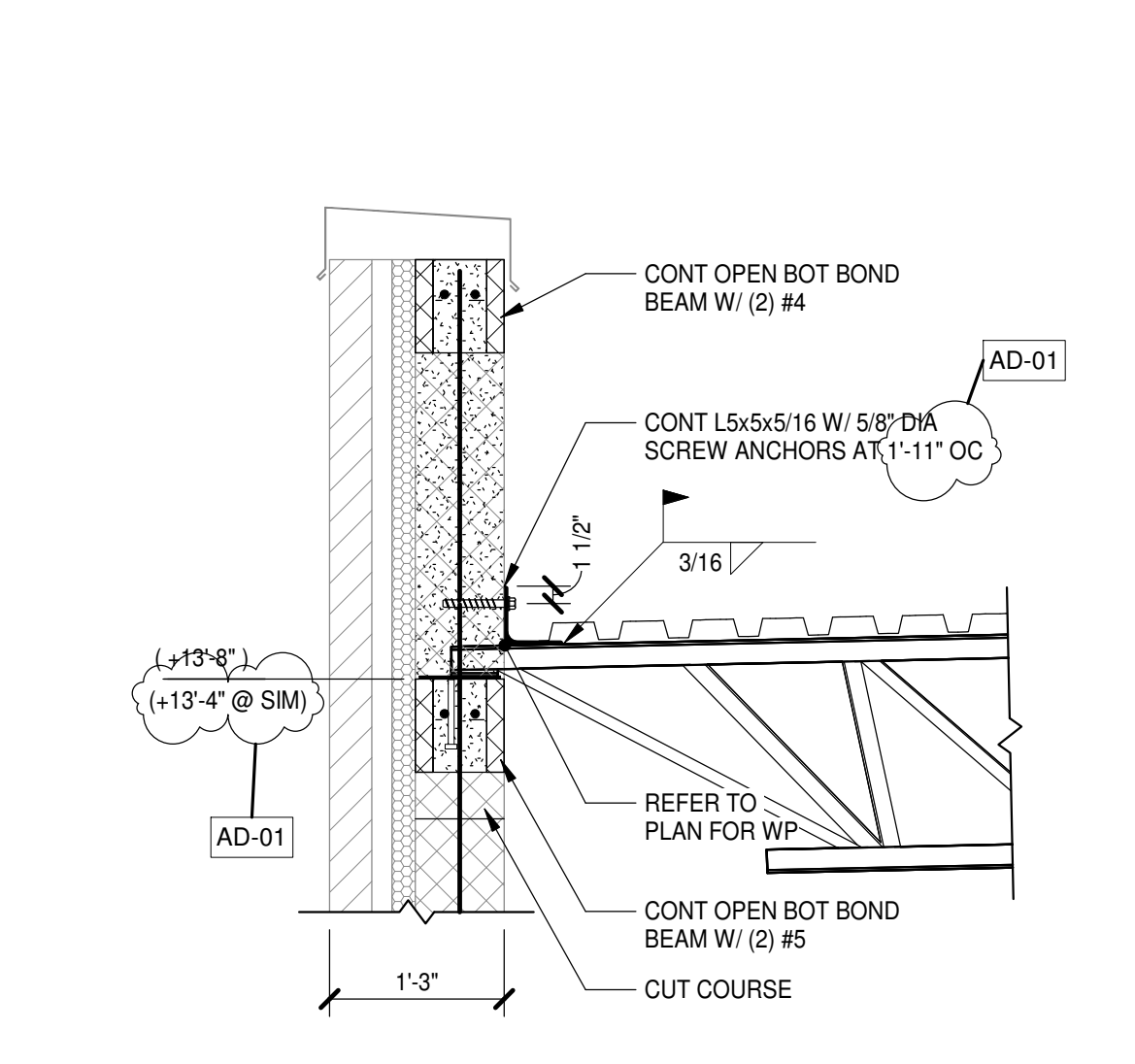
**20 SECTION**  
 S2.1.2 | S4.1.3 | 3/4" = 1'-0"



**19 SECTION**  
 S2.1.2 | S4.1.3 | 3/4" = 1'-0"



**18 SECTION**  
 S2.1.2 | S4.1.3 | 3/4" = 1'-0"

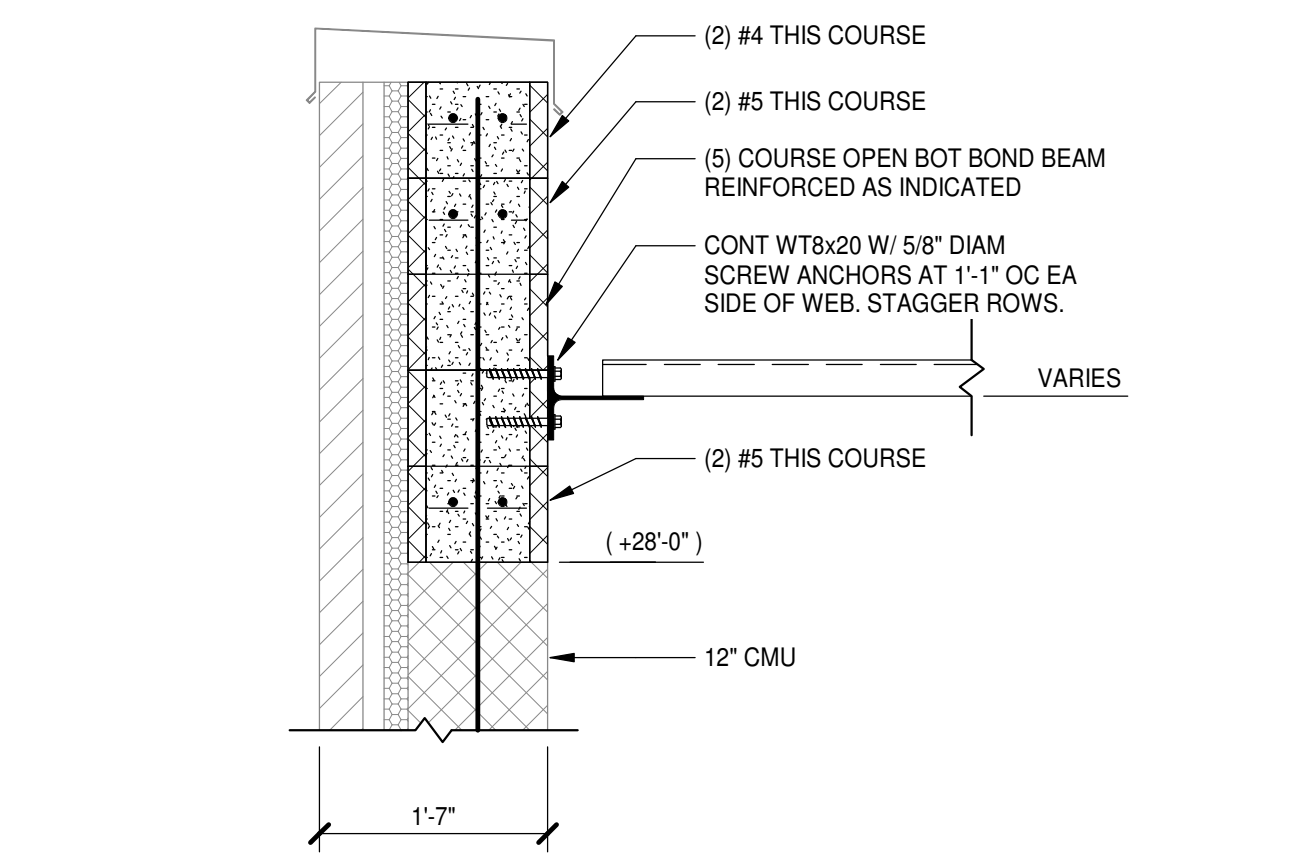


**17 SECTION**  
 S2.1.2 | S4.1.3 | 3/4" = 1'-0"

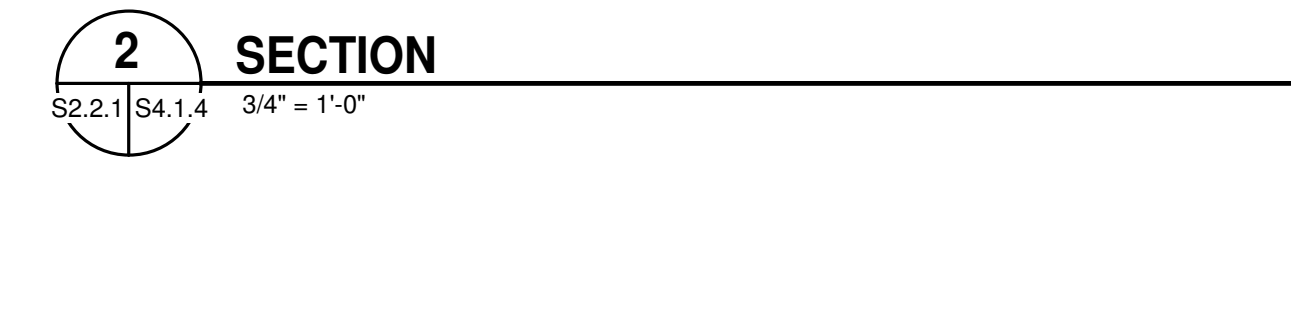




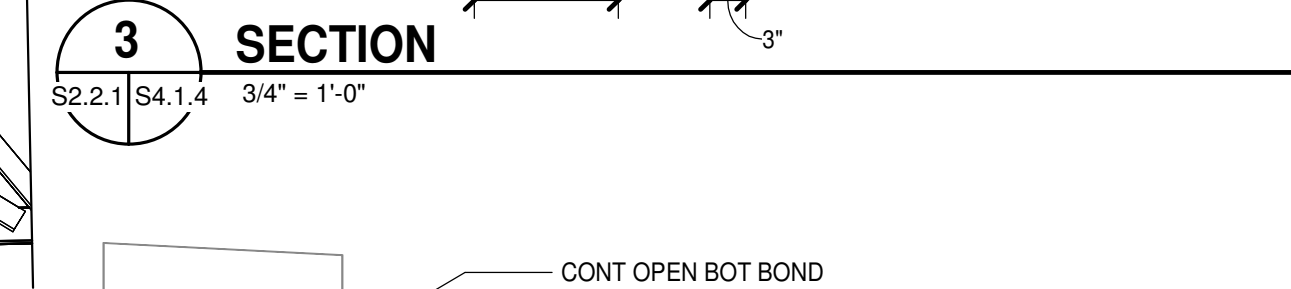
PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01



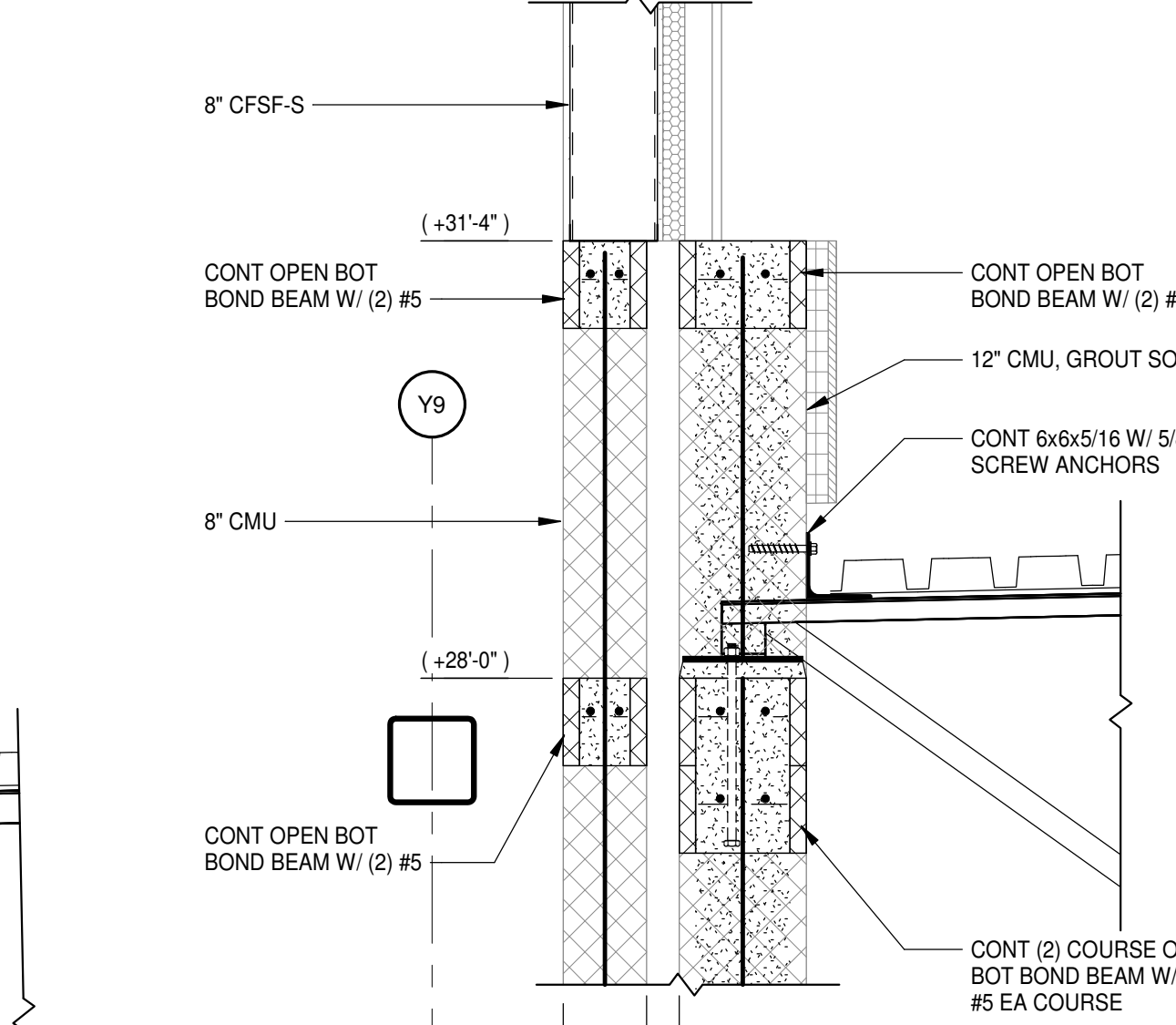
**1 SECTION**  
 S2.2.1 | S4.1.4 | 3/4" = 1'-0"



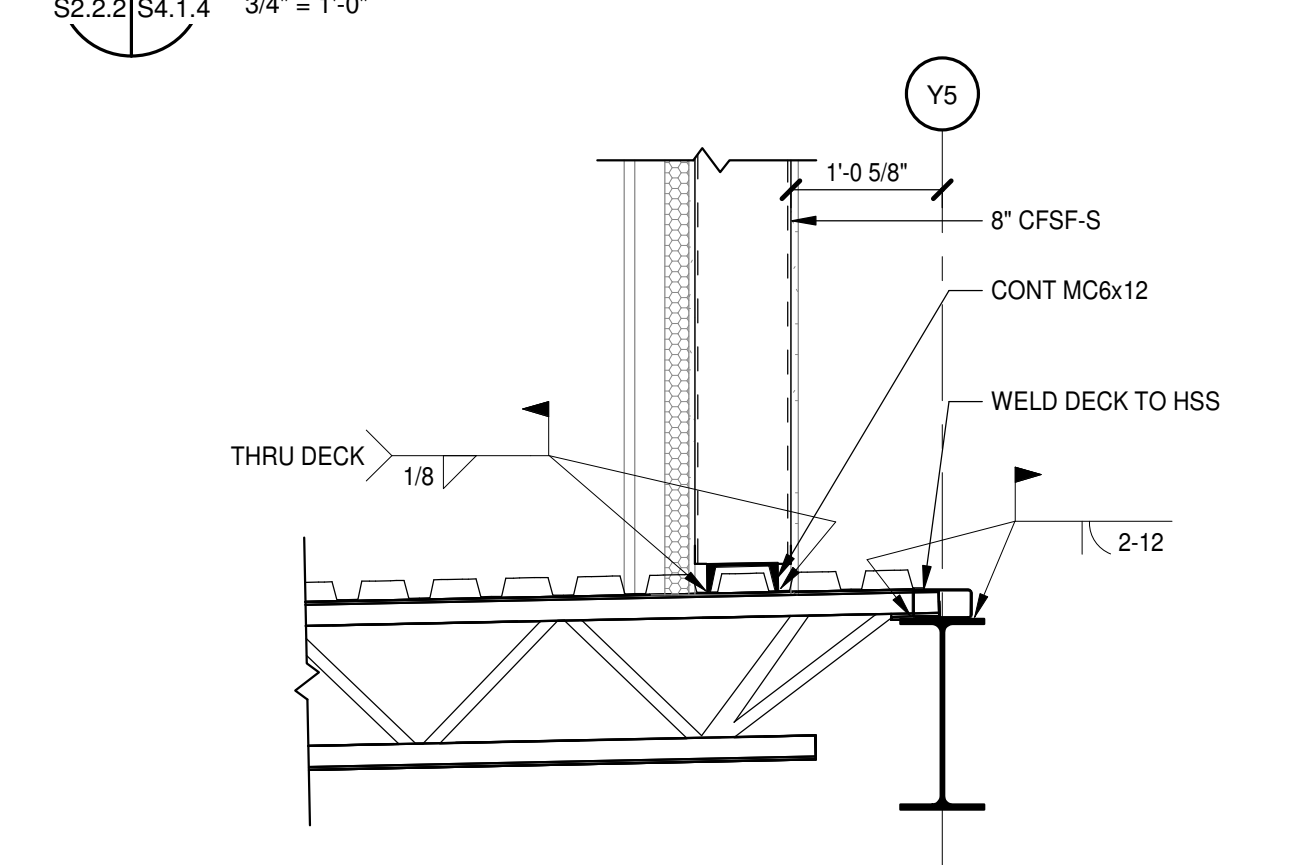
**2 SECTION**  
 S2.2.1 | S4.1.4 | 3/4" = 1'-0"



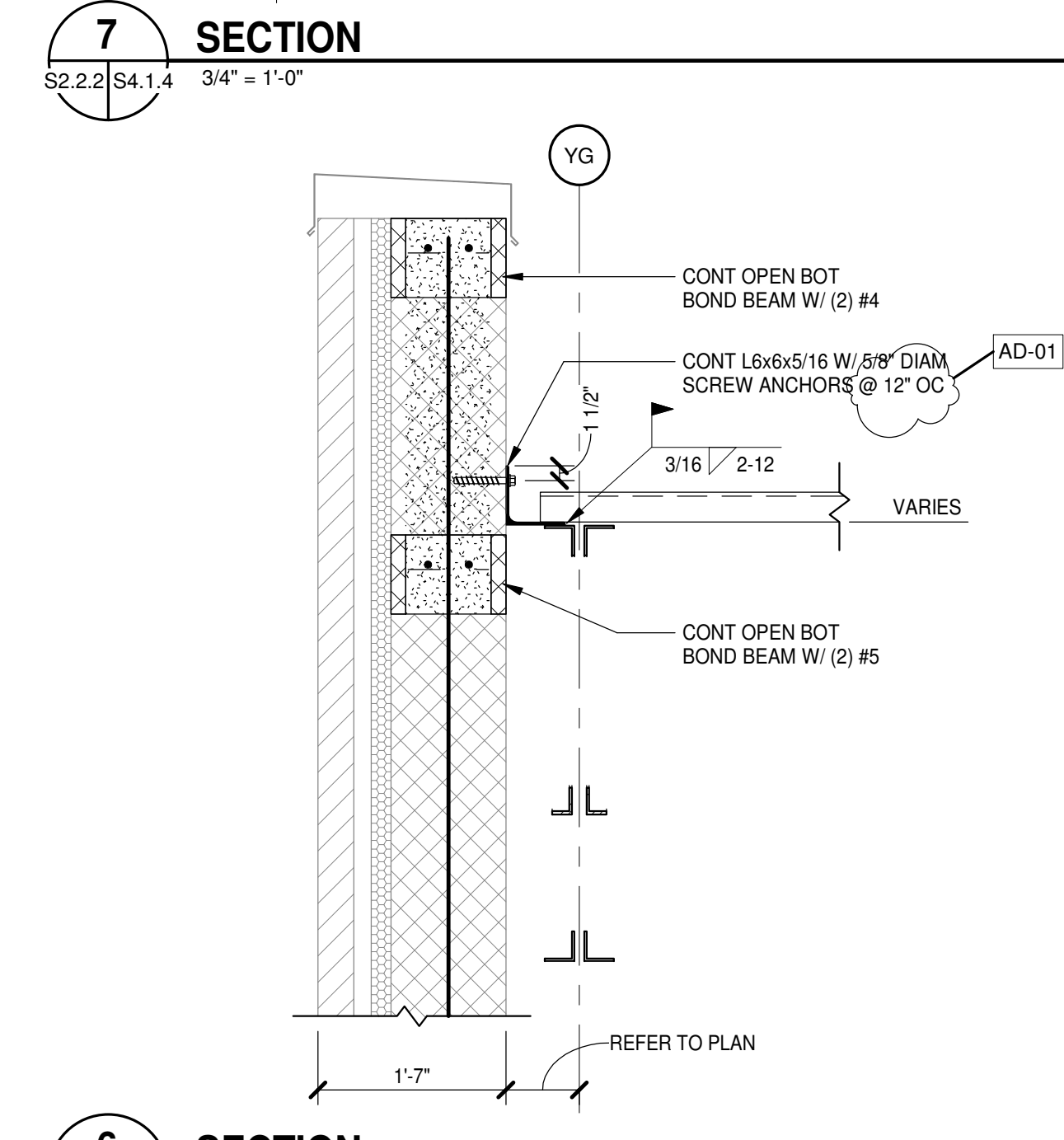
**3 SECTION**  
 S2.2.1 | S4.1.4 | 3/4" = 1'-0"



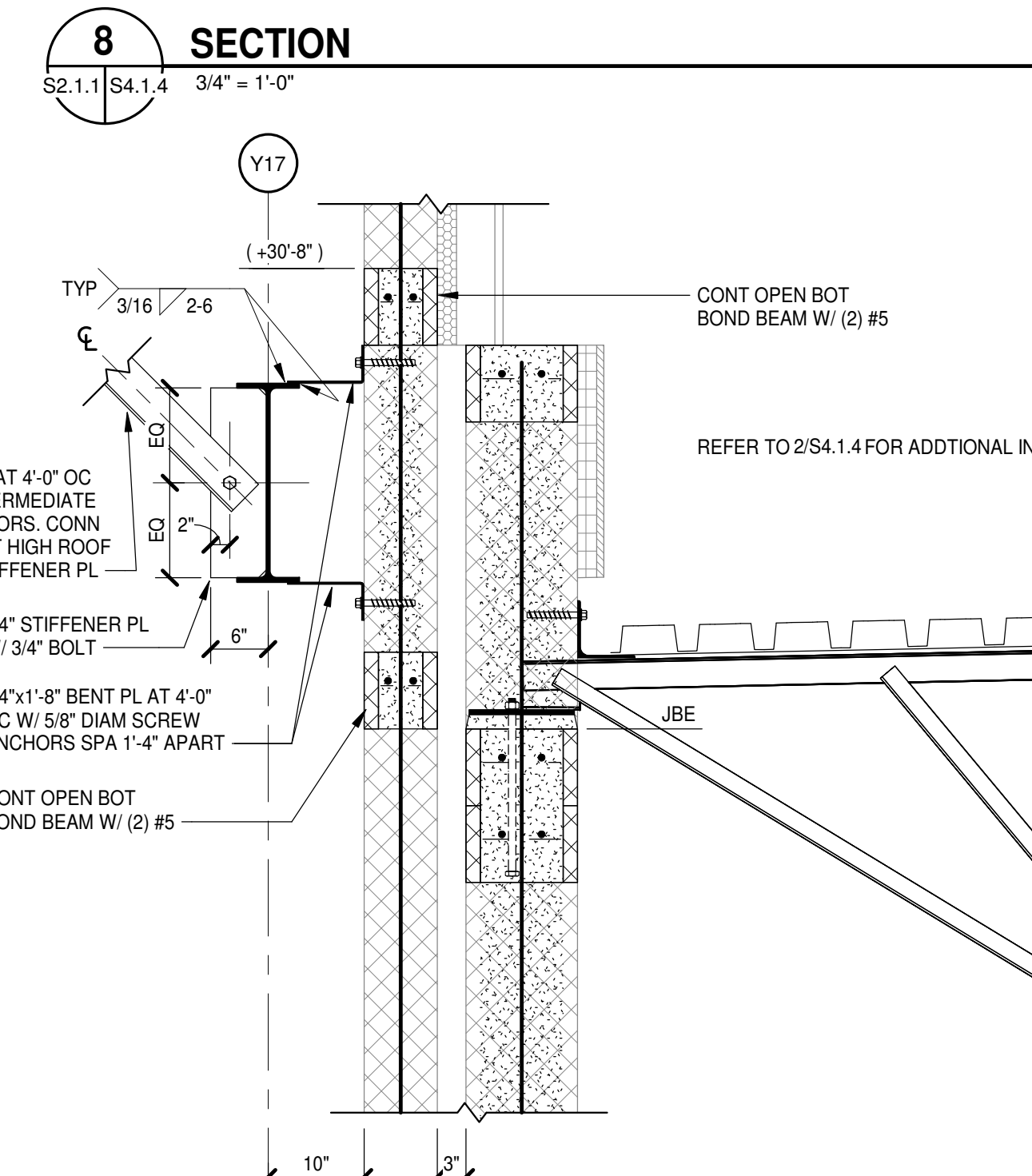
**4 SECTION**  
 S2.2.1 | S4.1.4 | 3/4" = 1'-0"



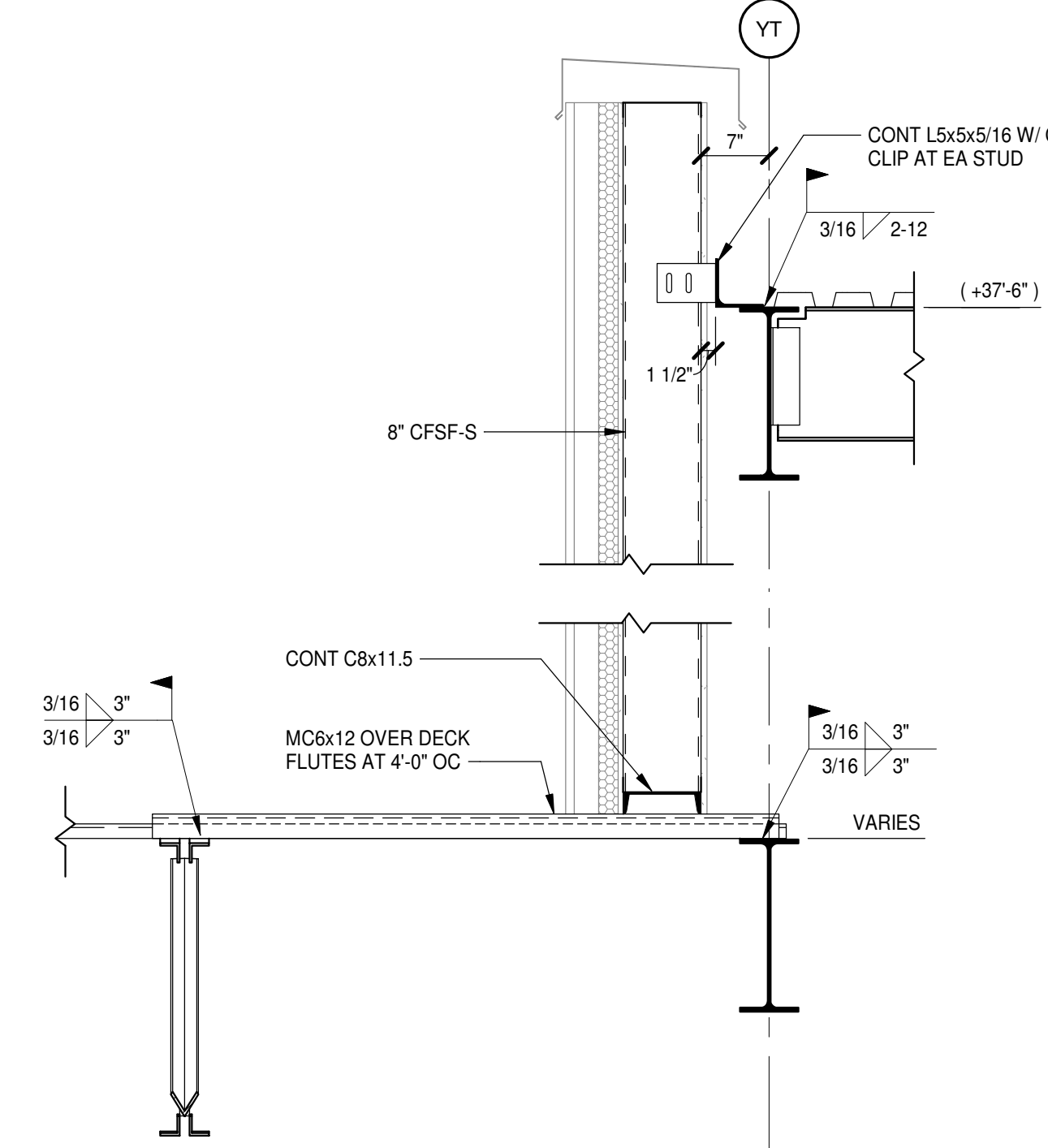
**5 SECTION**  
 S2.2.1 | S4.1.4 | 3/4" = 1'-0"



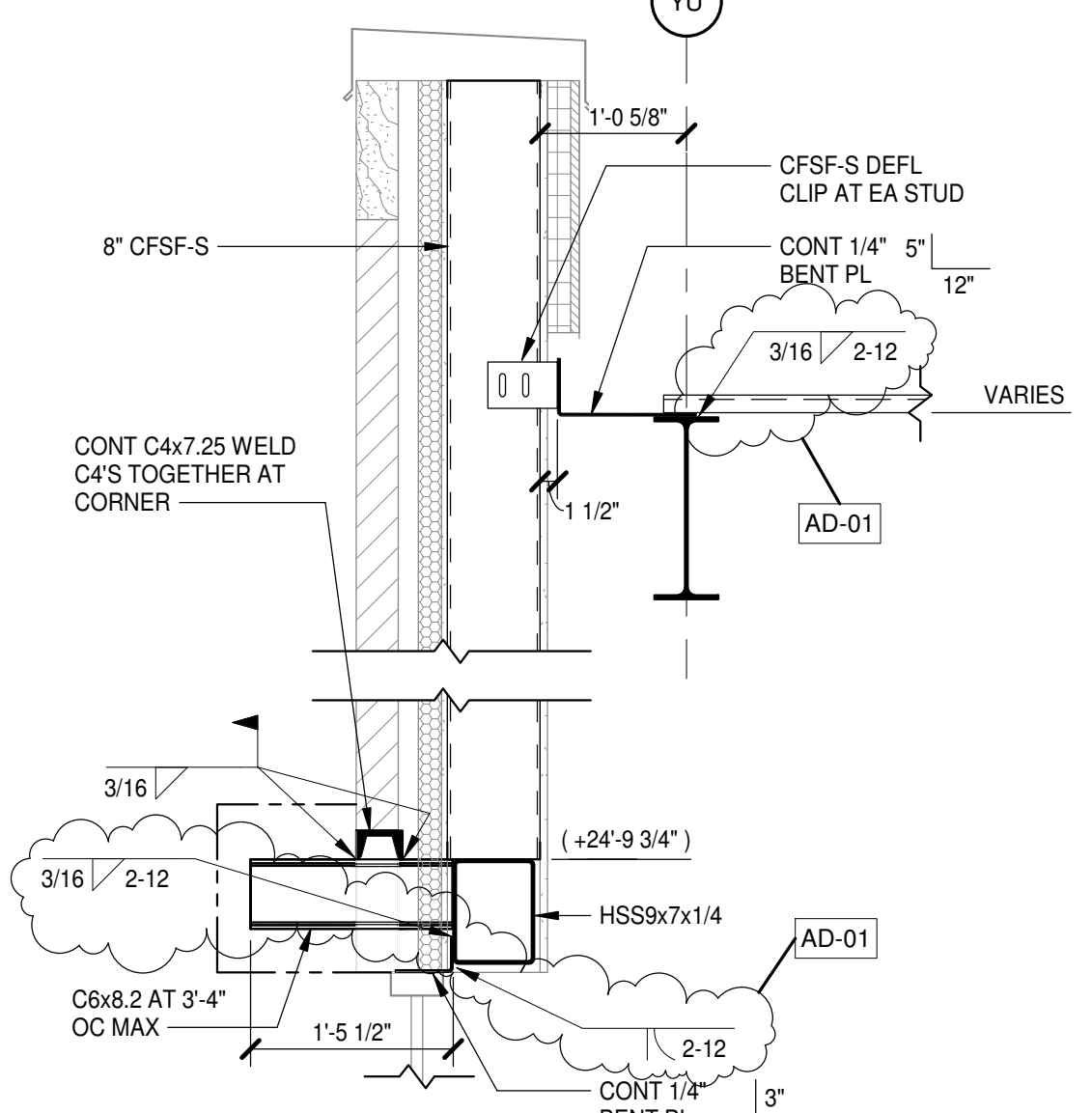
**6 SECTION**  
 S2.2.2 | S4.1.4 | 3/4" = 1'-0"



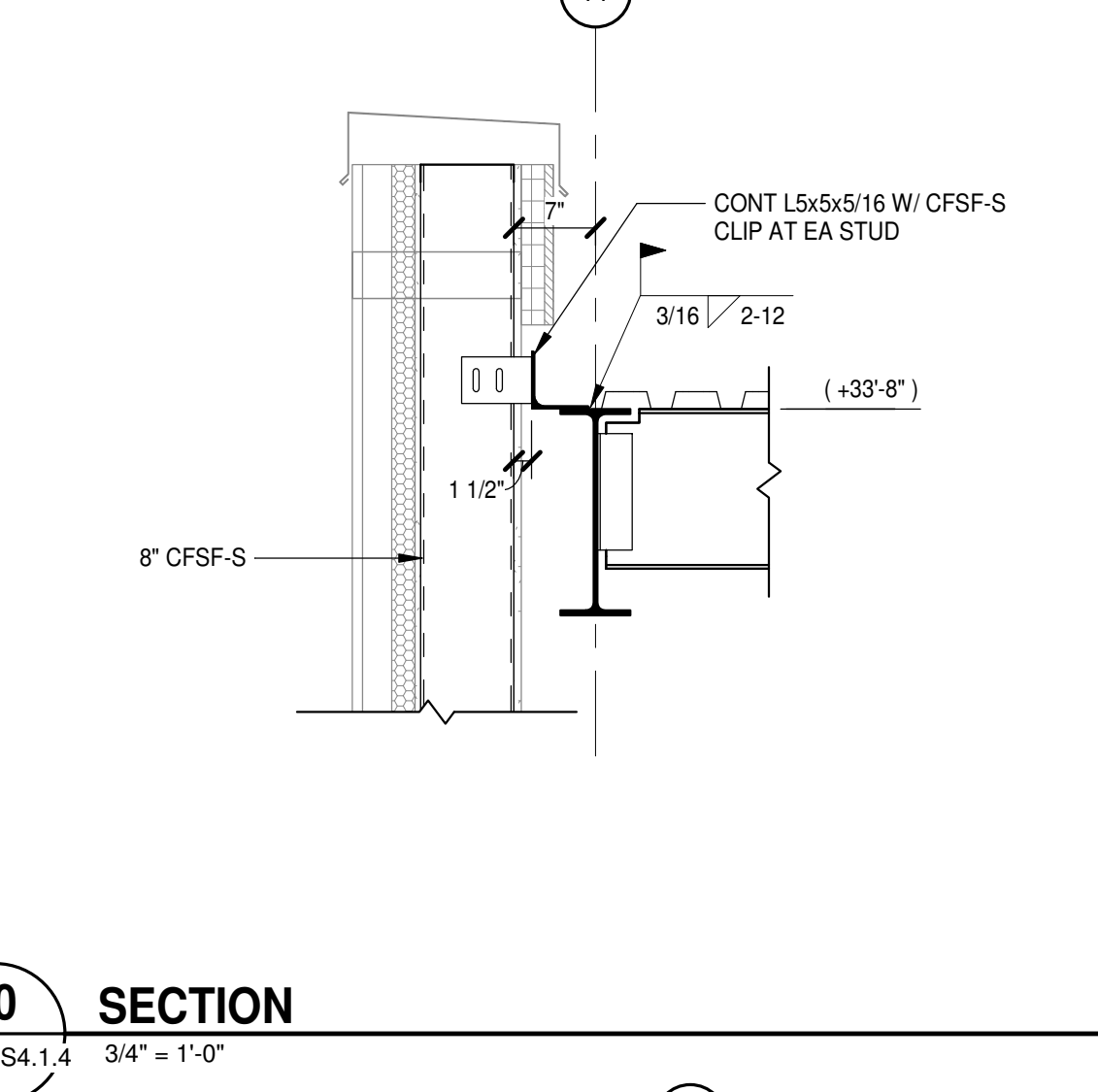
**7 SECTION**  
 S2.2.2 | S4.1.4 | 3/4" = 1'-0"



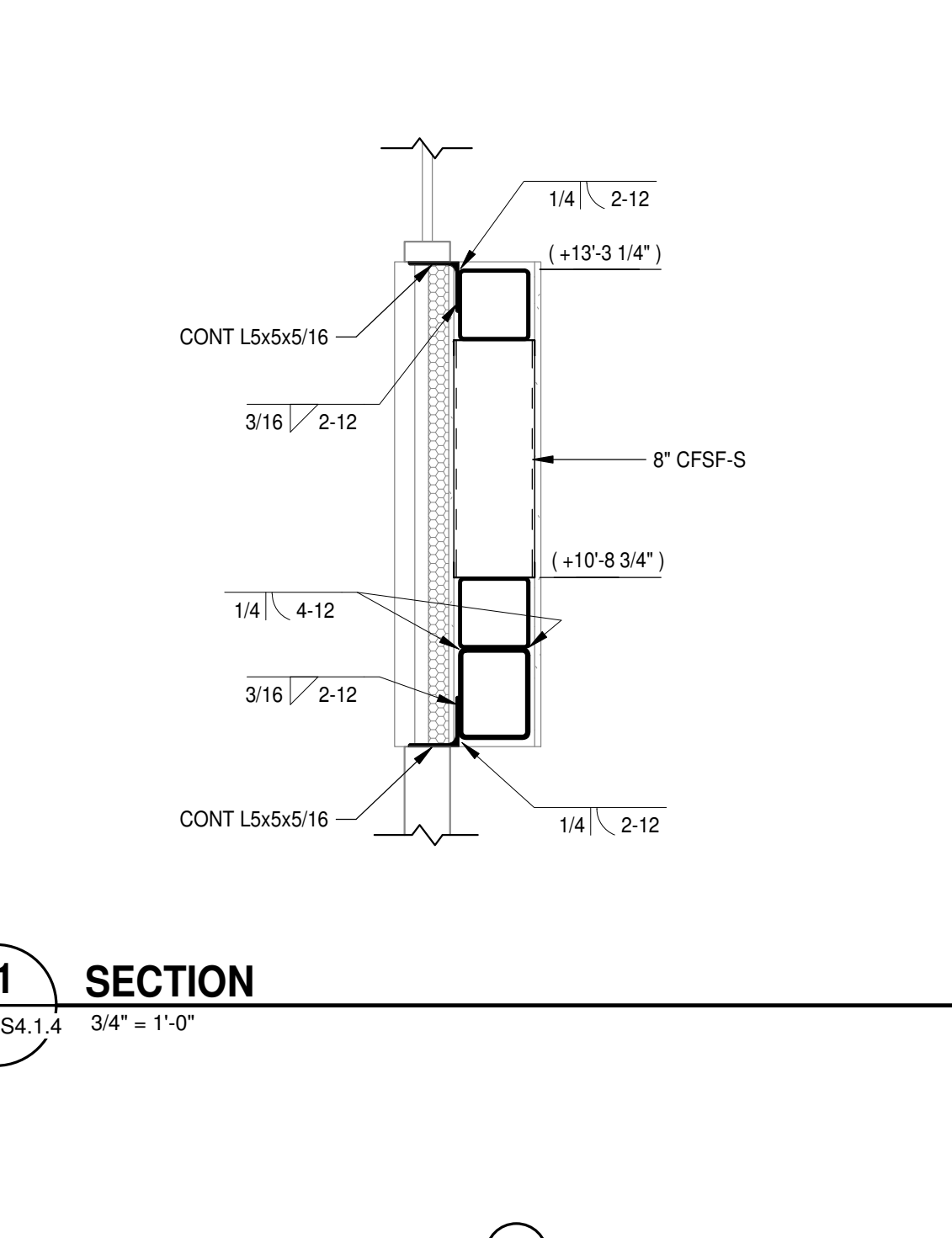
**8 SECTION**  
 S2.1.1 | S4.1.4 | 3/4" = 1'-0"



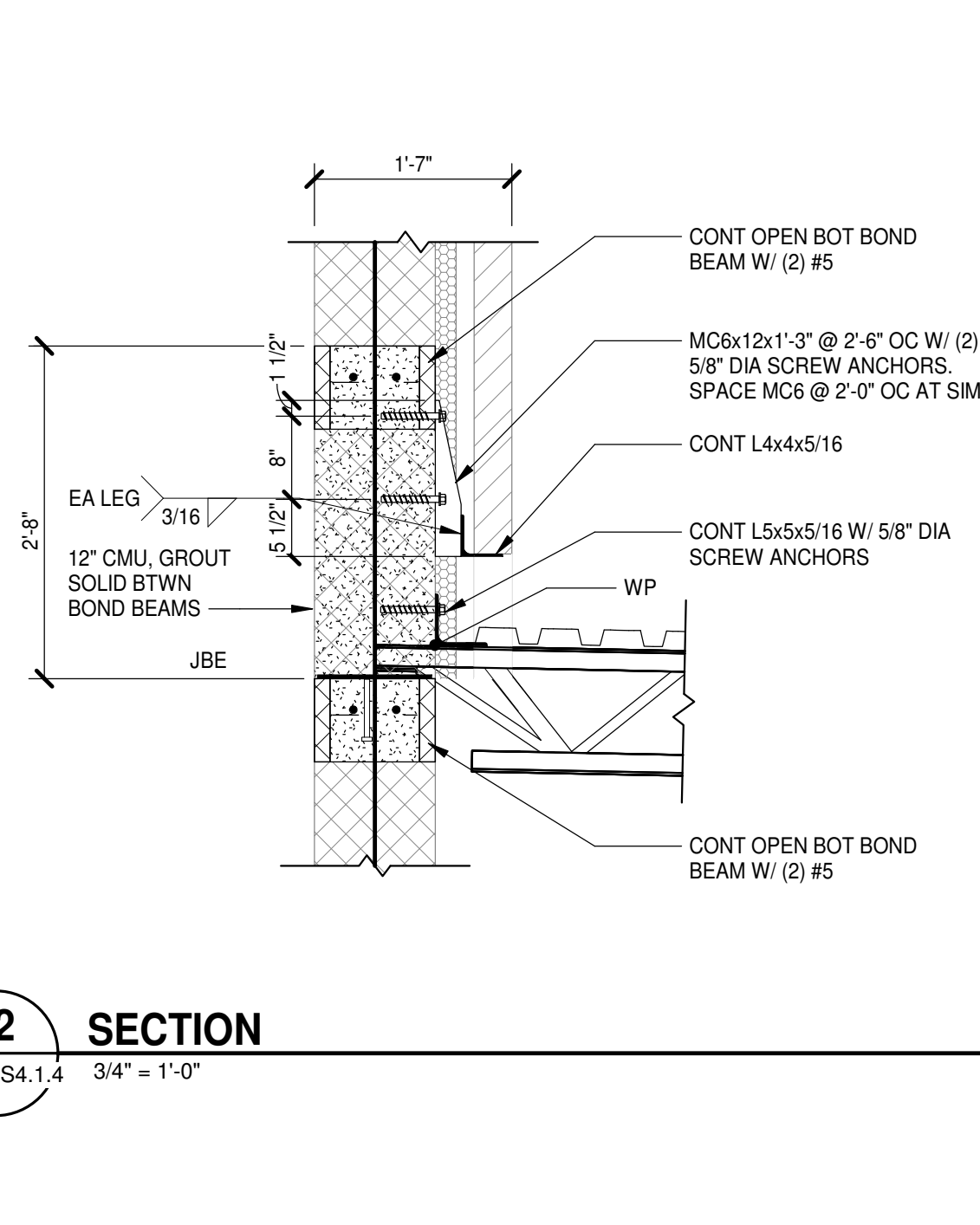
**9 SECTION**  
 S2.2.1 | S4.1.4 | 3/4" = 1'-0"



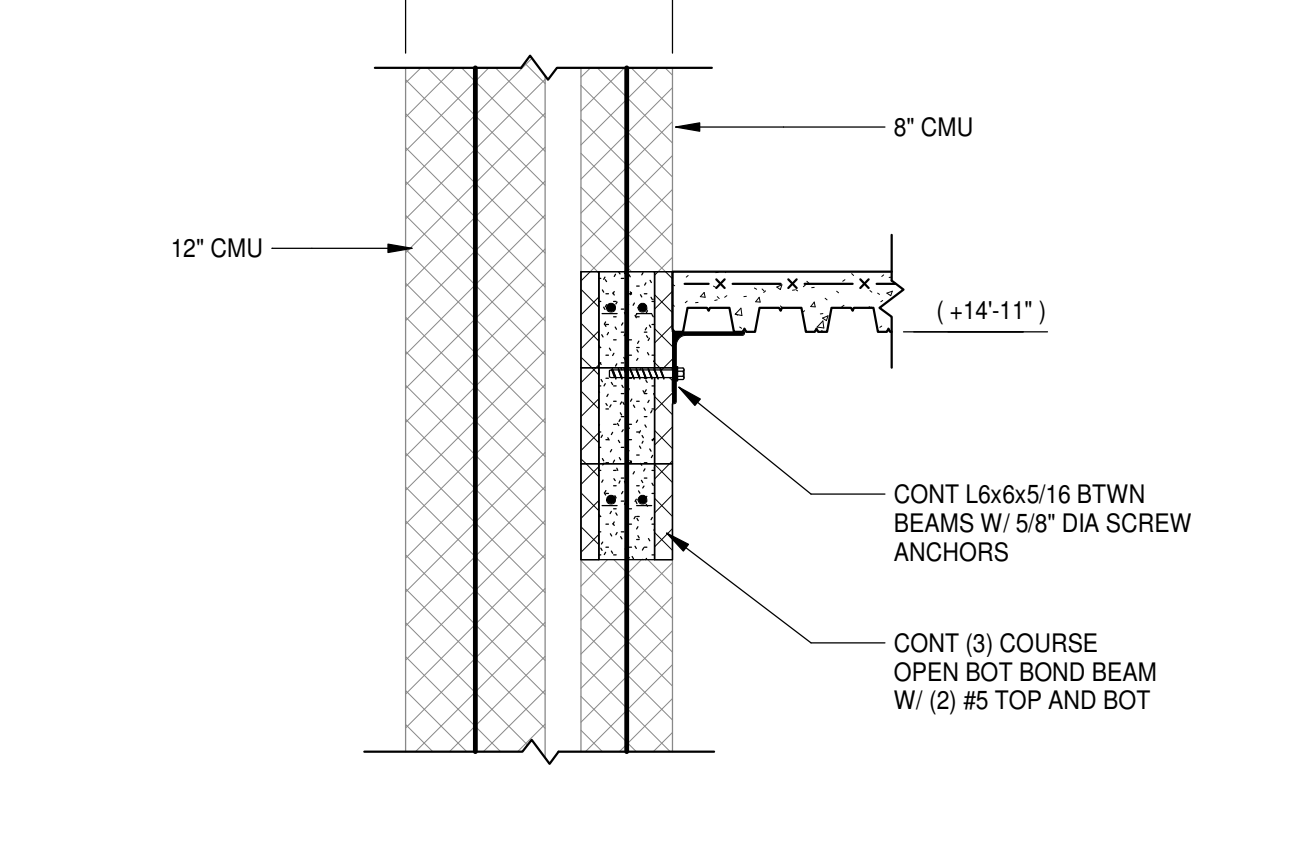
**10 SECTION**  
 S2.2.1 | S4.1.4 | 3/4" = 1'-0"



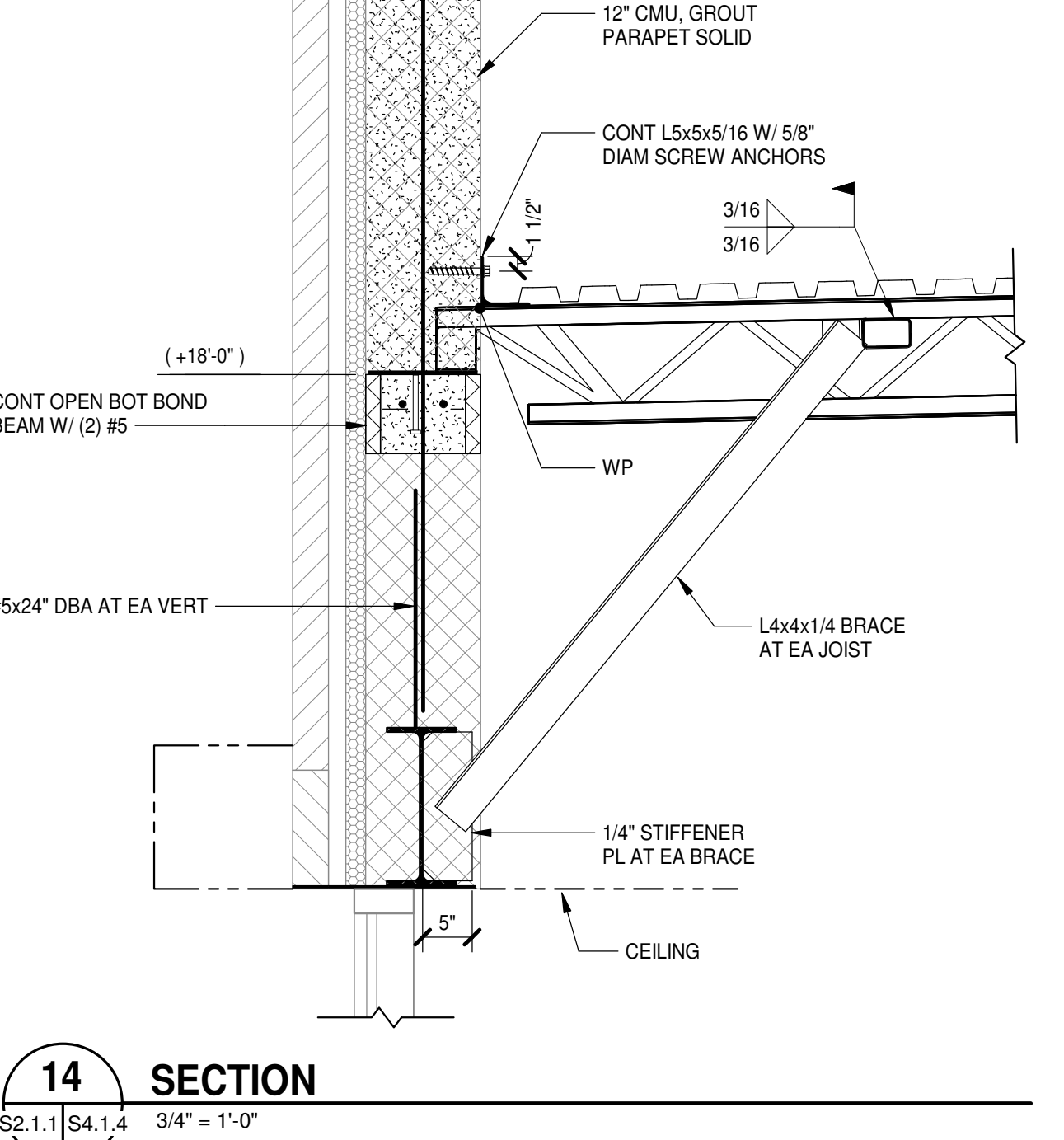
**11 SECTION**  
 S2.1.6 | S4.1.4 | 3/4" = 1'-0"



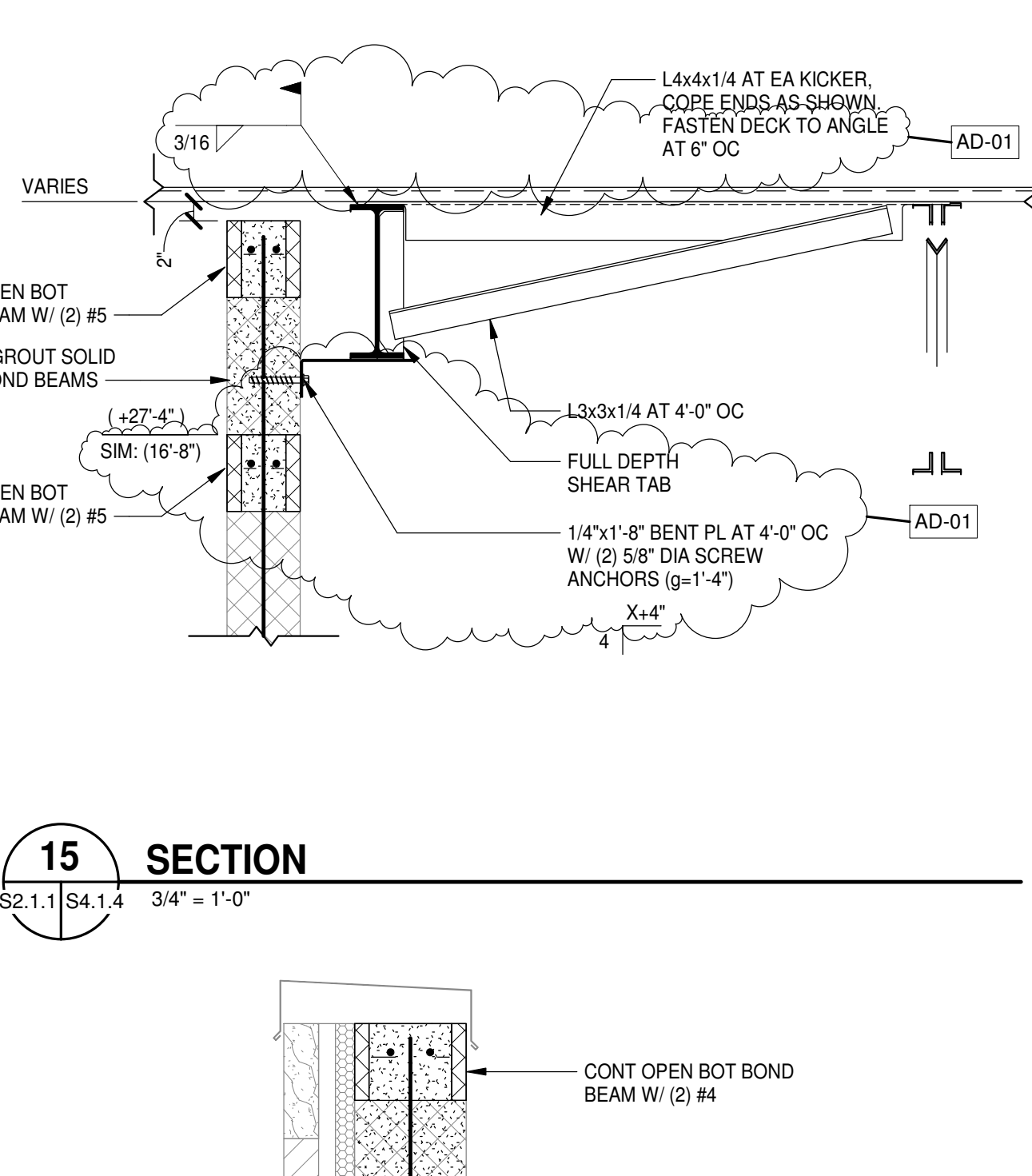
**12 SECTION**  
 S2.1.1 | S4.1.4 | 3/4" = 1'-0"



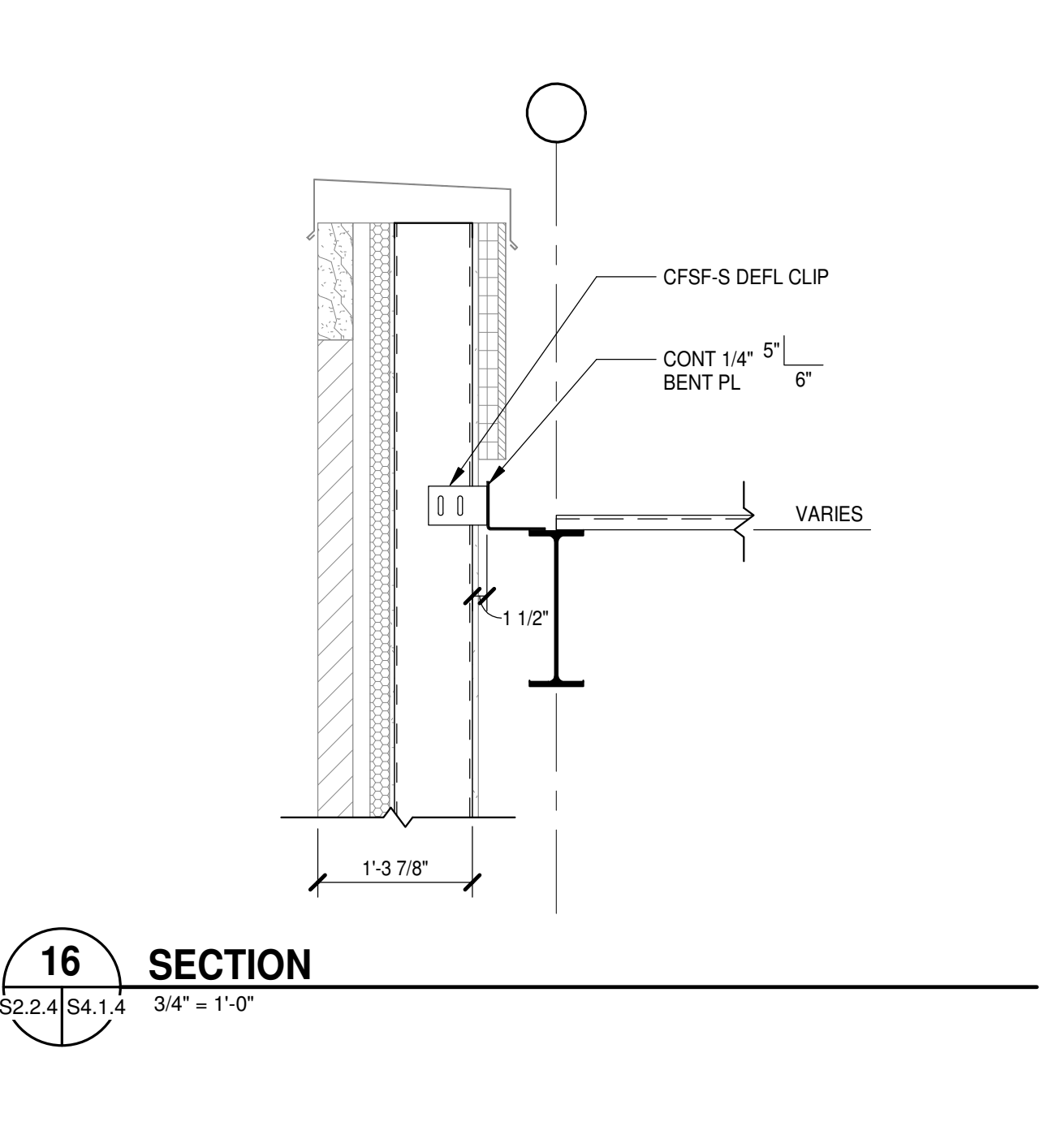
**13 SECTION**  
 S2.1.1 | S4.1.4 | 3/4" = 1'-0"



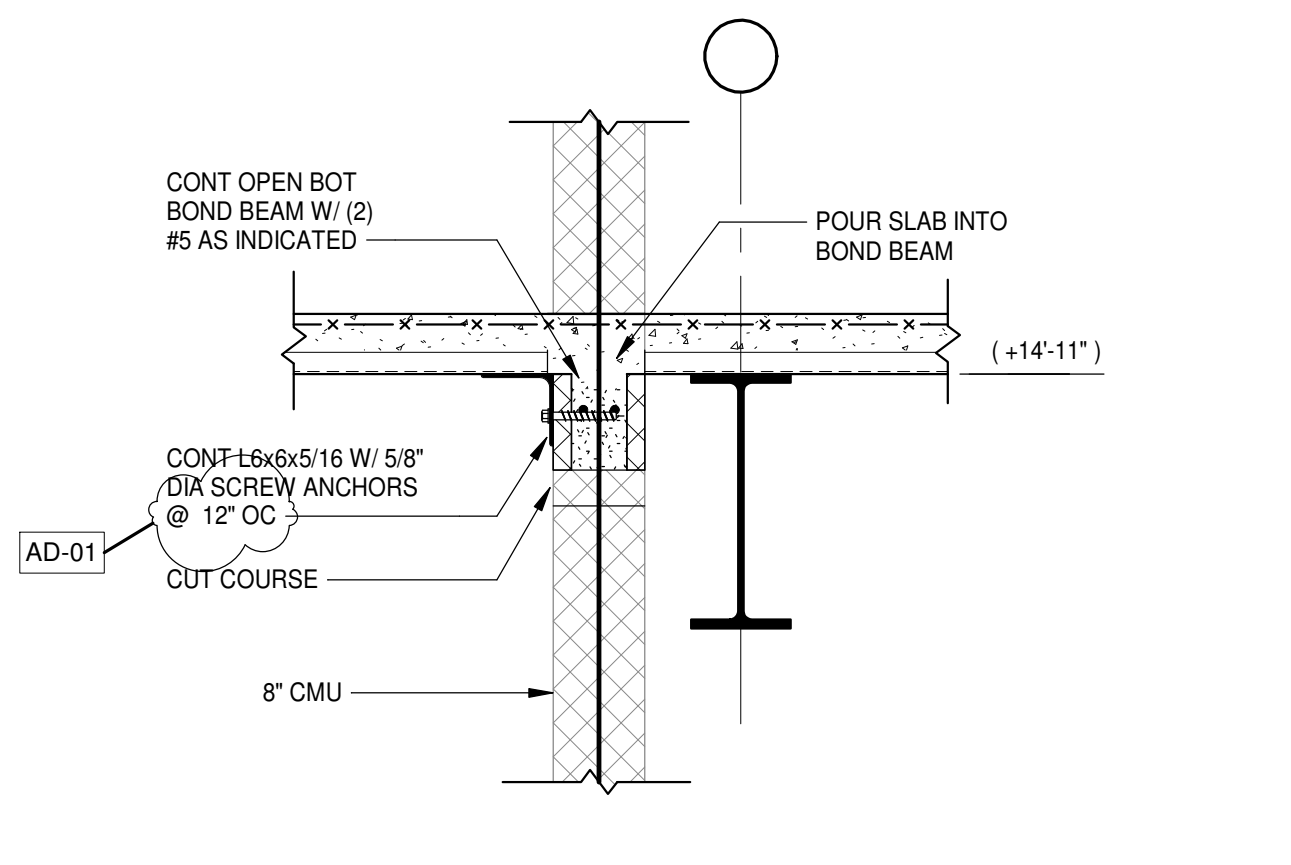
**14 SECTION**  
 S2.1.1 | S4.1.4 | 3/4" = 1'-0"



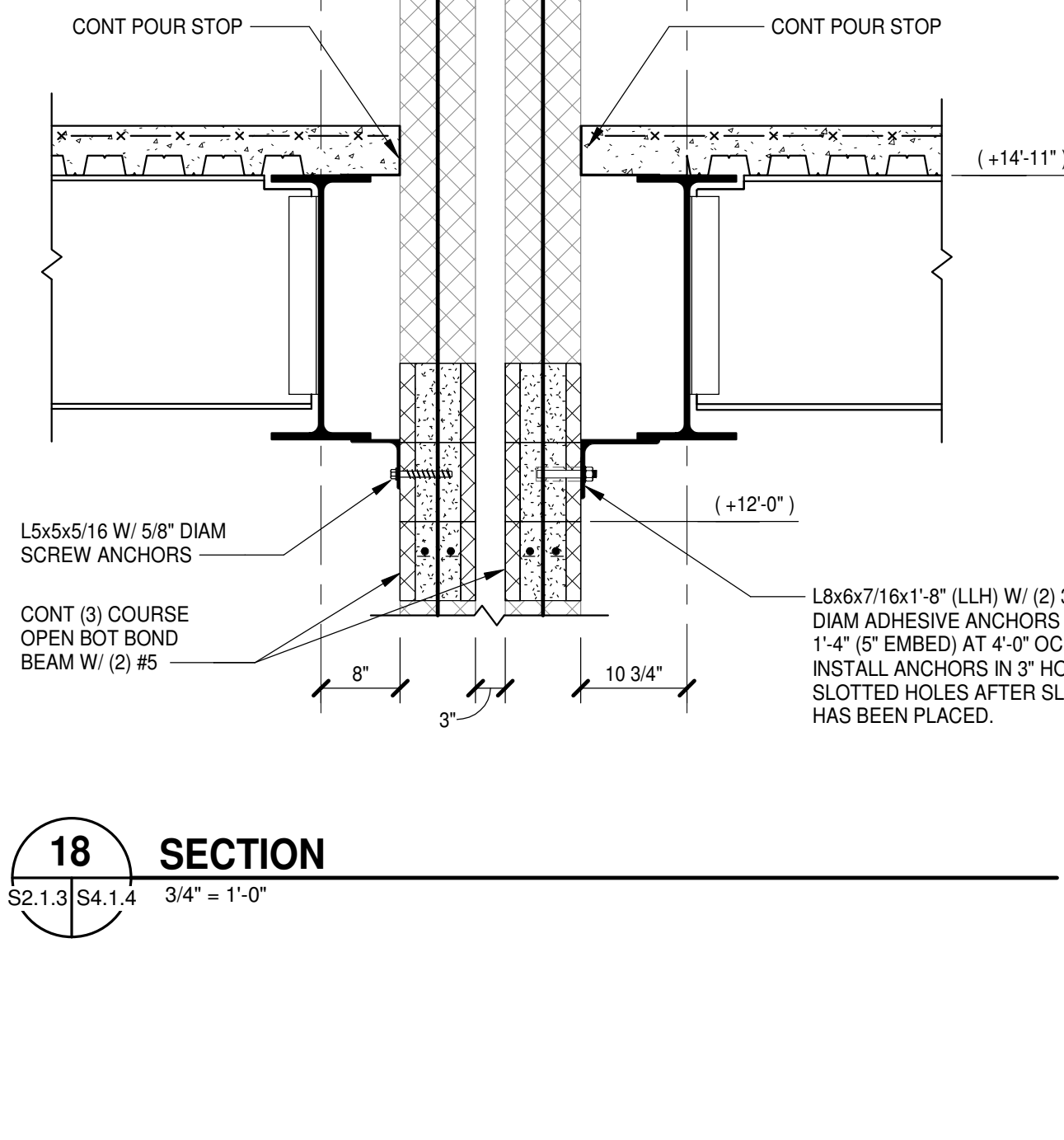
**15 SECTION**  
 S2.1.1 | S4.1.4 | 3/4" = 1'-0"



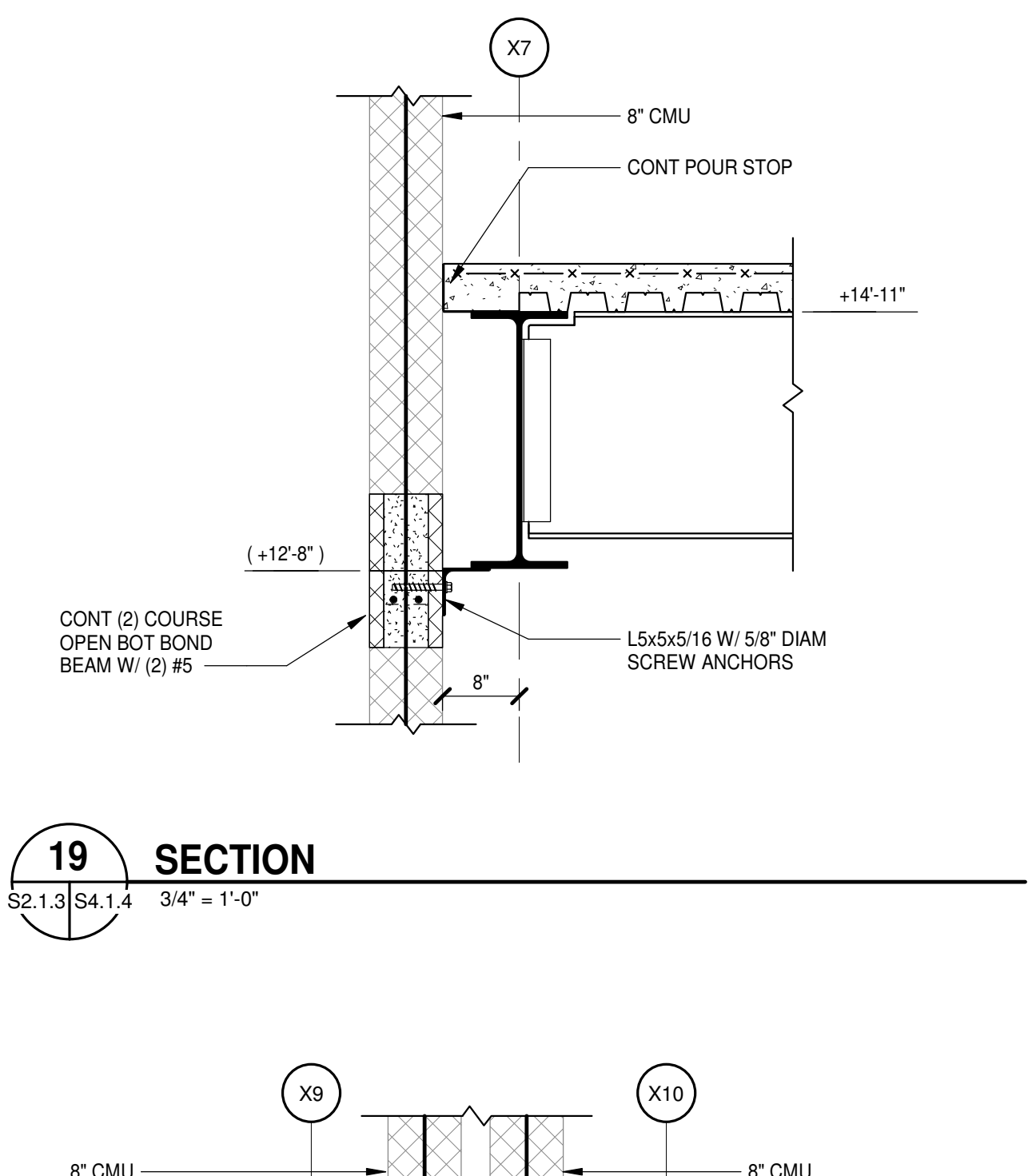
**16 SECTION**  
 S2.2.4 | S4.1.4 | 3/4" = 1'-0"



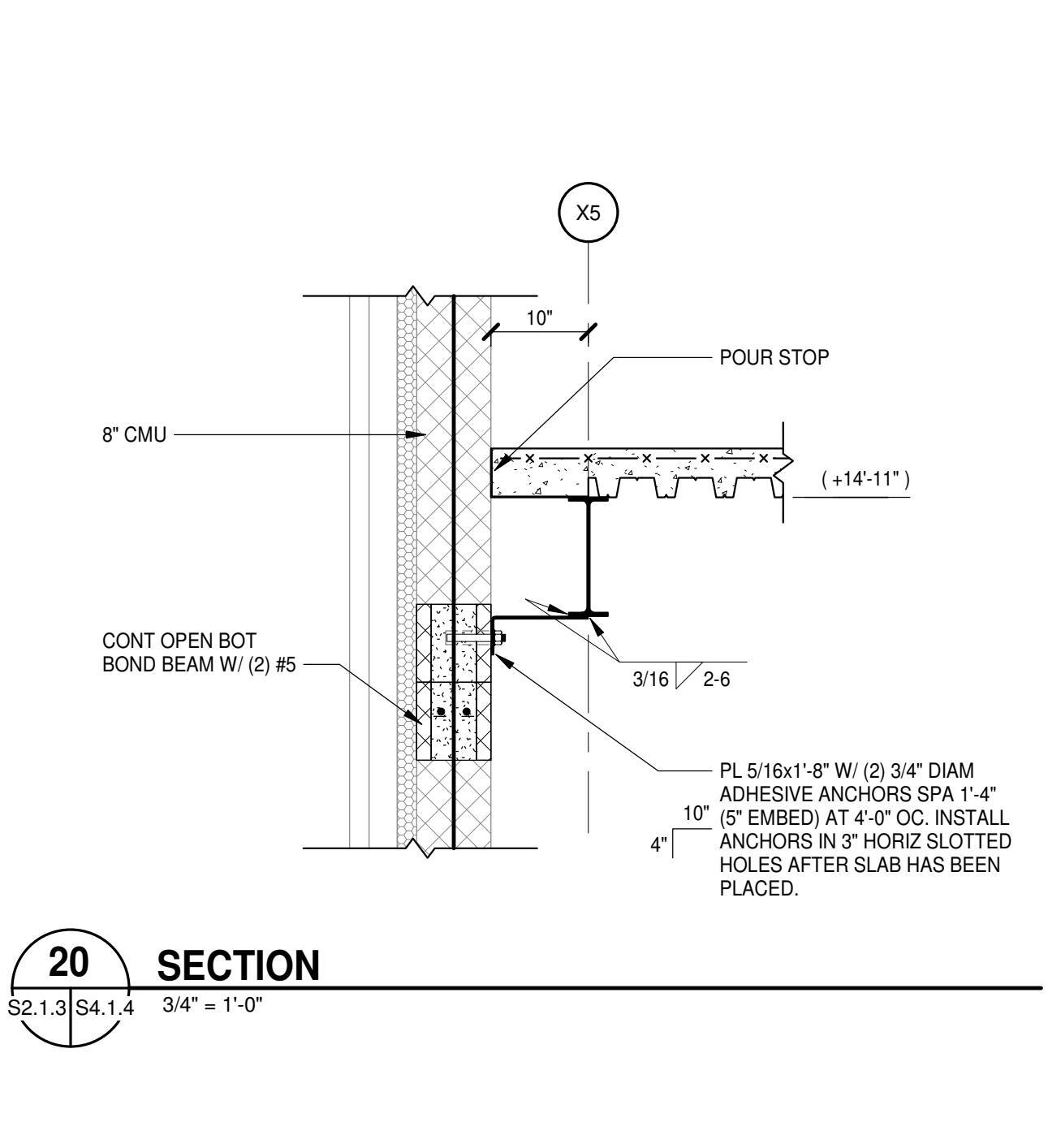
**17 SECTION**  
 S2.1.3 | S4.1.4 | 3/4" = 1'-0"



**18 SECTION**  
 S2.1.3 | S4.1.4 | 3/4" = 1'-0"



**19 SECTION**  
 S2.1.3 | S4.1.4 | 3/4" = 1'-0"



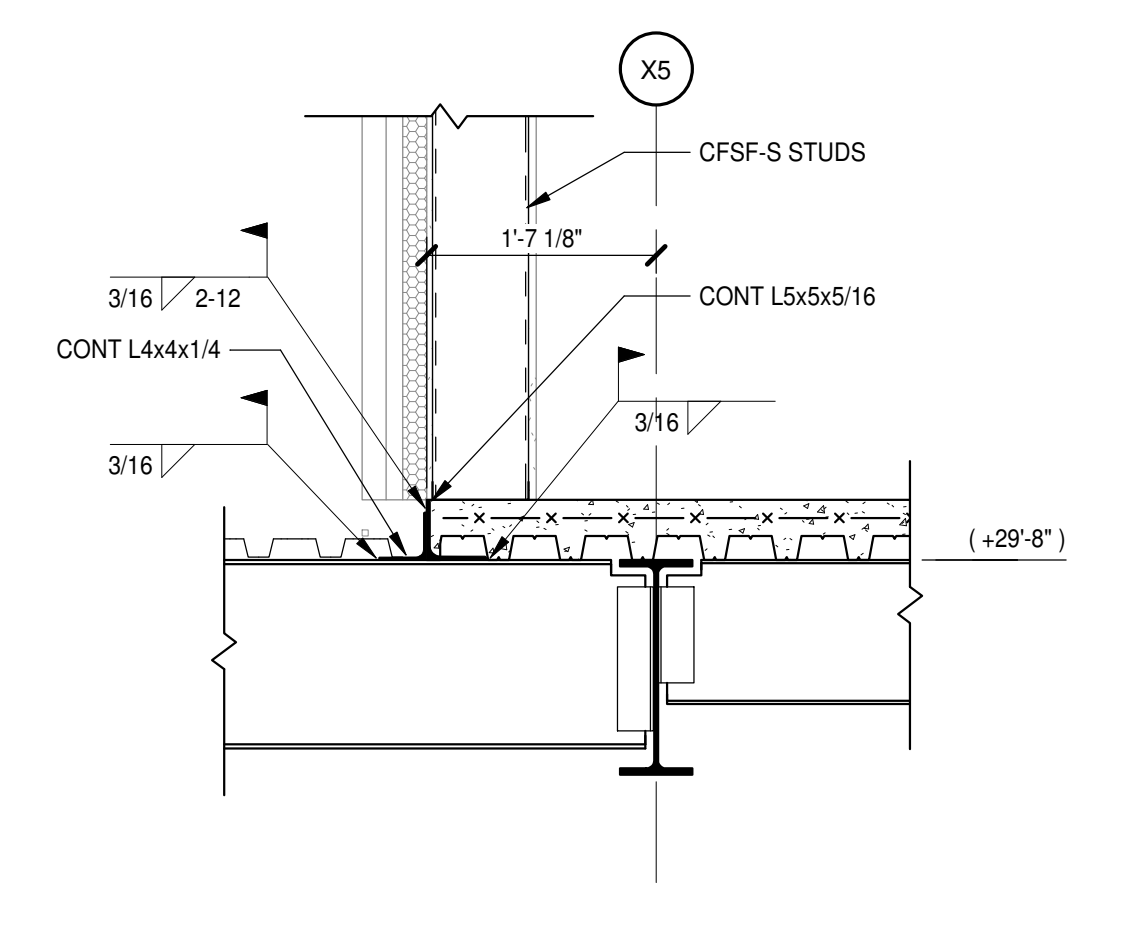
**20 SECTION**  
 S2.1.3 | S4.1.4 | 3/4" = 1'-0"



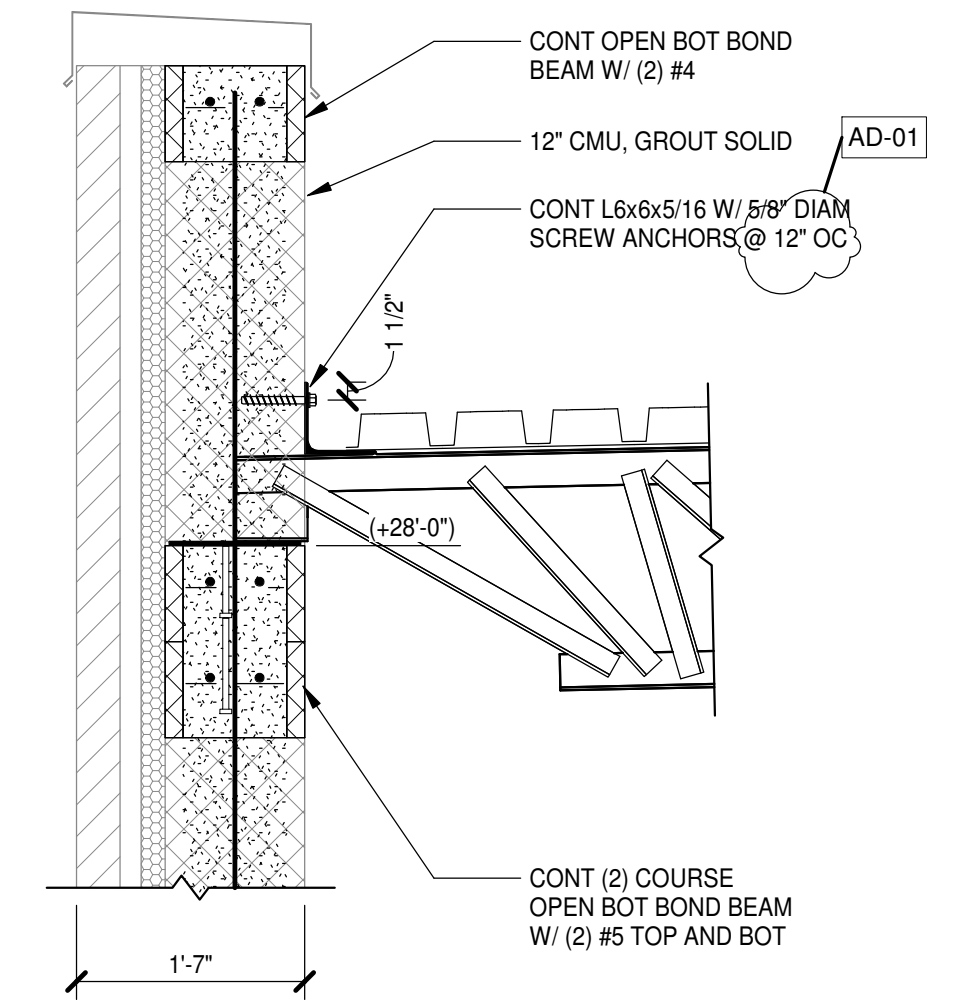


PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

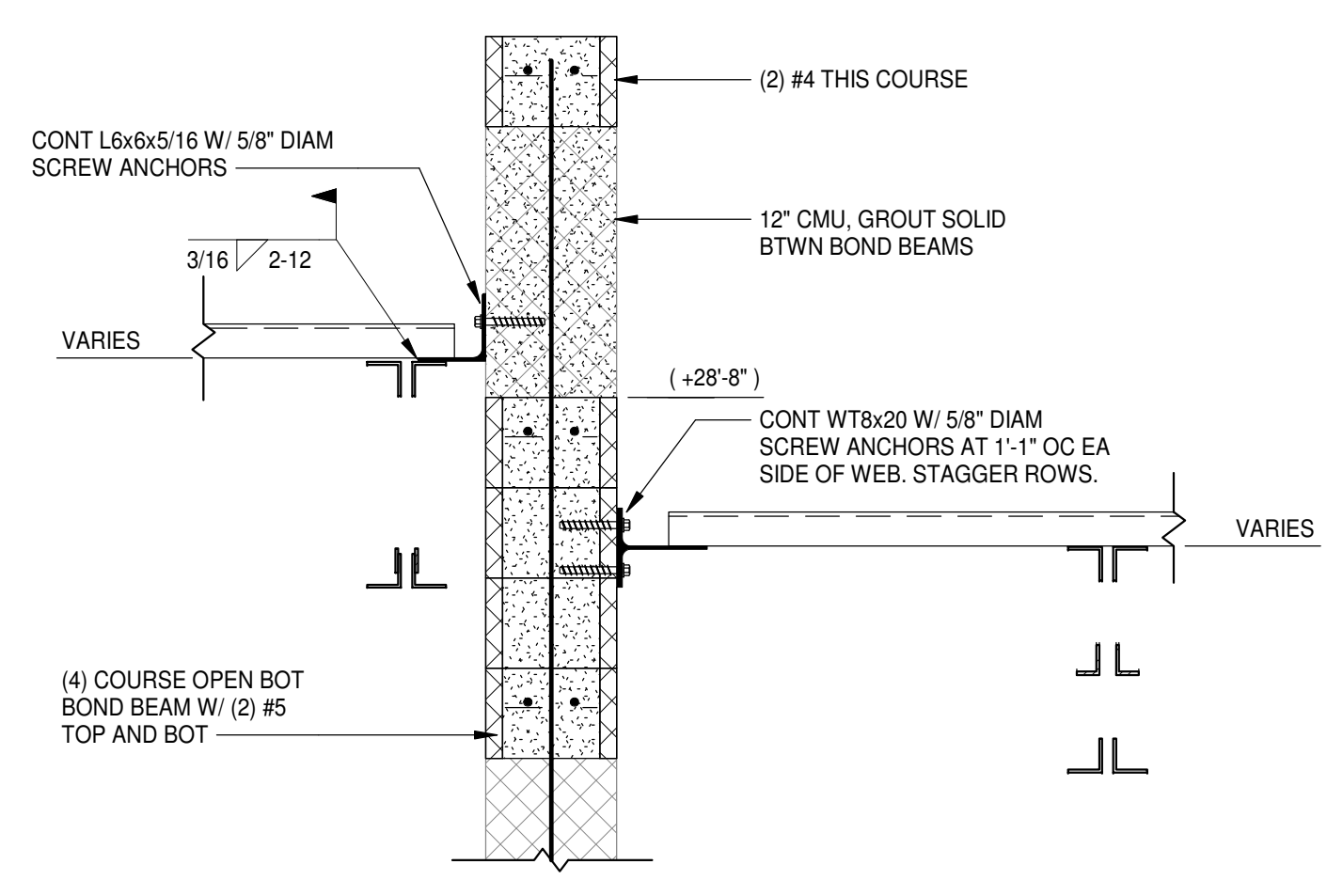
J  
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F  
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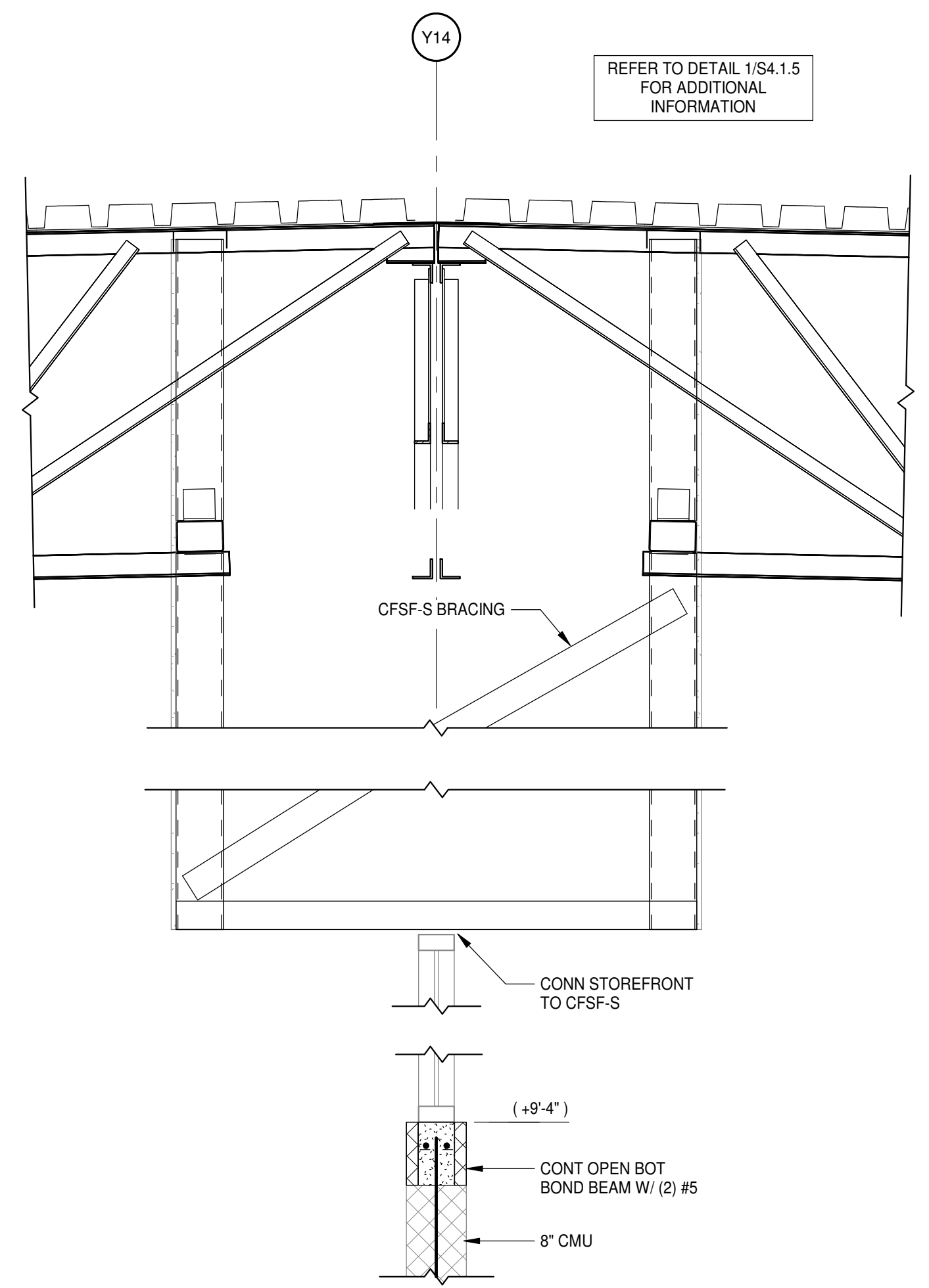
**14 SECTION**  
 S2.2.3 | S4.1.5 3/4" = 1'-0"



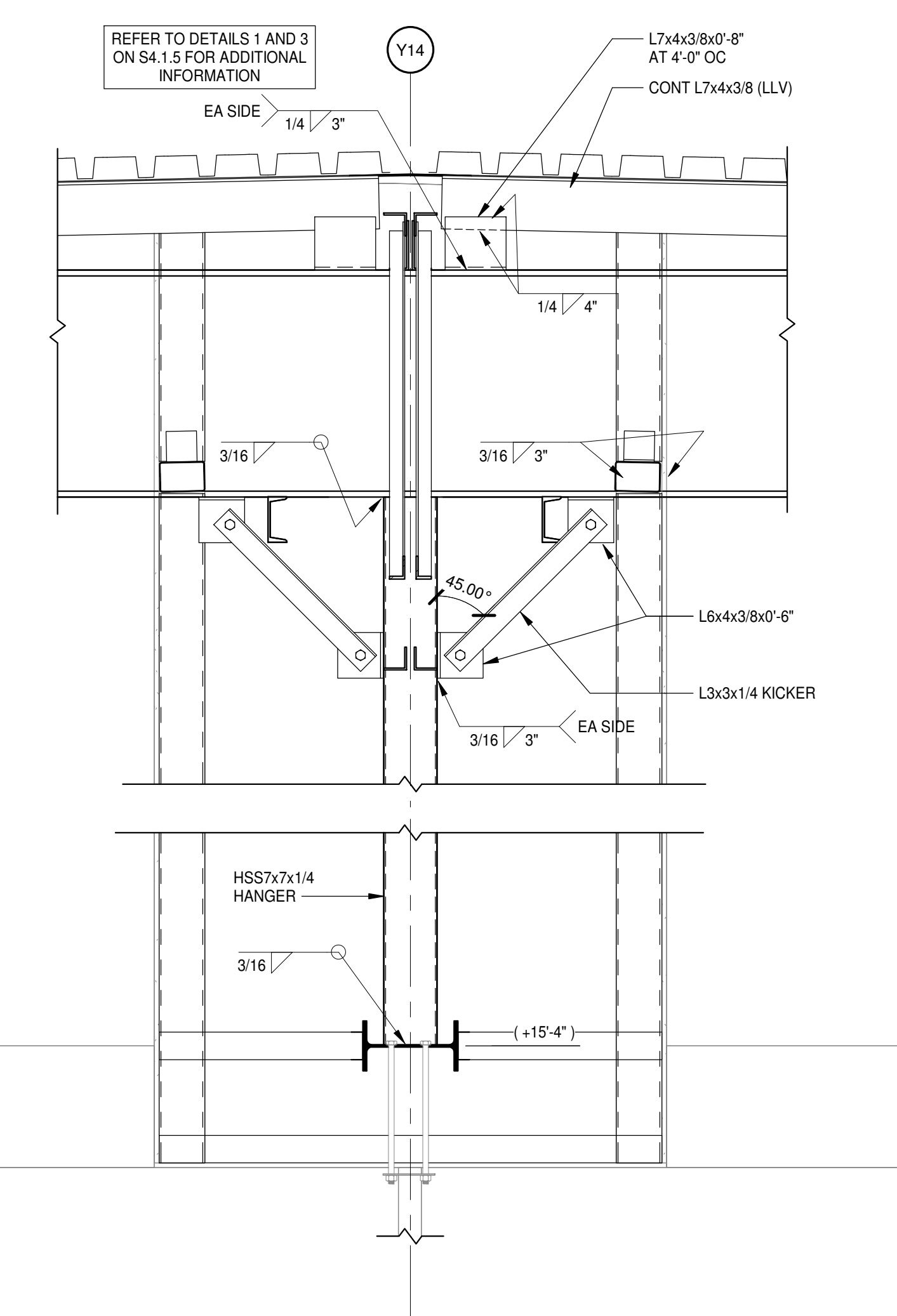
**10 SECTION**  
 S2.2.1 | S4.1.5 3/4" = 1'-0"



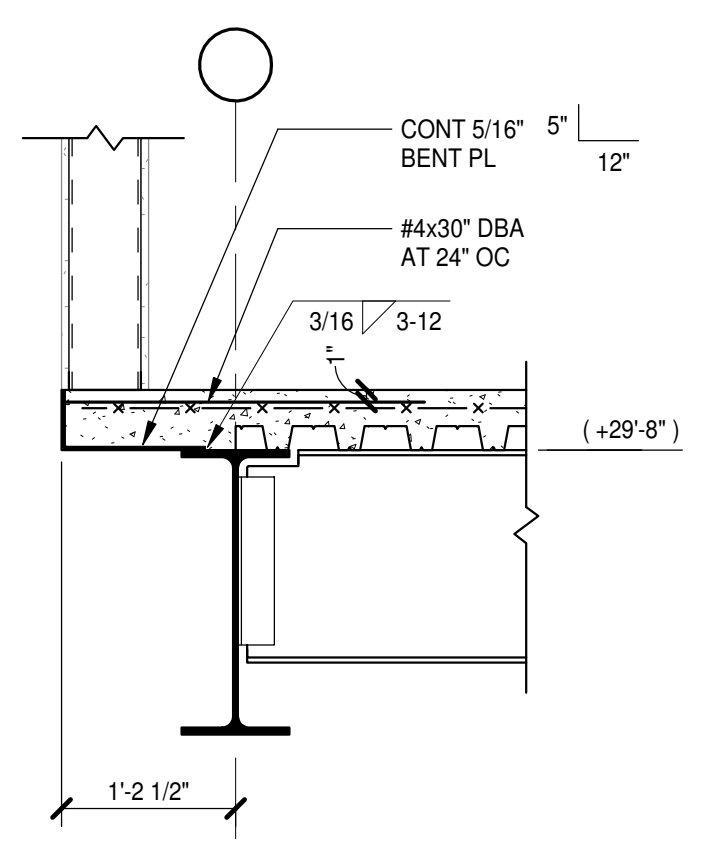
**6 SECTION**  
 S2.2.1 | S4.1.5 3/4" = 1'-0"



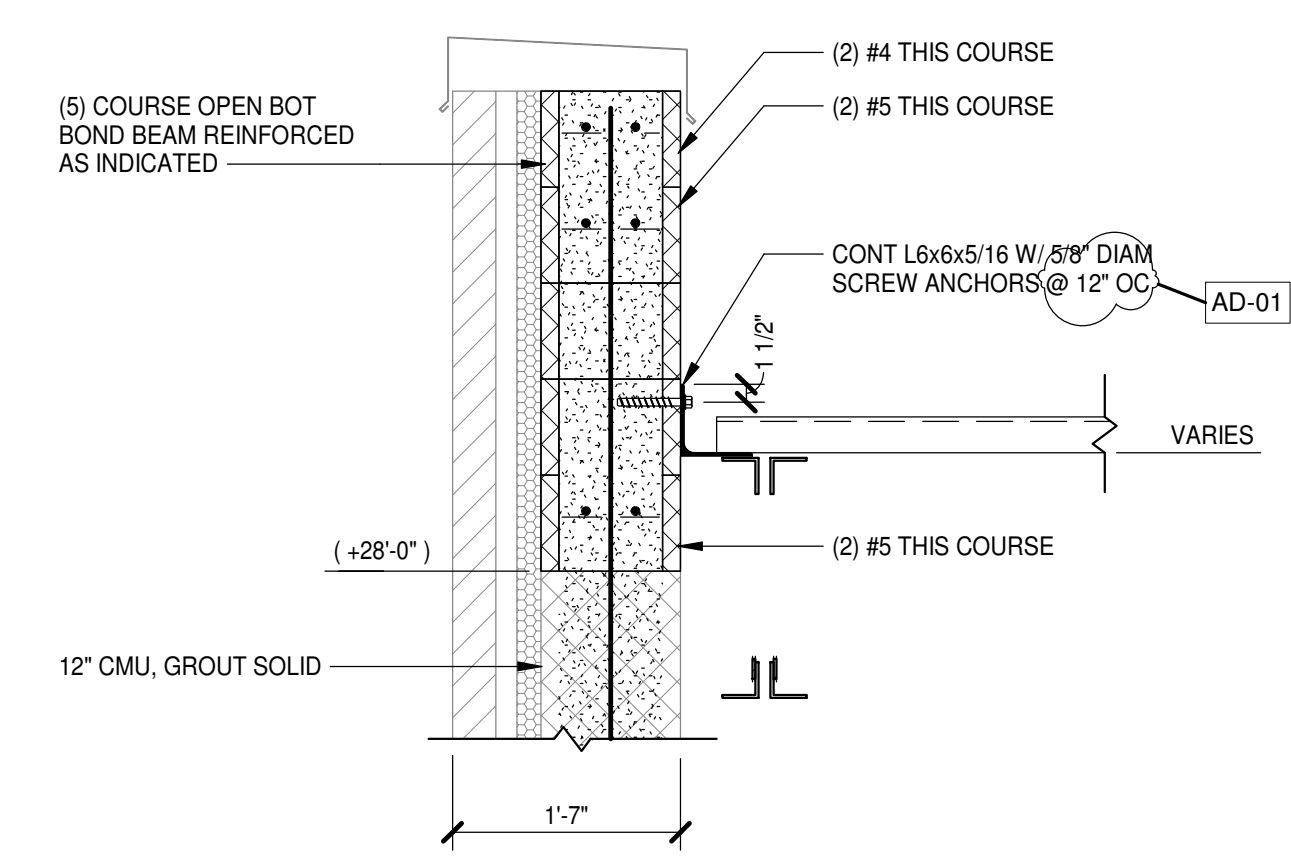
**4 SECTION**  
 S2.1.2 | S4.1.5 3/4" = 1'-0"



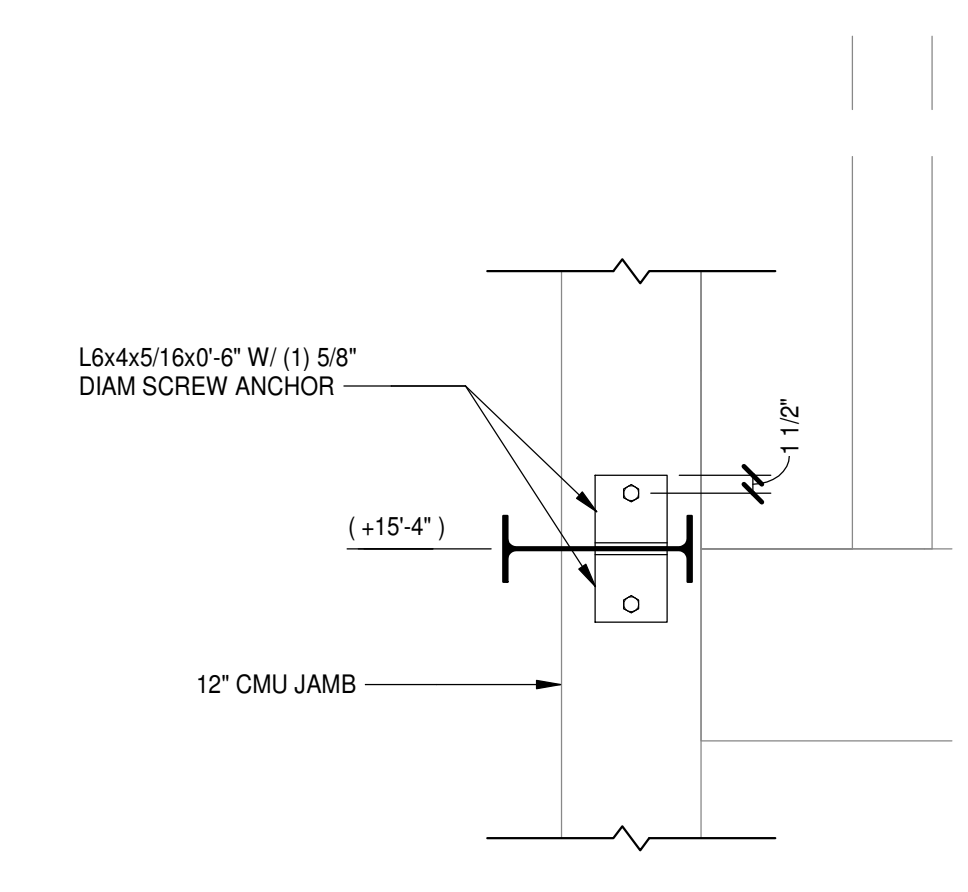
**2 SECTION**  
 S2.1.1 | S4.1.5 3/4" = 1'-0"



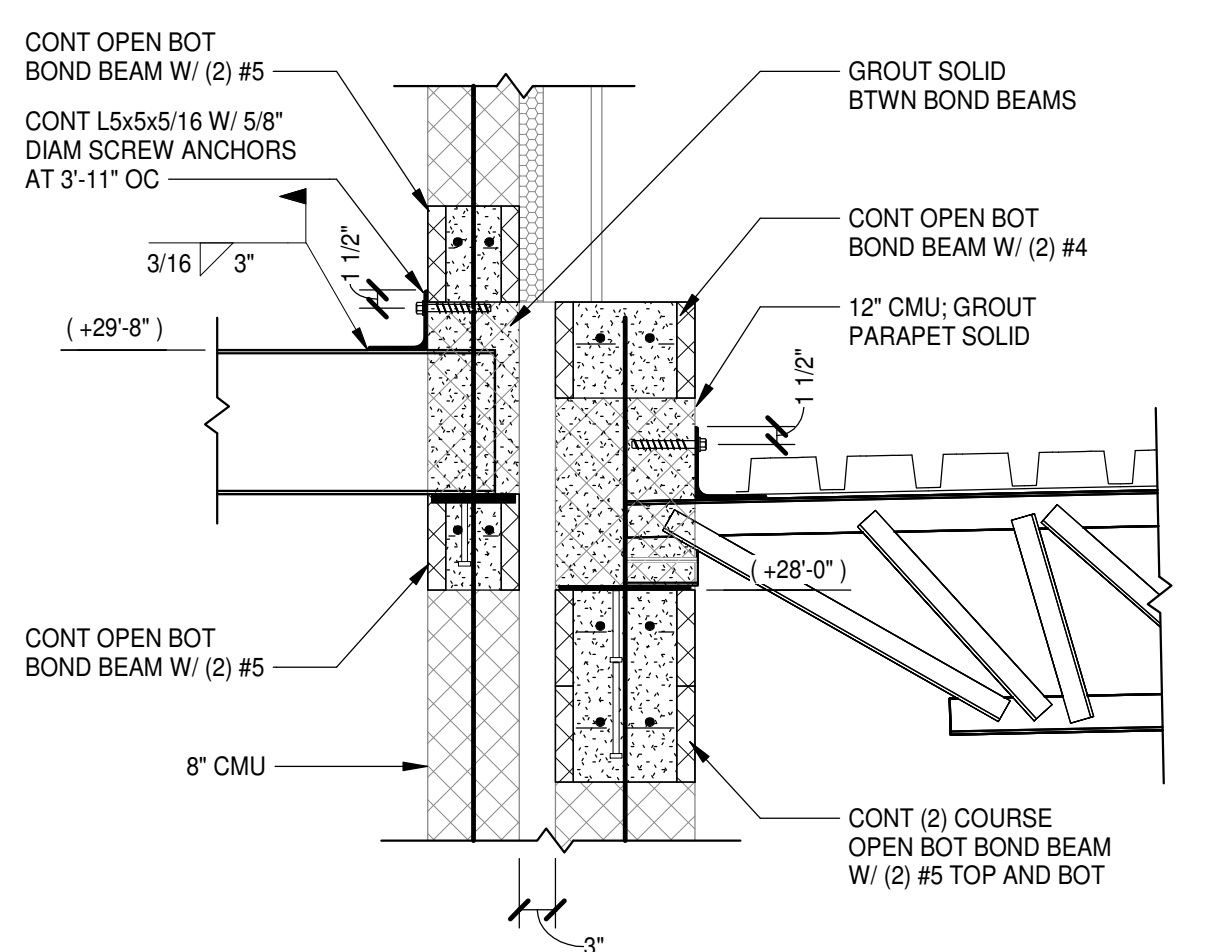
**13 SECTION**  
 S2.2.1 | S4.1.5 3/4" = 1'-0"



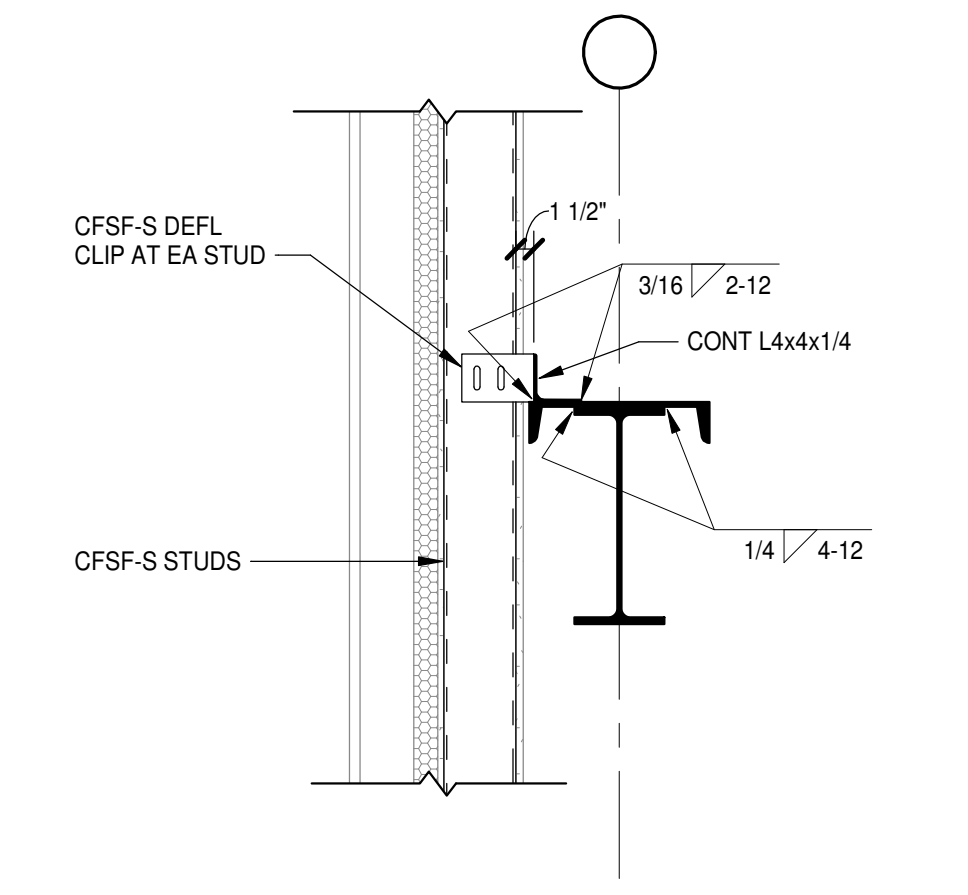
**9 SECTION**  
 S2.2.1 | S4.1.5 3/4" = 1'-0"



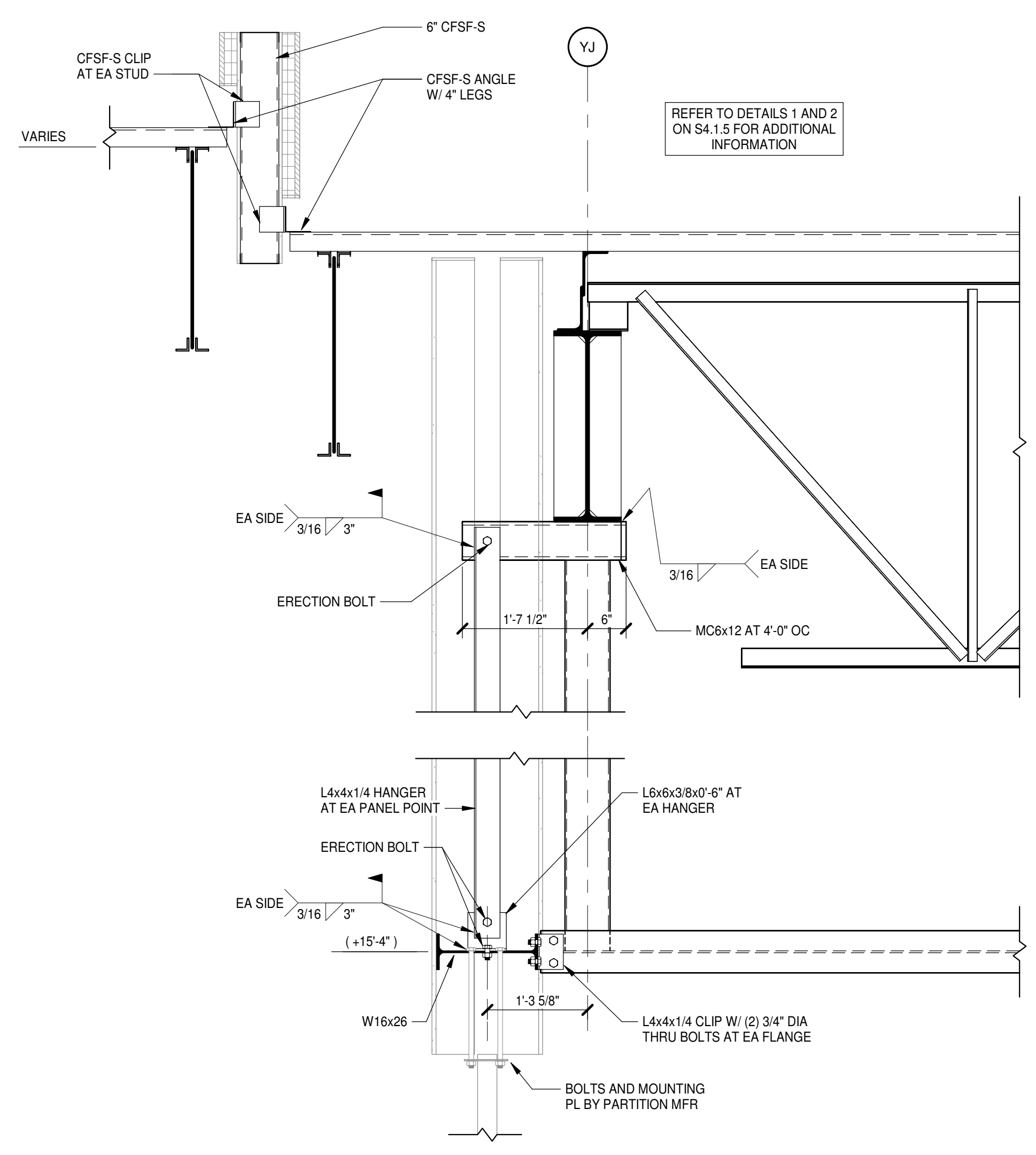
**5 SECTION**  
 S2.1.1 | S4.1.5 3/4" = 1'-0"



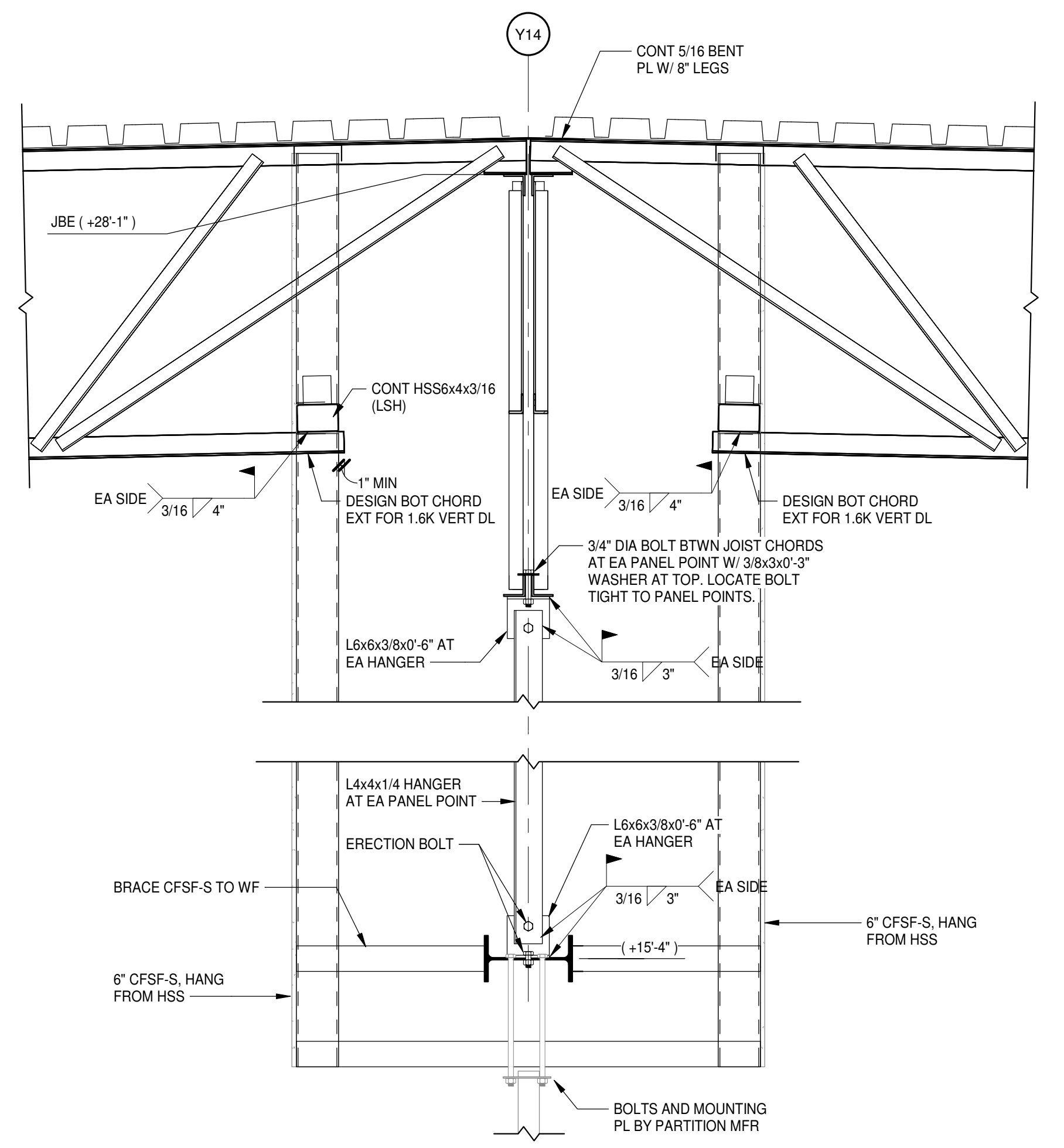
**12 SECTION**  
 S2.2.1 | S4.1.5 3/4" = 1'-0"



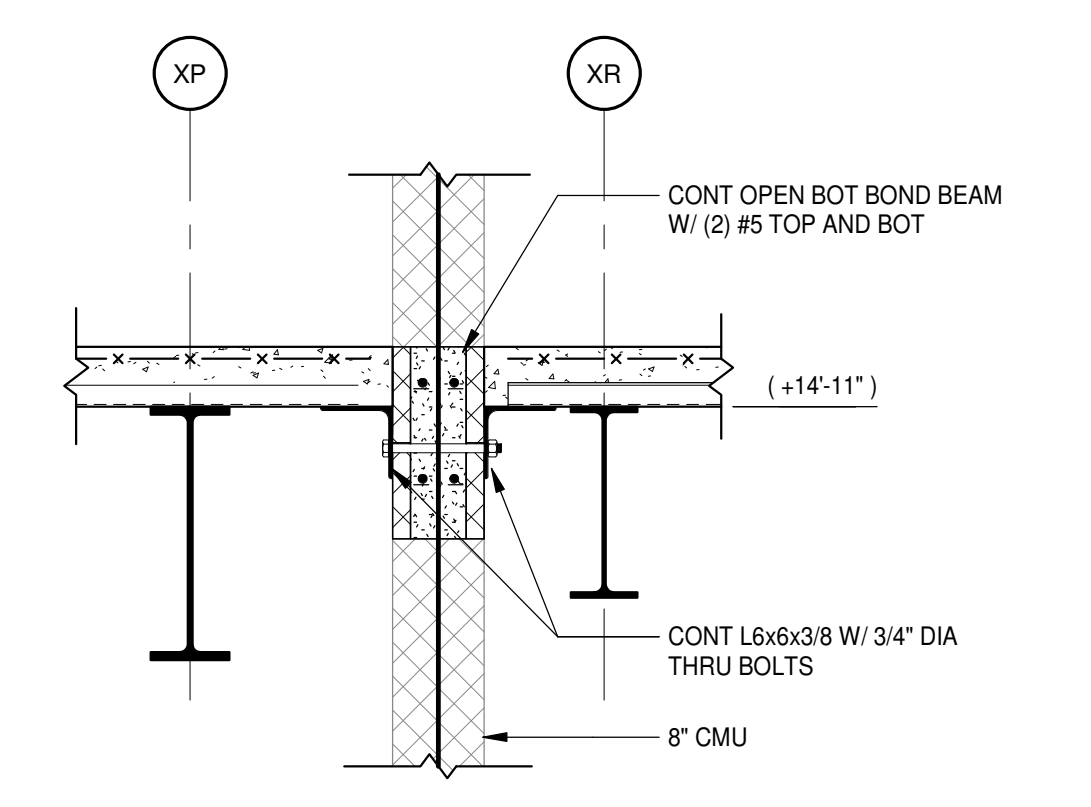
**8 SECTION**  
 S2.2.1 | S4.1.5 3/4" = 1'-0"



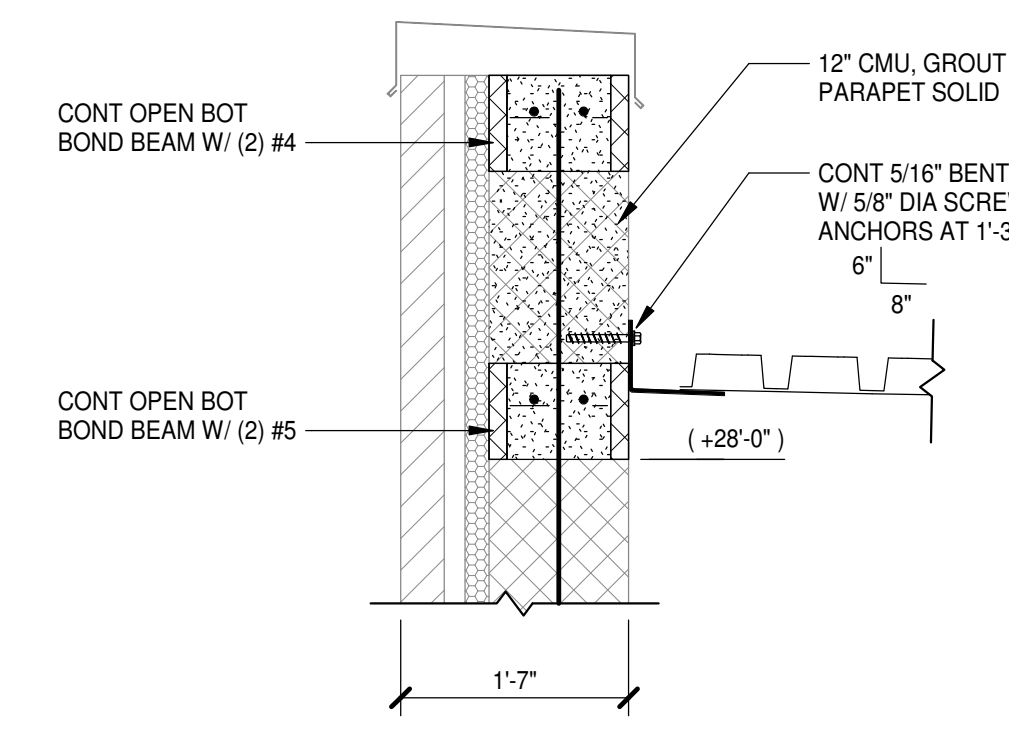
**3 SECTION**  
 S2.1.1 | S4.1.5 3/4" = 1'-0"



**1 SECTION**  
 S2.1.2 | S4.1.5 3/4" = 1'-0"



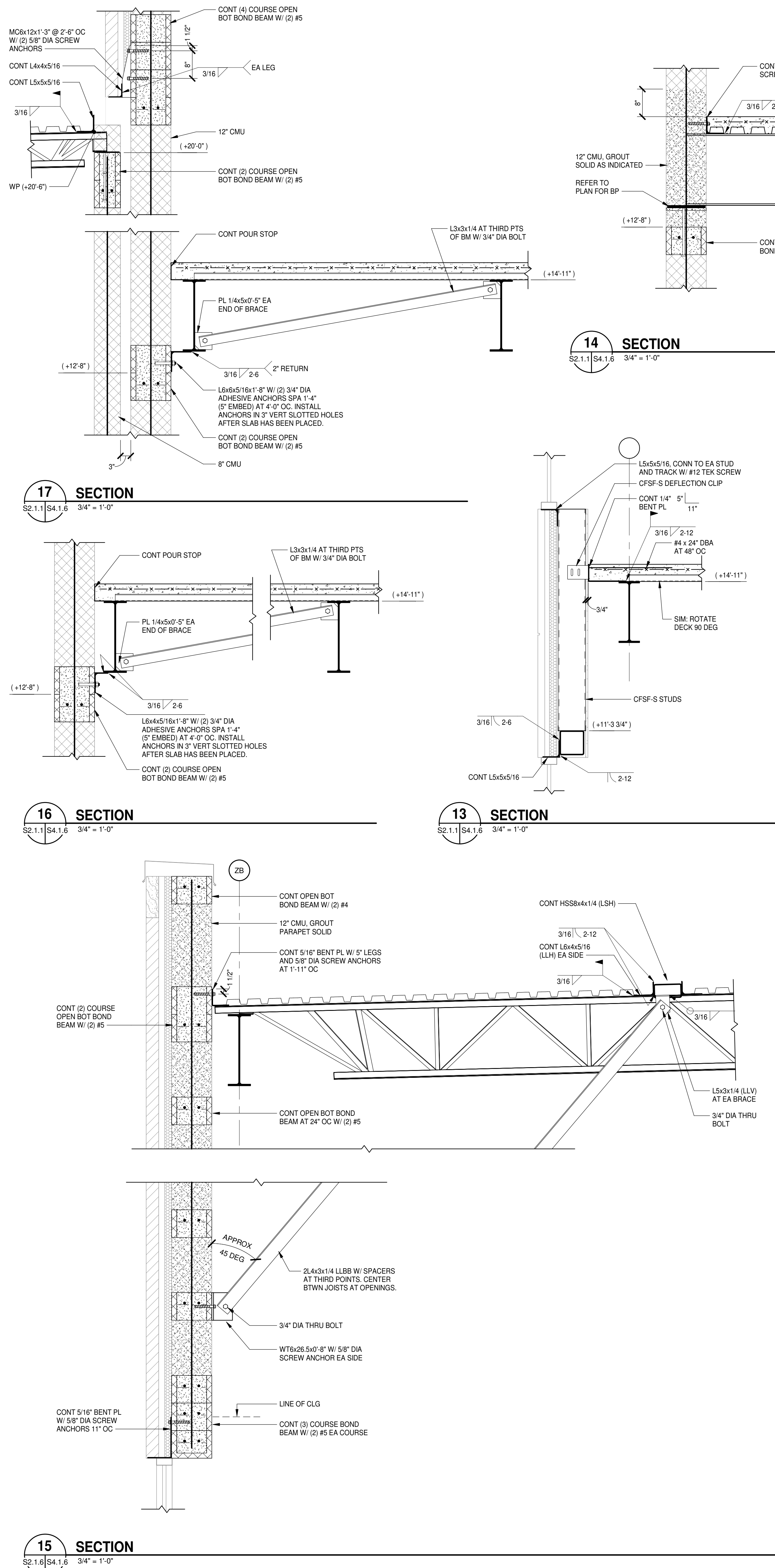
**11 SECTION**  
 S2.1.3 | S4.1.5 3/4" = 1'-0"



**7 SECTION**  
 S2.2.2 | S4.1.5 3/4" = 1'-0"



8/15/2024 2:49:29 PM

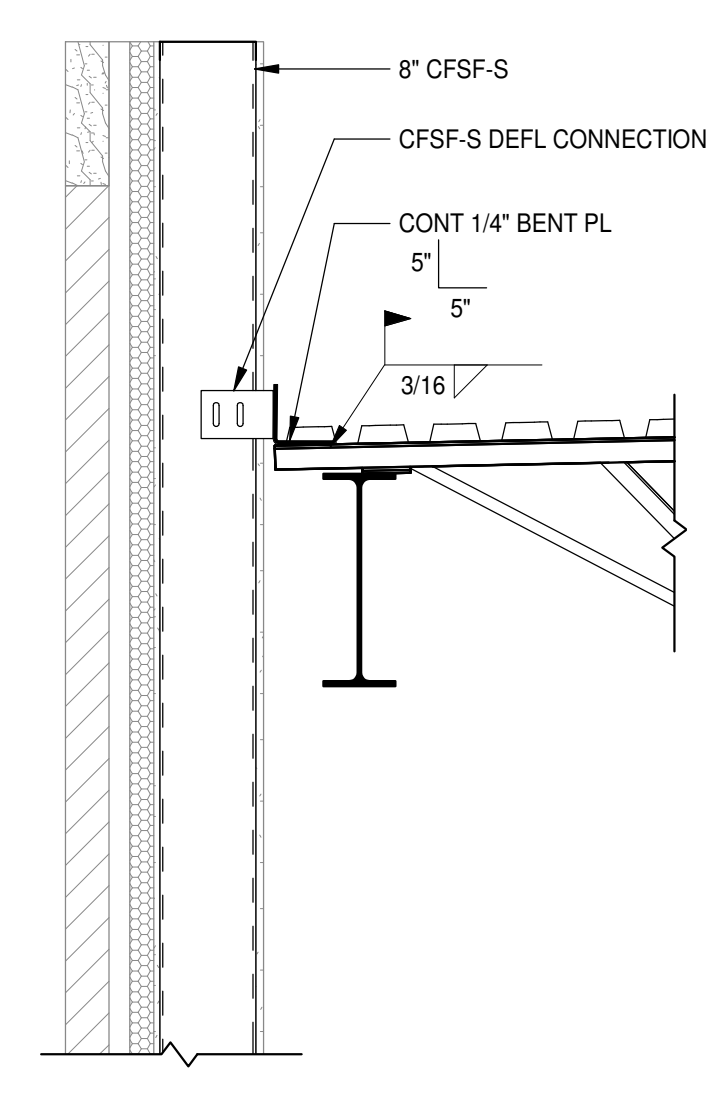


PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01

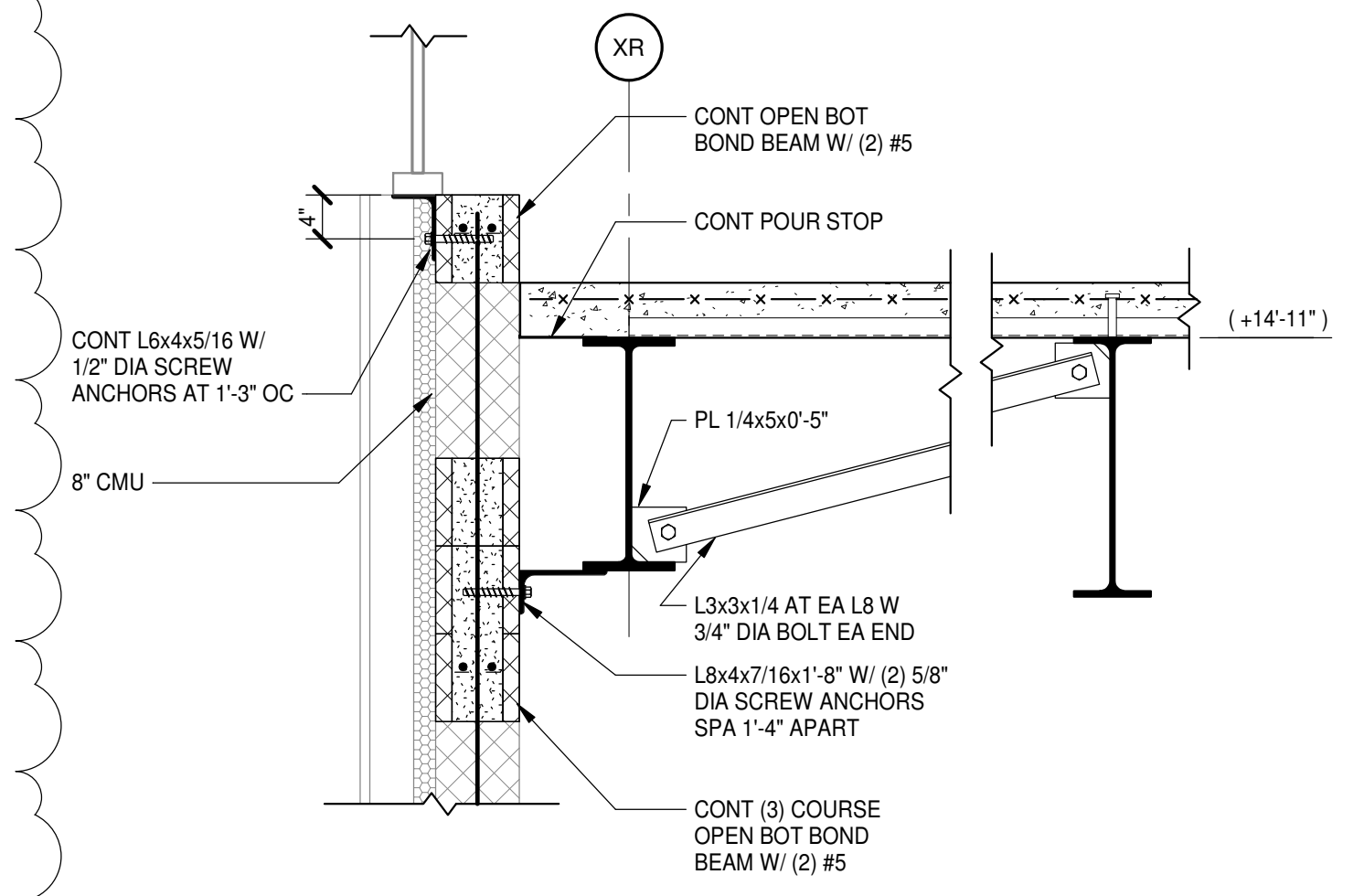




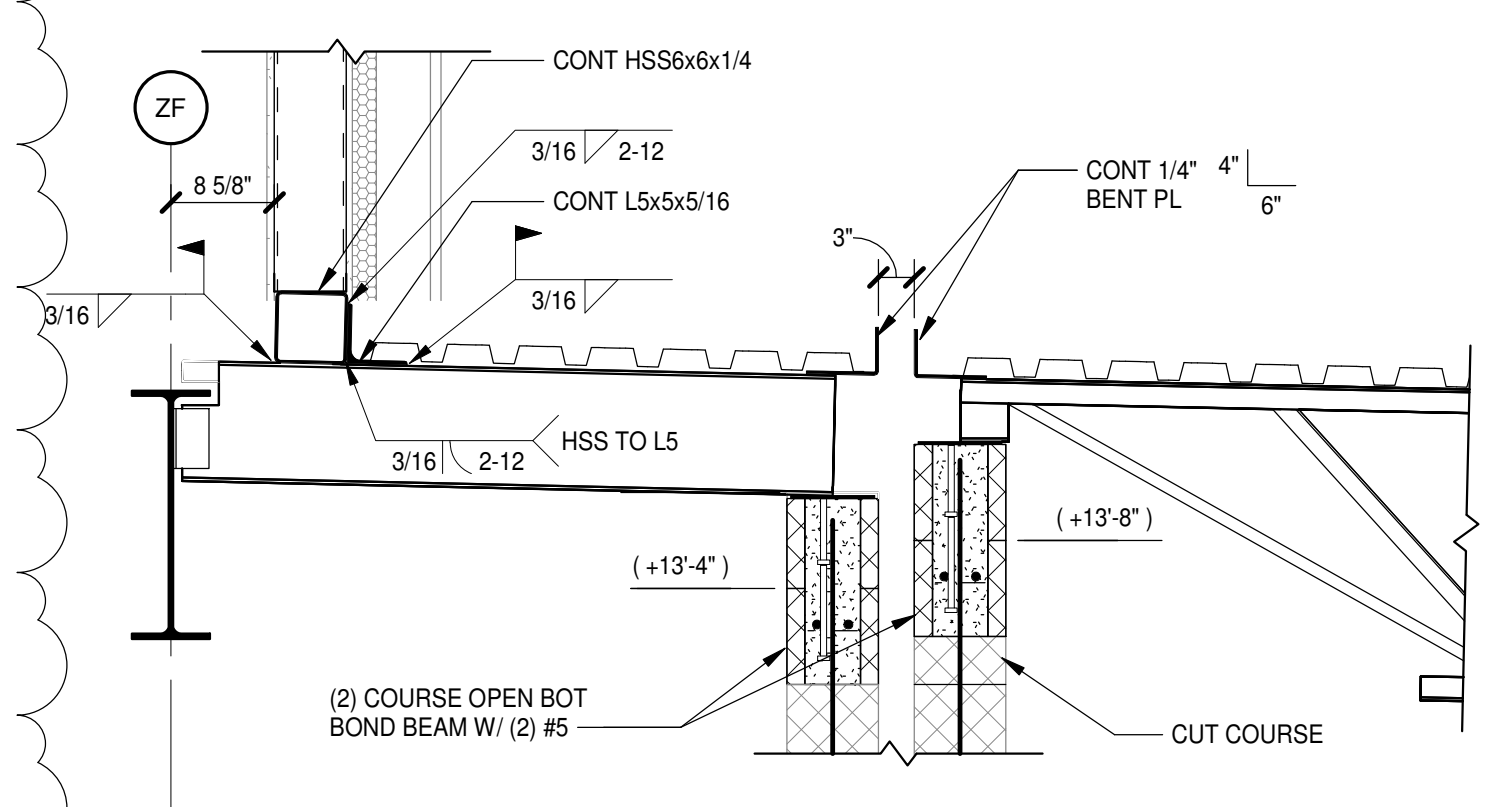
PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01



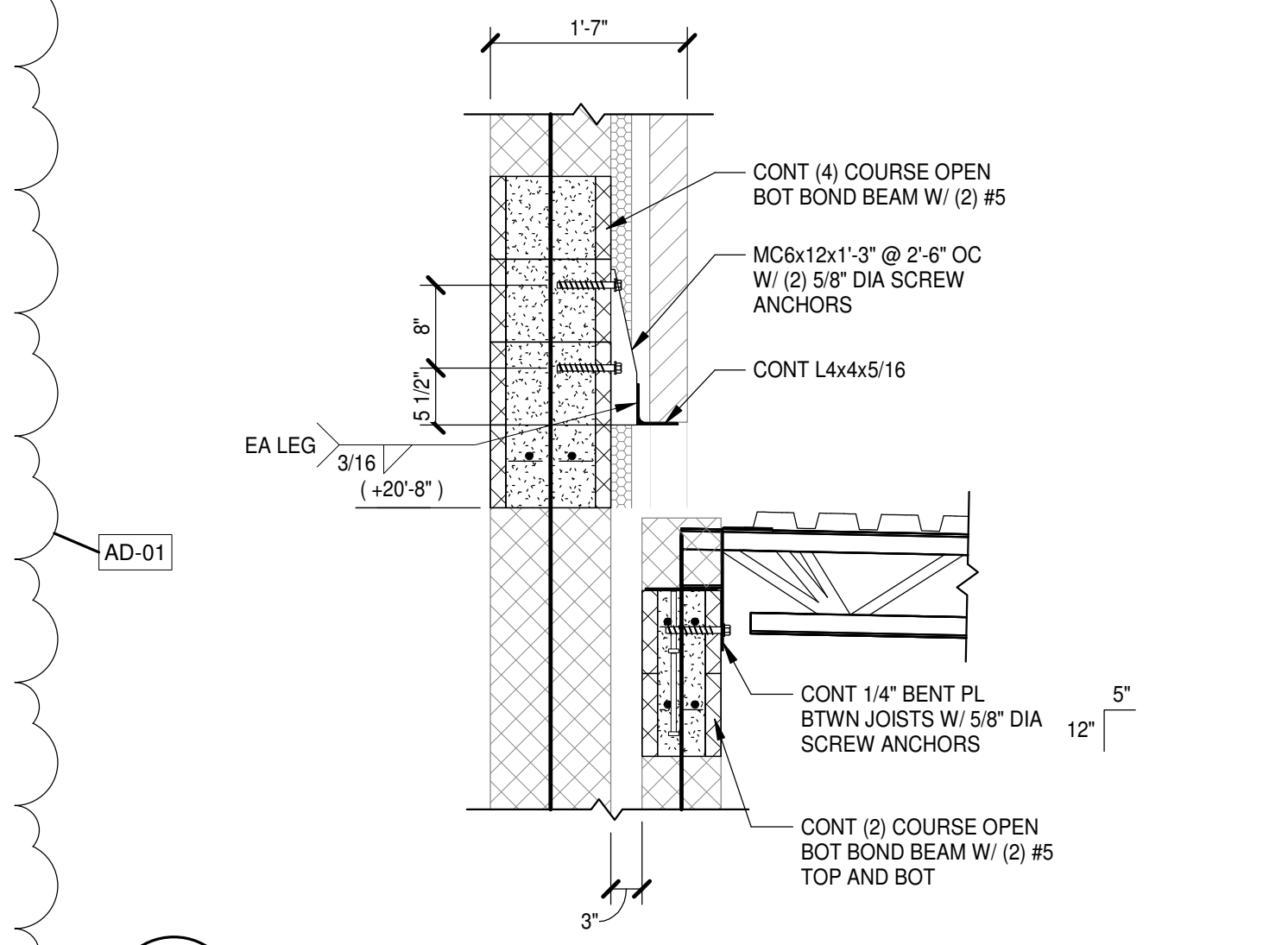
4 SECTION  
S2.1.2 | S4.1.7 3/4" = 1'-0"



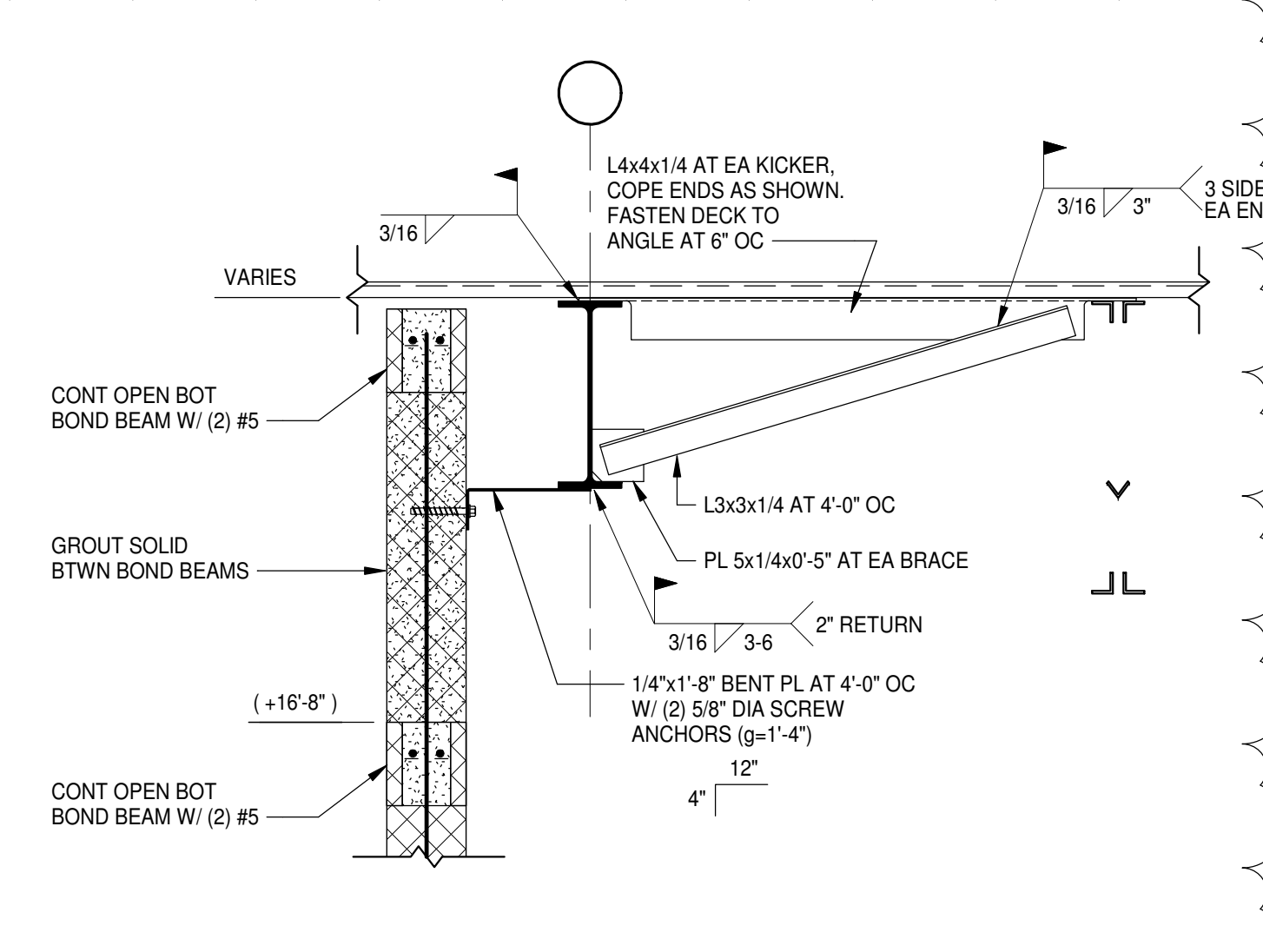
3 SECTION  
S2.1.3 | S4.1.7 3/4" = 1'-0"



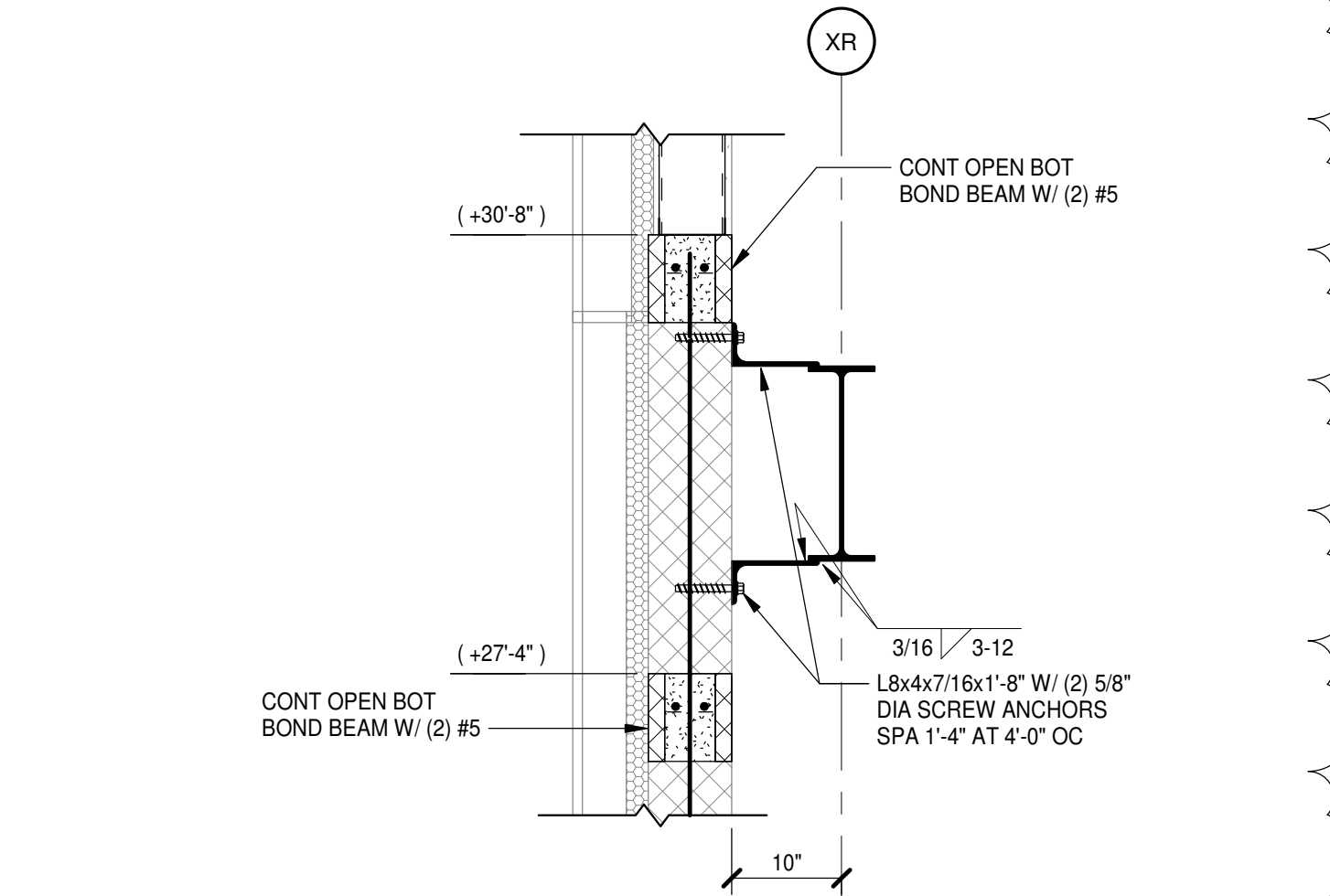
2 SECTION  
S2.1.2 | S4.1.7 3/4" = 1'-0"



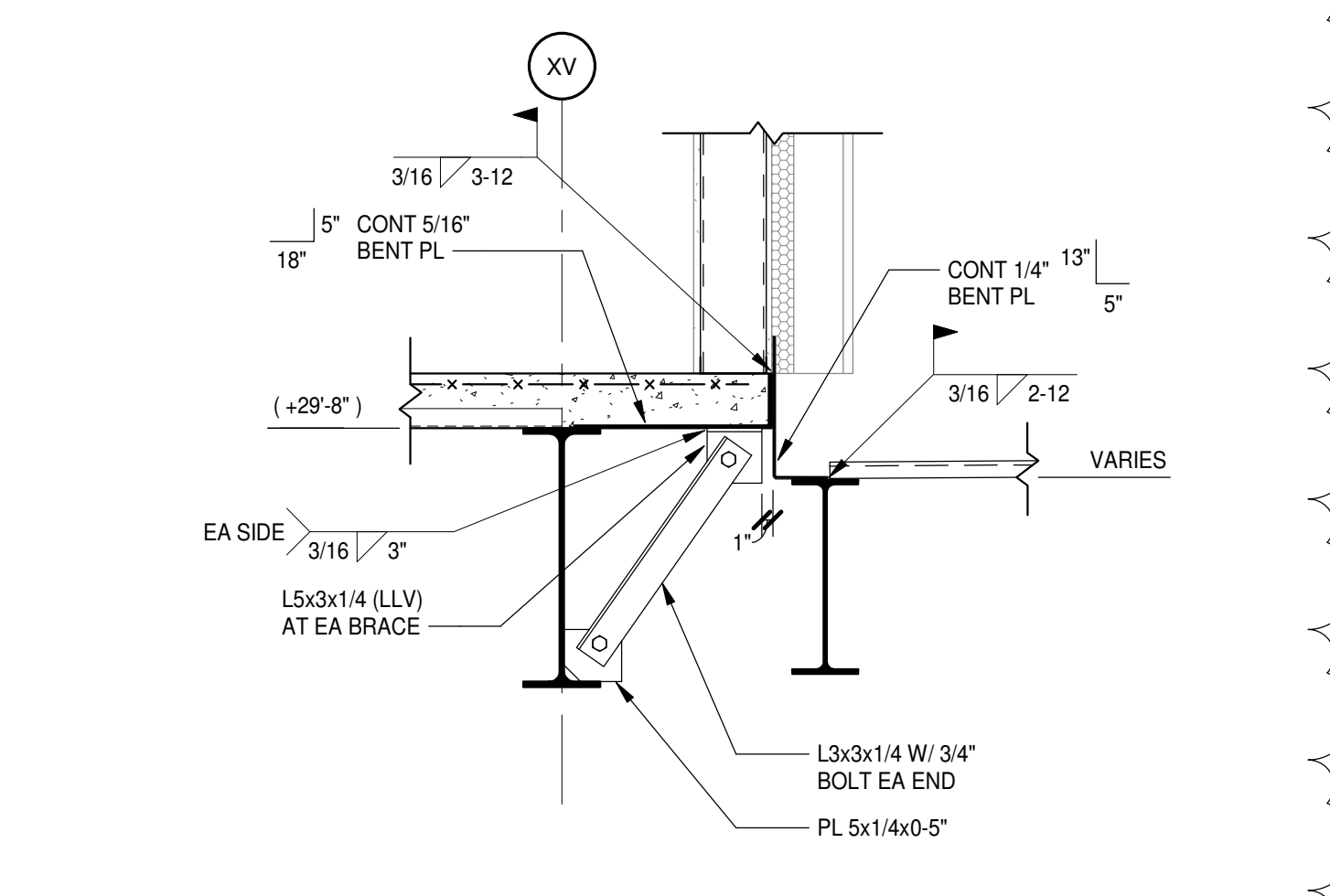
1 SECTION  
S2.1.1 | S4.1.7 3/4" = 1'-0"



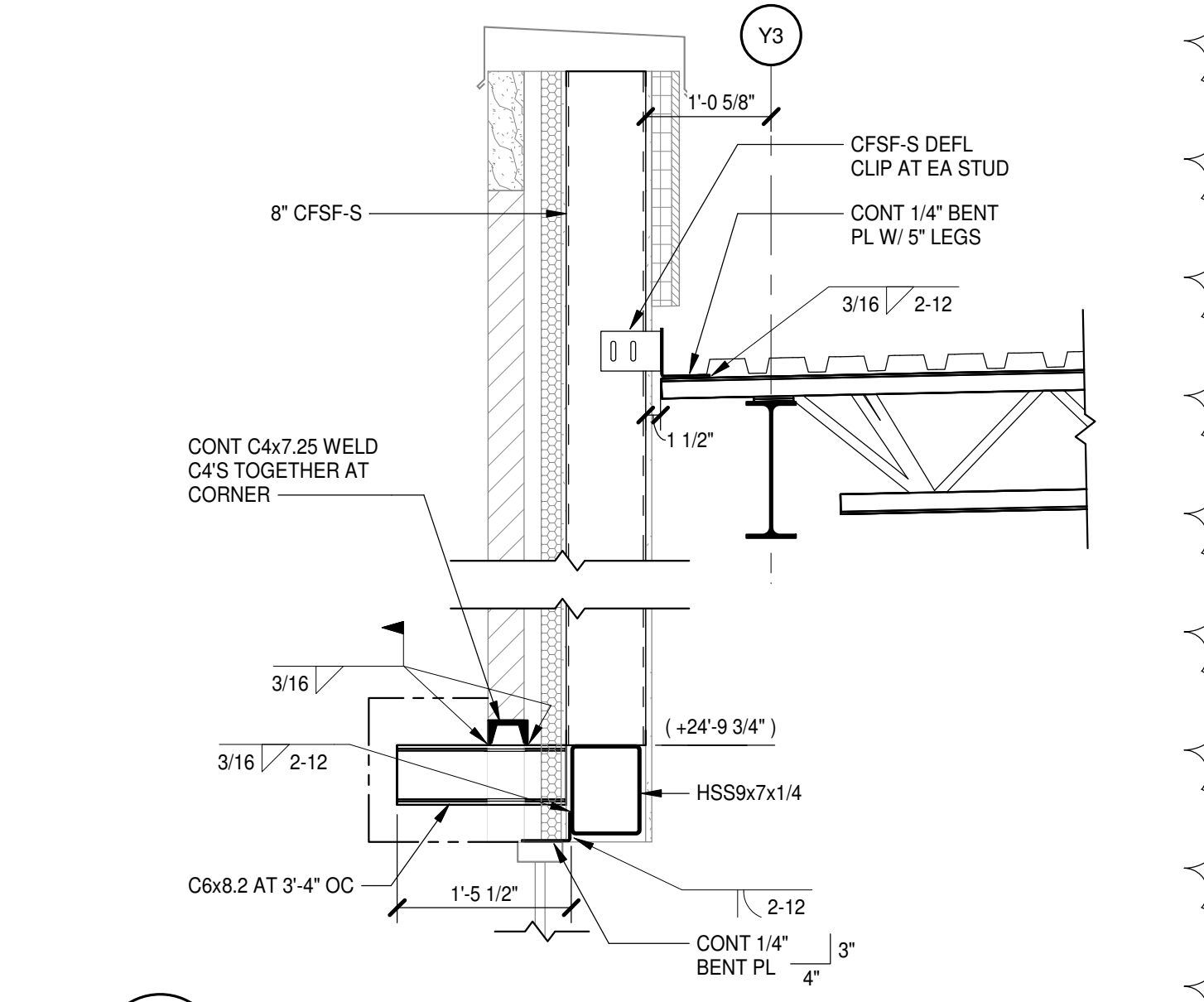
8 SECTION  
S2.1.1 | S4.1.7 3/4" = 1'-0"



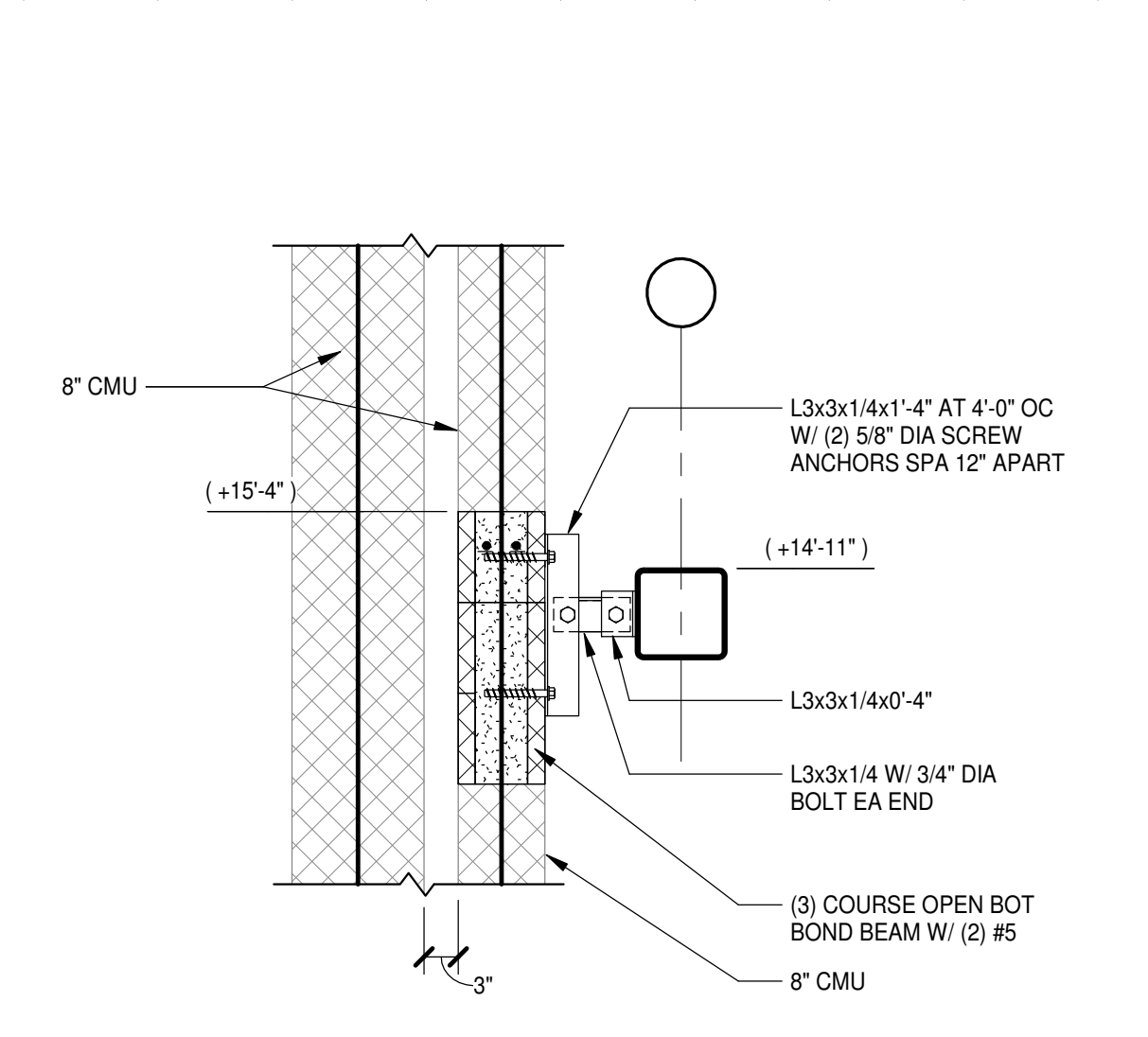
7 SECTION  
S2.2.1 | S4.1.7 3/4" = 1'-0"



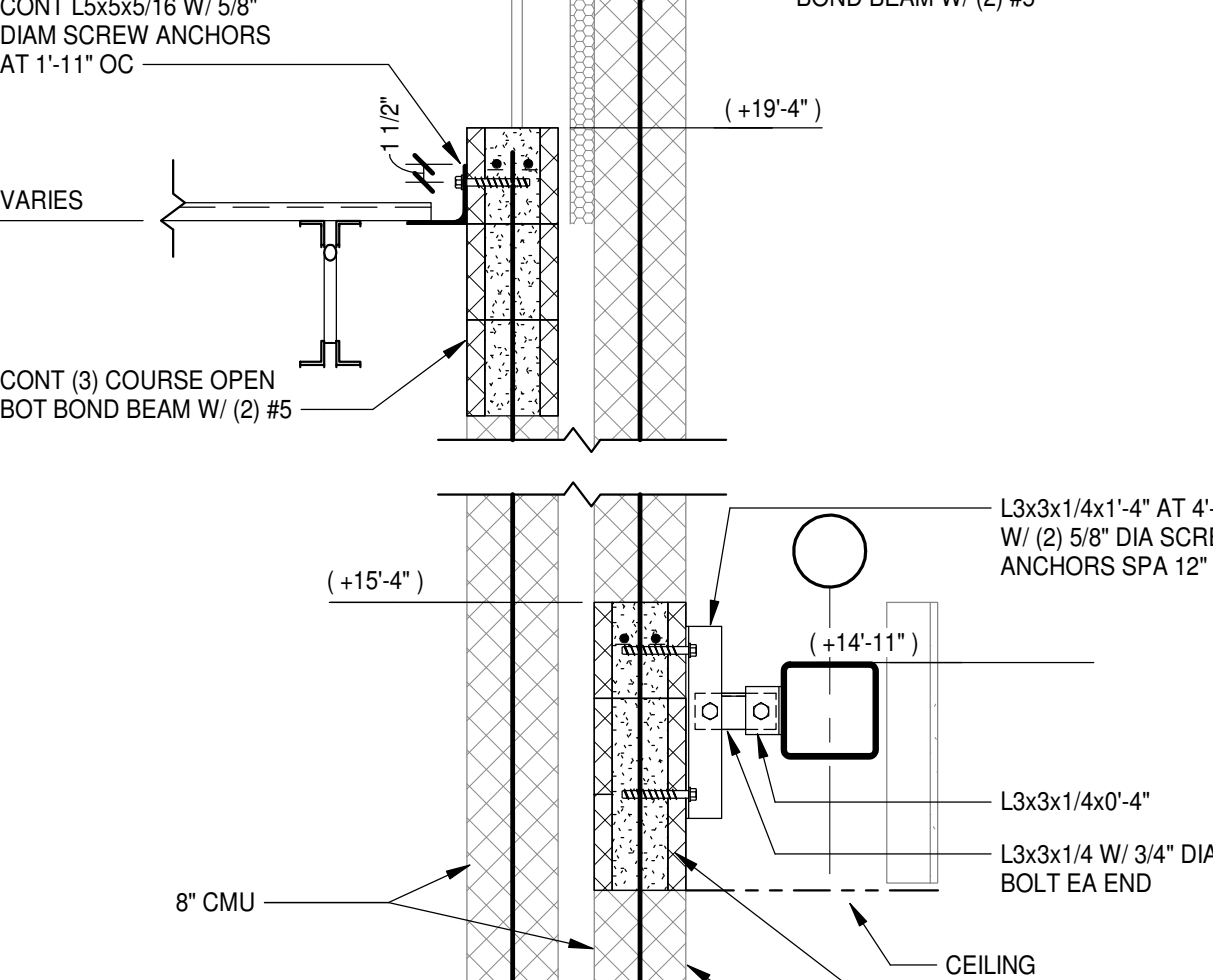
6 SECTION  
S2.2.1 | S4.1.7 3/4" = 1'-0"



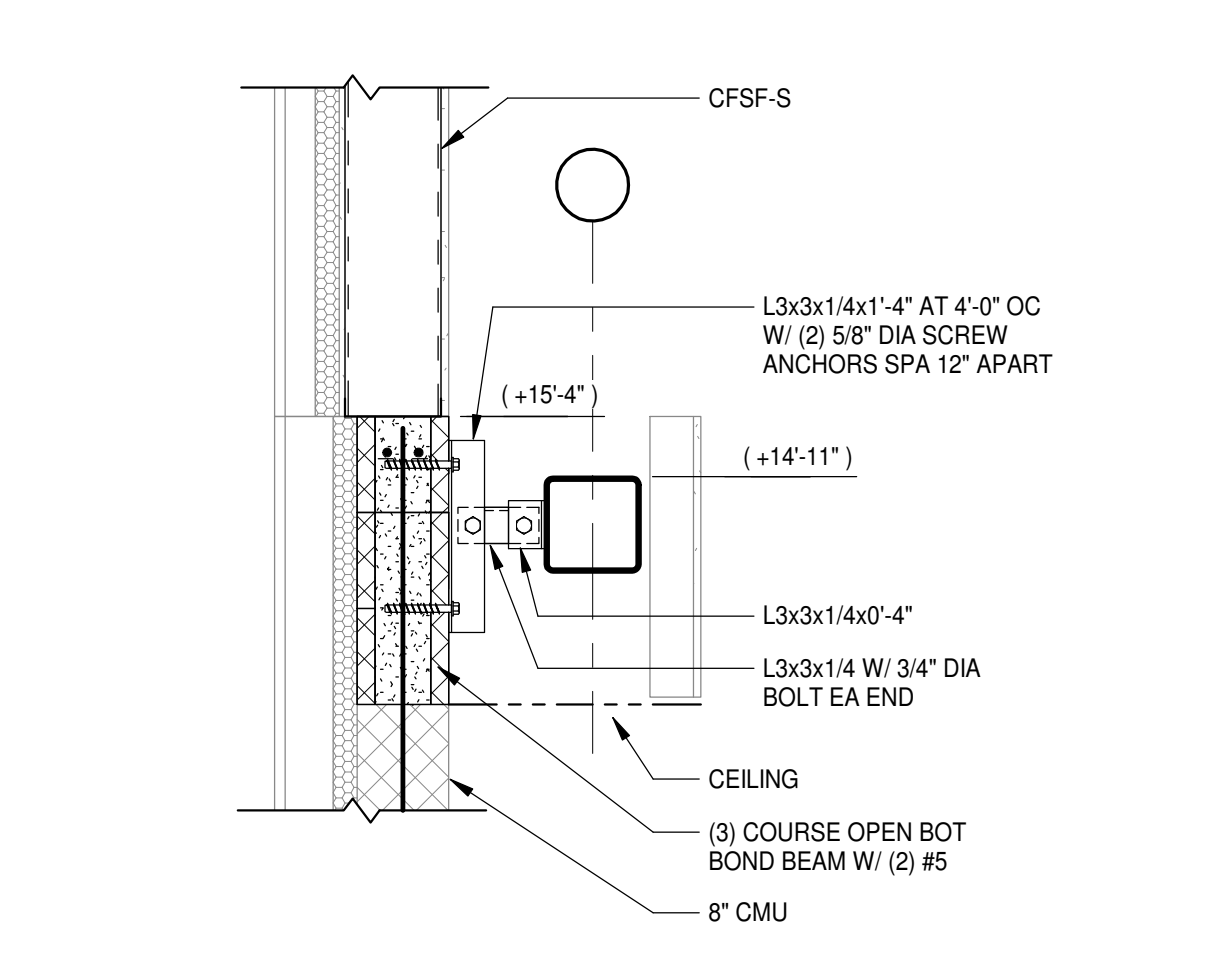
5 SECTION  
S2.2.1 | S4.1.7 3/4" = 1'-0"



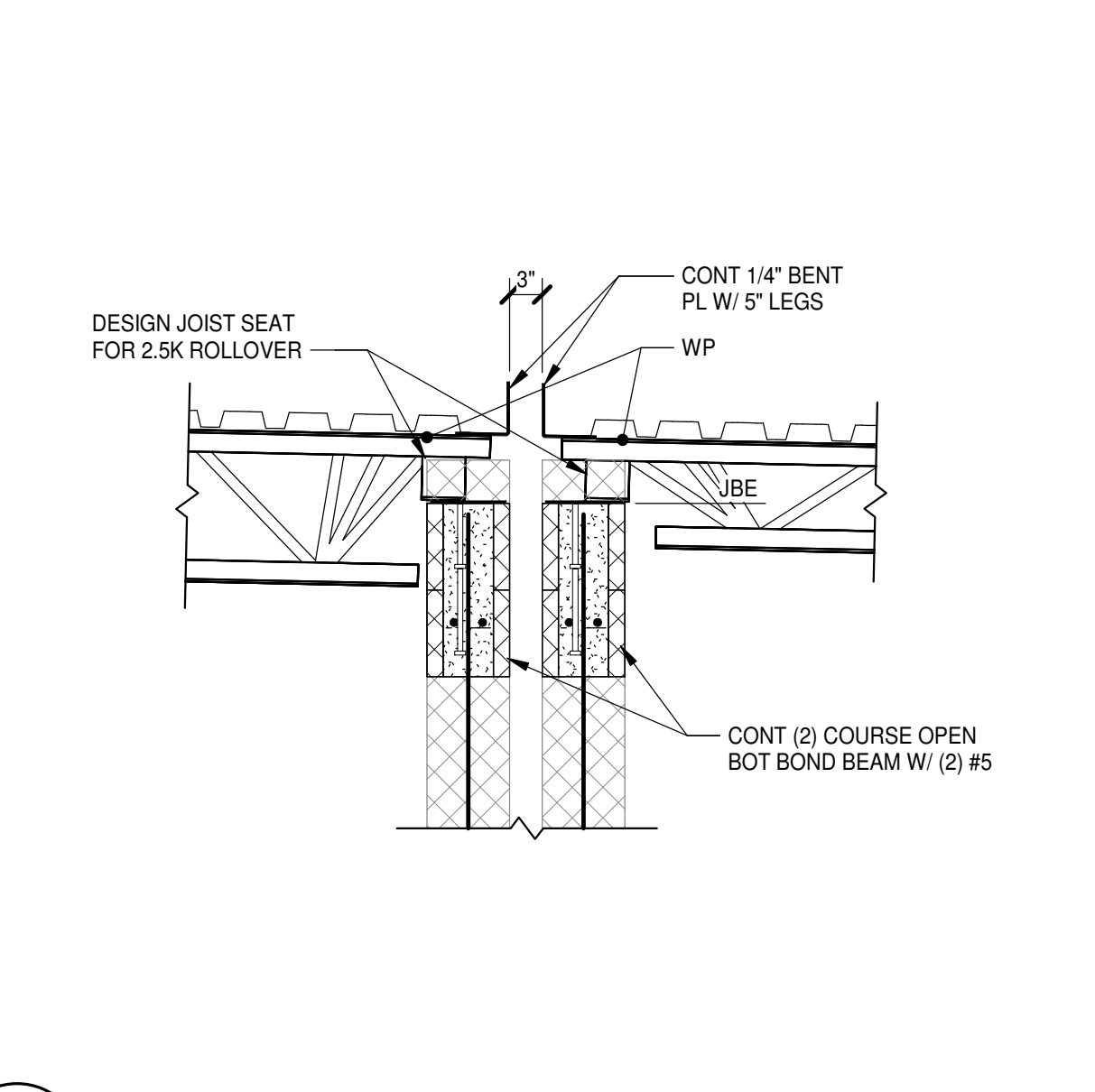
12 SECTION  
S2.1.1 | S4.1.7 3/4" = 1'-0"



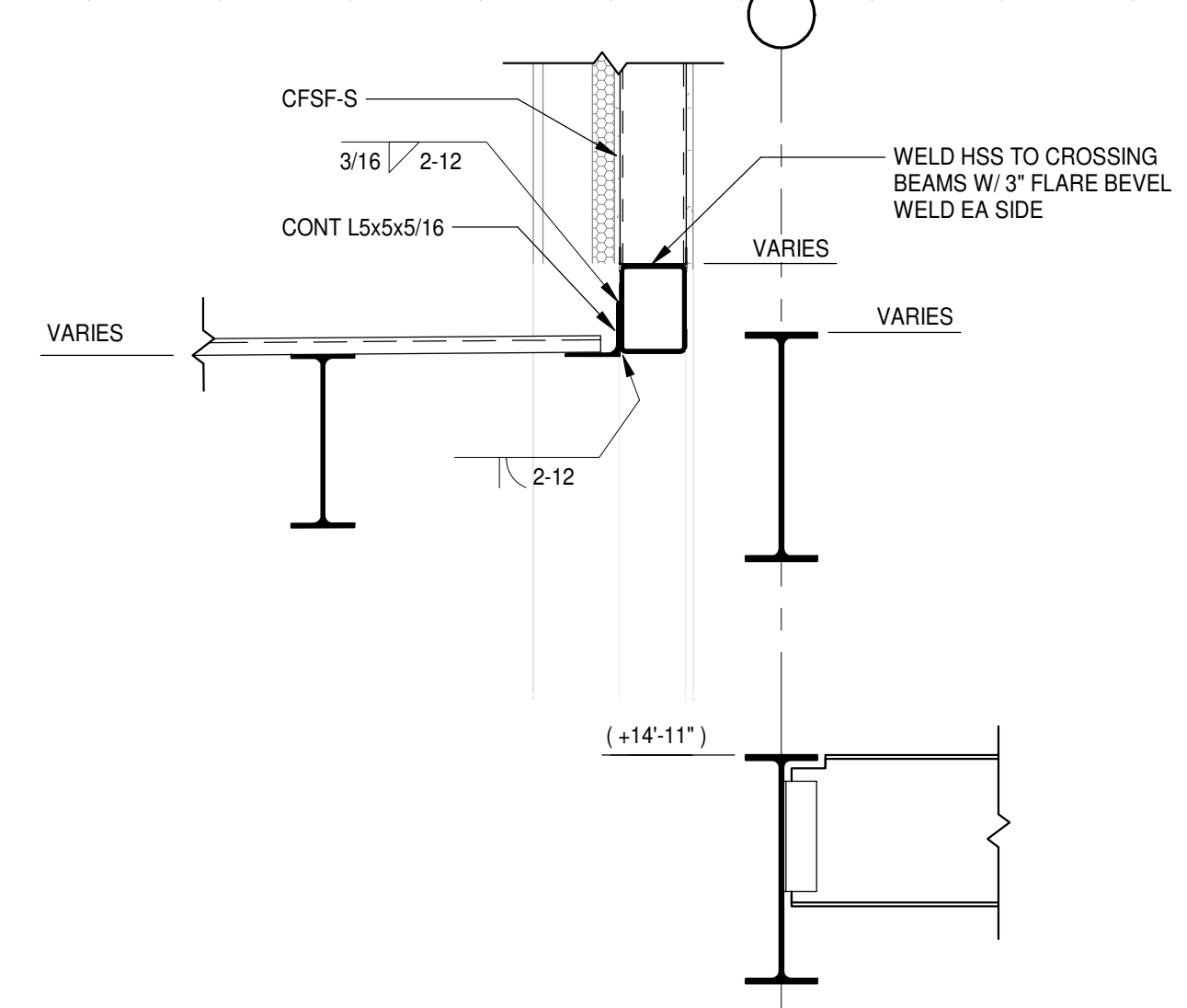
11 SECTION  
S2.1.1 | S4.1.7 3/4" = 1'-0"



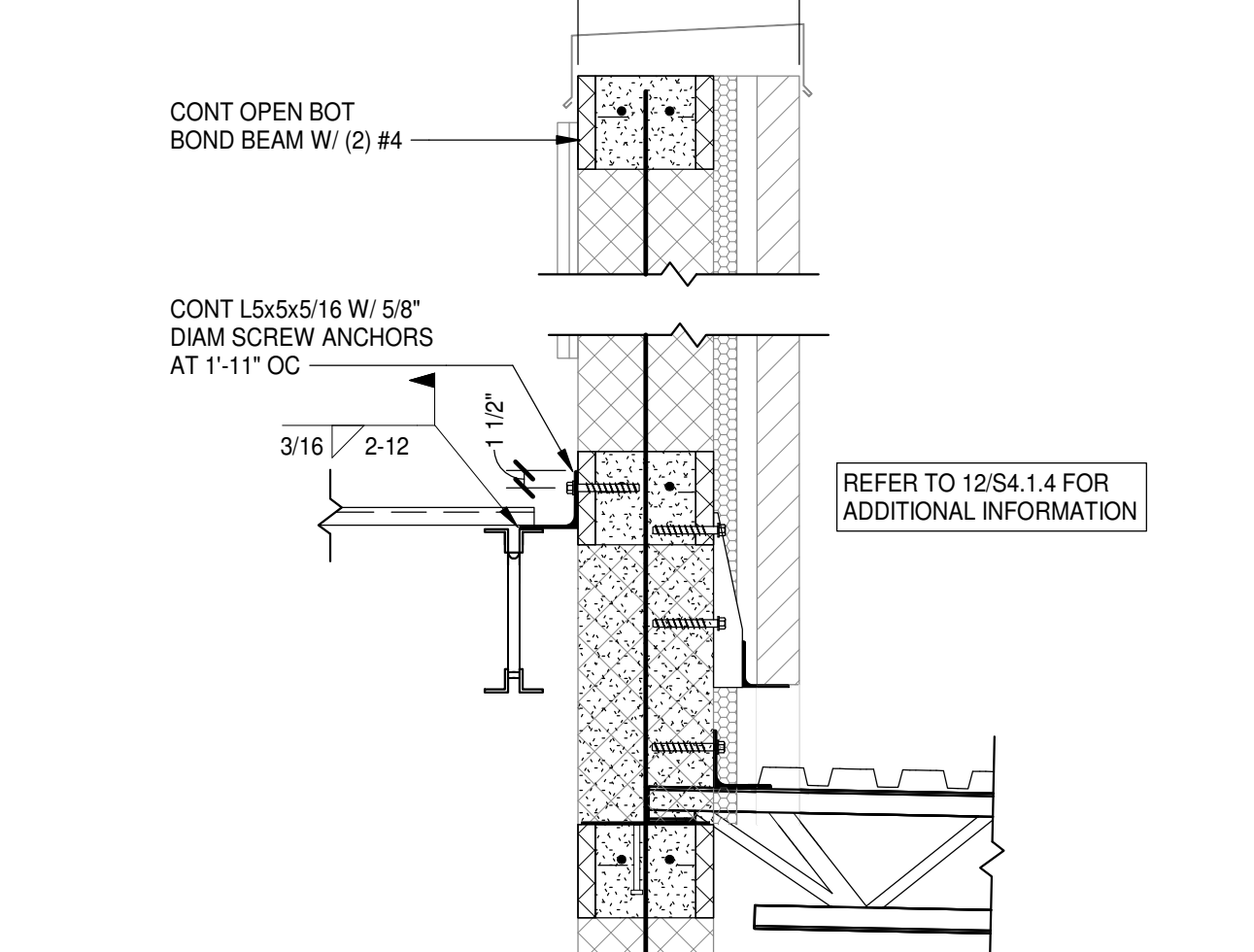
10 SECTION  
S2.1.1 | S4.1.7 3/4" = 1'-0"



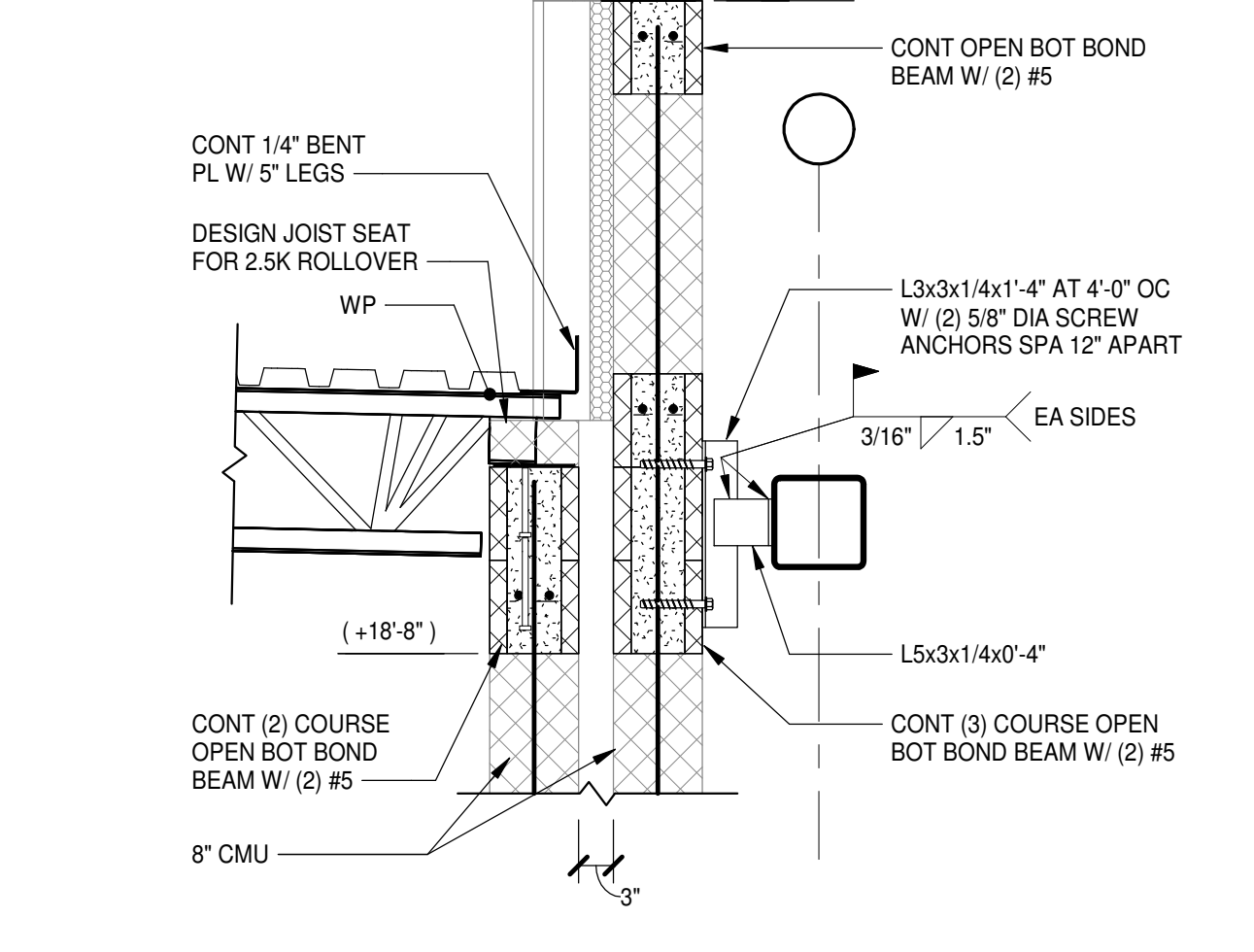
9 SECTION  
S2.1.1 | S4.1.7 3/4" = 1'-0"



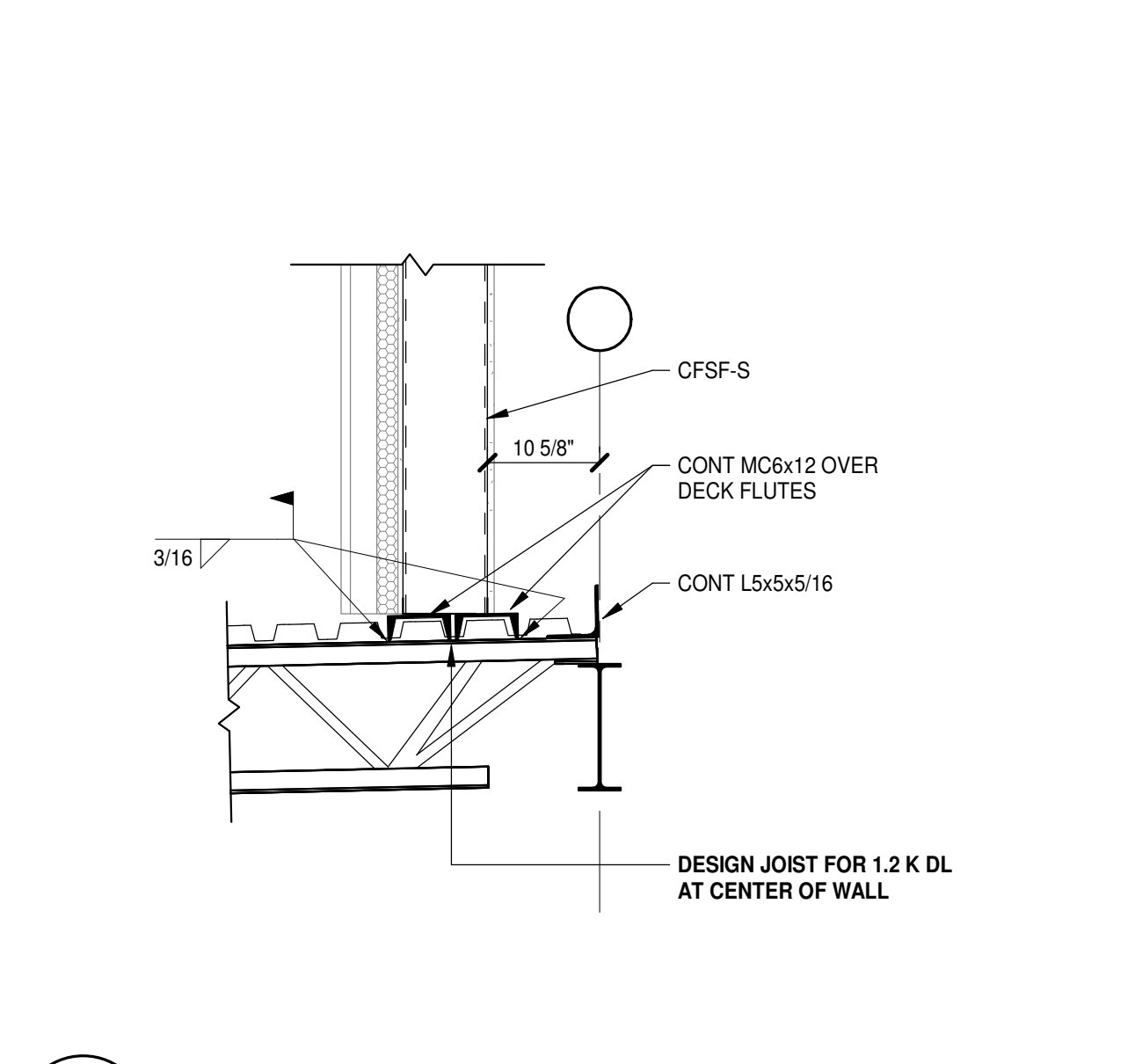
16 SECTION  
S2.1.2 | S4.1.7 3/4" = 1'-0"



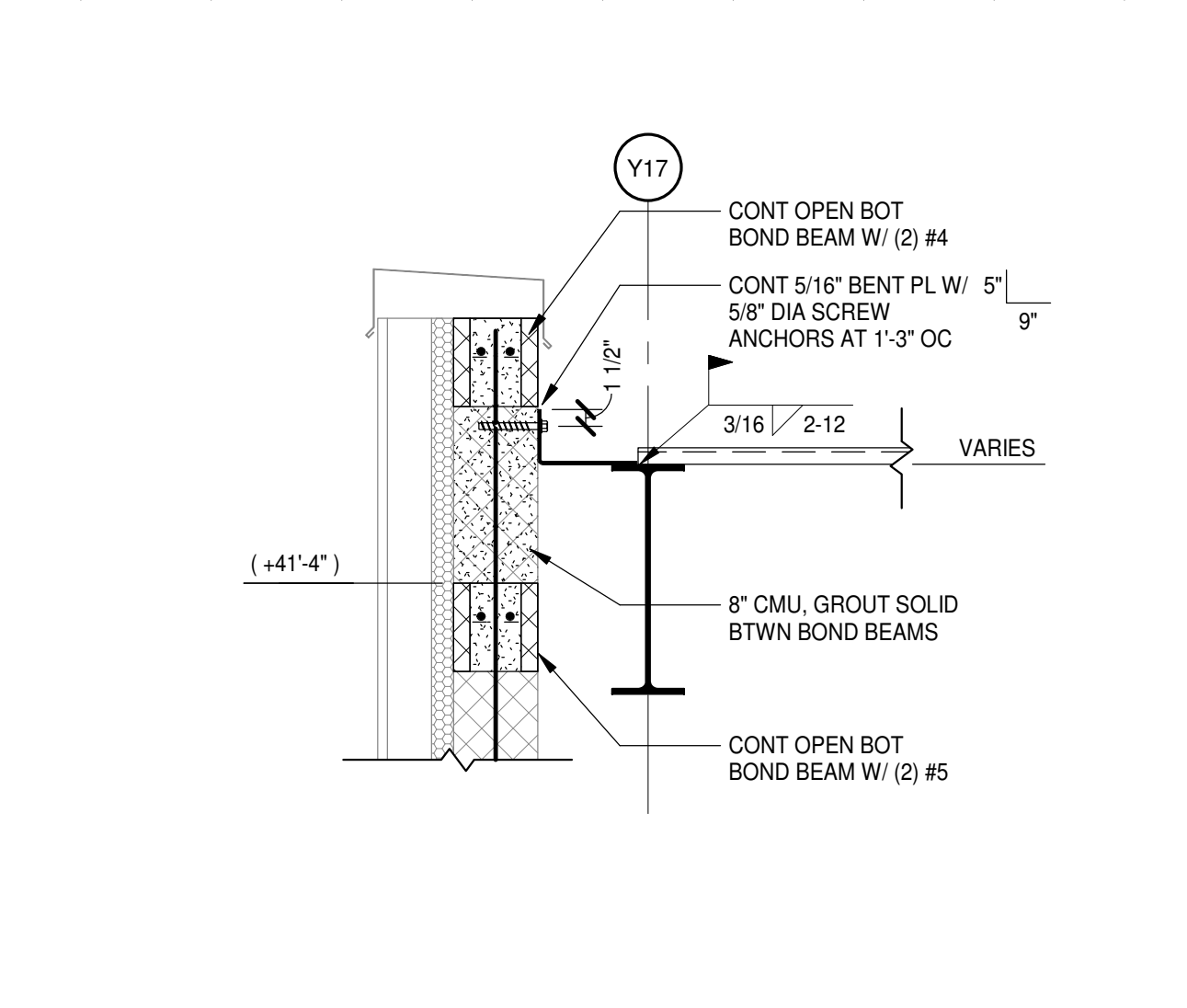
15 SECTION  
S2.1.1 | S4.1.7 3/4" = 1'-0"



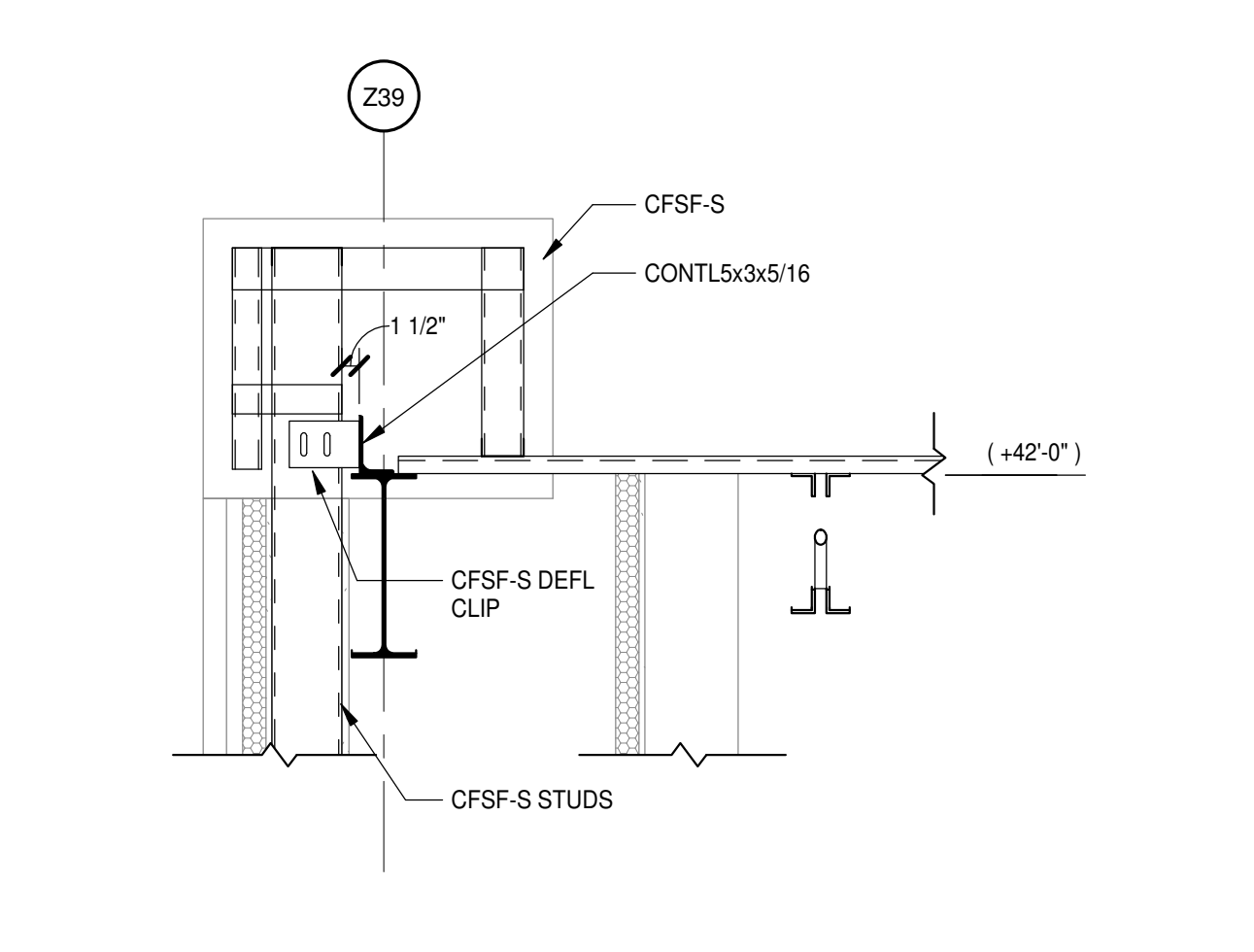
14 SECTION  
S2.1.1 | S4.1.7 3/4" = 1'-0"



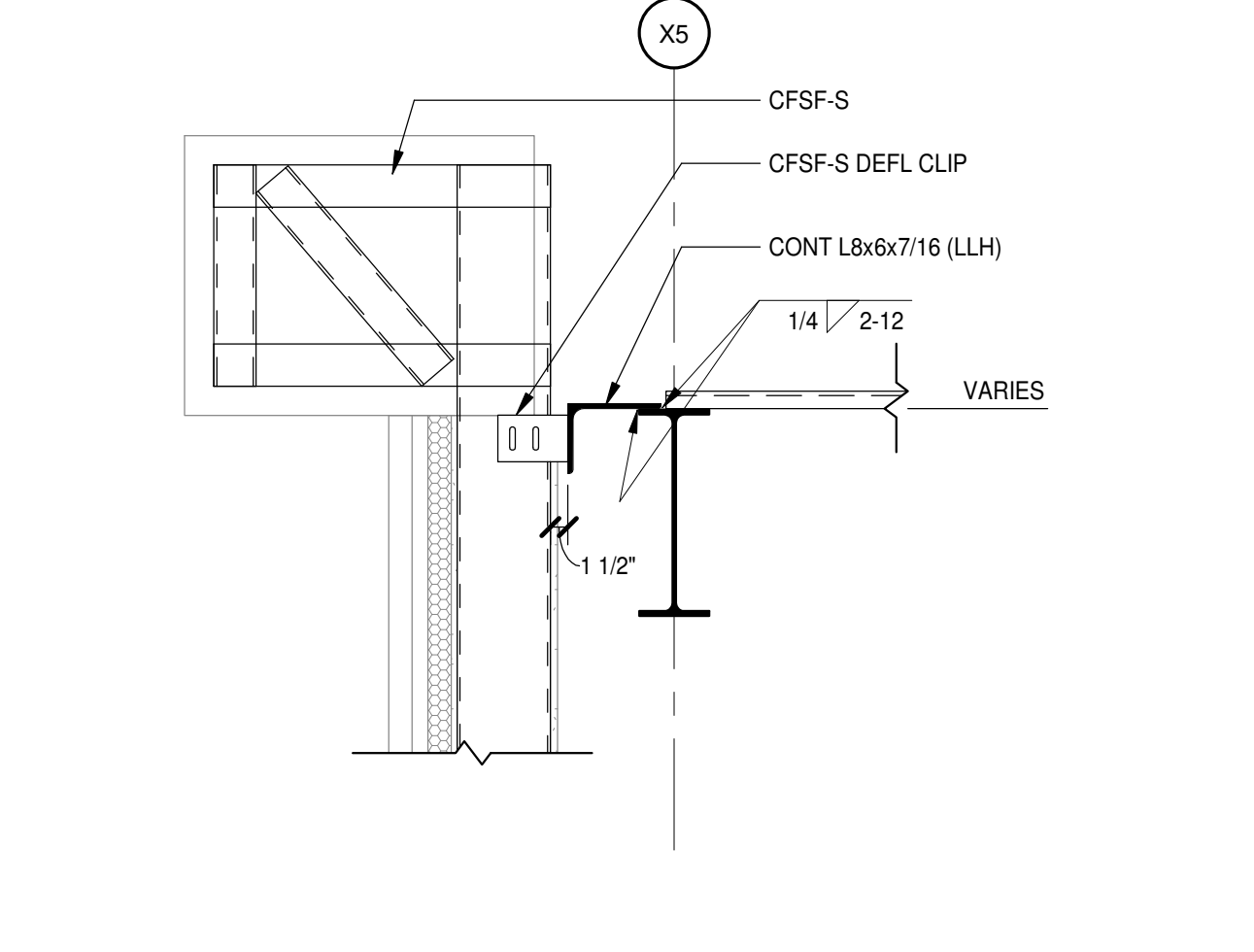
13 SECTION  
S2.1.1 | S4.1.7 3/4" = 1'-0"



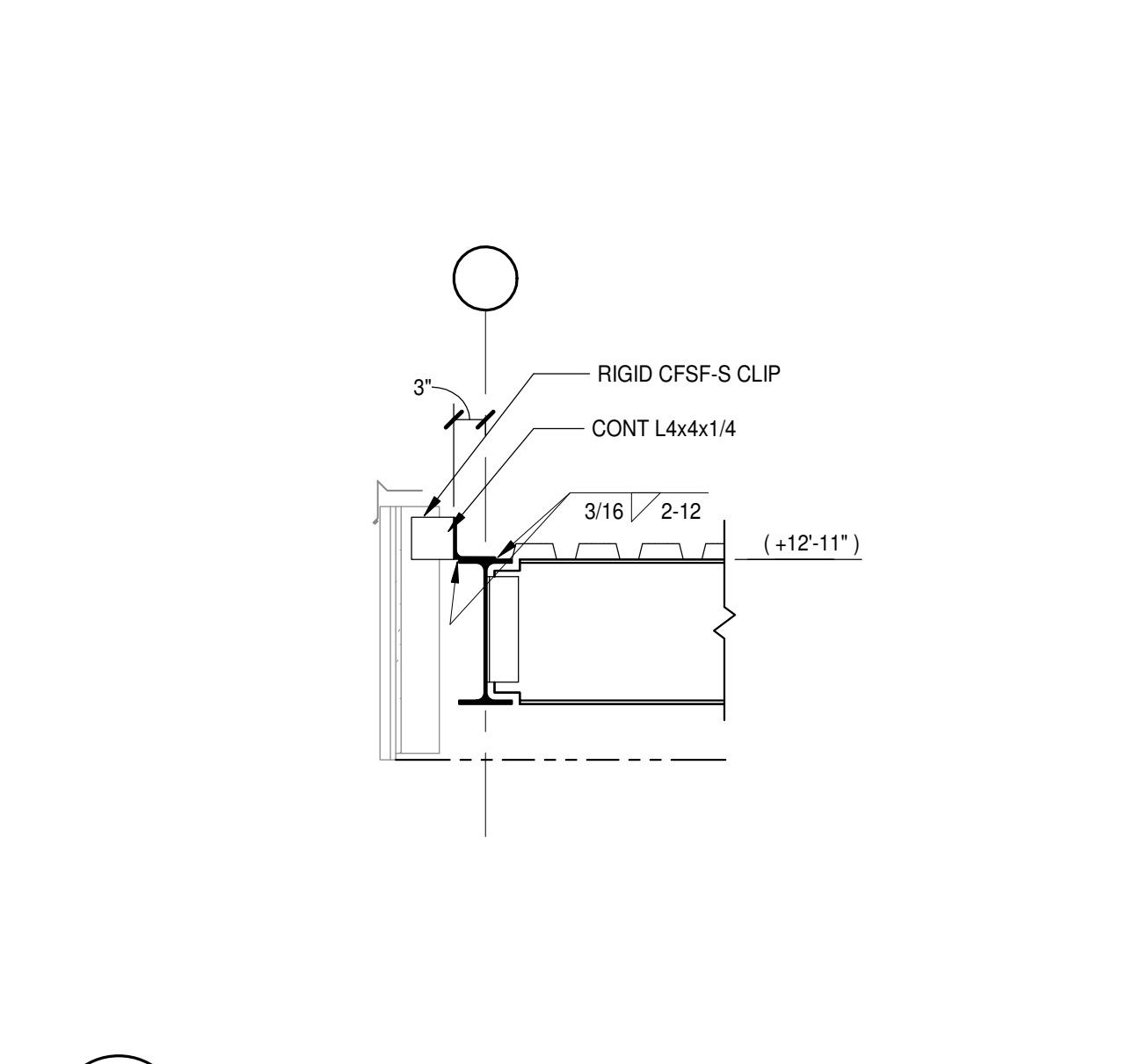
20 SECTION  
S2.2.1 | S4.1.7 3/4" = 1'-0"



19 SECTION  
S2.2.1 | S4.1.7 3/4" = 1'-0"

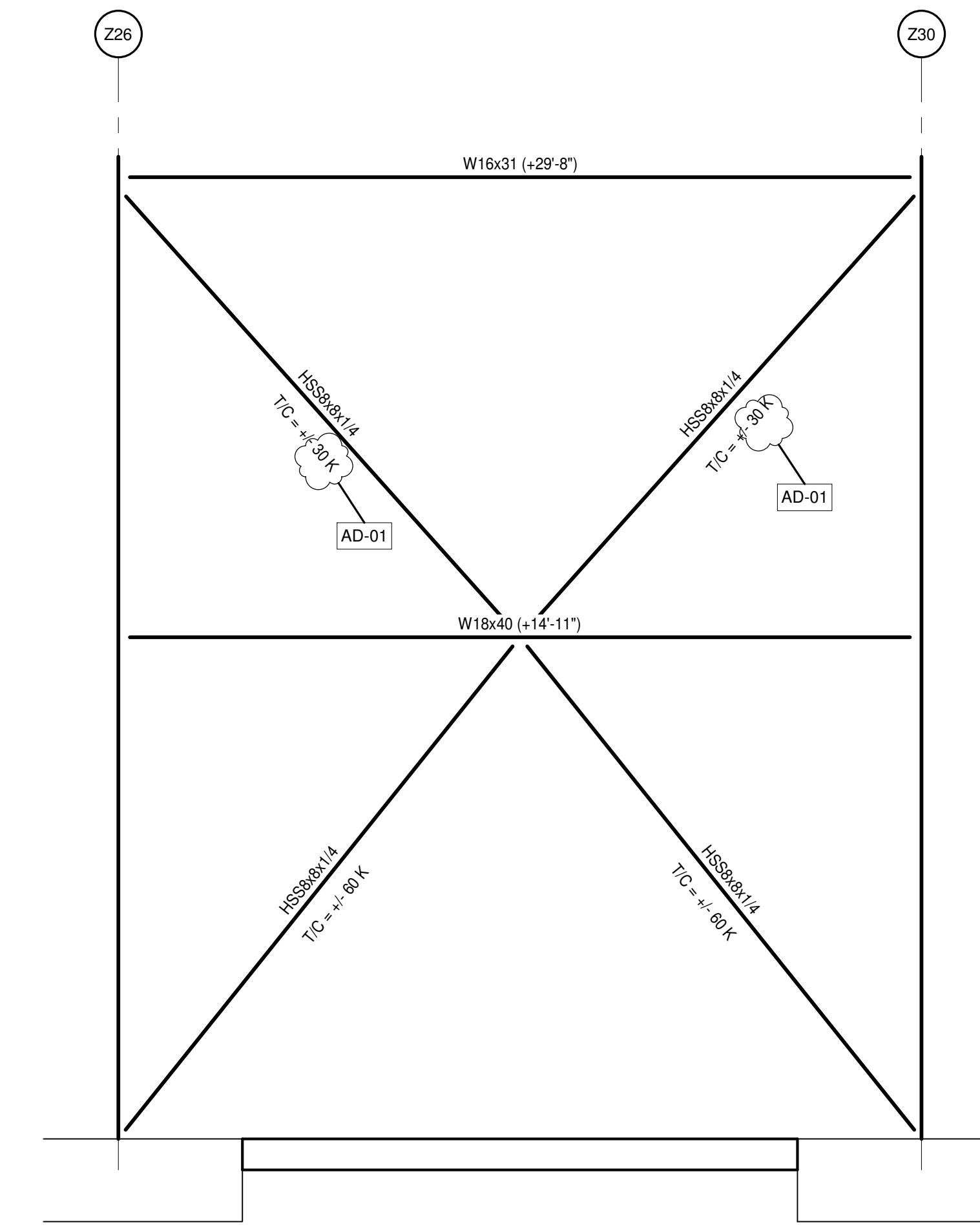


18 SECTION  
S2.2.1 | S4.1.7 3/4" = 1'-0"

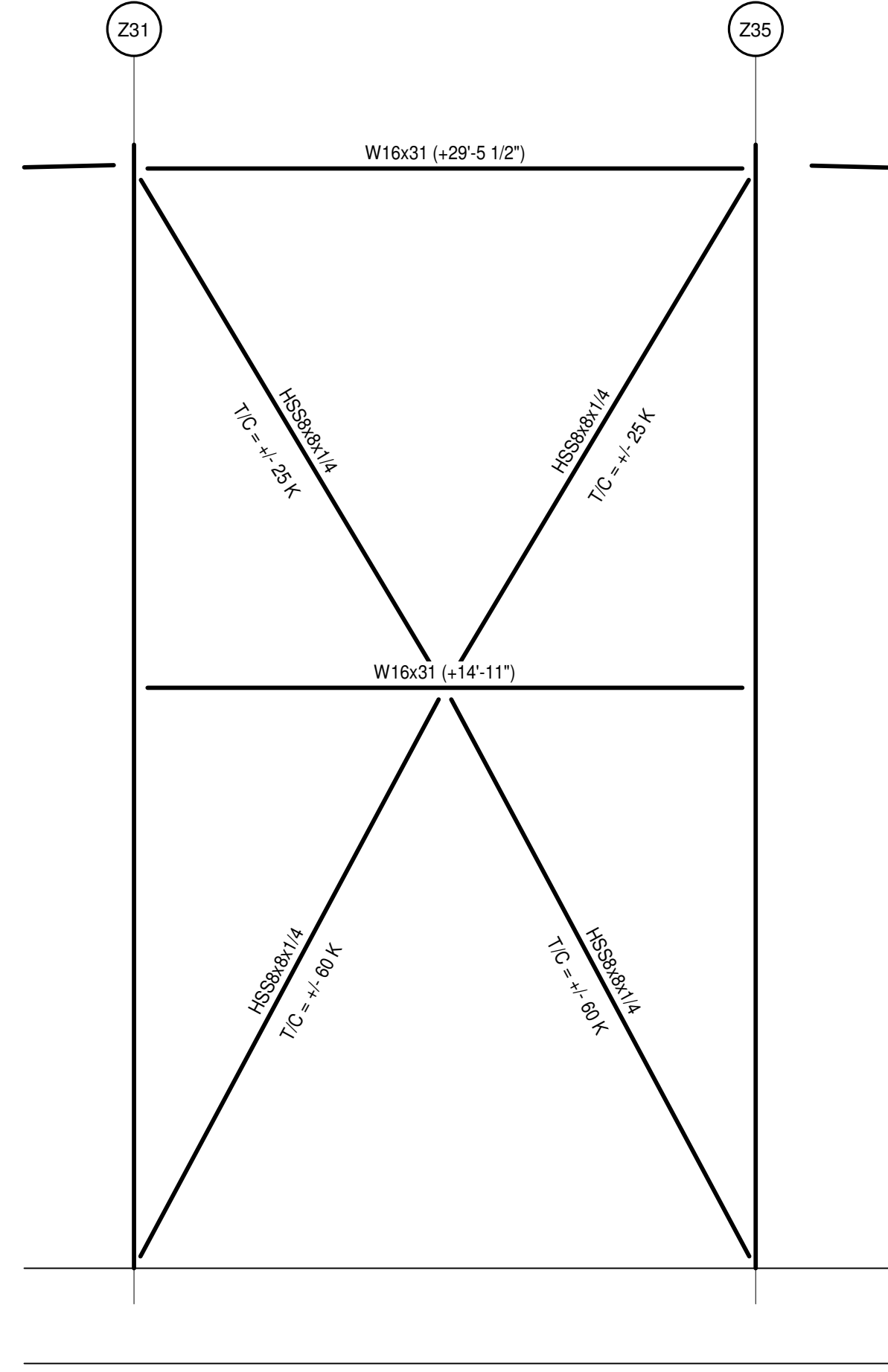


17 SECTION  
S2.1.2 | S4.1.7 3/4" = 1'-0"

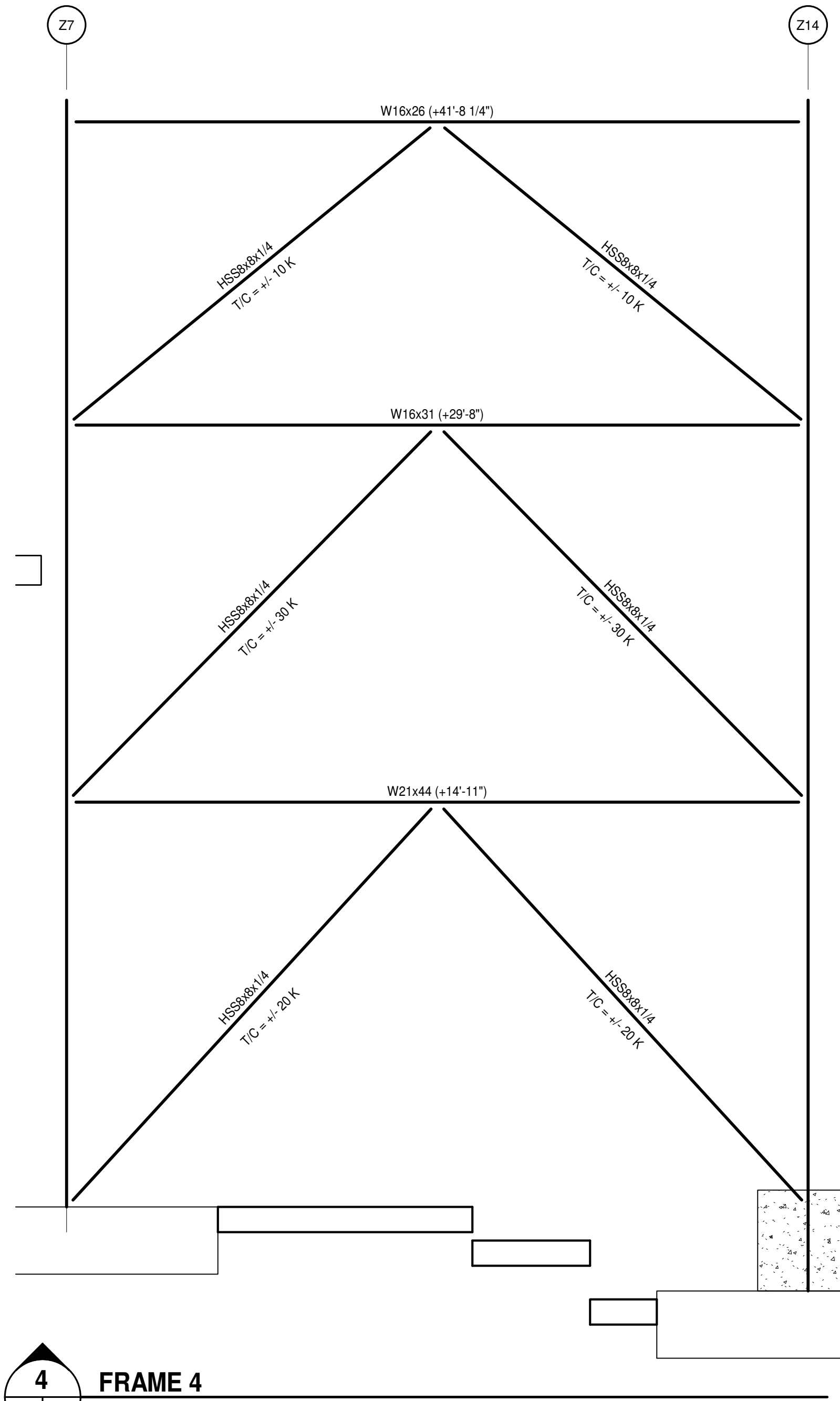




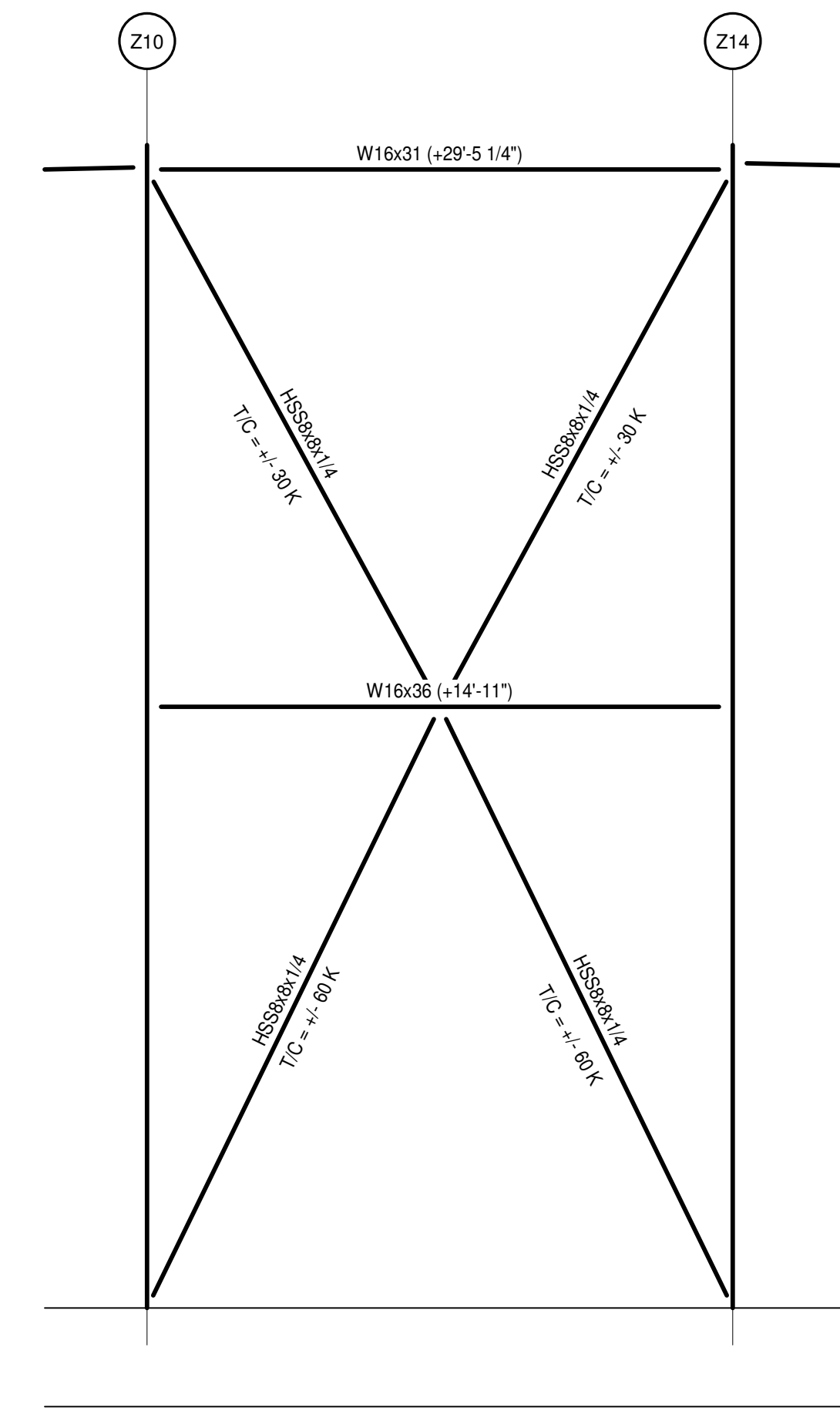
**8 FRAME 8**  
S1.1.8 | S5.1.1 | 1/4" = 1'-0"



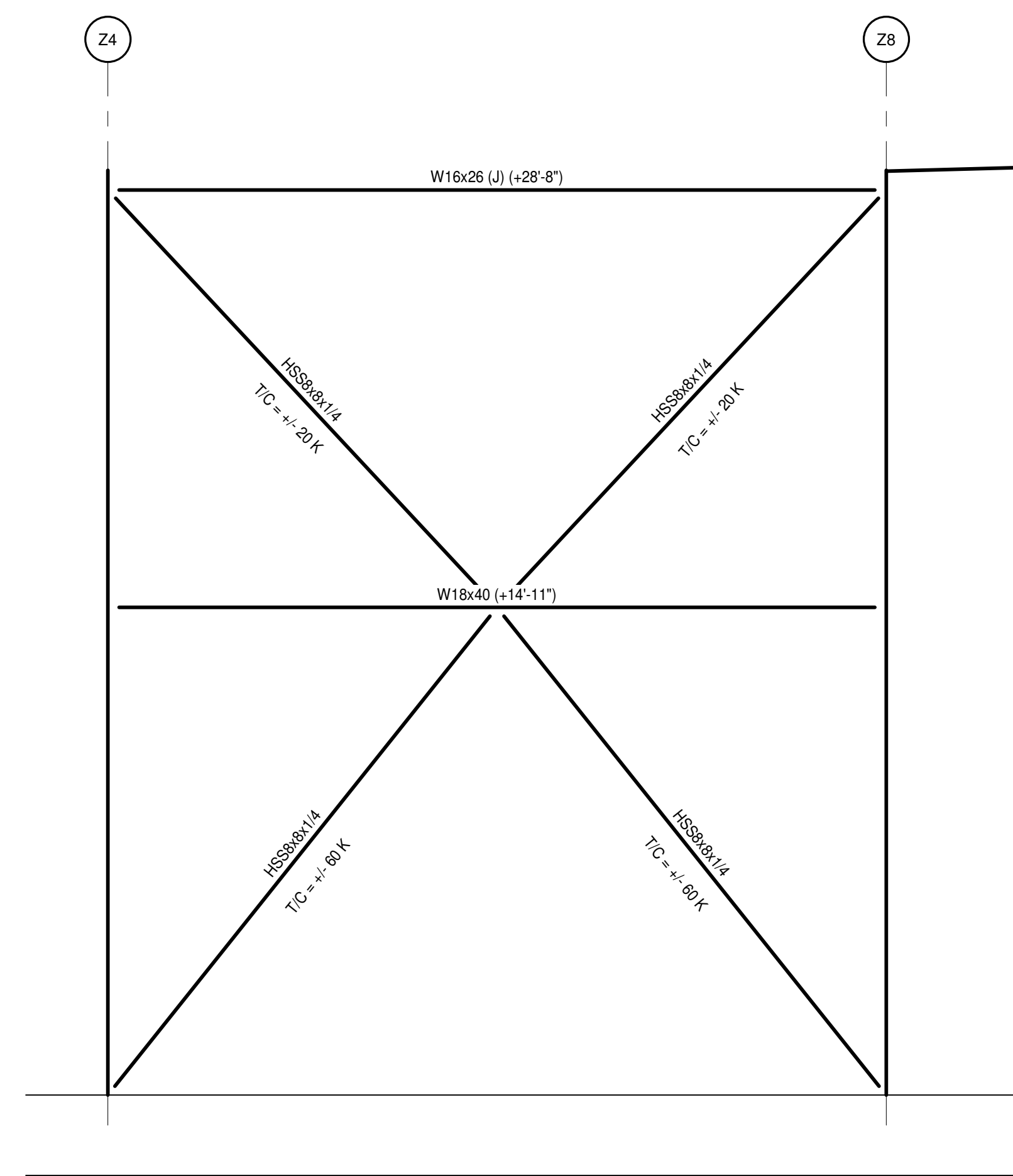
**6 FRAME 6**  
S1.1.8 | S5.1.1 | 1/4" = 1'-0"



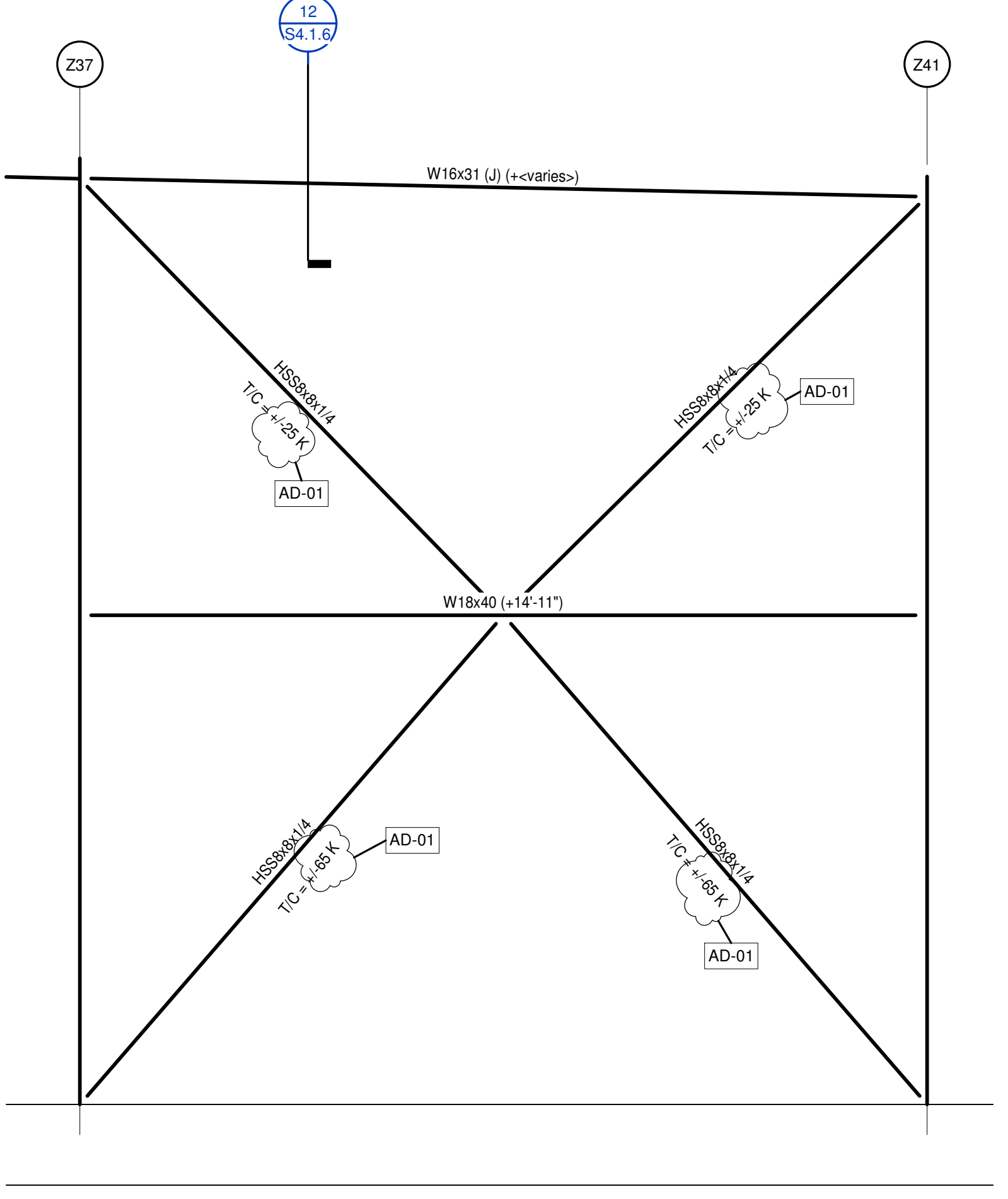
**4 FRAME 4**  
S1.1.2 | S5.1.1 | 1/4" = 1'-0"



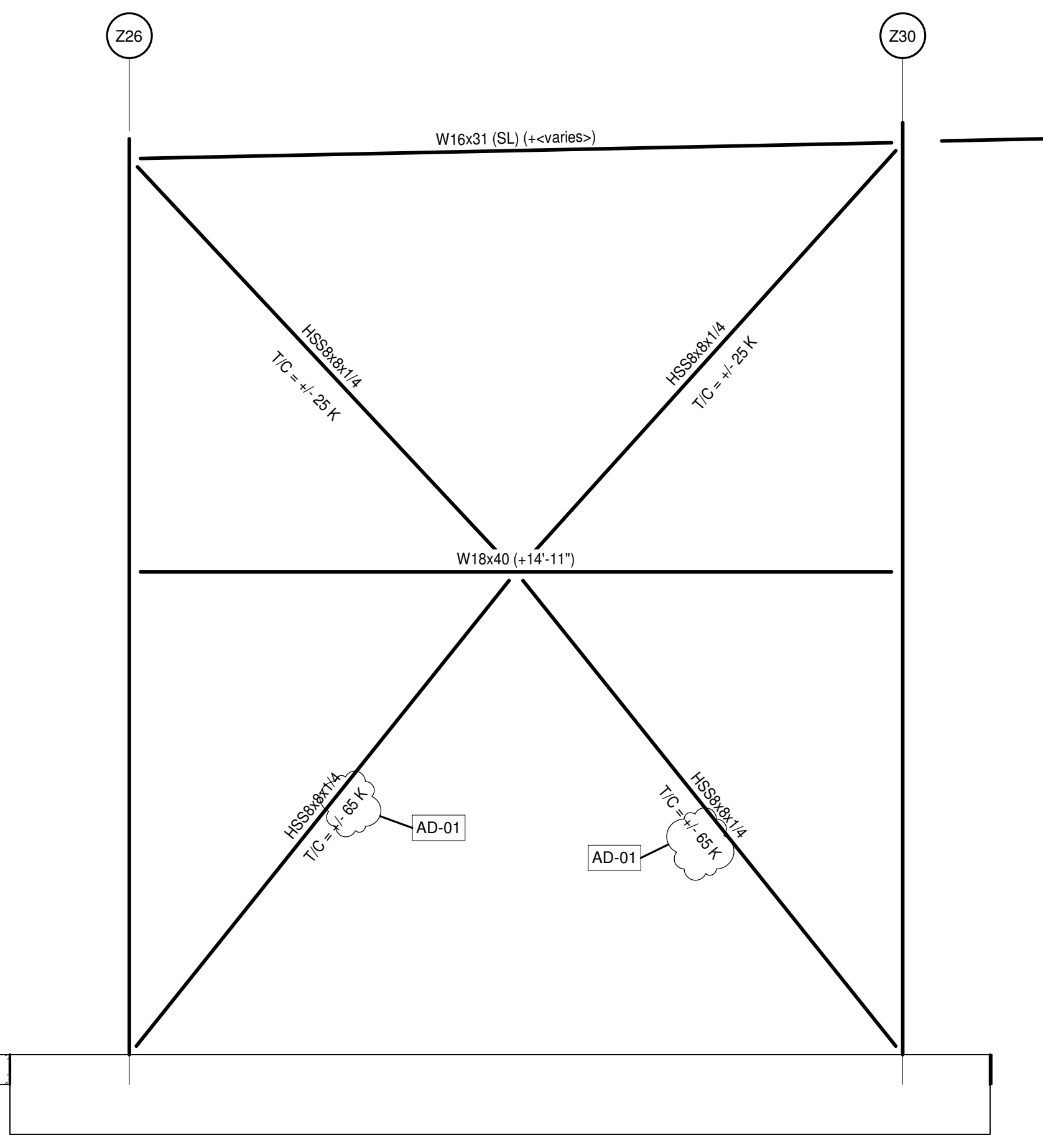
**2 FRAME 2**  
S1.1.7 | S5.1.1 | 1/4" = 1'-0"



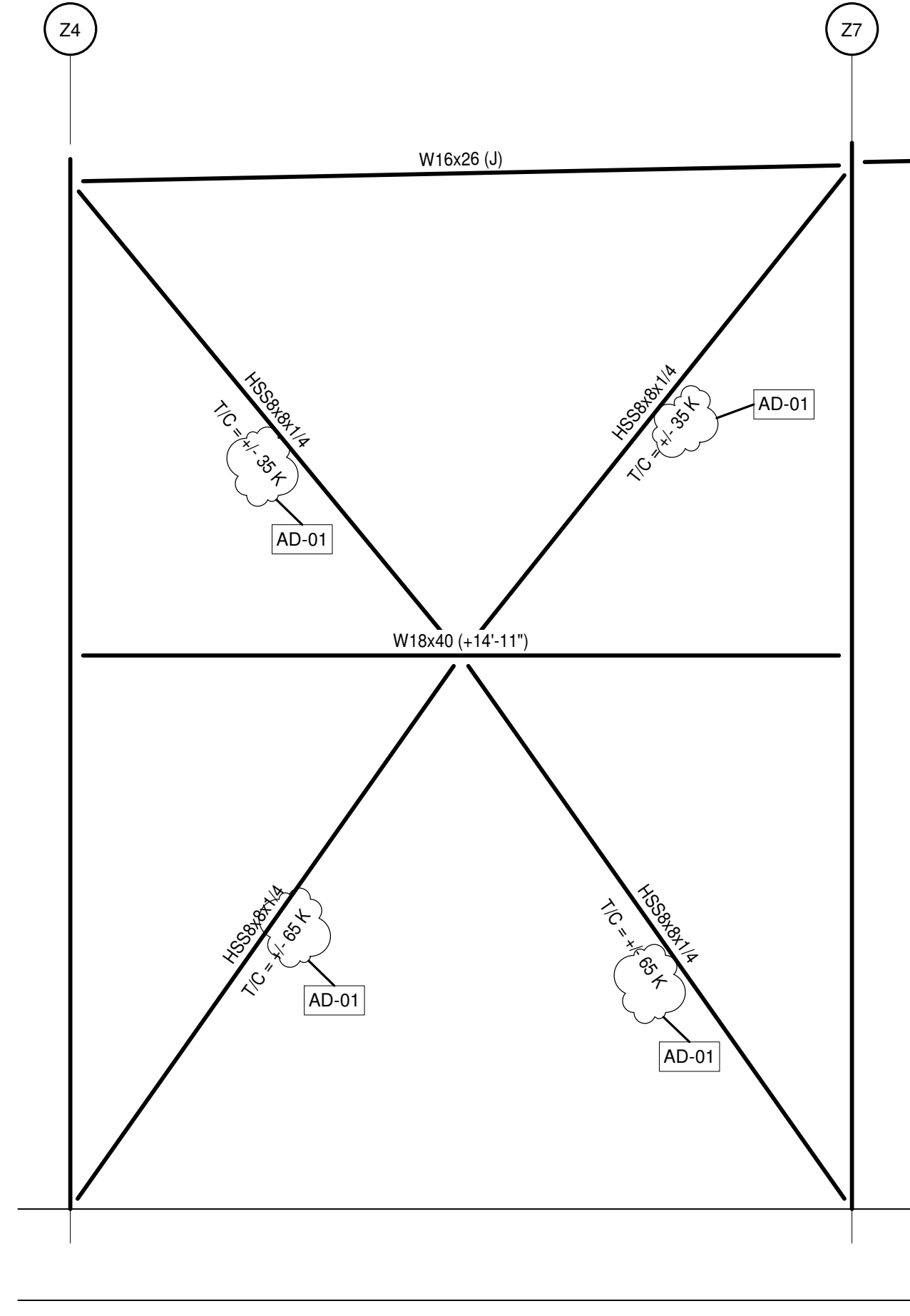
**1 FRAME 1**  
S1.1.7 | S5.1.1 | 1/4" = 1'-0"



**7 FRAME 7**  
S1.1.8 | S5.1.1 | 1/4" = 1'-0"



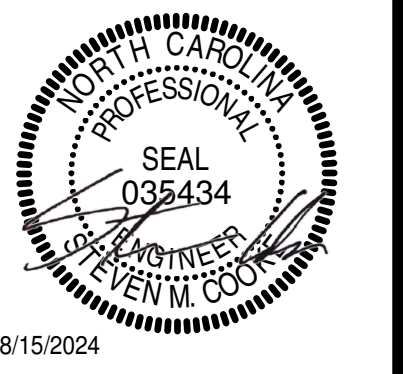
**5 FRAME 5**  
S1.1.8 | S5.1.1 | 1/4" = 1'-0"



**3 FRAME 3**  
S1.1.7 | S5.1.1 | 1/4" = 1'-0"

**DELEGATED DESIGN CONNECTION NOTES**

- DESIGN OF ALL BRACING CONNECTIONS SHALL BE PROVIDED BY THE FABRICATOR'S ENGINEER.
- THE UNIFORM FORCE METHOD SHALL BE USED TO DESIGN BRACING CONNECTIONS. DO NOT USE ANY SPECIAL CASES ASSOCIATED WITH THE UNIFORM FORCE METHOD. DO NOT USE KISS METHOD OR PARALLEL FORCE METHOD.
- DESIGN CALCULATIONS, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA, SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
- FABRICATOR SHALL REVIEW SHOP DRAWINGS FOR COORDINATION WITH CONNECTION DESIGN CALCULATIONS PRIOR TO SUBMITTING TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD FOR REVIEW.
- BRACING LOADS INDICATED ON S5.1.1 FRAME ELEVATIONS ARE SERVICE LOADS TO BE USED WITH ASD DESIGN METHODOLOGY. BRACING LOADS SHALL BE CONSIDERED TO BE BOTH TENSION AND COMPRESSION.
- SHEAR LOADS AT THE ENDS OF BRACED FRAME BEAMS ON S5.1.1 FRAME ELEVATIONS ARE SERVICE LOADS (DEAD + LIVE) MAXIMUMS TO BE USED IN DESIGN OF BRACING CONNECTIONS.
- SHORT HORIZONTAL SLOTTED HOLES MAY BE USED ONLY IN THE LEG OF THE ANGLES THAT CONNECT TO THE COLUMN. ALL OTHER HOLES IN BRACING CONNECTIONS SHALL BE STANDARD ROUND HOLES.
- ALL CONNECTIONS WITH TRANSFER/COLLECTOR FORCES INDICATED ON S5.1.1 FRAME ELEVATIONS, SHALL HAVE FULLY PRETENSIONED BOLTS IN ALL CONNECTIONS TO THE COLUMNS. USE ASTM F1852 OR F2280 TENSION CONTROL BOLTS FOR THESE PRETENSIONED CONNECTIONS. ALL OTHER CONNECTIONS MAY BE SNUG TIGHTENED.
- MOMENT CONNECTIONS OF BEAMS TO COLUMNS SHALL BE DESIGNED BY THE STEEL FABRICATOR'S ENGINEER FOR THE FULL BENDING MOMENT CAPACITY OF THE BEAM (UNO) AND FOR THE SHEAR FORCES INDICATED ON THE FRAMING PLANS. LOADS INDICATED ARE SERVICE LOADS TO BE USED WITH ASD DESIGN METHODOLOGY.
- HORIZONTAL LOADS INDICATED WITH THE LETTERS 'TF' ON FRAMING PLANS ARE TRANSFER FORCES INTO THE COLLECTOR BEAMS OF ADJACENT BAYS. THESE SERVICE LOADS ARE TO BE CONSIDERED TO OCCUR IN EITHER DIRECTION IN THE DESIGN OF BRACING CONNECTIONS. THE OVERSTRENGTH FACTOR HAS ALREADY BEEN APPLIED. REFER TO FRAMING PLANS FOR OTHER TRANSFER FORCE LOCATIONS.



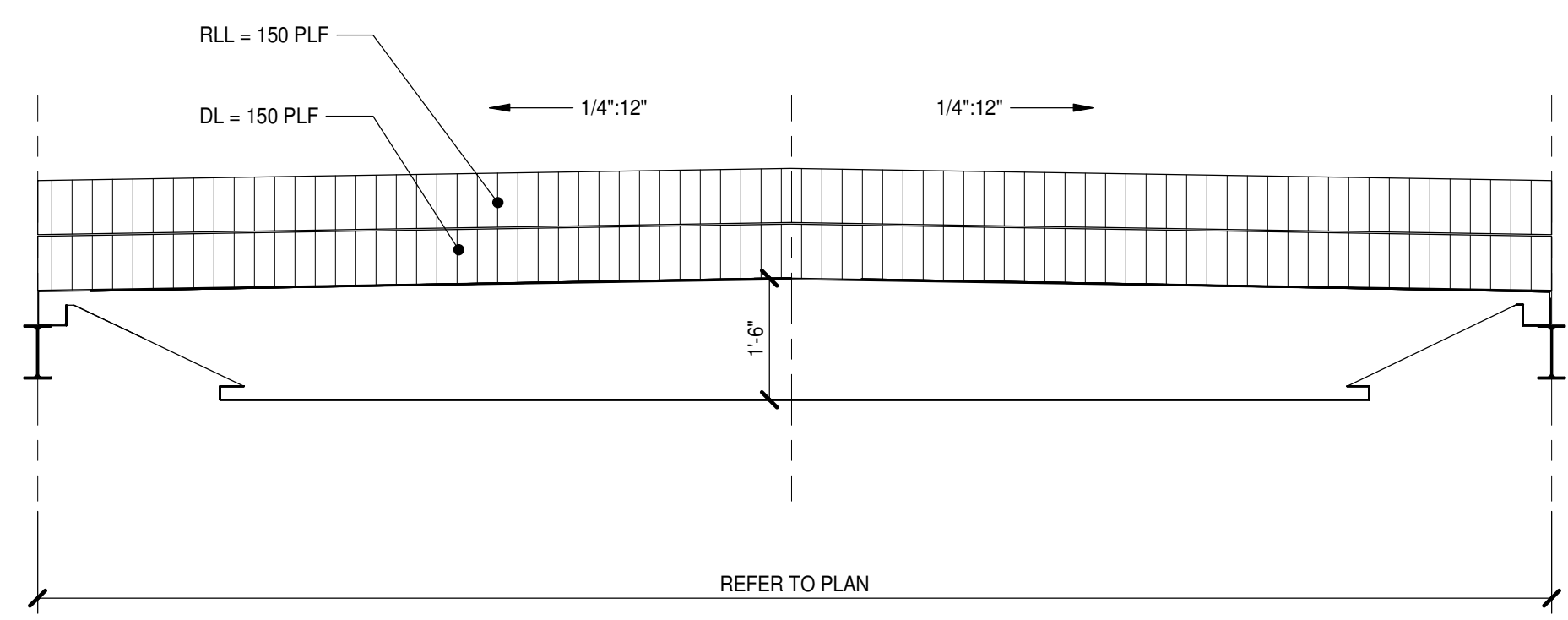
PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01



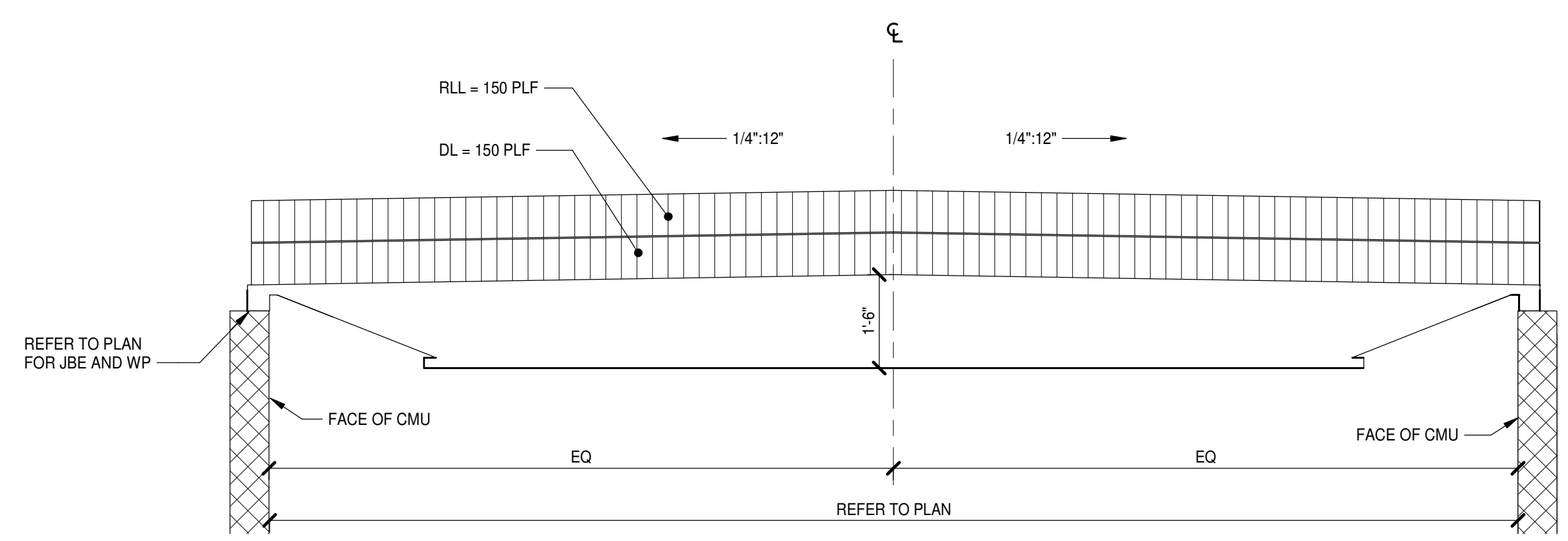
8/15/2024 2:49:44 PM

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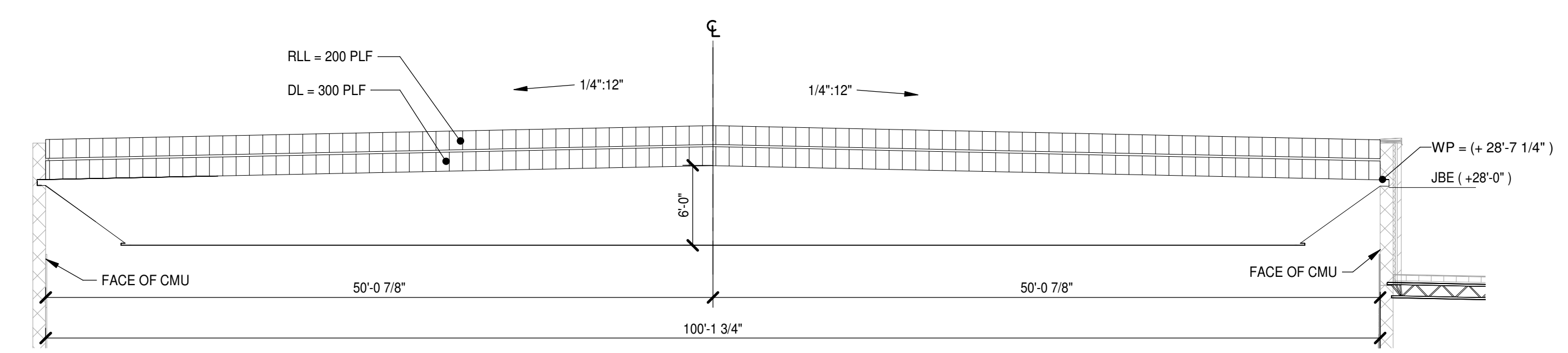
1 2 3 4 5 6 7 8 9 10



**3** 18 LH SP2 DOUPLE PITCHED JOIST  
S6.1.1 1/2" = 1'-0"



**2** 18 LH SP 1 DOUPLE PITCHED JOIST  
S6.1.1 1/2" = 1'-0"



**72DLH16 DOUPLE PITCH JOIST**

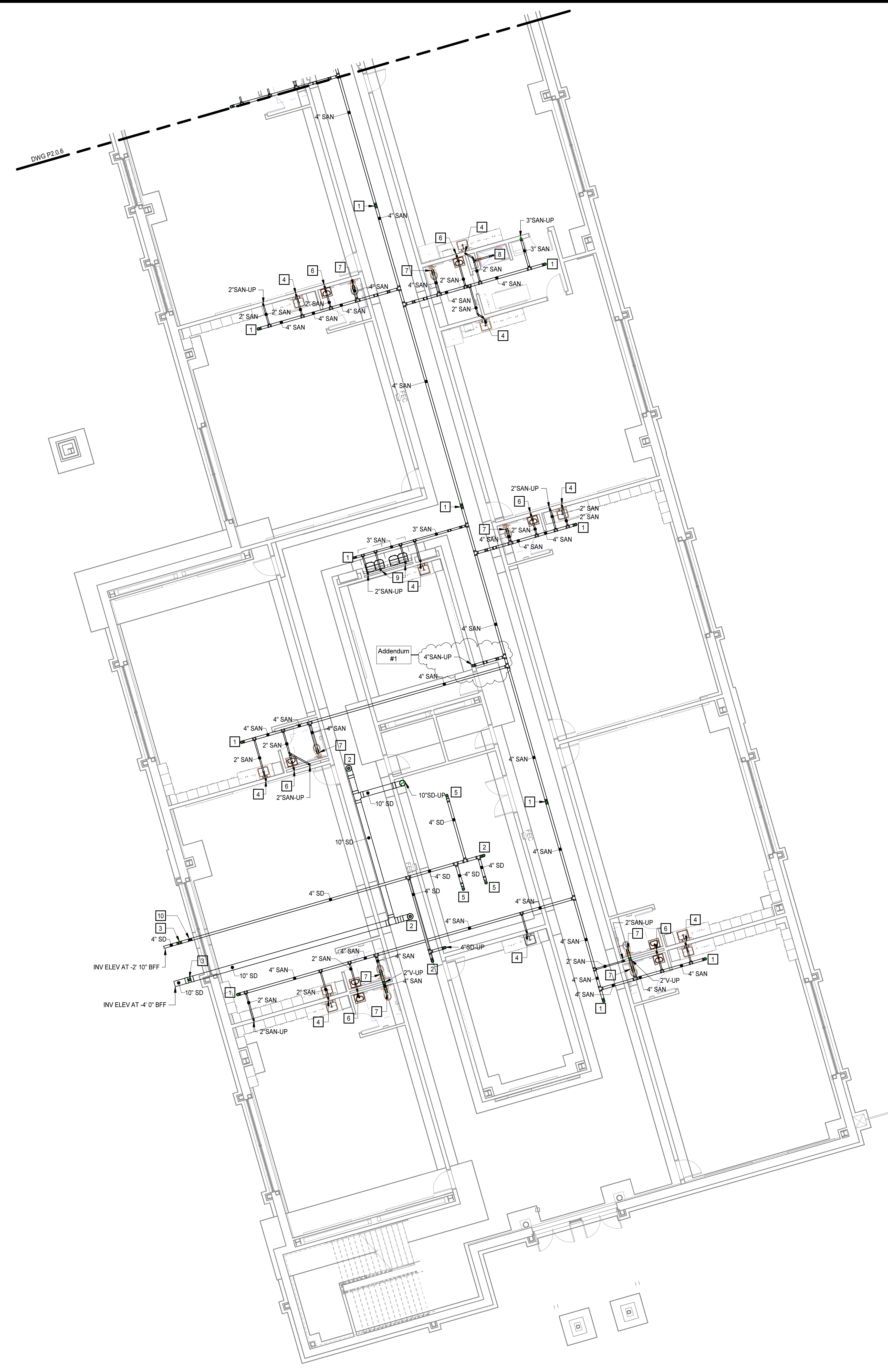
- NO SCALE
- NOTES:
1. REFER TO PLAN SHEETS FOR ADDITIONAL LOADS NOT INDICATED.
  2. JOIST MANUFACTURER TO ACCOUNT FOR WEIGHT OF JOIST (NOT INCLUDED IN DESIGN LOAD).
  3. DL INCLUDES 10 PSF PV LOAD.



PROJECT NO:	631310
DATE:	August 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/15/24	AD-01



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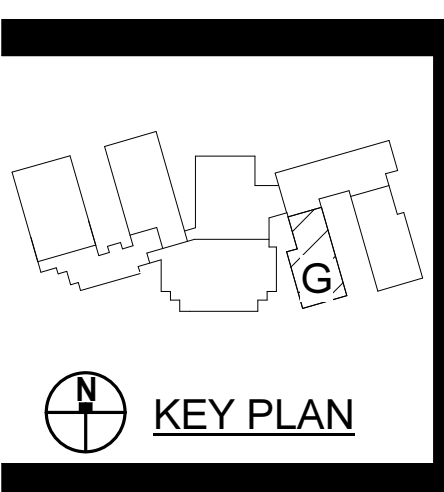


**KEYNOTES**  
 APPLIES TO DRAWINGS P2.0.7  
 REPRESENTED BY [Symbol]

1. SANITARY UP TO FLOOR CLEANOUT
2. STORM DRAINAGE UP TO FLOOR CLEANOUT
3. STORM DRAINAGE UP TO GROUND CLEANOUT
4. 2" SAN-UP TO SINK
5. 4" SD PTRAP-UP TO FLOOR DRAIN
6. 2" SAN-UP TO LAVATORY
7. 4" SAN-UP TO WATER CLOSET
8. 2" SAN PTRAP-UP SHOWER DRAIN
9. 2" SAN-UP TO DRINKING FOUNTAIN
10. BACKWATER VALVE LOCATED BELOW GRADE. REFER TO DETAIL ON P5.3.

**FOUNDATION PLAN - PLUMBING - AREA G**  
 1/8" = 1'-0"

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 Pender County Schools  
 Highway 210, Hampstead, NC 28443

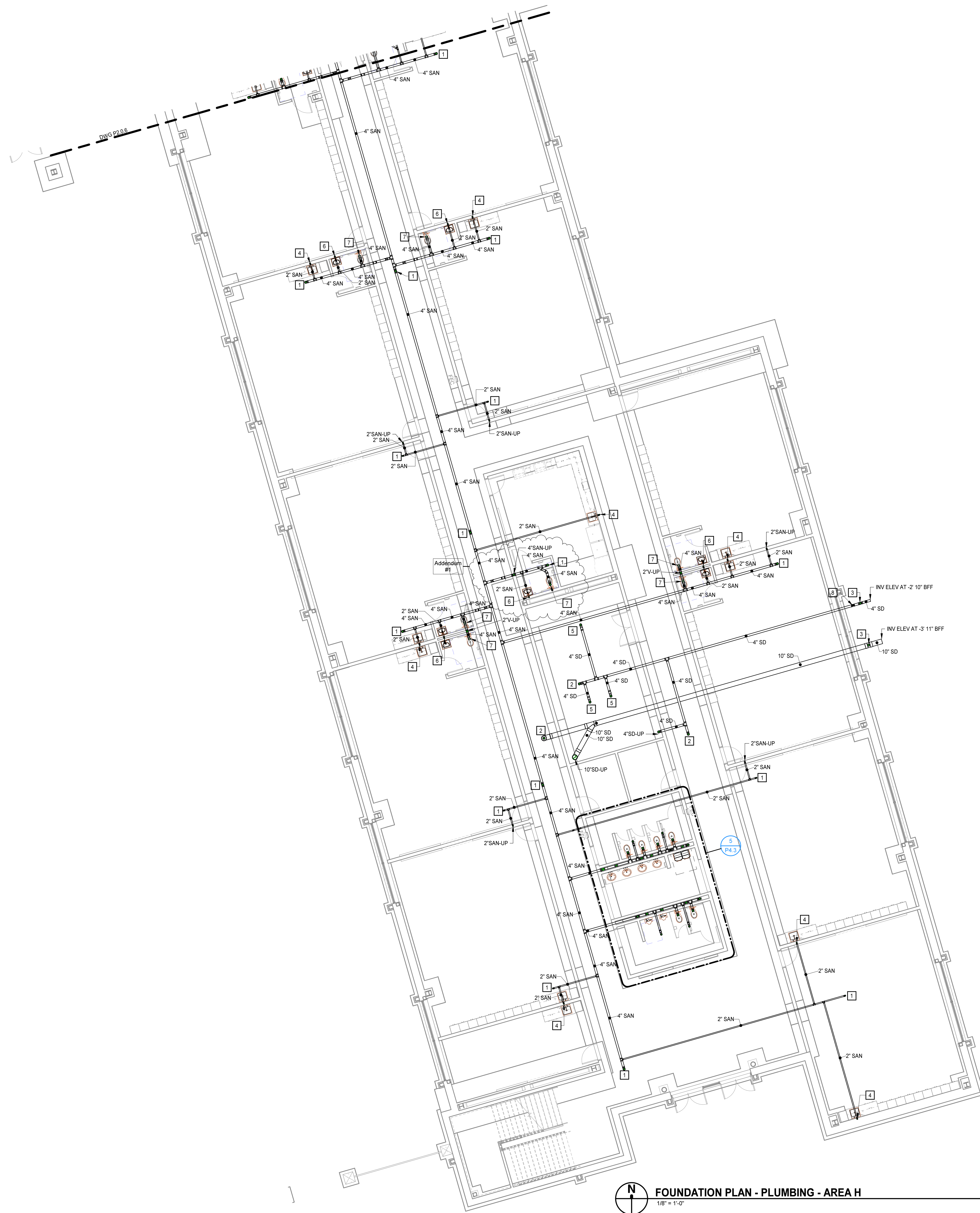
PROJECT NO.	631310
DATE	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

FOUNDATION PLAN -  
 PLUMBING - AREA G

**P2.0.7**

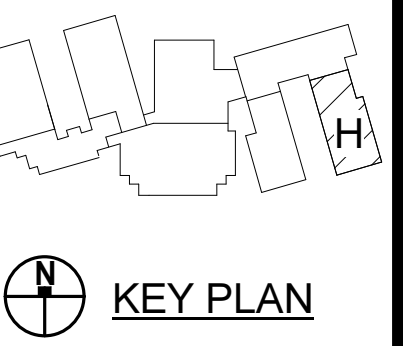
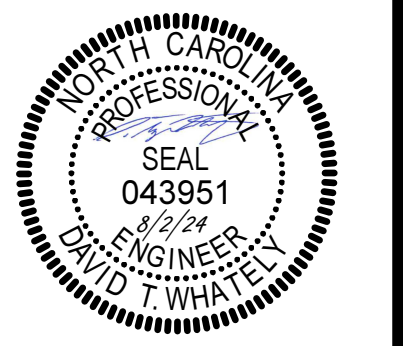


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KEYNOTES	
APPLIES TO DRAWINGS P2.0.8	
REPRESENTED BY [Symbol]	
1	SANITARY UP TO FLOOR CLEANOUT
2	STORM DRAINAGE UP TO FLOOR CLEANOUT
3	STORM DRAINAGE UP TO GROUND CLEANOUT
4	2" SAN-UP TO SINK
5	4" SD P/TRAP-UP TO FLOOR DRAIN
6	2" SAN-UP TO LAVATORY
7	4" SAN-UP TO WATER CLOSET
8	BACKWATER VALVE LOCATED BELOW GRADE. REFER TO DETAIL ON P5.3

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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

**FOUNDATION PLAN - PLUMBING - AREA H**  
 1/8" = 1'-0"

FOUNDATION PLAN - PLUMBING - AREA H

**P2.0.8**







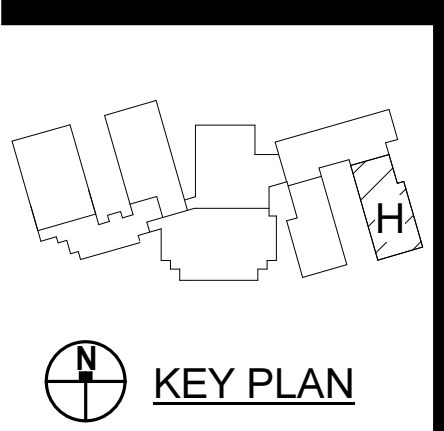
8/13/2024 10:13:40 AM



KEYNOTES	
APPLIES TO DRAWINGS P2.1.8 REPRESENTED BY [1]	
1.	2" SAN-UP AND DN.
2.	2" SAN-UP TO SINK
3.	2" V-DN TO 2" SAN-DN
4.	4" SD, PTRAP-UP TO FLOOR DRAIN.
5.	2" SAN-UP TO LAVATORY
6.	4" SAN-UP TO WATER CLOSET.

Addendum #1

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PROJECT NO:	831310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

**FIRST FLOOR PLAN - SANITARY - AREA H**  
 1/8" = 1'-0"

FIRST FLOOR PLAN -  
 SANITARY - AREA H

**P2.1.8**







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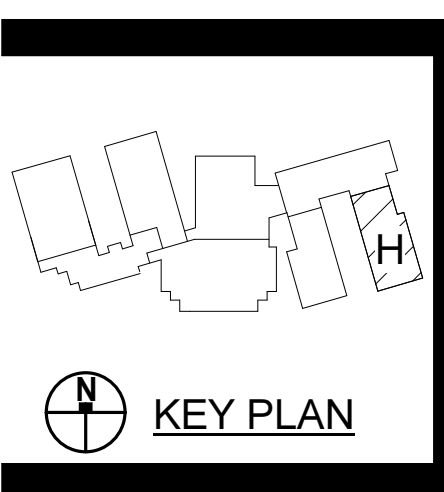
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KEYNOTES	
APPLIES TO DRAWINGS P2.1.16 REPRESENTED BY [1]	
1.	1/2"DCW & 1/2"DHW-DN TO SINK.
2.	1/2"DCW & 1/2"DHW-DN TO LAVATORY.
3.	1"DCW-DN TO WATER CLOSSET.
4.	CALIBRATED BALANCING VALVE SET AT 1.50GPM.
5.	1/2"DCW-DN TO ICE MAKER.
6.	2"DCW, 1 1/2"DHW, AND 1"DHR-UP.

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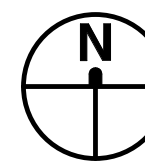
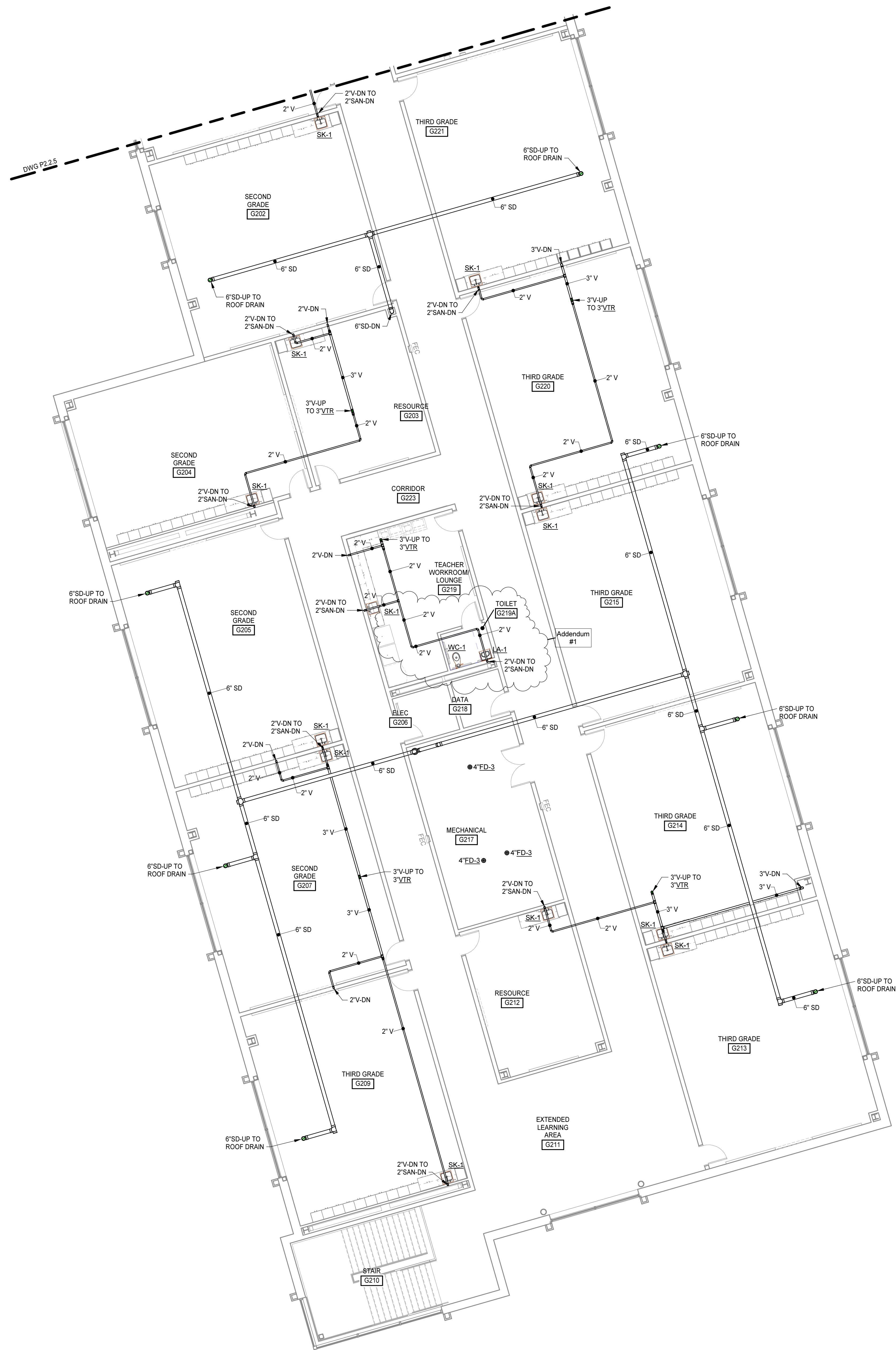
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

**FIRST FLOOR PLAN - DOMESTIC - AREA H**  
 1/8" = 1'-0"

FIRST FLOOR PLAN - DOMESTIC - AREA H

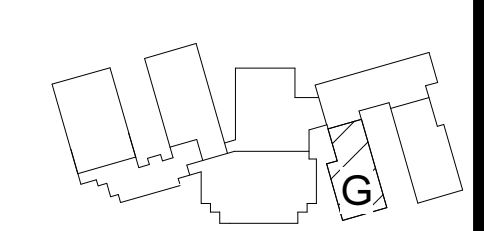
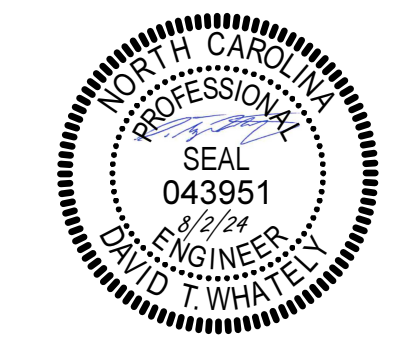
**P2.1.16**





SECOND FLOOR PLAN - SANITARY - AREA G

1/8" = 1'-0"



KEY PLAN

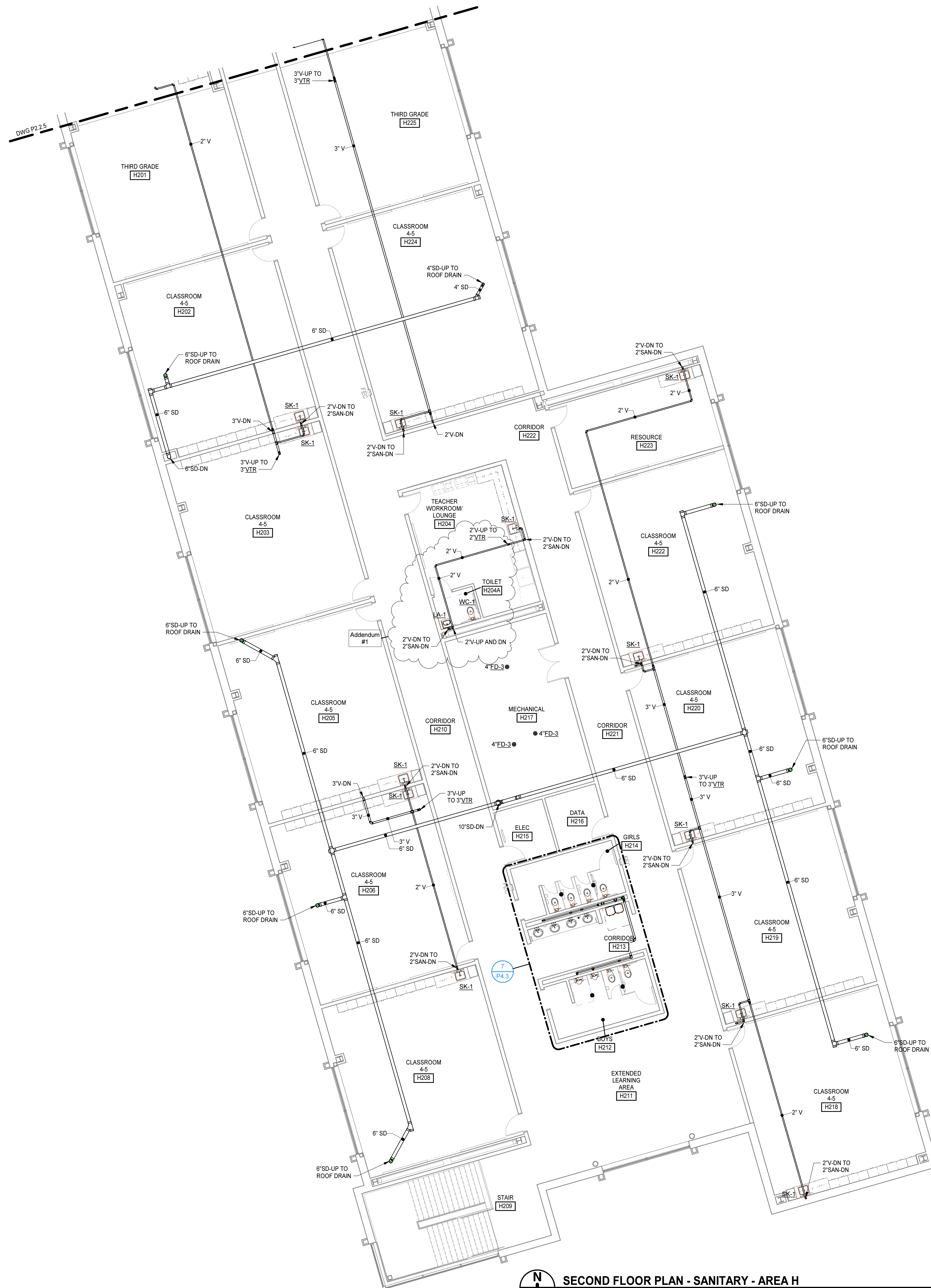
**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
 Highway 210, Hampstead, NC 28443

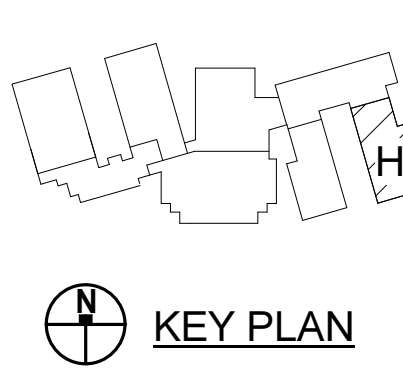
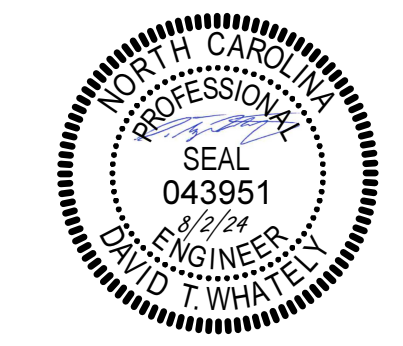
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

SECOND FLOOR PLAN -  
 SANITARY - AREA G





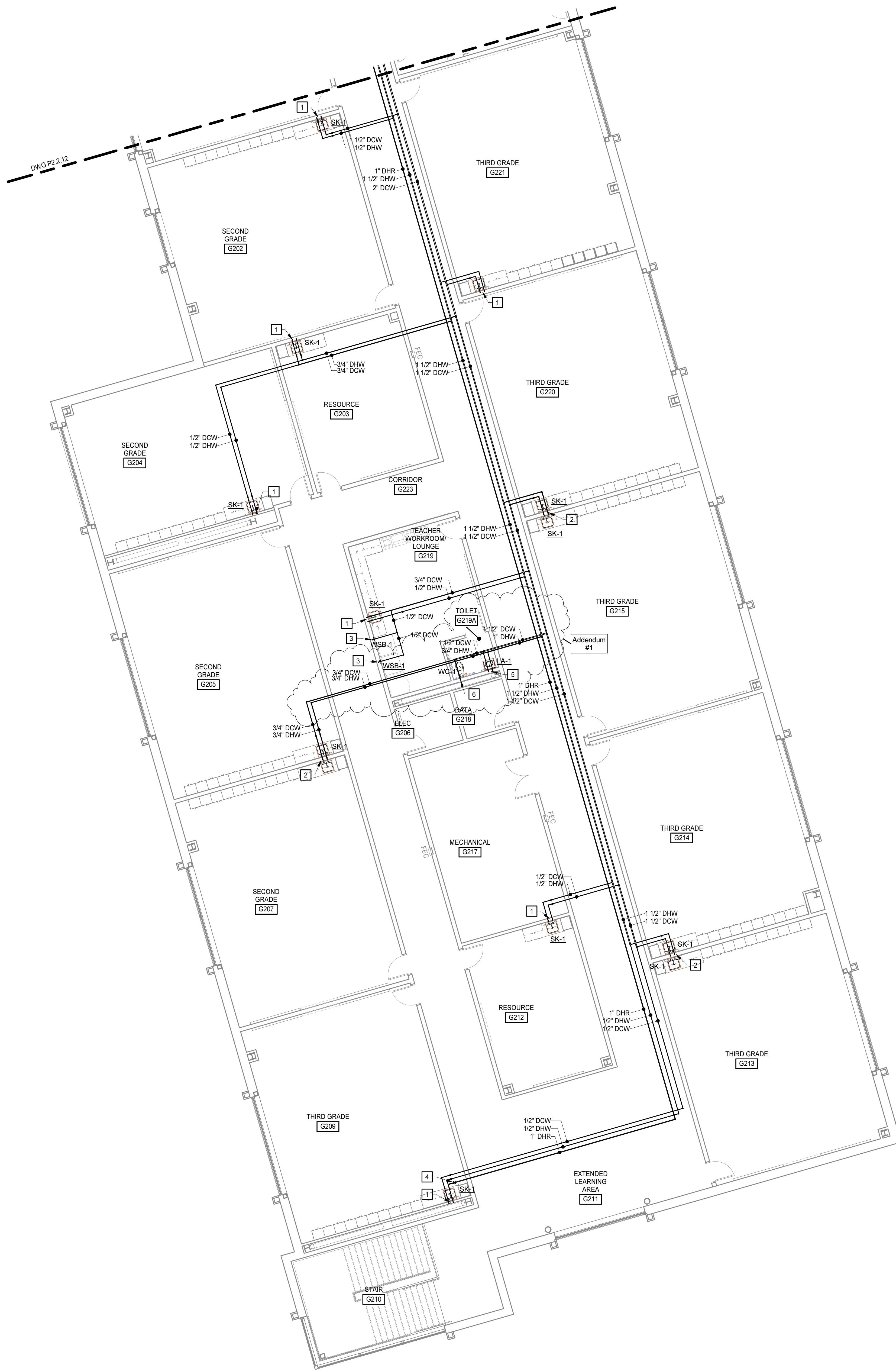
**SECOND FLOOR PLAN - SANITARY - AREA H**  
 1/8" = 1'-0"



DATE	REVISIONS
08/16/24	Addendum #1



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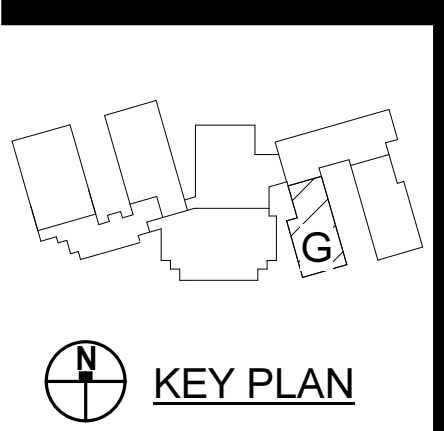
**KEYNOTES**  
 APPLIES TO DRAWINGS P2.2.13  
 REPRESENTED BY [Symbol]

Addendum #1

- 1/2" DCW AND 1/2" DHW-DN TO SINK
- 3/4" DCW AND 3/4" DHW-DN TO SINKS
- 1/2" DCW-DN TO URINAL
- CALIBRATED BALANCING VALVE SET AT 1.50GPM
- 1/2" DCW AND 1/2" DHW-DN TO LAVATORY
- 1" DCW-DN TO WATER CLOSET

**SECOND FLOOR PLAN - DOMESTIC - AREA G**  
 1/8" = 1'-0"

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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

**SECOND FLOOR PLAN - DOMESTIC - AREA G**

**P2.2.12**

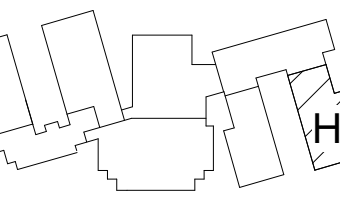


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KEYNOTES	
APPLIES TO DRAWINGS P2.2.14	
REPRESENTED BY	
1	1/2" DCW AND 1/2" DHW-DN TO SINK
2	3/4" DCW AND 3/4" DHW-DN TO SINKS
3	1/2" DCW-BN TO ICE MAKER
4	CALIBRATED BALANCING VALVE SET AT 1.50GPM
5	1/2" DCW AND 1/2" DHW-DN TO LAVATORY
6	1" DCW-DN TO WATER CLOSET

Addendum #1



KEY PLAN

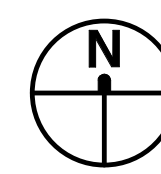
**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

SECOND FLOOR PLAN - DOMESTIC - AREA H

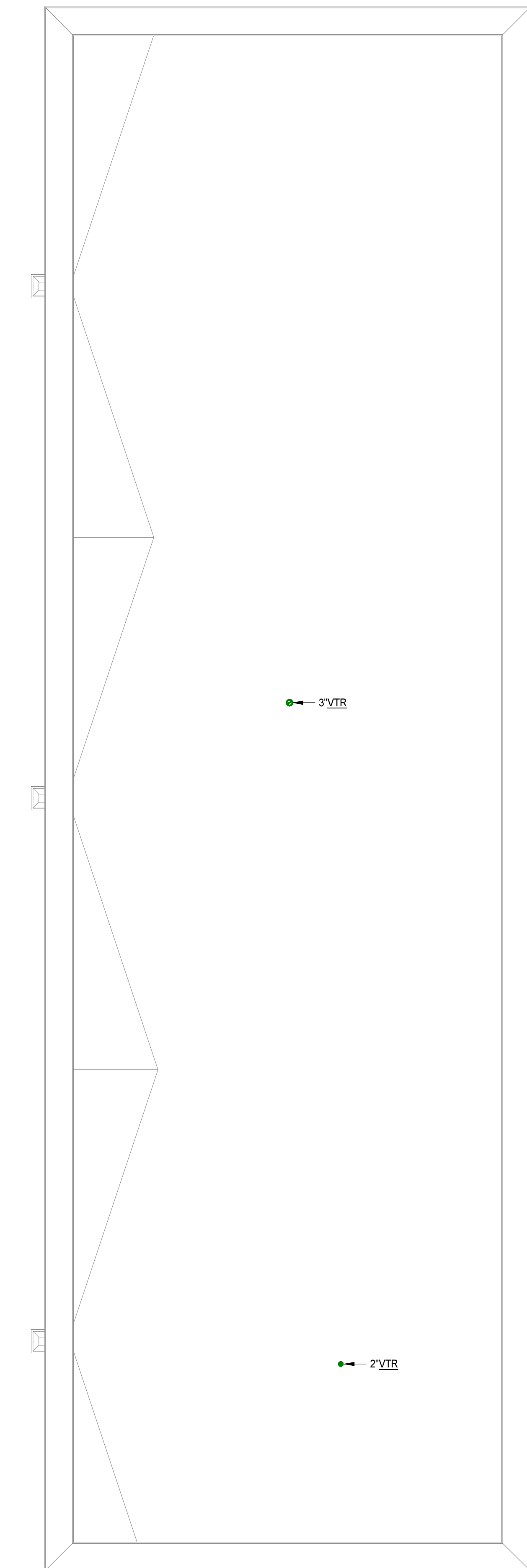
**P2.2.13**



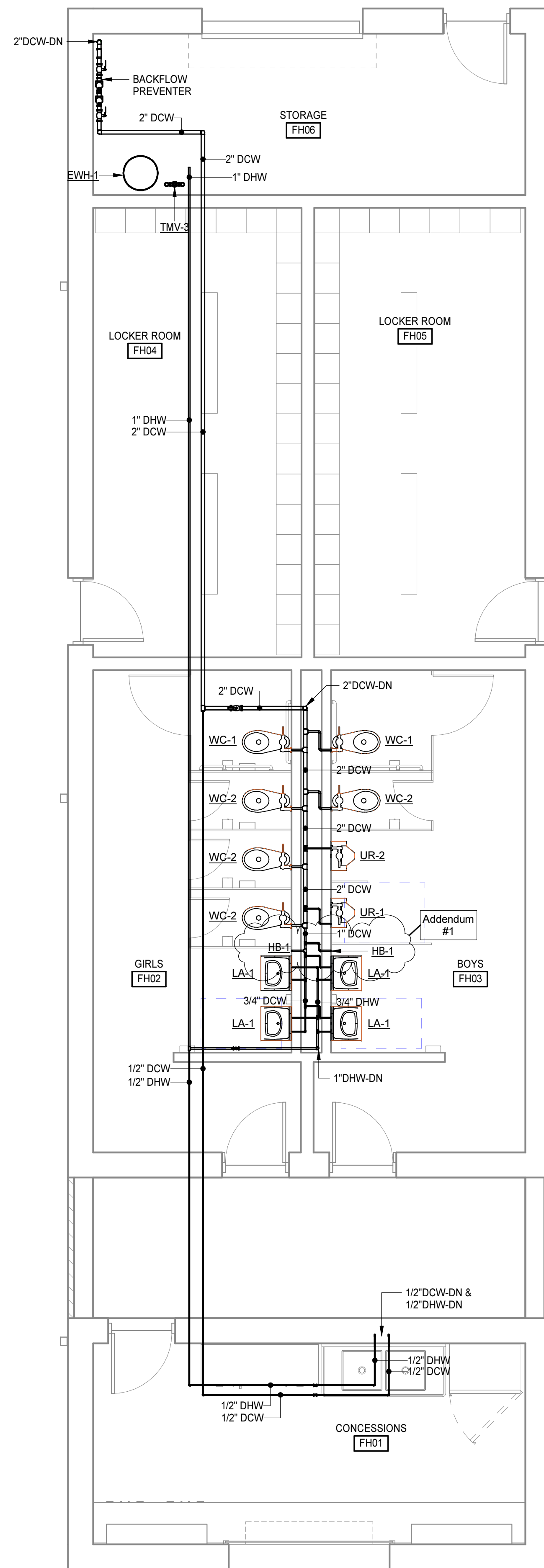
SECOND FLOOR PLAN - DOMESTIC - AREA H

1/8" = 1'-0"

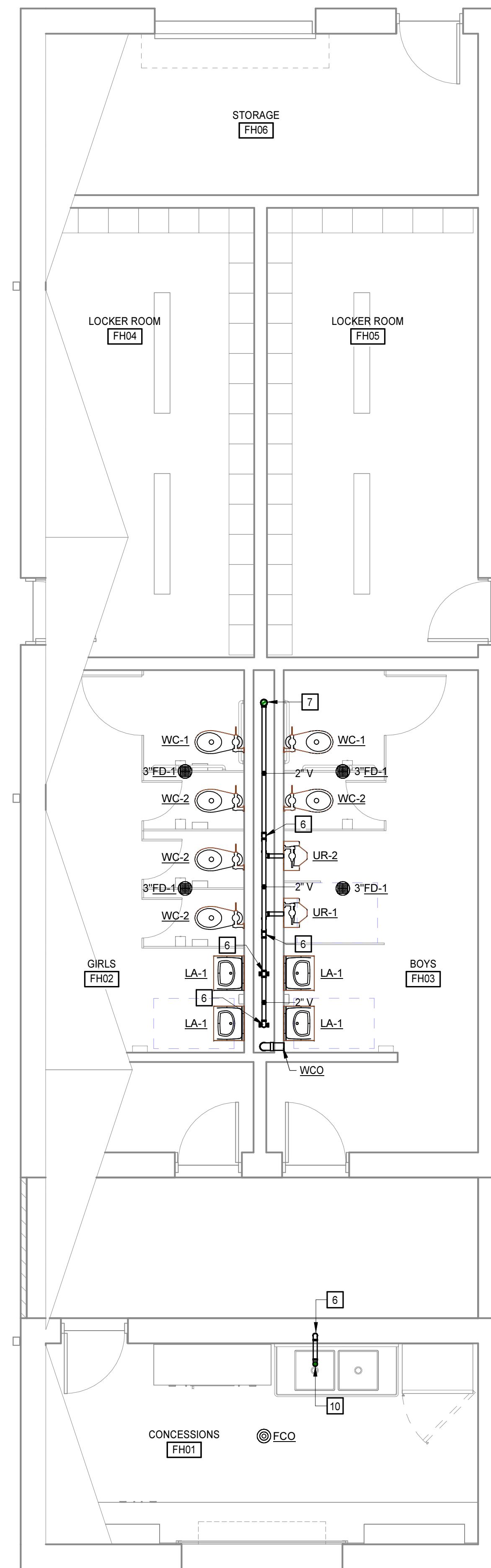




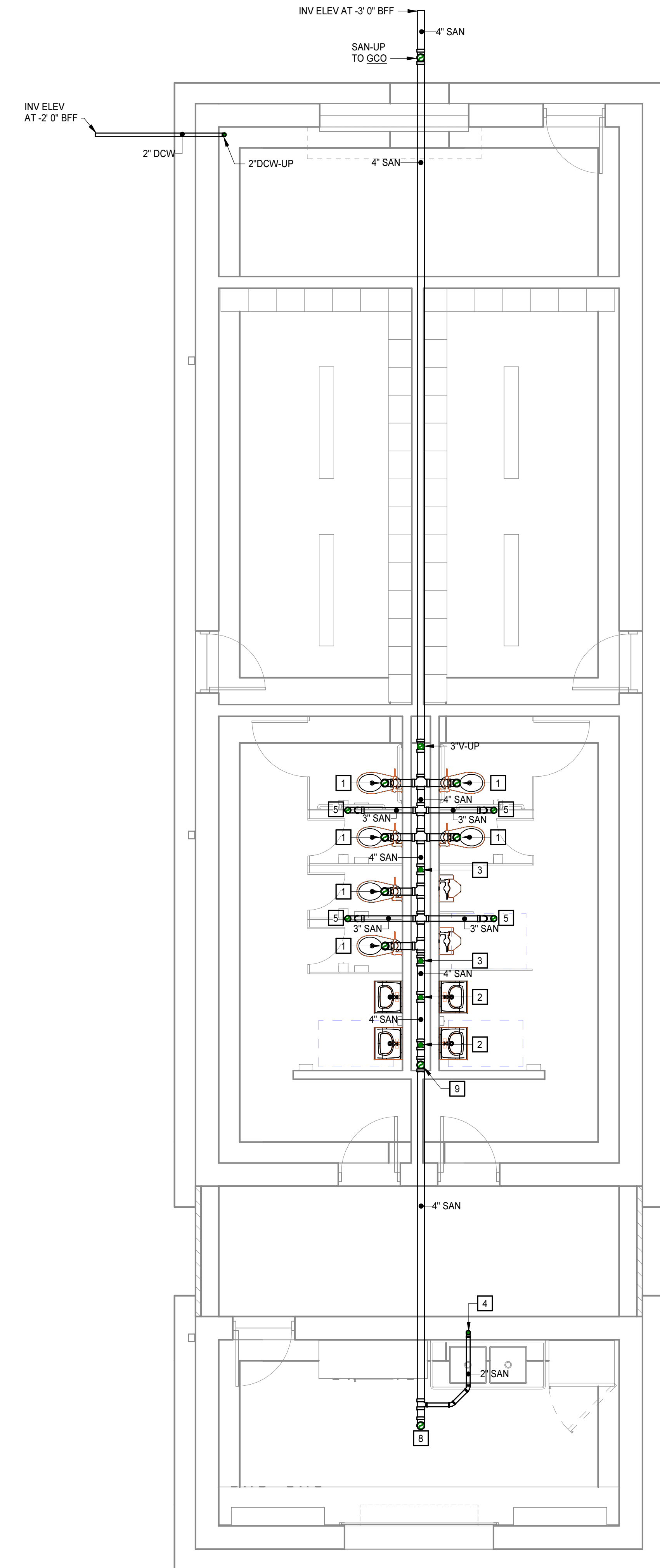
**FIELD HOUSE ROOF PLAN**  
1/4" = 1'-0"



**FIELD HOUSE FLOOR PLAN - DOMESTIC**  
1/4" = 1'-0"



**FIELD HOUSE FLOOR PLAN - SANITARY**  
1/4" = 1'-0"



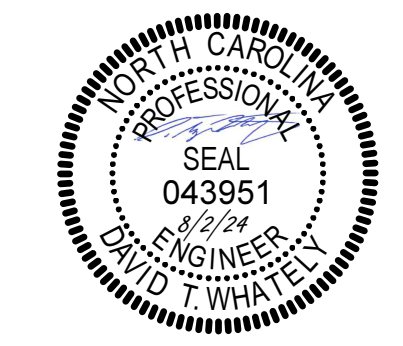
**FOUNDATION FIELD HOUSE PLAN - PLUMBING**  
1/4" = 1'-0"

KEYNOTES	
APPLIES TO DRAWINGS P2.4	
REPRESENTED BY [Symbol]	
1.	4" SAN-UP TO WATER CLOSET.
2.	2" SAN-UP TO LAVATORY.
3.	2" SAN-UP TO URINAL.
4.	2" SAN-UP TO SINK.
5.	3" SAN P-TRAP-UP TO FLOOR DRAIN.
6.	2" V-DN TO 2" SAN-DN.
7.	3" V-UP TO 3" VTR.
8.	SANITARY UP TO FLOOR CLEANOUT.
9.	SANITARY UP TO WALL CLEANOUT.
10.	2" V-UP TO 2" VTR.



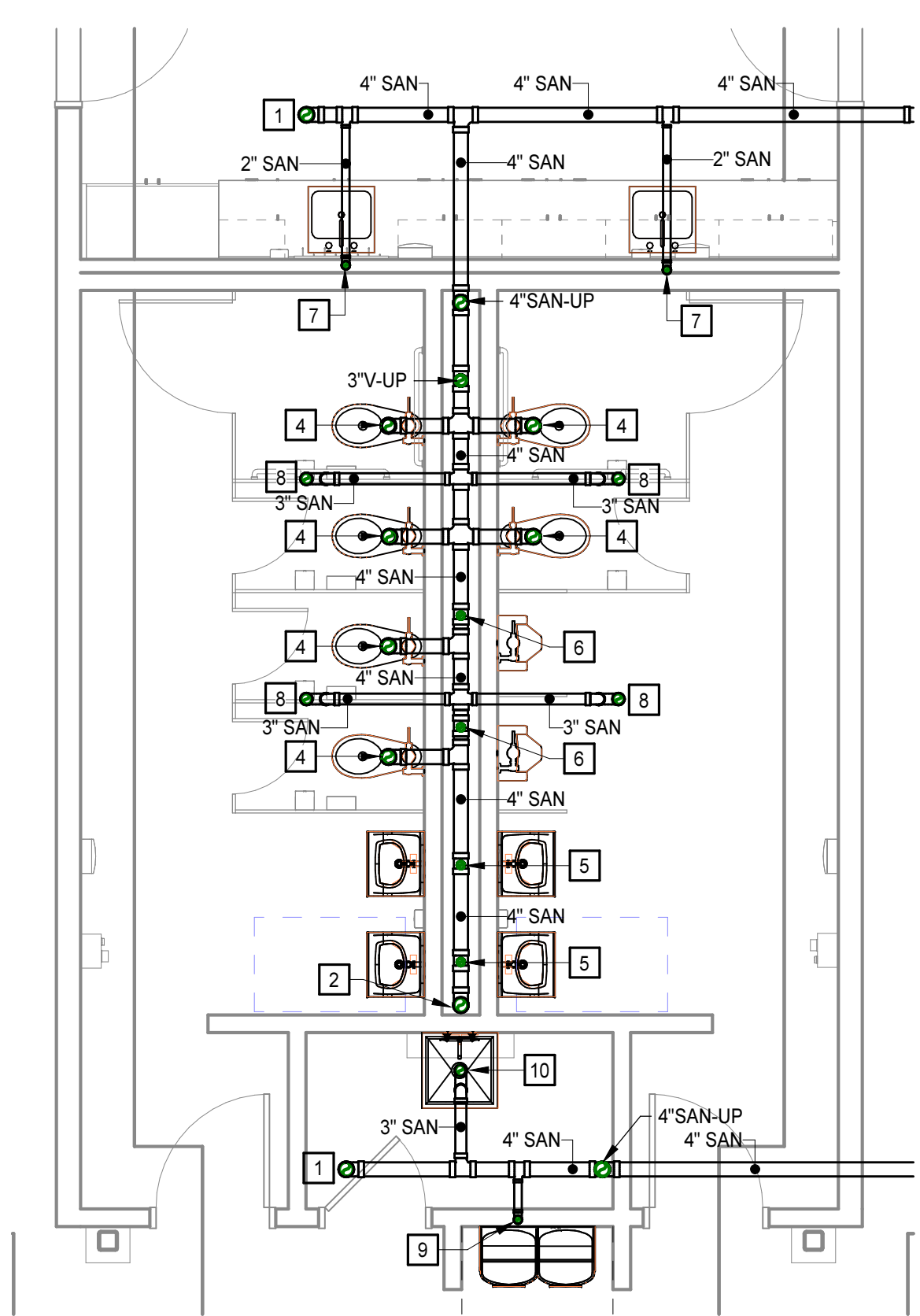
PROJECT NO.	DATE	REVISIONS
631310 <td>AUGUST 2, 2024 <td></td> </td>	AUGUST 2, 2024 <td></td>	
08/16/24		Addendum #1



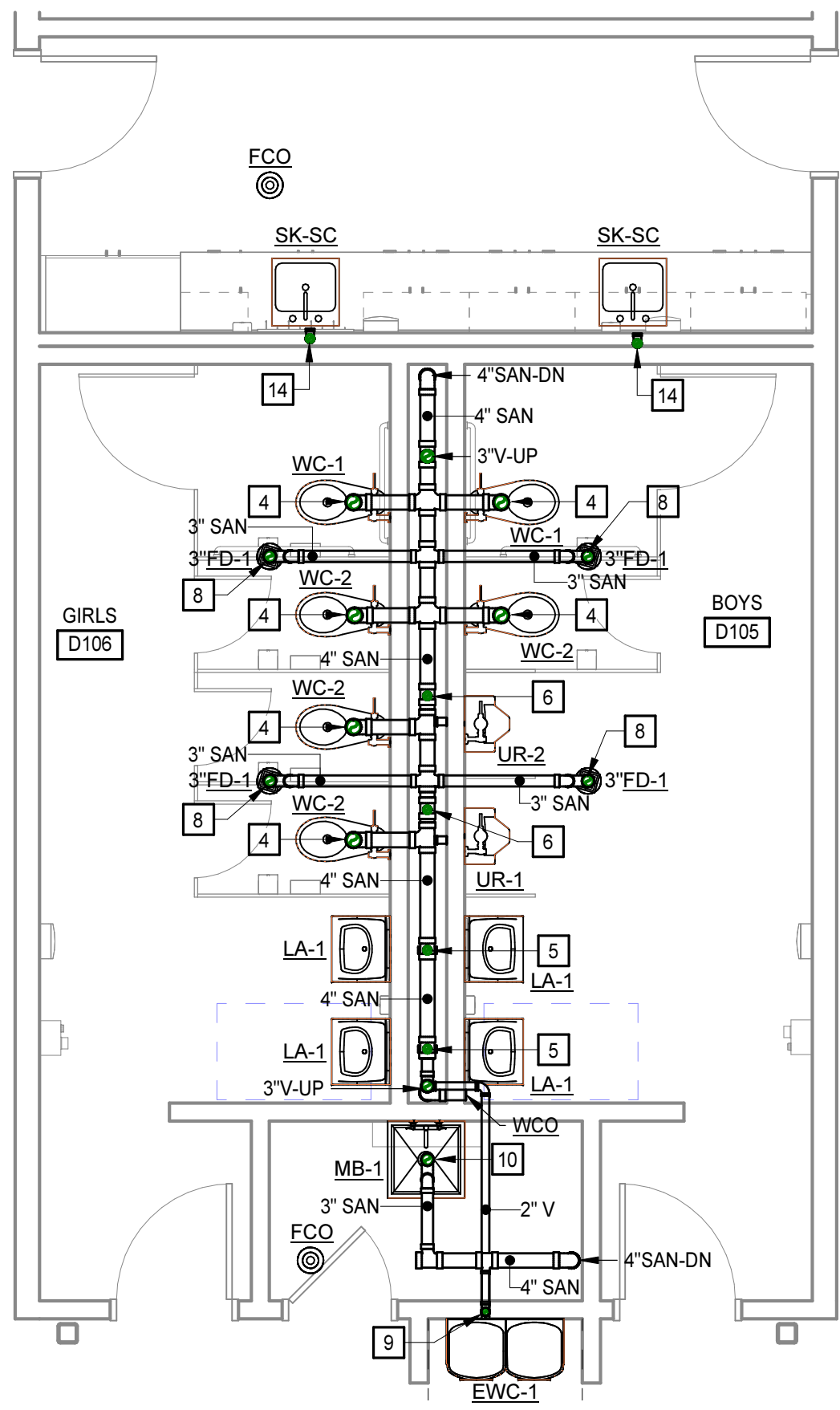


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

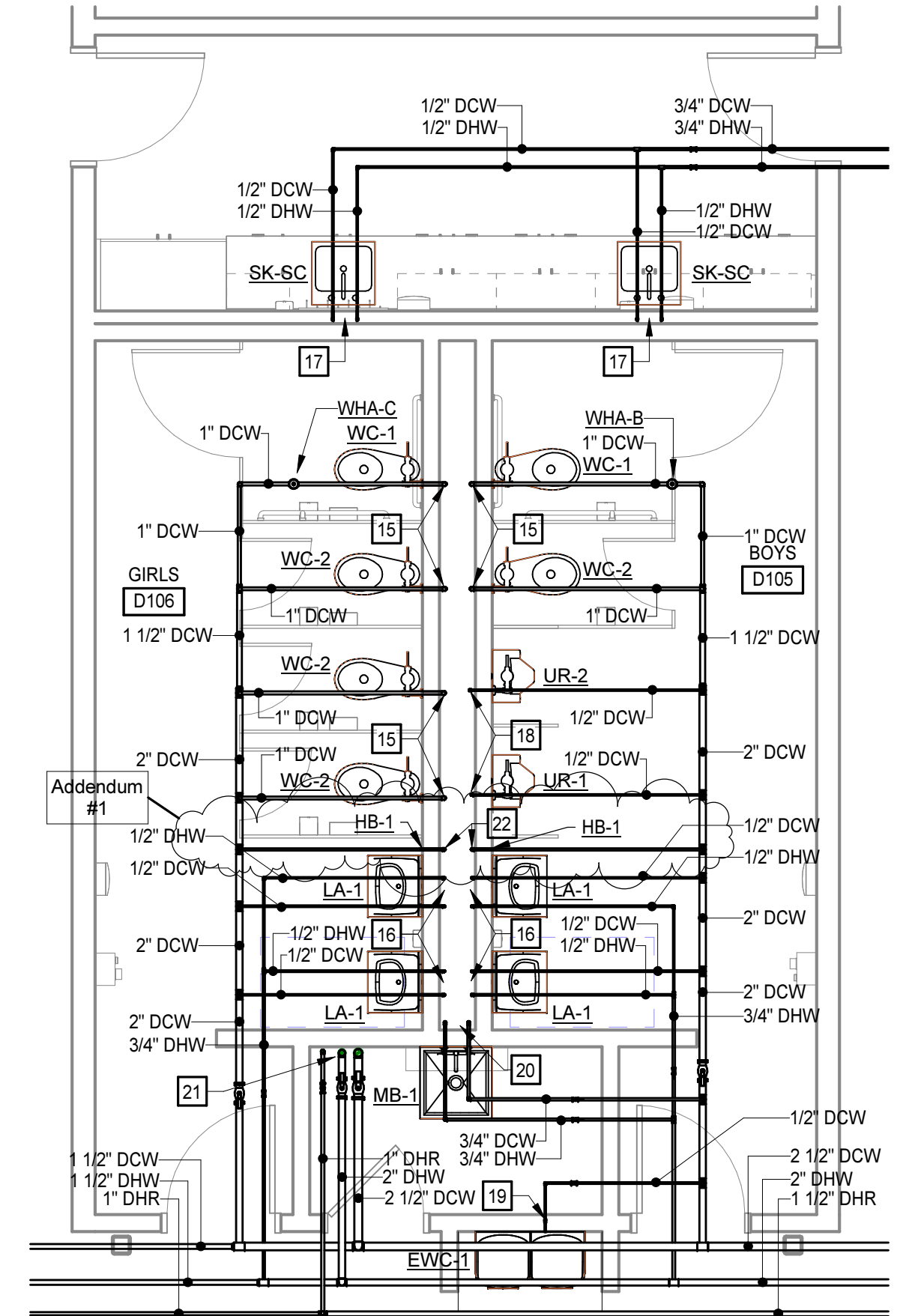
KEYNOTES	
APPLIES TO DRAWINGS P4.2	
REPRESENTED BY [n]	
1.	SANITARY UP TO FLOOR CLEANOUT.
2.	SANITARY UP TO WALL CLEANOUT.
3.	STORM DRAINAGE UP TO FLOOR CLEANOUT.
4.	4" SAN-UP TO WATER CLOSET.
5.	2" SAN-UP TO LAVATORY.
6.	2" SAN-UP TO URINAL.
7.	2" SAN-UP TO SINK.
8.	3" SAN PTRAP-UP TO FLOOR DRAIN.
9.	2" SAN-UP TO DRINKING FOUNTAIN.
10.	3" SAN PTRAP-UP TO MOP BASIN.
11.	4" SD PTRAP-UP TO FLOOR DRAIN.
12.	2" DN TO 2" SAN-DN.
13.	3" V-UP TO 3" VTR.
14.	2" SAN-UP AND DN.
15.	1" DCW/DN TO WATER CLOSET.
16.	1/2" DCW AND 1/2" DHW-DN TO LAVATORY.
17.	1/2" DCW AND 1/2" DHW-DN TO SINK.
18.	1/2" DCW/DN TO URINAL.
19.	1/2" DCW-DN TO DRINKING FOUNTAIN.
20.	3/4" DCW AND 3/4" DHW-DN TO MOP BASIN.
21.	2 1/2" DCW, 2" DHW AND 1" DHR-UP.
22.	3/4" DCW-DN TO HOSE BIBB.



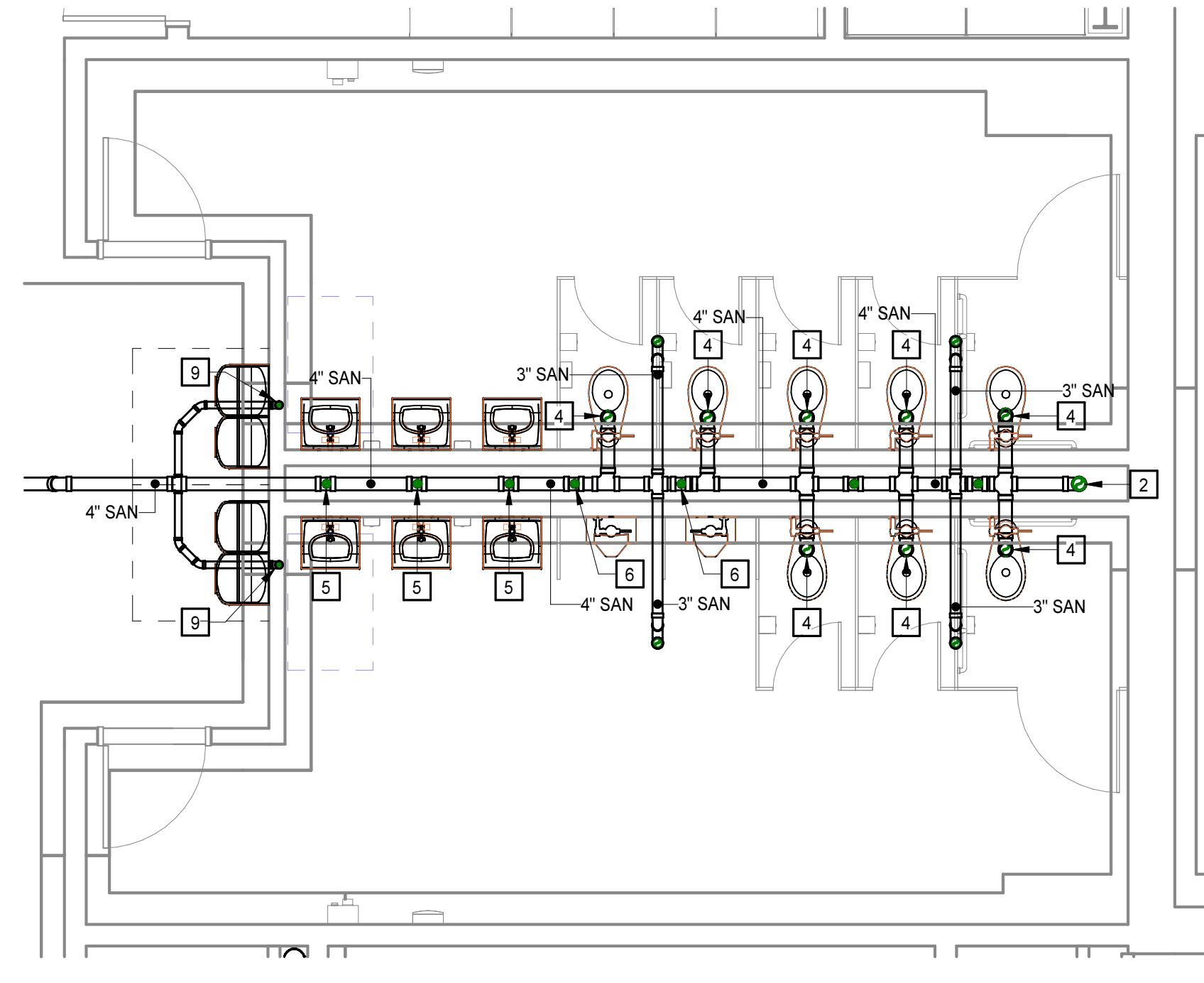
**7 ENLARGED FOUNDATION PLAN - D105 & D106**  
 P2.0.4/P4.2 1/4" = 1'-0"



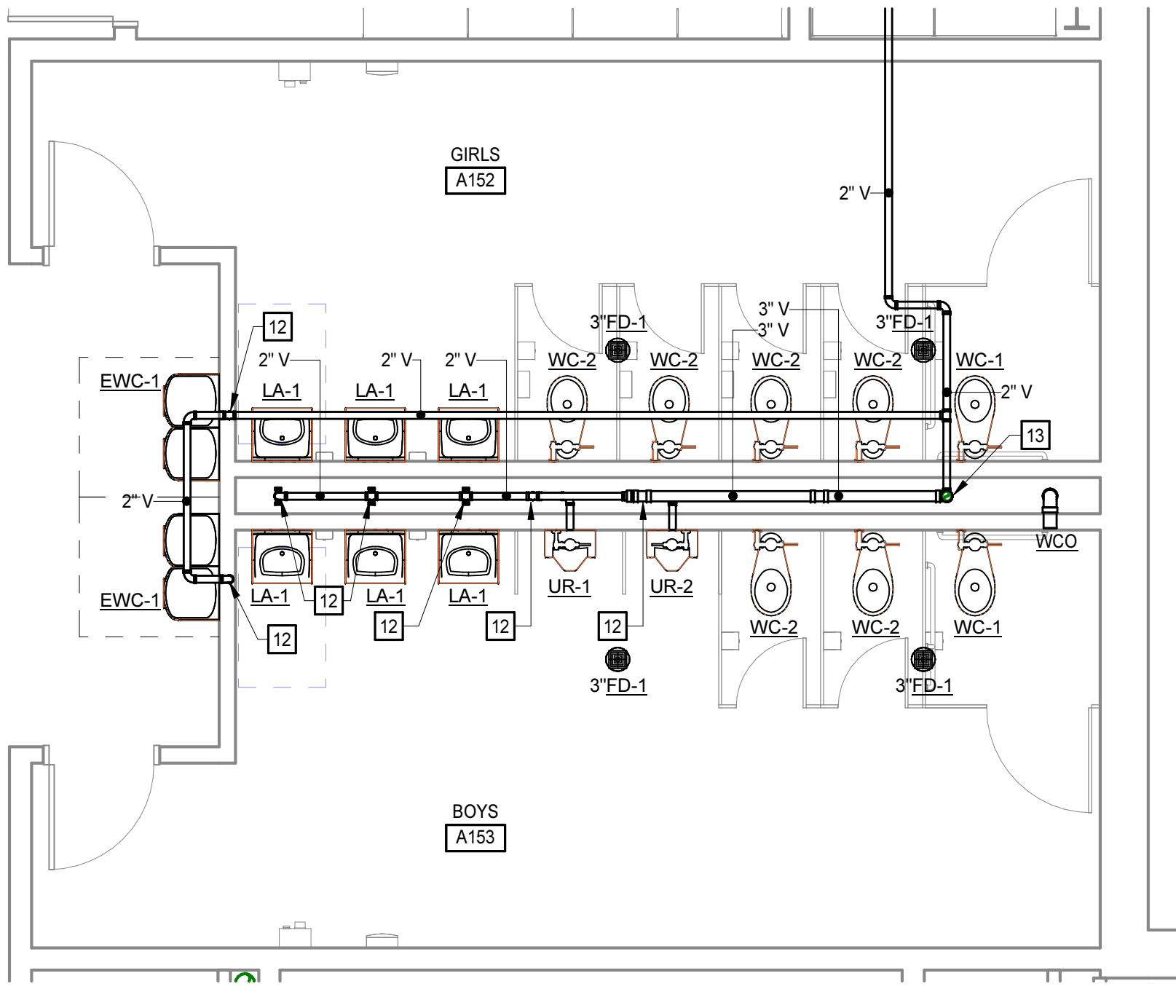
**8 ENLARGED SANITARY PLAN - D105 & D106**  
 P2.1.4/P4.2 1/4" = 1'-0"



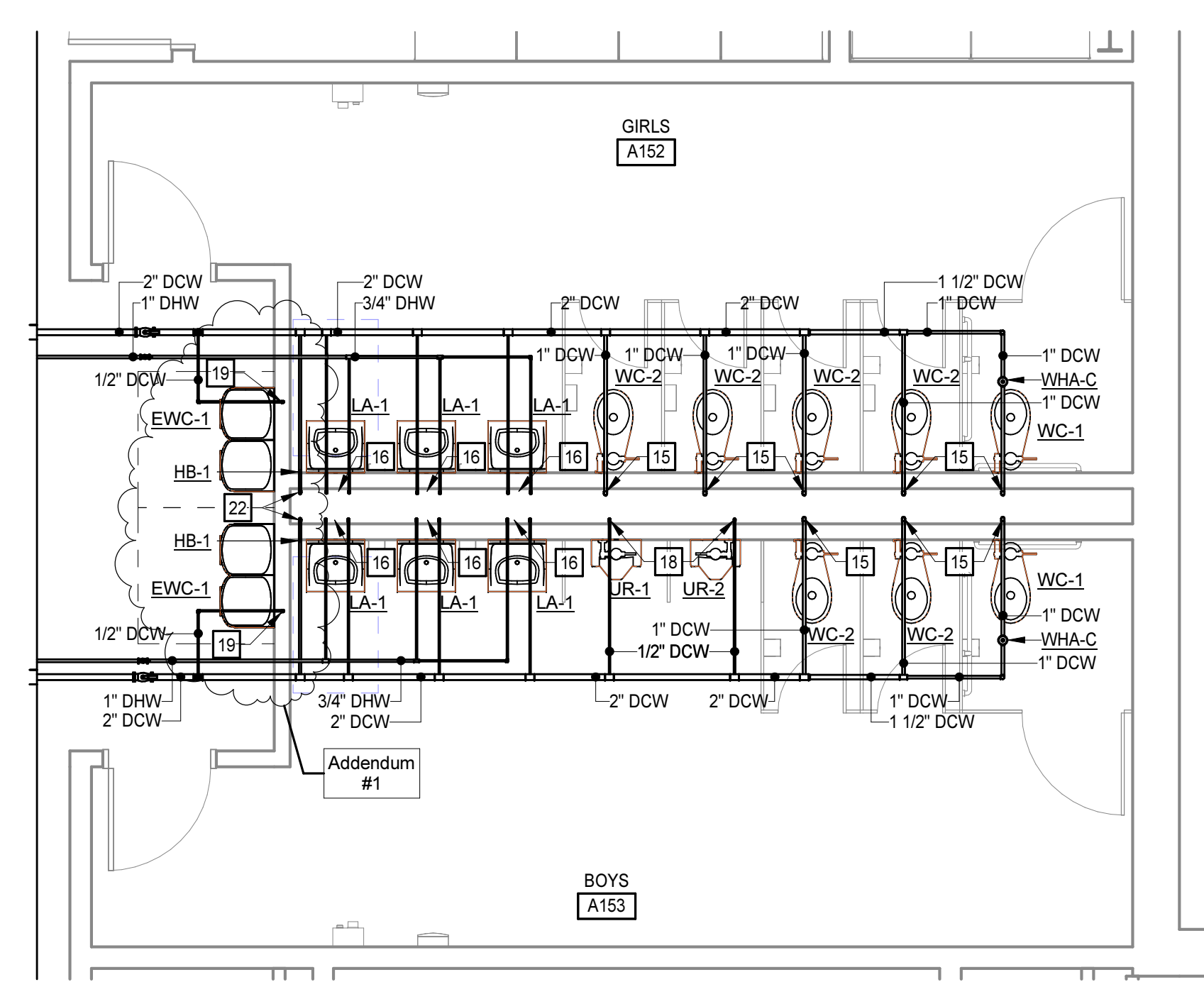
**9 ENLARGED DOMESTIC PLAN - D105 & D106**  
 P2.1.12/P4.2 1/4" = 1'-0"



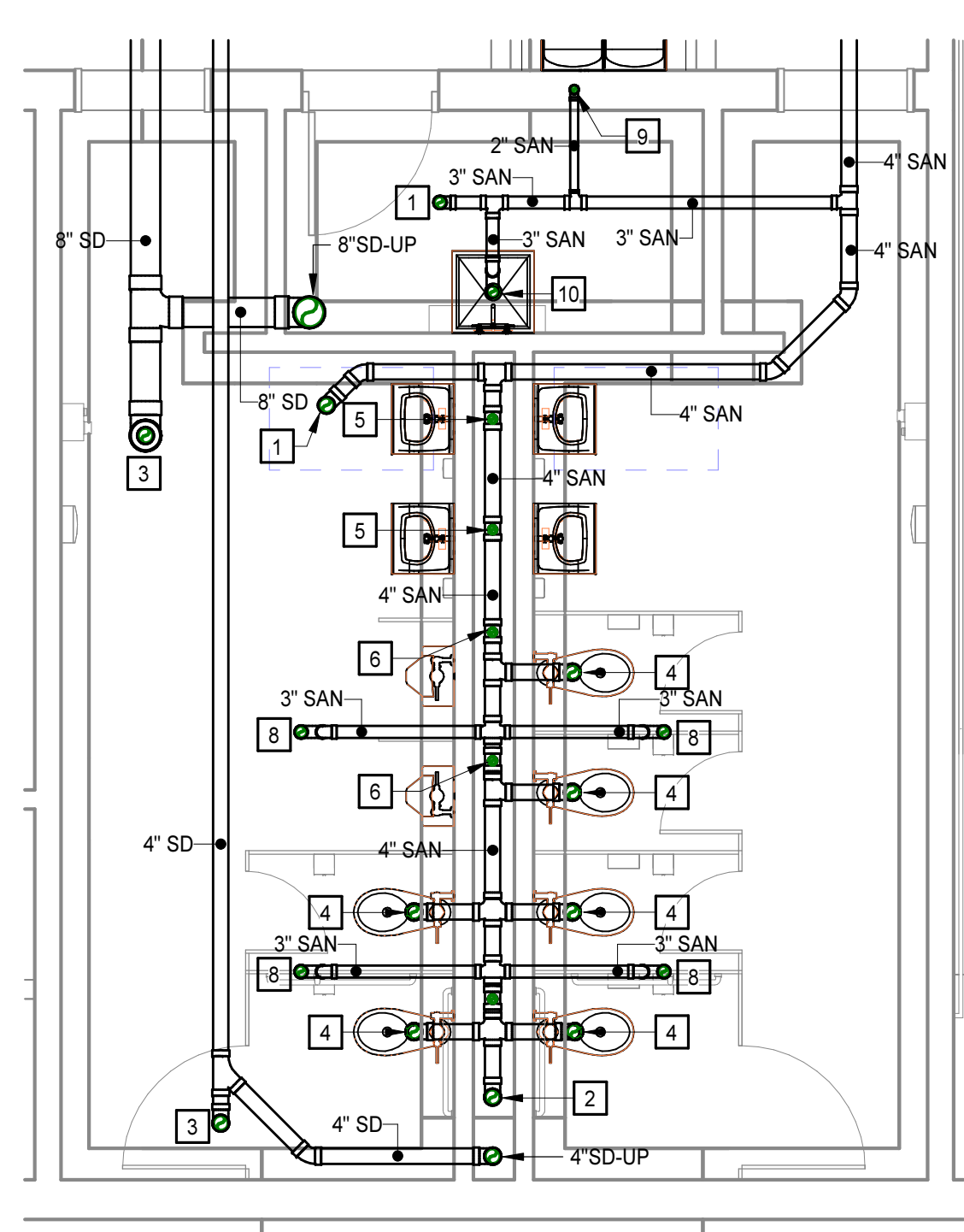
**4 ENLARGED FOUNDATION PLAN - A152 & A153**  
 P2.0.1/P4.2 1/4" = 1'-0"



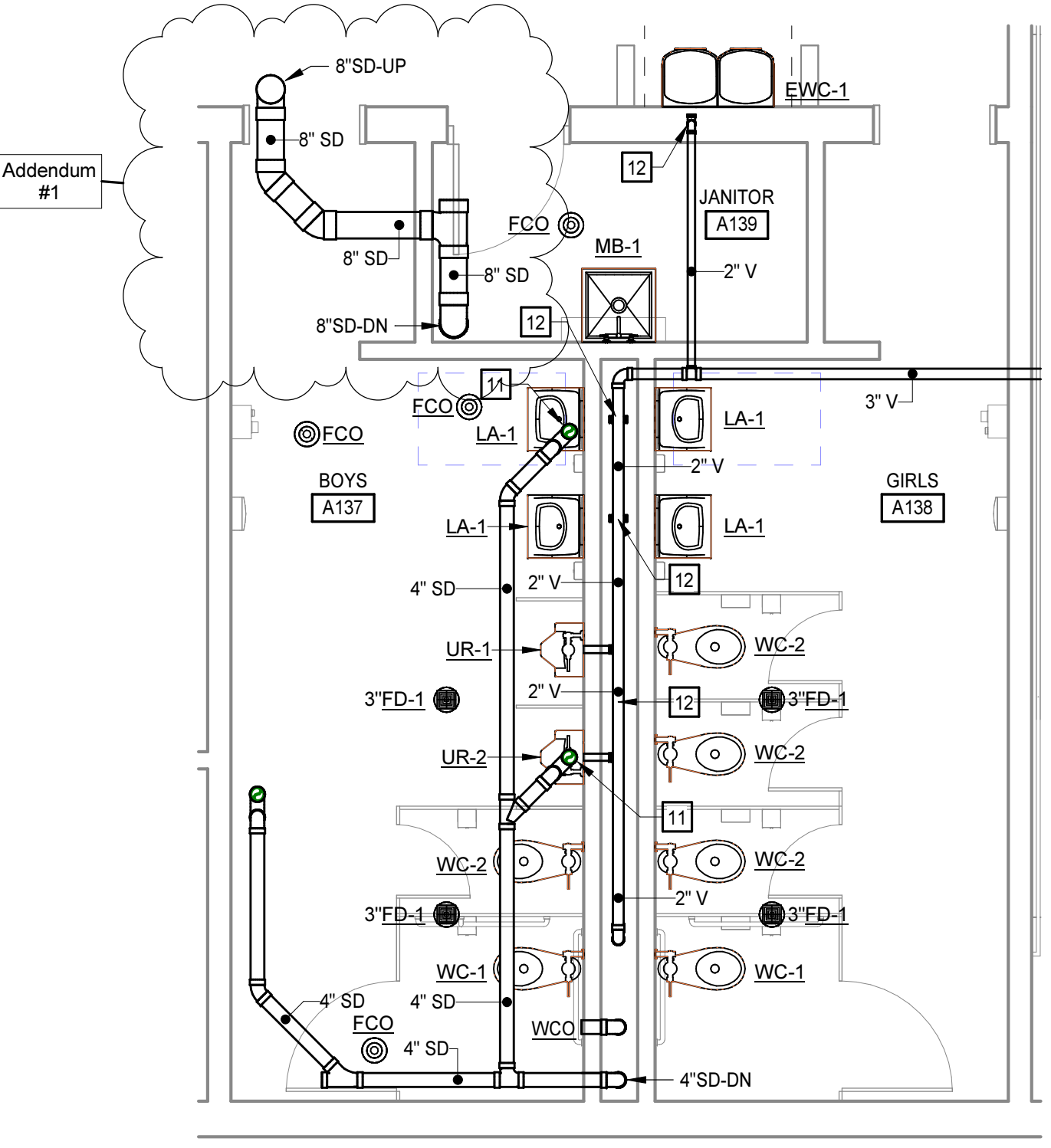
**5 ENLARGED SANITARY PLAN - A152 & A153**  
 P2.1.1/P4.2 1/4" = 1'-0"



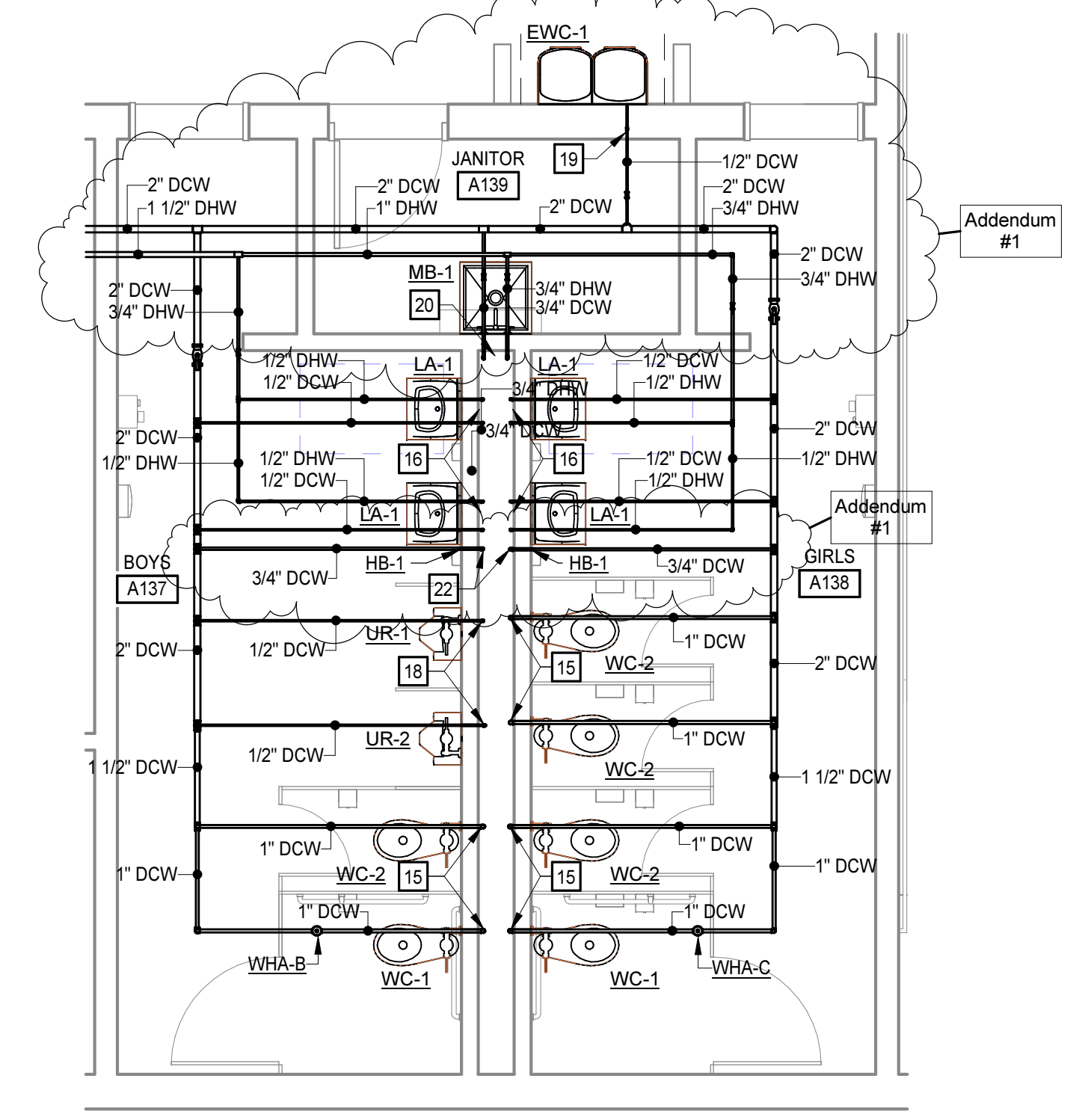
**6 ENLARGED DOMESTIC PLAN - A152 & A153**  
 P2.1.9/P4.2 1/4" = 1'-0"



**1 ENLARGED FOUNDATION PLAN - A137 & A138**  
 P2.0.1/P4.2 1/4" = 1'-0"



**2 ENLARGED SANITARY PLAN - A137 & A138**  
 P2.1.1/P4.2 1/4" = 1'-0"



**3 ENLARGED DOMESTIC PLAN - A137 & A138**  
 P2.1.9/P4.2 1/4" = 1'-0"

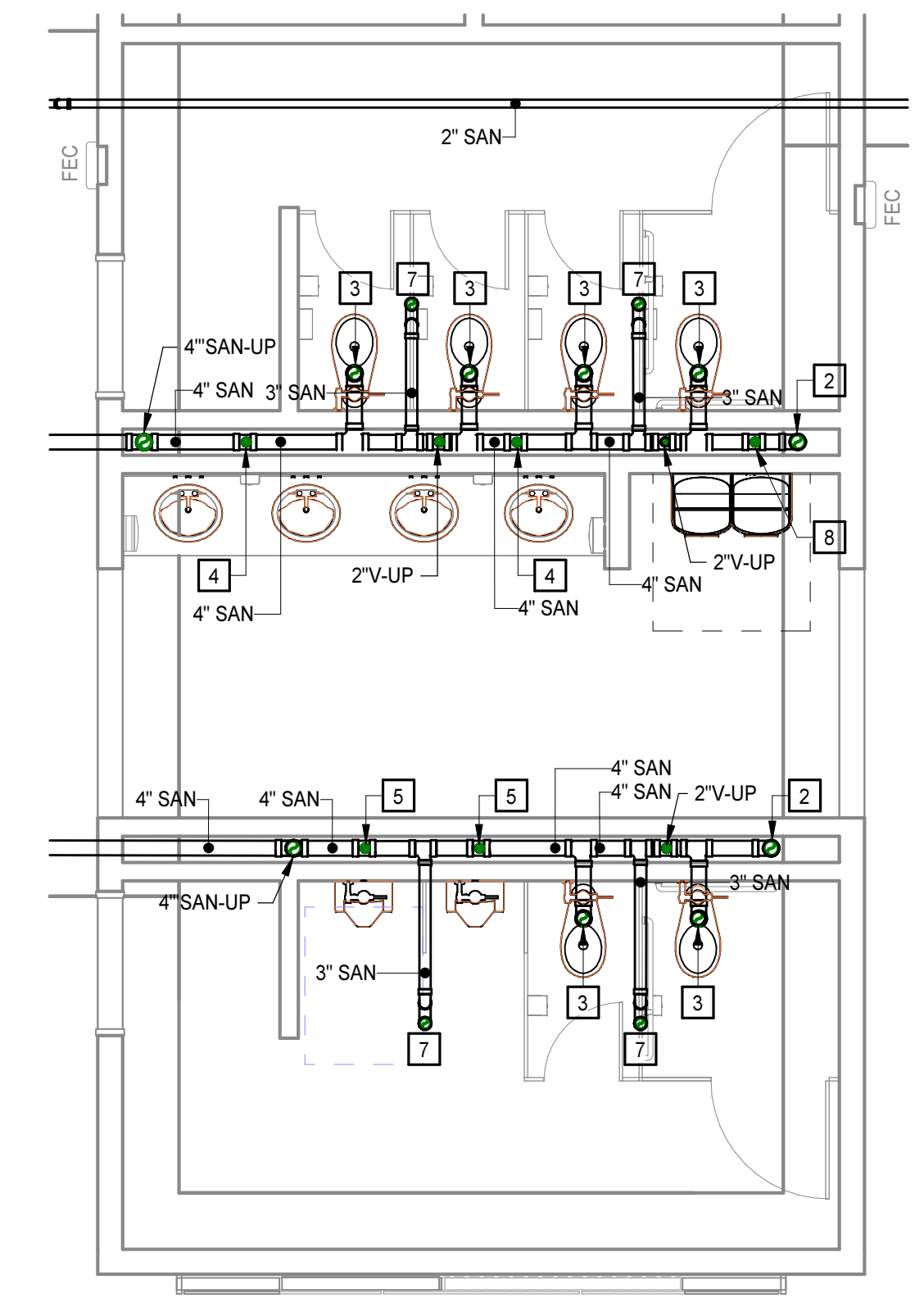




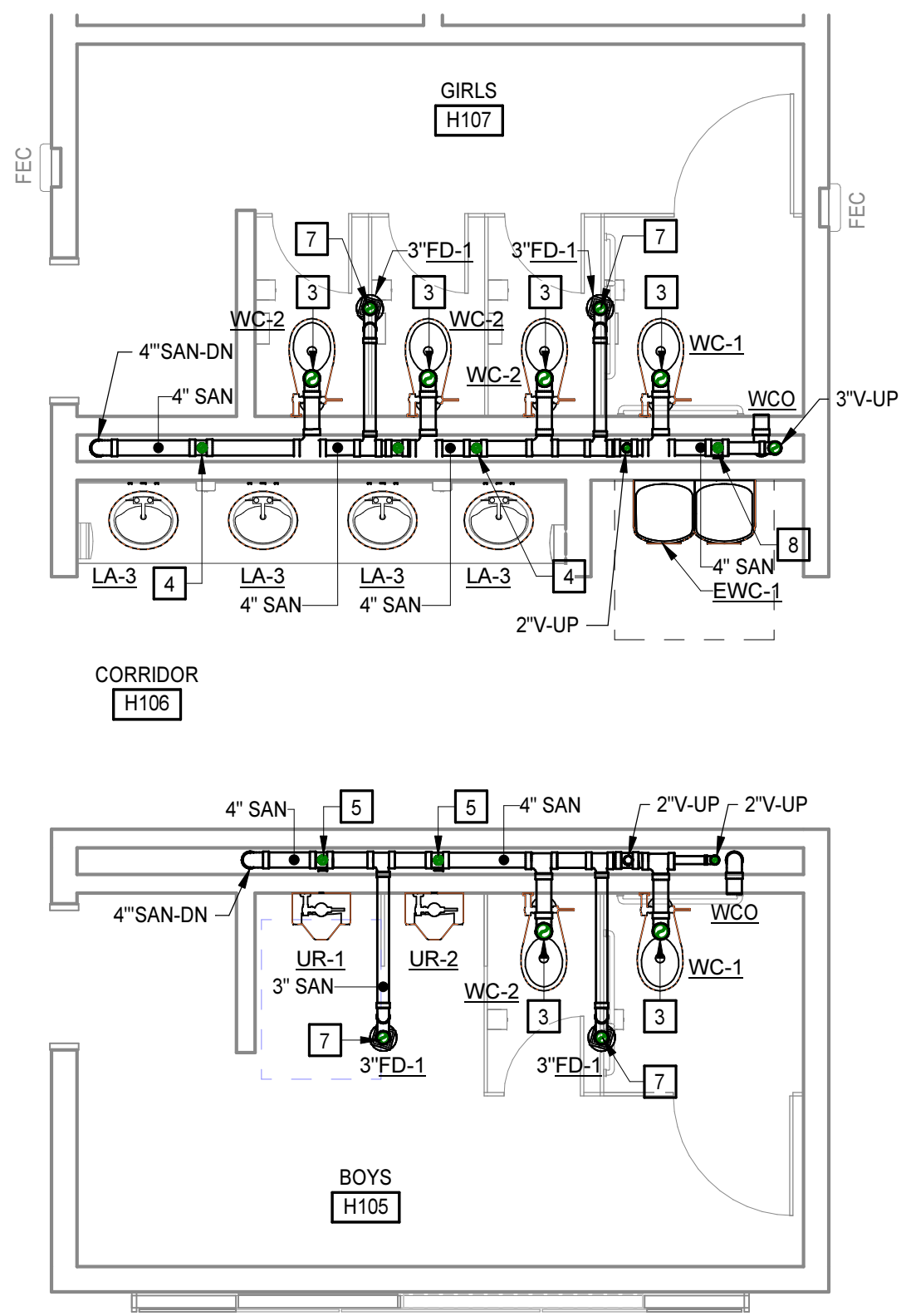
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

KEYNOTES	
APPLIES TO DRAWINGS P4.3	
REPRESENTED BY [Symbol]	
1.	SANITARY UP TO FLOOR CLEANOUT.
2.	SANITARY UP TO WALL CLEANOUT.
3.	4" SAN-UP TO WATER CLOSET.
4.	2" SAN-UP TO LAVATORY.
5.	2" SAN-UP TO URINAL.
6.	2" SAN-UP TO SINK.
7.	3" SAN PTRAP-UP TO FLOOR DRAIN.
8.	2" SAN-UP TO DRINKING FOUNTAIN.
9.	3" SAN PTRAP-UP TO MOP BASIN.
10.	2" SAN-UP AND DN.
11.	2" V-DN TO 2" SAN-DN.
12.	3" V-DN TO 2" V-DN.
13.	3" V-UP TO 3" VTB.
14.	1" DCW-DN TO WATER CLOSET.
15.	1/2" DCW AND 1/2" DHW-DN TO LAVATORY.
16.	1/2" DCW AND 1/2" DHW-DN TO SINK.
17.	1/2" DCW-DN TO URINAL.
18.	1/2" DCW-DN TO DRINKING FOUNTAIN.
19.	3/4" DCW AND 3/4" DHW-DN TO MOP BASIN.
20.	2 1/2" DCW, 2" DHW, AND 1" DHR-UP.
21.	3/4" DCW-DN TO HOSE BIBS.

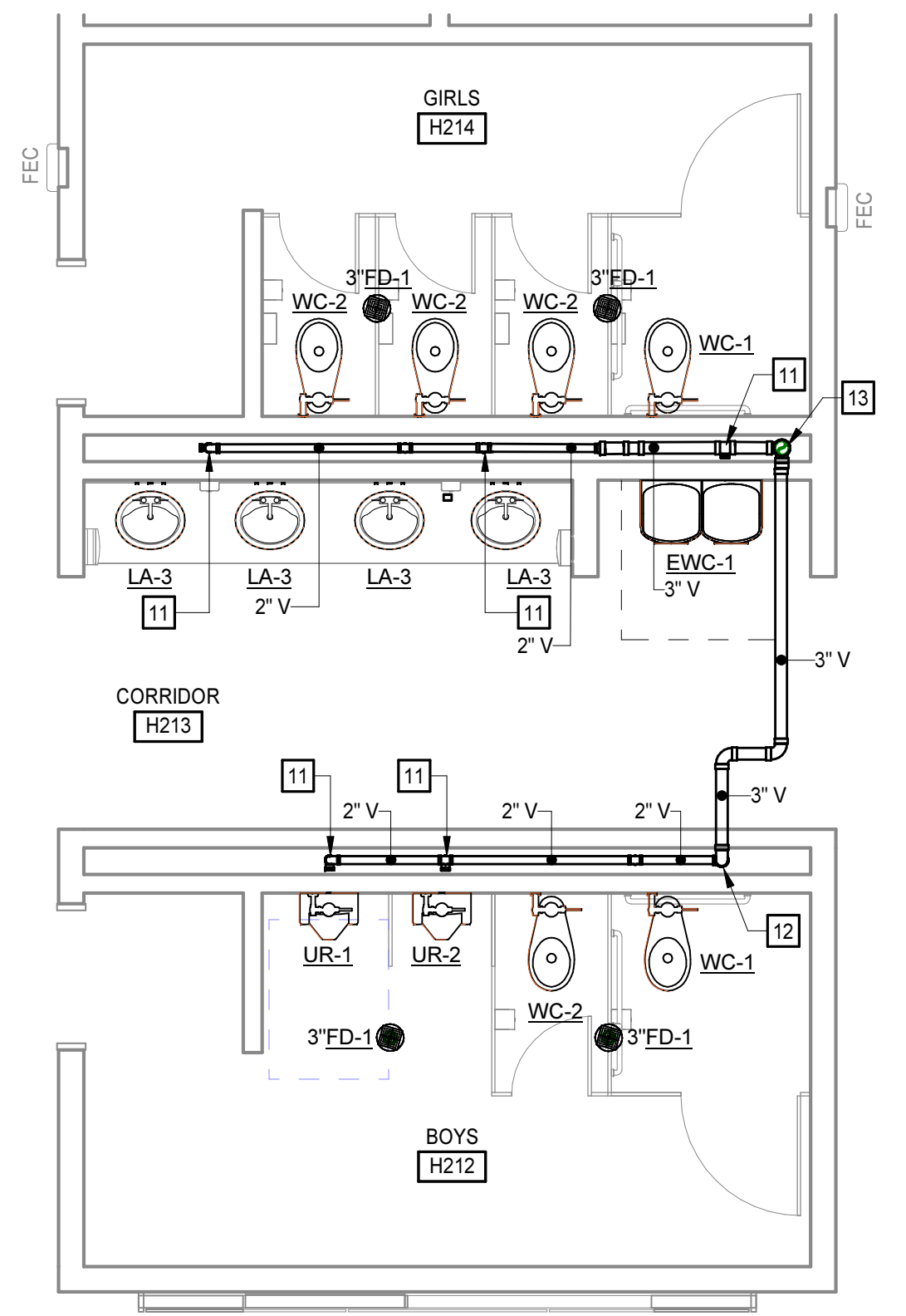
Addendum #1



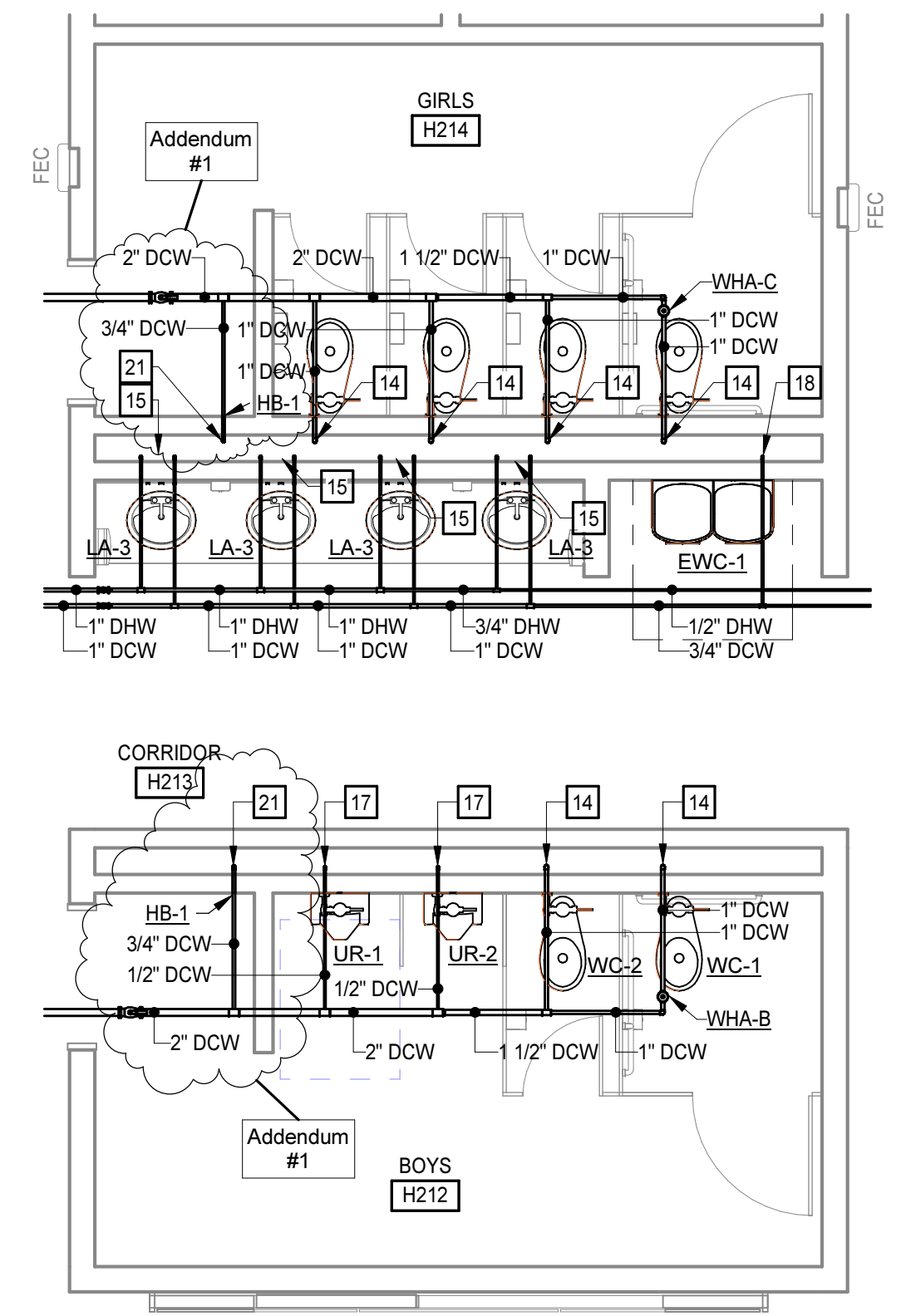
**5 ENLARGED FOUNDATION PLAN - AREA H BATHROOM GROUP**  
P2.0.8/P4.3 1/4" = 1'-0"



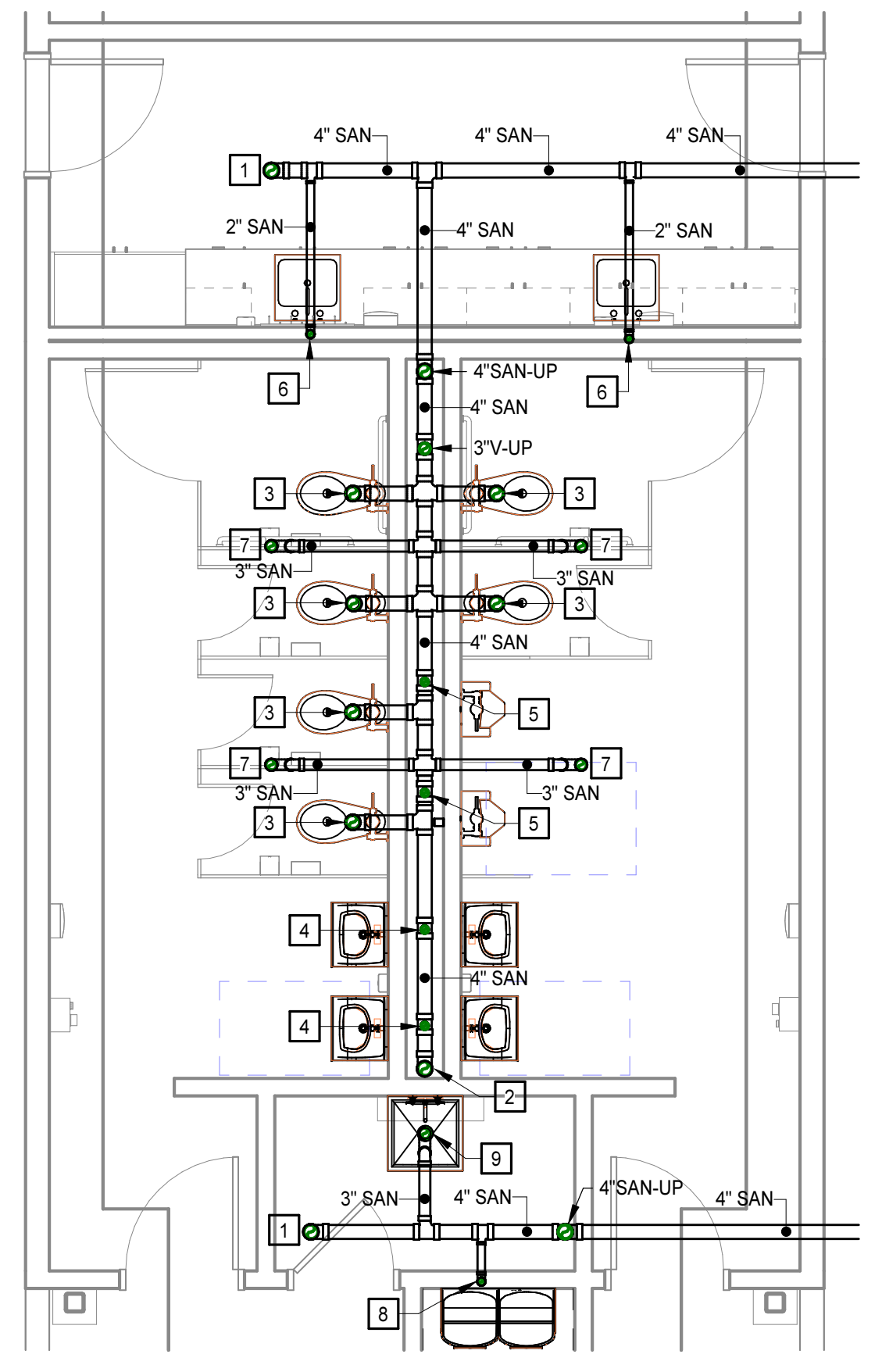
**6 ENLARGED SANITARY PLAN - AREA H BATHROOM GROUP**  
P2.1.8/P4.3 1/4" = 1'-0"



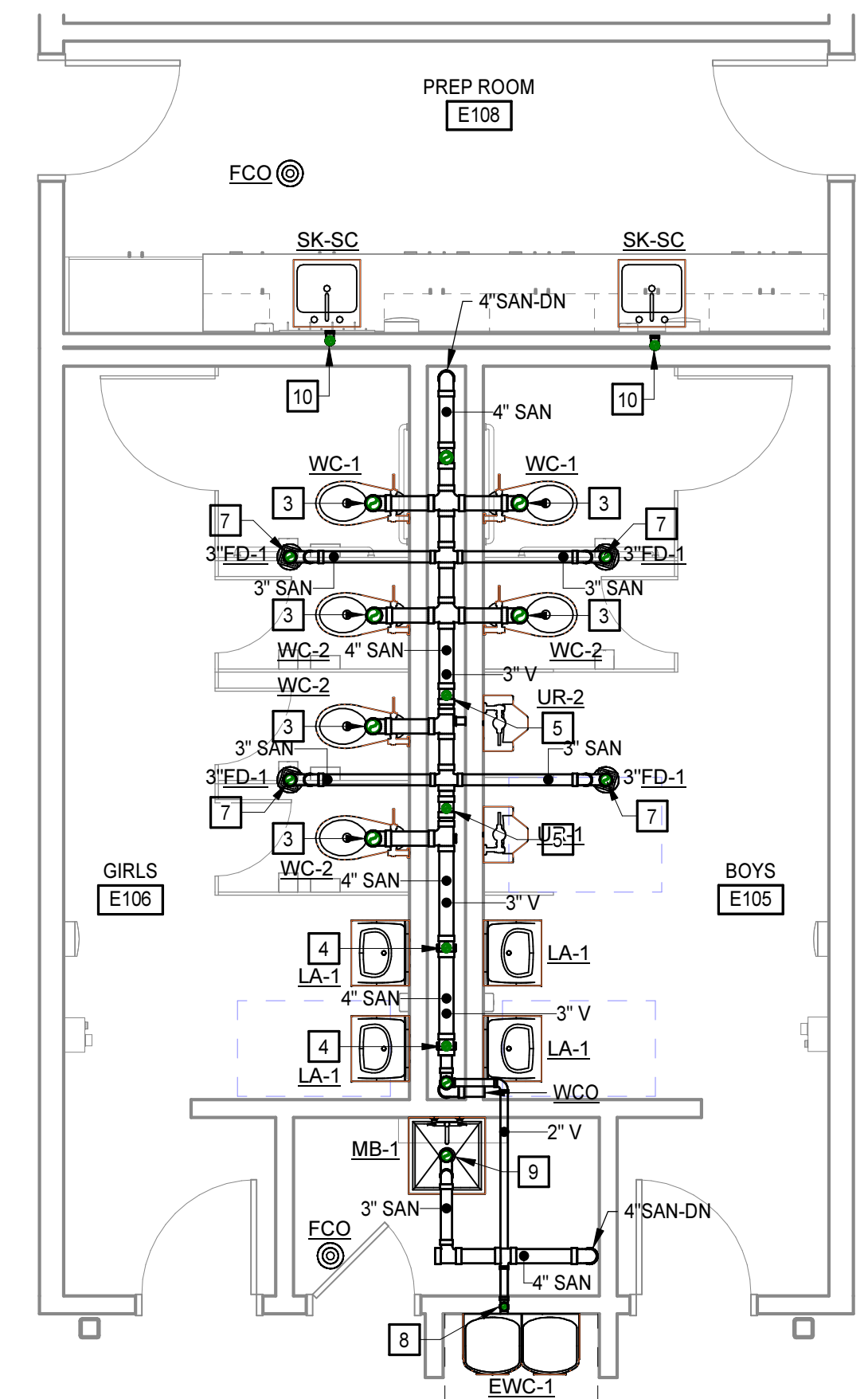
**7 ENLARGED SANITARY PLAN - AREA H SECOND FLOOR BATHROOM GROUP**  
P2.2.7/P4.3 1/4" = 1'-0"



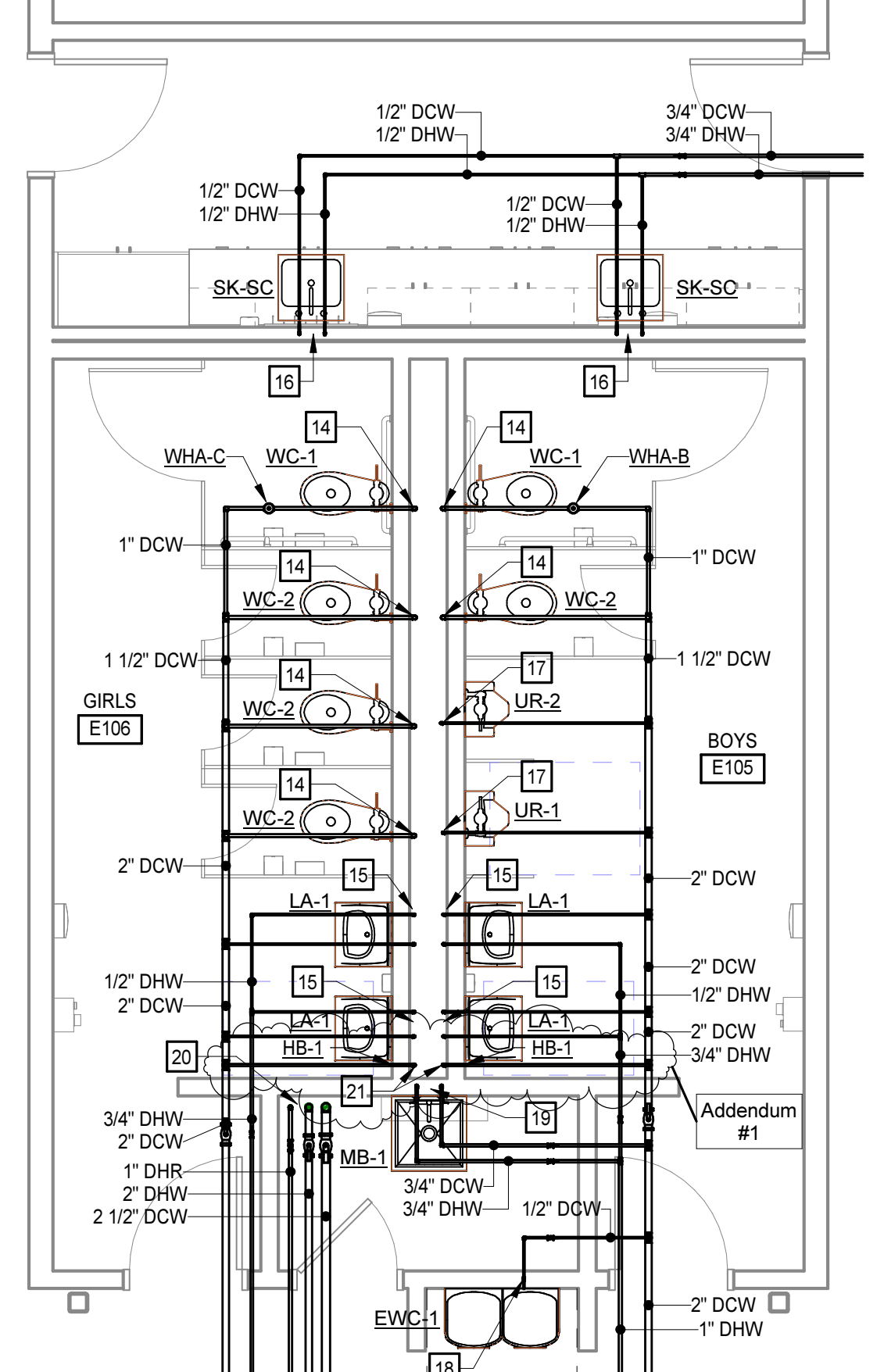
**8 ENLARGED DOMESTIC PLAN - AREA H SECOND FLOOR BATHROOM GROUP**  
P2.2.13/P4.3 1/4" = 1'-0"



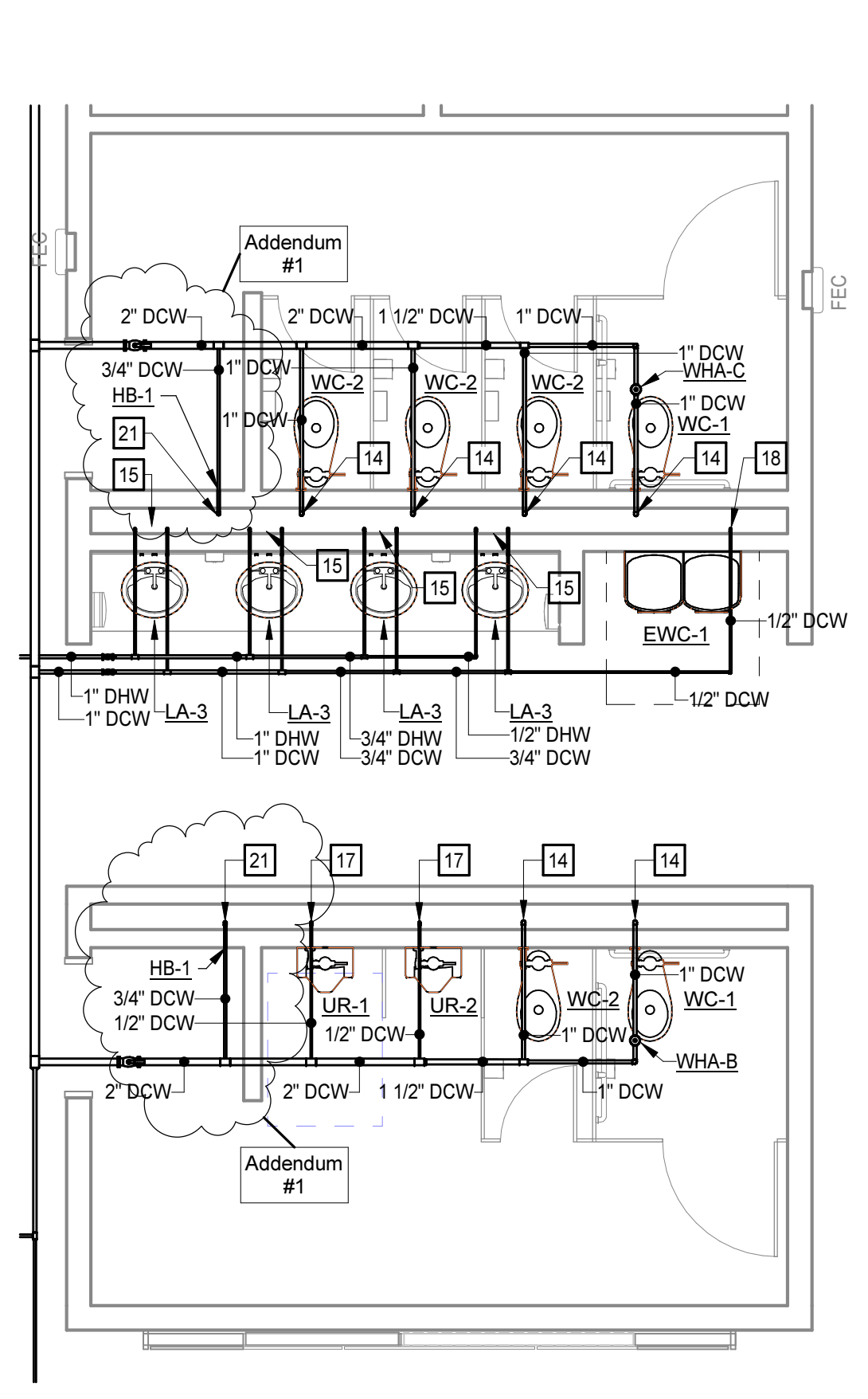
**1 ENLARGED FOUNDATION PLAN - E105 & E106**  
P2.0.5/P4.3 1/4" = 1'-0"



**2 ENLARGED SANITARY PLAN - E105 & E106**  
P2.1.5/P4.3 1/4" = 1'-0"

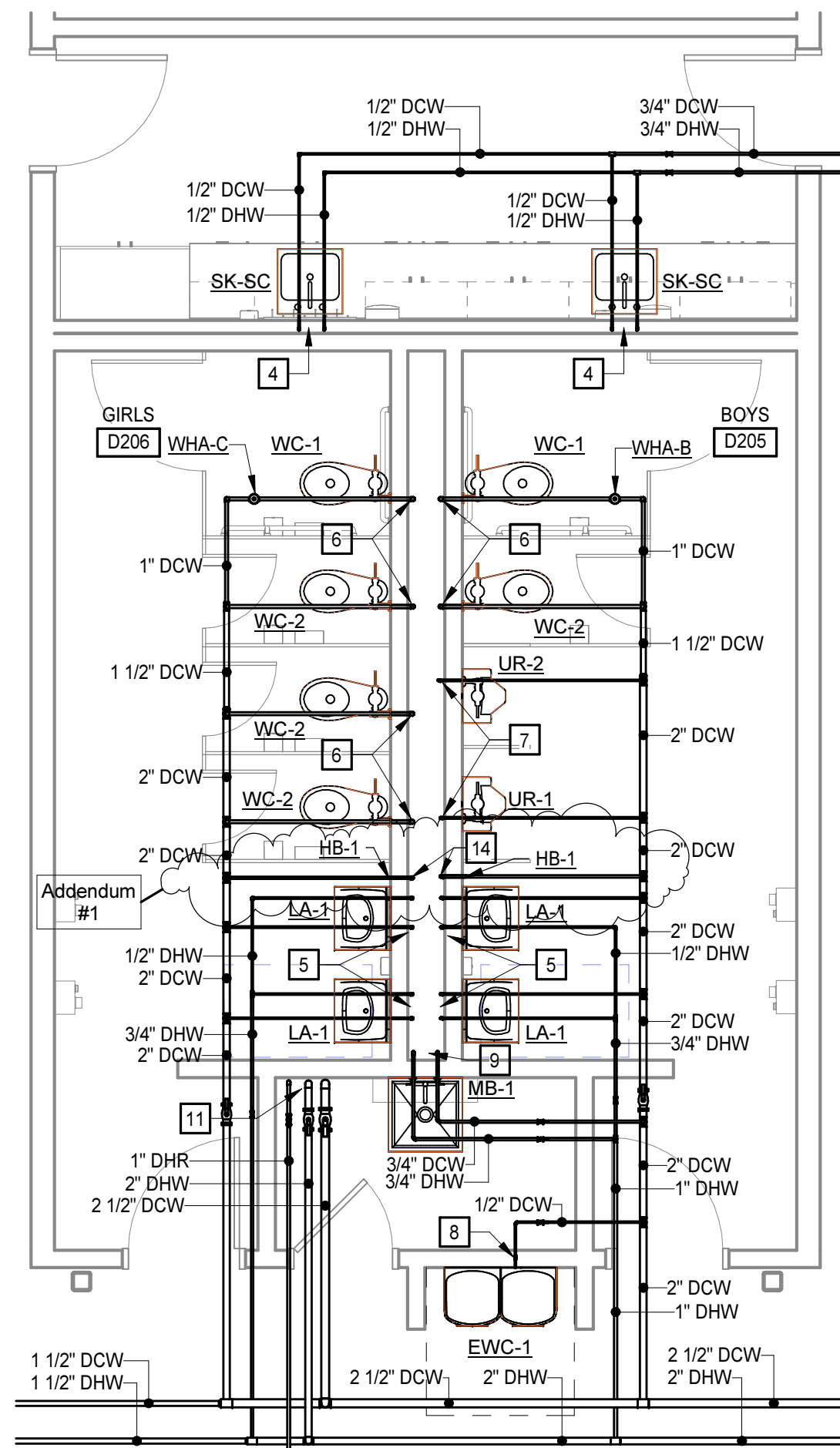


**3 ENLARGED DOMESTIC PLAN - E105 & E106**  
P2.1.13/P4.3 1/4" = 1'-0"

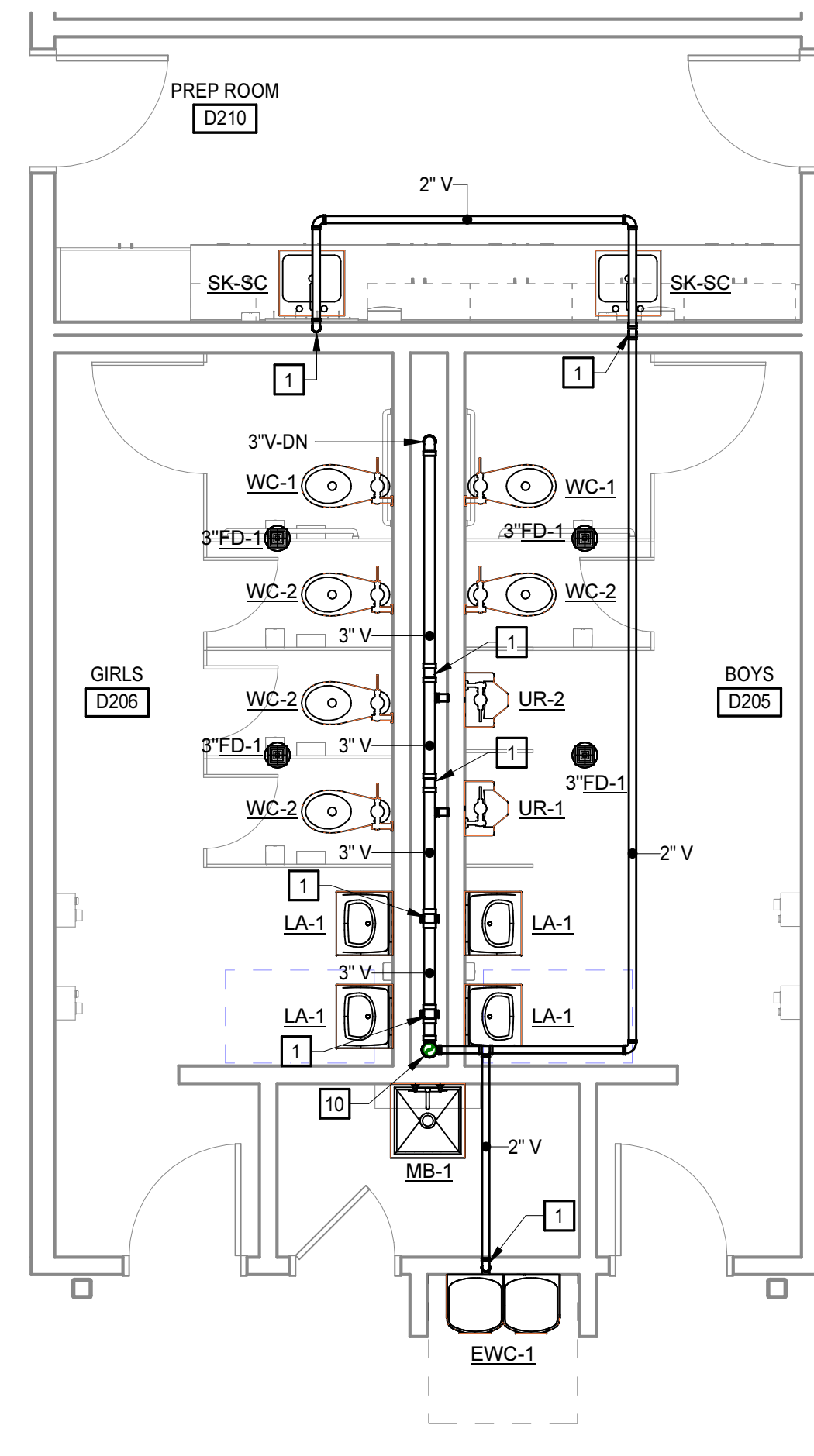


**4 ENLARGED DOMESTIC PLAN - AREA H BATHROOM GROUP**  
P2.1.16/P4.3 1/4" = 1'-0"



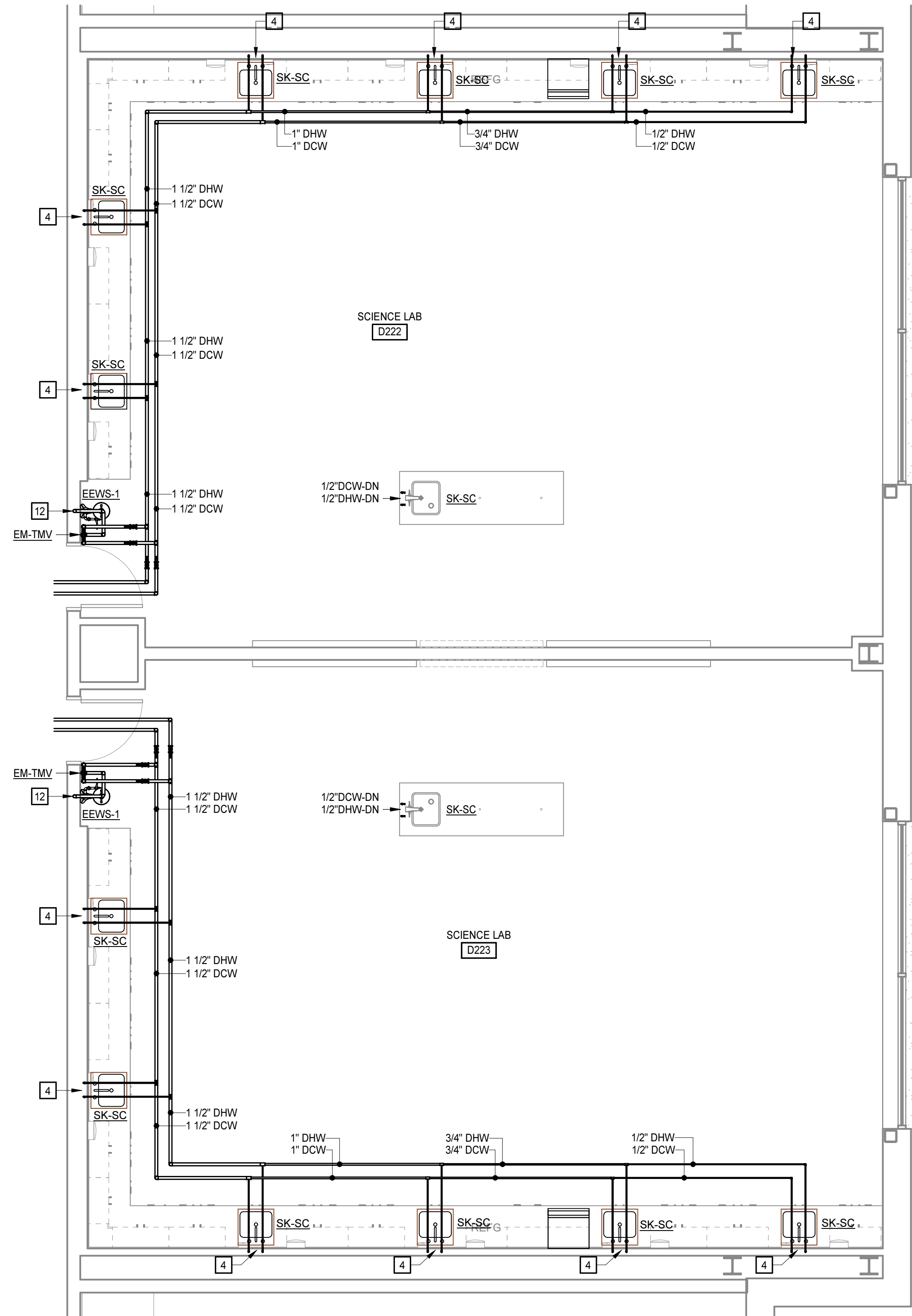


**4 ENLARGED DOMESTIC PLAN - D205 & D206**  
 P2.2.3/P4.4 1/4" = 1'-0"

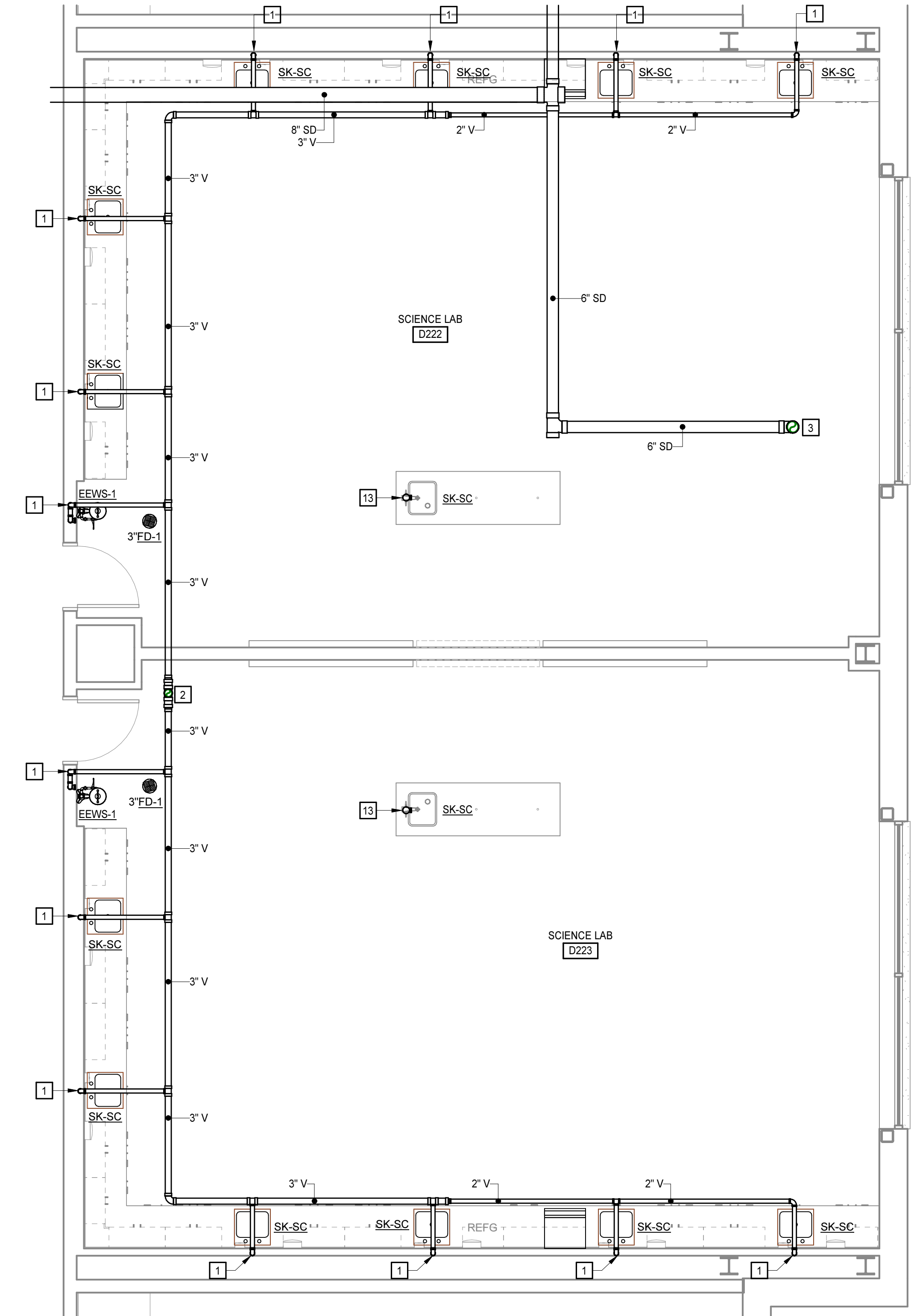


**3 ENLARGED SANITARY PLAN - D205 & D206**  
 P2.2.3/P4.4 1/4" = 1'-0"

KEYNOTES	
APPLIES TO DRAWINGS P4.4 REPRESENTED BY [Symbol]	
1	2" V-DN TO 2" SAN-DN
2	3" V-UP TO 3" VTR
3	6" SD-UP TO ROOF DRAIN
4	1/2" DCW AND 1/2" DHW-DN TO SINK
5	1/2" DCW AND 1/2" DHW-DN TO LAVATORY
6	1" DCW-DN TO WATER CLOSET
7	1/2" DCW-DN TO URINAL
8	1/2" DCW-DN TO DRINKING FOUNTAIN
9	3/4" DCW AND 3/4" DHW-DN TO MOP BASIN
10	4" V-UP TO 4" VTR
11	2" DCW-DN TO 2" DHW AND 1" DHR-DN
12	1/2" TEPID WATER-DN TO EMERGENCY EYE WASH
13	2" AIR ADMITTANCE VALVE-DN TO 2" SAN-DN
14	3/4" DCW-DN TO HOSE BIBB



**2 ENLARGED DOMESTIC PLAN - D222 & D223**  
 P2.2.3/P4.4 1/4" = 1'-0"

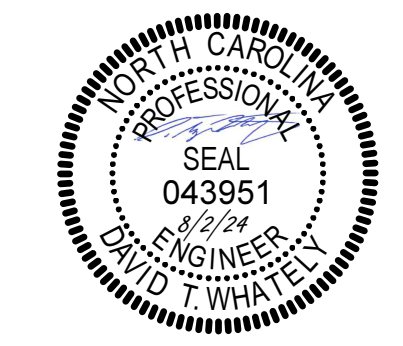


**1 ENLARGED SANITARY PLAN - D222 & D223**  
 P2.2.3/P4.4 1/4" = 1'-0"

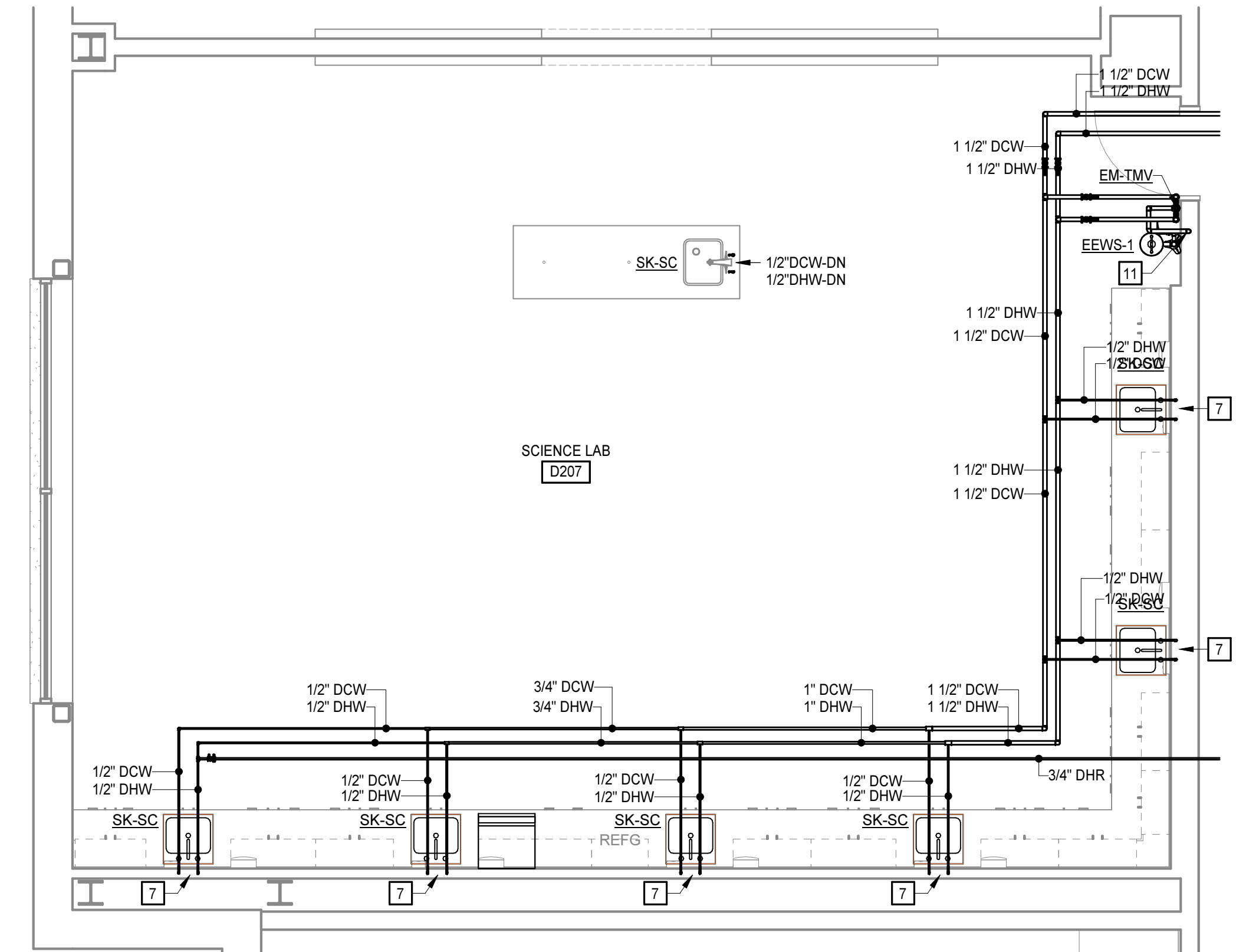


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

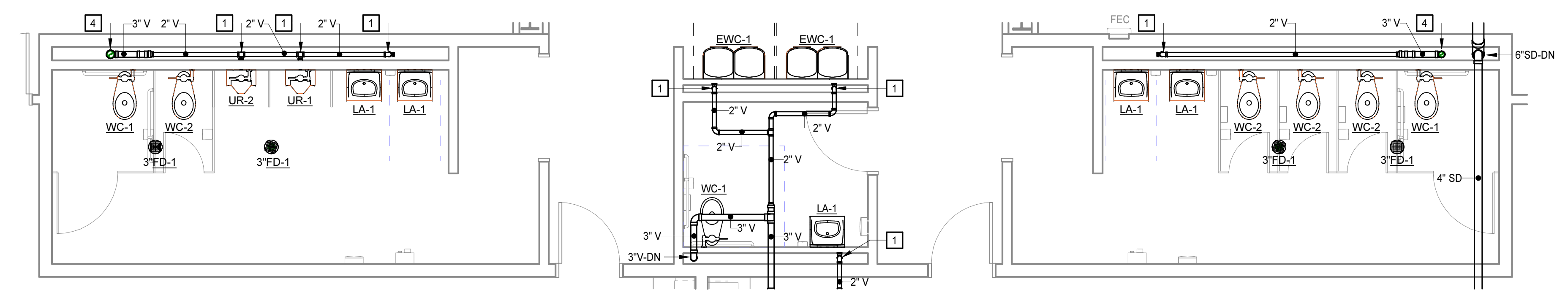




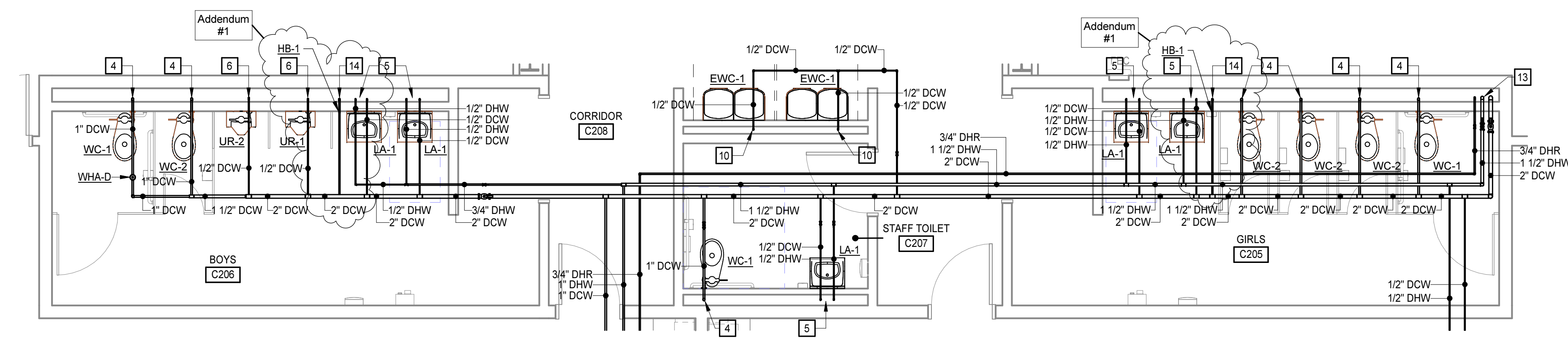
KEYNOTES	
APPLIES TO DRAWINGS P4.10 REPRESENTED BY [n]	
1.	2" V-DN TO 2" SAN-DN
2.	4" V-UP TO 4" VTB
3.	2" AIR ADMITTANCE VALVE-DN TO 2" SAN-DN
4.	1" DCW-DN TO WATER CLOSET
5.	1/2" DCW AND 1/2" DHW-DN TO LAVATORY
6.	1/2" DCW-DN TO URINAL
7.	1/2" DCW AND 1/2" DHW-DN TO SINK
8.	1/2" DCW AND 1/2" DHW-DN TO SHOWER
9.	3/4" DCW AND 3/4" DHW-DN TO WASHER BOX
10.	1/2" DCW-DN TO DRINKING FOUNTAIN
11.	1/2" TEPID WATER-DN
12.	2" DCW, 1/2" DHW, AND 3/4" DHR-UP
13.	2" DCW, 1/2" DHW, AND 3/4" DHR-DN
14.	3/4" DCW-DN TO HOSE BIBB



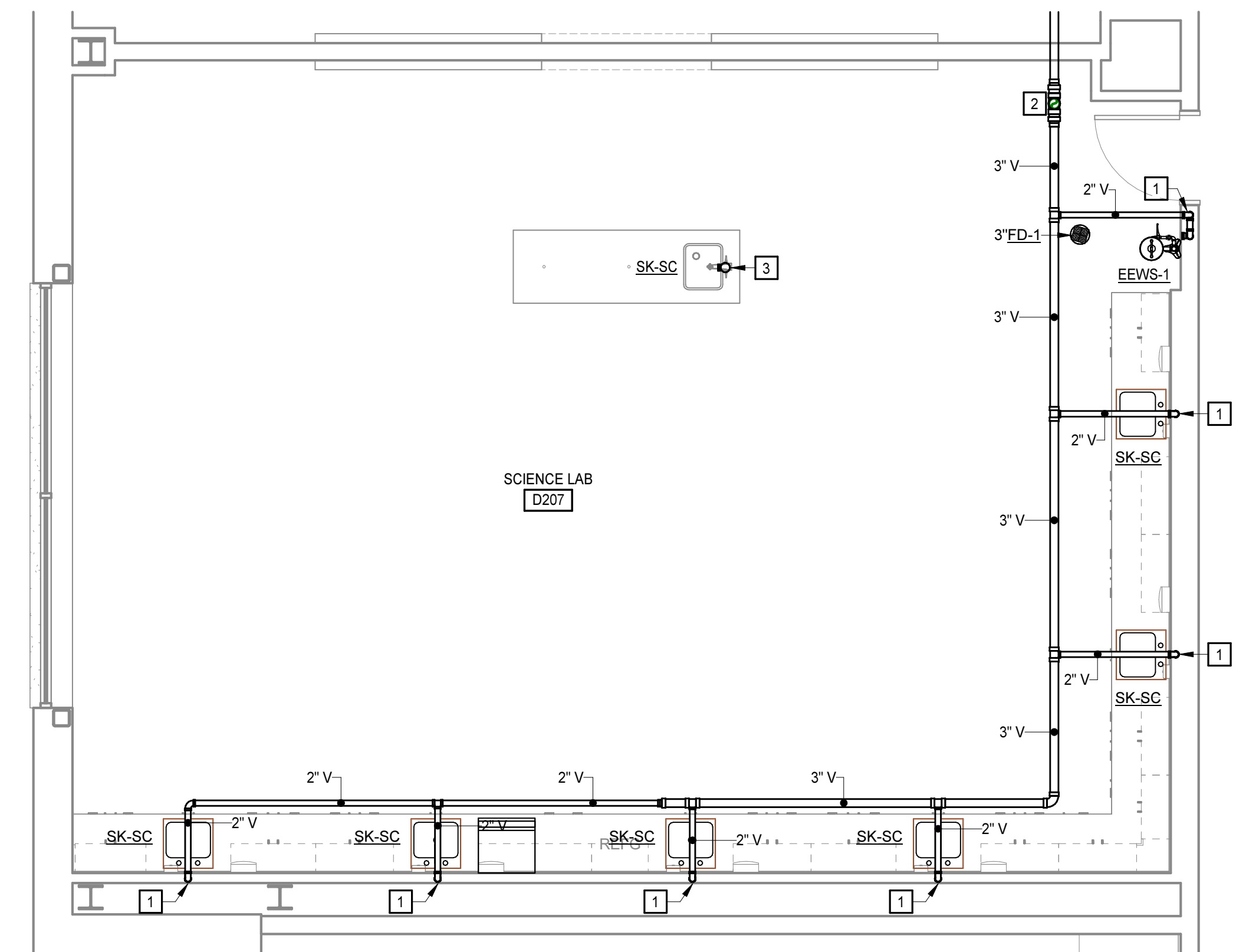
**5 ENLARGED DOMESTIC PLAN - D207**  
 P2.2.9/P4.10 1/4" = 1'-0"



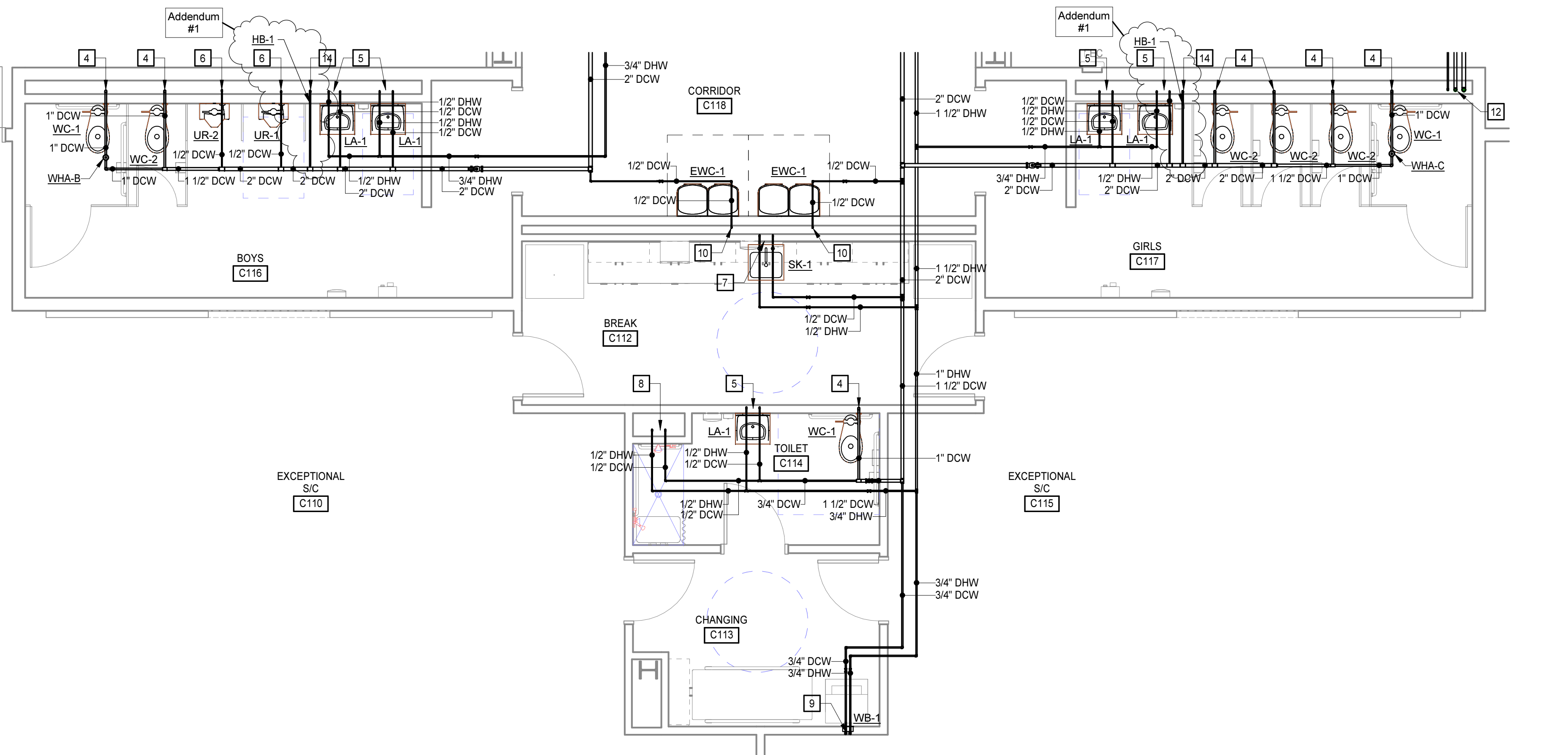
**3 ENLARGED SANITARY PLAN - C205 & C206**  
 P2.2.2/P4.10 1/4" = 1'-0"



**2 ENLARGED DOMESTIC PLAN - C205 & C206**  
 P2.2.8/P4.10 1/4" = 1'-0"



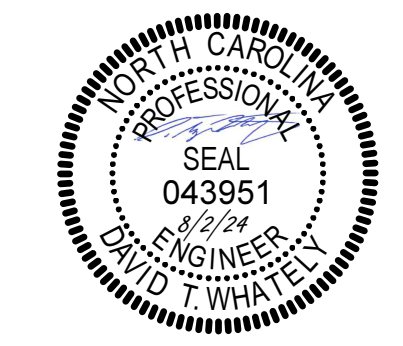
**4 ENLARGED SANITARY PLAN - D207**  
 P2.2.3/P4.10 1/4" = 1'-0"



**1 ENLARGED DOMESTIC PLAN - AREA C**  
 P2.1.11/P4.10 1/4" = 1'-0"

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

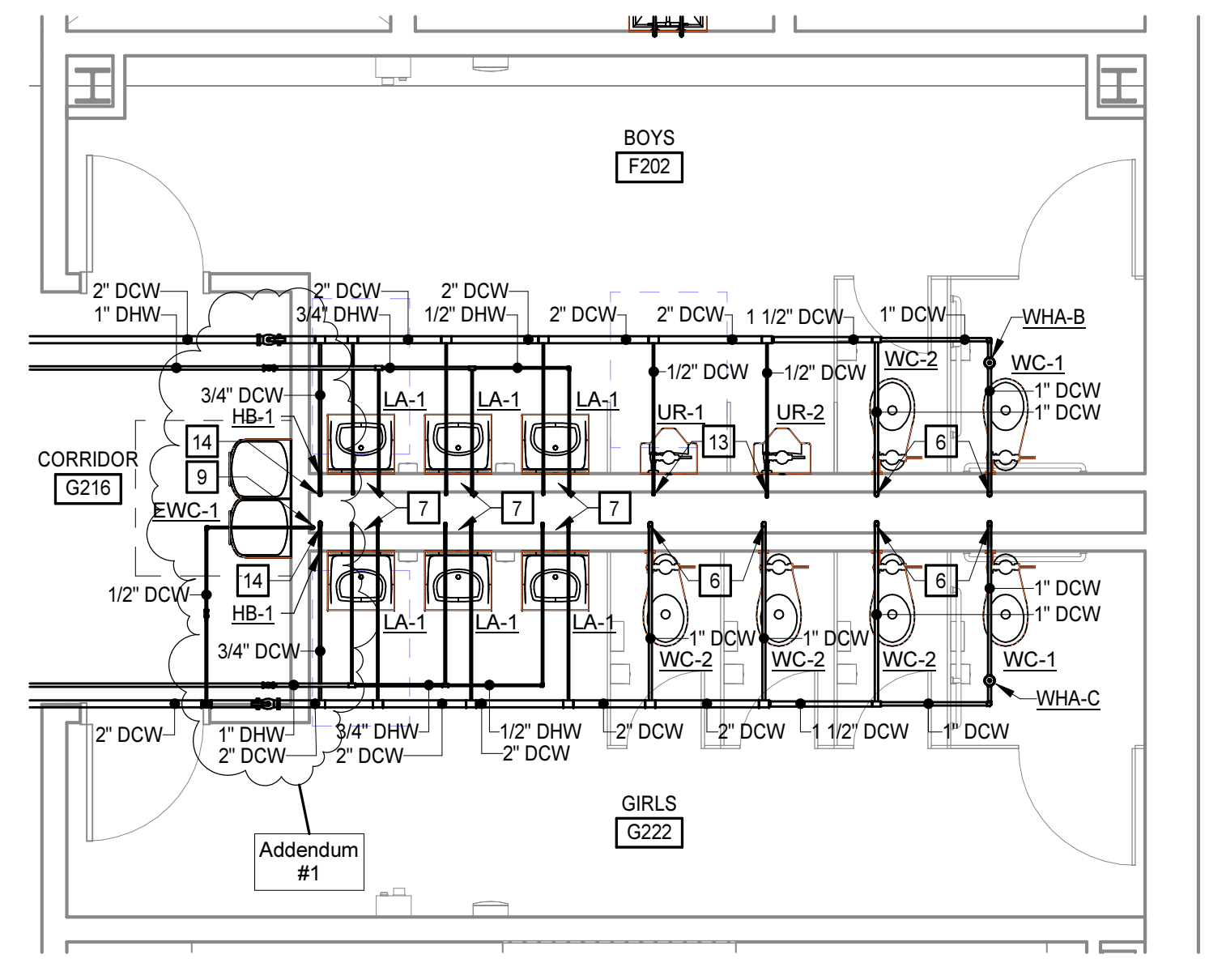




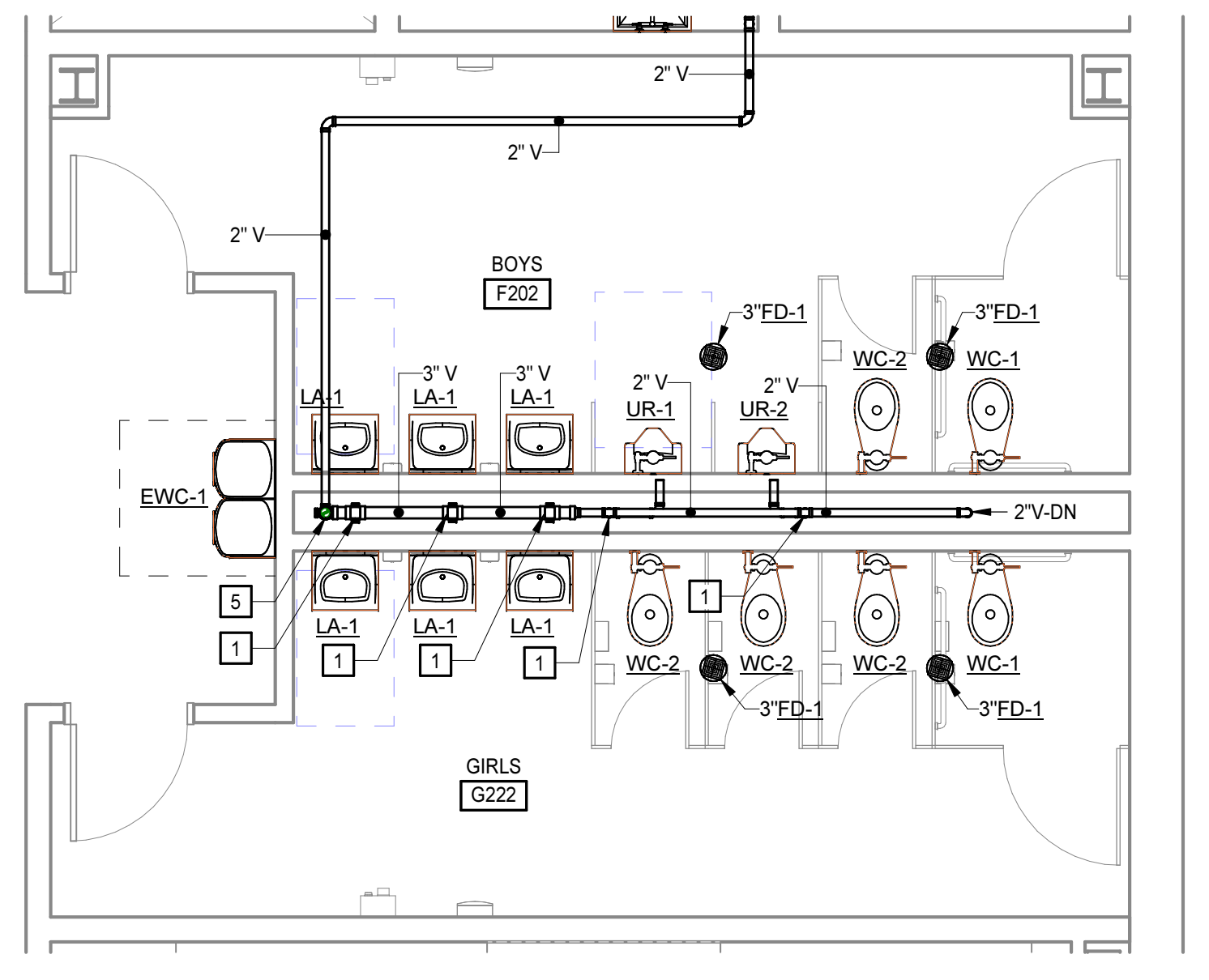
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

**KEYNOTES**  
 APPLIES TO DRAWINGS P4.11  
 REPRESENTED BY [n]

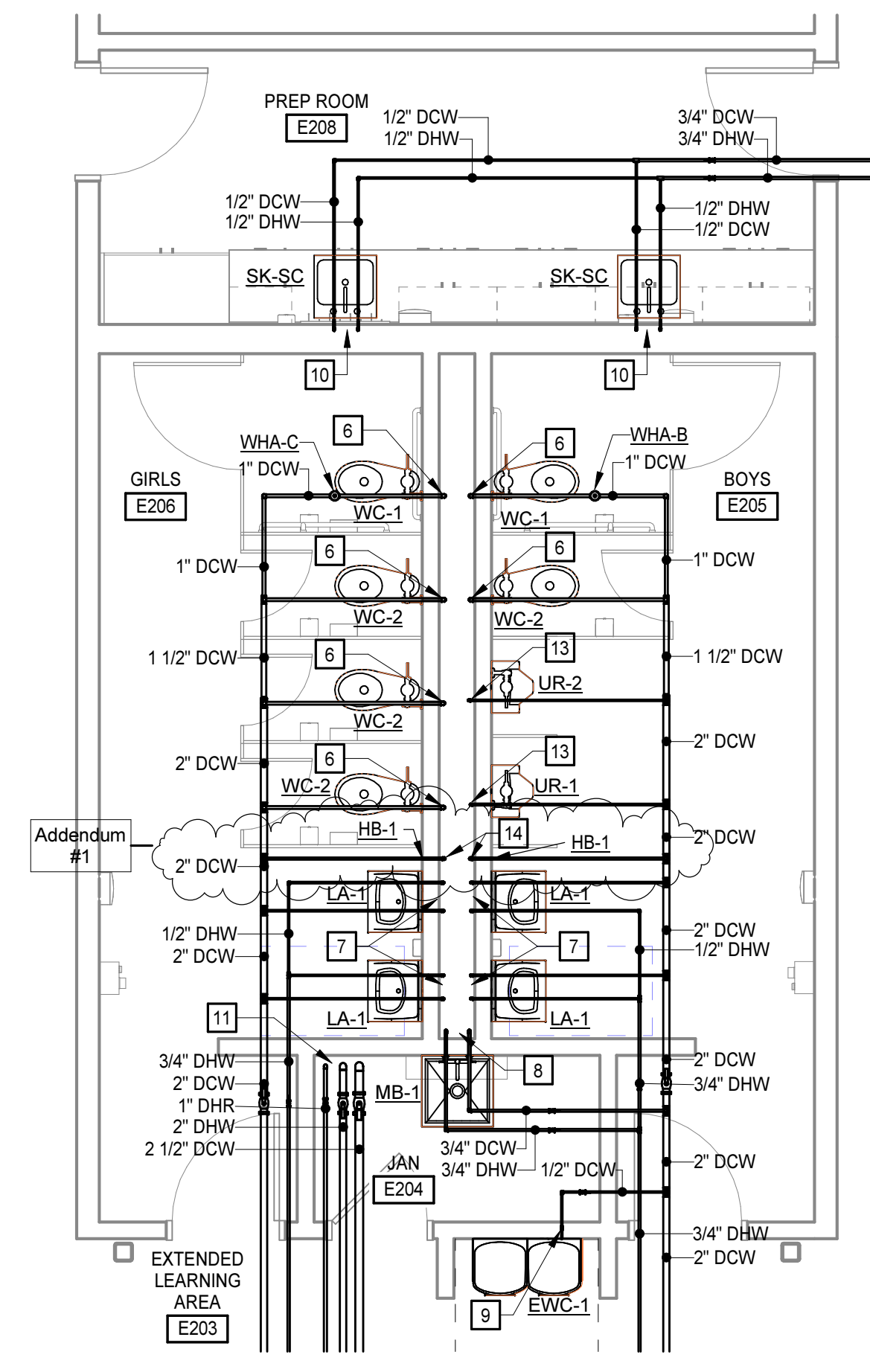
- 2" V-DN TO 2" SAN-DN
- 4" V-UP TO 4" VTB
- 6" SD-UP TO ROOF DRAIN
- 2" AIR ADMITTANCE VALVE-DN TO 2" SAN-DN
- 3" V-UP TO 3" VTB AND 2" V-DN TO 2" SAN-DN
- 1" DCW-DN TO WATER CLOSET
- 1/2" DCW AND 1/2" DHW-DN TO LAVATORY
- 3/4" DCW AND 3/4" DHW-DN TO MOP BASIN
- 1/2" DCW-DN TO DRINKING FOUNTAIN
- 1/2" DCW AND 1/2" DHW-DN TO SINK
- 2 1/2" DCW, 2" DHW AND 1" DHR-DN
- 1 1/2" EPD WATER-DN
- 1/2" DCW-DN TO URINAL
- 3/4" DCW-DN TO HOSE BIBB



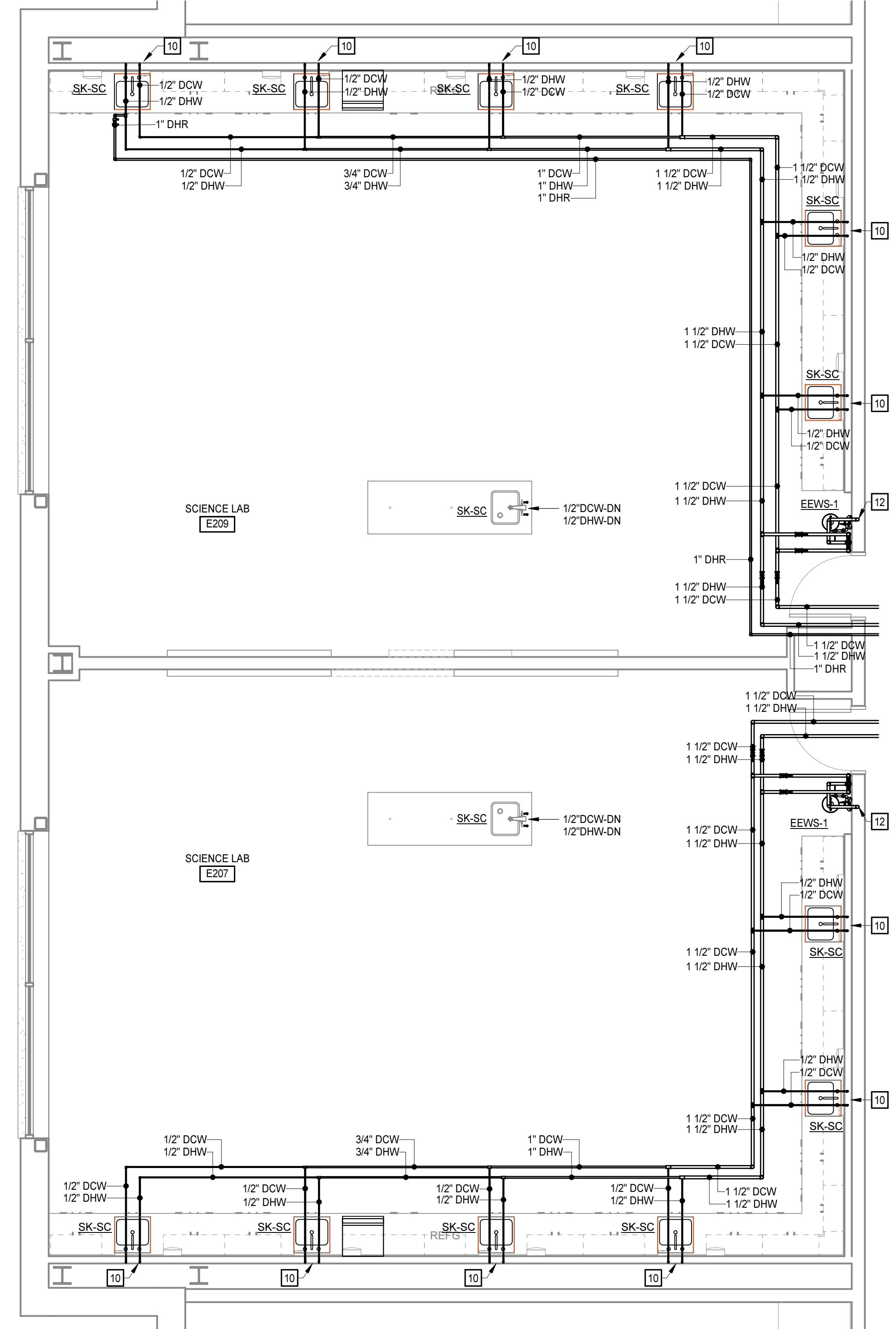
**6 ENLARGED DOMESTIC PLAN - F202 & G222**  
 P2.2.11 P4.11 1/4" = 1'-0"



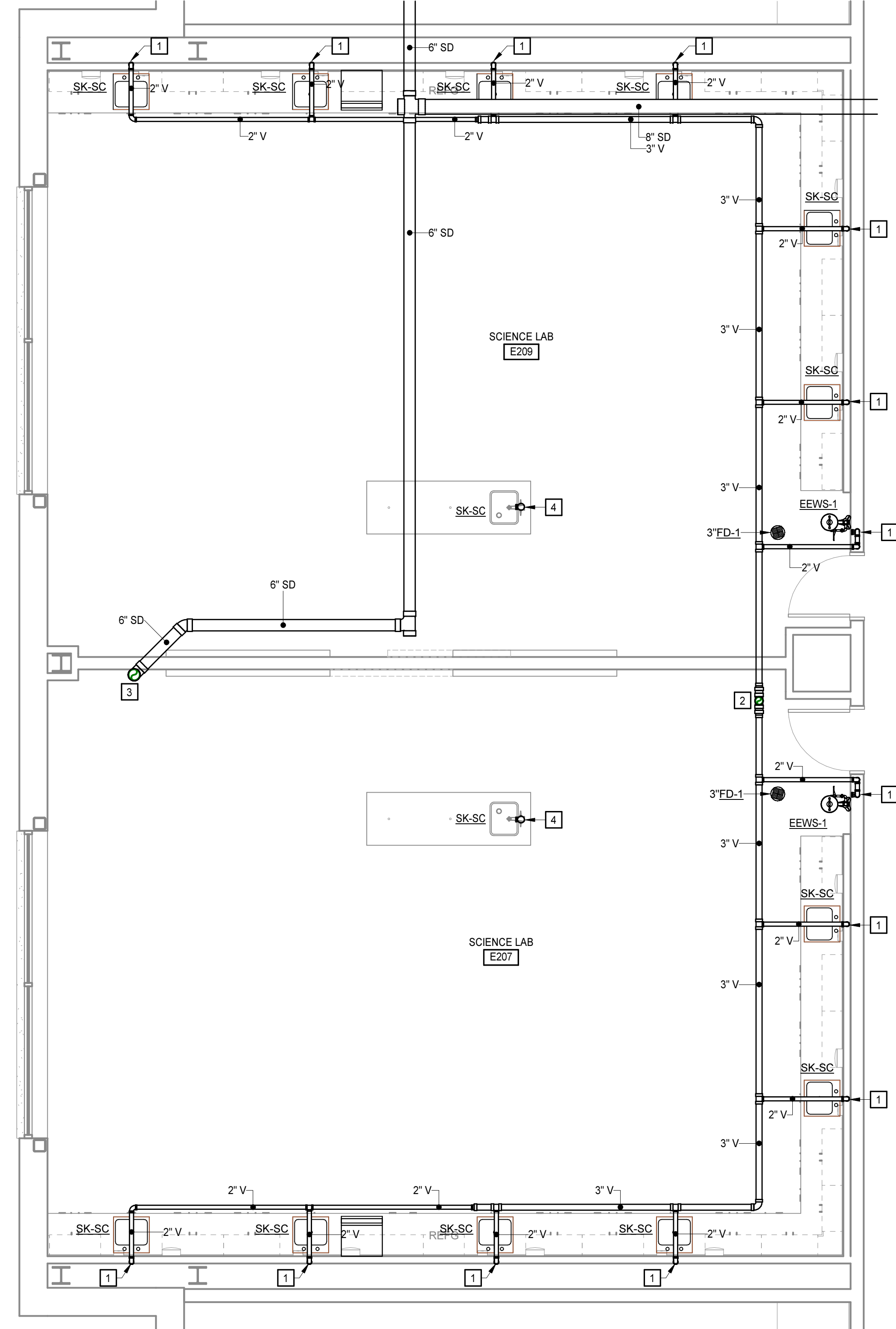
**5 ENLARGED SANITARY PLAN - F202 & G222**  
 P2.2.51 P4.11 1/4" = 1'-0"



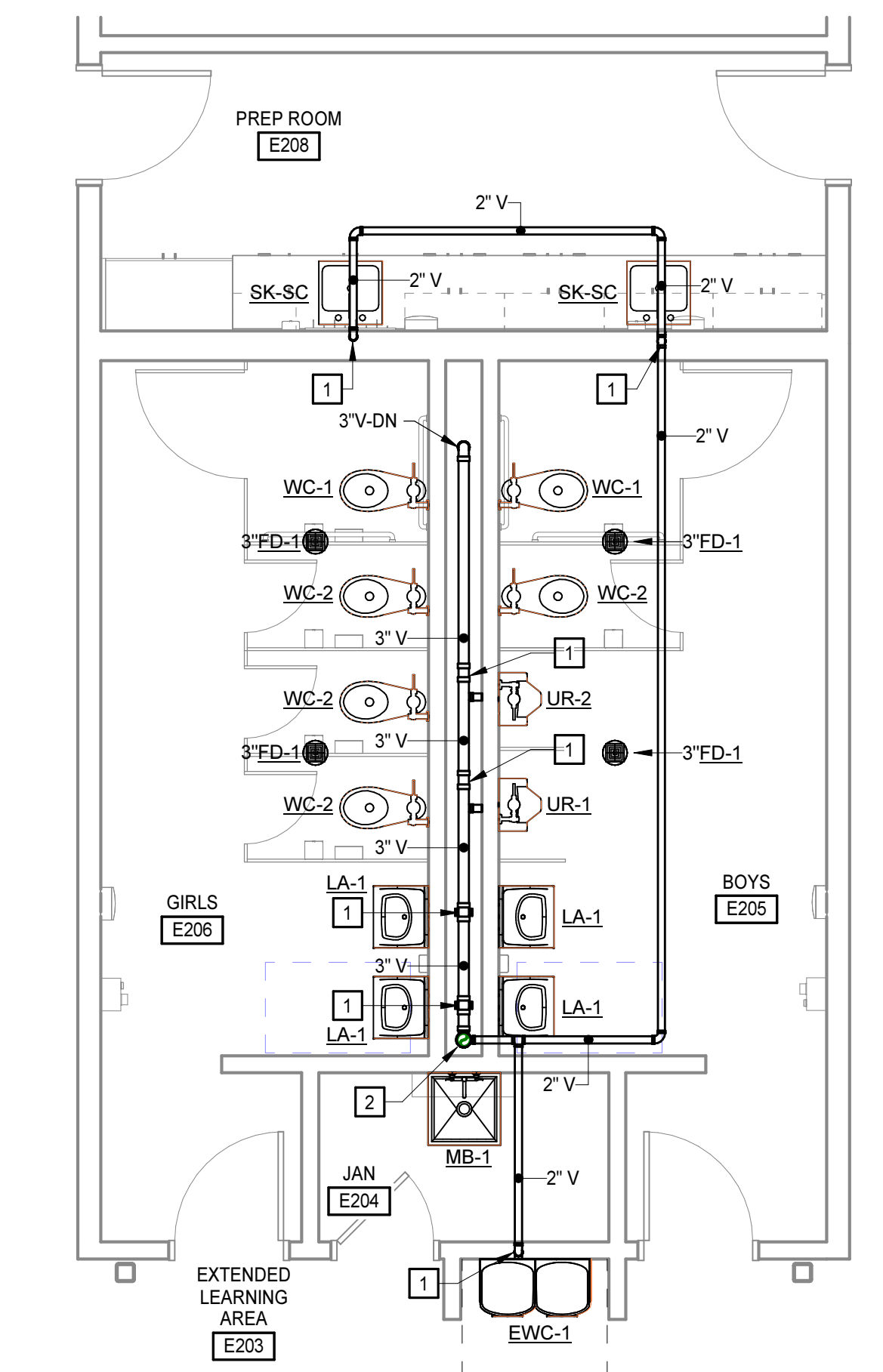
**2 ENLARGED DOMESTIC PLAN - E205 & E206**  
 P2.2.10 P4.11 1/4" = 1'-0"



**4 ENLARGED DOMESTIC PLAN - E207 & E209**  
 P2.2.10 P4.11 1/4" = 1'-0"



**3 ENLARGED SANITARY PLAN - E207 & E209**  
 P2.2.4 P4.11 1/4" = 1'-0"



**1 ENLARGED SANITARY PLAN - E205 & E206**  
 P2.2.4 P4.11 1/4" = 1'-0"



J  
H  
G  
F  
E  
D  
C  
B  
A

DRAIN AND CLEANOUT SCHEDULE				
TAG	BASIS OF DESIGN		STRAINER/GRATE	NOTES
	MANUFACTURER	MODEL		
DSN-1	ZURN	ZF199-DSG	DOWNSPOUT NOZZLE	
FCO	JOSAM	55000-1	FLOOR CLEANOUT	<varies>
FD-1	JOSAM	30000-6S-VP	6" x 6"	1, 2
FD-2	JOSAM	32100-50-B1-VP	6" ROUND	1, 2
FD-3	MI-FAB	F1100-C-DD	OPEN SIGHT HUB DRAIN	1, 2
FD-4	JOSAM	30004-S	6" x 6"	1, 3
FS-1	JOSAM	41630-VP-50-DSB-CF-HG	12" x 12" HALF GRATE	1, 2
FS-2	JOSAM	41630-VP-50-DSB-CF-NG	12" x 12" NO GRATE	1, 2
FS-3	JOSAM	41630-VP-50-DSB-CF	12" x 12" FULL GRATE	1, 4
GCO	JOSAM	58680-CO	GRADE CLEANOUT	2
OD-1	JOSAM	21500-AE-3-16-22-VP	13" ROUND	2
RD-1	JOSAM	21500-AE-3-22-VP	13" ROUND	2
WCO	JOSAM	58910-19	WALL CLEANOUT	

NOTES:  
1. PROVIDE TRAP PRIMER CONNECTION AND EXTENSION. SEE DETAIL.  
2. ALL ROOF DRAINS, SANITARY DRAINS AND CLEANOUTS TO HAVE ADJUSTABLE HEIGHT TOP.  
3. LAUNDRY TRENCH PIT DRAIN.  
4. PROVIDE CAN WASH WITH REMOVE WATER CONTROL BOX.

PLUMBING FIXTURE SCHEDULE										
TAG	FIXTURE	HEIGHT A.F.F.	BASIS OF DESIGN	PIPE SIZE				NOTES		
				COLD WATER	TEPID WATER	HOT WATER	VENT		SOIL WASTE	
EEVNS-1	COMBINATION EMERGENCY EYEWASH/SHOWER STATION	FLOOR MOUNTED	FIXTURE: BRADLEY S193148FPB VALVE: BRADLEY S19-2400EFX20	1/2"		1/2"	1 1/2"	1 1/2"	1.5	
EWB-1	BI-LEVEL WATER COOLER (ACCESSIBLE)	TOP OF BUBBLER AT 33" CORNER AT 34"	FIXTURE: ELKAY U25TL26WSWP	1/2"			1 1/2"	1 1/2"	1.1	
HB-1	HOSE BIB	CENTERLINE OF OUTLET AT 18"	FIXTURE: ZURN Z134X1	3/4"						
LA-1	WALL-HUNG LAVATORY (ACCESSIBLE) WITH MANUALLY-OPERATED FAUCET	RIM AT 34"	FIXTURE: ZURN Z5340 FAUCET: ZURN B1101XL-G-HCT-25M	1/2"		1/2"	1 1/2"	1 1/2"	1, 3	
LA-2	WALL-HUNG LAVATORY (CHILD ACCESSIBLE) WITH MANUALLY-OPERATED FAUCET	RIM AT 31"	FIXTURE: ZURN Z5340 FAUCET: ZURN B1101XL-G-HCT-25M	1/2"		1/2"	1 1/2"	1 1/2"	1, 3	
LA-3	COUNTER MOUNTED LAVATORY WITH MANUALLY-OPERATED FAUCET	COUNTER MOUNTED REFER TO ARCH DRAWINGS	FIXTURE: ZURN Z5110 FAUCET: ZURN B1101XL-G-HCT-25M	1/2"		1/2"	1 1/2"	1 1/2"	1, 3	
MB-1	MOP BASIN (24" x 24")	RIM AT 12"	FIXTURE: ELKAY LRA032255 FAUCET: ZURN Z843M1-XL-CS-HCT	3/4"		3/4"	2"	3"		
SH-1	INDIVIDUAL SHOWER (ACCESSIBLE)	CONTROLS AT 42", SHOWERHEAD AT 72"	VALVE: ZURN Z7301-SS-MT-S9	1/2"		1/2"	2"	2"	1, 4	
SH-2	INDIVIDUAL SHOWER	CONTROLS AT 42", SHOWERHEAD AT 78"	VALVE: ZURN Z7301-SS-MT-S9	1/2"		1/2"	2"	2"	4	
SK-1	SINK - SINGLE BASIN	COUNTER MOUNTED REFER TO ARCH DWGS	FIXTURE: ELKAY LRA032255 FAUCET: ZURN Z82300-XL-CP4-3M	1/2"		1/2"	1 1/2"	1 1/2"	1, 3, 6	
SK-2	ART ROOM SINK - SINGLE BASIN	COUNTER MOUNTED REFER TO ARCH DWGS	FIXTURE: ELKAY LRA032255 FAUCET: ZURN Z82300-XL-CP4-3M	1/2"		1/2"	1 1/2"	1 1/2"	1, 3, 6, 7	
SK-3	MUSIC ROOM SINK	RIM AT 36"	FIXTURE: ELKAY LRA032255 FAUCET: ZURN Z82300-XL-CP4-3M	1/2"		1/2"	1 1/2"	1 1/2"	3	
SK-4	SINK - DOUBLE BASIN	COUNTER MOUNTED REFER TO ARCH DWGS	FIXTURE: ELKAY LRA032255 FAUCET: ZURN Z82300-XL-CP4-3M	1/2"		1/2"	1 1/2"	1 1/2"	3, 6	
SK-SC	SCIENCE ROOM SINK (BY OTHERS) ROUGH-IN PIPING AND ACCESSORIES ONLY	COUNTER MOUNTED REFER TO ARCH DWGS	FIXTURE: BY OTHERS	1/2"		1/2"	1 1/2"	1 1/2"	1, 3, 6	
UR-1	URINAL (ACCESSIBLE)	RIM AT 17"	FIXTURE: ZURN Z5755 FLUSH VALVE: SLOAN ROYAL 186	3/4"			2"	2"	1, 2	
UR-2	URINAL	RIM AT 24"	FIXTURE: ZURN Z5755 FLUSH VALVE: SLOAN ROYAL 186	3/4"			2"	2"	2	
WB-1	WALL BOX - WASHER	CENTER AT 42"	FIXTURE: GUYGRAY WB20HATM	1/2"		1/2"	1 1/2"	2"		
WC-1	FLOOR MOUNTED WATER CLOSET (ACCESSIBLE)	TOP OF SEAT 17"	FIXTURE: ZURN Z5655-BWM-AM VALVE: SLOAN ROYAL 111	1"			2"	4"	1, 2	
WC-2	FLOOR MOUNTED WATER CLOSET	TOP OF SEAT 15"	FIXTURE: ZURN Z5655-BWM-AM VALVE: SLOAN ROYAL 111	1"			2"	4"	2	
WC-3	FLOOR MOUNTED WATER CLOSET (CHILD ACCESSIBLE)	TOP OF SEAT 15"	FIXTURE: ZURN Z5655-BWM-AM VALVE: SLOAN ROYAL 111	1"			2"	4"	1, 2	
WH-1	WALL HYDRANT	CENTERLINE OF OUTLET AT 18"	FIXTURE: ZURN Z132DXL	3/4"						
WSB-1	ICE MAKER OUTLET BOX	BOTTOM AT 8"	FIXTURE: GUYGRAY BIM875QTSAB	1/2"						

NOTES:  
1. THIS ACCESSIBLE FIXTURE, ACCESSORIES, AND INSTALLATION SHALL CONFORM TO THE USBC AND ASAD ADA STANDARDS FOR ACCESSIBLE DESIGN.  
2. LOCATE FLUSH ACTUATORS ON WIDE SIDE OF STALLS OR APPROACH AREAS.  
3. PROVIDE ASSE-1070 CERTIFIED MIXING VALVE IN STAINLESS STEEL WALL CABINET, ABOVE CEILING, OR BELOW FIXTURE ACCESSIBLE BUT CONCEALED FROM VIEW.  
4. PROVIDE ASSE-1016 CERTIFIED MIXING VALVE.  
5. PROVIDE ASSE-1071 CERTIFIED EMERGENCY MIXING VALVE IN STAINLESS STEEL WALL CABINET.  
6. PROVIDE DISHWASHER HOOK-UP WHERE DISHWASHER IS PRESENT. CONNECT HW IN SINK BASE AND CONNECT SANITARY THRU AIR GAP FITTING OR HIGH LOOP HOSE DRAIN INTO DISHWASHER TAIL PIECE SINK DRAIN.  
7. PROVIDE PLASER/SOLIDS INTERCEPTOR FOR ALL ART ROOMS. PROVIDE POP-UP DRAIN FOR ALL ART ROOMS.

ELECTRIC WATER HEATER SCHEDULE													
TAG	BASIS OF DESIGN			LOCATION	CAPACITY (GALLONS)	RECOVERY RATE (GPH)	TEMPERATURE RISE (°F)	TEMPERATURE SETTING (°F)	ELECTRICAL DATA				NOTES
	MANUFACTURER	MODEL							INPUT RATE (KW)	VOLTAGE	PHASE	HERTZ	
EWH-1	AO SMITH	DEN-30		STORAGE PH06	30	24	100	140	6	480	3	60	1, 2

NOTES:  
1. KW INPUT RATE FOR ELECTRIC WATER HEATERS BASED ON FULL LOAD SIMULTANEOUS OPERATION.  
2. PROVIDE PARALLEL INSTALLATIONS WITH PRECISION CUT EQUAL LEG PIPING, REVERSE-RETURN MANIFOLD PIPING, OR MANUFACTURER'S MANIFOLD INSTALLATION KIT. REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS AND RECOMMENDATIONS.

GAS WATER HEATER SCHEDULE														
TAG	BASIS OF DESIGN		LOCATION	CAPACITY (GALLONS)	RECOVERY RATE (GPH)	TEMPERATURE RISE (°F)	TEMPERATURE SETTING (°F)	TYPE	FUEL DATA		ELECTRICAL DATA			NOTES
	MANUFACTURER	MODEL							INPUT RATE (BTU/H)	MAX. INLET PRESSURE (INCHES W.C.)	VOLTAGE	PHASE	HERTZ	
GWH-1	AO SMITH	BTH-300A	MECHANICAL B119	220	342	100	140	NATURAL GAS	300000	14	120	1	60	1, 2
GWH-2	AO SMITH	BTH-300A	MECHANICAL B119	220	342	100	140	NATURAL GAS	300000	14	120	1	60	1, 2
GWH-3	AO SMITH	BTH-300A	MECHANICAL B119	220	342	100	140	NATURAL GAS	300000	14	120	1	60	1, 2

NOTES:  
1. PROVIDE PARALLEL INSTALLATIONS WITH PRECISION CUT EQUAL LEG PIPING, REVERSE-RETURN MANIFOLD PIPING, OR MANUFACTURER'S MANIFOLD INSTALLATION KIT. REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS AND RECOMMENDATIONS.  
2. REFER TO ALL MANUFACTURER'S RECOMMENDATIONS, DIAGRAMS, AND INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS. COORDINATE FINAL HEATER SELECTION'S INTEGRAL CIRCULATION PUMP WITH ELECTRICAL.

INTERCEPTOR AND SEPARATOR SCHEDULE													
TAG	BASIS OF DESIGN		LOCATION	FLOW (GPM)	CAPACITY (GALLONS)	OPERATING DATA	ELECTRICAL DATA			CONNECTION SIZE		NOTES	
	MANUFACTURER	MODEL					VOLTAGE	PHASE	HERTZ	INLET (IN)	OUTLET (IN)		
GI-1	HIGHLAND	PGI-2500-3	EXTERIOR BELOW GRADE	0	2515	CONTAMINATE RETENTION VOLUME (GAL)	643	120	1	60	4"	4"	1, 2, 3, 4, 5

NOTES:  
1. PROVIDE GREASE INTERCEPTOR UNIT WITH FOGS MONITORING ALARM SYSTEM WITH REMOTE LOCATED PANEL.  
2. PROVIDE INTERCEPTOR WITH CONCRETE ANCHORING PAD, DEADMAN ANCHORS, OR MANUFACTURER RECOMMENDED ANCHORING METHOD AND ALL ASSOCIATED INSTALLATION ACCESSORIES.  
3. PROVIDE INTERCEPTOR WITH CONCRETE RELIEVING SLAB AND TRAFFIC-RATED COVERS AND ACCESSORIES FOR INSTALLATIONS SUBJECT TO VEHICULAR TRAFFIC.  
4. PROVIDE INTERCEPTOR WITH PUMPED REMOTE DRAFFOFF. VERIFY FINAL INSTALLATION DOES NOT EXCEED RISE AND RUN LIMITATIONS OF PUMPED REMOTE DRAFFOFF SYSTEM.  
5. PROVIDE VENT PER MANUFACTURER RECOMMENDATIONS.

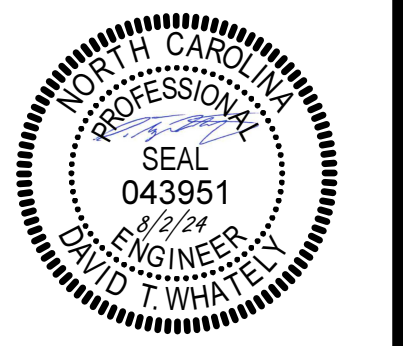
PUMP SCHEDULE																
TAG	BASIS OF DESIGN		LOCATION	SYSTEM TYPE	PUMP TYPE	OPERATING DATA				ELECTRICAL DATA			CONNECTION SIZE		NOTES	
	MANUFACTURER	MODEL				FLOW (GPM)	PRESSURE (FT)	EFFICIENCY	POWER (HP)	SPEED (RPM)	VOLTS	PHASE	HERTZ	INLET (IN)		OUTLET (IN)
RCP-1	GRUNDFOS	MAGNA3 32-100F	MECHANICAL B119	HOT WATER (110°F) RECIRCULATION	BUILDING CIRCULATION	0	25	85%	0.40	3450	120	1	60	1"	1"	1
RCP-2	GRUNDFOS	MAGNA3 32-100F	MECHANICAL B119	HOT WATER (140°F) RECIRCULATION	BUILDING CIRCULATION	0	15	86%	0.40	3450	120	1	60	1"	1"	1
SP-1	ZOELLER	FLOW-MATE 163 SERIES	ELEVATOR SUMP PIT	FORCE MAIN	SUMP	50	30	NA	0.50	3450	120	1	60	2"	2"	2
SP-2	ZOELLER	FLOW-MATE 163 SERIES	ELEVATOR SUMP PIT	FORCE MAIN	SUMP	50	30	NA	0.50	3450	120	1	60	2"	2"	2

NOTES:  
1. PROVIDE DUPLEX DOMESTIC HOT WATER RECIRCULATION PUMPS FOR EACH TEMPERATURE DELIVERED AND RETURNED WITH ALTERNATING LEAD/STANDBY.  
2. PROVIDE FULLY-PACKAGED ELEVATOR SUMP PUMP ASSEMBLY WITH AUDIBLE AND VISUAL FLOW ALARM LINKED TO BAS. MINIMUM REQUIRED PUMP FLOW RATE SHALL BE 50GPM PER ELEVATOR CAR/CAB.

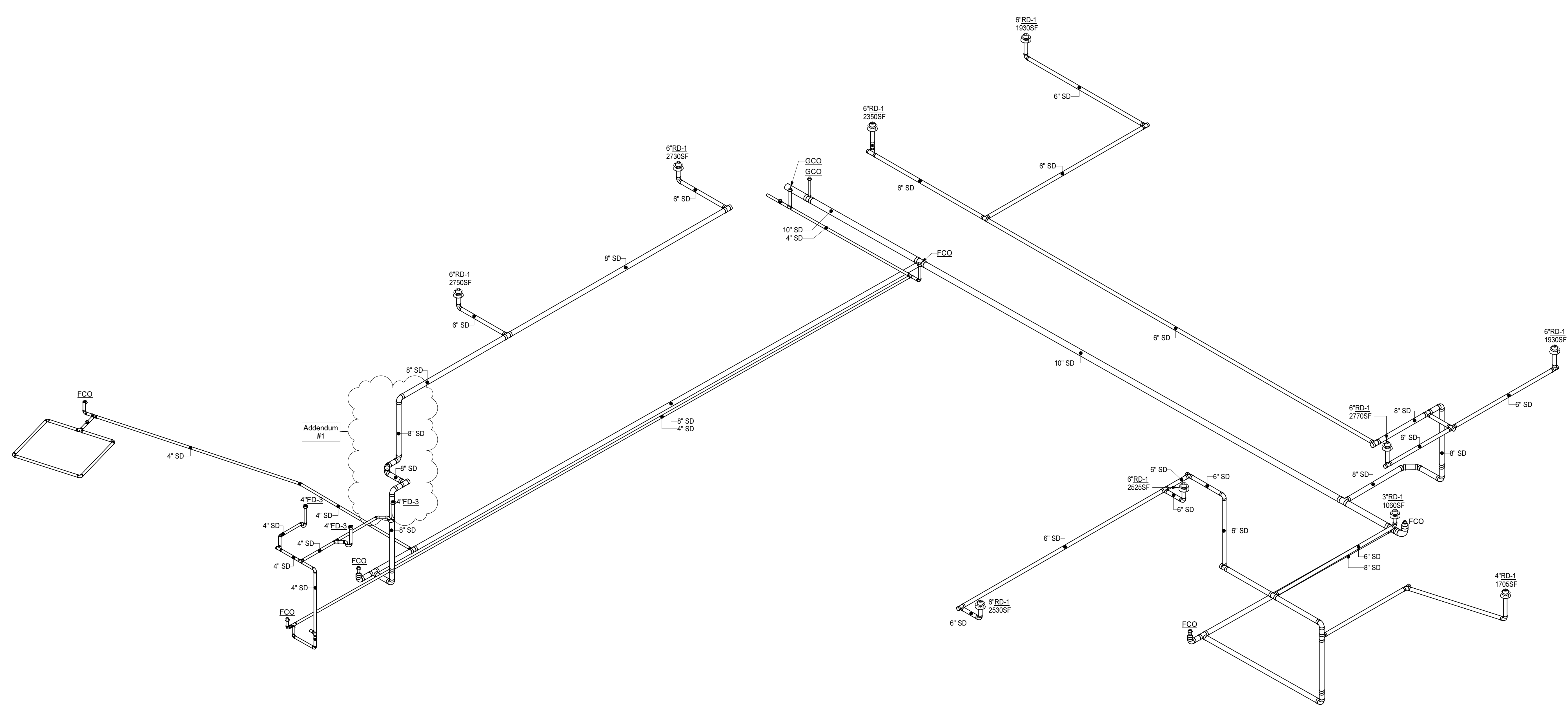
TANK SCHEDULE												
TAG	BASIS OF DESIGN		LOCATION	SYSTEM TYPE	TANK TYPE	OPERATING DATA			ASME CODE CONSTRUCTION (YES / NO)	CONNECTION SIZE		NOTES
	MANUFACTURER	MODEL				CAPACITY (GAL)	ACCEPTANCE (GAL)	AIR PRE-CHARGE PRESSURE (PSI)		INLET (IN)	OUTLET (IN)	
ET-1	AMTROL	ST-70V-C	MECHANICAL B119	DHW	EXPANSION	34	11	55	YES	3/4"	3/4"	

THERMOSTATIC MIXING VALVE SCHEDULE										
TAG	BASIS OF DESIGN		DESIGN FLOW (GPM)	FLOW RANGE (GPM)	MAX P.D. AT DESIGN FLOW (PSI)	HW SYSTEM TEMPERATURES		CONNECTION SIZE		NOTES
	MANUFACTURER	MODEL				INLET (°F)	OUTLET (°F)	INLET (IN)	OUTLET (IN)	
EM-TMV	BRADLEY	S19-2250-EFX50-RBP	22	3-40	5	120	85	1 1/2"	1 1/2"	1, 2, 3
TMV-1	POWERS	LFSH1435-1	67	67-232	5	160	120	2"	2"	1
TMV-2	POWERS	LFSH1434-1	42	42-147	5	160	140	1 1/4"	1 1/2"	1
TMV-3	POWERS	LFSH1432-1	19	19-66	5	160	120	3/4"	1"	1
TMV-4	POWERS	LFLM465-1	2	0.50-4.50	5	120	95	1/2"	1/2"	1, 4

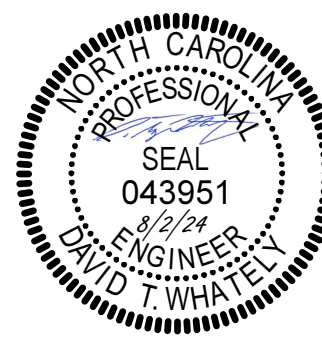
NOTES:  
1. PROVIDE THERMOSTATIC MIXING VALVE ASSEMBLY WITH STAINLESS STEEL WALL-MOUNTED CABINET AND TIP GAUGES ON INLETS AND OUTLET.  
2. DESIGN FLOW AND PRESSURE DROP BASED ON 5.1GPM EYE/FACE WASH AND 22GPM SHOWER ASSEMBLY.  
3. PROVIDE UNIT CONCEALED ABOVE CEILING FOR CASEWORK SAFETY CABINETS.  
4. PROVIDE ASSE-1070 VALVE FOR ALL PUBLIC LAVATORIES AND SINKS. UNIT SHALL BE MOUNTED CONCEALED FROM VIEW BELOW FIXTURE.







**STORM RISER DIAGRAM - AREA B**  
NO SCALE

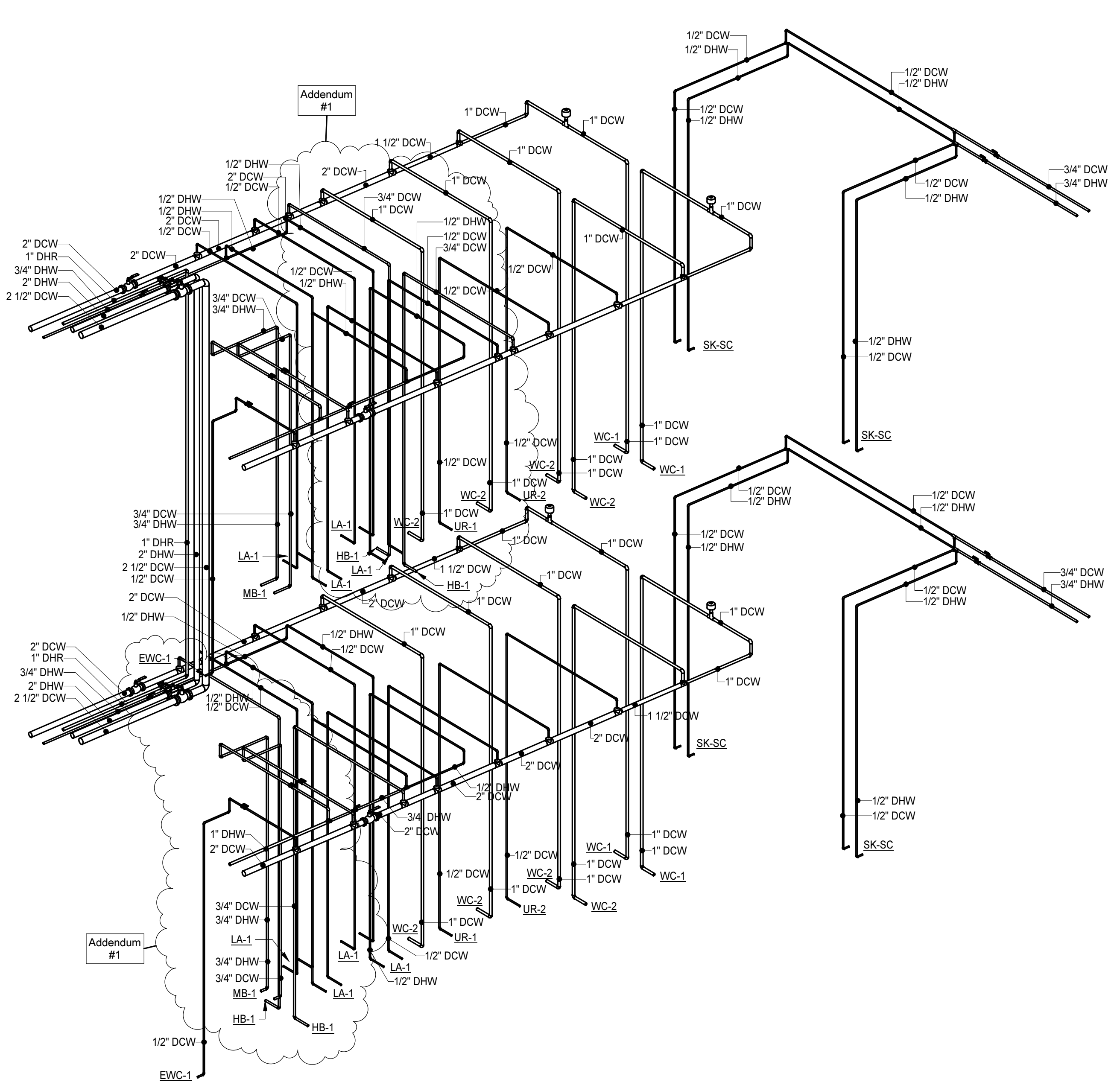


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

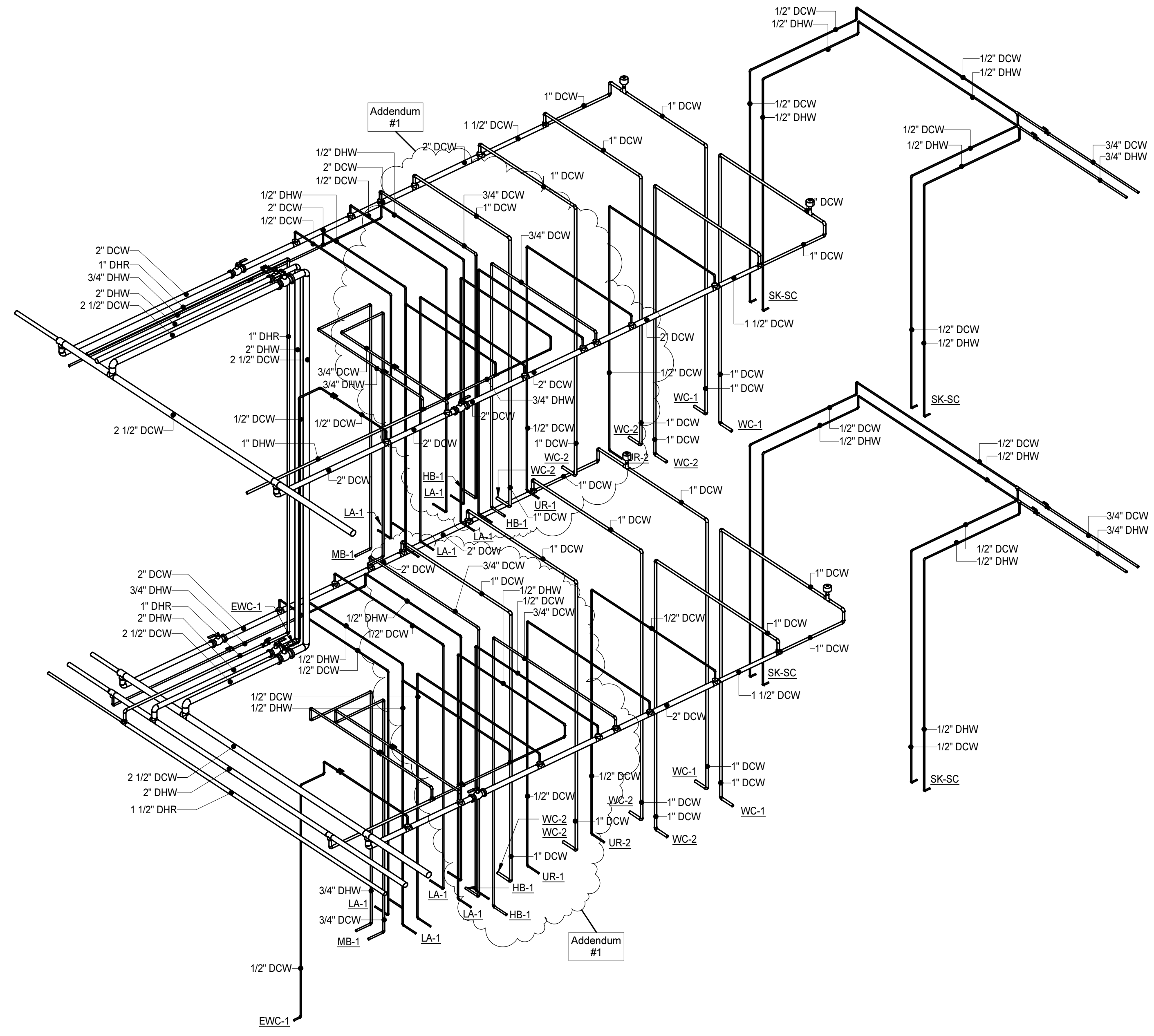




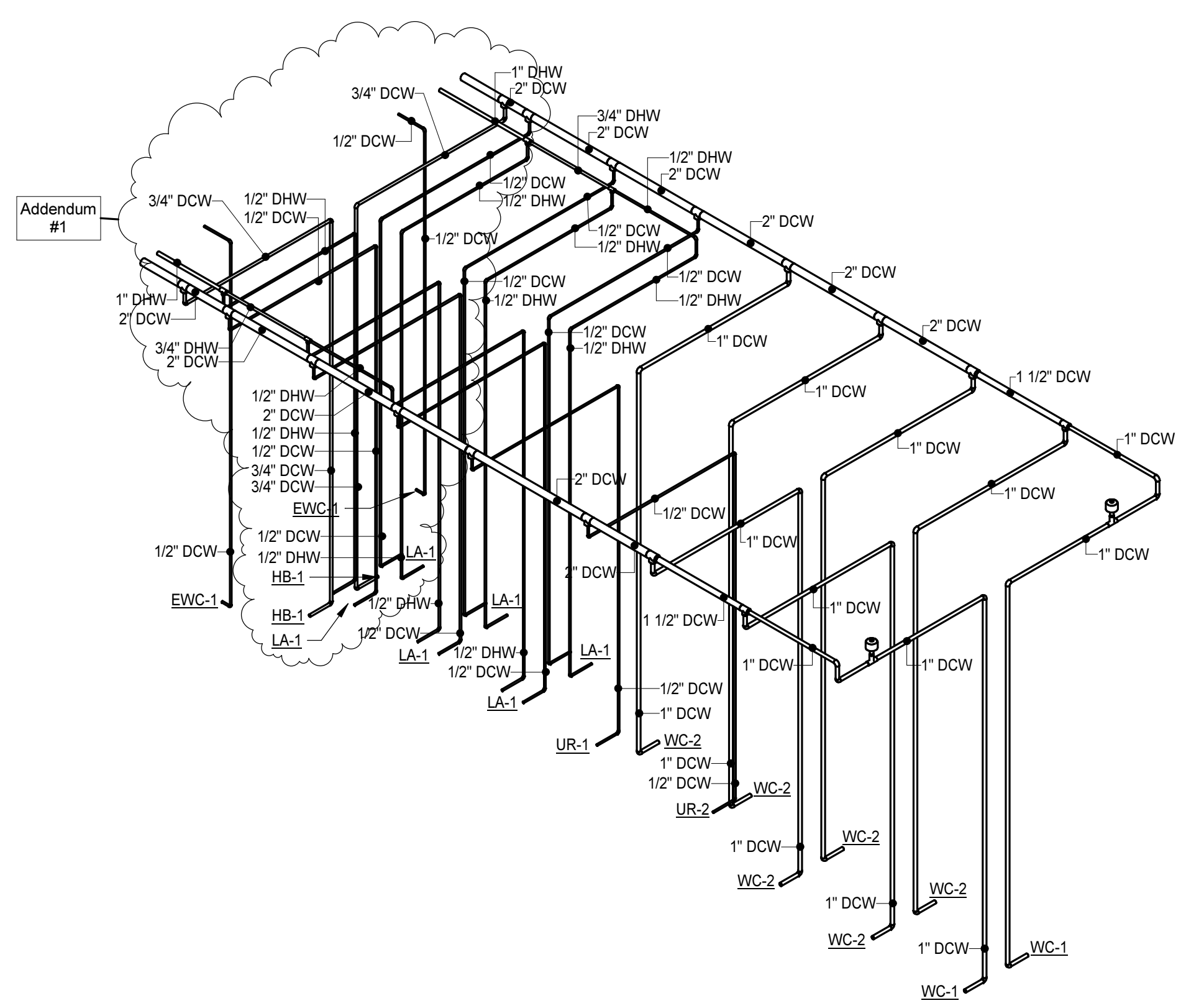
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1



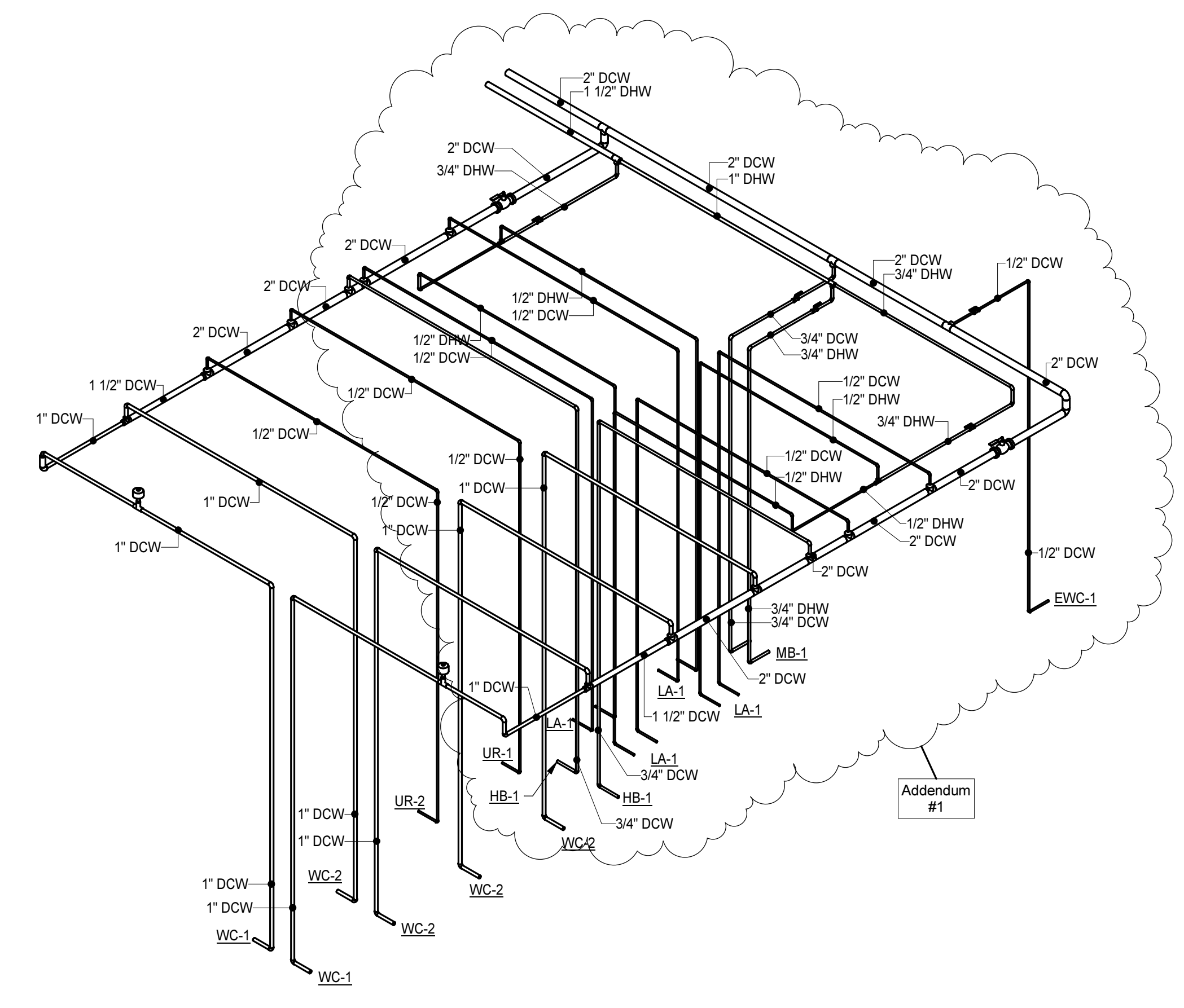
**DOMESTIC RISER DIAGRAM - BATHROOM GROUP AREA E**  
NO SCALE



**DOMESTIC RISER DIAGRAM - BATHROOM GROUP AREA D**  
NO SCALE



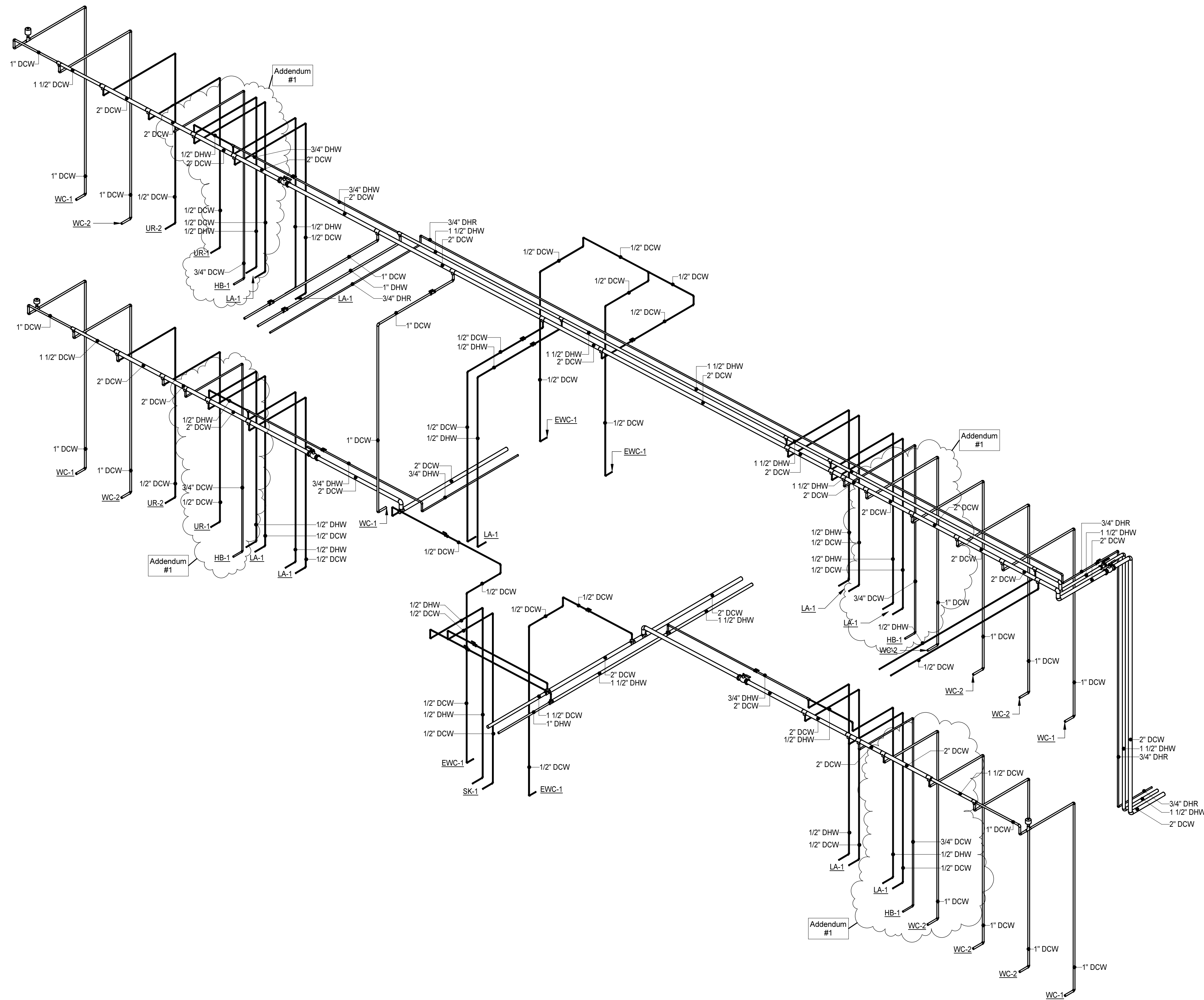
**DOMESTIC RISER DIAGRAM - A152 & A153**  
NO SCALE



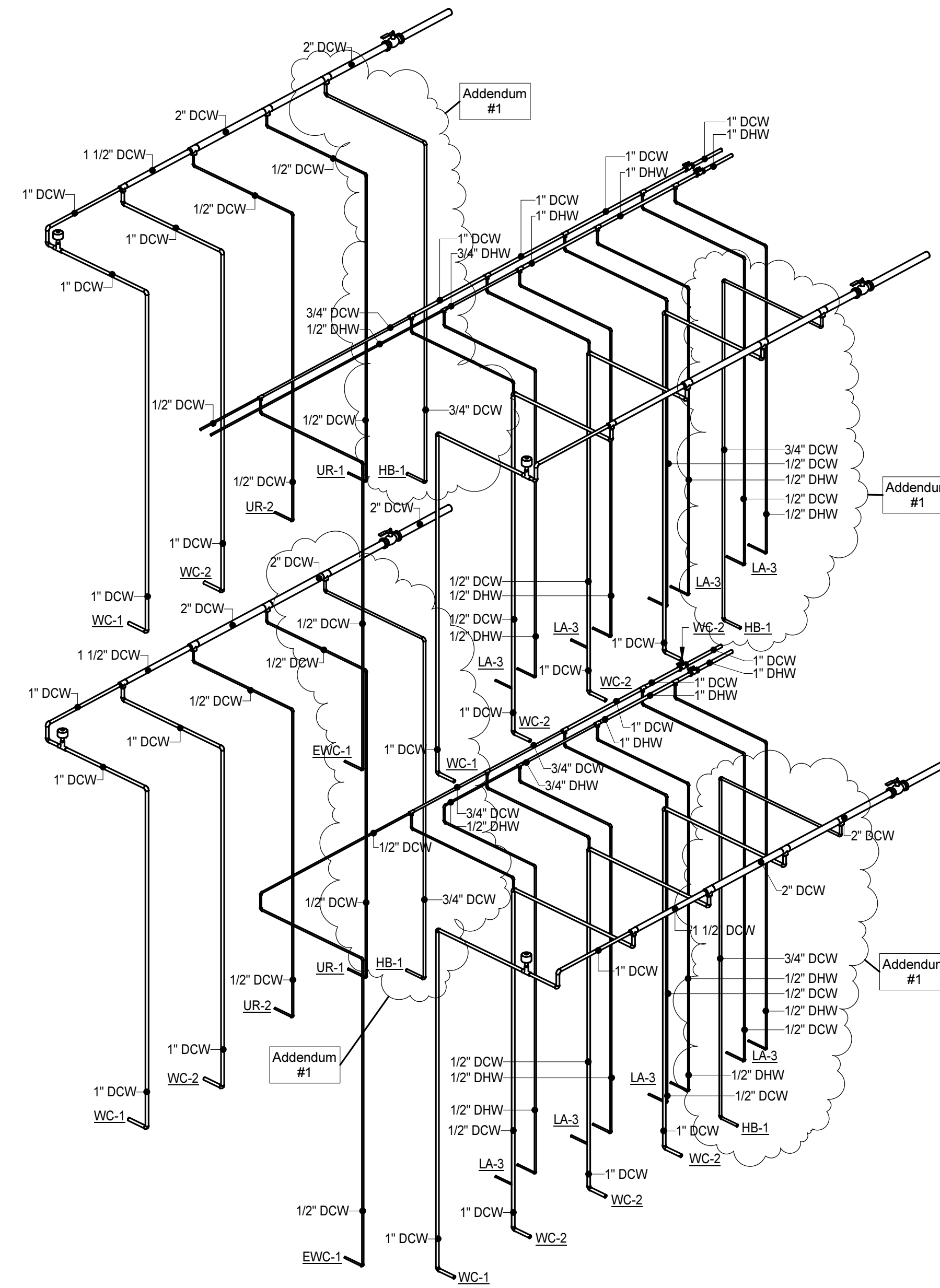
**DOMESTIC RISER DIAGRAM - A137 & A138**  
NO SCALE



DOMESTIC RISER DIAGRAM - BATHROOM GROUP AREA C  
NO SCALE

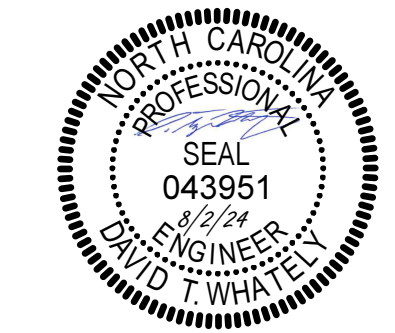


DOMESTIC RISER DIAGRAM - BATHROOM GROUP AREA H  
NO SCALE

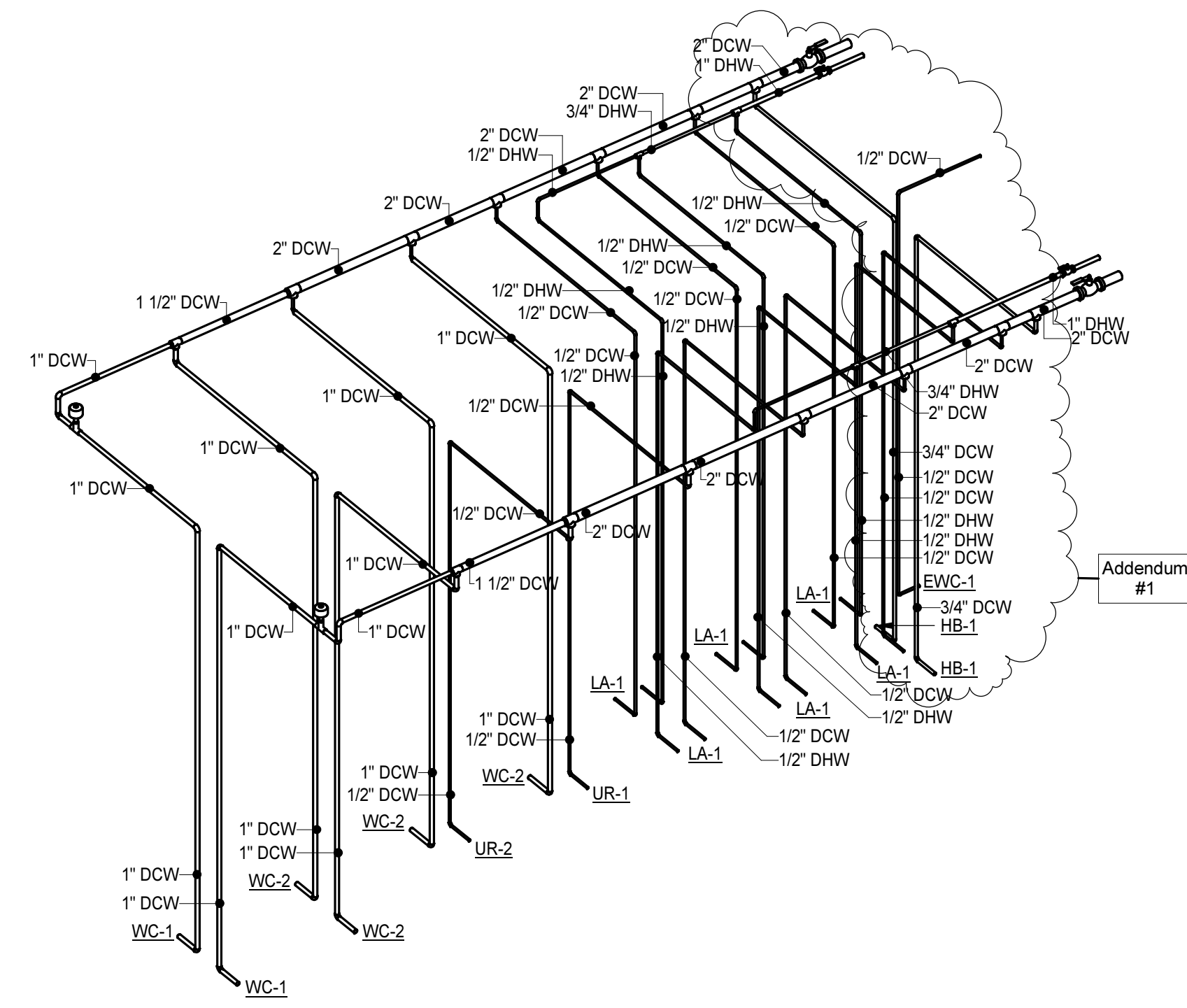


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1

**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

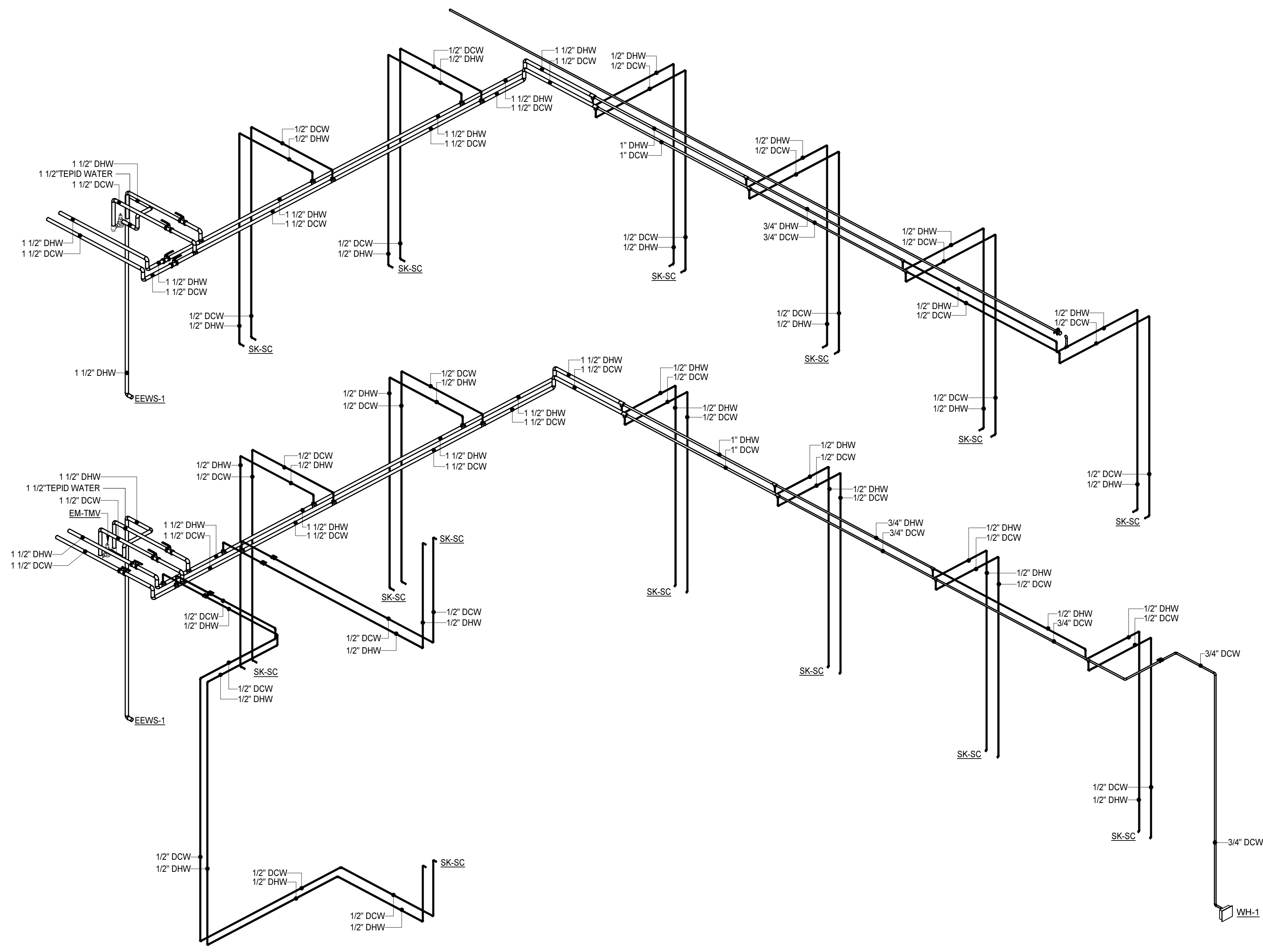






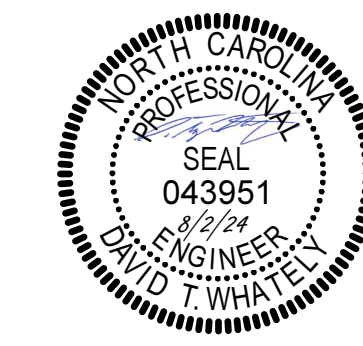
DOMESTIC RISER DIAGRAM - F202 & G222

NO SCALE



DOMESTIC RISER DIAGRAM - TYP SCIENCE LAB

NO SCALE



PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
08/16/24	Addendum #1





AIR HANDLING UNIT SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	SERVING	SUPPLY FAN										HYDRONIC PRE-HEATING COIL										HYDRONIC COOLING COIL										HYDRONIC RE-HEATING COIL										ELECTRICAL DATA									
				DESIGN AIRFLOW (CFM)	ESP (IN WC)	DIA (IN)	TYPE	FAN SPEED (RPM)	MOTOR SIZE (HP)	BHP	OUTSIDE AIRFLOW (CFM)	CO2 MIN (CFM)	UPD (CFM)	DESIGN AIRFLOW (CFM)	SENSIBLE CAPACITY (BTUH)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	WPD (FT WC)	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	WPD (FT WC)	DESIGN AIRFLOW (CFM)	SENSIBLE CAPACITY (BTUH)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	WPD (FT WC)	DESIGN AIRFLOW (CFM)	SENSIBLE CAPACITY (BTUH)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	WPD (FT WC)	UNIT FLOW (A)	UNIT MOCP (A)	(V)	(PH)	(HZ)	WEIGHT (LBS)	NOTES	CONTROL DIAGRAM
AHU-A-21	TRANE	CSAA D12	MS MEDIA CENTER	5,950	2.00	20.00	DD PF	2260	10	7.9	2,225	600	600	5,950	247,790	51.8	90.0	140	110	17	15.0	349,590	185,180	80.1	70.5	52.0	51.9	44	60	44	15.0	2,975	56,070	52.0	70.0	140	110	4.0	5.0	14.2	17.7	30.0	480	3	60	3,000	1.2, 3, 5	M7.1, DETAIL 1					
AHU-B-11	TRANE	CSAA D17	ES DINING	6,800	1.75	22.25	DD PF	2190	15	12.0	2,100	900	900	6,800	453,020	42.8	90.0	140	110	31	15.0	612,760	301,790	82.8	74.7	52.0	51.9	44	60	84	15.0	5,100	99,660	52.0	70.0	140	110	7.0	5.0	11.2	14.0	20.0	480	3	60	3,000	1.2, 3, 5	M7.1, DETAIL 1					
AHU-B-12	TRANE	CSAA D14	ES DINING	7,000	1.75	22.25	DD PF	2140	15	8.9	4,800	700	700	7,000	385,650	39.2	90.0	140	110	26	15.0	520,330	246,870	83.7	74.5	52.0	51.9	44	60	65	15.0	4,600	89,800	52.0	70.0	140	110	6.0	5.0	11.2	14.0	20.0	480	3	60	3,000	1.2, 3, 5	M7.1, DETAIL 1					
AHU-B-13	TRANE	CSAA 008	KITCHEN	3,500	2.00	18.25	DD PF	2340	5	4.4	800	300	300	3,500	123,740	57.4	90.0	140	110	9	15.0	163,390	101,200	78.2	67.3	52.0	51.9	44	60	21	15.0	1,750	34,160	52.0	70.0	140	110	3.0	5.0	8.4	10.5	15.0	480	3	60	2,500	1.2, 3, 5	M7.1, DETAIL 1					
AHU-B-15	TRANE	CSAA 008	ES ART	3,900	2.00	18.25	DD PF	2500	7.5	5.2	700	300	300	3,900	126,460	60.1	90.0	140	110	9	15.0	164,170	108,750	77.3	66.0	52.0	51.9	44	60	21	15.0	1,950	42,500	52.0	70.0	140	110	3.0	5.0	11.2	14.0	20.0	480	3	60	2,500	1.2, 3, 5	M7.1, DETAIL 1					
AHU-C-11	TRANE	CSAA D12	PART C - 1ST FL	6,000	1.75	20.00	DD PF	2190	7.5	6.9	1,475	700	700	6,000	247,790	51.8	90.0	140	110	31	15.0	612,760	301,790	82.8	74.7	52.0	51.9	44	60	84	15.0	5,100	99,660	52.0	70.0	140	110	7.0	5.0	11.2	14.0	20.0	480	3	60	3,000	1.2, 3, 5	M7.1, DETAIL 2					
AHU-C-21	TRANE	CSAA D14	PART C - 1ST FL	6,800	1.75	20.00	DD PF	2315	10	8.2	1,675	800	800	6,800	453,020	42.8	90.0	140	110	31	15.0	612,760	301,790	82.8	74.7	52.0	51.9	44	60	84	15.0	5,100	99,660	52.0	70.0	140	110	7.0	5.0	11.2	14.0	20.0	480	3	60	3,000	1.2, 3, 5	M7.1, DETAIL 2					
AHU-D-11	TRANE	CSAA D12	PART D - 1ST FL - NORTH	6,200	2.00	22.25	DD PF	2020	10	8.0	2,200	600	600	6,200	312,490	66.940	76.7	68.3	52.0	51.9	44	60	39	15.0	6,200	252,150	52.5	90.0	140	110	17.0	5.0	14.2	17.7	30.0	480	3	60	2,800	1.2, 3, 4	M7.1, DETAIL 2												
AHU-D-12	TRANE	CSAA 006	PART D - 1ST FL - CORE	2,600	2.00	16.50	DD PF	2400	5	3.1	600	250	250	2,600	96,490	68.970	76.1	64.6	52.0	51.9	44	60	13	15.0	2,600	92,770	57.1	90.0	140	110	7.0	5.0	8.4	10.5	15.0	480	3	60	2,000	1.2, 3, 4	M7.1, DETAIL 2												
AHU-D-13	TRANE	CSAA D12	PART D - 1ST FL - SOUTH	5,600	2.00	22.25	DD PF	1960	10	7.2	2,200	600	600	5,600	282,280	161,640	76.8	67.6	52.0	51.9	44	60	38	15.0	5,900	245,090	51.7	90.0	140	110	17.0	5.0	14.2	17.7	30.0	480	3	60	2,800	1.2, 3, 4	M7.1, DETAIL 2												
AHU-D-21	TRANE	CSAA D12	PART D - 1ST FL - NORTH	6,400	2.00	22.25	DD PF	2045	10	8.3	2,200	600	600	6,400	306,090	175,360	77.0	67.7	52.0	51.9	44	60	38	15.0	6,300	241,720	54.9	90.0	140	110	17.0	5.0	14.2	17.7	30.0	480	3	60	2,800	1.2, 3, 4	M7.1, DETAIL 2												
AHU-D-22	TRANE	CSAA 006	PART D - 1ST FL - CORE	3,100	2.00	16.50	DD PF	2675	5	4.5	800	300	300	3,100	119,760	84,940	76.8	65.0	52.0	51.9	44	60	15	15.0	3,200	126,320	53.6	90.0	140	110	9.0	5.0	8.4	10.5	15.0	480	3	60	2,000	1.2, 3, 4	M7.1, DETAIL 2												
AHU-D-23	TRANE	CSAA D12	PART D - 1ST FL - SOUTH	6,350	2.00	22.25	DD PF	1915	10	8.2	2,150	650	650	6,350	294,470	173,180	76.7	67.2	52.0	51.9	44	60	37	15.0	6,350	253,430	53.2	90.0	140	110	17.0	5.0	14.2	17.7	30.0	480	3	60	2,800	1.2, 3, 4	M7.1, DETAIL 2												
AHU-E-11	TRANE	CSAA 014	PART E - 1ST FL - NORTH	6,500	2.00	20.00	DD PF	2255	10	7.6	2,450	650	650	6,500	325,350	177,370	76.7	68.2	52.0	51.9	44	60	41	15.0	6,500	269,990	51.7	90.0	140	110	18.0	5.0	14.2	17.7	30.0	480	3	60	2,800	1.2, 3, 4	M7.1, DETAIL 2												
AHU-E-12	TRANE	CSAA 006	PART E - 1ST FL - CORE	2,650	2.00	16.50	DD PF	2470	5	3.3	1,050	250	250	2,650	98,810	70,300	76.1	64.6	52.0	51.9	44	60	13	15.0	2,650	113,230	50.6	90.0	140	110	8.0	5.0	8.4	10.5	15.0	480	3	60	2,000	1.2, 3, 4	M7.1, DETAIL 2												
AHU-E-13	TRANE	CSAA D14	PART E - 1ST FL - SOUTH	6,650	2.00	20.00	DD PF	2300	10	8.3	2,425	650	650	6,650	315,760	161,430	76.7	67.5	52.0	51.9	44	60	40	15.0	6,650	274,050	52.0	90.0	140	110	18.0	5.0	14.2	17.7	30.0	480	3	60	2,800	1.2, 3, 4	M7.1, DETAIL 2												
AHU-E-14	TRANE	CSAA D14	PART E - 2ND FL - NORTH	7,000	2.00	22.25	DD PF	1975	10	8.6	2,425	700	700	7,000	342,650	190,320	76.6	67.9	52.0	51.9	44	60	43	15.0	7,000	282,400	52.8	90.0	140	110	19.0	5.0	14.2	17.7	30.0	480	3	60	2,800	1.2, 3, 4	M7.1, DETAIL 2												
AHU-E-22	TRANE	CSAA 006	PART E - 2ND FL - SOUTH	3,200	2.00	16.50	DD PF	2680	5	4.5	1,050	250	250	3,200	113,860	85,880	76.4	64.1	52.0	51.9	44	60	15	15.0	3,200	126,320	53.6	90.0	140	110	9.0	5.0	8.4	10.5	15.0	480	3	60	2,000	1.2, 3, 4	M7.1, DETAIL 2												
AHU-E-23	TRANE	CSAA 014	PART E - 2ND FL - CORE	7,200	2.00	22.25	DD PF	2060	15	9.2	2,425	700	700	7,200	331,440	196,330	76.7	67.1	52.0	51.9	44	60	42	15.0	7,200	287,350	53.2	90.0	140	110	20.0	5.0	14.2	17.7	30.0	480	3	60	2,800	1.2, 3, 4	M7.1, DETAIL 2												
AHU-F-11	TRANE	CSAA D10	ES MEDIA CENTER	4,400	1.75	20.00	DD PF	2120	7.5	5.0	1,550	450	450	4,400	289,480	142,610	81.2	72.3	52.0	51.9	44	60	36	15.0	2,200	42,950	52.0	70.0	140	110	3.0	5.0	11.2	14.0	20.0	480	3	60	2,700	1.2, 3, 4	M7.1, DETAIL 1												
AHU-F-12	TRANE	CSAA 008	ES MUSIC	3,500	1.85	18.25	DD PF	2330	7.5	4.2	1,375	350	350	3,500	146,790	107,860	79.8	71.0	52.0	51.9	44	60	27	15.0	1,750	34,160	52.0	70.0	140	110	3.0	5.0	11.2	14.0	20.0	480	3	60	2,500	1.2, 3, 4	M7.1, DETAIL 1												
AHU-F-13	TRANE	CSAA D10	ES GYM	4,000	1.75	18.25	DD PF	2470	7.5	5.0	1,550	900	400	4,000	169,180	124,040	80.2	65.2	52.0	51.9	44	60	20	15.0	2,000	39,040	52.0	70.0	140	110	3.0	5.0	11.2	14.0	20.0	480	3	60	2,500	1.2, 3, 4	M7.1, DETAIL 1												
AHU-G-11	TRANE	CSAA 008	PART G - 1ST FL - NORTH	3,800	2.00	18.25	DD PF	2450	7.5	4.9	1,125	425	425	3,800	160,490	99,520	75.7	67.5	52.0	51.9	44	60	23	15.0	3,800	144,240	56.0	90.0	140	110	10.0	5.0	11.2	14.0	20.0	480	3	60	2,300	1.2, 3, 4	M7.1, DETAIL 2												
AHU-G-13	TRANE	CSAA D10	PART G - 1ST FL - SOUTH	5,100	2.00	20.00	DD PF	2390	7.5	7.2	1,250	450	450	5,100	233,010	136,820	76.3	67.0	52.0	51.9	44	60	29	15.0	5,100	180,860	57.3	90.0	140	110	12.0	5.0	11.2	14.0	20.0	480	3	60	2,500	1.2, 3, 4	M7.1, DETAIL 2												
AHU-G-21	TRANE	CSAA D10	PART G - 2ND FL - NORTH	4,700	2.00	20.00	DD PF	2220	7.5	5.8	1,225	525	525	4,700	189,140	128,670	76.5	65.5	52.0	51.9	44	60	24	15.0	4,700	172,240	56.6	90.0	140	110	12.0	5.0	11.2	14.0	20.0	480	3	60	2,500	1.2, 3, 4	M7.1, DETAIL 2												
AHU-H-11	TRANE	CSAA D10	PART H - 1ST FL - SOUTH	5,400	2.00	20.00	DD PF	2410	10	7.5	1,225	450	450	5,400	205,550	142,960	76.0	64.9	52.0	51.9	44	60	24	15.0	5,400	167,400	56.0	90.0	140	110	13.0	5.0	11.2	14.0	20.0	480	3	60	2,500	1.2, 3, 4	M7.1, DETAIL 2												
AHU-H-11	TRANE	CSAA 008	PART H - 1ST FL - NORTH	4,100	2.00	18.25	DD PF	2550	7.5	5.5	1,075	425	425	4,100	166,400	110,260	76.4	65.7	52.0	51.9	44	60	21	15.0	4,100	152,510	56.7	90.0	140	110	11.0	5.0	11.2	14.0	20.0	480	3	60	2,300	1.2, 3, 4	M7.1, DETAIL 2												
AHU-H-13	TRANE	CSAA D12	PART H - 1ST FL - SOUTH	5,700	2.00	22.25	DD PF	1925	7.5	6.4	1,360	600	600	5,700	224,250	151,940	76.2	65.2	52.0	51.9	44	60	28	15.0	5,700	200,290	57.6	90.0	140	110	14.0	5.0	11.2	14.0	20.0	480	3	60	2,700	1.2, 3, 4	M7.1, DETAIL 2												
AHU-H-21	TRANE	CSAA D12	PART H - 2ND FL - NORTH	4,900	2.00	20.00	DD PF	2275	7.5	6																																											



GRILLE, REGISTER, & DIFFUSER SCHEDULE									
TAG	MANUFACTURER	MODEL NUMBER	MOUNTING STYLE	NECK SIZE	FACE SIZE	MAX NC LEVEL	NOTES		
S1	PRICE	ASDA-4C	LAY-IN	6e	24x24	18	1		
S2	PRICE	ASDA-4C	LAY-IN	8e	24x24	18	1		
S3	PRICE	ASDA-4C	LAY-IN	10e	24x24	18	1		
S4	PRICE	ASDA-4C	LAY-IN	12e	24x24	18	1		
S5	PRICE	620-F	SURFACE	8x8	10x10	18	-		
S7	PRICE	HCDZ	DUCT	18x6	-	25	2		
S8	PRICE	LBP-15B	SURFACE	50x8	48x8	18	-		
S9	PRICE	LBP-15A	SURFACE	62x8	60x8	18	-		
R1	PRICE	635-TB	LAY-IN	22x22	24x24	18	3		
R2	PRICE	635-F	SURFACE	22x22	24x24	18	3		
R3	PRICE	635-F	SURFACE	22x22	24x24	18	3		
R4	PRICE	635-TB	LAY-IN	32x24	34x26	18	3		
R5	PRICE	96-F	SURFACE	72x40	74x42	18	3		
R6	PRICE	635F-TB	LAY-IN	22x22	24x24	18	3, 4		
E1	PRICE	635-F	LAY-IN	24x24	22x22	18	3		
E2	PRICE	635-F	SURFACE	8x8	10x10	18	3		
E3	PRICE	635-TB	LAY-IN	12x12	10x10	18	-		
T1	PRICE	635-TB	LAY-IN	10x10	12x12	18	3		
T2	PRICE	635-TB	LAY-IN	22x22	24x24	18	3		

NOTES:  
1. PROVIDE LAY-IN MOUNTING FRAME FOR DIFFUSERS LOCATED IN GYPSUM CEILINGS.  
2. ADJUST HIGH CAPACITY DRUM LOUVER FOR EVEN AIR DISTRIBUTION IN SPACE. PROVIDE SPIRAL DUCT FRAME FOR MOUNTING ON DOUBLE WALL SPIRAL DUCT.  
3. POSITION LOUVERED GRILLE SO BLADES ARE DIRECTED AT CLOSEST WALL, FLOOR, OR CEILING.  
4. PROVIDE RETURN GRILLE WITH 1" FILTER RACK. PROVIDE 1" PLEATED MERV-8 RATED FILTERS.

FAN COIL UNIT SCHEDULE																																
TAG	MANUFACTURER	MODEL NUMBER	SERVING	SUPPLY AIRFLOW (CFM)	ESP (IN WC)	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	HYDRONIC COOLING COIL				HYDRONIC HEATING COIL				ELECTRICAL DATA				WEIGHT (LBS)	NOTES											
								EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	NUMBER OF ROWS	WATER FLOW RATE (GPM)	WPD (FT WC)	CAPACITY (BTUH)			EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	NUMBER OF ROWS	WATER FLOW RATE (GPM)	WPD (FT WC)	MOTOR SIZE (WATTS)	MCA (A)	MOP (A)	(V)
FCU-A-11	TRANE	FCB120	A103-LOBBY	1200	0.25	43,010	31,280	80.0	67.0	56.1	55.4	42	57	3	6.0	15.00	30,350	60.0	80.0	140	110	1	2.0	20.00	1/2	3.6	15.0	277	1	60	182	1, 2, 3, 4
FCU-A-12	TRANE	FCB120	A103-LOBBY	1200	0.25	43,010	31,280	80.0	67.0	56.1	55.4	42	57	3	6.0	15.00	30,350	60.0	80.0	140	110	1	2.0	20.00	1/2	3.6	15.0	277	1	60	182	1, 2, 3, 4
FCU-A-13	TRANE	FCB120	A179-LOBBY	1200	0.25	43,010	31,280	80.0	67.0	56.1	55.4	42	57	3	6.0	15.00	30,350	60.0	80.0	140	110	1	2.0	20.00	1/2	3.6	15.0	277	1	60	182	1, 2, 3, 4
FCU-A-14	TRANE	FCB120	A179-LOBBY	1200	0.25	43,010	31,280	80.0	67.0	56.1	55.4	42	57	3	6.0	15.00	30,350	60.0	80.0	140	110	1	2.0	20.00	1/2	3.6	15.0	277	1	60	182	1, 2, 3, 4
FCU-A-15	TRANE	FCB120	A102-CONCESSIONS	400	0.25	13,510	10,140	80.0	67.0	56.8	56.1	44	57	3	2.0	10.00	11,500	60.0	85.5	140	125	1	1.5	6.00	1/3	2.0	15.0	277	1	60	109	1, 2, 3, 5
FCU-A-21	TRANE	FCB120	A219-MECHANICAL	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-A-22	TRANE	FCB120	A219-MECHANICAL	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-B-11	TRANE	FCB120	B115-MECHANICAL	1200	0.05	43,010	31,280	80.0	67.0	56.7	55.5	44	57	3	6.0	15.00	30,350	60.0	80.0	140	110	1	2.0	20.00	1/2	3.6	15.0	277	1	60	225	1, 2, 3, 4
FCU-B-12	TRANE	FCB120	B115-RECEIVING	1200	0.05	43,010	31,280	80.0	67.0	56.1	55.4	44	57	3	6.0	15.00	30,350	60.0	80.0	140	110	1	2.0	20.00	1/2	3.6	15.0	277	1	60	225	1, 2, 3, 5
FCU-B-13	TRANE	FCB120	B115-RECEIVING	1200	0.05	43,010	31,280	80.0	67.0	56.1	55.4	44	57	3	6.0	15.00	30,350	60.0	80.0	140	110	1	2.0	20.00	1/2	3.6	15.0	277	1	60	225	1, 2, 3, 5
FCU-C-11	TRANE	FCB120	C115-MECHANICAL	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-C-21	TRANE	FCB120	C225-MECHANICAL	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-D-11	TRANE	FCB120	MP01-MECH PLATFORM	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-D-21	TRANE	FCB120	D225-MECHANICAL	200	0.05	6,780	4,850	80.0	67.0	57.7	56.1	44	60	3	1.5	5.00	5,040	60.0	83.2	140	130	1	1.0	1.00	1/4	2.0	15.0	277	1	60	100	1, 2, 3, 4
FCU-E-11	TRANE	FCB120	E125-MECHANICAL	200	0.05	6,780	4,850	80.0	67.0	57.7	56.1	44	60	3	1.5	5.00	5,040	60.0	83.2	140	130	1	1.0	1.00	1/4	2.0	15.0	277	1	60	100	1, 2, 3, 4
FCU-E-21	TRANE	FCB120	E225-MECHANICAL	200	0.05	6,780	4,850	80.0	67.0	57.7	56.1	44	60	3	1.5	5.00	5,040	60.0	83.2	140	130	1	1.0	1.00	1/4	2.0	15.0	277	1	60	100	1, 2, 3, 4
FCU-E-31	TRANE	FCB120	MP02-MECH PLATFORM	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-F-11	TRANE	FCB120	F101-STAIR	400	0.25	14,210	10,140	80.0	67.0	56.0	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	109	1, 2, 3, 5
FCU-F-21	TRANE	FCB120	F205-MECHANICAL	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-F-22	TRANE	FCB120	F204-STAIR	400	0.25	14,210	10,140	80.0	67.0	56.0	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	0.00	1/4	2.0	15.0	277	1	60	109	1, 2, 3, 5
FCU-G-11	TRANE	FCB080	G102-STAIR	800	0.25	26,310	19,470	80.0	67.0	57.7	56.4	44	60	4	5.0	15.00	16,000	60.0	90.0	140	120	1	2.0	0.00	1/4	2.0	15.0	277	1	60	147	1, 2, 3, 5
FCU-G-12	TRANE	FCB120	G125-MECHANICAL	200	0.05	6,780	4,850	80.0	67.0	57.7	56.1	44	60	3	1.5	5.00	5,040	60.0	83.2	140	130	1	1.0	1.00	1/4	2.0	15.0	277	1	60	100	1, 2, 3, 4
FCU-G-21	TRANE	FCB080	F101-STAIR	800	0.25	26,310	19,470	80.0	67.0	57.7	56.4	44	60	4	5.0	15.00	16,000	60.0	90.0	140	120	1	2.0	0.00	1/4	2.0	15.0	277	1	60	147	1, 2, 3, 5
FCU-G-22	TRANE	FCB120	G217-MECHANICAL	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-G-31	TRANE	FCB120	MP03-MECH PLATFORM	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-H-11	TRANE	FCB080	F101-STAIR	800	0.25	26,310	19,470	80.0	67.0	57.7	56.4	44	60	4	5.0	15.00	16,000	60.0	90.0	140	120	1	2.0	0.00	1/4	2.0	15.0	277	1	60	147	1, 2, 3, 5
FCU-H-12	TRANE	FCB120	H125-MECHANICAL	200	0.05	6,780	4,850	80.0	67.0	57.7	56.1	44	60	3	1.5	5.00	5,040	60.0	83.2	140	130	1	1.0	1.00	1/4	2.0	15.0	277	1	60	100	1, 2, 3, 4
FCU-H-21	TRANE	FCB080	F101-STAIR	800	0.25	26,310	19,470	80.0	67.0	57.7	56.4	44	60	4	5.0	15.00	16,000	60.0	90.0	140	120	1	2.0	0.00	1/4	2.0	15.0	277	1	60	147	1, 2, 3, 5
FCU-H-22	TRANE	FCB120	H217-MECHANICAL	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4
FCU-H-31	TRANE	FCB120	MP04-MECH PLATFORM	400	0.05	14,210	10,140	80.0	67.0	56.7	55.5	44	60	3	3.0	15.00	8,720	60.0	80.1	140	131	1	2.0	1.00	1/4	2.0	15.0	277	1	60	125	1, 2, 3, 4

NOTES:  
1. HEATING AND COOLING COIL SELECTIONS BASED ON CLEAR WATER. HEATING COIL IS IN THE PRE-HEAT POSITION.  
2. FAN SHALL BE DIRECT DRIVE WITH ELECTRICALLY COMMUTATED MOTOR (ECM).  
3. PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH.  
4. PROVIDE WITH FACTORY FILTER RACK WITH 1" MERV-8 RATED FILTER.  
5. UNIT IS SUPPLIED WITH RETURN FILTER GRILLE.

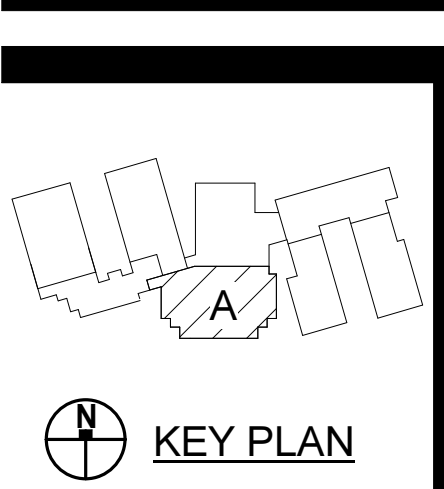
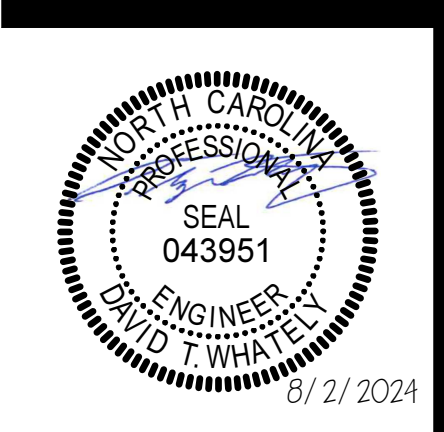
SPLIT SYSTEM HEAT PUMP INDOOR UNIT SCHEDULE																			
TAG	MANUFACTURER	MODEL NUMBER	LOCATION	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	ESP (IN WC)	COOLING		INDOOR EAT		HEATING @ 17°F		ELECTRICAL DATA				WEIGHT (LBS)	NOTES	
							TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	DB (°F)	WB (°F)	CAPACITY (BTUH)	EAT (°F)	MCA (A)	MOP (A)	V	PH			HZ
HP-AHU-01	TRANE	TEMA60C36H1SA	A121-CORRIDOR	1800	200	0.5	53277	38522	75.8	64.1	35800	67.0	9.0	15	208	1	60	144	1
HP-AHU-02	TRANE	TEMA60C36H1SA	A124-WORKROOM	1800	375	0.5	53277	38522	75.8	64.1	35800	67.0	9.0	15	208	1	60	144	1
HP-AHU-03	TRANE	TEMA60C36H1S	A121-CORRIDOR	1000	125	0.5	29178	20462	61.8	50.0	17500	61.8	5.0	15	208	1	60	118	1
HP-AHU-04	TRANE	TEMA60C36H1S	A166-CORRIDOR	1200	115	0.5	34800	28300	60.0	67.0	32400	70.0	5.0	15	208	1	60	160	1
HP-AHU-05	TRANE	TEMA60C36H1S	A166-CORRIDOR	1200	135	0.5	40300	28300	60.0	67.0	38500	70.0</							



VENTILATION CALCULATIONS - FIRST FLOOR

NUMBER	NAME	VENTILATION	HVAC UNIT	OCCUPANCY CLASSIFICATION	AREA (SF)	OCCUPANT DENSITY (PER SF)	CODE OCCUPANCY	NUMBER OF PEOPLE	OA AREA RATE (CFM/SF)	OA PEOPLE RATE (CFM/PERSON)	UNCORRECTED OA REQUIRED (CFM)	OA PROVIDED (CFM)	TOTAL SUPPLY AIR (CFM)	EA AREA RATE (CFM/SF)	EA PER FUTURE (CFM/SF)	EA REQUIRED (CFM)	EA PROVIDED (CFM)	
A142	MS GYMNASIUM	AHU-A-11	AHU-A-11	MULTIUSE ASSEMBLY	10624	100	1062.4	1062.4	0.06	7.5	8610	8610	8650	0.00	0.00	0	0	
A143	TOILET	AHU-A-11	AHU-A-11	TOILET ROOMS-PUBLIC	125	0	0.0	0.0	0.00	0.0	0	0	40	0.00	70.0	140	150	
A144	GIRLS LOCKER ROOM	AHU-A-11	AHU-A-11	SPORTS LOCKER ROOMS	376	0	0.0	0.0	0.00	0.0	0	0	150	0.00	0.0	188	250	
A145	OFFICE	AHU-A-11	AHU-A-11	OFFICE SPACES	128	0	0.0	1	0.06	5.0	128	128	130	0.00	0.00	0	0	
A146	LAUNDRY	AHU-A-11	AHU-A-11	COMMERCIAL LAUNDRY	150	10	1.5	2	0.00	25.0	50	50	220	0.00	0.00	0	200	
A147	OFFICE	AHU-A-11	AHU-A-11	OFFICE SPACES	128	5	1	0.06	5.0	13	20	75	0.00	0.00	0	0		
A148	BOYS LOCKER ROOM	AHU-A-11	AHU-A-11	SPORTS LOCKER ROOMS	379	0	0.0	0	0.00	0.0	0	0	150	0.00	0.0	189	250	
A149	TOILET	AHU-A-11	AHU-A-11	TOILET ROOMS-PUBLIC	125	0	0.0	2	0.00	0.0	0	0	40	0.00	70.0	140	150	
A101	LOBBY/COMMONS	AHU-A-12	AHU-A-12	LOBBIES/PREFUNCTION	1982	30	59.4	58	0.06	7.5	554	560	3200	0.00	0.00	0	0	
A102	CONCESSIONS	AHU-A-12	AHU-A-12	KITCHENS (COOKING)	156	0	0.0	3	0.00	0.0	0	40	400	0.70	0.00	109	0	
A103	BOYS	AHU-B-11	AHU-B-11	TOILET ROOMS-PUBLIC	232	0	0.0	4	0.00	0.0	0	0	0	0.00	70.0	280	300	
A137	GIRLS	AHU-B-11	AHU-B-11	TOILET ROOMS-PUBLIC	222	0	0.0	4	0.00	0.0	0	0	0	0.00	70.0	280	300	
A138	TOILET	AHU-B-11	AHU-B-11	TOILET ROOMS-PUBLIC	222	0	0.0	4	0.00	0.0	0	0	0	0.00	70.0	280	300	
A139	JANITOR	AHU-B-11	AHU-B-11	JANITOR CLOSETS, TRASH ROOMS, RECYCLING*	55	0	0.0	0	0.00	0.0	0	0	0	1.00	0.00	55	100	
B101	MS DINING	AHU-B-11	AHU-B-11	CAFETERIA, FAST FOOD	5377	100	537.7	543	0.18	7.5	5040	5100	8850	0.00	0.00	0	700	
B117	ES DINING	AHU-B-12	AHU-B-12	CAFETERIA, FAST FOOD	4973	100	497.3	496	0.18	7.5	4608	4600	7000	0.00	0.00	0	0	
AHU-B-12-1	10	WI FREEZER LINES	AHU-B-13	AHU-B-13	STORAGE*	729	0	0.0	0	0.00	0.0	0	0	0.00	0.00	0	0	
B102	MS SERVING LINES	AHU-B-13	AHU-B-13	KITCHENS (COOKING)	622	0	0.0	12	0.00	0.0	0	170	460	0.70	0.00	421	0	
B103	DISH ROOM	AHU-B-13	AHU-B-13	KITCHENS (COOKING)	243	0	0.0	2	0.00	0.0	0	50	220	0.70	0.00	170	0	
B104	KITCHEN	AHU-B-13	AHU-B-13	KITCHENS (COOKING)	1816	0	0.0	20	0.00	0.0	0	330	5170	0.70	0.00	1271	0	
B105	ES SERVING LINES	AHU-B-13	AHU-B-13	KITCHENS (COOKING)	574	0	0.0	12	0.00	0.0	0	150	460	0.70	0.00	402	0	
B106	DISH ROOM	AHU-B-13	AHU-B-13	KITCHENS (COOKING)	256	0	0.0	2	0.00	0.0	0	50	170	0.70	0.00	179	0	
B107	JANITOR	AHU-B-13	AHU-B-13	JANITOR CLOSETS, TRASH ROOMS, RECYCLING*	109	0	0.0	0	0.00	0.0	0	40	1.00	0.00	109	150		
B108	DRY STORAGE	AHU-B-13	AHU-B-13	STORAGE*	690	0	0.0	0	0.00	0.0	0	0	220	0.00	0.00	0	0	
B109	TOILET	AHU-B-13	AHU-B-13	TOILET ROOMS-PUBLIC	80	0	0.0	1	0.00	0.0	0	0	30	0.00	70.0	70	100	
B110	LOCKER	AHU-B-13	AHU-B-13	EDUCATION LOCKER/DRESSING ROOMS	64	0	0.0	0	0.00	0.0	0	0	30	0.25	0.00	16	50	
B111	OFFICE	AHU-B-13	AHU-B-13	OFFICE SPACES	158	5	0.8	0	0.06	5.0	9	14	100	0.00	0.00	0	0	
B114	CORR	AHU-B-13	AHU-B-13	CORRIDORS	108	0	0.0	0	0.00	0.0	0	8	90	0.00	0.00	0	0	
B115	CORRIDOR	AHU-B-13	AHU-B-13	CORRIDORS	439	0	0.0	0	0.00	0.0	0	26	28	400	0.00	0.00	0	0
AHU-B-13	A140	PLATFORM	AHU-B-14	AHU-B-14	THEATERS, STAGES, STUDIOS	1161	70	81.3	82	0.06	10.0	890	900	1500	0.00	0.00	0	0
A140	RAMP	AHU-B-14	AHU-B-14	CORRIDORS	104	0	0.0	0	0.00	0.0	0	6	15	0.00	0.00	0	0	
A141	RAMP	AHU-B-14	AHU-B-14	CORRIDORS	104	0	0.0	0	0.00	0.0	0	6	15	0.00	0.00	0	0	
A150	GYM STORAGE	AHU-B-14	AHU-B-14	STORAGE*	428	0	0.0	0	0.00	0.0	0	0	100	0.00	0.00	0	0	
A151	DINING STORAGE	AHU-B-14	AHU-B-14	STORAGE*	338	0	0.0	0	0.00	0.0	0	0	100	0.00	0.00	0	0	
AHU-B-14-5	A152	BOYS	AHU-B-15	AHU-B-15	TOILET ROOMS-PUBLIC	314	0	0.0	5	0.00	0.0	0	170	0.00	70.0	350	375	
A153	GIRLS	AHU-B-15	AHU-B-15	TOILET ROOMS-PUBLIC	326	0	0.0	5	0.00	0.0	0	170	0.00	70.0	350	375		
B116	CORRIDOR	AHU-B-15	AHU-B-15	CORRIDORS	705	0	0.0	0	0.00	0.0	0	705	420	0.00	0.00	0	0	
B120	CORRIDOR	AHU-B-15	AHU-B-15	CORRIDORS	693	0	0.0	0	0.00	0.0	0	42	50	150	0.00	0.00	0	0
B121	STAIR	AHU-B-15	AHU-B-15	STAIR*	221	0	0.0	0	0.00	0.0	0	0	550	0.00	0.00	0	0	
B122	ES ART	AHU-B-15	AHU-B-15	ART CLASSROOM	1101	20	22.0	30	0.18	10.0	498	520	1040	0.70	0.00	771	800	
B123	KLN	AHU-B-15	AHU-B-15	ART CLASSROOM	68	20	1.3	2	0.18	10.0	36	40	100	0.70	0.00	43	100	
B124	CORRIDOR	AHU-B-15	AHU-B-15	CORRIDORS	548	0	0.0	0	0.00	0.0	0	40	100	0.00	0.00	0	0	
AHU-B-15-8	A105	CONFERENCE	ERV-A-1	SSI-01	CONFERENCE ROOMS	285	50	14.2	15	0.06	5.0	92	95	500	0.00	0.00	0	0
A108	SECRETARY	ERV-A-1	SSI-01	OFFICE SPACES	144	5	0.7	1	0.06	5.0	14	15	180	0.00	0.00	0	0	
A109	PRINCIPAL	ERV-A-1	SSI-01	OFFICE SPACES	196	5	1.0	1	0.06	5.0	17	19	260	0.00	0.00	0	0	
A120	BOOKKEEPER	ERV-A-1	SSI-01	OFFICE SPACES	198	5	1.0	1	0.06	5.0	19	18	220	0.00	0.00	0	0	
A123	A.P.	ERV-A-1	SSI-01	OFFICE SPACES	165	5	0.8	1	0.06	5.0	15	15	150	0.00	0.00	0	0	
A128	GUID OFF	ERV-A-1	SSI-01	OFFICE SPACES	194	5	1.0	1	0.06	5.0	17	19	245	0.00	0.00	0	0	
A129	GUID OFF	ERV-A-1	SSI-01	OFFICE SPACES	201	5	1.0	1	0.06	5.0	17	19	245	0.00	0.00	0	0	
A106	CLINIC	ERV-A-1	SSI-02	OFFICE SPACES	231	5	1.2	2	0.06	5.0	24	30	115	0.00	0.00	0	200	
A107	TOILET	ERV-A-1	SSI-02	TOILET ROOMS-PUBLIC	58	0	0.0	1	0.00	0.0	0	0	0	0.00	70.0	70	100	
A110	TOILET	ERV-A-1	SSI-02	TOILET ROOMS-PUBLIC	48	0	0.0	1	0.00	0.0	0	0	0	0.00	70.0	70	100	
A111	TOILET	ERV-A-1	SSI-02	TOILET ROOMS-PUBLIC	48	0	0.0	1	0.00	0.0	0	0	0	0.00	70.0	70	100	
A112	STORAGE	ERV-A-1	SSI-02	STORAGE*	89	0	0.0	0	0.00	0.0	0	0	25	0.00	0.00	0	0	
A113	CORRIDOR	ERV-A-1	SSI-02	STORAGE*	132	0	0.0	0	0.00	0.0	0	0	0	0.00	0.00	0	0	
A117	SRO	ERV-A-1	SSI-02	OFFICE SPACES	149	5	0.7	1	0.06	5.0	14	15	50	0.00	0.00	0	0	
A118	CORR	ERV-A-1	SSI-02	CORRIDORS	1027	0	0.0	0	0.00	0.0	0	62	65	225	0.00	0.00	0	0
A119	RECORDS	ERV-A-1	SSI-02	STORAGE*	171	0	0.0	0	0.00	0.0	0	0	40	0.00	0.00	0	0	
A122	BREAK AREA	ERV-A-1	SSI-02	OFFICE SPACES	228	5	1.1	2	0.06	5.0	24	25	200	0.00	0.00	0	0	
A124	WORKROOM	ERV-A-1	SSI-02	OFFICE SPACES	208	5	1.0	1	0.06	5.0	17	20	170	0.00	0.00	0	0	
A125	BOOK STORAGE	ERV-A-1	SSI-02	STORAGE*	207	0	0.0	0	0.00	0.0	0	0	50	0.00	0.00	0	0	
A126	GUIDANCE	ERV-A-1	SSI-02	OFFICE SPACES	691	5	3.5	4	0.06	5.0	61	65	220	0.00	0.00	0	0	
A127	G. STOR	ERV-A-1	SSI-02	OFFICE SPACES	121	5	0.6	1	0.06	5.0	12	15	0	0.00	0.00	0	0	
A130	GUID CONF	ERV-A-1	SSI-02	CONFERENCE ROOMS	222	50	11.1	12	0.06	5.0	73	75	240	0.00	0.00	0	0	
A131	GUID OFF	ERV-A-1	SSI-02	OFFICE SPACES	153	5	0.8	1	0.06	5.0	15	15	70	0.00	0.00	0	0	
A133	STAIR	ERV-A-1	SSI-02	STAIR*	263	0	0.0	0	0.00	0.0	0	0	0	0.00	0.00	0	0	
A134	CORRIDOR	ERV-A-1	SSI-02	CORRIDORS	822	0	0.0	0	0.00	0.0	0	49	50	380	0.00	0.00	0	0
A180	STAIR	ERV-A-1	SSI-02	STAIR*	89	0	0.0	0	0.00	0.0	0	0	0	0.00	0.00	0	0	
A104	WAITING/RECEPTION	ERV-A-1	SSI-03	RECEPTION AREAS	460	30	13.8	14	0.06	5.0	98	70	300	0.00	0.00	0	0	
A121	CORR	ERV-A-1	SSI-03	CORRIDORS	449	0	0.0	0	0.00	0.0	0	27	27	300	0.00	0.00	0	0
ERV-A-1-28	A157	GUID CONF	ERV-A-2	SSI-04	CONFERENCE ROOMS	212	50	10.6	11	0.06	5.0	68	70	480	0.00	0.00	0	0
A158	G OFFICE	ERV-A-2	SSI-04	OFFICE SPACES	142	5	0.7	1	0.06	5.0	14	15	240</					





**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

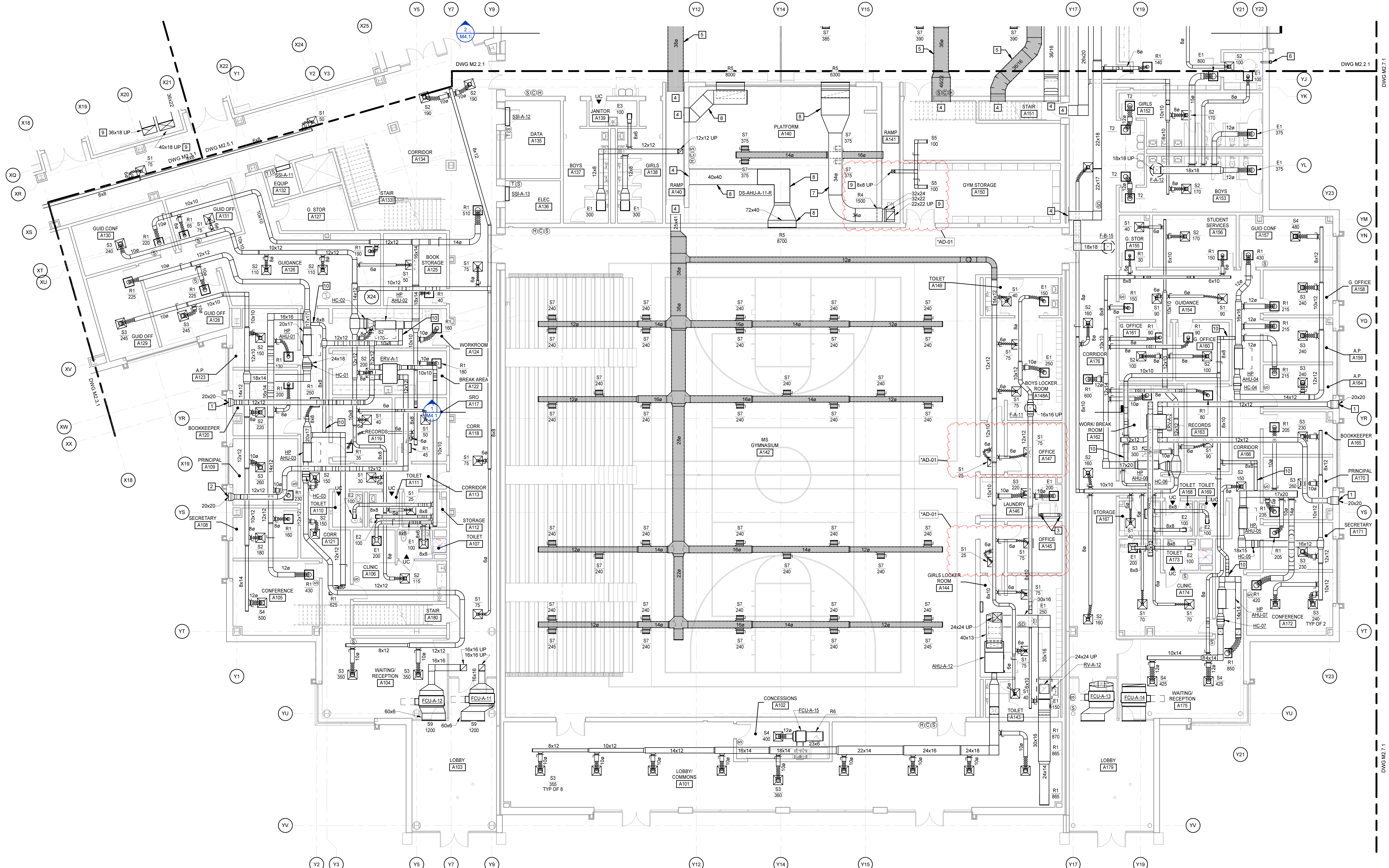
PROJECT NO:	831310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	*AD-01

FIRST FLOOR PLAN - PART A - DUCTWORK

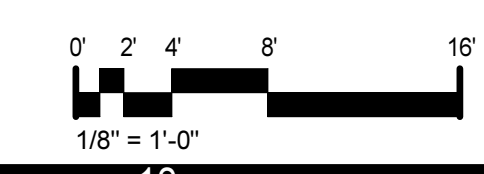
**M2.1.1**

- KEYNOTES**  
APPLIES TO THIS DRAWING
- CONNECT DUCT TO LOUVER. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SIZE AND LOCATION.
  - OPEN END DUCT, COVER WITH 1/2"x1/2" WELDED WIRE MESH.
  - 8" DRYER VENT UP TO DRYER VENT ON ROOF. ROOF PENETRATION SHALL BE A MINIMUM 4" FROM FIRE WALL. SIZE AND INSTALL IN ACCORDANCE WITH COMMERCIAL DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
  - REFER TO ENLARGED PLAN FOR CONTINUATION.
  - ALL SUPPLY DUCTWORK EXPOSED IN SPACE TO BE 1" DOUBLE WALL DUCT WITH PERFORATED INNER LINER.
  - PROVIDE KILN EXHAUST BLOWER AND FLEXIBLE DUCT TO BOTTOM CONNECTION OF KILN. REFER TO DIVISION #1. PROVIDE VENT TERMINATION ON EXTERIOR WALL. MOUNT BLOWER ON WALL AND POWER WITH PLUG RECEPTACLE. INTERLOCK FAN CONTROLS WITH KILN.

- KEYNOTES**  
APPLIES TO THIS DRAWING
- WRAP ALL ROUND RETURN DUCTWORK EXPOSED IN THIS SPACE WITH ONE LAYER OF MASS-LOADED VINYL WRAP. REFER TO SECTION 230700 FOR ADDITIONAL DETAILS.
  - WRAP ALL RECTANGULAR RETURN DUCT EXPOSED IN THIS SPACE WITH TWO LAYERS OF MASS-LOADED VINYL WRAP. REFER TO SECTION 230700 FOR ADDITIONAL DETAILS.
  - DUCT PENETRATES UNRATED FLOOR. FILL THE ANNULAR SPACE AROUND THE PENETRATING DUCT WITH APPROVED NONCOMBUSTIBLE MATERIAL THAT RESISTS THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 607.6.3. EXCEPTION 2 OF THE NCMC.
  - BALANCE OUTSIDE AIR FOR SPLIT SYSTEM TO VALUE LISTED IN SPLIT SYSTEM SCHEDULE.



**FIRST FLOOR PLAN - PART A - DUCTWORK**  
 1/8" = 1'-0"



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J  
H  
G  
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1 2 3 4 5 6 7 8 9 10

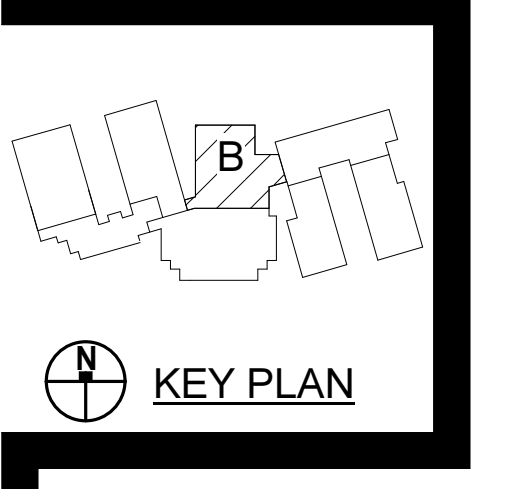
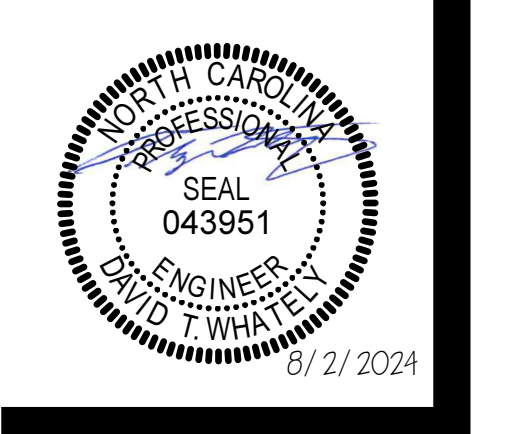
**FIRST FLOOR PLAN - FIELD HOUSE - DUCTWORK**  
1/8" = 1'-0"

**FIRST FLOOR PLAN - PART B - DUCTWORK**  
1/8" = 1'-0"

**KEYNOTES**

APPLIES TO THIS DRAWING

- 1 REFER TO ENLARGED PLAN FOR CONTINUATION
- 2 ALL SUPPLY DUCTWORK EXPOSED IN SPACE TO BE 1" DOUBLE WALL DUCT WITH PERFORATED INNER LINER
- 3 PROVIDE EXTERIOR CONCRETE EQUIPMENT PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
- 4 MOUNT CONDENSING UNITS ON CONCRETE PADS. REFER TO THE CONDENSING UNIT MOUNTING DETAIL - ON GRADE FOR ADDITIONAL DETAILS.
- 5 PROVIDE KILN EXHAUST BLOWER AND FLEXIBLE DUCT TO BOTTOM CONNECTION OF KILN. REFER TO DIVISION 11. PROVIDE VENT TERMINATION ON EXTERIOR WALL. MOUNT BLOWER ON WALL AND POWER WITH PLUG RECEPTACLE. INTERLOCK FAN CONTROLS WITH KILN.
- 6 WALL MOUNT CONDENSING UNITS WITH WALL STAND. REFER TO CONDENSING UNIT MOUNTING DETAIL - ON WALL FOR ADDITIONAL DETAILS.
- 7 PROVIDE ALUMINUM DUCT FROM ALL EXHAUST DUCT ASSOCIATED WITH THIS EXHAUST FAN

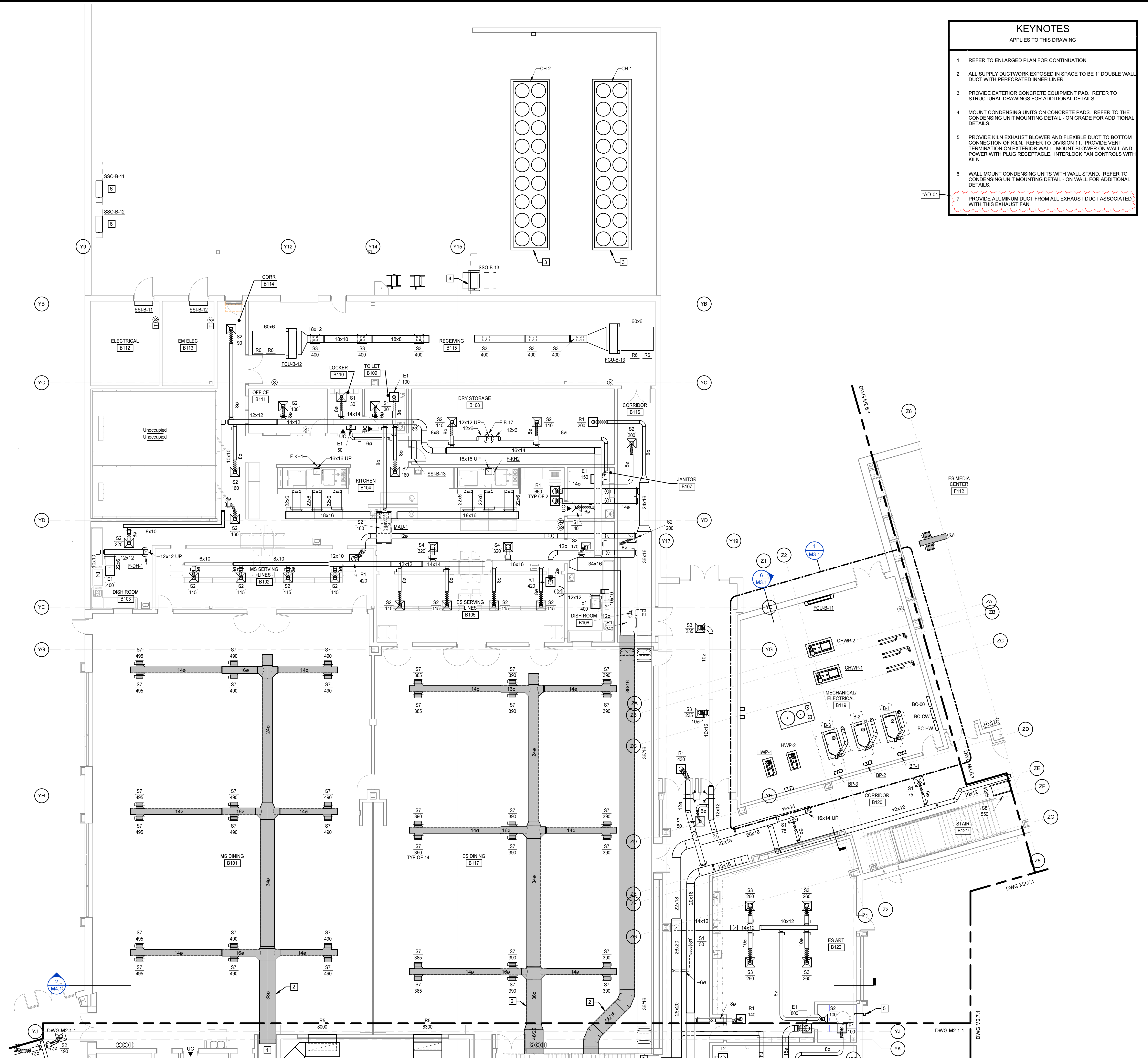


**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

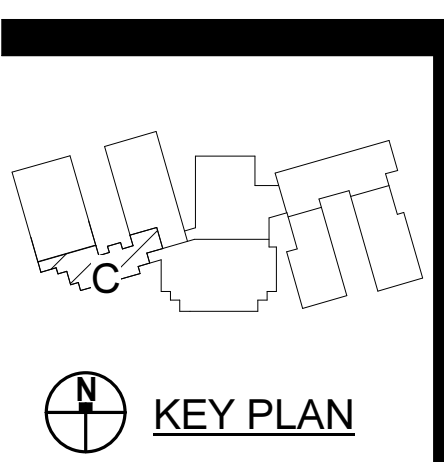
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
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DATE	DESCRIPTION
8/16/24	*AD-01

**FIRST FLOOR PLAN - PART B - DUCTWORK**

**M2.2.1**







PROJECT NO:	831310
DATE:	AUGUST 2, 2024
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DATE	DESCRIPTION
8/16/24	*AD-01

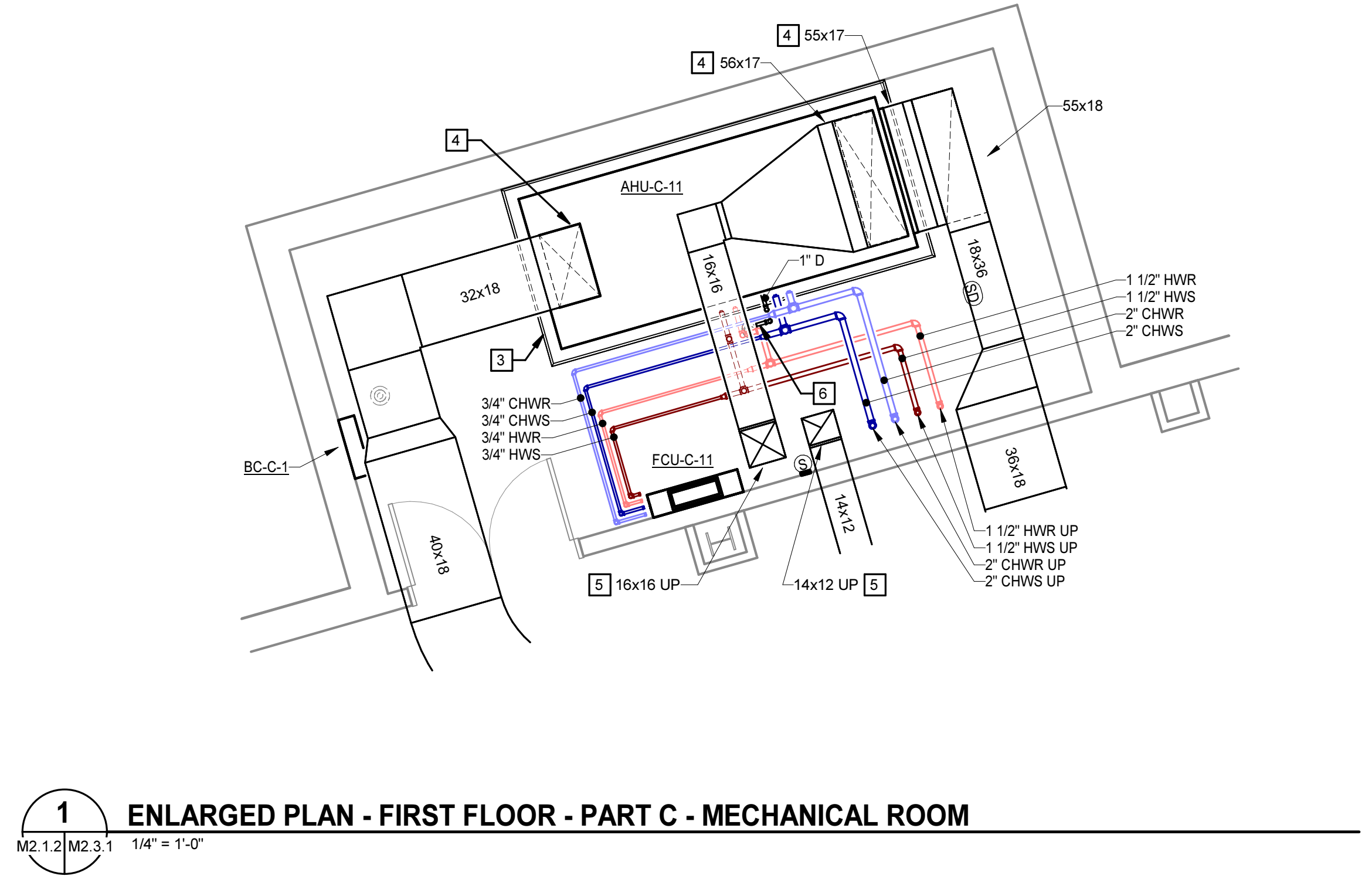
- KEYNOTES**  
APPLIES TO THIS DRAWING

  - 4" DOWN TO DRYER VENT WALL BOX. MOUNT AT HEIGHT TO ALIGN WITH DRYER EXHAUST VENT. PROVIDE NAMEPLATE ON WALL LISTING DRYER VENT EQUIVALENT LENGTH AS INSTALLED. REFER TO SECTION 233113 FOR ADDITIONAL DETAILS.
  - SIDEWALL DRYER VENT TERMINATION IN ACCORDANCE WITH DRYER MANUFACTURER'S INSTRUCTIONS. REFER TO SECTION 233113 FOR ADDITIONAL DETAILS. PAINT TO MATCH WALL COLOR.
  - PROVIDE 6" THICK HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
  - CONNECT TO UNIT FULL SIZE OF UNIT CONNECTION.
  - DUCT PENETRATES UNRATED FLOOR. FILL THE ANNULAR SPACE AROUND THE PENETRATING DUCT WITH APPROVED NONCOMBUSTIBLE MATERIAL THAT RESISTS THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 607.6.3, EXCEPTION 2 OF THE NCMC.
  - DISCHARGE CONDENSATE DRAIN INTO OPEN SITE FLOOR DRAIN.
  - PROVIDE ALUMINUM DUCT FROM THIS TAP BACK TO GRILLE.

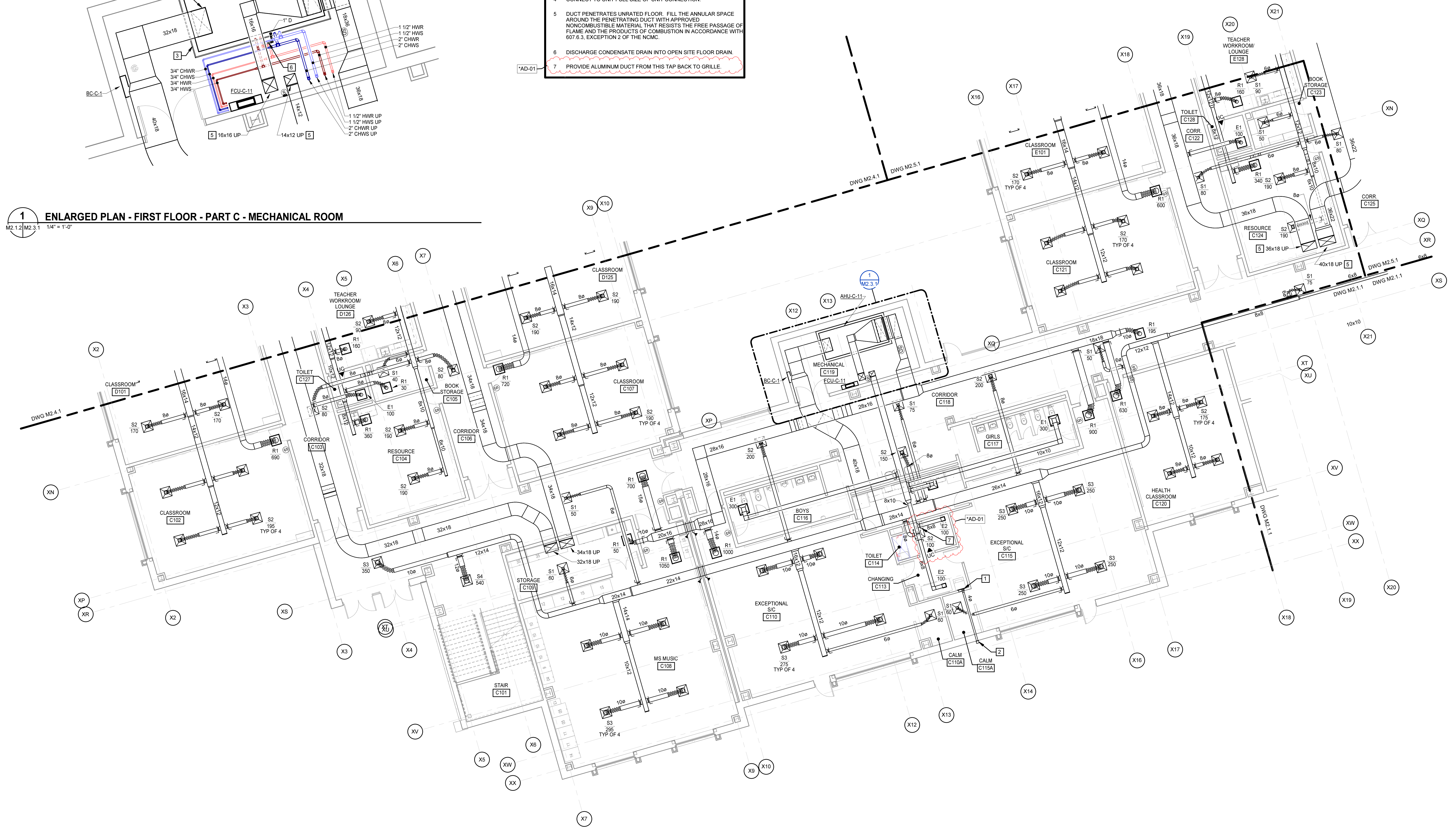
**GENERAL NOTES**

A. BRANCH PIPING RUNOUTS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE UNLESS OTHERWISE INDICATED. REFER TO EQUIPMENT SCHEDULES FOR FLOW RATES:

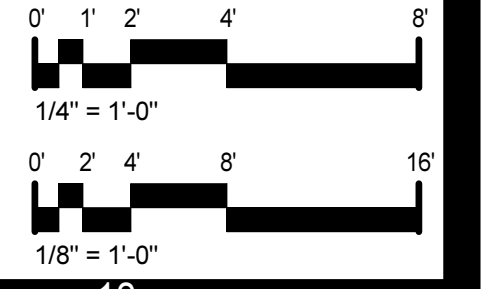
3/4"	0-3 GPM
1"	3-6 GPM
1-1/4"	6.5-12 GPM
1-1/2"	12.5-19 GPM
2"	18.5-37 GPM
2-1/2"	38-50 GPM
3"	61-104 GPM
4"	105-218 GPM
5"	219-340 GPM
6"	341-522 GPM



**1 ENLARGED PLAN - FIRST FLOOR - PART C - MECHANICAL ROOM**  
 M2.1.2 | M2.3.1 | 1/4" = 1'-0"



**FIRST FLOOR PLAN - PART C - DUCTWORK**  
 1/8" = 1'-0"





**GENERAL NOTES**

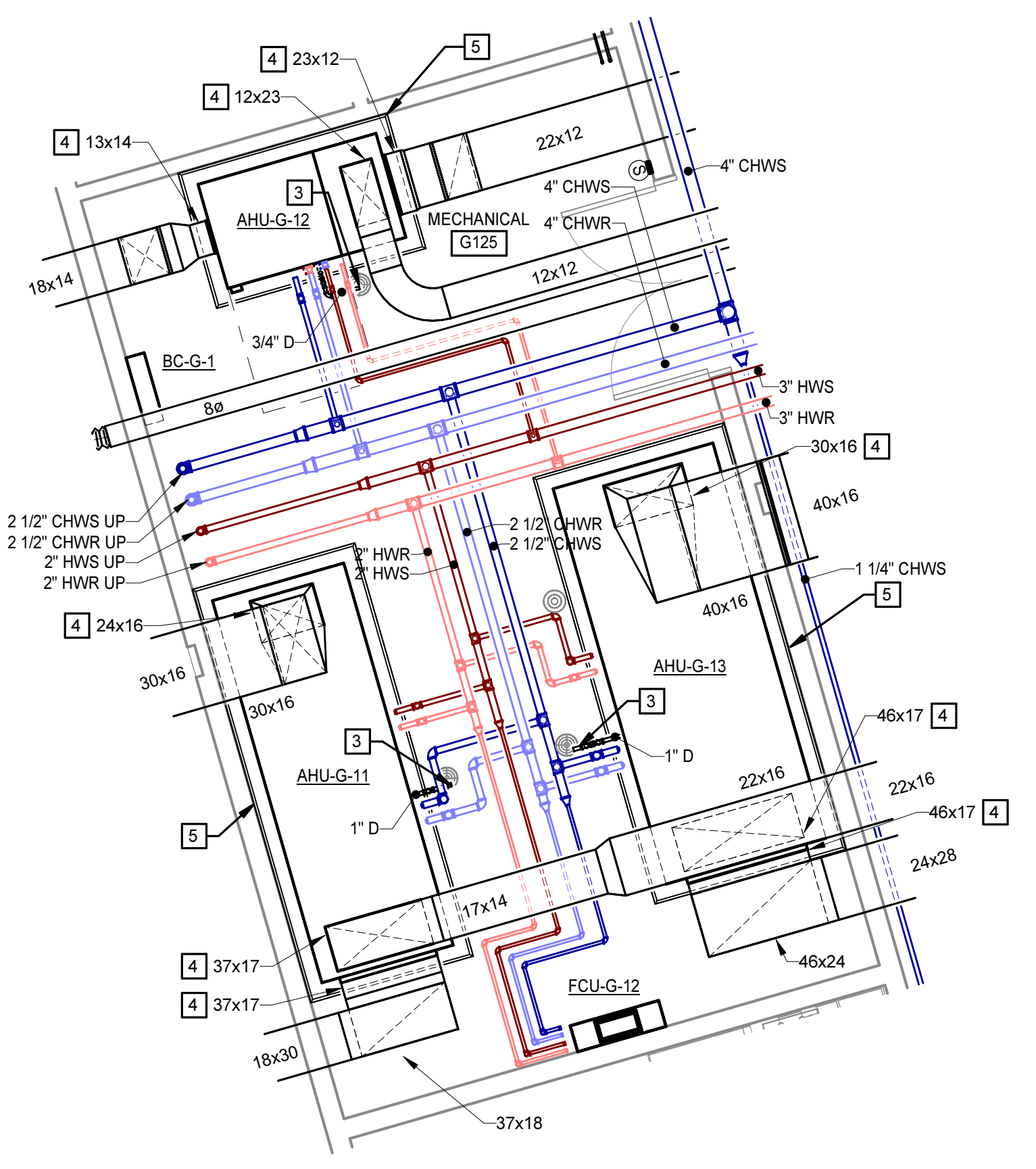
A. BRANCH PIPING RUNOUTS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE UNLESS OTHERWISE INDICATED. REFER TO EQUIPMENT SCHEDULES FOR FLOW RATES.

3/4"	0-3 GPM
1"	3.5-6 GPM
1-1/4"	6.5-12 GPM
1-1/2"	12.5-19 GPM
2"	19.5-37 GPM
2-1/2"	38-60 GPM
3"	61-104 GPM
4"	105-219 GPM
5"	219-340 GPM
6"	341-522 GPM

**KEYNOTES**

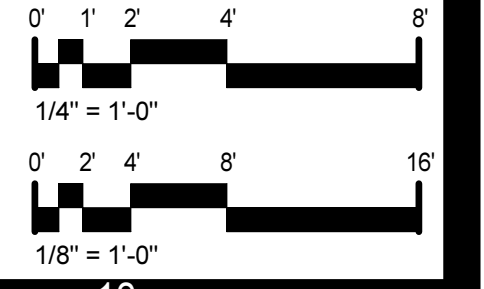
APPLIES TO THIS DRAWING

- 4" DOWN TO DRYER VENT WALL BOX. MOUNT AT HEIGHT TO ALIGN WITH DRYER EXHAUST VENT. PROVIDE NAMEPLATE ON WALL LISTING DRYER VENT EQUIVALENT LENGTH AS INSTALLED. REFER TO SECTION 233113 FOR ADDITIONAL DETAILS.
- SIDEWALL DRYER VENT TERMINATION IN ACCORDANCE WITH DRYER MANUFACTURER'S INSTRUCTIONS. REFER TO SECTION 233113 FOR ADDITIONAL DETAILS. PAINT TO MATCH WALL COLOR.
- DISCHARGE CONDENSATE DRAIN INTO OPEN SITE FLOOR DRAIN.
- CONNECT TO UNIT FULL SIZE OF UNIT CONNECTION.
- PROVIDE 6" THICK HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
- PROVIDE ALUMINUM DUCT FROM THIS TAP BACK TO GRILLE



**2 ENLARGED PLAN - FIRST FLOOR - PART G - MECHANICAL ROOM**

**FIRST FLOOR PLAN - PART G - DUCTWORK**

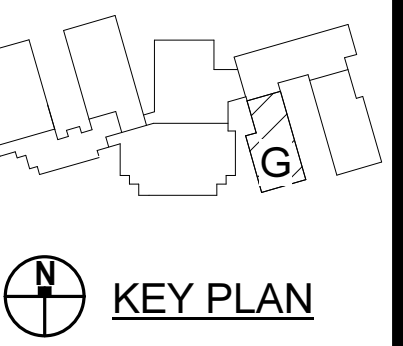
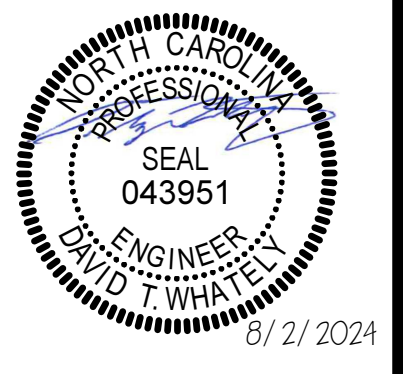


FIRST FLOOR PLAN - PART G - DUCTWORK

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS:	
DATE	DESCRIPTION
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**M2.7.1**

**MOSELEY ARCHITECTS**  
 911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA 27603  
 PHONE (919) 840-0091  
 MOSELEYARCHITECTS.COM



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

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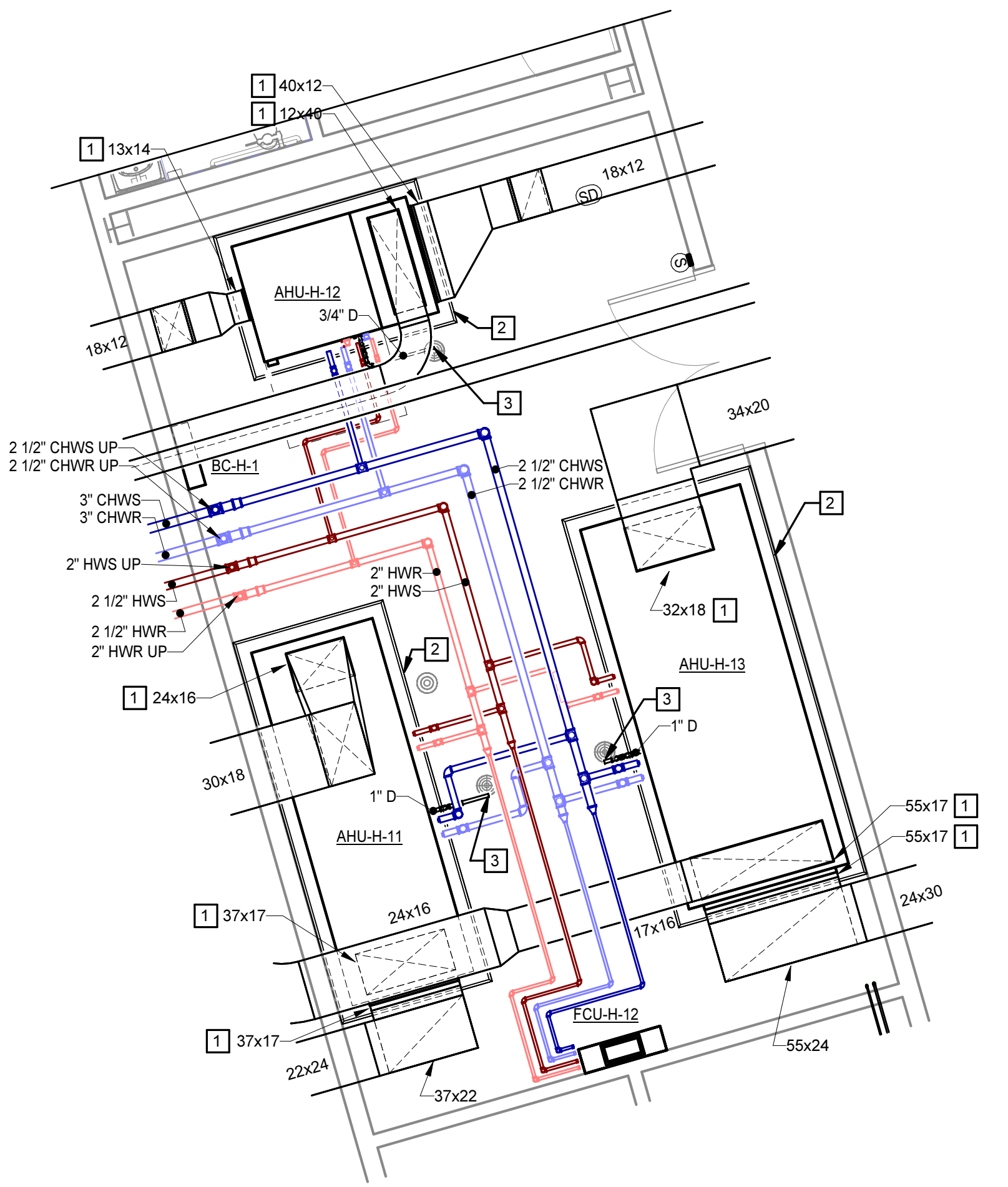
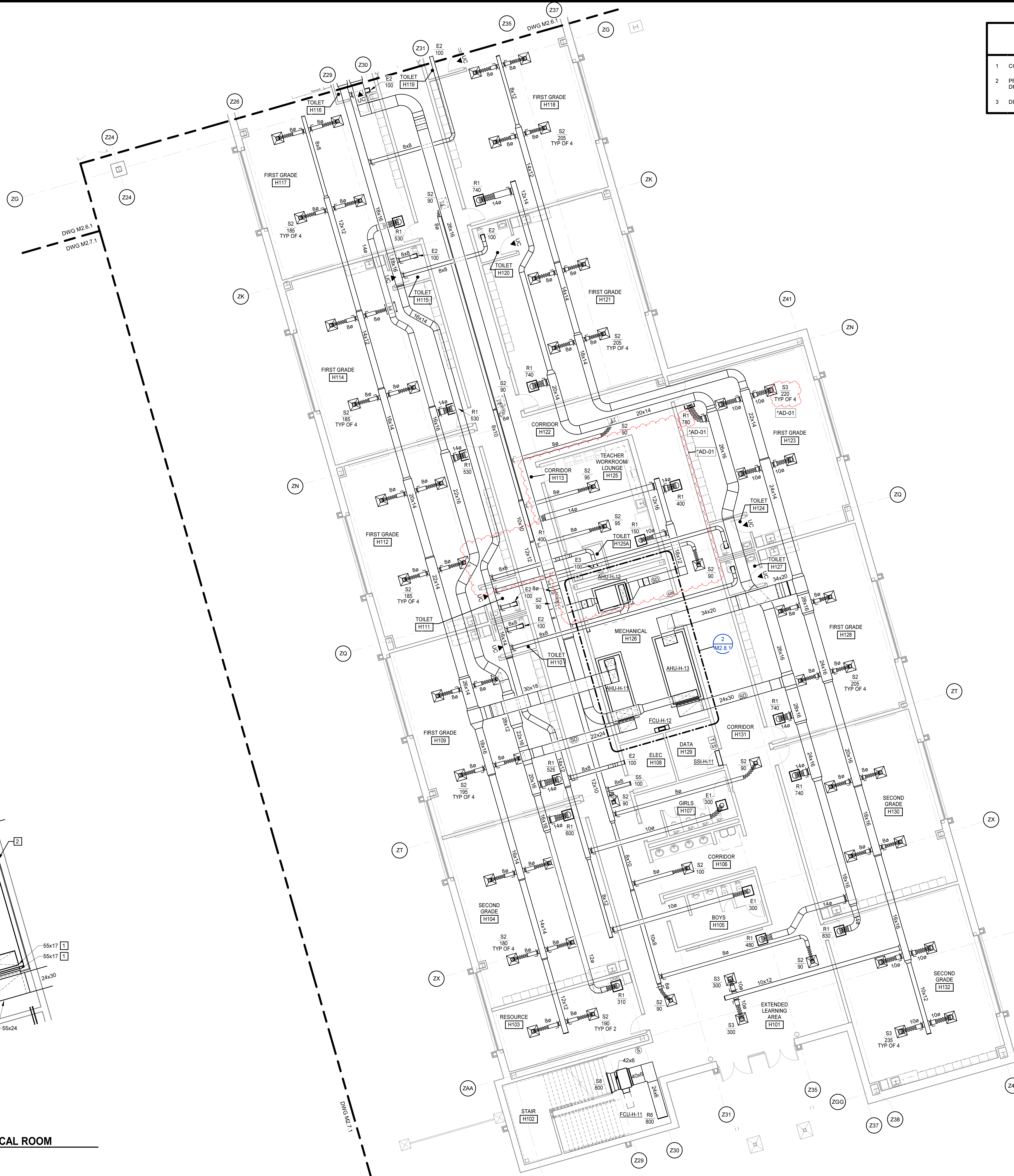
**GENERAL NOTES**

- A. BRANCH PIPING RUNOUTS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE UNLESS OTHERWISE INDICATED. REFER TO EQUIPMENT SCHEDULES FOR FLOW RATES:
- |        |             |
|--------|-------------|
| 3/4"   | 0-3 GPM     |
| 1"     | 3.5-6 GPM   |
| 1-1/4" | 6.5-12 GPM  |
| 1-1/2" | 12.5-19 GPM |
| 2"     | 19.5-37 GPM |
| 2-1/2" | 38-60 GPM   |
| 3"     | 61-104 GPM  |
| 4"     | 105-219 GPM |
| 5"     | 219-340 GPM |
| 6"     | 341-522 GPM |

**KEYNOTES**

APPLIES TO THIS DRAWING

- CONNECT TO UNIT FULL SIZE OF UNIT CONNECTION.
- PROVIDE 6" THICK HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
- DISCHARGE CONDENSATE DRAIN INTO OPEN SITE FLOOR DRAIN.

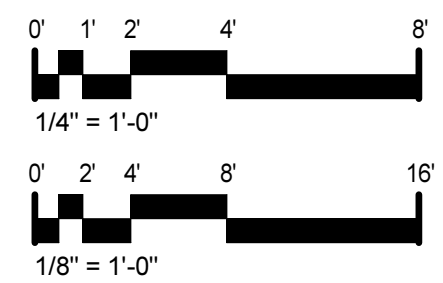


**2 ENLARGED PLAN - FIRST FLOOR - PART H - MECHANICAL ROOM**

M2.8.1 1/4" = 1'-0"

**FIRST FLOOR PLAN - PART H - DUCTWORK**

1/8" = 1'-0"



**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

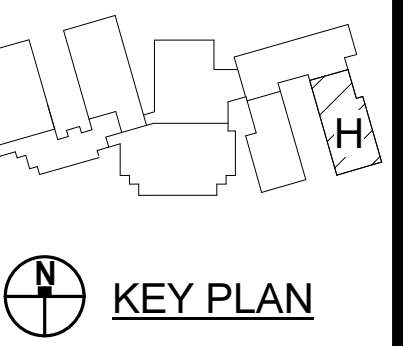
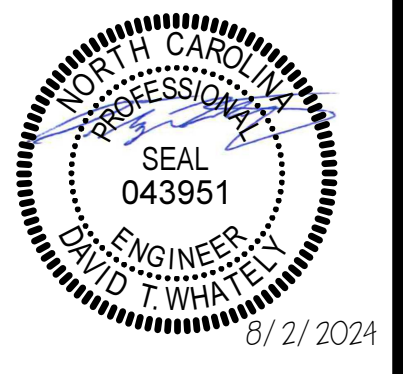
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS:	
DATE:	DESCRIPTION
8/16/24	*AD-01

**FIRST FLOOR PLAN - PART H - DUCTWORK**

**M2.8.1**

**MOSELEYARCHITECTS**

911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA, 27603  
PHONE (919) 840-0951  
MOSELEYARCHITECTS.COM



8/16/2024 11:35:51 AM



**GENERAL NOTES**

- A. BRANCH PIPING RUNOUTS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE UNLESS OTHERWISE INDICATED. REFER TO EQUIPMENT SCHEDULES FOR FLOW RATES.
- |        |             |
|--------|-------------|
| 3/4"   | 0.3 GPM     |
| 1"     | 3.5-6 GPM   |
| 1-1/4" | 6.5-12 GPM  |
| 1-1/2" | 12.5-19 GPM |
| 2"     | 19.5-37 GPM |
| 2-1/2" | 38-60 GPM   |
| 3"     | 61-104 GPM  |
| 4"     | 105-219 GPM |
| 5"     | 219-340 GPM |
| 6"     | 341-522 GPM |

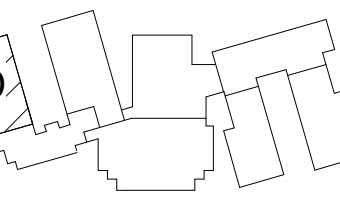
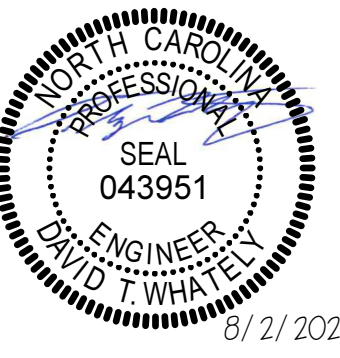
**KEYNOTES**

APPLIES TO THIS DRAWING

- PROVIDE 6" THICK HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
- CONNECT TO UNIT FULL SIZE OF UNIT CONNECTION.
- DUCT PENETRATES UNRATED FLOOR. FILL THE ANNULAR SPACE AROUND THE PENETRATING DUCT WITH APPROVED NONCOMBUSTIBLE MATERIAL THAT RESISTS THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 607.6.3, EXCEPTION 2 OF THE NCMC.
- SIZE AND ROUTE REFRIGERANT SUCTION AND LIQUID IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- REFRIGERANT SUCTION AND LIQUID DOWN TO FLOOR BELOW.
- REFRIGERANT SUCTION AND LIQUID UP TO CONDENSING UNIT ON ROOF. ROUTE PIPING THROUGH PIPE CURB, REFER TO REFRIGERANT PIPE PENETRATION DETAIL - ROOF FOR ADDITIONAL DETAILS.
- DISCHARGE CONDENSATE DRAIN INTO OPEN SITE FLOOR DRAIN.

**MOSELEY ARCHITECTS**

911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA 27603  
PHONE (919) 840-0951  
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KEY PLAN

**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS:	
DATE:	
DESCRIPTION:	
8/16/24	*AD-01

SECOND FLOOR PLAN - PART D - DUCTWORK

**M2.12.1**

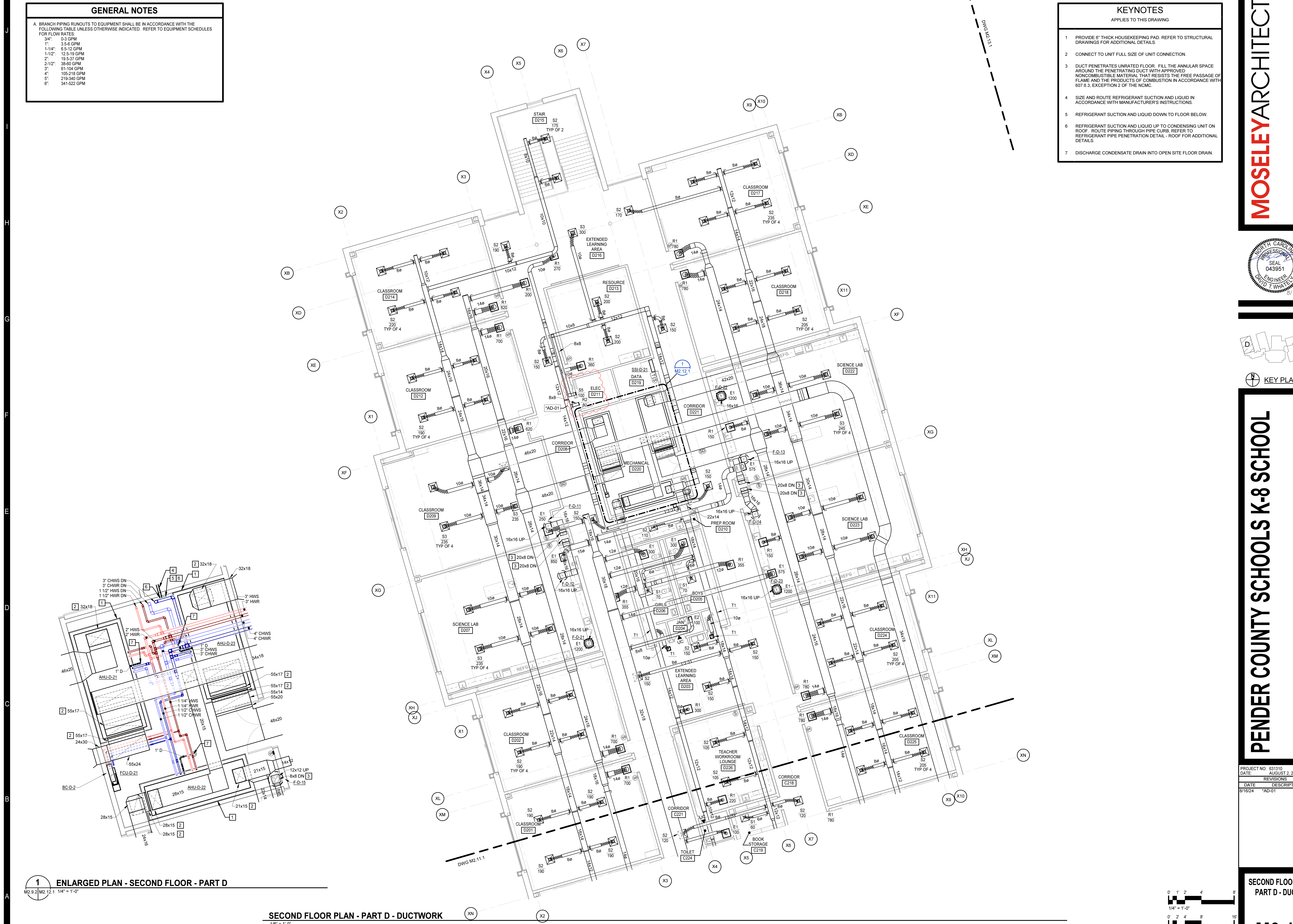
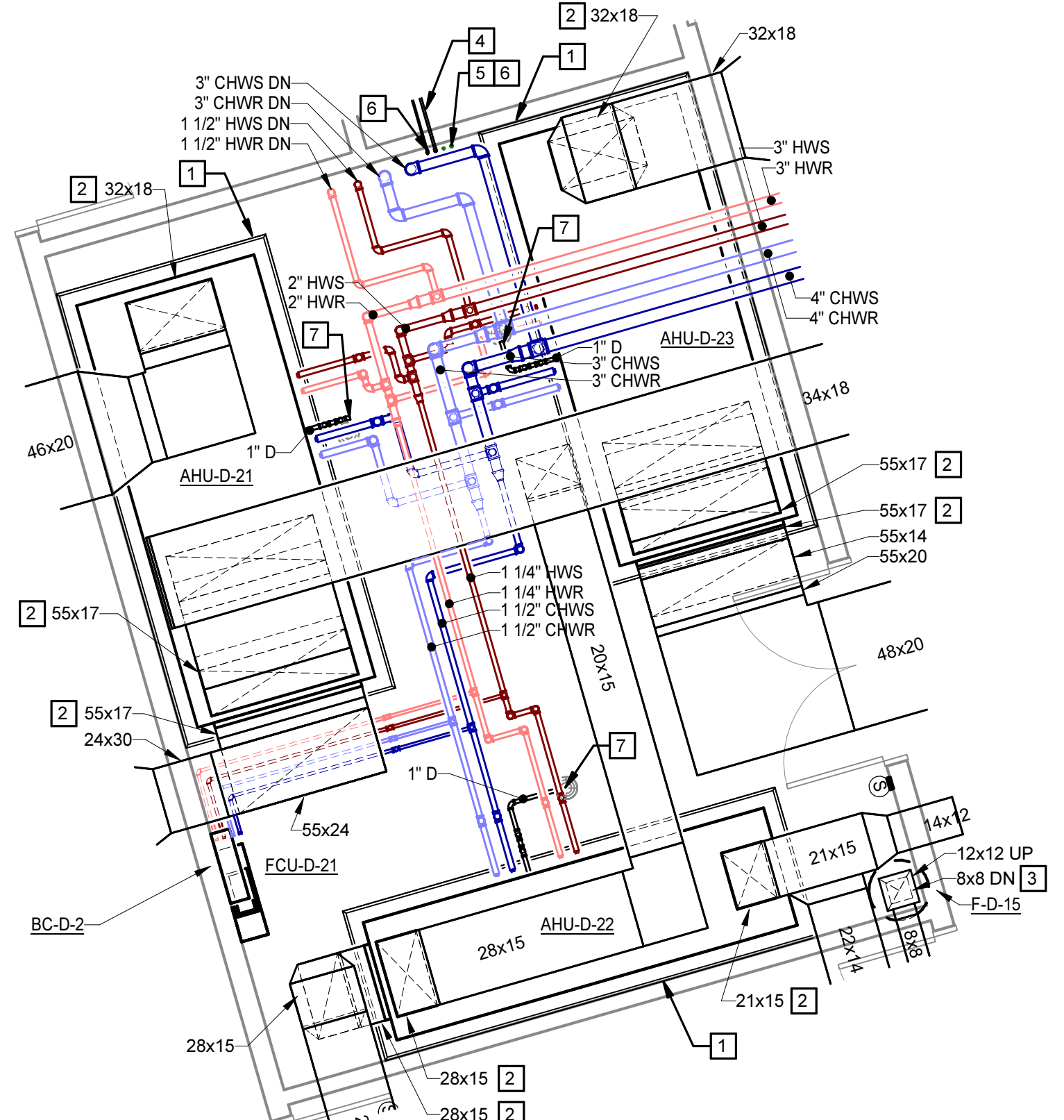
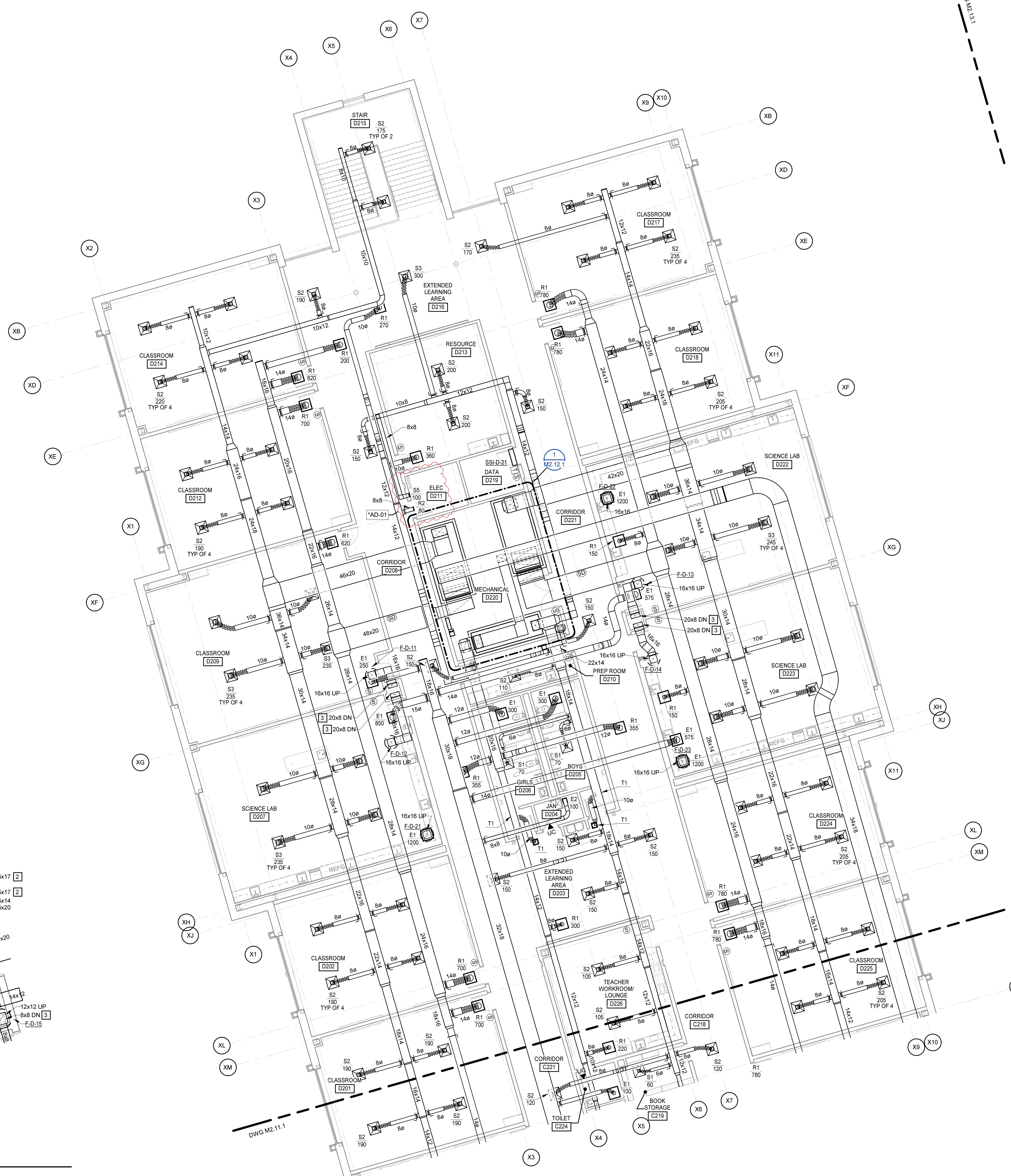
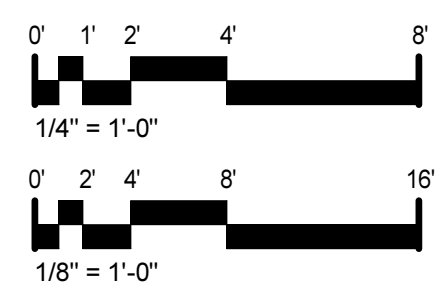
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**1 ENLARGED PLAN - SECOND FLOOR - PART D**

M2.9.2 M2.12.1 1/4" = 1'-0"

**SECOND FLOOR PLAN - PART D - DUCTWORK**

1/8" = 1'-0"





**GENERAL NOTES**

A. BRANCH PIPING RUNOUTS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE UNLESS OTHERWISE INDICATED. REFER TO EQUIPMENT SCHEDULES FOR FLOW RATES.

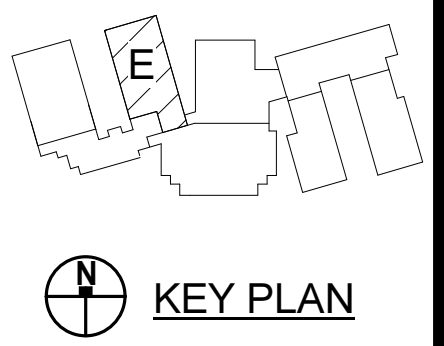
3/4"	0.3 GPM
1"	3.5-6 GPM
1-1/4"	6.5-12 GPM
1-1/2"	12.5-19 GPM
2"	19.5-37 GPM
2-1/2"	38-60 GPM
3"	61-104 GPM
4"	105-219 GPM
5"	219-340 GPM
6"	341-522 GPM

**KEYNOTES**

APPLIES TO THIS DRAWING

- DUCT PENETRATES UNRATED FLOOR. FILL THE ANNULAR SPACE AROUND THE PENETRATING DUCT WITH APPROVED NONCOMBUSTIBLE MATERIAL THAT RESISTS THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 607.6.3, EXCEPTION 2 OF THE NCMC.
- PROVIDE 6" THICK HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
- CONNECT TO UNIT FULL SIZE OF UNIT CONNECTION.
- REFRIGERANT SUCTION AND LIQUID DOWN TO FLOOR BELOW.
- SIZE AND ROUTE REFRIGERANT SUCTION AND LIQUID IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- REFRIGERANT SUCTION AND LIQUID UP TO CONDENSING UNIT ON ROOF. ROUTE PIPING THROUGH PIPE CURB, REFER TO REFRIGERANT PIPE PENETRATION DETAIL - ROOF FOR ADDITIONAL DETAILS.
- DISCHARGE CONDENSATE DRAIN INTO OPEN SITE FLOOR DRAIN.

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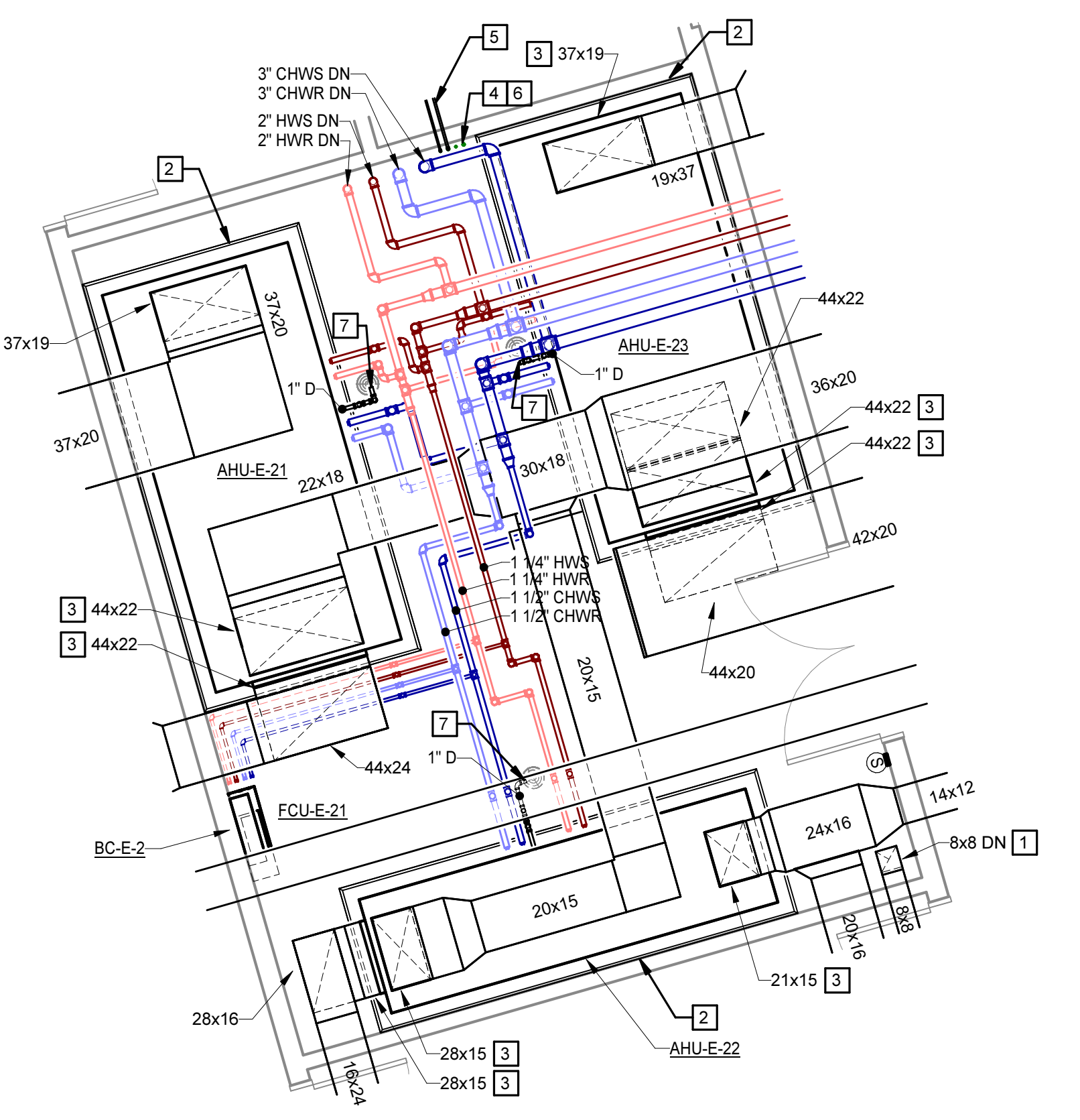


**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
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8/16/24	*AD-01

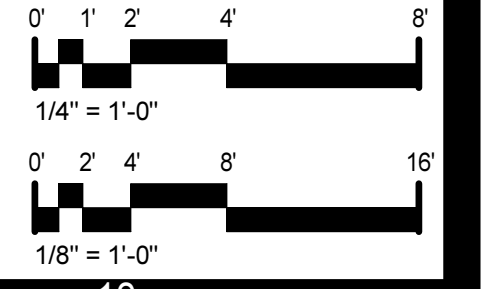
SECOND FLOOR PLAN - PART E - DUCTWORK

**M2.13.1**



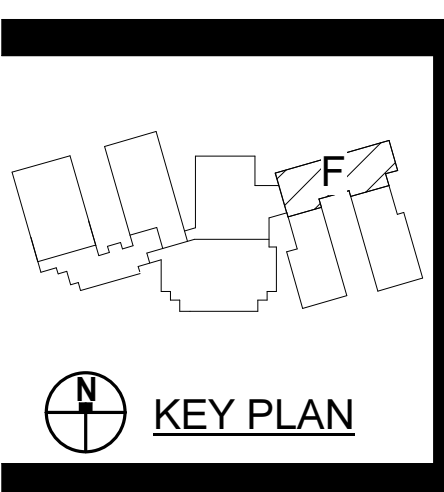
**ENLARGED PLAN - SECOND FLOOR - PART E - MECHANICAL ROOM**  
 1/4" = 1'-0"

**SECOND FLOOR PLAN - PART E - DUCTWORK**  
 1/8" = 1'-0"



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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	*AD-01

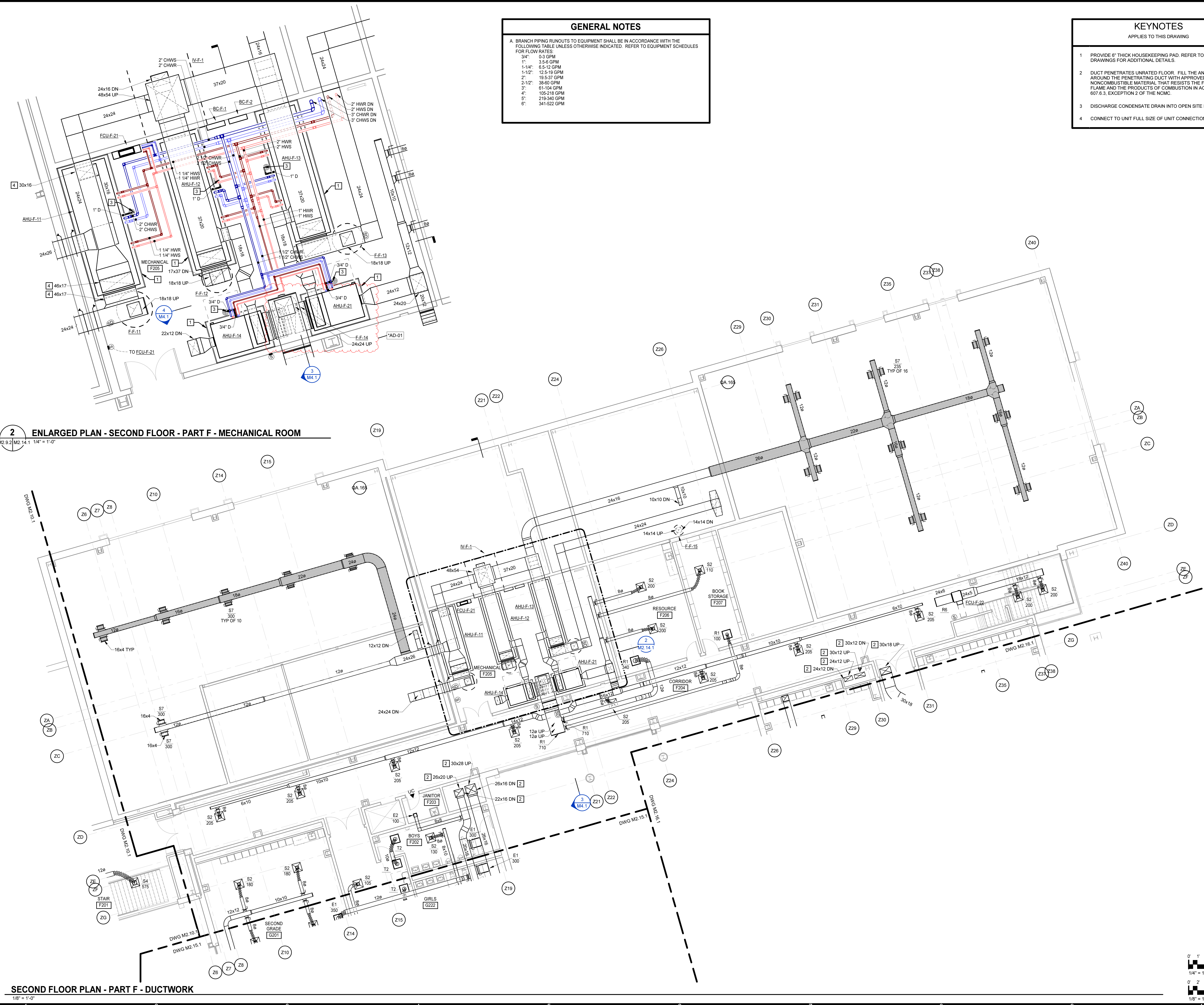
**GENERAL NOTES**

A. BRANCH PIPING RUNOUTS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE UNLESS OTHERWISE INDICATED. REFER TO EQUIPMENT SCHEDULES FOR FLOW RATES.

3/4"	0-3 GPM
1"	3.5-6 GPM
1-1/4"	6.5-12 GPM
1-1/2"	12.5-19 GPM
2"	19.5-37 GPM
2-1/2"	38-60 GPM
3"	61-104 GPM
4"	105-218 GPM
5"	219-340 GPM
6"	341-522 GPM

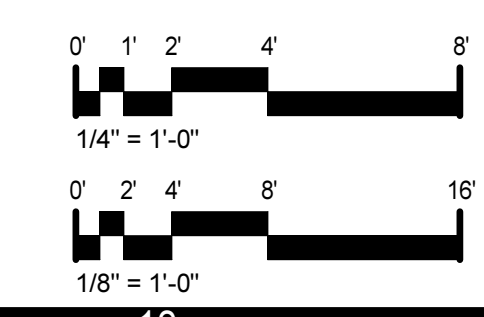
**KEYNOTES**  
 APPLIES TO THIS DRAWING

- PROVIDE 6" THICK HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
- DUCT PENETRATES UNRATED FLOOR. FILL THE ANNULAR SPACE AROUND THE PENETRATING DUCT WITH APPROVED NONCOMBUSTIBLE MATERIAL THAT RESISTS THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 607.6.3, EXCEPTION 2 OF THE NCMC.
- DISCHARGE CONDENSATE DRAIN INTO OPEN SITE FLOOR DRAIN.
- CONNECT TO UNIT FULL SIZE OF UNIT CONNECTION.



**2 ENLARGED PLAN - SECOND FLOOR - PART F - MECHANICAL ROOM**  
 M2.9.2 | M2.14.1 | 1/4" = 1'-0"

**SECOND FLOOR PLAN - PART F - DUCTWORK**  
 1/8" = 1'-0"





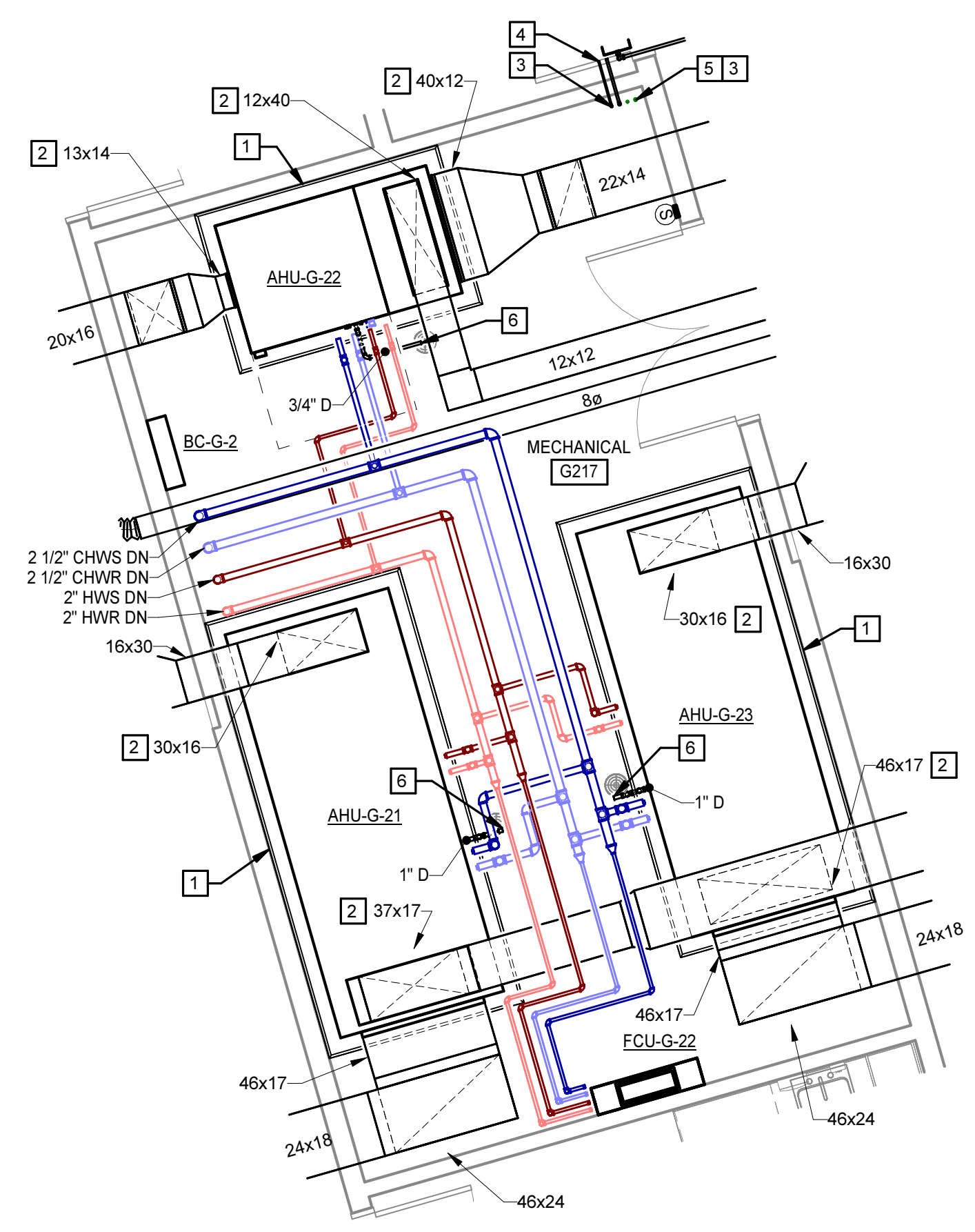
**GENERAL NOTES**

- A. BRANCH PIPING RUNOUTS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE UNLESS OTHERWISE INDICATED. REFER TO EQUIPMENT SCHEDULES FOR FLOW RATES.
- |        |             |
|--------|-------------|
| 3/4"   | 0.3 GPM     |
| 1"     | 3.5-6 GPM   |
| 1-1/4" | 6.5-12 GPM  |
| 1-1/2" | 12.5-19 GPM |
| 2"     | 19.5-37 GPM |
| 2-1/2" | 38-60 GPM   |
| 3"     | 61-104 GPM  |
| 4"     | 105-219 GPM |
| 5"     | 219-340 GPM |
| 6"     | 341-522 GPM |

**KEYNOTES**

APPLIES TO THIS DRAWING

- 1 PROVIDE 6" THICK HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
- 2 CONNECT TO UNIT FULL SIZE OF UNIT CONNECTION.
- 3 REFRIGERANT SUCTION AND LIQUID UP TO CONDENSING UNIT ON ROOF. ROUTE PIPING THROUGH PIPE CURB. REFER TO REFRIGERANT PIPE PENETRATION DETAIL - ROOF FOR ADDITIONAL DETAILS.
- 4 SIZE AND ROUTE REFRIGERANT SUCTION AND LIQUID IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 5 REFRIGERANT SUCTION AND LIQUID DOWN TO FLOOR BELOW.
- 6 DISCHARGE CONDENSATE DRAIN INTO OPEN SITE FLOOR DRAIN.

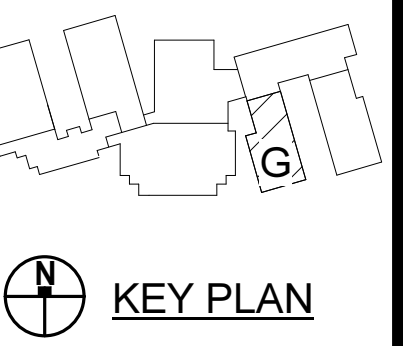
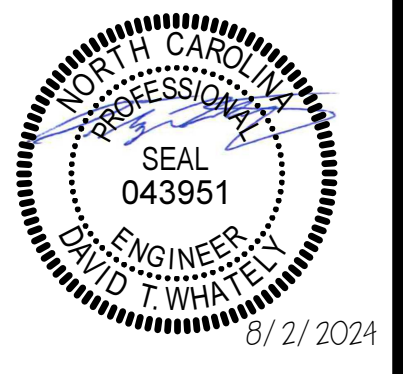
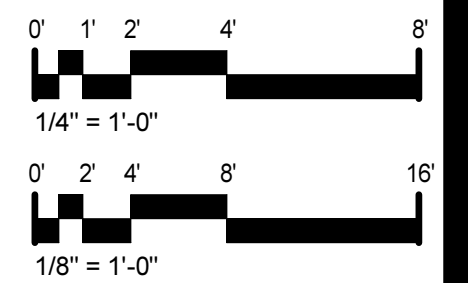


**1 ENLARGED PLAN - SECOND FLOOR - PART G - MECHANICAL ROOM**

M2.9.2 M2.15.1 1/4" = 1'-0"

**SECOND FLOOR PLAN - PART G - DUCTWORK**

1/8" = 1'-0"



PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS:	
DATE	DESCRIPTION
8/16/24	*AD-01

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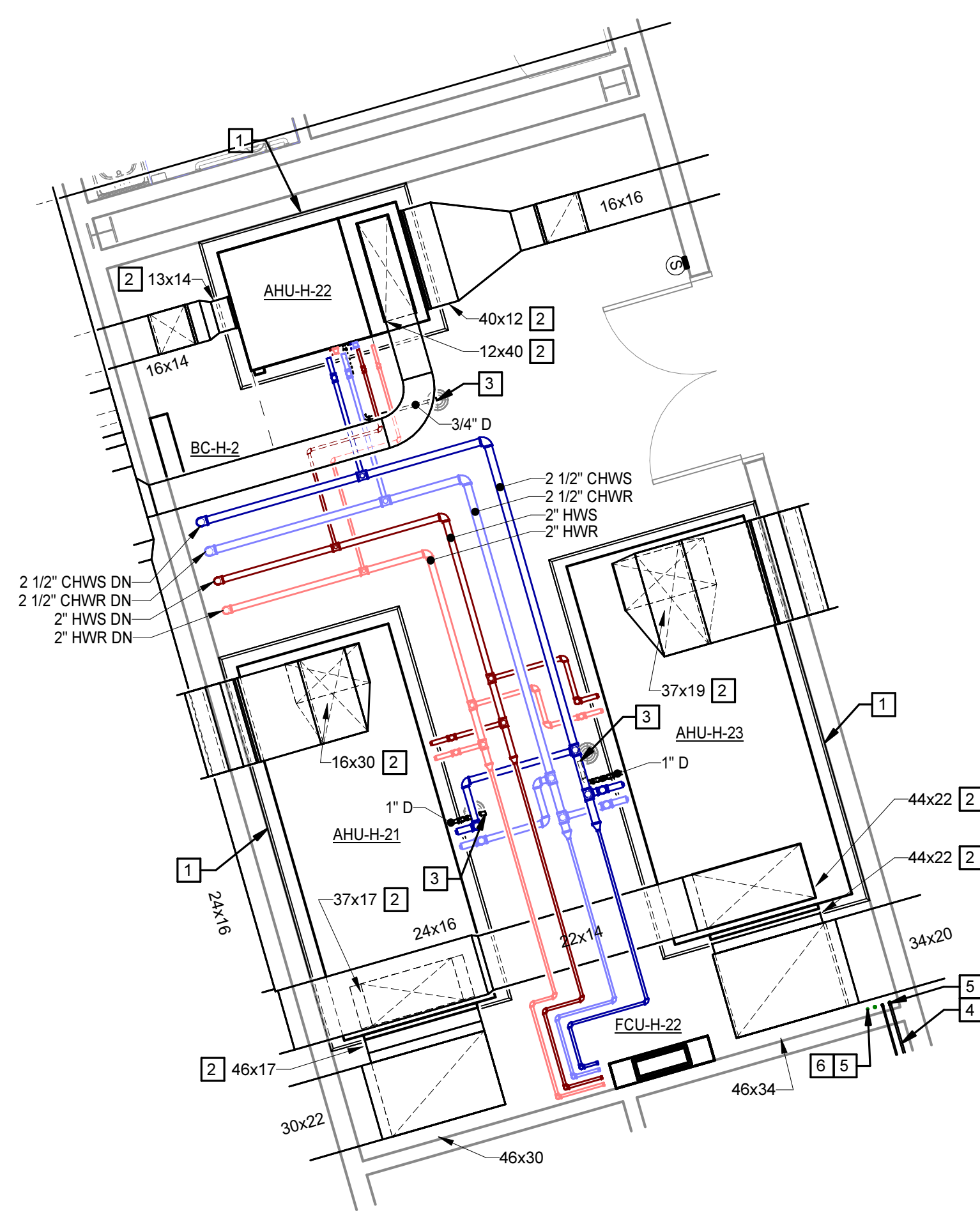
**GENERAL NOTES**

- A. BRANCH PIPING RUNOUTS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE UNLESS OTHERWISE INDICATED. REFER TO EQUIPMENT SCHEDULES FOR FLOW RATES.
- |        |             |
|--------|-------------|
| 3/4"   | 0.3 GPM     |
| 1"     | 3.5-6 GPM   |
| 1-1/4" | 6.5-12 GPM  |
| 1-1/2" | 12.5-19 GPM |
| 2"     | 19.5-37 GPM |
| 2-1/2" | 38-60 GPM   |
| 3"     | 61-104 GPM  |
| 4"     | 105-219 GPM |
| 5"     | 219-340 GPM |
| 6"     | 341-522 GPM |

**KEYNOTES**

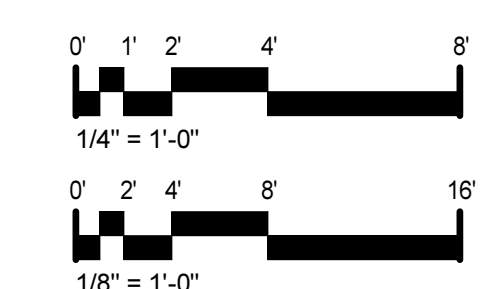
APPLIES TO THIS DRAWING

- 1 PROVIDE 6" THICK HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
- 2 CONNECT TO UNIT FULL SIZE OF UNIT CONNECTION.
- 3 DISCHARGE CONDENSATE DRAIN INTO OPEN SITE FLOOR DRAIN.
- 4 SIZE AND ROUTE REFRIGERANT SUCTION AND LIQUID IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 5 REFRIGERANT SUCTION AND LIQUID UP TO CONDENSING UNIT ON ROOF. ROUTE PIPING THROUGH PIPE CURB. REFER TO REFRIGERANT PIPE PENETRATION DETAIL - ROOF FOR ADDITIONAL DETAILS.
- 6 REFRIGERANT SUCTION AND LIQUID DOWN TO FLOOR BELOW.



**1 ENLARGED PLAN - SECOND FLOOR - PART H - MECHANICAL ROOM**  
M2.9.2 | M2.16.1 | 1/4" = 1'-0"

**SECOND FLOOR PLAN - PART H - DUCTWORK**  
1/8" = 1'-0"



**SECOND FLOOR PLAN - PART H - DUCTWORK**

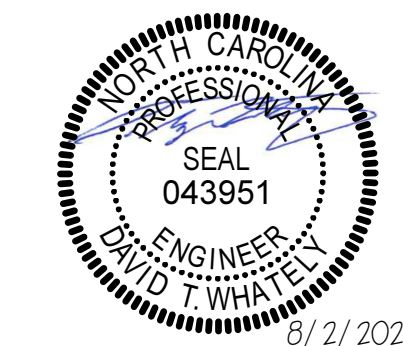
**M2.16.1**

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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS:	
DATE	DESCRIPTION
8/16/24	*AD-01

PENDER COUNTY SCHOOLS  
Highway 210, Hampstead, NC 28443

**PENDER COUNTY SCHOOLS K-8 SCHOOL**



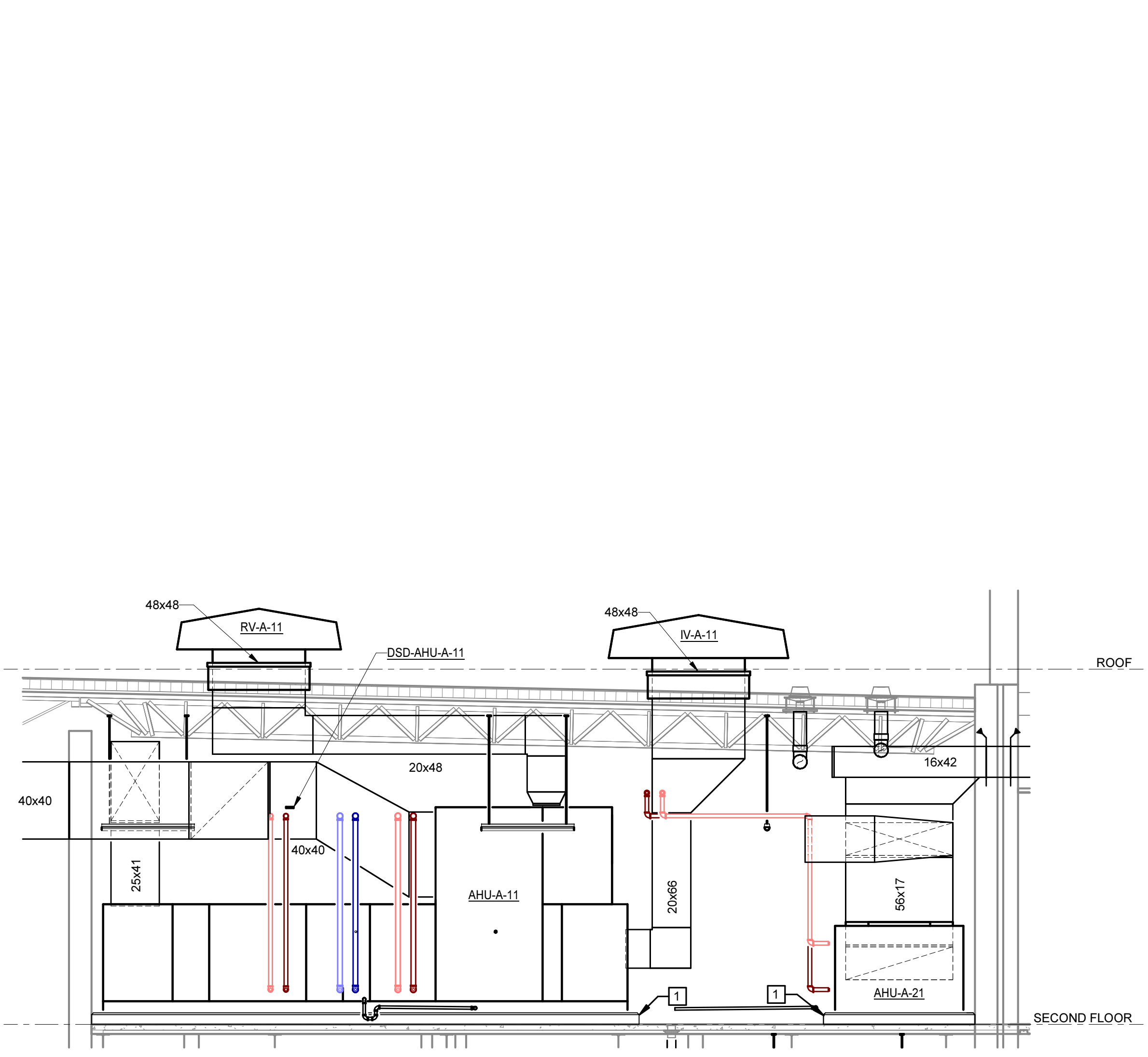
**MOSELEY ARCHITECTS**  
911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA, 27603  
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MOSELEYARCHITECTS.COM



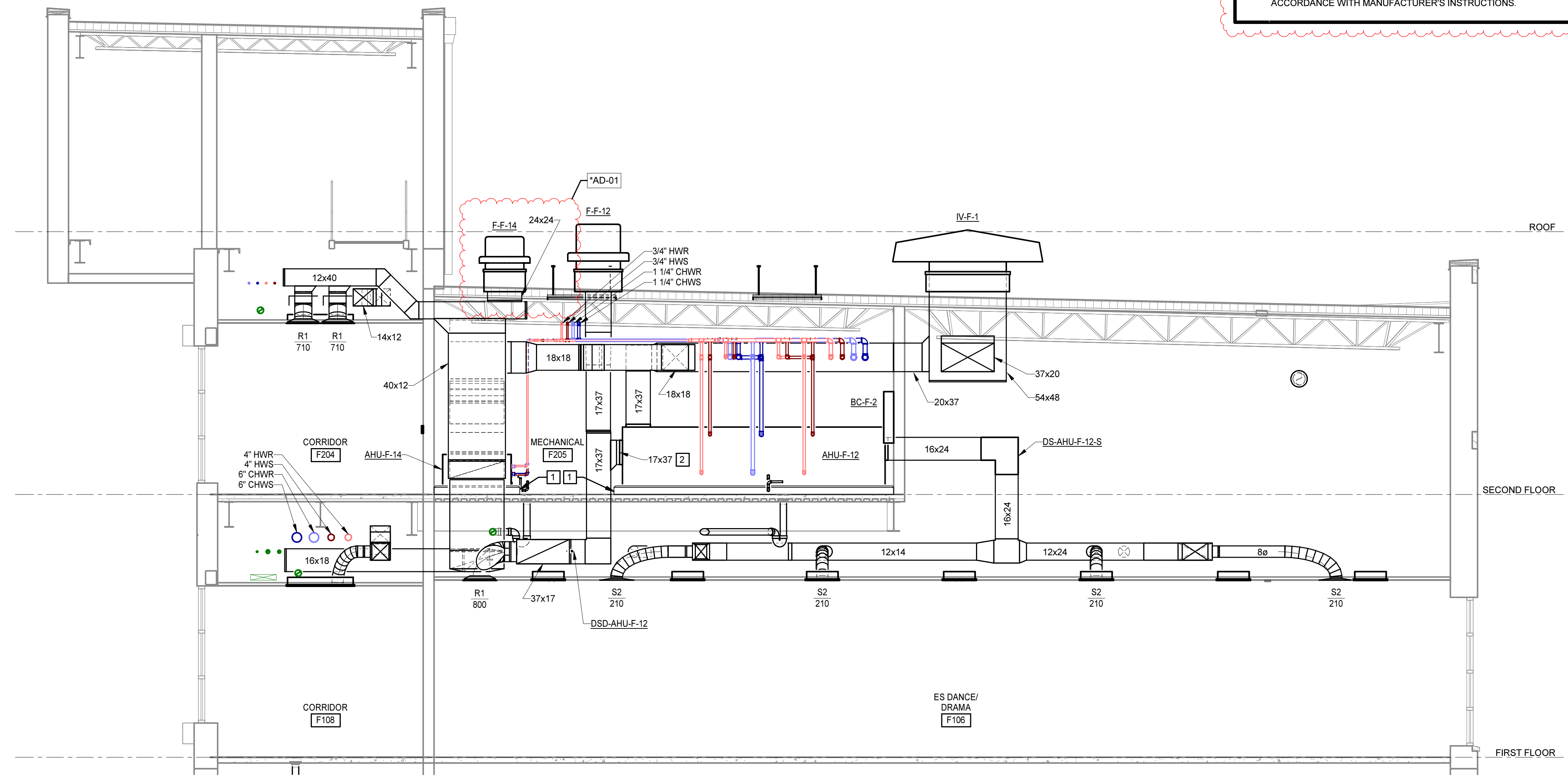


PROJECT NO:	631310
DATE:	AUGUST 2, 2024
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DATE	DESCRIPTION
8/16/24	*AD-01

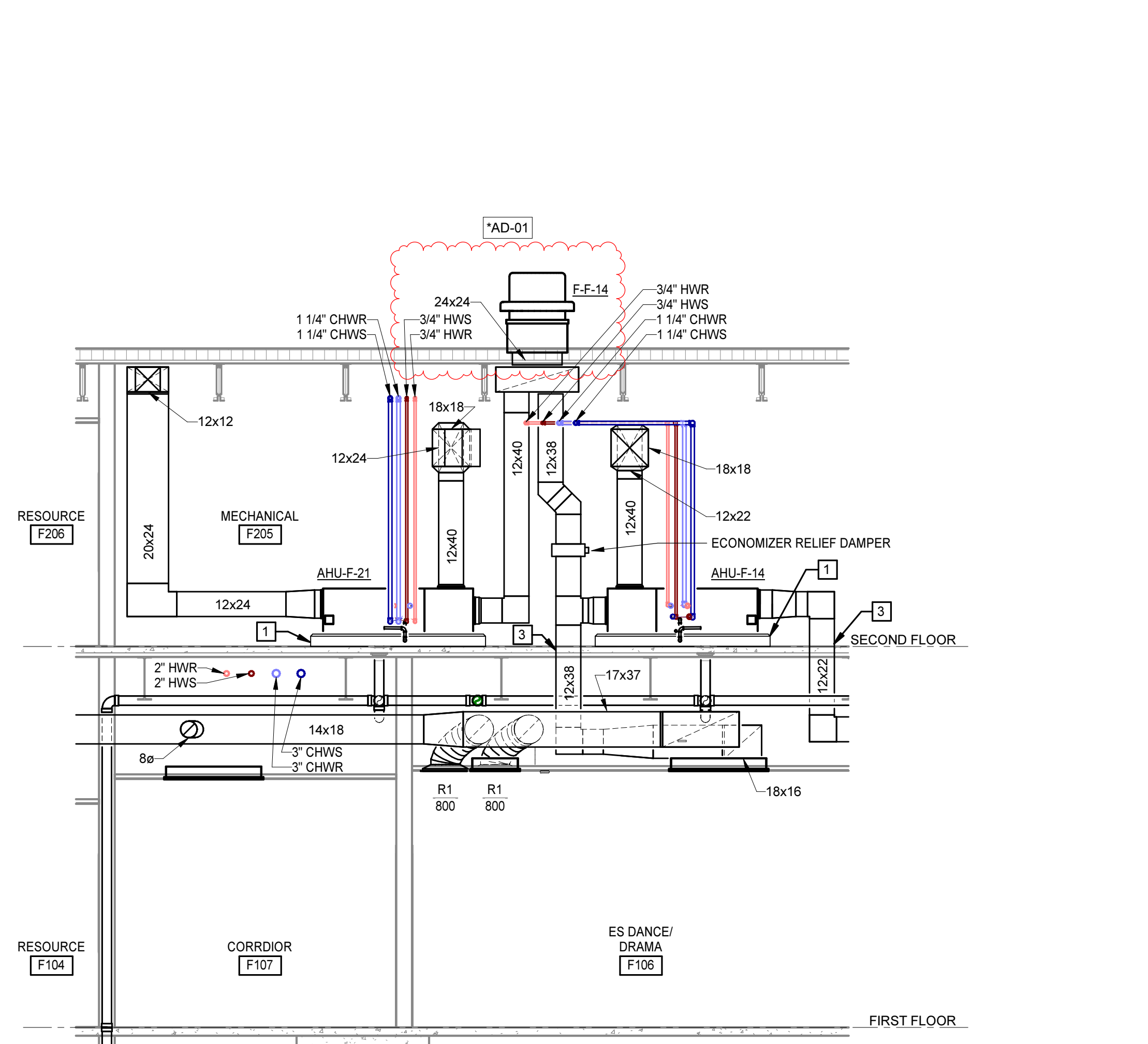
- KEYNOTES**  
APPLIES TO THIS DRAWING
- 1 PROVIDE 6" THICK HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.
  - 2 CONNECT TO UNIT FULL SIZE OF UNIT CONNECTION.
  - 3 DUCT PENETRATES UNRATED FLOOR. FILL THE ANNULAR SPACE AROUND THE PENETRATING DUCT WITH APPROVED NONCOMBUSTIBLE MATERIAL THAT RESISTS THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 607.6.3, EXCEPTION 2 OF THE NCMC.
  - 4 MOUNT CONDENSING UNIT ON ROOF ON EQUIPMENT CURBS REFER TO CONDENSING UNIT MOUNTING DETAIL - ROOF FOR ADDITIONAL DETAILS.
  - 5 SIZE AND ROUTE REFRIGERANT SUCTION AND LIQUID IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.



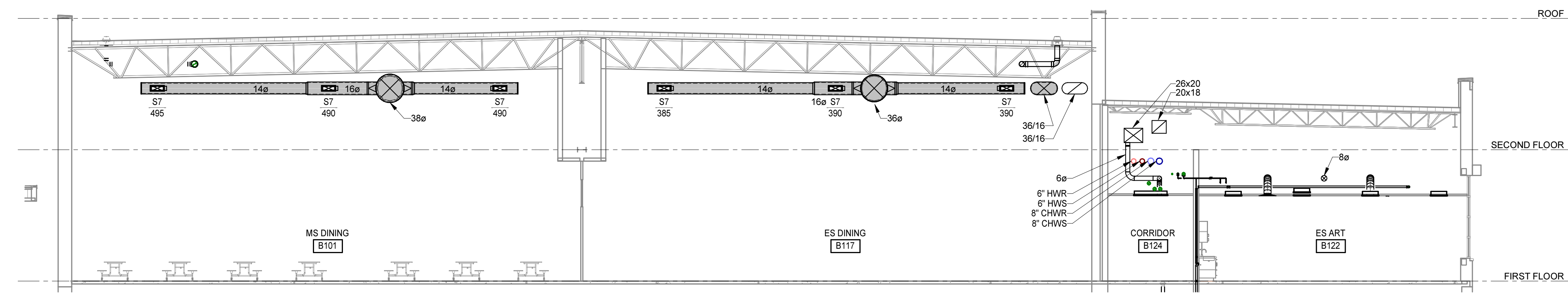
**5 SECTION**  
M3.1 | M4.1 | 1/4" = 1'-0"



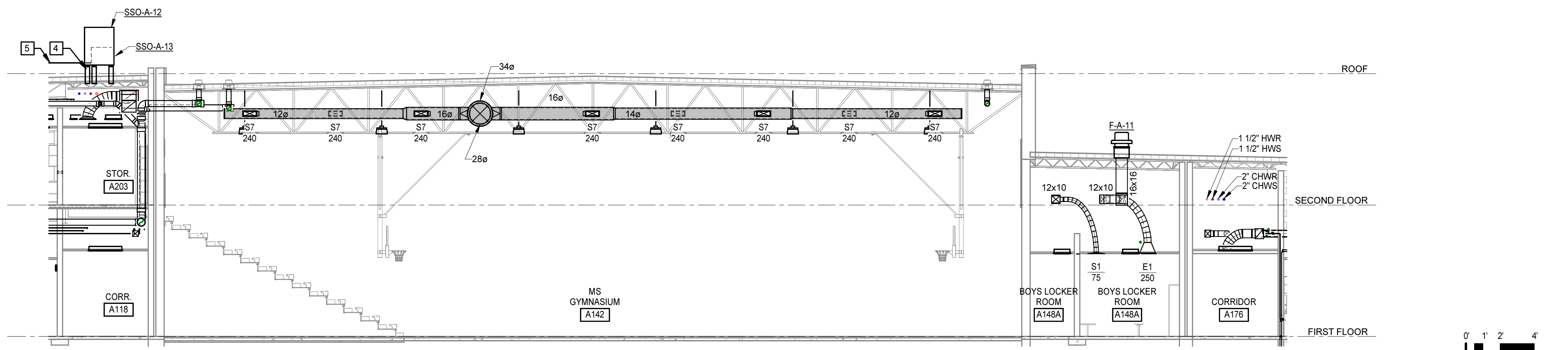
**3 SECTION**  
M2.6.1 | M4.1 | 1/4" = 1'-0"



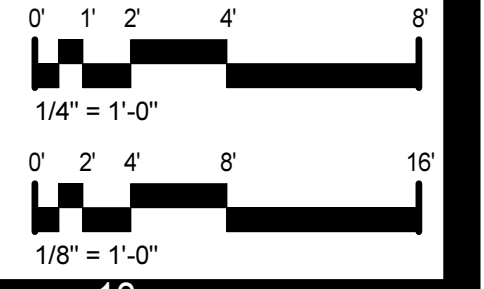
**4 SECTION**  
M2.14.1 | M4.1 | 1/4" = 1'-0"



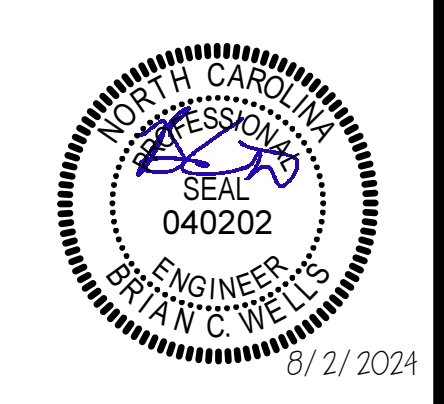
**2 SECTION**  
M2.1.1 | M4.1 | 1/8" = 1'-0"



**1 SECTION**  
M2.1.1 | M4.1 | 1/8" = 1'-0"





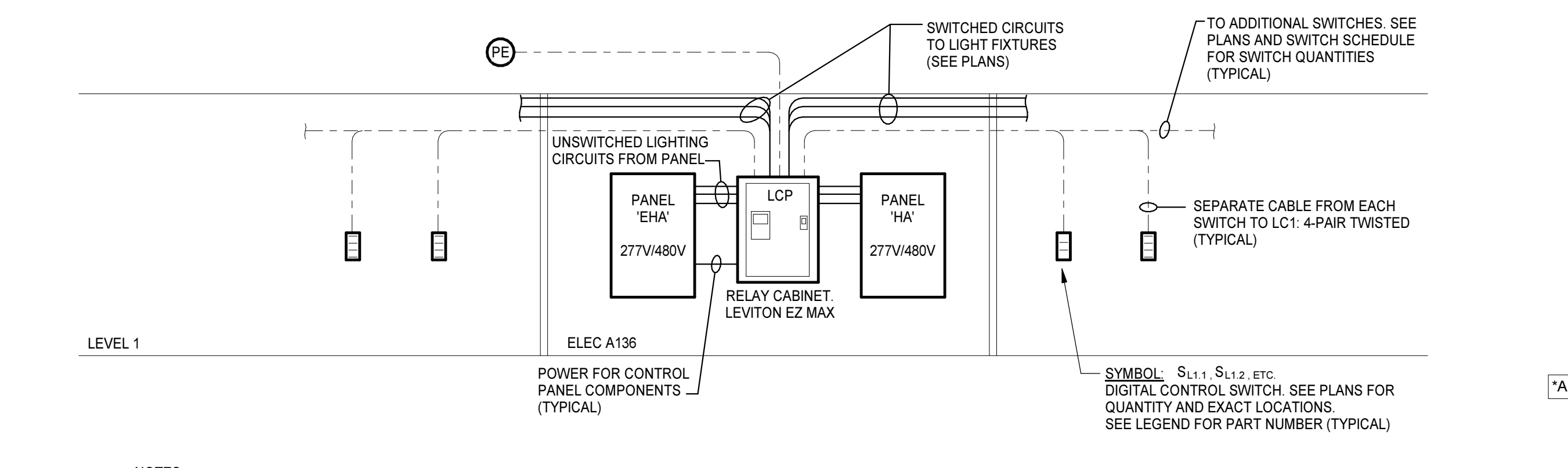


PROJECT NO:	831310
DATE:	AUGUST 2, 2024
REVISIONS:	
DATE:	DESCRIPTION:
8/16/24	*AD-01

RELAY #	CIRCUIT	VOLTAGE	AREA DESCRIPTION	CONTROL DESCRIPTION	CONTROL FUNCTION	BLINK WARNING	TIME DELAY	NOTES
1	HA-2	277V	1ST LVL - E. CLASSRM CORR	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
2	HA-4	277V	1ST LVL - ES GYM	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
3	HA-6	277V	1ST LVL - ES MEDIA CENTER	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
4	EHA-2	277V	1ST LVL - ES ADMIN + DINING CORR	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
5	EHA-4	277V	1ST LVL - MS GYM + STAGE (ZONES 'C', 'D', 'G')	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
6	EHA-6	277V	1ST LVL - MS GYM (ZONE 'H')	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
7	EHA-8	277V	1ST LVL - LOBBY (ZONE 'F')	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
8	EHA-8	277V	1ST LVL - DINING	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
9	EHA-10	277V	1ST LVL - MS ADMIN + DINING CORR	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
10	HA-8	277V	1ST LVL - MS CLASSRM CORR	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
11	HA-10	277V	2ND LVL - ES CLASSRM CORR	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
12	HA-12	277V	2ND LVL - MS CLASSRM CORR	-BAS SCHEDULE -OVERRIDE SWITCHES	ON / OFF	YES	YES	--
13	HA-14	277V	EXTERIOR	-SCHEDULE -PE CELL	ON / OFF	NO	NO	--
14	---	---	SPARE	---	---	---	---	---
15	---	---	SPARE	---	---	---	---	---
16	---	---	SPARE	---	---	---	---	---

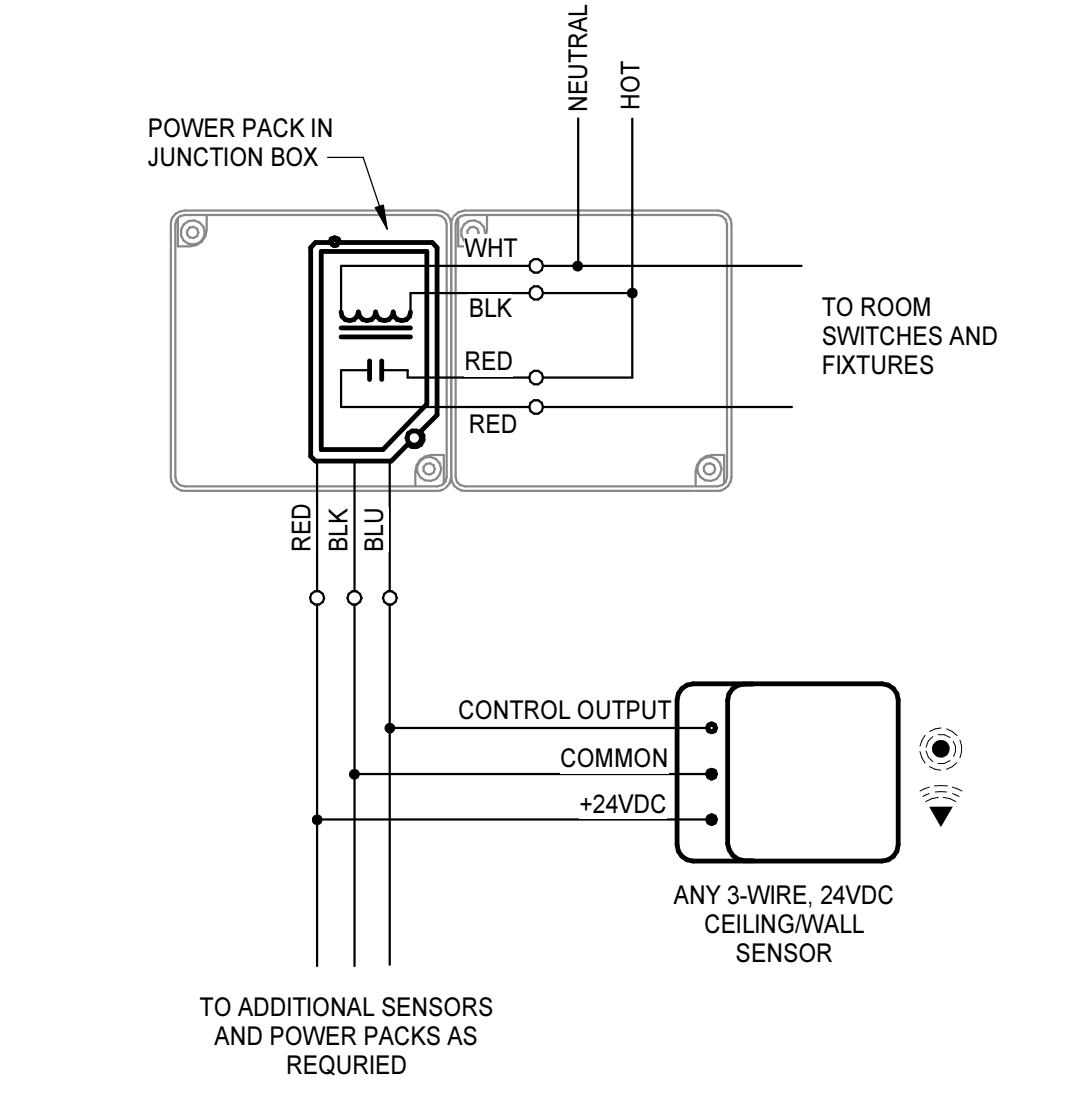
SWITCH ID	SWITCH QTY	SWITCH TYPE	RELAY(S) CONTROLLED	BUTTON LABELS	NOTES
SL1.1	1	1-BUTTON	LCP-1,2,3	1ST ES WING	
SL1.2	1	1-BUTTON	LCP-4	ES ADMIN	
SL1.3	2	1-BUTTON	LCP-5,6,7,8	GYM/DIN	
SL1.4	1	3-BUTTON	BUTTON 1: LCP-1,2,3,4 BUTTON 2: LCP-5,6,7,8 BUTTON 3: LCP-11	1ST ALL ES GYM/DIN 2ND ES CORR	1
SL1.5	1	1-BUTTON	LCP-10	1ST MS WING	
SL1.6	1	1-BUTTON	LCP-9	MS ADMIN	
SL1.7	1	3-BUTTON	BUTTON 1: LCP-9,10 BUTTON 2: LCP-5,6,7,8 BUTTON 3: LCP-12	1ST ALL MS GYM/DIN 2ND MS CORR	1
SL2.1	1	1-BUTTON	LCP-11	2ND ES CORR	
SL2.2	1	1-BUTTON	LCP-12	2ND MS CORR	

**SWITCH SCHEDULE NOTES:**  
 1. EACH BUTTON SHALL FUNCTION AS TIMED OVERRIDE. TURNING CONTROLLED RELAYS ON FOR 2-HOURS MAXIMUM. IN ADDITION TO BUTTON LABELS, PROVIDE PERMANENT LABEL ON SWITCH COVERPLATE READING, "2-HR TIMED OVERRIDE."

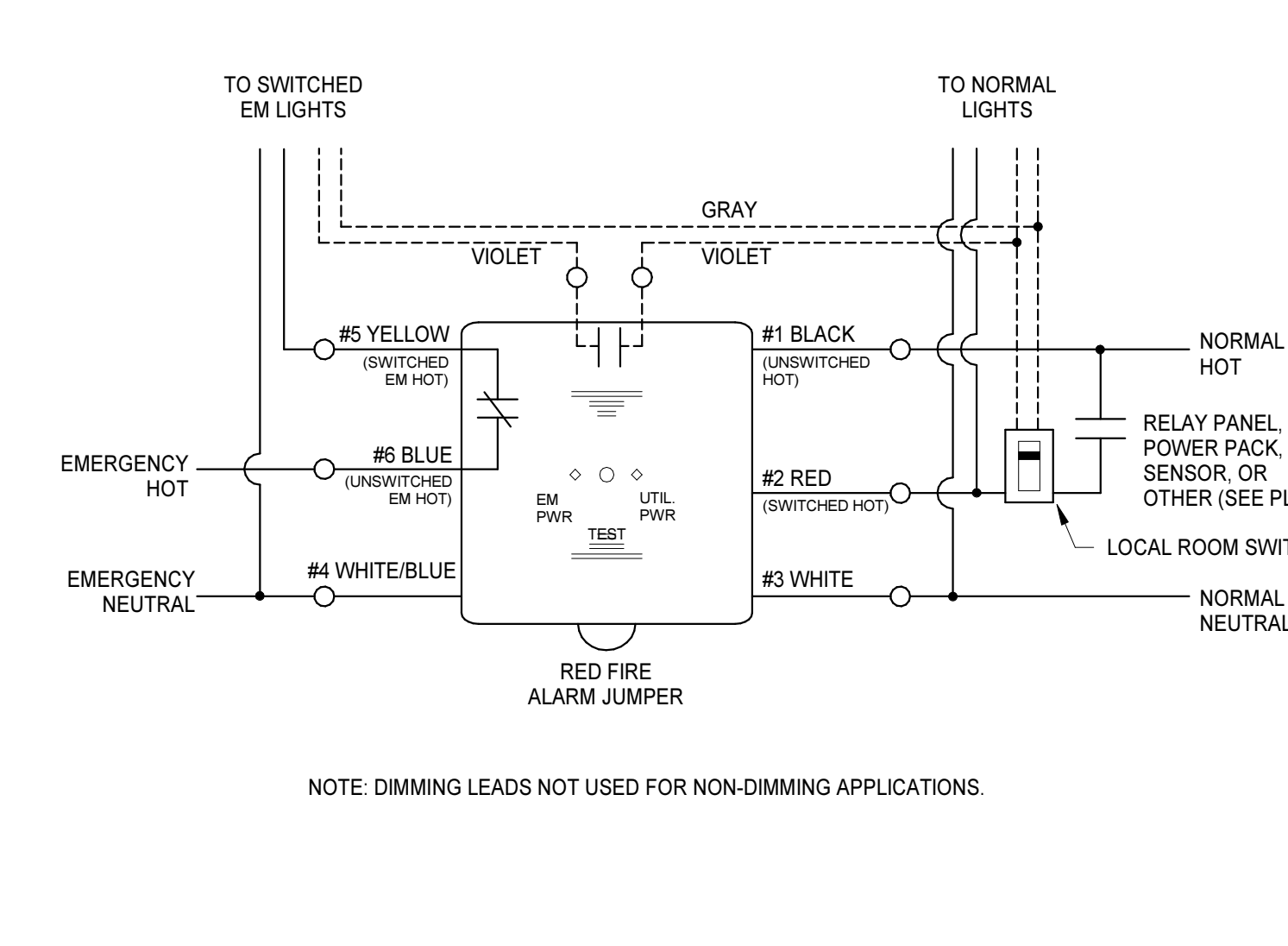


- NOTES:**
- LIGHTING CONTROL PANEL SHALL BE LEVITON #EZMAX OR EQUAL BY WATTS/OPPER, ACUITY, I.L.C. OR CURRENT. ALL COMPONENTS SHALL HAVE 5 YEAR WARRANTY AND SHALL BE U.L. LISTED. SHOP DRAWINGS SHALL BE PROVIDED BY MANUFACTURER INDICATING EXACT CATALOG NUMBERS AND COMPLETE WIRING DIAGRAMS.
  - LIGHTING CONTROL PANEL SHALL INCLUDE DIGITAL ASTRONOMIC TIMECLOCK FUNCTIONALITY, COMPATIBILITY FOR INTEGRATION WITH BAS, PE CELL AND CIRCUIT RELAYS AS SHOWN ON PLANS / RELAY SCHEDULES.
  - PROVIDE ALL PROGRAMING, CALIBRATION, ADJUSTING, TROUBLESHOOTING REQUIRED TO ENSURE THE CONTROL SYSTEM IS COMPLETE AND FUNCTIONS ACCORDING TO OWNERS REQUIREMENTS. CONTRACTOR SHALL PROVIDE TRAINING TO OWNER FOR PROGRAMMING, ADJUSTING AND MAINTAINING LIGHTING CONTROL PANEL.
  - PROVIDE BUTTON ENGRAVING ACCORDING TO SWITCH SCHEDULES ON THIS DRAWINGS. COORDINATE WITH OWNER FOR ADDITIONAL DIRECTION.
  - LOW VOLTAGE SWITCHES SHALL HAVE A HOMERUN MULTI-PAIR CABLE IN 3/4" C FROM EACH SWITCH LOCATION TO LIGHTING CONTROL PANEL FOR CONTROL.

**2 DIGITAL LIGHTING CONTROL PANEL RISER DIAGRAM AND SCHEDULES**  
 12" = 1'-0"



**3 OCCUPANCY SENSOR WIRING DIAGRAM**  
 12" = 1'-0"



**4 UL924 ALCR WIRING DIAGRAM**  
 12" = 1'-0"

TYPE	DESCRIPTION	MANUFACTURER	SERIES NO.	VOLTAGE	WATTAGE	FINISH/COLOR	MOUNTING TYPE	LIGHT SOURCE	LUMENS	CCT	CRI	DRIVER	REFLECTORS, OPTIONS & ACCESSORIES	LABELS & LISTINGS	COMMENTS
BL	7" DIA x 42" TALL ROUND ALUMINUM BOLLARD LIGHT, FLAT TOP	KIM	PATR-FT	UNIVERSAL	14	TEXTURED MATTE BLACK	ON GRADE	LED	1788	4000K	70	10%, 0-10V DIMMING	CLEAR HORIZONTAL LENS, TYPE II DISTRIBUTION	WET LOCATION	
BZL	47" DIA x 21" TALL ACOUSTIC PENDANT	BuzzSpace	BuzzJet XL	277V	30	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	LED	2545	3000K	90	10%, 0-10V DIMMING	MILKY DIFFUSER		3
BZM	31" DIA x 18" TALL ACOUSTIC PENDANT	BuzzSpace	BuzzJet medium	277V	30	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	LED	2545	3000K	90	10%, 0-10V DIMMING	MILKY DIFFUSER		3
BZP	18" DIA x 18" TALL ACOUSTIC PENDANT	BuzzSpace	BuzzProp Small	UNIVERSAL	20	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	LED	1500	3000K	90	10%, 0-10V DIMMING	SOLO GLOBE DIFFUSER		3
BZS	31" DIA x 9" TALL ACOUSTIC PENDANT	BuzzSpace	BuzzJet small	277V	30	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	LED	2545	3000K	90	10%, 0-10V DIMMING	MILKY DIFFUSER		3
BZX	59" DIA x 24" TALL ACOUSTIC PENDANT	BuzzSpace	BuzzJet XXL	UNIVERSAL	70	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	LED	6232	3000K	90	10%, 0-10V DIMMING	MILKY DIFFUSER		3
CP3	3.5" CYLINDER PENDANT ROUND, DIRECT/INDIRECT	ALW	CRP3	UNIVERSAL	24	WHITE FINISH	PENDANT	LED	D 1500LMFT / I 1500LMFT	4000K	90	1%, 0-10V DIMMING	D 55" BEAM, I 80" BEAM, DEEP DRIVER CANOPY	WET LOCATION	
CS6	6" CYLINDER SURFACE SQUARE, EXTERIOR	ALW	CSM6/WL	UNIVERSAL	12	WHITE FINISH	SURFACE	LED	1300	4000K	80	10%, 0-10V DIMMING	60" BEAM, DEEP DRIVER CANOPY	WET LOCATION	
D1	4" DIA. RECESSED DOWNLIGHT	PRESCOLITE	LTR-4RD-H	UNIVERSAL	14	CLEAR, SEMI-SPECULAR	Ceiling	LED	1000	4000K	80	1%, 0-10V DIMMING	45" BEAM	WET LOCATION	
D2	4" DIA. RECESSED DOWNLIGHT, EXTERIOR	PRESCOLITE	LTR-4RD-H	UNIVERSAL	19	CLEAR, SEMI-SPECULAR	Ceiling	LED	1500	4000K	80	1%, 0-10V DIMMING	45" BEAM	WET LOCATION	
DS	4" DIA. RECESSED DOWNLIGHT, SHOWER	PRESCOLITE	LTR-4RD-H	UNIVERSAL	12	WHITE FINISH	Ceiling	LED	500	4000K	80	1%, 0-10V DIMMING	POLYCARBONATE MICRO-PRISM LENS, NON-CONDUCTIVE SHOWER TRIM	WET LOCATION	
HB1	ROUND HIGHBAY	COLUMBIA	UTB2	UNIVERSAL	168	WHITE BODY, ALUMINUM REFLECTOR	PENDANT	LED	21,300	4000K	80	10%, 0-10V DIMMING	ALUMINUM REFLECTOR		
L1	4" INDUSTRIAL STRIP	COLUMBIA	MPS	UNIVERSAL	34	WHITE FINISH	Ceiling	LED	4000	4000K	80	10%, 0-10V DIMMING	WIRE GUARD OVER BOTTOM OF REFLECTOR ONLY		1
L2	4" LOW-PROFILE SURFACE WRAP	ILP	SVR	UNIVERSAL	41	WHITE FINISH	Ceiling	LED	4800	4000K	80	10%, 0-10V DIMMING	CURVED FROSTED POLYCARBONATE IMPACT LENS, SELECTABLE OUTPUT		
L2E	4" LOW-PROFILE SURFACE WRAP	ILP	SVR	UNIVERSAL	41	WHITE FINISH	Ceiling	LED	4800	4000K	80	10%, 0-10V DIMMING	CURVED FROSTED POLYCARBONATE IMPACT LENS, SELECTABLE OUTPUT, INTEGRAL BATTERY BACKUP		
L3	8" INDUSTRIAL STRIP	COLUMBIA	MPS	UNIVERSAL	55	WHITE FINISH	Ceiling	LED	7800	4000K	80	10%, 0-10V DIMMING	CURVED FROSTED ACRYLIC LENS		
L4	2" INDUSTRIAL VAPORLIGHT	COLUMBIA	LXEM	UNIVERSAL	26	WHITE FINISH	Ceiling	LED	3000	4000K	80	10%, 0-10V DIMMING	RIBBED FROSTED POLYCARBONATE LENS, STAINLESS LATCHES AND MOUNTING BRACKETS		
LP16	3" x 16" x 12" TALL LINEAR ACOUSTIC PENDANT, DIRECT/INDIRECT	PICASSO	ECHO-PR	UNIVERSAL	14.6 WFT	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	LED	D 1000LMFT / I 1500LMFT	4000K	85	1%, 0-10V DIMMING	D FROSTED ACRYLIC LENS / LAMB OPTIC I FROSTED LENS / LAMB OPTIC		
LP20	3" x 20" x 12" TALL LINEAR ACOUSTIC PENDANT, DIRECT/INDIRECT	PICASSO	ECHO-PR	UNIVERSAL	9.2 WFT	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	LED	D 750LMFT / I 1350LMFT	4000K	85	1%, 0-10V DIMMING	D FROSTED ACRYLIC LENS / LAMB OPTIC I FROSTED LENS / LAMB OPTIC		
LPC8	1" x 1" x 8" LONG LINEAR PENDANT, DIRECT/INDIRECT	PICASSO	SI1-PR-MCO	UNIVERSAL	8.8 WFT	SILVER BODY, BLACK MICRO LENS	PENDANT	LED	D 500LMFT / I 500LMFT	4000K	85	1%, 0-10V DIMMING	D: MICRO-CAVITY LENS / 45° OPTIC I: CLEAR LENS / BAT OPTIC		2
LPC14	1" x 1" x 14" LONG PENDANT, DIRECT/INDIRECT	PICASSO	SI1-PR-MCO	UNIVERSAL	8.8 WFT	SILVER BODY, BLACK MICRO LENS	PENDANT	LED	D 500LMFT / I 1500LMFT	4000K	85	1%, 0-10V DIMMING	D: MICRO-CAVITY LENS / 45° OPTIC I: CLEAR LENS / BAT OPTIC		2
LS8	2" x 8" SURFACE LINEAR	ALW	SP2.5SMB	UNIVERSAL	6.5WFT	WHITE FINISH	SURFACE	LED	750 LMFT	4000K	80	1%, 0-10V DIMMING	FLUSH FROSTED LENS		
PB4	3" x 4" x 12" TALL UN-LIT LINEAR ACOUSTIC BAFFLE	PICASSO	WAT	-	-	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	-	-	-	-	-	-		
PB8	3" x 8" x 12" TALL UN-LIT LINEAR ACOUSTIC BAFFLE	PICASSO	WAT	-	-	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	-	-	-	-	-	-		
PB16	3" x 12" x 12" TALL UN-LIT LINEAR ACOUSTIC BAFFLE	PICASSO	WAT	-	-	SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	-	-	-	-	-	-		
R3A	3" DIA. PENDANT RING, UNLIT, ACOUSTIC CENTER	OCL	REV ACOUSTIC - NL	-	-	STEEL GRAY BODY, SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	-	-	-	-	-	-		3
RL4	4" DIA. PENDANT RING, DIRECT/INDIRECT, OPEN CENTER	OCL	REV - RV3	UNIVERSAL	70	STEEL GRAY BODY	PENDANT	LED	4060	4000K	90	1%, 0-10V DIMMING	MATTE WHITE DIFFUSER, VERTICAL CABLE MOUNTING, INTEGRAL DRIVER CANOPY		3
RL4A	4" DIA. PENDANT RING, DIRECT/INDIRECT, ACOUSTIC CENTER	OCL	REV ACOUSTIC - RV3	UNIVERSAL	70	STEEL GRAY BODY, SEE INTERIORS PLANS FOR ACOUSTIC FINISH	PENDANT	LED	4060	4000K	90	1%, 0-10V DIMMING	MATTE WHITE DIFFUSER, VERTICAL CABLE MOUNTING, INTEGRAL DRIVER CANOPY		3
SL	SPOT LIGHT FOR FLAG POLE	VISTA	1043	UNIVERSAL	20	WHITE BODY	ON GRADE KNUCKLE	LED	1200	4000K	80	0-10V DIMMING	NARROW SPOT DISTRIBUTION	WET LOCATION	
T2	2X2 RECESSED TROFFER, CENTER BASKET	COLUMBIA	LCAT	UNIVERSAL	26	WHITE FINISH	Ceiling	LED	3300	4000K	80	10%, 0-10V DIMMING	CURVED FROSTED ACRYLIC LENS		
T4	2X4 RECESSED TROFFER, CENTER BASKET	COLUMBIA	LCAT	UNIVERSAL	32	WHITE FINISH	Ceiling	LED	4500	4000K	80	10%, 0-10V DIMMING	CURVED FROSTED ACRYLIC LENS		
TK2	2X2 RECESSED TROFFER, FLAT LENS	COLUMBIA	LJT	UNIVERSAL	31	WHITE BODY	Ceiling	LED	3400	4000K	80	10%, 0-10V DIMMING	ALUMINUM DOOR WITH GASKET, FLAT FROSTED ACRYLIC LENS, 0.125" THICK		
TK4	2X4 RECESSED TROFFER, FLAT LENS	COLUMBIA	LJT	UNIVERSAL	38	WHITE BODY	Ceiling	LED	4700	4000K	80	10%, 0-10V DIMMING	ALUMINUM DOOR WITH GASKET, FLAT FROSTED ACRYLIC LENS, 0.125" THICK		
TL	THEATRICAL TRACK LIGHT SUSPENDED TWO-CIRCUIT TRACK	SPECTRUM	ST016T HEAD OTS2B TRACK	120V	22HEAD	MATTE BLACK FINISH	SUSPENDED	LED	2000	3000K	83	1% PHASE DIMMING	TMD 48 BEAM, TEK100 ADAPTOR, BARN DOORS, SOLITE LENS, 500W CURRENT LIMITER		4
W1	EXTERIOR WALL SCONCE TRAPEZOIDAL	BEACON	TRP2	UNIVERSAL	37	DARK BRONZE MATTE	WALL MOUNTED	LED	5500	4000K	70	10%, 0-10V DIMMING			
W2	EXTERIOR WALL SCONCE TRAPEZOIDAL	BEACON	TRP2	UNIVERSAL	24	DARK BRONZE MATTE	WALL MOUNTED	LED	3600	4000K	70	10%, 0-10V DIMMING			
X1	UNIVERSAL MOUNT EXIT SIGN, DIE-CAST ALUMINUM BODY, AC ONLY	EXITRONIX	400EX	UNIVERSAL	4	WHITE BODY, RED LETTERS	Wall	LED	-	-	-	-	-		
X1C	UNIVERSAL MOUNT EXIT SIGN, DIE-CAST ALUMINUM BODY, AC ONLY	EXITRONIX	400EX	UNIVERSAL	4	WHITE BODY, RED LETTERS	Wall	LED	-	-	-	-	-		
X2	UNIVERSAL MOUNT EXIT SIGN, DIE-CAST ALUMINUM BODY, AC ONLY	EXITRONIX	400EX	UNIVERSAL	4	WHITE BODY, RED LETTERS	Ceiling	LED	-	-	-	-	-		

- GENERAL NOTES:**
- ALL FIXTURES SHALL BE CAPABLE OF 120V AND 277V INPUT (MVOLT), UNO.
  - REFER TO LIGHTING PLANS AND SPECIFICATIONS FOR ADDITIONAL FIXTURE INFORMATION.
  - KITCHEN FIXTURES: INSTALL LENS WITH SMOOTH SIDE OUT.
  - WHERE FINISH OR FIXTURE COLOR IS INDICATED AS 'TBD', IT SHALL BE SELECTED WITH THE PROJECT'S INTERIOR COLOR SELECTIONS. PROVIDE NUMBER OF FACES AND DIRECTIONAL CHEVRONS FOR EXIT SIGNS AS INDICATED ON DWGS.
  - PROVIDE LABEL AND LISTING DOCUMENTATION WITH LIGHTING FIXTURE SUBMITAL FOR EACH FIXTURE AND LABEL LISTING INDICATED IN LIGHT FIXTURE SCHEDULE.
- LABELS & LISTINGS:**
- DECLARE TRANSPARANCY
  - HPD TRANSPARANCY
  - RED LIST FREE
  - ENERGY STAR, DLC
  - WET LISTED
  - IMPACT RESISTANT
- COMMENTS:**
- COORDINATE INSTALLATION OF SUSPENDED LIGHT FIXTURE WITH HEIGHT OF DUCTWORK
  - PROVIDE FIXTURE LENGTHS, LIT CORNERS, CONNECTORS, MOUNTING POINTS, ETC., AS NECESSARY TO MATCH SHAPES ON PLANS
  - PRIOR TO ORDERING, EXACT LAYOUT AND ORIENTATION OF FIXTURES TO BE APPROVED BY ARCHITECT AND ENGINEER.
  - PROVIDE ALL CONNECTORS, MOUNTING HARDWARE, WIRING, ETC., REQUIRED FOR A COMPLETE SYSTEM.

**3 OCCUPANCY SENSOR WIRING DIAGRAM**  
 12" = 1'-0"

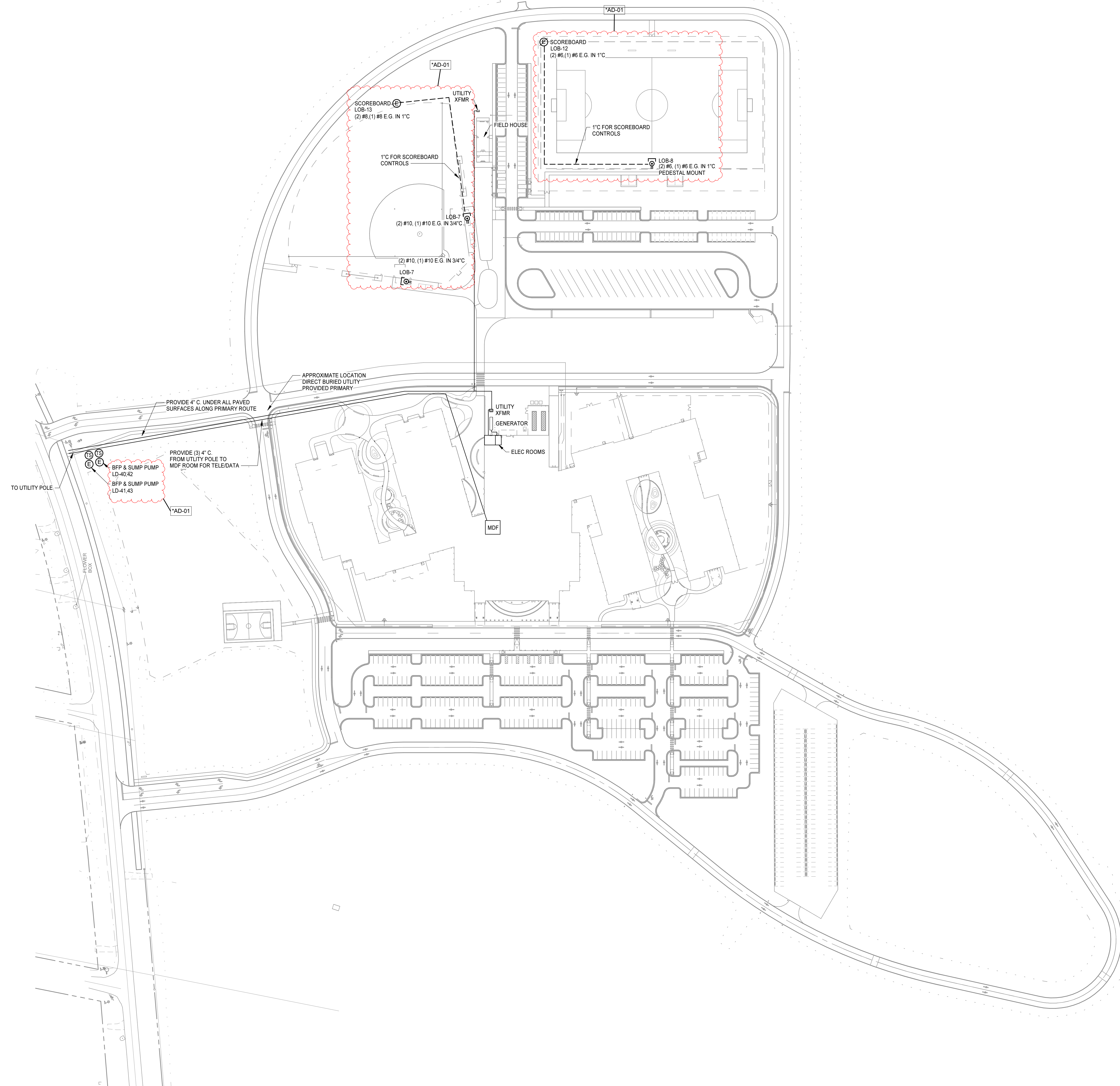
**4 UL924 ALCR WIRING DIAGRAM**  
 12" = 1'-0"

**5 LOW VOLTAGE SWITCH WIRING DIAGRAM**  
 12" = 1'-0"



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**ELECTRICAL SITE PLAN**  
1" = 80'-0"

**GENERAL SITE NOTES**

A. SITE LIGHTING SHALL BE PROVIDED AND CONTROLLED BY UTILITY.

**MOSELEYARCHITECTS**

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**PENDER COUNTY SCHOOLS K-8 SCHOOL**

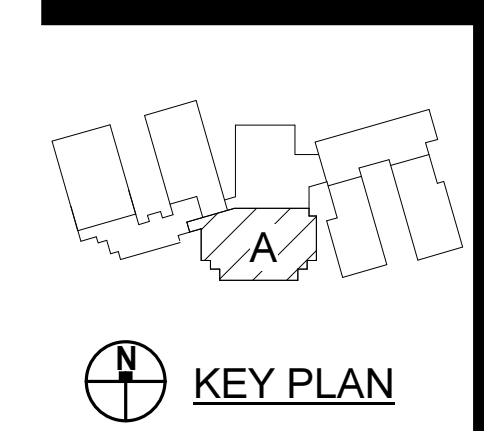
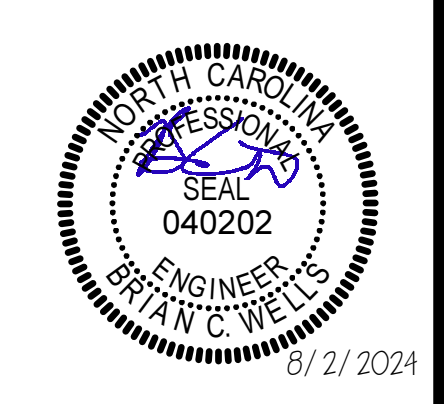
Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
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SITE PLAN

**E1.1**





KEY PLAN

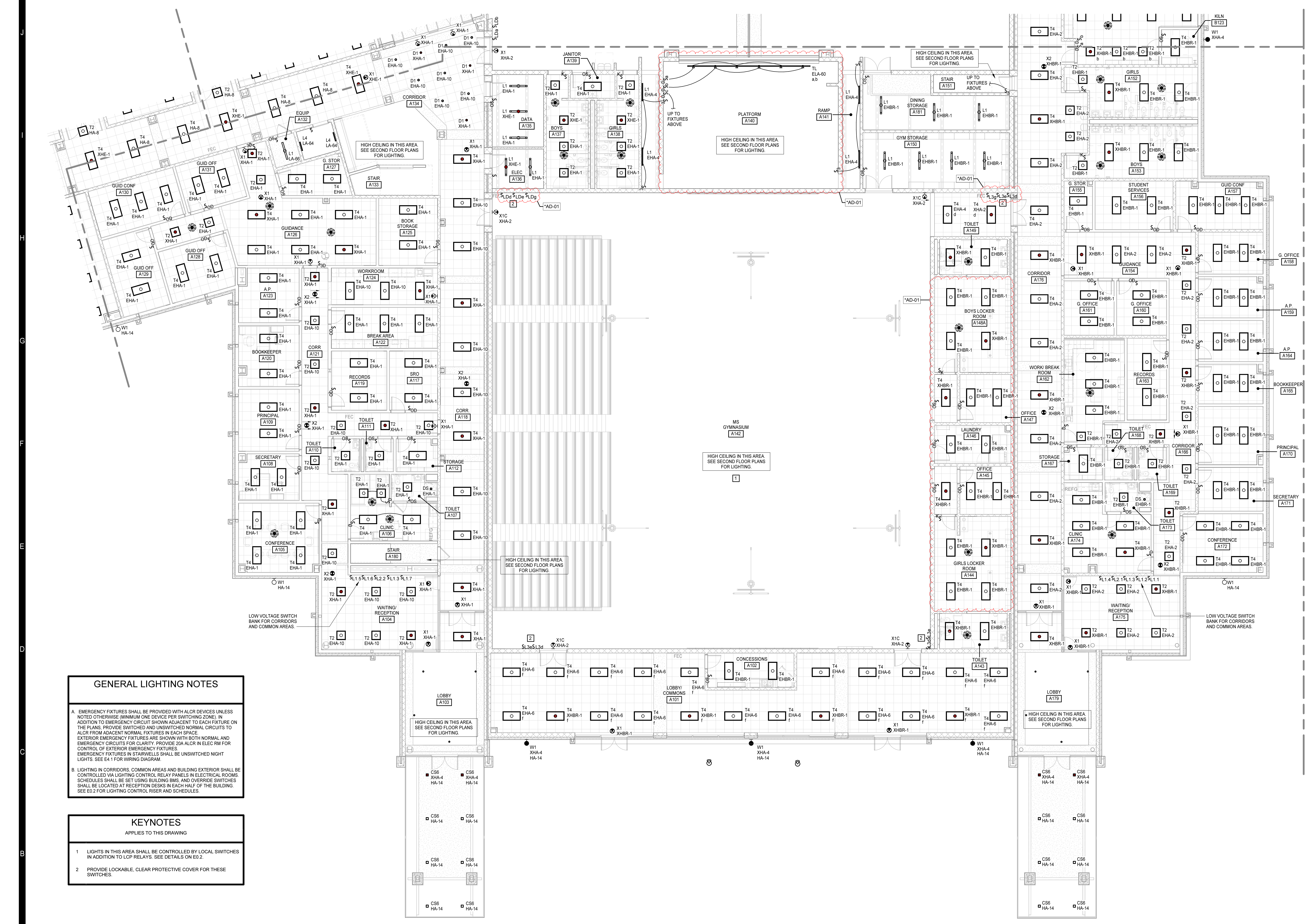
PENDER COUNTY SCHOOLS K-8 SCHOOL

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Highway 210, Hampstead, NC 28443

PROJECT NO:	831310
DATE:	AUGUST 2, 2024
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DATE:	DESCRIPTION
8/16/24	*AD-01

FIRST FLOOR PLAN - LIGHTING - PART A

E2.1.1.1



**GENERAL LIGHTING NOTES**

A. EMERGENCY FIXTURES SHALL BE PROVIDED WITH ALOR DEVICES UNLESS NOTED OTHERWISE (MINIMUM ONE DEVICE PER SWITCHING ZONE). IN ADDITION TO EMERGENCY CIRCUIT SHOWN ADJACENT TO EACH FIXTURE ON THE PLANS, PROVIDE SWITCHED AND UNSWITCHED NORMAL CIRCUITS TO ALOR FROM ADJACENT NORMAL FIXTURES IN EACH SPACE. EXTERIOR EMERGENCY FIXTURES ARE SHOWN WITH BOTH NORMAL AND EMERGENCY CIRCUITS FOR CLARITY. PROVIDE 20A ALOR IN ELEC RM FOR CONTROL OF EXTERIOR EMERGENCY FIXTURES. EMERGENCY FIXTURES IN STAIRWELLS SHALL BE UNSWITCHED NIGHT LIGHTS. SEE E4.1 FOR WIRING DIAGRAM.

B. LIGHTING IN CORRIDORS, COMMON AREAS AND BUILDING EXTERIOR SHALL BE CONTROLLED VIA LIGHTING CONTROL RELAY PANELS IN ELECTRICAL ROOMS. SCHEDULES SHALL BE SET USING BUILDING BMS. AND OVERRIDE SWITCHES SHALL BE LOCATED AT RECEPTION DESKS IN EACH HALF OF THE BUILDING. SEE E0.2 FOR LIGHTING CONTROL RISER AND SCHEDULES.

**KEYNOTES**  
APPLIES TO THIS DRAWING

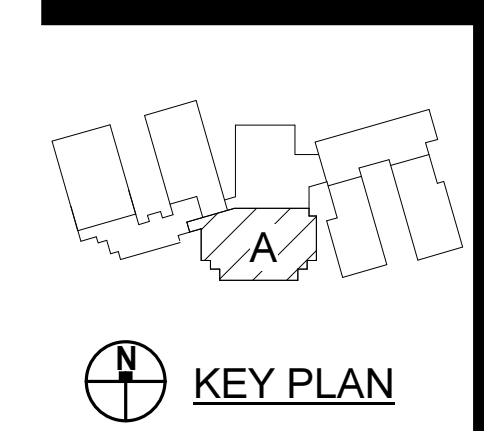
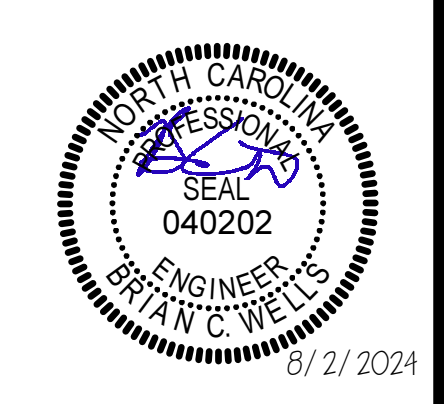
1 LIGHTS IN THIS AREA SHALL BE CONTROLLED BY LOCAL SWITCHES IN ADDITION TO LCP RELAYS. SEE DETAILS ON E0.2

2 PROVIDE LOCKABLE, CLEAR PROTECTIVE COVER FOR THESE SWITCHES.

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

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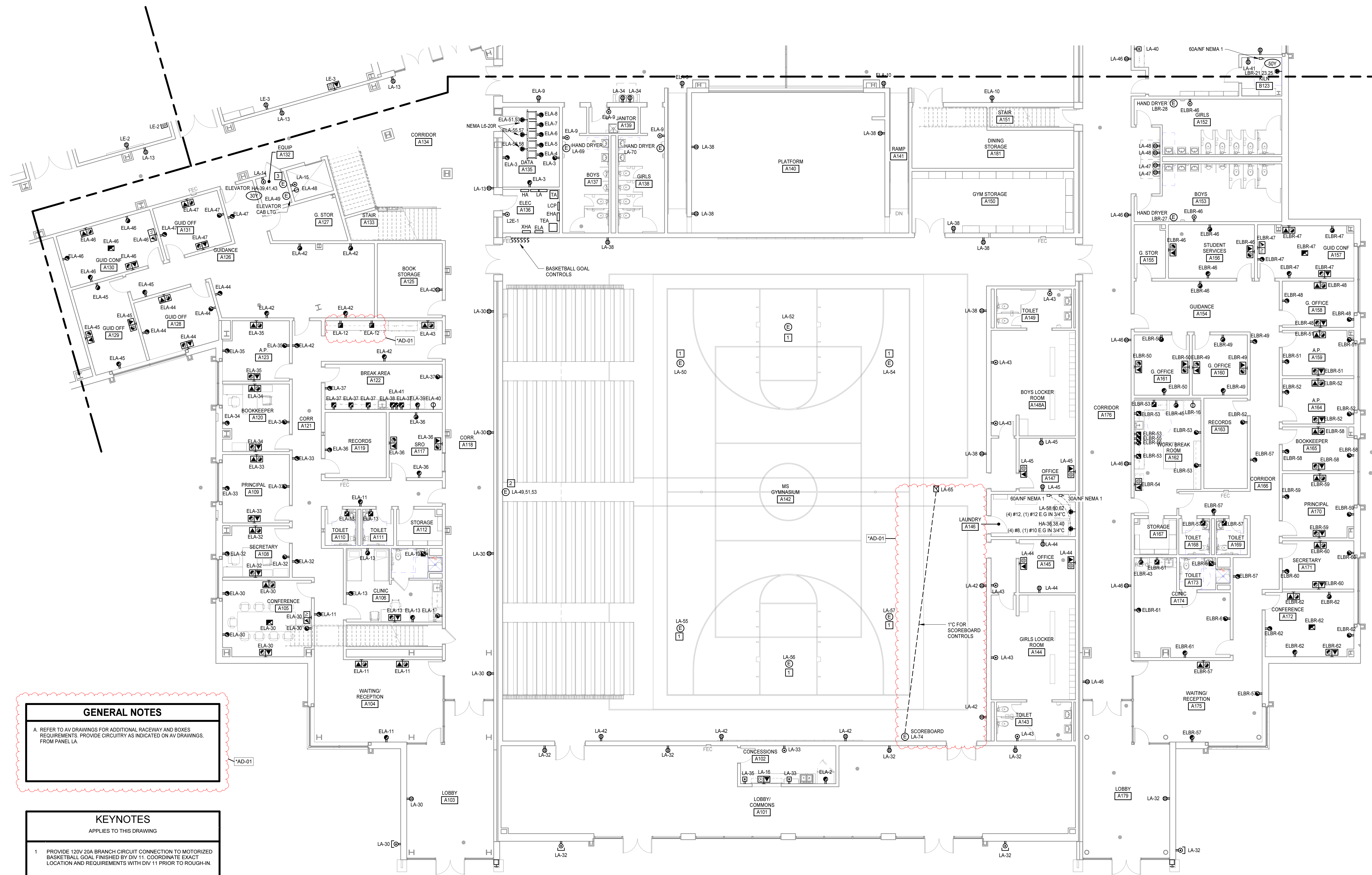
# PENDER COUNTY SCHOOLS K-8 SCHOOL

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	831310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	*AD-01

FIRST FLOOR PLAN - POWER - PART A

## E2.1.1.2



**GENERAL NOTES**

A REFER TO AV DRAWINGS FOR ADDITIONAL RACEWAY AND BOXES REQUIREMENTS. PROVIDE CIRCUITRY AS INDICATED ON AV DRAWINGS, FROM PANEL LA.

- KEYNOTES**  
APPLIES TO THIS DRAWING
- 1 PROVIDE 120V 20A BRANCH CIRCUIT CONNECTION TO MOTORIZED BASKETBALL GOAL FINISHED BY DIV 11. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH DIV 11 PRIOR TO ROUGH-IN.
  - 2 PROVIDE 208V, 3PH, 20A BRANCH CIRCUIT CONNECTION TO BLEACHER. PROVIDE 240V 30A NON-FUSED DISCONNECT. COORDINATE EXACT TERMINATION LOCATION PRIOR TO ROUGH-IN.
  - 3 PROVIDE ALL DISCONNECTS REQUIRED FOR ELEVATOR COMPLIANCE. PROVIDE EITHER SHUNT TRIP ELEVATOR DISCONNECT OR SHUNT TRIP BREAKER AS REQUIRED.

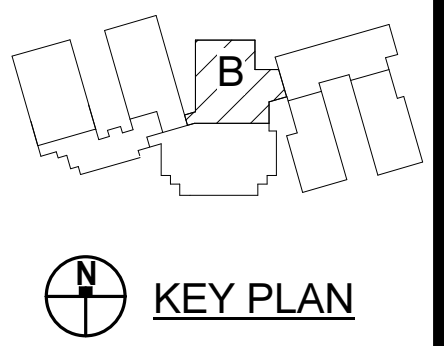
FIRST FLOOR PLAN - POWER - PART A  
1/8" = 1'-0"



GENERAL LIGHTING NOTES

A. EMERGENCY FIXTURES SHALL BE PROVIDED WITH ALCR DEVICES UNLESS NOTED OTHERWISE (MINIMUM ONE DEVICE PER SWITCHING ZONE). IN ADDITION TO EMERGENCY CIRCUIT SHOWN ADJACENT TO EACH FIXTURE ON THE PLANS, PROVIDE SWITCHED AND UNSWITCHED NORMAL CIRCUITS TO ALCR FROM ADJACENT NORMAL FIXTURES IN EACH SPACE. EXTERIOR EMERGENCY FIXTURES ARE SHOWN WITH BOTH NORMAL AND EMERGENCY CIRCUITS FOR CLARITY. PROVIDE 20A ALCR IN ELEC RM FOR CONTROL OF EXTERIOR EMERGENCY FIXTURES. EMERGENCY FIXTURES IN STAIRWELLS SHALL BE UNSWITCHED NIGHT LIGHTS. SEE E4.1 FOR WIRING DIAGRAM.

B. LIGHTING IN CORRIDORS, COMMON AREAS AND BUILDING EXTERIOR SHALL BE CONTROLLED VIA LIGHTING CONTROL RELAY PANELS IN ELECTRICAL ROOMS. SCHEDULES SHALL BE SET USING BUILDING BMS, AND OVERRIDE SWITCHES SHALL BE LOCATED AT RECEPTION DESKS IN EACH HALF OF THE BUILDING. SEE E0.2 FOR LIGHTING CONTROL RISER AND SCHEDULES.



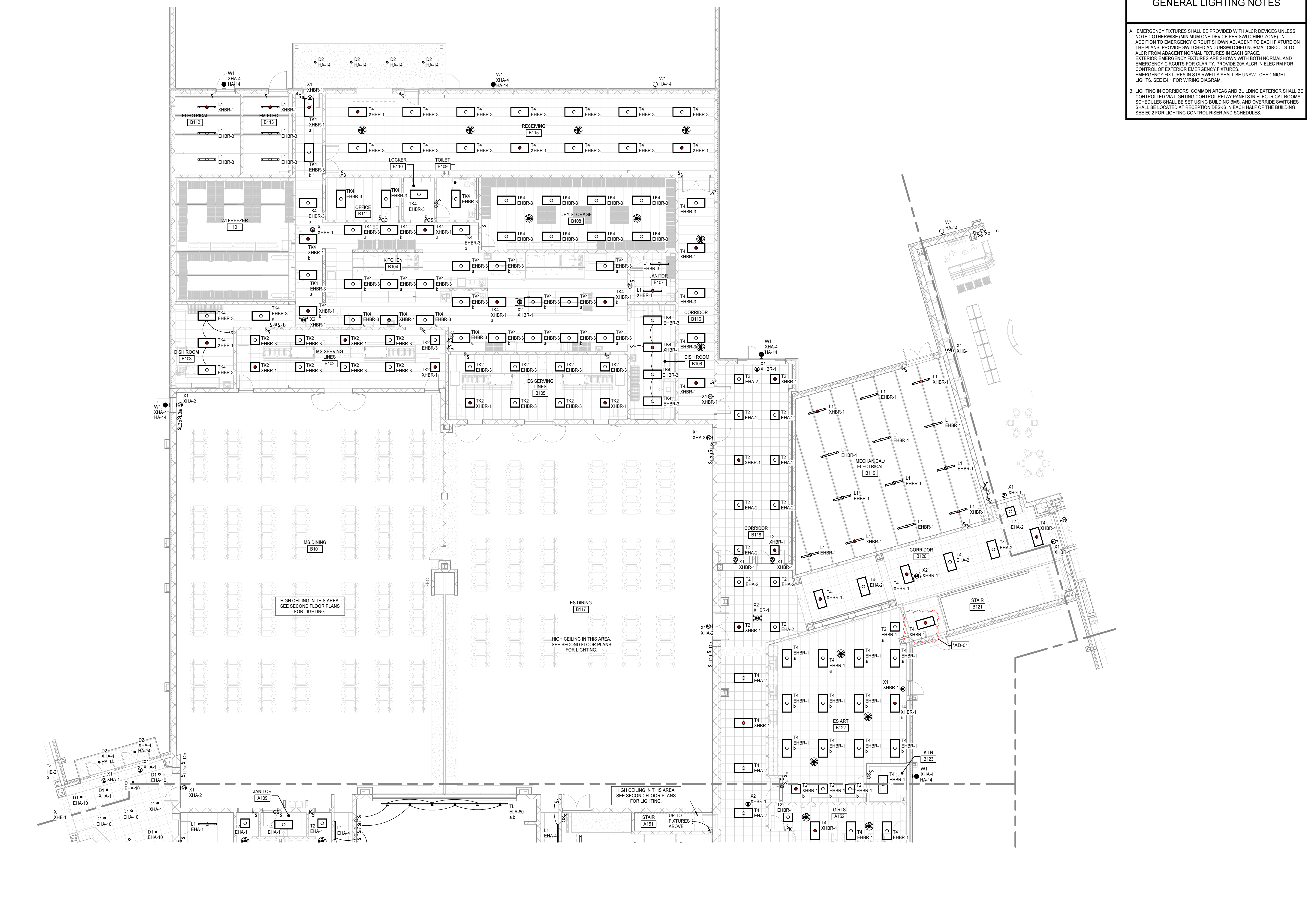
PENDER COUNTY SCHOOLS K-8 SCHOOL

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
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FIRST FLOOR PLAN - LIGHTING - PART B

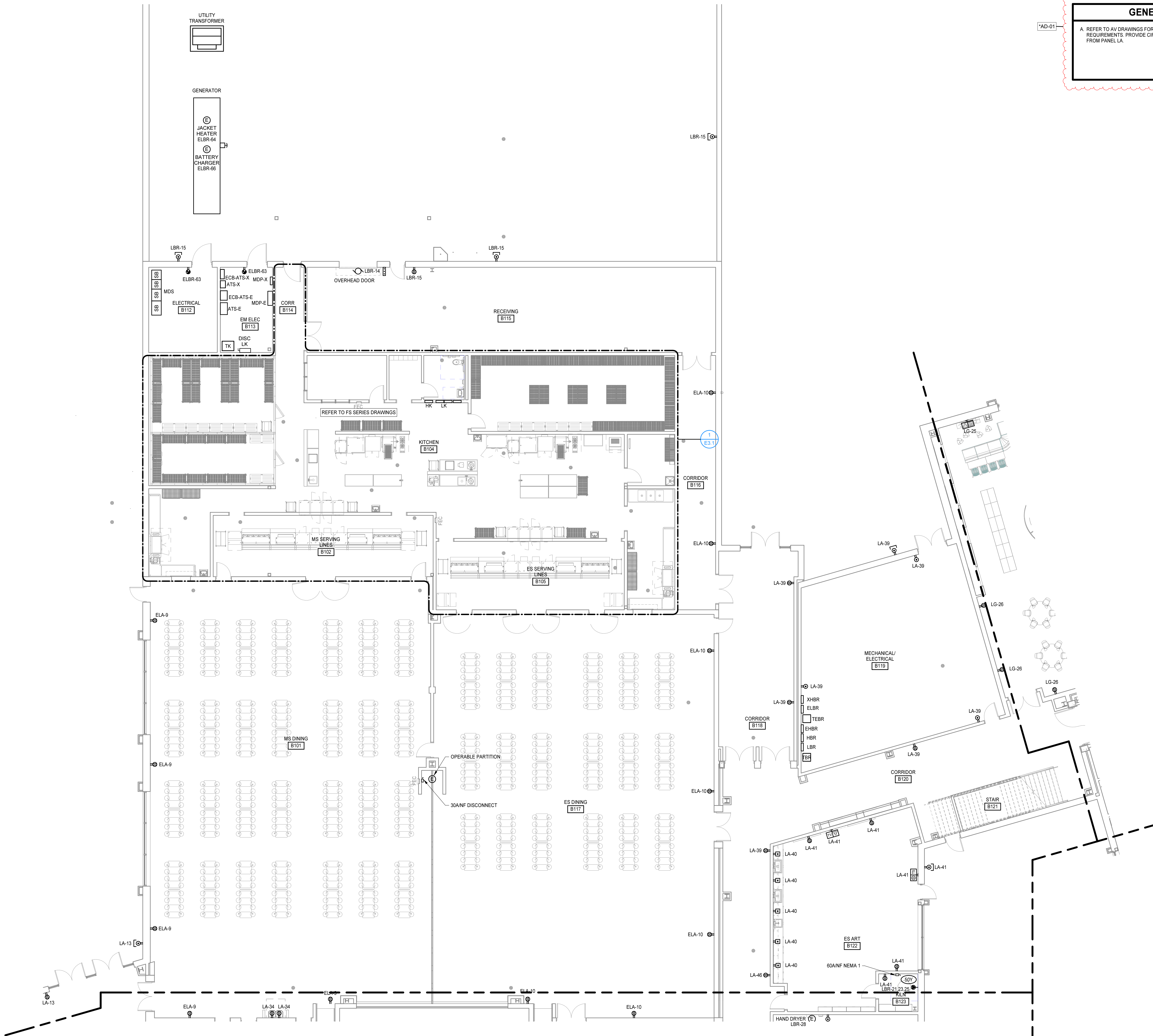
E2.1.2.1



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



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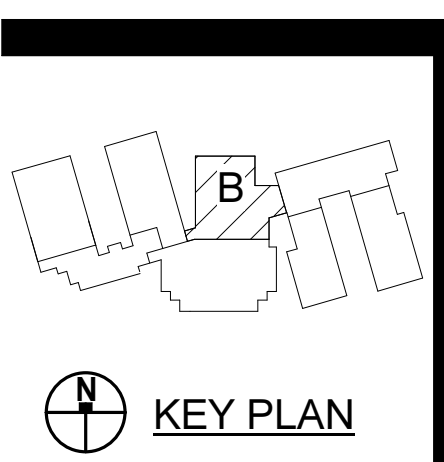
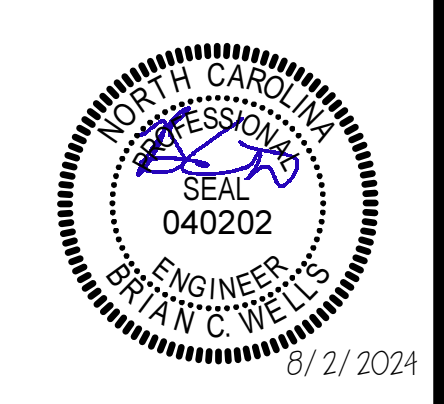


**GENERAL NOTES**

A REFER TO AV DRAWINGS FOR ADDITIONAL RACEWAY AND BOXES REQUIREMENTS. PROVIDE CIRCUITRY AS INDICATED ON AV DRAWINGS. FROM PANEL LA.

**MOSELEYARCHITECTS**

911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA, 27603  
 PHONE (919) 840-0091  
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**PENDER COUNTY SCHOOLS K-8 SCHOOL**

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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	*AD-01

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

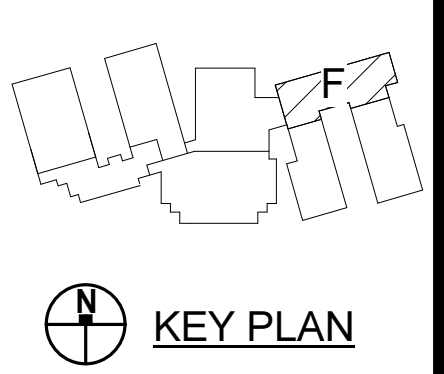
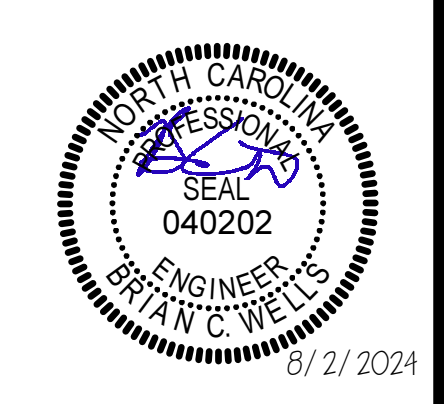
**FIRST FLOOR PLAN - POWER - PART B**

**E2.1.2.2**









**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	*AD-01

FIRST FLOOR PLAN - LIGHTING - PART F

**E2.1.6.1**

**GENERAL LIGHTING NOTES**

A. EMERGENCY FIXTURES SHALL BE PROVIDED WITH ALCR DEVICES UNLESS NOTED OTHERWISE (MINIMUM ONE DEVICE PER SWITCHING ZONE). IN ADDITION TO EMERGENCY CIRCUIT SHOWN ADJACENT TO EACH FIXTURE ON THE PLANS, PROVIDE SWITCHED AND UNSWITCHED NORMAL CIRCUITS TO ALCR FROM ADJACENT NORMAL FIXTURES IN EACH SPACE. EXTERIOR EMERGENCY FIXTURES ARE SHOWN WITH BOTH NORMAL AND EMERGENCY CIRCUITS FOR CLARITY. PROVIDE 20A ALCR IN ELEC RM FOR CONTROL OF EXTERIOR EMERGENCY FIXTURES. EMERGENCY FIXTURES IN STAIRWELLS SHALL BE UNSWITCHED NIGHT LIGHTS. SEE E4.1 FOR WIRING DIAGRAM.

B. LIGHTING IN CORRIDORS, COMMON AREAS AND BUILDING EXTERIOR SHALL BE CONTROLLED VIA LIGHTING CONTROL RELAY PANELS IN ELECTRICAL ROOMS. SCHEDULES SHALL BE SET USING BUILDING BMS, AND OVERRIDE SWITCHES SHALL BE LOCATED AT RECEPTION DESKS IN EACH HALF OF THE BUILDING. SEE E0.2 FOR LIGHTING CONTROL RISER AND SCHEDULES.

**KEYNOTES**  
 APPLIES TO THIS DRAWING

- 1 LIGHTS IN THIS AREA SHALL BE CONTROLLED BY LOCAL SWITCHES IN ADDITION TO TCP RELAYS. SEE DETAILS ON E0.2.
- 2 PROVIDE LOCKABLE, CLEAR PROTECTIVE COVER FOR THESE SWITCHES.



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

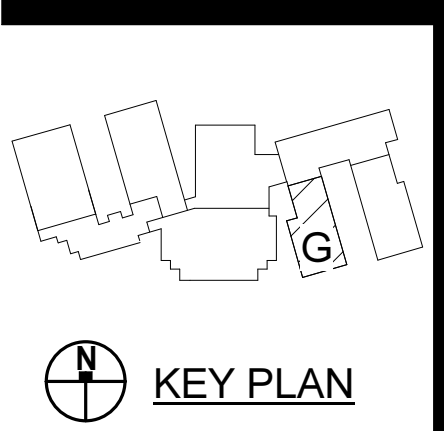
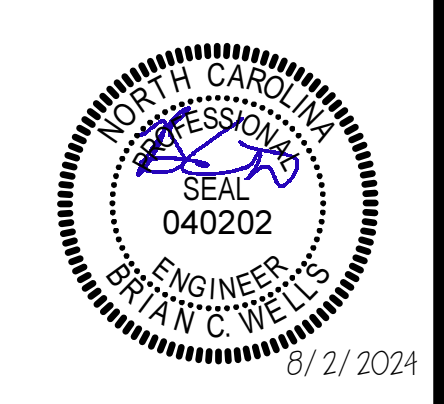
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**FIRST FLOOR PLAN - COMMUNICATIONS - PART G**  
 1/8" = 1'-0"



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

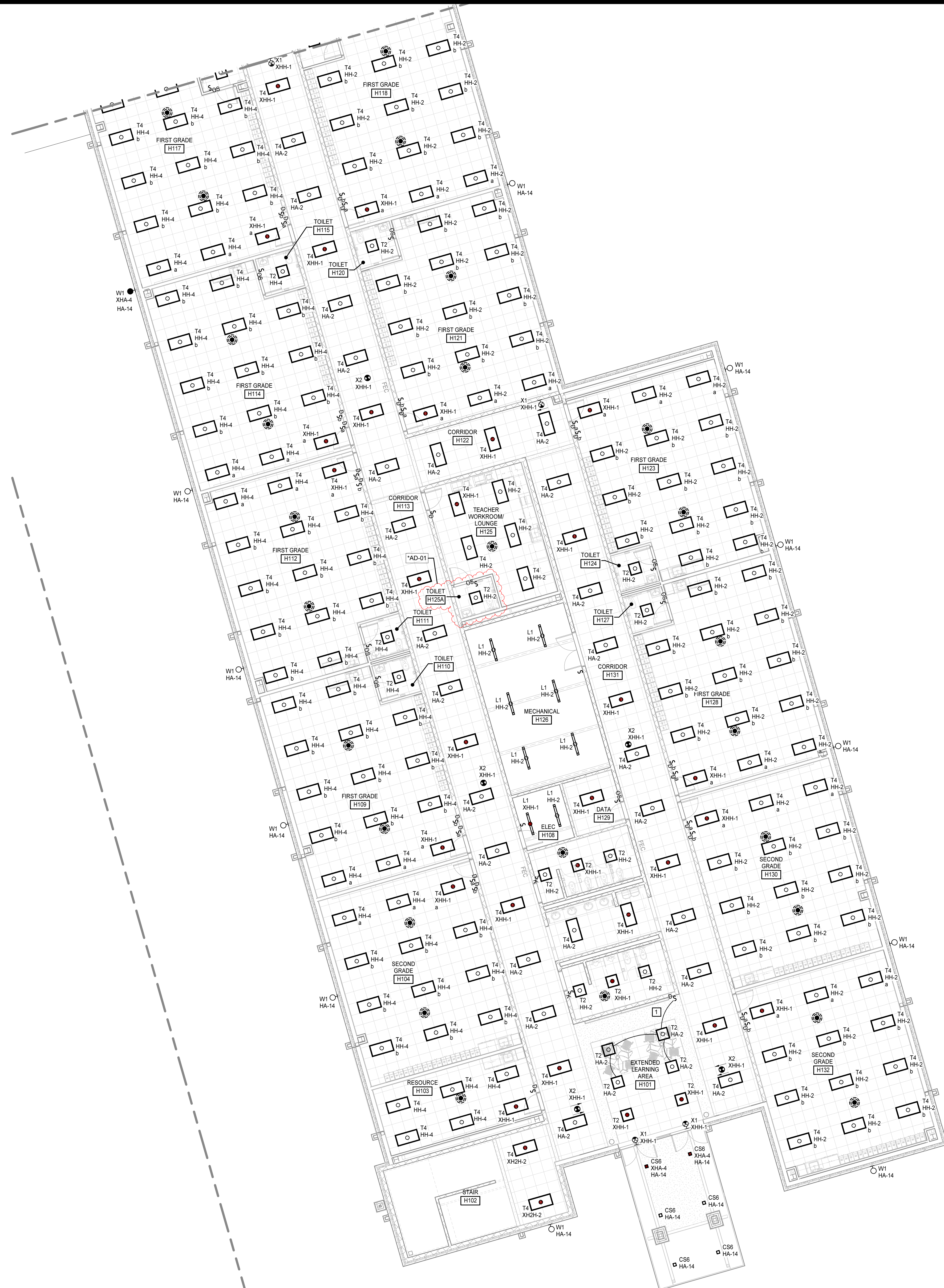
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8/16/24	*AD-01

FIRST FLOOR PLAN -  
 COMMUNICATIONS -  
 PART G

**E2.1.7.3**



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FIRST FLOOR PLAN - LIGHTING - PART H

1/8" = 1'-0"

GENERAL LIGHTING NOTES

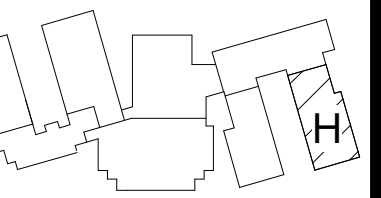
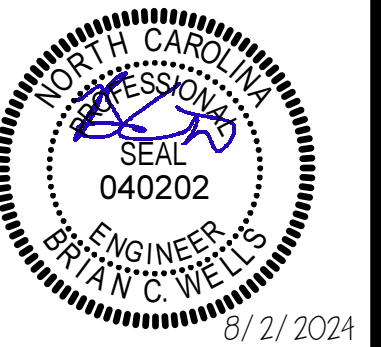
A. EMERGENCY FIXTURES SHALL BE PROVIDED WITH ALCR DEVICES UNLESS NOTED OTHERWISE (MINIMUM ONE DEVICE PER SWITCHING ZONE). IN ADDITION TO EMERGENCY CIRCUIT SHOWN ADJACENT TO EACH FIXTURE ON THE PLANS, PROVIDE SWITCHED AND UNSWITCHED NORMAL CIRCUITS TO ALCR FROM ADJACENT NORMAL FIXTURES IN EACH SPACE. EXTERIOR EMERGENCY FIXTURES ARE SHOWN WITH BOTH NORMAL AND EMERGENCY CIRCUITS FOR CLARITY. PROVIDE 20A ALCR IN ELEC RM FOR CONTROL OF EXTERIOR EMERGENCY FIXTURES. EMERGENCY FIXTURES IN STAIRWELLS SHALL BE UNSWITCHED NIGHT LIGHTS. SEE EA 1 FOR WIRING DIAGRAM.

B. LIGHTING IN CORRIDORS, COMMON AREAS AND BUILDING EXTERIOR SHALL BE CONTROLLED VIA LIGHTING CONTROL RELAY PANELS IN ELECTRICAL ROOMS. SCHEDULES SHALL BE SET USING BUILDING BMS, AND OVERRIDE SWITCHES SHALL BE LOCATED AT RECEPTION DESKS IN EACH HALF OF THE BUILDING. SEE E02 FOR LIGHTING CONTROL RISER AND SCHEDULES.

KEYNOTES

APPLIES TO THIS DRAWING

1. LIGHTS IN THIS AREA SHALL BE CONTROLLED BY LOCAL SWITCHES IN ADDITION TO LCP RELAYS. SEE DETAILS ON E02.



KEY PLAN

PENDER COUNTY SCHOOLS K-8 SCHOOL

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	*AD-01

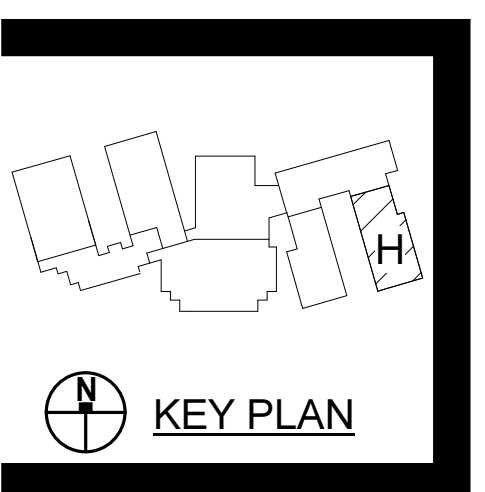
FIRST FLOOR PLAN - LIGHTING - PART H

E2.1.8.1





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



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

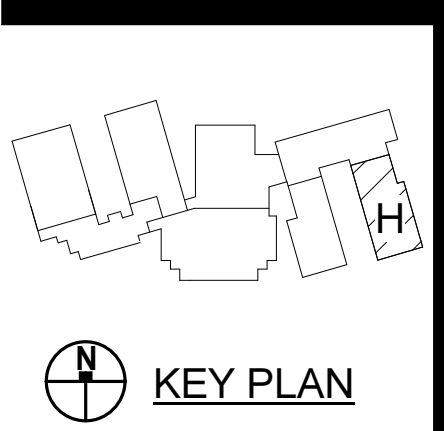
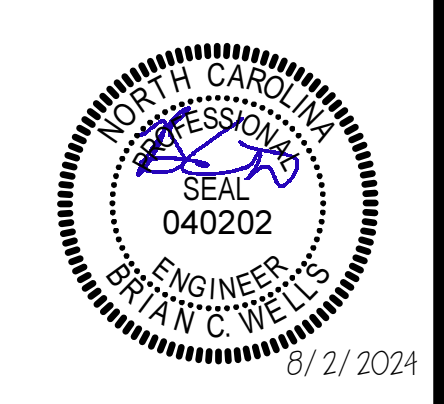
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
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DATE	DESCRIPTION
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FIRST FLOOR PLAN - POWER - PART H





**FIRST FLOOR PLAN - COMMUNICATIONS - PART H**  
 1/8" = 1'-0"



**PENDER COUNTY SCHOOLS K-8 SCHOOL**

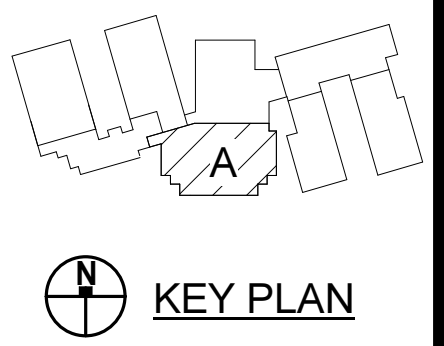
Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO.	REVISIONS
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DATE:	DATE
AUGUST 2, 2024	
DATE	DESCRIPTION
8/16/24	*AD-01

FIRST FLOOR PLAN -  
 COMMUNICATIONS -  
 PART H

**E2.1.8.3**





**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	*AD-01

SECOND FLOOR PLAN - LIGHTING - PART A

**E2.2.1.1**

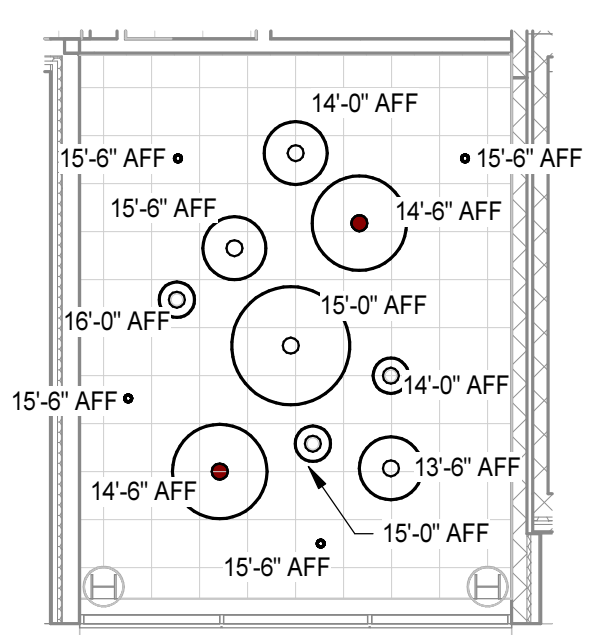
**GENERAL LIGHTING NOTES**

- A. EMERGENCY FIXTURES SHALL BE PROVIDED WITH ALCR DEVICES UNLESS NOTED OTHERWISE (MINIMUM ONE DEVICE PER SWITCHING ZONE). IN ADDITION TO EMERGENCY CIRCUIT SHOWN ADJACENT TO EACH FIXTURE ON THE PLANS, PROVIDE SWITCHED AND UNSWITCHED NORMAL CIRCUITS TO ALCR FROM ADJACENT NORMAL FIXTURES IN EACH SPACE. EXTERIOR EMERGENCY FIXTURES ARE SHOWN WITH BOTH NORMAL AND EMERGENCY CIRCUITS FOR CLARITY. PROVIDE 20A ALCR IN ELEC RIM FOR CONTROL OF EXTERIOR EMERGENCY FIXTURES. EMERGENCY FIXTURES IN STAIRWELLS SHALL BE UNSWITCHED NIGHT LIGHTS. SEE E4.1 FOR WIRING DIAGRAM.
- B. LIGHTING IN CORRIDORS, COMMON AREAS AND BUILDING EXTERIOR SHALL BE CONTROLLED VIA LIGHTING CONTROL RELAY PANELS IN ELECTRICAL ROOMS. SCHEDULES SHALL BE SET USING BUILDING BMS, AND OVERRIDE SWITCHES SHALL BE LOCATED AT RECEPTION DESKS IN EACH HALF OF THE BUILDING. SEE E0.2 FOR LIGHTING CONTROL RISER AND SCHEDULES.

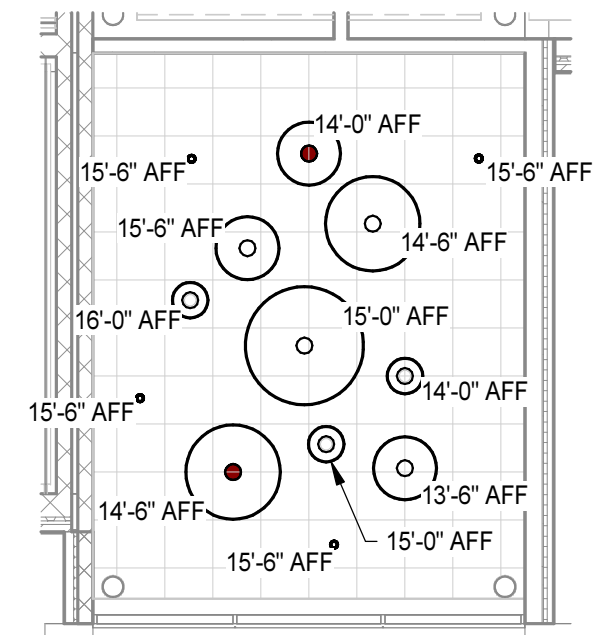
**KEYNOTES**

APPLIES TO THIS DRAWING

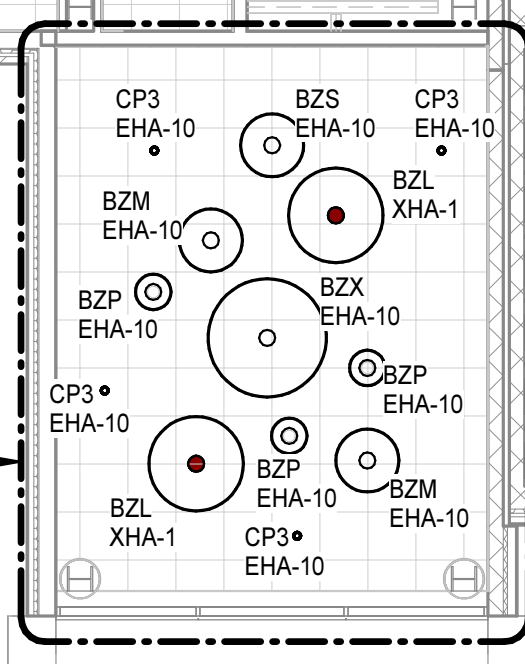
- 1. LIGHTS IN THIS AREA SHALL BE CONTROLLED BY LOCAL SWITCHES IN ADDITION TO LCP RELAYS. SEE DETAILS ON E0.2.



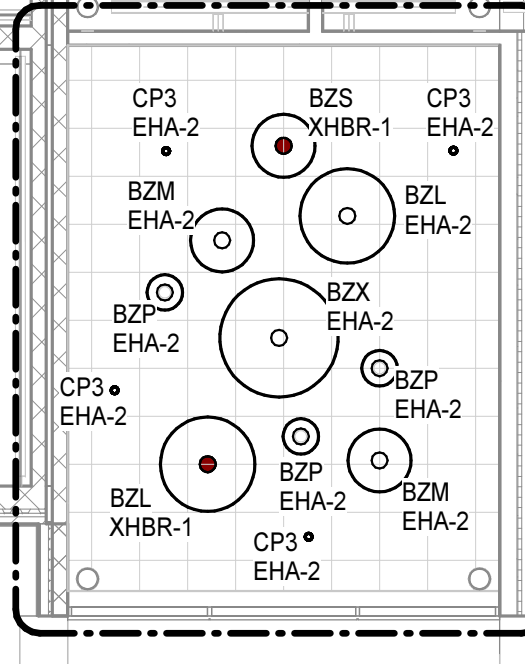
**MS ENTRY - LIGHTING MOUNTING HEIGHTS**  
 1/8" = 1'-0"



**ES ENTRY - LIGHTING MOUNTING HEIGHTS**  
 1/8" = 1'-0"



SEE MS PLAN ABOVE FOR FIXTURE MOUNTING HEIGHTS IN THIS ROOM.



SEE ES PLAN ABOVE FOR FIXTURE MOUNTING HEIGHTS IN THIS ROOM.

**SECOND FLOOR PLAN - LIGHTING - PART A**  
 1/8" = 1'-0"







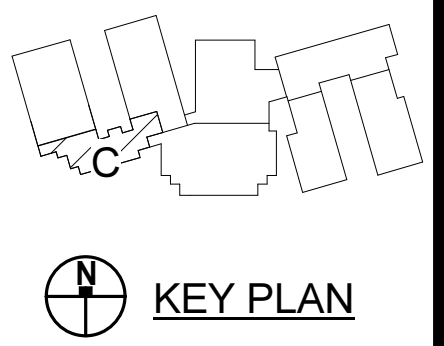
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**SECOND FLOOR PLAN - COMMUNICATIONS - PART C**  
1/8" = 1'-0"



**MOSELEYARCHITECTS**



**PENDER COUNTY SCHOOLS K-8 SCHOOL**

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
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DATE	DESCRIPTION
8/16/24	*AD-01

SECOND FLOOR PLAN - COMMUNICATIONS - PART C

**E2.2.3.3**

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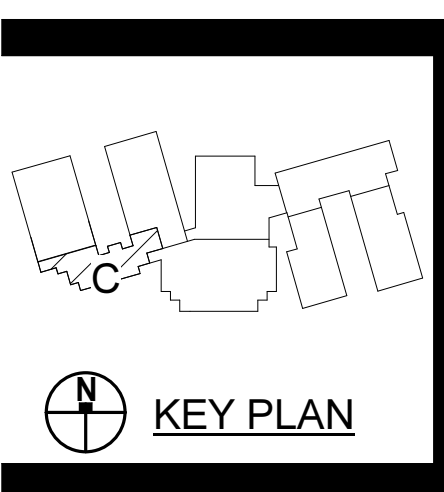
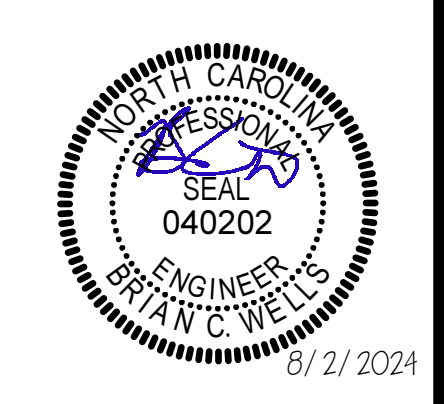
1 2 3 4 5 6 7 8 9 10

**SECOND FLOOR PLAN - POWER - PART D**  
1/8" = 1'-0"



KEYNOTES	
APPLIES TO THIS DRAWING	
1	COORDINATE RECEPTACLE AND DATA MOUNTING WITH CASEWORK
2	PROVIDE 6 POLE CONTACTOR WITH COIL CONNECTED TO E.P.O. BUTTON. ROUTE ALL RECEPTACLE CIRCUITS THROUGH CONTACTOR TO DE ENERGIZE CIRCUITS UPON E.P.O. ACTIVATION. LOCATE CONTACTOR ABOVE ACCESSIBLE CEILING

**MOSELEYARCHITECTS**  
 911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA, 27603  
 PHONE (919) 840-0951  
 MOSELEYARCHITECTS.COM



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO.	REVISIONS
631310 <td>AUGUST 2, 2024 </td>	AUGUST 2, 2024
DATE	
DATE	DESCRIPTION
8/16/24	*AD-01

SECOND FLOOR PLAN -  
POWER - PART D

**E2.2.4.2**







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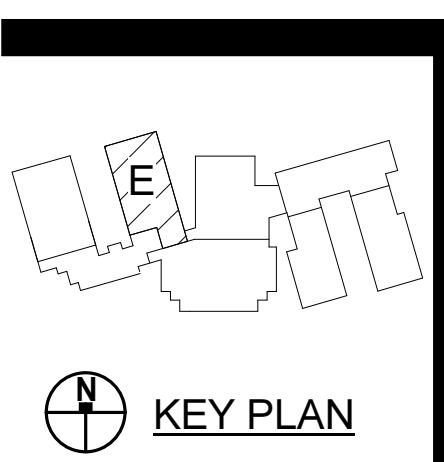
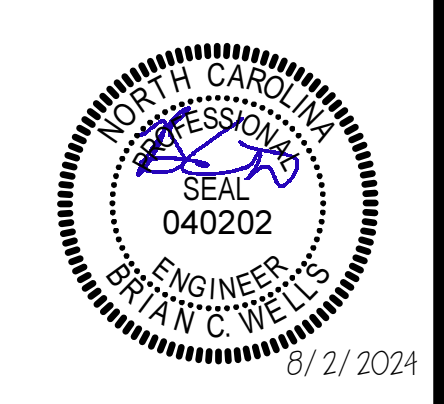


SECOND FLOOR PLAN - POWER - PART E  
1/8" = 1'-0"

**KEYNOTES**  
APPLIES TO THIS DRAWING

- COORDINATE RECEPTACLE AND DATA MOUNTING WITH CASEWORK.
- PROVIDE 6 POLE CONTACTOR WITH COIL CONNECTED TO E.P.O. BUTTON. ROUTE ALL RECEPTACLE CIRCUITS THROUGH CONTACTOR TO DE ENERGIZE CIRCUITS UPON E.P.O. ACTIVATION. LOCATE CONTACTOR ABOVE ACCESSIBLE CEILING.

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**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
Pender County Schools  
Highway 210, Hampstead, NC 28443

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SECOND FLOOR PLAN - POWER - PART E

E2.2.5.2

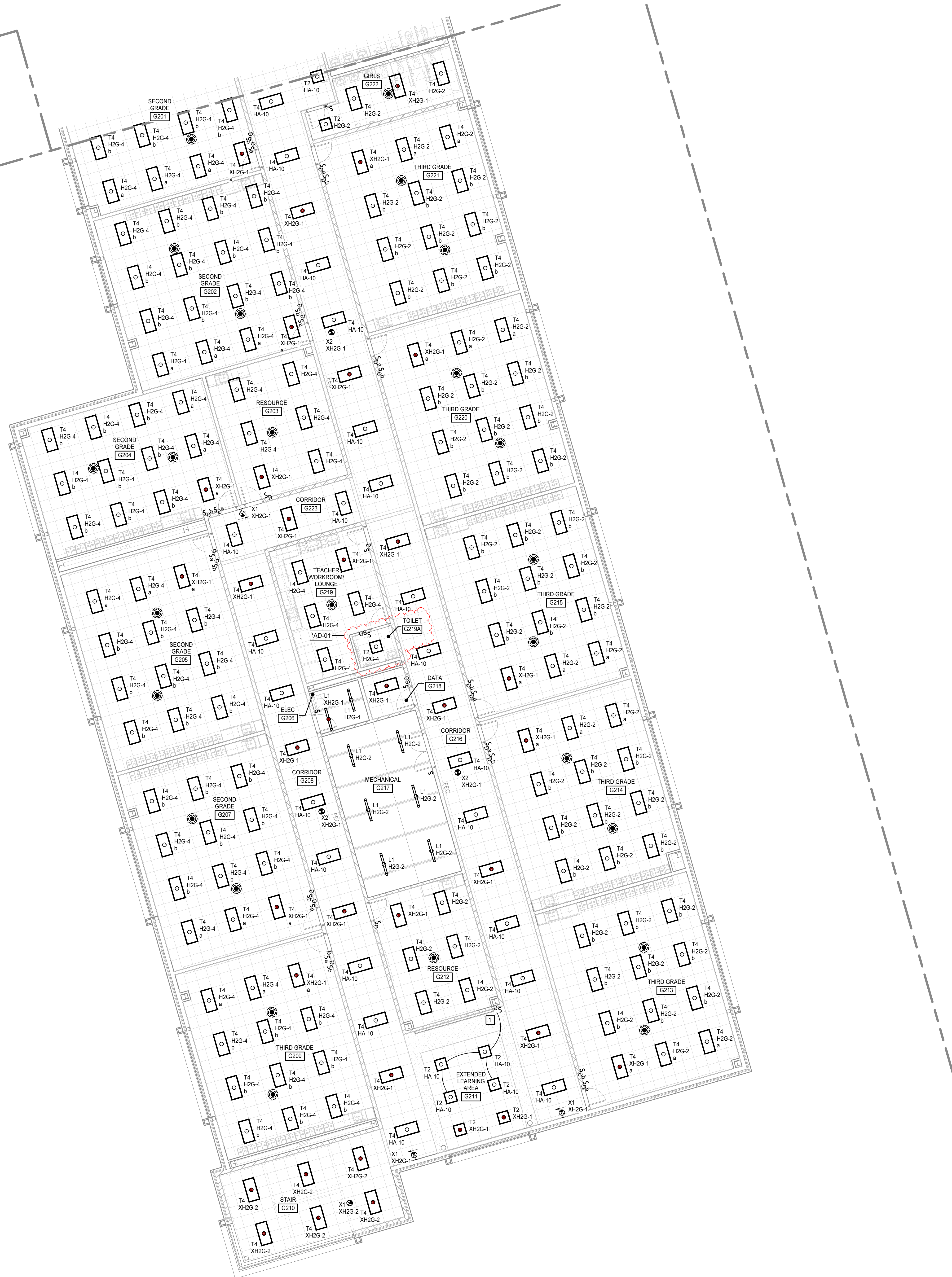


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SECOND FLOOR PLAN - LIGHTING - PART G

1/8" = 1'-0"



GENERAL LIGHTING NOTES

A. EMERGENCY FIXTURES SHALL BE PROVIDED WITH ALCR DEVICES UNLESS NOTED OTHERWISE (MINIMUM ONE DEVICE PER SWITCHING ZONE). IN ADDITION TO EMERGENCY CIRCUIT SHOWN ADJACENT TO EACH FIXTURE ON THE PLANS, PROVIDE SWITCHED AND UNSWITCHED NORMAL CIRCUITS TO ALCR FROM ADJACENT NORMAL FIXTURES IN EACH SPACE. EXTERIOR EMERGENCY FIXTURES ARE SHOWN WITH BOTH NORMAL AND EMERGENCY CIRCUITS FOR CLARITY. PROVIDE 20A ALCR IN ELEC RM FOR CONTROL OF EXTERIOR EMERGENCY FIXTURES. EMERGENCY FIXTURES IN STAIRWELLS SHALL BE UNSWITCHED NIGHT LIGHTS. SEE E4.1 FOR WIRING DIAGRAM.

B. LIGHTING IN CORRIDORS, COMMON AREAS AND BUILDING EXTERIOR SHALL BE CONTROLLED VIA LIGHTING CONTROL RELAY PANELS IN ELECTRICAL ROOMS. SCHEDULES SHALL BE SET USING BUILDING BMS, AND OVERRIDE SWITCHES SHALL BE LOCATED AT RECEPTION DESKS IN EACH HALF OF THE BUILDING. SEE E0.2 FOR LIGHTING CONTROL RISER AND SCHEDULES.

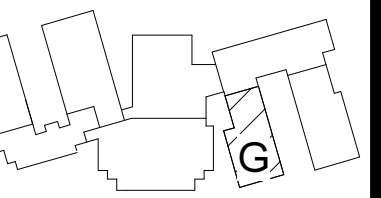
KEYNOTES

APPLIES TO THIS DRAWING

1. LIGHTS IN THIS AREA SHALL BE CONTROLLED BY LOCAL SWITCHES IN ADDITION TO LCP RELAYS. SEE DETAILS ON E0.2.

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KEY PLAN

PENDER COUNTY SCHOOLS K-8 SCHOOL

Pender County Schools  
Highway 210, Hampstead, NC 28443

PROJECT NO:	631310
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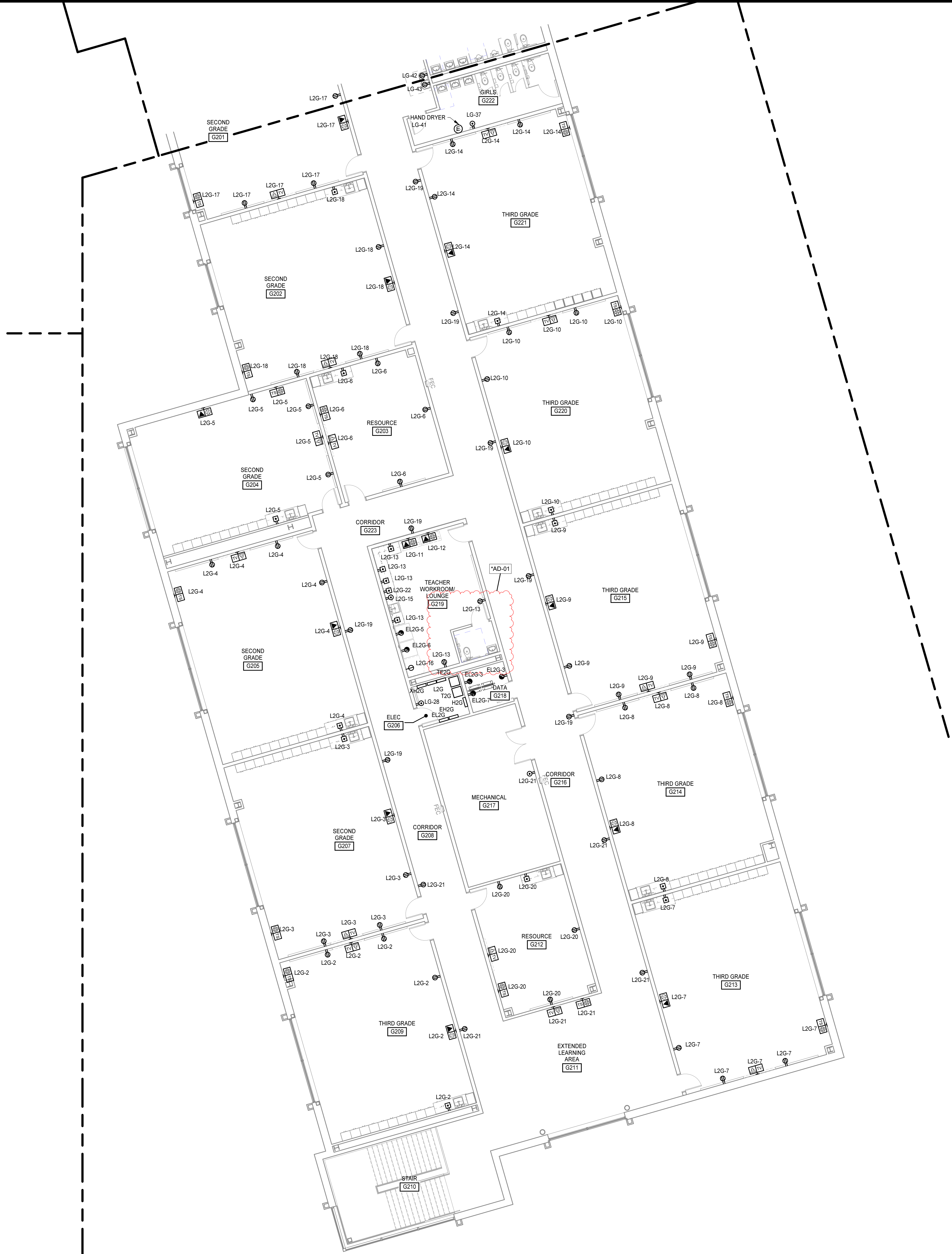
SECOND FLOOR PLAN - LIGHTING - PART G

E2.2.7.1

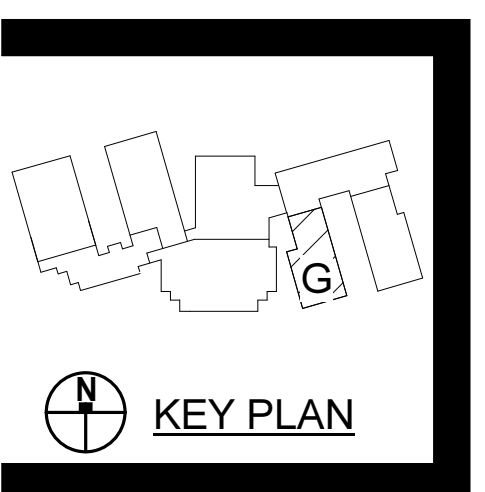
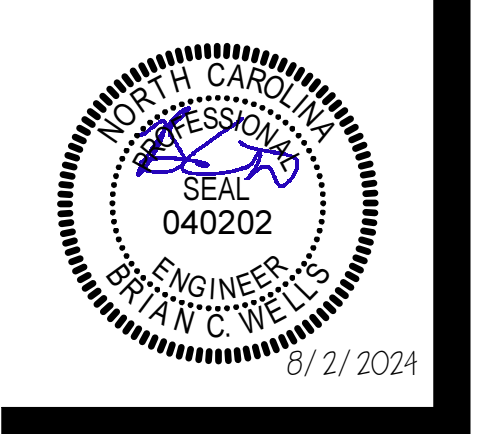


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SECOND FLOOR PLAN - POWER - PART G  
1/8" = 1'-0"



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

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SECOND FLOOR PLAN - POWER - PART G

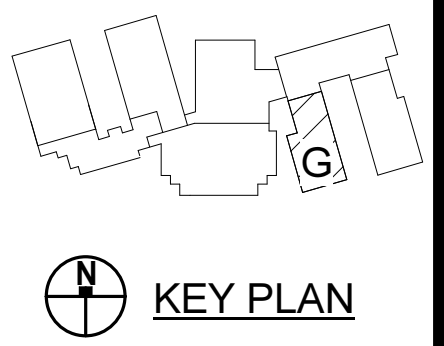
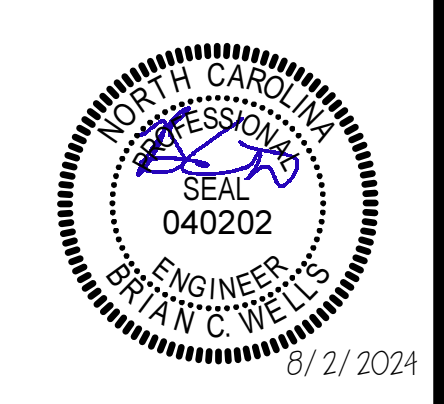


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SECOND FLOOR PLAN - COMMUNICATIONS - PART G

1/8" = 1'-0"



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

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DATE	DESCRIPTION
8/16/24	*AD-01

SECOND FLOOR PLAN -  
 COMMUNICATIONS -  
 PART G

**E2.2.7.3**



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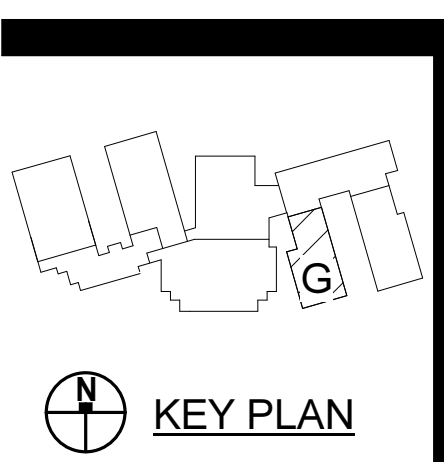
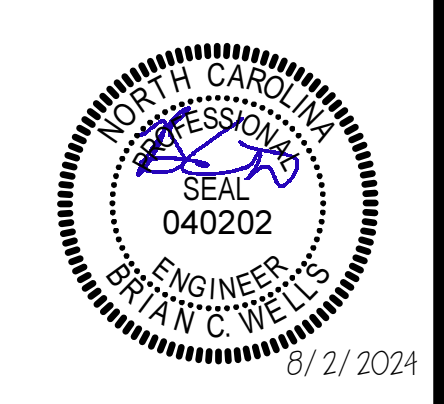


**SECOND FLOOR PLAN - MECHANICAL POWER - PART G**  
 1/8" = 1'-0"

**DIV 22 & 23 ELECTRICAL CONNECTION SCHEDULE E2.2.7.4**

TAG	VOLTAGE	# POLES	LOAD	PANEL	CCT#	WIRE	DISCONNECTING MEANS	REMARKS
AHU-G-21	480 V	3	9.3 KVA	H2G	7,8,11	(4) #12, (1) #12 E.G. IN 3/4"	BY DIV 23	
AHU-G-22	480 V	3	4.8 KVA	H2G	8,10,12	(4) #12, (1) #12 E.G. IN 3/4"	BY DIV 23	
AHU-G-23	480 V	3	11.7 KVA	H2G	13,15,17	(4) #10, (1) #10 E.G. IN 3/4"	BY DIV 23	
BC-G-2	120 V	1	0.5 KVA	EL2G	1	(2) #12, (1) #12 E.G. IN 3/4"	N/A	
FCU-G-21	277 V	1	0.2 KVA	H2G	14	(2) #12, (1) #12 E.G. IN 3/4"	BY DIV 23	
FCU-G-22	277 V	1	0.2 KVA	H2G	16	(2) #12, (1) #12 E.G. IN 3/4"	BY DIV 23	
SS-G-21	208 V	2	0.1 KVA	EL2G	2,4	(2) #12, (1) #12 E.G. IN 3/4"	MOTOR RATED SWITCH	FED FROM OUTDOOR UNIT

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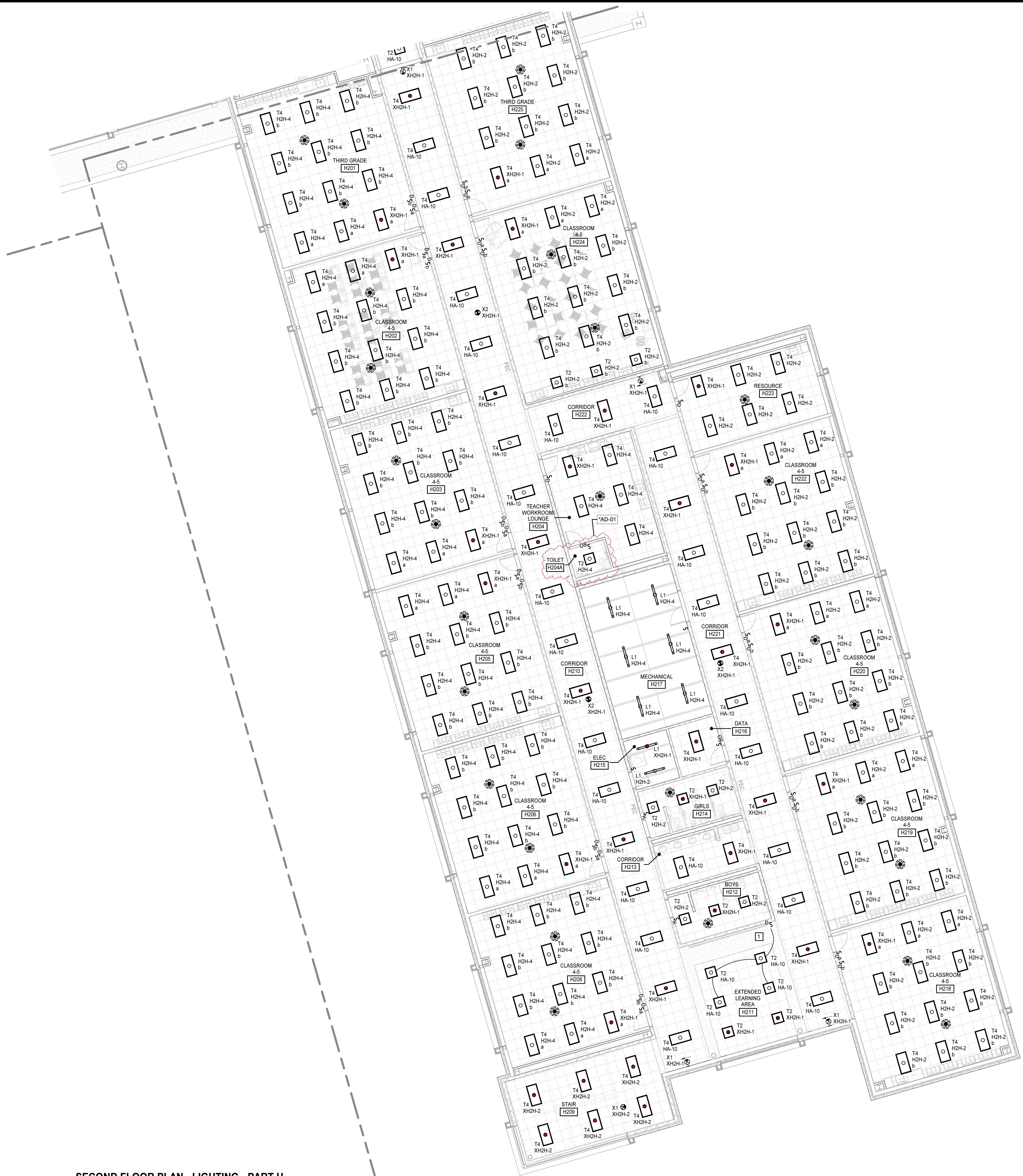
**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	831310
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REVISIONS	
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8/16/24	*AD-01

SECOND FLOOR PLAN -  
 MECHANICAL POWER -  
 PART G

**E2.2.7.4**





**GENERAL LIGHTING NOTES**

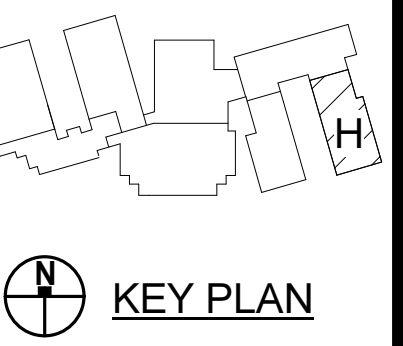
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B. LIGHTING IN CORRIDORS, COMMON AREAS AND BUILDING EXTERIOR SHALL BE CONTROLLED VIA LIGHTING CONTROL RELAY PANELS IN ELECTRICAL ROOMS. SCHEDULES SHALL BE SET USING BUILDING BMS, AND OVERRIDE SWITCHES SHALL BE LOCATED AT RECEPTION DESKS IN EACH HALF OF THE BUILDING. SEE E0.2 FOR LIGHTING CONTROL RISER AND SCHEDULES.

**KEYNOTES**

APPLIES TO THIS DRAWING

1. LIGHTS IN THIS AREA SHALL BE CONTROLLED BY LOCAL SWITCHES IN ADDITION TO LCP RELAYS. SEE DETAILS ON E0.2.



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
 Highway 210, Hampstead, NC 28443

PROJECT NO:	831310
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8/16/24	*AD-01

SECOND FLOOR PLAN - LIGHTING - PART H

**E2.2.8.1**

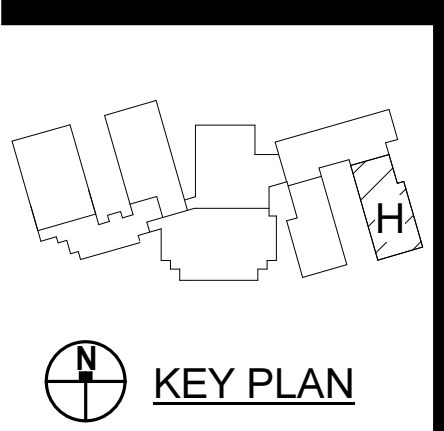
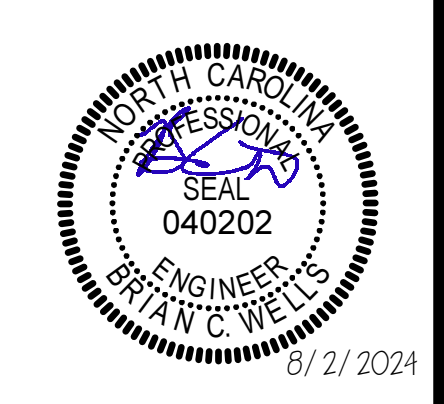
SECOND FLOOR PLAN - LIGHTING - PART H  
 1/8" = 1'-0"

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SECOND FLOOR PLAN - POWER - PART H

1/8" = 1'-0"



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
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SECOND FLOOR PLAN -  
 POWER - PART H

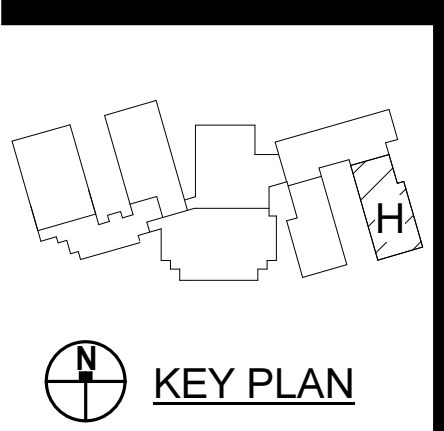
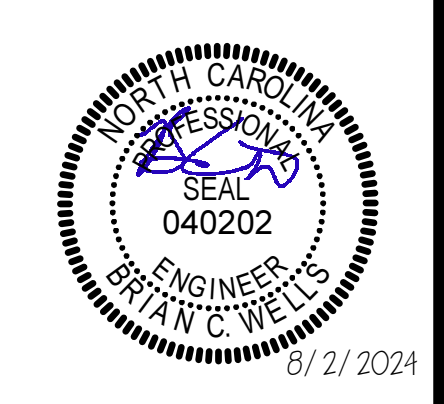
**E2.2.8.2**



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SECOND FLOOR PLAN - COMMUNICATIONS - PART H

1/8" = 1'-0"



**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
 Pender County Schools  
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SECOND FLOOR PLAN -  
 COMMUNICATIONS -  
 PART H

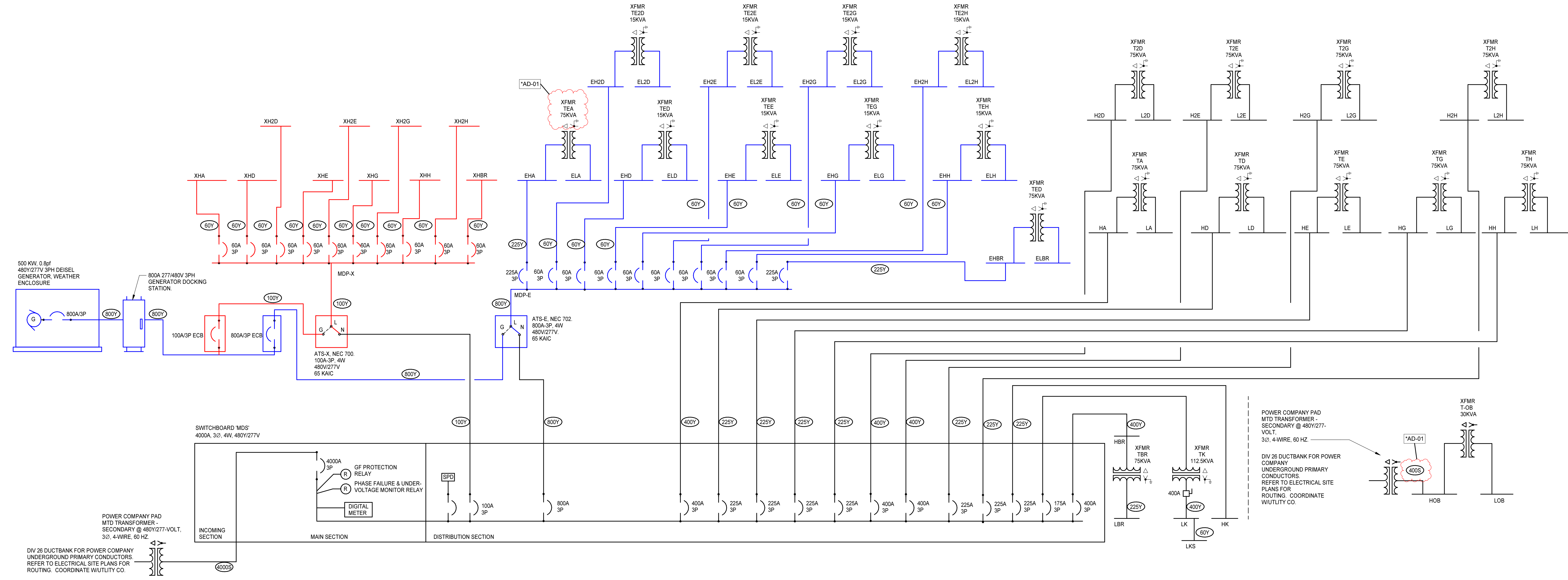
**E2.2.8.3**







2 ONE LINE DIAGRAM  
12" = 1'-0"



500 KW, 0.9pf  
480Y/277V 3PH DIESEL  
GENERATOR, WEATHER  
ENCLOSURE

800A 277/480V 3PH  
GENERATOR DOCKING  
STATION

100A/3P ECB  
800A/3P ECB

MDP-X  
MDP-E

ATS-X, NEC 700,  
100A/3P, 4W  
480V/277V  
65 KAIC

ATS-E, NEC 702,  
800A/3P, 4W  
480V/277V,  
65 KAIC

SWITCHBOARD MDS  
4000A, 3Ø, 4W, 480Y/277V

POWER COMPANY PAD  
MTD TRANSFORMER -  
SECONDARY @ 480Y/277-  
VOLT,  
3Ø, 4-WIRE, 60 HZ.

DIV 26 DUCTBANK FOR POWER COMPANY  
UNDERGROUND PRIMARY CONDUCTORS.  
REFER TO ELECTRICAL SITE PLANS FOR  
ROUTING. COORDINATE W/UTILITY CO.

POWER COMPANY PAD  
MTD TRANSFORMER -  
SECONDARY @ 480Y/277-  
VOLT,  
3Ø, 4-WIRE, 60 HZ.

DIV 26 DUCTBANK FOR POWER  
COMPANY  
UNDERGROUND PRIMARY  
CONDUCTORS.  
REFER TO ELECTRICAL SITE  
PLANS FOR  
ROUTING. COORDINATE  
W/UTILITY CO.

TRANSFORMER SCHEDULE						
KVA	TYPE	PRIMARY	SECONDARY	COPPER PRIMARY FEEDER	COPPER SECONDARY FEEDER	BONDING CONDUCTOR
15 KVA	LINEAR	480V-3Ø	208Y/120V	3#10, #10 G, 3/4" C.	4#4, #6 G, 1-1/4" C.	#6
30 KVA	LINEAR	480V-3Ø	208Y/120V	3#6, #10 G, 1" C.	4#1, #6 G, 1-1/2" C.	#6
45 KVA	LINEAR	480V-3Ø	208Y/120V	3#4, #6 G, 1-1/4" C.	4#10, #6 G, 2" C.	#6
75 KVA	LINEAR	480V-3Ø	208Y/120V	3#1, #6 G, 1-1/2" C.	4-250KCM, #2 G, 2-1/2" C.	#2
112.5 KVA	LINEAR	480V-3Ø	208Y/120V	3#2/0, #6 G, 2" C.	(2 SETS) 4-300, #2 G, 2-1/2" C.	#2
150 KVA	LINEAR	480V-3Ø	208Y/120V	3#4/0, #4 G, 2-1/2" C.	(2 SETS) 4-250KCM, #2/0 G, 3" C.	#2/0
225 KVA	LINEAR	480V-3Ø	208Y/120V	(2 SETS) 3#2/0, #3 G, 2" C.	(3 SETS) 4-350KCM, #2/0 G, 3" C.	#2/0
300 KVA	LINEAR	480V-3Ø	208Y/120V	(2 SETS) 3#4/0, #2 G, 2-1/2" C.	(4 SETS) 4-350KCM, #4/0 G, 4" C.	#3/0
500 KVA	LINEAR	480V-3Ø	208Y/120V	(3 SETS) 3-350KCM, #1/0 G, 4" C.	(6 SETS) 4-350KCM, 300KCM G, 4" C.	#3/0

COPPER FEEDER SCHEDULE							
FEEDER ID	# OF SETS	BUILDING WIRE QUANTITY & SIZE TYPE THWN - DRY TYPE THWN - WET	MINIMUM CONDUIT SIZE	FEEDER ID	# OF SETS	BUILDING WIRE QUANTITY & SIZE TYPE THWN - DRY TYPE THWN - WET	MINIMUM CONDUIT SIZE
30	1	3#10, #10 G	3/4"	30Y	1	4#10, #10 G	3/4"
35	1	3#6, #10 G	3/4"	35Y	1	4#6, #10 G	3/4"
40	1	3#6, #10 G	3/4"	40Y	1	4#6, #10 G	3/4"
45	1	3#6, #10 G	1"	45Y	1	4#6, #10 G	1"
50	1	3#6, #10 G	1"	50Y	1	4#6, #10 G	1"
60	1	3#4, #10 G	1"	60Y	1	4#4, #10 G	1"
70	1	3#4, #6 G	1 1/4"	70Y	1	4#4, #6 G	1 1/4"
80	1	3#3, #6 G	1 1/4"	80Y	1	4#3, #6 G	1 1/4"
90	1	3#2, #6 G	1 1/4"	90Y	1	4#2, #6 G	1 1/4"
100S	1	4#2	1 1/2"	100Y	1	4#2, #6 G	1 1/2"
110	1	3#2, #6 G	1 1/2"	110Y	1	4#2, #6 G	1 1/2"
125	1	3#1, #6 G	1 1/2"	125Y	1	4#1, #6 G	1 1/2"
150	1	3#1/0, #6 G	2"	150Y	1	4#1/0, #6 G	2"
175	1	3#2/0, #6 G	2"	175Y	1	4#2/0, #6 G	2"
200	1	3#3/0, #6 G	2"	200Y	1	4#3/0, #6 G	2"
225	1	3#4/0, #4 G	2 1/2"	225Y	1	4#4/0, #4 G	2 1/2"
250	1	3-250KCM, #4 G	2 1/2"	250Y	1	4-250KCM, #4 G	2 1/2"
300	1	3-350KCM, #4 G	2 1/2"	300Y	1	4-350KCM, #4 G	2 1/2"
350	2	3#2/0, #3 G	3"	350Y	2	4#2/0, #3 G	3"
400S	2	4#3/0	2"	400Y	2	4#3/0, #3 G	2"
450	2	3#4/0, #2 G	2 1/2"	450Y	2	4#4/0, #2 G	2 1/2"
500	2	3-250KCM, #2 G	2 1/2"	500Y	2	4-250KCM, #2 G	2 1/2"
600	2	3-350KCM, #1 G	3"	600Y	2	4-350KCM, #1 G	3"
700	2	3-500KCM, #1/0 G	4"	700Y	2	4-500KCM, #1/0 G	4"
800	3	3-350KCM, #1/0 G	3"	800Y	3	4-350KCM, #1/0 G	3"
1000	3	3-500KCM, #2/0 G	4"	1000Y	3	4-500KCM, #2/0 G	4"
1200	4	3-350KCM, #3/0 G	3"	1200Y	4	4-350KCM, #3/0 G	3"
1600	5	3-500KCM, #4/0 G	4"	1600Y	5	4-500KCM, #4/0 G	4"
2000	6	3-500KCM, #250 G	4"	2000Y	6	4-500KCM, #250 G	4"
2500	7	3-500KCM, #350 G	4"	2500Y	7	4-500KCM, #350 G	4"
4000S	11	3-500KCM, #350 G	4"				

NOTES:  
1. ELECTRICAL CONTRACTOR TO VERIFY CONDUIT SIZE REQUIRED IF WIRE TYPES OTHER THAN THOSE LISTED ABOVE ARE USED.  
2. FEEDER SIZES BASED ON TABLE 310.15(B)(16), 75° C.  
3. SIZES ADJUSTED PER NEC 110.14.



PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/24	*AD-01



PROGRESS  
PRINT NOT FOR  
CONSTRUCTION

PANELBOARD SCHEDULE MDP-X LOCATION: EM ELEC B113 FED FROM: ATS-X  
100 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 16584 VA 100.00% 16584 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 22.2 kVA  
Total Est. Demand: 22.2 kVA  
Total Conn. Current: 27 A  
Total Est. Demand Current: 27 A

PANELBOARD SCHEDULE MDP-E LOCATION: EM ELEC B113 FED FROM: ATS-E  
800 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 10646 VA 100.00% 10646 VA  
RECEPTACLES 59940 VA 58.34% 34970 VA  
AC / HEAT PUMP 197355 VA 100.00% 197355 VA  
HVAC 17990 VA 100.00% 17990 VA  
ELECTRIC HEAT 1000 VA 100.00% 1000 VA  
KITCHEN 240003 VA 65.00% 156002 VA  
MISCELLANEOUS 7109 VA 100.00% 7109 VA  
Total Conn. Load: 542.7 kVA  
Total Est. Demand: 433.9 kVA  
Total Conn. Current: 653 A  
Total Est. Demand Current: 522 A

SWITCHBOARD SCHEDULE MDS  
HORIZONTAL... 4000 A NEMA ENCL: 1 NEMA... FRONT ACCESS  
GROUND BUS: 4000 A MAIN SWITCH: 4000 A VOLTAGE: 480/277 Vye 3 PH 4 WIRE  
VERTICAL... 4000 A CT SECTION: YES BRACING: 65000 AMP

DEVIC E.N.O. DESCRIPTION A B C NUMBER OF POLES RATING NOTES  
1 HH 19425 VA 18364 VA 16070 VA 3 400 A  
2 HG 22287 VA 24250 VA 18120 VA 3 400 A  
3 HE 28356 VA 26568 VA 24202 VA 3 400 A  
4 H2D 37248 VA 41713 VA 35176 VA 3 400 A  
5 HD 29155 VA 27160 VA 22893 VA 3 400 A  
6 HA 41792 VA 35776 VA 32352 VA 3 400 A  
7 H2E 42245 VA 41250 VA 37187 VA 3 400 A  
8 H2G 25632 VA 23674 VA 20278 VA 3 225 A  
9 H2H 25348 VA 23722 VA 18671 VA 3 225 A  
10 ATS-E 184174 VA 185982 VA 171514 VA 3 800 A  
11 ATS-X 21118 VA 1094 VA 0 VA 3 100 A  
12 HBR 57435 VA 58605 VA 58192 VA 3 400 A  
13 CH-1 168733 VA 168733 VA 168733 VA 3 800 A  
14 CH-2 168733 VA 168733 VA 168733 VA 3 800 A  
15 SPACE 0 VA 0 VA 0 VA 3 400 A  
16 SPACE 0 VA 0 VA 0 VA 3 400 A  
17 SPACE 0 VA 0 VA 0 VA 3 400 A  
18 SPACE 0 VA 0 VA 0 VA 3 400 A

LOAD TYPE CONNECTED KVA DEMAND KVA  
INTERIOR LIGHTING 96967 VA 96967 VA  
EXTERIOR LIGHTING 2739 VA 2739 VA  
RECEPTACLES 367740 VA 188870 VA  
AC / HEAT PUMP 1635373 VA 1635373 VA  
HVAC 29659 VA 29659 VA  
ELECTRIC HEAT 23600 VA 23600 VA  
KITCHEN 240003 VA 156002 VA  
MISCELLANEOUS 17053 VA 17053 VA  
TOTAL CONNECTED KVA: 2383 kVA  
TOTAL DEMAND KVA: 2140 kVA  
TOTAL CONNECTED: 2878 A  
TOTAL DEMAND AMPS: 2574 A

- 1. SWITCHBOARD SHALL BE UL SERVICE ENTRANCE RATED
- 2. PROVIDE SPD WITH OVERCURRENT DEVICE, DISCONNECTING MEANS & CONDUCTORS, SIZE PER SPD MFR REQUIREMENTS MOUNTED ON TOP OF EQUIPMENT
- 3. PROVIDE DISCONNECTING MEANS LABEL PER 2020 NEC 230.70(B)
- 4. PROVIDE GROUND FAULT PROTECTIVE RELAY, DOCUMENT TEST, PROVIDE PHASE LOSS AND UNDERVOLTAGE DRY CONTACT FOR BAS PICKUP
- 5. PROVIDE FACTORY INSTALLED DIGITAL MULTIMETER, PLUS MONITORING CABLE IN CONDUIT TO BAS PICKUP MODULE, COORDINATE WITH DIV 23
- 6. PROVIDE SIGN PER NEC 700, LIFE SAFETY STANDBY FROM GENERATOR LOCATED IN EQUIPMENT YARD OUTSIDE, VIA ATS-X
- 7. PROVIDE SIGN PER NEC 702, "OPTIONAL STANDBY FROM GENERATOR LOCATED IN EQUIPMENT YARD OUTSIDE, VIA ATS-X"
- 8. FOR NON-SIMULTANEOUS LOADS, ONLY LARGER OF LOADS IS INCLUDED IN TOTAL.

PANELBOARD SCHEDULE XH2G LOCATION: ELEC G206 FED FROM: MDP-X  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 1805 VA 100.00% 1805 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 1.8 kVA  
Total Est. Demand: 1.8 kVA  
Total Conn. Current: 2 A  
Total Est. Demand Current: 2 A

PANELBOARD SCHEDULE XH2E LOCATION: ELEC E220 FED FROM: MDP-X  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 2603 VA 100.00% 2603 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 3.1 kVA  
Total Est. Demand: 3.1 kVA  
Total Conn. Current: 4 A  
Total Est. Demand Current: 4 A

PANELBOARD SCHEDULE XHA LOCATION: ELEC A136 FED FROM: MDP-X  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 826 VA 100.00% 826 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 4.1 kVA  
Total Est. Demand: 4.1 kVA  
Total Conn. Current: 5 A  
Total Est. Demand Current: 5 A

PANELBOARD SCHEDULE XHE LOCATION: ELEC E120 FED FROM: MDP-X  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 1963 VA 100.00% 1963 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 2.0 kVA  
Total Est. Demand: 2.0 kVA  
Total Conn. Current: 2 A  
Total Est. Demand Current: 2 A

PANELBOARD SCHEDULE XHG LOCATION: ELEC G108 FED FROM: MDP-X  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 1623 VA 100.00% 1623 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 2.5 kVA  
Total Est. Demand: 2.5 kVA  
Total Conn. Current: 3 A  
Total Est. Demand Current: 3 A

PANELBOARD SCHEDULE XH2D LOCATION: ELEC D211 FED FROM: MDP-X  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 1747 VA 100.00% 1747 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 1.7 kVA  
Total Est. Demand: 1.7 kVA  
Total Conn. Current: 2 A  
Total Est. Demand Current: 2 A

PANELBOARD SCHEDULE XHD LOCATION: ELEC D111 FED FROM: MDP-X  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 1344 VA 100.00% 1344 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 1.3 kVA  
Total Est. Demand: 1.3 kVA  
Total Conn. Current: 2 A  
Total Est. Demand Current: 2 A

PANELBOARD SCHEDULE XHH LOCATION: ELEC H108 FED FROM: MDP-X  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 1083 VA 100.00% 1083 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 1.9 kVA  
Total Est. Demand: 1.9 kVA  
Total Conn. Current: 2 A  
Total Est. Demand Current: 2 A



**PANELBOARD SCHEDULE E2HD** LOCATION: ELEC D211 FED FROM: MDP-E  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT
1				2.2	0.0					2
3	30 A	3	TE2D		1.8	0.0				4
5						0.4	0.0			6
7	20 A	1	SPARE	0.0	0.0					8
9	20 A	1	SPARE		0.0	0.0				10
11	20 A	1	SPARE			0.0	0.0			12
13	20 A	1	SPARE	0.0	0.0					14
15	20 A	1	SPARE			0.0	0.0			16
17	20 A	1	SPARE			0.0	0.0			18
				2 kVA	2 kVA	0 kVA				
				9 A	7 A	1 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	
RECEPTACLES	1440 VA	100.00%	1440 VA	Total Conn. Load: 4.3 kVA
AC / HEAT PUMP	2900 VA	100.00%	2900 VA	Total Est. Demand: 4.3 kVA
HVAC	0 VA	0.00%	0 VA	Total Conn. Current: 5 A
ELECTRIC HEAT	0 VA	0.00%	0 VA	Total Est. Demand Current: 5 A
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

**PANELBOARD SCHEDULE EH2E** LOCATION: ELEC E220 FED FROM: MDP-E  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT
1				2.4	0.0					2
3	30 A	3	TE2E		1.8	0.0				4
5						0.5	0.0			6
7	20 A	1	SPARE	0.0	0.0					8
9	20 A	1	SPARE		0.0	0.0				10
11	20 A	1	SPARE			0.0	0.0			12
13	20 A	1	SPARE	0.0	0.0					14
15	20 A	1	SPARE			0.0	0.0			16
17	20 A	1	SPARE			0.0	0.0			18
				2 kVA	2 kVA	1 kVA				
				9 A	7 A	2 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	
RECEPTACLES	1800 VA	100.00%	1800 VA	Total Conn. Load: 4.7 kVA
AC / HEAT PUMP	2900 VA	100.00%	2900 VA	Total Est. Demand: 4.7 kVA
HVAC	0 VA	0.00%	0 VA	Total Conn. Current: 6 A
ELECTRIC HEAT	0 VA	0.00%	0 VA	Total Est. Demand Current: 6 A
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

**PANELBOARD SCHEDULE EH2G** LOCATION: ELEC G206 FED FROM: MDP-E  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT
1				1.8	0.0					2
3	30 A	3	TE2G		1.5	0.0				4
5						0.4	0.0			6
7	20 A	1	SPARE	0.0	0.0					8
9	20 A	1	SPARE		0.0	0.0				10
11	20 A	1	SPARE			0.0	0.0			12
13	20 A	1	SPARE	0.0	0.0					14
15	20 A	1	SPARE			0.0	0.0			16
17	20 A	1	SPARE			0.0	0.0			18
				2 kVA	1 kVA	0 kVA				
				7 A	6 A	1 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	
RECEPTACLES	1260 VA	100.00%	1260 VA	Total Conn. Load: 3.7 kVA
AC / HEAT PUMP	2400 VA	100.00%	2400 VA	Total Est. Demand: 3.7 kVA
HVAC	0 VA	0.00%	0 VA	Total Conn. Current: 4 A
ELECTRIC HEAT	0 VA	0.00%	0 VA	Total Est. Demand Current: 4 A
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

**PANELBOARD SCHEDULE EH2H** LOCATION: ELEC H215 FED FROM: MDP-E  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT
1				1.8	0.0					2
3	30 A	3	TE2H		1.5	0.0				4
5						0.9	0.0			6
7	20 A	1	SPARE	0.0	0.0					8
9	20 A	1	SPARE		0.0	0.0				10
11	20 A	1	SPARE			0.0	0.0			12
13	20 A	1	SPARE	0.0	0.0					14
15	20 A	1	SPARE			0.0	0.0			16
17	20 A	1	SPARE			0.0	0.0			18
				2 kVA	1 kVA	1 kVA				
				7 A	6 A	3 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	
RECEPTACLES	1260 VA	100.00%	1260 VA	Total Conn. Load: 4.2 kVA
AC / HEAT PUMP	2900 VA	100.00%	2900 VA	Total Est. Demand: 4.2 kVA
HVAC	0 VA	0.00%	0 VA	Total Conn. Current: 5 A
ELECTRIC HEAT	0 VA	0.00%	0 VA	Total Est. Demand Current: 5 A
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

**PANELBOARD SCHEDULE EHA** LOCATION: ELEC A138 FED FROM: MDP-E  
225 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT
1	20 A	1	LTG - ADMIN, GUIDANCE, WEST	1.8	1.5					2
3	20 A	1	SPARE		0.0	3.1				4
5	20 A	1	SPARE			0.0	3.1			6
7				11.9	3.5					8
9	125 A	3	TEA		15.9	1.0				10
11						14.0	0.0			12
13				0.6	0.6					14
15	15 A	3	ERVA-2		0.6	0.6				16
17						0.6	0.6			18
19				5.8	5.8					20
21	45 A	3	AHU-A-11 SUPPLY			5.8	5.8			22
23										24
25				0.4	3.9					26
27	15 A	3	AHU-A-11 ENERGY WHEEL		0.4	3.9				28
29						0.4	3.9			30
31				2.1	1.3					32
33	15 A	3	F-B-11		2.1	1.3				34
35						2.1	1.3			36
37				2.2	2.2					38
39	15 A	3	HP-2			2.2	2.2			40
41										42
43	20 A	1	SPARE	0.0	0.0					44
45	20 A	1	SPARE		0.0	0.0				46
47	20 A	1	SPARE			0.0	0.0			48
49	20 A	1	SPARE	0.0	0.0					50
51	20 A	1	SPARE			0.0	0.0			52
53	20 A	1	SPARE			0.0	0.0			54
55	20 A	1	SPARE	0.0	0.0					56
57	20 A	1	SPARE			0.0	0.0			58
59	20 A	1	SPARE			0.0	0.0			60
				44 kVA	45 kVA	42 kVA				
				158 A	163 A	152 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	
RECEPTACLES	4811 VA	100.00%	4811 VA	Total Conn. Load: 130.6 kVA
AC / HEAT PUMP	24660 VA	70.25%	17330 VA	Total Est. Demand: 123.2 kVA
HVAC	78666 VA	100.00%	78666 VA	Total Conn. Current: 157 A
ELECTRIC HEAT	10500 VA	100.00%	10500 VA	Total Est. Demand Current: 148 A
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	2768 VA	100.00%	2768 VA	

**PANELBOARD SCHEDULE EHD** LOCATION: ELEC D111 FED FROM: MDP-E  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT
1				1.4	0.0					2
3	30 A	3	TED		1.3	0.0				4
5						1.3	0.0			6
7	20 A	1	SPARE	0.0	0.0					8
9	20 A	1	SPARE			0.0	0.0			10
11	20 A	1	SPARE				0.0	0.0		12
13	20 A	1	SPARE	0.0	0.0					14
15	20 A	1	SPARE			0.0	0.0			16
17	20 A	1	SPARE			0.0	0.0			18
				1 kVA	1 kVA	1 kVA				
				5 A	5 A	5 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	
RECEPTACLES	1620 VA	100.00%	1620 VA	Total Conn. Load: 4.0 kVA
AC / HEAT PUMP	2400 VA	100.00%	2400 VA	Total Est. Demand: 4.0 kVA
HVAC	0 VA	0.00%	0 VA	Total Conn. Current: 5 A
ELECTRIC HEAT	0 VA	0.00%	0 VA	Total Est. Demand Current: 5 A
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

**PANELBOARD SCHEDULE EHE** LOCATION: ELEC E120 FED FROM: MDP-E  
60 AMP MCB 480/277 Vye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT
1				1.5	0.0					2
3	30 A	3	TEE		1.6	0.0				4
5						1.1	0.0			6
7	20 A	1	SPARE	0.0	0.0					8
9	20 A	1	SPARE			0.0	0.0			10
11	20 A	1	SPARE			0.0	0.0			12
13	20 A	1	SPARE	0.0	0.0					14
15	20 A	1	SPARE			0.0	0.0			16
17	20 A	1	SPARE			0.0	0.0			18
				1 kVA	2 kVA	1 kVA				
				6 A	6 A	4 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	
RECEPTACLES	1800 VA	100.00%	1800 VA	Total Conn. Load: 4.2 kVA
AC / HEAT PUMP	2400 VA	100.00%	2400 VA	Total Est. Demand: 4.2 kVA
HVAC	0 VA	0.00%	0 VA	Total Conn. Current: 5 A
ELECTRIC HEAT	0 VA	0.00%	0 VA	Total Est. Demand Current: 5 A
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%		



PANELBOARD SCHEDULE EL2E LOCATION: ELEC E220 FED FROM: TE2E  
60 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

(GE) = PROVIDE GFCl BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCl BREAKER FOR PERSONNEL, 4-8mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 1800 VA 100.00% 1800 VA  
AC / HEAT PUMP 2800 VA 100.00% 2800 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 4.7 kVA  
Total Est. Demand: 4.7 kVA  
Total Conn. Current: 13 A  
Total Est. Demand Current: 13 A

PANELBOARD SCHEDULE ELD LOCATION: ELEC D111 FED FROM: TED  
60 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

(GE) = PROVIDE GFCl BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCl BREAKER FOR PERSONNEL, 4-8mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 1620 VA 100.00% 1620 VA  
AC / HEAT PUMP 2400 VA 100.00% 2400 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 4.0 kVA  
Total Est. Demand: 4.0 kVA  
Total Conn. Current: 11 A  
Total Est. Demand Current: 11 A

PANELBOARD SCHEDULE ELH LOCATION: ELEC H108 FED FROM: TEH  
60 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

(GE) = PROVIDE GFCl BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCl BREAKER FOR PERSONNEL, 4-8mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 1260 VA 100.00% 1260 VA  
AC / HEAT PUMP 2400 VA 100.00% 2400 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 3.7 kVA  
Total Est. Demand: 3.7 kVA  
Total Conn. Current: 10 A  
Total Est. Demand Current: 10 A

PANELBOARD SCHEDULE EL2G LOCATION: ELEC G206 FED FROM: TE2G  
60 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

(GE) = PROVIDE GFCl BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCl BREAKER FOR PERSONNEL, 4-8mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 1260 VA 100.00% 1260 VA  
AC / HEAT PUMP 2400 VA 100.00% 2400 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 3.7 kVA  
Total Est. Demand: 3.7 kVA  
Total Conn. Current: 10 A  
Total Est. Demand Current: 10 A

PANELBOARD SCHEDULE ELE LOCATION: ELEC E120 FED FROM: TEE  
60 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

(GE) = PROVIDE GFCl BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCl BREAKER FOR PERSONNEL, 4-8mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 1800 VA 100.00% 1800 VA  
AC / HEAT PUMP 2400 VA 100.00% 2400 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 4.2 kVA  
Total Est. Demand: 4.2 kVA  
Total Conn. Current: 12 A  
Total Est. Demand Current: 12 A

PANELBOARD SCHEDULE H2E LOCATION: ELEC E220 FED FROM: MDS  
400 AMP MCB 480/277 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCl BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCl BREAKER FOR PERSONNEL, 4-8mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 12329 VA 100.00% 12329 VA  
RECEPTACLES 41760 VA 81.97% 41760 VA  
AC / HEAT PUMP 62704 VA 100.00% 62704 VA  
HVAC 1489 VA 100.00% 1489 VA  
ELECTRIC HEAT 2400 VA 100.00% 2400 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 120.7 kVA  
Total Est. Demand: 104.6 kVA  
Total Conn. Current: 145 A  
Total Est. Demand Current: 126 A

PANELBOARD SCHEDULE ELA LOCATION: ELEC A136 FED FROM: TEA  
225 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

(GE) = PROVIDE GFCl BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCl BREAKER FOR PERSONNEL, 4-8mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 132 VA 100.00% 132 VA  
AC / HEAT PUMP 24660 VA 70.28% 17330 VA  
HVAC 14177 VA 100.00% 14177 VA  
ELECTRIC HEAT 190 VA 100.00% 190 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 2768 VA 100.00% 2768 VA  
Total Conn. Load: 41.7 kVA  
Total Est. Demand: 34.4 kVA  
Total Conn. Current: 116 A  
Total Est. Demand Current: 96 A

PANELBOARD SCHEDULE ELG LOCATION: ELEC G108 FED FROM: TEG  
60 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

(GE) = PROVIDE GFCl BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCl BREAKER FOR PERSONNEL, 4-8mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 1440 VA 100.00% 1440 VA  
AC / HEAT PUMP 2400 VA 100.00% 2400 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 500 VA 100.00% 500 VA  
Total Conn. Load: 4.3 kVA  
Total Est. Demand: 4.3 kVA  
Total Conn. Current: 12 A  
Total Est. Demand Current: 12 A

PANELBOARD SCHEDULE H2G LOCATION: ELEC G206 FED FROM: MDS  
225 AMP MCB 480/277 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

(GE) = PROVIDE GFCl BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
(GP) = PROVIDE GFCl BREAKER FOR PERSONNEL, 4-8mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 6099 VA 100.00% 6099 VA  
RECEPTACLES 24300 VA 70.58% 17150 VA  
AC / HEAT PUMP 39185 VA 100.00% 39185 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 69.6 kVA  
Total Est. Demand: 62.4 kVA  
Total Conn. Current: 84 A  
Total Est. Demand Current: 75 A

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 6099 VA 100.00% 6099 VA  
AC / HEAT PUMP 39185 VA 100.00% 39185 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA  
Total Conn. Load: 69.6 kVA  
Total Est. Demand: 62.4 kVA  
Total Conn. Current: 84 A  
Total Est. Demand Current: 75 A



PANELBOARD SCHEDULE LA LOCATION: ELEC A138 FED FROM: TA  
225 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 39050 VA 62.30% 24530 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 1570 VA 100.00% 1570 VA  
ELECTRIC HEAT 2400 VA 100.00% 2400 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA

PANELBOARD SCHEDULE LH LOCATION: ELEC H108 FED FROM: TH  
225 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 27720 VA 68.04% 18880 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 6290 VA 100.00% 6290 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA

PANELBOARD SCHEDULE LE LOCATION: ELEC E120 FED FROM: TE  
225 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 39050 VA 62.30% 24530 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 1570 VA 100.00% 1570 VA  
ELECTRIC HEAT 2400 VA 100.00% 2400 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA

PANELBOARD SCHEDULE LOB LOCATION: STORAGE FH06 FED FROM: T-OB  
100 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 3600 VA 100.00% 3600 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 190 VA 100.00% 190 VA  
ELECTRIC HEAT 0 VA 0.00% 0 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 1500 VA 100.00% 1500 VA

PANELBOARD SCHEDULE EHBR LOCATION: MECHANICAL/ELECTRICAL FED FROM: MDP-E  
225 AMP MCB 480/277 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 65 KAIC

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 5835 VA 100.00% 5835 VA  
RECEPTACLES 18540 VA 76.97% 14270 VA  
AC / HEAT PUMP 98025 VA 100.00% 98025 VA  
HVAC 6290 VA 100.00% 6290 VA  
ELECTRIC HEAT 1000 VA 100.00% 1000 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 3879 VA 100.00% 3879 VA

PANELBOARD SCHEDULE LG LOCATION: ELEC G108 FED FROM: TG  
225 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 160 VA 100.00% 160 VA  
RECEPTACLES 31320 VA 65.96% 20660 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 2400 VA 100.00% 2400 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA

PANELBOARD SCHEDULE ELBR LOCATION: MECHANICAL/ELECTRICAL FED FROM: TEBR  
225 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 18540 VA 76.97% 14270 VA  
AC / HEAT PUMP 32332 VA 100.00% 32332 VA  
HVAC 2300 VA 100.00% 2300 VA  
ELECTRIC HEAT 1000 VA 100.00% 1000 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 3879 VA 100.00% 3879 VA

PANELBOARD SCHEDULE LKS LOCATION: KITCHEN B104 FED FROM: LK  
80 AMP MLO 120/208 Wye 3 PH 4 W MOUNT: RECESSED PANEL ASSEMBLY RATED (KAIC): 10 KAIC

Load Classification Connected Load Demand Factor Estimated Demand Panel Totals  
INTERIOR LIGHTING 0 VA 0.00% 0 VA  
RECEPTACLES 0 VA 0.00% 0 VA  
AC / HEAT PUMP 0 VA 0.00% 0 VA  
HVAC 0 VA 0.00% 0 VA  
ELECTRIC HEAT 8760 VA 65.00% 5694 VA  
KITCHEN 0 VA 0.00% 0 VA  
MISCELLANEOUS 0 VA 0.00% 0 VA



PANELBOARD SCHEDULE										XHBR			LOCATION: MECHANICAL/ELECTRICAL...		FED FROM: MDP-X			
80 AMP MCB										480/277 Wye			3 PH 4 W		MOUNT: SURFACE		PANEL ASSEMBLY RATED (KAIC): 65 KAIC	
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT								
1	20 A	1	LTG - ADMIN / DINING CORR. WEST	2.2	0.0					1	20 A	2						
3	20 A	1	SPARE							1	20 A	4						
5	20 A	1	SPARE							1	20 A	6						
7	20 A	1	SPARE	0.0	0.0					1	20 A	8						
9	20 A	1	SPARE							1	20 A	10						
11	20 A	1	SPARE							1	20 A	12						
13	20 A	1	SPARE	0.0	0.0					1	20 A	14						
15	20 A	1	SPARE							1	20 A	16						
17	20 A	1	SPARE							1	20 A	18						
				2 kVA	0 kVA	0 kVA												
				8 A	0 A	0 A												

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
 (GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4.6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
 (L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
 (LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
 (ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	2111 VA	100.00%	2111 VA	Total Conn. Load: 2.2 kVA Total Est. Demand: 2.2 kVA Total Conn. Current: 2 kVA Total Est. Demand Current: 3 A
RECEPTACLES	0 VA	0.00%	0 VA	
AC / HEAT PUMP	0 VA	0.00%	0 VA	
HVAC	0 VA	0.00%	0 VA	
ELECTRIC HEAT	0 VA	0.00%	0 VA	
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

PANELBOARD SCHEDULE										LBR			LOCATION: MECHANICAL/ELECTRICAL...		FED FROM: TBR			
225 AMP MCB										120/208 Wye			3 PH 4 W		MOUNT: SURFACE		PANEL ASSEMBLY RATED (KAIC): 10 KAIC	
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT								
1	20 A	1	G1-1	0.5	0.2		F.A-12			1	15 A	2						
3	20 A	2	F.B-15			0.9	0.4			1	20 A	4						
5	20 A	1	SPARE							2	20 A	6						
7	20 A	2	F.F-12	0.9	0.9		0.9	0.9		2	15 A	10						
9	15 A	2	F.F-14			0.9	0.3			2	15 A	12						
13	20 A	1	REC RECEIVING B115	0.3	0.5					1	20 A	14						
15	20 A	1	REC RECEIVING B115			0.7	0.2			1	20 A	16						
17	20 A	1	REC RECEPTACLES MECHANICAL F205			0.4	1.4			1	20 A	18						
19	20 A	1	REC ROOM F204, F205, F207	0.7	0.5					1	20 A	20						
21	50 A	3	KILN B123			0.1	0.3			1	15 A	22						
23	20 A	1	HAND DRYER	0.1	0.5					1	20 A	24						
25	20 A	1	REC ROOF							1	20 A	26						
31	20 A	1	SPARE	0.0	0.0					1	20 A	32						
33	20 A	1	SPARE			0.0	0.0			1	20 A	34						
35	20 A	1	SPARE			0.0	0.0			1	20 A	36						
37	20 A	1	SPARE	0.0	0.0					1	20 A	38						
39	20 A	1	SPARE			0.0	0.0			1	20 A	40						
41	20 A	1	SPARE			0.0	0.0			1	20 A	42						
				5 kVA	6 kVA	6 kVA												
				42 A	51 A	49 A												

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
 (GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4.6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
 (L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
 (LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
 (ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	Total Conn. Load: 17.0 kVA Total Est. Demand: 17.0 kVA Total Conn. Current: 47 A Total Est. Demand Current: 47 A
RECEPTACLES	5040 VA	100.00%	5040 VA	
AC / HEAT PUMP	0 VA	0.00%	0 VA	
HVAC	6580 VA	100.00%	6580 VA	
ELECTRIC HEAT	3400 VA	100.00%	3400 VA	
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	1930 VA	100.00%	1930 VA	

PANELBOARD SCHEDULE										L2D			LOCATION: ELEC D211		FED FROM: T2D			
225 AMP MCB										120/208 Wye			3 PH 4 W		MOUNT: SURFACE		PANEL ASSEMBLY RATED (KAIC): 10 KAIC	
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT								
1	20 A	1	REC ELEC D111	0.2	1.4					1	20 A	2						
3	20 A	1	REC CLASSROOM D212			1.4	1.4			1	20 A	4						
5	20 A	1	REC CLASSROOM D218			1.4	0.9			1	20 A	6						
7	20 A	1	REC ROOM D208, D208A, D221, D221A, D216	1.4	0.9					1	20 A	8						
9	20 A	1	REC EWC D203 (GP)			0.4	1.3			1	20 A	10						
11	20 A	1	REC PRINTER D226				0.4	0.4		1	20 A	12						
13	20 A	1	REC ROOM C224, C218, D226	1.3	0.2					1	20 A	14						
15	20 A	1	REC RESOURCE C220			1.3	1.1			1	20 A	16						
17	20 A	1	REC CLASSROOM C222				1.4	1.4		1	20 A	18						
19	20 A	1	REC CLASSROOM D220	1.4	1.4					1	20 A	20						
21	20 A	1	REC CLASSROOM D225			1.4	1.4			1	20 A	22						
23	20 A	1	REC SCIENCE LAB D223			1.3	1.3			1	20 A	24						
25	20 A	1	REC SCIENCE LAB D223	1.3	0.2					1	20 A	26						
27	20 A	1	REC SCIENCE LAB D207			1.3	1.3			1	20 A	28						
29	20 A	1	REC DISHWASHER D207 (GP)			0.2	1.3			1	20 A	30						
31	20 A	1	REC DISHWASHER D222 (GP)	0.2	1.1					1	20 A	32						
33	20 A	1	REC MS DANCE/DRAMA C202			1.4	1.3			1	20 A	34						
35	20 A	1	REC MS ART C203			0.7	0.4			1	20 A	36						
37	20 A	1	F-D-22	0.4	0.4					1	20 A	38						
39	20 A	1	REC MECHANICAL PLATFORM MP01			0.4	1.2			1	20 A	40						
41	20 A	1	HAND DRYER			1.2	0.5			1	20 A	42						
43	20 A	1	SPARE	0.0	0.0					1	20 A	44						
45	20 A	1	SPARE	0.0	0.0					1	20 A	46						
47	20 A	1	SPARE	0.0	0.0					1	20 A	48						
49	20 A	1	SPARE	0.0	0.0					1	20 A	50						
51	20 A	1	SPARE	0.0	0.0					1	20 A	52						
53	20 A	1	SPARE	0.0	0.0					1	20 A	54						
55	20 A	1	SPARE	0.0	0.0					1	20 A	56						
57	20 A	1	SPARE	0.0	0.0					1	20 A	58						
59	20 A	1	SPARE	0.0	0.0					1	20 A	60						
61	20 A	1	SPARE	0.0	0.0					1	20 A	62						
63	20 A	1	SPARE	0.0	0.0					1	20 A	64						
65	20 A	1	SPARE	0.0	0.0					1	20 A	66						
67	20 A	1	SPARE	0.0	0.0					1	20 A	68						
69	20 A	1	SPARE	0.0	0.0					1	20 A	70						
71	20 A	1	SPARE	0.0	0.0					1	20 A	72						
73	20 A	1	SPARE	0.0	0.0					1	20 A	74						
75	20 A	1	SPARE	0.0	0.0					1	20 A	76						
77	20 A	1	SPARE	0.0	0.0					1	20 A	78						
79	20 A	1	SPARE	0.0	0.0					1	20 A	80						
81	20 A	1	SPARE	0.0	0.0					1	20 A	82						
83	20 A	1	SPARE	0.0	0.0					1	20 A	84						
				12 kVA	17 kVA	13 kVA												
				8 A	13 A	10 A												

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 (L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
 (LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
 (ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	Total Conn. Load: 41.0 kVA Total Est. Demand: 27.2 kVA Total Conn. Current: 114 A Total Est. Demand Current: 76 A
RECEPTACLES	37440 VA	63.35%	23720 VA	
AC / HEAT PUMP	0 VA	0.00%	0 VA	
HVAC	1110 VA	100.00%	1110 VA	
ELECTRIC HEAT	2400 VA	100.00%	2400 VA	
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

PANELBOARD SCHEDULE										HK			LOCATION: KITCHEN B104		FED FROM: MDP-E			
225 AMP MCB										480/277 Wye			3 PH 4 W		MOUNT: RECESSED		PANEL ASSEMBLY RATED (KAIC): 65 KAIC	
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT								
1	35 A	3	COMBI-STEAMER, HI (ITEM 23.1)	6.5	6.5					3	35 A	4						
3	35 A	3	COMBI-STEAMER, HI (ITEM 23.3)			6.5	6.5			3	35 A	6						
7	--	1	SHUNT TRIP FOR ABOVE	--	--	6.5	6.5			1	--	8						
11	35 A	3	COMBI-STEAMER, LO (ITEM 23.2)			6.5	6.5			3	35 A	12						
13	--	1	SHUNT TRIP FOR ABOVE	6.5	6.5					1	--	14						
17	--	1	SHUNT TRIP FOR ABOVE	--	--					1	--	16						
19	40 A	3	CONVEYER DISHWASHER, MOTOR/TANK (ITEM 42.1.1)	7.7	7.7					3	40 A	20						
23	30 A	3	CONVEYER DISHWASHER, BOOSTER (ITEM 42.2.2)	6.1	6.1					3	30 A	24						
27	--	1	SHUNT TRIP FOR ABOVE	--	--	6.1	6.1			1	--	28						
29	15 A	3	F-KH1	0.9	0.9					3	15 A	32						
33	--	1	SHUNT TRIP FOR ABOVE	--	--	0.9	0.9			1	--	34						
35	15 A	3	MAU-1	1.1	0.0					1	20 A	36						
37	15 A	3	SPARE															



PANELBOARD SCHEDULE XH2H										LOCATION: ELEC H215		FED FROM: MDP-X					
60 AMP MCB										480/277 Wye		3 PH 4 W		MOUNT: SURFACE		PANEL ASSEMBLY RATED (KAIC): 65 KAIC	
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT							
1	20 A	1	LTG ROOM H210, H221, H211	1.1	0.5		ROOM F204, F101, F204A			1	20 A	2					
3												4					
5												6					
7												8					
9												10					
11												12					
13												14					
15												16					
17												18					
				2 kVA	0 kVA	0 kVA					6 A	0 A	0 A				

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 (GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
 (L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
 (LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
 (ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	1489 VA	100.00%	1489 VA	Total Conn. Load: 1.6 kVA Total Est. Demand: 1.6 kVA Total Conn. Current: 2 A
RECEPTACLES	0 VA	0.00%	0 VA	
AC / HEAT PUMP	0 VA	0.00%	0 VA	
HVAC	0 VA	0.00%	0 VA	
ELECTRIC HEAT	0 VA	0.00%	0 VA	
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

PANELBOARD SCHEDULE EL2D										LOCATION: ELEC D211		FED FROM: TE2D					
60 AMP MCB										120/208 Wye		3 PH 4 W		MOUNT: SURFACE		PANEL ASSEMBLY RATED (KAIC): 10 KAIC	
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT							
1	20 A	1	REC DATA D219	0.4	0.4		REC DATA D219			1	20 A	2					
3	20 A	1	REC TEACHER WORKROOM/ LOUNGE D226		0.2	0.2	REC EWC D223 (GP)			1	20 A	4					
5	20 A	1	REC FRIDGE D207 (GP)			0.2	REC FRIDGE D222 (GP)			1	20 A	6					
7	20 A	1	BC-D-2	0.5	1.0		SSI-D-21 & SSO-D-21			2	20 A	8					
9	20 A	1	BC-C-3			0.5				2	20 A	10					
11	20 A	1	SPARE			0.0	SPARE			1	20 A	12					
13	20 A	1	SPARE	0.0	0.0		SPARE			1	20 A	14					
15	20 A	1	SPARE			0.0	SPARE			1	20 A	16					
17	20 A	1	SPARE			0.0	SPARE			1	20 A	18					
19	20 A	1	SPARE			0.0	SPARE			1	20 A	20					
21	20 A	1	SPARE			0.0	SPARE			1	20 A	22					
23	20 A	1	SPARE			0.0	SPARE			1	20 A	24					
25	20 A	1	SPARE	0.0	0.0		SPARE			1	20 A	26					
27	20 A	1	SPARE			0.0	SPARE			1	20 A	28					
29	20 A	1	SPARE			0.0	SPARE			1	20 A	30					
31	20 A	1	SPARE	0.0	0.0		SPARE			1	20 A	32					
33	20 A	1	SPARE			0.0	SPARE			1	20 A	34					
35	20 A	1	SPARE			0.0	SPARE			1	20 A	36					
37	20 A	1	SPARE	0.0	0.0		SPARE			1	20 A	38					
39	20 A	1	SPARE			0.0	SPARE			1	20 A	40					
41	20 A	1	SPARE			0.0	SPARE			1	20 A	42					
				2 kVA	2 kVA	0 kVA					20 A	17 A	3 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
 (GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
 (L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
 (LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
 (ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	Total Conn. Load: 4.3 kVA Total Est. Demand: 4.3 kVA Total Conn. Current: 12 A
RECEPTACLES	1440 VA	100.00%	1440 VA	
AC / HEAT PUMP	2900 VA	100.00%	2900 VA	
HVAC	0 VA	0.00%	0 VA	
ELECTRIC HEAT	0 VA	0.00%	0 VA	
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

PANELBOARD SCHEDULE H2D										LOCATION: ELEC D211		FED FROM: MDS					
400 AMP MCB										480/277 Wye		3 PH 4 W		MOUNT: SURFACE		PANEL ASSEMBLY RATED (KAIC): 10 KAIC	
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT							
1				11.7	3.1		LTG WING 2D' ROOMS			1	20 A	2					
3	125 A	3	T2D		16.5	3.2	LTG WING 2D' ROOMS			1	20 A	4					
5						12.7	0.6	LTG WING 2C' MS MUSIC		1	20 A	6					
7				3.9	2.3					3	15 A	8					
9	30 A	3	AHU-D-21		3.9	2.3	AHU-D-22			3	15 A	10					
11						3.9	2.3	FCU-D-21		1	20 A	12					
13				3.9	0.2					1	20 A	14					
15	30 A	3	AHU-D-23		3.9	3.0	ERV-C			3	15 A	16					
17						3.9	3.0			3	15 A	18					
19				4.4	3.0							20					
21	25 A	3	ERV-D-1		4.4	4.4	ERV-D-2			3	25 A	22					
23						4.4	4.4					24					
25	20 A	1	LTG MECHANICAL PLATFORM MP01	0.4	4.4					1	20 A	26					
27	15 A	1	FCU-C-31			0.2	0.0	SPARE		1	20 A	28					
29	20 A	1	SPARE	0.0	0.0		0.0	0.0	SPARE	1	20 A	30					
31	20 A	1	SPARE						SPARE	1	20 A	32					
33	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	34					
35	20 A	1	SPARE				0.0	0.0	SPARE	1	20 A	36					
37	20 A	1	SPARE	0.0	0.0		0.0	0.0	SPARE	1	20 A	38					
39	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	40					
41	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	42					
				37 kVA	42 kVA	35 kVA					136 A	152 A	127 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
 (GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
 (L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
 (LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
 (ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

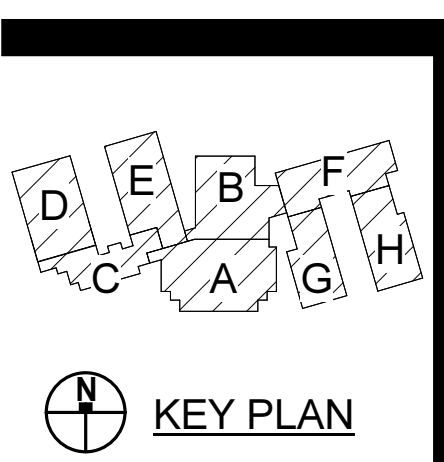
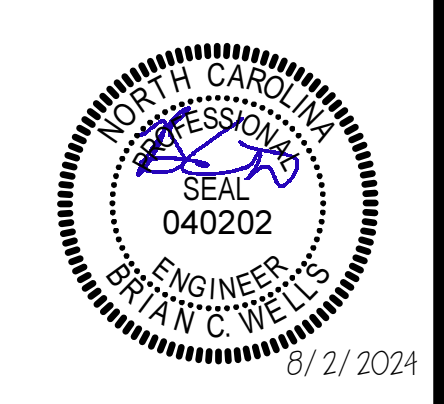
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	7333 VA	100.00%	7333 VA	Total Conn. Load: 114.1 kVA Total Est. Demand: 100.4 kVA Total Conn. Current: 137 A
RECEPTACLES	37440 VA	63.35%	23720 VA	
AC / HEAT PUMP	65854 VA	100.00%	65854 VA	
HVAC	1110 VA	100.00%	1110 VA	
ELECTRIC HEAT	2400 VA	100.00%	2400 VA	
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

PANELBOARD SCHEDULE EL2H										LOCATION: ELEC H215		FED FROM: TE2H					
60 AMP MCB										120/208 Wye		3 PH 4 W		MOUNT: SURFACE		PANEL ASSEMBLY RATED (KAIC): 10 KAIC	
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT							
1	20 A	1	BC-H-2	0.5	1.0		SSI-H-21 & SSO-H-21			2	20 A	2					
3	20 A	1	BC-H-3			0.5	1.0			1	20 A	4					
5	20 A	1	REC DATA H216			0.5	0.4	REC DATA H216		1	20 A	6					
7	20 A	1	REC FRIDGE H204 (GP)	0.2	0.2			REC FRIDGE H204 (GP)		1	20 A	8					
9	20 A	1	SPARE			0.0	0.0	SPARE		1	20 A	10					
11	20 A	1	SPARE				0.0	0.0	SPARE	1	20 A	12					
13	20 A	1	SPARE	0.0	0.0				SPARE	1	20 A	14					
15	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	16					
17	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	18					
19	20 A	1	SPARE	0.0	0.0				SPARE	1	20 A	20					
21	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	22					
23	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	24					
25	20 A	1	SPARE	0.0	0.0				SPARE	1	20 A	26					
27	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	28					
29	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	30					
31	20 A	1	SPARE	0.0	0.0				SPARE	1	20 A	32					
33	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	34					
35	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	36					
37	20 A	1	SPARE	0.0	0.0				SPARE	1	20 A	38					
39	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	40					
41	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	42					
				2 kVA	1 kVA	1 kVA					16 A	13 A	8 A				

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 PROVIDE DED. NEUTRAL.  
 (GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8 PROVIDE DED. NEUTRAL.  
 (L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.  
 (LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR.  
 (ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0 VA	0.00%	0 VA	Total Conn. Load: 4.2 kVA Total Est. Demand: 4.2 kVA Total Conn. Current: 12 A
RECEPTACLES	1260 VA	100.00%	1260 VA	
AC / HEAT PUMP	2900 VA	100.00%	2900 VA	
HVAC	0 VA	0.00%	0 VA	
ELECTRIC HEAT	0 VA	0.00%	0 VA	
KITCHEN	0 VA	0.00%	0 VA	
MISCELLANEOUS	0 VA	0.00%	0 VA	

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 Pender County Schools  
 Highway 210, Hampstead, NC 28443

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DATE:	AUGUST 2, 2024
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PANELBOARD SCHEDULES



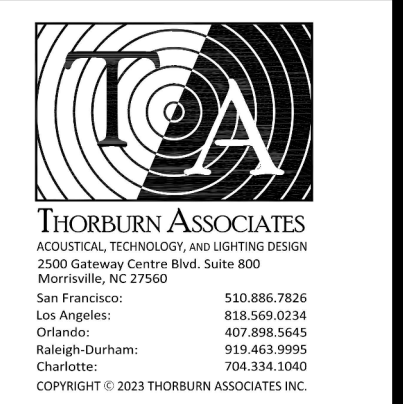
**1** INFRASTRUCTURE SCHEDULE

SYMBOL	DESCRIPTION	TYPE, SIZE, FLUSH MOUNT (UON)	FURNISHED / INSTALLED BY	MOUNTING HEIGHT	MOUNT LOCATION (UON)	BLOCKING	COORDINATION DETAIL	INTERFACE PLATE DETAIL	NOTES
	VIDEO PROJECTOR CEILING BOX	4-SQUARE 2-1/2" DEEP BOX	EC/EC	--	CEILING	--	DETAIL 1/TA7.2	--	EC SHALL FURNISH AND INSTALL (1) 16A/208VAC IEC C19 OUTLET ON DEDICATED CIRCUIT
	OVERHEAD LOUDSPEAKER CEILING BOX	4-SQUARE 2-1/2" DEEP BOX	EC/EC	--	CEILING	--	DETAIL 7/TA7.1	--	--
	SCORE TABLE AV FLOOR BOX	4-GANG FLOOR BOX, WIREMOLD EFB45 (BASIS OF DESIGN)	EC/EC	--	FLOOR	--	DETAIL 13/TA7.1	DETAIL 1/TA6.1	EC SHALL FURNISH AND INSTALL (1) 20A/120VAC DUPLEX RECEPTACLE ON DEDICATED CIRCUIT; TC SHALL FURNISH AND INSTALL (2) PROJECT STANDARD DATA DROPS LOCATED IN BOX.
	PROJECTION SCREEN LOW VOLTAGE INTERFACE	PROVIDED WITH PROJECTION SCREEN	EC/EC	--	WALL	--	--	--	EC SHALL FURNISH AND INSTALL (1) 120VAC DEDICATED CIRCUIT WIRED TO LOW-VOLTAGE INTERFACE FOR SCREEN OPERATION
	ADA ANTENNA WALL BOX	2-GANG, 2-1/2" DEEP WALL BOX	EC/EC	15' AFF	WALL	N	DETAIL 15/TA7.1	--	--
	MICROPHONE ANTENNA WALL BOX	2-GANG, 2-1/2" DEEP WALL BOX	EC/EC	10' AFF	WALL	N	DETAIL 1/TA7.1	--	--
	AV INPUT WALL BOX	5-GANG, 2-1/2" DEEP WALL BOX	EC/EC	OUTLET HEIGHT	WALL	N	DETAIL 4/TA7.1	DETAIL 6/TA6.1	EC SHALL FURNISH AND INSTALL (1) DUPLEX RECEPTACLE ADJACENT TO BOX; TC SHALL FURNISH AND INSTALL (2) PROJECT STANDARD DATA DROPS LOCATED IN BOX.
	AV INPUT WALL BOX	4-GANG, 2-1/2" DEEP WALL BOX	EC/EC	OUTLET HEIGHT	WALL	N	DETAIL 4/TA7.1	DETAIL 5/TA6.1	EC SHALL FURNISH AND INSTALL (1) DUPLEX RECEPTACLE ADJACENT TO BOX; TC SHALL FURNISH AND INSTALL (2) PROJECT STANDARD DATA DROPS LOCATED IN BOX.
	VIDEO PROJECTOR WALL BOX	2-GANG, 2-1/2" DEEP WALL BOX	EC/EC	11' AFF	WALL	N	DETAIL 5/TA7.2	--	EC SHALL FURNISH AND INSTALL (1) 16A/208VAC IEC C19 OUTLET ON DEDICATED CIRCUIT
	AV STAGE WALL BOX	2-GANG, 2-1/2" DEEP WALL BOX	EC/EC	OUTLET HEIGHT	WALL	N	DETAIL 4/TA7.1	DETAIL 9/TA6.1	EC SHALL FURNISH AND INSTALL (1) DUPLEX RECEPTACLE ADJACENT TO BOX
	WALL MOUNT LOUDSPEAKER	2-GANG, 2-1/2" DEEP WALL BOX	EC/EC	20'-9" AFF	WALL	N	DETAIL 11/TA7.1	--	--
	TOUCH PANEL WALL BOX	2-GANG, 2-1/2" DEEP WALL BOX	EC/EC	SWITCH HEIGHT	WALL	N	DETAIL 5/TA7.1	DETAIL 7/TA6.1	--
	AV RACK	PER SPEC SECTION 27 4116	AVC/AVC	--	--	Y	DETAIL 1/TA5.1	--	EC SHALL FURNISH (2) 20A/120VAC DUPLEX RECEPTACLES ON DEDICATED CIRCUITS; TC SHALL FURNISH AND INSTALL (4) PROJECT STANDARD DATA DROPS TO RACK.

**2** PROJECTION SCREEN SCHEDULE

DISPLAY LOCATION/DESCRIPTION	QTY.	DISPLAY SIZE - DIAGONAL (INCHES)	FORMAT	MOUNTING ORIENTATION	WEIGHT	MANUFACTURER	MODEL	SCREEN TYPE	BLACK MASKING	BLACK DROP (INCHES)	LOW VOLTAGE INTERFACE
PLATFORM A140 - MS GYM SIDE	1	300	16:9	WALL RECESSED	495 LBS	DRAPER	PARAGON V	XT1300X	YES	24"	YES
PLATFORM A140 - MS/ES DINING SIDE	1	184	16:9	WALL RECESSED	200 LBS	DRAPER	PREMIER XL	XT700V	YES	12"	YES

PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/2024	AD-1



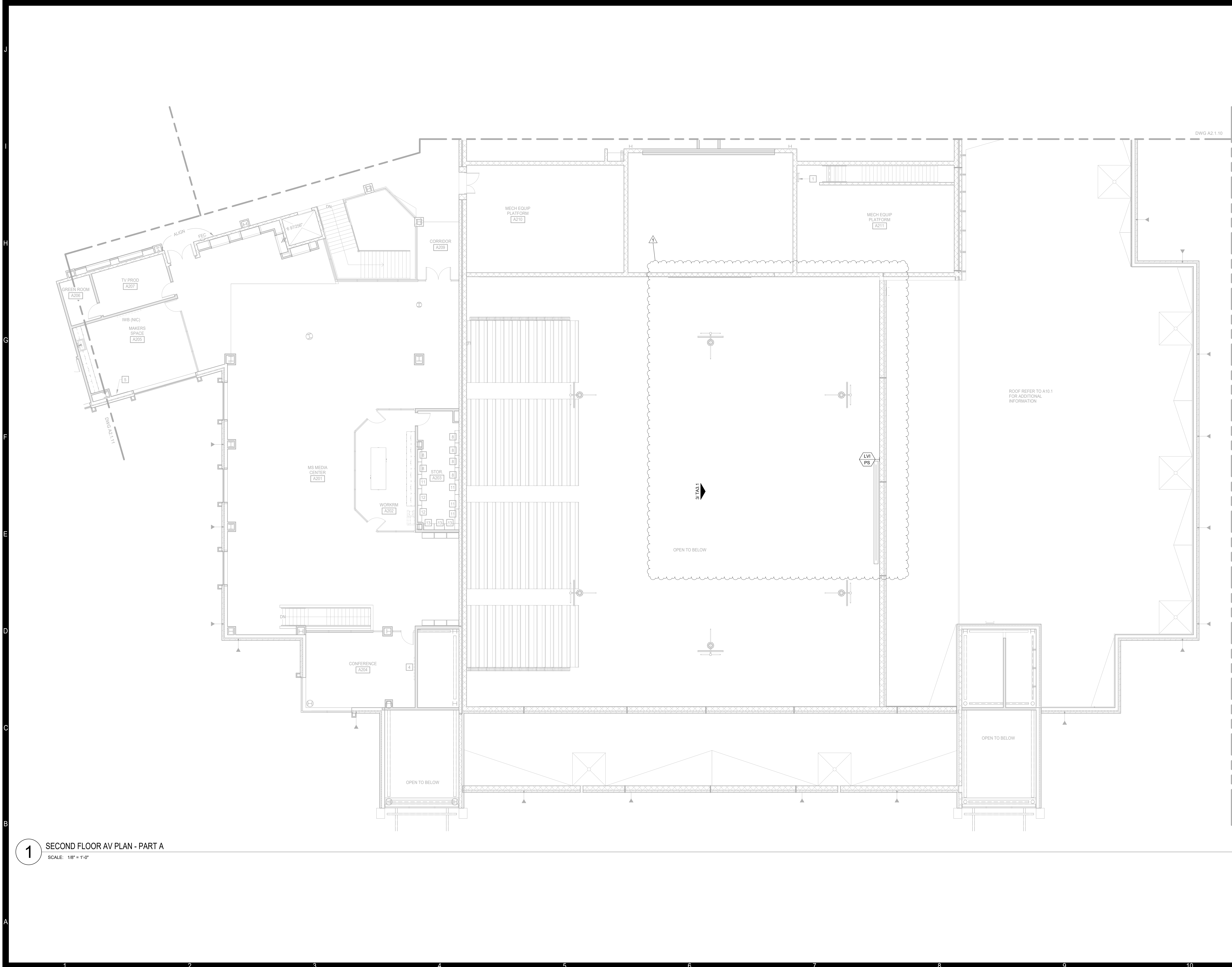
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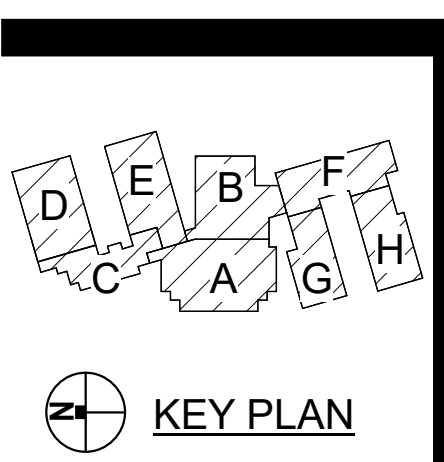
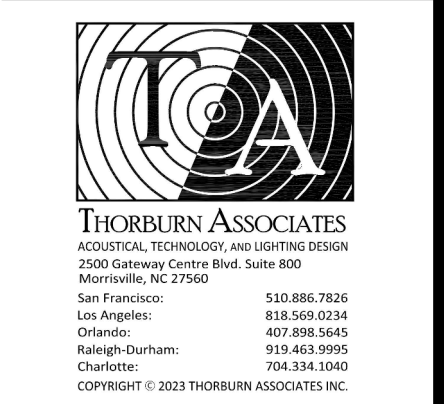


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**1** SECOND FLOOR AV PLAN - PART A  
SCALE: 1/8" = 1'-0"

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**PENDER COUNTY SCHOOLS K-8 SCHOOL**  
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PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/2024	AD-1

SECOND FLOOR AV  
PLAN - PART A

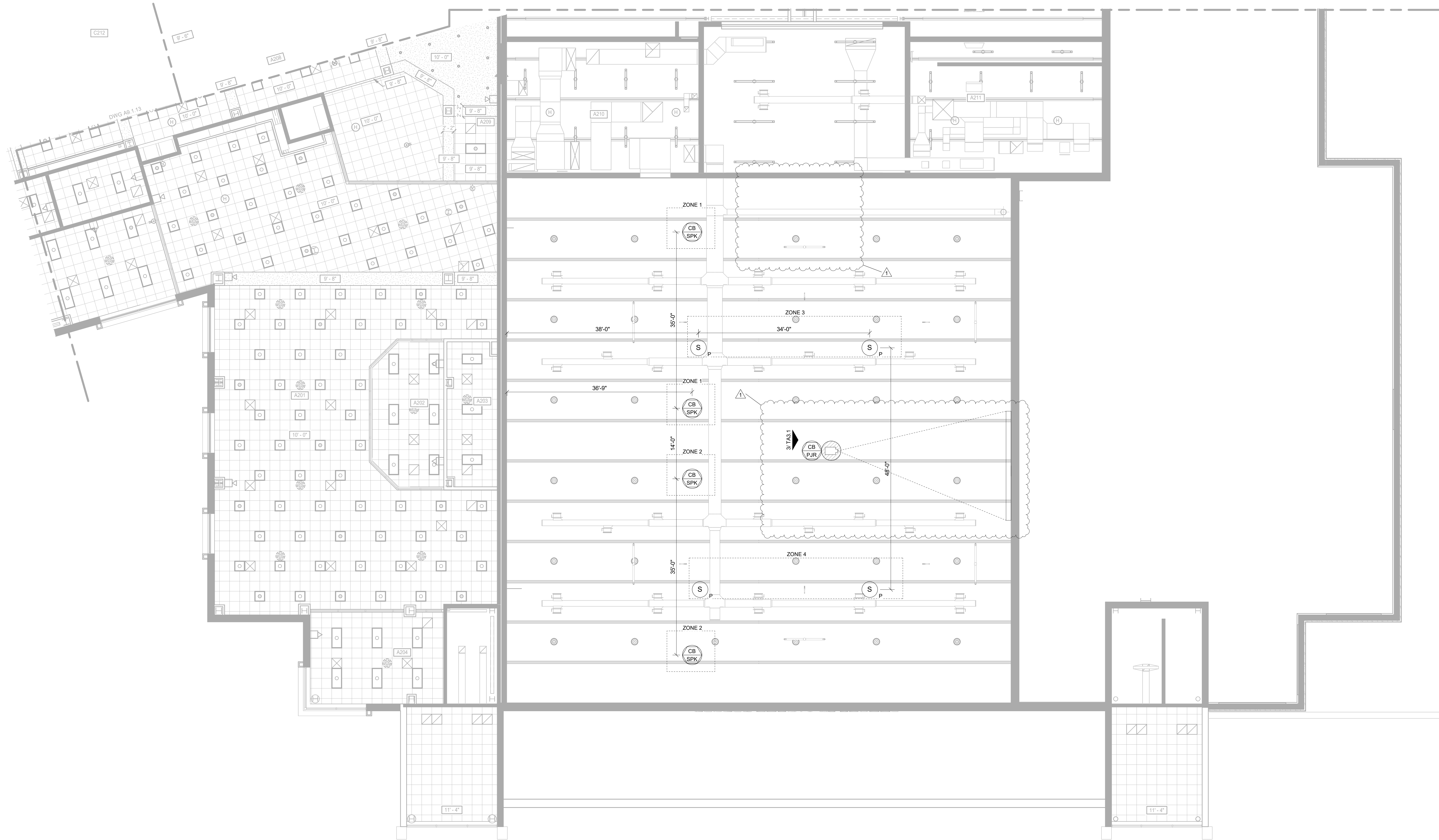
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# 1 SECOND FLOOR AV CEILING PLAN - AREA A

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



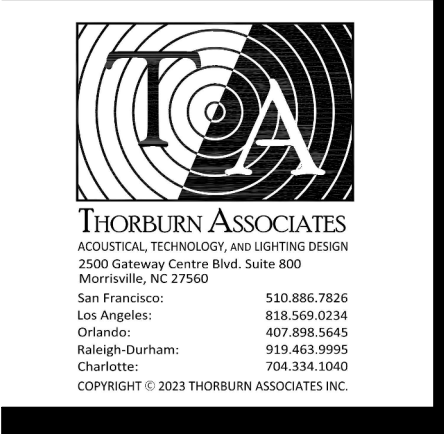
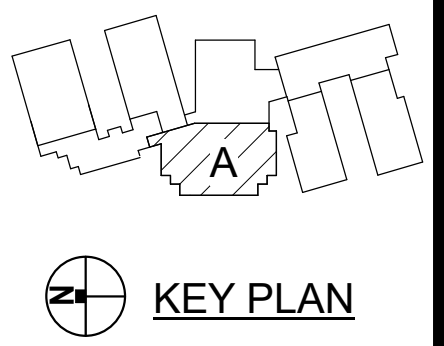
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DATE: AUGUST 2, 2024	
REVISIONS	
DATE	DESCRIPTION
8/16/2024	AD-1

SECOND FLOOR AV  
CEILING PLAN - AREA A

# TA2.2.1

## PENDER COUNTY SCHOOLS K-8 SCHOOL

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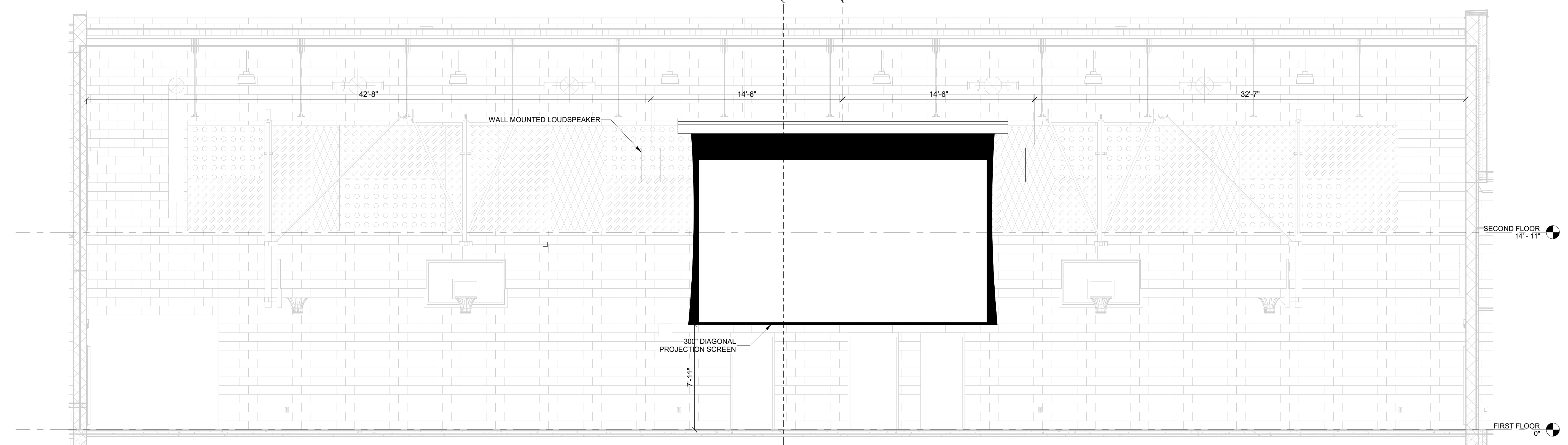
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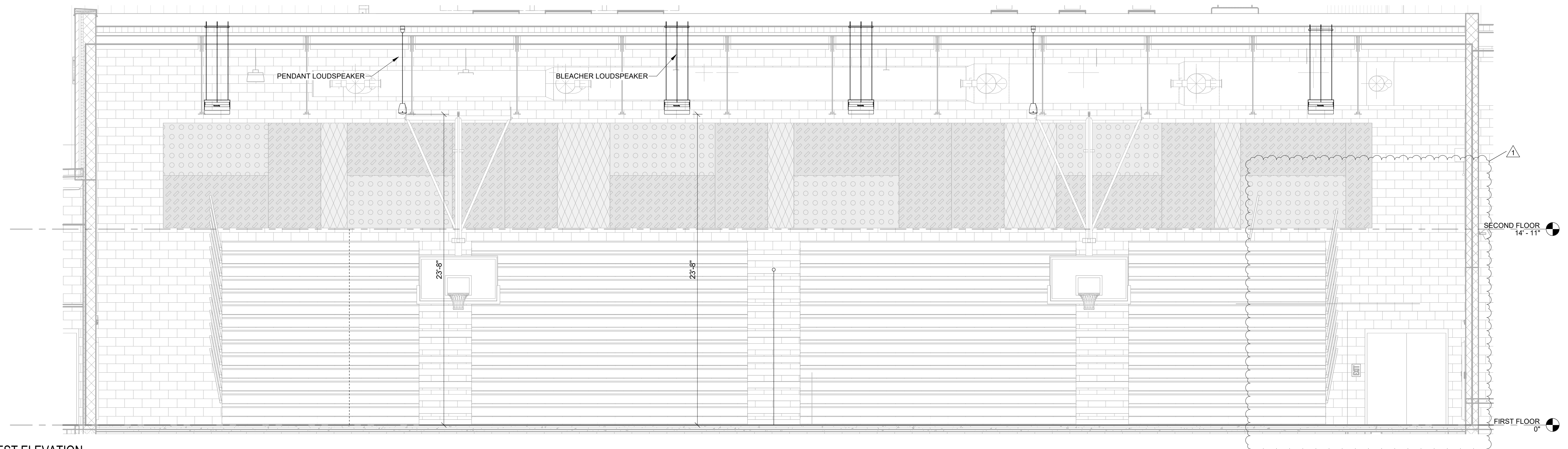
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DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/2024	AD-1

SECTIONS AND ELEVATIONS

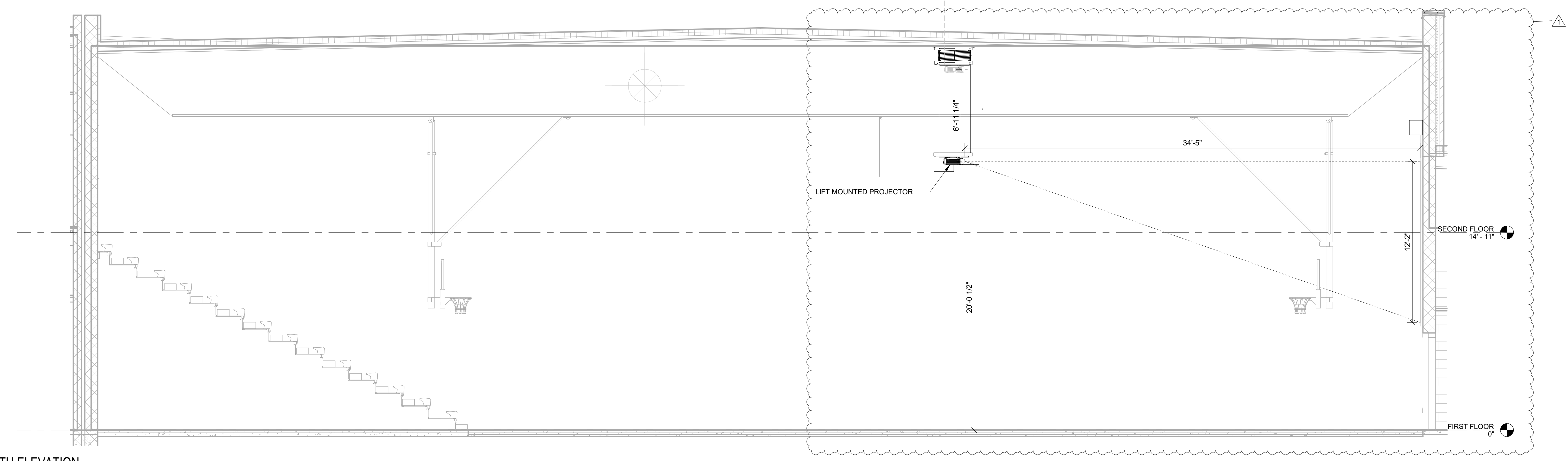
**TA3.1**



**3** MS GYMNASIUM (A142) EAST ELEVATION  
 SCALE: 1/4" = 1'-0"



**2** MS GYMNASIUM (A142) WEST ELEVATION  
 SCALE: 1/4" = 1'-0"



**1** MS GYMNASIUM (A142) NORTH ELEVATION  
 SCALE: 1/4" = 1'-0"

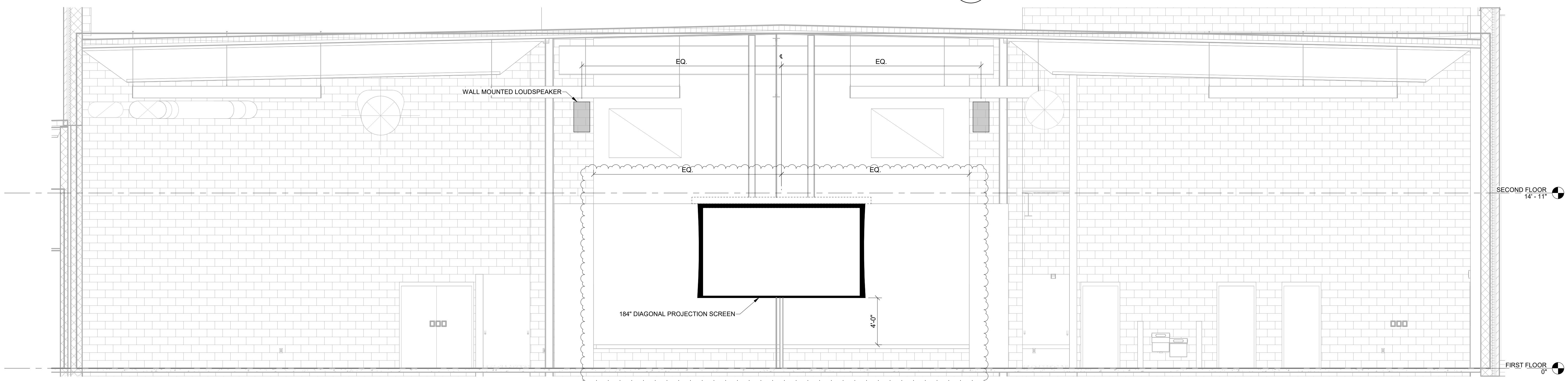
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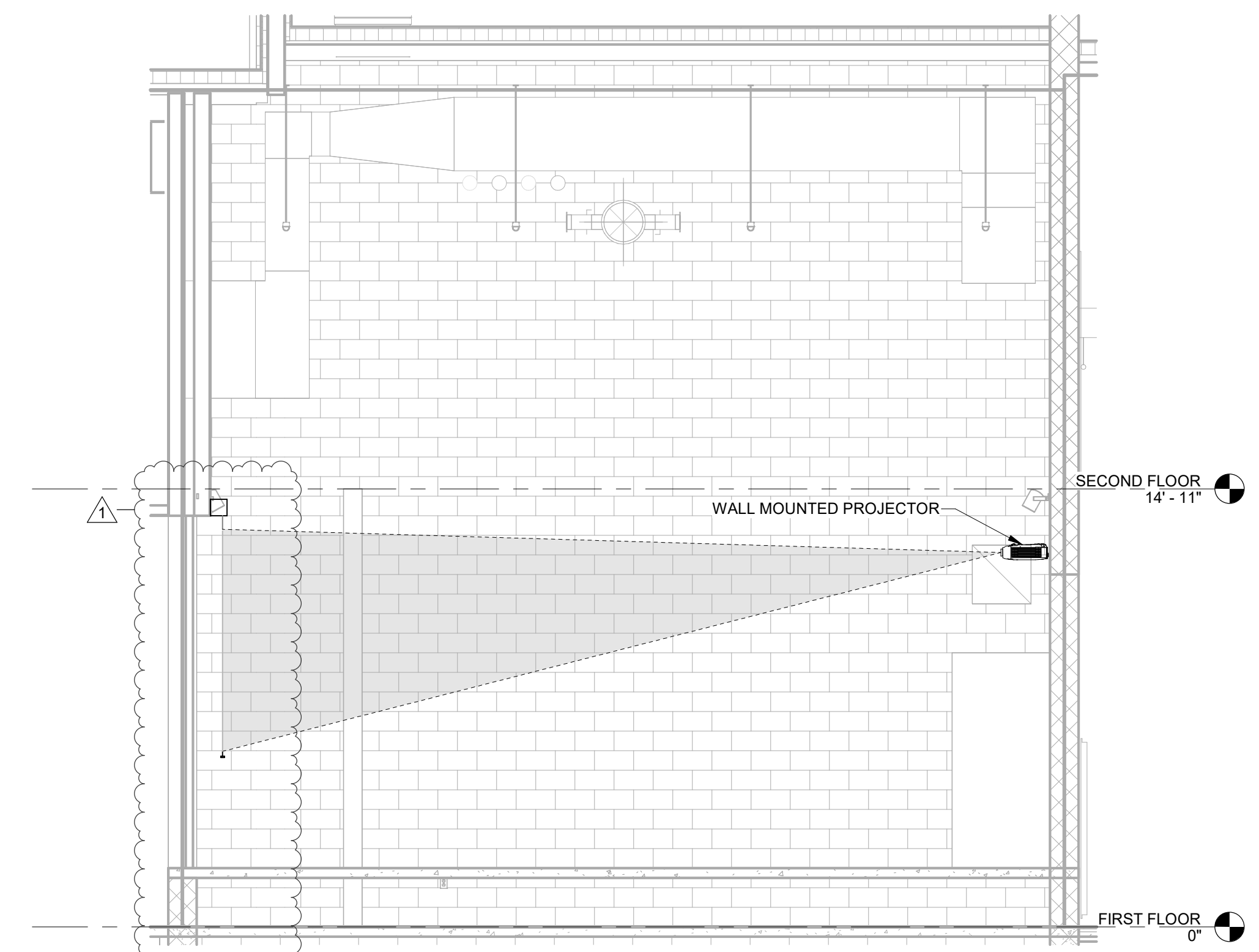
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J  
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**1** MS/ES DINING (B101/B117) SOUTH ELEVATION  
SCALE: 1/4" = 1'-0"

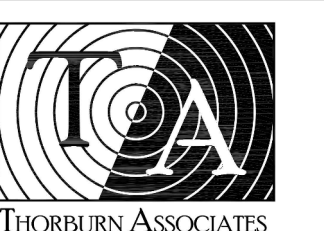


**2** PLATFORM (A140) EAST ELEVATION  
SCALE: 1/4" = 1'-0"



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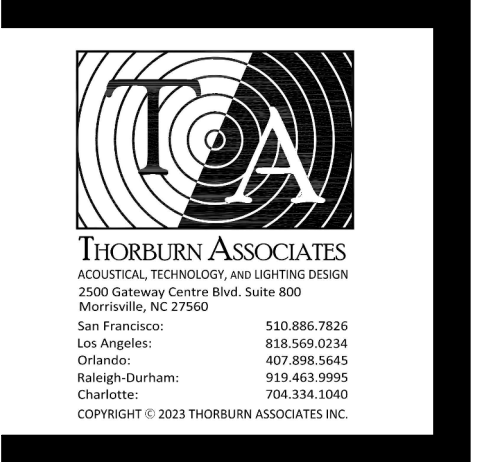
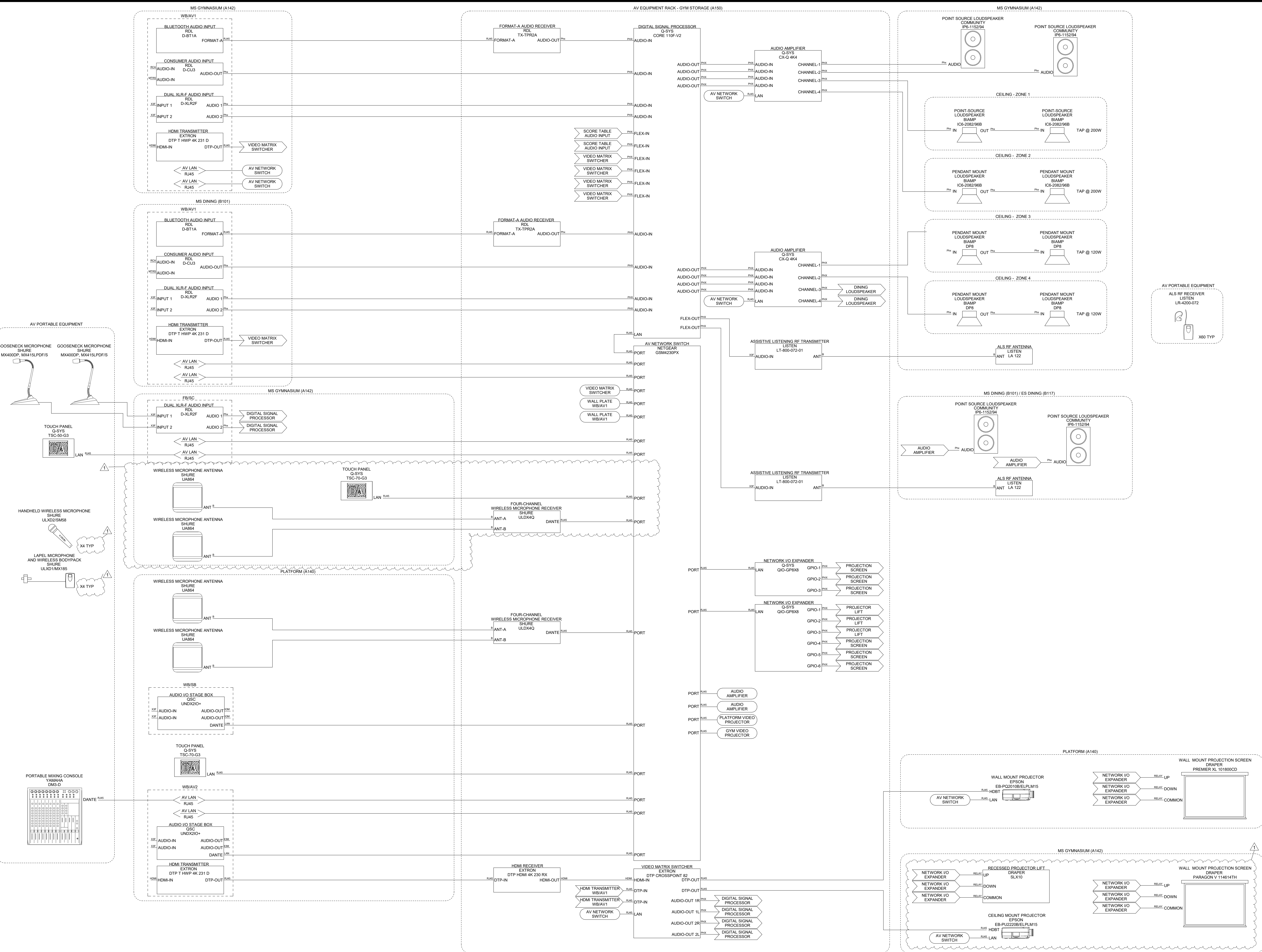
PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/2024	AD-1

SECTIONS AND ELEVATIONS

**TA3.2**



1 MS GYMNASIUM (A142) AND MS/ES DINING FUNCTIONAL



PROJECT NO:	631310
DATE:	AUGUST 2, 2024
REVISIONS	
DATE	DESCRIPTION
8/16/2024	AD-1



