



May 19, 2014

MEMORANDUM

TO: District Board of Trustees
FROM: Jim Murdaugh, President 
SUBJECT: Phase III Document Approval for Wakulla Environmental Institute,
Building One

Item Description

This item requests Board of Trustees approval of the Phase III Construction Documents for the Wakulla Environmental Institute, Building One.

Overview and Background

Chapter 1013.37(2)a, F.S. states, "Before a contract has been let for the construction ... the Florida College System institution board, or its authorized review agent must approve the Phase III construction documents."

The construction documents have been reviewed by the College's technical staff for conformance with TCC standards and TCC's Building Code Official will complete Florida Building Code review. The documents will be issued for bid after Board approval. We anticipate presenting the recommended low bid contractor at the August Board meeting.

Past Actions by the Board

The Board approved the architectural agreement with Barnett Fronczak Barlowe Architects at the September 16, 2013 meeting.

Funding/Financial Implications

Funds for this project were appropriated by the Florida Legislature during the 2012 session.

Staff Resource

Teresa Smith

Recommended Action

Approve the Phase III Construction Documents for the Wakulla Environmental Institute, Building One.

TCC WAKULLA ENVIRONMENTAL INSTITUTE

TALLAHASSEE COMMUNITY COLLEGE

30 APRIL 2014

CONSTRUCTION DOCUMENTS



14220

TCC - Wakulla
Environmental
Institute

30 APRIL 2014
DATE

CONSTRUCTION DOCUMENTS
PROJECT PHASE

PROJECT DIRECTORY

PROJECT LOCATION MAP

OWNER

TALLAHASSEE COMMUNITY COLLEGE
444 APPELYARD DRIVE
TALLAHASSEE, FL 32304

ARCHITECT

BARNETT FRONCZAK BARLOWE ARCHITECTS
225 SOUTH ADAMS STREET
TALLAHASSEE, FL 32301
850.224.6301

**STRUCTURAL
ENGINEER**

DAVID H. MELVIN, INC.
2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FL 32308
850.671.7221

CIVIL ENGINEER

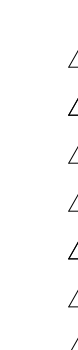
HYDRA ENGINEERING, LLC
36 JASPER THOMAS ROAD
CRAWFORDVILLE, FL 32327
850.926.2593

MEP ENGINEER

H2 ENGINEERING
114 EAST FIFTH AVENUE
TALLAHASSEE, FL 32303
850.224.7922



REVISIONS



COVER SHEET

CS-1

225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978

PROJECT CODE DESIGN DATA SUMMARY

1. GENERAL PROJECT INFORMATION	7. EXITS	13. GUARDRAILS	17. FIRE EXTINGUISHING EQUIPMENT
PROJECT NAME: TCC WAKULLA ENVIRONMENTAL INSTITUTE PROJECT LOCATION: CRAWFORDVILLE, WAKULLA, FLORIDA PROJECT ADDRESS: PRESERVATION WAY, BUILDING 'A' PROJECT NUMBER: 14220 DATE: 18 FEBRUARY	REQUIRED: 2 PROVIDED: 7 (FBC Ch. 10, 1018, NFPA 7.4.1.2) MAX. TRAVEL DISTANCE: 300' MAX. DEAD END CORRIDOR: 50' MIN. CORRIDOR/ AISLE WIDTH: 44' MIN EGRESS CAPACITY WIDTH: 34' SEPARATE OR EMERGENCY SOURCE OF LIGHT REQUIRED? YES	REQUIRED: 42' PROVIDED: 42' Exception: May be the same height as handrail at unenclosed side of switchback stairs <12" between flights. Intermediate rails shall be spaced to reject passage of a 4" dia. sphere. Bottom rail to be spaced to reject passage of a 2" dia. sphere. Triangular space at opening between tread, riser & bottom rail of stairs shall reject passage of a 6" dia. sphere.	APPROVED AUTOMATIC FIRE SPRINKLER SYSTEMS: YES Florida Statutes 553.895- Buildings 3 stories or more, except 1 & 2 family dwellings and open, noncombustible parking garages > 20' from adjacent structures require an approved automatic fire sprinkler system. 2004 FBC Chapter 9- Requirements as classified by occupancy and use. FBC Chapter 9 2003 NFPA 101 Sec. 9.7- Requirements as classified by occupancy and use. NFPA Chapter 12 APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM Required? YES
2. ZONING AND RESTRICTIONS ZONING: SITE SIZE: REQUIRED: FRONT: SIDES: REAR: REAR: REAR: PROVIDED: FRONT: SIDES: REAR: REAR: REAR:	8. DOORS REQUIRED: 32" PROVIDED: 34" MIN. CLEAR DOOR WIDTH: 32" MIN. EGRESS CAPACITY DOOR WIDTH: 48" MAX. DOOR WIDTH: 48" MIN DOOR HEIGHT: 6'-8" DOOR SWING: Door must swing in the direction of egress if it serves 50 or more persons. Doors shall not reduce the corridor or landing width to less than 1/2 the required width during the opening process nor project more than 7" into the required width of the corridor or landing when fully open. Minimum space between 2 hinged or pivoting doors = 48" plus the width of any door swinging into the space.	14. STRUCTURAL DESIGN LOADS LIVE LOADS - FLOORS: (FBC Ch. 16, Table 1607.1) LIVE LOADS - ROOFS: (FBC 1607) CONDITION: LOAD: PUBLIC AREAS: Live Load 100 p.s.f. STAIRS: Live Load 125 p.s.f. MECH. ELEC. ROOMS: Live Load 100 p.s.f. STAGE & PLATFORMS: Live Load 5 p.s.f. ROOF: Live Load 20 p.s.f. GUARDRAILS/ HANDRAILS: Point Load 200 lb. WIND LOAD: 10m.p.h. IMPORTANCE FACTOR: 1.15	STANDPIPE 2004 FBC Section 905- Requirements as classified by listed condition. FBC Section 905 2003 NFPA 101 Sec 9.7.4.2- Requirements as classified by occupancy and use. NFPA Sec. 42.8.3.5 STANDPIPE CLASS AND TYPE 2004 FBC Section 905- Requirements as classified by listed condition. FBC Section 905 2003 NFPA 14- Standard for the Installation of Standpipes. Standpipe Class & Type: Class 1 Semi-Automatic
3. APPLICABLE CODES BUILDING: FLORIDA BUILDING CODE (FBC-B) 2010 EDITION ACCESSIBILITY: FLORIDA BUILDING CODE, 2010 EDITION MECHANICAL: FLORIDA BUILDING CODE, (FBC-M)2010 EDITION ENERGY CONSERVATION: FLORIDA BUILDING CODE, 2010 EDITION FUEL GAS: FLORIDA BUILDING CODE, (FBC-P) 2010 EDITION PLUMBING: FLORIDA BUILDING CODE, (FBC-P) 2010 EDITION EXISTING BUILDING: FLORIDA BUILDING CODE, (FBC-EB) 2010 EDITION FIRE PREVENTION: FLORIDA FIRE PREVENTION CODE (FFPC) ELECTRICAL: NATIONAL ELECTRICAL CODE (NEC)	9. STAIRS REQUIRED: 44" PROVIDED: N/A MINIMUM STAIR WIDTH: 44" MINIMUM EGRESS CAPACITY: 296" (x.3 = 296") STAIR WIDTH: 2 hr STAIRWAY PROTECTION: 2 hr INT. STAIR, INT. WALLS: 2 hr INT. STAIR, EXT. WALLS: 0 hr EXT. STAIR SEPARATION: 0 hr REQD STAIR CONFIGURATIONS: MAX RISER HEIGHT: 7" MIN. RISER HEIGHT: 4" MIN. TREAD DEPTH: 11" MIN. HEADROOM: 6'-8" MAX NOSING: 1" MAX. HEIGHT BETWEEN LANDINGS: Equal to stair width (need not exceed 48" if straight run.) <i>*No stairs required to be accessible shall have open risers*</i>	15. HANDICAPPED ACCESSIBILITY (ADA) REQUIREMENTS REQUIRED: 75 PROVIDED: 75 PARKING SPACES: Provide accessible spaces as per FBC 11-4.1.2, Table (5a). One (1) per eight (8) accessible spaces shall be Van accessible. Configuration of spaces shall be as per FBC 11-4.6.3. TOTAL SPACES IN LOT: 75 STANDARD HC SPACES: 4 VAN HC SPACES: 4 TOTAL HC SPACES: 4 ACCESSIBLE ROUTE: Provide accessible route within site boundary connecting accessible site components including transportation stops, public walks, parking, adjacent accessible buildings and facilities, public spaces, etc. Accessible routes shall connect to accessible entrances of all buildings. (FBC 11-4.3) ACCESSIBLE ENTRANCE: Provide accessible entrances as per FBC 11-4.1.3 (8), to include each of the following: A. At least 50% of public entrance total count (1 min. at ground floor). B. Equal to number of exits required by fire / building codes. C. Separate accessible entrance for each tenant in a facility. (FBC 11-4.1.3(8))	STANDPIPE CLASS AND TYPE 2004 FBC Section 905- Requirements as classified by listed condition. FBC Section 905 FIRE EXTINGUISHERS: Class A, B & C FIRE HAZARD CLASSIFICATIONS: Class A, B & C OCCUPANCY HAZARD CLASS: Light (Low) EXTINGUISHER CLASSIFICATION: 10 lb. > 4A-60B-C EXTINGUISHER SIZE & DISTRIBUTION: CLASS "A" HAZARDS: MIN. RATING OF SINGLE EXTINGUISHER: 2A MAX. FLOOR AREA / EXTINGUISHER: 3,000 sq. ft. ALLOWABLE FLOOR AREA/ EXTINGUISHER: 11,250 sq. ft. MAX. FLOOR AREA / EXTINGUISHER: 11,250 sq. ft. CLASS "B" HAZARDS: MIN. RATING OF SINGLE EXTINGUISHER: 75' MAX. FLOOR AREA / EXTINGUISHER: 10-B CLASS "C" HAZARDS: 30' To be distributed on the basis of anticipated Class "A" or Class "B" Hazards Ch. 5-5 Unit size as per other hazards. To be distributed in the immediate vicinity of hazard with max. travel distance. Ch. 5-4 of 75'. Unit size per mfr. 30' max. travel distance. Ch 5-7 CLASS "D" HAZARDS: CLASS "K" HAZARDS: TOTAL EXTINGUISHER COUNTS: 11,250 sq. ft. Allowable Floor Area / Extinguisher 17,000 sq. ft. Floor area served/ 2 Extinguishers
4. OCCUPANCY OCCUPANCY GROUP: BUSINESS CLASSIFICATION: FFPC: NFPA 101, CH. 6 GROSS FLOOR AREA: GROSS INTERIOR: 7,227 SF OPEN MALL: 965 SF NET FLOOR AREA: PORCHES: 1,475 SF TOTAL: 9,367 SF TOTAL OCCUPANCY LOAD: 249 OCCUPANCY SEPARATION: NONE REQ. TENENT SEPARATION: NONE REQ.	10. RAMPS REQUIRED: 44" clear, or egress width, whichever is greater. MIN. RAMP WIDTH: 1:12 MAX. RAMP SLOPE: 1:50 REQUIRED RAMP CONFIGURATIONS: MIN LANDING LENGTH: 5' at top of ramp MIN LANDING WIDTH: 5' at bottom of ramp MAX. RISE / RUN: 5' at each vertical rise of 30" Ramps shall have landings at the top, the bottom and doorways. Ramps steeper than 1:20 require handrails on both sides. HANDRAILS AT RAMPS: Must extend 18" at top and bottom of ramp, parallel to floor surface. Maximum height: 34", 38". (FBC 11.4.8.5)(FBC 1010)	16. THERMAL RESISTANCE OF ASSEMBLIES RECOMMENDED GUIDELINES: Code requirements FBC Ch. 13- Energy Efficiency (Florida Energy Efficiency Code for Building Construction) Subchapter 4. FLOOR ASSEMBLIES: R-0 SLAB ON GRADE: R-19 RAISED WOOD: R-7 RAISED CONCRETE: R-7 WALL ASSEMBLIES: R-7 MASONRY: R-11 WOOD FRAME: R-13 METAL FRAME: R-13 ROOF ASSEMBLIES: R-19 INSULATION ONLY: R-30 ASSEMBLY TOTAL: R-30 <i>Note: Walls limited to exterior, adjacent & common walls. Doors: Doors in exterior, adjacent and common walls should be limited to insulated glass, solid core wood, wood panel or insulated hollow metal types.</i>	18. VENTILATION REQUIREMENTS CRAWL SPACE: Crawl spaces under buildings shall be ventilated by mechanical means or foundation openings. (FBC 1203) MECHANICAL MEANS FOUNDATION OPENINGS: See Mechanical Plans & Specifications WOOD FLOOR SYSTEMS: 1 sf of net open area / 150 sf crawlspace FLOOR SYSTEMS OTHER THAN WOOD: 1.5 sf of net open area / 151.1 of exterior wall ATTIC SPACE- PITCHED ROOF: A ratio of total net free ventilating area to ceiling area of 1:150, or reduction to 1:300 providing a vapor retarder on warm side of ceiling or 50% or required vent area by means of mechanical ventilators and balance by eave or cornice vents. (FBC 2309.7)
5. CONSTRUCTION CONSTRUCTION TYPE: TYPE IIB & IV PROTECTED OR UNPROTECTED: UNPROTECTED SPRINKLED OR NON SPRINKLED: SPRINKLED MAX BUILDING HEIGHT: 55 MAX NUMBER OF STORIES: 2 MAX FLOOR AREA/ FLOOR: 19,000 TOTAL ALLOWABLE AREA / FLOOR: 9,367 MAX BUILDING AREA:	11. ELEVATORS REQUIRED: 1 hr @ 3 story shafts MIN. FIRE RESISTANCE: 2 hr @ 4 story shafts TOP CLEARANCE: 6" min. top runby BOTTOM CLEARANCE: 24" min. clear between bottom of car structure and pit floor. MINIMUM DOOR SIZE: 42" clear ELEVATOR CAB: fire alarm recall, smoke detector & phone - size to accommodate 24" x 76" stretcher. PIT: sump pit or drain, access ladder, stop switch, GFI duplex receptacle & light w/ switch. HOISTWAY: (4 stories +) vent to exterior (free area size equal to 3.5% of hoistway floor area or 3 s.f. min.) EQUIPMENT ROOM: 10 A-B-C fire extinguisher, 2 cfm / s.f. ventilation & 7' min. clear headroom.	19. PLUMBING FIXTURE CALCULATION - OCCUPANCY FIRST FLOOR: 249 TOTAL OCCUPANTS 125 MALE/125 FEMALE FIXTURES: MALE: 3 WC 3 LAVS (3 URINALS ADDITIONAL IN MALE TOILET ROOMS) FEMALE: 3 WC 3 LAV DRINKING FOUNTAINS: 2	20. CONSTRUCTION DOCUMENTS PROJECT PHASE:
6. FIRE PROTECTION EXT. BEARING WALLS: supporting more than 1 floor: 2hrs INT. BEARING PARTITIONS: 0 COLUMNS: supporting more than 1 floor: 0 BEAMS, GIRDERS, TRUSSES: supporting more than 1 floor: 0 FLOOR & FLOOR/CEILING ROOF & ROOF/CEILING: 0 EXT. BEARING WALL(S) RATING / % PERMITTED OPENINGS: NORTH, Horiz. separation Distance: Over 30' 0 SOUTH, Horiz. separation distance: Over 30' 0 EAST, Horizontal separation distance: Over 30' 0 WEST, Horizontal separation distance: Over 30' 0 EXT. NON-BEARING WALL(S) RATING / % PERMITTED OPENINGS: NORTH, Horiz. separation Distance: Over 30' 0 SOUTH, Horiz. separation distance: Over 30' 0 EAST, Horizontal separation distance: Over 30' 0 WEST, Horizontal separation distance: Over 30' 0 MINIMUM FIRE RESISTANCE: WALLS & PARTITIONS: (FBC-B Tbl. 715.4) PROTECTIVE OPENING: (FBC-B SEC. 715) WIRE GLASS LIMIT: (FBC-B Tbl. 715.5.4) SHAFT/STAIR/ELEV. & EQUIP. RM FIRE WALL: 2hr / 2hr TENANT HORIZONTAL EXIT: 1hr / 1hr EXIT ACCESS CORRIDOR: 1hr / 1hr MINIMUM INTERIOR FINISH CLASS: FFC-NFPA 101,Ch.10.2.2 MANUAL FIRE ALARM REQUIRED: FBC Ch. 9, NFPA 101, Ch. 12	12. HANDRAILS REQUIRED: 34" - 38" above stair nosing HANDRAILS MOUNTING HEIGHT: 34" - 38" above stair nosing HANDRAILS: Handrails are required for ramps with rise > 6" HANDRAILS MOUNTING HEIGHT: 34" - 38" above stair nosing HANDRAILS: Handrails are required on both sides of the stairs. Inside or switch back handrails shall be continuous. HANDRAILS: Handrails shall extend 12" beyond top riser and continue to slope the depth of one (1) tread from the bottom riser. DIAMETER OF HANDRAIL: 1 1/4" - 2" HANDRAIL TO WALL CLEARANCE: 1 1/2" HANDRAILS: Handrails shall be provided within 30" of all portions of the stair width required for egress capacity.	REVISIONS 	CODE AND DATA

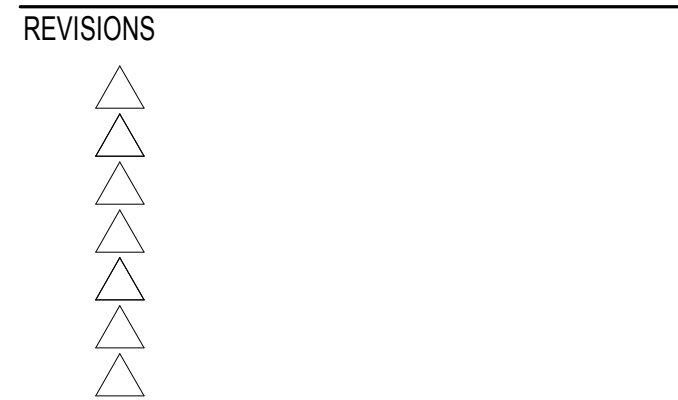
NOTES



14220
TCC - Wakulla Environmental Institute

30 APRIL 2014
 DATE

CONSTRUCTION DOCUMENTS
 PROJECT PHASE



CODE AND DATA

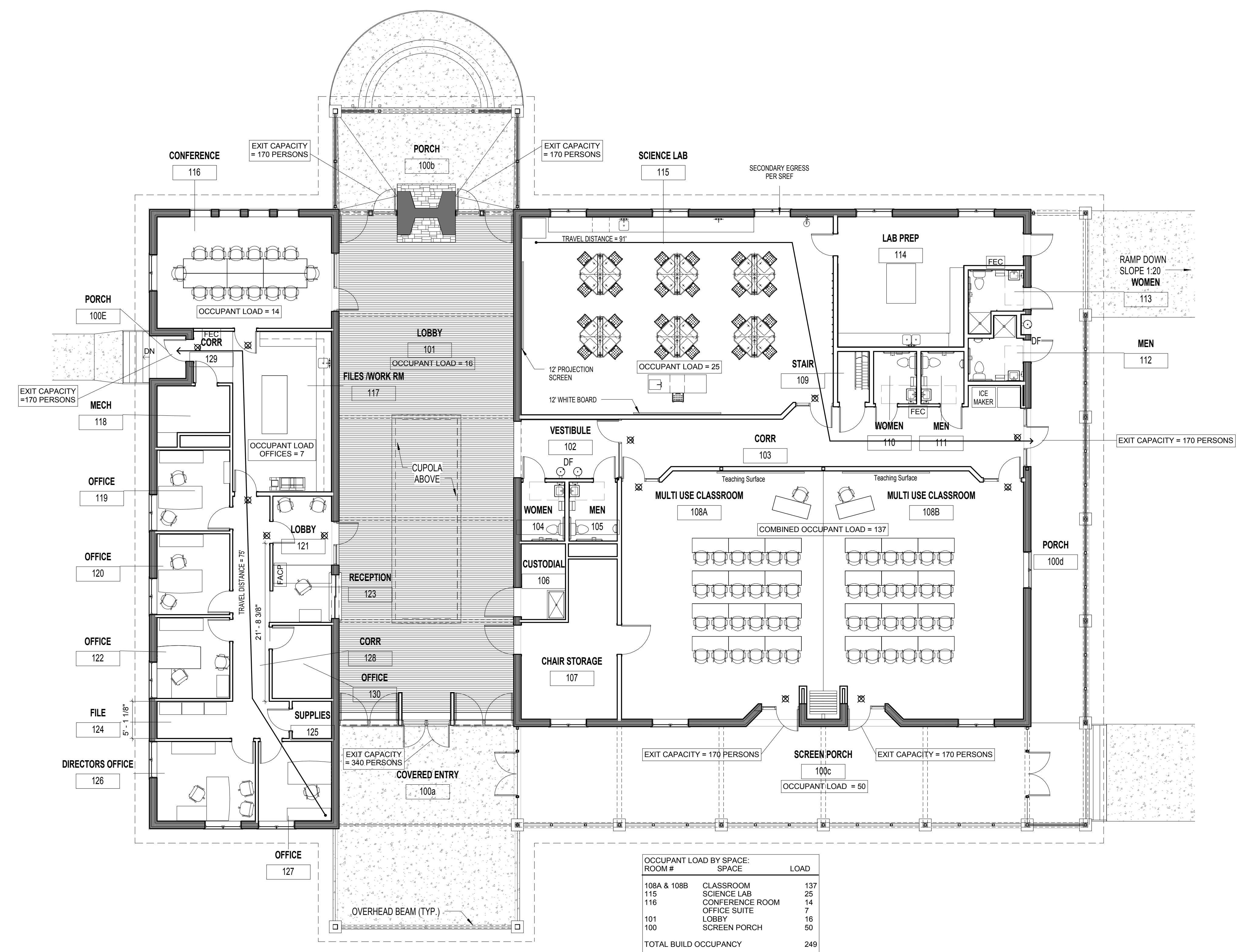
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225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
 PHONE 850 224-6301 FAX 850 561-6978

LIFE SAFETY LEGEND

- 1 HOUR RATED WALL ASSEMBLY
- 2 HOUR RATED WALL ASSEMBLY
- ⬢ EXIT/AREA OF REFUGE LIGHT
- ☐ FEC FIRE EXTINGUISHER CABINET
- FEB FIRE EXTINGUISHER BRACKET
- FE (k) FIRE EXTINGUISHER TYPE K
- ⌂ FIRE ALARM ANNUNCIATOR, HORN/VISIBLE TYPE
- ⌂ FIRE ALARM ANNUNCIATOR, VISIBLE TYPE
- ⌂ FIRE ALARM MANUAL PULL STATION
- EM EMERGENCY LIGHTING (SEE ELECTRICAL LIGHTING PLAN FOR LOCATIONS OF EMERGENCY LIGHTING)
- ⌂ FACFP FIRE ALARM CONTROL PANEL
- ⌂ FAAP FIRE ALARM ANNUNCIATOR PANEL

NOTES



ROOM #	SPACE	LOAD
108A & 108B	CLASSROOM	137
115	SCIENCE LAB	25
116	CONFERENCE ROOM	14
	OFFICE SUITE	7
101	LOBBY	16
100	SCREEN PORCH	50
TOTAL BUILD OCCUPANCY		249



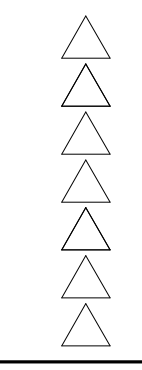
14220

TCC - Wakulla
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CONSTRUCTION DOCUMENTS
PROJECT PHASE

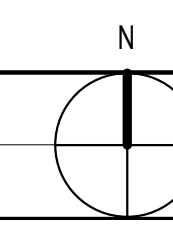
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LIFE SAFETY PLAN

LS1.1

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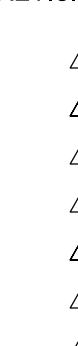
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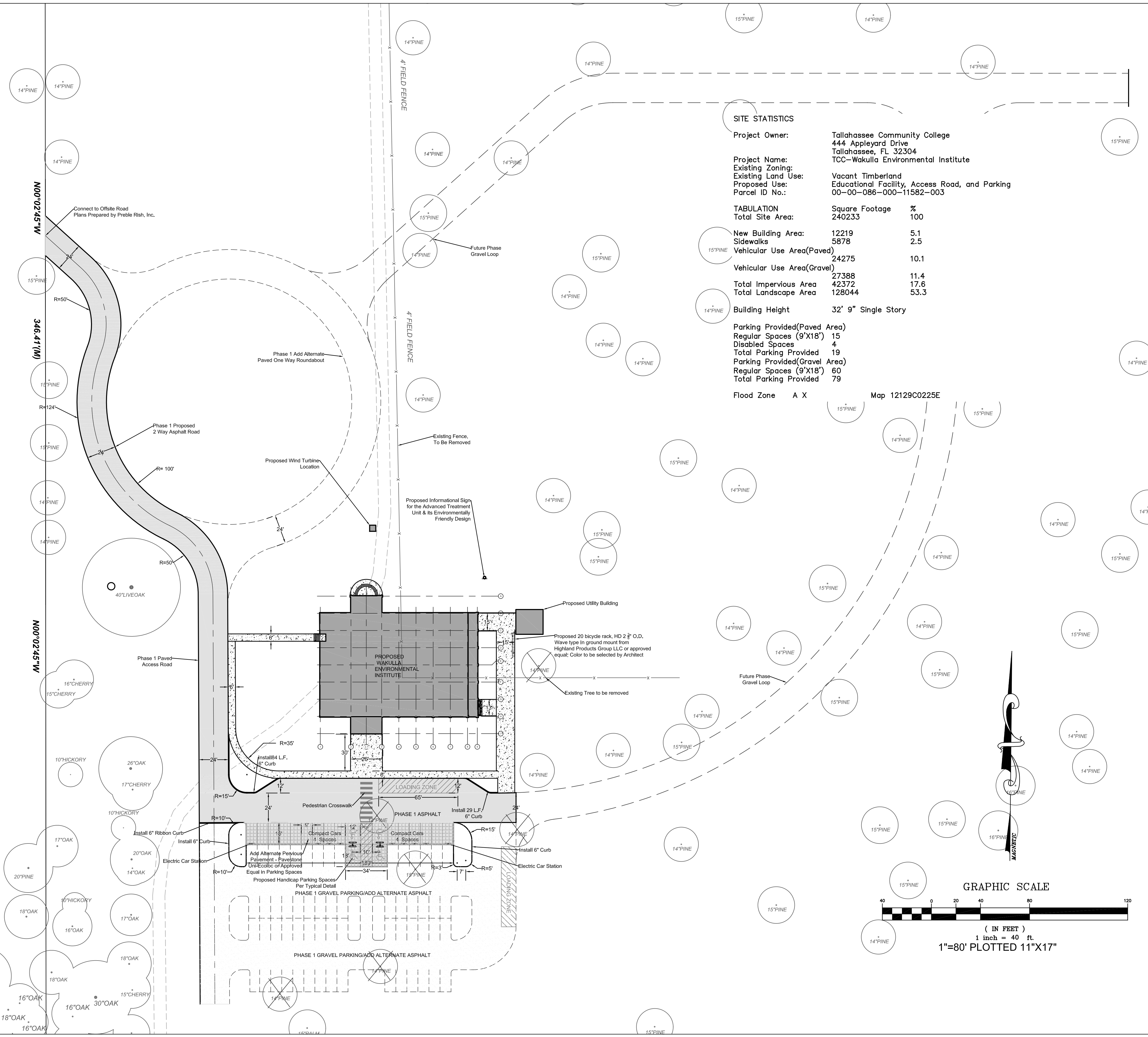
SITE PLAN

C1.0

225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978

LEGEND

- Proposed Concrete
- Proposed Building
- Proposed Asphalt
- Proposed Aggregate
- Tree To Be Removed



SITE STATISTICS

Project Owner: Tallahassee Community College
444 Appleyard Drive
Tallahassee, FL 32304
TCC-Wakulla Environmental Institute

Project Name:
Existing Zoning:
Existing Land Use:
Proposed Use:
Parcel ID No.:

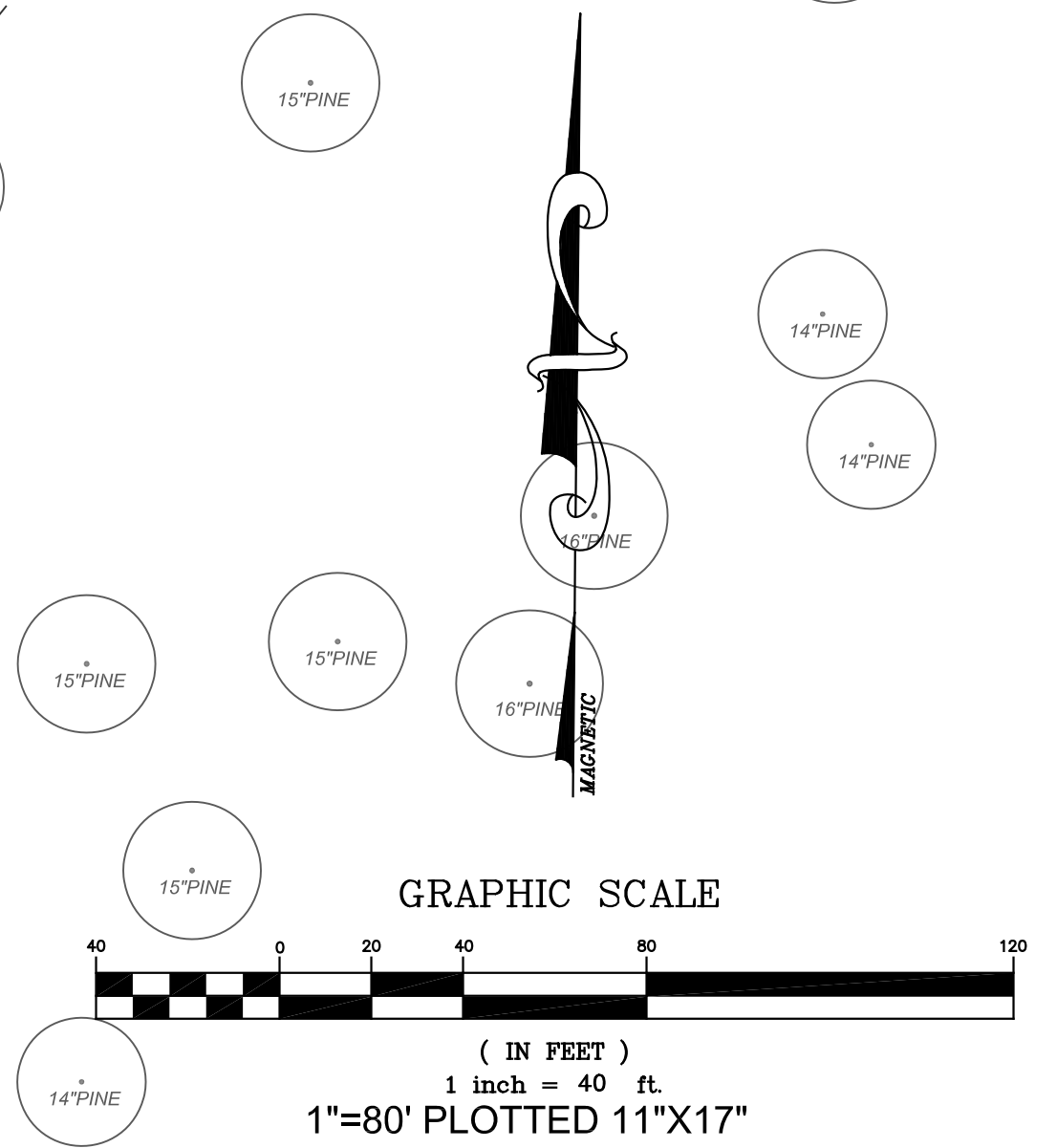
Vacant Timberland
Educational Facility, Access Road, and Parking
00-00-086-000-11582-003

TABULATION	Square Footage	%
Total Site Area:	240233	100
New Building Area:	12219	5.1
Sidewalks	5878	2.5
Vehicular Use Area(Paved)	24275	10.1
Vehicular Use Area(Gravel)	27388	11.4
Total Impervious Area	42372	17.6
Total Landscape Area	128044	53.3

Building Height 32' 9" Single Story

Parking Provided(Paved Area)
Regular Spaces (9'X18') 15
Disabled Spaces 4
Total Parking Provided 19
Parking Provided(Gravel Area)
Regular Spaces (9'X18') 60
Total Parking Provided 79

Flood Zone A X Map 12129C0225E





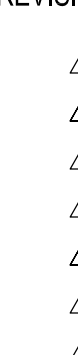
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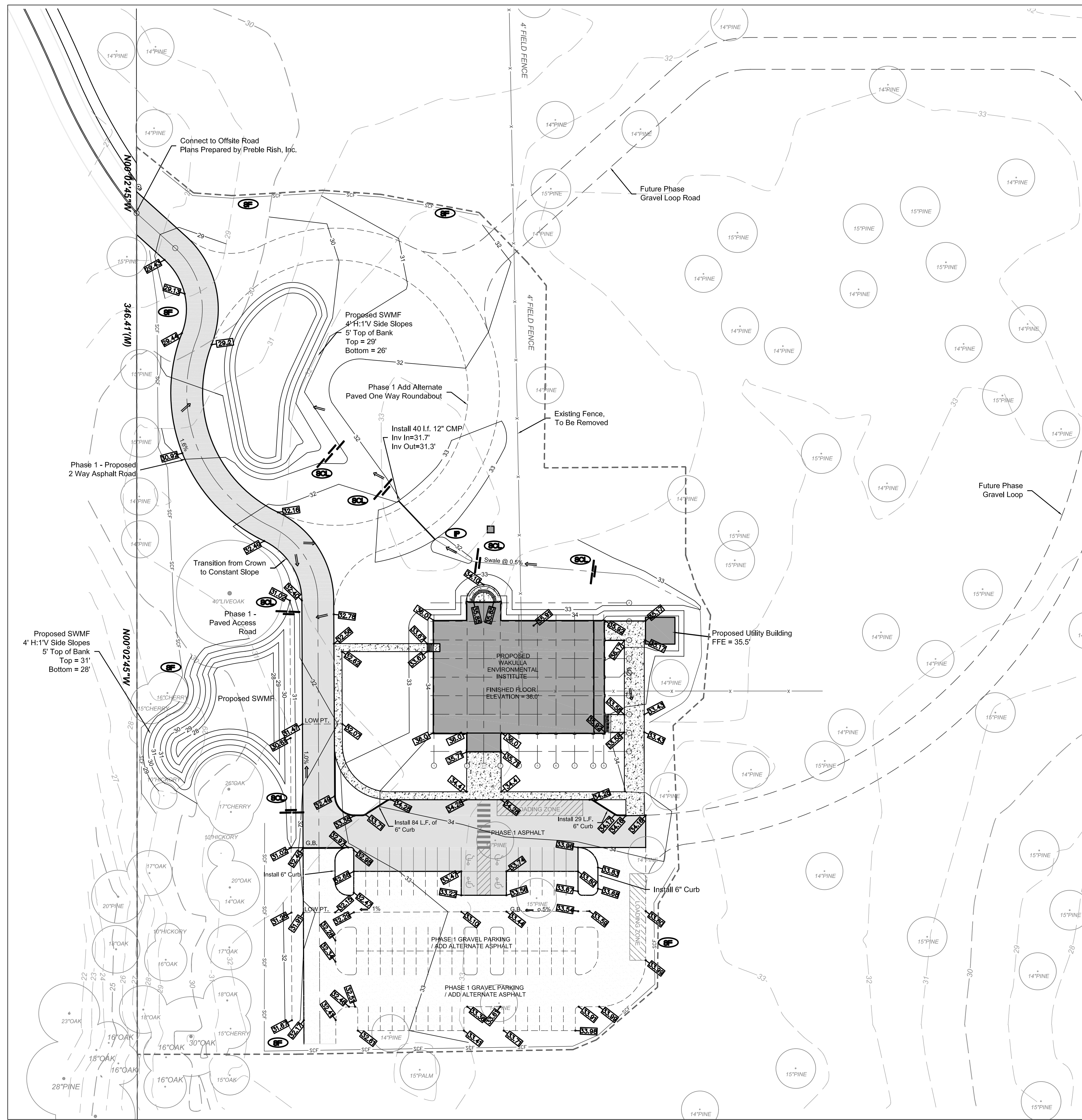
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GRADING PLAN

C2.0

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PHONE 850 224-6301 FAX 850 561-6978



EROSION CONTROL NOTES:

1. NO CLEARING, GRADING, CUTTING OR FILLING SHALL COMMENCE UNTIL EROSION & SEDIMENTATION CONTROL DEVICES HAVE BEEN PROPERLY INSTALLED PER THE APPROVED PLAN, BETWEEN THE AREA TO BE DISTURBED AND ADJACENT PROPERTY, WATER BODIES, WATERCOURSES (INCLUDING INLETS AND CULVERTS) AND WETLANDS.
 2. ONCE PROPERLY INSTALLED, EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL A PERMANENT GROUND COVER IS ESTABLISHED. ANY SITE OR PORTION THEREOF WHERE WORK IS NOT BEING PERFORMED AS PART OF THE CURRENT PHASE OF DEVELOPMENT AND WHICH REMAINS CLEARED FOR OVER 30 DAYS, SHALL BE STABILIZED THROUGH THE ESTABLISHMENT OF APPROPRIATE GROUND COVER.
 3. CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS AND CERTIFICATIONS AS MAY BE REQUIRED TO THE OWNER OR REGULATORY AGENCIES.
 4. EROSION AND SEDIMENTATION MEASURES SHOWN ON THE PLANS ARE AT A MINIMUM. CONTRACTOR TO PROVIDE ADDITIONAL OR ADEQUATE EROSION / SILT CONTROL MEASURES AS MAY BE REQUIRED.
- CONSTRUCTION SEQUENCE:**
1. EROSION & SEDIMENTATION CONTROL DEVICES SHALL BE PROPERLY INSTALLED PER THE APPROVED PLAN, AND HAVE BEEN INSPECTED AND APPROVED BY PROJECT ENGINEER.
 2. AFTER THE ON-SITE PRE-CONSTRUCTION MEETING, CLEARING AND GRADING OPERATIONS CAN COMMENCE.
 3. CONSTRUCT UTILITIES, THEN ROAD IMPROVEMENTS AND CONSTRUCTION OF THE BUILDING, FINAL GRADING OPERATIONS, LANDSCAPING AND THEN REMOVE SEDIMENT CONTROL FEATURES.
 4. LANDSCAPE IN ACCORDANCE WITH THE APPROVED PLANS.

CONSTRUCTION NOTES:

1. CONTRACTOR MUST STABILIZE & SOD (WITH CENTIPEDE) ALL DISTURBED AREAS AND BARE GROUND WITHIN THE "LIMIT OF CONSTRUCTION / SILT FENCE LINE." ALSO SOD ANY OTHER DISTURBED AREAS OUTSIDE THIS LIMIT MENTIONED, OR AS DIRECTED ON LANDSCAPE PLANS.
 2. DIMENSIONS ON L.F. OF PIPES AND OTHERS ARE APPROXIMATE AND MAY VARY. CONTRACTOR TO BE RESPONSIBLE TO REMOVE OR PROVIDE ALL PIPES AND OTHERS AS REQUIRED.
 3. CONTRACTOR MUST FIRST VERIFY ALL DISTANCES, ELEVATIONS, INVERTS, BEARINGS, AND UTILITY LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.
 4. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING NOTICE OF COMMENCEMENT TO NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT.
- TALLAHASSEE COMMUNITY COLLEGE WILL BE THE STORMWATER OFFICER FOR THESE PLANS: 444 APPELBY DR., TALLAHASSEE, FL 32304

KARST SENSITIVE AREA:

1. IF UNANTICIPATED LIMESTONE FORMATIONS ARE ENCOUNTERED DURING CONSTRUCTION OF THE RETENTION BASIN, OR A SINKHOLE OR SOLUTION CAVITY FORMS DURING CONSTRUCTION, CONSTRUCTION OF THE BASIN MUST BE HALTED IMMEDIATELY AND WAKULLA COUNTY, NWFWD, AND THE GEOTECHNICAL ENGINEER MUST BE NOTIFIED. REMEDIAL ACTION WILL BE REQUIRED.
2. IF DURING CONSTRUCTION OR OPERATION OF THE STORMWATER MANAGEMENT SYSTEM, A STRUCTURAL FAILURE IS OBSERVED THAT HAS THE POTENTIAL TO CAUSE THE DIRECT DISCHARGE OF SURFACE WATER INTO THE FLORIDA AQUIFER SYSTEM, CORRECTIVE ACTIONS DESIGNED OR APPROVED BY A REGISTERED PROFESSIONAL SHALL BE TAKEN AS SOON AS PRACTICAL TO CORRECT THE FAILURE. A REPORT PREPARED BY A REGISTERED PROFESSIONAL MUST BE PROVIDED AS SOON AS PRACTICAL TO THE CITY OF ST. MARKS AND NWFWD FOR REVIEW AND APPROVAL THAT PROVIDES REASONABLE ASSURANCE THAT THE BREACH WILL BE PERMANENTLY CORRECTED.

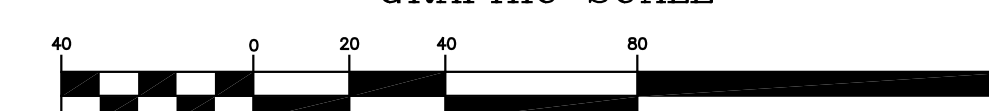
*****NOTE*****

THIS SITE IS LOCATED IN AN ACTIVE KARST AREA. THE LOCATION AND DESIGN OF THE SITE FEATURES INCLUDING THE STORMWATER MANAGEMENT FACILITY AND SEPTIC SYSTEM, ARE BASED ON THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. HYDRA ENGINEERING & CONSTRUCTION, LLC DOES NOT ACCEPT RESPONSIBILITY FOR ANY DAMAGES CAUSED BY KARST FEATURES.

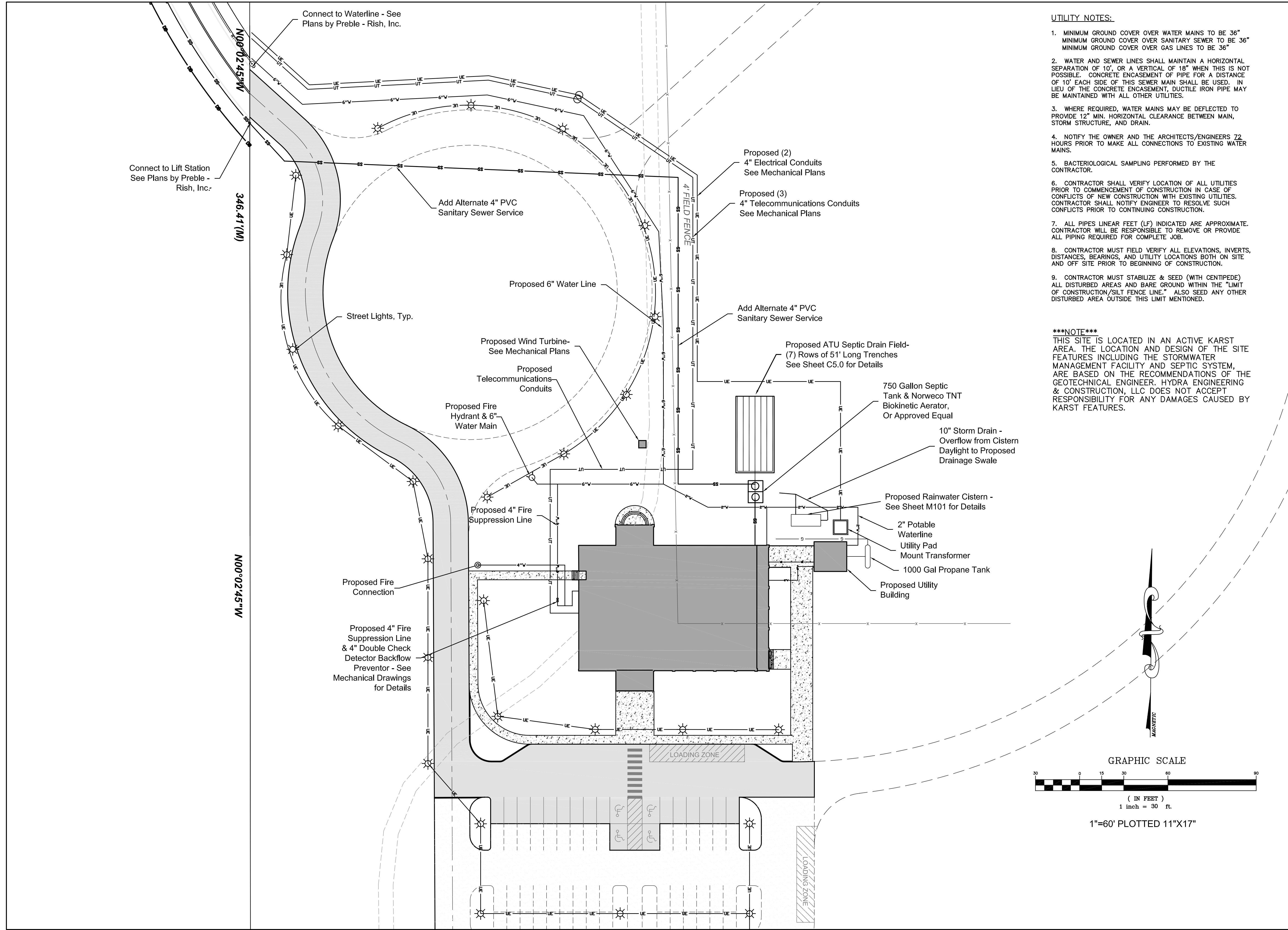
LEGEND

	PROPOSED BUILDING
	PROPOSED ASPHALT
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	PROPOSED STORM DRAIN
	EXISTING 1' CONTOUR
	LIMITS OF DISTURBANCE
	INLET PROTECTION
	SILT FENCE
	SEDIMENT CONTROL LOGS
	DIRECTION OF FLOW
	PROPOSED SPOT ELEVATION

GRAPHIC SCALE



(IN FEET)
1 inch = 40 ft.
1"=80' PLOTTED 11"X17"



UTILITY NOTES:

1. MINIMUM GROUND COVER OVER WATER MAINS TO BE 36"
MINIMUM GROUND COVER OVER SANITARY SEWER TO BE 36"
MINIMUM GROUND COVER OVER GAS LINES TO BE 36"
2. WATER AND SEWER LINES SHALL MAINTAIN A HORIZONTAL SEPARATION OF 10' OR A VERTICAL OF 18" WHEN THIS IS NOT POSSIBLE. CONCRETE ENCASEMENT OF PIPE FOR A DISTANCE OF 10' EACH SIDE OF THIS SEWER MAIN SHALL BE USED. IN LIEU OF THE CONCRETE ENCASEMENT, DUCTILE IRON PIPE MAY BE MAINTAINED WITH ALL OTHER UTILITIES.
3. WHERE REQUIRED, WATER MAINS MAY BE DEFLECTED TO PROVIDE 12" MIN. HORIZONTAL CLEARANCE BETWEEN MAIN, STORM STRUCTURE, AND DRAIN.
4. NOTIFY THE OWNER AND THE ARCHITECTS/ENGINEERS 72 HOURS PRIOR TO MAKE ALL CONNECTIONS TO EXISTING WATER MAINS.
5. BACTERIOLOGICAL SAMPLING PERFORMED BY THE CONTRACTOR.
6. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION IN CASE OF CONFLICTS OF NEW CONSTRUCTION WITH EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY ENGINEER TO RESOLVE SUCH CONFLICTS PRIOR TO CONTINUING CONSTRUCTION.
7. ALL PIPES LINEAR FEET (LF) INDICATED ARE APPROXIMATE. CONTRACTOR WILL BE RESPONSIBLE TO REMOVE OR PROVIDE ALL PIPING REQUIRED FOR COMPLETE JOB.
8. CONTRACTOR MUST FIELD VERIFY ALL ELEVATIONS, INVERTS, DISTANCES, BEARINGS, AND UTILITY LOCATIONS BOTH ON SITE AND OFF SITE PRIOR TO BEGINNING OF CONSTRUCTION.
9. CONTRACTOR MUST STABILIZE & SEED (WITH CENTIPEDE) ALL DISTURBED AREAS AND BARE GROUND WITHIN THE "LIMIT OF CONSTRUCTION/SILT FENCE LINE." ALSO SEED ANY OTHER DISTURBED AREA OUTSIDE THIS LIMIT MENTIONED.

*****NOTE*****
THIS SITE IS LOCATED IN AN ACTIVE KARST AREA. THE LOCATION AND DESIGN OF THE SITE FEATURES INCLUDING THE STORMWATER MANAGEMENT FACILITY AND SEPTIC SYSTEM, ARE BASED ON THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. HYDRA ENGINEERING & CONSTRUCTION, LLC DOES NOT ACCEPT RESPONSIBILITY FOR ANY DAMAGES CAUSED BY KARST FEATURES.

NOTES



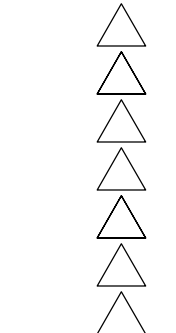
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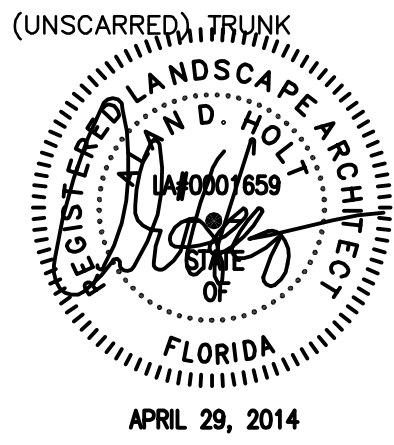


**MASTER
UTILITY
PLAN**

C3.0



Alan D. Holt,
A.S.L.A.
LANDSCAPE
ARCHITECT, PA
FL. LIC#26000193
P.O. BOX 2549
PANAMA CITY, FL 32402
TELEPHONE: 850914-9006
E-MAIL: alan@alandholtusa.com
Job Number: 14042

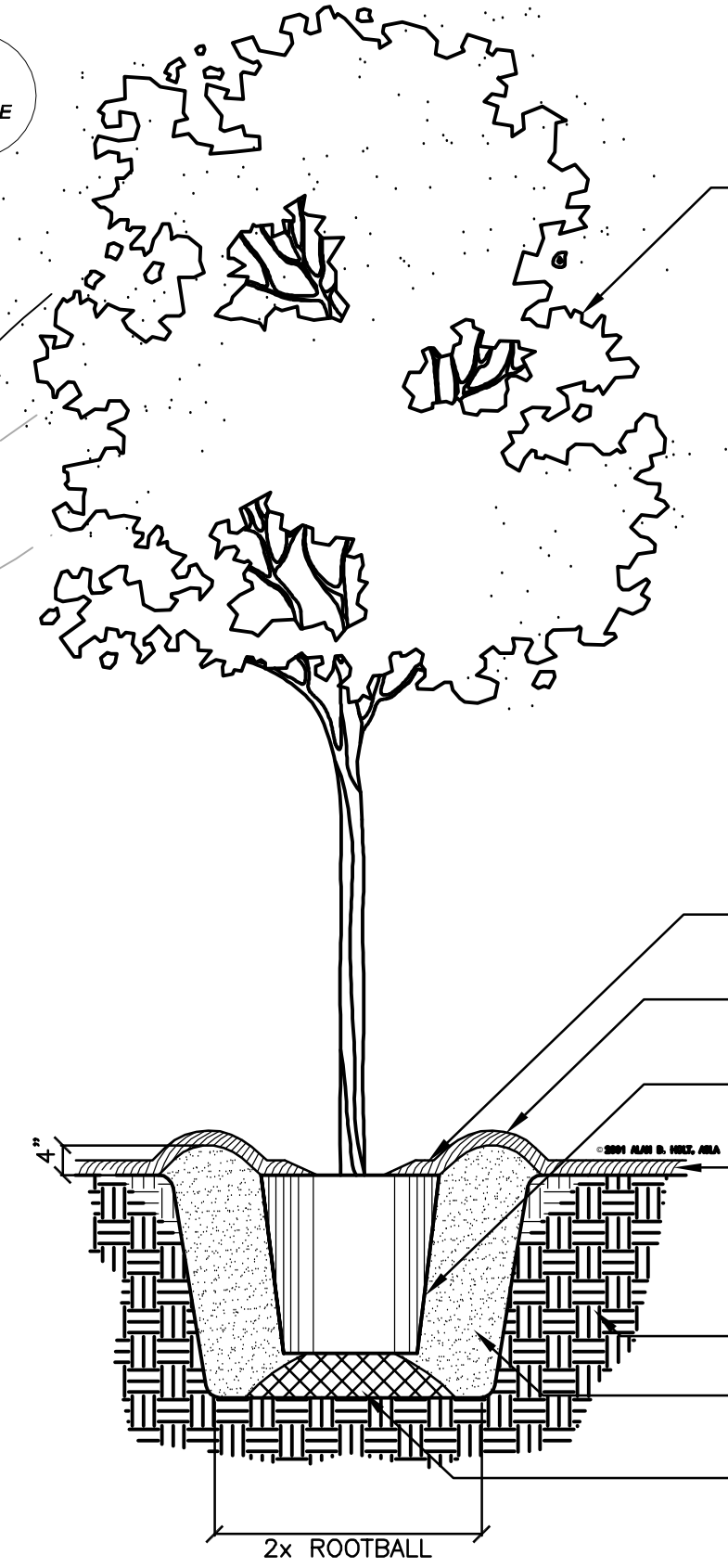
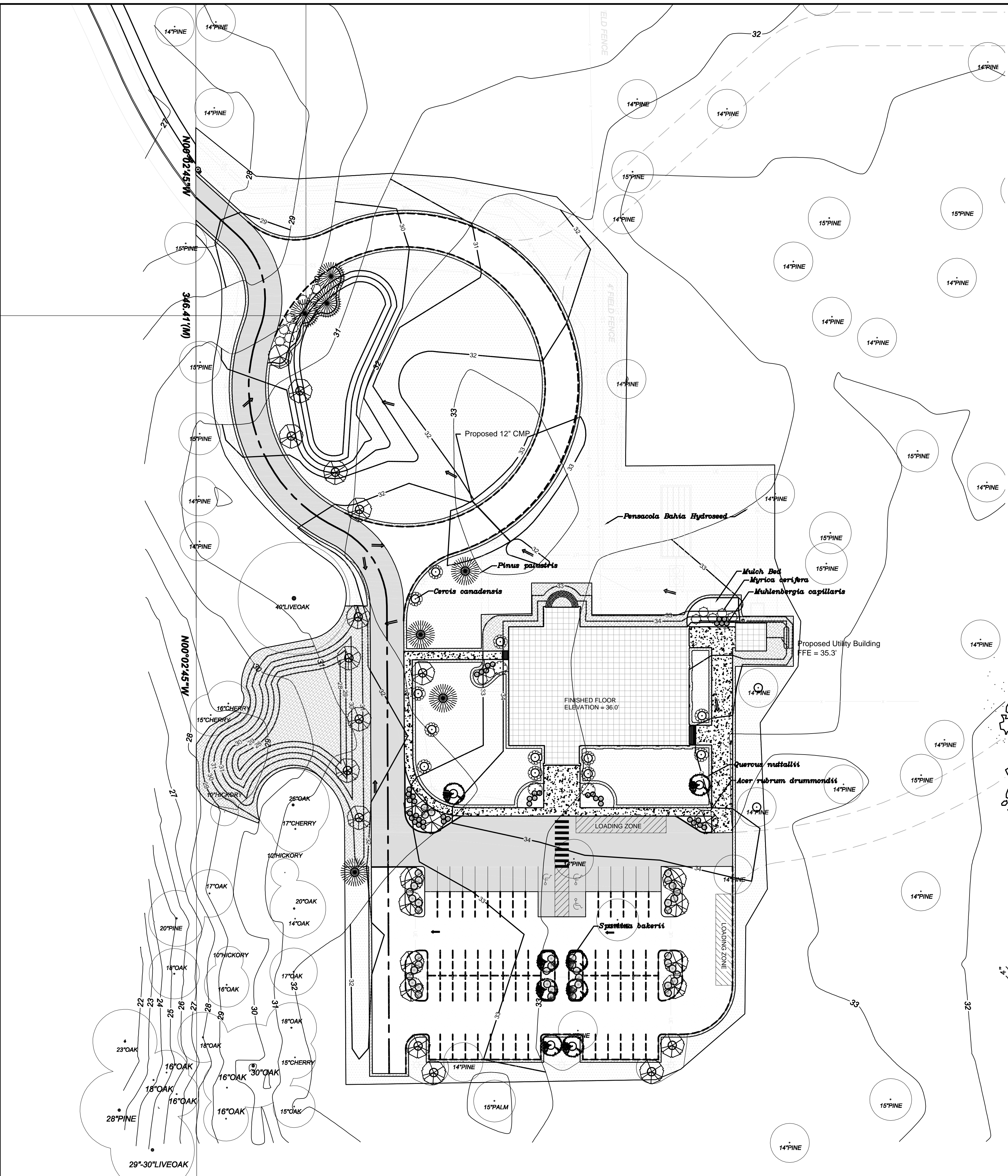


PLANT SCHEDULE

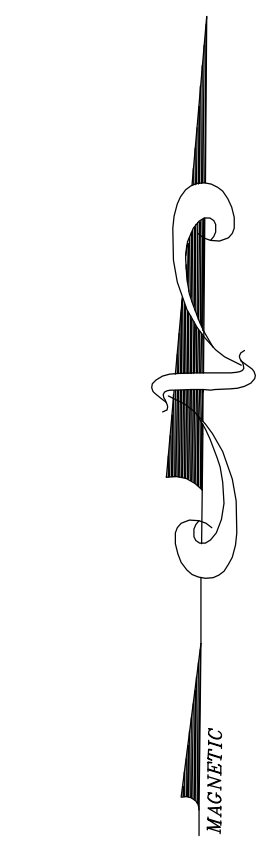
# TREES	BOTANICAL NAME	COMMON NAME	SPACING / SIZE / SPEC.
8	<i>Quercus nutallii</i>	Nuttall Oak	8'-10"HT., 45 GAL., 2 1/2" CAL.,
26	<i>Acer rubrum drummondii</i>	Swamp Red Maple	8'-10"HT., 45 GAL., 2 1/2" CAL.,
7	<i>Pinus palustris</i>	Long Leaf Pine	8'-10"HT., 45 GAL., 2 1/2" CAL.,
SMALL TREES			
15	<i>Cercis canadensis</i>	Eastern Redbud	8'-10"HT., 45 GAL., 2 1/2" CAL.
15	<i>Myrica cerifera</i>	Wax Myrtle	24"-30"HT., 7 GAL., 18"-24"Spread
GROUND COVER			
44	<i>Spartina bakerii</i>	Sand Cordgrass	18"HT., 1 GAL., 15"Spread, plant 42" O.C.
41	<i>Muhlenbergia capillaris</i>	Gulf Muhlygrass	18"HT., 1 GAL., 15"Spread, plant 36" O.C.
HYDROSEED:			
102,000SF	<i>Paspalum notatum 'Pensacola'</i> 98% PURE, Florida grown	Pensacola Bahia 98% PURE	HYDROSEED ALL DISTURBED AREAS OF SITE NOT OTHERWISE PLANTED
SOD:			
25,000SF	<i>Paspalum notatum 'Pensacola'</i> 98% PURE, Florida grown	Pensacola Bahia 98% PURE	SOD AREAS INDICATED ON PLAN
ABBREVIATIONS:			
HT.	= MINIMUM REQUIRED HEIGHT, MEASURED FROM GROUND UP		GAL. = GALLON CONTAINER SIZE
M.T.	= MULTIPLE TRUNK SPECIMEN (MIN. 3 BRANCHING TRUNKS FROM 1 OR 2 MAJOR TRUNKS)		O.C. = ON CENTER SPACING
SPD	= MIN. REQUIRED SPREAD, MEASURED AS AVERAGE DIAMETER OF FOLIAGE		C.T. = CLEAR (UNSCARRERED) TRUNK
CAL.	= DIAMETER OF TRUNK 6" ABOVE GRADE		

LANDSCAPE NOTES:

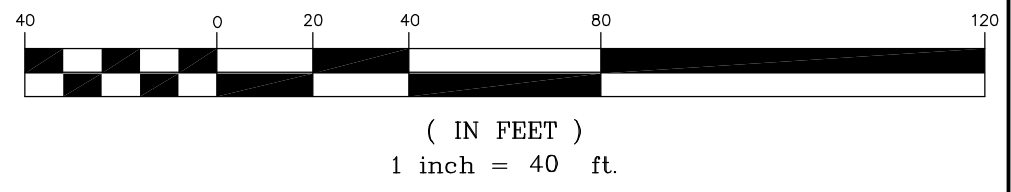
- LOCATE ALL UTILITIES BEFORE DIGGING. PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.
- ELIMINATE EXISTING VEGETATION IN AREAS TO BE PLANTED.
- TOP DRESS ALL AREAS TO RECEIVE PLANTINGS WITH 2" FINISHED MUSHROOM COMPOST PRIOR TO PLANTING.
- ALL PLANT MATERIAL FLORIDA #1 OR BETTER.
- DECREASE PLANT SPACING AS REQUIRED TO ALLOW PLACEMENT OF THE DESIGNATED NUMBER OF PLANTS PER GROUPING.
- FERTILIZE ALL PLANTINGS WITH ORGANIC SLOW RELEASE FERTILIZER AT MANUFACTURER'S RECOMMENDED RATE BEFORE MULCHING.
- MULCH ALL AREAS OF TREE, SHRUB AND GROUND COVER MASS PLANTINGS WITH 3" PINESTRAW MULCH.
- QUANTITIES SHOWN IN PLANT LIST ARE FOR CONTRACTOR'S CONVENIENCE. VERIFY ALL PLANT QUANTITIES SHOWN ON PLAN AND IN PLANT LIST.
- B&B MATERIAL MAY BE SUBSTITUTED FOR CONTAINER GROWN MATERIAL PROVIDED IT EXCEEDS THE MINIMUM SIZES NOTED.
- SOD ALL DISTURBED AREAS WITH SPECIES SHOWN ON PLAN.
- WARRANTY ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE.



CLEANLY PRUNE DAMAGED, DISEASED AND/OR WEAK BRANCHES. DO NOT PRUNE CENTRAL LEADER.



GRAPHIC SCALE



1 TREE PLANTING
C4.0 SCALE: NOT TO SCALE

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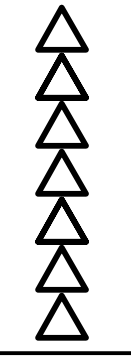
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LANDSCAPE PLAN

C4.0



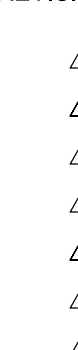
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DETAIL
SHEET

C5.0

225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978

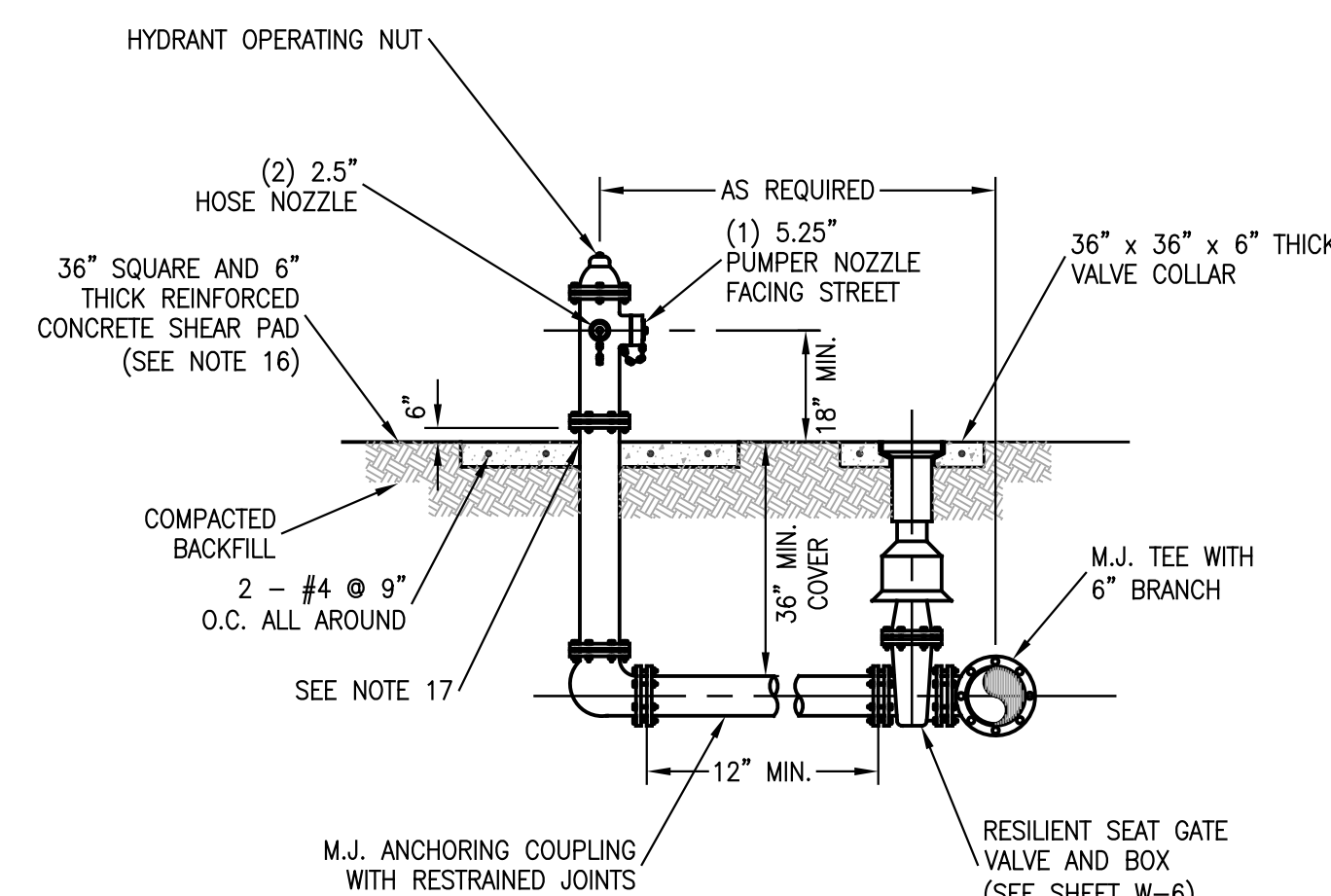
SEPTIC SYSTEM DESIGN DATA

- SOIL TYPE (WAKULLA COUNTY, FL)
17 - ORTEGA SAND, 0 TO 5% SLOPES
47 - OTELA-ALPIN FINE SANDS, 0 TO 5% SLOPES
48 - OTELA, LIMESTONE SUBSTRATUM- ORTEGA SANDS, 0 TO 5% SLOPES

PER TABLE III (CHAPTER 64E-6 FL. ADM CODE)

SOIL CLASSIFICATION	SOIL TEXTURE (PERCOLATION RATE)	MAXIMUM SEWAGE LOADING RATE TO TRENCH & BED ABSORPTION GAL / SF / DAY	TRENCH	BED
SAND	10 INCHES/HOUR		.90	0.70

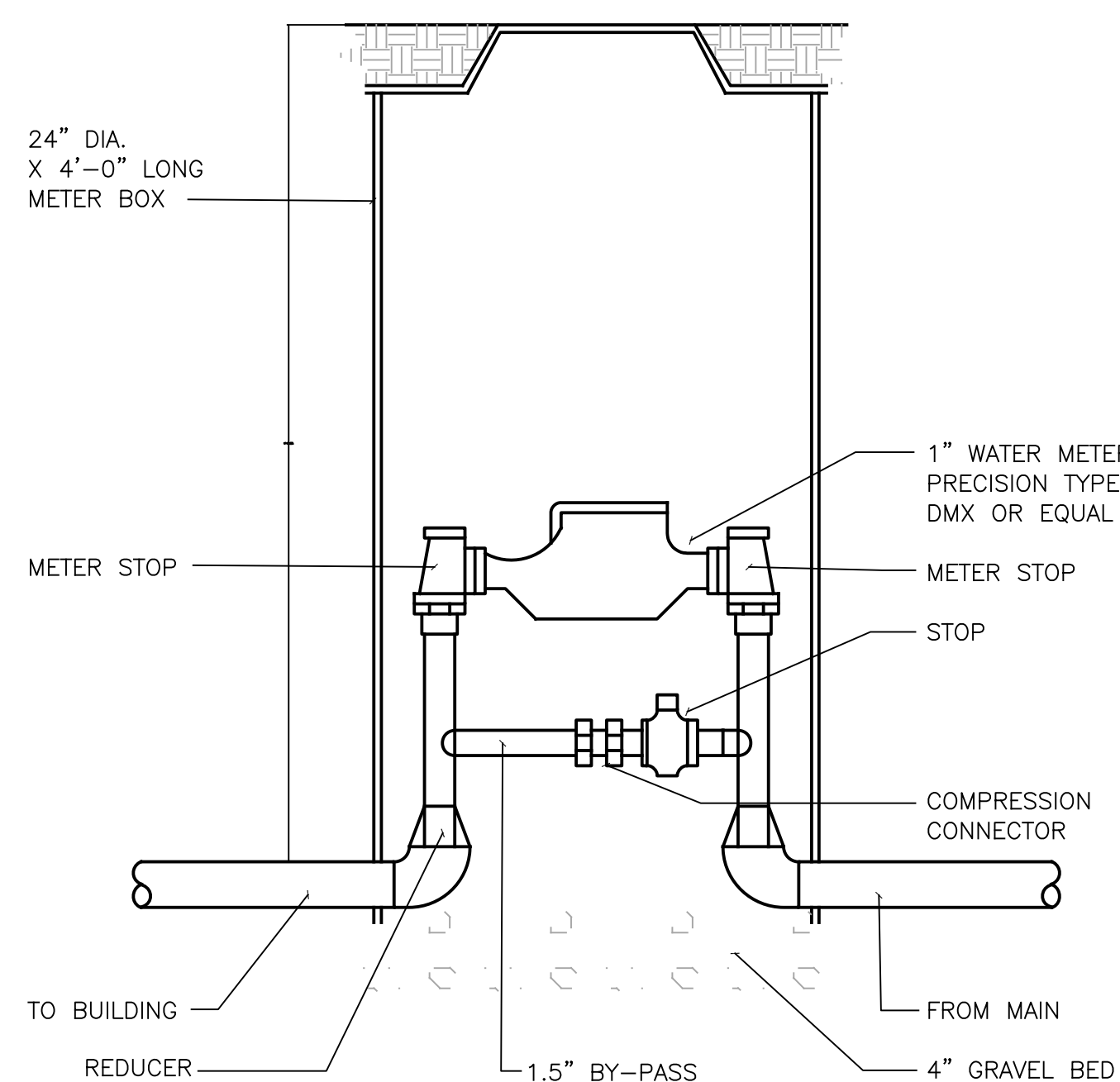
- * ESTIMATED SEWAGE FLOWS
FIXTURE COUNT = 23
15 GPD / FIXTURE = 668 GPD
BASED ON FULL TIME EQUIVALENT OCCUPANCY 10 GPD = 750 GPD
- * SYSTEM SHALL BE LOCATED 100-FT FROM ACTIVE OPEN KARST FEATURES
- * SOIL ABSORPTION CHAPTER 10D-6 FAC DRAINFIELD SIZING (SQUARE FOOT)
750 GAL/DAY / 0.90 GAL/SF DAY = 833 SF FOR TRENCH
750 GAL/DAY / 0.70 GAL/SF DAY = 1071 SF FOR TRENCH
- * MIN. DRAIN FIELD TRENCH DEPTH = 22 IN.
- * LOCATE TRENCHES 4 FT CENTER TO CENTER
- * USE PTI MPS-9 PIPING
- * TRENCH WIDTH = 24 IN. (2 FT)
- * SYSTEM CAPACITY = 3 SF PER LINEAR FOOT OF TRENCH
- * REQUIRED TRENCH LENGTH = 357 LINEAR FOOT
- * INSTALL FIVE (7) 51 FOOT TRENCHES
- * TOTAL SYSTEM CAPACITY 357 X 3 = 1071 SF



- NOTES:
1. GATE VALVE IS TO BE RESTRAINED TO THE MAIN TO ALLOW REMOVAL OF FIRE HYDRANT WITHOUT BLOWING THE GATE VALVE OFF.
 2. HYDRANT SHALL BE PLACED WITH NOZZLES FACING STREET.
 3. HYDRANT SHALL BE MUELLER, M & H, OR CLOW.
 4. VALVE OPENING IS 5 1/4".
 5. MINIMUM BURY IS 36".
 6. SIX INCH M.J. CONNECTION TO MAIN.
 7. HOSE NOZZLES:
TWO (2) EACH 2 1/2" HOSE NOZZLES
ONE (1) STEAMER NOZZLE WITH 4 1/2" OPENING.
 8. ALL PIPE FROM MAIN TO HYDRANT SHALL BE DUCTILE IRON, NO SUBSTITUTES.
 9. HYDRANT PLACEMENT:
CURB AND GUTTER STREET - BEHIND SIDE AS NOTED PER PLAN
OPEN DITCH STREET - TOP OF BACK SLOPE OF DITCH ON THE R/W LINE
 10. IF HYDRANT IS CLOSE TO MAIN, MECHANICAL JOINTS MAY BE RESTRAINED WITH CLOW F-1058 RETAINER GLANDS, GALVANIZED THREADED RODS WITH EYE BOLTS OR ROMAC GRIP RINGS.
 11. FIRE HYDRANT TEE MAY BE USED IN LIEU OF RESTRAINED TEE.
 12. PROPER COMPACTION FOR BREAKAWAY WILL MEET 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY.
 13. ALL DEAD END HYDRANT TEES SHALL HAVE A BLIND FLANGE AND SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR HYDRANT ASSEMBLIES DUE TO ACTUAL FIELD CONDITIONS.
 14. SOME FIRE HYDRANTS MAY REQUIRE RISER EXTENSIONS AT NO ADDITIONAL COST TO THE OWNER.
 15. FIRE HYDRANT SHALL BE SUPPLIED WITHOUT A WEEP HOLE OR WITH A PERMANENTLY PLUGGED WEEP HOLE.
 16. THE SHEAR PAD MAY BE RECESSED UP TO 6" BELOW FINISHED GRADE.
 17. CLEARANCE BETWEEN BOTTOM OF BOLTS AND TOP OF SHEAR PAD SHALL BE A 6" MINIMUM.

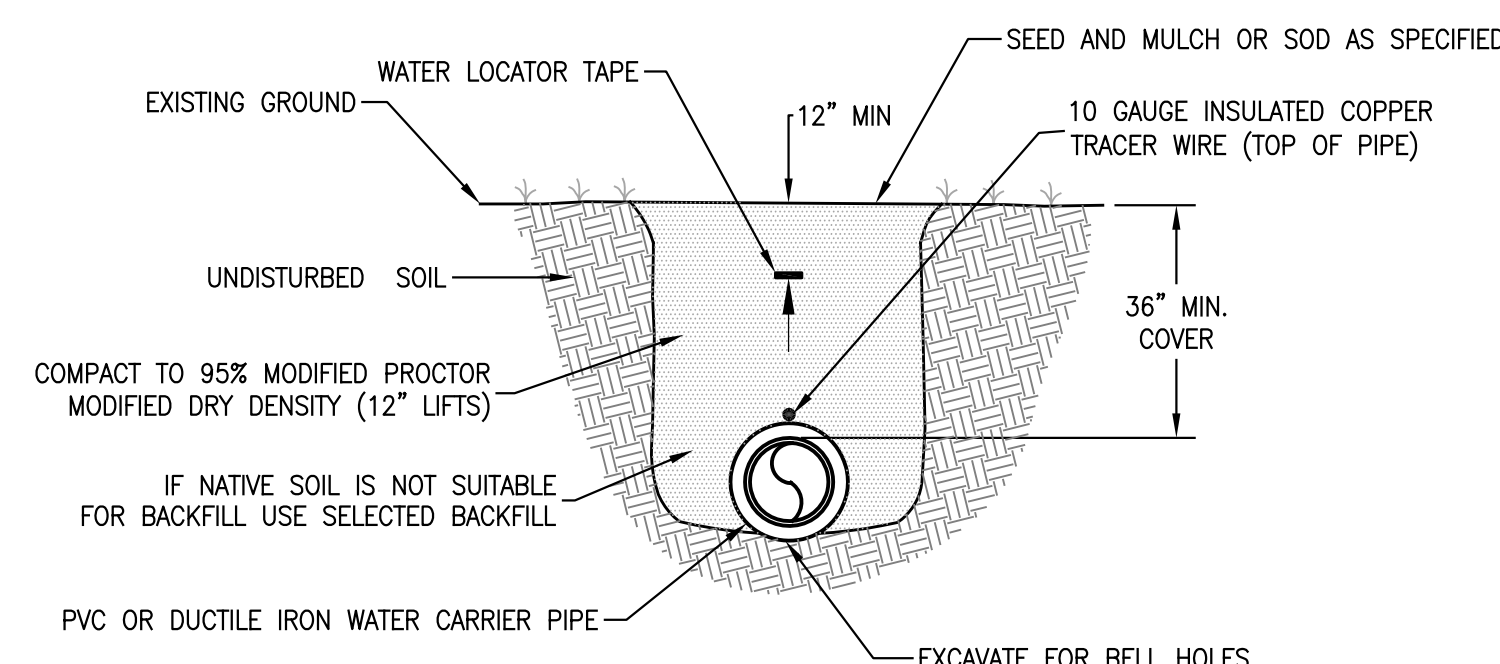
FIRE HYDRANT ASSEMBLY DETAIL

SCALE: N.T.S.



WATER METER DETAIL

NO SCALE



STANDARD WATER MAIN BEDDING

SCALE: N.T.S.



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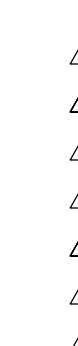
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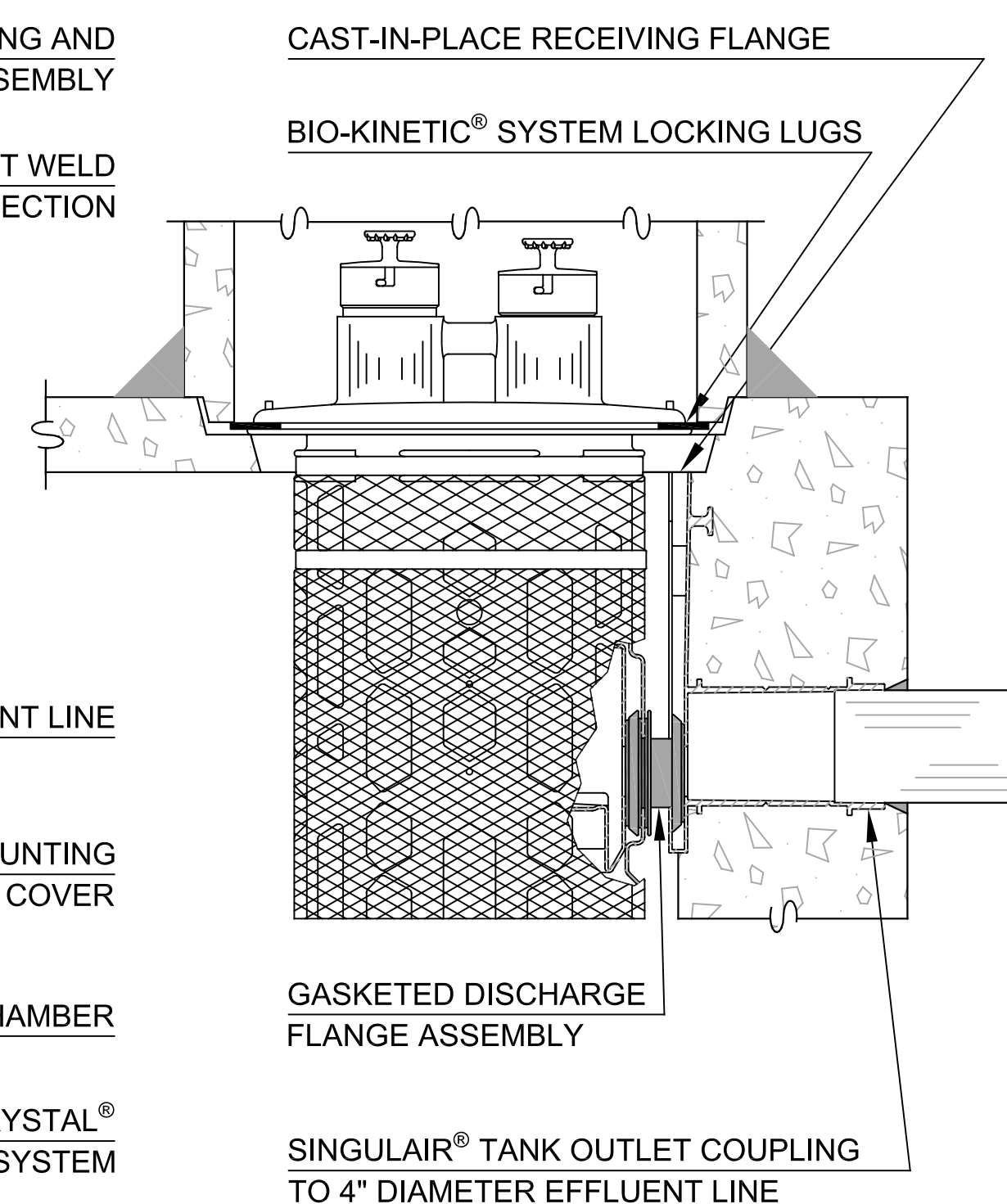
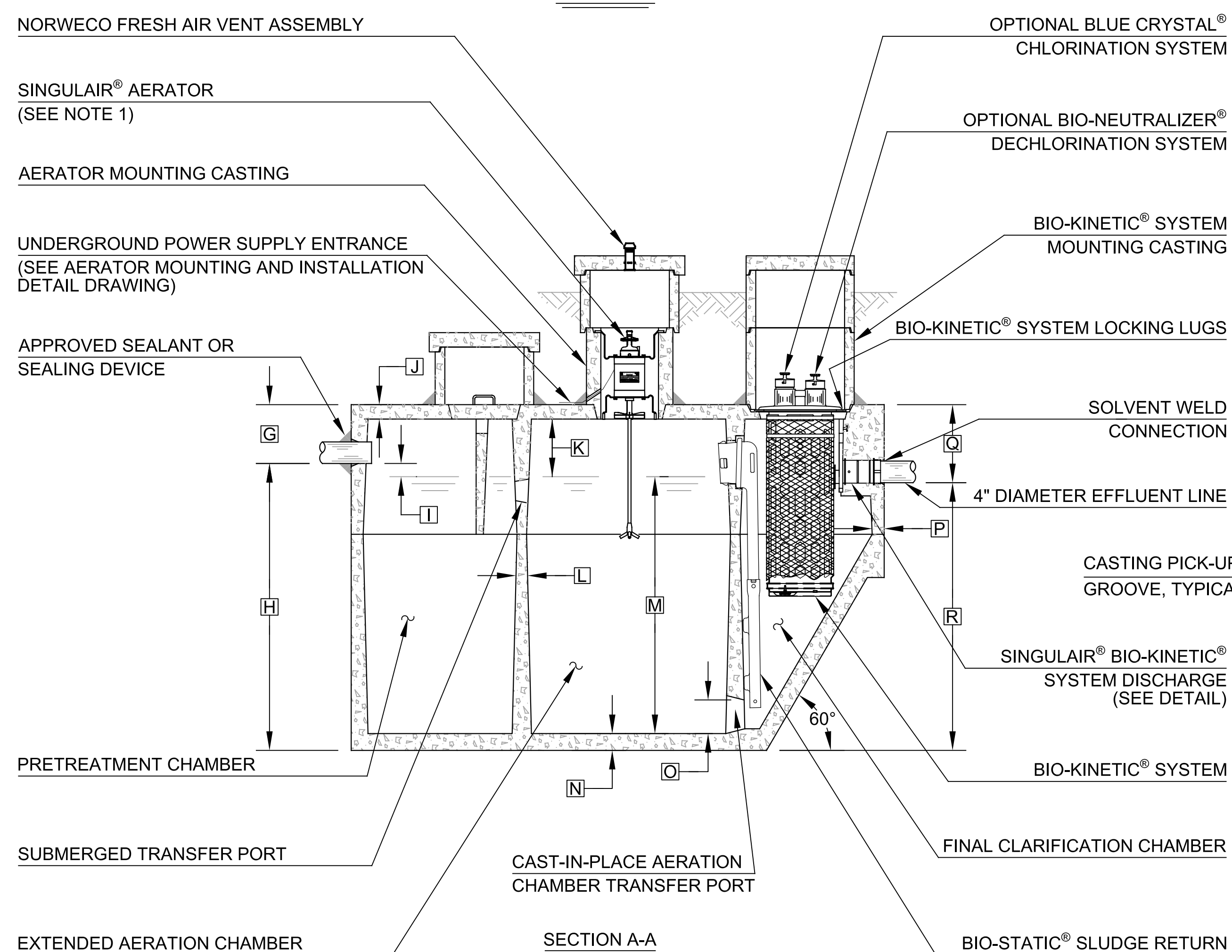
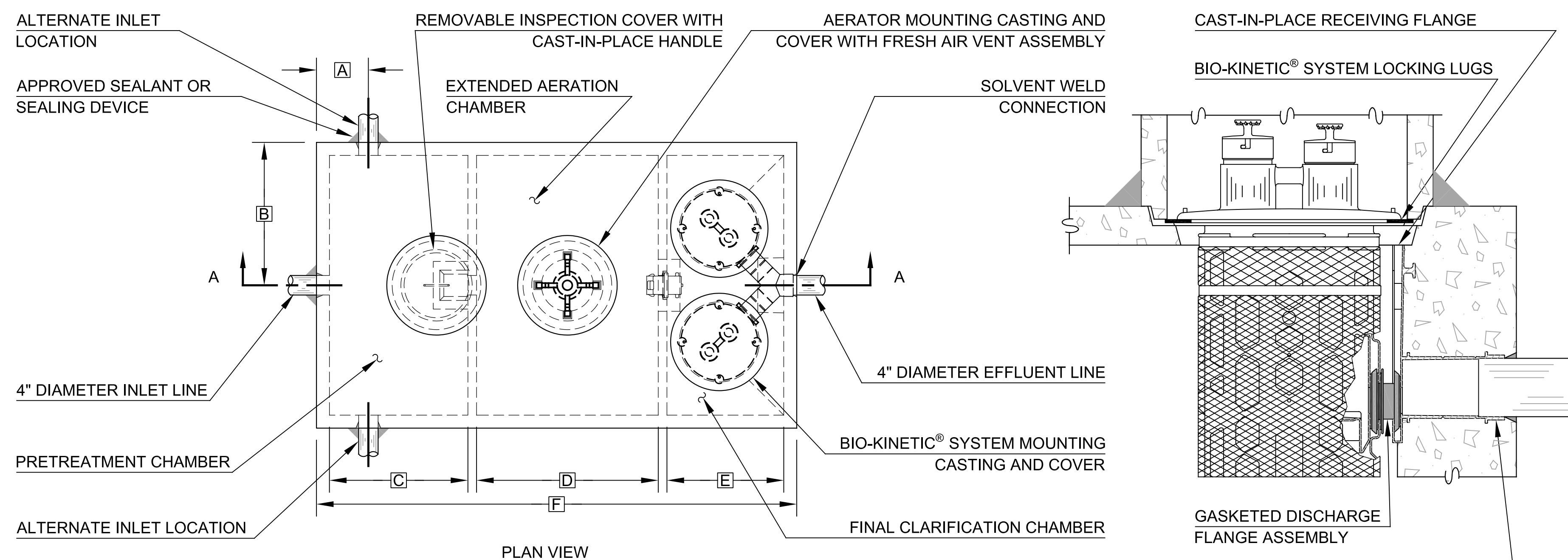
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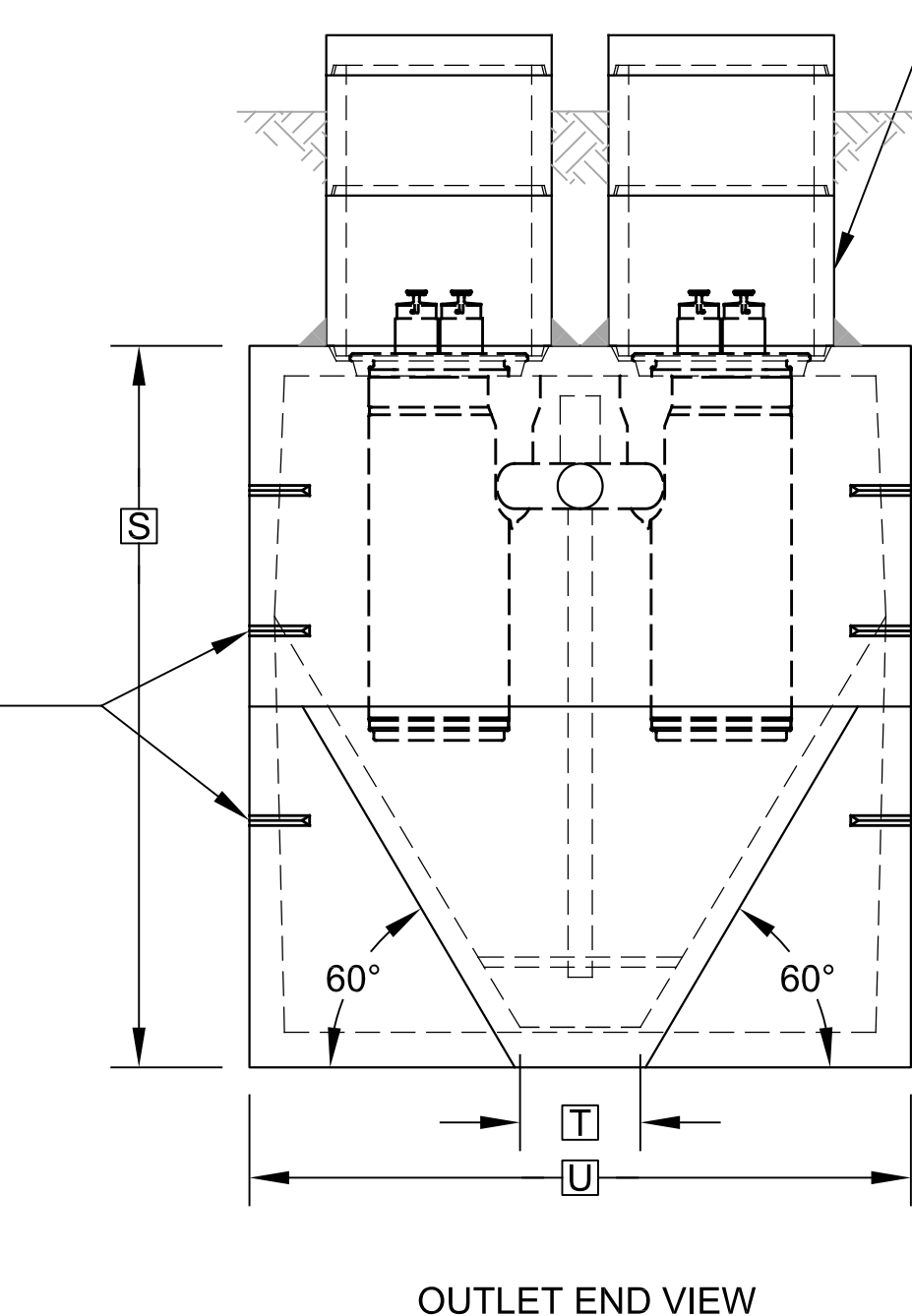
DETAIL
SHEET

C5.1



BIO-KINETIC® SYSTEM DISCHARGE DETAIL

BIO-KINETIC® SYSTEM MOUNTING CASTING AND COVER



NOTE: TOTAL SYSTEM CAPACITY: 1,600 GALLONS
RATED CAPACITY: 750 GALLONS PER DAY

GENERAL NOTES:

- ① SINGULAIR® AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 60 MINUTES ON / 60 MINUTES OFF.
- ② FALL THROUGH SINGULAIR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
- ③ ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND AERATOR MOUNTING CASTING AND BIO-KINETIC® SYSTEM MOUNTING CASTING TO GRADE. INSPECTION COVER ON PRETREATMENT CHAMBER MUST BE DEVELOPED TO WITHIN TWELVE INCHES OF GRADE.
- ④ TANK REINFORCED PER ACI STD. 318.
- ⑤ REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
- ⑥ CONTACT THE LOCAL, LICENSED SINGULAIR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

CRITICAL DIMENSIONS

A	1'- 0"	N	0'- 3"
B	2'- 9"	O	0'- 6"
C	2'- 8"	P	0'- 2 1/2"
D	3'- 7"	Q	1'- 4"
E	2'- 3"	R	5'- 8"
F	9'- 3"	S	7'- 0"
G	1'- 0"	T	1'- 0"
H	6'- 0"	U	5'- 6"
I	0'- 3"	V	
J	0'- 3"	W	
K	1'- 0"	X	
L	0'- 2"	Y	
M	5'- 6"	Z	



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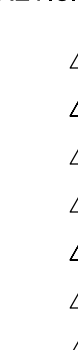
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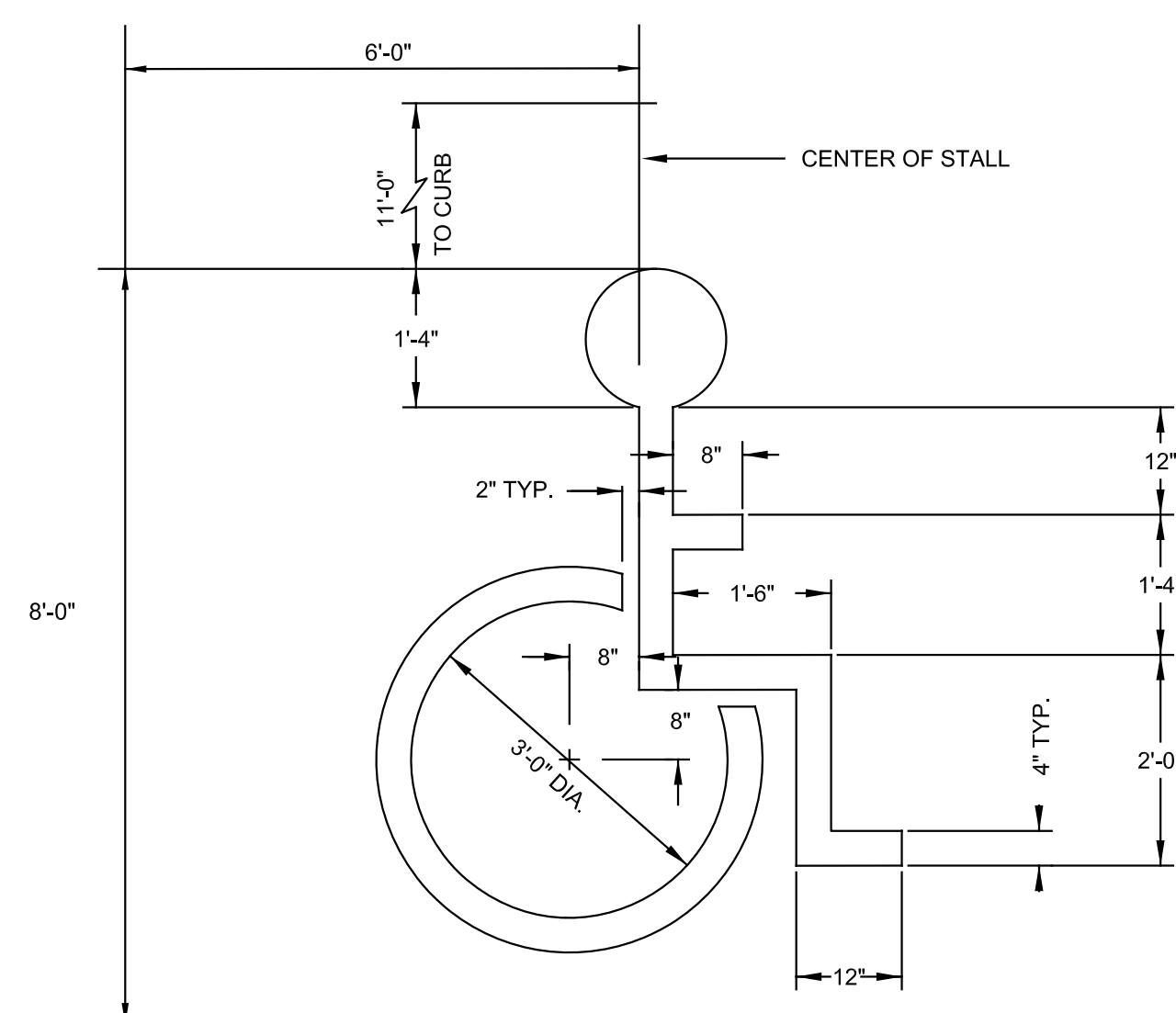
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DETAIL
SHEET

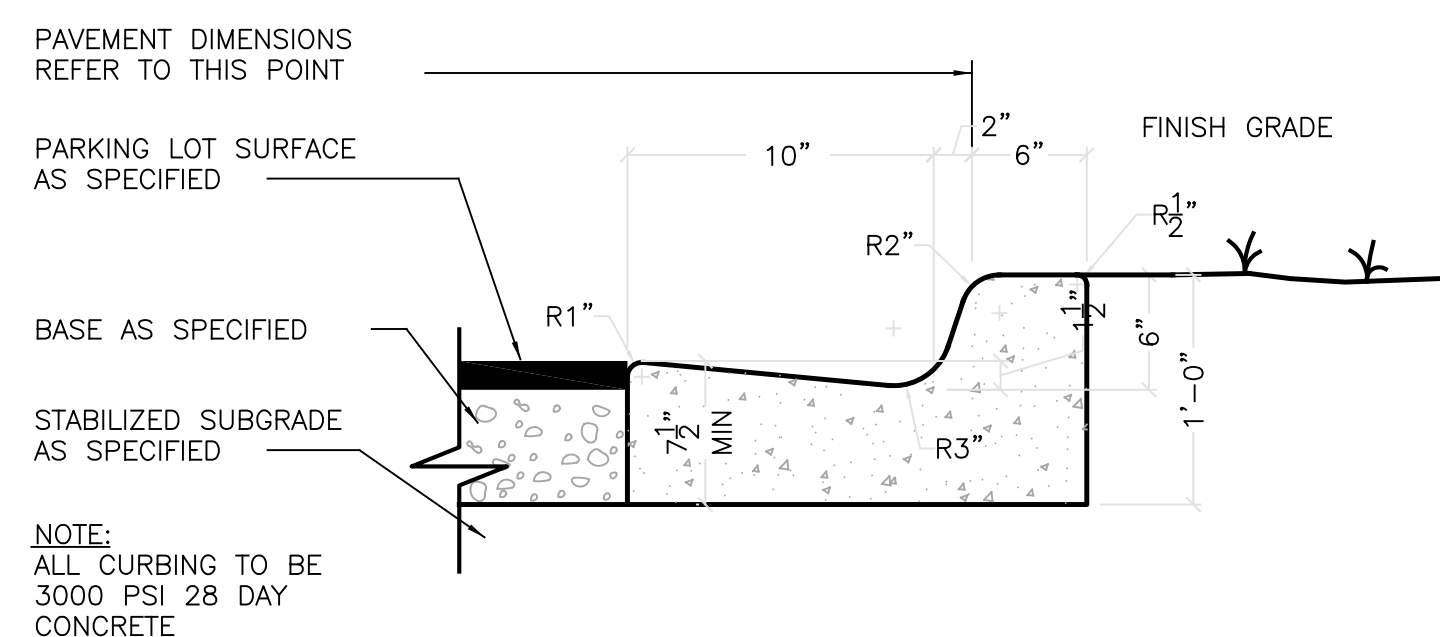
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225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
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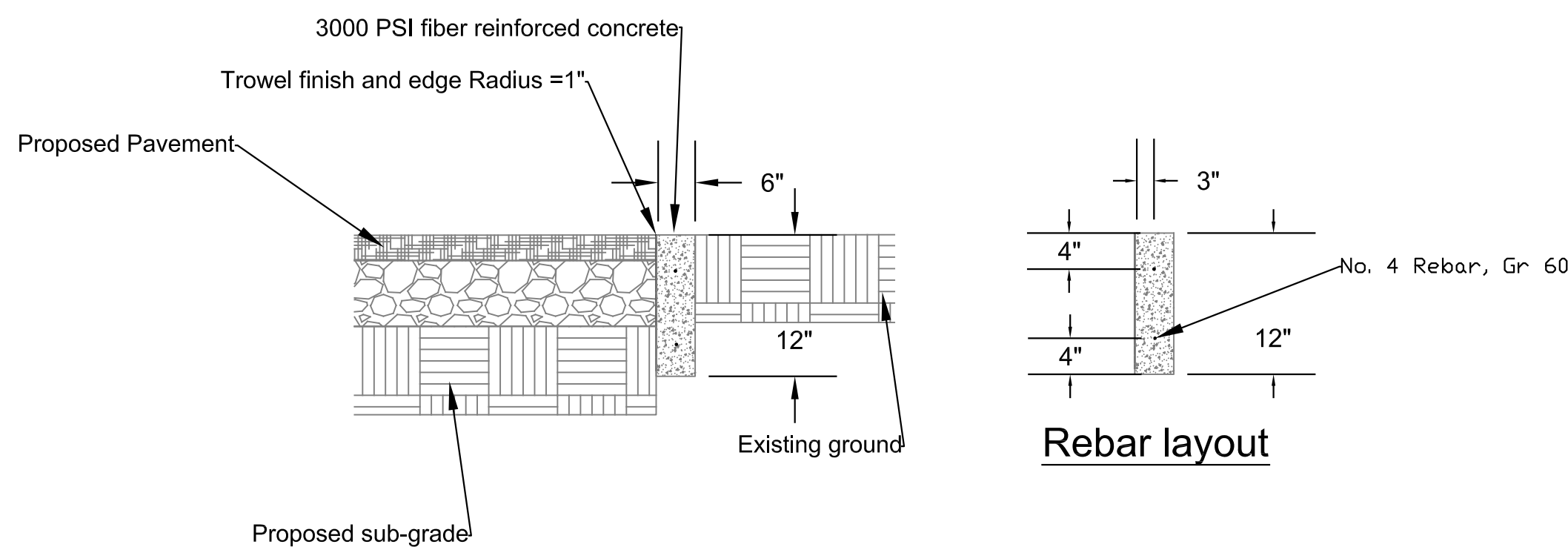
HANDICAPPED PARKING STALL STRIPING

N.T.S.

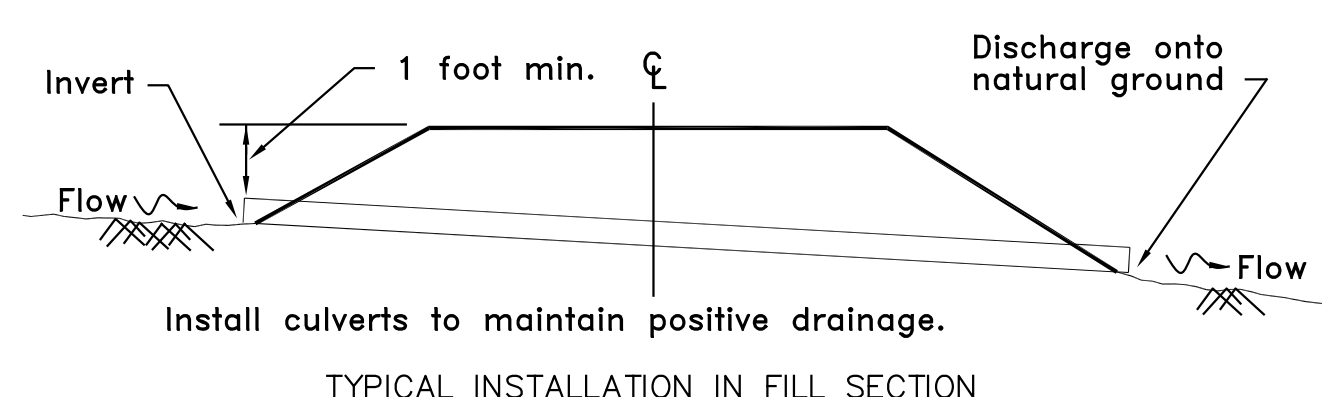


18" CONC. CURB & GUTTER

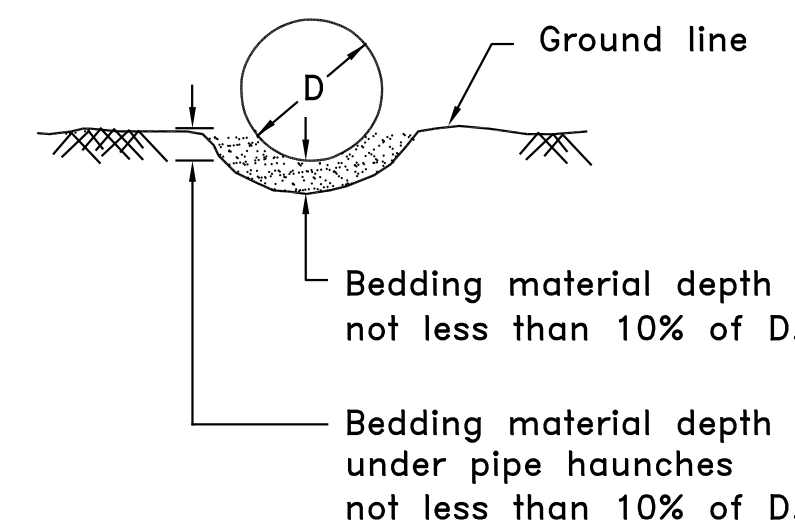
SCALE: 1"=1'-0"



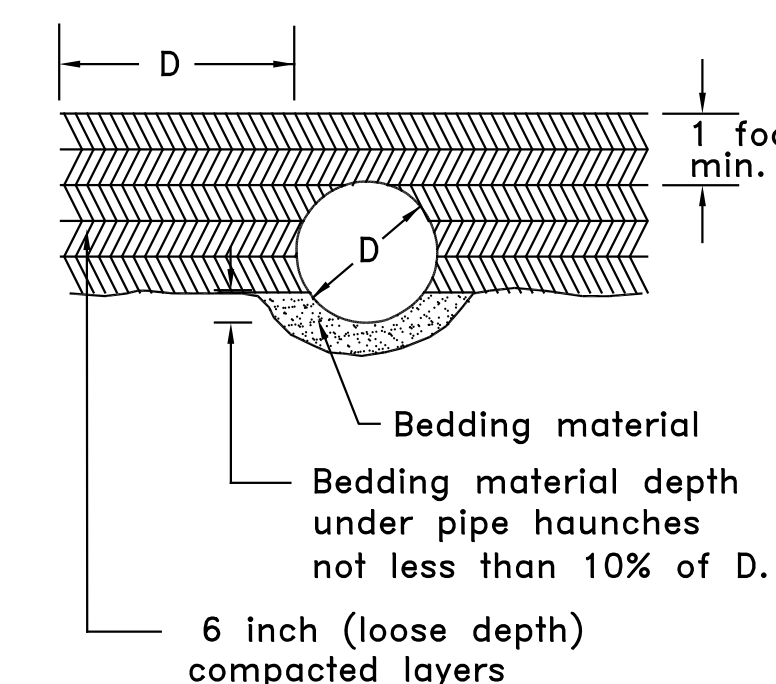
Ribbon Curb detail



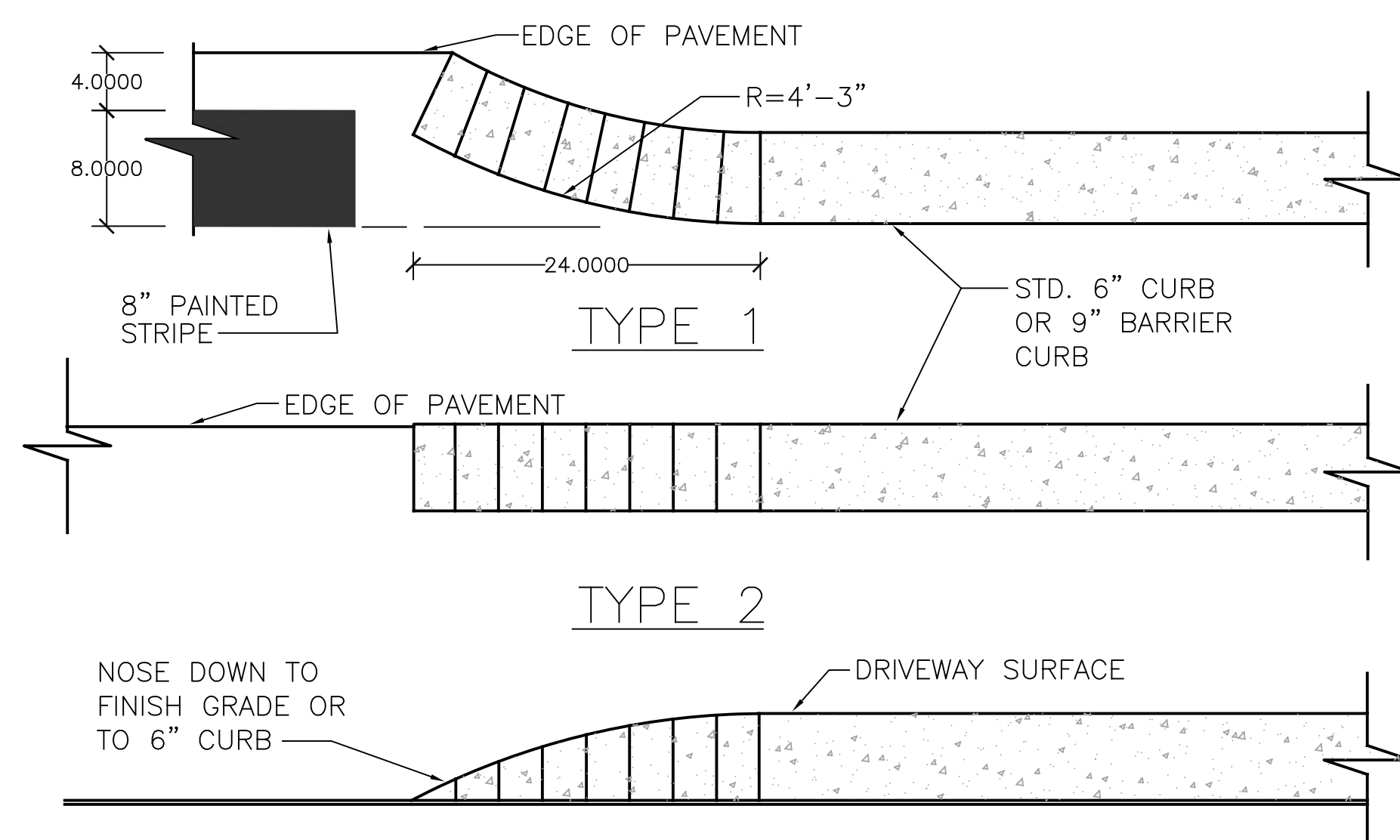
Install culverts to maintain positive drainage.



TYPICAL BEDDING DETAIL



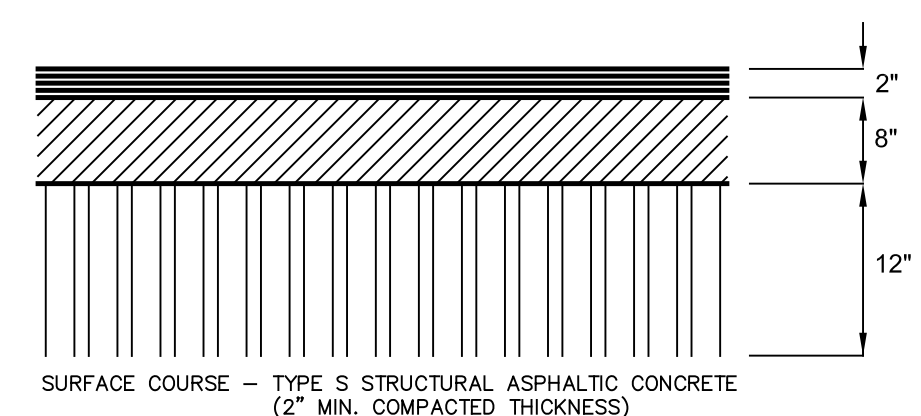
TYPICAL BACKFILL DETAIL



TYPICAL ELEVATION

STANDARD CURB NOSING

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



TYPICAL PAVEMENT SECTION
N.T.S.

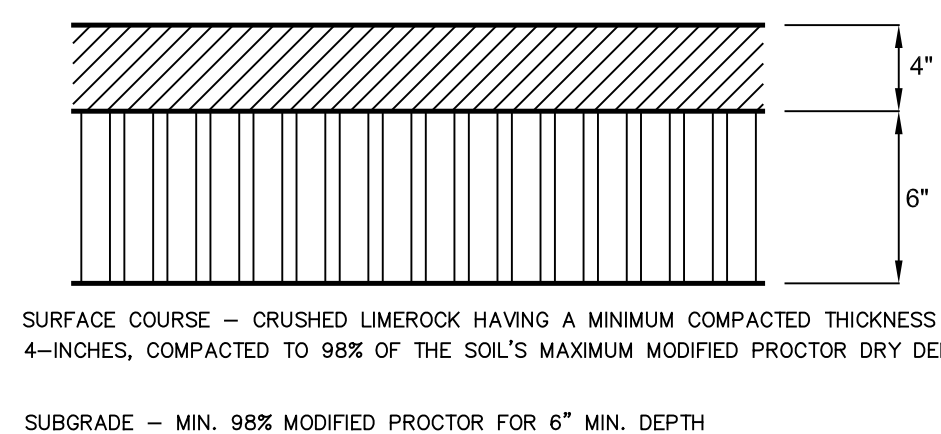
SURFACE COURSE - TYPE S STRUCTURAL ASPHALTIC CONCRETE (2" MIN. COMPACTED THICKNESS)

BASE COURSE - CRUSHED LIMEROCK HAVING A MINIMUM COMPACTED THICKNESS OF 8-INCHES, COMPACTED TO 98% OF THE SOIL'S MAXIMUM MODIFIED PROCTOR DRY DENSITY AND HAVING A LBR VALUE OF 100 OR GREATER.

SUBGRADE - ROADWAYS AND PARKING AREAS SHALL BE CLEARED & GRUBBED OF ALL VEGETATION PRIOR TO COMPACTION OR PLACEMENT OF FILL. THE CLEARING SHALL EXTEND AT LEAST ONE FOOT BEYOND THE EDGE OF THE PROPOSED ROADWAY AND PARKING AREA. ALL HIGH-DENSITY ROOT MASSES AND INDIVIDUAL ROOTS OVER ONE-HALF (1/2") INCH IN DIAMETER SHALL BE REMOVED.

SMOOTH AND COMPACT THE PREPARED SURFACE TO A DRY DENSITY OF AT LEAST 98% OF THE SOIL'S MAXIMUM MODIFIED PROCTOR DRY DENSITY TO A DEPTH OF 12-INCHES BELOW THE BASE LAYER.

TYPE S-3 ASPHALTIC CONCRETE SURFACE (2" MIN. COMPACTED THICKNESS) SHALL BE PLACED IN MULTIPLE LAYERS. EACH LAYER SHALL HAVE A MIN. COMPACTED THICKNESS OF 0.75 INCH.



TYPICAL GRAVEL SECTION

N.T.S.

GENERAL NOTES

1. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND THE SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON OR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
3. THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY, AND INSPECTION OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS, TECHNIQUES, AND SEQUENCES OF PROCEDURES TO PERFORM THE WORK. THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.
6. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH THE SUPPLIER'S INSTRUCTIONS AND REQUIREMENTS.
7. LOADING APPLIED TO THE STRUCTURE DURING THE PROCESS OF CONSTRUCTION SHALL NOT EXCEED THE SAFE LOAD-CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THE LIVE LOADING USED IN THE DESIGN OF THIS STRUCTURE ARE INDICATED IN THE "DESIGN CRITERIA NOTES". DO NOT APPLY ANY CONSTRUCTION LOADS UNTIL STRUCTURAL FRAMING IS CONNECTED TOGETHER AND UNTIL ALL TEMPORARY BRACING IS IN PLACE.
8. ALL ASTM AND OTHER REFERENCES ARE PER THE LATEST EDITIONS OF THESE STANDARDS, UNLESS OTHERWISE NOTED.
9. SHOP DRAWINGS AND OTHER ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR BEFORE SUBMITTAL. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK, AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC.
10. AS A MINIMUM, SUBMIT THE FOLLOWING ITEMS FOR REVIEW:
 - A. INSULATED CONCRETE FORMING SUBMITTALS
 - B. STEEL REINFORCING SHOP DRAWINGS
 - C. CAST-IN-PLACE CONCRETE MIX DESIGNS
 - D. STRUCTURAL STEEL FABRICATION DRAWINGS
 - E. STEEL ROOF AND FLOOR DECK SHOP DRAWINGS
 - F. COLD-FORMED METAL WALL FRAMING SHOP DRAWINGS AND CALCULATIONS
 - G. COLD-FORMED METAL TRUSS SHOP DRAWINGS AND CALCULATIONS
 - H. GLUED-LAMINATED WOOD ROOF DECKING PRODUCT DATA
 - I. ROOF SHEATHING PRODUCT DATA
 - J. STRUCTURAL GLUED-LAMINATED TIMBER PRODUCT AND CONNECTION DATAOTHER SUBMITTALS ARE REQUIRED PER THE NOTES CONTAINED HEREIN AND THE PROJECT SPECIFICATIONS.

11. ALL "STRUCTURAL SUBMITTALS" SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA. DRAWINGS PREPARED SOLELY AS A GUIDE FOR ERECTION, INSTALLATION, AND CATALOG INFORMATION WILL NOT REQUIRE AN ENGINEER'S SEAL, HOWEVER, THEY SHALL BEAR THE ENGINEER'S SIGNATURE AND AN INDICATION THAT HE OR SHE CHECKED THE WORK.

12. DRAWINGS INTRODUCING ENGINEERING INPUT AND CALCULATIONS SHALL BE SIGNED, SEALED, AND DATED BY THE ENGINEER PREPARING SUCH WORK.

DESIGN CRITERIA

1. THE INTENDED DESIGN STANDARDS AND/OR CRITERIA ARE AS FOLLOWS:

GENERAL CONCRETE	FLORIDA BUILDING CODE, BUILDING (FBC-B) 2010 EDITION WITH 2012 SUPPLEMENTS
STRUCTURAL STEEL	BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318-08
MASONRY	SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS AISC 360-05 (LRFD)
WOOD	BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES ACI 530-08/ASCE 5-08/TMS 402-08
COLD-FORMED STEEL	NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION WITH 2005 SUPPLEMENT NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING 2007

2. DESIGN SUPERIMPOSED GRAVITY DEAD LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:

ROOF	20 PSF
SOLAR PANELS	5 PSF
ALL OTHERS	ACTUAL SELF-WEIGHT

	UNIFORM	CONCENTRATED
3. CLASSROOMS	40 PSF	1000 LB
FIRST-FLOOR CORRIDORS	100 PSF	1000 LB
OFFICES	50 PSF	2000 LB
ASSEMBLY	100 PSF	
EQUIPMENT PLATFORM	125 PSF	
ROOF	20 PSF (REDUCIBLE)	

4. DESIGN LATERAL LIVE LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:

WIND LOADS PER ASCE 7-10 (3-SEC GUST)
ULTIMATE WIND SPEED = 130 MPH
RISK CATEGORY III
EXPOSURE B
INTERNAL PRESSURE COEFFICIENT, $G_c p_i = +/0.18$ (ENCLOSED)

SEE COMPONENTS & CLADDING WIND LOAD DIAGRAM AND PRESSURES ON SHEET S102.

5. THIS STRUCTURE HAS BEEN DESIGNED WITH "SAFETY FACTORS" IN ACCORDANCE WITH GENERALLY ACCEPTED PRINCIPLES OF STRUCTURAL ENGINEERING. THE FUNDAMENTAL NATURE OF THE "SAFETY FACTOR" IS TO COMPENSATE FOR UNCERTAINTIES IN THE INTENDED DESIGN, FABRICATION AND ERECTION OF STRUCTURAL BUILDING COMPONENTS. IT IS INTENDED THAT "SAFETY FACTORS" BE USED SO THAT THE LOAD CARRYING CAPACITY OF THE STRUCTURE DOES NOT FALL BELOW THE DESIGN LOAD AND THAT THE BUILDING WILL PERFORM UNDER DESIGN LOAD WITHOUT DISTRESS. WHILE THE USE OF "SAFETY FACTORS" IMPLIES SOME EXCESS CAPACITY BEYOND DESIGN LOAD, SUCH EXCESS CAPACITY CANNOT BE ADEQUATELY PREDICTED AND SHALL NOT BE RELIED UPON.

NON-COMPOSITE METAL ROOF DECK

1. ALL METAL DECK SHALL BE MANUFACTURED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS BY THE STEEL DECK INSTITUTE (SDI).
2. ALL METAL ROOF DECK SHALL BE 1 1/2" DEEP x 22 GAGE GALVANIZED TYPE B (WIDE RIB) DECK (MIN $I_p = 0.155$ IN⁴/FT AND $S_p = 0.186$ IN³/FT) AS MANUFACTURED BY VULCRAFT OR APPROVED EQUAL. DECK SHALL SPAN PERPENDICULAR TO SUPPORTS. FASTEN METAL DECK TO PRE-ENGINEERED METAL ROOF TRUSSES IN ACCORDANCE WITH SECTION 6/S503.
3. SUSPENDED CEILINGS, LIGHT FIXURES, DUCTS, AND OTHER PERMANENT SUSPENDED LOADS SHALL NOT BE SUPPORTED BY THE METAL DECK.
4. ALL ROOF DECKING SHALL BE GALVANIZED BY THE HOT-DIP PROCESS CONFORMING TO ASTM A924 CLASS G90. ALL DECK WELDS SHALL BE TOUCHED UP WITH GALVANIZING REPAIR PAINT FOR GALVANIZED DECKS.
5. SUBMIT DETAILED SHOP DRAWINGS PRIOR TO FABRICATION SHOWING LAYOUT, TYPES OF METAL DECK UNITS, CONNECTION DETAILS, ACCESSORIES AND OTHER RELATED ITEMS.
6. ALL STEEL DECK SHALL BE CAPABLE OF SUPPORTING THE DESIGN LOADS PROVIDED IN THE CONTRACT DOCUMENTS. THE DECK SUPPLIER SHALL SUBMIT CALCULATIONS AND/OR LOAD TABLES WITH THE SHOP DRAWINGS. THESE CALCULATIONS AND/OR LOAD TABLES SHALL BE SEALED BY AN ENGINEER LICENSED IN THE PROJECT STATE. THE STRUCTURAL ENGINEER OF RECORD'S REVIEW OF SUCH MATERIALS SHALL NOT RELIEVE THE DECK SUPPLIER AND ITS LICENSED ENGINEER OF THE SOLE RESPONSIBILITY FOR THE ACCURACY OF LOAD TABLES AND/OR CALCULATIONS SUBMITTED FOR REVIEW WITH THE SHOP DRAWINGS.

FOUNDATION NOTES

1. ALL FOOTINGS HAVE BEEN DESIGNED USING AN ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF AS RECOMMENDED BY ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC. GEOTECHNICAL REPORT, EGS FILE NO. 05-688-13-03, DATED APRIL 21, 2014. GROUTING AND DENSIFICATION OF THE SUBSURFACE SOILS SHALL FOLLOW THE RECOMMENDATIONS PROVIDED IN THE GROUTING REPORT. ALL FOUNDATION EXCAVATIONS SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY PRIOR TO POURING FOUNDATION CONCRETE.
2. AT FOOTING SUBGRADES, AT LEAST ONE TEST OF EACH SOIL STRATUM WILL BE PERFORMED FOR EACH ISOLATED FOOTING AND EACH 50 LINEAR FEET OF CONTINUOUS WALL FOOTING PER LIFT TO VERIFY DESIGN BEARING CAPACITIES.
3. ALL FOUNDATION CONCRETE SHALL OBTAIN A 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI. ALL CONCRETE TO BE PERMANENTLY EXPOSED TO WEATHER SHALL BE AIR ENTRAINED TO 5% ($\pm 1\%$) WITH AN ADMIXTURE THAT CONFORMS TO ASTM C-260.
4. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS". HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 305. COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 306.
5. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60.
6. UNLESS OTHERWISE NOTED, THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:
 - A) CONCRETE CAST AGAINST & PERMANENTLY EXPOSED TO EARTH - 3"
 - B) CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 THROUGH #18 BARS - 2"
#5 BAR, W31 OR D31 WIRE & SMALLER - 1 1/2"
7. ALL REINFORCING MARKED CONTINUOUS (CONT.) ON THE PLANS AND DETAILS SHALL BE LAPPED 36 BAR DIAMETERS AT SPLICES UNLESS OTHERWISE INDICATED.
8. NO UNBALANCED BACKFILLING SHALL BE DONE AGAINST FOUNDATION WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING, EITHER BY TEMPORARY BRACING OR BY PERMANENT CONSTRUCTION.
9. PRIOR TO COMMENCING ANY FOUNDATION WORK, COORDINATE WORK WITH ANY EXISTING AND NEW UTILITIES. FOUNDATIONS SHALL BE STEPPED OR SLEEVED AS REQUIRED TO AVOID UTILITIES.
10. PROVIDE CONTROL JOINTS IN FOUNDATION WALLS AT APPROXIMATELY EQUAL INTERVALS NOT TO EXCEED 25 FEET NOR 3 TIMES THE WALL HEIGHT. PROVIDE EXPANSION JOINTS AT EVERY FOURTH CONTROL JOINT, UNLESS OTHERWISE INDICATED.

CONCRETE MASONRY NOTES

1. MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530-08/ASCE 5-08/TMS 402-08)", PUBLISHED BY THE AMERICAN CONCRETE INSTITUTE, DETROIT, MICHIGAN.
2. HOLLOW LOAD-BEARING MASONRY UNITS SHALL CONFORM TO ASTM C-90, GRADE N AND BE MADE WITH NORMAL WEIGHT AGGREGATE. THE MINIMUM PRISM COMPRESSIVE STRENGTH (f_m) SHALL BE 1,500 PSI AT AN AGE OF 28 DAYS, AS DETERMINED BY THE UNIT STRENGTH METHOD OF ACI 530.1.
3. FILL ALL BOND BEAMS AND REINFORCED CELLS SOLIDLY WITH GROUT. GROUT SHALL CONFORM TO ASTM C-476 AND SHALL OBTAIN A MIN. 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI.
4. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A-615, GRADE 60. SHOP FABRICATE REINFORCING BARS WHICH ARE SHOWN TO BE HOOKED OR BENT.
5. THE USE OF MASONRY-CEMENT MORTAR IS STRICTLY PROHIBITED. MORTAR SHALL CONFORM TO ASTM C-270, TYPE S. ALL MORTAR SHALL MEET THE "PROPORTION SPECIFICATION" OF ASTM C-270 AND BE MADE WITH PORTLAND CEMENT/LIME (NON AIR-ENTRAINED).
6. UNLESS OTHERWISE INDICATED, ALL WALLS SHALL BE LAID IN RUNNING BOND. BOND CORNERS AND INTERSECTIONS OF LOAD-BEARING WALLS.
7. PROVIDE VERTICAL REINFORCING BARS OF THE GIVEN SIZE AND SPACING AS INDICATED. PROVIDE BARS AT ALL WALL CORNERS, INTERSECTIONS AND OPENING EDGES.
8. PROVIDE REBAR DOWELS FROM FOUNDATIONS TO MATCH VERTICAL REINFORCING SIZE AND SPACING. DOWELS SHALL HAVE STANDARD 90 DEGREE HOOKS AND LAP WITH THE FIRST LIFT OF REINFORCING.
9. PROVIDE HORIZONTAL BOND BEAMS WITH CONTINUOUS REINFORCING AS INDICATED. DISCONTINUE ALL HORIZONTAL REINFORCING AT CONTROL JOINTS EXCEPT FOR THE BOND BEAMS AT BEARING ELEVATIONS.
10. ALL VERTICAL WALL REINFORCING SHALL BE EXTENDED TO WITHIN 2" OF THE TOP OF ALL WALLS AND SHALL TERMINATE W/STD. HK.
11. PROVIDE STANDARD 9 GAUGE HORIZONTAL JOINT REINFORCING AT 16" ON CENTER IN ALL WALLS. PROVIDE LADDER TYPE JOINT REINFORCING FOR ALL CONCRETE MASONRY. STOP ALL HORIZONTAL JOINT REINFORCING AT CONTROL JOINTS.
12. SEE THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL DOOR AND WINDOW OPENINGS.
13. THE MASONRY CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY WALL BRACING DURING CONSTRUCTION (SEE "GENERAL STRUCTURAL NOTES").
14. WALL CONTROL JOINTS SHALL BE SPACED NO MORE THAN 35 FEET APART. COORDINATE LOCATIONS WITH ARCHITECTURAL DRAWINGS.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE 13TH EDITION OF THE "MANUAL OF STEEL CONSTRUCTION" OF THE AISC, LRFD.
2. UNLESS OTHERWISE NOTED, ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING ASTM SPECIFICATIONS:

MEMBER	ASTM	MIN. STRENGTH
STRUCTURAL TUBING	A500 (GRADE B)	46 KSI
WIDE FLANGE SHAPES	A992	50 KSI
OTHER ROLLED PLATES/SHAPES	A36	36 KSI
CONNECTION BOLTS	A325	92 KSI
ANCHOR RODS	F1554	36 KSI
THREADED RODS	A36	36 KSI
NONSHRINK GROUT	C1107	8000 PSI

3. ALL CONNECTIONS SHALL BE SIMPLE SHEAR TYPE CONNECTIONS AND SHALL UTILIZE THE MAXIMUM NUMBER OF ROWS AT 3 INCH STANDARD BOLT SPACING USING MINIMUM 3/4" DIAMETER A325-N BOLTS, UNLESS OTHERWISE NOTED. ALL BOLTS SHALL BE SHEAR/BEARING TYPE BOLTS AND BE "SNUG-TIGHT".
4. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 USING E70XX ELECTRODES. UNLESS OTHERWISE NOTED, PROVIDE CONT. MIN. SIZED FILLET WELDS PER AISC REQUIREMENTS. ALL FILLER MATERIAL SHALL HAVE A MINIMUM YIELD STRENGTH OF 58 KSI.
5. HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED.
6. UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A159.
7. THE STRUCTURAL STEEL ERECTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING (SEE "GENERAL STRUCTURAL NOTES").
8. COLUMNS, ANCHOR BOLTS, BASE PLATES, ETC. HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING STEEL ERECTION AND CONSTRUCTION. ANY INVESTIGATION OF THE COLUMNS, ANCHOR BOLTS, BASE PLATES, ETC. FOR ADEQUACY DURING THE STEEL ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
9. PROTECTIVE COATINGS DAMAGED DURING THE TRANSPORTING, ERECTING AND FIELD WELDING PROCESSES SHALL BE REPAIRED IN THE FIELD TO MATCH THE SHOP APPLIED COATING.

CAST-IN-PLACE CONCRETE NOTES

1. CONCRETE MIXES SHALL BE DESIGNED PER ACI 301, USING PORTLAND CEMENT CONFORMING TO ASTM C-150 OR C-595, AGGREGATE CONFORMING TO ASTM C-33, AND ADMIXTURES CONFORMING TO ASTM C-494, C-1017, C-618, C-989 AND C-260. CONCRETE SHALL BE READY-MIXED IN ACCORDANCE WITH C-94.
2. CONCRETE SHALL CONFORM TO THE FOLLOWING COMPRESSIVE STRENGTH, SLUMP AND WATER/CEMENT RATIO REQUIREMENTS:

CONCRETE	(28 DAY STRENGTH)	SLUMP*	W/C RATIO
4" SLAB ON GRADE	3,000 PSI	4" \pm 1"	0.50
5" SLAB ON GRADE	4,000 PSI	4" \pm 1"	0.45
CONCRETE NOT NOTED	3,000 PSI	4" \pm 1"	0.50
FOUNDATIONS	"SEE FDN NOTES"	4" \pm 1"	0.50
ELEVATED SLABS	4,000 PSI	4" \pm 1"	0.45
COLUMNS AND BEAMS	4,000 PSI	4" \pm 1"	0.45

* AT CONTRACTOR'S OPTION, AN APPROVED ADMIXTURE MAY BE USED TO PRODUCE FLOWABLE CONCRETE. MAXIMUM SLUMP SHALL NOT EXCEED 8 INCHES. THE CONTRACTOR SHALL SUBMIT TEST RESULTS OF THE PROPOSED CONCRETE MIXES ALONG WITH THE MANUFACTURER'S TECHNICAL DATA FOR APPROVAL PRIOR TO PLACING THE CONCRETE.

3. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS". HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 305. COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 306.

4. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. ALL WELDING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH AWS D1.4.

5. ALL WELDED WIRE REINFORCING (WWR) SHALL CONFORM TO A-185.

6. ALL REINFORCING STEEL SHALL BE SET AND TIED IN PLACE PRIOR TO PLACEMENT OF CONCRETE. DO NOT FIELD BEND BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE UNLESS SPECIFICALLY INDICATED OR APPROVED BY THE ENGINEER.

7. REINFORCING STEEL, INCLUDING HOOKS AND BENDS, SHALL BE DETAILED IN ACCORDANCE WITH ACI 315. ALL REINFORCING STEEL INDICATED AS BEING CONTINUOUS (CONT.) SHALL BE LAPPED WITH A CLASS B TENSION LAP SPLICE UNLESS OTHERWISE NOTED.

8. UNLESS OTHERWISE NOTED, THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:

A) CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 THROUGH #18 BARS	2"
#5 BAR, W31 OR D31 WIRE & SMALLER	1 1/2"

B) CONCRETE NOT EXPOSED TO EARTH OR WEATHER:

SLABS, WALLS, JOISTS:	
#14 AND #18 BARS	1 1/2"
#11 BAR AND SMALLER	3/4"

BEAMS AND COLUMNS:	
PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1 1/2"

C) FOUNDATION CONCRETE (SEE "FOUNDATION NOTES")

9. BAR SUPPORTS AND HOLDING BARS SHALL BE PROVIDED FOR ALL REINFORCING STEEL TO ENSURE MINIMUM CONCRETE COVER. BAR SUPPORTS SHALL BE PLASTIC TIPPED OR STAINLESS STEEL.

10. FORMWORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED AT LEAST 90% OF ITS 28 DAY COMPRESSIVE STRENGTH. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND RESHORING.

NON-COMPOSITE METAL FLOOR DECK

1. ALL METAL DECK SHALL BE MANUFACTURED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS BY THE STEEL DECK INSTITUTE (SDI).
2. ALL METAL FLOOR DECK SHALL BE 2" DEEP x 18 GAGE GALVANIZED TYPE C CONFORM DECK (MIN $I_p = 0.559$ IN⁴/FT AND $S_p = 0.495$ IN³/FT) AS MANUFACTURED BY VULCRAFT OR APPROVED EQUAL. DECK SHALL SPAN PERPENDICULAR TO SUPPORTS AND SHALL BE SHORED AT INTERVALS TO COMPLY WITH SDI CRITERIA FOR CONSTRUCTION CLEAR SPANS. FASTEN METAL DECK TO COLD-FORMED STEEL WALL FRAMING IN ACCORDANCE WITH SECTION 5/S503.
3. 8" SLAB SHALL BE 4,000 PSI NORMAL WEIGHT CONCRETE.
4. SUSPENDED CEILINGS, LIGHT FIXURES, DUCTS, AND OTHER PERMANENT SUSPENDED LOADS SHALL NOT BE SUPPORTED BY THE METAL DECK.
5. ALL FLOOR DECKING SHALL BE GALVANIZED BY THE HOT-DIP PROCESS CONFORMING TO ASTM A924 CLASS G60. ALL DECK WELDS SHALL BE TOUCHED UP WITH GALVANIZING REPAIR PAINT FOR GALVANIZED DECKS.
6. SUBMIT DETAILED SHOP DRAWINGS PRIOR TO FABRICATION SHOWING LAYOUT, TYPES OF METAL DECK UNITS, CONNECTION DETAILS, ACCESSORIES AND OTHER RELATED ITEMS.
7. ALL STEEL DECK SHALL BE CAPABLE OF SUPPORTING THE DESIGN LOADS PROVIDED IN THE CONTRACT DOCUMENTS. THE DECK SUPPLIER SHALL SUBMIT CALCULATIONS AND/OR LOAD TABLES WITH THE SHOP DRAWINGS. THESE CALCULATIONS AND/OR LOAD TABLES SHALL BE SEALED BY AN ENGINEER LICENSED IN THE PROJECT STATE. THE STRUCTURAL ENGINEER OF RECORD'S REVIEW OF SUCH MATERIALS SHALL NOT RELIEVE THE DECK SUPPLIER AND ITS LICENSED ENGINEER OF THE SOLE RESPONSIBILITY FOR THE ACCURACY OF LOAD TABLES AND/OR CALCULATIONS SUBMITTED FOR REVIEW WITH THE SHOP DRAWINGS.

NOTES



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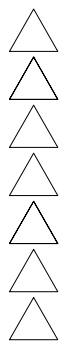
30 APRIL 2014

DATE

CONSTRUCTION DOCUMENTS

PROJECT PHASE

REVISIONS



STRUCTURAL NOTES

DAVID H. MELVIN, INC.
Consulting Engineers

TALLAHASSEE
2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

00

225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301

PHONE 850 224-6301

FAX 850 561-6978

PRE-ENGINEERED COLD-FORMED METAL TRUSSES

1. COLD-FORMED METAL TRUSSES SHALL BE DESIGNED BY TRUSS SUPPLIER USING COLD-FORMED STEEL SYMMETRICAL SHAPES WITH A MIN. YIELD STRENGTH OF 33 KSI MEETING THE REQUIREMENTS OF ASTM A-653. ALL LIGHT GAUGE COLD-FORMED STEEL SECTIONS, STUDS, JOISTS AND ACCESSORIES SHALL HAVE HOT DIPPED GALVANIZED STEEL COATING MEETING THE REQUIREMENTS OF ASTM A525 AND C955 WITH G-60 CLASS COATING. TRUSS TOP AND BOTTOM CHORDS SHALL BE MIN. 18 GAUGE AND ALL OTHER TRUSS MEMBERS SHALL BE MIN. 20 GAUGE.
2. ALL COLD-FORMED METAL TRUSS ELEMENTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN STRICT ACCORDANCE WITH THE LATEST EDITION OF AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL MEMBERS" AND OTHER APPLICABLE CODES AND SPECIFICATIONS. TRUSSES SHALL BE DESIGNED TO SUPPORT THE DESIGN LOADS LISTED IN THE STRUCTURAL DESIGN CRITERIA AS WELL AS LOADS LISTED ELSEWHERE ON THE DRAWINGS.
3. THE COLD-FORMED METAL TRUSS SUPPLIER SHALL SUBMIT TO THE ARCHITECT FOR REVIEW AND APPROVAL, DETAILED SHOP DRAWINGS AND DESIGN CALCULATIONS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF FLORIDA. FABRICATION OF TRUSSES SHALL NOT BEGIN UNTIL THE SHOP DRAWINGS AND CALCULATIONS HAVE BEEN REVIEWED AND RETURNED APPROVED. REFER TO CONTRACT SPECIFICATIONS FOR APPROVED SUPPLIERS. SUPPLIER/ERECTOR NOT PRE-APPROVED, MUST HAVE QUALIFICATIONS MEETING CONTRACT SPECIFICATIONS APPROVED PRIOR TO BIDDING.
4. CALCULATIONS SHALL INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
 - A. ENGINEERING ANALYSIS SHOWING LOADING, MEMBER STRESSES AND DEFLECTIONS FOR EACH DIFFERENT TRUSS DESIGN BASED ON DESIGN LOADS LISTED ON THE DRAWINGS.
 - B. ALL TRUSS MEMBERS, PITCH, SPAN, CAMBER, BEARING, CONFIGURATION, TYPE, LOCATION, SPACING AND LAYOUT OF TRUSSES.
 - C. ALL BRIDGING AND BRACING FOR DIAPHRAGM ACTION, CONSTRUCTION LOADS, AND ALL OTHERS, TEMPORARY AND PERMANENT LOADS.
 - D. ALL TRUSS TO TRUSS CONNECTIONS, TRUSS TO STEEL BEAM OR BEARING PLATE, TRUSS TO CONCRETE BEAM, JOISTS, TRACK, GUSSET PLATES, FASTENERS, BRIDGING AND RELATED ACCESSORIES TO BE DESIGNED AND DETAILED FOR ALL LOADING CONDITIONS INCLUDING NET WIND UPLIFT AND REACTIONS FROM HORIZONTAL WIND DIAPHRAGM ACTION.
 - E. ALL TRUSS MEMBER SIZES, PROPERTIES, ANY YIELD STRENGTH.
 - F. SPACING AND LAYOUT OF TRUSSES MEETING REQUIREMENTS INDICATED ON THE DRAWINGS.
 - G. NOTE ANY PROPOSED TRUSS LAYOUT CHANGES THAT WOULD EFFECT THE LOCATION OF BEARING WALLS OR FOUNDATION DESIGN OR CONSTRUCTION.
5. GENERAL CONTRACTOR SHALL COORDINATE TRUSS REQUIREMENTS WITH MEP, HVAC AND DUCT WORK REQUIREMENTS.
6. SUBMIT ERECTION DRAWINGS PREPARED BY FABRICATOR FOR APPROVAL BY ARCHITECT, THESE DRAWINGS SHALL INCLUDE:
 - A. PLACING DRAWINGS FOR STEEL AND TRUSS SYSTEM SHOWING MEMBERS, PITCH, SPAN, CAMBER, CONFIGURATION, TYPE, LOCATIONS, AND SPACING OF ALL MEMBERS. ALL ATTACHMENTS, BEARINGS, AND ANCHORAGE SHALL BE CLEARLY DETAILED ON DWGS. INDICATE SUPPLEMENTAL STRAPPINGS, BRACINGS, CLIPS AND OTHER ACCESSORIES REQUIRED FOR PROPER INSTALLATION, MEETING DESIGN CRITERIA OUTLINED.
 - B. CROSS SECTIONS, PLANS AND ELEVATIONS DEPICTING COMPONENT LOCATIONS.
 - C. CONNECTION DETAILS SHOWING SCREW TYPES, NUMBER AND LOCATIONS, WELD LENGTHS AND LOCATIONS OR OTHER RELATED FASTENER REQUIREMENTS. ALL CONNECTIONS SHALL MEET OUTLINED DESIGN CRITERIA.
7. THE COLD-FORMED METAL TRUSSES SHALL BE SHOP FABRICATED BY THE TRUSS SUPPLIER. THE SPECIALTY ENGINEER FOR THE STEEL TRUSSES SHALL INSPECT ALL FABRICATED TRUSSES AND SHALL PROVIDE A LETTER CERTIFYING THAT THE TRUSSES ARE FABRICATED IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS AND WILL SUSTAIN THE DESIGN LOADS SPECIFIED IN THE CONTRACT DOCUMENTS.
8. THE TRUSS SUPPLIER SHALL SUBMIT FOR REVIEW DESIGN DATA FOR ALL SHOP OR FIELD SELF-DRILLING FASTENERS USED FOR CONSTRUCTION OF TRUSSES. PROVIDE CONNECTION DETAILS SHOWING SCREW TYPES, NUMBER AND LOCATIONS, AND OTHER RELATED FASTENER REQUIREMENTS.
9. THE TRUSS SUPPLIER SHALL LAYOUT PANEL POINTS TO ALLOW MECHANICAL DUCTS TO BE PLACED BETWEEN PANEL POINTS. THE LOCATION OF MECHANICAL DUCTS SHOWN ON MECHANICAL PLANS MAY BE FIELD ADJUSTED TO PREVENT INTERFERENCE WITH THE PANEL POINT LAYOUT OF TRUSSES IF APPROVED BY THE MECHANICAL ENGINEER. THE ACTUAL LAYOUT OF ALL TRUSS WEB MEMBERS SHALL BE SHOWN ON THE TRUSS SHOP DRAWINGS.
10. DESIGN LOADS FOR TRUSSES:

BUILDING DESIGN CODE - 2010 FLORIDA BUILDING CODE, BUILDING (FBC-B) WITH 2012 SUPPLEMENTS

 1. UPLIFT - SEE SHEET S102
 2. TOP CHORD:
 - a. LIVE LOAD - 20 PSF (ON THE HORIZONTAL PROJECTION)
 - b. DEAD LOAD - 10 PSF (ON THE SURFACE AREA)
 3. BOTTOM CHORD:
 - a. LIVE LOAD - 10 PSF (ON THE HORIZONTAL PROJECTION)

COLD-FORMED METAL LOAD-BEARING WALL FRAMING

1. DESIGN, DETAIL AND ERECT FRAMING IN ACCORDANCE WITH THE GENERAL NOTES AND SPECIFICATIONS.
2. COLD-FORMED STEEL FRAMING DETAILS SHOWN ON CONTRACT DOCUMENTS REPRESENT THE MINIMUM DESIGN INTENT TO BE FOLLOWED. CONNECTIONS NOT DETAILED IN CONTRACT DOCUMENTS SHALL BE DESIGNED AND DETAILED BY FABRICATOR ACCORDING TO SPECIFICATIONS AND REQUIREMENTS HEREIN. MINIMUM GAUGE OF MEMBERS IS 16 GAUGE.
3. SUBMIT COMPLETE SHOP DRAWINGS AND CALCULATIONS SHOWING METHOD OF FABRICATION, ERECTION PROCEDURES, ATTACHMENT OF THE SYSTEM TO THE BUILDING, JOINTS, CONNECTIONS AND FRAMING. CALCULATIONS AND SHOP DRAWINGS SHALL BE PREPARED, SIGNED AND SEALED BY A DELEGATED ENGINEER.
4. USE GALVANIZED STEEL "C" STUDS, TRACKS, ANGLES AND STRAPS AS SHOWN ON DRAWINGS AND DETAILS HAVING A MINIMUM YIELD STRENGTH AS FOLLOWS:

12, 14, 16 GAUGE MEMBERS:	F _y = 50MIN.
18 & 20 GAUGE MEMBERS:	F _y = 30MIN.
- ALL TRACKS TO BE SAME GAUGE AS STUDS WITH MINIMUM OF 1 1/4" LEG.
5. DOOR AND WINDOW SILLS, HEADERS, AND JAMBS SHALL BE DESIGNED TO RESIST WIND FORCES ON TRIBUTARY WINDOWS AND DOORS AND TO TRANSMIT THE FORCES TO THE PRIMARY STRUCTURAL FRAME.
6. SCREWS, WHERE REQUIRED, SHALL MEET THE MINIMUM REQUIREMENTS OF SAE J429 GRADE 5; AND IFI-105. SCREWS SHALL HAVE A PROTECTIVE COATING EQUIVALENT TO CADMIUM OR ZINC PLATING, ASTM B766.
7. FIELD CUTTING OF COLD-FORM STEEL MEMBER SHALL BE BY SAW OR SHEAR. TORCH CUTTING IS NOT PERMITTED.
8. LIMIT DEFLECTIONS OF STUDS BETWEEN SUPPORTS TO L/600 WHEN SUPPORTING MASONRY, L/360 WHEN SUPPORTING GYPSUM WALL BOARD OR PORTLAND CEMENT STUCCO AND L/240 FOR OTHER CONDITIONS.
9. ADD WEB STIFFENERS AT CONCENTRATED LOADS AS REQUIRED BY DESIGN.

ROOF SHEATHING NOTES

1. ALL PLYWOOD CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN PLYWOOD ASSOCIATION (APA) SPECIFICATIONS.
2. ALL ROOF PANEL SHEATHING SHALL BE 1/2" (NOM.) APA RATED SHEATHING, C-D, EXPOSURE 1 OR OSB, EXP. 1, WITH 32/16 SPAN RATING. SHEATHING SHALL BE ATTACHED OVER GLUED-LAMINATED ROOF DECKING WITH 8d RING SHANK COMMON NAILS AT 6" O.C. AT PANEL EDGES AND 6" O.C. FIELD.
3. INSTALL ALL ROOF SHEATHING WITH THE LONG DIMENSION OF THE PANEL ACROSS SUPPORTS AND WITH PANEL CONTINUOUS OVER TWO OR MORE SPANS. STAGGER PANEL END JOINTS. ALLOW 1/8" SPACING AT PANEL ENDS AND EDGES UNLESS OTHERWISE RECOMMENDED BY THE SHEATHING MANUFACTURER.
4. ALL NAILING SHALL BE CAREFULLY DRIVEN AND NOT OVERDRIVEN. THE USE OF STAPLES AND PNEUMATIC NAIL GUNS ARE PROHIBITED FROM USE.



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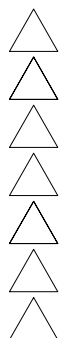
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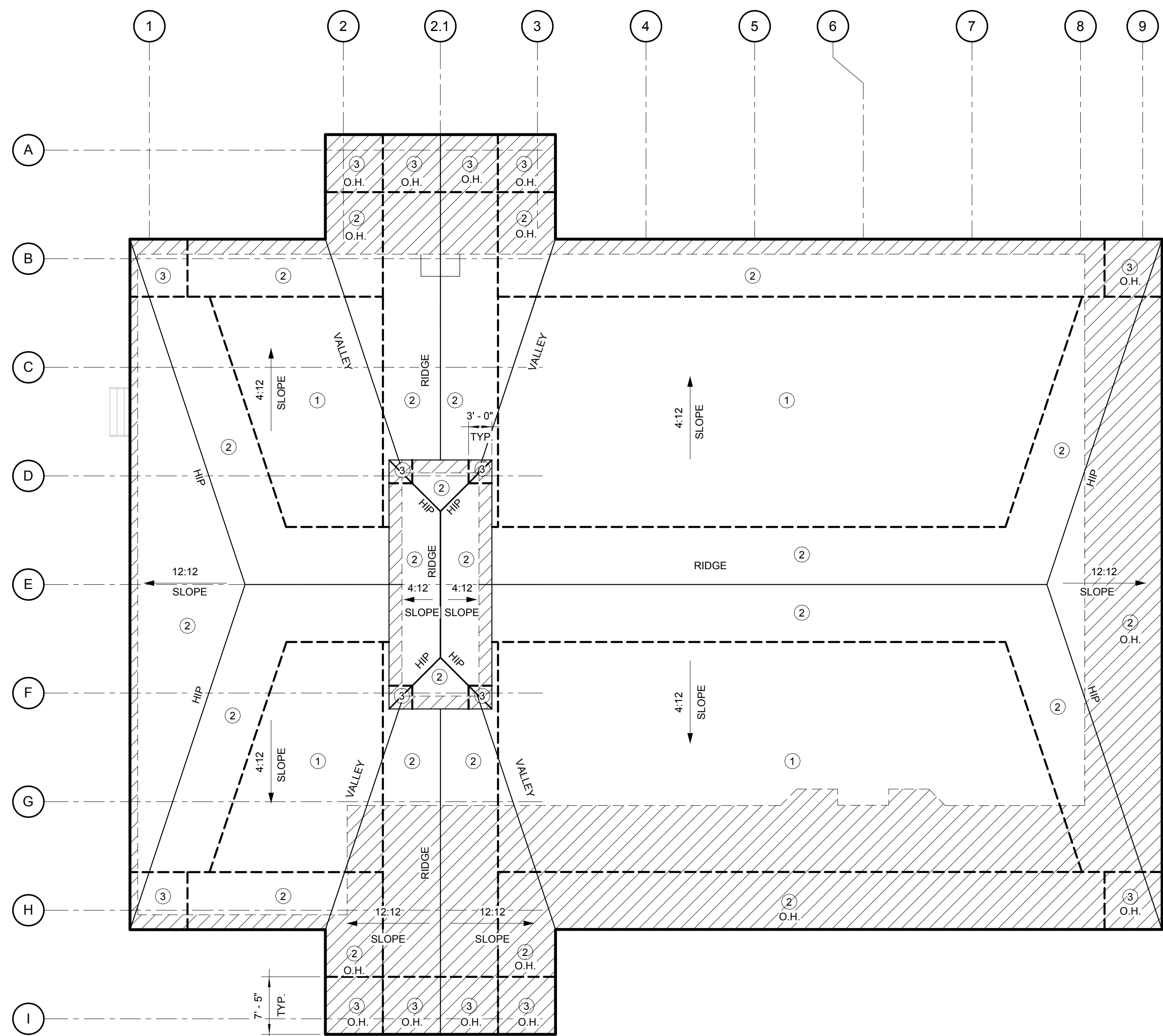
DAVID H. MELVIN, INC.
Consulting Engineers

TALLAHASSEE
2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301

PHONE 850 224-6301

FAX 850 561-6978



C&C PLAN

SCALE: 3/32" = 1'-0"

COMPONENTS AND CLADDING WIND PRESSURES

ROOF ULTIMATE WIND PRESSURES (SLOPE 4:12)

ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		PRESSURE	SUCTION
1	10	+22.2	-35.2
	20	+20.2	-34.2
	50	+17.6	-32.9
	100	+16.0	-31.9
2	10	+22.2	-61.3
	20	+20.2	-56.4
	50	+17.6	-49.9
	100	+16.0	-45.0
3	10	+22.2	-61.3
	20	+20.2	-56.4
	50	+17.6	-49.9
	100	+16.0	-45.0

a = 7'-5"

ROOF OVERHANG ULTIMATE WIND PRESSURES (SLOPE 4:12)

ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		PRESSURE	SUCTION
2	10	---	-71.7
	50	---	-71.7
	100	---	-71.7
	150	---	-71.7
3	10	---	-71.7
	50	---	-71.7
	100	---	-71.7
	150	---	-71.7

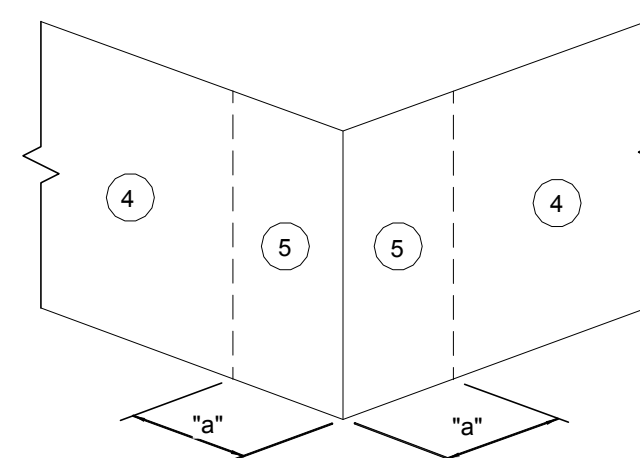
a = 7'-5"

WALL ULTIMATE WIND PRESSURES (SLOPE 4:12) AND (SLOPE 12:12)

ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		PRESSURE	SUCTION
4	10	+38.5	-41.7
	20	+36.7	-40.0
	50	+34.4	-37.7
	100	+32.7	-36.0
	500	+28.7	-31.9
5	10	+38.5	-51.5
	20	+36.7	-48.0
	50	+34.4	-43.4
	100	+32.7	-40.0
	500	+28.7	-31.9

a = 7'-5"

C&C WALL DIAGRAM



COMPONENTS AND CLADDING WIND PRESSURES

ROOF ULTIMATE WIND PRESSURES FOR CUPOLA (SLOPE 4:12)

ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		PRESSURE	SUCTION
1	10	+24.6	-39.0
	20	+22.4	-37.9
	50	+19.5	-36.5
	100	+17.3	-35.4
2	10	+24.6	-67.9
	20	+22.4	-62.5
	50	+19.5	-55.3
	100	+17.3	-49.8
3	10	+24.6	-67.9
	20	+22.4	-62.5
	50	+19.5	-55.3
	100	+17.3	-49.8

a = 3'-0"

ROOF OVERHANG ULTIMATE WIND PRESSURES FOR CUPOLA (SLOPE 4:12)

ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		PRESSURE	SUCTION
2	10	---	-79.5
	50	---	-79.5
	100	---	-79.5
	150	---	-79.5
3	10	---	-79.5
	50	---	-79.5
	100	---	-79.5
	150	---	-79.5

a = 3'-0"

WALL ULTIMATE WIND PRESSURES FOR CUPOLA (SLOPE 4:12)

ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		PRESSURE	SUCTION
4	10	+42.6	-46.2
	20	+40.7	-44.3
	50	+38.2	-41.8
	100	+36.2	-39.9
	500	+31.8	-35.4
5	10	+42.6	-57.1
	20	+40.7	-53.2
	50	+38.2	-48.2
	100	+36.2	-44.3
	500	+31.8	-35.4

a = 3'-0"

COMPONENTS AND CLADDING WIND PRESSURES

ROOF ULTIMATE WIND PRESSURES (SLOPE 12:12)

ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		PRESSURE	SUCTION
1	10	+35.2	-38.5
	20	+34.2	-36.5
	50	+32.9	-33.9
	100	+31.9	-31.9
2	10	+35.2	-45.0
	20	+34.2	-43.0
	50	+32.9	-40.4
	100	+31.9	-38.5
3	10	+35.2	-45.0
	20	+34.2	-43.0
	50	+32.9	-40.4
	100	+31.9	-38.5

a = 7'-5"

ROOF OVERHANG ULTIMATE WIND PRESSURES (SLOPE 12:12)

ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		PRESSURE	SUCTION
2	10	---	-65.2
	20	---	-63.2
	50	---	-60.6
	100	---	-58.7
3	10	---	-65.2
	20	---	-63.2
	50	---	-60.6
	100	---	-58.7

a = 7'-5"



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2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223



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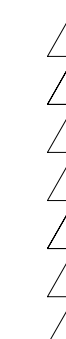
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DATE

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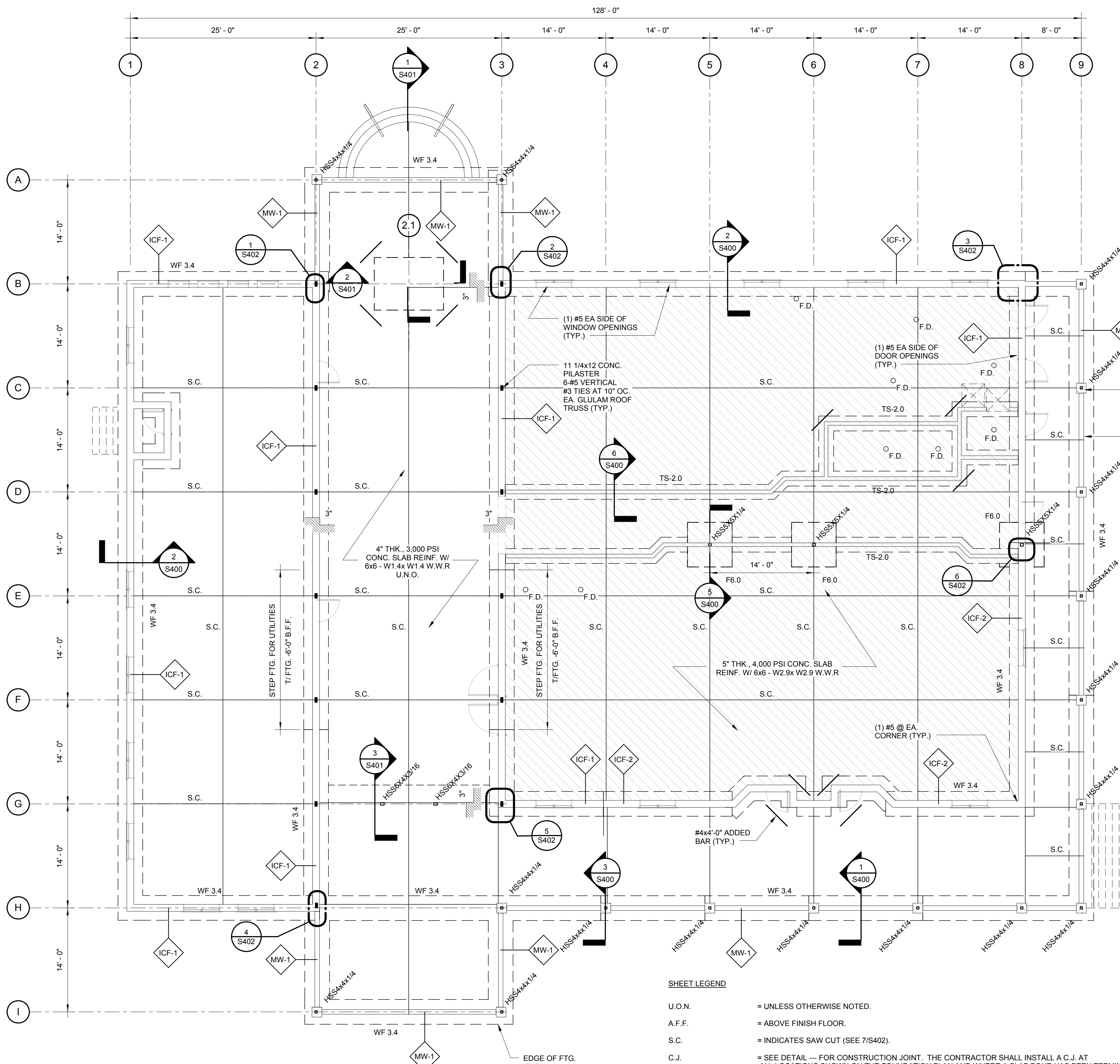
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C C PLAN

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FOUNDATION PLAN

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

SHEET LEGEND

- U.O.N. = UNLESS OTHERWISE NOTED.
- A.F.F. = ABOVE FINISH FLOOR.
- S.C. = INDICATES SAW CUT (SEE 7/S402).
- C.J. = SEE DETAIL --- FOR CONSTRUCTION JOINT. THE CONTRACTOR SHALL INSTALL A C.J. AT ALL LOCATIONS SHOWN ON THE FOUNDATION PLAN AND WHERE A SLAB POUR HAS BEEN TERMINATED AND CONTINUED AT A LATER TIME (SEE 8/S402).
- B.F.F. = BELOW FINISH FLOOR.

FOUNDATION NOTES:

1. SEE FOUNDATION NOTES ON SHEET S100.
2. SEE ARCHITECTURAL FOR WALLS AND DIMENSIONS NOT SHOWN.
3. VERIFY DOOR OPENINGS AND LOCATIONS WITH ARCHITECTURAL.
4. VERIFY DIMENSIONS AND LOCATIONS OF RECESSED SLABS WITH ARCHITECTURAL.
5. ALL SLABS ARE AT +0'-0" REF. UNLESS NOTED OTHERWISE. SEE CIVIL DRAWINGS FOR FINISHED FLOOR.
6. COLUMNS ARE CENTERED ON FOOTINGS UNLESS NOTED OTHERWISE.



TALLAHASSEE
2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

WALL FOOTING SCHEDULE

MARK	WIDTH	THICKNESS	REINFORCING (CONT.)	TRANSVERSE STEEL
WF 3.4	3' - 4"	1' - 4"	4-#5 TOP & BOTT.	#4 @ 32" TOP & BOTT.

THICKENED SLAB SCHEDULE

MARK	WIDTH	THICKNESS	REINFORCING (CONT.)	TRANSVERSE STEEL
TS-2.0	2' - 0"	1' - 0"	2-#5 BARS CONT. BOTT.	#4 @ 32" O.C.

ICF WALL SCHEDULE

MARK	THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING
ICF-1	6" ICF	1-#5 @ 40" O.C.	1-#5 @ 48" O.C. MAX
ICF-2	6" ICF	1-#5 @ 32" O.C.	1-#5 @ 48" O.C. MAX

MASONRY WALL SCHEDULE

MARK	THICKNESS	VERTICAL REINFORCING	COMMENTS
MW-1	8" CMU	1-#5 @ 16" O.C.	FULLY GROUTED

COLUMN FOOTING SCHEDULE

MARK	LENGTH	WIDTH	THICKNESS	REINFORCING BOTTOM STEEL	REINFORCING TOP STEEL	COMMENTS
F6.0	6' - 0"	6' - 0"	2' - 0"	(7) #5 x 5'-6" (7) #5 x 5'-6"	(7) #5 x 5'-6" (7) #5 x 5'-6"	



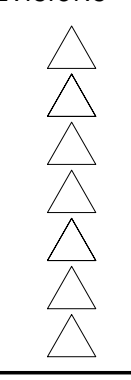
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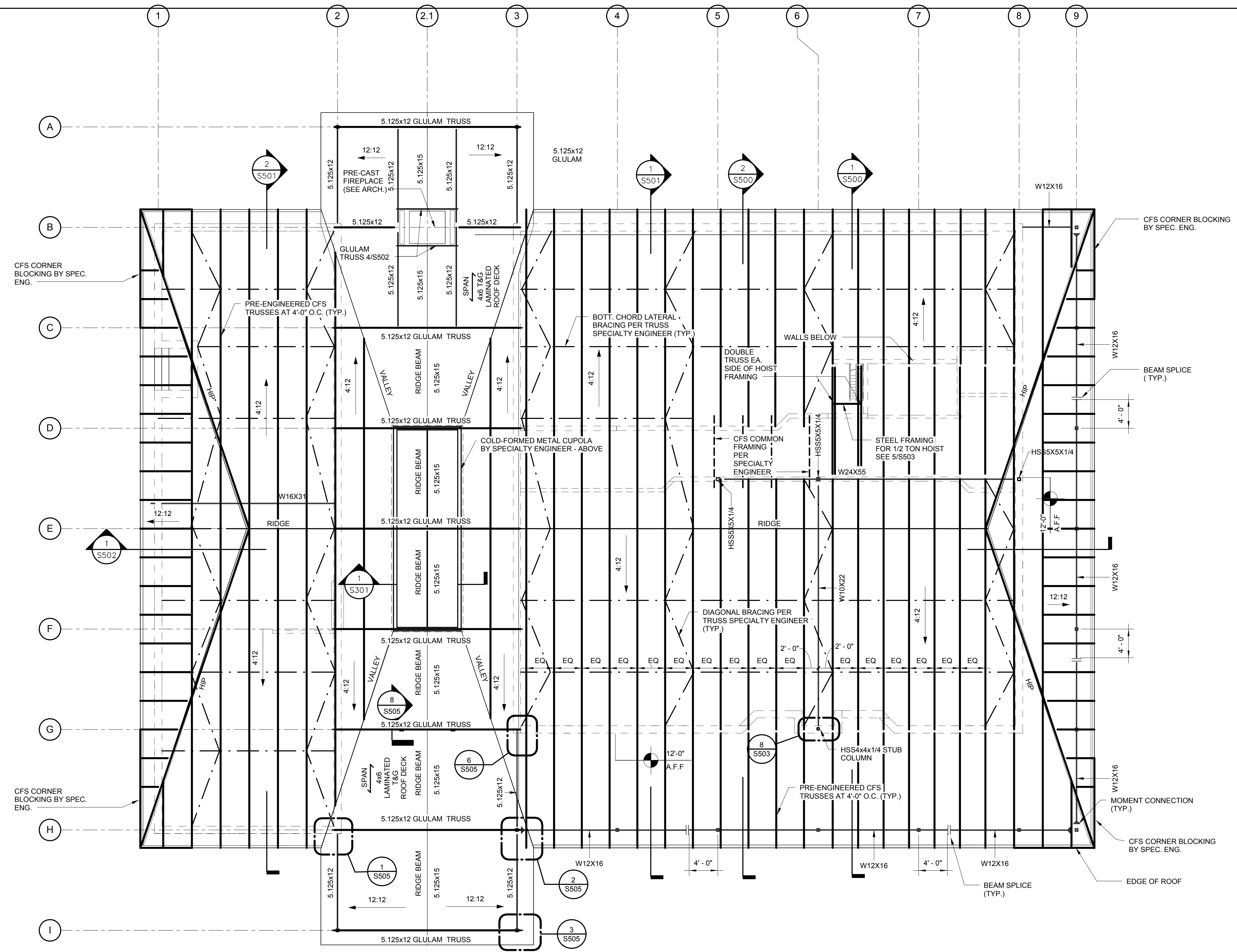
FOUNDATION PLAN

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ICF LINTEL SCHEDULE

MAX SPAN	MIN. DEPTH	TOP REINF.	BOTT. REINF.	VERTICAL
4'-0"	8"	-	1-#5	-
6'-0"	16"	-	2-#5	-
8'-0"	16"	-	2-#6	-
10'-0"	24"	2-#5	2-#6	-

- NOTES:
1. ADD 1-#5 BAR AT BOTTOM OF EACH OPENING. EXTEND BOTTOM BARS 24" MINIMUM BEYOND SIDES OF OPENINGS.
 2. EXTEND LINTEL BARS 24" MINIMUM BEYOND SIDES OF OPENINGS.



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



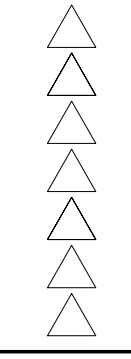
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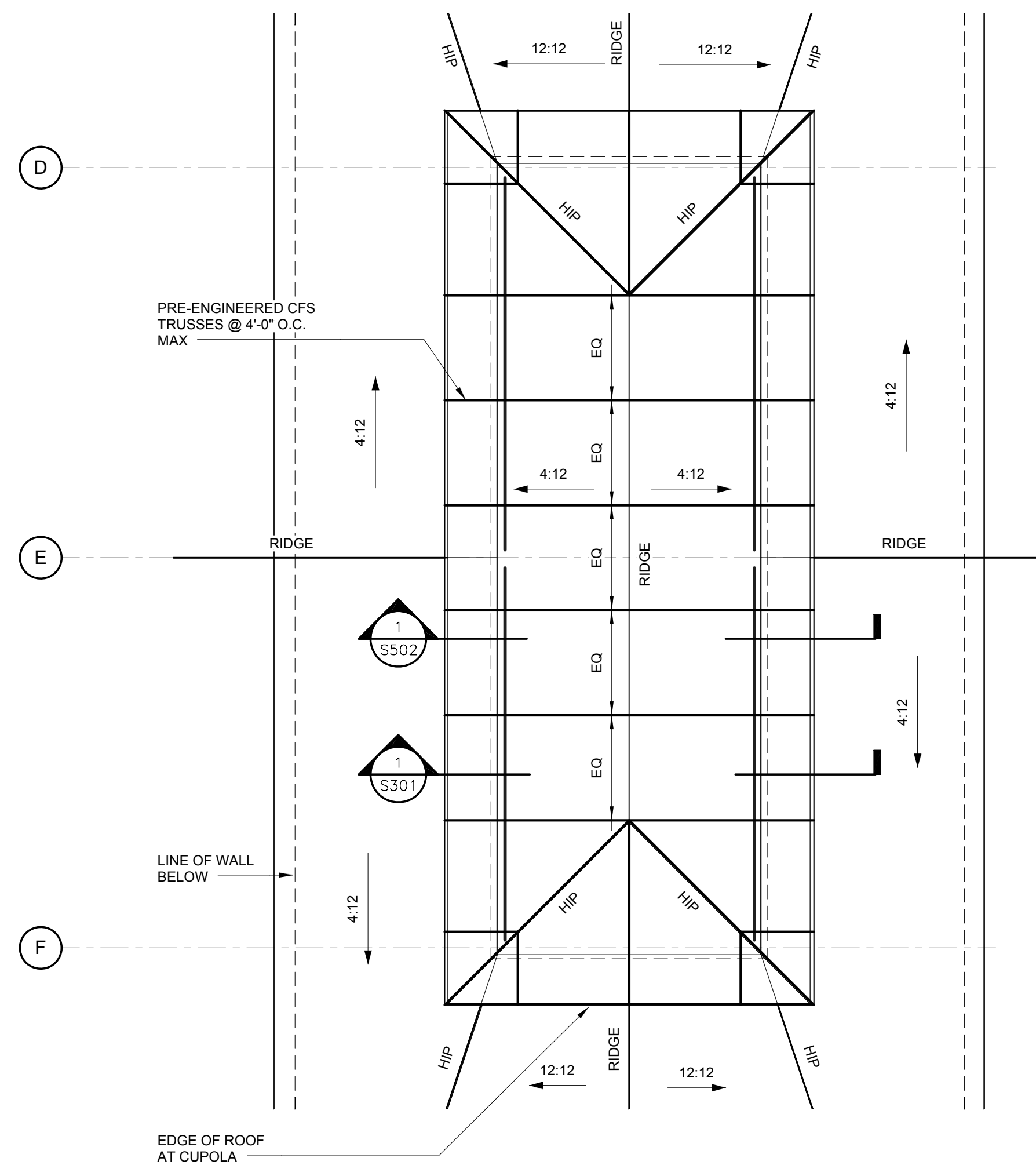
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RAMIIN PLAN

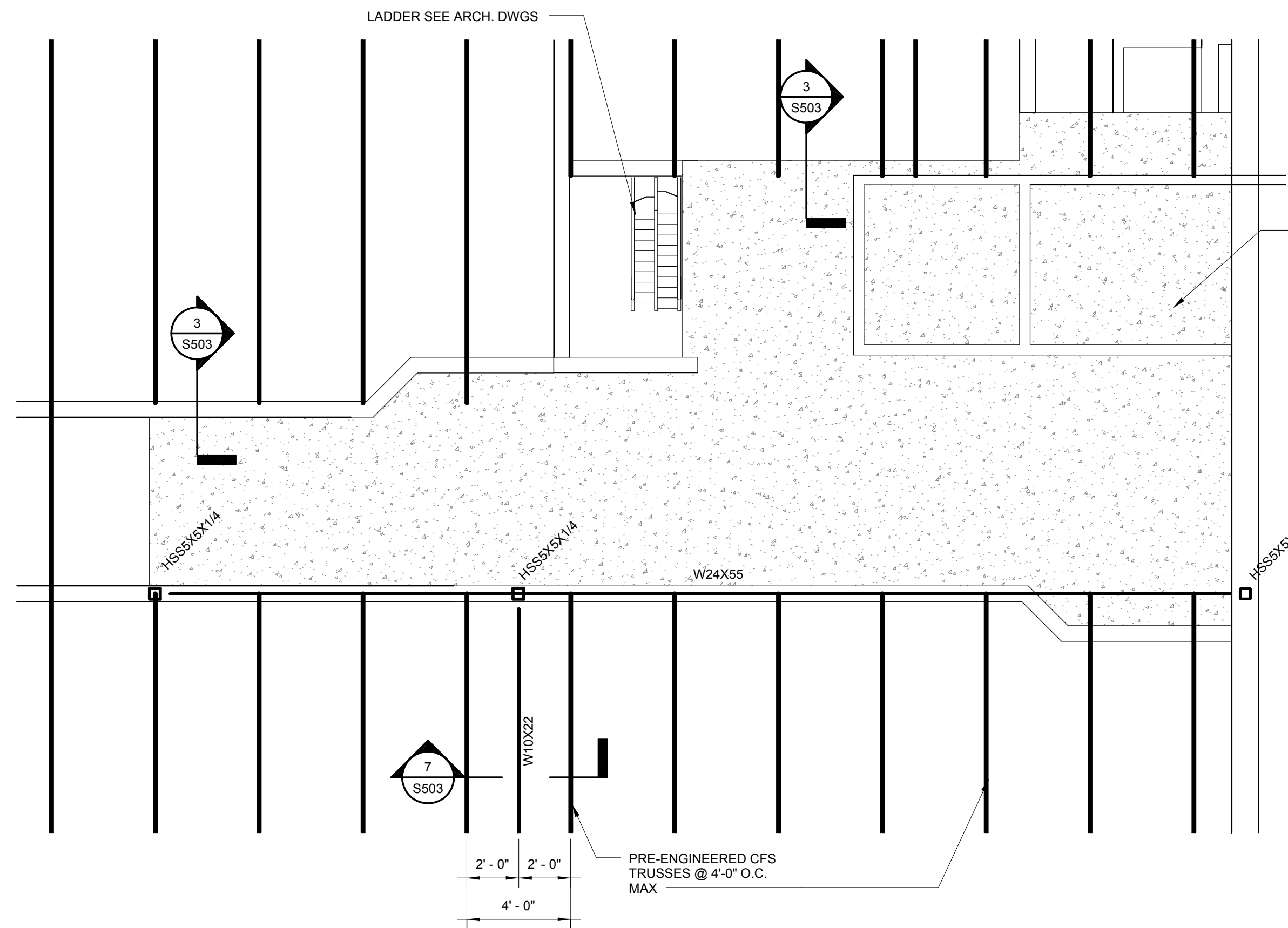


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2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223



FRAMING PLAN - CUPOLA

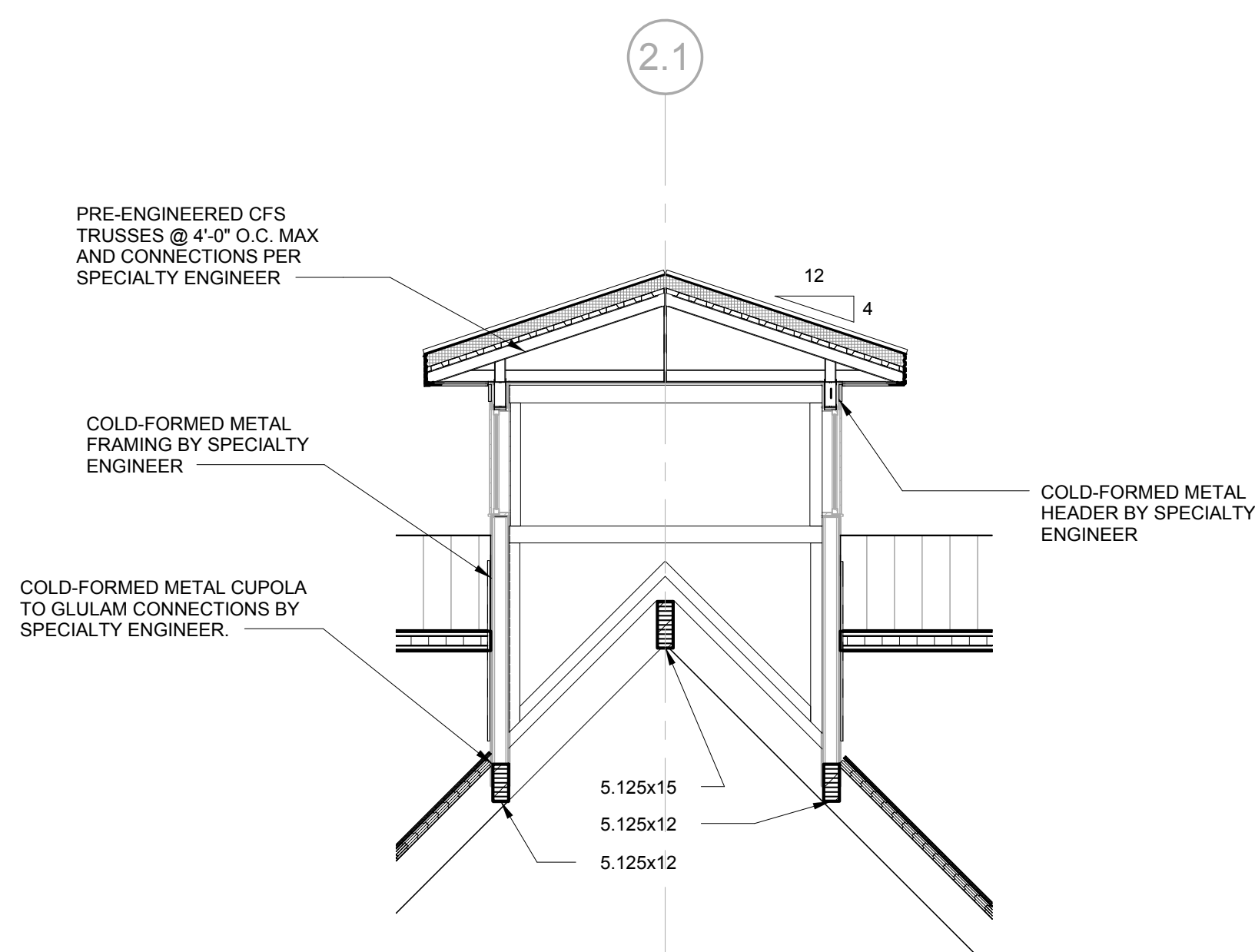
SCALE: 1/4" = 1'-0"



EQUIPMENT PLATFORM

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

8" SLAB SHALL BE 4,000 PSI NORMAL WEIGHT CONCRETE. #5 BOTTOM REINFORCING BARS AT 12" O.C., 1" CLR. FROM BOTTOM OF SLAB. (CENTER REBAR IN DECKING FLUTES & SUPPORT W/CHAIRS) #5 TOP REINFORCING BARS AT 12" O.C. EACH WAY, 1" CLR. FROM TOP OF SLAB. (UNLESS NOTED OTHERWISE) SUPPORT REBAR ON CHCP HIGH CHAIRS AT 48" O.C.



CUPOLA SECTION

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



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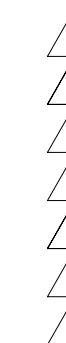
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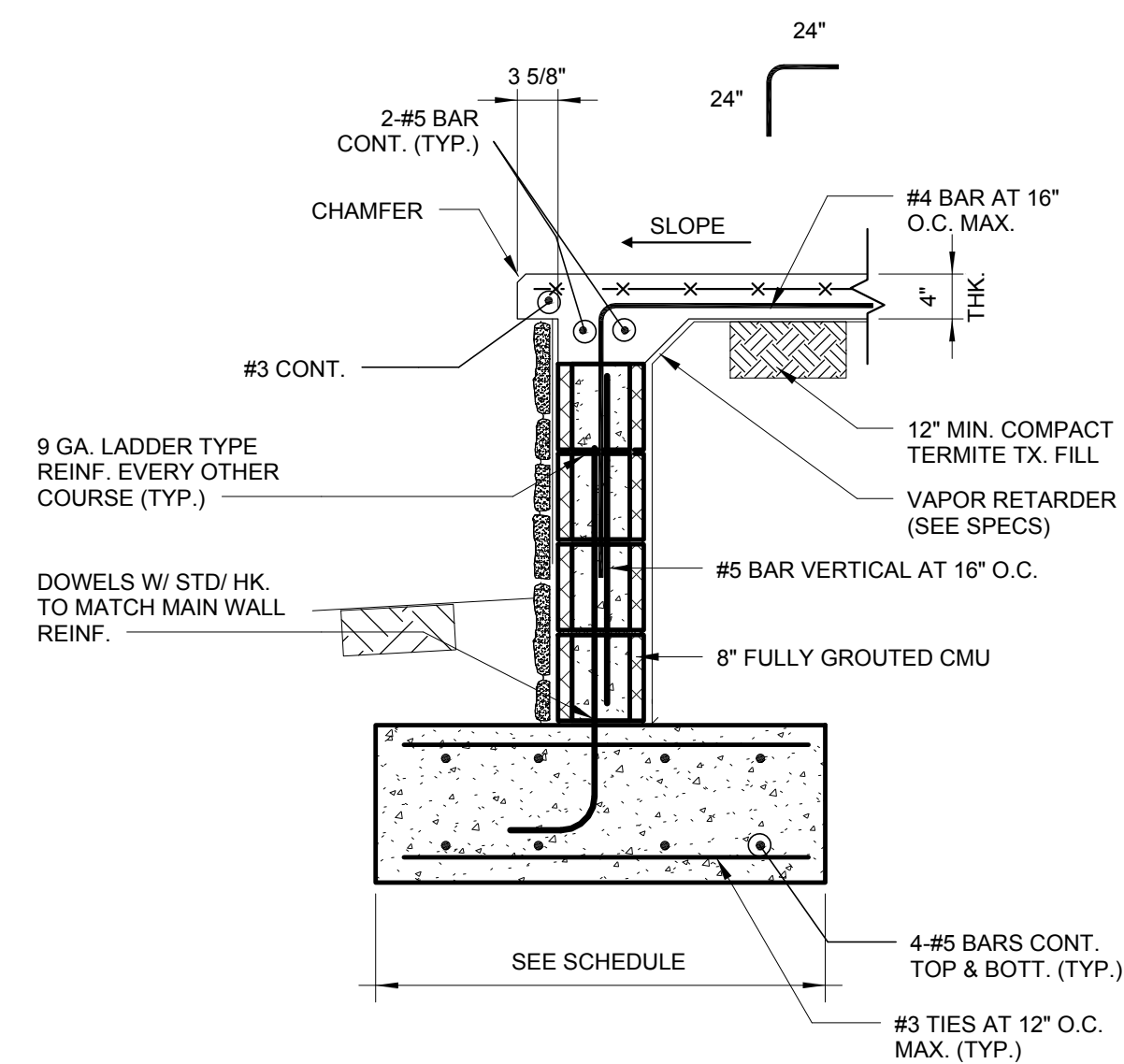


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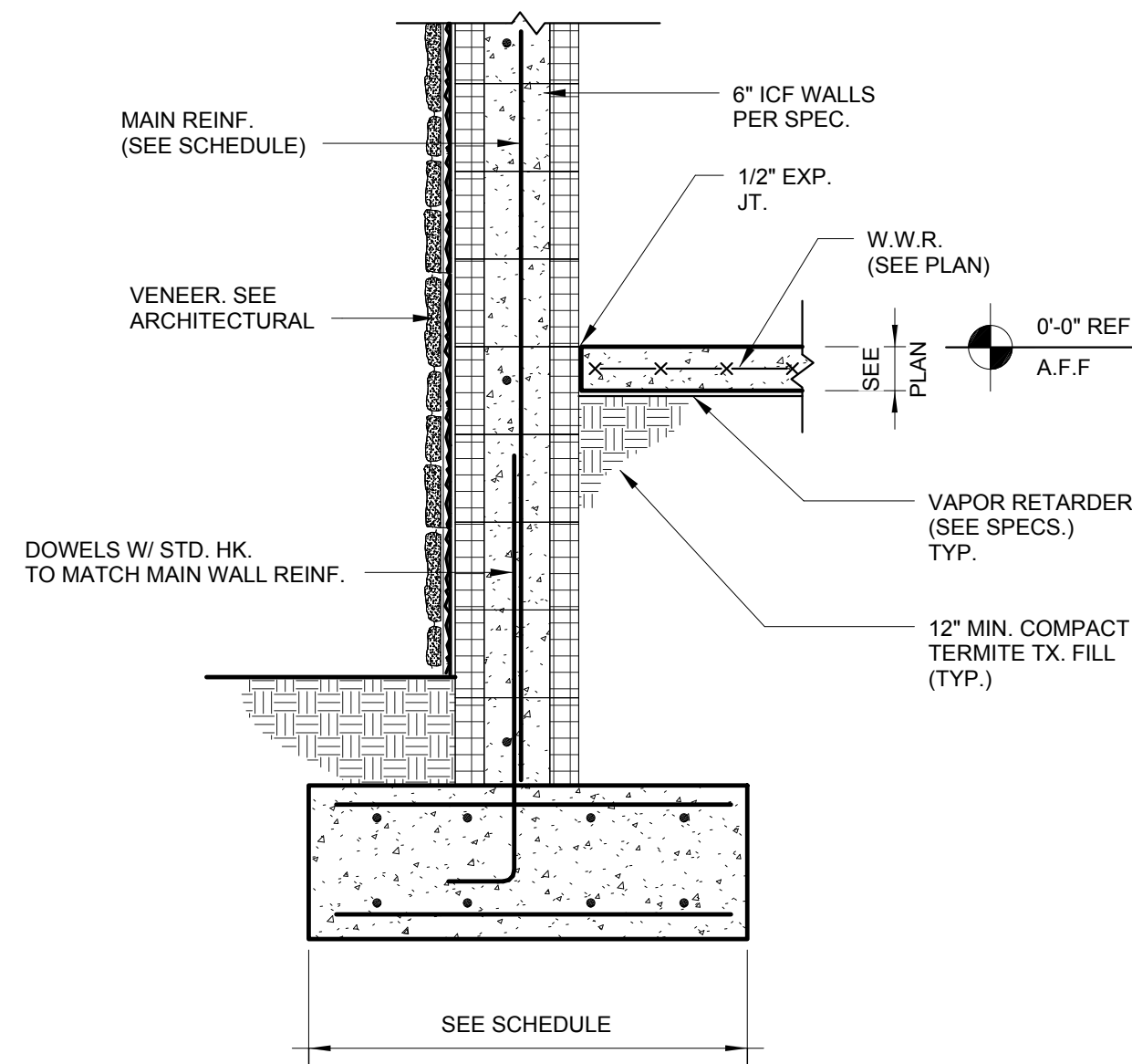


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TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

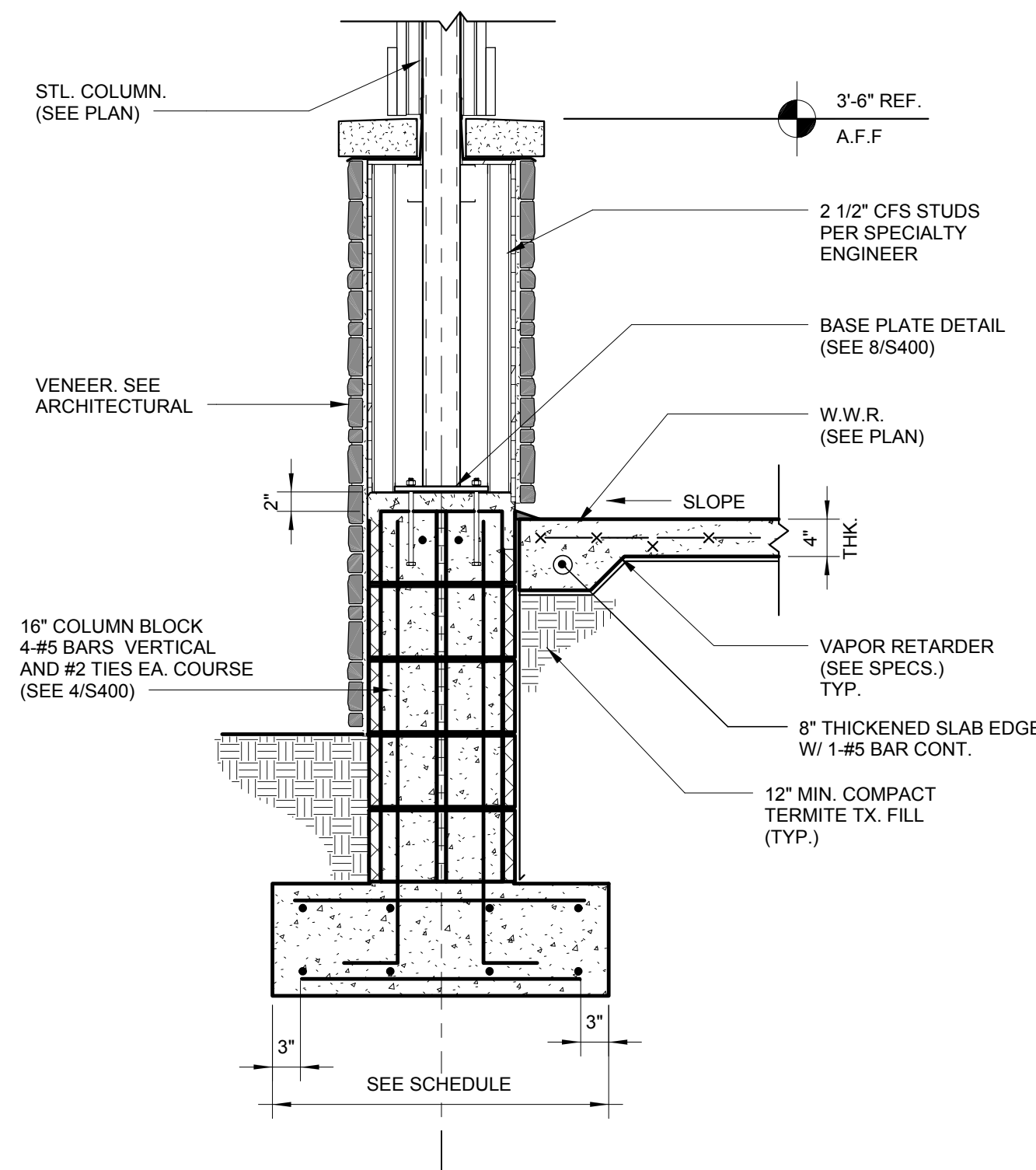
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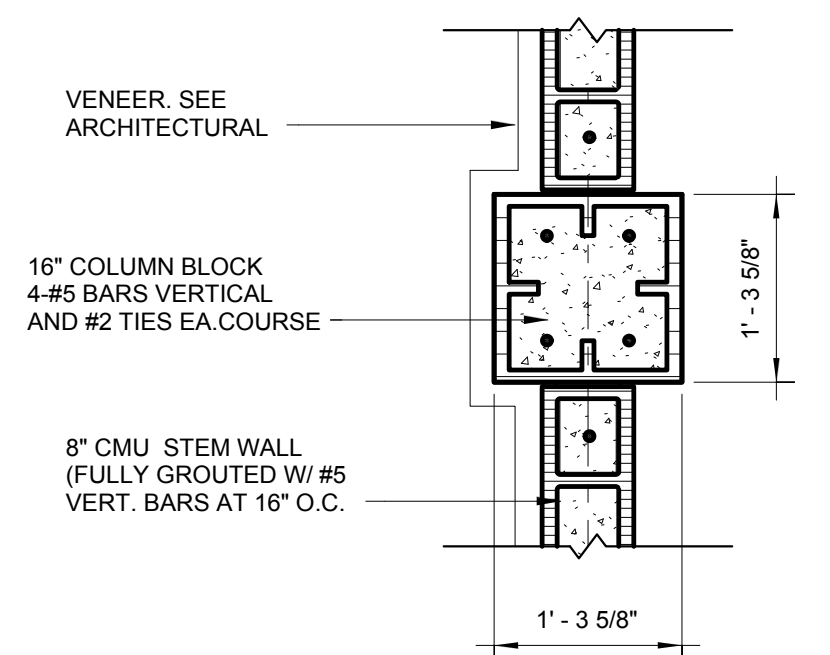
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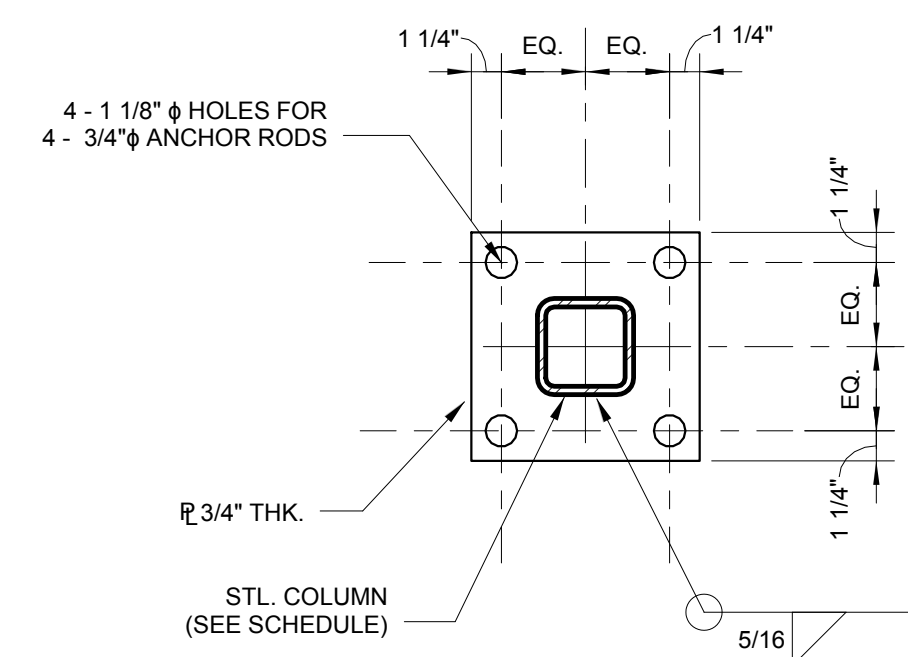
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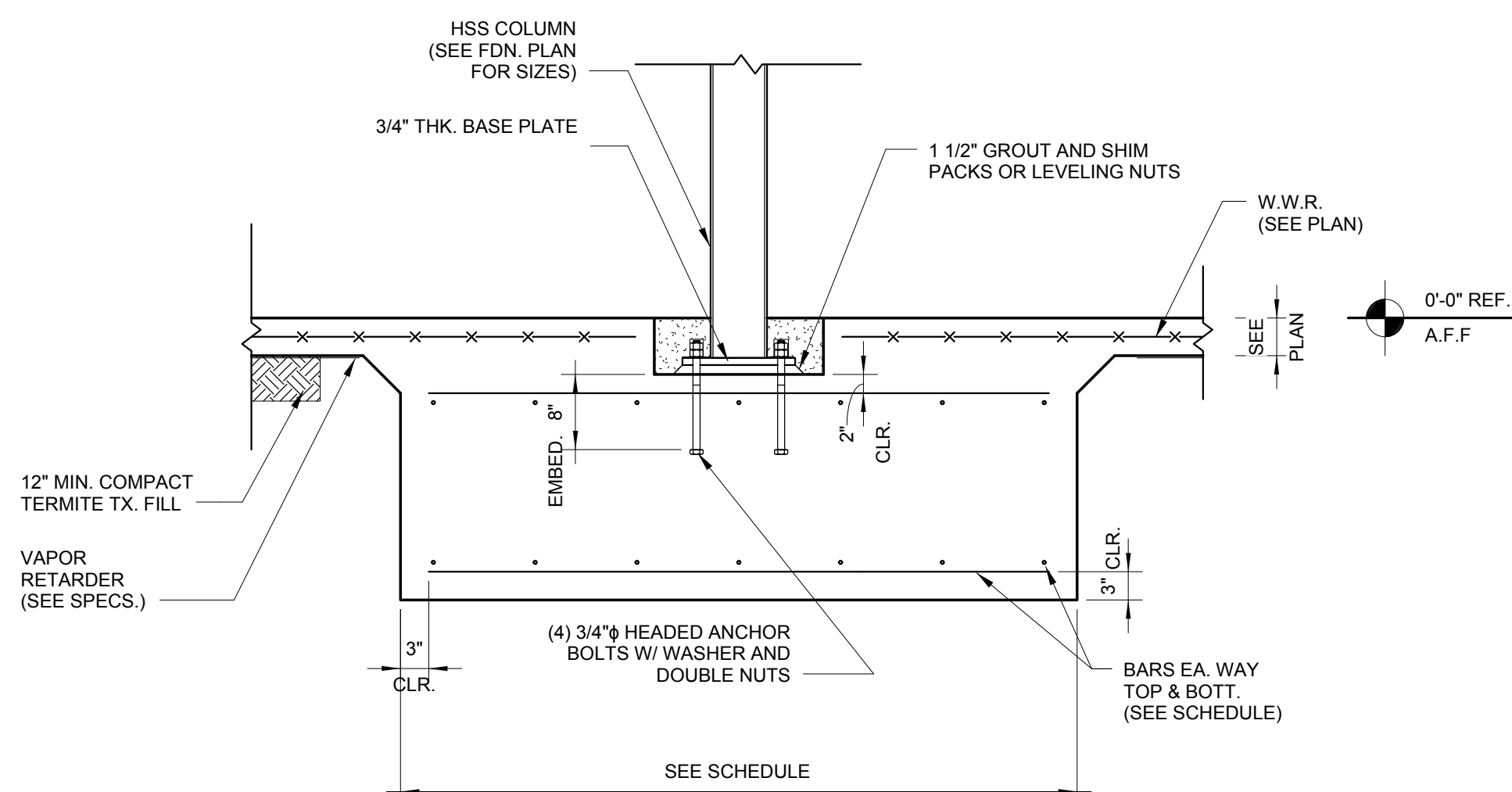
3 SECTION
SCALE: 3/4" = 1'-0"



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

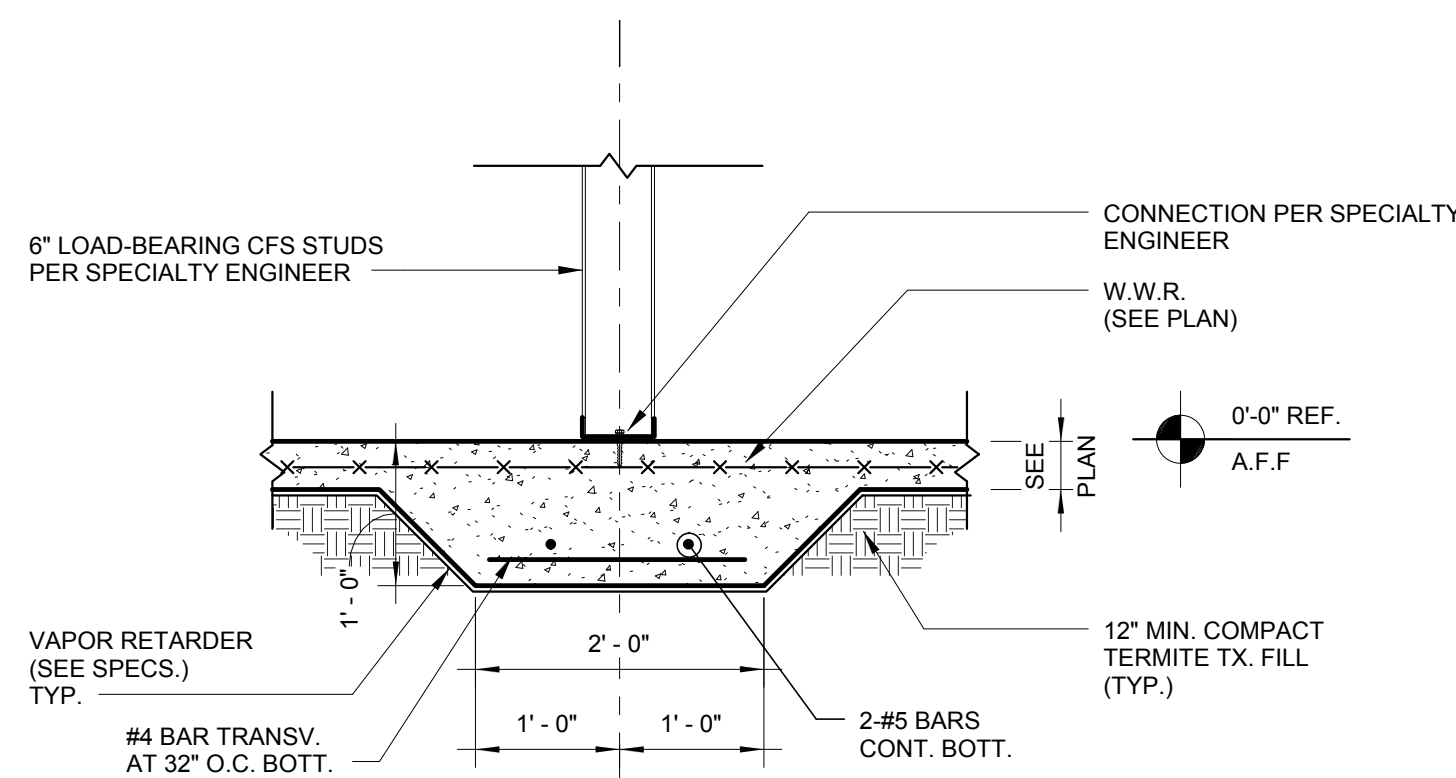


8 COLUMN BASE PLATE
SCALE: 1 1/2" = 1'-0"

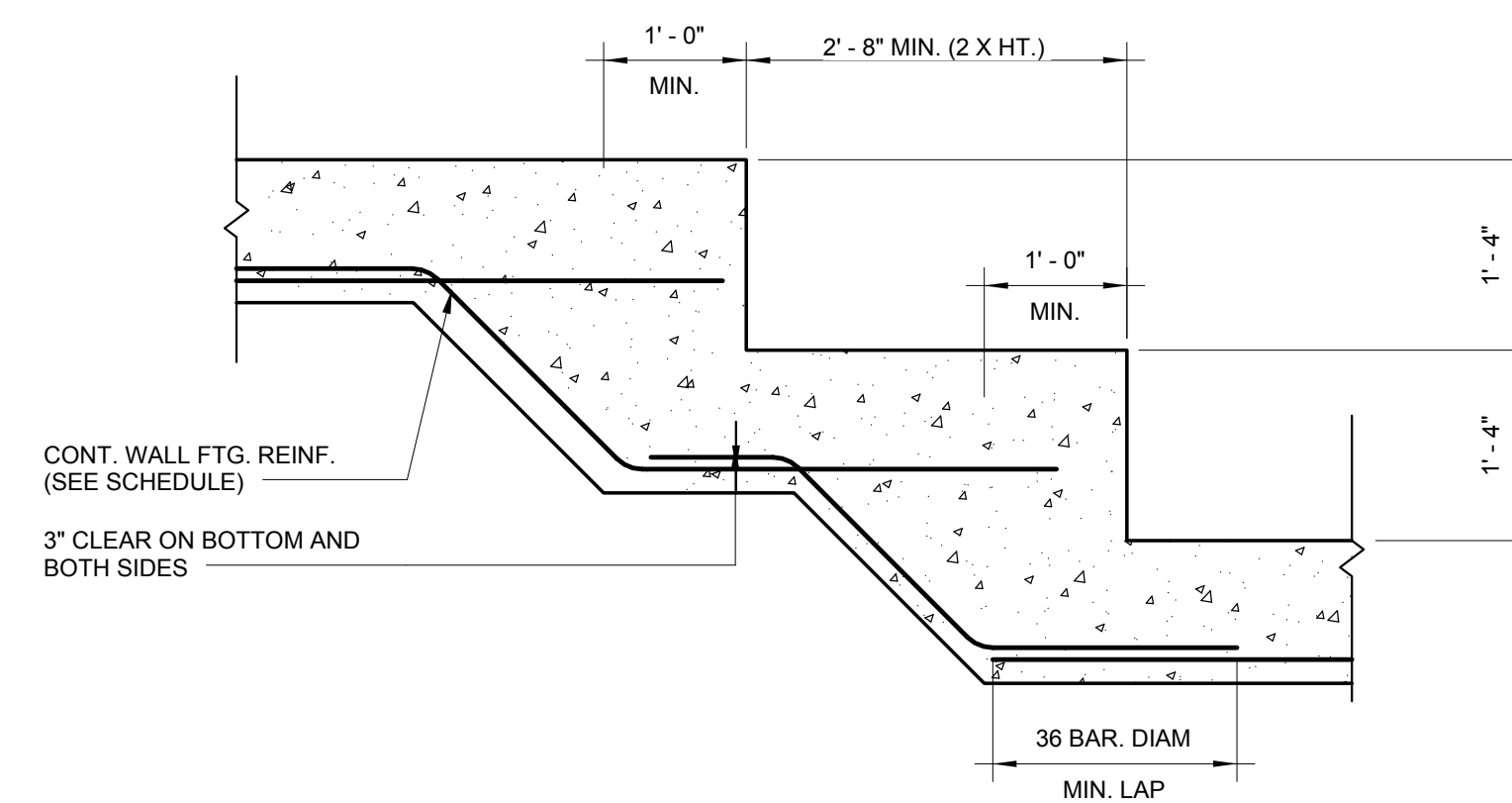


5 SECTION
SCALE: 3/4" = 1'-0"

- ANCHOR BOLT NOTES:**
1. HEADED ANCHOR BOLTS: ASTM F 1554 HEAVY HEX, GRADE 36, STRAIGHT
 2. NUTS: ASTM A 563 HEAVY HEX CARBON STEEL
 3. PLATE WASHERS: ASTM A36 CARBON STEEL, 2x2x1/4 W/ STD. HOLE
 4. WASHERS: ASTM F 436 HARDENED CARBON STEEL



6 SECTION
SCALE: 3/4" = 1'-0"



7 STEPPED FOOTING
SCALE: 3/4" = 1'-0"



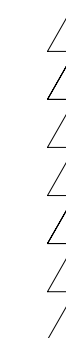
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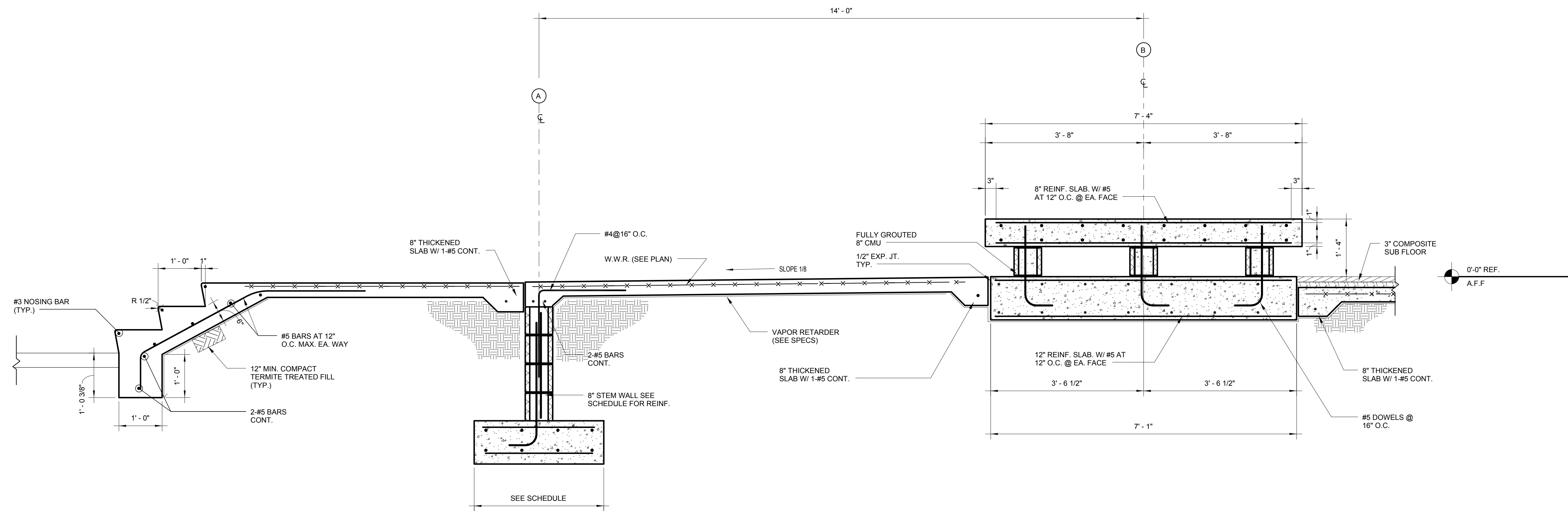


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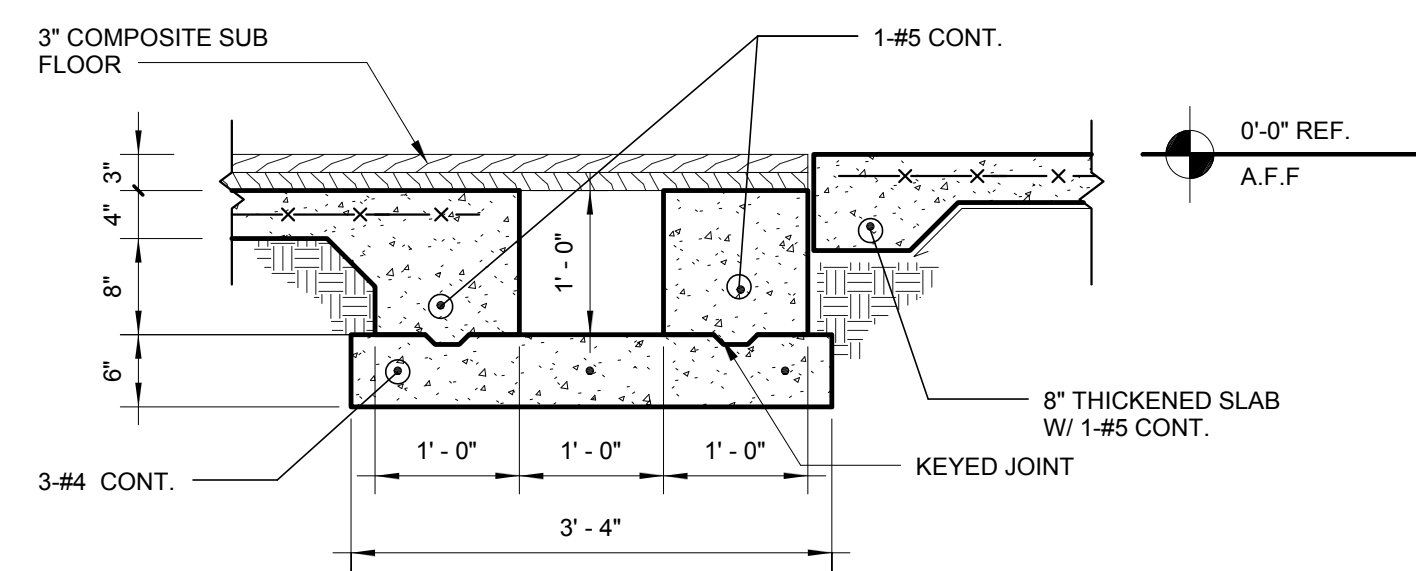


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2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
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Fax: 850.671.7223

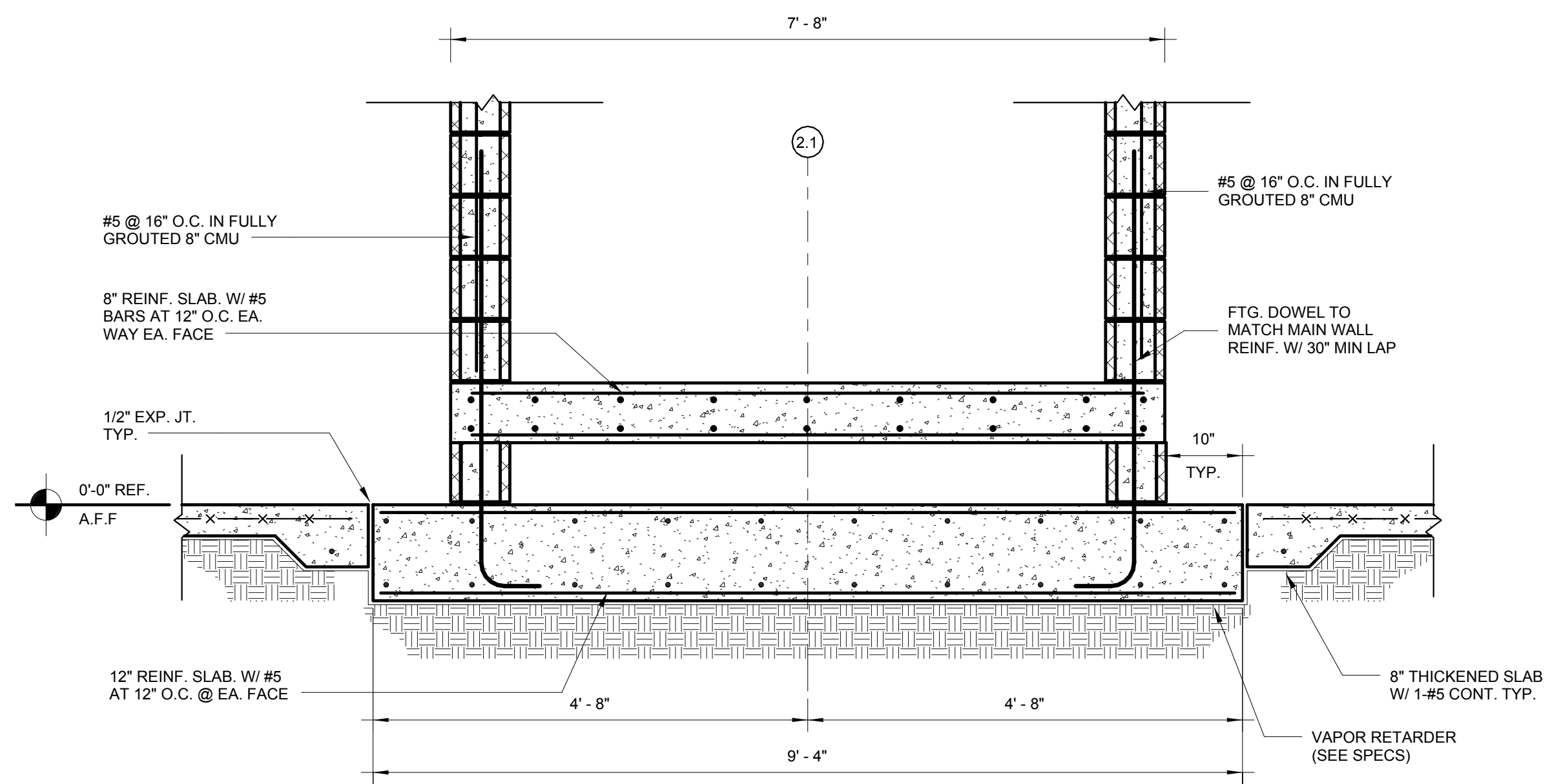
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1 SECTION
S401 SCALE: 3/4" = 1'-0"



3 DETAIL
S401 SCALE: 3/4" = 1'-0"



2 SECTION
S401 SCALE: 3/4" = 1'-0"



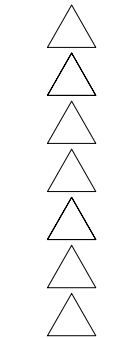
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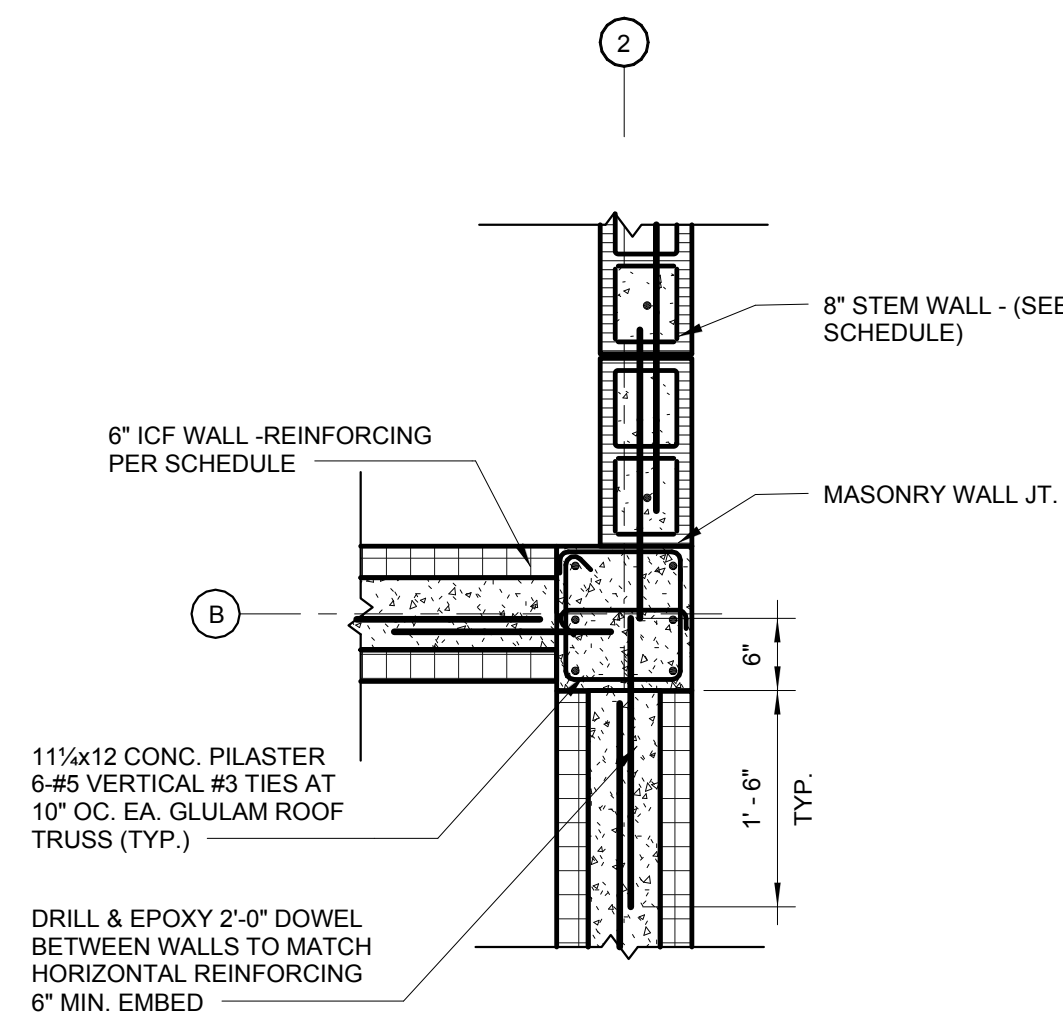
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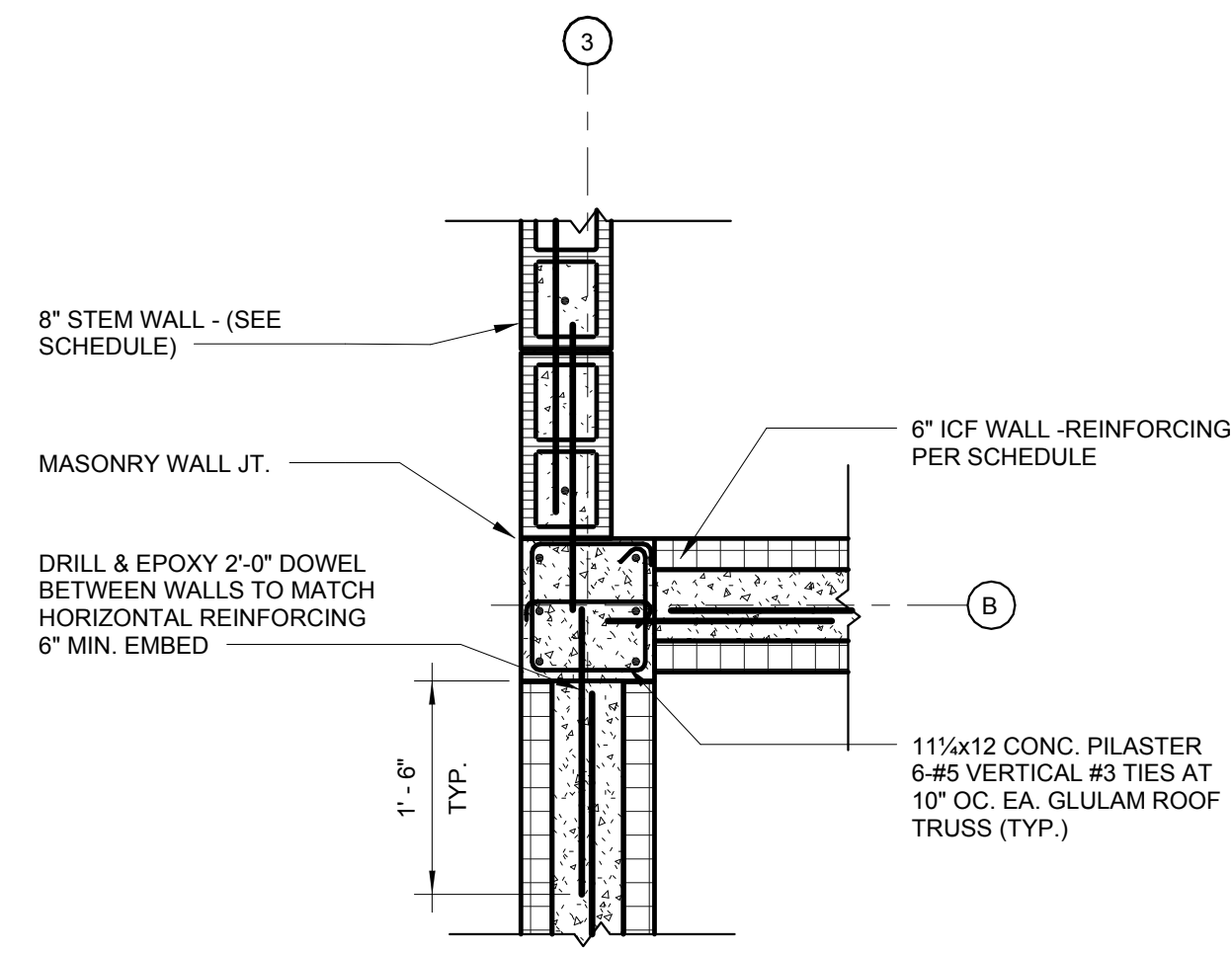
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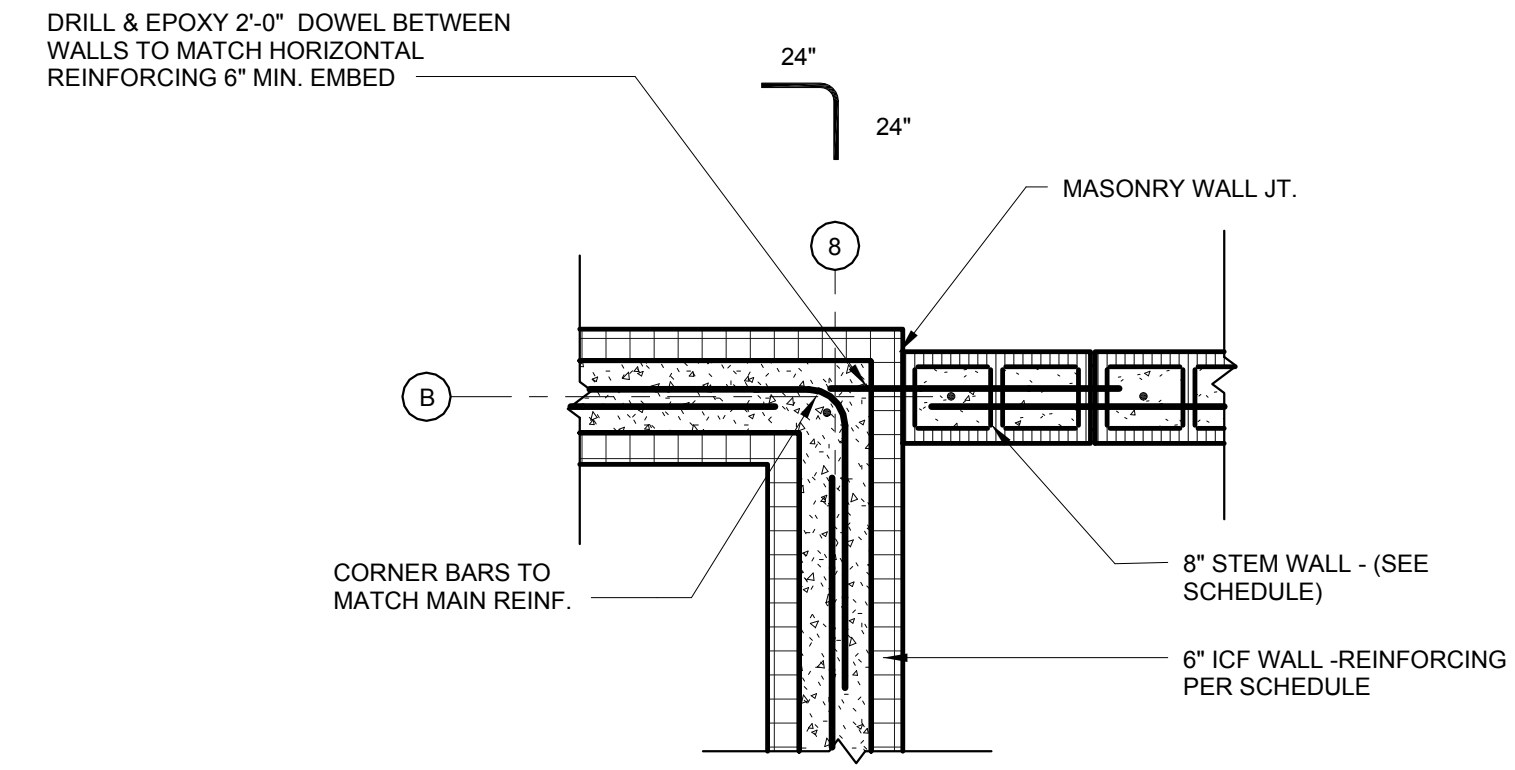
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TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
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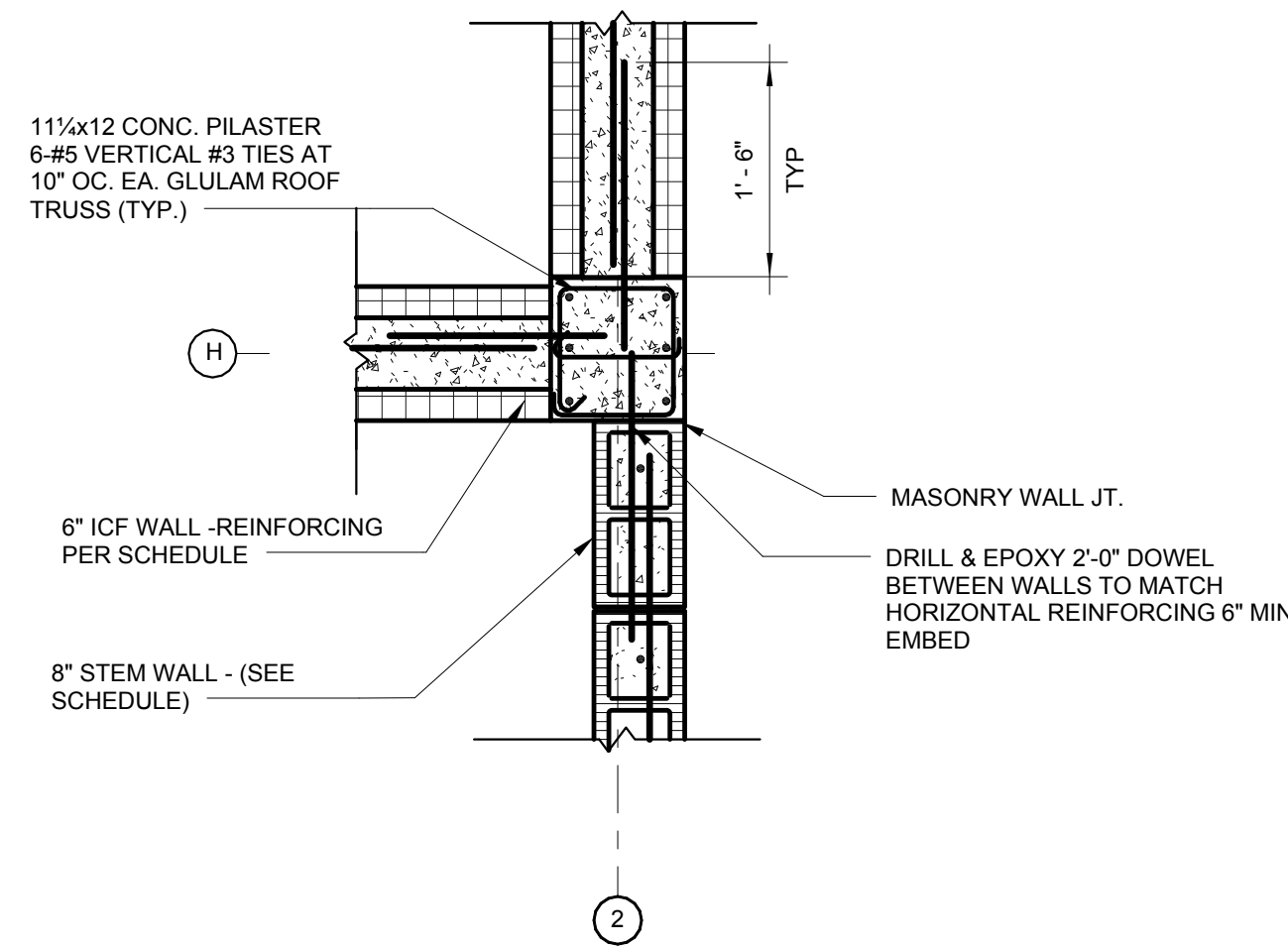
1 PLAN DETAIL
S402 SCALE: 3/4" = 1'-0"



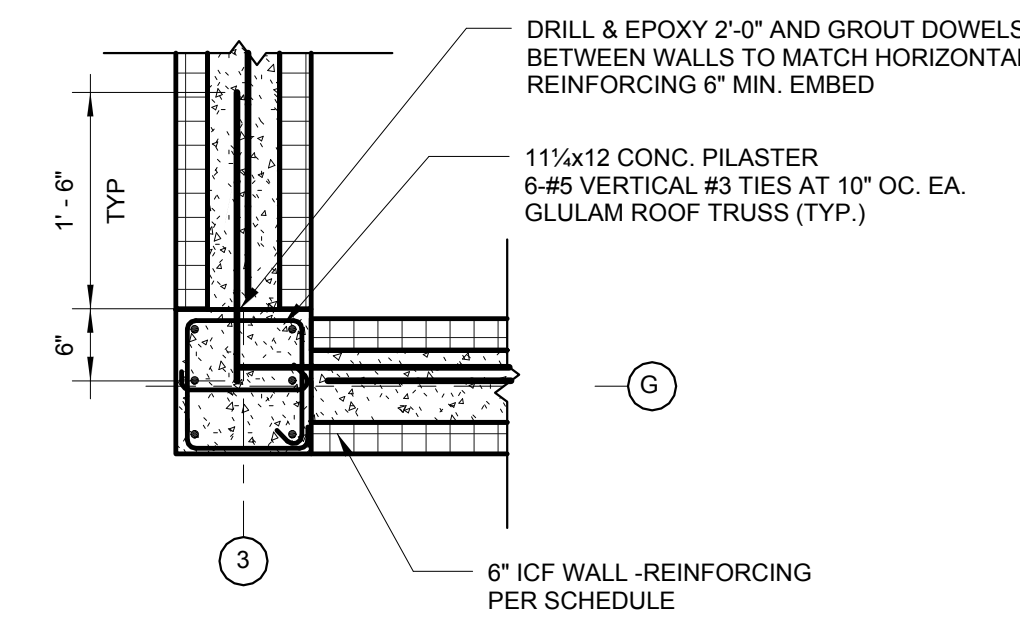
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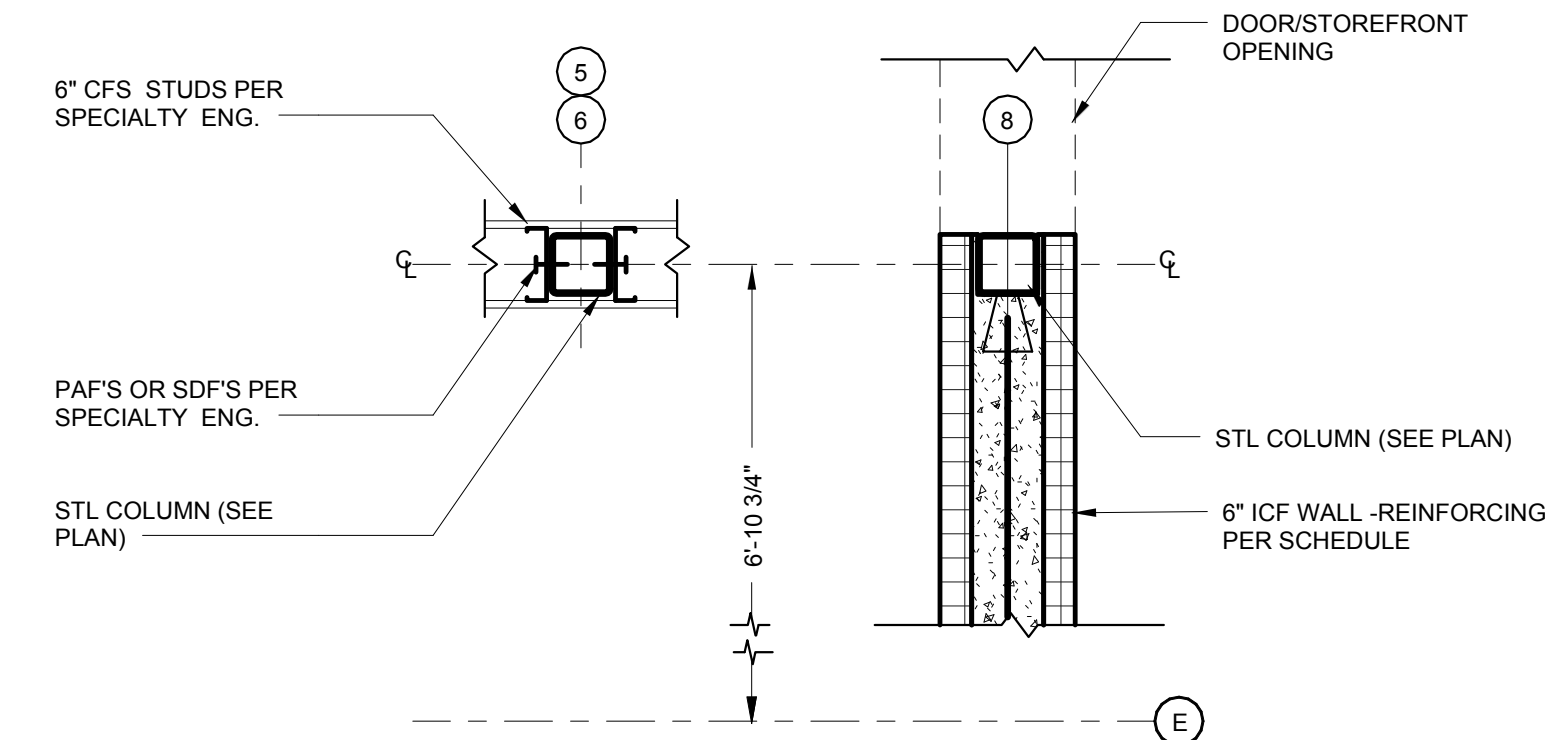
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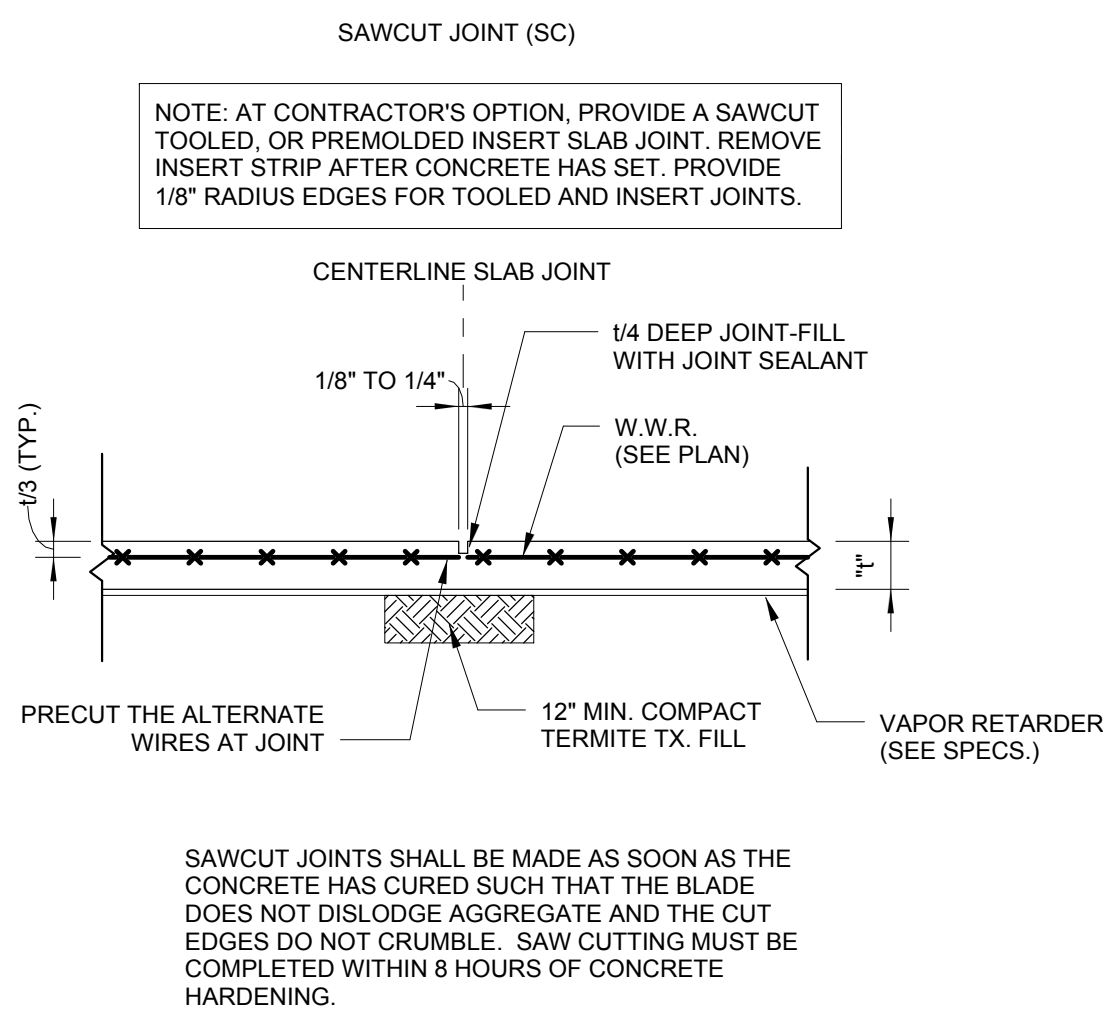
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S402 SCALE: 3/4" = 1'-0"



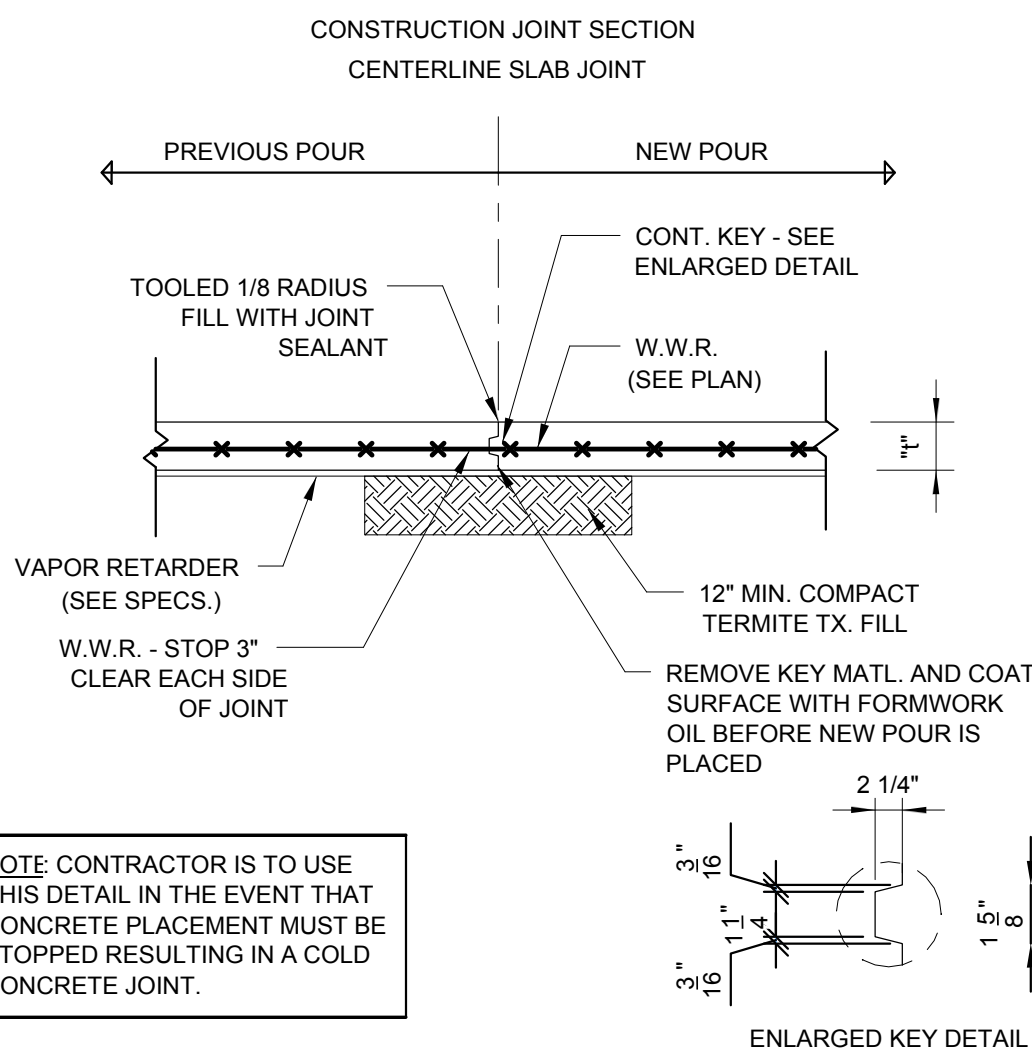
5 PLAN DETAIL
S402 SCALE: 3/4" = 1'-0"



6 PLAN DETAIL
S402 SCALE: 3/4" = 1'-0"



7 CONTROL JOINT (SC)
S402 SCALE: 3/4" = 1'-0"



8 CONTROL JOINT (CJ)
S402 SCALE: 3/4" = 1'-0"



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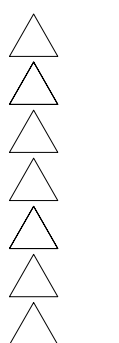
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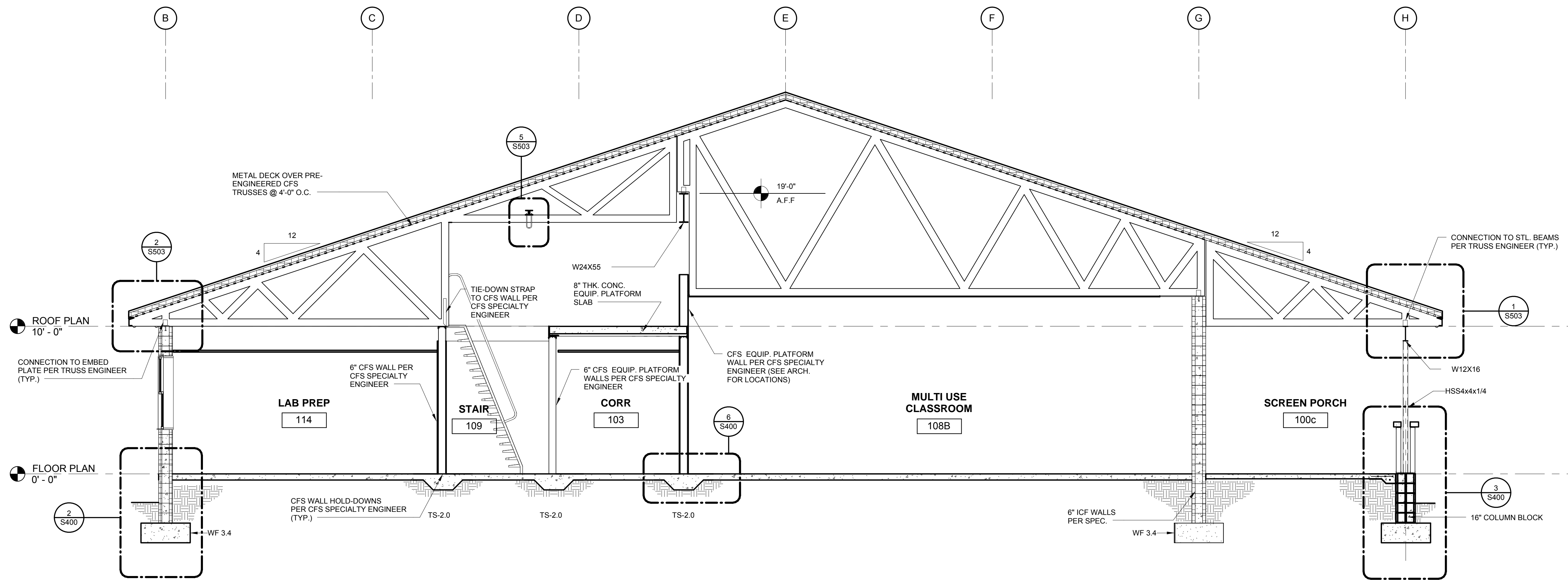
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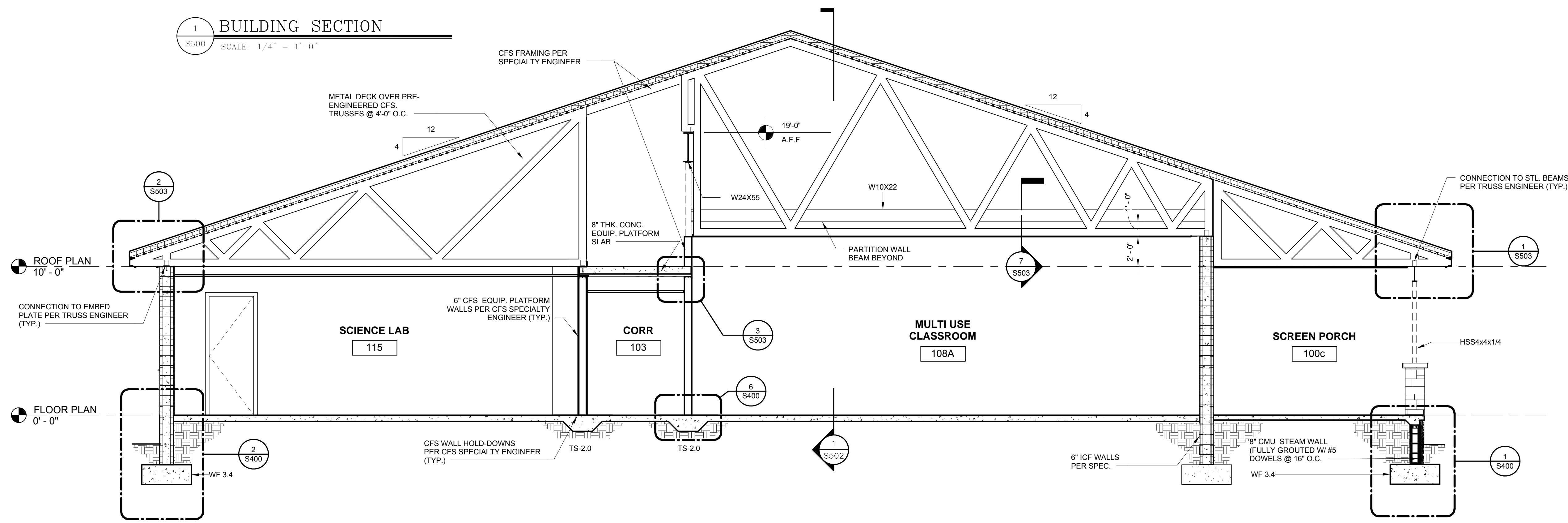
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2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

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225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978



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



2 BUILDING SECTION
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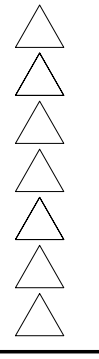
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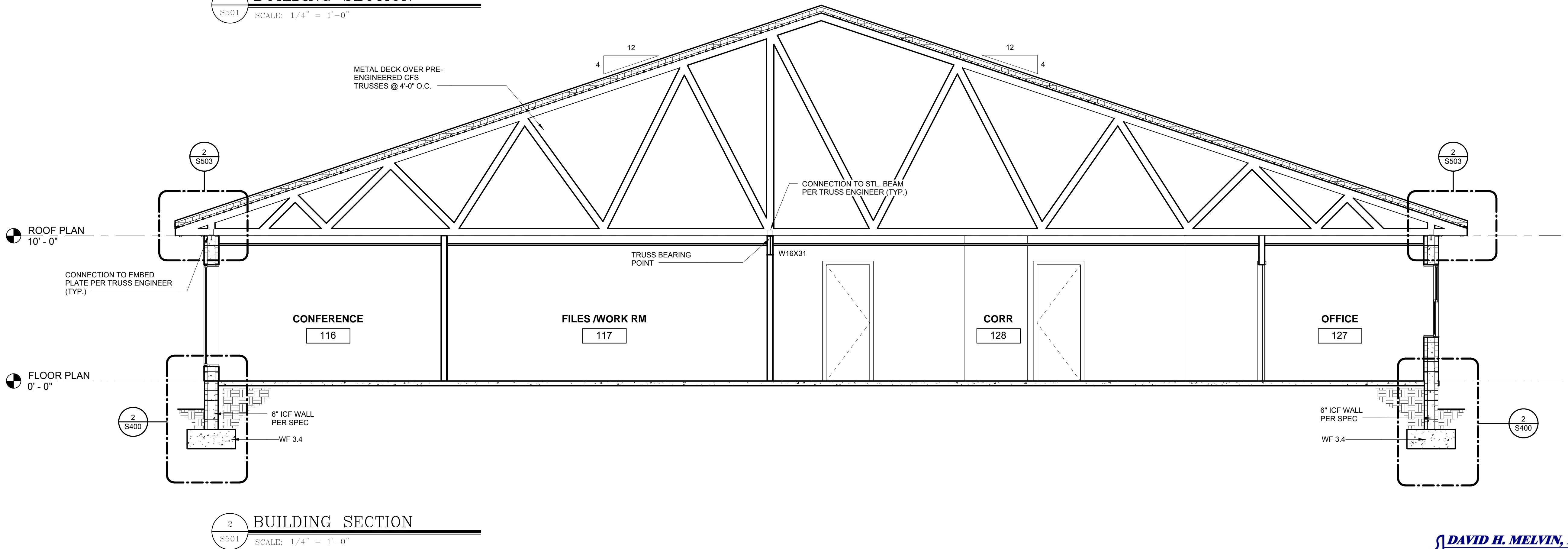
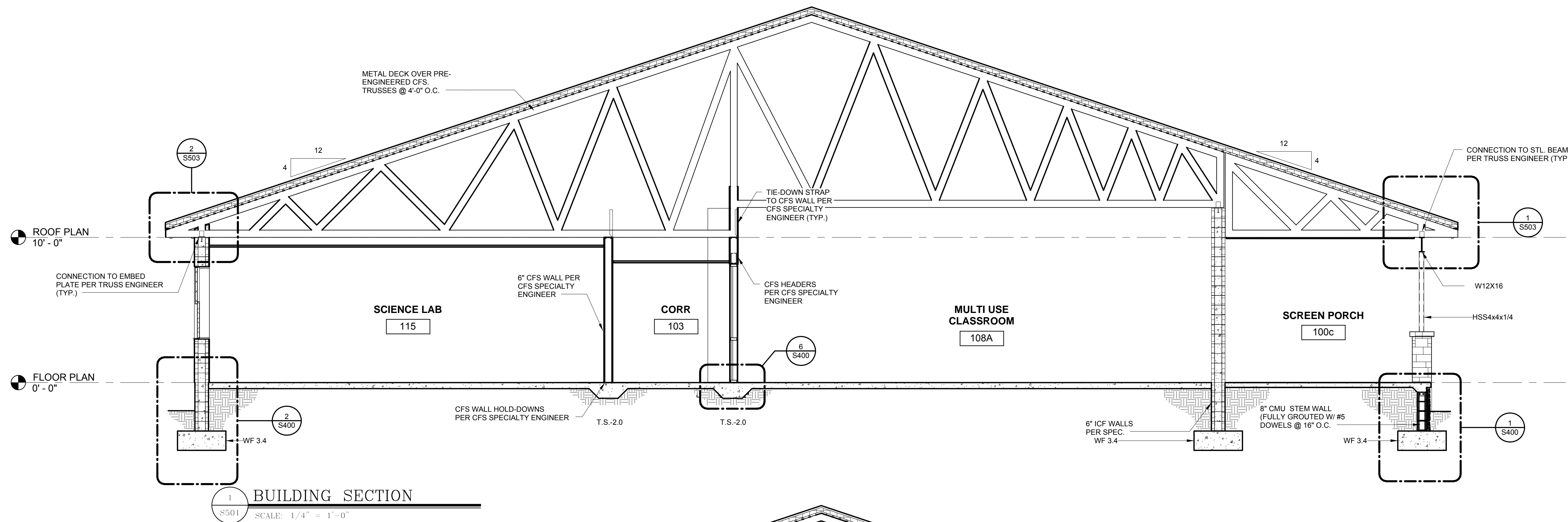


BUILDING SECTIONS

DAVID H. MELVIN, INC.
Consulting Engineers

TALLAHASSEE
2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

00



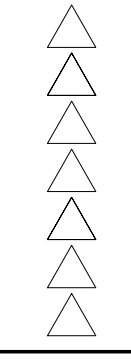
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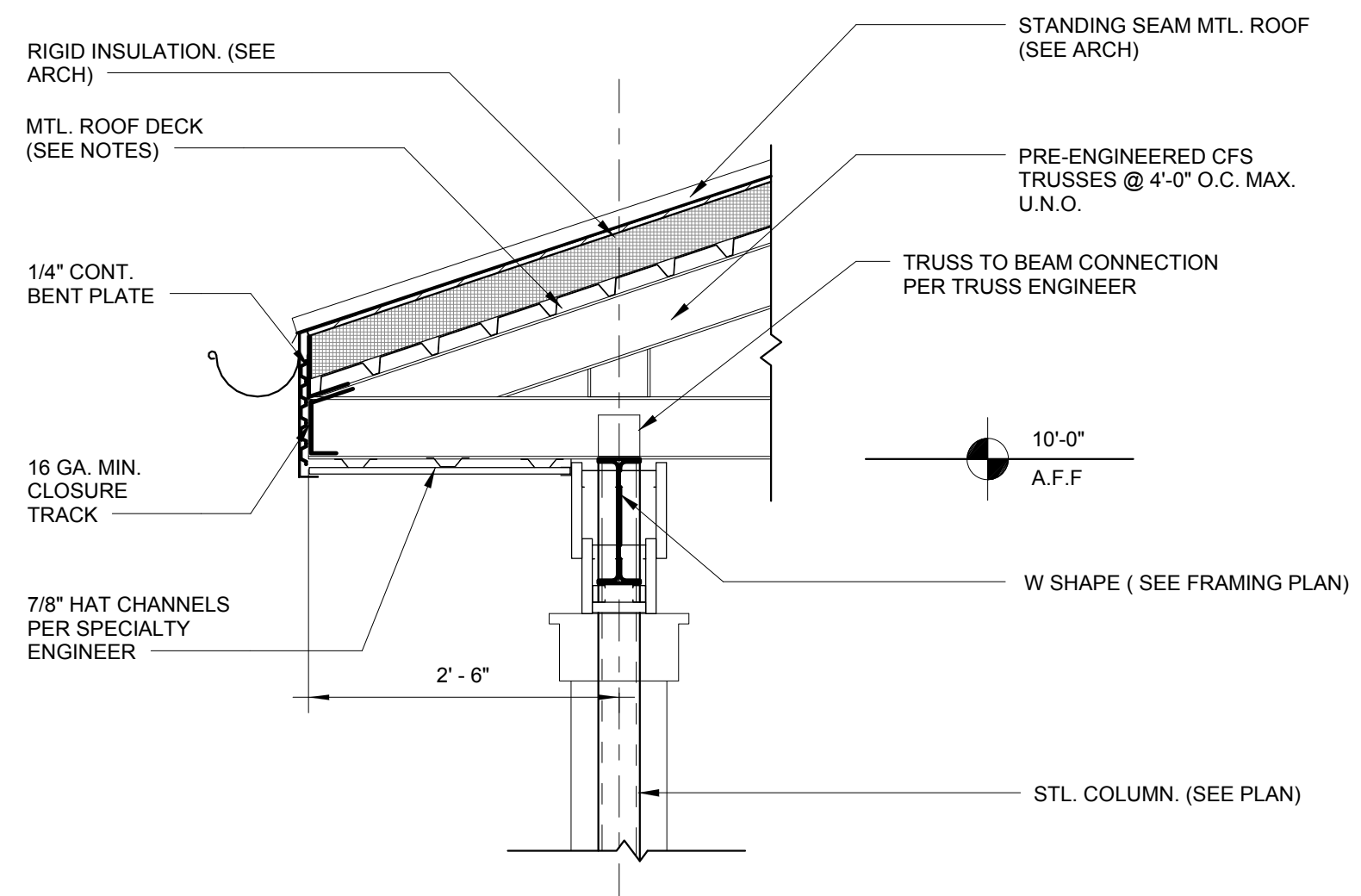


UILDIN SECTIONS

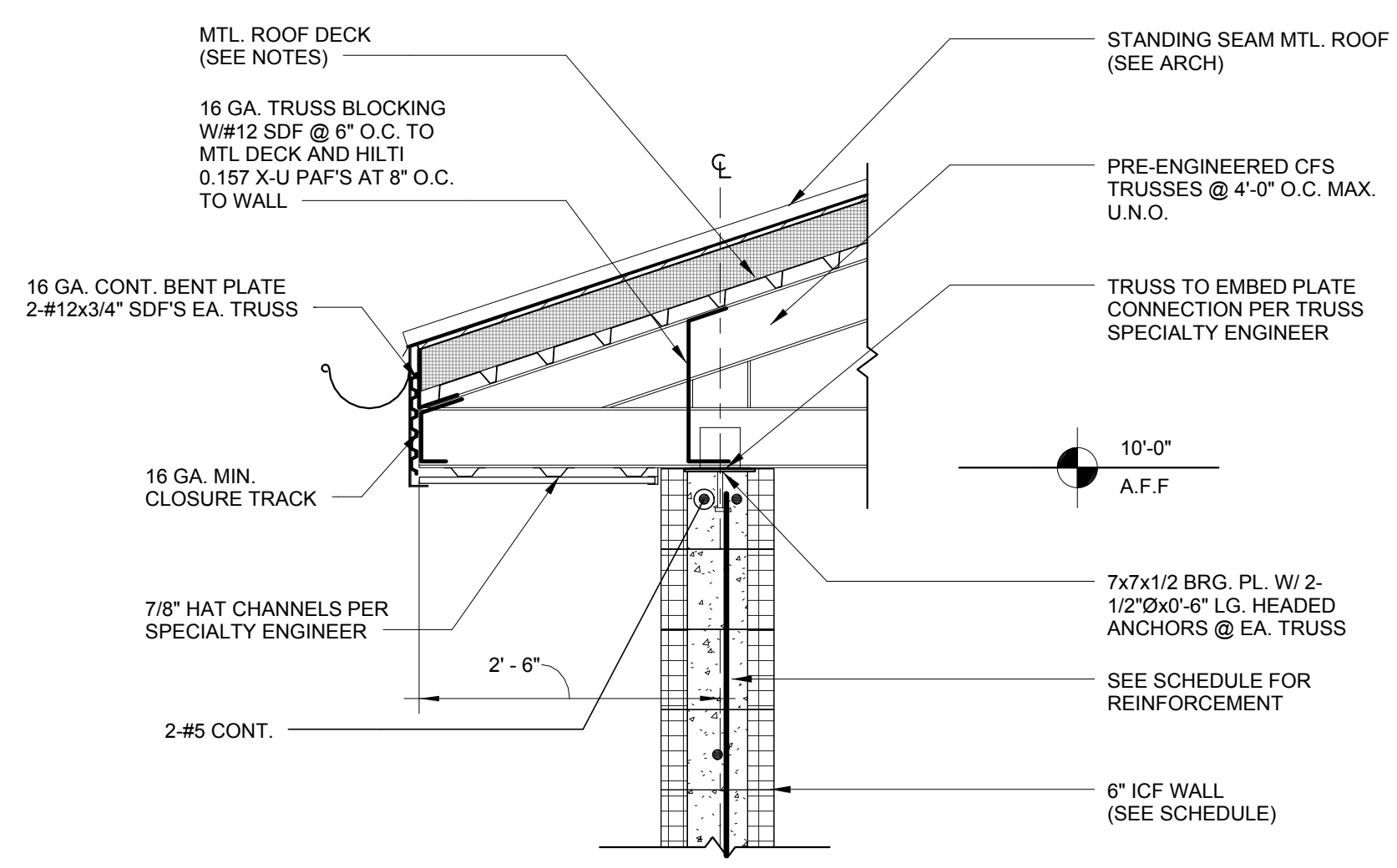


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 Phone: 850.671.7221
 Fax: 850.671.7223

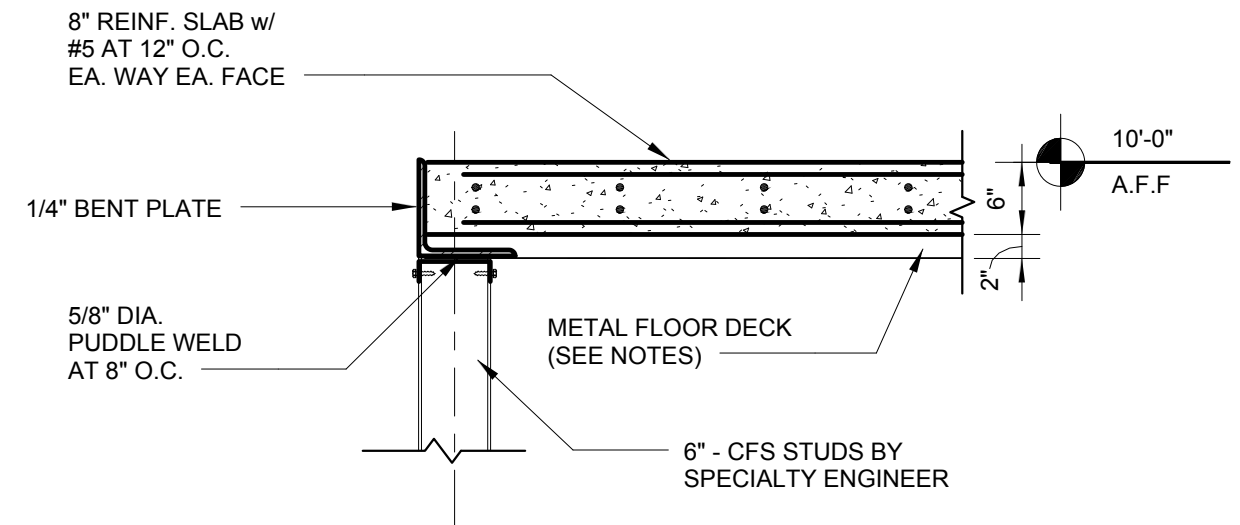
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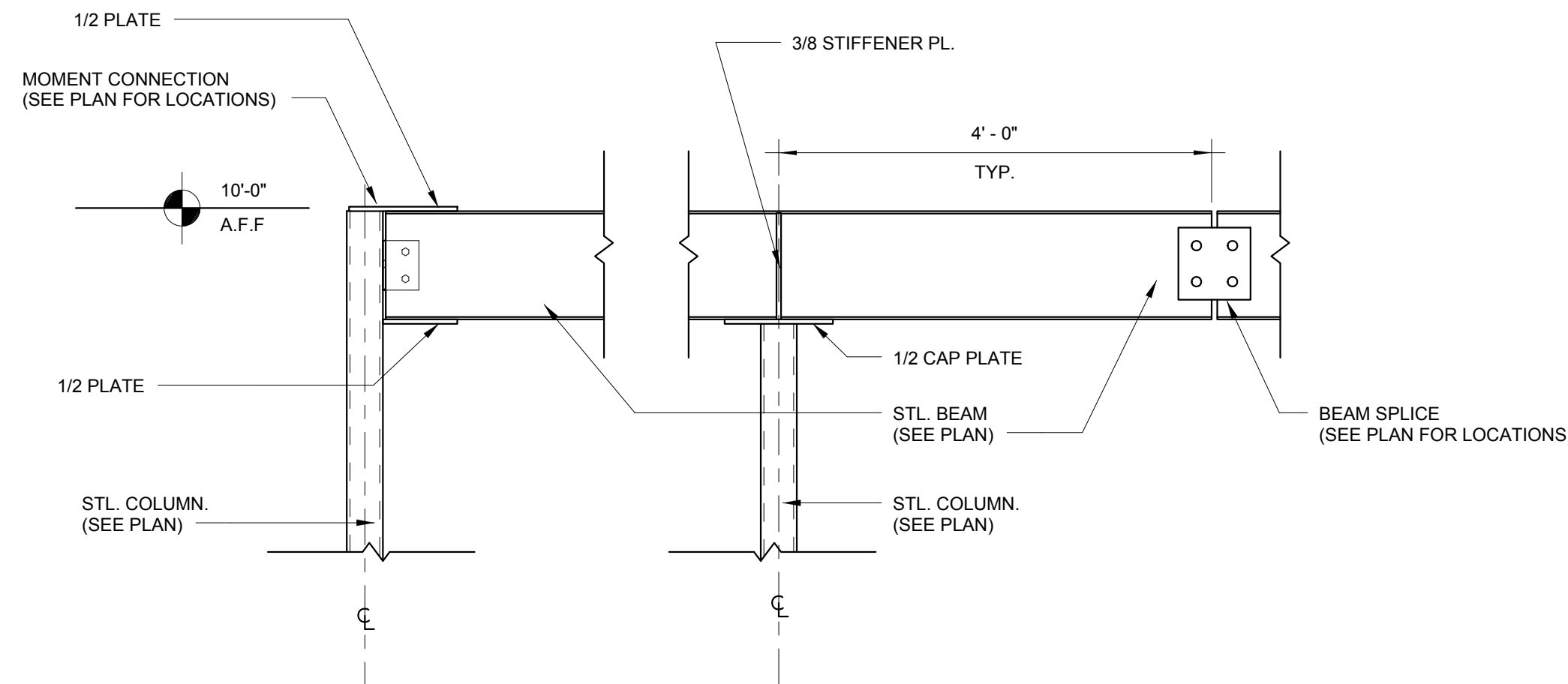
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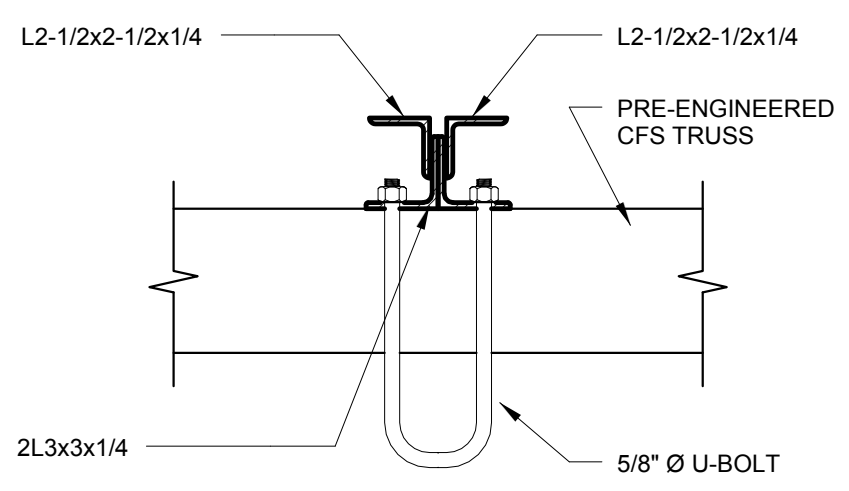
2 SECTION
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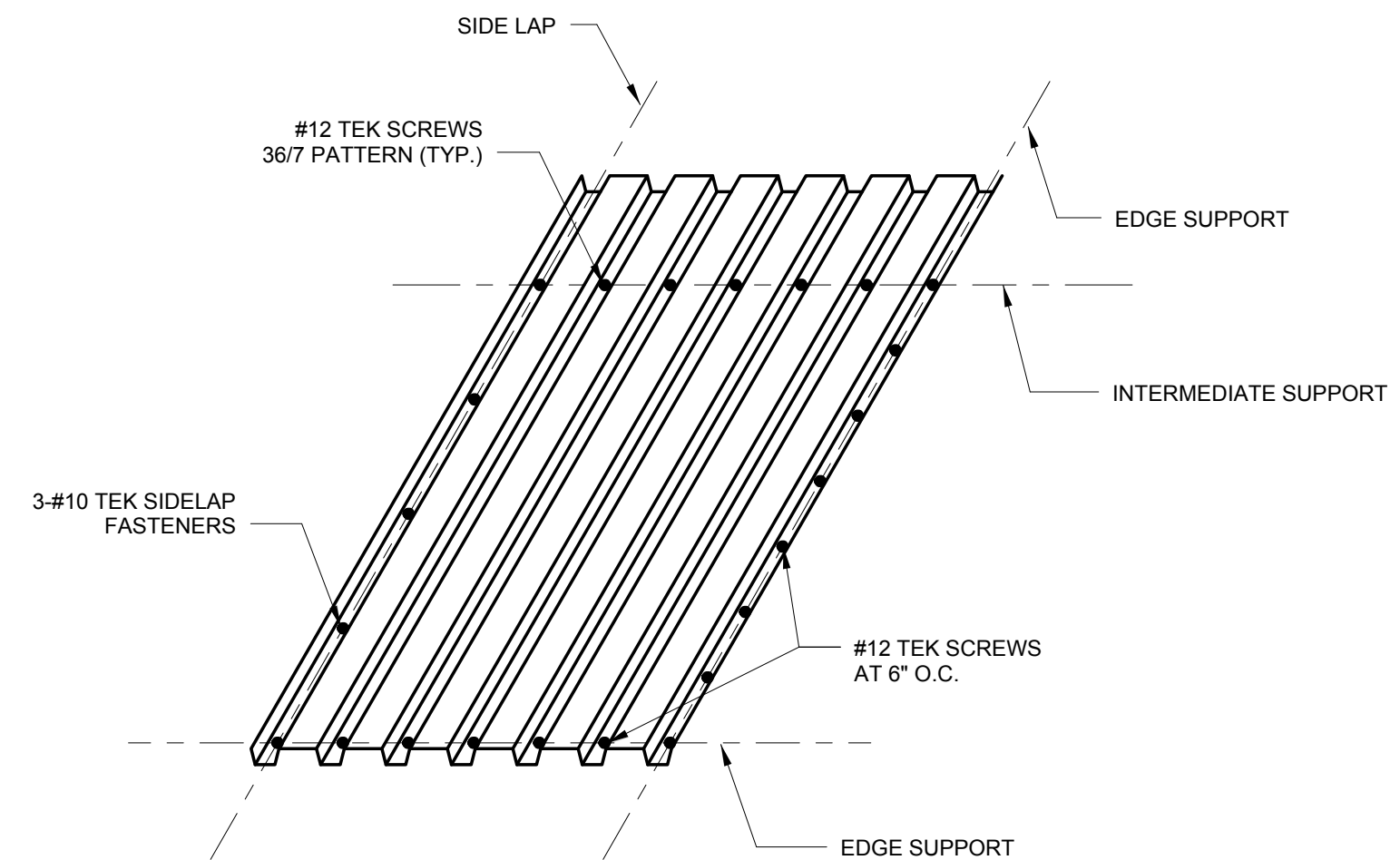
3 SECTION
S503 SCALE: 3/4" = 1'-0"



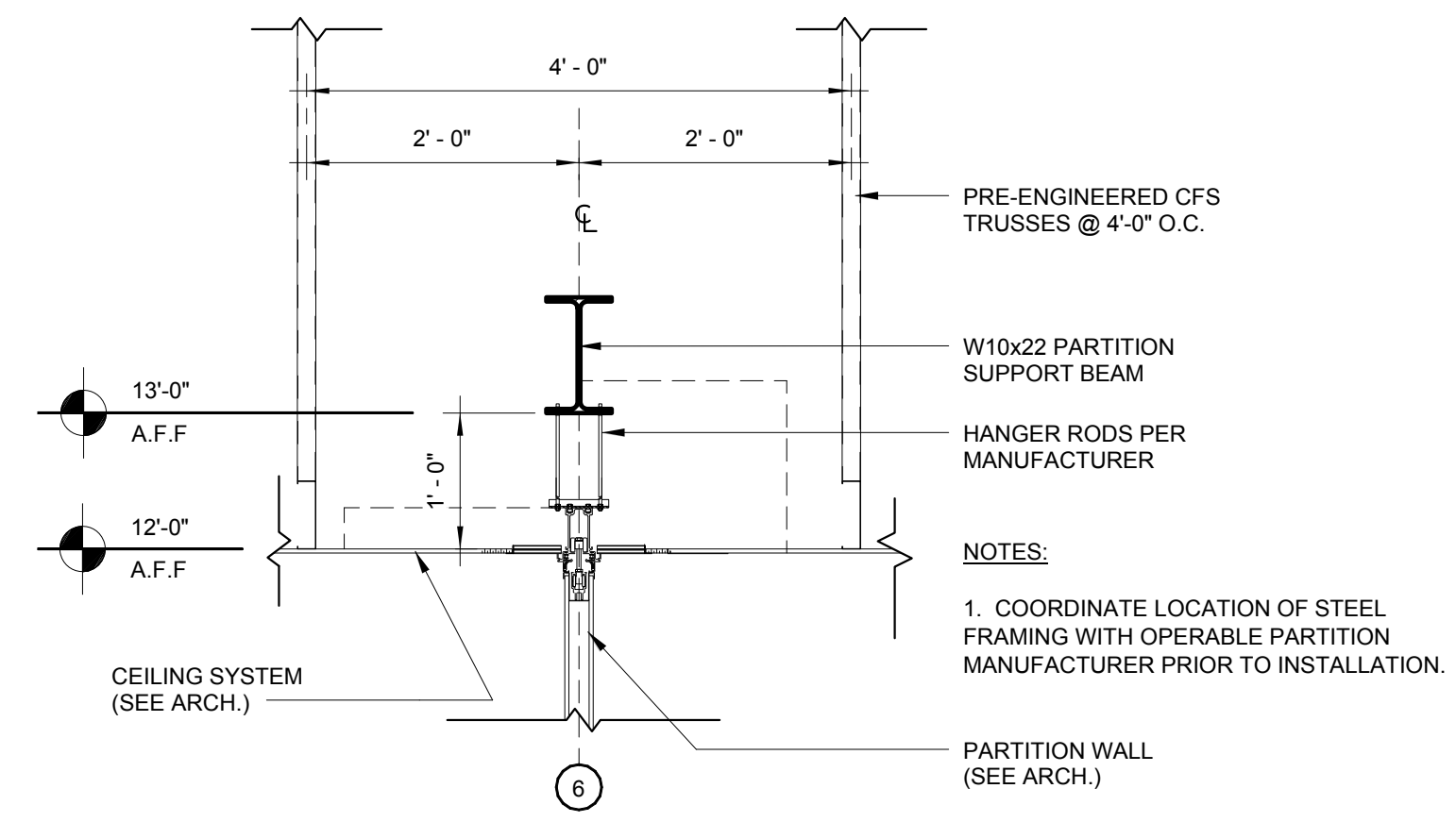
4 SECTION
S503 SCALE: 3/4" = 1'-0"



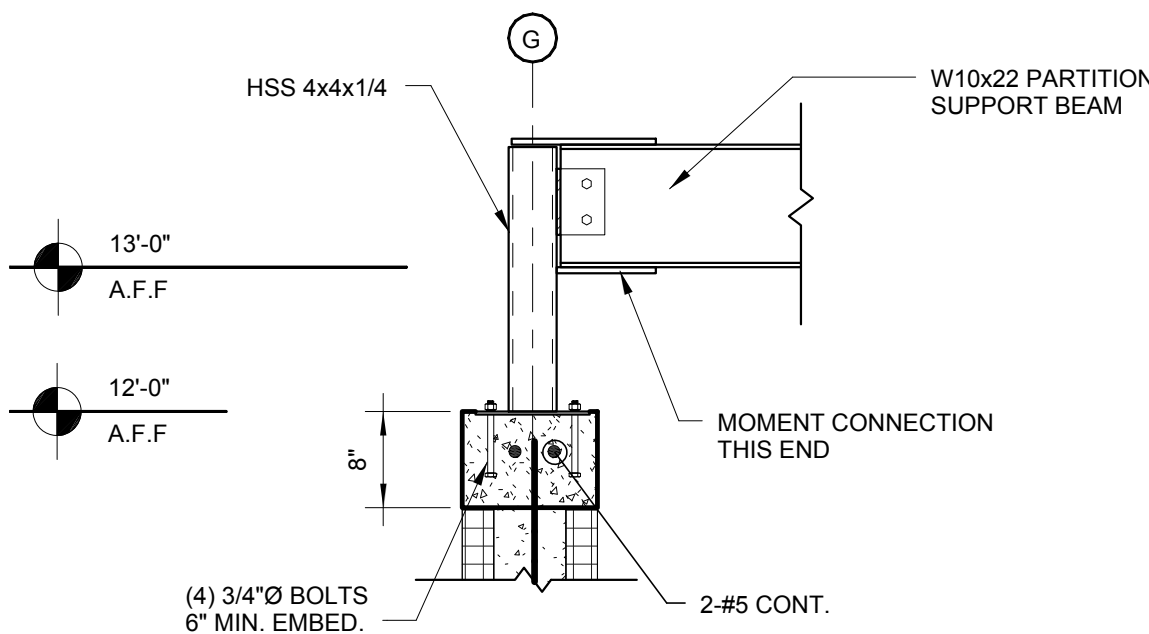
5 DETAIL
S503 SCALE: 1 1/2" = 1'-0"



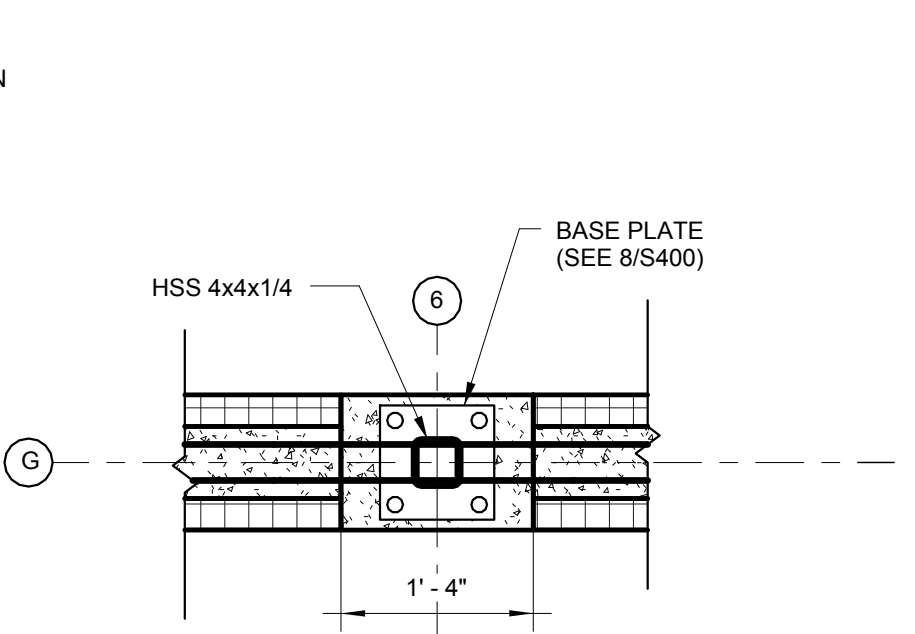
6 SECTION
S503 SCALE: 3/4" = 1'-0"



7 OPERABLE PARTITION
S503 SCALE: 3/4" = 1'-0"



8 SECTION
S503 SCALE: 3/4" = 1'-0"



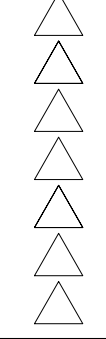
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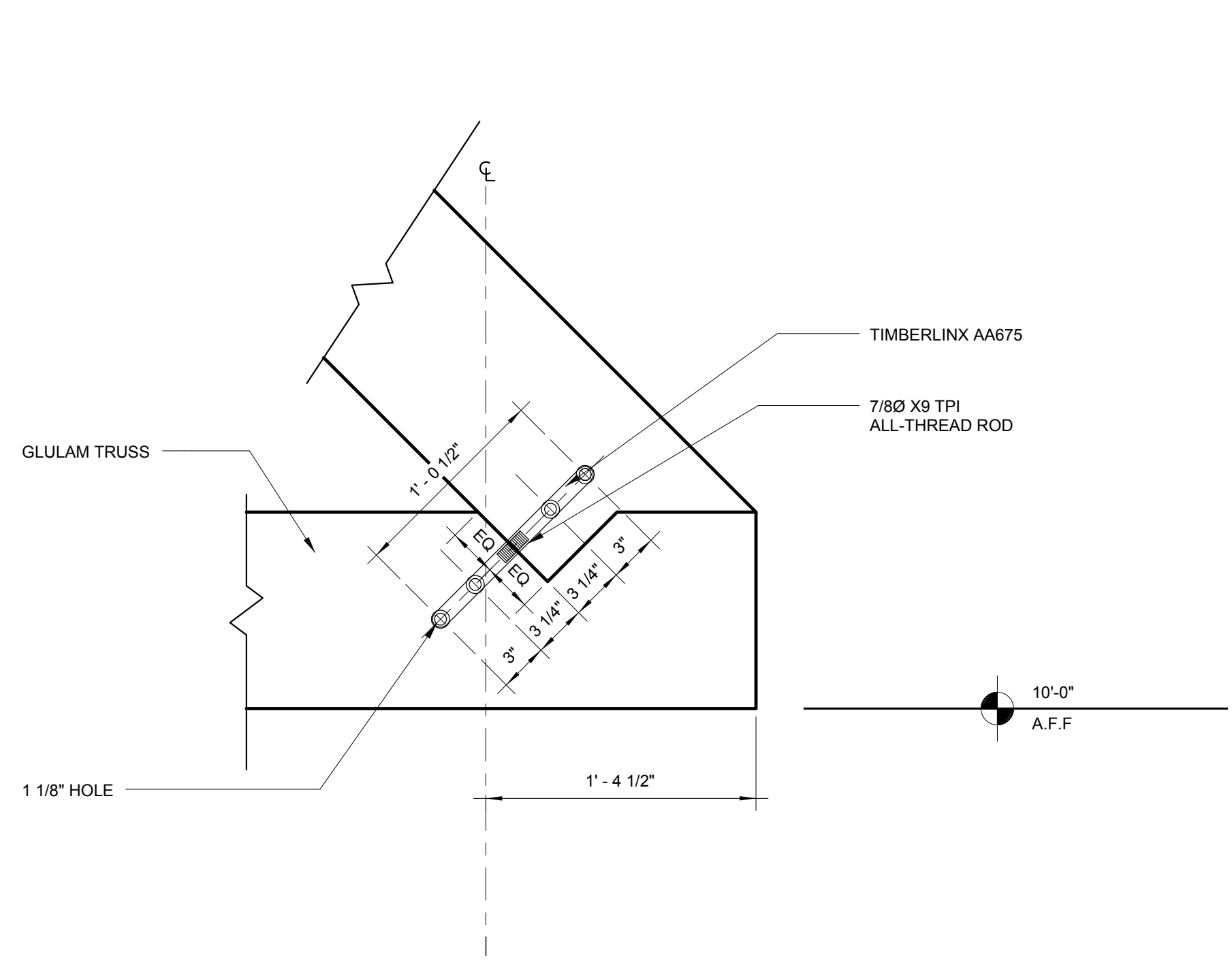


SECTIONS DETAILS

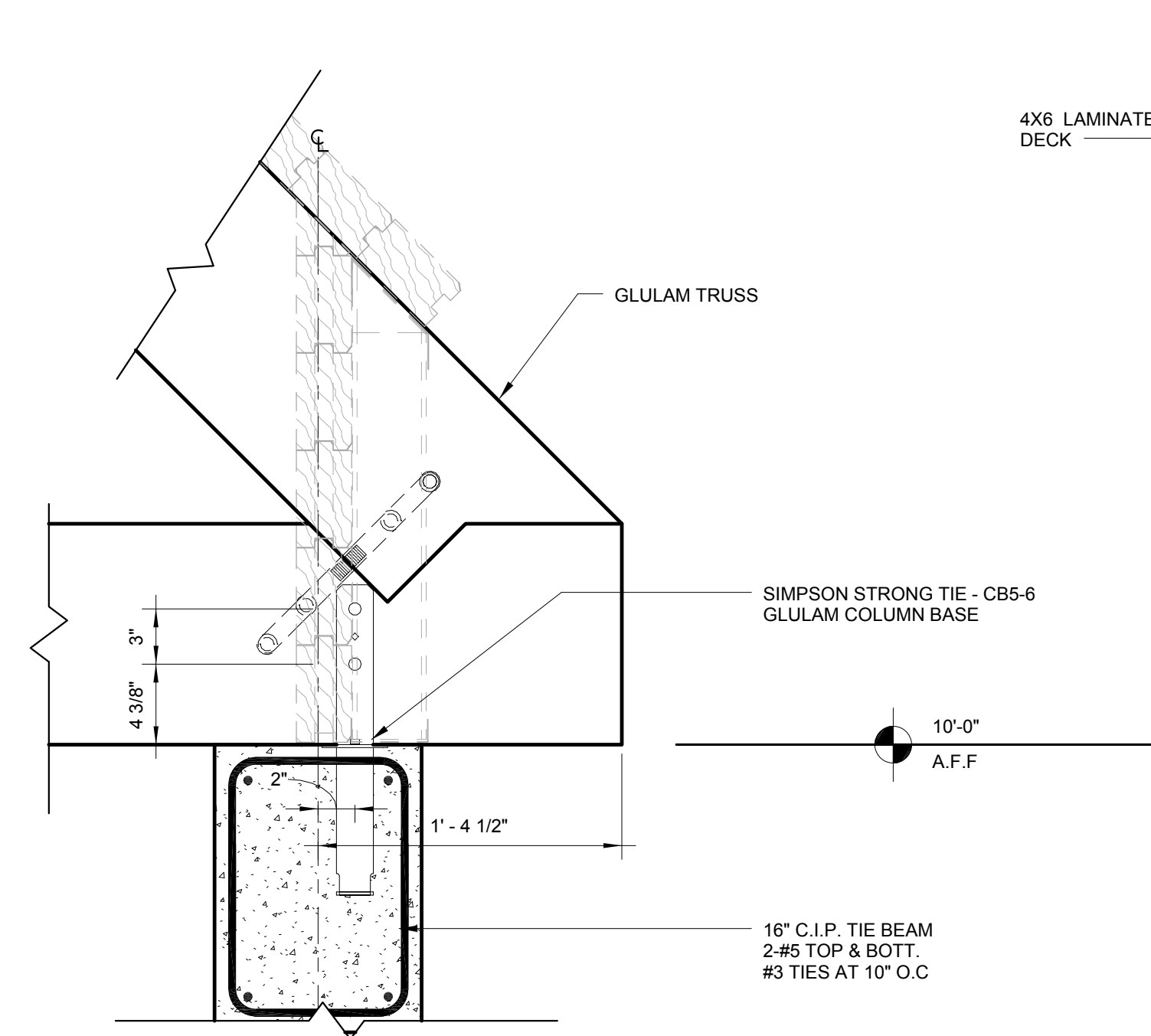
DAVID H. MELVIN, INC.
Consulting Engineers

TALLAHASSEE
2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

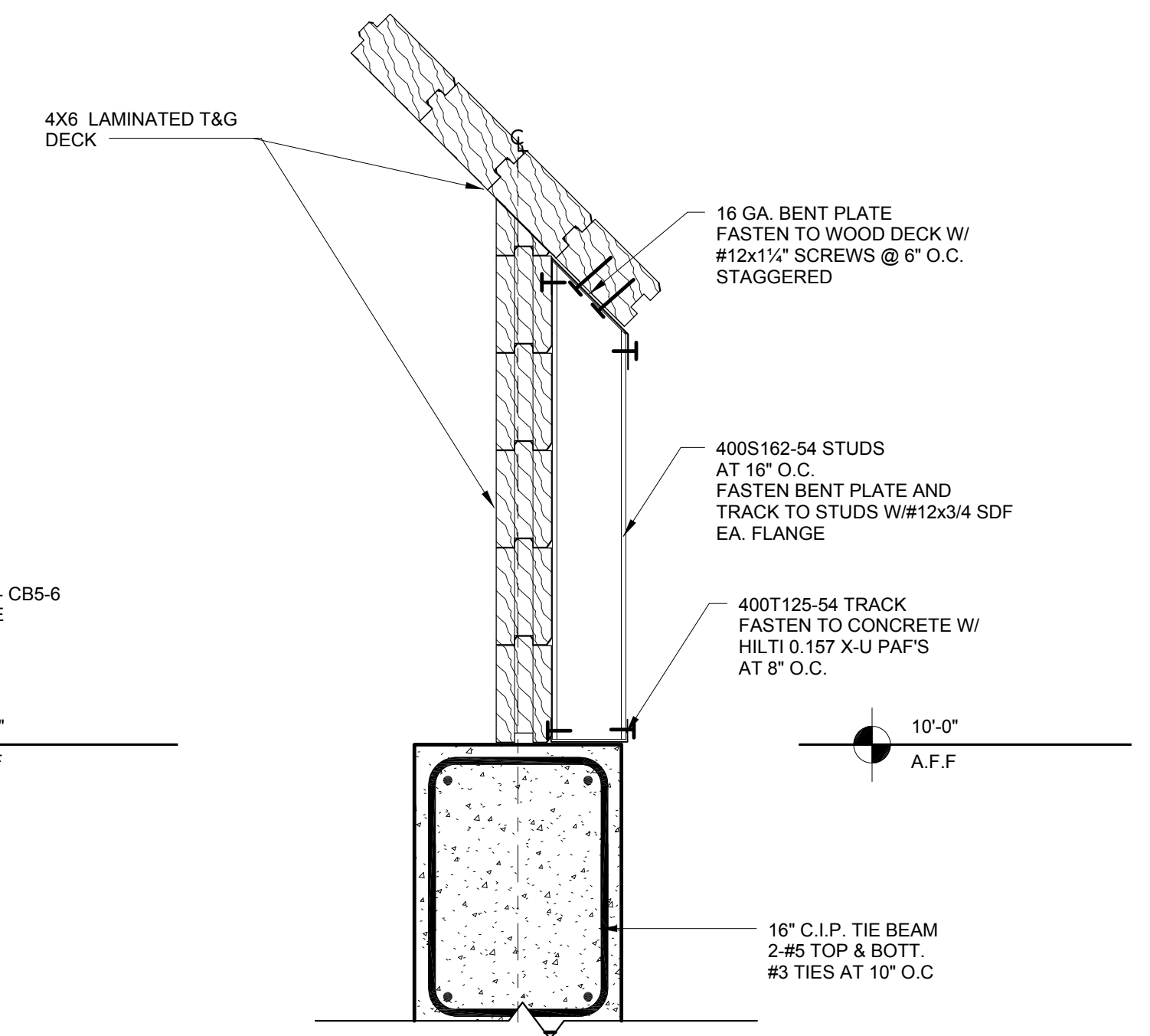
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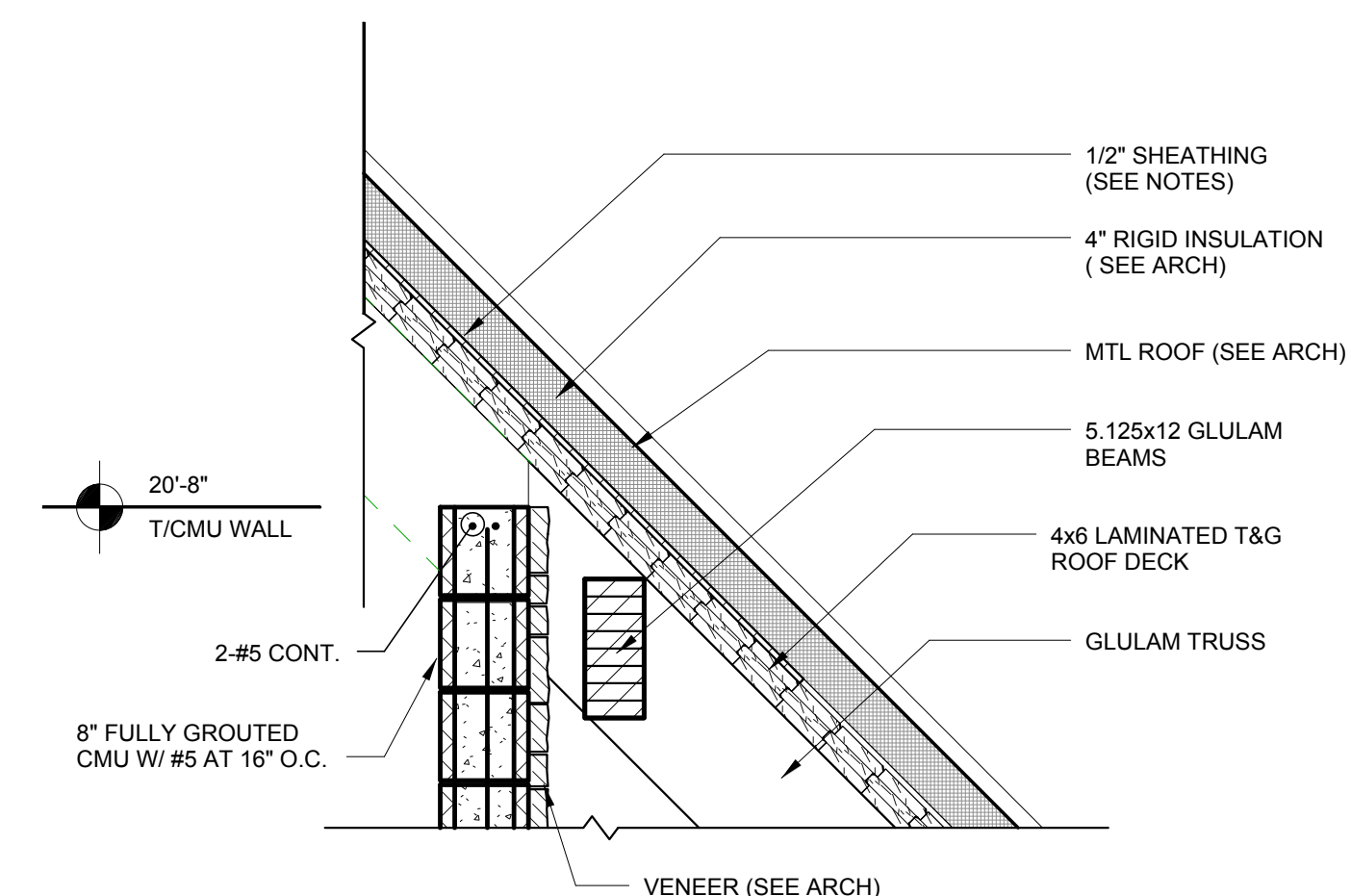
1 TRUSS HEEL DETAIL
SCALE: 1 1/2" = 1'-0"



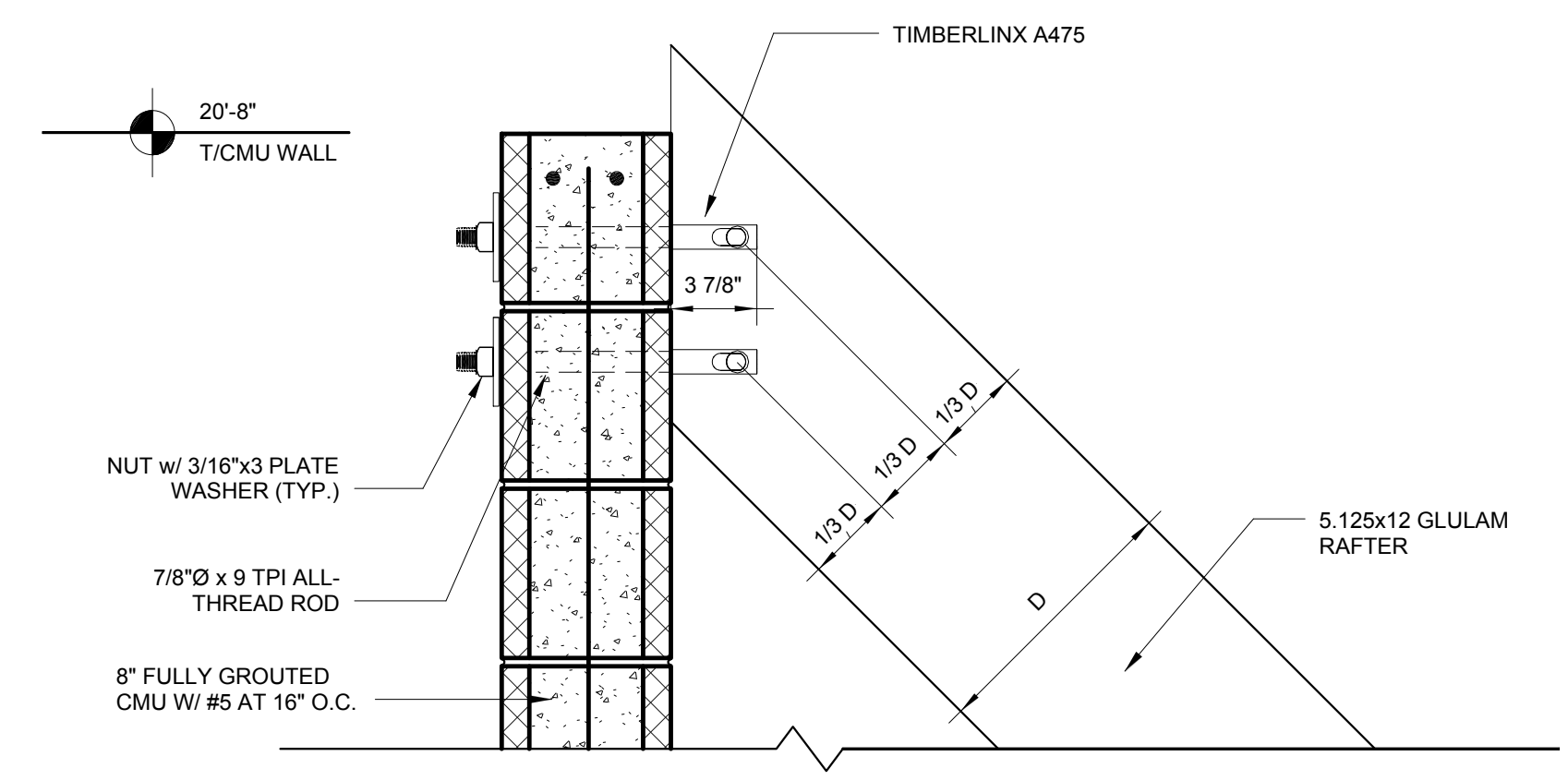
2 TRUSS HEEL DETAIL
SCALE: 1 1/2" = 1'-0"



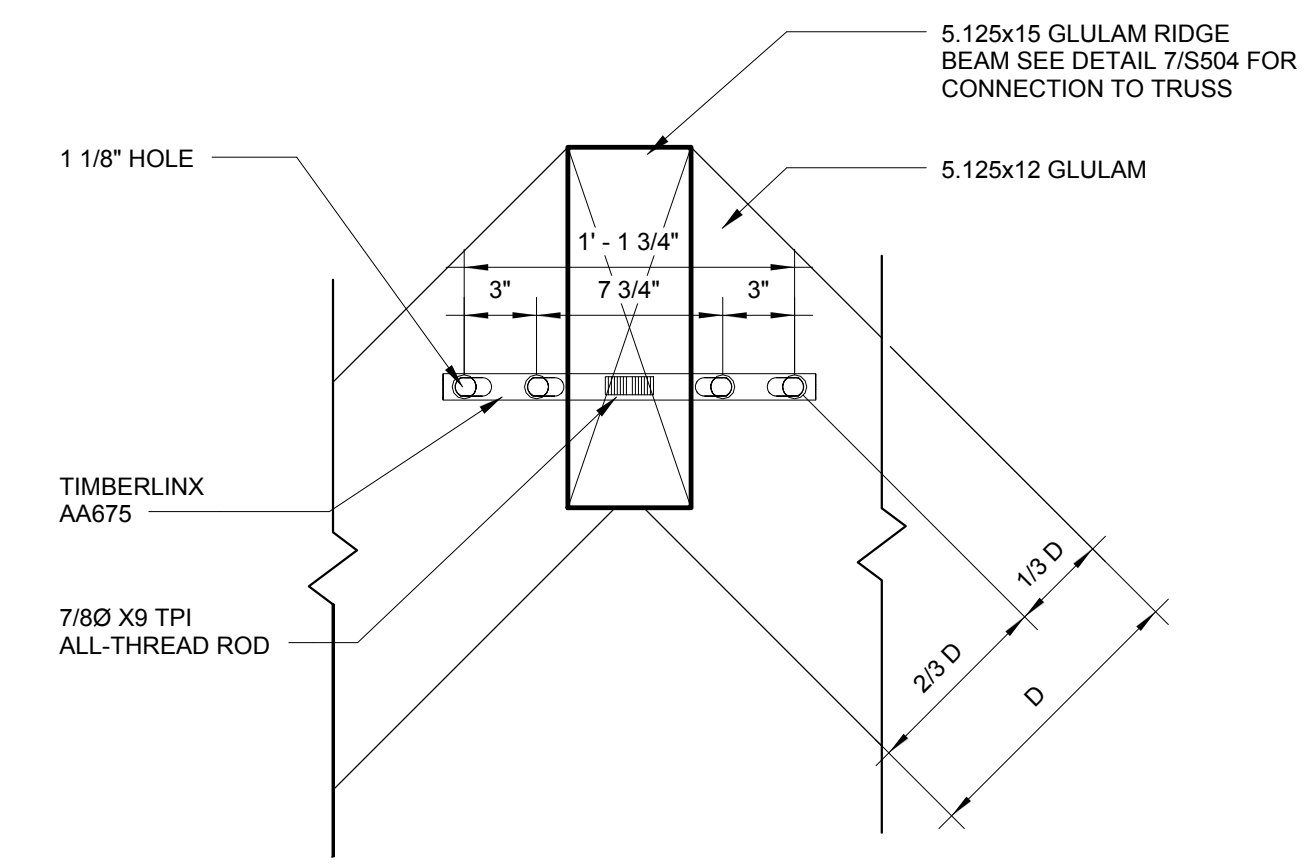
3 TRUSS HEEL DETAIL
SCALE: 1 1/2" = 1'-0"



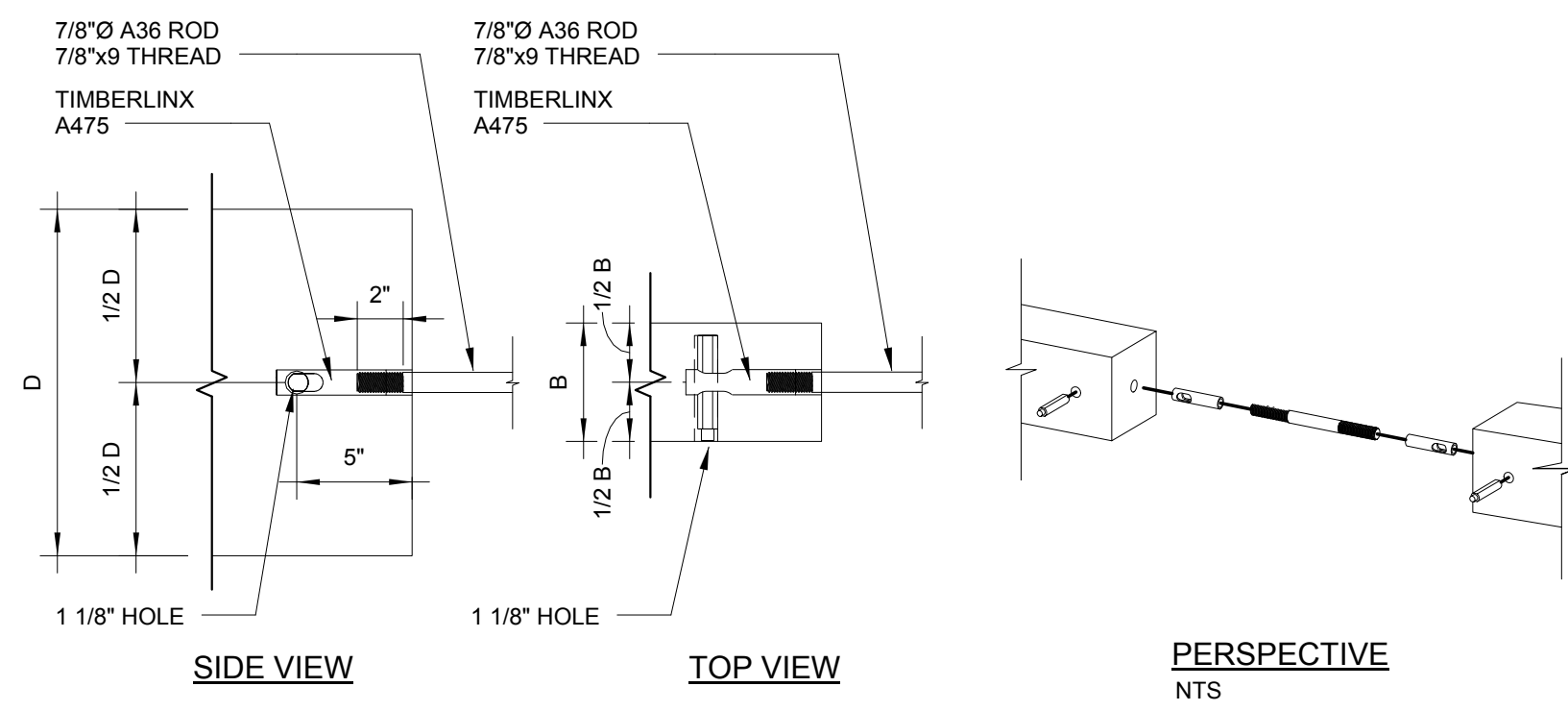
4 DETAIL
SCALE: 3/4" = 1'-0"



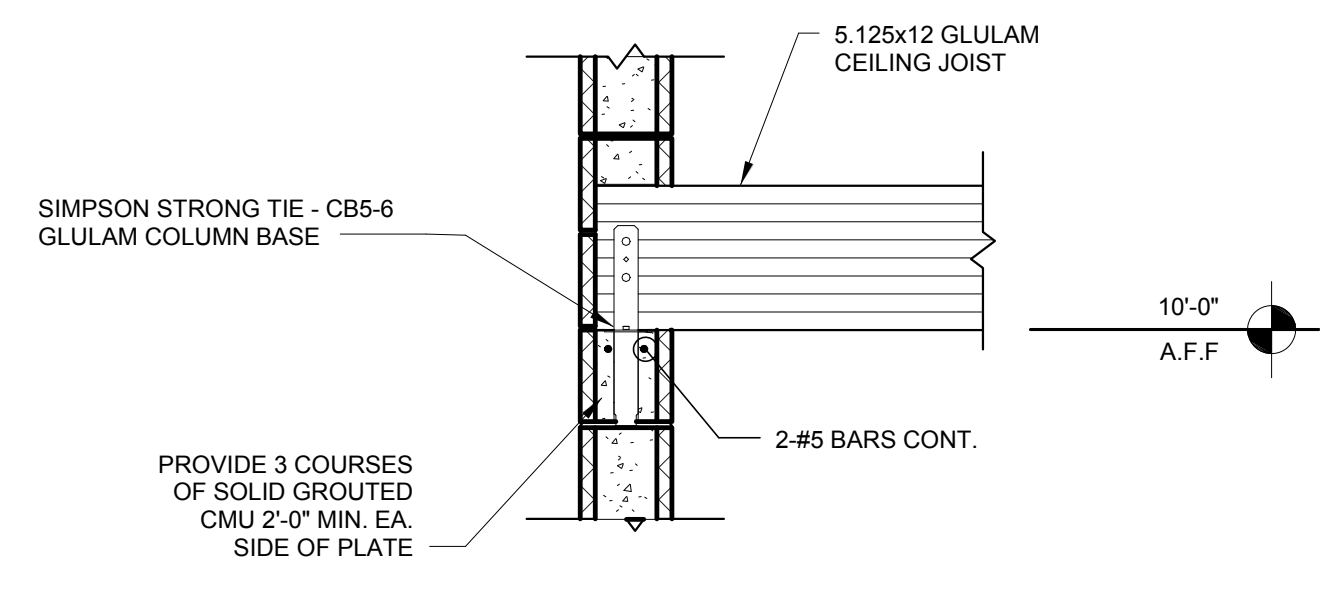
5 DETAIL
SCALE: 1 1/2" = 1'-0"



6 RIDGE BEAM DETAIL
SCALE: 1 1/2" = 1'-0"



7 BEAM TO TRUSS CONNECTION
SCALE: 1 1/2" = 1'-0"



8 GLULAM BEAM POCKET
SCALE: 3/4" = 1'-0"



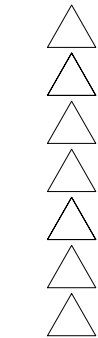
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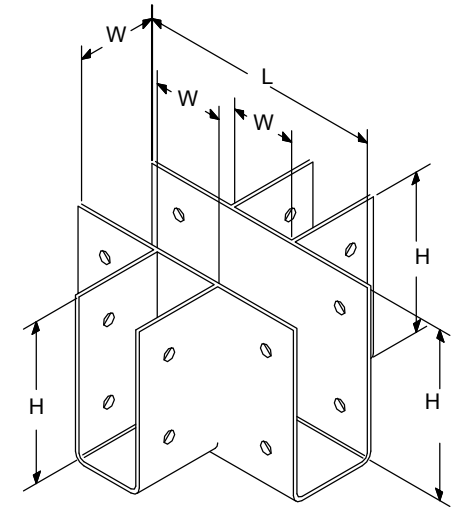
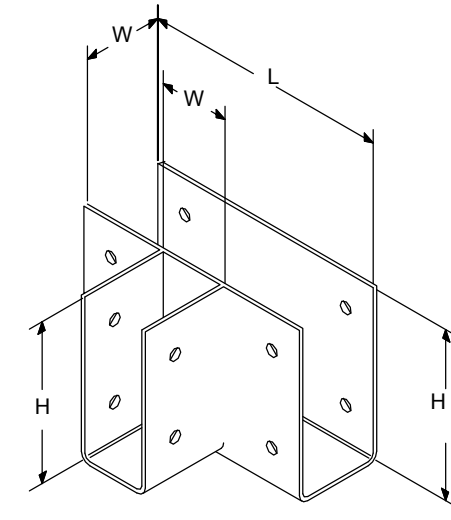


RAMIN DETAILS



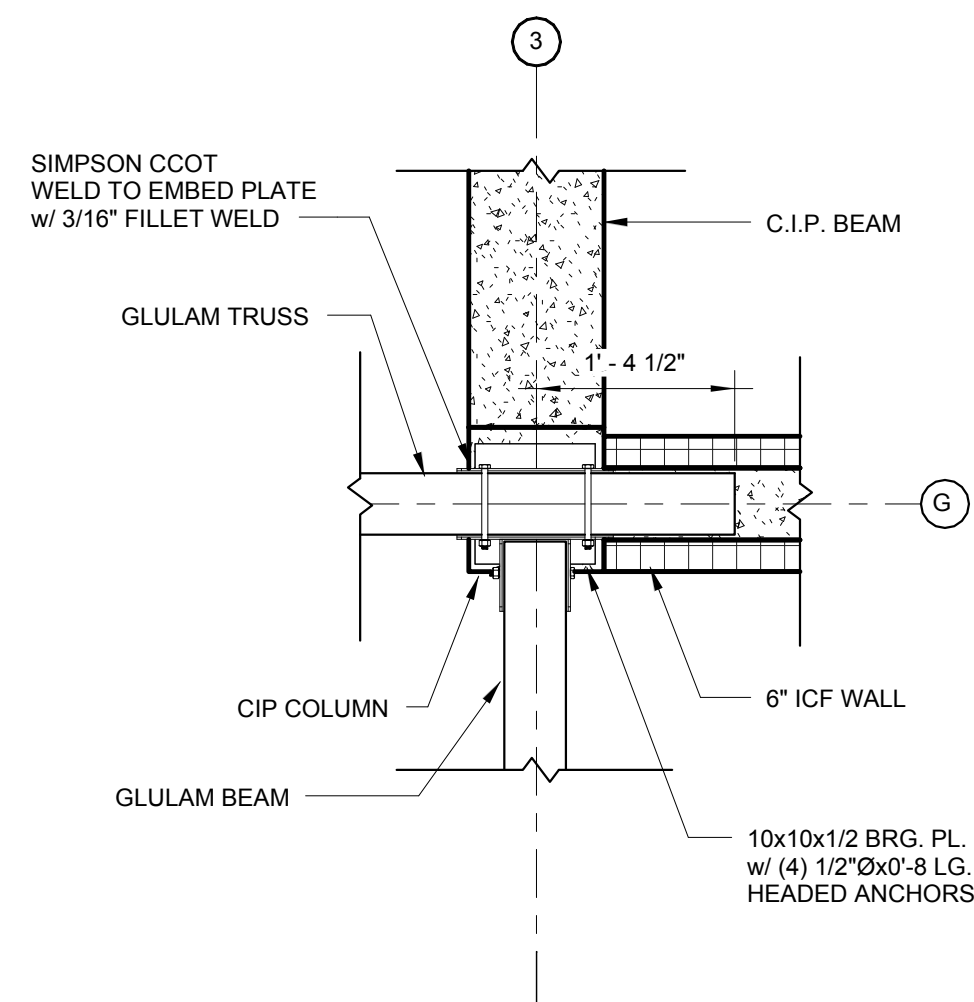
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2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

MARK	SIZE
W	5 1/2"
L	13"
H	8"

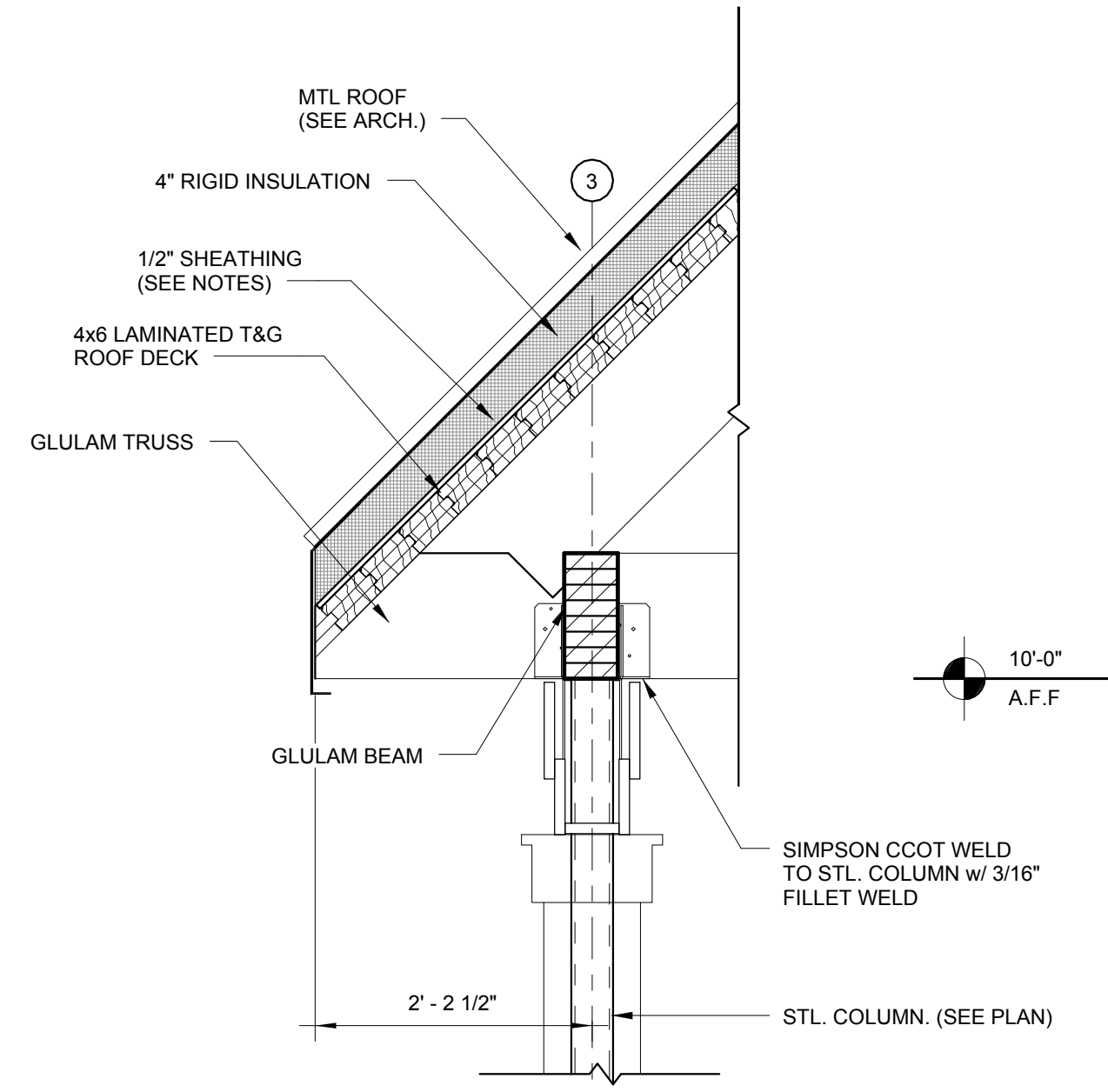


SIMPSON CCOT

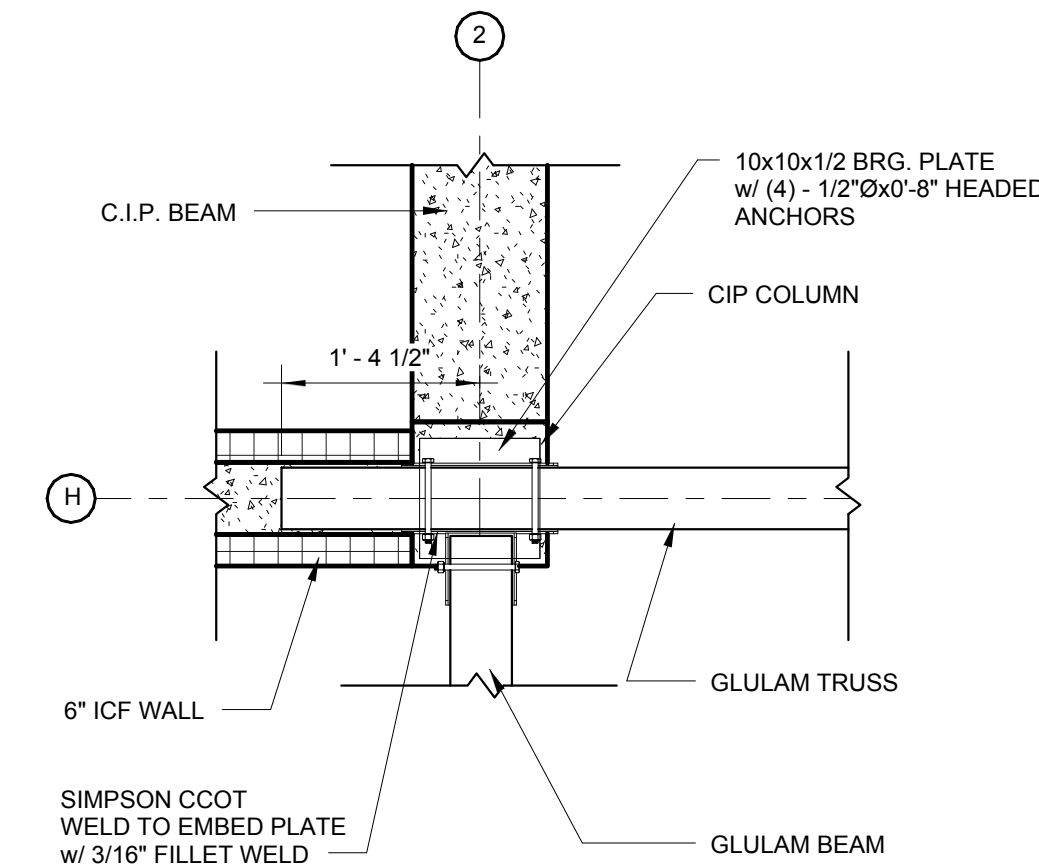
SIMPSON CCOC



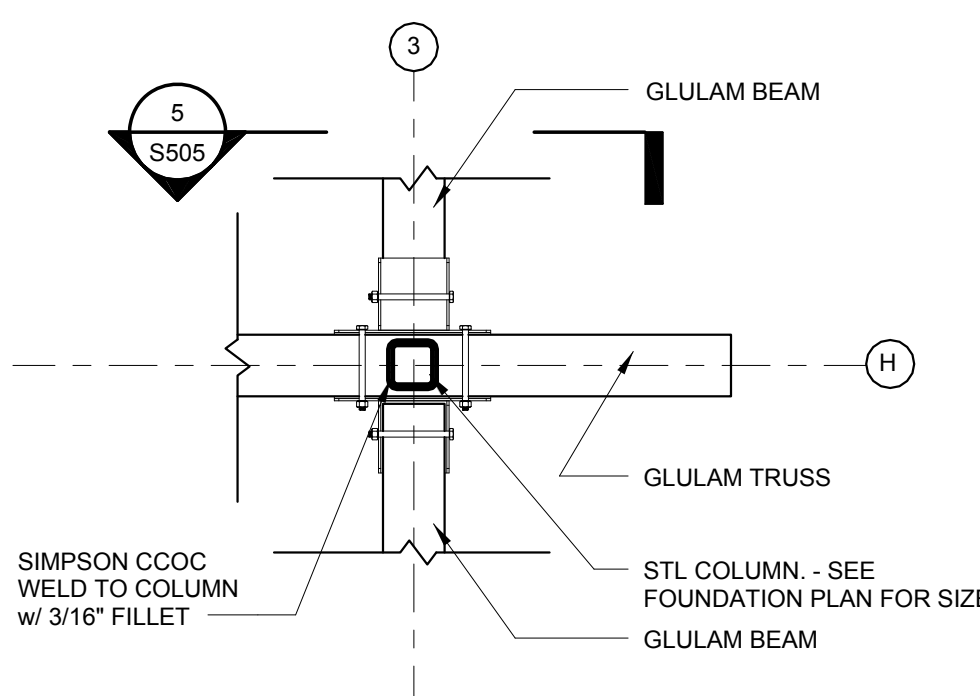
6 SECTION
S505 SCALE: 3/4" = 1'-0"



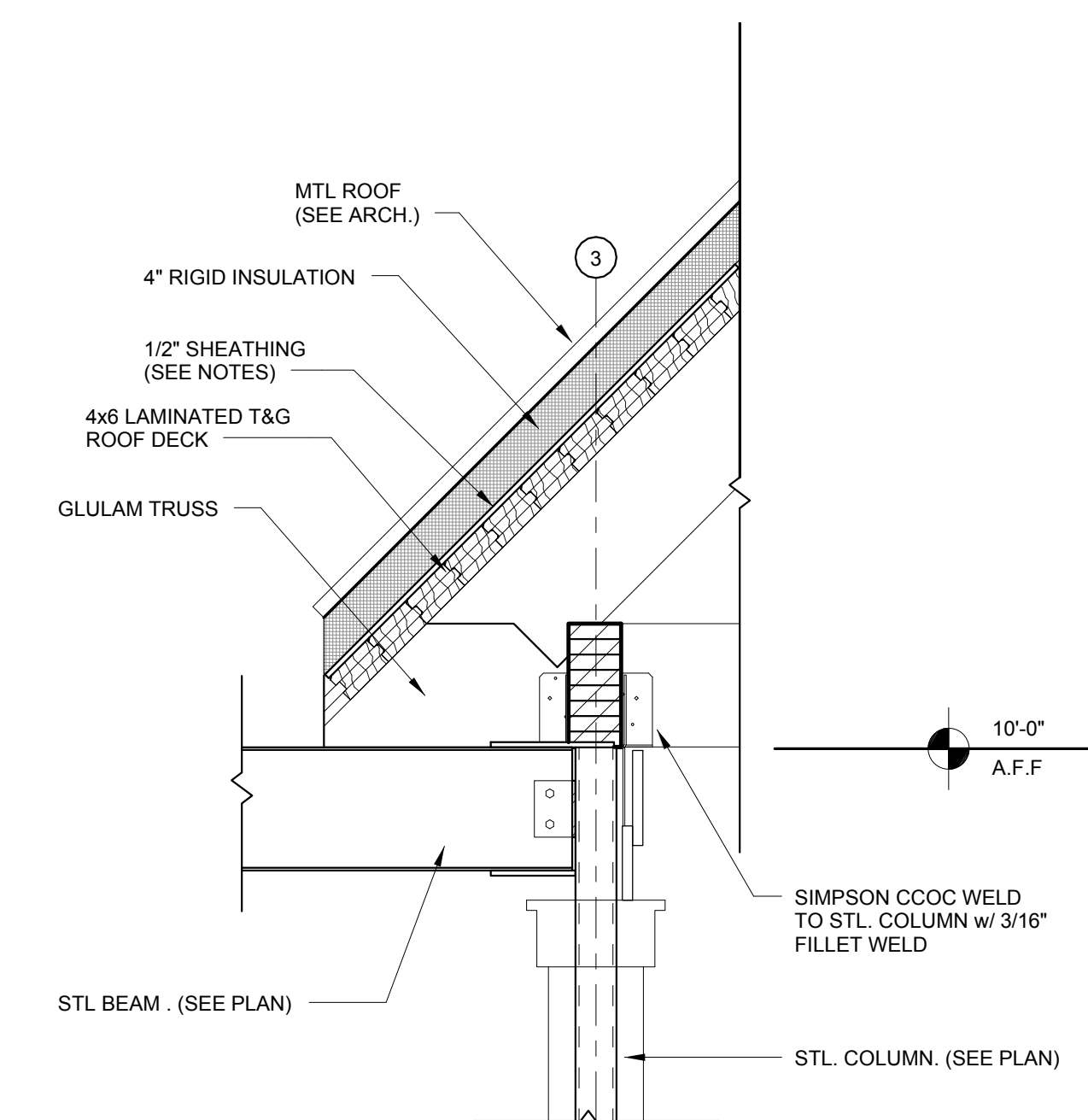
4 SECTION
S505 SCALE: 3/4" = 1'-0"



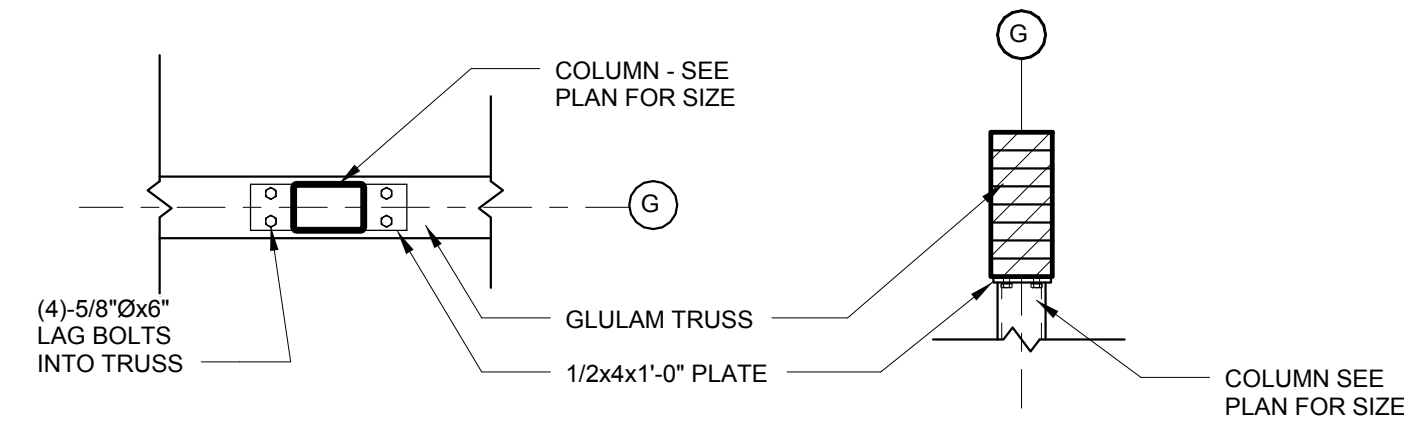
1 SECTION
S505 SCALE: 3/4" = 1'-0"



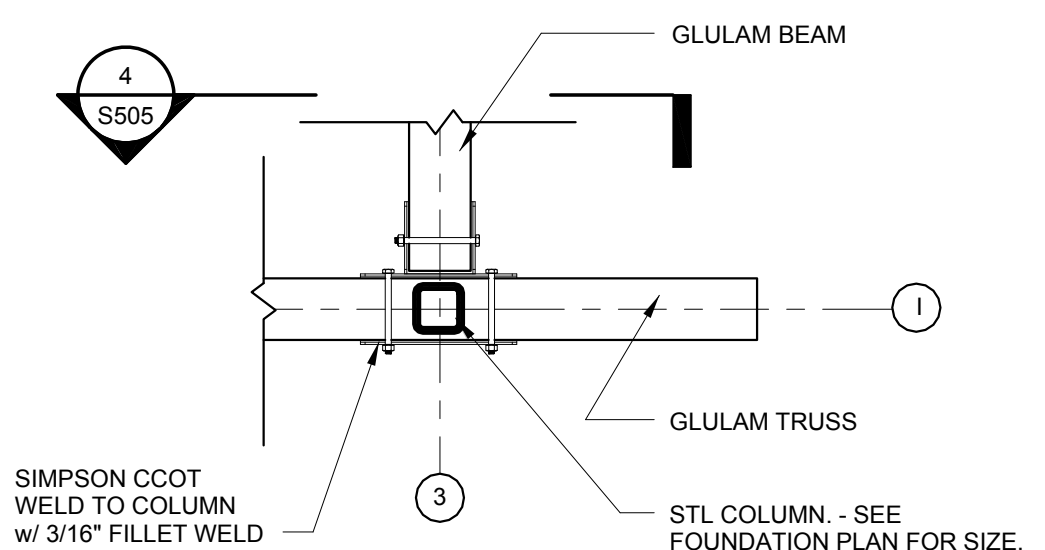
5 SECTION
S505 SCALE: 3/4" = 1'-0"



5 SECTION
S505 SCALE: 3/4" = 1'-0"



8 SECTION
S505 SCALE: 3/4" = 1'-0"



4 SECTION
S505 SCALE: 3/4" = 1'-0"

NOTES



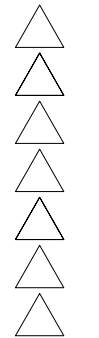
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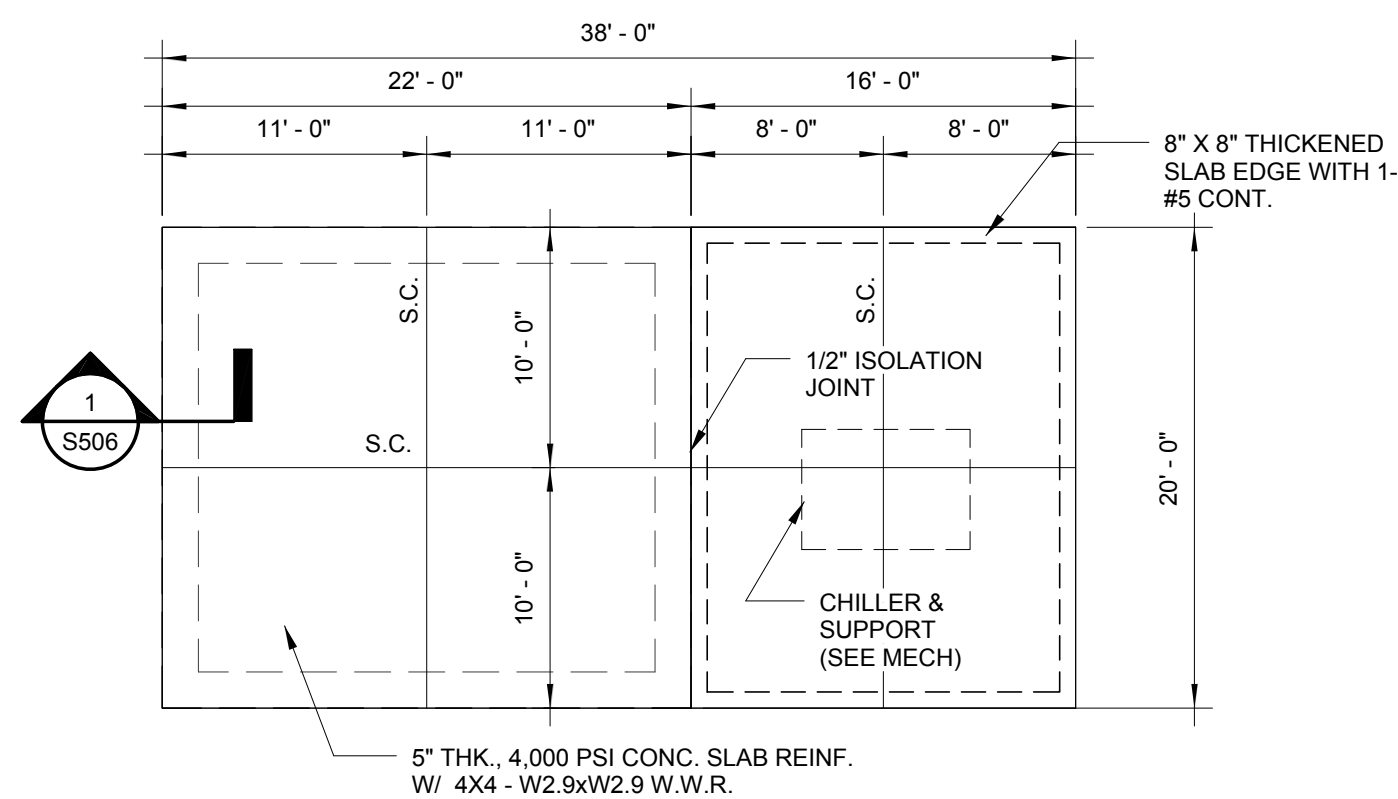


RAMIN DETAILS



TALLAHASSEE
2541-1 BARRINGTON CIRCLE
TALLAHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

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FOUNDATION PLAN

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

COMPONENTS AND CLADDING WIND PRESSURES

ROOF ULTIMATE WIND PRESSURES (SLOPE 4:12)

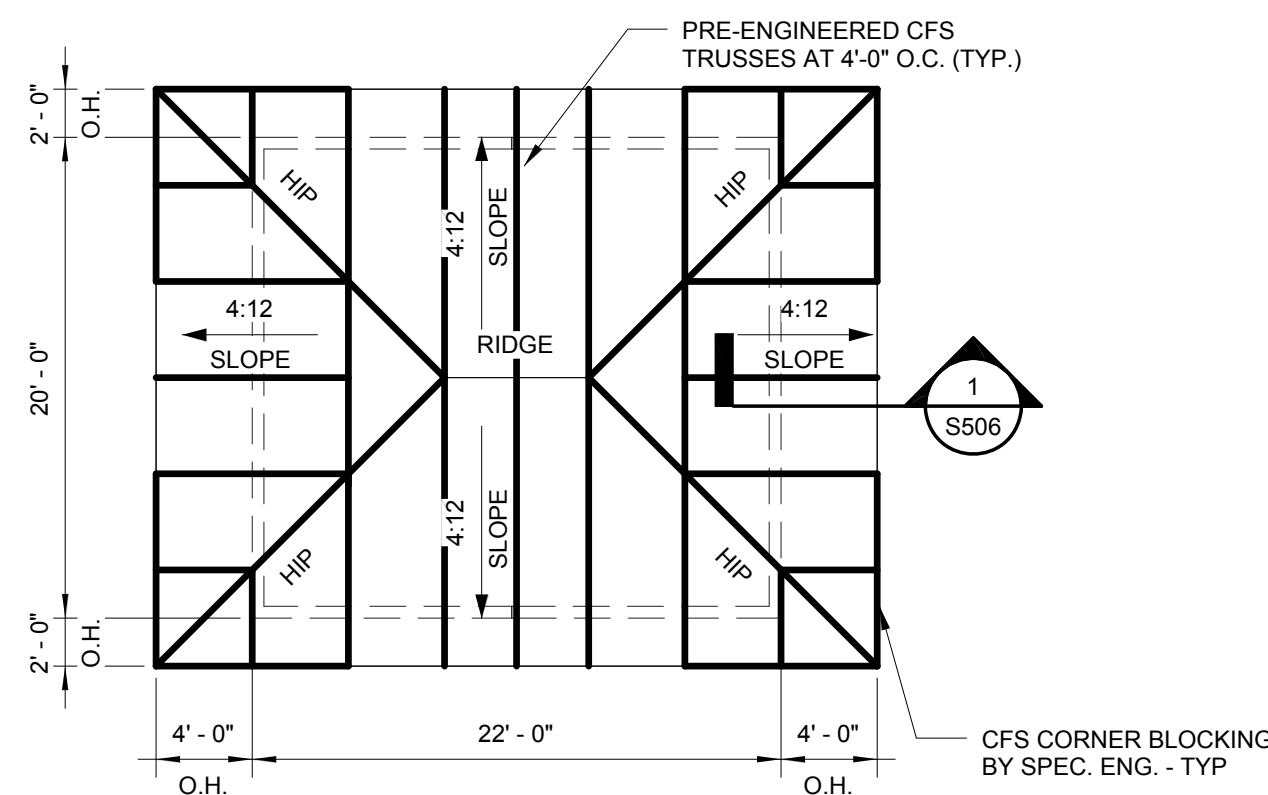
ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		WIND PRESSURE	SUCTION
1	10	+21.2	-33.7
	20	+19.3	-32.8
	50	+16.9	-31.5
	100	+16.0	-30.6
2	10	+21.2	-58.7
	20	+19.3	-54.0
	50	+16.9	-47.8
	100	+16.0	-43.1
3	10	+21.2	-58.7
	20	+19.3	-54.0
	50	+16.9	-47.8
	100	+16.0	-43.1

a = 3'-0"

ROOF OVERHANG ULTIMATE WIND PRESSURES (SLOPE 4:12)

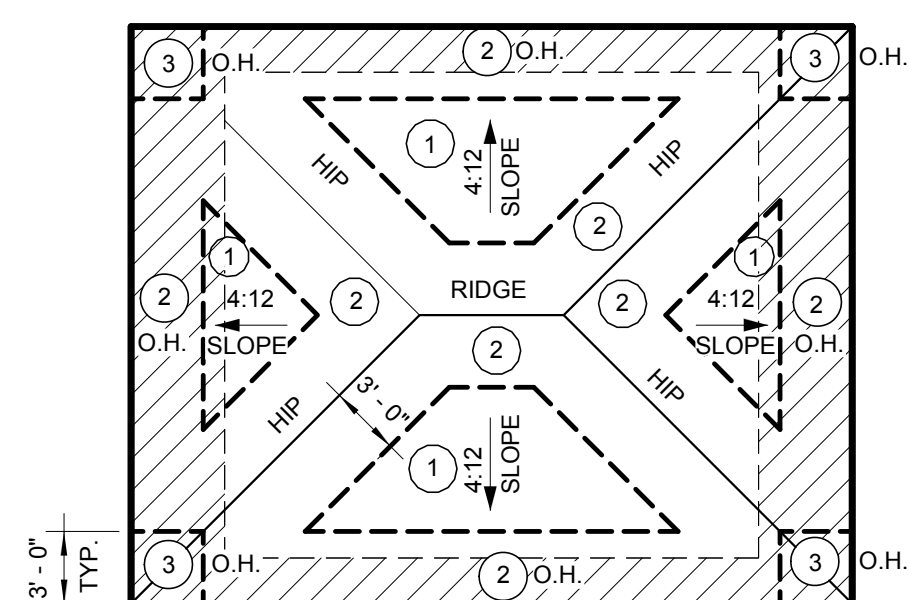
ZONE	EFFECTIVE WIND AREA, SF	WIND PRESSURE AND SUCTION (PSF)	
		WIND PRESSURE	SUCTION
2	10	----	-68.7
	O.H.	----	-68.7
	50	----	-68.7
	100	----	-68.7
3	10	----	-68.7
	O.H.	----	-68.7
	50	----	-68.7
	100	----	-68.7

a = 3'-0"



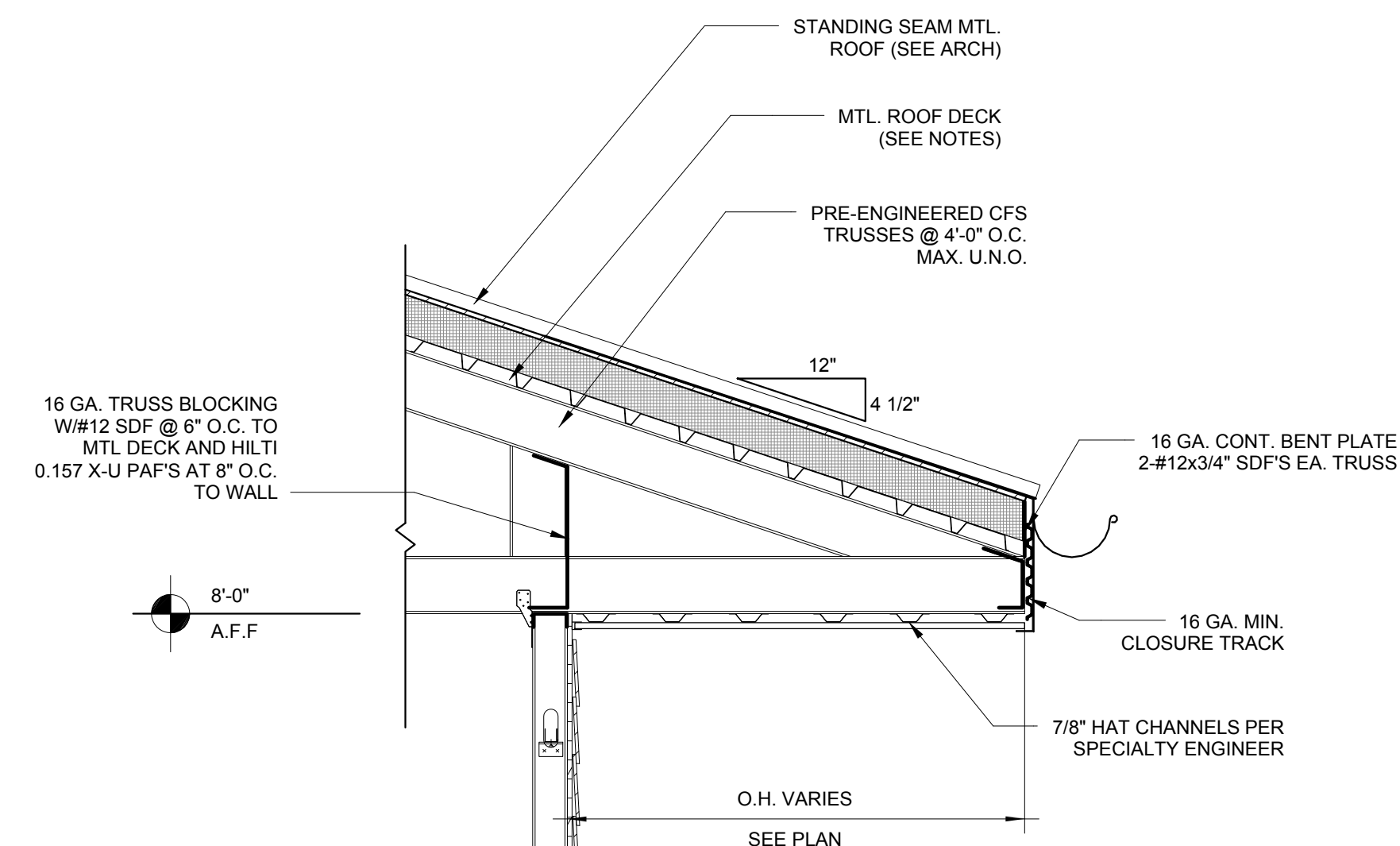
FRAMING PLAN

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

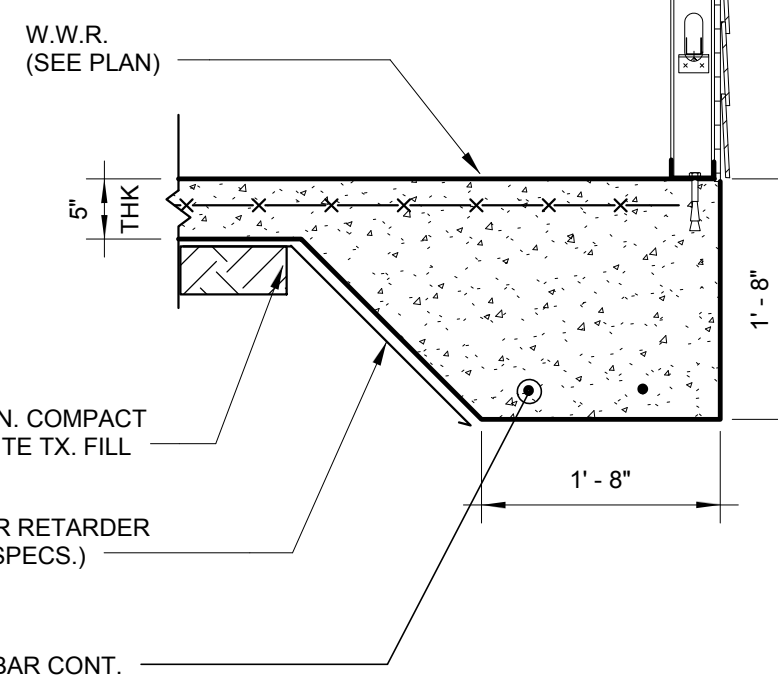


C&C ROOF PLAN

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



SPECIALTY ENGINEER TO PROVIDE COMPLETE CFS FRAMED WALL SYSTEM TO COMPLY WITH LOADS INDICATED ON SHEETS S100, S101 AND S506. INCLUDE COLD-FORMED METAL STUDS, WALL SHEATHING, HOLD-DOWNS, ANCHOR BOLTS, HURRICANE CLIPS, AND OTHER FASTENERS.



SECTION 1

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



A13WEI

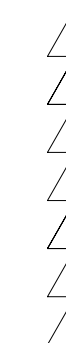
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2541-1 BARRINGTON CIRCLE
TALLHASSEE, FLORIDA 32308
Phone: 850.671.7221
Fax: 850.671.7223

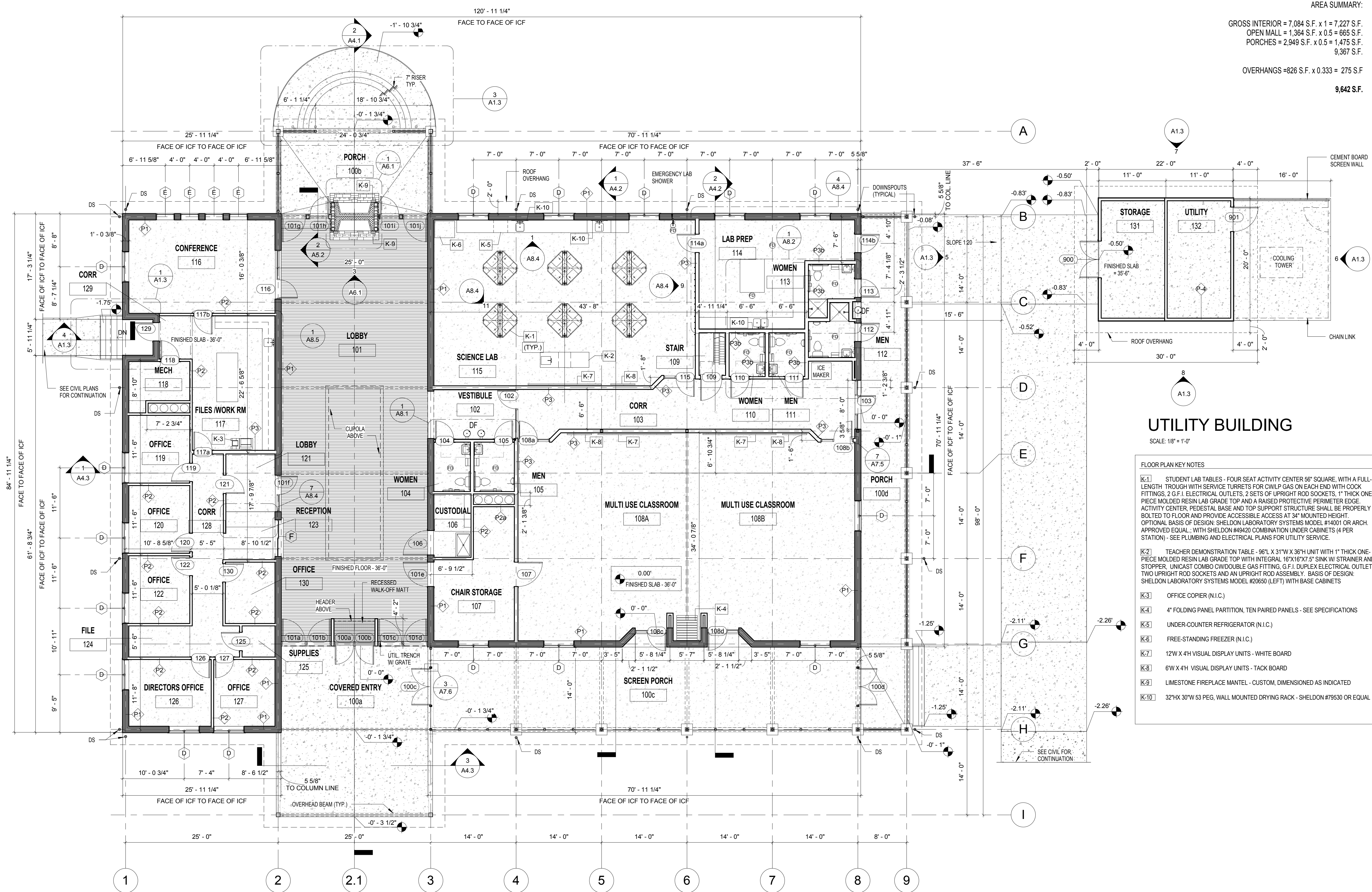
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AREA SUMMARY:

GROSS INTERIOR = 7,084 S.F. x 1 = 7,227 S.F.
 OPEN MALL = 1,364 S.F. x 0.5 = 665 S.F.
 PORCHES = 2,949 S.F. x 0.5 = 1,475 S.F.
 9,367 S.F.

OVERHANGS = 826 S.F. x 0.333 = 275 S.F.

9,642 S.F.



UTILITY BUILDING

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

FLOOR PLAN KEY NOTES

- K-1 STUDENT LAB TABLES - FOUR SEAT ACTIVITY CENTER 56" SQUARE, WITH A FULL-LENGTH TROUGH WITH SERVICE TURRETS FOR CWP/LP GAS ON EACH END WITH COOK FITTINGS, 2 G.F.I. ELECTRICAL OUTLETS, 2 SETS OF UPRIGHT ROD SOCKETS, 1" THICK ONE-PIECE MOLDED RESIN LAB GRADE TOP AND A RAISED PROTECTIVE PERIMETER EDGE. ACTIVITY CENTER, PEDESTAL BASE AND TOP SUPPORT STRUCTURE SHALL BE PROPERLY BOLTED TO FLOOR AND PROVIDE ACCESSIBLE ACCESS AT 34" MOUNTED HEIGHT. OPTIONAL BASIS OF DESIGN: SHELDON LABORATORY SYSTEMS MODEL #14001 OR ARCH. APPROVED EQUAL., WITH SHELDON #49420 COMBINATION UNDER CABINETS (4 PER STATION) - SEE PLUMBING AND ELECTRICAL PLANS FOR UTILITY SERVICE.
- K-2 TEACHER DEMONSTRATION TABLE - 96" X 31" W X 36" H UNIT WITH 1" THICK ONE-PIECE MOLDED RESIN LAB GRADE TOP WITH INTEGRAL 16" X 16" X 7.5" SINK W/ STRAINER AND STOPPER, UNICAST COMBO CW/DOUBLE GAS FITTING, G.F.I. DUPLEX ELECTRICAL OUTLET, TWO UPRIGHT ROD SOCKETS AND AN UPRIGHT ROD ASSEMBLY. BASIS OF DESIGN: SHELDON LABORATORY SYSTEMS MODEL #20650 (LEFT) WITH BASE CABINETS
- K-3 OFFICE COPIER (N.I.C.)
- K-4 4" FOLDING PANEL PARTITION, TEN PAIRED PANELS - SEE SPECIFICATIONS
- K-5 UNDER-COUNTER REFRIGERATOR (N.I.C.)
- K-6 FREE-STANDING FREEZER (N.I.C.)
- K-7 12W X 4H VISUAL DISPLAY UNITS - WHITE BOARD
- K-8 6W X 4H VISUAL DISPLAY UNITS - TACK BOARD
- K-9 LIMESTONE FIREPLACE MANTEL - CUSTOM, DIMENSIONED AS INDICATED
- K-10 32"HX 30"W 53 PEG, WALL MOUNTED DRYING RACK - SHELDON #79530 OR EQUAL

1 FLOOR PLAN
 A1.1 1/8" = 1'-0"

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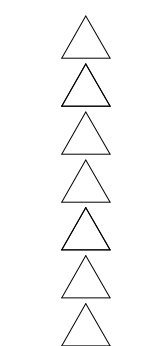
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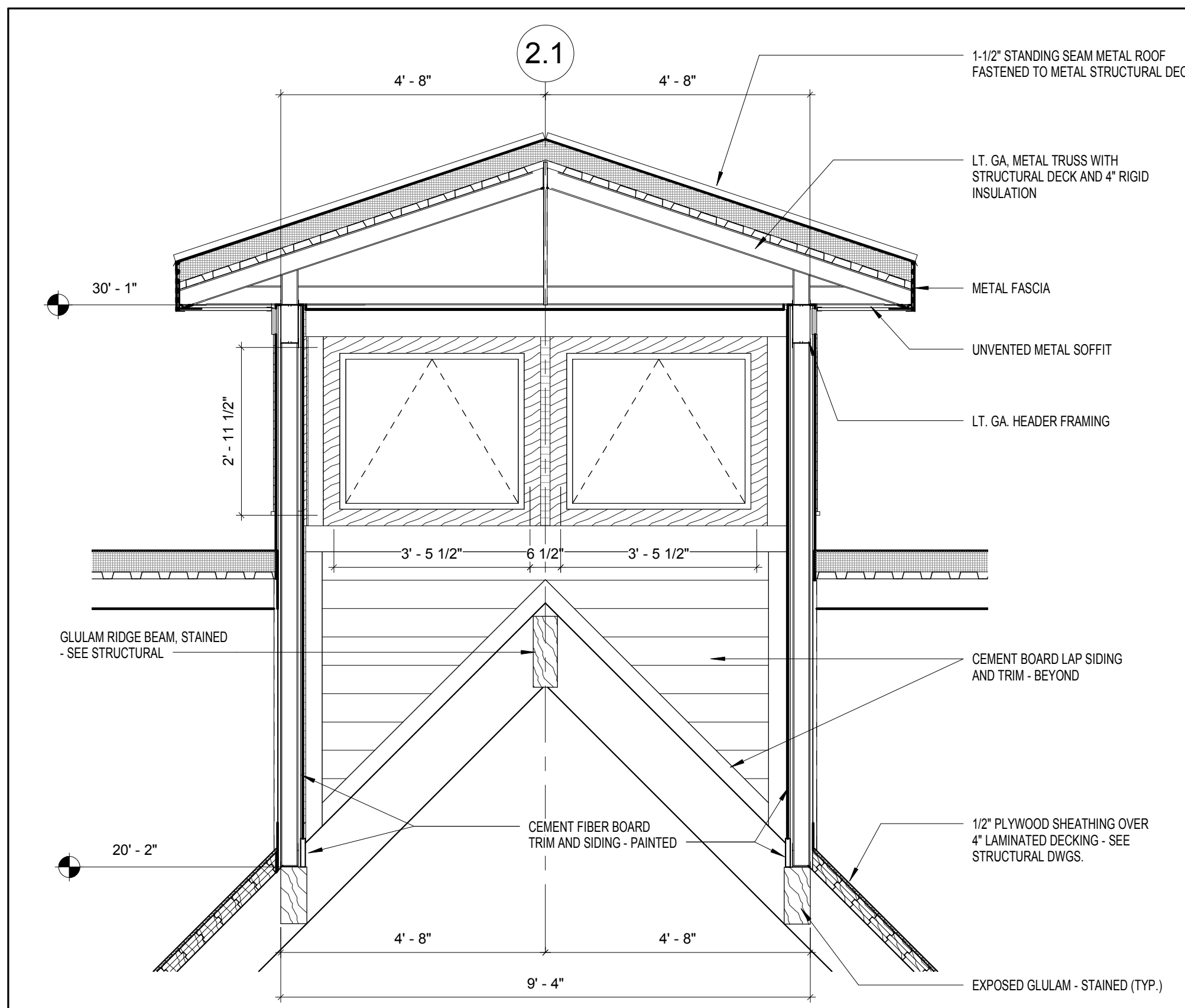
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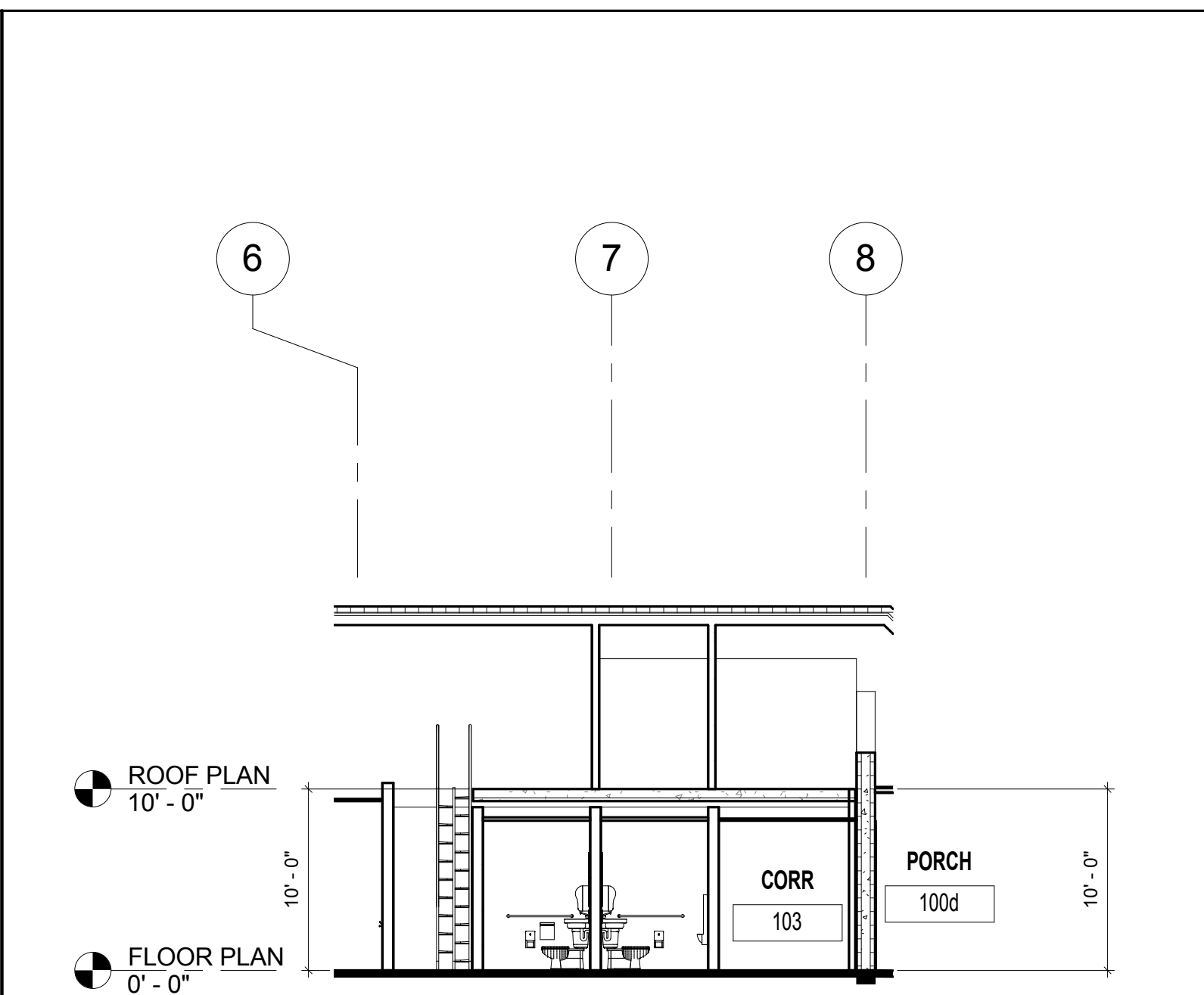
FLOOR PLAN

A1.1

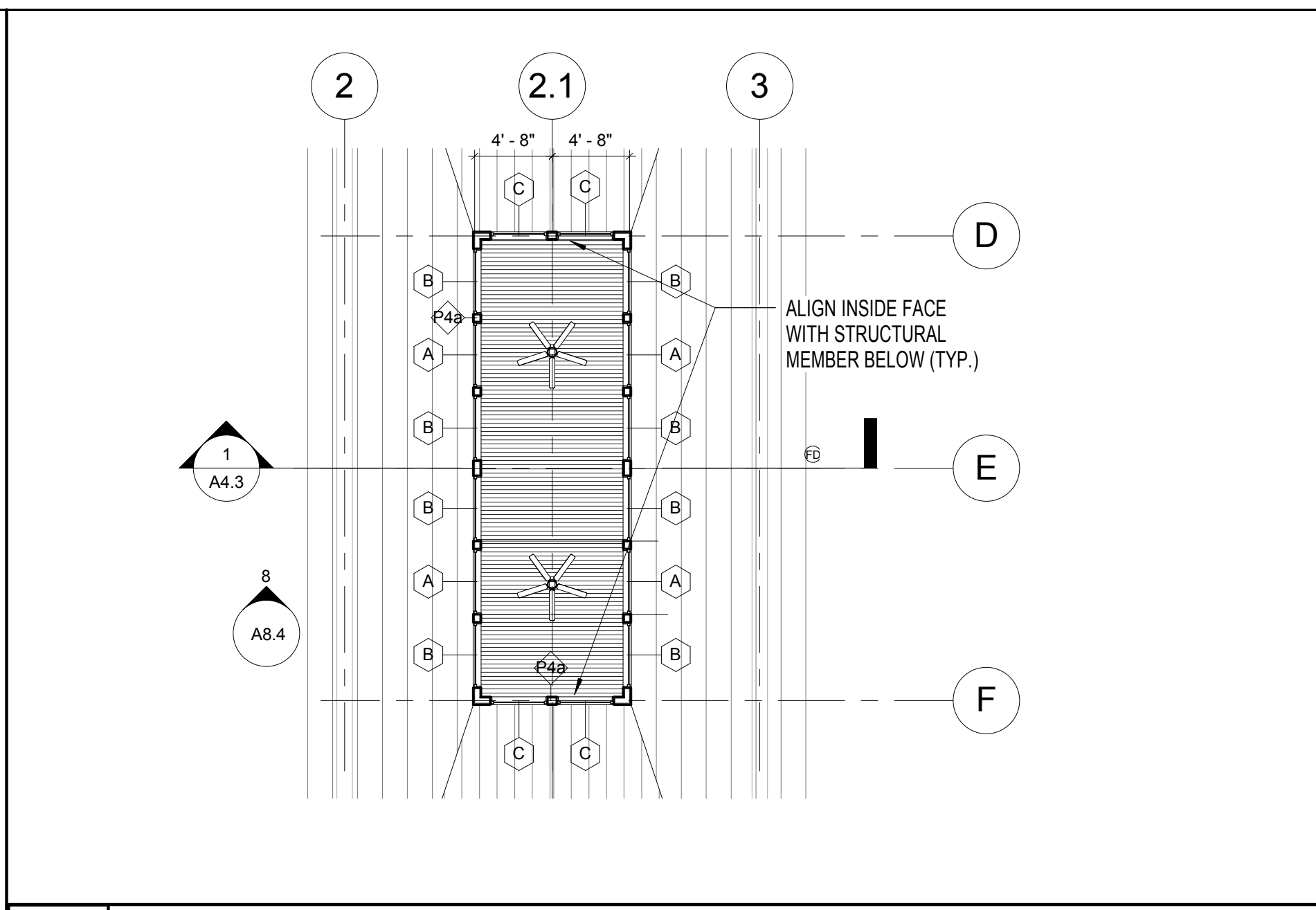
225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
 PHONE 850 224-6301 FAX 850 561-6978



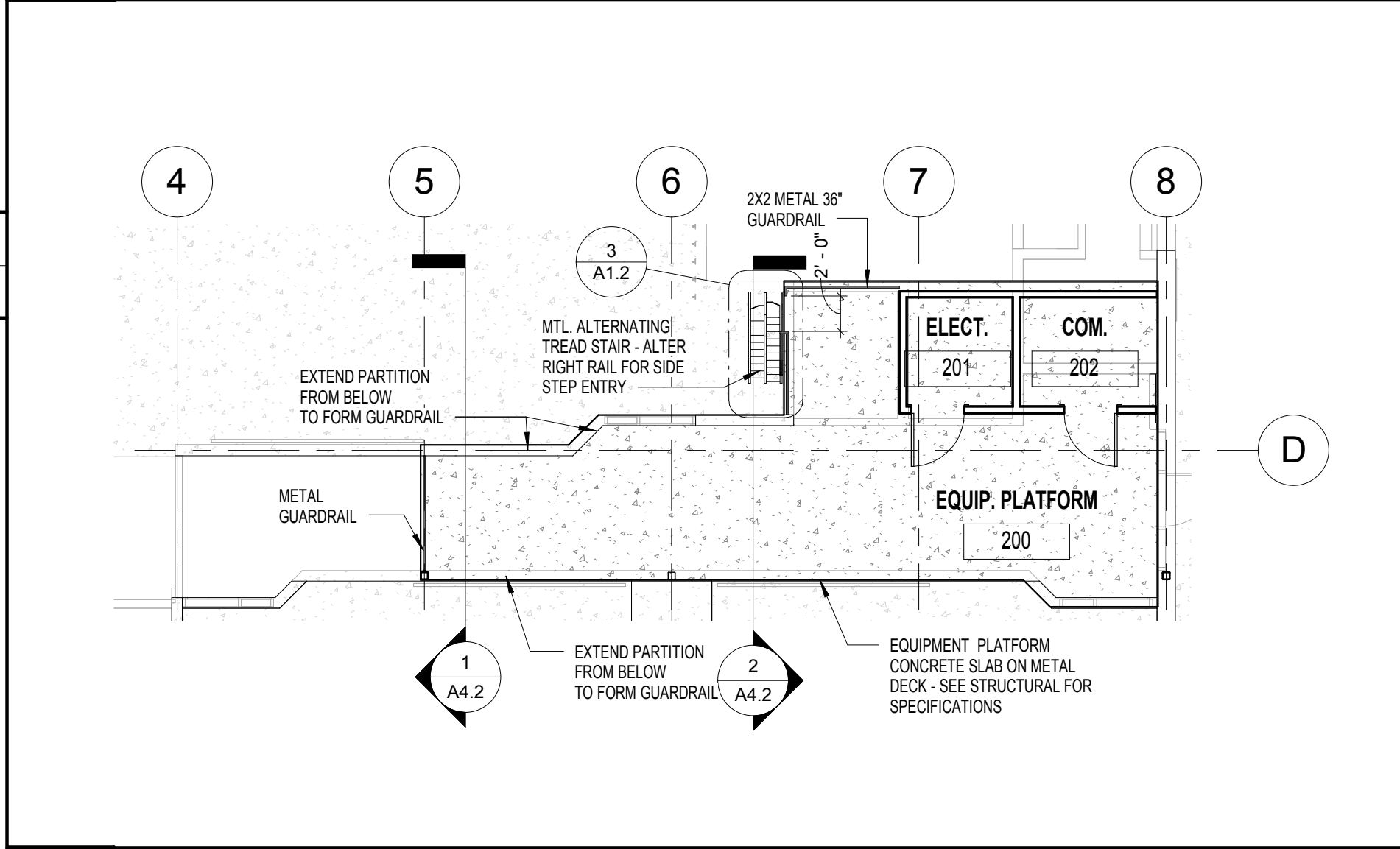
4 Detail - Cupola Framing E/W
A1.2 1/2" = 1'-0"



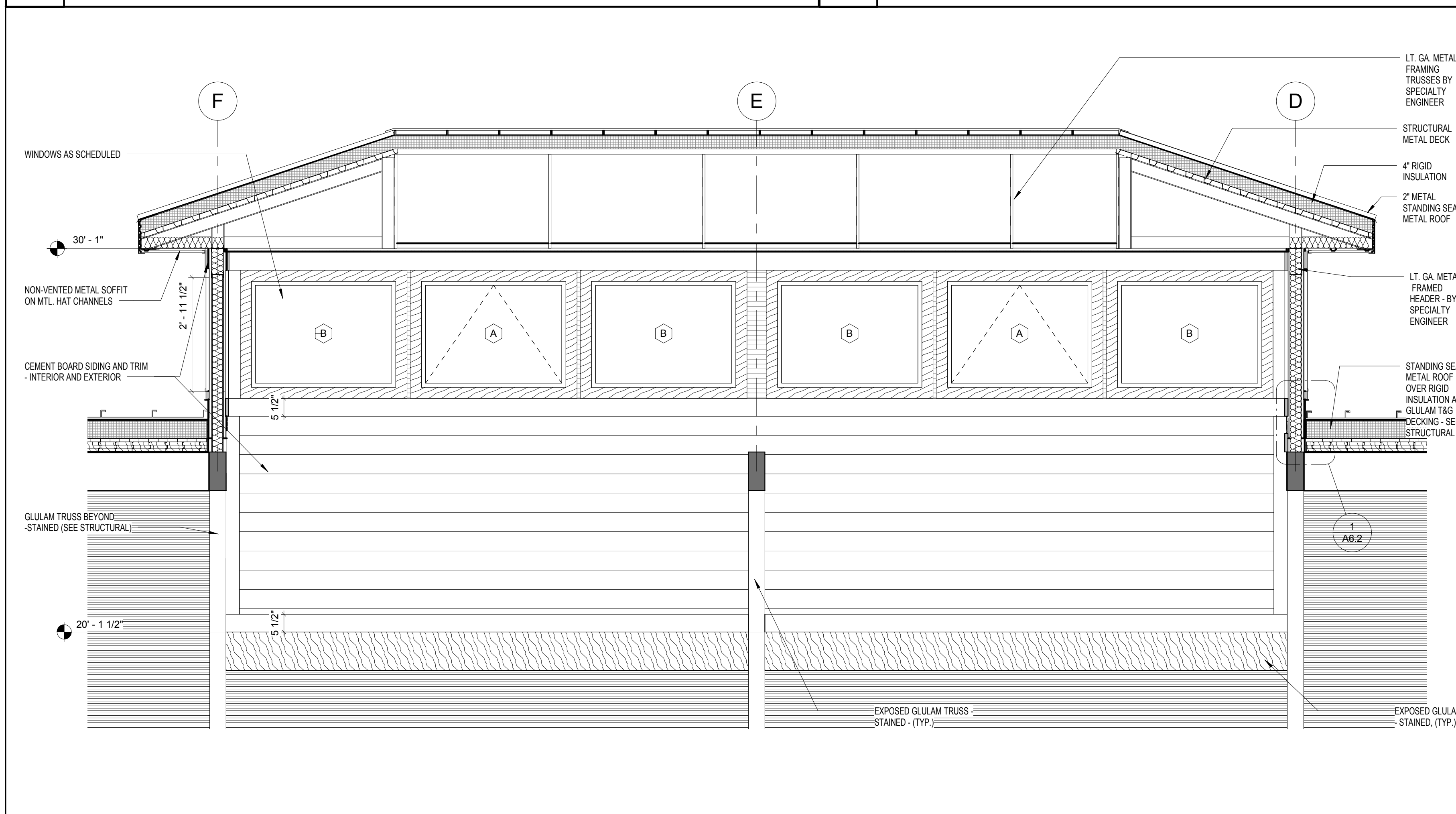
5 Partial Section - Mezzanine
A1.2 1/8" = 1'-0"



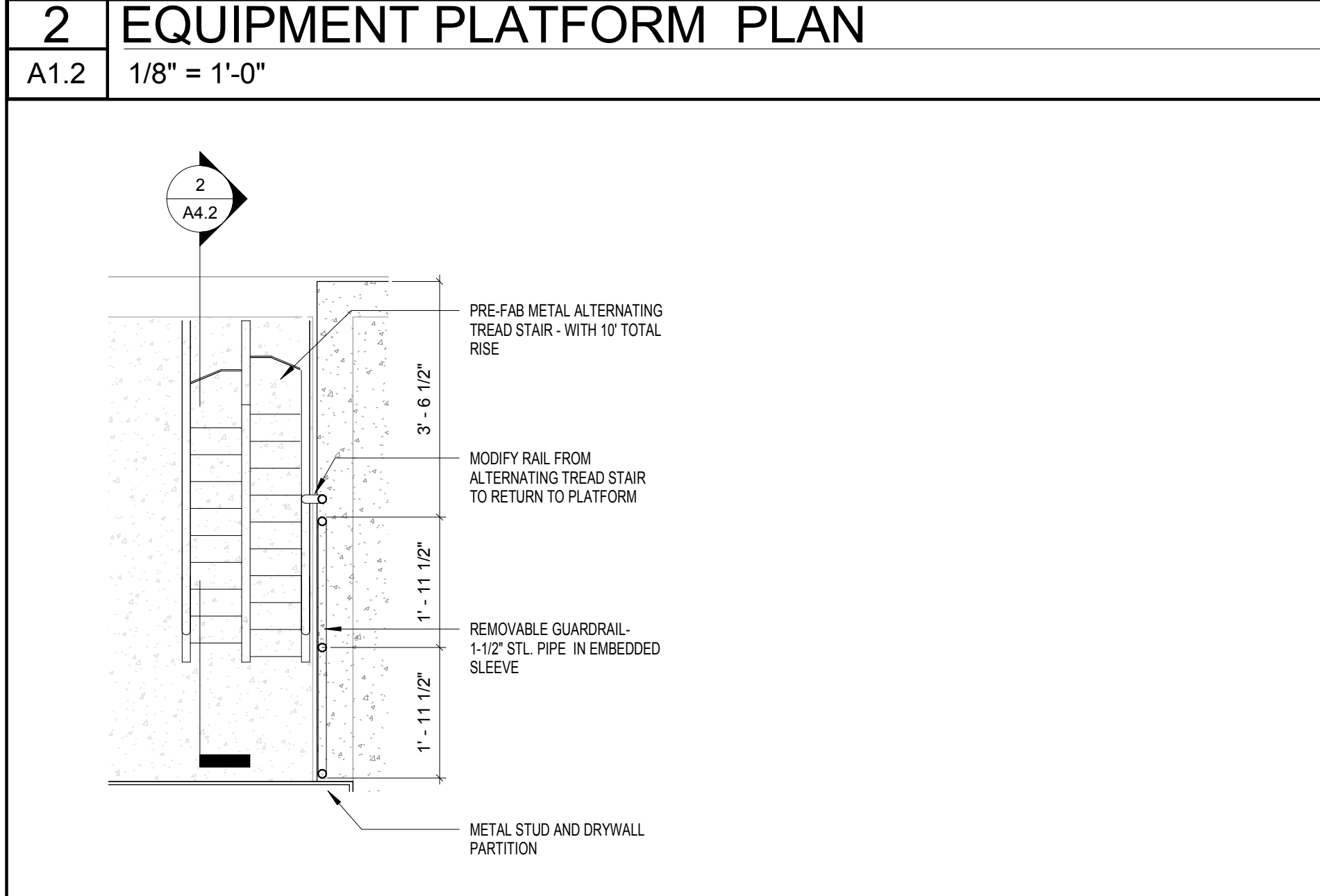
1 CUPOLA PLAN
A1.2 1/8" = 1'-0"



2 EQUIPMENT PLATFORM PLAN
A1.2 1/8" = 1'-0"



6 Detail - Cupola Framing N/S
A1.2 1/2" = 1'-0"



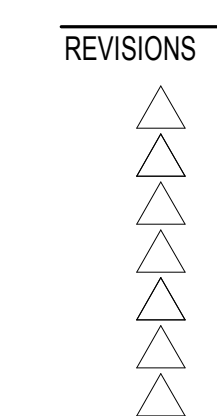
3 Plan Detail
A1.2 1/2" = 1'-0"



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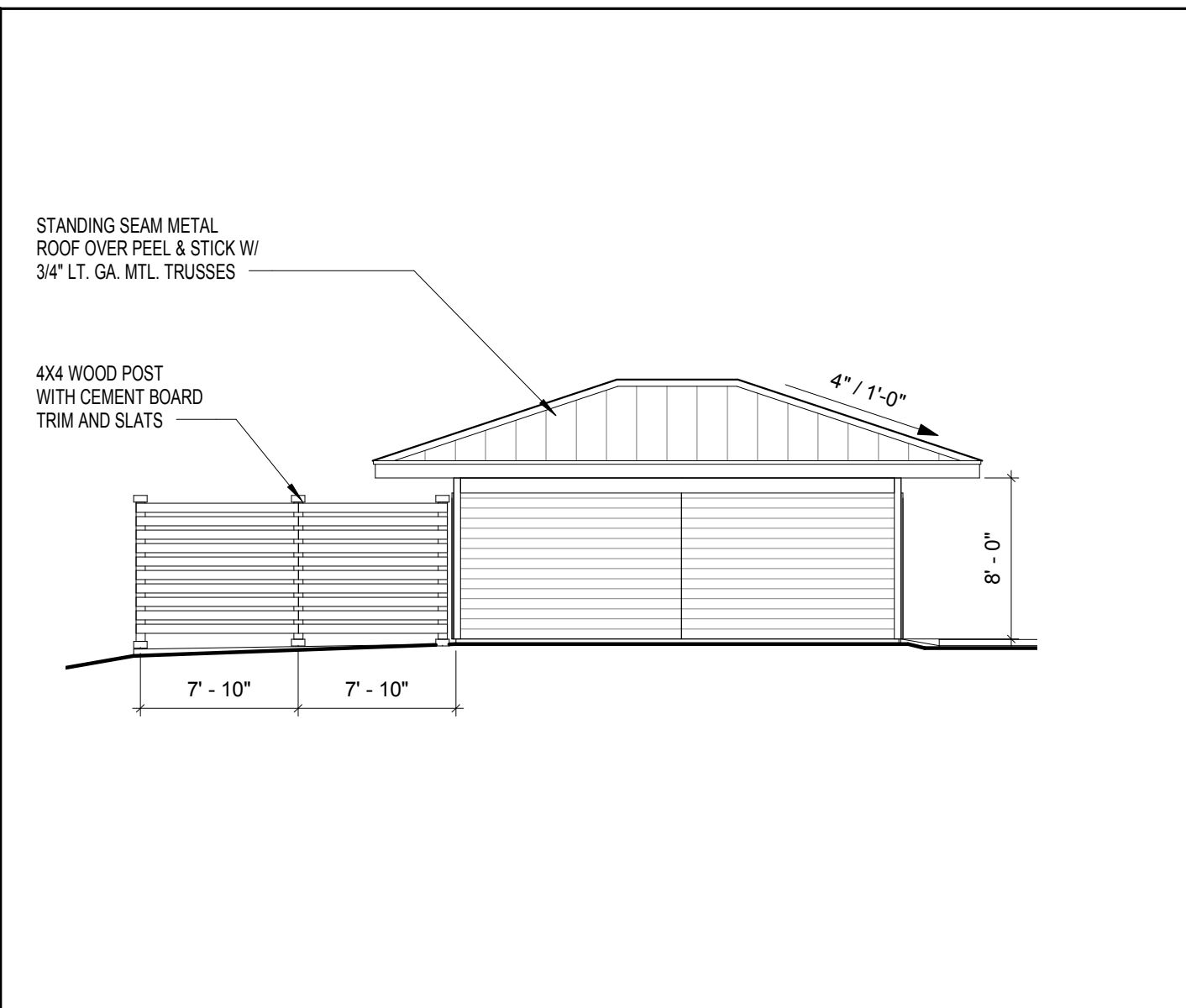
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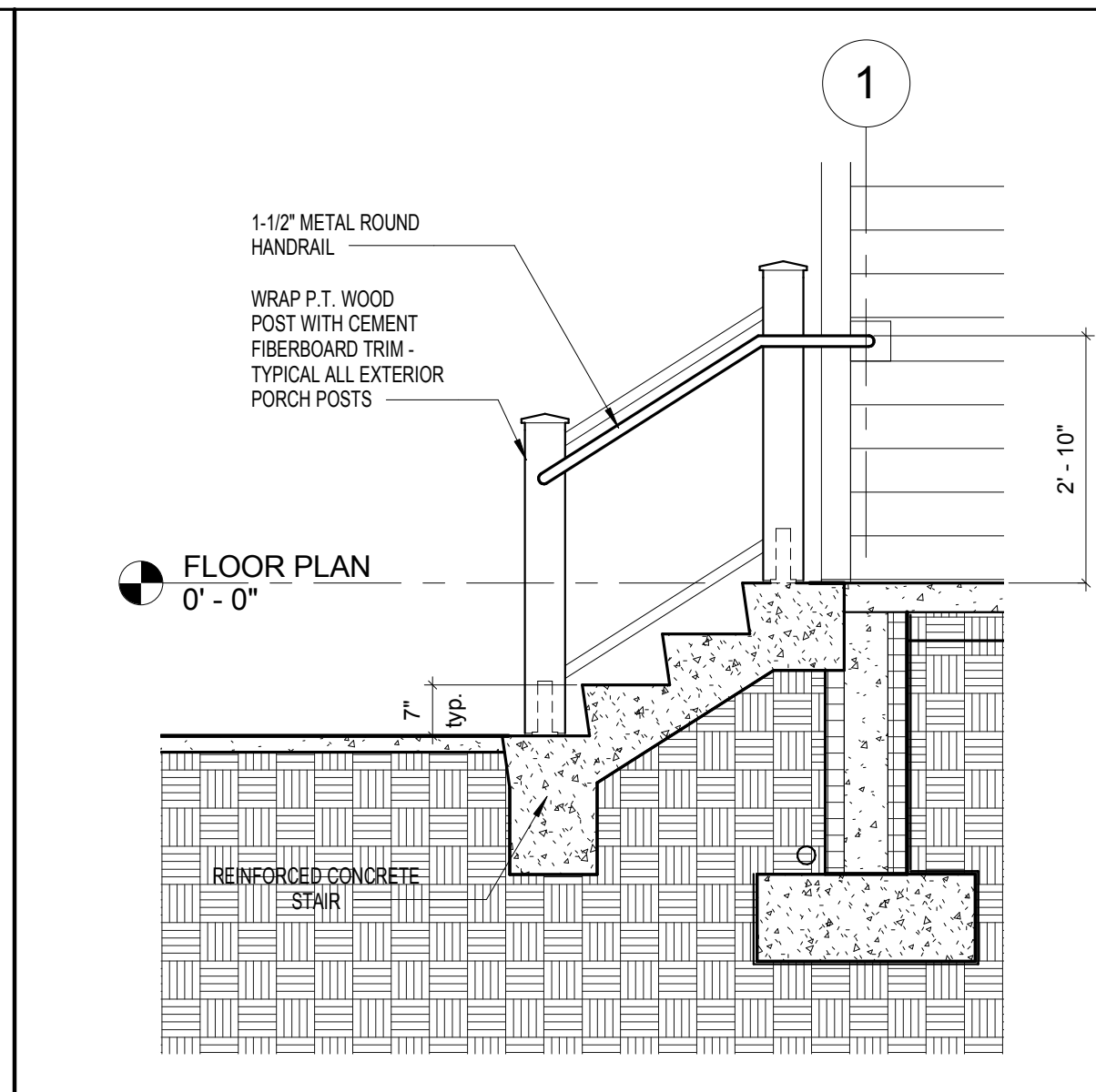


PLAN VIEWS & DETAILS

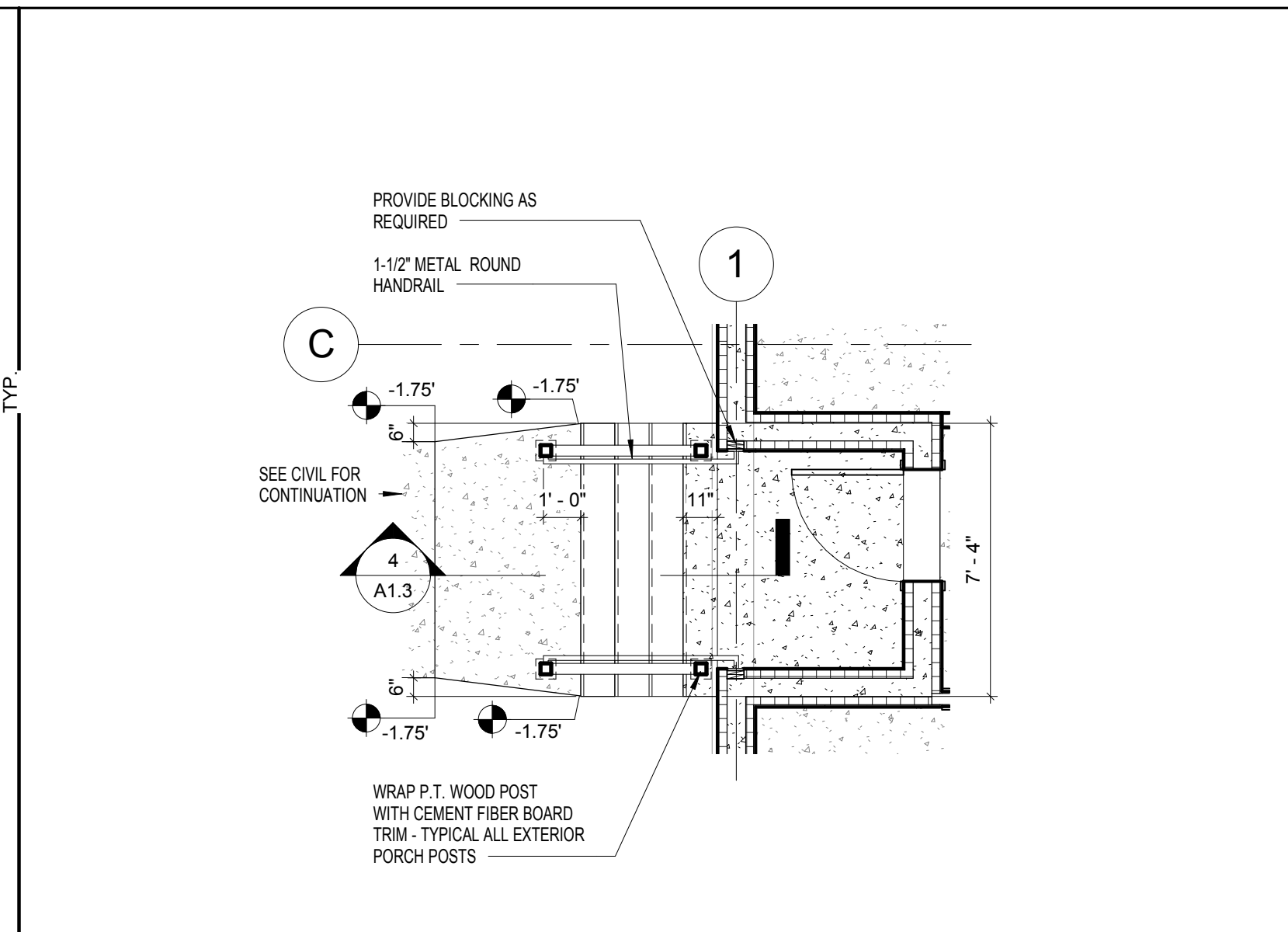
A1.2



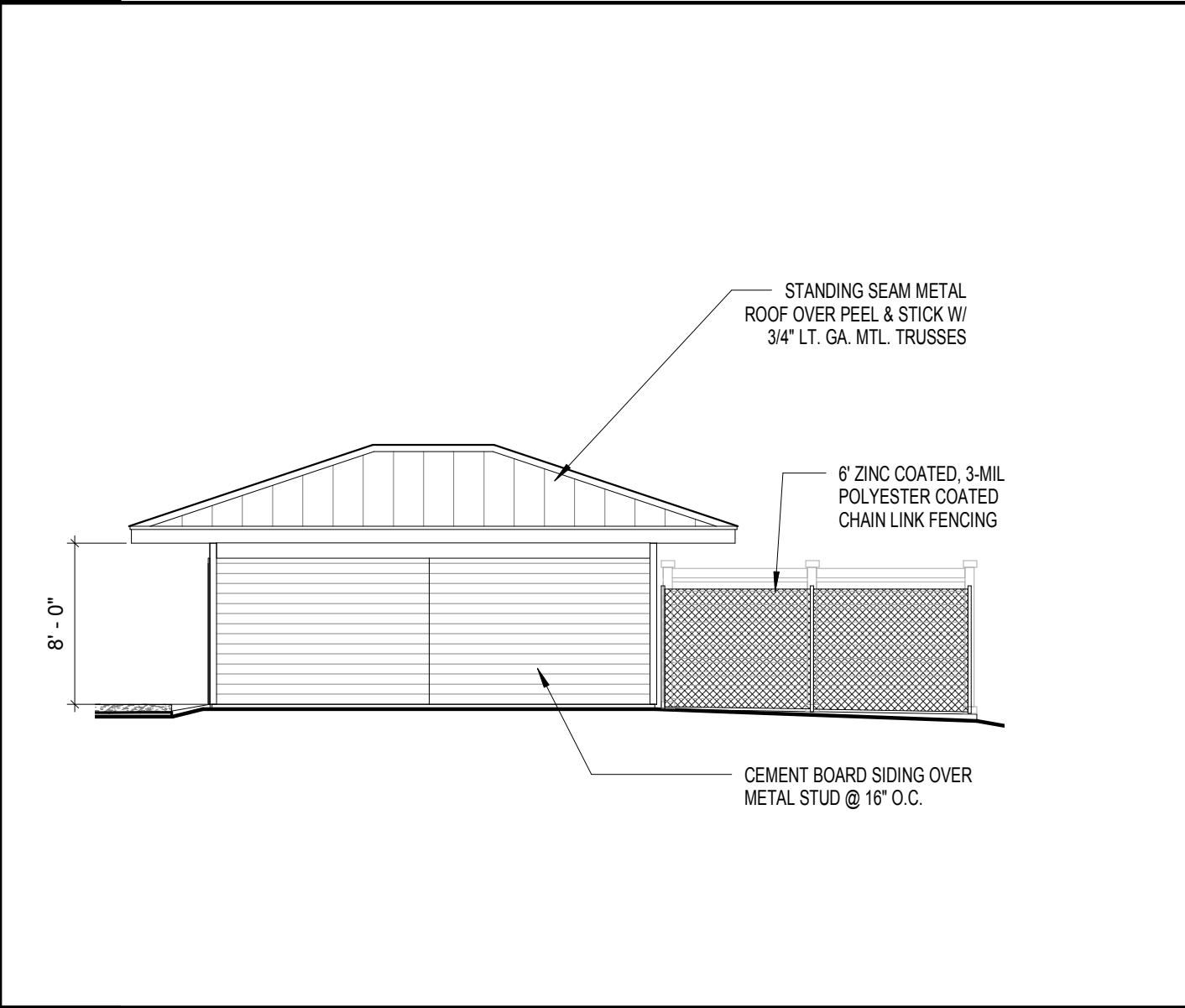
7 North Elevation - Utility Bldg.
A1.3 1/8" = 1'-0"



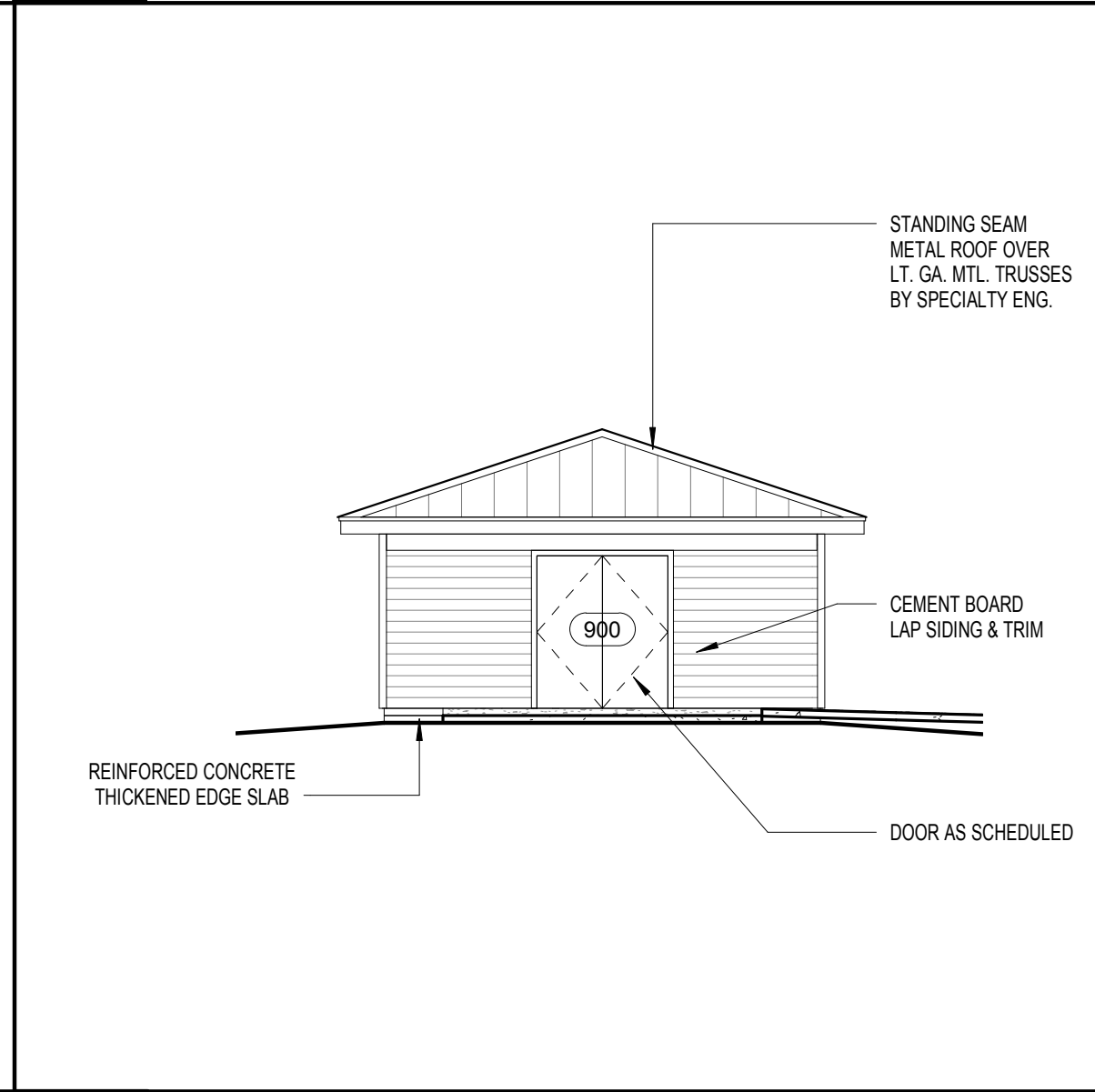
4 Section Detail - West Entry Stair
A1.3 1/2" = 1'-0"



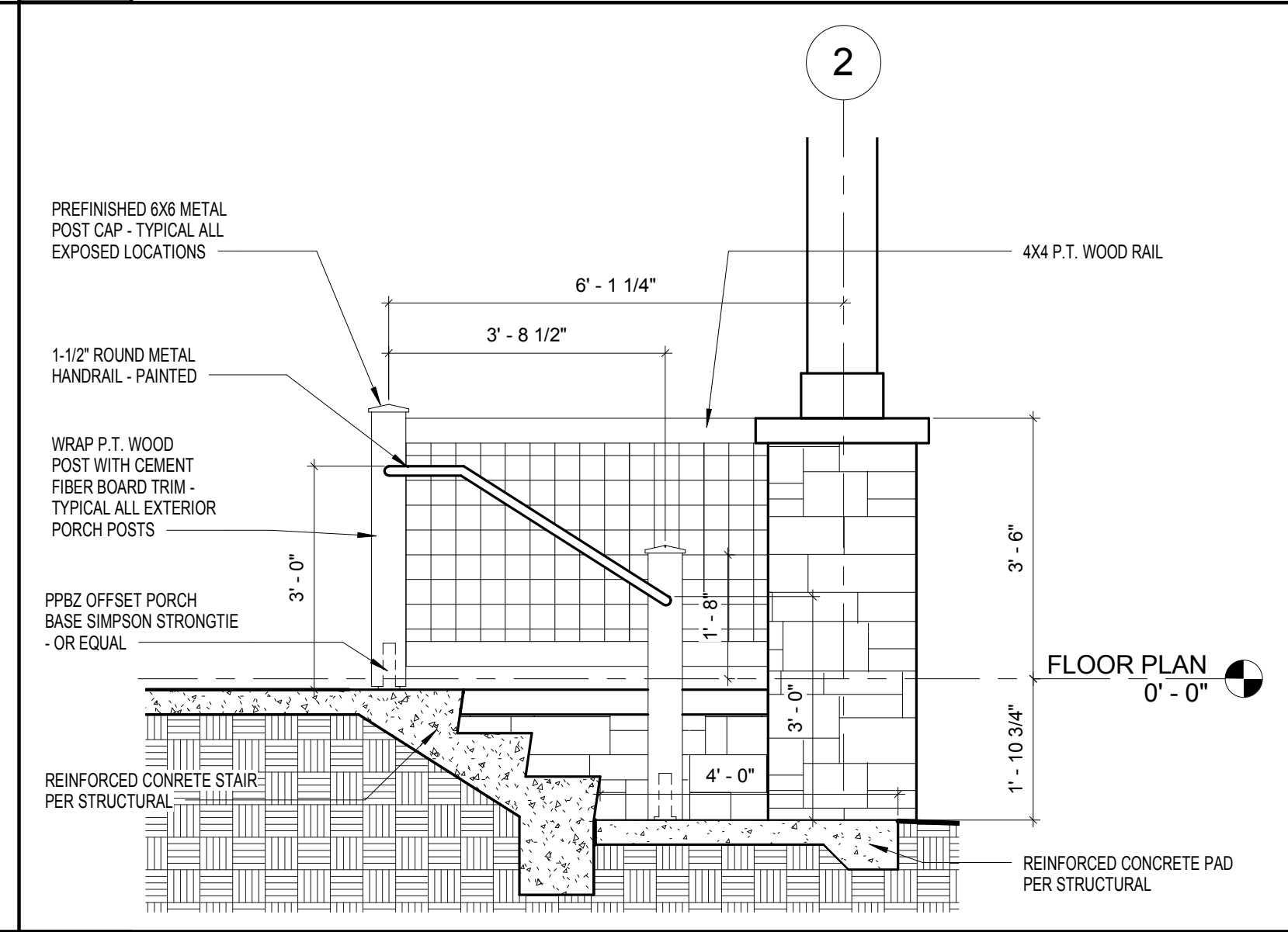
1 Plan Detail - West Entry Stair
A1.3 1/4" = 1'-0"



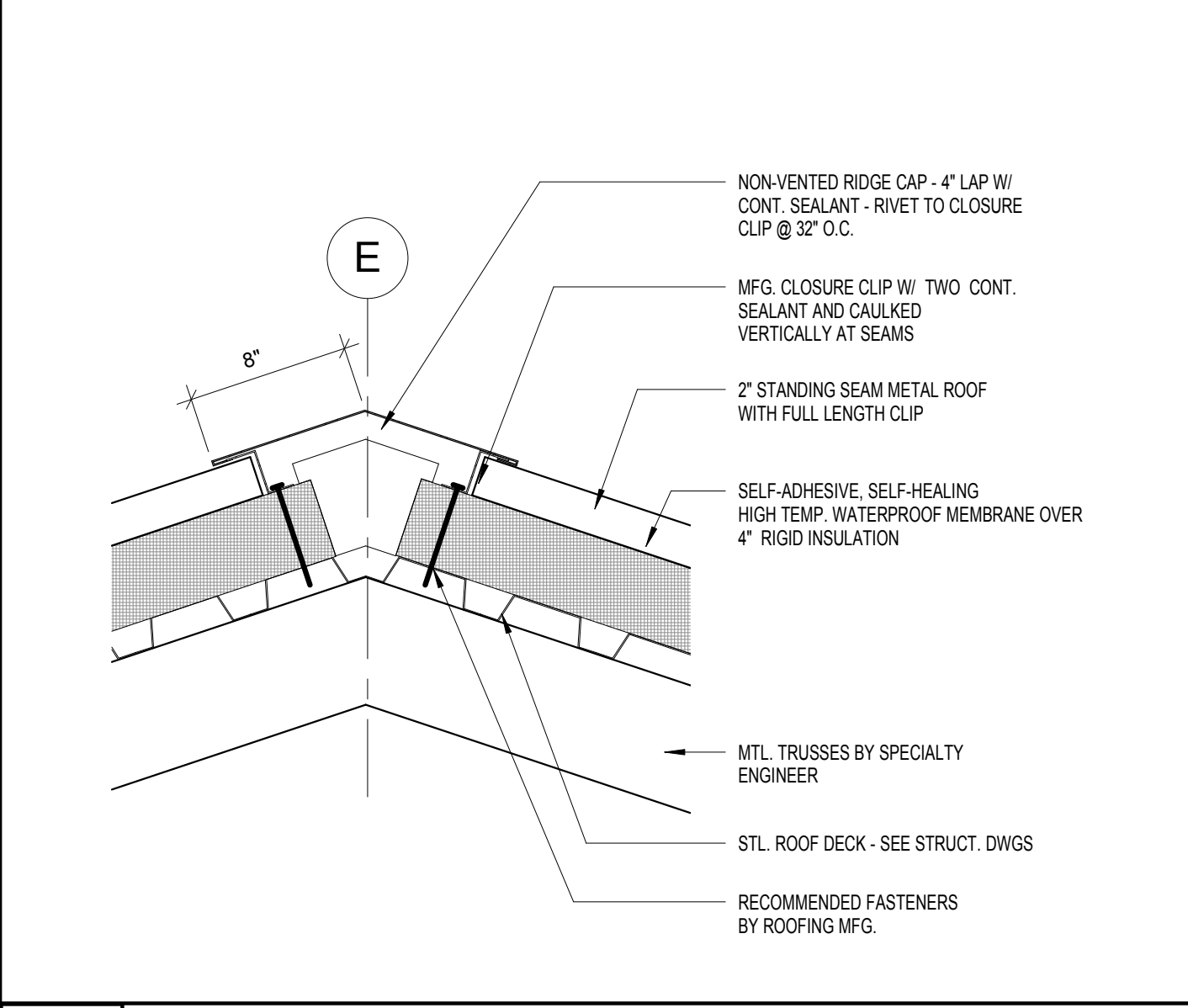
8 South Elevation - Utility Bldg.
A1.3 1/8" = 1'-0"



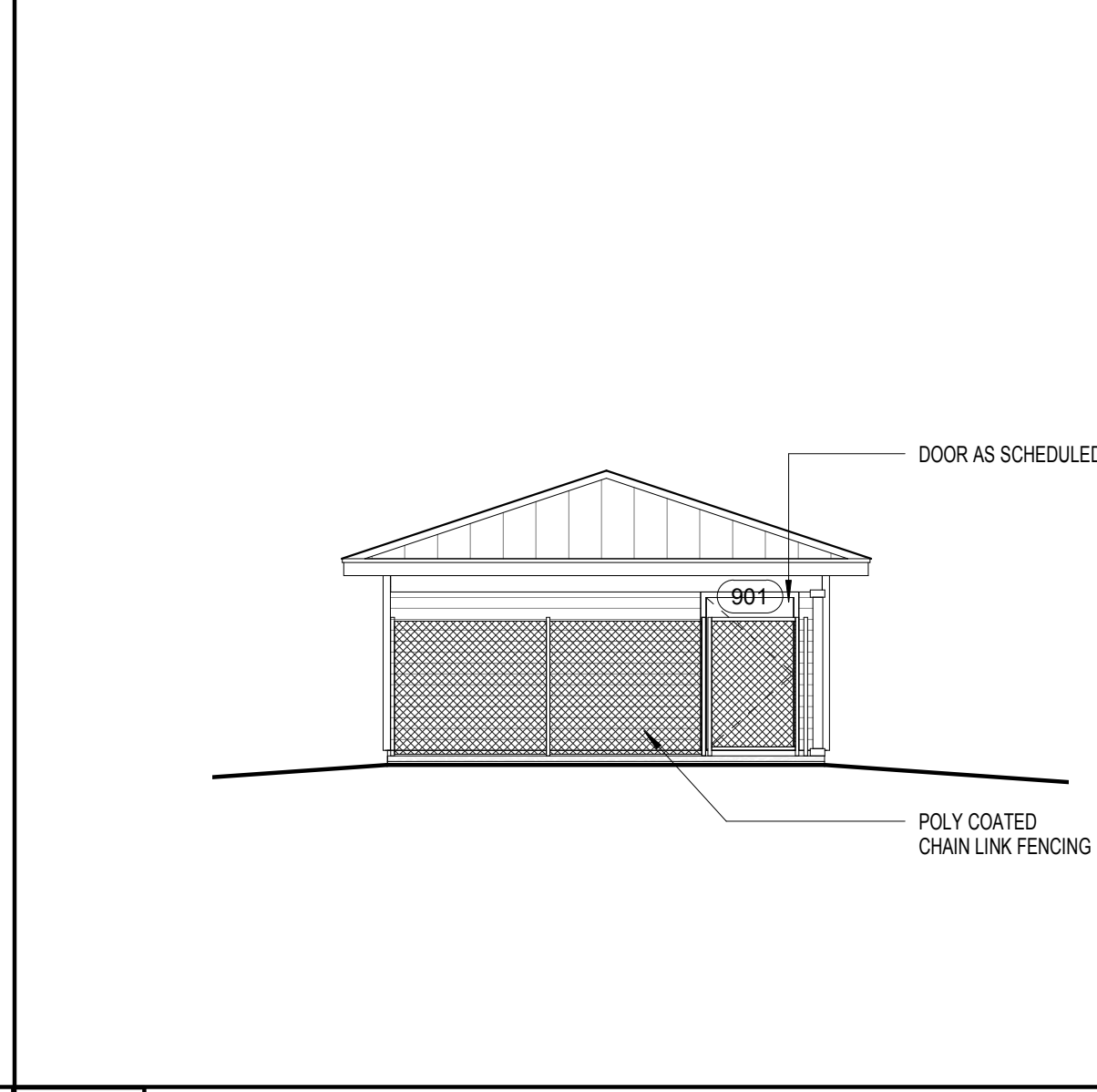
5 West Elevation - Utility Bldg.
A1.3 1/8" = 1'-0"



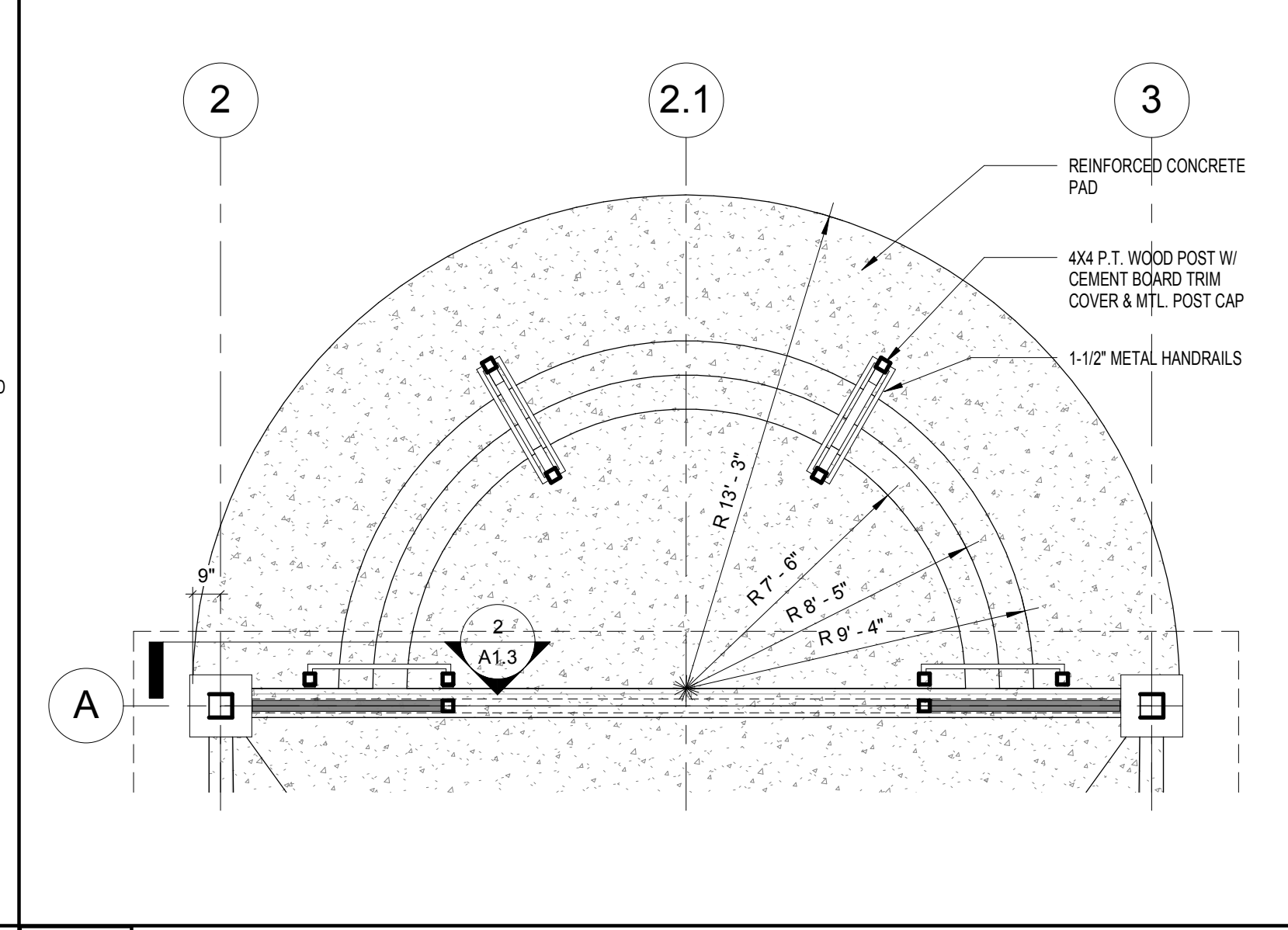
2 Partial Section - Stair
A1.3 1/2" = 1'-0"



9 Detail Section - Typical Ridge
A1.3 1 1/2" = 1'-0"



6 East Elevation - Utility Bldg.
A1.3 1/8" = 1'-0"



3 Plan Detail - North Stair
A1.3 1/4" = 1'-0"



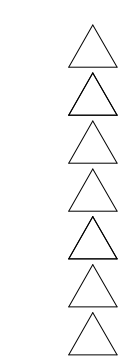
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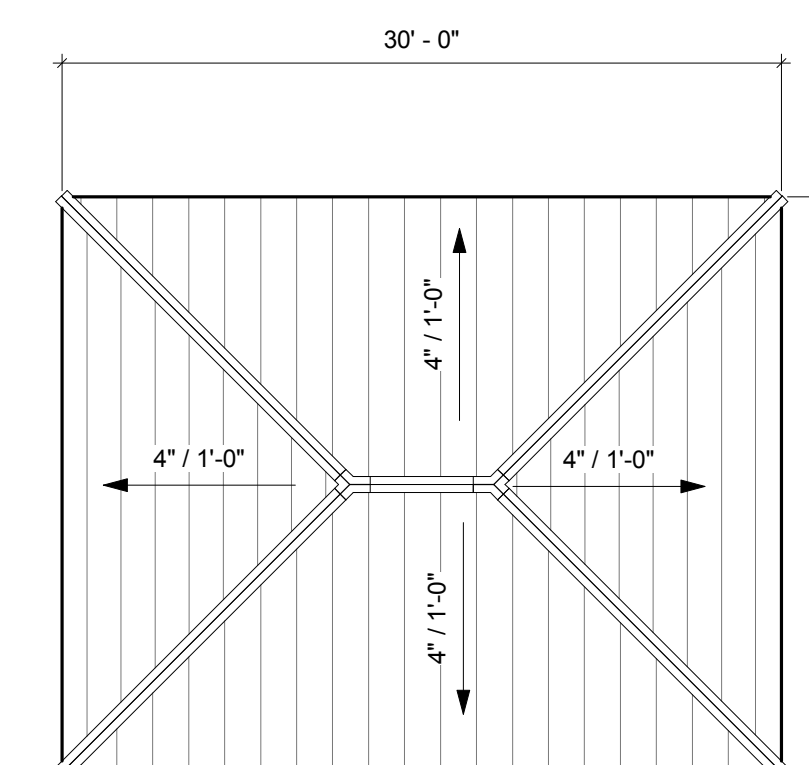
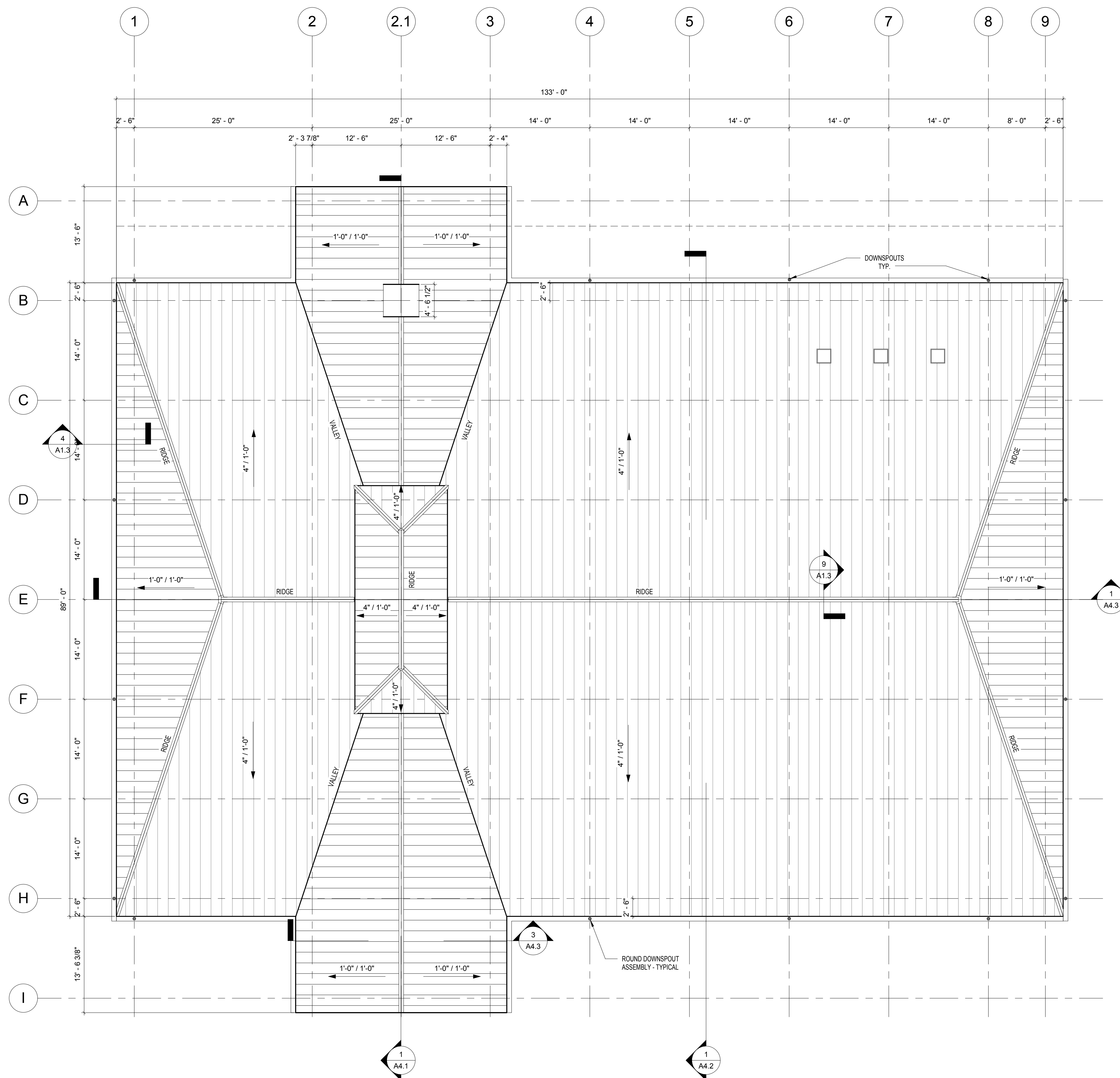
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PLAN VIEWS & DETAILS

A1.3



NOTE:
 SOLAR ARRAY ATTACHMENT CLIPS BASIS OF DESIGN PRODUCT: S-SI MODEL RS-S-T CLAMP WITH PV KIT AND EDGE GRAB. NOTE THAT CLIPS ARE ROOFING PRODUCT SPECIFIC AND MODEL NUMBER MUST BE ADJUSTED FOR STANDING SEAM METAL ROOF INSTALLED.
 COORDINATE WITH SOLAR ARRAY INSTALLER FOR FINAL SHOP DRAWINGS.



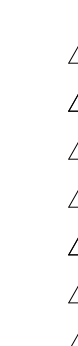
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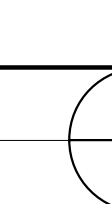
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ROOF PLAN

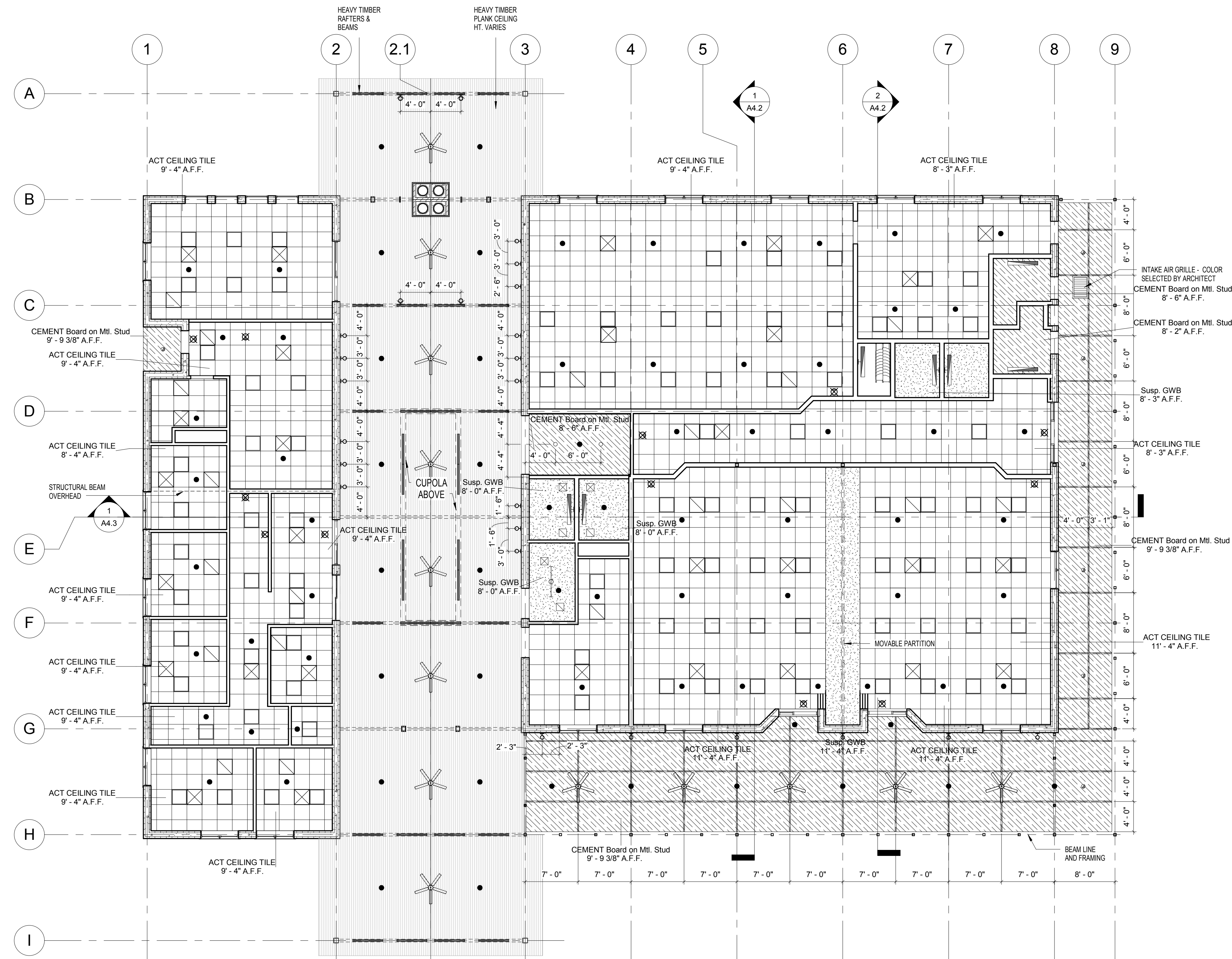
A1.4

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RCP FIXTURE LEGEND	
LIGHT FIXTURES	
	RECESSED DOWN LIGHT - ROUND
	RECESSED DOWN LIGHT - EMERGENCY
	CEILING FAN
	WALL MOUNTED LIGHT
	WALL MOUNTED LIGHT - DIRECTIONAL
	2x2 LAY-IN FIXTURE
	2x2 EMERGENCY FIXTURE, ACRYLIC LENS
	STRIP FLUORESCENT FIXTURE
	WALL MOUNTED FIXTURE, LINEAR
	BEAM MOUNTED FIXTURE (AIM UP), LINEAR
	EXIT SIGN CEILING MOUNTED
MECHANICAL FIXTURES	
	ACCESS PANEL
	RETURN AIR DIFFUSER
	SUPPLY AIR DIFFUSER
	SPRINKLER HEAD

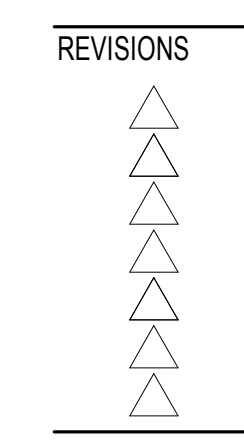
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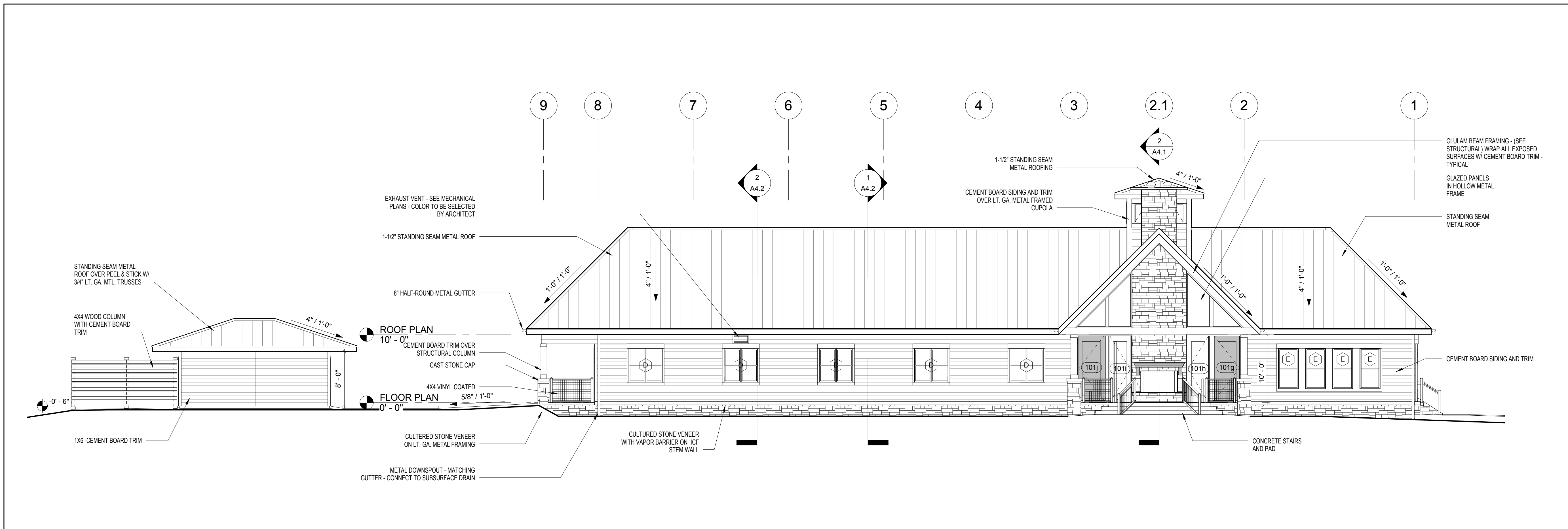
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CEILING PLANS

A2.1

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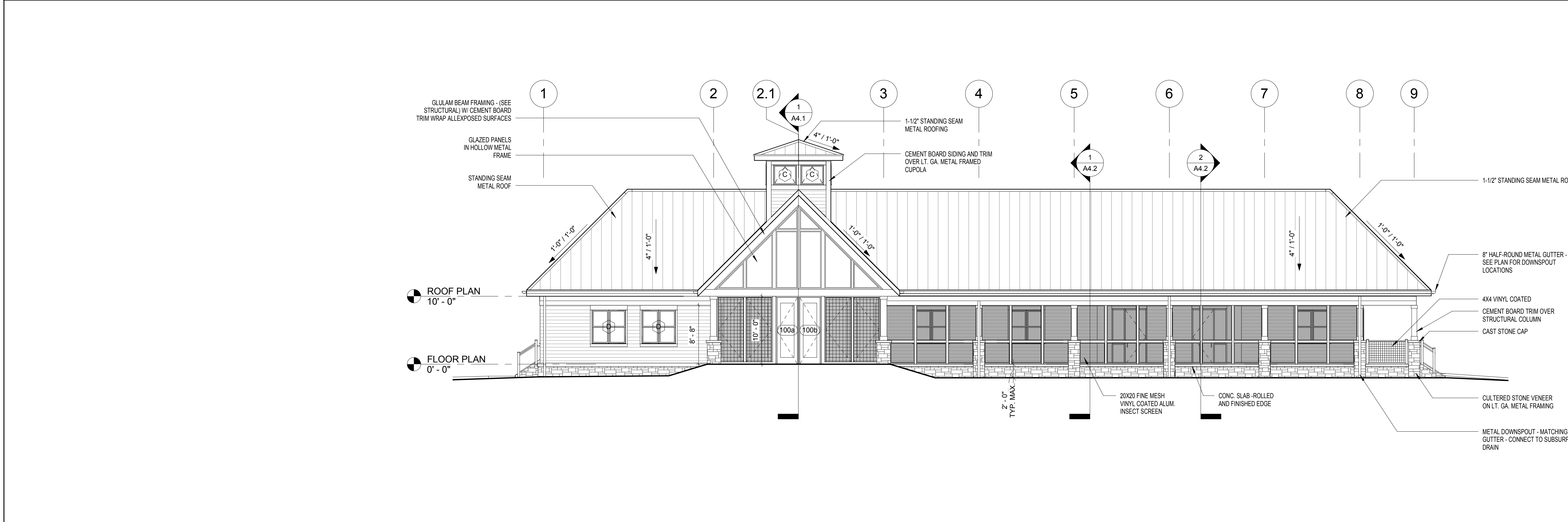
2 North Elevation
 A3.1 1/8" = 1'-0"



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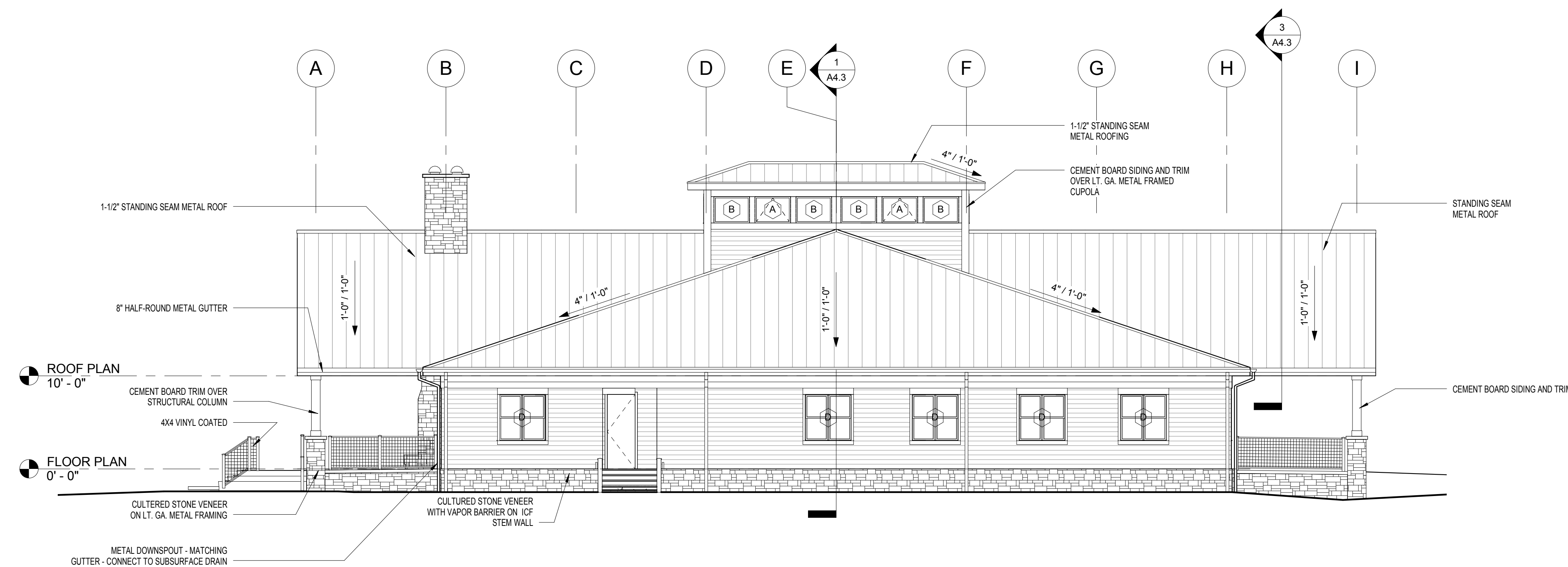
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1 South Elevation
 A3.1 1/8" = 1'-0"

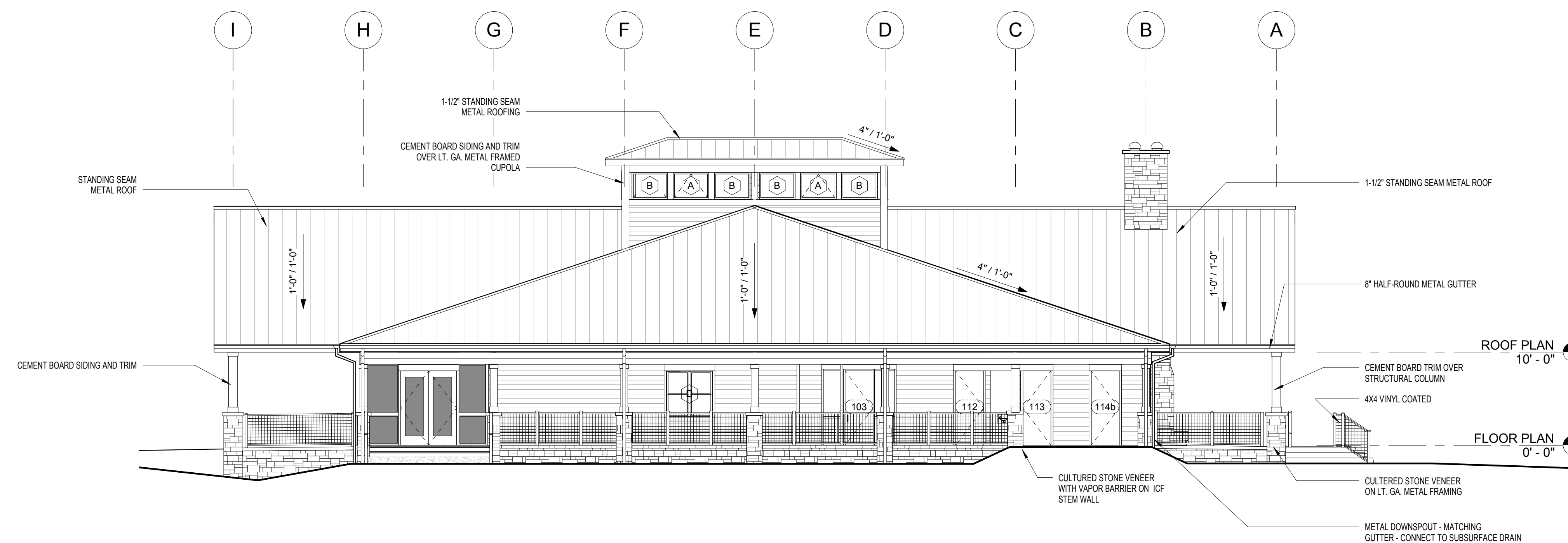
BUILDING ELEVATIONS

A3.1



2 West Elevation

A3.2 1/8" = 1'-0"



1 East Elevation

A3.2 1/8" = 1'-0"



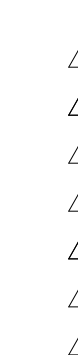
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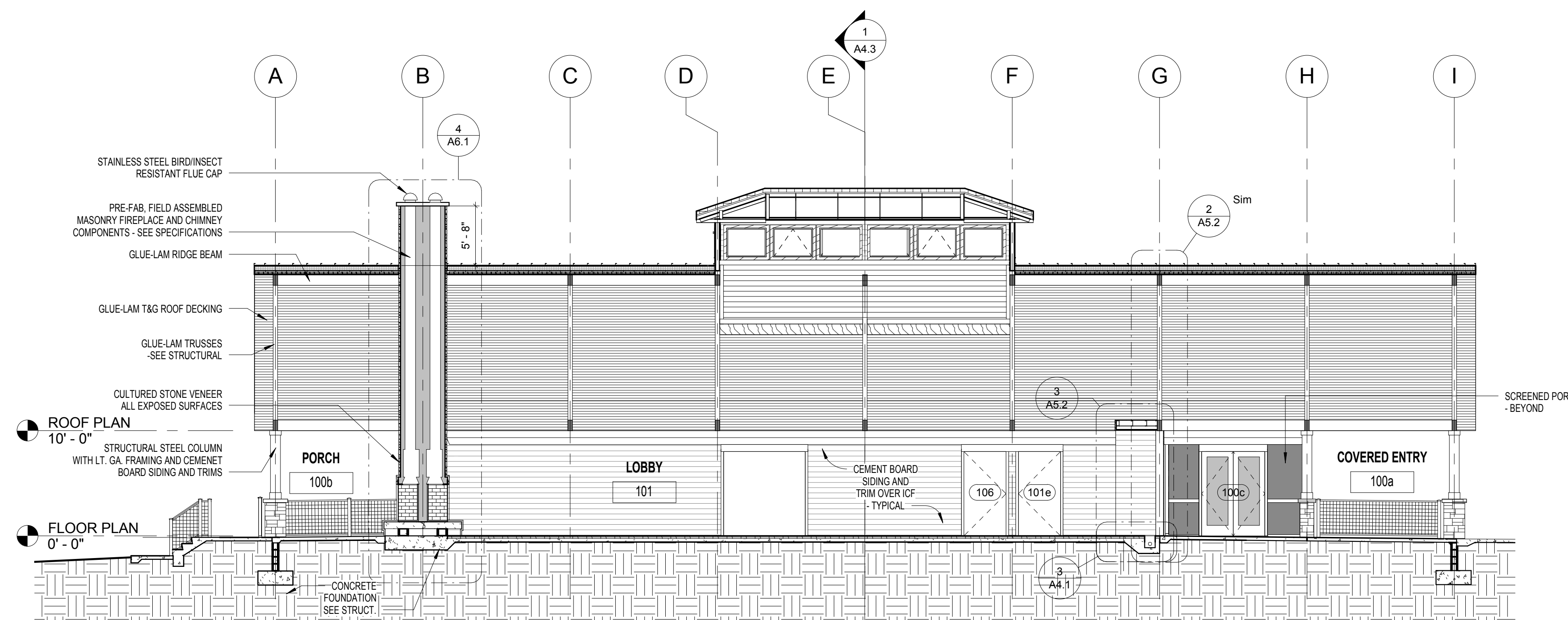
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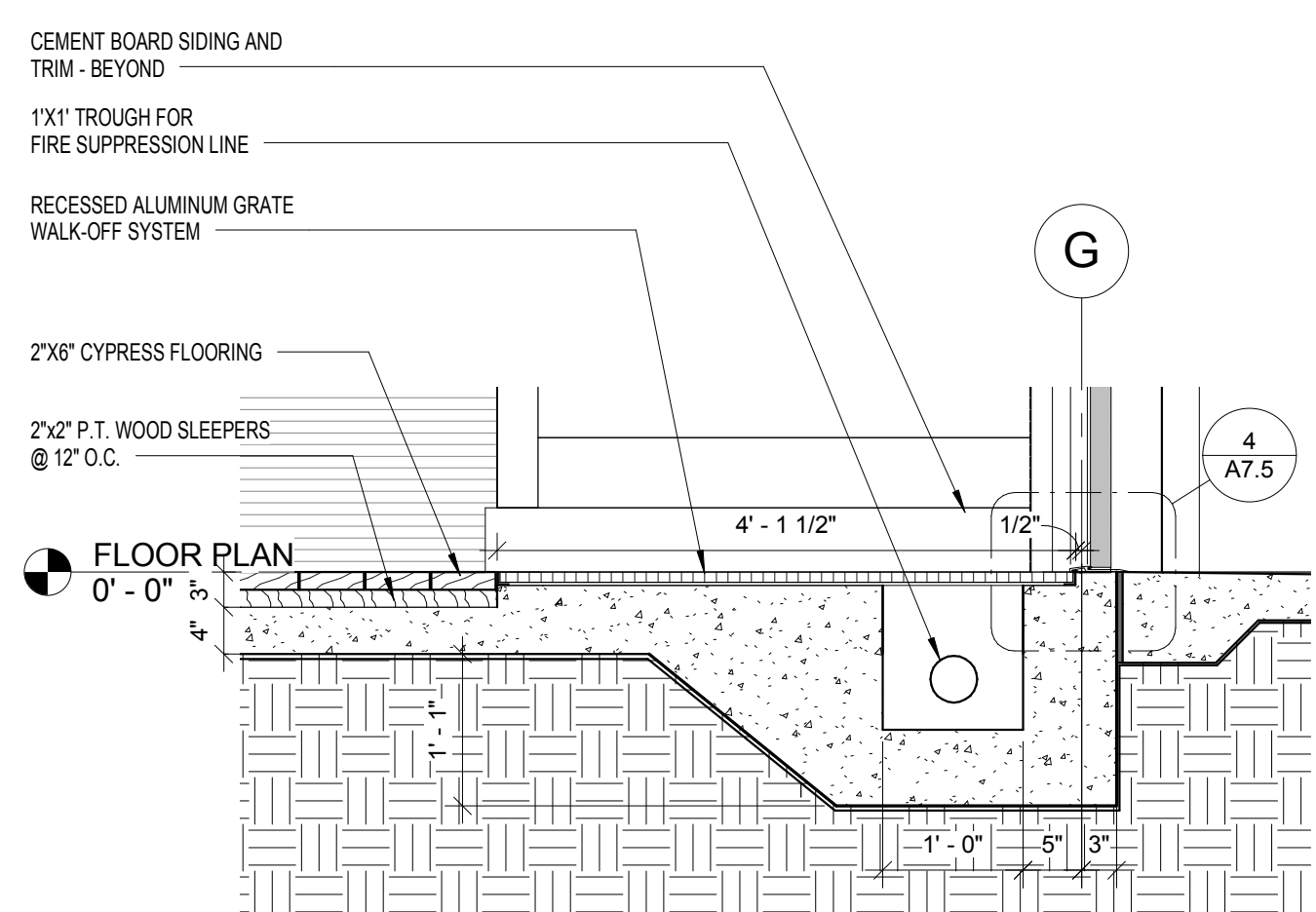
BUILDING ELEVATIONS

A3.2

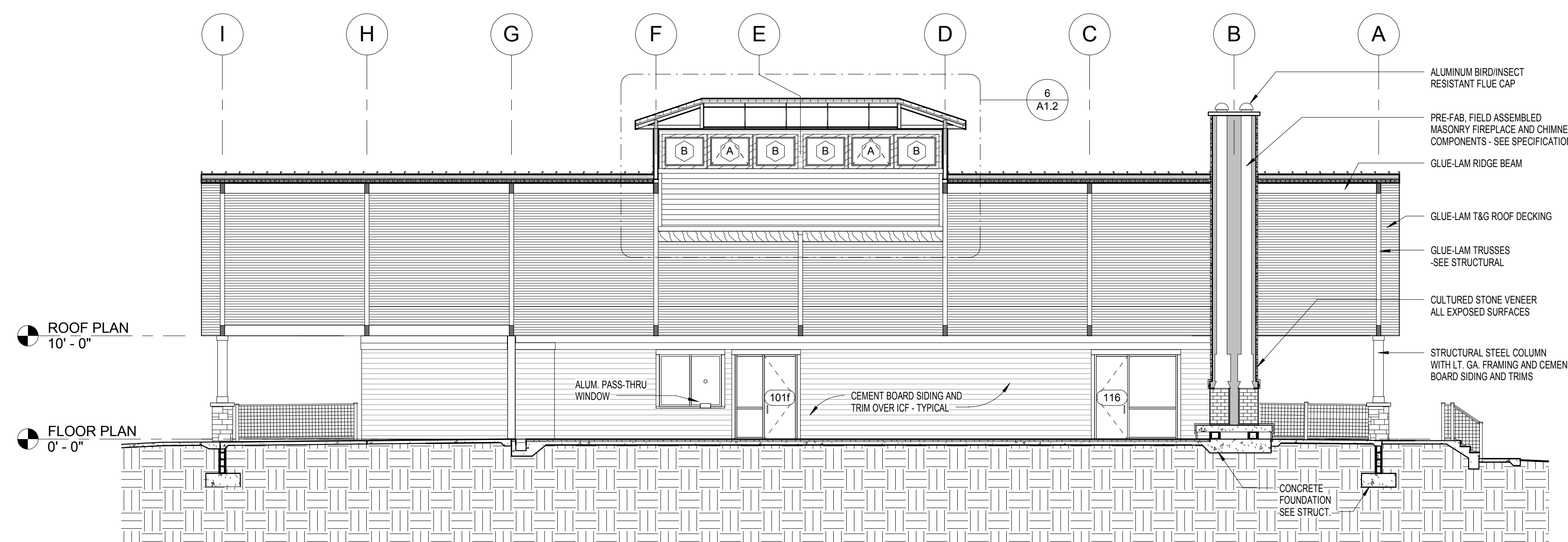
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2 North/South Building Section -1
A4.1 1/8" = 1'-0"



3 Detail - Trough for Piping
A4.1 3/4" = 1'-0"



1 North/South Building Section 2
A4.1 1/8" = 1'-0"

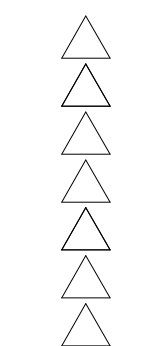


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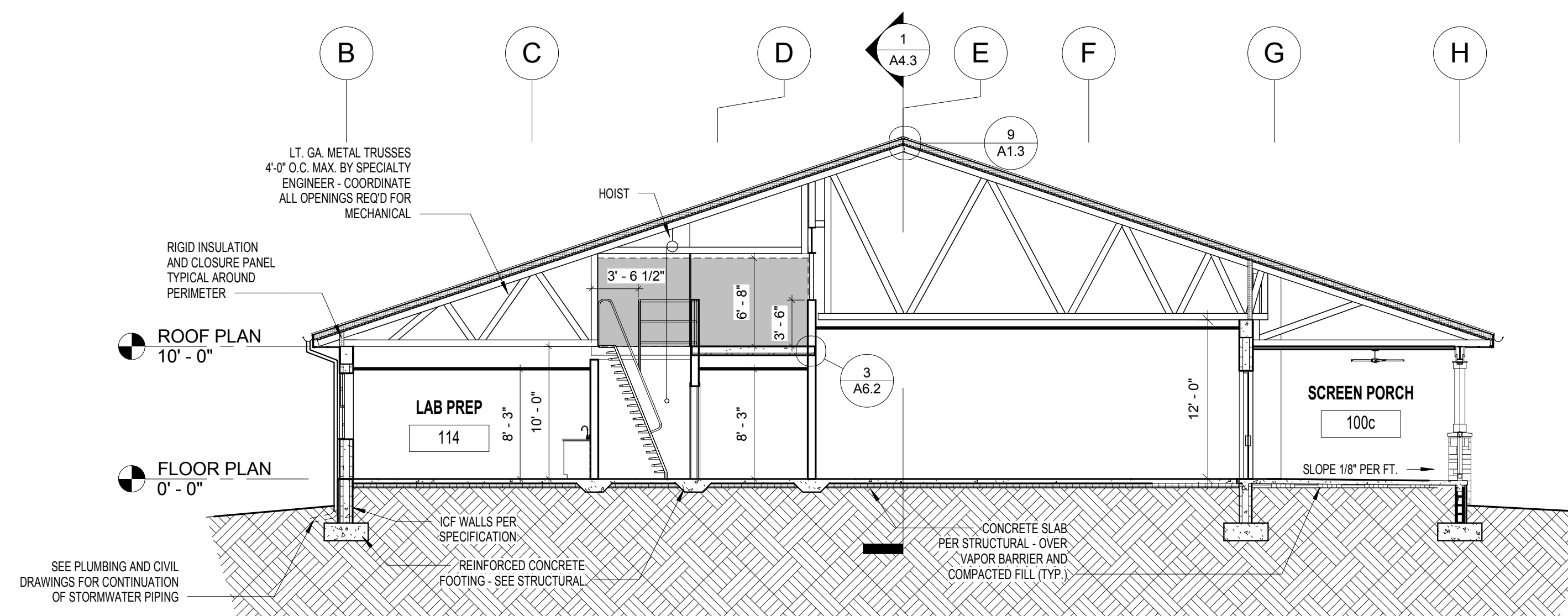
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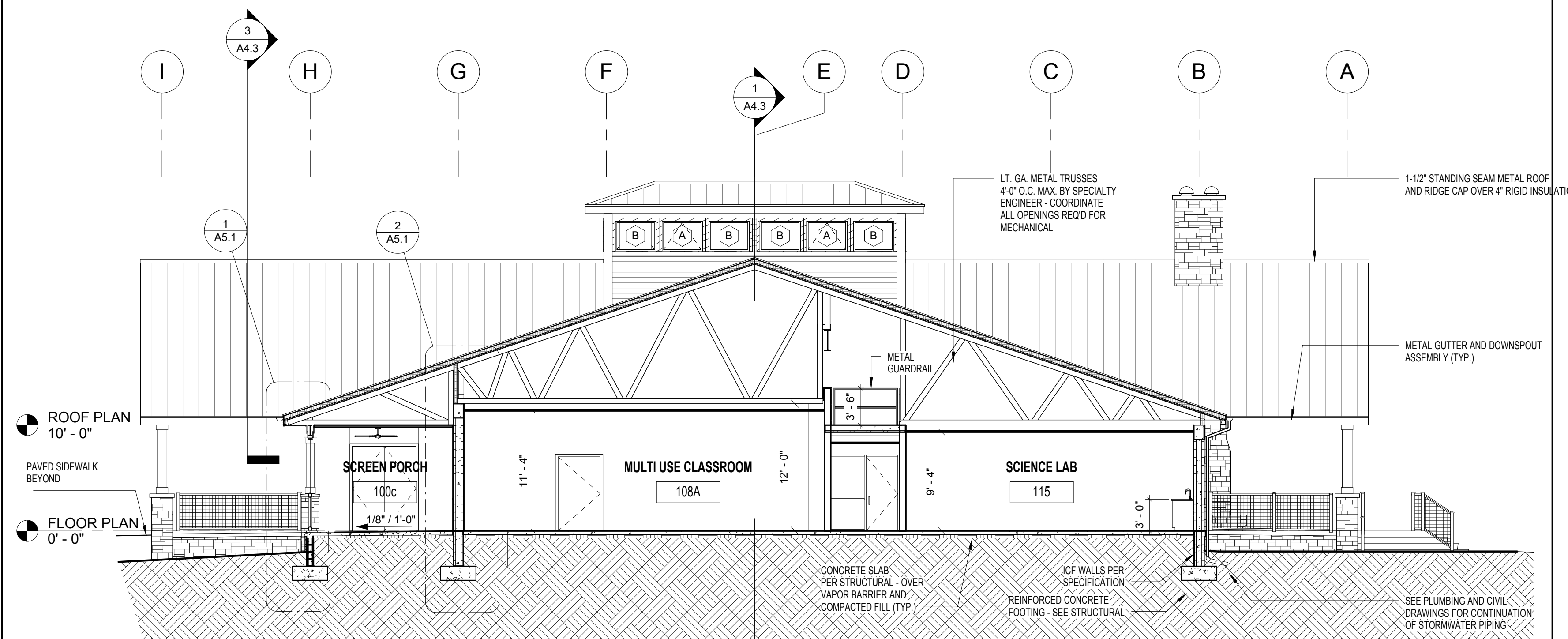
BUILDING SECTIONS

A4.1



2 Lateral Building Section 2

A4.2 1/8" = 1'-0"



1 Lateral Building Section 1

A4.2 1/8" = 1'-0"



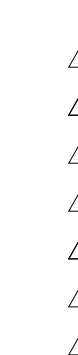
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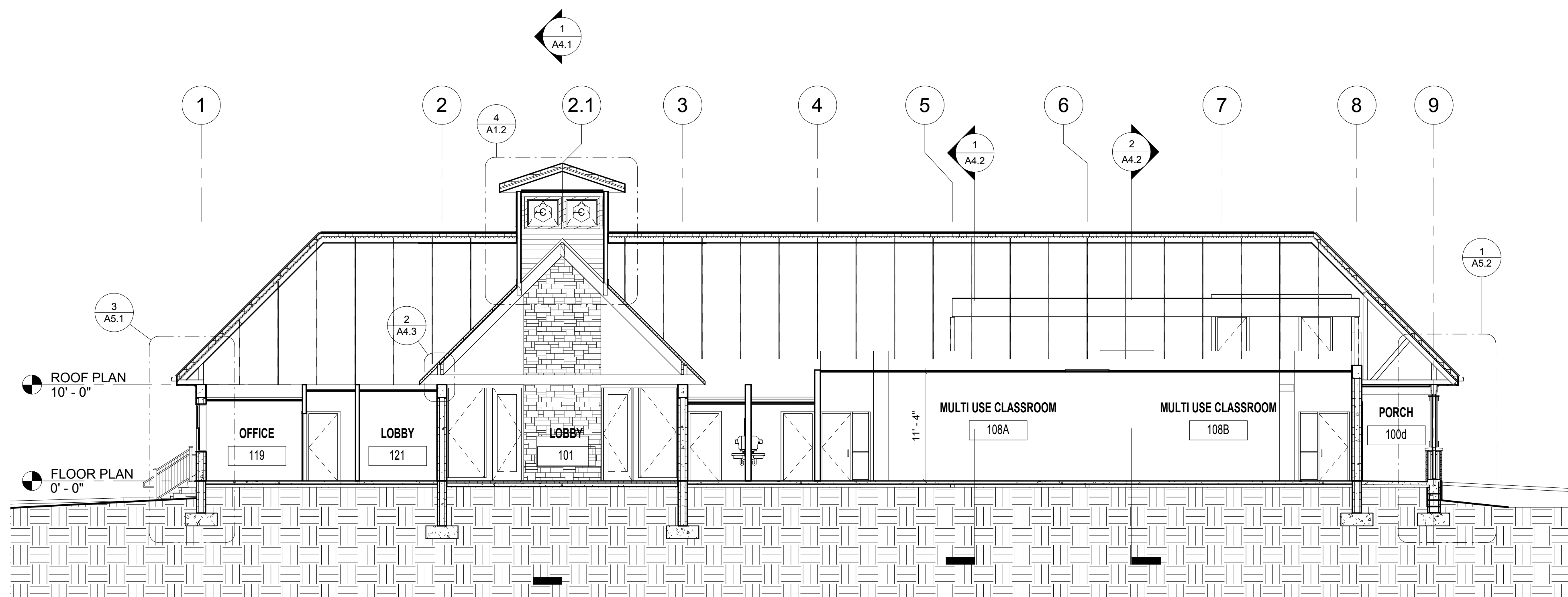
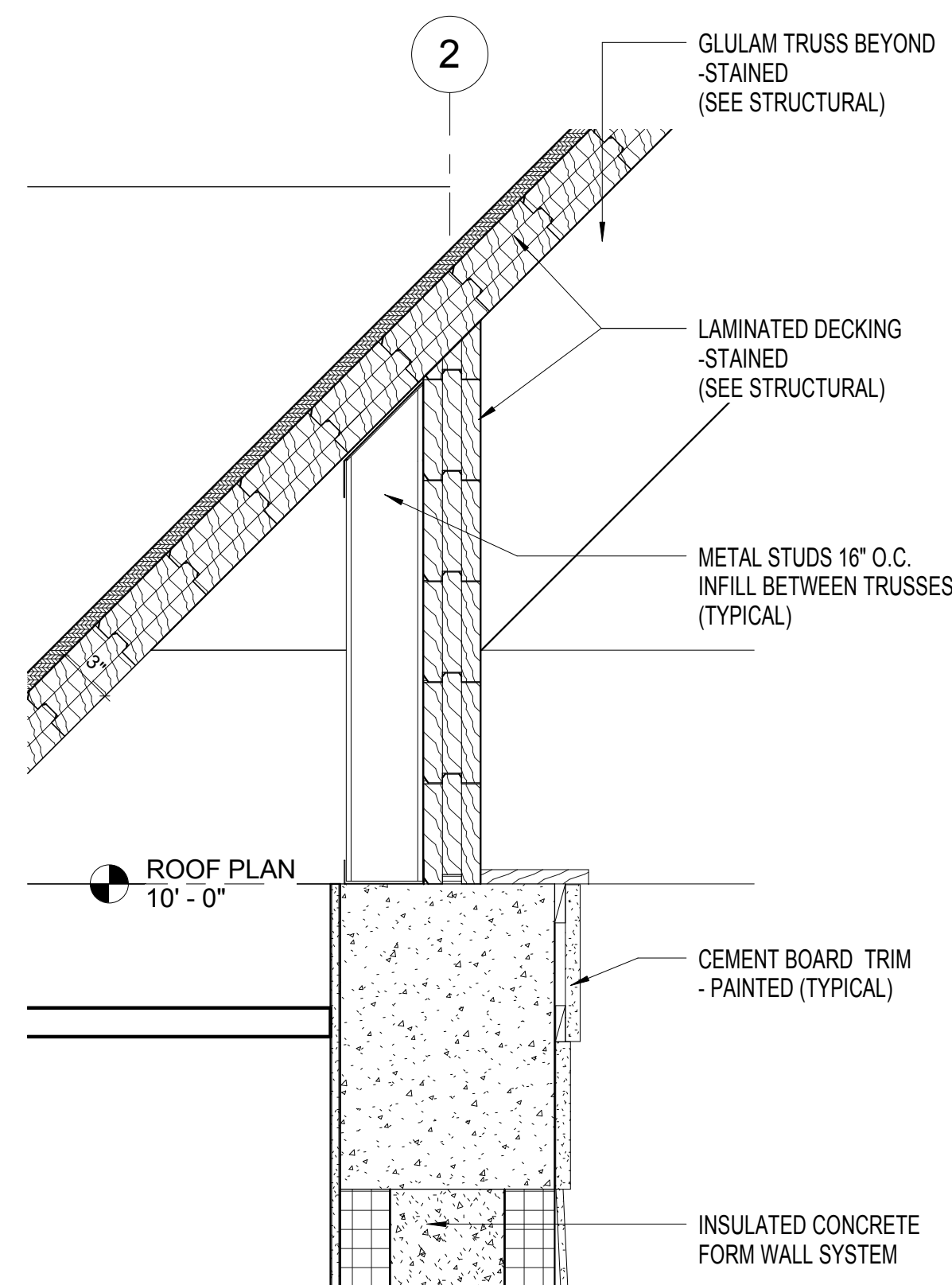
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BUILDING SECTIONS

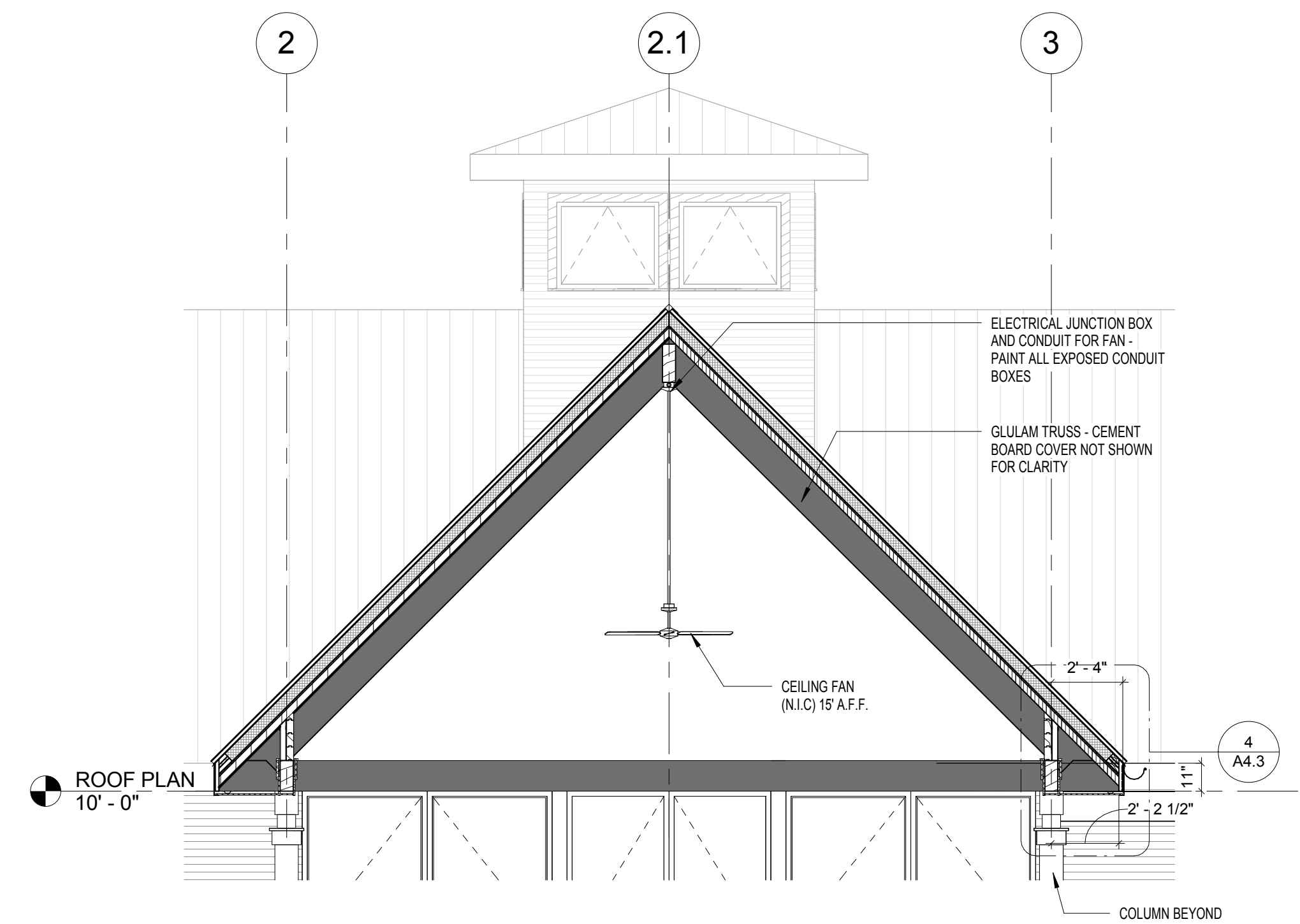
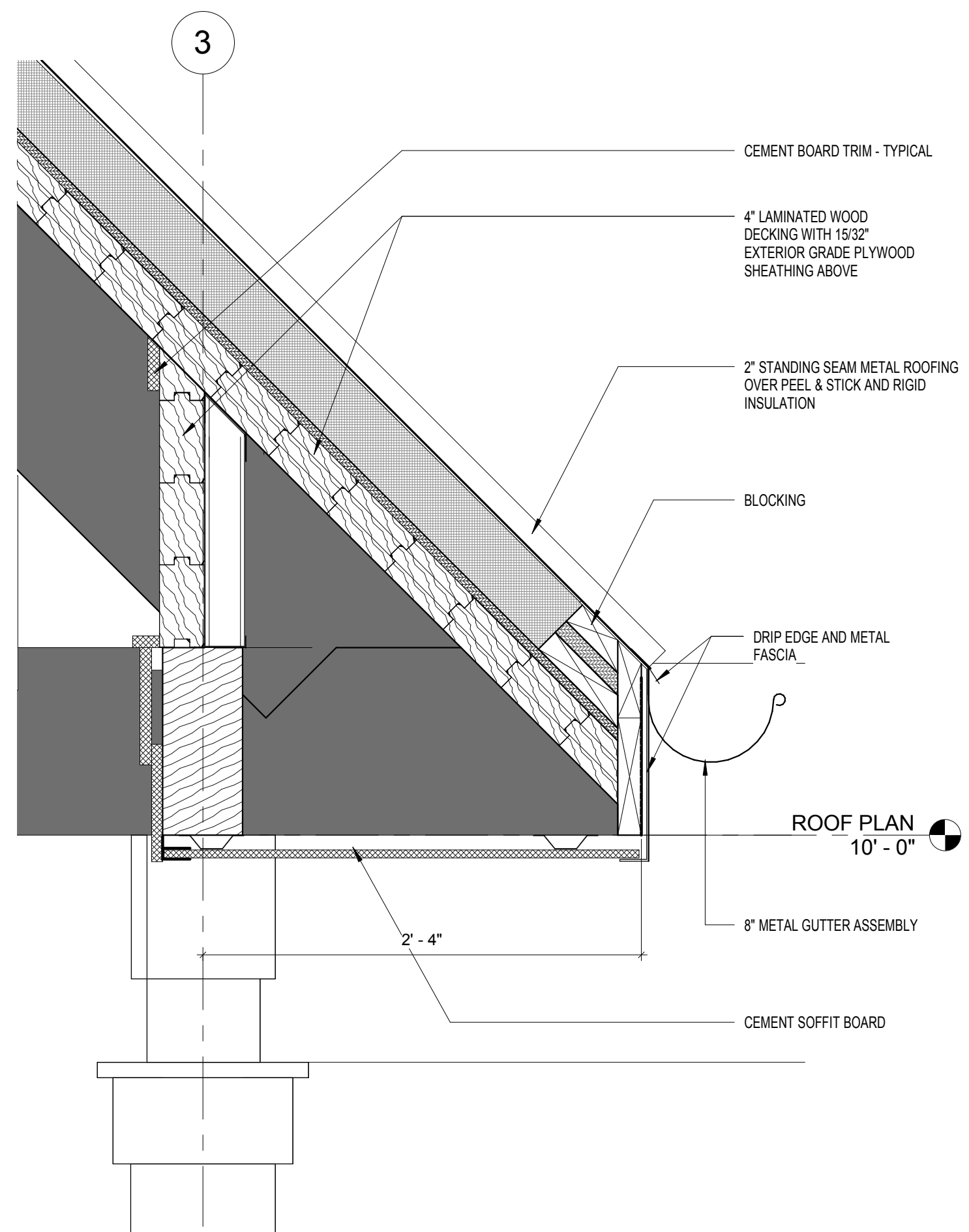
A4.2

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2 Detail - Truss Closure Panel
A4.3 1 1/2" = 1'-0"

1 East/West Building Section
A4.3 1/8" = 1'-0"



4 Section Detail - Covered Entry
A4.3 1 1/2" = 1'-0"

3 Partial Section - Covered Entry
A4.3 1/4" = 1'-0"

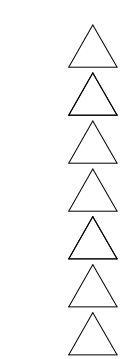
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BUILDING SECTIONS

A4.3



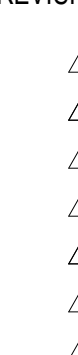
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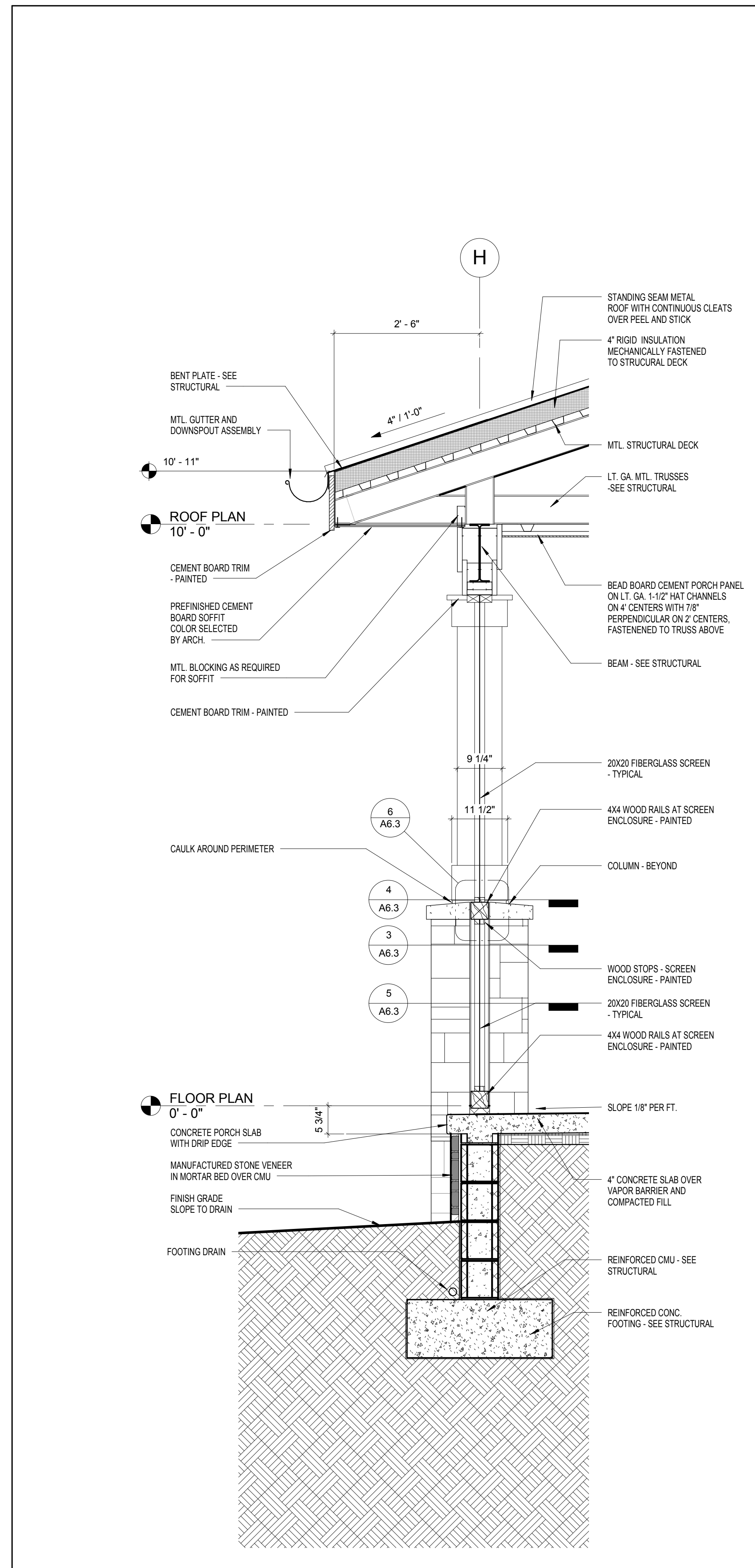
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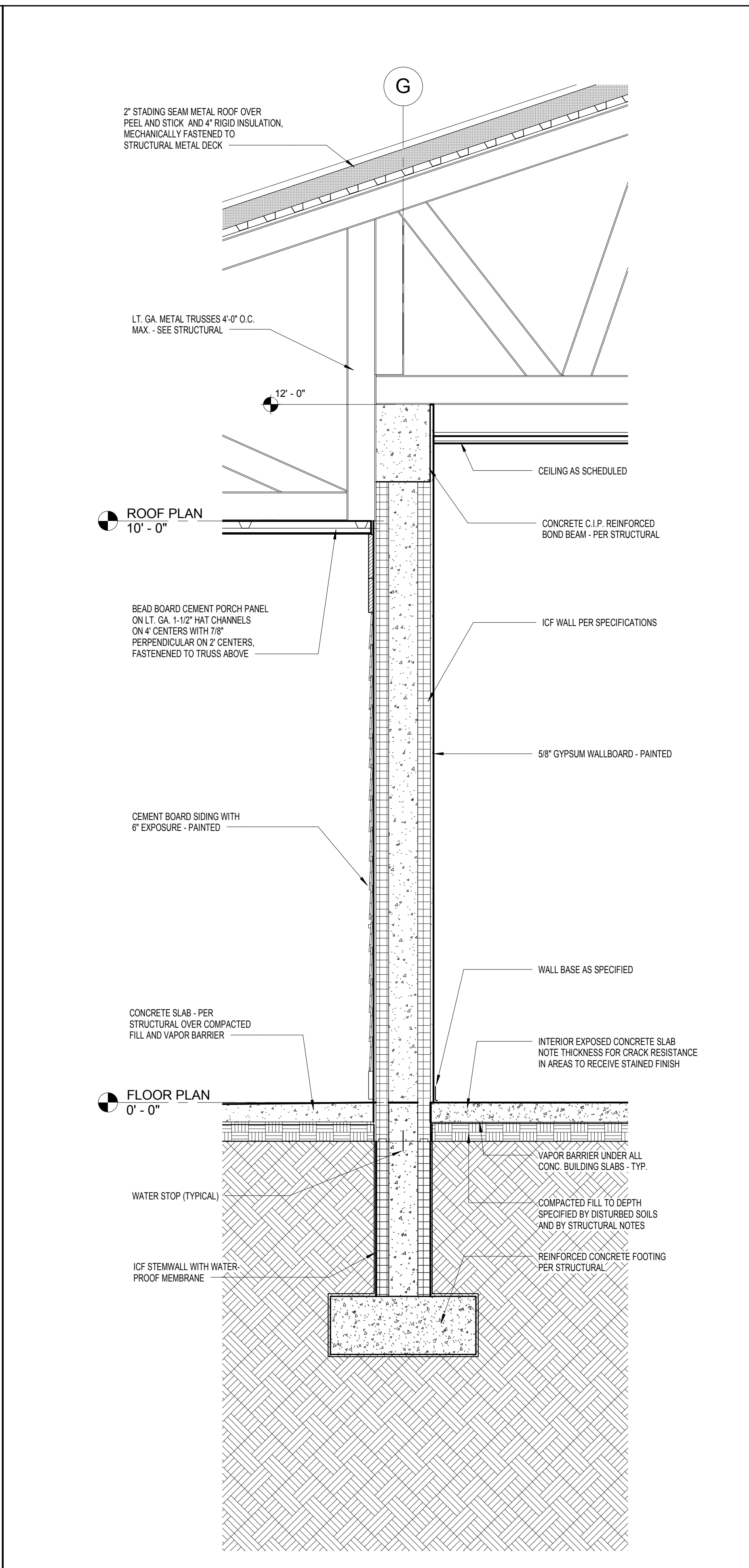
WALL SECTIONS

A5.1

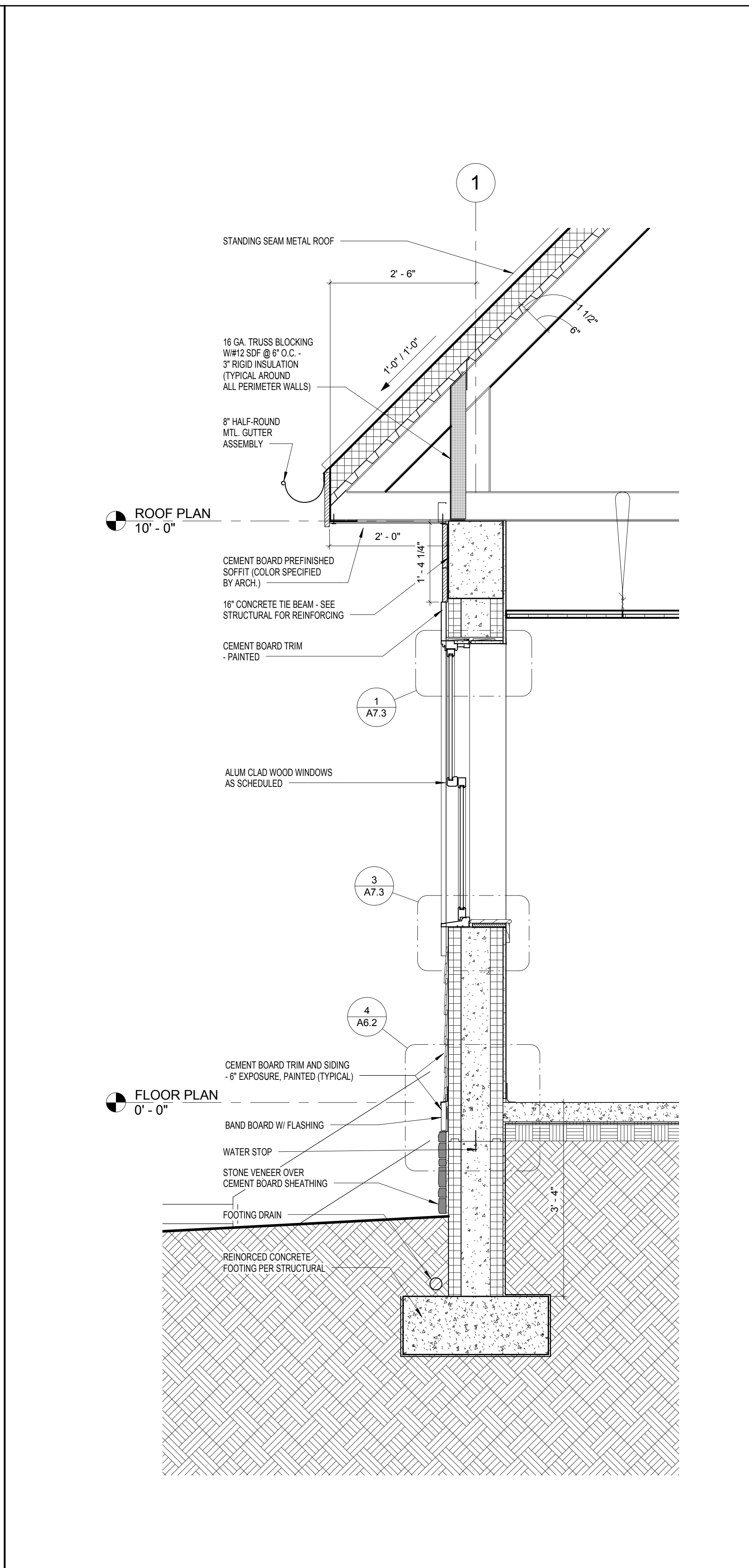
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1 Wall Section - Porch
A5.1 3/4" = 1'-0"



2 Wall Section - Exterior ICF Wall at "G"
A5.1 3/4" = 1'-0"



3 Wall Section - Typical Window
A5.1 3/4" = 1'-0"



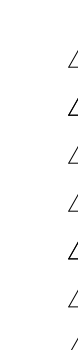
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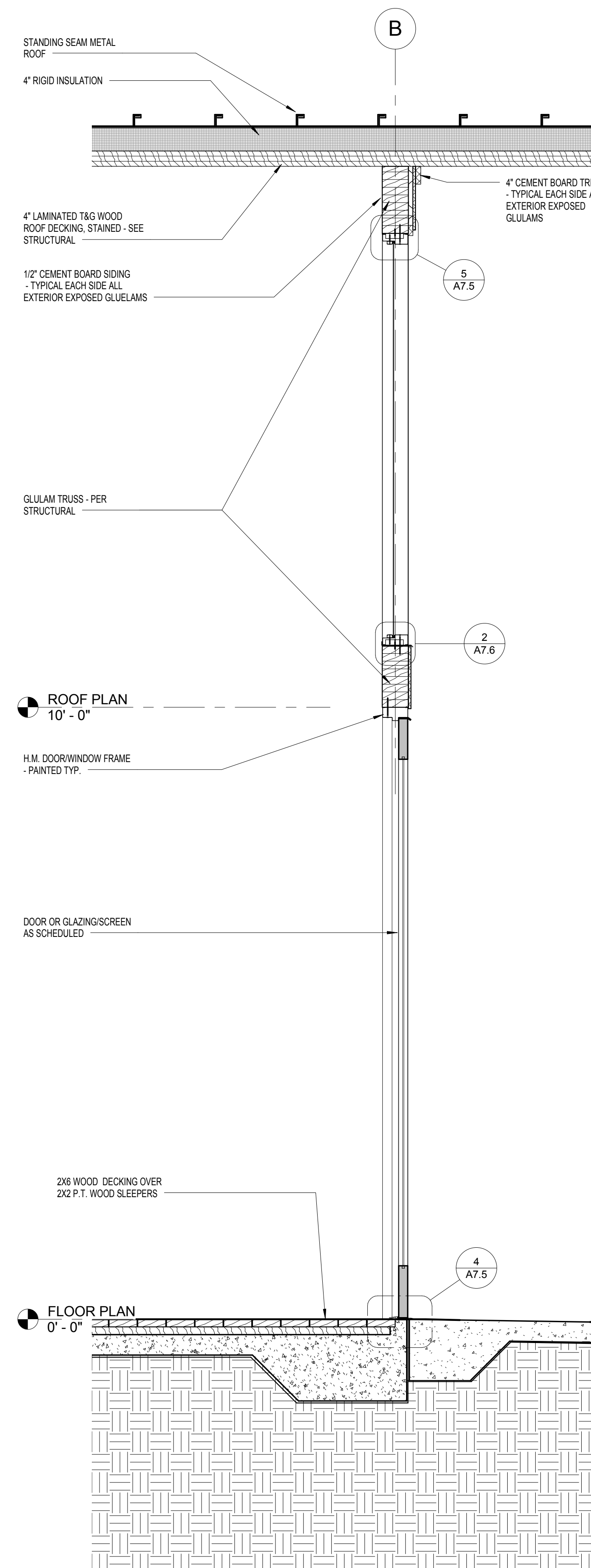
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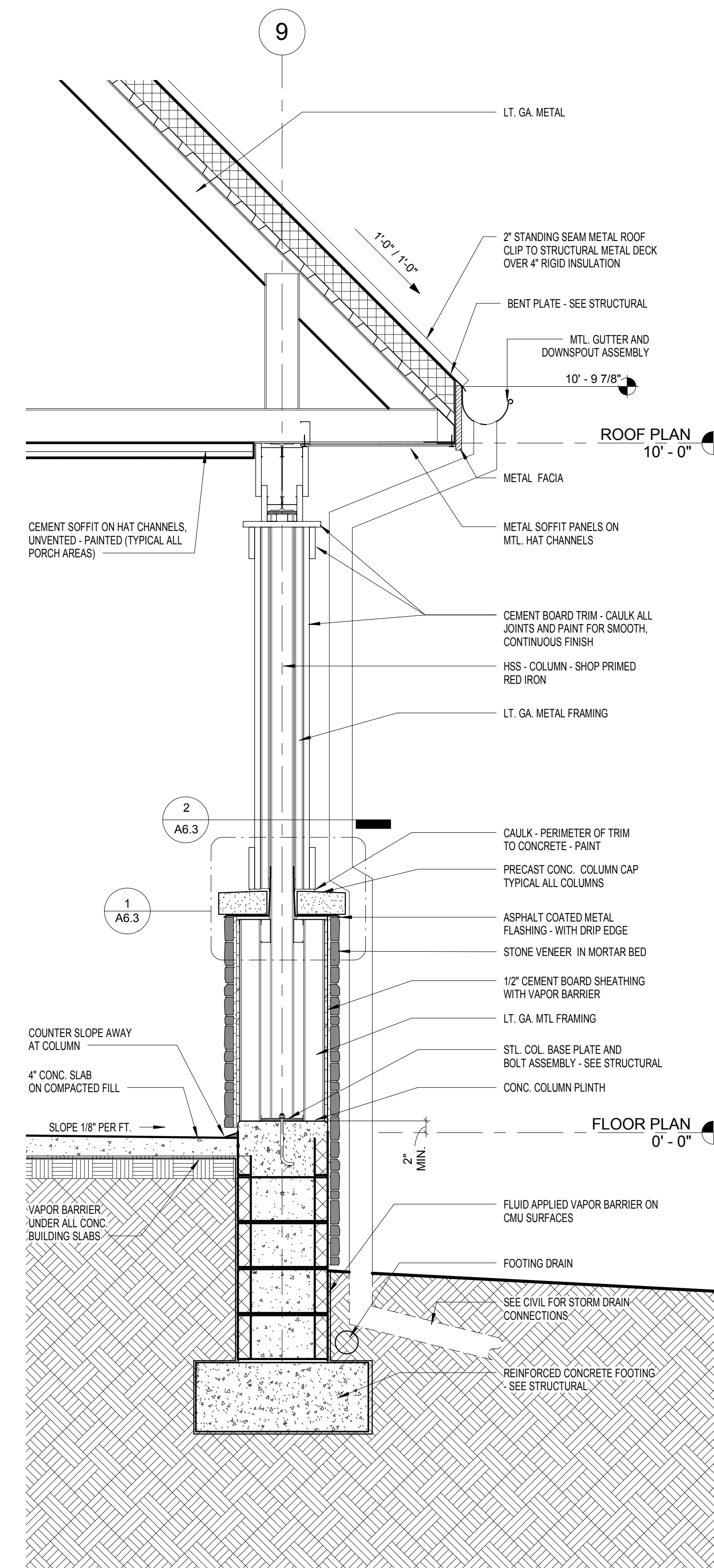
WALL SECTIONS

A5.2

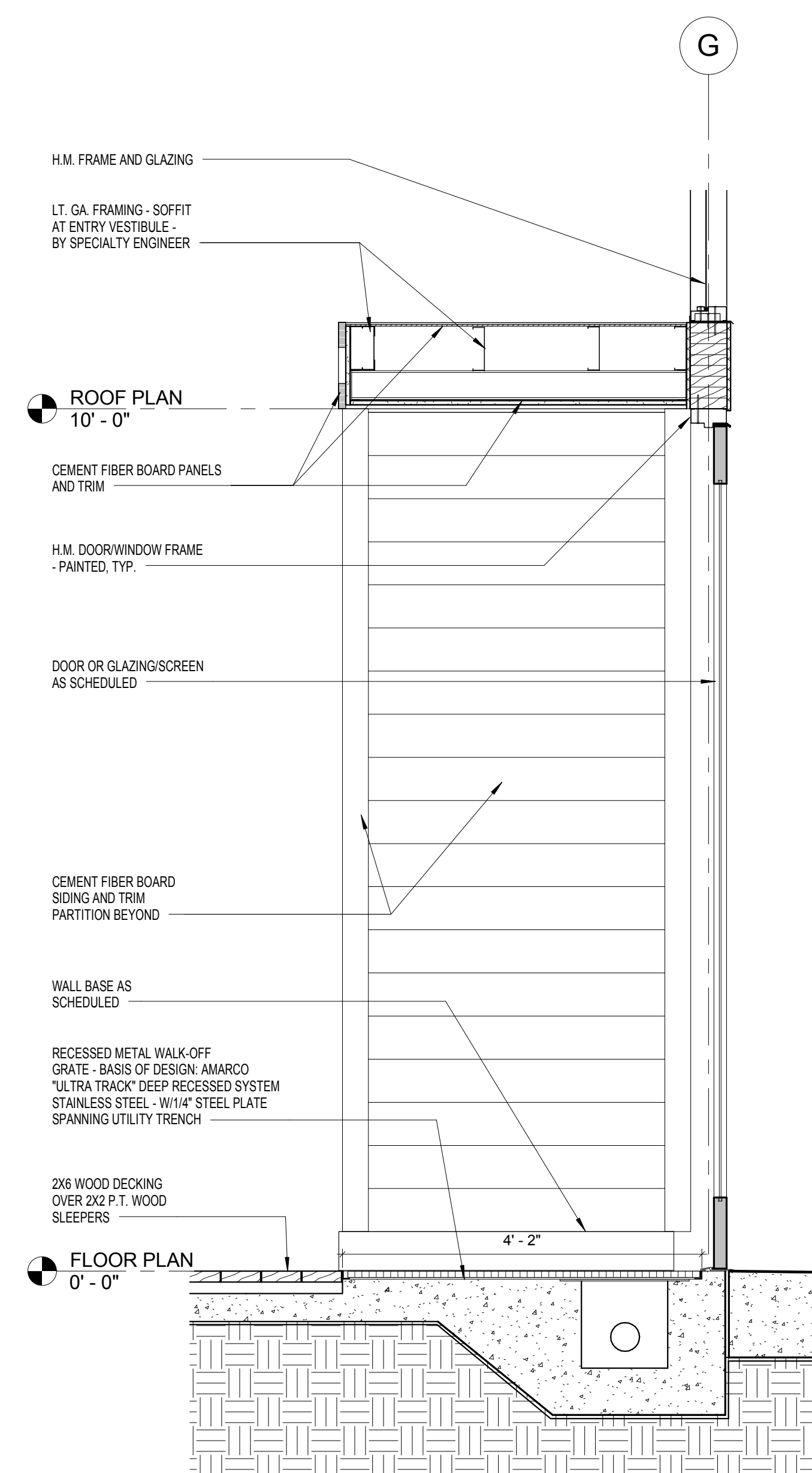
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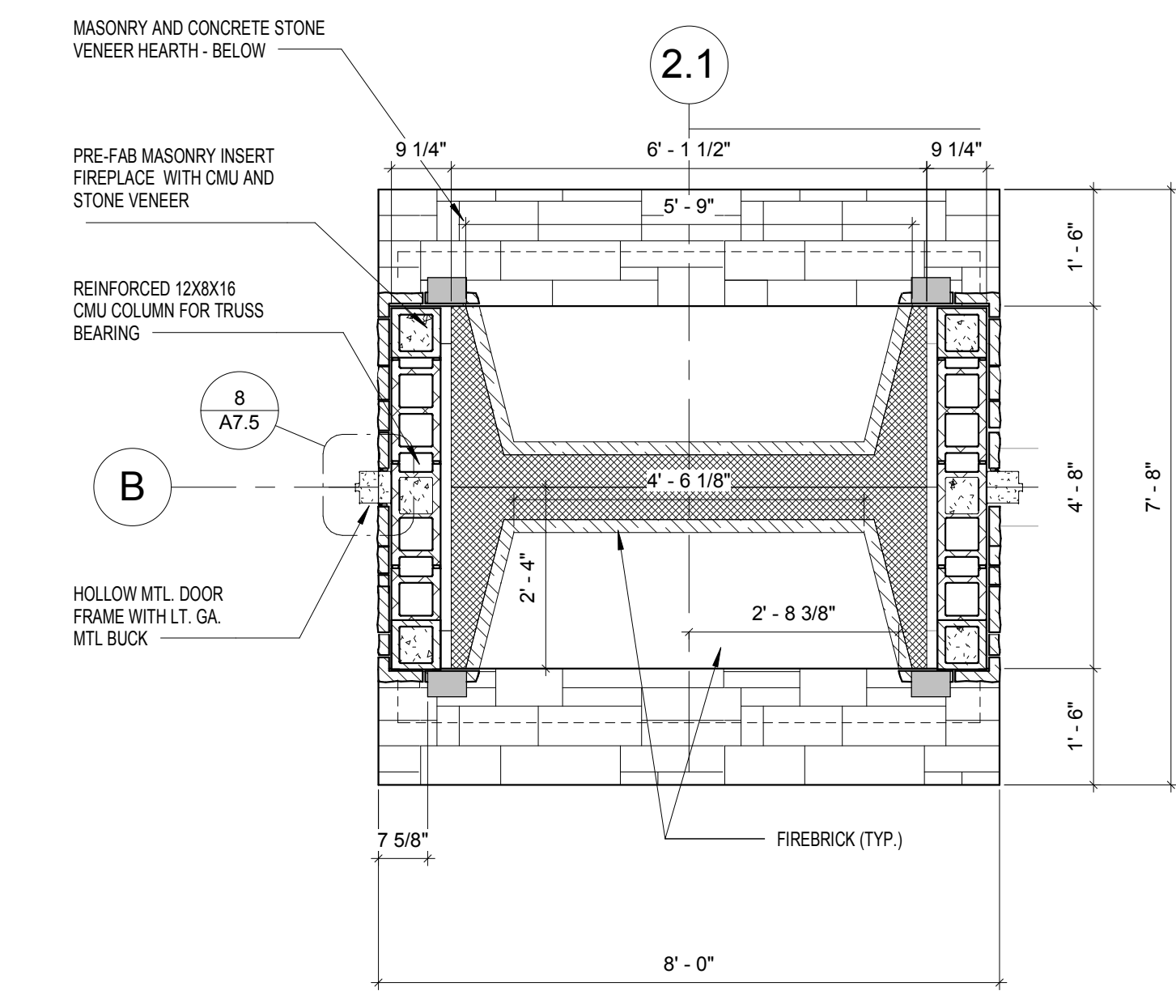
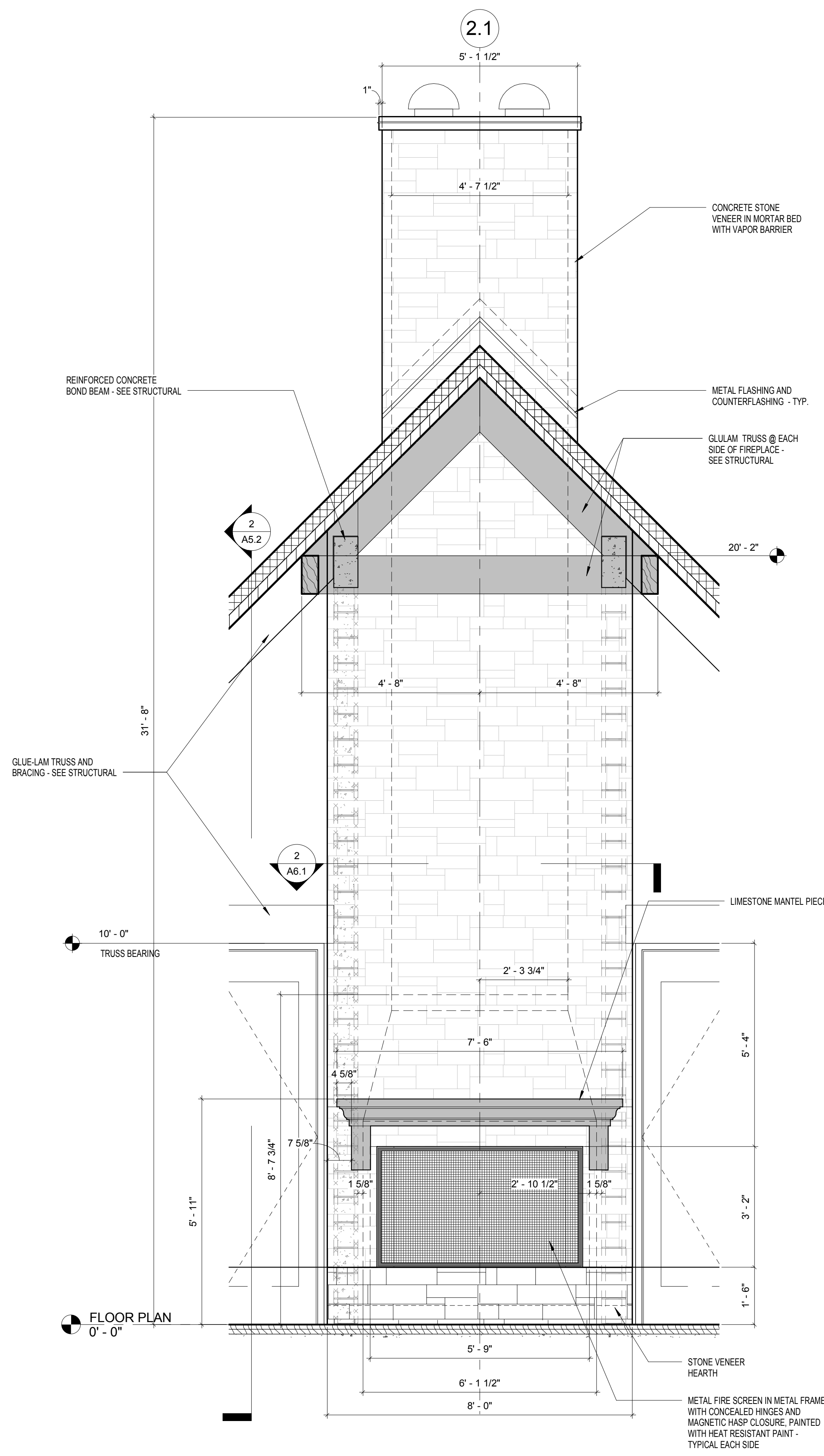
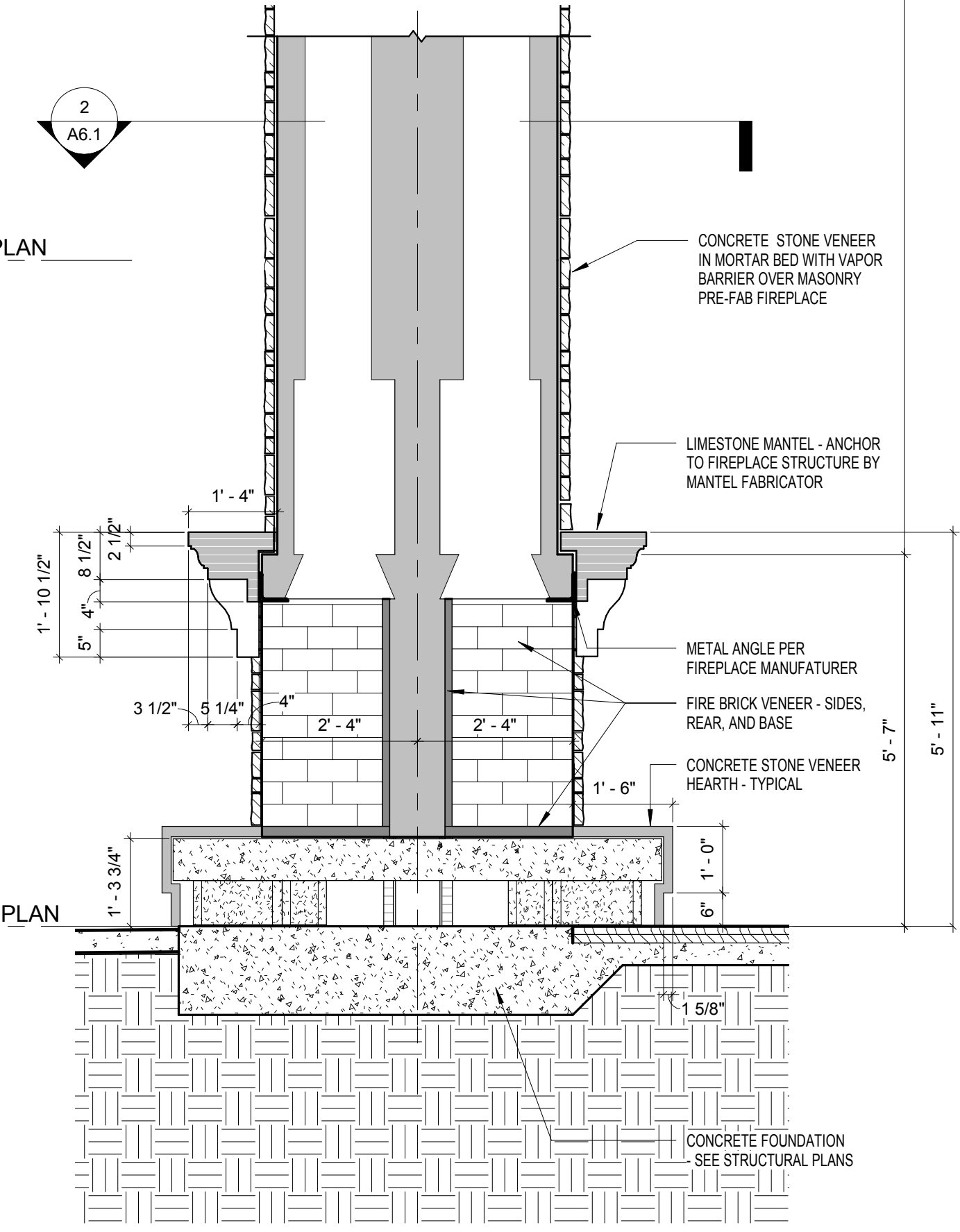
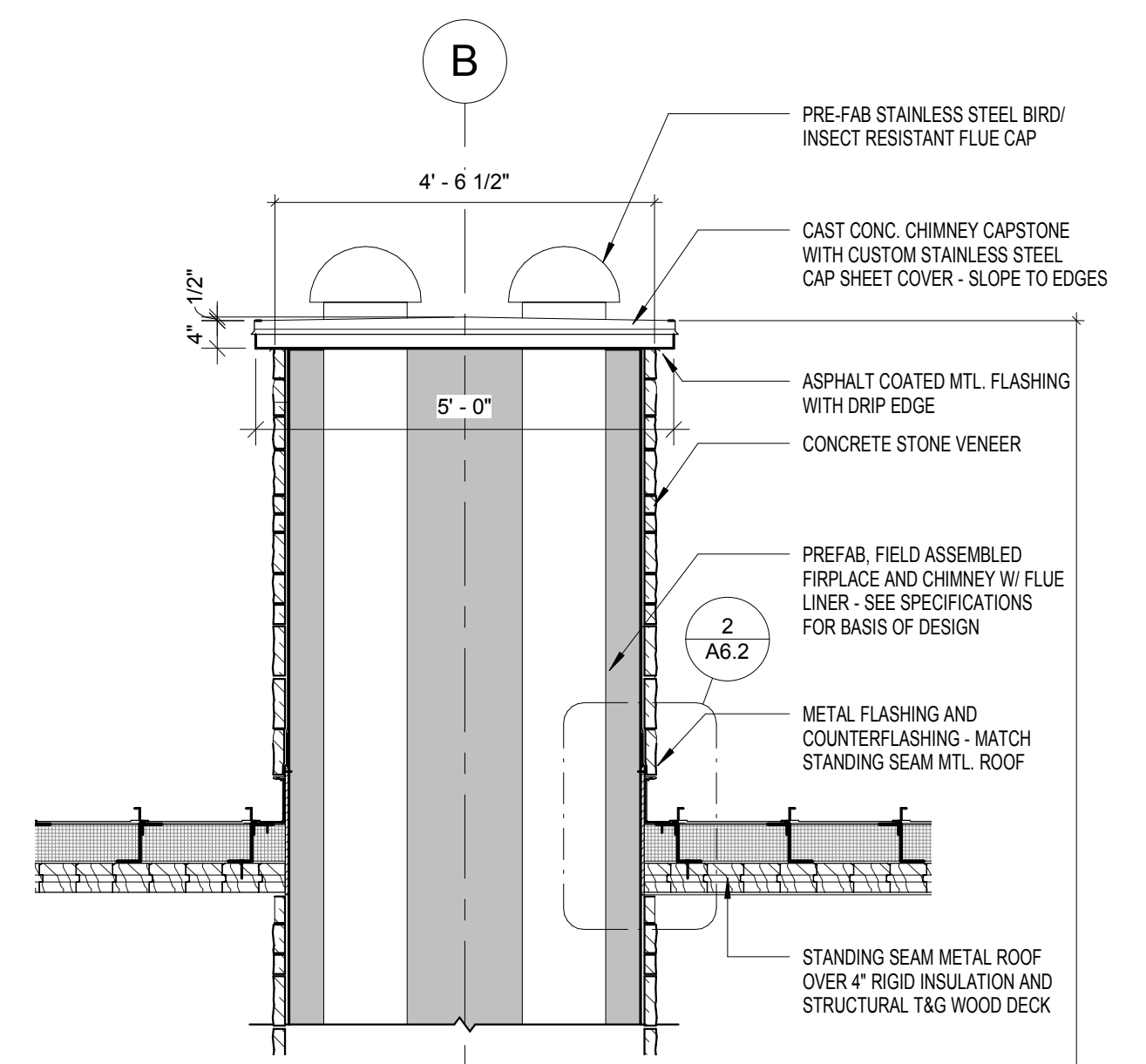
2 Wall Section - at Lobby Truss
A5.2 3/4" = 1'-0"



1 Wall Section - at Porch Column (Typ.)
A5.2 3/4" = 1'-0"

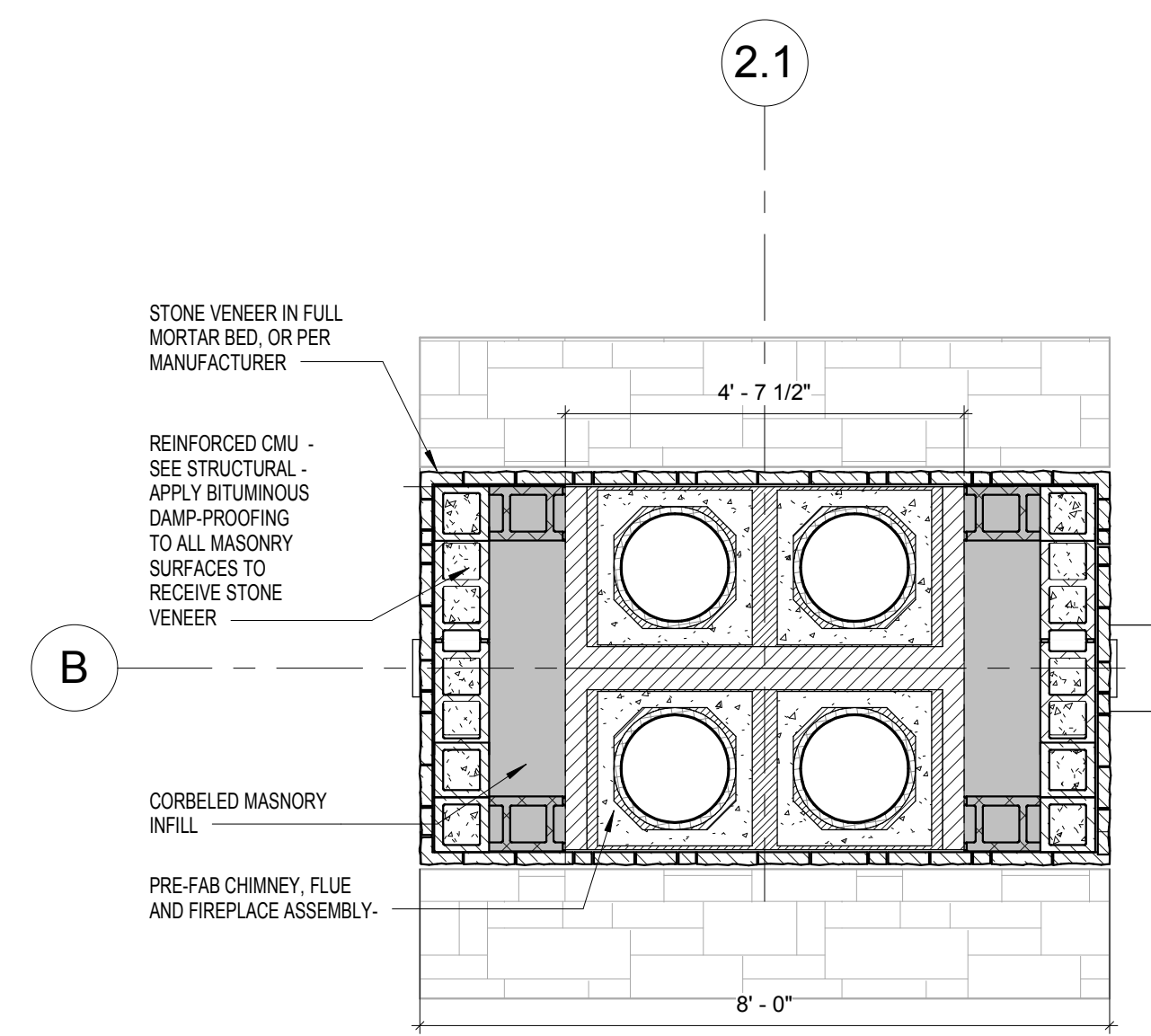


3 Detail Section - Entry Soffit at Col. "G"
A5.2 3/4" = 1'-0"



BASIS OF DESIGN: ISOKERN - MAGNUM SERIES 60" OUTDOOR FIREPLACE AND DM54 CHIMNEY ASSEMBLY

1 Section Plan - Masonry Fireplace
 A6.1 1/2" = 1'-0"



2 Section Plan - Masonry Chimney
 A6.1 1/2" = 1'-0"

4 Section Detail - Fireplace
 A6.1 1/2" = 1'-0"

3 Interior Elevation - Masonry Fireplace
 A6.1 1/2" = 1'-0"

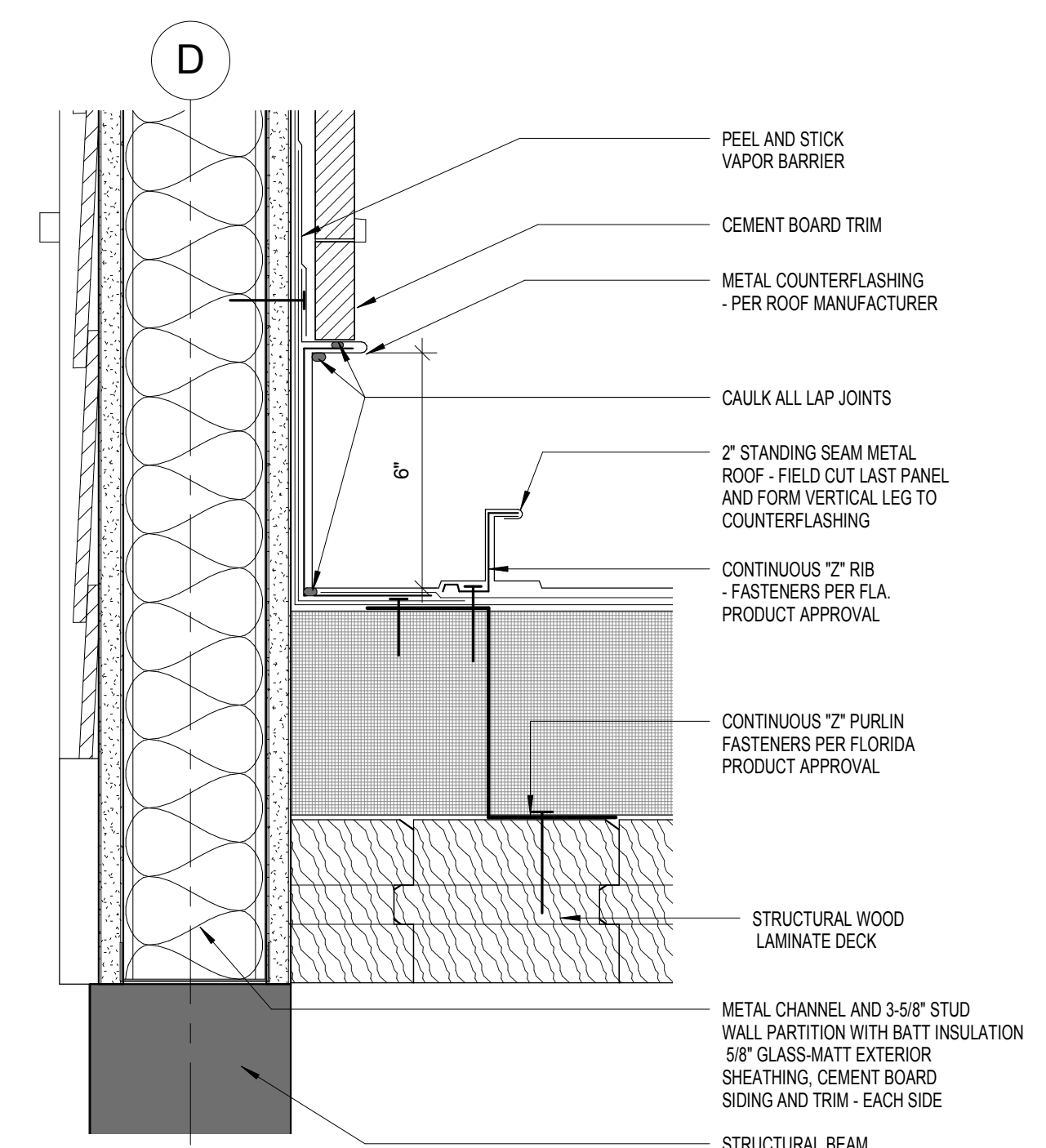
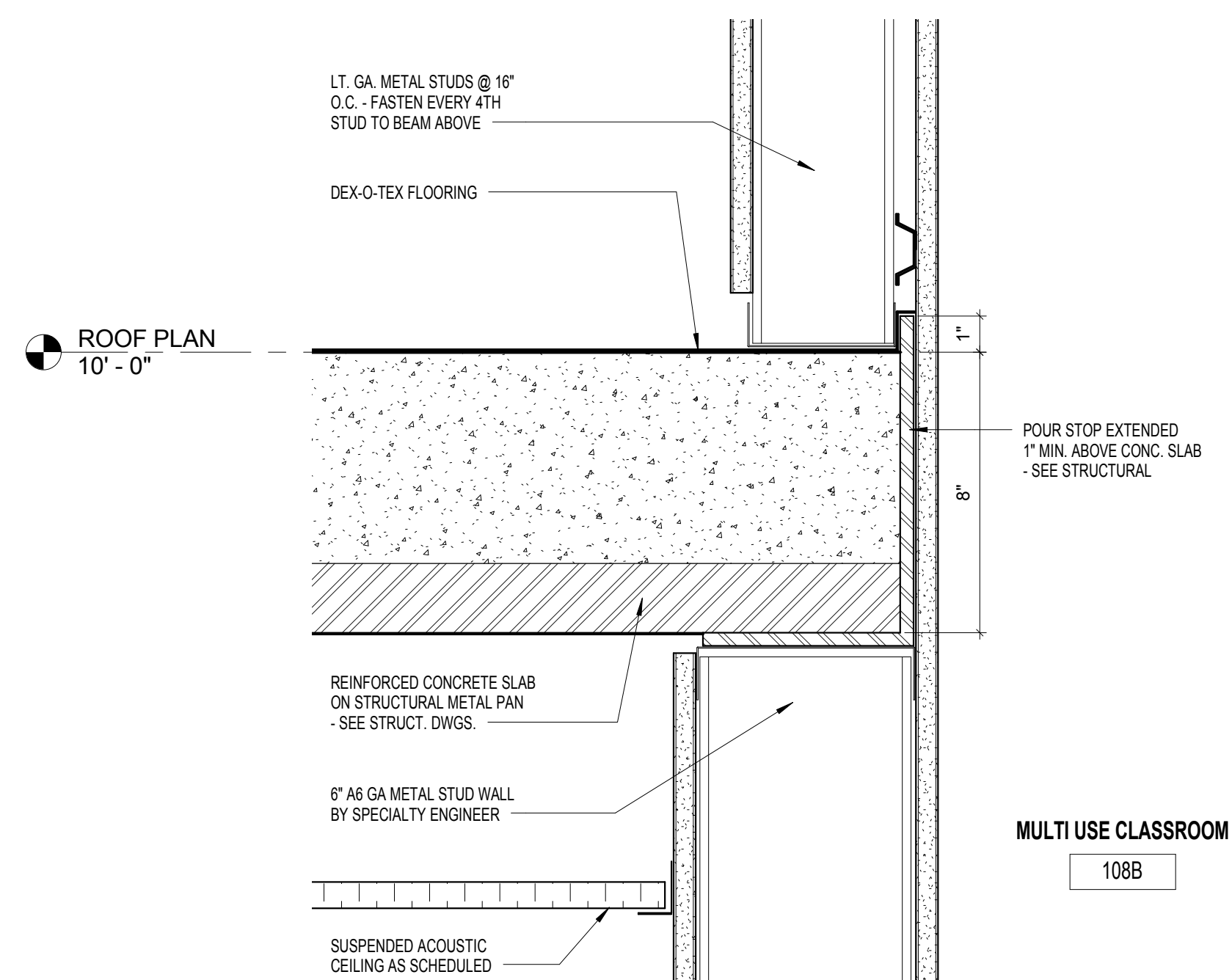
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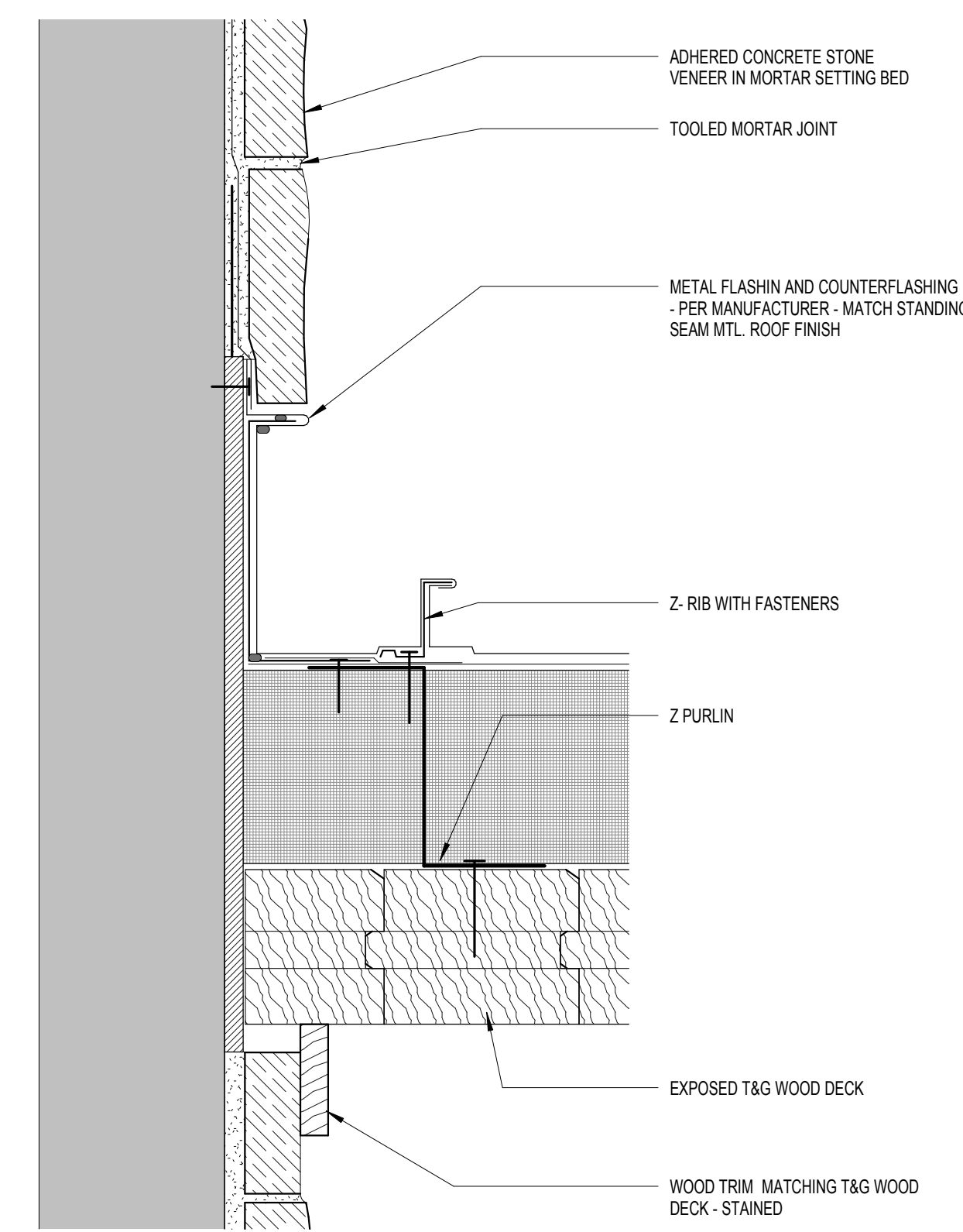
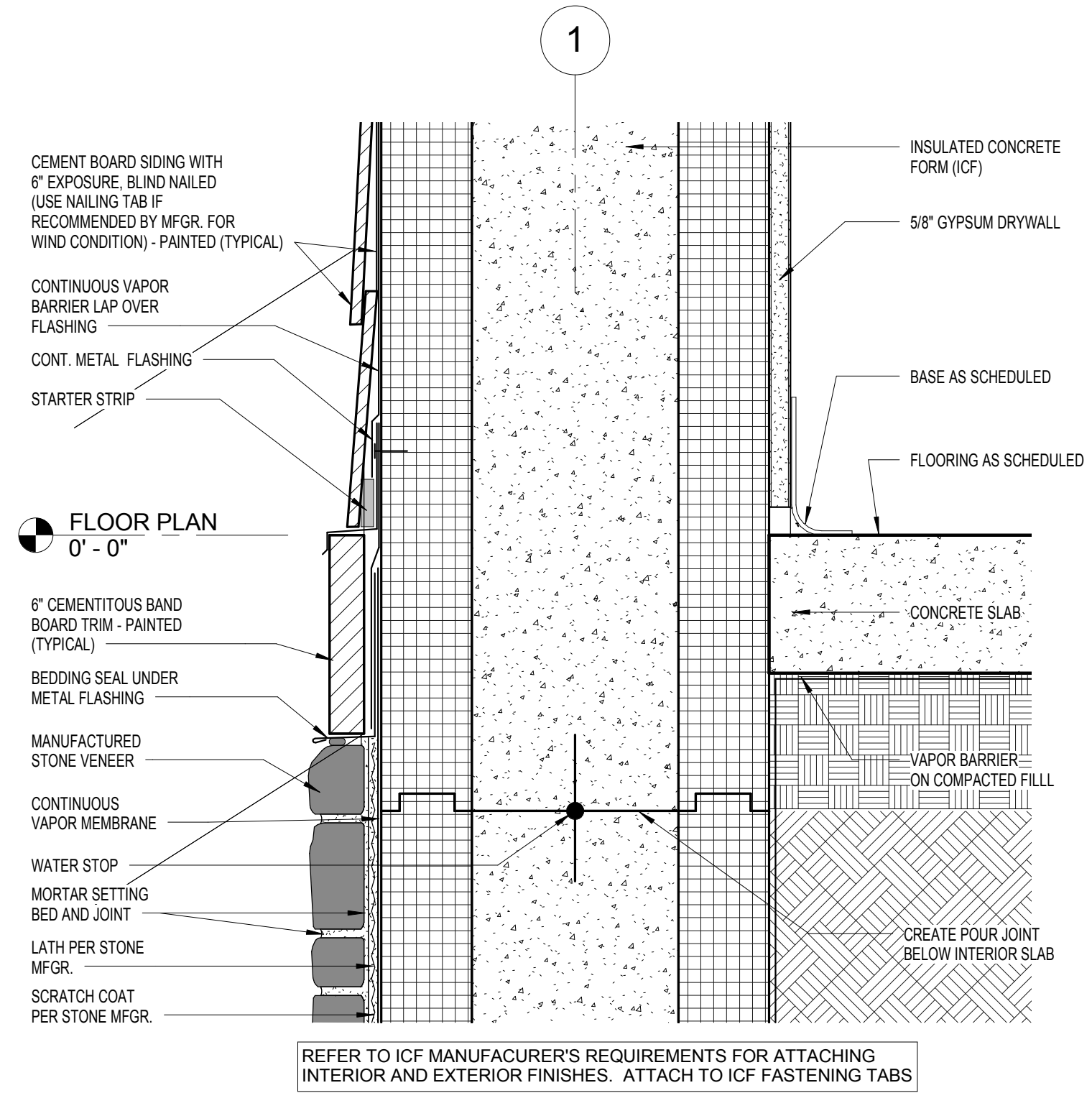
BUILDING DETAILS

A6.1



3 Detail - Equipment Platform Edge of Slab
A6.2 3" = 1'-0"

1 Callout of Detail - Cupola Framing N/S
A6.2 3" = 1'-0"



4 Detail Section - Siding Transition
A6.2 3" = 1'-0"

2 Detail - Metal Flashing @ Fireplace
A6.2 3" = 1'-0"



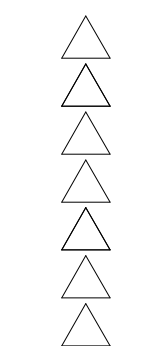
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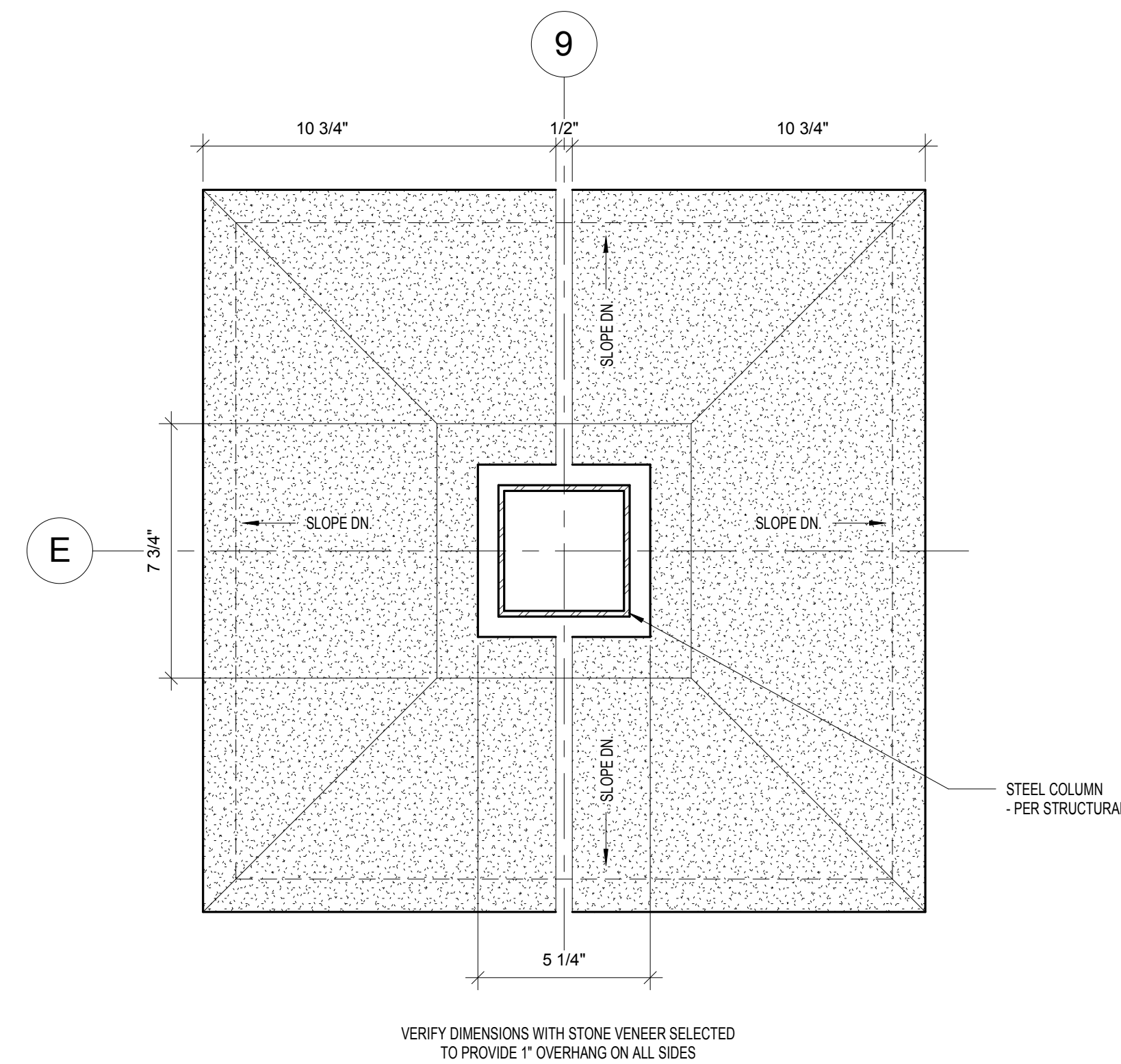
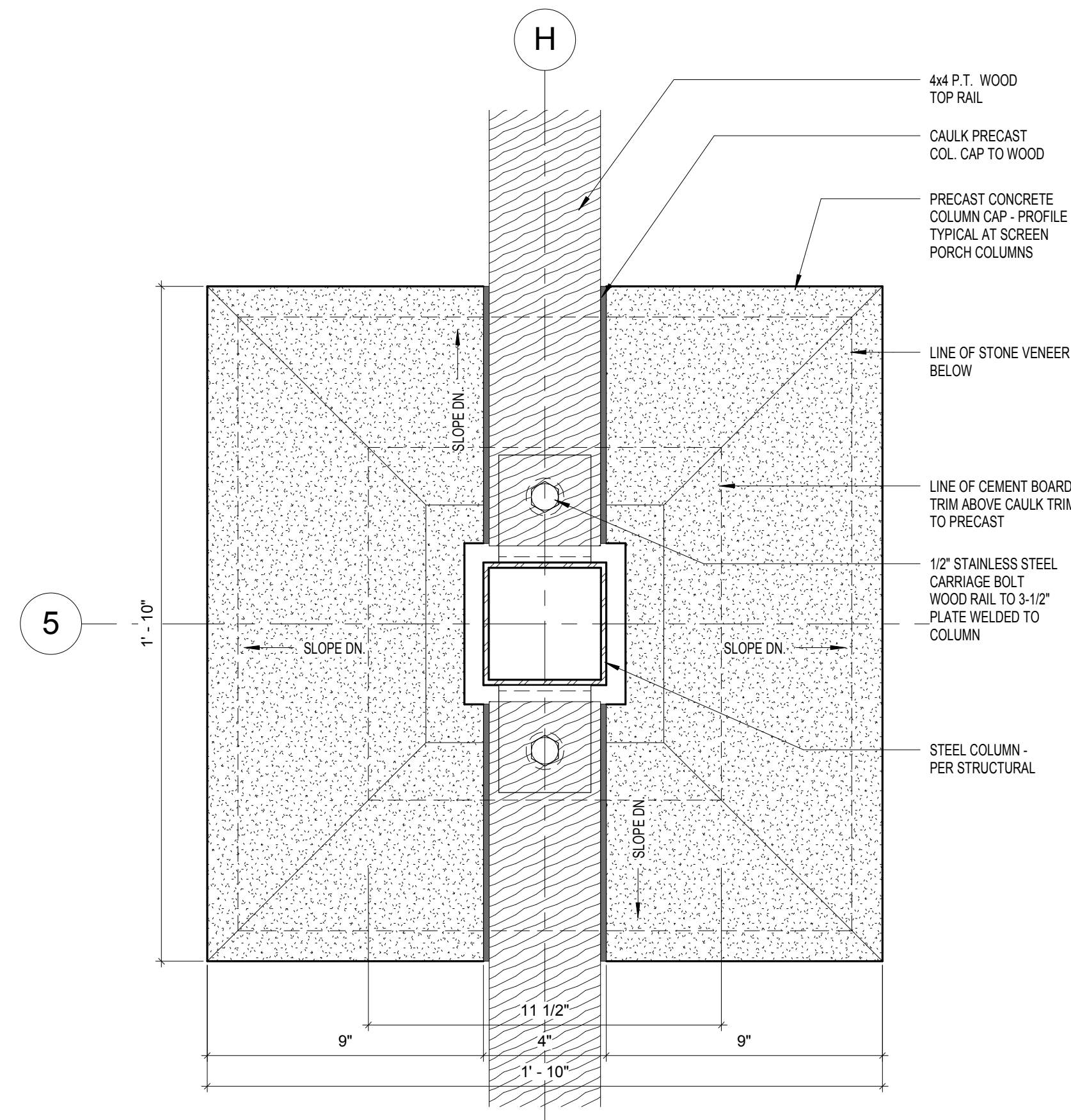
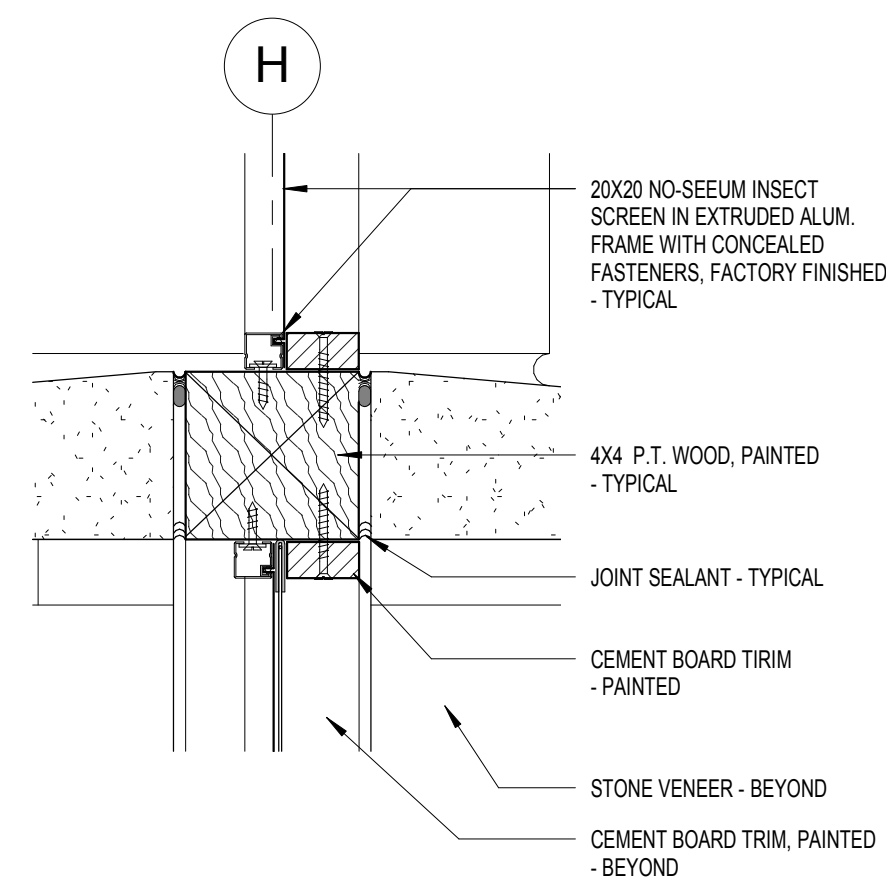
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BUILDING DETAILS

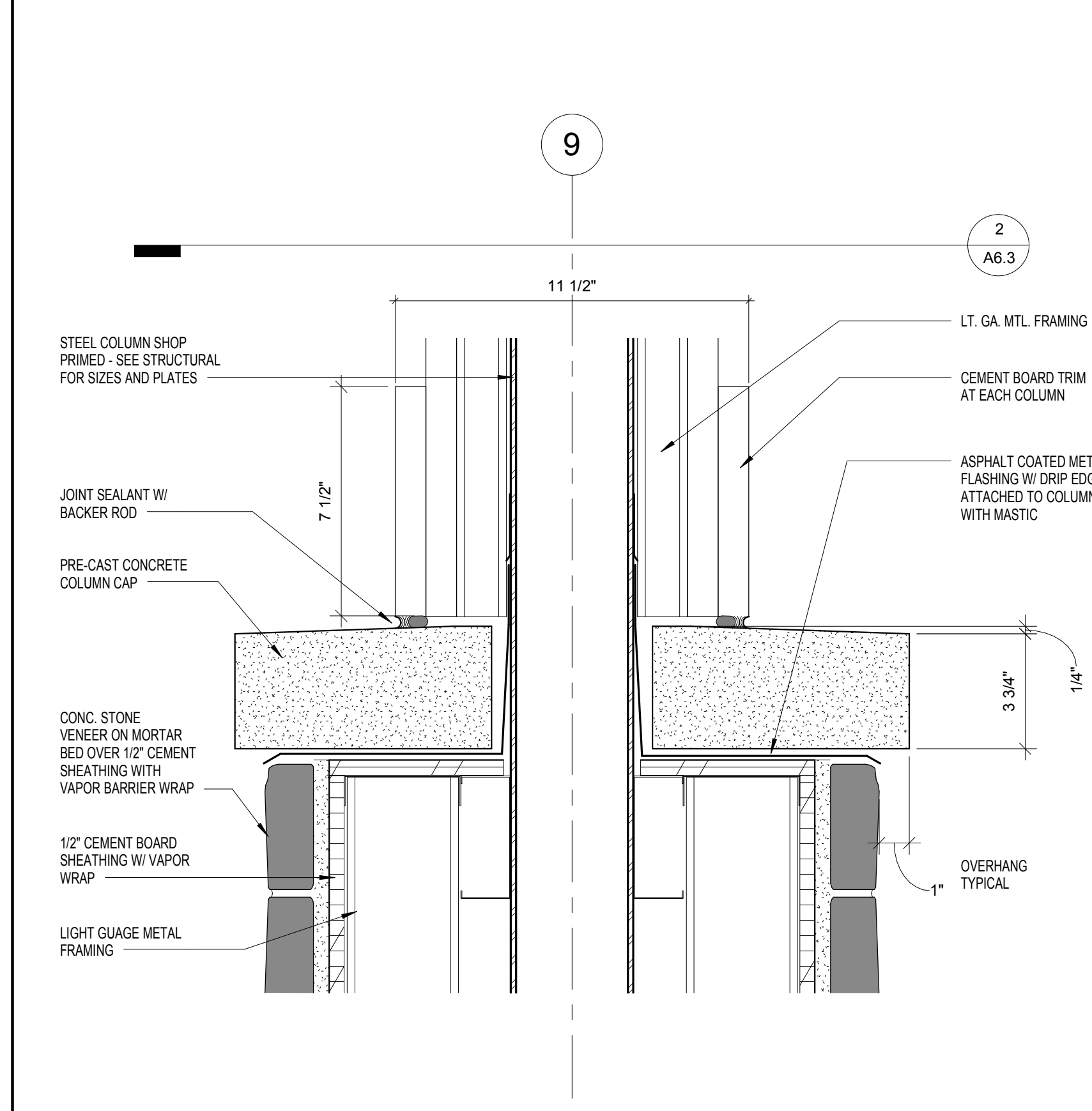
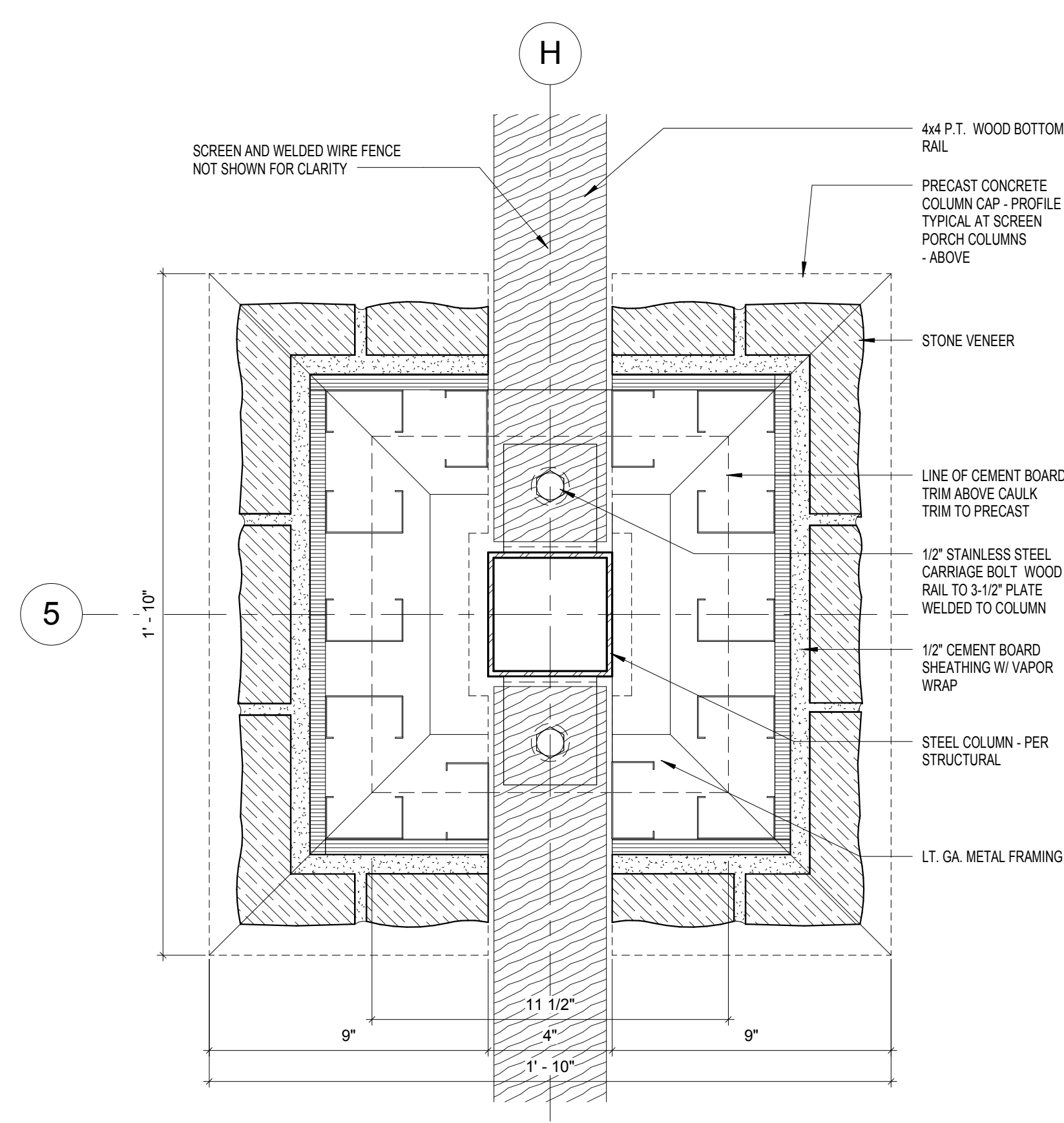
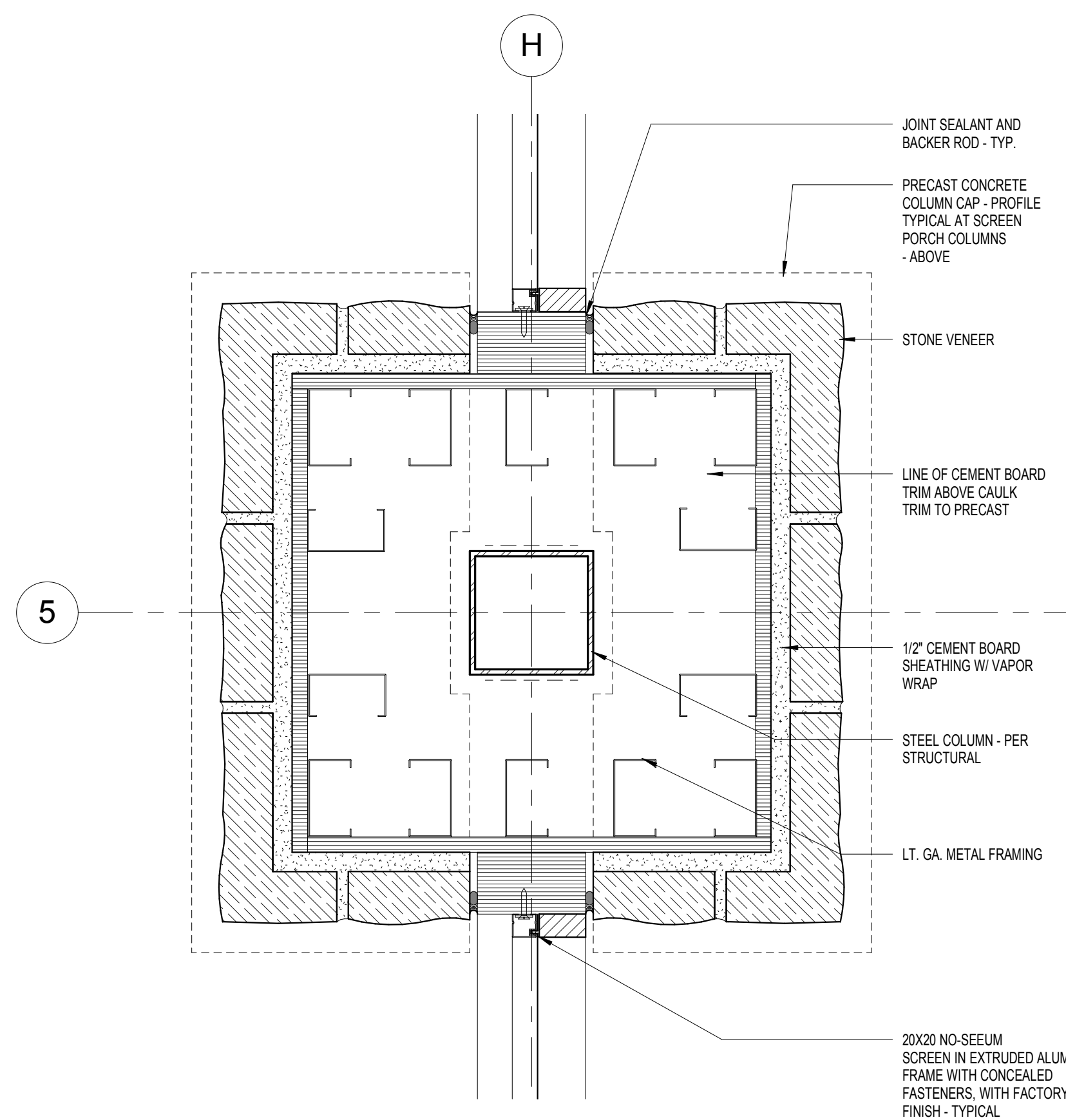
A6.2



6 Detail - Screen frame at Porch Rail
A6.3 3" = 1'-0"

4 Detail - Column Cap @ Screened Porch
A6.3 3" = 1'-0"

2 Detail - Column Cap @ Open Porch
A6.3 3" = 1'-0"



5 Detail - Column Framing @ Screened Porch1
A6.3 3" = 1'-0"

3 Detail - Column Framing @ Screened Porch
A6.3 3" = 1'-0"

1 Detail - Section
A6.3 3" = 1'-0"



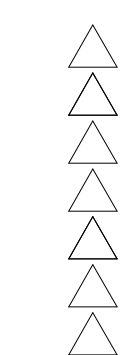
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BUILDING DETAILS

A6.3

WALL PARTITION SCHEDULE

MARK	RATING	SYMBOL	PLAN SECTION	ASSEMBLY	REMARKS
P-1			<p>PARTITION TYPE</p>	<ol style="list-style-type: none"> 5/8" Gypsum Drywall Board Insulated Concrete Form Wall System (see comments) Horizontal/Vertical Reinforcement (as per code or as specified) Vapor Barrier Wrap (lapped and sealed) Exterior Cement Board Lap Siding 	Continuous Horizontal Masonry Reinforcing per systems manufacturer recommendations and per code
P-2			<p>PARTITION TYPE</p>	<ol style="list-style-type: none"> 1 Layer of 5/8" Gypsum Board each side 3 5/8" Metal Studs @ 16" O.C. 3 1/2" Fiberglass Batt Insulation 	P-2a Omit G.W.B. on one side
P-3			<p>PARTITION TYPE</p>	<ol style="list-style-type: none"> 1 Layer of 5/8" Gypsum Board 6" Metal Studs @ 16" O.C. 6" Fiberglass Batt Insulation 1 Layer of 5/8" Gypsum Board 	P-3a Omit G.W.B. on one side P-3b Omit G.W.B. and substitute cement backerboard where tile is indicated on finish schedule
P-4			<p>PARTITION TYPE</p>	<ol style="list-style-type: none"> 1 Layer of 5/8" Gypsum Board (Type "X") 3 5/8" Light Ga. Structural Framing @ 16" O.C. 3 1/2" Fiberglass Batt Insulation 1 Layer of 5/8" Exterior Sheathing (Moisture Resistant glass matt type) Vapor Barrier - cont. lapped and taped Cement Board Lap Siding 	P-4a Omit G.W.B. on inside face. Substitute 1 layer of 5/8" ext. sheathing (glass matt type) and cement board lap siding
P-5			<p>PARTITION TYPE</p>	<ol style="list-style-type: none"> 1 Layer of 5/8" Gypsum Board (Type "X") 6" Light Ga. Structural Framing @ 16" O.C. 6" Fiberglass Batt Insulation 1 Layer of 5/8" Exterior Sheathing (Moisture Resistant Glass-matt type) Vapor Barrier - cont. lapped and taped Cement Board Lap Siding 	
P-6			<p>PARTITION TYPE</p>	<ol style="list-style-type: none"> 8" Concrete Masonry Unit (See Remarks) Grouted & Reinforced cells, corners & Openings. See Structural Drawings Bituminous Dampproofing over CMU Mortar Bed Stone Veneer direct applied to cement backer board. with mortar 	Continuous Horizontal Masonry Reinforcing every other Course
F.			<p>FLOOR SYSTEM- TYPICAL SLAB ON GRADE CONSTRUCTION</p>	<ol style="list-style-type: none"> Cast in Place Concrete Slab (See Structural) Welded Wire Mesh (See Structural) 4" Compacted Sand Fill under Vapor Barrier (See Structural) Subgrade 	

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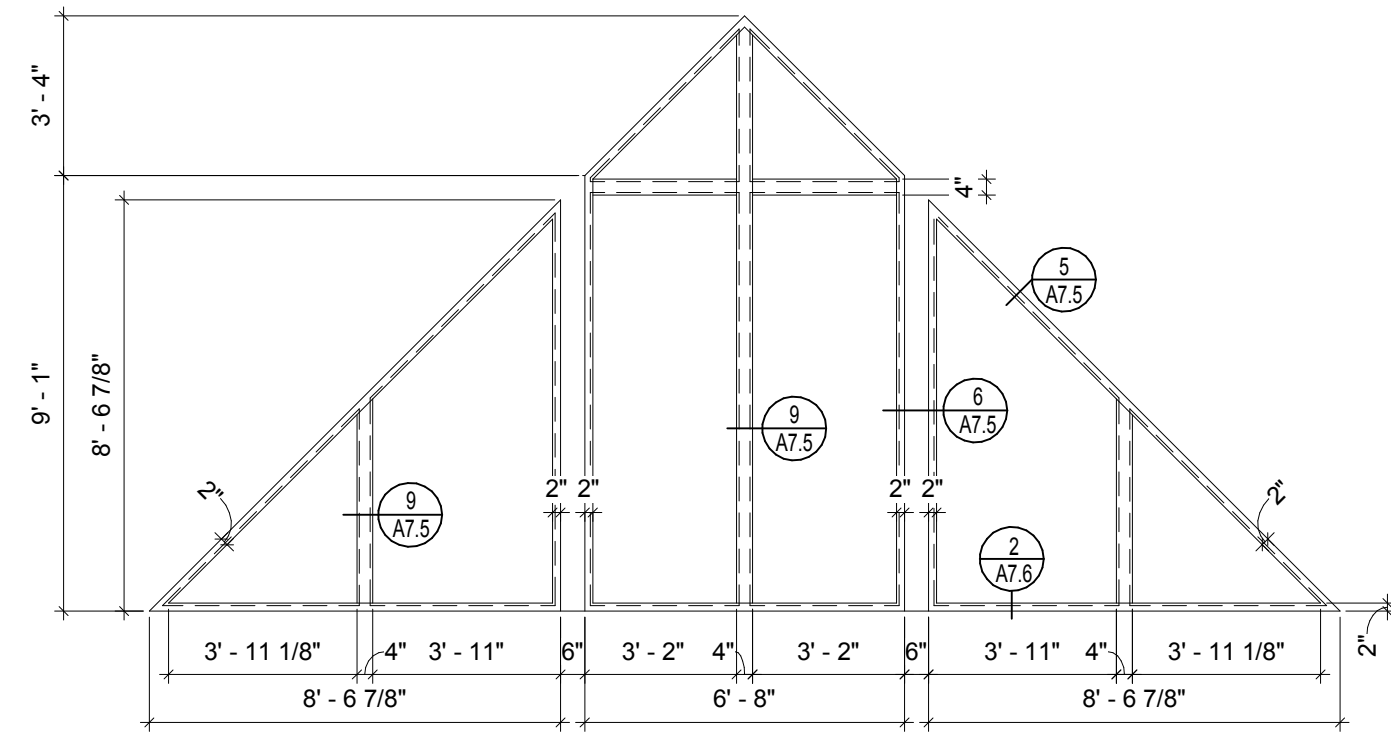
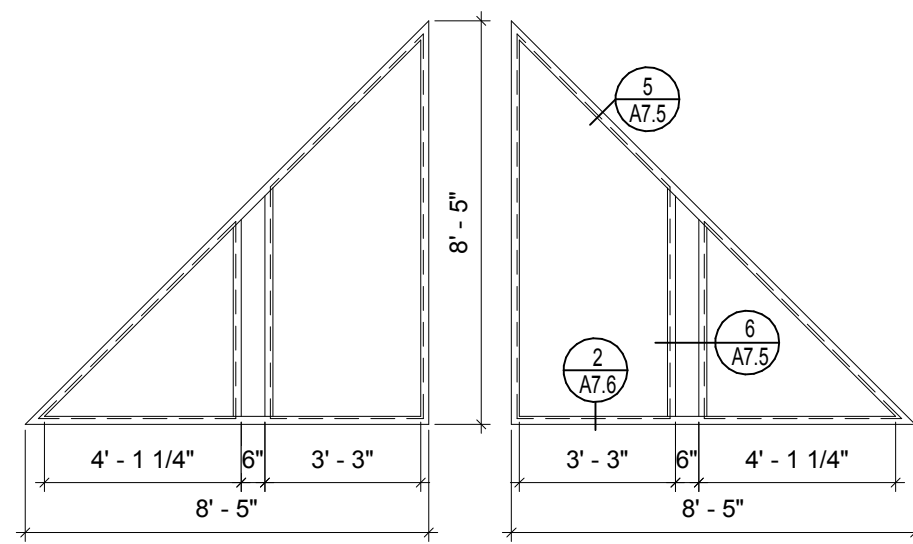
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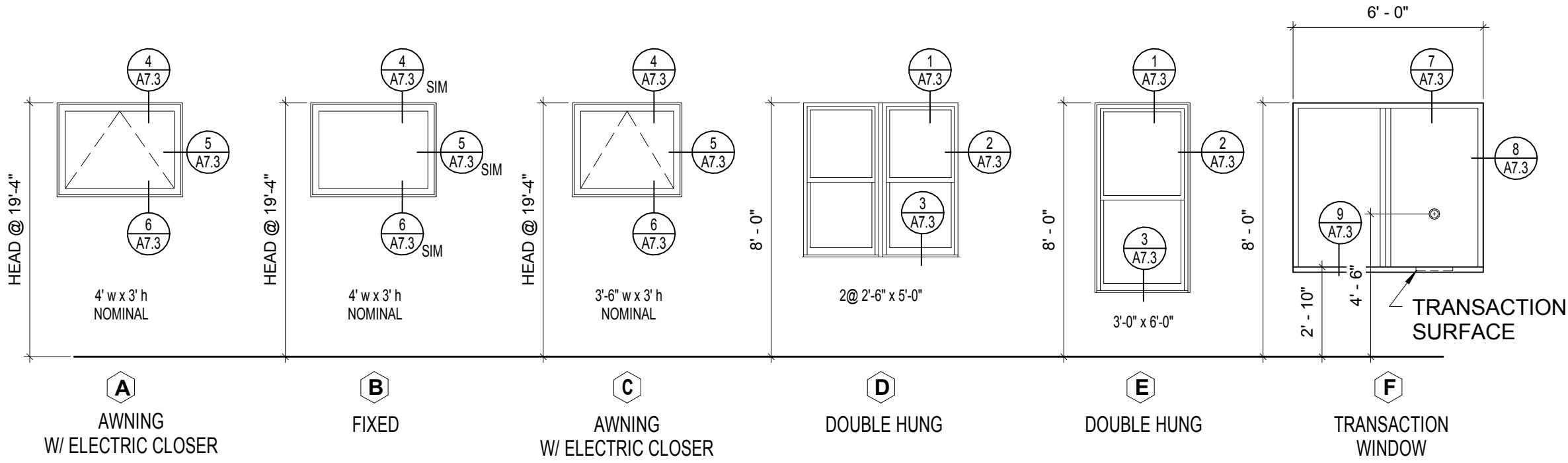
WALL SCHEDULES

A7.1

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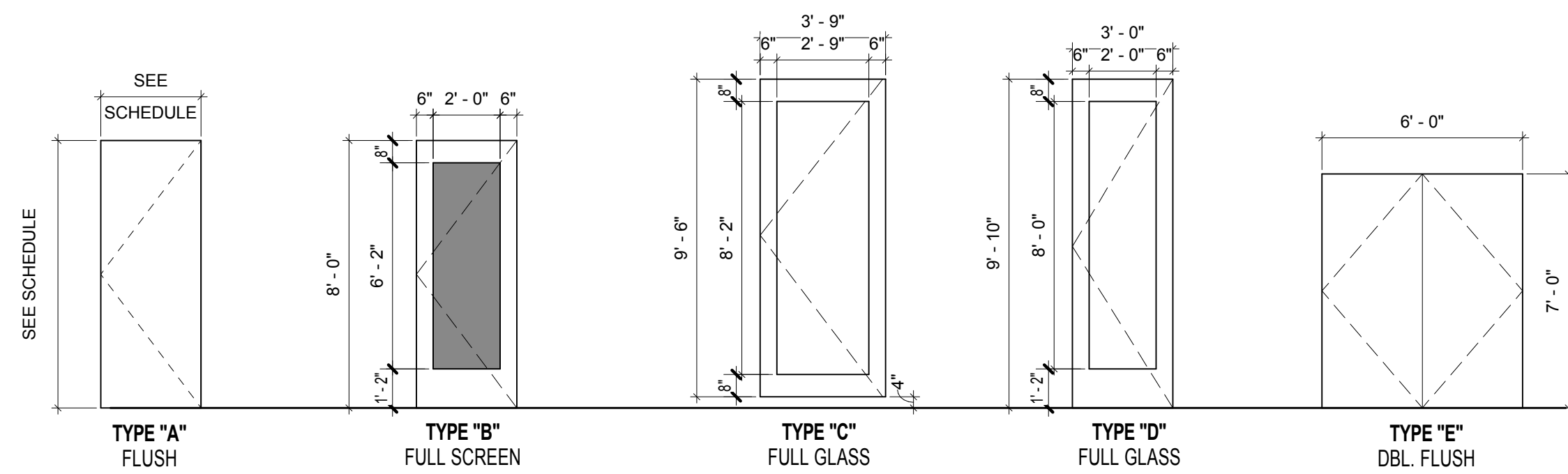


WINDOW TYPES



BASIS OF DESIGN: CR LAURENCE #SISWS TO CUSTOM SIZE 16" S.S. DEAL SHELF

DOOR TYPES



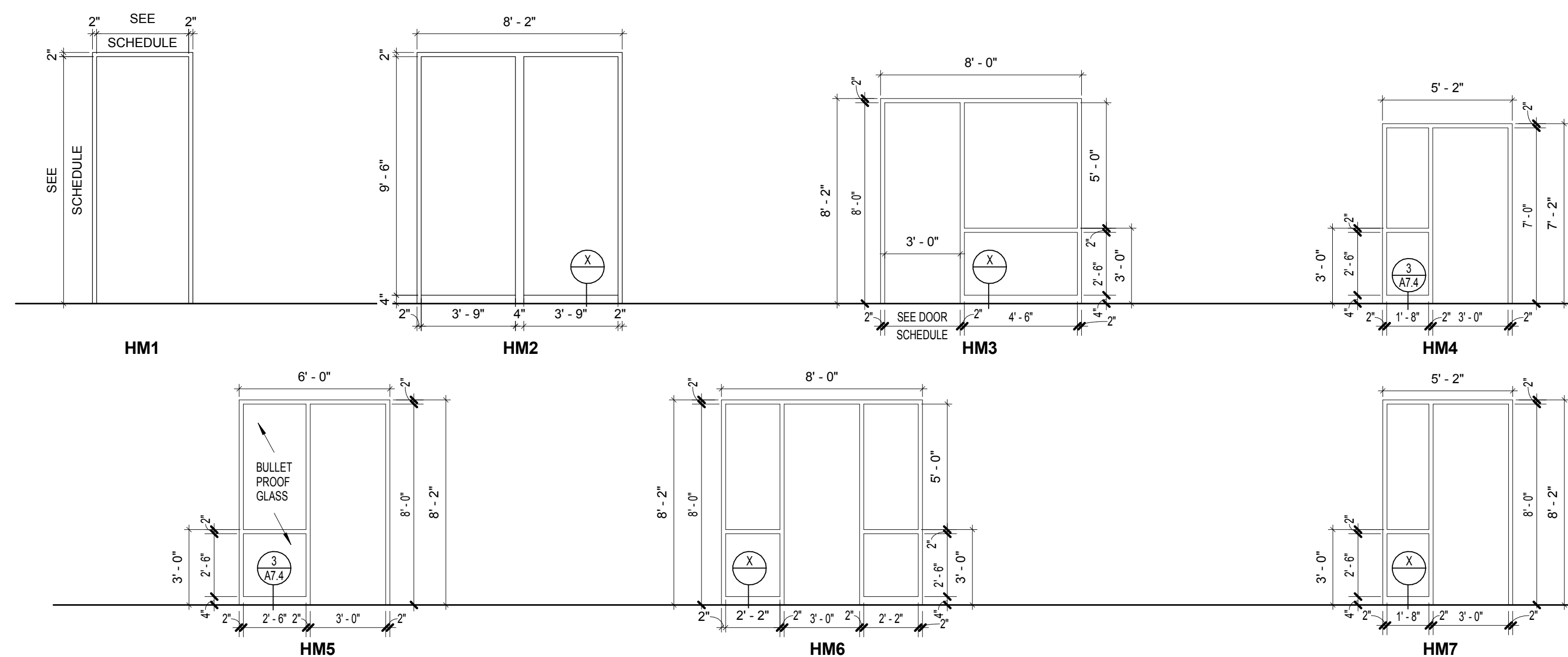
GENERAL NOTES:

- SEE DOOR SCHEDULE FOR GLAZING TYPES
- SET FORCE NOT EXCEED 5LBS FOR ALL ENTRY DOORS PER FLORIDA ACCESSIBILITY CODE

DOOR SCHEDULE

DOOR NO.	WIDTH	HEIGHT	THICK NESS	DOOR TYPE	DOOR FINISH	FRAME TYPE	FRAME FINISH	HDW. SET	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	REMARKS
100a	3'-0"	9'-10"	0'-1 3/4"	TYPE D	WD/GL - PT.	HM-2	PAINT		5 / A7.6	2 / A7.5 3 / A7.5	4 / A7.5 6 / A7.6	
100b	3'-0"	9'-10"	0'-1 3/4"	TYPE D	WD/GL - PT.	HM-2	PAINT			2 / A7.5 3 / A7.5	4 / A7.5 6 / A7.6	
100c	6'-0"	8'-0"	0'-1 3/4"	TYPE B	WD/SCR - PT	HM-1	PAINT			3 / A7.6	---	SCREENED INSET PANEL
100d	6'-0"	8'-0"	0'-1 3/4"	TYPE B	WD/SCR - PT	HM-1	PAINT			3 / A7.6	---	SCREENED INSET PANEL
101a	3'-9"	9'-6"	0'-1 3/4"	TYPE C	MTL/GL - PT.	HM-2	PAINT		4 / A7.6	1 / A7.5	7 / A7.6	
101b	3'-9"	9'-6"	0'-1 3/4"	TYPE C	MTL/GL - PT.	HM-2	PAINT		4 / A7.6	2 / A7.5	7 / A7.6	
101c	3'-9"	9'-6"	0'-1 3/4"	TYPE C	MTL/GL - PT.	HM-2	PAINT		4 / A7.6	2 / A7.5	7 / A7.6	
101d	3'-9"	9'-6"	0'-1 3/4"	TYPE C	MTL/GL - PT.	HM-2	PAINT		4 / A7.6	1 / A7.5	7 / A7.6	
101e	4'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-1	PAINT	4	1 / A7.4	2 / A7.4	6 / A7.4	
101f	3'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-5	PAINT	4				
101g	3'-9"	9'-6"	0'-1 3/4"	TYPE C	MTL. - PT.	HM-2	PAINT		4 / A7.6	8 / A7.5		
101h	3'-0"	9'-10"	0'-1 3/4"	TYPE D	MTL/GL - PT.	HM-1	PAINT					
101i	3'-0"	9'-10"	0'-1 3/4"	TYPE D	MTL/GL - PT.	HM-1	PAINT					
101j	3'-9"	9'-6"	0'-1 3/4"	TYPE C	MTL. - PT.	HM-2	PAINT		4 / A7.6	8 / A7.5		
102	3'-0"	7'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-3	PAINT	9		6 / A7.5		
103	3'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-6	PAINT	10	1 / A7.4			
104	3'-0"	7'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-1	PAINT	5	4 / A7.4	5 / A7.4	6 / A7.4	8X34 ST STL KICK PLATES
105	3'-0"	7'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-1	PAINT	5	4 / A7.4	5 / A7.4	6 / A7.4	8X34 ST STL KICK PLATES
106	4'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-1	PAINT		1 / A7.4	2 / A7.4	6 / A7.4	
107	4'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	4	7 / A7.4	8 / A7.4		
108a	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-4	PAINT	1	7 / A7.4	8 / A7.4		8X34 ST STL KICK PLATES
108b	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-4 (OPP)	PAINT	1	7 / A7.4	8 / A7.4		8X34 ST STL KICK PLATES
108c	3'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-7	PAINT	9	1 / A7.4	2 / A7.4	4 / A7.5	
108d	3'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-7 (OPP)	PAINT	9	1 / A7.4	2 / A7.4	4 / A7.5	
109	3'-6"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT		7 / A7.4	8 / A7.4		
110	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	5	4 / A7.4	5 / A7.4		8X34 ST STL KICK PLATES
111	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	5	4 / A7.4	5 / A7.4		8X34 ST STL KICK PLATES
112	3'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-1	PAINT	6	1 / A7.4	2 / A7.4	4 / A7.5	
113	3'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-1	PAINT	6	1 / A7.4	2 / A7.4	4 / A7.5	
114a	3'-0"	8'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT		7 / A7.4	8 / A7.4		8X34 ST STL KICK PLATES
114b	3'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-1	PAINT		1 / A7.4	2 / A7.4	4 / A7.5	
115	3'-0"	7'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-4	PAINT		7 / A7.4	8 / A7.4		8X34 ST STL KICK PLATES
116	3'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-3	PAINT	4	1 / A7.4	2 / A7.4	6 / A7.4	
117a	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	8	7 / A7.4	8 / A7.4		
117b	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	7	4 / A7.4	5 / A7.4		
118	3'-0"	8'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	1	4 / A7.4	5 / A7.4		
119	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	7	4 / A7.4	5 / A7.4		
120	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	7	4 / A7.4	5 / A7.4		
121	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	8	4 / A7.4	5 / A7.4		
122	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	7	4 / A7.4	5 / A7.4		
125	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	2	4 / A7.4	5 / A7.4		
126	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	7	4 / A7.4	5 / A7.4		
127	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	7	4 / A7.4	5 / A7.4		
129	3'-0"	8'-0"	0'-1 3/4"	TYPE A	MTL. - PT.	HM-1	PAINT	3	1 / A7.4	2 / A7.4	4 / A7.5	
130	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT	7	4 / A7.4	5 / A7.4		
900	6'-0"	7'-0"	0'-1 3/4"	TYPE E	MTL. - PT.	HM-1	PAINT					
901	4'-0"	7'-0"	0'-1 3/4"	TYPE E	MTL. - PT.	HM-1	PAINT					
CASED 102	0'-0"	0'-0"				HM-1	PAINT					
201	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT		4 / A7.4	5 / A7.4		
202	3'-0"	7'-0"	0'-1 3/4"	TYPE A	WD. - STN	HM-1	PAINT		4 / A7.4	5 / A7.4		

DOOR FRAME TYPES



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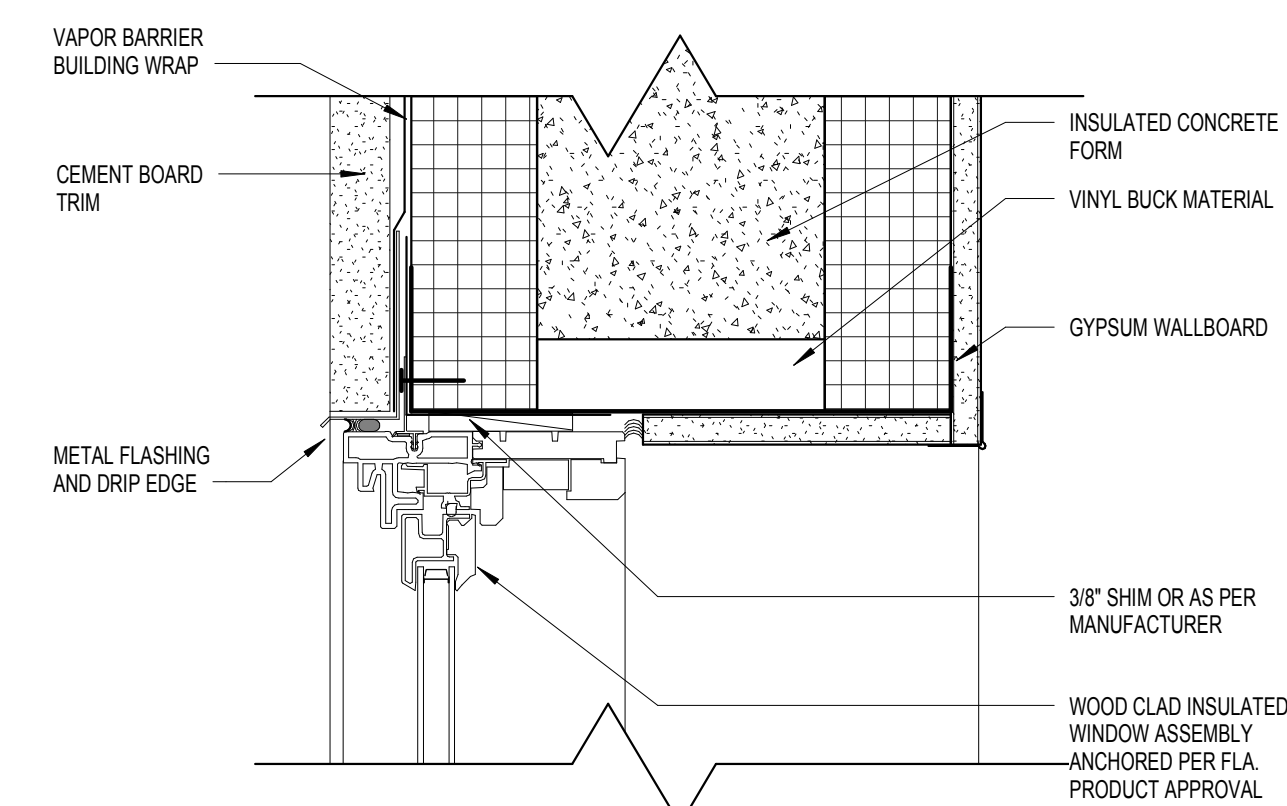
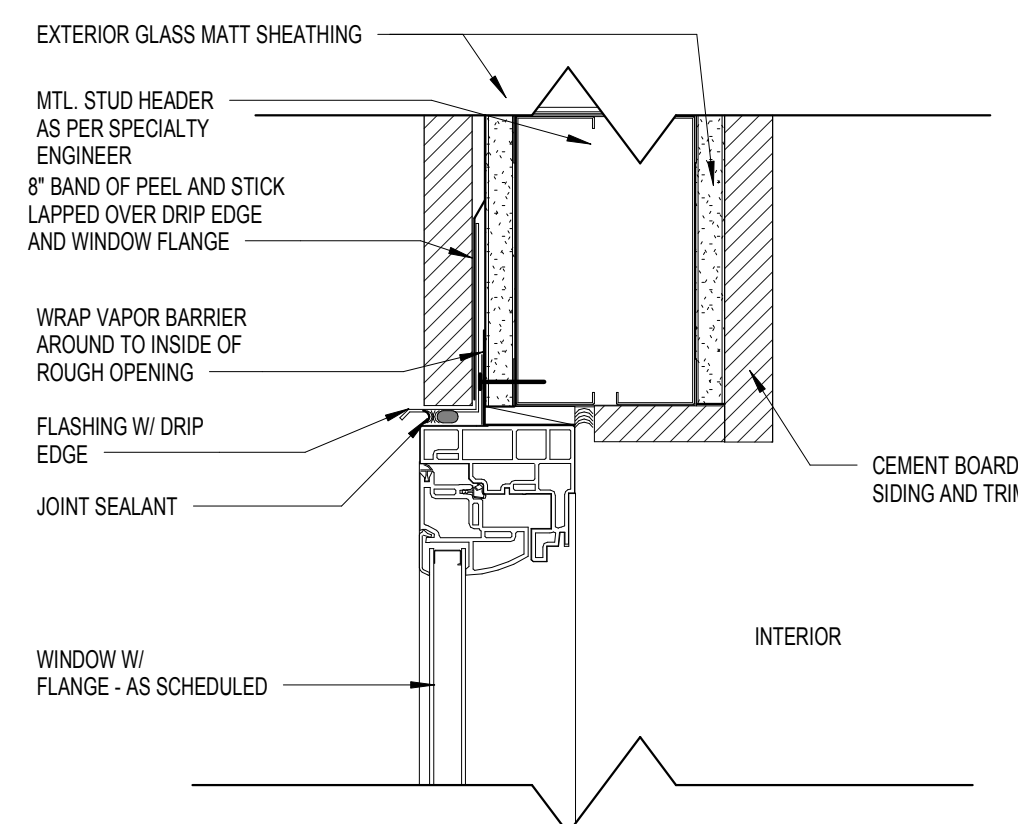
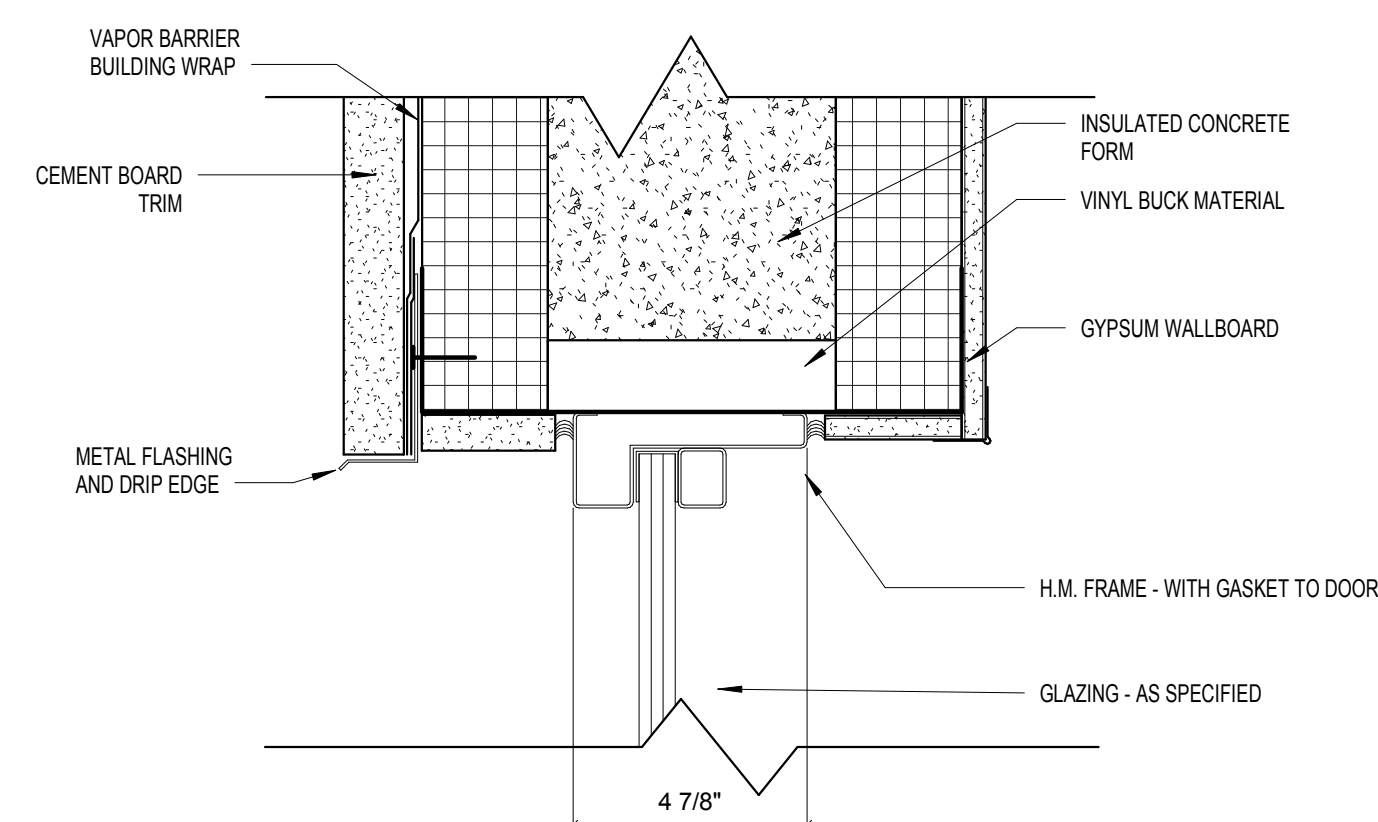
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DOOR & WINDOW SCHEDULES

A7.2

225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978



7 Detail - Service Window @ ICF - HEAD

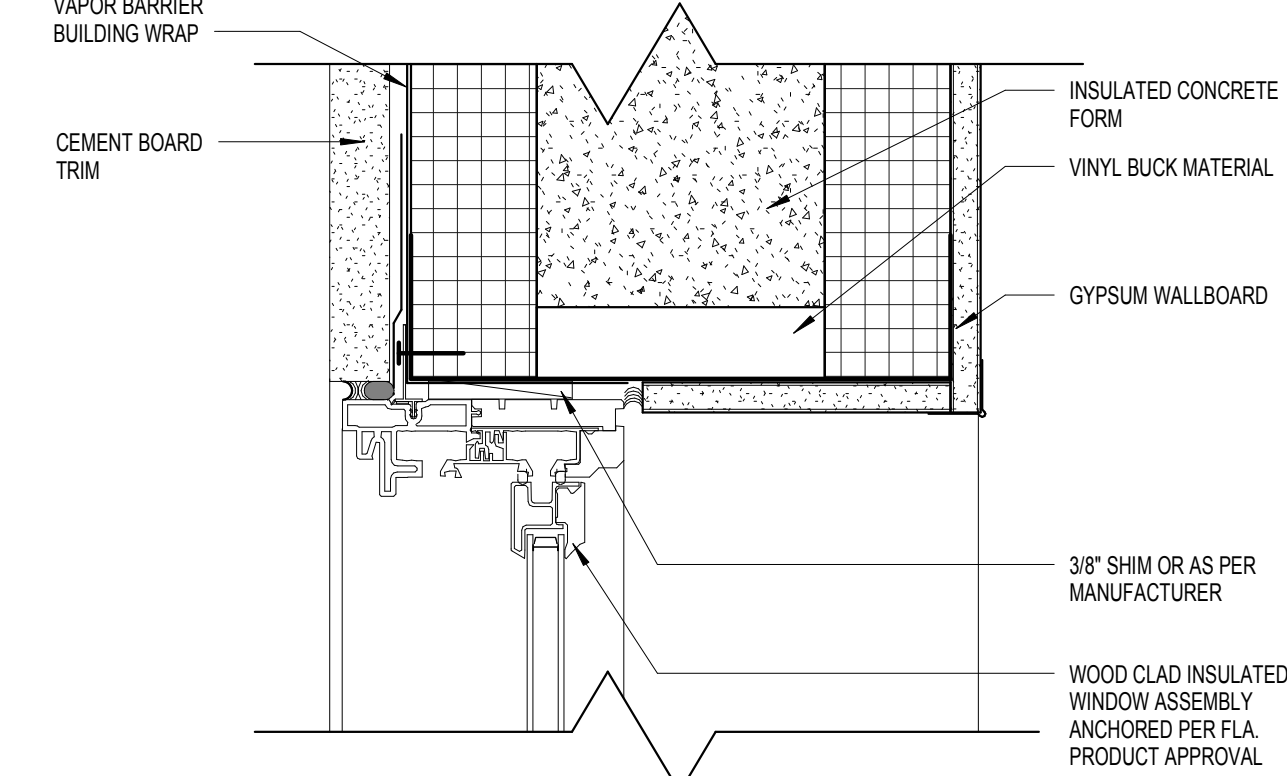
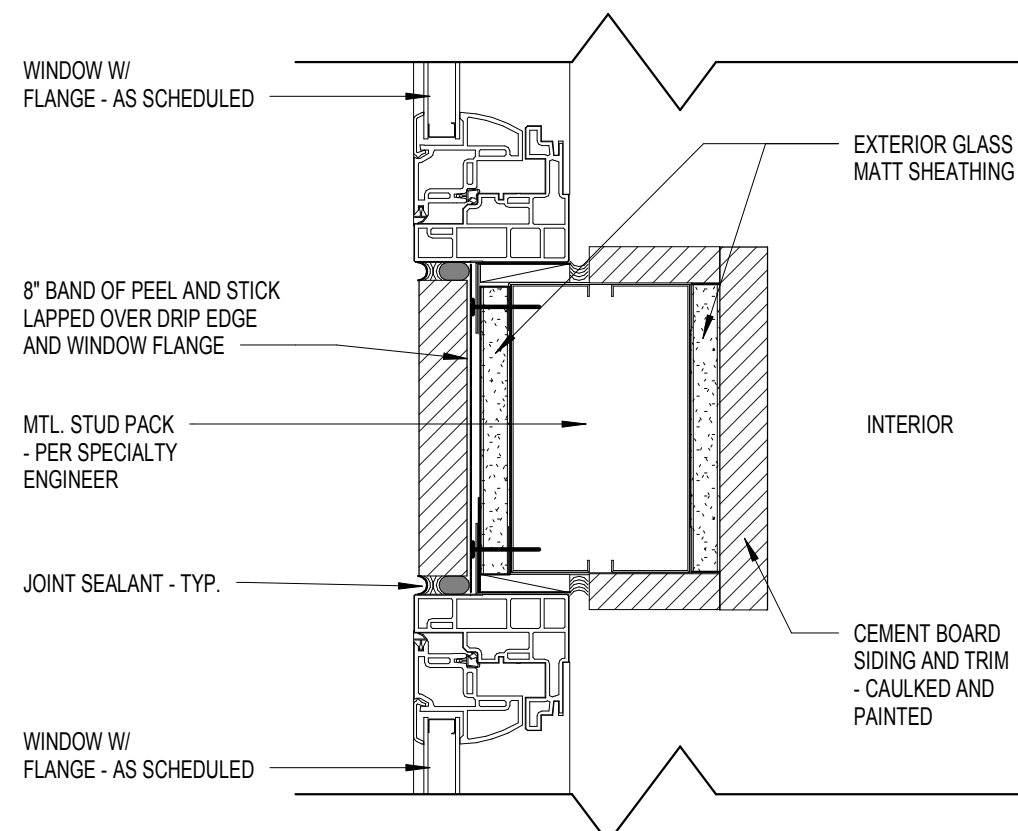
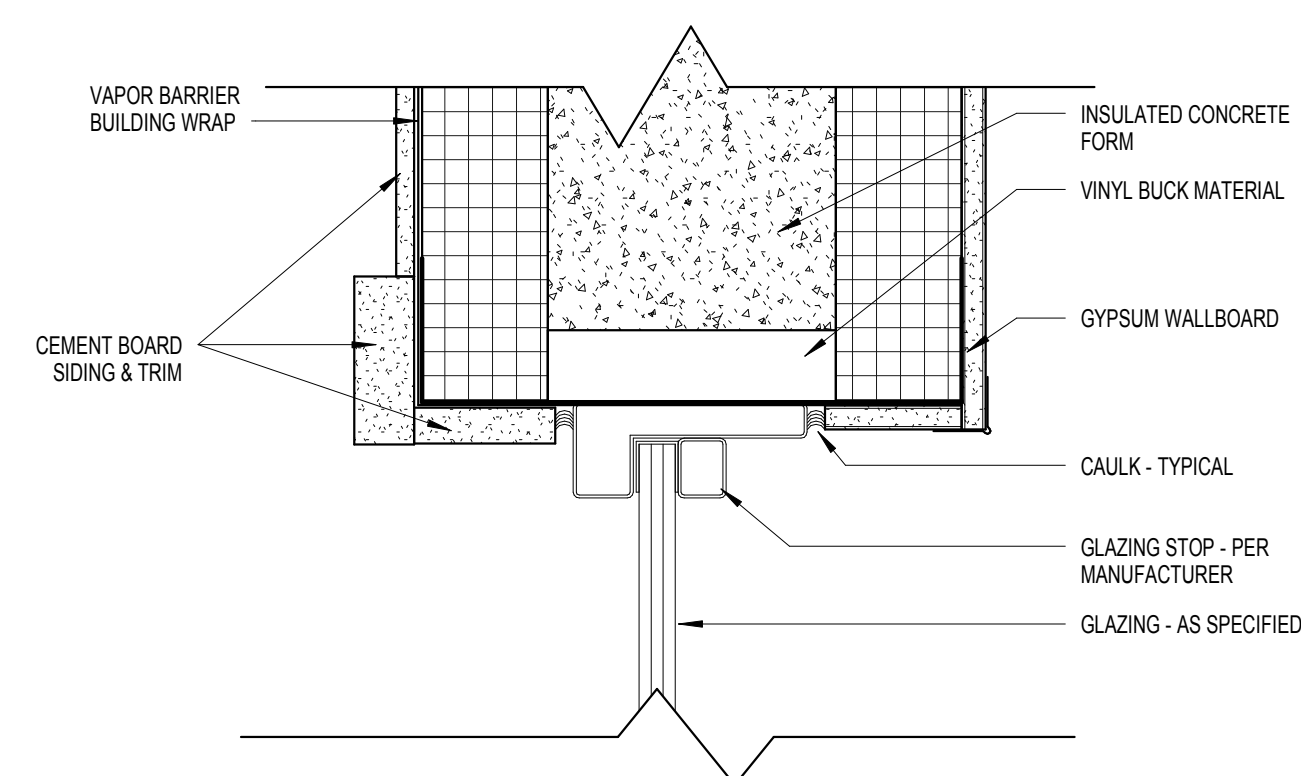
A7.3 3" = 1'-0"

4 Detail - Awning Window at Cupola - Head

A7.3 3" = 1'-0"

1 Detail - Double Hung Window at ICF - HEAD

A7.3 3" = 1'-0"



8 Detail - Service Window @ ICF - JAMB

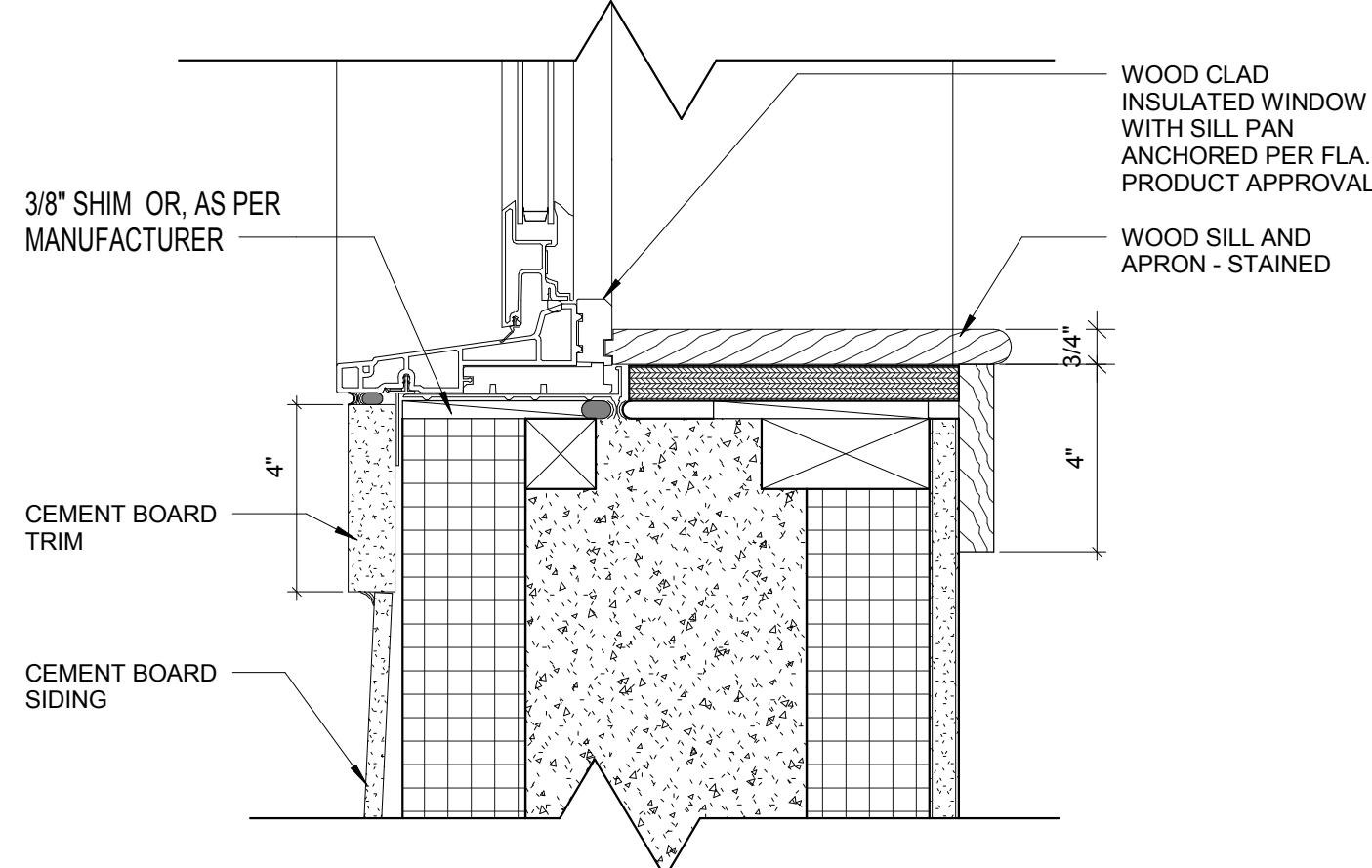
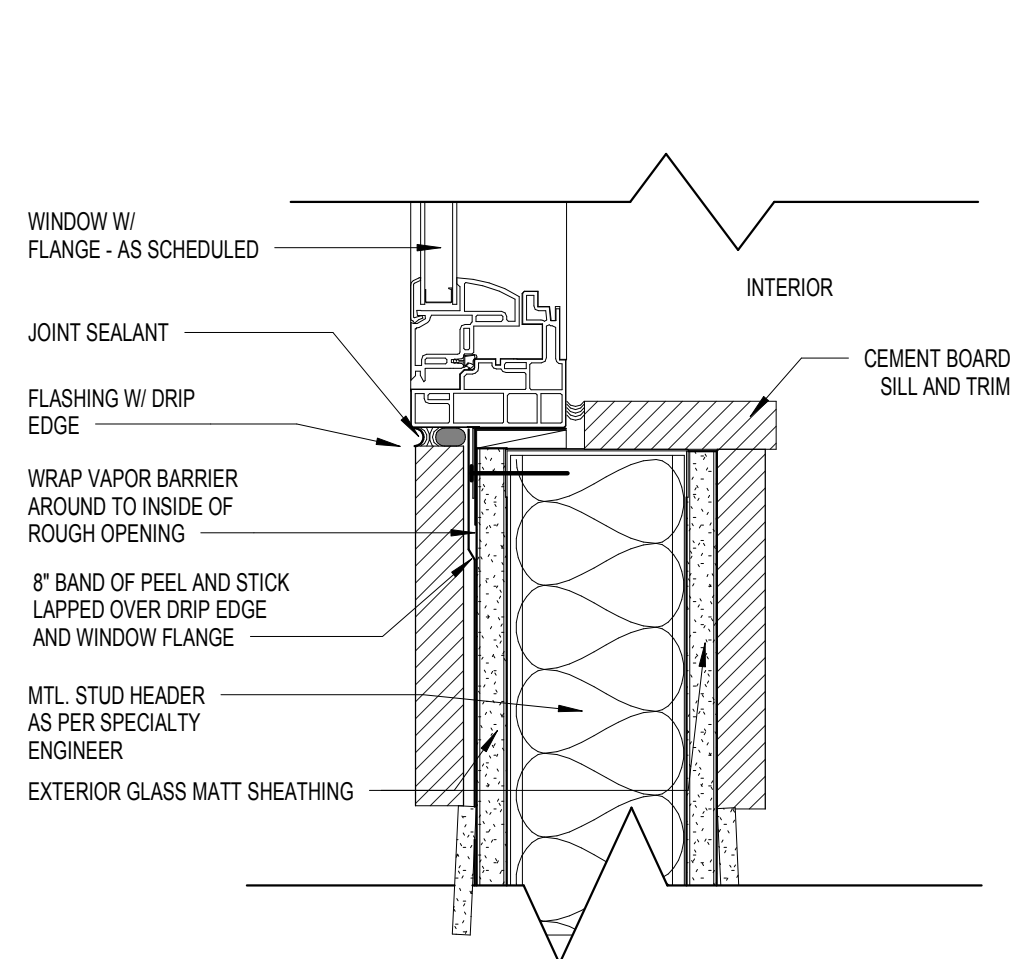
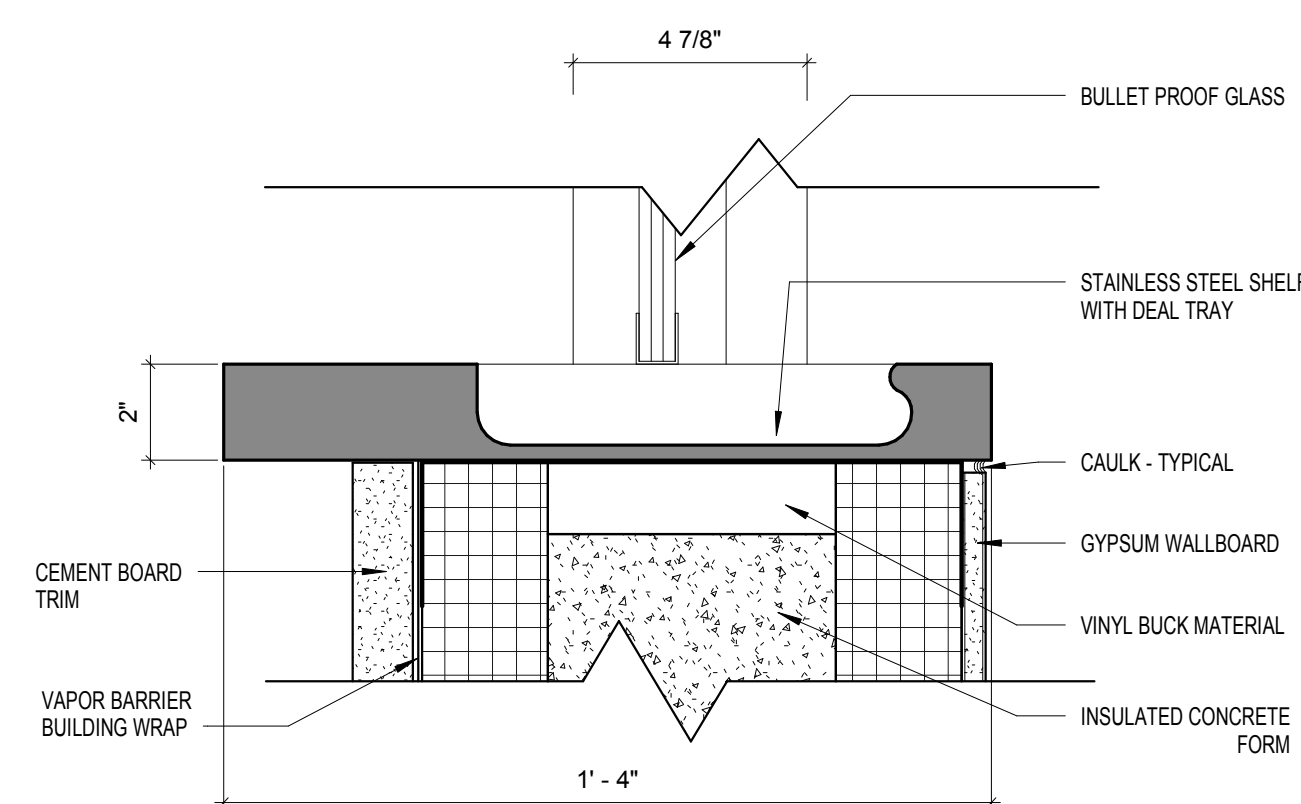
A7.3 3" = 1'-0"

5 Detail - Awning Window at Cupola - Jamb

A7.3 3" = 1'-0"

2 Detail - Double Hung Window at ICF - JAMB

A7.3 3" = 1'-0"



9 Detail - Service Window @ ICF - SILL

A7.3 3" = 1'-0"

6 Detail - Awning Window at Cupola - Sill

A7.3 3" = 1'-0"

3 Detail - Double Hung Window Sill

A7.3 3" = 1'-0"



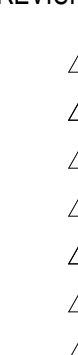
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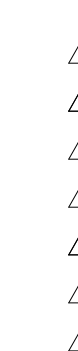
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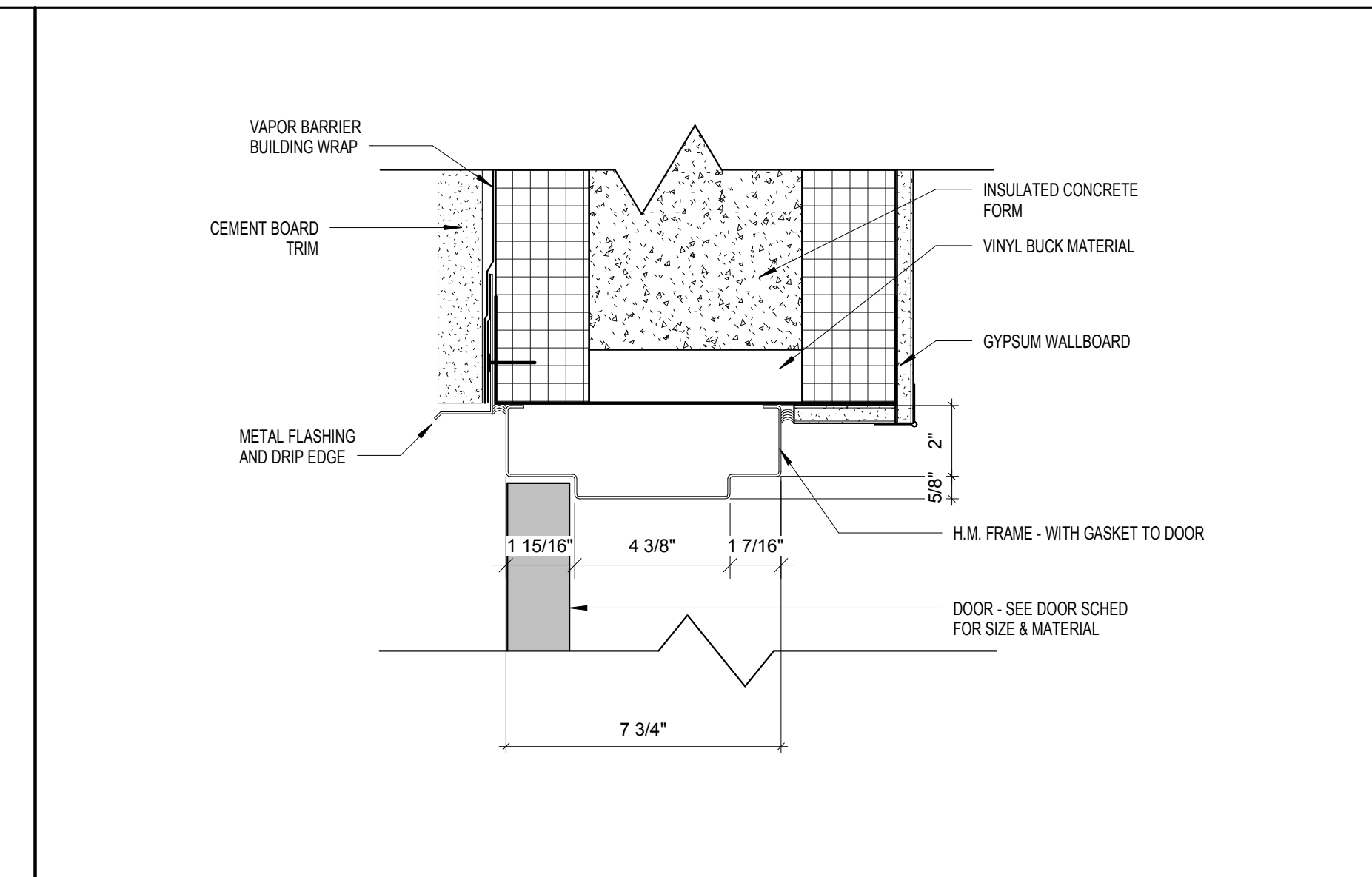
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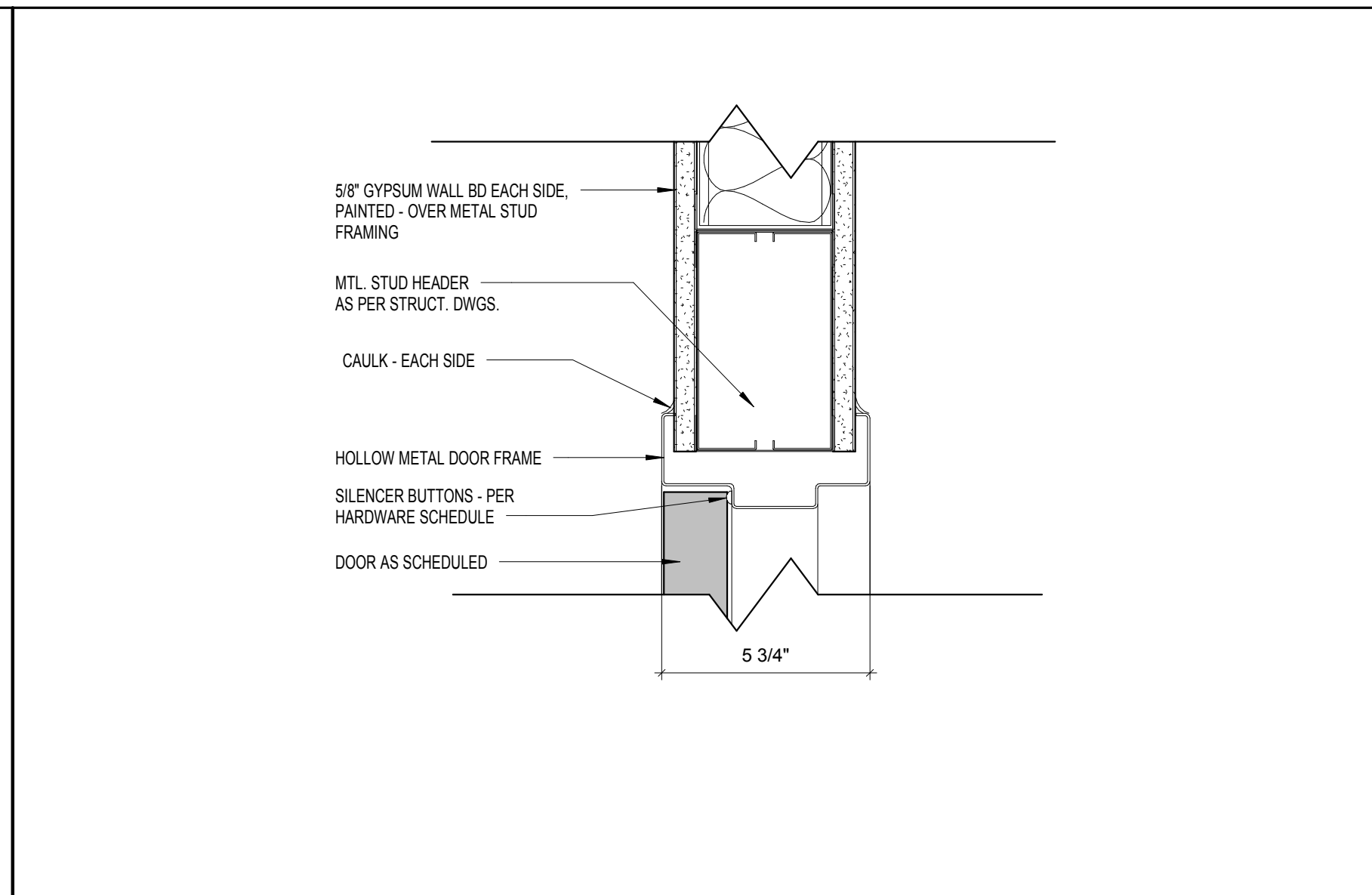
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A7.4

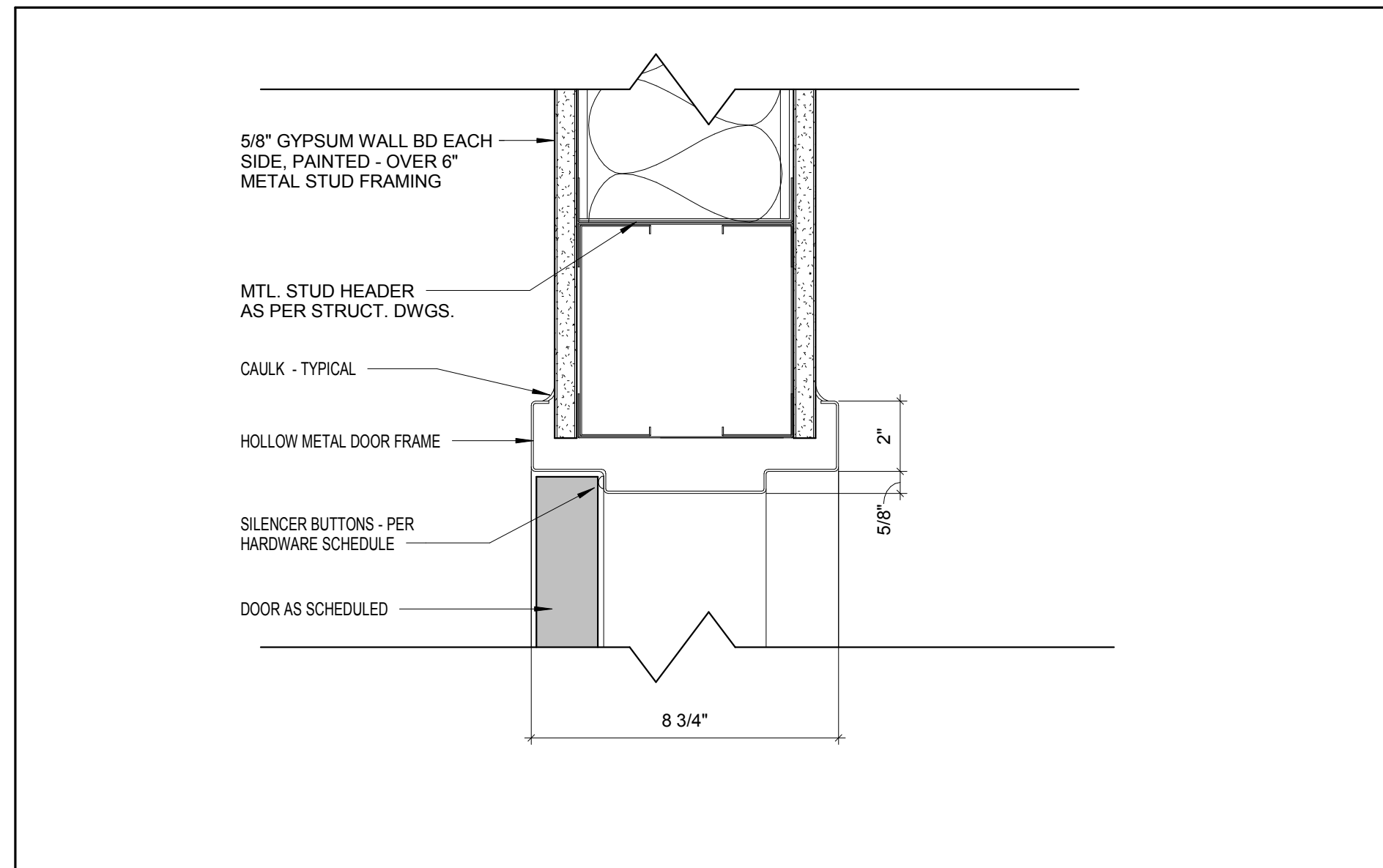
225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978



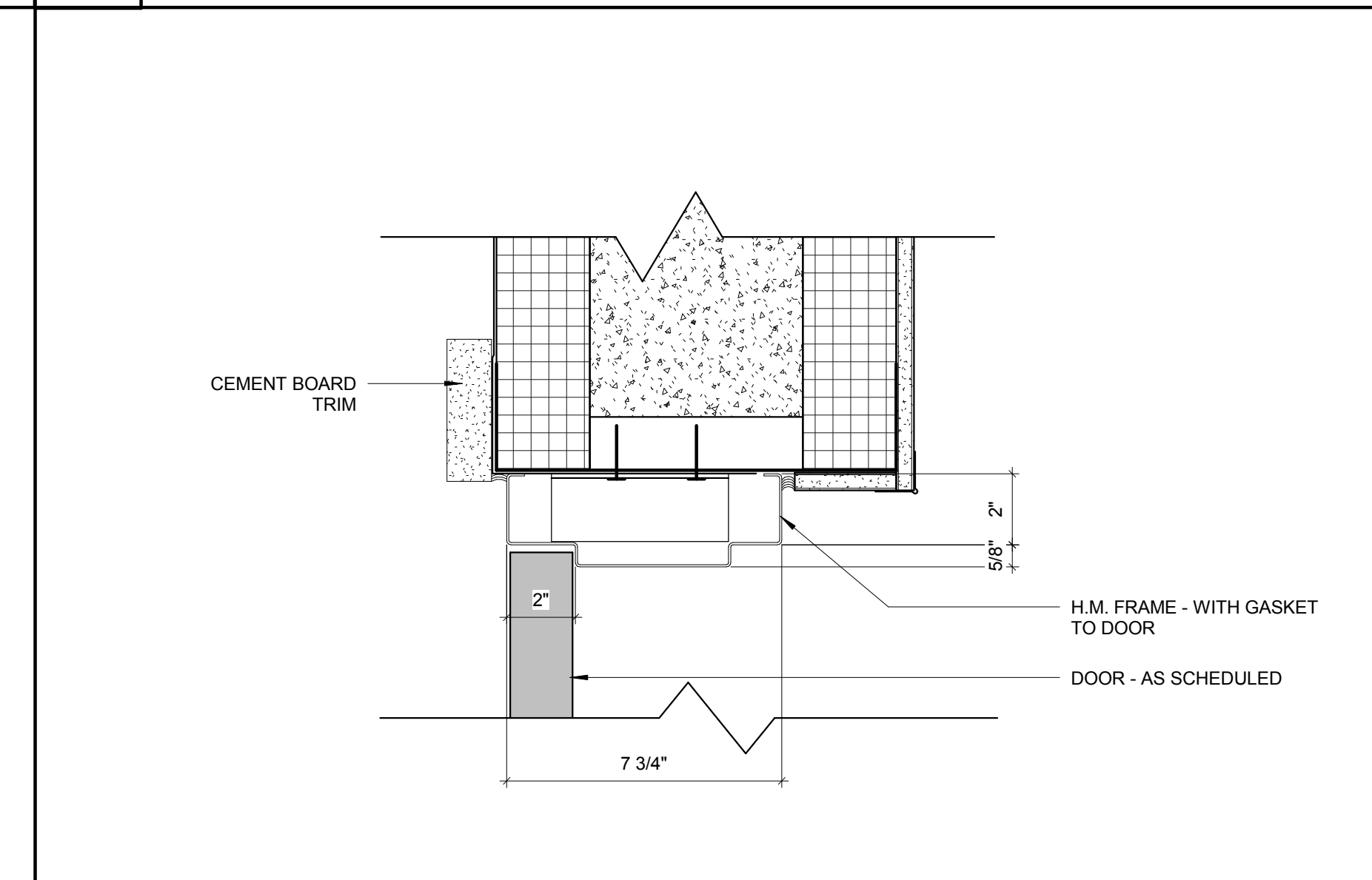
1 Detail - H. M. Frame at ICF - HEAD
A7.4 3" = 1'-0"



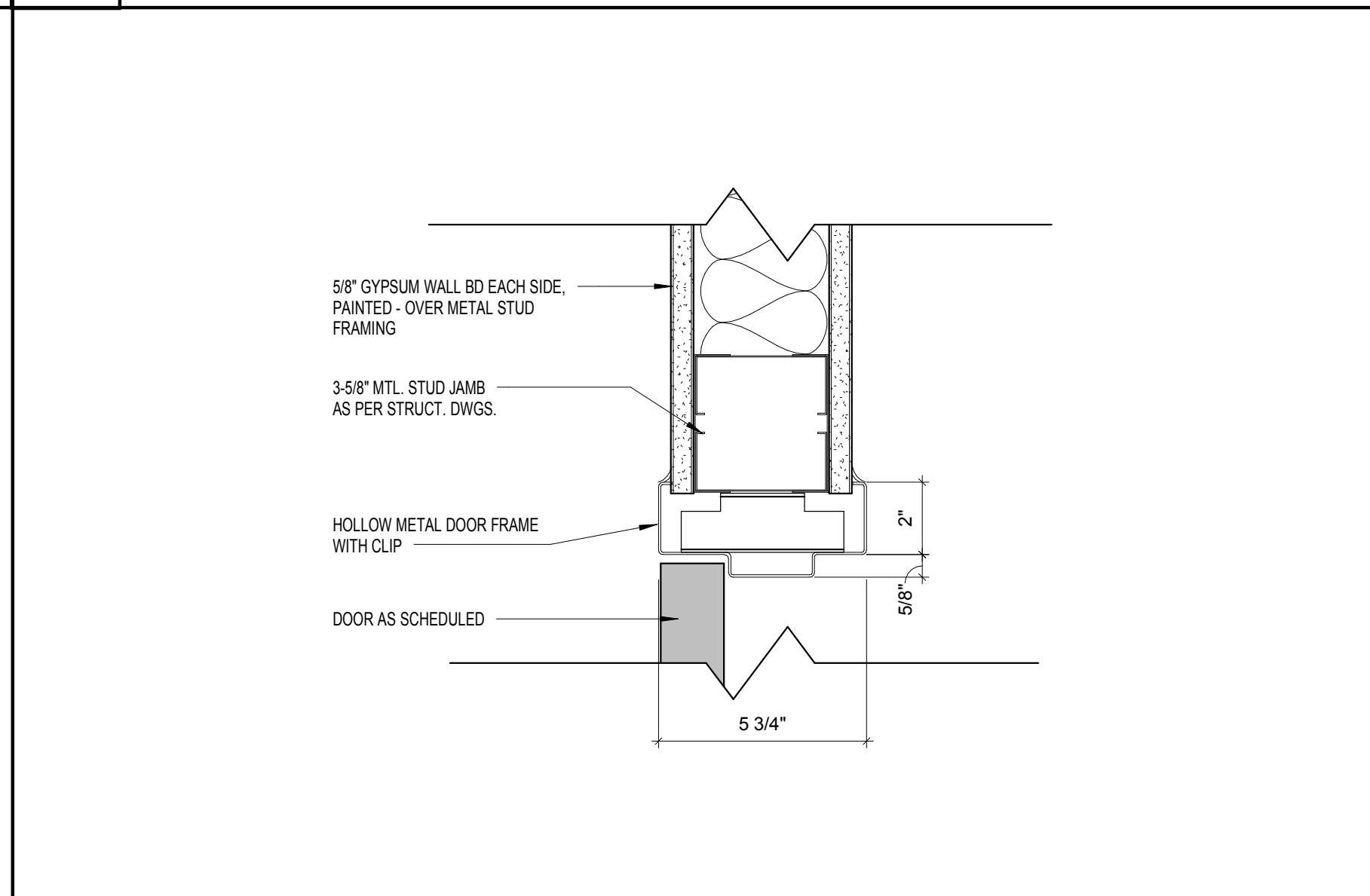
4 Detail - HM Door Frame 5-3/4" HEAD
A7.4 3" = 1'-0"



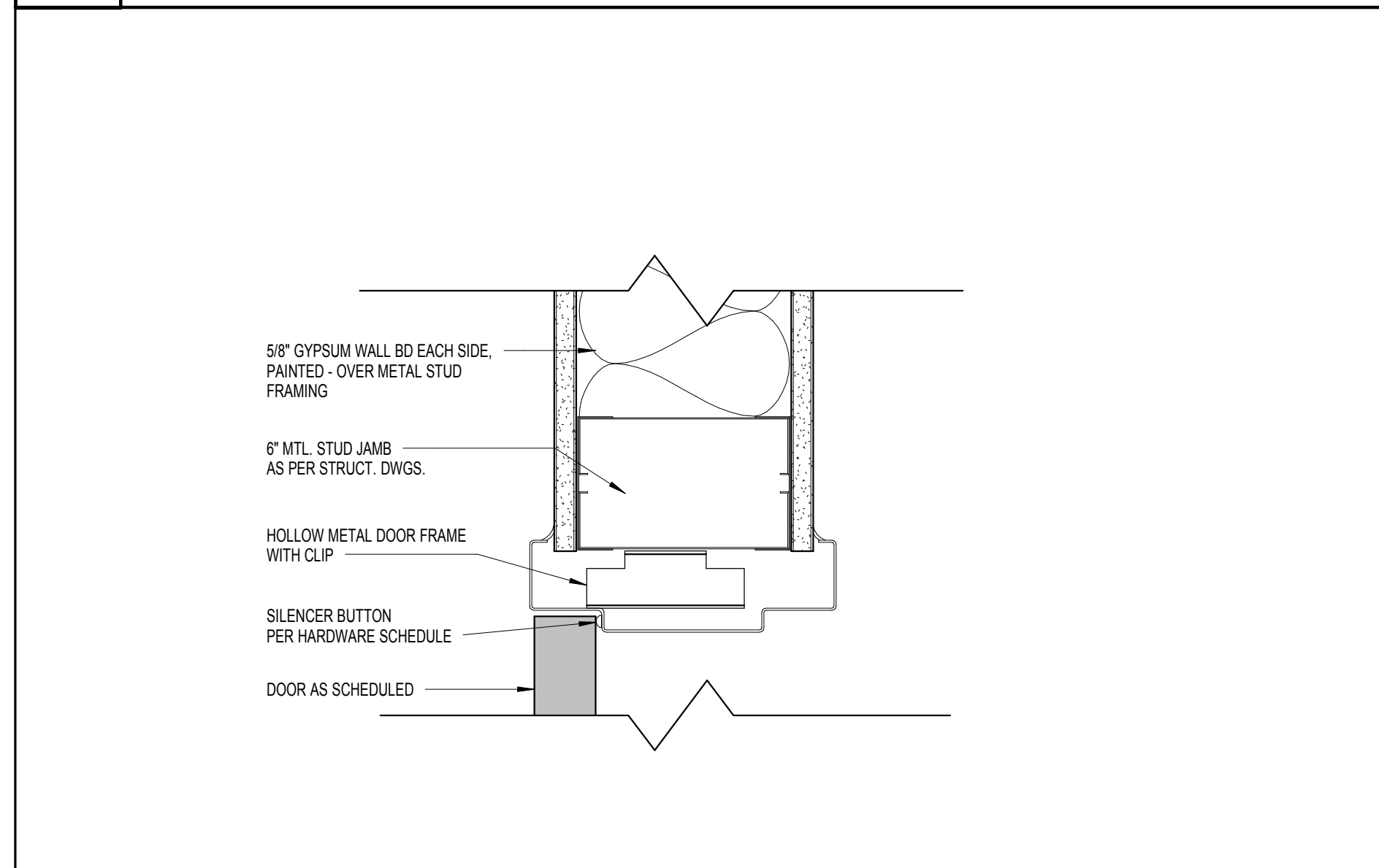
7 Detail - HM Door Frame 8-3/4" HEAD
A7.4 3" = 1'-0"



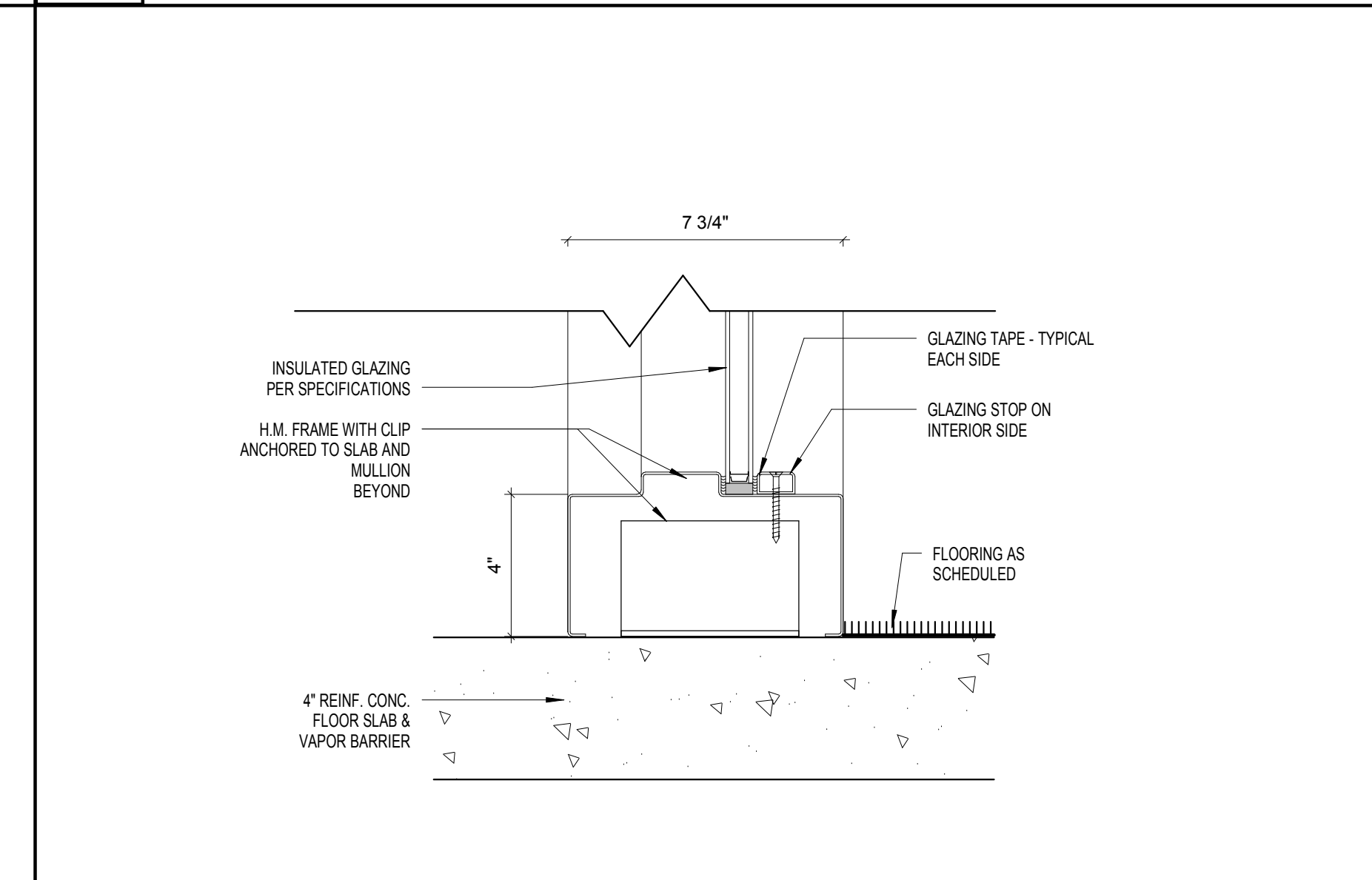
2 Detail - H. M. Frame at ICF - JAMB
A7.4 3" = 1'-0"



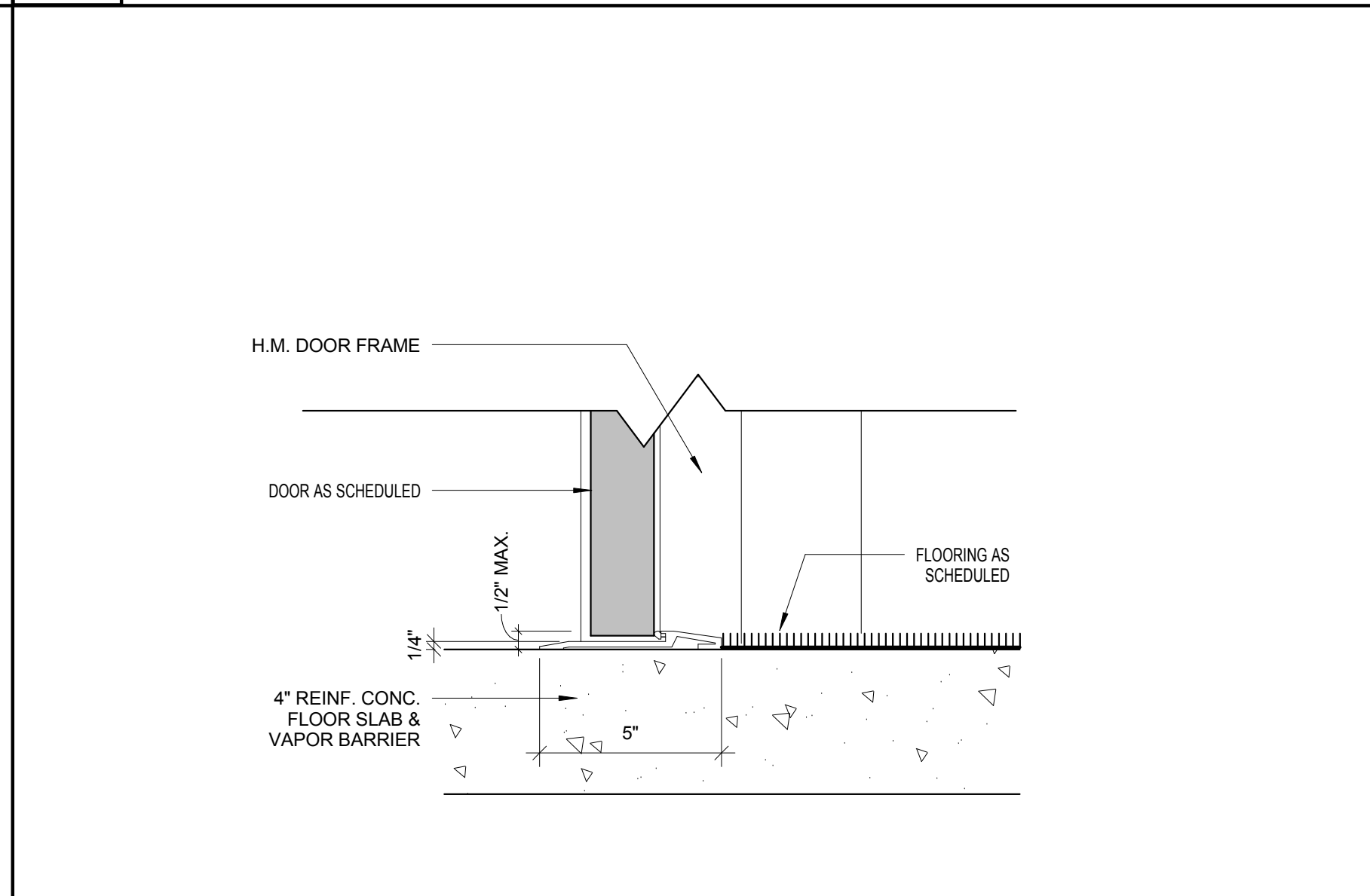
5 Detail - HM Door Frame 5-3/4" JAMB
A7.4 3" = 1'-0"



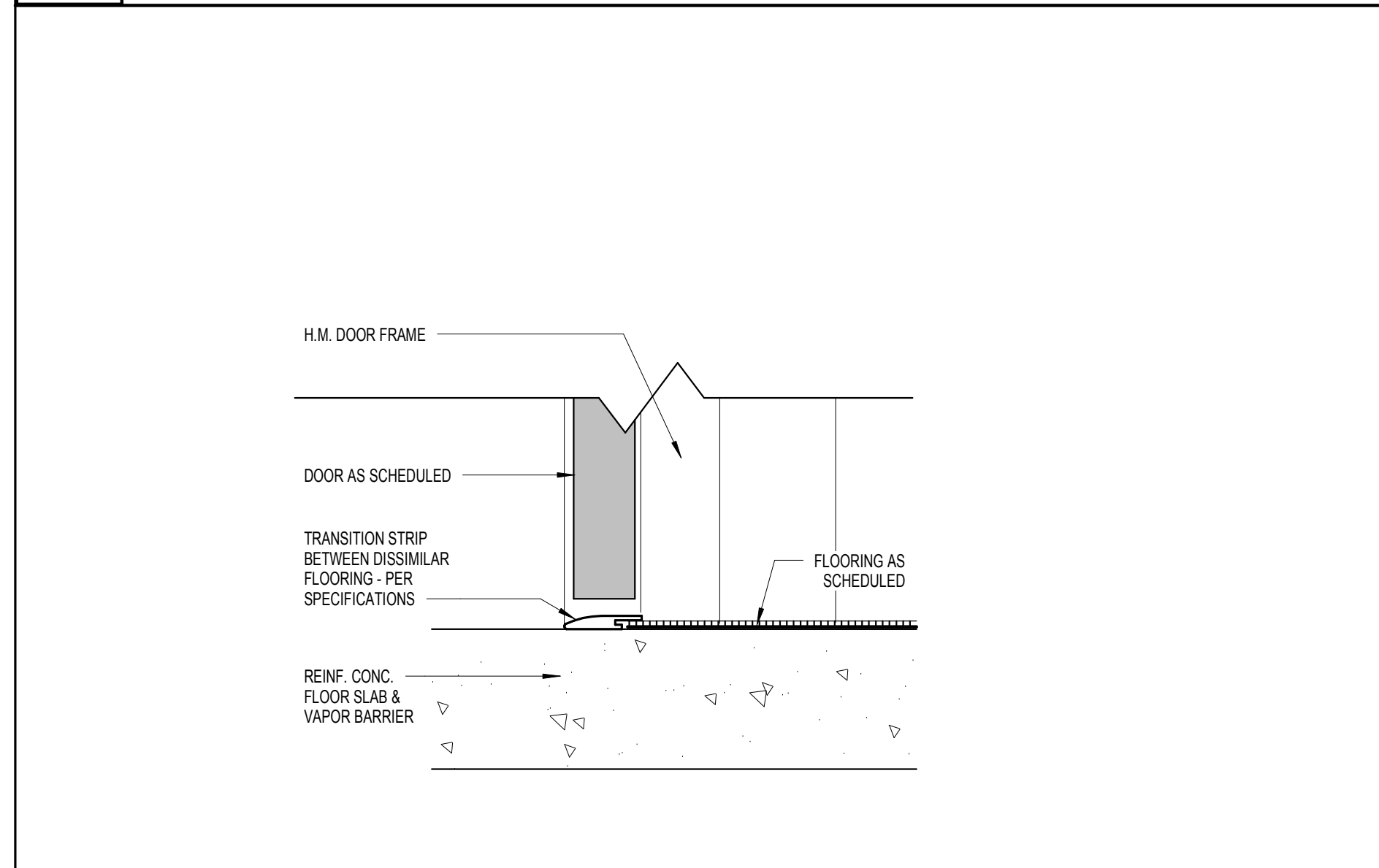
8 Detail - HM Door Frame 8-3/4" JAMB
A7.4 3" = 1'-0"



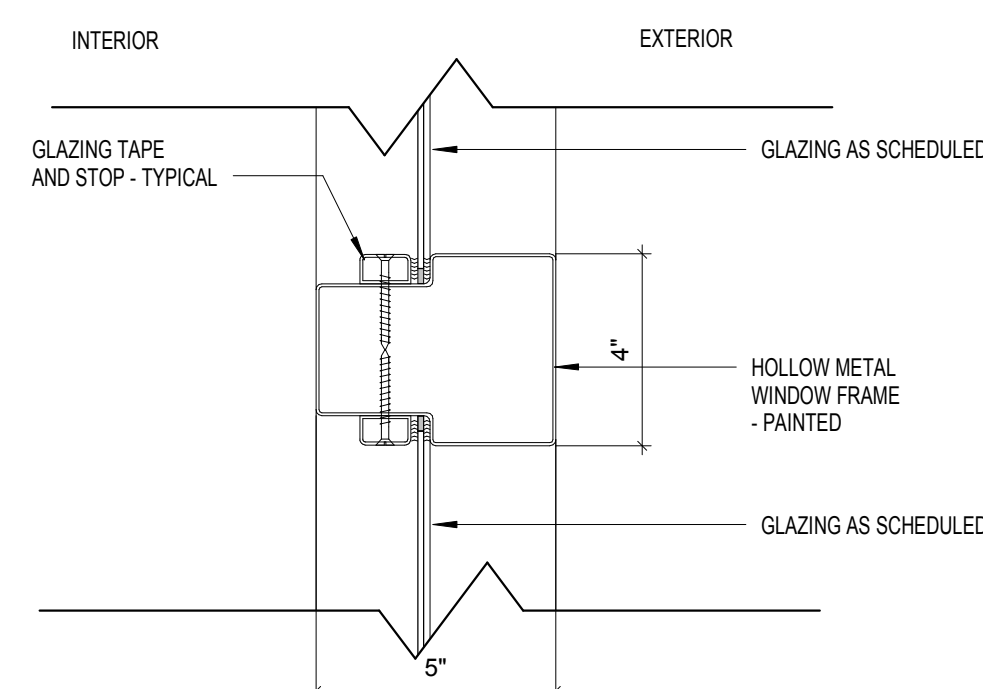
3 Detail - H.M. Frame with Glazing
A7.4 3" = 1'-0"



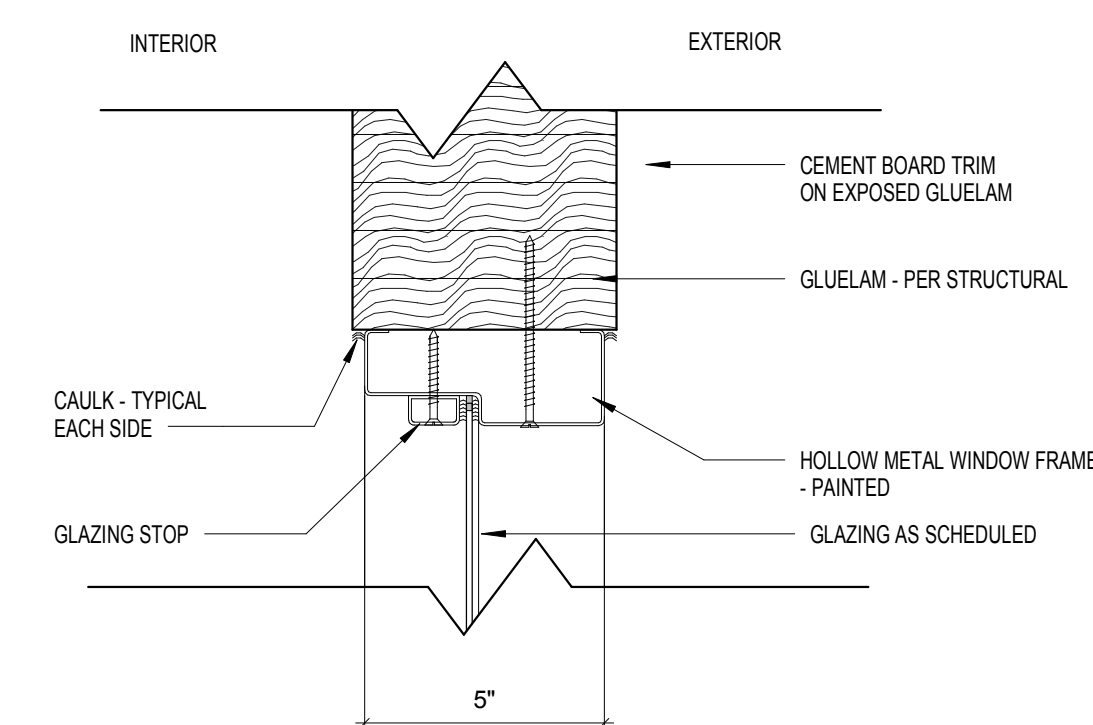
6 Detail - Alum Threshold / Flush Door
A7.4 3" = 1'-0"



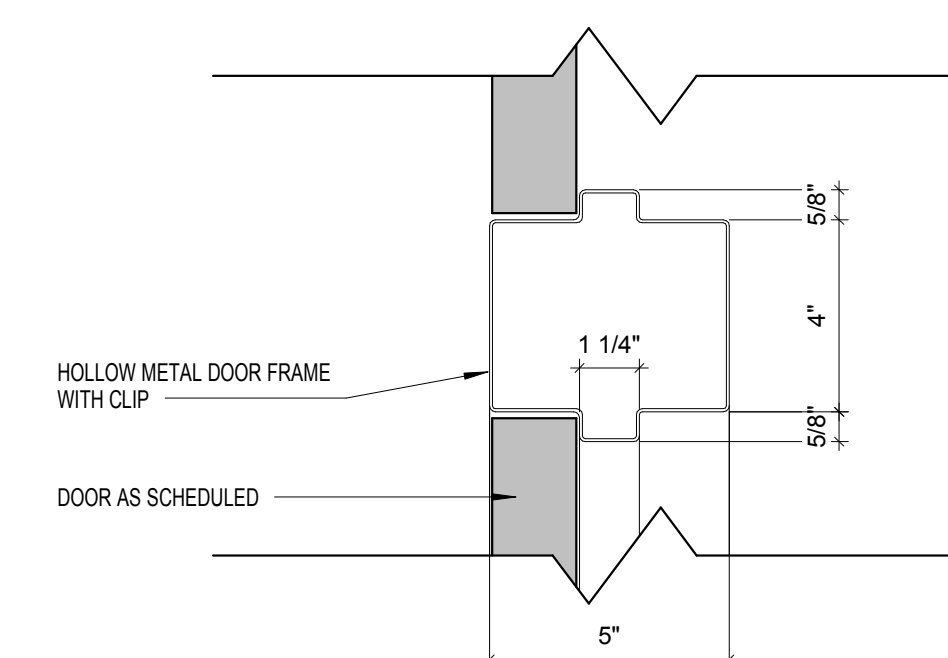
9 Detail - Threshold @ Dissimilar Flooring
A7.4 3" = 1'-0"



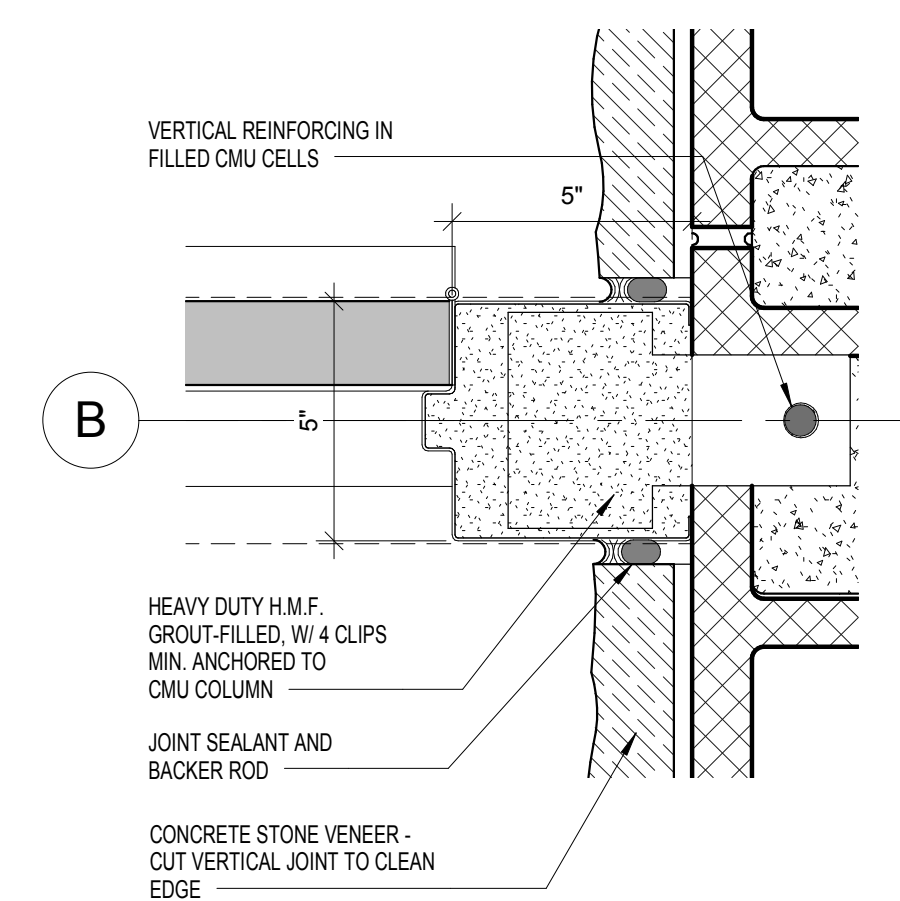
9 Detail - HM Window Frame - 5" Glazed JAMB
A7.5 3" = 1'-0"



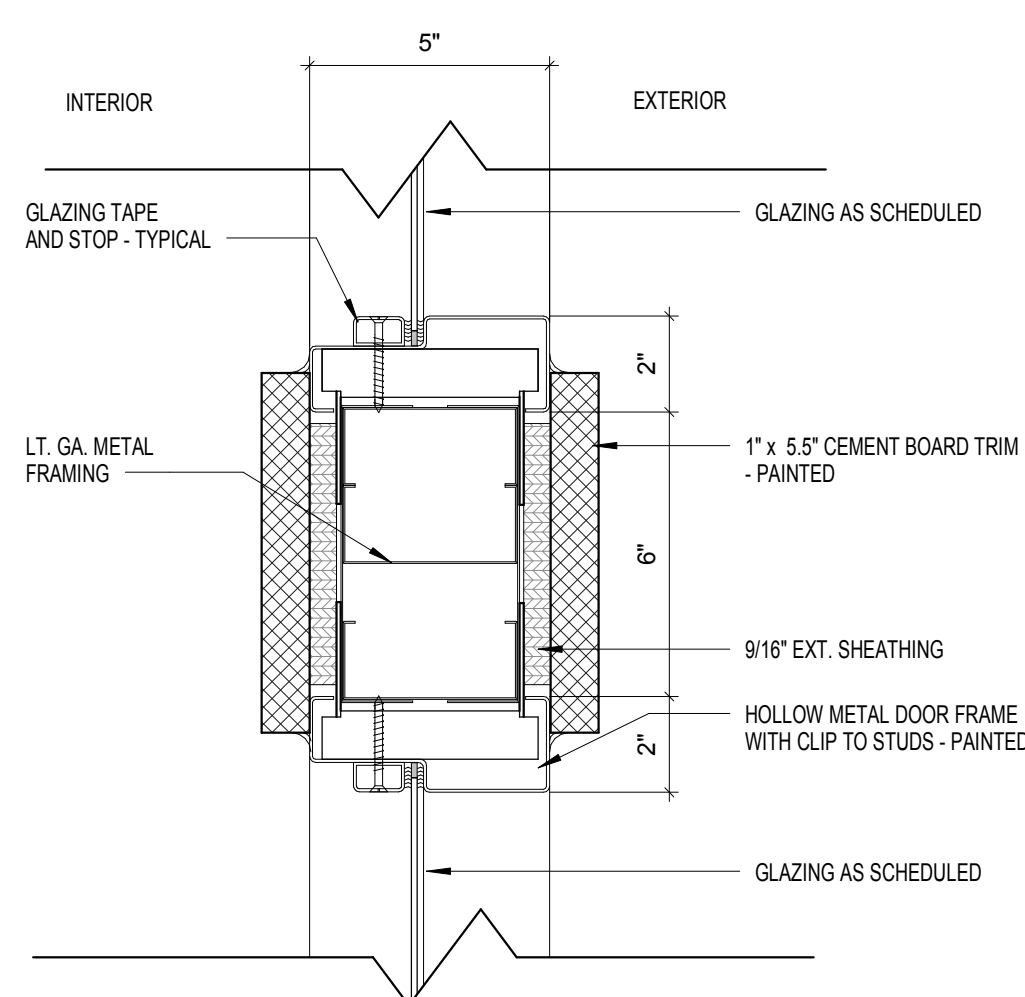
5 Detail - HM Frame - 5" Glazed HEAD
A7.5 3" = 1'-0"



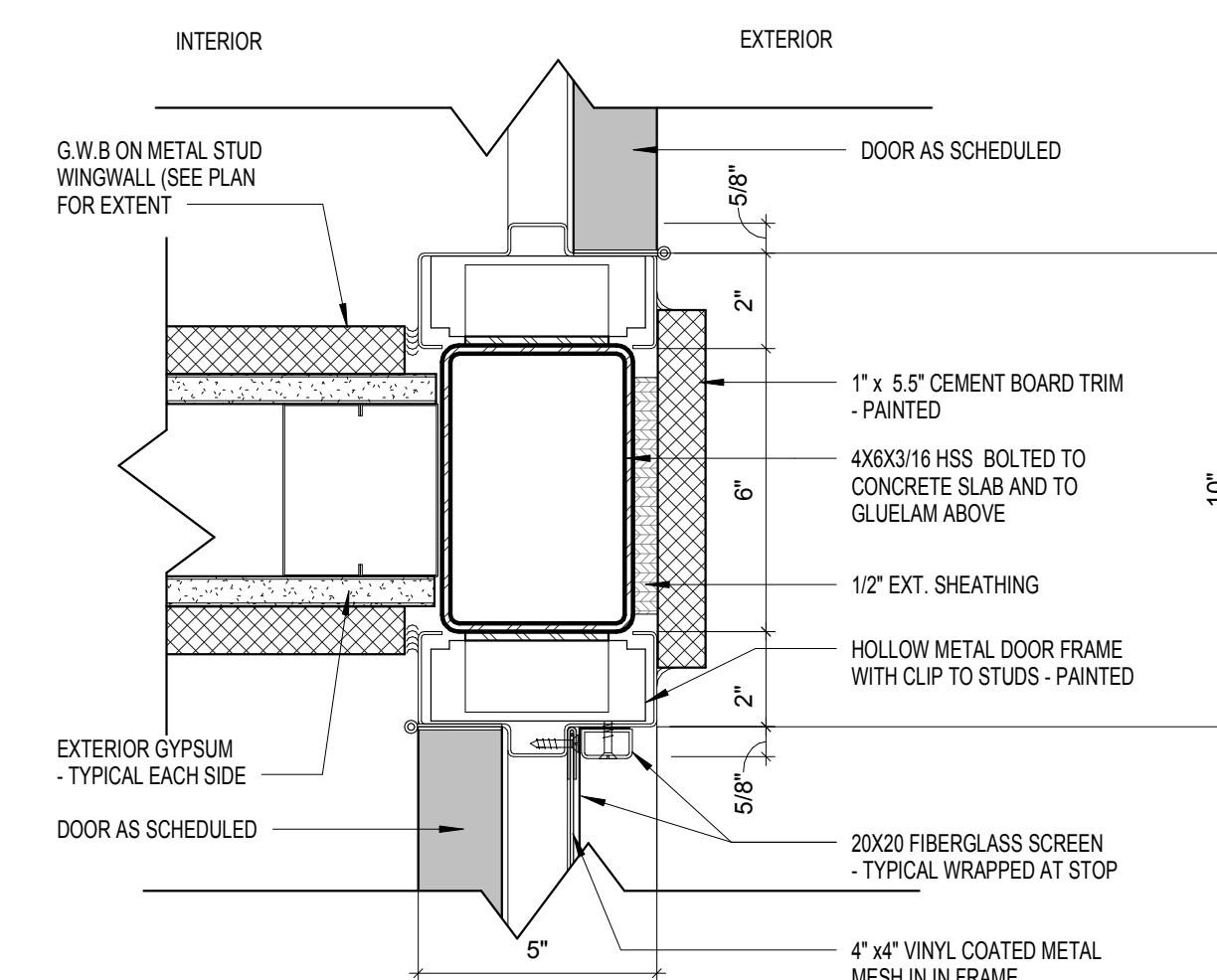
3 Detail - HM Door Frame - 5" Fixed Astragal
A7.5 3" = 1'-0"



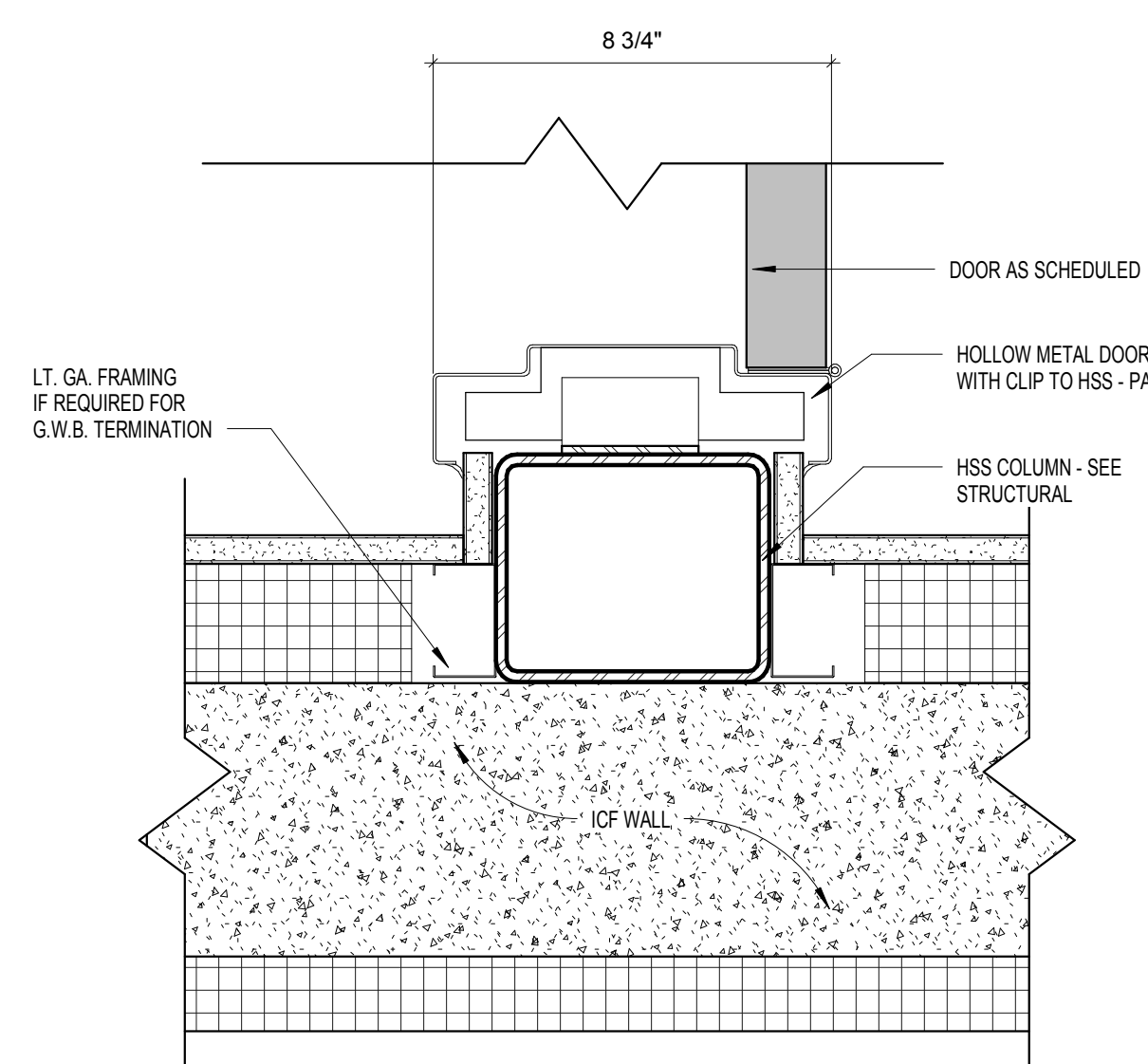
8 Detail 2
A7.5 3" = 1'-0"



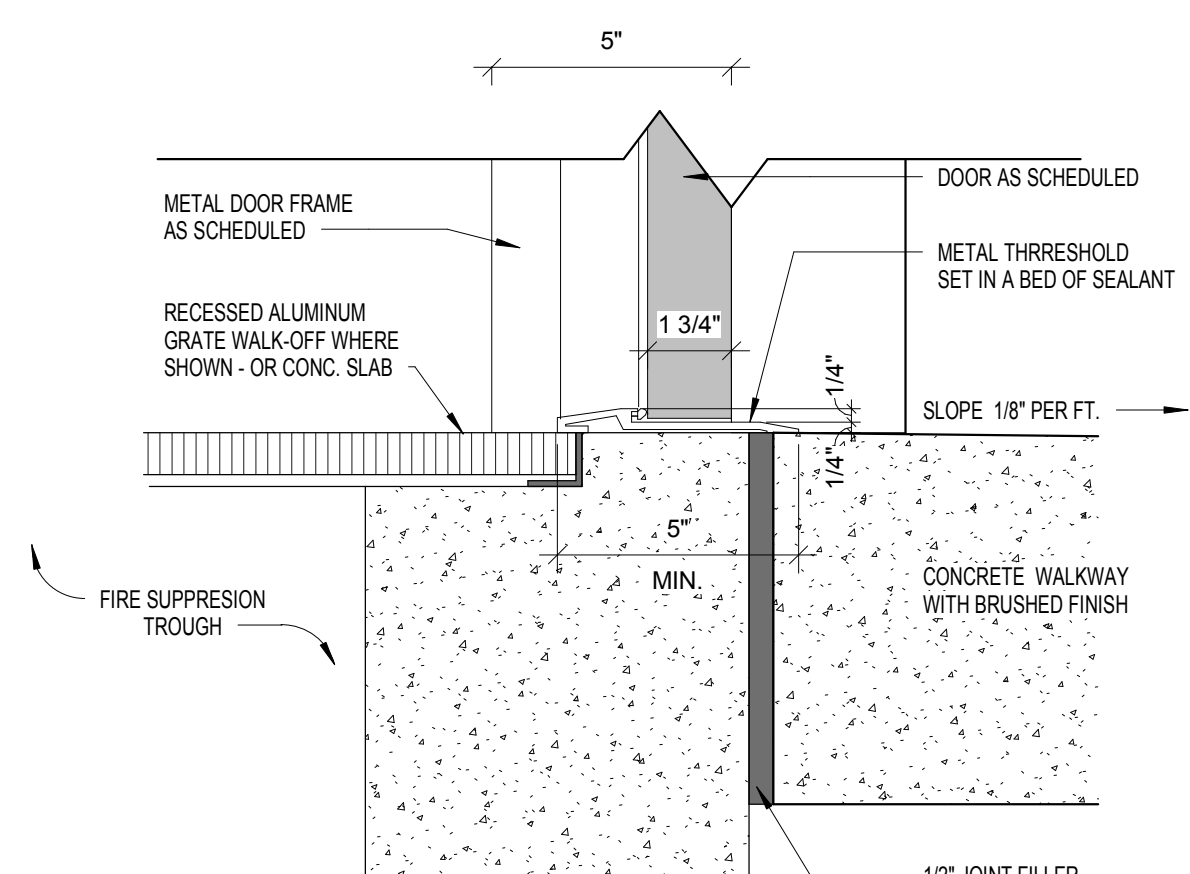
6 Detail - HM Frame - 5" Glazed Jamb Ganged
A7.5 3" = 1'-0"



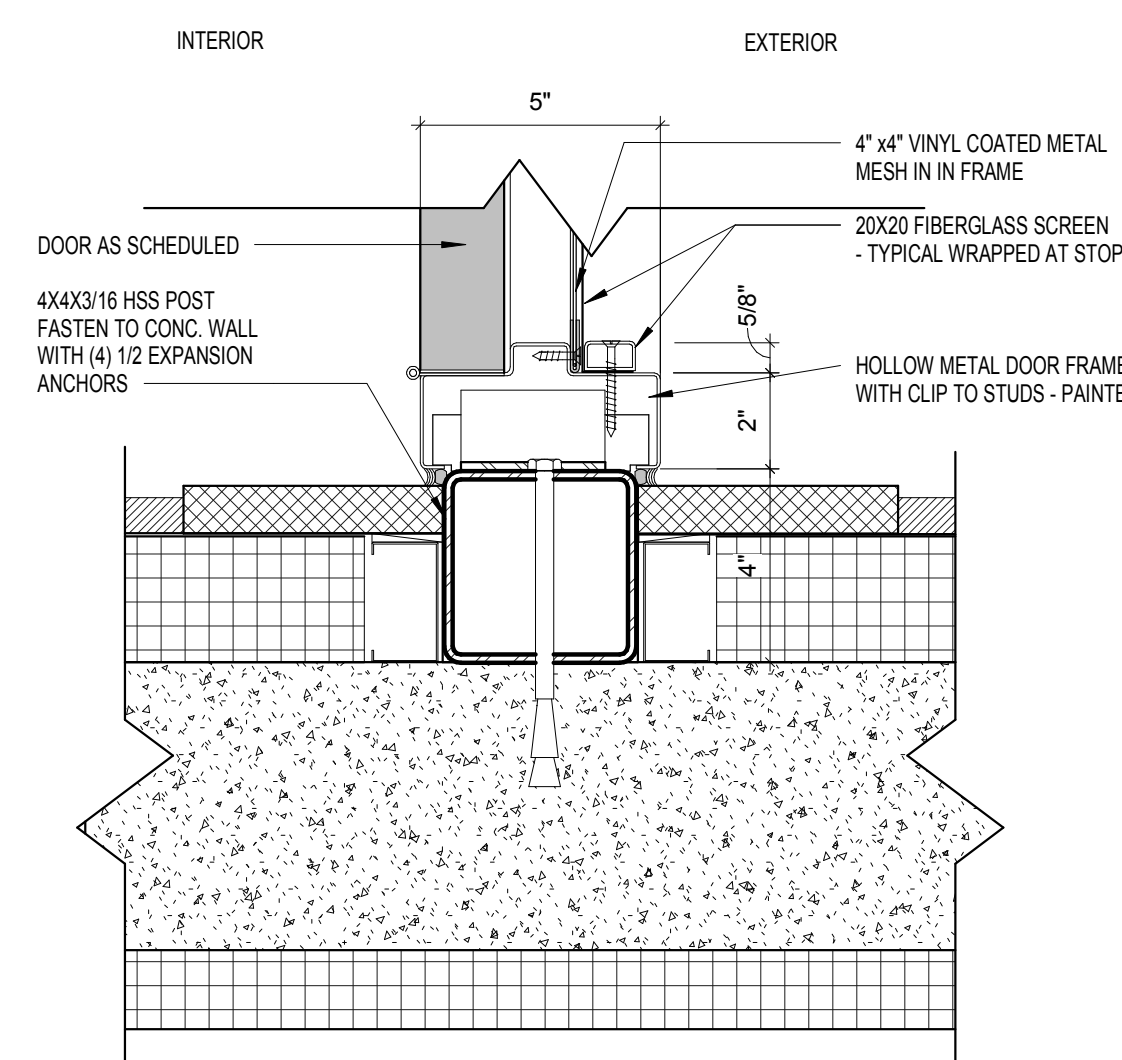
2 Detail - HM Door Frame - 5" Ganged JAMB
A7.5 3" = 1'-0"



7 Detail - HM Door Frame - 8-3/4" ICF JAMB
A7.5 3" = 1'-0"



4 Detail - Alum Threshold @ Lobby
A7.5 3" = 1'-0"



1 Detail - HM Door Frame - 5" ICF JAMB
A7.5 3" = 1'-0"



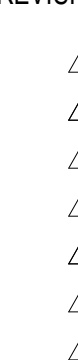
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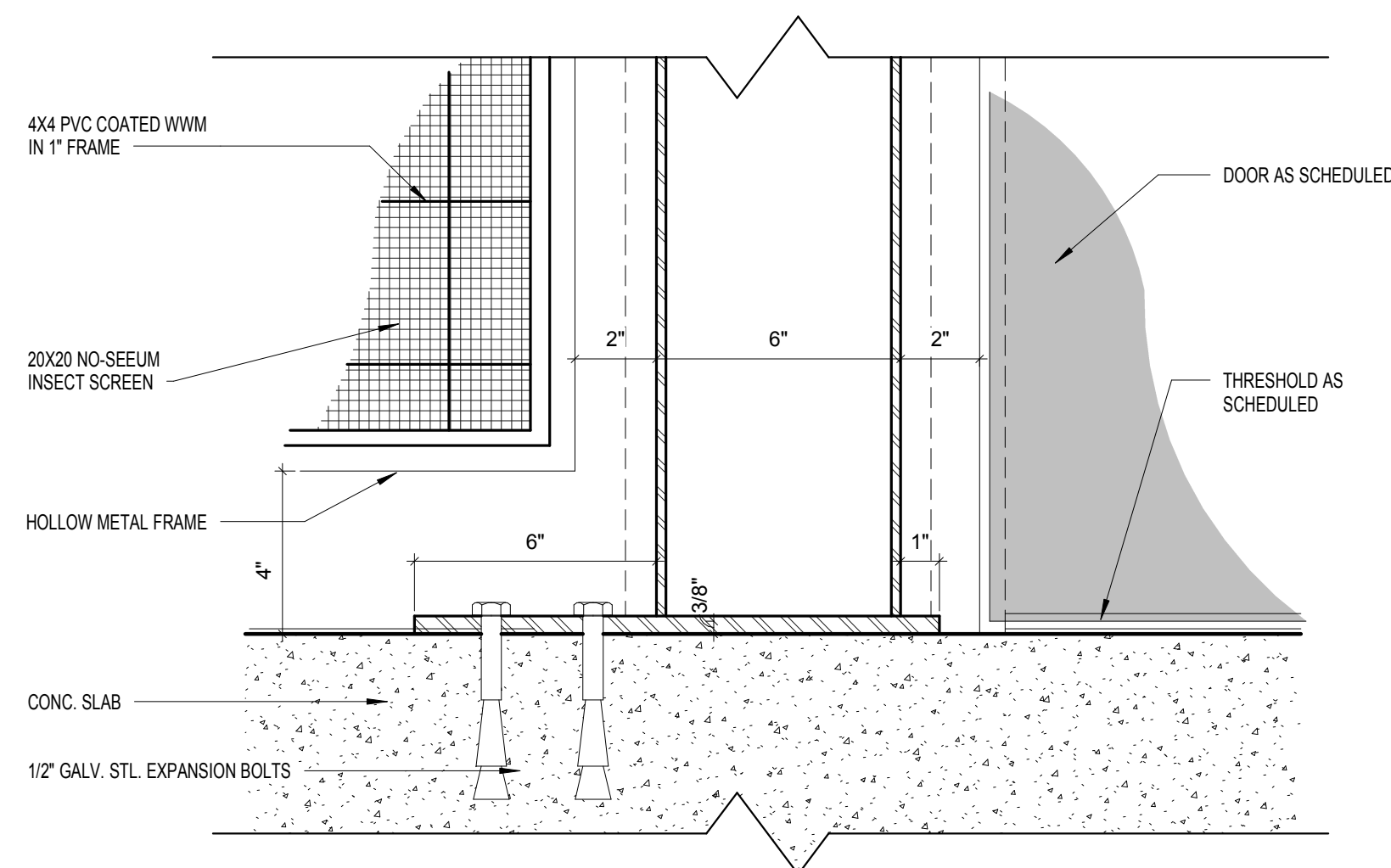
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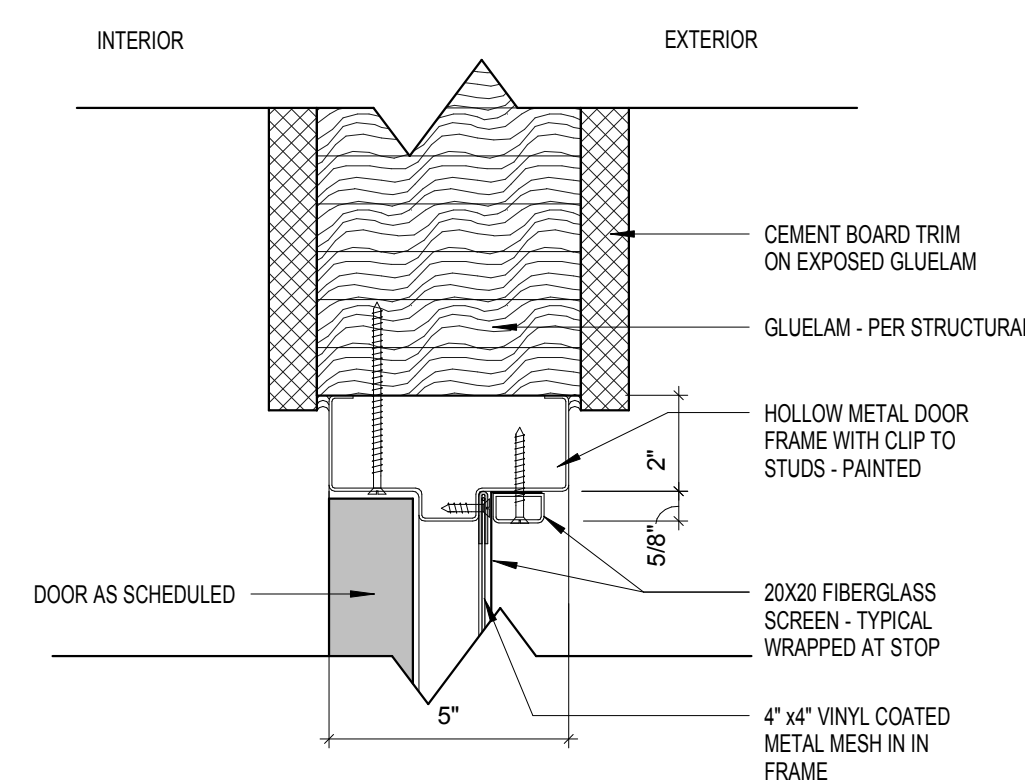


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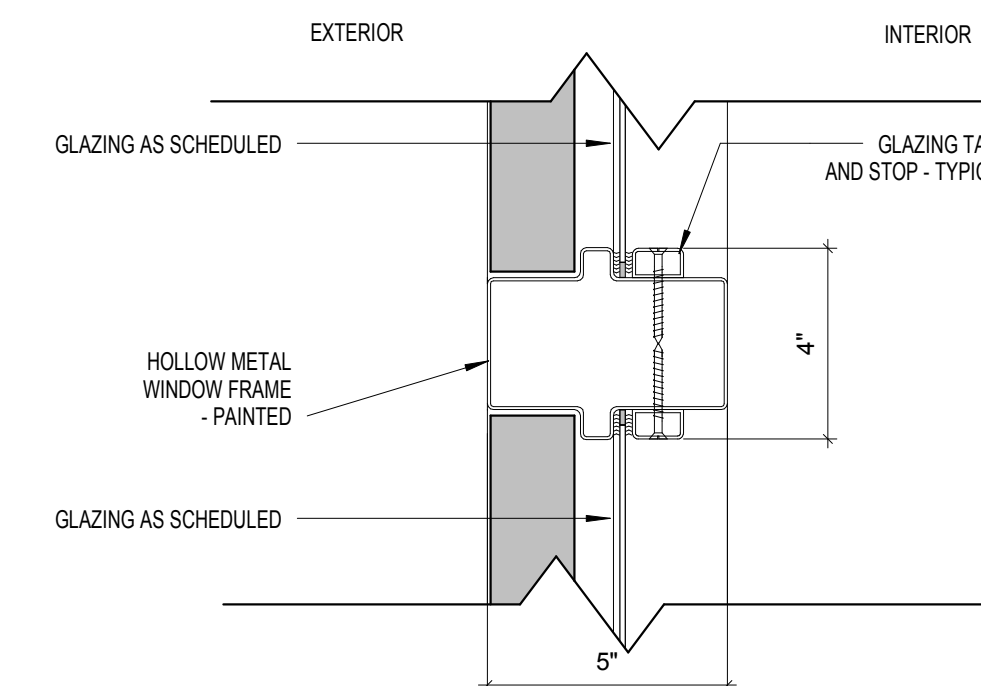
A7.5



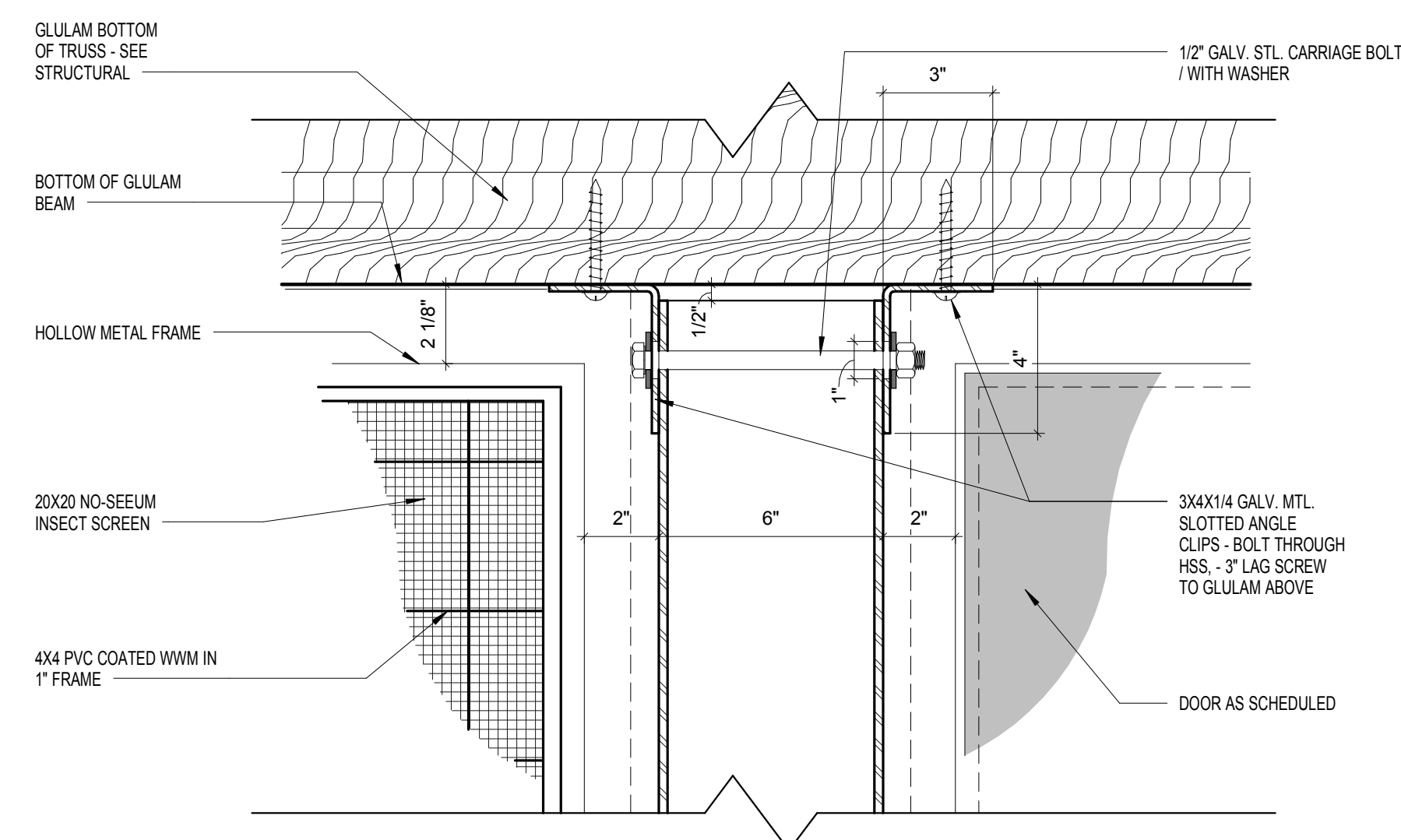
7 Detail - HM Frame - 5" Ganged BASE ELEV.
A7.6 3" = 1'-0"



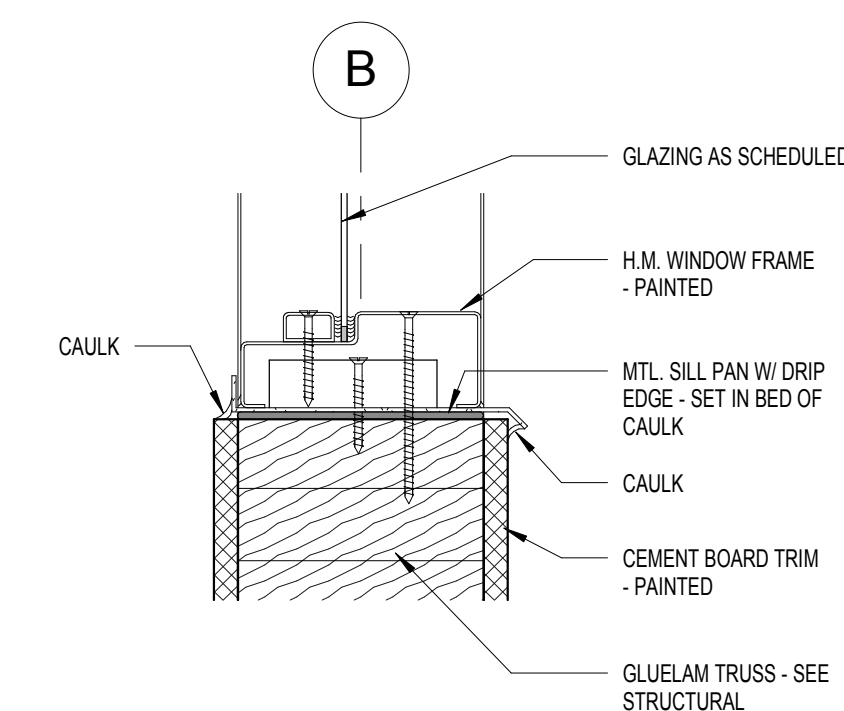
4 Detail - HM Door Frame w/ Screen - 5" HEAD
A7.6 3" = 1'-0"



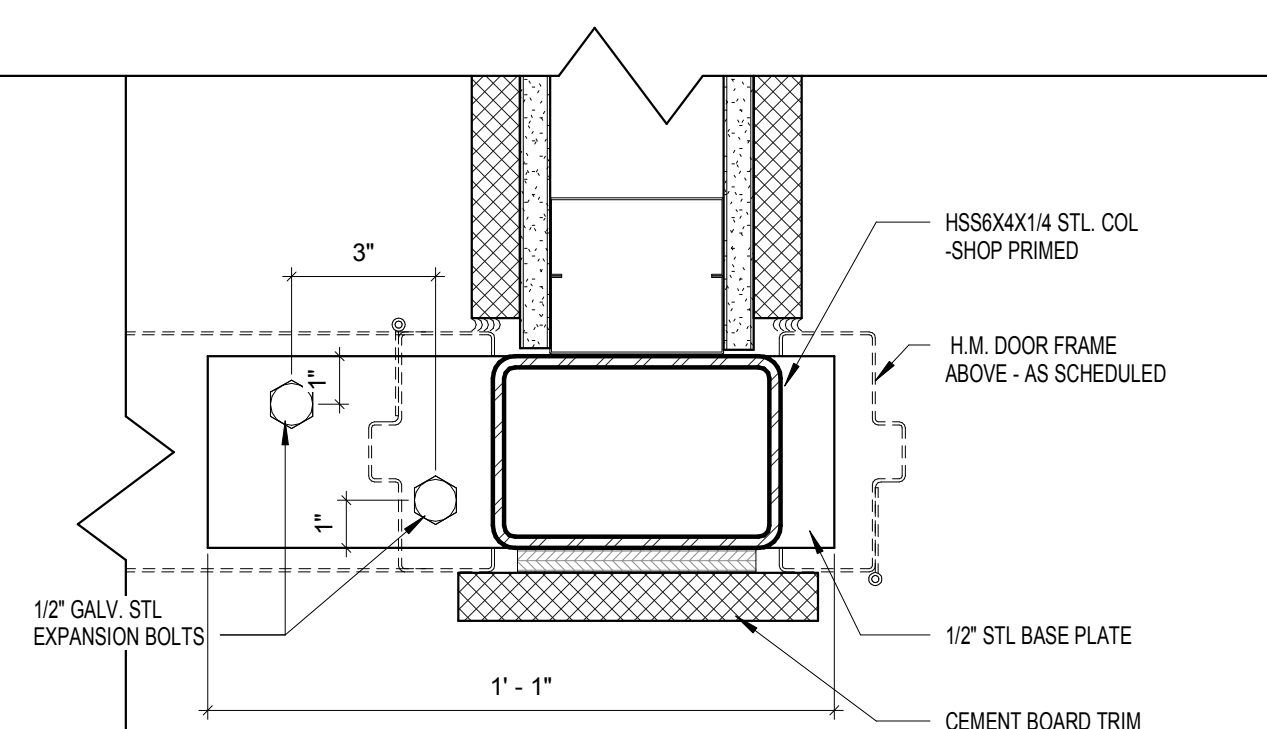
1 Detail - HM Door Frame - 5" Glazed Astragal
A7.6 3" = 1'-0"



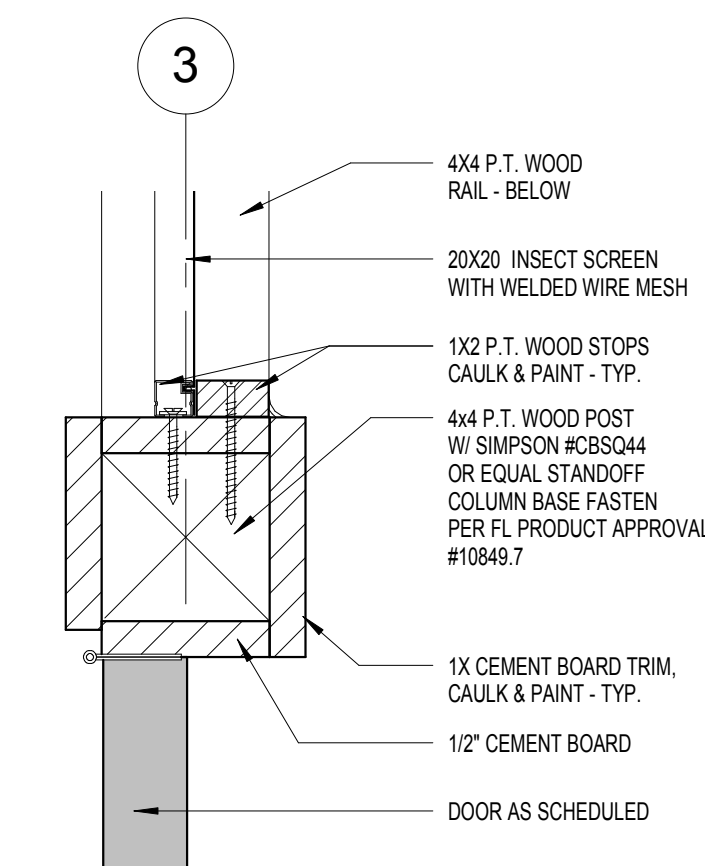
5 Detail - HSS Frame - JAMB to HEAD
A7.6 3" = 1'-0"



2 Detail - H.M. Window Glulam - SILL
A7.6 3" = 1'-0"



6 Detail - HM Frame - 5" Ganged BASE
A7.6 3" = 1'-0"



3 Detail - Screen Door at Porch - Jamb
A7.6 3" = 1'-0"



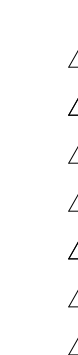
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ROOM FINISH SCHEDULE									
ROOM NO.	ROOM NAME	FLOOR	BASE	NORTH WALL	SOUTH WALL	EAST WALL	WEST WALL	CEILING	COMMENTS
								MATERIAL	
100a	COVERED ENTRY	CONC. BROOM FIN.	CEMENT BOARD	SCREEN	---	SCREEN	CEMENT BD. PAINTED	WOOD - STAINED & SEALED	
100b	PORCH	CONC. BROOM FIN.	CEMENT BOARD	---	SCREEN	---	---	WOOD - STAINED & SEALED	
100c	SCREEN PORCH	CONC. BROOM FIN.	CEMENT BOARD	CEMENT BD. PAINTED	SCREEN	SCREEN	SCREEN	CEMENT BD. PAINTED	
100d	PORCH	CONC. BROOM FIN.	CEMENT BOARD	---	---	---	CEMENT BD. PAINTED	CEMENT BD. PAINTED	
100E	PORCH	CONC. BROOM FIN.	CEMENT BOARD	CEMENT BD. PAINTED	CEMENT BD. PAINTED	CEMENT BD. PAINTED	---	CEMENT BD. PAINTED	
101	LOBBY	WOOD	CEMENT BOARD	SCREEN	SCREEN	CEMENT BD. PAINTED	CEMENT BD. PAINTED	WOOD - STAINED & SEALED	2X6 CYPRESS DECKING (STAINED) ON 2X2 P.T. SLEEPERS
102	VESTIBULE	CONC. STAIN FIN.	CEMENT BOARD	CEMENT BD. PAINTED	CEMENT BD. PAINTED	GLAZED	---	CEMENT BD. PAINTED	
103	CORR	CONC. STAIN FIN.	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GLAZED	A.C.T.	
104	WOMEN	CONC. STAIN FIN.	TILE	GYP./TILE	GYP./TILE	GYP./TILE	GYP./TILE	GYP. PAINTED	
105	MEN	CONC. STAIN FIN.	TILE	GYP./TILE	GYP./TILE	GYP./TILE	GYP./TILE	GYP. PAINTED	
106	CUSTODIAL	CONC. STAIN FIN.	TILE	GYP. PAINTED	GYP./TILE	GYP./TILE	GYP. PAINTED	GYP. PAINTED	
107	CHAIR STORAGE	CONC. STAIN FIN.	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
108A	MULTI USE CLASSROOM	CONC. STAIN FIN.	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
108B	MULTI USE CLASSROOM	CONC. STAIN FIN.	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
109	STAIR	CONC. STAIN FIN.	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	---	
110	WOMEN	CONC. STAIN FIN.	TILE	GYP./TILE	GYP./TILE	GYP./TILE	GYP./TILE	GYP. PAINTED	
111	MEN	CONC. STAIN FIN.	TILE	GYP./TILE	GYP./TILE	GYP./TILE	GYP./TILE	GYP. PAINTED	
112	MEN	CONC. STAIN FIN.	TILE	CEMENT BD. PAINTED	CEMENT BD. PAINTED	CEMENT BD. PAINTED	CEMENT BD. PAINTED	CEMENT BD. PAINTED	
113	WOMEN	CONC. STAIN FIN.	TILE	CEMENT BD. PAINTED	CEMENT BD. PAINTED	CEMENT BD. PAINTED	CEMENT BD. PAINTED	CEMENT BD. PAINTED	
114	LAB PREP	CONC. STAIN FIN.	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
115	SCIENCE LAB	CONC. STAIN FIN.	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
116	CONFERENCE	CONC. STAIN FIN.	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
117	FILES /WORK RM	V.C.T.	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
118	MECH	CONC. SEALED	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
119	OFFICE	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
120	OFFICE	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
121	LOBBY	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
122	OFFICE	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
123	RECEPTION	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
124	FILE	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
125	SUPPLIES	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
126	DIRECTORS OFFICE	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
127	OFFICE	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
128	CORR	CARPET	RUBBER	GYP. PAINTED	CEMENT BD. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
129	CORR	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
130	OFFICE	CARPET	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	A.C.T.	
131	STORAGE	CONC. SEALED	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	
132	UTILITY	CONC. SEALED	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	
201	ELECT.	CONC. SEALED	RUBBER	GYP. PAINTED	GYP./TILE	GYP. PAINTED	GYP. PAINTED	---	
202	COM.	CONC. SEALED	RUBBER	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	GYP. PAINTED	---	

- NOTES:
- SEE SPECIFICATION FOR BASIS OF DESIGN PRODUCTS. ALL FINISH SUBSTITUTIONS MUST BE OF LIKE MATERIAL AND QUALITY, AND BE APPROVED BY ARCHITECT AND/OR INTERIOR DESIGNER.
 - WHERE NO COLOR IS SPECIFIED, BIDDER IS TO MAKE AVAILABLE ALL COLORS WITHIN THE MANUFACTURER'S LINE OF LIKE GRADE.
 - IN ALL ROOM AREAS SCHEDULED FOR PAINT, ASSUME ONE ACCENT WALL PER SPACE OR ROOM. TO BE DETERMINED BY ARCHITECT/INTERIOR DESIGNER.
 - ALL JOINTS BETWEEN SIMILAR AND DISSIMILAR SURFACES SCHEDULED FOR PAINT, SHALL CAULKED WITH PAINTABLE CAULK.
 - CONTRACTOR TO SUPPLY ALL NECESSARY TRIMS, SHIMS, AND TRANSITIONS, MATCHING SCHEDULED WORK, REGARDLESS IF SPECIFICALLY IDENTIFIED IN THESE DRAWINGS.
 - CONTRACTOR IS TO PROTECT ALL CONCRETE FLOORS SCHEDULED FOR STAINING THROUGHOUT THE CONSTRUCTION PERIOD, PROVIDING UNIFORM AND CONSISTENT SHADING THROUGHOUT FACILITY. FLOORS DAMAGED BY CONSTRUCTION ACTIVITIES MUST BE MITIGATED AT THE EXPENSE OF THE CONTRACTOR.



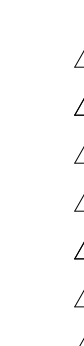
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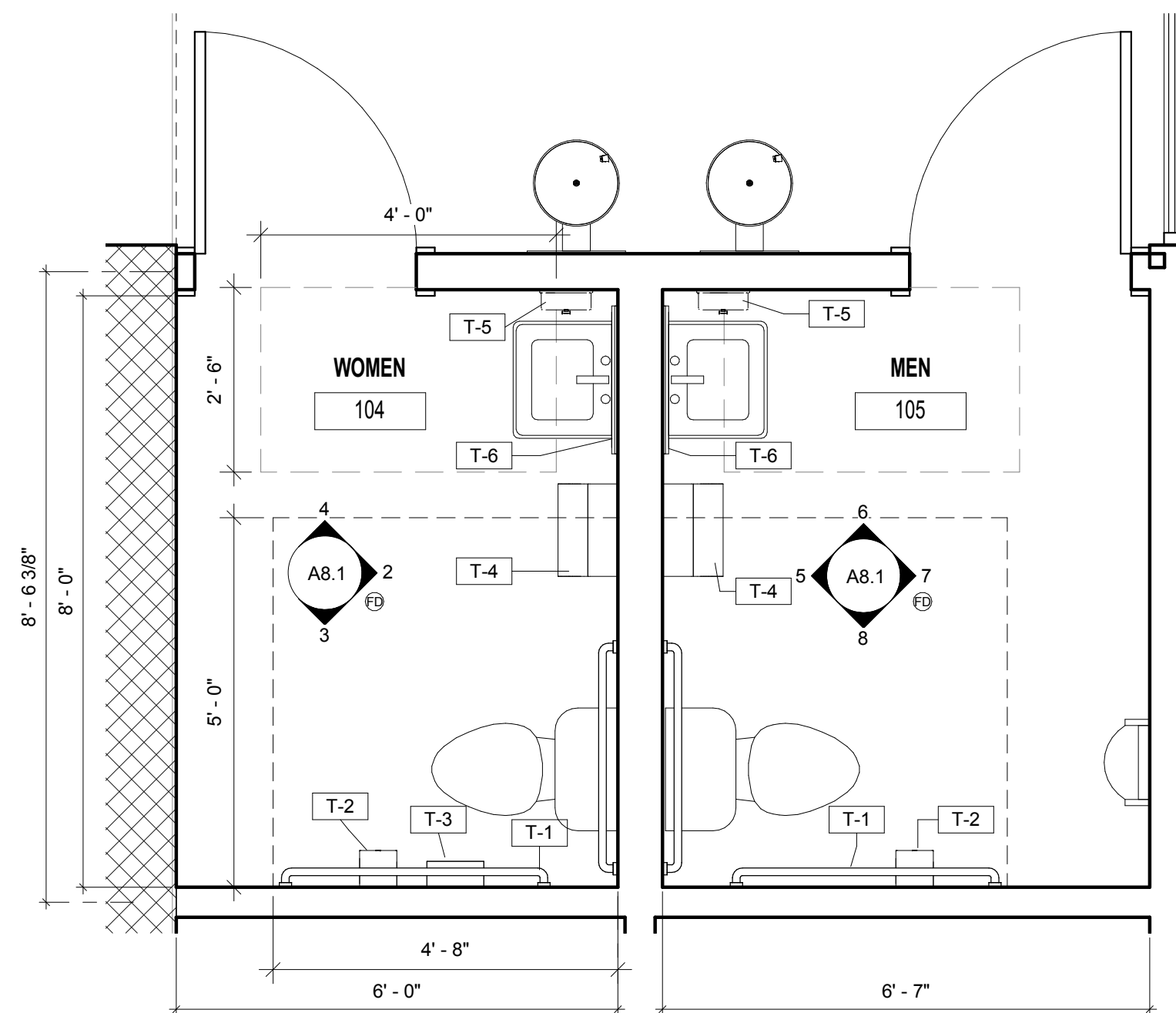
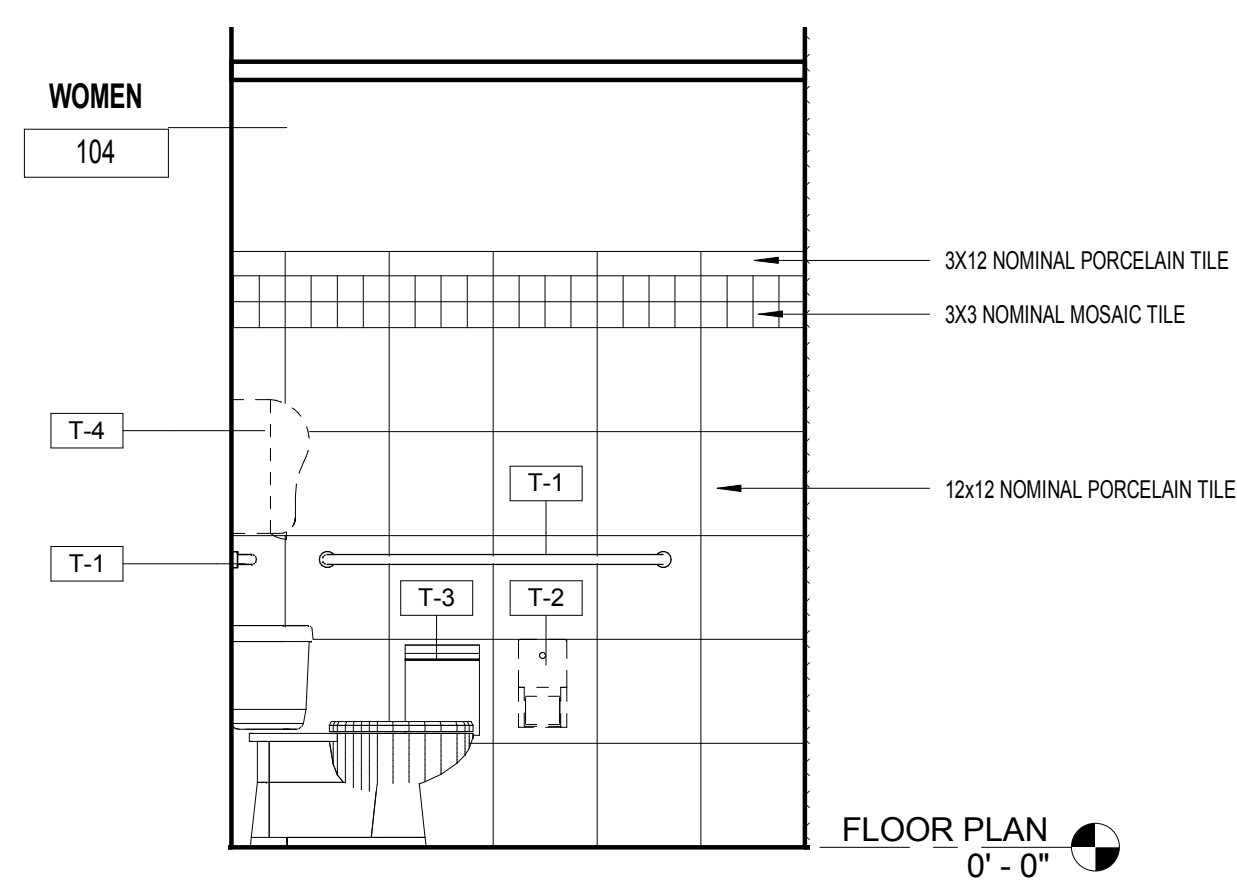
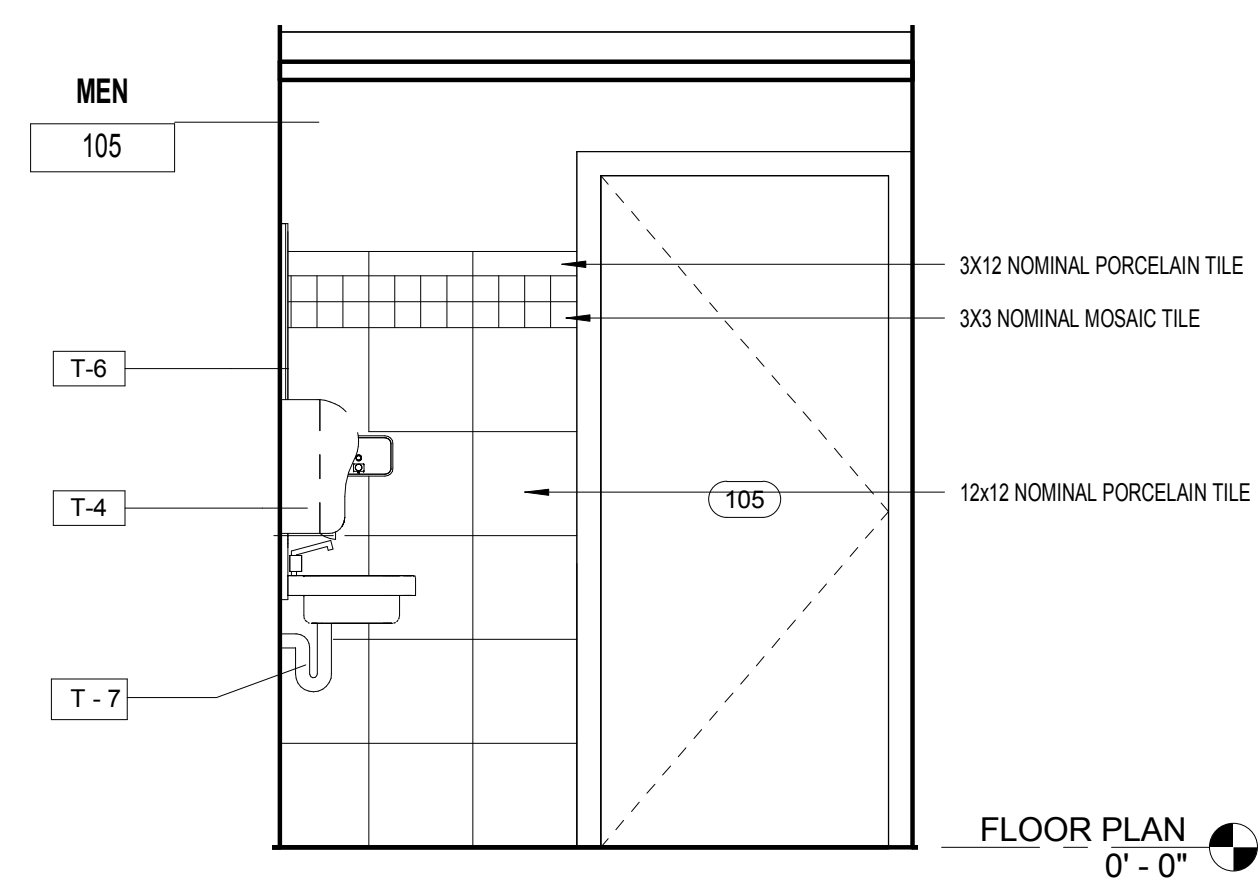
CONSTRUCTION DOCUMENTS
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ROOM FINISH
SCHEDULE

A7.7



6 Toilet Rm. 105 - Elevation B

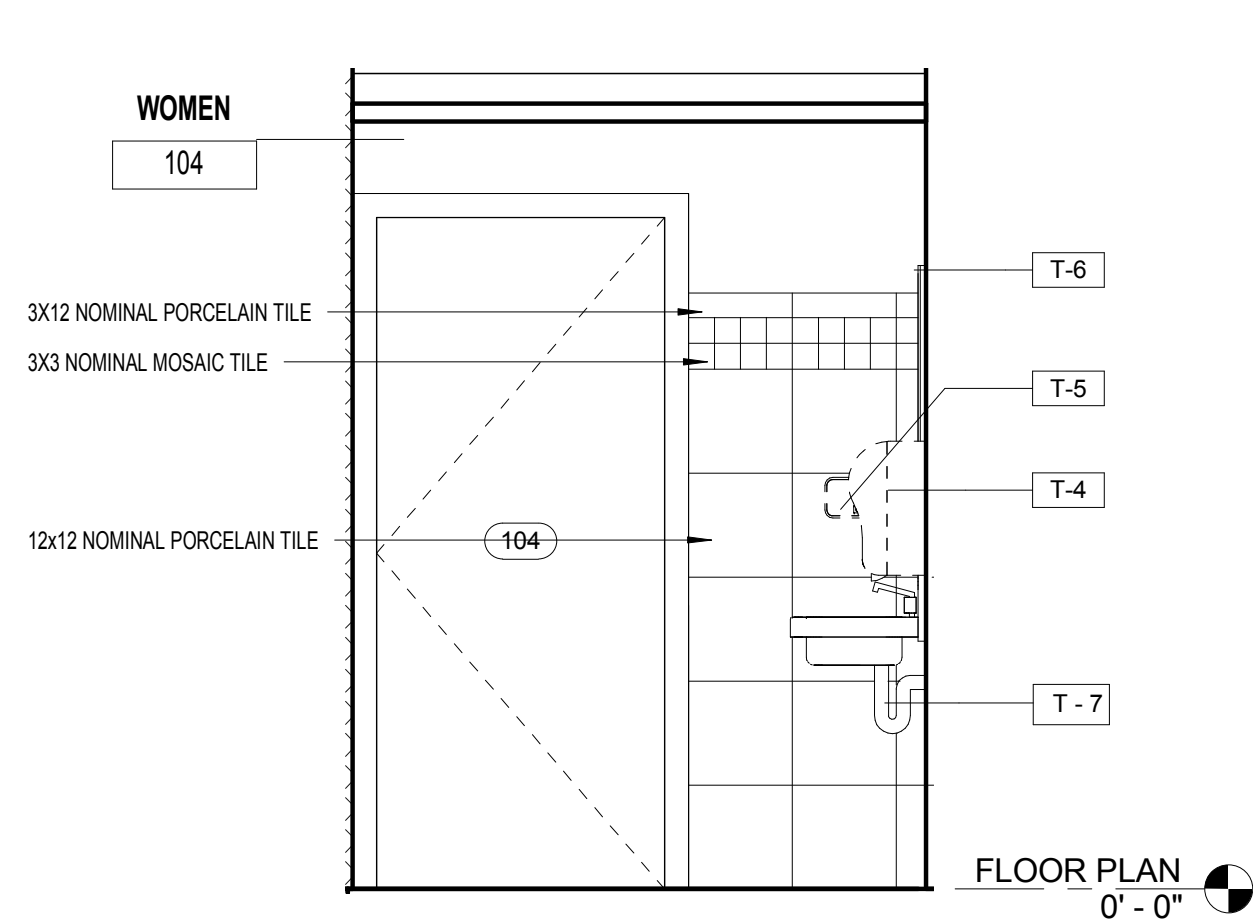
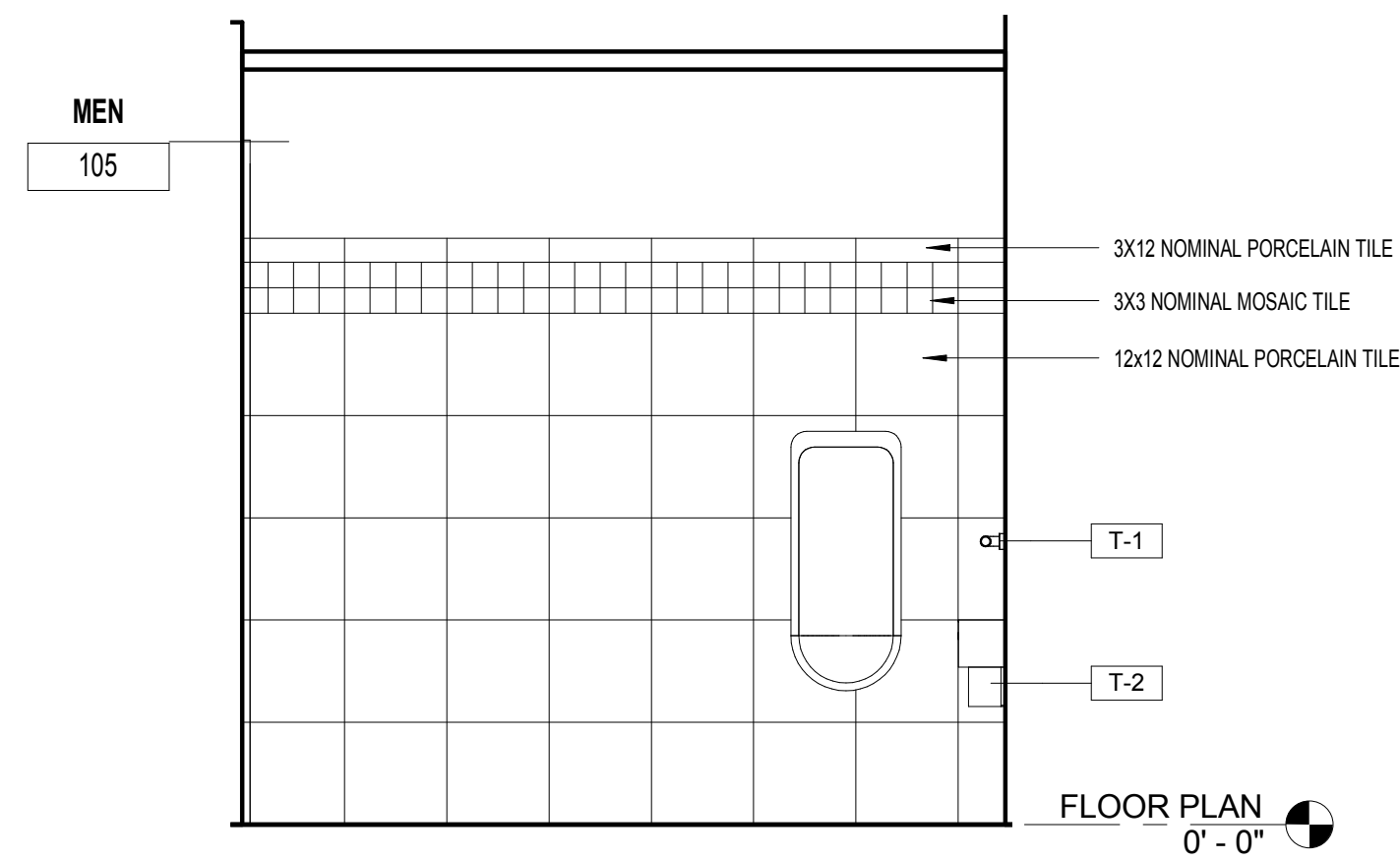
A8.1 1/2" = 1'-0"

3 Toilet Rm. 104 - Elevation B

A8.1 1/2" = 1'-0"

1 Plan Detail - Toilet Rm. 104 & 105

A8.1 1/2" = 1'-0"



- 1 ADA GRAB BAR (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 2 TOILET PAPER DISPENSER (N.I.C.)
- 3 SANITARY NAPKIN DISPOSAL (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 4 PAPER TOWEL DISPENSER (N.I.C.)
- 5 SOAP DISPENSER (N.I.C.)
- 6 MIRROR (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 7 UNDER SINK PLUMBING PROTECTION (SEE SPECIFICATIONS FOR BASIS OF DESIGN)

7 Toilet Rm. 105 - Elevation C

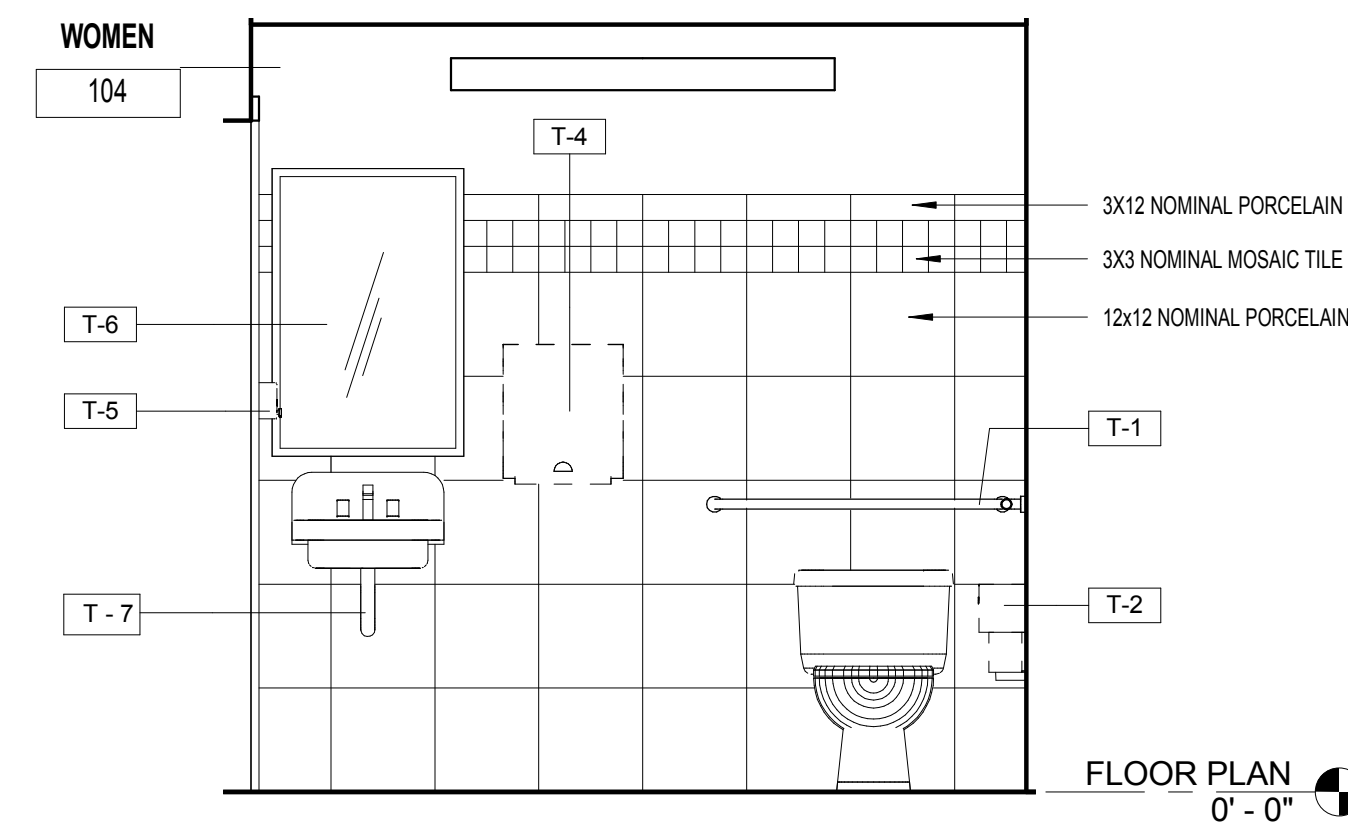
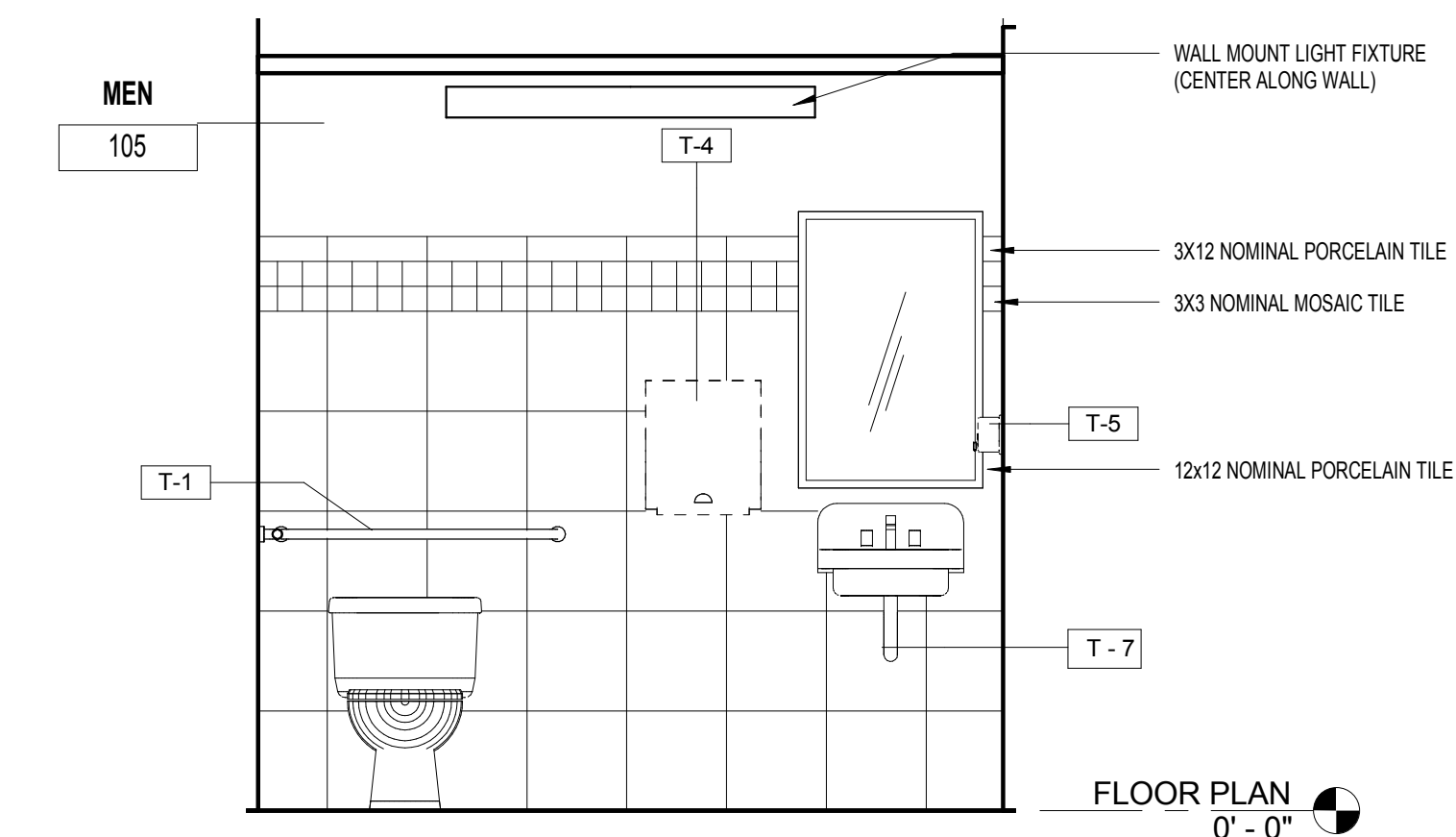
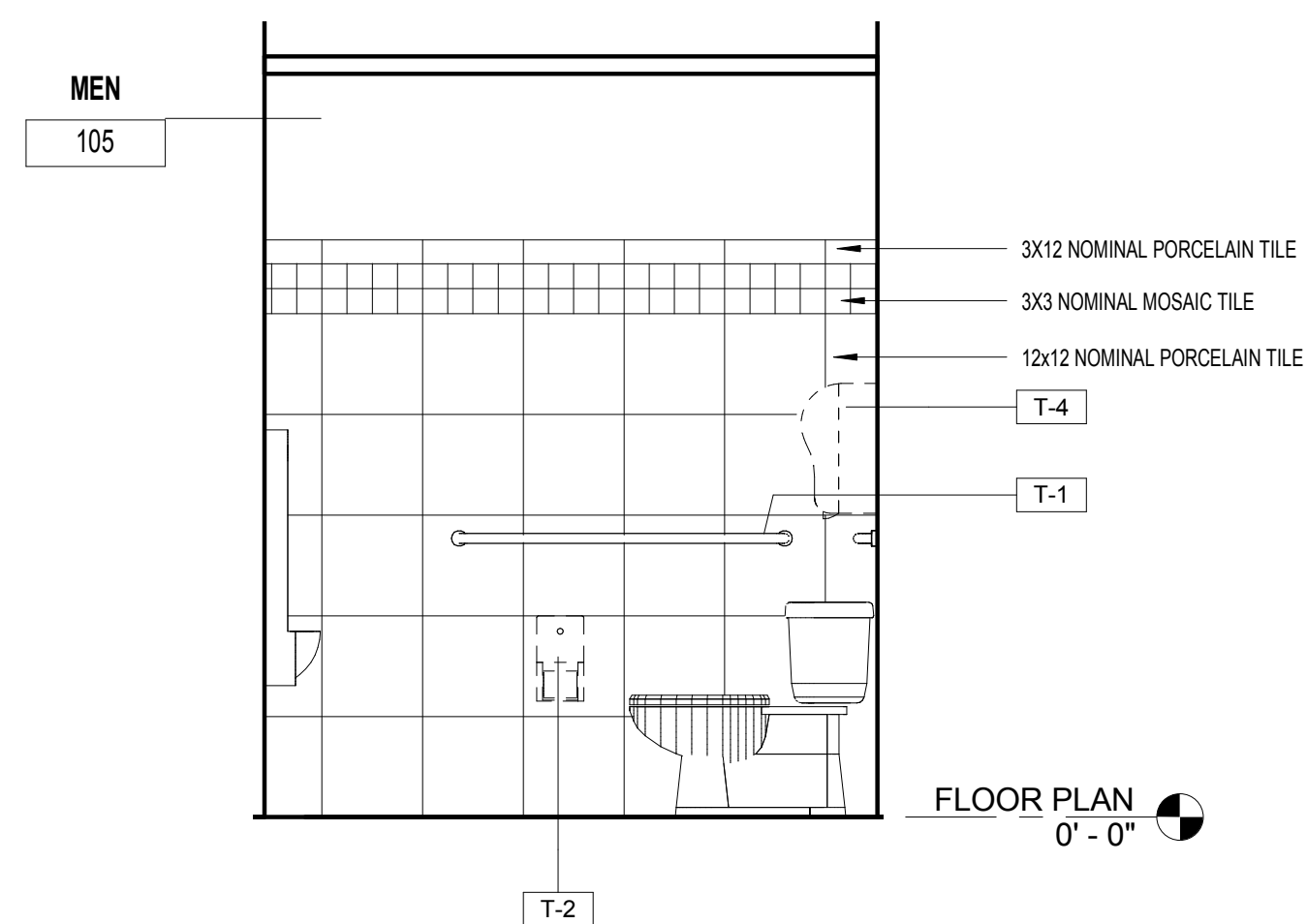
A8.1 1/2" = 1'-0"

4 Toilet Rm. 104 - Elevation C

A8.1 1/2" = 1'-0"

TOILET ACCESSORY LEGEND

1/8" = 1'-0"



8 Toilet Rm. 105 - Elevation D

A8.1 1/2" = 1'-0"

5 Toilet Rm. 105 - Elevation A

A8.1 1/2" = 1'-0"

2 Toilet Rm. 104 - Elevation A

A8.1 1/2" = 1'-0"



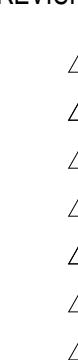
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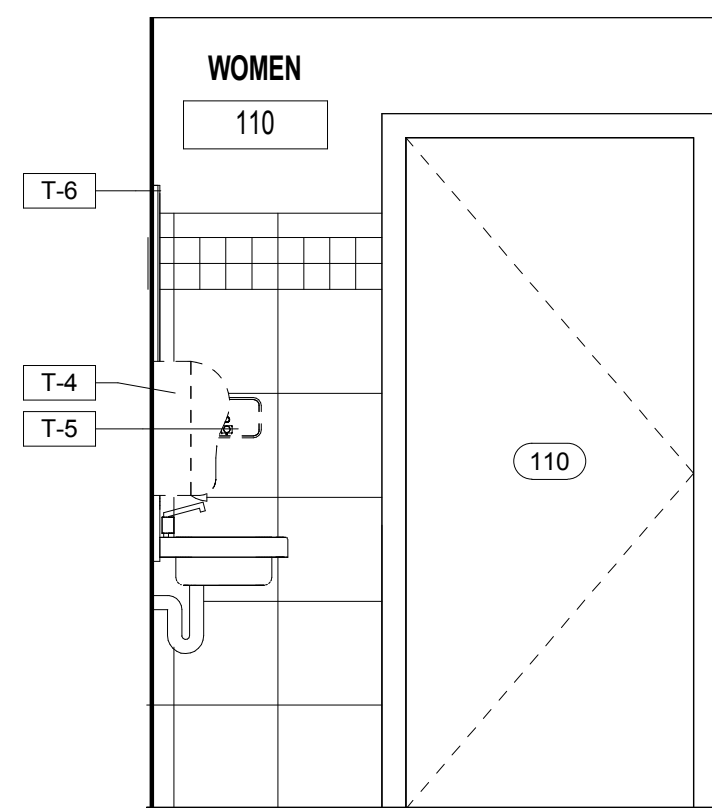
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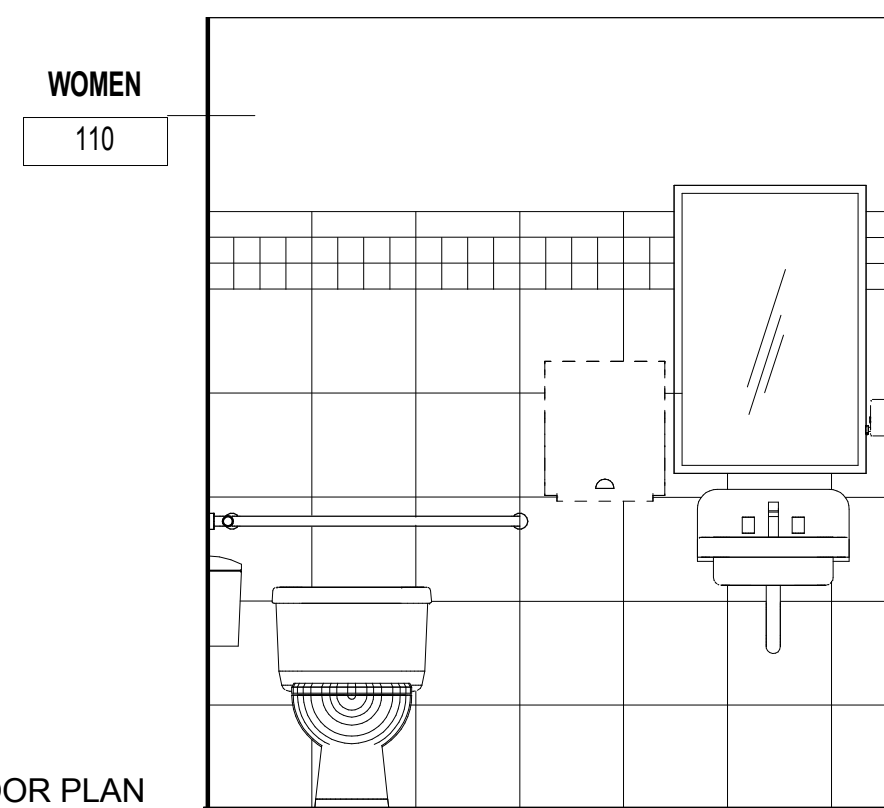


TOILET RM. PLANS,
ELEVATIONS &
ACCESSORIES

A8.1



FLOOR PLAN
0' - 0"



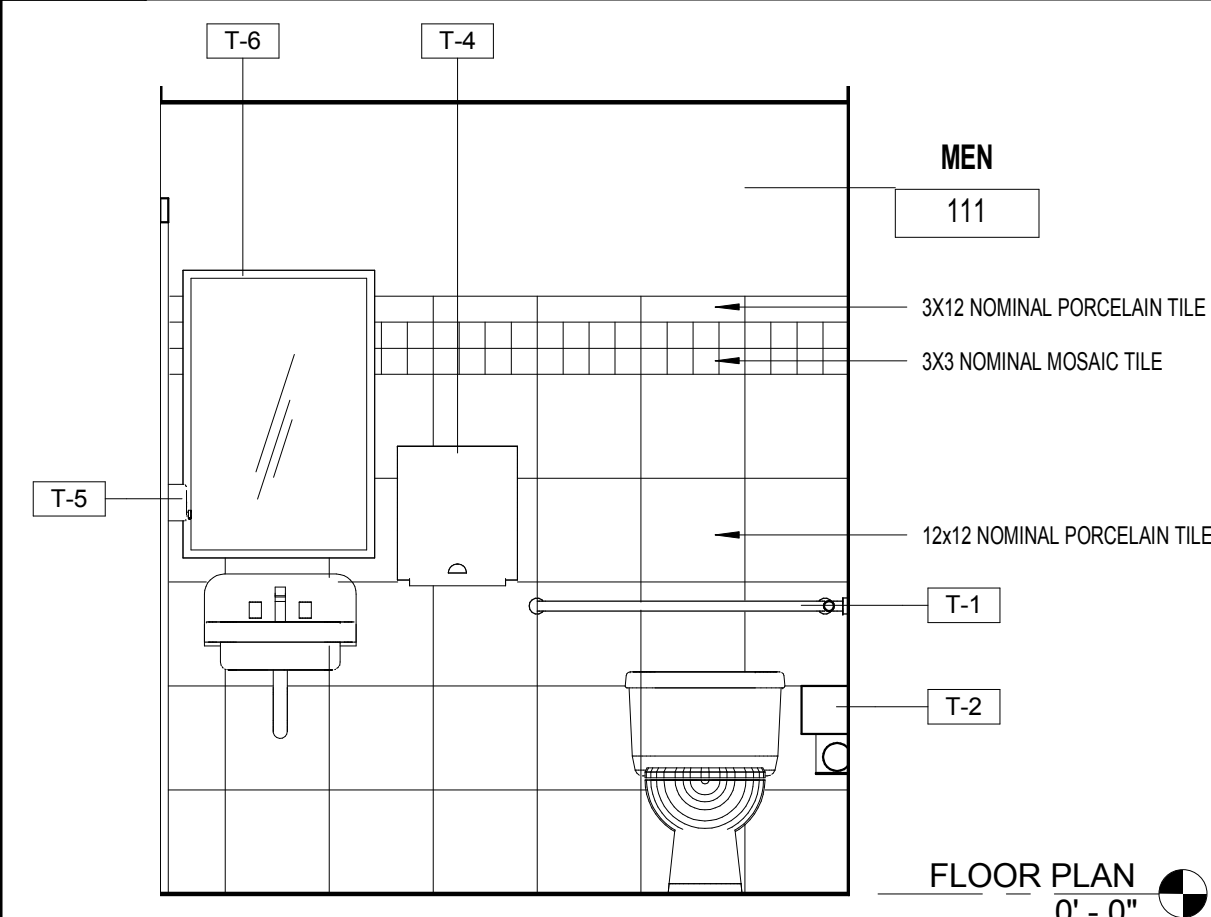
FLOOR PLAN
0' - 0"

4 Toilet Rm. 110 - Elevation C

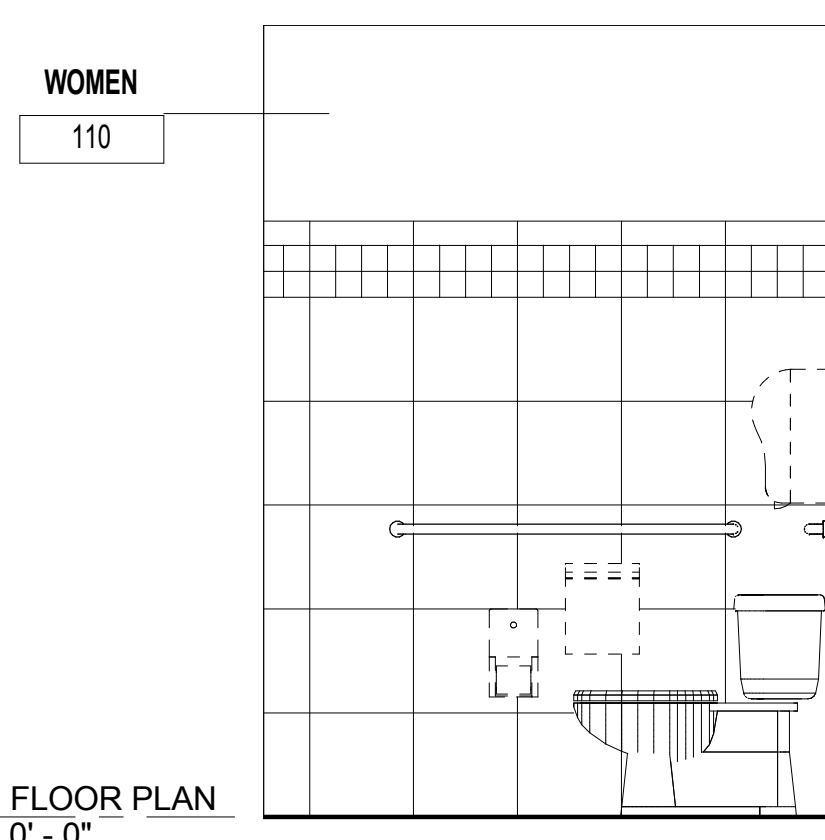
A8.2 1/2" = 1'-0"

2 Toilet Rm. 110 - Elevation A

A8.2 1/2" = 1'-0"



FLOOR PLAN
0' - 0"



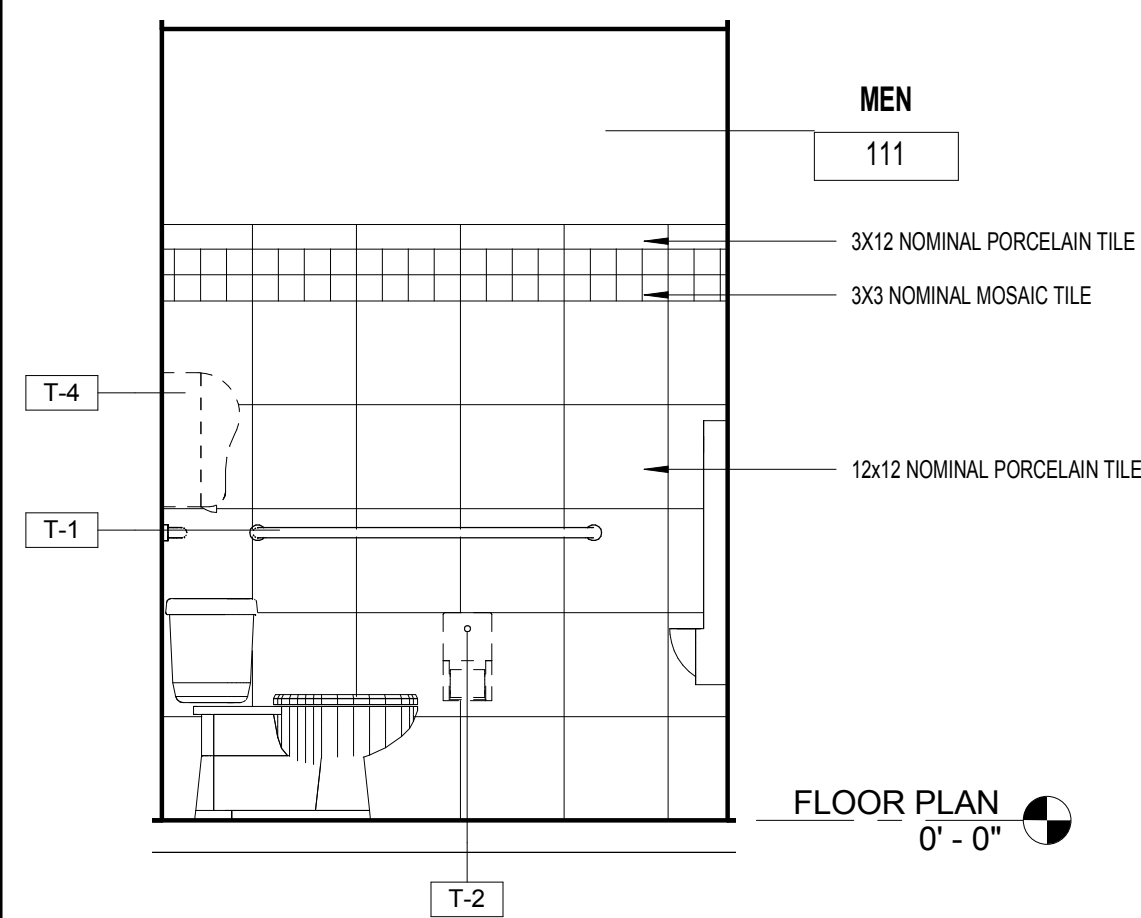
FLOOR PLAN
0' - 0"

5 Toilet Rm. 111 - Elevation A

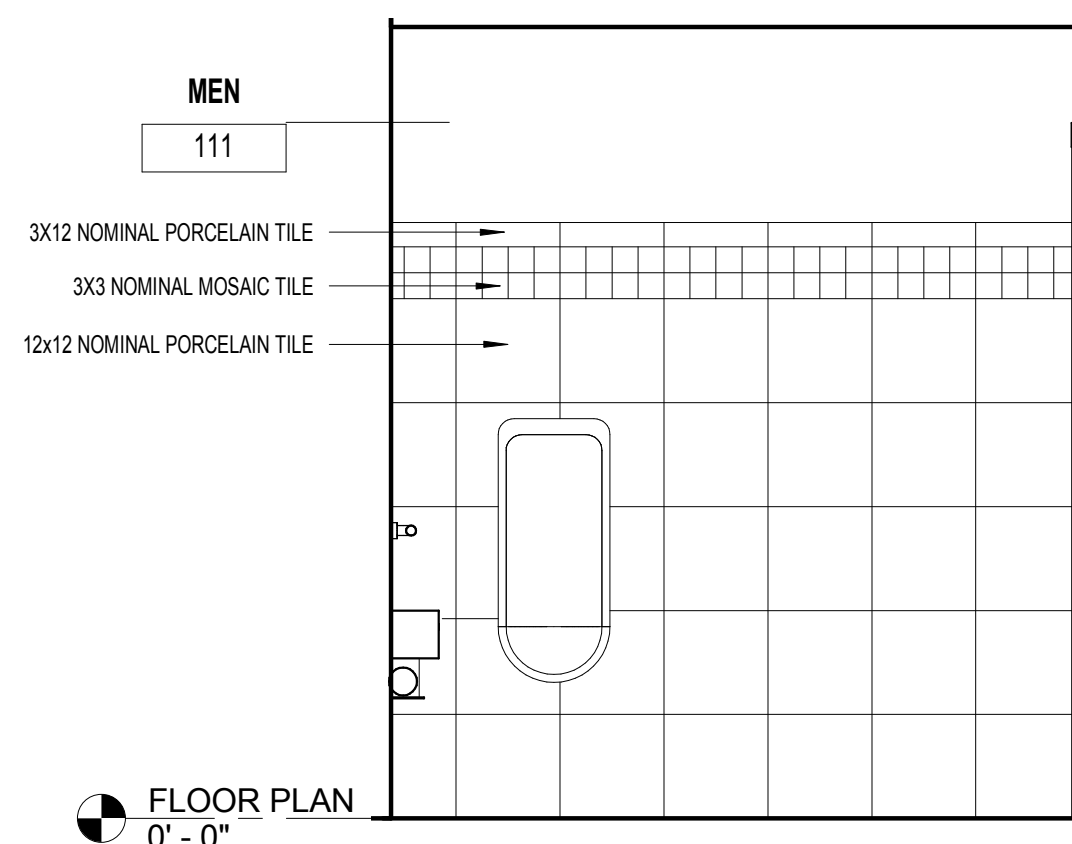
A8.2 1/2" = 1'-0"

3 Toilet Rm. 110 - Elevation B

A8.2 1/2" = 1'-0"



FLOOR PLAN
0' - 0"



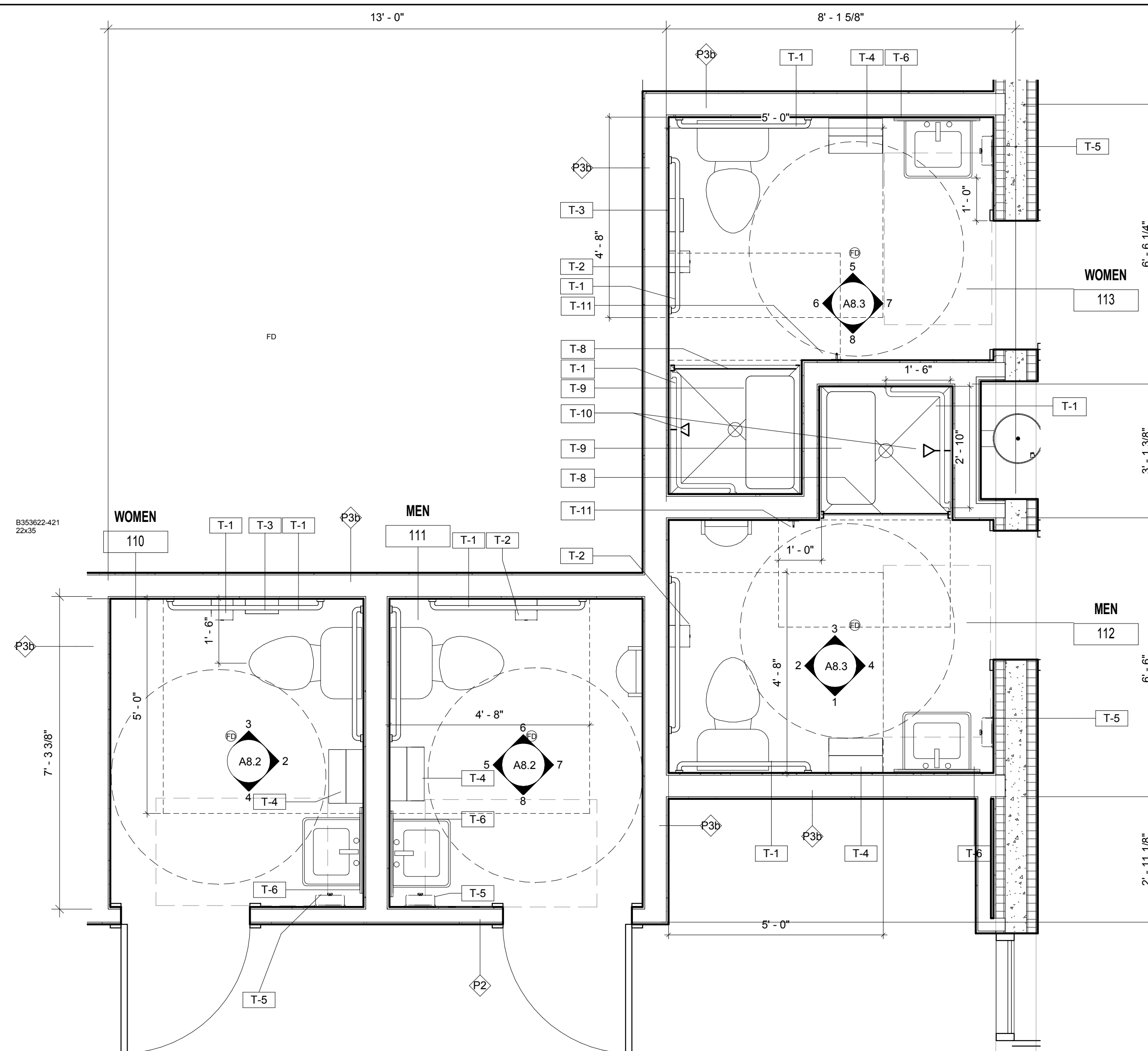
FLOOR PLAN
0' - 0"

6 Toilet Rm. 111 - Elevation B

A8.2 1/2" = 1'-0"

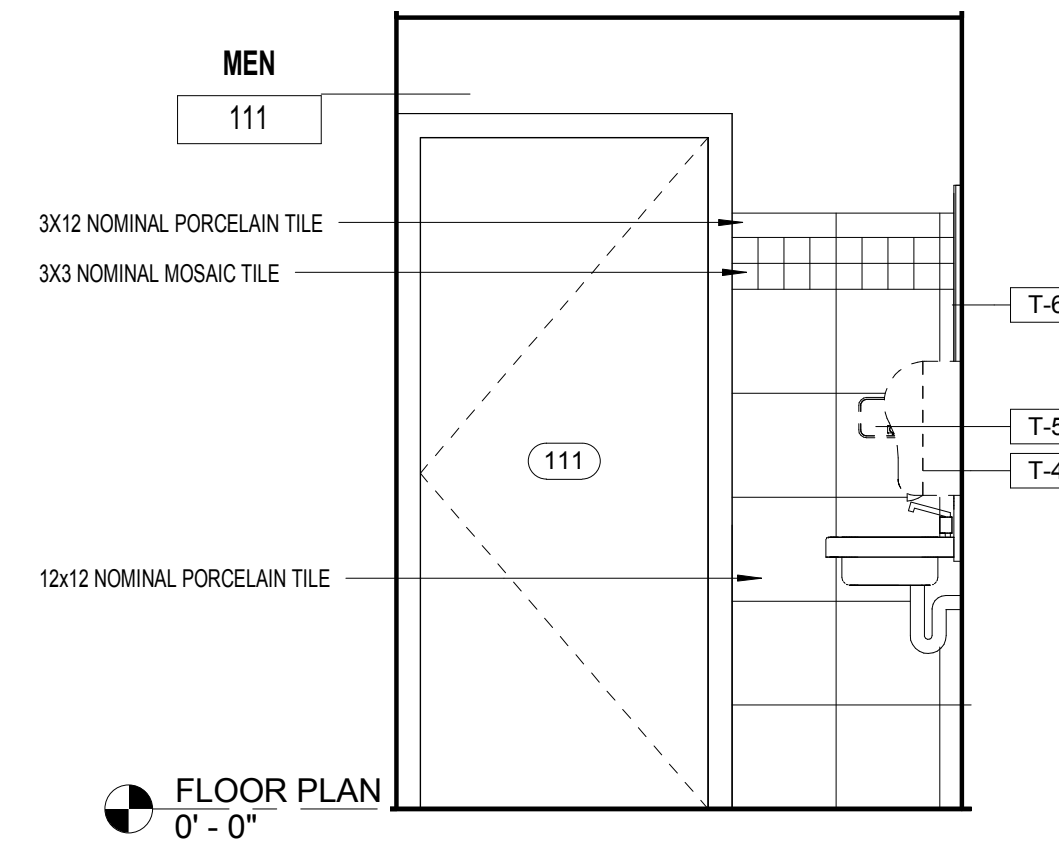
7 Toilet Rm. 111 - Elevation C

A8.2 1/2" = 1'-0"



1 Plan Detail - Toilet Rm. 110, 111, 112 & 113

A8.2 1/2" = 1'-0"



FLOOR PLAN
0' - 0"

8 Toilet Rm. 111 - Elevation D

A8.2 1/2" = 1'-0"

- 1 ADA GRAB BAR (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 2 TOILET PAPER DISPENSER (N.I.C.)
- 3 SANITARY NAPKIN DISPOSAL (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 4 PAPER TOWEL DISPENSER (N.I.C.)
- 5 SOAP DISPENSER (N.I.C.)
- 6 MIRROR (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 7 UNDER SINK PLUMBING PROTECTION (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 8 SHOWER CURTAIN AND ROD (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 9 ADA SHOWER SEAT (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 10 ADA SHOWER SET (SEE PLUMBING SPECIFICATIONS FOR BASIS OF DESIGN)
- 11 TOWEL HOOK (SEE SPECIFICATIONS FOR BASIS OF DESIGN)

ACCESSORY LEGEND

1/8" = 1'-0"



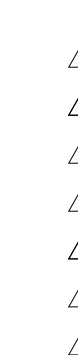
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TOILET RM. PLANS,
ELEVATIONS &
ACCESSORIES

A8.2



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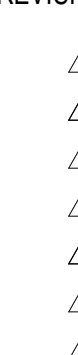
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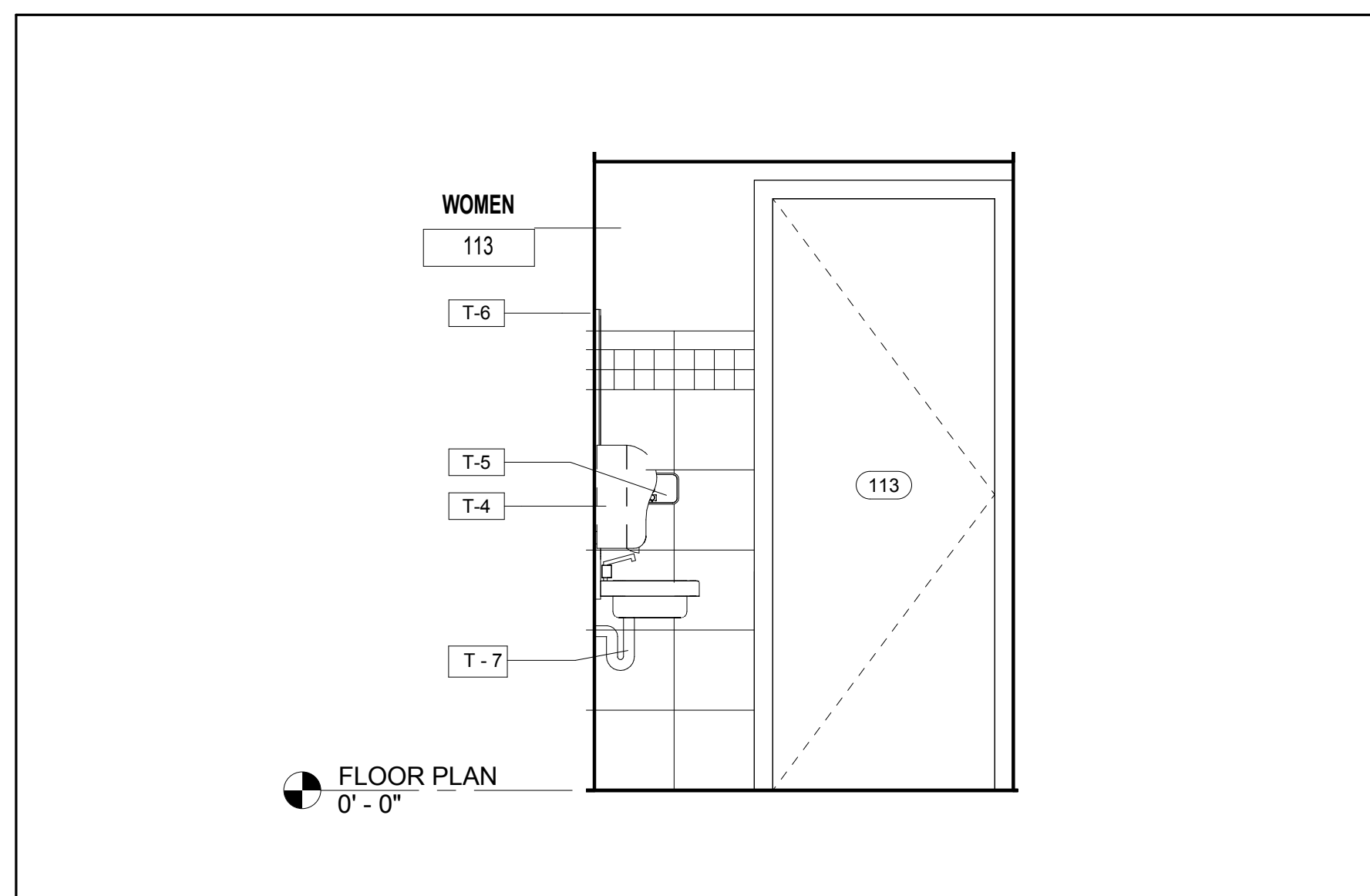
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PROJECT PHASE

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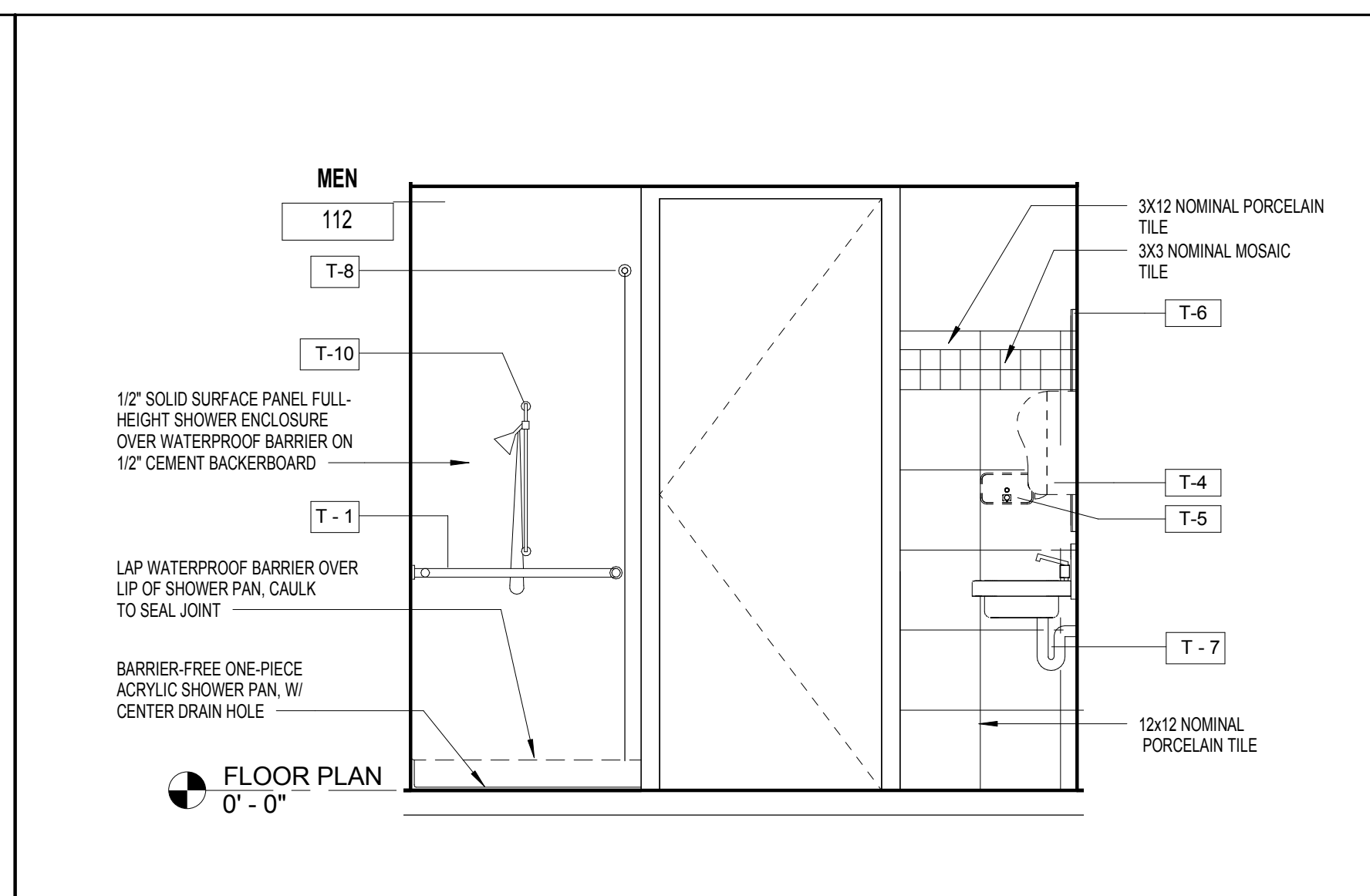


TOILET RM. PLANS,
ELEVATIONS

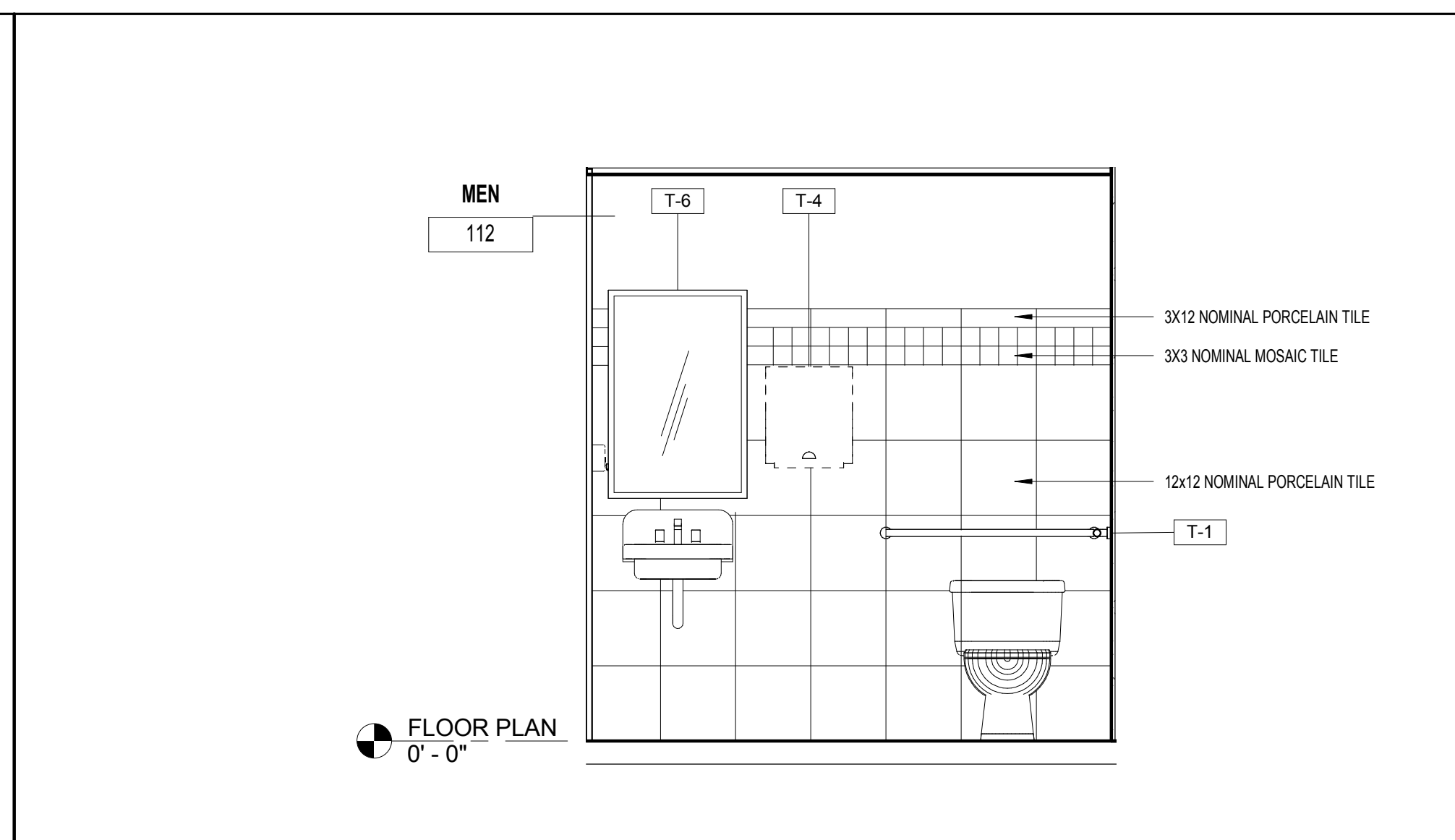
A8.3



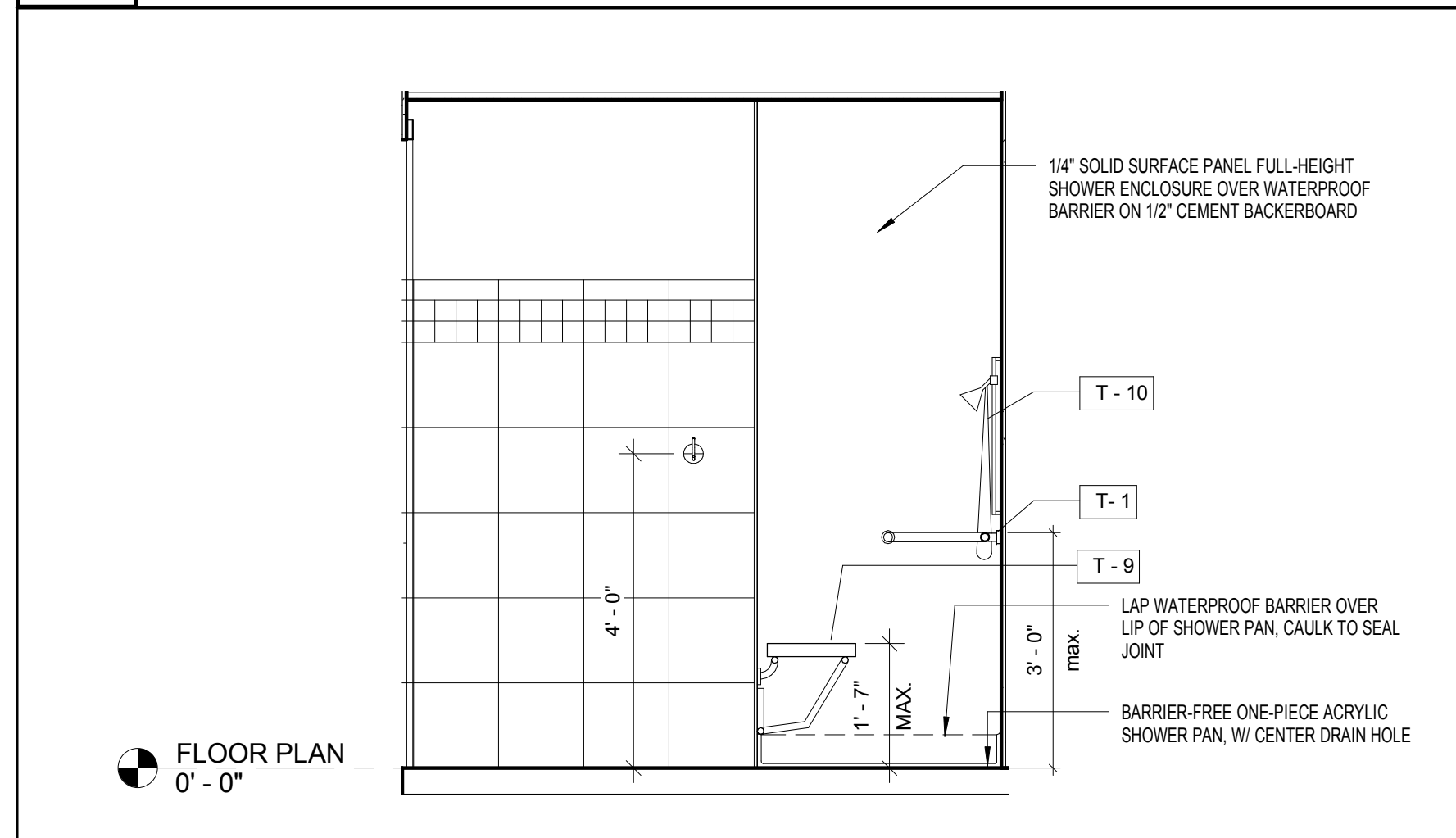
7 Toilet Rm. 113 - Elevation C
A8.3 1/2" = 1'-0"



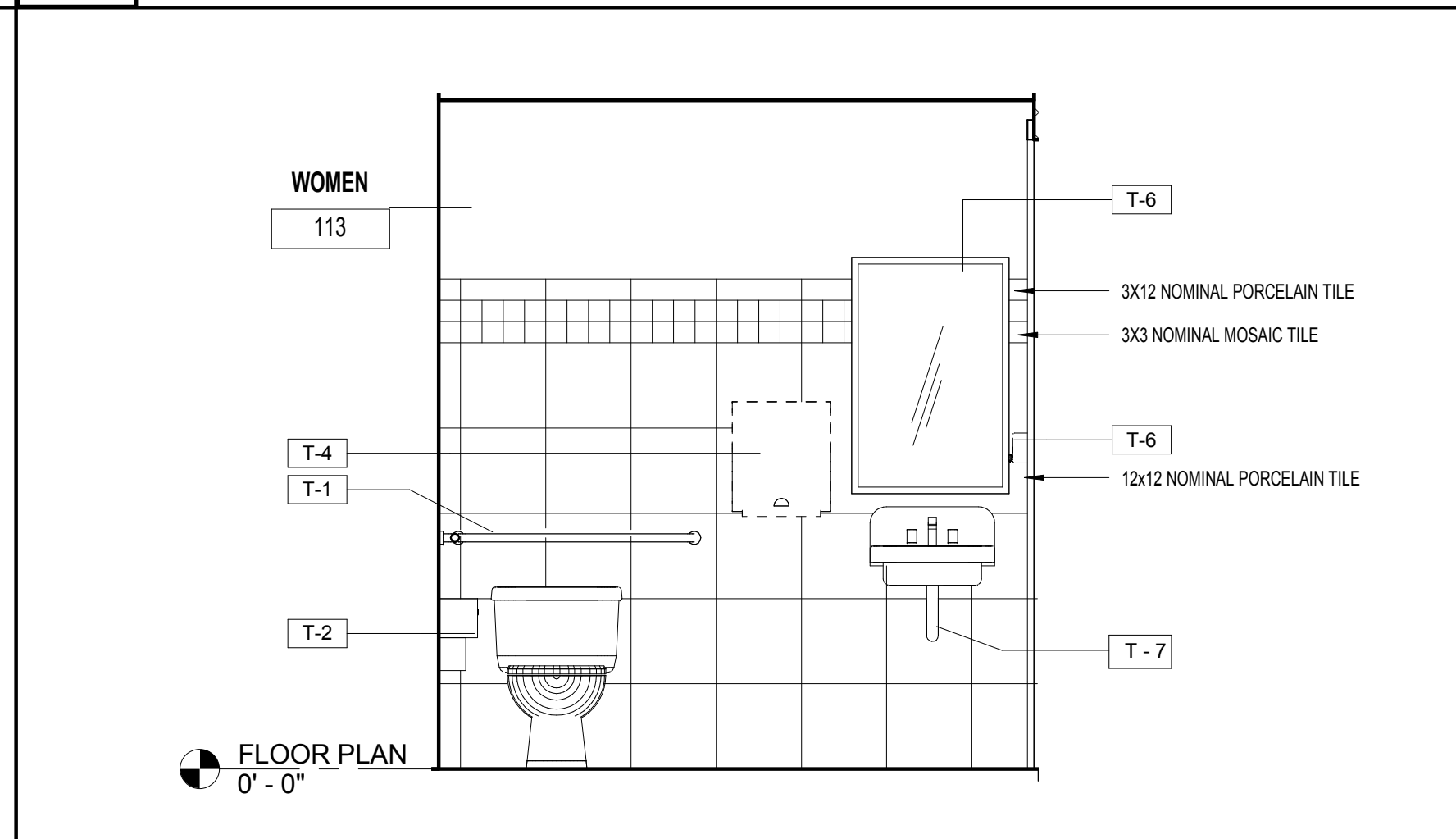
4 Toilet Rm. 112 - Elevation D
A8.3 1/2" = 1'-0"



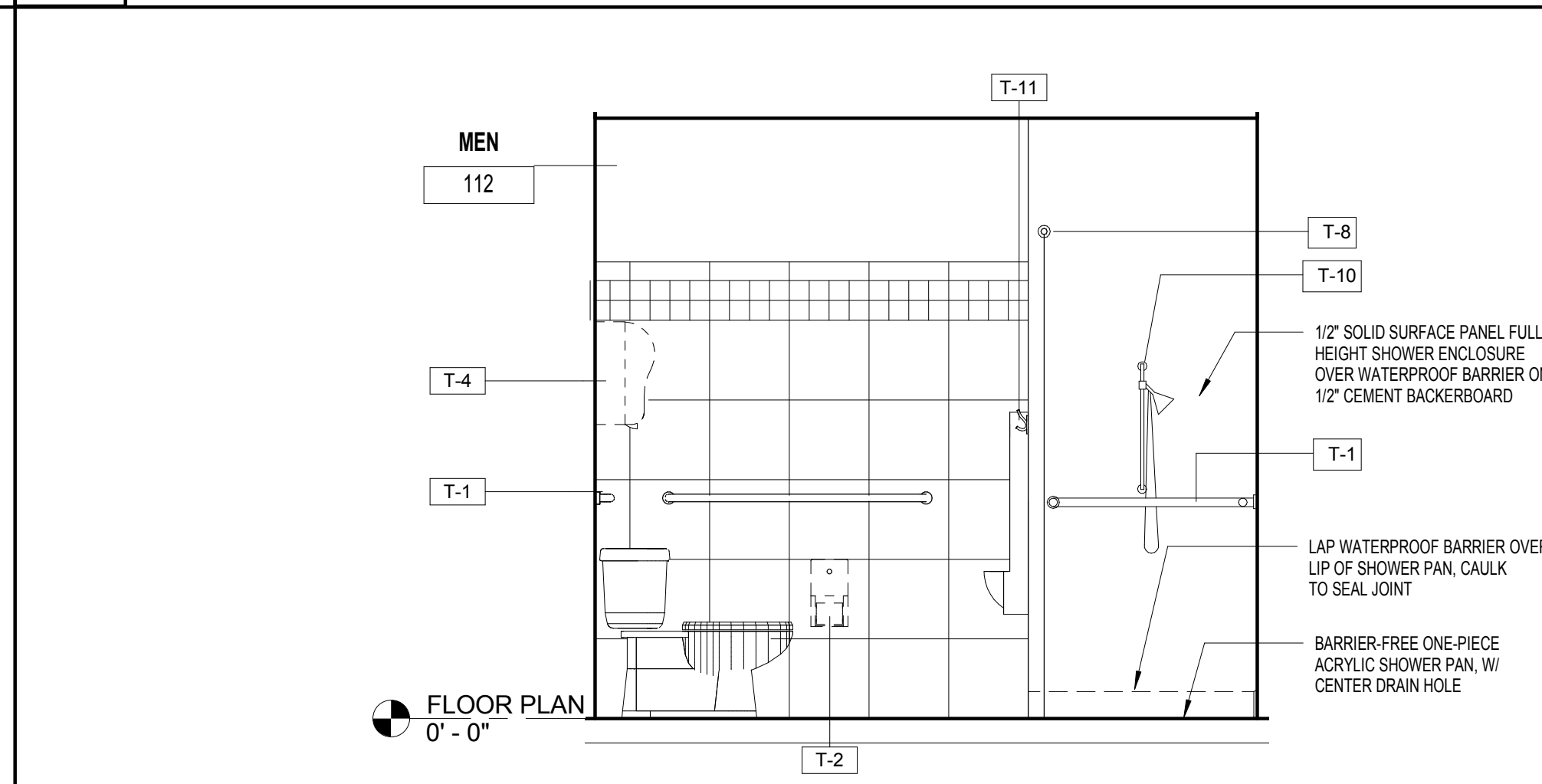
1 Toilet Rm. 112 - Elevation A
A8.3 1/2" = 1'-0"



8 Toilet Rm. 113 - Elevation D
A8.3 1/2" = 1'-0"



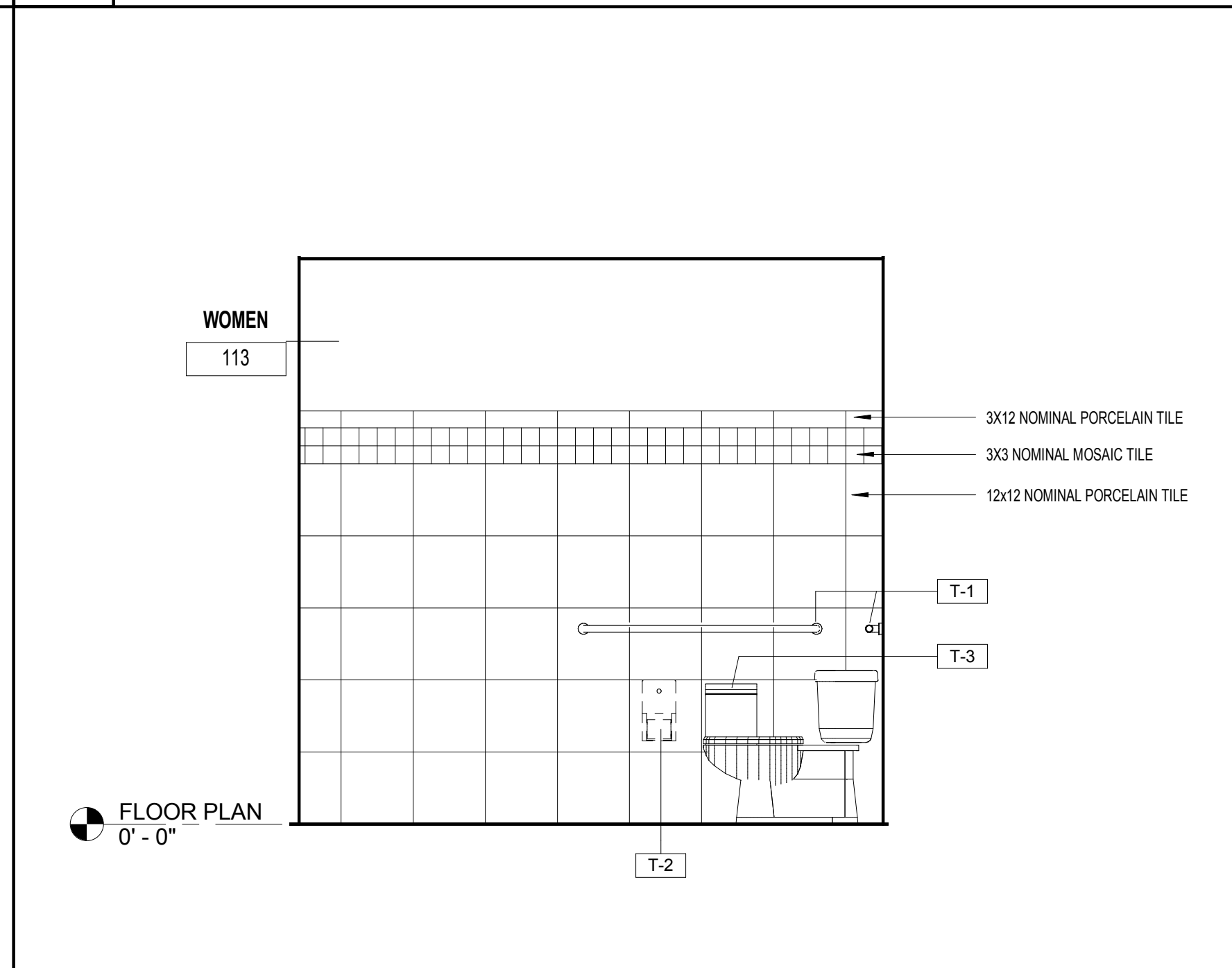
5 Toilet Rm. 113 - Elevation A
A8.3 1/2" = 1'-0"



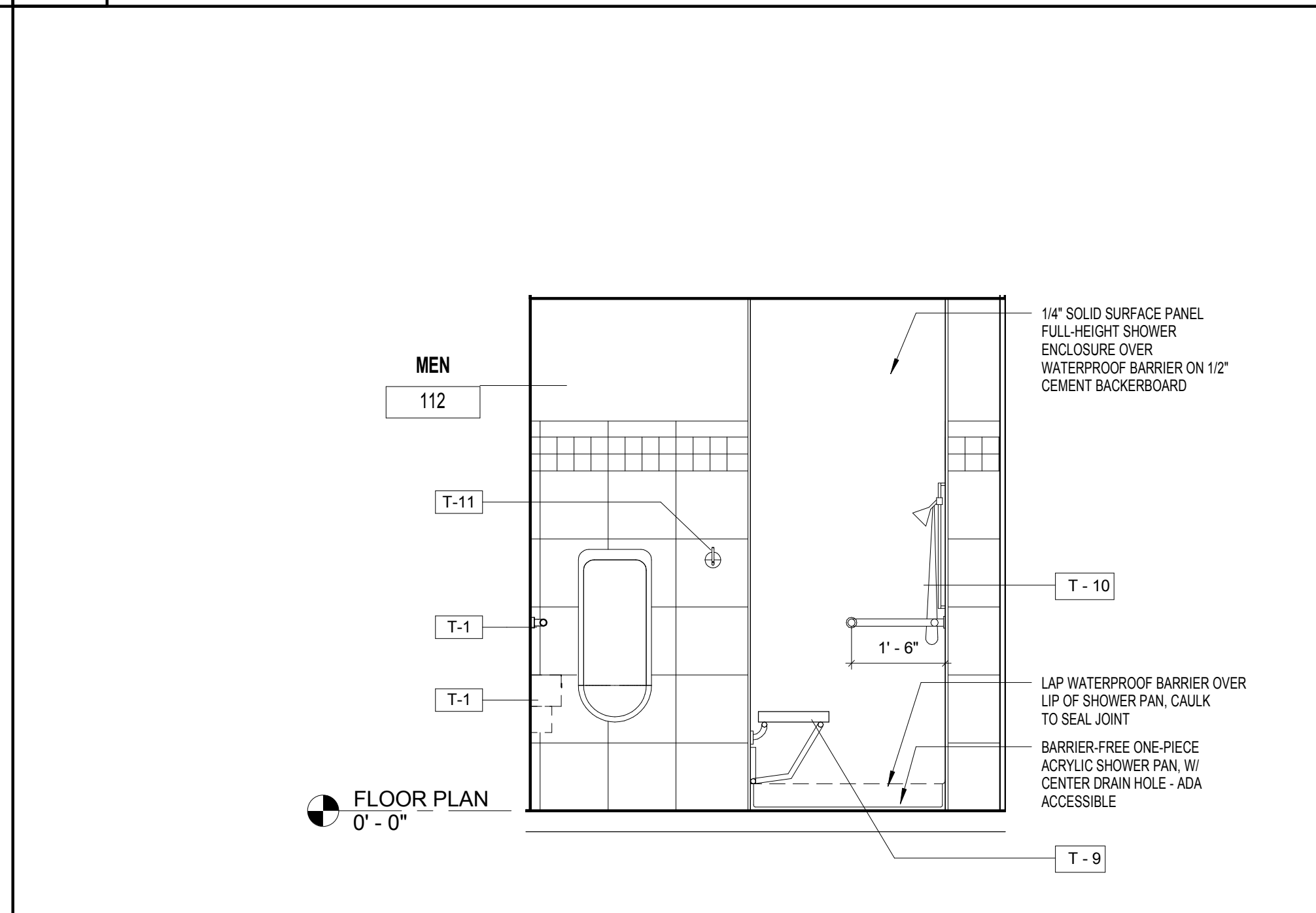
2 Toilet Rm. 112 - Elevation B
A8.3 1/2" = 1'-0"

- 1 ADA GRAB BAR (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 2 TOILET PAPER DISPENSER (N.I.C.)
- 3 SANITARY NAPKIN DISPOSAL (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 4 PAPER TOWEL DISPENSER (N.I.C.)
- 5 SOAP DISPENSER (N.I.C.)
- 6 MIRROR (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 7 UNDER SINK PLUMBING PROTECTION (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 8 SHOWER CURTAIN AND ROD (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 9 ADA SHOWER SEAT (SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 10 ADA SHOWER SET (SEE PLUMBING SPECIFICATIONS FOR BASIS OF DESIGN)
- 11 TOWEL HOOK (SEE SPECIFICATIONS FOR BASIS OF DESIGN)

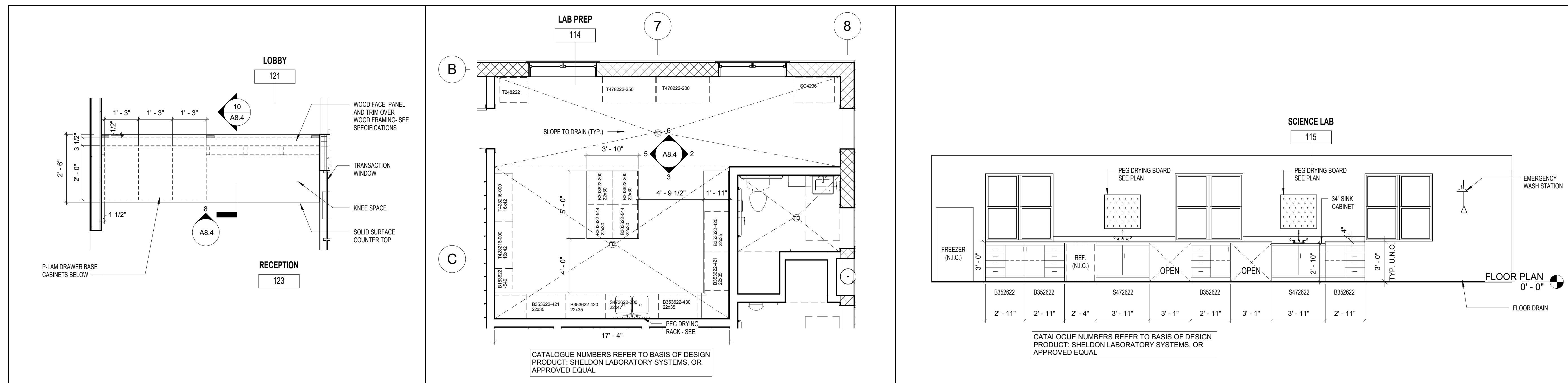
ACCESSORY LEGEND
1/8" = 1'-0"



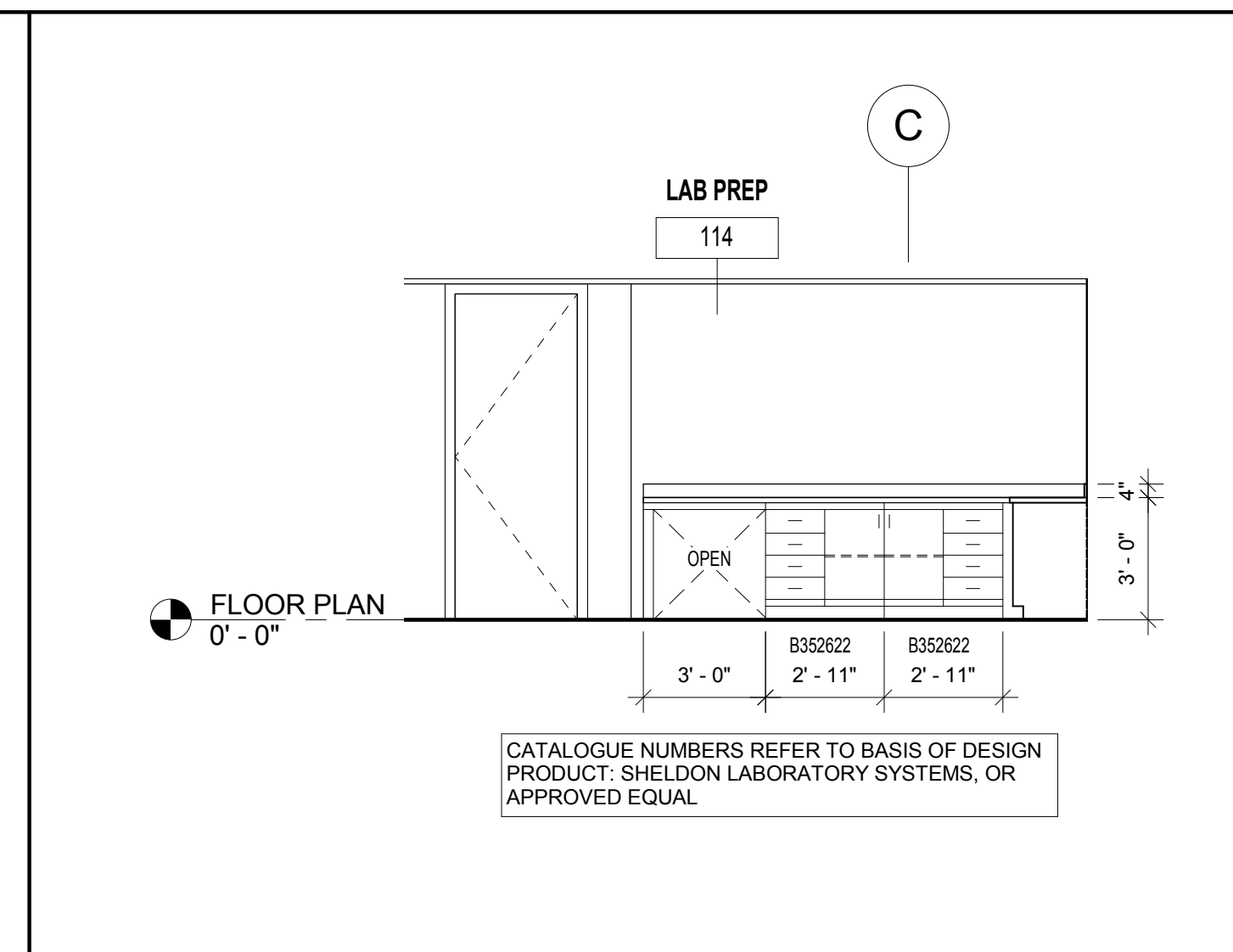
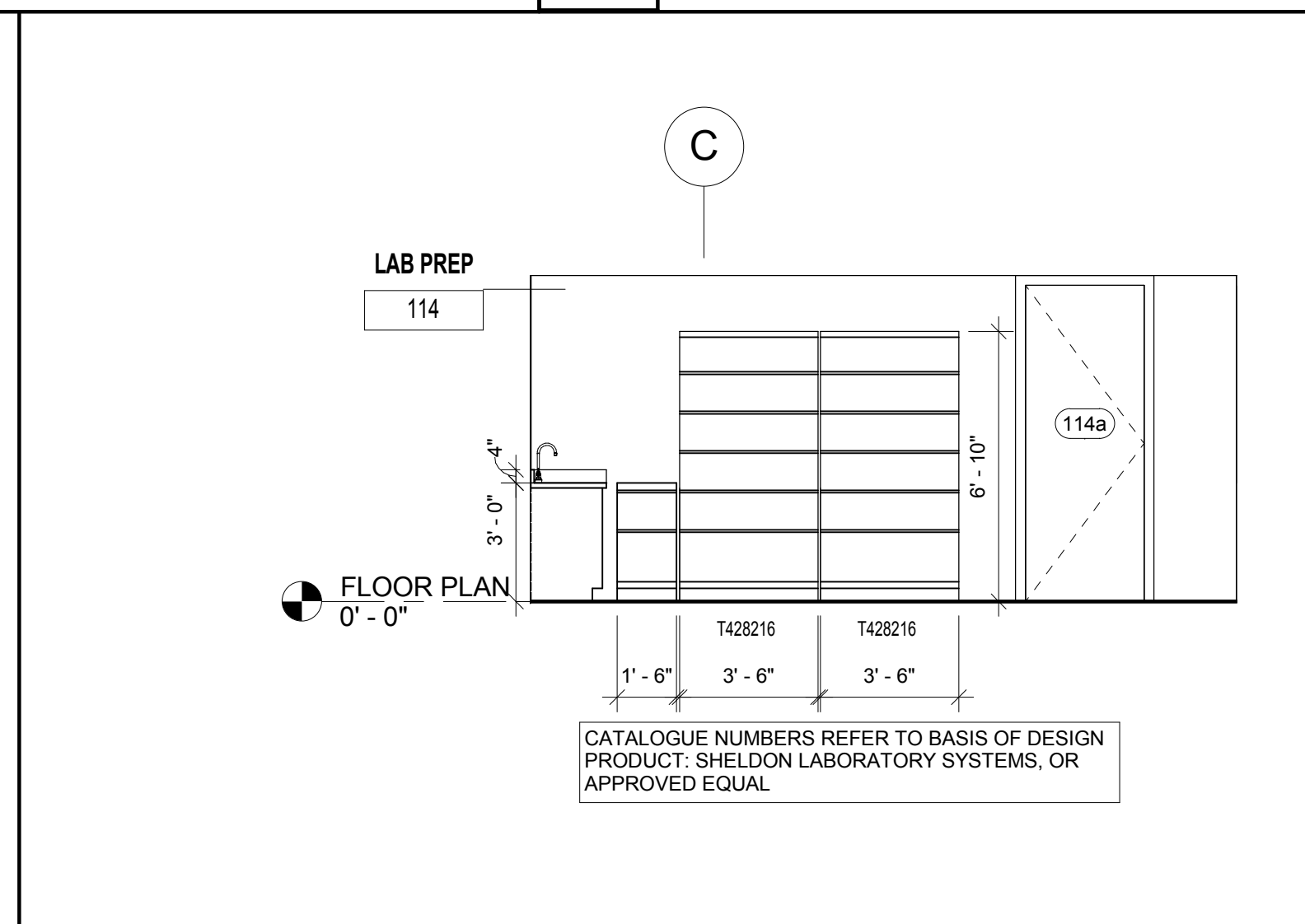
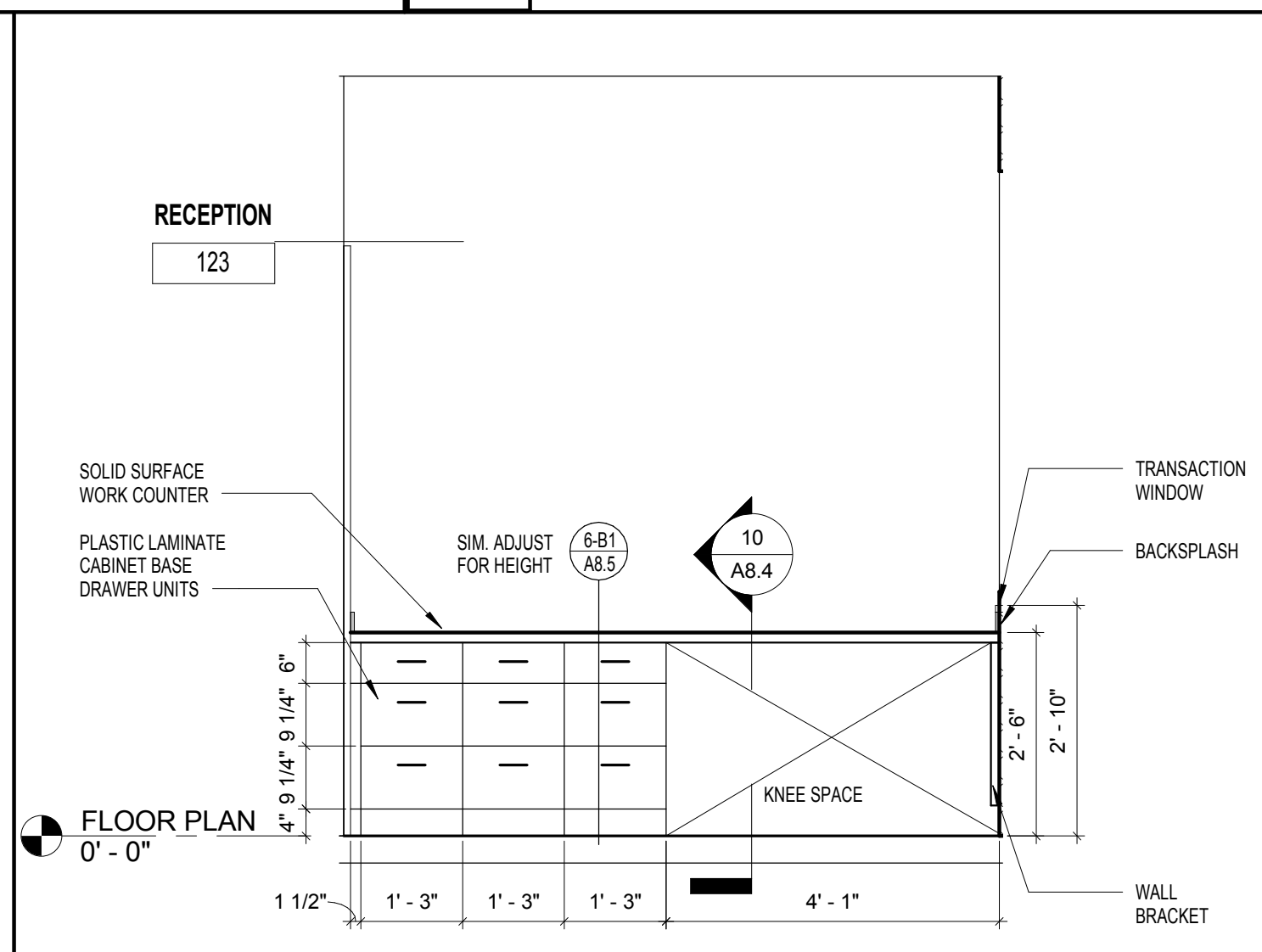
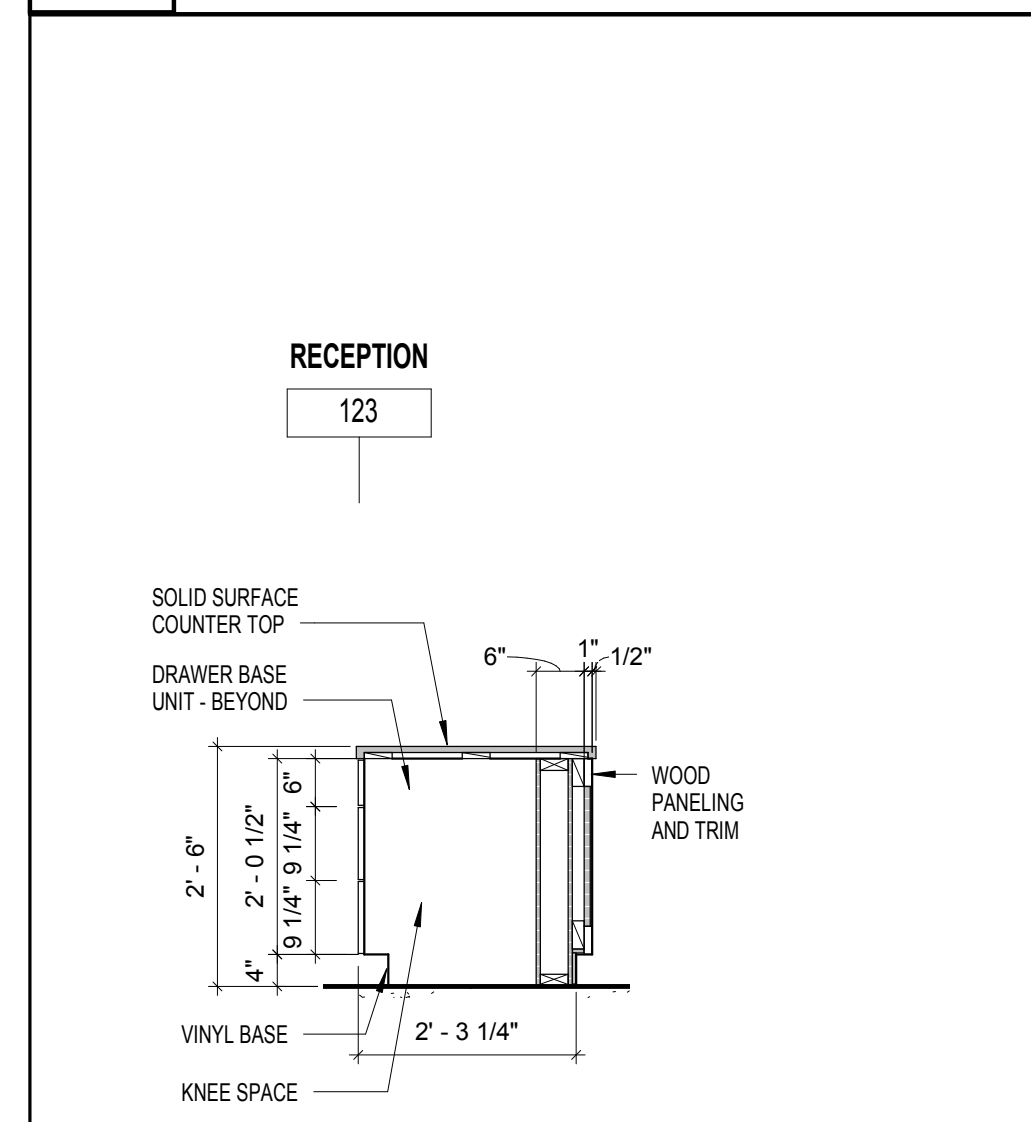
6 Toilet Rm. 113 - Elevation B
A8.3 1/2" = 1'-0"



3 Toilet Rm. 112 - Elevation C
A8.3 1/2" = 1'-0"



7 Plan Detail - Reception Desk A8.4 1/2" = 1'-0"
4 Plan Detail - Lab Prep A8.4 1/4" = 1'-0"
1 Science Lab - Elevation A A8.4 1/4" = 1'-0"

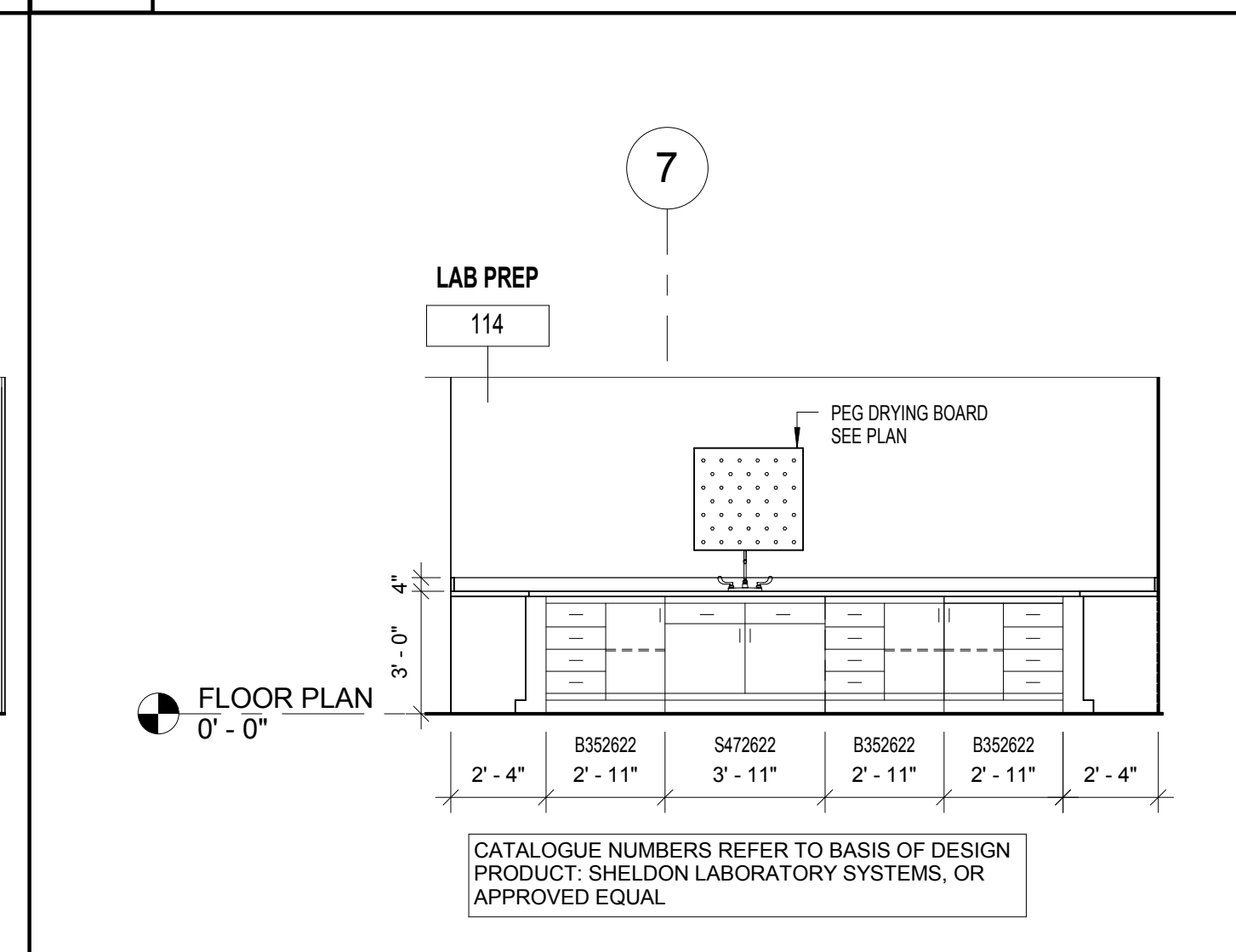
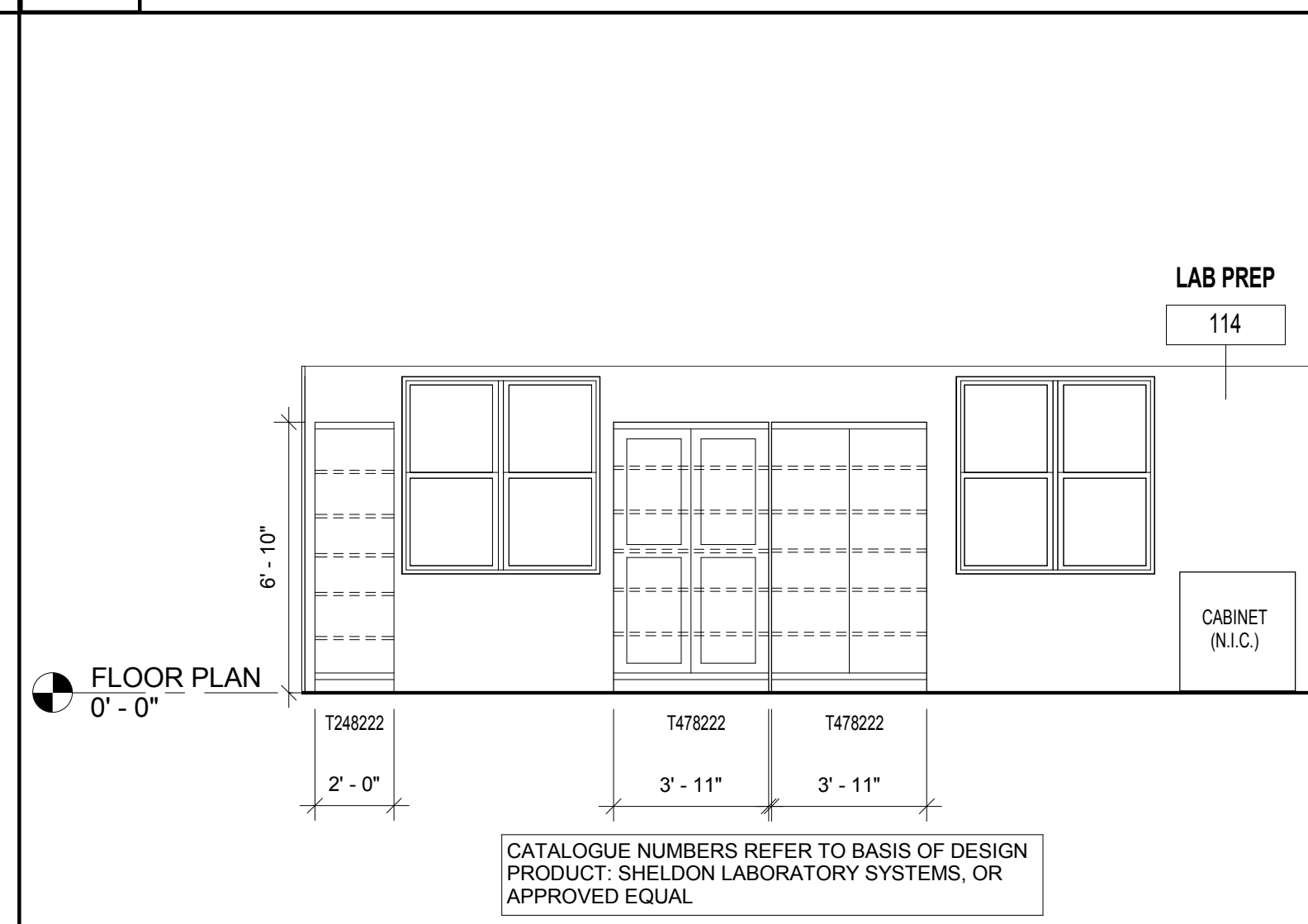
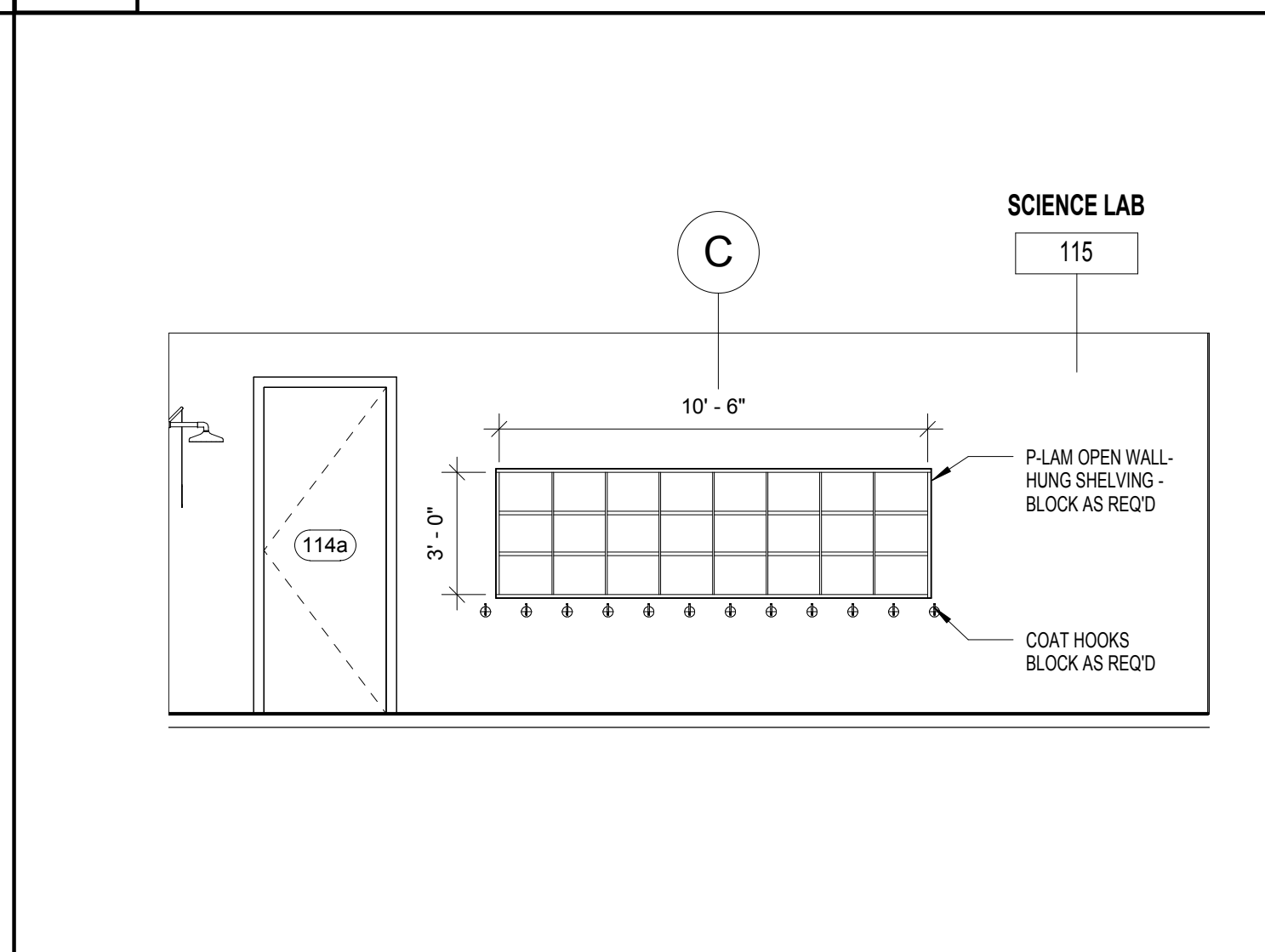
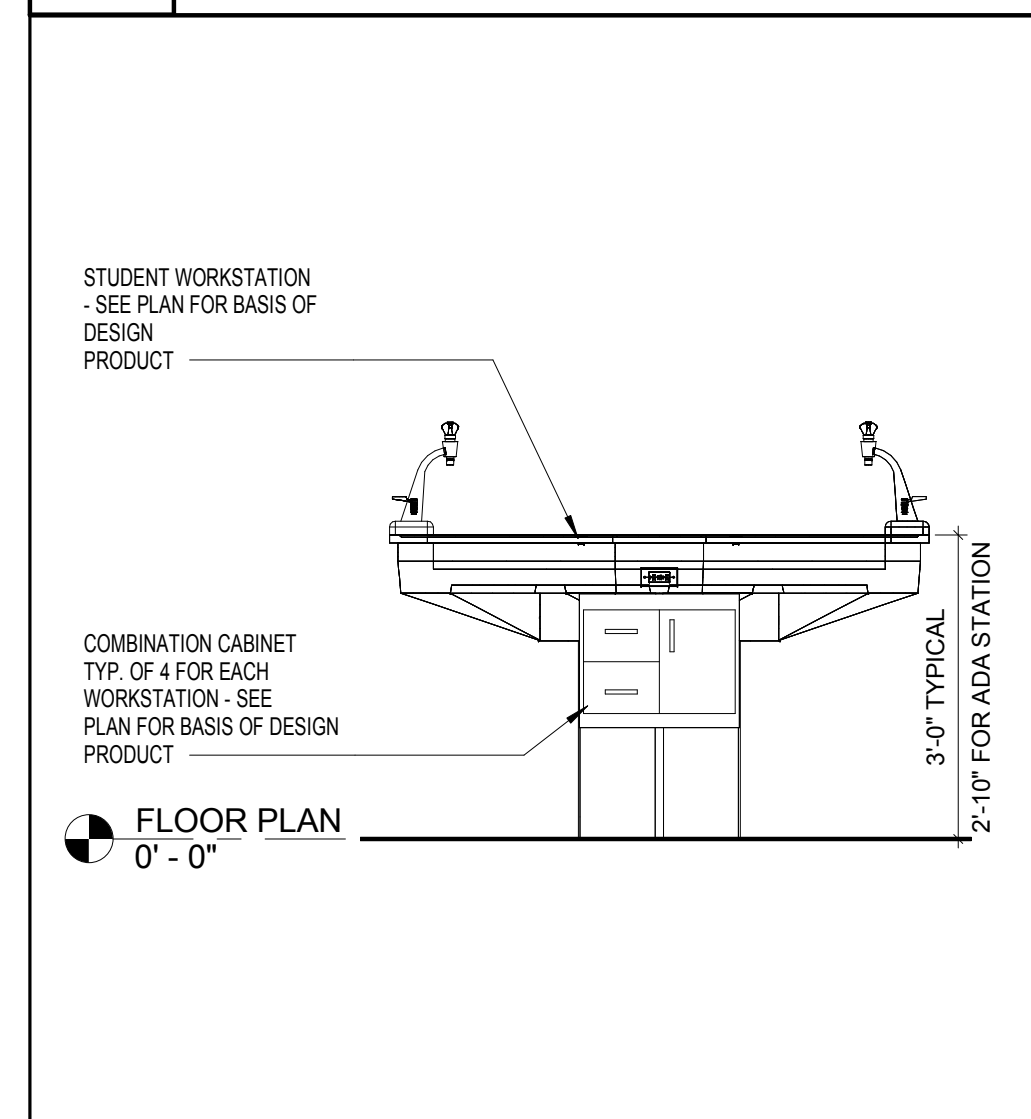


10 Section - Recpt. Desk A8.4 1/2" = 1'-0"

8 Reception Desk A8.4 1/2" = 1'-0"

5 Lab Prep - Elevation D A8.4 1/4" = 1'-0"

2 Lab Prep - Elevation B A8.4 1/4" = 1'-0"



11 Lab Workstation A8.4 1/2" = 1'-0"

9 Science Lab - Cubbies & Hooks A8.4 1/4" = 1'-0"

6 Lab Prep - Elevation A A8.4 1/4" = 1'-0"

3 Lab Prep - Elevation C A8.4 1/4" = 1'-0"



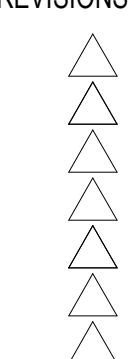
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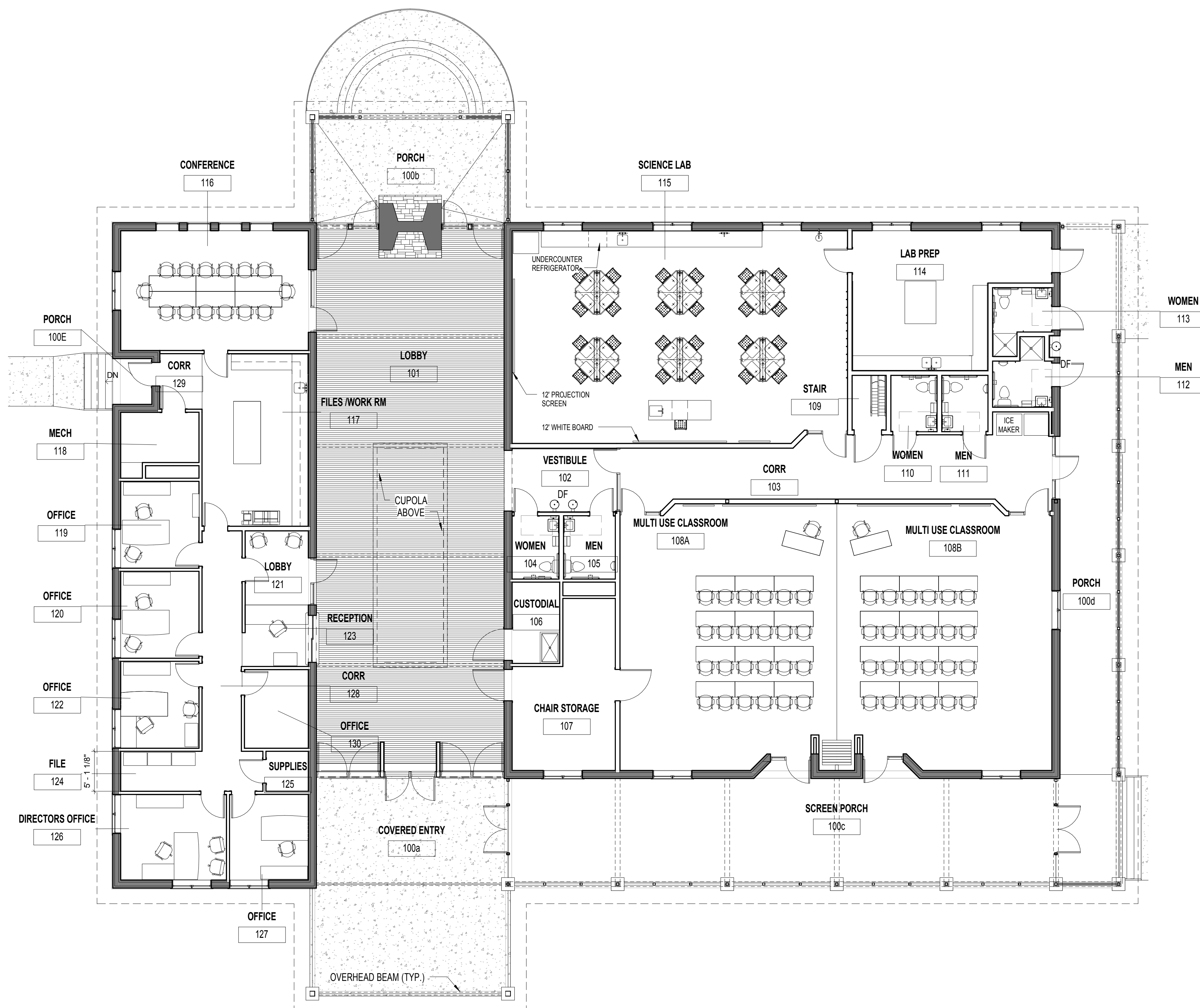
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MILLWORK
ELEVATIONS & DETAILS

A8.4



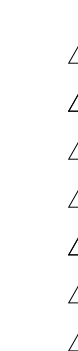
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FURNITURE PLAN

ID-1

225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978

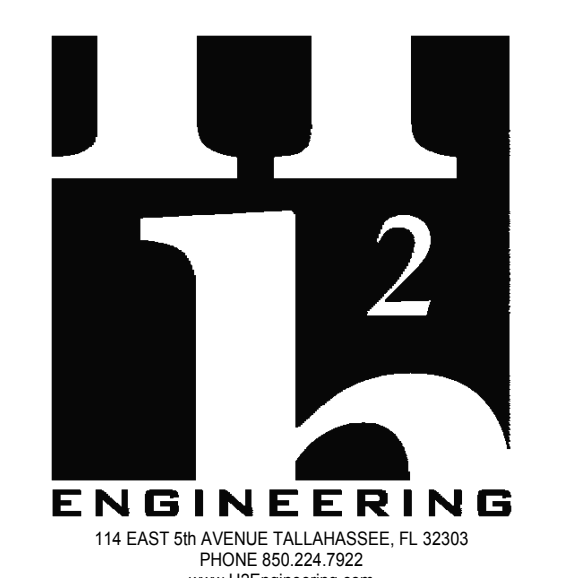
2 Alternate Seating Plan

ID-1 1/8" = 1'-0"

1 FURNITURE PLAN

ID-1 1/8" = 1'-0"

NOTES



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Florida Certificate of Authorization #2485
Matthew T. Scarino, P.E. #54639



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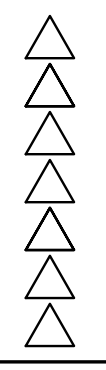
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100% CONSTRUCTION
DOCUMENTS

REVISIONS



GENERAL NOTES
LE ENDS
SCHEDULES

00

225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978

MISCELLANEOUS

Table with 2 columns: Symbol and Description. Symbols include solid line for 'POINT OF CONNECTION, MECHANICAL TO CIVIL', dashed line for 'SMOKE RATED WALL', dash-dot line for '1 HOUR FIRE RATED WALL', and long-dash line for '2 HOUR FIRE RATED WALL'.

DESIGN CONDITIONS

Table with 4 columns: Location (OUTDOORS/INDOORS), Condition (SUMMER WINTER), Temperature, and Value. Values range from 95-78 to 25.

AIR BALANCE SCHEDULE

Table with 4 columns: OUTSIDE AIR SOURCE, CFM, EXHAUST SOURCE, CFM. Includes MAU-1, TOTAL (730), and AIR BALANCE (+380).

CEILING SUPPLY DIFFUSERS

Table with 5 columns: SYMBOL, CFM, NECK DIAMETER, MINIMUM - MAXIMUM 1/2 SPACING, FACE DIMENSION (HARD CEILING, LAY-IN CEILING). Rows include 50-80, 85-180, 185-340, 345-500, and 505-650.

NOTE: 1. RUNOUT DUCTS TO DIFFUSERS SHALL BE THE SAME SIZE AS THE INDICATED NECK SIZE.

CEILING RETURN OR EXHAUST REGISTERS AND GRILLES

Table with 4 columns: SYMBOL, CFM, GRILLE SIZE, RUNOUT DUCT (NOTE 3). Rows include 0-95, 100-195, 200-295, 300-595, 600-695, 700-795, and 800-1500.

NOTES:
1. USE FOR ALL LAY-IN CEILING APPLICATIONS.
2. USE FOR HARD CEILING APPLICATIONS WHERE SIZE OR AIRFLOW IS NOT INDICATED.
3. WHERE DUCT CONNECTION IS SHOWN, RUNOUT DUCT SHALL BE SIZE SHOWN IN SCHEDULE U.N.O.

ELECTRIC HEATER UNIT

Table with 4 columns: DESIGNATION, CAPACITY, NUMBER OF STAGES, ELECTRICAL CHARACTERISTICS, AIR QUANTITY, MOTOR HORSEPOWER OR WATTS, FAN SPEED, AIR TEMPERATURE RISE, AIR DELIVERY THROW, MOUNTING HEIGHT (A.F.F.), MOTOR VOLTAGE, BUILT-IN CONTACTOR, BUILT-IN TRANSFORMER, MANUFACTURER, MODEL NUMBER.

NOTES: 1. PROVIDE LINE VOLTAGE, WALL MOUNT THERMOSTAT.

AIR DISTRIBUTION

Table with 2 columns: Symbol and Description. Includes rectangular sheet metal duct, round sheet metal duct, flexible runout duct, supply air ductwork section, return or exhaust or outside air ductwork section, air balancing damper, control damper, ductwork flexible connection, duct access panel, duct elbow with single thickness turning vanes, square ceiling SA diffuser and air flow, rectangular ceiling RA or EA register and air flow, and duct access doors.

PIPING AND FITTINGS

Table with 2 columns: Symbol and Description. Includes condensate drain piping, condenser water supply piping, condenser water return piping, strainer, union, flexible pipe connection, automatic air vent and isolation ball valve, backflow preventer, diameter of straight pipe, flow direction in pipe, eccentric reducer, concentric reducer, air and dirt separator, expansion tank, chemical shot feeder, and make-up water station.

VALVES

Table with 2 columns: Symbol and Description. Includes ball valve and butterfly valve.

MEASUREMENTS AND CONTROLS

Table with 2 columns: Symbol and Description. Includes thermometer, pressure gauge and isolation ball valve, flow control valve, venturi flow meter, pressure & temperature test station, room temperature sensor, room humidity sensor, flow switch, water meter, adjustable frequency drive, motor starter/disconnect, direct digital control panel, air flow station, and flow meter.

HVAC NOTES

- 1. PRESSURE TEST PIPING SYSTEMS WITH WATER AT 100 PSI FOR A MINIMUM OF 4 HOURS... FOR AIR TEST LEAVE PRESSURE ON SYSTEM FOR 24 HOURS... SYSTEM SHALL BE VERIFIED AT SAME TIME AND APPROXIMATELY SAME TEMPERATURE 24 HOURS FOLLOWING FILL... PRESSURE SHALL REMAIN ON SYSTEM UNTIL INSPECTED BY ENGINEER.
2. TRAP AIR CONDITIONING CONDENSATE AND RUN TO SAFEWASTE AT LOCATION SHOWN ON PLANS.
3. COMPLETELY FLUSH AND CLEAN THE CONDENSER WATER PIPING SYSTEM... SEE WATER TREATMENT SPECIFICATIONS.
4. PROVIDE AUTOMATIC AIR VENTS AT HIGH POINTS OF CONDENSER WATER PIPING SYSTEMS.
5. COORDINATE LOCATION OF ALL EQUIPMENT, DUCTWORK AND PIPING INSTALLATIONS WITH ELECTRICAL TO PROVIDE THE REQUIRED CLEARANCES AROUND ALL ELECTRICAL PANELS, SWITCHGEAR, ETC.
6. INSTALLATION OF EQUIPMENT, DUCTWORK AND PIPING SHALL PROVIDE CONVENIENT ACCESS FOR REMOVAL OF FILTERS AND FOR MAINTENANCE.
7. DUCT SIZES GIVEN ARE SHEET METAL SIZES.
8. COORDINATE EXACT LOCATIONS OF AIR DISTRIBUTION EQUIPMENT WITH THE CEILING AND THE LIGHTING LAYOUT.
9. THE CEILING DIFFUSERS SHALL BE 4-WAY THROW UNLESS OTHERWISE NOTED.
10. PROVIDE NEW AIR FILTERS IN EACH UNIT REQUIRING FILTERS WHEN THE PROJECT IS READY FOR TEST AND BALANCE... DO NOT OPERATE UNITS WITHOUT FILTERS DURING CONSTRUCTION... REPLACE ALL FILTERS DURING CONSTRUCTION ACCORDING TO FILTER MANUFACTURER'S RECOMMENDATIONS... SEAL ALL OPEN ENDS OF DUCT WORK DURING CONSTRUCTION.
11. WHEREVER THE DEPTH OF THE TRUNK DUCT IS LESS THAN THE ROUND RUNOUT DUCT DIAMETER, PROVIDE TRANSITION FITTING OF EQUIVALENT AREA TO THE RUNOUT DUCT.
12. WHERE ROUND DUCT IS INDICATED ON PLANS, USE SPIRAL WOUND DUCTWORK... "SNAPLOCK" DUCTWORK IS NOT ACCEPTABLE.
13. PROVIDE FLEXIBLE DUCT CONNECTIONS AT EACH EQUIPMENT CONNECTION.
14. OUTSIDE AIR INTAKES SHALL NOT BE LOCATED ANY CLOSER THAN 15 FEET FROM ANY CHIMNEY OR EXHAUST OUTLET OR PLUMBING TERMINAL.
15. PROVIDE FIRE DAMPER AT EVERY DUCT PENETRATION OF FIRE RATED CONSTRUCTION, WHETHER SHOWN ON THE DRAWINGS OR NOT.
16. WHERE FIRE DAMPERS ARE REQUIRED, PROVIDE DUCT ACCESS DOORS TO ALLOW RE-LINKING OF DAMPER FUSIBLE LINKS... PROVIDE CEILING/WALL ACCESS PANELS WHERE INSTALLED IN INACCESSIBLE LOCATIONS... ACCESS PANELS IN RATED CONSTRUCTION SHALL BEAR U.L LABEL.
17. WHERE CONTROL DAMPERS OR COILS ARE INSTALLED IN DUCTWORK, PROVIDE DUCT ACCESS DOORS TO ALLOW INSPECTION OF DEVICE... PROVIDE CEILING/WALL ACCESS PANELS WHERE INSTALLED IN INACCESSIBLE LOCATIONS... PANELS IN RATED CONSTRUCTION SHALL BEAR U.L LABEL.
18. IT IS RECOMMENDED THAT DUCTWORK BE FABRICATED FROM FIELD MEASUREMENTS TAKEN AS THE BUILDING STRUCTURE AND SPACE COMPETING SYSTEMS ARE PROGRESSIVELY INSTALLED... THE DUCTWORK AS SHOWN ON THE CONSTRUCTION DOCUMENTS IS DIAGRAMMATIC AND DOES NOT NECESSARILY INCLUDE ALL MODIFICATIONS REQUIRED TO AVOID THESE INTERFERENCES... BEFORE FABRICATING ANY DUCTWORK, CHECK THE PHYSICAL CONDITIONS AT THE JOB SITE AND MAKE CHANGES IN CROSS SECTIONS, ROUTING, OFFSETS AND SIMILAR ITEMS WHETHER SPECIFICALLY INDICATED OR NOT... VERIFY THAT SUFFICIENT CLEARANCES ARE AVAILABLE FOR INSTALLING DUCTWORK, PIPING, LIGHT FIXTURES, CEILING SYSTEMS AND TO PROVIDE EQUIPMENT SERVICE... COSTS REQUIRED TO CHANGE DUCTWORK TO FIT THE SPACE AVAILABLE AND AVOID INTERFERENCES CAUSED BY SPACE COMPETING SYSTEMS SHALL BE BORNE BY THE CONTRACTOR... NO ADDITIONAL REMUNERATION WILL BE PAID BY THE OWNER.
19. APPLY EXTERNAL INSULATION TO SINGLE WALL SUPPLY DUCTS, RETURN DUCTS AND OUTSIDE AIR DUCTS PER SPECIFICATIONS... UNDERGROUND DUCTS SHALL NOT RECEIVE EXTERNAL INSULATION.
20. PROVIDE VOLUME CONTROL DAMPERS IN SIDE TAKE-OFF FITTINGS TO SUPPLY AIR DIFFUSERS AND EXHAUST AIR AND RETURN AIR GRILLES AND AT EACH DUCT BRANCH SERVING TWO OR MORE AIR TERMINALS, WHETHER SHOWN ON THE DRAWINGS OR NOT.
21. MINIMUM PIPE SIZE FOR CONDENSER WATER AND COOLING COIL CONDENSATE SHALL BE 3/4". REFER TO SCHEDULE FOR RUNOUT PIPE SIZE TO INDIVIDUAL EQUIPMENT.
22. SECTIONS OF PIPE STORED ON SITE OR PLACED IN TRENCHES SHALL HAVE EACH OPEN END COVERED AT ALL TIMES EXCEPT WHILE MAKING CONNECTIONS... IF DEBRIS IS FOUND INSIDE PIPE, IT SHALL BE COMPLETELY REMOVED PRIOR TO ASSEMBLY.
23. PROVIDE ACCESS PANEL AT EACH LOCATION WHERE A VALVE, DAMPER OR OTHER DEVICE REQUIRING SERVICE IS LOCATED ABOVE AN INACCESSIBLE CEILING OR INSIDE A WALL... ACCESS PANELS IN RATED CONSTRUCTION SHALL BEAR U.L LABEL... COORDINATE ACCESS PANEL LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
24. COORDINATE LOUVER AND DEVICE LOCATIONS WITH WALL STRUCTURAL REINFORCING... SEE STRUCTURAL DRAWINGS FOR LOCATION OF LINTELS, BOND BEAMS AND REINFORCING.
25. COORDINATE ALL DUCT TEST WITNESSING WITH TALLAHASSEE COMMUNITY COLLEGE'S MECHANICAL INSPECTOR.
26. 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 DUCT."

Table with 5 columns: TYPE OF SPACE, EXHAUST, OUTSIDE AIR, CFM/FT², CFM/PERSON, CFM/FT². Rows include Classrooms, Comm. Rooms, Conference/Meeting, Copy/Print Room, Corridors, Electrical Rooms, Janitor/Trash, Laboratories - Science, Lobbies, Multi-Use Assembly, Office Space, Reception Areas, Storage Rooms, and Toilet - Private.

- NOTES:
1. VENTILATION RATES FOR SPACES WITH INTERMITTENT OCCUPANCY (PEAK OCCUPANCY LESS THAN THREE HOURS) HAVE BEEN REDUCED ON AVERAGE OCCUPANCY DURING THE OCCUPIED PERIOD, BUT NOT LESS THAN HALF OF THAT REQUIRED DURING PEAK OCCUPANCY.
2. VENTILATION RATES CALCULATED PER REQUIREMENTS OF ASHRAE STANDARD 62.1-2007.
3. EXHAUST RATE IS PER WATER CLOSET AND/OR URINAL. HIGHER RATE IS FOR HIGHER USE FACILITIES.

GENERAL NOTES

- 1. DRAWINGS ARE DIAGRAMMATIC, INDICATIVE OF WORK TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT... REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DIMENSIONS.
2. FIELD VERIFY DIMENSIONS AND CONDITIONS... IF THE CONTRACTOR IS UNABLE TO INTERPRET THE CONTRACT DOCUMENTS, HE IS RESPONSIBLE TO REQUEST CLARIFICATION IN WRITING TO THE ARCHITECT... IF HE PROCEEDS WITH ANY WORK BEFORE OBTAINING CLARIFICATION, HE SHALL BE HELD RESPONSIBLE FOR DEFICIENCIES ASSOCIATED THEREWITH.
3. BEFORE SUBMITTING FOR THE WORK, EACH BIDDER WILL BE RESPONSIBLE TO EXAMINE THE PREMISES AND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGATED TO OPERATE AND COMPLETE THE WORK UNDER THIS CONTRACT... NO ALLOWANCE WILL SUBSEQUENTLY BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR OMISSION ON HIS PART.
4. THE CONTRACTOR SHALL PAY FOR INSPECTION PERMITS, CERTIFICATES, CONNECTION FEES, SYSTEM DEMAND CHARGES AND LICENSE FEES IN CONNECTION WITH HIS WORK.
5. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK OF SUBCONTRACTORS TO AVOID INTERFERENCES.
6. WORK SHALL COMPLY WITH APPLICABLE O.S.H.A. AND E.P.A. REGULATIONS AND GUIDELINES... ERECT AND MAINTAIN REASONABLE PRECAUTIONS FOR SAFETY AND HEALTH INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS INCLUDING PROMULGATING SAFETY REGULATIONS... PROVIDE SAFETY PRECAUTIONS AND BARRICADES FOR PEDESTRIANS AT CONSTRUCTION VEHICLE ACCESS AND EGRESS LOCATIONS.
7. COORDINATE AND SEQUENCE CLEANING AND CONSTRUCTION WORK... SUBMIT A COMPLETELY DETAILED CONSTRUCTION SCHEDULE PRIOR TO PRE-CONSTRUCTION CONFERENCE.
8. THE CONTRACTOR SHALL STRICTLY BE HELD TO THE PROJECT SCHEDULE... HE SHALL PROVIDE SUFFICIENT MANPOWER AND EQUIPMENT TO FULLY MOBILIZE, PROCEED WITH AND COMPLETE THE WORK.
9. THE CONTRACTOR SHALL BE RESTRICTED TO AREAS SPECIFIED BY THE OWNER FOR ON-SITE STORAGE OF CONSTRUCTION MATERIALS... THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SECURITY OF EQUIPMENT AND MATERIALS.
10. THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK ENVIRONMENT AT ALL TIMES AND SHALL CLEAN CONSTRUCTION SITE OF DEBRIS AT COMPLETION OF THE JOB AND BEFORE FINAL PAYMENT IS MADE.
11. THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS TO THE ARCHITECT AT COMPLETION OF CONSTRUCTION.
12. CONTRACTOR'S USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACTOR HAS COMPLIED WITH THE CONTRACT DOCUMENT REQUIREMENTS RELATED TO "SHOP DRAWINGS, PRODUCT DATA AND SAMPLES".
13. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT ENGINEER IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMITTAL AND THE ARCHITECT ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION... THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS BY THE ARCHITECT ENGINEER'S APPROVAL THEREOF.
14. PRIOR TO INSTALLATION, COORDINATE AND ADJUST THE FINAL LOCATION OF WALL MOUNTED DEVICES AND EQUIPMENT WITH ALL CASEWORK, SHELVING, MARKERBOARDS, BULLETIN BOARDS OR OTHER WALL MOUNTED FURNISHINGS.
15. NOTE ANY SPECIAL REQUIREMENTS INVOLVED IN INSTALLING THE EQUIPMENT IN THE BUILDING... DISMANTLING AND REASSEMBLING OF ANY EQUIPMENT SHALL BE DONE AS REQUIRED FOR ENTRY INTO THE BUILDING AND EQUIPMENT ROOMS.
16. PROTECT THE ROOF FROM DAMAGE WHENEVER ANY WORK ON THE ROOF IS REQUIRED.
17. SUPPORTS AND HANGERS SHALL PRESENT A NEAT, ORDERLY APPEARANCE.
18. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE, SMOKE, AND ACOUSTICAL WALL ASSEMBLIES.
19. BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER... BEAM SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
20. CONTRACTOR SHALL FURNISH U.L. APPROVED DRAWINGS FOR EACH TYPE OF FIRE RATED ASSEMBLY PENETRATION BY DUCTS, PIPES OR CONDUITS... THESE DRAWINGS SHALL BE DISPLAYED ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.
21. CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE... THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY MATERIAL SUPPLIERS AND MANUFACTURERS.
22. EXIT WAYS SHALL BE KEPT CLEAR... IF AN EXIT MUST BE TEMPORARILY BLOCKED, PROVIDE THE REQUIRED BARRICADE AND DIRECTIONAL SIGNS FOR TEMPORARY EXITING AND SAFETY.
23. CONTRACTOR SHALL COMPLY WITH "TRENCH SAFETY ACT" (FLORIDA STATUTE 553 PART III) AND OSHA STANDARD 29 CFR 1926.650 SUBPART P FOR ALL UTILITY TRENCHES IN EXCESS OF 5 FEET DEEP... CONTRACTOR SHALL INDICATE WITHIN HIS BID RESPONSE A REFERENCE TO THE TRENCH SAFETY STANDARD AND A SEPARATE LINE ITEM COST OF COMPLIANCE WITH STANDARD.

ABBREVIATIONS

Table with 3 columns: Symbol, Description, Description. Includes AFF (ABOVE FINISHED FLOOR), AHP (AS HIGH AS POSSIBLE), ADS (AIR AND DIRT SEPARATOR), B (BOILER), BD (BALANCING DAMPER), BDD (BACKDRAFT DAMPER), BFP (BACKFLOW PREVENTER), BHP (BRAKE HORSEPOWER), BTUH (BRITISH THERMAL UNITS PER HOUR), C (CONDENSATE), CFM (CUBIC FEET PER MINUTE), CT (COOLING TOWER), CV (CONSTANT VOLUME), CWP (CONDENSER WATER PUMP), DDC (DIRECT DIGITAL CONTROL PANEL), DN (DOWN), EA (EXHAUST AIR), EAG (EXHAUST AIR GRILLE), EF (EXHAUST FAN), ER (EXHAUST REGISTER), Fdb (DEGREES FAHRENHEIT DRY BULB), Fdbw (DEGREES FAHRENHEIT WET BULB), FCV (FLOW CONTROL VALVE), FD (FIRE DAMPER), FPM (FEET PER MINUTE), FT (FEET), GPH (GALLONS PER HOUR), GPM (GALLONS PER MINUTE), GPM (GALLONS PER MINUTE), HP (HORSEPOWER), HX (HEAT EXCHANGER), IN (INCHES), MAU (MAKE-UP AIR UNIT), MCA (MINIMUM CIRCUIT AMPACITY), MD (MOTORIZED DAMPER), MOCOP (MAXIMUM OVERLOAD CIRCUIT PROTECTION), NA (NOT APPLICABLE), OA (OUTSIDE AIR), P (PUMP), RA (RETURN AIR), RAG (RETURN AIR GRILLE), RAR (RETURN AIR REGISTER), RPM (REVOLUTIONS PER MINUTE), SA (SUPPLY AIR), SAR (SUPPLY AIR REGISTER), SMS (SHEET METAL SIZE), SP (STATIC PRESSURE), TYP (TYPICAL), UC (DOOR UNDERCUT (3/4", UNO)), UG (UNDERGROUND), UNO (UNLESS NOTED OTHERWISE), V (VALVE), VFM (VENTURI FLOW METER), WG (WATER GAUGE), WSPH (WATER SOURCE HEAT PUMP), XT (EXPANSION TANK).

HVAC SHEET LIST

Table with 3 columns: SHEET NUMBER, SHEET NAME, ISSUED. Rows include M001 (GENERAL NOTES, LEGENDS & SCHEDULES), M002 (SCHEDULES), M101 (FLOOR PLAN - HVAC), M201 (ENLARGED PLANS - HVAC), M202 (ENLARGED PLANS - HVAC), M301 (SECTIONS - HVAC), M302 (SECTIONS - HVAC), M303 (SECTIONS - HVAC), M501 (DETAILS), M502 (DETAILS), M601 (CONTROLS - HVAC), M602 (CONTROLS - HVAC).

HYDRONIC CONTROL VALVE SCHEDULE				
VALVE DESIGNATION (NOTE 2)	CV-A	CV-B	CV-C	
SERVICE		CONDENSER WATER	CONDENSER WATER	CONDENSER WATER
FLOW	GPM	7.1	9.3	17
TARGET DIFFERENTIAL PRESSURE @ DESIGN FLOW	PSI	1	1	1
TARGET Cv		7.1	9.3	17
SELECTED Cv (BASIS OF DESIGN)		7.4	10	19
ACTUAL PRESSURE DROP @ SELECTED Cv	PSI	0.92	0.86	0.8
SIZE	IN.	1	1	1-1/2
LINE SIZE	IN.	1	1	1-1/2
STYLE		BALL	BALL	BALL
CONFIGURATION		2-WAY	2-WAY	3-WAY
ACTUATOR		NON-SPRING	NON-SPRING	NON-SPRING
CONTROL TYPE		2 POSITION	2 POSITION	2 POSITION
MANUFACTURER		BELIMO	BELIMO	BELIMO
VALVE MODEL (NOTE 1)		B222	B223	B338
ACTUATOR MODEL		LRB24-3	LRB24-3	ARB24-3

NOTES:
1) PROVIDE STAINLESS STEEL TRIM.

COOLING TOWER SCHEDULE				PLATE AND FRAME HEAT EXCHANGER			
DESIGNATION	CT-1	HX-1	COOLING	DESIGNATION	CT-1	HX-1	COOLING
CAPACITY	GPM	65	MODE	MODE			
ENTERING WATER TEMPERATURE	°F	97	SOURCE / SINK	FLUID			WATER
LEAVING WATER TEMPERATURE	°F	85	FLOW RATE			GPM	65
WET BULB TEMPERATURE	°F	80	EWT			°F	85
FAN MOTOR	HP	2	LWT			°F	95
AIR QUANTITY	CFM		PRESSURE DROP			FT.	10
ELECTRICAL CHARACTERISTICS	V/PH	208/3					
MOTOR WINDING		FULL	LOAD				
BASIN HEATERS			FLUID				WATER
CAPACITY	KW	1.5	FLOW RATE			GPM	65
QUANTITY		1	EWT			°F	100
AMBIENT TEMPERATURE	°F	10	LWT			°F	88
ELECTRICAL CHARACTERISTICS	V/PH	120/1	PRESSURE DROP			FT.	10
MANUFACTURER		MARLEY	MANUFACTURER				TACO
MODEL NUMBER		493G	MODEL NUMBER				PF016-041

NOTES:
1. PROVIDE BASIN HEATER.
2. PROVIDE STAINLESS STEEL ASSEMBLY HARDWARE AND INTERNAL STEEL COMPONENTS.

HW BOILER SCHEDULE				EXPANSION TANK SCHEDULE			
BOILER DESIGNATION	B-1	XT-1	PUMP HOUSE	DESIGNATION	XT-1		
CAPACITY (85°F EWT)	MBTUH	285	LOCATION				
FUEL		PROPANE	TANK VOLUME			GAL	4
FIRING RATE	MBTUH	300	ACCEPTANCE VOLUME			GAL	2
TYPE OF FIRING		FULL MODULATION	ORIENTATION				VERTICAL
TURN DOWN	CAPACITY	20%	ASSOCIATED SYSTEM				BUILDING CW LOOP
TOTAL WATER CIRCULATED	GPM	20	MANUFACTURER				TACO
WATER SUPPLY TEMPERATURE	°F	88	MODEL NUMBER				CBX-15
WATER RETURN TEMPERATURE	°F	60	DETAIL REFERENCE				AM502
MANUFACTURER		PATTERSON KELLEY					
MODEL NUMBER		CM300					
DETAIL REFERENCE		CM502					

AIR AND DIRT SEPARATOR SCHEDULE			
DESIGNATION	ADS-1	CONDENSER WATER	
ASSOCIATED SYSTEM			
MANUFACTURER		TACO	
MODEL NUMBER		4902SAD	
DETAIL REFERENCE		AM502	

NOTES:
1. SEALED DIRECT VENT KIT
2. LOW WATER CUT-OFF - REMOTE PROBE
3. MANUAL HIGH AND LOW GAS PRESSURE SWITCH
4. HIGH LIMIT CONTROL - MANUAL RESET
5. UNIT CONTROLLER WITH BACnet INTERFACE
6. FLOOR MOUNTED UNIT.

WATER SOURCE MAKE-UP AIR UNIT SCHEDULE		
UNIT DESIGNATION	MAU-1	
TOTAL SUPPLY OUTSIDE AIR	CFM	730
DEHUMIDIFICATION PERFORMANCE DATA		
EVAPORATOR TOTAL COOLING CAPACITY	MBTUH	66.9
EVAPORATOR SENSIBLE COOLING CAPACITY	MBTUH	28.1
AIR ENTERING EVAPORATOR SECTION	°Fdb-°Fwb	88.0-79.0
AIR LEAVING EVAPORATOR SECTION	°Fdb-°Fwb	53.5-52.7
TOTAL REHEAT CAPACITY	MBTUH	16.2
UNIT LEAVING TEMPERATURES (WITH FAN HEAT)	°Fdb-°Fwb	74.0-60.7
TOTAL HEAT REJECTED TO CONDENSER WATER	MBTUH	65.1
ENTERING & LEAVING WATER TEMPERATURE	°F - °F	88.0-95.7
HEATING PERFORMANCE DATA		
TOTAL HEATING CAPACITY	MBTUH	35.5
ENTERING & LEAVING AIR TEMPERATURE	°Fdb-°Fdb	25-70
TOTAL HEAT EXTRACTED FROM CONDENSER WATER	MBTUH	48.7
ENTERING & LEAVING WATER TEMPERATURE	°F - °F	70.0-64.3
UNIT PERFORMANCE DATA		
CONDENSER WATER FLOW	GPM	17
RUNOUT PIPE SIZE	IN.	1-1/2
CONDENSATE DRAIN SIZE	IN.	3/4
MAXIMUM WATER PRESSURE DROP	FT. H2O	10
UNIT EER @ DESIGN CONDITIONS	BTUW-HR.	9.3
UNIT COP @ DESIGN CONDITIONS		4.5
UNIT DATA		
BLOWER MOTOR HORSEPOWER	HP	1/2
EXTERNAL STATIC PRESSURE (INCL. FILTER)	IN. H2O	1.5
NUMBER OF COMPRESSORS & STAGES	NO. - NO.	1-1
NUMBER OF REFRIGERANT CIRCUITS	NO.	1
REFRIGERANT TYPE		R-410A
ELECTRICAL CHARACTERISTICS	V/PH	208/3
MINIMUM CIRCUIT AMPACITY	AMPS	25
MAXIMUM OVERLOAD PROTECTION	AMPS	40
CONTROL VALVE		CV-C
MANUFACTURER		CLIMATEMASTER
MODEL NUMBER		TTV049B HPS0EKS

WATER SOURCE HEAT PUMP SCHEDULE					
SCHEDULE TYPE	WSHP-1	WSHP-2	WSHP-3	WSHP-4	WSHP-5
TOTAL COOLING SUPPLY AIRFLOW	CFM	1040	1550	1210	1550
OUTSIDE AIR QUANTITY	CFM	50	200	80	200
COOLING DATA					
TOTAL COOLING CAPACITY	MBTUH	42.9	45.6	44.1	45.6
SENSIBLE COOLING CAPACITY	MBTUH	27.6	33.7	29.6	33.7
TOTAL HEAT OF REJECTION	MBTUH	53.4	56.9	54.7	56.9
AIR ENTERING COOLING COIL	°Fdb-°Fwb	76-63	76-63	76-63	76-63
AIR LEAVING COOLING COIL	°Fdb-°Fwb	51.4-48.0	55.9-52.8	53.4-50.0	55.9-52.8
CONDENSER WATER FLOW	GPM	9.3	9.3	9.3	9.3
FLUID ENTERING AND LEAVING TEMP.	°F-°F	88-100	88-100	88-100	88-100
FLUID PRESSURE DROP	FT. H2O	7.7	7.7	7.7	7.7
EER		14.1	13.8	14.1	13.8
HEATING DATA					
TOTAL HEATING CAPACITY	MBTUH	59.8	59.8	59.8	59.8
HEAT OF ABSORPTION	MBTUH	46.7	46.7	46.7	46.7
HEATING COIL ENTERING AND LEAVING	°Fdb-°Fdb	70-116	70-116	70-116	70-116
FLUID ENTERING AND LEAVING TEMP.	°F-°F	70-60	70-60	70-60	70-60
COP		4.6	4.6	4.6	4.6
UNIT DATA					
BLOWER MOTOR HORSEPOWER	HP	1	1	1	1
COOLING SPEED		D2	C3	O3	C3
HEATING SPEED		1	1	1	1
EXT. STATIC PRESSURE	IN. H2O	0.75	0.75	0.75	0.75
RUNOUT PIPE SIZE	IN.	1	1	1	1
CONDENSATE DRAIN SIZE	IN.	3/4	3/4	3/4	3/4
ELECTRICAL CHARACTERISTICS	V/PH	208/3	208/3	208/3	208/3
MINIMUM CIRCUIT AMPACITY	AMPS	23.8	23.8	23.8	23.8
MAXIMUM OVERLOAD PROTECTION	AMPS	35	35	35	35
UNIT OPERATING WEIGHT	LBS.	420	420	420	420
REFRIGERANT TYPE		R-410A	R-410A	R-410A	R-410A
CONTROL VALVE		CV-B	CV-B	CV-B	CV-B
MANUFACTURER		CLIMATEMASTER	CLIMATEMASTER	CLIMATEMASTER	CLIMATEMASTER
MODEL NUMBER		TTV049B HPS0EKS	TTV049B HPS0EKS	TTV049B HPS0EKS	TTV049B HPS0EKS

NOTES:
1. PROVIDE CLIMADRY REHEAT OPTION.
2. PROVIDE 2-INCH FILTER RACKS.
3. PROVIDE ACUSTICAL PACKAGE INCLUDING SOUND ATTENUATING MATERIAL ON COMPRESSORS, AHU CASING, AND FAN AND SPRING MOUNTS ON FAN.
4. PROVIDE DDX-MPC CONTROLLER FOR CONTROL OF 2-STAGE COOLING/HEATING WITH HUMIDITY CONTROL OF CLIMADRY AND BACnet INTERFACE.
5. PROVIDE EXTENDED 5-YEAR WARRANTY ON COMPRESSOR, REFRIGERANT CIRCUIT AND CONTROL BOARD.
6. 2-WAY CONTROL VALVE SHALL BE INTERLOCKED WITH UNIT OPERATION TO OPEN WHEN COMPRESSOR IS ON.

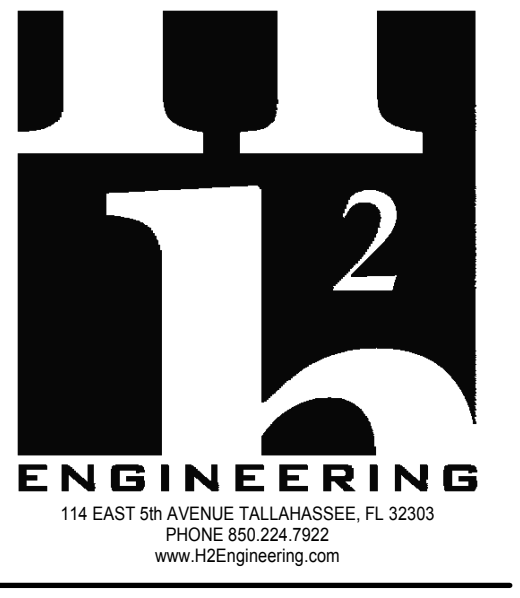
FAN SCHEDULE		
DESIGNATION	EF-1	
TYPE		INLINE
SERVICE		GENERAL EXHAUST
AIR QUANTITY	CFM	350
STATIC PRESSURE	IN. H2O	0.4
FAN SPEED	RPM	1217
FAN MOTOR	HP	1/6
FAN DRIVE		DIRECT
MOTOR SPEED	RPM	1550
ELECTRICAL CHARACTERISTICS	V/PH	120/1
BIRDSCREEN		PROVIDE
BACKDRAFT DAMPER		PROVIDE
DISCONNECT SWITCH-PREWired		PROVIDE
SOLID STATE SPEED CONTROLLER		PROVIDE
NOISE LEVEL	SONES	5.2
SPECIAL FEATURES	NOTES	1.2
MANUFACTURER		COOK
MODEL NUMBER		1005QN12D
DETAIL REFERENCE		CM501

NOTES:
1. PROVIDE INSULATED HOUSING.
2. PROVIDE SPRING HANGERS.

PUMP SCHEDULE					
PUMP DESIGNATION	CWP-1	CWP-2	CWP-3		
SERVICE	COOLING TOWER	BUILDING CW LOOP	BOILER PUMP		
VARIABLE SPEED DRIVE	NO	YES	NO		
CAPACITY	GPM	65	65	20	
STATIC HEAD	FT.	15	20	25	
TOTAL DYNAMIC HEAD	FT.	33	38	25	
EFFICIENCY	%	69	63	41	
SHUT-OFF HEAD	FT.	41	39	27	
SPEED	RPM	1760	1760	1760	
MOTOR HORSEPOWER	HP-BHP	1 - 0.8	1 1/2 - 1.0	1/2 - 0.3	
ELECTRICAL CHARACTERISTICS	V/PH	208/3	208/3	120/1	
MOTOR WINDING		FULL	FULL	FULL	
IMPELLER DIAMETER	IN.	6.2	6.2	5.0	
PUMP SEAL		MECHANICAL	MECHANICAL	MECHANICAL	
MANUFACTURER		TACO	TACO	TACO	
MODEL NUMBER		CH206	CH506	1915	
DETAIL REFERENCE		FM501	FM501	EM502	

PUMP SCHEDULE					
PUMP DESIGNATION	CWP-1	CWP-2	CWP-3		
SERVICE	COOLING TOWER	BUILDING CW LOOP	BOILER PUMP		
VARIABLE SPEED DRIVE	NO	YES	NO		
CAPACITY	GPM	65	65	20	
STATIC HEAD	FT.	15	20	25	
TOTAL DYNAMIC HEAD	FT.	33	38	25	
EFFICIENCY	%	69	63	41	
SHUT-OFF HEAD	FT.	41	39	27	
SPEED	RPM	1760	1760	1760	
MOTOR HORSEPOWER	HP-BHP	1 - 0.8	1 1/2 - 1.0	1/2 - 0.3	
ELECTRICAL CHARACTERISTICS	V/PH	208/3	208/3	120/1	
MOTOR WINDING		FULL	FULL	FULL	
IMPELLER DIAMETER	IN.	6.2	6.2	5.0	
PUMP SEAL		MECHANICAL	MECHANICAL	MECHANICAL	
MANUFACTURER		TACO	TACO	TACO	
MODEL NUMBER		CH206	CH506	1915	
DETAIL REFERENCE		FM501	FM501	EM502	

NOTES



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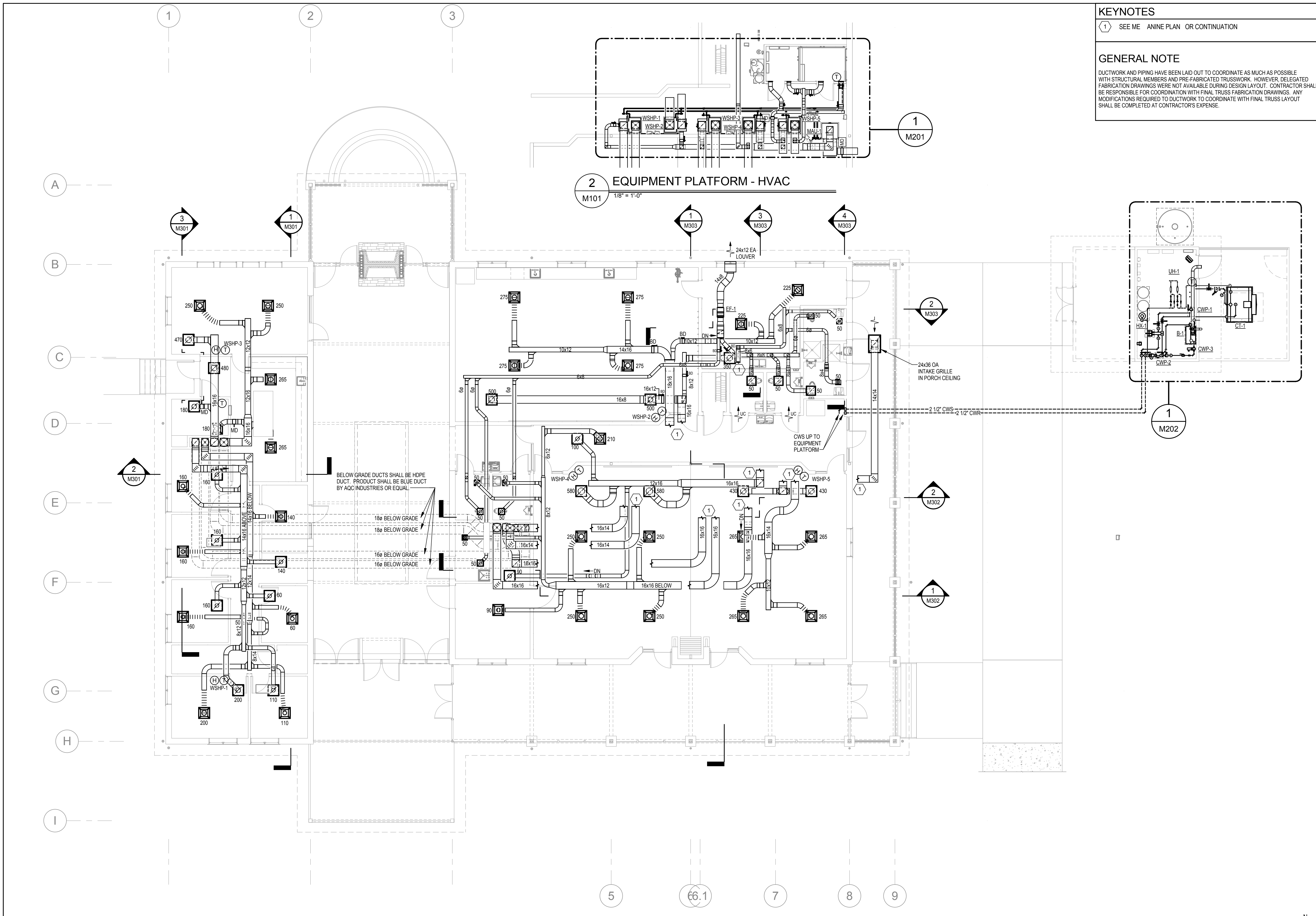
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225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978



KEYNOTES

1 SEE ME ANINE PLAN OR CONTINUATION

GENERAL NOTE

DUCTWORK AND PIPING HAVE BEEN LAID OUT TO COORDINATE AS MUCH AS POSSIBLE WITH STRUCTURAL MEMBERS AND PRE-FABRICATED TRUSSWORK. HOWEVER, DELEGATED FABRICATION DRAWINGS WERE NOT AVAILABLE DURING DESIGN LAYOUT. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH FINAL TRUSS FABRICATION DRAWINGS. ANY MODIFICATIONS REQUIRED TO DUCTWORK TO COORDINATE WITH FINAL TRUSS LAYOUT SHALL BE COMPLETED AT CONTRACTOR'S EXPENSE.

NOTES

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BARNETT FRONCZAK BARLOWE ARCHITECTS

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30 APRIL 2014
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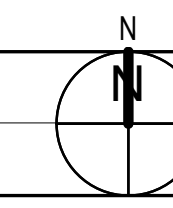
LOOR PLAN - AC

0

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1 FLOOR PLAN - HVAC
 M101 1/8" = 1'-0"

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KEYNOTES

1 SEE LOOR PLAN OR CONTINUATION

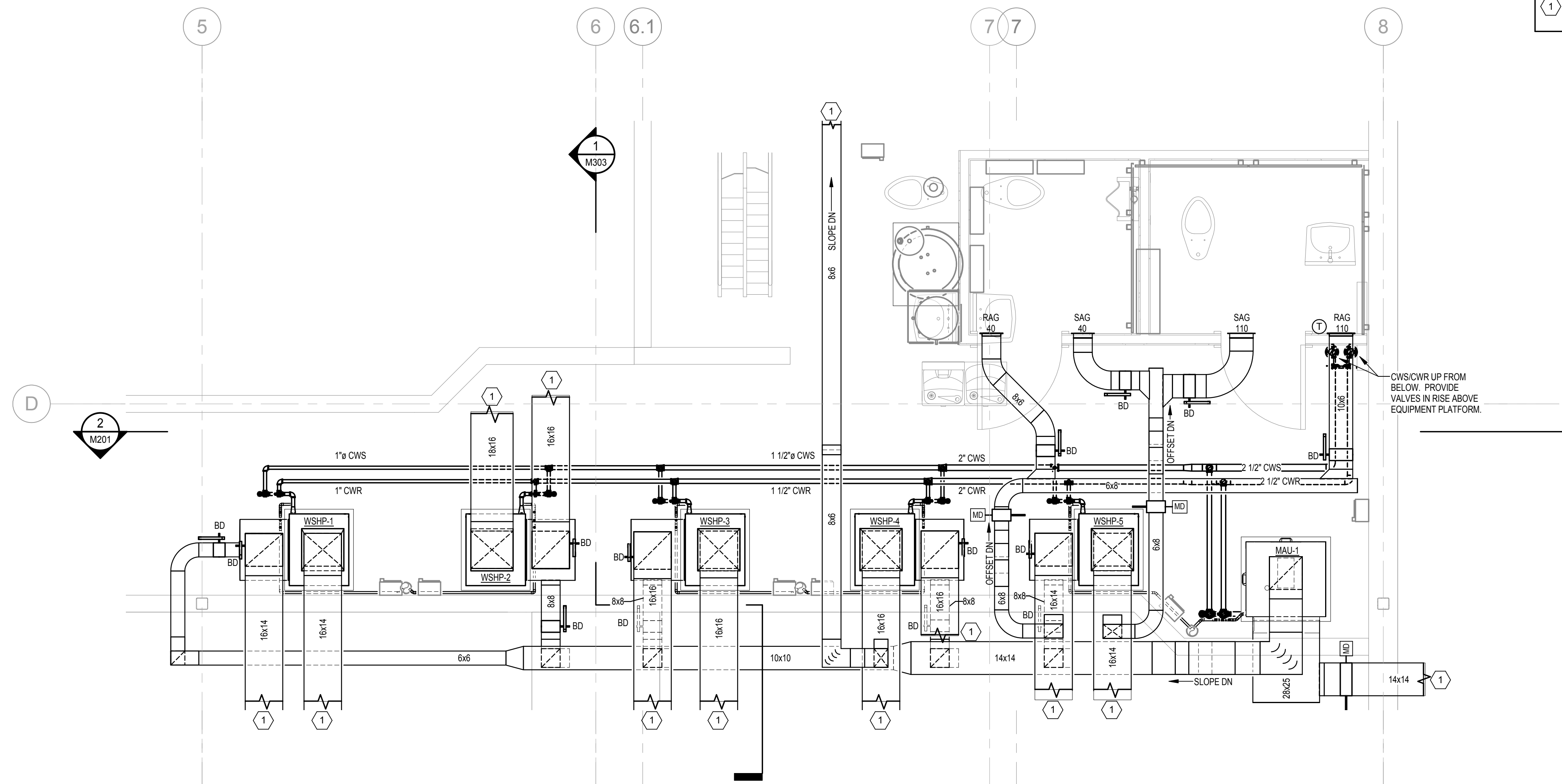
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**BARNETT
FRONCZAK
BARLOWE
ARCHITECTS**



1 ENLARGED EQUIPMENT PLATFORM - HVAC
 M201 3/8" = 1'-0"

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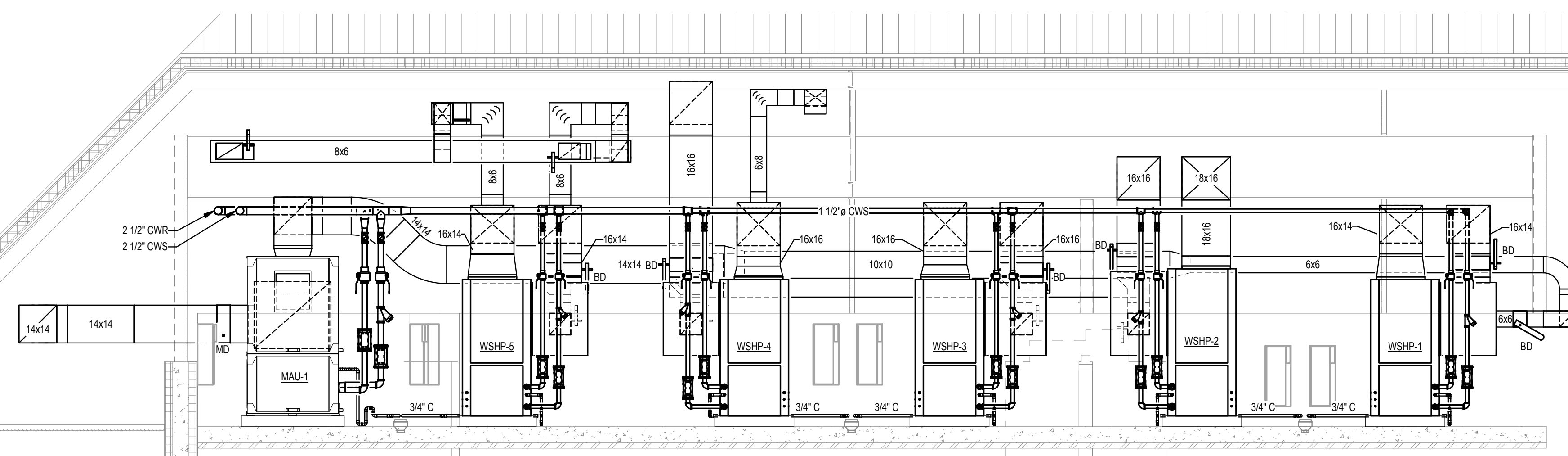
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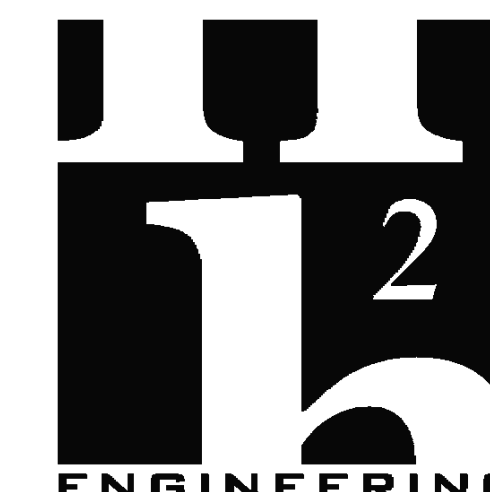
ENLAR ED PLANS -
 AC

0

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2 EQUIPMENT PLATFORM SECTION - HVAC
 M201 3/8" = 1'-0"



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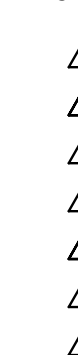
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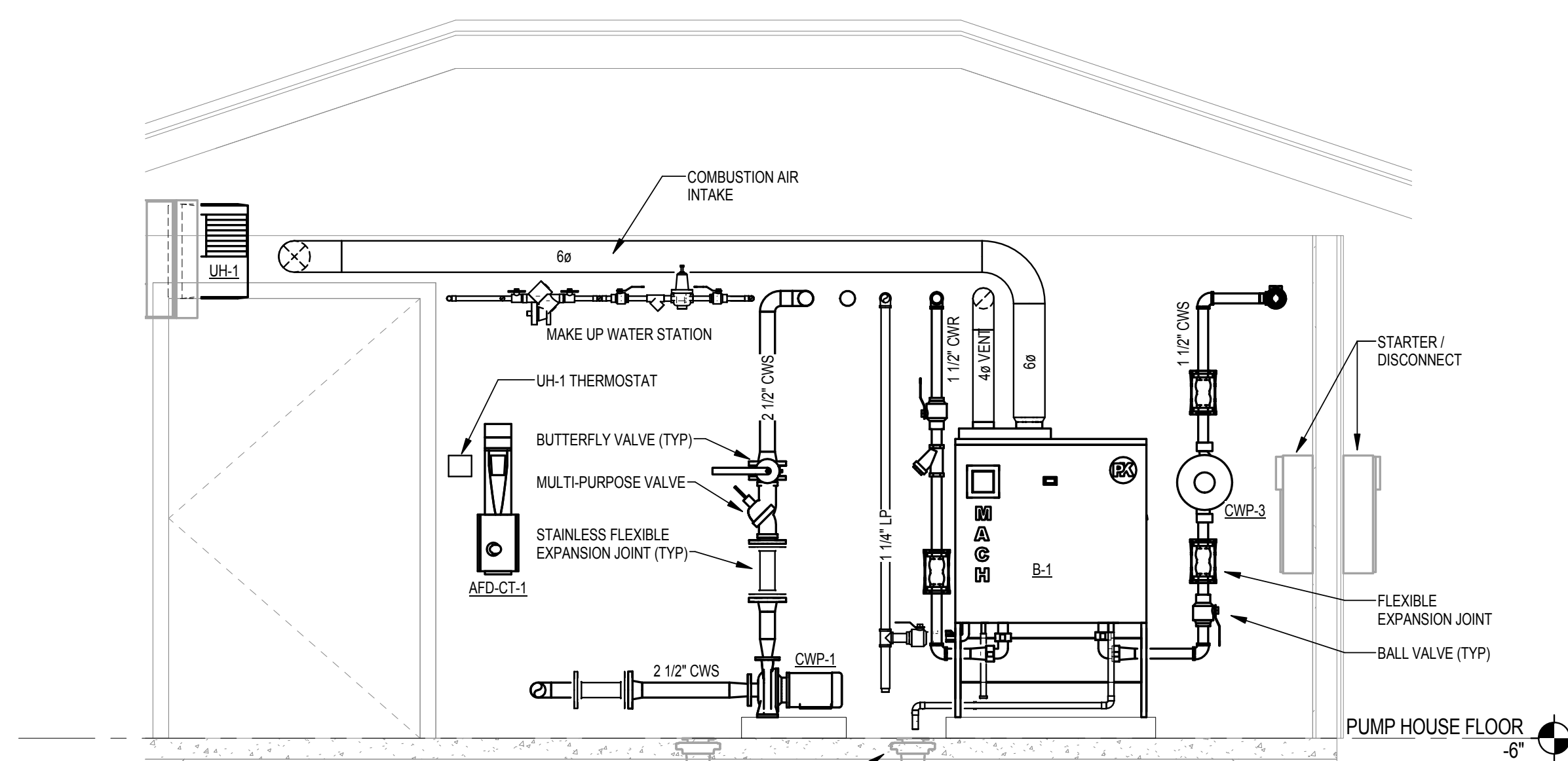
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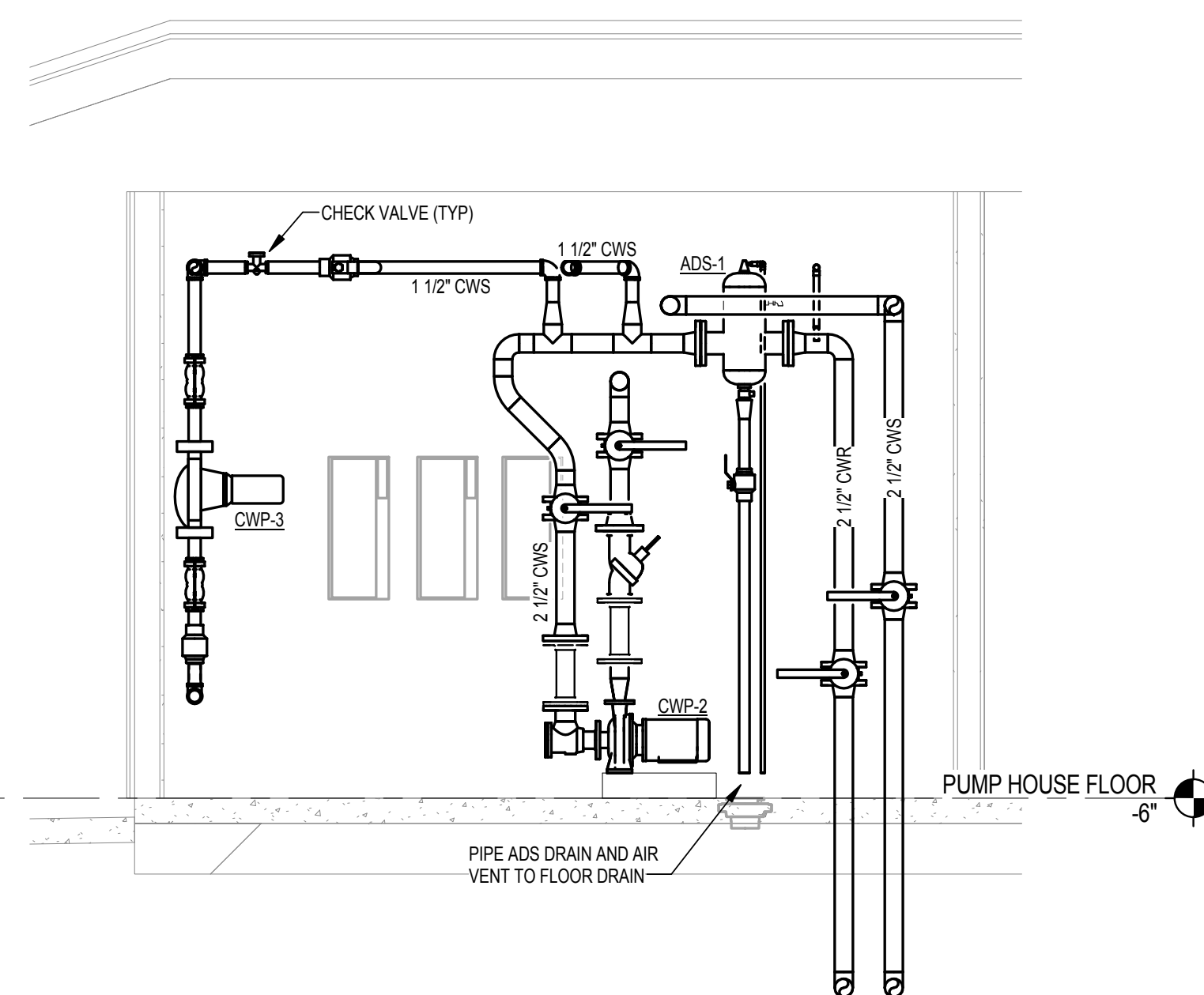
ENLARGED PLANS -
 AC

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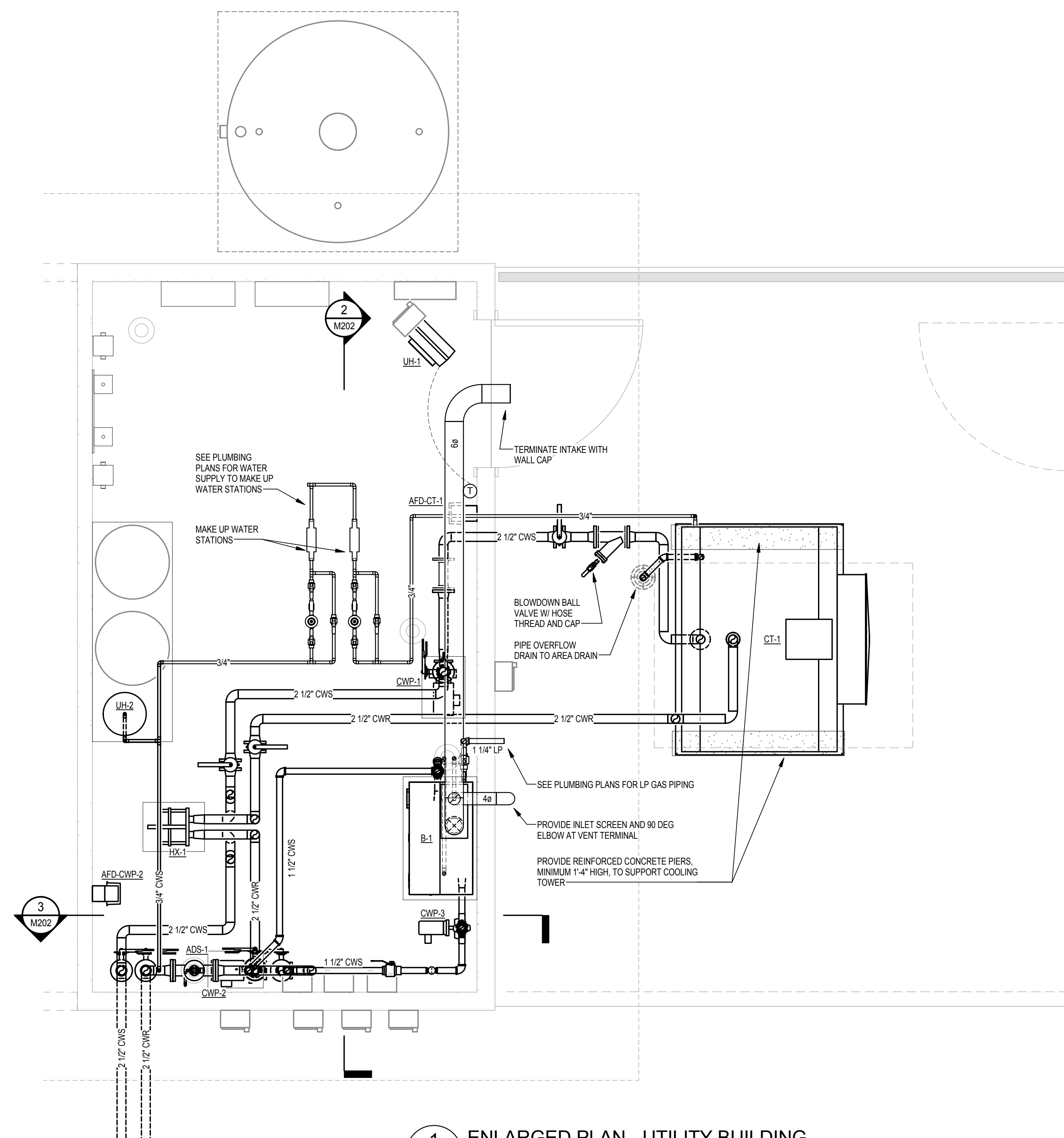
2 UTILITY BUILDING EAST SECTION

M202 1/2" = 1'-0"



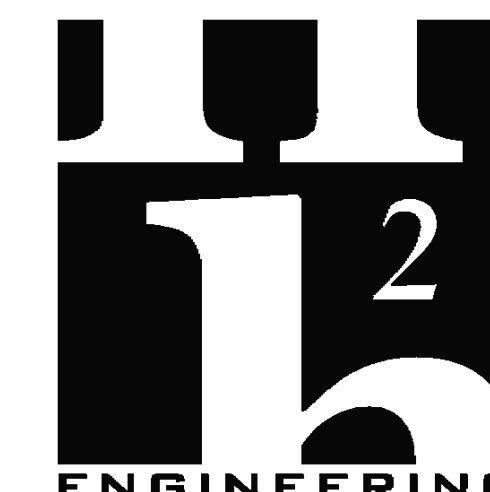
3 UTILITY BUILDING SOUTH SECTION

M202 1/2" = 1'-0"



1 ENLARGED PLAN - UTILITY BUILDING

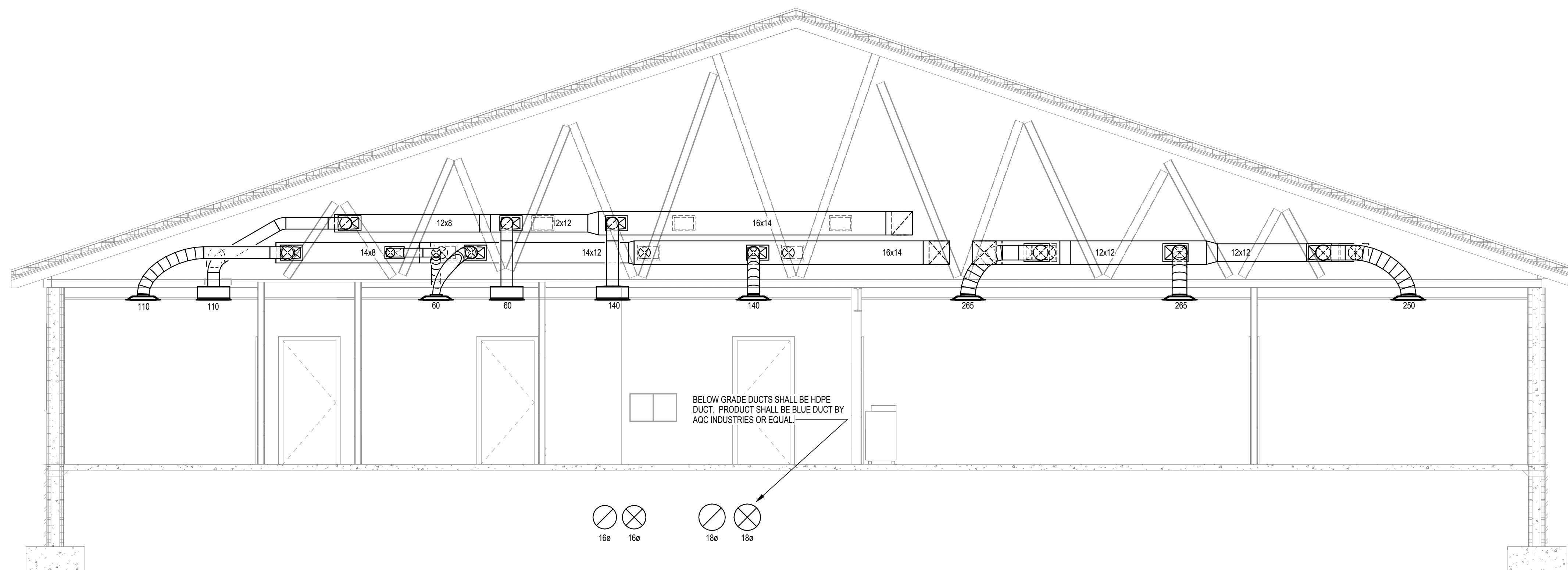
M202 1/2" = 1'-0"



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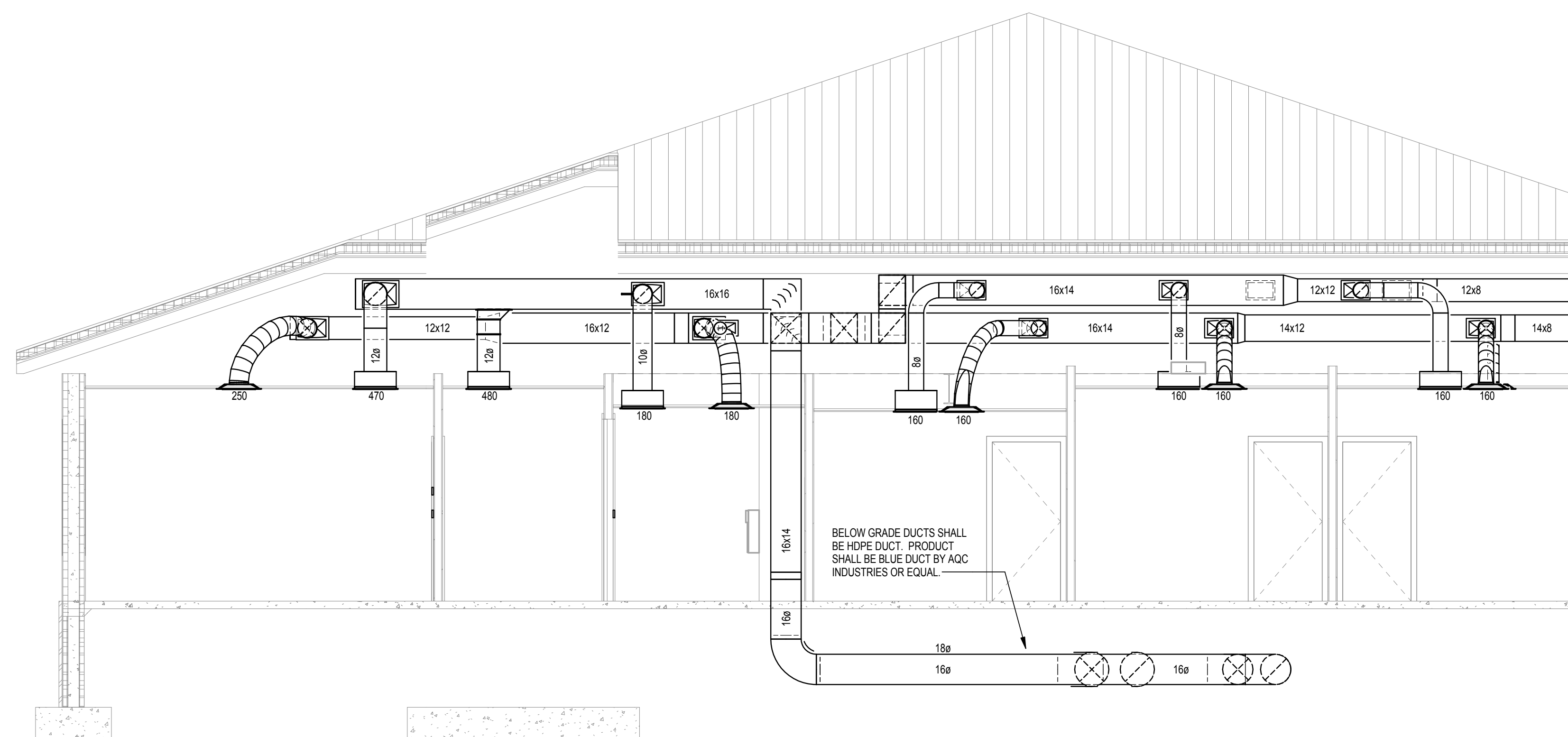
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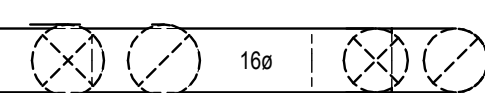
BELOW GRADE DUCTS SHALL BE HDPE DUCT. PRODUCT SHALL BE BLUE DUCT BY AQC INDUSTRIES OR EQUAL



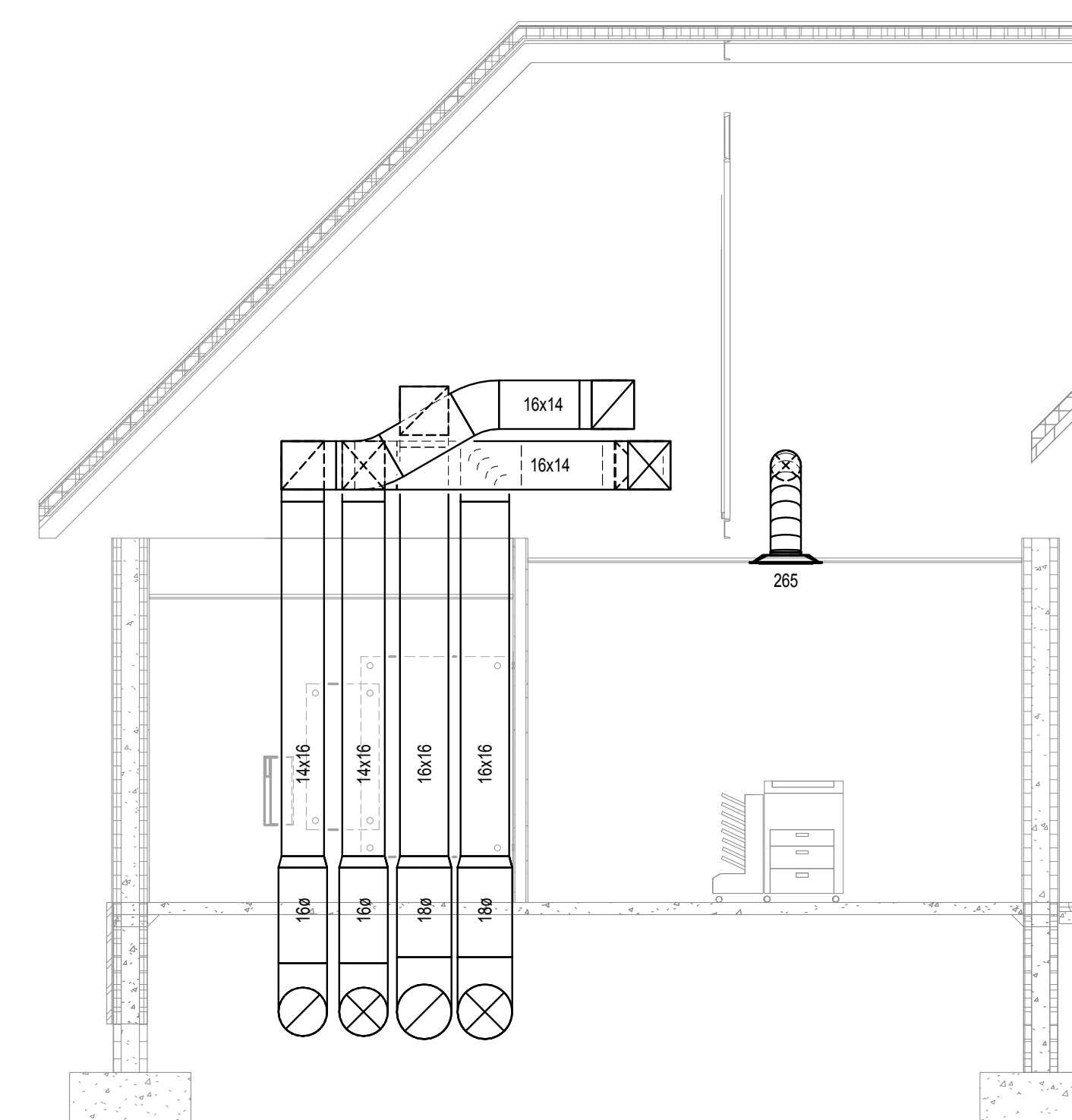
1 WEST SECTION - ADMIN
 M301 1/4" = 1'-0"



BELOW GRADE DUCTS SHALL BE HDPE DUCT. PRODUCT SHALL BE BLUE DUCT BY AQC INDUSTRIES OR EQUAL



3 EAST SECTION - ADMIN
 M301 1/4" = 1'-0"



2 SECTION - DUCT CHASE
 M301 1/4" = 1'-0"

14220

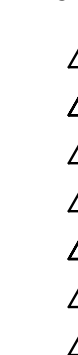
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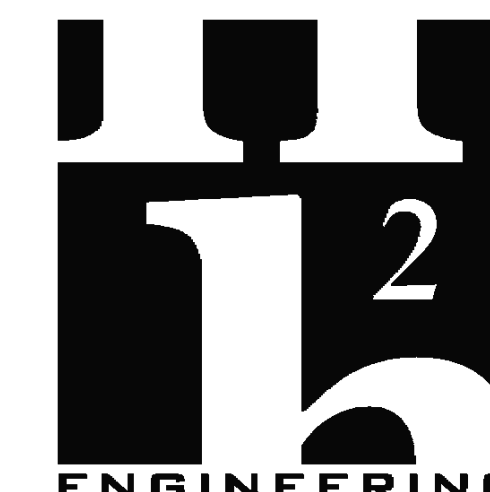
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SECTIONS - AC

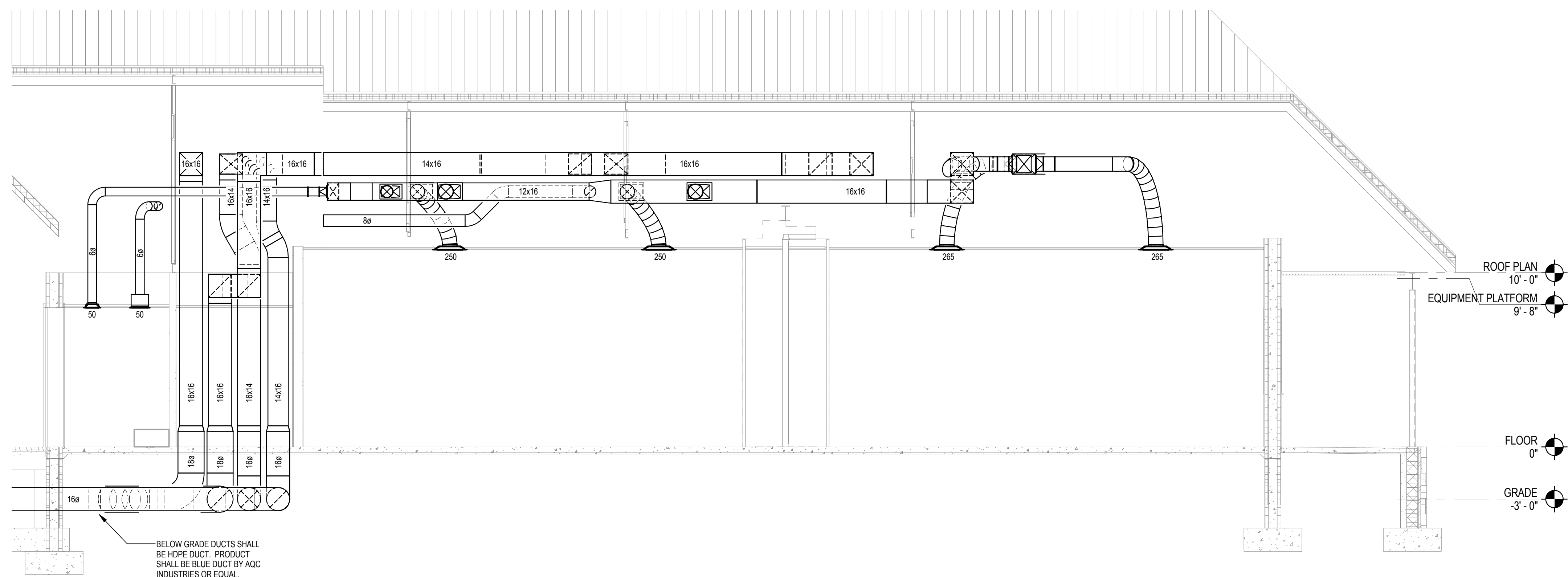
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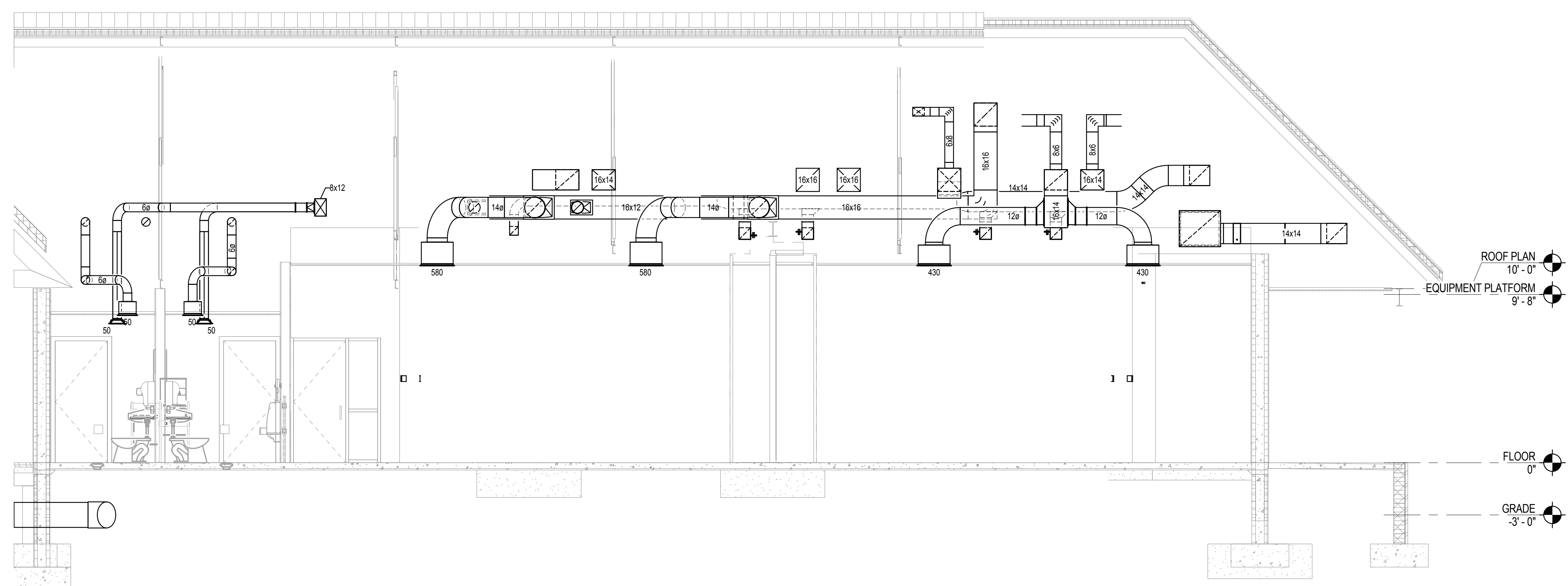
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1 NORTH SECTION - MULTI-PURPOSE
 M302 1/4" = 1'-0"



2 NORTH SECTION - MULTI-PURPOSE
 M302 1/4" = 1'-0"

14220

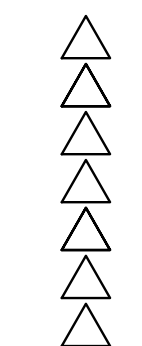
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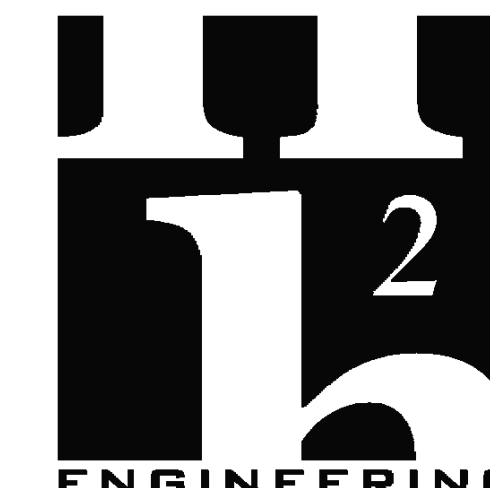
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SECTIONS - AC

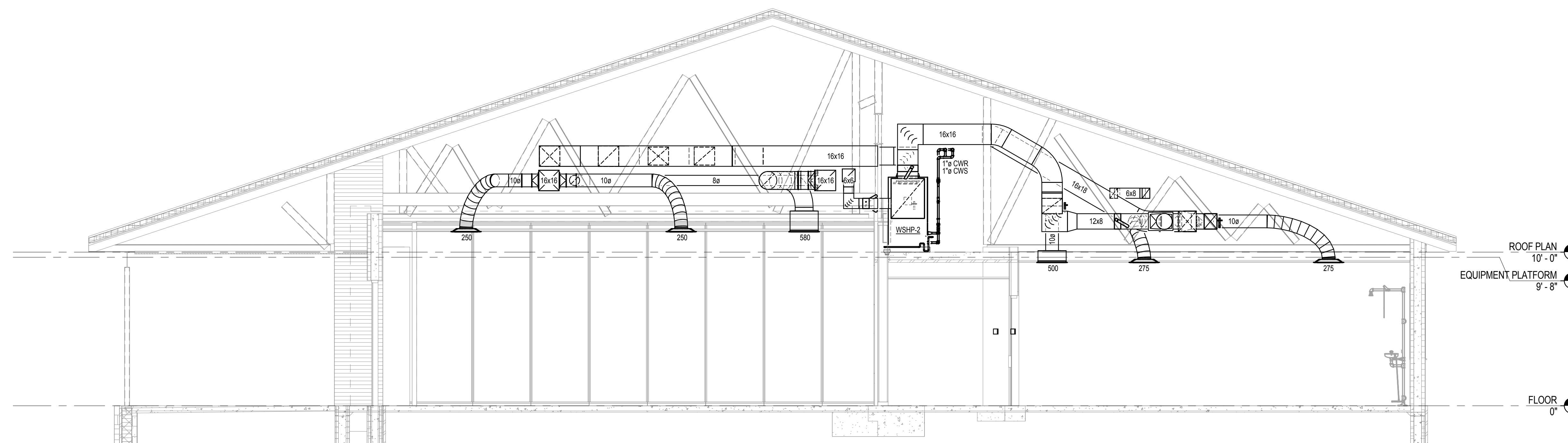
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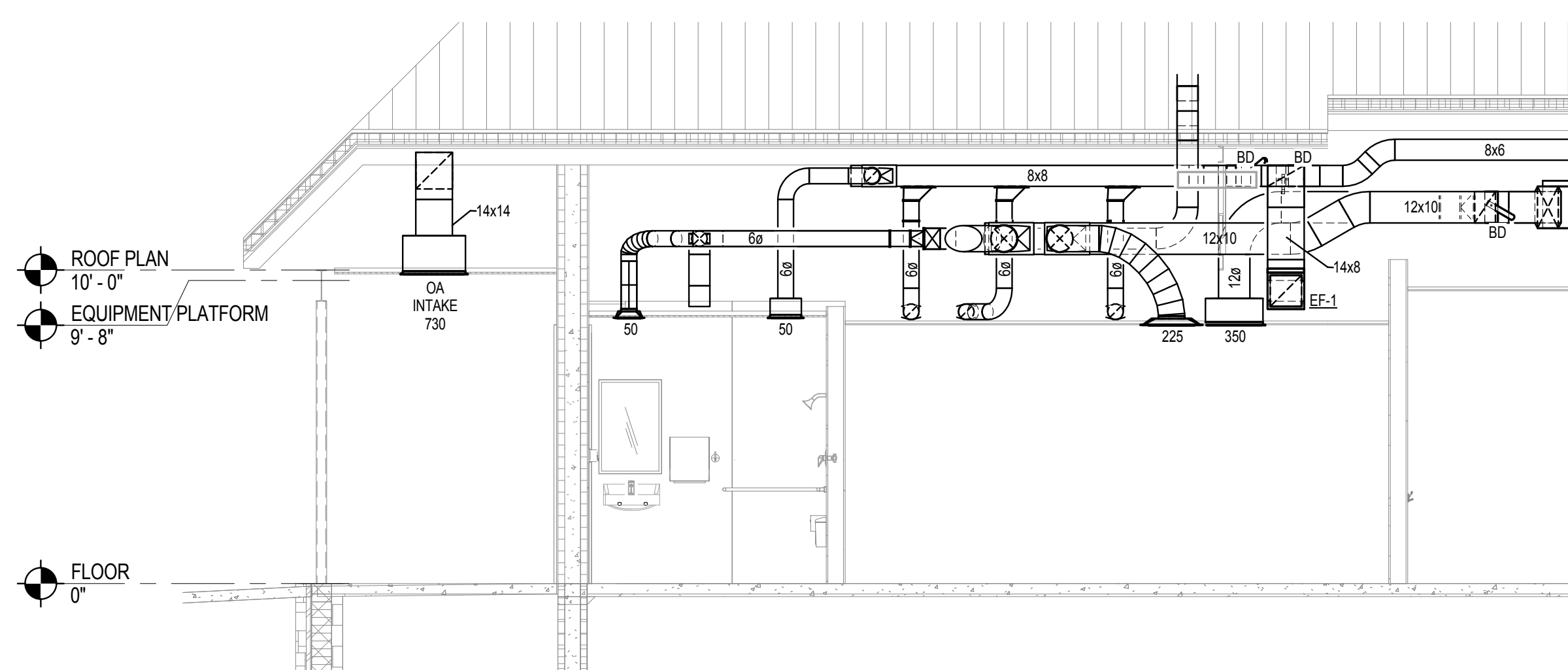
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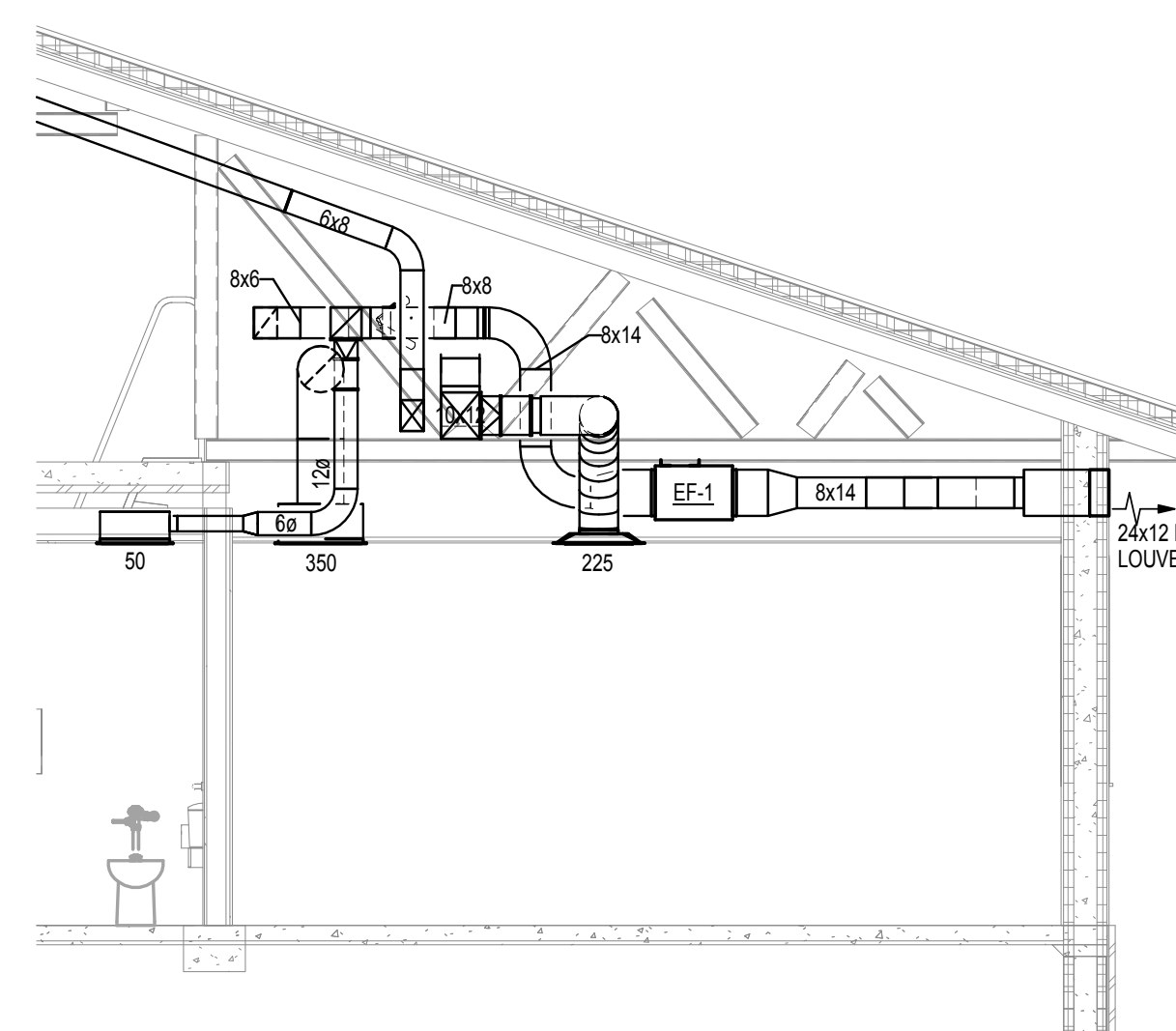
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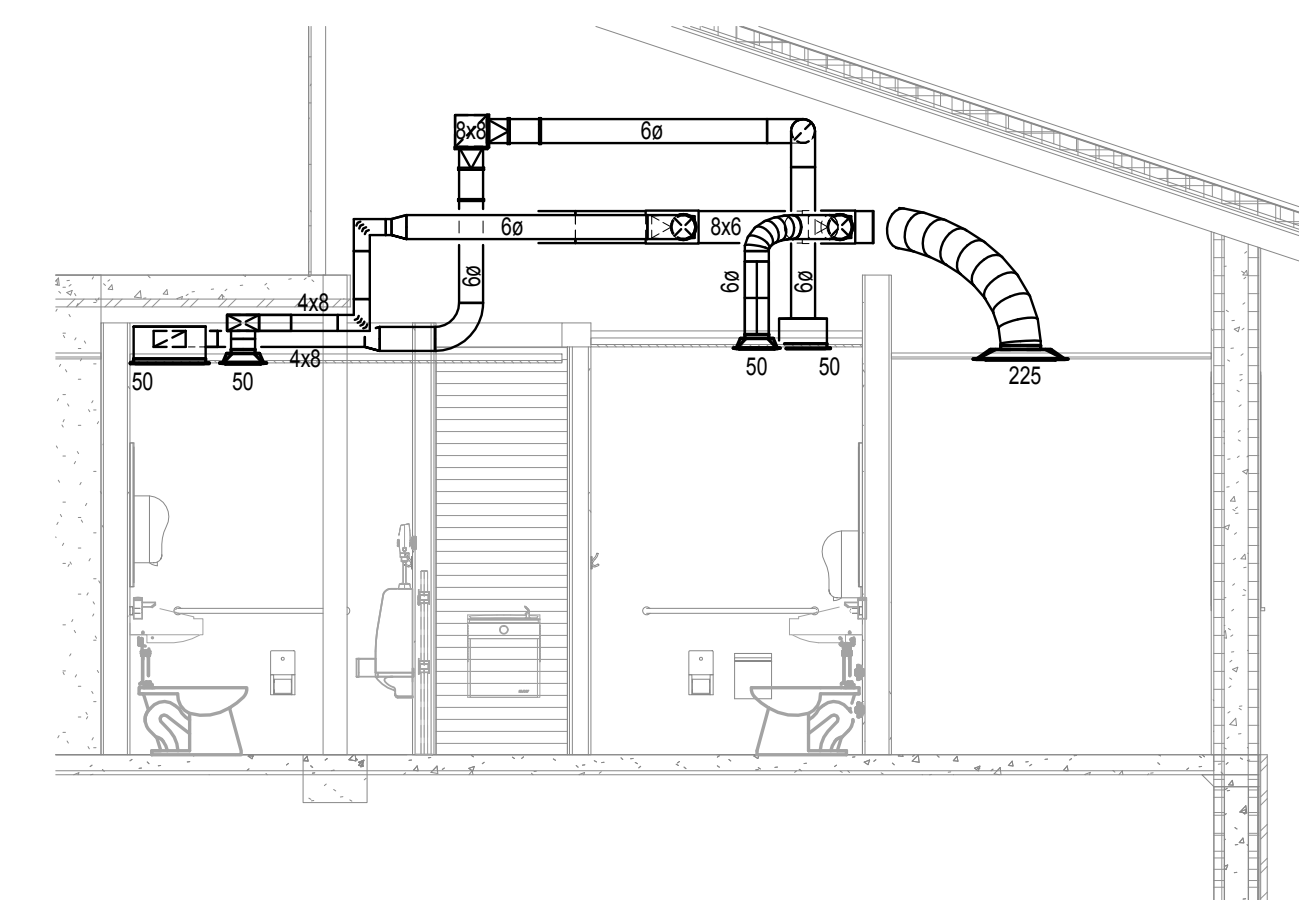
1 WEST SECTION - CLASSROOM WING
 M303 1/4" = 1'-0"



2 SOUTH SECTION - LAB PREP
 M303 1/4" = 1'-0"



3 WEST SECTION - LAB PREP
 M303 1/4" = 1'-0"



4 WEST SECTION - EXTERIOR TOILETS
 M303 1/4" = 1'-0"

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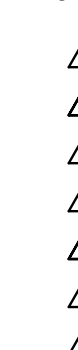
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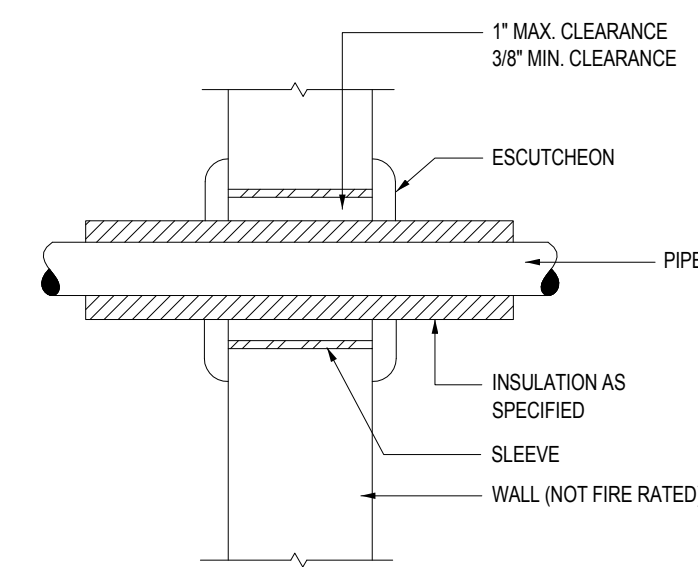
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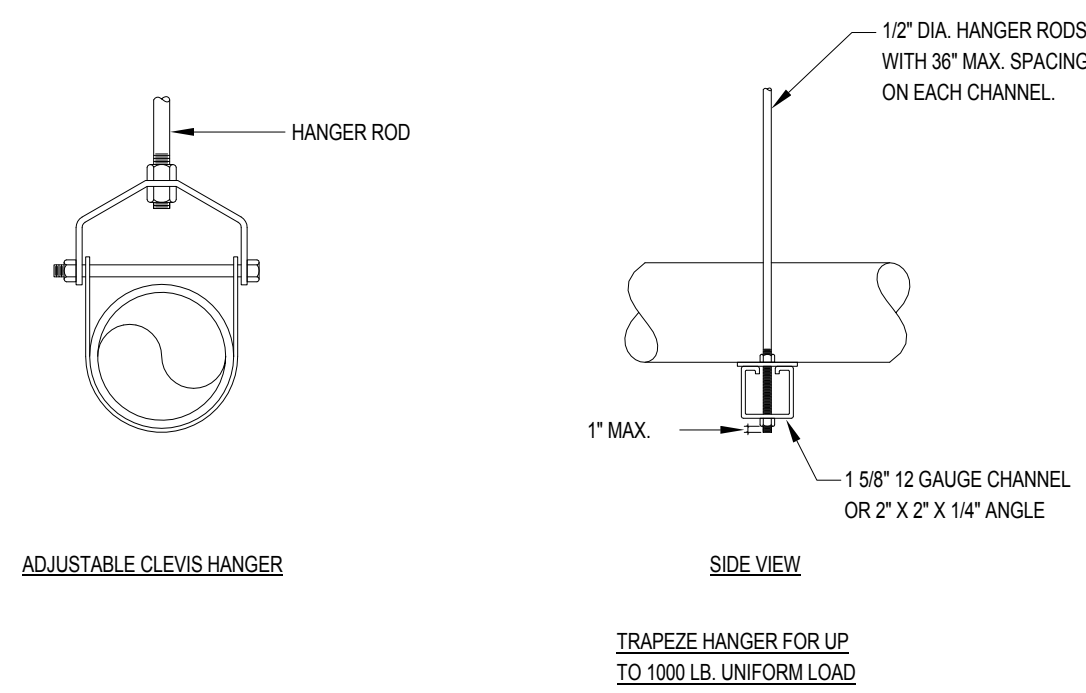
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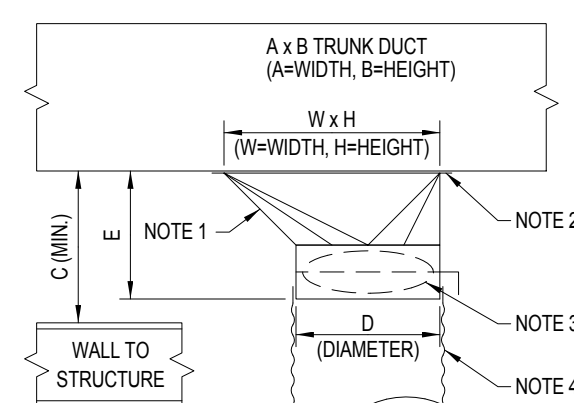
NON-FIRE RATED WALL

G TYPICAL PIPE PENETRATION OF NON-FIRE RATED WALL

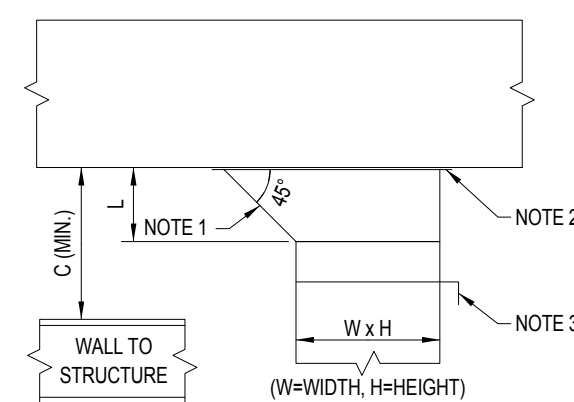


NOTES:
1. SEE SPECIFICATIONS FOR SPACING OF HANGERS.

H TYPICAL PIPE HANGERS



ROUND DUCT



RECTANGULAR DUCT

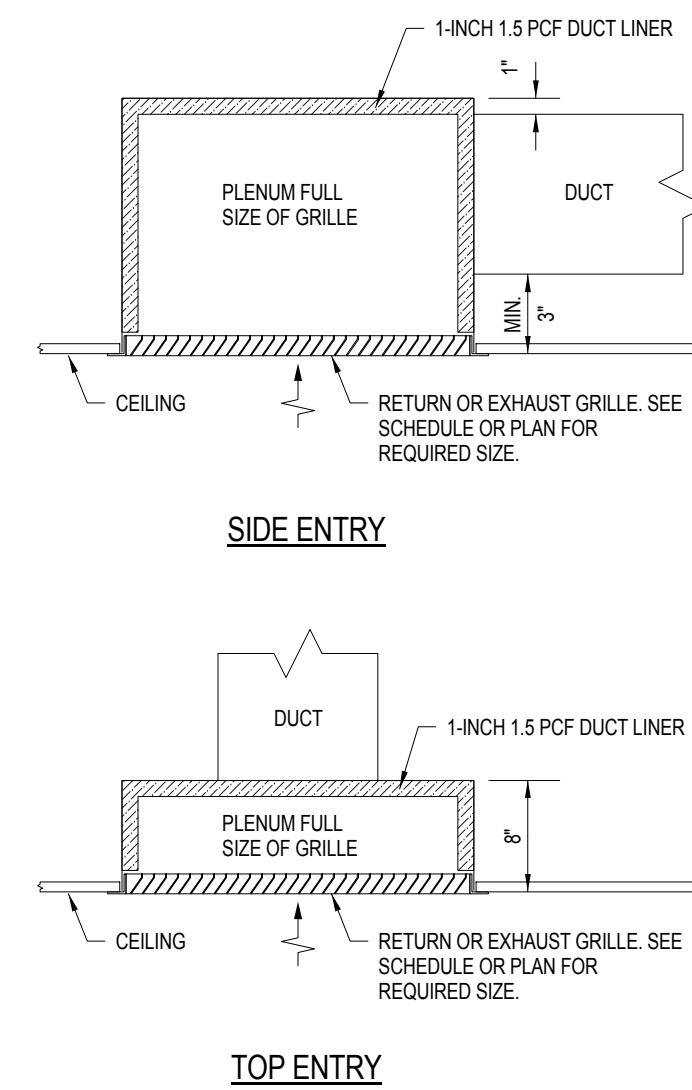
D	E (NOTE 5)	WxH (NOTE 5)	TRUNK DUCT HEIGHT (8 MIN.)	C	
				NO FIRE DAMPER	WITH FIRE DAMPER
6	8.5	12 x 6	8	9	12
8	8.5	12 x 6	8	9	12
10	9.5	16 x 6.75	10	10	13
12	10.5	18 x 8.5	12	11	14
14	10.5	20 x 9.5	12	11	14
16	12	24 x 12	14	13	16

DIMENSIONS BASED ON CROWN PRODUCTS CO., INC.

L = W/4 (4" MIN.)
H = B/2 (MAX.)
C = L+4 (WITH FIRE DAMPER)
C = L+2 (WITHOUT FIRE DAMPER)

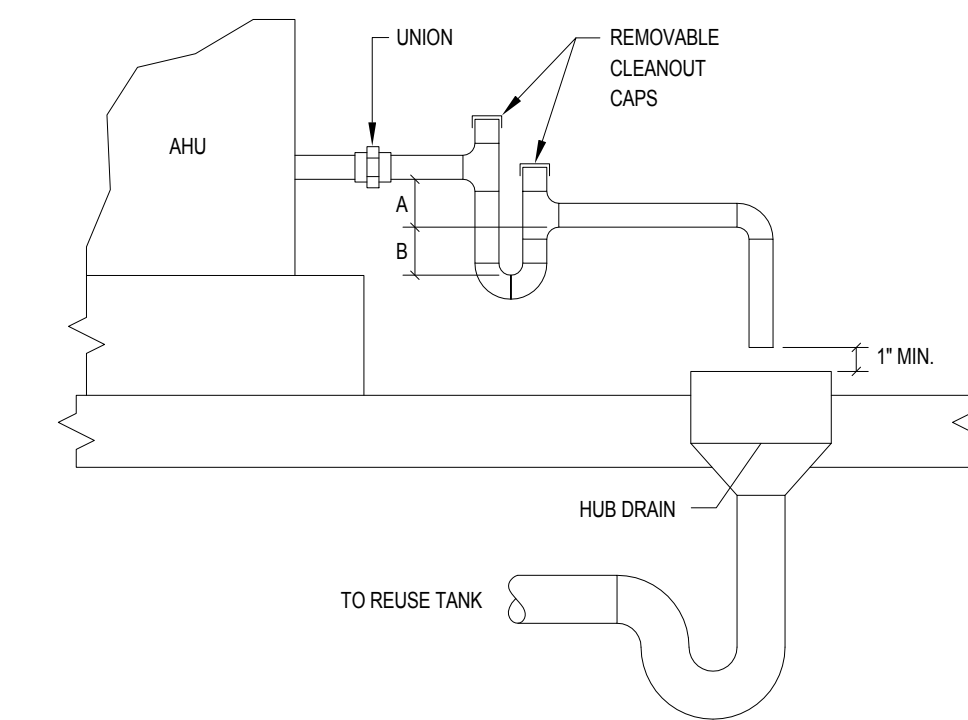
NOTES:
1. 45° ENTRY.
2. 1" WIDE FLANGE WITH GASKET SEAL AROUND ENTIRE PERIMETER.
3. PROVIDE MANUAL BALANCING DAMPER. OPERATOR SHALL PENETRATE INSULATION.
4. USE ROUND TYPE TAKE-OFF FOR SUPPLY AIR TO NOT MORE THAN ONE TERMINAL.
5. WHEREVER THE DEPTH OF THE TRUNK DUCT IS LESS THAN THE ROUND RUNOUT DUCT DIAMETER, PROVIDE TRANSITION FITTING OF EQUIVALENT AREA TO THE ROUND DUCT.

J TYPICAL DUCT TAKE-OFF FITTINGS



NOTES:
1. INSTALL BLADES OF GRILLE SO SIGHT LINE INTO PLENUM IS OBSCURED FROM ROOM.
2. PROVIDE APPROPRIATE MOUNTING HARDWARE FOR GRILLE TO ACCOMMODATE CEILING TYPE.

D RETURN OR EXHAUST CEILING GRILLE

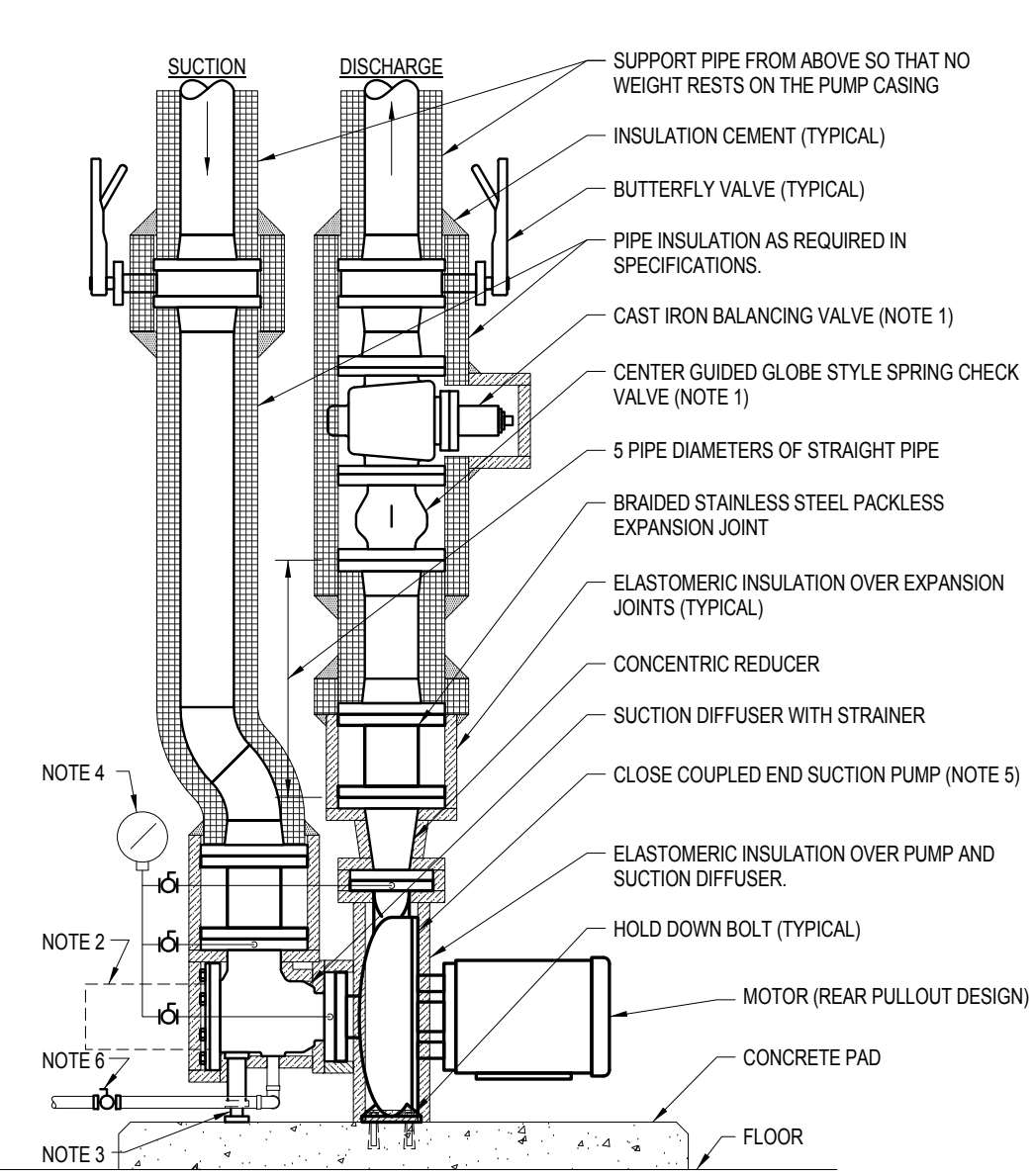


NOTES:
1. DRAIN LINE SHALL BE AT LEAST THE SAME SIZE AS THE CONNECTION ON THE DRAIN PAN (1" MIN.)
2. DRAIN LINE SHALL SLOPE 1/8" PER FOOT (MIN.)
3. SEE SPECIFICATIONS FOR PIPE AND INSULATION MATERIALS.

UNIT TYPE	A	B
DRAW-THRU	X PLUS 2"	X
BLOW-THRU	1" MIN.	2X

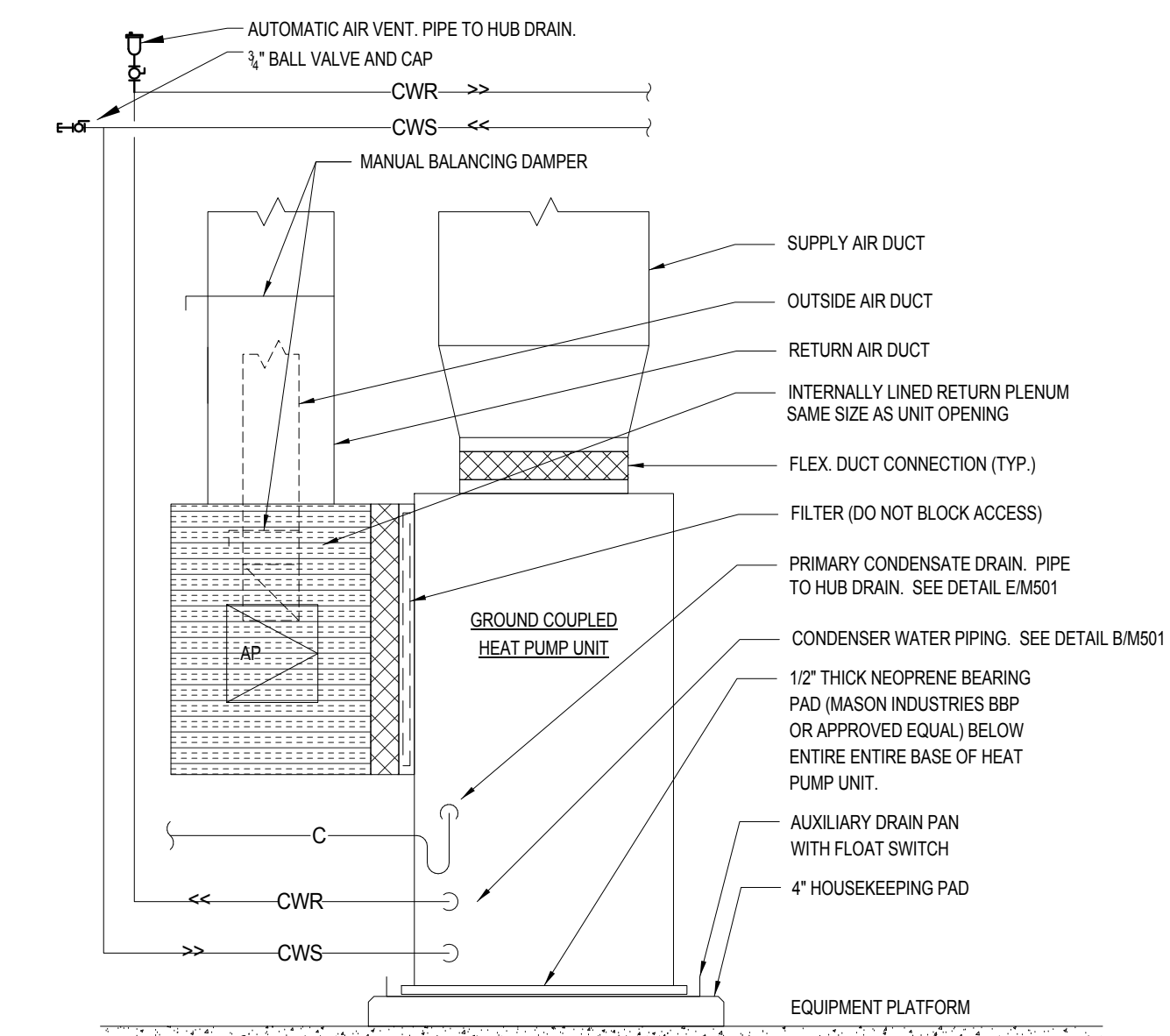
WHERE X=STATIC PRESSURE IN PAN

E AHU CONDENSATE DRAIN

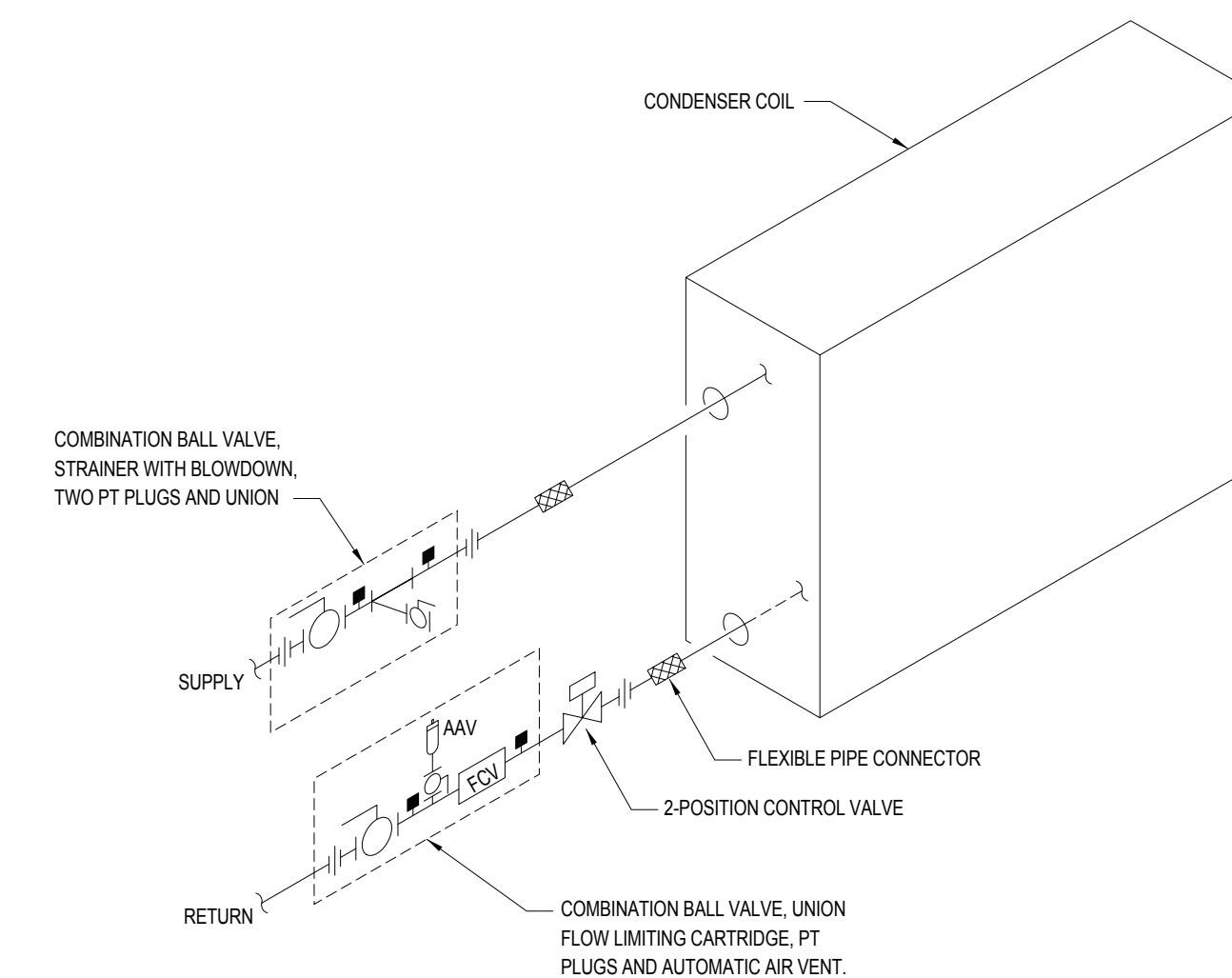


NOTES:
1. IN LIEU OF DISCHARGE CHECK VALVE AND BALANCING VALVE, INSTALLER MAY SUBSTITUTE A TRIPLE-OUTY VALVE. BUTTERFLY VALVE SHALL REMAIN FOR ISOLATION.
2. PROVIDE ADEQUATE CLEARANCE FOR STRAINER PULL.
3. ADJUSTABLE PIPE SUPPORT.
4. PRESSURE GAUGE WITH SNUBBER AND ISOLATING BALL VALVES. IDENTIFY EACH VALVE: "PUMP SUCTION", "STRAINER INLET", "STRAINER OUTLET".
5. PROVIDE ENGRAVED PLASTIC NAMEPLATE FOR PUMP LISTING PUMP IDENTIFICATION NUMBER, FLOW RATE (GPM), HEAD PRESSURE (FEET), IMPELLER DIAMETER (INCHES), HORSEPOWER, VOLTAGE, PHASE, MANUFACTURER AND MODEL NUMBER. MOUNT NAMEPLATE ON PUMP MOTOR.
6. BLOWDOWN BALL VALVE (NORMALLY CLOSED). ROUTE DRAIN LINE TO FLOOR DRAIN IN ROOM.

F CLOSE-COUPLED END SUCTION PUMP

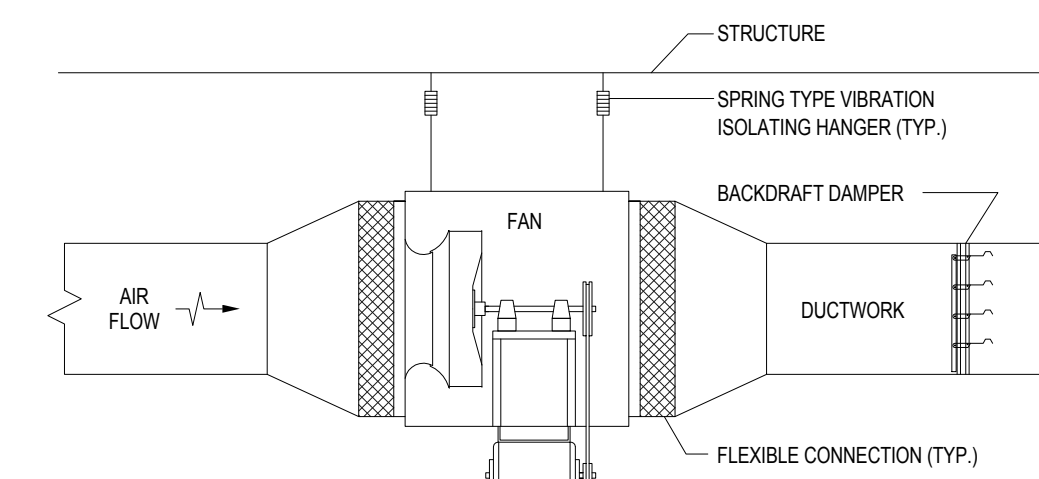


A VERTICAL GROUND COUPLED HEAT PUMP UNIT



NOTES:
1. GCMU-1 SHALL BE PROVIDED WITH A 3-WAY, 2-POSITION CONTROL VALVE FOR BYPASS PURPOSES.

B CONDENSER COIL PIPING



NOTES:
1. INSTALL TO ALLOW ACCESS FOR MAINTENANCE.
2. PROVIDE DIRECT DRIVE FAN WHERE SCHEDULED.

C IN-LINE FAN

NOTES



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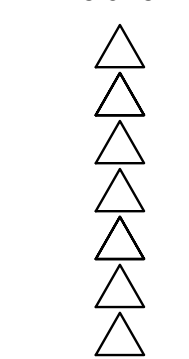
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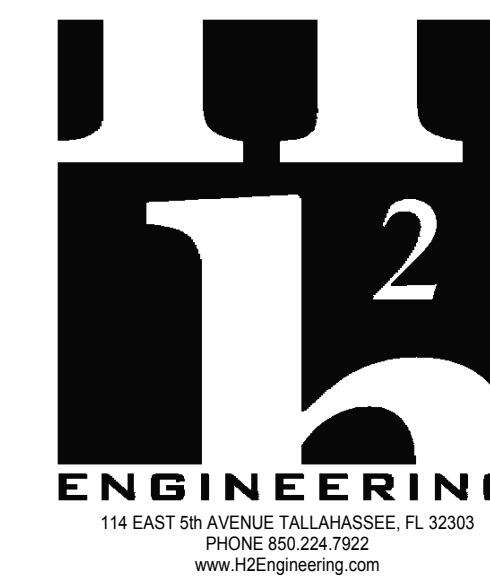


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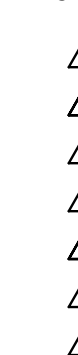
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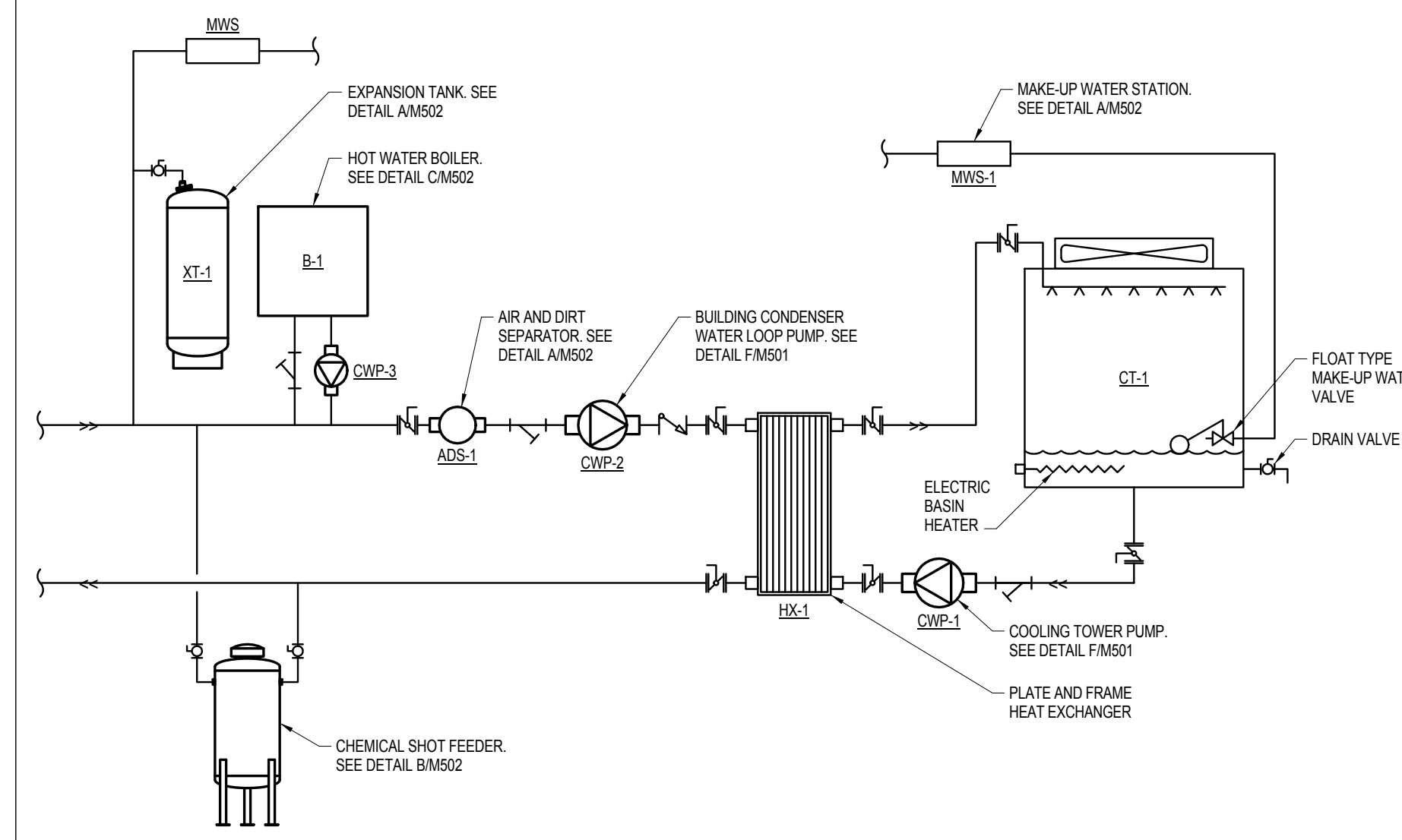
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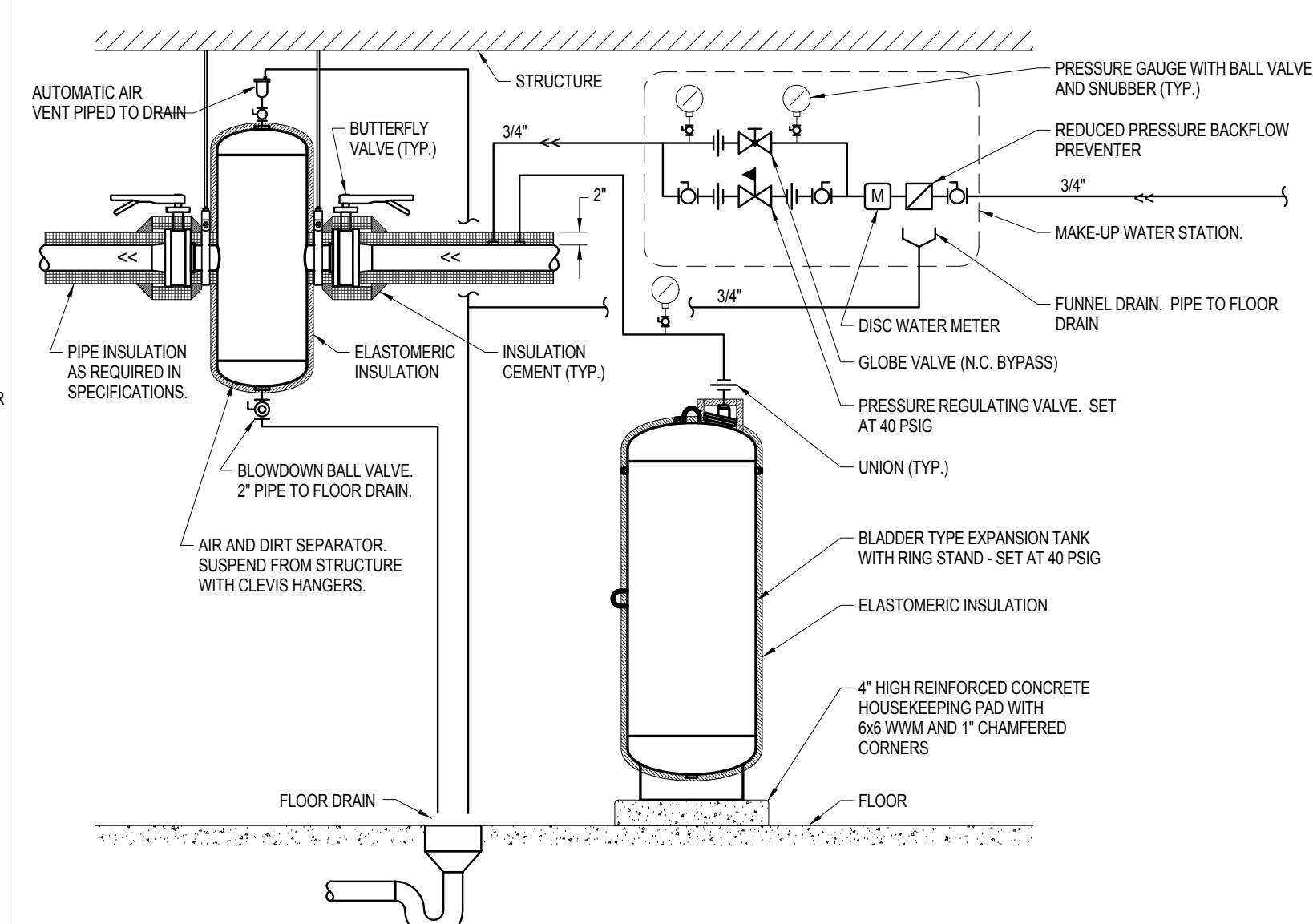
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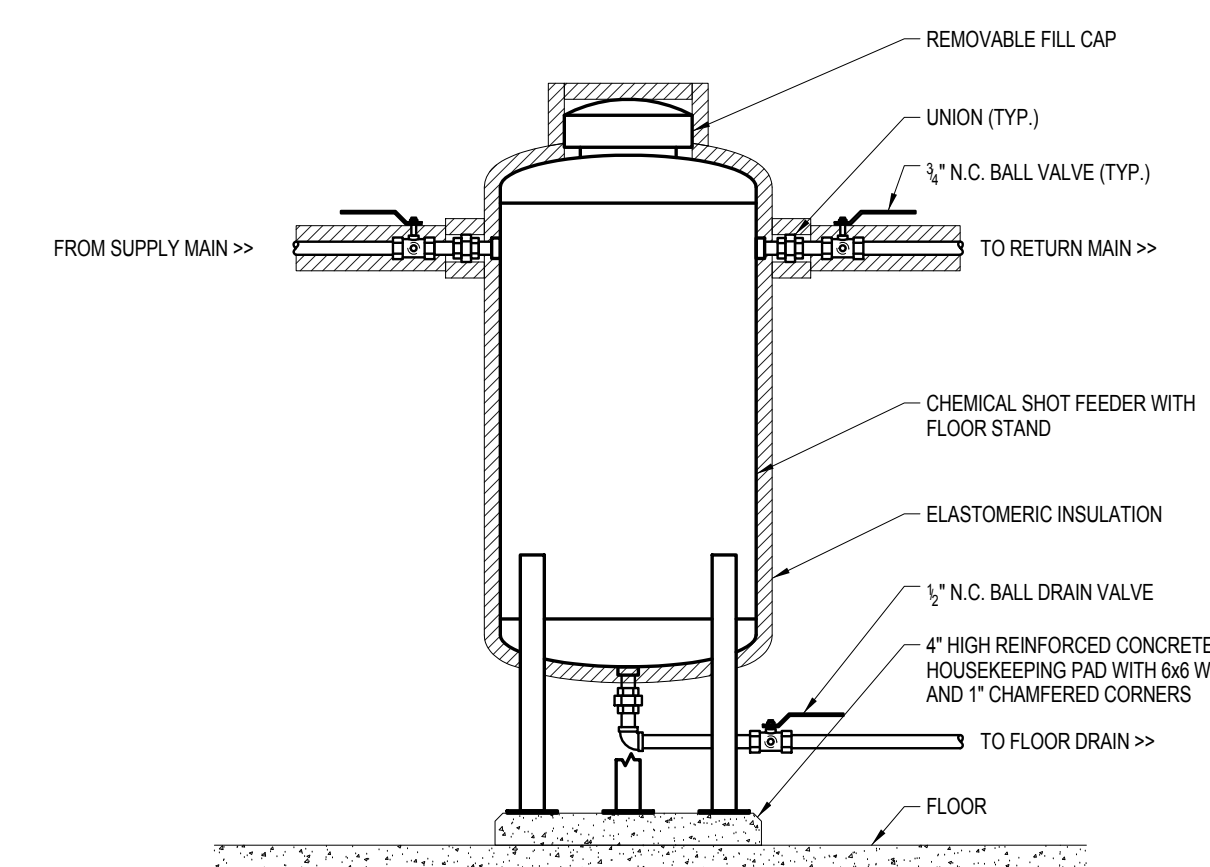
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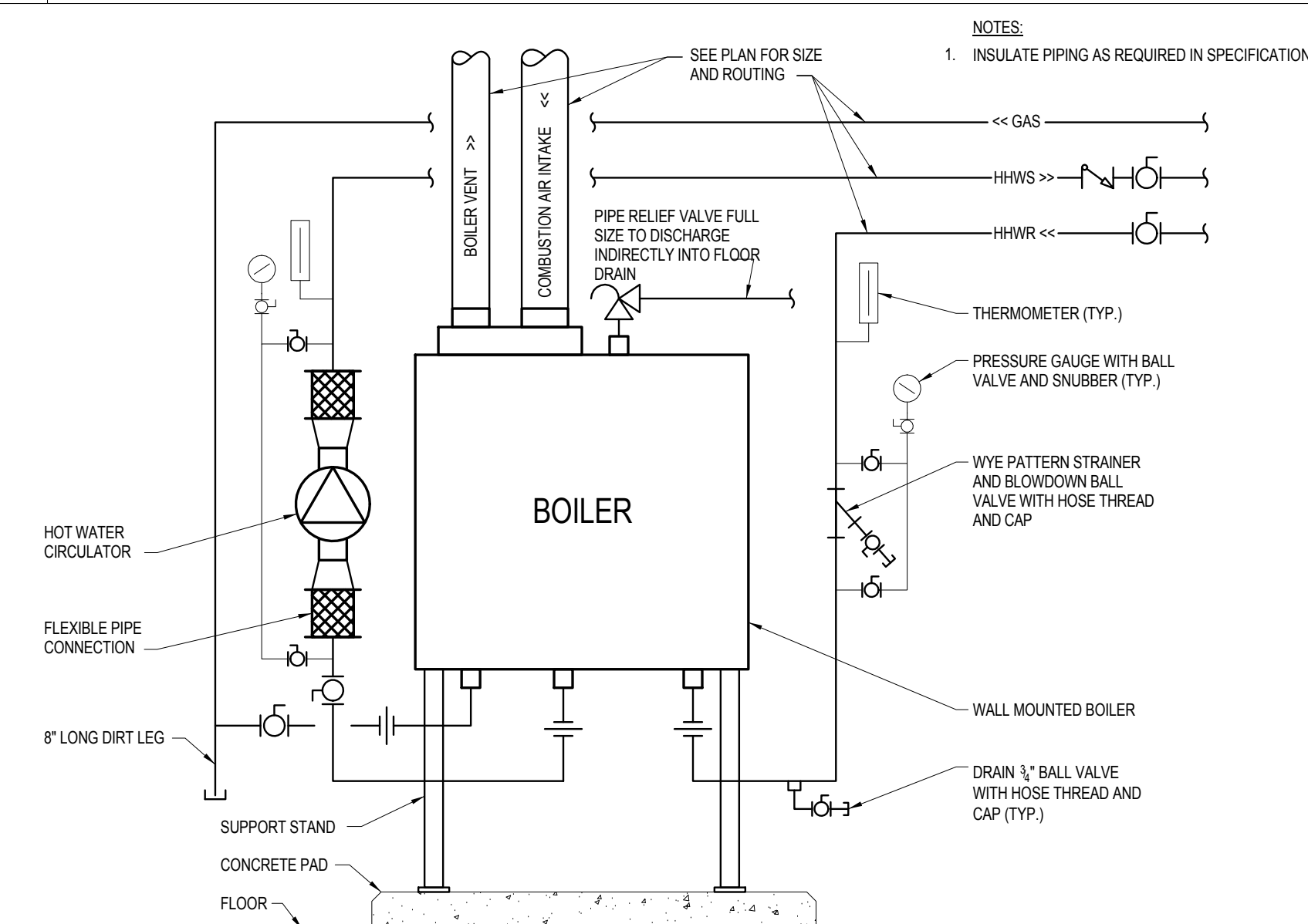
D CONDENSER WATER PIPING SCHEMATIC



A AIR AND DIRT SEPARATOR / EXPANSION TANK / MAKE-UP WATER STATION

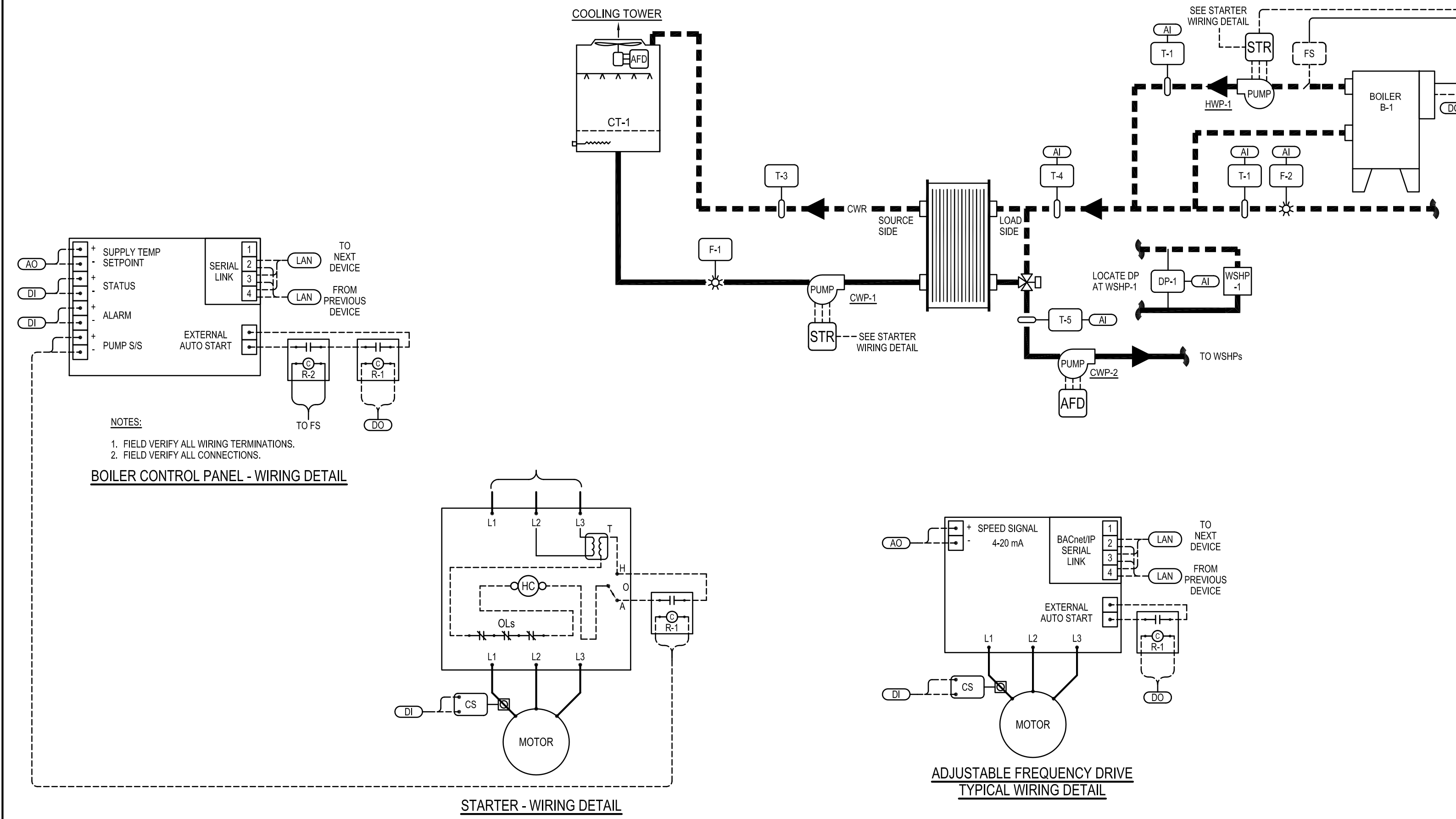


B CHEMICAL SHOT FEEDER



C HOT WATER BOILER

CONTROLS - CONDENSER WATER SYSTEM



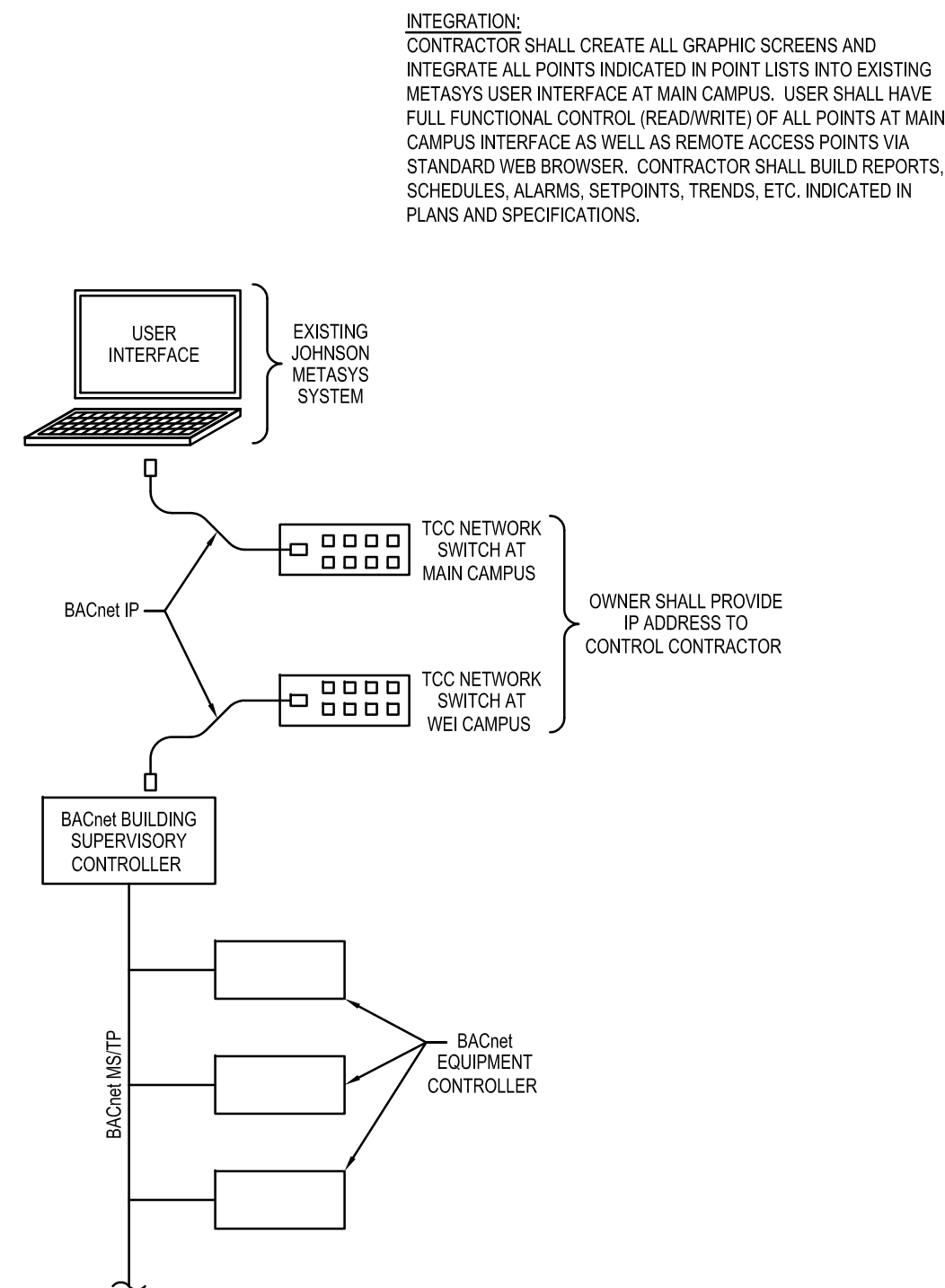
ABBREVIATIONS

- AI ANALOG INPUT
- AO ANALOG OUTPUT
- AVG AVERAGING SENSOR
- BI BINARY INPUT
- BO BINARY OUTPUT
- C RELAY COIL
- C/C COOLING COIL
- CWP CONDENSER WATER PUMP
- CNT CONTACTOR
- CS CURRENT SWITCH
- D DAMPER
- DP DIFFERENTIAL PRESSURE SENSOR / TRANSMITTER
- EA EXHAUST AIR
- EF EXHAUST FAN
- ES END SWITCH
- FE FLOW SENSOR / TRANSMITTER
- FS FLOW SWITCH
- H/C HEATING COIL
- H HUMIDITY SENSOR
- LAN LOCAL AREA NETWORK
- M ELECTRIC MOTOR
- N.C. NORMALLY CLOSED
- N.O. NORMALLY OPEN
- OA OUTSIDE AIR
- R RELAY
- RA RETURN AIR
- SA SUPPLY AIR
- SD SMOKE DETECTOR
- SF SUPPLY FAN
- S/S START / STOP
- T TEMPERATURE SENSOR / TRANSMITTER
- CV VALVE
- 24V CONTROL WIRING
- 120V CONTROL WIRING

CONTROLS - CONDENSER WATER SYSTEM

- CONDENSER WATER SYSTEM:**
- GENERAL**
 - THE CONDENSER WATER SYSTEM SHALL BE CONTROLLED BY A BACnet DDC CONTROLLER. SEQUENCE OF OPERATION SHALL NOT RELY ON A COMMUNICATION INTERFACE WITH A REMOTE PANEL; ALL CONTROL LOGIC SHALL RESIDE IN CONTROL PANEL SERVING EQUIPMENT.
 - SYSTEM ENABLE / DISABLE**
 - PROVIDE A GLOBAL ENABLE / DISABLE POINT FOR THE ENTIRE CONDENSER WATER SYSTEM AND A SEPARATE ENABLE / DISABLE POINT FOR EACH INDIVIDUAL PIECE OF EQUIPMENT.
 - BASED ON CONDENSER WATER SYSTEM REQUEST FROM ANY WSHP OR MAU, ENABLE THE CONDENSER WATER SYSTEM.
 - BOILER (B-1)**
 - THE BOILER CONTROL PANEL SHALL MONITOR AND CONTROL THE BOILER IN A STAND-ALONE MODE OR AS DIRECTED BY THE BAS.
 - THE CONTROL CONTRACTOR SHALL PROVIDE HARD WIRE CONNECTIONS FROM THE BAS TO THE BOILER CONTROL PANEL TO ALLOW FOR THE FOLLOWING FUNCTIONS:
 - EXTERNAL START/STOP CONTACT (1) DO 110 VOLT (1) DI 24 VOLT
 - ALARM INDICATION (1) DI 24 VOLT
 - START/STOP: A FLOW SWITCH SHALL BE PROVIDED BY THE BOILER MANUFACTURER TO BE INSTALLED BY THE CONTROL CONTRACTOR IN THE CONDENSER WATER SUPPLY PIPING FROM EACH BOILER; PROVIDE WIRING (110 VOLT) FROM FLOW SWITCH TO BOILER CONTROL PANEL. ONCE THE STATUS OF CONDENSER WATER FLOW IS PROVEN; THEN START THE BOILER. TO PREVENT SHORT CYCLING, EACH BOILER SHALL RUN FOR A MINIMUM-ON TIME DELAY (ADJ) AND BE OFF FOR A MINIMUM-OFF TIME DELAY (ADJ), UNLESS SHUTDOWN ON SAFETIES. THE START-UP SEQUENCE SHALL BE ALTERNATED ON A WEEKLY BASIS TO EQUALIZE RUN/TIME ON EACH BOILER.
 - STATUS: BOILER OPERATION SHALL BE PROVED THROUGH THE BOILER CONTROL PANEL. IF BOILER STATUS IS NOT PROVEN WITHIN A MINIMUM TIME DELAY AFTER BOILER START IS INITIATED; THEN PROVIDE ALARM AND CHANGE BOILER STATUS TO 'FAILED'. UPON FAILURE, THE BAS SHALL ALSO ANNUNCIATE A 'BOILER FAILURE' ALARM (MANUAL RESET).
 - CONDENSER WATER TEMPERATURE CONTROL: THE BOILER SHALL MAINTAIN A DISCHARGE WATER TEMPERATURE SETPOINT AS DETERMINED BY ITS OWN INTERNAL CONTROLS (PROVIDED BY OTHERS). THE BAS SHALL RESET SETPOINT TO MAINTAIN A CONDENSER WATER SUPPLY SETPOINT.
 - COOLING TOWER FAN**
 - START/STOP: START/STOP OF FAN SHALL BE CONTROLLED THROUGH THE I-O-A SWITCH ON THE ADJUSTABLE FREQUENCY DRIVE (AFD).
 - FAN START SEQUENCE: IF CONDENSER WATER SUPPLY TEMPERATURE IS ABOVE THE SUPPLY WATER SETPOINT PLUS A USER ADJUSTABLE DEADBAND FOR A 10 MINUTE TIME DELAY; THEN START FAN.
 - FAN STOP SEQUENCE: IF CONDENSER WATER SUPPLY TEMPERATURE IS BELOW THE SUPPLY WATER SETPOINT MINUS A USER ADJUSTABLE DEADBAND FOR A 10 MINUTE TIME DELAY; THEN STOP ENABLED FAN.
 - STATUS: FAN OPERATION SHALL BE PROVED THROUGH A CURRENT SWITCH.
 - SPEED: MODULATE FAN SPEED TO MAINTAIN A MAXIMUM SUPPLY WATER SETPOINT. FAN SHALL BE STARTED AT A USER ADJUSTABLE MINIMUM OPERATING MOTOR SPEED SETPOINT. BELOW MINIMUM SPEED SETPOINT SHUT DOWN FAN.
 - COOLING TOWER BASIN HEATERS:** BASIN HEATERS AND CONTROL ARE TO BE PROVIDED BY THE COOLING TOWER MANUFACTURER.
 - HEAT EXCHANGER BYPASS VALVE:** CLOSE VALVE TO HEAT EXCHANGER WHEN THE BOILER IS ENABLED. OPEN VALVE WHEN THE BOILER IS DISABLED.
 - BOILER PRIMARY PUMP**
 - START/STOP: START/STOP OF THE PUMP SHALL BE CONTROLLED BY THE BOILER CONTROL PANEL. CONTROL CONTRACTOR SHALL PROVIDE LOW VOLTAGE WIRING FROM MOTOR STARTER TO BOILER CONTROL PANEL.
 - STATUS: PUMP OPERATION SHALL BE PROVED THROUGH A CURRENT SWITCH.
 - CONDENSER WATER PUMP**
 - START/STOP: START/STOP OF PUMP SHALL BE CONTROLLED THROUGH THE I-O-A SWITCH ON THE MOTOR STARTER. TO PREVENT SHORT CYCLING, PUMP SHALL RUN OR BE OFF FOR A MINIMUM TIME DELAY, UNLESS SHUTDOWN ON SAFETIES.
 - STOP: IF CONDENSER WATER SUPPLY TEMPERATURE IS BELOW SETPOINT MINUS A 2' DEAD BAND FOR A 10 MINUTE TIME DELAY, START PUMP.
 - STATUS: PUMP OPERATION SHALL BE PROVED THROUGH A CURRENT SWITCH.
 - START/STOP: IF CONDENSER WATER SUPPLY TEMPERATURE IS ABOVE SETPOINT FOR A 10 MINUTE TIME DELAY, START PUMP.
 - BUILDING WATER PUMP**
 - START/STOP: START/STOP OF PUMP SHALL BE CONTROLLED THROUGH THE I-O-A SWITCH ON THE ADJUSTABLE FREQUENCY DRIVE (AFD). TO PREVENT SHORT CYCLING, PUMP SHALL RUN OR BE OFF FOR A MINIMUM TIME DELAY, UNLESS SHUTDOWN ON SAFETIES.
 - STATUS: PUMP OPERATION SHALL BE PROVED THROUGH A CURRENT SWITCH.
 - SPEED: MODULATE PUMP SPEED TO MAINTAIN A BUILDING DIFFERENTIAL PRESSURE SETPOINT. ALL OPERATING PUMPS SHALL TRACK TOGETHER.
 - DIFFERENTIAL PRESSURE SETPOINT RESET: RESET THE DP SETPOINT TO MAINTAIN BUILDING DP SETPOINT MEASURED AT THE HYDRAULICALLY MOST DEMANDING (HMD) POINT IN THE SYSTEM.

TYPICAL BAS ARCHITECTURE



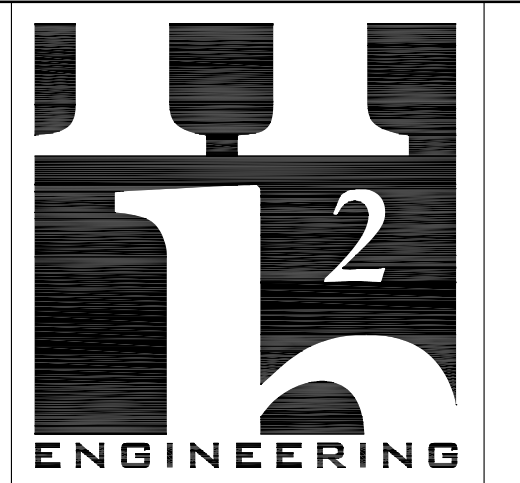
CONTROLS - CONDENSER WATER SYSTEM

SHORT NAME	POINT DESCRIPTION	UNITS	POINT TYPE			SETPOINTS		ALARM CONDITION			INTEG. POINT	NOTES	
			ANALOG IN	DIGITAL OUT	VIRT	ADJ.	DEFAULT	HIGH	LOW	EQUIP ALARM			HIGH LIMIT
bbb_CW_B_SS	BOILER START/STOP	ON/OFF			X								
bbb_CW_B_S	BOILER STATUS	ON/OFF		X									
bbb_CW_B_AL	BOILER STATUS ALARM	ON/OFF		X						X			
bbb_CW_B_S_TEMP	BOILER SUPPLY TEMPERATURE (T-1)	DEG F	X										
bbb_CW_B_S_STP	BOILER SUPPLY TEMPERATURE SETPOINT	DEG F				X							
bbb_CW_HL_STP	HIGH LIMIT CONDENSER WATER SETPOINT	DEG F					X						
bbb_CW_LL_STP	LOW LIMIT CONDENSER WATER SETPOINT	DEG F					X						
bbb_CW_DB_STP	CONDENSER WATER DEADBAND SETPOINT	DEG F					X						
bbb_CW_PP_S	PRIMARY PUMP STATUS	ON/OFF		X									
bbb_CW_PP_AL	PRIMARY PUMP STATUS ALARM	ON/OFF			X					X			
bbb_CW_CP_SS	CONDENSER WATER PUMP START/STOP	ON/OFF			X								
bbb_CW_CP_S	CONDENSER WATER PUMP STATUS	ON/OFF		X									
bbb_CW_CP_SPD	CONDENSER WATER PUMP SPEED	%		X									
bbb_CW_CP_AL	CONDENSER WATER PUMP STATUS ALARM	ON/OFF			X					X			
bbb_CW_CP_H	CONDENSER WATER PUMP IN HAND	ON/OFF			X					X			
bbb_CW_CP_AFD_HZ	CONDENSER WATER PUMP AFD HERTZ	HZ									X		
bbb_CW_CP_AFD_D	CONDENSER WATER PUMP AFD DEMAND	KW									X		
bbb_CW_CP_AFD_AL	CONDENSER WATER PUMP AFD ALARM	ON/OFF									X		
bbb_CW_BP_SS	BUILDING PUMP START/STOP	ON/OFF		X									
bbb_CW_BP_S	BUILDING PUMP STATUS	ON/OFF		X									
bbb_CW_BP_SPD	BUILDING PUMP SPEED	%		X									
bbb_CW_BP_AL	BUILDING PUMP STATUS ALARM	ON/OFF			X					X			
bbb_CW_BP_H	BUILDING PUMP IN HAND	ON/OFF			X					X			
bbb_CW_BP_AFD_HZ	BUILDING PUMP AFD HERTZ	HZ									X		
bbb_CW_BP_AFD_D	BUILDING PUMP AFD DEMAND	KW									X		
bbb_CW_BP_AFD_AL	BUILDING PUMP AFD ALARM	ON/OFF									X		
bbb_CW_CW_S_TEMP	CONDENSER WATER SUPPLY TEMPERATURE - VIA TEM	DEG F								X		X	
bbb_CW_CW_R_TEMP	CONDENSER WATER RETURN TEMPERATURE - VIA TEM	DEG F									X	X	
bbb_CW_CW_FLO	CONDENSER WATER FLOW - VIA TEM	GPM										X	
bbb_CW_CT_BV	COOLING TOWER BYPASS VALVE (V-2)	OPN/CLO			X								
bbb_CW_BLD_S_TEMP	BUILDING SUPPLY TEMPERATURE (T-5)	DEG F	X										
bbb_CW_BLD_R_TEMP	BUILDING RETURN TEMPERATURE (T-4)	DEG F	X										
bbb_CW_BLD_DP	BUILDING DIFFERENTIAL PRESSURE (DP-1)	PSI	X										
bbb_CW_BLD_DP_STP	BUILDING DIFFERENTIAL PRESSURE SETPOINT	PSI				X	X						
bbb_CW_BLD_FLO	BUILDING FLOW (F-2)	GPM	X										
bbb_CW_CF_SS	COOLING TOWER FAN START/STOP	ON/OFF			X								
bbb_CW_CF_S	COOLING TOWER FAN STATUS	ON/OFF		X									
bbb_CW_CF_SPD	COOLING TOWER FAN SPEED	%		X									
bbb_CW_CF_AL	COOLING TOWER FAN STATUS ALARM	ON/OFF			X					X			
bbb_CW_CF_H	COOLING TOWER FAN IN HAND	ON/OFF			X					X			
bbb_CW_CF_AFD_HZ	COOLING TOWER FAN AFD HERTZ	HZ									X		
bbb_CW_CF_AFD_D	COOLING TOWER FAN AFD DEMAND	KW									X		
bbb_CW_CF_AFD_AL	COOLING TOWER FAN AFD ALARM	ON/OFF									X		

DASHBOARD

CONTRACTOR SHALL PROVIDE GRAPHIC BASED DASHBOARD INTEGRATED TO BAS CAPABLE OF GATHERING BUILDING DATA AS SPECIFIED BELOW. PRODUCT SHALL BE

NOTES



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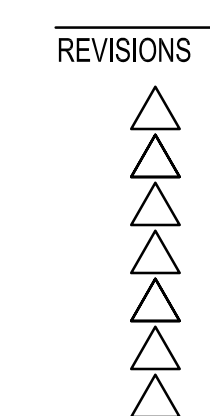


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TCC - Wakulla Environmental Institute

30 APRIL 2014 DATE

CONSTRUCTION DOCUMENTS PROJECT PHASE 100% CONSTRUCTION DOCUMENTS



CONTROLS - HVAC

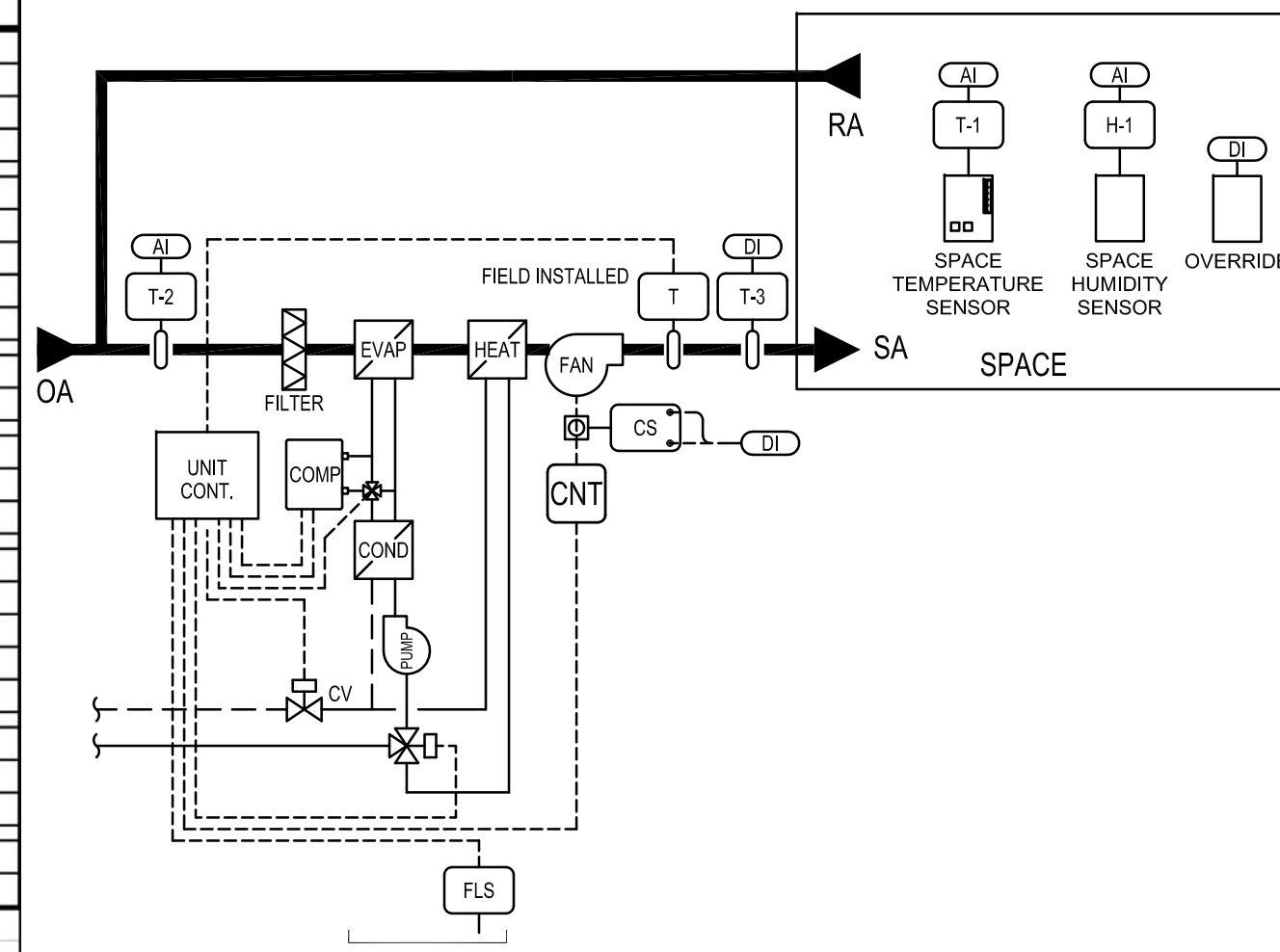
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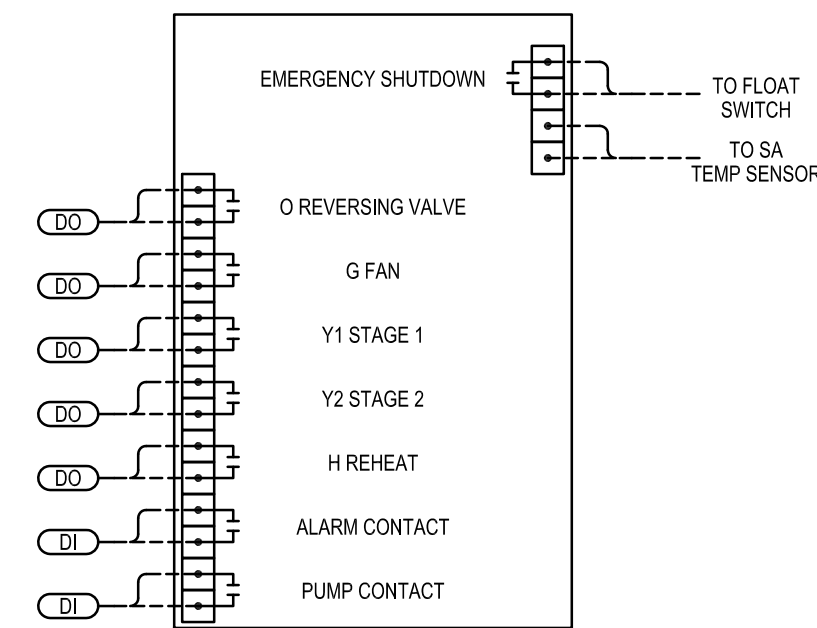
CONTROLS - WATER SOURCE HEAT PUMPS (WSHP - 1, 2, 3, 4, 5)

WSHP-x	SHORT NAME (1)	POINT DESCRIPTION	UNITS	POINT TYPE					SETPOINTS			ALARM CONDITION			SCHEM.D ESIG.	NOTES	
				ANALOG IN	ANALOG OUT	DIGITAL IN	DIGITAL OUT	VIRT.	INTEG. POINT	ADJ.	INIT.	HIGH	LOW	EQUIP ALARM			HIGH LIMIT
bbb	HPx_OCC_MODE	OCCUPIED MODE STATUS	ON/OFF				X	X									(2)
bbb	HPx_CLG_MODE	COOLING MODE STATUS	ON/OFF				X	X									
bbb	HPx_HTG_MODE	HEATING MODE STATUS	ON/OFF				X	X									
bbb	HPx_DEH_MODE	DEHUMIDIFICATION MODE STATUS	ON/OFF				X	X									
bbb	HPx_SF_SS	SUPPLY FAN START/STOP	ON/OFF			X			X								"G" TERM
bbb	HPx_RVS	REVERSING VALVE	ON/OFF			X			X								"O" TERM
bbb	HPx_HUM	HUMIDITY CONTROL - REHEAT	ON/OFF			X			X								"H" TERM
bbb	HPx_STG1	COMPRESSOR STAGE 1	ON/OFF			X			X								"Y1" TERM
bbb	HPx_STG2	COMPRESSOR STAGE 2	ON/OFF			X			X								"Y2" TERM
bbb	HPx_SAT	SUPPLY AIR TEMPERATURE	DEG F	X					X								T-3
bbb	HPx_ALARM	ALARM	DEG F		X				X								
bbb	HPx_CWP	CONDENSER WATER SYSTEM REQUEST	ON/OFF		X				X								
bbb	HPx_MA_T	MIXED AIR TEMPERATURE	DEG F	X					X								T-2
bbb	HPx_SF_S	SUPPLY FAN STATUS	ON/OFF		X				X								
bbb	HPx_SP_T	SPACE TEMPERATURE SENSOR	DEG F	X					X								T-1
bbb	HPx_SP_T_CLG	SPACE COOLING SETPOINT	DEG F			X	X	X	X	74							
bbb	HPx_SP_T_HTG	SPACE HEATING SETPOINT	DEG F			X	X	X	X	70							
bbb	HPx_SP_T_CLG_U	SPACE COOLING SETPOINT - UNOCCUPIED	DEG F			X	X	X	X	80							
bbb	HPx_SP_T_HTG_U	SPACE HEATING SETPOINT - UNOCCUPIED	DEG F			X	X	X	X	65							
bbb	HPx_SP_H	SPACE HUMIDITY SENSOR	%RH	X					X								H-1
bbb	HPx_SP_H_SP	SPACE HUMIDITY SETPOINT	%RH			X	X	X	X	60							
bbb	HPx_SP_H_SP_U	SPACE HUMIDITY SETPOINT - UNOCCUPIED	%RH			X	X	X	X	75							
bbb	HPx_OVRD_SP	UNOCCUPIED OVERRIDE - SETPOINT	HRS			X	X	X	X	2							
bbb	HPx_OVRD	UNOCCUPIED OVERRIDE	ON/OFF		X				X								

NOTES:
 (1) REPLACE "bbb" IN SHORT NAME WITH BUILDING NUMBER AND "x" WITH WSHP NUMBER
 (2) INITIAL SCHEDULE: S-S OFF; M-F 7:00AM - 6:00PM



UNIT CONTROLLER - FIELD WIRING DETAIL



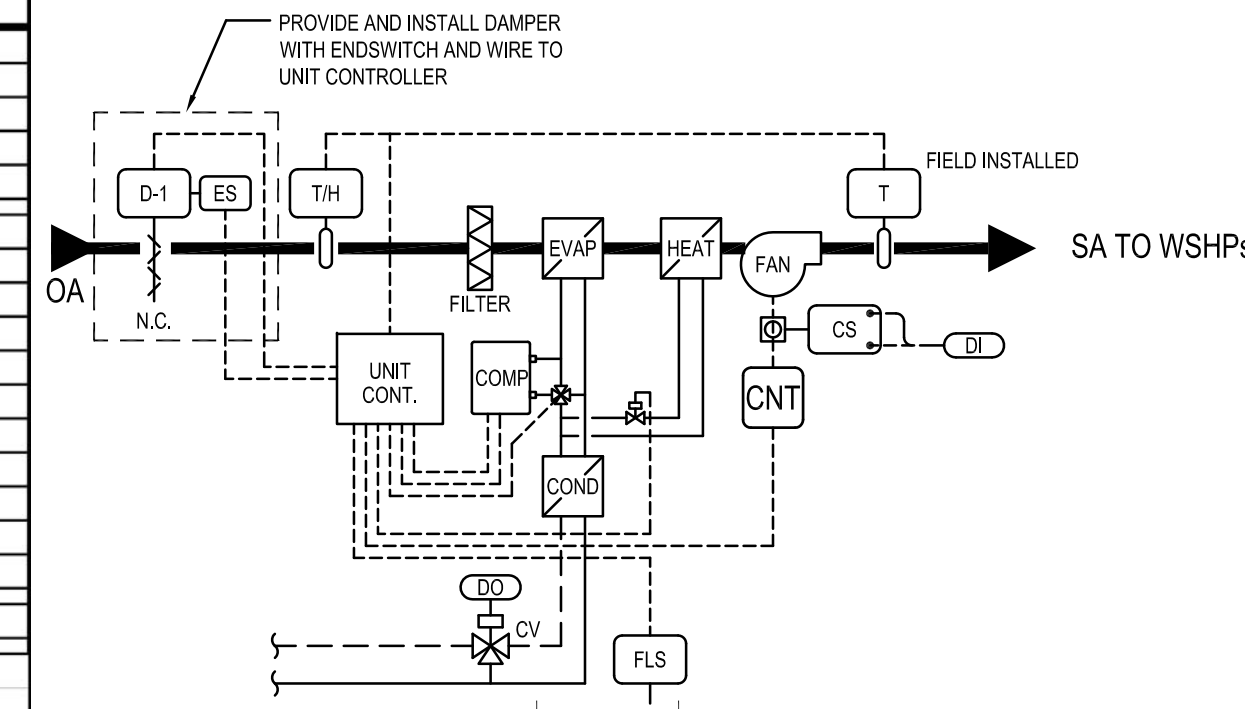
SEQUENCE OF OPERATION: (WSHP-1 through WSHP-5)

- GENERAL**
 - THE UNIT SHALL BE CONTROLLED BY A BACnet DDC CONTROLLER. THE BAS SHALL INTERFACE TO THE UNIT CONTROLLER VIA TERMINAL STRIP. THE UNIT CONTROLLER SHALL PROVIDE ALL INTERNAL SAFETIES.
 - IT IS NOT THE INTENT OF THESE DOCUMENTS TO SHOW ALL INTERNAL CONTROLS AND/OR WIRING NECESSARY TO OPERATE THE UNIT.
- GRAPHIC SCREENS**
 - FLOOR PLAN: SHOW EACH WSHP UNIT WITH SPACE TEMPERATURE AND SETPOINT.
 - WSHP DETAIL: DISPLAY ALL POINTS INDICATED IN POINTS LIST.
- OPERATIONAL MODES:** BAS SHALL CONTROL OPERATIONAL MODES AND STAGING THROUGH TERMINAL STRIP ON UNIT CONTROLLER
 - SPACE SETPOINTS: PROVIDE OCCUPIED AND UNOCCUPIED SPACE TEMPERATURE COOLING AND HEATING SETPOINTS. DO NOT ALLOW LESS THAN A 4 DEGREE DEADBAND BETWEEN COOLING AND HEATING SETPOINTS.
 - OCCUPIED MODE: THE SUPPLY FAN SHALL BE ENABLED TO RUN CONTINUOUSLY.
 - UNOCCUPIED MODE: THE SUPPLY AIR FAN SHALL BE CYCLED BASED ON A CALL FOR HEATING OR COOLING. IF THE OVERRIDE BUTTON IS ACTIVATED AT THE SPACE SENSOR, THEN INITIATE AN OCCUPIED MODE OF OPERATION FOR UNOCCUPIED OVERRIDE SETPOINT TIME DELAY.
 - SYSTEM REQUEST: BASED ON PUMP CONTACT IN UNIT CONTROLLER, INITIATE A CONDENSER WATER SYSTEM REQUEST.
 - CONDENSER ISOLATION VALVE: THE UNIT CONTROLLER SHALL OPEN THE ISOLATION VALVE WHEN COOLING, HEATING, OR DEHUMIDIFICATION MODE IS ENABLED. WIRE CONDENSER WATER ISOLATION VALVE AND VALVE END SWITCH PER MANUFACTURER'S INSTRUCTIONS. END SWITCH SHALL BE IN SERIES WITH "Y1" STAGE 1 COMPRESSOR CONTACT.
 - COOLING / HEATING CHANGEOVER: IF SPACE TEMPERATURE IS BELOW HEATING SETPOINT; THEN INITIATE HEATING MODE TO MAINTAIN SETPOINT. IF SPACE TEMPERATURE IS ABOVE COOLING SETPOINT THEN INITIATE COOLING MODE TO MAINTAIN SETPOINT.
 - COOLING MODE: ONCE INITIATED BY BAS, UNIT CONTROLLER SHALL ENERGIZE REVERSING VALVE. THE BAS SHALL SEQUENCE 1ST AND 2ND STAGE COOLING TO MAINTAIN COOLING SETPOINT.
 - HEATING MODE: ONCE INITIATED BY BAS, UNIT CONTROLLER SHALL DE-ENERGIZE REVERSING VALVE. THE BAS SHALL SEQUENCE 1ST AND 2ND STAGE HEATING TO MAINTAIN HEATING SETPOINT.
 - DEHUMIDIFICATION MODE: IF COOLING MODE IS DISABLED AND SPACE HUMIDITY IS ABOVE SETPOINT FOR A 10 MINUTE TIME DELAY THEN ENABLE DEHUMIDIFICATION MODE UNTIL SPACE HUMIDITY IS BELOW SETPOINT MINUS A 5% DEADBAND. ONCE INITIATED BY BAS, UNIT CONTROLLER SHALL ENABLE COOLING MODE AND ENGAGE REHEAT. THE UNIT CONTROLLER SHALL ENABLE UNIT PUMP AND MODULATE THE HYDROMIX MIXING VALVE TO MAINTAIN LEAVING AIR TEMPERATURE SETPOINT (SET AT UNIT CONTROLLER AT 72 DEGREES) FROM REHEAT COOL.
- SAFETIES**
 - FLOAT SWITCH: PROVIDE A FLOAT SWITCH IN THE AUXILIARY DRAIN PAN WIRED TO A SAFETY CONTACT ON THE UNIT CONTROLLER.
- ALARMS**
 - SUPPLY FAN FAILURE: IF THE FAN IS COMMANDED ON, BUT THE STATUS IS OFF.
 - UNIT ALARM STATUS: IF AN ALARM CONDITION EXISTS; THEN PROVIDE ALARM SIGNAL AND CHANGE STATUS TO "FAILED".

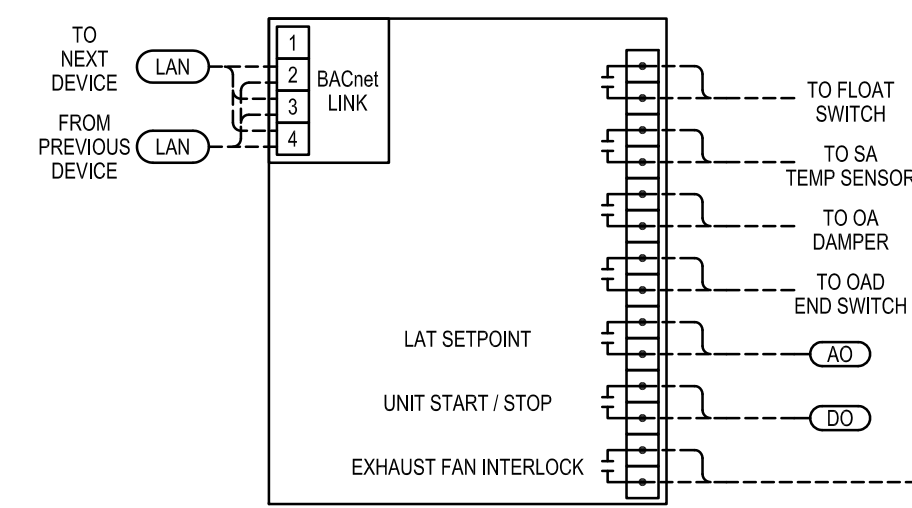
CONTROLS - MAKE UP AIR UNIT (MAU - 1)

MAU-1	SHORT NAME (1)	POINT DESCRIPTION	UNITS	POINT TYPE					SETPOINTS			ALARM CONDITION			SCHEM. DESIG.	NOTES	
				ANALOG IN	ANALOG OUT	DIGITAL IN	DIGITAL OUT	VIRT.	INTEG. POINT	ADJ.	INIT.	HIGH	LOW	EQUIP ALARM			HIGH LIMIT
bbb	MAU1_OCC_MODE	OCCUPIED MODE STATUS	ON/OFF				X	X									(2)
bbb	MAU1_CWP	CONDENSER WATER SYSTEM REQUEST	ON/OFF				X	X									CV-1
bbb	MAU1_CWV	CONDENSER WATER ISOLATION VALVE	OPN/CLS			X			X								
bbb	MAU1_SF_S	SUPPLY FAN STATUS	ON/OFF		X				X								
bbb	MAU1_SAT_SP	SUPPLY AIR TEMPERATURE SETPOINT	DEG F	X					X	72							
bbb	MAU1_SAT	SUPPLY AIR TEMPERATURE	DEG F						X								(3)
bbb	MAU1_SAT	OUTSIDE AIR TEMPERATURE	DEG F						X								(3)
bbb	MAU1_LWT	LEAVING WATER TEMPERATURE	DEG F						X								(3)
bbb	MAU1_CLG_S	COOLING STATUS	ON/OFF				X		X								(3)
bbb	MAU1_HTG_S	HEATING STATUS	ON/OFF				X		X								(3)
bbb	MAU1_LT_A	LOW TEMPERATURE ALARM	ON/OFF				X		X								(3)
bbb	MAU1_LP_A	LOW PRESSURE ALARM	ON/OFF				X		X								(3)
bbb	MAU1_HP_A	HIGH PRESSURE ALARM	ON/OFF				X		X								(3)
bbb	MAU1_C_A	CONDENSATE OVERFLOW ALARM	ON/OFF				X		X								(3)
bbb	MAU1_RESET_A	FAULT RESET COMMAND	ON/OFF				X		X								(3)
bbb	MAU1_CODE_A	FAULT CODE	ON/OFF				X		X								(3)
bbb	EF1_S	EXHAUST FAN STATUS	ON/OFF		X				X								

NOTES:
 (1) REPLACE "bbb" IN SHORT NAME WITH BUILDING NUMBER
 (2) BASED ON CALL FROM WSHPs
 (3) INTEGRATED POINT THROUGH UNIT CONTROLLER BACnet INTERFACE

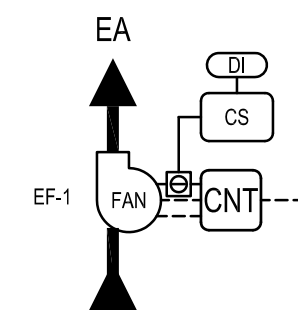


UNIT CONTROLLER - FIELD WIRING DETAIL



FAN SEQUENCE OF OPERATION:

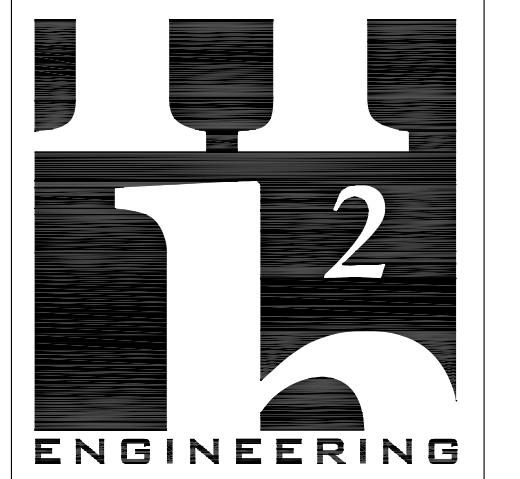
- FAN (EF-1): INTERLOCK EXHAUST FAN WITH MAU-1 VIA EXHAUST FAN INTERLOCK ON MAU-1 UNIT CONTROLLER.
- ALARM: IF STATUS IS NOT PROVEN AFTER A TIME DELAY; THEN PROVIDE ALARM MESSAGE AT OPERATOR INTERFACE AND CHANGE STATUS TO "FAILED".



SEQUENCE OF OPERATION: (MAU - 1)

- GENERAL**
 - THE UNIT SHALL BE CONTROLLED BY A BACnet DDC CONTROLLER PROVIDED BY THE HEAT PUMP MANUFACTURER. THE BAS SHALL INTERFACE TO THE UNIT CONTROLLER VIA BACnet COMMUNICATION INTERFACE. INDICATED INTEGRATED POINTS SHALL BE TRANSFERRED THROUGH BACnet INTERFACE TO BAS USER INTERFACE. THE UNIT CONTROLLER SHALL PROVIDE ALL INTERNAL CONTROLS AND SAFETIES.
 - IT IS NOT THE INTENT OF THESE DOCUMENTS TO SHOW ALL INTERNAL CONTROLS AND/OR WIRING NECESSARY TO OPERATE THE UNIT.
- GRAPHIC SCREENS**
 - FLOOR PLAN: SHOW EACH MAU UNIT WITH SUPPLY TEMPERATURE AND SETPOINT.
 - MAU DETAIL: DISPLAY ALL POINTS INDICATED IN POINTS LIST.
- OPERATIONAL MODES:** BAS SHALL CONTROL UNOCCUPIED / OCCUPIED MODE THROUGH TERMINAL STRIP ON UNIT CONTROLLER
 - SUPPLY AIR SETPOINT: PROVIDE LEAVING AIR TEMPERATURE SETPOINT FROM BAS TO UNIT CONTROLLER.
 - OCCUPIED MODE: IF ANY WSHP UNIT ENTERS OCCUPIED MODE; THEN THE BAS SHALL SET MAU MODE TO OCCUPIED. UNIT CONTROLLER SHALL OPEN OUTSIDE AIR DAMPER AND START SUPPLY FAN WHEN DAMPER END SWITCH MAKES OPEN POSITION.
 - UNOCCUPIED MODE: IF ALL WSHP UNITS ARE IN UNOCCUPIED MODE; THEN THE BAS SHALL SET MAU MODE TO UNOCCUPIED. UNIT CONTROLLER SHALL CLOSE OUTSIDE AIR DAMPER AND SHUT OFF SUPPLY FAN.
 - CONDENSER ISOLATION VALVE: THE BAS SHALL OPEN THE ISOLATION VALVE IN OCCUPIED MODE. WHEN CONDENSER WATER VALVE BEGINS TO OPEN INITIATE A PUMP REQUEST TO THE CONDENSER WATER SYSTEM.
 - COOLING / DEHUMIDIFICATION MODE: UNIT CONTROLLER SHALL STAGE COMPRESSOR(S) TO MAINTAIN A LEAVING AIR DEWPOINT SETPOINT AND WILL ENGAGE HOT GAS REHEAT TO MAINTAIN A LEAVING AIR TEMPERATURE SETPOINT (72 DEG F). ENABLE COMPRESSOR(S) WHEN OUTSIDE AIR DEW POINT IS ABOVE SETPOINT (60 DEG F) OR OUTSIDE AIR TEMPERATURE IS ABOVE TO DEG F.
 - HEATING MODE: IF NOT IN COOLING / DEHUMIDIFICATION MODE AND IF LEAVING AIR TEMPERATURE IS BELOW LEAVING AIR TEMPERATURE SETPOINT (72 DEG F); THEN UNIT CONTROLLER SHALL INITIATE HEATING MODE. UNIT CONTROLLER SHALL ENABLE COMPRESSOR(S) AND MODULATE HOT GAS REHEAT TO MAINTAIN LEAVING AIR TEMPERATURE SETPOINT WHILE DIVERTING LOW PRESSURE REFRIGERANT TO AUXILIARY WATERSIDE EXCHANGER.
- SAFETIES**
 - FLOAT SWITCH: PROVIDE A FLOAT SWITCH IN THE AUXILIARY DRAIN PAN WIRED TO SHUT DOWN UNIT.
- ALARMS**
 - SUPPLY FAN FAILURE: IF THE FAN IS COMMANDED ON, BUT THE STATUS IS OFF.
 - UNIT ALARM STATUS: IF AN ALARM CONDITION EXISTS; THEN PROVIDE ALARM SIGNAL AND CHANGE STATUS TO "FAILED".

NOTES



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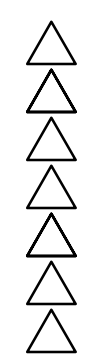
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CONSTRUCTION DOCUMENTS
 PROJECT PHASE
 100% CONSTRUCTION
 DOCUMENTS

REVISIONS



CONTROLS - HVAC

M602

225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
 PHONE 850 224-6301 FAX 850 561-6978

RAINWATER HARVESTING SYSTEM

ROOF AREA	SF	10,000
DESIGN AVERAGE RAINFALL RATE	IN/MONTH	4.5
DESIGN MONTHLY RAINFALL VOLUME	GAL	28,000
DESIGN MONTHLY REUSE WATER CONSUMPTION	GAL	8,000

PRE-FILTER SYSTEM

DESIGNATION	F-1	
MAXIMUM ROOF AREA SERVED	SF	16,000
CONNECTION SIZE	IN	8
FILTER SPRAYHEAD (2)	PROVIDE	
LID TYPE	PEDESTRIAN	
MODEL	OPTIMAX INDUSTRIAL	
MANUFACTURER	GRAF	

BELOW GROUND CISTERN (3)(11)(12)

DESIGNATION	CT-1	
STORAGE CAPACITY	GAL	5,000
DIMENSIONS (DIA x L)	FT x FT	8'-0" x 17'-8.5"
TANK MATERIAL	FIBERGLASS	
OVERFLOW SIPHON DIAMETER	IN	8
WEIGHT	LBS	1,700
MANUFACTURER	XERXES	

BELOW GROUND CISTERN SUMP PUMP

DESIGNATION	SP-1	
DESIGN FLOW RATE	GPM	15
MAXIMUM DESIGN HEAD	FT	80
HORSEPOWER	HP	34
ELECTRICAL CHARACTERISTICS	VOLTPH	115/1
FLOATING FILTER	1 1/4" STAINLESS	
MANUFACTURER	RAINMASTER	
MODEL	R128B-2C	

BELOW GROUND CISTERN SUMP PUMP CONTROLLER

DESIGN FLOW RATE	GPM	15
MAXIMUM DESIGN HEAD	PSI	1.5
ELECTRICAL CHARACTERISTICS	VOLTPH	115/1
MANUFACTURER	MASCONTROL	
MODEL	MCB 1 1/4"	

PRE-FILTER PRESSURE TANK

DESIGNATION	PT-1	
TANK VOLUME	GAL	76.4
DIMENSIONS (DIA x H)	IN x IN	27 x 54
ORIENTATION	VERTICAL	
PRE-CHARGE PRESSURE	PSIG	47
MANUFACTURER	RAINMASTER	

POST FILTRATION SYSTEM

DESIGNATION	F-2, F-3	
FILTER		
DESIGN FLOW RATE PER FILTER	GPM	7.5
CLEAN PRESSURE DROP	PSI	5
DESIGN LOADED PRESSURE DROP	PSI	15
FILTER HOUSING QUANTITY (4)(5)	2	
FILTER HOUSING DIMENSIONS (L x DIA)	IN x IN	20 x 4.5
FILTER CARTRIDGE TYPE	PLEATED	
FILTER CARTRIDGE EFFICIENCY	MICRON	5

UV STERILIZER

DESIGNATION	UV-1, UV-2	
DESIGN FLOW RATE PER STERILIZER	GPM	7.5
PRESSURE DROP	PSI	7
QUANTITY	2	
MANUFACTURER	UV PURE TECHNOLOGY	
MODEL	UPSTREAM NC 15-50	

REUSE WATER SOLENOID VALVE TO AG CISTERN

TYPE	2-WAY	
SIZE	IN	1 1/4
PRESSURE DROP	PSI	1.7
FLOAT SWITCH	(7)	
MANUFACTURER	HUNTER	
MODEL	PGV-151	

POTABLE WATER SOLENOID VALVE TO AG CISTERN

TYPE	2-WAY	
SIZE	IN	1 1/4
PRESSURE DROP	PSI	1.7
FLOAT SWITCH	(7)	
MANUFACTURER	HUNTER	
MODEL	PGV-151	

ABOVE GROUND CISTERN (8)(9)(10)(11)(12)

DESIGNATION	CT-2	
STORAGE CAPACITY	GAL	558
DIMENSIONS (DIA x L)	FT x FT	5'-11" x 5'-5"
TANK MATERIAL	CORRUGATED STEEL CEDAR WRAP	
OVERFLOW SIPHON DIAMETER	IN	4
WEIGHT	LBS	341
MANUFACTURER	RAINMASTER	
MODEL	601	

ABOVE GROUND CISTERN SUMP PUMP

DESIGNATION	SP-2	
DESIGN FLOW RATE	GPM	15
MAXIMUM DESIGN HEAD	PSIG	55
HORSEPOWER	HP	1 1/4
ELECTRICAL CHARACTERISTICS	VOLTPH	115/1
FLOATING FILTER	NONE	
MANUFACTURER	RAINMASTER	
MODEL	R128B-3C	

ABOVE GROUND CISTERN SUMP PUMP CONTROLLER

DESIGN FLOW RATE	GPM	15
PUMP CONTROL PRESSURE	PSIG	50
MAXIMUM DESIGN HEAD	HP	1.5
ELECTRICAL CHARACTERISTICS	VOLTPH	115/1
MANUFACTURER	MASCONTROL	
MODEL	MCB 1 1/4"	

SYSTEM PRESSURE TANK

DESIGNATION	PT-2	
TANK VOLUME	GAL	76.4
DIMENSIONS (DIA x H)	IN x IN	27 x 54
ORIENTATION	VERTICAL	
PRE-CHARGE PRESSURE	PSIG	47
MANUFACTURER	RAINMASTER	

- NOTES:**
- PROVIDE EXTENSION RINGS AS NECESSARY TO BRING LID UP TO GRADE.
 - PROVIDE 3" BALL VALVE IN VALVE BOX AT GRADE IN SUPPLY LINE TO SPRAYHEAD.
 - PROVIDE SIGNED AND SEALED ENGINEERED TANK ANCHORING SYSTEM BY TANK MANUFACTURER.
 - PROVIDE SINGLE HEAVY DUTY FILTER HOUSING MOUNTING BRACKET FOR EACH FILTER.
 - PROVIDE TWO FILTER HOUSING WRENCHES TO OWNER.
 - PROVIDE I.O. FLOAT SWITCH.
 - PROVIDE RAINMASTER MULTIFUNCTION FLOAT SWITCH TO ACTIVATE SOLENOID IN AUTO-FILL MODE.
 - PROVIDE SIGNED AND SEALED ENGINEERING DESIGN OF TANK FOUNDATION BY TANK MANUFACTURER.
 - PROVIDE OSHA APPROVED "CAUTION NON-POTABLE WATER DO NOT DRINK" SIGNAGE ON CISTERN.
 - PROVIDE AIR GAFF FITTING FOR POTABLE, BACK-UP WATER CONNECTION TO CISTERN.
 - PROVIDE OVERFLOW SIPHON FROM CISTERN.
 - PROVIDE DIGITAL WATER LEVEL INDICATOR.

SOLAR WATER HEATING SYSTEM

HEAT EXCHANGER TANK

DESIGNATION	WH-1	
STORAGE CAPACITY	GAL	65
DIMENSIONS (H x DIA)	IN x IN	59 x 21
TAP RELIEF VALVE	YES	
TANK LINING	GLASS	
OPERATING WEIGHT	LBS	715

HEAT EXCHANGER

DOUBLE WALL	YES	
DESIGN FLOW RATE	GPM	0.83
MAXIMUM DESIGN HEAD	FT	1.3

BACKUP HEAT SOURCE

ELECTRIC	ELECTRIC	
ELECTRIC INPUT (NOTE 1)	KW	4.5
NUMBER OF ELEMENTS	1	
SIMULTANEOUS ELEMENT OPERATION	NO	
RECOVERY RATE	GPH	32
TEMPERATURE RISE	'F	50
ELECTRICAL CHARACTERISTICS	VOLTPH	208/1
MODEL	80V65HE-1	

COLLECTOR

DESIGNATION	SC-1	
NUMBER OF PANELS	1	
SOLAR ENERGY FACTOR (SRCC)	1.7	
DESIGN FLOW RATE	GPM	0.83
DIMENSIONS (W x H)	IN x IN	48 x 98
AREA	SF	32
OPERATING WEIGHT	LBS	115

PUMP / CONTROL STATION

DESIGNATION	SP-1	
DESIGN FLOW RATE	GPM	0.83
MAXIMUM DESIGN HEAD	FT	18
HORSEPOWER	HP	1/25
ELECTRICAL CHARACTERISTICS	VOLT / PH	120/1
MODEL	RSPS-01	

SOLAR LOOP EXPANSION TANK

DESIGNATION	XT-1	
CAPACITY	GAL	5
ACCEPTANCE VOLUME	GAL	3.4
AIRSIDE PRE-PRESSURE	PSIG	20
MODEL	SET-12	
MANUFACTURER	WATTS	

POTABLE LOOP EXPANSION TANK

DESIGNATION	XT-2	
TANK VOLUME	GAL	5
ACCEPTANCE VOLUME	GAL	2.9
AIRSIDE PRE-PRESSURE	PSIG	40
MODEL	PLT-12	
MANUFACTURER	WATTS	

COLLECTOR FLUID

MANUFACTURER	25% PROPYLENE GLYCOL	
MODEL NUMBER	RS65-32BP	

- NOTES:**
- RATED AT 240 VOLT/1 PHASE

ELECTRIC WATER HEATER SCHEDULE

DESIGNATION		WH-2
STORAGE	GAL	N/A
TOTAL ELECTRIC INPUT	KW	8.3
NUMBER OF ELEMENTS	NO	1
SIMULTANEOUS ELEMENTS OPERATION	NO	
RECOVERY RATE	GAL/HR	N/A
RECOVERY RATE	GPM	1.5
TEMPERATURE RISE	'F	38
LEAVING WATER TEMPERATURE	'F	108
ELECTRICAL CHARACTERISTICS	VOLT	208/1
MANUFACTURER	EEMAX	
MODEL NUMBER	EX8208T	

WATER HAMMER ARRESTER SCHEDULE

CHART A - FOR GROUPED FIXTURES		CHART B - FOR LONG PIPE RUNS						
P.D.I. SIZE	FIXTURE UNITS	P.D.I. WATER HAMMER ARRESTERS						
A	1-11	LENGTH OF PIPE	NOMINAL PIPE DIAMETER					
B	12-32		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
C	33-60	25'	A	A	B	C	D	E
D	61-113	50'	A	B	C	D	E	F
E	114-154	75'	B	C	D	E	AE	EF
F	155-330	100'	C	D	E	F	CF	FF
		125'	C	D	F	AF	EF	EFF
		150'	D	E	F	DF	FF	FFF

- NOTES:**
- WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD PDI-WH201.

THERMOSTATIC MIXING VALVE SCHEDULE

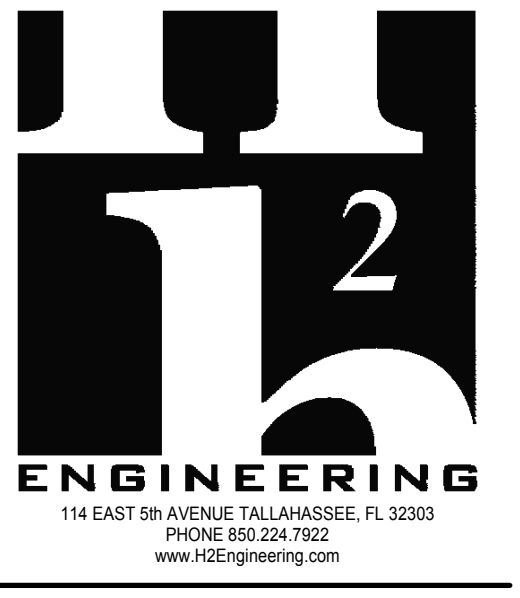
DESIGNATION		TMV-1
LOCATION	ROOM #	MEZZANINE
SETPOINT	'F	110
MINIMUM FLOW	GPM	0.5
MAXIMUM FLOW	GPM	12
PRESSURE DROP AT MAXIMUM FLOW	PSI	10
MANUFACTURER (BASIS)	LAWLER	
MODEL NUMBER	66-25	
DETAIL REFERENCE	JP501	

- NOTES:**
- MINIMUM FLOW BASED ON RECIRCULATED SYSTEM.
 - PROVIDE OUTLET DIAL THERMOMETER AND SHUT-OFF VALVE.
 - PROVIDE ROUGH BRASS FINISH.

CIRCULATOR PUMPS

DESIGNATION		C-1
SERVICE		HW CIRCULATOR
CAPACITY	GPM	4
TOTAL DYNAMIC HEAD	FT.	24
SHUT-OFF HEAD	FT.	35
MOTOR HORSEPOWER	HP	1/8
ELECTRICAL CHARACTERISTICS	VPH	115/1
MOTOR WINDING	FULL	
PUMP SEAL	MECHANICAL	
MANUFACTURER	TACO	
MODEL NUMBER	009	
DETAIL REFERENCE	FIP501	

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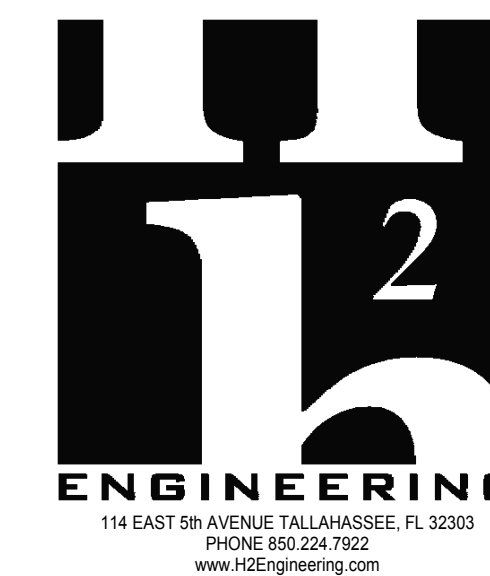
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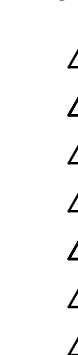
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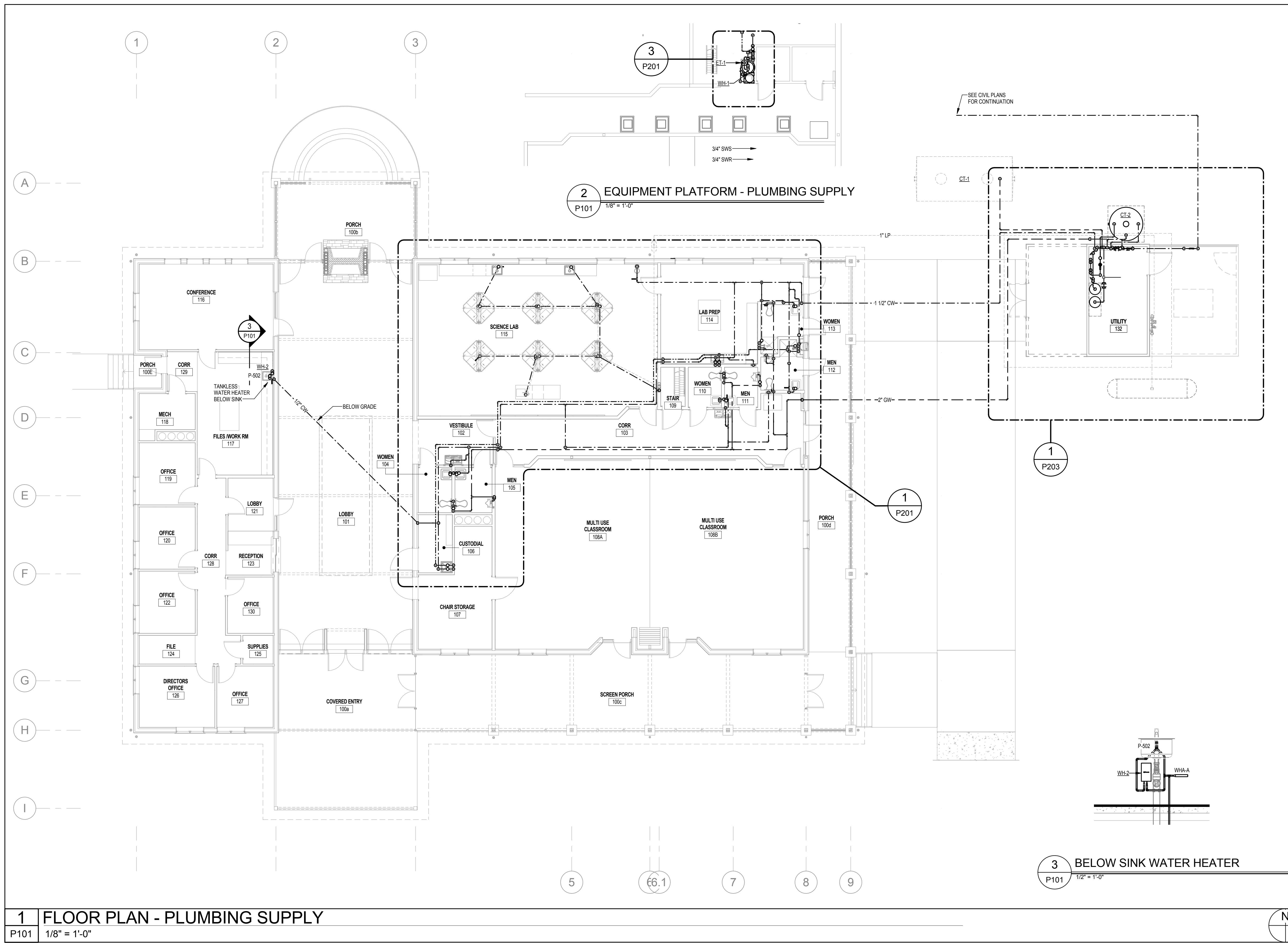
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LOOR PLAN -
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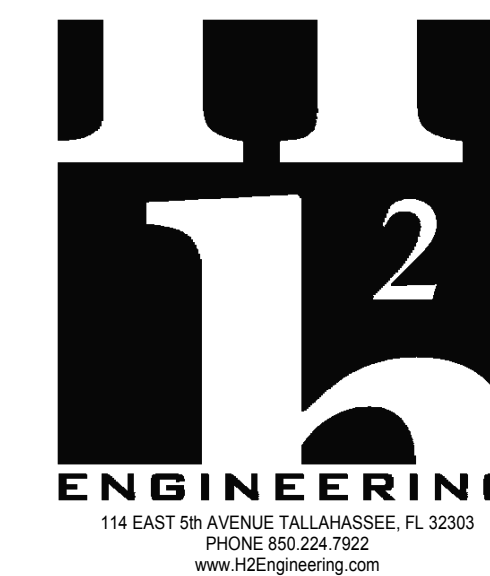


1 FLOOR PLAN - PLUMBING SUPPLY
P101 1/8" = 1'-0"

2 EQUIPMENT PLATFORM - PLUMBING SUPPLY
P101 1/8" = 1'-0"

3 BELOW SINK WATER HEATER
P101 1/2" = 1'-0"





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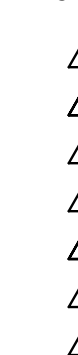
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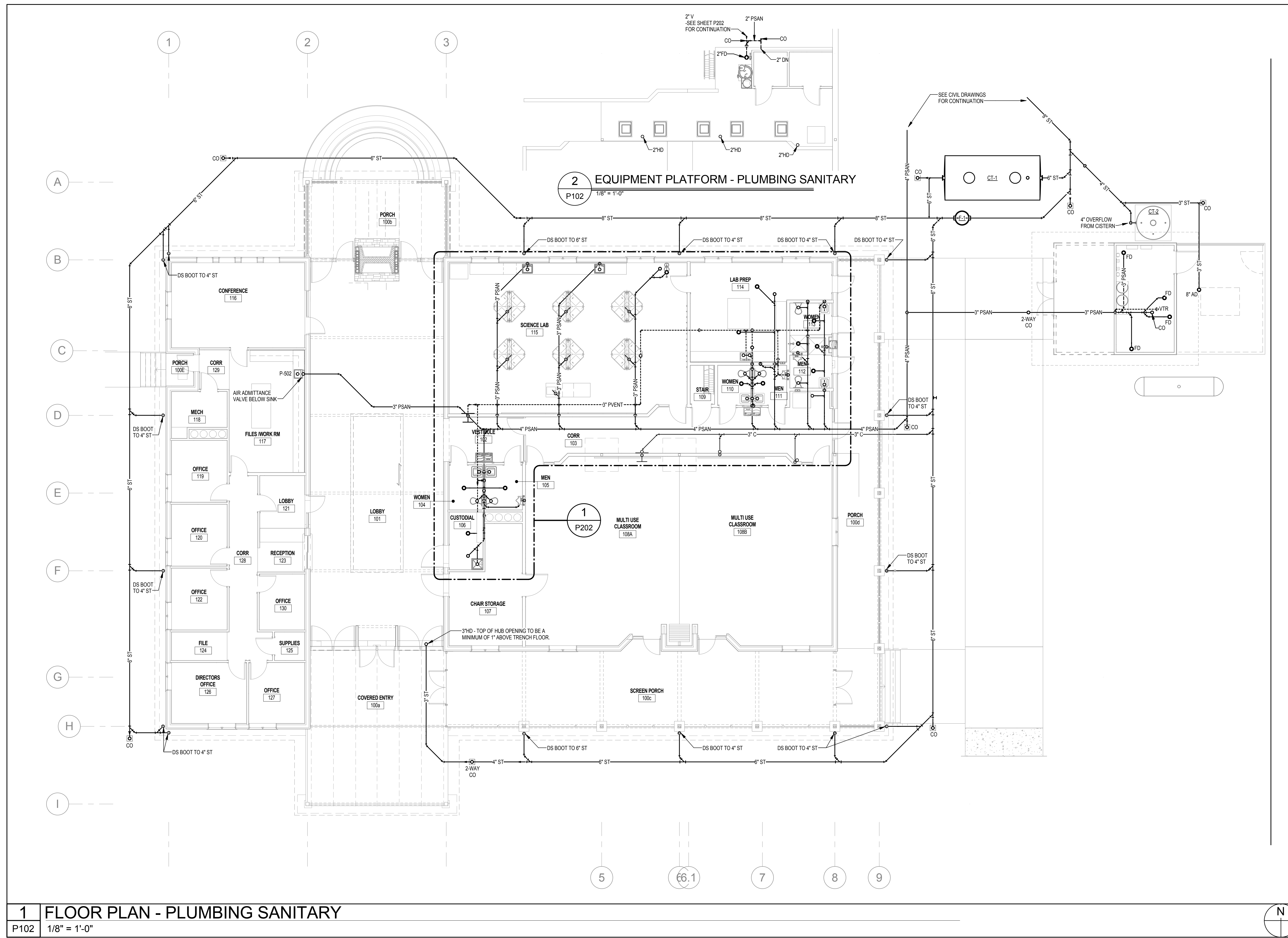
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LOOR PLAN -
 PLUM IN SANITAR

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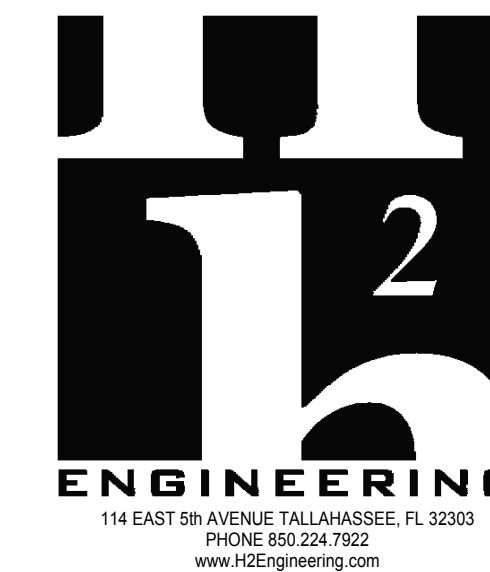
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1 FLOOR PLAN - PLUMBING SANITARY

P102 1/8" = 1'-0"

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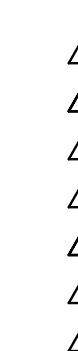
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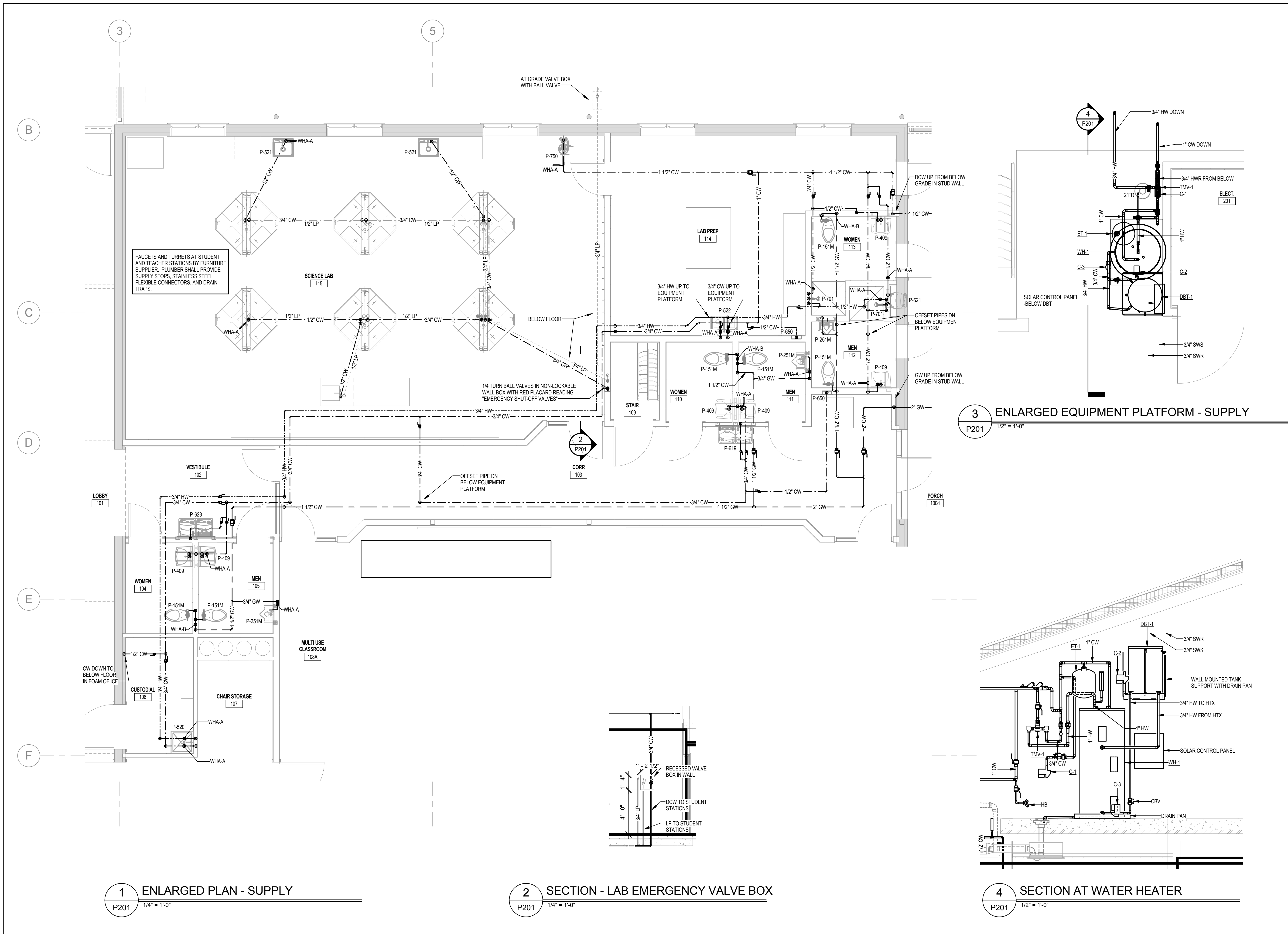
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ENLAR ED PLANS
 SECTIONS - SUPPL

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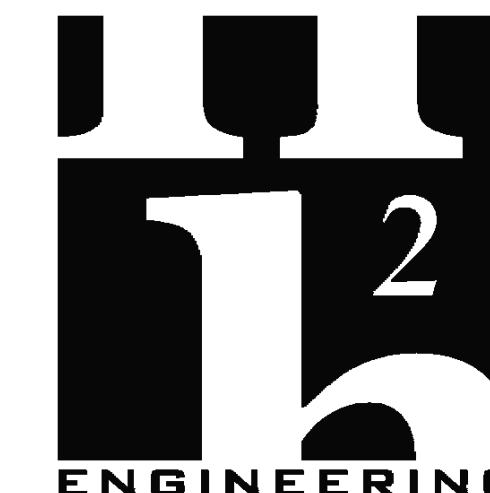


1 ENLARGED PLAN - SUPPLY
 P201 1/4" = 1'-0"

2 SECTION - LAB EMERGENCY VALVE BOX
 P201 1/4" = 1'-0"

4 SECTION AT WATER HEATER
 P201 1/2" = 1'-0"

3 ENLARGED EQUIPMENT PLATFORM - SUPPLY
 P201 1/2" = 1'-0"



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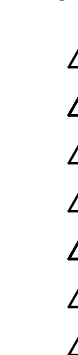
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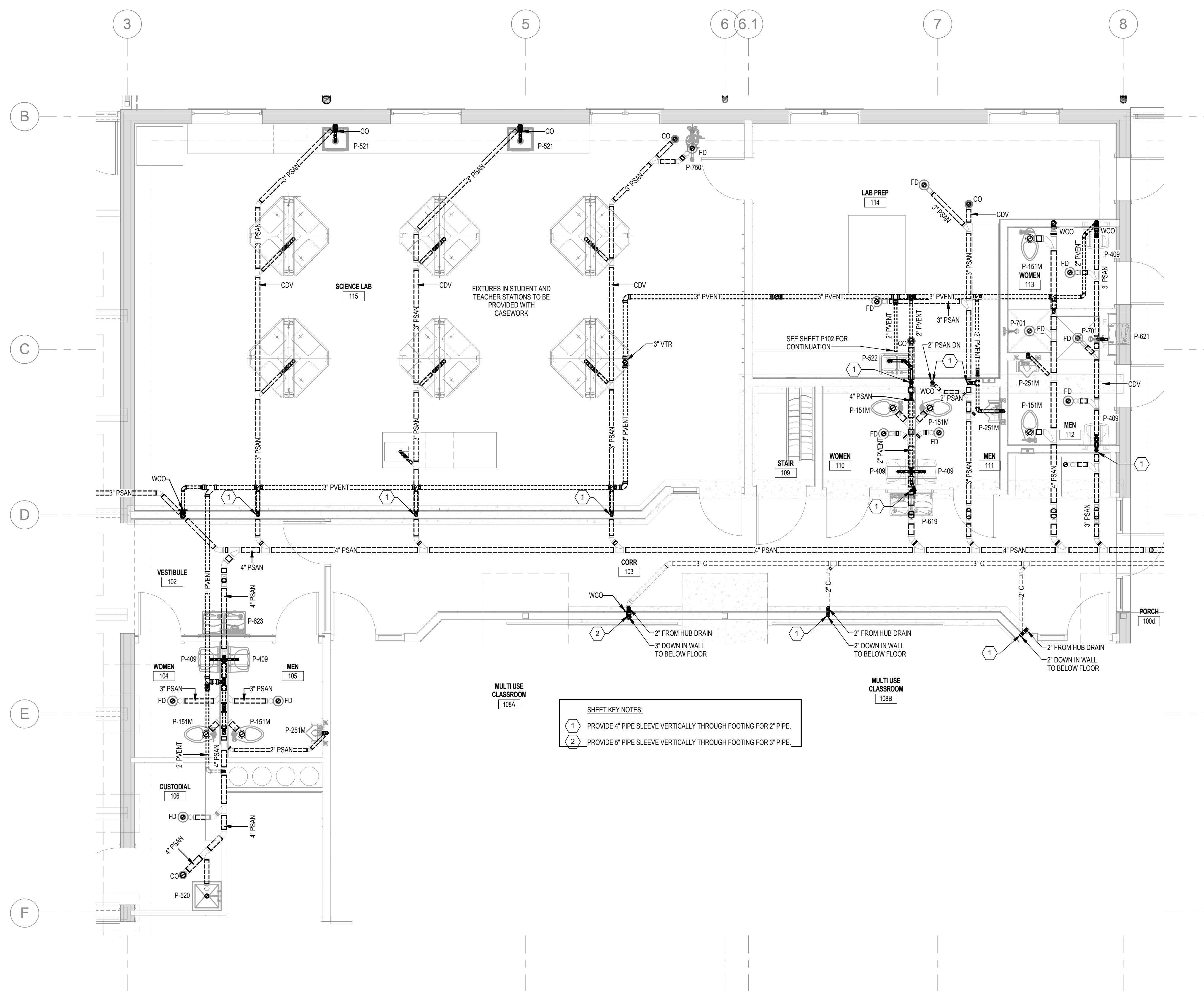
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ENLARGED PLANS -
SANITARY

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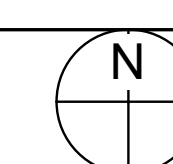
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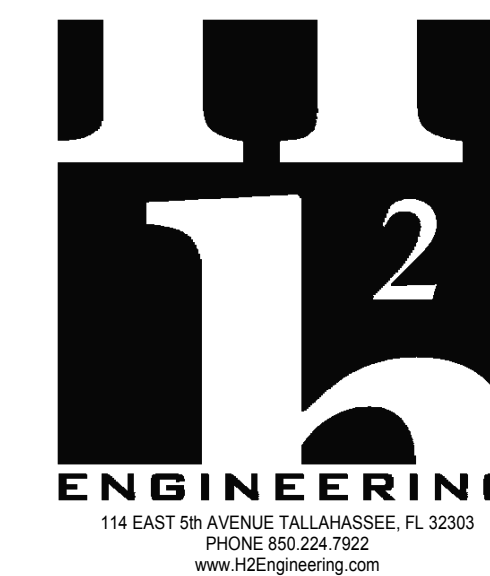
SHEET KEY NOTES:

- 1 PROVIDE 4" PIPE SLEEVE VERTICALLY THROUGH FOOTING FOR 2" PIPE.
- 2 PROVIDE 5" PIPE SLEEVE VERTICALLY THROUGH FOOTING FOR 3" PIPE.

1 ENLARGED SANITARY PLAN
P202 1/4" = 1'-0"



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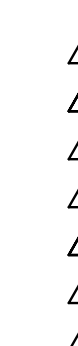
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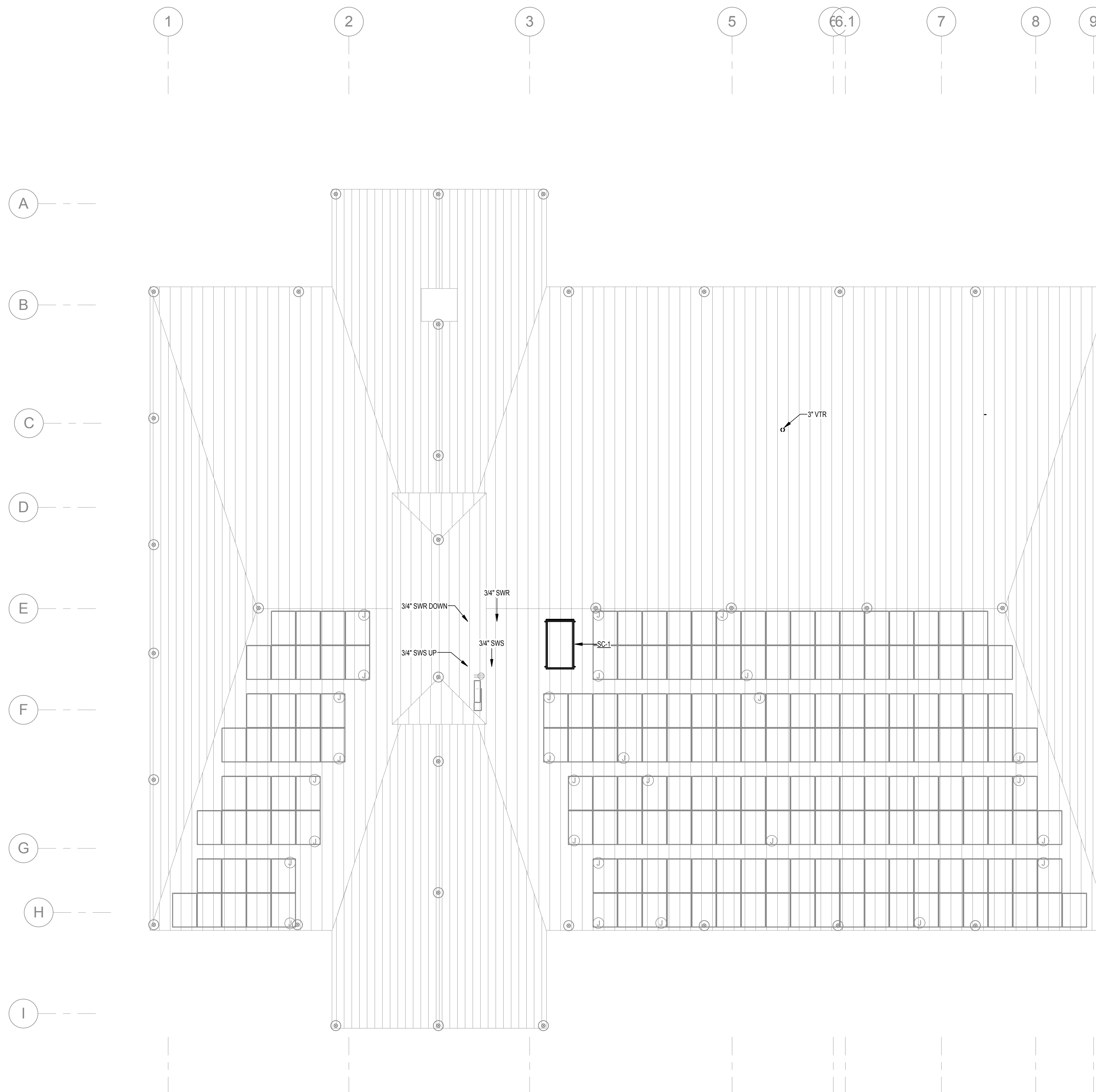
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ROO PLAN -
PLUM IN

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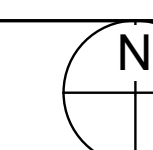
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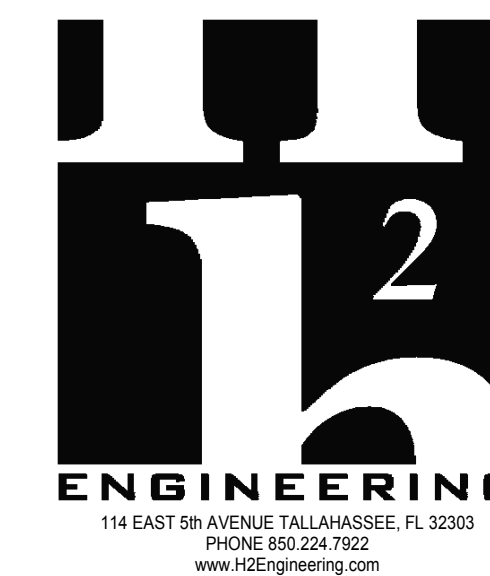


1 ROOF PLAN - PLUMBING

P301 1/8" = 1'-0"

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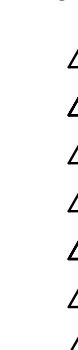
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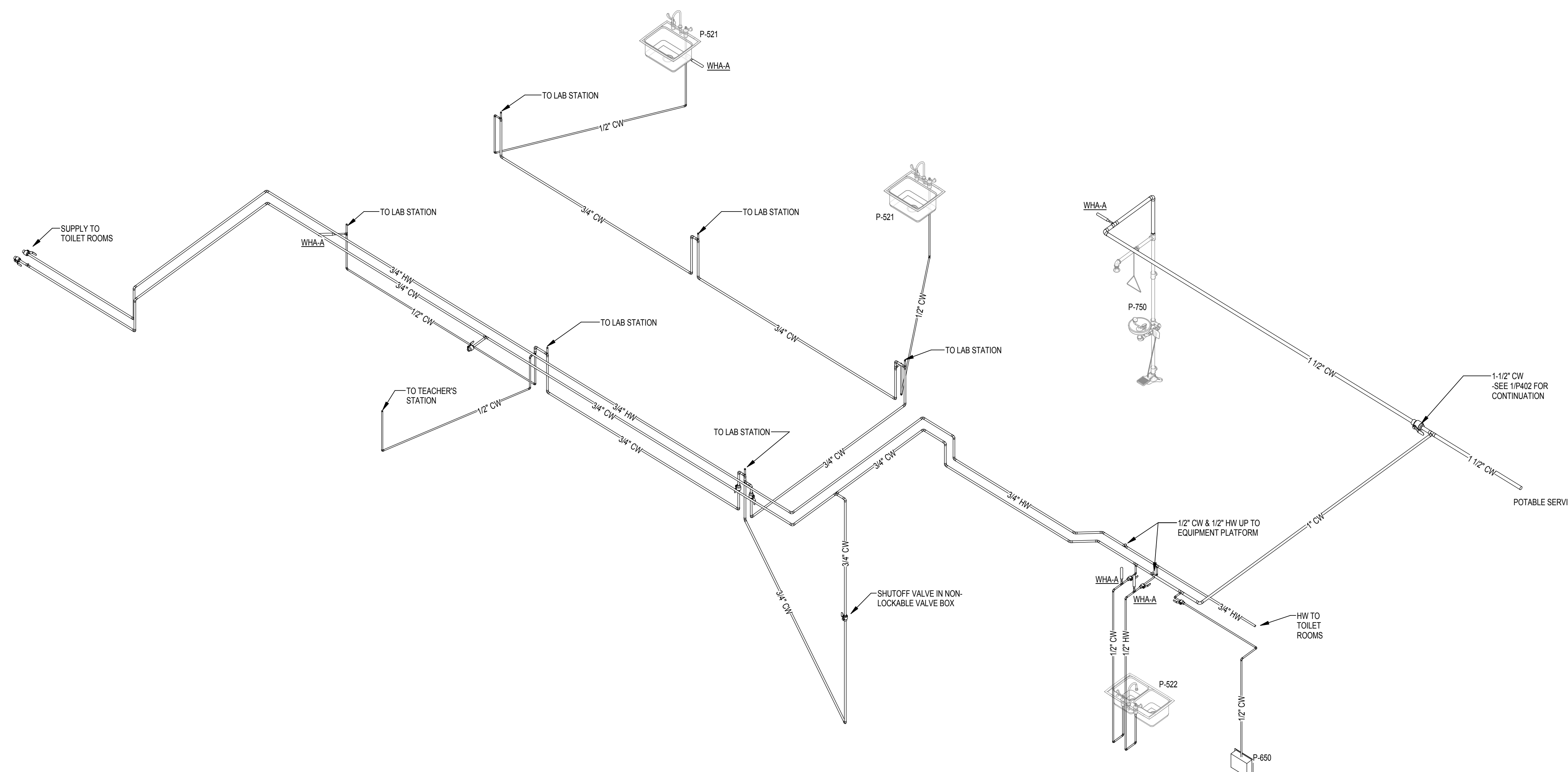
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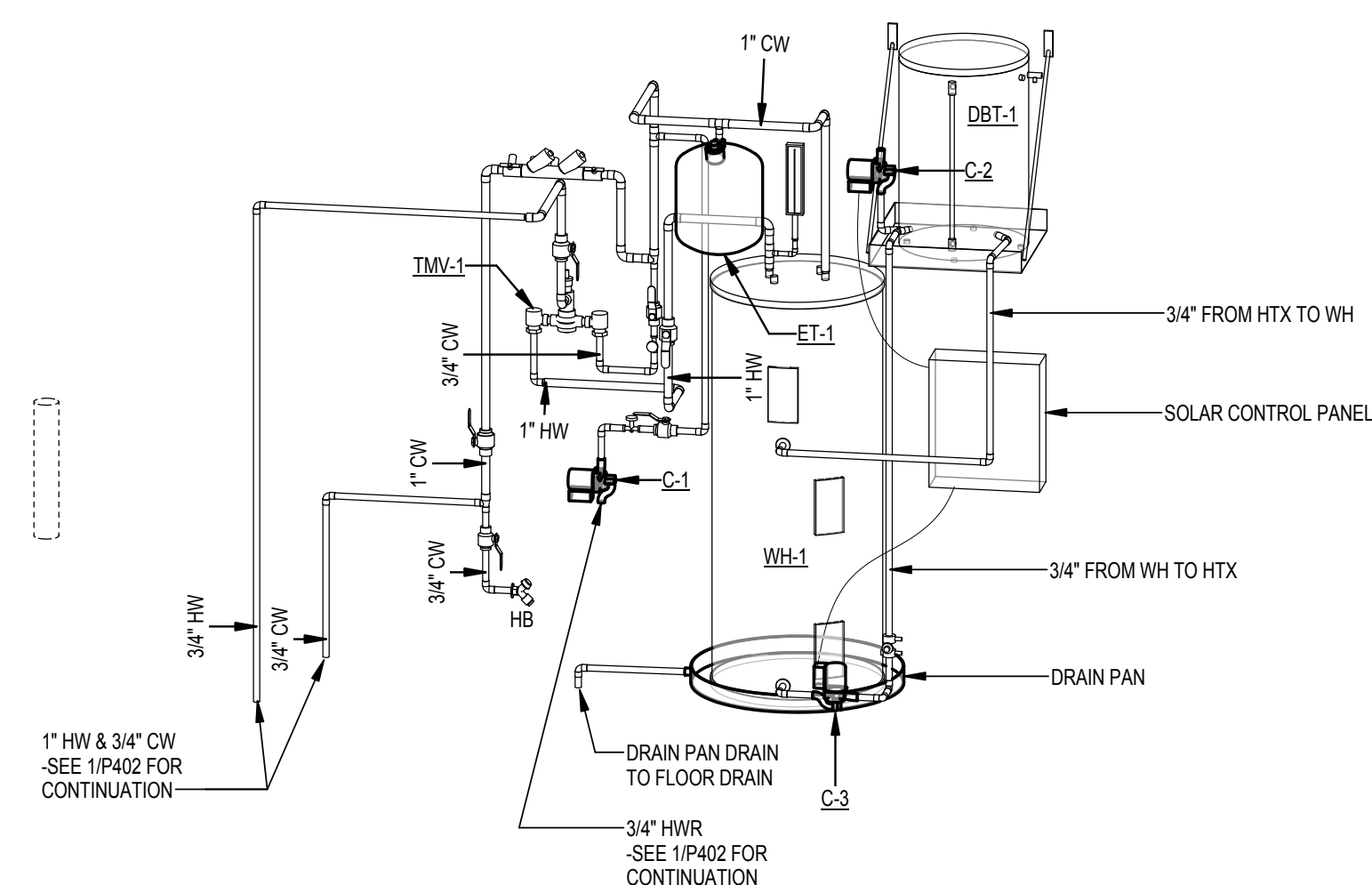
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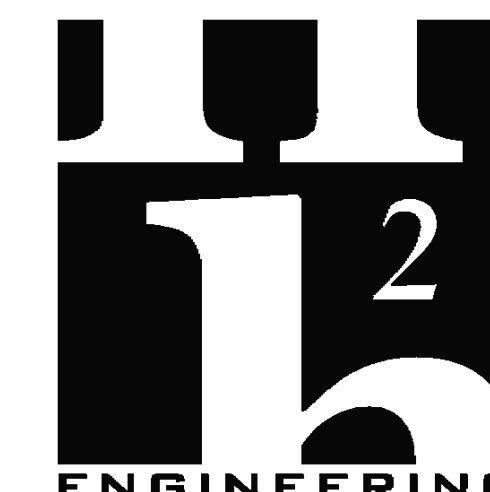
RISERS



1 ISOMETRIC - LAB SUPPLY
 P401



2 ISOMETRIC - EQUIPMENT PLATFORM SUPPLY
 P401



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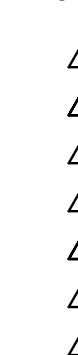
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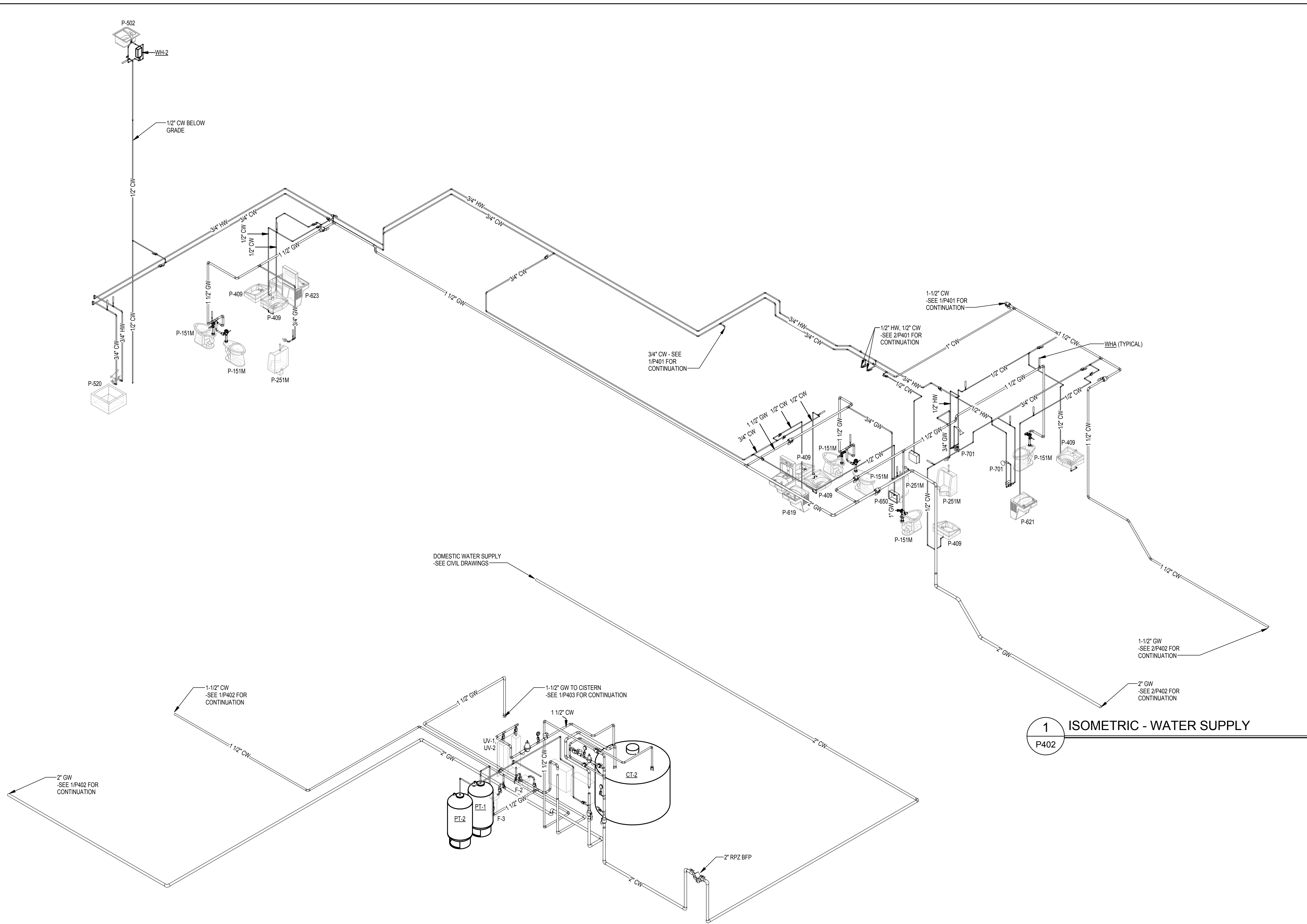
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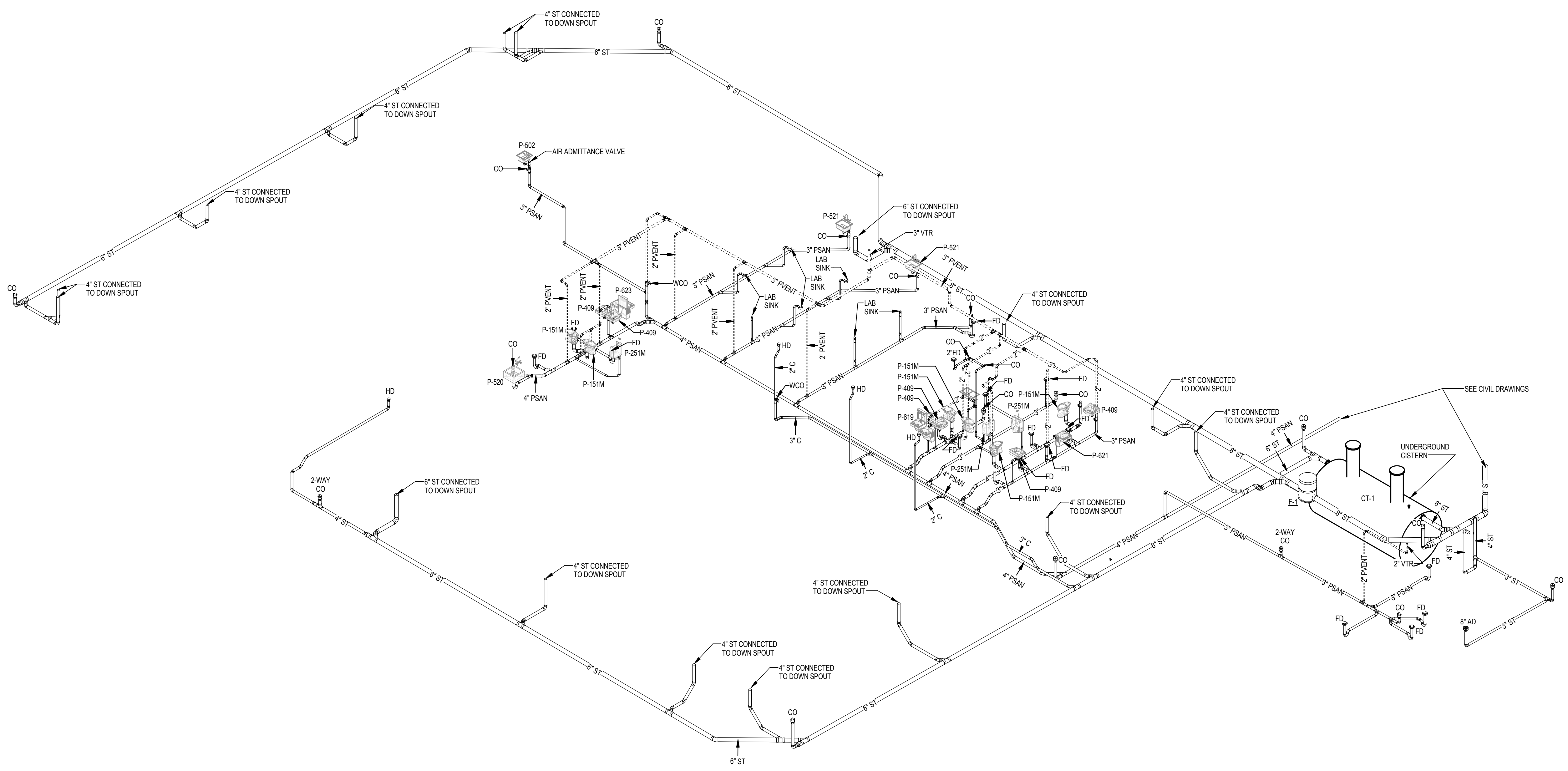


RISERS



1 ISOMETRIC - WATER SUPPLY
 P402

2 ISOMETRIC - WATER SUPPLY
 P402



1 ISOMETRIC - WASTE & VENT
P403

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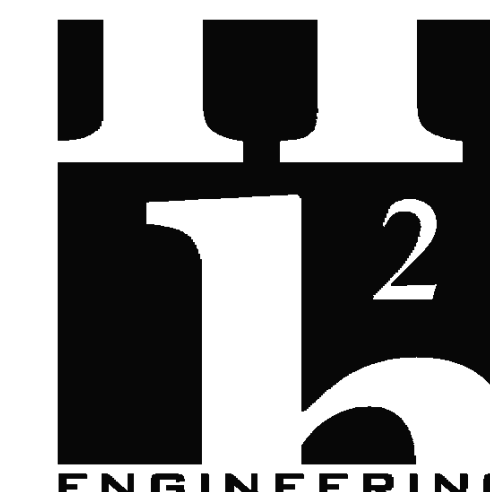
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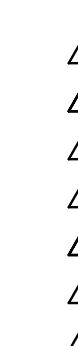
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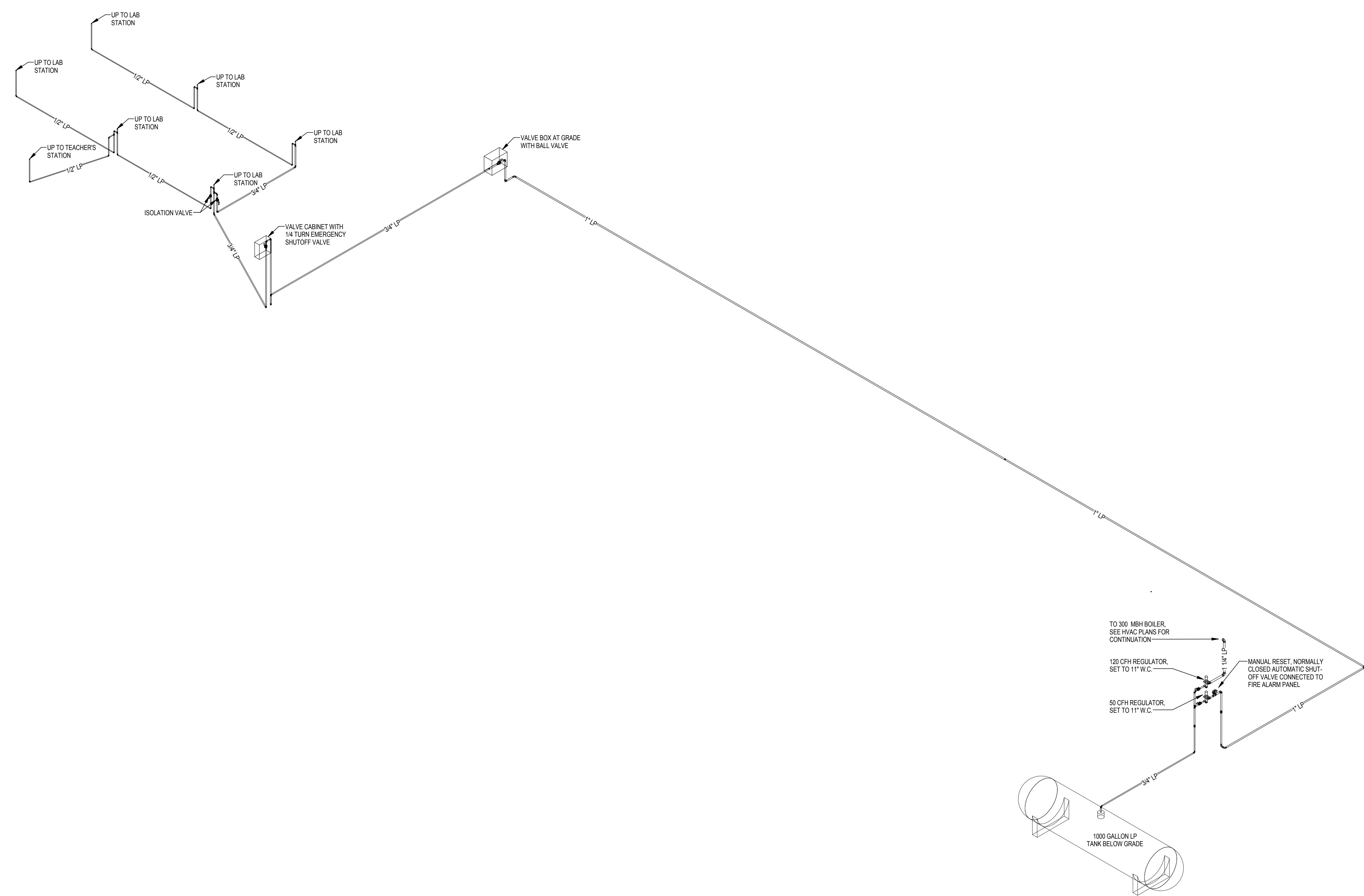
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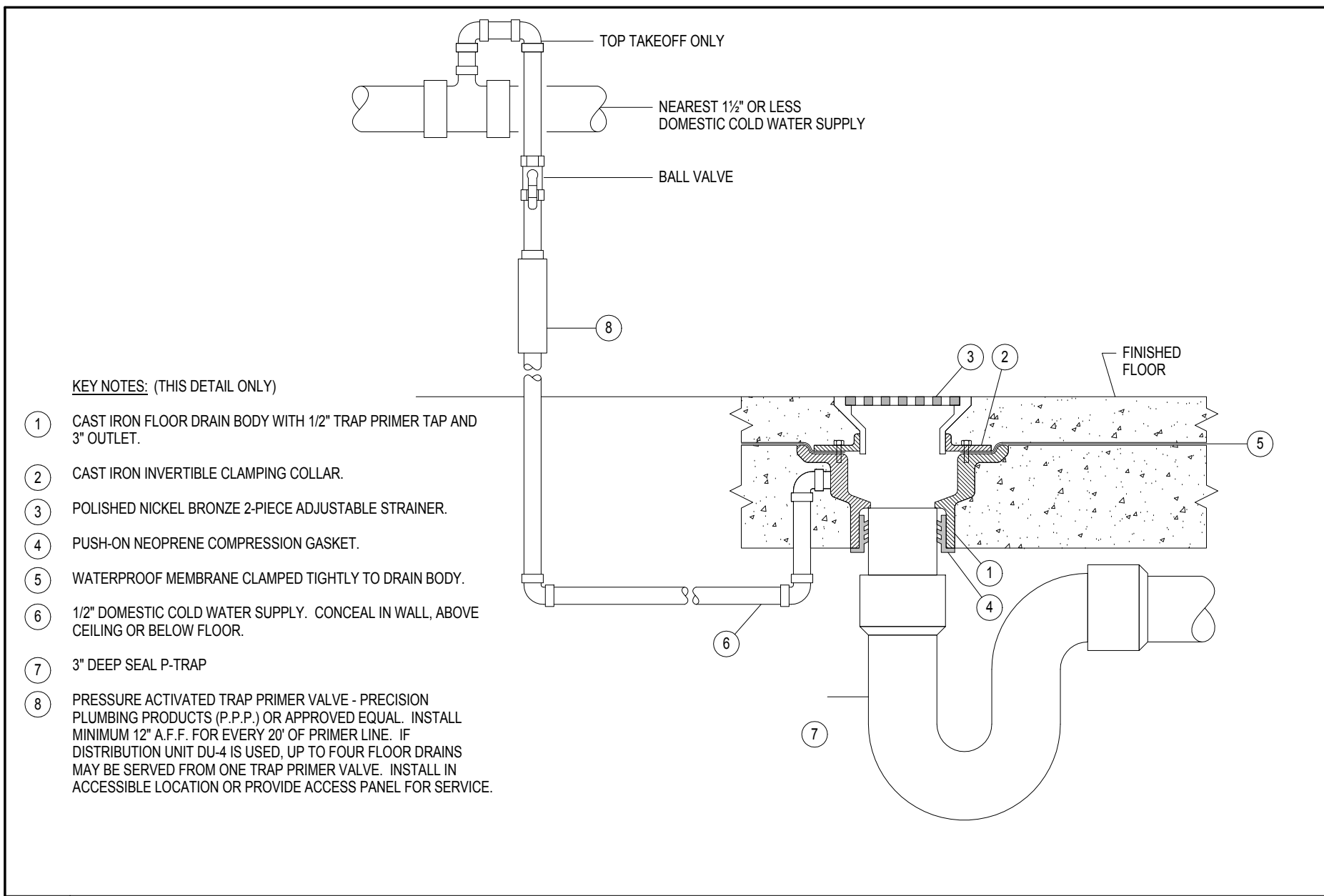
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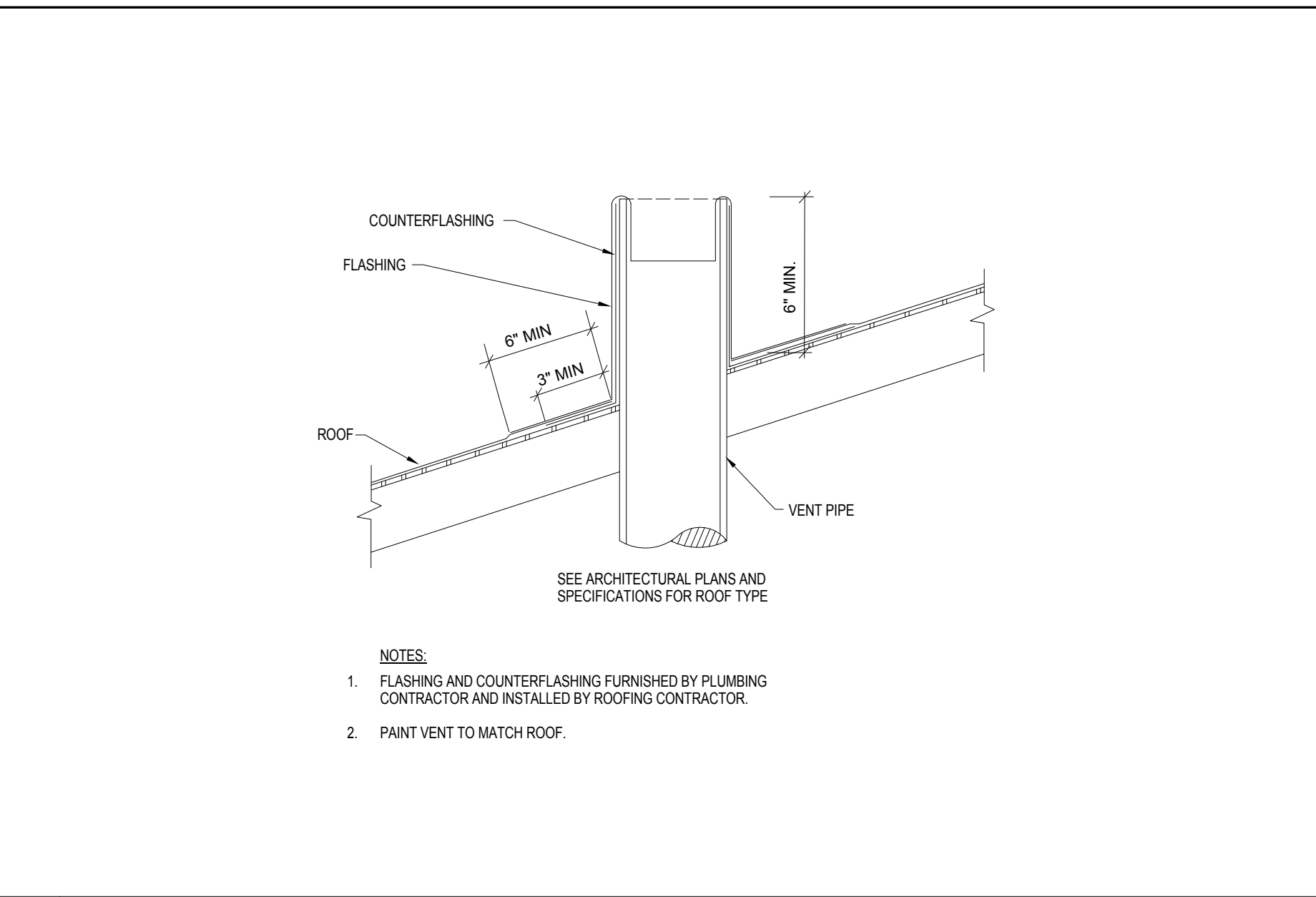
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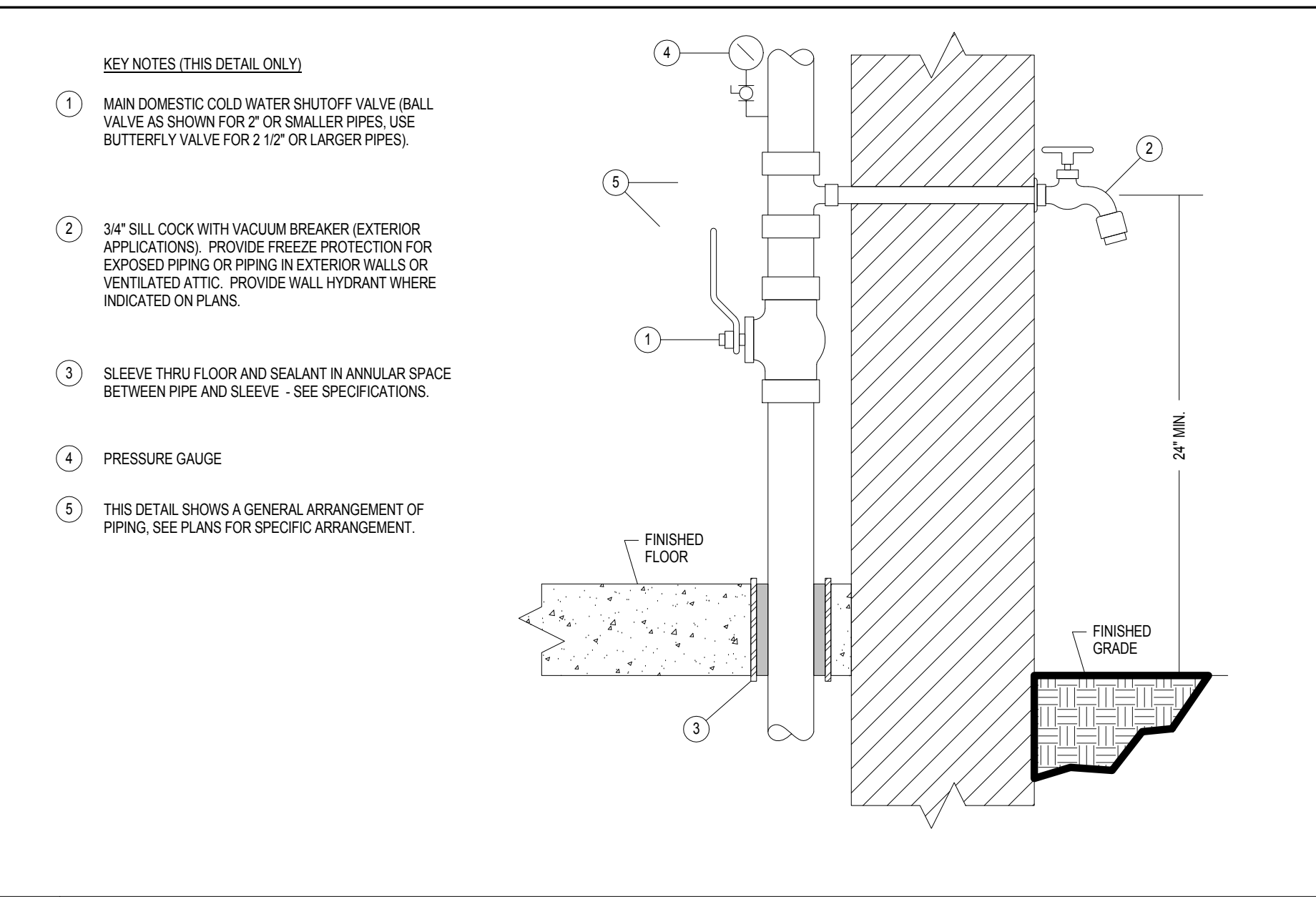
1 ISOMETRIC - GAS RISER
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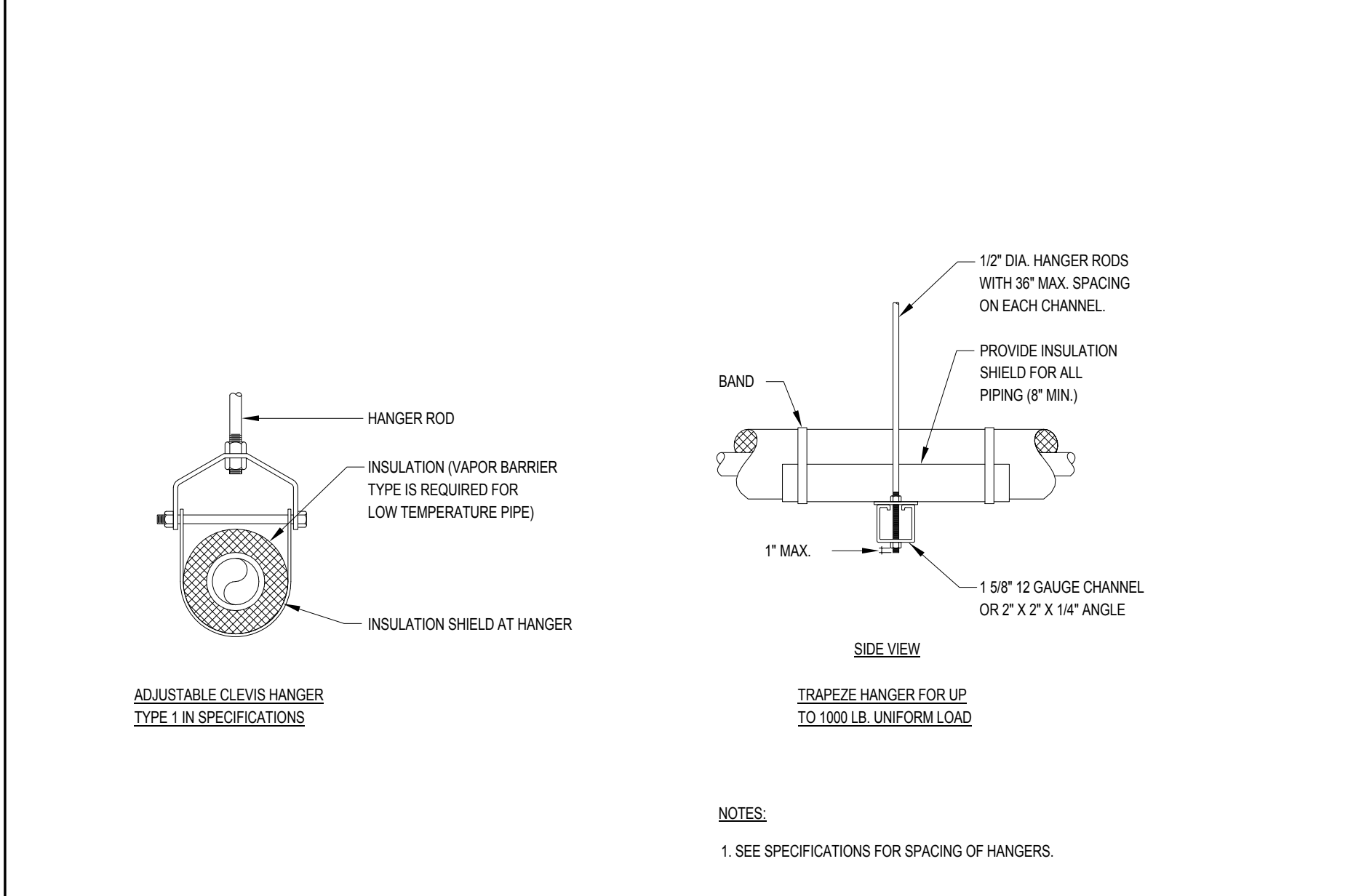
G FLOOR DRAIN



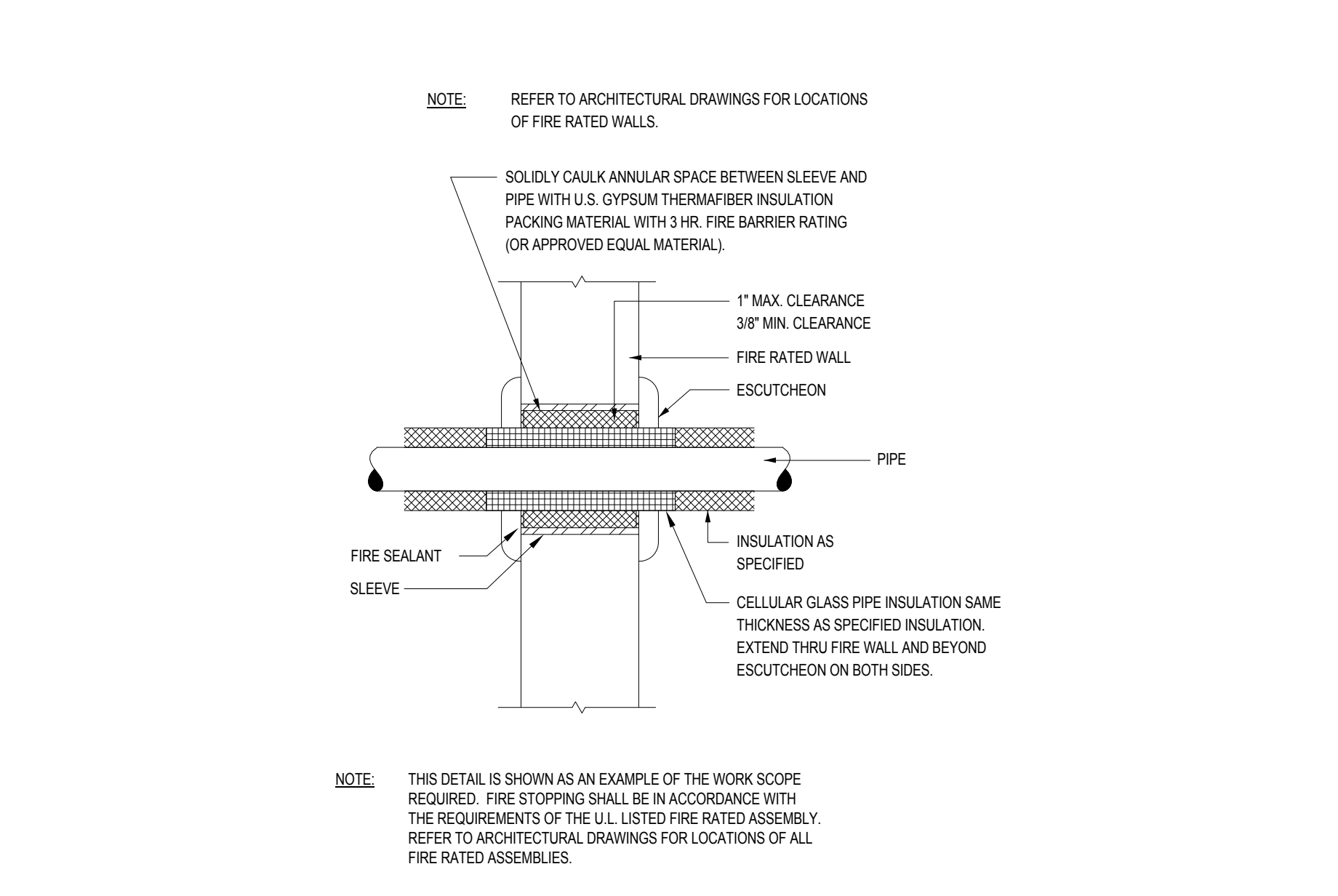
D VENT THRU ROOF



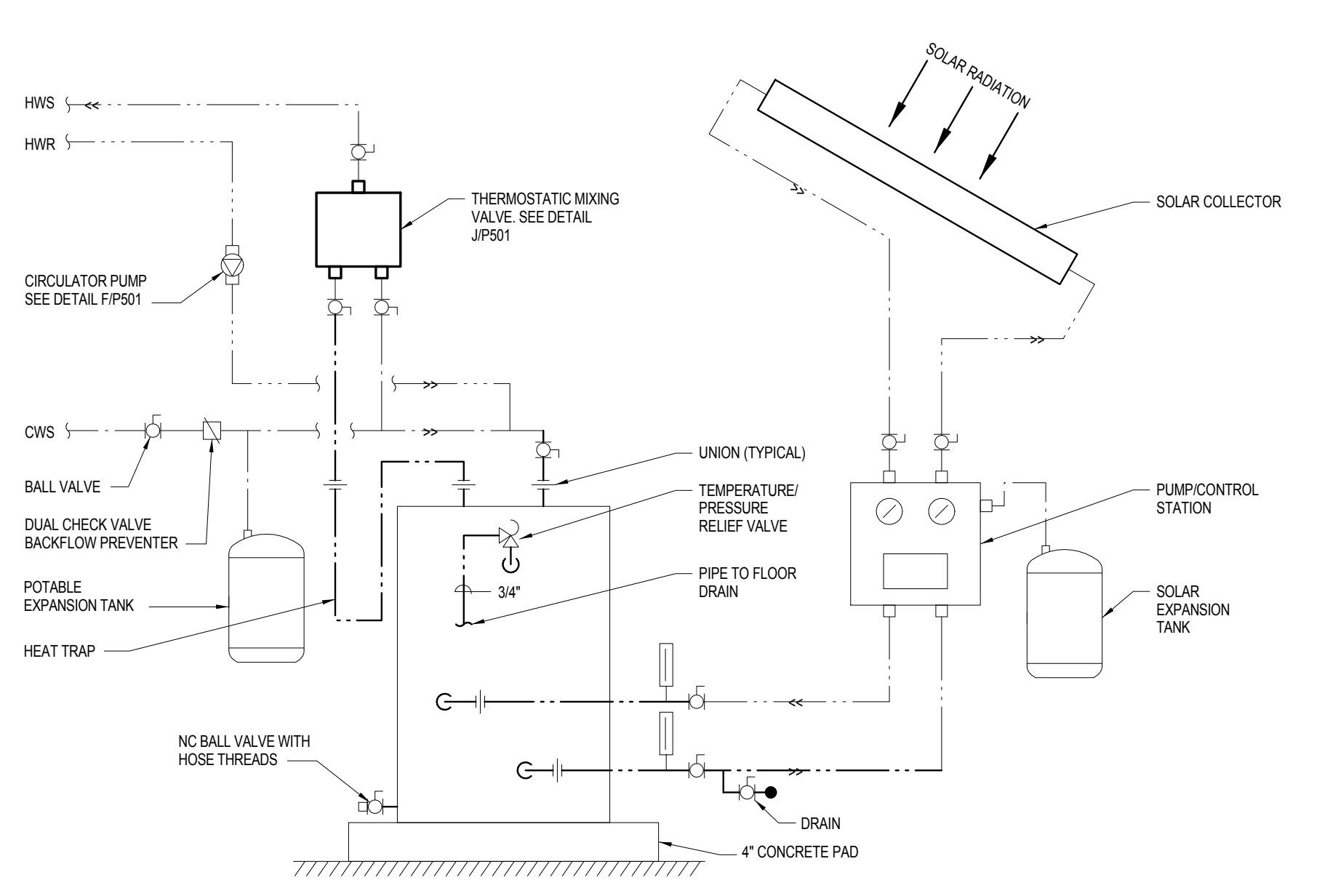
A WATER SERVICE ENTRANCE



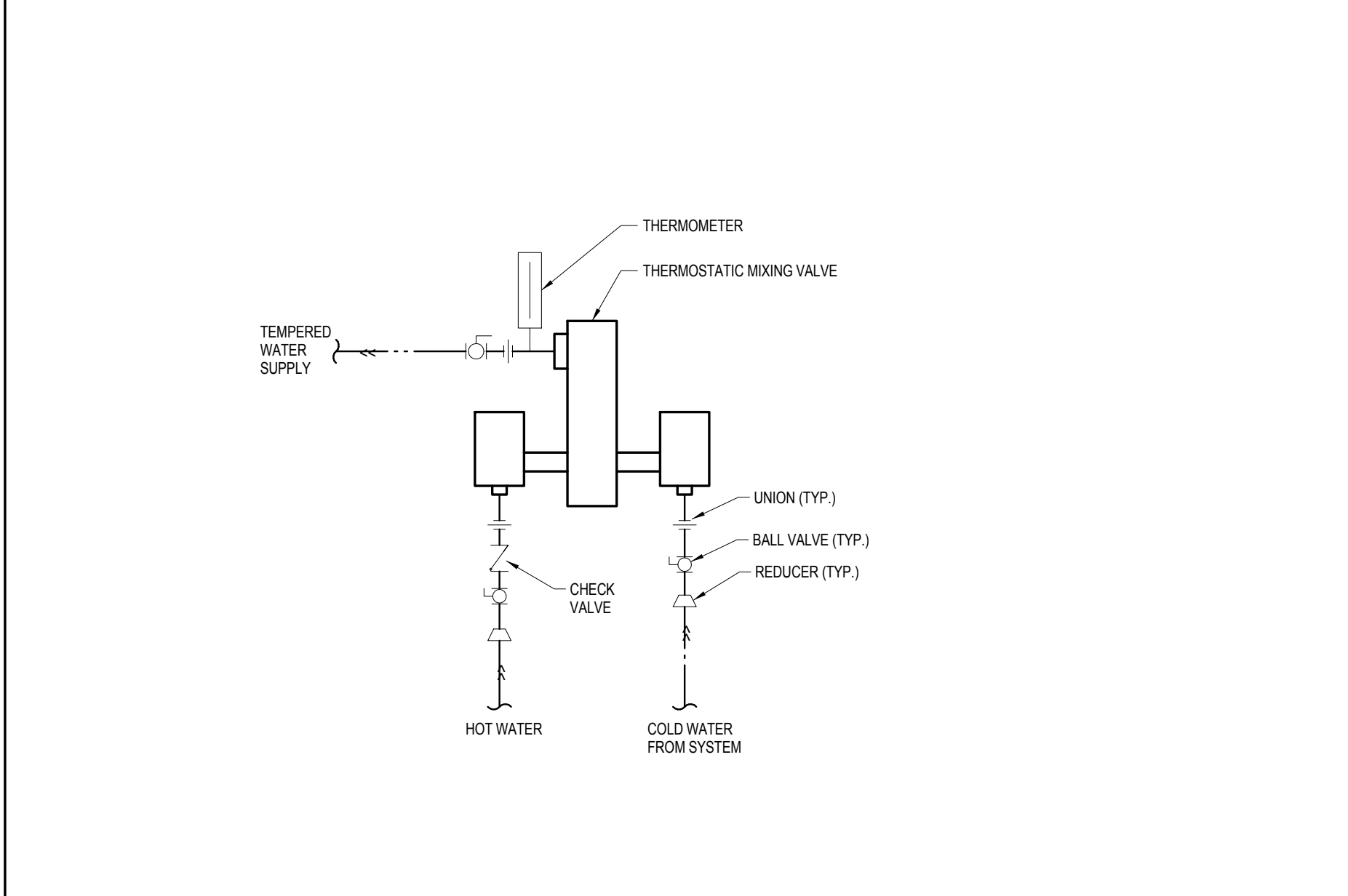
H TYPICAL PIPE HANGERS



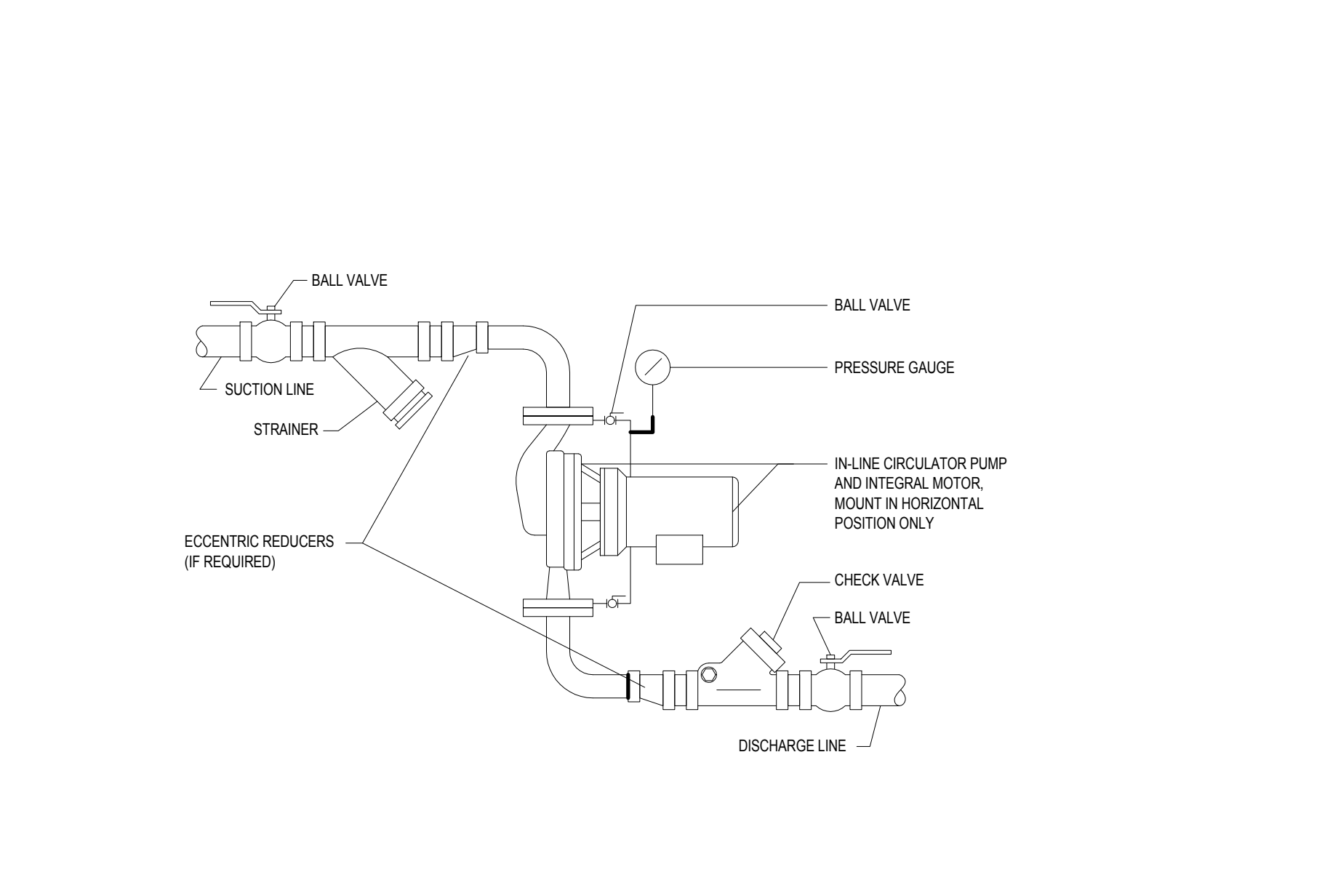
E PIPE PENETRATION OF FIRE RATED WALL



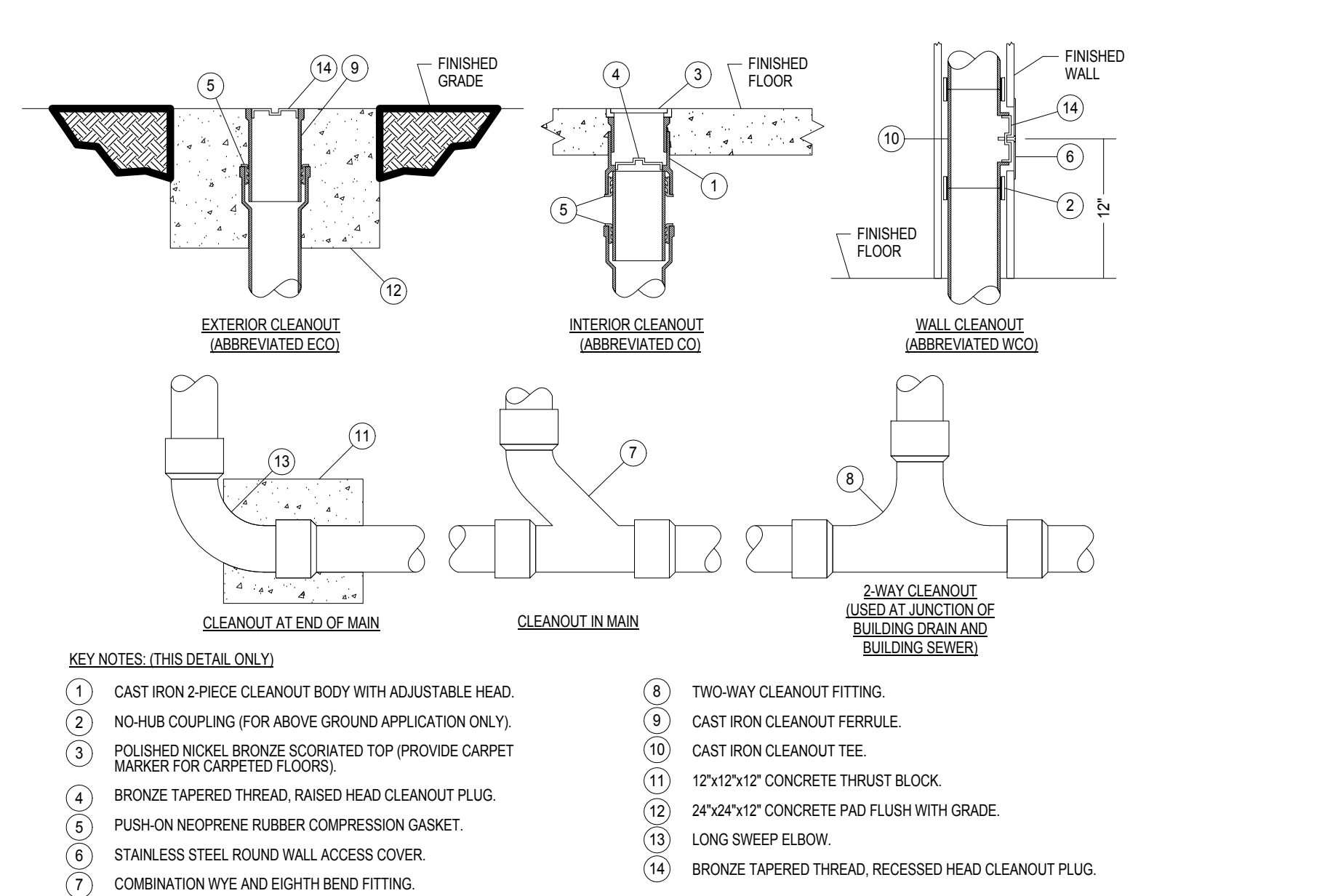
B SOLAR WATER HEATER WITH ELECTRIC BACKUP - FLOOR MOUNTED



J THERMOSTATIC MIXING VALVE

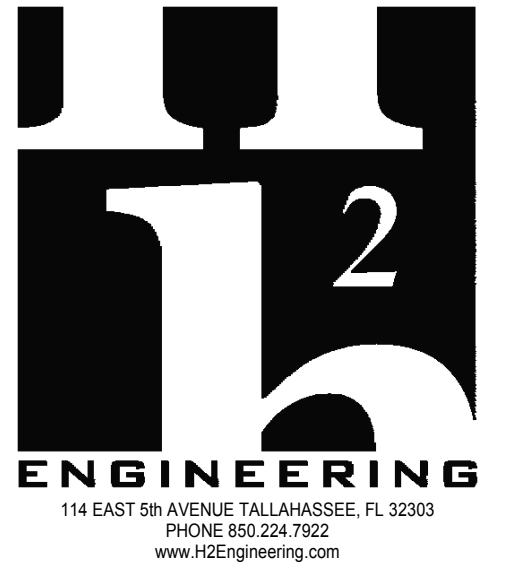


F IN-LINE CIRCULATOR PUMP



C CLEANOUTS

NOTES



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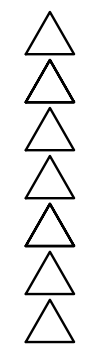
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CONSTRUCTION DOCUMENTS
 PROJECT PHASE

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DELEGATED DESIGN CALCULATION REQUIREMENTS								
<p>1. THESE FIRE PROTECTION ENGINEERING DESIGN DOCUMENTS ARE INTENDED TO BE COMPLIANT WITH FAC815-32.004(2) ITEMS "Q" THROUGH "J" AND REPRESENT THE DESIGN INTENT FOR THE FIRE SPRINKLER SYSTEM. THE DELEGATED ENGINEER IS RESPONSIBLE FOR PROVIDING A FIRE SPRINKLER SYSTEM FOR THE ENTIRE BUILDING APPROVED BY NFPA AND THE AUTHORITY HAVING JURISDICTION. PROVIDE DELEGATED DESIGN DOCUMENTS AND HYDRAULIC CALCULATIONS, SUBMITTED THROUGH THE ARCHITECT. SIZE PIPING TO PROVIDE AN EXCESS RESIDUAL PRESSURE OF 10 PSI AT THE HYDRAULICALLY MOST DEMANDING POINT AT SYSTEM DESIGN FLOW.</p> <p>2. DELEGATED ENGINEER SHALL PROVIDE FIRE PROTECTION SYSTEM LAYOUT DOCUMENTS TO THE ENGINEER OF RECORD AND AUTHORITY HAVING JURISDICTION INCLUDING THE FOLLOWING AS APPLICABLE, BUT NOT LIMITED TO: 1) SPRINKLER SYSTEM WORKING PLANS, INCLUDING SPRINKLER SYSTEM LAYOUT, NODE IDENTIFICATION AND NODE SPOT ELEVATIONS, 2) WATER SUPPLY INFORMATION, 3) SPRINKLER SYSTEM DESIGN AND HYDRAULIC CALCULATIONS, INCLUDING DETAILED WORKSHEETS AND GRAPH OF WATER SUPPLY CURVE AND SPRINKLER SYSTEM DEMAND, 4) SPRINKLER HEAD DATA/CUT SHEETS WITH SPECIFIC SYSTEM COMPONENTS IDENTIFIED, AND 5) ADDITIONAL SPRINKLER SYSTEM SPECIFICATIONS AS REQUIRED IN COMPLIANCE WITH NFPA 13-2002, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, CHAPTER 8, PLANS AND CALCULATIONS, PRIOR TO AUTOMATIC SPRINKLER SYSTEMS INSTALLATION.</p> <p>3. FIRE SPRINKLER CONTRACTOR SHALL COORDINATE THE LOCATION OF RISERS, CROSS MAINS, BRANCH LINES AND SPRINKLER HEADS WITH OTHER TRADE SYSTEMS TO AVOID CONFLICTS AND MAINTAIN ALL ARCHITECTURAL ELEMENTS OF THE BUILDING.</p> <p>4. CONTRACTOR SHALL INCLUDE IN HIS BID AN ALLOWANCE FOR FURNISHING AND INSTALLING ADDITIONAL PIPING AND SPRINKLER HEADS IN A QUANTITY OF TEN PERCENT OF THE TOTAL HEADS AND PIPING SHOWN IN THE CONTRACT DOCUMENTS. THESE HEADS SHALL BE INSTALLED AS DIRECTED BY THE ARCHITECT/ENGINEER TO COVER AREAS OBSTRUCTED BY OTHER SYSTEMS OR STRUCTURAL MEMBERS OR AS OTHERWISE NEEDED.</p>								
SYSTEM DESCRIPTION								
AREA	CLASSIFICATION	SYSTEM TYPE	DENSITY	TEMPERATURE RATING	MAXIMUM COVERAGE	MAXIMUM SPACING	WATER SUPPLY DURATION	OUTSIDE HOSE ALLOWANCE
			GPM/SF	'F	SQ. FT.	FEET	MINUTES	GPM
GENERAL EXCEPT AS LISTED BELOW	LIGHT	WET	0.1	ORDINARY	225	15	30	100
STORAGE	ORDINARY G-1	WET	0.15	ORDINARY	130	15	60-90	250
MEZZANINE	ORDINARY G-1	WET	0.15	INTERMEDIATE	130	15	60-90	250
EQUIPMENT ROOMS	ORDINARY G-1	WET	0.15	INTERMEDIATE	130	15	60-90	250
JANITOR CLOSETS	ORDINARY G-1	WET	0.15	ORDINARY	130	15	60-90	250
APPLICABLE CODES								
NFPA 1	UNIFORM FIRE CODE							
NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS							
NFPA 25	WATER BASED FIRE PROTECTION SYSTEMS							
NFPA 70	NATIONAL ELECTRICAL CODE							
NFPA 72	NATIONAL FIRE ALARM CODE							
NFPA 101	LIFE SAFETY CODE							
NFPA 1963	SCREW THREADS AND GASKETS FOR FIRE HOSE CONNECTIONS							
FBC 2010	FLORIDA BUILDING CODE 2010							
FAC 69A-3	FLORIDA ADMINISTRATIVE CODE - THE STATE FIRE PREVENTION CODE							
WATER FLOW TEST DATA								
TEST DATA								
STATIC PRESSURE		PSIG	54					
MEASURED FLOW		GPM	845					
RESIDUAL PRESSURE		PSIG	28					
TEST LOCATION & ELEVATION (ABOVE SEA LEVEL)								
FLOW HYDRANT		4265 CRAWFORDVILLE HWY - 33 FT.						
TEST HYDRANT		DONALDSON-WILLIAMS ROAD & HWY 319, CRAWFORDVILLE, FL - 24 FT.						
TEST DATE & TIME		03/11/2014 - 4:45 PM						
HYDRANT BUTT COEFFICIENT		0.9						
POINT OF SERVICE								
DESCRIPTION		INTERSECTION OF DONALDSON-WILLIAMS ROAD & HWY 319, CRAWFORDVILLE, FL						
ADDRESS		445 DONALDSON-WILLIAMS ROAD, CRAWFORDVILLE, FL 32327						
DRAWING REFERENCE		P100						
TEST CONDUCTED BY		STEWART MARNIE WITH PHOENIX FP						
WATER SUPPLY CHARACTERISTICS								
WATER MAIN SIZE		INCH	--					
WATER MAIN LOCATION		XXX - SEE SHEET XXX						
WATER MAIN DEAD-END SERVICE		YES						
WATER MAIN CIRCULATING		YES						
WATER SUPPLY MICROBIAL INDUCED CORROSION (MIC) POTENTIAL		NOTE 1	LOW					
NOTES:								
1. THE ENGINEER IS UNAWARE OF ANY MICROBIAL INDUCED CORROSION (MIC) FROM THIS WATER SUPPLY SYSTEM BASED ON FAMILIARITY WITH LOCAL CONDITIONS.								

PIPING AND FITTINGS			
	CAP		
	ELBOW TURNED UP		
	ELBOW TURNED DOWN		
	TEE, OUTLET UP		
	TEE, OUTLET DOWN		
	WET PIPE		
	DRY PIPE		
	DRAIN PIPING		
	NEW PIPE		
	FIRE DEPARTMENT CONNECTION (SHAMOSE INLET)		
VALVES			
N.O.	N.C.	BALL VALVE	
N.O.	N.C.	BUTTERFLY VALVE	
		SWING CHECK VALVE	
SPRINKLERS			
	PENDANT (UNLESS NOTED OTHERWISE)		
	EXPOSED UPRIGHT		
MEASUREMENTS AND CONTROLS			
	FLOW SWITCH		
	TAMPER SWITCH ON INDICATING TYPE VALVE		
	PRESSURE GAUGE AND ISOLATION VALVE		
AIR COMPRESSOR SCHEDULE			
DESIGNATION		AC-1	
NUMBER OF COMPRESSORS	NO.	1	
COMPRESSOR	HP	3/4	
ELECTRICAL CHARACTERISTICS	V/PH	115/1	
DRY PIPE MAXIMUM SYSTEM CAPACITY	GAL.	425	
MANUFACTURER	GENERAL AIR		
MODEL NUMBER	0L42575AC		
NOTES:			
1. PROVIDE AIR MAINTENANCE DEVICE; MODEL #AMD-1.			
2. PROVIDE MANUAL DESICCANT DRYER; MODEL #AD3400.			

FIRE PROTECTION NOTES			
1. INSTALL ALL WORK IN ACCORDANCE WITH THE PLUMBING CODE, LATEST APPROVED EDITION N.F.P.A. FIRE CODES, LOCAL PLUMBING CODES, AND APPLICABLE O.S.H.A. AND E.P.A. REGULATIONS AND GUIDELINES. WHERE CONFLICTS BETWEEN CODE AND CONSTRUCTION DOCUMENTS OCCUR, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN.			
2. COORDINATE EXACT LOCATION OF ALL SPRINKLERS WITH THE CEILING, LIGHTING LAYOUT, HVAC DUCTS AND STRUCTURAL COMPONENTS.			
3. LIGHT FIXTURES AND HVAC DIFFUSERS TAKE PRECEDENCE. ADD ADDITIONAL SPRINKLERS AS REQUIRED TO MEET "COVERAGE REQUIREMENTS".			
4. PLACE SPRINKLERS IN CENTER OF CEILING TILES. PROVIDE RETURN BENDS AT ALL SPRINKLER LOCATIONS TO ALLOW FLOW ADJUSTMENT. PREFABRICATION OF PIPING TO LOCATE SPRINKLER IN CENTER OR TILE IS PROHIBITED.			
5. ALL BRANCH LINES SERVING ONE SPRINKLER SHALL BE 1" UNLESS NOTED OTHERWISE.			
6. IN MECHANICAL ROOMS FINAL LOCATION OF SPRINKLERS SHALL BE DETERMINED AFTER EQUIPMENT AND DUCTWORK ARE IN PLACE. CONTRACTOR SHALL PROVIDE ADDITIONAL SPRINKLERS, IF NECESSARY, TO PROVIDE ADEQUATE COVERAGE IN ACCORDANCE WITH NFPA 13.			
7. ALARM, SUPERVISORY AND TROUBLE SIGNALS SHALL BE AUTOMATICALLY TRANSMITTED TO AN APPROVED CENTRAL STATION. REMOTE SUPERVISING STATION OR PROPRIETARY SUPERVISING STATION AS DEFINED IN NFPA 720R, WHEN APPROVED BY THE BUILDING OFFICIAL, SHALL SOUND AN AUDIBLE SIGNAL AT A CONSTANTLY ATTENDED LOCATION. COORDINATE WITH DIVISION 26 CONTRACTOR AS REQUIRED.			
8. PROVIDE A LISTED GUARD FOR SPRINKLERS IN LOCATIONS SUBJECT TO MECHANICAL INJURY. THESE AREAS SHALL INCLUDE MECHANICAL ROOMS, ELECTRICAL ROOMS AND ON MEZZANINE.			
9. FIRE DEPARTMENT CONNECTIONS SHALL BE ON THE STREET SIDE OF BUILDINGS, FULLY VISIBLE AND RECOGNIZABLE FROM THE STREET OR NEAREST POINT OF FIRE DEPARTMENT APPARATUS ACCESSIBILITY, AND SHALL BE LOCATED AND ARRANGED SO THAT HOSE LINES CAN BE ATTACHED TO THE INLETS WITHOUT INTERFERENCE FROM NEARBY OBJECTS, INCLUDING BUILDINGS, FENCES, POSTS, OR OTHER FIRE DEPARTMENT CONNECTIONS.			
10. CLEARANCES SHALL BE MAINTAINED OF SEVEN AND ONE HALF FEET (7'-6") IN FRONT OF AND TO THE SIDES OF FIRE DEPARTMENT CONNECTION.			
11. THE DOUBLE-DETECTOR CHECK VALVE ASSEMBLY AND/OR POST INDICATOR VALVE DEDICATED TO THE FIRE SPRINKLER SYSTEM SHALL BE PROTECTED WITH TAMPER SWITCHES, TIED INTO THE FIRE ALARM SYSTEM AND CHAIN-LOCKED IN THE OPEN POSITION.			
12. EACH FIRE DEPARTMENT CONNECTION SHALL BE IDENTIFIED WITH A SIGN INDICATING THE BUILDING OR BUILDINGS SERVED.			
13. AN EXTERNAL AUDIBLE ALARM SHALL BE PROVIDED WHEN THE WATER FLOW SWITCH IS ACTIVATED. THE EXTERNAL ALARM SHALL BE PROVIDED WITH APPROPRIATE SIGNAGE. THE SIGN SHOULD BE LOCATED NEAR THE DEVICE IN A CONSPICUOUS POSITION AND SHOULD BE WORDED AS FOLLOWS: "SPRINKLER FIRE ALARM, WHEN BELL RINGS CALL FIRE DEPT".			
14. THE CONTRACTOR SHALL SUBMIT A SEPARATE PERMIT APPLICATION AND PLANS FOR REVIEW PER NFPA 1, 1.14.1 & 1.14.2, FLORIDA 2010 EDITION.			
15. PER FFPC 2004, 1, SECTION 18.3.4.3, FIRE DEPARTMENT CONNECTIONS SHALL BE IDENTIFIED BY A SIGN THAT STATES "NO PARKING, FIRE DEPARTMENT CONNECTION" AND SHALL BE DESIGNED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS FOR INFORMATION SIGNAGE.			
ABBREVIATIONS			
AC	ABOVE CEILING	FS	FLOW SWITCH
AFF	ABOVE FINISHED FLOOR	FT	FEET
AHAP	AS HIGH AS POSSIBLE	GPM	GALLONS PER MINUTE
BF	BELOW FLOOR	IN	INCHES
BG	BELOW GRADE	N/A	NOT APPLICABLE
DN	DOWN	OS&Y	OUTSIDE SCREW AND YOKE
DPIV	DRY PIPE VALVE	PW	POST INDICATOR VALVE
EXIST	EXISTING	PSIG	POUNDS PER SQUARE INCH, GAUGE
FDC	FIRE DEPARTMENT CONNECTION	TS	TAMPER SWITCH
FE	FIRE EXTINGUISHER	TYP	TYPICAL
HAZARD CLASSIFICATION			
	LIGHT HAZARD		
	ORDINARY HAZARD, GROUP 1		
ROOMS OR SPACES NOT SPECIFICALLY DESIGNATED AS TO HAZARD CLASSIFICATION SHALL BE CONSIDERED LIGHT HAZARD.			

GENERAL NOTES		
1. DRAWINGS ARE DIAGRAMMATIC, INDICATIVE OF WORK TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS.		
2. FIELD VERIFY ALL DIMENSIONS AND ALL CONDITIONS. IF THE CONTRACTOR IS UNABLE TO INTERPRET THE CONTRACT DOCUMENTS, HE IS RESPONSIBLE TO REQUEST CLARIFICATION IN WRITING TO THE ARCHITECT. IF HE PROCEEDS WITH ANY WORK BEFORE OBTAINING CLARIFICATION, HE SHALL BE HELD RESPONSIBLE FOR ALL DEFICIENCIES ASSOCIATED THEREWITH.		
3. BEFORE SUBMITTING FOR THE WORK, EACH BIDDER WILL BE RESPONSIBLE TO EXAMINE THE PREMISES AND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGATED TO OPERATE AND COMPLETE THE WORK UNDER THIS CONTRACT. NO ALLOWANCE WILL BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR OMISSION ON HIS PART.		
4. THE CONTRACTOR SHALL PAY FOR ALL INSPECTION PERMITS, CERTIFICATES, CONNECTION FEES, SYSTEM DEMAND CHARGES AND LICENSE FEES IN CONNECTION WITH HIS WORK.		
5. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK OF ALL SUBCONTRACTORS TO AVOID INTERFERENCES.		
6. ALL WORK SHALL COMPLY WITH APPLICABLE O.S.H.A. AND E.P.A. REGULATIONS AND GUIDELINES.		
7. ERECT AND MAINTAIN ALL REASONABLE PRECAUTIONS FOR SAFETY AND HEALTH INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS INCLUDING PROMULGATING SAFETY REGULATIONS. PROVIDE SAFETY PRECAUTIONS AND BARRICADES FOR PEDESTRIANS AT CONSTRUCTION VEHICLE ACCESS AND EGRESS LOCATIONS.		
8. COORDINATE AND SEQUENCE ALL CLEANING AND CONSTRUCTION WORK. SUBMIT A COMPLETELY DETAILED CONSTRUCTION SCHEDULE PRIOR TO PRE-CONSTRUCTION CONFERENCE.		
9. THE CONTRACTOR SHALL BE HELD TO THE PROJECT SCHEDULE. HE SHALL PROVIDE SUFFICIENT MANPOWER AND EQUIPMENT TO FULLY MOBILIZE, PROCEED WITH AND COMPLETE THE WORK.		
10. THE CONTRACTOR SHALL BE RESTRICTED TO AREAS SPECIFIED BY THE OWNER FOR ON-SITE STORAGE OF CONSTRUCTION MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SECURITY OF ALL EQUIPMENT AND MATERIALS.		
11. THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK ENVIRONMENT AT ALL TIMES AND SHALL CLEAN CONSTRUCTION SITE OF ALL DEBRIS AT COMPLETION OF THE JOB AND BEFORE FINAL PAYMENT IS MADE.		
12. THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS TO THE ARCHITECT AT COMPLETION OF CONSTRUCTION.		
13. CONTRACTOR'S USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACTOR HAS COMPLIED WITH THE CONTRACT DOCUMENT REQUIREMENTS RELATED TO "SHOP DRAWINGS, PRODUCT DATA AND SAMPLES".		
14. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT/ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT/ENGINEER IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMITTAL AND THE ARCHITECT/ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS BY THE ARCHITECT/ENGINEER'S APPROVAL THEREOF.		
15. SUPPORTS AND HANGERS SHALL PRESENT A NEAT, ORDERLY APPEARANCE.		
16. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE, SMOKE, AND ACOUSTICAL WALL ASSEMBLIES.		
17. BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. BEAM SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.		
18. CONTRACTOR SHALL FURNISH U.L. APPROVED DRAWINGS FOR EACH TYPE OF FIRE RATED ASSEMBLY PENETRATION BY DUCTS, PIPES OR CONDUITS. THESE DRAWINGS SHALL BE DISPLAYED ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION. SEE SPECIFICATIONS.		
19. CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY MATERIAL SUPPLIERS AND MANUFACTURERS.		
FIRE SHEET LIST		
SHEET NUMBER	SHEET NAME	ISSUED
F001	GENERAL NOTES, LEGENDS & SCHEDULES - FIRE PROTECTION	Yes
F100	SITE PLAN - FIRE	Yes
F101	FLOOR PLAN - FIRE SPRINKLER	Yes
F301	SECTIONS - FIRE	Yes
F501	DETAILS	Yes

NOTES

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www.H2Engineering.com

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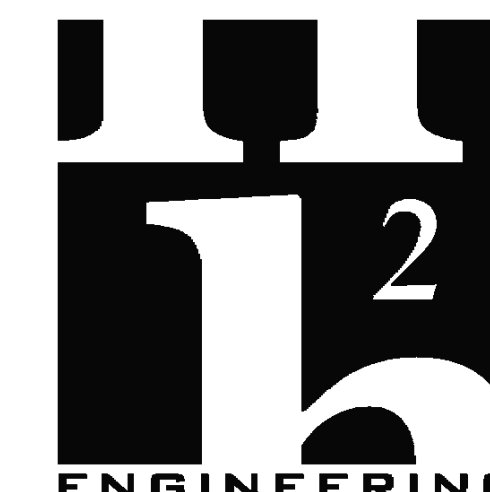
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DOCUMENTS

REVISIONS

GENERAL NOTES
LE ENDS
SCHEDULES - FIRE
PROTECTION

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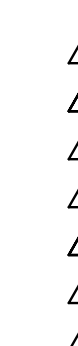
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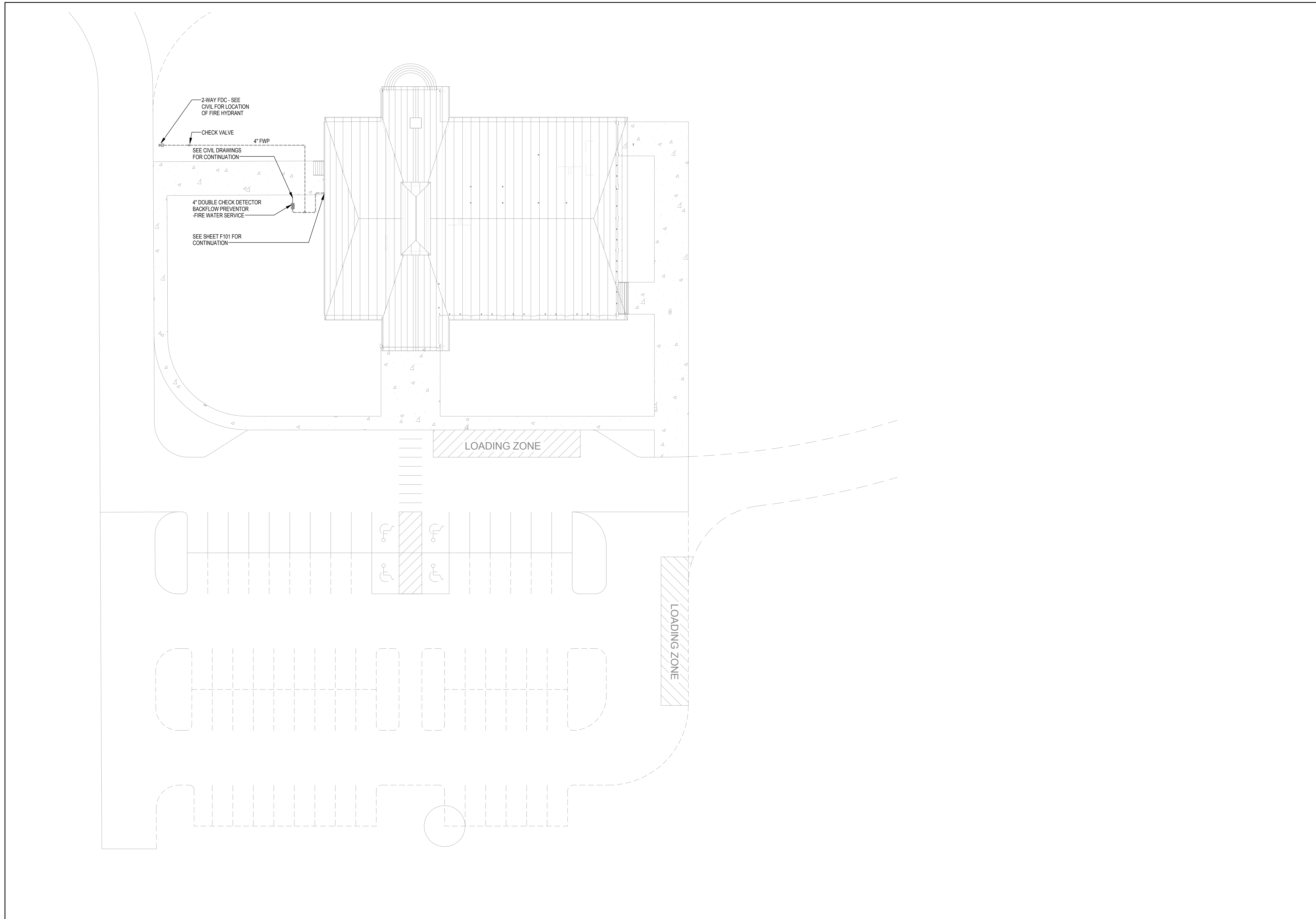
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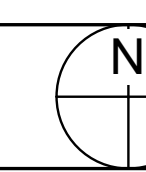
SITE PLAN - IRE

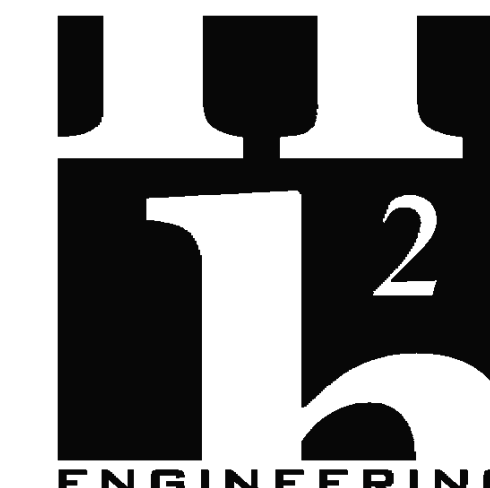
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1 SITE PLAN - FIRE
F100 1" = 20'-0"





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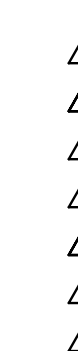
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LOOR PLAN - IRE
 SPRINKLER

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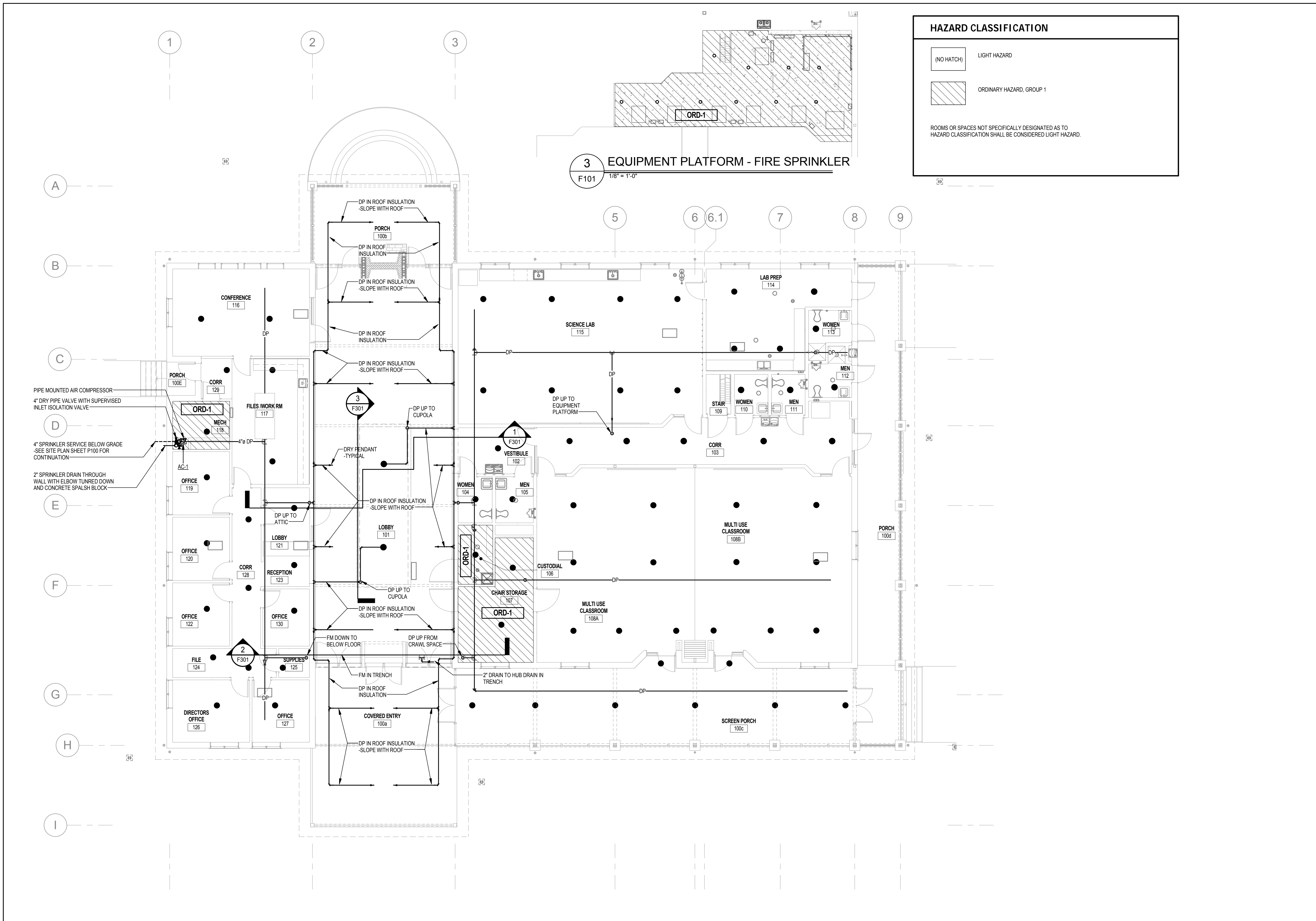
HAZARD CLASSIFICATION

(NO HATCH) LIGHT HAZARD

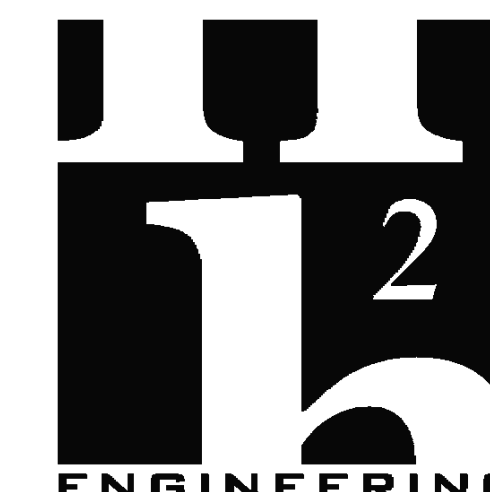
(DIAGONAL HATCH) ORDINARY HAZARD, GROUP 1

ROOMS OR SPACES NOT SPECIFICALLY DESIGNATED AS TO HAZARD CLASSIFICATION SHALL BE CONSIDERED LIGHT HAZARD.

3 EQUIPMENT PLATFORM - FIRE SPRINKLER
 F101 1/8" = 1'-0"



1 FLOOR PLAN - FIRE SPRINKLER
 F101 1/8" = 1'-0"



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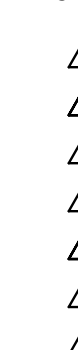
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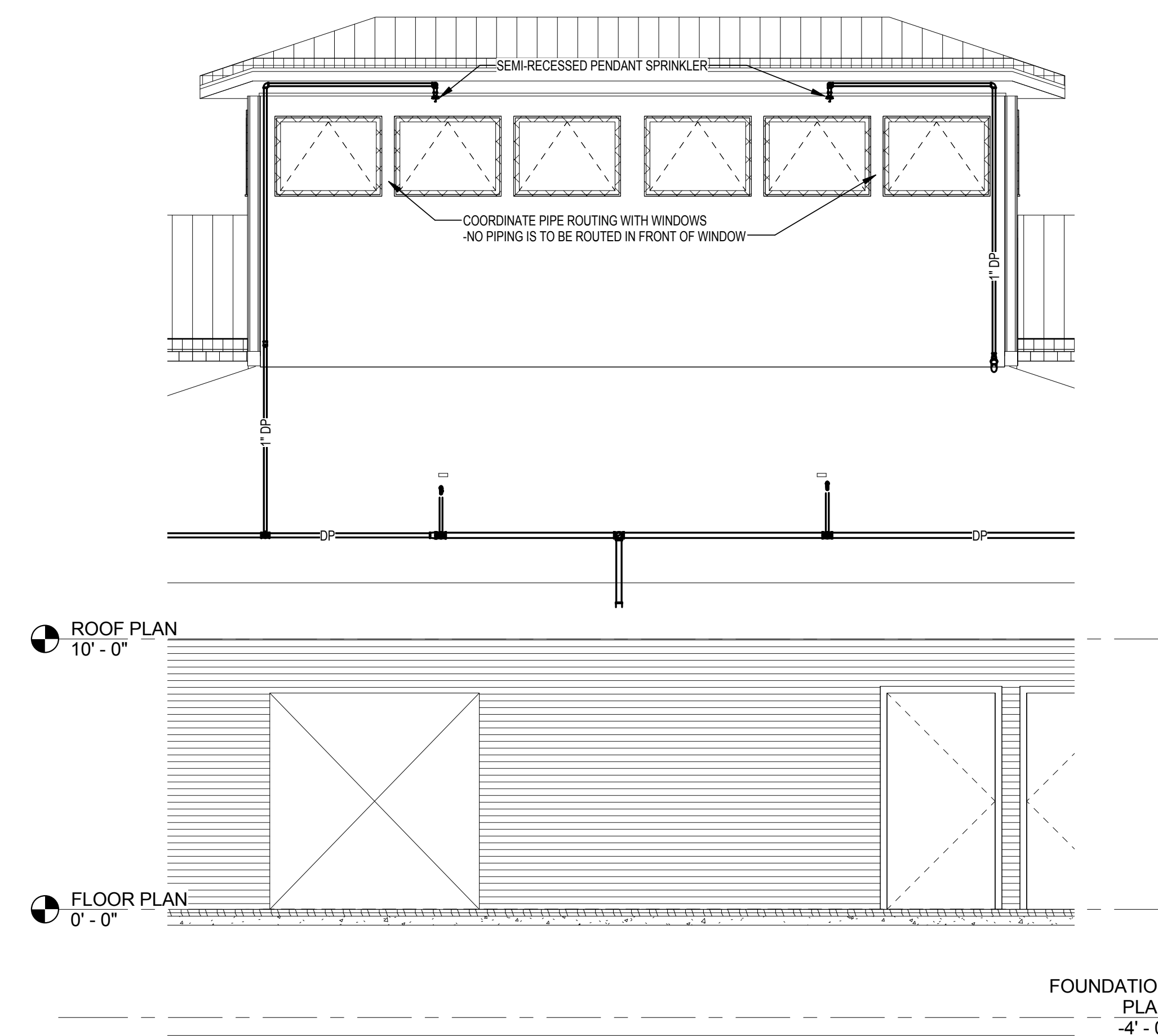
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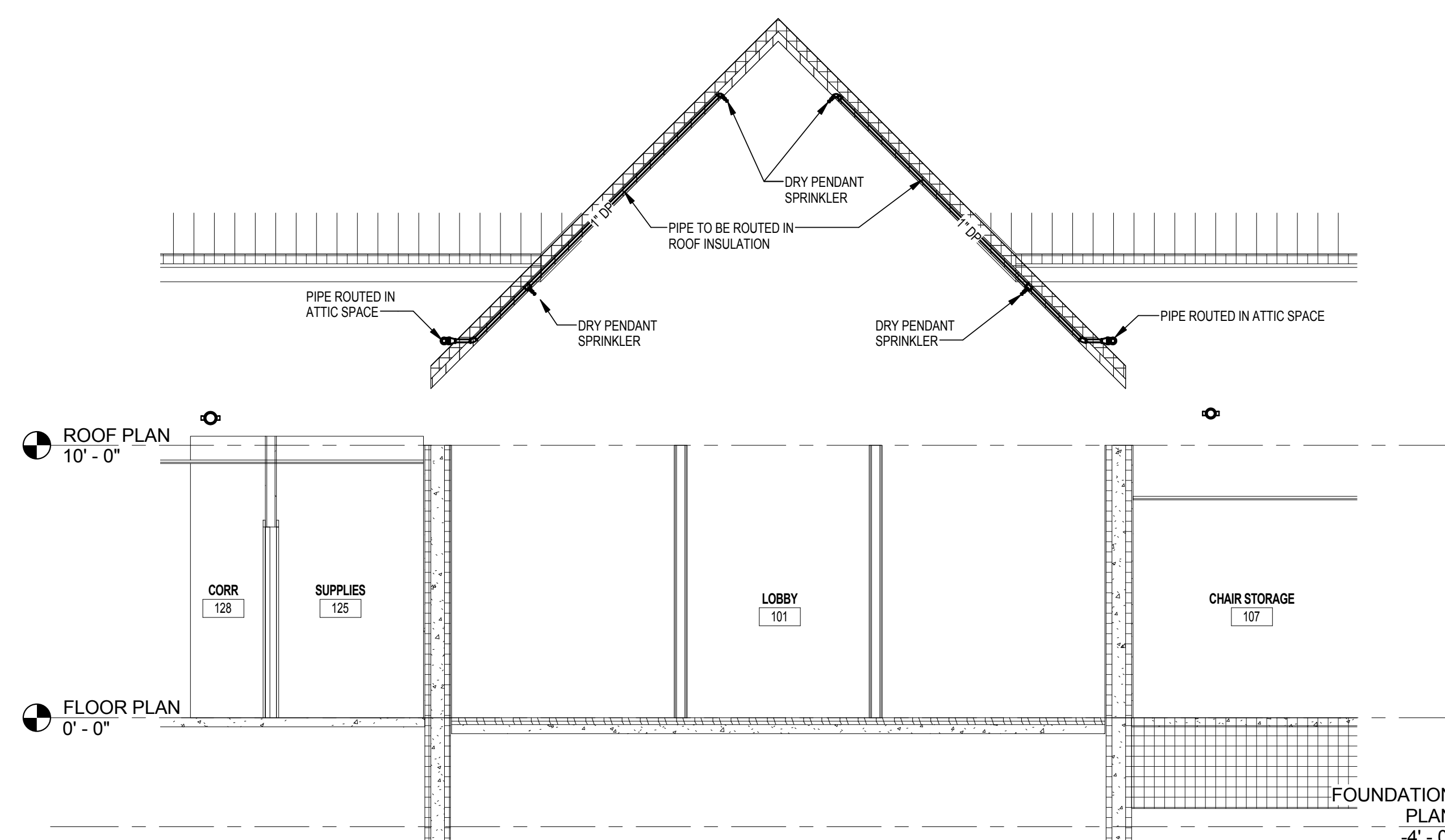
SECTIONS - IRE

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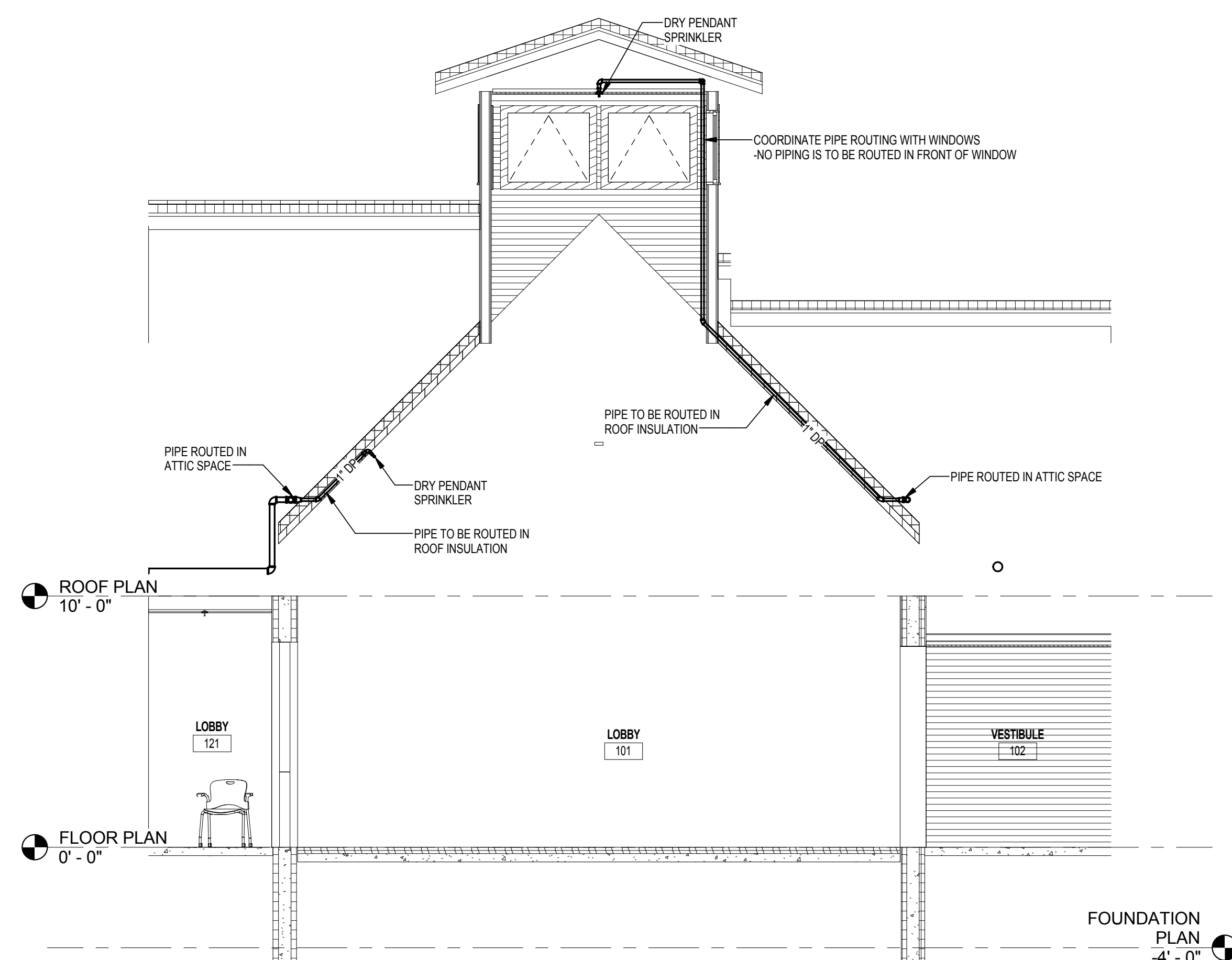
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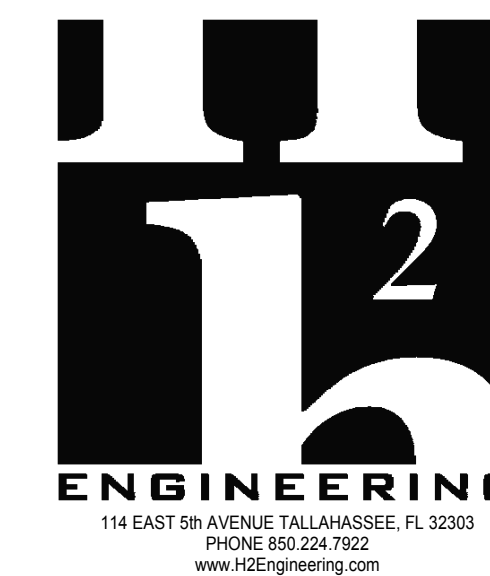
3 NORTH/SOUTH SECTION - CUPOLA
 F301 1/4" = 1'-0"



2 EAST/WEST SECTION - OPEN MALL AREA
 F301 1/4" = 1'-0"



1 EAST/WEST SECTION - CUPOLA
 F301 1/4" = 1'-0"



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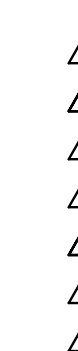
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 Institute

30 APRIL 2014
 DATE

CONSTRUCTION DOCUMENTS
 PROJECT PHASE

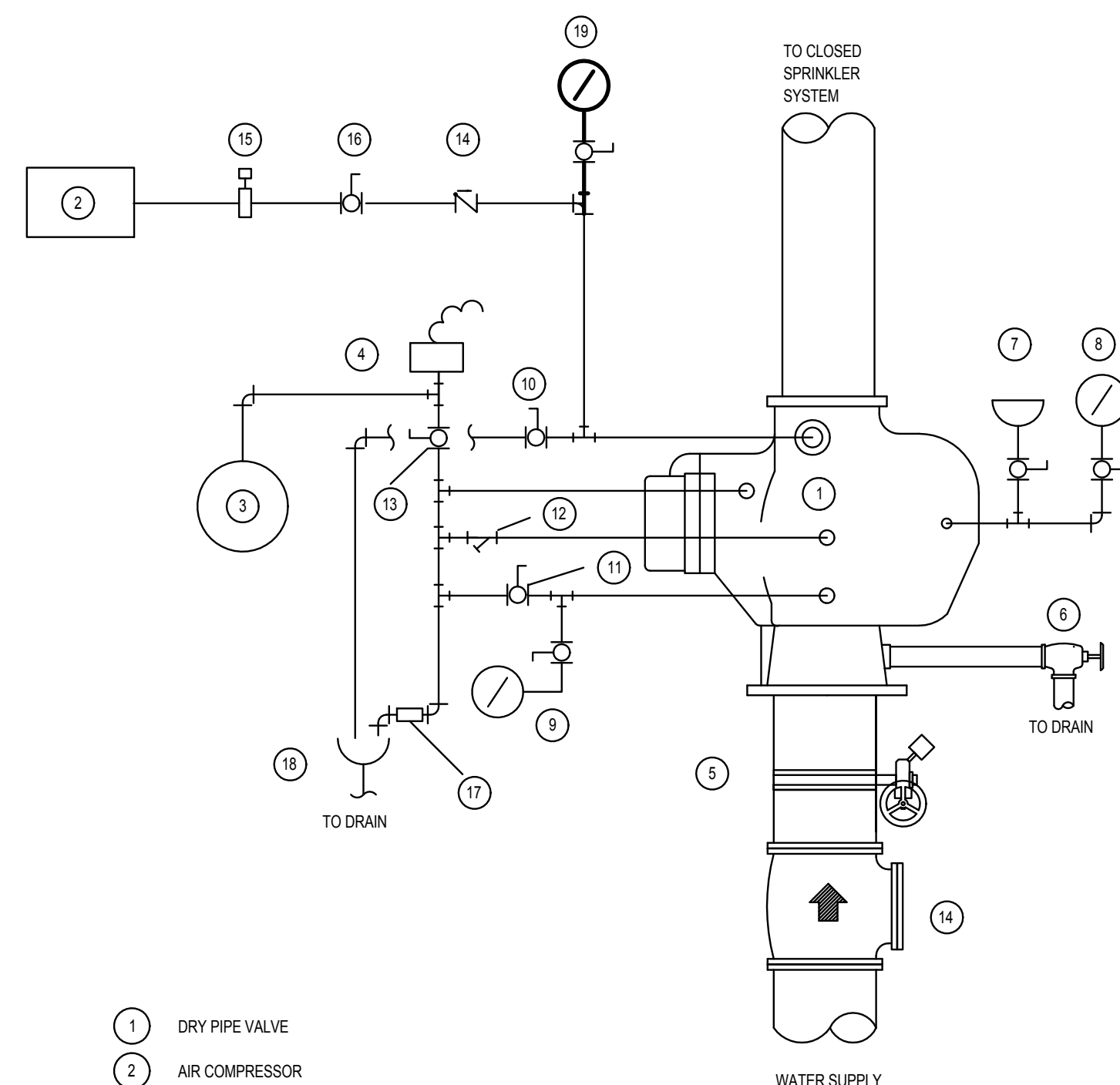
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 DOCUMENTS

REVISIONS

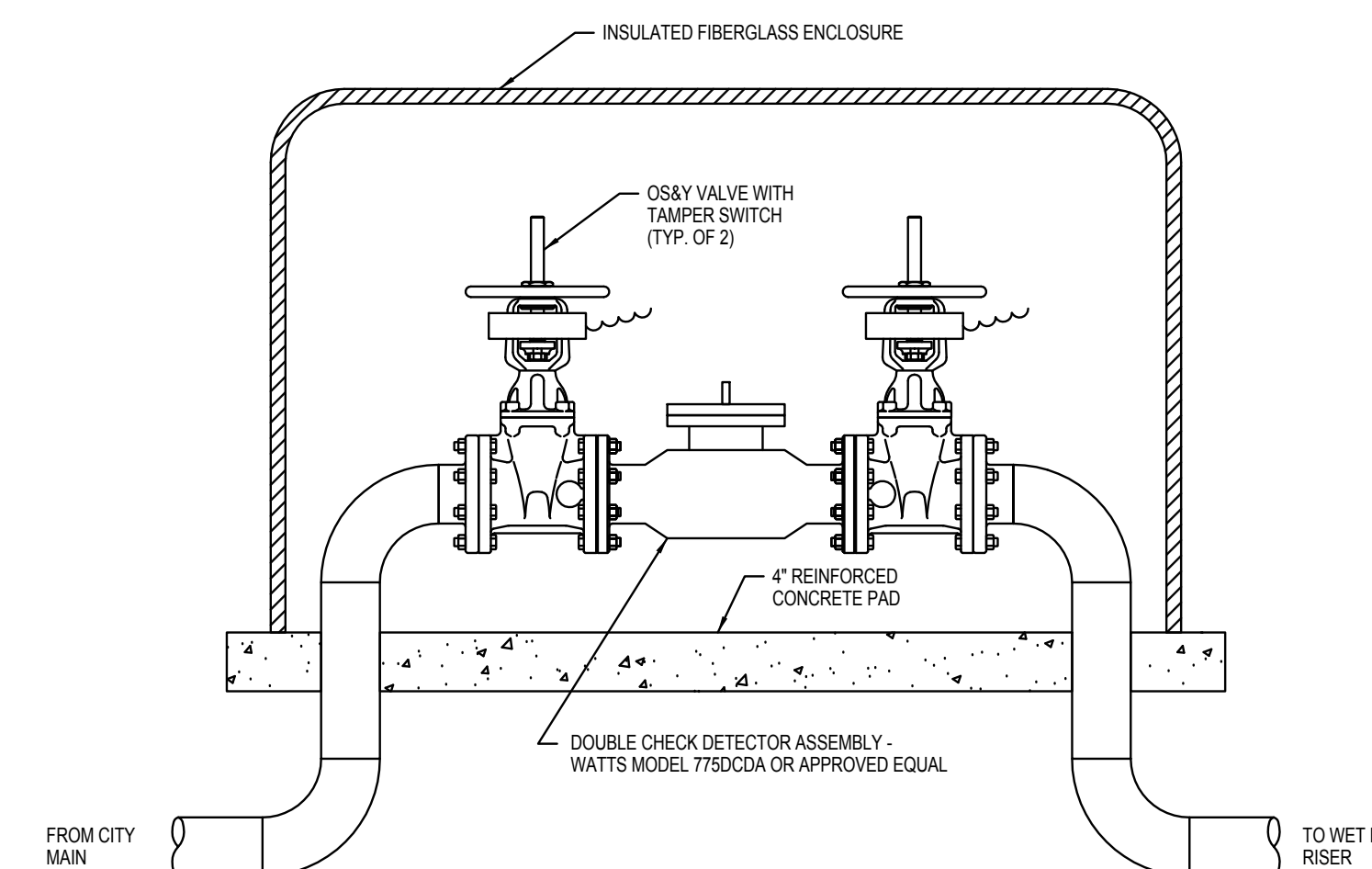


DETAILS

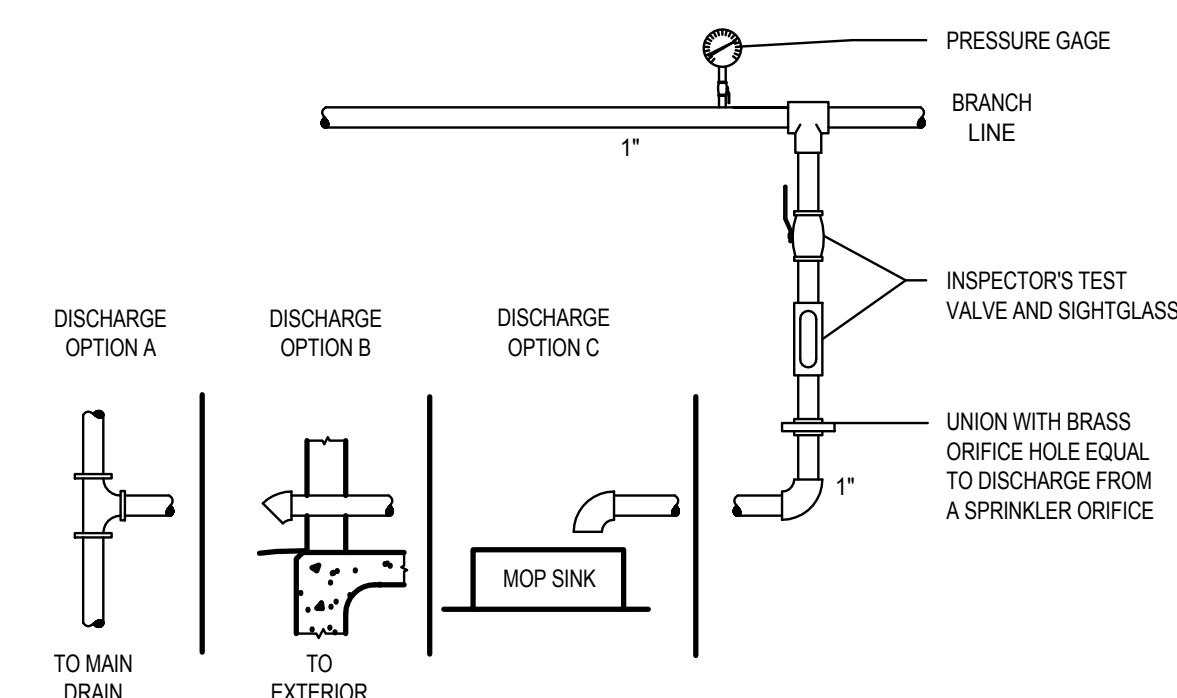
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- | | |
|---------------------------------------|-----------------------------|
| 1 DRY PIPE VALVE | 11 ALARM TEST VALVE |
| 2 AIR COMPRESSOR | 12 STRAINER |
| 3 WATER MOTOR GONG | 13 ALARM CONTROL VALVE |
| 4 LOW PRESSURE ALARM | 14 CHECK VALVE (TYPICAL) |
| 5 INDICATING VALVE WITH STATUS SWITCH | 15 PRESSURE RELIEF VALVE |
| 6 2" DRAIN AND VALVE | 16 AIR SUPPLY CONTROL VALVE |
| 7 PRIMING CUP | 17 AUTOMATIC DRAIN VALVE |
| 8 AIR PRESSURE GAUGE | 18 DRIP FUNNEL |
| 9 WATER PRESSURE GAUGE | 19 AIR PRESSURE GAUGE |
| 10 BALL VALVE (TYPICAL) | |

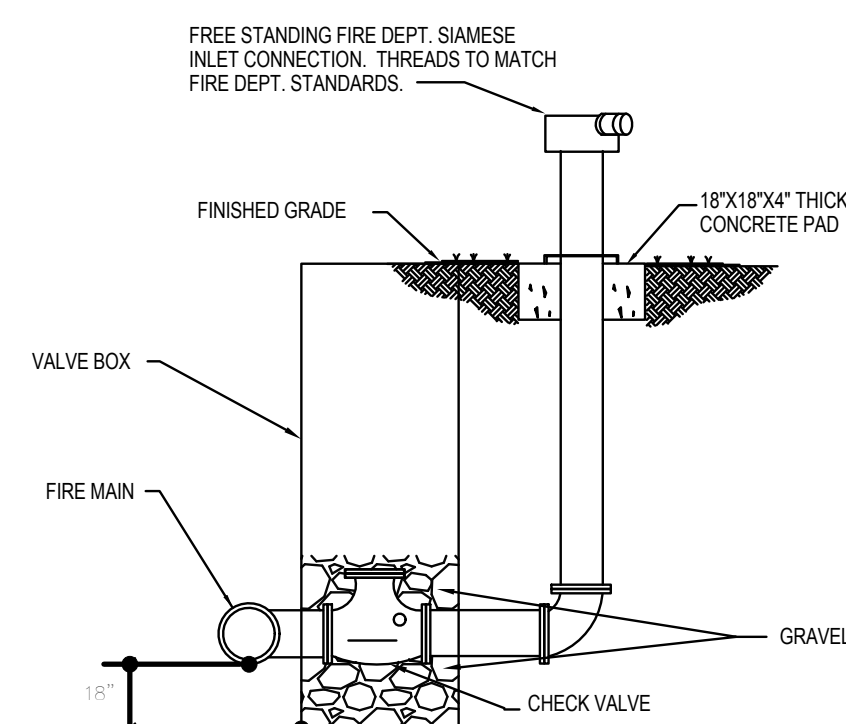


A IN-LINE BACKFLOW PREVENTER

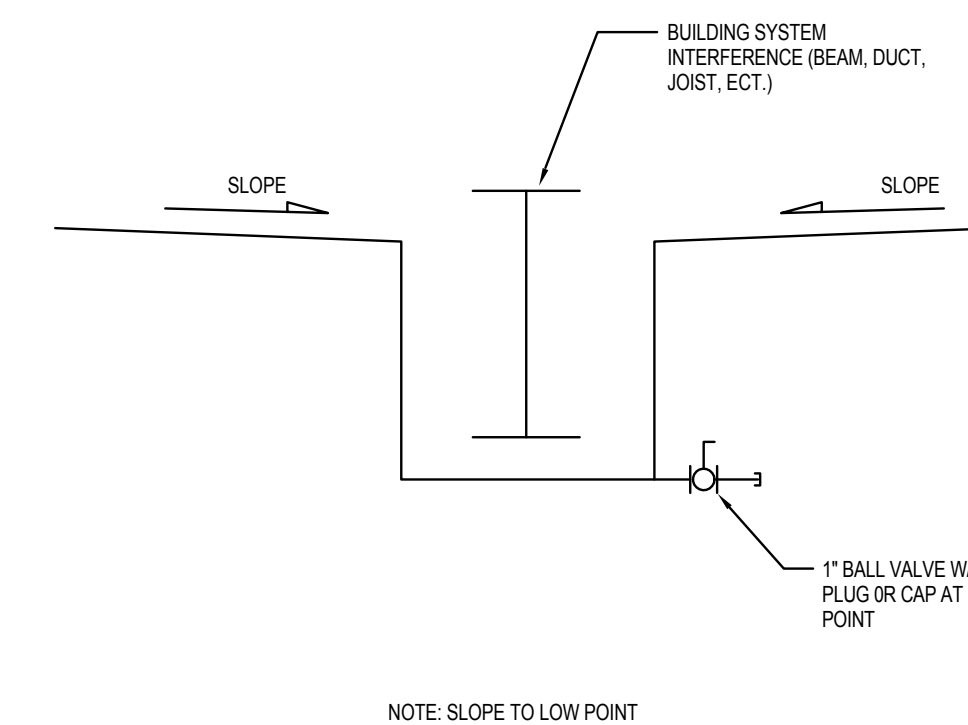


B INSPECTOR'S TEST STATION

D DRY PIPE SPRINKLER SYSTEM RISER



E SIDEWALK SIAMESE



C SPRINKLER AUXILIARY DRAIN

ELECTRICAL SYMBOLS LEGEND CONT	
POWER	
	DUPLEX RECEPTACLE - 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE, MOUNT 18" AFF UNLESS NOTED OTHERWISE
	DUPLEX RECEPTACLE - 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE, MOUNT ABOVE COUNTERTOP
	DUPLEX RECEPTACLE - SPLIT WIRED - 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE, MOUNT 18" AFF UNLESS NOTED OTHERWISE
	DUPLEX RECEPTACLE SERVING TV - 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE, MOUNT 78" AFF (U.N.O.)
	QUADRAPLEX RECEPTACLE - 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE, MOUNT 18" AFF UNLESS NOTED OTHERWISE
	SPECIAL PURPOSE RECEPTACLE - PROVIDE RECEPTACLE TO MATCH EQUIPMENT TO BE SERVED, MOUNT 18" AFF UNLESS NOTED OTHERWISE
	FLOOR BOX - QUADRAPLEX POWER OUTLET AND 4 JACK PLATE FOR COMMUNICATIONS. (WALKER #RFB-4(2-DB-2-T/RKMI)). ROUTE 1" COMMUNICATION CONDUIT & 3/4" POWER CONDUIT TO CORRIDOR WALL UP WALL TO ABOVE CEILING, THEN TURN INTO CEILING SPACE AND PROVIDE BUSHING.
	QUADRAPLEX RECEPTACLE - 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE, FLUSH MOUNTED IN FLOOR (WALKER #RFB-4SS) TWO RFB-DR/RAKMI)
	DUPLEX RECEPTACLE - 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE, IN CEILING UNLESS NOTED OTHERWISE
	12x12x4" DEEP PULL JUNCTION BOX W/SCREW COVER (UNO)
	JUNCTION BOX - 4" SQUARE UNLESS NOTED OTHERWISE ADO = AUTOMATIC DOOR OPERATOR
	WIRE IN CONDUIT - CONCEALED IN WALL OR CEILING
	WIRE IN CONDUIT - CONCEALED IN FLOOR OR UNDERGROUND
	CONDUIT - STUB OUT AND CAP
	HOMERUN TO PANEL - ARROWS INDICATE NUMBER OF CIRCUITS, SLASH MARKS INDICATE NUMBER OF CONDUCTORS, NO SLASH MARKS INDICATE #1/2 PHASE CONDUCTOR, #1/2 NEUTRAL CONDUCTOR, U.N.O. NOTE THAT THE GREEN GROUND WIRE IS NOT SHOWN BUT IS REQUIRED IN EACH FEEDER, LIGHTING, RECEPTACLE, AND POWER BRANCH CIRCUIT. THERE SHALL BE NO SHARED NEUTRALS BETWEEN MULTIPLE CIRCUITS.
	ELECTRIC PANEL - 120/208 VOLT
	ELECTRIC PANEL - 277/480 VOLT
	DISCONNECT SWITCH - SEE DRAWING FOR SIZE*
	ADJUSTABLE FREQUENCY DRIVE (AFD)- FURNISHED BY DIV. 23 INSTALLED & WIRED BY DIV. 25
* EQUIPMENT SIZES WILL BE INDICATED AS FOLLOWS:	
	STARTER NEMA SIZE (NO # SHOWN FOR DISC SWITCHES)
	AMP RATING & POLE QTY.
	NEMA ENCLOSURE TYPE
	FUSE AMPS OR NON-FUSED (AS SHOWN)
	GROUNDING BUS BAR. REFER TO SPECIFICATION SECTION 260526 *GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS.*
	LADDER RACK
	SECURITY CAMERA
	ADD PUSH BUTTON
FIRE ALARM SYSTEM	
	FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM CONTROL PANEL
	MANUAL FIRE ALARM PULL STATION - MOUNT 48" AFF UNLESS NOTED OTHERWISE
	FIRE ALARM HORN/STROBE - MOUNT 80" AFF TO BOTTOM OF STROBE UNLESS NOTED OTHERWISE
	ADA COMPLIANT FLASHING STROBE - MOUNT 80" AFF TO BOTTOM OF STROBE UNLESS NOTED OTHERWISE
	SMOKE DETECTOR - CEILING MOUNTED - CONNECT TO FIRE ALARM SYSTEM
	HEAT DETECTOR - CEILING MOUNTED, 135" TYPE UNLESS NOTED OTHERWISE
	FIRE SYSTEM TO ACTUATE SOLENOID VALVE
	FIRE SYSTEM TO MONITOR SPRINKLER SYSTEM FLOW SWITCH
	FIRE SYSTEM TO MONITOR SPRINKLER SYSTEM STATUS SWITCH (TAMPER SWITCH)

ELECTRICAL SYMBOLS LEGEND	
LIGHTING AND LIGHTING CONTROLS	
	LIGHT FIXTURE - CAPITAL LETTER INDICATES FIXTURE TYPE
	FIXTURE WITH NICKEL CADMIUM BATTERY CAPABLE OF POWERING LAMPS AT 30-40% OF INITIAL LUMENS FOR 90 MINUTES OR LONGER
	STRIP FIXTURE
	RECESSED FIXTURE
	RECESSED FIXTURE WITH NICKEL CADMIUM BATTERY CAPABLE OF POWERING LAMPS AT 66-80% INITIAL LUMENS FOR 90 MINUTES
	EXIT LIGHT FIXTURE - PROVIDE ARROWS WHERE SHOWN, PROVIDE DOUBLE-FACE EXIT LIGHT WHERE INDICATED (POWERED EXIT SIGNS SHALL BE WIRED "UNSWITCHED")
	LED POLE MOUNTED FIXTURE
	PHOTOELECTRIC CELL - MOUNT NEAR TOP OF EXTERIOR WALL WHERE IT IS IN DIRECT SUNLIGHT
	DLM PHOTO-CELL
	DENOTES WALL MOUNTED DEVICE
	LIGHTING CONTRACTOR
	SINGLE-POLE TOGGLE SWITCH - 120/277 VOLT, 20 AMP, MOUNT 48" AFF
	THREE-WAY SWITCH - 120/277 VOLT, 20 AMP, MOUNT 48" AFF
	DLM LOW VOLTAGE CONTROL, 48" AFF
	MOTOR RATED TOGGLE SWITCH (20A/1P U.N.O.)
	OCCUPANCY SENSOR - LINE VOLTAGE, WALL MOUNTED, DUAL TECHNOLOGY - MOUNT 48" AFF
	OCCUPANCY SENSOR - LOW VOLTAGE, CEILING MOUNTED, DUAL TECHNOLOGY
	OCCUPANCY SENSOR - LOW VOLTAGE, WALL MOUNTED, DUAL TECHNOLOGY
	OCCUPANCY SENSOR - LOW VOLTAGE, CEILING MOUNTED, ULTRASONIC - COVERAGE FOR LONG NARROW APPLICATIONS (CORRIDORS, ETC.)
	POWER/SWITCH PACK - MATCH VOLTAGE OF LIGHTS - LOCATE ABOVE ACCESSIBLE CEILING WHERE POSSIBLE. (B.O.D. - GREENGATE; SP20-MV)
	DLM PLUG LOAD CONTROLLER
	THREE CHANNEL DIGITAL ON/OFF/10-10V DIMMING ROOM LIGHTING CONTROLLER. WATTS TOPPER DLM, LMRC-210 SERIES OR APPROVED EQUAL. INSTALLED ABOVE CEILING.
	CEILING FAN, OWNER FURNISHED, CONTRACTOR INSTALLED
TELECOMMUNICATIONS	
	COMMUNICATIONS BACKBOARD - EXTERIOR GRADE PLYWOOD, 8" HIGH X 3/4" THICK X WIDTH SHOWN ON PLANS. PROVIDE #6 GRD. WIRE WITH 8FT. OF COILED SLACK. ROUTE #6 IN 1/2" C. TO MAIN BLDG. GRD.)
	COMMUNICATIONS TERMINAL OUTLET - 4" SQUARE OUTLET BOX, 2 1/8" DEEP WITH 1-GANG PLASTER RING, MOUNT AT 18" AFF. ROUTE 1" CONDUIT, HOMERUN TO CBB AND PROVIDE GROUNDING BUSHING, BOND TO GROUNDING BUS BAR WITH #12 CU.
	COMMUNICATIONS TERMINAL OUTLET - 4" SQUARE OUTLET BOX, 2 1/8" DEEP WITH 1-GANG PLASTER RING, IN CEILING.
	COMMUNICATIONS WIRELESS ACCESS POINT TERMINAL OUTLET - 4" SQUARE OUTLET BOX, 2 1/8" DEEP WITH 1-GANG PLASTER RING, ABOVE CEILING.
TELEVISION	
	TELEVISION OUTLET - MOUNT 78" AFF UNLESS OTHERWISE NOTED. PROVIDE 3/4" CONDUIT WITH PULL STRING TO CBB
	CEILING MOUNTED SPEAKER, ROUGH-IN ONLY
	EXPOSED TYPE SPEAKER, ROUGH-IN ONLY (CONCEAL ON TOP OF BEAM)
CLASSROOM EMERGENCY SHUT-OFF SYSTEM	
	CLASSROOM POWER CIRCUITS EMERGENCY CONTACTOR
	EMERGENCY PUSHBUTTON POWER OFF SWITCH.
SECURITY	
	SECURITY SYSTEM - CARD READER, PROVIDE ROUGH-IN ONLY
	SECURITY SYSTEM - ELECTRIC DOOR LATCH, PROVIDE ROUGH-IN ONLY

- ### GENERAL NOTES
- DRAWINGS ARE DIAGRAMMATIC, INDICATIVE OF WORK TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS.
 - FIELD VERIFY ALL DIMENSIONS AND ALL CONDITIONS. IF THE CONTRACTOR IS UNABLE TO INTERPRET THE CONTRACT DOCUMENTS, HE IS RESPONSIBLE TO REQUEST CLARIFICATION IN WRITING TO THE ARCHITECT. IF HE PROCEEDS WITH ANY WORK BEFORE OBTAINING CLARIFICATION, HE SHALL BE HELD RESPONSIBLE FOR ALL DEFICIENCIES ASSOCIATED THEREWITH.
 - BEFORE SUBMITTING FOR THE WORK, EACH BIDDER WILL BE RESPONSIBLE TO EXAMINE THE PREMISES AND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGED TO OPERATE AND COMPLETE THE WORK UNDER THIS CONTRACT. NO ALLOWANCE WILL SUBSEQUENTLY BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR OMISSION ON HIS PART.
 - THE CONTRACTOR SHALL PAY FOR ALL INSPECTION PERMITS, CERTIFICATES, CONNECTION FEES, SYSTEM DEMAND CHARGES AND LICENSE FEES IN CONNECTION WITH HIS WORK.
 - GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK OF ALL SUBCONTRACTORS TO AVOID INTERFERENCES.
 - ALL WORK SHALL COMPLY WITH APPLICABLE O.S.H.A. AND E.P.A. REGULATIONS AND GUIDELINES.
 - ERECT AND MAINTAIN ALL REASONABLE PRECAUTIONS FOR SAFETY AND HEALTH INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS INCLUDING PROMULGATING SAFETY REGULATIONS. PROVIDE SAFETY PRECAUTIONS AND BARRICADES FOR PEDESTRIANS AT CONSTRUCTION VEHICLE ACCESS AND EGRESS LOCATIONS.
 - COORDINATE AND SEQUENCE ALL CLEANING AND CONSTRUCTION WORK. SUBMIT A COMPLETELY DETAILED CONSTRUCTION SCHEDULE PRIOR TO PRE-CONSTRUCTION CONFERENCE.
 - THE CONTRACTOR SHALL STRICTLY BE HELD TO THE PROJECT SCHEDULE. HE SHALL PROVIDE SUFFICIENT MANPOWER AND EQUIPMENT TO FULLY MOBILIZE, PROCEED WITH AND COMPLETE THE WORK.
 - THE CONTRACTOR SHALL BE RESTRICTED TO AREAS SPECIFIED BY THE OWNER FOR ON-SITE STORAGE OF CONSTRUCTION MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SECURITY OF ALL EQUIPMENT AND MATERIALS.
 - THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK ENVIRONMENT AT ALL TIMES AND SHALL CLEAN CONSTRUCTION SITE OF ALL DEBRIS AT COMPLETION OF THE JOB AND BEFORE FINAL PAYMENT IS MADE.
 - THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS TO THE OWNER AT COMPLETION OF CONSTRUCTION.
 - CONTRACTOR'S USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACTOR HAS COMPLIED WITH THE CONTRACT DOCUMENT REQUIREMENTS RELATED TO "SHOP DRAWINGS, PRODUCT DATA AND SAMPLES".
 - THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT/ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT/ENGINEER IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMITTAL AND THE ARCHITECT/ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS BY THE ARCHITECT/ENGINEER'S APPROVAL THEREOF.
 - PRIOR TO INSTALLATION, COORDINATE AND ADJUST THE FINAL LOCATION OF ALL WALL MOUNTED DEVICES AND EQUIPMENT WITH ALL CASEWORK, SHELVING, BLACKBOARDS, BULLETIN BOARDS OR OTHER WALL MOUNTED FURNISHINGS.
 - NOTE ANY SPECIAL REQUIREMENTS INVOLVED IN INSTALLING THE EQUIPMENT IN THE BUILDING. DISMANTLING AND REASSEMBLING OF ANY EQUIPMENT SHALL BE DONE AS REQUIRED FOR ENTRY INTO THE BUILDING AND EQUIPMENT ROOMS.
 - PROTECT THE ROOF FROM DAMAGE WHENEVER ANY WORK ON THE ROOF IS REQUIRED.
 - SUPPORTS AND HANGERS SHALL PRESENT A NEAT, ORDERLY APPEARANCE. ALL EXTERIOR STRUCTURES INCLUDED, SHALL BE INSTALLED TO RESIST 130 MPH WIND LOAD.
 - CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE AND SMOKE WALL ASSEMBLIES AND ACOUSTICAL WALLS.
 - BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. BEAM SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
 - CONTRACTOR SHALL FURNISH U.L. APPROVED DRAWINGS FOR EACH TYPE OF FIRE RATED ASSEMBLY PENETRATION BY DUCTS, PIPES OR CONDUITS. THESE DRAWINGS SHALL BE DISPLAYED ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION. SEE SPECIFICATIONS.
 - PROVIDE PROPER PROTECTIVE MEASURES TO PROTECT FURNITURE, CARPET AND FINISHES DURING THE COURSE OF CONSTRUCTION. TAKE CARE NOT TO DAMAGE SURFACES.
 - ALARM, SUPERVISORY AND TROUBLE SIGNALS SHALL BE AUTOMATICALLY TRANSMITTED TO AN APPROVED CENTRAL STATION, REMOTE SUPERVISING STATION OR PROPRIETARY SUPERVISING STATION AS DEFINED IN NFPA 72 OR, WHEN APPROVED BY THE BUILDING OFFICIAL, SHALL SOUND AN AUDIBLE SIGNAL AT A CONSTANTLY ATTENDED LOCATION.
 - ALL EXTERIOR DEVICES SHALL BE WEATHER PROOF ENCLOSURES AND GFI RATED IN ACCORDANCE WITH N.E.C. INSTALLER REQUIRED TO VERIFY PRIOR TO ORDERING MATERIALS.
 - ALL DEVICE MOUNTING HEIGHTS INDICATED SHALL BE TO OUTLET BOX CENTER LINE.
 - FIRE ALARM DRAWINGS INDICATE DESIGN INTENT. ACTUAL DEVICE TYPES, QUANTITIES AND LOCATIONS SHALL BE VERIFIED BY THE FIRE ALARM CONTRACTOR TO MEET ALL APPLICABLE CODES AND STANDARDS. ANY DEVIATIONS FROM THE DRAWINGS SHALL BE INDICATED ON FIRE ALARM SHOP DRAWINGS SUBMITTED BY THE FIRE ALARM CONTRACTOR.
 - CONTRACTOR SHALL COMPLY WITH "TRENCH SAFETY ACT" (FLORIDA STATUTE 553 PART III) AND OSHA STANDARD 29 CFR 1926.650 SUBPART P FOR ALL UTILITY TRENCHES IN EXCESS OF 5 FEET DEEP.

ELECTRICAL GENERAL NOTES	
<ol style="list-style-type: none"> INSTALL ALL WORK IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2010 EDITION WITH SUPPLEMENTS, THE NATIONAL ELECTRICAL CODE 2008 EDITION, AND ALL CODES, ORDINANCES, RULES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION AT THIS SITE. WHERE CONFLICTS OCCUR BETWEEN CODES AND THE CONSTRUCTION DOCUMENTS, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN. COMPLY WITH NFPA 70E. CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY MATERIAL SUPPLIERS AND MANUFACTURERS. ENTRY AND REMOVAL OF EQUIPMENT FROM THE BUILDING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR ANY DAMAGED MATERIALS TO THEIR ORIGINAL CONDITION. SURFACES SHALL BE REPAIRED TO MATCH THE EXISTING ADJACENT UNDAMAGED SURFACES. ALL WIRING SYSTEMS SHALL BE COPPER CONDUCTORS IN METALLIC CONDUIT, UNLESS NOTED OTHERWISE. WIRE AND CONDUIT SIZES SHOWN ARE BASED ON THW COPPER, UNLESS NOTED OTHERWISE. HEAVY WALL, RIGID PVC CONDUIT SHALL BE USED IN SLABS AND BELOW GRADE AND WHERE INDICATED AND INTERMEDIATE GRADE CONDUIT AND EMT CONDUIT MAY BE USED ELSEWHERE WHERE APPROVED BY N.E.C. AND LOCAL CODES. FLEXIBLE METAL CONDUIT SHALL BE STEEL AND USED TO CONNECT EQUIPMENT WHERE INDICATED AND WHERE REQUIRED DUE TO VIBRATION AND CONNECTION ACCESSIBILITY. ALL CONDUIT SHALL BE STRAPPED IN ACCORDANCE WITH REQUIREMENTS OF N.E.C. CONTRACTOR SHALL BOND AND GROUND SYSTEMS AND EQUIPMENT PER ARTICLE 250 OF N.E.C. PROVIDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH ARTICLE 250-122 N.E.C. ON ALL RECEPTACLES AND POWER BRANCH CIRCUITS. LIGHTING FIXTURES SHALL BE SECURELY FASTENED AND SUPPORTED PER N.E.C. THE CONTRACTOR SHALL COORDINATE THE CIRCUIT REQUIREMENTS WITH THE MANUFACTURER OF THE ACTUAL EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OF WORK. THE CIRCUIT BREAKER, WIRE AND CONDUIT SHALL BE SIZED AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER. ALL CIRCUIT BREAKERS SHALL BE BOLT-IN TYPE. PROVIDE A LAMINATED PLASTIC NAMEPLATE IDENTIFYING EACH NEW PANELBOARD, MOTOR STARTER AND DISCONNECT LETTERING SHALL BE 1/2" MINIMUM AND SHALL IDENTIFY EQUIPMENT SERVED, FEEDER DISCONNECT SWITCH, ORIGINATION AND CIRCUIT NUMBER. SECURE NAMEPLATE WITH SCREWS TO EQUIPMENT TO BE IDENTIFIED. PLASTIC TAPE IS NOT APPROVED. ALL MISCELLANEOUS EQUIPMENT TO BE FURNISHED UNDER OTHER SECTIONS OF THE SPECIFICATIONS THAT REQUIRE ELECTRICAL CONNECTIONS SHALL BE RECEIVED AND SET WITH ROUGH-IN AND FINAL CONNECTIONS MADE UNDER THESE SECTIONS. 	
ABBREVIATIONS	
ACT	ABOVE COUNTERTOP
ADO	AUTOMATIC DOOR OPERATOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
C	CONDUIT
DN	DOWN
EM	FIXTURE WITH EMERGENCY BATTERY BALLAST
EC	ELECTRICAL CONTRACTOR
EGC	EQUIPMENT GROUNDING CONDUCTOR
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER (ANY EWC RECEIPT, THAT IS NOT HIDDEN BY THE EWC MUST BE A GFI TYPE)
G	GROUND
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID CONDUIT
LED	LIGHT EMITTING DIODE
UNO	UNLESS NOTED OTHERWISE
WP	WEATHERPROOF
DRAWING INDEX	
E001	GENERAL NOTES & LEGEND - ELECTRICAL
E002	FIXTURE SCHEDULE
E100	SITE PLAN - ELECTRICAL
E101	FLOOR PLAN - LIGHTING
E201	FLOOR PLAN - POWER
E202	ROOF PLAN - POWER
E301	RISER DIAGRAMS - ELECTRICAL
E302	RISER DIAGRAMS - SYSTEMS
E303	RISER DIAGRAM - PV SYSTEM
E401	PANEL SCHEDULES - ELECTRICAL
E402	PANEL SCHEDULES - ELECTRICAL
E501	DETAILS - ELECTRICAL
E502	DETAILS - ELECTRICAL
E503	DETAILS - ELECTRICAL
E504	DETAILS - ELECTRICAL
E505	DETAILS - ELECTRICAL
E506	DETAILS - ELECTRICAL
LP01	GENERAL NOTES, LEGEND & DETAILS - LIGHTNING PROTECTION
LP10	ROOF PLAN - LIGHTNING PROTECTION

NOTES

H2 ENGINEERING
114 EAST 9th AVENUE TALLAHASSEE, FL 32303
PHONE 850 224 7922
www.H2Engineering.com

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BARNETT FRONCZAK BARLOWE ARCHITECTS

14220

TCC - Wakulla Environmental Institute

30 APRIL 2014
DATE

CONSTRUCTION DOCUMENTS
PROJECT PHASE

100% CONSTRUCTION DOCUMENTS

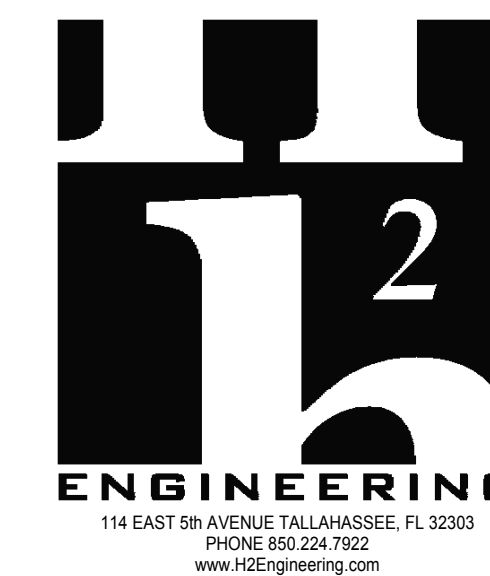
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GENERAL NOTES
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225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978



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LIGHTING FIXTURE SCHEDULE					
CONTRACTOR SHALL COORDINATE FIXTURE TYPE WITH ARCHITECTURAL FINISH SCHEDULE(S) VOLTAGE 120V UNLESS NOTED OTHERWISE					
TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS (1)		REMARKS (2)
			NO.	TYPE	
A1	PHILLIPS EQUAL EQUAL	2DL04L840-2-D-UNV-DIM EQUAL EQUAL	INC	LED	2' x 2' RECESSED, LED ARCHITECTURAL FIXTURE, LISTED FOR DAMP LOCATIONS, 3400 LUMENS
A2	PHILLIPS EQUAL EQUAL	2DL04L840-2-D-UNV-DIM EQUAL EQUAL	INC	LED	2' x 2' RECESSED, LED ARCHITECTURAL FIXTURE, LISTED FOR DAMP LOCATIONS, 4400 LUMENS
B	WILLIAMS EQUAL EQUAL	75-4-LED*PH85840-WG-7514-LED-UNV EQUAL EQUAL	INC	LED	4' LED STRIP WITH WIREGUARD
C	INSIGHT EQUAL EQUAL	MX03.540K45*UJCS48REMCRF EQUAL EQUAL	INC	LED	4' LINEAR LED FIXTURE, UL LISTED FOR DAMP LOCATIONS. PROVIDE 100W REMOTE POWER SUPPLY, WET LOCATION NEMA 3R
D	B-K LIGHTING EQUAL EQUAL	SM-LED-e23-SP-A8-12-11-24-D EQUAL EQUAL	INC	LED	WALL MOUNTED LED DISPLAY SPOT LIGHT
E	CHLORIDE EQUAL EQUAL	COX-3-R-W EQUAL EQUAL	INC	LED	LED EXIT SIGN, WHITE THERMOPLASTIC WITH RED LETTERS WITH BATTERY BACKUP
G	WILLIAMS EQUAL EQUAL	LED660-1100-40K-CS-AC/CAL EQUAL EQUAL	INC	LED	RECESSED, LED DOWNLIGHT 6" ROUND SUITABLE FOR WET LOCATION PROVIDE LED DRIVER
H	WILLIAMS EQUAL EQUAL	WMAUD-4-LEDPH32840UPH32840D-AF-UNV EQUAL EQUAL	INC	LED	4" WALL MOUNT, LOW PROFILE INDIRECT/DIRECT FIXTURE MOUNT 7'-0" AFF. PROVIDE LED DRIVER
J	WILLIAMS EQUAL EQUAL	LED PSL60-2800-40K EQUAL EQUAL	INC	LED	RECESSED 6" ROUND LED SHOWER LIGHT LISTED FOR USE IN WET LOCATION
K	BETACALCO EQUAL EQUAL	32 0272 EQUAL EQUAL	INC	LED	WALL MOUNT LED SCONCE, WIDE BEAM UP/DOWN, MOUNT 6'-0" AFF FINISH PER ARCHITECT
L	B-K LIGHTING EQUAL EQUAL	DELEDx23-FL-9-C-PM2 EQUAL EQUAL	INC	LED	ACCENT LIGHT LED, ADJUSTABLE FLOOD
N	LUMEC EQUAL EQUAL	S52C2-SFX-FN10-120 EQUAL EQUAL	INC	LED	LED POST TOP LANETRN TYPE, POLE TYPE APR-LBC3 WITH TYPE CRF MOUNTING ARM, SINGLE OR DOUBLE HEAD AS SHOWN, FINISH PER ARCHITECT, TYPE LES DISTRIBUTION, WET LISTED
P	STONCO EQUAL EQUAL	WP48LED4K-8 EQUAL EQUAL	INC	LED	LED MEDIUM WALL PACK, FINISH PER ARCHITECT WET LISTED

LIGHT FIXTURES DEEMED EQUAL TO THOSE SPECIFIED SHALL BE SUBMITTED FOR APPROVAL IN ACCORDANCE WITH THE SPECIFICATIONS.

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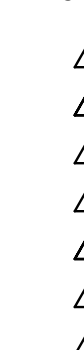
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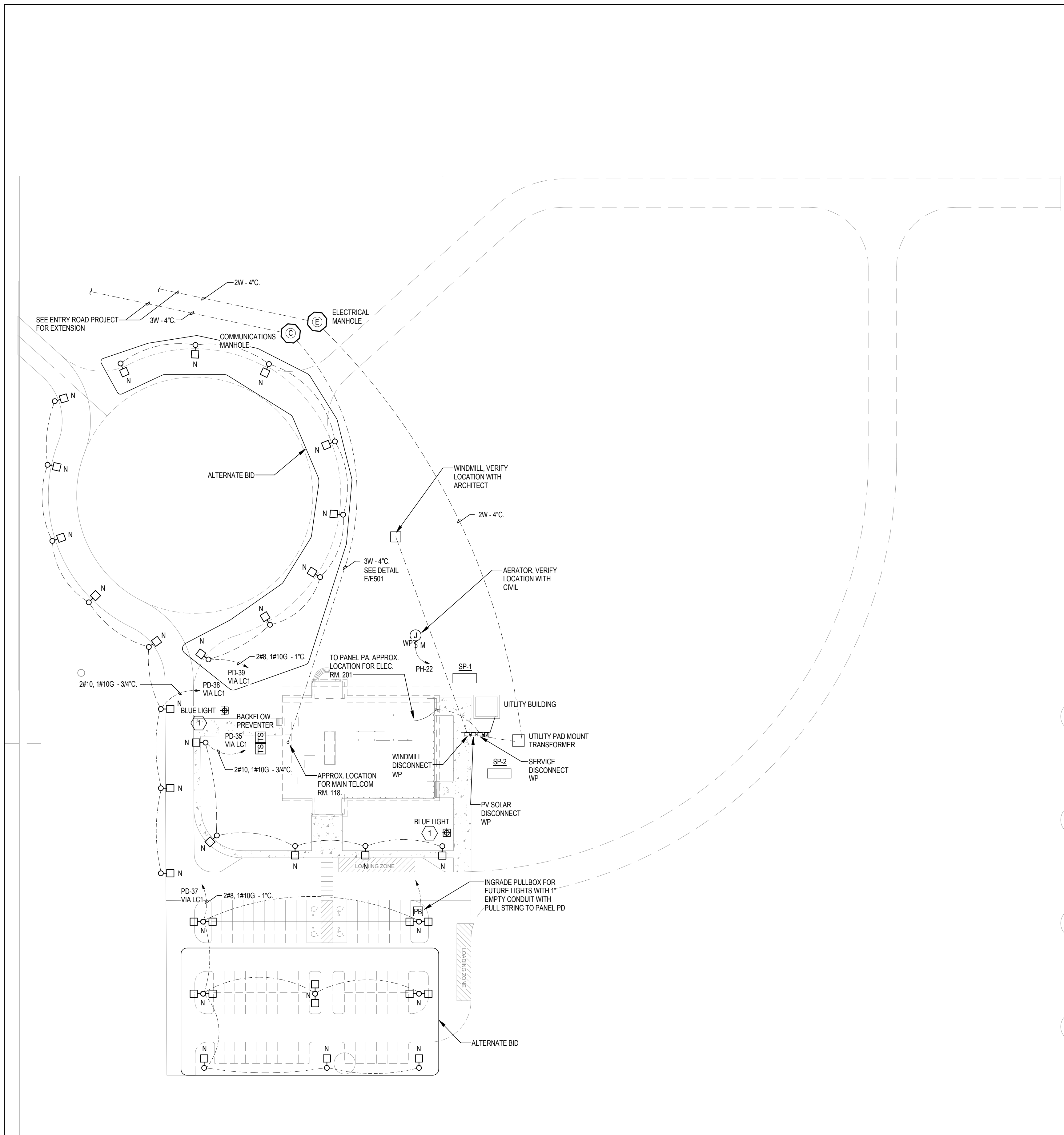
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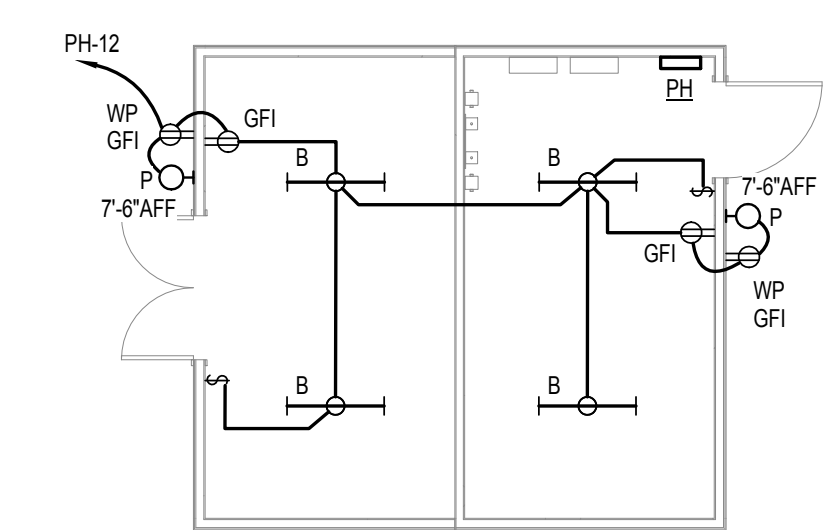
FIXTURE SCHEDULE

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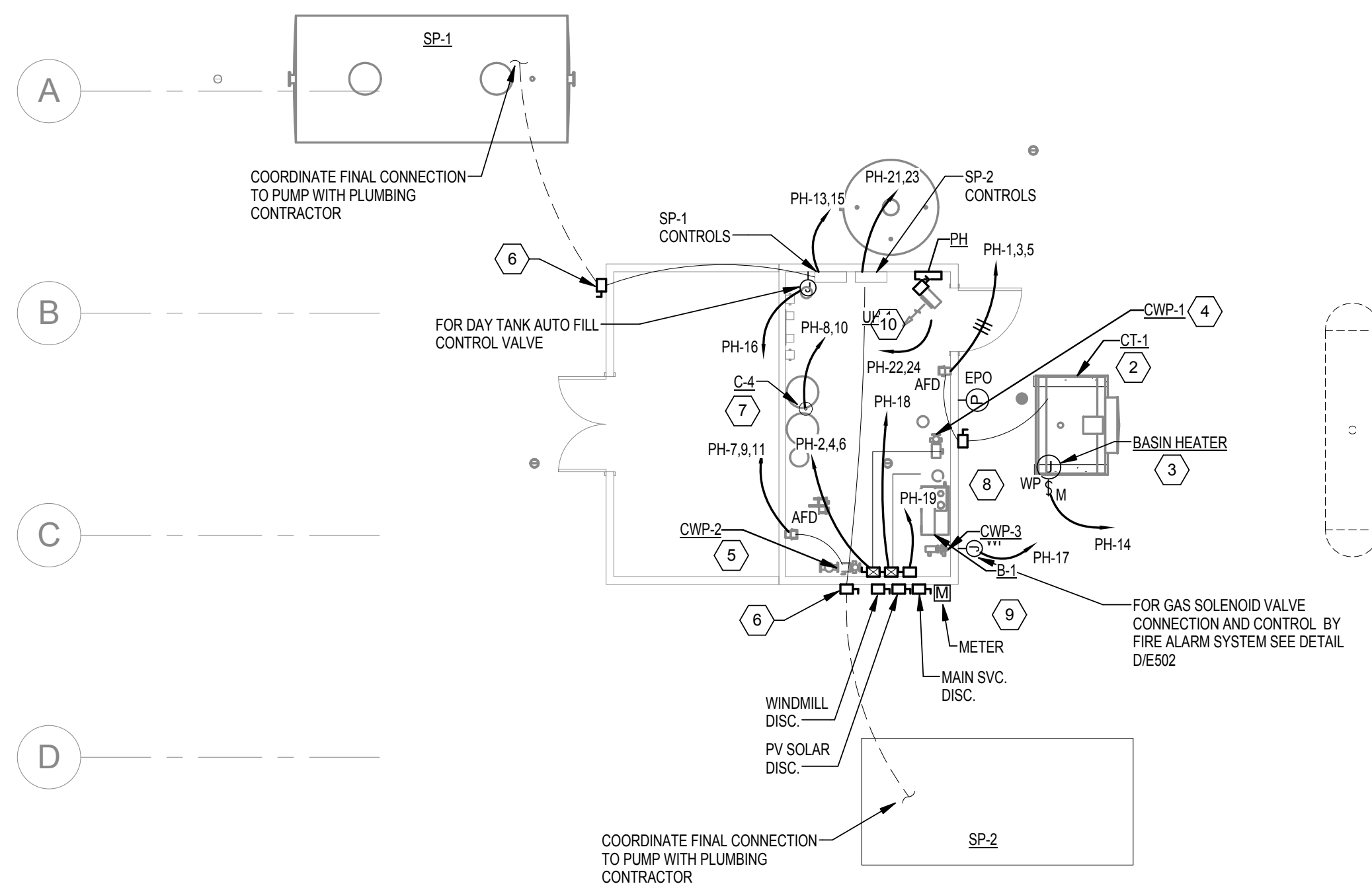


GENERAL NOTES:
 1. PROVIDE ENGRAVED LABELS FOR ELECTRICAL EQUIPMENT AS NOTED ON SHEET E001.

- KEY NOTES:**
- ROUGH-IN ONLY FOR CAMPUS EMERGENCY PHONE TOWER "BLUE LIGHT". STUB OUT AND CAP 1" C. FROM MAIN COM. RM 118 AND 1" C. TO PANEL "PD".
 - COOLING TOWER CT-1: 208V, 3PH, 2HP. PROVIDE 30/2 FUSED DISCONNECT, FUSED AT 15A IN NEMA 3R ENCLOSURE WITH 3#12, 1#12G - 1" C. TO PANEL SHOWN.
 - COOLING TOWER BASIN HEATER: 120V, 1.5KW. PROVIDE 2#12, 1#12G - 1/2" C. TO PANEL SHOWN.
 - CWP-1: 208V, 3PH, 1HP. PROVIDE NEMA 00 STARTER IN NEMA 1 ENCLOSURE WITH 3#12, 1#12G - 1" C. TO PANEL SHOWN.
 - CWP-2: 208V, 3PH, 1 1/2HP. PROVIDE 3#12, 1#12G - 1/2" C. TO PANEL SHOWN.
 - SP-1 & SP-2: 208V, 1PH, 1HP. PROVIDE 30/2 FUSED DISCONNECT, FUSED AT 15A, IN NEMA 1 ENCLOSURE WITH 2#12, 1#12G - 1/2" C. TO PANEL SHOWN. VERIFY AND COORDINATE CONNECTIONS WITH PLUMBING CONTRACTOR.
 - C-4: 208V, 1PH, 1 1/2HP. PROVIDE 2#12, 1#12G - 1/2" C. TO PANEL SHOWN.
 - CWP-3: 120V, 1/2HP. PROVIDE NEMA 00 STARTER IN NEMA 1 ENCLOSURE WITH 2#12, 1#12G - 1/2" C. TO PANEL SHOWN.
 - BOILER CONTROL PANEL, 120V, PROVIDE 30/1 NON FUSED LOCKABLE DISCONNECT IN NEMA 1 ENCLOSURE WITH AUXILIARY CONTACT FOR EMERGENCY POWER OFF PUSHBUTTON, 2#12, 1#12G - 1/2" C. TO PANEL SHOWN.
 - UH-1: 208V, 1PH, 4.5KW PROVIDE 30/2 NO-FUSED DISCONNECT IN NEMA 1 ENCLOSURE WITH 2#10, 1#10G - 1/2" C. TO PANEL SHOWN.

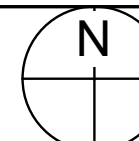


3 Utility Building Plan - Lighting
 E100 1/8" = 1'-0"



2 Utility Building Plan - Power
 E100 1/8" = 1'-0"

1 SITE PLAN - ELECTRICAL
 E100 1" = 50'-0"



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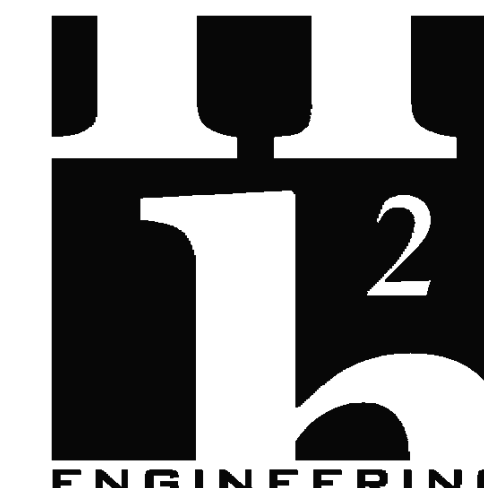
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SITE PLAN - ELECTRICAL

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NOTES



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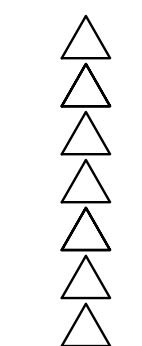
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LOOR PLAN -
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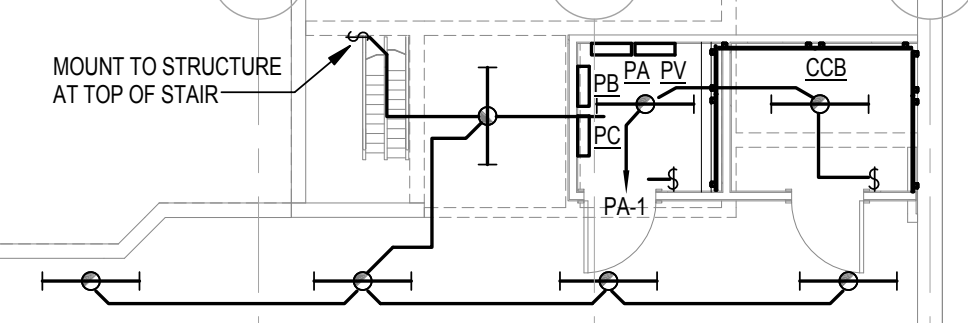
225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978

GENERAL NOTES:

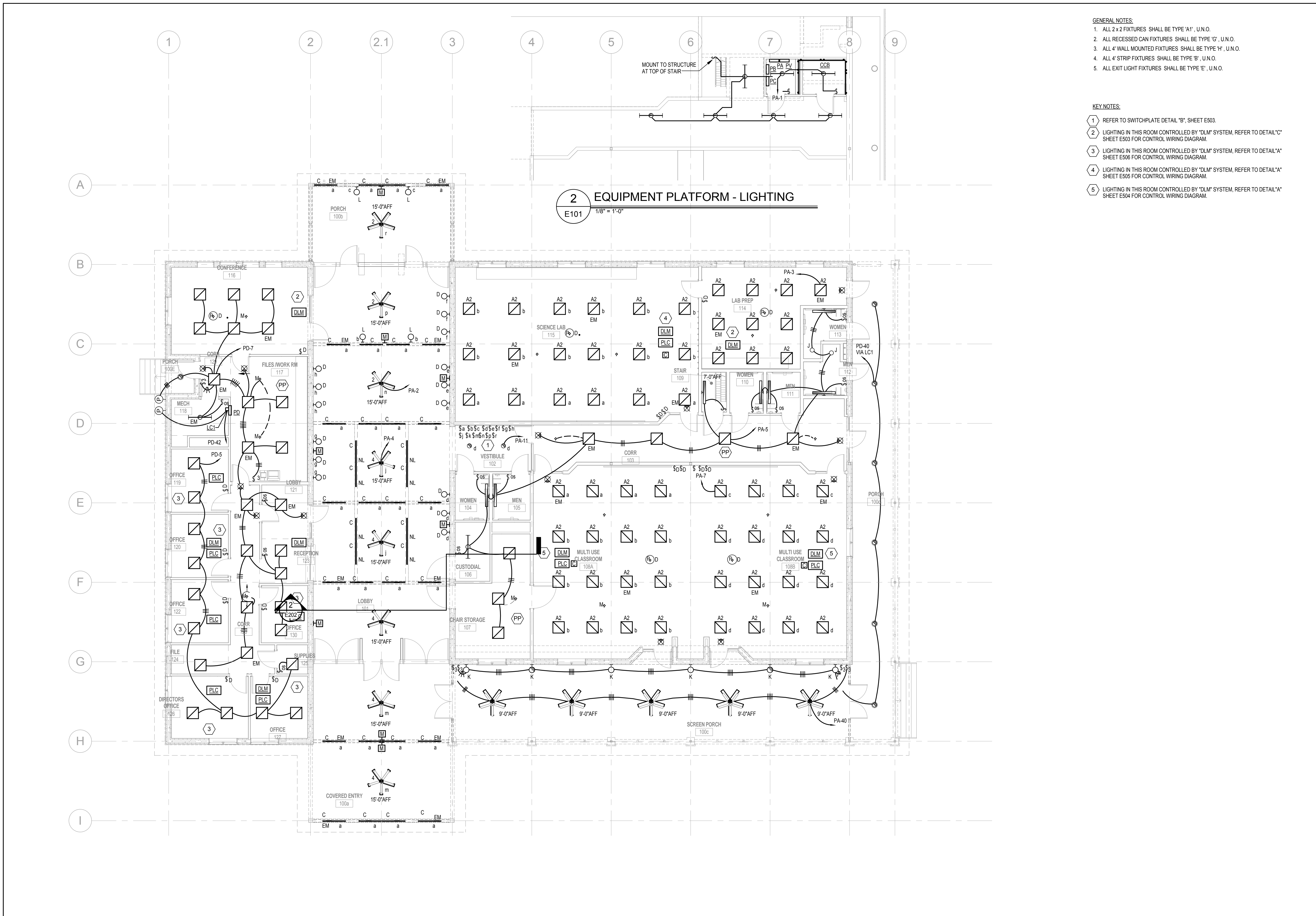
1. ALL 2 x 2 FIXTURES SHALL BE TYPE 'A1', U.N.O.
2. ALL RECESSED CAN FIXTURES SHALL BE TYPE 'G', U.N.O.
3. ALL 4" WALL MOUNTED FIXTURES SHALL BE TYPE 'H', U.N.O.
4. ALL 4" STRIP FIXTURES SHALL BE TYPE 'B', U.N.O.
5. ALL EXIT LIGHT FIXTURES SHALL BE TYPE 'E', U.N.O.

KEY NOTES:

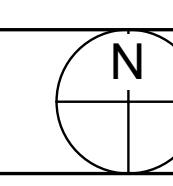
- 1 REFER TO SWITCHPLATE DETAIL "B", SHEET E503.
- 2 LIGHTING IN THIS ROOM CONTROLLED BY "DLM" SYSTEM, REFER TO DETAIL "C" SHEET E503 FOR CONTROL WIRING DIAGRAM.
- 3 LIGHTING IN THIS ROOM CONTROLLED BY "DLM" SYSTEM, REFER TO DETAIL "A" SHEET E506 FOR CONTROL WIRING DIAGRAM.
- 4 LIGHTING IN THIS ROOM CONTROLLED BY "DLM" SYSTEM, REFER TO DETAIL "A" SHEET E505 FOR CONTROL WIRING DIAGRAM.
- 5 LIGHTING IN THIS ROOM CONTROLLED BY "DLM" SYSTEM, REFER TO DETAIL "A" SHEET E504 FOR CONTROL WIRING DIAGRAM.



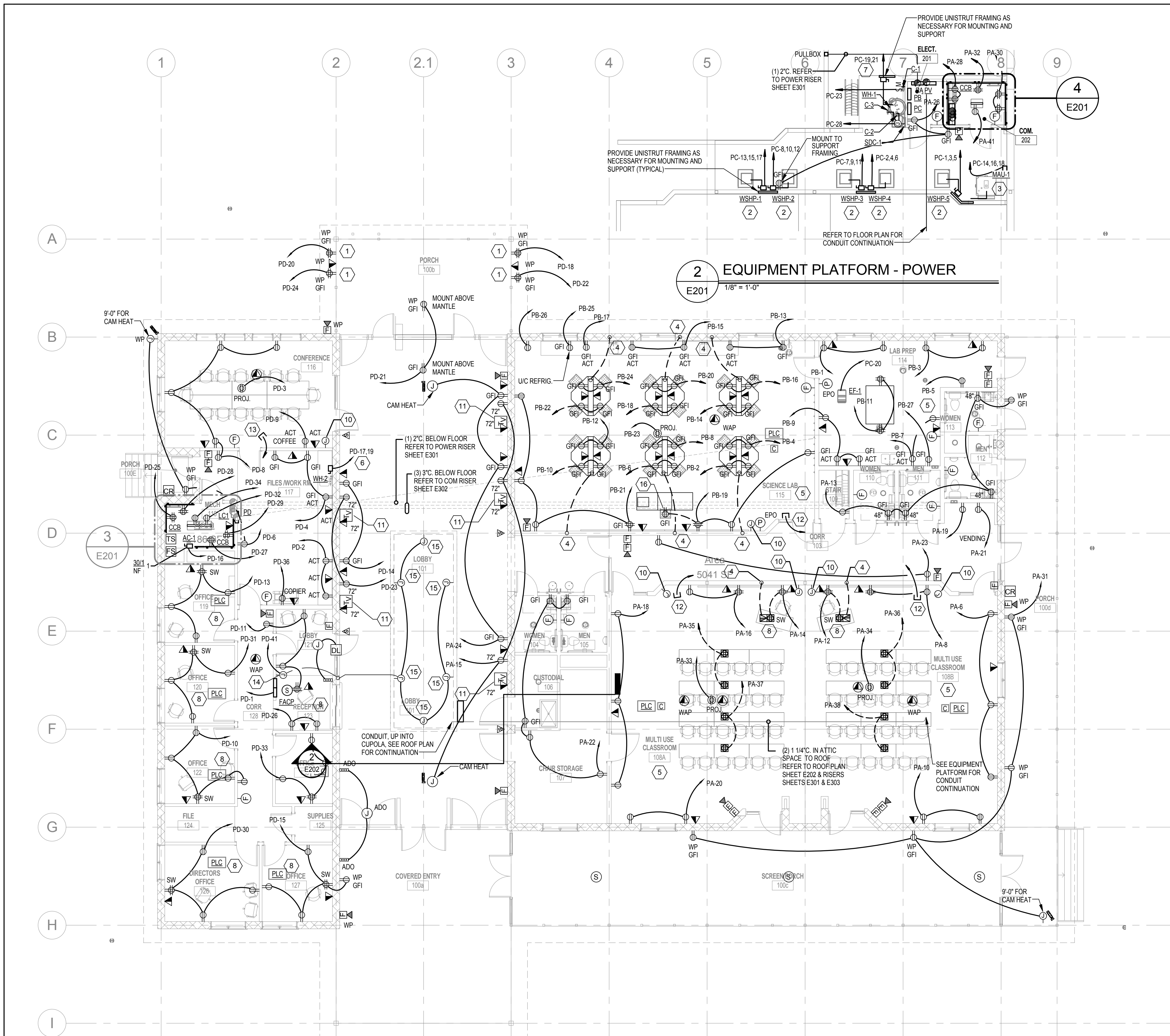
2 EQUIPMENT PLATFORM - LIGHTING
E101 1/8" = 1'-0"



1 FLOOR PLAN - LIGHTING
E101 1/8" = 1'-0"



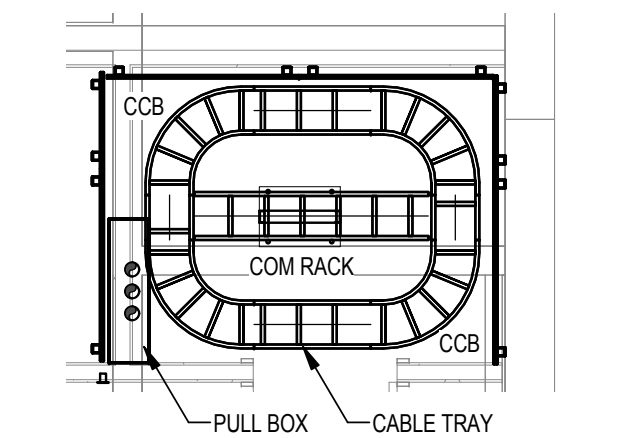
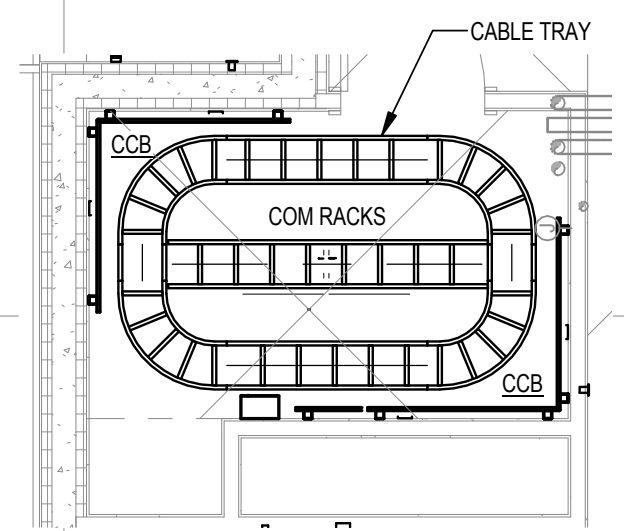
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1 FLOOR PLAN - POWER
E201 1/8" = 1'-0"

2 EQUIPMENT PLATFORM - POWER
E201 1/8" = 1'-0"

3 ENLARGED PLAN - RM. 118 - ELEC.
E201 1/4" = 1'-0"



4 ENLARGED PLAN - RM. 202 - ELEC.
E201 1/4" = 1'-0"

- KEY NOTES:**
- 1 PROVIDE ALUMINUM "IN USE" COVER FOR RECEPTACLE.
 - 2 PROVIDE 60/3 FUSED DISCONNECT SWITCH IN NEMA 1 ENCLOSURE, FUSED AT 35A WITH 3#10, 1#10G - 3/4"C. TO PANEL SHOWN.
 - 3 PROVIDE 60/3 FUSED DISCONNECT SWITCH IN NEMA 1 ENCLOSURE, FUSED AT 40A WITH 3#10, 1#10G - 3/4"C. TO PANEL SHOWN.
 - 4 PROVIDE 2" CONDUIT TO ABOVE CEILING AND TERMINATE WITH BUSHING.
 - 5 RECEPTACLES IN THIS ROOM CONTROLLED BY "DLM" SYSTEM, REFER TO DETAIL "B" SHEET E501 FOR CONTROLS WIRING DIAGRAM. "SW" INDICATES SPLIT WIRED RECEPTACLE (ONE SIDE OF THIS RECEPTACLE TO REMAIN HOT ALL OTHERS ARE CONTROLLED).
 - 6 PROVIDE 60/2 NON-FUSED DISCONNECT SWITCH IN NEMA 1 ENCLOSURE, FOR WH-K UNDER COUNTER WITH 2#8, 1#10G - 3/4"C. TO PANEL SHOWN.
 - 7 PROVIDE 30/2 NON-FUSED DISCONNECT SWITCH IN NEMA 1 ENCLOSURE, FOR WH-1 WITH 2#10, 1#10G - 3/4"C. TO PANEL SHOWN.
 - 8 RECEPTACLES IN THIS ROOM CONTROLLED BY "DLM" SYSTEM, REFER TO DETAIL "A" SHEET E501 FOR CONTROLS WIRING DIAGRAM. "SW" INDICATES SPLIT WIRED RECEPTACLE (ONE SIDE OF THIS RECEPTACLE TO REMAIN HOT ALL OTHERS ARE CONTROLLED).
 - 9 3#12, 1#12G - 3/4"C. TO PANEL SHOWN.
 - 10 PROVIDE 2 GANG JUNCTION BOX, NO COVERPLATE, 48" AFF U.N.O. WITH 2"C. STUBBED ABOVE CEILING, TERMINATE WITH BUSHING.
 - 11 PROVIDE 1"C. FROM DISPLAY JUNCTION BOX DOWN INTO CRAWL SPACE, STUB UP AND TERMINATE WITH BUSHING IN COM. RM 118.
 - 12 STUB 1 1/2"C. ABOVE CEILING FROM COM. RM. 202 ON MEZZANINE, TERMINATE BOTH ENDS WITH BUSHING.
 - 13 STUB 1 1/2"C. ABOVE CEILING FROM COM. RM. 118, TERMINATE BOTH ENDS WITH BUSHING.
 - 14 OPEN/CLOSE CONTROL FOR WINDOW ACTUATORS IN CUPOLA, 48" AFF.
 - 15 MOUNT NEAR WINDOWS IN CUPOLA FOR WINDO ACTUATOR, REFER TO ARCHITECTURAL PLANS AND COORDINATE WITH WINDOW INSTALLER.
 - 16 MAKE POWER CONNECTION TO RECEPTACLE (GFI RECEPTACLE FURNISHED WITH FURNITURE) COORDINATE CONNECTION WITH FURNITURE INSTALLER.

NOTES



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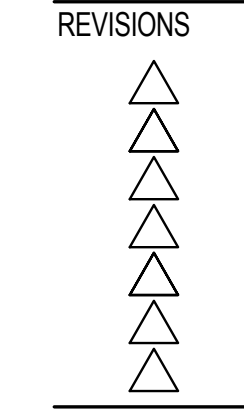
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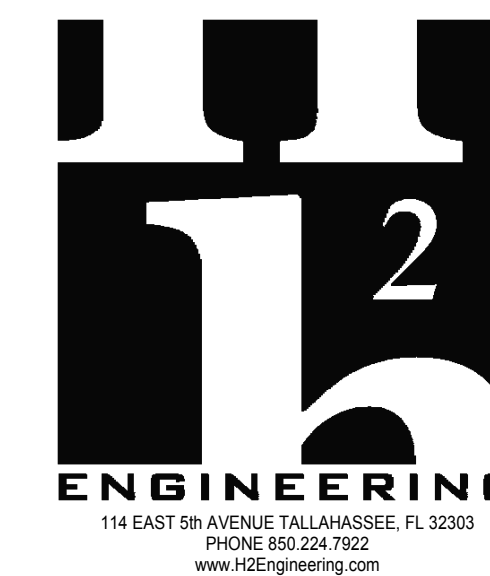
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LOOR PLAN - POWER

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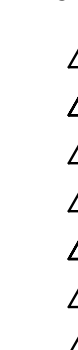
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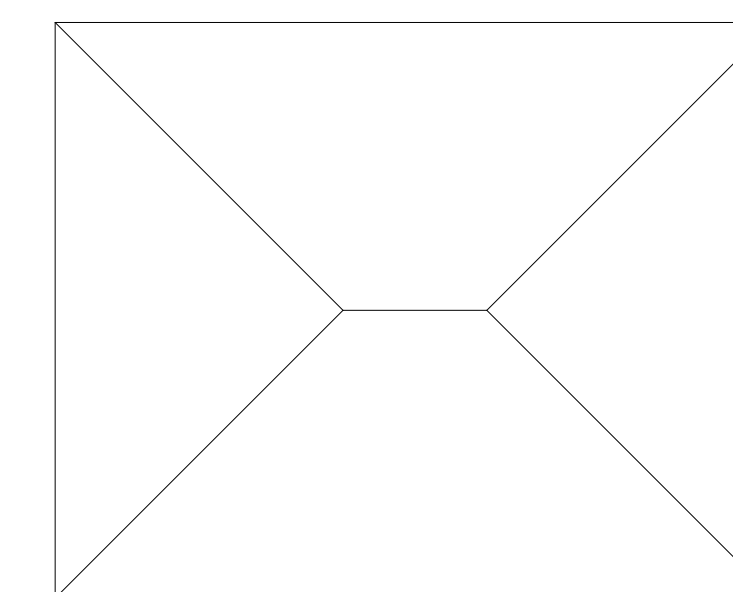


ROO PLAN - POWER

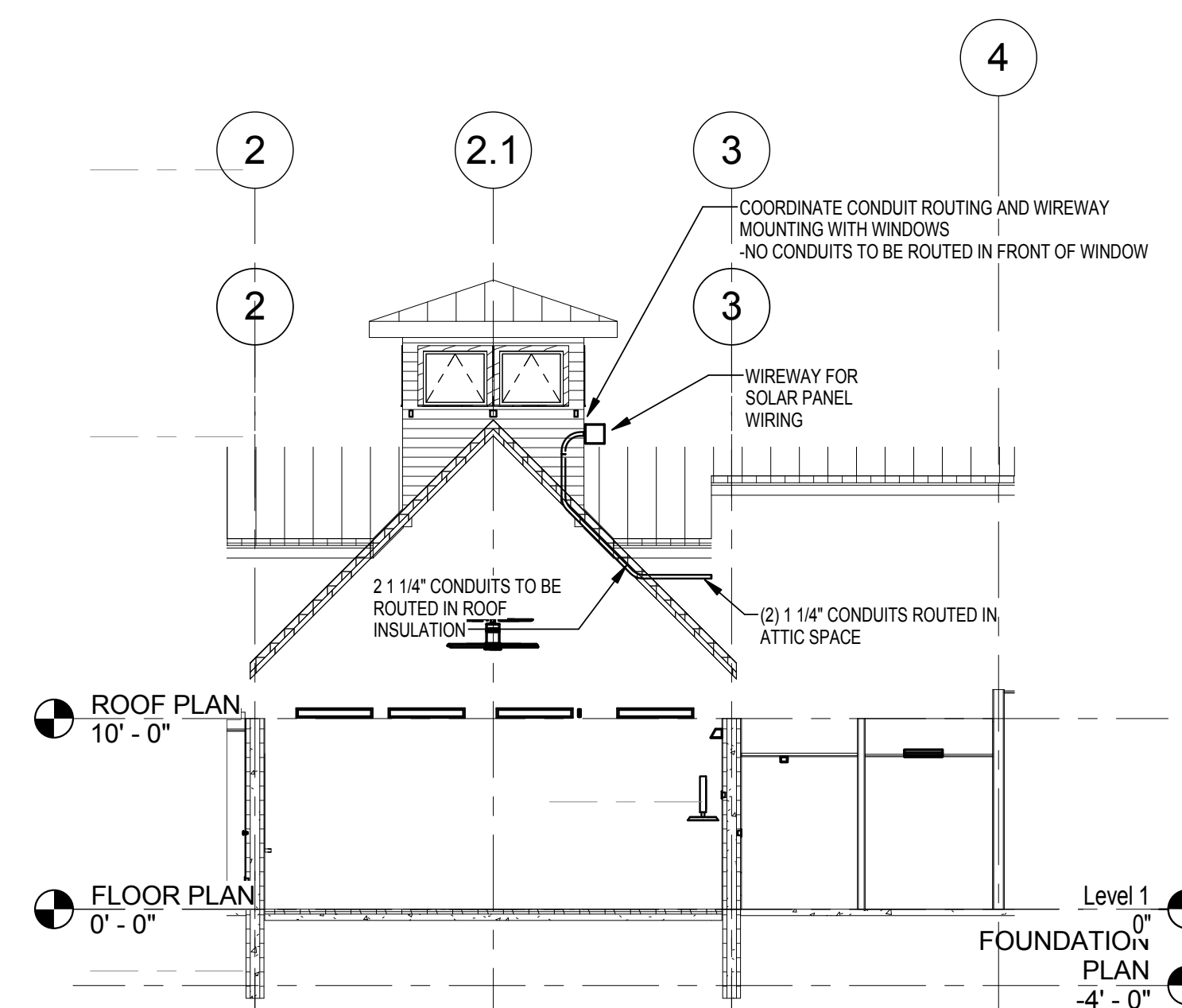
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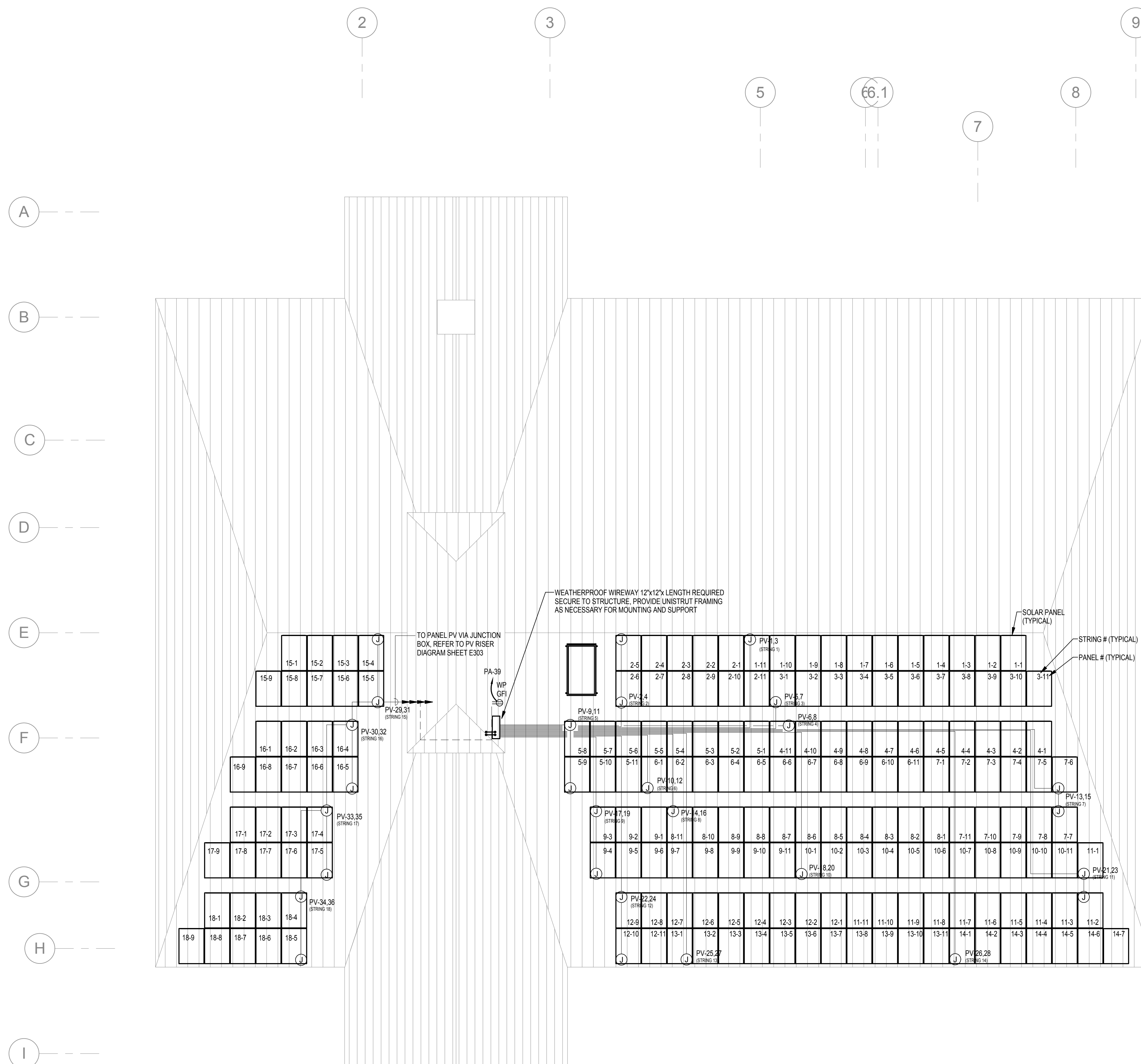
GENERAL NOTES:
 1. REFER TO RISER DIAGRAM - PV ARRAY FOR CONDUIT AND WIRE SIZE AND ADDITIONAL INFORMATION, SHEET E303.



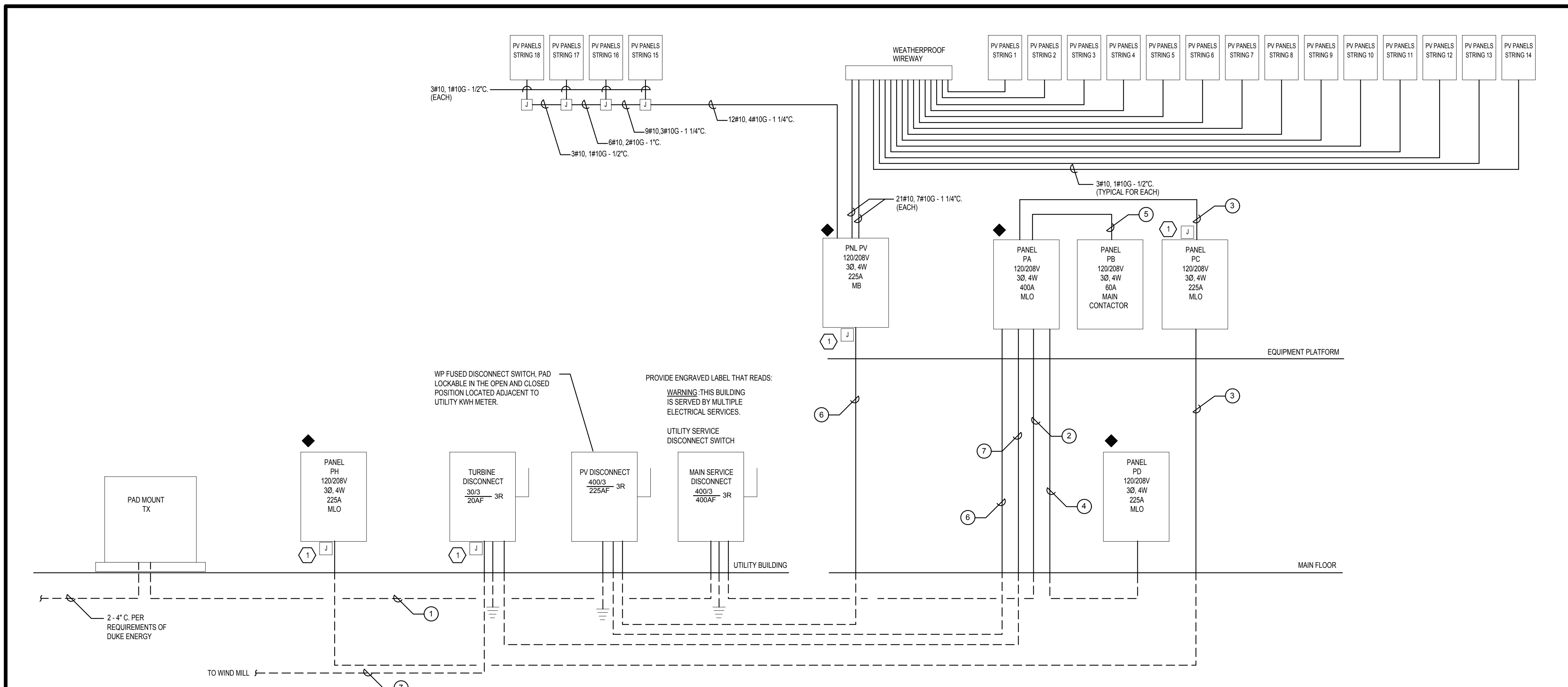
UTILITY BUILDING



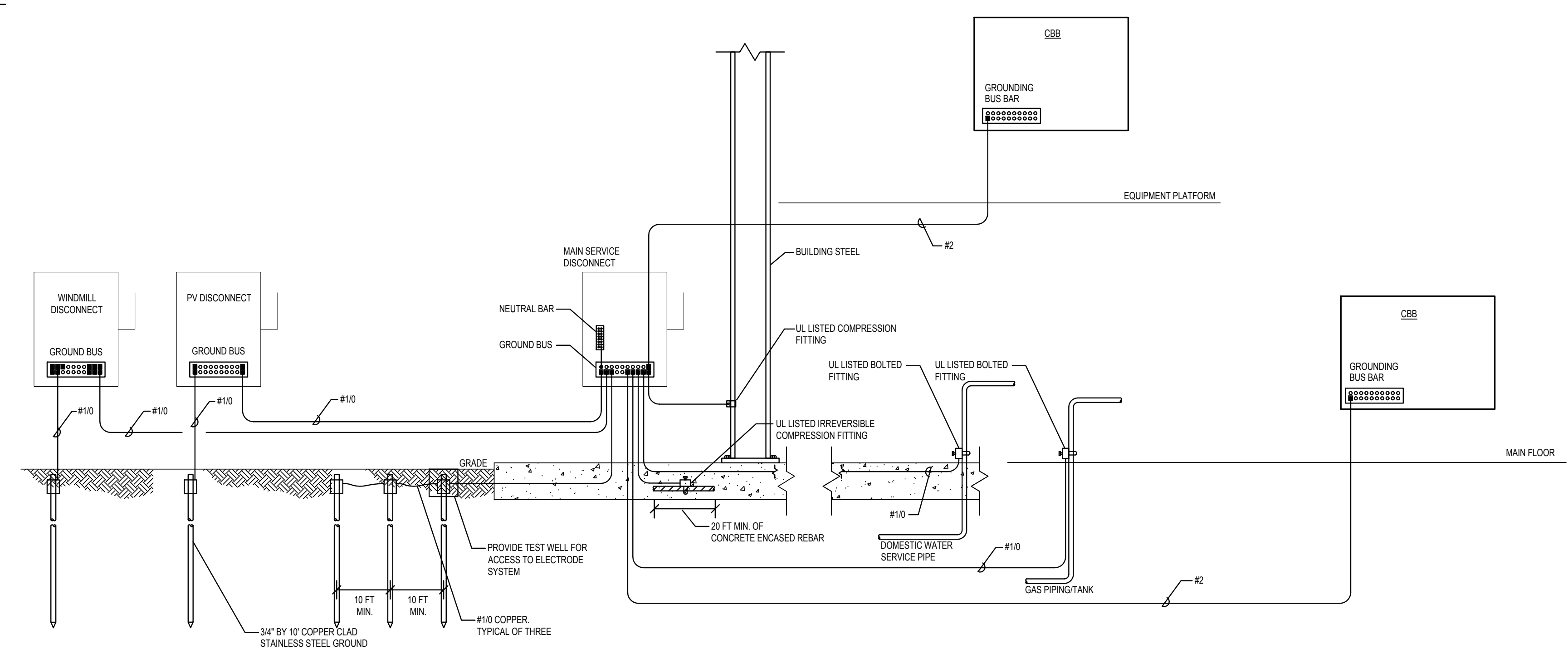
2 EAST/WEST SECTION - CUPOLA
 E202 1/8" = 1'-0"



1 ROOF PLAN - POWER
 E202 1/8" = 1'-0"



RISER DIAGRAM - POWER
NO SCALE



GROUNDING RISER DIAGRAM
NO SCALE

CONDUCTOR SCHEDULE

WIRE	CONDUIT
① 4 - 500KCMIL	3"
② 4 - 500KCMIL, #3G	3"
③ 4 - #4/0, #4G	2 1/2"
④ 4 - #2, #8G	1 1/2"
⑤ 4 - #6, #10G	1 1/4"
⑥ 4 - #4/0, #4G	2"
⑦ 4 - #10, #10G	2"

KEY NOTES:

① PROVIDE DIGITAL ENERGY METER, SIEMENS DEM 2000 OR EQUAL.

NOTES

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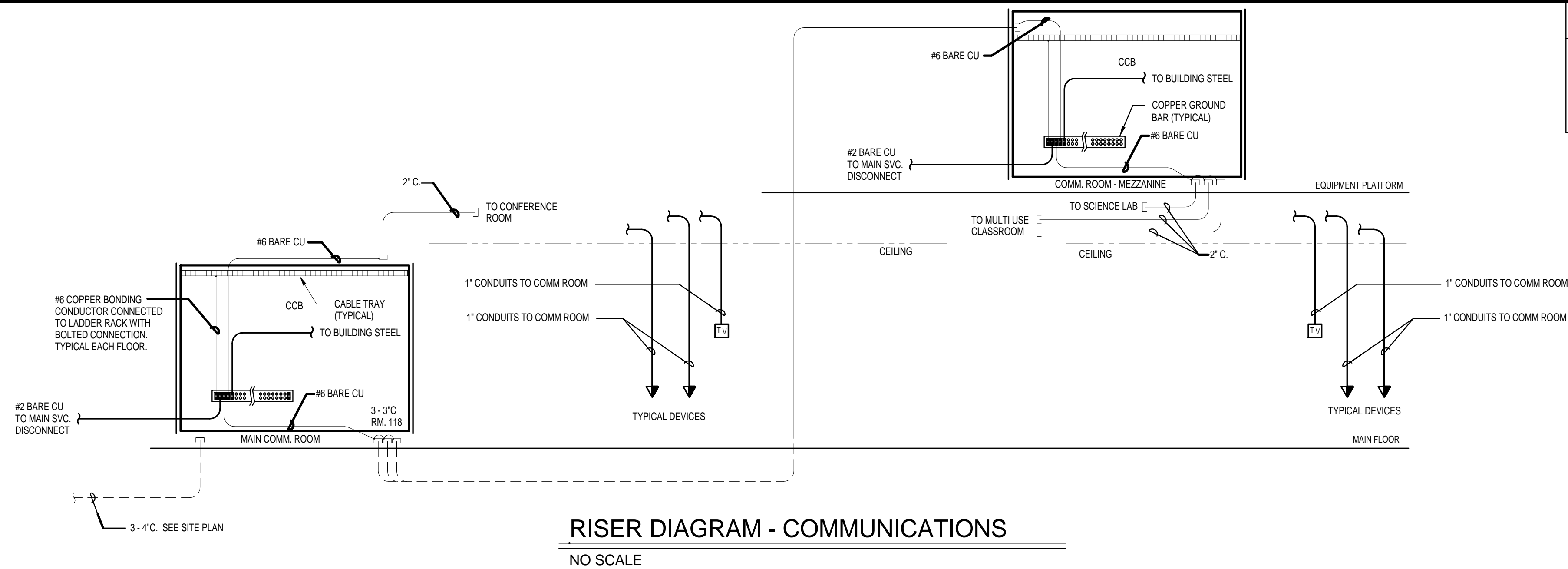
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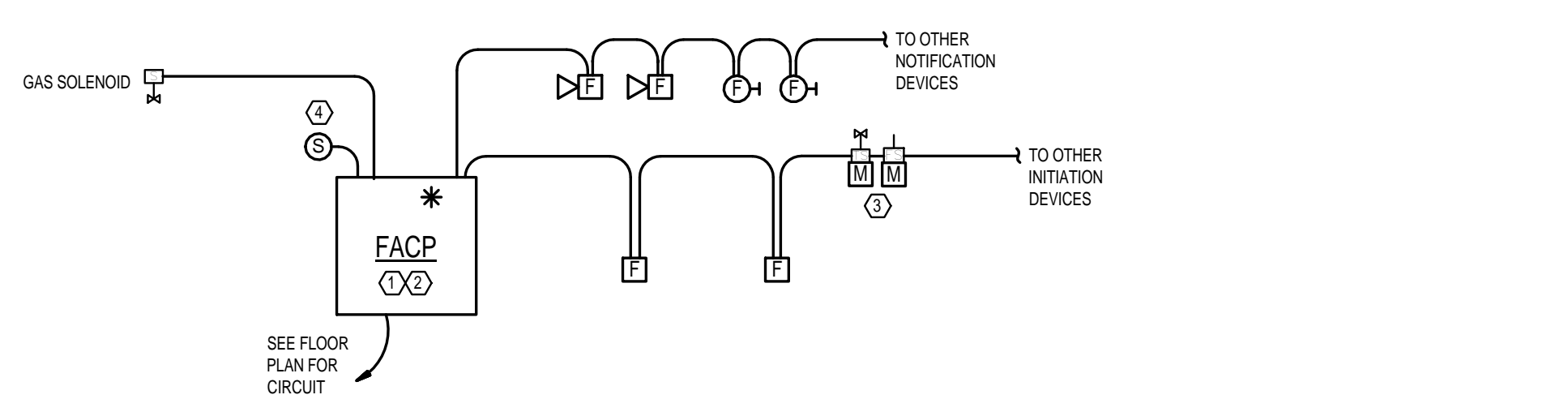
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**RISER DIA RAMS -
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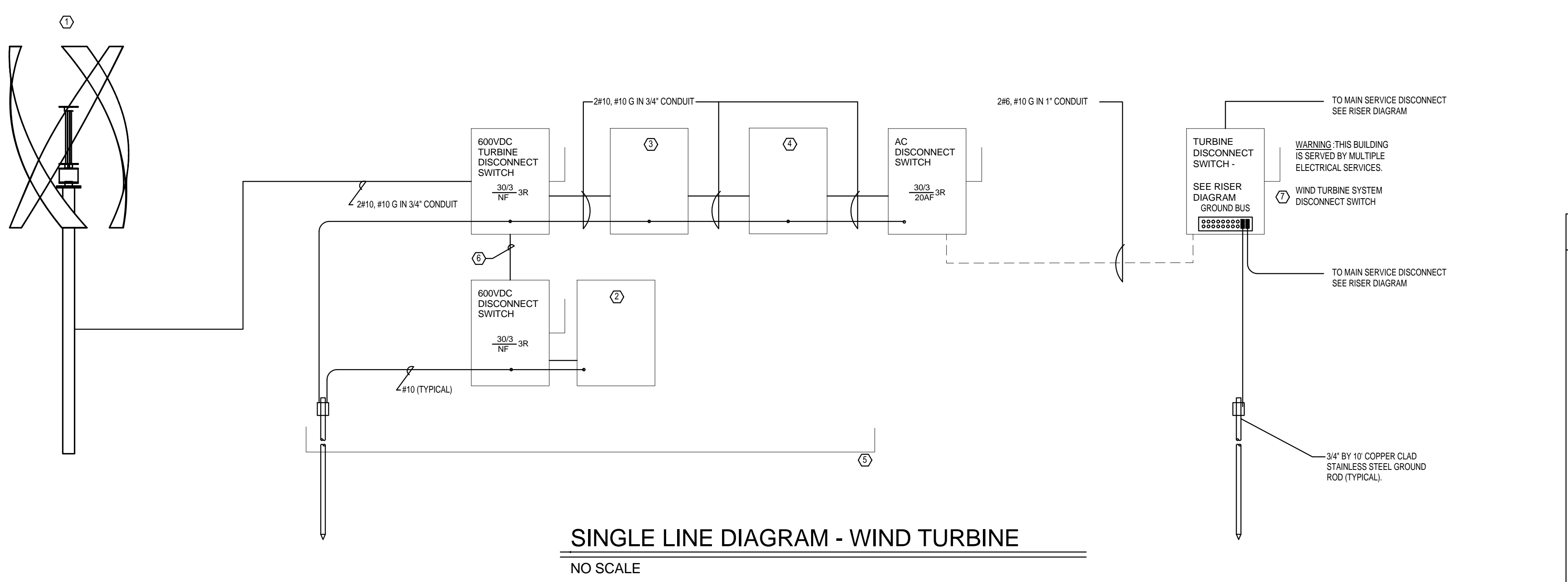
- NOTES**
1. TERMINATE ALL TELECOM BONDING CONDUCTORS ON TWO-HOLE, LONG BARREL, COMPRESSION LUGS.
 2. PROVIDE #2 BARE COPPER CONDUCTOR TERMINATED WITH EXOTHERMIC WELD ON BUILDING STEEL IN EACH COMMUNICATIONS ROOM. TERMINATE OTHER END OF CONDUCTOR WITH TWO-HOLE, LONG BARREL, COMPRESSION LUG.



FIRE ALARM SEQUENCE OF OPERATION

EVENT	ALARM AT FACP	ALARM OFF SITE	INITIATE NOTIFICATION APPLIANCES	TROUBLE AT FACP	TROUBLE NOTIFICATION OFF SITE	SUPERVISORY AT FACP	SUPERVISORY NOTIFICATION OFF SITE	FAN SHUT DOWN	RELEASE LOCKING DEVICES	DEACTIVATE AUDIBLE NOTIFICATION APPLIANCES	COMMENTS
SMOKE DETECTOR	o	o	o	o	o	o	o	o	o	o	
HEAT DETECTOR	o	o	o	o	o	o	o	o	o	o	
MANUAL PULL STATION	o	o	o	o	o	o	o	o	o	o	
SPRINKLER WATER FLOW	o	o	o	o	o	o	o	o	o	o	
TAMPER SWITCH	o	o	o	o	o	o	o	o	o	o	
WIRING FAULT	o	o	o	o	o	o	o	o	o	o	
AC POWER FAILURE	o	o	o	o	o	o	o	o	o	o	
ALARM SILENCE	o	o	o	o	o	o	o	o	o	o	

- FIRE ALARM NOTES**
1. ALL FIRE ALARM JUNCTION BOX COVERS SHALL BE PAINTED RED.
 2. ALL SPLICES SHALL BE MADE WITH CRIMP CONNECTORS. NO WIRE NUTS SHALL BE USED.
 3. ALL MAIN JUNCTION BOXES AND TERMINAL CABINETS SHALL BE PROVIDED WITH TERMINAL BLOCKS.
 4. PROVIDE REMOTE TEST & ALARM INDICATORS FOR AHJ DUCT DETECTORS LOCATED IN AREAS NOT READILY VISIBLE & ACCESSIBLE ABOVE CEILINGS, OR AS INDICATED ON THE DRAWINGS.
 5. ALL INITIATING DEVICES WITH SCREW TERMINALS SHALL BE CONNECTED TO THE WIRING SYSTEM WITH SPADE TERMINALS.
 6. THE NUMBER AND TYPE OF CONDUCTORS TO BE PROVIDED IN THE FIRE ALARM SYSTEM RACEWAYS SHALL BE SHOWN ON THE FIRE ALARM DELEGATED DESIGN SUBMITTAL.
 7. CONDUIT SHALL BE 3/4" UNLESS NOTED OTHERWISE.
 8. * INCLUDES BATTERY BACK-UP.
 9. FIRE ALARM SYSTEM SHALL MONITOR ALL FLOW AND TAMPER SWITCHES ASSOCIATED WITH FIRE SPRINKLER SYSTEM. REFER TO THE SPRINKLER SHOP DRAWINGS FOR QUANTITY AND FINAL INSTALLED LOCATIONS.
 10. RISER DIAGRAM IS DIAGRAMMATICAL IN NATURE AND DOES NOT SHOW EVERY DEVICE ASSOCIATED WITH THE SYSTEM. THE FIRE ALARM CONTRACTOR SHALL SUBMIT A COMPLETE ONE LINE INDICATING EVERY DEVICE INTEGRATED WITH THE FIRE ALARM SYSTEM.
- FIRE ALARM KEY NOTES**
- ① PROVIDE 120V POWER AS REQUIRED FOR FIRE PANEL. COORDINATE WITH THE INSTALLED EQUIPMENT.
 - ② PROVIDE TYPE 3A SURGE PROTECTION DEVICES FOR EACH INITIATION AND NOTIFICATION CIRCUITS THAT SERVE DEVICES ON THE BUILDING EXTERIOR. SURGE PROTECTIVE DEVICE LOCATIONS SHALL BE INDICATED ON FIRE ALARM SHOP DRAWINGS.
 - ③ MONITOR EACH FLOW AND TAMPER SWITCH ASSOCIATED WITH THE BFP AND SPRINKLER RISER. COORDINATE WITH FIRE SPRINKLER SHOP DRAWINGS FOR QUANTITY AND LOCATIONS.
 - ④ PROVIDE A SMOKE DETECTOR WITHIN 5 FEET OF FATC.



- WIND TURBINE SYSTEM KEY NOTES**
- ① 1000W VERTICAL ACCESS WIND TURBINE WITH DIRECT DRIVE DC GENERATOR. PROVIDE EDDY GT BY URBAN GREEN ENERGY OR EQUAL PRODUCT APPROVED PRIOR TO BID. MAXIMUM CUT-IN WIND SPEED IS 8 MPH. MINIMUM SURVIVAL WIND SPEED IS 110 MPH. SEE DETAIL B504 FOR INSTALLATION FOOTER REQUIREMENTS.
 - ② MANUAL BRAKE RESISTOR BANK IN NEMA 3R ENCLOSURE PROVIDED BY TURBINE MANUFACTURER. CLOSING THE ASSOCIATED DISCONNECT WILL DIVERT ENERGY TO THE RESISTOR BANK AND BRAKE THE TURBINE.
 - ③ GRID THE WIND CONTROLLER IN NEMA 3R ENCLOSURE WITH AUTOMATIC DIVERSION LOAD FOR SAFETY BREAK UNDER NO-LOAD OR LOW-LOAD CONDITIONS.
 - ④ WIND INVERTER IN NEMA 3R ENCLOSURE WITH INTEGRAL UTILITY MONITORING AND 208V OUTPUT. INVERTER SHALL ONLY OPERATE WHEN UTILITY POWER IS PRESENT.
 - ⑤ MOUNT EQUIPMENT ADJACENT TO WIND TURBINE. PROVIDE FREESTANDING RACK FOR EQUIPMENT CONSISTING OF TWO 6' SQUARE VERTICAL POSTS AND THREE 1 1/2" SQUARE, 12 GAUGE, HOT DIPPED GALVANIZED UNISTRUT CHANNEL.
 - ⑥ #10 INSTALLED IN PARALLEL WITH FEED FROM TURBINE. PROVIDE LUGS SUITABLE FOR TWO #10 PER PHASE ON LINE (TURBINE) SIDE OF DC TURBINE DISCONNECT SWITCH.
 - ⑦ PROVIDE ENGRAVED LABEL WITH TEXT INDICATED FOR TURBINE DISCONNECT.

NOTES

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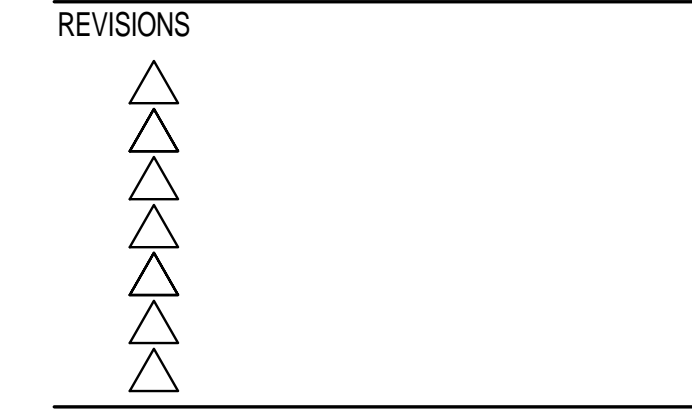
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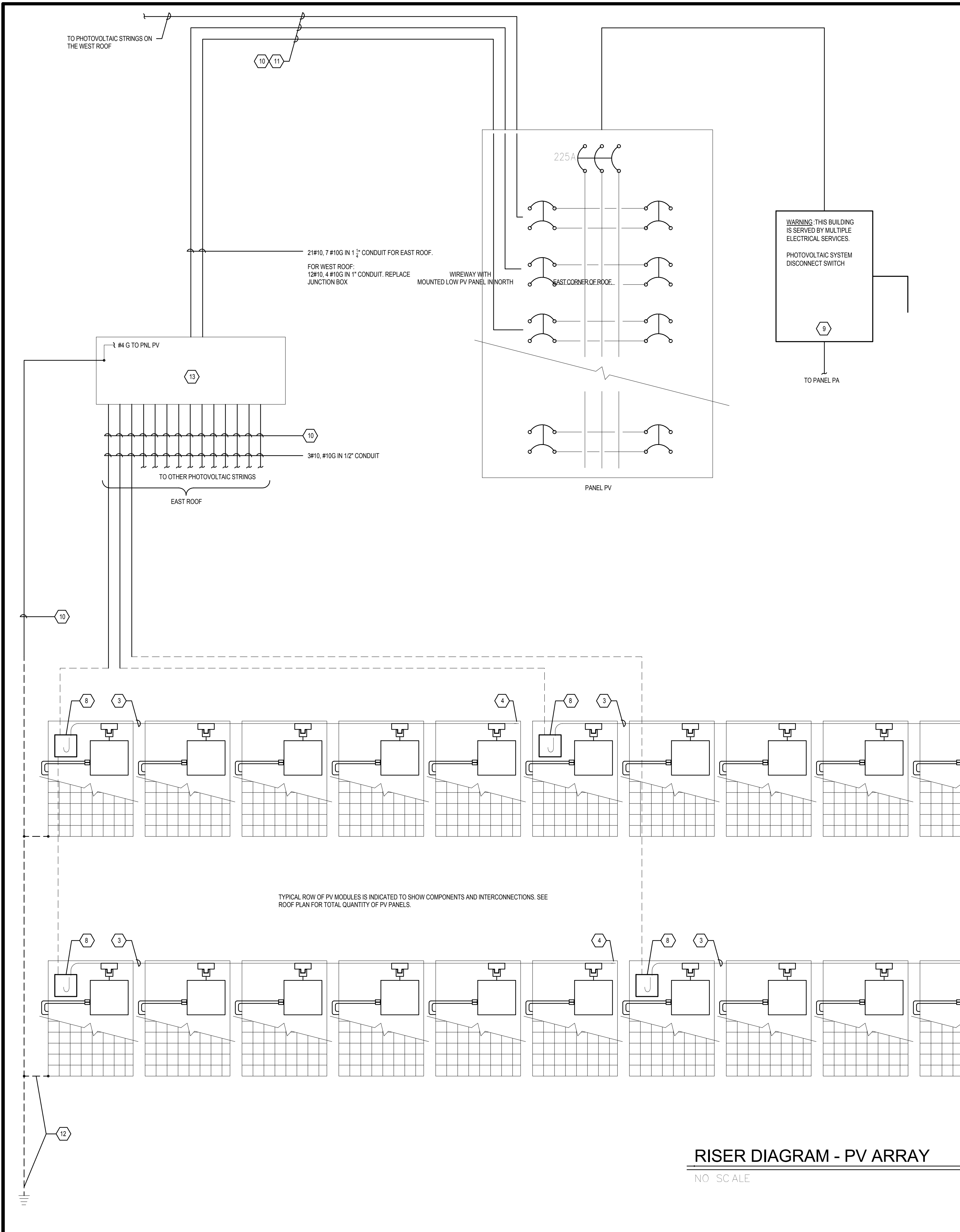
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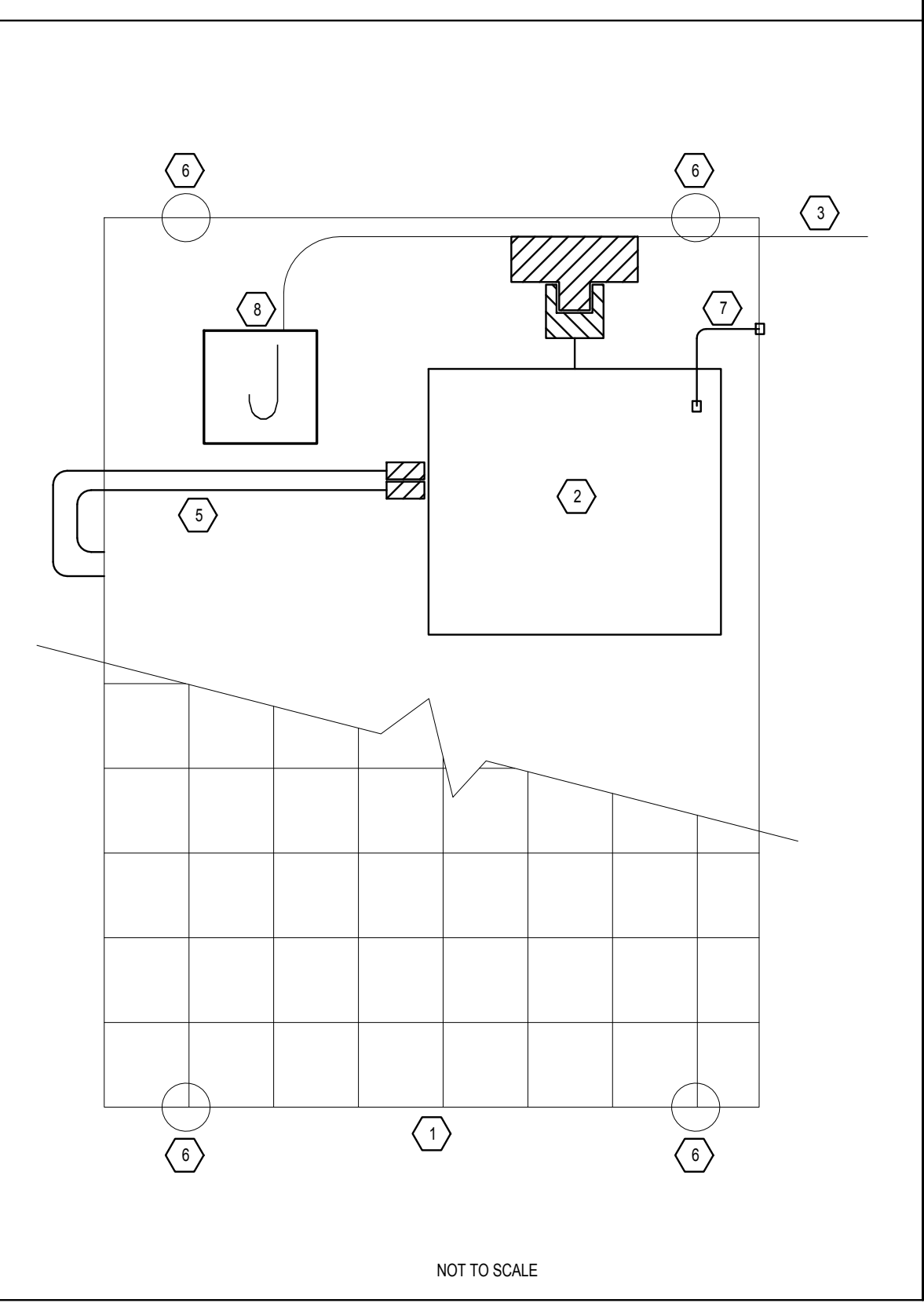


RISER DIA RAMS - S STEMS

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TYPICAL PHOTOVOLTAIC MODULE INSTALL.



KEY NOTES:

- 1 295 WATT (MINIMUM) MONOCRYSTALLINE PV MODULE. MOUNT TO STANDING SEAM METAL ROOF WITH UL 1703 STANDING SEAM CLAMP KIT. SEE STRUCTURAL DRAWINGS FOR MOUNTING DETAILS. CLAMP KIT SHALL PROVIDE INTEGRAL GROUNDING CONNECTION BETWEEN MODULE FRAMES AND SHALL PROVIDE INTEGRAL WIRE MANAGEMENT.
- 2 PROVIDE ONE 300W DC 208V, 1" MICRO INVERTER FOR EACH PV MODULE. BOLT INVERTER TO MOUNTING DISK ASSOCIATED WITH STANDING SEAM CLAMP KIT. PROVIDE ADDITIONAL STANDING SEAM CLAMP KIT AS REQUIRED TO PROPER SUPPORT INVERTER. MOUNT INVERTER BELOW PV MODULE SUCH THAT IT IS SHADED FROM DIRECT SUNLIGHT.
- 3 FOUR WIRE (1, 1, 2, N, G) #10 AWG CU AC TRUNK CABLE WITH INTEGRAL PLUG IN CONNECTORS SPACED EVERY 41". ONCE INVERTER IS CONNECTED TO TRUNK, PLUG CONNECTORS SHALL REQUIRE SPECIAL TOOL TO DISCONNECT CABLES. MOUNT TRUNK CABLE ON WIRE MANAGEMENT INTEGRAL TO STANDING SEAM CLAMP KIT. STRAP TO EACH CLAMP WITH TWO CABLE TIES. CABLE TIES SHALL BE LISTED FOR USE AT 75 DEGREES CELSIUS. PROVIDE ADDITIONAL STANDING SEAM CLAMP KITS TO SUPPORT TRUNK CABLE WHERE NORTH/SOUTH RUNS OF TRUNK CABLE ARE REQUIRED BETWEEN MODULES.
- 4 PROVIDE AC TRUNK CAP AT THE END OF EACH TRUNK CABLE RUN THAT DOES NOT TERMINATE IN A JUNCTION BOX.
- 5 PV MODULE DC OUTPUT SHALL PLUG DIRECTLY INTO MICRO INVERTER. MAXIMUM DC CABLE LENGTH IS 2 METERS.
- 6 STANDING SEAM CLAMP KIT. REFER TO STRUCTURAL DRAWINGS.
- 7 BOND EACH INVERTER TO THE ASSOCIATED PV MODULE FRAME WITH #6 CU. CONNECTIONS SHALL UTILIZE LISTED BOLTED CONNECTION HARDWARE.
- 8 TERMINATE AC TRUNK CABLE IN WEATHERPROOF JUNCTION BOX. SPLICE TO THIN-THIN CONDUCTORS USING INSULATED TERMINAL STRIPS. PROVIDE GROUND LUG IN BOX SUITABLE FOR TERMINATION OF #10 CU EGC FROM AC TRUNK CABLE AND #10 EGC FROM PANEL PV. MOUNT JUNCTION BOX BELOW PV MODULE SUCH THAT IT IS NOT VISIBLE FROM THE GROUND BUT IS FULLY ACCESSIBLE BY THE REMOVAL OF A SINGLE PV MODULE.
- 9 PROVIDE 400A, 3" DISCONNECT SWITCH IN NEMA 3R ENCLOSURE. MOUNT ADJACENT TO ELECTRIC METER. PROVIDE ENGRAVED WITH TEXT INDICATED.
- 10 INSTALL THE PV SYSTEM AND ASSOCIATED WIRING TO LIMIT THE VISIBILITY OF SYSTEM AND WIRING COMPONENTS FROM THE GROUND TO THE MAXIMUM EXTENT POSSIBLE WHILE MINIMIZING ROOF PENETRATIONS. ALL CONDUIT RUNS LOCATED ON THE ROOF SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE STANDING SEAMS OF THE ROOF. TO THE EXTENT POSSIBLE, ALL CONDUIT SHOULD ALSO BE LOCATED BELOW PV MODULES FOR FURTHER CONCEALMENT. DASHING DENOTES PORTIONS OF CONDUIT RUNS THAT MAY BE ROUTED BELOW PV PANELS. PARALLEL EXPOSED CONDUITS SHALL BE ROUTED TO A SINGLE LOCATION TO MINIMIZE LOCATIONS OF VISIBLE CONDUIT. DIRECT ANY QUESTIONS CONCERNING THE REQUIRED AESTHETICS OF THE SYSTEM TO THE ARCHITECT OR ENGINEER PRIOR TO INSTALLATION.
- 11 MULTIPLE PV STRING OUTPUTS INSTALLED IN A SINGLE CONDUIT. SEE SHEET E202 FOR ROUTING OF CONDUIT.
- 12 DRIVE GROUND ROD(S) AS REQUIRED TO ACHIEVE RESISTANCE <250HMS TO GROUND. PROVIDE #4 COPPER TO GROUND LUG IN PV STRING CONSOLIDATION POINT (WIREWAY OR JUNCTION BOX). PROVIDE #6 CU CONNECTION TO THE METAL FRAME AT EACH ROW OF THE PV ARRAY. CONNECTION TO #4 WIRE SHALL UTILIZE IRREVERSIBLE COMPRESSION FITTING. CONNECTION TO MODULE HOUSING SHALL BE MADE VIA A BOLTED CONNECTOR. NOTE THE STANDING SEAM ROOF CLAMP KIT SHALL PROVIDE BONDING BETWEEN MODULES. TYPICAL FOR THREE LOCATIONS: EAST ROOF, WEST ROOF AND UTILITY BUILDING ROOF.
- 13 WEATHERPROOF WIRE WAY. PROVIDE GROUND LUG SUITABLE FOR TERMINATION OF #4 CU FROM PV GROUNDING ELECTRODE AND #4 CU FROM PANEL PV GROUND BUS.

NOTES

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 114 EAST 9th AVENUE TALLAHASSEE, FL 32303
 PHONE 850 224 7922
 www.H2Engineering.com

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BARNETT FRONCZAK BARLOWE ARCHITECTS

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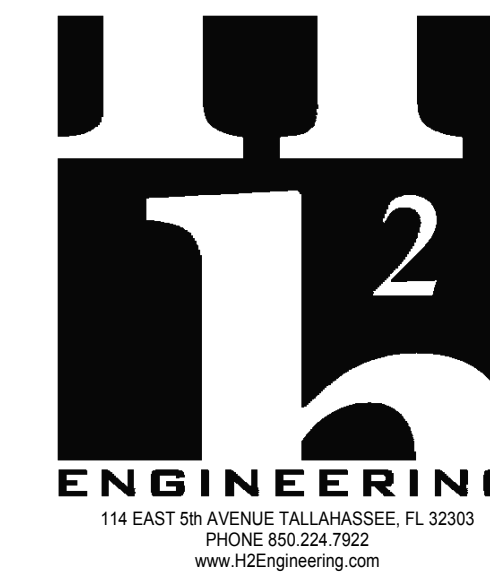
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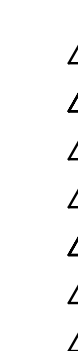
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PANEL SC EDULES

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Branch Panel: PB

Location: ELEC. RM. 201
 Supply From: PA
 Mounting: Surface
 Enclosure: Type 1

Volts: 120/208 Wye
 Phases: 3
 Wires: 4

A.I.C. Rating:
 Mains Type: CONTACTOR
 Mains Rating: 100 A
 MCB Rating: 60A CONTACTOR

Notes:
 1) PROVIDE MAIN BREAKER WITH SHUNT TRIP FOR EMERGENCY POWER OFF.

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	Receptacle 114	20 A	1	360 VA	400 VA			1	20 A	2	
3	Receptacle 114	20 A	1		360 VA	400 VA		1	20 A	4	
5	Receptacle 114	20 A	1			180 VA	400 VA	1	20 A	6	
7	Receptacle 114	20 A	1	360 VA	400 VA			1	20 A	8	
9	Receptacle 114	20 A	1		540 VA	400 VA		1	20 A	10	
11	Receptacle 114	20 A	1			800 VA	400 VA	1	20 A	12	
13	Receptacle 115	20 A	1	360 VA	400 VA			1	20 A	14	
15	Receptacle 115	20 A	1		360 VA	400 VA		1	20 A	16	
17	Receptacle 115	20 A	1			180 VA	400 VA	1	20 A	18	
19	Receptacle 115	20 A	1	900 VA	400 VA			1	20 A	20	
21	Receptacle 115	20 A	1		900 VA	400 VA		1	20 A	22	
23	Projector 115	20 A	1			200 VA	400 VA	1	20 A	24	
25	Receptacle 115 U/C REFRIG.	20 A	1	1000...	1000...			1	20 A	26	
27	Receptacle LAB PREP 114	20 A	1		1000...	0 VA		1	20 A	28	
29	Spare	20 A	1			0 VA	0 VA	1	20 A	30	
31	Spare	20 A	1	0 VA	0 VA			1	20 A	32	
33	Spare	20 A	1		0 VA	0 VA		1	20 A	34	
35	Space	--	--			0 VA	0 VA	--	--	36	
37	Space	--	--	0 VA	0 VA			--	--	38	
39	Space	--	--		0 VA	0 VA		--	--	40	
41	Space	--	--			0 VA	0 VA	--	--	42	
				Total Load:	5580 VA	4760 VA	2960 VA				
				Total Amps:	49 A	42 A	25 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Receptacle	13300 VA	87.59%	11650 VA	
				Total Conn. Load: 13300 VA
				Total Est. Demand: 11650 VA
				Total Conn.: 37 A
				Total Est. Demand: 32 A

Notes:

Branch Panel: PC

Location: ELEC. RM. 201
 Supply From: PA
 Mounting: Surface
 Enclosure: Type 1

Volts: 120/208 Wye
 Phases: 3
 Wires: 4

A.I.C. Rating:
 Mains Type: MLO
 Mains Rating: 225 A
 MCB Rating:

Notes: PROVIDE FEED THRU LUGS.

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1				2857...	2857...					2	
3	WSPH-5	40 A	3		2857...	2857...		3	40 A	4	
5						2857...	2857...			6	
7				2857...	2857...					8	
9	WSPH-3	40 A	3		2857...	2857...		3	40 A	10	
11						2857...	2857...			12	
13				2857...	3000...					14	
15	WSPH-1	40 A	3		2857...	3000...		3	40 A	16	
17						2857...	3000...			18	
19	WH-1	30 A	2	2250...	400 VA			1	15 A	20	
21					2250...	0 VA		1	20 A	22	
23	C-1	15 A	1			400 VA	0 VA	1	20 A	24	
25	Spare	20 A	1	0 VA	0 VA			1	20 A	26	
27	Spare	20 A	1		0 VA	500 VA		1	20 A	28	
29	Spare	20 A	1			0 VA	0 VA	1	20 A	30	
31	Spare	20 A	1	0 VA	0 VA			--	--	32	
33	Space	--	--		0 VA	0 VA		--	--	34	
35	Space	--	--			0 VA	0 VA	--	--	36	
37	Space	--	--	0 VA	0 VA			--	--	38	
39	Space	--	--		0 VA	0 VA		--	--	40	
41	Space	--	--			0 VA	0 VA	--	--	42	
				Total Load:	19933 VA	20033 VA	17683 VA				
				Total Amps:	169 A	170 A	147 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Elevator	56350 VA	100.00%	56350 VA	
Other	500 VA	100.00%	500 VA	
Receptacle	800 VA	100.00%	800 VA	
				Total Conn. Load: 57650 VA
				Total Est. Demand: 57650 VA
				Total Conn.: 160 A
				Total Est. Demand: 160 A

Notes:

Branch Panel: PA

Location: ELEC. RM. 201
 Supply From: UTILITY
 Mounting: Surface
 Enclosure: Type 1

Volts: 120/208 Wye
 Phases: 3
 Wires: 4

A.I.C. Rating:
 Mains Type: MLO
 Mains Rating: 400 A
 MCB Rating:

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	Lighting	20 A	1	300 VA	600 VA			1	20 A	2	
3	Lighting 114, 115	20 A	1		791 VA	1000...		1	20 A	4	
5	Lighting 103 - 113	20 A	1			535 VA	540 VA	1	20 A	6	
7	Lighting 108A, 108B	20 A	1	1328...	540 VA			1	20 A	8	
9	Spare	20 A	1		0 VA	360 VA		1	20 A	10	
11	Lighting 101, 102	20 A	1			1326...	760 VA	1	20 A	12	
13	Receptacle 109 - 113	20 A	1	1080...	760 VA			1	20 A	14	
15	Receptacle EXTERIOR 101	20 A	1		740 VA	540 VA		1	20 A	16	
17	Spare	0 A	1			0 VA	540 VA	1	20 A	18	
19	Receptacle VENDING 103	20 A	1	1000...	360 VA			1	20 A	20	
21	Receptacle VENDING 103	20 A	1		1000...	900 VA		1	20 A	22	
23	Receptacle 103	20 A	1			360 VA	740 VA	1	20 A	24	
25	Spare	20 A	1	0 VA	540 VA			1	20 A	26	
27	Spare	20 A	1		0 VA	720 VA		1	20 A	28	
29	Spare	20 A	1			0 VA	720 VA	1	20 A	30	
31	Receptacle EXT. 100c, 100d	20 A	1	896 VA	360 VA			1	20 A	32	
33	Projector 108A	20 A	1		200 VA	200 VA		1	20 A	34	
35	Receptacle FLOOR 108A	20 A	1			800 VA	800 VA	1	20 A	36	
37	Receptacle FLOOR 108A	20 A	1	800 VA	800 VA			1	20 A	38	
39	Receptacle ROOF	20 A	1		200 VA	1000...		1	20 A	40	
41	Receptacle COMM RM. RACK	20 A	1			180 VA	0 VA	1	20 A	42	
43	Space	--	--	0 VA	0 VA			--	--	44	
45	Space	--	--		0 VA	0 VA		--	--	46	
47	Space	--	--			0 VA	0 VA	--	--	48	
49	Space	--	--	0 VA	0 VA			--	--	50	
51	Space	--	--		0 VA	0 VA		--	--	52	
53	Space	--	--			0 VA	0 VA	--	--	54	
55	Space	--	--	0 VA	0 VA			--	--	56	
57	Space	--	--		0 VA	0 VA		--	--	58	
59	Space	--	--			0 VA	0 VA	--	--	60	
61	Space	--	--	0 VA	0 VA			--	--	62	
63	Space	--	--		0 VA	0 VA		--	--	64	
65	Space	--	--			0 VA	0 VA	--	--	66	
67		--	--	0 VA	11732...			--	--	68	
69	WINDMILL	20 A	3		0 VA	9616...		3	125 A	70	
71						0 VA	10198...			72	
73				5347...	0 VA					74	
75	PANEL PB	60 A	3		4543...	0 VA		3	150 A	76	
77						2868...	0 VA			78	
79				19855...	0 VA					80	
81	PC	200 A	3		20031...	0 VA		3	30 A	82	
83						17605...	0 VA			84	
				Total Load:	46298 VA	41841 VA	37972 VA				
				Total Amps:	391 A	354 A	316 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Elevator	66250 VA	100.00%	66250 VA	
Lighting	11156 VA	100.00%	11156 VA	
Other	1400 VA	100.00%	1400 VA	
Power	1100 VA	100.00%	1100 VA	
Receptacle	48340 VA	60.34%	29170 VA	
				Total Conn. Load: 128246 VA
				Total Est. Demand: 109076 VA
				Total Conn.: 356 A
				Total Est. Demand: 303 A

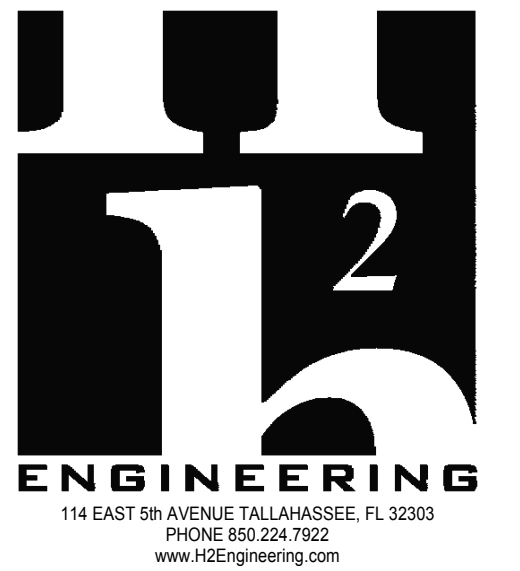
Notes:

Branch Panel: PV												
Location: <Location>			Volts: 120/208 Wye			A.I.C. Rating:						
Supply From:			Phases: 3			Mains Type:						
Mounting: Surface			Wires: 4			Mains Rating: 225 A						
Enclosure: Type 1						MCB Rating:						
Notes:												
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT		
1	SOLAR PANELS - STRING #1	20 A	2	1650...	1650...		2	20 A	SOLAR PANELS - STRING #2	2		
3				1650...	1650...					4		
5	SOLAR PANELS - STRING #3	20 A	2			1650... 1650...	2	20 A	SOLAR PANELS - STRING #4	6		
7				1650...	1650...					8		
9	SOLAR PANELS - STRING #5	20 A	2		1650... 1650...		2	20 A	SOLAR PANELS - STRING #6	10		
11						1650... 1650...				12		
13	SOLAR PANELS - STRING #7	20 A	2	1650...	1650...		2	20 A	SOLAR PANELS - STRING #8	14		
15				1650...	1650...					16		
17	SOLAR PANELS - STRING #9	20 A	2			1650... 1650...	2	20 A	SOLAR PANELS - STRING #10	18		
19				1650...	1650...					20		
21	SOLAR PANELS - STRING #11	20 A	2		1650... 1650...		2	20 A	SOLAR PANELS - STRING #12	22		
23						1650... 1650...				24		
25	SOLAR PANELS - STRING #13	20 A	2	1650...	1050...		2	20 A	SOLAR PANELS - STRING #14	26		
27				1650...	1050...					28		
29	SOLAR PANELS - STRING #15	20 A	2			1350... 1350...	2	20 A	SOLAR PANELS - STRING #16	30		
31				1350...	1350...					32		
33	SOLAR PANELS - STRING #17	20 A	2		1350... 1350...		2	20 A	SOLAR PANELS - STRING #18	34		
35						1350... 1350...				36		
37	Space	--	--	0 VA	0 VA					38		
39	Space	--	--		0 VA	0 VA		3	30 A	SPD	40	
41	Space	--	--			0 VA	0 VA			42		
				Total Load:	18600 VA	18600 VA			18600 VA			
				Total Amps:	155 A	155 A			155 A			
Legend:												
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals								
Power	55800 VA	100.00%	55800 VA	Total Conn. Load:	55800 VA							
				Total Est. Demand:	55800 VA							
				Total Conn.:	155 A							
				Total Est. Demand:	155 A							
Notes:												

Branch Panel: PD												
Location: WORK RM. 117			Volts: 120/208 Wye			A.I.C. Rating:						
Supply From: PA			Phases: 3			Mains Type: MLO						
Mounting: Recessed			Wires: 4			Mains Rating: 225 A						
Enclosure: Type 1						MCB Rating:						
Notes:												
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT		
1	FACP 123	20 A	1	200 VA	360 VA		1	20 A	Receptacle 117	2		
3	Projector 116	20 A	1		200 VA	540 VA		1	20 A	Receptacle 117		
5	Lighting 119 - 127	20 A	1			341 VA	540 VA	1	20 A	Receptacle 117, 118		
7	Lighting 116 - 117, 121 - 130	20 A	1	759 VA	900 VA			1	20 A	Receptacle 116		
9	Receptacle COFFEE 116	20 A	1		1000...	1080...		1	20 A	Receptacle 122		
11	Receptacle 123	20 A	1			893 VA	0 VA	1	20 A	Spare		
13	Receptacle 119	20 A	1	900 VA	360 VA			1	20 A	Receptacle EXTERIOR 101		
15	Receptacle 127	20 A	1		1080...	1600...		1	15 A	AC-1 118		
17	WH-2	50 A	2	4150...	360 VA		4150...	360 VA	1	20 A	Receptacle EXTERIOR 100b	
19									1	20 A	Receptacle EXTERIOR 100b	
21	Receptacle FIRE PLACE	20 A	1		360 VA	360 VA		1	20 A	Receptacle EXTERIOR 100b		
23	Receptacle EXTERIOR 101	20 A	1			360 VA	360 VA	1	20 A	Receptacle EXTERIOR 100b		
25	Receptacle COM. RM. 118	20 A	1	360 VA	360 VA			1	20 A	Receptacle 123		
27	Receptacle COM. RM. 118	20 A	1		360 VA	360 VA		1	20 A	Receptacle COM. RM. 118		
29	Receptacle COM. RM. 118	20 A	1			360 VA	900 VA	1	20 A	Receptacle 126		
31	Receptacle 120	20 A	1	900 VA	1000...			1	20 A	Receptacle COM. RM. 118 RACK		
33	Receptacle 130	20 A	1		900 VA	1000...		1	20 A	Receptacle COM. RM. 118 RACK		
35	Lighting - SITE WALKWAY	20 A	1			400 VA	1000...	1	20 A	Receptacle COPIER 117		
37	Lighting - SITE PARKING	20 A	1	1040...	640 VA			1	20 A	Lighting - SITE ROADWAY		
39	Lighting - SITE ROUND-A-BOUT	20 A	1		640 VA	408 VA		1	20 A	Lighting EXT. 100c, 100d		
41	CUPOLA WINDOW ACTUATORS	20 A	1			500 VA	500 VA	1	20 A	LC1		
43	Space	--	--	0 VA	0 VA			--	--	Space		
45	Space	--	--		0 VA	0 VA		--	--	Space		
47	Space	--	--			0 VA	0 VA	--	--	Space		
49	Space	--	--	0 VA	0 VA							
51	Space	--	--		0 VA	0 VA		3	30 A	SPD		
53	Space	--	--			0 VA	0 VA					
				Total Load:	12289 VA	9888 VA			10664 VA			
				Total Amps:	103 A	82 A			90 A			
Legend:												
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals								
Elevator	9900 VA	100.00%	9900 VA	Total Conn. Load:	32916 VA							
Lighting	4236 VA	100.00%	4236 VA	Total Est. Demand:	29226 VA							
Other	700 VA	100.00%	700 VA	Total Conn.:	91 A							
Power	700 VA	100.00%	700 VA	Total Est. Demand:	81 A							
Receptacle	17380 VA	78.77%	13690 VA									
Notes:												

Branch Panel: PH												
Location: UTILITY BUILDING			Volts: 120/208 Wye			A.I.C. Rating:						
Supply From: PANEL PC			Phases: 3			Mains Type: MLO						
Mounting: Surface			Wires: 4			Mains Rating: 100 A						
Enclosure: Type 3R						MCB Rating:						
Notes:												
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT		
1				933 VA	600 VA					2		
3	CT-1	20 A	3		933 VA	600 VA		3	15 A	CWP-1		
5						933 VA	600 VA			4		
7				833 VA	1150...					6		
9	CWP-2	15 A	3		833 VA	1150...		2	15 A	C-4		
11						833 VA	948 VA	1	20 A	Receptacle. Lights UTILITY BLDG.		
13	SP-1	15 A	2	950 VA	1500...			1	20 A	CT-1 BASIN HEATER		
15					950 VA	100 VA		1	20 A	DAY TANK CONTROL VALVE		
17	GAS SOLENOID VALVE	20 A	1			100 VA	1200...	1	20 A	CWP-3		
19	B-1 BOILER CONTROL PANEL	20 A	1	500 VA	500 VA			1	20 A	AERATOR		
21					950 VA	2250...		2	30 A	UH-1		
23	SP-2	15 A	2			950 VA	2250...					
25	Space	--	--	0 VA	0 VA			--	--	Space		
27	Space	--	--		0 VA	0 VA		--	--	Space		
29	Space	--	--			0 VA	0 VA	--	--	Space		
				Total Load:	6967 VA	7767 VA			7815 VA			
				Total Amps:	58 A	66 A			66 A			
Legend:												
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals								
Lighting	228 VA	100.00%	228 VA	Total Conn. Load:	22548 VA							
Other	200 VA	100.00%	200 VA	Total Est. Demand:	22548 VA							
Power	21400 VA	100.00%	21400 VA	Total Conn.:	63 A							
Receptacle	720 VA	100.00%	720 VA	Total Est. Demand:	63 A							
Notes:												

NOTES



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114 EAST 9th AVENUE TALLAHASSEE, FL 32303
PHONE: 850.224.7922
www.H2Engineering.com

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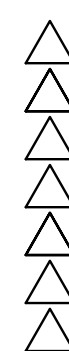
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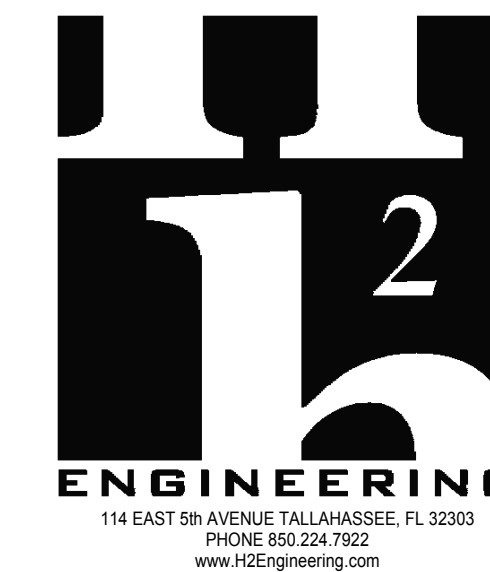
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PANEL SC EDULES

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225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978



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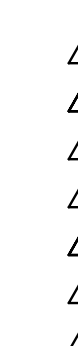
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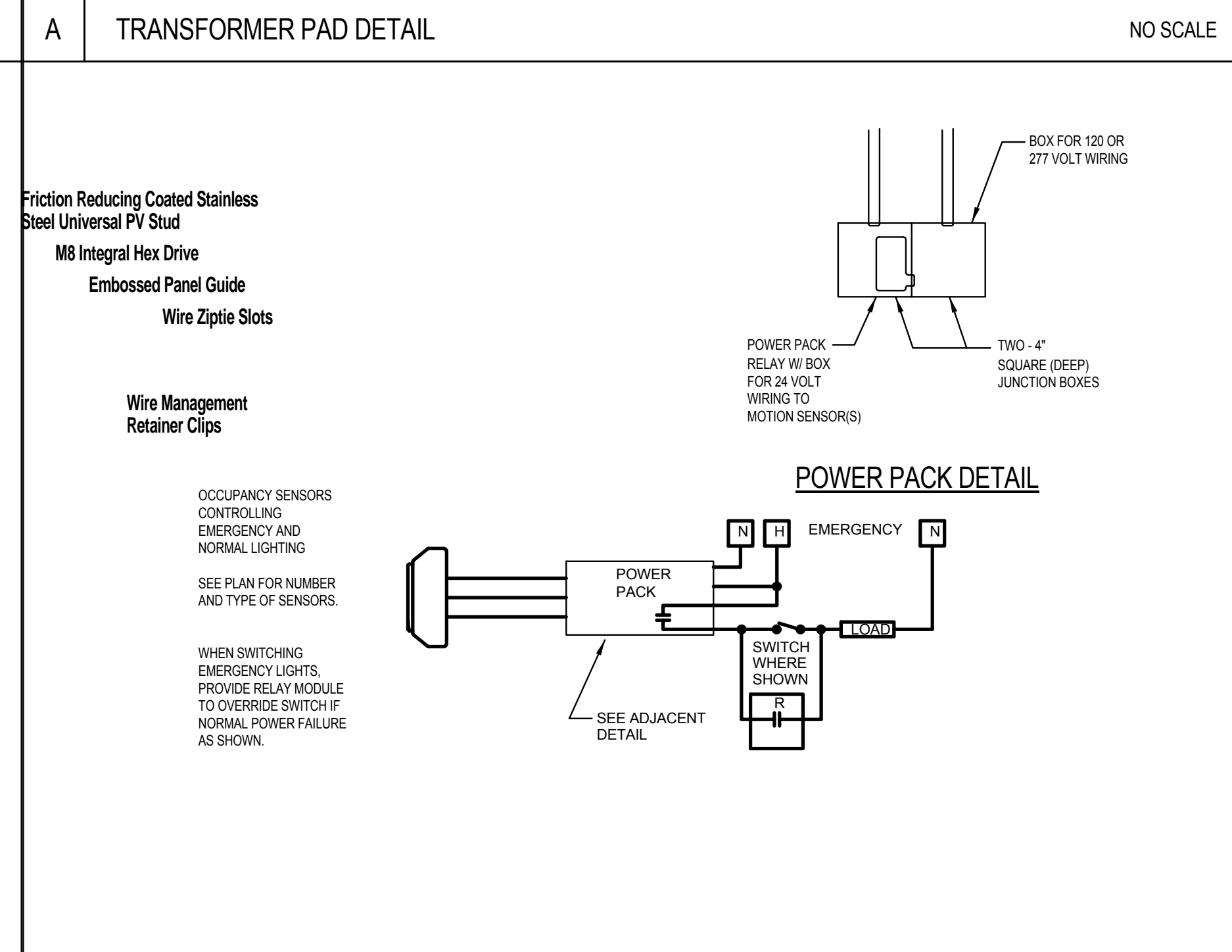
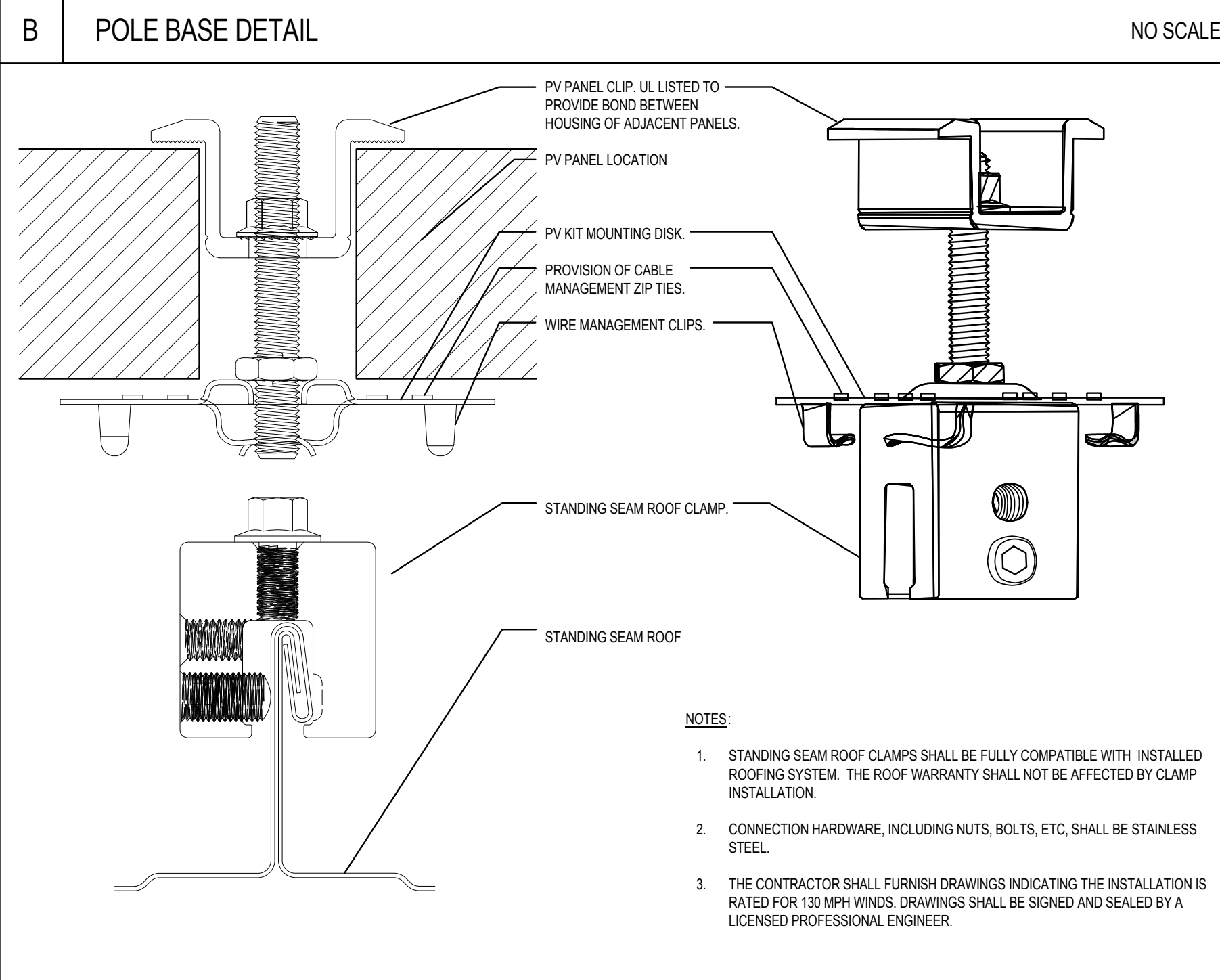
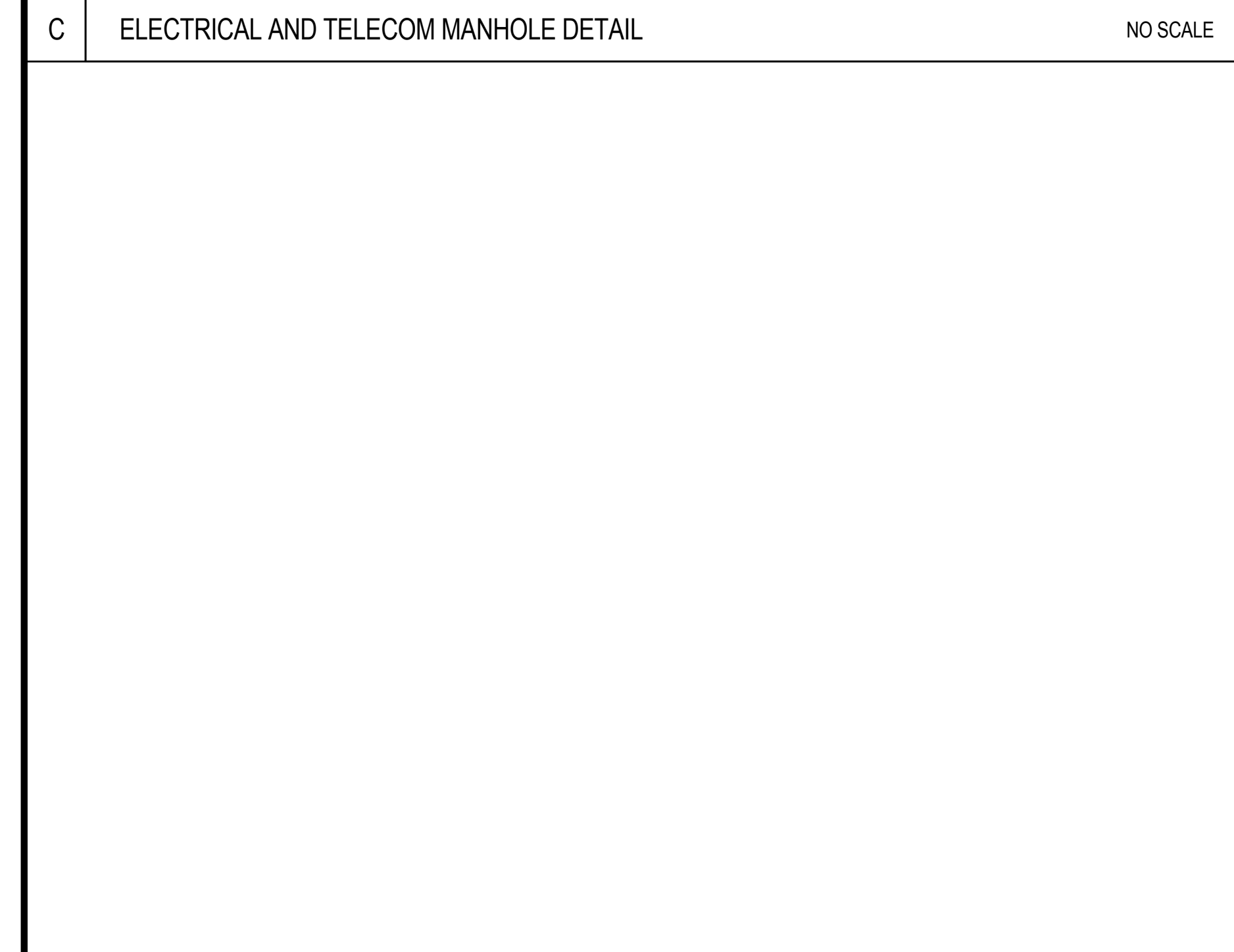
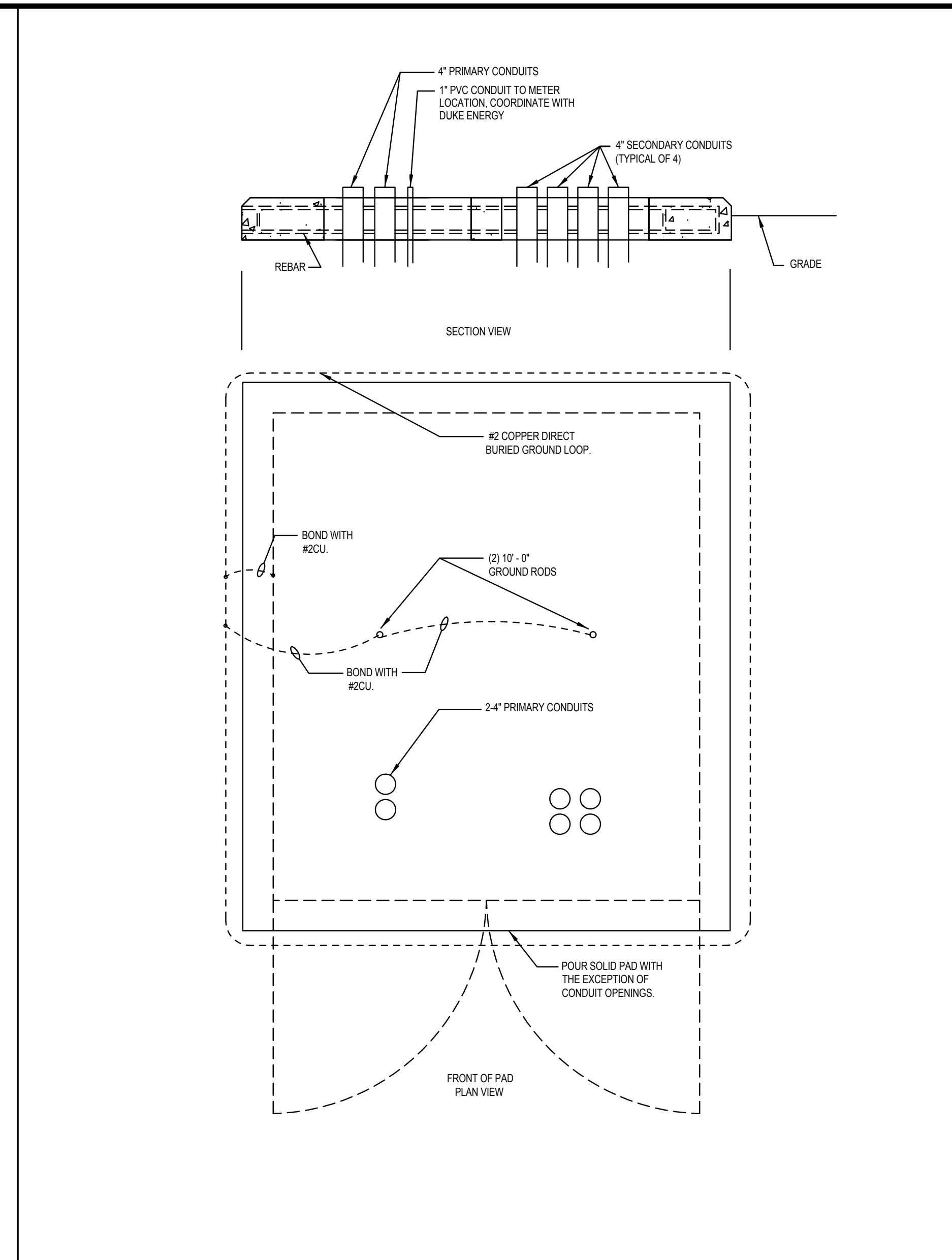
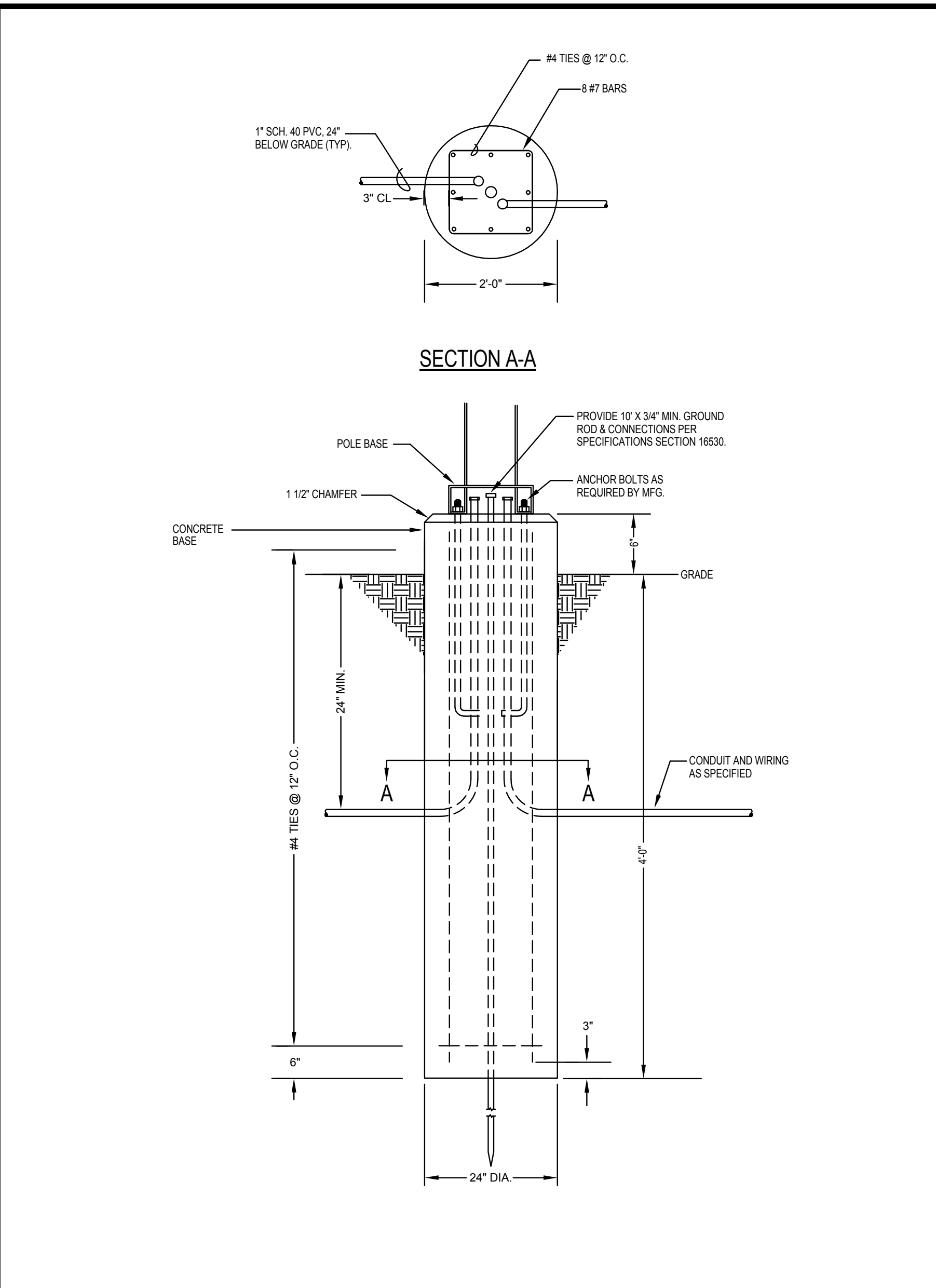
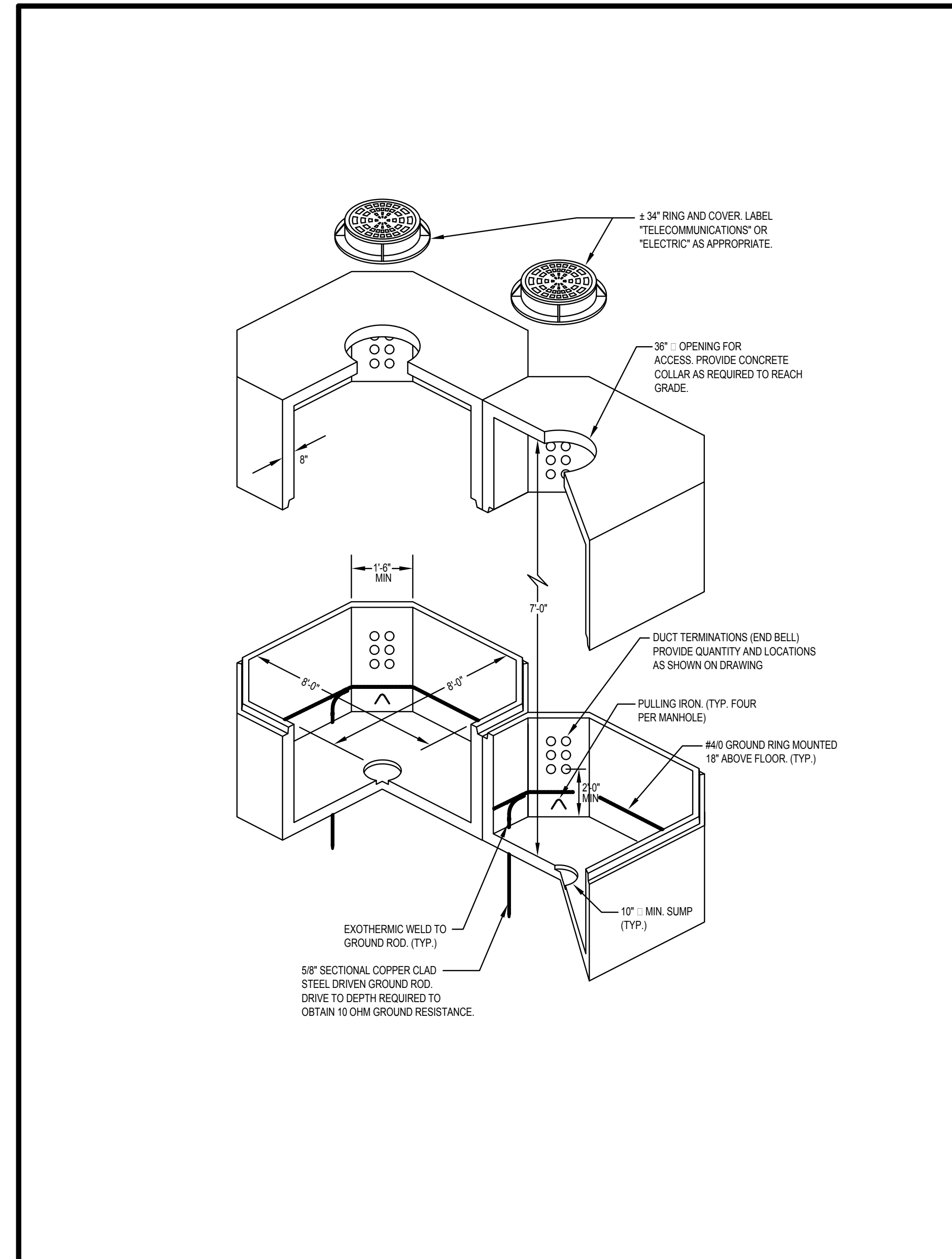
REVISIONS

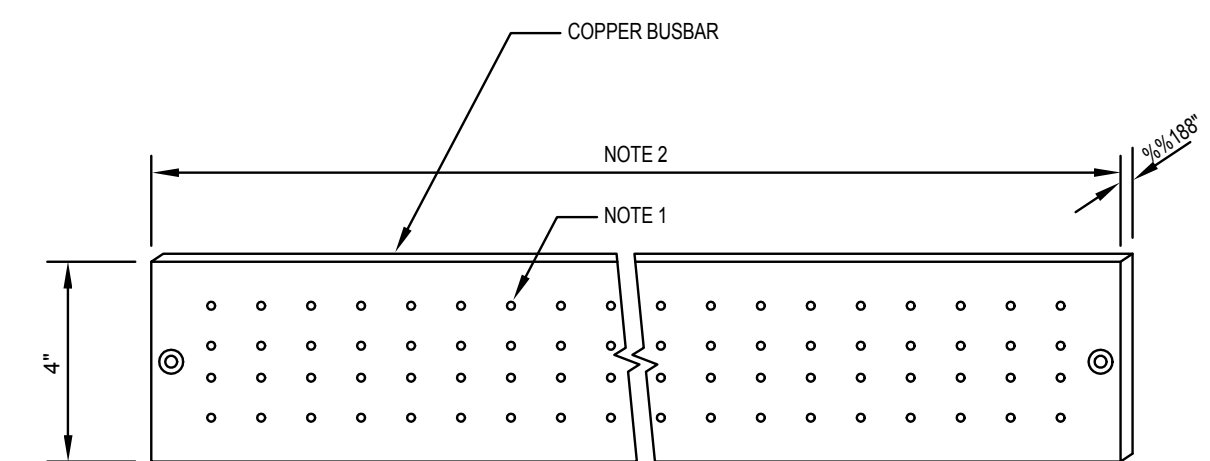


DETAILS - ELECTRICAL

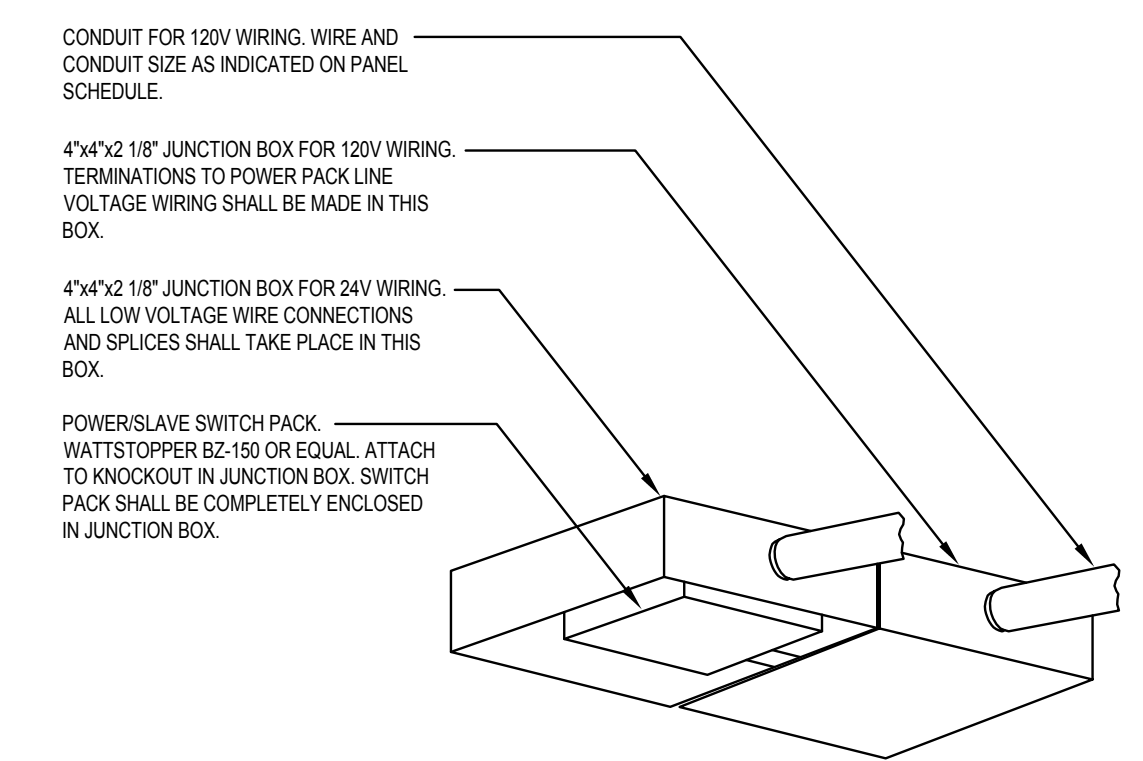
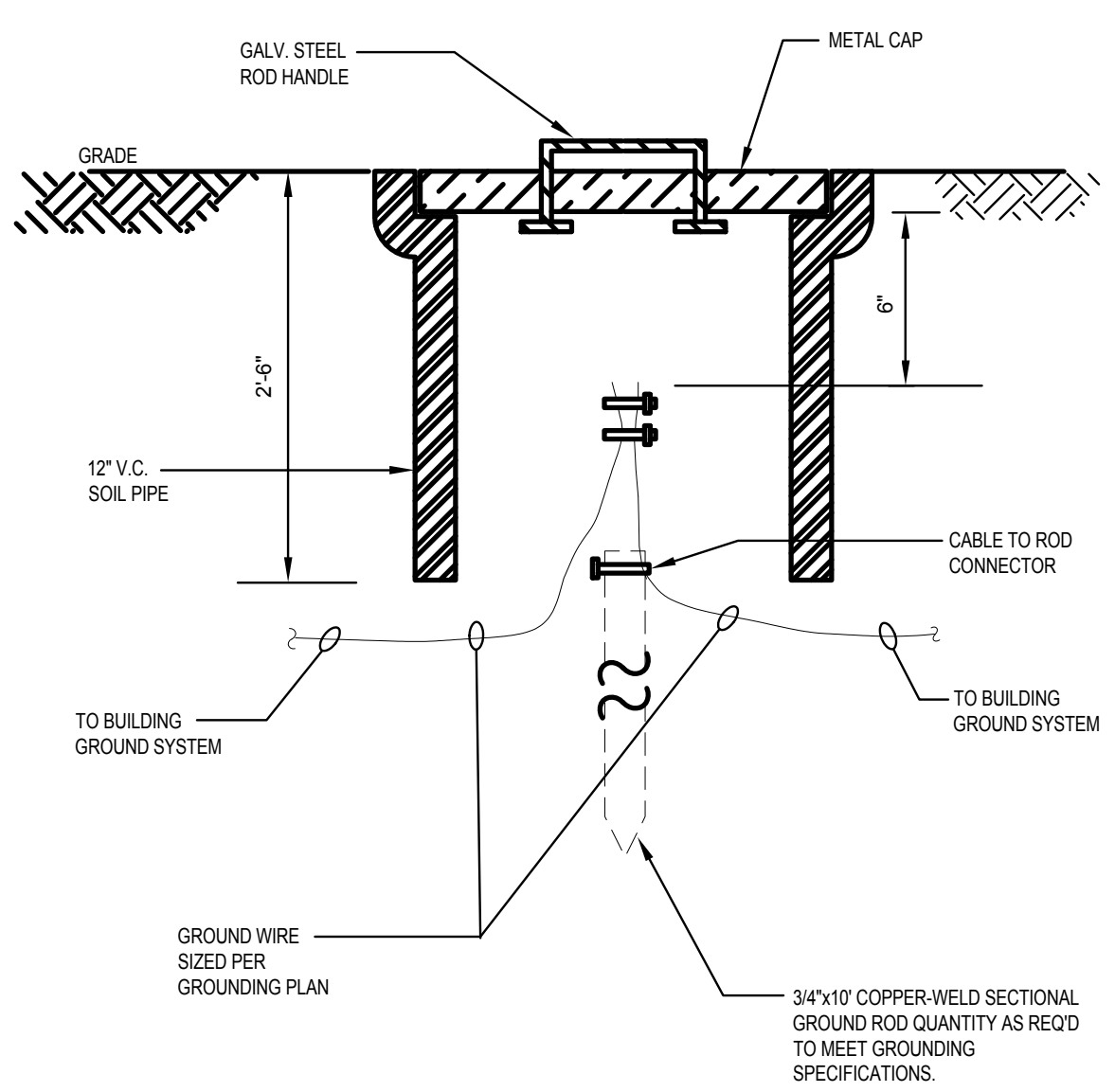
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- NOTES:**
1. PREDRILLED BOLT HOLE SIZE AND SPACING AS PER NEMA STANDARDS.
 2. VARIABLE LENGTH TO MATCH CURRENT REQUIREMENTS PLUS MINIMUM 20% SPARE CAPACITY. TSB CONNECTIONS SHALL UTILIZE 2-HOLE COMPRESSION CONNECTORS.
 3. MOUNT BAR TO BACKBOARD WITH INSULATED MOUNTING BRACKET.



- NOTES:**
1. EACH JUNCTION BOX SHALL BE INDEPENDENTLY SUPPORTED PER NEC.
 2. WHERE SWITCH PACK IS INSTALLED ABOVE HARD CEILING, COORDINATE LOCATION WITH ACCESS PANEL PROVIDED BY OTHER TRADES. IF NO ACCESS PANEL IS AVAILABLE IN THE ROOM, PROVIDE ACCESS PANEL. ACCESS PANEL FINISH SHALL MATCH CEILING FINISH.
 3. PROVIDE A COVER FOR EACH JUNCTION BOX. COVERS HAVE BEEN OMITTED FROM DETAIL FOR CLARITY.
 4. LOW VOLTAGE CONTROL WIRE (PLENUM RATED) MAY BE FREE WIRED. ALL SPLICES SHALL BE IN A JUNCTION BOX.

C TELCOM MAIN GROUND BUSBAR (TMGB)

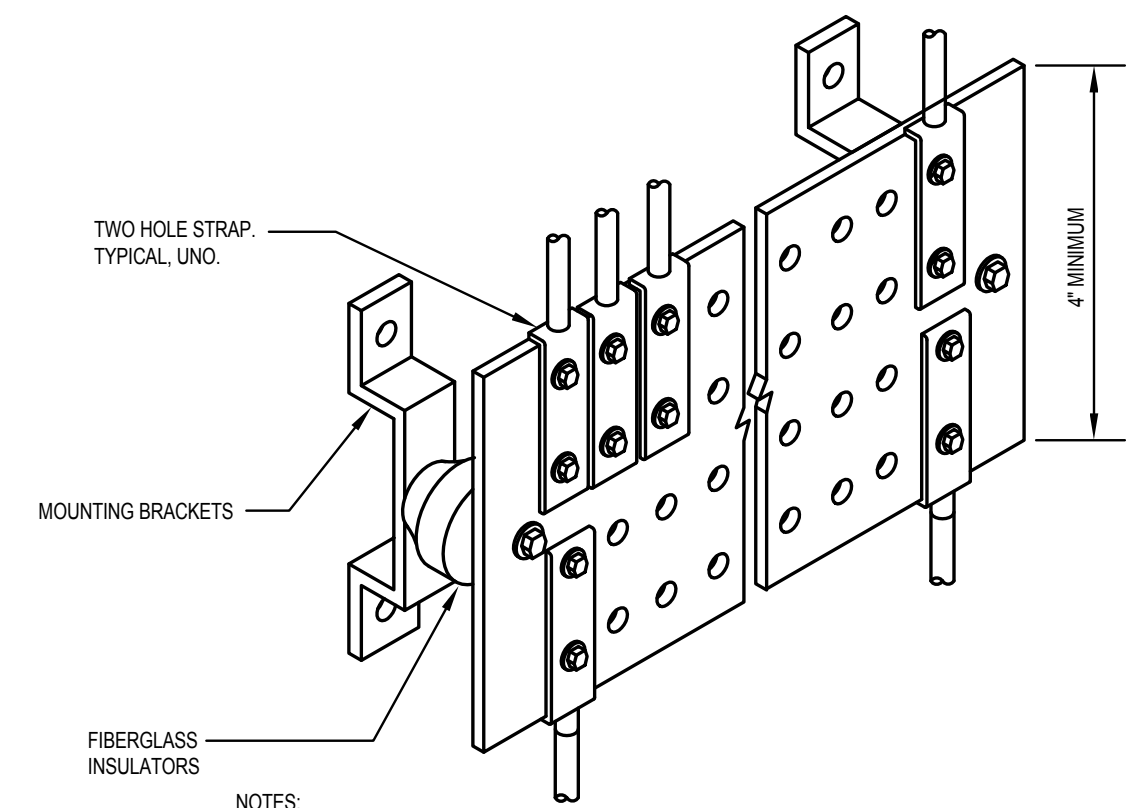
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B ELECTRICAL GROUND TEST WELL

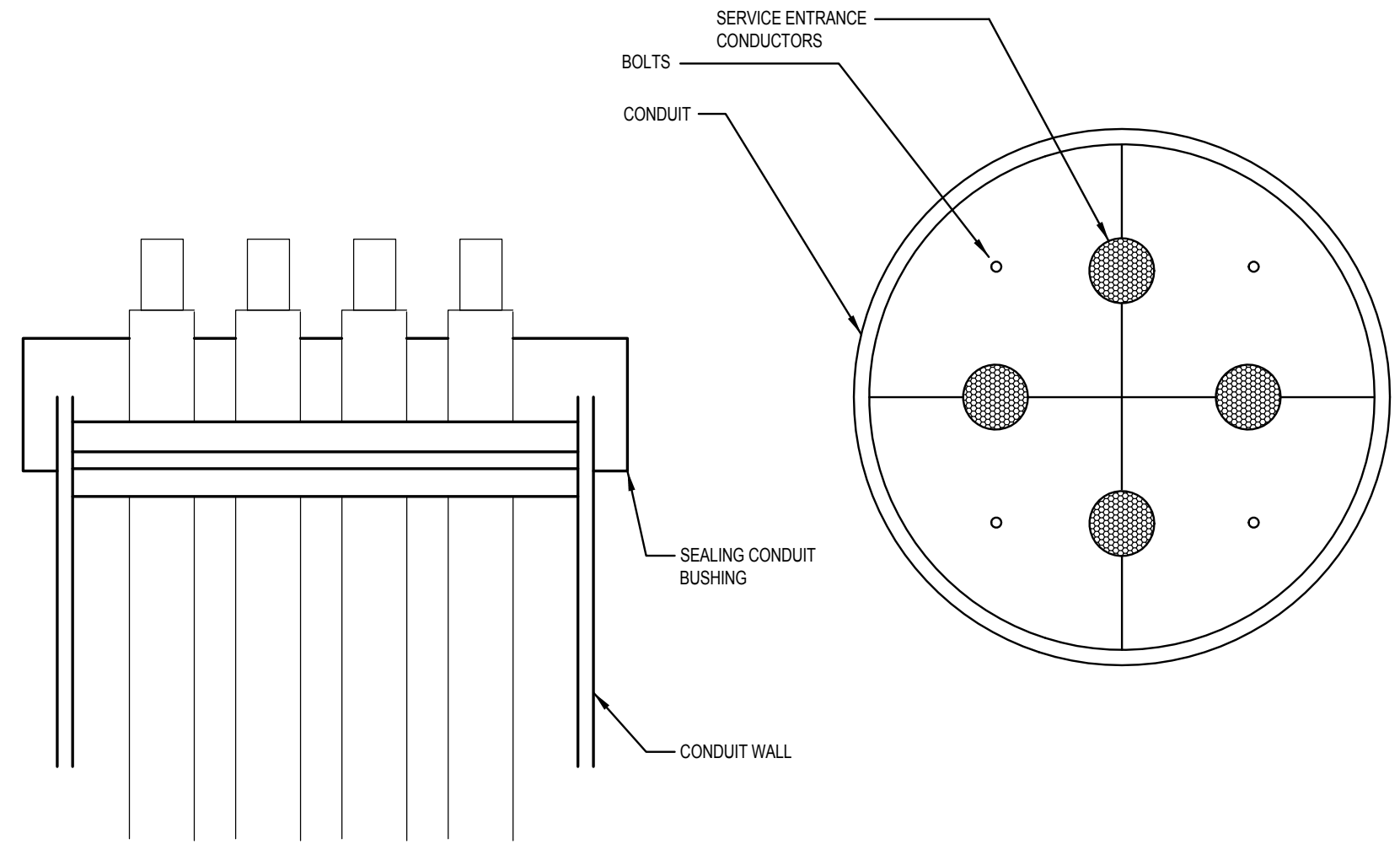
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A SWITCH PACK INSTALLATION DETAIL

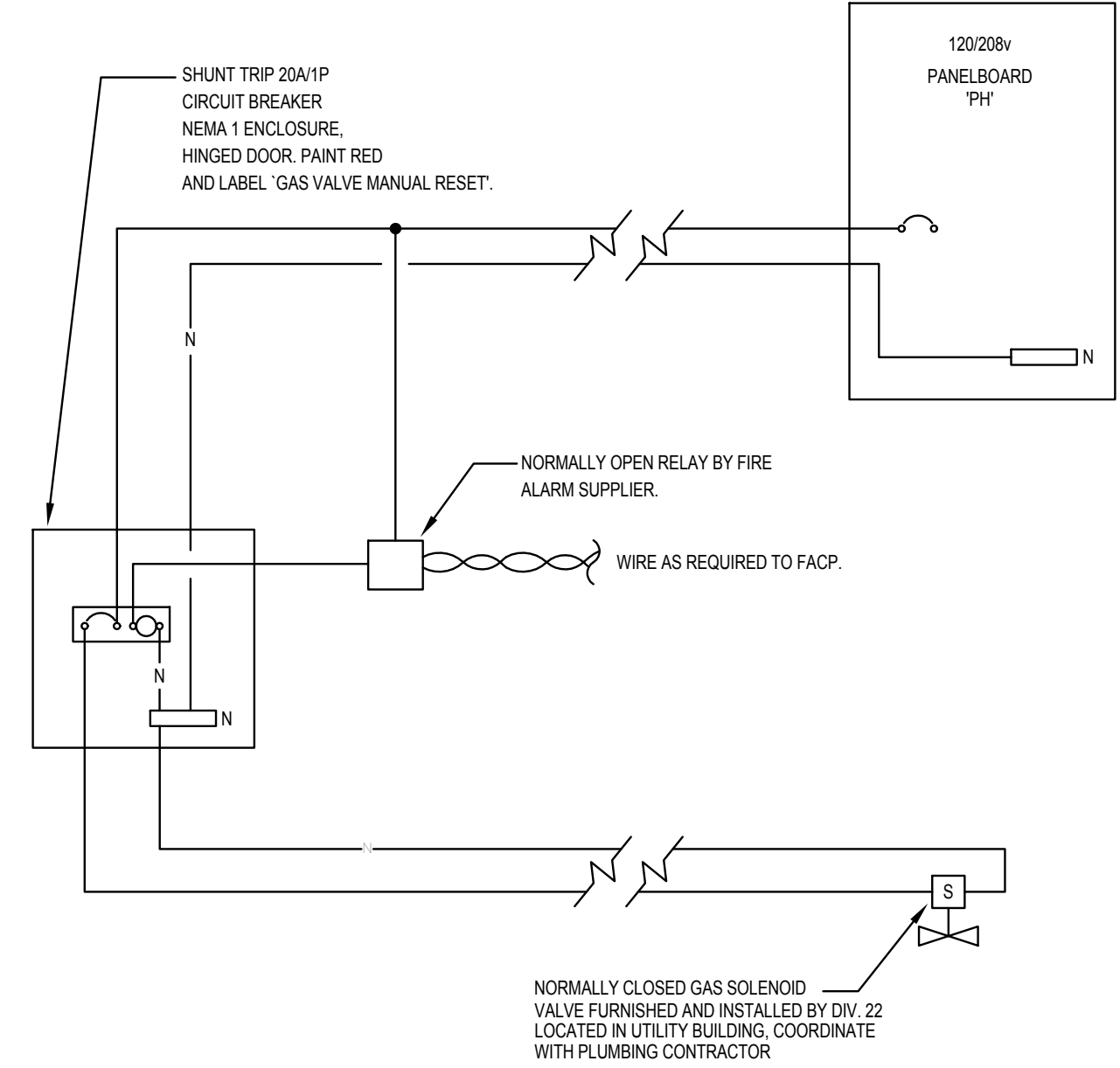
NO SCALE



- NOTES:**
1. PROVIDE LENGTH AS INDICATED ON THE DRAWINGS. CONNECTIONS SHALL UTILIZE TWO HOLE COMPRESSIONS CONNECTORS, UNO.
 2. GROUND BAR SHALL BE MOUNTED A MINIMUM 2" OFF OF WALL.
 3. FIBERGLASS INSULATORS SHALL HAVE A MINIMUM DIELECTRIC STRENGTH OF 15KV.
 4. MOUNT MGB IN MAIN TELECOMMUNICATIONS ROOM.
 5. BUS BAR SHALL BE ALLOY 110 ETP COPPER.



- NOTES:**
1. PROVIDE CONDUIT SEALING BUSHINGS AT EACH SERVICE ENTRANCE RACEWAY FROM GENERATOR AND TRANSFORMER.



F MAIN GROUND BUS BAR (MGB)

NO SCALE

E CONDUIT SEALING BUSHING DETAIL

NO SCALE

D GAS VALVE CONTROL DIAGRAM

NO SCALE

NOTES

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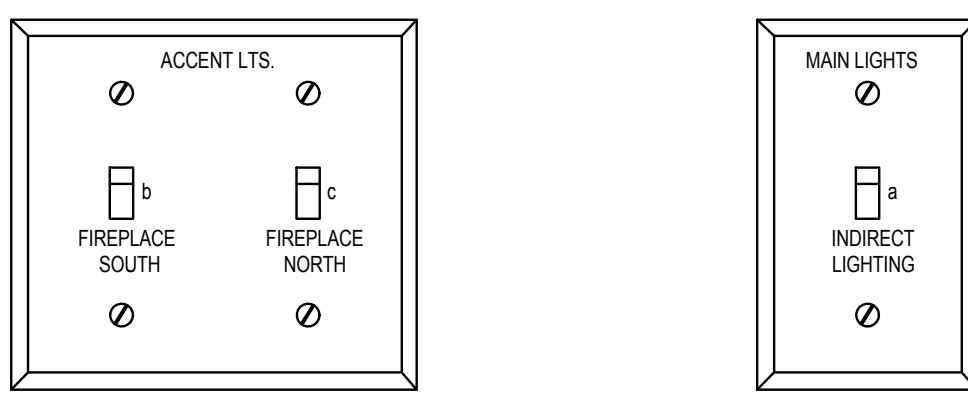
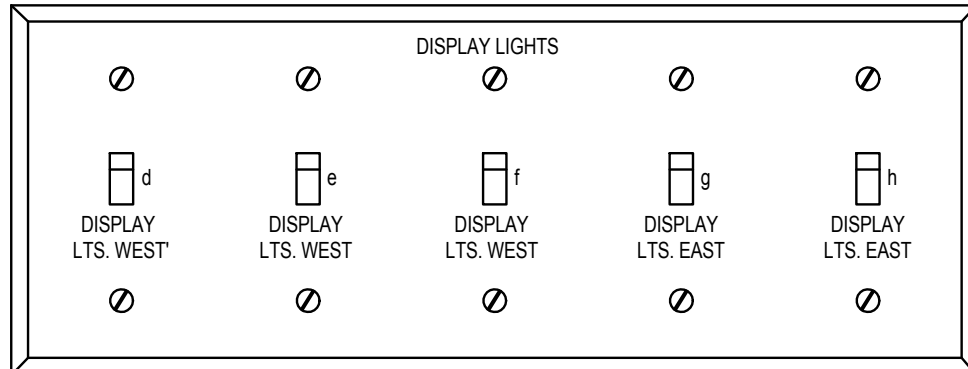
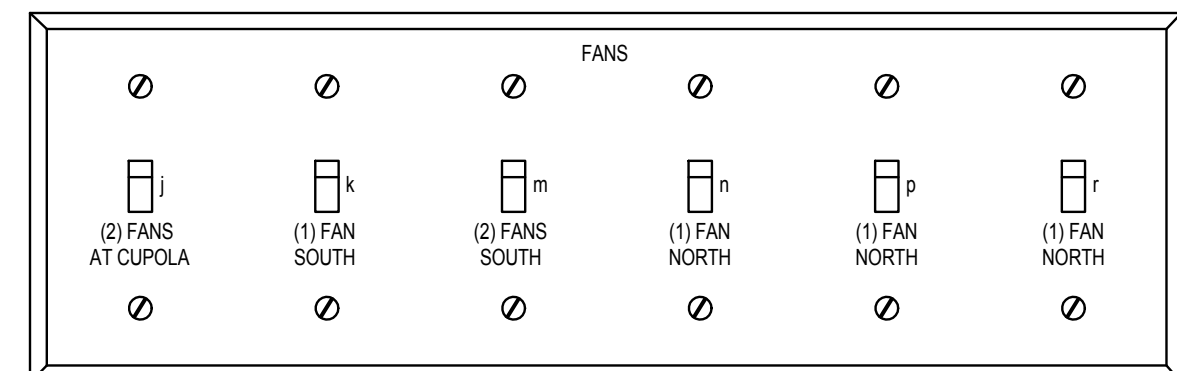
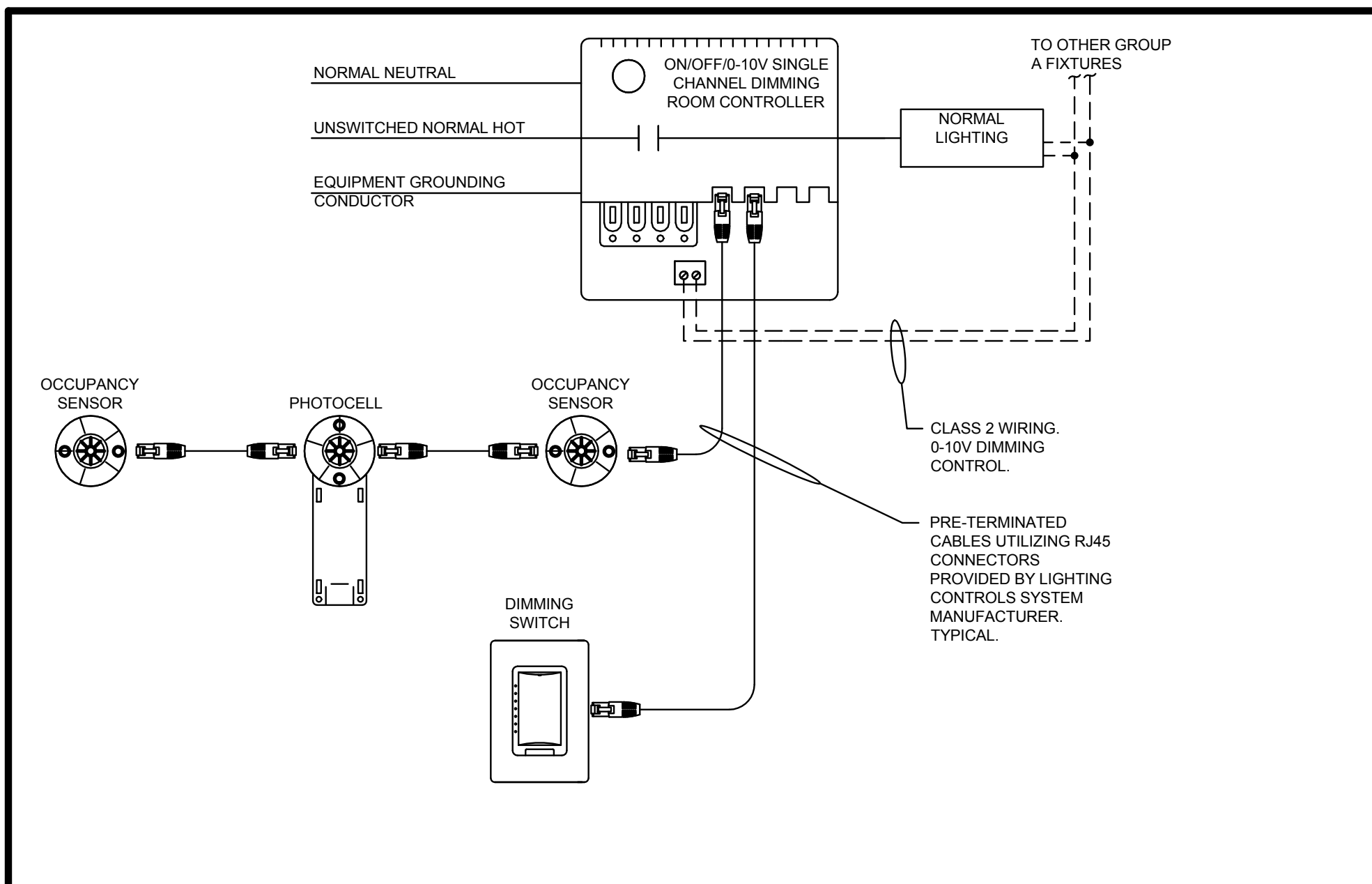
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DATE

CONSTRUCTION DOCUMENTS
PROJECT PHASE
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DOCUMENTS

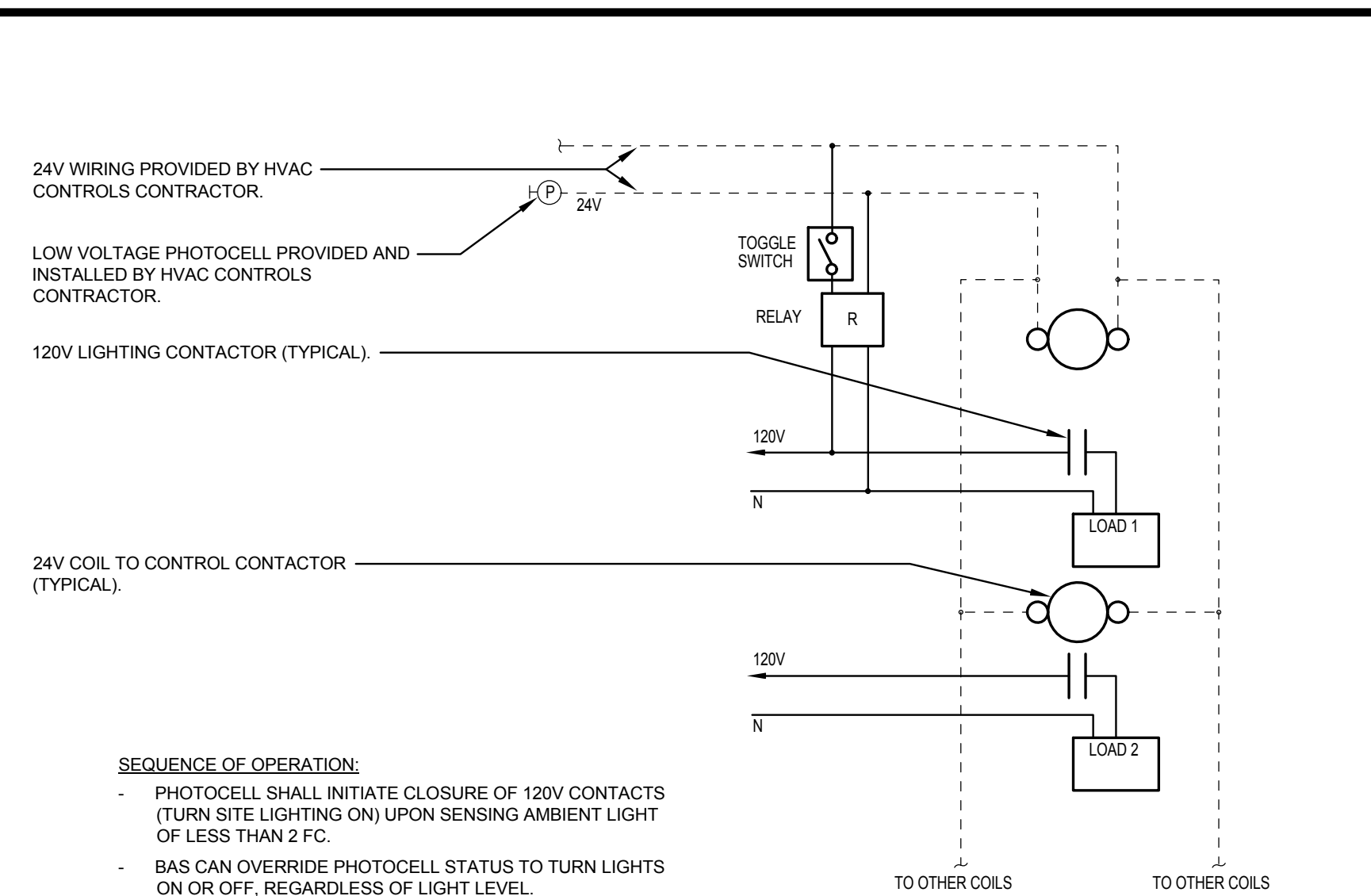
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DETAILS - ELECTRICAL

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NOTES:
1. THIS DETAIL IS DIAGRAMMATIC ONLY, ALL SWITCHES SHALL BE MOUNTED AT THE SAME HEIGHT (48" AFF).



SEQUENCE OF OPERATION:
- PHOTOCELL SHALL INITIATE CLOSURE OF 120V CONTACTS (TURN SITE LIGHTING ON) UPON SENSING AMBIENT LIGHT OF LESS THAN 2 FC.
- BAS CAN OVERRIDE PHOTOCELL STATUS TO TURN LIGHTS ON OR OFF, REGARDLESS OF LIGHT LEVEL.
- TOGGLE SWITCH ADJACENT TO CONTACTOR SHALL PROVIDE MANUAL OVERRIDE OF PHOTOCELL (OVERRIDE "ON" ONLY).

LIGHTING CONTACTOR 'LC-1' SCHEDULE
PROVIDE 8 POLE CONTACTOR. CONTACTS SHALL BE RATED FOR 20A AT 120V. CONTROL/COIL VOLTAGE SHALL BE 24V.

POLE	LOAD (VA)	SERVED BY	LOAD SERVED	WIRE	CONTROL
1	4	PD-40	LTS. PORCH 100G AND 100d	2 #10, #10 G. IN 3/4" C.	PHOTOCELL BAS OVERRIDE
2	5	PD-35	LTS. SITE WALKWAY	2 #8, #10 G. IN 1" C.	PHOTOCELL BAS OVERRIDE
3	1.1	PD-37	LTS. SITE PARKING	2 #8, #10 G. IN 1" C.	PHOTOCELL BAS OVERRIDE
4	9	PD-39	LTS. SITE ROUND-A-BOUNT	2 #8, #10 G. IN 1" C.	PHOTOCELL BAS OVERRIDE
5	1.0	PD-38	LTS. SITE ROADWAY	2 #8, #10 G. IN 1" C.	PHOTOCELL BAS OVERRIDE
6	-	-	SPARE	-	-
7	-	-	SPARE	-	-
8	-	-	SPARE	-	-

NOTES

1. LINE VOLTAGE WIRING SHALL BE #12 THHN COPPER IN MINIMUM 1/2" EMT CONDUIT.
2. CONTROL CABLE SHALL BE PLENUM RATED AND MAY BE FREE WIRED. FREE WIRING SHALL BE SUPPORTED PER NEC; WIRING SHALL NOT BE SUPPORTED BY CEILING SYSTEM.
3. ALL FIELD TERMINATIONS OF WIRING, INCLUDING 120V AND 0-10V WIRING SYSTEMS, SHALL BE MADE INSIDE A JUNCTION BOX.
4. ALL CONTROLLERS AND CONTACTORS SHALL BE INSTALLED ABOVE THE CEILING.
5. ALL EQUIPMENT ABOVE THE CEILING SHALL BE RATED FOR INSTALLATION IN A PLENUM.
6. SEE LIGHTING FLOOR PLAN FOR LOCATIONS OF DIMMER SWITCHES AND CONTROLS.
7. BASIS OF DESIGN PRODUCT IS DIGITAL LIGHTING MANAGEMENT SYSTEM MANUFACTURED BY WATTSTOPPER. EQUAL PRODUCTS MAY BE SUBMITTED FOR SUBSTITUTION; SEE SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS.

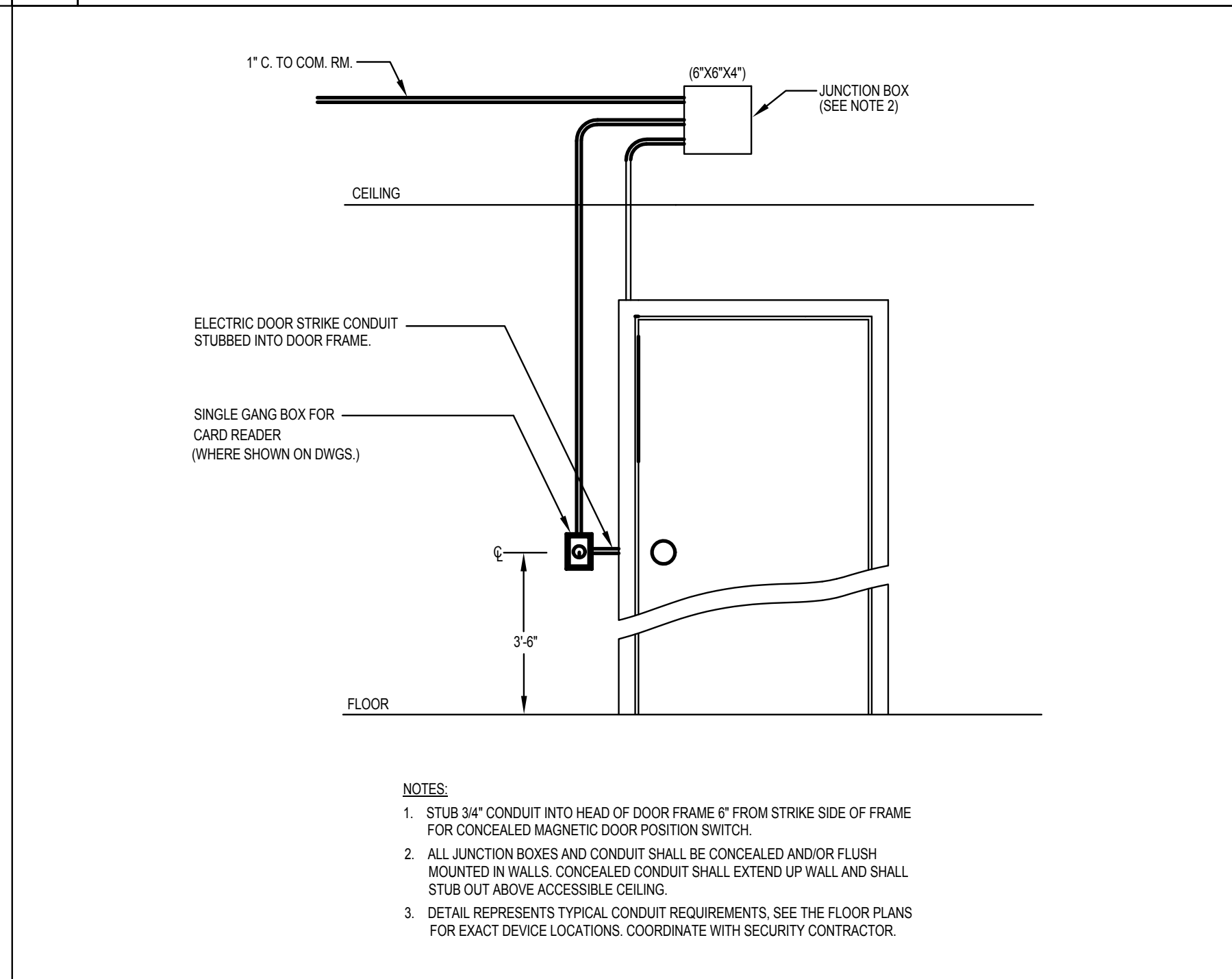
SEQUENCES OF OPERATION

- LIGHTING CONTROL**
- UPON DETECTION OF OCCUPANCY, ALL GENERAL LIGHT FIXTURES IN THAT SPACE SHALL ILLUMINATE TO PRODUCE 50 FOOT CANDLES (FC) AT THE PHOTOCELL.
 - DIMMER SWITCHES SHALL BE CAPABLE OF REDUCING LIGHTING LEVELS FOR THE DURATION OF OCCUPANCY. PROVIDE ONE DIMMING SWITCH FOR EACH LIGHTING GROUP (TWO TOTAL DIMMER SWITCHES).
 - THE SYSTEM SHALL MAINTAIN THE USER-SET LIGHTING LEVELS BY DIMMING FIXTURES BASED ON AMBIENT LIGHTING CONDITIONS.
 - IF NO OCCUPANCY IS DETECTED FOR 15 MINUTES, ALL FIXTURES SHALL BE TURNED OFF.
 - EMERGENCY LIGHTING PROVIDED VIA BATTERY BALLAST.
- PLUG LOAD CONTROL**
- NONE IN THIS SPACE

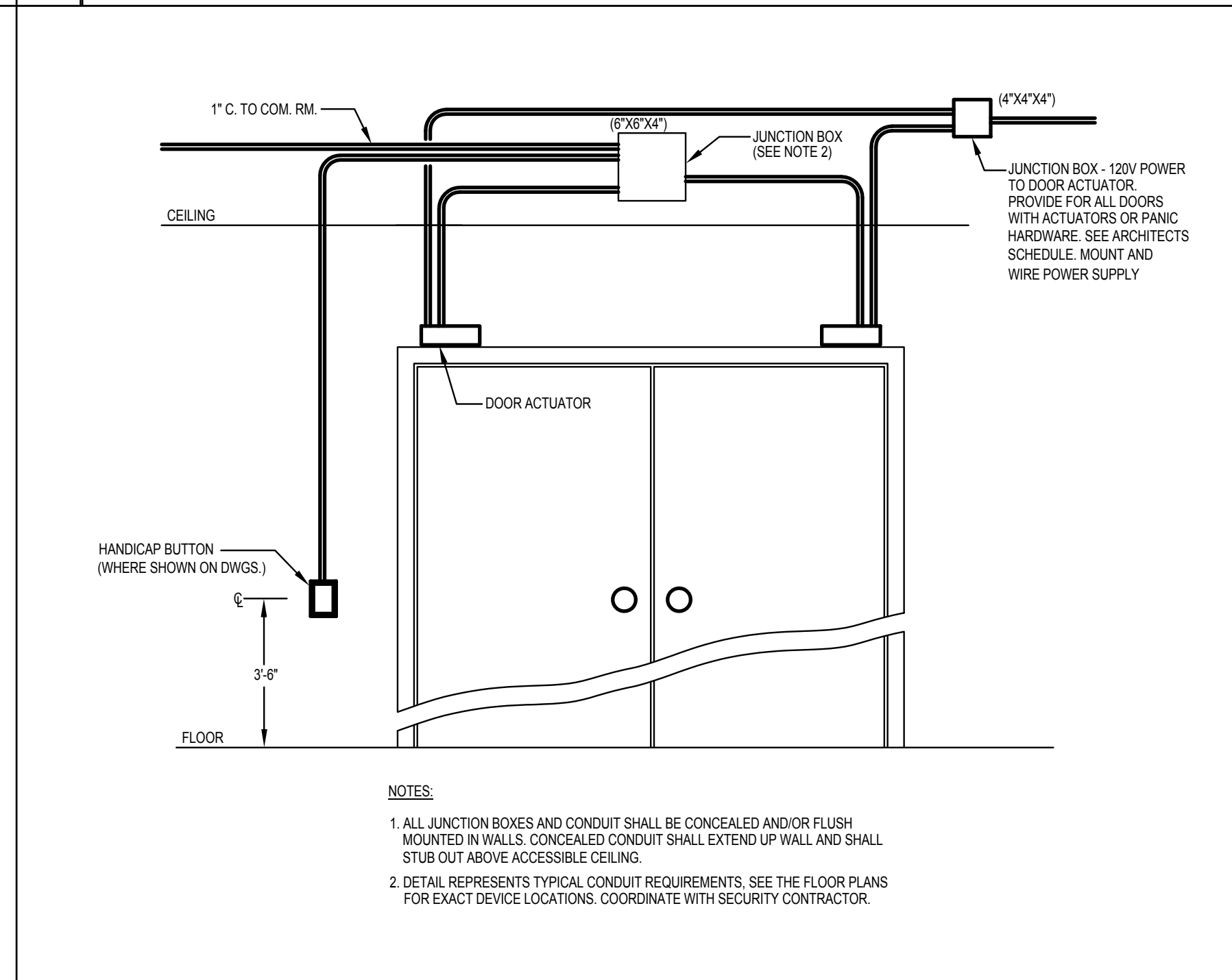
C LIGHTING/POWER CONTROL DIAGRAM - LAB PREP 114 AND CONFERENCE 116

B OPEN MALL SWITCH PLATE IDENTIFICATION DETAIL NO SCALE

A SITE LIGHTING CONTACTOR DIAGRAM AND SCHEDULE NO SCALE



E SINGLE DOOR CARD READER ROUGH IN NO SCALE



D DOUBLE DOOR HANDICAPPED ROUGH IN NO SCALE

NOTES



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PROJECT PHASE

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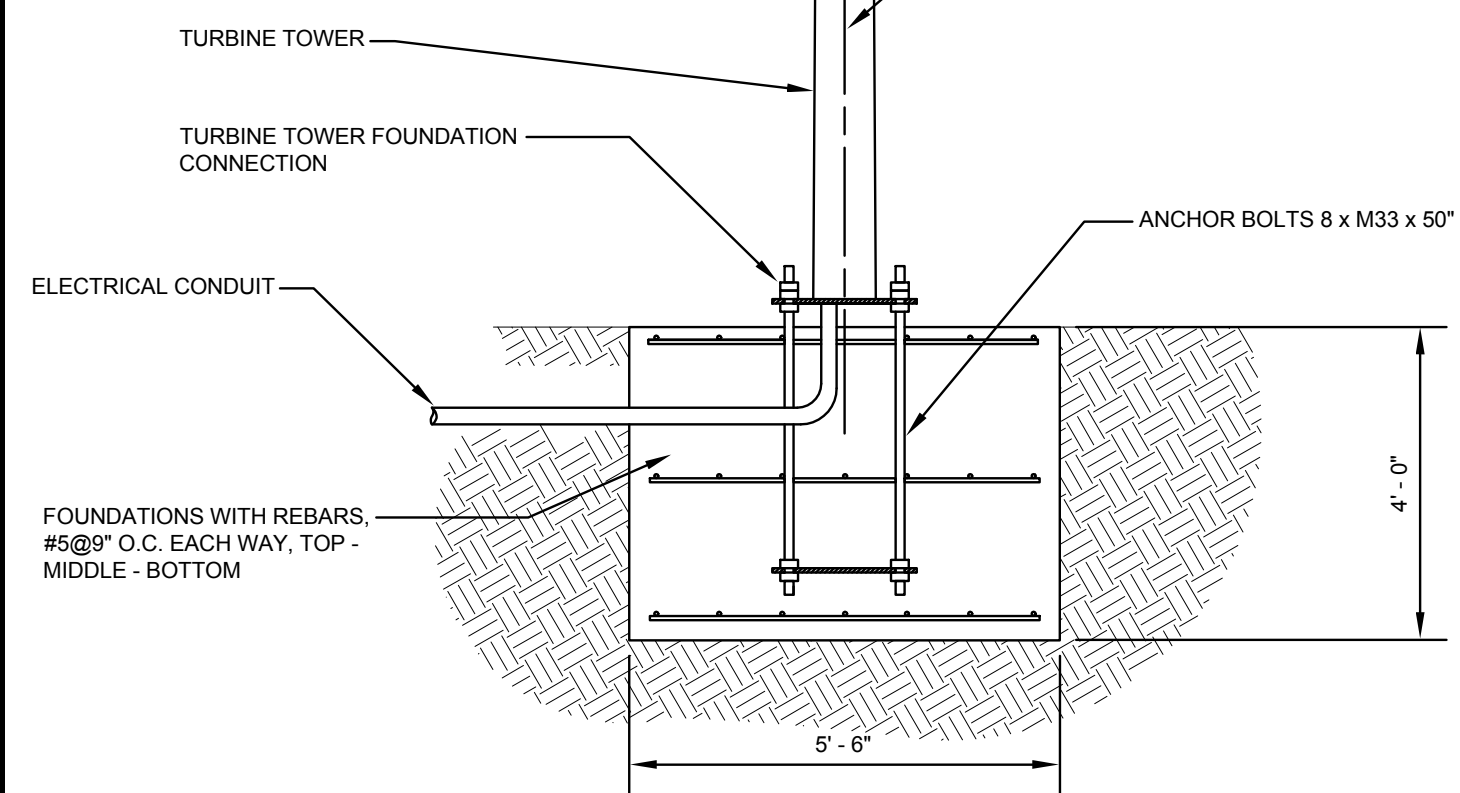
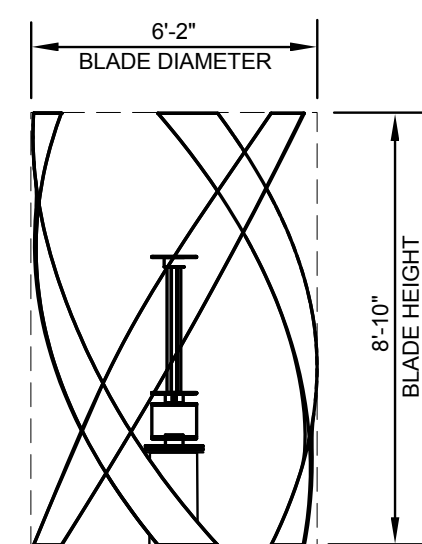
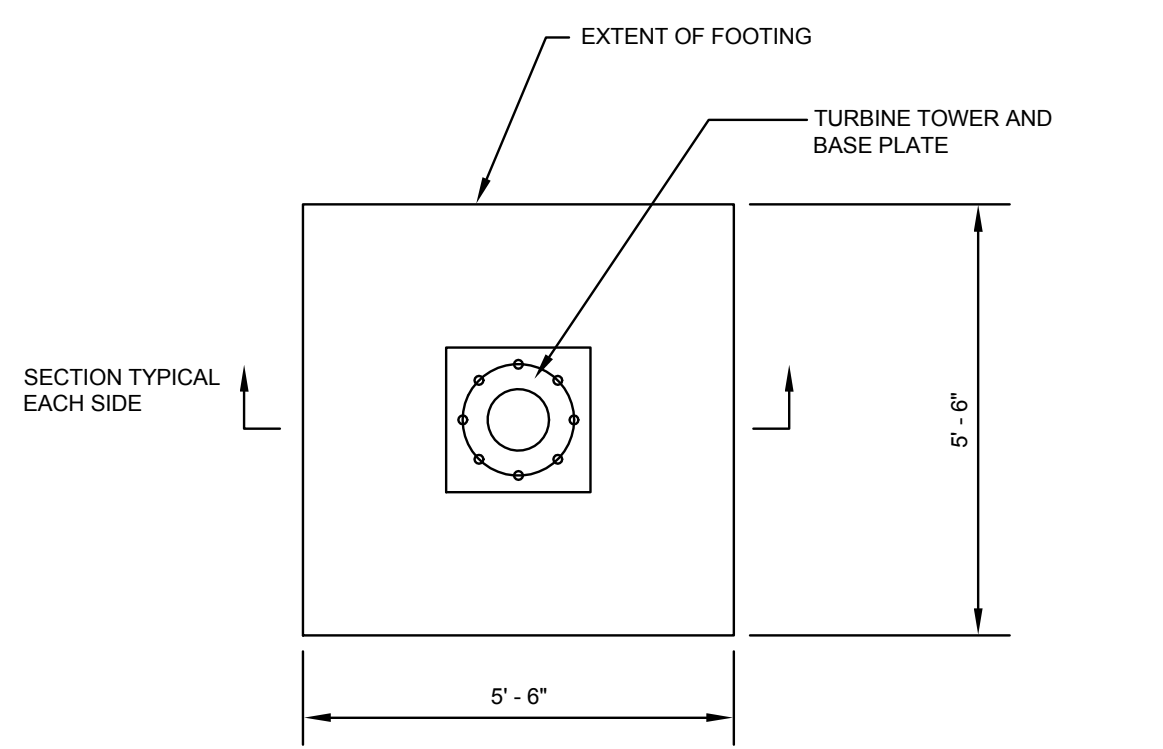
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DETAILS - ELECTRICAL

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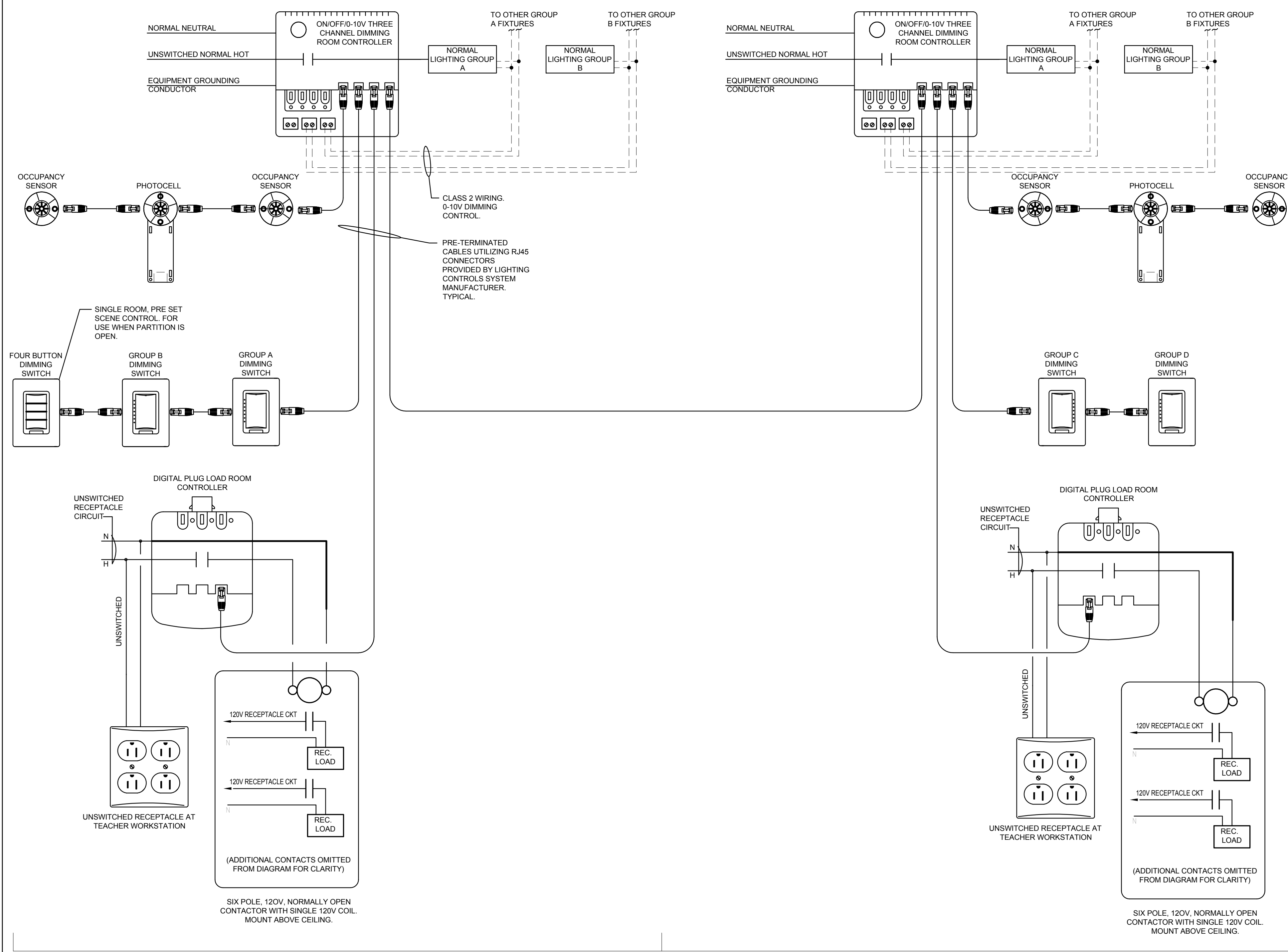
225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
PHONE 850 224-6301 FAX 850 561-6978



NOTES:
 1. THE FOOTING DETAIL INDICATED REPRESENTS THE MANUFACTURER'S STANDARD FOOTER. THE CONTRACTOR SHALL FURNISH DRAWINGS INDICATING THE INSTALLATION IS RATED FOR 110 MPH WINDS. DRAWINGS SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER.

UGE = URBAN GREEN ENERGY

B UGE TURBINE TOWER/FOOTING DETAIL



MULTIUSE CLASSROOM 108A

MULTIUSE CLASSROOM 108B

NOTES

- LINE VOLTAGE WIRING SHALL BE #12 THHN COPPER IN MINIMUM 1/2" EMT CONDUIT.
- CONTROL CABLE SHALL BE PLENUM RATED AND MAY BE FREE WIRED. FREE WIRING SHALL BE SUPPORTED PER NEC; WIRING SHALL NOT BE SUPPORTED BY CEILING SYSTEM.
- ALL FIELD TERMINATIONS OF WIRING, INCLUDING 120V AND 0-10V WIRING SYSTEMS, SHALL BE MADE INSIDE A JUNCTION BOX.
- ALL CONTROLLERS AND CONTACTORS SHALL BE INSTALLED ABOVE THE CEILING.
- ALL EQUIPMENT ABOVE THE CEILING SHALL BE RATED FOR INSTALLATION IN A PLENUM.
- SEE LIGHTING FLOOR PLAN FOR LOCATIONS OF DIMMER SWITCHES AND CONTROLS.
- SEE POWER FLOOR PLAN FOR RECEPTACLE CIRCUIT NUMBERS THAT ARE TO BE CONTROLLED BY CONTACTOR.
- BASIS OF DESIGN PRODUCT IS DIGITAL LIGHTING MANAGEMENT SYSTEM MANUFACTURED BY WATTSTOPPER. EQUAL PRODUCTS MAY BE SUBMITTED FOR SUBSTITUTION. SEE SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS.

SEQUENCES OF OPERATION

LIGHTING CONTROL

- UPON DETECTION OF OCCUPANCY IN ONE SPACE, ALL GENERAL LIGHT FIXTURES IN THAT SPACE SHALL ILLUMINATE TO PRODUCE 50 FOOT CANDLES (FC) AT THE PHOTOCELL.
- DIMMER SWITCHES SHALL BE CAPABLE OF REDUCING LIGHTING LEVELS FOR THE DURATION OF OCCUPANCY. PROVIDE ONE DIMMING SWITCH FOR EACH LIGHTING GROUP IN EACH SPACE (TWO GROUPS FOR EACH OF THE TWO SPACES, FOUR TOTAL DIMMER SWITCHES).
- THE SYSTEM SHALL MAINTAIN THE USER-SET LIGHTING LEVELS BY DIMMING FIXTURE GROUP CLOSEST TO THE EXTERIOR (B & D) BASED ON AMBIENT LIGHTING CONDITIONS IN EACH SPACE.
- PROVIDE ONE, FIVE BUTTON, PRE-SET SCENE CONTROL STATION FOR USE WHEN THE DIVIDING PARTITION IS OPEN.
 - SCENE 1: ALL LIGHTING TO 50%.
 - SCENE 2: GROUPS A & C TO 50% BRIGHTNESS, GROUPS B & D TO 100% BRIGHTNESS.
 - SCENE 3: GROUPS A, B, C & D TO 50% BRIGHTNESS.
 - SCENE 4: GROUPS A & C OFF, GROUPS B & D TO 50% BRIGHTNESS.
 - SCENE 5: ALL GROUPS OFF.
- IF NO OCCUPANCY IS DETECTED FOR 15 MINUTES, ALL FIXTURES SHALL BE TURNED OFF.
- EMERGENCY LIGHTING PROVIDED VIA BATTERY BALLAST.

PLUG LOAD CONTROL

- IF NO OCCUPANCY IS DETECTED FOR 15 MINUTES IN A SPACE, THE PLUG LOAD ROOM CONTROLLED SHALL REMOVE POWER FROM THE CONTACTOR COIL. RECEPTACLE CIRCUITS WILL BE DE-ENERGIZED VIA THE CONTACTOR. THE QUAD RECEPTACLE AT THE TEACHER STATION SHALL REMAIN HOT.
- UPON DETECTION OF OCCUPANCY IN A SPACE, THE PLUG LOAD CONTROLLER SHALL ENERGIZE THE CONTACTOR COIL. ALL RECEPTACLE CIRCUITS WILL BE ENERGIZED.

A LIGHTING/POWER CONTROL DIAGRAM - MULTIUSE CLASSROOMS 108A AND 108B

NOTES

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BARNETT FRONCZAK BARLOWE ARCHITECTS

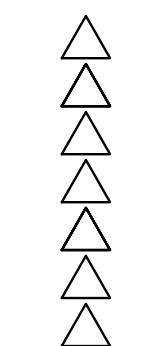
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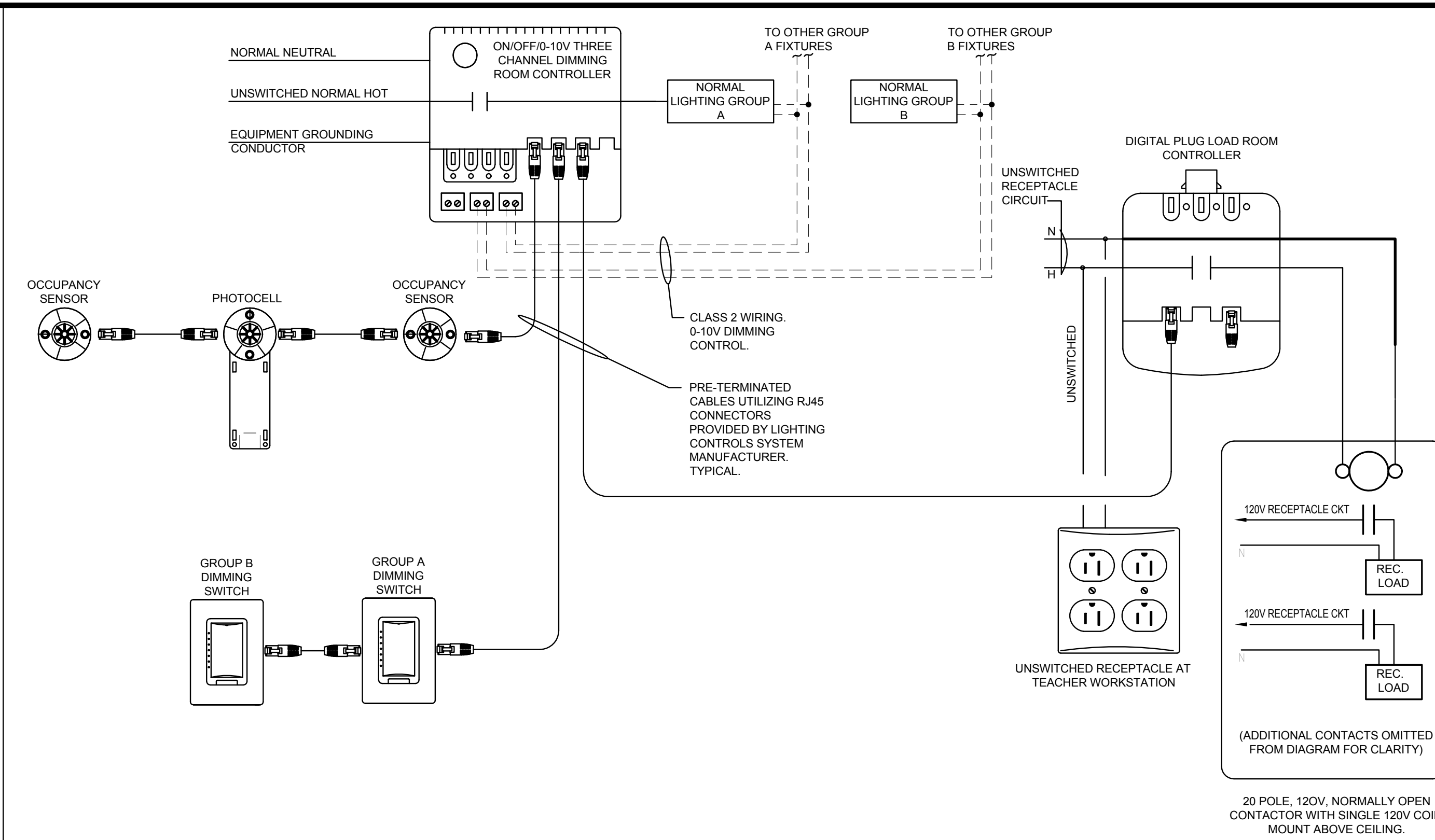
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DETAILS - ELECTRICAL

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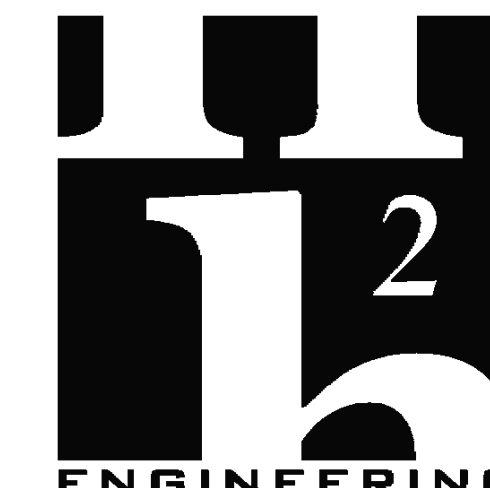
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5. ALL EQUIPMENT ABOVE THE CEILING SHALL BE RATED FOR INSTALLATION IN A PLENUM.
6. SEE LIGHTING FLOOR PLAN FOR LOCATIONS OF DIMMER SWITCHES AND CONTROLS.
7. SEE POWER FLOOR PLAN FOR RECEPTACLE CIRCUIT NUMBERS THAT ARE TO BE CONTROLLED BY CONTACTOR.
8. BASIS OF DESIGN PRODUCT IS DIGITAL LIGHTING MANAGEMENT SYSTEM MANUFACTURED BY WATTSTOPPER. EQUAL PRODUCTS MAY BE SUBMITTED FOR SUBSTITUTION. SEE SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS.

SEQUENCES OF OPERATION

- LIGHTING CONTROL
- UPON DETECTION OF OCCUPANCY, ALL GENERAL LIGHT FIXTURES IN THAT SPACE SHALL ILLUMINATE TO PRODUCE 50 FOOT CANDLES (FC) AT THE PHOTOCELL.
 - DIMMER SWITCHES SHALL BE CAPABLE OF REDUCING LIGHTING LEVELS FOR THE DURATION OF OCCUPANCY. PROVIDE ONE DIMMING SWITCH FOR EACH LIGHTING GROUP (TWO TOTAL DIMMER SWITCHES).
 - THE SYSTEM SHALL MAINTAIN THE USER-SET LIGHTING LEVELS BY DIMMING GROUP B BASED ON AMBIENT LIGHTING CONDITIONS.
 - IF NO OCCUPANCY IS DETECTED FOR 15 MINUTES, ALL FIXTURES SHALL BE TURNED OFF.
 - EMERGENCY LIGHTING PROVIDED VIA BATTERY BALLAST.
- PLUG LOAD CONTROL
- IF NO OCCUPANCY IS DETECTED FOR 15 MINUTES IN A SPACE, THE PLUG LOAD ROOM CONTROLLED SHALL REMOVE POWER FROM THE CONTACTOR COIL. RECEPTACLE CIRCUITS WILL BE DE-ENERGIZED VIA THE CONTACTOR. THE QUAD RECEPTACLE AT THE TEACHER STATION SHALL REMAIN HOT.
 - UPON DETECTION OF OCCUPANCY IN A SPACE, THE PLUG LOAD CONTROLLER SHALL ENERGIZE THE CONTACTOR COIL. ALL RECEPTACLE CIRCUITS WILL BE ENERGIZED.

A LIGHTING/POWER CONTROL DIAGRAM - SCIENCE LAB 115

NOTES



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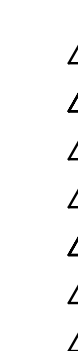
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PROJECT PHASE

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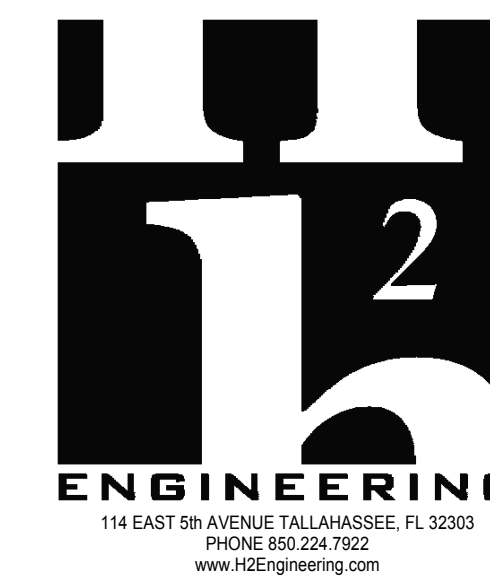
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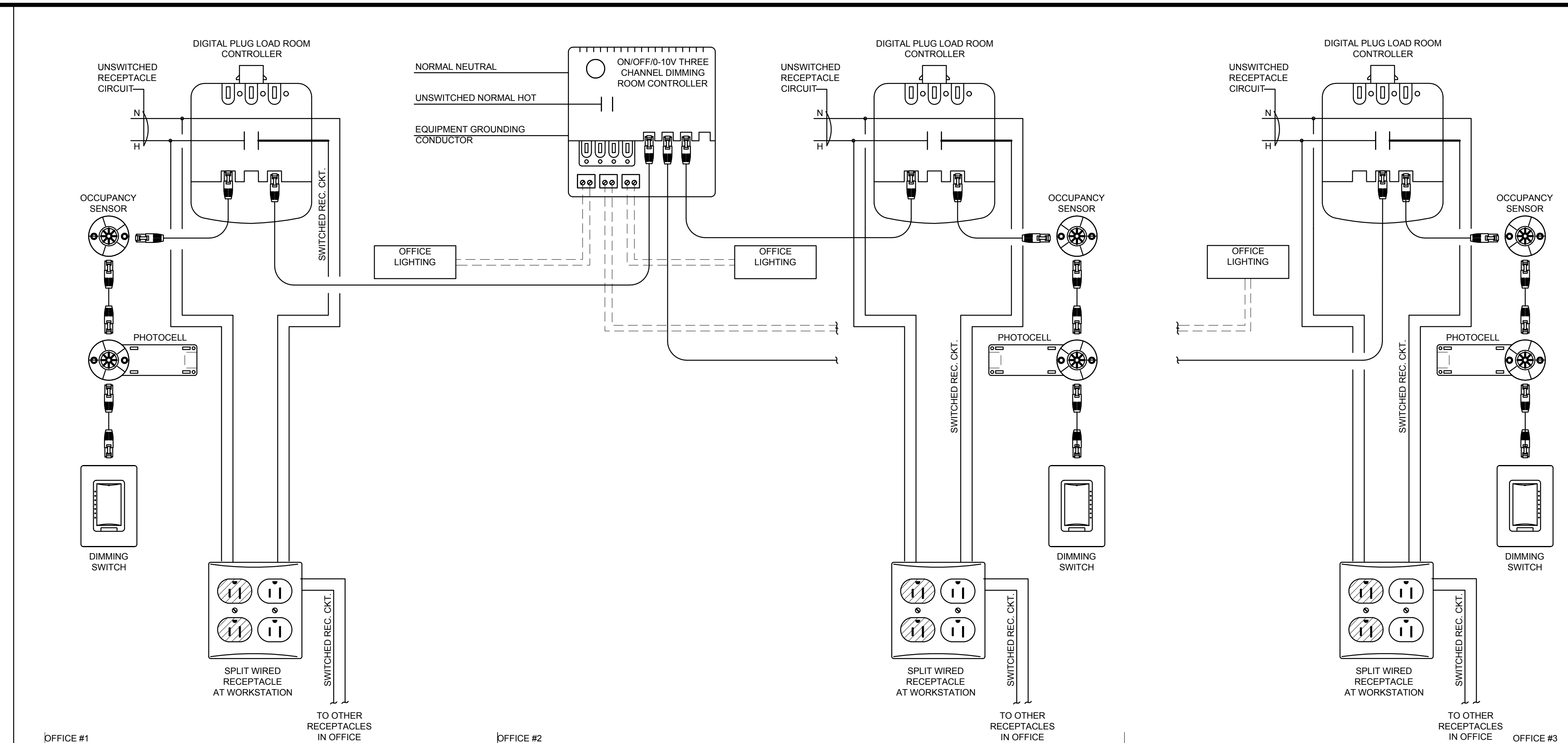
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- NOTES**
1. LINE VOLTAGE WIRING SHALL BE #12 THHN COPPER IN MINIMUM 1/2" EMT CONDUIT.
 2. CONTROL CABLE SHALL BE PLENUM RATED AND MAY BE FREE WIRED. FREE WIRING SHALL BE SUPPORTED PER NEC. WIRING SHALL NOT BE SUPPORTED BY CEILING SYSTEM.
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 5. ALL EQUIPMENT ABOVE THE CEILING SHALL BE RATED FOR INSTALLATION IN A PLENUM.
 6. SEE LIGHTING FLOOR PLAN FOR LOCATIONS OF DIMMER SWITCHES AND CONTROLS.
 7. SEE POWER FLOOR PLAN FOR RECEPTACLE CIRCUIT NUMBERS THAT ARE TO BE CONTROLLED.
 8. PROVIDE ONE, THREE CHANNEL DIMMING ROOM CONTROLLER FOR EACH THREE OFFICES ON THE WEST SIDE OF THE OPEN MALL. SPARE DIMMING CHANNELS SHALL BE PROVIDED FOR FUTURE USE.
 9. BASIS OF DESIGN PRODUCT IS DIGITAL LIGHTING MANAGEMENT SYSTEM MANUFACTURED BY WATTSTOPPER. EQUAL PRODUCTS MAY BE SUBMITTED FOR SUBSTITUTION; SEE SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS.

- SEQUENCES OF OPERATION**
- LIGHTING CONTROL
- UPON DETECTION OF OCCUPANCY IN A SPACE, ALL GENERAL LIGHT FIXTURES IN THAT SPACE SHALL ILLUMINATE TO PRODUCE 30 FOOT CANDLES (FC) AT THE PHOTOCELL.
 - DIMMER SWITCHES SHALL BE CAPABLE OF REDUCING LIGHTING LEVELS FOR THE DURATION OF OCCUPANCY. PROVIDE ONE DIMMING SWITCH FOR EACH SPACE.
 - THE SYSTEM SHALL MAINTAIN THE USER-SET LIGHTING LEVELS BY DIMMING FIXTURES BASED ON AMBIENT LIGHTING CONDITIONS.
 - IF NO OCCUPANCY IS DETECTED FOR 15 MINUTES, ALL FIXTURES SHALL BE TURNED OFF.
 - EMERGENCY LIGHTING IS NOT REQUIRED IN SINGLE OFFICES.
- PLUG LOAD CONTROL
- IF NO OCCUPANCY IS DETECTED FOR 15 MINUTES IN A SPACE, THE PLUG LOAD ROOM CONTROLLED SHALL REMOVE POWER FROM THE SWITCHED RECEPTACLE CIRCUIT. TWO OUTLETS OF THE QUAD RECEPTACLE AT THE WORKSTATION SHALL REMAIN HOT.
 - UPON DETECTION OF OCCUPANCY IN A SPACE, THE PLUG LOAD CONTROLLER SHALL ENERGIZE THE SWITCHED RECEPTACLE CIRCUIT.

A LIGHTING/POWER CONTROL DIAGRAM - TYPICAL SINGLE OFFICE

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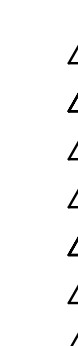
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PROJECT PHASE

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DOCUMENTS**

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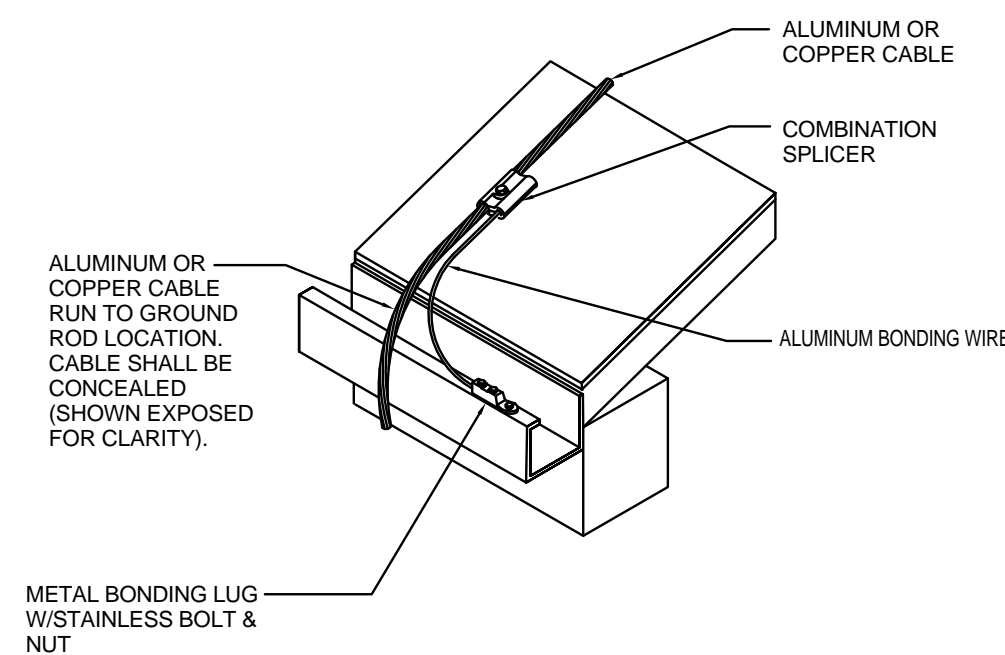
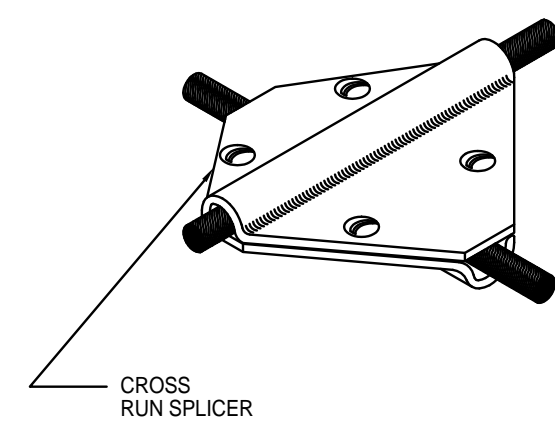
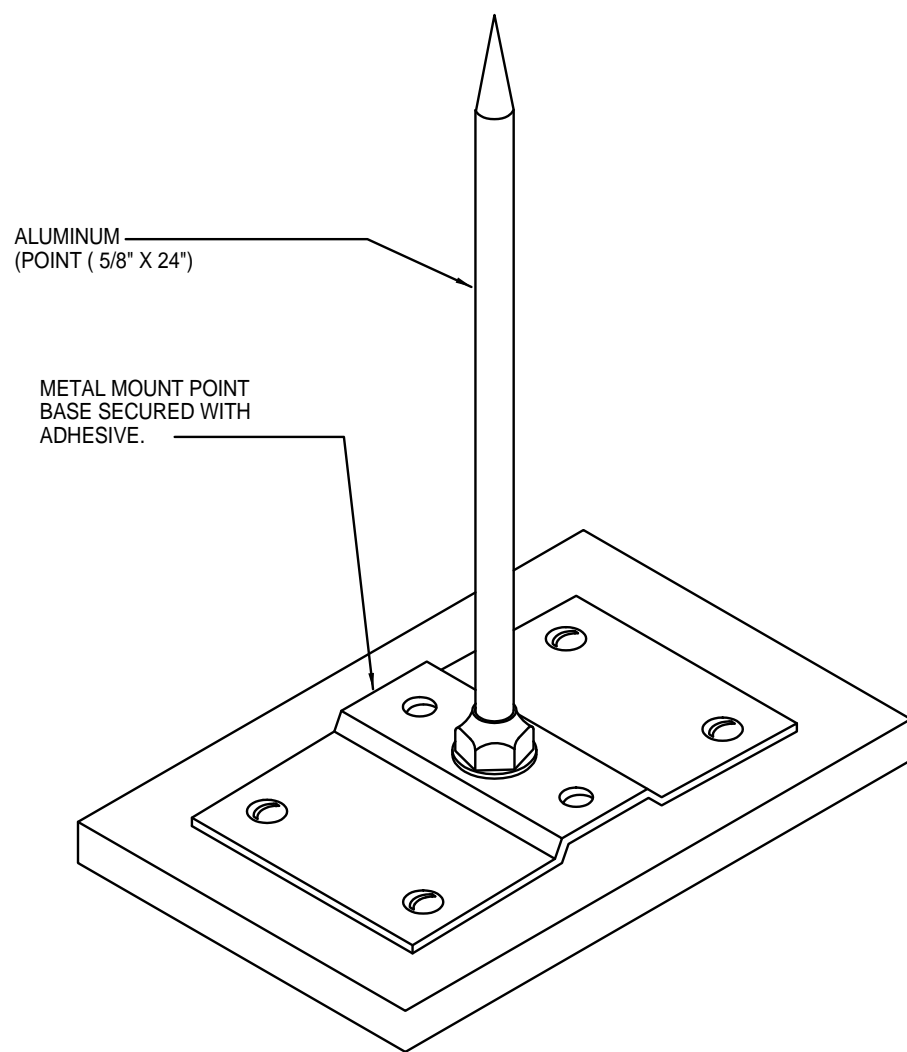
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LIGHTNING PROTECTION DETAILS

NOTE: A SYMBOL OR DETAIL SHOWN IN THIS LEGEND IS NOT MEANT TO INDICATE THAT THE SPECIFIC EQUIPMENT IS REQUIRED FOR THIS PROJECT.

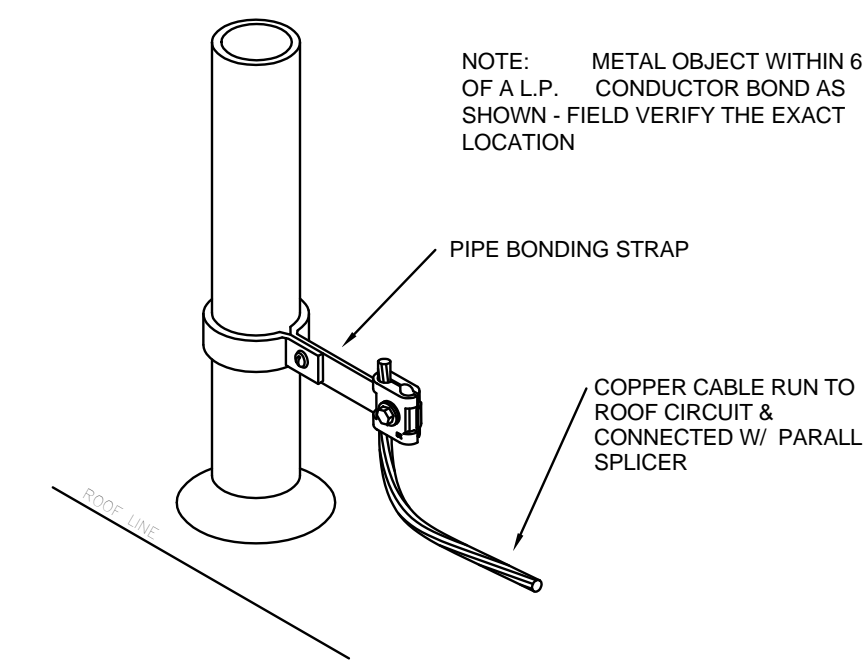
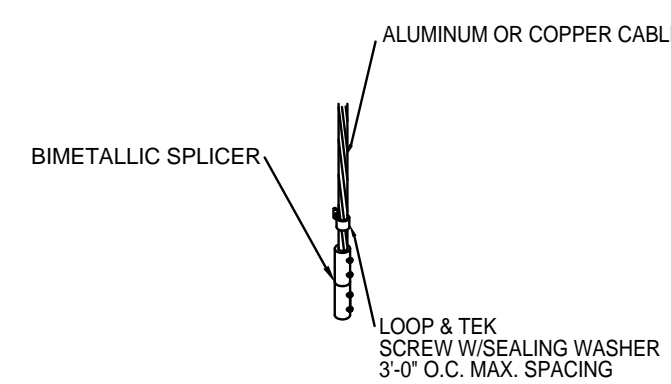
LIGHTNING PROTECTION SYSTEMS
GENERAL INSTALLATION NOTES

- A. LOCATE AIR TERMINALS (POINTS AND BASES) AS SHOWN ON DRAWING WITHIN 2' OF OUTSIDE BUILDING EDGE AND OUTSIDE CORNERS. MAXIMUM SPACING BETWEEN AIR TERMINALS SHALL NOT EXCEED 20'-0" AND THE APEX OF THE POINTS WILL EXTEND A MINIMUM OF 10' ABOVE THE ROOF, PARAPET WALL, OR EQUIPMENT PROTECTED. AIR TERMINALS EXTENDING ABOVE THE STRUCTURE A MINIMUM OF 24" WILL BE SPACED AT 25'-0" ON CENTER AS ALLOWABLE BY UL-96A AND NFPA-780 CODES.
- B. AIR CONDITIONING UNITS, FANS, VENT STACKS, HOUSINGS, SCREENS, HVAC UNITS, SKY LIGHTS, ETC. EXTENDING ABOVE THE FLAT ROOF OR PARAPET WALLS SHALL BE PROTECTED WITH AIR TERMINALS AND INTERCONNECTING CABLES BACK TO THE MAIN LIGHTNING PROTECTION SYSTEM.
- C. IN ADDITION TO THE AIR TERMINALS AND CABLES ON THE ROOF MOUNTED EQUIPMENT SHOWN, BOND TO METAL BODIES OF CONDUCTANCE ON ROOF WITH MAIN SIZE CONDUCTORS AS REQUIRED BY CODES AND STANDARDS. THESE INCLUDE, BUT ARE NOT LIMITED TO, VENTS, METAL SCREENS AND PANELS, HATCHES, ANTENNAS, ETC. OR ANY LARGE METAL BODIES SUBJECT TO A DIRECT LIGHTNING STRIKE.
- D. MAINTAIN HORIZONTAL OR DOWNWARD COURSE OF MAIN CONDUCTOR CABLES AND ENSURE THAT ALL BENDS ARE GRADUAL WITH AT LEAST AN 8" RADIUS AND ARE NOT LESS THAN 90 DEGREES.
- E. ALL EXPOSED AND CONCEALED ROOF CONDUCTORS AS WELL AS DOWNLEAD AND BONDING CABLES MUST BE SUPPORTED WITH FASTENERS OF LIKE MATERIAL AT INTERVALS NOT TO EXCEED 3'-0".
- F. BOND TO ALL METAL BODIES OF INDUCTANCE (SUBJECT TO AN INDUCED CHARGE) LOCATED WITHIN 6'-0" OF MAIN CONDUCTOR OR OTHER METAL BODY ALREADY BONDED TO THE LIGHTNING PROTECTION SYSTEM WITH APPROVED SECONDARY BONDING CONDUCTOR AND CLAMPS AS REQUIRED BY UL, LPL AND NFPA CODES. SUCH OBJECTS INCLUDE, BUT ARE NOT LIMITED TO, METAL FLASHINGS, METAL COPING CAPS, GRAVEL GUARDS, INTERIOR STRUCTURAL "Y" BEAMS, ROOF DRAINS, DOWNSPOUTS AND INTERIOR DUCTS, PIPING, ETC. IN GENERAL, ANY ISOLATED BODY AT OR BELOW THE FLAT ROOF OR TOP OF PARAPET WALL SUBJECT TO INDUCTANCE AND WITHIN 6'-0" OF THE SYSTEM.
- G. DOWNLEAD CONDUCTORS FROM ROOF TO GROUND AND TERMINALS SHALL BE LOCATED AROUND THE PERIMETER OF THE STRUCTURE NOT OVER AN AVERAGE OF 10'-0" APART AND NOT LESS THAN 2'-0" BELOW GRADE AND OUT A MINIMUM OF 3'-0" FROM FOUNDATION WALLS. DRIVEN GROUND TERMINALS SHALL PENETRATE EARTH AT LEAST 10'-0" LONGER DEPTH SECTIONAL GROUND TERMINALS MAY BE REQUIRED IN SANDY SOIL OR POOR GROUNDING CONDITIONS.
- H. BOND TO METAL WATER SERVICE PIPE AND OTHER METALLIC PIPING SYSTEMS AS NEAR AS POSSIBLE WHERE THEY ENTER THE BUILDING AS REQUIRED BY CODES AND STANDARDS.
- I. INTERCONNECT ONE LIGHTNING PROTECTION GROUND TERMINAL TO THE ELECTRIC SERVICE GROUND, TELEPHONE SERVICE GROUND, AND OTHER BUILDING GROUND SYSTEMS AS REQUIRED BY CODES AND STANDARDS.
- J. SYSTEM SHALL COMPLY IN DESIGN & INSTALLATION WITH THE CODES AND STANDARDS OF NFPA-780, UL-96A AND LPL-175.
- K. THE LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN A MANNER THAT KEEPS ROOF PENETRATIONS TO A MINIMUM. EACH PENETRATION OF THE BUILDING ENVELOPE SHALL BE SPECIFICALLY INDICATED AND DIMENSIONED ON THE SHOP DRAWINGS.
- L. LIGHTNING PROTECTION COMPONENTS SHALL NOT PENETRATE THE SLOPED ROOF AND WATERPROOF MEMBRANE AT THE SAME POINT.
- M. CONDUCTORS SHALL NOT BE VISIBLE FROM THE GROUND UNLESS APPROVED BY ENGINEER OR ARCHITECT.



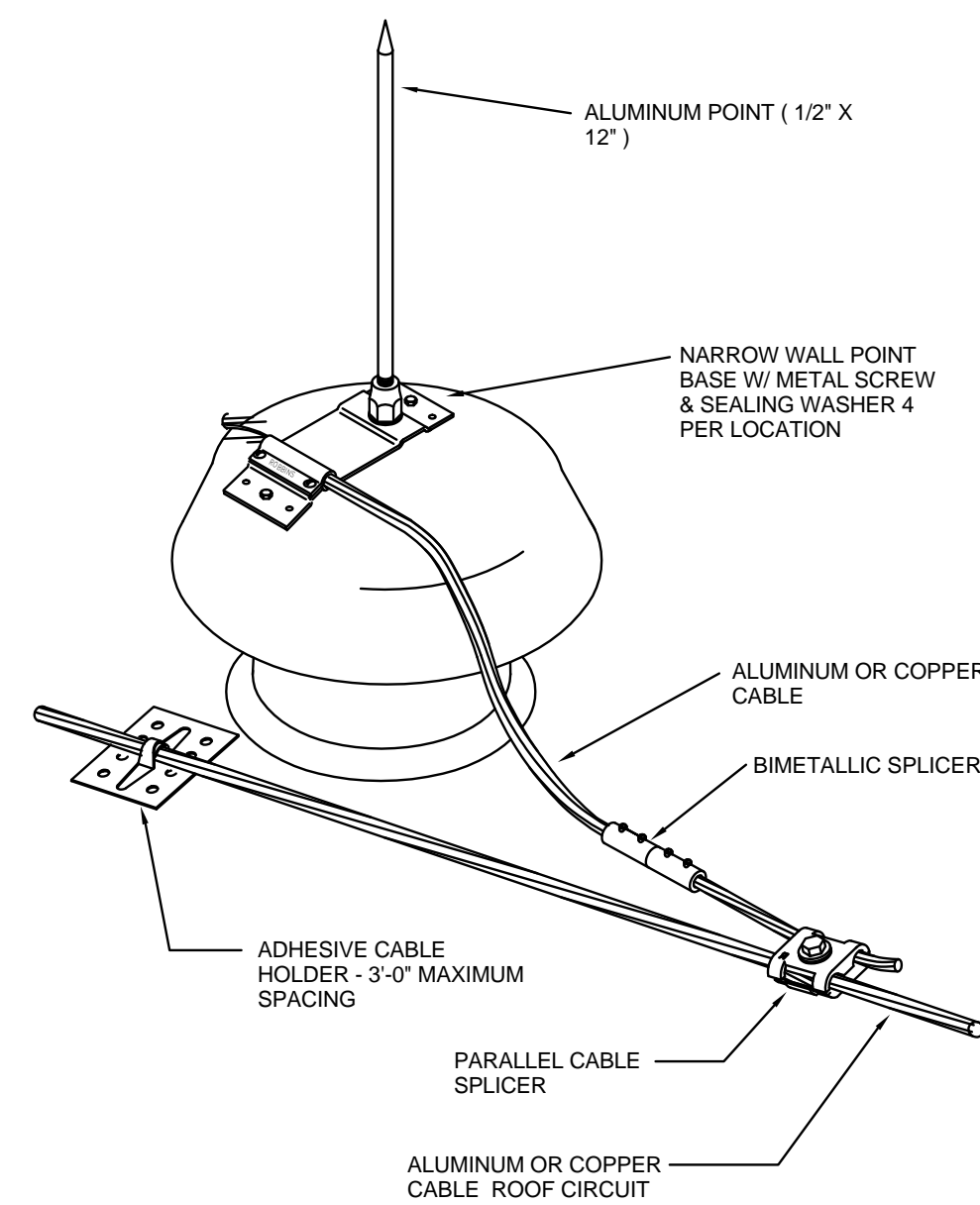
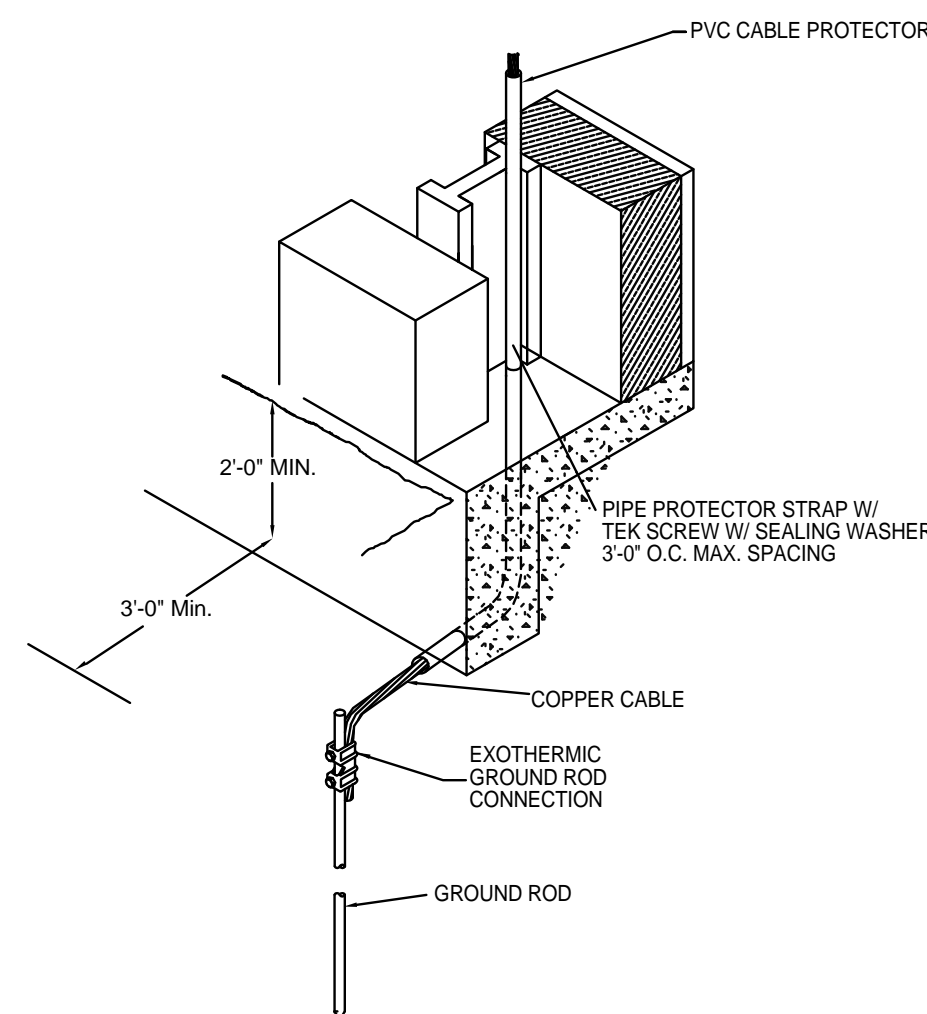
B CROSS CABLE SPLICER N.T.S.

A TYPICAL GUTTER BOND AND DOWNLEAD N.T.S.



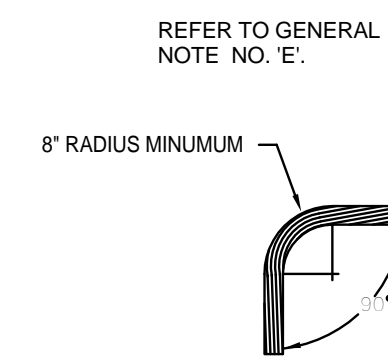
D BIMETALLIC SPLICER N.T.S.

C TYPICAL ROOF VENT BOND N.T.S.



H EXHAUST FAN AIR TERMINAL N.T.S.

F TYPICAL BELOW GRADE PIPE BOND N.T.S.



G TYPICAL ACCEPTABLE CABLE BEND N.T.S.

E TYPICAL ROOF EQUIPMENT AIR TERMINAL N.T.S.

I TYPICAL DOWNLEAD AND GROUND N.T.S.

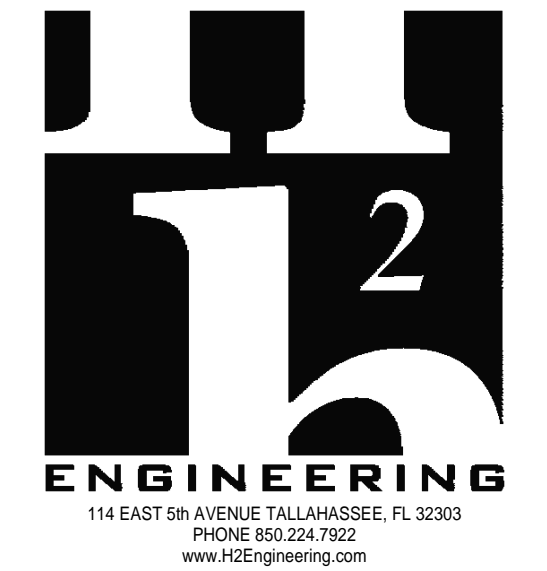
LIGHTNING PROTECTION SYSTEMS LEGEND

- AIR TERMINAL
- CABLE SPLINE
- ⊥ CONDUCTOR TO GRD. ROD EXOTHERMIC CONNECTION. (USE 5/8" X 10' ROD.)
- HORIZONTAL OR DOWNWARD CONDUCTOR. CONDUCTORS SHALL NOT BE VISIBLE FROM GROUND LEVEL.

LIGHTNING PROTECTION NOTE

PROVIDE COMPLETE LIGHTNING PROTECTION SYSTEM DESIGN DRAWINGS FOR THESE STRUCTURES SHOWING ALL LIGHTNING PROTECTION COMPONENTS AS WELL AS ALL RELATED ITEMS BY OTHERS (I.E., CONCRETE ENCASED PVC FOR DOWN CONDUCTORS, PITCH POCKETS, ETC.) THESE DRAWINGS MUST DEMONSTRATE A COMPLETE UNDERSTANDING OF THE STRUCTURE TO BE PROTECTED.

NOTES



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REVISIONS

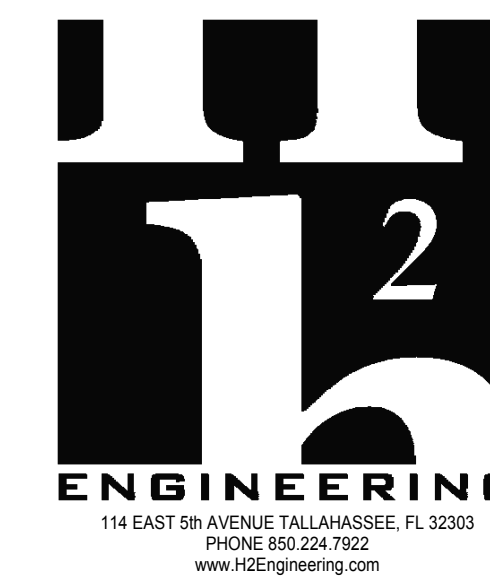


GENERAL NOTES
 LEAD DETAILS -
 LIGHTNING
 PROTECTION

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225 SOUTH ADAMS ST., TALLAHASSEE, FLORIDA 32301
 PHONE 850 224-6301 FAX 850 561-6978

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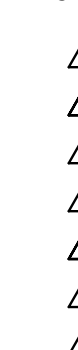
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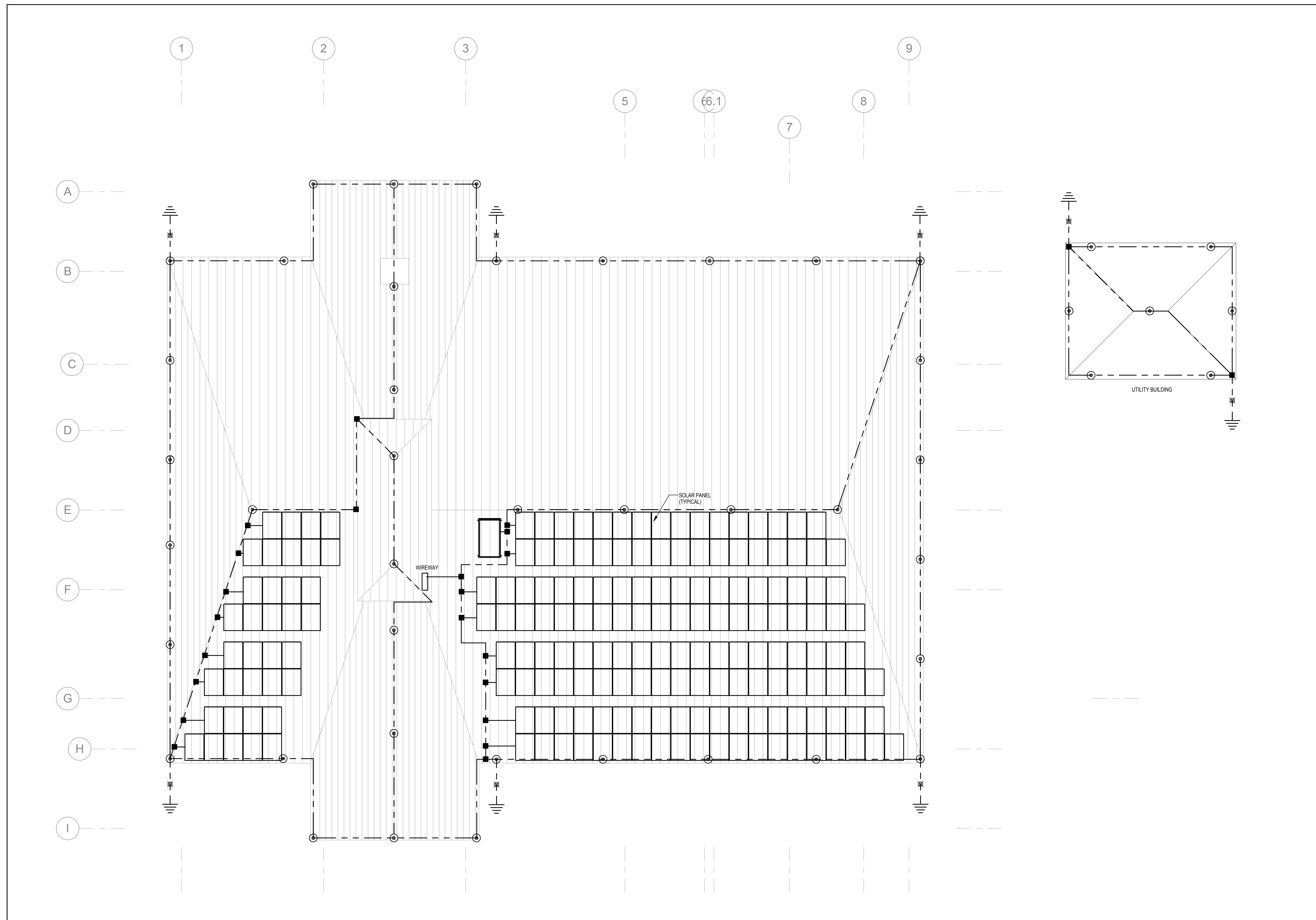
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ROO PLAN -
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1 ROOF PLAN - LIGHTNING PROTECTION

LP10 1/8" = 1'-0"

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