



APALACHEE REGIONAL CROSS COUNTRY VENUE

7550 APALACHEE PARKWAY
 TALLAHASSEE, FLORIDA 32311
 LEON COUNTY
 04 OCTOBER 2019
 BID DOCUMENTS



APALACHEE
 REGIONAL CROSS
 COUNTRY VENUE

16150 Drawn By: DS
 Project Code Checked By: DS

Date
 04 OCTOBER 2019

BID DOCUMENTS

Revisions
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COVER SHEET

Tallahassee Florida

CS-1

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PROJECT LOCATION MAP

STRUCTURAL GENERAL NOTES

1. GENERAL NOTES

- 1.1. THE GOVERNING CODE FOR THIS PROJECT IS THE FLORIDA BUILDING CODE, 8th EDITION (2017). THIS CODE PRESCRIBES WHICH EDITION OF EACH REFERENCE STANDARD APPLIES TO THIS PROJECT, UNLESS OTHERWISE NOTED. ALL WORK AND MATERIALS SHALL CONFORM WITH THE GOVERNING BUILDING CODE AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL CODES, STANDARDS, REGULATIONS AND LAWS.
- 1.2. THE CONTRACTOR SHALL COORDINATE ALL CONTRACT DOCUMENTS WITH FIELD CONDITIONS, DIMENSIONS, AND PROJECT SHOP DRAWINGS PRIOR TO CONSTRUCTION. DO NOT SCALE DRAWINGS. USE ONLY PRINTED DIMENSIONS. REPORT ANY DISCREPANCIES OR FIELD CONDITIONS ENCOUNTERED IN CONFLICT WITH THE DRAWINGS IN WRITING TO THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITH WORK. DO NOT CHANGE SIZE OR LOCATION OF STRUCTURAL MEMBERS WITHOUT WRITTEN INSTRUCTIONS FROM THE ARCHITECT OR ENGINEER OF RECORD.
- 1.3. THE STRUCTURE SHOWN ON THESE DRAWINGS IS SELF-SUPPORTING IN ITS COMPLETED FORM. THE DESIGN, ADEQUACY, SAFETY AND STABILITY OR ERECTION BRACING, FORMWORK, SHORING, AND TEMPORARY SUPPORTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 1.4. DETAILS LABELED AS "TYPICAL" APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED, WHETHER OR NOT THEY ARE KEYS IN AT EACH LOCATION.
- 1.5. THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTY, HIS OWN WORK, AND THE GENERAL PUBLIC FROM HARM. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, AND JOBSITE SAFETY INCLUDING ALL OSHA REQUIREMENTS. THE STRUCTURAL ENGINEER OF RECORD HAS NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION PERSONNEL RELATED TO THEIR WORK OR ANY HEALTH OR SAFETY PRECAUTIONS.
2. SHOP DRAWING SUBMITTAL & REVIEW
 - 2.1. SHOP DRAWINGS ARE REQUIRED FOR THE FOLLOWING ITEMS, AT A MINIMUM:
 - CONCRETE REINFORCING BARS
 - CONCRETE MIX DESIGN
 - CONCRETE SLAB JOINT PLAN
 - GROUT MIX DESIGN
 - MASONRY REINFORCING BARS
 - PRE-ENGINEERED WOOD TRUSSES
 - STRUCTURAL STEEL
 - SUB-GRADE AND FILL COMPACTION TEST RESULTS
 - 2.2. SUBMISSIONS MAY BE MADE IN PAPER FORM OR ELECTRONICALLY AND SHALL CONTAIN SUFFICIENT COPIES TO ALLOW THE ENGINEER TO RETAIN A RECORD COPY OF THE PLANS AND CALCULATIONS (IF REQUIRED).
 - 2.3. ALLOW TEN (10) WORKING DAYS FOR REVIEW OF EACH SHOP DRAWING COMMENCING THE NEXT WORKING DAY AFTER RECEIPT. CONTRACTOR SHALL PLAN SCHEDULE ACCORDINGLY TO ACCOMMODATE THIS REVIEW TIME.
 - 2.4. SHOP DRAWINGS REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT. CORRECTIONS OR COMMENTS MADE ON THIS REVIEW DO NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS, AND FROM COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. CORRECTIONS OR COMMENTS DO NOT AUTHORIZE AND INCREASE IN THE CONSTRUCTION BUDGET.
 - 2.5. APPROVAL OF SHOP DRAWINGS DOES NOT CONSTITUTE ACCEPTANCE OF DEVIATIONS FROM CONTRACT DOCUMENTS OR PREVIOUS SHOP DRAWING REVIEW COMMENTS UNLESS SPECIFICALLY NOTED THEREIN BY THE ENGINEER OF RECORD.
 - 2.6. CONTRACTOR RESPONSIBILITIES PRIOR TO SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER:
 - 2.6.1. REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO WHICH ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
 - 2.6.2. REVIEW AND APPROVE EACH SET PRIOR TO SUBMISSION WHICH SHALL INCLUDE VERIFICATION OF ALL DIMENSIONS AND GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS.
 - 2.7. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL CHANGES OR DELAYS CAUSED BY SUBMITTING INCOMPLETE SHOP DRAWINGS AND SHALL NOT BEGIN CONSTRUCTION OR FABRICATION WITHOUT RECEIPT OF REVIEWED SHOP DRAWINGS.

3. DESIGN SUPERIMPOSED LOADS

LOBBY, & CORRIDORS	= 100 PSF LIVE, 20 PSF DEAD
OFFICES	= 50 PSF LIVE, 20 PSF DEAD
ROOF	= 20 PSF LIVE, 20 PSF DEAD

4. WIND LOADING

- 4.1. DESIGN CRITERIA PER ASCE 7-10:
 - WIND SPEED (ULT/ASD) = 120 MPH / 93 MPH
 - RISK CATEGORY = II
 - WIND EXPOSURE CATEGORY = C
 - ENCLOSURE CLASSIFICATION = ENCLOSED MAIN STRUCTURE / OPEN CANOPY AREA
 - EDGE ZONE WIDTH (a) = 3'-0"

5. EARTHWORK FOR STRUCTURES

- 5.1. FOUNDATION DESIGN, SOIL PREPARATION AND COMPACTION ARE BASED ON GEOTECHNICAL INVESTIGATION, DATA AND RECOMMENDATIONS IN FILE NO. 07-50-18-02 BY ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC. DATED JANUARY 9, 2019. ALL FOOTINGS SHALL BEAR ON COMPACTED FILL OR NATURAL SOIL PREPARED PER THE GEOTECHNICAL REPORT TO PROVIDE AN ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF.
- 5.2. UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT, ALL SOIL BELOW SLABS ON GRADE AND FOOTINGS SHALL BE COMPACTED TO A DEPTH OF 12 INCHES AT OPTIMUM MOISTURE CONTENT TO 95% OF THE MODIFIED PROCTOR, ASTM D1557. FILL SHALL BE PLACED AND COMPACTED IN LIFTS NO GREATER THAN 12 INCHES.
- 5.3. SUB-GRADE PREPARATION SHALL BE FIELD CONTROLLED AND TESTED BY A LICENSED GEOTECHNICAL ENGINEER IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. AT COMPLETION, THAT ENGINEER SHALL PREPARE AND SUBMIT TO THE OWNER, ARCHITECT, CONTRACTOR, AND STRUCTURAL ENGINEER A SIGNED AND SEALED LETTER INDICATING THAT THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT HAVE BEEN FOLLOWED.

6. FORMWORK

- 6.1. DESIGN, ERECTION AND REMOVAL OF FORMWORK, AND SHORING AND RESHORING IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
- 6.2. CONSTRUCTION, ERECTION, AND REMOVAL OF FORMWORK SHALL BE IN ACCORDANCE WITH ACI 301 AND 347.

7. CONCRETE

- 7.1. ALL CONCRETE CONSTRUCTION SHALL COMPLY WITH ACI 301 AND 318 AND CRSI STANDARDS.
- 7.2. PROVIDE STRUCTURAL CONCRETE WITH A MINIMUM ULTIMATE COMPRESSIVE DESIGN STRENGTH IN 28 DAYS OF:

FOUNDATIONS	3,000 PSI	NW
SLAB ON GRADE	3,000 PSI	NW
- 7.3. ALL CONCRETE SHALL BE NORMAL WEIGHT (NW), U.O.N.
- 7.4. ALL INTERIOR AND EXTERIOR SLABS ON GRADE SHALL BE A MINIMUM OF 4 INCHES THICK REINFORCED WITH 6x6 W2.1 x W2.1 WELDED WIRE MESH PLACED ON 10 MIL POLYETHYLENE SHEETING, UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DOCUMENTS.
- 7.5. PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI 318, SECTION 6.4. PROVIDE KEYWAYS AND ADEQUATE DOWELS. SUBMIT DRAWINGS SHOWING LOCATION OF CONSTRUCTION JOINTS AND DIRECTION OF POUR FOR REVIEW.
- 7.6. UNLESS OTHERWISE NOTED IN THE PLANS, PROVIDE CRACK CONTROL JOINTS AT 15 FEET MAXIMUM TO LIMIT AREAS BETWEEN JOINTS TO 225 SQUARE FEET IN ALL SLABS ON GRADE. LOCATE TO CONFORM TO BAY SPACING WHENEVER POSSIBLE. ADD CRACK CONTROL JOINTS AT RE-ENTRANT CORNERS WHICH TEND TO INVITE CRACKS.

- 7.7. CONTRACTOR SHALL MAKE SETS OF FOUR ACCEPTANCE CYLINDERS FOR STRENGTH TESTING FOR EACH 50 CUBIC YARDS OF CONCRETE PLACED. CYLINDERS SHALL BE MADE IN ACCORDANCE WITH ASTM C31 AND C172. TESTING SHALL BE PERFORMED BY AN ACI CERTIFIED TESTING LABORATORY AND SHALL BE PAID FOR BY THE CONTRACTOR. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND/OR STRUCTURAL ENGINEER OF ANY TEST NOT MEETING THE REQUIREMENTS OF THE SPECIFIED TESTS. COPIES OF REPORTS DOCUMENTING THE TEST RESULTS SHALL BE MAINTAINED BY THE CONTRACTOR AND MADE AVAILABLE UPON REQUEST.
- 7.8. PROVIDE ASTM A-615 GRADE 60 REINFORCING STEEL. REINFORCING SHALL BE ACCURATELY PLACED, RIGIDLY SUPPORTED AND FIRMLY TIED IN PLACE, WITH APPROPRIATE BAR SUPPORTS AND SPACERS. LAP CONTINUOUS REINFORCING AS SHOWN IN THE PROVIDED REBAR LAP SPACING TABLE.
- 7.9. PROVIDE COVER OVER REINFORCING STEEL AS FOLLOWS:

CAST AGAINST & EXPOSED TO EARTH/WEATHER	3"
EXPOSED TO EARTH/WEATHER	
#6 THROUGH #18 REBAR	2"
#5 REBAR, W31/031 WIRE OR SMALLER	1-1/2"
NOT EXPOSED TO EARTH/WEATHER	
SLABS, WALLS, JOISTS	
#14 AND #18 REBAR	1-1/2"
#11 REBAR AND SMALLER	3/4"
BEAMS AND COLUMNS	
REINF, TIES, STRIPPUPS, SPIRALS	1-1/2"
- 7.10. CURE ALL CONCRETE SURFACES FOR A PERIOD OF SEVEN DAYS UNTIL AVERAGE COMPRESSIVE STRENGTH HAS REACHED 70% OF THE SPECIFIED 28 DAY STRENGTH. CURING SHALL BE BY PONDING, MOIST CURING WITH SAND OR ABSORPTIVE MATS KEPT CONTINUOUSLY WET, CONTINUOUS APPLICATION OF STEAM (NOT EXCEEDING 105' F) OR MIST SPRAY, WATERPROOF CURING PAPER, OR LIQUID MEMBRANE FORMING CURING COMPOUND. SELECTION OF CURING METHOD SHALL BE COMPATIBLE WITH THE FINISH TO BE APPLIED TO THE CONCRETE SURFACE.
- 7.11. WHERE REINFORCING STEEL CONGESTION PERMITS, CONDUIT AND PIPES UP TO ONE INCH DIAMETER MAY BE EMBEDDED IN CONCRETE PER ACI 318, SECTION 6.3. SPACE AT THREE DIAMETERS ON CENTER. PLACE BETWEEN OUTER LAYERS OF REINFORCING IF CONDUITS ARE SIGNIFICANTLY CONGESTED. ADDITIONAL REINFORCING PERPENDICULAR TO PIPING MAY BE REQUIRED. REQUESTS TO EMBED LARGER PIPES SHOULD BE ACCOMPANIED BY A DETAILED DESCRIPTION AND BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR EVALUATION.
- 7.12. PROVIDE REINFORCING STEEL PLACER WITH A SET OF STRUCTURAL DRAWINGS FOR FIELD REFERENCE. INSPECT REINFORCING STEEL PLACING FROM STRUCTURAL DRAWINGS.

8. CONCRETE MASONRY

- 8.1. CONCRETE MASONRY MATERIALS AND CONSTRUCTION SHALL CONFORM WITH ACI 530.
- 8.2. COMPRESSIVE STRENGTH OF MASONRY SHALL BE DETERMINED BY THE UNIT STRENGTH METHOD AS SET FORTH IN ACI 530.1. THE NET AREA COMPRESSIVE STRENGTH OF MASONRY (F_m) SHALL BE 1,500 PSI AT 28 DAYS.
- 8.3. USE 50% SOLID CONCRETE MASONRY UNITS CONFORMING TO ASTM C90 WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1,900 PSI AT 28 DAYS.
- 8.6. USE TYPE S MORTAR IN ACCORDANCE WITH ASTM C270 EXCEPT USE TYPE M MORTAR BELOW GRADE. HEAD AND BED JOINTS SHALL BE 3/8 INCH FOR THE THICKNESS OF THE FACE SHELL. WEBS ARE TO BE FULLY MORTARED IN ALL COURSES OF PIERS, COLUMNS AND PILASTERS, IN THE STARTING COURSE AND WHERE AN ADJACENT CELL IS TO BE GROUTED. REMOVE MORTAR PROTRUSIONS EXTENDING 1/2 INCH OR MORE INTO CELLS TO BE GROUTED.
- 8.7. USE FINE OR COURSE GROUT CONFORMING TO ASTM C476, WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI IN 28 DAYS. AGGREGATE SHALL CONFORM TO ASTM C404 FOR GROUT SELECTED, WITH SLUMP OF 8 TO 11 INCHES.
- 8.8. ALL REINFORCED CELLS; CELLS WITH EXPANSION BOLTS, EMBED PLATES, OR OTHER ANCHORS; AND ALL CELLS BELOW GRADE SHALL BE GROUTED SOLID IN ACCORDANCE WITH ACI 530.1. ALLOW MORTAR TO CURE 24 HOURS PRIOR TO GROUTING.
- 8.9. LAY UP UNITS IN RUNNING BOND UNLESS OTHERWISE NOTED. SAW CUT UNITS WHICH ARE NOT IN MULTIPLES OF 8 INCHES WITH ALL UNITS BEING AT LEAST 8 INCHES LONG. BAND CORNERS BY LAPPING ENDS 8 INCHES IN SUCCESSIVE VERTICAL COURSES.
- 8.10. USE STANDARD (9 GAGE) HORIZONTAL JOINT REINFORCING CONFORMING TO ASTM A82 IN EVERY OTHER COURSE. OVERLAP DISCONTINUOUS ENDS 6". USE PREFABRICATED CORNERS AND TEES. USE TRUSS TYPE, EXCEPT USE LADDER TYPE IN WALLS WITH VERTICAL REINFORCING. EXTEND JOINT REINFORCING A MINIMUM OF 4 INCHES INTO THE COLUMNS.
- 8.11. FOR HIGH-LIFT GROUTING, USE 5 FEET MAXIMUM LIFTS WITH 1/2 HOUR TO 1 HOUR BETWEEN LIFTS. VIBRATE EACH LIFT AND RECONSOLIDATE THE PREVIOUS LIFT. PROVIDE CLEANOUT HOLES AT THE BASE OF CELLS TO BE GROUTED FOR GROUTING HEIGHTS EXCEEDING 5 FEET.
- 8.12. USE ASTM A615 GRADE 60 REINFORCING STEEL. VERTICAL REINFORCEMENT SHALL BE PLACED IN THE CENTER OF THE CELLS, U.O.N., WITH ALL REQUIRED SPLICES TIED AT THE TOP AND BOTTOM OF THE LAPPED BARS. BAR POSITIONERS MAY BE USED IN LIEU OF TIES WITH APPROVAL FROM THE ENGINEER OF RECORD.
- 8.13. AT A MINIMUM, ALL LOAD BEARING WALLS SHALL BE REINFORCED WITH #5 VERTICAL REINFORCING AS FOLLOWS, U.O.N. IN THE CONSTRUCTION DOCUMENTS:

ALL EXTERIOR WALLS:	4 FEET ON CENTER
AT EACH LINTEL BEARING	
AT CORNERS AND TURNS:	3 BARS @ 8 INCHES ON CENTER
AT WALL INTERSECTIONS:	4 BARS @ 8 INCHES ON CENTER
AT STEEL BEAM BEARING:	2 BARS @ 8 INCHES ON CENTER
- 8.14. AT BOND/TIE BEAM CORNERS AND INTERSECTIONS, PLACE 1 #5 x 5 FEET CORNER BAR, WITH 30 INCH LEGS EACH WAY, AT THE EXTERIOR FACE.
- 8.15. LINTELS SHALL BE CAST SOLID FOR THE FULL LENGTH (TO THE END OF BEARING) AND HEIGHT OF LINTEL IN THE SAME POUR.

9. STRUCTURAL STEEL

- 9.1. FABRICATE AND ERECT STRUCTURAL STEEL IN CONFORMANCE, W/ AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", WITH COMMENTARY, AND ALL OSHA REQUIREMENTS.
- 9.2. ALL STEEL CONNECTIONS SHALL CONFORM TO AISC MANUAL "STANDARD FRAMED BEAM CONNECTIONS" UNLESS SHOWN OTHERWISE.
- 9.3. STRUCTURAL STEEL SHAPES SHALL BE FABRICATED FROM THE FOLLOWING MATERIALS:

ROLLED W AND WT SHAPES:	ASTM A992, GRADE 50
ROLLED HP SHAPES:	ASTM A572, GRADE 50
ROLLED M, S, C AND MC SHAPES AND ANGLES:	ASTM A36, fy=36 KSI
PLATES AND BARS:	ASTM A36, fy=36 KSI
COLD-FORMED HOLLOW STRUCTURAL SECTIONS (HSS):	
SQUARE AND RECTANGULAR SECTIONS:	ASTM A500, GRADE B, fy=46 KSI
ROUND SECTIONS:	ASTM A500, GRADE B, fy=42 KSI
STRUCTURAL PIPE:	ASTM A53, GRADE B, fy=35 KSI
- 9.4. ALL SHOP AND FIELD WELDING SHALL CONFORM TO THE AWS D1.1 STRUCTURAL WELDING CODE BY THE AMERICAN WELDING SOCIETY. USE E70 SERIES WELDING ELECTRODES, U.O.N. WHERE NECESSARY, REMOVE GALVANIZING OR PRIMER PRIOR TO WELDING.
- 9.5. A325 BOLTS SHALL COMPLY WITH "SPECIFICATION FOR STRUCTURAL JOINTS USING: ASTM A325 OR A490 BOLTS", INCLUDING COMMENTARY.

- 9.6. TYPICAL BOLTS USED IN STRUCTURAL CONNECTIONS FOR THIS PROJECT ARE 3/4 INCH DIAMETER.
- 9.7. TIGHTEN BEARING-TYPE BOLTS (A-325N) TO THE SNUG TIGHT CONDITION AS FOLLOWS:
 - 9.7.1. BOLTS SHALL BE PLACED IN ALL HOLES, WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY.
 - 9.7.2. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT.
 - 9.7.3. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH.
 - 9.7.4. MORE THAN ONE CYCLE THROUGH THE BOLT PATTERN MAY BE REQUIRED TO ACHIEVE THE SNUG-TIGHTENED JOINT.
 - 9.7.5. PROVIDE HARDENED WASHERS CONFORMING TO ASTM F436 AND PLACE UNDER THE PART BEING TURNED.
 - 9.7.6. DO NOT REUSE OR RETIGHTEN BOLTS WHICH HAVE BEEN FULLY TIGHTENED. USE ONLY NON-GALVANIZED NUTS AND BOLTS THAT ARE CLEAN, RUST-FREE, AND WELL LUBRICATED. BOLTS AND NUTS SHALL BE WAX DIPPED BY THE BOLT SUPPLIER.
 - 9.7.7. STORE FASTENER COMPONENTS TO PREVENT CONTAMINATION BY MOISTURE OR OTHER DELETERIOUS SUBSTANCES. FASTENERS FROM OPEN CONTAINERS AND FASTENERS THAT ACCUMULATE RUST OR DIRT SHALL NOT BE USED AND SHALL BE IMMEDIATELY AND PERMANENTLY REMOVED FROM THE PROJECT SITE.

- 9.8. SETTING BASE AND BEARING PLATES:
 - 9.8.1. CLEAN CONCRETE BEARING SURFACE OF BOND-REDUCING MATERIALS AND CLEAN BOTTOM OF BASE PLATE.
 - 9.8.2. SET BASE OR BEARING PLATE ON WEDGE OR OTHER ADJUSTING DEVICES AS REQUIRED.
 - 9.8.3. TIGHTEN ANCHOR RODS AFTER STRUCTURAL STEEL FRAME HAS BEEN PLUMBED. DO NOT REMOVE WEDGES OR SHIMS BUT, IF PROTRUDING, CUT OFF FLUSH WITH EDGE OF BASE OR BEARING PLATE PRIOR TO PACKING WITH GROUT.
 - 9.8.4. PACK OR POUR NON-SHRINK GROUT SOLIDLY BETWEEN BEARING SURFACE AND BASE OR BEARING PLATE. ENSURE THAT NO VOIDS REMAIN. FINISH EXPOSED SURFACES, PROTECT GROUT AND ALLOW TO CURE.
 - 9.8.5. FOR PROPRIETARY GROUT MATERIALS, COMPLY WITH MANUFACTURER'S INSTRUCTIONS.
 - 9.8.6. BASE PLATES MUST BE GROUTED A MINIMUM OF 72 HOURS PRIOR TO PLACING CONCRETE SLABS ON SUPPORTING STEEL STRUCTURE.
- 9.9. CUT, DRILL, OR PUNCH HOLES PERPENDICULAR TO METAL SURFACES. REAM HOLES THAT MUST BE ENLARGED TO ADMIT BOLTS AS PERMITTED BY ARCHITECT. DO NOT ENLARGE UNFAIR HOLES BY BURNING OR USING DRIFT PINS.
- 9.10. ANCHOR RODS SHALL BE A MINIMUM OF 3/4 INCH DIAMETER AND SHALL COMPLY WITH ASTM F1554 GRADE 55.
- 9.11. NON-SHRINK GROUT SHALL BE NON METALLIC, SHRINKAGE RESISTANT GROUT CONFORMING TO ASTM C1107 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.
- 9.12. HOT DIP GALVANIZATION (WHERE REQUIRED BY CONSTRUCTION DOCUMENTS)
 - 9.12.1. ANY STRUCTURAL STEEL EXPOSED TO THE ELEMENTS SHALL BE HOT DIPPED GALVANIZED.
 - 9.12.2. AFTER FABRICATION, STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED PER ASTM A123 TO A MINIMUM THICKNESS OF 3.9 MILS.
 - 9.12.3. NO FIELD DRILLING, CUTTING, WELDING, OR OTHER ADJUSTMENTS WILL BE PERMITTED AFTER HOT DIP GALVANIZING.
 - 9.12.4. TOUCH UP ANY DAMAGE TO GALVANIZED SURFACES WITH TWO COATS OF ZINC BASED TOUCH UP COATING SIMILAR TO ZRC COLD GALVANIZING COMPOUND MANUFACTURED BY ZRC WORLDWIDE.
- 9.13. ALL FULL PENETRATION WELDS SHALL BE TESTED USING ULTRASONIC (UT) OR RADIOGRAPHIC (RT) METHOD. A REPORT DETAILING THE SATISFACTORY RESULTS FOR ALL FULL PENETRATION WELDS SHALL BE PROVIDED BY THE CONTRACTOR TO THE DESIGN TEAM UPON REQUEST.
- 9.14. SHOP AND FIELD PAINT
 - 9.14.1. PRIMER: FABRICATOR'S STANDARD, LEAD AND CHROMATE FREE, NON-ASPHALTIC, RUSTING INHIBITING PRIMER CONFORMING TO SSPC-PAINT 25, TYPE II.
 - 9.14.2. SURFACE PREPARATION: CLEAN SURFACES TO BE PRIMED TO REMOVE LOOSE RUST AND MILL SCALE USING SSPC-SP 2, "HAND TOOL CLEANING" AND SSPC-SP 3 "POWER TOOL CLEANING.
 - 9.14.3. IMMEDIATELY AFTER SURFACE PREPARATION, APPLY TO PROVIDE A DRY FILM THICKNESS OF NOT LESS THAN 1.5 MILS.
 - 9.14.4. FIELD TOUCH UP: RE-CLEAN AND REPAINT ALL PRIMED SURFACES (INCLUDING EXISTING STEEL SURFACES) DAMAGED BY ERECTION PROCESS, INCLUDING ALL FASTENERS AND OTHER STEEL SURFACES.

10. CHEMICAL ADHESIVES FOR ANCHOR BOLTS AND RODS

- 10.1. USE AN EPOXY, ACRYLIC OR POLYESTER RESIN ADHESIVE SYSTEM SUCH AS THE POWERS RAWL POWER-FAST SYSTEM, HILTI HIT HY200, ITW RAMSEY/RED HEAD EPCON A7 OR C6 INJECTION SYSTEM, ALLIED FASTENER ALLIED GOLD A-1000, OR ACCEPTED EQUIVALENT. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR USE AND INSTALLATION.
- 10.2. CONFIRM THE ABSENCE OF REINFORCING STEEL BY DRILLING A 1/4 INCH DIAMETER PILOT HOLE FOR EACH ANCHOR. DO NOT CUT REINFORCING STEEL WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
- 10.3. DRILL 1/4 INCH LARGER DIAMETER HOLE THAN ANCHOR BOLT AND 1/8 INCH LARGER HOLE THAN REINFORCING BAR. THOROUGHLY CLEAN HOLE INCLUDING REMOVAL OF DUST PRIOR TO FILLING WITH EPOXY.
- 10.4. PROVIDE ANCHOR EMBEDMENT, SPACING AND EDGE DISTANCE AS SHOWN ON THE DRAWINGS.
- 10.5. THREADED RODS ARE A36 GALVANIZED STEEL, U.O.N.

11. WOOD FRAMING

- 11.1. WOOD CONSTRUCTION SHALL COMPLY WITH AF&PA NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION AND CHAPTER 23 OF FBC.
- 11.2. MANUFACTURED LUMBER, S4S AND GRADE-STAMPED, TO COMPLY WITH PS20 AND APPLICABLE GRADING RULES OF INSPECTION AGENCIES CERTIFIED BY ALSG'S BOARD OF REVIEW.
- 11.3. PROVIDE SEASONED LUMBER WITH 19% MOISTURE CONTENT, MAXIMUM AT TIME OF DRESSING AND SHIPMENT FOR SIZES 2" OR LESS IN THICKNESS.
- 11.4. THE DESIGN OF ALL ROOF AND FLOOR TRUSSES SHALL COMPLY WITH "DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES".
- 11.5. ALL STRUCTURAL LUMBER TO BE MIN SOUTHERN YELLOW PINE NO. 2 S4S, GRADE-STAMPED. ALL OTHER LUMBER PER ARCHITECTURAL SPECIFICATIONS. WOOD FRAME WALLS MAY BE NO. 2 SPRUCE PINE FIR.
- 11.6. AT ALL BUILT-UP WOOD AND BEAM BEARING LOCATIONS A MINIMUM OF (2) 2X4 STUD MEMBERS TO BE USED U.O.N.
- 11.7. THE INDIVIDUAL STUDS OF BUILT-UP COLUMNS TO BE ADEQUATELY FASTENED TO DEVELOP COMPOSITE ACTION OF THE ASSEMBLY.
- 11.8. DO NOT SPLICE STRUCTURAL MEMBERS BETWEEN SUPPORTS, U.O.N.
- 11.9. USE MANUFACTURERS REQUIRED SIZE AND NUMBER OF NAILS OR BOLTS FOR ANCHOR TIE DOWNS, HURRICANE CLIPS AND ALL CONNECTORS U.O.N.
- 11.10. SECURELY ATTACH CARPENTRY WORK TO SUBSTRATES AND SUPPORTING MEMBERS USING FASTENERS OF SIZE THAT WILL NOT PENETRATE MEMBERS WHERE THE OPPOSITE SIDE WILL BE EXPOSED TO VIEW OR RECEIVE FINISH MATERIALS.
- 11.11. GYPSUM WALL SHEATHING AT EXTERIOR WALLS, LOAD BEARING WALLS AND INTERIOR WALLS INTERSECTING WALLS TO BE SECURED TO STUDS WITH DRYWALL NAILS AT 12" O.C. @ EACH STUD.
- 11.12. PROVIDE CONTINUOUS LATERAL BRACING AND/OR BLOCKING BETWEEN CHORDS OF TRUSSES AS REQUIRED OR AS NOTED BY TRUSS MANUFACTURER TO ADEQUATELY TRANSFER LOADS TO SHEAR WALLS.

- 11.13. PLACE FLAT STRAPPING BETWEEN STUDS AT ENDS OF ALL BEAM BEARING LOCATIONS WITH 1 1/4" x 30" x 16 GA FLAT STRAP W/ (24) 10D NAILS TO BE PLACED AT ENDS OF BUILT-UP WOOD BEAMS.
- 11.14. ANCHOR BOLTS TO BE 1/2"x10" LONG W/ 2" SQ. WASHERS SPACED @ 48" O.C. U.O.N. WHT THE FIRST ANCHOR BOLT PLACED A MAXIMUM OF 10" FROM EACH CORNER.
- 11.15. EXTERIOR END WALLS AT VAULTED OR CATHEDRAL CEILING LOCATIONS SHALL BE BALLOON FRAMED FROM SILL PLATE TO ROOF DIAPHRAGM.
- 11.16. AT ENDS OF ALL SHEAR WALLS PLACE MIN. (3) BUILT-UP STUD GROUP. INSTALL HOLD DOWN ANCHORS AS REQUIRED AT BUILT-UP STUD GROUP ENDS OF SHEAR WALLS TO PROVIDE CONTINUOUS LOAD PATH FROM FRAMING LEVEL TO FOUNDATION.
- 11.17. THE ENGINEER SHOULD BE NOTIFIED OF ANY DEVIATIONS FROM THE PLANS OR TRUSS SHOP DRAWINGS.
- 11.18. PERMANENT TRUSS BOTTOM CHORD LATERAL BRACING, CONSISTING OF 2X4 GRADE MARKED LUMBER, NAILED WITH A MINIMUM OF (2) 16D NAILS PER TRUSS AND LAPPED AT LEAST TWO TRUSSES, SHALL BE SPACED NO GREATER THAN 15'-0".
- 11.19. PRE-ENGINEERED TRUSS BRACING PER TRUSS MANUFACTURER TO BE A MINIMUM OF 2X4 OF THE SAME SPECIES AS TRUSS.
- 11.20. CEILING SHALL BE A MINIMUM OF 1/2" GYPSUM WITH 50 COOLER NAILS OR GWB-54 1-1/2" NAILS INSTALLED AT 10" O.C. AND 7" O.C. ALONG EDGES.

- 11.13. CONTRACTOR TO VERIFY THAT HURRICANE CLIPS/TIE DOWNS SHOWN WILL RESIST WIND UPLIFT FROM ROOF TRUSSES. IF UPLIFT VALUE FROM ROOF TRUSS MANUFACTURER EXCEEDS CAPACITY OF THE HURRICANE CLIPS/TIE DOWN, THE CONTRACTOR SHALL PROVIDE A CONNECTOR TO SAFELY RESIST THE UPLIFT LOADS. THE CONTRACTOR CAN SIZE HURRICANE CLIPS BY USING THE TRUSS DRAWINGS IN COMBINATION WITH THE FOLLOWING HC/TIE DOWN CHART:

MAXIMUM UPLIFT	RECOMMENDED STRAP	SPECIAL REQUIREMENTS
510 LBS.	SIMPSON H2.5A	
995 LBS.	SIMPSON H10	
1,020 LBS.	(2) SIMPSON H2.5A	TO BE INSTALLED ON OPPOSITE FACES & SIDE OF TRUSS
1,785 LBS.	SIMPSON LGT2	INSTALL ON 2 PLY GIRDER WITH MINIMUM OF (2) STUDS
1,990 LBS.	(2) SIMPSON H10	TO BE INSTALLED INSIDE AND OUTSIDE OF WALL
2,655 LBS.	SIMPSON LGT3	INSTALL ON 3 PLY GIRDER WITH MINIMUM OF (3) STUDS
3,555 LBS.	SIMPSON VGT WITH HDU4	MINIMUM OF 2 PLY GIRDER WITH MINIMUM OF (2) STUDS
5,175 LBS.	(2) SIMPSON VGT WITH (2) HDU4	MINIMUM OF 2 PLY GIRDER WITH MINIMUM OF (2) STUDS, INSTALL ON OPPOSITE FACES OF TRUSS & STAGGER HDU4'S

CONTACT ENGINEER IF UPLIFT EXCEEDS 5,175 POUNDS OR IF THE FASTENERS LISTED ABOVE ARE NOT AVAILABLE.

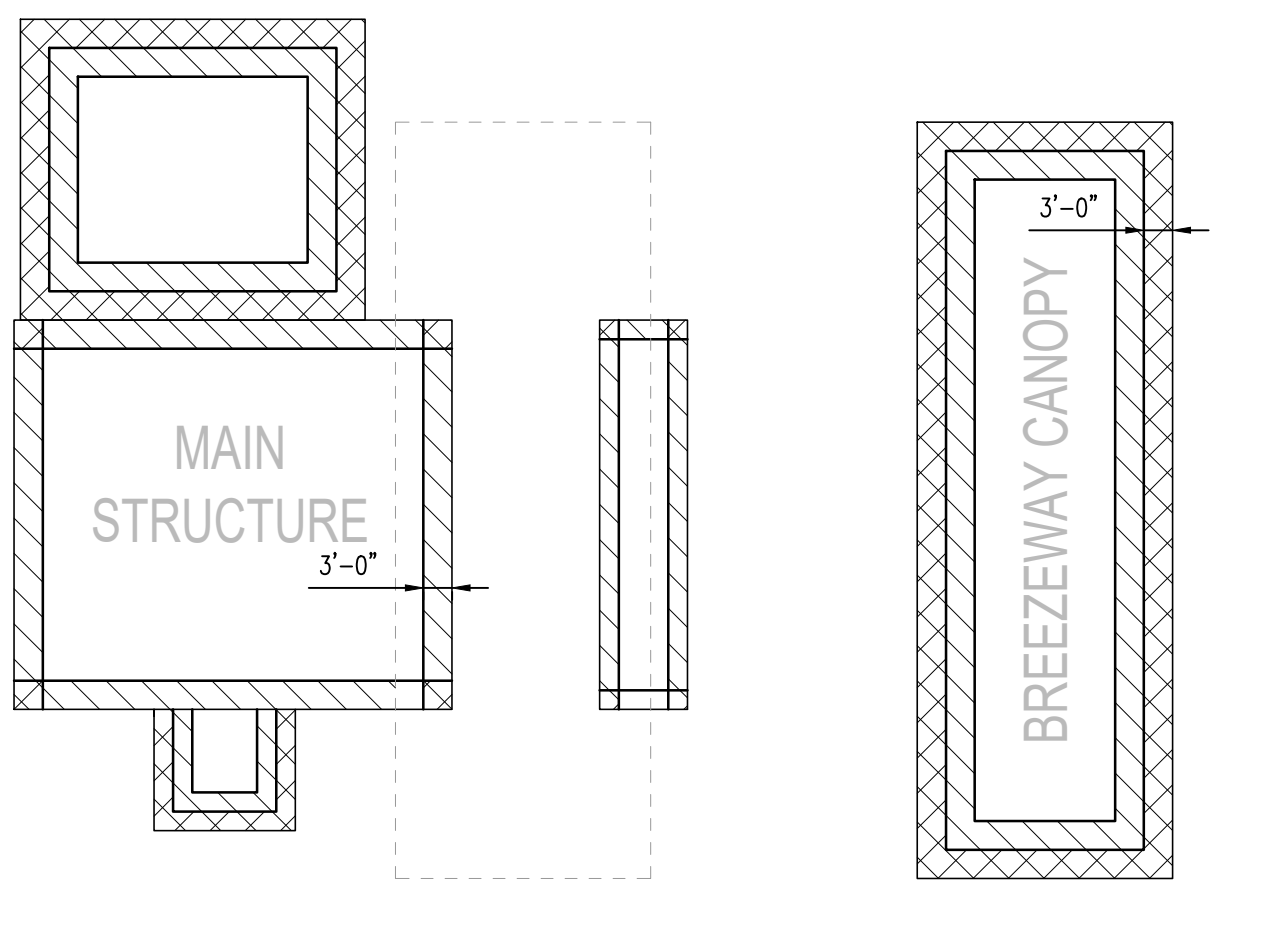
EFF. WIND AREA	ZONE 1	ZONE 2	ZONE 2 OH	ZONE 3	ZONE 3 OH
10 ft ²	+12.8/-31.4	+12.8/-52.7	-50.1	+12.8/-79.4	-79.4
20 ft ²	+12.8/-31.1	+12.5/-50.7	-49.8	+12.5/-74.3	-73.5
50 ft ²	+11.6/-30.3	+11.6/-44.4	-48.9	+11.6/-59.2	-55.7
100 ft ²	+10.1/-28.8	+10.1/-34.1	-47.4	+10.1/-34.1	-26.2

EFF. WIND AREA	ZONE 4	ZONE 5
10 ft ²	+28.8/-31.2	+28.8/-38.4
20 ft ²	+27.5/-29.9	+27.5/-35.8
50 ft ²	+25.8/-28.2	+25.8/-32.4
100 ft ²	+24.5/-26.9	+24.5/-29.9
200 ft ²	+23.8/-26.2	+23.8/-28.4

1. THE PRESSURES ARE ULTIMATE PRESSURES AND MAY BE MULTIPLIED BY 0.6 PER ASCE 7 TO DETERMINE ALLOWABLE STRESS PRESSURES.
2. FOR EFFECTIVE AREAS BETWEEN THOSE GIVEN, THE LOAD MAY BE INTERPOLATED. OTHERWISE, USE THE LOAD ASSOCIATED WITH THE LOWER EFFECTIVE AREA.
3. THE FINAL DESIGN PRESSURE, INCLUDING ALL PERMITTED REDUCTIONS, USED IN THE DESIGN SHALL NOT BE LESS THAN THAT REQUIRED BY SECTION 30.2.2 OF ASCE 7-10.

- WIND PRESSURE NOTES:
1. EDGE ZONE PRESSURES (ZONE 2 & 3 FOR ROOFS AND ZONE 5 FOR WALLS) SHALL BE TAKEN AS ANY AREA WITHIN 5 FEET OF AN EXTERIOR WALL OR ROOF EDGE.
 2. THE CONTRACTOR SHALL VERIFY ALL MATERIALS SUBMITTED FOR REVIEW ARE ADEQUATE TO WITHSTAND THE POSITIVE (TOWARDS THE SURFACE) AND NEGATIVE (AWAY FROM SURFACE) PRESSURES INDICATED ON THIS DRAWING.

EFF. WIND AREA	ZONE 1	ZONE 2	ZONE 3
≤ 9 ft ²	+31.3/-28.7	+47.0/-44.4	+62.6/-86.1
> 9 ft ² , ≤ 36 ft ²	+31.3/-28.7	+47.0/-44.4	+47.0/-44.4
> 36 ft ²	+31.3/-28.7	+31.3/-28.7	+31.3/-28.7



WIND PRESSURE DIAGRAM
SCALE: NTS

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- ZONE 1
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APALACHEE REGIONAL CROSS COUNTRY VENUE

18182 Drawn By: BVP
Project Code Checked By: PMM

04 OCTOBER 2019

Date

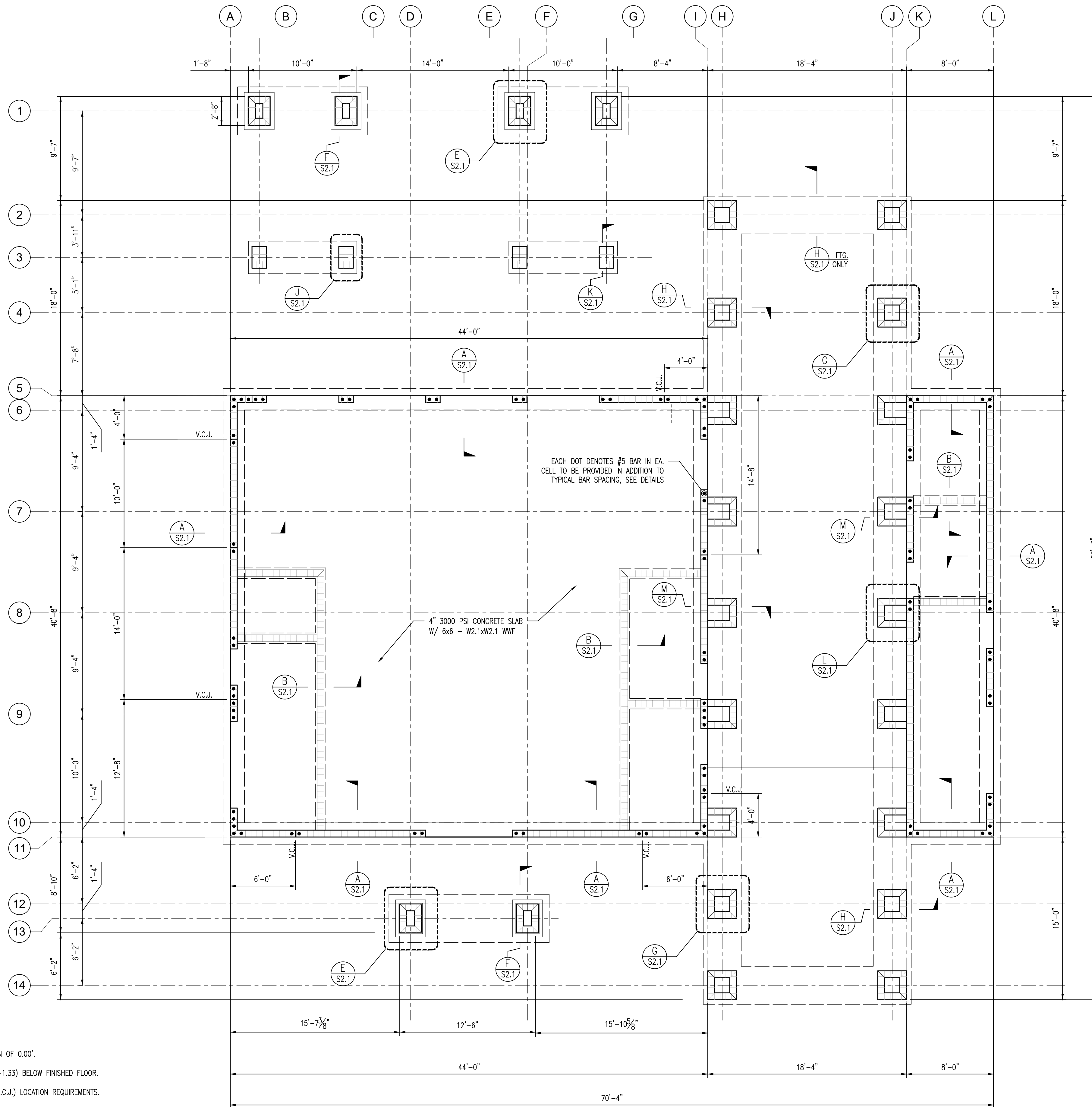
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- ZONE 1
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STRUCTURAL NOTES

Tallahassee Florida

S0.1



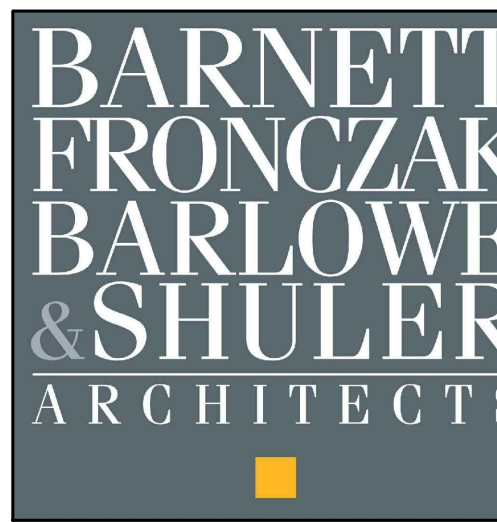
NOTES FOR FOUNDATION AND FLOOR PLANS:
(UNLESS INDICATED OTHERWISE):

1. ALL ELEVATIONS ARE RELATIVE TO AN ASSUMED FINISHED FLOOR ELEVATION OF 0.00'.
2. U.N.O., ALL TOP OF COLUMN AND WALL FOOTING ELEVATIONS SHALL BE (-1.33) BELOW FINISHED FLOOR.
3. REFER TO ROOF FRAMING PLAN FOR MINIMUM VERTICAL CONTROL JOINT (V.C.J.) LOCATION REQUIREMENTS.
4. ALL WALLS ON FOOTINGS ARE REINFORCED, LOAD BEARING WALLS, SEE PLAN AND MASONRY DETAILS ON SHEET S4.2.
5. CENTERLINE OF COLUMN FOOTING SHALL COINCIDE WITH CENTERLINE OF COLUMN, U.N.O.
6. TYPICAL SLAB-ON-GRADE CONSTRUCTION SHALL BE 4" THICK CONCRETE REINFORCED WITH 6x6-W2.1xW2.1.
7. ALL BOND BREAKERS (B.B.) SHALL BE 30# FELT.
8. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF WALLS FOR C.J.'S ALIGNED WITH FACE OF WALLS. U.N.O., ALL OTHER C.J.'S SHALL BE EQUALLY SPACED.
9. SEE ARCHITECTURAL AND PLUMBING DRAWINGS FOR DETAILS AND EXACT LOCATIONS OF FLOOR RECESSES, FLOOR DRAINS AND OTHER FEATURES.
10. SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR EXTENT OF MISCELLANEOUS CONCRETE SIDEWALKS.

FOUNDATION PLAN
SCALE: 3/8" = 1'-0"



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APALACHEE
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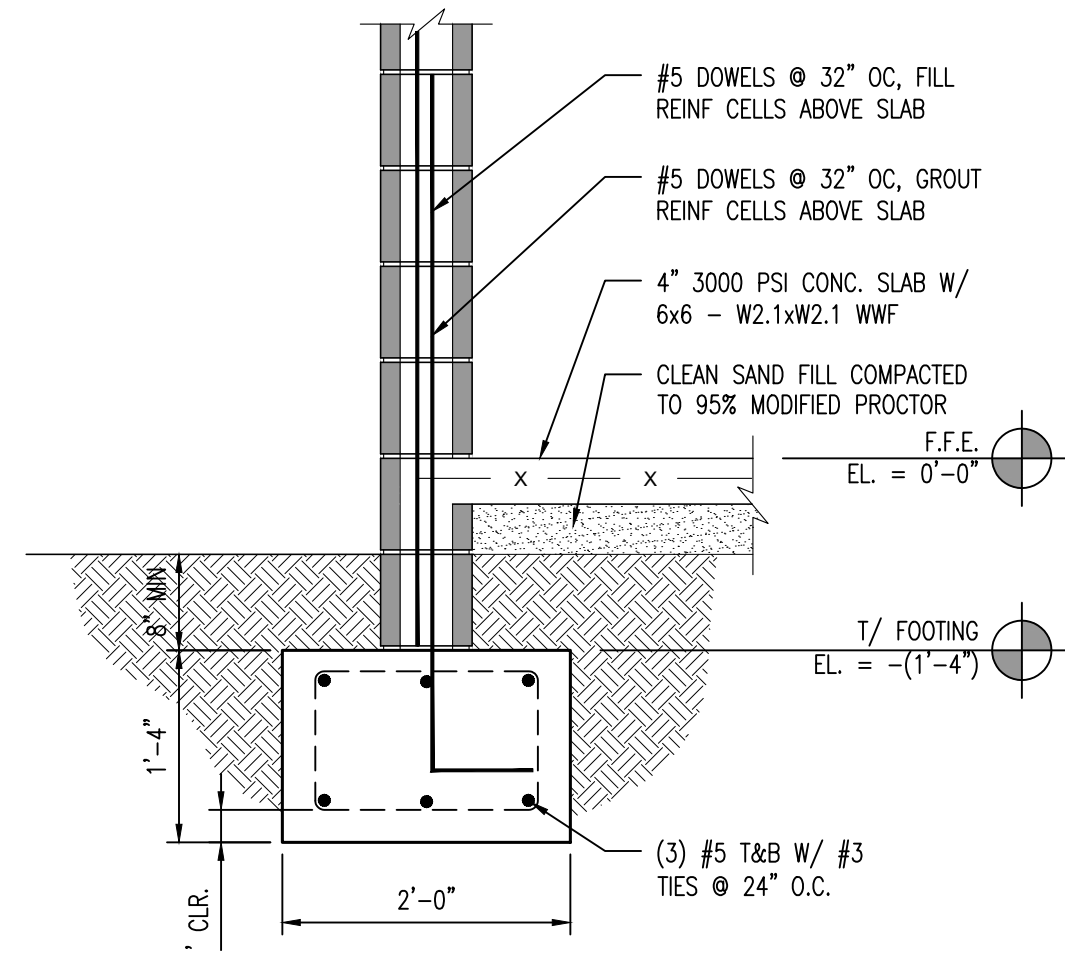
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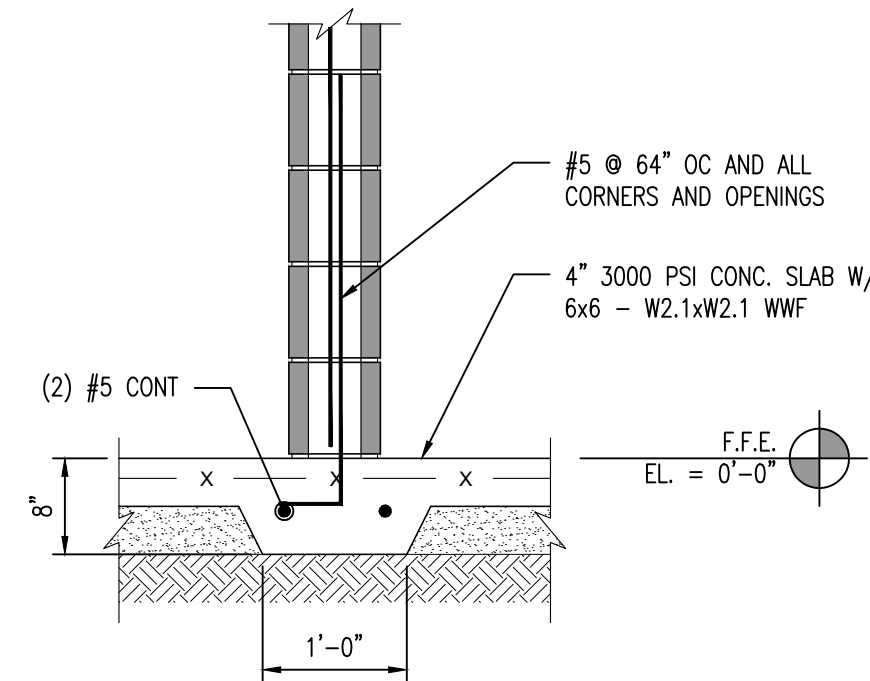
FOUNDATION PLAN

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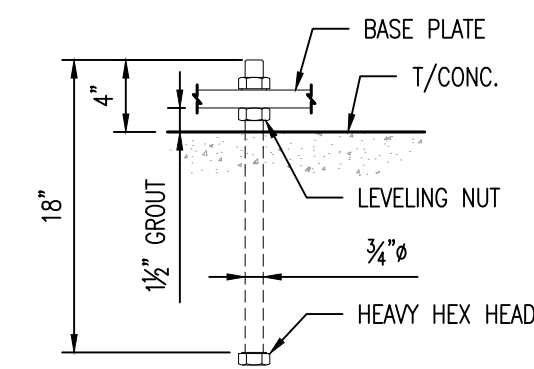
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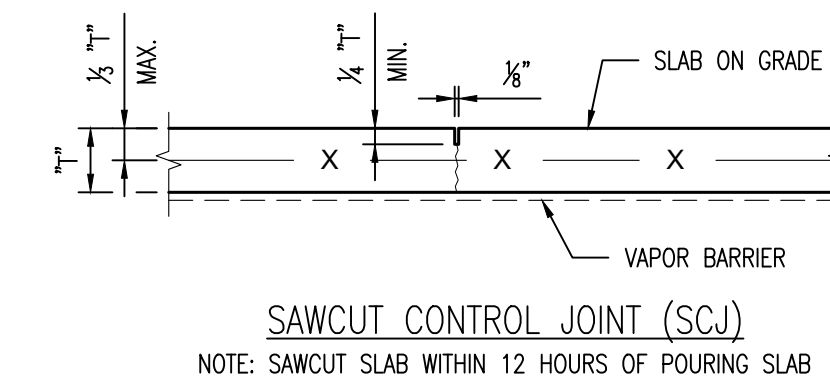
TYP FOOTING SECTION A
SCALE: 3/4"=1'-0"



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

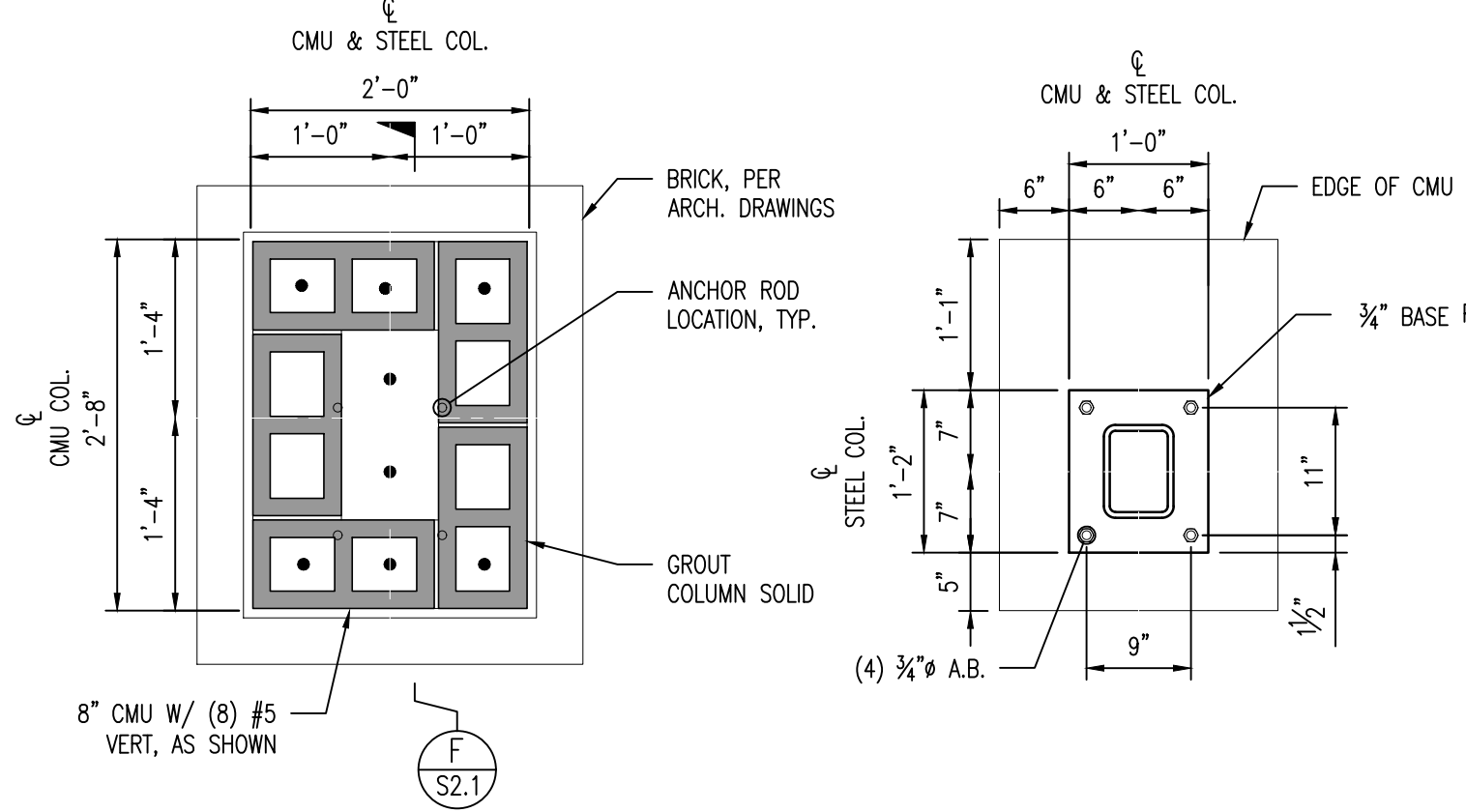


TYP ANCHOR ROD DETAIL C
NOT TO SCALE

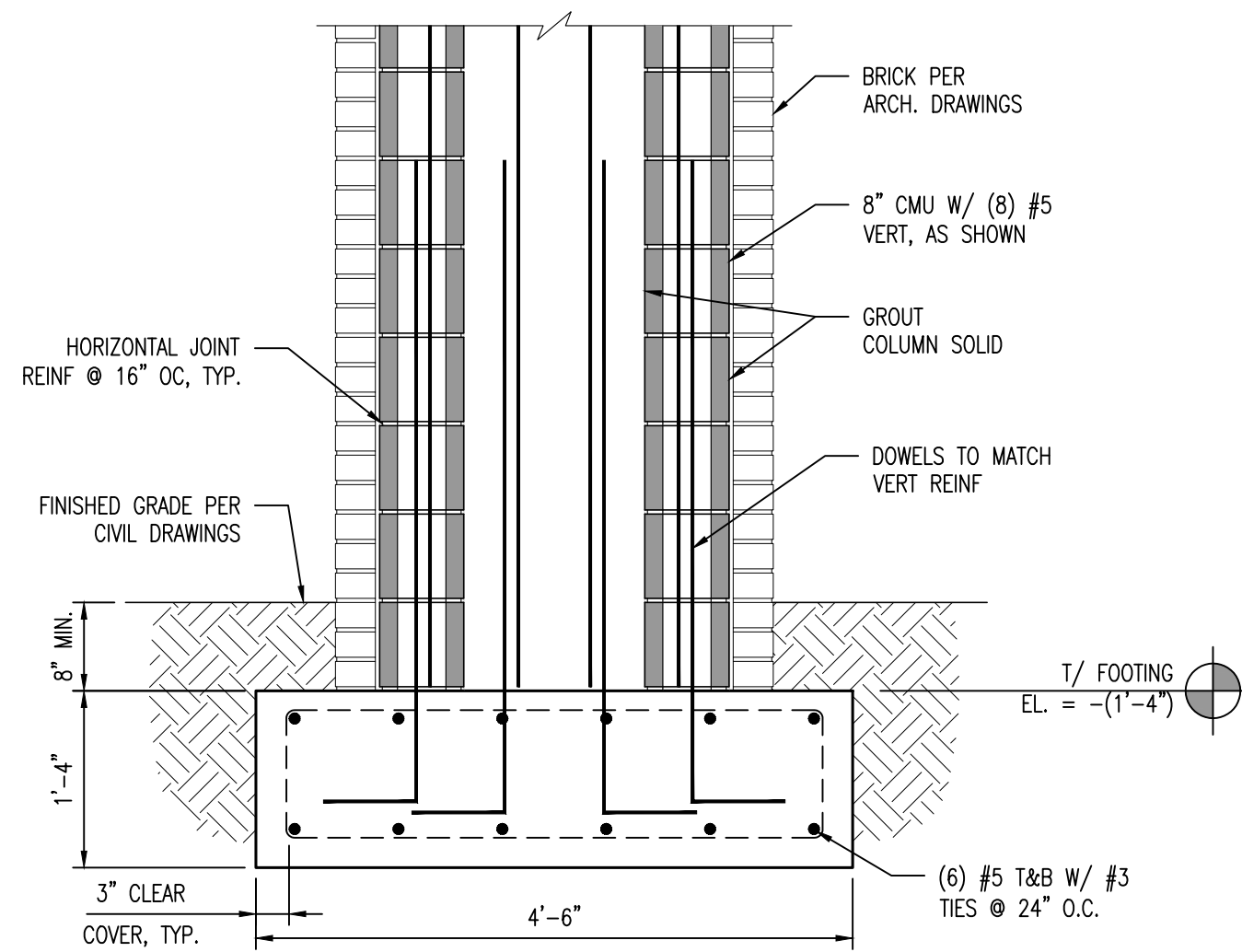


- NOTES:
- REFER TO ARCHITECTURAL FLOOR PLANS FOR JOINT LAYOUT AT EXPOSED FLOORS. AT ALL OTHER LOCATIONS, LAY OUT JOINTS WITH MAXIMUM SPACING OF 12'-0" ON CENTER AND A MAXIMUM LENGTH TO WIDTH RATIO FOR JOINT SPACING OF 2:1.
 - RIPS, TEARS, AND HOLES IN VAPOR BARRIERS SHALL BE REPAIRED PRIOR TO PLACING CONCRETE.
 - ALL SLABS SHALL BE CURED WITH A MOISTURE RETAINING COVER FOR A MINIMUM OF SEVEN DAYS.
 - ALL JOINTS SHOWN IN PLANS ARE SCHEMATIC. CONTRACTOR SHALL SUBMIT JOINT LOCATION PLAN FOR ARCHITECTURAL APPROVAL.

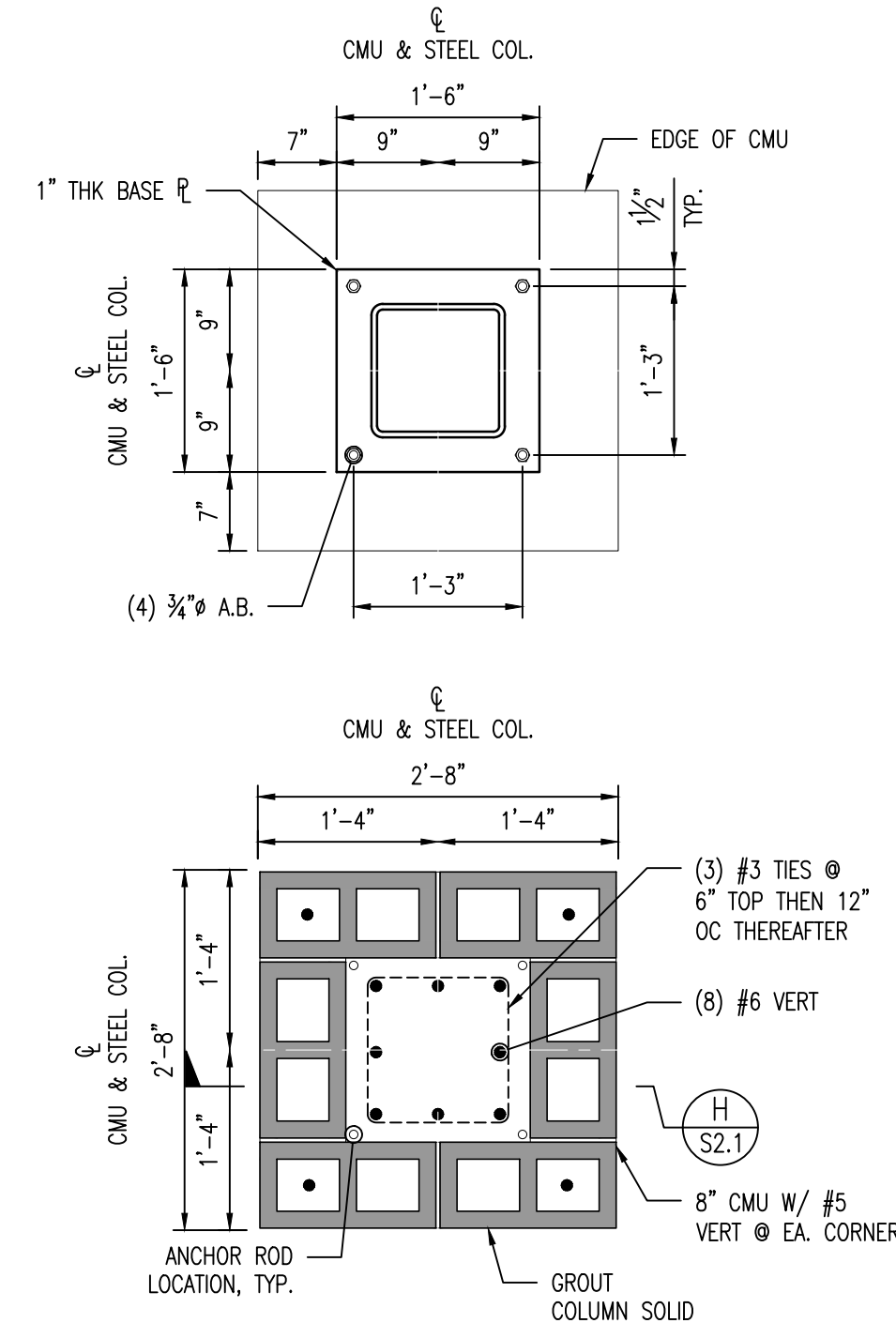
TYP SAWCUT JOINT DETAIL D
NOT TO SCALE



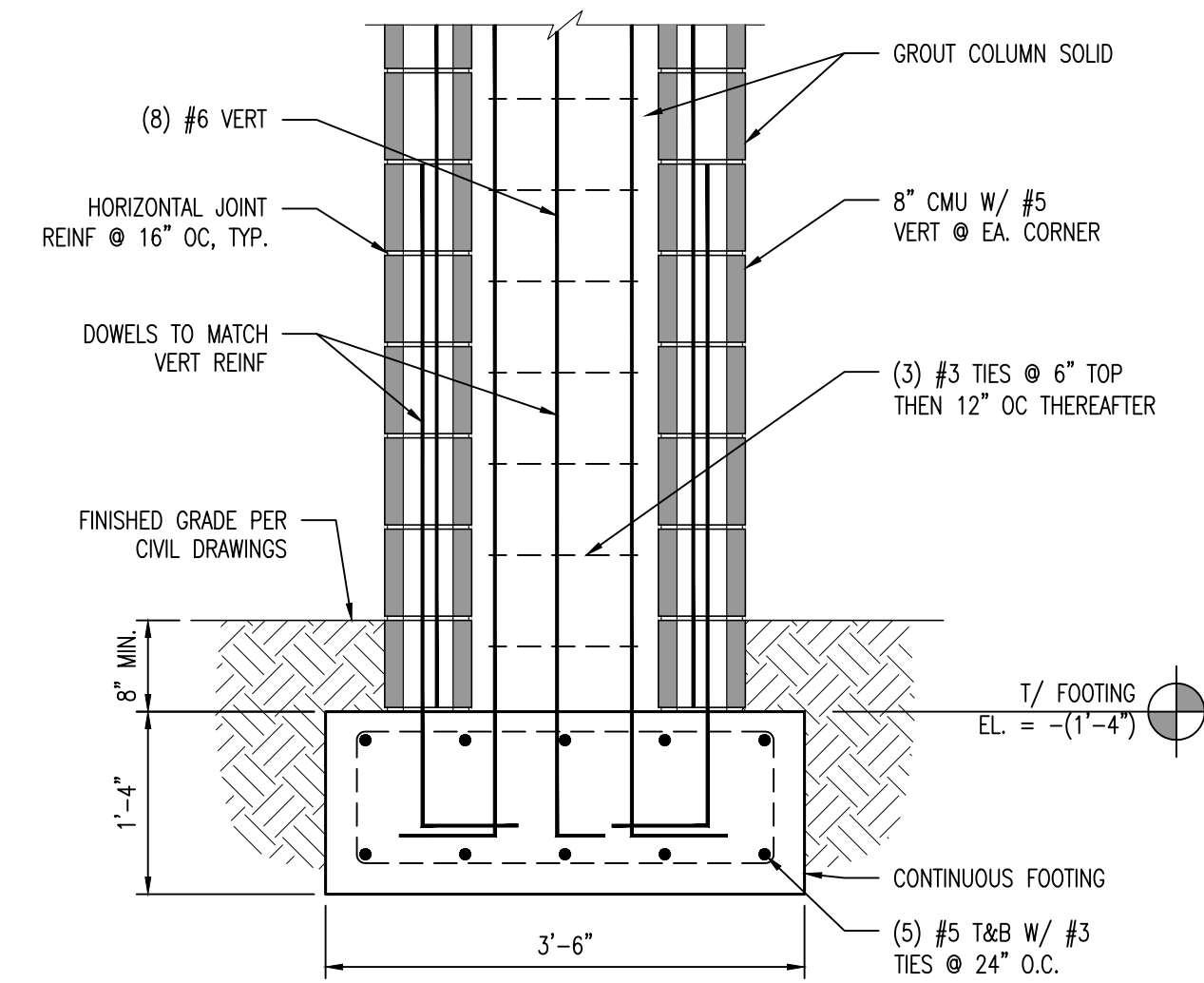
COL. DETAILS @ BREEZEWAY E
SCALE: 3/4"=1'-0"



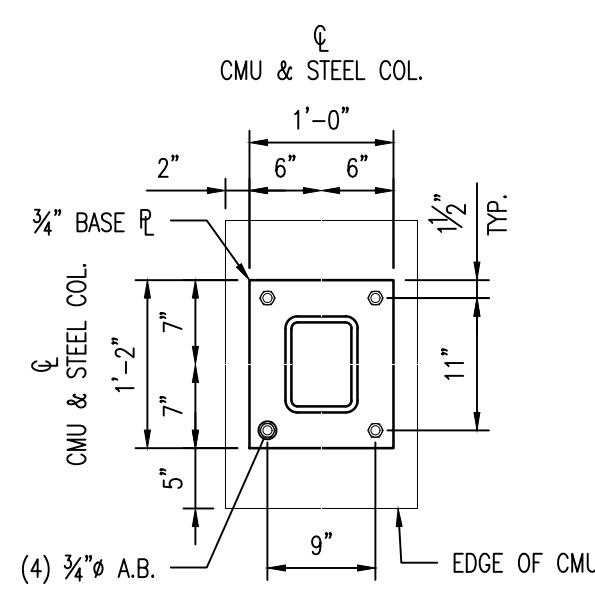
SECTION @ BREEZEWAY F
SCALE: 3/4"=1'-0"



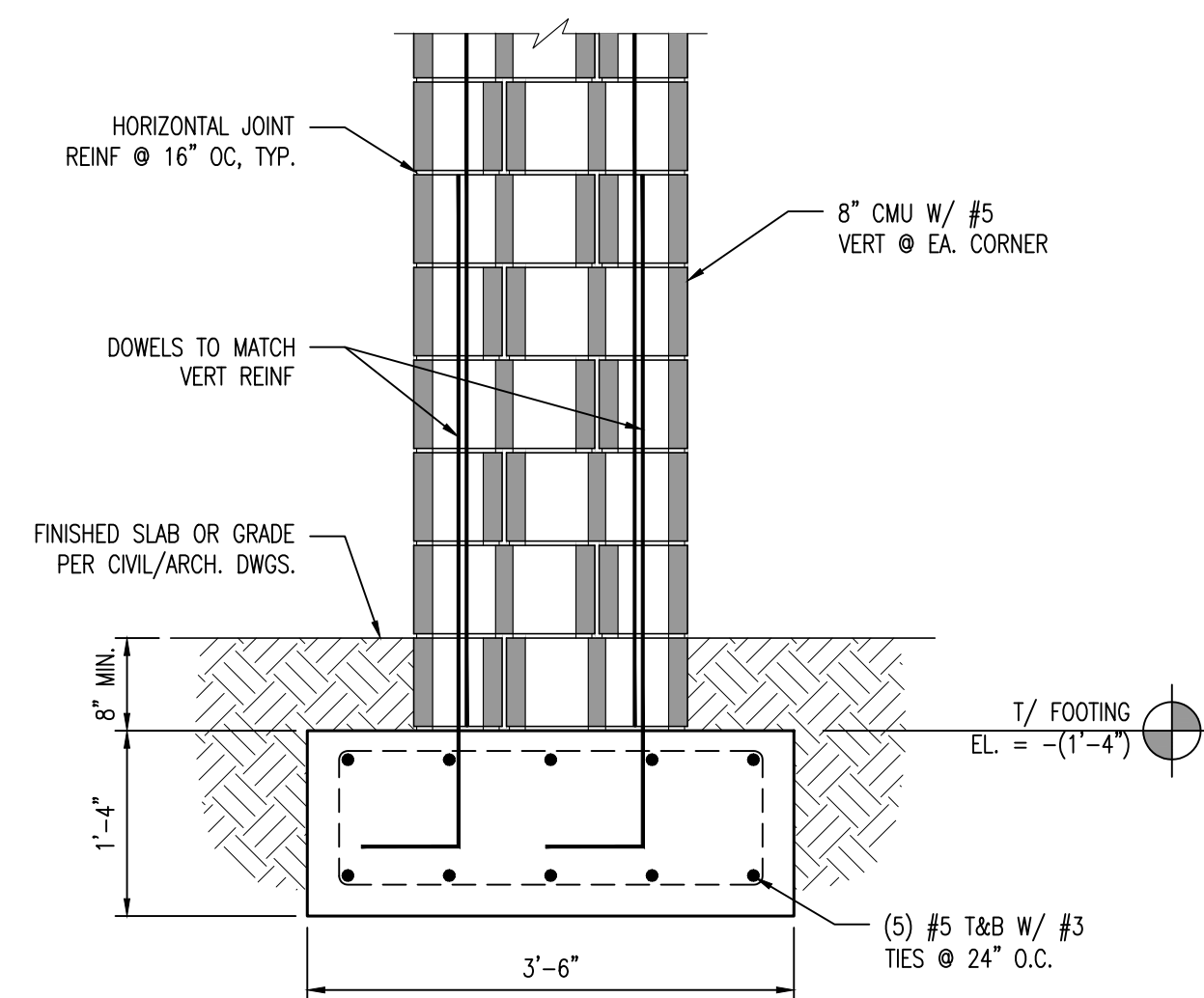
COL. DETAILS @ BREEZEWAY G
SCALE: 3/4"=1'-0"



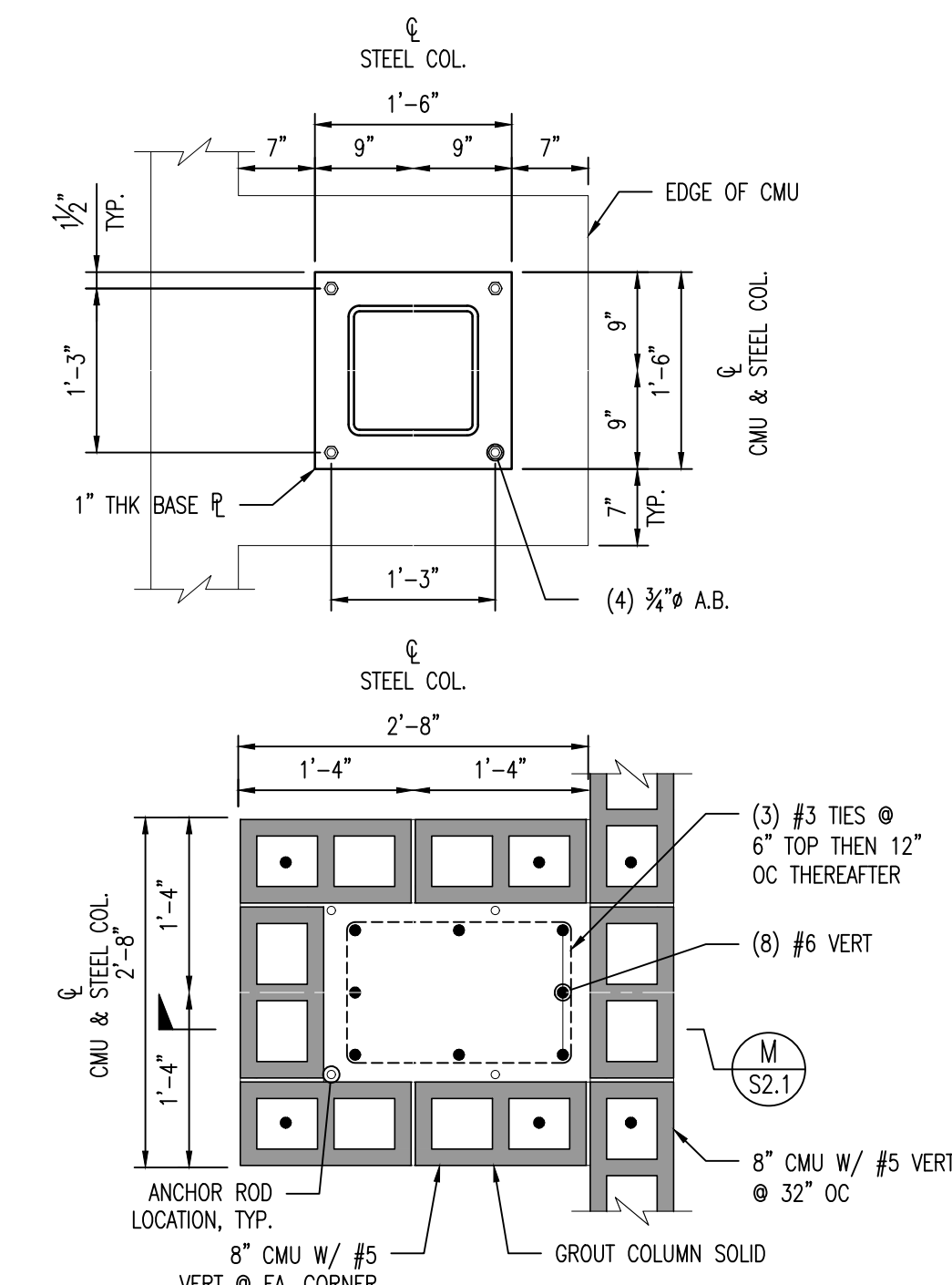
SECTION @ BREEZEWAY H
SCALE: 3/4"=1'-0"



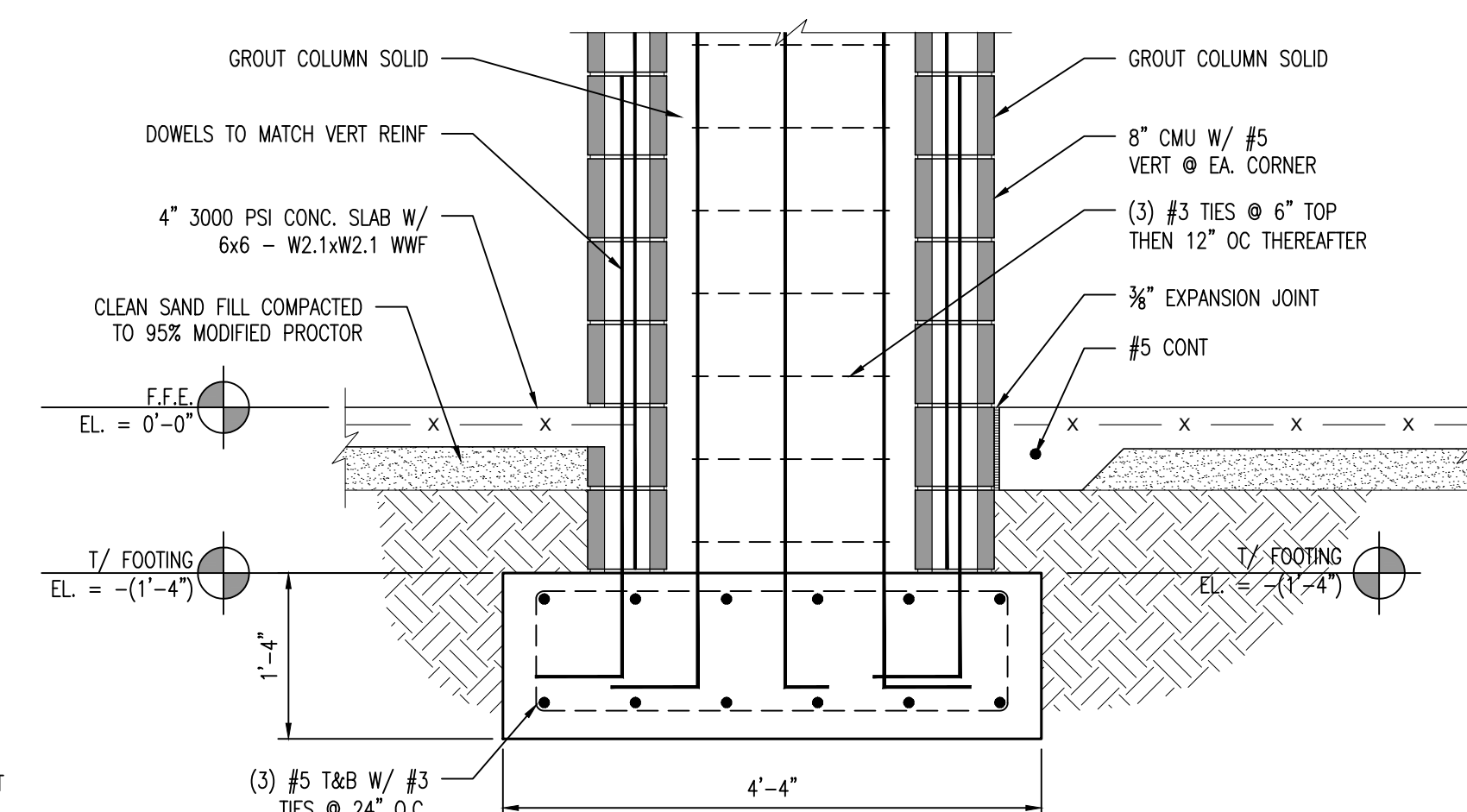
COL. DETAILS @ BREEZEWAY I
SCALE: 3/4"=1'-0"



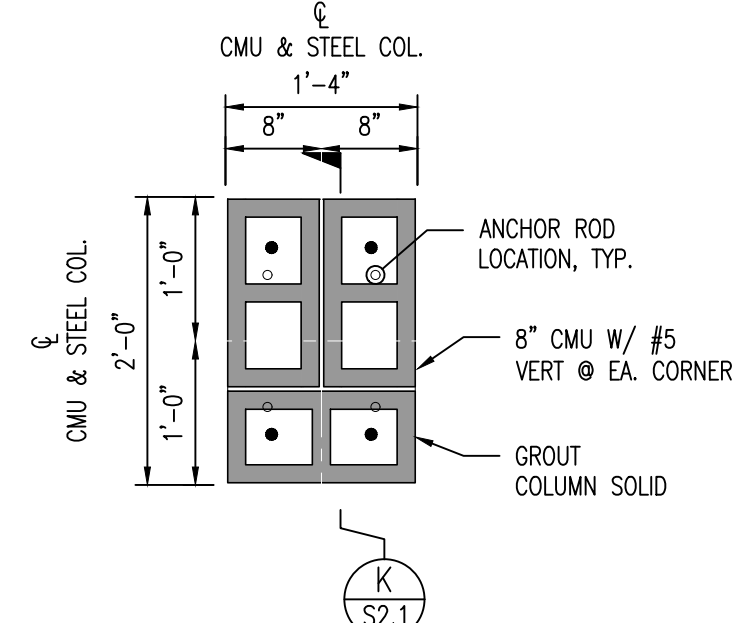
SECTION @ BREEZEWAY J
SCALE: 3/4"=1'-0"



COL. DETAILS @ BREEZEWAY K
SCALE: 3/4"=1'-0"



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



COL. DETAILS @ BREEZEWAY M
SCALE: 3/4"=1'-0"

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BARNETT FRONCZAK BARLOWE & SHULER ARCHITECTS

APALACHEE REGIONAL CROSS COUNTRY VENUE

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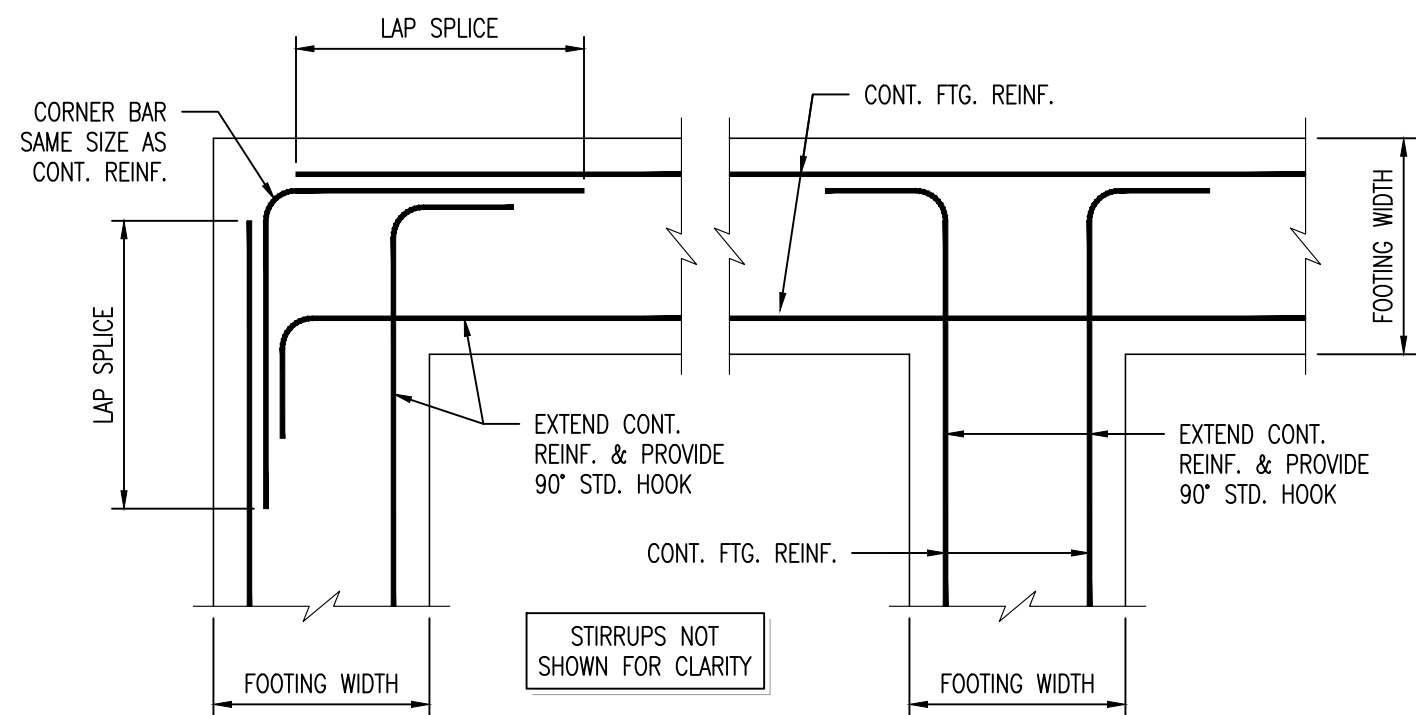
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FOUNDATION DETAILS

Tallahassee Florida

S2.1

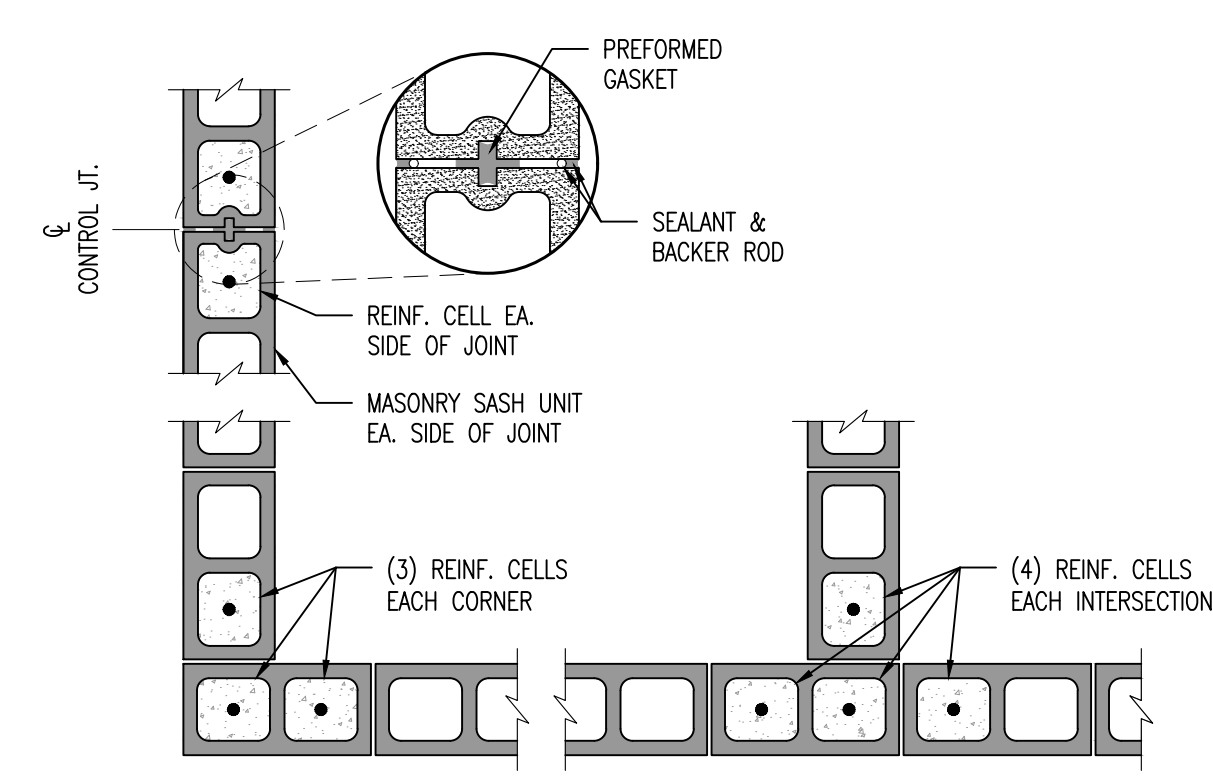


TYP FOOTING INTERSECTIONS **A**
SCALE: 3/4"=1'-0" **S2.2**

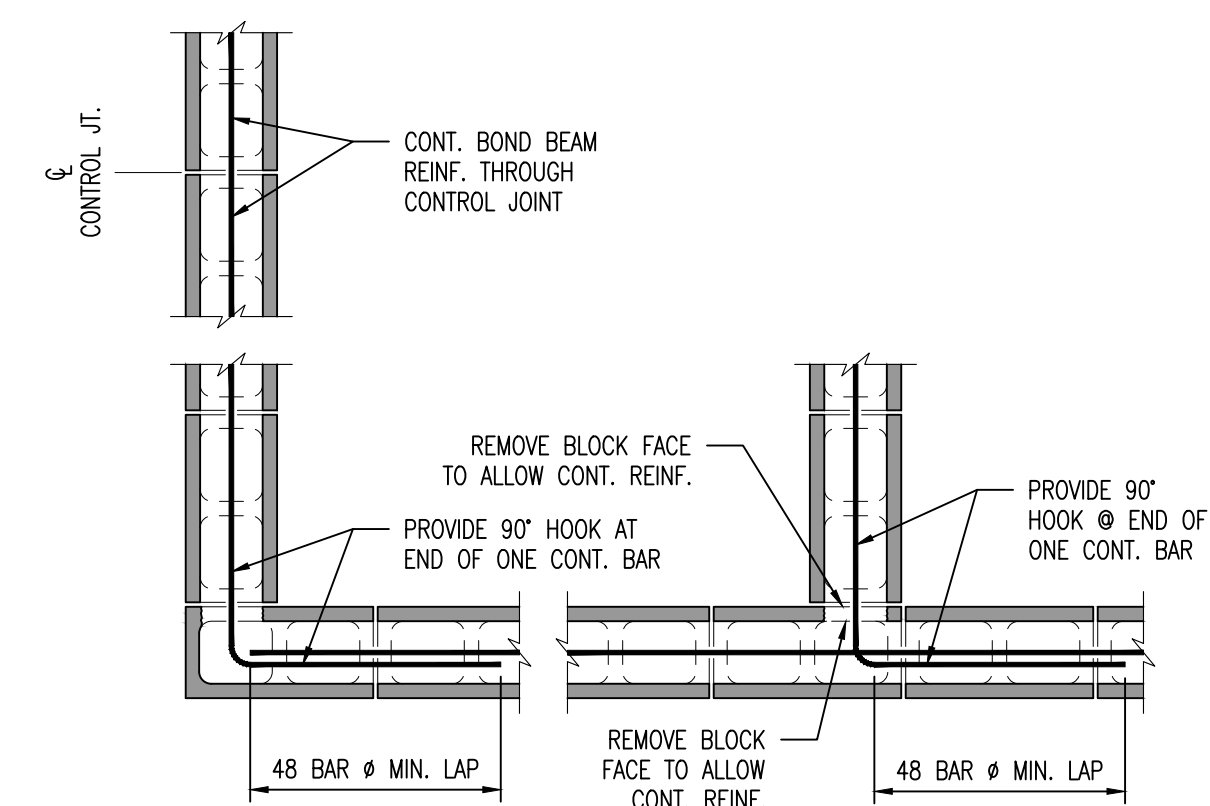
LINTEL SCHEDULE (EXCEPT AS INDICATED OTHERWISE ON DRAWINGS)						
SPANS	REINFORCEMENT FOR 6", 8" & 12" BLOCKWORK			STEEL FOR 4" BRICK		
	MIN. DEPTH	REINF. STEEL	END BRG.	STIRRUPS	STEEL LINTEL	END BRG.
UP TO 2'-0" (INCL.)	8"	1 #4 BOT.	8" EA. END	-	1-3/2"x3/8" FLAT BAR	6" EA. END
2'-0" TO 4'-0" (DO.)	8"	1 #6 BOT.	(DO.)	-	1-1/2"x3/8" (L.L.V.)	8" (DO.)
4'-0" TO 6'-0" (DO.)	16"	1 #8 BOT.	(DO.)	-	1-3/4"x3/8" (L.L.V.)	10" (DO.)
6'-0" TO 8'-0" (DO.)	16"	1 #9 BOT., 1 #8 TOP	12" EA. END	#3 @ 8"	1-5/8"x3/8" (L.L.V.)	12" (DO.)
8'-0" TO 10'-0" (DO.)	16"	1 #10 BOT., 1 #8 TOP	(DO.)	#3 @ 8"	1-5/8"x3/8" (L.L.V.)	14" (DO.)
10'-0" TO 12'-0" (DO.)	24"	1 #10 BOT., 1 #9 TOP	16" EA. END	#3 @ 8"	1-5/8"x3/8" (L.L.V.)	16" (DO.)
12'-0" TO 14'-0" (DO.)	24"	2 #9 BOT., 1 #9 TOP	(DO.)	#3 @ 8"	1-5/8"x3/8" (L.L.V.)	16" (DO.)

NOTES:
 1. WIDTH OF LINTEL = FULL WIDTH OF WALL.
 2. ALL MASONRY LINTEL COMPONENTS SHALL BE SHORED UNTIL GROUT HAS CURED FOR 14 DAYS.
 3. TOP REINFORCING TO BE 1/2" CLEAR FROM TOP OF LINTEL BEAM; BOTTOM REINFORCING TO BE 2" CLEAR FROM BOTTOM OF LINTEL BEAM.
 4. REINFORCING STEEL TO HAVE 1/2" CLEARANCE FROM INTERIOR FACE OF VOID.
 5. DO NOT NOTCH OR CUT LINTEL BEAMS FOR A/C DUCTS.
 6. LINTEL MAY BE PRECAST CONCRETE, CAST IN PLACE CONCRETE, OR LINTEL BLOCK.
 7. STIRRUPS SHALL BE J-STIRRUPS.

CMU WALL LINTEL SCHEDULE **B**
NO SCALE **S2.2**



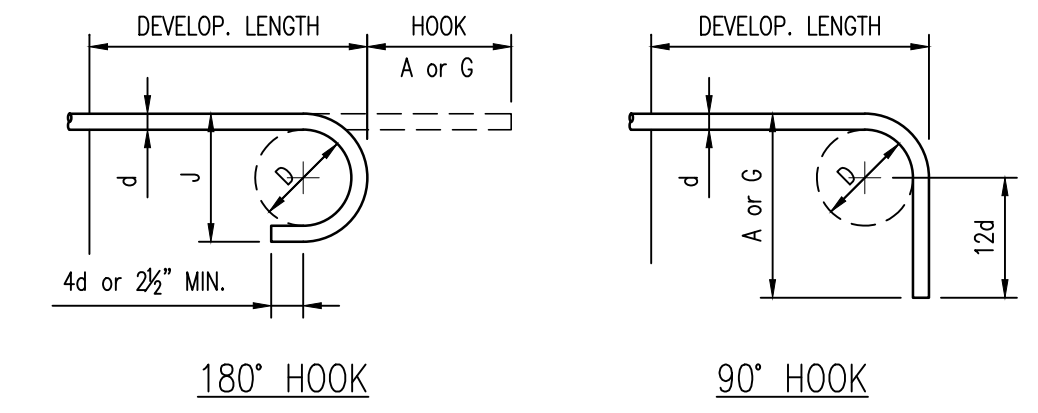
CMU WALL DETAILS **C**
SCALE: 3/4"=1'-0" **S2.2**



BOND BEAM REINF. DETAILS **D**
SCALE: 3/4"=1'-0" **S2.2**

BAR SIZE	REBAR LAP SPLICE LENGTHS					
	f _c = 3,000 PSI		f _c = 4,000 PSI		f _c = 5,000 PSI	
	CLASS A	CLASS B	CLASS A	CLASS B	CLASS A	CLASS B
#3	16"	21"	14"	18"	13"	17"
#4	22"	28"	19"	25"	17"	22"
#5	27"	36"	24"	31"	21"	28"
#6	33"	43"	28"	37"	25"	33"
#7	48"	62"	42"	54"	37"	48"
#8	55"	71"	47"	62"	42"	55"
#9	62"	80"	54"	70"	48"	62"
#10	70"	90"	60"	78"	54"	70"
#11	77"	100"	67"	87"	60"	78"

REBAR LAP SPLICE NOTES:
 1. CLASS B SPLICES SHALL BE PROVIDED FOR ALL COLUMN REINFORCING STEEL.
 2. CLASS A SPLICES ARE ALLOWED FOR CONTINUOUS REINFORCING STEEL IF NO MORE THAN 50% OF THE STEEL IS LAPPED AT THE SAME LOCATION.



BAR SIZE	STD. HOOK DIMENSIONS				DEVELOP. LENGTHS		
	PIN DIAM.	180° HOOK		90° HOOK	CONC. COMPRESSIVE STRENGTH		
		D	A or G	J	A or G	3,000 PSI	4,000 PSI
#3	2 1/4"	0'-5"	0'-3"	0'-6"	6"	6"	6"
#4	3"	0'-6"	0'-4"	0'-8"	8"	7"	6"
#5	3 3/4"	0'-7"	0'-5"	0'-10"	10"	9"	8"
#6	4 1/2"	0'-8"	0'-6"	1'-0"	12"	10"	9"
#7	5 1/4"	0'-10"	0'-7"	1'-2"	14"	12"	11"
#8	6"	0'-11"	0'-8"	1'-4"	16"	14"	12"
#9	9 1/2"	1'-3"	0'-11 3/4"	1'-8"	18"	15"	14"
#10	10 3/4"	1'-5"	1'-1 1/4"	1'-10"	20"	17"	15"
#11	12"	1'-7"	1'-2 3/4"	2'-1"	22"	19"	17"

REBAR STANDARD HOOK NOTES:
 1. D = FINISHED BEND DIAMETERS.
 2. REFER TO ACI 315 FOR ALTERNATE BEND PATTERN DIMENSIONS AND REQUIREMENTS.
 3. ASTM A767 REQUIRES THAT BARS BENT COLD PRIOR TO HOT DIP GALVANIZING MUST BE FABRICATED TO A MINIMUM BEND DIAMETER EQUAL TO 7 INCHES FOR #7 BAR AND 8 INCHES FOR #8 BAR.

TYP REBAR DETAILS **E**
NO SCALE **S2.2**



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APALACHEE
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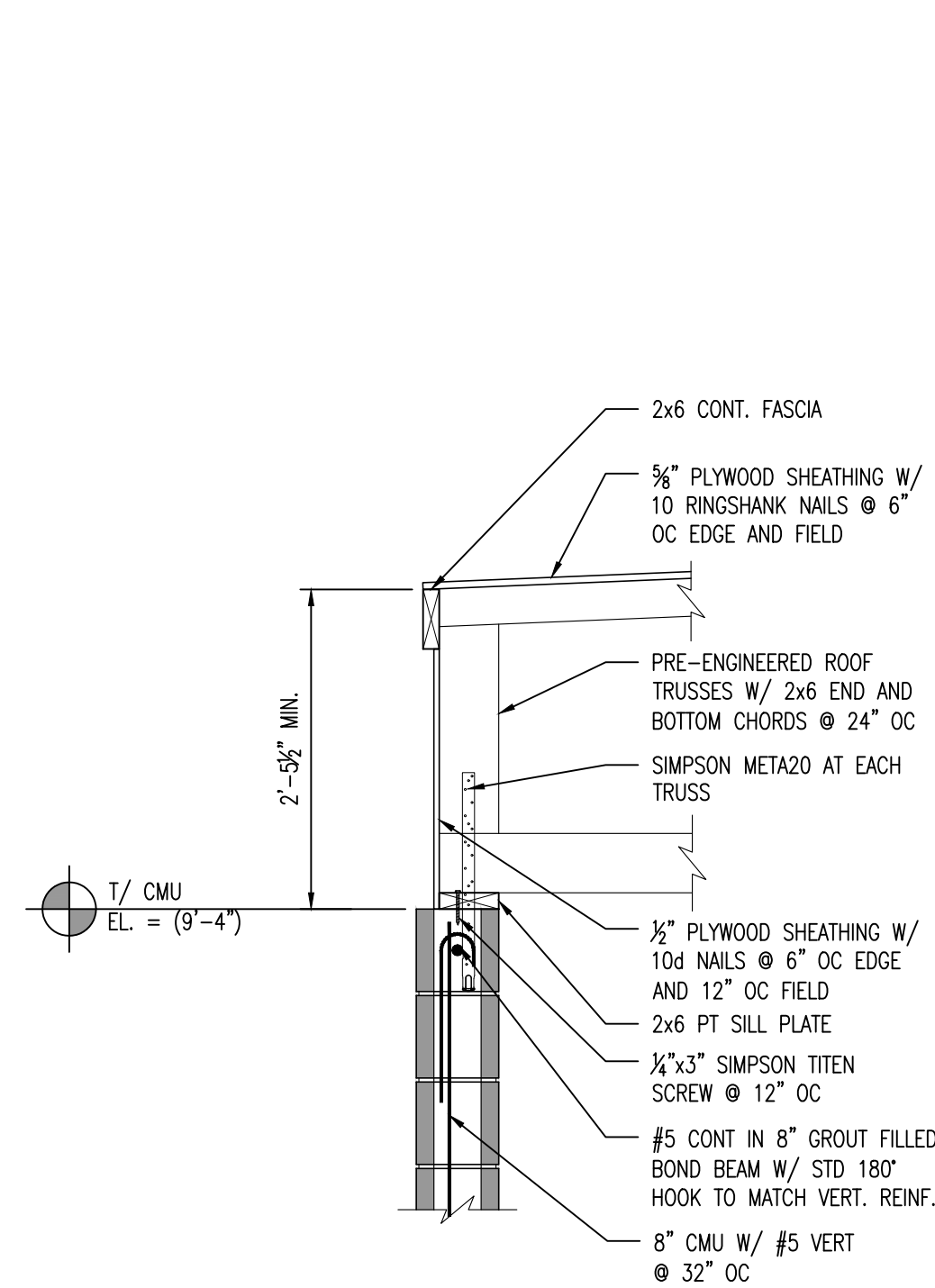
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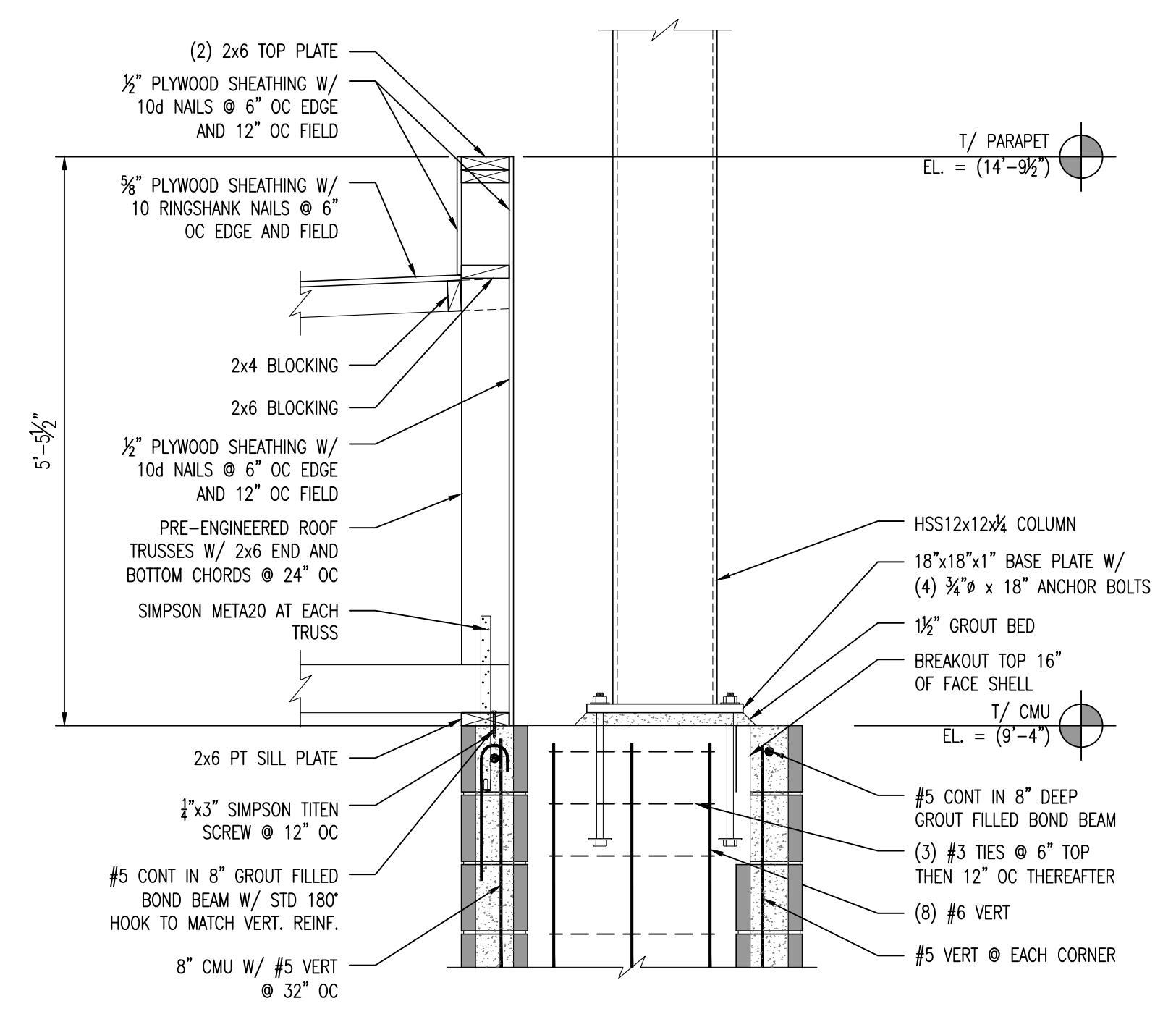
FOUNDATION &
 CMU DETAILS

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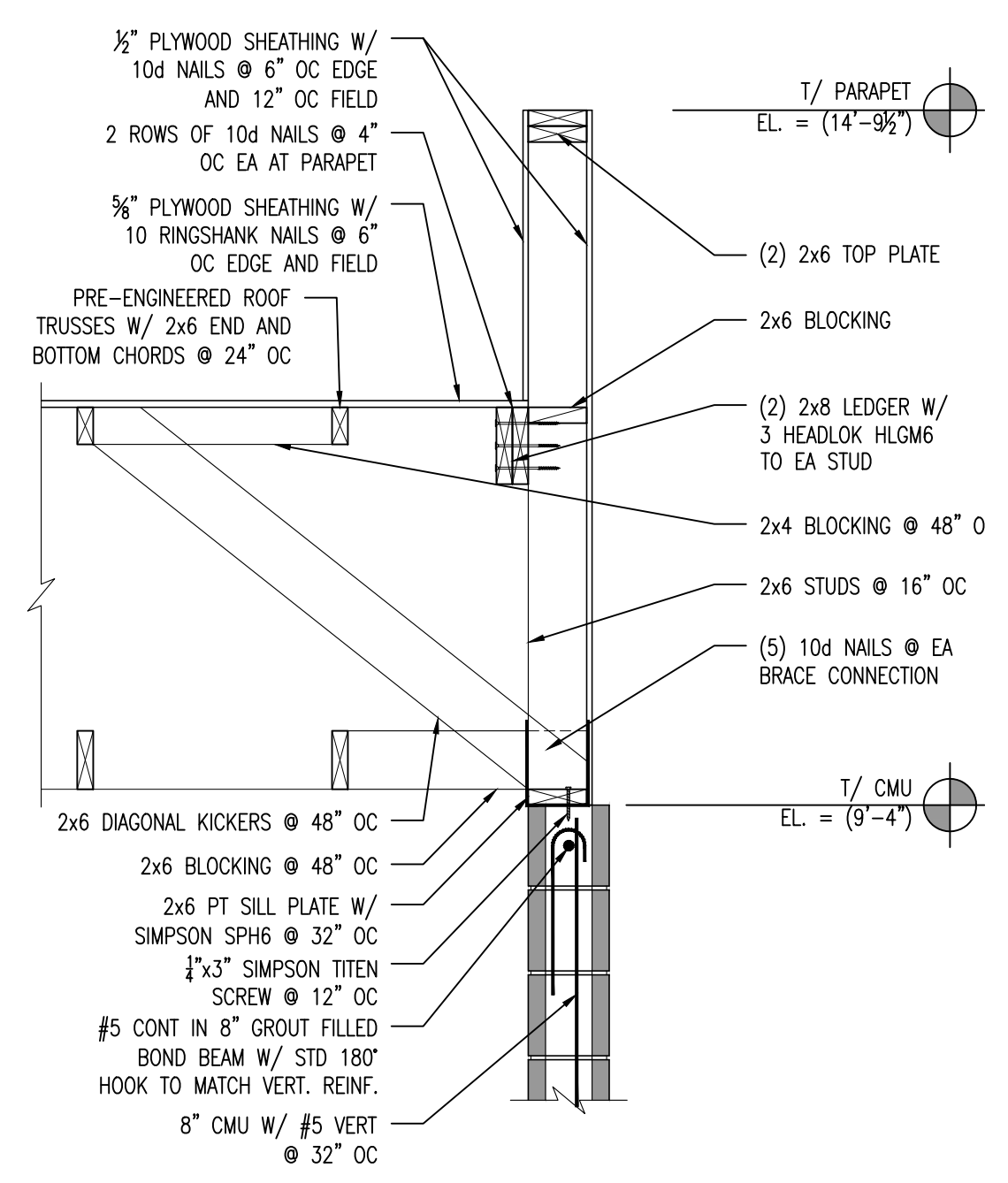
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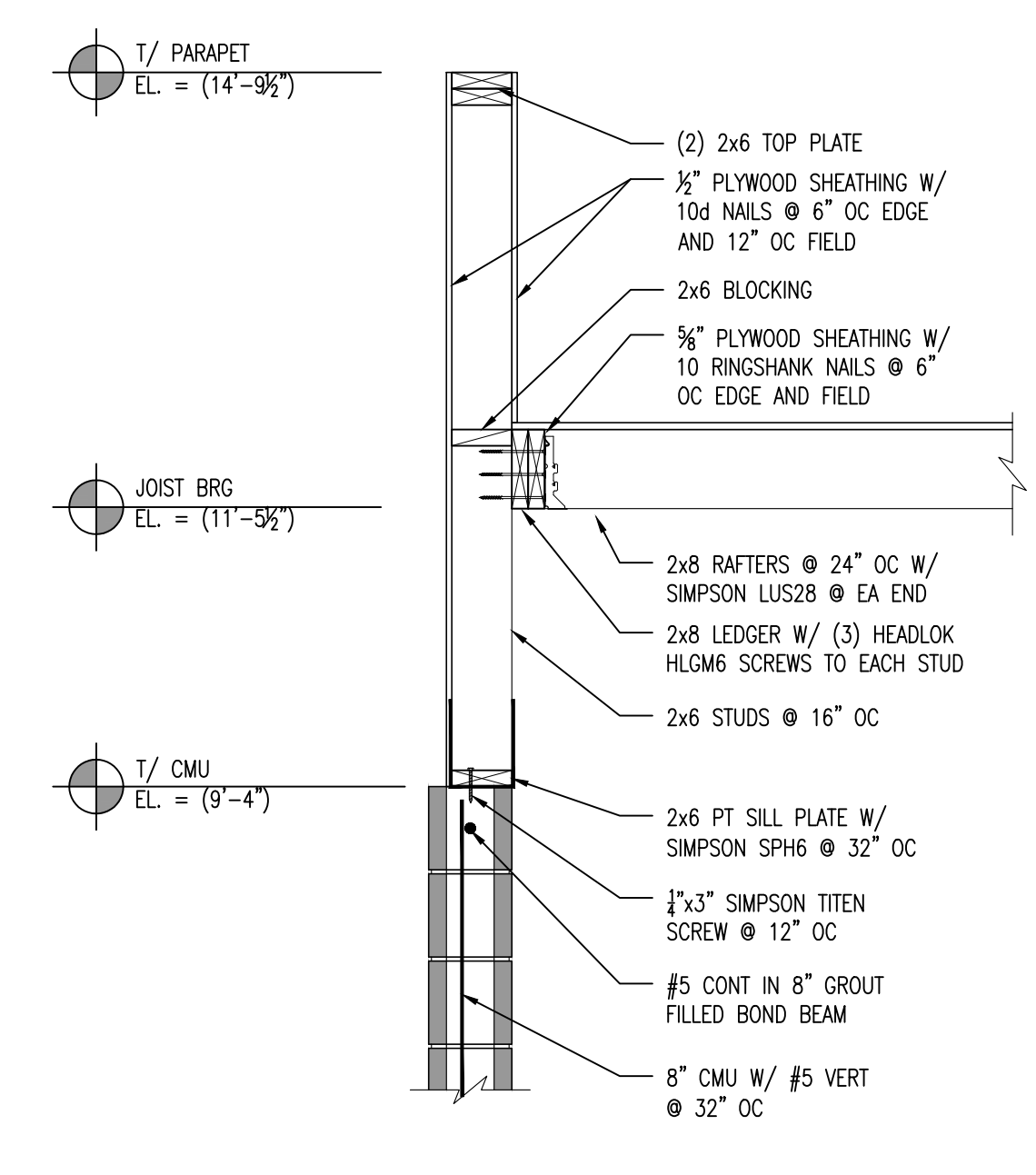
LOW SIDE WALL SECTION **A**
SCALE: 3/4"=1'-0" **S3.1**



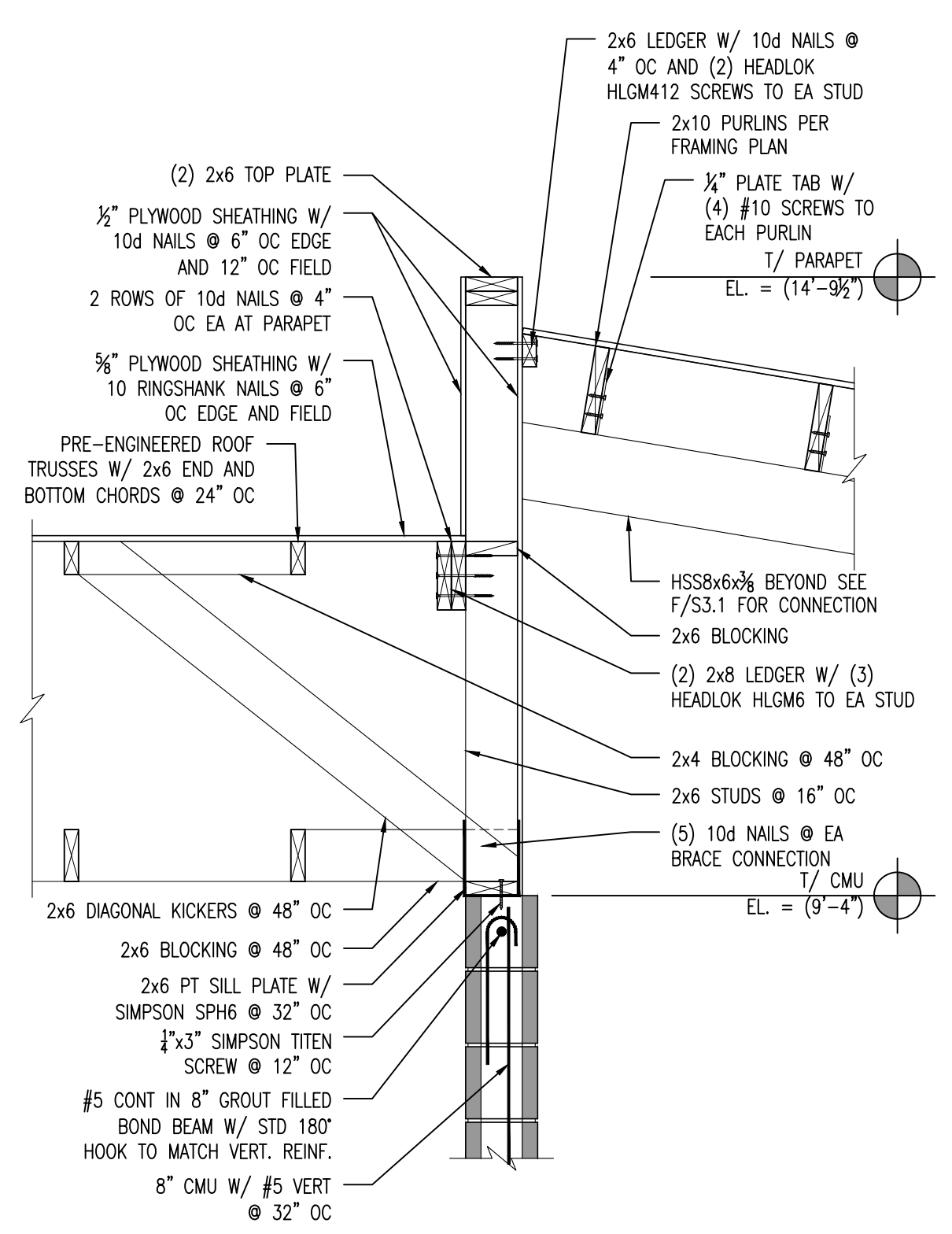
SECTION @ BREEZEWAY **B**
SCALE: 3/4"=1'-0" **S3.1**



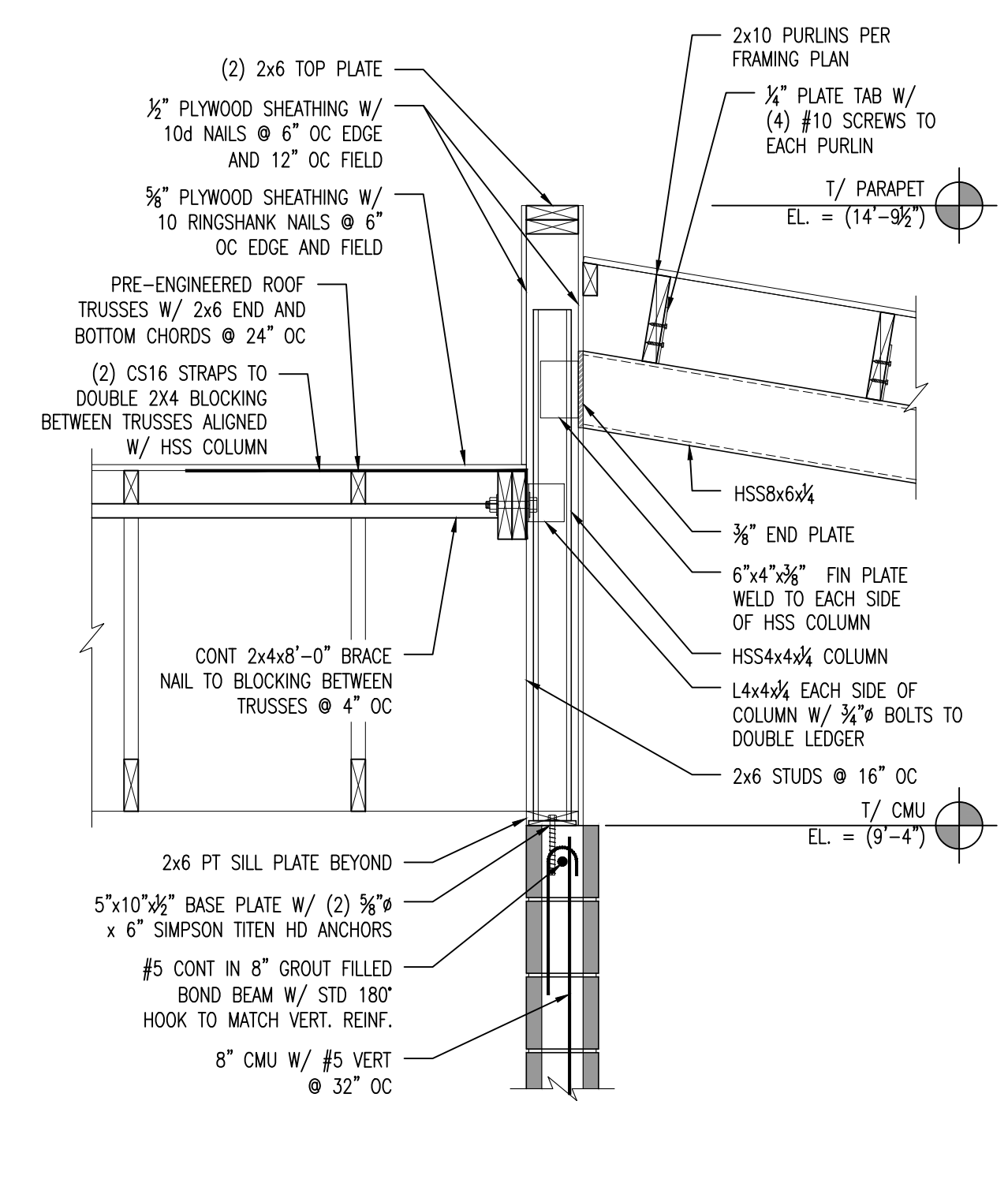
FRONT WALL SECTION **C**
SCALE: 3/4"=1'-0" **S3.1**



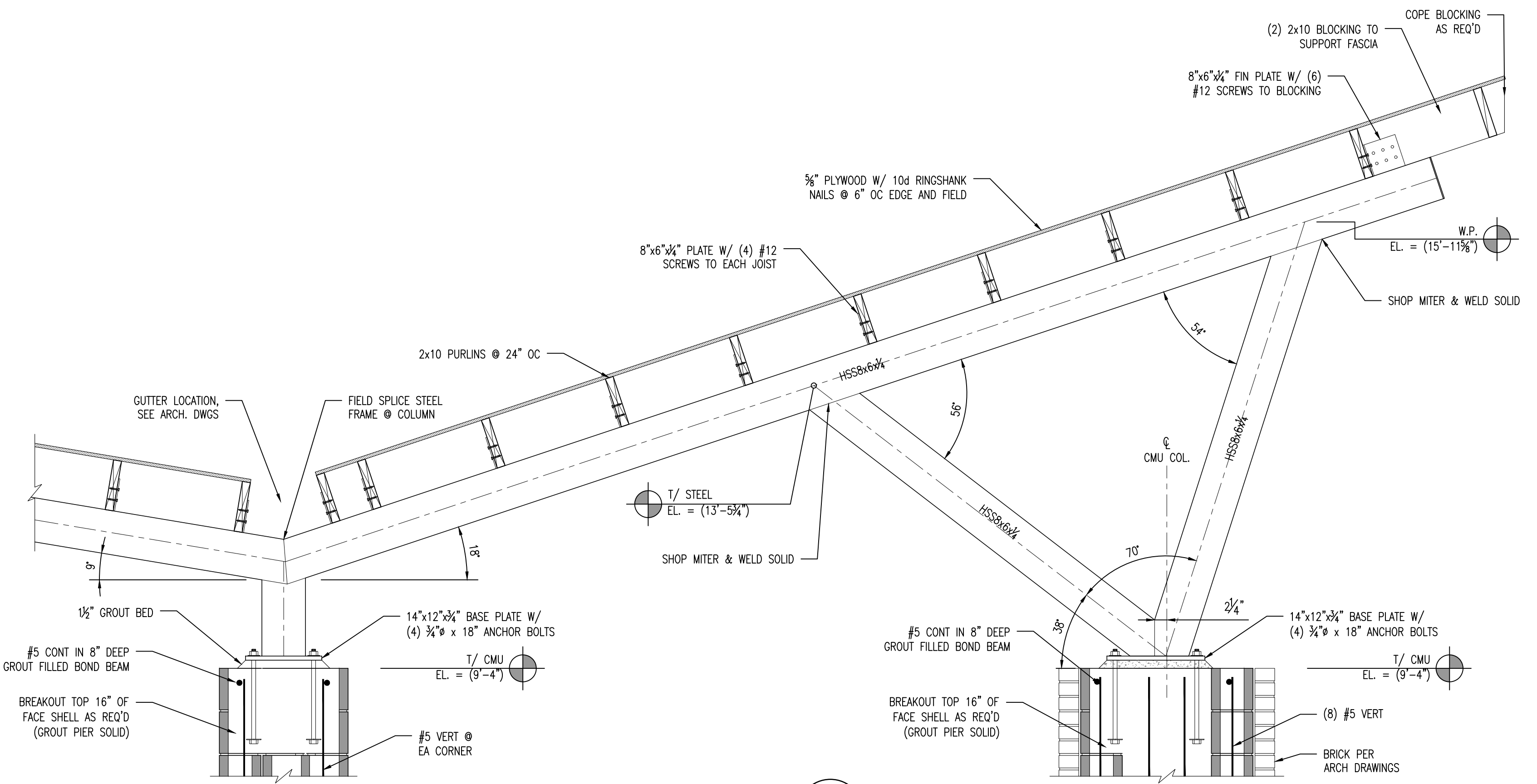
RIGHT SIDE SECTION **D**
SCALE: 3/4"=1'-0" **S3.1**



REAR WALL SECTION **E**
SCALE: 3/4"=1'-0" **S3.1**



REAR WALL SECTION **F**
SCALE: 3/4"=1'-0" **S3.1**



REAR CANOPY SECTION **G**
SCALE: 3/4"=1'-0" **S3.1**



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APALACHEE REGIONAL CROSS COUNTRY VENUE

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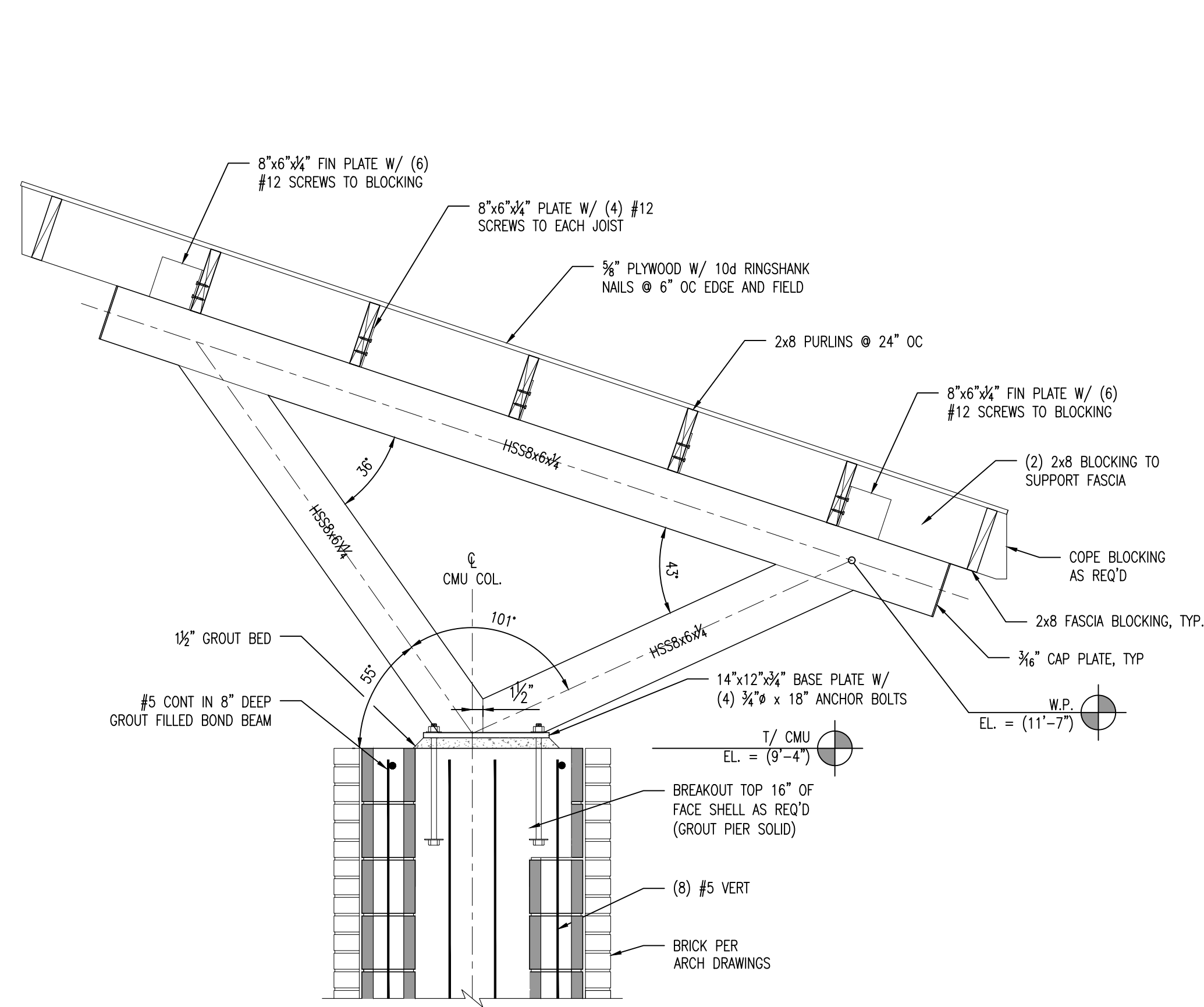
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SECTIONS AND DETAILS

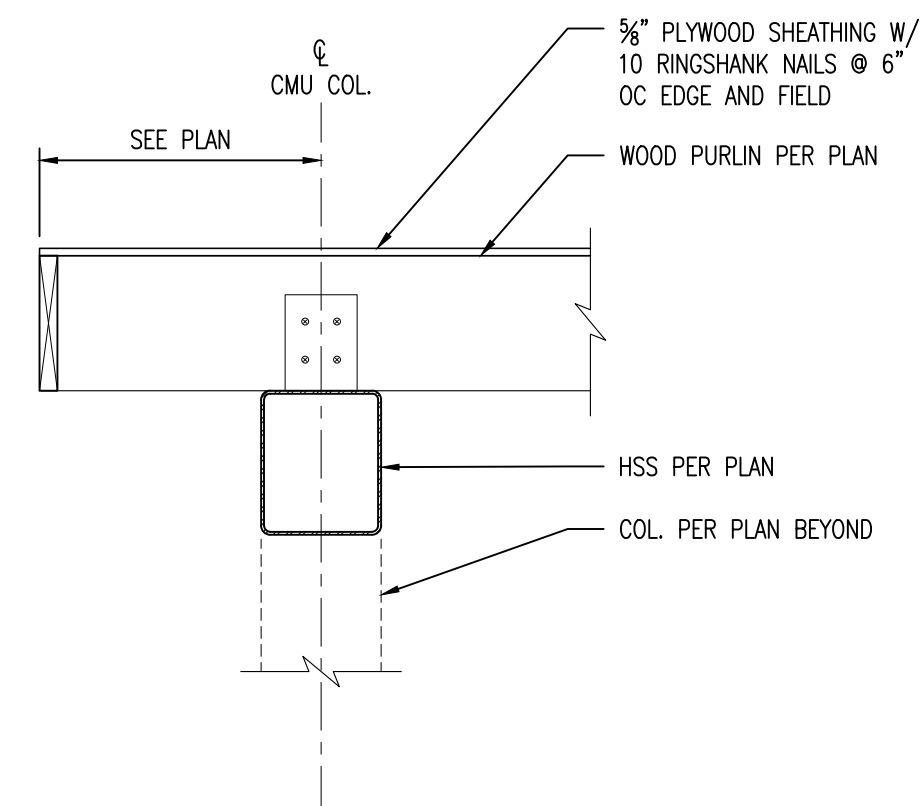
Tallahassee Florida

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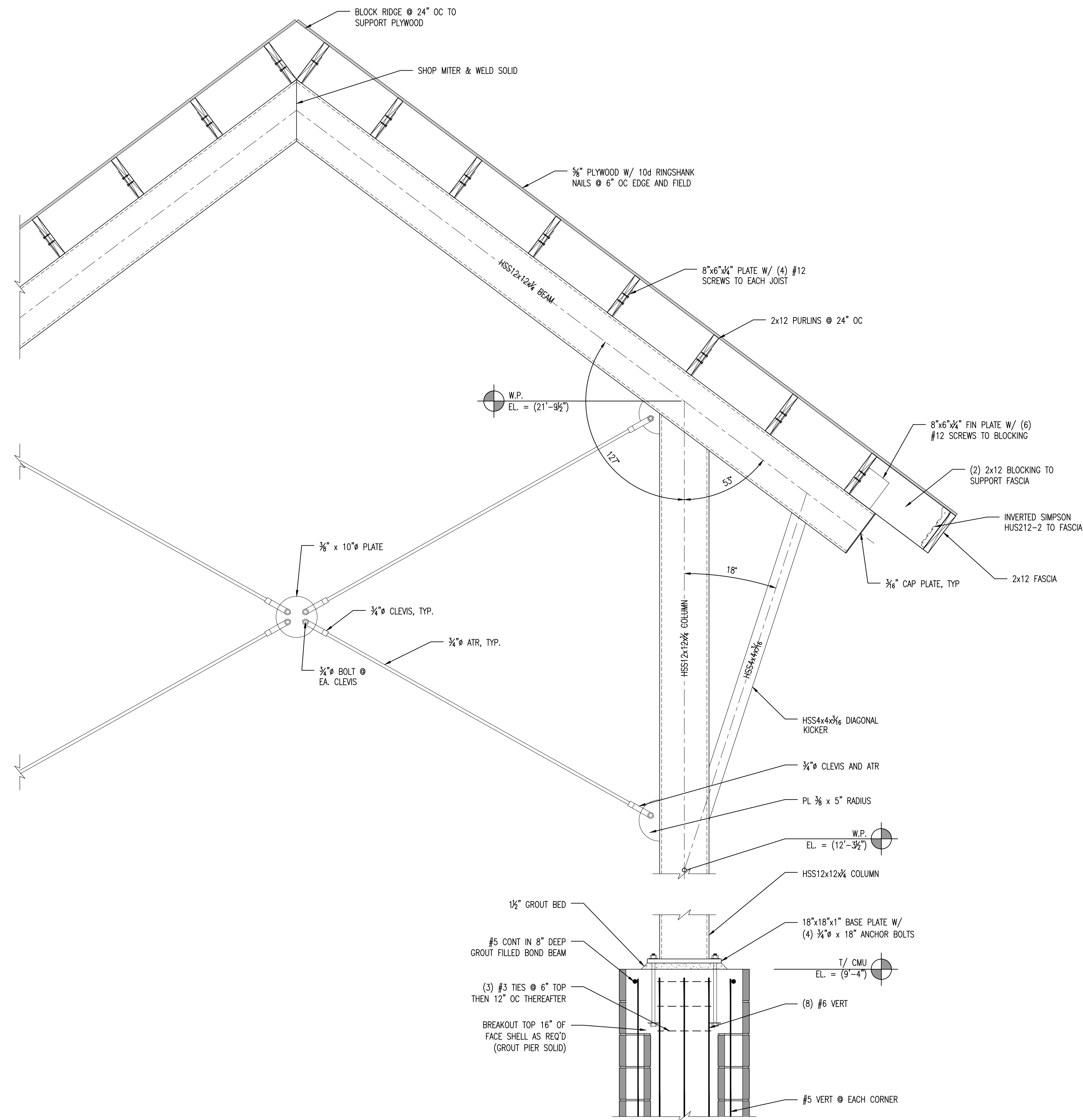
CANOPY SECTION
SCALE: 3/4"=1'-0"

A
S3.2



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

C
S3.2

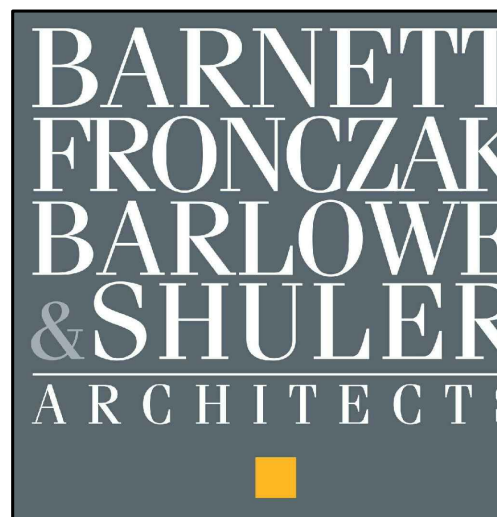


CANOPY SECTION
SCALE: 3/4"=1'-0"

B
S3.2



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Authorization No. 31293



APALACHEE
REGIONAL CROSS
COUNTRY VENUE

18182 Drawn By: BVP
Project Code Checked By: PMM

04 OCTOBER 2019

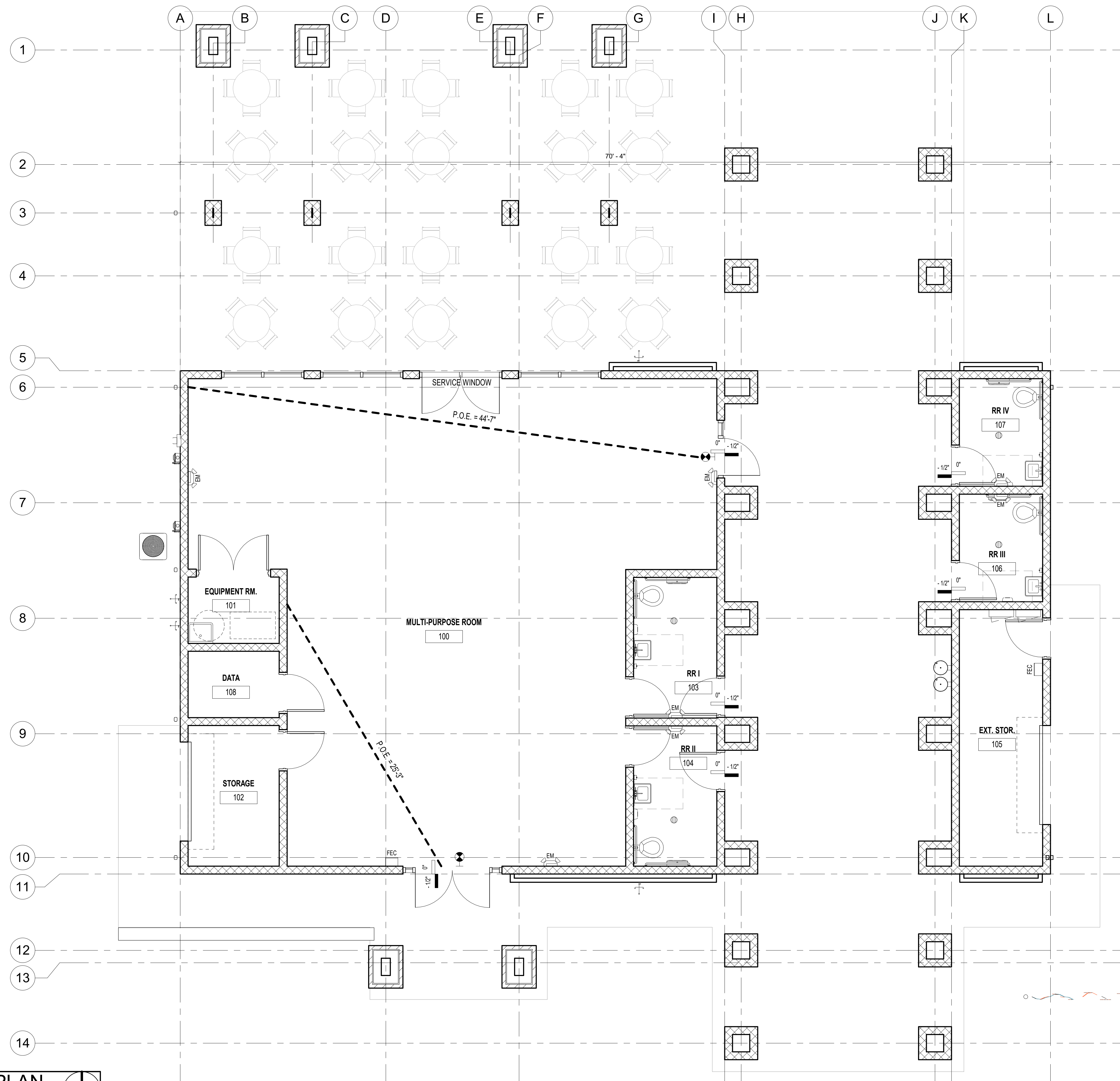
Date
100% BID
DOCUMENTS

Revisions

SECTIONS AND
DETAILS

Tallahassee Florida

S3.2



LIFE SAFETY LEGEND

- PATH OF EGRESS
- EXIT/AREA OF REFUGE LIGHT
- EM
- FEC
- EXIT/AREA OF REFUGE LIGHT
- EMERGENCY LIGHT
- FIRE EXTINGUISHER CABINET

1 LIFE SAFETY PLAN
 LS1.1 1/4" = 1'-0"

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APALACHEE REGIONAL CROSS COUNTRY VENUE

16150 Drawn By: DS
 Project Code Checked By: DS

04 OCTOBER 2019
 Date

BID DOCUMENTS

Revisions

LIFE SAFETY PLAN

Tallahassee Florida

LS1.1

2074 Centre Pointe Blvd, THL, FL 32308
 Phone 850-224-6301 www.bfbsa.com

01 GENERAL REQUIREMENTS

Comply with the requirements of the Agreement between Leon County and the Contractor for the **Apalachee Cross County Venue Facility**.

Summary of work:

This Work consists of all work necessary to construct venue for the Apalachee Cross County Park as shown on the 100% Construction Documents titled Leon County Apalachee Cross County Venue by Barnett Fronczak Barlowe & Shuler Architects. (BFBS Architects) The Work includes, but is not limited to, site work, site utilities, cast-in-place concrete, masonry walls, steel trusses, plywood sheathing, standing seam metal roofing, TOP membrane roofing, fiber-cement soffits and trim, aluminum louvers, abuse resistant fiber cement panels, hollow metal doors and frames, finish hardware, toilet partitions, toilet accessories, sealants and caulking, painting, signage, new plumbing fixtures and accessories, exhaust systems, lighting and electrical work.

Comply with requirements of applicable product or trade standards, except when more rigid requirements are specified or are required by applicable codes. Substitutions are allowed for all products and materials specified below, unless otherwise noted.

Substitutions: Adhere to the substitution requirements of Leon County.

The following specifications are general in nature and apply only where applicable, as shown on the Drawings.

02 DEMOLITION AND SITE WORK

Protection of Existing: Provide protection for all existing elements in the Project and in the Work Area. Provide dust and debris containment barriers protecting existing areas as needed. Coordinate location and type of protection with Architect and Site Manager.

Coordinate access and time of work with the Site Manager.

03 CONCRETE

See Structural Drawings

Cast-in-Place Concrete: All concrete work shall conform to the American Concrete Institute's "Building Code Requirement for Structural Concrete" (A.C.I. 318-11). Concrete shall have a minimum compressive strength at 28 days of 3,000 psi.

04 MASONRY

See Structural Drawings for design loads, foundation notes, design details and general conditions.

Exterior Walls: Basis of Design for masonry wall shall be 8" masonry scored block, 8" smooth block and brick veneer. NOTE: All block sides connected to the door and louver jams, etc.; will be required to have a smooth face.

Submit samples and brick color samples for selection from manufacturer's product line. Submit product literature, certifications, test reports and full size sample(s) of each color specified. Certifications: Concrete blocks for grinding shall conform to ASTM C90. Colored matching or contrasting mortar is available from manufacturer.

Units shall be delivered to the jobsite on wooden pallets. Store pallets on level ground and cover with waterproof covering (e.g. tarpaulins) carefully to avoid breakage and damage to the finished surfaces. Protection of Work: Cover walls each day after installation to keep open walls protected and dry. After units are installed they should be protected from damage by other trades performing operations that can stain or damage.

Carefully following manufacturer's instructions, use Custom Masonry Cleaner and Burnished Custom Masonry Cleaner by PROSOCC (dilute 1 part to 3 parts clean water). Available from manufacturer. DO NOT POWERWASH. CAUTION! Never use Muriatic Acid solution or any cleaner with an acid base on units.

Draw blocks from more than one pallet at a time during installation. All exterior mortar shall include manufacturer approved matching water repellent additive added to each batch in the appropriate dosage rates for mortar type (M, S or N) per manufacturer's instructions. See MFG instructions for hot and cold weather construction practices.

Lay units using the best concrete masonry practices. Install only quality units; reject all defective units as defined by ASTM C90. Lay blocks with the faces level, plumb and true to the line strung horizontally at the ground or filled and polished face. Units shall have uniform, 3/8"-wide joints both horizontally and vertically on the finished side of the wall. Tool joints neatly after they are finger-hard to make them straight and uniform. Size and place cut pieces appropriately to maintain consistency and bond. Complete masonry construction using procedures and workmanship consistent with the best masonry practices.

Cutting: Make all unit cuts, including those for bonding, holes, boxes, etc., with motor-driven masonry saws, using either an abrasive or diamond blade. Cut neatly and locate for best appearance. Lay units with full mortar coverage on head and bed joints taking care not to block cores to be grouted or filled with masonry insulation. Tool all mortar joints when thumbprint hard into a concave configuration. Care should be taken to remove mortar from the face of masonry units before it sets. Tuck-point the joints of scored units for proper appearance. All exterior scored units must be tuck-pointed to prevent water penetration.

The faces shall conform to the requirements of ASTM C90 when viewed from a distance of twenty (20) feet at right angles to the wall with normal lighting. Install flashing at locations shown in the plans; strict accordance with the details and the best masonry flashing practices.

Keep walls clean daily during installation using brushes, rags and the burlap squares supplied on the pallets. Do not allow excess mortar lumps or smears to harden on the finished surfaces. Harsh cleaning methods after walls have been erected will mar the surface of the blocks.

Cast Stone Masonry: Provide cast stone caps as shown on the Drawings and as specified herein. Provide cast stone units using either vibrant dry-lamp or wet-cast method.

Provide Shop Drawings for cast stone caps. Include plans, elevations, sections, and details for attachment to other Work.

05 METALS

See Structural Drawings for design loads, foundation notes, design details and general conditions.

06 WOOD AND PLASTICS

Rough Carpentry: Provide all wood roof sheathing, grounds, nailers and blocking. Comply with PS 20 "American Softwood Lumber Standard" and PS 1 "U.S. Product Standard for Construction and Industrial Plywood," dressed S4S, 19% max. moisture content. No. 2 grade or better. Install wood grounds, nailers and blocking where required for attaching of other work. Form to shapes required for true level and line of attached work. Coordinate locations with other work involved.

Nails, Wire Brads and staples shall comply with FS FF-N-105 and wood screws shall comply with ASME B18.6.1

Plywood backing panels for electrical panels shall be screwed to supports.

Interior Finish Carpentry: As required.

Provide finish carpentry that complies with AWI premium grade construction. Provide product data, details and shop drawings consisting of dimensioned plans and elevations, large scale details, attachment devices and other components. Provide samples of solid surfacing materials and lumber products stained to match Architects sample.

07 THERMAL AND MOISTURE PROTECTION

Thermoplastic Olefin (TPO) Roofing: Provide TPO membrane roofing to withstand wind loads, structural movement thermally induced movement and exposure to weather.

Provide GAF TPO membrane and related products for a complete installation of a comparable product as approved by the Architect.

Roofing Membrane shall be Everguard TPO Adhered membrane, smooth surface, 60 mil thickness, 8'-0" width, white, adhesively applied to roof board.

Before roof construction, conduct a Preliminary Roofing Conference at the Project Site to review methods and procedures related to roofing installation, including manufacturer's written instructions. Provide verification samples for all of the components of the Work. Only firms qualified approved, authorized or licensed by the roofing system manufacturer will be allowed to perform the Work.

Install Roofing System according to roofing system manufacturer's written instructions for an Adhered Installation. Comply with typical GAF Everguard TPO Adhered Roofing system application and specification manual.

Provide a warranty including membrane roofing, roof insulation, fasteners, cover boards and roofing accessories and other components of the roofing system for a Warranty Period of 25 years from the date of Substantial Completion.

Building Insulation: Provide Closed-Cell Spray Polyurethane Foam: ASTM C1029, Type II with a min. R-Value of 19 in the walls and 30 in the ceiling. Flame-Spread Index: 25 or less. Smoke-Development Index: 450 or less - passing ASTM E 138 for combustion characteristics in locations as shown on the Drawings. (Basis of Design: Icynene ProSeal)

Comply with insulation manufacturer's written instructions applicable to specified products. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fill around obstructions and fill voids with insulation.

Weather Barriers: Provide Butyl Rubber, flexible underlayment and flashing under all surfaces of Standing Seam Sheet Metal Roofing panels. Material shall be composite, self adhesive product consisting of a pliable, butyl rubber compound, bonded to a high-density polyethylene film, aluminum foil or spunbonded polyolefin to produce an overall thickness of 30 mil.

Provide Owens Corning Weatherlock Specialty Tile and Metal Waterproofing Barrier or comparable product approved by the Architect. Install in accordance with manufacturer's recommendations

Standing-Seam Metal Roof Panels: Provide standing seam metal roof panels as shown on the Drawings. Provide Vertical Rib, Seamed-Joint metal roof panels formed with vertical ribs at panel edges and a flat pan between ribs; designed for sequential installation by mechanically attaching panels to supports using concealed clips located under one side of the panels, engaging the opposite edge of adjacent panels, and mechanically seaming panels together.

Acceptable systems are can be directed by AEP Span, Berridge, Centria, Englert, Petersen or MBCI.

Provide 24 gauge metallic coated steel sheet, zinc coated or aluminum-zinc alloy coated steel sheet. Panels shall be pre-painted with a two coat fluoropolymer exterior coating, 0.34 inch nominal thickness. Panel coverage shall be 16 inches with a panel height of 2.0 inches.

Examine substrates for compliance with requirements of manufacturer. Provide self-adhering underlayment prior to installation of panels. Install metal roof panels, trim and accessories to comply with manufacturer's written installation instructions applicable to products and applications indicated.

Metal Soffit Panels: Provide Flush-Profile, Concealed Fastener Metal Soffit Panels as shown on the Drawings and as specified herein. Basis of Design for soffit panels shall be "Artisan Series" by MBCI, 1 inch thickness by 8 inch coverage, concealed fastening system, smooth finish, 24 gauge or a comparable product approved by the Architect.

Provide exterior soffit panels capable of withstanding the effects of loads and stresses from wind and normal thermal movement without evidencing permanent deformation of door components. Provide certification from a licensed Florida Professional Engineer that system provided meet the requirements of the Florida Building Code for the wind zone of the application. Provide aluminum framed systems with a 1 year Warranty from defects in material and workmanship and a 40 year warranty for High Performance finishes.

Provide Product Data and Shop Drawings for metal soffit systems. Include plans, elevations, sections, details and attachment to other Work. Include details of how system coordinates with light gauge framing and spacing of structural elements.

Provide manufacturers High-Performance Organic Finish consisting of a 2-coat fluoropolymer finish complying with AAMA 2604 and containing not less than 70 percent PVDF resin by weight in color coat. Color and gloss shall be as selected by Architect from manufacturer's full range.

Fiber-Cement Wood Trim and Soffits: Provide ASTM C 1186, Type A, Grade II, noncombustible fiber board by James Hardie Building Products, Inc. or comparable product acceptable to the Architect. Provide soffit materials not less than 5/16" thick, smooth textured to receive paint. Provide 25 year Special Warranty to repair or replace products that fail in materials or workmanship

Provide fiber-cement wood trim and soffits, accessories, starter strips, edge trim, outside and inside corner strips and other items as manufactured by fiber cement manufacturer for configuration as shown on the Drawings. Provide aluminum flashing at windows and door heads. Provide ribbed bugle-head screws of sufficient length to penetrate a minimum of 1 inch into substrate.

Examine substrates for compliance with requirements of manufacturer. Install soffits, trim and accessories to comply with manufacturer's written installation instructions applicable to products and applications indicated.

Sheet Metal Flashing and Trim: Provide sheet metal flashing and trim, gutters and downspouts to withstand wind loads, structural movement, thermally induced movement and exposure to weather.

Fabricate sheet metal flashing and trim to comply with recommendations of SMACNA's Architectural Sheet Metal Manual that apply to the design, dimension, metal, and other characteristics of the item indicated. Fabricate cleats and attachment devices from same material as sheet metal component being anchored or from compatible, noncorrosive metal recommended by sheet metal manufacturer.

Fabricate all flashing materials from aluminum. Flashing thickness shall be 0.032 inch minimum.

Sealants and Caulking: Provide Nonstaining, Silicone sealant, single component for all exterior applications. Joint sealant shall be neutral curing, non-traffic to comply with ASTM C 920, Type S, Grade NS, Class 50.

Provide mildew-resistant joint sealants at all joints between plumbing fixtures and adjoining walls, floors and counters and all tile control and expansion joints.

Provide Acrylic latex joint sealants at perimeter joints between interior wall surfaces and frames of interior doors and other joint as indicated on the Drawings

Mildew-resistant joint sealants shall be Dow Corning 786-M White or comparable product approved by the Architect .

Acrylic latex joint sealants shall be Tremco Incorporated Tremflex 834 or comparable product approved by the Architect .

Silicone joint sealants shall be Dow Corning 795 or comparable product approved by the Architect.

Sealants Below Grade: SONOLASTIC® POLYSULFIDE SEALANT or equal. High-performance electromagnetic nonsag sealant. Multi-component, high-performance, low-modulus polysulfide sealant. Electrometric properties allow +25% joint movement. Withstands constant water immersion. No degrade under limited chemical exposure.

Water Repellent: Sure Kleen® Weather Seal Blok-Guard® & Graffiti Control II Water Repellent Specification or equal. A clear-drying, water-based silicone emulsion for weatherproofing concrete block and other porous masonry materials and protecting them from graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control II is appropriate for interior and exterior use. Blok-Guard® & Graffiti Control II is easy to apply with low-pressure spray, brush or roller, and protects exterior walls exposed to normal weathering. Graffiti removal from treated surfaces is fast and easy using Defacer Eraser® Graffiti Wipe. Adhere to mfg technical specifications for application. Test a minimum 4 ft.by 4 ft. area on each type of masonry. Use the manufacturer's application instructions. Let protective treatment test area cure before inspection. Keep test panels available for comparison throughout the protective treatment project.

08 DOORS AND WINDOWS

Steel Doors and Frames: Comply with Steel Door Institute "Recommended Specification for Standard Steel Doors and Frames" ANSI/SDI-100, Grade II for interior doors. Provide galvanized units. Frames shall be minimum 16 gauge. Coordinate hardware installation with supplier of finish hardware.

Provide prime painted finish, manufacturer's standard factory applied coat of rust inhibiting primer complying with ANSI 250.10.

Finish Hardware: Provide door hardware for swinging doors as scheduled on the Drawings. Basis of Design is Corbin Russwin CL 3100 Series Locksets, Princeton Design, satin chromium plated or comparable product acceptable to the Architect.

At exterior aluminum entry doors, provide panic hardware (Entry function) At doors to restrooms, provide CL3120 Series. (Privacy function). At all other doors, provide CL 3157 Series. (Storage function).

Hinges shall be Stanley FBB191 Series, stainless steel at exterior doors and satin chromium plated at all other openings, 3-1/2 x 3-1/2. Provide silencers at all doors that do not have weathersstripping.

Closers shall have a warranty of 10 years from the Date of Substantial Completion. All other hardware shall be warranted for a minimum of three years. Provide closers for all doors and with parallel arms for doors that open outward

Keying shall be as directed by the Owner. Install each door hardware item to comply with manufacturer's written directions.

Provide weathersstripping and aluminum thresholds at all exterior doors.

Overhead Ceiling Doors: Provide exterior heavy duty rolling service door as shown on the Drawings and specified herein. Basis of Design manufacturer shall be Overhead Door AStormite 610@ series.

Series 610 doors shall be provided with F-265 slats, 20 gauge galvanized steel galvanized per ASTM A-653.

Provide rolling service doors capable of withstanding the effects of loads and stresses from wind and normal thermal movement without evidencing permanent deformation of door components. Provide certification from a licensed Florida Professional Engineer that system provided meet the requirements of the Florida Building Code.

Provide Product Data and Shop Drawings for rolling service doors. Include plans, elevations, sections, details and attachment to other Work

Glazing: Provide glazing for aluminum framed entrances and storefronts. Glazing shall be SOLARBAN 60 solar control Low-E glass by PPG or comparable product acceptable to the Architect. Provide 1 inch insulating units for all applications. Provide heat strengthened tempered glass units to meet applicable requirements and regulations of authorities having jurisdiction.

Provide minimum glass thickness to comply with ASTM E 1300 and wind loads applicable to the Project. Provide vertical glazing with a probability for breakage of 8 lites per 1,000 with a load duration of 60 seconds or less.

09 FINISHES

Gypsum Board Assemblies: Provide abuse resistant interior gypsum wallboard as shown on the Drawings.

Interior gypsum wallboard ceiling panels shall be Fiberock Aqua-Tough Abuse Resistant gypsum panels as manufactured by United States Gypsum, 5/8" thickness installed on 3/4" furring channels spaced a maximum 16" on center. Screw attach ceiling panels to metal furring. Joint treatment materials shall comply with ASTM C 475 and shall be setting type sandable compound for taping and all purpose joint compound as recommended by the manufacturer for finishing.

Resilient Base: Provide rubber wall base and accessories as shown on the Drawings.

Provide 1/8" thick smooth cover base with top-set toe. Provide continuous coil lengths with preformed outside corners and ends and job-fit inside corners.

Examine substrates, areas and conditions under which base and accessories will be installed for compliance with manufacturer's requirements. Clean and prepare surfaces according to manufacturer's written instructions for each particular substrate condition.

Painting: The Scope of Work includes painting all exposed interior and exterior surfaces. Painting includes field painting of exposed bare and covered pipes and ducts, hangers, exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment

Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts and labels

Examine substrates, areas and conditions under which painting will be performed for compliance with paint application requirements. Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition. Provide barrier coats over incompatible primers or remove and reprime. Provide block fillers, primers, undercoats and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied. Provide the following finish systems. Paint materials shall be best quality products by Devco, Fuller, Glidden, Moore, PPG or Pratt and Lambert:

Gypsum wallboard partitions and ceilings: Provide 2 coats latex egg shell latex enamel over a primer for ceilings and a semi-gloss Acrylic-Enamel finish over a primer for walls.

Ferrous metal (interior and exterior): Provide 2 coats of full gloss, Alkyd-Enamel finish over a galvanized metal primer.

Concrete Floors: Provide Vulkem 2102 Silicate Sealer, Hardener and Dustproofor.

Exposed Concrete Masonry Units: Provide Sherwin Williams Sher-Crete single component, water based system over Sherwin Williams Loxon Concrete and Masonry Primer/Sealer or comparable product acceptable to the Architect.

Exposed Concrete Masonry Units (Interior Restrooms): Provide Sherwin Williams Pro-Industrial Pre-Catalyzed Water Based Epoxy Egg Shell Series, Intermediate and Topcoats over Sherwin Williams Pro-Industrial Heavy Duty Block Filler or comparable product acceptable to the Architect.

10 SPECIALTIES

Louvers and Vents: Provide aluminum wall and door louvers as shown on the Drawings. Wall louvers shall be fixed-blade louvers with extruded aluminum frames and blades, 6" deep with a frame and blade thickness not less than 0.081 inch. Provide aluminum louver insect screens on inside face of louver.

Signs: Provide Cast Dimensional Letters as shown on the Drawings and as specified herein. Letters shall be cast aluminum with natural satin finish. Provide manufacturer's standard clear organic coating.

Mount letters using standard fastening methods recommended by the manufacturer for letter form, type of mounting, wall construction and condition of exposure indicated.

Fire Extinguishers and Cabinets: Provide 5 lb. unit with 3A40BC rating standard. Fire extinguisher cabinets shall be surface mounted with no trim, suitably sized for specified fire extinguisher. Cabinet shall be constructed of 0.097 thick steel sheet, powdered coated.

Door shall be a fully glazed panel with frame, glazed with tempered break glass. Provide manufacturer's standard door operating hardware of proper type for cabinet type, door trim style and door armarial.

Provide one fire extinguisher in cabinet locations as shown on the Drawings.

Signage: Provide ADA compliant accessible restroom exterior rated signage for each Men's Restroom and Women's Restroom. Signs shall be 6 inches W x 9 inches H with raised tactile graphics and wording. Signage shall include Braille identification.

Toilet Accessories: Provide toilet accessories as delineated on the Drawings. Prior to ordering of accessories, verify with Owner Product designations and operation. Coordinate accessory locations with other Work to prevent interference with clearances required for access by disabled persons, proper installation, adjustment, operation, cleaning and servicing of accessories.

Mirrors shall be warranted for a minimum of 15 years from date of Substantial Completion.

Install accessories according to manufacturer's written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units lever, plumb, and firmly anchored in locations and at heights indicated.

GENERAL NOTES

1. The Contractor shall field verify all dimensions and conditions. If the Contractor is unable to interpret the contract documents, he is responsible for requesting clarification in writing to the Architect. If the Contractor proceeds with any work before obtaining clarification, he shall be responsible for all associated deficiencies.

2. Prior to commencement of the work, the Contractor shall visit the site to examine the premises and become familiar with existing conditions under which he will be obliged to operate and complete the work under this contract. No allowance will be made subsequently in this connection on behalf of the Contractor for any error or negligence on his part.

3. The Contractor shall coordinate the work with all subcontractors and sequence demolition and construction to minimize interruptions to the normal operations of the building. This coordination shall be reviewed and approved by the Leon County designee or project manager.

4. The Contractor shall maintain all egress paths clear. Where an egress path must be temporarily blocked, the Contractor shall provide barricades and directional signs as needed to maintain exiting and safety.

5. The Contractor shall erect and maintain all reasonable safeguards for safety and health, including posting danger signs and other warning against hazards, as well as promulgating safety standards.

6. The Contractor shall be restricted to areas specified by the Owner for on-site storage of materials.

7. The Contractor shall maintain a clean work premise at all times and shall clean construction site of all debris daily. The work premise shall be clean at completion of job and before final payment is made.

8. The Contractor shall install all items and systems required by these plans in accordance with the manufacturer's directions unless required otherwise by these plans or any applicable building code or regulation.

9. All work shall be installed in accordance with all applicable building codes or regulations currently in effect at the time of construction. Where conflicts occur between codes and between construction documents and codes, the most restrictive requirements shall govern unless restricted otherwise by local statutory requirements.



APALACHEE REGIONAL CROSS COUNTRY VENUE

16150 Drawn By: DS
Project Code Checked By: DS

04 OCTOBER 2019
Date

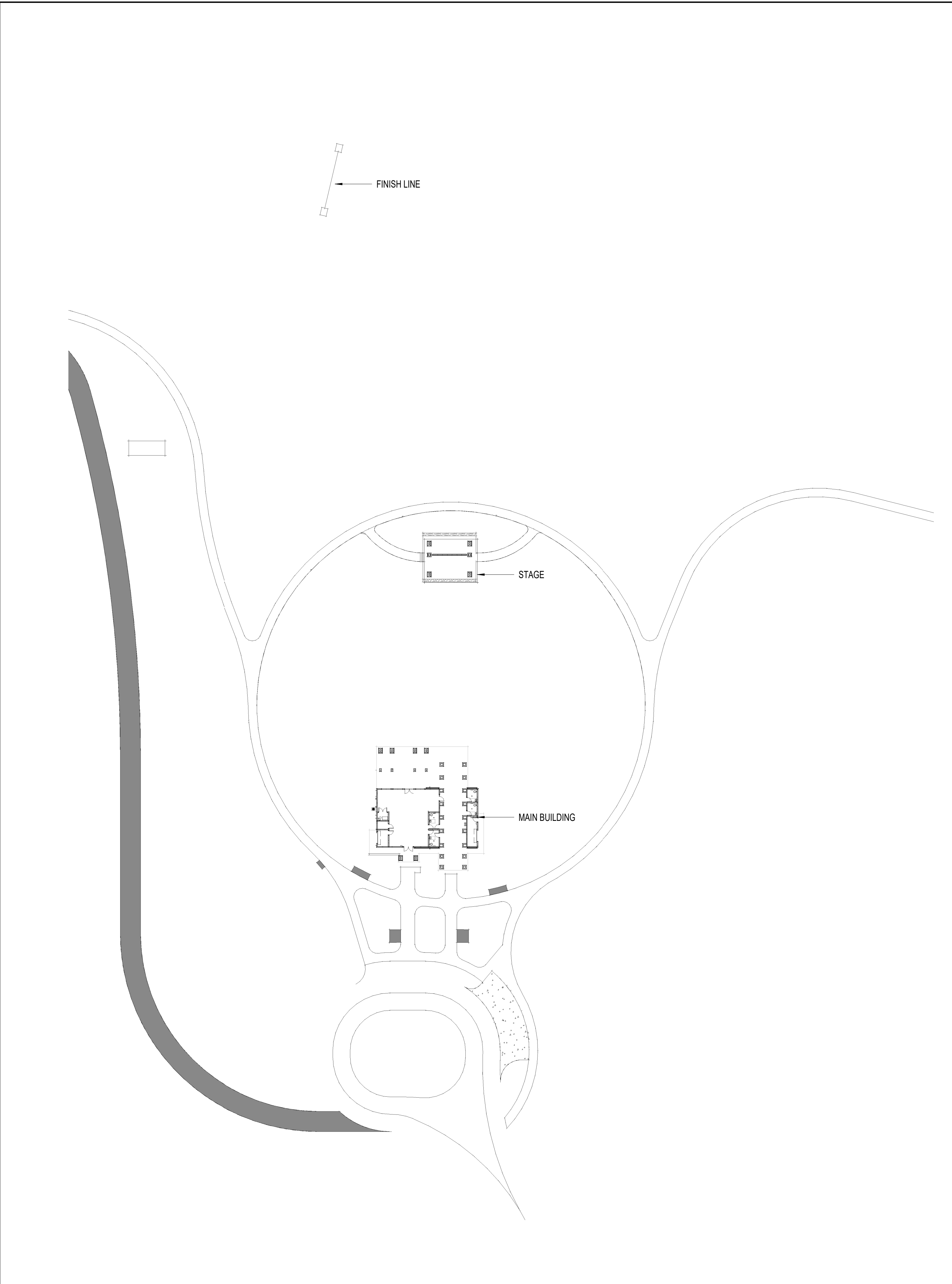
BID DOCUMENTS

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ARCHITECTURAL SPECIFICATIONS

Tallahassee Florida

A0.0



**APALACHEE
REGIONAL CROSS
COUNTRY VENUE**

16150 Drawn By: jh2
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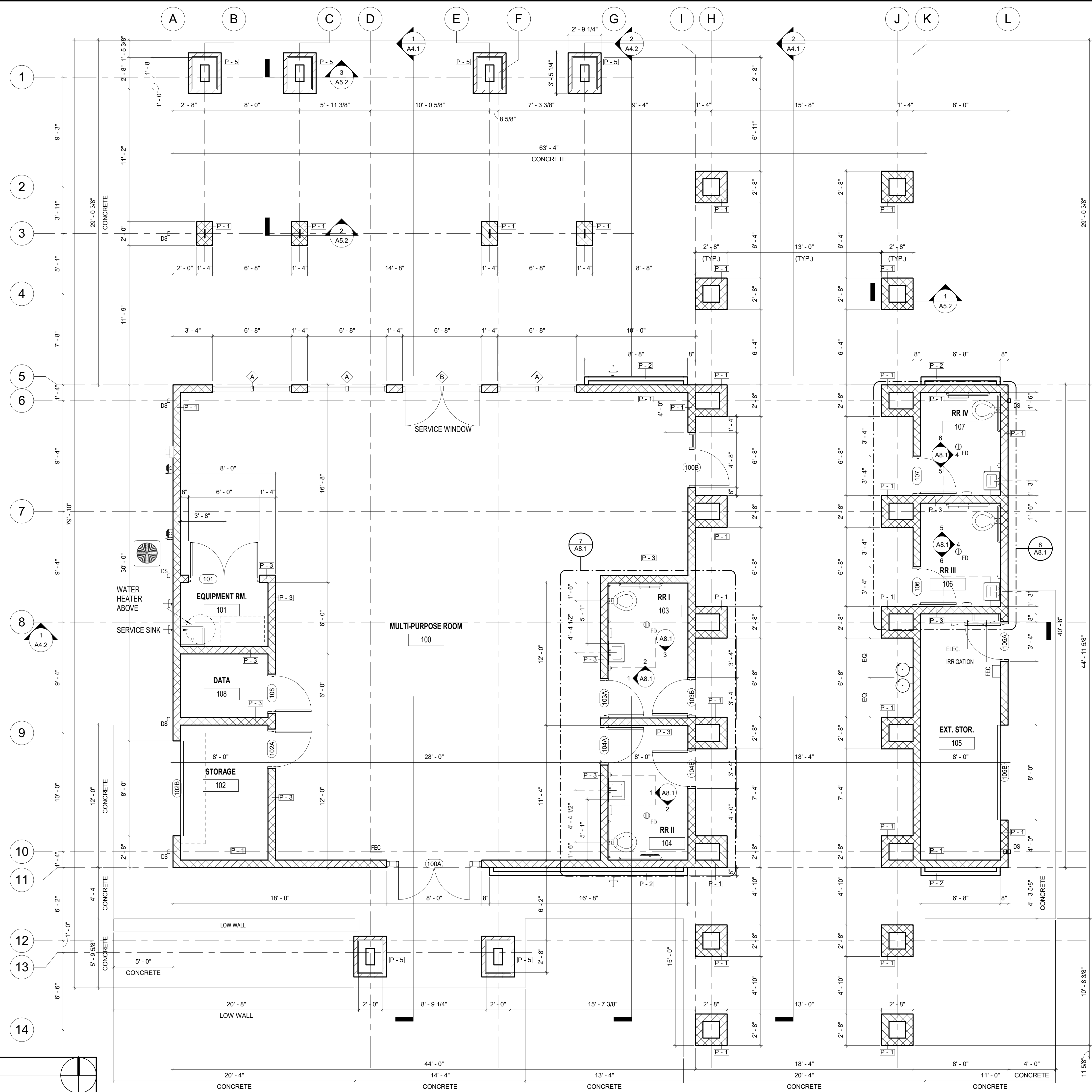
SITE PLAN

Tallahassee Florida

A0.1

2074 Centre Pointe Blvd, THL, FL 32308
Phone 850-224-6301 www.bfbsa.com

1 SITE PLAN
A0.1 1" = 40'-0"



FLOOR PLAN LEGEND

- NEW CMU WALL PARTITION
- NEW CMU WALL PARTITION W/ BRICK VENEER
- Name**
- ROOM NAME AND NUMBER
- DOOR NUMBER
- FIRE RATING
- WALL PARTITION TYPE
- WINDOW TYPE (EXTERIOR)
- SPOT ELEVATION

1 FLOOR PLAN
 A1.1 1/4" = 1'-0"
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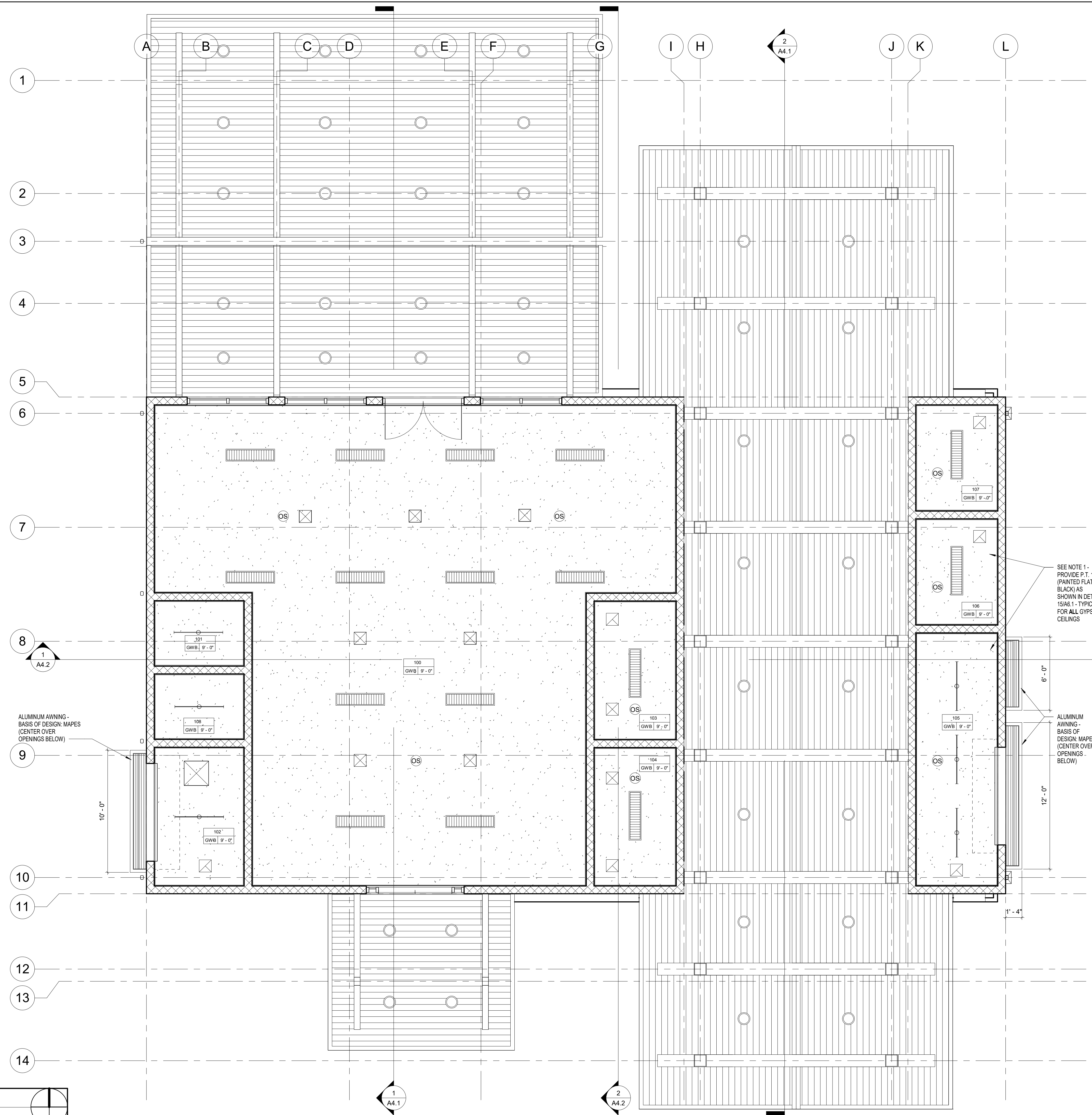
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FLOOR PLAN

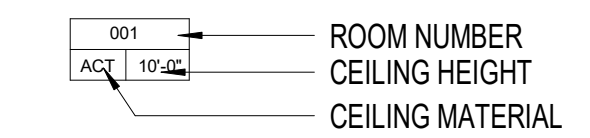
Tallahassee Florida

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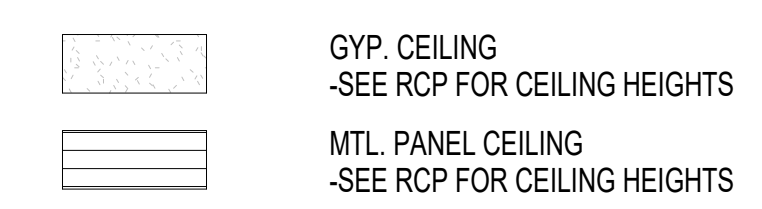
- PROVIDE P.T. 1x4 (PAINTED FLAT BLACK) AS SHOWN IN DETAIL 15A6.1 - TYPICAL FOR ALL GYPSUM CEILINGS



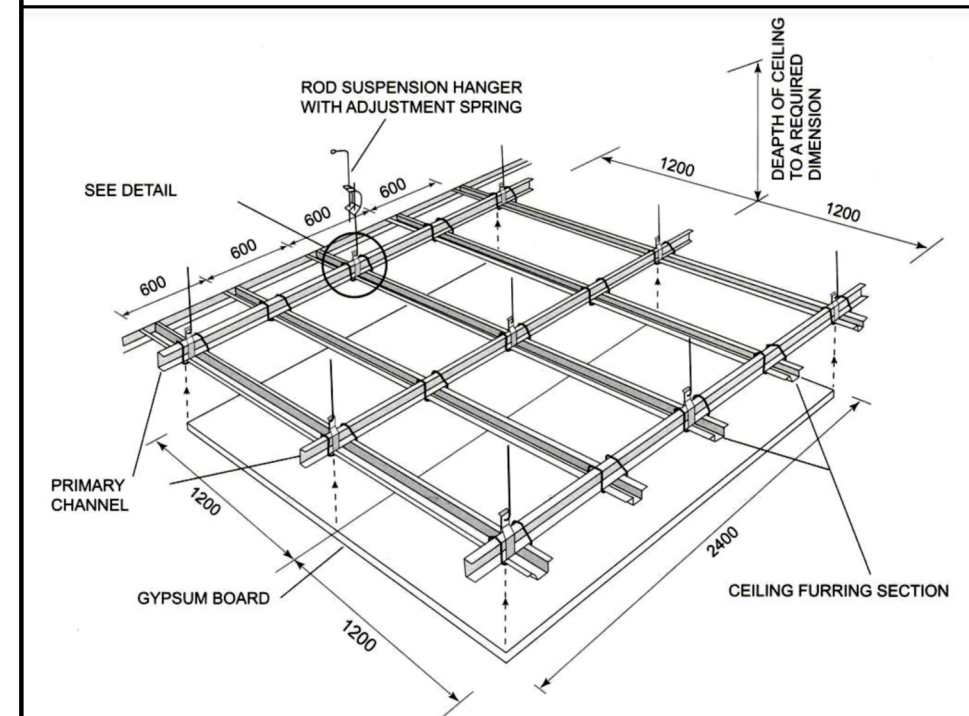
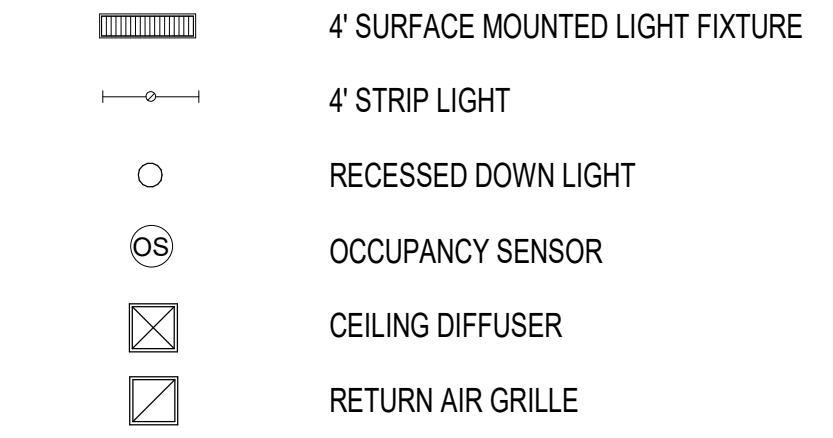
RCP LEGEND



CEILING FINISHES



CEILING ACCESSORIES



SUSPENDED GYPSUM CEILING DETAIL FOR ROOMS 105, 106 & 107

SEE NOTE 1 - PROVIDE P.T. 1x4 (PAINTED FLAT BLACK) AS SHOWN IN DETAIL 15A6.1 - TYPICAL FOR ALL GYPSUM CEILINGS

ALUMINUM AWNING - BASIS OF DESIGN: MAPES (CENTER OVER OPENINGS BELOW)

1 CEILING PLAN
A2.1 1/4" = 1'-0"

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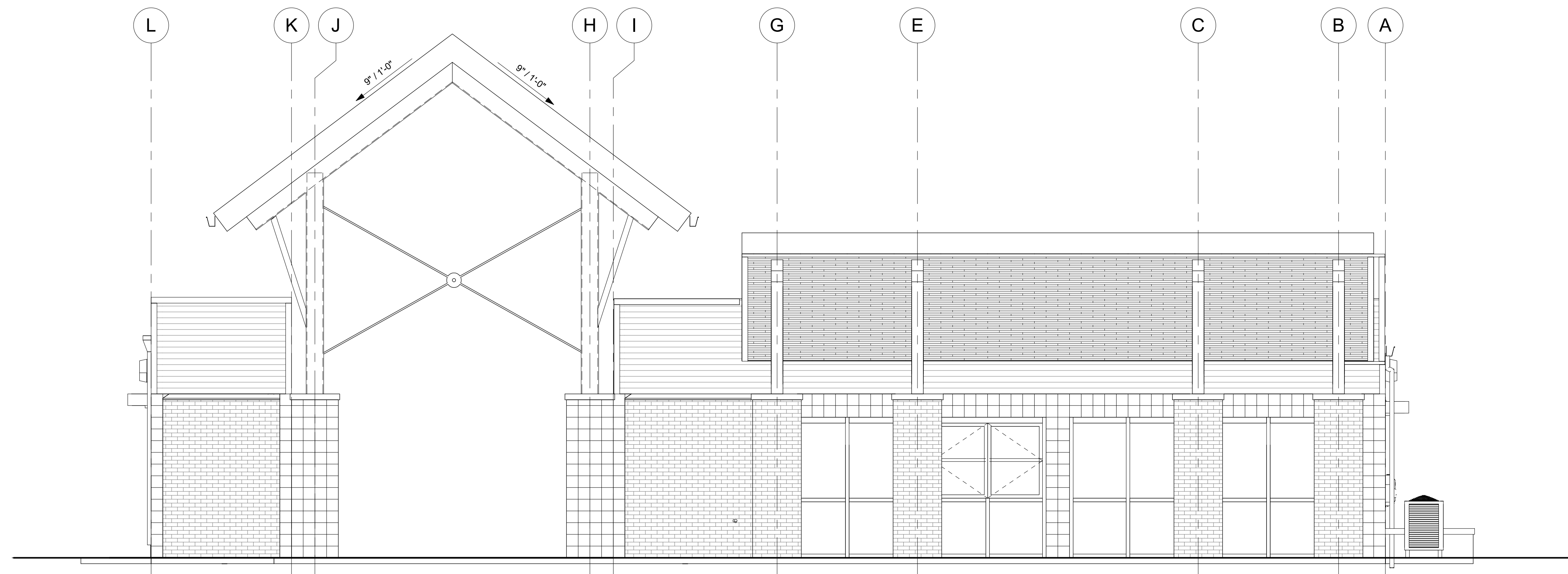
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CEILING PLANS

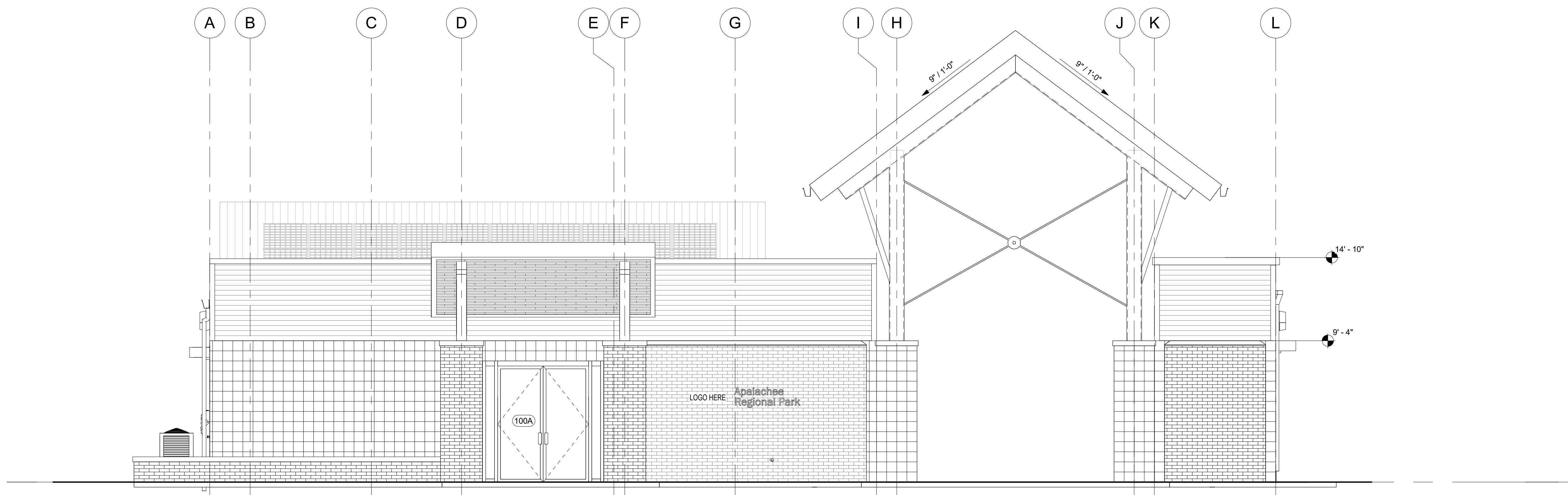
Tallahassee Florida

A2.1



1 NORTH ELEVATION

A3.1 1/4" = 1'-0"



2 SOUTH ELEVATION

A3.1 1/4" = 1'-0"



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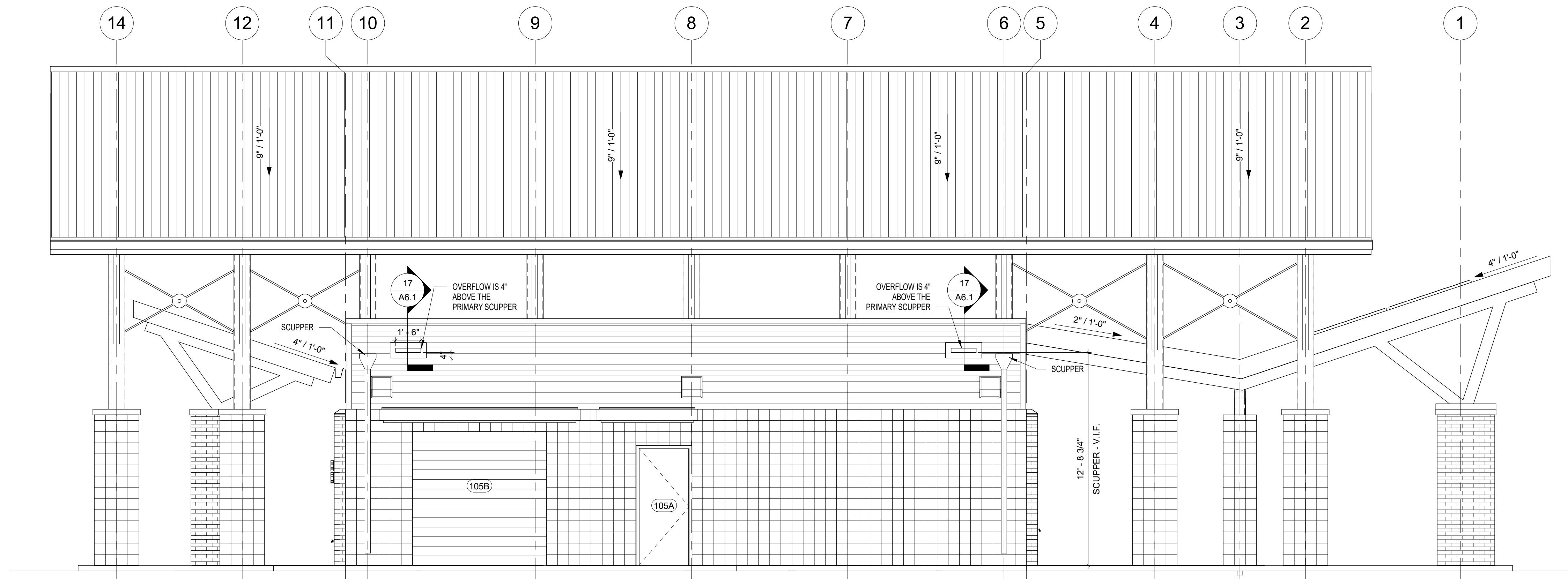
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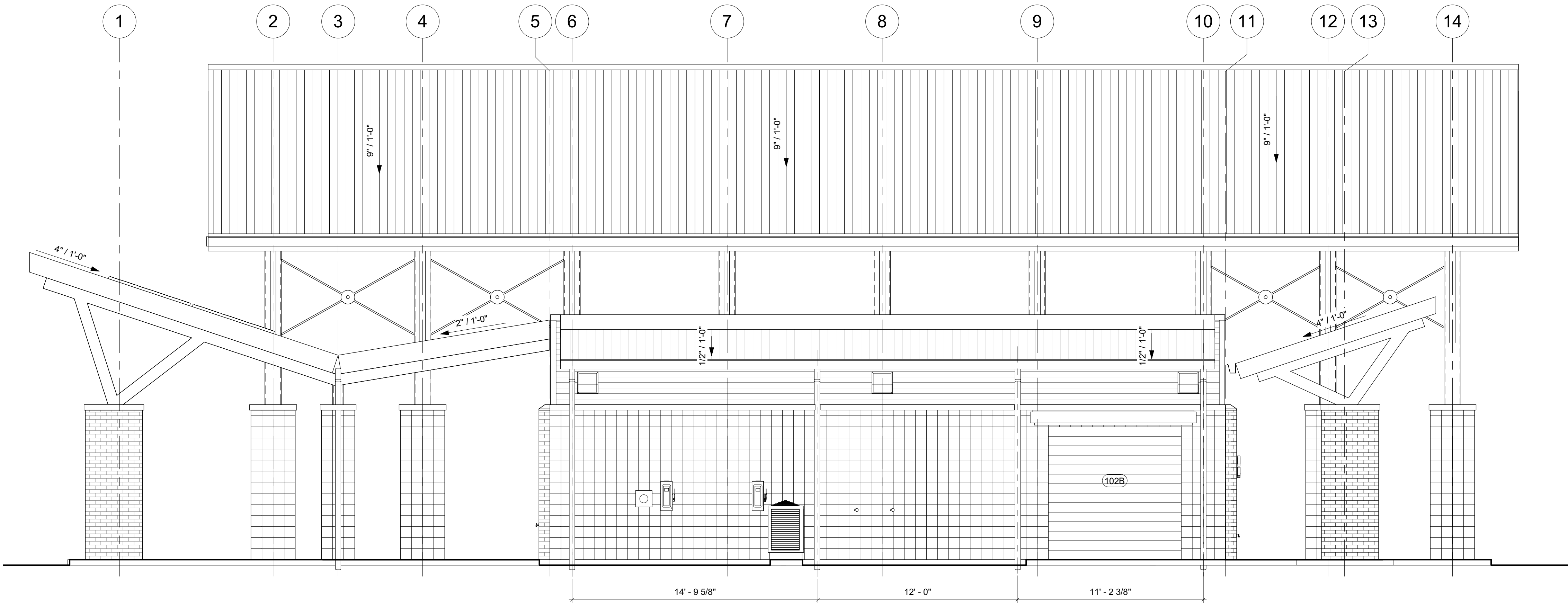
**BUILDING
ELEVATIONS**

Tallahassee Florida

A3.1



1 EAST ELEVATION
A3.2 1/4" = 1'-0"



2 WEST ELEVATION
A3.2 1/4" = 1'-0"



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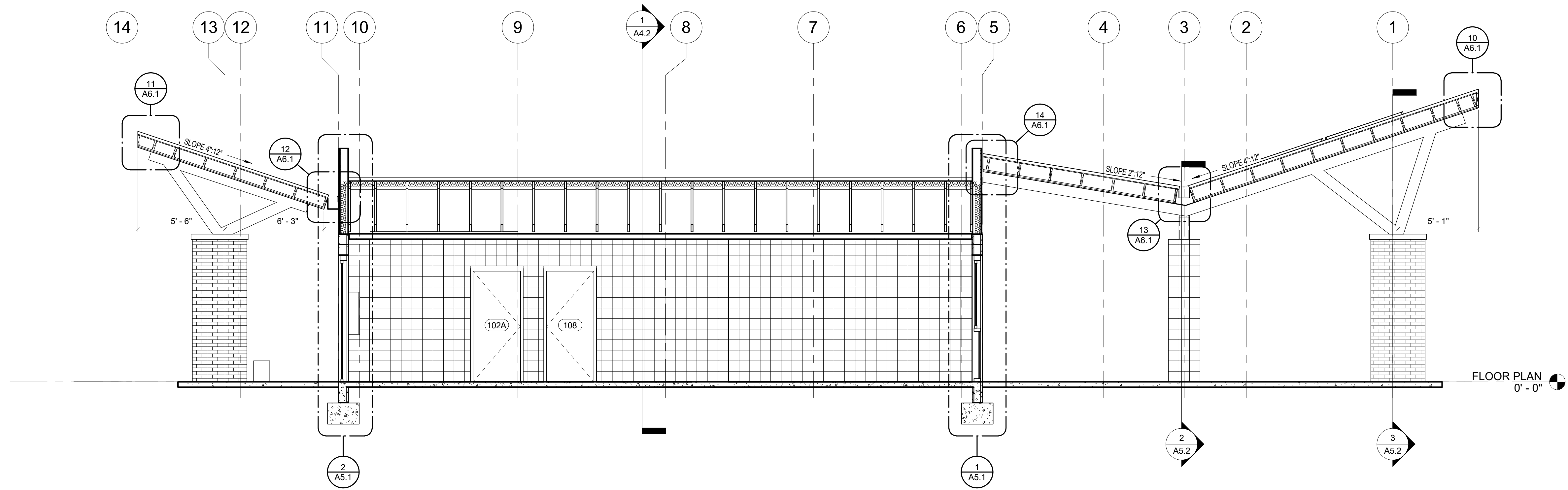
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BUILDING ELEVATIONS

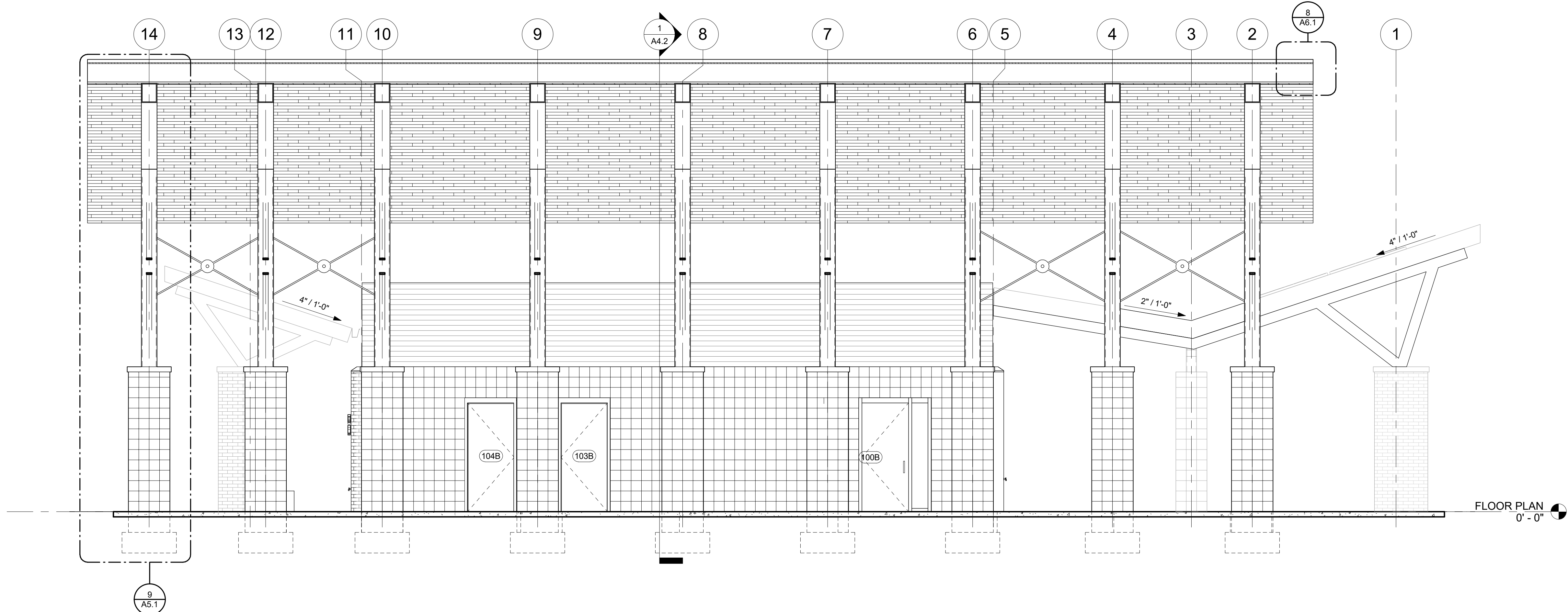
Tallahassee Florida

A3.2



1 BUILDING SECTION

A4.1 1/4" = 1'-0"



2 BUILDING SECTION

A4.1 1/4" = 1'-0"



**APALACHEE
REGIONAL CROSS
COUNTRY VENUE**

16150 Drawn By: jh2
Project Code Checked By: DS

Date
04 OCTOBER 2019

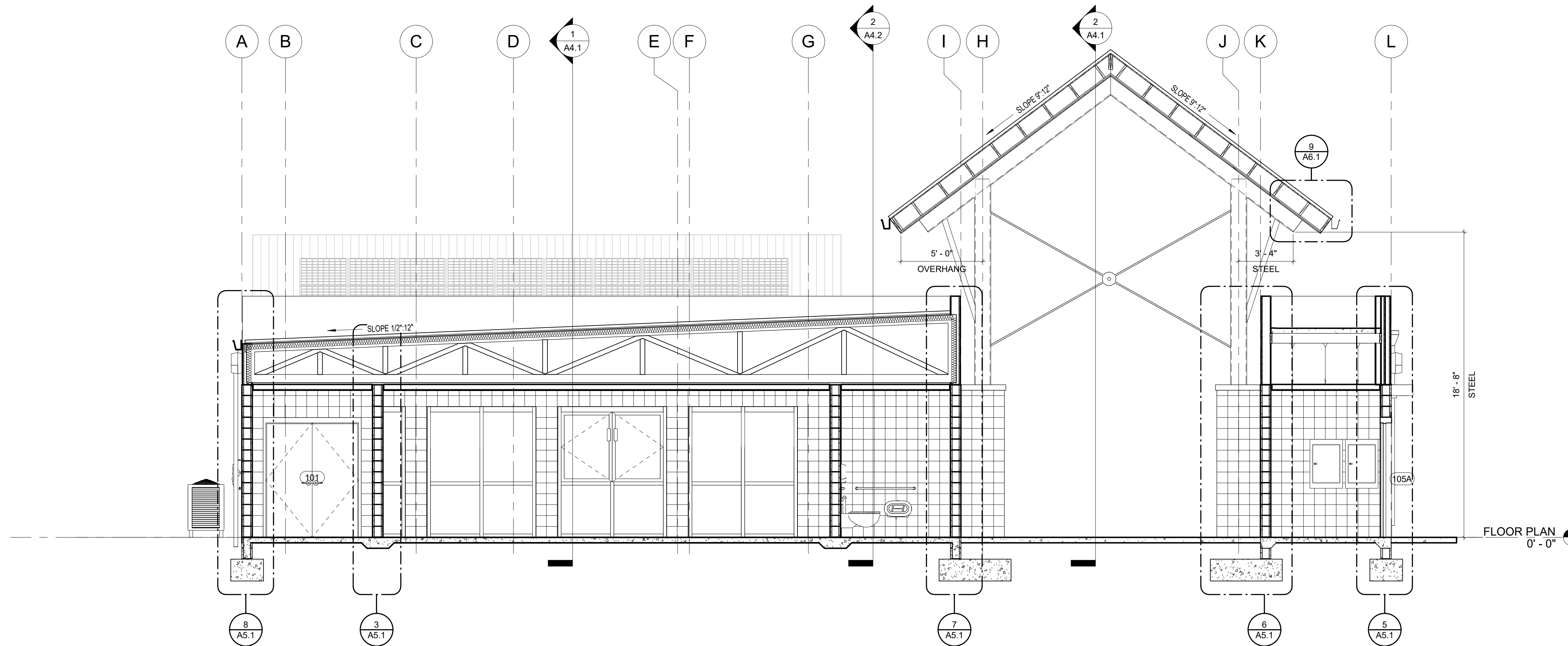
BID DOCUMENTS

Revisions

BUILDING SECTIONS

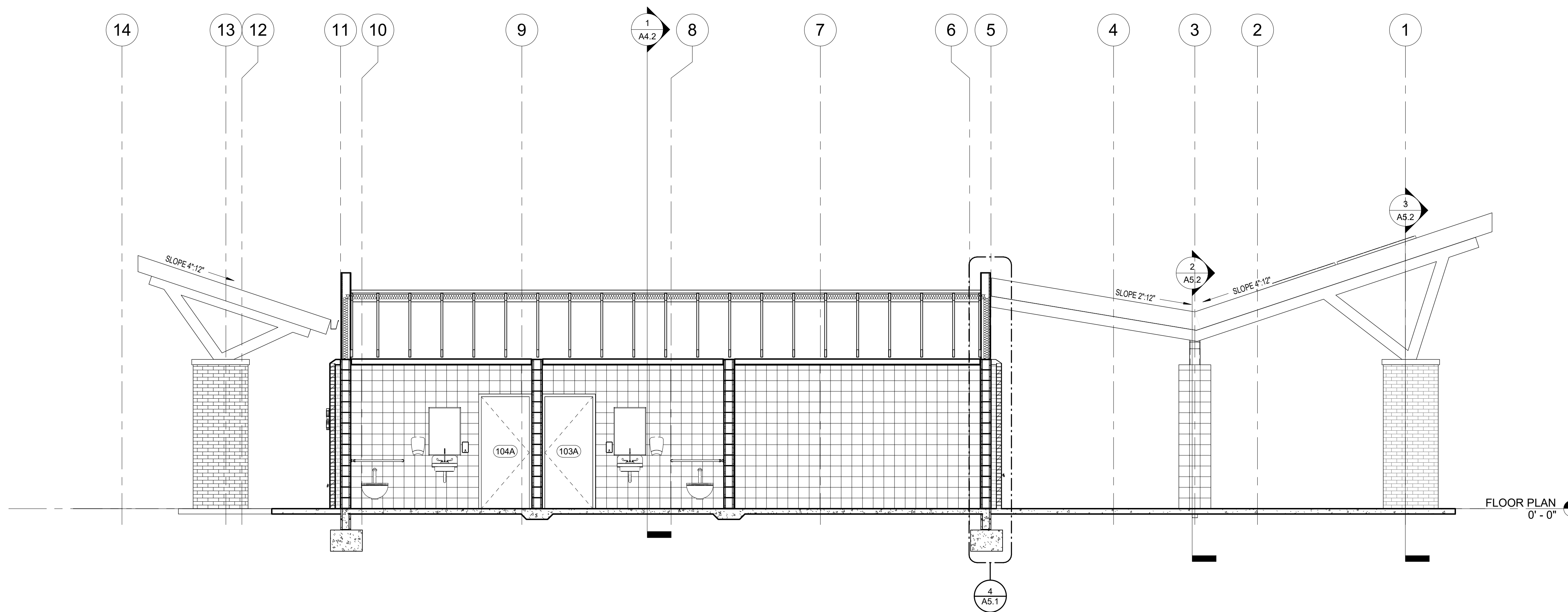
Tallahassee Florida

A4.1



1 BUILDING SECTION

A4.2 1/4" = 1'-0"



2 BUILDING SECTION

A4.2 1/4" = 1'-0"

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APALACHEE
REGIONAL CROSS
COUNTRY VENUE

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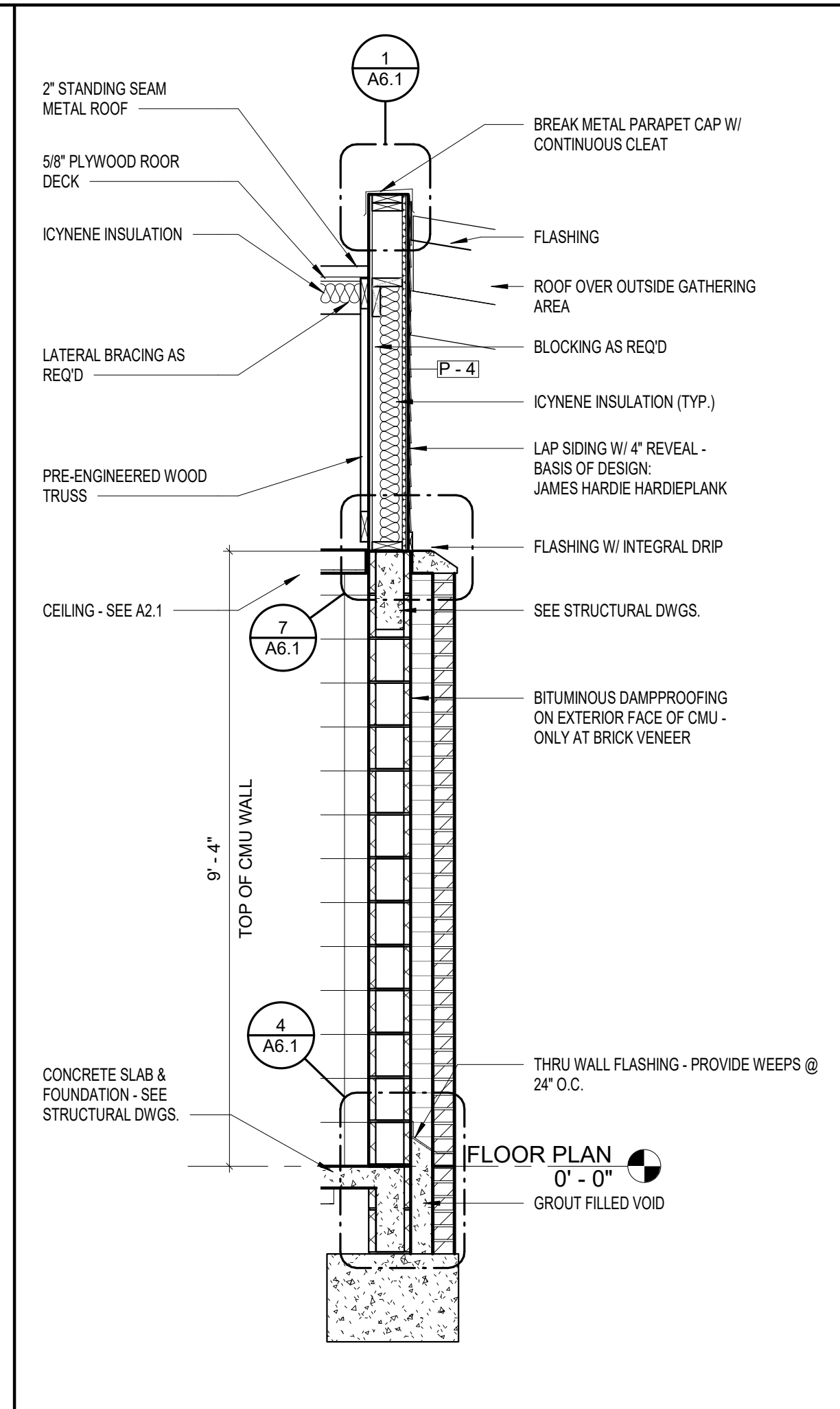
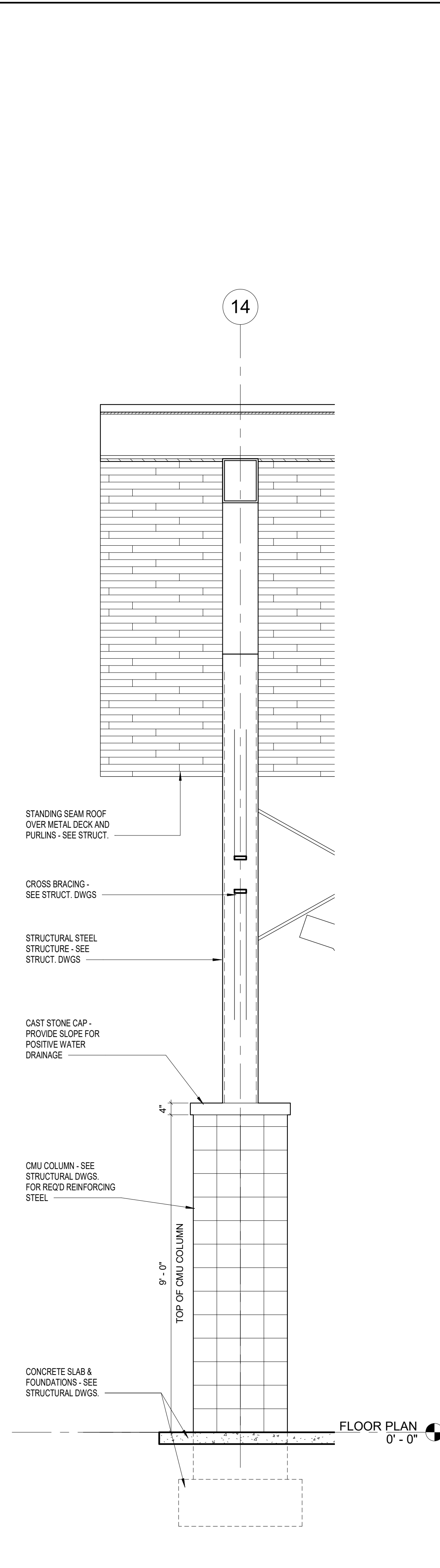
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BUILDING SECTIONS

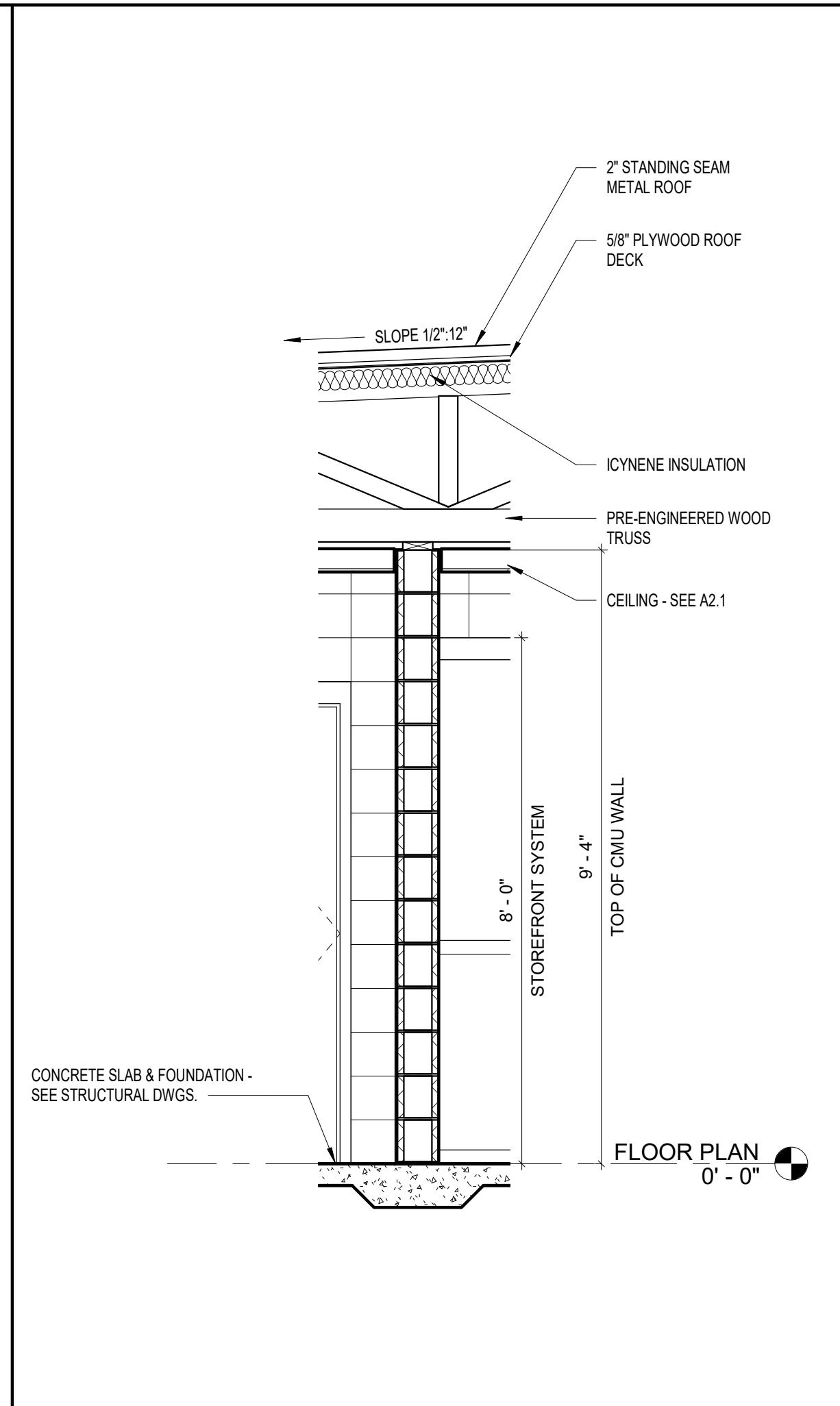
Tallahassee Florida

A4.2

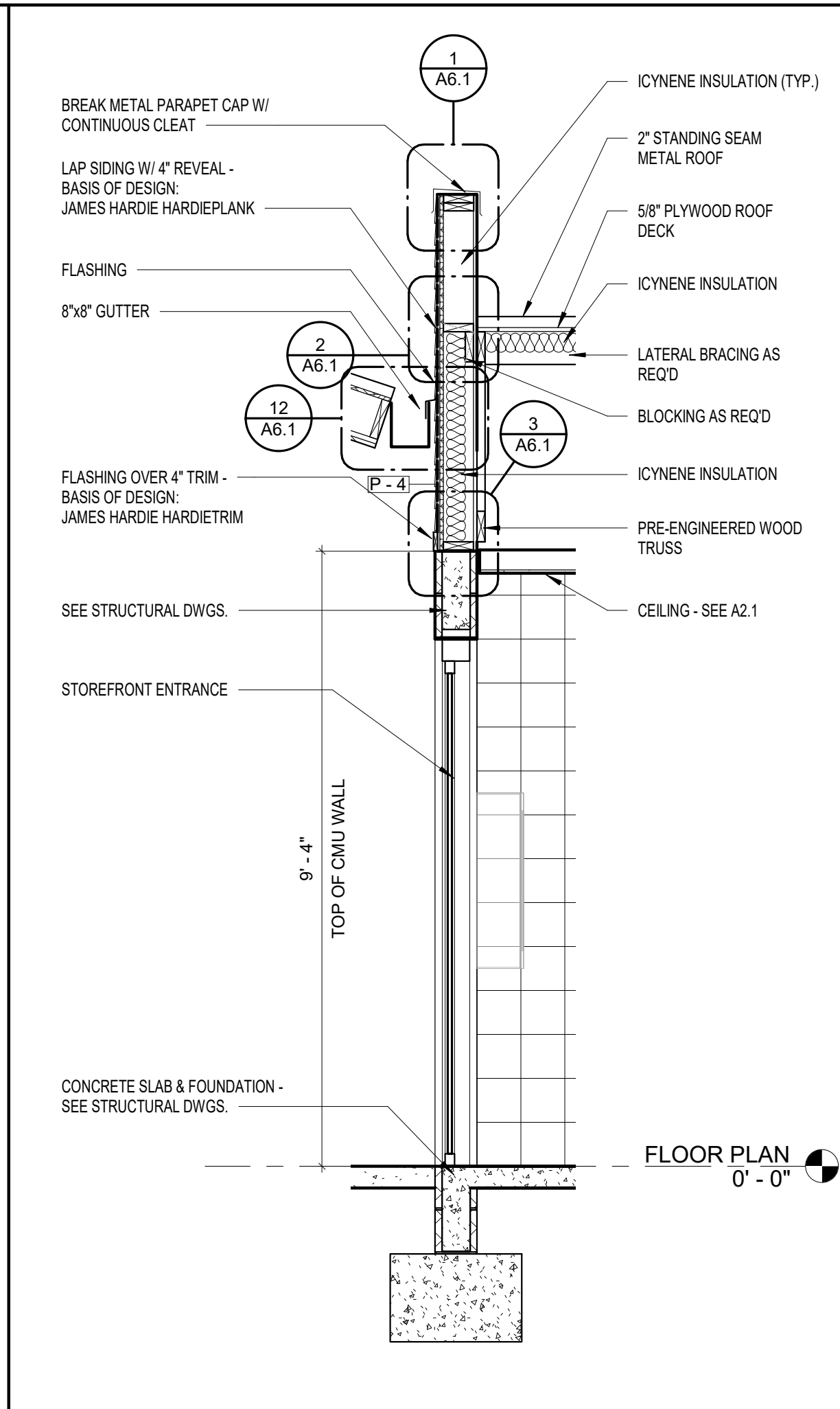
2074 Centre Pointe Blvd, THL, FL 32308
Phone 850-224-6301 www.bfbsa.com



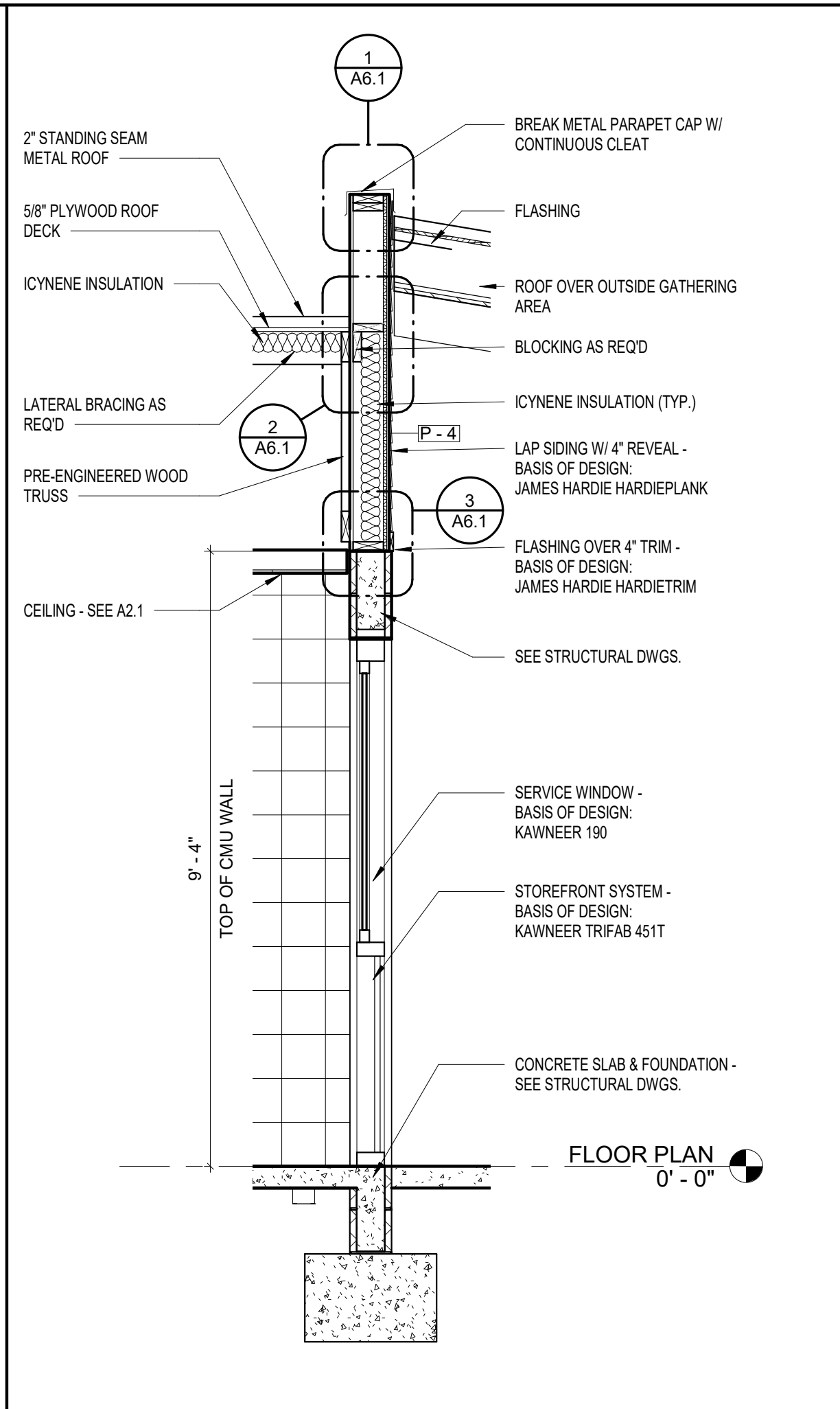
4 SECTION 4
A5.1 1/2" = 1'-0"



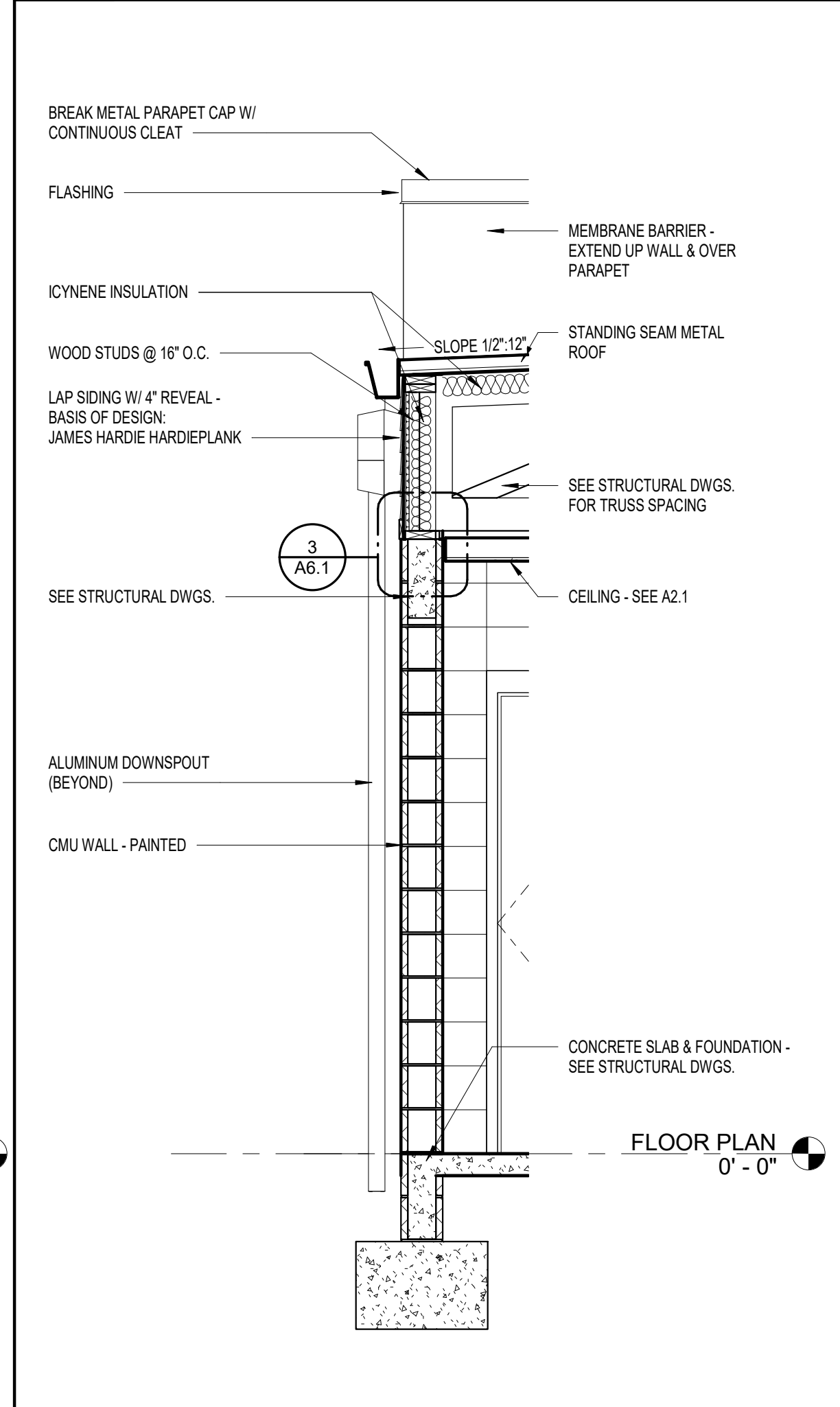
3 SECTION 3
A5.1 1/2" = 1'-0"



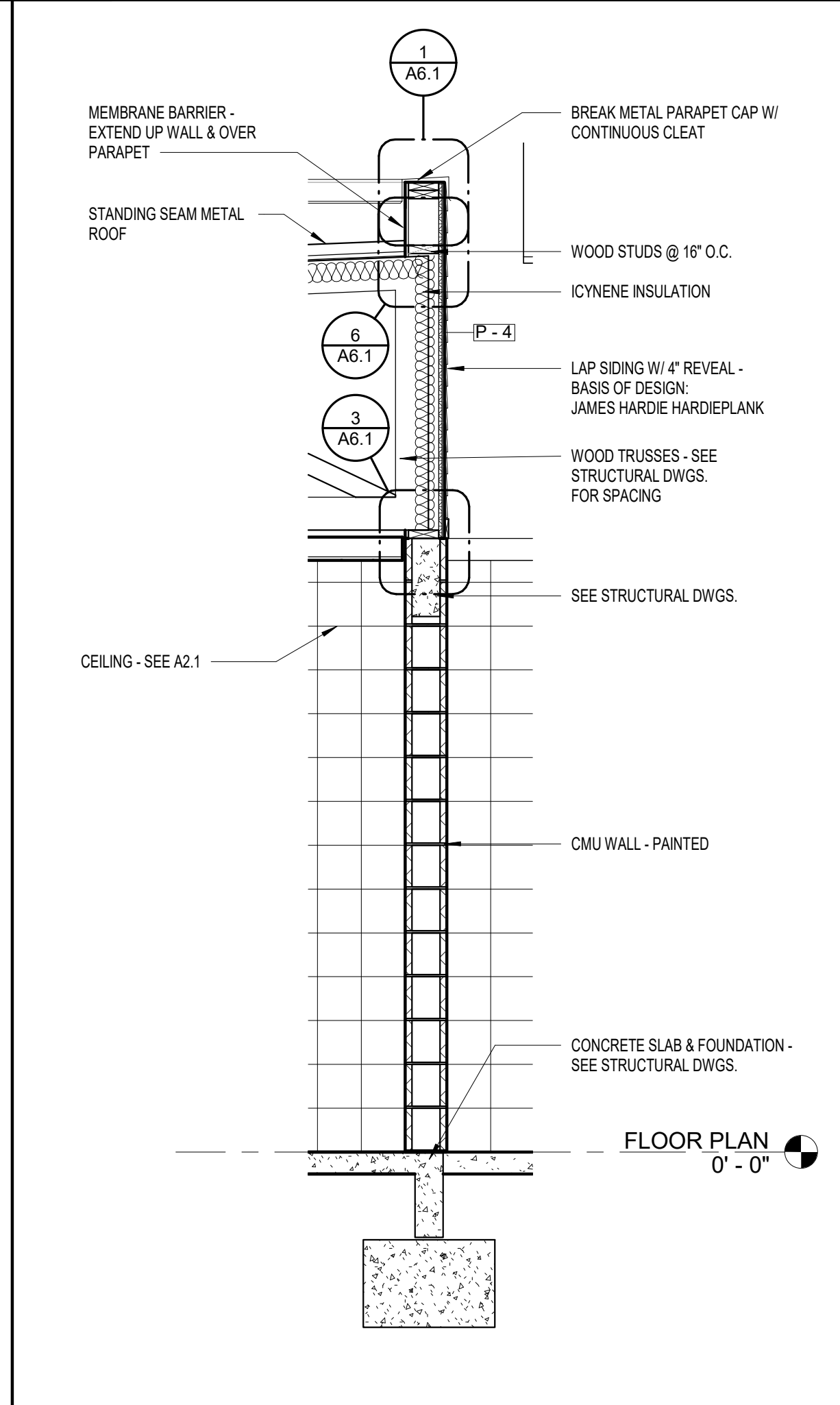
2 SECTION 2
A5.1 1/2" = 1'-0"



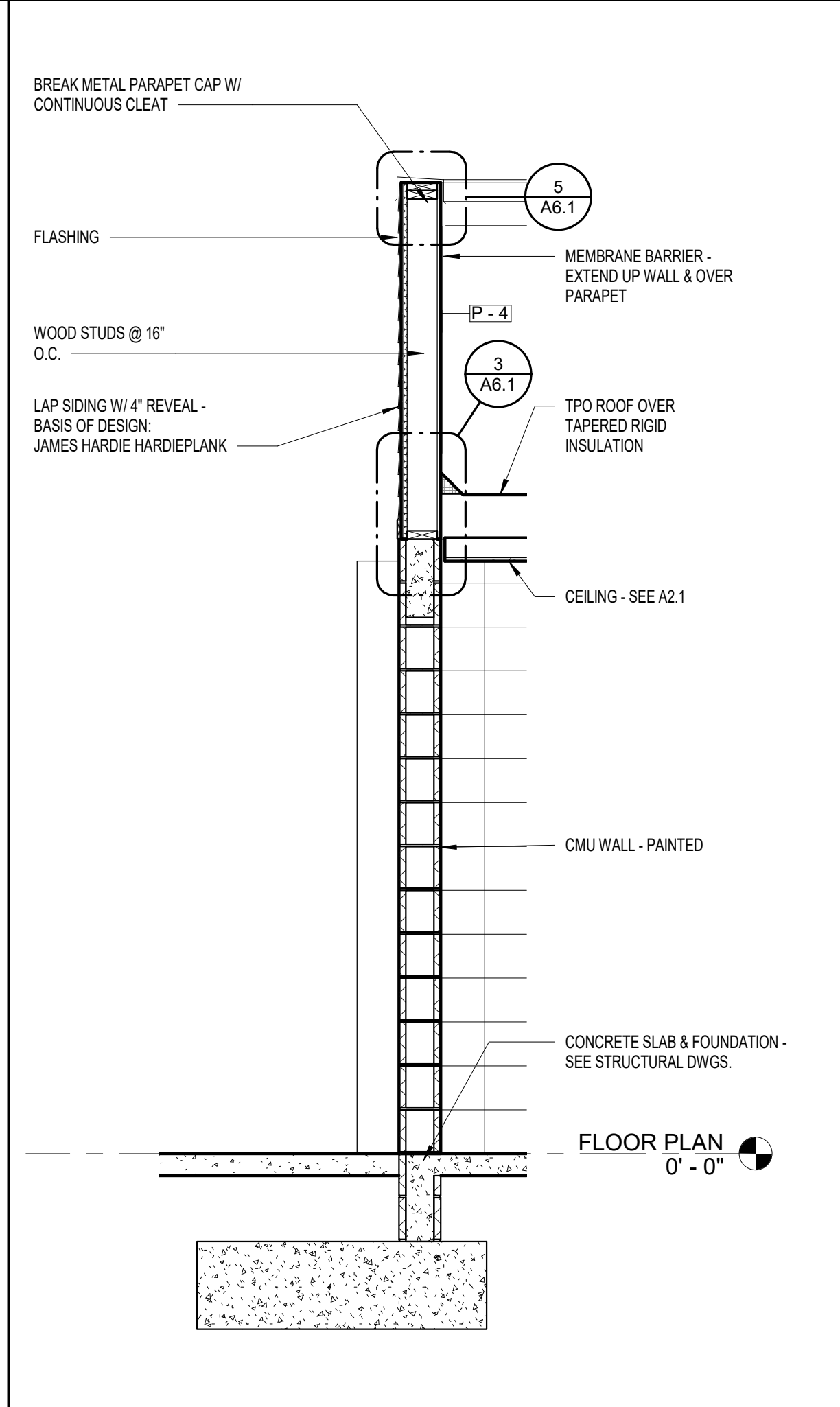
1 SECTION 1
A5.1 1/2" = 1'-0"



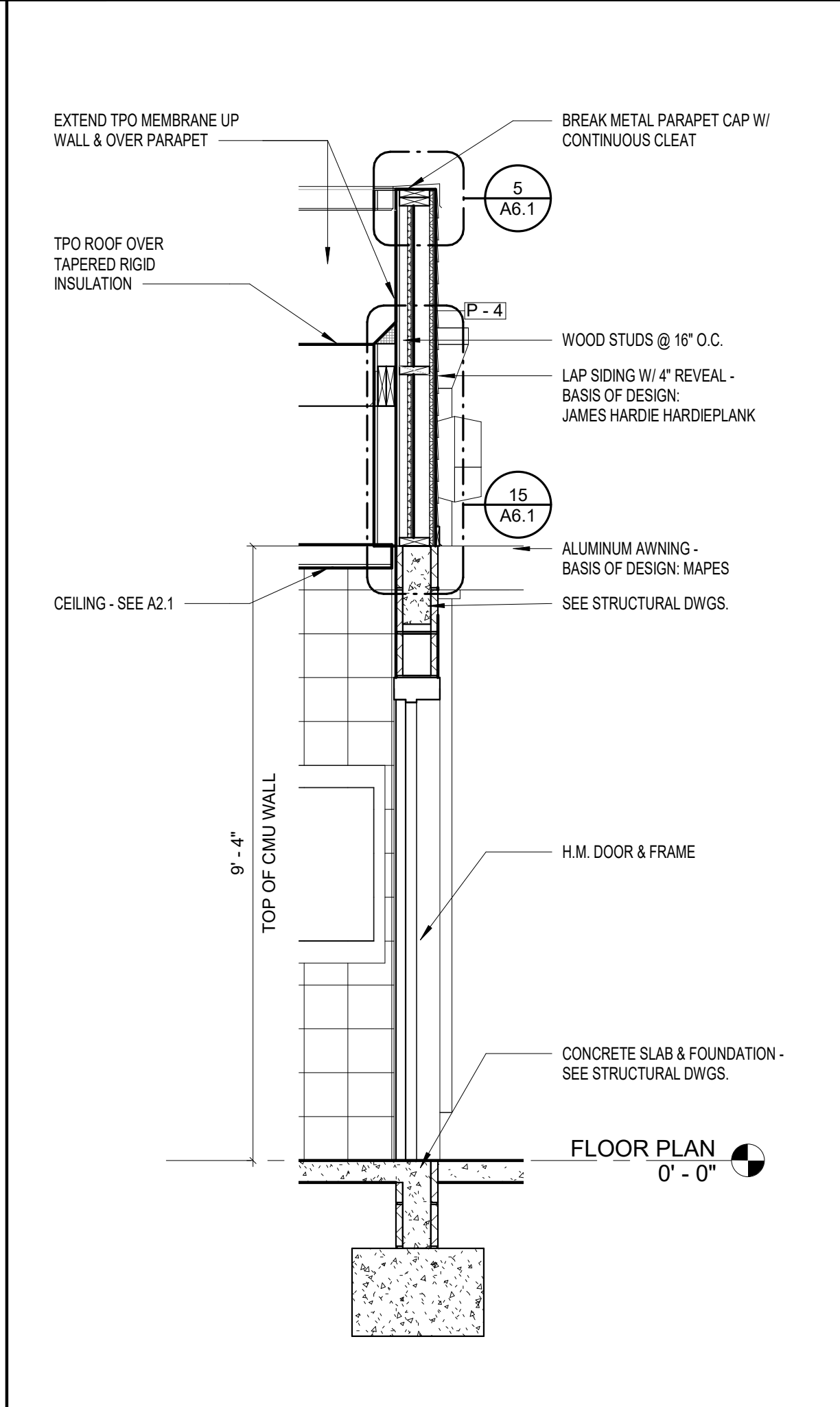
8 SECTION 8
A5.1 1/2" = 1'-0"



7 SECTION 7
A5.1 1/2" = 1'-0"



6 SECTION 6
A5.1 1/2" = 1'-0"



5 SECTION 5
A5.1 1/2" = 1'-0"

9 SECTION 9
A5.1 1/2" = 1'-0"



APALACHEE REGIONAL CROSS COUNTRY VENUE

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04 OCTOBER 2019 Date

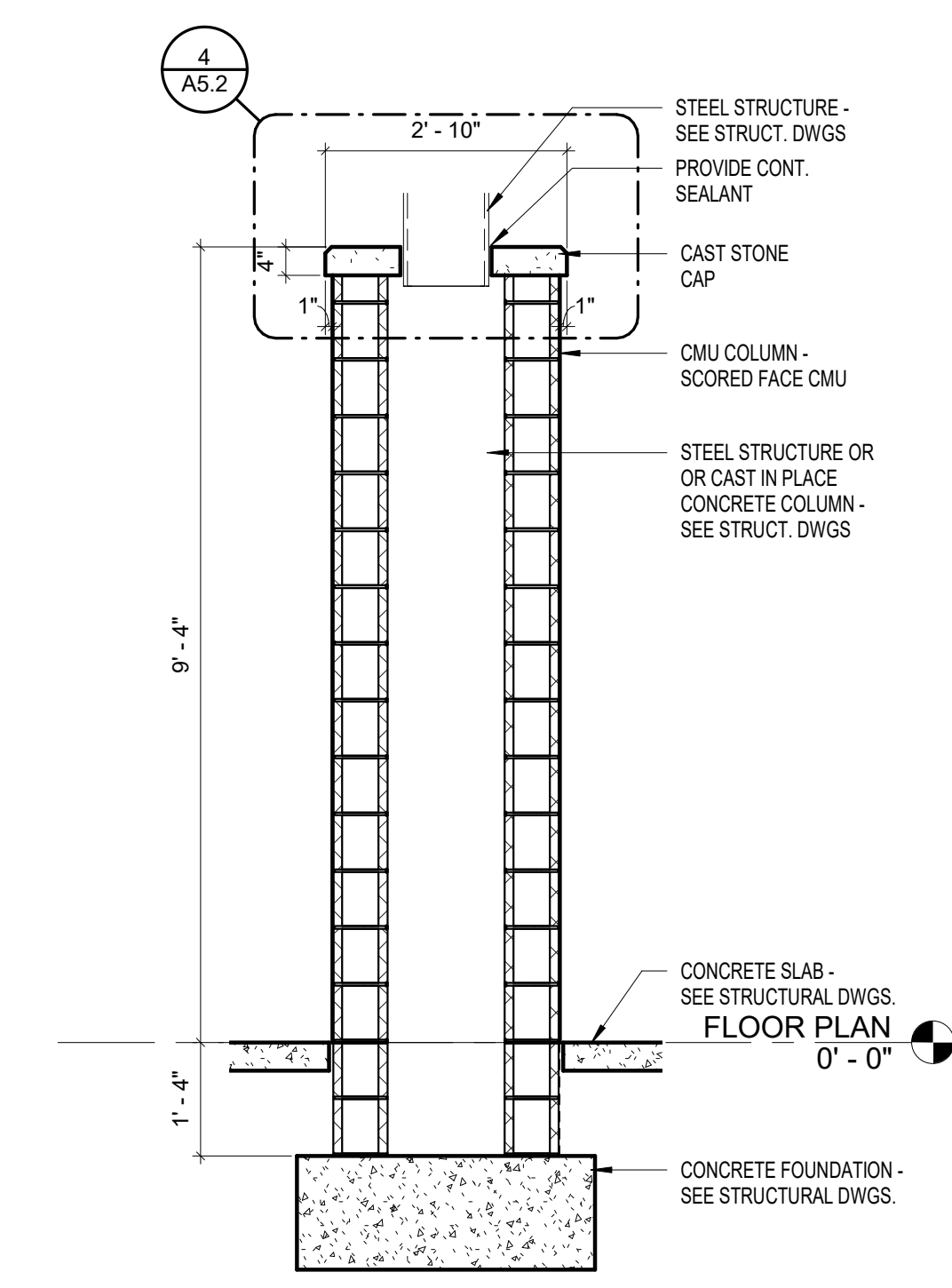
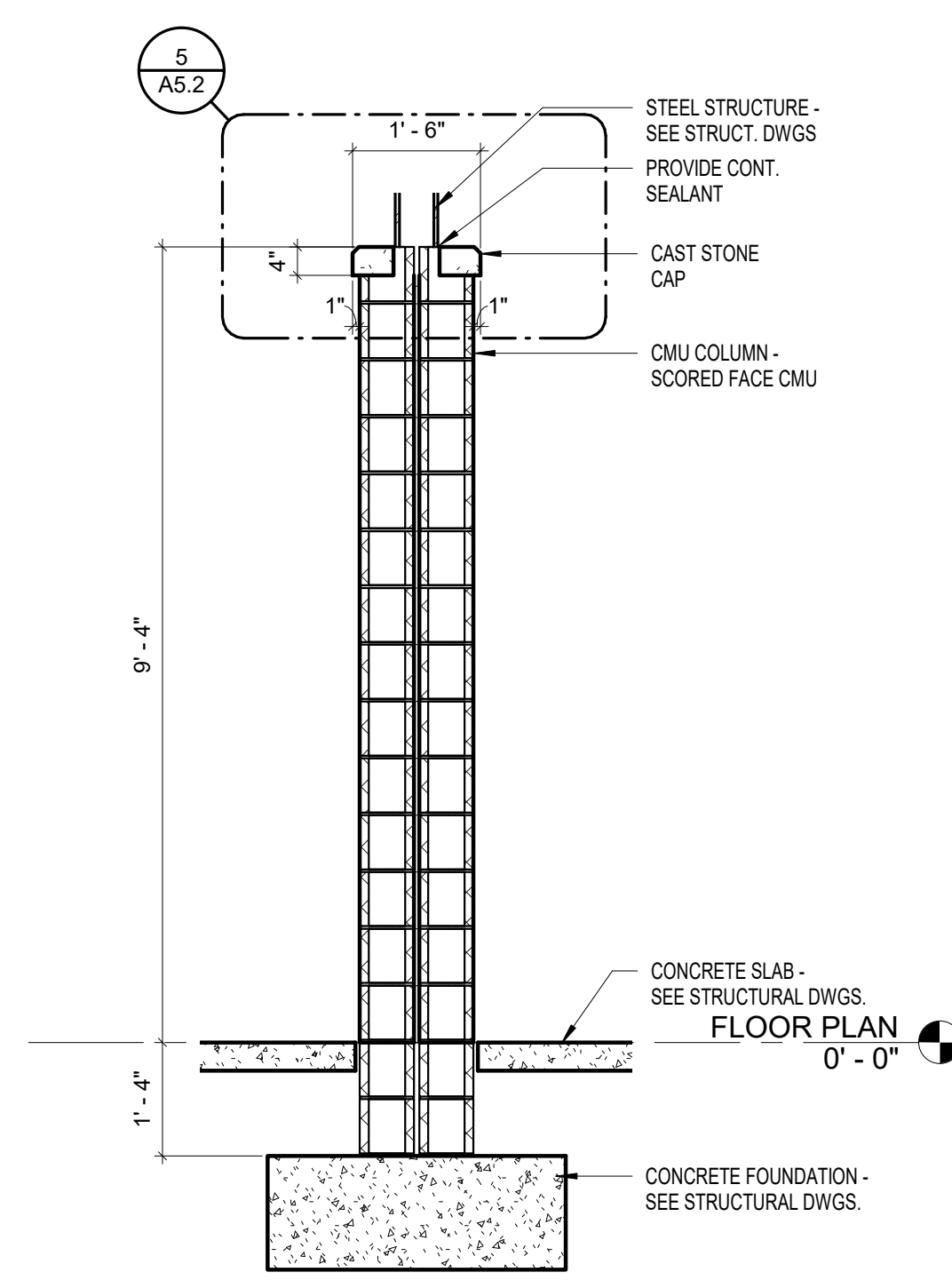
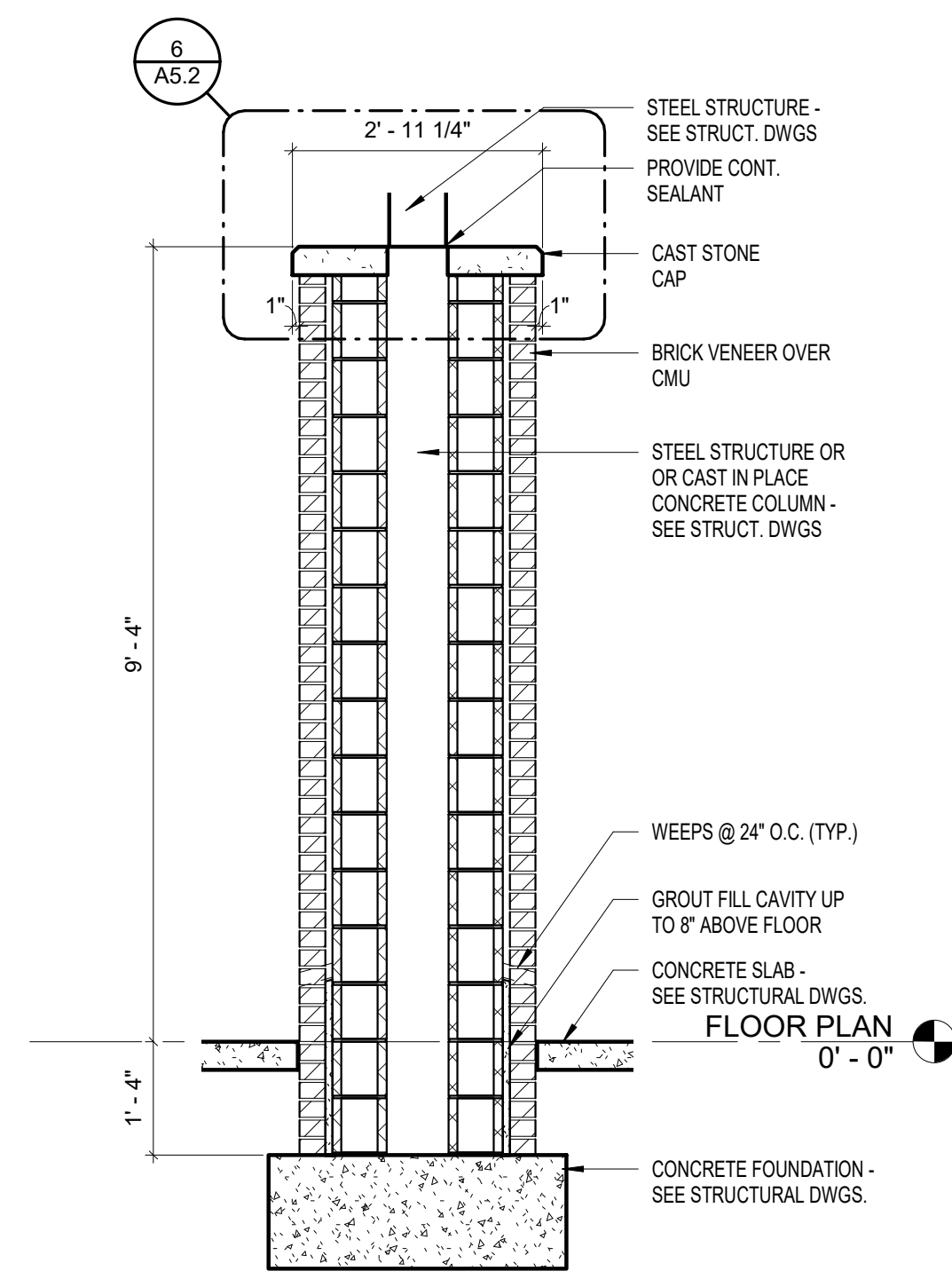
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WALL SECTIONS

Tallahassee Florida

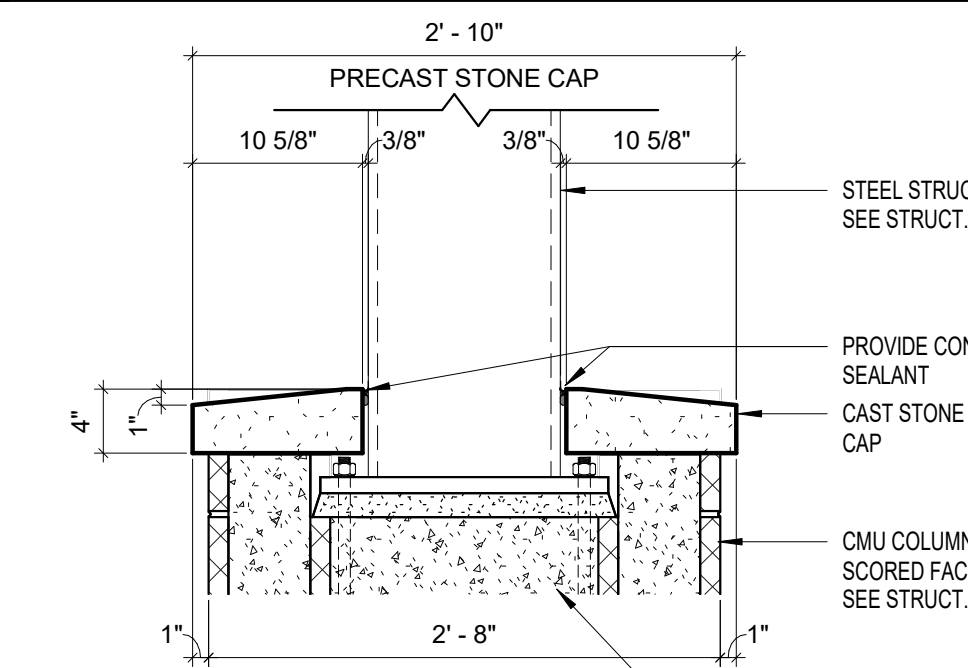
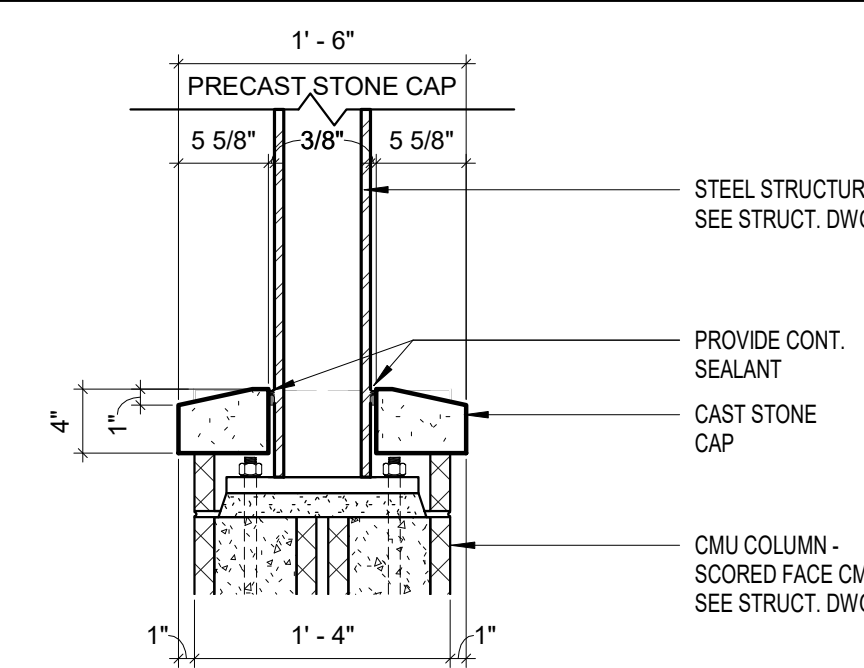
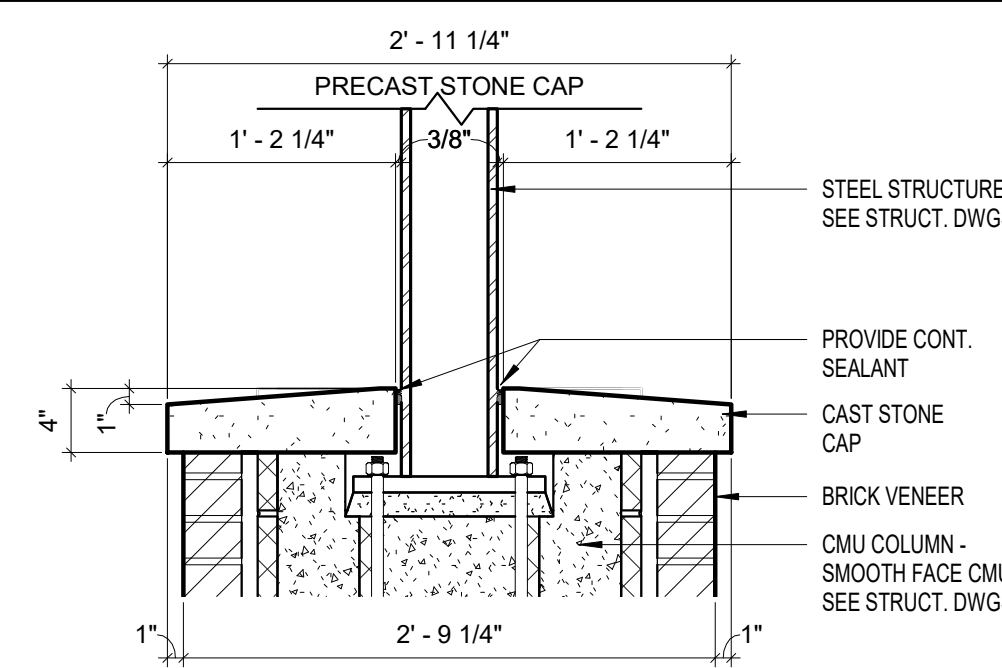
A5.1



3 Section 7
A5.2 1/2" = 1'-0"

2 Section 6
A5.2 1/2" = 1'-0"

1 Section 5
A5.2 1/2" = 1'-0"



6 32x33 COL CAP
A5.2 1" = 1'-0"

5 24x16 COL CAP
A5.2 1" = 1'-0"

4 32x32 COL CAP
A5.2 1" = 1'-0"



APALACHEE REGIONAL CROSS COUNTRY VENUE

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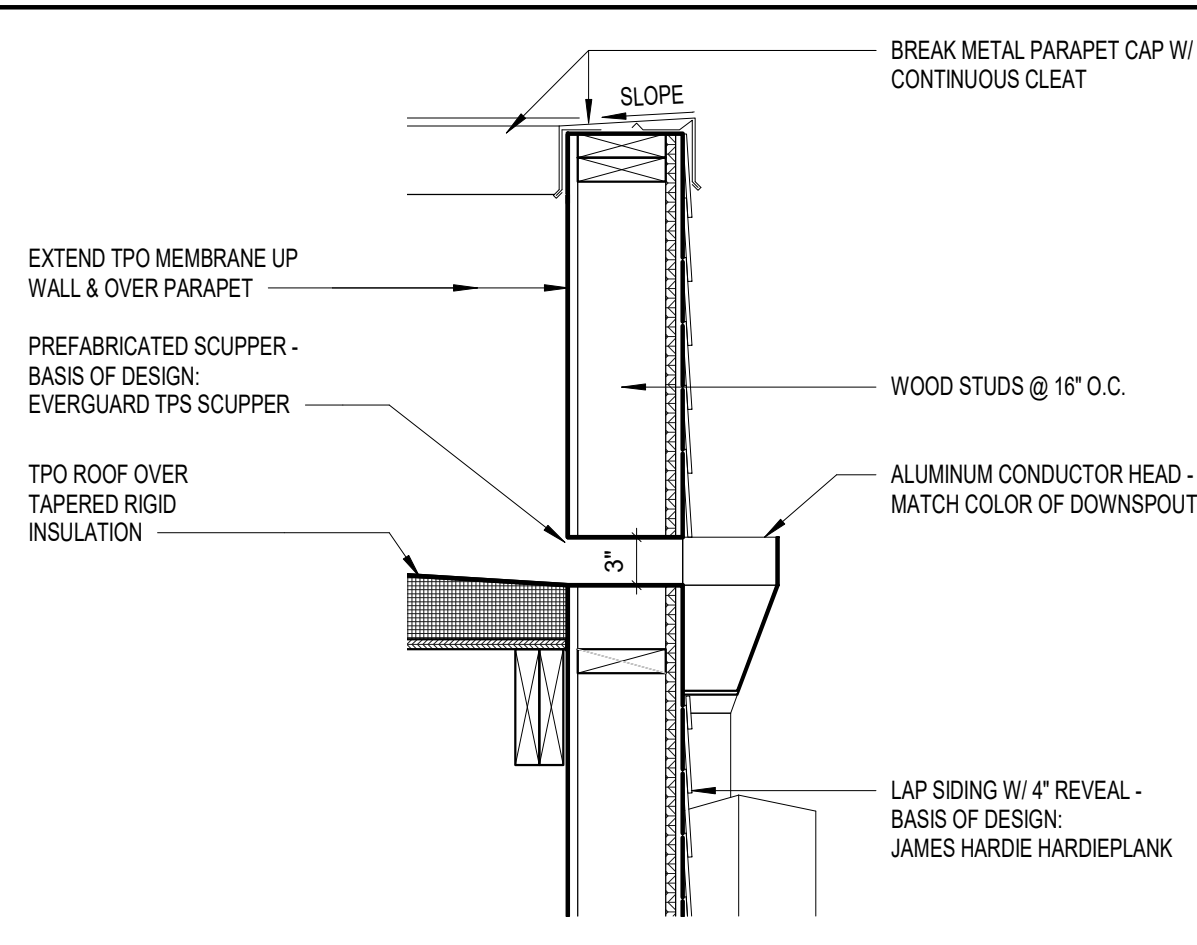
BID DOCUMENTS

Revisions

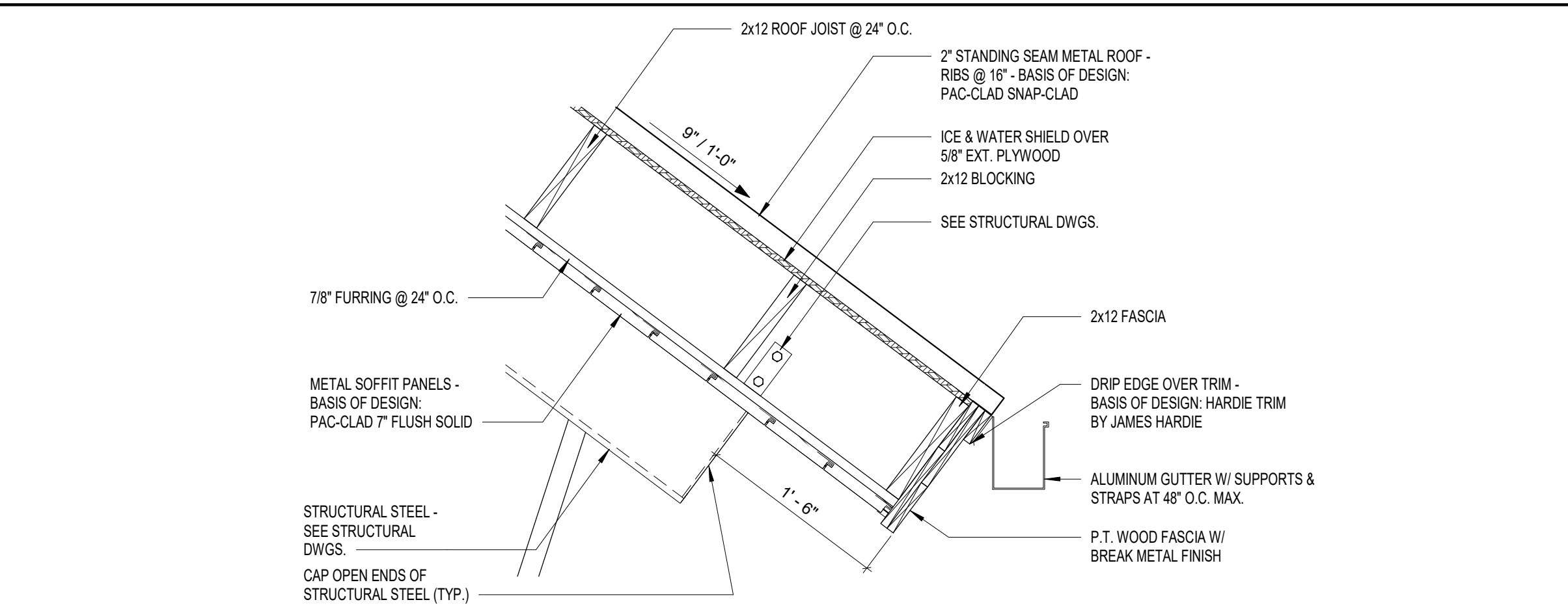
WALL SECTIONS

Tallahassee Florida

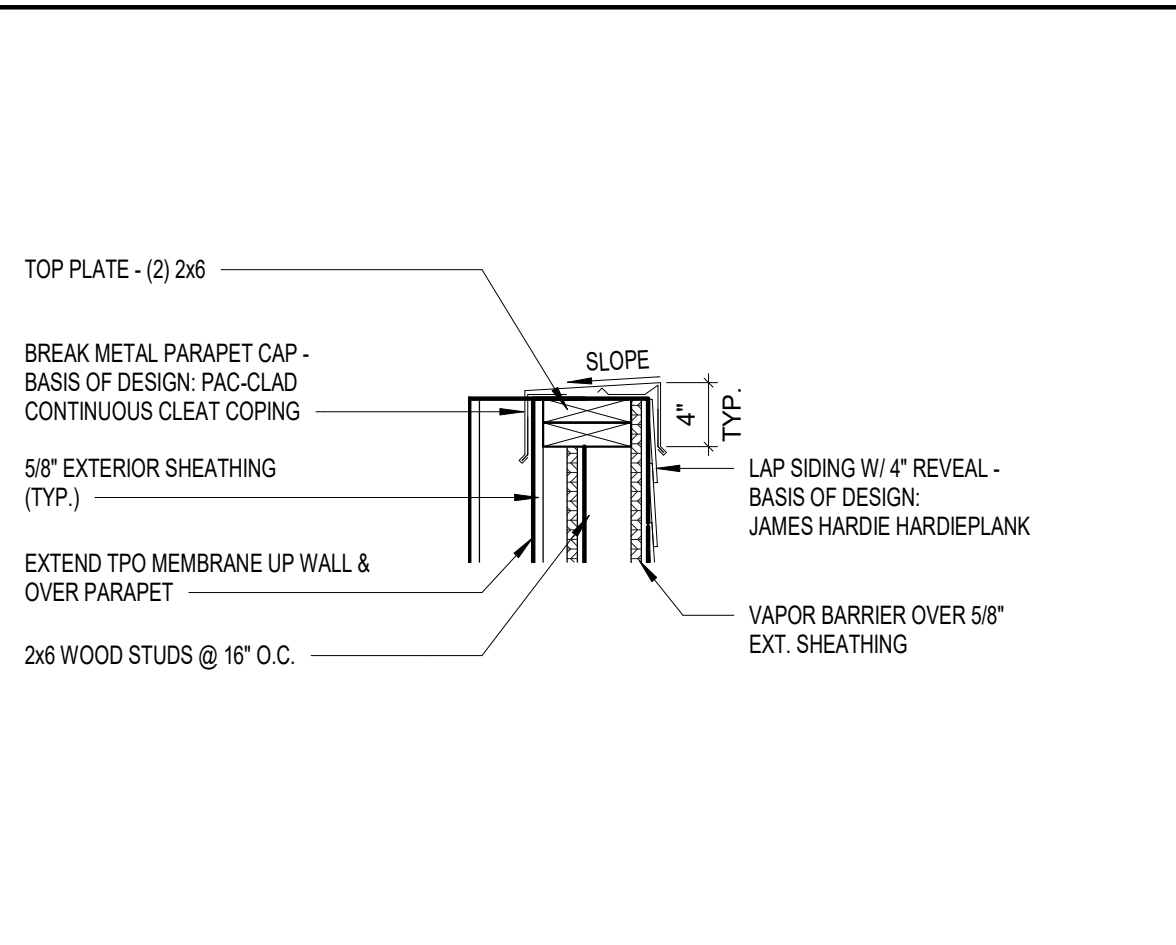
A5.2



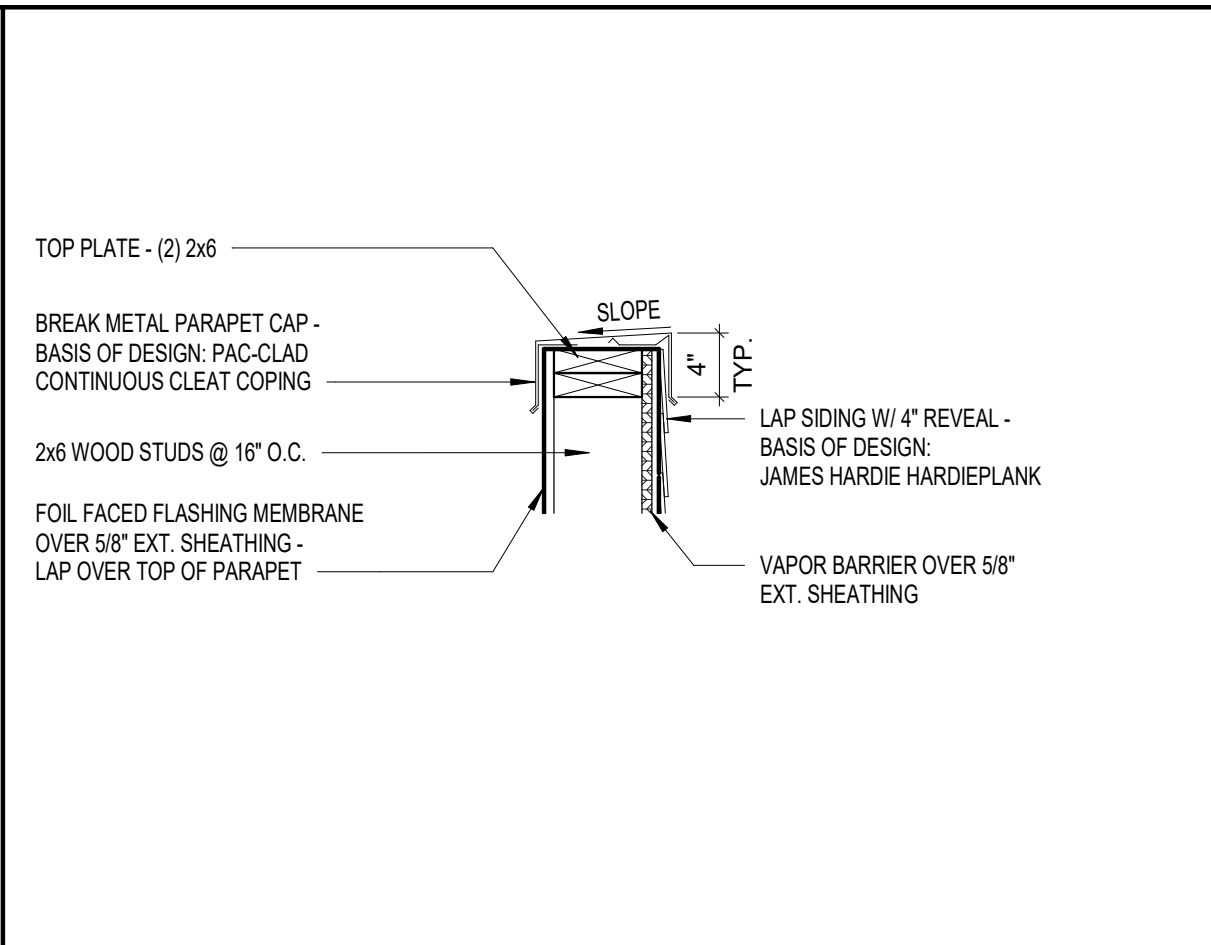
16 SCUPPER SECTION
A6.1 1" = 1'-0"



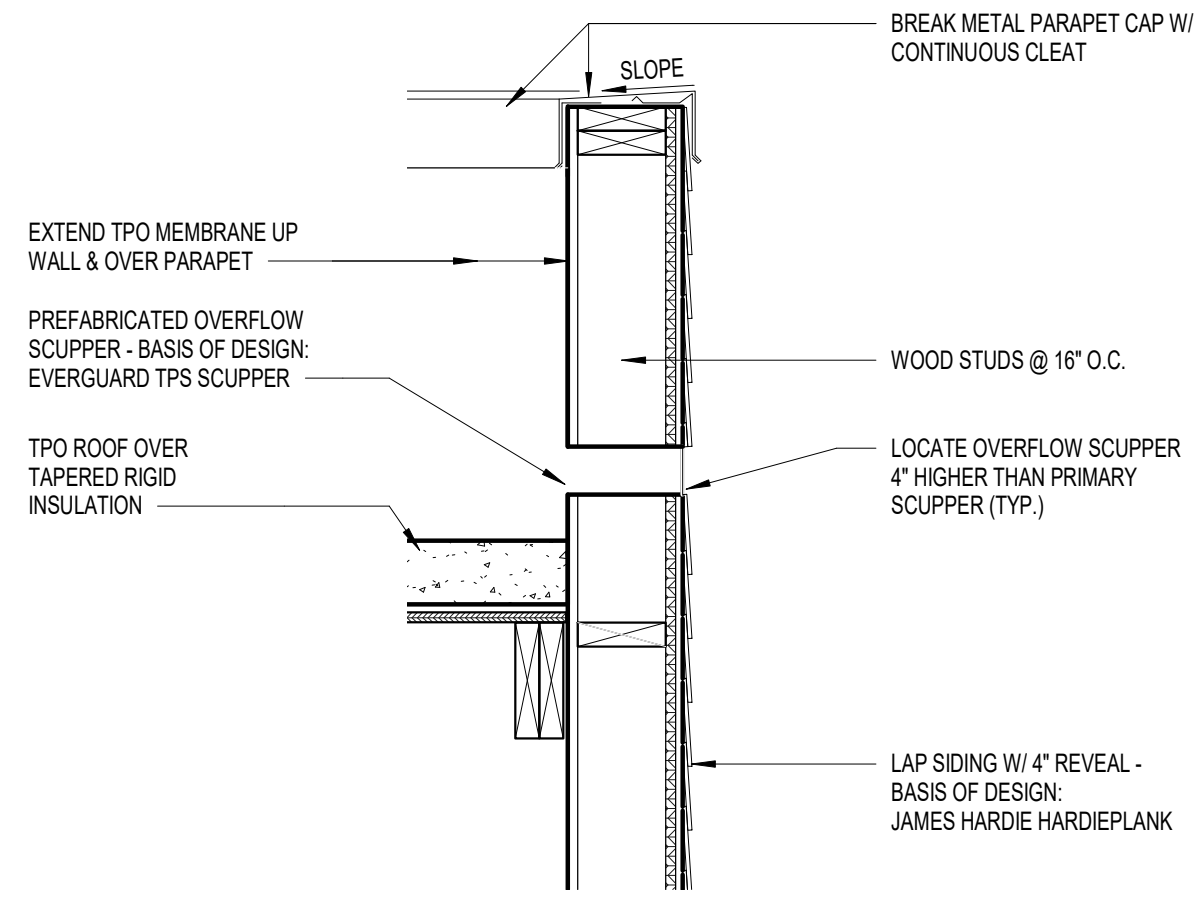
9 FASCIA DETAIL
A6.1 1" = 1'-0"



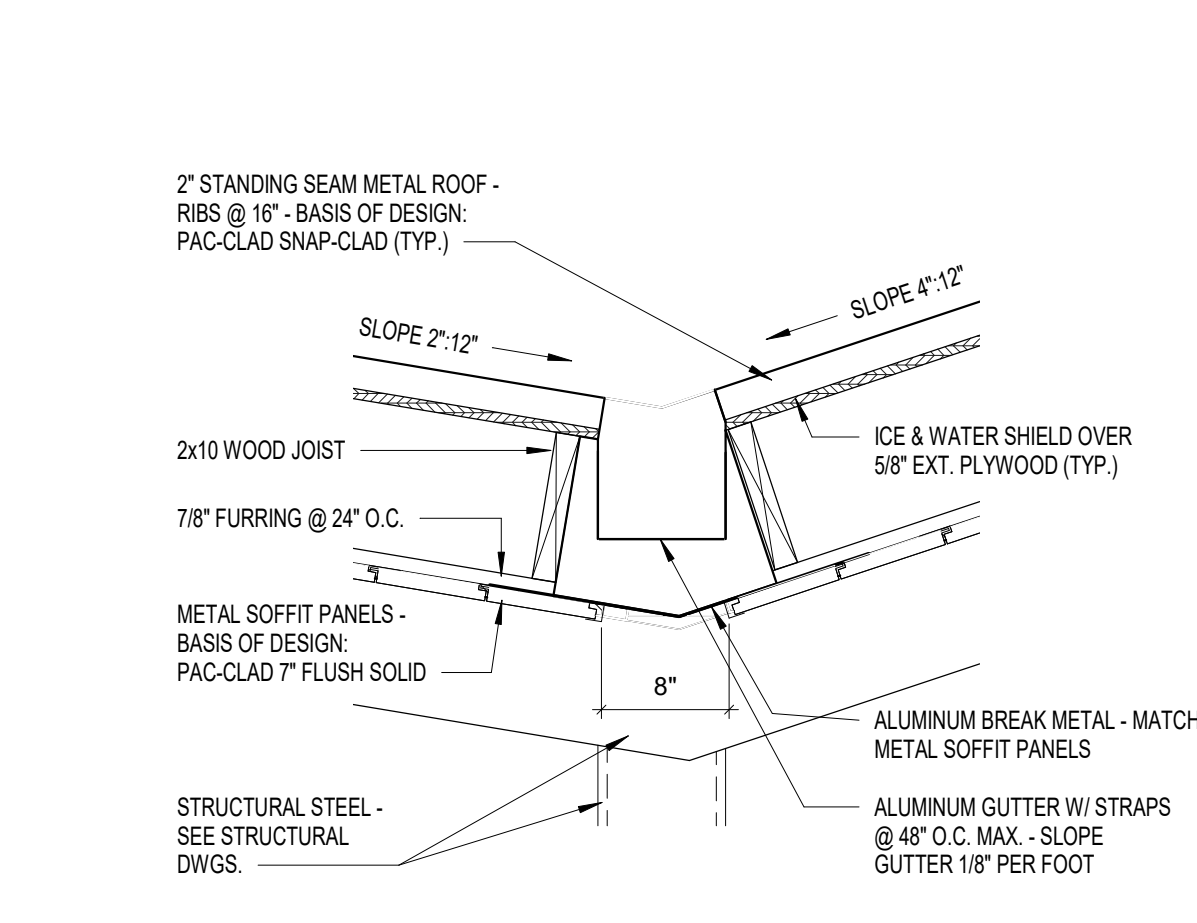
5 PARAPET CAP @ TPO
A6.1 1" = 1'-0"



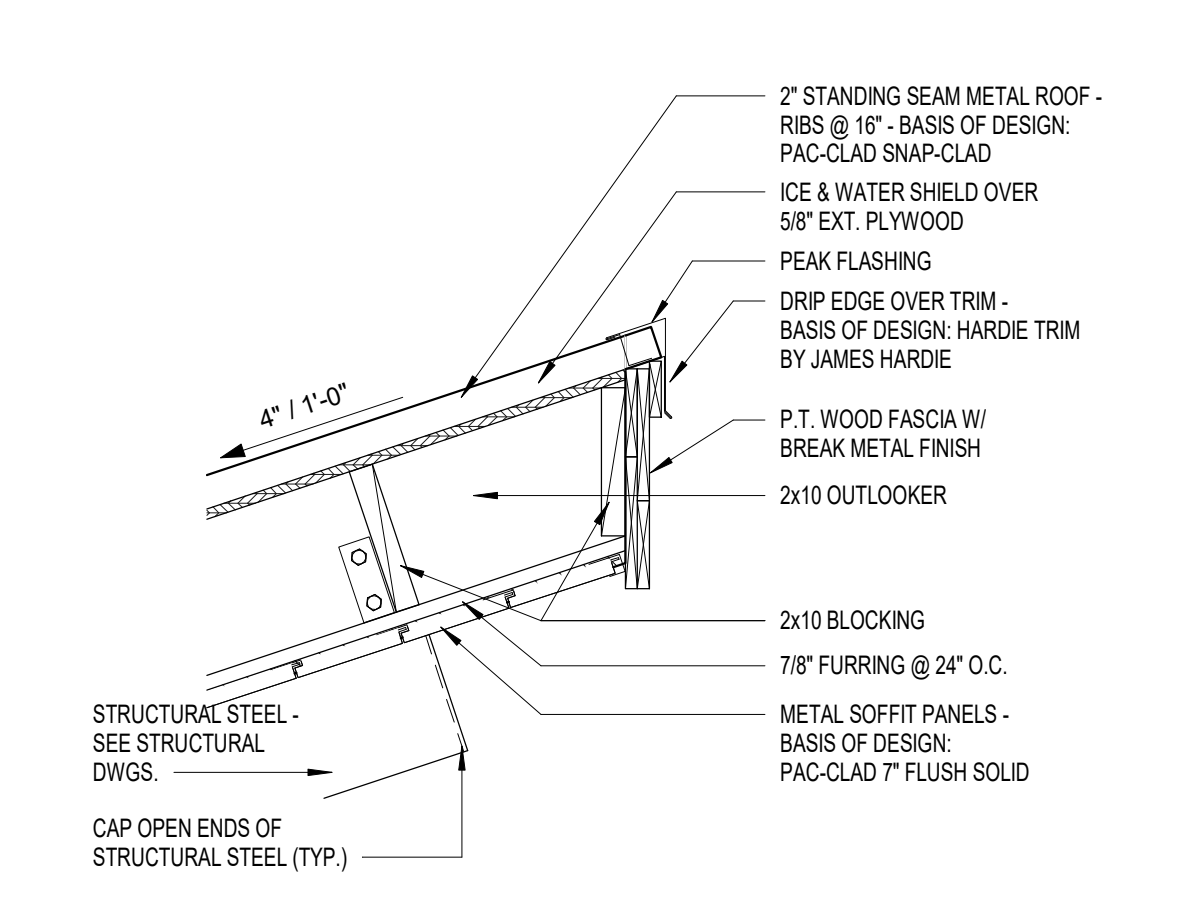
1 PARAPET CAP - TYP.
A6.1 1" = 1'-0"



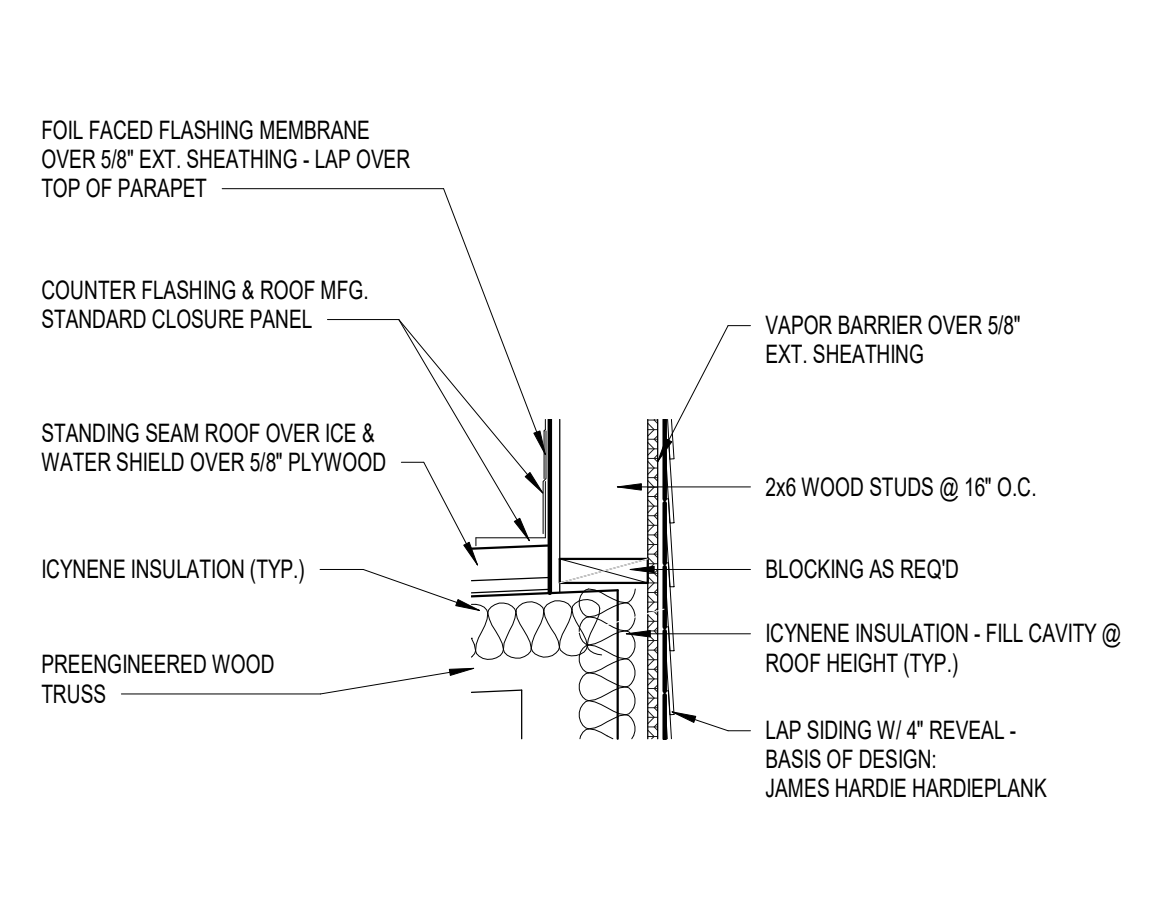
17 SCUPPER - OVERFLOW
A6.1 1" = 1'-0"



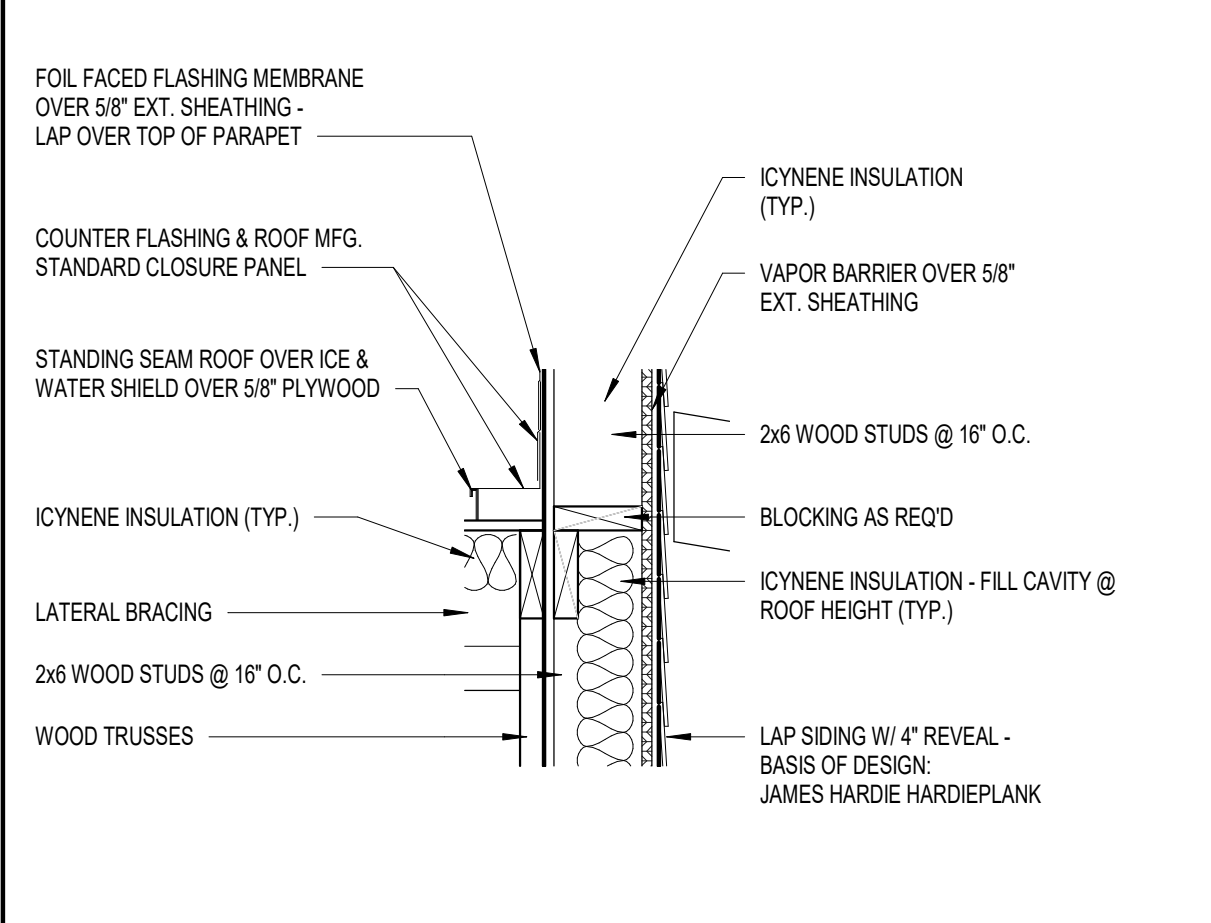
13 GUTTER BETWEEN ROOFS
A6.1 1" = 1'-0"



10 PEAK DETAIL
A6.1 1" = 1'-0"



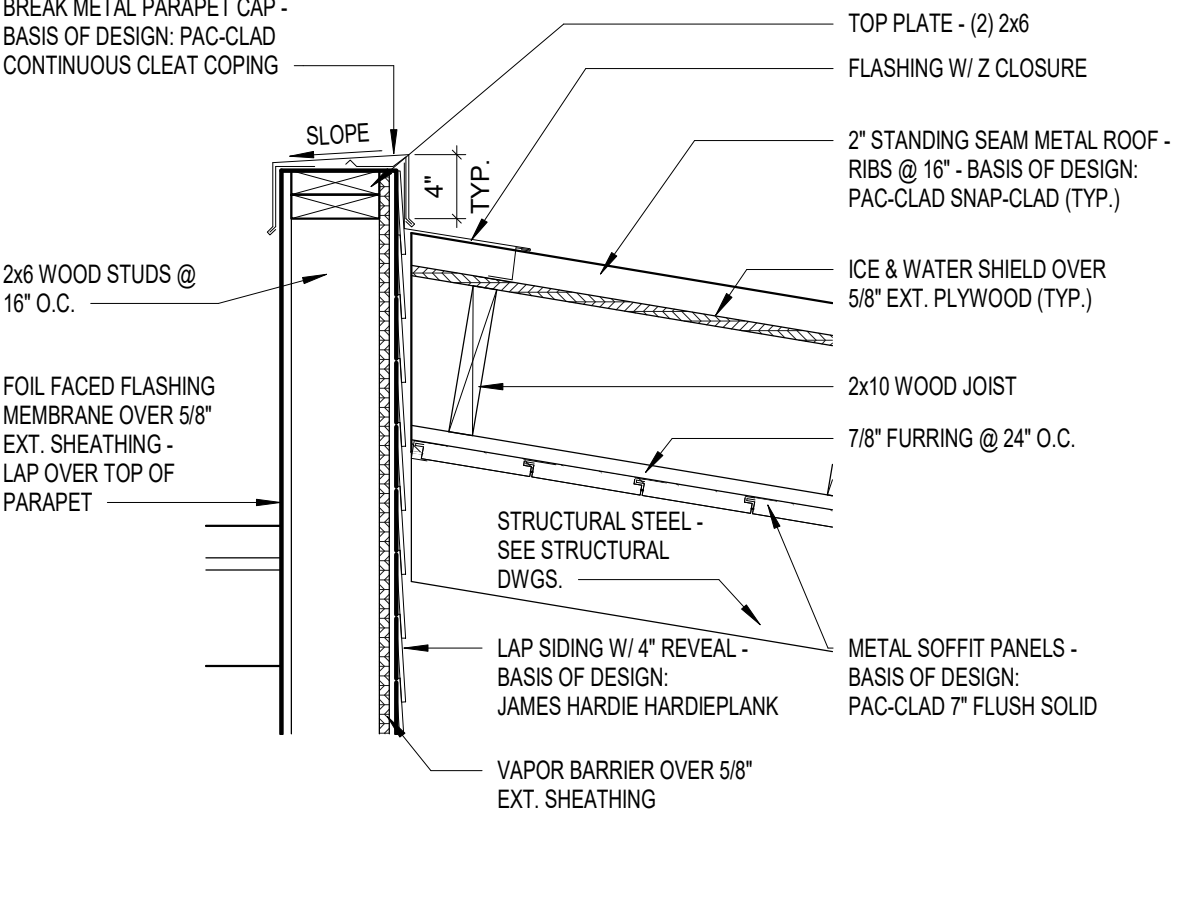
6 METAL ROOF @ PARAPET
A6.1 1" = 1'-0"



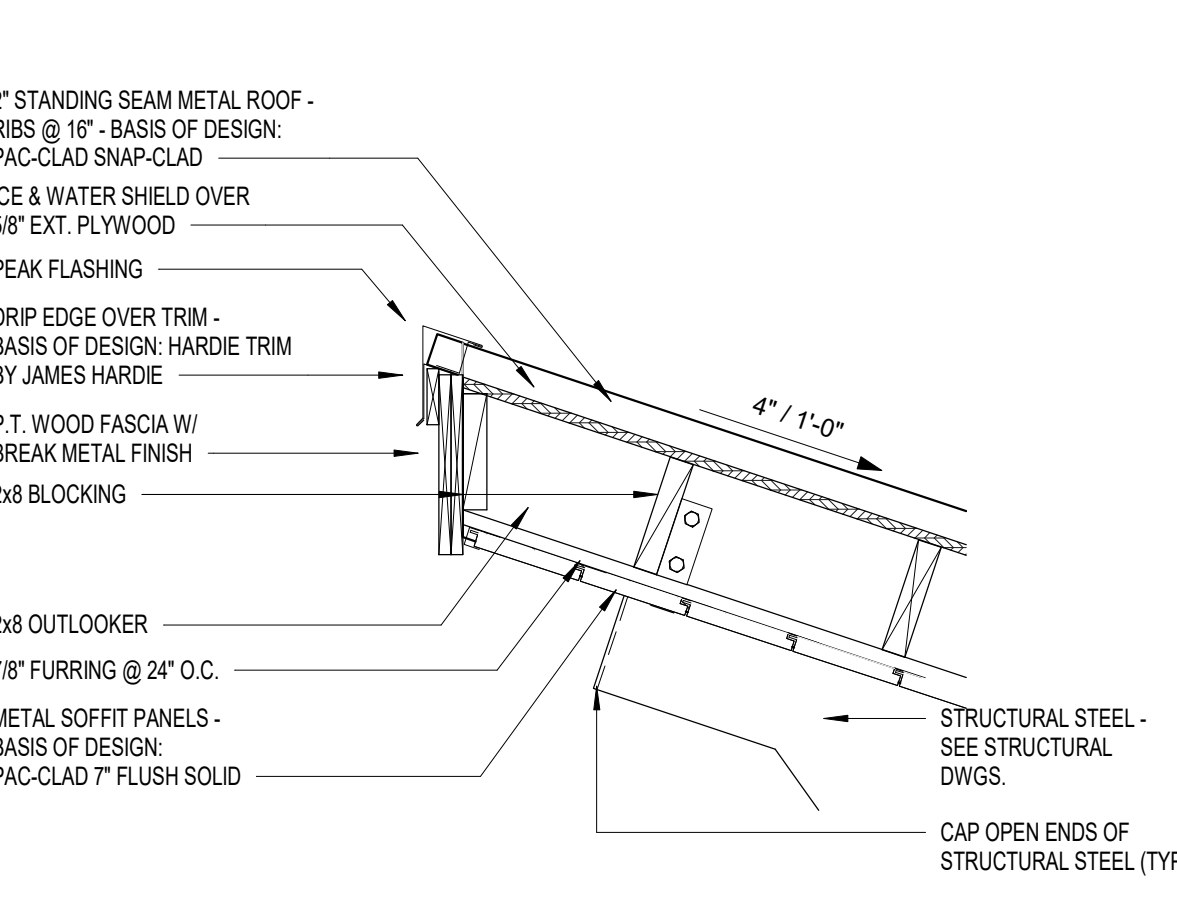
2 METAL ROOF @ PARAPET
A6.1 1" = 1'-0"



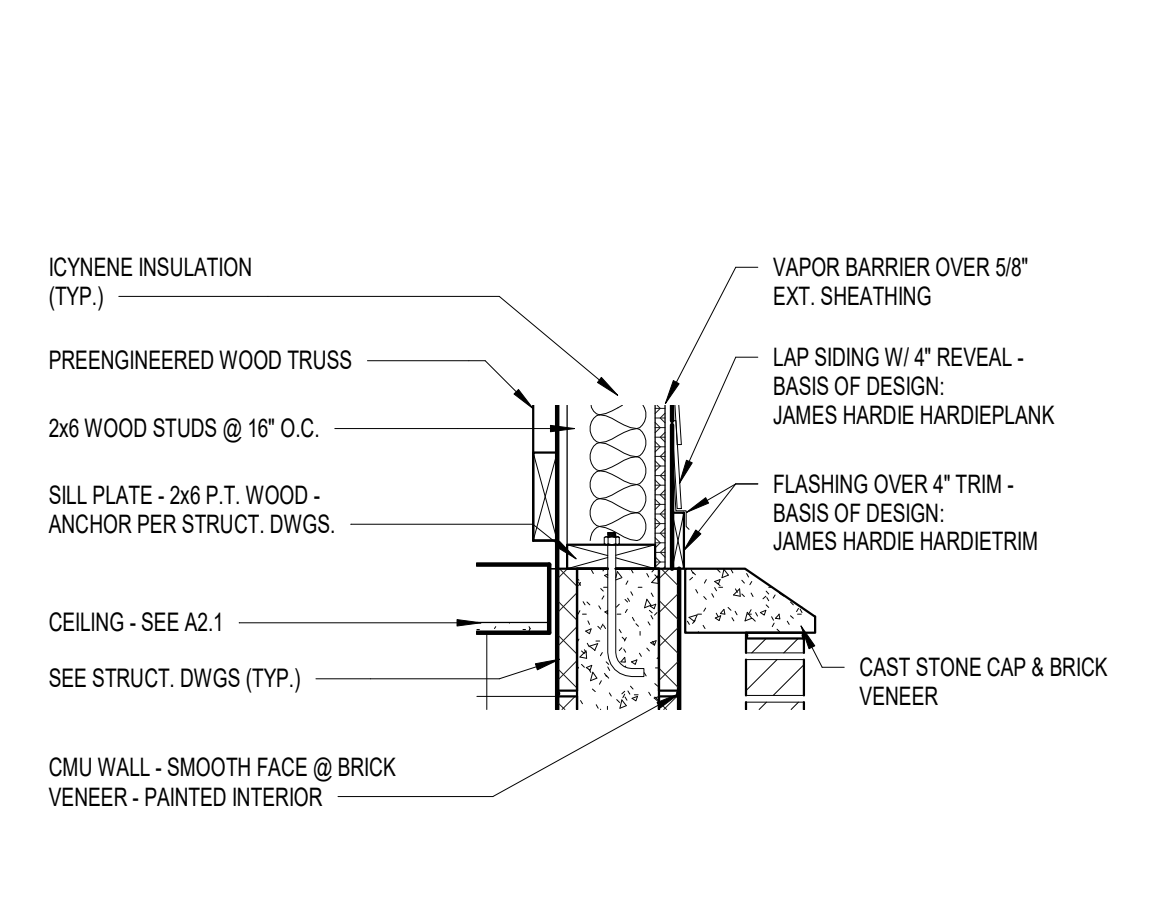
14 ROOF PEAK @ PARAPET
A6.1 1" = 1'-0"



11 PEAK DETAIL
A6.1 1" = 1'-0"



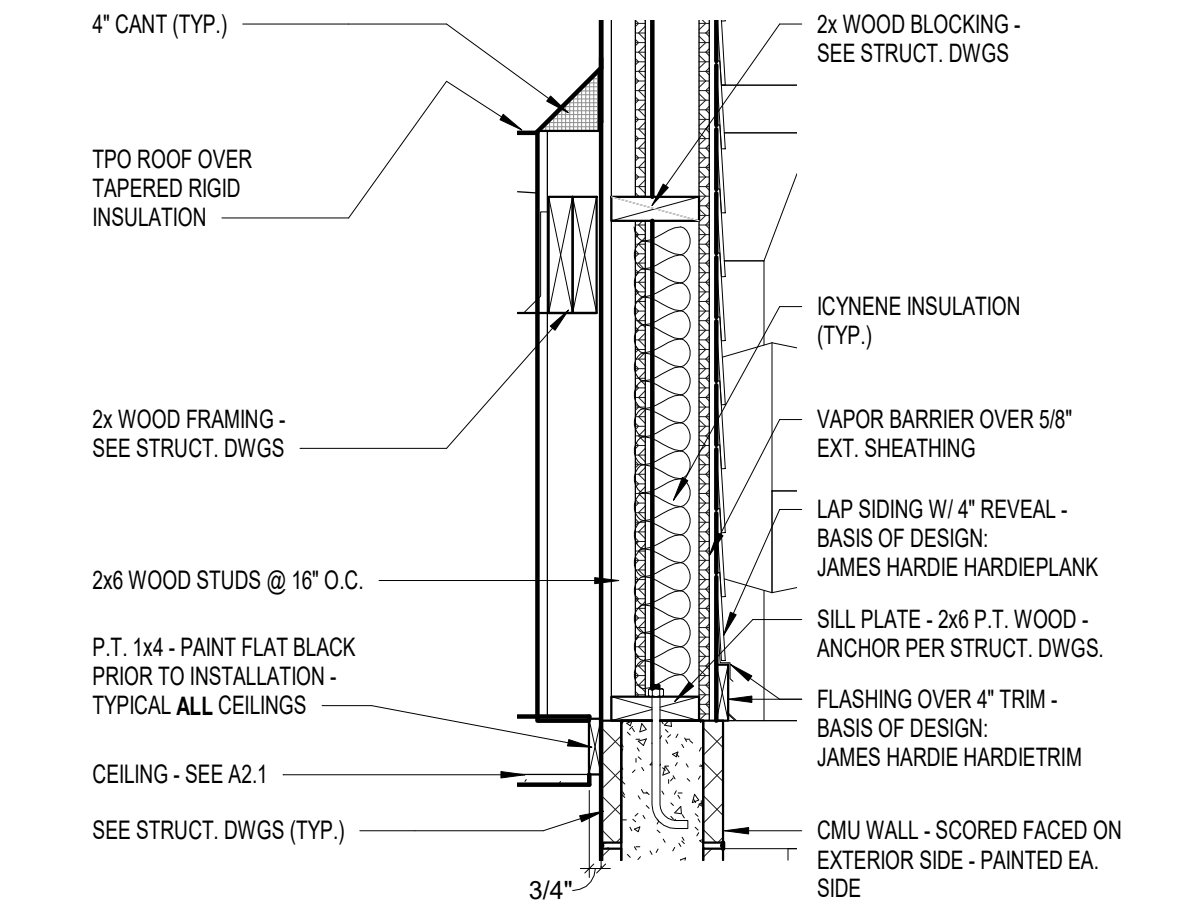
7 PARAPET SILL @ VENEER
A6.1 1" = 1'-0"



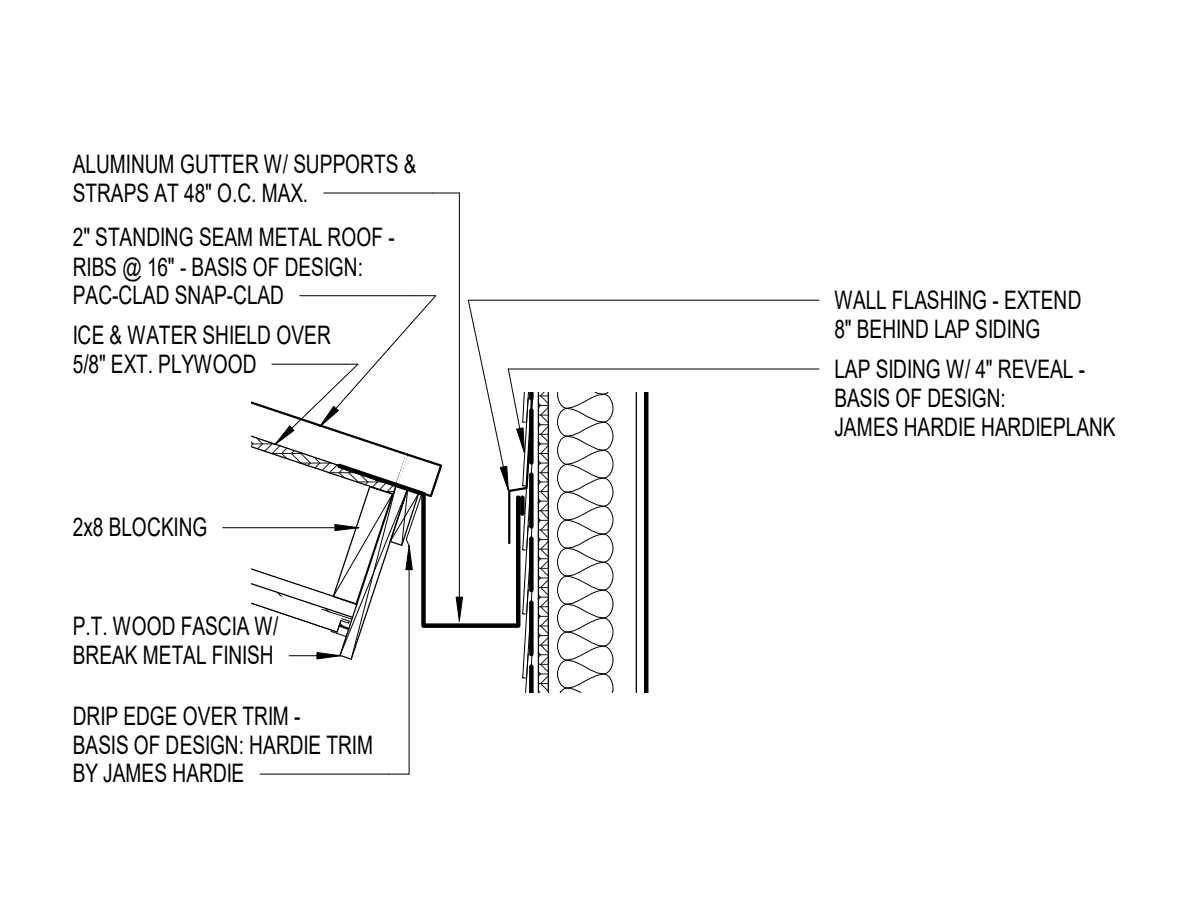
3 PARAPET SILL - TYP.
A6.1 1" = 1'-0"



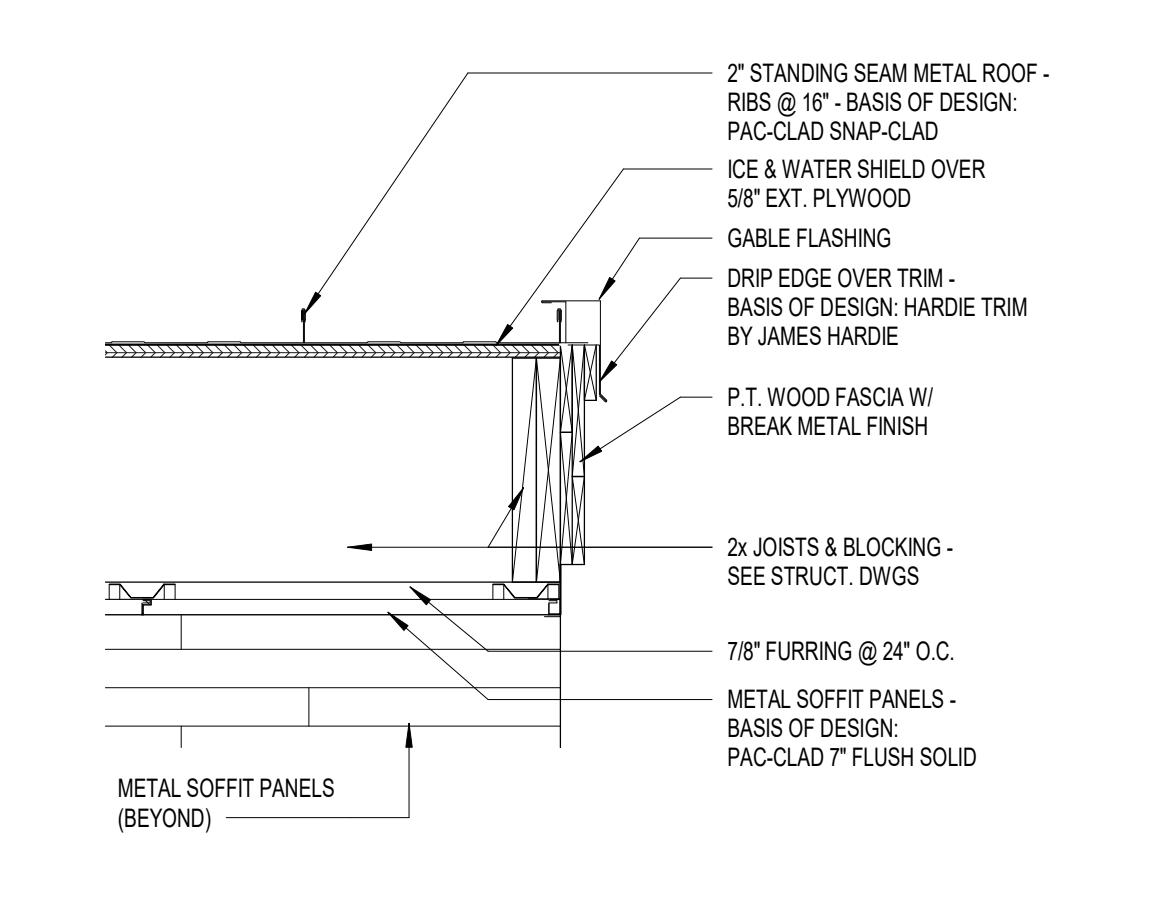
15 STORAGE BLDG
A6.1 1" = 1'-0"



12 SHED GUTTER @ WALL
A6.1 1" = 1'-0"



8 ROOF GABLE DETAIL
A6.1 1" = 1'-0"



4 BRICK VENEER @ FLOOR
A6.1 1" = 1'-0"



APALACHEE REGIONAL CROSS COUNTRY VENUE

16150 Drawn By: jh2
Project Code Checked By: DS

04 OCTOBER 2019

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BUILDING DETAILS

Tallahassee Florida

A6.1

WALL PARTITION SCHEDULE					
MARK	RATING	SYMBOL	PLAN SECTION	ASSEMBLY	REMARKS
P-1				<ol style="list-style-type: none"> 8" CONCRETE MASONRY UNIT - SCORED FACE (SEE REMARKS) GROUTED & REINFORCED CELLS, CORNERS & OPENINGS. SEE STRUCTURAL DRAWINGS FILL ALL NON-REINFORCING CELLS WITH FOAM INSULATION PER SPECIFICATIONS 	<p>CONTINUOUS HORIZONTAL MASONRY REINFORCING EVERY OTHER COURSE</p> <p>PROVIDE RAKED JOINTS</p> <p>SCORED FACE ON EXT. SIDE</p>
P-2				<ol style="list-style-type: none"> 8" CONCRETE MASONRY UNIT - SMOOTH FACE (SEE REMARKS) GROUTED & REINFORCED CELLS, CORNERS & OPENINGS. SEE STRUCTURAL DRAWINGS BITUMINIOUS DAMPPROOFING OVER CMU BRICK VENEER W/CLEANED & FLASHED AIR SPACE CAVITY W/ BRICK TIES @ 16" O.C VERT. AND 32" HORIZON. 	<p>CONTINUOUS HORIZONTAL MASONRY REINFORCING EVERY OTHER COURSE</p> <p>PROVIDE RAKED JOINTS ON INTERIOR SIDE ONLY</p>
P-3				<ol style="list-style-type: none"> 8" CONCRETE MASONRY UNIT - SMOOTH FACE (SEE REMARKS) GROUTED & REINFORCED CELLS, CORNERS & OPENINGS. SEE STRUCTURAL DRAWINGS 	<p>CONTINUOUS HORIZONTAL MASONRY REINFORCING EVERY OTHER COURSE</p> <p>PROVIDE RAKED JOINTS</p> <p>PROVIDE EPOXY PAINT ON WET PLUMBING WALLS</p>
P-4				<ol style="list-style-type: none"> 5/8" EXT. PLYWOOD (SEE REMARKS) 2x6 WOOD STUDS @ 16" O.C. ICENYNE INSULATION - TOP OF CMU TO ROOF VAPOR BARRIER OVER 5/8" EXT. PLYWOOD LAP SIDING W/ 4" REVEAL (SEE REMARKS) 	<p>FOIL FACED FLASHING MEMBRANE OVER INTERIOR SIDE OF 5/8" EXT. PLYWOOD @ METAL ROOF</p> <p>TPO MEMBRANE OVER INTERIOR SIDE OF 5/8" EXT. PLYWOOD @ TPO ROOF</p> <p>LAP SIDING - BASIS OF DESIGN: JAMES HARDIE HARDIEPLANK</p>
P-5				<ol style="list-style-type: none"> 8" CONCRETE MASONRY UNIT - SMOOTH FACE (SEE REMARKS) GROUTED & REINFORCED CELLS, CORNERS & OPENINGS. SEE STRUCTURAL DRAWINGS BITUMINIOUS DAMPPROOFING OVER CMU BRICK VENEER W/CLEANED & FLASHED AIR SPACE CAVITY W/ BRICK TIES @ 16" O.C VERT. AND 32" HORIZON. 	<p>CONTINUOUS HORIZONTAL MASONRY REINFORCING EVERY OTHER COURSE</p> <p>PROVIDE RAKED JOINTS ON INTERIOR SIDE ONLY</p> <p>PROVIDE WEEPS @ 24" O.C. - LOCATE 8" ABOVE FLOOR</p>



APALACHEE REGIONAL CROSS COUNTRY VENUE

16150 Project Code Drawn By: jh2 Checked By: DS

Date 04 OCTOBER 2019

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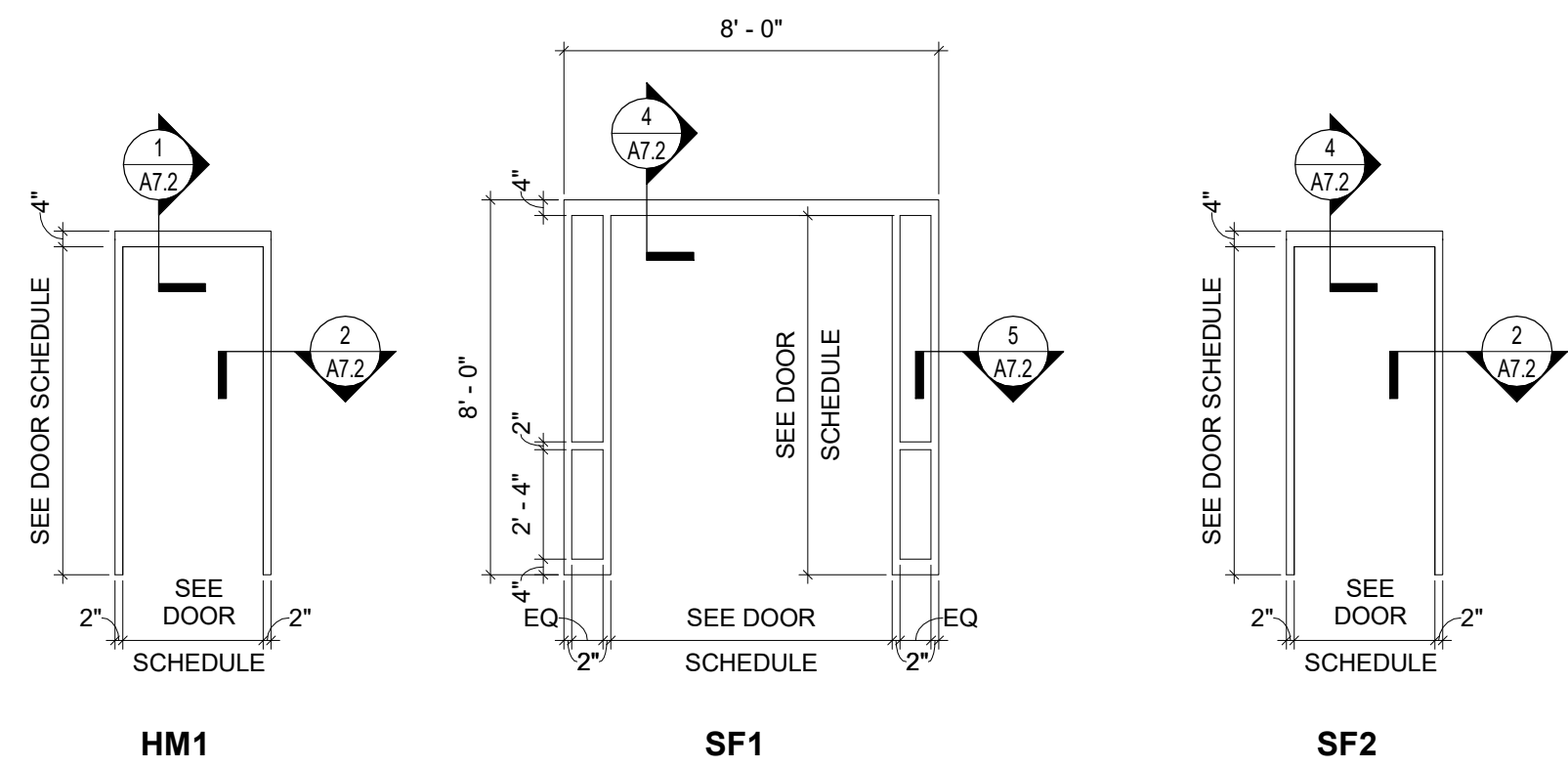
Revisions

PARTITION SCHEDULE

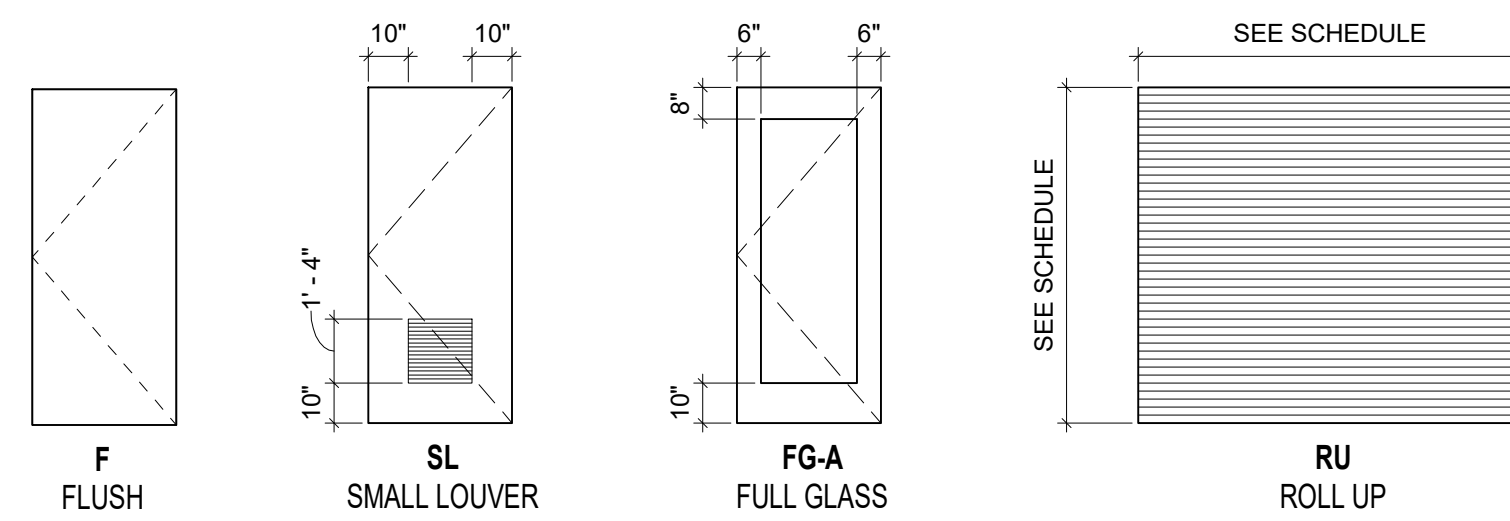
Tallahassee Florida

A7.1

DOOR FRAME TYPES



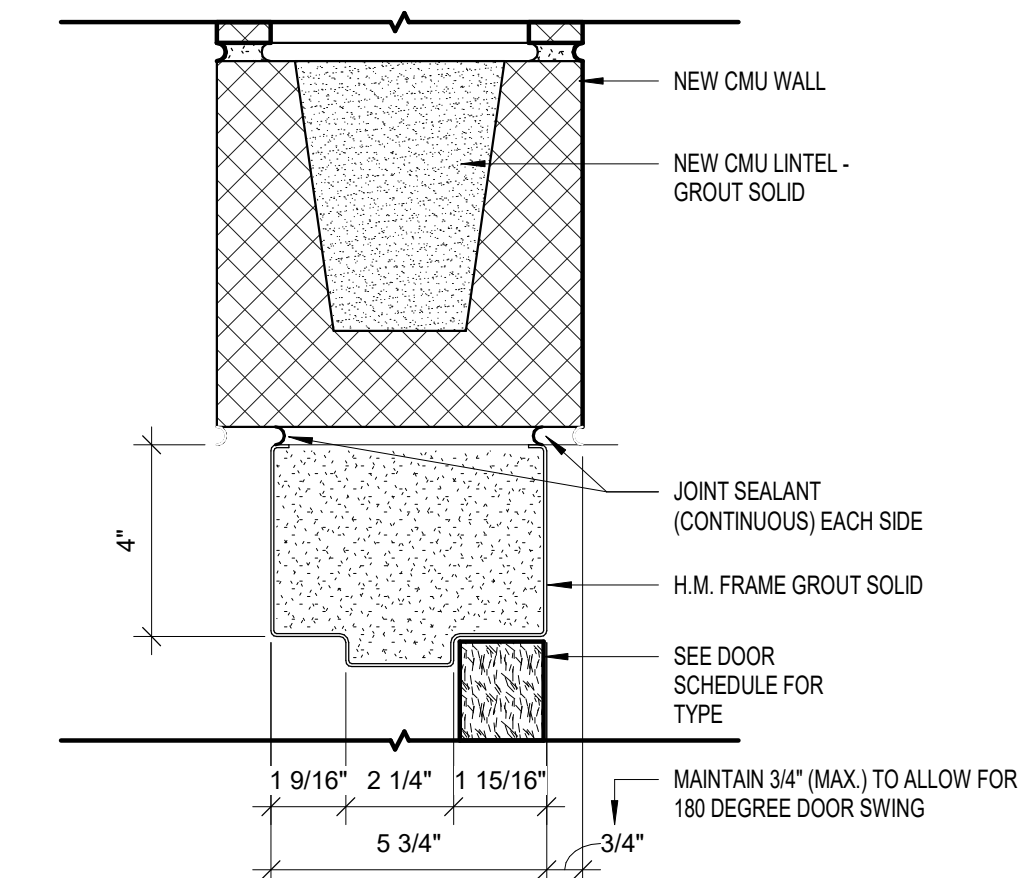
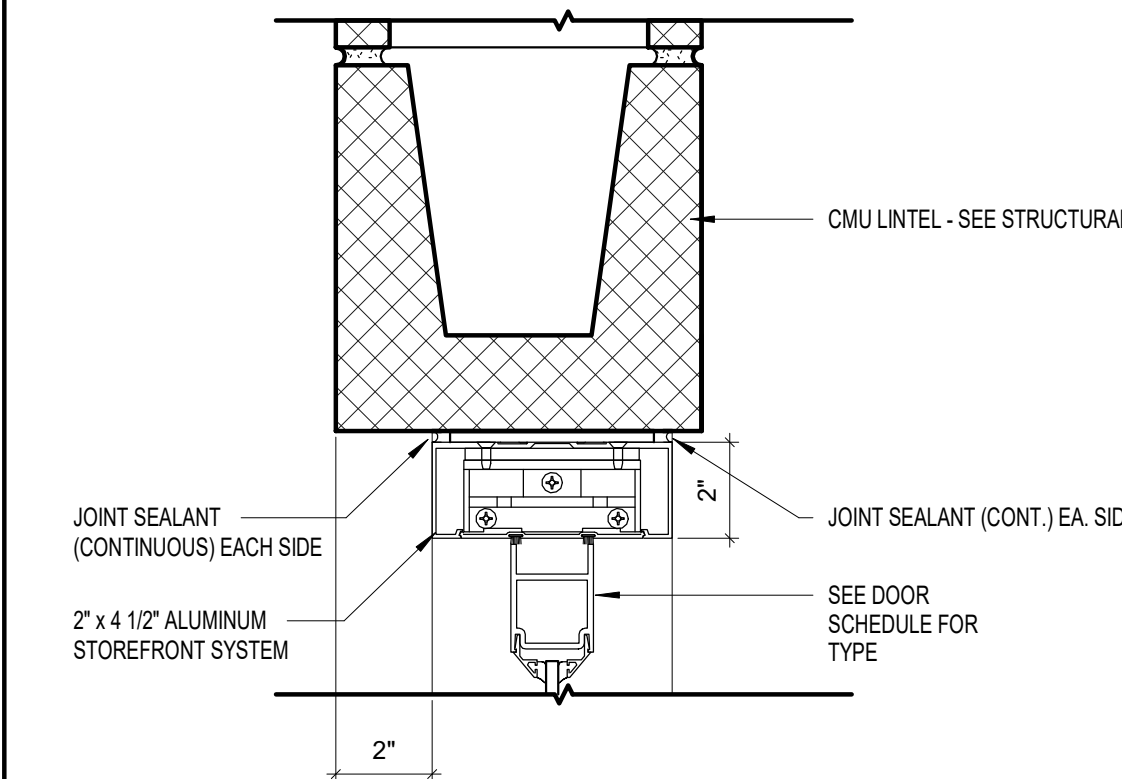
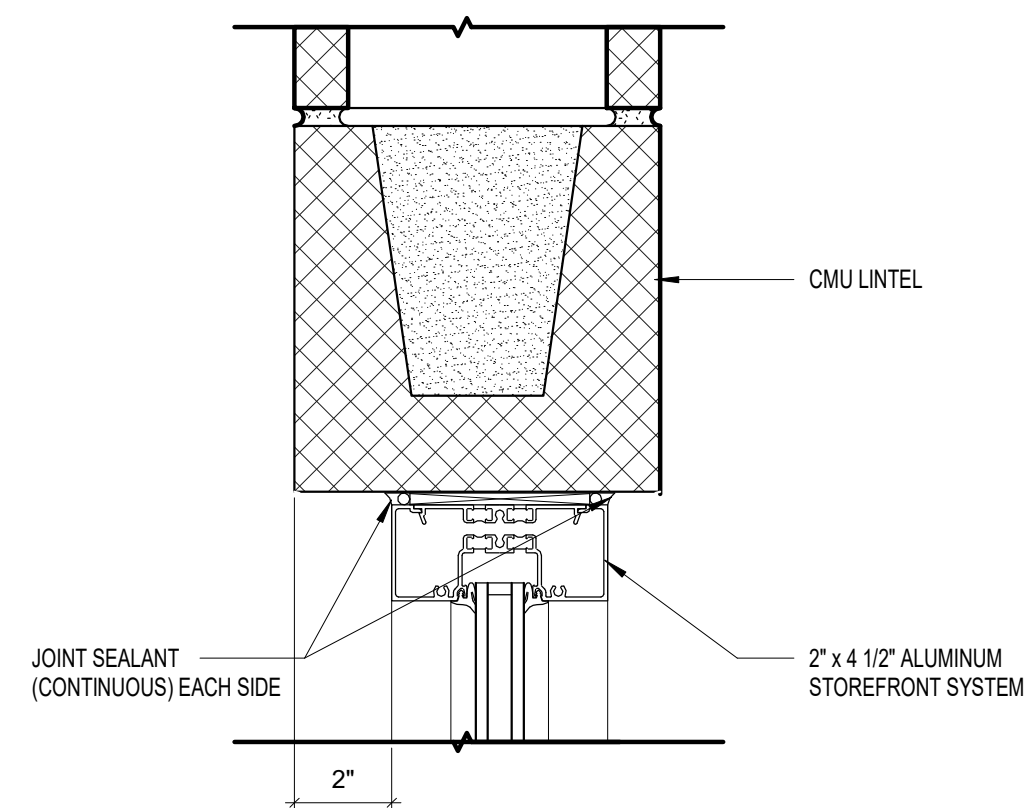
DOOR TYPES



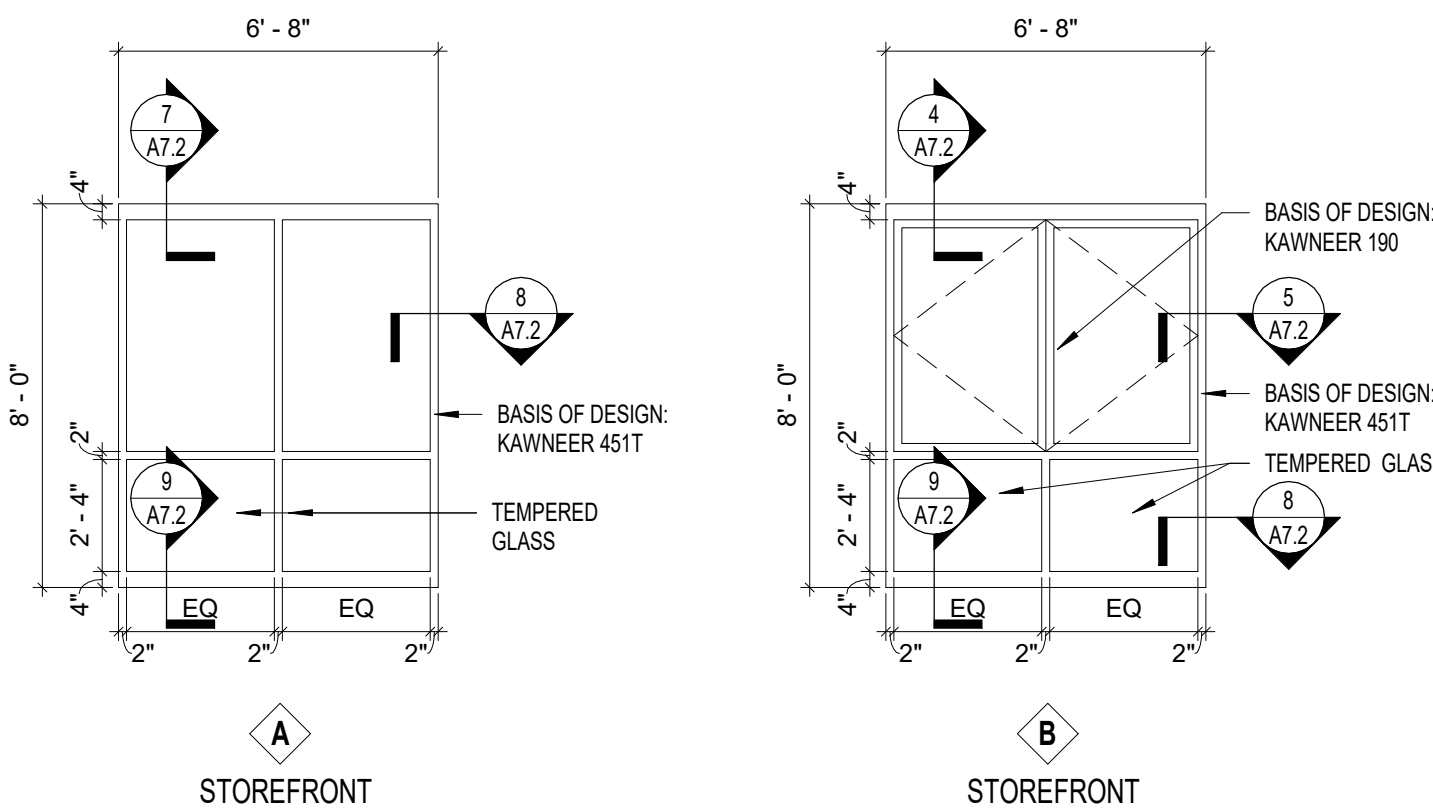
GENERAL NOTE:
SEE DOOR SCHEDULE FOR GLAZING TYPES
INTERIOR DOORS - STEEL DOORS & FRAMES
EXTERIOR DOORS - STEEL GALVANIZED DOORS & FRAMES

DOOR SCHEDULE

MARK	WIDTH	HEIGHT	THICKNESS	DOOR TYPE	DOOR FINISH	FRAME TYPE	FRAME FINISH	HDWR	HEAD	JAMB	SILL	REMARKS
100A	PAIR 3'-0"	7'-8"	2"	FG	ALUMINUM	SF1	ALUM	1	4/A7.1	5/A7.1	6/A7.1	PROVIDE TEMPERED GLAZING & CLOSER / HARDWARE BY ALUMINUM DOOR MANUFACTURER
100B	3'-0"	7'-0"	2"	FG	ALUMINUM	SF2	ALUMINUM	2	4/A7.1	5/A7.1	6/A7.1	PROVIDE TEMPERED GLAZING & CLOSER / HARDWARE BY ALUMINUM DOOR MANUFACTURER
101	PAIR 2'-10"	7'-0"	1 3/4"	SL	PAINT	HM	PAINT	7	1/A7.1	2/A7.1		PROVIDE FLUSH BOLTS AT INACTIVE LEAF OF DOOR
102A	3'-0"	7'-0"	1 3/4"	F	PAINT	HM	PAINT	6	1/A7.1	2/A7.1		
102B	8'-0"	8'-0"	2"	RU	PAINT	HM	PAINT					
103A	3'-0"	7'-0"	1 3/4"	F	PAINT	HM	PAINT	5	1/A7.1	2/A7.1		
103B	3'-0"	7'-0"	1 3/4"	F	PAINT	HM	PAINT	4	1/A7.1	2/A7.1	3/A7.1	
104A	3'-0"	7'-0"	1 3/4"	F	PAINT	HM	PAINT	5	1/A7.1	2/A7.1		
104B	3'-0"	7'-0"	1 3/4"	F	PAINT	HM	PAINT	4	1/A7.1	2/A7.1	3/A7.1	
105A	3'-0"	7'-0"	1 3/4"	F	PAINT	HM	PAINT	3	1/A7.1	2/A7.1	3/A7.1	
105B	8'-0"	8'-0"	2"	RU	PAINT	HM	PAINT					
106	3'-0"	7'-0"	1 3/4"	F	PAINT	HM	PAINT	4	1/A7.1	2/A7.1	3/A7.1	
107	3'-0"	7'-0"	1 3/4"	F	PAINT	HM	PAINT	4	1/A7.1	2/A7.1	3/A7.1	
108	3'-0"	7'-0"	1 3/4"	F	PAINT	HM	PAINT	6	1/A7.1	2/A7.1	3/A7.1	



WINDOW TYPES



GENERAL NOTE:
ALL WINDOW GLAZING TO BE LOW-E AND OR TEMPERED GLASS

7 SF WINDOW HEAD

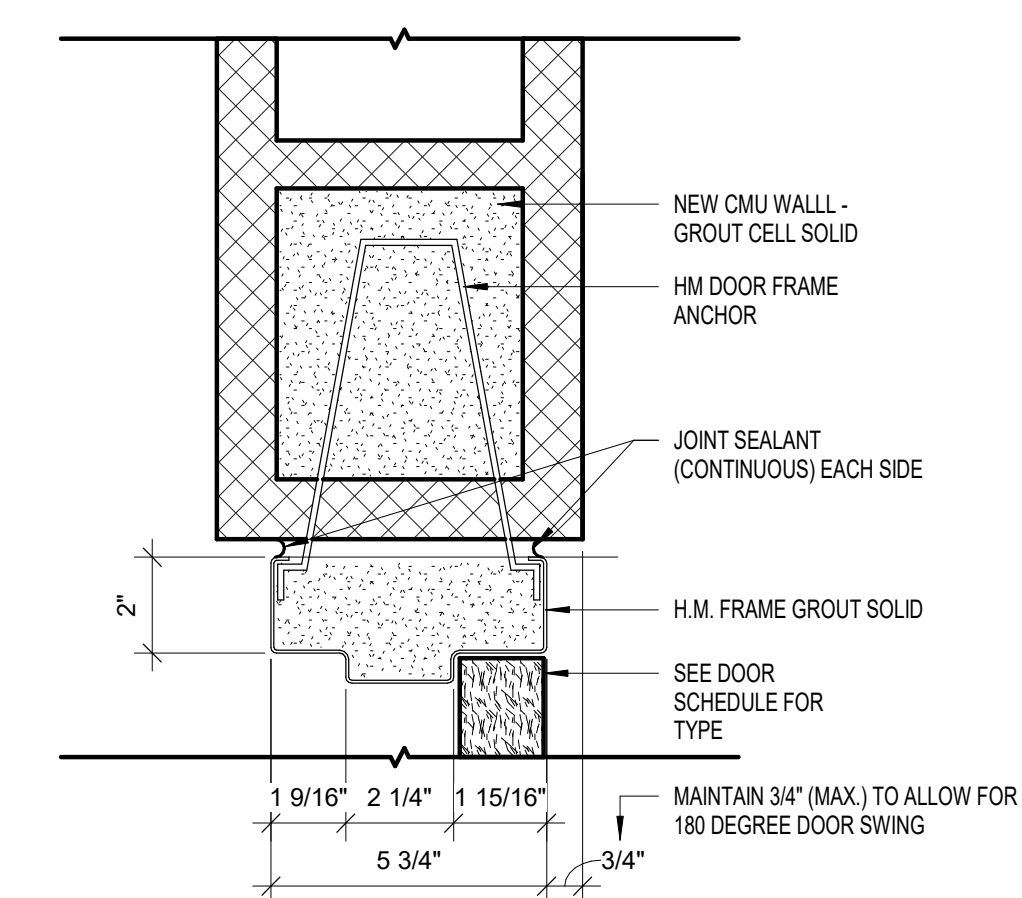
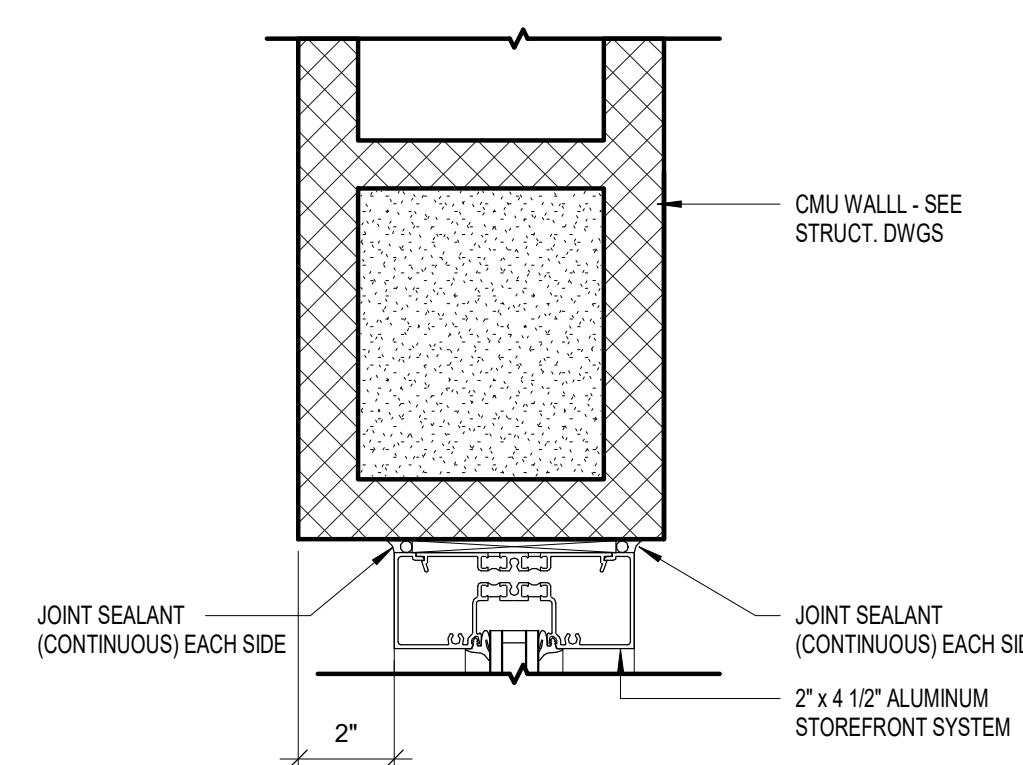
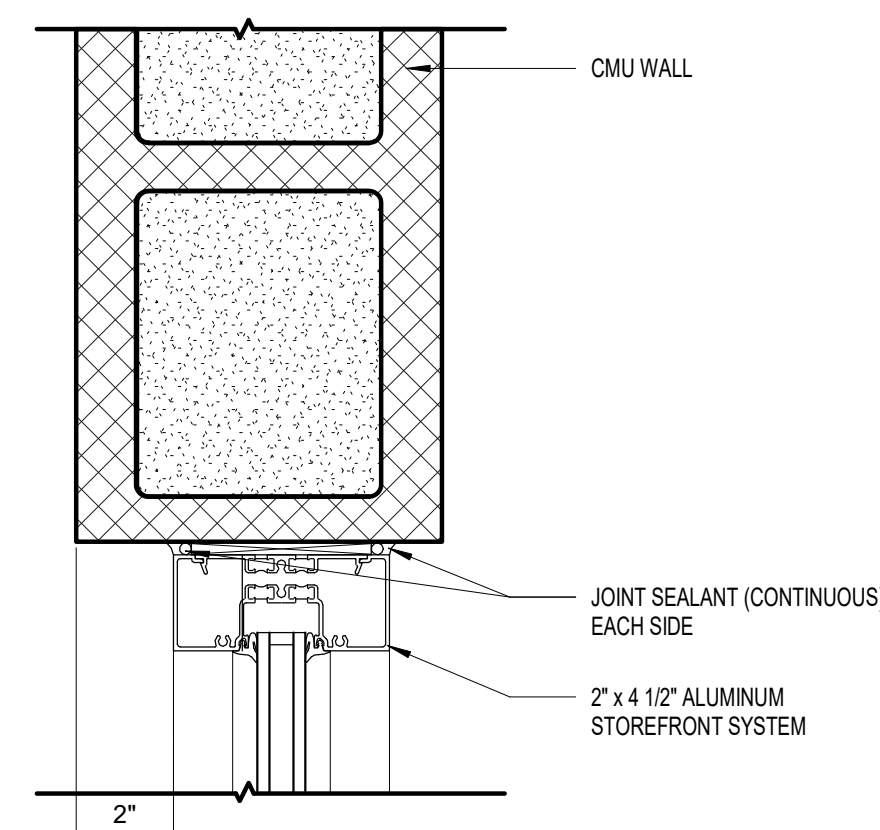
A7.2 3" = 1'-0"

4 SF DOOR HEAD

A7.2 3" = 1'-0"

1 HM DOOR HEAD

A7.2 3" = 1'-0"



8 SF WINDOW JAMB

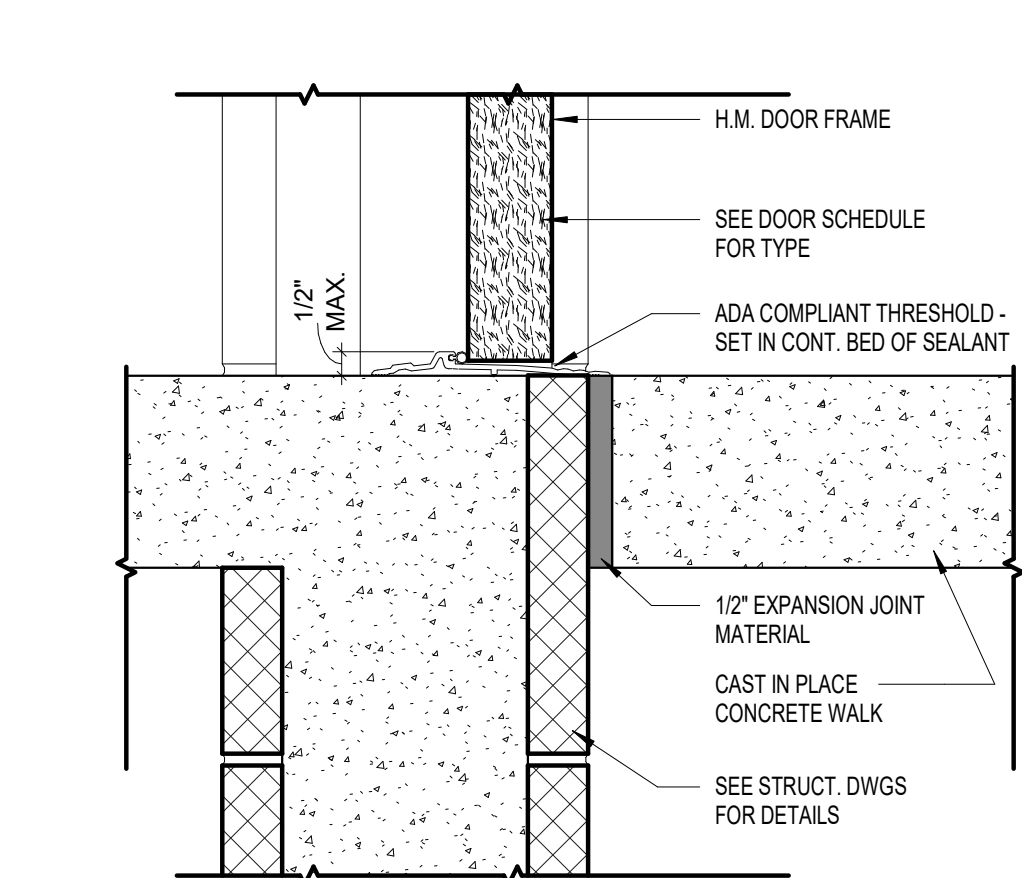
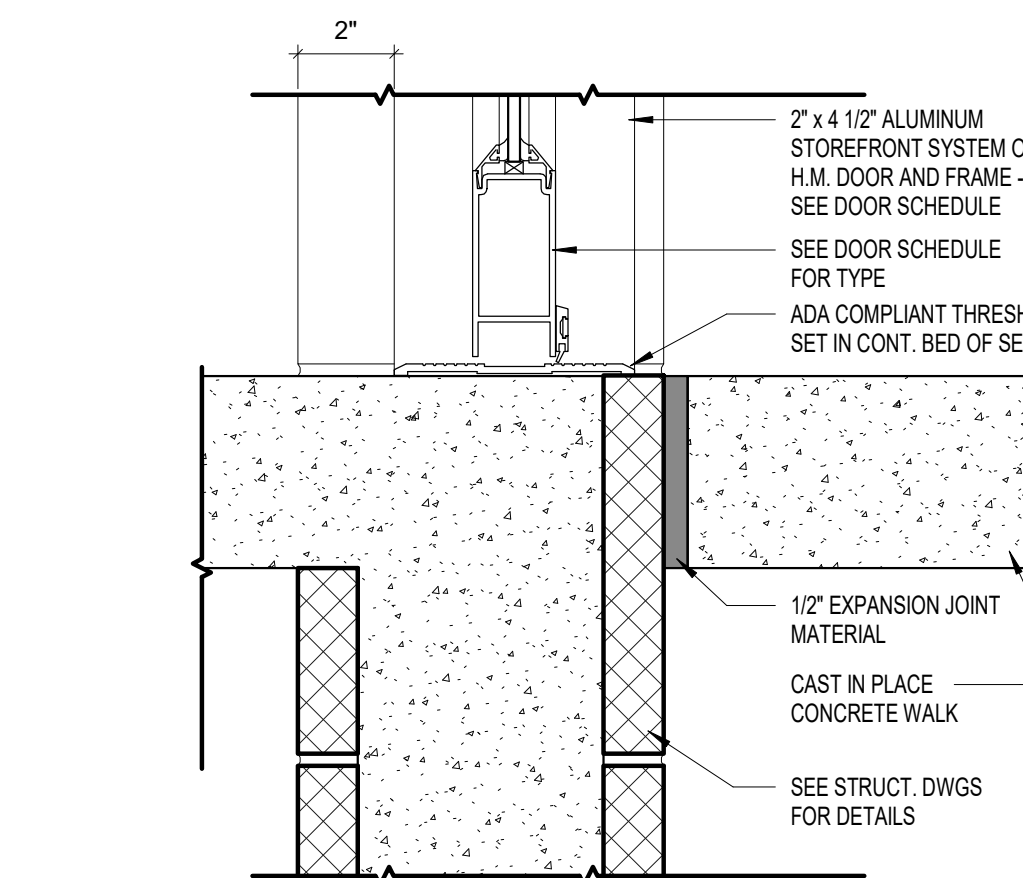
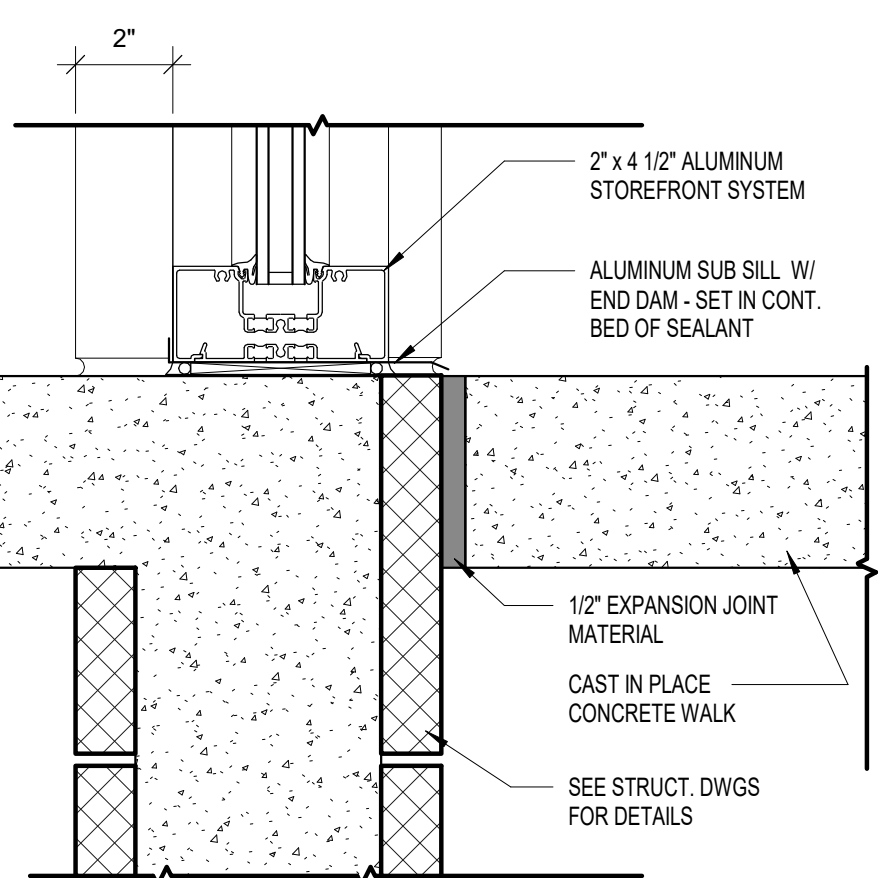
A7.2 3" = 1'-0"

5 SF DOOR JAMB

A7.2 3" = 1'-0"

2 HM DOOR JAMB

A7.2 3" = 1'-0"



9 SF WINDOW SILL

A7.2 3" = 1'-0"

6 SF DOOR SILL

A7.2 3" = 1'-0"

3 HM DOOR SILL

A7.2 3" = 1'-0"



APALACHEE REGIONAL CROSS COUNTRY VENUE

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Project Code Checked By: DS

04 OCTOBER 2019

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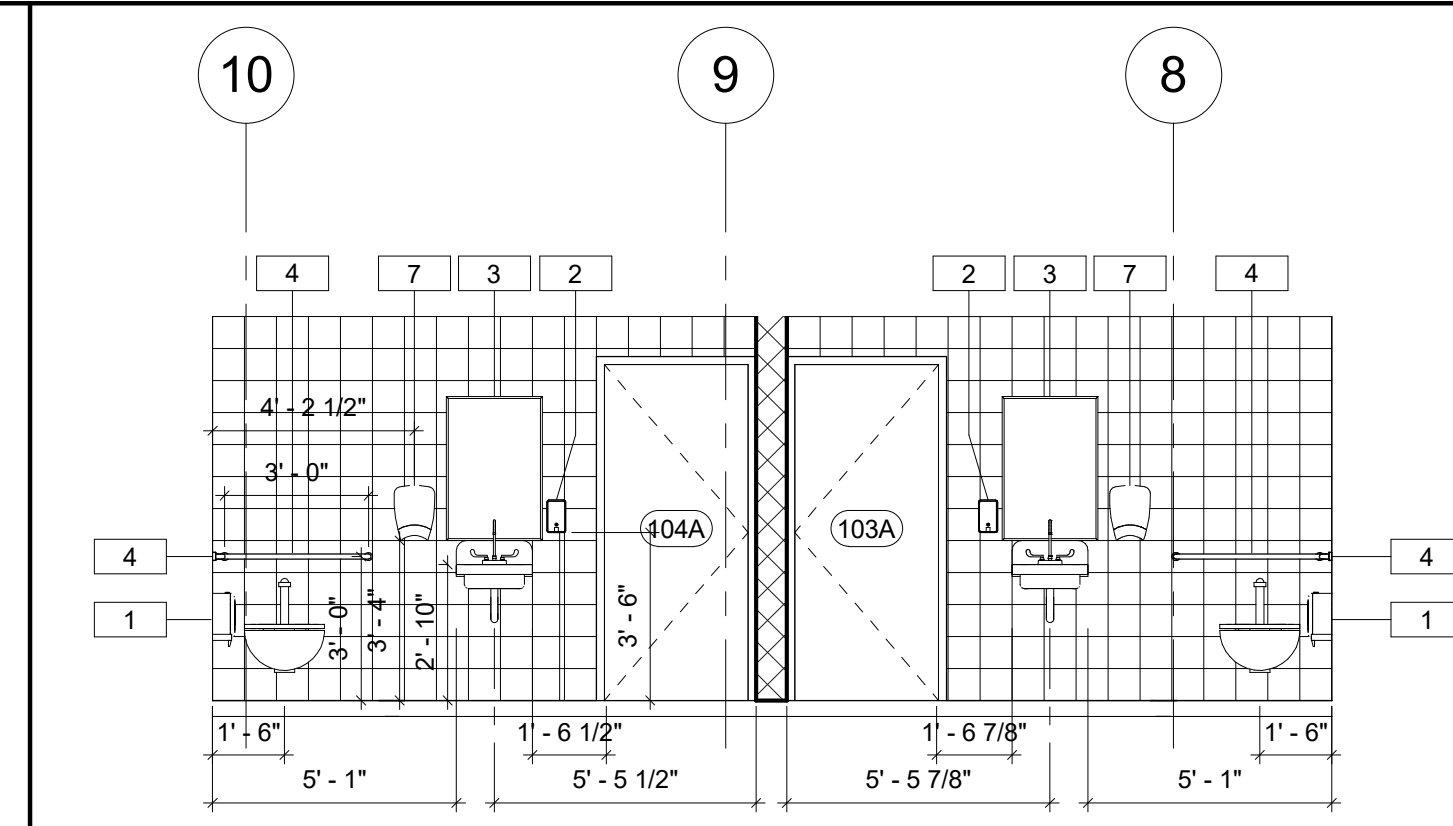
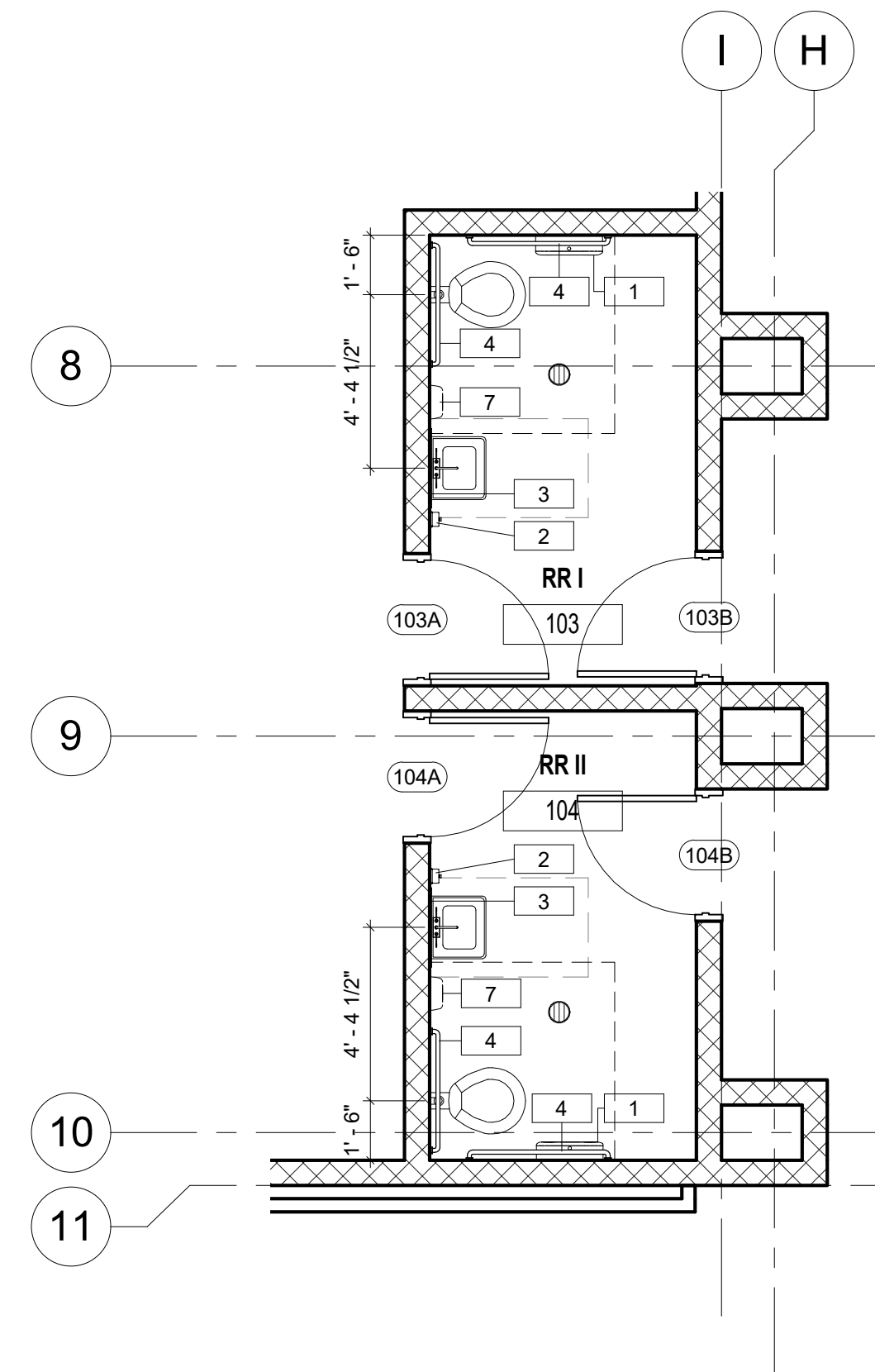
Revisions

SCHEDULES

Tallahassee Florida

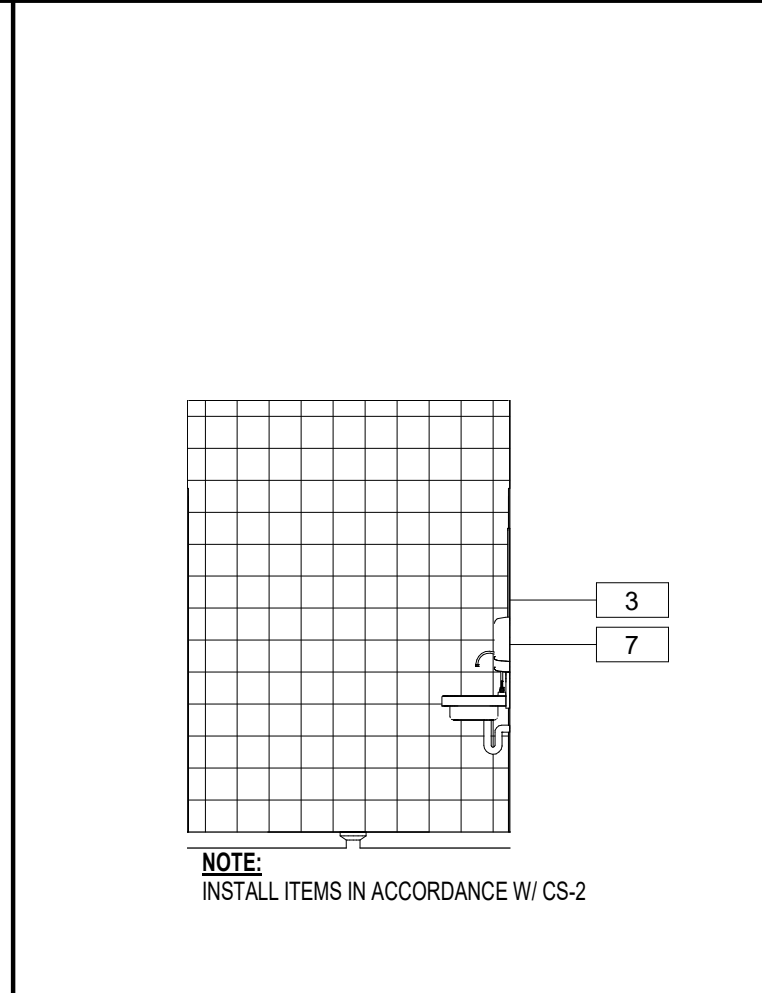
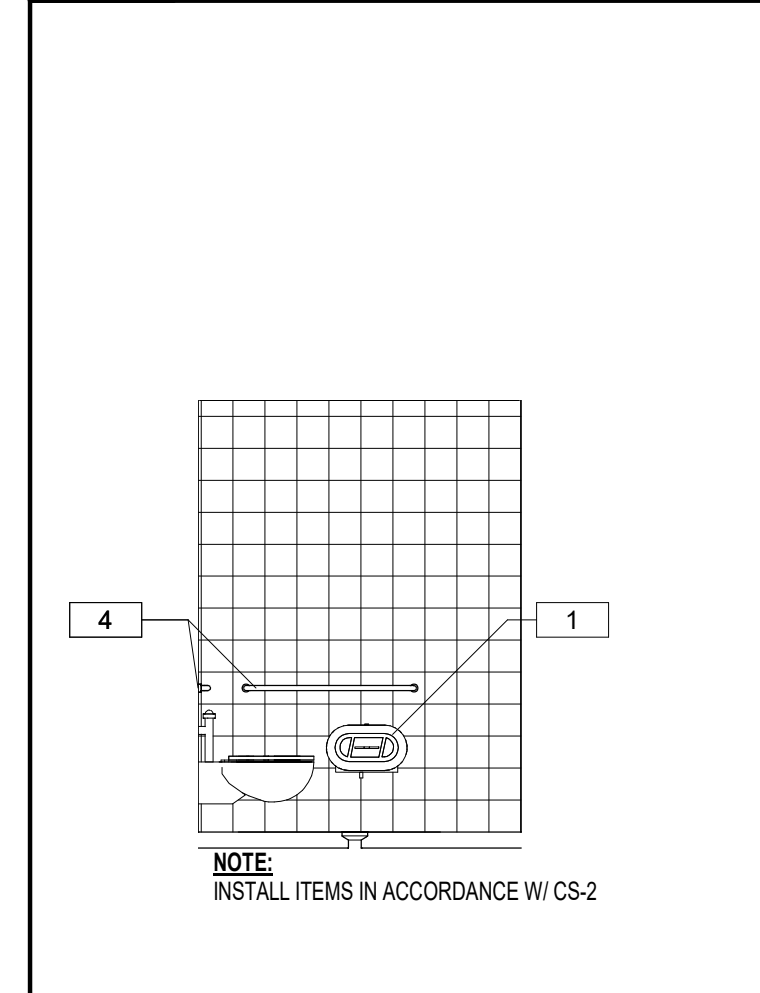
A7.2

- 1 TOILET PAPER DISPENSER
(SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 2 SOAP DISPENSER
(SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 3 MIRROR
(SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 4 ADA GRAB BAR
(SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 5 BABY CHANGING STATION
(SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 6 UNDER SINK PLUMBING PROTECTION
(SEE SPECIFICATIONS FOR BASIS OF DESIGN)
- 7 HAND DRYER
(SEE SPECIFICATIONS FOR BASIS OF DESIGN)



1 RESTROOM ELEVATION I

A8.1 1/4" = 1'-0"



7 ENLARGED RR I

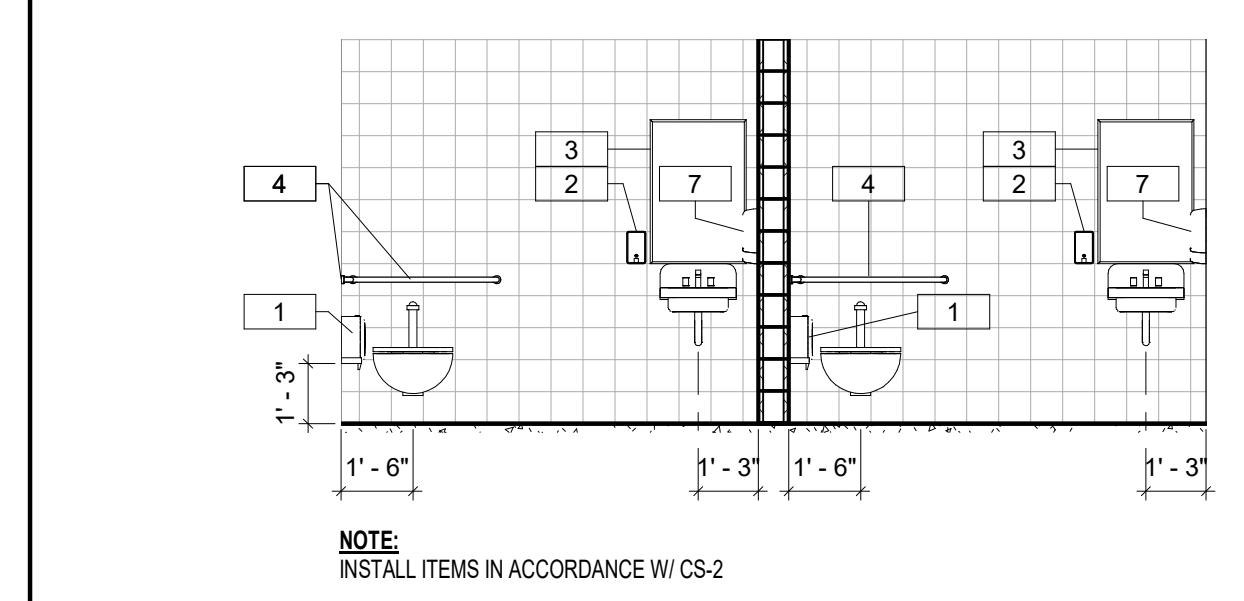
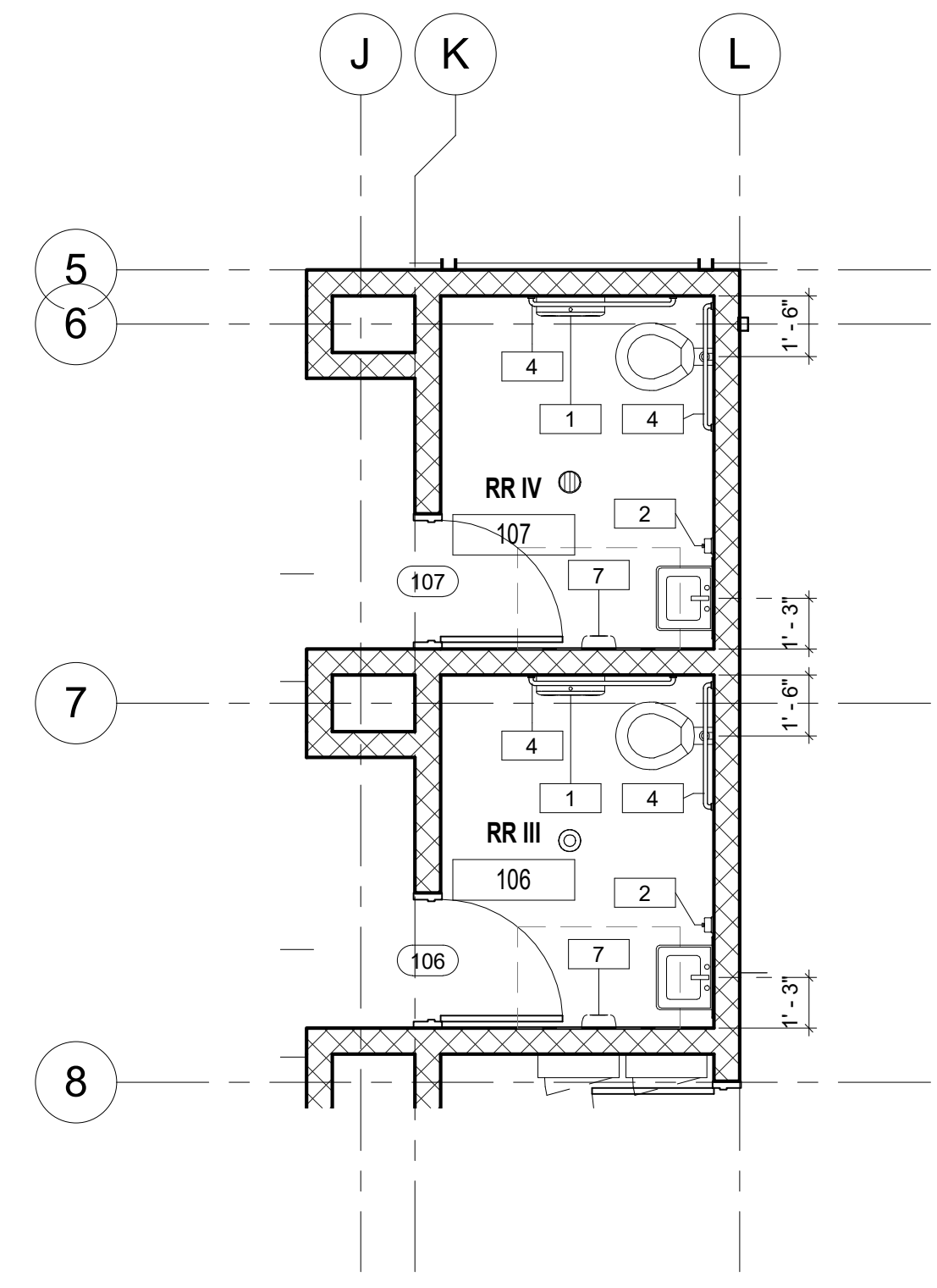
A8.1 1/4" = 1'-0"

2 RR ELEV. II

A8.1 1/4" = 1'-0"

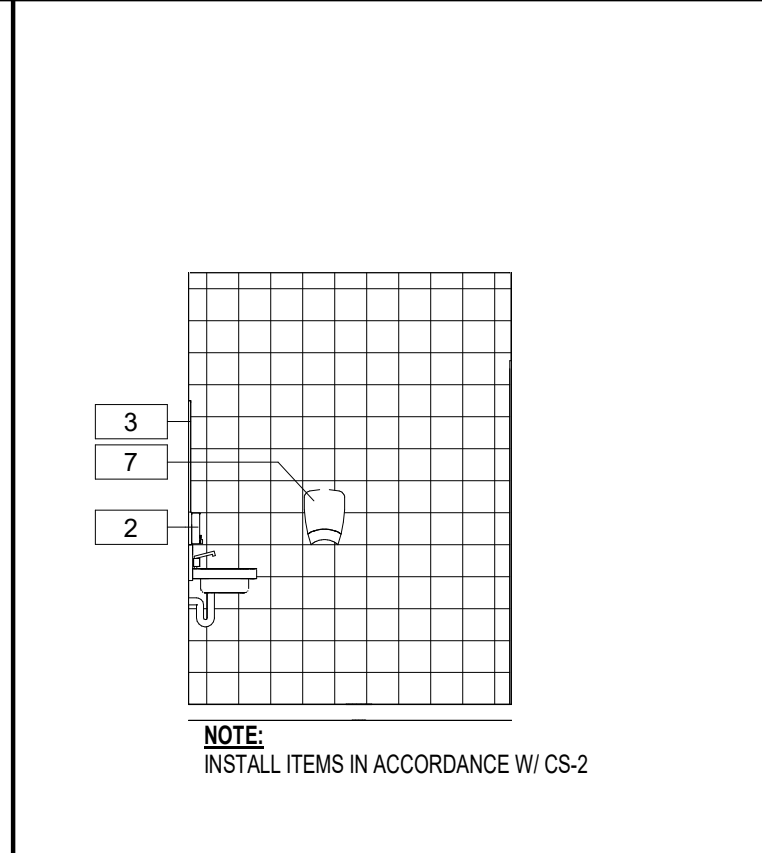
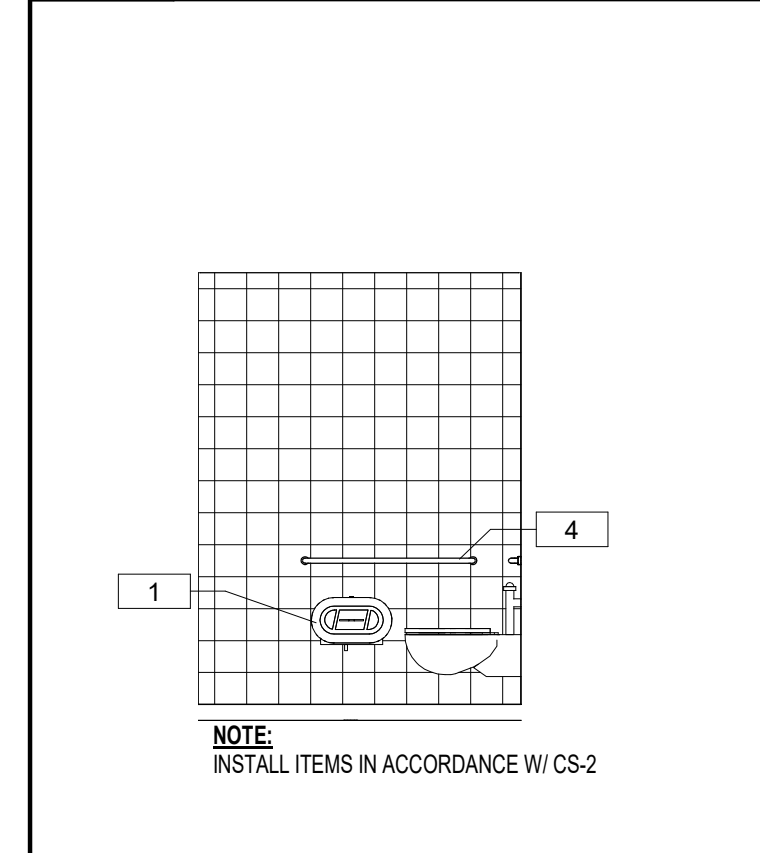
3 RR ELEV III

A8.1 1/4" = 1'-0"



4 RESTROOM ELEVATION IV

A8.1 1/4" = 1'-0"



8 ENLARGED RR II

A8.1 1/4" = 1'-0"

5 RR ELEV V

A8.1 1/4" = 1'-0"

6 RR ELEV VI

A8.1 1/4" = 1'-0"



APALACHEE
REGIONAL CROSS
COUNTRY VENUE

16150 Drawn By: DS
Project Code Checked By: DS

04 OCTOBER 2019
Date

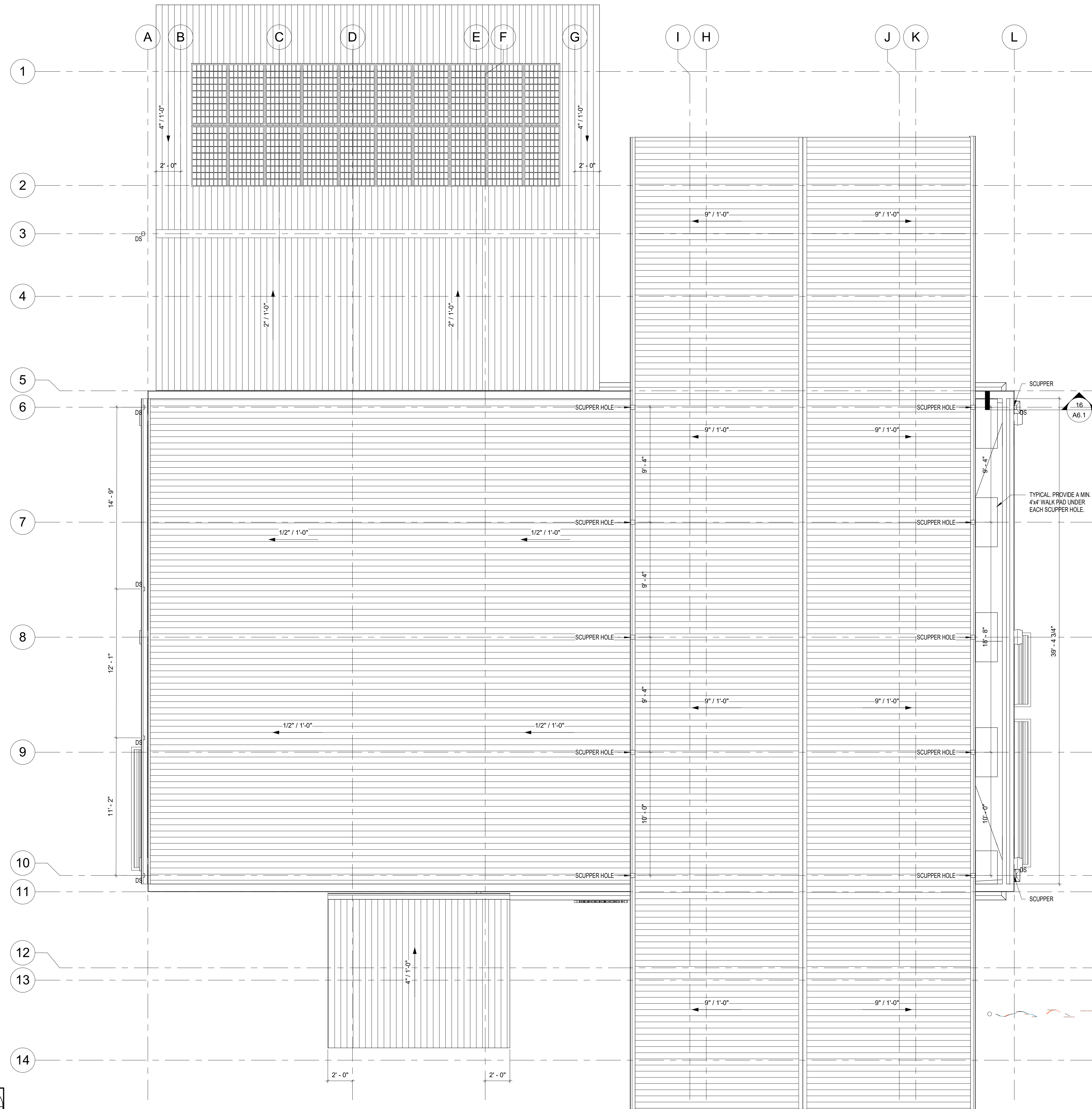
BID DOCUMENTS

Revisions

INTERIOR
RESTROOM
ELEVATIONS

Tallahassee Florida

A8.1



1 ROOF PLAN
 A9.1 1/4" = 1'-0"

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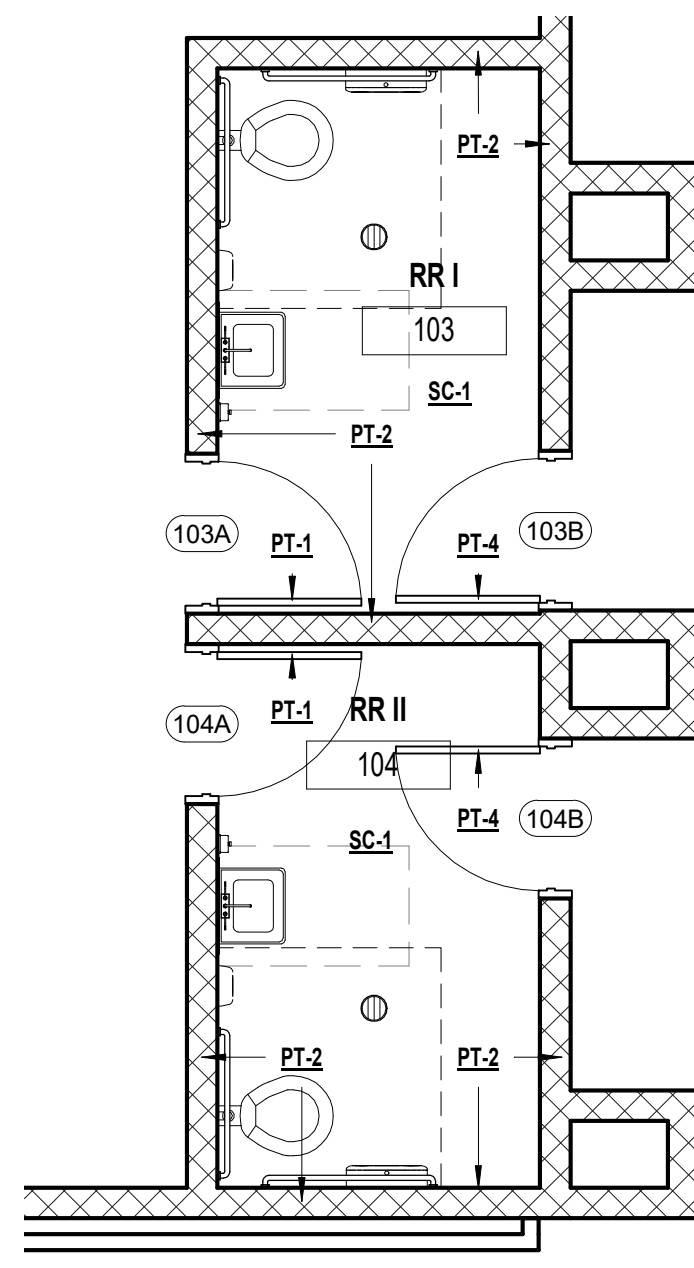
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Revisions

ROOF PLAN

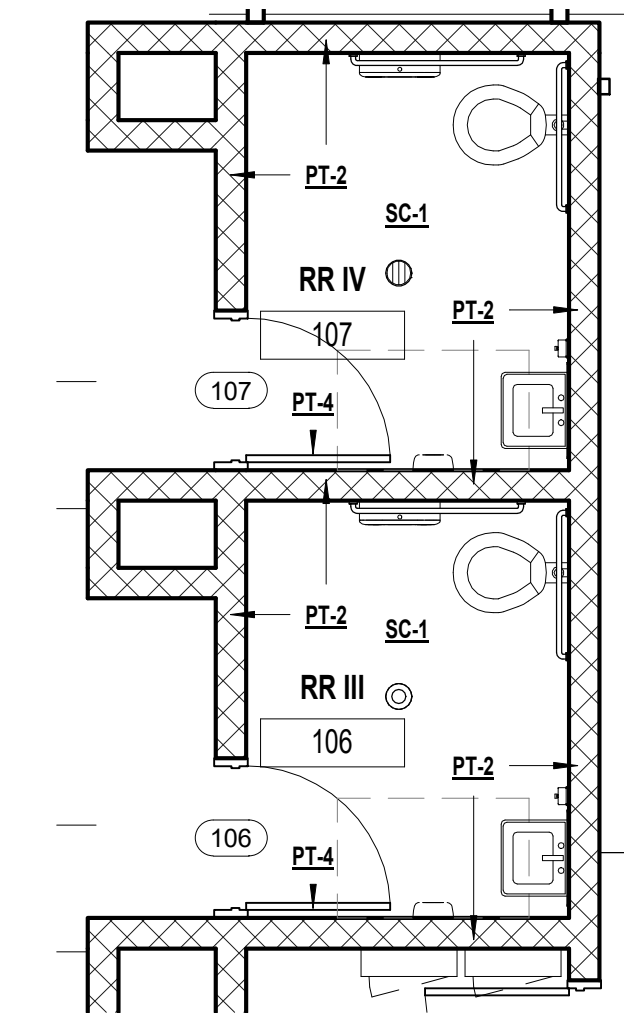
Tallahassee Florida

A9.1



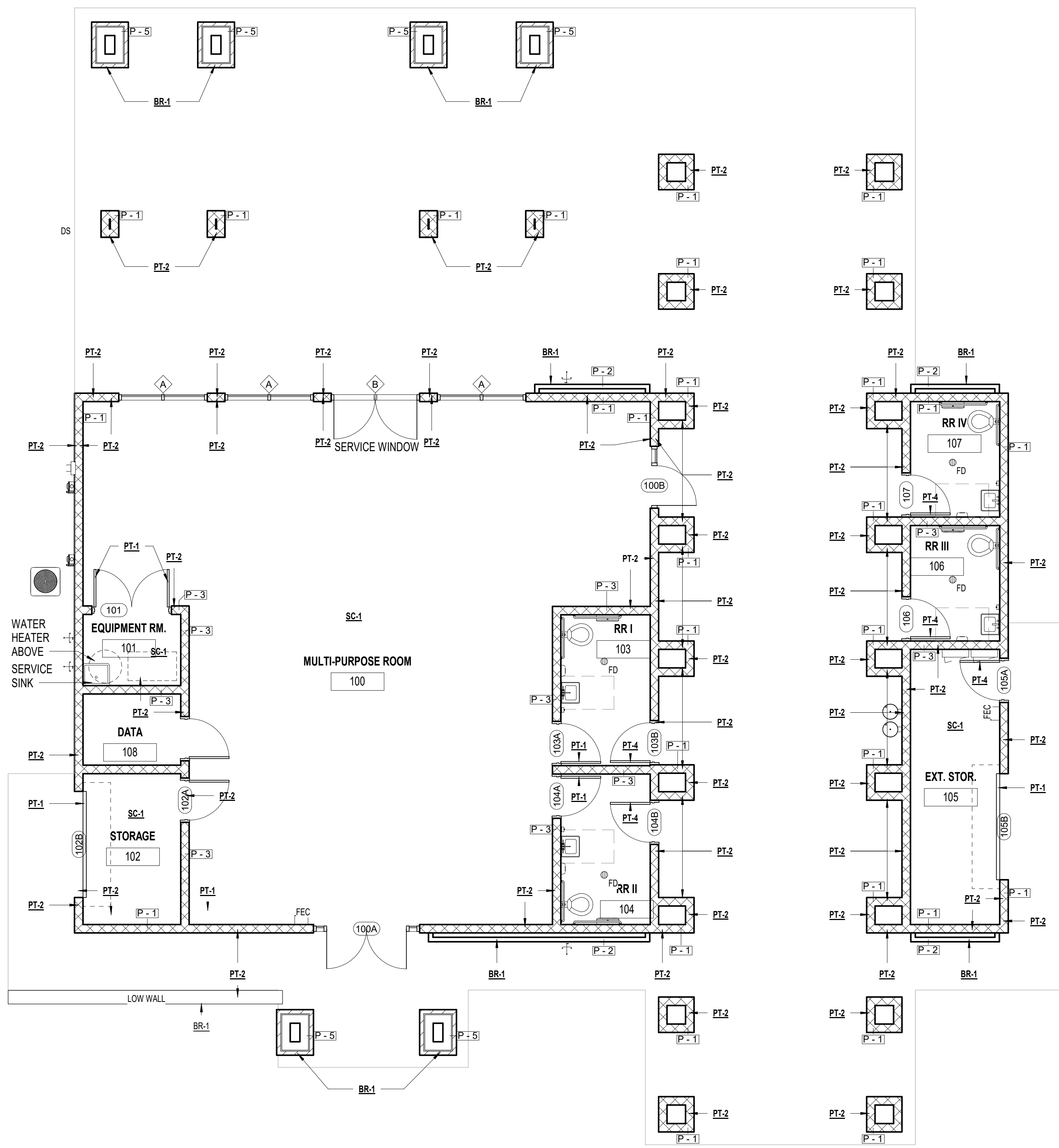
2 ENLARGED RR I - FINISHES

ID1.1 1/4" = 1'-0"



3 ENLARGED RR II - FINISHES

ID1.1 1/4" = 1'-0"



1 FLOOR PLAN - FINISHES

ID1.1 3/16" = 1'-0"

FINISH MATERIAL LEGEND

CODE	MATERIAL NAME	MATERIAL DESCRIPTION	MANUFACTURER	PRODUCT #	COLOR/FINISH	LOCATION
BR	BRICK					
BR-1	MODULAR BRICK	CREAM COLOR - BARK FINISH	ACME	105806	GLACIER WHITE	ALL EXTERIOR MODULAR BRICK
BS	BASE COVE					
BS-1	VINYL BASE COVE	VINYL WALL BASE	BURKE	208	LIGHT GREY	ALL INTERIOR AREAS
PT	PAINT					
PT-1	EXTERIOR LATEX PAINT	DARK GREY	SHERWIN-WILLIAMS	SW-7674	PEPPERCORN	ALL EXTERIOR METAL, HARDIE BOARD, DOOR AND FRAMES BOTH SIDES: 101, 102B, 102C, 103A, 105B
PT-2	INTERIOR LATEX PAINT	VERY LIGHT GREY	SHERWIN-WILLIAMS	SW-7070	SITE WHITE	ALL INTERIOR EXTERIOR CMU BLOCK, ALL INTERIOR WALLS
PT-3	INTERIOR LATEX PAINT	WHITE	SHERWIN-WILLIAMS	SW-7757	HIGH REFLECTIVE WHITE	ALL INTERIOR CEILINGS
PT-4	INTERIOR LATEX PAINT	YELLOW	SHERWIN-WILLIAMS	SW-6614	EYE CATCHING	DOORS AND FRAMES BOTH SIDES: 102A, 103B, 104B, 105A, 106, 107
SC	SEALED CONCRETE					
SC-1	SEALED CONCRETE					ALL INTERIOR AREAS

ROOM FINISH SCHEDULE

WT	ROOM NAME	FLOOR	BASE	NORTH	SOUTH	EAST	WEST	CEILING		COMMENTS
								MATERIAL	HEIGHT	
100	MULTI-PURPOSE ROOM	SC-1	BS-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	PT-3
101	EQUIPMENT RM.	SC-1	BS-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	PT-3
102	STORAGE	SC-1	BS-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	PT-3
103	RR I	SC-1	BS-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	PT-3
104	RR II	SC-1	BS-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	PT-3
105	EXT. STOR.	SC-1	BS-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	PT-3
106	RR III	SC-1	BS-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	PT-3
107	RR IV	SC-1	BS-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	PT-3
108	DATA	SC-1	BS-1	PT-2	PT-2	PT-2	PT-2	GWB	9'-0"	PT-3

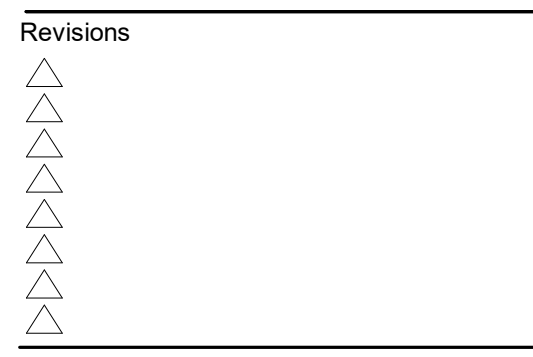


APALACHEE REGIONAL CROSS COUNTRY VENUE

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Date
BID DOCUMENTS



FINISHES

Tallahassee Florida

ID1.1

SYMBOLS		ALL MAY NOT APPLY	
	OPTIONAL AIR DISTRIBUTION CORE STYLE (REFER TO MANUFACTURER FOR MORE OPTIONS)		THERMOMETER
	RETURN GRILLE		PRESSURE GAUGE
	EXHAUST GRILLE		DUCT HUMIDITY SENSOR
	AIR HANDLING UNIT (VERTICAL/HORIZONTAL)		DUCT FLOW METER
	CEILING RECESSED AIR HANDLER		MOTORIZED CONTROL VALVE
	WALL MOUNT AIR HANDLER		BALANCING VALVE
	1 OR 4-WAY CEILING MOUNT CASSETTE AIR HANDLER		SHUT-OFF/ISOLATION VALVE
	BC CONTROLLER		SA/RA TAKE-OFF WITH FLEX TAKE-OFF W/ DAMPER
	CONDENSING UNIT HEAT PUMP		SA/RA TAKE-OFF WITH RIGID DUCT TAKE-OFF W/ DAMPER
	CEILING MOUNTED EXHAUST FAN		SQUARE TO ROUND
	MANUAL BALANCING DAMPER		DEMOLITION HATCH INDICATION
	DUCT MOUNTED SMOKE DETECTOR		EQUIPMENT, PIPE, DUCT, FITTINGS, ETC TO BE DEMOLISHED WILL BE INDICATED SPECIFICALLY OR BY DIAGONAL HATCH MARKING.
	DUCT MOUNTED TEMPERATURE SENSOR		AIR DISTRIBUTION DEVICE TAG
	DUCT MOUNTED MOTORIZED DAMPER		DEVICE TAG
	DUCT MOUNTED BACKDRAFT DAMPER		AIRFLOW (CFM)
	DUCT MOUNTED AIRFLOW SENSOR		DEVICE SIZE
	DUCT CONTINUES UP		SUPPLY/RETURN DUCT FIRST DIMENSION = WIDTH SECOND DIMENSION = HEIGHT
	DEMOLITION KEYNOTE		SUPPLY/RETURN DUCT ROUND PIPE D=INSIDE DIAMETER DIMENSION
	KEYNOTE		DEMOLITION KEYNOTE
	KEYNOTE		KEYNOTE

DESIGN CRITERIA	
BUILDING TYPE	GROUP B, BUSINESS
CLIMATE ZONE	2A, LEON COUNTY, FLORIDA
OUTDOOR DESIGN CONDITIONS (SUMMER)	95 DEG Fdb, 77 DEG Fwb
OUTDOOR DESIGN CONDITIONS (WINTER)	20 DEG Fdb
INTERIOR DESIGN CONDITIONS	75 DEG F COOLING, 72 DEG F HEATING
ENERGY COMPLIANCE METHOD	TOTAL BUILDING PERFORMANCE
CODE REFERENCE	
FBC, BUILDING	FLORIDA BUILDING CODE 6TH EDITION
FBC, MECHANICAL	FLORIDA BUILDING CODE 6TH EDITION
FBC, EXISTING BUILDING	FLORIDA BUILDING CODE 6TH EDITION
FBC, FUEL GAS	FLORIDA BUILDING CODE 6TH EDITION
FBC, PLUMBING	FLORIDA BUILDING CODE 6TH EDITION
FBC, ACCESSIBILITY	FLORIDA BUILDING CODE 6TH EDITION
FBC, TEST PROTOCOLS	FLORIDA BUILDING CODE 6TH EDITION
FBC, ENERGY CONSERVATION	FLORIDA BUILDING CODE 6TH EDITION
FPFC	FLORIDA FIRE PREVENTION CODE, 2017 6TH EDITION
ASHRAE 62.1	VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY
ASHRAE 90.1	ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS
NFPA 54	NATIONAL FUEL GAS CODE
NFPA 70	NATIONAL ELECTRICAL CODE
NFPA 90A	STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS
NFPA 90B	STANDARD FOR THE INSTALLATION OF WARM AIR HEATING AND AIR CONDITIONING SYSTEMS
NFPA 101	LIFE SAFETY CODE
NFPA 101A	GUIDE ON ALTERNATIVE APPROACHES TO LIFE SAFETY
NFPA 101B	CODE FOR MEANS OF EGRESS FOR BUILDINGS AND STRUCTURES
NFPA 900	BUILDING ENERGY CODE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
ENERGY SYSTEMS	
1.	PROVIDE A TEST AND BALANCE OF THE SYSTEM IN COMPLIANCE WITH FBC-EC SECTION 408.2.2 IN ACCORDANCE WITH THE LATEST NEBB, ASHRAE, OR EQUIVALENT GUIDELINES FOR SUCH WORK. TAB CONTRACTORS SHALL BE PRE APPROVED BY THE ENGINEER OF RECORD.
2.	FOR EXISTING UNITS BEING REPLACED OVER 5 TONS PROVIDE A PRE TEST AND BALANCE REPORT TO ENGINEER OF RECORD PRIOR TO COMMENCEMENT OF WORK SO THAT THE ENGINEER OF RECORD CAN COMMUNICATE ANY CHANGES ASSOCIATED WITH THE INFORMATION FOUND PRIOR TO CONTRACTORS COMMENCEMENT OF WORK. CONTRACTORS
3.	PROVIDE OWNER A COMPLETE SET OF OPERATIONS AND MAINTENANCE MANUALS FOR ALL COOLING AND VENTILATION EQUIPMENT.
CONDENSATE PIPING	
1.	CONDENSATE DRAIN PIPING SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS.
2.	ALL CONDENSATE DRAIN PIPE SYSTEMS SHALL HAVE A BUILT TRAP AT EACH PIECE OF EQUIPMENT PER DETAILS.
3.	ALL LINES SHALL BE INSULATED WITH 1/2" ARMAFLEX FROM EQUIPMENT TO APPROVED DISPOSAL POINT OR OUTSIDE AT GRADE IN COMPLIANCE WITH FBC-M 307.2.1. OUTSIDE DISPOSAL AT EARTH SHALL BE MINIMUM 2 FEET AWAY FROM BUILDING STRUCTURE AND FOUNDATION.
4.	TRAP AIR CONDITIONING CONDENSATE AND RUN TO LOCATION SHOWN ON PLANS.
5.	CONDENSATE DRAIN SIZING (PER FBC-M TABLE 307.2.2)
	UP TO 20 TONS 1/2" DIAMETER
	21 TO 40 TONS 1" DIAMETER
	41 TO 90 TONS 1 1/2" DIAMETER
	91 TO 125 TONS 1 3/4" DIAMETER
	126 TO 250 TONS 2" DIAMETER
	251 AND ABOVE SIZED BASED ON ACTUAL FLOW
REFRIGERANT PIPING	
1.	REFRIGERANT PIPING
1.1.	BELOW FINISHED FLOOR: COPPER TUBING - TYPE "K" SOFT ANNEALED TEMPER, NO JOINTS BELOW GRADE.
1.2.	ABOVE FINISHED FLOOR: COPPER TUBING-TYPE "L" HARD DRAWN TEMPER WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS AT 1100 DEG F; FLUX MATERIAL NOT ALLOWED.
2.	ALL REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH MINIMUM 3/4" ARMAFLEX INSULATION WITH TAPED JOINTS.
3.	ALL EXTERIOR PIPING INSULATION SHALL BE PROTECTED FROM UV RADIATION. COVER ALL EXTERIOR REFRIGERANT LINES WITH ALUMINUM JACKET, INSTALLED TO SHED WATER AND SECURED WITH STAINLESS STEEL BANDS 12" O.C.
4.	REFRIGERANT PIPE SYSTEMS SHALL BE PLACED UNDER A VACUUM FOR REMOVAL OF NON-CONDENSABLES PRIOR TO BEING PUT INTO SERVICE.
5.	REFRIGERANT PIPE SYSTEMS SHALL BE PRESSURE TESTED USING NITROGEN PRIOR TO BEING PUT INTO SERVICE.
6.	REFRIGERANT PIPES SHALL BE SIZED BY THE EQUIPMENT MFG.

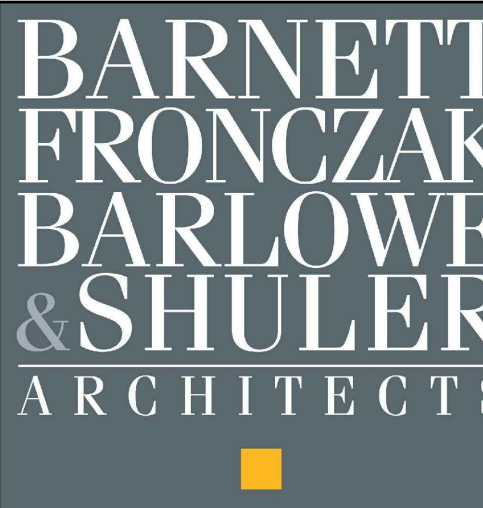
HVAC GENERAL NOTES	
1.	ONLY NEW EQUIPMENT SHALL BE PROVIDED.
2.	ALL CONNECTIONS TO EQUIPMENT SHALL BE MADE WITH FLEXIBLE REGIONS FOR VIBRATION ISOLATION.
3.	ALL EQUIPMENT SHALL BE LABELED SO THAT USERS CAN IDENTIFY EACH PIECE OF EQUIPMENT. LABELS SHALL BE CONSISTENT WITH EQUIPMENT TAGS THAT ARE LISTED IN THE SCHEDULES WITHIN THESE DOCUMENTS. ANY ABOVE CEILING EQUIPMENT SHALL HAVE A LABEL PROVIDED ON THE CEILING BELOW THE UNIT FOR EASE OF LOCATING BY MAINTENANCE PERSONNEL.
4.	ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS WRITTEN INSTRUCTIONS.
5.	INSTALL DUCTWORK AND PIPING AS HIGH AS POSSIBLE ABOVE CEILING.
6.	COORDINATE THE INSTALLATION OF DUCTWORK AND PIPING WITH ELECTRICAL EQUIPMENT SO THAT THE REQUIRED CODE CLEARANCES TO ELECTRICAL EQUIPMENT IS MAINTAINED.
7.	DUCTWORK AND PIPING INSTALLATIONS SHALL ALLOW FOR EQUIPMENT RECOMMENDED MAINTENANCE CLEARANCES. CONVENIENT ACCESS FOR REMOVAL OF FILTERS SHALL BE MAINTAINED.
8.	MATERIALS INSTALLED WITHIN A RETURN AIR PLENUM SHALL BE NONCOMBUSTIBLE.
9.	COORDINATE THE PLACEMENT AIR DISTRIBUTION EQUIPMENT WITH THE CEILING AND LIGHTING LAYOUT.
10.	THE CEILING DIFFUSERS SHALL BE 4-WAY THROW UNLESS OTHERWISE NOTED.
11.	AT THE ONSET OF TEST AND BALANCE ACTIVITIES PROVIDE NEW FILTERS TO ALL UNITS. DO NOT OPERATE UNITS WITHOUT FILTERS DURING CONSTRUCTION. SEAL ALL OPEN ENDED DUCTS DURING CONSTRUCTION.
12.	ENSURE ALL EQUIPMENT HAS BEEN CLEANED AT THE END OF THE PROJECT.
13.	DO NOT LOCATE AIR INTAKES CLOSER THAN 10 FEET FROM ANY VENT OR EXHAUST OUTLETS.
14.	PROVIDE FIRE DAMPER AT EVERY DUCT PENETRATION OF FIRE RATED CONSTRUCTION, WHETHER SHOWN ON THE DRAWINGS OR NOT.
15.	INSTALL DUCT MOUNTED SMOKE DETECTOR (FURNISHED BY DIVISION 26) IN SUPPLY AIR DUCT BEFORE ANY TAKE OFFS FOR AIR HANDLING UNITS WITH SUPPLY AIR CAPACITY OF 2000 CFM OR GREATER.
16.	WHERE FIRE, SMOKE, COMBINATION FIRE SMOKE DAMPERS CONTROL DAMPERS, VALVES, COILS OR OTHER DEVICE NEEDING ACCESS ARE INSTALLED, PROVIDE DUCT ACCESS DOORS. WHERE INSTALLED IN INACCESSIBLE LOCATIONS PROVIDE CEILING/WALL ACCESS PANELS. PANELS LOCATED IN RATED ASSEMBLIES SHALL BEAR A UL RATING. COORDINATE LOCATION OF SUCH ACCESS WITH ARCHITECT PRIOR TO INSTALLATION.
17.	PROVIDE MEANS OF TEST AND BALANCE IN ALL TAKE OFF FITTINGS OF SUPPLY EXHAUST, RETURN SYSTEMS AND AT EACH POINT WHERE A BRANCH SERVES TWO OR MORE GRILLES, WEATHER SHOWN ON THE PLANS OR NOT.
18.	WHERE CONFLICTS BETWEEN LIGHT SWITCHES AND THERMOSTAT/HUMIDISTAT LOCATIONS, THE LIGHT SWITCH TAKES PRECEDENT. CONTROLLERS SHALL BE MOUNTED ADJACENT.
SUBMITTALS	
1.	CONTRACTORS USE OF AN APPROVAL STAMP ON SUBMITTAL DOCUMENTS CERTIFIES THAT THE CONTRACTOR HAS COMPLIED WITH THE CONTRACT DOCUMENT REQUIREMENTS.
2.	THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT/ENGINEERS APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES, OR SIMILAR SUBMITTAL ITEMS 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 SUBMITTAL ITEMS BY THE ARCHITECT/ENGINEERS APPROVAL THEREOF.
DUCTWORK	
1.	DUCT MATERIAL
1.1.	MATERIAL: CLASS "A" GALVANIZED STEEL OR ROLLED STEEL IN COMPLIANCE WITH SMACNA 205-3RD EDITION LOW/MEDIUM PRESSURE DUCT STANDARDS TABLE 1.1. DUCTS SHALL BE TESTED, VERIFIED AND RECORDED IN ACCORDANCE WITH ASHRAE 90.1-2013 REQUIREMENT BASED ON LEAKAGE RATE LESS THAN 4% PER 100SF OF DUCT.
1.2.	SEALER: LOW VOC MASTIC PAINT.
2.	ALL DUCTWORK LINES SHALL BE RUN STRAIGHT, LEVEL, AND PLUMB, AND ROUTED AS INDICATED IN THESE DRAWINGS. SHEET METAL SADDLES SHALL BE PROVIDED AT ALL HANGERS FOR FLEX DUCTS TO PREVENT KINKING OF THE DUCTS AND EXCESSIVE COMPRESSION OF THE INSULATION.
3.	MINOR MODIFICATIONS TO DUCT ROUTING DUE TO OBSTRUCTIONS OR COORDINATION WITH OTHER TRADES WILL BE FURNISHED WITHOUT ADDITIONAL COST TO THE OWNER. ANY CHANGES IN SIZE TO DUCTWORK MUST BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION AND INSTALLATION.
4.	FLEXIBLE DUCTS TO AIR TERMINALS SHALL BE LIMITED IN LENGTH TO 6'.
5.	FLEX DUCT SHALL BE EQUAL TO THERMAFLEX SERIES MKE, MINIMUM R VALUE 6.0.
6.	BENDS IN FLEXIBLE DUCTS SHOULD BE MINIMIZED, AND MADE IN SUCH A MANNER SO AS NOT TO RESTRICT THE AIRFLOW.
7.	ALL FLEXIBLE DUCTS SHALL BE SUPPORTED SO THAT HORIZONTAL RUNS ARE STRAIGHT AND WITHOUT SAGS OR BENDS. SHEET METAL SADDLES SHALL BE PROVIDED AT ALL HANGERS FOR FLEX DUCTS TO PREVENT KINKING OF THE DUCTS AND EXCESSIVE COMPRESSION OF THE INSULATION.
8.	ALL MITERED RECTANGULAR DUCT 90 DEGREE ELBOWS SHALL BE PROVIDED WITH TURNING VANES.
9.	ALL SUPPLY, RETURN AND EXHAUST DUCTS SHALL BE EXTERNALLY INSULATED UNLESS OTHERWISE NOTED. INSULATION SHALL BE EQUAL TO JOHNS MANVILLE MICROLIGHT XL 2" THICK 0.75 PCF R6.0 OUT OF THE BOX WITH FSK VAPOR BARRIER. SEAL WITH FIRE RATED MASTIC SEAL PER UL-181A-M AT ALL JOINTS AND SEAMS. OR APPROVED ACRYLIC FOIL PRESSURE SENSITIVE TAPE PER UL-181A-P APPLIED USING SQUEEGEE APPROVED METHOD AT JOINTS AND SEAMS. RUBBER BASE TAPES ARE NOT ALLOWED.
10.	DUCTBOARD IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD.

GENERAL NOTES	
1.	FSM ENGINEERING LLC SHALL NOT BE HELD RESPONSIBLE FOR ANY MISUSE AND/OR MISREPRESENTATION OF THIS SET OF DOCUMENTS.
2.	THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE USE OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAKE HIMSELF AWARE OF PROJECT CONDITIONS AND OWNER REQUIREMENTS PRIOR TO PROCUREMENT OF EQUIPMENT AND SERVICES. CHANGES IN PROJECT COST WILL NOT BE GRANTED DUE TO FIELD CONFLICTS AND/OR PROJECT CONDITIONS.
3.	THIS SET OF DRAWINGS AND SPECIFICATIONS SHALL NOT BE CONSIDERED A SET OF CONSTRUCTION DOCUMENTS UNLESS A SIGNATURE AND DATE ARE AFFIXED TO THE DRAWINGS AND SPECIFICATIONS BY THE ENGINEER OF RESPONSIBLE CHARGE OF THE GIVEN DISCIPLINE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED UNLESS EMBOSSED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ELECTRONIC COPIES.
4.	CONFLICTS BETWEEN THIS SET OF DRAWINGS AND THE CONTRACT SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER OF RECORD. THE CONTRACTOR DOES NOT HAVE THE AUTHORITY TO INTERPRET CONFLICTS AND RESOLVE ISSUES WITHOUT WRITTEN DIRECTION FROM THE ENGINEER OF RECORD.
5.	ANY CONFLICTS IN THE FIELD OR WITHIN THESE DOCUMENTS SHALL BE RECORDED AND PROVIDED TO THE ENGINEER OF RECORD ON THE CONTRACTORS STANDARD LETTERHEAD. WRITTEN DIRECTION RESOLVING CONFLICT WILL BE ISSUED BY THE ENGINEER OF RECORD.
6.	PRIOR TO INSTALLATION, COORDINATE AND ADJUST THE FINAL LOCATION OF ALL WALL MOUNTED DEVICES AND EQUIPMENT WITH ALL CASEWORK, SHELVING OR OTHER WALL MOUNTED FURNISHINGS.
7.	PLANS ARE DIAGRAMMATIC IN NATURE AND INTENDED TO SHOW THE GENERAL SCOPE OF THE WORK TO BE PERFORMED. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS.
8.	THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND EXISTING EQUIPMENT TO ENSURE THE EQUIPMENT SPECIFIED WILL WORK FOR THE SPACES PROVIDED. FINAL DIMENSIONS OF SYSTEMS SHOWN ON THESE PLANS SHALL BE COORDINATED IN THE FIELD. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR PROVIDING OFFSETS AND TRANSITIONS TO FIT IN SPACES PROVIDED AND AT NO COST TO THE OWNER.
9.	THE CONTRACTOR IS RESPONSIBLE FOR ANY SPECIAL REQUIREMENTS INVOLVED IN INSTALLING EQUIPMENT IN THE BUILDING. DISMANTLING AND REASSEMBLING OF ANY EQUIPMENT SHALL BE DONE AS REQUIRED TO BRING INTO THE BUILDING AND EQUIPMENT ROOMS.
10.	ALL WORK PERFORMED AS PART OF THIS PROJECT SHALL BE PERFORMED BY EXPERIENCED TRADESMEN, TRAINED, EXPERIENCED, AND SKILLED IN THE TASKS INCIDENTAL TO THE PROJECT.
11.	ALL WORK SHALL COMPLY WITH APPLICABLE OSHA AND EPS REGULATIONS AND GUIDELINES
12.	THE CONTRACTOR PERFORMING WORK ON THIS PROJECT WILL BE RESPONSIBLE FOR REGULAR CLEANING THE WORK AREA OF ANY DEBRIS ASSOCIATED WITH THE WORK BEING PERFORMED. THE SITE SHALL BE CLEAN OF ALL CONSTRUCTION DEBRIS AT THE COMPLETION OF THE JOB, BEFORE FINAL PAYMENT IS MADE.
13.	REASONABLE PRECAUTIONS SHALL BE MADE FOR SAFETY AND HEALTH INCLUDING BUT NOT LIMITED TO WARNING SIGNS, SAFETY PRECAUTIONS AND BARRICADES FOR PEDESTRIANS.
14.	COORDINATE ALL DEMOLITION, CLEANING AND CONSTRUCTION WORK. CONTRACTOR SHALL PROVIDE OWNER A FULL CONSTRUCTION SCHEDULE.
15.	CONTRACTOR SHALL BE HELD TO PROVIDED SCHEDULE. HE SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT MANPOWER AND EQUIPMENT TO COMPLETE THE WORK IN THE TIME INDICATED.
16.	THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SECURITY OF ALL EQUIPMENT AND MATERIALS. THE LOCATION OF STORAGE SHALL BE RESTRICTED SPECIFICALLY TO THE AREA ALLOTTED BY THE OWNER.
17.	ALL ITEMS INSTALLED UNDER THE SCOPE OF THIS PROJECT SHALL BE NEW, CLEAN, AND FREE OF DEFECTS.
18.	THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS TO THE ARCHITECT AT THE COMPLETION OF CONSTRUCTION. IF DRAWINGS CHANGES ARE NEEDED FOR INSPECTION DUE TO FIELD COORDINATION ISSUES THE CONTRACTOR SHALL PAY HOURLY RATES TO THE ENGINEER OF RECORD FOR MAKING NECESSARY CHANGES.
19.	SUPPORTS, HANGERS, WIRING AND PIPING SHALL BE INSTALLED IN A NEAT AND ORDERLY APPEARANCE.
20.	ALL ROOF EQUIPMENT SHALL BE SECURED TO STRUCTURE TO RESIST A 130 MPH WIND LOAD.
21.	PROTECT THE ROOF FROM DAMAGE WHENEVER ANY WORK ON THE ROOF IS REQUIRED.
22.	CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL PARTITIONS LABELED WITH A SPECIAL LISTING ON THE ARCHITECTURAL PLANS. THIS INCLUDES FIRE, SMOKE ACOUSTICAL AND OTHER UL WALL OR CEILING ASSEMBLIES.
23.	STRUCTURAL PENETRATIONS INCLUDING BUT NOT LIMITED TO WALL, FLOOR OR BEAM SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. ALL BEAM SLEEVES AND REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
24.	CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY THE MATERIAL SUPPLIES AND MANUFACTURERS.
25.	VALUE ENGINEERING OR CHANGES TO PLANS MUST BE APPROVED BY THE ENGINEER OF RECORD AND RESUBMITTED THROUGH THE BUILDING DEPARTMENT PRIOR TO BEING INSTALLED.
SHEET INDEX	
SHEET NUMBER	SHEET TITLE
M0.1	HVAC LEGEND, NOTES, DETAILS, & SCHEDULES
M0.2	DETAILS - HVAC
M0.3	DETAILS AND SCHEDULES - HVAC
M1.1	FLOOR PLAN - HVAC

ABBREVIATION	ALL MAY NOT APPLY
AHU	AIR HANDLING UNIT
BTU	BRITISH THERMAL UNIT
CD	CONDENSATE
CFM	CUBIC FEET PER MINUTE
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CRAH	COMPUTER ROOM AIR HANDLER
CRCU	COMPUTER ROOM CU
CHS	CONDENSING UNIT
CWS	CHILLED WATER SUPPLY
ΔP	DIFFERENCE IN PRESSURE
ΔT	DIFFERENCE IN TEMPERATURE
DB	DRY BULB TEMPERATURE (DEG. F)
DEG. F	DEGREES FAHRENHEIT
DDC	DISTRIBUTED DIGITAL CONTROLS
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE (In W.C.)
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
FD	FIRE DAMPER
FPI	FINS PER INCH
GPM	GALLONS PER MINUTE
HHWS	HEATING HOT WATER SUPPLY
HHWR	HEATING HOT WATER RETURN
HP	HEAT PUMP
HWS	HOT WATER SUPPLY
In W.C.	INCHES OF WATER COLUMN
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	1,000 BTUS PER HOUR
MFG.	MANUFACTURER
OA	OUTSIDE AIR
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RND	ROUND
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SD	SMOKE DAMPER
SM	SURFACE MOUNTED
SS	STAINLESS STEEL
TSP	TOTAL STATIC PRESSURE
UNO	UNLESS NOTED OTHERWISE
V/PZ	VOLT/PHASE
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
WB	WET BULB TEMPERATURE (DEG. F)

NOT FOR CONSTRUCTION

Robert E. Gelhardt II, P.E. FL 77568



APALACHEE REGIONAL CROSS COUNTRY VENUE

16150 Drawn By: GR
Project Code Checked By: REGII

04 October 2019
Date

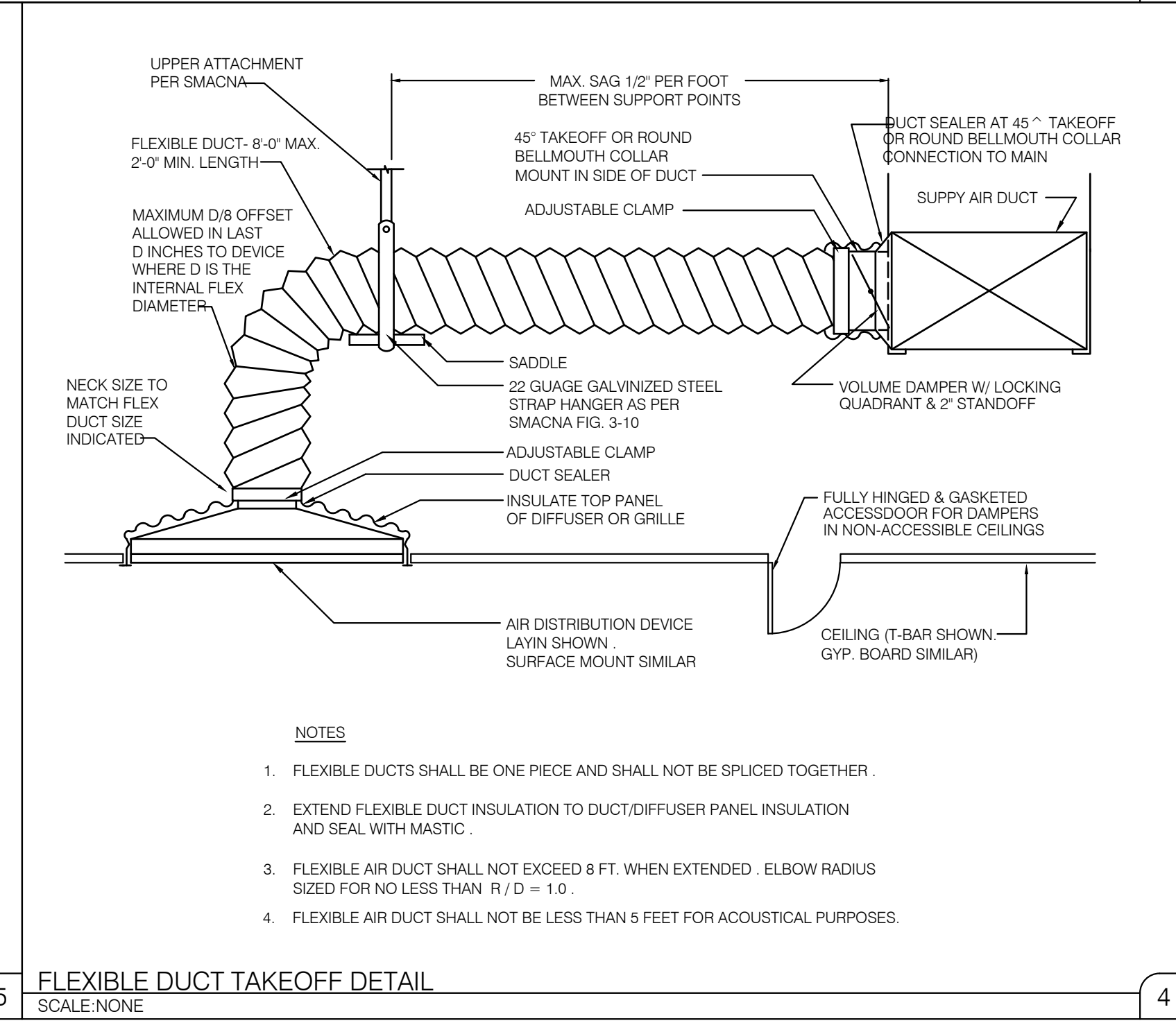
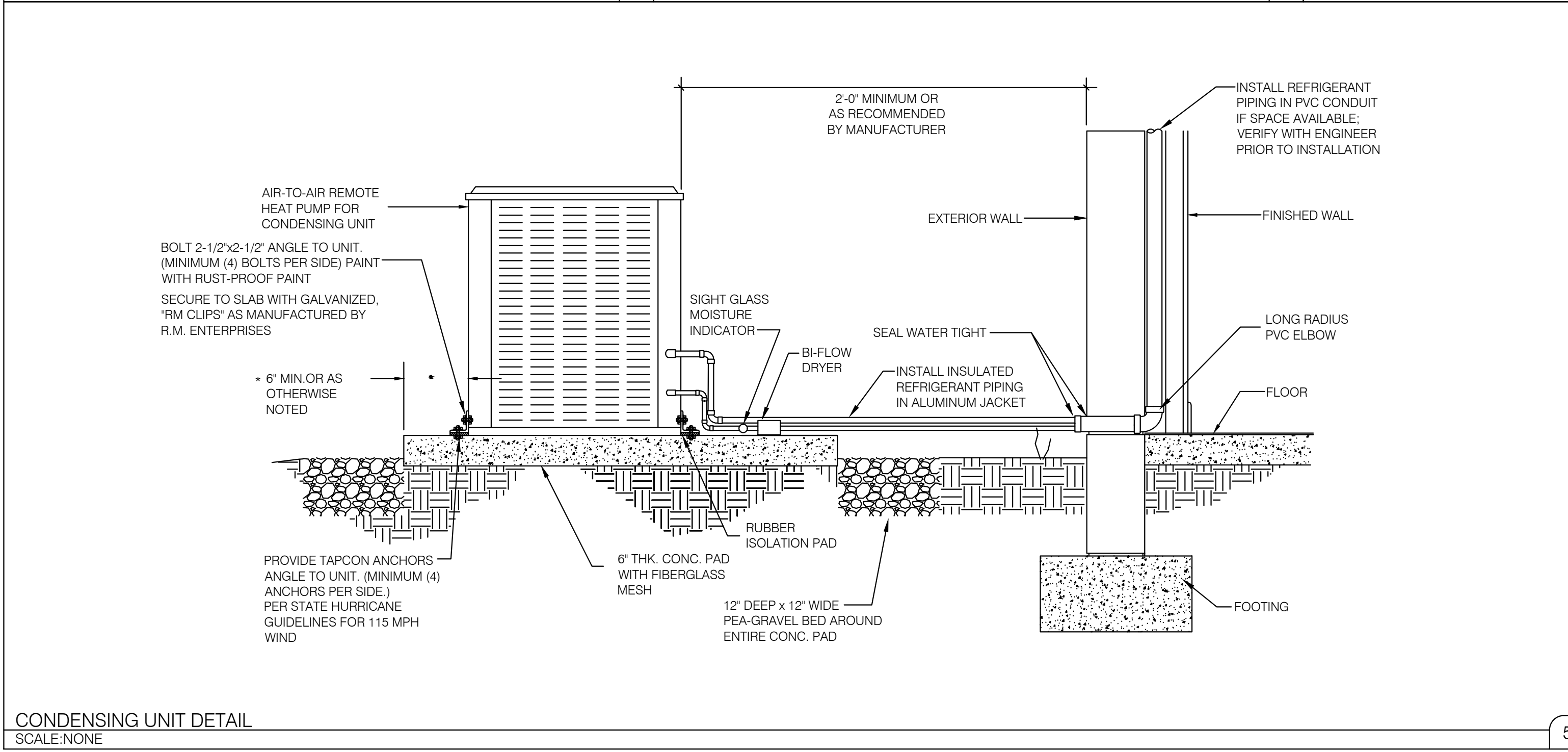
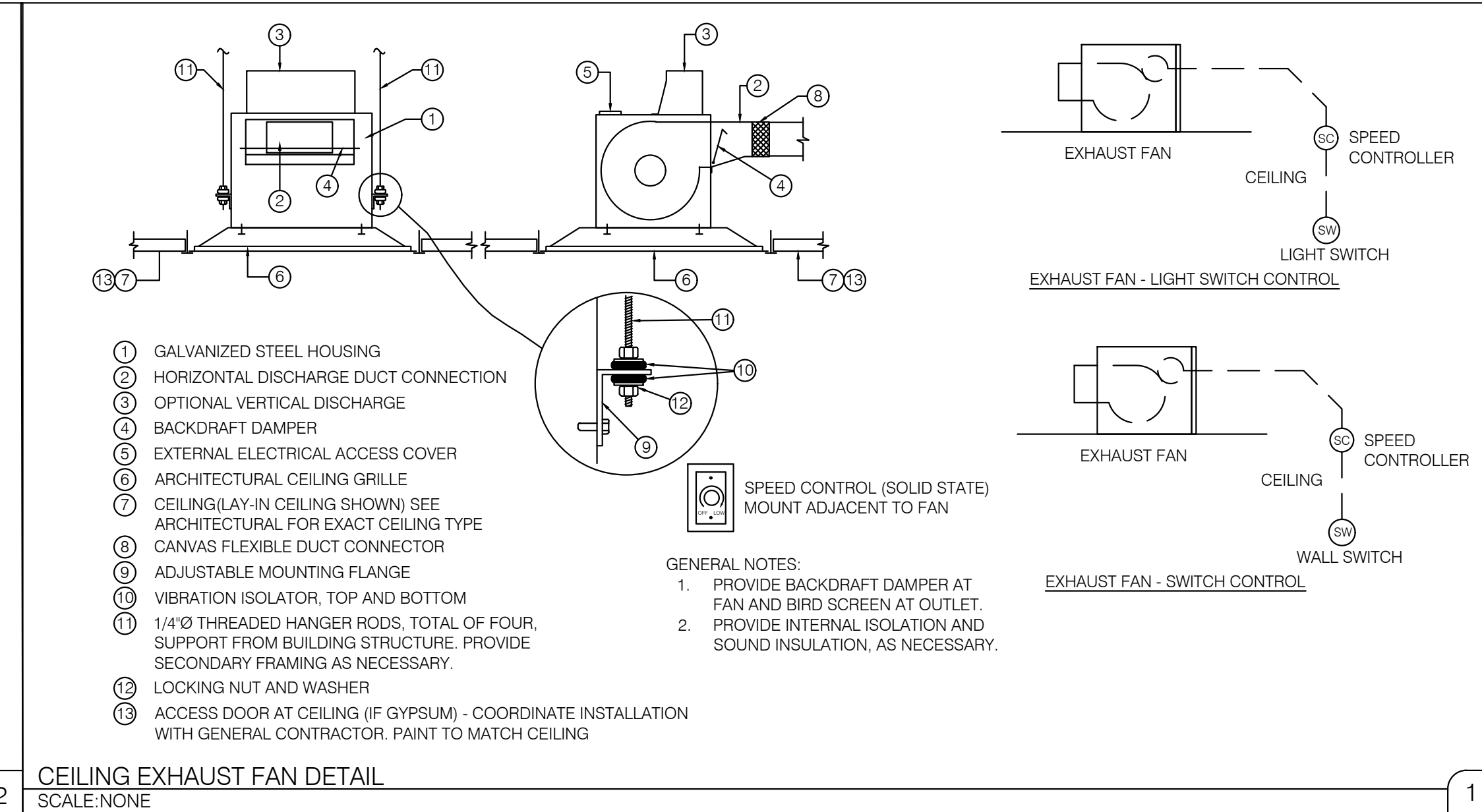
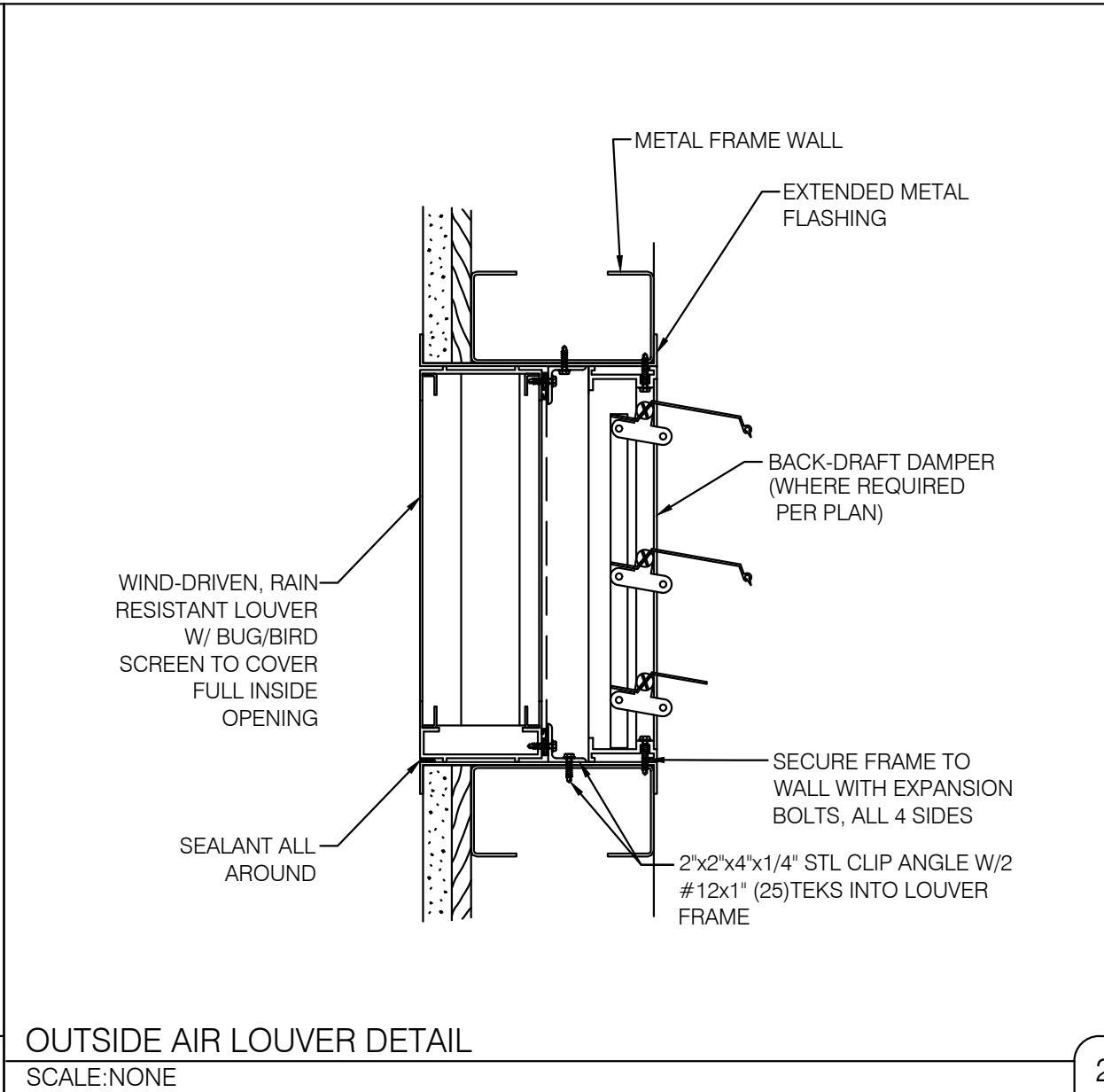
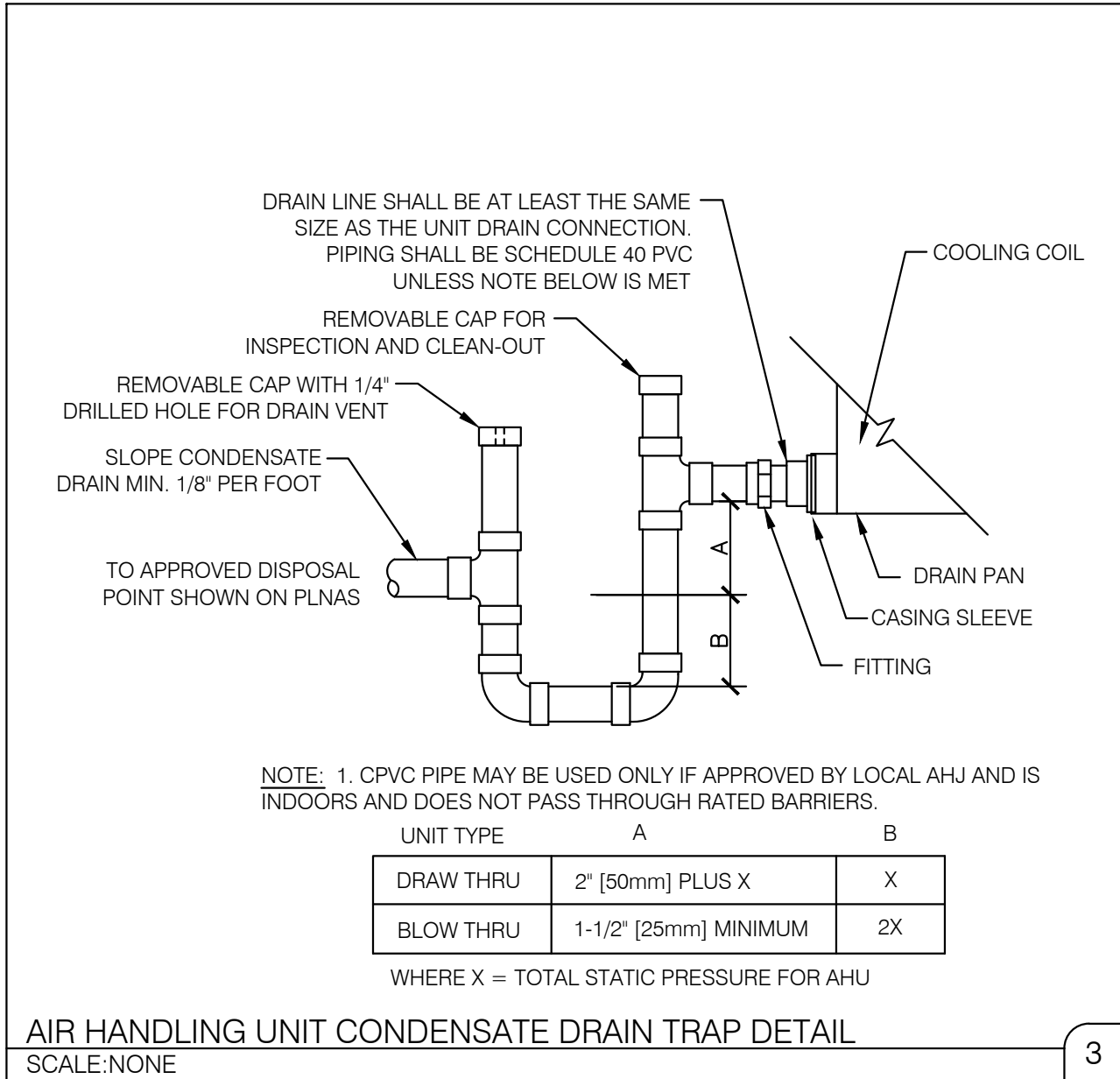
BID DOCUMENTS

- Revisions
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HVAC LEGEND, NOTES, DETAILS, & SCHEDULES

Tallahassee Florida

M0.1



NOT FOR CONSTRUCTION

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APALACHEE REGIONAL CROSS COUNTRY VENUE

16150 Drawn By: GR
Project Code Checked By: REGII

Date: 04 October 2019

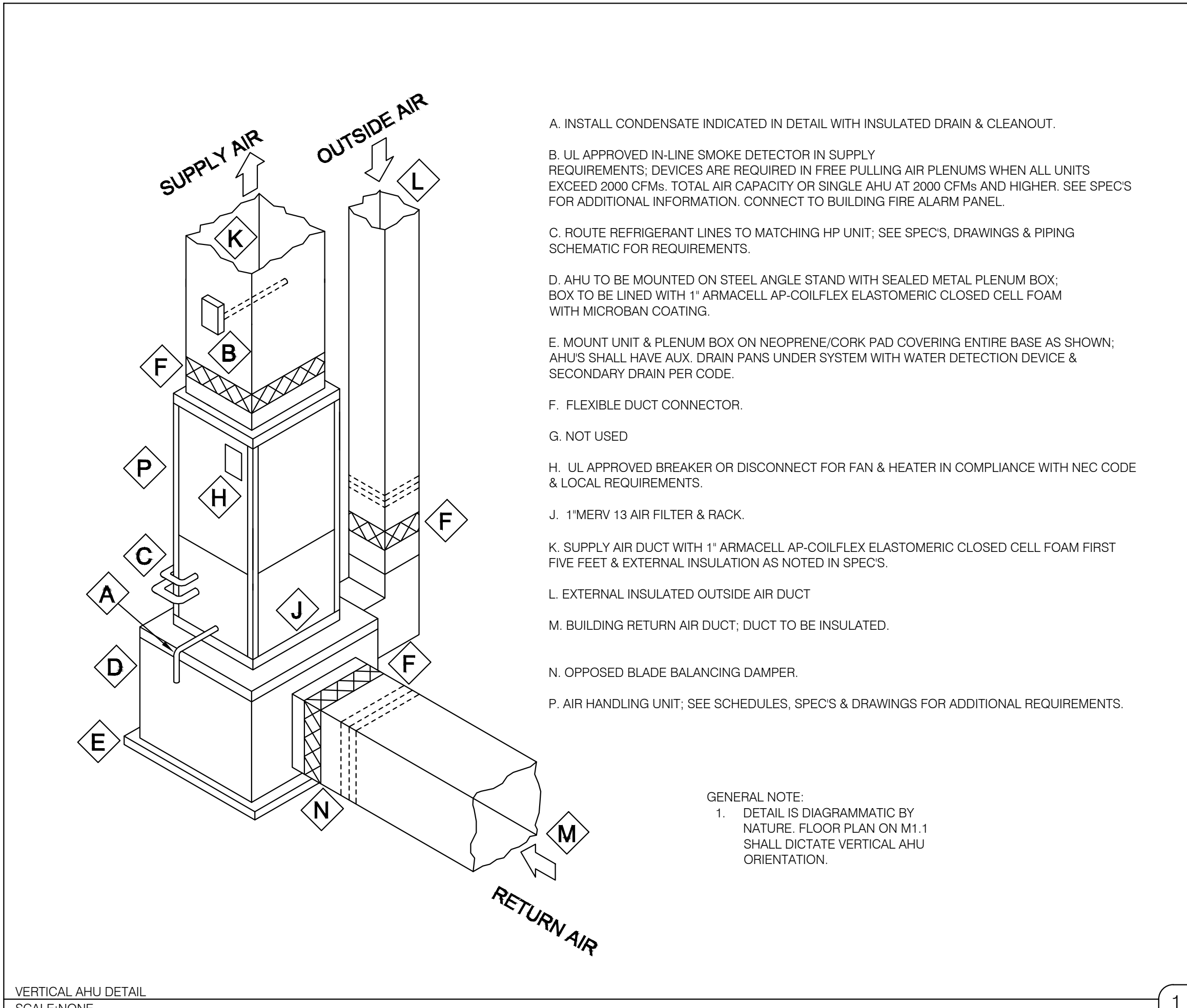
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Revisions

DETAILS - HVAC

Tallahassee Florida

M0.2



VERTICAL AHU DETAIL
SCALE: NONE

FAN SCHEDULE

GENERAL DATA										
TAG	MFG.	MODEL NUMBER	VOL (CFM)	SP (INWG)	DRIVE	MOTOR SIZE (HP)	RPM	WEIGHT	ELECTRICAL (V/PZ)	REMARKS
EF-1	COOK	GC-146	100	0.125	DIRECT	FRACTIONAL	882	17	120/1	1-4
EF-2	COOK	GC-146	100	0.125	DIRECT	FRACTIONAL	882	17	120/1	1-4
EF-3	COOK	GC-146	100	0.125	DIRECT	FRACTIONAL	882	17	120/1	1-4
EF-4	COOK	GC-146	100	0.125	DIRECT	FRACTIONAL	882	17	120/1	1-4
EF-5	COOK	GC-186	200	0.125	DIRECT	1/8	986	18	120/1	1-3,5
EF-6	COOK	GC-186	200	0.125	DIRECT	1/8	986	18	120/1	1-3,5
EF-7	COOK	GC-146	100	0.125	DIRECT	FRACTIONAL	882	17	120/1	1-4

REMARKS:
 1. PROVIDE BACKDRAFT DAMPER
 2. PROVIDE FAN SPEED CONTROLLER.
 3. CEILING MOUNTED.
 4. FAN SHALL INTERLOCK WITH LIGHT SWITCH WITH 5 MINUTE OFF DELAY TIMER.
 5. FAN SHALL BE PROVIDED WITH LINE VOLTAGE DIAL TIMER SWITCH.
 6. PROVIDE 2" FILTER RACK.
 7. PROVIDE MINIMUM MERV-13 FILTER

AIR DISTRIBUTION DEVICE SCHEDULE

TAG	MFG	MODEL	AIRFLOW (CFM)	NECK SIZE	FACE SIZE	DETAILS	
A	PRICE	LCMD	0-100	6"	9X9	TYPE	LIGHT COMMERCIAL DIRECTIONAL
			101-180	8"	11X11	MOUNTING	GYP CEILING
			181-270	10"	13X13	COLOR	WHITE
						MATERIAL	ALUMINUM
						CORE	4A - 4 DIRECTIONS
						NOTES	
B	PRICE	635	0-90	6X6	7X7	TYPE	LOUVERED FACE RETURN
			91-150	8X8	9X9	MOUNTING	SURFACE MOUNT
			151-240	10X10	11X11	COLOR	WHITE
			241-360	12X12	13X13	MATERIAL	ALUMINUM
			361-470	14X14	15X15	CORE	ALUMINUM
471-1080	22X22	24X24	NOTES	1/2" SPACING 45° DEFLECTION			

NOTE: FURNISH REMOTE AIR BALANCING DEVICES AT ALL CEILING MOUNTED DIFFUSERS WITH UNACCESIBLE DUCTS FOR BALANCING. WHERE DIFFUSERS ARE LOCATED IN ROOMS WITH GYPSUM CEILINGS, PROVIDE PLASTER RINGS AND APPURTANCES AS REQUIRED FOR SURFACE MOUNTING.

SPLIT AIR HANDLING UNIT SCHEDULE

GENERAL DATA				FAN DATA			AIR CONDITIONS			ELECTRICAL DATA			REMARKS	
Mark	MODEL NUMBER	NOMINAL TONS	MATCHED CONDENSING UNIT	AIRFLOW (CFM)	VENT. AIRFLOW	ESP	MOTOR HP	EAT (DB/WB)	LAT (DB/WB)	V/PZ	AUX. HEATER KW	MCA		MOCP
AHU-1	FV4CNB006L00	5	24ABC760A003	2000	220	0.55	3/4	80/67	55/54	230/1	10	53.8	60	1-5

REMARKS:
 1. VARIABLE SPEED AIR HANDLER SELECTION AND TWO STAGED AIR COOLED CONDENSER BASED ON CARRIER.
 2. PROVIDE SINGLE POINT POWER CONNECTION.
 3. PROVIDE UNIT WITH NEW WIRELESS INTERNET READY, TOUCHSCREEN, 7 DAY PROGRAMMABLE COMMUNICATING THERMOSTAT WITH HUMIDITY CONTROL
 4. ROUTE CONDENSATE AS INDICATED ON PLANS. PROVIDE CONDENSATE PUMP IF NECESSARY.
 5. PROVIDE A GRAVITY DAMPER IN OUTSIDE AIR PATH FOR EACH UNIT WITH LEAKAGE RATE NOT LESS THAN 20CFM/FT2 @ 1.0 inch WG.

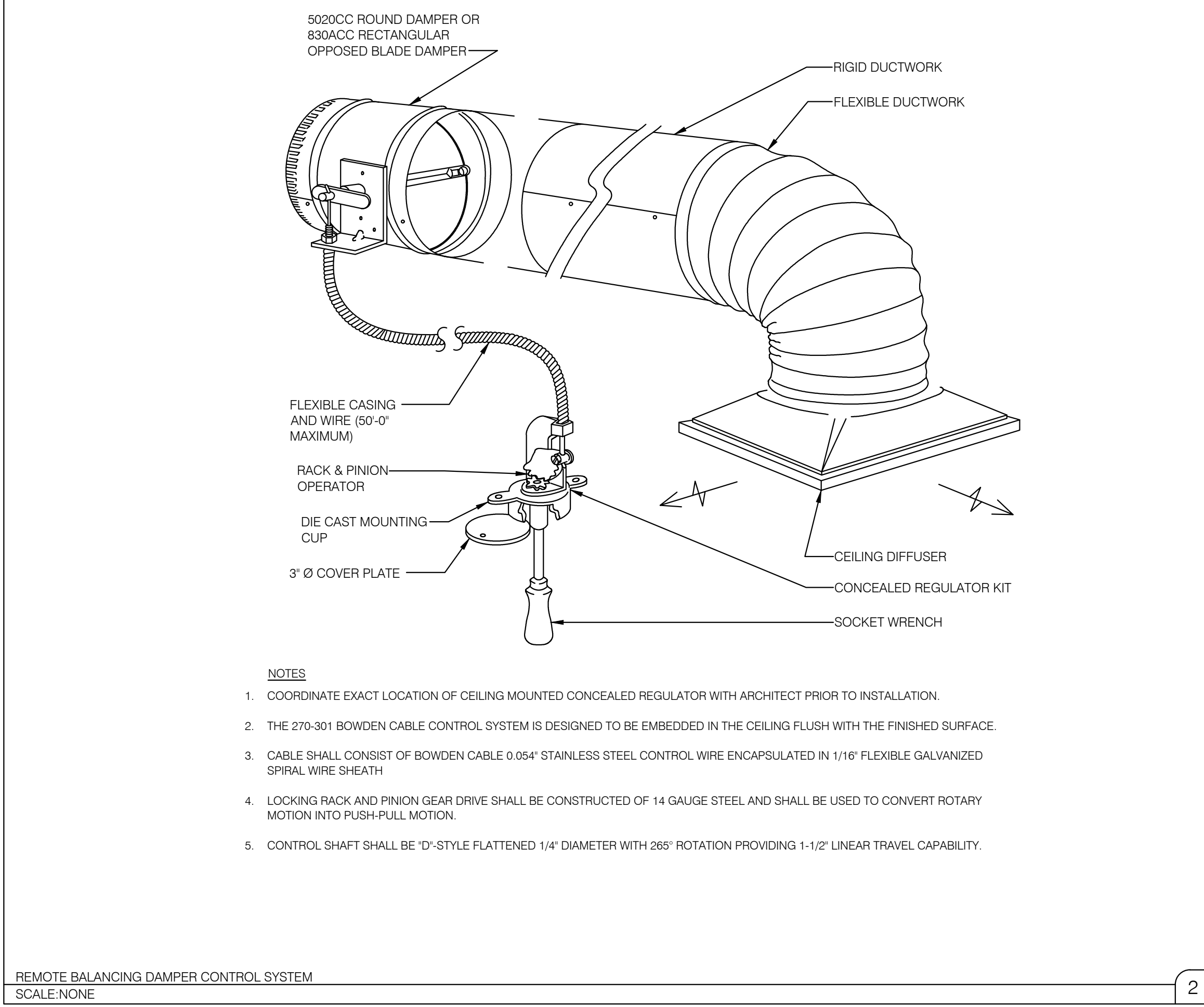
SPLIT HEAT PUMP CONDENSING UNIT SCHEDULE

GENERAL DATA				COOLING CAPACITY			HEATING CAPACITY @ 17 C		ELECTRICAL DATA			REMARKS
TAG	MODEL NUMBER	NOMINAL TONS	MATCHED AIR HANDLER	TOTAL COOLING (MBH)	SENS. COOLING (MBH)	SEER (EER)	TOTAL HEATING (MBH)	HSPF (COP)	V/PZ	MCA	MOCP	
HP-1	25VNA060A003	5	AHU-1	60	42	18.0	56.00	12.0 (2.22)	230/1	40.8	60	1-3

REMARKS:
 1. AIR HANDLER SELECTION BASED ON CARRIER HEAT PUMP w/INVERTER COMPRESSOR
 2. EFFICIENCY RATINGS ARE BASED ON SYSTEM WITH MATCHED AHU AND HP
 3. REFRIGERANT LINE SIZING SHALL BE PER MANUFACTURERS RECCOMENDATIONS.

BUILDING PRESSURIZATION CHART

Zone/System	Sup Air	Ret Air	Outside Air	Exh Air	Makeup Air
AHU-1	1850	1630	220		
EF-3				100	
EF-4				100	
Totals	1850	1630	220	200	0
AIR BALANCE OA+MA-EA					20



REMOTE BALANCING DAMPER CONTROL SYSTEM
SCALE: NONE

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DETAILS AND SCHEDULES - HVAC

Tallahassee Florida

M0.3

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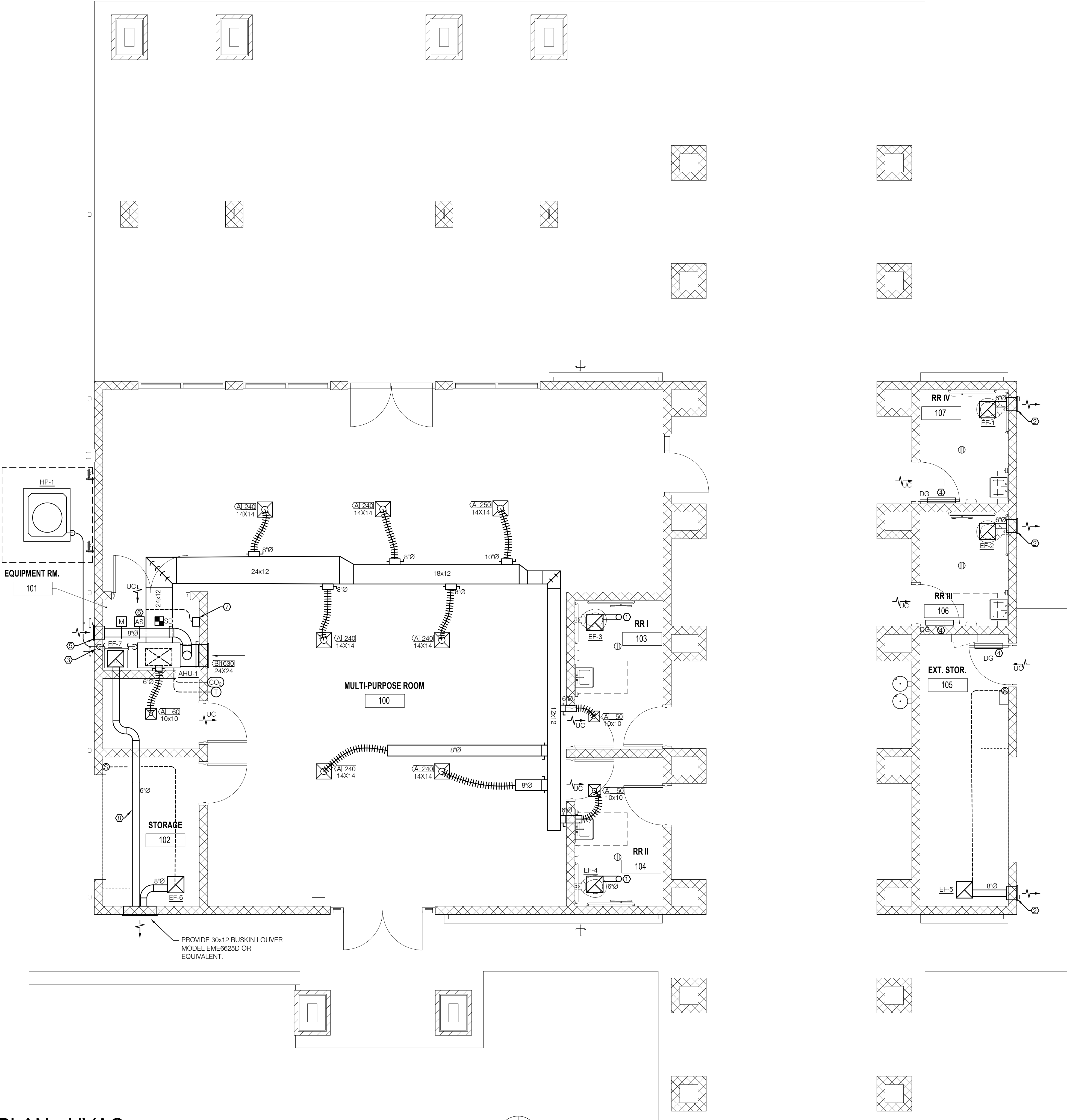
Revisions

FLOOR PLAN - HVAC

Tallahassee Florida

M1.1

- RENOVATION KEYED NOTES:**
- ① UP THROUGH ROOF WITH COOK MODEL PR08 GRAVITY VENTILATOR.
 - ② PROVIDE 12x12 WIND DRIVEN RAIN RESISTANCE LOUVER, RUSKIN MODEL EME420MD OR EQUAL. COORDINATE EXACT LOUVER MOUNTING HEIGHT WITH ARCHITECTURAL SECTIONS AND ELEVATIONS.
 - ③ INSTALL REFRIGERANT PIPING IN WALL AS DETAILED. SEE CONDENSING UNIT DETAIL ON DETAIL SHEET.
 - ④ DOOR GRILLE, SEE ARCHITECTURAL DOOR SPECS.
 - ⑤ PROVIDE 16x14 WIND DRIVEN RAIN RESISTANCE LOUVER, RUSKIN MODEL EME662SD OR EQUAL. COORDINATE EXACT LOUVER MOUNTING HEIGHT WITH ARCHITECTURAL SECTIONS AND ELEVATIONS.
 - ⑥ PROVIDE GREENTROL GF-A2000, OR EQUAL, IN OA DUCT. PROVIDE DRY CONTACT RELAY TO COMMUNICATE WITH LED ALARM NOTIFICATION. TRANSMITTER SHOULD ALERT LED IF AIRFLOW IS NOT WITHIN 10% OF DESIGN AIRFLOW.
 - ⑦ LED ALARM FOR DUCT MOUNTED AIRFLOW SENSOR. MOUNT ADJACENT TO PLUMBING SUB-METERS @ 5' AFF. LED SHOULD LIGHT UP RED WHEN ERROR OCCURS.
 - ⑧ COORDINATE EXHAUST DUCT WITH ROLL UP DOOR IN THIS AREA.

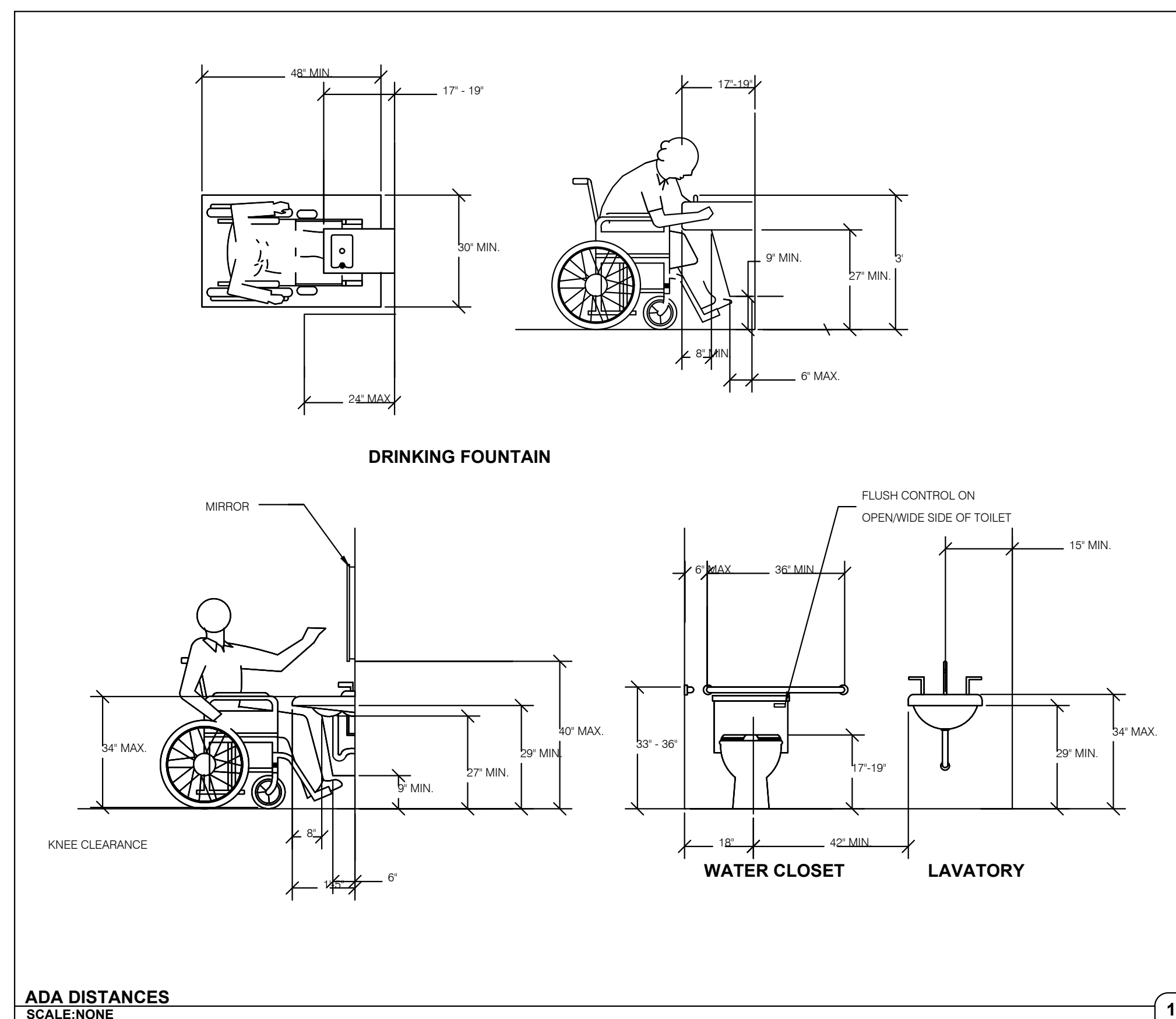


1 FLOOR PLAN - HVAC
M1.1 1/4" = 1'-0"

PLUMBING FIXTURE SCHEDULE						
TYPE	DESCRIPTION	MODEL	TRIM & ACCESSORIES	RUNOUT SIZES		
				COLD	HOT	WASTE
WC-1	ADA FLOOR MOUNTED VITREOUS CHINA FLUSH VALVE TOILET. 1.28 GALLON FLUSH. 17" RIM HEIGHT. WATERSENSE COMPLIANT.	KOHLER WELLCOMME K-96053-B	4-BOLT BASE. SLOAN ROYAL 111-1-1 28 1/2 GPM FLUSH VALVE. 1-1/2" TOP SPUD. BEMIS 105SSSC. SELF-SUSTAINING CHECK HINGES WITH NON-CORROSIVE 300 SERIES STAINLESS STEEL POSTS, PINTLES AND HARDWARE INCLUDING S.S. CLOSET BOLTS AND WASHERS. ELONGATED OPEN FRONT SEAT LESS COVER.	1"	--	4"
L-1	ADA WALL MOUNT 19X17 ENAMELED CAST IRON WALL HUNG LAVATORY. 8" CENTERS.	KOHLER HUDSON K-2863	SLOAN EAF-100 SENSOR FAUCET WITH POLISHED CHROME PLATED CAST SPOUT 0.35 GPM AERATOR, AND INTEGRATED SIDE MIXER. PROVIDE EAF FAUCET WITH SFP-22 TRIM PLATE. McGUIRE 8872 CHROME PLATED HEAVY CAST BRASS 17GA. 1-1/4" OFFSET DRAIN & P-TRAP WITH CLEANOUT. 17 GA. SEAMLESS TUBULAR BRASS WALL BEND. McGUIRE 167LK ANGLE SUPPLY STOPS. FLEXIBLE CHROME PLATED COPPER RISERS. CHROME ESCUTOHEON PLATES WITH SET SCREW. TRUEBRO LAV GUARD UNDERSINK PIPING COVERS. STEEL WALL HANGER BRACKET.	1/2"	1/2"	1-1/4"
MS-1	ACORN TERRAZZO 28" CORNER ROUND MOP SINK, BEEHIVE DOME STRAINER, 12" HIGH, STAINLESS STEEL CAP. 36" LONG HOSE WITH WALL HANGER, MOP HANGER WITH 3 GRIPS ON A STAINLESS STEEL BRACKET. 2 SIDEWALL GUARDS.	ACORN TCR-28	PROVIDE T&S B-0655-BSTP SERVICE SINK FAUCET W/ POLISHED CHROME FINISH, BUILT-IN STOPS, VACUUM BREAKER, LEVER HANDLES, WALL BRACE AND 3/4" GARDEN HOSE OUTLET.	1/2"	1/2"	3"
DF-1	ONE PIECE WELD CONSTRUCTION WITH MDF STANDARD 304 SCHEDULE 10 STAINLESS STEEL DUAL HEIGHT DRINKING FOUNTAIN. S.S ANTI-SQUIRT BUBBLER. SURFACE MOUNT. COMPLIES TO ADA, FREEZE & VANDAL RESISTANT.	MDF MODEL 440 SM	PROVIDE OPTIONAL STAINLESS STEEL SURFACE CARRIER. MUSHROOM STYLE PUSH BAR. MAINTENANCE FREE REINFORCED NYLOBRAID WATER SUPPLY TUBING. TUBING. 1-1/2" SCH. 40 PVC DRAIN.	1/2"	--	1-1/2"
EWH-1	INSTANTANEOUS ELECTRIC TANKLESS WATER HEATER BELOW LAVATORIES.	EEMAX AM007240T	6.5 KW, 27 AMPS. 1 GPM @ 44° TEMPERATURE RISE. FACTORY SET AT 105° F.	3/8"	3/8"	--
EWH-2	INSTANTANEOUS ELECTRIC TANKLESS WATER HEATER AT JANITORS CLOSET.	EEMAX AM010240T	9.5 KW, 40 AMPS. 1 GPM @ 65° TEMPERATURE RISE. SET TEMPERATURE SHALL BE 125° F.	3/8"	3/8"	--
WH-1	NICKEL BRONZE QUARTER TURN NON-FREEZE ANTI-SIPHON EXTERIOR WALL HYDRANT.	JR SMITH MODEL 5609QT	BACKER PLATE, 3/4" INLET AND HOSE CONNECTION. LOOSE TEE KEY. VANDAL RESISTANT CAP.	3/4"	--	--
FD-1	CAST IRON GENERAL SERVICE FLOOR DRAIN WITH ROUND NICKEL BRONZE TOP.	JR SMITH FIG. 2005	DUCO COATED CAST IRON BODY W/ FLASHING COLLAR AND ADJUSTABLE 6" SQUARE NICKEL BRONZE STRAINER HEAD. SURESEAL SS3009V FLOOR DRAIN TRAP SEALER.	--	--	3"
FCO-1	CAST IRON FLOOR CLEANOUT WITH ROUND ADJUSTABLE SCORIATED HEAVY DUTY NICKEL BRONZE TOP.	JR SMITH 4100 NB SERIES	FLASHING CLAMP AND FLASHING FLANGE. BRONZE PLUG.	--	--	4"
ECO-1	EXTERIOR CAST IRON FLOOR CLEANOUT WITH ROUND ADJUSTABLE SCORIATED EXTRA HEAVY DUTY NICKEL BRONZE TOP SET IN 4" CONCRETE PAD.	JR SMITH 9776 SERIES	CF8 ROUGH FINISH STAINLESS STEEL PLUG, SCREW WITH POLISHED STAINLESS STEEL COVER PLATE.	--	--	2", 3", 4"

FIXTURE UNIT TABULATION				DOMESTIC WATER S.F.U.'S			SANITARY F.U.'S		
FIXTURE	OCCUPANCY	SUPPLY CONTROL	NO. OF FIXTURES	FIXTURE UNIT VALUES			TOTAL F.U.	FIXTURE UNIT VALUES	TOTAL
				CW	HW	TOTAL			
TOILET	PUBLIC	FLUSH TANK	4	10	-	10	40	4	16
LAVATORY	PUBLIC	FAUCET	4	1.5	1.5	2	8	1	4
MOP SINK	PRIVATE	3/4" VALVE	1	2.25	2.25	3	3	2	2
FLOOR DRAIN	-	-	4	-	-	-	-	2	8
							51		30

50 GPM
2" @ 6 FPS



ADA DISTANCES
SCALE: NONE

1

PLUMBING GENERAL SPECIFICATIONS

- LOCATIONS OF ANY WASTE AND SUPPLY PIPING SHOWN ARE ONLY APPROXIMATE. THE PLUMBING CONTRACTOR SHALL VERIFY THESE LOCATIONS BEFORE PROCEEDING WITH WORK.
- ALL PLUMBING PIPE SHALL BE RUN IN STRAIGHT, SQUARE, LEVEL, AND/OR PLUMB LINES. NO SAGGING OF PLUMBING PIPING SHALL BE ACCEPTED.

PLUMBING POTABLE WATER SUPPLY SYSTEM SPECIFICATIONS

- UNDERGROUND SERVICE PIPING SHALL BE COPPER TUBING.
- ALL POTABLE WATER PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH THE PLUMBING CODE AND VERIFIED BY WRITTEN REPORT FROM THE STATE BOARD OF HEALTH.
- ALL PLUMBING PIPING SHALL BE CONCEALED IN FLOORS, WALLS, OR ABOVE CEILING AS APPLICABLE EXCEPT AT IMMEDIATE FIXTURE.

PIPING SYSTEMS SPECIFICATIONS

- DOMESTIC COLD WATER SUPPLY PIPING SHALL BE HIGH IMPACT CPVC SOLVENT WELD FITTINGS CONFORMING TO ASTM D-2665.
- NO PVC PIPING SHALL BE USED IN UNCONCEALED SPACES. COPPER PIPING SHALL BE INSTALLED IN UNCONCEALED LOCATIONS.
- INSULATE CWS PIPING IN EXTERIOR WALLS AND ATTIC WITH 1" IMCOLOCK PRE-SLIT, PRE-GLUED INSULATION. INSULATE FITTINGS WITH MITERED CUT PIECES OF IMCOLOCK, 1" INSULATION.
- INSULATE HWS PIPING WITH MINIMUM 1" IMCOLOCK INSULATION. THERE SHALL BE NO EXPOSED HWS PIPING.
- PROVIDE HANGERS FOR CWS PIPING AT A MAXIMUM SPACING OF 3 FEET.
- BELOW GRADE PIPING SHALL BE COATED WITH HEAVY TROWEL GRADE LION OIL CO. NOKORODE SEALKOTE OR APPROVED EQUAL.
- ALL HOT WATER PIPES SHALL BE INSULATED PER FBC-EC SECTION 504.5 WHERE PART OF A RECIRCULATING SYSTEM.
- PROVIDE WATER HAMMER ARRESTORS IN ALL LOCATIONS WHERE QUICK CLOSING VALVES ARE INSTALLED.

SANITARY WASTE SYSTEM SPECIFICATIONS

- GRAVITY FLOW SYSTEMS HAVE SPACE PRIORITY FOR SLOPING PIPES.
- SLOPING PIPES SHALL BE STARTED AT THE HIGHEST POINT POSSIBLE.
- ALL SOIL, WASTE, AND VENT PIPING SHALL BE TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND LOCAL PERMITTING AUTHORITIES REQUIREMENTS.

PIPING SYSTEM SPECIFICATIONS

- DOMESTIC SOIL, WASTE, AND VENT PIPING SHALL BE SCHEDULE 40 PVC/DWW PIPE WITH SOLVENT WELD DRAINAGE FITTINGS CONFORMING TO ASTM D-2665.
- UNLESS NOTED OTHERWISE, VENT PIPING SHALL BE 2".
- THE GENERAL CONTRACTOR SHALL VERIFY ALL FLOOR DRAIN AND WATER SUPPLY LOCATIONS BEFORE POURING SLABS.

ABBREVIATIONS (ALL MAY NOT APPLY)

C	CONDENSATE	HB	HOSE BIBB
CO	CLEAN OUT	HD	HUB DRAIN
DCW	DOMESTIC COLD WATER SUPPLY	HWS	HEATING HOT WATER SUPPLY
DHW	DOMESTIC HOT WATER SUPPLY	HWS	HEATING HOT WATER RETURN
CWV	COMBINATION WASTE AND VENT	HWR	HOT WATER RETURN
DN	DOWN	L	LAVATORY
ECO	EXTERIOR CLEANOUT	SAN	SANITARY WASTE
EX	EXISTING	UNO	UNLESS NOTED OTHERWISE
FCO	FLOOR CLEANOUT	VTR	VENT THROUGH ROOF
FD	FLOOR DRAIN	WC	WATER CLOSET
		WCO	WALL CLEAN OUT

SHEET INDEX

SHEET #	TITLE
P0.1	PLUMBING LEGEND, NOTES, DETAILS, & SHEET INDEX
P0.2	PLUMBING - DETAILS
P1.1	FLOOR PLAN - PLUMBING - DRAIN & VENT
P1.2	FLOOR PLAN - PLUMBING - PRESSURE
P2.1	DRAIN & VENT ISOMETRIC
P2.2	PRESSURE ISOMETRIC

PLUMBING LEGEND

HOT WATER SUPPLY	— — — — —
COLD WATER SUPPLY	— — — — —
SANITARY DRAIN	— — — — —
ELBOW DN	— — — — —
ELBOW UP	— — — — —
VENT THROUGH ROOF	— — — — —
CONDENSATE	— — — — —
CHECK VALVE	— — — — —
HOSE BIBB	— — — — —
WALL CLEAN OUT	— — — — —
FLOOR CLEAN OUT	— — — — —
EXTERNAL CLEAN OUT	— — — — —
FLOOR DRAIN	— — — — —
WALL HYDRANT	— — — — —

GENERAL NOTES

- THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR ANY MISUSE AND/OR MISREPRESENTATION OF THIS SET OF DOCUMENTS.
- THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE USE OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAKE HIMSELF AWARE OF PROJECT CONDITIONS AND OWNER REQUIREMENTS PRIOR TO PROCUREMENT OF EQUIPMENT AND SERVICES. CHANGES IN PROJECT COST WILL NOT BE GRANTED DUE TO FIELD CONFLICTS AND/OR PROJECT CONDITIONS.
- THIS SET OF DRAWINGS AND SPECIFICATIONS SHALL NOT BE CONSIDERED A SET OF CONSTRUCTION DOCUMENTS UNLESS A SIGNATURE AND DATE ARE AFFIXED TO THE DRAWINGS AND SPECIFICATIONS BY THE ENGINEER OF RESPONSIBLE CHARGE OF THE GIVEN DISCIPLINE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED UNLESS EMBOSSED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ELECTRONIC COPIES.
- CONFLICTS BETWEEN THIS SET OF DRAWINGS AND THE CONTRACT SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER OF RECORD. THE CONTRACTOR DOES NOT HAVE THE AUTHORITY TO INTERPRET CONFLICTS AND RESOLVE ISSUES WITHOUT WRITTEN DIRECTION FROM THE ENGINEER OF RECORD.
- ANY CONFLICTS IN THE FIELD OR WITHIN THESE DOCUMENTS SHALL BE RECORDED AND PROVIDED TO THE ENGINEER OF RECORD ON THE CONTRACTOR'S STANDARD LETTERHEAD. WRITTEN DIRECTION RESOLVING CONFLICT WILL BE ISSUED BY THE ENGINEER OF RECORD.
- PRIOR TO INSTALLATION, COORDINATE AND ADJUST THE FINAL LOCATION OF ALL WALL MOUNTED DEVICES AND EQUIPMENT WITH ALL CASEWORK, SHELVING OR OTHER WALL MOUNTED FURNISHINGS.
- PLANS ARE DIAGRAMMATIC IN NATURE AND INTENDED TO SHOW THE GENERAL SCOPE OF THE WORK TO BE PERFORMED. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS.
- THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND EXISTING EQUIPMENT TO ENSURE THE EQUIPMENT SPECIFIED WILL WORK FOR THE SPACES PROVIDED. FINAL DIMENSIONS OF SYSTEMS SHOWN ON THESE PLANS SHALL BE COORDINATED IN THE FIELD. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR PROVIDING OFFSETS AND TRANSITIONS TO FIT IN SPACES PROVIDED AND AT NO COST TO THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY SPECIAL REQUIREMENTS INVOLVED IN INSTALLING EQUIPMENT IN THE BUILDING. DISMANTLING AND REASSEMBLING OF ANY EQUIPMENT SHALL BE DONE AS REQUIRED TO BRING INTO THE BUILDING AND EQUIPMENT ROOMS.
- ALL WORK PERFORMED AS PART OF THIS PROJECT SHALL BE PERFORMED BY EXPERIENCED TRADESMEN, TRAINED, EXPERIENCED, AND SKILLED IN THE TASKS INCIDENTAL TO THE PROJECT.
- ALL WORK SHALL COMPLY WITH APPLICABLE OSHA AND EPS REGULATIONS AND GUIDELINES.
- THE CONTRACTOR PERFORMING WORK ON THIS PROJECT WILL BE RESPONSIBLE FOR REGULAR CLEANING THE WORK AREA OF ANY DEBRIS ASSOCIATED WITH THE WORK BEING PERFORMED. THE SITE SHALL BE CLEAN OF ALL CONSTRUCTION DEBRIS AT THE COMPLETION OF THE JOB, BEFORE FINAL PAYMENT IS MADE.
- REASONABLE PRECAUTIONS SHALL BE MADE FOR SAFETY AND HEALTH INCLUDING BUT NOT LIMITED TO WARNING SIGNS, SAFETY PRECAUTIONS AND BARRICADES FOR PEDESTRIANS.
- COORDINATE ALL DEMOLITION, CLEANING AND CONSTRUCTION WORK. CONTRACTOR SHALL PROVIDE OWNER A FULL CONSTRUCTION SCHEDULE.
- CONTRACTOR SHALL BE HELD TO PROVIDED SCHEDULE. HE SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT MANPOWER AND EQUIPMENT TO COMPLETE THE WORK IN THE TIME INDICATED.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SECURITY OF ALL EQUIPMENT AND MATERIALS. THE LOCATION OF STORAGE SHALL BE RESTRICTED SPECIFICALLY TO THE AREA ALLOTTED BY THE OWNER.
- ALL ITEMS INSTALLED UNDER THE SCOPE OF THIS PROJECT SHALL BE NEW, CLEAN, AND FREE OF DEFECTS.
- THE CONTRACTOR SHALL FURNISH 'AS-BUILT' DRAWINGS TO THE ARCHITECT AT THE COMPLETION OF CONSTRUCTION. IF DRAWINGS CHANGES ARE NEEDED FOR INSPECTION DUE TO FIELD COORDINATION ISSUES THE CONTRACTOR SHALL PAY HOURLY RATES TO THE ENGINEER OF RECORD FOR MAKING NECESSARY CHANGES.
- SUPPORTS, HANGERS, WIRING AND PIPING SHALL BE INSTALLED IN A NEAT AND ORDERLY APPEARANCE.
- ALL ROOF EQUIPMENT SHALL BE SECURED TO STRUCTURE TO RESIST A 130 MPH WIND LOAD.
- PROTECT THE ROOF FROM DAMAGE WHENEVER ANY WORK ON THE ROOF IS REQUIRED.
- CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL PARTITIONS LABELED WITH A SPECIAL LISTING ON THE ARCHITECTURAL PLANS. THIS INCLUDES FIRE, SMOKE ACOUSTICAL AND OTHER UL WALL OR CEILING ASSEMBLIES.
- STRUCTURAL PENETRATIONS INCLUDING BUT NOT LIMITED TO WALL, FLOOR OR BEAM SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. ALL BEAM SLEEVES AND REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY THE MATERIAL SUPPLIES AND MANUFACTURERS.
- VALUE ENGINEERING OR CHANGES TO PLANS MUST BE APPROVED BY THE ENGINEER OF RECORD AND RESUBMITTED THROUGH THE BUILDING DEPARTMENT PRIOR TO BEING INSTALLED.

CODE REFERENCE

FBC, BUILDING	FLORIDA BUILDING CODE 6TH EDITION
FBC, PLUMBING	FLORIDA BUILDING CODE 6TH EDITION
FBC, EXISTING BUILDING	FLORIDA BUILDING CODE 6TH EDITION
FBC, FUEL GAS	FLORIDA BUILDING CODE 6TH EDITION
FBC, ENERGY CONSERVATION	FLORIDA BUILDING CODE 6TH EDITION
FFPC	FLORIDA FIRE PREVENTION CODE, 2017 6TH EDITION
NFPA 54	NATIONAL FUEL GAS CODE
NFPA 101	LIFE SAFETY CODE
NFPA 101A	GUIDE ON ALTERNATIVE APPROACHES TO LIFE SAFETY
NFPA 101B	CODE FOR MEANS OF EGRESS FOR BUILDINGS AND STRUCTURES
NFPA 900	BUILDING ENERGY CODE

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APALACHEE REGIONAL CROSS COUNTRY VENUE

16150 Drawn By: GR
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04 October 2019

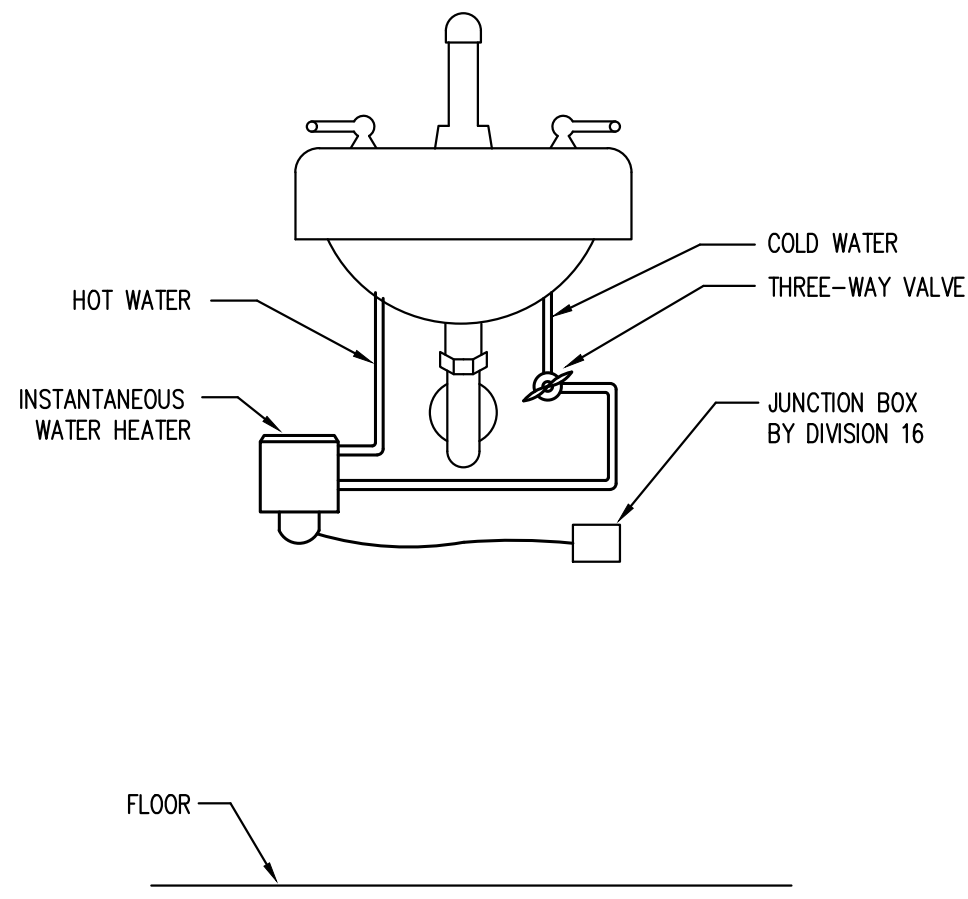
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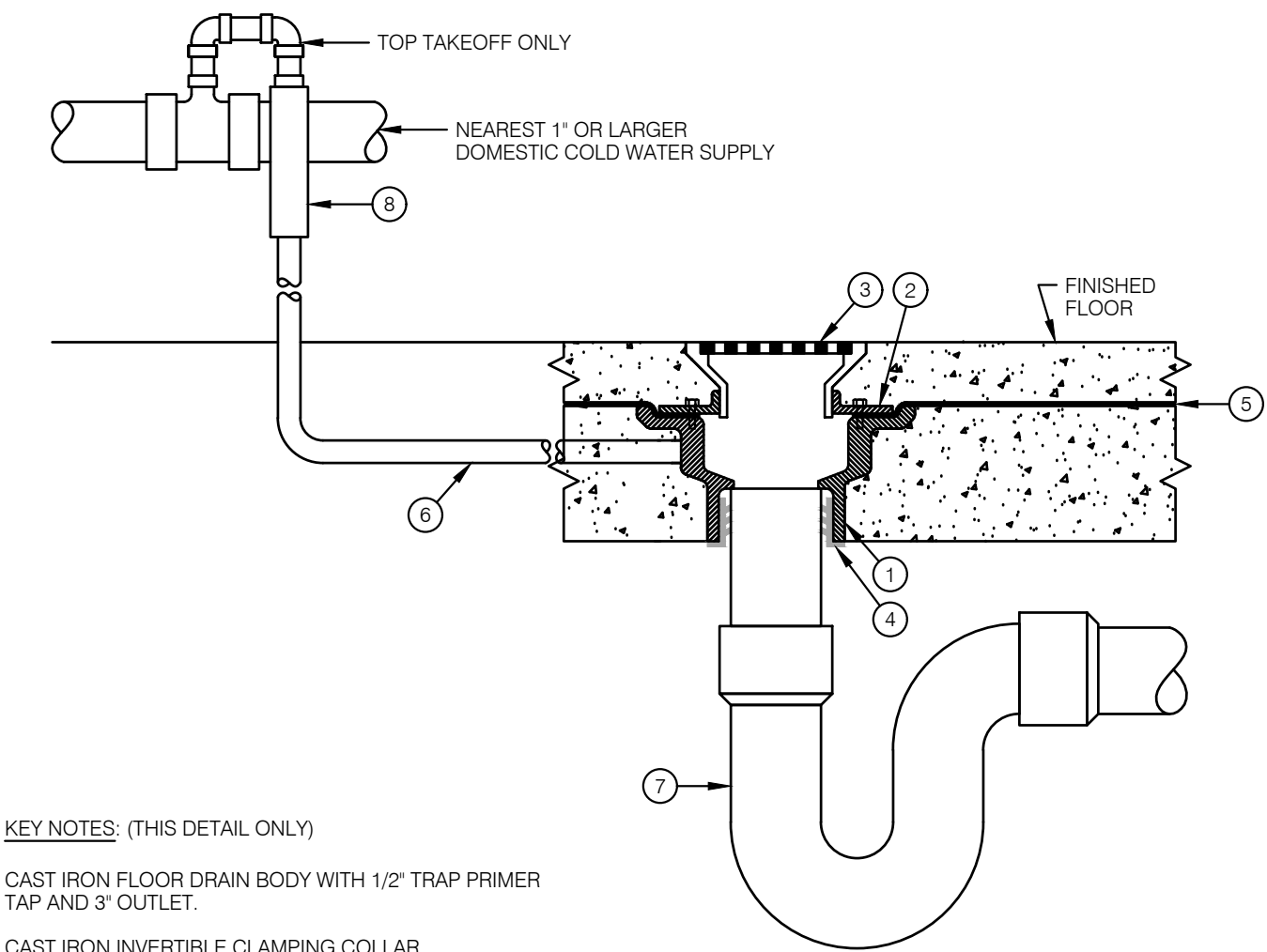
PLUMBING LEGEND, NOTES, DETAILS, & SHEET INDEX

Tallahassee Florida

P0.1

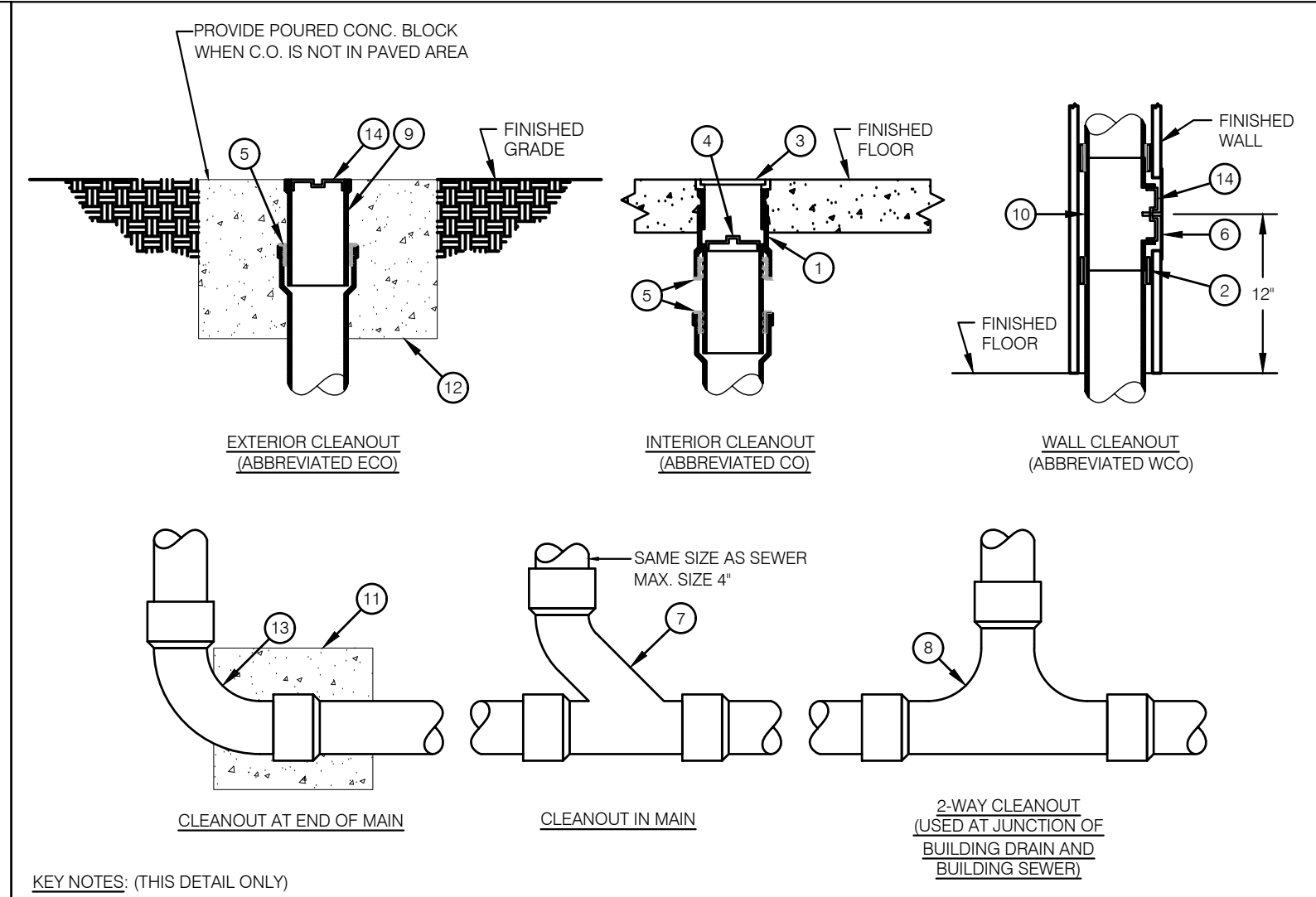


INSTANTANEOUS WATER HEATER DETAIL
SCALE: NONE



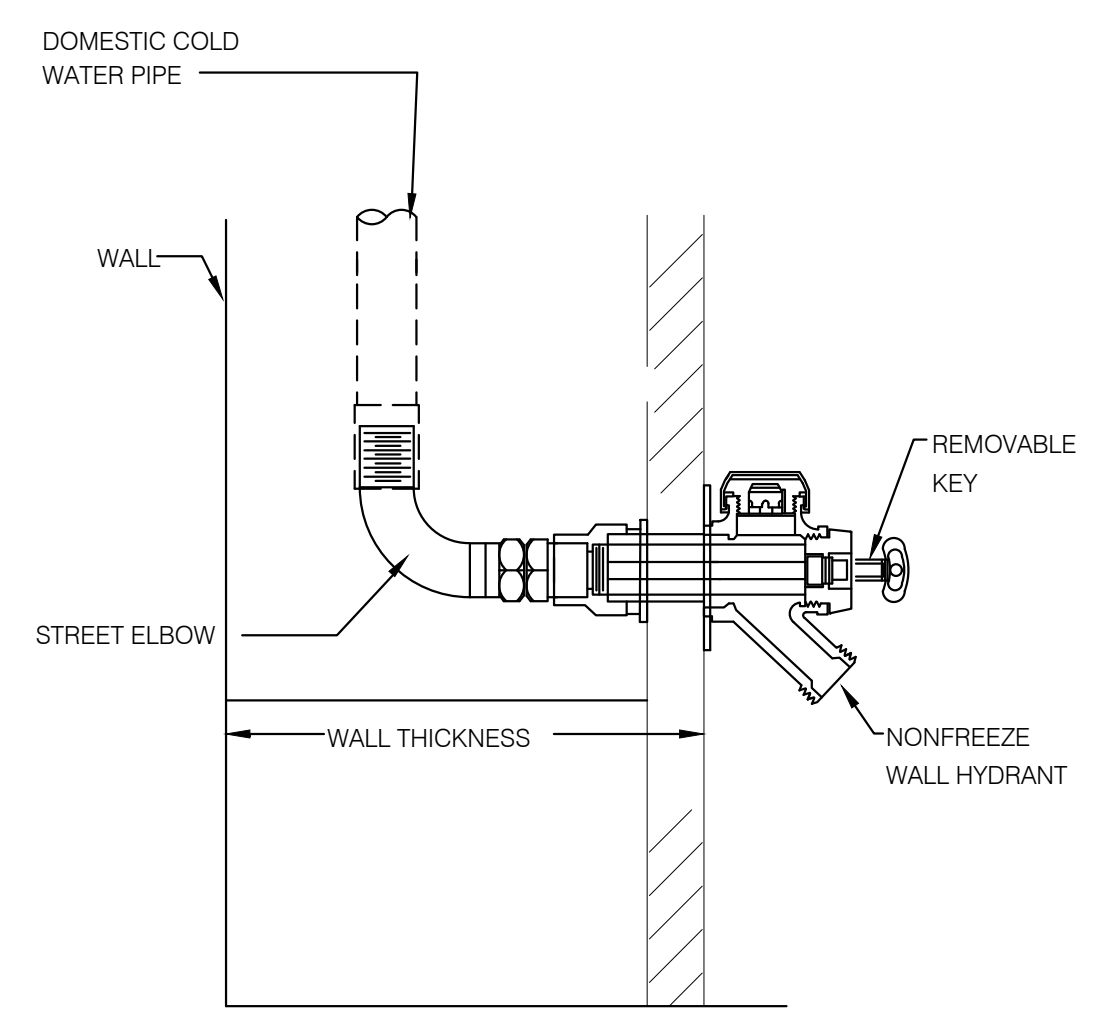
- KEY NOTES: (THIS DETAIL ONLY)**
- 1 CAST IRON FLOOR DRAIN BODY WITH 1/2" TRAP PRIMER TAP AND 3" OUTLET.
 - 2 CAST IRON INVERTIBLE CLAMPING COLLAR.
 - 3 POLISHED NICKEL BRONZE 2-PIECE ADJUSTABLE STRAINER.
 - 4 PUSH-ON NEOPRENE COMPRESSION GASKET.
 - 5 WATERPROOF MEMBRANE CLAMPED TIGHTLY TO DRAIN BODY.
 - 6 1/2" DOMESTIC COLD WATER SUPPLY. TYPE K SOFT COPPER.
 - 7 3" DEEP SEAL P-TRAP
 - 8 PRESSURE ACTIVATED TRAP PRIMER VALVE - PRECISION PLUMBING PRODUCTS (P.P.P.) OR APPROVED EQUAL. INSTALL MINIMUM 12" A.F.F. FOR EVERY 20' OF PRIMER LINE. IF DISTRIBUTION UNIT DU-4 IS USED, UP TO FOUR FLOOR DRAINS MAY BE SERVED FROM ONE TRAP PRIMER VALVE. INSTALL IN ACCESSIBLE LOCATION OR PROVIDE ACCESS PANEL FOR SERVICE.
- ALTERNATE NOTE:**
IN LIEU OF WATER BASED TRAP PRIMER IT IS ACCEPTABLE TO USE SURE SEAL M#: SS3009V INLINE FLOOR DRAIN TRAP SEAL RUBBER SEALING GASKET.

FLOOR DRAIN DETAIL
SCALE: NONE

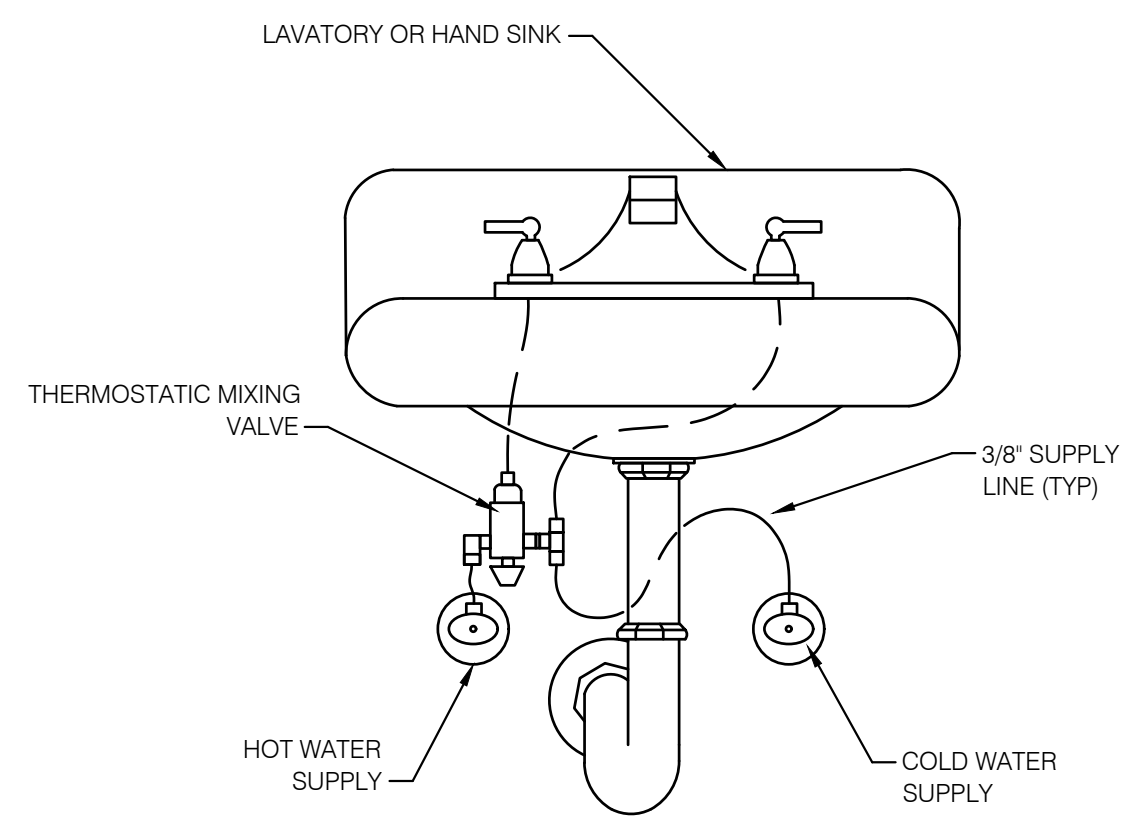


- KEY NOTES: (THIS DETAIL ONLY)**
- 1 CAST IRON 2-PIECE CLEANOUT BODY WITH ADJUSTABLE HEAD.
 - 2 NO-HUB COUPLING (FOR ABOVE GROUND APPLICATION ONLY).
 - 3 POLISHED NICKEL BRONZE SCORATED TOP (PROVIDE CARPET MARKER FOR CARPETED FLOORS).
 - 4 BRONZE TAPERED THREAD, RAISED HEAD CLEANOUT PLUG.
 - 5 PUSH-ON NEOPRENE RUBBER COMPRESSION GASKET.
 - 6 STAINLESS STEEL ROUND WALL ACCESS COVER.
 - 7 COMBINATION "Y" & 1/8" BEND FITTING.
 - 8 TWO-WAY CLEANOUT FITTING.
 - 9 CAST IRON CLEANOUT FERRULE.
 - 10 CAST IRON CLEANOUT TEE.
 - 11 12" x 12" x 12" CONCRETE THRUST BLOCK.
 - 12 24" x 24" x 12" CONCRETE PAD FLUSH WITH GRADE.
 - 13 LONG SWEEP ELBOW.
 - 14 BRONZE TAPERED THREAD, RECESSED HEAD CLEANOUT PLUG.

TYPICAL CLEANOUT DETAIL
SCALE: NONE

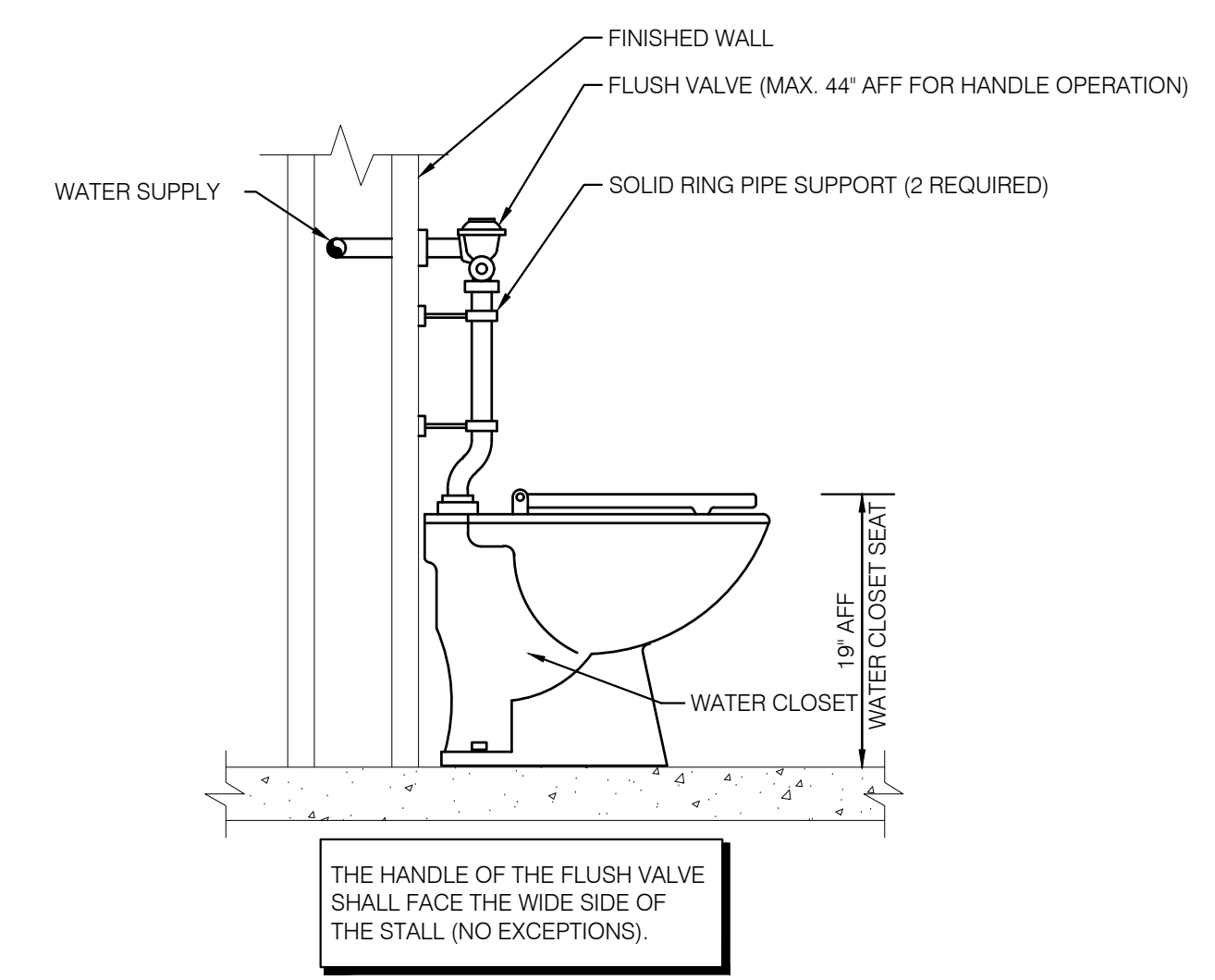


HOSE BIBB DETAIL
SCALE: NONE



- COMMENTS:**
1. ALL HAND SINKS AND LAVATORIES REQUIRED TO MEET A.D.A. GUIDELINES SHALL HAVE ADA COMPLIANT UNDER-SINK PROTECTION. SUPPLY, WASTE AND VALVES MUST ALL BE COVERED.
 2. ALL HAND SINKS AND LAVATORIES REQUIRE THERMOSTATIC MIXING VALVES ASSE 1070 CERTIFIED AND SET TO 110°F.

THERMOSTATIC MIXING VALVE DETAIL
SCALE: NONE



FLUSH VALVE (MAX. 44" AFF FOR HANDLE OPERATION)
SCALE: NONE

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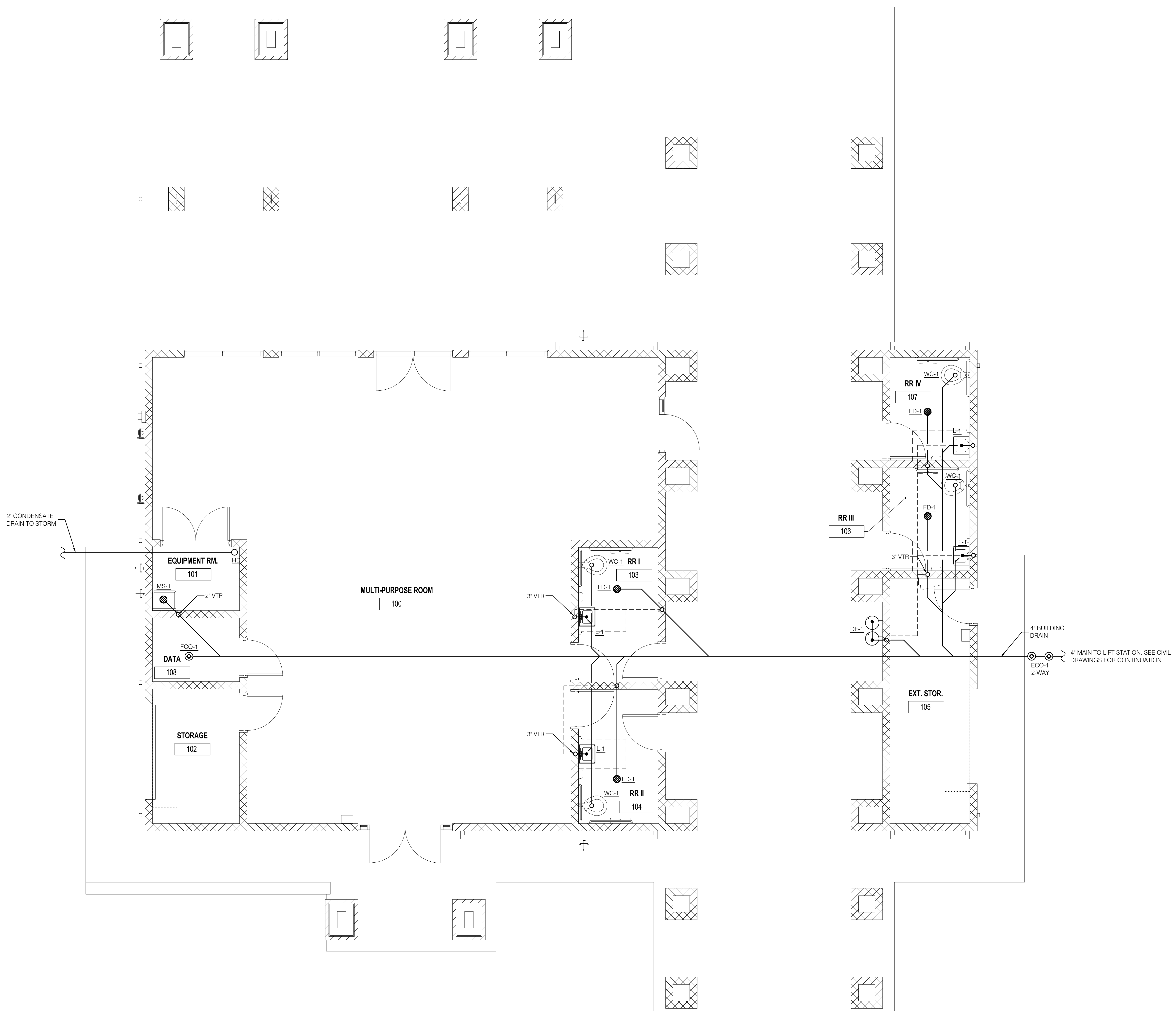
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PLUMBING - DETAILS

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P0.2



1 FLOOR PLAN - PLUMBING - DRAIN & VENT
 P1.1 1/4" = 1'-0"

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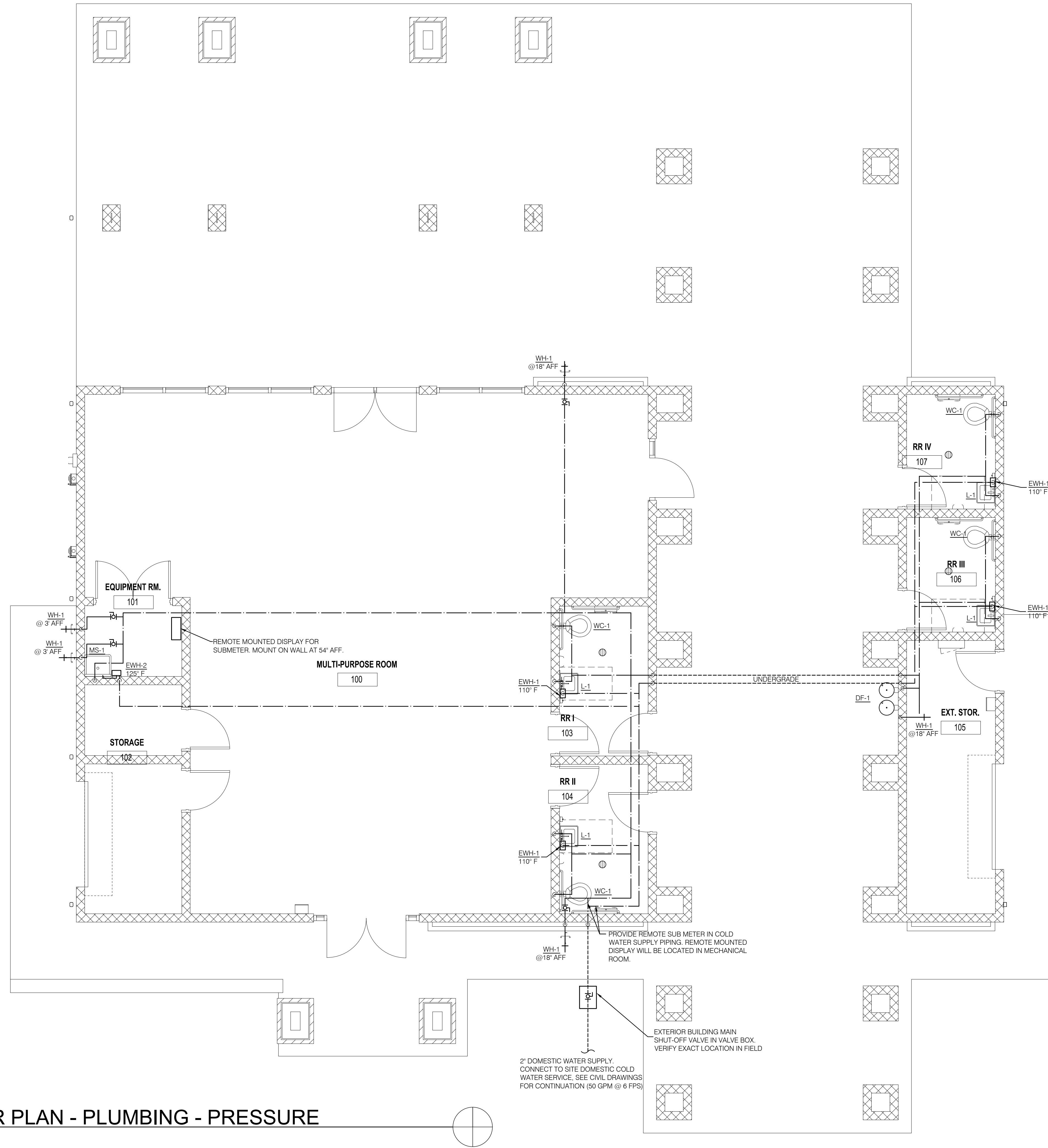
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FLOOR PLAN - PLUMBING - DRAIN & VENT

Tallahassee Florida

P1.1



1 FLOOR PLAN - PLUMBING - PRESSURE
 P1.2 1/4" = 1'-0"

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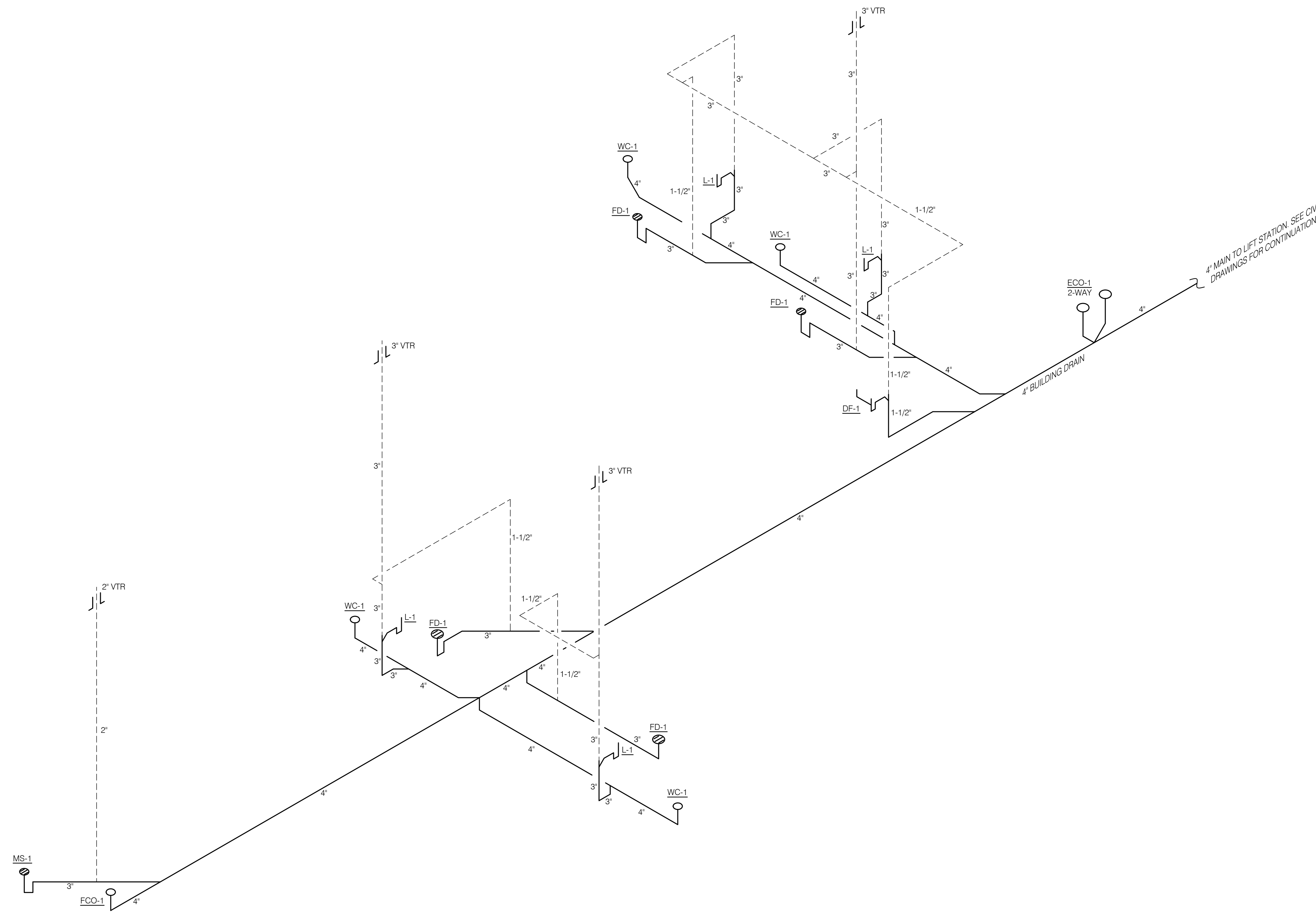
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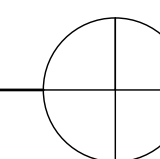
FLOOR PLAN - PLUMBING - PRESSURE

Tallahassee Florida

P1.2



1 DRAIN & VENT ISOMETRIC
 P2.1 N.T.S.



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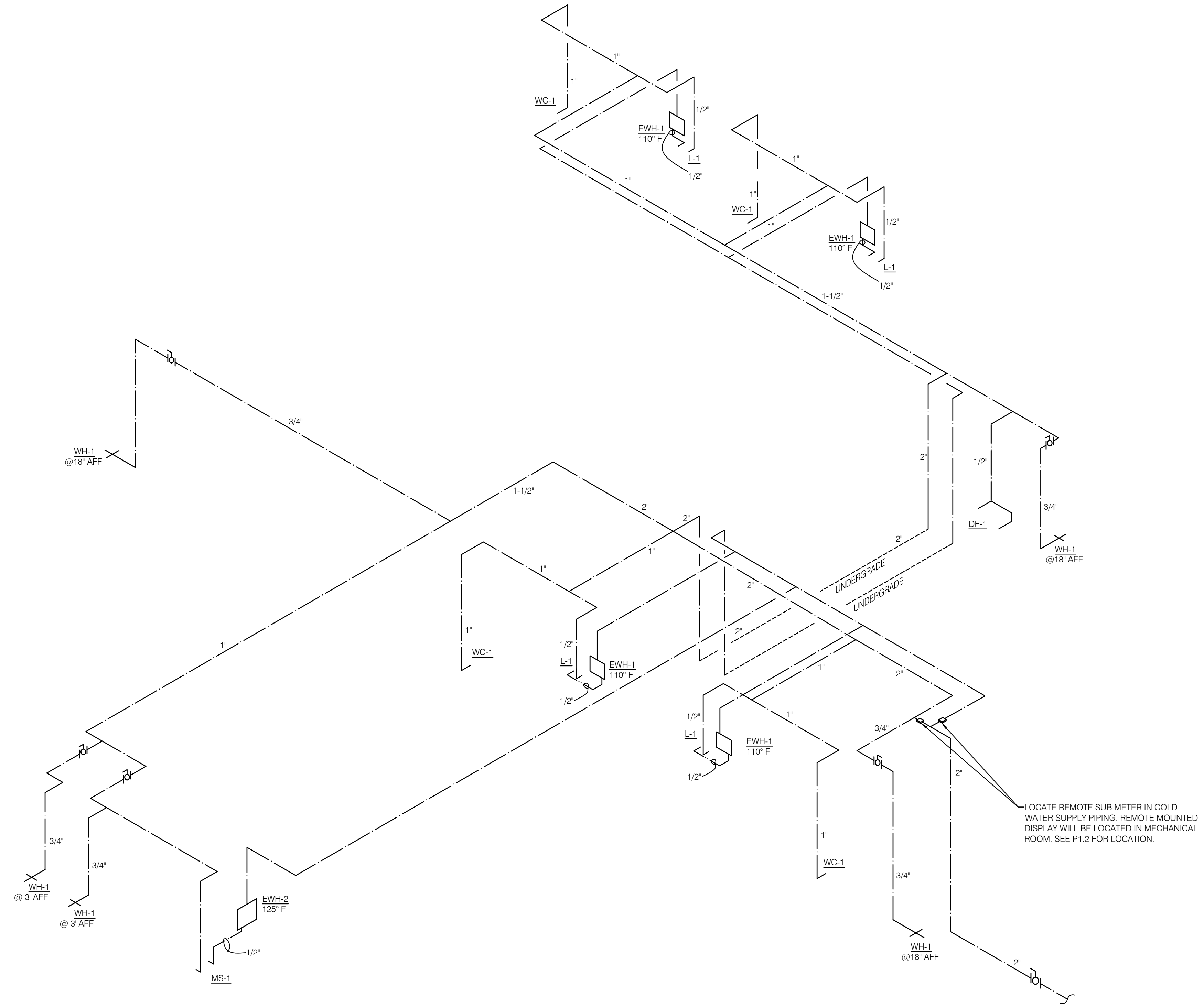
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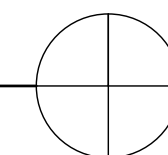
DRAIN & VENT ISOMETRIC

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P2.1



1 PRESSURE ISOMETRIC
 P2.2 N.T.S.



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PRESSURE ISOMETRIC

Tallahassee Florida

P2.2

ELECTRICAL SPECIFICATIONS

BASIC ELECTRICAL MATERIALS AND METHODS

- ELECTRICAL COMPONENTS, DEVICES, FIXTURES, EQUIPMENT, AND ACCESSORIES LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
- IDENTIFICATION DEVICE COLORS: USE THOSE PRESCRIBED BY ANSI A13.1, NFPA 70, AND THESE SPECIFICATIONS.
- COLORS: ADHESIVE MARKING TAPE FOR RACEWAYS, WIRES, AND CABLES; SELF-ADHESIVE VINYL TAPE, NOT LESS THAN 1 INCH WIDE BY 3 MILS THICK (25 MM WIDE BY 0.08 MM THICK).
- TAPE MARKERS FOR CONDUCTORS: VINYL OR VINYL-CLOTH, SELF-ADHESIVE, WRAP-AROUND TYPE WITH PREPRINTED NUMBERS AND LETTERS.
- ENGRAVED-PLASTIC LABELS, SIGNS, AND INSTRUCTION PLATES: ENGRAVING STOCK; MELAMINE PLASTIC LAMINATE PUNCHED OR DRILLED FOR MECHANICAL FASTENERS 1/16-INCH (1.6-MM) MINIMUM THICKNESS FOR SIGNS UP TO 20 SQ. IN. (129 SQ. CM) AND 1/8-INCH (3.2-MM) MINIMUM THICKNESS FOR LARGER SIZES. ENGRAVED LEGEND IN BLACK LETTERS ON WHITE BACKGROUND.
- PULL STRINGS: PROVIDE PULL STRINGS IN ALL SPARE OR EMPTY CONDUITS AND RACEWAYS.
- COORDINATE NAMES, ABBREVIATIONS, COLORS, AND OTHER DESIGNATIONS USED FOR ELECTRICAL IDENTIFICATION WITH CORRESPONDING DESIGNATIONS INDICATED IN THE CONTRACT DOCUMENTS OR REQUIRED BY CODES AND STANDARDS. USE CONSISTENT DESIGNATIONS THROUGHOUT PROJECT.
- CUT, CHANNEL, CHASE, AND DRILL FLOORS, WALLS, PARTITIONS, CEILINGS, AND OTHER SURFACES REQUIRED TO PERMIT ELECTRICAL INSTALLATIONS. PERFORM CUTTING BY SKILLED MECHANICS OF TRADES INVOLVED. SLEEVE ALL CABLE PENETRATIONS OF WALLS. SEAL ALL CONDUIT PENETRATIONS.
- REPAIR, REFRESH AND TOUCH UP DISTURBED FINISH MATERIALS AND OTHER SURFACES TO MATCH ADJACENT UNDISTURBED SURFACES.
- ALL WORK SHALL COMPLY WITH THE CODES AND STANDARDS LISTED ON THE PLANS.
- CONTRACTOR SHALL SUBMIT MANUFACTURER'S DATA FOR ALL FIXTURES, DEVICES, AND EQUIPMENT FOR THE REVIEW AND APPROVAL OF THE ENGINEER PRIOR TO ORDERING.
- WITHIN 30 DAYS OF COMMENCEMENT, CONTRACTOR SHALL ARRANGE AND ATTEND A MEETING ON-SITE WITH A REPRESENTATIVE OF THE UTILITY TO REVIEW AND COORDINATE REQUIREMENTS AND SCHEDULE FOR THE INSTALLATION OF THE NEW ELECTRICAL SERVICE.

GROUNDING AND BONDING

- EQUIPMENT GROUNDING CONDUCTORS: COMPLY WITH NFPA 70, ARTICLE 250, FOR TYPES, SIZES, AND QUANTITIES OF EQUIPMENT GROUNDING CONDUCTORS, UNLESS SPECIFIC TYPES, LARGER SIZES, OR MORE CONDUCTORS THAN REQUIRED BY NFPA 70 ARE INDICATED.
- INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS IN ALL FEEDERS AND BRANCH CIRCUITS.
- ALL GROUNDING CONDUCTORS SHALL BE COPPER, COMPLY WITH DIVISION 16 SECTION "CONDUCTORS AND CABLES" AND ASTM B, AS APPLICABLE.
- EQUIPMENT GROUNDING CONDUCTORS: INSULATED WITH GREEN-COLORED INSULATION.
- GROUNDING ELECTRODE CONDUCTORS: STRANDED COPPER CABLE.
- UNDERGROUND CONDUCTORS: BARE, TINNED, STRANDED, UNLESS OTHERWISE INDICATED.
- CONNECTORS: COMPLY WITH IEEE 837 AND UL 467; LISTED FOR USE FOR SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND CONNECTED ITEMS.
- IN RACEWAYS, USE INSULATED EQUIPMENT GROUNDING CONDUCTORS.
- EXOTHERMIC-WELDED CONNECTIONS: USE FOR CONNECTIONS TO STRUCTURAL STEEL AND FOR UNDERGROUND CONNECTIONS.
- GROUNDING CONDUCTORS: ROUTE ALONG SHORTEST AND STRAIGHTEST PATHS POSSIBLE, UNLESS OTHERWISE INDICATED. AVOID OBSTRUCTING ACCESS OR PLACING CONDUCTORS WHERE THEY MAY BE SUBJECTED TO STRAIN, IMPACT, OR DAMAGE.
- BONDING STRAPS AND JUMPERS: INSTALL SO VIBRATION BY EQUIPMENT MOUNTED ON VIBRATION ISOLATION HANGERS OR SUPPORTS IS NOT TRANSMITTED TO RIGIDLY MOUNTED EQUIPMENT.

CONDUCTORS AND CABLES

- CONDUCTOR MATERIAL: COPPER COMPLYING WITH NEMA WC 5 OR 7; SOLID CONDUCTOR FOR NO. 10 AWG AND SMALLER, STRANDED FOR NO. 8 AWG AND LARGER.
- CONDUCTOR INSULATION TYPES: TYPE THHN-THWN COMPLYING WITH NEMA WC 5 OR WC 7.
- TYPE MC/NM/JF CABLE SHALL NOT BE PERMITTED.
- BRANCH CIRCUITS AND FEEDERS: TYPE THHN-THWN, SINGLE CONDUCTORS IN RACEWAY.
- CONCEAL CABLES AND RACEWAYS IN FINISHED WALLS, CEILINGS, AND FLOORS. USE MANUFACTURER-APPROVED PULLING COMPOUND OR LUBRICANT WHERE NECESSARY; COMPOUND USED MUST NOT DEGRADATE CONDUCTOR OR INSULATION. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM PULLING TENSIONS AND SIDEWALL PRESSURE VALUES.
- IN EXPOSED LOCATIONS, ALL CONDUCTORS AND CABLES SHALL BE INSTALLED IN RACEWAY.
- MAKE SPLICES AND TAPS THAT ARE COMPATIBLE WITH CONDUCTOR MATERIAL AND THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN UNSPLICED CONDUCTORS.
- WIRING AT OUTLETS: INSTALL CONDUCTOR AT EACH OUTLET, WITH AT LEAST 6 INCHES (150 MM) OF SLACK.

RACEWAYS AND BOXES

- PERMANENTLY LABEL ALL RACEWAYS AND JUNCTION/PULL BOX COVERS TO INDICATE PANEL/CIRCUIT NUMBERS CONTAINED.
- UNLESS OTHERWISE NOTED, PROVIDE NEMA 1 ENCLOSURES IN INDOOR LOCATIONS, NEMA 3R ENCLOSURES IN OUTDOOR LOCATIONS.
- MINIMUM RACEWAY SIZE: 3/4" TRADE SIZE.
- KEEP RACEWAYS AT LEAST 6 INCHES (150 MM) AWAY FROM PARALLEL RUNS OF HOT-WATER PIPES. INSTALL HORIZONTAL RACEWAY RUNS ABOVE WATER PIPING. PROTECT STUB-UPS FROM DAMAGE WHERE CONDUITS RISE THROUGH FLOOR SLABS. ARRANGE SO CURVED PORTIONS OF BENDS ARE NOT VISIBLE ABOVE FINISHED SLAB.
- MAKE BENDS AND OFFSETS SO ID IS NOT REDUCED. KEEP LEGS OF BENDS IN SAME PLANE AND KEEP STRAIGHT LEGS OF OFFSETS PARALLEL, UNLESS OTHERWISE INDICATED.
- CONCEAL CONDUIT AND EMT WITHIN FINISHED WALLS, CEILINGS, AND FLOORS. INSTALL EXPOSED RACEWAYS PARALLEL OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS AND FOLLOW SURFACE CONTOURS AS MUCH AS POSSIBLE.
- INSTALL RACEWAY SEALING FITTINGS AT SUITABLE, APPROVED, AND ACCESSIBLE LOCATIONS AND FILL THEM WITH UL-LISTED SEALING COMPOUND. INSTALL RACEWAY SEALING FITTINGS WHERE CONDUITS PASS FROM WARM TO COLD LOCATIONS, SUCH AS BOUNDARIES OF REFRIGERATED SPACES AND WHERE OTHERWISE REQUIRED BY NFPA 70.
- FLEXIBLE CONNECTIONS: USE MAXIMUM OF 72 INCHES (1830 MM) OF FLEXIBLE CONDUIT FOR RECESSED AND SEMIRECESSED LIGHTING FIXTURES; FOR EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT; AND FOR ALL MOTORS. USE LFMC IN DAMP OR WET LOCATIONS. INSTALL SEPARATE GROUND CONDUCTOR ACROSS FLEXIBLE CONNECTIONS.
- ALL EXTERIOR EXPOSED RACEWAY SHALL BE METALLIC, WITH RAIN-TIGHT FITTINGS/COUPLINGS. UNDERGROUND RACEWAY SHALL BE RNC, RMC, OR IMC.

WIRING DEVICES

- STRAIGHT-BLADE-TYPE RECEPTACLES: COMPLY WITH NEMA WD 1, NEMA WD 6, DSCC W-C-596G, AND UL 498. STRAIGHT-BLADE AND LOCKING RECEPTACLES: HEAVY-DUTY GRADE.
- GFCI RECEPTACLES: STRAIGHT BLADE, HEAVY-DUTY GRADE, WITH INTEGRAL NEMA WD 6, CONFIGURATION 5-20R DUPLEX RECEPTACLE; COMPLYING WITH UL 498 AND UL 943.
- SINGLE- AND DOUBLE-POLE SWITCHES: COMPLY WITH DSCC W-C-896F AND UL 20.
- SNAP SWITCHES: HEAVY-DUTY GRADE, QUIET TYPE.
- DIMMERS SHALL BE SLIDE-TYPE, WITH PRESET. DIMMERS SHALL BE RATED FOR THE LOAD TYPE CONTROLLED. DIMMERS SHALL BE RATED FOR 500W, MINIMUM; DERATE, AS PER MANUFACTURER'S RECOMMENDATIONS, FOR GANG INSTALLATION.
- DEVICE & COVERPLATE FINISH: PER ARCHITECTS DIRECTION, UNLESS OTHERWISE INDICATED OR REQUIRED BY NFPA 70.
- INSTALL DEVICES AND ASSEMBLIES LEVEL, PLUMB, AND SQUARE WITH BUILDING LINES.
- ARRANGEMENT OF DEVICES: UNLESS OTHERWISE INDICATED, MOUNT FLUSH, WITH LONG DIMENSION VERTICAL. GROUP ADJACENT SWITCHES UNDER SINGLE, MULTIGANG WALL PLATES.
- REMOVE WALL PLATES AND PROTECT DEVICES AND ASSEMBLIES DURING PAINTING.
- AFTER INSTALLING WIRING DEVICES AND AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, TEST FOR PROPER POLARITY, GROUND CONTINUITY, AND COMPLIANCE WITH REQUIREMENTS.
- TEST GFCI OPERATION WITH BOTH LOCAL AND REMOTE FAULT SIMULATIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

ENCLOSED SWITCHES

- ENCLOSED SWITCHES SHALL BE MANUFACTURED BY SQUARE-D, CUTLER-HAMMER, GE, OR SIEMENS.
- ALL ENCLOSED SWITCHES SHALL BE HEAVY-DUTY TYPE, LOCKABLE ON AND LOCKABLE OFF.
- MOUNT INDIVIDUAL WALL-MOUNTING SWITCHES WITH TOPS AT UNIFORM HEIGHT, UNLESS OTHERWISE INDICATED.
- ENCLOSED SWITCHES SHALL BE UL LISTED FOR THE APPLICATION USED; ENCLOSURES SHALL BE NEMA-3R UNLESS NOTED OTHERWISE.
- MOTOR STARTERS SHALL BE NEMA-RATED, WITH OVERLOADS SIZED PER LOAD. COORDINATE COIL VOLTAGE WITH CONTROLS.
- PROVIDE FUSES FOR ALL FUSIBLE SWITCHES.

PANELBOARDS

- MANUFACTURERS: PANELBOARDS SHALL BE MANUFACTURED BY SQUARE-D, CUTLER-HAMMER, GE, OR SIEMENS.
- ENCLOSURES: FLUSH- AND SURFACE-MOUNTED CABINETS. NEMA PB 1, TYPE 1.
- PHASE AND GROUND BUSES: HARD-DRAWN COPPER, 98 PERCENT CONDUCTIVITY.
- CONDUCTOR CONNECTIONS: SUITABLE FOR USE WITH CONDUCTOR MATERIAL.
- SERVICE EQUIPMENT LABEL: UL LABELED FOR USE AS SERVICE EQUIPMENT FOR PANELBOARDS WITH MAIN SERVICE DISCONNECT SWITCHES.
- FUTURE DEVICES: MOUNTING BRACKETS, BUS CONNECTIONS, AND NECESSARY APURTANCES REQUIRED FOR FUTURE INSTALLATION OF DEVICES.
- PANELBOARD SHORT-CIRCUIT RATING: SERIES RATED TO INTERRUPT SYMMETRICAL SHORT-CIRCUIT CURRENT AVAILABLE AT TERMINALS.
- MAIN OVERCURRENT PROTECTIVE DEVICES: CIRCUIT BREAKER.
- MOLDED-CASE CIRCUIT BREAKER: UL 489, WITH INTERRUPTING CAPACITY TO MEET AVAILABLE FAULT CURRENTS.
- MOUNT TOP OF TRIM 74 INCHES (1880 MM) ABOVE FINISHED FLOOR, UNLESS OTHERWISE INDICATED.
- MOUNT PLUMB AND RIGID WITHOUT DISTORTION OF BOX. MOUNT RECESSED PANELBOARDS WITH FRONTS UNIFORMLY FLUSH WITH WALL FINISH.
- INSTALL FILLER PLATES IN UNUSED SPACES.
- PROVIDE NEW TYPE-WRITTEN PANEL DIRECTORIES, SHOWING ALL EXISTING AND NEW CIRCUITS.
- PANELBOARD NAMEPLATES: LABEL EACH PANELBOARD WITH ENGRAVED METAL OR LAMINATED-PLASTIC NAMEPLATE MOUNTED WITH CORROSION-RESISTANT SCREWS.
- WHERE BREAKER IS SERVING HARD-WIRED APPLIANCE WITHOUT A SEPARATE DISCONNECT (NOT WITHIN SIGHT), PROVIDE A PERMANENTLY INSTALLED PROVISION TO LOCK THE BREAKER IN THE "OFF" POSITION.
- WHERE SURGE PROTECTIVE DEVICE IS INDICATED, PROVIDE NEW UL-1449 LISTED TYPE 1 SURGE PROTECTIVE DEVICE, 40KA PER MODE MINIMUM.

LIGHTING

- LIGHTING FIXTURES: PER FIXTURE SCHEDULE ON PROJECT PLANS.
- ALL LIGHTING FIXTURES SHALL BE LED-TYPE.
- FIXTURES: SET LEVEL, PLUMB, AND SQUARE WITH CEILINGS AND WALLS. INSTALL LAMPS IN EACH FIXTURE.
- FOR EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS, PROVIDE UNSWITCHED HOT CONDUCTOR AS INDICATED ON THE PLANS.
- PROVIDE ALL BACKBOXES, SUPPORTS, STEMS, HARDWARE, LAMPS, AND DRIVERS FOR A COMPLETE AND FUNCTIONAL INSTALLATION.

PHOTOVOLTAIC ARRAY

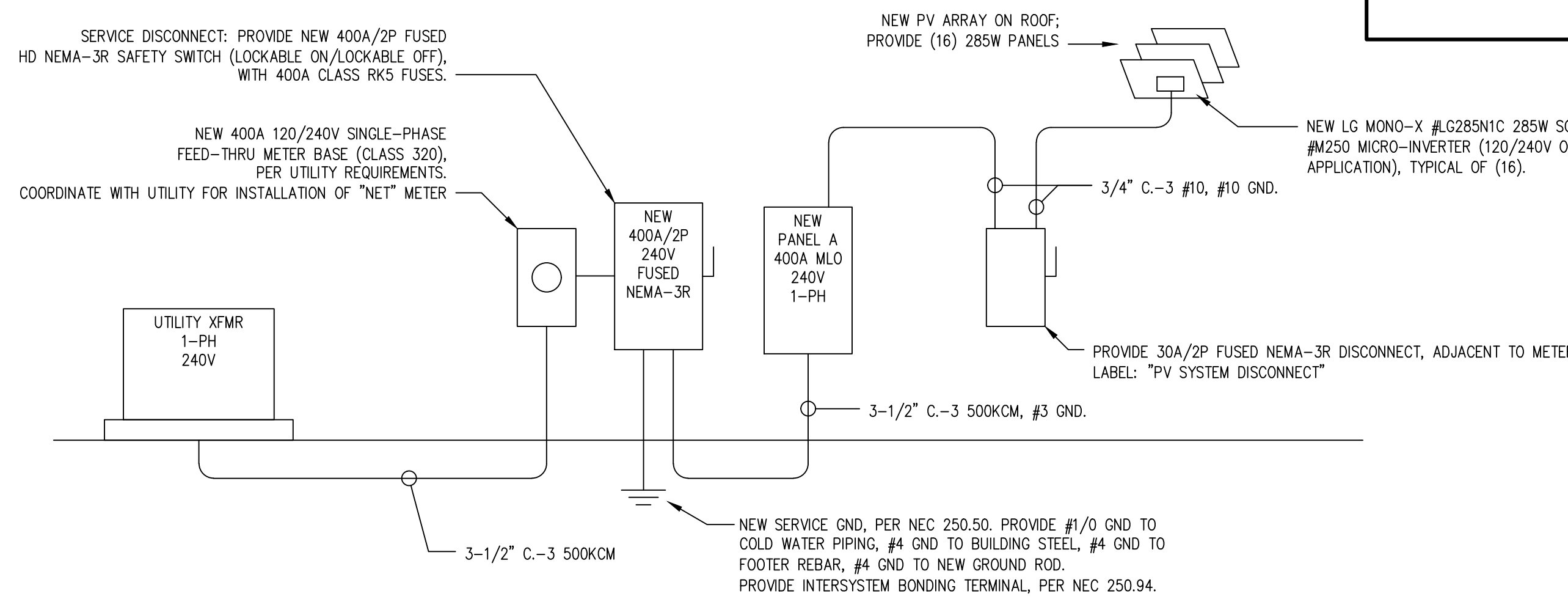
- PV MODULES SHALL BE MONOCRYSTALLINE TYPE, 60-CELL, WITH IP67 JUNCTION BOX WITH THREE BYPASS DIODES, AND ANODIZED ALUMINUM FRAME. PANELS SHALL BE LISTED/CERTIFIED TO IEC 61215, IEC 61730-1/-2, UL 1703, ISO 9001.
- INVERTERS SHALL BE MICROINVERTER TYPE, 48VDC MAXIMUM INPUT, 27VDC-39VDC PEAK POWER TRACKING VOLTAGE, 15A DC SHORT CIRCUIT, 240W CONTINUOUS OUTPUT POWER, NEMA 6 ENCLOSURE. INVERTERS SHALL BE LISTED/CERTIFIED TO UL 2703, UL1741/IEEE1547, FCC PART 15 CLASS B, AND SHALL COMPLY WITH N.E.C. 690.12 REQUIREMENTS FOR PV RAPID SHUTDOWN EQUIPMENT.
- INSTALLATION SHALL BE COMPATIBLE WITH ROOFING MATERIAL AND WARRANTIES. PROVIDE ALL ENGINEERING AND CERTIFICATION AS REQUIRED TO DEMONSTRATE EQUIPMENT, ATTACHMENTS, AND FASTENERS MEET STRUCTURAL AND WIND-LOAD REQUIREMENTS.
- PROVIDE NETWORK-CONNECTED COMMUNICATIONS DEVICE WITH GATEWAY AND ACCESSORIES AS REQUIRED TO PROVIDE PRODUCTION, CONSUMPTION, AND OTHER METERING DATA VIA NETWORK CONNECTION.
- PROVIDE GROUNDING AND BONDING OF ALL PANELS, RACKING, ATTACHMENTS, AND OTHER COMPONENTS AS REQUIRED BY N.E.C.
- PROVIDE ALL SIGNAGE, MARKING, AND LABELING AS REQUIRED BY N.E.C. ARTICLE 690. ALL OUTDOOR SIGNAGE SHALL BE WEATHERPROOF AND SUNLIGHT RESISTANT.
- PV PANELS PROVIDE MANUFACTURER'S TEN YEAR LIMITED WARRANTY ON ALL PV PANELS AND INVERTERS; AND TWO YEAR INSTALLER'S WARRANTY ON INSTALLATION.
- PROVIDE ALL MATERIALS, COMPONENTS, ACCESSORIES, BRACKETS, FASTENERS, CABLEING, WIRING, LABELING, HARDWARE, LABOR, STARTUP, AND COMMISSIONING FOR A COMPLETE AND OPERATIONAL SYSTEM.
- WITHIN 30 DAYS OF SUBSTANTIAL COMPLETION, PROVIDE FOUR HOURS OF TRAINING TO OWNER'S REPRESENTATIVE ON THE OPERATION AND MAINTENANCE OF THE PV SYSTEM.

LIGHTING FIXTURE SCHEDULE					
Code	Description	Mfr.	Cat. No.	Lamps	Notes
F	4FT LED SURFACE	LITHONIA	FMLL 9 30840	36W LED	
G	4FT LED SURFACE	LITHONIA	CLX L48 3000LM SEF RDL MVOLT GZ10 40K 80CRI WH	22W LED	
P	PENDANT MOUNTED CYLINDER	LITHONIA	EVO-CYL 40/15 6WR MD LSS MVOLT GZ10 PM	32W LED	CONTROL VIA TIME CLOCK / CONTACTOR NOT SHOWN
S	TRIPLE HEAD EXTERIOR FLOOD LIGHT	LITHONIA	OLF 3RH 40K 120 DDB	36W LED	FINISH PER ARCHITECT
EM	WALL MOUNTED EMERGENCY BATTERY AREA LIGHT	CHLORIDE	CTX618	INCLUDED	CONNECT TO UNSWITCHED LEG OF LIGHTING CIRCUIT
EX	EXIT DIRECTIONAL SIGNAGE	CHLORIDE	VERWEM	INCLUDED	CONNECT TO UNSWITCHED LEG OF LIGHTING CIRCUIT
FL	GROUND MOUNTED FLOOD LIGHT	LITHONIA	QTE LED P1 40K 120 THK DDB	24W LED	CONTROL VIA TIME CLOCK / CONTACTOR
PL	POLE MOUNTED AREA LIGHT	LITHONIA	AS1LED 42C 530 40K SR3 MVOLT	75W LED	2 HEADS AT 180 DEGREES ON 25'-0" POLE. CONTROL VIA TIME CLOCK / CONTACTOR
U	CANOPY UPLIGHT	BK LIGHTING	DE-LED-x59-WFL-BZP-12-90-PC	12W LED	CONTROL VIA TIME CLOCK / CONTACTOR.

NOTE: FINAL FINISH/COLOR SELECTION BY ARCHITECT. VERIFY EXACT HEIGHT OF WALL/PENDANT MOUNTED FIXTURES WITH ARCHITECTURAL ELEVATIONS. FIXTURES LISTED ARE BASIS OF DESIGN; ALTERNATIVE FIXTURES OF SIMILAR STYLE AND EQUAL OR BETTER PERFORMANCE AND QUALITY WILL BE CONSIDERED.

PANEL: A											
MAN: 400A MLO SERVICE: 120/240V, 1-PHASE, 3-WIRE LOCATION: SEE PLAN RATING: 22,000 AAC TYPE: NEMA-1, SURFACE					NOTE: PROVIDE UL-1449 LISTED TYPE 1 SURGE PROTECTION DEVICE AT PANEL (80KA PER MODE, MINIMUM).						
KVA											
CKT	DESCRIPTION	BKR	P	LOAD	A	B	LOAD	BKR	P	DESCRIPTION	CKT
1	LTS-INSIDE	20	1	1.00	7.40		6.40	60	2	AHU	2
3	LTS-EXTERIOR	20	1	1.00	7.40		6.40				4
5	SPARE	20	1		4.90		4.90	60	2	HEAT PUMP	6
7	REC-COMMS	20	1	0.50	4.90		4.90				8
9	REC-MULTIPURPOSE	20	1	0.90	4.15		3.25	**30	2	WATER HEATER	10
11	REC-MULTIPURPOSE	20	1	0.54			3.79	3.25			12
13	REC-SEATING	20	1	0.36	3.61		3.25	**30	2	WATER HEATER	14
15	REC-MULTIPURPOSE	20	1	0.72			3.97	3.25			16
17	REC-STORAGE	20	1	0.36	3.61		3.25	**30	2	WATER HEATER	18
19	REC-STORAGE	20	1	0.36			3.61	3.25			20
21	REC-RESTRM	*20	1	0.36	3.61		3.25	**30	2	WATER HEATER	22
23	REC-RESTRM	*20	1	0.36			3.61	3.25			24
25	WATER COOLER	*20	1	0.80	5.55		4.75	**50	2	WATER HEATER	26
27	REC-STORAGE	20	1	0.36			5.11	4.75			28
29	REC-STORAGE	20	1	0.36	3.26		2.90	50	2	LIFT STATION	30
31	REC-STORAGE	20	1	0.36			3.26	2.90			32
33	REC-STORAGE	20	1	0.36	2.36		2.00	60	2	STAGE	34
35	REC-ENH-PHASE ENVOY	20	1	0.18			2.18	2.00			36
37	REC-FINISH LINE	*20	1	0.18	0.18		0.18	20	2	PV ARRAY	38
39	IRRIGATION CONTROLLER	20	1	0.18			0.18				40
41	HAND DRYER	20	1	1.80	1.80					SPACE	42
43	HAND DRYER	20	1	1.80	1.80					SPACE	44
45	HAND DRYER	20	1	1.80	1.80					SPACE	46
47	HAND DRYER	20	1	1.80	1.80					SPACE	48
49	SPARE	*20	1		0.00		0.00			SPACE	50
51	SPARE	*20	1		0.00		0.00	30	2	SURGE PROT DEVICE	52
53	SPARE	20	1		0.00		0.00				54
					42.23		42.11				
					84.34	KVA	351.4	AMPS			

* PROVIDE GFCI BREAKER
** PROVIDE LOCKABLE "OFF" BREAKER
TOTAL CONNECTED LOAD (KVA):



POWER RISER

NOT TO SCALE

LEGEND

- 4FT SURFACE LED LIGHTING FIXTURE.
- PENDANT LIGHT FIXTURE
- MULTI-HEAD FLOOD LIGHT
- SINGLE-HEAD FLOOD UP-LIGHT
- LED EXIT SIGN, WITH INVERTER & BATTERY BACKUP. TYPE "EX" CIRCUIT TO UNSWITCHED ROOM LIGHTING CIRCUIT WITH 2 #12, #12 GND.
- EMERGENCY WALL-PACK, WITH INVERTER & BATTERY BACKUP. TYPE "EM" CIRCUIT TO UNSWITCHED ROOM LIGHTING CIRCUIT WITH 2 #12, #12 GND.
- TWO (2) AREA LIGHTING FIXTURES, 180 DEGREES, MOUNTED 25FT A.F.G.; PROVIDE DIRECT-BURIED POLE, RATED FOR 130MPH WIND LOAD.
- CONDUCTORS IN CONDUIT OR RACEWAY, CONCEALED IN WALLS, MILLWORK, OR CEILING; MINIMUM CONDUCTOR SIZE #2AWG, CU. PROVIDE INSULATED GREEN EQUIPMENT GROUNDING CONDUCTOR; SIZED PER NEC. IN ALL RACEWAYS; RACEWAY TO BE 3/4" MINIMUM. MC CABLE NOT PERMITTED.
- ELECTRICAL PANEL. SEE PANEL SCHEDULE FOR REQUIREMENTS.
- 20A/120V QUIET-TYPE SNAP SWITCH. MOUNT 48" A.F.F. TO TOP. "3" INDICATES 3-WAY SWITCH; "4" INDICATES 4-WAY SWITCH. "T" INDICATES WALL-MOUNTED TIMER SWITCH.
- CEILING-MOUNTED DUAL-TECHNOLOGY LOW-VOLTAGE OCCUPANCY SENSOR, EQUAL TO WATTSTOPPER #DT-300; PROVIDE #BZ-250 POWER PACKS, AS REQUIRED; WIRE TO CONTROL ROOM LIGHTING.
- DUCT SMOKE DETECTOR, WITH REMOTE INDICATOR AND SHUTDOWN RELAY. POWER FROM UNSWITCHED LIGHTING CIRCUIT.
- 120V/20A DUPLEX RECEPTACLE. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE. PROVIDE GRAY DEVICE, STAINLESS COVERPLATE.
- 120V/20A DUPLEX RECEPTACLE WITH INTEGRAL GFI PROTECTION. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE. "WP" INDICATES WEATHERPROOF-IN-USE COVER. GRAY DEVICE, STAINLESS COVERPLATE.
- 120V/20A DUPLEX RECEPTACLE WITH INTEGRAL GFI PROTECTION. MOUNT 44" A.F.F. PROVIDE GRAY DEVICE, STAINLESS COVERPLATE.
- HAND DRYER. COORDINATE EXACT LOCATION AND ELEVATION WITH ARCHITECTURAL DETAILS; COORDINATE ROUGH-IN REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- PROVIDE SINGLE-GANG DEVICE BOX (18" A.F.F. U.N.O.), WITH (2) CAT-SE RJ-45 JACKS, (2) CAT-SE CABLES, IN 3/4" RACEWAY, BACK TO ROOM DATA 108. PROVIDE CAT-SE PATCH PANEL AND TERMINATE/TEST ALL CABLES.
- SAFETY SWITCH, POLES/AMPAICITY/ENCLOSURE RATING AS NOTED ON THE PLANS. FIELD-COORDINATE EXACT LOCATION TO ASSURE ALL CODE CLEARANCE REQUIREMENTS ARE MET.
- EXHAUST FAN; FIELD COORDINATE EXACT LOCATION WITH MECHANICAL.

CODES AND STANDARDS

- NFPA 70 NATIONAL ELECTRICAL CODE (NEC), 2014 ED.
- NFPA 72 NATIONAL FIRE ALARM CODE, 2013 ED.
- FLORIDA FIRE PREVENTION CODE, SIXTH EDITION.
- FLORIDA BUILDING CODE, SIXTH EDITION.

James M. Lamb, State of Florida, Professional Engineer, License No. 52688. This item has been digitally signed and sealed by James M. Lamb on the date indicated here. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



APALACHEE REGIONAL CROSS COUNTRY VENUE

16150 Drawn By: TAW/JML
Project Code Checked By: JML

04 OCTOBER 2019
Date

- Revisions
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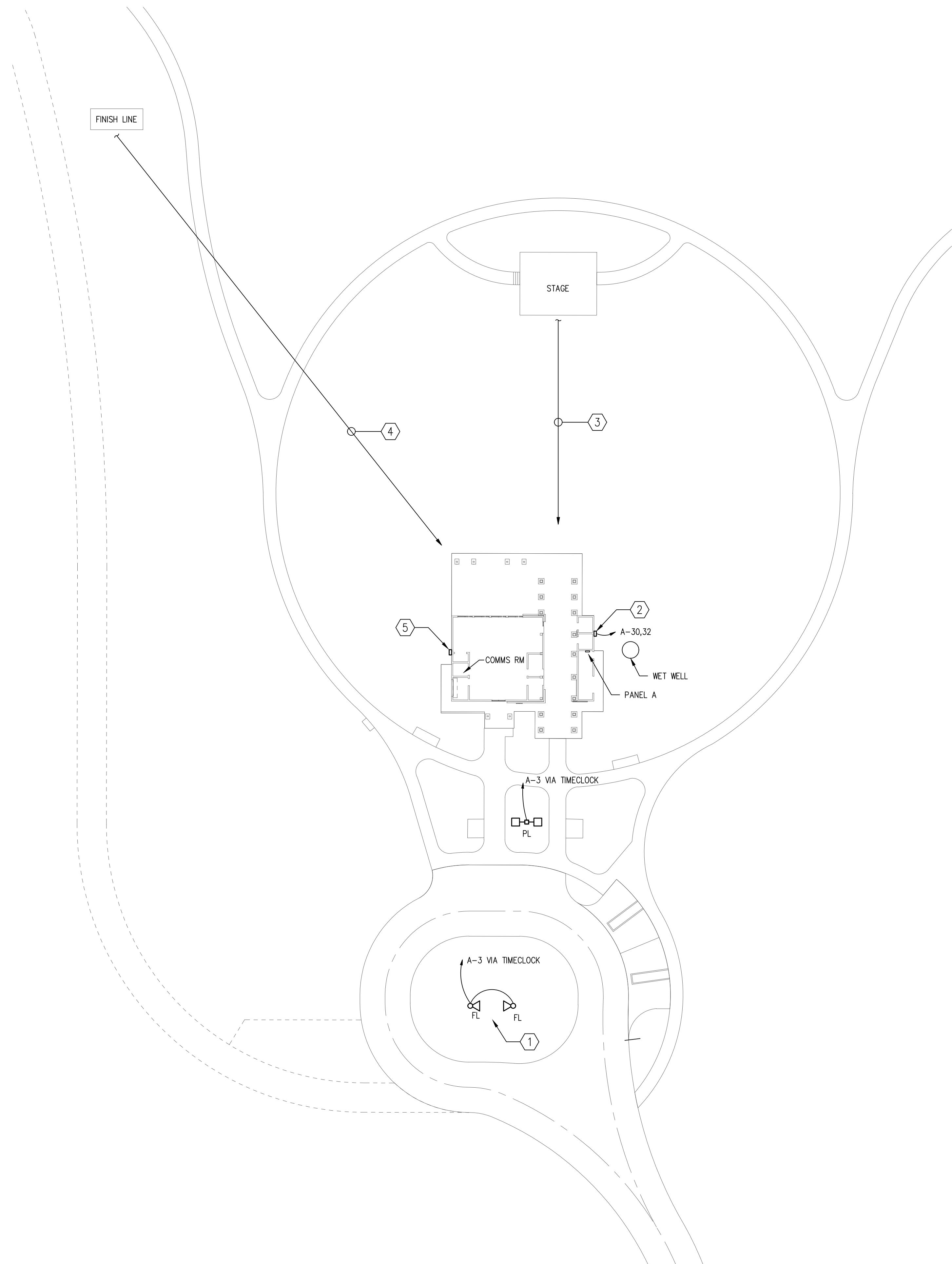
ELECTRICAL LEGEND & NOTES

ARD PROJECT # 8029

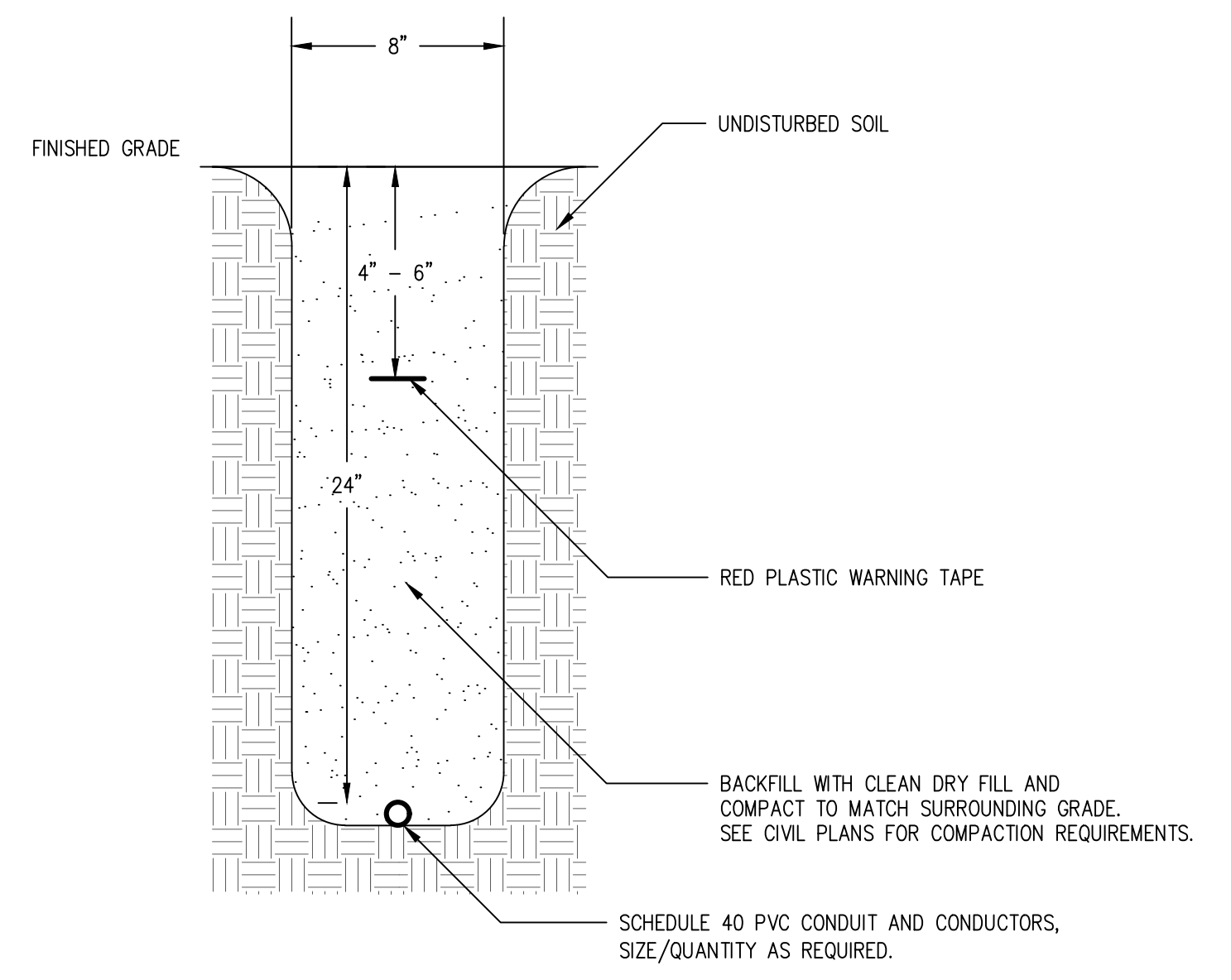
APPLIED RESEARCH AND DESIGN, INC.
2623 S. BLAIR STONE ROAD
TALLAHASSEE, FL 32301
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Tallahassee Florida

E-0.1



SITE PLAN
SCALE: 1"=30'-0"
0 15' 30'



TRENCH DETAIL
SCALE: N.T.S.

WORK NOTES:
(THIS SHEET ONLY)

- ① FIELD COORDINATE EXACT LOCATION OF FLAG POLE AND FLAG LIGHTING. PROVIDE CONCRETE BASE AND STANCHION MOUNT (NOT SHOWN) FOR EACH FLOODLIGHT.
- ② LIFT STATION CONTROL PANEL (SEE CIVIL DRAWINGS FOR DETAILS), SERVING 2HP DUPLEX PUMPS. PROVIDE RSCC CONDUIT TO WET WELL TO POWER PUMPS AND FOR CONTROLS. WET WELL IS A CLASS 1 DIVISION 1 LOCATION; ALL CONDUIT TO WET WELL SHALL BE FURNISHED WITH EXPLOSIONPROOF SEALS. PROVIDE 1" C.-3 #8, #10 GND, TO PANEL.
- ③ POWER/COMMUNICATIONS TO STAGE: PROVIDE 2" C. (COMMS) TO COMMS RM; PROVIDE 1-1/2" C.-3 #4, #8 GND, TO PANEL A.
- ④ POWER/COMMUNICATIONS TO FINISH LINE: PROVIDE 2" C. (COMMS) TO COMMS RM; PROVIDE 1-1/2" C.-4 #8, #8 GND, TO PANEL A.
- ⑤ BUILDING METER/SERVICE DISCONNECT.

NOTE:
1. PROVIDE (2) 2" RNC FROM COMMS ROOM TO APALACHEE PARKWAY RIGHT-OF-WAY, FOR COMMUNICATIONS SERVICE. CONDUITS ARE TO BE INSTALLED WITH 24" MINIMUM COVER (SEE TRENCHING DETAIL). SEE CIVIL PLANS FOR ROUTING/DISTANCE. PROVIDE 12" X 18" X 12"D OPEN-BOTTOM ANSI TIER-15 POLYMER JUNCTION BOXES, WITH BOLT-DOWN COVER (LOGO: "COMMUNICATIONS") AT INTERVALS NOT EXCEEDING 180FT. PROVIDE PULL STRING IN CONDUITS.
2. PROVIDE SERVICE TO EXISTING PAD-MOUNT TRANSFORMER; SEE RISER FOR CONDUIT/CONDUCTORS. SEE CIVIL PLANS FOR ROUTING AND TRANSFORMER LOCATION.

CALL SUNSHINE 811 OR GO ONLINE TO www.sunshine811.com, AT LEAST TWO FULL BUSINESS DAYS BEFORE DIGGING TO HAVE UTILITIES LOCATED AND MARKED.

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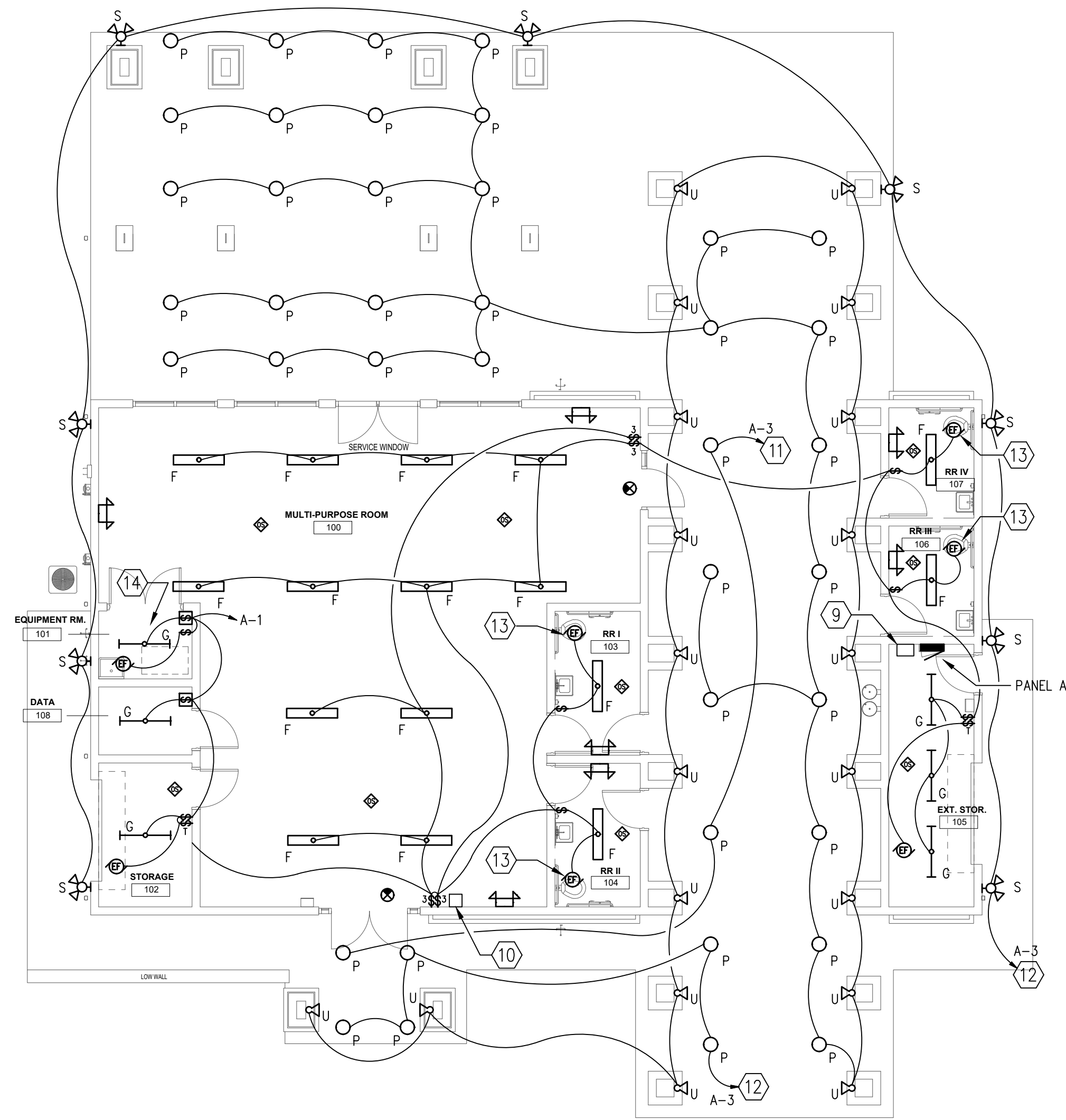
16150 Drawn By: TAW/JML
Project Code Checked By: JML
04 OCTOBER 2019
Date

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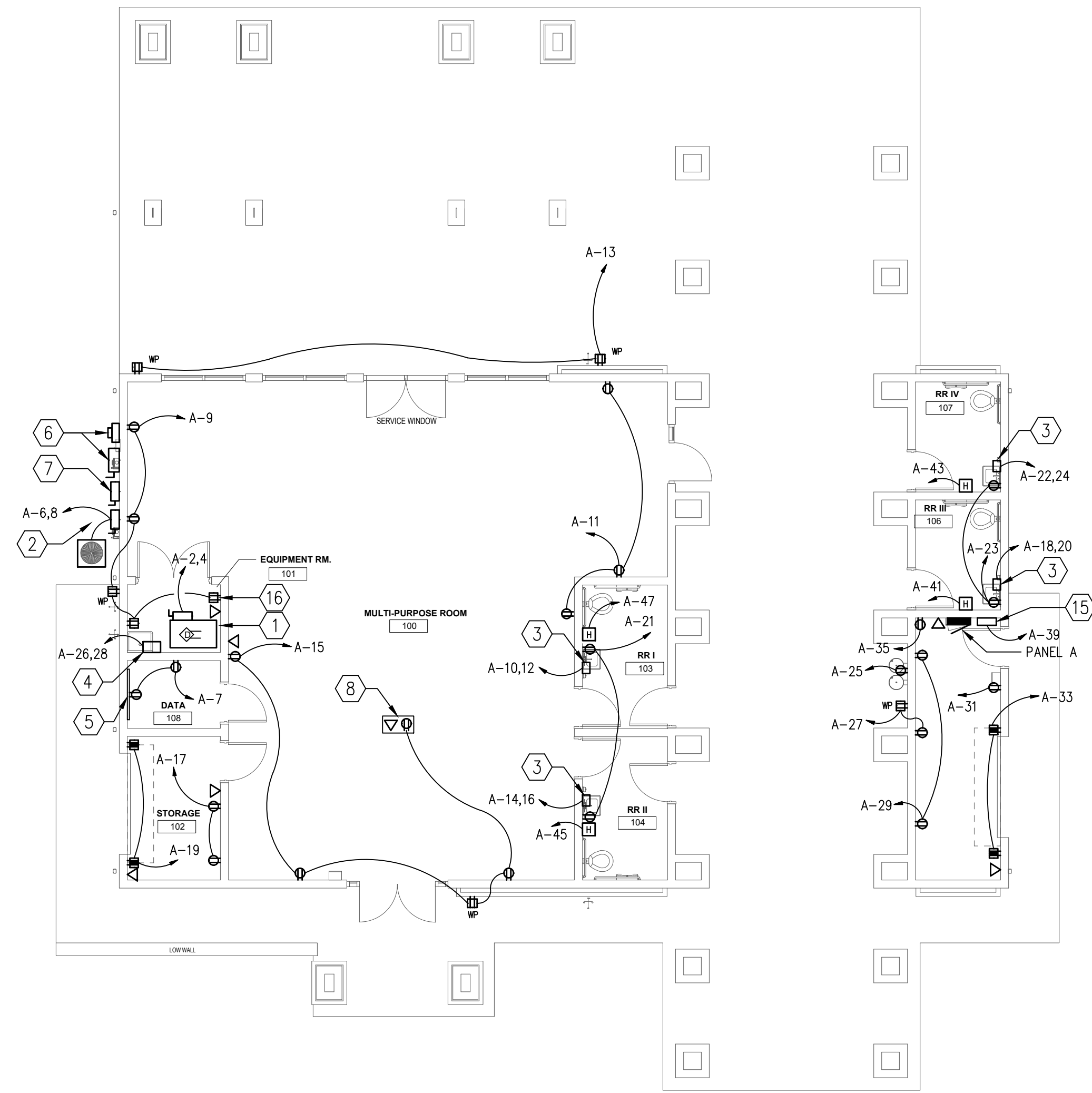
ELECTRICAL SITE PLAN

Tallahassee Florida
E-1.0



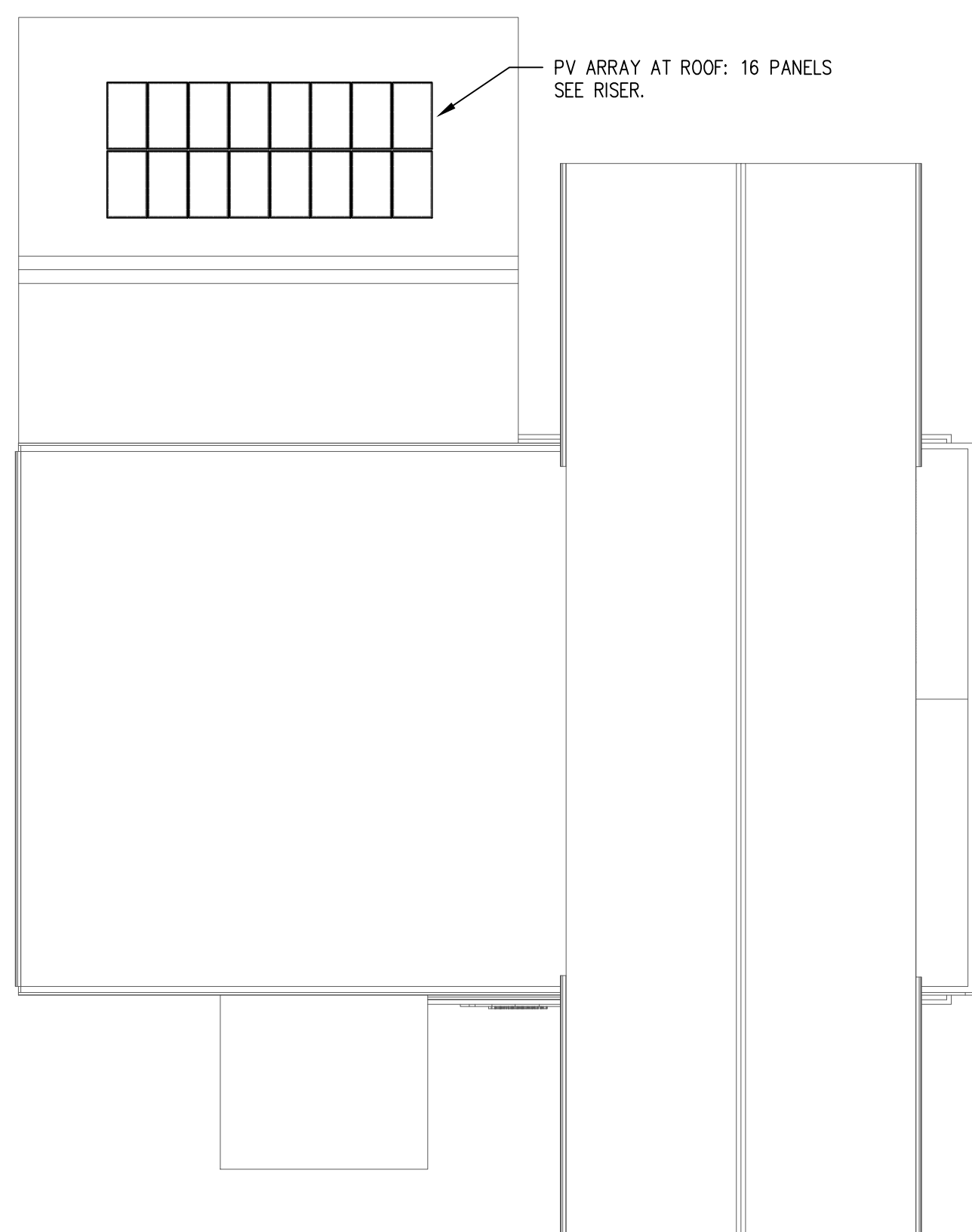
LIGHTING

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



POWER & SYSTEMS

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



ROOF ELECTRICAL

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

PV SYSTEM CALCULATIONS:

MODULE MAXIMUM POWER AT STC:	285W
MODULE MAXIMUM OPEN-CIRCUIT VOLTAGE AT STC:	39.0VDC
MODULE SHORT-CIRCUIT CURRENT:	9.68A
MODULE OPERATING VOLTAGE (MPP/NOCT):	31.6VDC
MODULE OPERATING CURRENT (MPP/NOCT):	9.09A
SYSTEM RATED DC POWER (285W/MODULE X 16 MODULES):	4560W
MICROINVERTER RECOMMENDED INPUT POWER:	210W - 350W
MICROINVERTER INPUT OPERATING RANGE:	16VDC - 48VDC
MICROINVERTER MAXIMUM INPUT START VOLTAGE:	48VDC
MICROINVERTER RATED PEAK EFFICIENCY:	96.5%
MICROINVERTER RATED OUTPUT POWER (@ 240VAC):	250W
STRING OUTPUT POWER @ 240VAC (16 X 250W):	4000W
STRING OUTPUT CURRENT @ 240VAC:	16.7A
SYSTEM OUTPUT POWER @ 240VAC (16 X 250W):	4000W
SYSTEM OUTPUT CURRENT @ 240VAC:	16.7A

WORK NOTES:

(THIS SHEET ONLY)

- 1 AHU: PROVIDE 60A/2P N.F. NEMA-1 SAFETY SWITCH, WITH 1" C.-2 #6, #10 GND, TO PANEL.
- 2 HEAT PUMP: PROVIDE 60A/2P N.F. NEMA-3R SAFETY SWITCH, WITH 1" C.-2 #6, #10 GND, TO PANEL.
- 3 TANKLESS WATER HEATER (6.5KW): COORDINATE EXACT LOCATION WITH PLUMBER PRIOR TO ROUGH-IN. PROVIDE 3/4" C.-2 #10, #10 GND, TO PANEL. PROVIDE LOCKABLE "OFF" BREAKER AT PANEL, FOR DISCONNECT MEANS.
- 4 TANKLESS WATER HEATER (9.5KW): COORDINATE EXACT LOCATION WITH PLUMBER PRIOR TO ROUGH-IN. PROVIDE 3/4" C.-2 #8, #10 GND, TO PANEL. PROVIDE LOCKABLE "OFF" BREAKER AT PANEL, FOR DISCONNECT MEANS.
- 5 COMMUNICATIONS BACKBOARD: PROVIDE 48" X 72" X 3/4" PLYWOOD BACKBOARD, PAINTED WITH (2) COATS OF FIRE-RETARDANT PAINT. PROVIDE GROUND BAR, WITH #6 GND TO BUILDING GROUNDING ELECTRODE. PROVIDE CAT-5E PATCH PANEL AND TERMINATE/TEST ALL OUTLET CABLING.
- 6 NEW METER AND SERVICE DISCONNECT. SEE RISER.
- 7 NEW 30A/2P N.F. NEMA-3R PHOTOVOLTAIC SYSTEM DISCONNECT. SEE RISER.
- 8 PROVIDE NEW DUAL-SERVICE FLUSH-MOUNT RECESSED FLOORBOX, WITH DUPLEX RECEPTACLE AND COMMS OUTLET. PROVIDE 1-1/2" C. TO COMMUNICATIONS BACKBOARD IN ROOM DATA 108.
- 9 DUAL-CHANNEL ELECTRONIC PROGRAMMABLE ASTRONOMICAL TIMECLOCK, FOR CONTROL OF EXTERIOR LIGHTING.
- 10 ELECTRONIC PROGRAMMABLE ASTRONOMICAL WALLBOX TIMECLOCK, WITH OVER-RIDE.
- 11 CONNECT TO TIMECLOCK, SEE NOTE #9 ABOVE.
- 12 CONNECT TO WALLBOX TIMECLOCK, SEE NOTE #10 ABOVE.
- 13 EXHAUST FAN IS TO BE CONTROLLED BY OCCUPANCY SENSOR, ONLY; CONFIGURE FOR 10-MINUTE TIME-DELAY OFF.
- 14 FIELD-COORDINATE INSTALLATION OF FIXTURE WITH MECHANICAL EQUIPMENT AND DUCTWORK.
- 15 IRRIGATION CONTROLLER: COORDINATE WITH IRRIGATION VENDOR. PROVIDE HARDWIRE CONNECTION, OR DUPLEX RECEPTACLE, PER MANUFACTURER'S REQUIREMENTS. PROVIDE NEW SUPPLEMENTAL GROUND ROD, WITH #6 GND TO IRRIGATION CONTROLLER. STUB-OUT 2" CONDUIT (SPARE) FOR IRRIGATION CONTROL WIRING, THROUGH SLAB, UNDERGROUND TO SFT BEYOND BUILDING.
- 16 PROVIDE DATA/POWER OUTLET FOR NEW HVAC CONTROLS; FIELD COORDINATE LOCATION WITH MECHANICAL.
- 17 PROVIDE NEW ENPHASE ENVOY PV SYSTEM COMMUNICATIONS GATEWAY; PROVIDE DATA OUTLET AND RECEPTACLE, AS SHOWN.

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APALACHEE REGIONAL CROSS COUNTRY VENUE

16150 Drawn By: TAW/JML
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Revisions

ELECTRICAL PLANS

ARD PROJECT # 8029
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